



# Zehnder Charleston

Prices and Technology 2023 - Sales International

always the best climate



## ALWAYS THE BEST CLIMATE

**“We strive to improve the quality of life by providing the finest indoor climate solutions.”**



### **Excellent team**

Every day we combine passion, expert knowledge and commitment to give you the best results.



### **Great solutions, products and services**

Great products and unique service for an energy-efficient, healthy and comfortable indoor climate.

## WE ARE THE SPECIALISTS FOR A HEALTHY, COMFORTABLE AND ENERGY-EFFICIENT

The broad and clearly structured portfolio from the Zehnder Group is split into five product lines. Consequently, we can provide our customers with the right product, perfect system and matching service for all types of projects – from new build to renovations, single or multi-occupancy homes, as well as commercial projects. This variety ensures that our wealth of experience is continuously expanding, providing tangible added value to our customers on a daily basis.



### **Comfortable indoor ventilation**

Our comfortable indoor ventilation is energy-efficient and provides a healthy indoor climate. It promotes the wellbeing of the occupants and increases the value of the property.

## OUR BRAND REPRESENTS INNOVATION, QUALITY AND DESIGN

**zehnder**

The Zehnder brand offers excellent indoor climate solutions within the product lines of decorative radiators, comfortable indoor ventilation, heating and cooling ceiling and clean air solutions.

## INNOVATION OVER 5 GENERATIONS



### First choice for customers

Always close to the needs of our customers, to grow with you and overcome all challenges together.

MANUFACTURER OF THE WORLD'S

**1<sup>st</sup>**

STEEL AND BATHROOM RADIATORS

REPRESENTED IN MORE THAN

**70** COUNTRIES

AROUND

**3,500**

EMPLOYEES

**17** OF OUR OWN PRODUCTION PLANTS IN EUROPE, NORTH AMERICA AND CHINA

INNOVATION SINCE **1895**

**900** PATENTS AND DESIGN RIGHTS THROUGHOUT THE WORLD

AROUND **40,000**

TRAINED CUSTOMERS PER YEAR

## INDOOR CLIMATE



### Decorative radiators

Our individual decorative radiators make every room – whether at home or in commercial or public buildings – not only warmer, but also more attractive. They combine iconic design with outstanding comfort experience.



### Heating and cooling ceiling

The ceiling is the perfect place to supply a room with convenient heating and cooling. Energy-efficient climate via radiant panels work perfectly with our suite of solutions from office to manufacturing spaces.

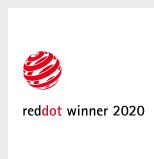
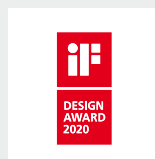


### Clean air solutions

Air cleaning systems from Zehnder effectively reduce the amount of dust and other particles in the air. The result: clean working environments, significantly improved employee health and enhanced business performance.








## BEST QUALITY CERTIFICATES

Zehnder Group products are frequently awarded prizes for design and innovative technology.



**General Sales and Delivery Conditions:**

Our General Sales and Delivery Conditions apply. You can find these under “Legal notice” on our homepage at [www.international.zehnder-systems.com](http://www.international.zehnder-systems.com).

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# A radiator with tradition. The Zehnder Charleston.

**Discover the original.** Zehnder applied for the patent for Europe's first tube radiator as early as 1930 – marking the birth of Zehnder Charleston.

This began a success story that continues to the present day. Maybe it's due to the high quality "Made in Germany", maybe it's the timeless contemporary designs, maybe it's the countless customized solutions – or maybe it's all these things: Zehnder Charleston is and remains the classic, or better put, the original tube radiator.

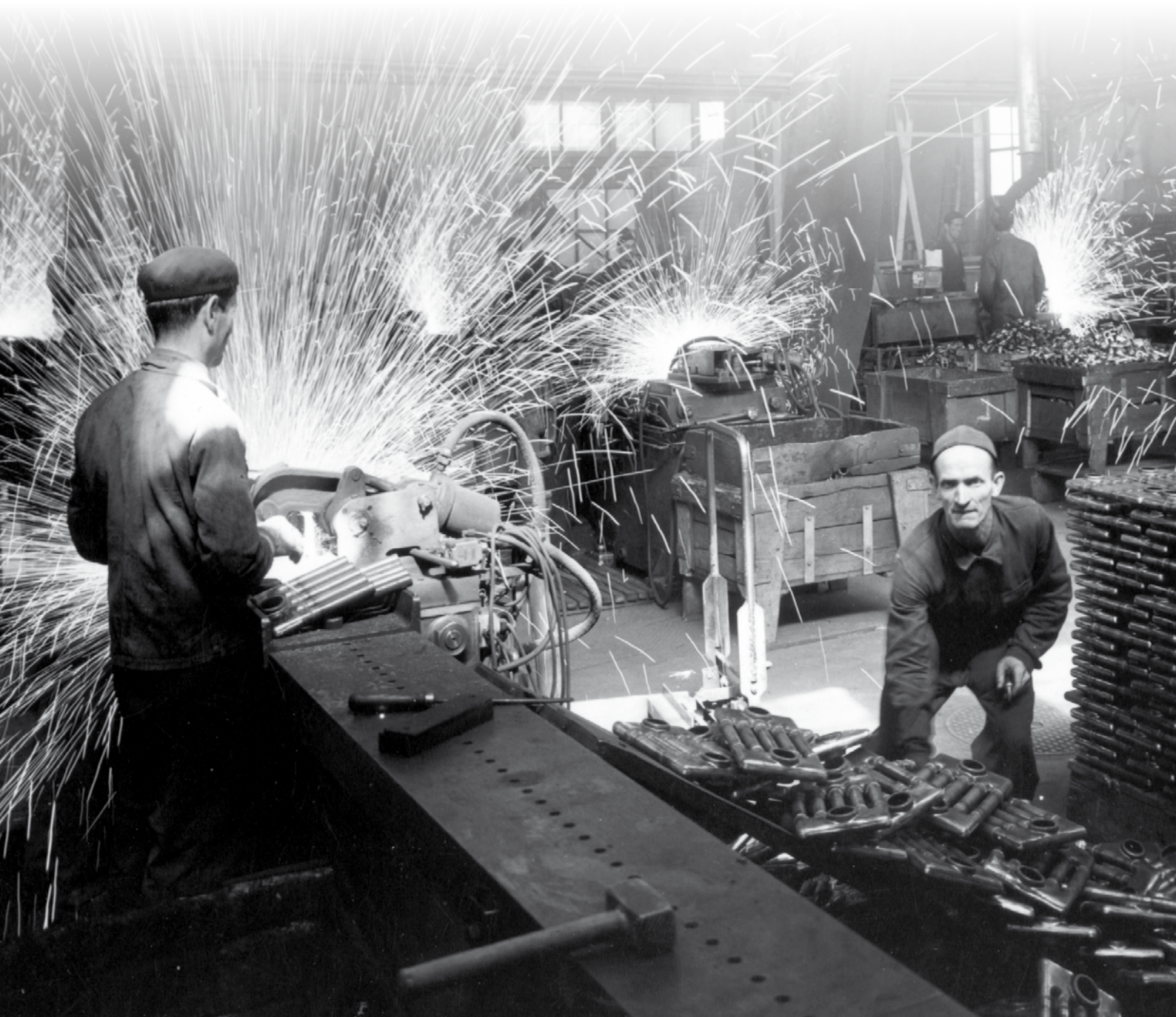
Today, with an over 100 year company history, Zehnder is the specialist in heating, cooling, and fresh clean air. In addition to radiators for the bathroom, living room and buildings, our product portfolio also includes heating and cooling radiators, climate-controlling systems and Clean Air Solutions to filter dust.

As you can see: With Zehnder, you are choosing experience and know-how, a product portfolio that has something for everyone – and an expert service, that is tailored to your requirements and needs.

What's your project? The original Zehnder Charleston helps you realize your goals.



An idea generates sparks.  
A classic is born.







## **TODAY AS ALWAYS, A FIRM FAVOURITE.**

Even an original has to move with the times. For Zehnder Charleston, this meant having to switch over to modern industrial production methods: the manufacturing of Zehnder Charleston with LaZer made. This innovative laser welding method for the production of sectional radiators is setting new standards for quality and technology in terms of precision, quality and functionality.



## **MASTERFUL. THE ZEHNDER FACTORY.**

For all the technological progress, there are some things that only “good old-fashioned handicraft” can accomplish: In the Zehnder factory, special productions are made to individual requirements and wishes – masterfully.



## **MADE IN GERMANY. PUT THROUGH ITS PACES.**

You can rightly expect that Zehnder Charleston is made – and tested – in Germany. For example, all radiators are fully tested for leaks. And delivery is also done with care: Sturdy cardboard packaging carries the radiator safely to its destination and a further packaging of stretch film protects it during and after installation.

# Zehnder Charleston.

## Benefits of the classic radiator.



### THE ORIGINAL

Often copied, but never bettered: When Zehnder registered its patent for Europe's first steel tubular radiator on March 18, 1930, no-one could have known that this invention would still be at the cutting edge over almost 90 years later. Zehnder Charleston was, is and remains without doubt a truly timeless classic.

1



### MADE IN GERMANY

Innovation, design, quality – you should expect nothing but the best from Zehnder. All radiators are 100 % approved against leaks and can even be delivered galvanized for humid rooms. The specially developed primer and powder coating process guarantees a smooth and durable surface.

2



### COSY WARMTH - EVERYWHERE

Zehnder Charleston ensures a balanced and pleasant room climate. Its large heating surface enables the Zehnder Charleston to powerful radiant heat and rapid warm-up period ensure cosy warmth straight away. And all this with the minimum of dust movement, which is good news for people with allergies.

3



### CLEAN, HYGIENIC AND HEALTH

The distance between the elements enables easy cleaning of the radiator. Zehnder Charleston meets the highest hygiene standards (Certified by Düsseldorf University), and can also be delivered with the TopCare anti-microbe surface (in RAL 9016). The paint contains no solvents.

4

5

### WARMTH AS YOU WANT IT

Curved, single or multi-angle or as a room divider: Thanks to its countless special designs, Zehnder Charleston can fit in all buildings. Even the building heights of 30 - 600 cm can be undercut or exceeded as required.



6

### MORE THAN JUST WHITE

Zehnder Charleston is available in over 700 colours and surfaces, from classic tones, contemporary and metallic colours through to metal surfaces, such as Technoline – this means you have to make no compromises when it comes to aesthetics. All these lacquers are free of solvents and heavy metals, and therefore do not release any toxic fumes.



7

### QUICK AND SIMPLE

Thanks to the Zehnder EasyFix assembly system, all radiators can be installed simply, safely and quickly. This saves installation time, and money. The location of the mounting points behind the tubes can barely be seen – another aesthetic benefit.



8

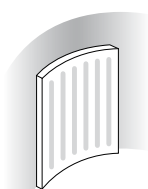
### DELIVERED AS ORDERED

A bar code-based logistics system ensures reliable, punctual delivery. A robust fully cardboard packaging prevents any kind of transport damages, and an extra film covering protects the radiator during and after installation. It is only removed during the move-in.



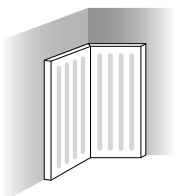
# Individual solutions

Homes, studios, offices, banks, hospitals...Buildings have highly varied uses, and their architecture can be just as varied. So it's good when top plans even work out for warmth: Zehnder's radiators allow you to realise your ideas in the most diverse of architectural designs.



Curved





**Angled**

# Zehnder Radiator Bench

Enjoy total relaxation:

The Zehnder radiator bench offers a warm and comfortable seating area.

Heating and a seat - a space-saving alternative, for example for the hall. In addition: You can choose the bench type yourself.



# Zehnder Charleston Bench

Warmth through the bench:  
Thanks to Zehnder Charleston  
Bench, you can turn your  
radiator into an additional  
storage option or a bench  
upon which you can sit and  
enjoy the glowing warmth.  
In addition: You can choose  
the bench type yourself.



# Zehnder Charleston Retrofit

From old to new: Zehnder Charleston Retrofit is the right choice for swapping old for new, and cold for warm. Can be mounted to existing connections without major building work.



# Zehnder Charleston Turned

Zehnder Charleston Turned, the original steel tubular radiator with a new look, boasts a fresh design and great performance. The orientation, rotated by 90°, lends the classic radiator a new dimension and gives Zehnder Charleston Turned an exceptionally slim design. Due to its outstanding performance, the steel tubular radiator turns large living spaces into an oasis of well-being. Available in almost any colour and finish from the Zehnder colour chart.





# Zehnder Charleston Completo

Top preliminary work:  
Zehnder Charleston Completo  
is the ideal radiator for new buildings  
– pre-installation in the unfinished  
structure, and then radiator  
installation once the building is  
complete.  
And thanks to its integrated valve, not  
only the mounting is easier, but also  
the operation.



# Zehnder Charleston Clinic


Easy cleaning, greater  
hygiene: Thanks to the large space  
between the tubes, the Charleston  
Clinic is quick and easy to clean,  
making it ideal for doctor's surgeries,  
hospitals and children's bedrooms.





# Zehnder Charleston

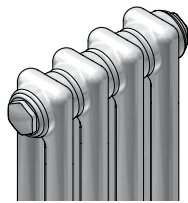


	Overview of models	Product description	List prices	Special versions	Connections	Fixings	Technical data	Installation points
<b>Zehnder Charleston</b>								
 <ul style="list-style-type: none"> <li>■ Classic tubular radiator</li> <li>■ Element length 46 mm</li> <li>■ Flexible connection options</li> </ul>	18	19	21	41	43	47	50	55

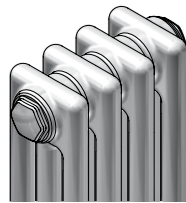
# Zehnder Charleston



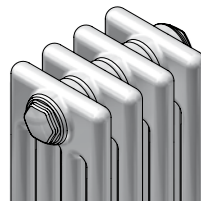
## Zehnder Charleston



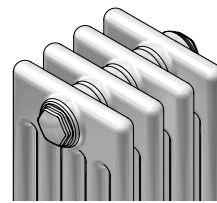
2-column



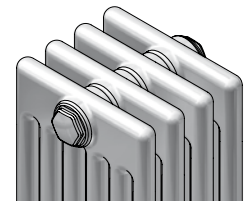
3-column



4-column



5-column



6-column

Height <sup>1)</sup> mm	Depth mm				
	62	100	136	173	210
260	2026	3026	4026	5026	6026
300	2030	3030	4030	5030	6030
350	2035	3035	4035	5035	6035
400	2040	3040	4040	5040	6040
450	2045	3045	4045	5045	6045
500	2050	3050	4050	5050	6050
550	2055	3055	4055	5055	6055
600	2060	3060	4060	5060	6060
750	2075	3075	4075	5075	6075
900	2090	3090	4090	5090	6090
1000	2100	3100	4100	5100	6100
1100	2110	3110	4110	5110	6110
1200	2120	3120	4120	5120	6120
1500	2150	3150	4150	5150	6150
1800	2180	3180	4180	5180	6180
2000	2200	3200	4200	5200	6200
2200	2220	3220	4220	5220	6220
2500	2250	3250	4250	5250	6250
2800	2280	3280	4280	5280	6280
3000	2300	3300	4300	5300	6300

<sup>1)</sup>The values shown here are the so-called nominal height; the exact height varies by a few mm for 2-column radiators and for some of the 3-column radiators as well, see "Technical specifications"; larger heights over 3000 mm or intermediate heights are available on request.

Maximum radiator lengths on piece (per block)

**Zehnder Charleston** (also see price tables from page 21 onwards)

Model	Height mm						
	260 - 600	> 600 - 750	> 750 - 900	> 900 - 1000	> 1000 - 2000	> 2000 - 2500	> 2500 - 3000
2-, 3-column	64	64	64	64	22	22	22
4-column	64	64	64	60	22	22	22
5-column	64	64	50	50	22	22	17
6-column	64	55	46	42	22	17	14

# Zehnder Charleston



Zehnder Charleston

## Product description

Zehnder Charleston – the original tube radiator.

The construction of individual elements gives the multi-column radiator enormous possibilities for adapting to the architectural circumstances found in new and old buildings. Nowadays, Zehnder Charleston generally comes with a custom finish, delivered in a single piece with connections to order. In the case of excess lengths or lengths on request, the radiator can also be delivered to the building site in several parts and assembled on site.

Zehnder Charleston meets individual expectations for the widest range of applications and has therefore been successfully used in all areas of buildings for decades. From private homes to public buildings, schools, homes, prisons, offices, shops as well as workshops and industrial buildings. Its versatility and variability are what allow the Charleston to create such varied looks, combined with the hygienic suitability (certificate) and cleanability, safety aspects during mounting and installation.

Special versions by agreement supplement the products on offer. No other radiator is as flexible in all regards – and everything is made in Germany.

## Technical specifications

- Steel round tubes Ø 25 mm
- Header in sheet steel
- Length of the individual element 46 mm
- Priming and powder coating to DIN 55900
- Thermal output tested to EN 442; with CE marking
- Maximum operating pressure 10 bar
- Maximum operating temperature 110 °C



Completo version

## Customisation options

- Large choice of connection types, including integrated valve
- Mounting sets for all applications
- Special colours and antibacterial coating
- Galvanised and painted
- Energy saving thermal radiation shield for installation in front of windows
- Special shapes: angled or curved, etc.
- High pressure version up to max. 18 bar
- Operating temperature at 120 °C on request

## Advantages

- Residue-free laser welding technology LaZer made
- Classic elegance
- Accident-safe
- Cleaning with Zehnder lambswool cleaning brush
- Simple and secure with non-lift-out feature: Installation with Zehnder EasyFix
- Radiant heat with feel-good factor
- Energy-efficient for use in low temperature heating systems

## Scope of delivery for standard version

- Primed and painted in RAL 9016
- Connections 4 x ½" female thread at front
- Connection S001: 1 blanking plug ½", directional air vent ½"
- Complete packaging in stretch film and carton
- Heights greater than 2200 mm with stabilising brace welded at the factory

## Scope of delivery for Completo version

- Primed and painted in RAL 9016
- Valve unit integrated on side, with valve insert AV 9, max. flow rate 250 kg/h
- Connections 2 x ½" female thread from bottom 50 mm
- Integrated baffle
- 1 directional air vent ½"
- Complete packaging in stretch film and carton

# Zehnder Charleston



Calculation example of a standard version

Price per element	Amount of elements	Colour	Connection	Accessories
3030	14	RAL 9016	Nº 1270	CVD0 + BH in RAL 9016
<b>24,94 €</b>	<b>349,16 €</b>	<b>0 € (Standard)</b>	<b>0 € (Standard)</b>	<b>24,71 €</b>
2026	32	RAL 7016	Nº V001	SMB
<b>22,60 €</b>	<b>732,20 €</b>	<b>20% = 144,64 €</b>	<b>216,05 €</b>	<b>49,46 €</b>





# Zehnder Charleston

$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		260									
Model		2026		3026		4026		5026		6026	
Depth	mm	62		100		136		173		210	
Exponent	n	1,25		1,25		1,25		1,25		1,27	
Max. number of elements		64		64		64		64		64	
Price/element		€ 22,60		€ 24,35		€ 27,09		€ 33,02		€ 38,47	
Length		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price	
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	85	90,40	112	97,40	146	108,36	181	132,08	214	153,88
5	230	106	113,00	140	121,75	183	135,45	226	165,10	268	192,35
6	276	127	135,60	168	146,10	219	162,54	271	198,12	321	230,82
7	322	148	158,20	196	170,45	256	189,63	316	231,14	375	269,29
8	368	169	180,80	224	194,80	292	216,72	361	264,16	428	307,76
9	414	190	203,40	252	219,15	329	243,81	406	297,18	482	346,23
10	460	211	226,00	279	243,50	365	270,90	451	330,20	535	384,70
11	506	233	248,60	307	267,85	402	297,99	497	363,22	589	423,17
12	552	254	271,20	335	292,20	438	325,08	542	396,24	642	461,64
13	598	275	293,80	363	316,55	475	352,17	587	429,26	696	500,11
14	644	296	316,40	391	340,90	511	379,26	632	462,28	749	538,58
15	690	317	339,00	419	365,25	548	406,35	677	495,30	803	577,05
16	736	338	361,60	447	389,60	584	433,44	722	528,32	856	615,52
17	782	359	384,20	475	413,95	621	460,53	767	561,34	910	653,99
18	828	380	406,80	503	438,30	657	487,62	812	594,36	963	692,46
19	874	401	429,40	531	462,65	694	514,71	857	627,38	1017	730,93
20	920	422	452,00	558	487,00	730	541,80	902	660,40	1070	769,40
21	966	444	474,60	586	511,35	767	568,89	948	693,42	1124	807,87
22	1012	465	497,20	614	535,70	803	595,98	993	726,44	1177	846,34
23	1058	486	519,80	642	560,05	840	623,07	1038	759,46	1231	884,81
24	1104	507	542,40	670	584,40	876	650,16	1083	792,48	1284	923,28
25	1150	528	565,00	698	608,75	913	677,25	1128	825,50	1338	961,75
26	1196	549	587,60	726	633,10	949	704,34	1173	858,52	1391	1.000,22
27	1242	570	610,20	754	657,45	986	731,43	1218	891,54	1445	1.038,69
28	1288	591	632,80	782	681,80	1022	758,52	1263	924,56	1498	1.077,16
29	1334	612	655,40	810	706,15	1059	785,61	1308	957,58	1552	1.115,63
30	1380	633	678,00	837	730,50	1095	812,70	1353	990,60	1605	1.154,10
31	1426	655	700,60	865	754,85	1132	839,79	1399	1.023,62	1659	1.192,57
32	1472	676	723,20	893	779,20	1168	866,88	1444	1.056,64	1712	1.231,04
33	1518	697	745,80	921	803,55	1205	893,97	1489	1.089,66	1766	1.269,51
34	1564	718	768,40	949	827,90	1241	921,06	1534	1.122,68	1819	1.307,98
35	1610	739	791,00	977	852,25	1278	948,15	1579	1.155,70	1873	1.346,45
36	1656	760	813,60	1005	876,60	1314	975,24	1624	1.188,72	1926	1.384,92
37	1702	781	836,20	1033	900,95	1351	1.002,33	1669	1.221,74	1980	1.423,39
38	1748	802	858,80	1061	925,30	1387	1.029,42	1714	1.254,76	2033	1.461,86
39	1794	823	881,40	1089	949,65	1424	1.056,51	1759	1.287,78	2087	1.500,33
40	1840	844	904,00	1116	974,00	1460	1.083,60	1804	1.320,80	2140	1.538,80

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		300									
Model		2030		3030		4030		5030		6030	
Depth	mm	62		100		136		173		210	
Exponent	n	1,24		1,25		1,25		1,25		1,26	
Max. number of elements		64		64		64		64		64	
Price/element	€	22,99		24,94		27,71		33,05		38,51	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	95	91,96	128	99,76	168	110,84	207	132,20	246	154,04
5	230	118	114,95	160	124,70	210	138,55	259	165,25	307	192,55
6	276	142	137,94	192	149,64	252	166,26	311	198,30	368	231,06
7	322	166	160,93	224	174,58	294	193,97	362	231,35	430	269,57
8	368	189	183,92	256	199,52	336	221,68	414	264,40	491	308,08
9	414	213	206,91	288	224,46	378	249,39	466	297,45	552	346,59
10	460	236	229,90	320	249,40	419	277,10	517	330,50	613	385,10
11	506	260	252,89	352	274,34	461	304,81	569	363,55	675	423,61
12	552	284	275,88	384	299,28	503	332,52	621	396,60	736	462,12
13	598	307	298,87	416	324,22	545	360,23	673	429,65	797	500,63
14	644	331	321,86	448	349,16	587	387,94	724	462,70	859	539,14
15	690	354	344,85	480	374,10	629	415,65	776	495,75	920	577,65
16	736	378	367,84	512	399,04	671	443,36	828	528,80	981	616,16
17	782	402	390,83	544	423,98	713	471,07	879	561,85	1043	654,67
18	828	425	413,82	576	448,92	755	498,78	931	594,90	1104	693,18
19	874	449	436,81	608	473,86	797	526,49	983	627,95	1165	731,69
20	920	472	459,80	640	498,80	838	554,20	1034	661,00	1226	770,20
21	966	496	482,79	672	523,74	880	581,91	1086	694,05	1288	808,71
22	1012	520	505,78	704	548,68	922	609,62	1138	727,10	1349	847,22
23	1058	543	528,77	736	573,62	964	637,33	1190	760,15	1410	885,73
24	1104	567	551,76	768	598,56	1006	665,04	1241	793,20	1472	924,24
25	1150	590	574,75	800	623,50	1048	692,75	1293	826,25	1533	962,75
26	1196	614	597,74	832	648,44	1090	720,46	1345	859,30	1594	1.001,26
27	1242	638	620,73	864	673,38	1132	748,17	1396	892,35	1656	1.039,77
28	1288	661	643,72	896	698,32	1174	775,88	1448	925,40	1717	1.078,28
29	1334	685	666,71	928	723,26	1216	803,59	1500	958,45	1778	1.116,79
30	1380	708	689,70	960	748,20	1257	831,30	1551	991,50	1839	1.155,30
31	1426	732	712,69	992	773,14	1299	859,01	1603	1.024,55	1901	1.193,81
32	1472	756	735,68	1024	798,08	1341	886,72	1655	1.057,60	1962	1.232,32
33	1518	779	758,67	1056	823,02	1383	914,43	1707	1.090,65	2023	1.270,83
34	1564	803	781,66	1088	847,96	1425	942,14	1758	1.123,70	2085	1.309,34
35	1610	826	804,65	1120	872,90	1467	969,85	1810	1.156,75	2146	1.347,85
36	1656	850	827,64	1152	897,84	1509	997,56	1862	1.189,80	2207	1.386,36
37	1702	874	850,63	1184	922,78	1551	1.025,27	1913	1.222,85	2269	1.424,87
38	1748	897	873,62	1216	947,72	1593	1.052,98	1965	1.255,90	2330	1.463,38
39	1794	921	896,61	1248	972,66	1635	1.080,69	2017	1.288,95	2391	1.501,89
40	1840	944	919,60	1280	997,60	1676	1.108,40	2068	1.322,00	2452	1.540,40

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51





# Zehnder Charleston

$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		350									
Model		2035		3035		4035		5035		6035	
Depth	mm	62		100		136		173		210	
Exponent	n	1,24		1,25		1,25		1,26		1,26	
Max. number of elements		64		64		64		64		64	
Price/element		€ 23,40		€ 25,63		€ 28,64		€ 33,80		€ 39,72	
Length		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price	
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	110	93,60	148	102,52	194	114,56	240	135,20	284	158,88
5	230	138	117,00	185	128,15	243	143,20	300	169,00	355	198,60
6	276	165	140,40	222	153,78	291	171,84	360	202,80	426	238,32
7	322	193	163,80	259	179,41	340	200,48	420	236,60	497	278,04
8	368	220	187,20	296	205,04	388	229,12	480	270,40	568	317,76
9	414	248	210,60	333	230,67	437	257,76	540	304,20	639	357,48
10	460	275	234,00	370	256,30	485	286,40	599	338,00	710	397,20
11	506	303	257,40	407	281,93	534	315,04	659	371,80	781	436,92
12	552	330	280,80	444	307,56	582	343,68	719	405,60	852	476,64
13	598	358	304,20	481	333,19	631	372,32	779	439,40	923	516,36
14	644	385	327,60	518	358,82	679	400,96	839	473,20	994	556,08
15	690	413	351,00	555	384,45	728	429,60	899	507,00	1065	595,80
16	736	440	374,40	592	410,08	776	458,24	959	540,80	1136	635,52
17	782	468	397,80	629	435,71	825	486,88	1019	574,60	1207	675,24
18	828	495	421,20	666	461,34	873	515,52	1079	608,40	1278	714,96
19	874	523	444,60	703	486,97	922	544,16	1139	642,20	1349	754,68
20	920	550	468,00	740	512,60	970	572,80	1198	676,00	1420	794,40
21	966	578	491,40	777	538,23	1019	601,44	1258	709,80	1491	834,12
22	1012	605	514,80	814	563,86	1067	630,08	1318	743,60	1562	873,84
23	1058	633	538,20	851	589,49	1116	658,72	1378	777,40	1633	913,56
24	1104	660	561,60	888	615,12	1164	687,36	1438	811,20	1704	953,28
25	1150	688	585,00	925	640,75	1213	716,00	1498	845,00	1775	993,00
26	1196	715	608,40	962	666,38	1261	744,64	1558	878,80	1846	1.032,72
27	1242	743	631,80	999	692,01	1310	773,28	1618	912,60	1917	1.072,44
28	1288	770	655,20	1036	717,64	1358	801,92	1678	946,40	1988	1.112,16
29	1334	798	678,60	1073	743,27	1407	830,56	1738	980,20	2059	1.151,88
30	1380	825	702,00	1110	768,90	1455	859,20	1797	1.014,00	2130	1.191,60
31	1426	853	725,40	1147	794,53	1504	887,84	1857	1.047,80	2201	1.231,32
32	1472	880	748,80	1184	820,16	1552	916,48	1917	1.081,60	2272	1.271,04
33	1518	908	772,20	1221	845,79	1601	945,12	1977	1.115,40	2343	1.310,76
34	1564	935	795,60	1258	871,42	1649	973,76	2037	1.149,20	2414	1.350,48
35	1610	963	819,00	1295	897,05	1698	1.002,40	2097	1.183,00	2485	1.390,20
36	1656	990	842,40	1332	922,68	1746	1.031,04	2157	1.216,80	2556	1.429,92
37	1702	1018	865,80	1369	948,31	1795	1.059,68	2217	1.250,60	2627	1.469,64
38	1748	1045	889,20	1406	973,94	1843	1.088,32	2277	1.284,40	2698	1.509,36
39	1794	1073	912,60	1443	999,57	1892	1.116,96	2337	1.318,20	2769	1.549,08
40	1840	1100	936,00	1480	1.025,20	1940	1.145,60	2396	1.352,00	2840	1.588,80

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		400									
Model		2040		3040		4040		5040		6040	
Depth	mm	62		100		136		173		210	
Exponent	n	1,24		1,25		1,26		1,26		1,27	
Max. number of elements		64		64		64		64		64	
Price/element	€	23,87		26,39		29,16		34,50		40,93	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	125	95,48	168	105,56	220	116,64	272	138,00	322	163,72
5	230	156	119,35	210	131,95	275	145,80	340	172,50	403	204,65
6	276	188	143,22	252	158,34	330	174,96	408	207,00	483	245,58
7	322	219	167,09	294	184,73	385	204,12	476	241,50	564	286,51
8	368	250	190,96	336	211,12	440	233,28	544	276,00	644	327,44
9	414	281	214,83	378	237,51	495	262,44	612	310,50	725	368,37
10	460	312	238,70	419	263,90	549	291,60	679	345,00	805	409,30
11	506	344	262,57	461	290,29	604	320,76	747	379,50	886	450,23
12	552	375	286,44	503	316,68	659	349,92	815	414,00	966	491,16
13	598	406	310,31	545	343,07	714	379,08	883	448,50	1047	532,09
14	644	437	334,18	587	369,46	769	408,24	951	483,00	1127	573,02
15	690	468	358,05	629	395,85	824	437,40	1019	517,50	1208	613,95
16	736	500	381,92	671	422,24	879	466,56	1087	552,00	1288	654,88
17	782	531	405,79	713	448,63	934	495,72	1155	586,50	1369	695,81
18	828	562	429,66	755	475,02	989	524,88	1223	621,00	1449	736,74
19	874	593	453,53	797	501,41	1044	554,04	1291	655,50	1530	777,67
20	920	624	477,40	838	527,80	1098	583,20	1358	690,00	1610	818,60
21	966	656	501,27	880	554,19	1153	612,36	1426	724,50	1691	859,53
22	1012	687	525,14	922	580,58	1208	641,52	1494	759,00	1771	900,46
23	1058	718	549,01	964	606,97	1263	670,68	1562	793,50	1852	941,39
24	1104	749	572,88	1006	633,36	1318	699,84	1630	828,00	1932	982,32
25	1150	780	596,75	1048	659,75	1373	729,00	1698	862,50	2013	1.023,25
26	1196	812	620,62	1090	686,14	1428	758,16	1766	897,00	2093	1.064,18
27	1242	843	644,49	1132	712,53	1483	787,32	1834	931,50	2174	1.105,11
28	1288	874	668,36	1174	738,92	1538	816,48	1902	966,00	2254	1.146,04
29	1334	905	692,23	1216	765,31	1593	845,64	1970	1.000,50	2335	1.186,97
30	1380	936	716,10	1257	791,70	1647	874,80	2038	1.035,00	2415	1.227,90
31	1426	968	739,97	1299	818,09	1702	903,96	2105	1.069,50	2496	1.268,83
32	1472	999	763,84	1341	844,48	1757	933,12	2173	1.104,00	2576	1.309,76
33	1518	1030	787,71	1383	870,87	1812	962,28	2241	1.138,50	2657	1.350,69
34	1564	1061	811,58	1425	897,26	1867	991,44	2309	1.173,00	2737	1.391,62
35	1610	1092	835,45	1467	923,65	1922	1.020,60	2377	1.207,50	2818	1.432,55
36	1656	1124	859,32	1509	950,04	1977	1.049,76	2445	1.242,00	2898	1.473,48
37	1702	1155	883,19	1551	976,43	2032	1.078,92	2513	1.276,50	2979	1.514,41
38	1748	1186	907,06	1593	1.002,82	2087	1.108,08	2581	1.311,00	3059	1.555,34
39	1794	1217	930,93	1635	1.029,21	2142	1.137,24	2649	1.345,50	3140	1.596,27
40	1840	1248	954,80	1676	1.055,60	2196	1.166,40	2716	1.380,00	3220	1.637,20

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51



# Zehnder Charleston

$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		450									
Model		2045		3045		4045		5045		6045	
Depth	mm	62		100		136		173		210	
Exponent	n	1,24		1,25		1,26		1,26		1,27	
Max. number of elements		64		64		64		64		64	
Price/element	€	24,35		27,31		30,32		36,42		42,35	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	140	97,40	188	109,24	246	121,28	304	144,96	360	169,40
5	230	175	121,75	234	136,55	307	151,60	379	181,20	449	211,75
6	276	210	146,10	281	163,86	368	181,92	455	217,44	539	254,10
7	322	245	170,45	328	191,17	430	212,24	531	253,68	629	296,45
8	368	280	194,80	375	218,48	491	242,56	607	289,92	719	338,80
9	414	315	219,15	422	245,79	552	272,88	683	326,16	809	381,15
10	460	349	243,50	468	273,10	613	303,20	758	362,40	898	423,50
11	506	384	267,85	515	300,41	675	333,52	834	398,64	988	465,85
12	552	419	292,20	562	327,72	736	363,84	910	434,88	1078	508,20
13	598	454	316,55	609	355,03	797	394,16	986	471,12	1168	550,55
14	644	489	340,90	656	382,34	859	424,48	1062	507,36	1258	592,90
15	690	524	365,25	702	409,65	920	454,80	1137	543,60	1347	635,25
16	736	559	389,60	749	436,96	981	485,12	1213	579,84	1437	677,60
17	782	594	413,95	796	464,27	1043	515,44	1289	616,08	1527	719,95
18	828	629	438,30	843	491,58	1104	545,76	1365	652,32	1617	762,30
19	874	664	462,65	890	518,89	1165	576,08	1441	688,56	1707	804,65
20	920	698	487,00	936	546,20	1226	606,40	1516	724,80	1796	847,00
21	966	733	511,35	983	573,51	1288	636,72	1592	761,04	1886	889,35
22	1012	768	535,70	1030	600,82	1349	667,04	1668	797,28	1976	931,70
23	1058	803	560,05	1077	628,13	1410	697,36	1744	833,52	2066	974,05
24	1104	838	584,40	1124	655,44	1472	727,68	1820	869,76	2156	1.016,40
25	1150	873	608,75	1170	682,75	1533	758,00	1895	906,00	2245	1.058,75
26	1196	908	633,10	1217	710,06	1594	788,32	1971	942,24	2335	1.101,10
27	1242	943	657,45	1264	737,37	1656	818,64	2047	978,48	2425	1.143,45
28	1288	978	681,80	1311	764,68	1717	848,96	2123	1.014,72	2515	1.185,80
29	1334	1013	706,15	1358	791,99	1778	879,28	2199	1.050,96	2605	1.228,15
30	1380	1047	730,50	1404	819,30	1839	909,60	2274	1.087,20	2694	1.270,50
31	1426	1082	754,85	1451	846,61	1901	939,92	2350	1.123,44	2784	1.312,85
32	1472	1117	779,20	1498	873,92	1962	970,24	2426	1.159,68	2874	1.355,20
33	1518	1152	803,55	1545	901,23	2023	1.000,56	2502	1.195,92	2964	1.397,55
34	1564	1187	827,90	1592	928,54	2085	1.030,88	2578	1.232,16	3054	1.439,90
35	1610	1222	852,25	1638	955,85	2146	1.061,20	2653	1.268,40	3143	1.482,25
36	1656	1257	876,60	1685	983,16	2207	1.091,52	2729	1.304,64	3233	1.524,60
37	1702	1292	900,95	1732	1.010,47	2269	1.121,84	2805	1.340,88	3323	1.566,95
38	1748	1327	925,30	1779	1.037,78	2330	1.152,16	2881	1.377,12	3413	1.609,30
39	1794	1362	949,65	1826	1.065,09	2391	1.182,48	2957	1.413,36	3503	1.651,65
40	1840	1396	974,00	1872	1.092,40	2452	1.212,80	3032	1.449,60	3592	1.694,00

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		500									
Model		2050		3050		4050		5050		6050	
Depth	mm	62		100		136		173		210	
Exponent	n	1,25		1,25		1,26		1,27		1,28	
Max. number of elements		64		64		64		64		64	
Price/element	€	24,92		28,03		31,44		36,91		43,42	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	154	99,68	207	112,12	271	125,76	334	147,64	396	173,68
5	230	192	124,60	258	140,15	338	157,20	418	184,55	495	217,10
6	276	231	149,52	310	168,18	406	188,64	501	221,46	594	260,52
7	322	269	174,44	362	196,21	474	220,08	585	258,37	693	303,94
8	368	308	199,36	413	224,24	541	251,52	668	295,28	792	347,36
9	414	346	224,28	465	252,27	609	282,96	752	332,19	891	390,78
10	460	384	249,20	516	280,30	676	314,40	835	369,10	990	434,20
11	506	423	274,12	568	308,33	744	345,84	919	406,01	1089	477,62
12	552	461	299,04	620	336,36	812	377,28	1002	442,92	1188	521,04
13	598	500	323,96	671	364,39	879	408,72	1086	479,83	1287	564,46
14	644	538	348,88	723	392,42	947	440,16	1169	516,74	1386	607,88
15	690	576	373,80	774	420,45	1014	471,60	1253	553,65	1485	651,30
16	736	615	398,72	826	448,48	1082	503,04	1336	590,56	1584	694,72
17	782	653	423,64	878	476,51	1150	534,48	1420	627,47	1683	738,14
18	828	692	448,56	929	504,54	1217	565,92	1503	664,38	1782	781,56
19	874	730	473,48	981	532,57	1285	597,36	1587	701,29	1881	824,98
20	920	768	498,40	1032	560,60	1352	628,80	1670	738,20	1980	868,40
21	966	807	523,32	1084	588,63	1420	660,24	1754	775,11	2079	911,82
22	1012	845	548,24	1136	616,66	1488	691,68	1837	812,02	2178	955,24
23	1058	884	573,16	1187	644,69	1555	723,12	1921	848,93	2277	998,66
24	1104	922	598,08	1239	672,72	1623	754,56	2004	885,84	2376	1.042,08
25	1150	960	623,00	1290	700,75	1690	786,00	2088	922,75	2475	1.085,50
26	1196	999	647,92	1342	728,78	1758	817,44	2171	959,66	2574	1.128,92
27	1242	1037	672,84	1394	756,81	1826	848,88	2255	996,57	2673	1.172,34
28	1288	1076	697,76	1445	784,84	1893	880,32	2338	1.033,48	2772	1.215,76
29	1334	1114	722,68	1497	812,87	1961	911,76	2422	1.070,39	2871	1.259,18
30	1380	1152	747,60	1548	840,90	2028	943,20	2505	1.107,30	2970	1.302,60
31	1426	1191	772,52	1600	868,93	2096	974,64	2589	1.144,21	3069	1.346,02
32	1472	1229	797,44	1652	896,96	2164	1.006,08	2672	1.181,12	3168	1.389,44
33	1518	1268	822,36	1703	924,99	2231	1.037,52	2756	1.218,03	3267	1.432,86
34	1564	1306	847,28	1755	953,02	2299	1.068,96	2839	1.254,94	3366	1.476,28
35	1610	1344	872,20	1806	981,05	2366	1.100,40	2923	1.291,85	3465	1.519,70
36	1656	1383	897,12	1858	1.009,08	2434	1.131,84	3006	1.328,76	3564	1.563,12
37	1702	1421	922,04	1910	1.037,11	2502	1.163,28	3090	1.365,67	3663	1.606,54
38	1748	1460	946,96	1961	1.065,14	2569	1.194,72	3173	1.402,58	3762	1.649,96
39	1794	1498	971,88	2013	1.093,17	2637	1.226,16	3257	1.439,49	3861	1.693,38
40	1840	1536	996,80	2064	1.121,20	2704	1.257,60	3340	1.476,40	3960	1.736,80

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51



# Zehnder Charleston

$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		550									
mm											
Model		2055		3055		4055		5055		6055	
Depth	mm	62		100		136		173		210	
Exponent	n	1,25		1,26		1,26		1,27		1,28	
Max. number of elements		64		64		64		64		64	
Price/element	€	25,48		28,80		32,61		38,27		45,48	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	168	101,92	226	115,20	295	130,44	364	153,08	432	181,92
5	230	210	127,40	282	144,00	369	163,05	456	191,35	540	227,40
6	276	252	152,88	338	172,80	443	195,66	547	229,62	648	272,88
7	322	294	178,36	395	201,60	516	228,27	638	267,89	756	318,36
8	368	336	203,84	451	230,40	590	260,88	729	306,16	864	363,84
9	414	378	229,32	507	259,20	664	293,49	820	344,43	972	409,32
10	460	419	254,80	563	288,00	737	326,10	911	382,70	1080	454,80
11	506	461	280,28	620	316,80	811	358,71	1002	420,97	1188	500,28
12	552	503	305,76	676	345,60	885	391,32	1093	459,24	1296	545,76
13	598	545	331,24	732	374,40	959	423,93	1184	497,51	1404	591,24
14	644	587	356,72	789	403,20	1032	456,54	1275	535,78	1512	636,72
15	690	629	382,20	845	432,00	1106	489,15	1367	574,05	1620	682,20
16	736	671	407,68	901	460,80	1180	521,76	1458	612,32	1728	727,68
17	782	713	433,16	958	489,60	1253	554,37	1549	650,59	1836	773,16
18	828	755	458,64	1014	518,40	1327	586,98	1640	688,86	1944	818,64
19	874	797	484,12	1070	547,20	1401	619,59	1731	727,13	2052	864,12
20	920	838	509,60	1126	576,00	1474	652,20	1822	765,40	2160	909,60
21	966	880	535,08	1183	604,80	1548	684,81	1913	803,67	2268	955,08
22	1012	922	560,56	1239	633,60	1622	717,42	2004	841,94	2376	1.000,56
23	1058	964	586,04	1295	662,40	1696	750,03	2095	880,21	2484	1.046,04
24	1104	1006	611,52	1352	691,20	1769	782,64	2186	918,48	2592	1.091,52
25	1150	1048	637,00	1408	720,00	1843	815,25	2278	956,75	2700	1.137,00
26	1196	1090	662,48	1464	748,80	1917	847,86	2369	995,02	2808	1.182,48
27	1242	1132	687,96	1521	777,60	1990	880,47	2460	1.033,29	2916	1.227,96
28	1288	1174	713,44	1577	806,40	2064	913,08	2551	1.071,56	3024	1.273,44
29	1334	1216	738,92	1633	835,20	2138	945,69	2642	1.109,83	3132	1.318,92
30	1380	1257	764,40	1689	864,00	2211	978,30	2733	1.148,10	3240	1.364,40
31	1426	1299	789,88	1746	892,80	2285	1.010,91	2824	1.186,37	3348	1.409,88
32	1472	1341	815,36	1802	921,60	2359	1.043,52	2915	1.224,64	3456	1.455,36
33	1518	1383	840,84	1858	950,40	2433	1.076,13	3006	1.262,91	3564	1.500,84
34	1564	1425	866,32	1915	979,20	2506	1.108,74	3097	1.301,18	3672	1.546,32
35	1610	1467	891,80	1971	1.008,00	2580	1.141,35	3189	1.339,45	3780	1.591,80
36	1656	1509	917,28	2027	1.036,80	2654	1.173,96	3280	1.377,72	3888	1.637,28
37	1702	1551	942,76	2084	1.065,60	2727	1.206,57	3371	1.415,99	3996	1.682,76
38	1748	1593	968,24	2140	1.094,40	2801	1.239,18	3462	1.454,26	4104	1.728,24
39	1794	1635	993,72	2196	1.123,20	2875	1.271,79	3553	1.492,53	4212	1.773,72
40	1840	1676	1.019,20	2252	1.152,00	2948	1.304,40	3644	1.530,80	4320	1.819,20

Surcharge for Completo, valve at top, connections V001/V002 €: 216,05

Surcharge for Completo, valve at top, connections V007/V008 €: 287,08

Surcharge for Completo, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		600									
Model		2060		3060		4060		5060		6060	
Depth	mm	62		100		136		173		210	
Exponent	n	1,25		1,26		1,27		1,27		1,29	
Max. number of elements		64		64		64		64		64	
Price/element	€	26,03		29,60		34,05		40,02		47,18	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	182	104,12	244	118,40	320	136,20	395	160,08	468	188,72
5	230	227	130,15	305	148,00	399	170,25	493	200,10	585	235,90
6	276	272	156,18	366	177,60	479	204,30	592	240,12	702	283,08
7	322	318	182,21	427	207,20	559	238,35	691	280,14	819	330,26
8	368	363	208,24	488	236,80	639	272,40	789	320,16	936	377,44
9	414	408	234,27	549	266,40	719	306,45	888	360,18	1053	424,62
10	460	453	260,30	609	296,00	798	340,50	986	400,20	1170	471,80
11	506	499	286,33	670	325,60	878	374,55	1085	440,22	1287	518,98
12	552	544	312,36	731	355,20	958	408,60	1184	480,24	1404	566,16
13	598	589	338,39	792	384,80	1038	442,65	1282	520,26	1521	613,34
14	644	635	364,42	853	414,40	1118	476,70	1381	560,28	1638	660,52
15	690	680	390,45	914	444,00	1197	510,75	1479	600,30	1755	707,70
16	736	725	416,48	975	473,60	1277	544,80	1578	640,32	1872	754,88
17	782	771	442,51	1036	503,20	1357	578,85	1677	680,34	1989	802,06
18	828	816	468,54	1097	532,80	1437	612,90	1775	720,36	2106	849,24
19	874	861	494,57	1158	562,40	1517	646,95	1874	760,38	2223	896,42
20	920	906	520,60	1218	592,00	1596	681,00	1972	800,40	2340	943,60
21	966	952	546,63	1279	621,60	1676	715,05	2071	840,42	2457	990,78
22	1012	997	572,66	1340	651,20	1756	749,10	2170	880,44	2574	1.037,96
23	1058	1042	598,69	1401	680,80	1836	783,15	2268	920,46	2691	1.085,14
24	1104	1088	624,72	1462	710,40	1916	817,20	2367	960,48	2808	1.132,32
25	1150	1133	650,75	1523	740,00	1995	851,25	2465	1.000,50	2925	1.179,50
26	1196	1178	676,78	1584	769,60	2075	885,30	2564	1.040,52	3042	1.226,68
27	1242	1224	702,81	1645	799,20	2155	919,35	2663	1.080,54	3159	1.273,86
28	1288	1269	728,84	1706	828,80	2235	953,40	2761	1.120,56	3276	1.321,04
29	1334	1314	754,87	1767	858,40	2315	987,45	2860	1.160,58	3393	1.368,22
30	1380	1359	780,90	1827	888,00	2394	1.021,50	2958	1.200,60	3510	1.415,40
31	1426	1405	806,93	1888	917,60	2474	1.055,55	3057	1.240,62	3627	1.462,58
32	1472	1450	832,96	1949	947,20	2554	1.089,60	3156	1.280,64	3744	1.509,76
33	1518	1495	858,99	2010	976,80	2634	1.123,65	3254	1.320,66	3861	1.556,94
34	1564	1541	885,02	2071	1.006,40	2714	1.157,70	3353	1.360,68	3978	1.604,12
35	1610	1586	911,05	2132	1.036,00	2793	1.191,75	3451	1.400,70	4095	1.651,30
36	1656	1631	937,08	2193	1.065,60	2873	1.225,80	3550	1.440,72	4212	1.698,48
37	1702	1677	963,11	2254	1.095,20	2953	1.259,85	3649	1.480,74	4329	1.745,66
38	1748	1722	989,14	2315	1.124,80	3033	1.293,90	3747	1.520,76	4446	1.792,84
39	1794	1767	1.015,17	2376	1.154,40	3113	1.327,95	3846	1.560,78	4563	1.840,02
40	1840	1812	1.041,20	2436	1.184,00	3192	1.362,00	3944	1.600,80	4680	1.887,20

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51



# Zehnder Charleston

$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		750									
mm											
Model		2075		3075		4075		5075		6075	
Depth	mm	62		100		136		173		210	
Exponent	n	1,25		1,26		1,27		1,29		1,30	
Max. number of elements		64		64		64		64		55	
Price/element		€ 27,71		€ 32,05		€ 38,51		€ 45,85		€ 53,76	
Length		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price	
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	220	110,84	298	128,20	390	154,04	480	183,40	572	215,04
5	230	275	138,55	372	160,25	487	192,55	600	229,25	715	268,80
6	276	330	166,26	446	192,30	585	231,06	720	275,10	858	322,56
7	322	385	193,97	521	224,35	682	269,57	840	320,95	1001	376,32
8	368	440	221,68	595	256,40	780	308,08	960	366,80	1144	430,08
9	414	495	249,39	669	288,45	877	346,59	1080	412,65	1287	483,84
10	460	550	277,10	743	320,50	974	385,10	1200	458,50	1430	537,60
11	506	605	304,81	818	352,55	1072	423,61	1320	504,35	1573	591,36
12	552	660	332,52	892	384,60	1169	462,12	1440	550,20	1716	645,12
13	598	715	360,23	966	416,65	1267	500,63	1560	596,05	1859	698,88
14	644	770	387,94	1041	448,70	1364	539,14	1680	641,90	2002	752,64
15	690	825	415,65	1115	480,75	1461	577,65	1800	687,75	2145	806,40
16	736	880	443,36	1189	512,80	1559	616,16	1920	733,60	2288	860,16
17	782	935	471,07	1264	544,85	1656	654,67	2040	779,45	2431	913,92
18	828	990	498,78	1338	576,90	1754	693,18	2160	825,30	2574	967,68
19	874	1045	526,49	1412	608,95	1851	731,69	2280	871,15	2717	1.021,44
20	920	1100	554,20	1486	641,00	1948	770,20	2400	917,00	2860	1.075,20
21	966	1155	581,91	1561	673,05	2046	808,71	2520	962,85	3003	1.128,96
22	1012	1210	609,62	1635	705,10	2143	847,22	2640	1.008,70	3146	1.182,72
23	1058	1265	637,33	1709	737,15	2241	885,73	2760	1.054,55	3289	1.236,48
24	1104	1320	665,04	1784	769,20	2338	924,24	2880	1.100,40	3432	1.290,24
25	1150	1375	692,75	1858	801,25	2435	962,75	3000	1.146,25	3575	1.344,00
26	1196	1430	720,46	1932	833,30	2533	1.001,26	3120	1.192,10	3718	1.397,76
27	1242	1485	748,17	2007	865,35	2630	1.039,77	3240	1.237,95	3861	1.451,52
28	1288	1540	775,88	2081	897,40	2728	1.078,28	3360	1.283,80	4004	1.505,28
29	1334	1595	803,59	2155	929,45	2825	1.116,79	3480	1.329,65	4147	1.559,04
30	1380	1650	831,30	2229	961,50	2922	1.155,30	3600	1.375,50	4290	1.612,80
31	1426	1705	859,01	2304	993,55	3020	1.193,81	3720	1.421,35	4433	1.666,56
32	1472	1760	886,72	2378	1.025,60	3117	1.232,32	3840	1.467,20	4576	1.720,32
33	1518	1815	914,43	2452	1.057,65	3215	1.270,83	3960	1.513,05	4719	1.774,08
34	1564	1870	942,14	2527	1.089,70	3312	1.309,34	4080	1.558,90	4862	1.827,84
35	1610	1925	969,85	2601	1.121,75	3409	1.347,85	4200	1.604,75	5005	1.881,60
36	1656	1980	997,56	2675	1.153,80	3507	1.386,36	4320	1.650,60	5148	1.935,36
37	1702	2035	1.025,27	2750	1.185,85	3604	1.424,87	4440	1.696,45	5291	1.989,12
38	1748	2090	1.052,98	2824	1.217,90	3702	1.463,38	4560	1.742,30	5434	2.042,88
39	1794	2145	1.080,69	2898	1.249,95	3799	1.501,89	4680	1.788,15	5577	2.096,64
40	1840	2200	1.108,40	2972	1.282,00	3896	1.540,40	4800	1.834,00	5720	2.150,40

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		900									
Model		2090		3090		4090		5090		6090	
Depth	mm	62		100		136		173		210	
Exponent	n	1,25		1,27		1,28		1,30		1,31	
Max. number of elements		64		64		64		50		46	
Price/element	€	29,26		34,49		44,19		52,23		60,47	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	256	117,04	348	137,96	456	176,76	564	208,92	668	241,88
5	230	320	146,30	435	172,45	570	220,95	705	261,15	835	302,35
6	276	384	175,56	522	206,94	684	265,14	846	313,38	1002	362,82
7	322	448	204,82	609	241,43	798	309,33	987	365,61	1169	423,29
8	368	512	234,08	696	275,92	912	353,52	1128	417,84	1336	483,76
9	414	576	263,34	783	310,41	1026	397,71	1269	470,07	1503	544,23
10	460	639	292,60	870	344,90	1140	441,90	1410	522,30	1670	604,70
11	506	703	321,86	957	379,39	1254	486,09	1551	574,53	1837	665,17
12	552	767	351,12	1044	413,88	1368	530,28	1692	626,76	2004	725,64
13	598	831	380,38	1131	448,37	1482	574,47	1833	678,99	2171	786,11
14	644	895	409,64	1218	482,86	1596	618,66	1974	731,22	2338	846,58
15	690	959	438,90	1305	517,35	1710	662,85	2115	783,45	2505	907,05
16	736	1023	468,16	1392	551,84	1824	707,04	2256	835,68	2672	967,52
17	782	1087	497,42	1479	586,33	1938	751,23	2397	887,91	2839	1.027,99
18	828	1151	526,68	1566	620,82	2052	795,42	2538	940,14	3006	1.088,46
19	874	1215	555,94	1653	655,31	2166	839,61	2679	992,37	3173	1.148,93
20	920	1278	585,20	1740	689,80	2280	883,80	2820	1.044,60	3340	1.209,40
21	966	1342	614,46	1827	724,29	2394	927,99	2961	1.096,83	3507	1.269,87
22	1012	1406	643,72	1914	758,78	2508	972,18	3102	1.149,06	3674	1.330,34
23	1058	1470	672,98	2001	793,27	2622	1.016,37	3243	1.201,29	3841	1.390,81
24	1104	1534	702,24	2088	827,76	2736	1.060,56	3384	1.253,52	4008	1.451,28
25	1150	1598	731,50	2175	862,25	2850	1.104,75	3525	1.305,75	4175	1.511,75
26	1196	1662	760,76	2262	896,74	2964	1.148,94	3666	1.357,98	4342	1.572,22
27	1242	1726	790,02	2349	931,23	3078	1.193,13	3807	1.410,21	4509	1.632,69
28	1288	1790	819,28	2436	965,72	3192	1.237,32	3948	1.462,44	4676	1.693,16
29	1334	1854	848,54	2523	1.000,21	3306	1.281,51	4089	1.514,67	4843	1.753,63
30	1380	1917	877,80	2610	1.034,70	3420	1.325,70	4230	1.566,90	5010	1.814,10
31	1426	1981	907,06	2697	1.069,19	3534	1.369,89	4371	1.619,13	5177	1.874,57
32	1472	2045	936,32	2784	1.103,68	3648	1.414,08	4512	1.671,36	5344	1.935,04
33	1518	2109	965,58	2871	1.138,17	3762	1.458,27	4653	1.723,59	5511	1.995,51
34	1564	2173	994,84	2958	1.172,66	3876	1.502,46	4794	1.775,82	5678	2.055,98
35	1610	2237	1.024,10	3045	1.207,15	3990	1.546,65	4935	1.828,05	5845	2.116,45
36	1656	2301	1.053,36	3132	1.241,64	4104	1.590,84	5076	1.880,28	6012	2.176,92
37	1702	2365	1.082,62	3219	1.276,13	4218	1.635,03	5217	1.932,51	6179	2.237,39
38	1748	2429	1.111,88	3306	1.310,62	4332	1.679,22	5358	1.984,74	6346	2.297,86
39	1794	2493	1.141,14	3393	1.345,11	4446	1.723,41	5499	2.036,97	6513	2.358,33
40	1840	2556	1.170,40	3480	1.379,60	4560	1.767,60	5640	2.089,20	6680	2.418,80

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51





# Zehnder Charleston

$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		1000									
mm											
Model		2100		3100		4100		5100		6100	
Depth	mm	62		100		136		173		210	
Exponent	n	1,25		1,27		1,29		1,30		1,31	
Max. number of elements		64		64		60		50		42	
Price/element	€	30,32		36,01		47,78		55,68		65,17	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	278	121,28	381	144,04	500	191,12	616	222,72	732	260,68
5	230	348	151,60	476	180,05	625	238,90	770	278,40	915	325,85
6	276	417	181,92	571	216,06	750	286,68	924	334,08	1098	391,02
7	322	487	212,24	666	252,07	875	334,46	1078	389,76	1281	456,19
8	368	556	242,56	761	288,08	1000	382,24	1232	445,44	1464	521,36
9	414	626	272,88	856	324,09	1125	430,02	1386	501,12	1647	586,53
10	460	695	303,20	951	360,10	1250	477,80	1540	556,80	1830	651,70
11	506	765	333,52	1047	396,11	1375	525,58	1694	612,48	2013	716,87
12	552	834	363,84	1142	432,12	1500	573,36	1848	668,16	2196	782,04
13	598	904	394,16	1237	468,13	1625	621,14	2002	723,84	2379	847,21
14	644	973	424,48	1332	504,14	1750	668,92	2156	779,52	2562	912,38
15	690	1043	454,80	1427	540,15	1875	716,70	2310	835,20	2745	977,55
16	736	1112	485,12	1522	576,16	2000	764,48	2464	890,88	2928	1.042,72
17	782	1182	515,44	1617	612,17	2125	812,26	2618	946,56	3111	1.107,89
18	828	1251	545,76	1712	648,18	2250	860,04	2772	1.002,24	3294	1.173,06
19	874	1321	576,08	1807	684,19	2375	907,82	2926	1.057,92	3477	1.238,23
20	920	1390	606,40	1902	720,20	2500	955,60	3080	1.113,60	3660	1.303,40
21	966	1460	636,72	1998	756,21	2625	1.003,38	3234	1.169,28	3843	1.368,57
22	1012	1529	667,04	2093	792,22	2750	1.051,16	3388	1.224,96	4026	1.433,74
23	1058	1599	697,36	2188	828,23	2875	1.098,94	3542	1.280,64	4209	1.498,91
24	1104	1668	727,68	2283	864,24	3000	1.146,72	3696	1.336,32	4392	1.564,08
25	1150	1738	758,00	2378	900,25	3125	1.194,50	3850	1.392,00	4575	1.629,25
26	1196	1807	788,32	2473	936,26	3250	1.242,28	4004	1.447,68	4758	1.694,42
27	1242	1877	818,64	2568	972,27	3375	1.290,06	4158	1.503,36	4941	1.759,59
28	1288	1946	848,96	2663	1.008,28	3500	1.337,84	4312	1.559,04	5124	1.824,76
29	1334	2016	879,28	2758	1.044,29	3625	1.385,62	4466	1.614,72	5307	1.889,93
30	1380	2085	909,60	2853	1.080,30	3750	1.433,40	4620	1.670,40	5490	1.955,10
31	1426	2155	939,92	2949	1.116,31	3875	1.481,18	4774	1.726,08	5673	2.020,27
32	1472	2224	970,24	3044	1.152,32	4000	1.528,96	4928	1.781,76	5856	2.085,44
33	1518	2294	1.000,56	3139	1.188,33	4125	1.576,74	5082	1.837,44	6039	2.150,61
34	1564	2363	1.030,88	3234	1.224,34	4250	1.624,52	5236	1.893,12	6222	2.215,78
35	1610	2433	1.061,20	3329	1.260,35	4375	1.672,30	5390	1.948,80	6405	2.280,95
36	1656	2502	1.091,52	3424	1.296,36	4500	1.720,08	5544	2.004,48	6588	2.346,12
37	1702	2572	1.121,84	3519	1.332,37	4625	1.767,86	5698	2.060,16	6771	2.411,29
38	1748	2641	1.152,16	3614	1.368,38	4750	1.815,64	5852	2.115,84	6954	2.476,46
39	1794	2711	1.182,48	3709	1.404,39	4875	1.863,42	6006	2.171,52	7137	2.541,63
40	1840	2780	1.212,80	3804	1.440,40	5000	1.911,20	6160	2.227,20	7320	2.606,80

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		1100									
mm											
Model		2110		3110		4110		5110		6110	
Depth mm		62		100		136		173		210	
Exponent n		1,25		1,28		1,29		1,31		1,32	
Max. number of elements		22		22		22		22		22	
Price/element €		31,44		40,65		52,96		64,62		76,85	
Length		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price	
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	299	125,76	412	162,60	540	211,84	668	258,48	792	307,40
5	230	374	157,20	515	203,25	675	264,80	835	323,10	990	384,25
6	276	449	188,64	618	243,90	810	317,76	1002	387,72	1188	461,10
7	322	523	220,08	721	284,55	945	370,72	1169	452,34	1386	537,95
8	368	598	251,52	824	325,20	1080	423,68	1336	516,96	1584	614,80
9	414	673	282,96	927	365,85	1215	476,64	1503	581,58	1782	691,65
10	460	747	314,40	1030	406,50	1350	529,60	1670	646,20	1980	768,50
11	506	822	345,84	1133	447,15	1485	582,56	1837	710,82	2178	845,35
12	552	897	377,28	1236	487,80	1620	635,52	2004	775,44	2376	922,20
13	598	972	408,72	1339	528,45	1755	688,48	2171	840,06	2574	999,05
14	644	1046	440,16	1442	569,10	1890	741,44	2338	904,68	2772	1.075,90
15	690	1121	471,60	1545	609,75	2025	794,40	2505	969,30	2970	1.152,75
16	736	1196	503,04	1648	650,40	2160	847,36	2672	1.033,92	3168	1.229,60
17	782	1270	534,48	1751	691,05	2295	900,32	2839	1.098,54	3366	1.306,45
18	828	1345	565,92	1854	731,70	2430	953,28	3006	1.163,16	3564	1.383,30
19	874	1420	597,36	1957	772,35	2565	1.006,24	3173	1.227,78	3762	1.460,15
20	920	1494	628,80	2060	813,00	2700	1.059,20	3340	1.292,40	3960	1.537,00
21	966	1569	660,24	2163	853,65	2835	1.112,16	3507	1.357,02	4158	1.613,85
22	1012	1644	691,68	2266	894,30	2970	1.165,12	3674	1.421,64	4356	1.690,70
23	1058	1719	723,12	2369	934,95	3105	1.218,08	3841	1.486,26	4554	1.767,55
24	1104	1793	754,56	2472	975,60	3240	1.271,04	4008	1.550,88	4752	1.844,40
25	1150	1868	786,00	2575	1.016,25	3375	1.324,00	4175	1.615,50	4950	1.921,25
26	1196	1943	817,44	2678	1.056,90	3510	1.376,96	4342	1.680,12	5148	1.998,10
27	1242	2017	848,88	2781	1.097,55	3645	1.429,92	4509	1.744,74	5346	2.074,95
28	1288	2092	880,32	2884	1.138,20	3780	1.482,88	4676	1.809,36	5544	2.151,80
29	1334	2167	911,76	2987	1.178,85	3915	1.535,84	4843	1.873,98	5742	2.228,65
30	1380	2241	943,20	3090	1.219,50	4050	1.588,80	5010	1.938,60	5940	2.305,50
31	1426	2316	974,64	3193	1.260,15	4185	1.641,76	5177	2.003,22	6138	2.382,35
32	1472	2391	1.006,08	3296	1.300,80	4320	1.694,72	5344	2.067,84	6336	2.459,20
33	1518	2466	1.037,52	3399	1.341,45	4455	1.747,68	5511	2.132,46	6534	2.536,05
34	1564	2540	1.068,96	3502	1.382,10	4590	1.800,64	5678	2.197,08	6732	2.612,90
35	1610	2615	1.100,40	3605	1.422,75	4725	1.853,60	5845	2.261,70	6930	2.689,75
36	1656	2690	1.131,84	3708	1.463,40	4860	1.906,56	6012	2.326,32	7128	2.766,60
37	1702	2764	1.163,28	3811	1.504,05	4995	1.959,52	6179	2.390,94	7326	2.843,45
38	1748	2839	1.194,72	3914	1.544,70	5130	2.012,48	6346	2.455,56	7524	2.920,30
39	1794	2914	1.226,16	4017	1.585,35	5265	2.065,44	6513	2.520,18	7722	2.997,15
40	1840	2988	1.257,60	4120	1.626,00	5400	2.118,40	6680	2.584,80	7920	3.074,00

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51



# Zehnder Charleston

$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		1200									
mm											
Model		2120		3120		4120		5120		6120	
Depth	mm	62		100		136		173		210	
Exponent	n	1,26		1,29		1,30		1,31		1,32	
Max. number of elements		22		22		22		22		22	
Price/element	€	33,80		47,47		59,79		74,76		87,13	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	331	135,20	460	189,88	588	239,16	716	299,04	840	348,52
5	230	414	169,00	575	237,35	735	298,95	895	373,80	1050	435,65
6	276	497	202,80	690	284,82	882	358,74	1074	448,56	1260	522,78
7	322	579	236,60	805	332,29	1029	418,53	1253	523,32	1470	609,91
8	368	662	270,40	920	379,76	1176	478,32	1432	598,08	1680	697,04
9	414	745	304,20	1035	427,23	1323	538,11	1611	672,84	1890	784,17
10	460	827	338,00	1150	474,70	1470	597,90	1790	747,60	2100	871,30
11	506	910	371,80	1265	522,17	1617	657,69	1969	822,36	2310	958,43
12	552	993	405,60	1380	569,64	1764	717,48	2148	897,12	2520	1.045,56
13	598	1076	439,40	1495	617,11	1911	777,27	2327	971,88	2730	1.132,69
14	644	1158	473,20	1610	664,58	2058	837,06	2506	1.046,64	2940	1.219,82
15	690	1241	507,00	1725	712,05	2205	896,85	2685	1.121,40	3150	1.306,95
16	736	1324	540,80	1840	759,52	2352	956,64	2864	1.196,16	3360	1.394,08
17	782	1406	574,60	1955	806,99	2499	1.016,43	3043	1.270,92	3570	1.481,21
18	828	1489	608,40	2070	854,46	2646	1.076,22	3222	1.345,68	3780	1.568,34
19	874	1572	642,20	2185	901,93	2793	1.136,01	3401	1.420,44	3990	1.655,47
20	920	1654	676,00	2300	949,40	2940	1.195,80	3580	1.495,20	4200	1.742,60
21	966	1737	709,80	2415	996,87	3087	1.255,59	3759	1.569,96	4410	1.829,73
22	1012	1820	743,60	2530	1.044,34	3234	1.315,38	3938	1.644,72	4620	1.916,86
23	1058	1903	777,40	2645	1.091,81	3381	1.375,17	4117	1.719,48	4830	2.003,99
24	1104	1985	811,20	2760	1.139,28	3528	1.434,96	4296	1.794,24	5040	2.091,12
25	1150	2068	845,00	2875	1.186,75	3675	1.494,75	4475	1.869,00	5250	2.178,25
26	1196	2151	878,80	2990	1.234,22	3822	1.554,54	4654	1.943,76	5460	2.265,38
27	1242	2233	912,60	3105	1.281,69	3969	1.614,33	4833	2.018,52	5670	2.352,51
28	1288	2316	946,40	3220	1.329,16	4116	1.674,12	5012	2.093,28	5880	2.439,64
29	1334	2399	980,20	3335	1.376,63	4263	1.733,91	5191	2.168,04	6090	2.526,77
30	1380	2481	1.014,00	3450	1.424,10	4410	1.793,70	5370	2.242,80	6300	2.613,90
31	1426	2564	1.047,80	3565	1.471,57	4557	1.853,49	5549	2.317,56	6510	2.701,03
32	1472	2647	1.081,60	3680	1.519,04	4704	1.913,28	5728	2.392,32	6720	2.788,16
33	1518	2730	1.115,40	3795	1.566,51	4851	1.973,07	5907	2.467,08	6930	2.875,29
34	1564	2812	1.149,20	3910	1.613,98	4998	2.032,86	6086	2.541,84	7140	2.962,42
35	1610	2895	1.183,00	4025	1.661,45	5145	2.092,65	6265	2.616,60	7350	3.049,55
36	1656	2978	1.216,80	4140	1.708,92	5292	2.152,44	6444	2.691,36	7560	3.136,68
37	1702	3060	1.250,60	4255	1.756,39	5439	2.212,23	6623	2.766,12	7770	3.223,81
38	1748	3143	1.284,40	4370	1.803,86	5586	2.272,02	6802	2.840,88	7980	3.310,94
39	1794	3226	1.318,20	4485	1.851,33	5733	2.331,81	6981	2.915,64	8190	3.398,07
40	1840	3308	1.352,00	4600	1.898,80	5880	2.391,60	7160	2.990,40	8400	3.485,20

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		1500									
Model		2150		3150		4150		5150		6150	
Depth	mm	62		100		136		173		210	
Exponent	n	1,28		1,31		1,31		1,32		1,32	
Max. number of elements		22		22		22		22		22	
Price/element	€	43,03		61,48		80,37		100,40		119,64	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	416	172,12	560	245,92	720	321,48	876	401,60	1024	478,56
5	230	520	215,15	700	307,40	900	401,85	1095	502,00	1280	598,20
6	276	624	258,18	840	368,88	1080	482,22	1314	602,40	1536	717,84
7	322	728	301,21	980	430,36	1260	562,59	1533	702,80	1792	837,48
8	368	832	344,24	1120	491,84	1440	642,96	1752	803,20	2048	957,12
9	414	936	387,27	1260	553,32	1620	723,33	1971	903,60	2304	1.076,76
10	460	1040	430,30	1400	614,80	1800	803,70	2190	1.004,00	2560	1.196,40
11	506	1144	473,33	1540	676,28	1980	884,07	2409	1.104,40	2816	1.316,04
12	552	1248	516,36	1680	737,76	2160	964,44	2628	1.204,80	3072	1.435,68
13	598	1352	559,39	1820	799,24	2340	1.044,81	2847	1.305,20	3328	1.555,32
14	644	1456	602,42	1960	860,72	2520	1.125,18	3066	1.405,60	3584	1.674,96
15	690	1560	645,45	2100	922,20	2700	1.205,55	3285	1.506,00	3840	1.794,60
16	736	1664	688,48	2240	983,68	2880	1.285,92	3504	1.606,40	4096	1.914,24
17	782	1768	731,51	2380	1.045,16	3060	1.366,29	3723	1.706,80	4352	2.033,88
18	828	1872	774,54	2520	1.106,64	3240	1.446,66	3942	1.807,20	4608	2.153,52
19	874	1976	817,57	2660	1.168,12	3420	1.527,03	4161	1.907,60	4864	2.273,16
20	920	2080	860,60	2800	1.229,60	3600	1.607,40	4380	2.008,00	5120	2.392,80
21	966	2184	903,63	2940	1.291,08	3780	1.687,77	4599	2.108,40	5376	2.512,44
22	1012	2288	946,66	3080	1.352,56	3960	1.768,14	4818	2.208,80	5632	2.632,08
23	1058	2392	989,69	3220	1.414,04	4140	1.848,51	5037	2.309,20	5888	2.751,72
24	1104	2496	1.032,72	3360	1.475,52	4320	1.928,88	5256	2.409,60	6144	2.871,36
25	1150	2600	1.075,75	3500	1.537,00	4500	2.009,25	5475	2.510,00	6400	2.991,00
26	1196	2704	1.118,78	3640	1.598,48	4680	2.089,62	5694	2.610,40	6656	3.110,64
27	1242	2808	1.161,81	3780	1.659,96	4860	2.169,99	5913	2.710,80	6912	3.230,28
28	1288	2912	1.204,84	3920	1.721,44	5040	2.250,36	6132	2.811,20	7168	3.349,92
29	1334	3016	1.247,87	4060	1.782,92	5220	2.330,73	6351	2.911,60	7424	3.469,56
30	1380	3120	1.290,90	4200	1.844,40	5400	2.411,10	6570	3.012,00	7680	3.589,20
31	1426	3224	1.333,93	4340	1.905,88	5580	2.491,47	6789	3.112,40	7936	3.708,84
32	1472	3328	1.376,96	4480	1.967,36	5760	2.571,84	7008	3.212,80	8192	3.828,48
33	1518	3432	1.419,99	4620	2.028,84	5940	2.652,21	7227	3.313,20	8448	3.948,12
34	1564	3536	1.463,02	4760	2.090,32	6120	2.732,58	7446	3.413,60	8704	4.067,76
35	1610	3640	1.506,05	4900	2.151,80	6300	2.812,95	7665	3.514,00	8960	4.187,40
36	1656	3744	1.549,08	5040	2.213,28	6480	2.893,32	7884	3.614,40	9216	4.307,04
37	1702	3848	1.592,11	5180	2.274,76	6660	2.973,69	8103	3.714,80	9472	4.426,68
38	1748	3952	1.635,14	5320	2.336,24	6840	3.054,06	8322	3.815,20	9728	4.546,32
39	1794	4056	1.678,17	5460	2.397,72	7020	3.134,43	8541	3.915,60	9984	4.665,96
40	1840	4160	1.721,20	5600	2.459,20	7200	3.214,80	8760	4.016,00	10240	4.785,60

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51



# Zehnder Charleston

$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		1800									
mm											
Model		2180		3180		4180		5180		6180	
Depth	mm	62		100		136		173		210	
Exponent	n	1,31		1,33		1,33		1,32		1,33	
Max. number of elements		22		22		22		22		22	
Price/element	€	50,85		75,89		96,47		118,43		140,63	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	496	203,40	664	303,56	852	385,88	1036	473,72	1212	562,52
5	230	620	254,25	830	379,45	1065	482,35	1295	592,15	1515	703,15
6	276	744	305,10	996	455,34	1278	578,82	1554	710,58	1818	843,78
7	322	868	355,95	1162	531,23	1491	675,29	1813	829,01	2121	984,41
8	368	992	406,80	1328	607,12	1704	771,76	2072	947,44	2424	1.125,04
9	414	1116	457,65	1494	683,01	1917	868,23	2331	1.065,87	2727	1.265,67
10	460	1240	508,50	1660	758,90	2130	964,70	2590	1.184,30	3030	1.406,30
11	506	1364	559,35	1826	834,79	2343	1.061,17	2849	1.302,73	3333	1.546,93
12	552	1488	610,20	1992	910,68	2556	1.157,64	3108	1.421,16	3636	1.687,56
13	598	1612	661,05	2158	986,57	2769	1.254,11	3367	1.539,59	3939	1.828,19
14	644	1736	711,90	2324	1.062,46	2982	1.350,58	3626	1.658,02	4242	1.968,82
15	690	1860	762,75	2490	1.138,35	3195	1.447,05	3885	1.776,45	4545	2.109,45
16	736	1984	813,60	2656	1.214,24	3408	1.543,52	4144	1.894,88	4848	2.250,08
17	782	2108	864,45	2822	1.290,13	3621	1.639,99	4403	2.013,31	5151	2.390,71
18	828	2232	915,30	2988	1.366,02	3834	1.736,46	4662	2.131,74	5454	2.531,34
19	874	2356	966,15	3154	1.441,91	4047	1.832,93	4921	2.250,17	5757	2.671,97
20	920	2480	1.017,00	3320	1.517,80	4260	1.929,40	5180	2.368,60	6060	2.812,60
21	966	2604	1.067,85	3486	1.593,69	4473	2.025,87	5439	2.487,03	6363	2.953,23
22	1012	2728	1.118,70	3652	1.669,58	4686	2.122,34	5698	2.605,46	6666	3.093,86
23	1058	2852	1.169,55	3818	1.745,47	4899	2.218,81	5957	2.723,89	6969	3.234,49
24	1104	2976	1.220,40	3984	1.821,36	5112	2.315,28	6216	2.842,32	7272	3.375,12
25	1150	3100	1.271,25	4150	1.897,25	5325	2.411,75	6475	2.960,75	7575	3.515,75
26	1196	3224	1.322,10	4316	1.973,14	5538	2.508,22	6734	3.079,18	7878	3.656,38
27	1242	3348	1.372,95	4482	2.049,03	5751	2.604,69	6993	3.197,61	8181	3.797,01
28	1288	3472	1.423,80	4648	2.124,92	5964	2.701,16	7252	3.316,04	8484	3.937,64
29	1334	3596	1.474,65	4814	2.200,81	6177	2.797,63	7511	3.434,47	8787	4.078,27
30	1380	3720	1.525,50	4980	2.276,70	6390	2.894,10	7770	3.552,90	9090	4.218,90
31	1426	3844	1.576,35	5146	2.352,59	6603	2.990,57	8029	3.671,33	9393	4.359,53
32	1472	3968	1.627,20	5312	2.428,48	6816	3.087,04	8288	3.789,76	9696	4.500,16
33	1518	4092	1.678,05	5478	2.504,37	7029	3.183,51	8547	3.908,19	9999	4.640,79
34	1564	4216	1.728,90	5644	2.580,26	7242	3.279,98	8806	4.026,62	10302	4.781,42
35	1610	4340	1.779,75	5810	2.656,15	7455	3.376,45	9065	4.145,05	10605	4.922,05
36	1656	4464	1.830,60	5976	2.732,04	7668	3.472,92	9324	4.263,48	10908	5.062,68
37	1702	4588	1.881,45	6142	2.807,93	7881	3.569,39	9583	4.381,91	11211	5.203,31
38	1748	4712	1.932,30	6308	2.883,82	8094	3.665,86	9842	4.500,34	11514	5.343,94
39	1794	4836	1.983,15	6474	2.959,71	8307	3.762,33	10101	4.618,77	11817	5.484,57
40	1840	4960	2.034,00	6640	3.035,60	8520	3.858,80	10360	4.737,20	12120	5.625,20

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		2000									
Model		2200		3200		4200		5200		6200	
Depth	mm	62		100		136		173		210	
Exponent	n	1,31		1,33		1,32		1,32		1,32	
Max. number of elements		22		22		22		22		22	
Price/element	€	57,44		82,08		107,77		132,13		156,52	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	552	229,76	732	328,32	936	431,08	1140	528,52	1336	626,08
5	230	690	287,20	915	410,40	1170	538,85	1425	660,65	1670	782,60
6	276	828	344,64	1098	492,48	1404	646,62	1710	792,78	2004	939,12
7	322	966	402,08	1281	574,56	1638	754,39	1995	924,91	2338	1.095,64
8	368	1104	459,52	1464	656,64	1872	862,16	2280	1.057,04	2672	1.252,16
9	414	1242	516,96	1647	738,72	2106	969,93	2565	1.189,17	3006	1.408,68
10	460	1380	574,40	1830	820,80	2340	1.077,70	2850	1.321,30	3340	1.565,20
11	506	1518	631,84	2013	902,88	2574	1.185,47	3135	1.453,43	3674	1.721,72
12	552	1656	689,28	2196	984,96	2808	1.293,24	3420	1.585,56	4008	1.878,24
13	598	1794	746,72	2379	1.067,04	3042	1.401,01	3705	1.717,69	4342	2.034,76
14	644	1932	804,16	2562	1.149,12	3276	1.508,78	3990	1.849,82	4676	2.191,28
15	690	2070	861,60	2745	1.231,20	3510	1.616,55	4275	1.981,95	5010	2.347,80
16	736	2208	919,04	2928	1.313,28	3744	1.724,32	4560	2.114,08	5344	2.504,32
17	782	2346	976,48	3111	1.395,36	3978	1.832,09	4845	2.246,21	5678	2.660,84
18	828	2484	1.033,92	3294	1.477,44	4212	1.939,86	5130	2.378,34	6012	2.817,36
19	874	2622	1.091,36	3477	1.559,52	4446	2.047,63	5415	2.510,47	6346	2.973,88
20	920	2760	1.148,80	3660	1.641,60	4680	2.155,40	5700	2.642,60	6680	3.130,40
21	966	2898	1.206,24	3843	1.723,68	4914	2.263,17	5985	2.774,73	7014	3.286,92
22	1012	3036	1.263,68	4026	1.805,76	5148	2.370,94	6270	2.906,86	7348	3.443,44
23	1058	3174	1.321,12	4209	1.887,84	5382	2.478,71	6555	3.038,99	7682	3.599,96
24	1104	3312	1.378,56	4392	1.969,92	5616	2.586,48	6840	3.171,12	8016	3.756,48
25	1150	3450	1.436,00	4575	2.052,00	5850	2.694,25	7125	3.303,25	8350	3.913,00
26	1196	3588	1.493,44	4758	2.134,08	6084	2.802,02	7410	3.435,38	8684	4.069,52
27	1242	3726	1.550,88	4941	2.216,16	6318	2.909,79	7695	3.567,51	9018	4.226,04
28	1288	3864	1.608,32	5124	2.298,24	6552	3.017,56	7980	3.699,64	9352	4.382,56
29	1334	4002	1.665,76	5307	2.380,32	6786	3.125,33	8265	3.831,77	9686	4.539,08
30	1380	4140	1.723,20	5490	2.462,40	7020	3.233,10	8550	3.963,90	10020	4.695,60
31	1426	4278	1.780,64	5673	2.544,48	7254	3.340,87	8835	4.096,03	10354	4.852,12
32	1472	4416	1.838,08	5856	2.626,56	7488	3.448,64	9120	4.228,16	10688	5.008,64
33	1518	4554	1.895,52	6039	2.708,64	7722	3.556,41	9405	4.360,29	11022	5.165,16
34	1564	4692	1.952,96	6222	2.790,72	7956	3.664,18	9690	4.492,42	11356	5.321,68
35	1610	4830	2.010,40	6405	2.872,80	8190	3.771,95	9975	4.624,55	11690	5.478,20
36	1656	4968	2.067,84	6588	2.954,88	8424	3.879,72	10260	4.756,68	12024	5.634,72
37	1702	5106	2.125,28	6771	3.036,96	8658	3.987,49	10545	4.888,81	12358	5.791,24
38	1748	5244	2.182,72	6954	3.119,04	8892	4.095,26	10830	5.020,94	12692	5.947,76
39	1794	5382	2.240,16	7137	3.201,12	9126	4.203,03	11115	5.153,07	13026	6.104,28
40	1840	5520	2.297,60	7320	3.283,20	9360	4.310,80	11400	5.285,20	13360	6.260,80

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51



# Zehnder Charleston

$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		2200											
mm													
Model		2220		3220		4220		5220		6220			
Depth	mm	62		100		136		173		210			
Exponent	n	1,31		1,32		1,32		1,32		1,32			
Max. number of elements		22		22		22		22		17			
Price/element	€	63,73		92,34		119,90		146,83		147,30			
Length		$\Phi_s$		Price		$\Phi_s$		Price		$\Phi_s$		Price	
Elements	mm	W	€	W	€	W	€	W	€	W	€		
4	184	604	254,92	800	369,36	1024	479,60	1248	587,32	1460	697,20		
5	230	755	318,65	1000	461,70	1280	599,50	1560	734,15	1825	871,50		
6	276	906	382,38	1200	554,04	1536	719,40	1872	880,98	2190	1.045,80		
7	322	1057	446,11	1400	646,38	1792	839,30	2184	1.027,81	2555	1.220,10		
8	368	1208	509,84	1600	738,72	2048	959,20	2496	1.174,64	2920	1.394,40		
9	414	1359	573,57	1800	831,06	2304	1.079,10	2808	1.321,47	3285	1.568,70		
10	460	1510	637,30	2000	923,40	2560	1.199,00	3120	1.468,30	3650	1.743,00		
11	506	1661	701,03	2200	1.015,74	2816	1.318,90	3432	1.615,13	4015	1.917,30		
12	552	1812	764,76	2400	1.108,08	3072	1.438,80	3744	1.761,96	4380	2.091,60		
13	598	1963	828,49	2600	1.200,42	3328	1.558,70	4056	1.908,79	4745	2.265,90		
14	644	2114	892,22	2800	1.292,76	3584	1.678,60	4368	2.055,62	5110	2.440,20		
15	690	2265	955,95	3000	1.385,10	3840	1.798,50	4680	2.202,45	5475	2.614,50		
16	736	2416	1.019,68	3200	1.477,44	4096	1.918,40	4992	2.349,28	5840	2.788,80		
17	782	2567	1.083,41	3400	1.569,78	4352	2.038,30	5304	2.496,11	6205	2.963,10		
18	828	2718	1.147,14	3600	1.662,12	4608	2.158,20	5616	2.642,94	6570	3.137,40		
19	874	2869	1.210,87	3800	1.754,46	4864	2.278,10	5928	2.789,77	6935	3.311,70		
20	920	3020	1.274,60	4000	1.846,80	5120	2.398,00	6240	2.936,60	7300	3.486,00		
21	966	3171	1.338,33	4200	1.939,14	5376	2.517,90	6552	3.083,43	7665	3.660,30		
22	1012	3322	1.402,06	4400	2.031,48	5632	2.637,80	6864	3.230,26	8030	3.834,60		
23	1058	3473	1.465,79	4600	2.123,82	5888	2.757,70	7176	3.377,09	8395	4.008,90		
24	1104	3624	1.529,52	4800	2.216,16	6144	2.877,60	7488	3.523,92	8760	4.183,20		
25	1150	3775	1.593,25	5000	2.308,50	6400	2.997,50	7800	3.670,75	9125	4.357,50		
26	1196	3926	1.656,98	5200	2.400,84	6656	3.117,40	8112	3.817,58	9490	4.531,80		
27	1242	4077	1.720,71	5400	2.493,18	6912	3.237,30	8424	3.964,41	9855	4.706,10		
28	1288	4228	1.784,44	5600	2.585,52	7168	3.357,20	8736	4.111,24	10220	4.880,40		
29	1334	4379	1.848,17	5800	2.677,86	7424	3.477,10	9048	4.258,07	10585	5.054,70		
30	1380	4530	1.911,90	6000	2.770,20	7680	3.597,00	9360	4.404,90	10950	5.229,00		
31	1426	4681	1.975,63	6200	2.862,54	7936	3.716,90	9672	4.551,73	11315	5.403,30		
32	1472	4832	2.039,36	6400	2.954,88	8192	3.836,80	9984	4.698,56	11680	5.577,60		
33	1518	4983	2.103,09	6600	3.047,22	8448	3.956,70	10296	4.845,39	12045	5.751,90		
34	1564	5134	2.166,82	6800	3.139,56	8704	4.076,60	10608	4.992,22	12410	5.926,20		
35	1610	5285	2.230,55	7000	3.231,90	8960	4.196,50	10920	5.139,05	12775	6.100,50		
36	1656	5436	2.294,28	7200	3.324,24	9216	4.316,40	11232	5.285,88	13140	6.274,80		
37	1702	5587	2.358,01	7400	3.416,58	9472	4.436,30	11544	5.432,71	13505	6.449,10		
38	1748	5738	2.421,74	7600	3.508,92	9728	4.556,20	11856	5.579,54	13870	6.623,40		
39	1794	5889	2.485,47	7800	3.601,26	9984	4.676,10	12168	5.726,37	14235	6.797,70		
40	1840	6040	2.549,20	8000	3.693,60	10240	4.796,00	12480	5.873,20	14600	6.972,00		

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		2500									
Model		2250		3250		4250		5250		6250	
Depth	mm	62		100		136		173		210	
Exponent	n	1,30		1,32		1,31		1,31		1,32	
Max. number of elements		22		22		22		22		17	
Price/element	€	71,15		104,45		134,50		164,28		195,78	
Length		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price	
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	684	<b>284,60</b>	900	<b>417,80</b>	1156	<b>538,00</b>	1408	<b>657,12</b>	1648	<b>783,12</b>
5	230	855	<b>355,75</b>	1125	<b>522,25</b>	1445	<b>672,50</b>	1760	<b>821,40</b>	2060	<b>978,90</b>
6	276	1026	<b>426,90</b>	1350	<b>626,70</b>	1734	<b>807,00</b>	2112	<b>985,68</b>	2472	<b>1.174,68</b>
7	322	1197	<b>498,05</b>	1575	<b>731,15</b>	2023	<b>941,50</b>	2464	<b>1.149,96</b>	2884	<b>1.370,46</b>
8	368	1368	<b>569,20</b>	1800	<b>835,60</b>	2312	<b>1.076,00</b>	2816	<b>1.314,24</b>	3296	<b>1.566,24</b>
9	414	1539	<b>640,35</b>	2025	<b>940,05</b>	2601	<b>1.210,50</b>	3168	<b>1.478,52</b>	3708	<b>1.762,02</b>
10	460	1710	<b>711,50</b>	2250	<b>1.044,50</b>	2890	<b>1.345,00</b>	3520	<b>1.642,80</b>	4120	<b>1.957,80</b>
11	506	1881	<b>782,65</b>	2475	<b>1.148,95</b>	3179	<b>1.479,50</b>	3872	<b>1.807,08</b>	4532	<b>2.153,58</b>
12	552	2052	<b>853,80</b>	2700	<b>1.253,40</b>	3468	<b>1.614,00</b>	4224	<b>1.971,36</b>	4944	<b>2.349,36</b>
13	598	2223	<b>924,95</b>	2925	<b>1.357,85</b>	3757	<b>1.748,50</b>	4576	<b>2.135,64</b>	5356	<b>2.545,14</b>
14	644	2394	<b>996,10</b>	3150	<b>1.462,30</b>	4046	<b>1.883,00</b>	4928	<b>2.299,92</b>	5768	<b>2.740,92</b>
15	690	2565	<b>1.067,25</b>	3375	<b>1.566,75</b>	4335	<b>2.017,50</b>	5280	<b>2.464,20</b>	6180	<b>2.936,70</b>
16	736	2736	<b>1.138,40</b>	3600	<b>1.671,20</b>	4624	<b>2.152,00</b>	5632	<b>2.628,48</b>	6592	<b>3.132,48</b>
17	782	2907	<b>1.209,55</b>	3825	<b>1.775,65</b>	4913	<b>2.286,50</b>	5984	<b>2.792,76</b>	7004	<b>3.328,26</b>
18	828	3078	<b>1.280,70</b>	4050	<b>1.880,10</b>	5202	<b>2.421,00</b>	6336	<b>2.957,04</b>	7416	<b>3.524,04</b>
19	874	3249	<b>1.351,85</b>	4275	<b>1.984,55</b>	5491	<b>2.555,50</b>	6688	<b>3.121,32</b>	7828	<b>3.719,82</b>
20	920	3420	<b>1.423,00</b>	4500	<b>2.089,00</b>	5780	<b>2.690,00</b>	7040	<b>3.285,60</b>	8240	<b>3.915,60</b>
21	966	3591	<b>1.494,15</b>	4725	<b>2.193,45</b>	6069	<b>2.824,50</b>	7392	<b>3.449,88</b>	8652	<b>4.111,38</b>
22	1012	3762	<b>1.565,30</b>	4950	<b>2.297,90</b>	6358	<b>2.959,00</b>	7744	<b>3.614,16</b>	9064	<b>4.307,16</b>
23	1058	3933	<b>1.636,45</b>	5175	<b>2.402,35</b>	6647	<b>3.093,50</b>	8096	<b>3.778,44</b>	9476	<b>4.502,94</b>
24	1104	4104	<b>1.707,60</b>	5400	<b>2.506,80</b>	6936	<b>3.228,00</b>	8448	<b>3.942,72</b>	9888	<b>4.698,72</b>
25	1150	4275	<b>1.778,75</b>	5625	<b>2.611,25</b>	7225	<b>3.362,50</b>	8800	<b>4.107,00</b>	10300	<b>4.894,50</b>
26	1196	4446	<b>1.849,90</b>	5850	<b>2.715,70</b>	7514	<b>3.497,00</b>	9152	<b>4.271,28</b>	10712	<b>5.090,28</b>
27	1242	4617	<b>1.921,05</b>	6075	<b>2.820,15</b>	7803	<b>3.631,50</b>	9504	<b>4.435,56</b>	11124	<b>5.286,06</b>
28	1288	4788	<b>1.992,20</b>	6300	<b>2.924,60</b>	8092	<b>3.766,00</b>	9856	<b>4.599,84</b>	11536	<b>5.481,84</b>
29	1334	4959	<b>2.063,35</b>	6525	<b>3.029,05</b>	8381	<b>3.900,50</b>	10208	<b>4.764,12</b>	11948	<b>5.677,62</b>
30	1380	5130	<b>2.134,50</b>	6750	<b>3.133,50</b>	8670	<b>4.035,00</b>	10560	<b>4.928,40</b>	12360	<b>5.873,40</b>
31	1426	5301	<b>2.205,65</b>	6975	<b>3.237,95</b>	8959	<b>4.169,50</b>	10912	<b>5.092,68</b>	12772	<b>6.069,18</b>
32	1472	5472	<b>2.276,80</b>	7200	<b>3.342,40</b>	9248	<b>4.304,00</b>	11264	<b>5.256,96</b>	13184	<b>6.264,96</b>
33	1518	5643	<b>2.347,95</b>	7425	<b>3.446,85</b>	9537	<b>4.438,50</b>	11616	<b>5.421,24</b>	13596	<b>6.460,74</b>
34	1564	5814	<b>2.419,10</b>	7650	<b>3.551,30</b>	9826	<b>4.573,00</b>	11968	<b>5.585,52</b>	14008	<b>6.656,52</b>
35	1610	5985	<b>2.490,25</b>	7875	<b>3.655,75</b>	10115	<b>4.707,50</b>	12320	<b>5.749,80</b>	14420	<b>6.852,30</b>
36	1656	6156	<b>2.561,40</b>	8100	<b>3.760,20</b>	10404	<b>4.842,00</b>	12672	<b>5.914,08</b>	14832	<b>7.048,08</b>
37	1702	6327	<b>2.632,55</b>	8325	<b>3.864,65</b>	10693	<b>4.976,50</b>	13024	<b>6.078,36</b>	15244	<b>7.243,86</b>
38	1748	6498	<b>2.703,70</b>	8550	<b>3.969,10</b>	10982	<b>5.111,00</b>	13376	<b>6.242,64</b>	15656	<b>7.439,64</b>
39	1794	6669	<b>2.774,85</b>	8775	<b>4.073,55</b>	11271	<b>5.245,50</b>	13728	<b>6.406,92</b>	16068	<b>7.635,42</b>
40	1840	6840	<b>2.846,00</b>	9000	<b>4.178,00</b>	11560	<b>5.380,00</b>	14080	<b>6.571,20</b>	16480	<b>7.831,20</b>

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51





# Zehnder Charleston

$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		2800									
mm											
Model		2280		3280		4280		5280		6280	
Depth	mm	62		100		136		173		210	
Exponent	n	1,30		1,30		1,30		1,30		1,30	
Max. number of elements		22		22		22		17		14	
Price/element	€	81,05		117,26		153,38		184,09		221,52	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	756	324,20	1004	469,04	1292	613,52	1568	736,36	1836	886,08
5	230	945	405,25	1255	586,30	1615	766,90	1960	920,45	2295	1.107,60
6	276	1134	486,30	1506	703,56	1938	920,28	2352	1.104,54	2754	1.329,12
7	322	1323	567,35	1757	820,82	2261	1.073,66	2744	1.288,63	3213	1.550,64
8	368	1512	648,40	2008	938,08	2584	1.227,04	3136	1.472,72	3672	1.772,16
9	414	1701	729,45	2259	1.055,34	2907	1.380,42	3528	1.656,81	4131	1.993,68
10	460	1890	810,50	2510	1.172,60	3230	1.533,80	3920	1.840,90	4590	2.215,20
11	506	2079	891,55	2761	1.289,86	3553	1.687,18	4312	2.024,99	5049	2.436,72
12	552	2268	972,60	3012	1.407,12	3876	1.840,56	4704	2.209,08	5508	2.658,24
13	598	2457	1.053,65	3263	1.524,38	4199	1.993,94	5096	2.393,17	5967	2.879,76
14	644	2646	1.134,70	3514	1.641,64	4522	2.147,32	5488	2.577,26	6426	3.101,28
15	690	2835	1.215,75	3765	1.758,90	4845	2.300,70	5880	2.761,35	6885	3.322,80
16	736	3024	1.296,80	4016	1.876,16	5168	2.454,08	6272	2.945,44	7344	3.544,32
17	782	3213	1.377,85	4267	1.993,42	5491	2.607,46	6664	3.129,53	7803	3.765,84
18	828	3402	1.458,90	4518	2.110,68	5814	2.760,84	7056	3.313,62	8262	3.987,36
19	874	3591	1.539,95	4769	2.227,94	6137	2.914,22	7448	3.497,71	8721	4.208,88
20	920	3780	1.621,00	5020	2.345,20	6460	3.067,60	7840	3.681,80	9180	4.430,40
21	966	3969	1.702,05	5271	2.462,46	6783	3.220,98	8232	3.865,89	9639	4.651,92
22	1012	4158	1.783,10	5522	2.579,72	7106	3.374,36	8624	4.049,98	10098	4.873,44
23	1058	4347	1.864,15	5773	2.696,98	7429	3.527,74	9016	4.234,07	10557	5.094,96
24	1104	4536	1.945,20	6024	2.814,24	7752	3.681,12	9408	4.418,16	11016	5.316,48
25	1150	4725	2.026,25	6275	2.931,50	8075	3.834,50	9800	4.602,25	11475	5.538,00
26	1196	4914	2.107,30	6526	3.048,76	8398	3.987,88	10192	4.786,34	11934	5.759,52
27	1242	5103	2.188,35	6777	3.166,02	8721	4.141,26	10584	4.970,43	12393	5.981,04
28	1288	5292	2.269,40	7028	3.283,28	9044	4.294,64	10976	5.154,52	12852	6.202,56
29	1334	5481	2.350,45	7279	3.400,54	9367	4.448,02	11368	5.338,61	13311	6.424,08
30	1380	5670	2.431,50	7530	3.517,80	9690	4.601,40	11760	5.522,70	13770	6.645,60
31	1426	5859	2.512,55	7781	3.635,06	10013	4.754,78	12152	5.706,79	14229	6.867,12
32	1472	6048	2.593,60	8032	3.752,32	10336	4.908,16	12544	5.890,88	14688	7.088,64
33	1518	6237	2.674,65	8283	3.869,58	10659	5.061,54	12936	6.074,97	15147	7.310,16
34	1564	6426	2.755,70	8534	3.986,84	10982	5.214,92	13328	6.259,06	15606	7.531,68
35	1610	6615	2.836,75	8785	4.104,10	11305	5.368,30	13720	6.443,15	16065	7.753,20
36	1656	6804	2.917,80	9036	4.221,36	11628	5.521,68	14112	6.627,24	16524	7.974,72
37	1702	6993	2.998,85	9287	4.338,62	11951	5.675,06	14504	6.811,33	16983	8.196,24
38	1748	7182	3.079,90	9538	4.455,88	12274	5.828,44	14896	6.995,42	17442	8.417,76
39	1794	7371	3.160,95	9789	4.573,14	12597	5.981,82	15288	7.179,51	17901	8.639,28
40	1840	7560	3.242,00	10040	4.690,40	12920	6.135,20	15680	7.363,60	18360	8.860,80

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		3000									
Model		2300		3300		4300		5300		6300	
Depth	mm	62		100		136		173		210	
Exponent	n	1,30		1,30		1,30		1,30		1,30	
Max. number of elements		22		22		22		17		14	
Price/element	€	86,02		126,97		164,10		197,16		235,70	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	804	344,08	1076	507,88	1380	656,40	1680	788,64	1964	942,80
5	230	1005	430,10	1345	634,85	1725	820,50	2100	985,80	2455	1.178,50
6	276	1206	516,12	1614	761,82	2070	984,60	2520	1.182,96	2946	1.414,20
7	322	1407	602,14	1883	888,79	2415	1.148,70	2940	1.380,12	3437	1.649,90
8	368	1608	688,16	2152	1.015,76	2760	1.312,80	3360	1.577,28	3928	1.885,60
9	414	1809	774,18	2421	1.142,73	3105	1.476,90	3780	1.774,44	4419	2.121,30
10	460	2010	860,20	2690	1.269,70	3450	1.641,00	4200	1.971,60	4910	2.357,00
11	506	2211	946,22	2959	1.396,67	3795	1.805,10	4620	2.168,76	5401	2.592,70
12	552	2412	1.032,24	3228	1.523,64	4140	1.969,20	5040	2.365,92	5892	2.828,40
13	598	2613	1.118,26	3497	1.650,61	4485	2.133,30	5460	2.563,08	6383	3.064,10
14	644	2814	1.204,28	3766	1.777,58	4830	2.297,40	5880	2.760,24	6874	3.299,80
15	690	3015	1.290,30	4035	1.904,55	5175	2.461,50	6300	2.957,40	7365	3.535,50
16	736	3216	1.376,32	4304	2.031,52	5520	2.625,60	6720	3.154,56	7856	3.771,20
17	782	3417	1.462,34	4573	2.158,49	5865	2.789,70	7140	3.351,72	8347	4.006,90
18	828	3618	1.548,36	4842	2.285,46	6210	2.953,80	7560	3.548,88	8838	4.242,60
19	874	3819	1.634,38	5111	2.412,43	6555	3.117,90	7980	3.746,04	9329	4.478,30
20	920	4020	1.720,40	5380	2.539,40	6900	3.282,00	8400	3.943,20	9820	4.714,00
21	966	4221	1.806,42	5649	2.666,37	7245	3.446,10	8820	4.140,36	10311	4.949,70
22	1012	4422	1.892,44	5918	2.793,34	7590	3.610,20	9240	4.337,52	10802	5.185,40
23	1058	4623	1.978,46	6187	2.920,31	7935	3.774,30	9660	4.534,68	11293	5.421,10
24	1104	4824	2.064,48	6456	3.047,28	8280	3.938,40	10080	4.731,84	11784	5.656,80
25	1150	5025	2.150,50	6725	3.174,25	8625	4.102,50	10500	4.929,00	12275	5.892,50
26	1196	5226	2.236,52	6994	3.301,22	8970	4.266,60	10920	5.126,16	12766	6.128,20
27	1242	5427	2.322,54	7263	3.428,19	9315	4.430,70	11340	5.323,32	13257	6.363,90
28	1288	5628	2.408,56	7532	3.555,16	9660	4.594,80	11760	5.520,48	13748	6.599,60
29	1334	5829	2.494,58	7801	3.682,13	10005	4.758,90	12180	5.717,64	14239	6.835,30
30	1380	6030	2.580,60	8070	3.809,10	10350	4.923,00	12600	5.914,80	14730	7.071,00
31	1426	6231	2.666,62	8339	3.936,07	10695	5.087,10	13020	6.111,96	15221	7.306,70
32	1472	6432	2.752,64	8608	4.063,04	11040	5.251,20	13440	6.309,12	15712	7.542,40
33	1518	6633	2.838,66	8877	4.190,01	11385	5.415,30	13860	6.506,28	16203	7.778,10
34	1564	6834	2.924,68	9146	4.316,98	11730	5.579,40	14280	6.703,44	16694	8.013,80
35	1610	7035	3.010,70	9415	4.443,95	12075	5.743,50	14700	6.900,60	17185	8.249,50
36	1656	7236	3.096,72	9684	4.570,92	12420	5.907,60	15120	7.097,76	17676	8.485,20
37	1702	7437	3.182,74	9953	4.697,89	12765	6.071,70	15540	7.294,92	18167	8.720,90
38	1748	7638	3.268,76	10222	4.824,86	13110	6.235,80	15960	7.492,08	18658	8.956,60
39	1794	7839	3.354,78	10491	4.951,83	13455	6.399,90	16380	7.689,24	19149	9.192,30
40	1840	8040	3.440,80	10760	5.078,80	13800	6.564,00	16800	7.886,40	19640	9.428,00

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston

		Price €																				
<b>High pressure version max. 18 bar</b> (not for Completto version) - with welded plugs - with welded plugs and tied rod - for radiators comprising several blocks additionally per welded joint		2- to 3-column 4- to 6-column (at top and bottom)																				
		<b>246,95 per RAD</b> <b>363,70 per RAD</b> <b>123,64</b>																				
<b>Operating temperature 120 °C</b>		<b>On request</b>																				
<b>Further connections</b>		<b>On request</b>																				
<b>Insert tube</b> for Zehnder Charleston radiators with same-side connections, a flow insert tube is factory-installed in $\frac{2}{3}$ of the radiator length from the following element numbers or lengths, in order to guarantee the thermal outputs shown in the catalogue.		<b>274,51 per RAD</b>																				
2-column from 87 elements = length 4002 mm 3-column from 85 elements = length 3910 mm 4-column from 81 elements = length 3726 mm 5-column from 71 elements = length 3266 mm 6-column from 55 elements = length 2530 mm																						
<b>Intermediate heights</b> calculated on next-higher catalogue height		<b>On request</b>																				
<b>Angled or curved design</b> (see page 42)		<b>On request</b>																				
<b>Radiator designs over height 3000 mm</b>		<b>On request</b>																				
<b>Welded lugs, price per lug</b>		<b>34,21</b>																				
<b>Galvanising</b> (see also explanations on galvanising in section "General") with subsequent standard finish (RAL 9016), maximum dimensions: 3000 x 850 x 450 mm		<b>On request</b>																				
<b>Completto version</b> with valve inserts for clip seal (Danfoss thermostat) instead of M 30 x 1,5 threaded connection		<b>No surcharge</b>																				
<b>Completto Q-Tech</b> Charleston Completto Q-Tech is built in factory-made, for an automatic hydraulic balancing of pressure differences that can occur when, e.g. connecting or turning off system parts. By the integrated diaphragm-sensed flow-control in the valve insert, the differential pressure is constantly kept above the pre-setting and standard cross section value. Therefore it is possible to quickly and easily do the hydraulic balancing of new and old systems or unknown pipe networks. The pre-setting of the needed flow for the customer needs on site, is achieved by turning the regulation ring with the pre-setting key which is integrated in the scope of delivery. Large flows of 10 to 170 l/h and very big differential pressure (max. 1,5 bar). The Q-Tech valve cannot be retrofitted with AV6, AV9 or other valves.		<b>141,04</b> (Surcharge on the corresponding price for Completto connection, see page 45)																				
<b>Thermal radiation shield</b> Heights from 260 mm to 750 mm and a maximum length of the thermal radiation shield of up to 2024 mm; for large lengths, the thermal radiation shields are supplied in 2 or more pieces. The thermal radiation shield consists of special 6 mm safety glass with thermal coating, rounded corners, finely polished edges, including holders for on-site attachment to the last row of columns. Bracket painted with powder-coating in the colour of the radiator.																						
<table border="1"> <thead> <tr> <th>Number of elements Zehnder Charleston</th> <th>Number of shields</th> <th>Number of brackets</th> </tr> </thead> <tbody> <tr> <td>7 to 30</td> <td>1</td> <td>4</td> </tr> <tr> <td>31 to 44</td> <td>1</td> <td>6</td> </tr> <tr> <td>45 to 60</td> <td>2</td> <td>8</td> </tr> <tr> <td>61 to 88</td> <td>2</td> <td>12</td> </tr> <tr> <td>89 to 114</td> <td>3</td> <td>18</td> </tr> <tr> <td>115 to 130</td> <td>3</td> <td>18</td> </tr> </tbody> </table>			Number of elements Zehnder Charleston	Number of shields	Number of brackets	7 to 30	1	4	31 to 44	1	6	45 to 60	2	8	61 to 88	2	12	89 to 114	3	18	115 to 130	3
Number of elements Zehnder Charleston	Number of shields	Number of brackets																				
7 to 30	1	4																				
31 to 44	1	6																				
45 to 60	2	8																				
61 to 88	2	12																				
89 to 114	3	18																				
115 to 130	3	18																				
		Basic price per reflective cover plate <b>216,56</b>  Price per metre, thermal radiation shield: H = 260 - 450 mm <b>104,98</b> H = 500 - 750 mm <b>159,87</b>  H = Height of shield																				

Basis for calculating the surcharge is the standard finish

Curved version		
Version	Sketch/template	Prices €
<p>Zehnder Charleston radiators are available with the following minimum external curve radii:</p> <p>2-column: 400 mm                      3-column: 650 mm                      4-column: 750 mm                      5-column: 900 mm                      6-column: 1000 mm</p> <p>The first three elements are not curved for the Zehnder Charleston Completto.</p>		On request
		On request

Angled version		
Version	Sketch/template	Prices €
<p>Special version angled, available from 90° to 179°.</p> <p>When making a price enquiry, please provide the following dimensions on the dimensional drawing:                      L<sub>1</sub>, L<sub>2</sub>, L<sub>3</sub> in mm, angle α<sub>1</sub>, α<sub>2</sub> in degrees.</p> <p>Please provide sturdy templates when placing your order.</p>		On request
		On request
		On request

When ordering or requesting prices of curved and angled radiators, please enclose a template or dimensional drawing with all dimensions indicated.

- HK = Radiator
- WA = Wall clearance
- R = Radius
- α<sub>1</sub>, α<sub>2</sub> = Angle [°]
- L<sub>1</sub>, L<sub>2</sub>, L<sub>3</sub> = Lengths

Dimensions in mm

# Zehnder Charleston, Zehnder Charleston Clinic<sup>1)</sup>



Connection type	Price €	Dimensional drawings: Front view, side view and top view (bottom)
<b>Connection 2-tube with external valve</b>		
same-side or opposite end 	No additional charge	
from bottom to bottom <p>Please note: For Completo, see p. 45</p>	128,67	
from top to top 	159,30	
from bottom to bottom, at side 50 mm <p>Please note: For Completo, see p. 45</p>	128,67	
from top to top, at side 50 mm 	159,30	
from bottom to bottom, central 50 mm <p>Please note: For Completo, see page 45</p>	188,84	<p>Central arrangement of connection fitting only with even number of elements<sup>2)</sup></p>

When orders are placed without indication of the connection type, the standard connection 4 x 1/2" (S001) will be delivered. Possible connections: 1270/7610 and 1670/7210.

- H = Height
  - L = Length
  - N = Boss spacing
  - L<sub>2</sub> = Excess length thread, 1/2" = 5; 3/4" = 15
  - \* = Venting
  - Δ = Draining
  - = Internal installations
- Dimensions in mm

- 1) The dimensions shown also apply to Zehnder Charleston Clinic (without graphic illustration), unless noted otherwise.
- 2) With an uneven number of elements: One additional element on the return side

# Zehnder Charleston, Zehnder Charleston Clinic<sup>1)</sup>



Connection type	Price €	Dimensional drawings: Front view, side view and top view (bottom)
<b>Connection 1-tube with external valve</b>		
for horizontal lance valve 	No additional charge	<p>Specify valve unit when placing order</p>
for vertical lance valve 	51,69	<p>Specify valve unit when placing order</p>
<b>Completo connection with integrated valve (prices without thermostat)</b>		
valve at top, connection on side 50 mm 	216,05	
valve at bottom, connection on side 50 mm 	305,60 <sup>5)</sup>	<p>Reduced thermal output of the first element due to insufficient circulation.</p>

When orders are placed without indication of the connection type, the standard connection 4 x 1/2" (S001) will be delivered. Possible connections: 1270/7610 and 1670/7210.

- H = Height
- L = Length
- N = Boss spacing
- L<sub>2</sub> = Excess length thread,  
1/2" = 5; 3/4" = 15

- \* = Venting
- Δ = Draining
- = Internal installations

Dimensions in mm

- 1) The dimensions shown also apply to Zehnder Charleston Clinic (without graphic illustration), unless noted otherwise.
- 2) For Zehnder Charleston Clinic 88 mm
- 3) Only valid for Zehnder thermostat LH2
- 4) For Zehnder Charleston Clinic 31 mm
- 5) When exceeding the max. number of elements (see page 18), the radiator is nippeded factory-made.

Connection type	Price €	Dimensional drawings: Front view, side view and top view (bottom)
<b>Completo connection with integrated valve (prices without thermostat)</b>		
valve at top, connection central 50 mm 	287,80	<p>Possible as of 6 elements</p> <p>Central arrangement of the connections only with even number of elements<sup>4)</sup></p>
valve at top, opposite end connection 	216,05	
valve at top, connection from top to top on side 50 mm 	393,64 <sup>5)</sup>	
valve at bottom, connection from top to top on side 50 mm 	447,56 <sup>5)</sup>	

When orders are placed without indication of the connection type, the standard connection 4 x 1/2" (S001) will be delivered. Possible connections: 1270/7610 and 1670/7210.

**Valve parameters:** Special control valve OV 1" (for 2-column) or OV 5/4" (for 3- to 6-column) is installed at the factory. Max. recommended flow rate 250 kg/h. Data for special control valve on page 169.

- H = Height
  - L = Length
  - N = Boss spacing
  - \* = Venting
  - Δ = Draining
- 1) The dimensions shown also apply to Zehnder Charleston Clinic (without graphic illustration), unless noted otherwise.
  - 2) Only applies to Zehnder thermostat LH2
  - 3) For Zehnder Charleston Clinic 31 mm
  - 4) With an uneven number of elements: One additional element on the return side
  - 5) When exceeding the max. number of elements (see page 18), the radiator is nippedled factory-made.

Dimensions in mm

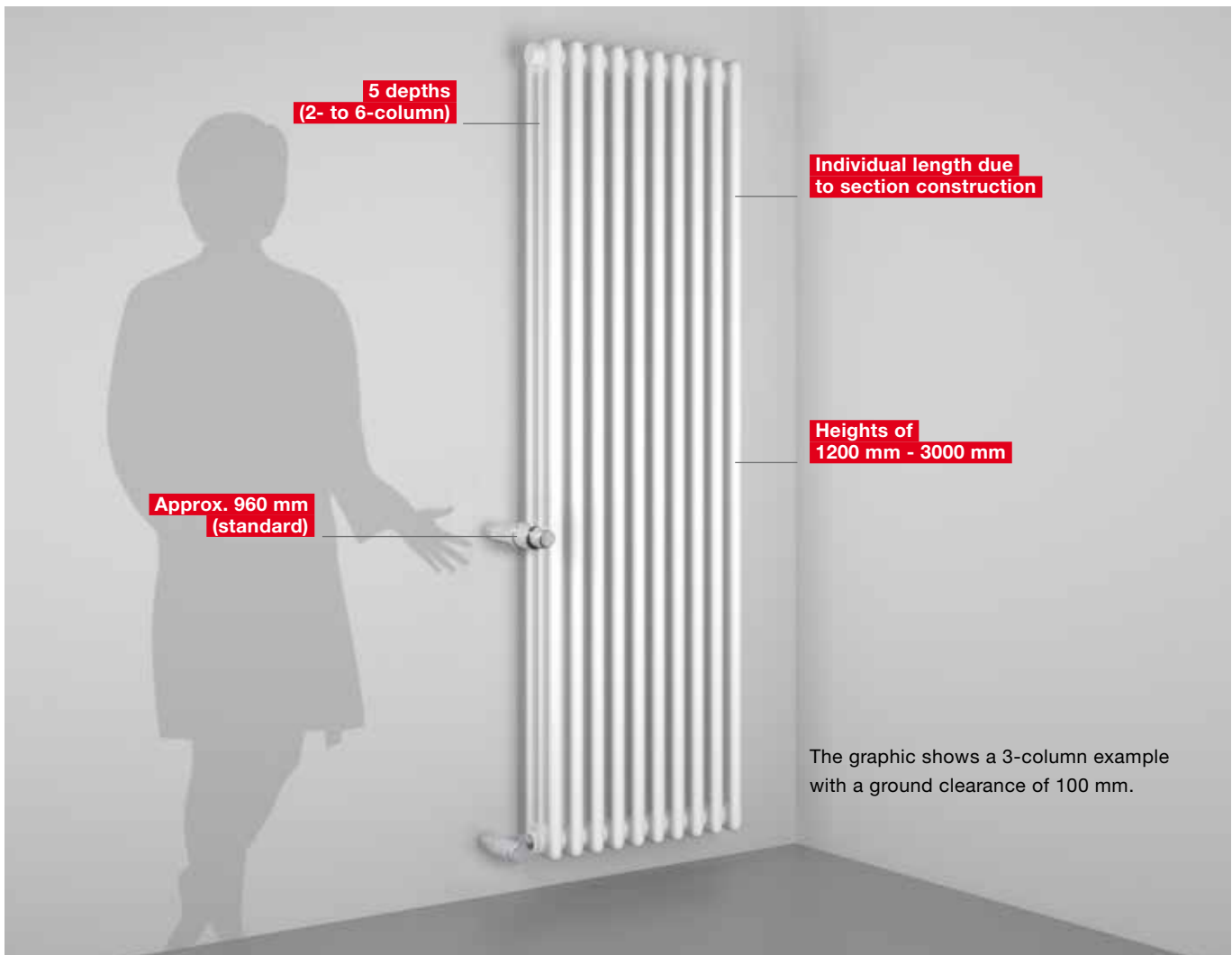
# Zehnder Charleston, Zehnder Charleston Clinic<sup>1)</sup>



Connection type	Price €	Dimensional drawings: Front view, side view and top view (bottom)
<b>Connection 2-tube with external valve</b>		
<p>Convenient operation for easy-access, same-side</p>	<p><b>180,71</b></p>	<p>Indicate boss spacing N when placing order</p> <p>Connection as of height ≥ 1200 mm possible</p>

- H = Height
- L = Length
- N = 500, 600, 619, 700, 800, 819, 900 mm
- \* = Venting
- Δ = Draining

Dimensions in mm





# Zehnder Charleston

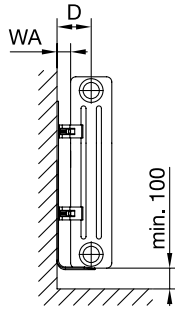
with EasyFix



Illustration	Sketch Side view	Model				
		Application	Wall clearance WA mm	Brackets in set	Article no. <sup>3)</sup> Set white	€/Set White   Colour

Fixing details for accessory set SMB

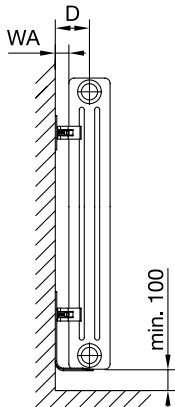
### Set SMB 30-75



Distance D:

2-column	66 mm
3-column	85 mm
4-column	103 mm
5-column	122 mm
6-column	140 mm

### Set SMB 2T<sup>2)</sup>



Distance D:

2-column	66 mm
3-column	85 mm
4-column	103 mm
5-column	122 mm
6-column	140 mm

H = 300-369					
All models					
L = 4-22 el.	35	2 x SMB30	173521	24,71	37,11
L = 23-39 el.		3 x SMB30	173621	37,10	55,66
L = 40-50 el.		4 x SMB30	173721	49,46	74,18
L = 51-60 el.		5 x SMB30	173821	61,80	92,76
H = 370-484					
All models					
L = 4-22 el.	35	2 x SMB40	173531	24,71	37,11
L = 23-39 el.		3 x SMB40	173631	37,10	55,66
L = 40-50 el.		4 x SMB40	173731	49,46	74,18
L = 51-60 el.		5 x SMB40	173831	61,80	92,76
H = 485-679					
All models					
L = 4-22 el.	35	2 x SMB50	173541	24,71	37,11
L = 23-39 el.		3 x SMB50	173641	37,10	55,66
L = 40-50 el.		4 x SMB50	173741	49,46	74,18
L = 51-60 el.		5 x SMB50	173841	61,80	92,76
H = 680-1000					
2- to 4-column					
L = 4-22 el.	35	2 x SMB75	173551	24,71	37,11
L = 23-39 el.		3 x SMB75	173651	37,10	55,66
L = 40-55 el.		4 x SMB75	173751	49,46	74,18
L = 56-65 el.		5 x SMB75	173851	61,80	92,76
5- to 6-column					
L = 4-15 el.	35	2 x SMB75	173551	24,71	37,11
L = 16-29 el.		3 x SMB75	173651	37,10	55,66
L = 30-42 el.		4 x SMB75	173751	49,46	74,18
L = 43-55 el.		5 x SMB75	173851	61,80	92,76
H = 1001-1500					
2- to 4-column					
L = 4-15 el.	35	2 x SMB2T	173511	24,71	37,11
L = 16-30 el.		3 x SMB2T	173611	37,10	55,66
L = 31-45 el.		4 x SMB2T	173711	49,46	74,18
L = 46-60 el.		5 x SMB2T	173811	61,80	92,76
5- to 6-column					
L = 4-10 el.	35	2 x SMB2T	173511	24,71	37,11
L = 11-20 el.		3 x SMB2T	173611	37,10	55,66
L = 21-30 el.		4 x SMB2T	173711	49,46	74,18
L = 31-40 el.		5 x SMB2T	173811	61,80	92,76
H = 1501-2200					
2- to 4-column					
L = 4-11 el.	35	2 x SMB2T	173511	24,71	37,11
L = 12-21 el.		3 x SMB2T	173611	37,10	55,66
L = 22-31 el.		4 x SMB2T	173711	49,46	74,18
L = 32-41 el.		5 x SMB2T	173811	61,80	92,76
5- to 6-column					
L = 4-10 el.	35	2 x SMB2T	173511	24,71	37,11
L = 11-16 el.		3 x SMB2T	173611	37,10	55,66
L = 17-21 el.		4 x SMB2T	173711	49,46	74,18
L = 22-27 el.		5 x SMB2T	173811	61,80	92,76

H = Height of radiator in mm      L = Length of radiator in elements      D = Dimension from wall to middle of connection


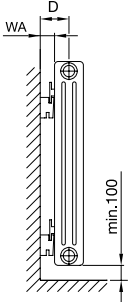

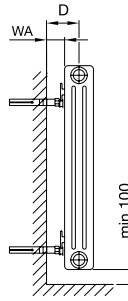
WA = Wall clearance

<sup>2)</sup> Further allocations of the bracket SMB 2T for heights from 245 mm and up to 3000 mm on request.

<sup>3)</sup> The article no. of the set in colour is produced by replacing the end digit 1 by the end digit 9.

Illustration	Sketch Side view	Model				
		Application	Wall clearance WA mm	Brackets in set	Article no. <sup>3)</sup> Set white	€/Set White Colour

Fixing details for accessory sets CVD, BKE

Illustration	Sketch Side view	Model														
		Application	Wall clearance WA mm	Brackets in set	Article no. <sup>3)</sup> Set white	€/Set White Colour										
<b>Set CVD</b> 	 <p>Distance D:</p> <table border="1"> <tr><td>2-column</td><td>59 mm</td></tr> <tr><td>3-column</td><td>78 mm</td></tr> <tr><td>4-column</td><td>96 mm</td></tr> <tr><td>5-column</td><td>114 mm</td></tr> <tr><td>6-column</td><td>133 mm</td></tr> </table>	2-column	59 mm	3-column	78 mm	4-column	96 mm	5-column	114 mm	6-column	133 mm	<b>All models</b>				
		2-column	59 mm													
		3-column	78 mm													
		4-column	96 mm													
		5-column	114 mm													
		6-column	133 mm													
		Height 260 - 1000 mm with retaining spring														
		L = 4-20 el. L = 21-40 el. L = 41-60 el.	28	4 x BH + CVD 0 6 x BH + CVD 0 8 x BH + CVD 0	774401 774601 774801	24,95 36,32 47,67	65,68 97,39 129,11									
		Height 1001 - 1500 mm with retaining spring														
		L = 4-20 el. L = 21-40 el. L = 41-60 el.	28	4 x BH + CVD 0 8 x BH + CVD 0 10 x BH + CVD 0	774401 774801 774901	24,95 47,67 59,04	65,68 129,11 160,83									
<b>2- to 5-column</b>																
Height 1501 - 2200 mm with retaining spring																
L = 4-10 el. L = 11-20 el. L = 21-30 el. L = 31-40 el.	28	4 x BH + CVD 0 6 x BH + CVD 0 8 x BH + CVD 0 10 x BH + CVD 0	774401 774601 774801 774901	24,95 36,32 47,67 59,04	65,68 97,39 129,11 160,83											
<b>6-column</b>																
Height 1501 - 2200 mm with retaining spring																
L = 4-10 el. L = 11-20 el. L = 21-30 el. L = 31-40 el.	28	4 x BH + CVD 0 8 x BH + CVD 0 10 x BH + CVD 0 14 x BH + CVD 0	774401 774801 774901 -	24,95 47,67 59,04 -	65,68 129,11 160,83 -											
<b>Set BKE<sup>2)</sup></b> 	 <p>Distance D:</p> <table border="1"> <tr><td>2-column</td><td>77 mm</td></tr> <tr><td>3-column</td><td>96 mm</td></tr> <tr><td>4-column</td><td>114 mm</td></tr> <tr><td>5-column</td><td>133 mm</td></tr> <tr><td>6-column</td><td>151 mm</td></tr> </table>	2-column	77 mm	3-column	96 mm	4-column	114 mm	5-column	133 mm	6-column	151 mm	<b>All models</b>				
		2-column	77 mm													
		3-column	96 mm													
		4-column	114 mm													
		5-column	133 mm													
		6-column	151 mm													
		Height 260 - 1000 mm with retaining spring														
		L = 4-20 el. L = 21-40 el. L = 41-60 el.	46	4 x BH + BKE160 6 x BH + BKE160 8 x BH + BKE160	774461 774661 774861	40,07 56,11 72,19	63,14 90,52 117,90									
		Height 1001 - 1500 mm with retaining spring														
		L = 4-20 el. L = 21-40 el. L = 41-60 el.	46	4 x BH + BKE160 8 x BH + BKE160 10 x BH + BKE160	774461 774861 774961	40,07 72,19 88,18	63,14 117,90 145,28									
<b>2- to 5-column</b>																
Height 1501 - 2200 mm with retaining spring																
L = 4-10 el. L = 11-20 el. L = 21-30 el. L = 31-40 el.	46	4 x BH + BKE160 6 x BH + BKE160 8 x BH + BKE160 10 x BH + BKE160	774461 774661 774861 774961	40,07 56,11 72,19 88,18	63,14 90,52 117,90 145,28											
<b>6-column</b>																
Height 1501 - 2200 mm with retaining spring																
L = 4-10 el. L = 11-20 el. L = 21-30 el. L = 31-40 el.	46	4 x BH + BKE160 8 x BH + BKE160 10 x BH + BKE160 14 x BH + BKE160	774461 774861 774961 -	40,07 72,19 88,18 -	63,14 117,90 145,28 -											





L = Length of radiator in mm

D = Dimension from wall to middle of connection

WA = Wall clearance

<sup>2)</sup> Average distances are given for D and WA for set BKE, as bracket installation depth is variable.<sup>3)</sup> The article no. of the set in colour is produced by replacing the end digit 1 by the end digit 9.

## Zehnder Charleston

Illustration	Description	Model			
		Application	Amount + type of brackets	Article no. Piece	Price/white €/piece
For other fixing options using accessories, see page 148 onwards.					
<b>Wall bracket AK <sup>3)</sup></b> 	For adjustable wall clearance, short and long version possible, standard: Short, RAL 9016, for details see "Accessories"	<b>All models</b>			
		Height 260 - 1000 mm			
		L = 4-20 el. L = 21-40 el. L = 41-60 el.	4 x BH + AK 1 6 x BH + AK 1 8 x BH + AK 1	Bracket BH: 774001 Bracket AK1: 796011	<b>3,03</b> <b>13,70</b>
		Height 1001 - 1500 mm			
		L = 4-20 el. L = 21-40 el. L = 41-60 el.	4 x BH + AK 1 8 x BH + AK 1 10 x BH + AK 1	Bracket BH: 774001 Bracket AK 1: 796011	<b>3,03</b> <b>13,70</b>
<b>T-bracket AKK</b> 	For mounting, for adjustable wall clearance, combination with bracket TTK is recommended, standard: RAL 9016, for details, see "Accessories"	<b>All models</b>			
		Height 260 - 500 mm			
		L = 4-20 el. L = 21-30 el. L = 31-40 el. L = 41-50 el. L = 51-60 el.	2 x AKK 3 x AKK 4 x AKK 5 x AKK 6 x AKK	By length	<b>9,90 - 15,76</b>
<b>Free-standing floor support STF</b> 	For mounting on unfinished or finished floor, different lengths possible, standard: RAL 9016, for details, see "Accessories"	<b>All models</b>			
		Height H: 260 to < 600 mm <sup>2)</sup>			
		L = 4-20 el. L = 21-40 el. L = 41-60 el. L = 61-80 el.	2 x STF 2 / STF 3 3 x STF 2 / STF 3 4 x STF 2 / STF 3 5 x STF 2 / STF 3	By height	STF2: <b>44,53 - 49,74</b> STF3: <b>43,24 - 48,43</b>
<b>Floor support HFK</b> 	For mounting on unfinished or finished floor, standard: RAL 9016, for details see "Accessories"	<b>All models</b>			
		Height H: 190 to < 600 mm <sup>2)</sup>			
		L = 4-20 el. L = 21-40 el. L = 41-60 el. L = 61-80 el.	2 x HFK 3 x HFK 4 x HFK 5 x HFK	By height	<b>48,79 / 54,36</b>

H = Height of radiator in mm

L = Length of radiator in elements

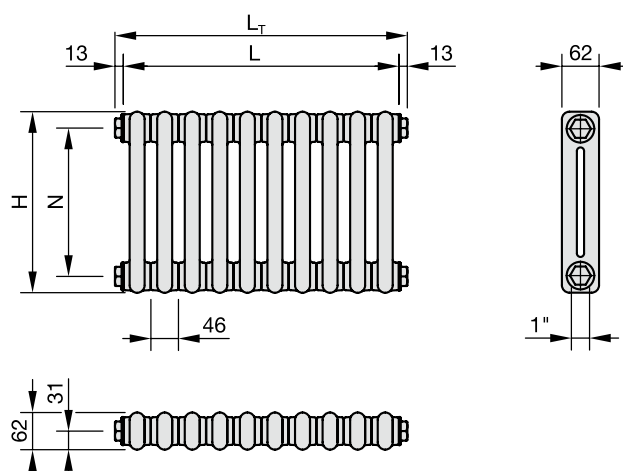
D = Dimension from wall to middle of connection

<sup>2)</sup> Provided from a height of 600 mm for requirements class 2 additional brackets<sup>3)</sup> An on-site locking device may be required depending on the installation and connection situation and net weight of the radiator

# Zehnder Charleston



## Model 2-column



- H = Height
- L = Length = elements x 46 mm
- L<sub>T</sub> = Total length = elements x 46 mm + 2 x 13 mm
- N = Boss spacing = H - 58 mm
- T = Depth of radiator
- A = Surface
- V = Water content
- M = Weight
- s<sub>k</sub> = Proportion of radiation
- q<sub>ms</sub> = Nominal flow rate
- n = Exponent
- Φ<sub>s</sub> = Nominal heat output according to EN 442 (75/65/20 °C)
- Φ = Thermal output at system temperatures

Dimensions in mm

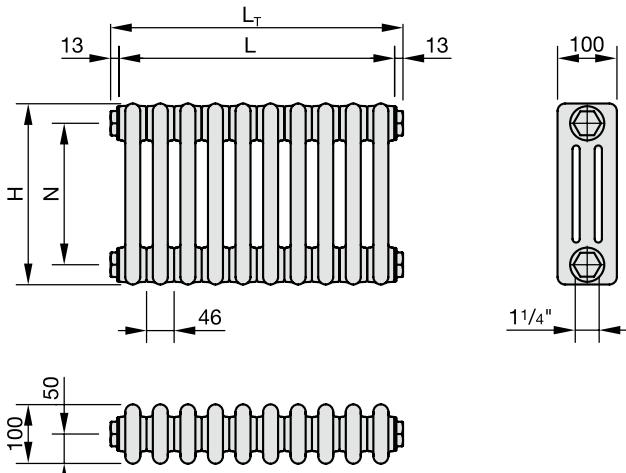
### Technical specifications per element

Model	H mm	N mm	T mm	A m <sup>2</sup>	V dm <sup>3</sup>	M kg	s <sub>k</sub> %	q <sub>ms</sub> kg/h	Exp. n	Φ <sub>s</sub> =ΔT 50 K EN442 Watt	Φ 70/55/20 °C Watt	Φ 55/45/20 °C Watt
2026	260	202	62	0,04	0,3	0,40	25	2,0	1,25	21,1	17,1	11,1
2030	292	234	62	0,04	0,4	0,44	25	2,0	1,24	23,6	19,1	12,4
2035	342	284	62	0,05	0,4	0,51	24	2,0	1,24	27,5	22,3	14,5
2040	392	334	62	0,06	0,4	0,55	25	3,0	1,24	31,2	25,3	16,4
2045	442	384	62	0,07	0,5	0,62	24	3,0	1,24	34,9	28,3	18,4
2050	492	434	62	0,07	0,5	0,69	23	3,0	1,25	38,4	31,1	20,1
2055	542	484	62	0,08	0,6	0,75	23	4,0	1,25	41,9	33,9	22,0
2060	592	534	62	0,09	0,6	0,82	23	4,0	1,25	45,3	36,6	23,7
2075	742	684	62	0,11	0,7	1,01	22	5,0	1,25	55,0	44,5	28,8
2090	892	834	62	0,14	0,8	1,21	22	5,0	1,25	63,9	51,7	33,5
2100	992	934	62	0,15	0,9	1,34	22	6,0	1,25	69,5	56,2	36,4
2110	1092	1034	62	0,17	1,0	1,47	22	6,0	1,25	74,7	60,4	39,2
2120	1192	1134	62	0,18	1,1	1,60	22	7,0	1,26	82,7	66,8	43,1
2150	1492	1434	62	0,23	1,3	2,00	23	9,0	1,28	104,0	83,7	53,7
2180	1792	1734	62	0,28	1,5	2,39	23	11,0	1,31	124,0	99,3	63,0
2200	1992	1934	62	0,31	1,7	2,65	23	12,0	1,31	138,0	110,5	70,1
2220	2192	2134	62	0,34	1,9	2,92	23	13,0	1,31	151,0	120,9	76,7
2250	2492	2434	62	0,39	2,1	3,31	23	15,0	1,30	171,0	137,2	87,3
2280	2792	2734	62	0,44	2,4	3,70	23	16,0	1,30	189,0	151,6	96,5
2300	2992	2934	62	0,47	2,5	3,97	23	17,0	1,30	201,0	161,2	102,7

# Zehnder Charleston



**Model 3-column**



- H = Height
- L = Length = elements x 46 mm
- L<sub>T</sub> = Total length = elements x 46 mm + 2 x 13 mm
- N = Boss spacing = H - 66 mm
- T = Depth of radiator
- A = Surface
- V = Water content
- M = Weight
- s<sub>k</sub> = Proportion of radiation
- q<sub>ms</sub> = Nominal flow rate
- n = Exponent
- Φ<sub>s</sub> = Nominal heat output according to EN 442 (75/65/20 °C)
- Φ = Thermal output at system temperatures

Dimensions in mm

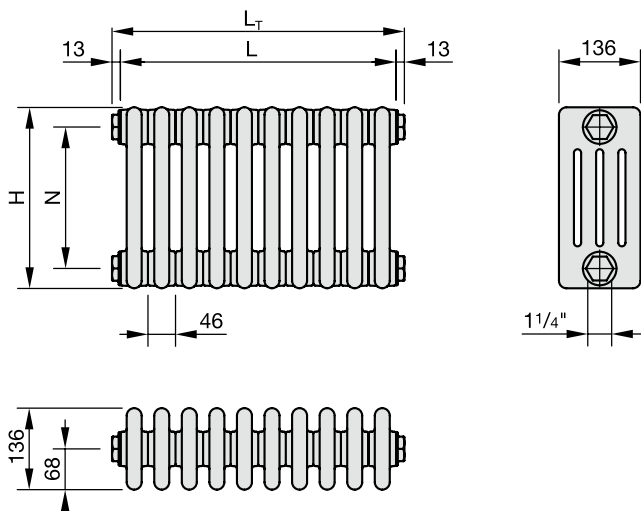
**Technical specifications per element**

Model	H mm	N mm	T mm	A m <sup>2</sup>	V dm <sup>3</sup>	M kg	s <sub>k</sub> %	q <sub>ms</sub> kg/h	Exp. n	Φ <sub>s</sub> =ΔT 50 K EN442 Watt	Φ 70/55/20 °C Watt	Φ 55/45/20 °C Watt
3026	260	194	100	0,06	0,5	0,56	21	2,0	1,25	27,9	22,6	14,6
3030	300	234	100	0,07	0,6	0,63	20	3,0	1,25	32,0	25,9	16,8
3035	350	284	100	0,08	0,6	0,73	20	3,0	1,25	37,0	29,9	19,4
3040	400	334	100	0,09	0,7	0,83	19	4,0	1,25	41,9	33,9	22,0
3045	450	384	100	0,10	0,7	0,93	19	4,0	1,25	46,8	37,9	24,5
3050	500	434	100	0,11	0,8	1,03	18	4,0	1,25	51,6	41,7	27,0
3055	550	484	100	0,12	0,9	1,13	18	5,0	1,26	56,3	45,5	29,4
3060	600	534	100	0,14	0,9	1,23	18	5,0	1,26	60,9	49,2	31,8
3075	750	684	100	0,17	1,1	1,52	18	6,0	1,26	74,3	60,0	38,7
3090	900	834	100	0,21	1,3	1,81	18	7,0	1,27	87,0	70,1	45,1
3100	1000	934	100	0,23	1,4	2,01	18	8,0	1,27	95,1	76,7	49,3
3110	1100	1034	100	0,25	1,5	2,21	18	9,0	1,28	103,0	82,9	53,2
3120	1200	1134	100	0,28	1,6	2,40	18	10,0	1,29	115,0	92,4	59,0
3150	1500	1434	100	0,35	2,0	2,99	18	12,0	1,31	140,0	112,1	71,1
3180	1800	1734	100	0,42	2,4	3,58	18	14,0	1,33	166,0	132,5	83,5
3200	2000	1934	100	0,47	2,6	3,97	18	16,0	1,33	183,0	146,0	92,0
3220	2200	2134	100	0,51	2,9	4,36	18	17,0	1,32	200,0	159,9	101,1
3250	2500	2434	100	0,58	3,2	4,95	18	19,0	1,32	225,0	179,9	113,7
3280	2800	2734	100	0,65	3,6	5,54	18	22,0	1,30	251,0	201,3	128,2
3300	3000	2934	100	0,70	3,9	5,93	18	23,0	1,30	269,0	215,8	137,4

# Zehnder Charleston



## Model 4-column



- H = Height
- L = Length = elements x 46 mm
- L<sub>T</sub> = Total length = elements x 46 mm + 2 x 13 mm
- N = Boss spacing = H - 66 mm
- T = Depth of radiator
- A = Surface
- V = Water content
- M = Weight
- s<sub>k</sub> = Proportion of radiation
- q<sub>ms</sub> = Nominal flow rate
- n = Exponent
- Φ<sub>s</sub> = Nominal heat output according to EN 442 (75/65/20 °C)
- Φ = Thermal output at system temperatures

Dimensions in mm

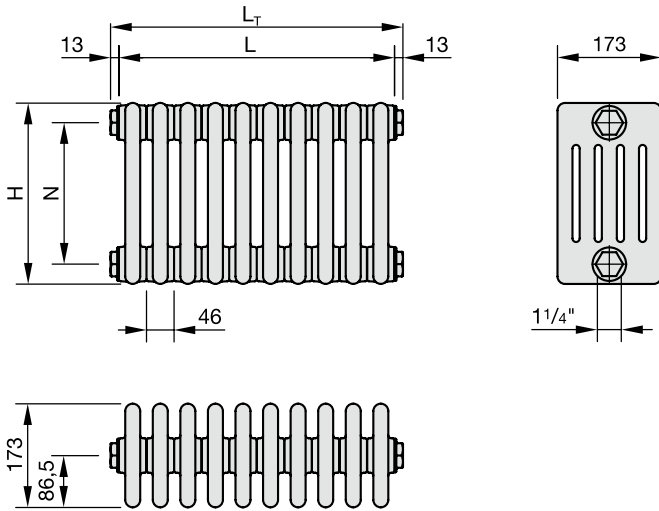
### Technical specifications per element

Model	H mm	N mm	T mm	A m <sup>2</sup>	V dm <sup>3</sup>	M kg	s <sub>k</sub> %	q <sub>ms</sub> kg/h	Exp. n	Φ <sub>s</sub> =ΔT 50 K EN442 Watt	Φ 70/55/20 °C Watt	Φ 55/45/20 °C Watt
4026	260	194	136	0,08	0,7	0,77	18	3,0	1,25	36,5	29,5	19,1
4030	300	234	136	0,09	0,7	0,88	18	4,0	1,25	41,9	33,9	22,0
4035	350	284	136	0,11	0,8	1,01	17	4,0	1,25	48,5	39,2	25,4
4040	400	334	136	0,12	0,9	1,16	16	5,0	1,26	54,9	44,3	28,6
4045	450	384	136	0,14	1,0	1,29	16	5,0	1,26	61,3	49,5	32,0
4050	500	434	136	0,15	1,0	1,42	16	6,0	1,26	67,6	54,6	35,2
4055	550	484	136	0,17	1,1	1,55	16	6,0	1,26	73,7	59,5	38,4
4060	600	534	136	0,19	1,2	1,67	15	7,0	1,27	79,8	64,3	41,4
4075	750	684	136	0,23	1,4	2,06	15	8,0	1,27	97,4	78,5	50,5
4090	900	834	136	0,28	1,7	2,45	15	10,0	1,28	114,0	91,7	58,8
4100	1000	934	136	0,31	1,8	2,70	15	11,0	1,29	125,0	100,4	64,2
4110	1100	1034	136	0,34	2,0	2,96	15	12,0	1,29	135,0	108,5	69,3
4120	1200	1134	136	0,37	2,1	3,22	15	13,0	1,30	147,0	117,9	75,1
4150	1500	1434	136	0,47	2,6	3,99	15	15,0	1,31	180,0	144,1	91,5
4180	1800	1734	136	0,56	3,1	4,76	15	18,0	1,33	213,0	170,0	107,1
4200	2000	1934	136	0,63	3,4	5,28	15	20,0	1,32	234,0	187,1	118,3
4220	2200	2134	136	0,69	3,8	5,79	15	22,0	1,32	256,0	204,6	129,4
4250	2500	2434	136	0,78	4,3	6,56	15	25,0	1,31	289,0	231,4	146,9
4280	2800	2734	136	0,88	4,8	7,33	15	28,0	1,30	323,0	259,1	165,0
4300	3000	2934	136	0,94	5,1	7,85	15	30,0	1,30	345,0	276,7	176,2

# Zehnder Charleston



**Model 5-column**



- H = Height
- L = Length = elements x 46 mm
- L<sub>T</sub> = Total length = elements x 46 mm + 2 x 13 mm
- N = Boss spacing = H - 66 mm
- T = Depth of radiator
- A = Surface
- V = Water content
- M = Weight
- s<sub>k</sub> = Proportion of radiation
- q<sub>ms</sub> = Nominal flow rate
- n = Exponent
- Φ<sub>s</sub> = Nominal heat output according to EN 442 (75/65/20 °C)
- Φ = Thermal output at system temperatures

Dimensions in mm

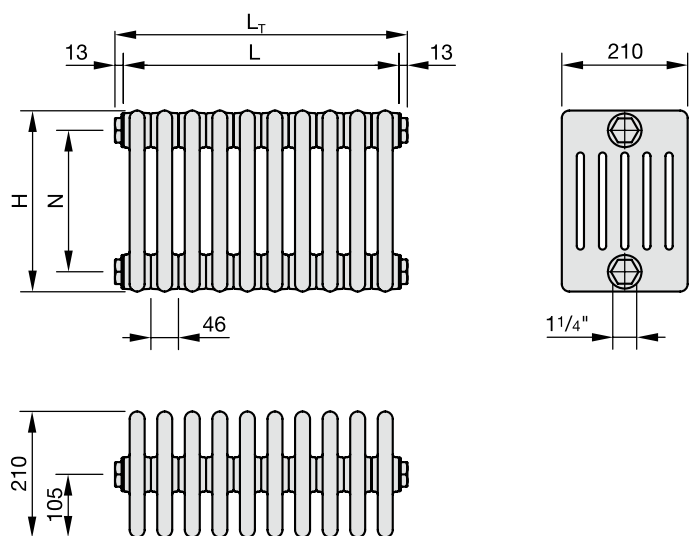
**Technical specifications per element**

Model	H mm	N mm	T mm	A m <sup>2</sup>	V dm <sup>3</sup>	M kg	s <sub>k</sub> %	q <sub>ms</sub> kg/h	Exp. n	Φ <sub>s</sub> =ΔT 50 K EN442 Watt	Φ 70/55/20 °C Watt	Φ 55/45/20 °C Watt
5026	260	194	173	0,10	0,8	0,88	17	4,0	1,25	45,1	36,5	23,6
5030	300	234	173	0,12	0,9	1,01	16	4,0	1,25	51,7	41,8	27,1
5035	350	284	173	0,13	1,0	1,18	15	5,0	1,26	59,9	48,4	31,2
5040	400	334	173	0,15	1,1	1,51	15	6,0	1,26	67,9	54,8	35,4
5045	450	384	173	0,17	1,2	1,67	14	7,0	1,26	75,8	61,2	39,5
5050	500	434	173	0,19	1,3	1,83	14	7,0	1,27	83,5	67,3	43,3
5055	550	484	173	0,20	1,3	2,00	14	8,0	1,27	91,1	73,4	47,3
5060	600	534	173	0,23	1,5	2,16	13	8,0	1,27	98,6	79,5	51,1
5075	750	684	173	0,29	1,8	2,65	13	10,0	1,29	120,0	96,4	61,6
5090	900	834	173	0,35	2,1	3,14	13	12,0	1,30	141,0	113,1	72,0
5100	1000	934	173	0,39	2,3	3,47	13	13,0	1,30	154,0	123,5	78,7
5110	1100	1034	173	0,43	2,5	3,79	13	14,0	1,31	167,0	133,7	84,9
5120	1200	1134	173	0,47	2,7	4,12	13	15,0	1,31	179,0	143,3	91,0
5150	1500	1434	173	0,59	3,3	5,10	13	19,0	1,32	219,0	175,1	110,7
5180	1800	1734	173	0,70	3,9	6,08	13	22,0	1,32	259,0	207,0	130,9
5200	2000	1934	173	0,78	4,3	6,73	13	25,0	1,32	285,0	227,8	144,1
5220	2200	2134	173	0,86	4,7	7,39	13	27,0	1,32	312,0	249,4	157,7
5250	2500	2434	173	0,98	5,3	8,37	13	30,0	1,31	352,0	281,9	178,9
5280	2800	2734	173	1,10	5,9	9,35	13	34,0	1,30	392,0	314,4	200,2
5300	3000	2934	173	1,18	6,4	10,00	13	36,0	1,30	420,0	336,9	214,5

# Zehnder Charleston



## Model 6-column



- H = Height
- L = Length = elements x 46 mm
- L<sub>T</sub> = Total length = elements x 46 mm + 2 x 13 mm
- N = Boss spacing = H - 66 mm
- T = Depth of radiator
- A = Surface
- V = Water content
- M = Weight
- s<sub>k</sub> = Proportion of radiation
- q<sub>ms</sub> = Nominal flow rate
- n = Exponent
- Φ<sub>s</sub> = Nominal heat output according to EN 442 (75/65/20 °C)
- Φ = Thermal output at system temperatures

Dimensions in mm

### Technical specifications per element


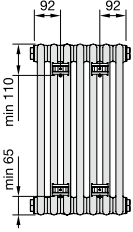
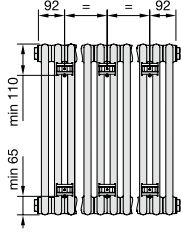
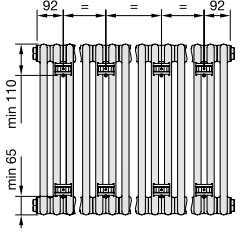
Model	H mm	N mm	T mm	A m <sup>2</sup>	V dm <sup>3</sup>	M kg	s <sub>k</sub> %	q <sub>ms</sub> kg/h	Exp. n	Φ <sub>s</sub> =ΔT 50 K EN442 Watt	Φ 70/55/20 °C Watt	Φ 55/45/20 °C Watt
6026	260	194	210	0,12	1,0	1,26	18	5,0	1,27	53,5	43,1	27,8
6030	300	234	210	0,14	1,1	1,42	15	5,0	1,26	61,3	49,5	32,0
6035	350	284	210	0,16	1,2	1,62	14	6,0	1,26	71,0	57,3	37,0
6040	400	334	210	0,19	1,3	1,79	14	7,0	1,27	80,5	64,9	41,8
6045	450	384	210	0,21	1,4	1,99	13	8,0	1,27	89,8	72,4	46,6
6050	500	434	210	0,23	1,5	2,19	13	9,0	1,28	99,0	79,7	51,1
6055	550	484	210	0,26	1,6	2,38	12	9,0	1,28	108,0	86,9	55,7
6060	600	534	210	0,28	1,8	2,58	12	10,0	1,29	117,0	94,0	60,1
6075	750	684	210	0,35	2,1	3,17	12	12,0	1,30	143,0	114,7	73,0
6090	900	834	210	0,42	2,5	3,76	12	14,0	1,31	167,0	133,7	84,9
6100	1000	934	210	0,47	2,7	4,16	12	16,0	1,31	183,0	146,5	93,0
6110	1100	1034	210	0,52	3,0	4,55	12	17,0	1,32	198,0	158,3	100,1
6120	1200	1134	210	0,56	3,2	4,95	12	18,0	1,32	210,0	167,9	106,2
6150	1500	1434	210	0,70	4,0	6,13	12	22,0	1,32	256,0	204,6	129,4
6180	1800	1734	210	0,85	4,7	7,31	12	26,0	1,33	303,0	241,8	152,4
6200	2000	1934	210	0,94	5,2	8,10	12	29,0	1,32	334,0	267,0	168,8
6220	2200	2134	210	1,03	5,6	8,89	12	31,0	1,32	365,0	291,8	184,5
6250	2500	2434	210	1,18	6,3	10,07	12	35,0	1,32	412,0	329,3	208,3
6280	2800	2734	210	1,33	7,0	11,25	12	39,0	1,30	459,0	368,2	234,4
6300	3000	2934	210	1,41	7,5	12,04	12	42,0	1,30	491,0	393,8	250,8



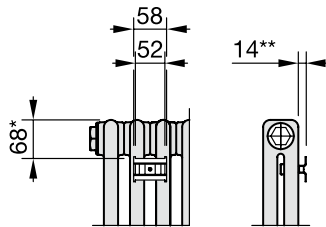
# Zehnder Charleston




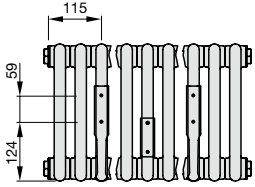
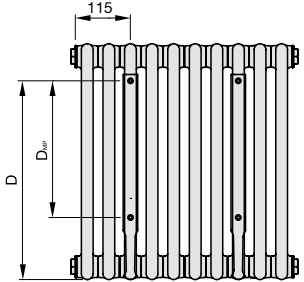
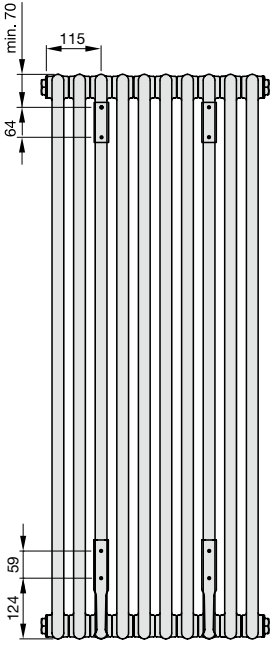
## Dimensions for the bores when using CVD brackets (upper drill hole)

Number of fixings	2 axes / 4 brackets	3 axes / 6 brackets	4 axes / 8 brackets
		 <p>If there is an odd number of sections then the middle axis is offset by 23 mm.</p>	

### Detail of suspension



## Dimensions for the bores when using EasyFix brackets<sup>1)</sup>

For height mm	SMB 2T H = 245-299	SMB 30-75 H = 300-1000	SMB 2T H = 1001-3000															
		 <table border="1" data-bbox="853 1709 1157 1888"> <thead> <tr> <th>H</th> <th>D<sub>MP</sub></th> <th>D</th> </tr> </thead> <tbody> <tr> <td>300 - 369</td> <td>134</td> <td>241</td> </tr> <tr> <td>370 - 484</td> <td>204</td> <td>309</td> </tr> <tr> <td>485 - 679</td> <td>309</td> <td>414</td> </tr> <tr> <td>680 - 1000</td> <td>518</td> <td>623</td> </tr> </tbody> </table>	H	D <sub>MP</sub>	D	300 - 369	134	241	370 - 484	204	309	485 - 679	309	414	680 - 1000	518	623	
H	D <sub>MP</sub>	D																
300 - 369	134	241																
370 - 484	204	309																
485 - 679	309	414																
680 - 1000	518	623																


<sup>1)</sup> For connection type 3370/5510 and V001-V004, the bracket must be offset inwards by one element

- = Position of drill hole
  - L = Length
  - H = Height
  - \* = Smallest possible dimension
  - \*\* = Front edge of bracket to radiator
  - D = Dimension from bottom edge of radiator to upper drill hole
  - D<sub>MP</sub> = Spacing of drill holes
- Dimensions in mm

For the recommended number of brackets, see page 47 onwards.



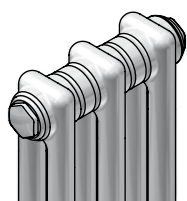


	Overview of models	Product description	List prices	Special versions	Connections	Fixings	Technical data	Installation points
<b>Zehnder Charleston Clinic</b>								
 <ul style="list-style-type: none"> <li>■ Element length 65 mm</li> <li>■ Larger element spacings</li> <li>■ Particularly easy to clean</li> </ul>	58	59	60	80	81	82	85	90

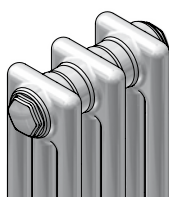
# Zehnder Charleston Clinic



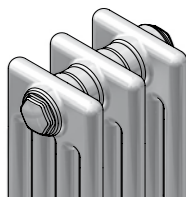
## Zehnder Charleston Clinic



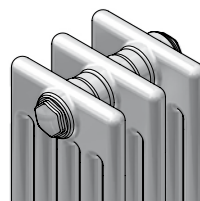
2-column



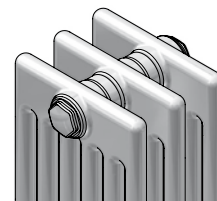
3-column



4-column



5-column



6-column

Height <sup>1)</sup> mm	Depth mm				
	62	100	136	173	210
260	K2026	K3026	K4026	K5026	K6026
300	K2030	K3030	K4030	K5030	K6030
350	K2035	K3035	K4035	K5035	K6035
400	K2040	K3040	K4040	K5040	K6040
450	K2045	K3045	K4045	K5045	K6045
500	K2050	K3050	K4050	K5050	K6050
550	K2055	K3055	K4055	K5055	K6055
600	K2060	K3060	K4060	K5060	K6060
750	K2075	K3075	K4075	K5075	K6075
900	K2090	K3090	K4090	K5090	K6090
1000	K2100	K3100	K4100	K5100	K6100
1100	K2110	K3110	K4110	K5110	K6110
1200	K2120	K3120	K4120	K5120	K6120
1500	K2150	K3150	K4150	K5150	K6150
1800	K2180	K3180	K4180	K5180	K6180
2000	K2200	K3200	K4200	K5200	K6200
2200	K2220	K3220	K4220	K5220	K6220
2500	K2250	K3250	K4250	K5250	K6250
2800	K2280	K3280	K4280	K5280	K6280
3000	K2300	K3300	K4300	K5300	K6300

<sup>1)</sup>The values shown here are the so-called nominal height; the exact height varies by a few mm for 2-column radiators and for some of the 3-column radiators as well, see "Technical specifications"; larger heights over 3000 mm or intermediate heights are available on request.

Maximum radiator lengths on piece (per block)

**Zehnder Charleston Clinic** (also see price tables from page 60 onwards)

Model	Height mm		
	260 - 1000	> 1000 - 2500	> 2500 - 3000
2-5-column	44	16	16
6-column	44	16	14

# Zehnder Charleston Clinic



Zehnder Charleston Clinic

## Product description

There are rooms where cleanliness and hygiene are high priorities, such as hospitals and doctors' surgeries, for example. Zehnder Charleston Clinic is there to help. Ample clearance between the individual elements of the radiator ensures cleaning is a simple process. The Zehnder EasyFix fixing system for simple and anti-lift assembly ensures easy installation. Available in almost any colour and finish from the Zehnder colour chart.

## Technical specifications

- Steel round tubes Ø 25 mm
- Header in sheet steel
- Length of the individual element 65 mm
- Priming and powder coating to DIN 55900
- Thermal output tested to EN 442; with CE marking
- Maximum operating pressure 10 bar
- Maximum operating temperature 110 °C

## Customisation options

- Large choice of connection types, including integrated valve
- Mounting sets for all applications
- Special colours and antibacterial coating
- Galvanised and painted
- Energy saving thermal radiation shield for installation in front of windows
- Special shapes: angled or curved, with handrail, etc.
- High pressure version up to max. 18 bar
- Operating temperature at 120 °C on request

## Advantages

- Ample spaces between tubes make cleaning easy
- Residue-free laser welding technology LaZer made
- Classic elegance
- Accident-safe
- Cleaning with Zehnder lambswool cleaning brush
- Simple and secure with non-lift-out feature: Installation with Zehnder EasyFix
- Radiant heat with feel-good factor
- Energy-efficient for use in low temperature heating systems

## Scope of delivery for standard version

- Primed and painted in RAL 9016
- Connections 4 x ½" female thread at front
- Connection S001: 1 blanking plug ½", directional air vent ½"
- Complete packaging in stretch film and carton
- Heights greater than 2200 mm with stabilising brace welded at the factory

## Scope of delivery for Completo version

- Primed and painted in RAL 9016
- Valve unit integrated on side, with valve insert AV 9, max. flow rate 250 kg/h
- Connections 2 x ½" female thread from bottom 50 mm
- Integrated baffle
- 1 directional air vent ½"
- Complete packaging in stretch film and carton

# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		260									
Model		K2026		K3026		K4026		K5026		K6026	
Depth	mm	62		100		136		173		210	
Exponent	n	1,30		1,27		1,26		1,25		1,28	
Max. number of elements		44		44		44		44		44	
Price/element	€	54,53		61,94		67,99		76,52		85,07	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	96	218,12	125	247,76	162	271,96	198	306,08	232	340,28
5	306	120	272,65	156	309,70	202	339,95	247	382,60	291	425,35
6	371	143	327,18	187	371,64	242	407,94	296	459,12	349	510,42
7	436	167	381,71	218	433,58	283	475,93	346	535,64	407	595,49
8	501	191	436,24	250	495,52	323	543,92	395	612,16	465	680,56
9	566	215	490,77	281	557,46	364	611,91	445	688,68	523	765,63
10	631	239	545,30	312	619,40	404	679,90	494	765,20	581	850,70
11	696	263	599,83	343	681,34	444	747,89	543	841,72	639	935,77
12	761	287	654,36	374	743,28	485	815,88	593	918,24	697	1.020,84
13	826	311	708,89	406	805,22	525	883,87	642	994,76	755	1.105,91
14	891	335	763,42	437	867,16	566	951,86	692	1.071,28	813	1.190,98
15	956	359	817,95	468	929,10	606	1.019,85	741	1.147,80	872	1.276,05
16	1021	382	872,48	499	991,04	646	1.087,84	790	1.224,32	930	1.361,12
17	1086	406	927,01	530	1.052,98	687	1.155,83	840	1.300,84	988	1.446,19
18	1151	430	981,54	562	1.114,92	727	1.223,82	889	1.377,36	1046	1.531,26
19	1216	454	1.036,07	593	1.176,86	768	1.291,81	939	1.453,88	1104	1.616,33
20	1281	478	1.090,60	624	1.238,80	808	1.359,80	988	1.530,40	1162	1.701,40
21	1346	502	1.145,13	655	1.300,74	848	1.427,79	1037	1.606,92	1220	1.786,47
22	1411	526	1.199,66	686	1.362,68	889	1.495,78	1087	1.683,44	1278	1.871,54
23	1476	550	1.254,19	718	1.424,62	929	1.563,77	1136	1.759,96	1336	1.956,61
24	1541	574	1.308,72	749	1.486,56	970	1.631,76	1186	1.836,48	1394	2.041,68
25	1606	598	1.363,25	780	1.548,50	1010	1.699,75	1235	1.913,00	1453	2.126,75
26	1671	621	1.417,78	811	1.610,44	1050	1.767,74	1284	1.989,52	1511	2.211,82
27	1736	645	1.472,31	842	1.672,38	1091	1.835,73	1334	2.066,04	1569	2.296,89
28	1801	669	1.526,84	874	1.734,32	1131	1.903,72	1383	2.142,56	1627	2.381,96
29	1866	693	1.581,37	905	1.796,26	1172	1.971,71	1433	2.219,08	1685	2.467,03
30	1931	717	1.635,90	936	1.858,20	1212	2.039,70	1482	2.295,60	1743	2.552,10
31	1996	741	1.690,43	967	1.920,14	1252	2.107,69	1531	2.372,12	1801	2.637,17
32	2061	765	1.744,96	998	1.982,08	1293	2.175,68	1581	2.448,64	1859	2.722,24
33	2126	789	1.799,49	1030	2.044,02	1333	2.243,67	1630	2.525,16	1917	2.807,31
34	2191	813	1.854,02	1061	2.105,96	1374	2.311,66	1680	2.601,68	1975	2.892,38
35	2256	837	1.908,55	1092	2.167,90	1414	2.379,65	1729	2.678,20	2034	2.977,45
36	2321	860	1.963,08	1123	2.229,84	1454	2.447,64	1778	2.754,72	2092	3.062,52
37	2386	884	2.017,61	1154	2.291,78	1495	2.515,63	1828	2.831,24	2150	3.147,59
38	2451	908	2.072,14	1186	2.353,72	1535	2.583,62	1877	2.907,76	2208	3.232,66
39	2516	932	2.126,67	1217	2.415,66	1576	2.651,61	1927	2.984,28	2266	3.317,73
40	2581	956	2.181,20	1248	2.477,60	1616	2.719,60	1976	3.060,80	2324	3.402,80

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		300									
Model		K2030		K3030		K4030		K5030		K6030	
Depth	mm	62		100		136		173		210	
Exponent	n	1,29		1,27		1,26		1,25		1,29	
Max. number of elements		44		44		44		44		44	
Price/element	€	54,95		62,35		68,89		77,01		85,52	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	106	219,80	142	249,40	183	275,56	224	308,04	264	342,08
5	306	133	274,75	177	311,75	229	344,45	280	385,05	330	427,60
6	371	159	329,70	212	374,10	275	413,34	336	462,06	395	513,12
7	436	186	384,65	248	436,45	321	482,23	392	539,07	461	598,64
8	501	212	439,60	283	498,80	366	551,12	448	616,08	527	684,16
9	566	239	494,55	319	561,15	412	620,01	504	693,09	593	769,68
10	631	265	549,50	354	623,50	458	688,90	560	770,10	659	855,20
11	696	292	604,45	389	685,85	504	757,79	616	847,11	725	940,72
12	761	318	659,40	425	748,20	550	826,68	672	924,12	791	1.026,24
13	826	345	714,35	460	810,55	595	895,57	728	1.001,13	857	1.111,76
14	891	371	769,30	496	872,90	641	964,46	784	1.078,14	923	1.197,28
15	956	398	824,25	531	935,25	687	1.033,35	840	1.155,15	989	1.282,80
16	1021	424	879,20	566	997,60	733	1.102,24	896	1.232,16	1054	1.368,32
17	1086	451	934,15	602	1.059,95	779	1.171,13	952	1.309,17	1120	1.453,84
18	1151	477	989,10	637	1.122,30	824	1.240,02	1008	1.386,18	1186	1.539,36
19	1216	504	1.044,05	673	1.184,65	870	1.308,91	1064	1.463,19	1252	1.624,88
20	1281	530	1.099,00	708	1.247,00	916	1.377,80	1120	1.540,20	1318	1.710,40
21	1346	557	1.153,95	743	1.309,35	962	1.446,69	1176	1.617,21	1384	1.795,92
22	1411	583	1.208,90	779	1.371,70	1008	1.515,58	1232	1.694,22	1450	1.881,44
23	1476	610	1.263,85	814	1.434,05	1053	1.584,47	1288	1.771,23	1516	1.966,96
24	1541	636	1.318,80	850	1.496,40	1099	1.653,36	1344	1.848,24	1582	2.052,48
25	1606	663	1.373,75	885	1.558,75	1145	1.722,25	1400	1.925,25	1648	2.138,00
26	1671	689	1.428,70	920	1.621,10	1191	1.791,14	1456	2.002,26	1713	2.223,52
27	1736	716	1.483,65	956	1.683,45	1237	1.860,03	1512	2.079,27	1779	2.309,04
28	1801	742	1.538,60	991	1.745,80	1282	1.928,92	1568	2.156,28	1845	2.394,56
29	1866	769	1.593,55	1027	1.808,15	1328	1.997,81	1624	2.233,29	1911	2.480,08
30	1931	795	1.648,50	1062	1.870,50	1374	2.066,70	1680	2.310,30	1977	2.565,60
31	1996	822	1.703,45	1097	1.932,85	1420	2.135,59	1736	2.387,31	2043	2.651,12
32	2061	848	1.758,40	1133	1.995,20	1466	2.204,48	1792	2.464,32	2109	2.736,64
33	2126	875	1.813,35	1168	2.057,55	1511	2.273,37	1848	2.541,33	2175	2.822,16
34	2191	901	1.868,30	1204	2.119,90	1557	2.342,26	1904	2.618,34	2241	2.907,68
35	2256	928	1.923,25	1239	2.182,25	1603	2.411,15	1960	2.695,35	2307	2.993,20
36	2321	954	1.978,20	1274	2.244,60	1649	2.480,04	2016	2.772,36	2372	3.078,72
37	2386	981	2.033,15	1310	2.306,95	1695	2.548,93	2072	2.849,37	2438	3.164,24
38	2451	1007	2.088,10	1345	2.369,30	1740	2.617,82	2128	2.926,38	2504	3.249,76
39	2516	1034	2.143,05	1381	2.431,65	1786	2.686,71	2184	3.003,39	2570	3.335,28
40	2581	1060	2.198,00	1416	2.494,00	1832	2.755,60	2240	3.080,40	2636	3.420,80

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		350									
Model		K2035		K3035		K4035		K5035		K6035	
Depth	mm	62		100		136		173		210	
Exponent	n	1,29		1,28		1,26		1,25		1,29	
Max. number of elements		44		44		44		44		44	
Price/element	€	55,23		62,65		70,02		78,08		86,78	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	122	220,92	162	250,60	210	280,08	257	312,32	302	347,12
5	306	152	276,15	203	313,25	263	350,10	321	390,40	378	433,90
6	371	182	331,38	244	375,90	315	420,12	385	468,48	453	520,68
7	436	213	386,61	284	438,55	368	490,14	449	546,56	529	607,46
8	501	243	441,84	325	501,20	420	560,16	514	624,64	604	694,24
9	566	274	497,07	365	563,85	473	630,18	578	702,72	680	781,02
10	631	304	552,30	406	626,50	525	700,20	642	780,80	755	867,80
11	696	334	607,53	447	689,15	578	770,22	706	858,88	831	954,58
12	761	365	662,76	487	751,80	630	840,24	770	936,96	906	1.041,36
13	826	395	717,99	528	814,45	683	910,26	835	1.015,04	982	1.128,14
14	891	426	773,22	568	877,10	735	980,28	899	1.093,12	1057	1.214,92
15	956	456	828,45	609	939,75	788	1.050,30	963	1.171,20	1133	1.301,70
16	1021	486	883,68	650	1.002,40	840	1.120,32	1027	1.249,28	1208	1.388,48
17	1086	517	938,91	690	1.065,05	893	1.190,34	1091	1.327,36	1284	1.475,26
18	1151	547	994,14	731	1.127,70	945	1.260,36	1156	1.405,44	1359	1.562,04
19	1216	578	1.049,37	771	1.190,35	998	1.330,38	1220	1.483,52	1435	1.648,82
20	1281	608	1.104,60	812	1.253,00	1050	1.400,40	1284	1.561,60	1510	1.735,60
21	1346	638	1.159,83	853	1.315,65	1103	1.470,42	1348	1.639,68	1586	1.822,38
22	1411	669	1.215,06	893	1.378,30	1155	1.540,44	1412	1.717,76	1661	1.909,16
23	1476	699	1.270,29	934	1.440,95	1208	1.610,46	1477	1.795,84	1737	1.995,94
24	1541	730	1.325,52	974	1.503,60	1260	1.680,48	1541	1.873,92	1812	2.082,72
25	1606	760	1.380,75	1015	1.566,25	1313	1.750,50	1605	1.952,00	1888	2.169,50
26	1671	790	1.435,98	1056	1.628,90	1365	1.820,52	1669	2.030,08	1963	2.256,28
27	1736	821	1.491,21	1096	1.691,55	1418	1.890,54	1733	2.108,16	2039	2.343,06
28	1801	851	1.546,44	1137	1.754,20	1470	1.960,56	1798	2.186,24	2114	2.429,84
29	1866	882	1.601,67	1177	1.816,85	1523	2.030,58	1862	2.264,32	2190	2.516,62
30	1931	912	1.656,90	1218	1.879,50	1575	2.100,60	1926	2.342,40	2265	2.603,40
31	1996	942	1.712,13	1259	1.942,15	1628	2.170,62	1990	2.420,48	2341	2.690,18
32	2061	973	1.767,36	1299	2.004,80	1680	2.240,64	2054	2.498,56	2416	2.776,96
33	2126	1003	1.822,59	1340	2.067,45	1733	2.310,66	2119	2.576,64	2492	2.863,74
34	2191	1034	1.877,82	1380	2.130,10	1785	2.380,68	2183	2.654,72	2567	2.950,52
35	2256	1064	1.933,05	1421	2.192,75	1838	2.450,70	2247	2.732,80	2643	3.037,30
36	2321	1094	1.988,28	1462	2.255,40	1890	2.520,72	2311	2.810,88	2718	3.124,08
37	2386	1125	2.043,51	1502	2.318,05	1943	2.590,74	2375	2.888,96	2794	3.210,86
38	2451	1155	2.098,74	1543	2.380,70	1995	2.660,76	2440	2.967,04	2869	3.297,64
39	2516	1186	2.153,97	1583	2.443,35	2048	2.730,78	2504	3.045,12	2945	3.384,42
40	2581	1216	2.209,20	1624	2.506,00	2100	2.800,80	2568	3.123,20	3020	3.471,20

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51



# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		400									
Model		K2040		K3040		K4040		K5040		K6040	
Depth	mm	62		100		136		173		210	
Exponent	n	1,29		1,28		1,27		1,26		1,29	
Max. number of elements		44		44		44		44		44	
Price/element	€	55,72		62,81		70,96		78,97		88,43	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	137	222,88	183	251,24	237	283,84	289	315,88	340	353,72
5	306	171	278,60	229	314,05	296	354,80	362	394,85	426	442,15
6	371	205	334,32	274	376,86	355	425,76	434	473,82	511	530,58
7	436	239	390,04	320	439,67	414	496,72	506	552,79	596	619,01
8	501	274	445,76	366	502,48	474	567,68	578	631,76	681	707,44
9	566	308	501,48	411	565,29	533	638,64	651	710,73	766	795,87
10	631	342	557,20	457	628,10	592	709,60	723	789,70	851	884,30
11	696	376	612,92	503	690,91	651	780,56	795	868,67	936	972,73
12	761	410	668,64	548	753,72	710	851,52	868	947,64	1021	1.061,16
13	826	445	724,36	594	816,53	770	922,48	940	1.026,61	1106	1.149,59
14	891	479	780,08	640	879,34	829	993,44	1012	1.105,58	1191	1.238,02
15	956	513	835,80	686	942,15	888	1.064,40	1085	1.184,55	1277	1.326,45
16	1021	547	891,52	731	1.004,96	947	1.135,36	1157	1.263,52	1362	1.414,88
17	1086	581	947,24	777	1.067,77	1006	1.206,32	1229	1.342,49	1447	1.503,31
18	1151	616	1.002,96	823	1.130,58	1066	1.277,28	1301	1.421,46	1532	1.591,74
19	1216	650	1.058,68	868	1.193,39	1125	1.348,24	1374	1.500,43	1617	1.680,17
20	1281	684	1.114,40	914	1.256,20	1184	1.419,20	1446	1.579,40	1702	1.768,60
21	1346	718	1.170,12	960	1.319,01	1243	1.490,16	1518	1.658,37	1787	1.857,03
22	1411	752	1.225,84	1005	1.381,82	1302	1.561,12	1591	1.737,34	1872	1.945,46
23	1476	787	1.281,56	1051	1.444,63	1362	1.632,08	1663	1.816,31	1957	2.033,89
24	1541	821	1.337,28	1097	1.507,44	1421	1.703,04	1735	1.895,28	2042	2.122,32
25	1606	855	1.393,00	1143	1.570,25	1480	1.774,00	1808	1.974,25	2128	2.210,75
26	1671	889	1.448,72	1188	1.633,06	1539	1.844,96	1880	2.053,22	2213	2.299,18
27	1736	923	1.504,44	1234	1.695,87	1598	1.915,92	1952	2.132,19	2298	2.387,61
28	1801	958	1.560,16	1280	1.758,68	1658	1.986,88	2024	2.211,16	2383	2.476,04
29	1866	992	1.615,88	1325	1.821,49	1717	2.057,84	2097	2.290,13	2468	2.564,47
30	1931	1026	1.671,60	1371	1.884,30	1776	2.128,80	2169	2.369,10	2553	2.652,90
31	1996	1060	1.727,32	1417	1.947,11	1835	2.199,76	2241	2.448,07	2638	2.741,33
32	2061	1094	1.783,04	1462	2.009,92	1894	2.270,72	2314	2.527,04	2723	2.829,76
33	2126	1129	1.838,76	1508	2.072,73	1954	2.341,68	2386	2.606,01	2808	2.918,19
34	2191	1163	1.894,48	1554	2.135,54	2013	2.412,64	2458	2.684,98	2893	3.006,62
35	2256	1197	1.950,20	1600	2.198,35	2072	2.483,60	2531	2.763,95	2979	3.095,05
36	2321	1231	2.005,92	1645	2.261,16	2131	2.554,56	2603	2.842,92	3064	3.183,48
37	2386	1265	2.061,64	1691	2.323,97	2190	2.625,52	2675	2.921,89	3149	3.271,91
38	2451	1300	2.117,36	1737	2.386,78	2250	2.696,48	2747	3.000,86	3234	3.360,34
39	2516	1334	2.173,08	1782	2.449,59	2309	2.767,44	2820	3.079,83	3319	3.448,77
40	2581	1368	2.228,80	1828	2.512,40	2368	2.838,40	2892	3.158,80	3404	3.537,20

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		450									
Model		K2045		K3045		K4045		K5045		K6045	
Depth	mm	62		100		136		173		210	
Exponent	n	1,29		1,28		1,27		1,26		1,29	
Max. number of elements		44		44		44		44		44	
Price/element	€	56,07		63,11		72,07		80,37		89,56	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	152	224,28	203	252,44	263	288,28	322	321,48	378	358,24
5	306	190	280,35	254	315,55	329	360,35	402	401,85	473	447,80
6	371	227	336,42	305	378,66	394	432,42	482	482,22	568	537,36
7	436	265	392,49	356	441,77	460	504,49	563	562,59	662	626,92
8	501	303	448,56	406	504,88	526	576,56	643	642,96	757	716,48
9	566	341	504,63	457	567,99	591	648,63	724	723,33	851	806,04
10	631	379	560,70	508	631,10	657	720,70	804	803,70	946	895,60
11	696	417	616,77	559	694,21	723	792,77	884	884,07	1041	985,16
12	761	455	672,84	610	757,32	788	864,84	965	964,44	1135	1.074,72
13	826	493	728,91	660	820,43	854	936,91	1045	1.044,81	1230	1.164,28
14	891	531	784,98	711	883,54	920	1.008,98	1126	1.125,18	1324	1.253,84
15	956	569	841,05	762	946,65	986	1.081,05	1206	1.205,55	1419	1.343,40
16	1021	606	897,12	813	1.009,76	1051	1.153,12	1286	1.285,92	1514	1.432,96
17	1086	644	953,19	864	1.072,87	1117	1.225,19	1367	1.366,29	1608	1.522,52
18	1151	682	1.009,26	914	1.135,98	1183	1.297,26	1447	1.446,66	1703	1.612,08
19	1216	720	1.065,33	965	1.199,09	1248	1.369,33	1528	1.527,03	1797	1.701,64
20	1281	758	1.121,40	1016	1.262,20	1314	1.441,40	1608	1.607,40	1892	1.791,20
21	1346	796	1.177,47	1067	1.325,31	1380	1.513,47	1688	1.687,77	1987	1.880,76
22	1411	834	1.233,54	1118	1.388,42	1445	1.585,54	1769	1.768,14	2081	1.970,32
23	1476	872	1.289,61	1168	1.451,53	1511	1.657,61	1849	1.848,51	2176	2.059,88
24	1541	910	1.345,68	1219	1.514,64	1577	1.729,68	1930	1.928,88	2270	2.149,44
25	1606	948	1.401,75	1270	1.577,75	1643	1.801,75	2010	2.009,25	2365	2.239,00
26	1671	985	1.457,82	1321	1.640,86	1708	1.873,82	2090	2.089,62	2460	2.328,56
27	1736	1023	1.513,89	1372	1.703,97	1774	1.945,89	2171	2.169,99	2554	2.418,12
28	1801	1061	1.569,96	1422	1.767,08	1840	2.017,96	2251	2.250,36	2649	2.507,68
29	1866	1099	1.626,03	1473	1.830,19	1905	2.090,03	2332	2.330,73	2743	2.597,24
30	1931	1137	1.682,10	1524	1.893,30	1971	2.162,10	2412	2.411,10	2838	2.686,80
31	1996	1175	1.738,17	1575	1.956,41	2037	2.234,17	2492	2.491,47	2933	2.776,36
32	2061	1213	1.794,24	1626	2.019,52	2102	2.306,24	2573	2.571,84	3027	2.865,92
33	2126	1251	1.850,31	1676	2.082,63	2168	2.378,31	2653	2.652,21	3122	2.955,48
34	2191	1289	1.906,38	1727	2.145,74	2234	2.450,38	2734	2.732,58	3216	3.045,04
35	2256	1327	1.962,45	1778	2.208,85	2300	2.522,45	2814	2.812,95	3311	3.134,60
36	2321	1364	2.018,52	1829	2.271,96	2365	2.594,52	2894	2.893,32	3406	3.224,16
37	2386	1402	2.074,59	1880	2.335,07	2431	2.666,59	2975	2.973,69	3500	3.313,72
38	2451	1440	2.130,66	1930	2.398,18	2497	2.738,66	3055	3.054,06	3595	3.403,28
39	2516	1478	2.186,73	1981	2.461,29	2562	2.810,73	3136	3.134,43	3689	3.492,84
40	2581	1516	2.242,80	2032	2.524,40	2628	2.882,80	3216	3.214,80	3784	3.582,40

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		500									
Model		K2050		K3050		K4050		K5050		K6050	
Depth	mm	62		100		136		173		210	
Exponent	n	1,29		1,28		1,27		1,26		1,29	
Max. number of elements		44		44		44		44		44	
Price/element	€	57,02		63,72		73,61		81,69		91,10	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	166	228,08	224	254,88	289	294,44	354	326,76	416	364,40
5	306	208	285,10	280	318,60	362	368,05	442	408,45	520	455,50
6	371	250	342,12	335	382,32	434	441,66	530	490,14	624	546,60
7	436	291	399,14	391	446,04	506	515,27	619	571,83	728	637,70
8	501	333	456,16	447	509,76	578	588,88	707	653,52	832	728,80
9	566	374	513,18	503	573,48	651	662,49	796	735,21	936	819,90
10	631	416	570,20	559	637,20	723	736,10	884	816,90	1040	911,00
11	696	458	627,22	615	700,92	795	809,71	972	898,59	1144	1.002,10
12	761	499	684,24	671	764,64	868	883,32	1061	980,28	1248	1.093,20
13	826	541	741,26	727	828,36	940	956,93	1149	1.061,97	1352	1.184,30
14	891	582	798,28	783	892,08	1012	1.030,54	1238	1.143,66	1456	1.275,40
15	956	624	855,30	839	955,80	1085	1.104,15	1326	1.225,35	1560	1.366,50
16	1021	666	912,32	894	1.019,52	1157	1.177,76	1414	1.307,04	1664	1.457,60
17	1086	707	969,34	950	1.083,24	1229	1.251,37	1503	1.388,73	1768	1.548,70
18	1151	749	1.026,36	1006	1.146,96	1301	1.324,98	1591	1.470,42	1872	1.639,80
19	1216	790	1.083,38	1062	1.210,68	1374	1.398,59	1680	1.552,11	1976	1.730,90
20	1281	832	1.140,40	1118	1.274,40	1446	1.472,20	1768	1.633,80	2080	1.822,00
21	1346	874	1.197,42	1174	1.338,12	1518	1.545,81	1856	1.715,49	2184	1.913,10
22	1411	915	1.254,44	1230	1.401,84	1591	1.619,42	1945	1.797,18	2288	2.004,20
23	1476	957	1.311,46	1286	1.465,56	1663	1.693,03	2033	1.878,87	2392	2.095,30
24	1541	998	1.368,48	1342	1.529,28	1735	1.766,64	2122	1.960,56	2496	2.186,40
25	1606	1040	1.425,50	1398	1.593,00	1808	1.840,25	2210	2.042,25	2600	2.277,50
26	1671	1082	1.482,52	1453	1.656,72	1880	1.913,86	2298	2.123,94	2704	2.368,60
27	1736	1123	1.539,54	1509	1.720,44	1952	1.987,47	2387	2.205,63	2808	2.459,70
28	1801	1165	1.596,56	1565	1.784,16	2024	2.061,08	2475	2.287,32	2912	2.550,80
29	1866	1206	1.653,58	1621	1.847,88	2097	2.134,69	2564	2.369,01	3016	2.641,90
30	1931	1248	1.710,60	1677	1.911,60	2169	2.208,30	2652	2.450,70	3120	2.733,00
31	1996	1290	1.767,62	1733	1.975,32	2241	2.281,91	2740	2.532,39	3224	2.824,10
32	2061	1331	1.824,64	1789	2.039,04	2314	2.355,52	2829	2.614,08	3328	2.915,20
33	2126	1373	1.881,66	1845	2.102,76	2386	2.429,13	2917	2.695,77	3432	3.006,30
34	2191	1414	1.938,68	1901	2.166,48	2458	2.502,74	3006	2.777,46	3536	3.097,40
35	2256	1456	1.995,70	1957	2.230,20	2531	2.576,35	3094	2.859,15	3640	3.188,50
36	2321	1498	2.052,72	2012	2.293,92	2603	2.649,96	3182	2.940,84	3744	3.279,60
37	2386	1539	2.109,74	2068	2.357,64	2675	2.723,57	3271	3.022,53	3848	3.370,70
38	2451	1581	2.166,76	2124	2.421,36	2747	2.797,18	3359	3.104,22	3952	3.461,80
39	2516	1622	2.223,78	2180	2.485,08	2820	2.870,79	3448	3.185,91	4056	3.552,90
40	2581	1664	2.280,80	2236	2.548,80	2892	2.944,40	3536	3.267,60	4160	3.644,00

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		550									
Model		K2055		K3055		K4055		K5055		K6055	
Depth	mm	62		100		136		173		210	
Exponent	n	1,29		1,29		1,28		1,27		1,29	
Max. number of elements		44		44		44		44		44	
Price/element	€	57,93		64,84		75,15		83,27		93,32	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	181	231,72	244	259,36	315	300,60	386	333,08	452	373,28
5	306	226	289,65	305	324,20	394	375,75	482	416,35	565	466,60
6	371	271	347,58	366	389,04	473	450,90	578	499,62	678	559,92
7	436	316	405,51	427	453,88	552	526,05	675	582,89	791	653,24
8	501	362	463,44	488	518,72	630	601,20	771	666,16	904	746,56
9	566	407	521,37	549	583,56	709	676,35	868	749,43	1017	839,88
10	631	452	579,30	610	648,40	788	751,50	964	832,70	1130	933,20
11	696	497	637,23	671	713,24	867	826,65	1060	915,97	1243	1.026,52
12	761	542	695,16	732	778,08	946	901,80	1157	999,24	1356	1.119,84
13	826	588	753,09	793	842,92	1024	976,95	1253	1.082,51	1469	1.213,16
14	891	633	811,02	854	907,76	1103	1.052,10	1350	1.165,78	1582	1.306,48
15	956	678	868,95	915	972,60	1182	1.127,25	1446	1.249,05	1695	1.399,80
16	1021	723	926,88	976	1.037,44	1261	1.202,40	1542	1.332,32	1808	1.493,12
17	1086	768	984,81	1037	1.102,28	1340	1.277,55	1639	1.415,59	1921	1.586,44
18	1151	814	1.042,74	1098	1.167,12	1418	1.352,70	1735	1.498,86	2034	1.679,76
19	1216	859	1.100,67	1159	1.231,96	1497	1.427,85	1832	1.582,13	2147	1.773,08
20	1281	904	1.158,60	1220	1.296,80	1576	1.503,00	1928	1.665,40	2260	1.866,40
21	1346	949	1.216,53	1281	1.361,64	1655	1.578,15	2024	1.748,67	2373	1.959,72
22	1411	994	1.274,46	1342	1.426,48	1734	1.653,30	2121	1.831,94	2486	2.053,04
23	1476	1040	1.332,39	1403	1.491,32	1812	1.728,45	2217	1.915,21	2599	2.146,36
24	1541	1085	1.390,32	1464	1.556,16	1891	1.803,60	2314	1.998,48	2712	2.239,68
25	1606	1130	1.448,25	1525	1.621,00	1970	1.878,75	2410	2.081,75	2825	2.333,00
26	1671	1175	1.506,18	1586	1.685,84	2049	1.953,90	2506	2.165,02	2938	2.426,32
27	1736	1220	1.564,11	1647	1.750,68	2128	2.029,05	2603	2.248,29	3051	2.519,64
28	1801	1266	1.622,04	1708	1.815,52	2206	2.104,20	2699	2.331,56	3164	2.612,96
29	1866	1311	1.679,97	1769	1.880,36	2285	2.179,35	2796	2.414,83	3277	2.706,28
30	1931	1356	1.737,90	1830	1.945,20	2364	2.254,50	2892	2.498,10	3390	2.799,60
31	1996	1401	1.795,83	1891	2.010,04	2443	2.329,65	2988	2.581,37	3503	2.892,92
32	2061	1446	1.853,76	1952	2.074,88	2522	2.404,80	3085	2.664,64	3616	2.986,24
33	2126	1492	1.911,69	2013	2.139,72	2600	2.479,95	3181	2.747,91	3729	3.079,56
34	2191	1537	1.969,62	2074	2.204,56	2679	2.555,10	3278	2.831,18	3842	3.172,88
35	2256	1582	2.027,55	2135	2.269,40	2758	2.630,25	3374	2.914,45	3955	3.266,20
36	2321	1627	2.085,48	2196	2.334,24	2837	2.705,40	3470	2.997,72	4068	3.359,52
37	2386	1672	2.143,41	2257	2.399,08	2916	2.780,55	3567	3.080,99	4181	3.452,84
38	2451	1718	2.201,34	2318	2.463,92	2994	2.855,70	3663	3.164,26	4294	3.546,16
39	2516	1763	2.259,27	2379	2.528,76	3073	2.930,85	3760	3.247,53	4407	3.639,48
40	2581	1808	2.317,20	2440	2.593,60	3152	3.006,00	3856	3.330,80	4520	3.732,80

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		600											
mm													
Model		K2060		K3060		K4060		K5060		K6060			
Depth	mm	62		100		136		173		210			
Exponent	n	1,29		1,29		1,28		1,27		1,29			
Max. number of elements		44		44		44		44		44			
Price/element	€	58,54		66,40		76,74		85,07		95,36			
Length		$\Phi_s$		Price		$\Phi_s$		Price		$\Phi_s$		Price	
Elements	mm	W	€	W	€	W	€	W	€	W	€	W	€
4	241	195	234,16	264	265,60	342	306,96	416	340,28	492	381,44		
5	306	244	292,70	330	332,00	427	383,70	520	425,35	615	476,80		
6	371	293	351,24	396	398,40	512	460,44	624	510,42	738	572,16		
7	436	342	409,78	462	464,80	598	537,18	728	595,49	861	667,52		
8	501	390	468,32	528	531,20	683	613,92	832	680,56	984	762,88		
9	566	439	526,86	594	597,60	769	690,66	936	765,63	1107	858,24		
10	631	488	585,40	660	664,00	854	767,40	1040	850,70	1230	953,60		
11	696	537	643,94	726	730,40	939	844,14	1144	935,77	1353	1.048,96		
12	761	586	702,48	792	796,80	1025	920,88	1248	1.020,84	1476	1.144,32		
13	826	634	761,02	858	863,20	1110	997,62	1352	1.105,91	1599	1.239,68		
14	891	683	819,56	924	929,60	1196	1.074,36	1456	1.190,98	1722	1.335,04		
15	956	732	878,10	990	996,00	1281	1.151,10	1560	1.276,05	1845	1.430,40		
16	1021	781	936,64	1056	1.062,40	1366	1.227,84	1664	1.361,12	1968	1.525,76		
17	1086	830	995,18	1122	1.128,80	1452	1.304,58	1768	1.446,19	2091	1.621,12		
18	1151	878	1.053,72	1188	1.195,20	1537	1.381,32	1872	1.531,26	2214	1.716,48		
19	1216	927	1.112,26	1254	1.261,60	1623	1.458,06	1976	1.616,33	2337	1.811,84		
20	1281	976	1.170,80	1320	1.328,00	1708	1.534,80	2080	1.701,40	2460	1.907,20		
21	1346	1025	1.229,34	1386	1.394,40	1793	1.611,54	2184	1.786,47	2583	2.002,56		
22	1411	1074	1.287,88	1452	1.460,80	1879	1.688,28	2288	1.871,54	2706	2.097,92		
23	1476	1122	1.346,42	1518	1.527,20	1964	1.765,02	2392	1.956,61	2829	2.193,28		
24	1541	1171	1.404,96	1584	1.593,60	2050	1.841,76	2496	2.041,68	2952	2.288,64		
25	1606	1220	1.463,50	1650	1.660,00	2135	1.918,50	2600	2.126,75	3075	2.384,00		
26	1671	1269	1.522,04	1716	1.726,40	2220	1.995,24	2704	2.211,82	3198	2.479,36		
27	1736	1318	1.580,58	1782	1.792,80	2306	2.071,98	2808	2.296,89	3321	2.574,72		
28	1801	1366	1.639,12	1848	1.859,20	2391	2.148,72	2912	2.381,96	3444	2.670,08		
29	1866	1415	1.697,66	1914	1.925,60	2477	2.225,46	3016	2.467,03	3567	2.765,44		
30	1931	1464	1.756,20	1980	1.992,00	2562	2.302,20	3120	2.552,10	3690	2.860,80		
31	1996	1513	1.814,74	2046	2.058,40	2647	2.378,94	3224	2.637,17	3813	2.956,16		
32	2061	1562	1.873,28	2112	2.124,80	2733	2.455,68	3328	2.722,24	3936	3.051,52		
33	2126	1610	1.931,82	2178	2.191,20	2818	2.532,42	3432	2.807,31	4059	3.146,88		
34	2191	1659	1.990,36	2244	2.257,60	2904	2.609,16	3536	2.892,38	4182	3.242,24		
35	2256	1708	2.048,90	2310	2.324,00	2989	2.685,90	3640	2.977,45	4305	3.337,60		
36	2321	1757	2.107,44	2376	2.390,40	3074	2.762,64	3744	3.062,52	4428	3.432,96		
37	2386	1806	2.165,98	2442	2.456,80	3160	2.839,38	3848	3.147,59	4551	3.528,32		
38	2451	1854	2.224,52	2508	2.523,20	3245	2.916,12	3952	3.232,66	4674	3.623,68		
39	2516	1903	2.283,06	2574	2.589,60	3331	2.992,86	4056	3.317,73	4797	3.719,04		
40	2581	1952	2.341,60	2640	2.656,00	3416	3.069,60	4160	3.402,80	4920	3.814,40		

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		750									
Model		K2075		K3075		K4075		K5075		K6075	
Depth	mm	62		100		136		173		210	
Exponent	n	1,29		1,30		1,29		1,28		1,30	
Max. number of elements		44		44		44		44		44	
Price/element	€	61,72		70,25		82,13		92,42		103,41	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	237	246,88	324	281,00	420	328,52	512	369,68	604	413,64
5	306	296	308,60	406	351,25	525	410,65	640	462,10	755	517,05
6	371	355	370,32	487	421,50	630	492,78	768	554,52	906	620,46
7	436	414	432,04	568	491,75	735	574,91	896	646,94	1057	723,87
8	501	474	493,76	649	562,00	840	657,04	1024	739,36	1208	827,28
9	566	533	555,48	730	632,25	945	739,17	1152	831,78	1359	930,69
10	631	592	617,20	811	702,50	1050	821,30	1280	924,20	1510	1.034,10
11	696	651	678,92	892	772,75	1155	903,43	1408	1.016,62	1661	1.137,51
12	761	710	740,64	973	843,00	1260	985,56	1536	1.109,04	1812	1.240,92
13	826	770	802,36	1054	913,25	1365	1.067,69	1664	1.201,46	1963	1.344,33
14	891	829	864,08	1135	983,50	1470	1.149,82	1792	1.293,88	2114	1.447,74
15	956	888	925,80	1217	1.053,75	1575	1.231,95	1920	1.386,30	2265	1.551,15
16	1021	947	987,52	1298	1.124,00	1680	1.314,08	2048	1.478,72	2416	1.654,56
17	1086	1006	1.049,24	1379	1.194,25	1785	1.396,21	2176	1.571,14	2567	1.757,97
18	1151	1066	1.110,96	1460	1.264,50	1890	1.478,34	2304	1.663,56	2718	1.861,38
19	1216	1125	1.172,68	1541	1.334,75	1995	1.560,47	2432	1.755,98	2869	1.964,79
20	1281	1184	1.234,40	1622	1.405,00	2100	1.642,60	2560	1.848,40	3020	2.068,20
21	1346	1243	1.296,12	1703	1.475,25	2205	1.724,73	2688	1.940,82	3171	2.171,61
22	1411	1302	1.357,84	1784	1.545,50	2310	1.806,86	2816	2.033,24	3322	2.275,02
23	1476	1362	1.419,56	1865	1.615,75	2415	1.888,99	2944	2.125,66	3473	2.378,43
24	1541	1421	1.481,28	1946	1.686,00	2520	1.971,12	3072	2.218,08	3624	2.481,84
25	1606	1480	1.543,00	2028	1.756,25	2625	2.053,25	3200	2.310,50	3775	2.585,25
26	1671	1539	1.604,72	2109	1.826,50	2730	2.135,38	3328	2.402,92	3926	2.688,66
27	1736	1598	1.666,44	2190	1.896,75	2835	2.217,51	3456	2.495,34	4077	2.792,07
28	1801	1658	1.728,16	2271	1.967,00	2940	2.299,64	3584	2.587,76	4228	2.895,48
29	1866	1717	1.789,88	2352	2.037,25	3045	2.381,77	3712	2.680,18	4379	2.998,89
30	1931	1776	1.851,60	2433	2.107,50	3150	2.463,90	3840	2.772,60	4530	3.102,30
31	1996	1835	1.913,32	2514	2.177,75	3255	2.546,03	3968	2.865,02	4681	3.205,71
32	2061	1894	1.975,04	2595	2.248,00	3360	2.628,16	4096	2.957,44	4832	3.309,12
33	2126	1954	2.036,76	2676	2.318,25	3465	2.710,29	4224	3.049,86	4983	3.412,53
34	2191	2013	2.098,48	2757	2.388,50	3570	2.792,42	4352	3.142,28	5134	3.515,94
35	2256	2072	2.160,20	2839	2.458,75	3675	2.874,55	4480	3.234,70	5285	3.619,35
36	2321	2131	2.221,92	2920	2.529,00	3780	2.956,68	4608	3.327,12	5436	3.722,76
37	2386	2190	2.283,64	3001	2.599,25	3885	3.038,81	4736	3.419,54	5587	3.826,17
38	2451	2250	2.345,36	3082	2.669,50	3990	3.120,94	4864	3.511,96	5738	3.929,58
39	2516	2309	2.407,08	3163	2.739,75	4095	3.203,07	4992	3.604,38	5889	4.032,99
40	2581	2368	2.468,80	3244	2.810,00	4200	3.285,20	5120	3.696,80	6040	4.136,40

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		900									
Model		K2090		K3090		K4090		K5090		K6090	
Depth	mm	62		100		136		173		210	
Exponent	n	1,30		1,31		1,30		1,29		1,30	
Max. number of elements		44		44		44		44		44	
Price/element	€	84,59		97,36		115,64		128,28		144,37	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	278	<b>338,36</b>	385	<b>389,44</b>	500	<b>462,56</b>	608	<b>513,12</b>	716	<b>577,48</b>
5	306	347	<b>422,95</b>	482	<b>486,80</b>	625	<b>578,20</b>	760	<b>641,40</b>	895	<b>721,85</b>
6	371	416	<b>507,54</b>	578	<b>584,16</b>	750	<b>693,84</b>	912	<b>769,68</b>	1074	<b>866,22</b>
7	436	486	<b>592,13</b>	674	<b>681,52</b>	875	<b>809,48</b>	1064	<b>897,96</b>	1253	<b>1.010,59</b>
8	501	555	<b>676,72</b>	770	<b>778,88</b>	1000	<b>925,12</b>	1216	<b>1.026,24</b>	1432	<b>1.154,96</b>
9	566	625	<b>761,31</b>	867	<b>876,24</b>	1125	<b>1.040,76</b>	1368	<b>1.154,52</b>	1611	<b>1.299,33</b>
10	631	694	<b>845,90</b>	963	<b>973,60</b>	1250	<b>1.156,40</b>	1520	<b>1.282,80</b>	1790	<b>1.443,70</b>
11	696	763	<b>930,49</b>	1059	<b>1.070,96</b>	1375	<b>1.272,04</b>	1672	<b>1.411,08</b>	1969	<b>1.588,07</b>
12	761	833	<b>1.015,08</b>	1156	<b>1.168,32</b>	1500	<b>1.387,68</b>	1824	<b>1.539,36</b>	2148	<b>1.732,44</b>
13	826	902	<b>1.099,67</b>	1252	<b>1.265,68</b>	1625	<b>1.503,32</b>	1976	<b>1.667,64</b>	2327	<b>1.876,81</b>
14	891	972	<b>1.184,26</b>	1348	<b>1.363,04</b>	1750	<b>1.618,96</b>	2128	<b>1.795,92</b>	2506	<b>2.021,18</b>
15	956	1041	<b>1.268,85</b>	1445	<b>1.460,40</b>	1875	<b>1.734,60</b>	2280	<b>1.924,20</b>	2685	<b>2.165,55</b>
16	1021	1110	<b>1.353,44</b>	1541	<b>1.557,76</b>	2000	<b>1.850,24</b>	2432	<b>2.052,48</b>	2864	<b>2.309,92</b>
17	1086	1180	<b>1.438,03</b>	1637	<b>1.655,12</b>	2125	<b>1.965,88</b>	2584	<b>2.180,76</b>	3043	<b>2.454,29</b>
18	1151	1249	<b>1.522,62</b>	1733	<b>1.752,48</b>	2250	<b>2.081,52</b>	2736	<b>2.309,04</b>	3222	<b>2.598,66</b>
19	1216	1319	<b>1.607,21</b>	1830	<b>1.849,84</b>	2375	<b>2.197,16</b>	2888	<b>2.437,32</b>	3401	<b>2.743,03</b>
20	1281	1388	<b>1.691,80</b>	1926	<b>1.947,20</b>	2500	<b>2.312,80</b>	3040	<b>2.565,60</b>	3580	<b>2.887,40</b>
21	1346	1457	<b>1.776,39</b>	2022	<b>2.044,56</b>	2625	<b>2.428,44</b>	3192	<b>2.693,88</b>	3759	<b>3.031,77</b>
22	1411	1527	<b>1.860,98</b>	2119	<b>2.141,92</b>	2750	<b>2.544,08</b>	3344	<b>2.822,16</b>	3938	<b>3.176,14</b>
23	1476	1596	<b>1.945,57</b>	2215	<b>2.239,28</b>	2875	<b>2.659,72</b>	3496	<b>2.950,44</b>	4117	<b>3.320,51</b>
24	1541	1666	<b>2.030,16</b>	2311	<b>2.336,64</b>	3000	<b>2.775,36</b>	3648	<b>3.078,72</b>	4296	<b>3.464,88</b>
25	1606	1735	<b>2.114,75</b>	2408	<b>2.434,00</b>	3125	<b>2.891,00</b>	3800	<b>3.207,00</b>	4475	<b>3.609,25</b>
26	1671	1804	<b>2.199,34</b>	2504	<b>2.531,36</b>	3250	<b>3.006,64</b>	3952	<b>3.335,28</b>	4654	<b>3.753,62</b>
27	1736	1874	<b>2.283,93</b>	2600	<b>2.628,72</b>	3375	<b>3.122,28</b>	4104	<b>3.463,56</b>	4833	<b>3.897,99</b>
28	1801	1943	<b>2.368,52</b>	2696	<b>2.726,08</b>	3500	<b>3.237,92</b>	4256	<b>3.591,84</b>	5012	<b>4.042,36</b>
29	1866	2013	<b>2.453,11</b>	2793	<b>2.823,44</b>	3625	<b>3.353,56</b>	4408	<b>3.720,12</b>	5191	<b>4.186,73</b>
30	1931	2082	<b>2.537,70</b>	2889	<b>2.920,80</b>	3750	<b>3.469,20</b>	4560	<b>3.848,40</b>	5370	<b>4.331,10</b>
31	1996	2151	<b>2.622,29</b>	2985	<b>3.018,16</b>	3875	<b>3.584,84</b>	4712	<b>3.976,68</b>	5549	<b>4.475,47</b>
32	2061	2221	<b>2.706,88</b>	3082	<b>3.115,52</b>	4000	<b>3.700,48</b>	4864	<b>4.104,96</b>	5728	<b>4.619,84</b>
33	2126	2290	<b>2.791,47</b>	3178	<b>3.212,88</b>	4125	<b>3.816,12</b>	5016	<b>4.233,24</b>	5907	<b>4.764,21</b>
34	2191	2360	<b>2.876,06</b>	3274	<b>3.310,24</b>	4250	<b>3.931,76</b>	5168	<b>4.361,52</b>	6086	<b>4.908,58</b>
35	2256	2429	<b>2.960,65</b>	3371	<b>3.407,60</b>	4375	<b>4.047,40</b>	5320	<b>4.489,80</b>	6265	<b>5.052,95</b>
36	2321	2498	<b>3.045,24</b>	3467	<b>3.504,96</b>	4500	<b>4.163,04</b>	5472	<b>4.618,08</b>	6444	<b>5.197,32</b>
37	2386	2568	<b>3.129,83</b>	3563	<b>3.602,32</b>	4625	<b>4.278,68</b>	5624	<b>4.746,36</b>	6623	<b>5.341,69</b>
38	2451	2637	<b>3.214,42</b>	3659	<b>3.699,68</b>	4750	<b>4.394,32</b>	5776	<b>4.874,64</b>	6802	<b>5.486,06</b>
39	2516	2707	<b>3.299,01</b>	3756	<b>3.797,04</b>	4875	<b>4.509,96</b>	5928	<b>5.002,92</b>	6981	<b>5.630,43</b>
40	2581	2776	<b>3.383,60</b>	3852	<b>3.894,40</b>	5000	<b>4.625,60</b>	6080	<b>5.131,20</b>	7160	<b>5.774,80</b>

**Surcharge for Completto, valve at top, connections V001/V002 €:** 216,05

**Surcharge for Completto, valve at top, connections V007/V008 €:** 287,08

**Surcharge for Completto, valve at bottom, connections V003/V004 €:** 305,60

Warning: Weight over 100 kg

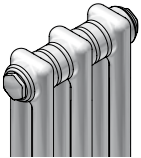

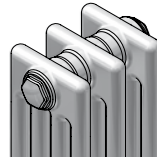

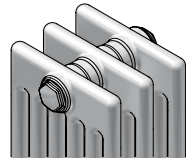
Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		1000									
mm											
Model		K2100		K3100		K4100		K5100		K6100	
Depth	mm	62		100		136		173		210	
Exponent	n	1,30		1,32		1,31		1,30		1,30	
Max. number of elements		16		16		16		16		16	
Price/element	€	85,97		100,46		119,83		132,86		150,05	
Length		$\Phi_s$		$\Phi_s$		$\Phi_s$		$\Phi_s$		$\Phi_s$	
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	304	343,88	428	401,84	552	479,32	672	531,44	792	600,20
5	306	380	429,85	535	502,30	690	599,15	840	664,30	990	750,25
6	371	456	515,82	642	602,76	828	718,98	1008	797,16	1188	900,30
7	436	532	601,79	749	703,22	966	838,81	1176	930,02	1386	1.050,35
8	501	608	687,76	856	803,68	1104	958,64	1344	1.062,88	1584	1.200,40
9	566	684	773,73	963	904,14	1242	1.078,47	1512	1.195,74	1782	1.350,45
10	631	760	859,70	1070	1.004,60	1380	1.198,30	1680	1.328,60	1980	1.500,50
11	696	836	945,67	1177	1.105,06	1518	1.318,13	1848	1.461,46	2178	1.650,55
12	761	912	1.031,64	1284	1.205,52	1656	1.437,96	2016	1.594,32	2376	1.800,60
13	826	988	1.117,61	1391	1.305,98	1794	1.557,79	2184	1.727,18	2574	1.950,65
14	891	1064	1.203,58	1498	1.406,44	1932	1.677,62	2352	1.860,04	2772	2.100,70
15	956	1140	1.289,55	1605	1.506,90	2070	1.797,45	2520	1.992,90	2970	2.250,75
16	1021	1216	1.375,52	1712	1.607,36	2208	1.917,28	2688	2.125,76	3168	2.400,80
17	1086	1292	1.461,49	1819	1.707,82	2346	2.037,11	2856	2.258,62	3366	2.550,85
18	1151	1368	1.547,46	1926	1.808,28	2484	2.156,94	3024	2.391,48	3564	2.700,90
19	1216	1444	1.633,43	2033	1.908,74	2622	2.276,77	3192	2.524,34	3762	2.850,95
20	1281	1520	1.719,40	2140	2.009,20	2760	2.396,60	3360	2.657,20	3960	3.001,00
21	1346	1596	1.805,37	2247	2.109,66	2898	2.516,43	3528	2.790,06	4158	3.151,05
22	1411	1672	1.891,34	2354	2.210,12	3036	2.636,26	3696	2.922,92	4356	3.301,10
23	1476	1748	1.977,31	2461	2.310,58	3174	2.756,09	3864	3.055,78	4554	3.451,15
24	1541	1824	2.063,28	2568	2.411,04	3312	2.875,92	4032	3.188,64	4752	3.601,20
25	1606	1900	2.149,25	2675	2.511,50	3450	2.995,75	4200	3.321,50	4950	3.751,25
26	1671	1976	2.235,22	2782	2.611,96	3588	3.115,58	4368	3.454,36	5148	3.901,30
27	1736	2052	2.321,19	2889	2.712,42	3726	3.235,41	4536	3.587,22	5346	4.051,35
28	1801	2128	2.407,16	2996	2.812,88	3864	3.355,24	4704	3.720,08	5544	4.201,40
29	1866	2204	2.493,13	3103	2.913,34	4002	3.475,07	4872	3.852,94	5742	4.351,45
30	1931	2280	2.579,10	3210	3.013,80	4140	3.594,90	5040	3.985,80	5940	4.501,50
31	1996	2356	2.665,07	3317	3.114,26	4278	3.714,73	5208	4.118,66	6138	4.651,55
32	2061	2432	2.751,04	3424	3.214,72	4416	3.834,56	5376	4.251,52	6336	4.801,60
33	2126	2508	2.837,01	3531	3.315,18	4554	3.954,39	5544	4.384,38	6534	4.951,65
34	2191	2584	2.922,98	3638	3.415,64	4692	4.074,22	5712	4.517,24	6732	5.101,70
35	2256	2660	3.008,95	3745	3.516,10	4830	4.194,05	5880	4.650,10	6930	5.251,75
36	2321	2736	3.094,92	3852	3.616,56	4968	4.313,88	6048	4.782,96	7128	5.401,80
37	2386	2812	3.180,89	3959	3.717,02	5106	4.433,71	6216	4.915,82	7326	5.551,85
38	2451	2888	3.266,86	4066	3.817,48	5244	4.553,54	6384	5.048,68	7524	5.701,90
39	2516	2964	3.352,83	4173	3.917,94	5382	4.673,37	6552	5.181,54	7722	5.851,95
40	2581	3040	3.438,80	4280	4.018,40	5520	4.793,20	6720	5.314,40	7920	6.002,00

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51



# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		1100									
mm											
Model		K2110		K3110		K4110		K5110		K6110	
Depth	mm	62		100		136		173		210	
Exponent	n	1,30		1,32		1,32		1,31		1,30	
Max. number of elements		16		16		16		16		16	
Price/element	€	89,10		106,07		126,04		143,26		163,83	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	330	356,40	468	424,28	604	504,16	740	573,04	868	655,32
5	306	413	445,50	585	530,35	755	630,20	925	716,30	1085	819,15
6	371	496	534,60	702	636,42	906	756,24	1110	859,56	1302	982,98
7	436	578	623,70	819	742,49	1057	882,28	1295	1.002,82	1519	1.146,81
8	501	661	712,80	936	848,56	1208	1.008,32	1480	1.146,08	1736	1.310,64
9	566	743	801,90	1053	954,63	1359	1.134,36	1665	1.289,34	1953	1.474,47
10	631	826	891,00	1170	1.060,70	1510	1.260,40	1850	1.432,60	2170	1.638,30
11	696	909	980,10	1287	1.166,77	1661	1.386,44	2035	1.575,86	2387	1.802,13
12	761	991	1.069,20	1404	1.272,84	1812	1.512,48	2220	1.719,12	2604	1.965,96
13	826	1074	1.158,30	1521	1.378,91	1963	1.638,52	2405	1.862,38	2821	2.129,79
14	891	1156	1.247,40	1638	1.484,98	2114	1.764,56	2590	2.005,64	3038	2.293,62
15	956	1239	1.336,50	1755	1.591,05	2265	1.890,60	2775	2.148,90	3255	2.457,45
16	1021	1322	1.425,60	1872	1.697,12	2416	2.016,64	2960	2.292,16	3472	2.621,28
17	1086	1404	1.514,70	1989	1.803,19	2567	2.142,68	3145	2.435,42	3689	2.785,11
18	1151	1487	1.603,80	2106	1.909,26	2718	2.268,72	3330	2.578,68	3906	2.948,94
19	1216	1569	1.692,90	2223	2.015,33	2869	2.394,76	3515	2.721,94	4123	3.112,77
20	1281	1652	1.782,00	2340	2.121,40	3020	2.520,80	3700	2.865,20	4340	3.276,60
21	1346	1735	1.871,10	2457	2.227,47	3171	2.646,84	3885	3.008,46	4557	3.440,43
22	1411	1817	1.960,20	2574	2.333,54	3322	2.772,88	4070	3.151,72	4774	3.604,26
23	1476	1900	2.049,30	2691	2.439,61	3473	2.898,92	4255	3.294,98	4991	3.768,09
24	1541	1982	2.138,40	2808	2.545,68	3624	3.024,96	4440	3.438,24	5208	3.931,92
25	1606	2065	2.227,50	2925	2.651,75	3775	3.151,00	4625	3.581,50	5425	4.095,75
26	1671	2148	2.316,60	3042	2.757,82	3926	3.277,04	4810	3.724,76	5642	4.259,58
27	1736	2230	2.405,70	3159	2.863,89	4077	3.403,08	4995	3.868,02	5859	4.423,41
28	1801	2313	2.494,80	3276	2.969,96	4228	3.529,12	5180	4.011,28	6076	4.587,24
29	1866	2395	2.583,90	3393	3.076,03	4379	3.655,16	5365	4.154,54	6293	4.751,07
30	1931	2478	2.673,00	3510	3.182,10	4530	3.781,20	5550	4.297,80	6510	4.914,90
31	1996	2561	2.762,10	3627	3.288,17	4681	3.907,24	5735	4.441,06	6727	5.078,73
32	2061	2643	2.851,20	3744	3.394,24	4832	4.033,28	5920	4.584,32	6944	5.242,56
33	2126	2726	2.940,30	3861	3.500,31	4983	4.159,32	6105	4.727,58	7161	5.406,39
34	2191	2808	3.029,40	3978	3.606,38	5134	4.285,36	6290	4.870,84	7378	5.570,22
35	2256	2891	3.118,50	4095	3.712,45	5285	4.411,40	6475	5.014,10	7595	5.734,05
36	2321	2974	3.207,60	4212	3.818,52	5436	4.537,44	6660	5.157,36	7812	5.897,88
37	2386	3056	3.296,70	4329	3.924,59	5587	4.663,48	6845	5.300,62	8029	6.061,71
38	2451	3139	3.385,80	4446	4.030,66	5738	4.789,52	7030	5.443,88	8246	6.225,54
39	2516	3221	3.474,90	4563	4.136,73	5889	4.915,56	7215	5.587,14	8463	6.389,37
40	2581	3304	3.564,00	4680	4.242,80	6040	5.041,60	7400	5.730,40	8680	6.553,20

Surcharge for Completo, valve at top, connections V001/V002 €: 216,05

Surcharge for Completo, valve at top, connections V007/V008 €: 287,08

Surcharge for Completo, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		1200									
mm											
Model		K2120		K3120		K4120		K5120		K6120	
Depth	mm	62		100		136		173		210	
Exponent	n	1,30		1,33		1,32		1,31		1,30	
Max. number of elements		16		16		16		16		16	
Price/element	€	92,20		114,31		134,29		155,13		175,73	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	364	368,80	508	457,24	660	537,16	804	620,52	944	702,92
5	306	456	461,00	635	571,55	825	671,45	1005	775,65	1180	878,65
6	371	547	553,20	762	685,86	990	805,74	1206	930,78	1416	1.054,38
7	436	638	645,40	889	800,17	1155	940,03	1407	1.085,91	1652	1.230,11
8	501	729	737,60	1016	914,48	1320	1.074,32	1608	1.241,04	1888	1.405,84
9	566	820	829,80	1143	1.028,79	1485	1.208,61	1809	1.396,17	2124	1.581,57
10	631	911	922,00	1270	1.143,10	1650	1.342,90	2010	1.551,30	2360	1.757,30
11	696	1002	1.014,20	1397	1.257,41	1815	1.477,19	2211	1.706,43	2596	1.933,03
12	761	1093	1.106,40	1524	1.371,72	1980	1.611,48	2412	1.861,56	2832	2.108,76
13	826	1184	1.198,60	1651	1.486,03	2145	1.745,77	2613	2.016,69	3068	2.284,49
14	891	1275	1.290,80	1778	1.600,34	2310	1.880,06	2814	2.171,82	3304	2.460,22
15	956	1367	1.383,00	1905	1.714,65	2475	2.014,35	3015	2.326,95	3540	2.635,95
16	1021	1458	1.475,20	2032	1.828,96	2640	2.148,64	3216	2.482,08	3776	2.811,68
17	1086	1549	1.567,40	2159	1.943,27	2805	2.282,93	3417	2.637,21	4012	2.987,41
18	1151	1640	1.659,60	2286	2.057,58	2970	2.417,22	3618	2.792,34	4248	3.163,14
19	1216	1731	1.751,80	2413	2.171,89	3135	2.551,51	3819	2.947,47	4484	3.338,87
20	1281	1822	1.844,00	2540	2.286,20	3300	2.685,80	4020	3.102,60	4720	3.514,60
21	1346	1913	1.936,20	2667	2.400,51	3465	2.820,09	4221	3.257,73	4956	3.690,33
22	1411	2004	2.028,40	2794	2.514,82	3630	2.954,38	4422	3.412,86	5192	3.866,06
23	1476	2095	2.120,60	2921	2.629,13	3795	3.088,67	4623	3.567,99	5428	4.041,79
24	1541	2186	2.212,80	3048	2.743,44	3960	3.222,96	4824	3.723,12	5664	4.217,52
25	1606	2278	2.305,00	3175	2.857,75	4125	3.357,25	5025	3.878,25	5900	4.393,25
26	1671	2369	2.397,20	3302	2.972,06	4290	3.491,54	5226	4.033,38	6136	4.568,98
27	1736	2460	2.489,40	3429	3.086,37	4455	3.625,83	5427	4.188,51	6372	4.744,71
28	1801	2551	2.581,60	3556	3.200,68	4620	3.760,12	5628	4.343,64	6608	4.920,44
29	1866	2642	2.673,80	3683	3.314,99	4785	3.894,41	5829	4.498,77	6844	5.096,17
30	1931	2733	2.766,00	3810	3.429,30	4950	4.028,70	6030	4.653,90	7080	5.271,90
31	1996	2824	2.858,20	3937	3.543,61	5115	4.162,99	6231	4.809,03	7316	5.447,63
32	2061	2915	2.950,40	4064	3.657,92	5280	4.297,28	6432	4.964,16	7552	5.623,36
33	2126	3006	3.042,60	4191	3.772,23	5445	4.431,57	6633	5.119,29	7788	5.799,09
34	2191	3097	3.134,80	4318	3.886,54	5610	4.565,86	6834	5.274,42	8024	5.974,82
35	2256	3189	3.227,00	4445	4.000,85	5775	4.700,15	7035	5.429,55	8260	6.150,55
36	2321	3280	3.319,20	4572	4.115,16	5940	4.834,44	7236	5.584,68	8496	6.326,28
37	2386	3371	3.411,40	4699	4.229,47	6105	4.968,73	7437	5.739,81	8732	6.502,01
38	2451	3462	3.503,60	4826	4.343,78	6270	5.103,02	7638	5.894,94	8968	6.677,74
39	2516	3553	3.595,80	4953	4.458,09	6435	5.237,31	7839	6.050,07	9204	6.853,47
40	2581	3644	3.688,00	5080	4.572,40	6600	5.371,60	8040	6.205,20	9440	7.029,20

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		1500									
mm											
Model		K2150		K3150		K4150		K5150		K6150	
Depth	mm	62		100		136		173		210	
Exponent	n	1,33		1,33		1,31		1,30		1,31	
Max. number of elements		16		16		16		16		16	
Price/element	€	103,20		130,97		158,88		185,93		214,19	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	460	412,80	632	523,88	816	635,52	996	743,72	1172	856,76
5	306	575	516,00	790	654,85	1020	794,40	1245	929,65	1465	1.070,95
6	371	690	619,20	948	785,82	1224	953,28	1494	1.115,58	1758	1.285,14
7	436	805	722,40	1106	916,79	1428	1.112,16	1743	1.301,51	2051	1.499,33
8	501	920	825,60	1264	1.047,76	1632	1.271,04	1992	1.487,44	2344	1.713,52
9	566	1035	928,80	1422	1.178,73	1836	1.429,92	2241	1.673,37	2637	1.927,71
10	631	1150	1.032,00	1580	1.309,70	2040	1.588,80	2490	1.859,30	2930	2.141,90
11	696	1265	1.135,20	1738	1.440,67	2244	1.747,68	2739	2.045,23	3223	2.356,09
12	761	1380	1.238,40	1896	1.571,64	2448	1.906,56	2988	2.231,16	3516	2.570,28
13	826	1495	1.341,60	2054	1.702,61	2652	2.065,44	3237	2.417,09	3809	2.784,47
14	891	1610	1.444,80	2212	1.833,58	2856	2.224,32	3486	2.603,02	4102	2.998,66
15	956	1725	1.548,00	2370	1.964,55	3060	2.383,20	3735	2.788,95	4395	3.212,85
16	1021	1840	1.651,20	2528	2.095,52	3264	2.542,08	3984	2.974,88	4688	3.427,04
17	1086	1955	1.754,40	2686	2.226,49	3468	2.700,96	4233	3.160,81	4981	3.641,23
18	1151	2070	1.857,60	2844	2.357,46	3672	2.859,84	4482	3.346,74	5274	3.855,42
19	1216	2185	1.960,80	3002	2.488,43	3876	3.018,72	4731	3.532,67	5567	4.069,61
20	1281	2300	2.064,00	3160	2.619,40	4080	3.177,60	4980	3.718,60	5860	4.283,80
21	1346	2415	2.167,20	3318	2.750,37	4284	3.336,48	5229	3.904,53	6153	4.497,99
22	1411	2530	2.270,40	3476	2.881,34	4488	3.495,36	5478	4.090,46	6446	4.712,18
23	1476	2645	2.373,60	3634	3.012,31	4692	3.654,24	5727	4.276,39	6739	4.926,37
24	1541	2760	2.476,80	3792	3.143,28	4896	3.813,12	5976	4.462,32	7032	5.140,56
25	1606	2875	2.580,00	3950	3.274,25	5100	3.972,00	6225	4.648,25	7325	5.354,75
26	1671	2990	2.683,20	4108	3.405,22	5304	4.130,88	6474	4.834,18	7618	5.568,94
27	1736	3105	2.786,40	4266	3.536,19	5508	4.289,76	6723	5.020,11	7911	5.783,13
28	1801	3220	2.889,60	4424	3.667,16	5712	4.448,64	6972	5.206,04	8204	5.997,32
29	1866	3335	2.992,80	4582	3.798,13	5916	4.607,52	7221	5.391,97	8497	6.211,51
30	1931	3450	3.096,00	4740	3.929,10	6120	4.766,40	7470	5.577,90	8790	6.425,70
31	1996	3565	3.199,20	4898	4.060,07	6324	4.925,28	7719	5.763,83	9083	6.639,89
32	2061	3680	3.302,40	5056	4.191,04	6528	5.084,16	7968	5.949,76	9376	6.854,08
33	2126	3795	3.405,60	5214	4.322,01	6732	5.243,04	8217	6.135,69	9669	7.068,27
34	2191	3910	3.508,80	5372	4.452,98	6936	5.401,92	8466	6.321,62	9962	7.282,46
35	2256	4025	3.612,00	5530	4.583,95	7140	5.560,80	8715	6.507,55	10255	7.496,65
36	2321	4140	3.715,20	5688	4.714,92	7344	5.719,68	8964	6.693,48	10548	7.710,84
37	2386	4255	3.818,40	5846	4.845,89	7548	5.878,56	9213	6.879,41	10841	7.925,03
38	2451	4370	3.921,60	6004	4.976,86	7752	6.037,44	9462	7.065,34	11134	8.139,22
39	2516	4485	4.024,80	6162	5.107,83	7956	6.196,32	9711	7.251,27	11427	8.353,41
40	2581	4600	4.128,00	6320	5.238,80	8160	6.355,20	9960	7.437,20	11720	8.567,60

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

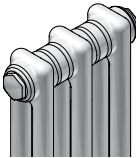

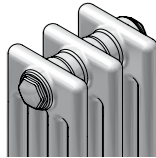
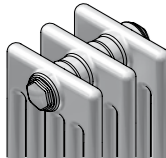
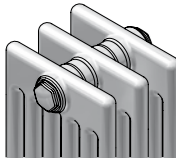
Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		1800									
mm											
Model		K2180		K3180		K4180		K5180		K6180	
Depth	mm	62		100		136		173		210	
Exponent	n	1,35		1,34		1,31		1,29		1,32	
Max. number of elements		16		16		16		16		16	
Price/element	€	112,56		148,20		178,11		208,30		240,72	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	556	450,24	756	592,80	976	712,44	1188	833,20	1396	962,88
5	306	695	562,80	945	741,00	1220	890,55	1485	1.041,50	1745	1.203,60
6	371	834	675,36	1134	889,20	1464	1.068,66	1782	1.249,80	2094	1.444,32
7	436	973	787,92	1323	1.037,40	1708	1.246,77	2079	1.458,10	2443	1.685,04
8	501	1112	900,48	1512	1.185,60	1952	1.424,88	2376	1.666,40	2792	1.925,76
9	566	1251	1.013,04	1701	1.333,80	2196	1.602,99	2673	1.874,70	3141	2.166,48
10	631	1390	1.125,60	1890	1.482,00	2440	1.781,10	2970	2.083,00	3490	2.407,20
11	696	1529	1.238,16	2079	1.630,20	2684	1.959,21	3267	2.291,30	3839	2.647,92
12	761	1668	1.350,72	2268	1.778,40	2928	2.137,32	3564	2.499,60	4188	2.888,64
13	826	1807	1.463,28	2457	1.926,60	3172	2.315,43	3861	2.707,90	4537	3.129,36
14	891	1946	1.575,84	2646	2.074,80	3416	2.493,54	4158	2.916,20	4886	3.370,08
15	956	2085	1.688,40	2835	2.223,00	3660	2.671,65	4455	3.124,50	5235	3.610,80
16	1021	2224	1.800,96	3024	2.371,20	3904	2.849,76	4752	3.332,80	5584	3.851,52
17	1086	2363	1.913,52	3213	2.519,40	4148	3.027,87	5049	3.541,10	5933	4.092,24
18	1151	2502	2.026,08	3402	2.667,60	4392	3.205,98	5346	3.749,40	6282	4.332,96
19	1216	2641	2.138,64	3591	2.815,80	4636	3.384,09	5643	3.957,70	6631	4.573,68
20	1281	2780	2.251,20	3780	2.964,00	4880	3.562,20	5940	4.166,00	6980	4.814,40
21	1346	2919	2.363,76	3969	3.112,20	5124	3.740,31	6237	4.374,30	7329	5.055,12
22	1411	3058	2.476,32	4158	3.260,40	5368	3.918,42	6534	4.582,60	7678	5.295,84
23	1476	3197	2.588,88	4347	3.408,60	5612	4.096,53	6831	4.790,90	8027	5.536,56
24	1541	3336	2.701,44	4536	3.556,80	5856	4.274,64	7128	4.999,20	8376	5.777,28
25	1606	3475	2.814,00	4725	3.705,00	6100	4.452,75	7425	5.207,50	8725	6.018,00
26	1671	3614	2.926,56	4914	3.853,20	6344	4.630,86	7722	5.415,80	9074	6.258,72
27	1736	3753	3.039,12	5103	4.001,40	6588	4.808,97	8019	5.624,10	9423	6.499,44
28	1801	3892	3.151,68	5292	4.149,60	6832	4.987,08	8316	5.832,40	9772	6.740,16
29	1866	4031	3.264,24	5481	4.297,80	7076	5.165,19	8613	6.040,70	10121	6.980,88
30	1931	4170	3.376,80	5670	4.446,00	7320	5.343,30	8910	6.249,00	10470	7.221,60
31	1996	4309	3.489,36	5859	4.594,20	7564	5.521,41	9207	6.457,30	10819	7.462,32
32	2061	4448	3.601,92	6048	4.742,40	7808	5.699,52	9504	6.665,60	11168	7.703,04
33	2126	4587	3.714,48	6237	4.890,60	8052	5.877,63	9801	6.873,90	11517	7.943,76
34	2191	4726	3.827,04	6426	5.038,80	8296	6.055,74	10098	7.082,20	11866	8.184,48
35	2256	4865	3.939,60	6615	5.187,00	8540	6.233,85	10395	7.290,50	12215	8.425,20
36	2321	5004	4.052,16	6804	5.335,20	8784	6.411,96	10692	7.498,80	12564	8.665,92
37	2386	5143	4.164,72	6993	5.483,40	9028	6.590,07	10989	7.707,10	12913	8.906,64
38	2451	5282	4.277,28	7182	5.631,60	9272	6.768,18	11286	7.915,40	13262	9.147,36
39	2516	5421	4.389,84	7371	5.779,80	9516	6.946,29	11583	8.123,70	13611	9.388,08
40	2581	5560	4.502,40	7560	5.928,00	9760	7.124,40	11880	8.332,00	13960	9.628,80

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		2000									
mm											
Model		K2200		K3200		K4200		K5200		K6200	
Depth	mm	62		100		136		173		210	
Exponent	n	1,34		1,33		1,32		1,31		1,31	
Max. number of elements		16		16		16		16		16	
Price/element	€	120,44		156,16		191,64		224,71		259,68	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	624	481,76	836	624,64	1080	766,56	1320	898,84	1548	1.038,72
5	306	780	602,20	1045	780,80	1350	958,20	1650	1.123,55	1935	1.298,40
6	371	936	722,64	1254	936,96	1620	1.149,84	1980	1.348,26	2322	1.558,08
7	436	1092	843,08	1463	1.093,12	1890	1.341,48	2310	1.572,97	2709	1.817,76
8	501	1248	963,52	1672	1.249,28	2160	1.533,12	2640	1.797,68	3096	2.077,44
9	566	1404	1.083,96	1881	1.405,44	2430	1.724,76	2970	2.022,39	3483	2.337,12
10	631	1560	1.204,40	2090	1.561,60	2700	1.916,40	3300	2.247,10	3870	2.596,80
11	696	1716	1.324,84	2299	1.717,76	2970	2.108,04	3630	2.471,81	4257	2.856,48
12	761	1872	1.445,28	2508	1.873,92	3240	2.299,68	3960	2.696,52	4644	3.116,16
13	826	2028	1.565,72	2717	2.030,08	3510	2.491,32	4290	2.921,23	5031	3.375,84
14	891	2184	1.686,16	2926	2.186,24	3780	2.682,96	4620	3.145,94	5418	3.635,52
15	956	2340	1.806,60	3135	2.342,40	4050	2.874,60	4950	3.370,65	5805	3.895,20
16	1021	2496	1.927,04	3344	2.498,56	4320	3.066,24	5280	3.595,36	6192	4.154,88
17	1086	2652	2.047,48	3553	2.654,72	4590	3.257,88	5610	3.820,07	6579	4.414,56
18	1151	2808	2.167,92	3762	2.810,88	4860	3.449,52	5940	4.044,78	6966	4.674,24
19	1216	2964	2.288,36	3971	2.967,04	5130	3.641,16	6270	4.269,49	7353	4.933,92
20	1281	3120	2.408,80	4180	3.123,20	5400	3.832,80	6600	4.494,20	7740	5.193,60
21	1346	3276	2.529,24	4389	3.279,36	5670	4.024,44	6930	4.718,91	8127	5.453,28
22	1411	3432	2.649,68	4598	3.435,52	5940	4.216,08	7260	4.943,62	8514	5.712,96
23	1476	3588	2.770,12	4807	3.591,68	6210	4.407,72	7590	5.168,33	8901	5.972,64
24	1541	3744	2.890,56	5016	3.747,84	6480	4.599,36	7920	5.393,04	9288	6.232,32
25	1606	3900	3.011,00	5225	3.904,00	6750	4.791,00	8250	5.617,75	9675	6.492,00
26	1671	4056	3.131,44	5434	4.060,16	7020	4.982,64	8580	5.842,46	10062	6.751,68
27	1736	4212	3.251,88	5643	4.216,32	7290	5.174,28	8910	6.067,17	10449	7.011,36
28	1801	4368	3.372,32	5852	4.372,48	7560	5.365,92	9240	6.291,88	10836	7.271,04
29	1866	4524	3.492,76	6061	4.528,64	7830	5.557,56	9570	6.516,59	11223	7.530,72
30	1931	4680	3.613,20	6270	4.684,80	8100	5.749,20	9900	6.741,30	11610	7.790,40
31	1996	4836	3.733,64	6479	4.840,96	8370	5.940,84	10230	6.966,01	11997	8.050,08
32	2061	4992	3.854,08	6688	4.997,12	8640	6.132,48	10560	7.190,72	12384	8.309,76
33	2126	5148	3.974,52	6897	5.153,28	8910	6.324,12	10890	7.415,43	12771	8.569,44
34	2191	5304	4.094,96	7106	5.309,44	9180	6.515,76	11220	7.640,14	13158	8.829,12
35	2256	5460	4.215,40	7315	5.465,60	9450	6.707,40	11550	7.864,85	13545	9.088,80
36	2321	5616	4.335,84	7524	5.621,76	9720	6.899,04	11880	8.089,56	13932	9.348,48
37	2386	5772	4.456,28	7733	5.777,92	9990	7.090,68	12210	8.314,27	14319	9.608,16
38	2451	5928	4.576,72	7942	5.934,08	10260	7.282,32	12540	8.538,98	14706	9.867,84
39	2516	6084	4.697,16	8151	6.090,24	10530	7.473,96	12870	8.763,69	15093	10.127,52
40	2581	6240	4.817,60	8360	6.246,40	10800	7.665,60	13200	8.988,40	15480	10.387,20

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		2200									
Model		K2220		K3220		K4220		K5220		K6220	
Depth	mm	62		100		136		173		210	
Exponent	n	1,34		1,33		1,32		1,31		1,31	
Max. number of elements		16		16		16		16		16	
Price/element	€	127,12		166,35		204,34		239,94		278,45	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	688	508,48	916	665,40	1184	817,36	1448	959,76	1700	1.113,80
5	306	860	635,60	1145	831,75	1480	1.021,70	1810	1.199,70	2125	1.392,25
6	371	1032	762,72	1374	998,10	1776	1.226,04	2172	1.439,64	2550	1.670,70
7	436	1204	889,84	1603	1.164,45	2072	1.430,38	2534	1.679,58	2975	1.949,15
8	501	1376	1.016,96	1832	1.330,80	2368	1.634,72	2896	1.919,52	3400	2.227,60
9	566	1548	1.144,08	2061	1.497,15	2664	1.839,06	3258	2.159,46	3825	2.506,05
10	631	1720	1.271,20	2290	1.663,50	2960	2.043,40	3620	2.399,40	4250	2.784,50
11	696	1892	1.398,32	2519	1.829,85	3256	2.247,74	3982	2.639,34	4675	3.062,95
12	761	2064	1.525,44	2748	1.996,20	3552	2.452,08	4344	2.879,28	5100	3.341,40
13	826	2236	1.652,56	2977	2.162,55	3848	2.656,42	4706	3.119,22	5525	3.619,85
14	891	2408	1.779,68	3206	2.328,90	4144	2.860,76	5068	3.359,16	5950	3.898,30
15	956	2580	1.906,80	3435	2.495,25	4440	3.065,10	5430	3.599,10	6375	4.176,75
16	1021	2752	2.033,92	3664	2.661,60	4736	3.269,44	5792	3.839,04	6800	4.455,20
17	1086	2924	2.161,04	3893	2.827,95	5032	3.473,78	6154	4.078,98	7225	4.733,65
18	1151	3096	2.288,16	4122	2.994,30	5328	3.678,12	6516	4.318,92	7650	5.012,10
19	1216	3268	2.415,28	4351	3.160,65	5624	3.882,46	6878	4.558,86	8075	5.290,55
20	1281	3440	2.542,40	4580	3.327,00	5920	4.086,80	7240	4.798,80	8500	5.569,00
21	1346	3612	2.669,52	4809	3.493,35	6216	4.291,14	7602	5.038,74	8925	5.847,45
22	1411	3784	2.796,64	5038	3.659,70	6512	4.495,48	7964	5.278,68	9350	6.125,90
23	1476	3956	2.923,76	5267	3.826,05	6808	4.699,82	8326	5.518,62	9775	6.404,35
24	1541	4128	3.050,88	5496	3.992,40	7104	4.904,16	8688	5.758,56	10200	6.682,80
25	1606	4300	3.178,00	5725	4.158,75	7400	5.108,50	9050	5.998,50	10625	6.961,25
26	1671	4472	3.305,12	5954	4.325,10	7696	5.312,84	9412	6.238,44	11050	7.239,70
27	1736	4644	3.432,24	6183	4.491,45	7992	5.517,18	9774	6.478,38	11475	7.518,15
28	1801	4816	3.559,36	6412	4.657,80	8288	5.721,52	10136	6.718,32	11900	7.796,60
29	1866	4988	3.686,48	6641	4.824,15	8584	5.925,86	10498	6.958,26	12325	8.075,05
30	1931	5160	3.813,60	6870	4.990,50	8880	6.130,20	10860	7.198,20	12750	8.353,50
31	1996	5332	3.940,72	7099	5.156,85	9176	6.334,54	11222	7.438,14	13175	8.631,95
32	2061	5504	4.067,84	7328	5.323,20	9472	6.538,88	11584	7.678,08	13600	8.910,40
33	2126	5676	4.194,96	7557	5.489,55	9768	6.743,22	11946	7.918,02	14025	9.188,85
34	2191	5848	4.322,08	7786	5.655,90	10064	6.947,56	12308	8.157,96	14450	9.467,30
35	2256	6020	4.449,20	8015	5.822,25	10360	7.151,90	12670	8.397,90	14875	9.745,75
36	2321	6192	4.576,32	8244	5.988,60	10656	7.356,24	13032	8.637,84	15300	10.024,20
37	2386	6364	4.703,44	8473	6.154,95	10952	7.560,58	13394	8.877,78	15725	10.302,65
38	2451	6536	4.830,56	8702	6.321,30	11248	7.764,92	13756	9.117,72	16150	10.581,10
39	2516	6708	4.957,68	8931	6.487,65	11544	7.969,26	14118	9.357,66	16575	10.859,55
40	2581	6880	5.084,80	9160	6.654,00	11840	8.173,60	14480	9.597,60	17000	11.138,00

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		2500									
Model		K2250		K3250		K4250		K5250		K6250	
Depth	mm	62		100		136		173		210	
Exponent	n	1,33		1,33		1,32		1,31		1,30	
Max. number of elements		16		16		16		16		16	
Price/element	€	136,82		182,40		223,46		263,10		306,69	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	780	547,28	1040	729,60	1340	893,84	1640	1.052,40	1924	1.226,76
5	306	975	684,10	1300	912,00	1675	1.117,30	2050	1.315,50	2405	1.533,45
6	371	1170	820,92	1560	1.094,40	2010	1.340,76	2460	1.578,60	2886	1.840,14
7	436	1365	957,74	1820	1.276,80	2345	1.564,22	2870	1.841,70	3367	2.146,83
8	501	1560	1.094,56	2080	1.459,20	2680	1.787,68	3280	2.104,80	3848	2.453,52
9	566	1755	1.231,38	2340	1.641,60	3015	2.011,14	3690	2.367,90	4329	2.760,21
10	631	1950	1.368,20	2600	1.824,00	3350	2.234,60	4100	2.631,00	4810	3.066,90
11	696	2145	1.505,02	2860	2.006,40	3685	2.458,06	4510	2.894,10	5291	3.373,59
12	761	2340	1.641,84	3120	2.188,80	4020	2.681,52	4920	3.157,20	5772	3.680,28
13	826	2535	1.778,66	3380	2.371,20	4355	2.904,98	5330	3.420,30	6253	3.986,97
14	891	2730	1.915,48	3640	2.553,60	4690	3.128,44	5740	3.683,40	6734	4.293,66
15	956	2925	2.052,30	3900	2.736,00	5025	3.351,90	6150	3.946,50	7215	4.600,35
16	1021	3120	2.189,12	4160	2.918,40	5360	3.575,36	6560	4.209,60	7696	4.907,04
17	1086	3315	2.325,94	4420	3.100,80	5695	3.798,82	6970	4.472,70	8177	5.213,73
18	1151	3510	2.462,76	4680	3.283,20	6030	4.022,28	7380	4.735,80	8658	5.520,42
19	1216	3705	2.599,58	4940	3.465,60	6365	4.245,74	7790	4.998,90	9139	5.827,11
20	1281	3900	2.736,40	5200	3.648,00	6700	4.469,20	8200	5.262,00	9620	6.133,80
21	1346	4095	2.873,22	5460	3.830,40	7035	4.692,66	8610	5.525,10	10101	6.440,49
22	1411	4290	3.010,04	5720	4.012,80	7370	4.916,12	9020	5.788,20	10582	6.747,18
23	1476	4485	3.146,86	5980	4.195,20	7705	5.139,58	9430	6.051,30	11063	7.053,87
24	1541	4680	3.283,68	6240	4.377,60	8040	5.363,04	9840	6.314,40	11544	7.360,56
25	1606	4875	3.420,50	6500	4.560,00	8375	5.586,50	10250	6.577,50	12025	7.667,25
26	1671	5070	3.557,32	6760	4.742,40	8710	5.809,96	10660	6.840,60	12506	7.973,94
27	1736	5265	3.694,14	7020	4.924,80	9045	6.033,42	11070	7.103,70	12987	8.280,63
28	1801	5460	3.830,96	7280	5.107,20	9380	6.256,88	11480	7.366,80	13468	8.587,32
29	1866	5655	3.967,78	7540	5.289,60	9715	6.480,34	11890	7.629,90	13949	8.894,01
30	1931	5850	4.104,60	7800	5.472,00	10050	6.703,80	12300	7.893,00	14430	9.200,70
31	1996	6045	4.241,42	8060	5.654,40	10385	6.927,26	12710	8.156,10	14911	9.507,39
32	2061	6240	4.378,24	8320	5.836,80	10720	7.150,72	13120	8.419,20	15392	9.814,08
33	2126	6435	4.515,06	8580	6.019,20	11055	7.374,18	13530	8.682,30	15873	10.120,77
34	2191	6630	4.651,88	8840	6.201,60	11390	7.597,64	13940	8.945,40	16354	10.427,46
35	2256	6825	4.788,70	9100	6.384,00	11725	7.821,10	14350	9.208,50	16835	10.734,15
36	2321	7020	4.925,52	9360	6.566,40	12060	8.044,56	14760	9.471,60	17316	11.040,84
37	2386	7215	5.062,34	9620	6.748,80	12395	8.268,02	15170	9.734,70	17797	11.347,53
38	2451	7410	5.199,16	9880	6.931,20	12730	8.491,48	15580	9.997,80	18278	11.654,22
39	2516	7605	5.335,98	10140	7.113,60	13065	8.714,94	15990	10.260,90	18759	11.960,91
40	2581	7800	5.472,80	10400	7.296,00	13400	8.938,40	16400	10.524,00	19240	12.267,60

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

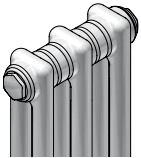

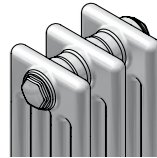
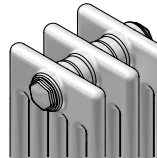
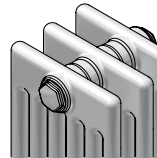
Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		2800									
mm											
Model		K2280		K3280		K4280		K5280		K6280	
Depth	mm	62		100		136		173		210	
Exponent	n	1,32		1,33		1,32		1,31		1,30	
Max. number of elements		16		16		16		16		14	
Price/element	€	148,64		197,72		246,11		286,83		337,53	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	876	<b>594,56</b>	1160	<b>790,88</b>	1500	<b>984,44</b>	1832	<b>1.147,32</b>	2148	<b>1.350,12</b>
5	306	1095	<b>743,20</b>	1450	<b>988,60</b>	1875	<b>1.230,55</b>	2290	<b>1.434,15</b>	2685	<b>1.687,65</b>
6	371	1314	<b>891,84</b>	1740	<b>1.186,32</b>	2250	<b>1.476,66</b>	2748	<b>1.720,98</b>	3222	<b>2.025,18</b>
7	436	1533	<b>1.040,48</b>	2030	<b>1.384,04</b>	2625	<b>1.722,77</b>	3206	<b>2.007,81</b>	3759	<b>2.362,71</b>
8	501	1752	<b>1.189,12</b>	2320	<b>1.581,76</b>	3000	<b>1.968,88</b>	3664	<b>2.294,64</b>	4296	<b>2.700,24</b>
9	566	1971	<b>1.337,76</b>	2610	<b>1.779,48</b>	3375	<b>2.214,99</b>	4122	<b>2.581,47</b>	4833	<b>3.037,77</b>
10	631	2190	<b>1.486,40</b>	2900	<b>1.977,20</b>	3750	<b>2.461,10</b>	4580	<b>2.868,30</b>	5370	<b>3.375,30</b>
11	696	2409	<b>1.635,04</b>	3190	<b>2.174,92</b>	4125	<b>2.707,21</b>	5038	<b>3.155,13</b>	5907	<b>3.712,83</b>
12	761	2628	<b>1.783,68</b>	3480	<b>2.372,64</b>	4500	<b>2.953,32</b>	5496	<b>3.441,96</b>	6444	<b>4.050,36</b>
13	826	2847	<b>1.932,32</b>	3770	<b>2.570,36</b>	4875	<b>3.199,43</b>	5954	<b>3.728,79</b>	6981	<b>4.387,89</b>
14	891	3066	<b>2.080,96</b>	4060	<b>2.768,08</b>	5250	<b>3.445,54</b>	6412	<b>4.015,62</b>	7518	<b>4.725,42</b>
15	956	3285	<b>2.229,60</b>	4350	<b>2.965,80</b>	5625	<b>3.691,65</b>	6870	<b>4.302,45</b>	8055	<b>5.062,95</b>
16	1021	3504	<b>2.378,24</b>	4640	<b>3.163,52</b>	6000	<b>3.937,76</b>	7328	<b>4.589,28</b>	8592	<b>5.400,48</b>
17	1086	3723	<b>2.526,88</b>	4930	<b>3.361,24</b>	6375	<b>4.183,87</b>	7786	<b>4.876,11</b>	9129	<b>5.738,01</b>
18	1151	3942	<b>2.675,52</b>	5220	<b>3.558,96</b>	6750	<b>4.429,98</b>	8244	<b>5.162,94</b>	9666	<b>6.075,54</b>
19	1216	4161	<b>2.824,16</b>	5510	<b>3.756,68</b>	7125	<b>4.676,09</b>	8702	<b>5.449,77</b>	10203	<b>6.413,07</b>
20	1281	4380	<b>2.972,80</b>	5800	<b>3.954,40</b>	7500	<b>4.922,20</b>	9160	<b>5.736,60</b>	10740	<b>6.750,60</b>
21	1346	4599	<b>3.121,44</b>	6090	<b>4.152,12</b>	7875	<b>5.168,31</b>	9618	<b>6.023,43</b>	11277	<b>7.088,13</b>
22	1411	4818	<b>3.270,08</b>	6380	<b>4.349,84</b>	8250	<b>5.414,42</b>	10076	<b>6.310,26</b>	11814	<b>7.425,66</b>
23	1476	5037	<b>3.418,72</b>	6670	<b>4.547,56</b>	8625	<b>5.660,53</b>	10534	<b>6.597,09</b>	12351	<b>7.763,19</b>
24	1541	5256	<b>3.567,36</b>	6960	<b>4.745,28</b>	9000	<b>5.906,64</b>	10992	<b>6.883,92</b>	12888	<b>8.100,72</b>
25	1606	5475	<b>3.716,00</b>	7250	<b>4.943,00</b>	9375	<b>6.152,75</b>	11450	<b>7.170,75</b>	13425	<b>8.438,25</b>
26	1671	5694	<b>3.864,64</b>	7540	<b>5.140,72</b>	9750	<b>6.398,86</b>	11908	<b>7.457,58</b>	13962	<b>8.775,78</b>
27	1736	5913	<b>4.013,28</b>	7830	<b>5.338,44</b>	10125	<b>6.644,97</b>	12366	<b>7.744,41</b>	14499	<b>9.113,31</b>
28	1801	6132	<b>4.161,92</b>	8120	<b>5.536,16</b>	10500	<b>6.891,08</b>	12824	<b>8.031,24</b>	15036	<b>9.450,84</b>
29	1866	6351	<b>4.310,56</b>	8410	<b>5.733,88</b>	10875	<b>7.137,19</b>	13282	<b>8.318,07</b>	15573	<b>9.788,37</b>
30	1931	6570	<b>4.459,20</b>	8700	<b>5.931,60</b>	11250	<b>7.383,30</b>	13740	<b>8.604,90</b>	16110	<b>10.125,90</b>
31	1996	6789	<b>4.607,84</b>	8990	<b>6.129,32</b>	11625	<b>7.629,41</b>	14198	<b>8.891,73</b>	16647	<b>10.463,43</b>
32	2061	7008	<b>4.756,48</b>	9280	<b>6.327,04</b>	12000	<b>7.875,52</b>	14656	<b>9.178,56</b>	17184	<b>10.800,96</b>
33	2126	7227	<b>4.905,12</b>	9570	<b>6.524,76</b>	12375	<b>8.121,63</b>	15114	<b>9.465,39</b>	17721	<b>11.138,49</b>
34	2191	7446	<b>5.053,76</b>	9860	<b>6.722,48</b>	12750	<b>8.367,74</b>	15572	<b>9.752,22</b>	18258	<b>11.476,02</b>
35	2256	7665	<b>5.202,40</b>	10150	<b>6.920,20</b>	13125	<b>8.613,85</b>	16030	<b>10.039,05</b>	18795	<b>11.813,55</b>
36	2321	7884	<b>5.351,04</b>	10440	<b>7.117,92</b>	13500	<b>8.859,96</b>	16488	<b>10.325,88</b>	19332	<b>12.151,08</b>
37	2386	8103	<b>5.499,68</b>	10730	<b>7.315,64</b>	13875	<b>9.106,07</b>	16946	<b>10.612,71</b>	19869	<b>12.488,61</b>
38	2451	8322	<b>5.648,32</b>	11020	<b>7.513,36</b>	14250	<b>9.352,18</b>	17404	<b>10.899,54</b>	20406	<b>12.826,14</b>
39	2516	8541	<b>5.796,96</b>	11310	<b>7.711,08</b>	14625	<b>9.598,29</b>	17862	<b>11.186,37</b>	20943	<b>13.163,67</b>
40	2581	8760	<b>5.945,60</b>	11600	<b>7.908,80</b>	15000	<b>9.844,40</b>	18320	<b>11.473,20</b>	21480	<b>13.501,20</b>

Surcharge for Completto, valve at top, connections V001/V002 €: 216,05

Surcharge for Completto, valve at top, connections V007/V008 €: 287,08

Surcharge for Completto, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51



# Zehnder Charleston Clinic



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		3000									
mm											
Model		K2300		K3300		K4300		K5300		K6300	
Depth	mm	62		100		136		173		210	
Exponent	n	1,32		1,33		1,32		1,31		1,30	
Max. number of elements		16		16		16		16		14	
Price/element	€	154,57		209,28		258,85		302,41		354,46	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	241	940	618,28	1244	837,12	1604	1.035,40	1960	1.209,64	2300	1.417,84
5	306	1175	772,85	1555	1.046,40	2005	1.294,25	2450	1.512,05	2875	1.772,30
6	371	1410	927,42	1866	1.255,68	2406	1.553,10	2940	1.814,46	3450	2.126,76
7	436	1645	1.081,99	2177	1.464,96	2807	1.811,95	3430	2.116,87	4025	2.481,22
8	501	1880	1.236,56	2488	1.674,24	3208	2.070,80	3920	2.419,28	4600	2.835,68
9	566	2115	1.391,13	2799	1.883,52	3609	2.329,65	4410	2.721,69	5175	3.190,14
10	631	2350	1.545,70	3110	2.092,80	4010	2.588,50	4900	3.024,10	5750	3.544,60
11	696	2585	1.700,27	3421	2.302,08	4411	2.847,35	5390	3.326,51	6325	3.899,06
12	761	2820	1.854,84	3732	2.511,36	4812	3.106,20	5880	3.628,92	6900	4.253,52
13	826	3055	2.009,41	4043	2.720,64	5213	3.365,05	6370	3.931,33	7475	4.607,98
14	891	3290	2.163,98	4354	2.929,92	5614	3.623,90	6860	4.233,74	8050	4.962,44
15	956	3525	2.318,55	4665	3.139,20	6015	3.882,75	7350	4.536,15	8625	5.316,90
16	1021	3760	2.473,12	4976	3.348,48	6416	4.141,60	7840	4.838,56	9200	5.671,36
17	1086	3995	2.627,69	5287	3.557,76	6817	4.400,45	8330	5.140,97	9775	6.025,82
18	1151	4230	2.782,26	5598	3.767,04	7218	4.659,30	8820	5.443,38	10350	6.380,28
19	1216	4465	2.936,83	5909	3.976,32	7619	4.918,15	9310	5.745,79	10925	6.734,74
20	1281	4700	3.091,40	6220	4.185,60	8020	5.177,00	9800	6.048,20	11500	7.089,20
21	1346	4935	3.245,97	6531	4.394,88	8421	5.435,85	10290	6.350,61	12075	7.443,66
22	1411	5170	3.400,54	6842	4.604,16	8822	5.694,70	10780	6.653,02	12650	7.798,12
23	1476	5405	3.555,11	7153	4.813,44	9223	5.953,55	11270	6.955,43	13225	8.152,58
24	1541	5640	3.709,68	7464	5.022,72	9624	6.212,40	11760	7.257,84	13800	8.507,04
25	1606	5875	3.864,25	7775	5.232,00	10025	6.471,25	12250	7.560,25	14375	8.861,50
26	1671	6110	4.018,82	8086	5.441,28	10426	6.730,10	12740	7.862,66	14950	9.215,96
27	1736	6345	4.173,39	8397	5.650,56	10827	6.988,95	13230	8.165,07	15525	9.570,42
28	1801	6580	4.327,96	8708	5.859,84	11228	7.247,80	13720	8.467,48	16100	9.924,88
29	1866	6815	4.482,53	9019	6.069,12	11629	7.506,65	14210	8.769,89	16675	10.279,34
30	1931	7050	4.637,10	9330	6.278,40	12030	7.765,50	14700	9.072,30	17250	10.633,80
31	1996	7285	4.791,67	9641	6.487,68	12431	8.024,35	15190	9.374,71	17825	10.988,26
32	2061	7520	4.946,24	9952	6.696,96	12832	8.283,20	15680	9.677,12	18400	11.342,72
33	2126	7755	5.100,81	10263	6.906,24	13233	8.542,05	16170	9.979,53	18975	11.697,18
34	2191	7990	5.255,38	10574	7.115,52	13634	8.800,90	16660	10.281,94	19550	12.051,64
35	2256	8225	5.409,95	10885	7.324,80	14035	9.059,75	17150	10.584,35	20125	12.406,10
36	2321	8460	5.564,52	11196	7.534,08	14436	9.318,60	17640	10.886,76	20700	12.760,56
37	2386	8695	5.719,09	11507	7.743,36	14837	9.577,45	18130	11.189,17	21275	13.115,02
38	2451	8930	5.873,66	11818	7.952,64	15238	9.836,30	18620	11.491,58	21850	13.469,48
39	2516	9165	6.028,23	12129	8.161,92	15639	10.095,15	19110	11.793,99	22425	13.823,94
40	2581	9400	6.182,80	12440	8.371,20	16040	10.354,00	19600	12.096,40	23000	14.178,40

Surcharge for Completo, valve at top, connections V001/V002 €: 216,05

Surcharge for Completo, valve at top, connections V007/V008 €: 287,08

Surcharge for Completo, valve at bottom, connections V003/V004 €: 305,60

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

## Zehnder Charleston Clinic



		Price €																					
<b>High pressure version max. 18 bar</b> (not for Completto version) - with welded plugs - with welded plugs and tied rod - for radiators comprising several blocks additionally per welded joint		2- to 3-column 4- to 6-column (at top and bottom)																					
		<b>246,95 per RAD</b> <b>363,70 per RAD</b> <b>123,64</b>																					
<b>Operating temperature 120 °C</b>		<b>On request</b>																					
<b>Further connections</b>		<b>On request</b>																					
<b>Insert tube</b> for Zehnder Charleston radiators with same-side connections, a flow insert tube is factory-installed in $\frac{2}{3}$ of the radiator length from the following element numbers or lengths, in order to guarantee the thermal outputs shown in the catalogue.																							
2-column from 87 elements = length 5636 mm 3-column from 85 elements = length 5506 mm 4-column from 81 elements = length 5246 mm 5-column from 71 elements = length 4596 mm 6-column from 55 elements = length 3556 mm		<b>274,51 per RAD</b>																					
<b>Intermediate heights</b> calculated on next-higher catalogue height		<b>On request</b>																					
<b>Angled or curved design</b> (see page 42)		<b>On request</b>																					
<b>Radiator designs over height 3000 mm</b>		<b>On request</b>																					
<b>Welded lugs, price per lug</b>		<b>38,25</b>																					
<b>Galvanising</b> (see also explanations on galvanising in section "General") Galvanising with subsequent standard finish (RAL 9016) maximum dimensions: 3000 x 850 x 450 mm		<b>On request</b>																					
<b>Completto version</b> with valve inserts for clip seal (Danfoss thermostat) instead of M 30 x 1,5 threaded connection		<b>No surcharge</b>																					
<b>Completto Q-Tech</b> Charleston Completto Q-Tech is built in factory-made, for an automatic hydraulic balancing of pressure differences that can occur when, e.g. connecting or turning off system parts. By the integrated diaphragm-sensed flow-control in the valve insert, the differential pressure is constantly kept above the pre-setting and standard cross section value. Therefore it is possible to quickly and easily do the hydraulic balancing of new and old systems or unknown pipe networks. The pre-setting of the needed flow for the customer needs on site, is achieved by turning the regulation ring with the pre-setting key which is integrated in the scope of delivery. Large flows of 10 to 170 l/h and very big differential pressure (max. 1,5 bar). The Q-Tech valve cannot be retrofitted with AV6, AV9 or other valves.		<b>141,04</b> (Surcharge on the corresponding price for Completto connection, see page 45)																					
<b>Thermal radiation shield</b> for heights from 260 mm to 750 mm and a maximum length of the thermal radiation shield of up to 2024 mm; for large lengths, the thermal radiation shields are supplied in 2 or more pieces. The thermal radiation shield consists of special 6 mm safety glass with thermal coating, rounded corners, finely polished edges, including holders for on-site attachment to the last row of columns. Bracket painted with powder-coating in the colour of the radiator.																							
<table border="1"> <thead> <tr> <th>Number of elements Zehnder Charleston Clinic</th> <th>Number of shields</th> <th>Number of brackets</th> </tr> </thead> <tbody> <tr> <td>5 to 21</td> <td>1</td> <td>4</td> </tr> <tr> <td>22 to 31</td> <td>1</td> <td>6</td> </tr> <tr> <td>32 to 42</td> <td>2</td> <td>8</td> </tr> <tr> <td>43 to 61</td> <td>2</td> <td>12</td> </tr> <tr> <td>62 to 84</td> <td>3</td> <td>18</td> </tr> <tr> <td>85 to 92</td> <td>3</td> <td>18</td> </tr> </tbody> </table>	Number of elements Zehnder Charleston Clinic	Number of shields	Number of brackets	5 to 21	1	4	22 to 31	1	6	32 to 42	2	8	43 to 61	2	12	62 to 84	3	18	85 to 92	3	18	Basic price per reflective cover plate	<b>216,56</b>
Number of elements Zehnder Charleston Clinic	Number of shields	Number of brackets																					
5 to 21	1	4																					
22 to 31	1	6																					
32 to 42	2	8																					
43 to 61	2	12																					
62 to 84	3	18																					
85 to 92	3	18																					
	Price per metre, thermal radiation shield: H = 260 - 450 mm H = 500 - 750 mm	<b>104,98</b> <b>159,87</b>																					
	H = Height of shield																						


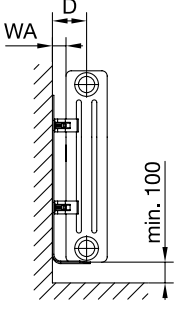
Basis for calculating the surcharge is the standard finish

## Zehnder Charleston Clinic

Connections for Zehnder Charleston Clinic see chapter  
Zehnder Charleston page 43 ff.

# Zehnder Charleston Clinic

with EasyFix

Illustration	Sketch Side view	Model					
		Application	Wall clearance WA mm	Brackets in set	Article no. <sup>3</sup> Set White	White	Colour
Fixing details for accessory set SMB							
<b>Set SMB 30-75</b> 	 <p>Distance D:</p> <p>2-column 66 mm 3-column 85 mm 4-column 103 mm 5-column 122 mm 6-column 140 mm</p>	<b>H = 300-369</b>					
		All models					
		L = 4-16 el.	35	2 x SMB30	173521	24,71	37,11
		L = 17-27 el.		3 x SMB30	173621	37,10	55,66
		L = 28-40 el.		4 x SMB30	173721	49,46	74,18
		L = 41-55 el.		5 x SMB30	173821	61,80	92,76
		<b>H = 370-484</b>					
		All models					
		L = 4-16 el.	35	2 x SMB40	173531	24,71	37,11
		L = 17-27 el.		3 x SMB40	173631	37,10	55,66
L = 28-40 el.	4 x SMB40	173731		49,46	74,18		
L = 41-55 el.	5 x SMB40	173831		61,80	92,76		
<b>H = 485-679</b>							
All models							
L = 4-16 el.	35	2 x SMB50	173541	24,71	37,11		
L = 17-27 el.		3 x SMB50	173641	37,10	55,66		
L = 28-40 el.		4 x SMB50	173741	49,46	74,18		
L = 41-55 el.		5 x SMB50	173841	61,80	92,76		
<b>H = 680-1000</b>							
All models							
L = 4-14 el.	35	2 x SMB75	173551	24,71	37,11		
L = 15-27 el.		3 x SMB75	173651	37,10	55,66		
L = 28-40 el.		4 x SMB75	173751	49,46	74,18		
L = 41-55 el.		5 x SMB75	173851	61,80	92,76		
<b>H = 1001-1500</b>							
2- to 4-column							
L = 4-14 el.	35	2 x SMB2T	173511	24,71	37,11		
L = 15-27 el.		3 x SMB2T	173611	37,10	55,66		
L = 28-40 el.		4 x SMB2T	173711	49,46	74,18		
L = 41-55 el.		5 x SMB2T	173811	61,80	92,76		
5- to 6-column							
L = 4-10 el.	35	2 x SMB2T	173511	24,71	37,11		
L = 11-20 el.		3 x SMB2T	173611	37,10	55,66		
L = 21-30 el.		4 x SMB2T	173711	49,46	74,18		
<b>H = 1501-2200</b>							
2- to 4-column							
L = 4-11 el.	35	2 x SMB2T	173511	24,71	37,11		
L = 12-21 el.		3 x SMB2T	173611	37,10	55,66		
L = 22-31 el.		4 x SMB2T	173711	49,46	74,18		
5- to 6-column							
L = 4-8 el.	35	2 x SMB2T	173511	24,71	37,11		
L = 9-15 el.		3 x SMB2T	173611	37,10	55,66		
L = 16-22 el.		4 x SMB2T	173711	49,46	74,18		


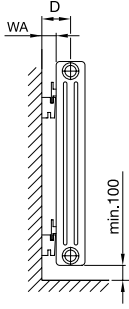

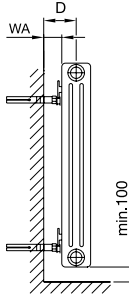
H = Height of radiator in mm  
WA = Wall clearance

L = Length of radiator in elements

D = Dimension from wall to middle of connection

<sup>2)</sup> Further allocations of the bracket SMB 2T for heights from 245 mm and up to 3000 mm on request.

<sup>3)</sup> The article no. of the set in colour is produced by replacing the end digit 1 by the end digit 9.

Illustration	Sketch Side view	Model					
		Application	Wall clearance WA mm	Brackets in set	Article no. <sup>3</sup> set White	€/Set White   Colour	
Accessory sets CVD, BKE							
<b>Set CVD</b> 	  Distance D: 2-column 57 mm 3-column 76 mm 4-column 94 mm 5-column 112 mm 6-column 131 mm	<b>All models</b>					
		Height 260 - 1500 mm		with retaining spring			
		L = 4-15 el.	24	4 x BHK + CVD 0	775421	45,73	85,90
		L = 16-30 el.		6 x BHK + CVD 0	775621	66,88	127,71
		L = 31-44 el.		8 x BHK + CVD 0	775821	88,47	169,54
		<b>2- to 5-column</b>					
		Height 1501 - 2200 mm		with retaining spring			
		L = 4-15 el.	24	4 x BHK + CVD 0	775421	45,73	85,90
		L = 16-23 el.		6 x BHK + CVD 0	775621	66,88	127,71
		L = 24-30 el.		8 x BHK + CVD 0	775821	88,47	169,54
L = 31-36 el.	10 x BHK + CVD 0	775921		110,01	211,34		
<b>6-column</b>							
Height 1501 - 2200 mm		with retaining spring					
L = 4-7 el.	24	4 x BHK + CVD 0	775421	45,73	85,90		
L = 8-15 el.		6 x BHK + CVD 0	775621	66,88	127,71		
L = 16-23 el.		8 x BHK + CVD 0	775821	88,47	169,54		
L = 24-30 el.		10 x BHK + CVD 0	775921	110,01	211,34		
L = 31-36 el.		12 x BHK + CVD 0	-	-	-		
<b>Set BKE<sup>2)</sup></b> 	  Distance D: 2-column 77 mm 3-column 96 mm 4-column 114 mm 5-column 133 mm 6-column 151 mm	<b>All models</b>					
		Height 260 - 1500 mm		with retaining spring			
		L = 4-15 el.	46	4 x BHK+BKE160	775461	60,47	84,19
		L = 16-30 el.		6 x BHK+BKE160	775661	86,70	122,09
		L = 31-44 el.		8 x BHK+BKE160	775861	112,95	160,03
		<b>2- to 5-column</b>					
		Height 1501 - 2200 mm		with retaining spring			
		L = 4-15 el.	46	4 x BHK+BKE160	775461	60,47	84,19
		L = 16-23 el.		6 x BHK+BKE160	775661	86,70	122,09
		L = 24-30 el.		8 x BHK+BKE160	775861	112,95	160,03
L = 31-36 el.	10 x BHK+BKE160	775961		139,20	197,94		
<b>6-column</b>							
Height 1501 - 2200 mm		with retaining spring					
L = 4-7 el.	46	4 x BHK+BKE160	775461	60,47	84,19		
L = 8-15 el.		6 x BHK+BKE160	775661	86,70	122,09		
L = 16-23 el.		8 x BHK+BKE160	775861	112,95	160,03		
L = 24-30 el.		10 x BHK+BKE160	775961	139,20	197,94		
L = 31-36 el.		12 x BHK+BKE160	-	-	-		




H = Height of radiator in elements

D = Dimension from wall to middle of connection

WA = Wall clearance

<sup>2)</sup> Average distances are given for D and WA for set BKE, as bracket installation depth is variable.

<sup>3)</sup> The article no. of the set in colour is produced by replacing the end digit 1 by the end digit 9.

Illustration	Description	Model			
		Application	Amount + type of brackets	Article no. Piece	Price/piece €
For other fixing options using accessories, see page 148 onwards.					
 <p><b>Wall bracket AK<sup>3)</sup></b></p>	<p>For adjustable wall clearance, short and long version possible, standard: Short, RAL 9016, for details see "Accessories"</p>	<b>All models</b>			
		Height 260 - 1500 mm			
		L = 4-15 el. L = 16-30 el. L = 31-44 el.	4 x BHK + AK 1 6 x BHK + AK 1 8 x BHK + AK 1	Bracket BHK: 775011 Bracket AK 1: 796011	<b>8,14</b> <b>13,70</b>
		<b>2- to 5-column</b>			
		Height 1501 - 2200 mm			
		L = 4-15 el. L = 16-23 el. L = 24-30 el. L = 31-36 el.	4 x BHK + AK 1 6 x BHK + AK 1 8 x BHK + AK 1 10 x BHK + AK 1	Bracket BHK: 775011 Bracket AK 1: 796011	<b>8,14</b> <b>13,70</b>
 <p><b>T-bracket AKK</b></p>	<p>For mounting, for adjustable wall clearance, combination with bracket TKK is recommended, standard: RAL 9016. For details, see "Accessories"</p>	<b>All models</b>			
		Height 260 - 600 mm			
		L = 4-15 el. L = 16-23 el. L = 24-30 el. L = 31-36 el.	2 x AKK 3 x AKK 4 x AKK 5 x AKK	By length	<b>9,90 - 15,76</b>
 <p><b>Free-standing floor support STF</b></p>	<p>For mounting on unfinished or finished floor, different lengths possible, standard: RAL 9016. For details, see "Accessories"</p>	<b>All models</b>			
		Height H: 260 to < 600 mm <sup>2)</sup>			
		L = 4-15 el. L = 16-23 el. L = 24-30 el. L = 31-36 el.	2 x STF2K / STF3K 3 x STF2K / STF3K 4 x STF2K / STF3K 5 x STF2K / STF3K	By height	STF2K: <b>41,51 / 46,70</b> STF3K: <b>41,69 / 46,95</b>

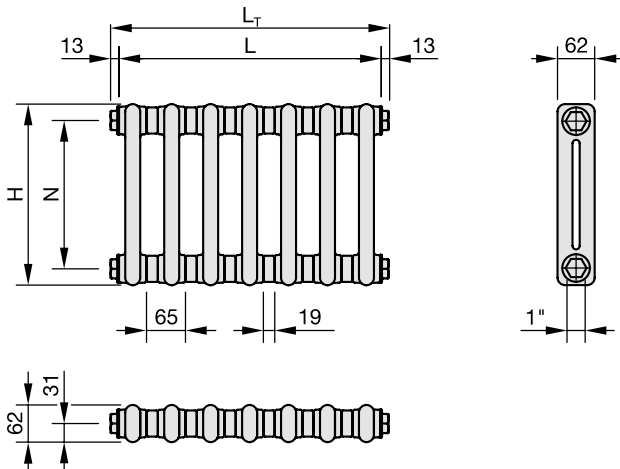
L = Length of radiator in sections

<sup>2)</sup> Provided from a height of 600 mm for requirements class 2 additional brackets<sup>3)</sup> An on-site locking device may be required depending on the installation and connection situation and net weight of the radiator

# Zehnder Charleston Clinic



**Model 2-column Clinic**



- H = Height
- L = Length = elements x 65 mm - 19 mm
- L<sub>T</sub> = Total length = elements x 65 mm - 19 mm + 2 x 13 mm
- N = Boss spacing = H - 58 mm
- T = Depth
- A = Surface
- V = Water content
- M = Weight
- s<sub>k</sub> = Proportion of radiation
- q<sub>ms</sub> = Nominal flow rate
- n = Exponent
- Φ<sub>s</sub> = Nominal heat output according to EN 442 (75/65/20 °C)
- Φ = Thermal output at system temperatures

Dimensions in mm

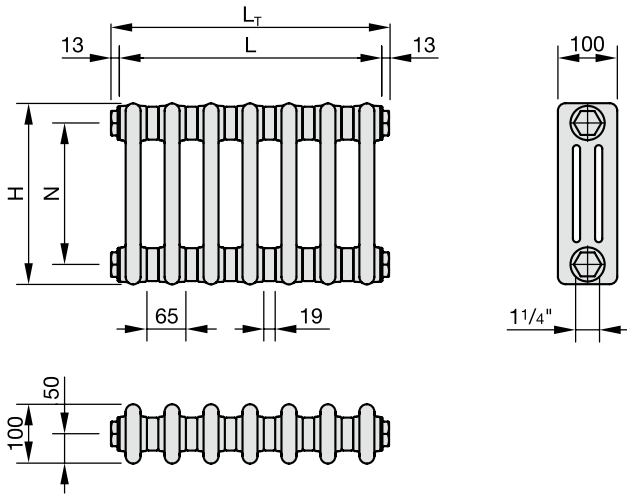
**Technical specifications per element**

Model	H mm	N mm	T mm	A m <sup>2</sup>	V dm <sup>3</sup>	M kg	s <sub>k</sub> %	q <sub>ms</sub> kg/h	Exp. n	Φ <sub>s</sub> =ΔT 50 K EN442 Watt	Φ 70/55/20 °C Watt	Φ 55/45/20 °C Watt
K2026	260	202	62	0,04	0,4	0,47	25	2,1	1,30	23,9	19,2	12,2
K2030	292	234	62	0,05	0,4	0,51	25	2,3	1,29	26,5	21,3	13,6
K2035	342	284	62	0,06	0,4	0,58	24	2,5	1,29	30,4	24,4	15,6
K2040	392	334	62	0,07	0,5	0,62	25	2,8	1,29	34,2	27,5	17,6
K2045	442	384	62	0,07	0,5	0,69	24	3,0	1,29	37,9	30,5	19,5
K2050	492	434	62	0,08	0,6	0,75	23	3,3	1,29	41,6	33,4	21,4
K2055	542	484	62	0,09	0,6	0,82	23	3,6	1,29	45,2	36,3	23,2
K2060	592	534	62	0,10	0,6	0,88	23	3,9	1,29	48,8	39,2	25,1
K2075	742	684	62	0,12	0,8	1,08	22	4,8	1,29	59,2	47,6	30,4
K2090	892	834	62	0,14	0,9	1,28	22	5,8	1,30	69,4	55,7	35,4
K2100	992	934	62	0,16	1,0	1,41	22	6,4	1,30	76,0	61,0	38,8
K2110	1092	1034	62	0,18	1,0	1,54	22	7,1	1,30	82,6	66,3	42,2
K2120	1192	1134	62	0,19	1,1	1,67	22	7,8	1,30	91,1	73,1	46,5
K2150	1492	1434	62	0,24	1,3	2,07	23	9,9	1,33	115,0	91,8	57,8
K2180	1792	1734	62	0,29	1,6	2,46	23	12,1	1,35	139,0	110,5	69,2
K2200	1992	1934	62	0,32	1,8	2,72	23	13,5	1,34	156,0	124,3	78,1
K2220	2192	2134	62	0,35	1,9	2,98	23	14,9	1,34	172,0	137,0	86,1
K2250	2492	2434	62	0,40	2,2	3,38	23	16,8	1,33	195,0	155,6	98,1
K2280	2792	2734	62	0,45	2,4	3,77	23	18,8	1,32	219,0	175,1	110,7
K2300	2992	2934	62	0,48	2,6	4,03	23	20,2	1,32	235,0	187,9	118,8

# Zehnder Charleston Clinic



## Model 3-column Clinic



- H = Height
- L = Length = elements x 65 mm - 19 mm
- L<sub>T</sub> = Total length = elements x 65 mm - 19 mm + 2 x 13 mm
- N = Boss spacing = H - 66 mm
- T = Depth
- A = Surface
- V = Water content
- M = Weight
- S<sub>k</sub> = Proportion of radiation
- q<sub>ms</sub> = Nominal flow rate
- n = Exponent
- Φ<sub>s</sub> = Nominal heat output according to EN 442 (75/65/20 °C)
- Φ = Thermal output at system temperatures

Dimensions in mm

### Technical specifications per element

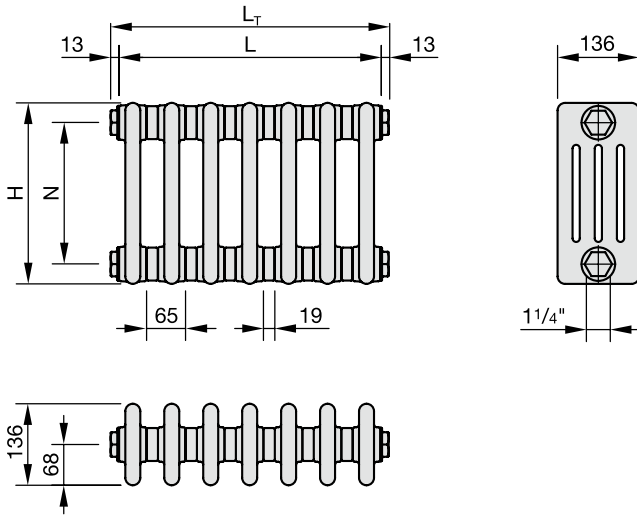
Model	H mm	N mm	T mm	A m <sup>2</sup>	V dm <sup>3</sup>	M kg	S <sub>k</sub> %	q <sub>ms</sub> kg/h	Exp. n	Φ <sub>s</sub> =ΔT 50 K EN442 Watt	Φ 70/55/20 °C Watt	Φ 55/45/20 °C Watt
K3026	260	194	100	0,06	0,6	0,63	21	2,7	1,27	31,2	25,2	16,2
K3030	300	234	100	0,07	0,6	0,71	20	3,1	1,27	35,4	28,5	18,4
K3035	350	284	100	0,08	0,7	0,80	20	3,5	1,28	40,6	32,7	21,0
K3040	400	334	100	0,10	0,7	0,91	19	4,0	1,28	45,7	36,8	23,6
K3045	450	384	100	0,11	0,8	1,01	19	4,4	1,28	50,8	40,9	26,2
K3050	500	434	100	0,12	0,9	1,10	18	4,8	1,28	55,9	45,0	28,8
K3055	550	484	100	0,13	0,9	1,20	18	5,3	1,29	61,0	49,0	31,3
K3060	600	534	100	0,14	1,0	1,30	18	5,7	1,29	66,0	53,0	33,9
K3075	750	684	100	0,18	1,2	1,59	18	6,9	1,30	81,1	65,0	41,4
K3090	900	834	100	0,21	1,3	1,89	18	8,2	1,31	96,3	77,1	48,9
K3100	1000	934	100	0,24	1,5	2,08	18	9,0	1,32	107,0	85,5	54,1
K3110	1100	1034	100	0,26	1,6	2,28	18	9,8	1,32	117,0	93,5	59,1
K3120	1200	1134	100	0,29	1,7	2,48	18	10,8	1,33	127,0	101,3	63,9
K3150	1500	1434	100	0,36	2,0	3,06	18	13,7	1,33	158,0	126,1	79,5
K3180	1800	1734	100	0,43	2,4	3,65	18	16,5	1,34	189,0	150,6	94,6
K3200	2000	1934	100	0,47	2,6	4,04	18	18,4	1,33	209,0	166,8	105,1
K3220	2200	2134	100	0,52	2,9	4,44	18	20,2	1,33	229,0	182,7	115,2
K3250	2500	2434	100	0,56	3,3	5,02	18	22,7	1,33	260,0	207,5	130,8
K3280	2800	2734	100	0,66	3,7	5,61	18	24,9	1,33	290,0	231,4	145,8
K3300	3000	2934	100	0,71	4,0	6,00	18	26,7	1,33	311,0	248,2	156,4



# Zehnder Charleston Clinic



**Model 4-column Clinic**



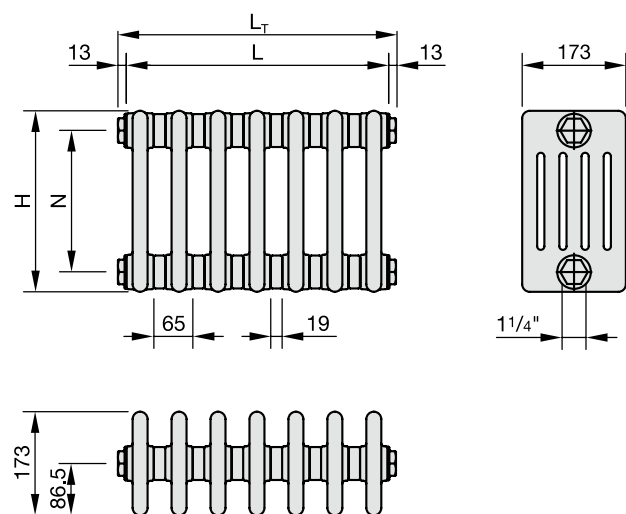
- H = Height
- L = Length = elements x 65 mm - 19 mm
- L<sub>T</sub> = Total length = elements x 65 mm - 19 mm + 2 x 13 mm
- N = Boss spacing = H - 66 mm
- T = Depth
- A = Surface
- V = Water content
- M = Weight
- s<sub>k</sub> = Proportion of radiation
- q<sub>ms</sub> = Nominal flow rate
- n = Exponent
- Φ<sub>s</sub> = Nominal heat output according to EN 442 (75/65/20 °C)
- Φ = Thermal output at system temperatures

Dimensions in mm

**Technical specifications per element**

Model	H mm	N mm	T mm	A m <sup>2</sup>	V dm <sup>3</sup>	M kg	s <sub>k</sub> %	q <sub>ms</sub> kg/h	Exp. n	Φ <sub>s</sub> =ΔT 50 K EN442 Watt	Φ 70/55/20 °C Watt	Φ 55/45/20 °C Watt
K4026	260	194	136	0,09	0,7	0,85	18	3,4	1,26	40,4	32,6	21,1
K4030	300	234	136	0,10	0,8	0,95	18	3,9	1,26	45,8	37,0	23,9
K4035	350	284	136	0,11	0,9	1,08	17	4,5	1,26	52,5	42,4	27,4
K4040	400	334	136	0,13	0,9	1,23	16	5,1	1,27	59,2	47,7	30,7
K4045	450	384	136	0,15	1,0	1,36	16	5,7	1,27	65,7	53,0	34,1
K4050	500	434	136	0,16	1,1	1,49	16	6,2	1,27	72,3	58,3	37,5
K4055	550	484	136	0,18	1,2	1,62	16	6,8	1,28	78,8	63,4	40,7
K4060	600	534	136	0,19	1,3	1,75	15	7,4	1,28	85,4	68,7	44,1
K4075	750	684	136	0,24	1,5	2,13	15	9,1	1,29	105,0	84,4	53,9
K4090	900	834	136	0,29	1,8	2,52	15	10,8	1,30	125,0	100,3	63,8
K4100	1000	934	136	0,32	1,9	2,78	15	11,9	1,31	138,0	110,5	70,1
K4110	1100	1034	136	0,35	2,1	3,03	15	13,0	1,32	151,0	120,7	76,3
K4120	1200	1134	136	0,38	2,2	3,29	15	14,1	1,32	165,0	131,9	83,4
K4150	1500	1434	136	0,47	2,7	4,06	15	17,4	1,31	204,0	163,4	103,7
K4180	1800	1734	136	0,57	3,1	4,83	15	20,6	1,31	244,0	195,4	124,0
K4200	2000	1934	136	0,63	3,4	5,35	15	22,9	1,32	270,0	215,8	136,5
K4220	2200	2134	136	0,70	3,7	5,86	15	25,0	1,32	296,0	236,6	149,6
K4250	2500	2434	136	0,79	4,3	6,64	15	28,4	1,32	335,0	267,8	169,3
K4280	2800	2734	136	0,87	4,9	7,41	15	32,2	1,32	375,0	299,8	189,6
K4300	3000	2934	136	0,95	5,4	7,92	15	34,5	1,32	401,0	320,6	202,7

**Model 5-column Clinic**



- H = Height
- L = Length = elements x 65 mm - 19 mm
- L<sub>T</sub> = Total length = elements x 65 mm - 19 mm + 2 x 13 mm
- N = Boss spacing = H - 66 mm
- T = Depth
- A = Surface
- V = Water content
- M = Weight
- S<sub>k</sub> = Proportion of radiation
- q<sub>ms</sub> = Nominal flow rate
- n = Exponent
- Φ<sub>s</sub> = Nominal heat output according to EN 442 (75/65/20 °C)
- Φ = Thermal output at system temperatures

Dimensions in mm

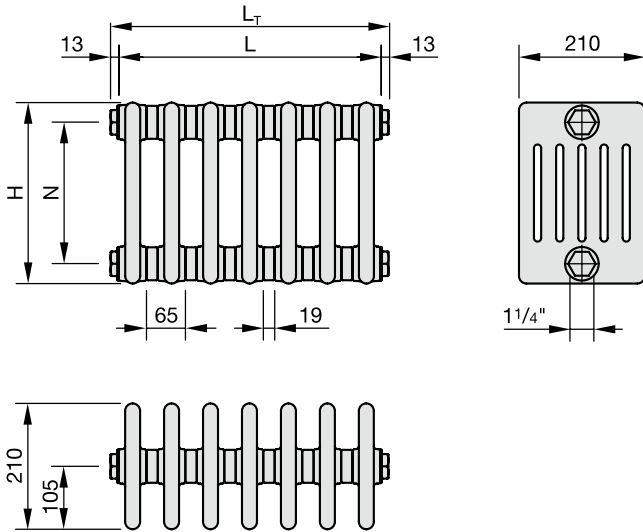
**Technical specifications per element**

Model	H mm	N mm	T mm	A m <sup>2</sup>	V dm <sup>3</sup>	M kg	S <sub>k</sub> %	q <sub>ms</sub> kg/h	Exp. n	Φ <sub>s</sub> =ΔT 50 K EN442 Watt	Φ 70/55/20 °C Watt	Φ 55/45/20 °C Watt
K5026	260	194	173	0,11	0,9	0,95	17	4,2	1,25	49,4	40,0	25,9
K5030	300	234	173	0,12	1,0	1,08	16	4,8	1,25	56,0	45,3	29,4
K5035	350	284	173	0,14	1,1	1,25	15	5,5	1,25	64,2	51,9	33,6
K5040	400	334	173	0,16	1,2	1,58	15	6,2	1,26	72,3	58,4	37,7
K5045	450	384	173	0,18	1,3	1,74	14	6,9	1,26	80,4	64,9	41,9
K5050	500	434	173	0,20	1,4	1,91	14	7,7	1,26	88,4	71,4	46,1
K5055	550	484	173	0,22	1,5	2,07	14	8,4	1,27	96,4	77,7	50,0
K5060	600	534	173	0,24	1,6	2,23	13	9,1	1,27	104,0	83,8	54,0
K5075	750	684	173	0,30	1,9	2,72	13	11,2	1,28	128,0	103,0	66,1
K5090	900	834	173	0,36	2,2	3,21	13	13,2	1,29	152,0	122,1	78,0
K5100	1000	934	173	0,40	2,4	3,54	13	14,6	1,30	168,0	134,8	85,8
K5110	1100	1034	173	0,44	2,6	3,87	13	16,0	1,31	185,0	148,1	94,0
K5120	1200	1134	173	0,48	2,8	4,19	13	17,4	1,31	201,0	160,9	102,1
K5150	1500	1434	173	0,59	3,3	5,17	13	21,2	1,30	249,0	199,7	127,2
K5180	1800	1734	173	0,71	3,9	6,15	13	25,2	1,29	297,0	238,6	152,5
K5200	2000	1934	173	0,79	4,3	6,81	13	27,8	1,31	330,0	264,2	167,7
K5220	2200	2134	173	0,87	4,7	7,46	13	30,5	1,31	362,0	289,9	183,9
K5250	2500	2434	173	0,99	5,4	8,44	13	34,7	1,31	410,0	328,3	208,3
K5280	2800	2734	173	1,11	6,1	9,42	13	39,4	1,31	458,0	366,7	232,7
K5300	3000	2934	173	1,19	6,6	10,08	13	42,1	1,31	490,0	392,4	249,0

# Zehnder Charleston Clinic



**Model 6-column Clinic**



- H = Height
- L = Length = elements x 65 mm - 19 mm
- L<sub>T</sub> = Total length = elements x 65 mm - 19 mm + 2 x 13 mm
- N = Boss spacing = H - 66 mm
- T = Depth
- A = Surface
- V = Water content
- M = Weight
- s<sub>k</sub> = Proportion of radiation
- q<sub>ms</sub> = Nominal flow rate
- n = Exponent
- Φ<sub>s</sub> = Nominal heat output according to EN 442 (75/65/20 °C)
- Φ = Thermal output at system temperatures

Dimensions in mm

**Technical specifications per element**

Model	H mm	N mm	T mm	A m <sup>2</sup>	V dm <sup>3</sup>	M kg	s <sub>k</sub> %	q <sub>ms</sub> kg/h	Exp. n	Φ <sub>s</sub> =ΔT 50 K EN442 Watt	Φ 70/55/20 °C Watt	Φ 55/45/20 °C Watt
K6026	260	194	210	0,13	1,0	1,33	18	5,0	1,28	58,1	46,8	30,0
K6030	300	234	210	0,15	1,1	1,49	15	5,7	1,29	65,9	52,9	33,8
K6035	350	284	210	0,17	1,3	1,69	14	6,6	1,29	75,5	60,7	38,8
K6040	400	334	210	0,19	1,4	1,87	14	7,4	1,29	85,1	68,4	43,7
K6045	450	384	210	0,22	1,5	2,06	13	8,3	1,29	94,6	76,0	48,6
K6050	500	434	210	0,24	1,6	2,26	13	9,1	1,29	104,0	83,6	53,4
K6055	550	484	210	0,26	1,8	2,46	12	10,0	1,29	113,0	90,8	58,0
K6060	600	534	210	0,29	1,9	2,65	12	10,8	1,29	123,0	98,8	63,2
K6075	750	684	210	0,36	2,2	3,25	12	13,2	1,30	151,0	121,1	77,1
K6090	900	834	210	0,43	2,6	3,84	12	15,7	1,30	179,0	143,6	91,4
K6100	1000	934	210	0,48	2,8	4,23	12	17,3	1,30	198,0	158,8	101,1
K6110	1100	1034	210	0,52	3,1	4,62	12	18,9	1,30	217,0	174,1	110,8
K6120	1200	1134	210	0,57	3,3	5,02	12	20,5	1,30	236,0	189,3	120,5
K6150	1500	1434	210	0,71	4,0	6,20	12	25,2	1,31	293,0	234,6	148,9
K6180	1800	1734	210	0,85	4,8	7,38	12	30,0	1,32	349,0	279,0	176,4
K6200	2000	1934	210	0,95	5,2	8,17	12	33,2	1,31	387,0	309,9	196,7
K6220	2200	2134	210	1,04	5,7	8,96	12	36,4	1,31	425,0	340,3	216,0
K6250	2500	2434	210	1,19	6,4	10,14	12	41,4	1,30	481,0	385,8	245,7
K6280	2800	2734	210	1,34	7,1	11,32	12	46,2	1,30	537,0	430,7	274,3
K6300	3000	2934	210	1,42	7,6	12,11	12	49,4	1,30	575,0	461,2	293,7

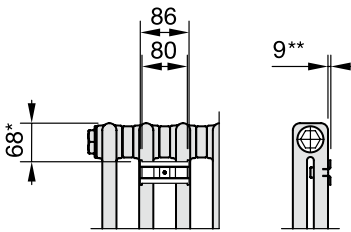
# Zehnder Charleston Clinic



**Dimensions for the bores when using CVD brackets (upper drill hole)<sup>1)</sup>**

Number of fixings	2 axes / 4 brackets	3 axes / 6 brackets	4 axes / 8 brackets
		  If there is an odd number of sections then the middle axis is offset by 23 mm.	

**Detail of suspension**



**Dimensions for the bores when using EasyFix brackets<sup>1)</sup>**

	SMB 2T H = 245-299 mm	SMB 30-75 H = 300-1000 mm	SMB 2T H = 1001-3000 mm															
		<table border="1"> <thead> <tr> <th>H</th> <th>D<sub>MP</sub></th> <th>D</th> </tr> </thead> <tbody> <tr> <td>300 - 369</td> <td>134</td> <td>241</td> </tr> <tr> <td>370 - 484</td> <td>204</td> <td>309</td> </tr> <tr> <td>485 - 679</td> <td>309</td> <td>414</td> </tr> <tr> <td>680 - 1000</td> <td>518</td> <td>623</td> </tr> </tbody> </table>	H	D <sub>MP</sub>	D	300 - 369	134	241	370 - 484	204	309	485 - 679	309	414	680 - 1000	518	623	
H	D <sub>MP</sub>	D																
300 - 369	134	241																
370 - 484	204	309																
485 - 679	309	414																
680 - 1000	518	623																

<sup>1)</sup> For connection type 3370/5510 and V001-V004, the bracket must be offset inwards by one element

- = Position of drill hole
- L = Length
- H = Height
- \* = Smallest possible dimension
- \*\* = Front edge of bracket to radiator
- D = Dimension from bottom edge of radiator to upper drill hole
- D<sub>MP</sub> = Spacing of drill holes
- Dimensions in mm


For the recommended number of brackets, see page 82 onwards.





# Zehnder Charleston Retrofit



	Overview of models	Product description	List prices	Fixings	Technical data
<b>Zehnder Charleston Retrofit</b>					
 <ul style="list-style-type: none"> <li>■ Suitable for connections of old DIN standard, aluminium and cast radiators</li> <li>■ Retrofitting without changing the connection pipework</li> <li>■ Optimum flexible heat output</li> </ul>	94	95	96	110	111

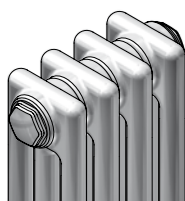
# Zehnder Charleston Retrofit



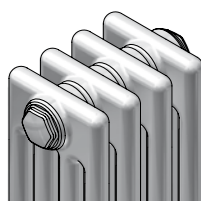
## Zehnder Charleston Retrofit



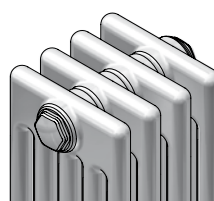
2-column



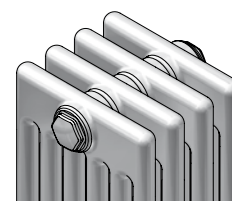
3-column



4-column



5-column



6-column

Height mm	Depth mm				
	62	100	136	173	210
266	-	-	-	-	6027
366	-	3037	4037	5037	6037
408	2041	-	-	-	-
416	-	3042	4042	-	6042
458	2046	-	-	-	-
558	2056	-	-	-	-
566	-	3057	4057	5057	6057
588	2059	-	-	-	-
596	-	3059	4059	-	-
628	2063	-	-	-	-
636	-	3064	4064	-	-
658	2066	-	-	-	-
666	-	3067	4067	5067	6067
677	2068	-	-	-	-
685	-	3069	4069	5069	6069
758	2076	-	-	-	-
766	-	3077	4077	5077	6077
788	2079	-	-	-	-
796	-	3079	4079	-	-
858	2086	-	-	-	-
866	-	3087	4087	5087	6087
877	2088	-	-	-	-
885	-	3089	4089	5089	6089
928	2093	-	-	-	-
936	-	3094	4094	-	-
958	2096	-	-	-	-
966	-	3097	4097	5097	6097
1066	-	3107	4107	5107	6107
1658	2166	-	-	-	-
1666	-	3167	4167	-	-
1858	2186	-	-	-	-
1866	-	3187	4187	-	-
2058	2206	-	-	-	-
2066	-	3207	4207	-	-

<sup>1)</sup>The values shown here are the so-called nominal height; the exact height varies by a few mm for 2-column radiators and for some of the 3-column radiators as well, see "Technical specifications".

Maximum radiator lengths on piece (per block)

**Zehnder Charleston Retrofit** (also see price tables from page 96 onwards)

Model	Height mm						
	260 - 600	> 600 - 750	> 750 - 900	> 900 - 1000	> 1000 - 2000	> 2000 - 2500	> 2500 - 3000
2-, 3-column	64	64	64	64	22	22	22
4-column	64	64	64	60	22	22	22
5-column	64	64	50	50	22	22	17
6-column	64	55	46	42	22	17	14



# Zehnder Charleston Retrofit



Old radiator



Radiator surface: Technoline

### Product description

The original tubular radiator, specifically for renovations. Flexible installation for renovation projects as retrofit models are available for existing pipework, thus it is not necessary to adjust the piping. Suitable for connection to old steel tube radiators, cast iron radiators or aluminium radiators.

The element construction gives Zehnder Charleston Retrofit its transparent appearance and timeless elegance. The tubular radiator provides comfortable radiant heat and transforms the living space into an oasis of relaxation. The Zehnder Charleston Retrofit models make installation easy, especially for renovation projects: retrofit models are available for existing connections. Available in almost any colour and finish from the Zehnder colour chart.

### Technical specifications

- Steel round tubes Ø 25 mm
- Header in sheet steel
- Length of the individual element 46 mm
- Priming and powder coating to DIN 55900
- Thermal output tested to EN 442; with CE marking
- Maximum operating pressure 10 bar
- Maximum operating temperature 110 °C

### Customisation options

- Special colours and antibacterial coating
- Galvanised and painted
- High pressure version up to max. 18 bar
- Operating temperature at 120 °C on request

### Advantages

- Flexible installation on existing pipework means time savings
- Residue-free laser welding technology LaZer made
- Classic elegance
- Radiant heat with feel-good factor
- Energy-efficient for use in low temperature heating systems

### Scope of delivery for standard version

- Primed and painted in RAL 9016
- Connections 4 x ½" female thread at front
- Connection S001: 1 blanking plug ½", directional air vent ½"
- Complete packaging in stretch film and carton

# Zehnder Charleston Retrofit



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		mm		408		458		558		588		628	
Model		2041		2046		2056		2059		2063			
Depth		mm		62		62		62		62		62	
Exponent		n		1,26		1,26		1,25		1,25		1,24	
Max. number of elements		64		64		64		64		64		64	
Price/element		€		34,09		34,97		36,52		37,24		38,09	
Length		$\Phi_s$		Price		$\Phi_s$		Price		$\Phi_s$		Price	
Elements	mm	W	€	W	€	W	€	W	€	W	€	W	€
4	184	130	136,36	144	139,88	172	146,08	180	148,96	191	152,36		
5	230	162	170,45	180	174,85	215	182,60	225	186,20	239	190,45		
6	276	194	204,54	216	209,82	258	219,12	270	223,44	286	228,54		
7	322	227	238,63	252	244,79	301	255,64	315	260,68	334	266,63		
8	368	259	272,72	288	279,76	344	292,16	360	297,92	382	304,72		
9	414	292	306,81	324	314,73	387	328,68	405	335,16	429	342,81		
10	460	324	340,90	360	349,70	430	365,20	450	372,40	477	380,90		
11	506	356	374,99	396	384,67	473	401,72	495	409,64	525	418,99		
12	552	389	409,08	432	419,64	516	438,24	540	446,88	572	457,08		
13	598	421	443,17	468	454,61	559	474,76	585	484,12	620	495,17		
14	644	454	477,26	504	489,58	602	511,28	630	521,36	668	533,26		
15	690	486	511,35	540	524,55	645	547,80	675	558,60	716	571,35		
16	736	518	545,44	576	559,52	688	584,32	720	595,84	763	609,44		
17	782	551	579,53	612	594,49	731	620,84	765	633,08	811	647,53		
18	828	583	613,62	648	629,46	774	657,36	810	670,32	859	685,62		
19	874	616	647,71	684	664,43	817	693,88	855	707,56	906	723,71		
20	920	648	681,80	720	699,40	860	730,40	900	744,80	954	761,80		
21	966	680	715,89	756	734,37	903	766,92	945	782,04	1002	799,89		
22	1012	713	749,98	792	769,34	946	803,44	990	819,28	1049	837,98		
23	1058	745	784,07	828	804,31	989	839,96	1035	856,52	1097	876,07		
24	1104	778	818,16	864	839,28	1032	876,48	1080	893,76	1145	914,16		
25	1150	810	852,25	900	874,25	1075	913,00	1125	931,00	1193	952,25		
26	1196	842	886,34	936	909,22	1118	949,52	1170	968,24	1240	990,34		
27	1242	875	920,43	972	944,19	1161	986,04	1215	1.005,48	1288	1.028,43		
28	1288	907	954,52	1008	979,16	1204	1.022,56	1260	1.042,72	1336	1.066,52		
29	1334	940	988,61	1044	1.014,13	1247	1.059,08	1305	1.079,96	1383	1.104,61		
30	1380	972	1.022,70	1080	1.049,10	1290	1.095,60	1350	1.117,20	1431	1.142,70		
31	1426	1004	1.056,79	1116	1.084,07	1333	1.132,12	1395	1.154,44	1479	1.180,79		
32	1472	1037	1.090,88	1152	1.119,04	1376	1.168,64	1440	1.191,68	1526	1.218,88		
33	1518	1069	1.124,97	1188	1.154,01	1419	1.205,16	1485	1.228,92	1574	1.256,97		
34	1564	1102	1.159,06	1224	1.188,98	1462	1.241,68	1530	1.266,16	1622	1.295,06		
35	1610	1134	1.193,15	1260	1.223,95	1505	1.278,20	1575	1.303,40	1670	1.333,15		
36	1656	1166	1.227,24	1296	1.258,92	1548	1.314,72	1620	1.340,64	1717	1.371,24		
37	1702	1199	1.261,33	1332	1.293,89	1591	1.351,24	1665	1.377,88	1765	1.409,33		
38	1748	1231	1.295,42	1368	1.328,86	1634	1.387,76	1710	1.415,12	1813	1.447,42		
39	1794	1264	1.329,51	1404	1.363,83	1677	1.424,28	1755	1.452,36	1860	1.485,51		
40	1840	1296	1.363,60	1440	1.398,80	1720	1.460,80	1800	1.489,60	1908	1.523,60		

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Retrofit



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		mm		658		677		758		788		858	
Model		2066		2068		2076		2079		2086			
Depth		mm		62		62		62		62		62	
Exponent		n		1,24		1,24		1,24		1,23		1,23	
Max. number of elements		64		64		64		64		64		64	
Price/element		€		38,79		39,52		40,20		40,56		40,99	
Length		$\Phi_s$		Price		$\Phi_s$		Price		$\Phi_s$		Price	
Elements	mm	W	€	W	€	W	€	W	€	W	€	W	€
4	184	199	155,16	204	158,08	224	160,80	231	162,24	248	163,96		
5	230	249	193,95	255	197,60	280	201,00	289	202,80	310	204,95		
6	276	298	232,74	305	237,12	336	241,20	347	243,36	372	245,94		
7	322	348	271,53	356	276,64	392	281,40	405	283,92	434	286,93		
8	368	398	310,32	407	316,16	448	321,60	462	324,48	496	327,92		
9	414	447	349,11	458	355,68	504	361,80	520	365,04	558	368,91		
10	460	497	387,90	509	395,20	560	402,00	578	405,60	620	409,90		
11	506	547	426,69	560	434,72	616	442,20	636	446,16	682	450,89		
12	552	596	465,48	611	474,24	672	482,40	694	486,72	744	491,88		
13	598	646	504,27	662	513,76	728	522,60	751	527,28	806	532,87		
14	644	696	543,06	713	553,28	784	562,80	809	567,84	868	573,86		
15	690	746	581,85	764	592,80	840	603,00	867	608,40	930	614,85		
16	736	795	620,64	814	632,32	896	643,20	925	648,96	992	655,84		
17	782	845	659,43	865	671,84	952	683,40	983	689,52	1054	696,83		
18	828	895	698,22	916	711,36	1008	723,60	1040	730,08	1116	737,82		
19	874	944	737,01	967	750,88	1064	763,80	1098	770,64	1178	778,81		
20	920	994	775,80	1018	790,40	1120	804,00	1156	811,20	1240	819,80		
21	966	1044	814,59	1069	829,92	1176	844,20	1214	851,76	1302	860,79		
22	1012	1093	853,38	1120	869,44	1232	884,40	1272	892,32	1364	901,78		
23	1058	1143	892,17	1171	908,96	1288	924,60	1329	932,88	1426	942,77		
24	1104	1193	930,96	1222	948,48	1344	964,80	1387	973,44	1488	983,76		
25	1150	1243	969,75	1273	988,00	1400	1.005,00	1445	1.014,00	1550	1.024,75		
26	1196	1292	1.008,54	1323	1.027,52	1456	1.045,20	1503	1.054,56	1612	1.065,74		
27	1242	1342	1.047,33	1374	1.067,04	1512	1.085,40	1561	1.095,12	1674	1.106,73		
28	1288	1392	1.086,12	1425	1.106,56	1568	1.125,60	1618	1.135,68	1736	1.147,72		
29	1334	1441	1.124,91	1476	1.146,08	1624	1.165,80	1676	1.176,24	1798	1.188,71		
30	1380	1491	1.163,70	1527	1.185,60	1680	1.206,00	1734	1.216,80	1860	1.229,70		
31	1426	1541	1.202,49	1578	1.225,12	1736	1.246,20	1792	1.257,36	1922	1.270,69		
32	1472	1590	1.241,28	1629	1.264,64	1792	1.286,40	1850	1.297,92	1984	1.311,68		
33	1518	1640	1.280,07	1680	1.304,16	1848	1.326,60	1907	1.338,48	2046	1.352,67		
34	1564	1690	1.318,86	1731	1.343,68	1904	1.366,80	1965	1.379,04	2108	1.393,66		
35	1610	1740	1.357,65	1782	1.383,20	1960	1.407,00	2023	1.419,60	2170	1.434,65		
36	1656	1789	1.396,44	1832	1.422,72	2016	1.447,20	2081	1.460,16	2232	1.475,64		
37	1702	1839	1.435,23	1883	1.462,24	2072	1.487,40	2139	1.500,72	2294	1.516,63		
38	1748	1889	1.474,02	1934	1.501,76	2128	1.527,60	2196	1.541,28	2356	1.557,62		
39	1794	1938	1.512,81	1985	1.541,28	2184	1.567,80	2254	1.581,84	2418	1.598,61		
40	1840	1988	1.551,60	2036	1.580,80	2240	1.608,00	2312	1.622,40	2480	1.639,60		

Warning: Weight over 100 kg






Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Retrofit



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		mm	877		928		958		1658		1858	
												
Model			2088		2093		2096		2166		2186	
Depth	mm		62		62		62		62		62	
Exponent	n		1,23		1,22		1,22		1,29		1,29	
Max. number of elements			64		64		64		22		22	
Price/element		€	41,58		42,21		42,47		50,33		53,39	
Length			$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price	
Elements	mm	W	€	W	€	W	€	W	€	W	€	
4	184	252	166,32	264	168,84	270	169,88	460	201,32	516	213,56	
5	230	316	207,90	330	211,05	338	212,35	575	251,65	645	266,95	
6	276	379	249,48	396	253,26	406	254,82	690	301,98	774	320,34	
7	322	442	291,06	462	295,47	473	297,29	805	352,31	903	373,73	
8	368	505	332,64	528	337,68	541	339,76	920	402,64	1032	427,12	
9	414	568	374,22	594	379,89	608	382,23	1035	452,97	1161	480,51	
10	460	631	415,80	660	422,10	676	424,70	1150	503,30	1290	533,90	
11	506	694	457,38	726	464,31	744	467,17	1265	553,63	1419	587,29	
12	552	757	498,96	792	506,52	811	509,64	1380	603,96	1548	640,68	
13	598	820	540,54	858	548,73	879	552,11	1495	654,29	1677	694,07	
14	644	883	582,12	924	590,94	946	594,58	1610	704,62	1806	747,46	
15	690	947	623,70	990	633,15	1014	637,05	1725	754,95	1935	800,85	
16	736	1010	665,28	1056	675,36	1082	679,52	1840	805,28	2064	854,24	
17	782	1073	706,86	1122	717,57	1149	721,99	1955	855,61	2193	907,63	
18	828	1136	748,44	1188	759,78	1217	764,46	2070	905,94	2322	961,02	
19	874	1199	790,02	1254	801,99	1284	806,93	2185	956,27	2451	1.014,41	
20	920	1262	831,60	1320	844,20	1352	849,40	2300	1.006,60	2580	1.067,80	
21	966	1325	873,18	1386	886,41	1420	891,87	2415	1.056,93	2709	1.121,19	
22	1012	1388	914,76	1452	928,62	1487	934,34	2530	1.107,26	2838	1.174,58	
23	1058	1451	956,34	1518	970,83	1555	976,81	2645	1.157,59	2967	1.227,97	
24	1104	1514	997,92	1584	1.013,04	1622	1.019,28	2760	1.207,92	3096	1.281,36	
25	1150	1578	1.039,50	1650	1.055,25	1690	1.061,75	2875	1.258,25	3225	1.334,75	
26	1196	1641	1.081,08	1716	1.097,46	1758	1.104,22	2990	1.308,58	3354	1.388,14	
27	1242	1704	1.122,66	1782	1.139,67	1825	1.146,69	3105	1.358,91	3483	1.441,53	
28	1288	1767	1.164,24	1848	1.181,88	1893	1.189,16	3220	1.409,24	3612	1.494,92	
29	1334	1830	1.205,82	1914	1.224,09	1960	1.231,63	3335	1.459,57	3741	1.548,31	
30	1380	1893	1.247,40	1980	1.266,30	2028	1.274,10	3450	1.509,90	3870	1.601,70	
31	1426	1956	1.288,98	2046	1.308,51	2096	1.316,57	3565	1.560,23	3999	1.655,09	
32	1472	2019	1.330,56	2112	1.350,72	2163	1.359,04	3680	1.610,56	4128	1.708,48	
33	1518	2082	1.372,14	2178	1.392,93	2231	1.401,51	3795	1.660,89	4257	1.761,87	
34	1564	2145	1.413,72	2244	1.435,14	2298	1.443,98	3910	1.711,22	4386	1.815,26	
35	1610	2209	1.455,30	2310	1.477,35	2366	1.486,45	4025	1.761,55	4515	1.868,65	
36	1656	2272	1.496,88	2376	1.519,56	2434	1.528,92	4140	1.811,88	4644	1.922,04	
37	1702	2335	1.538,46	2442	1.561,77	2501	1.571,39	4255	1.862,21	4773	1.975,43	
38	1748	2398	1.580,04	2508	1.603,98	2569	1.613,86	4370	1.912,54	4902	2.028,82	
39	1794	2461	1.621,62	2574	1.646,19	2636	1.656,33	4485	1.962,87	5031	2.082,21	
40	1840	2524	1.663,20	2640	1.688,40	2704	1.698,80	4600	2.013,20	5160	2.135,60	

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Retrofit



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		mm	2058	366	416	566	596				
Model			2206	3037	3042	3057	3059				
Depth	mm		62	100	100	100	100				
Exponent	n		1,28	1,28	1,28	1,27	1,27				
Max. number of elements			22	64	64	64	64				
Price/element		€	37,08		38,24		41,54		42,45		
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	568	<b>232,88</b>	154	<b>148,32</b>	174	<b>152,96</b>	231	<b>166,16</b>	242	<b>169,80</b>
5	230	710	<b>291,10</b>	193	<b>185,40</b>	218	<b>191,20</b>	289	<b>207,70</b>	303	<b>212,25</b>
6	276	852	<b>349,32</b>	232	<b>222,48</b>	261	<b>229,44</b>	347	<b>249,24</b>	363	<b>254,70</b>
7	322	994	<b>407,54</b>	270	<b>259,56</b>	305	<b>267,68</b>	405	<b>290,78</b>	424	<b>297,15</b>
8	368	1136	<b>465,76</b>	309	<b>296,64</b>	348	<b>305,92</b>	462	<b>332,32</b>	484	<b>339,60</b>
9	414	1278	<b>523,98</b>	347	<b>333,72</b>	392	<b>344,16</b>	520	<b>373,86</b>	545	<b>382,05</b>
10	460	1420	<b>582,20</b>	386	<b>370,80</b>	435	<b>382,40</b>	578	<b>415,40</b>	605	<b>424,50</b>
11	506	1562	<b>640,42</b>	425	<b>407,88</b>	479	<b>420,64</b>	636	<b>456,94</b>	666	<b>466,95</b>
12	552	1704	<b>698,64</b>	463	<b>444,96</b>	522	<b>458,88</b>	694	<b>498,48</b>	726	<b>509,40</b>
13	598	1846	<b>756,86</b>	502	<b>482,04</b>	566	<b>497,12</b>	751	<b>540,02</b>	787	<b>551,85</b>
14	644	1988	<b>815,08</b>	540	<b>519,12</b>	609	<b>535,36</b>	809	<b>581,56</b>	847	<b>594,30</b>
15	690	2130	<b>873,30</b>	579	<b>556,20</b>	653	<b>573,60</b>	867	<b>623,10</b>	908	<b>636,75</b>
16	736	2272	<b>931,52</b>	618	<b>593,28</b>	696	<b>611,84</b>	925	<b>664,64</b>	968	<b>679,20</b>
17	782	2414	<b>989,74</b>	656	<b>630,36</b>	740	<b>650,08</b>	983	<b>706,18</b>	1029	<b>721,65</b>
18	828	2556	<b>1.047,96</b>	695	<b>667,44</b>	783	<b>688,32</b>	1040	<b>747,72</b>	1089	<b>764,10</b>
19	874	2698	<b>1.106,18</b>	733	<b>704,52</b>	827	<b>726,56</b>	1098	<b>789,26</b>	1150	<b>806,55</b>
20	920	2840	<b>1.164,40</b>	772	<b>741,60</b>	870	<b>764,80</b>	1156	<b>830,80</b>	1210	<b>849,00</b>
21	966	2982	<b>1.222,62</b>	811	<b>778,68</b>	914	<b>803,04</b>	1214	<b>872,34</b>	1271	<b>891,45</b>
22	1012	3124	<b>1.280,84</b>	849	<b>815,76</b>	957	<b>841,28</b>	1272	<b>913,88</b>	1331	<b>933,90</b>
23	1058	3266	<b>1.339,06</b>	888	<b>852,84</b>	1001	<b>879,52</b>	1329	<b>955,42</b>	1392	<b>976,35</b>
24	1104	3408	<b>1.397,28</b>	926	<b>889,92</b>	1044	<b>917,76</b>	1387	<b>996,96</b>	1452	<b>1.018,80</b>
25	1150	3550	<b>1.455,50</b>	965	<b>927,00</b>	1088	<b>956,00</b>	1445	<b>1.038,50</b>	1513	<b>1.061,25</b>
26	1196	3692	<b>1.513,72</b>	1004	<b>964,08</b>	1131	<b>994,24</b>	1503	<b>1.080,04</b>	1573	<b>1.103,70</b>
27	1242	3834	<b>1.571,94</b>	1042	<b>1.001,16</b>	1175	<b>1.032,48</b>	1561	<b>1.121,58</b>	1634	<b>1.146,15</b>
28	1288	3976	<b>1.630,16</b>	1081	<b>1.038,24</b>	1218	<b>1.070,72</b>	1618	<b>1.163,12</b>	1694	<b>1.188,60</b>
29	1334	4118	<b>1.688,38</b>	1119	<b>1.075,32</b>	1262	<b>1.108,96</b>	1676	<b>1.204,66</b>	1755	<b>1.231,05</b>
30	1380	4260	<b>1.746,60</b>	1158	<b>1.112,40</b>	1305	<b>1.147,20</b>	1734	<b>1.246,20</b>	1815	<b>1.273,50</b>
31	1426	4402	<b>1.804,82</b>	1197	<b>1.149,48</b>	1349	<b>1.185,44</b>	1792	<b>1.287,74</b>	1876	<b>1.315,95</b>
32	1472	4544	<b>1.863,04</b>	1235	<b>1.186,56</b>	1392	<b>1.223,68</b>	1850	<b>1.329,28</b>	1936	<b>1.358,40</b>
33	1518	4686	<b>1.921,26</b>	1274	<b>1.223,64</b>	1436	<b>1.261,92</b>	1907	<b>1.370,82</b>	1997	<b>1.400,85</b>
34	1564	4828	<b>1.979,48</b>	1312	<b>1.260,72</b>	1479	<b>1.300,16</b>	1965	<b>1.412,36</b>	2057	<b>1.443,30</b>
35	1610	4970	<b>2.037,70</b>	1351	<b>1.297,80</b>	1523	<b>1.338,40</b>	2023	<b>1.453,90</b>	2118	<b>1.485,75</b>
36	1656	5112	<b>2.095,92</b>	1390	<b>1.334,88</b>	1566	<b>1.376,64</b>	2081	<b>1.495,44</b>	2178	<b>1.528,20</b>
37	1702	5254	<b>2.154,14</b>	1428	<b>1.371,96</b>	1610	<b>1.414,88</b>	2139	<b>1.536,98</b>	2239	<b>1.570,65</b>
38	1748	5396	<b>2.212,36</b>	1467	<b>1.409,04</b>	1653	<b>1.453,12</b>	2196	<b>1.578,52</b>	2299	<b>1.613,10</b>
39	1794	5538	<b>2.270,58</b>	1505	<b>1.446,12</b>	1697	<b>1.491,36</b>	2254	<b>1.620,06</b>	2360	<b>1.655,55</b>
40	1840	5680	<b>2.328,80</b>	1544	<b>1.483,20</b>	1740	<b>1.529,60</b>	2312	<b>1.661,60</b>	2420	<b>1.698,00</b>

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Retrofit



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		mm	636	666	685	766	796					
Model			3064	3067	3069	3077	3079					
Depth	mm		100	100	100	100	100					
Exponent	n		1,27	1,26	1,26	1,26	1,26					
Max. number of elements			64	64	64	64	64					
Price/element		€	43,83		44,91		45,52		46,68		48,28	
Length			$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€	
4	184	257	<b>175,32</b>	268	<b>179,64</b>	274	<b>182,08</b>	303	<b>186,72</b>	310	<b>193,12</b>	
5	230	321	<b>219,15</b>	335	<b>224,55</b>	343	<b>227,60</b>	379	<b>233,40</b>	387	<b>241,40</b>	
6	276	385	<b>262,98</b>	401	<b>269,46</b>	412	<b>273,12</b>	454	<b>280,08</b>	464	<b>289,68</b>	
7	322	449	<b>306,81</b>	468	<b>314,37</b>	480	<b>318,64</b>	530	<b>326,76</b>	542	<b>337,96</b>	
8	368	514	<b>350,64</b>	535	<b>359,28</b>	549	<b>364,16</b>	606	<b>373,44</b>	619	<b>386,24</b>	
9	414	578	<b>394,47</b>	602	<b>404,19</b>	617	<b>409,68</b>	681	<b>420,12</b>	697	<b>434,52</b>	
10	460	642	<b>438,30</b>	669	<b>449,10</b>	686	<b>455,20</b>	757	<b>466,80</b>	774	<b>482,80</b>	
11	506	706	<b>482,13</b>	736	<b>494,01</b>	755	<b>500,72</b>	833	<b>513,48</b>	851	<b>531,08</b>	
12	552	770	<b>525,96</b>	803	<b>538,92</b>	823	<b>546,24</b>	908	<b>560,16</b>	929	<b>579,36</b>	
13	598	835	<b>569,79</b>	870	<b>583,83</b>	892	<b>591,76</b>	984	<b>606,84</b>	1006	<b>627,64</b>	
14	644	899	<b>613,62</b>	937	<b>628,74</b>	960	<b>637,28</b>	1060	<b>653,52</b>	1084	<b>675,92</b>	
15	690	963	<b>657,45</b>	1004	<b>673,65</b>	1029	<b>682,80</b>	1136	<b>700,20</b>	1161	<b>724,20</b>	
16	736	1027	<b>701,28</b>	1070	<b>718,56</b>	1098	<b>728,32</b>	1211	<b>746,88</b>	1238	<b>772,48</b>	
17	782	1091	<b>745,11</b>	1137	<b>763,47</b>	1166	<b>773,84</b>	1287	<b>793,56</b>	1316	<b>820,76</b>	
18	828	1156	<b>788,94</b>	1204	<b>808,38</b>	1235	<b>819,36</b>	1363	<b>840,24</b>	1393	<b>869,04</b>	
19	874	1220	<b>832,77</b>	1271	<b>853,29</b>	1303	<b>864,88</b>	1438	<b>886,92</b>	1471	<b>917,32</b>	
20	920	1284	<b>876,60</b>	1338	<b>898,20</b>	1372	<b>910,40</b>	1514	<b>933,60</b>	1548	<b>965,60</b>	
21	966	1348	<b>920,43</b>	1405	<b>943,11</b>	1441	<b>955,92</b>	1590	<b>980,28</b>	1625	<b>1.013,88</b>	
22	1012	1412	<b>964,26</b>	1472	<b>988,02</b>	1509	<b>1.001,44</b>	1665	<b>1.026,96</b>	1703	<b>1.062,16</b>	
23	1058	1477	<b>1.008,09</b>	1539	<b>1.032,93</b>	1578	<b>1.046,96</b>	1741	<b>1.073,64</b>	1780	<b>1.110,44</b>	
24	1104	1541	<b>1.051,92</b>	1606	<b>1.077,84</b>	1646	<b>1.092,48</b>	1817	<b>1.120,32</b>	1858	<b>1.158,72</b>	
25	1150	1605	<b>1.095,75</b>	1673	<b>1.122,75</b>	1715	<b>1.138,00</b>	1893	<b>1.167,00</b>	1935	<b>1.207,00</b>	
26	1196	1669	<b>1.139,58</b>	1739	<b>1.167,66</b>	1784	<b>1.183,52</b>	1968	<b>1.213,68</b>	2012	<b>1.255,28</b>	
27	1242	1733	<b>1.183,41</b>	1806	<b>1.212,57</b>	1852	<b>1.229,04</b>	2044	<b>1.260,36</b>	2090	<b>1.303,56</b>	
28	1288	1798	<b>1.227,24</b>	1873	<b>1.257,48</b>	1921	<b>1.274,56</b>	2120	<b>1.307,04</b>	2167	<b>1.351,84</b>	
29	1334	1862	<b>1.271,07</b>	1940	<b>1.302,39</b>	1989	<b>1.320,08</b>	2195	<b>1.353,72</b>	2245	<b>1.400,12</b>	
30	1380	1926	<b>1.314,90</b>	2007	<b>1.347,30</b>	2058	<b>1.365,60</b>	2271	<b>1.400,40</b>	2322	<b>1.448,40</b>	
31	1426	1990	<b>1.358,73</b>	2074	<b>1.392,21</b>	2127	<b>1.411,12</b>	2347	<b>1.447,08</b>	2399	<b>1.496,68</b>	
32	1472	2054	<b>1.402,56</b>	2141	<b>1.437,12</b>	2195	<b>1.456,64</b>	2422	<b>1.493,76</b>	2477	<b>1.544,96</b>	
33	1518	2119	<b>1.446,39</b>	2208	<b>1.482,03</b>	2264	<b>1.502,16</b>	2498	<b>1.540,44</b>	2554	<b>1.593,24</b>	
34	1564	2183	<b>1.490,22</b>	2275	<b>1.526,94</b>	2332	<b>1.547,68</b>	2574	<b>1.587,12</b>	2632	<b>1.641,52</b>	
35	1610	2247	<b>1.534,05</b>	2342	<b>1.571,85</b>	2401	<b>1.593,20</b>	2650	<b>1.633,80</b>	2709	<b>1.689,80</b>	
36	1656	2311	<b>1.577,88</b>	2408	<b>1.616,76</b>	2470	<b>1.638,72</b>	2725	<b>1.680,48</b>	2786	<b>1.738,08</b>	
37	1702	2375	<b>1.621,71</b>	2475	<b>1.661,67</b>	2538	<b>1.684,24</b>	2801	<b>1.727,16</b>	2864	<b>1.786,36</b>	
38	1748	2440	<b>1.665,54</b>	2542	<b>1.706,58</b>	2607	<b>1.729,76</b>	2877	<b>1.773,84</b>	2941	<b>1.834,64</b>	
39	1794	2504	<b>1.709,37</b>	2609	<b>1.751,49</b>	2675	<b>1.775,28</b>	2952	<b>1.820,52</b>	3019	<b>1.882,92</b>	
40	1840	2568	<b>1.753,20</b>	2676	<b>1.796,40</b>	2744	<b>1.820,80</b>	3028	<b>1.867,20</b>	3096	<b>1.931,20</b>	

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Retrofit



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		mm		866		885		936		966		1066	
Model		3087		3089		3094		3097		3107			
Depth	mm	100		100		100		100		100		100	
Exponent	n	1,26		1,26		1,25		1,25		1,25		1,25	
Max. number of elements		64		64		64		64		64		22	
Price/element		€		48,86		49,46		50,04		50,55		57,02	
Length		$\Phi_s$		Price		$\Phi_s$		Price		$\Phi_s$		Price	
Elements	mm	W	€	W	€	W	€	W	€	W	€	W	€
4	184	337	195,44	343	197,84	360	200,16	370	202,20	400	228,08		
5	230	421	244,30	429	247,30	450	250,20	462	252,75	500	285,10		
6	276	505	293,16	515	296,76	540	300,24	554	303,30	600	342,12		
7	322	589	342,02	601	346,22	630	350,28	647	353,85	700	399,14		
8	368	674	390,88	686	395,68	720	400,32	739	404,40	800	456,16		
9	414	758	439,74	772	445,14	810	450,36	832	454,95	900	513,18		
10	460	842	488,60	858	494,60	900	500,40	924	505,50	1000	570,20		
11	506	926	537,46	944	544,06	990	550,44	1016	556,05	1100	627,22		
12	552	1010	586,32	1030	593,52	1080	600,48	1109	606,60	1200	684,24		
13	598	1095	635,18	1115	642,98	1170	650,52	1201	657,15	1300	741,26		
14	644	1179	684,04	1201	692,44	1260	700,56	1294	707,70	1400	798,28		
15	690	1263	732,90	1287	741,90	1350	750,60	1386	758,25	1500	855,30		
16	736	1347	781,76	1373	791,36	1440	800,64	1478	808,80	1600	912,32		
17	782	1431	830,62	1459	840,82	1530	850,68	1571	859,35	1700	969,34		
18	828	1516	879,48	1544	890,28	1620	900,72	1663	909,90	1800	1.026,36		
19	874	1600	928,34	1630	939,74	1710	950,76	1756	960,45	1900	1.083,38		
20	920	1684	977,20	1716	989,20	1800	1.000,80	1848	1.011,00	2000	1.140,40		
21	966	1768	1.026,06	1802	1.038,66	1890	1.050,84	1940	1.061,55	2100	1.197,42		
22	1012	1852	1.074,92	1888	1.088,12	1980	1.100,88	2033	1.112,10	2200	1.254,44		
23	1058	1937	1.123,78	1973	1.137,58	2070	1.150,92	2125	1.162,65	2300	1.311,46		
24	1104	2021	1.172,64	2059	1.187,04	2160	1.200,96	2218	1.213,20	2400	1.368,48		
25	1150	2105	1.221,50	2145	1.236,50	2250	1.251,00	2310	1.263,75	2500	1.425,50		
26	1196	2189	1.270,36	2231	1.285,96	2340	1.301,04	2402	1.314,30	2600	1.482,52		
27	1242	2273	1.319,22	2317	1.335,42	2430	1.351,08	2495	1.364,85	2700	1.539,54		
28	1288	2358	1.368,08	2402	1.384,88	2520	1.401,12	2587	1.415,40	2800	1.596,56		
29	1334	2442	1.416,94	2488	1.434,34	2610	1.451,16	2680	1.465,95	2900	1.653,58		
30	1380	2526	1.465,80	2574	1.483,80	2700	1.501,20	2772	1.516,50	3000	1.710,60		
31	1426	2610	1.514,66	2660	1.533,26	2790	1.551,24	2864	1.567,05	3100	1.767,62		
32	1472	2694	1.563,52	2746	1.582,72	2880	1.601,28	2957	1.617,60	3200	1.824,64		
33	1518	2779	1.612,38	2831	1.632,18	2970	1.651,32	3049	1.668,15	3300	1.881,66		
34	1564	2863	1.661,24	2917	1.681,64	3060	1.701,36	3142	1.718,70	3400	1.938,68		
35	1610	2947	1.710,10	3003	1.731,10	3150	1.751,40	3234	1.769,25	3500	1.995,70		
36	1656	3031	1.758,96	3089	1.780,56	3240	1.801,44	3326	1.819,80	3600	2.052,72		
37	1702	3115	1.807,82	3175	1.830,02	3330	1.851,48	3419	1.870,35	3700	2.109,74		
38	1748	3200	1.856,68	3260	1.879,48	3420	1.901,52	3511	1.920,90	3800	2.166,76		
39	1794	3284	1.905,54	3346	1.928,94	3510	1.951,56	3604	1.971,45	3900	2.223,78		
40	1840	3368	1.954,40	3432	1.978,40	3600	2.001,60	3696	2.022,00	4000	2.280,80		

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Retrofit



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		mm	1666		1866		2066		366		416	
Model			3167		3187		3207		4037		4042	
Depth	mm		100		100		100		136		136	
Exponent	n		1,31		1,32		1,32		1,28		1,28	
Max. number of elements			22		22		22		64		64	
Price/element			€ 72,36		€ 79,81		€ 86,94		€ 40,88		€ 42,47	
Length			$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price	
Elements	mm	W	€	W	€	W	€	W	€	W	€	
4	184	616	289,44	684	319,24	752	347,76	202	163,52	228	169,88	
5	230	770	361,80	855	399,05	940	434,70	253	204,40	285	212,35	
6	276	924	434,16	1026	478,86	1128	521,64	304	245,28	342	254,82	
7	322	1078	506,52	1197	558,67	1316	608,58	354	286,16	399	297,29	
8	368	1232	578,88	1368	638,48	1504	695,52	405	327,04	456	339,76	
9	414	1386	651,24	1539	718,29	1692	782,46	455	367,92	513	382,23	
10	460	1540	723,60	1710	798,10	1880	869,40	506	408,80	570	424,70	
11	506	1694	795,96	1881	877,91	2068	956,34	557	449,68	627	467,17	
12	552	1848	868,32	2052	957,72	2256	1.043,28	607	490,56	684	509,64	
13	598	2002	940,68	2223	1.037,53	2444	1.130,22	658	531,44	741	552,11	
14	644	2156	1.013,04	2394	1.117,34	2632	1.217,16	708	572,32	798	594,58	
15	690	2310	1.085,40	2565	1.197,15	2820	1.304,10	759	613,20	855	637,05	
16	736	2464	1.157,76	2736	1.276,96	3008	1.391,04	810	654,08	912	679,52	
17	782	2618	1.230,12	2907	1.356,77	3196	1.477,98	860	694,96	969	721,99	
18	828	2772	1.302,48	3078	1.436,58	3384	1.564,92	911	735,84	1026	764,46	
19	874	2926	1.374,84	3249	1.516,39	3572	1.651,86	961	776,72	1083	806,93	
20	920	3080	1.447,20	3420	1.596,20	3760	1.738,80	1012	817,60	1140	849,40	
21	966	3234	1.519,56	3591	1.676,01	3948	1.825,74	1063	858,48	1197	891,87	
22	1012	3388	1.591,92	3762	1.755,82	4136	1.912,68	1113	899,36	1254	934,34	
23	1058	3542	1.664,28	3933	1.835,63	4324	1.999,62	1164	940,24	1311	976,81	
24	1104	3696	1.736,64	4104	1.915,44	4512	2.086,56	1214	981,12	1368	1.019,28	
25	1150	3850	1.809,00	4275	1.995,25	4700	2.173,50	1265	1.022,00	1425	1.061,75	
26	1196	4004	1.881,36	4446	2.075,06	4888	2.260,44	1316	1.062,88	1482	1.104,22	
27	1242	4158	1.953,72	4617	2.154,87	5076	2.347,38	1366	1.103,76	1539	1.146,69	
28	1288	4312	2.026,08	4788	2.234,68	5264	2.434,32	1417	1.144,64	1596	1.189,16	
29	1334	4466	2.098,44	4959	2.314,49	5452	2.521,26	1467	1.185,52	1653	1.231,63	
30	1380	4620	2.170,80	5130	2.394,30	5640	2.608,20	1518	1.226,40	1710	1.274,10	
31	1426	4774	2.243,16	5301	2.474,11	5828	2.695,14	1569	1.267,28	1767	1.316,57	
32	1472	4928	2.315,52	5472	2.553,92	6016	2.782,08	1619	1.308,16	1824	1.359,04	
33	1518	5082	2.387,88	5643	2.633,73	6204	2.869,02	1670	1.349,04	1881	1.401,51	
34	1564	5236	2.460,24	5814	2.713,54	6392	2.955,96	1720	1.389,92	1938	1.443,98	
35	1610	5390	2.532,60	5985	2.793,35	6580	3.042,90	1771	1.430,80	1995	1.486,45	
36	1656	5544	2.604,96	6156	2.873,16	6768	3.129,84	1822	1.471,68	2052	1.528,92	
37	1702	5698	2.677,32	6327	2.952,97	6956	3.216,78	1872	1.512,56	2109	1.571,39	
38	1748	5852	2.749,68	6498	3.032,78	7144	3.303,72	1923	1.553,44	2166	1.613,86	
39	1794	6006	2.822,04	6669	3.112,59	7332	3.390,66	1973	1.594,32	2223	1.656,33	
40	1840	6160	2.894,40	6840	3.192,40	7520	3.477,60	2024	1.635,20	2280	1.698,80	

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51





# Zehnder Charleston Retrofit

$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		mm		566		596		636		666		685	
Model		4057		4059		4064		4067		4069			
Depth	mm	136		136		136		136		136		136	
Exponent	n	1,27		1,27		1,27		1,26		1,26		1,26	
Max. number of elements		64		64		64		64		64		64	
Price/element		€		47,78		50,26		52,82		54,01		55,72	
Length		$\Phi_s$		Price		$\Phi_s$		Price		$\Phi_s$		Price	
Elements	mm	W	€	W	€	W	€	W	€	W	€	W	€
4	184	303	191,12	317	202,48	336	211,28	350	216,04	360	222,88		
5	230	379	238,90	397	253,10	421	264,10	438	270,05	450	278,60		
6	276	454	286,68	476	303,72	505	316,92	526	324,06	539	334,32		
7	322	530	334,46	555	354,34	589	369,74	613	378,07	629	390,04		
8	368	606	382,24	634	404,96	673	422,56	701	432,08	719	445,76		
9	414	681	430,02	714	455,58	757	475,38	788	486,09	809	501,48		
10	460	757	477,80	793	506,20	841	528,20	876	540,10	899	557,20		
11	506	833	525,58	872	556,82	925	581,02	964	594,11	989	612,92		
12	552	908	573,36	952	607,44	1009	633,84	1051	648,12	1079	668,64		
13	598	984	621,14	1031	658,06	1093	686,66	1139	702,13	1169	724,36		
14	644	1060	668,92	1110	708,68	1177	739,48	1226	756,14	1259	780,08		
15	690	1136	716,70	1190	759,30	1262	792,30	1314	810,15	1349	835,80		
16	736	1211	764,48	1269	809,92	1346	845,12	1402	864,16	1438	891,52		
17	782	1287	812,26	1348	860,54	1430	897,94	1489	918,17	1528	947,24		
18	828	1363	860,04	1427	911,16	1514	950,76	1577	972,18	1618	1.002,96		
19	874	1438	907,82	1507	961,78	1598	1.003,58	1664	1.026,19	1708	1.058,68		
20	920	1514	955,60	1586	1.012,40	1682	1.056,40	1752	1.080,20	1798	1.114,40		
21	966	1590	1.003,38	1665	1.063,02	1766	1.109,22	1840	1.134,21	1888	1.170,12		
22	1012	1665	1.051,16	1745	1.113,64	1850	1.162,04	1927	1.188,22	1978	1.225,84		
23	1058	1741	1.098,94	1824	1.164,26	1934	1.214,86	2015	1.242,23	2068	1.281,56		
24	1104	1817	1.146,72	1903	1.214,88	2018	1.267,68	2102	1.296,24	2158	1.337,28		
25	1150	1893	1.194,50	1983	1.265,50	2103	1.320,50	2190	1.350,25	2248	1.393,00		
26	1196	1968	1.242,28	2062	1.316,12	2187	1.373,32	2278	1.404,26	2337	1.448,72		
27	1242	2044	1.290,06	2141	1.366,74	2271	1.426,14	2365	1.458,27	2427	1.504,44		
28	1288	2120	1.337,84	2220	1.417,36	2355	1.478,96	2453	1.512,28	2517	1.560,16		
29	1334	2195	1.385,62	2300	1.467,98	2439	1.531,78	2540	1.566,29	2607	1.615,88		
30	1380	2271	1.433,40	2379	1.518,60	2523	1.584,60	2628	1.620,30	2697	1.671,60		
31	1426	2347	1.481,18	2458	1.569,22	2607	1.637,42	2716	1.674,31	2787	1.727,32		
32	1472	2422	1.528,96	2538	1.619,84	2691	1.690,24	2803	1.728,32	2877	1.783,04		
33	1518	2498	1.576,74	2617	1.670,46	2775	1.743,06	2891	1.782,33	2967	1.838,76		
34	1564	2574	1.624,52	2696	1.721,08	2859	1.795,88	2978	1.836,34	3057	1.894,48		
35	1610	2650	1.672,30	2776	1.771,70	2944	1.848,70	3066	1.890,35	3147	1.950,20		
36	1656	2725	1.720,08	2855	1.822,32	3028	1.901,52	3154	1.944,36	3236	2.005,92		
37	1702	2801	1.767,86	2934	1.872,94	3112	1.954,34	3241	1.998,37	3326	2.061,64		
38	1748	2877	1.815,64	3013	1.923,56	3196	2.007,16	3329	2.052,38	3416	2.117,36		
39	1794	2952	1.863,42	3093	1.974,18	3280	2.059,98	3416	2.106,39	3506	2.173,08		
40	1840	3028	1.911,20	3172	2.024,80	3364	2.112,80	3504	2.160,40	3596	2.228,80		

Warning: Weight over 100 kg



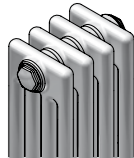
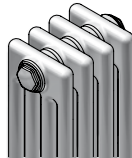
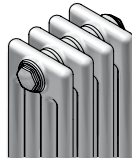
Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Retrofit



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		mm	766	796	866	885	936					
												
Model			4077	4079	4087	4089	4094					
Depth	mm		136	136	136	136	136					
Exponent	n		1,26	1,26	1,26	1,26	1,25					
Max. number of elements			64	64	64	64	64					
Price/element		€	56,75		57,77		61,42		62,86		64,48	
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	
Elements	mm	W	€	W	€	W	€	W	€	W	€	
4	184	397	<b>227,00</b>	412	<b>231,08</b>	444	<b>245,68</b>	448	<b>251,44</b>	472	<b>257,92</b>	
5	230	496	<b>283,75</b>	515	<b>288,85</b>	555	<b>307,10</b>	560	<b>314,30</b>	590	<b>322,40</b>	
6	276	595	<b>340,50</b>	618	<b>346,62</b>	666	<b>368,52</b>	672	<b>377,16</b>	708	<b>386,88</b>	
7	322	694	<b>397,25</b>	721	<b>404,39</b>	777	<b>429,94</b>	784	<b>440,02</b>	826	<b>451,36</b>	
8	368	794	<b>454,00</b>	824	<b>462,16</b>	888	<b>491,36</b>	896	<b>502,88</b>	944	<b>515,84</b>	
9	414	893	<b>510,75</b>	927	<b>519,93</b>	999	<b>552,78</b>	1008	<b>565,74</b>	1062	<b>580,32</b>	
10	460	992	<b>567,50</b>	1030	<b>577,70</b>	1110	<b>614,20</b>	1120	<b>628,60</b>	1180	<b>644,80</b>	
11	506	1091	<b>624,25</b>	1133	<b>635,47</b>	1221	<b>675,62</b>	1232	<b>691,46</b>	1298	<b>709,28</b>	
12	552	1190	<b>681,00</b>	1236	<b>693,24</b>	1332	<b>737,04</b>	1344	<b>754,32</b>	1416	<b>773,76</b>	
13	598	1290	<b>737,75</b>	1339	<b>751,01</b>	1443	<b>798,46</b>	1456	<b>817,18</b>	1534	<b>838,24</b>	
14	644	1389	<b>794,50</b>	1442	<b>808,78</b>	1554	<b>859,88</b>	1568	<b>880,04</b>	1652	<b>902,72</b>	
15	690	1488	<b>851,25</b>	1545	<b>866,55</b>	1665	<b>921,30</b>	1680	<b>942,90</b>	1770	<b>967,20</b>	
16	736	1587	<b>908,00</b>	1648	<b>924,32</b>	1776	<b>982,72</b>	1792	<b>1.005,76</b>	1888	<b>1.031,68</b>	
17	782	1686	<b>964,75</b>	1751	<b>982,09</b>	1887	<b>1.044,14</b>	1904	<b>1.068,62</b>	2006	<b>1.096,16</b>	
18	828	1786	<b>1.021,50</b>	1854	<b>1.039,86</b>	1998	<b>1.105,56</b>	2016	<b>1.131,48</b>	2124	<b>1.160,64</b>	
19	874	1885	<b>1.078,25</b>	1957	<b>1.097,63</b>	2109	<b>1.166,98</b>	2128	<b>1.194,34</b>	2242	<b>1.225,12</b>	
20	920	1984	<b>1.135,00</b>	2060	<b>1.155,40</b>	2220	<b>1.228,40</b>	2240	<b>1.257,20</b>	2360	<b>1.289,60</b>	
21	966	2083	<b>1.191,75</b>	2163	<b>1.213,17</b>	2331	<b>1.289,82</b>	2352	<b>1.320,06</b>	2478	<b>1.354,08</b>	
22	1012	2182	<b>1.248,50</b>	2266	<b>1.270,94</b>	2442	<b>1.351,24</b>	2464	<b>1.382,92</b>	2596	<b>1.418,56</b>	
23	1058	2282	<b>1.305,25</b>	2369	<b>1.328,71</b>	2553	<b>1.412,66</b>	2576	<b>1.445,78</b>	2714	<b>1.483,04</b>	
24	1104	2381	<b>1.362,00</b>	2472	<b>1.386,48</b>	2664	<b>1.474,08</b>	2688	<b>1.508,64</b>	2832	<b>1.547,52</b>	
25	1150	2480	<b>1.418,75</b>	2575	<b>1.444,25</b>	2775	<b>1.535,50</b>	2800	<b>1.571,50</b>	2950	<b>1.612,00</b>	
26	1196	2579	<b>1.475,50</b>	2678	<b>1.502,02</b>	2886	<b>1.596,92</b>	2912	<b>1.634,36</b>	3068	<b>1.676,48</b>	
27	1242	2678	<b>1.532,25</b>	2781	<b>1.559,79</b>	2997	<b>1.658,34</b>	3024	<b>1.697,22</b>	3186	<b>1.740,96</b>	
28	1288	2778	<b>1.589,00</b>	2884	<b>1.617,56</b>	3108	<b>1.719,76</b>	3136	<b>1.760,08</b>	3304	<b>1.805,44</b>	
29	1334	2877	<b>1.645,75</b>	2987	<b>1.675,33</b>	3219	<b>1.781,18</b>	3248	<b>1.822,94</b>	3422	<b>1.869,92</b>	
30	1380	2976	<b>1.702,50</b>	3090	<b>1.733,10</b>	3330	<b>1.842,60</b>	3360	<b>1.885,80</b>	3540	<b>1.934,40</b>	
31	1426	3075	<b>1.759,25</b>	3193	<b>1.790,87</b>	3441	<b>1.904,02</b>	3472	<b>1.948,66</b>	3658	<b>1.998,88</b>	
32	1472	3174	<b>1.816,00</b>	3296	<b>1.848,64</b>	3552	<b>1.965,44</b>	3584	<b>2.011,52</b>	3776	<b>2.063,36</b>	
33	1518	3274	<b>1.872,75</b>	3399	<b>1.906,41</b>	3663	<b>2.026,86</b>	3696	<b>2.074,38</b>	3894	<b>2.127,84</b>	
34	1564	3373	<b>1.929,50</b>	3502	<b>1.964,18</b>	3774	<b>2.088,28</b>	3808	<b>2.137,24</b>	4012	<b>2.192,32</b>	
35	1610	3472	<b>1.986,25</b>	3605	<b>2.021,95</b>	3885	<b>2.149,70</b>	3920	<b>2.200,10</b>	4130	<b>2.256,80</b>	
36	1656	3571	<b>2.043,00</b>	3708	<b>2.079,72</b>	3996	<b>2.211,12</b>	4032	<b>2.262,96</b>	4248	<b>2.321,28</b>	
37	1702	3670	<b>2.099,75</b>	3811	<b>2.137,49</b>	4107	<b>2.272,54</b>	4144	<b>2.325,82</b>	4366	<b>2.385,76</b>	
38	1748	3770	<b>2.156,50</b>	3914	<b>2.195,26</b>	4218	<b>2.333,96</b>	4256	<b>2.388,68</b>	4484	<b>2.450,24</b>	
39	1794	3869	<b>2.213,25</b>	4017	<b>2.253,03</b>	4329	<b>2.395,38</b>	4368	<b>2.451,54</b>	4602	<b>2.514,72</b>	
40	1840	3968	<b>2.270,00</b>	4120	<b>2.310,80</b>	4440	<b>2.456,80</b>	4480	<b>2.514,40</b>	4720	<b>2.579,20</b>	

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Retrofit



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height	mm	966	1066	1666	1866	2066					
Model		4097	4107	4167	4187	4207					
Depth	mm	136	136	136	136	136					
Exponent	n	1,25	1,25	1,31	1,32	1,32					
Max. number of elements		60	22	22	22	22					
Price/element	€	66,96	74,19	86,21	99,92	110,28					
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	484	<b>267,84</b>	528	<b>296,76</b>	792	<b>344,84</b>	880	<b>399,68</b>	968	<b>441,12</b>
5	230	605	<b>334,80</b>	660	<b>370,95</b>	990	<b>431,05</b>	1100	<b>499,60</b>	1210	<b>551,40</b>
6	276	726	<b>401,76</b>	792	<b>445,14</b>	1188	<b>517,26</b>	1320	<b>599,52</b>	1452	<b>661,68</b>
7	322	847	<b>468,72</b>	924	<b>519,33</b>	1386	<b>603,47</b>	1540	<b>699,44</b>	1694	<b>771,96</b>
8	368	968	<b>535,68</b>	1056	<b>593,52</b>	1584	<b>689,68</b>	1760	<b>799,36</b>	1936	<b>882,24</b>
9	414	1089	<b>602,64</b>	1188	<b>667,71</b>	1782	<b>775,89</b>	1980	<b>899,28</b>	2178	<b>992,52</b>
10	460	1210	<b>669,60</b>	1320	<b>741,90</b>	1980	<b>862,10</b>	2200	<b>999,20</b>	2420	<b>1.102,80</b>
11	506	1331	<b>736,56</b>	1452	<b>816,09</b>	2178	<b>948,31</b>	2420	<b>1.099,12</b>	2662	<b>1.213,08</b>
12	552	1452	<b>803,52</b>	1584	<b>890,28</b>	2376	<b>1.034,52</b>	2640	<b>1.199,04</b>	2904	<b>1.323,36</b>
13	598	1573	<b>870,48</b>	1716	<b>964,47</b>	2574	<b>1.120,73</b>	2860	<b>1.298,96</b>	3146	<b>1.433,64</b>
14	644	1694	<b>937,44</b>	1848	<b>1.038,66</b>	2772	<b>1.206,94</b>	3080	<b>1.398,88</b>	3388	<b>1.543,92</b>
15	690	1815	<b>1.004,40</b>	1980	<b>1.112,85</b>	2970	<b>1.293,15</b>	3300	<b>1.498,80</b>	3630	<b>1.654,20</b>
16	736	1936	<b>1.071,36</b>	2112	<b>1.187,04</b>	3168	<b>1.379,36</b>	3520	<b>1.598,72</b>	3872	<b>1.764,48</b>
17	782	2057	<b>1.138,32</b>	2244	<b>1.261,23</b>	3366	<b>1.465,57</b>	3740	<b>1.698,64</b>	4114	<b>1.874,76</b>
18	828	2178	<b>1.205,28</b>	2376	<b>1.335,42</b>	3564	<b>1.551,78</b>	3960	<b>1.798,56</b>	4356	<b>1.985,04</b>
19	874	2299	<b>1.272,24</b>	2508	<b>1.409,61</b>	3762	<b>1.637,99</b>	4180	<b>1.898,48</b>	4598	<b>2.095,32</b>
20	920	2420	<b>1.339,20</b>	2640	<b>1.483,80</b>	3960	<b>1.724,20</b>	4400	<b>1.998,40</b>	4840	<b>2.205,60</b>
21	966	2541	<b>1.406,16</b>	2772	<b>1.557,99</b>	4158	<b>1.810,41</b>	4620	<b>2.098,32</b>	5082	<b>2.315,88</b>
22	1012	2662	<b>1.473,12</b>	2904	<b>1.632,18</b>	4356	<b>1.896,62</b>	4840	<b>2.198,24</b>	5324	<b>2.426,16</b>
23	1058	2783	<b>1.540,08</b>	3036	<b>1.706,37</b>	4554	<b>1.982,83</b>	5060	<b>2.298,16</b>	5566	<b>2.536,44</b>
24	1104	2904	<b>1.607,04</b>	3168	<b>1.780,56</b>	4752	<b>2.069,04</b>	5280	<b>2.398,08</b>	5808	<b>2.646,72</b>
25	1150	3025	<b>1.674,00</b>	3300	<b>1.854,75</b>	4950	<b>2.155,25</b>	5500	<b>2.498,00</b>	6050	<b>2.757,00</b>
26	1196	3146	<b>1.740,96</b>	3432	<b>1.928,94</b>	5148	<b>2.241,46</b>	5720	<b>2.597,92</b>	6292	<b>2.867,28</b>
27	1242	3267	<b>1.807,92</b>	3564	<b>2.003,13</b>	5346	<b>2.327,67</b>	5940	<b>2.697,84</b>	6534	<b>2.977,56</b>
28	1288	3388	<b>1.874,88</b>	3696	<b>2.077,32</b>	5544	<b>2.413,88</b>	6160	<b>2.797,76</b>	6776	<b>3.087,84</b>
29	1334	3509	<b>1.941,84</b>	3828	<b>2.151,51</b>	5742	<b>2.500,09</b>	6380	<b>2.897,68</b>	7018	<b>3.198,12</b>
30	1380	3630	<b>2.008,80</b>	3960	<b>2.225,70</b>	5940	<b>2.586,30</b>	6600	<b>2.997,60</b>	7260	<b>3.308,40</b>
31	1426	3751	<b>2.075,76</b>	4092	<b>2.299,89</b>	6138	<b>2.672,51</b>	6820	<b>3.097,52</b>	7502	<b>3.418,68</b>
32	1472	3872	<b>2.142,72</b>	4224	<b>2.374,08</b>	6336	<b>2.758,72</b>	7040	<b>3.197,44</b>	7744	<b>3.528,96</b>
33	1518	3993	<b>2.209,68</b>	4356	<b>2.448,27</b>	6534	<b>2.844,93</b>	7260	<b>3.297,36</b>	7986	<b>3.639,24</b>
34	1564	4114	<b>2.276,64</b>	4488	<b>2.522,46</b>	6732	<b>2.931,14</b>	7480	<b>3.397,28</b>	8228	<b>3.749,52</b>
35	1610	4235	<b>2.343,60</b>	4620	<b>2.596,65</b>	6930	<b>3.017,35</b>	7700	<b>3.497,20</b>	8470	<b>3.859,80</b>
36	1656	4356	<b>2.410,56</b>	4752	<b>2.670,84</b>	7128	<b>3.103,56</b>	7920	<b>3.597,12</b>	8712	<b>3.970,08</b>
37	1702	4477	<b>2.477,52</b>	4884	<b>2.745,03</b>	7326	<b>3.189,77</b>	8140	<b>3.697,04</b>	8954	<b>4.080,36</b>
38	1748	4598	<b>2.544,48</b>	5016	<b>2.819,22</b>	7524	<b>3.275,98</b>	8360	<b>3.796,96</b>	9196	<b>4.190,64</b>
39	1794	4719	<b>2.611,44</b>	5148	<b>2.893,41</b>	7722	<b>3.362,19</b>	8580	<b>3.896,88</b>	9438	<b>4.300,92</b>
40	1840	4840	<b>2.678,40</b>	5280	<b>2.967,60</b>	7920	<b>3.448,40</b>	8800	<b>3.996,80</b>	9680	<b>4.411,20</b>

Warning: Weight over 100 kg

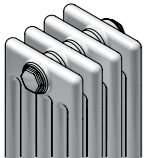
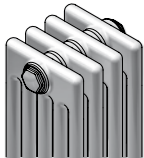
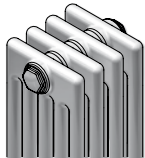

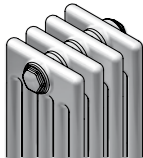
Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Retrofit



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		mm	366		566		666		685		766	
												
Model			5037		5057		5067		5069		5077	
Depth	mm		173		173		173		173		173	
Exponent	n		1,28		1,27		1,26		1,26		1,26	
Max. number of elements			64		64		64		64		50	
Price/element		€	48,40		56,07		64,30		69,89		70,89	
Length			$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price		$\Phi_s$ Price	
Elements	mm	W	€	W	€	W	€	W	€	W	€	
4	184	250	193,60	374	224,28	432	257,20	444	279,56	492	283,56	
5	230	313	242,00	468	280,35	540	321,50	555	349,45	615	354,45	
6	276	375	290,40	561	336,42	648	385,80	666	419,34	738	425,34	
7	322	438	338,80	655	392,49	756	450,10	777	489,23	861	496,23	
8	368	500	387,20	748	448,56	864	514,40	888	559,12	984	567,12	
9	414	563	435,60	842	504,63	972	578,70	999	629,01	1107	638,01	
10	460	625	484,00	935	560,70	1080	643,00	1110	698,90	1230	708,90	
11	506	688	532,40	1029	616,77	1188	707,30	1221	768,79	1353	779,79	
12	552	750	580,80	1122	672,84	1296	771,60	1332	838,68	1476	850,68	
13	598	813	629,20	1216	728,91	1404	835,90	1443	908,57	1599	921,57	
14	644	875	677,60	1309	784,98	1512	900,20	1554	978,46	1722	992,46	
15	690	938	726,00	1403	841,05	1620	964,50	1665	1.048,35	1845	1.063,35	
16	736	1000	774,40	1496	897,12	1728	1.028,80	1776	1.118,24	1968	1.134,24	
17	782	1063	822,80	1590	953,19	1836	1.093,10	1887	1.188,13	2091	1.205,13	
18	828	1125	871,20	1683	1.009,26	1944	1.157,40	1998	1.258,02	2214	1.276,02	
19	874	1188	919,60	1777	1.065,33	2052	1.221,70	2109	1.327,91	2337	1.346,91	
20	920	1250	968,00	1870	1.121,40	2160	1.286,00	2220	1.397,80	2460	1.417,80	
21	966	1313	1.016,40	1964	1.177,47	2268	1.350,30	2331	1.467,69	2583	1.488,69	
22	1012	1375	1.064,80	2057	1.233,54	2376	1.414,60	2442	1.537,58	2706	1.559,58	
23	1058	1438	1.113,20	2151	1.289,61	2484	1.478,90	2553	1.607,47	2829	1.630,47	
24	1104	1500	1.161,60	2244	1.345,68	2592	1.543,20	2664	1.677,36	2952	1.701,36	
25	1150	1563	1.210,00	2338	1.401,75	2700	1.607,50	2775	1.747,25	3075	1.772,25	
26	1196	1625	1.258,40	2431	1.457,82	2808	1.671,80	2886	1.817,14	3198	1.843,14	
27	1242	1688	1.306,80	2525	1.513,89	2916	1.736,10	2997	1.887,03	3321	1.914,03	
28	1288	1750	1.355,20	2618	1.569,96	3024	1.800,40	3108	1.956,92	3444	1.984,92	
29	1334	1813	1.403,60	2712	1.626,03	3132	1.864,70	3219	2.026,81	3567	2.055,81	
30	1380	1875	1.452,00	2805	1.682,10	3240	1.929,00	3330	2.096,70	3690	2.126,70	
31	1426	1938	1.500,40	2899	1.738,17	3348	1.993,30	3441	2.166,59	3813	2.197,59	
32	1472	2000	1.548,80	2992	1.794,24	3456	2.057,60	3552	2.236,48	3936	2.268,48	
33	1518	2063	1.597,20	3086	1.850,31	3564	2.121,90	3663	2.306,37	4059	2.339,37	
34	1564	2125	1.645,60	3179	1.906,38	3672	2.186,20	3774	2.376,26	4182	2.410,26	
35	1610	2188	1.694,00	3273	1.962,45	3780	2.250,50	3885	2.446,15	4305	2.481,15	
36	1656	2250	1.742,40	3366	2.018,52	3888	2.314,80	3996	2.516,04	4428	2.552,04	
37	1702	2313	1.790,80	3460	2.074,59	3996	2.379,10	4107	2.585,93	4551	2.622,93	
38	1748	2375	1.839,20	3553	2.130,66	4104	2.443,40	4218	2.655,82	4674	2.693,82	
39	1794	2438	1.887,60	3647	2.186,73	4212	2.507,70	4329	2.725,71	4797	2.764,71	
40	1840	2500	1.936,00	3740	2.242,80	4320	2.572,00	4440	2.795,60	4920	2.835,60	

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51



# Zehnder Charleston Retrofit

$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		mm		866		885		966		1066		266	
Model		5087		5089		5097		5107		6027			
Depth	mm	173		173		173		173		210			
Exponent	n	1,26		1,26		1,25		1,25		1,28			
Max. number of elements		50		50		50		22		64			
Price/element		€		72,80		74,55		78,09		90,66		54,01	
Length		$\Phi_s$		Price		$\Phi_s$		Price		$\Phi_s$		Price	
Elements	mm	W	€	W	€	W	€	W	€	W	€	W	€
4	184	544	291,20	556	298,20	600	312,36	648	362,64	219	216,04		
5	230	680	364,00	695	372,75	750	390,45	810	453,30	274	270,05		
6	276	816	436,80	834	447,30	900	468,54	972	543,96	328	324,06		
7	322	952	509,60	973	521,85	1050	546,63	1134	634,62	383	378,07		
8	368	1088	582,40	1112	596,40	1200	624,72	1296	725,28	438	432,08		
9	414	1224	655,20	1251	670,95	1350	702,81	1458	815,94	492	486,09		
10	460	1360	728,00	1390	745,50	1500	780,90	1620	906,60	547	540,10		
11	506	1496	800,80	1529	820,05	1650	858,99	1782	997,26	602	594,11		
12	552	1632	873,60	1668	894,60	1800	937,08	1944	1.087,92	656	648,12		
13	598	1768	946,40	1807	969,15	1950	1.015,17	2106	1.178,58	711	702,13		
14	644	1904	1.019,20	1946	1.043,70	2100	1.093,26	2268	1.269,24	766	756,14		
15	690	2040	1.092,00	2085	1.118,25	2250	1.171,35	2430	1.359,90	821	810,15		
16	736	2176	1.164,80	2224	1.192,80	2400	1.249,44	2592	1.450,56	875	864,16		
17	782	2312	1.237,60	2363	1.267,35	2550	1.327,53	2754	1.541,22	930	918,17		
18	828	2448	1.310,40	2502	1.341,90	2700	1.405,62	2916	1.631,88	985	972,18		
19	874	2584	1.383,20	2641	1.416,45	2850	1.483,71	3078	1.722,54	1039	1.026,19		
20	920	2720	1.456,00	2780	1.491,00	3000	1.561,80	3240	1.813,20	1094	1.080,20		
21	966	2856	1.528,80	2919	1.565,55	3150	1.639,89	3402	1.903,86	1149	1.134,21		
22	1012	2992	1.601,60	3058	1.640,10	3300	1.717,98	3564	1.994,52	1203	1.188,22		
23	1058	3128	1.674,40	3197	1.714,65	3450	1.796,07	3726	2.085,18	1258	1.242,23		
24	1104	3264	1.747,20	3336	1.789,20	3600	1.874,16	3888	2.175,84	1313	1.296,24		
25	1150	3400	1.820,00	3475	1.863,75	3750	1.952,25	4050	2.266,50	1368	1.350,25		
26	1196	3536	1.892,80	3614	1.938,30	3900	2.030,34	4212	2.357,16	1422	1.404,26		
27	1242	3672	1.965,60	3753	2.012,85	4050	2.108,43	4374	2.447,82	1477	1.458,27		
28	1288	3808	2.038,40	3892	2.087,40	4200	2.186,52	4536	2.538,48	1532	1.512,28		
29	1334	3944	2.111,20	4031	2.161,95	4350	2.264,61	4698	2.629,14	1586	1.566,29		
30	1380	4080	2.184,00	4170	2.236,50	4500	2.342,70	4860	2.719,80	1641	1.620,30		
31	1426	4216	2.256,80	4309	2.311,05	4650	2.420,79	5022	2.810,46	1696	1.674,31		
32	1472	4352	2.329,60	4448	2.385,60	4800	2.498,88	5184	2.901,12	1750	1.728,32		
33	1518	4488	2.402,40	4587	2.460,15	4950	2.576,97	5346	2.991,78	1805	1.782,33		
34	1564	4624	2.475,20	4726	2.534,70	5100	2.655,06	5508	3.082,44	1860	1.836,34		
35	1610	4760	2.548,00	4865	2.609,25	5250	2.733,15	5670	3.173,10	1915	1.890,35		
36	1656	4896	2.620,80	5004	2.683,80	5400	2.811,24	5832	3.263,76	1969	1.944,36		
37	1702	5032	2.693,60	5143	2.758,35	5550	2.889,33	5994	3.354,42	2024	1.998,37		
38	1748	5168	2.766,40	5282	2.832,90	5700	2.967,42	6156	3.445,08	2079	2.052,38		
39	1794	5304	2.839,20	5421	2.907,45	5850	3.045,51	6318	3.535,74	2133	2.106,39		
40	1840	5440	2.912,00	5560	2.982,00	6000	3.123,60	6480	3.626,40	2188	2.160,40		

Warning: Weight over 100 kg

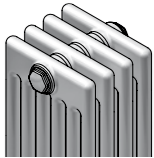
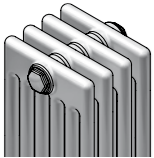
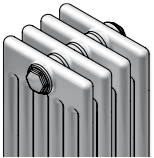
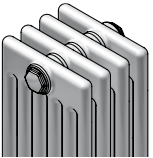
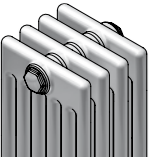
Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Retrofit



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)

Height		mm	366		416		566		666		685	
												
Model		6037		6042		6057		6067		6069		
Depth	mm	210		210		210		210		210		
Exponent	n	1,28		1,28		1,27		1,26		1,26		
Max. number of elements		64		64		64		55		55		
Price/element		€ 57,36		€ 59,37		€ 66,15		€ 75,43		€ 79,37		
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	
Elements	mm	W	€	W	€	W	€	W	€	W	€	
4	184	296	229,44	334	237,48	444	264,60	512	301,72	528	317,48	
5	230	370	286,80	418	296,85	555	330,75	640	377,15	660	396,85	
6	276	444	344,16	501	356,22	666	396,90	768	452,58	792	476,22	
7	322	518	401,52	585	415,59	777	463,05	896	528,01	924	555,59	
8	368	592	458,88	668	474,96	888	529,20	1024	603,44	1056	634,96	
9	414	666	516,24	752	534,33	999	595,35	1152	678,87	1188	714,33	
10	460	740	573,60	835	593,70	1110	661,50	1280	754,30	1320	793,70	
11	506	814	630,96	919	653,07	1221	727,65	1408	829,73	1452	873,07	
12	552	888	688,32	1002	712,44	1332	793,80	1536	905,16	1584	952,44	
13	598	962	745,68	1086	771,81	1443	859,95	1664	980,59	1716	1.031,81	
14	644	1036	803,04	1169	831,18	1554	926,10	1792	1.056,02	1848	1.111,18	
15	690	1110	860,40	1253	890,55	1665	992,25	1920	1.131,45	1980	1.190,55	
16	736	1184	917,76	1336	949,92	1776	1.058,40	2048	1.206,88	2112	1.269,92	
17	782	1258	975,12	1420	1.009,29	1887	1.124,55	2176	1.282,31	2244	1.349,29	
18	828	1332	1.032,48	1503	1.068,66	1998	1.190,70	2304	1.357,74	2376	1.428,66	
19	874	1406	1.089,84	1587	1.128,03	2109	1.256,85	2432	1.433,17	2508	1.508,03	
20	920	1480	1.147,20	1670	1.187,40	2220	1.323,00	2560	1.508,60	2640	1.587,40	
21	966	1554	1.204,56	1754	1.246,77	2331	1.389,15	2688	1.584,03	2772	1.666,77	
22	1012	1628	1.261,92	1837	1.306,14	2442	1.455,30	2816	1.659,46	2904	1.746,14	
23	1058	1702	1.319,28	1921	1.365,51	2553	1.521,45	2944	1.734,89	3036	1.825,51	
24	1104	1776	1.376,64	2004	1.424,88	2664	1.587,60	3072	1.810,32	3168	1.904,88	
25	1150	1850	1.434,00	2088	1.484,25	2775	1.653,75	3200	1.885,75	3300	1.984,25	
26	1196	1924	1.491,36	2171	1.543,62	2886	1.719,90	3328	1.961,18	3432	2.063,62	
27	1242	1998	1.548,72	2255	1.602,99	2997	1.786,05	3456	2.036,61	3564	2.142,99	
28	1288	2072	1.606,08	2338	1.662,36	3108	1.852,20	3584	2.112,04	3696	2.222,36	
29	1334	2146	1.663,44	2422	1.721,73	3219	1.918,35	3712	2.187,47	3828	2.301,73	
30	1380	2220	1.720,80	2505	1.781,10	3330	1.984,50	3840	2.262,90	3960	2.381,10	
31	1426	2294	1.778,16	2589	1.840,47	3441	2.050,65	3968	2.338,33	4092	2.460,47	
32	1472	2368	1.835,52	2672	1.899,84	3552	2.116,80	4096	2.413,76	4224	2.539,84	
33	1518	2442	1.892,88	2756	1.959,21	3663	2.182,95	4224	2.489,19	4356	2.619,21	
34	1564	2516	1.950,24	2839	2.018,58	3774	2.249,10	4352	2.564,62	4488	2.698,58	
35	1610	2590	2.007,60	2923	2.077,95	3885	2.315,25	4480	2.640,05	4620	2.777,95	
36	1656	2664	2.064,96	3006	2.137,32	3996	2.381,40	4608	2.715,48	4752	2.857,32	
37	1702	2738	2.122,32	3090	2.196,69	4107	2.447,55	4736	2.790,91	4884	2.936,69	
38	1748	2812	2.179,68	3173	2.256,06	4218	2.513,70	4864	2.866,34	5016	3.016,06	
39	1794	2886	2.237,04	3257	2.315,43	4329	2.579,85	4992	2.941,77	5148	3.095,43	
40	1840	2960	2.294,40	3340	2.374,80	4440	2.646,00	5120	3.017,20	5280	3.174,80	

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

# Zehnder Charleston Retrofit



$\Phi_s$  = Standard thermal output according to EN 442 ( $\Delta T$  50K: 75/65/20 °C)


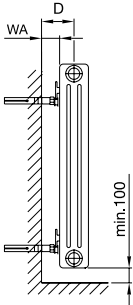
Height	mm	766	866	885	966	1066					
Model		6077	6087	6089	6097	6107					
Depth	mm	210	210	210	210	210					
Exponent	n	1,26	1,26	1,26	1,25	1,25					
Max. number of elements		46	46	46	42	22					
Price/element	€	84,16	87,98	89,71	91,41	107,76					
Length		$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price	$\Phi_s$	Price
Elements	mm	W	€	W	€	W	€	W	€	W	€
4	184	588	<b>336,64</b>	648	<b>351,92</b>	660	<b>358,84</b>	708	<b>365,64</b>	772	<b>431,04</b>
5	230	735	<b>420,80</b>	810	<b>439,90</b>	825	<b>448,55</b>	885	<b>457,05</b>	965	<b>538,80</b>
6	276	882	<b>504,96</b>	972	<b>527,88</b>	990	<b>538,26</b>	1062	<b>548,46</b>	1158	<b>646,56</b>
7	322	1029	<b>589,12</b>	1134	<b>615,86</b>	1155	<b>627,97</b>	1239	<b>639,87</b>	1351	<b>754,32</b>
8	368	1176	<b>673,28</b>	1296	<b>703,84</b>	1320	<b>717,68</b>	1416	<b>731,28</b>	1544	<b>862,08</b>
9	414	1323	<b>757,44</b>	1458	<b>791,82</b>	1485	<b>807,39</b>	1593	<b>822,69</b>	1737	<b>969,84</b>
10	460	1470	<b>841,60</b>	1620	<b>879,80</b>	1650	<b>897,10</b>	1770	<b>914,10</b>	1930	<b>1.077,60</b>
11	506	1617	<b>925,76</b>	1782	<b>967,78</b>	1815	<b>986,81</b>	1947	<b>1.005,51</b>	2123	<b>1.185,36</b>
12	552	1764	<b>1.009,92</b>	1944	<b>1.055,76</b>	1980	<b>1.076,52</b>	2124	<b>1.096,92</b>	2316	<b>1.293,12</b>
13	598	1911	<b>1.094,08</b>	2106	<b>1.143,74</b>	2145	<b>1.166,23</b>	2301	<b>1.188,33</b>	2509	<b>1.400,88</b>
14	644	2058	<b>1.178,24</b>	2268	<b>1.231,72</b>	2310	<b>1.255,94</b>	2478	<b>1.279,74</b>	2702	<b>1.508,64</b>
15	690	2205	<b>1.262,40</b>	2430	<b>1.319,70</b>	2475	<b>1.345,65</b>	2655	<b>1.371,15</b>	2895	<b>1.616,40</b>
16	736	2352	<b>1.346,56</b>	2592	<b>1.407,68</b>	2640	<b>1.435,36</b>	2832	<b>1.462,56</b>	3088	<b>1.724,16</b>
17	782	2499	<b>1.430,72</b>	2754	<b>1.495,66</b>	2805	<b>1.525,07</b>	3009	<b>1.553,97</b>	3281	<b>1.831,92</b>
18	828	2646	<b>1.514,88</b>	2916	<b>1.583,64</b>	2970	<b>1.614,78</b>	3186	<b>1.645,38</b>	3474	<b>1.939,68</b>
19	874	2793	<b>1.599,04</b>	3078	<b>1.671,62</b>	3135	<b>1.704,49</b>	3363	<b>1.736,79</b>	3667	<b>2.047,44</b>
20	920	2940	<b>1.683,20</b>	3240	<b>1.759,60</b>	3300	<b>1.794,20</b>	3540	<b>1.828,20</b>	3860	<b>2.155,20</b>
21	966	3087	<b>1.767,36</b>	3402	<b>1.847,58</b>	3465	<b>1.883,91</b>	3717	<b>1.919,61</b>	4053	<b>2.262,96</b>
22	1012	3234	<b>1.851,52</b>	3564	<b>1.935,56</b>	3630	<b>1.973,62</b>	3894	<b>2.011,02</b>	4246	<b>2.370,72</b>
23	1058	3381	<b>1.935,68</b>	3726	<b>2.023,54</b>	3795	<b>2.063,33</b>	4071	<b>2.102,43</b>	4439	<b>2.478,48</b>
24	1104	3528	<b>2.019,84</b>	3888	<b>2.111,52</b>	3960	<b>2.153,04</b>	4248	<b>2.193,84</b>	4632	<b>2.586,24</b>
25	1150	3675	<b>2.104,00</b>	4050	<b>2.199,50</b>	4125	<b>2.242,75</b>	4425	<b>2.285,25</b>	4825	<b>2.694,00</b>
26	1196	3822	<b>2.188,16</b>	4212	<b>2.287,48</b>	4290	<b>2.332,46</b>	4602	<b>2.376,66</b>	5018	<b>2.801,76</b>
27	1242	3969	<b>2.272,32</b>	4374	<b>2.375,46</b>	4455	<b>2.422,17</b>	4779	<b>2.468,07</b>	5211	<b>2.909,52</b>
28	1288	4116	<b>2.356,48</b>	4536	<b>2.463,44</b>	4620	<b>2.511,88</b>	4956	<b>2.559,48</b>	5404	<b>3.017,28</b>
29	1334	4263	<b>2.440,64</b>	4698	<b>2.551,42</b>	4785	<b>2.601,59</b>	5133	<b>2.650,89</b>	5597	<b>3.125,04</b>
30	1380	4410	<b>2.524,80</b>	4860	<b>2.639,40</b>	4950	<b>2.691,30</b>	5310	<b>2.742,30</b>	5790	<b>3.232,80</b>
31	1426	4557	<b>2.608,96</b>	5022	<b>2.727,38</b>	5115	<b>2.781,01</b>	5487	<b>2.833,71</b>	5983	<b>3.340,56</b>
32	1472	4704	<b>2.693,12</b>	5184	<b>2.815,36</b>	5280	<b>2.870,72</b>	5664	<b>2.925,12</b>	6176	<b>3.448,32</b>
33	1518	4851	<b>2.777,28</b>	5346	<b>2.903,34</b>	5445	<b>2.960,43</b>	5841	<b>3.016,53</b>	6369	<b>3.556,08</b>
34	1564	4998	<b>2.861,44</b>	5508	<b>2.991,32</b>	5610	<b>3.050,14</b>	6018	<b>3.107,94</b>	6562	<b>3.663,84</b>
35	1610	5145	<b>2.945,60</b>	5670	<b>3.079,30</b>	5775	<b>3.139,85</b>	6195	<b>3.199,35</b>	6755	<b>3.771,60</b>
36	1656	5292	<b>3.029,76</b>	5832	<b>3.167,28</b>	5940	<b>3.229,56</b>	6372	<b>3.290,76</b>	6948	<b>3.879,36</b>
37	1702	5439	<b>3.113,92</b>	5994	<b>3.255,26</b>	6105	<b>3.319,27</b>	6549	<b>3.382,17</b>	7141	<b>3.987,12</b>
38	1748	5586	<b>3.198,08</b>	6156	<b>3.343,24</b>	6270	<b>3.408,98</b>	6726	<b>3.473,58</b>	7334	<b>4.094,88</b>
39	1794	5733	<b>3.282,24</b>	6318	<b>3.431,22</b>	6435	<b>3.498,69</b>	6903	<b>3.564,99</b>	7527	<b>4.202,64</b>
40	1840	5880	<b>3.366,40</b>	6480	<b>3.519,20</b>	6600	<b>3.588,40</b>	7080	<b>3.656,40</b>	7720	<b>4.310,40</b>

Warning: Weight over 100 kg

Surcharge for special colours, category 1 = 20%, category 2 = 30%

Factor  $f_1$  for converting the thermal output to operating temperatures 70/55/20 °C = 0,80, to 70/50/20 °C = 0,73, to 55/45/20 °C = 0,51

## Zehnder Charleston Retrofit

Illustration	Sketch Side view	Model					
		Application	Wall clearance WA mm	Brackets in set	Article no. <sup>1)</sup> Set white	€/Set White   Colour	
Fixing details for accessory set BKE							
		<b>All models</b>					
		Height 260 - 1000 mm		with retaining spring			
		L = 4-20 el. L = 21-40 el. L = 41-60 el.	46	4 x BH + BKE160 6 x BH + BKE160 8 x BH + BKE160	774461 774661 774861	<b>40,07</b> <b>56,11</b> <b>72,19</b>	<b>63,14</b> <b>90,52</b> <b>117,90</b>
		Height 1001 - 1500 mm		with retaining spring			
		L = 4-20 el. L = 21-40 el. L = 41-60 el.	46	4 x BH + BKE160 8 x BH + BKE160 10 x BH + BKE160	774461 774861 774961	<b>40,07</b> <b>72,19</b> <b>88,18</b>	<b>63,14</b> <b>117,90</b> <b>145,28</b>
		<b>2- to 5-column</b>					
		Height 1501 - 2200 mm		with retaining spring			
		L = 4-10 el. L = 11-20 el. L = 21-30 el. L = 31-40 el.	46	4 x BH + BKE160 6 x BH + BKE160 8 x BH + BKE160 10 x BH + BKE160	774461 774661 774861 774961	<b>40,07</b> <b>56,11</b> <b>72,19</b> <b>88,18</b>	<b>63,14</b> <b>90,52</b> <b>117,90</b> <b>145,28</b>
		<b>6-column</b>					
		Height 1501 - 2200 mm		with retaining spring			
L = 4-10 el. L = 11-20 el. L = 21-30 el. L = 31-40 el.	46	4 x BH + BKE160 8 x BH + BKE160 10 x BH + BKE160 14 x BH + BKE160	774461 774861 774961 -	<b>40,07</b> <b>72,19</b> <b>88,18</b> -	<b>63,14</b> <b>117,90</b> <b>145,28</b> -		
Distance D:							
2-column	77 mm						
3-column	96 mm						
4-column	114 mm						
5-column	133 mm						
6-column	151 mm						
L = Length of radiator in mm      D = Dimension from wall to middle of connection      WA = Wall clearance							

<sup>1)</sup> The article no. of the set in colour is produced by replacing the end digit 1 by the end digit 9.

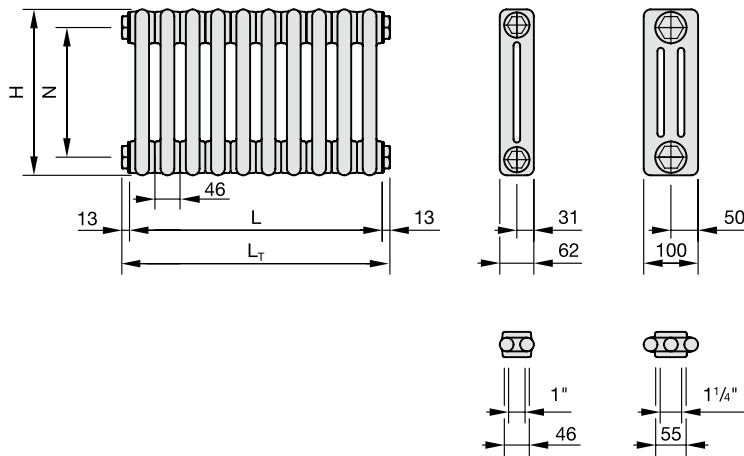
<sup>2)</sup> Average distances are given for D and WA for set BKE, as bracket installation depth is variable.



# Zehnder Charleston Retrofit



**Retrofit models 2- to 6-column**



- H = Height
- L = Length = elements x 46 mm
- L<sub>T</sub> = Total length = elements x 46 mm + 2 x 13 mm
- N = Boss spacing
- T = Depth
- V = Water content
- M = Weight
- s<sub>k</sub> = Proportion of radiation
- q<sub>ms</sub> = Nominal flow rate
- n = Exponent
- Φ<sub>s</sub> = Nominal heat output according to EN 442 (75/65/20 °C)
- Φ = Thermal output at system temperatures

Dimensions in mm

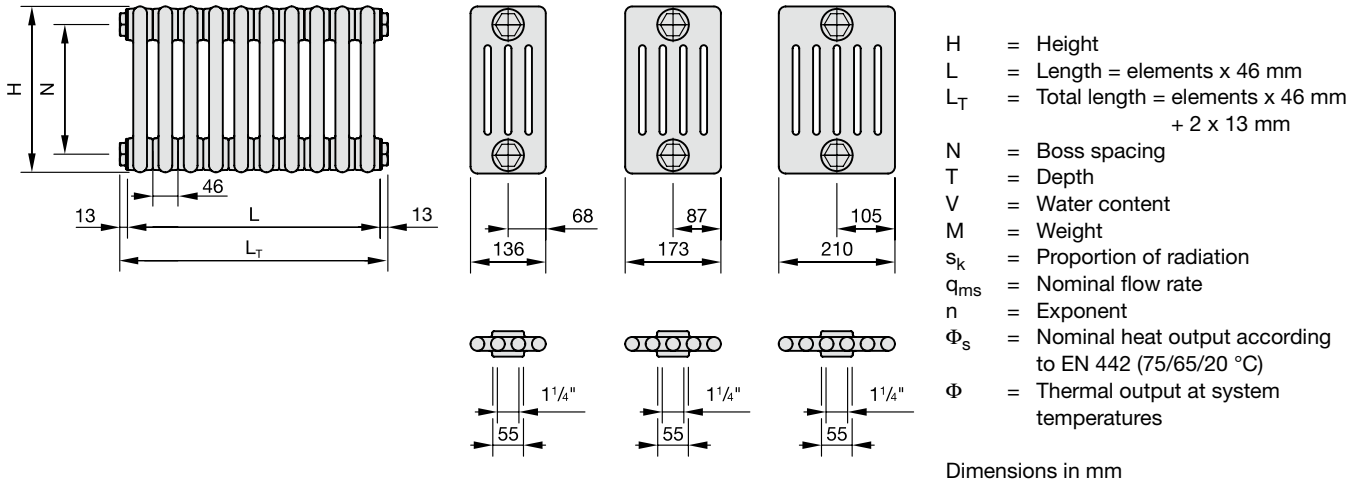
**Technical specifications per element**

Model	H mm	N mm	T mm	V dm <sup>3</sup>	M kg	s <sub>k</sub> %	q <sub>ms</sub> kg/h	Exp. n	Φ <sub>s</sub> =ΔT 50 K EN442 Watt	Φ 70/55/20 °C Watt	Φ 55/45/20 °C Watt
2041	408	350	62	0,40	0,65	24	3,0	1,26	32,4	26,3	17,1
2046	458	400	62	0,50	0,72	24	3,0	1,26	36,0	29,2	19,0
2056	558	500	62	0,60	0,86	23	4,0	1,25	43,0	34,8	22,5
2059	588	530	62	0,60	0,90	23	3,9	1,25	45,0	36,4	23,8
2063	628	570	62	0,70	0,95	22	4,0	1,24	47,7	38,7	25,3
2066	658	600	62	0,70	0,99	22	4,0	1,24	49,7	40,2	26,0
2068	677	619	62	0,65	1,11	23	4,4	1,24	50,9	41,3	27,0
2076	758	700	62	0,70	1,19	22	4,8	1,24	56,0	45,4	29,7
2079	788	730	62	0,71	1,22	22	4,9	1,23	57,8	46,9	30,8
2086	858	800	62	0,75	1,34	22	5,2	1,23	62,0	50,3	33,1
2088	877	819	62	0,80	1,40	22	5,4	1,23	63,1	51,2	33,7
2093	928	870	62	0,80	1,33	22	5,7	1,22	66,0	53,7	35,4
2096	958	900	62	0,90	1,40	22	6,0	1,22	67,6	54,7	35,4
2166	1658	1600	62	1,40	2,22	23	10,0	1,29	115,0	92,4	59,5
2186	1858	1800	62	1,50	2,60	23	11,1	1,29	129,0	103,7	66,7
2206	2058	2000	62	1,70	2,90	23	12,3	1,28	142,0	114,3	73,8
3037	366	300	100	0,60	0,89	19	3,0	1,28	38,6	31,2	20,2
3042	416	350	100	0,70	0,99	19	4,0	1,28	43,5	35,2	22,8
3057	566	500	100	0,90	1,31	18	5,0	1,27	57,8	46,7	30,1
3059	596	530	100	0,90	1,37	18	5,2	1,27	60,5	48,8	31,6
3064	636	570	100	1,00	1,45	18	5,4	1,27	64,2	51,8	33,6
3067	666	600	100	1,00	1,52	18	6,0	1,26	66,9	54,0	34,9
3069	685	619	100	0,97	1,68	18	5,9	1,26	68,6	55,4	36,0
3077	766	700	100	1,15	1,76	18	6,5	1,26	75,7	61,1	39,8
3079	796	730	100	1,15	1,80	18	6,7	1,26	77,4	62,5	40,7
3087	866	800	100	1,19	1,98	18	7,3	1,26	84,2	68,0	44,2
3089	885	819	100	1,21	2,12	18	7,5	1,26	85,8	69,3	45,1
3094	936	870	100	1,30	2,05	18	7,8	1,25	90,0	72,8	47,5
3097	966	900	100	1,30	2,15	18	8,0	1,25	92,4	74,5	47,9
3107	1066	1000	100	1,50	2,36	18	9,0	1,25	100,0	80,6	51,9
3167	1666	1600	100	2,00	3,30	18	13,4	1,31	154,0	123,3	78,9
3187	1866	1800	100	2,40	3,95	18	15,0	1,32	171,0	136,7	87,1
3207	2066	2000	100	2,60	4,35	18	16,3	1,32	188,0	150,3	95,8

# Zehnder Charleston Retrofit



## Retrofit models 2- to 6-column



### Technical specifications per element

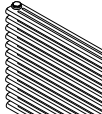
Model	H mm	N mm	T mm	V dm <sup>3</sup>	M kg	s <sub>k</sub> %	q <sub>ms</sub> kg/h	Exp. n	Φ <sub>s</sub> =ΔT 50 K EN442 Watt	Φ 70/55/20 °C Watt	Φ 55/45/20 °C Watt
4037	366	300	136	0,80	1,14	16	4,0	1,28	50,6	40,9	26,5
4042	416	350	136	0,90	1,28	16	5,0	1,28	57,0	46,0	29,7
4057	566	500	136	1,10	1,69	15	6,0	1,27	75,7	61,0	39,3
4059	596	530	136	1,20	1,78	15	6,8	1,27	79,3	63,9	41,5
4064	636	570	136	1,20	1,82	15	7,2	1,27	84,1	67,8	44,0
4067	666	600	136	1,30	1,96	15	7,0	1,26	87,6	70,6	45,4
4069	685	619	136	1,27	2,02	15	7,7	1,26	89,9	72,6	47,2
4077	766	700	136	1,45	2,24	15	8,6	1,26	99,2	80,1	52,1
4079	796	730	136	1,45	2,30	15	8,8	1,26	103,0	83,2	54,1
4087	866	800	136	1,56	2,51	15	9,3	1,26	111,0	89,7	58,3
4089	885	819	136	1,59	2,56	15	9,5	1,26	112,0	90,5	58,8
4094	936	870	136	1,70	2,70	15	10,1	1,25	118,0	95,5	62,3
4097	966	900	136	1,70	2,79	15	10,0	1,25	121,0	97,4	62,4
4107	1066	1000	136	1,90	3,06	15	11,0	1,25	132,0	106,1	67,8
4167	1666	1600	136	2,10	4,40	15	17,1	1,31	198,0	158,6	101,4
4187	1866	1800	136	3,10	5,12	15	18,8	1,32	220,0	175,9	112,1
4207	2066	2000	136	3,40	5,62	15	20,8	1,32	242,0	193,5	123,3
5037	366	300	173	1,00	1,49	15	5,0	1,28	62,5	50,5	32,6
5057	566	500	173	1,40	2,17	14	8,0	1,27	93,5	75,4	48,5
5067	666	600	173	1,60	2,52	13	9,0	1,26	108,0	86,9	55,7
5069	685	619	173	1,70	2,90	13	9,5	1,26	111,0	89,7	58,3
5077	766	700	173	1,85	2,99	13	10,6	1,26	123,0	99,3	64,6
5087	866	800	173	2,00	3,36	13	11,8	1,26	136,0	109,8	71,5
5089	885	819	173	2,10	3,60	13	12,0	1,26	139,0	112,3	73,0
5097	966	900	173	2,10	3,54	13	13,0	1,25	150,0	120,3	76,6
5107	1066	1000	173	2,30	3,88	13	14,0	1,25	162,0	129,9	82,7
6027	266	200	210	1,10	1,44	16	5,0	1,28	54,7	44,1	28,4
6037	366	300	210	1,10	1,80	14	6,0	1,28	74,0	59,8	38,6
6042	416	350	210	1,30	2,01	13	7,0	1,28	83,5	67,3	43,3
6057	566	500	210	1,70	2,62	12	9,0	1,27	111,0	89,3	57,3
6067	666	600	210	1,90	3,02	12	11,0	1,26	128,0	102,7	65,4
6069	685	619	210	2,00	3,30	12	11,4	1,26	132,0	106,6	69,3
6077	766	700	210	2,15	3,61	12	12,6	1,26	147,0	118,7	77,2
6087	866	800	210	2,40	4,05	12	13,9	1,26	162,0	130,8	85,1
6089	885	819	210	2,50	4,20	12	14,2	1,26	165,0	133,3	86,7
6097	966	900	210	2,60	4,25	12	15,0	1,25	177,0	141,7	89,9
6107	1066	1000	210	2,80	4,65	12	16,0	1,25	193,0	154,3	97,6





# Zehnder Charleston Turned



	Overview of models	Product description	List prices	Connections	Technical data
<b>Zehnder Charleston Turned</b>					
 <ul style="list-style-type: none"> <li>■ Classic tubular radiator rotated by 90°</li> <li>■ Element height 46 mm</li> <li>■ Welded-on lugs</li> </ul>	116	117	118	119	118

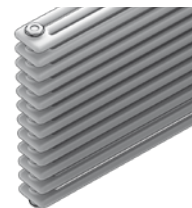
# Zehnder Charleston Turned



## Zehnder Charleston Turned



2-column



3-column

Height mm	Length <sup>1)</sup> mm	Depth mm	
		62	100
302	1500	T2150/6	T3150/6
	1800	T2180/6	T3180/6
394	1500	T2150/8	T3150/8
	1800	T2180/8	T3180/8
486	1500	T2150/10	T3150/10
	1800	T2180/10	T3180/10
578	1500	T2150/12	T3150/12
	1800	T2180/12	T3180/12

<sup>1)</sup> The values shown here are the so-called nominal length; the exact length for 2-column radiators is 8 mm lower; see page 118.

# Zehnder Charleston Turned



Zehnder Charleston Turned

## Product description

Zehnder Charleston Turned, the original steel tubular radiator with a new look, boasts a fresh design and great performance. The orientation, rotated by 90°, lends the classic radiator a new dimension and gives Zehnder Charleston Turned an exceptionally slim design. Due to its outstanding performance, the steel tubular radiator turns large living spaces into an oasis of well-being. Available in almost any colour and finish from the Zehnder colour chart.

## Technical specifications

- Steel round tubes Ø 25 mm
- Header in sheet steel
- Height of the individual element 46 mm
- Priming and powder coating to DIN 55900
- Thermal output tested to EN 442; with CE marking
- Maximum operating pressure 10 bar
- Maximum operating temperature 110 °C

## Advantages

- Innovative design due to its orientation rotated by 90°
- Significantly higher thermal output due to the optimal waterflow properties of the horizontal tubes
- Easy installation via welded-on lugs in the same colour as the radiator (provided ex factory)
- Lasting attractive looks with no tube deformation due to a welded-on centre brace in the same colour as the radiator (provided ex factory)
- Wide range of applications due to various connection options
- High level of thermal output ideal for old buildings with a high heat load
- Available with special Zehnder TopCare surface coating for preventing the reproduction and spread of microorganisms
- Residue-free laser welding technology “LaZer made” guarantees maximum quality, high-end design and reliable operation of the heating system

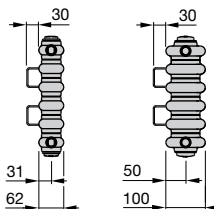
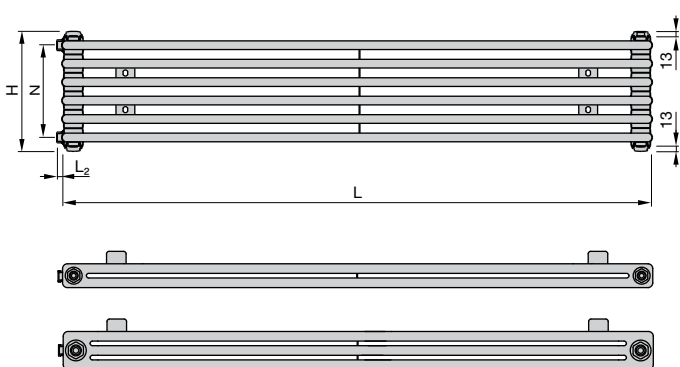
## Scope of delivery for standard version

- Primed and painted in RAL 9016
- Connections 3 x ½" female thread
- Directional air vent ½"
- Welded-on lugs and centre brace
- Complete packaging in stretch film and carton

# Zehnder Charleston Turned



## Horizontal models



- H = Height
- N = Connection centre
- T = Depth of radiator
- A = Surface
- V = Water content
- M = Weight
- n = Exponent
- $\Phi_S$  = Nominal heat output according to EN 442 (75/65/20 °C)
- $\Phi$  = Thermal output at system temperatures

Dimensions in mm

### Prices and technical specifications per radiator

Model	Price <sup>1)</sup> RAL 9016 €	H mm	N Bottom connection mm	N Side connection mm	L mm	T mm	T incl. lugs <sup>2)</sup> mm	A m <sup>2</sup>	V dm <sup>3</sup>	M kg	Exp. n	$\Phi_S = \Delta T 50 K$ EN442 Watt	$\Phi$ 70/55/20 °C Watt	$\Phi$ 55/45/20 °C Watt
T2150/6	542,67	302	1434	234	1492	62	92	1,42	7,8	12,73	1,23	759	616	402
T2150/8	628,74	394	1434	326	1492	62	92	1,89	10,4	16,97	1,25	975	789	512
T2150/10	714,79	486	1434	418	1492	62	92	2,36	13,0	21,21	1,26	1195	965	622
T2150/12	800,88	578	1434	510	1492	62	92	2,83	15,6	25,45	1,23	1420	1152	751
T2180/6	589,35	302	1734	234	1792	62	92	1,70	9,0	15,16	1,22	924	751	491
T2180/8	691,47	394	1734	326	1792	62	92	2,26	12,0	20,22	1,24	1187	962	626
T2180/10	793,60	486	1734	418	1792	62	92	2,83	15,0	25,27	1,25	1454	1176	761
T2180/12	894,24	578	1734	510	1792	62	92	3,40	18,0	30,32	1,26	1729	1397	902
T3150/6	653,54	302	1434	234	1500	100	130	2,11	12,0	19,66	1,23	1032	837	546
T3150/8	776,07	394	1434	326	1500	100	130	2,82	16,0	26,22	1,25	1318	1067	691
T3150/10	898,60	486	1434	418	1500	100	130	3,52	20,0	32,77	1,26	1598	1290	831
T3150/12	1.022,60	578	1434	510	1500	100	130	4,22	24,0	39,32	1,26	1871	1510	974
T3180/6	739,59	302	1734	234	1800	100	130	2,53	14,4	23,45	1,25	1255	1016	659
T3180/8	891,32	394	1734	326	1800	100	130	3,38	19,2	31,27	1,27	1604	1294	833
T3180/10	1.043,04	486	1734	418	1800	100	130	4,22	24,0	39,09	1,29	1944	1563	999
T3180/12	1.194,76	578	1734	510	1800	100	130	5,06	28,8	46,91	1,26	2276	1838	1186

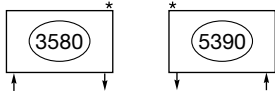
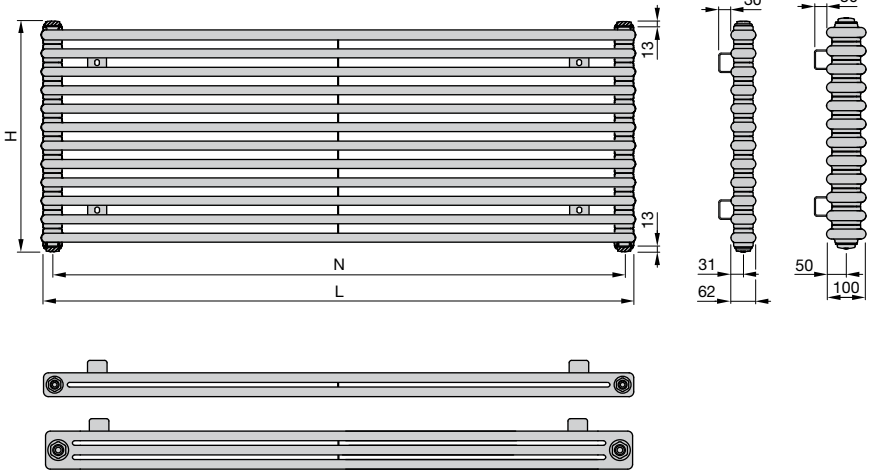
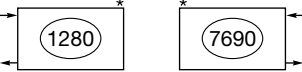
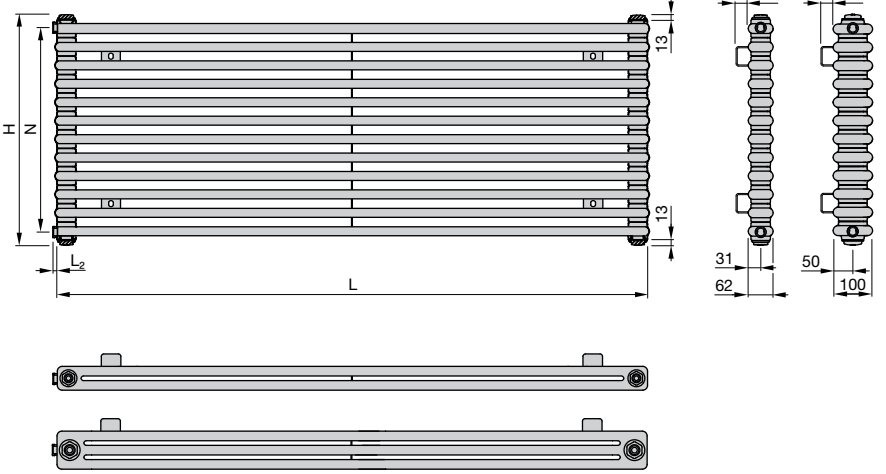
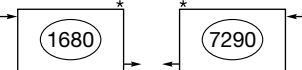
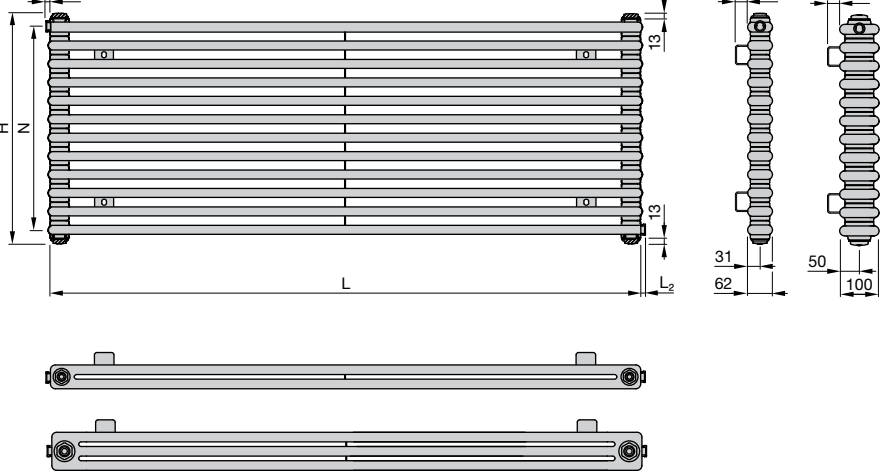
<sup>1)</sup> Surcharge for special colour, category 1 = 20%; category 2 = 30%

<sup>2)</sup> Wall distance of the welded-on lugs: 30 mm



# Zehnder Charleston Turned



Connection type	Price €	Dimensional drawings: front view, side view and top view (bottom)
<b>Connection 2-tube with external valve</b>		
<p>bottom connection</p> 	<p>No additional charge</p>	
<p>same-side</p> 	<p>128,37</p>	
<p>opposite side</p> 	<p>107,95</p>	

H = Height  
 L = Length  
 N = Boss spacing

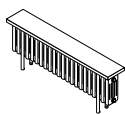
\* = Venting  
 L<sub>2</sub> = Excess length thread,  
 1280/7690 = 5 mm;  
 1680/7290 = 15 mm

Dimensions in mm



# Zehnder Charleston Bench

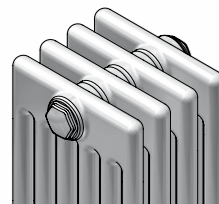
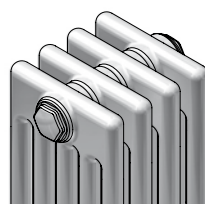
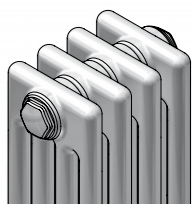


	Overview of models	Product description	List prices	Special versions	Connections	Technical data
<b>Zehnder Charleston Bench</b>						
 <ul style="list-style-type: none"> <li>■ Can be used as a bench or shelf</li> <li>■ Lengths according to requirements</li> <li>■ For unfinished and finished floors</li> </ul>	122	123	124	126	125	124

# Zehnder Charleston Bench



## Zehnder Charleston Bench



Bench height total <sup>1)</sup> mm	Length mm	4-column	5-column	6-column
430	1012	<b>CB 4026-22</b>	<b>CB 5026-22</b>	<b>CB 6026-22</b>
	1242	<b>CB 4026-27</b>	<b>CB 5026-27</b>	<b>CB 6026-27</b>
	1426	<b>CB 4026-31</b>	<b>CB 5026-31</b>	<b>CB 6026-31</b>
	1610	<b>CB 4026-35</b>	<b>CB 5026-35</b>	<b>CB 6026-35</b>
	1748	<b>CB 4026-38</b>	<b>CB 5026-38</b>	<b>CB 6026-38</b>
	2024	<b>CB 4026-44</b>	<b>CB 5026-44</b>	<b>CB 6026-44</b>
	2300	<b>CB 4026-50</b>	<b>CB 5026-50</b>	<b>CB 6026-50</b>

<sup>1)</sup> Dimension applies from finished floor.

# Zehnder Charleston Bench



Zehnder Charleston Bench

## Product description

Zehnder Charleston Bench is the version of a heated bench with vertical tube guide. This radiator is part of the product family of Zehnder Charleston and can additionally be used as seating in either private or public spaces.

The radiator can be installed on unfinished or finished floors, the connection is provided from the floor as standard, the seat (see example in figure) added on site depending on the installation situation. The aspects of hygienic suitability (certificate) and cleanability also naturally apply to Zehnder Charleston Bench.

## Technical specifications

- Steel round tubes Ø 25 mm
- Header in sheet steel
- Length of the individual element 46 mm
- Priming and powder coating to DIN 55900
- Thermal output tested to EN 442; with CE marking
- Maximum operating pressure 10 bar
- Operating temperature max. 110 °C

## Customisation options

- Choice of connection types, including integrated valve
- Special colours and antibacterial coating
- Galvanised and painted
- Energy-saving thermal radiation shield for installation in front of windows
- Special shapes: angled or curved
- High pressure version up to max. 18 bar

## Advantages

- Residue-free laser welding technology LaZer made
- Combination of bench and radiator
- Classic elegance
- Accident-safe
- Cleaning with Zehnder lambswool cleaning brush
- Energy-efficient for use in low temperature heating systems

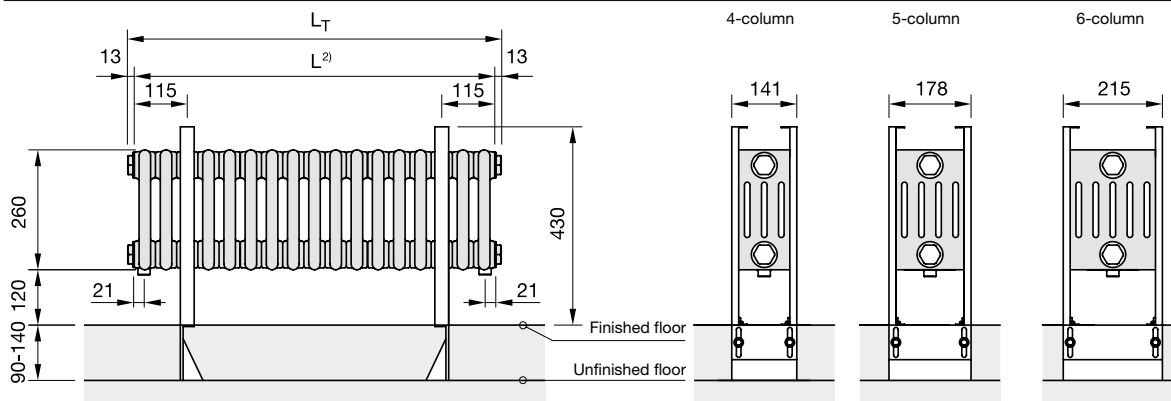
## Scope of delivery for standard version

- Primed and painted in RAL 9016
- Connections 2 x ½" female thread from bottom
- 1 x ½" connection for directional air vent
- Bench brackets (without seat)
- Complete packaging in stretch film and cardboard

# Zehnder Charleston Bench



## Model 4- to 6-column



- L = Length
- $L_T$  = Total length = elements x 46 mm + 2 x 13 mm
- T = Depth of radiator
- V = Water content
- M = Weight

- $q_{ms}$  = Nominal flow rate
- n = Exponent
- $\Phi_S$  = Nominal heat output according to EN 442 (75/65/20 °C)
- $\Phi$  = Thermal output at system temperatures

Dimensions in mm

### Prices and technical specifications

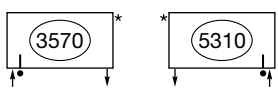
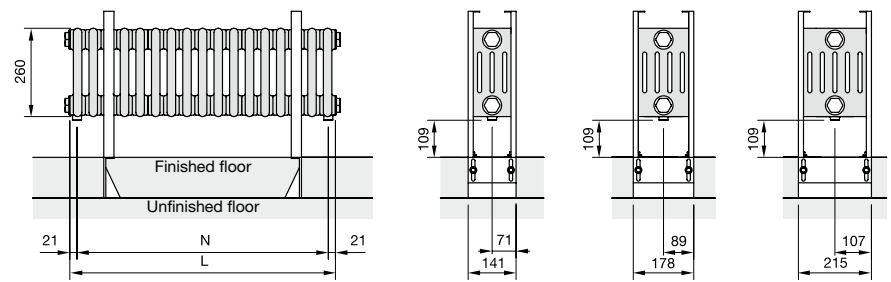
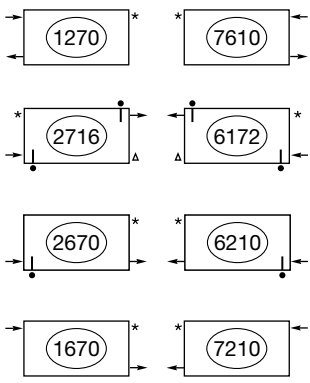
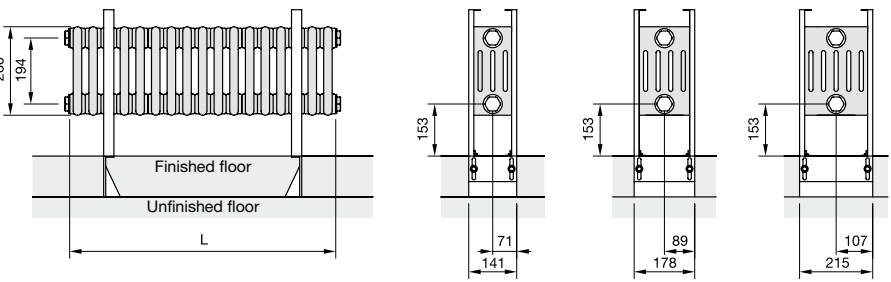
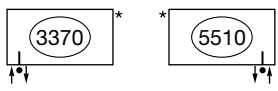
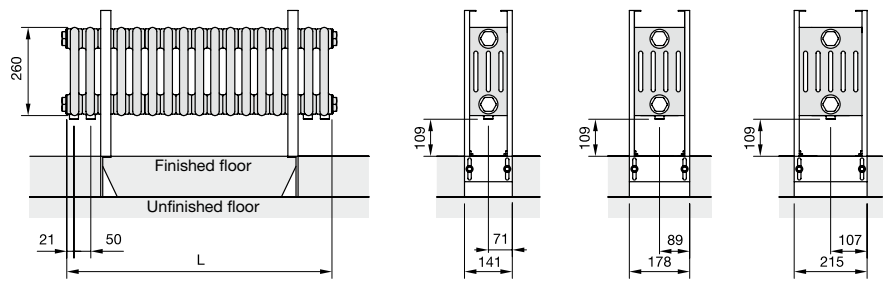
Model	Price <sup>1)</sup> RAL 9016 €	$L^2$ mm	T mm	V dm <sup>3</sup>	M kg	$q_{ms}$ kg/h	Exp. n	$\Phi_S = \Delta T$ 50 K EN442 Watt	$\Phi$ 70/55/20 °C Watt	$\Phi$ 55/45/20 °C Watt
CB4026-22	1.159,40	1012	141	13,6	20,9	69,0	1,25	804	650	421
CB4026-27	1.476,35	1242	141	16,7	26,5	84,8	1,25	986	798	517
CB4026-31	1.608,58	1426	141	19,2	29,6	97,3	1,25	1132	916	593
CB4026-35	1.740,87	1610	141	21,7	32,7	109,9	1,25	1278	1034	670
CB4026-38	1.991,64	1748	141	23,6	36,7	119,3	1,25	1388	1123	728
CB4026-44	2.189,97	2024	141	27,3	41,3	138,1	1,25	1607	1300	842
CB4026-50	2.388,35	2300	141	31,0	46,0	156,9	1,25	1826	1477	957
CB5026-22	1.317,83	1012	178	16,5	23,7	85,3	1,25	993	803	521
CB5026-27	1.670,72	1242	178	20,3	30,1	104,7	1,25	1218	985	638
CB5026-31	1.831,80	1426	178	23,3	33,6	120,2	1,25	1399	1132	733
CB5026-35	1.992,82	1610	178	26,3	37,1	135,8	1,25	1579	1277	828
CB5026-38	2.265,18	1748	178	28,5	41,7	147,4	1,25	1715	1387	899
CB5026-44	2.506,74	2024	178	33,0	46,9	170,6	1,25	1986	1607	1041
CB5026-50	2.748,27	2300	178	37,5	52,2	193,9	1,25	2256	1825	1183
CB6026-22	1.463,65	1012	215	19,4	32,6	101,2	1,27	1177	949	611
CB6026-27	1.849,71	1242	215	23,8	41,1	124,2	1,27	1445	1165	750
CB6026-31	2.037,28	1426	215	27,3	46,1	142,6	1,27	1659	1337	861
CB6026-35	2.224,86	1610	215	30,8	51,1	161,0	1,27	1873	1510	972
CB6026-38	2.517,13	1748	215	33,4	57,1	174,8	1,27	2033	1639	1055
CB6026-44	2.798,48	2024	215	38,7	64,6	202,4	1,27	2354	1898	1221
CB6026-50	3.079,83	2300	215	44,0	72,2	230,0	1,27	2675	2156	1388

<sup>1)</sup> Total price, including accessories, surcharge for special finish, colour category 1 = 20%, colour category 2 = 30%, cover on side.

<sup>2)</sup> Number of bench brackets depending on length:  
 2 x brackets for L = 1012  
 3 x brackets for L = 1242 - 1610  
 4 x brackets for L = 1748 - 2300

# Zehnder Charleston Bench



Connection type	Price €	Dimensional drawings: Front view and side views
<b>Connection 2-tube with external valve</b>		
standard connection from bottom <sup>1)</sup>  	<b>No surcharge</b>	
same or opposite end  	<b>No surcharge</b>	
from bottom to bottom, on side, 50 mm  	<b>No surcharge</b>	

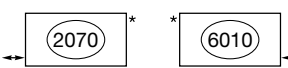
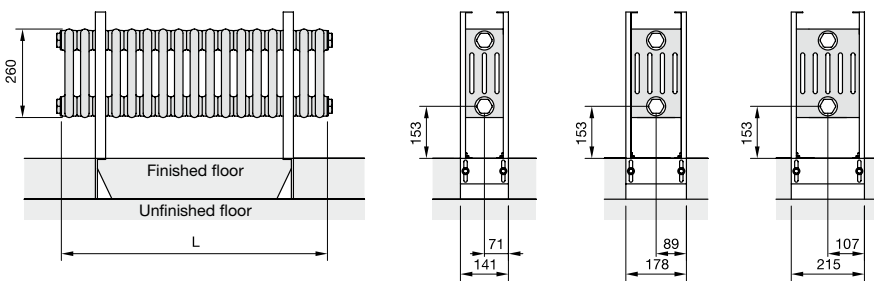
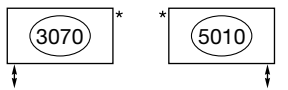
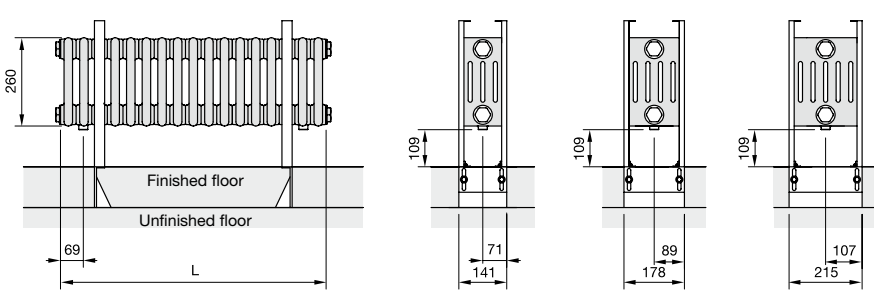
<sup>1)</sup>When ordered without specification of the connection type, the standard connection from bottom to bottom will be supplied, suitable for connection 3570/5310.

- N = Boss spacing
- L = Length
- \* = Venting
- Δ = Draining
- = Internal installations

Dimensions in mm

# Zehnder Charleston Bench



Connection type	Price €	Dimensional drawings: Front view and side views
<b>Connection 1-tube with external valve</b> - See note on the single-pipe system in the keyword list		
for horizontal baffle plate <sup>2)</sup>  	<b>No surcharge</b>	
for vertical baffle plate <sup>2)</sup>  	<b>No surcharge</b>	

<sup>2)</sup> Specify valve unit when placing order

	Price €
<b>High pressure version max. 18 bar</b> (not for Completo connection)	with welded-on plug: 2- to 3-column with welded-on plug + tied rod: 4 to 6-column <b>246,95 / RAD</b> <b>363,70 / RAD</b>
<b>Angled or curved design</b>	<b>On request</b>
<b>Intermediate lengths</b>	<b>On request</b>
<b>Galvanising</b> with subsequent standard finish (RAL 9016) (see also explanations on galvanising in section "General")	<b>On request</b>
<b>Version</b> with thermal radiation shield (→ section Zehnder Charleston)	<b>On request</b>
<b>Completo connection with integrated valve (prices without thermostat)</b> details and further Completo connections, see page 45 onwards.	<b>216,05</b>

Basis for calculating the surcharge is the standard finish

- L = Length
- \* = Venting
- Δ = Draining

Dimensions in mm



# Zehnder Charleston Bench

Curved version		
Version	Sketch/template	Prices €
<p>Curved Zehnder Charleston Bench radiators are available with the following minimum outside curve radii:</p> <p>4-column: 750 mm 5-column: 900 mm 6-column: 1000 mm</p> <p>When making a price enquiry, please include a sketch with the dimensions radius R, length and wall clearance in mm.</p>		On request
		On request

Angled version		
Version	Sketch/template	Prices €
<p>Zehnder Charleston Bench angled, available from 90° to 179°. When making a price inquiry, please provide the following dimensions: <math>L_1</math>, <math>L_2</math>, <math>L_3</math>, wall clearance WA in mm and angle <math>\alpha_1</math>, <math>\alpha_2</math> in degrees.</p>		On request
		On request
		On request

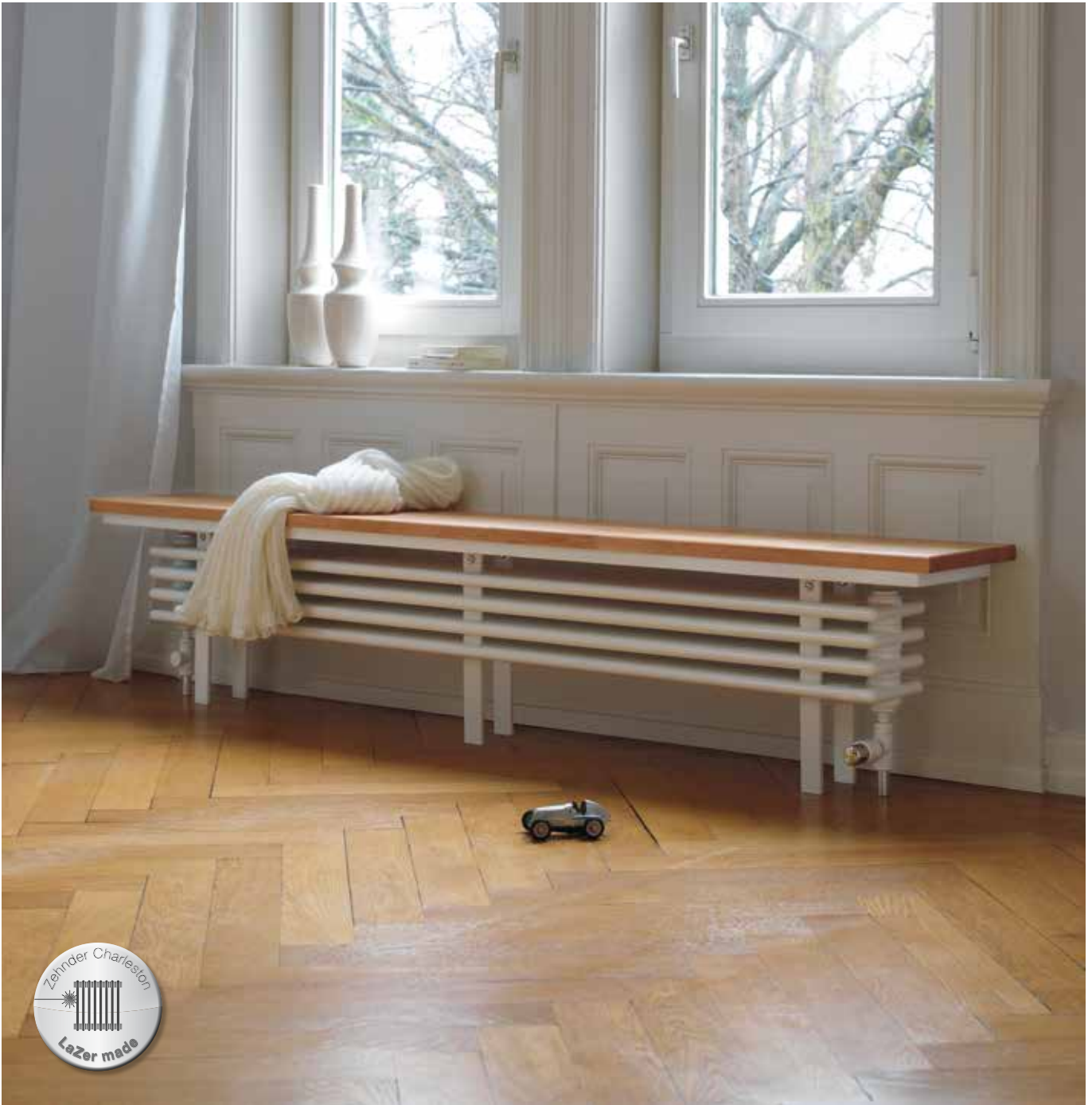
When placing an order for curved and angled radiators, please enclose sketch or template.

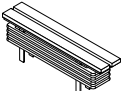
- HK = Radiator
- WA = Wall clearance
- R = Radius
- $\alpha_1, \alpha_2$  = Angles (°)
- $L_1, L_2, L_3$  = Lengths

Dimensions in mm



# Zehnder Radiator Bench

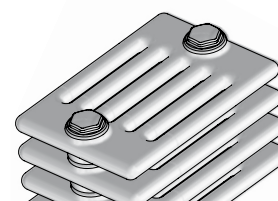
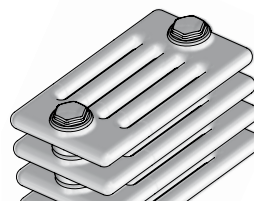
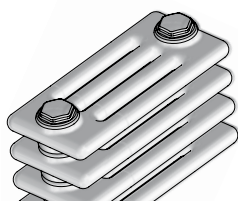


	Overview of models	Product description	List prices	Special versions	Connections	Technical data
<b>Zehnder Radiator Bench</b>						
 <ul style="list-style-type: none"> <li>■ Dual function as bench and radiator</li> <li>■ Different seat heights</li> <li>■ Transversable right or left</li> </ul>	130	131	132	135	135	132

# Zehnder Radiator Bench



## Zehnder Radiator Bench



Bench height total <sup>1)</sup> mm	Length mm	4-column	5-column	6-column
479	1200	<b>B4120/4</b>	<b>B5120/4</b>	<b>B6120/4</b>
	1500	<b>B4150/4</b>	<b>B5150/4</b>	<b>B6150/4</b>
	1800	<b>B4180/4</b>	<b>B5180/4</b>	<b>B6180/4</b>
	2000	<b>B4200/4</b>	<b>B5200/4</b>	<b>B6200/4</b>
	2500	<b>B4250/4</b>	<b>B5250/4</b>	<b>B6250/4</b>
	3000	<b>B4300/4</b>	<b>B5300/4</b>	<b>B6300/4</b>
525	1200	<b>B4120/5</b>	<b>B5120/5</b>	<b>B6120/5</b>
	1500	<b>B4150/5</b>	<b>B5150/5</b>	<b>B6150/5</b>
	1800	<b>B4180/5</b>	<b>B5180/5</b>	<b>B6180/5</b>
	2000	<b>B4200/5</b>	<b>B5200/5</b>	<b>B6200/5</b>
	2500	<b>B4250/5</b>	<b>B5250/5</b>	<b>B6250/5</b>
	3000	<b>B4300/5</b>	<b>B5300/5</b>	<b>B6300/5</b>
571	1200	<b>B4120/6</b>	<b>B5120/6</b>	<b>B6120/6</b>
	1500	<b>B4150/6</b>	<b>B5150/6</b>	<b>B6150/6</b>
	1800	<b>B4180/6</b>	<b>B5180/6</b>	<b>B6180/6</b>
	2000	<b>B4200/6</b>	<b>B5200/6</b>	<b>B6200/6</b>
	2500	<b>B4250/6</b>	<b>B5250/6</b>	<b>B6250/6</b>
	3000	<b>B4300/6</b>	<b>B5300/6</b>	<b>B6300/6</b>
617	1200	<b>B4120/7</b>	<b>B5120/7</b>	<b>B6120/7</b>
	1500	<b>B4150/7</b>	<b>B5150/7</b>	<b>B6150/7</b>
	1800	<b>B4180/7</b>	<b>B5180/7</b>	<b>B6180/7</b>
	2000	<b>B4200/7</b>	<b>B5200/7</b>	<b>B6200/7</b>
	2500	<b>B4250/7</b>	<b>B5250/7</b>	<b>B6250/7</b>
	3000	<b>B4300/7</b>	<b>B5300/7</b>	<b>B6300/7</b>
663	1200	<b>B4120/8</b>	<b>B5120/8</b>	<b>B6120/8</b>
	1500	<b>B4150/8</b>	<b>B5150/8</b>	<b>B6150/8</b>
	1800	<b>B4180/8</b>	<b>B5180/8</b>	<b>B6180/8</b>
	2000	<b>B4200/8</b>	<b>B5200/8</b>	<b>B6200/8</b>
	2500	<b>B4250/8</b>	<b>B5250/8</b>	<b>B6250/8</b>
	3000	<b>B4300/8</b>	<b>B5300/8</b>	<b>B6300/8</b>

<sup>1)</sup> Dimensions apply from unfinished floor.

# Zehnder Radiator Bench



Zehnder Radiator Bench

### Product description

The sections of the heated bench are arranged horizontally above each other in Zehnder Radiator Bench. With the additional use as a seat or shelf, Zehnder Radiator Bench offers a different look from the normal upright tubes.

Different heights also result in different seat heights. The radiator is installed on the unfinished floor, the connection is provided from the floor as standard, the seat (see example above) is added on site depending on the installation situation.

The aspects of hygienic suitability (certificate), cleanability also naturally apply to Zehnder Radiator Bench.

### Technical specifications

- Steel round tubes Ø 25 mm
- Header in sheet steel
- Length of the individual element 46 mm
- Priming and powder coating to DIN 55900
- Thermal output tested to EN 442; with CE marking
- Operating pressure max. 10 bar
- Operating temperature max. 110 °C

### Customisation options

- Choice of connection types
- Special colours and antibacterial coating
- Galvanised and painted
- High pressure version up to max. 18 bar

### Advantages

- Residue-free laser welding technology LaZer made
- Combination of bench and radiator
- Classic elegance
- Accident-safe
- Easy cleaning with Zehnder lambswool cleaning brush
- Energy-efficient for use in low temperature heating systems

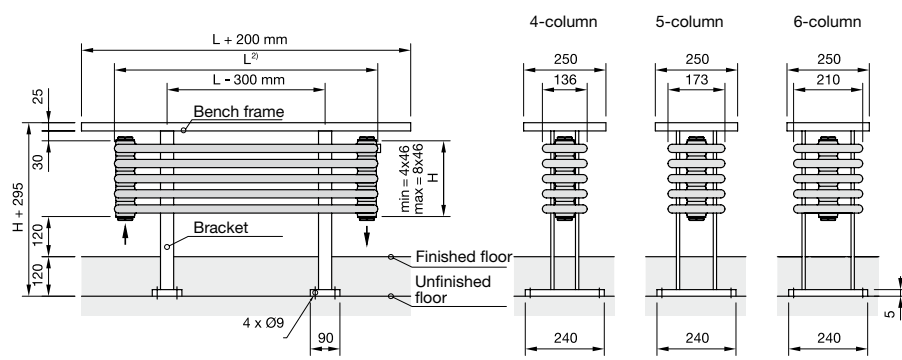
### Scope of delivery for standard version

- Primed and painted in RAL 9016
- Connections 2 x ½" female thread from bottom
- 1 x ½" connection for directional air vent
- Bench frame with brackets (without seat)
- Complete packaging in stretch film and cardboard

# Zehnder Radiator Bench



## Model Radiator Bench



- H = Height
- L = Length
- T = Depth of radiator
- V = Water content
- M = Weight
- q<sub>ms</sub> = Nominal water flow
- n = Exponent
- Φ<sub>S</sub> = Nominal heat output according to EN 442 (75/65/20 °C)
- Φ = Thermal output at system temperatures

Dimensions in mm

## Prices and technical specifications

Model	Price <sup>1)</sup> RAL 9016 €	H mm	L <sup>2)</sup> mm	T mm	V dm <sup>3</sup>	M kg	q <sub>ms</sub> kg/h	Exp. n	Φ <sub>S</sub> =ΔT 50 K EN442 Watt	Φ 70/55/20 °C Watt	Φ 55/45/20 °C Watt
B4120/4	1.013,14	184	1200	136	8,4	23,3	64,0	1,25	744	601	388
B4150/4	1.139,40	184	1500	136	10,3	30,1	80,0	1,25	930	751	485
B4180/4	1.245,19	184	1800	136	12,2	34,0	96,0	1,25	1116	901	582
B4200/4	1.325,56	184	2000	136	13,5	36,7	107,0	1,25	1240	1001	647
B4250/4	1.644,82	184	2500	136	16,9	43,4	138,0	1,25	1550	1252	808
B4300/4	1.840,73	184	3000	136	19,9	49,7	160,0	1,25	1859	1501	969
B5120/4	1.086,18	184	1200	173	10,3	27,0	79,0	1,25	917	741	478
B5150/4	1.237,21	184	1500	173	12,7	34,6	99,0	1,25	1146	925	598
B5180/4	1.352,24	184	1800	173	15,1	39,4	118,0	1,25	1375	1110	717
B5200/4	1.444,32	184	2000	173	16,7	42,7	131,0	1,25	1528	1234	797
B5250/4	1.790,21	184	2500	173	20,7	50,7	164,0	1,25	1910	1542	996
B5300/4	2.001,99	184	3000	173	24,7	58,4	197,0	1,25	2292	1851	1195
B6120/4	1.146,35	184	1200	210	12,3	30,4	93,0	1,25	1085	876	566
B6150/4	1.330,91	184	1500	210	15,2	38,9	117,0	1,25	1357	1096	708
B6180/4	1.460,68	184	1800	210	18,1	44,5	140,0	1,25	1628	1315	849
B6200/4	1.563,18	184	2000	210	20,0	48,3	155,0	1,25	1809	1461	943
B6250/4	1.943,65	184	2500	210	24,8	57,7	194,0	1,25	2261	1826	1179
B6300/4	2.190,09	184	3000	210	29,6	66,7	233,0	1,25	2713	2191	1415
B4120/5	1.117,28	230	1200	136	10,5	26,7	75,0	1,26	875	707	456
B4150/5	1.268,62	230	1500	136	12,9	34,4	94,0	1,26	1093	883	570
B4180/5	1.394,00	230	1800	136	15,3	39,1	113,0	1,26	1312	1060	684
B4200/5	1.488,24	230	2000	136	16,9	42,3	125,0	1,26	1458	1177	760
B4250/5	1.840,06	230	2500	136	20,9	50,2	157,0	1,26	1822	1471	950
B4300/5	2.072,05	230	3000	136	24,9	57,8	188,0	1,26	2187	1766	1140
B5120/5	1.208,58	230	1200	173	12,9	31,3	93,0	1,26	1078	871	562
B5150/5	1.390,94	230	1500	173	15,9	40,0	116,0	1,26	1348	1089	703
B5180/5	1.527,87	230	1800	173	18,9	45,8	139,0	1,26	1618	1307	844
B5200/5	1.636,68	230	2000	173	20,9	49,7	155,0	1,26	1797	1451	937
B5250/5	2.021,74	230	2500	173	25,9	59,4	193,0	1,26	2247	1815	1172
B5300/5	2.273,60	230	3000	173	30,9	68,7	232,0	1,26	2696	2177	1406
B6120/5	1.283,83	230	1200	210	15,4	35,5	110,0	1,26	1276	1030	665
B6150/5	1.508,05	230	1500	210	19,0	45,3	137,0	1,26	1596	1289	832
B6180/5	1.663,49	230	1800	210	22,6	52,1	165,0	1,26	1915	1546	999
B6200/5	1.785,29	230	2000	210	25,0	56,7	183,0	1,26	2127	1718	1109
B6250/5	2.213,62	230	2500	210	31,0	68,0	229,0	1,26	2659	2147	1387
B6300/5	2.508,74	230	3000	210	37,0	79,0	274,0	1,26	3191	2577	1664

<sup>1)</sup> Total price, including accessories (without seat), surcharge for special finish, colour category 1 = 20%, colour category 2 = 30%

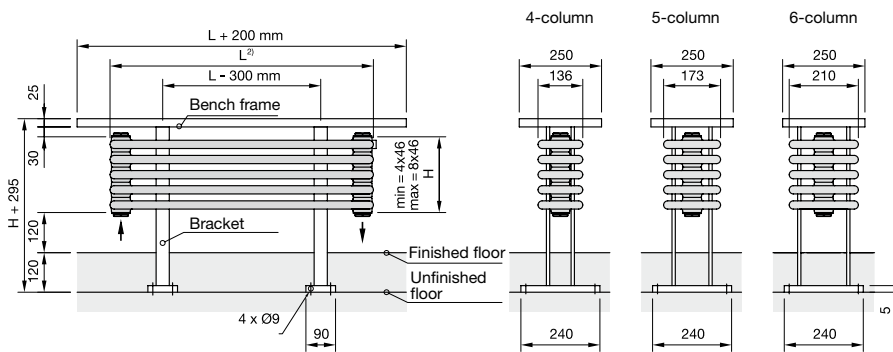
<sup>2)</sup> Number of bench brackets depending on length:

2 x brackets for L = 1200

3 x brackets for L = 1500 - 3000

# Zehnder Radiator Bench

## Model Radiator Bench



- H = Height
- L = Length
- T = Depth of radiator
- V = Water content
- M = Weight
- q<sub>ms</sub> = Nominal water flow
- n = Exponent
- Φ<sub>S</sub> = Nominal heat output according to EN 442 (75/65/20 °C)
- Φ = Thermal output at system temperatures

Dimensions in mm

## Prices and technical specifications

Model	Price <sup>1)</sup> RAL 9016 €	H mm	L <sup>2)</sup> mm	T mm	V dm <sup>3</sup>	M kg	q <sub>ms</sub> kg/h	Exp. n	Φ <sub>S</sub> =ΔT 50 K EN442 Watt	Φ 70/55/20 °C Watt	Φ 55/45/20 °C Watt
B4120/6	1.221,93	276	1200	136	12,5	30,1	86,0	1,26	1001	808	522
B4150/6	1.398,31	276	1500	136	15,4	38,6	108,0	1,26	1251	1010	652
B4180/6	1.543,39	276	1800	136	18,3	44,1	129,0	1,26	1502	1213	783
B4200/6	1.651,37	276	2000	136	20,2	47,8	143,0	1,26	1668	1347	870
B4250/6	2.035,79	276	2500	136	25,0	57,1	179,0	1,26	2085	1684	1087
B4300/6	2.303,83	276	3000	136	29,8	65,9	215,0	1,26	2503	2021	1305
B5120/6	1.331,41	276	1200	173	15,4	35,6	106,0	1,26	1234	997	643
B5150/6	1.545,18	276	1500	173	19,0	45,4	133,0	1,26	1543	1246	805
B5180/6	1.704,02	276	1800	173	22,6	52,2	159,0	1,26	1851	1495	965
B5200/6	1.829,57	276	2000	173	25,0	56,7	177,0	1,26	2057	1661	1073
B5250/6	2.253,81	276	2500	173	31,0	68,0	221,0	1,26	2571	2076	1341
B5300/6	2.545,77	276	3000	173	37,0	79,0	265,0	1,26	3085	2491	1609
B6120/6	1.421,73	276	1200	210	18,5	40,7	126,0	1,26	1461	1180	762
B6150/6	1.685,58	276	1500	210	22,8	51,7	157,0	1,26	1826	1475	952
B6180/6	1.866,73	276	1800	210	27,1	59,7	188,0	1,26	2191	1769	1142
B6200/6	2.007,89	276	2000	210	30,0	65,0	209,0	1,26	2434	1966	1269
B6250/6	2.484,05	276	2500	210	37,2	78,4	262,0	1,26	3043	2457	1587
B6300/6	2.827,92	276	3000	210	44,4	91,3	314,0	1,26	3652	2949	1904
B4120/7	1.326,43	322	1200	136	14,6	33,6	97,0	1,26	1124	908	586
B4150/7	1.527,96	322	1500	136	18,0	42,9	121,0	1,26	1405	1135	733
B4180/7	1.692,58	322	1800	136	21,4	49,2	145,0	1,26	1686	1362	879
B4200/7	1.814,35	322	2000	136	23,6	53,5	161,0	1,26	1873	1513	977
B4250/7	2.231,41	322	2500	136	29,2	64,0	201,0	1,26	2342	1891	1221
B4300/7	2.535,48	322	3000	136	34,8	74,1	242,0	1,26	2810	2269	1465
B5120/7	1.454,17	322	1200	173	18,0	40,0	119,0	1,26	1386	1119	723
B5150/7	1.699,21	322	1500	173	22,2	50,9	149,0	1,26	1732	1399	903
B5180/7	1.879,96	322	1800	173	26,4	58,6	179,0	1,26	2078	1678	1084
B5200/7	2.022,27	322	2000	173	29,2	63,8	199,0	1,26	2309	1865	1204
B5250/7	2.485,74	322	2500	173	36,2	76,8	248,0	1,26	2887	2331	1505
B5300/7	2.817,70	322	3000	173	43,2	89,3	298,0	1,26	3464	2797	1806
B6120/7	1.559,55	322	1200	210	21,6	45,8	141,0	1,26	1640	1324	855
B6150/7	1.863,05	322	1500	210	26,6	58,2	176,0	1,26	2050	1655	1069
B6180/7	2.069,82	322	1800	210	31,6	67,3	212,0	1,26	2460	1987	1283
B6200/7	2.230,31	322	2000	210	35,0	73,5	235,0	1,26	2733	2207	1425
B6250/7	2.754,27	322	2500	210	43,4	88,8	294,0	1,26	3417	2759	1782
B6300/7	3.146,85	322	3000	210	51,8	103,7	353,0	1,26	4100	3311	2138

<sup>1)</sup> Total price, including accessories (without seat), surcharge for special finish, colour category 1 = 20%, colour category 2 = 30%

<sup>2)</sup> Number of bench brackets depending on length:

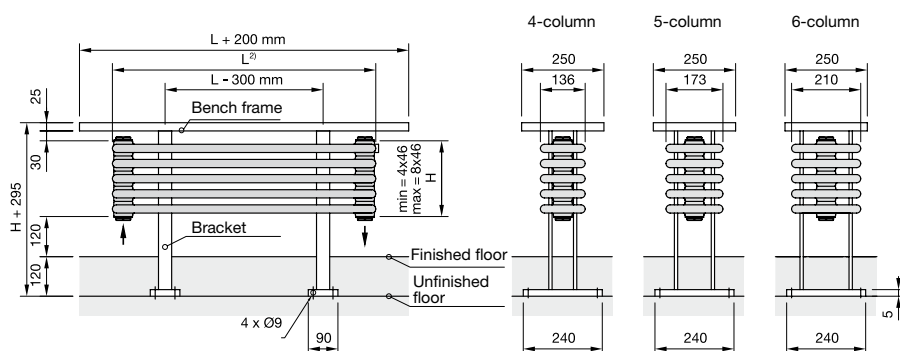
2 x brackets for L = 1200

3 x brackets for L = 1500 - 3000

# Zehnder Radiator Bench



## Model Radiator Bench



- H = Height
- L = Length
- T = Depth of radiator
- V = Water content
- M = Weight
- q<sub>ms</sub> = Nominal water flow
- n = Exponent
- Φ<sub>S</sub> = Nominal heat output according to EN 442 (75/65/20 °C)
- Φ = Thermal output at system temperatures

Dimensions in mm

## Prices and technical specifications

Model	Price <sup>1)</sup> RAL 9016 €	H mm	L <sup>2)</sup> mm	T mm	V dm <sup>3</sup>	M kg	q <sub>ms</sub> kg/h	Exp. n	Φ <sub>S</sub> =ΔT 50 K EN442 Watt	Φ 70/55/20 °C Watt	Φ 55/45/20 °C Watt
B4120/8	1.430,55	368	1200	136	16,7	37,0	107,0	1,27	1245	1005	649
B4150/8	1.657,13	368	1500	136	20,6	47,3	134,0	1,27	1556	1257	811
B4180/8	1.841,46	368	1800	136	24,4	54,4	160,0	1,27	1867	1508	974
B4200/8	1.977,04	368	2000	136	27,0	59,1	178,0	1,27	2074	1675	1081
B4250/8	2.426,59	368	2500	136	33,4	70,9	223,0	1,27	2593	2094	1352
B4300/8	2.766,71	368	3000	136	39,8	82,3	267,0	1,27	3111	2512	1622
B5120/8	1.576,55	368	1200	173	20,6	44,3	132,0	1,27	1534	1239	800
B5150/8	1.852,86	368	1500	173	25,4	56,3	165,0	1,27	1918	1549	1000
B5180/8	2.055,55	368	1800	173	30,2	65,0	198,0	1,27	2301	1858	1200
B5200/8	2.214,61	368	2000	173	33,4	70,9	220,0	1,27	2557	2065	1333
B5250/8	2.717,34	368	2500	173	41,4	85,5	275,0	1,27	3196	2581	1667
B5300/8	3.089,31	368	3000	173	49,4	99,7	330,0	1,27	3836	3098	2000
B6120/8	1.696,94	368	1200	210	24,6	51,0	156,0	1,27	1816	1467	947
B6150/8	2.040,17	368	1500	210	30,4	64,7	195,0	1,27	2270	1833	1184
B6180/8	2.272,53	368	1800	210	36,2	75,0	234,0	1,27	2724	2200	1420
B6200/8	2.452,41	368	2000	210	40,0	82,0	260,0	1,27	3027	2444	1578
B6250/8	3.024,21	368	2500	210	49,6	99,2	325,0	1,27	3783	3055	1973
B6300/8	3.465,51	368	3000	210	59,2	116,1	390,0	1,27	4540	3666	2367

<sup>1)</sup> Total price, including accessories (without seat), surcharge for special finish, colour category 1 = 20%, colour category 2 = 30%

<sup>2)</sup> Number of bench brackets depending on length:  
 2 x brackets for L = 1200  
 3 x brackets for L = 1500 - 3000



# Zehnder Radiator Bench



Connection type	Price €	Dimensional drawings: Front view and side views
<b>Connection 2-tube with external valve</b>		
from bottom to bottom <sup>1)</sup>  	<b>No surcharge</b>	
same or opposite end  	<b>No surcharge</b>	

<sup>1)</sup> When placing an order without specification of the connection, the standard connection (3570/5310) from bottom to bottom with 3 x 1/2" will be delivered.

Special versions	Price €
<b>High-pressure version max. 18 bar</b> with welded plugs: with welded plugs + tied rod:	2 to 3-column 4- to 6-column  <b>246,95 / RAD</b> <b>363,70 / RAD</b>
<b>Special versions, single-tube connection</b>	<b>On request</b>
<b>Galvanising</b> with subsequent standard finish (RAL 9016) (see also explanations on galvanising in section "General")	<b>On request</b>

Basis for calculating the surcharge is the standard finish

- H = Height
- L = Length
- R = Radius
- \* = Venting
- N = Boss spacing
- L<sub>1</sub> = Connection length at side
- = Internal installations

Dimensions in mm


Connection size Ø	3/8"	1/2"	3/4"
L <sub>1</sub> (mm)	12	12	15



# Zehnder Charleston

Electric operation



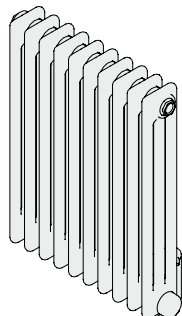
	Overview of models	Product description	Prices / technical specifications	Installation points
<b>Zehnder Charleston</b>				
 <ul style="list-style-type: none"> <li>■ Classic tubular radiator as electric version</li> <li>■ Oil-filled steel elements</li> <li>■ Radio remote control</li> </ul>	138	139	140	141

# Zehnder Charleston

Electric operation

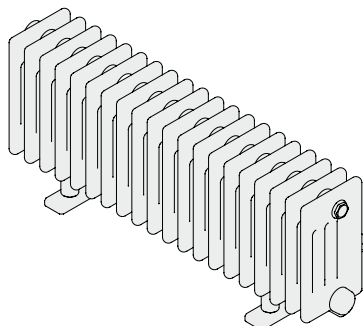


## Wall version



Length <sup>1)</sup> mm	Height mm
	600
502	NZ-060-053/GF
594	NZ-060-062/GF
732	NZ-060-076/GF
870	NZ-060-089/GF
1008	NZ-060-103/GF
1284	NZ-060-131/GF

## Plinth version



Length <sup>1)</sup> mm	Height mm <sup>2)</sup>
	300
962	NZ-030-100/GF

<sup>1)</sup> Total length incl. immersion heater

<sup>2)</sup> Without foot

# Zehnder Charleston

Electric operation



## Product description

Electric Zehnder Charleston is an oil filled multi-column radiator available in 6 sizes ideal for installation in loft conversions. The complementary Zehnder Charleston Electric Plinth low level model is perfectly suited to conservatories and in front of low-level windows. Radiator with powder coating, in colour RAL 9016 as standard or in special colour.

## Advantages

- Energy-efficient and comfortable heating via innovative “open window detection”
- High energy efficiency due to compliance with the European Ecodesign Directive saves energy costs
- Low energy consumption of only 0,5 W in stand-by mode for increased energy efficiency
- User-friendly remote control device allows simple operation
- Comfortable operation as needed by customisable daily and weekly programme
- Timer function for on-demand operation
- Increased safety due to parental control

## Technical specifications

- Oil-filled multi-column electric radiator
- Vertical steel round tubes Ø 25 mm, 3 and 5 columns versions available
- Connection cable without plug, appliance class II
- With integrated electric heating element and remote control
- Protection class IP44
- Supply voltage: 230 V
- Fixing: model NZ 060-XXX/GF delivered ready to install with 2 wall brackets in colour of radiator. Model NZ 030-100/GF delivered ready to install with 2 feet in colour of radiator.

## Standard scope of delivery:

- Primed and painted in RAL 9016
- Remote control device in white
- Connecting cable 1,20 m without plug
- Mounting accessories
- Packaging

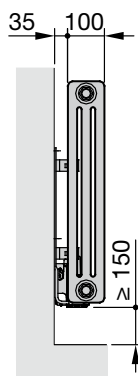
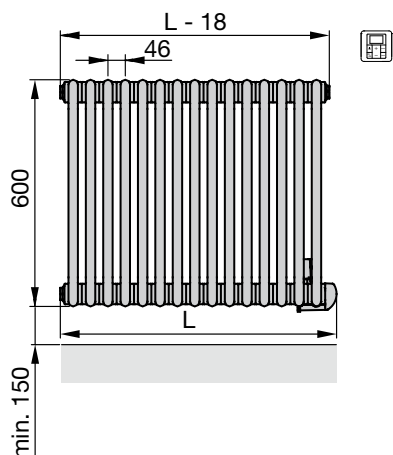


Control unit radio  
remote-controlled  
Model 2

# Zehnder Charleston

Electric operation

## Wall version



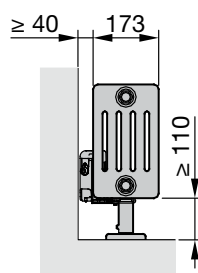
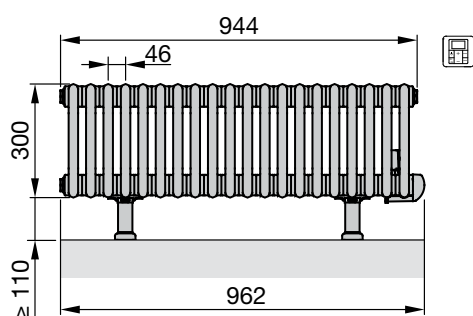
H = Height  
L = Length including immersion heater

Dimensions in mm

### Prices and technical specifications per radiator

Model	Price <sup>2)</sup> RAL 9016 €	H mm	L <sup>1)</sup> mm	Elements	T mm	M kg	Output Electric heating element Watt
NZ-060-053/GF	1.012,17	600	502	10	100	27	500
NZ-060-062/GF	1.096,19	600	594	12	100	30	750
NZ-060-076/GF	1.224,52	600	732	15	100	41	1000
NZ-060-089/GF	1.354,26	600	870	18	100	47	1250
NZ-060-103/GF	1.484,91	600	1008	21	100	58	1500
NZ-060-131/GF	1.768,45	600	1284	27	100	70	2000

## Plinth version



H = Height  
L = Length including immersion heater

Dimensions in mm

### Prices and technical specifications per radiator

Model	Price <sup>2)</sup> RAL 9016 €	H <sup>3)</sup> mm	L <sup>1)</sup> mm	Elements	T mm	M kg	Output Electric heating element Watt
NZ-030-100/GF	1.744,72	300	962	20	173	42,4	1000

<sup>1)</sup> Total length incl. immersion heater

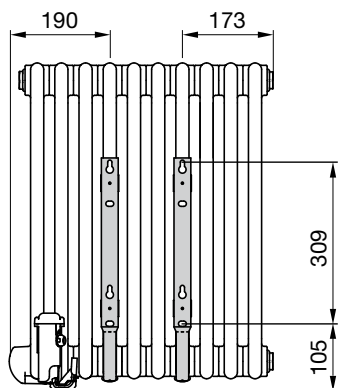
<sup>2)</sup> Surcharge for special colour, category 1 = 20%; category 2 = 30%, not available in Technoline

<sup>3)</sup> Without foot

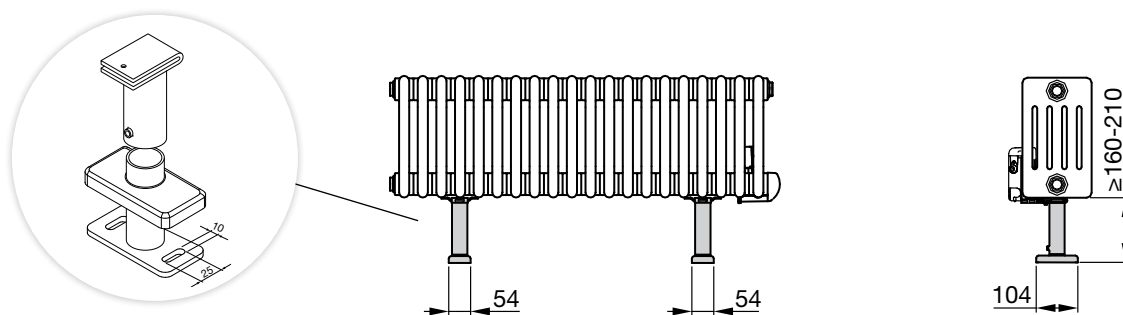
# Zehnder Charleston

Electric operation

## Dimensions for Wall version



## Dimensions for Plinth version




Dimensions in mm, plinth incl. cover








# Accessories



	Mounting Sets	Valves	Rail	Miscellaneous
<b>Zehnder accessories</b>				
	144	153	159	159

## Individual brackets for wall mounting

Zehnder SMB bracket available only in connection with Zehnder Charleston.

Description	Version	Article number	Price €	Application	
<b>Set Charleston SMB 2T</b> For height 260 - 299 mm and height 1001 - 3000 mm Wall bracket for fast and simple installation, painted to order. Wall clearance to rear edge of radiator 35 mm.  Max. load per axis = 100 kg  Completely pre-assembled bracket comprising: - Bars, one or two-piece - Attenuator cover - Base with attenuator		RAL 9016			Zehnder Charleston, Zehnder Charleston Clinic
		2 x SMB 2T	173511	<b>24,71</b>	
		3 x SMB 2T	173611	<b>37,10</b>	
		4 x SMB 2T	173711	<b>49,46</b>	
		5 x SMB 2T	173811	<b>61,80</b>	
		Special finish			
		2 x SMB 2T	173519	<b>37,11</b>	
		3 x SMB 2T	173619	<b>55,66</b>	
		4 x SMB 2T	173719	<b>74,18</b>	
		5 x SMB 2T	173819	<b>92,76</b>	
<b>Set Charleston SMB 30</b> For height 300 - 369 mm		RAL 9016			
		2 x SMB 30	173521	<b>24,71</b>	
		3 x SMB 30	173621	<b>37,10</b>	
		4 x SMB 30	173721	<b>49,46</b>	
		5 x SMB 30	173821	<b>61,80</b>	
		Special finish			
		2 x SMB 30	173529	<b>37,11</b>	
		3 x SMB 30	173629	<b>55,66</b>	
		4 x SMB 30	173729	<b>74,18</b>	
		5 x SMB 30	173829	<b>92,76</b>	
<b>Set Charleston SMB 40</b> For height 370 - 484 mm		RAL 9016			
		2 x SMB 40	173531	<b>24,71</b>	
		3 x SMB 40	173631	<b>37,10</b>	
		4 x SMB 40	173731	<b>49,46</b>	
		5 x SMB 40	173831	<b>61,80</b>	
		Special finish			
		2 x SMB 40	173539	<b>37,11</b>	
		3 x SMB 40	173639	<b>55,66</b>	
		4 x SMB 40	173739	<b>74,18</b>	
		5 x SMB 40	173839	<b>92,76</b>	
<b>Set Charleston SMB 50</b> For height 485 - 679 mm		RAL 9016			also for Zehnder Charleston electric operation
		2 x SMB 50	173541	<b>24,71</b>	
		3 x SMB 50	173641	<b>37,10</b>	
		4 x SMB 50	173741	<b>49,46</b>	
		5 x SMB 50	173841	<b>61,80</b>	
		Special finish			
		2 x SMB 50	173549	<b>37,11</b>	
		3 x SMB 50	173649	<b>55,66</b>	
		4 x SMB 50	173749	<b>74,18</b>	
		5 x SMB 50	173849	<b>92,76</b>	
<b>Set Charleston SMB 75</b> For height 680 - 1000 mm		RAL 9016			
		2 x SMB 75	173551	<b>24,71</b>	
		3 x SMB 75	173651	<b>37,10</b>	
		4 x SMB 75	173751	<b>49,46</b>	
		5 x SMB 75	173851	<b>61,80</b>	
		Special finish			
		2 x SMB 75	173559	<b>37,11</b>	
		3 x SMB 75	173659	<b>55,66</b>	
		4 x SMB 75	173759	<b>74,18</b>	
		5 x SMB 75	173859	<b>92,76</b>	
<b>Set Charleston SMB 2</b> 2 clamp brackets as wall holders in connection with foot brackets		RAL 9016	173401	<b>18,87</b>	Zehnder Charleston, Zehnder Charleston Clinic
		Special finish	173409	<b>26,73</b>	


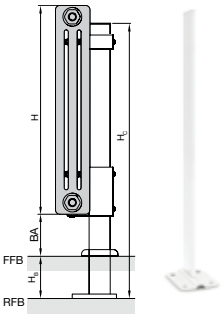



Screws and anchors are not included in the scope of delivery.

## Individual sets for wall and floor mounting

Description	Version	Article number	Price €	Application
<b>Set CVD for Charleston</b> Fixing set, consisting of: - Bracket CVD 0 - Support BH - Attenuator - Locking mechanism	RAL 9016	4 x CVD 0 / BH 774401 6 x CVD 0 / BH 774601 8 x CVD 0 / BH 774801 10 x CVD 0 / BH 774901	<b>24,95</b> <b>36,32</b> <b>47,67</b> <b>59,04</b>	Zehnder Charleston
	Special finish	4 x CVD 0 / BH 774409 6 x CVD 0 / BH 774609 8 x CVD 0 / BH 774809 10 x CVD 0 / BH 774909	<b>65,68</b> <b>97,39</b> <b>129,11</b> <b>160,83</b>	
<b>Set CVD for Charleston Clinic</b> Fixing set, consisting of: - Bracket CVD 0 - Support BHK - Attenuator - Locking mechanism	RAL 9016	4 x CVD 0 / BHK 775421 6 x CVD 0 / BHK 775621 8 x CVD 0 / BHK 775821 10 x CVD 0 / BHK 775921	<b>45,37</b> <b>66,88</b> <b>88,47</b> <b>110,01</b>	Zehnder Charleston Clinic
	Special finish	4 x CVD 0 / BHK 775429 6 x CVD 0 / BHK 775629 8 x CVD 0 / BHK 775829 10 x CVD 0 / BHK 775929	<b>85,90</b> <b>127,71</b> <b>169,54</b> <b>211,34</b>	
<b>Set BKE for Charleston</b> Wall hole Ø 18 mm, bracket length 160 mm. Depth regulation and plastic head off-centre, height-adjustable 0 - 7 mm.  Fixing set, consisting of: - Build-in bracket BKE - Support BH (white) - Incl. 2 retaining springs BSF1	Galvanised/RAL 9016	4 x BKE / BH 774461 6 x BKE / BH 774661 8 x BKE / BH 774861 10 x BKE / BH 774961	<b>40,07</b> <b>56,11</b> <b>72,19</b> <b>88,18</b>	Zehnder Charleston
	Special finish	4 x BKE / BH 774469 6 x BKE / BH 774669 8 x BKE / BH 774869 10 x BKE / BH 774969	<b>63,14</b> <b>90,52</b> <b>117,90</b> <b>145,28</b>	
<b>Set BKE for Charleston Clinic</b> Wall hole Ø 18 mm, bracket length 160 mm. Depth regulation and plastic head off-centre, height-adjustable 0 - 7 mm.  Fixing set, consisting of: - Build-in bracket BKE - Support BHK (white) - Incl. 2 retaining springs BSF1	Galvanised/RAL 9016	4 x BKE / BHK 775461 6 x BKE / BHK 775661 8 x BKE / BHK 775861 10 x BKE / BHK 775961	<b>60,47</b> <b>86,70</b> <b>112,95</b> <b>139,20</b>	Zehnder Charleston Clinic
	Special finish	4 x BKE / BHK 775469 6 x BKE / BHK 775669 8 x BKE / BHK 775869 10 x BKE / BHK 775969	<b>84,19</b> <b>122,09</b> <b>160,03</b> <b>197,94</b>	
<b>Set support for TSK</b> In connection with wall brackets to guard against movement, meets high requirements according to VDI 6036, available in two different lengths: TSK130 = length 130 mm (for 2-column), TSK160 = length 160 mm (for 3-6-column or larger wall clearances)	RAL 9016	2 x TSK130 774701 2 x TSK160 774721	<b>8,99</b> <b>9,29</b>	Zehnder Charleston
	Special finish	2 x TSK130 774709 2 x TSK160 774729	<b>13,46</b> <b>13,90</b>	
<b>Set support for TSKC</b> In connection with wall brackets to guard against movement, meets high requirements according to VDI 6036, available in two different lengths: TSKC130 = length 130 mm (for 2-column), TSKC160 = length 160 mm (for 3-6-column or larger wall clearances)	RAL 9016	2 x TSKC130 774711 2 x TSKC160 774731	<b>8,99</b> <b>9,29</b>	Zehnder Charleston Clinic
	Special finish	2 x TSKC130 774719 2 x TSKC160 774739	<b>13,46</b> <b>13,90</b>	

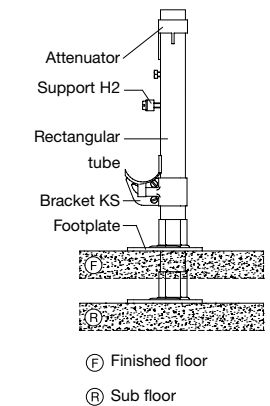
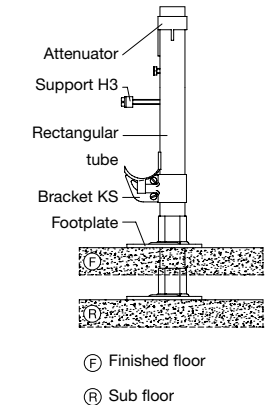
Screws and anchors are not included in the scope of delivery. Only some accessories in special finishes available as a set, see individual brackets.

## Zehnder HDS floor bracket

Description	Height $H_C$ mm	Article number	Price €	Application									
<p><b>Free-standing floor bracket HDS</b> reinforced floor bracket for heavy requirements (e. g. schools) on finished and unfinished floors, available in RAL 9016 or special finish.</p> 													
<p><b>Floor bracket</b> rectangular tube 60 x 10 mm and welded-on footplate in standard colour RAL 9016 or special finish.</p> <p>BA = ground clearance HB = floor structure height HB + BA = max. 300 mm HC = console height H = radiator height, 260 - 600 mm</p> <p>Dimensions in mm</p>  <p><b>Recommended console height <math>H_C</math></b></p> <table border="1"> <thead> <tr> <th>Installation location</th> <th><math>H_C</math> 2-column</th> <th><math>H_C</math> 3- to 6-column</th> </tr> </thead> <tbody> <tr> <td>Finished floor (FFB)</td> <td>= H + BA - max. 72 mm</td> <td>= H + BA - max. 80 mm</td> </tr> <tr> <td>Unfinished floor (RFB)</td> <td>= H + <math>H_B</math> + BA - max. 72 mm</td> <td>= H + <math>H_B</math> + BA - max. 80 mm</td> </tr> </tbody> </table>	Installation location	$H_C$ 2-column	$H_C$ 3- to 6-column	Finished floor (FFB)	= H + BA - max. 72 mm	= H + BA - max. 80 mm	Unfinished floor (RFB)	= H + $H_B$ + BA - max. 72 mm	= H + $H_B$ + BA - max. 80 mm	370 mm 420 mm 470 mm 520 mm 570 mm 620 mm 670 mm 720 mm 770 mm 820 mm	722201 722211 722221 722231 722241 722251 722261 722271 722281 722291	51,79 51,79 51,79 51,79 51,79 51,79 51,79 51,79 56,29 56,29	
Installation location	$H_C$ 2-column	$H_C$ 3- to 6-column											
Finished floor (FFB)	= H + BA - max. 72 mm	= H + BA - max. 80 mm											
Unfinished floor (RFB)	= H + $H_B$ + BA - max. 72 mm	= H + $H_B$ + BA - max. 80 mm											
<p><b>Clamp bracket set</b> in standard colour RAL 9016 or special finish, consisting of: 1x bottom clamp bracket with attenuator 1x top clamp bracket 1x plastic plug, white, for standpipe 2x plastic cover, white, for brackets</p> 		722321 722331 722341	56,29 56,29 56,29	2-column 3- and 5-column 4- and 6-column									
<p><b>Plastic cover</b> for HDS footplate 137 x 15 mm, white, suitable for retrofitting</p> 		722301	18,58	for installation on finished floor									
<p><b>Plastic cover</b> for HDS standpipe 90 x 41 mm, white, suitable for retrofitting</p> 		722311	16,90	for installation on unfinished floor									

<sup>1)</sup> The article number of the item in special finish is created by replacing the end digit 1 by the end digit 9 (not available for plastic covers)  
Surcharge for special finishing: 50 % on the price of RAL 9016

## Individual brackets for floor mounting

Description	Version	Article number	Price €	Application	
<b>Foot bracket set HFK</b> incl. cover H = 140 - 170 <sup>1)</sup> mm	RAL 9016			Zehnder Charleston	
	2 x HFK	754551	<b>111,62</b>		
	3 x HFK	754561	<b>149,13</b>		
	Special finish				
	2 x HFK	754559	<b>149,13</b>		
	3 x HFK	754569	<b>246,99</b>		
<b>Foot bracket set HFK</b> incl. cover H = 170 - 350 mm	RAL 9016			Zehnder Charleston	
	2 x HFK	754431	<b>130,73</b>		
	3 x HFK	754441	<b>196,10</b>		
	Special finish				
	2 x HFK	754439	<b>171,06</b>		
	3 x HFK	754449	<b>256,62</b>		
<b>Free-standing floor bracket STF 2 for tightening</b> With bracket, without bench frame, RAL 9016  <b>Comprising:</b> - Attenuator, plastic - Support H2, plastic - Rectangular tube - Bracket KS - Footplate - Sealing cap, plastic  <b>Can be combined with:</b> - <b>Cover AD1</b> for footplate - <b>Cover AR</b> for rectangular tube  * The desired dimension depends on the sum of the floor construction, ground clearance and height of the radiator.		Dimension*			Zehnder Charleston (2-column), up to H < 600 mm <sup>2)</sup>
		360 mm	719011	<b>44,53</b>	
		410 mm	719021	<b>44,53</b>	
		460 mm	719031	<b>44,53</b>	
		510 mm	719041	<b>44,53</b>	
		560 mm	719051	<b>44,53</b>	
		610 mm	719061	<b>44,53</b>	
		660 mm	719071	<b>49,74</b>	
		710 mm	719081	<b>49,74</b>	
		760 mm	719091	<b>49,74</b>	
		810 mm	719101	<b>49,74</b>	
		860 mm	719111	<b>49,74</b>	
		910 mm	719121	<b>49,74</b>	
		960 mm	719131	<b>49,74</b>	
		1010 mm	719141	<b>49,74</b>	
		1060 mm	719151	<b>49,74</b>	
1110 mm	719161	<b>49,74</b>			
1160 mm	719171	<b>49,74</b>			
<b>Free-standing floor bracket STF 3 for tightening</b> With bracket, without bench frame, RAL 9016  <b>Comprising:</b> - Attenuator, plastic - Support H3, plastic - Rectangular tube - Bracket KS - Footplate - Sealing cap, plastic  <b>Can be combined with:</b> - <b>Cover AD1</b> for footplate - <b>Cover AR</b> for rectangular tube  * The desired dimension depends on the sum of the floor construction, ground clearance and height of the radiator.		Dimension*			Zehnder Charleston 3 to 6-column, up to H < 600 mm <sup>2)</sup>
		360 mm	721011	<b>43,24</b>	
		410 mm	721021	<b>43,24</b>	
		460 mm	721031	<b>43,24</b>	
		510 mm	721041	<b>43,24</b>	
		560 mm	721051	<b>43,24</b>	
		610 mm	721061	<b>43,24</b>	
		660 mm	721071	<b>48,43</b>	
		710 mm	721081	<b>48,43</b>	
		760 mm	721091	<b>48,43</b>	
		810 mm	721101	<b>48,43</b>	
		860 mm	721111	<b>48,43</b>	
		910 mm	721121	<b>48,43</b>	
		960 mm	721131	<b>48,43</b>	
		1010 mm	721141	<b>48,43</b>	
		1060 mm	721151	<b>48,43</b>	
1110 mm	721161	<b>48,43</b>			
1160 mm	721171	<b>48,43</b>			

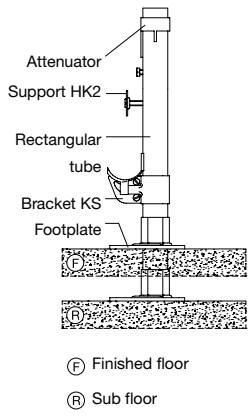
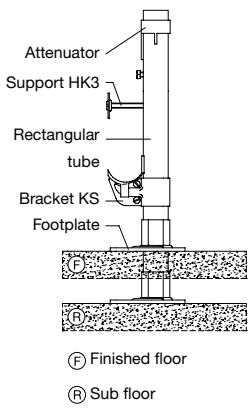
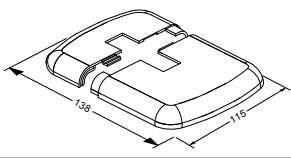
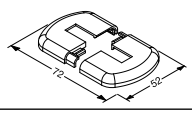
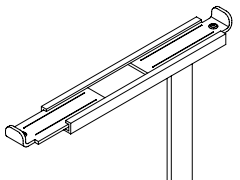
Screws and anchors are not included in the scope of delivery. Surcharge for custom-made colour: 50% surcharge on price of RAL 9016

1) Cut the round tubes to length by 5 mm each at the building site to reduce the minimum height to 130 mm.

2) Provide additional bracket from a height of 600 mm for the requirements class 2.

H = Total height of bracket

## Individual floor brackets for floor mounting



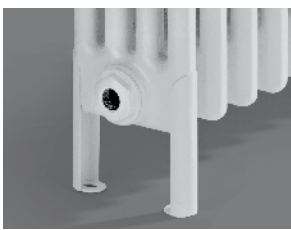
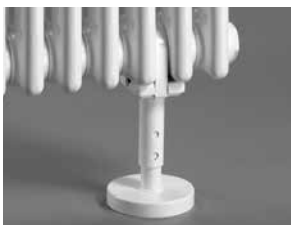


Description	Version	Article number	Price €	Application
<b>Floor brackets STF 2 K for tightening</b> With bracket, without bench frame, RAL 9016  <b>Comprising:</b> - Attenuator, plastic - Support HK2 - Rectangular tube - Bracket KS - Footplate - Sealing cap, plastic  <b>Can be combined with:</b> - <b>Cover AD1</b> for footplate - <b>Cover AR</b> for rectangular tube  * The desired dimension depends on the sum of the floor construction, ground clearance and height of the radiator.		Dimension* 360 mm 410 mm 460 mm 510 mm 560 mm 610 mm 660 mm 710 mm 760 mm 810 mm 860 mm 910 mm 960 mm 1010 mm 1060 mm 1110 mm 1160 mm	605011 <b>51,51</b> 605021 <b>51,51</b> 605031 <b>51,51</b> 605041 <b>51,51</b> 605051 <b>51,51</b> 605061 <b>51,51</b> 605071 <b>46,70</b> 605081 <b>46,70</b> 605091 <b>46,70</b> 605101 <b>46,70</b> 605111 <b>46,70</b> 605121 <b>46,70</b> 605131 <b>46,70</b> 605141 <b>46,70</b> 605151 <b>46,70</b> 605161 <b>46,70</b> 605171 <b>46,70</b>	Zehnder Charleston Clinic (2-column), up to H < 600 mm <sup>1)</sup>
<b>Floor bracket STF 3 K for tightening</b> With bracket, without bench frame, RAL 9016  <b>Comprising:</b> - Attenuator, plastic - Support HK3 - Rectangular tube - Bracket KS - Footplate - Sealing cap, plastic  <b>Can be combined with:</b> - <b>Cover AD1</b> for footplate - <b>Cover AR</b> for rectangular tube  * The desired dimension depends on the sum of the floor construction, ground clearance and height of the radiator.		Dimension* 360 mm 410 mm 460 mm 510 mm 560 mm 610 mm 660 mm 710 mm 760 mm 810 mm 860 mm 910 mm 960 mm 1010 mm 1060 mm 1110 mm 1160 mm	609011 <b>41,69</b> 609021 <b>41,69</b> 609031 <b>41,69</b> 609041 <b>41,69</b> 609051 <b>41,69</b> 609061 <b>41,69</b> 609071 <b>46,95</b> 609081 <b>46,95</b> 609091 <b>46,95</b> 609101 <b>46,95</b> 609111 <b>46,95</b> 609121 <b>46,95</b> 609131 <b>46,95</b> 609141 <b>46,95</b> 609151 <b>46,95</b> 609161 <b>46,95</b> 609171 <b>46,95</b>	Zehnder Charleston Clinic 3 to 6-column, up to H < 600 mm <sup>1)</sup>
<b>Plastic cover, AD1</b> For footplate Not included in price of STF, suitable for retrofitting		Plastic, white	703000 <b>14,95</b>	Floor brackets STF
<b>Cover AR</b> For rectangular tube Not included in price of STF.		Plastic, white	704000 <b>3,88</b>	Floor brackets STF
<b>Bench frame for floor bracket STF</b>		Galvanised	713002 <b>28,48</b>	Floor brackets STF

Screws and anchors are not included in the scope of delivery

Surcharge for custom-made colour: 50% surcharge on price of RAL 9016

<sup>1)</sup> Provide additional bracket from a height of 600 mm for the requirements class 2.

## Individual supports for floor mounting

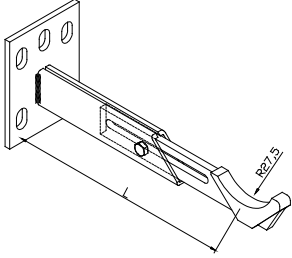
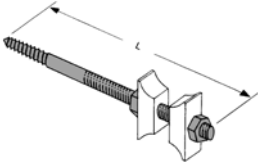
Description	Version	Article number	Price €	Application	
<b>Welded foot bracket for Charleston</b> Height-adjustable, for mounting on unfinished or finished floor. Number of brackets = fixing axes on radiator incl. cover		In colour of radiator  120 - 170 mm 170 - 350 mm	1100013810 1100013870	<b>126,88</b> <b>126,88</b>	Zehnder Charleston <sup>2)</sup> max. height 600 mm
<b>Welded foot bracket for Charleston</b> Height: fix 150 mm for mounting on unfinished or finished floor. Number of brackets = fixing axes on radiator Cover separately		In colour of radiator 150mm	-	<b>137,66</b>	Zehnder Charleston <sup>2)</sup> max. height 600 mm
<b>Traditional welded feet for Charleston</b> H = 100 mm, for mounting on finished floors Number of brackets = fixing axes on radiator		In colour of radiator	-	<b>56,06</b>	Zehnder Charleston 3-6 column Free-standing installation up to and including a height of 600 mm (requirements classes 1 and 2)
<b>Foot bracket HFK</b> For tightening with bracket, painted, without cover H = 140 - 170 <sup>1)</sup> mm		RAL 9016 Special finish	754411 754419	<b>48,79</b> <b>63,83</b>	Zehnder Charleston <sup>2)</sup>
<b>Foot bracket HFK</b> For tightening with bracket, painted, without cover H = 170 - 350 mm, can be shortened on site		RAL 9016 Special finish	754421 754429	<b>54,36</b> <b>69,51</b>	
<b>Cover for foot bracket Charleston,            welded (height adjustable) and foot            bracket HFK</b> Diameter 106 mm for round tube bracket Ø 25 mm		Plastic, white Special finish	753031 753039	<b>14,26</b> <b>18,48</b>	Zehnder Charleston
<b>Cover for foot bracket Charleston,            welded fix 150 mm</b> Diameter 106 mm for round tube bracket Ø 30 mm		Plastic, white Special finish	753041 753049	<b>14,26</b> <b>18,48</b>	Zehnder Charleston

Screws and anchors are not included in the scope of delivery

<sup>1)</sup> Cut the round tubes to length by 5 mm each at the building site to reduce the minimum height to 130 mm.

<sup>2)</sup> Provide additional bracket from a height of 600 mm for requirements class 2, request a separate allocation for requirements class 3 (e.g. school)

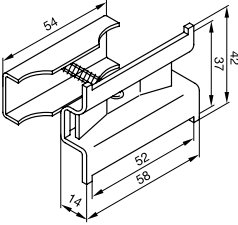
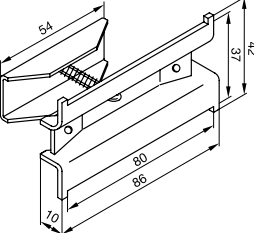
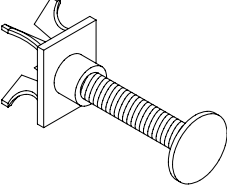

## Individual brackets for wall mounting

Description	Version	Article number	Price €	Application																						
<p><b>T bracket AKK for tightening</b> With white attenuator</p> <p>2-column, L = 68-91 mm 3-6 column, L = 95-139 mm</p> <p>2-column, L = 68-91 mm 3-6 column, L = 95-139 mm</p> <p>Wall distance WA for modified bracket allocation (mm):</p> <table border="1"> <tr> <td>RAL 9016</td> <td>796101</td> <td>796111</td> </tr> <tr> <td>Special finish</td> <td>796109</td> <td>796119</td> </tr> <tr> <td>2-column</td> <td>37-60</td> <td>64-108</td> </tr> <tr> <td>3-column</td> <td>18-41</td> <td>45-89</td> </tr> <tr> <td>4-column</td> <td>0-26</td> <td>27-71</td> </tr> <tr> <td>5-column</td> <td>-</td> <td>8,5-52,5</td> </tr> <tr> <td>6-column</td> <td>-</td> <td>0-34</td> </tr> </table> <p>Compatible supports HA/HAK + TKK</p>	RAL 9016	796101	796111	Special finish	796109	796119	2-column	37-60	64-108	3-column	18-41	45-89	4-column	0-26	27-71	5-column	-	8,5-52,5	6-column	-	0-34		<p>RAL 9016 RAL 9016</p> <p>Special finish Special finish</p>	<p>796101 796111</p> <p>796109 796119</p>	<p><b>9,90</b> <b>10,85</b></p> <p><b>14,83</b> <b>15,76</b></p>	<p>Zehnder Charleston Zehnder Charleston Clinic</p>
RAL 9016	796101	796111																								
Special finish	796109	796119																								
2-column	37-60	64-108																								
3-column	18-41	45-89																								
4-column	0-26	27-71																								
5-column	-	8,5-52,5																								
6-column	-	0-34																								
<p><b>Support TKK</b> For tightening, white plastic/galvanised To be used with bracket AKK,  L = 150 mm</p>			<p>784100 784120</p>	<p><b>3,76</b> <b>3,85</b></p>	<p>Zehnder Charleston Zehnder Charleston Clinic</p>																					

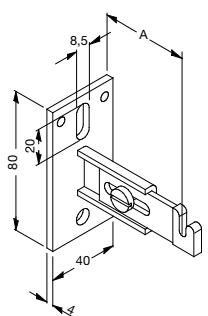

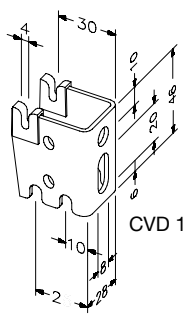

Screws and anchors are not included in the scope of delivery



## Support, spacers, etc.












Description		Version	Article number	Price €	Application
<b>Support BH</b> Clamp bracket for tightening instead of welded lugs; variable positioning		RAL 9016 Special finish	774001 774009	<b>3,03</b> <b>8,14</b>	Zehnder Charleston (not Clinic version)
<b>Support BHK</b> Clamp bracket for tightening instead of welded lugs; variable positioning		RAL 9016 Special finish	775011 775019	<b>8,14</b> <b>13,19</b>	Zehnder Charleston Clinic
<b>Spacer DS</b> Adjustable for wall clearance 15-60 mm		Plastic, white	780000	<b>2,52</b>	Zehnder Charleston Zehnder Charleston Clinic
<b>Retaining spring for CVD</b> For wall brackets CVD 0, CVD 1 and CVD 2 with support BH/BHK or lugs with height 20 mm. Price valid for 2 retaining springs		Spring steel	948012	<b>2,24</b>	Zehnder Charleston

## Individual brackets for wall mounting

Description	Version	Article number	Price €	Application
<b>Wall bracket AK 1 <sup>1)</sup></b> With attenuator. Clearance A 40 - 55 mm  Compatible supports BH/BHK		RAL 9016 Special finish 796011 796019	<b>13,70</b> <b>23,85</b>	For all radiators with suspension brackets or plates
<b>Wall bracket AK 2 <sup>1)</sup></b> With attenuator. Clearance A 60 - 80 mm  Compatible supports BH/BHK		RAL 9016 Special finish 796021 796029	<b>14,17</b> <b>24,34</b>	For all radiators with suspension brackets or plates
<b>Build-in bracket BKE <sup>1)</sup></b> Wall hole Ø 18 mm. Depth regulation and plastic head off-centre, height-adjustable 0 - 7 mm.  Can be combined with retaining spring BFS 1 for Zehnder Charleston with support BH/BHK.	Galvanised  L = 100 mm L = 130 mm L = 160 mm L = 200 mm L = 240 mm	766012 766022 766032 766042 766052	<b>4,55</b> <b>4,77</b> <b>4,98</b> <b>5,93</b> <b>7,31</b>	For all radiators with suspension brackets or plates
<b>Security clip BFS 1</b> For drilling templates BKE with support BH/BHK		Spring steel	777010	<b>4,02</b>  Zehnder Charleston
<b>Wall bracket CVD 0 <sup>1)</sup></b> With attenuator, clearances 10/15 mm		RAL 9016 Special finish 795031 795039	<b>2,63</b> <b>7,74</b>	For all radiators with suspension brackets or plates
<b>Wall bracket CVD 1 <sup>1)</sup></b> With attenuator, clearances 25/30 mm		RAL 9016 Special finish 795041 795049	<b>2,63</b> <b>7,74</b>	For all radiators with suspension brackets or plates
<b>Wall bracket CVD 2 <sup>1)</sup></b> With attenuator, clearances 30/45/50 mm		RAL 9016 Special finish 795051 795059	<b>5,75</b> <b>10,79</b>	For all radiators with suspension brackets or plates
<b>Retaining spring for CVD</b> For wall brackets CVD 0, CVD 1 and CVD 2 with support BH/BHK or lugs with height 20 mm. Price valid for 2 retaining springs		Spring steel	948012	<b>2,24</b>  Zehnder Charleston

<sup>1)</sup> An on-site locking device may be required depending on the installation and connection situation and the net weight of the radiator. In this case, retaining springs (suitable for the relevant product) or an on-site locking device must be provided.







## Valves, return screw connections, thermostats

Description		Version	Article number	Price €	Application
<b>Adaptor nipple</b> From 1/2" female thread to 3/4" external thread for screwing with O-ring seal			837110	<b>9,01</b>	For all radiators
<b>Directional air vent, nickel-plated, self-sealing</b>		1/4" 3/8" 1/2" 1/8"	816010 816020 816030 816040	<b>4,17</b> <b>4,17</b> <b>4,17</b> <b>4,17</b>	
<b>Directional air vent, chrome-plated, self-sealing</b> Suitable for max. operating pressure of 18 bar		1/2"	816070	<b>7,09</b>	
<b>Zehnder thermostat "LH2"</b> Thermostat with integrated fluid sensor, tested according to EN 215. Can be restricted and locked to individual reference value of 7 to 28 °C. Version with zero setting and threaded connection for thermostat M 30 x 1,5		White Chrome	819140 819148	<b>35,02</b> <b>60,35</b>	For all radiators with threaded connection M 30 x 1,5 mm
<b>Zehnder thermostat "DH"</b> Thermostat with integrated expansion material sensor, reference value range 7 to 28 °C. Version with zero setting		White Chrome	819050 819058	<b>35,02</b> <b>53,36</b>	
<b>Zehnder thermostat "SH"</b> Elegant thermostat with integrated fluid sensor, tested according to EN 215, reference value range 7 to 28 °C. Version with zero setting. Thermostat threaded connection M 30 x 1,5 with coupling nut in chrome.		White Chrome Stainless steel	819080 819088 819082	<b>38,09</b> <b>53,47</b> <b>53,47</b>	
<b>Zehnder thermostat „Design Line“</b> Thermostat with integrated fluid sensor. Can be restricted and locked to individual reference value of 6,5 - 28 °C, connection for thermostat M 30 x 1,5		White Chrome Stainless steel optic Copper Bronze 1) Special finish	841271 841278 853720 853850 853860 841279	<b>64,11</b> <b>92,61</b> <b>166,68</b> <b>171,72</b> <b>171,72</b> <b>73,79</b>	
<b>Thermostatic head M 30 x 1.5 mm</b>		White Chrome	853931 853938	<b>36,10</b> <b>65,00</b>	
<b>Blanking plug, nickel-plated, self-sealing</b>		1/2"	974020	<b>2,39</b>	For all radiators
<b>Blanking plug, chrome-plated</b> Suitable for operating pressure up to max. 18 bar		1/2"	974058	<b>6,28</b>	
<b>Angle adapter for thermostat M 30 x 1,5</b>		White	819500	<b>13,92</b>	For all radiators with threaded connection M 30 x 1,5 mm





All fittings etc. suitable for operating temperature max. 110 °C and operating pressure max. 10 bar, unless indicated otherwise.

1) Suitable for connection fitting and valve body in brass.

## Zehnder Design Line valves

Description		Version	Article number	Price €	Application
<b>Valve set type A</b> Angled flow and lockshield, thermostatic insert M 30 x 1,5 mm with pre-setting 1-7, manual handwheel, including 2 pcs 3/4" Eurocone nuts Ø 16,8 mm in finish of valve body, without adaptors for pipes		Chrom	838888	<b>76,44</b>	For all radiators with 1/2" female thread
<b>Valve set type B</b> Angled flow and lockshield, manual handwheel thermostatic insert M 30 x 1,5 mm with pre-setting 1-7, including 2 pcs 3/4" Eurocone nuts Ø 16,8 mm in finish of valve body, without adaptors for pipes		White Chrome	838891 838898	<b>119,66</b> <b>119,66</b>	
<b>Valve set type C</b> Straight flow and lockshield, manual handwheel thermostatic insert M 30 x 1,5 mm with pre-setting 1-7, including 2 pcs 3/4" Eurocone nuts Ø 16,8 mm in finish of valve body, without adaptors for pipes		White Chrome	838941 838948	<b>119,66</b> <b>119,66</b>	
<b>Valve set type D</b> Reverse flow and angled lockshield, manual handwheel thermostatic insert M 30 x 1,5 mm with pre-setting 1-7, including 2 pcs 3/4" Eurocone nuts Ø 16,8 mm in finish of valve body, without adaptors for pipes		White Chrome	838951 838958	<b>125,37</b> <b>125,37</b>	
<b>Valve set type G</b> Angled-angled flow head to the left, thermostatic insert M 30 x 1,5 mm with pre-setting 1-7, manual handwheel, lockshield angled, including 2 pcs 3/4" Eurocone nuts Ø 16,8 mm in finish of valve body, without adaptors for pipes		White Chrome	838981 838988	<b>133,41</b> <b>133,41</b>	
<b>Ventilset Typ I</b> Angled-angled flow head to the right, manual handwheel, thermostatic insert M 30 x 1,5 mm with pre-setting 1-7, lockshield angled, including 2 pcs 3/4" Eurocone nuts Ø 16,8 mm in finish of valve body, without adaptors for pipes		White Chrome	838991 838998	<b>133,41</b> <b>133,41</b>	

## Zehnder Design Line valves

Description		Version	Article number	Price €	Application
<b>Valve type O</b> 50 mm straight, thermostatic insert M 30 x 1,5 mm with pre-setting 1-7 and by-pass, turnable for manual handwheel to the left or right, including 2 pcs ¾" Eurocone nuts Ø 16,8 mm in finish of valve body, without adaptors for pipes		White Chrome	839041 839048	<b>132,50</b> <b>132,50</b>	For all radiators with ½" female thread
<b>Valve type P</b> 50 mm angled, with by-pass, to the right thermostatic insert M 30 x 1,5 mm, with pre-setting 1-7 and by-pass, manual handwheel, including 2 pcs ¾" Eurocone nuts Ø 16,8 mm in finish of valve body, without adaptors for pipes		White Chrome	839051 839058	<b>132,50</b> <b>132,50</b>	
<b>Valve type Q</b> 50 mm angled, with by-pass, to the left thermostatic insert M 30 x 1,5 mm with pre-setting 1-7 and by-pass, manual handwheel, including 2 pcs ¾" Eurocone nuts Ø 16,8 mm in finish of valve body, without adaptors for pipes		White Chrome	839101 839108	<b>132,50</b> <b>132,50</b>	
<b>Valve type U</b> 50 mm swiveling design valve straight or angled, with by-pass, thermostatic insert M 30 x 1.5 mm with pre-setting 1-7, manual handwheel to the left or to the right, including 2 pc ¾" Eurocone nuts Ø 16.8 mm in finish of valve body, without adaptors for pipes		White Chrome	839171 839178	<b>242,19</b> <b>242,19</b>	

## Zehnder Design Line Coloured Valves



Description		Version	Article nr.	Price €	Application
<p><b>Zehnder thermostat "Design Line"</b> Thermostat with integrated fluid sensor. Can be restricted and locked to individual reference value of 6,5 - 28 °C, connection for thermostat M 30 x 1,5</p>		Special finish	841279	<b>73,79</b>	For all radiators with ½" female thread, in colour of radiator
<p><b>Valve set type B</b> Angled flow and lockshield, thermostatic insert M 30 x 1,5 mm with pre-setting 1-7, including 2 pcs 3/4" Eurocone nuts Ø 16,8 mm in finish of valve body, without adaptors for pipes. Thermostat Design Line with integrated fluid sensor. Can be restricted and locked to individual reference value of 6,5 - 28 °C, connection for thermostat M 30 x 1,5.</p>		Special finish			
		Valve set with manual handwheel	838899	<b>119,66</b>	
		Valve set including Design Line thermostat	839439	<b>193,45</b>	
		Special finish			
<p><b>Valve type O</b> 50 mm straight, thermostatic insert M 30 x 1,5 mm with pre-setting 1-7 and by-pass, turnable to the left or right, including 2 pcs 3/4" Eurocone nuts Ø 16,8 mm in finish of valve body, without adaptors for pipes. Thermostat Design Line with integrated fluid sensor. Can be restricted and locked to individual reference value of 6,5 - 28 °C, connection for thermostat M 30 x 1,5.</p>		Valve set with manual handwheel	839049	<b>132,50</b>	
		Valve set including Design Line thermostat	839409	<b>206,29</b>	
<p><b>Valve type P</b> 50 mm angled, with by-pass, to the right thermostatic insert M 30 x 1,5 mm, with pre-setting 1-7 and by-pass, including 2 pcs 3/4" Eurocone nuts Ø 16,8 mm in finish of valve body, without adaptors for pipes. Thermostat Design Line with integrated fluid sensor. Can be restricted and locked to individual reference value of 6,5 - 28 °C, connection for thermostat M 30 x 1,5.</p>		Special finish			
		Valve set with manual handwheel	839059	<b>132,50</b>	
		Valve set including Design Line thermostat	839419	<b>206,29</b>	
		Special finish			
<p><b>Valve type Q</b> 50 mm angled, with by-pass, to the left thermostatic insert M 30 x 1,5 mm with pre-setting 1-7 and by-pass, including 2 pcs 3/4" Eurocone nuts Ø 16,8 mm in finish of valve body, without adaptors for pipes. Thermostat Design Line with integrated fluid sensor. Can be restricted and locked to individual reference value of 6,5 - 28 °C, connection for thermostat M 30 x 1,5.</p>		Valve set with manual handwheel	839109	<b>132,50</b>	
		Valve set including Design Line thermostat	839429	<b>206,29</b>	

All valves etc. suitable for operating temperature max. 110 °C and operating pressure max. 10 bar, if not indicated differently.  
For further information, please see information in the keyword list.

## Zehnder Design Line Accessories








Description	Version	Article number	Price €	Application
<b>Nut ½", 2 pcs</b> Fe - ¾" Eurocone	White	842001	<b>24,23</b>	Adapter for screw fittings with ½" external thread
	Chrome	842008	<b>24,23</b>	
<b>Adaptors, 2 pcs</b> Multilayer 16 x 2,0 mm	Brass	842060	<b>11,41</b>	
<b>Adaptors, 2 pcs</b> PEX 12 x 1,0 mm	Brass	842070	<b>11,41</b>	
<b>Adaptors, 2 pcs</b>  Copper Ø 10 mm Copper Ø 12 mm Copper Ø 14 mm Copper Ø 15 mm Copper Ø 16 mm	Brass	842080	<b>7,13</b>	Matching to Zehnder Design Line valves and union nuts (2 x ¾" Eurocone, Ø 16,8 mm) which are included in the scope of delivery
		842090	<b>7,13</b>	
		842100	<b>7,13</b>	
		842110	<b>7,13</b>	
		842120	<b>7,13</b>	
<b>Nuts Ø 18 mm - ¾" Eurocone + adaptors copper Ø 18 mm</b> <b>2 pcs</b>	Chrome / brass	842140	<b>35,63</b>	
<b>Nuts Ø 20,8 mm - ¾" Eurocone + adaptors multilayer Ø 20 x 2 mm</b> <b>2 pcs</b>	Chrome / brass	842150	<b>35,63</b>	
<b>Adaptors, 2 pcs</b> Multilayer Ø 14 mm	Brass	842160	<b>11,41</b>	
<b>Adaptors, 2 pcs</b> Multilayer Ø 16 x 2,25 mm	Brass	842170	<b>11,41</b>	
<b>Universal Adaptor set</b> (without nuts ¾" Eurocone - Ø 16,8 mm) - 2 pcs Alu/Pex multilayer 16 x 2.0 mm - 2 pcs PEX 12 x 1 mm - 2 pcs CU 12 mm - 2 pcs CU 14 mm - 2 pcs CU 15 mm	Brass	842180	<b>39,90</b>	

## Zehnder Design Line Accessories

Description	Version	Article number	Price €	Application	
<b>Sleeving kit</b>  L = 70 mm  L = 160 mm		Chrome  Chrome	853738  853668	<b>24,23</b>  <b>31,33</b>	For radiator installation
<b>Collar Ø45 mm</b>  for Ø ½"  for Ø 10 mm  for Ø 12 mm  for Ø 14 mm  for Ø 15 mm  for Ø 16 mm  for Ø 18 mm		White Chrome  White Chrome  White Chrome  White Chrome  White Chrome  White Chrome	816241 816248  816251 816258  816261 816268  816271 816278  816281 816288  816291 816298  816301 816308	<b>2,85</b> <b>7,13</b>  <b>2,85</b> <b>7,13</b>  <b>2,85</b> <b>7,13</b>  <b>2,85</b> <b>7,13</b>  <b>2,85</b> <b>7,13</b>  <b>2,85</b> <b>7,13</b>	For existing connections






## Rail, Miscellaneous

Description	Version	Article number	Price €	Application
<p><b>Towel rail Charleston with anti-crash device</b></p> <p>Depth 45 mm Rail to be shortened on site, attachments and towel bar in chrome.</p> <p>Length 366 mm (at least 9 elements) Length 918 mm (at least 20 elements)</p>	 <p>Chrome Length 366 mm Length 918 mm</p>	<p>966018 966028</p>	<p><b>200,08</b> <b>215,18</b></p>	<p>Zehnder Charleston Zehnder Charleston Clinic</p>
<p><b>Connection plugs for 2-column radiators</b></p> <p>For hard marsonite seal</p> <p>Plug painted RAL 9016</p> <p>Right-hand thread as standard on flow side of the radiator</p>		<p>Right-hand thread</p> <p>1" x 1/8" right 908101 1" x 1/4" right 908201 1" x 3/8" right 908301 1" x 1/2" right 908401 1" x 3/4" right 908501</p> <p>Left-hand thread</p> <p>1" x 1/8" left 909101 1" x 1/4" left 909201 1" x 3/8" left 909301 1" x 1/2" left 909401 1" x 3/4" left 909501</p>	<p><b>8,45</b> <b>8,45</b> <b>8,45</b> <b>8,45</b> <b>8,45</b> <b>8,45</b> <b>8,45</b> <b>8,45</b> <b>8,45</b> <b>8,45</b></p>	<p>Zehnder Charleston All versions</p>
<p><b>Connection plugs for 3 to 6-column radiators</b></p> <p>For hard marsonite seal</p> <p>Plug painted RAL 9016</p> <p>Right-hand thread as standard on flow side of the radiator</p>		<p>Right-hand thread</p> <p>5/4" x 1/8" right 908111 5/4" x 1/4" right 908211 5/4" x 3/8" right 908311 5/4" x 1/2" right 908411 5/4" x 3/4" right 908511 5/4" x 1" right 908611</p> <p>Left-hand thread</p> <p>5/4" x 1/8" left 909111 5/4" x 1/4" left 909211 5/4" x 3/8" left 909311 5/4" x 1/2" left 909411 5/4" x 3/4" left 909511 5/4" x 1" left 909611</p>	<p><b>8,45</b> <b>8,45</b> <b>8,45</b> <b>8,45</b> <b>8,45</b> <b>8,45</b> <b>8,45</b> <b>8,45</b> <b>8,45</b> <b>8,45</b> <b>8,45</b></p>	
<p><b>Clip-in baffle</b></p>		<p>1" 911110 5/4" 911120</p>	<p><b>3,30</b> <b>3,30</b></p>	
<p><b>Blind plugs for 2-column radiators</b></p> <p>For hard marsonite seal</p> <p>Plug painted RAL 9016 Right-hand thread as standard on flow side of the radiator</p>		<p>Right-hand thread 1" 906001 Left-hand thread 1" 907001</p>	<p><b>7,95</b> <b>7,95</b></p>	
<p><b>Blind plugs for 3 to 6-column radiators</b></p> <p>For hard marsonite seal</p> <p>Plug painted RAL 9016 Right-hand thread as standard on flow side of the radiator</p>		<p>Right-hand thread 5/4" right 906011 Left-hand thread 5/4" left 907011</p>	<p><b>7,95</b> <b>7,95</b></p>	
<p><b>Blind plugs</b></p> <p>With soft seal, RAL 9016</p>		<p>Right-hand thread 1" 906021 5/4" 906031 Left-hand thread 1" 907021 5/4" 907031</p>	<p><b>6,85</b> <b>6,85</b> <b>6,85</b> <b>6,85</b></p>	

All fittings, plugs, etc. suitable for max. operating temperature of 110 °C and max. operating pressure of 10 bar, unless noted otherwise.

## Miscellaneous

Description	Version	Article number	Price €	Application	
<b>Connection plugs</b> With soft seal, RAL 9016 Connection 1/2"	Right-hand thread			Zehnder Charleston Zehnder Charleston Clinic	
	1"	908421	6,85		
	5/4"	908431	6,85		
	Left-hand thread				
	1"	909421	6,85		
	5/4"	909431	6,85		
<b>Plug key</b> Steel	1"	901010	399,57		
	5/4"	901020	504,70		
<b>Plug key</b> For painted plugs with soft seal	Plastic	901030	11,64	Zehnder Charleston	
<b>Fitting</b>	2-column 1"	911020	2,52	Zehnder Charleston Zehnder Charleston Clinic	
	3 to 6-column 5/4"	911030	2,81		
<b>1 set coupling tools</b> 2-column 1" 3 to 6-column 5/4" 2-column 1" 3 to 6-column 5/4"	Dimensions				
	750 mm	903020	474,91		
	750 mm	903030	671,70		
	1250 mm	905020	575,09		
	1250 mm	905030	835,80		
<b>Seals</b> Hard marsonite seal 0,75 mm	2-column 1"	915020	1,26		
	3 to 6-column 5/4"	915030	1,26		
<b>Soft seal, plastic white</b> Joint seal, only seals on unpainted sealing surfaces  Approved fastening torques:		For 1" boss	915021	1,40	Zehnder Charleston
		For 5/4" boss	915031	1,40	
<b>Lambswool cleaning brush</b>		601020	53,81	Zehnder Charleston Zehnder Charleston Clinic Charleston electric operation	
		601030	53,81		
<b>Lacquer aerosol</b> Original paint, air-drying For improving the surface finish, 150 ml RAL 9001 (Cream White) RAL 9002 (Grey White) RAL 9010 (Pure White) RAL 9016 (Traffic White)		Colour:			
		RAL 9001	977020	30,75	
		RAL 9002	977050	30,75	
		RAL 9010	977080	30,75	
		RAL 9016	977090	30,75	
<b>Lacquer pens</b> Original paint, air-drying For repairing minor damage  RAL 9010 (Pure White) RAL 9016 (Traffic White)		Colour:			
		RAL 9010	675020	26,18	
		RAL 9016	675130	26,18	
		On request	675000	26,18	



# Keyword list

## Accessories

A wide range of accessories are available for various additional uses, such as hanging up towels. For more information, see the section on "Accessories".

## Accessory set

To make accessories simple to choose, accessory sets are offered for each radiator. Detailed information is provided in the relevant section.

## Antimicrobial coating

Especially for use in hygienically sensitive areas. This coating is based on the well-known bacteria-inhibiting and killing effect of silver ions embedded in the painted surface and offers safe and reliable long-term protection against the growth and spread of micro-organisms on radiator surfaces. This coating is completely safe for people and animals to touch. It has scientifically proven properties and is primarily offered for Zehnder Charleston Clinic.

## Baffle

To avoid reduced output, e.g. with a riding connection, internal installations, e.g. baffles, deflector plates, guide plates, are required. Detailed information is available on request.

## Advantages

See "Product description".

## Brackets

Appropriate brackets are offered as an accessory set for the respective radiators. Detailed information is given alongside the relevant products and in the "Accessories" section. Also see notes under "Fixings".

## CE marking

The CE marking on Zehnder radiators shows that they are manufactured in accordance with the prevailing European standard EN 442 and that the product has been subjected to the prescribed conformity evaluation procedure.



Product/product family	CE - Year
Zehnder Charleston	CE - 05
Zehnder Charleston Clinic	CE - 05
Zehnder Charleston Retrofit	CE - 05
Zehnder Charleston Turned	CE - 18
Zehnder Charleston Bench	CE - 05
Zehnder Radiator Bench	CE - 05
Zehnder Charleston electric version	CE - 17

## Clear Lacquer Version (Technoline)

See "Colours"

## Connections

Each Zehnder radiator is supplied complete with connections. Unless stated otherwise, all connections are female threads. Unless a different dimension is specified, the supplied connections are 1/2". Orders without a connection type number will always be delivered with the respective standard connection. Plastic plugs inserted to protect the thread must be removed and replaced with an directional air vent / draining valve or blind plug.

## Conversion

Factor for converting the nominal heat output to thermal outputs at other system temperatures, see "Thermal output".

## Corrosion protection

See "Finish" and "Surface protection".

## Colours

Zehnder radiators are available in almost every colour conceivable. From all possible colours, the Zehnder colour chart shows a selection of colours from various colour systems, such as RAL colours, sanitary colours or colours from the NCS-S system. The standard paint for the entire Zehnder radiator programme is the colour RAL 9016, Traffic White.

17 common colours make up Zehnder colour category 1, with an additional charge of 20%, 30 others colour make up category 2, with an additional charge of 30% on the standard finish. All other paintable colours are available for a surcharge on request. Another coating option is the clear lacquer version for Zehnder Charleston (Technoline), which falls in category 2. This essentially concerns one unique colour for each radiator. For this reason, different surface structures and visual colour differences can also occur at a later point in time. These colour deviations are not a fault and are therefore not subject to claims under warranty as described in our General Sales and Delivery Conditions.

Structural paints (structured paint surface) are possible on Zehnder radiators and also fall under category 2.

The Zehnder colour chart is printed on the inside of the rear catalogue cover.

For more information, see "Finish".

## Description

The description for a product contains all the information needed to create a specification or tender. The text-block structure simplifies the composition of all necessary features according to on-site requirements.

## Dimensions

The dimensions indicated in the documentation are correct at the time of printing. Subject to change without notice.

## Electric operation and Ecodesign Directive

Electric radiators are fixed units that comprise the actual radiator body, a filling medium (heat transfer fluid), a heating element and associated controls. This unit is subject to a special function test and must not be changed. The heat transfer fluid is frost-proof up to -20°C. The electric radiators are subject to the Ecodesign Directive. The aim of this Directive is to reduce the environmental effects of products that consume energy, with the entire product life-cycle taken into account. A points system is used to evaluate the extent to which the Directive has been fulfilled. Various functions, such as standby power consumption ≤ 0,5 W, weekly programme and open window detection, help to fulfil the minimum legal requirements (that is, they help to achieve the minimum number of points). Devices that meet the minimum requirements and are thus compliant with the Ecodesign Directive.

Please note:

- The electrical installation must comply with local regulations.
- In stationary installation (without plug), a switch must be installed (all-phase isolation from the mains with min. 3 mm contact spacing).
- For electric-only radiators, the defined filling quantity must not be changed.
- The electric heating element must only be opened and the mains cable only replaced by the manufacturer.
- When using radiators with electric heating elements, the qualified electrician is the competent partner for the protective measures to be taken.
- Follow the operating instructions.

# Keyword list

## Environment

The certification of our environmental management system to DIN EN ISO 14 001 by an independent institution obliges us to make continuous improvements to our environmental services through reducing or avoiding environmental burdens and waste, encouraging the utilisation and protection of resources as well as observing all environmental laws and regulations applicable to us.

## Finish

Ready-painted radiators in this price list have a two-coat finish (to DIN 55900, Part 1 and 2, comprising primer and top coat). The top coat is a powder coating. The high-quality Zehnder powder coating produces an especially smooth and extremely durable surface. Further information on the applications and limits of radiators is contained in information sheet number 7 of the BDH (Bundesindustrieverband Deutschland, Haus-, Energie- und Umwelttechnik e.V.).

Please always use the original RAL, NCS colour samples or original colour charts of the sanitary manufacturers for exact colour matching. For technical production reasons, minor colour deviations are possible in paints on steel surfaces, also when taking the prevailing lighting conditions into account. Deviations can also occur when comparing painted steel surfaces (radiators) with ceramic products.

The colours shown here (see inside of rear cover) are not binding for printing reasons. Radiators in metallic colours, e.g. RAL 9006, RAL 9007 and Anthracite are unique products and visual differences may appear in the colour, depending on the radiator.

## Fixings

To ensure that radiators are fitted safely, the weight of the radiator and other aspects must be considered when choosing the right quality and quantity of fixings. Additional loads and foreseeable misuse of a radiator must be considered or ruled out by planning and implementation in line with the known building use. The installation situation and accessibility are just as important criteria as wall material, bracket shape, location of the suspension points, locking device, add-on elements and the like.

Detailed information on the required number of fixing axes in accordance with VDI 6036 requirements class 2 is given for the respective products in the section on "Installation accessories". Recommendations for additional requirements classes on request. See also the key word VDI 6036.

## Flow connection

This concerns the connection on the radiator through which the hot water flows into the radiator.

## Galvanising

Only ½" connections or larger are possible. Curved or angled radiators cannot be galvanised. Galvanisation creates structures on the surface. These are caused by the technological process and therefore are not a fault. We cannot guarantee a clean, smooth surface. Galvanised radiators are generally delivered with a top coat. For explanation, see "Surface protection".

Maximum dimension galvanised: 3000 x 850 x 450 mm

## Ground clearance

A reduction in the distance between the radiator and the floor can result in reduced output. For more information, see "Reduced output".

## Guide plate

See "Baffle".

## High pressure

Even with suitable radiators and accessory parts, pressure loads up to a maximum of 18 bar are only permitted if pressure surges can be excluded.

## Hydraulic balancing

By hydraulic balancing the various system resistances are set so that the radiators are supplied with the necessary quantity of water at all operational points, in order to achieve the desired thermal output.

## Hygiene version

Numerous Zehnder radiators are suitable for use in hygienically sensitive areas. Hygiene certificates can be requested for this. The keyword "Antimicrobial coating" is also of interest for the topic of hygiene.

## Immersion tube

Some types of connection require the installation of an immersion tube to achieve optimal heat distribution.

## Inlet and outlet resistance

The resistance coefficient (zeta value) is used to calculate the pressure loss. For more information, see "Pressure loss".

## Installation in series

The installation in series of radiators refers to the series connection of several radiators. Detailed information is given alongside the relevant products.

## Joining

Zehnder Charleston radiators in lengths above the set maximum number of elements are supplied in sub-blocks and must be joined together on site. For detailed information, see section on "Zehnder Charleston".

## Lance valve

The lances must be shortened or extended, depending on the radiator and connection types. Detailed information is available on request. See keyword "Single-tube systems".

## Length restrictions

Avoiding damage during transport significantly increases the cost of packaging, which must be charged for accordingly.

## Made to measure

Zehnder radiators can be customised (e.g. angled, curved, with welded brackets). Special shapes require templates to be made from solid materials (cardboard, packing paper) in order to guarantee quick and trouble-free processing. The support of the area manager can be used for a small charge.

Where necessary, the customer will receive a scale drawing of the version to be installed and final pricing for inspection and approval, after which the order will be manufactured. The order cannot be cancelled once placed.

## Minimum water flow

If the flow of water through a radiator is heavily reduced, the heat output can fall far below the calculated or indicated value. For this reason, a minimum water flow should always be ensured.

The approximate minimum water flows  $q_{m \min}$  in % of the nominal flow rate  $q_{ms}$  which does not cause the thermal output to deviate from the standard characteristic curve by more than 5% is 17%.

## Operating pressure

The maximum permissible operating pressure of a radiator depends on its geometry, the material used and the finish. The permissible operating pressure varies according to the product, see table: Suitable fittings, plugs and directional air vents must be ensured in connection with high pressure applications in excess of 10 bar. See "High pressure".

Product/product family	Standard version [bar]	High pressure version [bar]
Zehnder Charleston	10	18
Zehnder Charleston Clinic	10	18
Zehnder Charleston Retrofit	10	18
Zehnder Charleston Turned	10	-
Zehnder Charleston Bench	10	18
Zehnder Radiator Bench	10	18

### Operating temperature

The coating of Zehnder radiators can be used for central heating systems up to 110 °C. It is suitable for use in district heating, low temperature and condensing systems.

### Packaging

The packaging of Zehnder radiators serves as protection against damage during transport and on building sites. It must be removed before starting the system for the first time in order to avoid any damage caused by condensation.

### Pressure loss

The pressure loss is determined using a zeta value of 2,5 per radiator for connection sizes from  $\frac{3}{8}$ " to  $\frac{1}{2}$ " and a flow velocity of 1 m/sec. The inherent resistance of a radiator can be ignored. In special cases (e.g. where an integrated valve is fitted), information on pressure losses is provided.

### Prices

Terms of delivery for quoted prices are: FQA Lahr. All prices are gross prices. Where prices are not stated or only shown with the proviso 'current list price', the valid list prices will be calculated on the day of delivery. Also see General Sales and Delivery Conditions.

### Quality check

Zehnder Group Deutschland GmbH is certified to DIN ISO 9001 and is therefore subject to stringent quality controls carried out by independent institutions in the areas of Design/Development, Production, Assembly and Customer Service.

### Reduced output

The thermal output can be affected depending on where the radiator is installed. The standard thermal output is measured in an unobstructed setting with a ground clearance of 110 mm and a wall clearance of 50 mm. Any reduction in these clearances, as well as installation in alcoves and the application of covers and grilles can, depending on the model, lead to a reduction in thermal output. In the case of grilles, this reduction can differ between 5 and 12%, depending on the radiator.

### Reflective cover plates

The disadvantage of installing a radiator in front of external glazing is that heat is lost directly through the glass. The back of a radiator emits heat in the form of thermal radiation in the same way as the front. For wall mounted radiators, the thermal radiation is reflected or absorbed by the wall, whereas this long-wave radiation radiates almost unimpeded through the pane of glass when radiators are installed in front of windows, even at greater distances. In order to avoid this unnecessary loss of heat and energy, radiators are available with a reflective cover plate fitted to the side of the radiator facing the window.

### Returns

Radiators and accessories cannot be returned.

### Return connection

This concerns the connection on the radiator through which the hot

water leaves the radiator and passes along the return line to the heat generator.

### Scope of delivery

The scope of delivery for the standard version of a radiator can be found in the respective product description.

### Seal

In the case of sealed connections and plugs, it may be necessary to tighten up the connection and blind plugs depending on the water quality, e.g. in a remote heating connection, after testing the pressure or heating the system for the first time. The sealing materials supplied or used by Zehnder are intended for use in closed heating systems.

### Single-tube system

We recommend using single-tube valves with an adjustable bypass or a ballast system (riser), i.e. with an adjustable water volume over the radiator. Essentially, a reduced output of at least 25% must be considered when using single-tube lance valves. Function is often guaranteed only for certain models and up to specific lengths. Maximum lengths and an indication of how the radiators function with various makes of valve is available on request.

### Standard thermal output

The standard thermal output of a radiator is determined in an independent, certified test laboratory according to standard EN 442 at the standard operating temperatures of 75/65/20 °C. The conversion of the thermal output to other system temperatures is done on the basis of the standard thermal output according to EN 12831. For easy dimensioning, additional outputs for frequently used temperatures are shown alongside the standard thermal output:

- 70/55/20 °C
- 55/45/20 °C

### Standard colour/finish

The standard colour for Zehnder radiators is RAL 9016. For more information, see "Painting".

### Storage

Zehnder radiators must be stored for the long-term or temporarily in dry and chemical-free rooms.

### Structural finish

See "Finish".

### Surface protection

We recommend that installation areas affected by damp or chemicals are only fitted with radiators that are galvanised and then given a powder coating. A polyzinc coating with subsequent powder-coating increases the corrosion protection of the radiator, depending on the surface geometry. Possible applications are available on request. (see also "Galvanising")

### System temperatures

These are the temperatures at which the hot water heating system is operated (flow, return and room temperature).

### Technical specifications

The dimensions indicated in the documentation are correct at the time of printing. We reserve the right to make amendments that improve the product.

### Technoline

See "Colours"

### Test pressure

Each radiator is checked for leaks by subjecting it to 1,3 times its rated maximum operating pressure before delivery. For orders that

# Keyword list

do not indicate the required operating pressure, the radiator will be delivered with the operating pressure of the standard version.

## Thermal output $\Phi$

The thermal output of a radiator model is given by the standard characteristic curve:

$$\Phi = K_M \cdot \Delta T^n$$



EN 442 defines the test procedure and the measurement method in identically arranged test laboratories. A single, pan-European measuring method therefore replaces the previous measurements that varied from country to country.

The output given under the following conditions in accordance with EN 442 applies as the nominal heat output  $\Phi_s$ :

Flow temperature	$t_1 = 75 \text{ }^\circ\text{C}$
Return temperature	$t_2 = 65 \text{ }^\circ\text{C}$
Mean water temperature	$t_m = 70 \text{ }^\circ\text{C}$
Room temperature	$t_r = 20 \text{ }^\circ\text{C}$
Excess temperature ( $t_m - t_r$ )	$\Delta T = 50 \text{ K}$

## Thermal outputs $\Phi$ (different $\Delta T$ than 50 K)

For all excess temperatures other than  $\Delta T_n = 50 \text{ K}$ , the thermal output is calculated in accordance with the formulae

$$\Phi = \Phi_s \times f_1 \text{ or } \Phi = \Phi_s \times \left(\frac{\Delta T}{\Delta T_n}\right)^n$$

$\Delta T$  is to be calculated logarithmically as follows:

$$\Delta T = \frac{(t_1 - t_r) - (t_2 - t_r)}{\ln\left(\frac{t_1 - t_r}{t_2 - t_r}\right)} = \frac{t_1 - t_2}{\ln\left(\frac{t_1 - t_r}{t_2 - t_r}\right)}$$

The excess temperature  $\Delta T_n$  under standard conditions (75/65/20 °C) is, as a logarithmic excess temperature

$$\Delta T_n = \frac{75 - 65}{\ln\left(\frac{75 - 20}{65 - 20}\right)} = 49,83 \text{ K}$$

The entire calculation process can be avoided by using the tables on page 170.

These can be used to directly read off the  $f_1$  factor for known system temperatures ( $t_1$ ,  $t_2$ ,  $t_r$ ) and radiator exponents. For other system temperatures,  $f_1$  must be determined mathematically according to the specified formulae.

## Examples for the dimensioning of radiators

### Example of Zehnder Charleston:

Model 3050 (3-column) - 20 elements

$\Phi_s = 1032 \text{ W}$ , exponent  $n = 1,25$

$t_1 = 60 \text{ }^\circ\text{C}$ ,  $t_2 = 40 \text{ }^\circ\text{C}$ ,  $t_r = 20 \text{ }^\circ\text{C}$

Determining  $\Delta T$ :

$$\Delta T = \frac{(60 - 40)}{\ln\left(\frac{60 - 20}{40 - 20}\right)} = \frac{20}{0,693} = 28,85 \text{ K}$$

$$\phi = 1032 \text{ W} \times \left(\frac{28,85}{49,83}\right)^{1,25} = 1032 \text{ W} \times 0,579^{1,25} = 1032 \text{ W} \times 0,505 = \underline{\underline{521 \text{ W}}}$$

## Tolerances

Industry standard tolerances and tolerances based on production technology are subject to change for all indicated dimensions and fall within the tolerances defined in EN 442. The maximum tolerance must be considered during pre-assembly of the pipework or fixing materials. We reserve the right to make technical amendments during the validity of the documentation as part of product improvement.

## TopCare

See keyword "Antimicrobial surface".

## VDI 6036

Application of the directive VDI 6036 assists all participants in the process to make a comprehensive and comparable assessment of the installation situation. As an accepted rule of technology, this directive and the resulting assessment can also be drawn on for regulation purposes in the event of damages. Directive VDI 6036 classifies applications for radiator fastenings into various requirements classes with different loads. Additional loads for various intensities of misuse can be added to the net weight and water content of the radiator as required. Zehnder issues standard assignment recommendations for requirements classes 1 and 2, and for stable wall constructions (e.g. concrete) for selected fixing pieces - unless otherwise marked. Assignment recommendations for requirements class 3 and for special custom applications (requirements class 4) on request.

Example applications from VDI 6036:

**Requirements class 2** (normal and increased requirements): owner-occupied homes, rented flats, kindergartens, hospitals, retirement and nursing homes, office buildings, doctors' surgeries/lawyers offices, retail outlets.

**Requirements class 3** (high-level requirements): schools, sports facilities, youth centres, meeting places, railway stations, barracks

**Requirements class 4** (very high-level requirements or special burdens): prisons, psychiatric institutions, special agreements

## Wall clearance

This is the distance between the wall and the back of the radiator. For more information, see "Reduced output".

## Warranty

The warranty period for the products shown in this price list is two years. Additional information is provided in the General Sales and Delivery Conditions.

## Water quality

Operating conditions and water quality according to VDI 2035 must be maintained.

Claims under guarantee will be rejected if substances (e.g. chemicals, antifreeze, etc.) are added to the heating water which have an aggressive effect on the sealing material. In case of non compliance, no liability can be accepted in accordance with point 8 of our General Sales and Delivery Conditions for sealing material, nor for any resulting defects and consequences. Claims under guarantee in accordance with point 8 of our General Sales and Delivery Conditions will also be rendered invalid in case of:

- Operation with steam,
- Periodical or long-term draining of the system,
- Excessive sludge in the radiators and
- Occasional or constant of oxygen into the system.

## Wetrooms

See "Surface protection"

# Keyword list

## Legend

Icon	Unit	Description
H	mm	Height
L	mm	Length
T	mm	Depth
H Lam.	mm	Height of fins
N	mm	Boss spacing
A	m <sup>2</sup>	Surface
V	dm <sup>3</sup>	Water content
M	kg	Empty weight
N <sub>s</sub>	-	Number of elements
t <sub>1</sub>	°C	Flow temperature
t <sub>2</sub>	°C	Return temperature
t <sub>r</sub>	°C	Room air temperature
t <sub>m</sub>	°C	Mean water temperature (t <sub>1</sub> +t <sub>2</sub> )/2
ΔT	K	Excess temperature t <sub>m</sub> - t <sub>r</sub>
Φ	W=(J/s)	Thermal output
Φ <sub>s</sub>	W	Nominal heat output
Φ <sub>L</sub>	W	Nominal heat output of the module
C <sub>p</sub>	J/(kg K)	Specific heat capacity
n	-	Radiator indicator, exponent
S <sub>k</sub>	%	Proportion of radiation
C <sub>K</sub>	-	Conversion factor to Φ <sub>s</sub>
q <sub>m</sub>	kg/h/(kg/s)	Water flow
q <sub>ms</sub>	kg/h/(kg/s)	Nominal flow rate
v	m/s	Velocity
Δp	kPa	Pressure loss, pressure drop
ζ	-	Resistance coefficient
ln	-	Natural logarithm

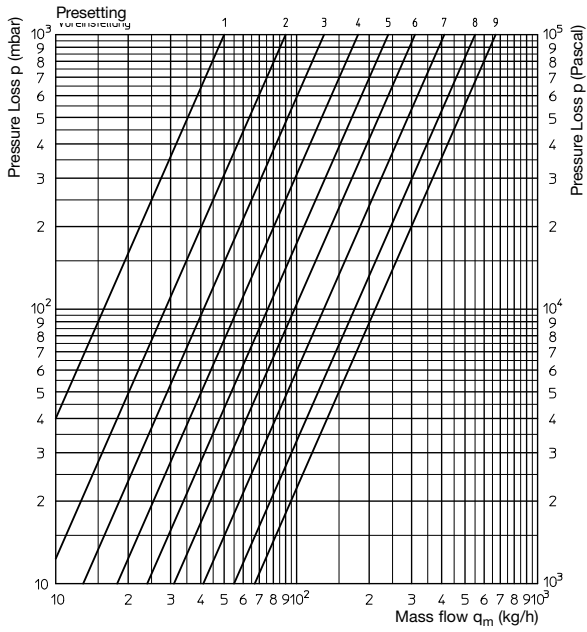
## Physical unit

°C	Degrees, Celsius
K	Kelvin, unit for temperature difference
m	Metres
mm	Millimetres
m/s	Metres/second, flow rate
Pa	Pascal, 1 Pa = 0,102 mmWS
mmWS	mm water column
W	Watt, unit of power 1 W = 0,6 kilocalories/hour old unit of power, 1 kcal/h = 1,163 W
c	Specific heat capacity of water = 1 kcal/kg K = 4,187 kJ/kg K
kJ	Kilojoule, 1 kJ = 0,239 kcal



# Pressure loss graph

## Valve insert AV 9 (Oventrop)



Presetting	1	2	3	4	5	6	7	8	9
kv-value	0,05	0,09	0,14	0,20	0,26	0,32	0,43	0,57 <sup>1)</sup>	0,67 <sup>2)</sup>

1) Charleston Completto 0,54

2) Charleston Completto 0,63

# Conversion table, $f_1$ factor



		$t_2$		75					70					65					60					55				
		$t_1$	$t_r$	n	1,20	1,25	1,30	1,35	1,40	1,20	1,25	1,30	1,35	1,40	1,20	1,27	1,30	1,35	1,40	1,20	1,25	1,30	1,35	1,40	1,20	1,25	1,30	1,35
90	10	1,562	1,591	1,621	1,651	1,682	1,491	1,516	1,542	1,568	1,594	1,419	1,449	1,462	1,483	1,505	1,346	1,363	1,380	1,397	1,414	1,270	1,283	1,296	1,309	1,322		
	15	1,432	1,454	1,476	1,498	1,521	1,363	1,380	1,398	1,416	1,435	1,291	1,311	1,319	1,333	1,347	1,218	1,228	1,238	1,248	1,259	1,142	1,149	1,155	1,162	1,168		
	18	1,356	1,373	1,390	1,408	1,426	1,286	1,300	1,313	1,327	1,341	1,215	1,229	1,235	1,245	1,255	1,142	1,148	1,155	1,161	1,168	1,066	1,069	1,072	1,075	1,078		
	20	1,305	1,319	1,334	1,349	1,364	1,236	1,247	1,258	1,269	1,280	1,165	1,175	1,180	1,187	1,195	1,092	1,096	1,100	1,104	1,108	1,016	1,017	1,017	1,018	1,019		
	22	1,254	1,266	1,278	1,290	1,303	1,185	1,194	1,202	1,211	1,220	1,115	1,122	1,125	1,130	1,135	1,042	1,043	1,045	1,047	1,049	0,966	0,966	0,963	0,962	0,960		
24	1,204	1,214	1,223	1,233	1,242	1,136	1,142	1,148	1,154	1,160	1,065	1,069	1,071	1,073	1,076	0,992	0,992	0,991	0,991	0,991	0,916	0,913	0,909	0,906	0,903			
85	10	1,501	1,526	1,552	1,579	1,606	1,432	1,454	1,476	1,498	1,521	1,363	1,387	1,398	1,416	1,435	1,291	1,305	1,319	1,333	1,347	1,218	1,228	1,238	1,248	1,259		
	15	1,372	1,391	1,409	1,428	1,447	1,305	1,319	1,334	1,349	1,364	1,236	1,251	1,258	1,269	1,280	1,165	1,172	1,180	1,187	1,195	1,092	1,096	1,100	1,104	1,108		
	18	1,296	1,311	1,325	1,339	1,354	1,229	1,240	1,251	1,261	1,272	1,160	1,171	1,175	1,182	1,190	1,090	1,094	1,098	1,102	1,105	1,017	1,017	1,017	1,018	1,019		
	20	1,246	1,258	1,269	1,281	1,293	1,179	1,187	1,196	1,204	1,212	1,111	1,118	1,121	1,125	1,130	1,040	1,042	1,044	1,045	1,047	0,967	0,967	0,966	0,964	0,963		
	22	1,196	1,205	1,214	1,223	1,233	1,130	1,135	1,141	1,147	1,153	1,061	1,065	1,067	1,069	1,072	0,991	0,991	0,990	0,990	0,989	0,918	0,915	0,911	0,908	0,905		
24	1,147	1,153	1,160	1,166	1,173	1,080	1,084	1,087	1,091	1,094	1,012	1,013	1,013	1,014	1,014	0,942	0,940	0,937	0,935	0,933	0,869	0,864	0,859	0,854	0,849			
80	10	1,439	1,461	1,483	1,505	1,528	1,372	1,391	1,409	1,428	1,447	1,305	1,325	1,334	1,349	1,364	1,236	1,247	1,258	1,269	1,280	1,165	1,172	1,180	1,187	1,195		
	15	1,312	1,326	1,342	1,357	1,372	1,246	1,258	1,269	1,281	1,293	1,179	1,191	1,196	1,204	1,212	1,111	1,116	1,121	1,125	1,130	1,040	1,042	1,044	1,044	1,047		
	18	1,236	1,247	1,258	1,270	1,281	1,171	1,179	1,187	1,195	1,203	1,105	1,111	1,114	1,119	1,124	1,037	1,038	1,040	1,041	1,043	0,966	0,965	0,964	0,962	0,961		
	20	1,187	1,195	1,204	1,212	1,221	1,122	1,127	1,133	1,138	1,144	1,056	1,059	1,061	1,063	1,066	0,988	0,987	0,987	0,986	0,986	0,918	0,914	0,911	0,908	0,904		
	22	1,137	1,143	1,149	1,156	1,162	1,073	1,076	1,079	1,082	1,086	1,007	1,008	1,008	1,008	1,008	0,939	0,937	0,934	0,932	0,930	0,869	0,864	0,859	0,854	0,849		
24	1,088	1,092	1,096	1,100	1,103	1,024	1,025	1,026	1,027	1,028	0,959	0,956	0,955	0,954	0,952	0,891	0,887	0,883	0,878	0,874	0,821	0,814	0,808	0,801	0,794			
75	10						1,312	1,326	1,342	1,357	1,372	1,246	1,262	1,269	1,281	1,293	1,179	1,187	1,196	1,204	1,212	1,111	1,116	1,121	1,125	1,130		
	15						1,187	1,195	1,204	1,212	1,221	1,122	1,130	1,133	1,138	1,144	1,056	1,058	1,061	1,063	1,066	0,988	0,987	0,987	0,986	0,985		
	18						1,113	1,118	1,122	1,127	1,133	1,049	1,051	1,053	1,055	1,057	0,983	0,982	0,981	0,981	0,980	0,915	0,912	0,908	0,905	0,902		
	20						1,064	1,066	1,069	1,072	1,075	1,000	1,000	1,000	1,000	1,000	0,935	0,932	0,929	0,927	0,924	0,867	0,862	0,857	0,852	0,847		
	22						1,015	1,016	1,016	1,017	1,018	0,952	0,949	0,948	0,946	0,944	0,887	0,882	0,878	0,874	0,869	0,820	0,813	0,806	0,799	0,793		
24						0,967	0,966	0,964	0,963	0,962	0,904	0,899	0,897	0,893	0,889	0,839	0,833	0,827	0,821	0,815	0,772	0,764	0,756	0,748	0,740			
70	10											1,187	1,198	1,204	1,212	1,221	1,122	1,127	1,133	1,138	1,144	1,056	1,058	1,061	1,063	1,066		
	15											1,064	1,068	1,069	1,072	1,075	1,000	1,000	1,000	1,000	1,000	0,935	0,932	0,929	0,927	0,924		
	18											0,991	0,991	0,990	0,990	0,990	0,928	0,925	0,922	0,919	0,917	0,863	0,858	0,853	0,847	0,842		
	20											0,943	0,940	0,939	0,936	0,934	0,880	0,876	0,871	0,867	0,862	0,816	0,809	0,802	0,795	0,789		
	22											0,896	0,890	0,887	0,883	0,879	0,833	0,827	0,821	0,815	0,808	0,769	0,761	0,752	0,744	0,736		
24											0,848	0,840	0,837	0,831	0,826	0,787	0,779	0,771	0,763	0,756	0,723	0,713	0,703	0,694	0,684			
65	10																1,064	1,066	1,069	1,072	1,075	1,000	1,000	1,000	1,000	1,000		
	15																0,943	0,941	0,939	0,936	0,934	0,880	0,876	0,871	0,867	0,862		
	18																0,872	0,867	0,862	0,857	0,852	0,810	0,803	0,796	0,789	0,782		
	20																0,825	0,818	0,812	0,805	0,799	0,763	0,755	0,746	0,738	0,730		
	22																0,779	0,770	0,762	0,755	0,747	0,717	0,707	0,698	0,688	0,679		
24																0,733	0,723	0,714	0,705	0,696	0,672	0,661	0,650	0,639	0,629			
60	10																					0,943	0,941	0,939	0,936	0,934		
	15																					0,825	0,818	0,812	0,805	0,799		
	18																					0,755	0,747	0,738	0,729	0,721		
	20																					0,710	0,700	0,690	0,680	0,670		
	22																					0,664	0,653	0,642	0,631	0,621		
24																					0,620	0,607	0,595	0,584	0,572			

Conversion factor  $f_1$  for converting the standard thermal output to EN 442 at 75/65/20 °C for other system temperatures:  $\Phi = \Phi_s \cdot f_1$

$$f_1 = \left[ \frac{(t_1 - t_2)}{\ln \left( \frac{t_1 - t_r}{t_2 - t_r} \right) \cdot 49,83 \text{ K}} \right]^n$$

The radiator exponent depends on the model and type of radiator and can therefore be found in the table containing the technical specifications for the respective radiator. For exponents other than those given, the correction factor can be interpolated or precisely calculated according to the above formulae. An exponent of 1,3 can be used for the approximate calculation.

System temperatures not shown must be mathematically determined using the formulae given, or can be made available on request.

For more information about thermal outputs, see keyword list.

### Legend

Icon	Unit	Description
$t_1$	°C	Flow temperature
$t_2$	°C	Return temperature
$t_r$	°C	Room air temperature
$\Phi$	W (J / s)	Thermal output
$\Phi_s$	W	Nominal heat output
n	-	Radiator indicator, exponent
ln	-	Natural logarithm

### Physical unit

K	Kelvin, unit for temperature difference
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# Conversion table, $f_1$ factor



t <sub>1</sub>	t <sub>2</sub>	n	50					45					40					35					30				
			1,20	1,25	1,30	1,35	1,40	1,20	1,25	1,30	1,35	1,40	1,20	1,25	1,30	1,35	1,40	1,20	1,25	1,30	1,35	1,40	1,20	1,25	1,30	1,35	1,40
90	10		1,193	1,201	1,210	1,219	1,228	1,112	1,117	1,122	1,127	1,132	1,028	1,029	1,030	1,031	1,032	0,939	0,937	0,934	0,932	0,929	0,844	0,839	0,833	0,827	0,821
	15		1,064	1,067	1,070	1,073	1,075	0,983	0,982	0,981	0,981	0,980	0,897	0,893	0,889	0,885	0,881	0,805	0,798	0,791	0,784	0,777	0,706	0,696	0,686	0,676	0,666
	18		0,988	0,987	0,987	0,986	0,986	0,906	0,902	0,898	0,894	0,891	0,819	0,812	0,805	0,798	0,792	0,725	0,715	0,706	0,696	0,687	0,621	0,608	0,596	0,585	0,573
	20		0,937	0,935	0,932	0,930	0,927	0,854	0,849	0,843	0,838	0,832	0,766	0,758	0,749	0,741	0,733	0,670	0,659	0,648	0,638	0,627	0,562	0,549	0,536	0,523	0,511
	22		0,887	0,882	0,878	0,874	0,869	0,803	0,796	0,789	0,781	0,774	0,714	0,704	0,694	0,684	0,675	0,615	0,603	0,591	0,579	0,567	0,502	0,487	0,473	0,460	0,447
24		0,836	0,830	0,824	0,818	0,812	0,752	0,743	0,734	0,726	0,717	0,661	0,650	0,638	0,628	0,617	0,559	0,546	0,533	0,520	0,507	0,438	0,423	0,408	0,395	0,381	
85	10		1,142	1,149	1,155	1,162	1,168	1,064	1,067	1,070	1,073	1,075	0,983	0,982	0,981	0,981	0,980	0,897	0,893	0,889	0,885	0,881	0,805	0,798	0,791	0,784	0,777
	15		1,016	1,017	1,017	1,018	1,019	0,937	0,935	0,932	0,930	0,927	0,854	0,849	0,843	0,838	0,832	0,766	0,758	0,749	0,741	0,733	0,670	0,659	0,648	0,638	0,627
	18		0,941	0,939	0,936	0,934	0,931	0,862	0,856	0,851	0,846	0,840	0,778	0,770	0,761	0,754	0,746	0,687	0,677	0,666	0,656	0,646	0,587	0,574	0,562	0,550	0,537
	20		0,891	0,887	0,883	0,883	0,874	0,811	0,804	0,797	0,790	0,784	0,726	0,717	0,707	0,698	0,689	0,634	0,622	0,611	0,599	0,588	0,531	0,517	0,503	0,490	0,477
	22		0,842	0,836	0,830	0,824	0,818	0,761	0,753	0,744	0,736	0,727	0,675	0,664	0,653	0,643	0,632	0,581	0,568	0,555	0,543	0,530	0,472	0,457	0,443	0,430	0,416
24		0,792	0,785	0,777	0,770	0,762	0,711	0,701	0,691	0,682	0,672	0,624	0,612	0,600	0,588	0,577	0,526	0,512	0,499	0,486	0,473	0,410	0,395	0,381	0,367	0,354	
80	10		1,092	1,096	1,100	1,104	1,108	1,016	1,017	1,017	1,018	1,019	0,937	0,935	0,932	0,930	0,927	0,854	0,849	0,843	0,838	0,832	0,766	0,758	0,749	0,741	0,733
	15		0,967	0,966	0,964	0,963	0,962	0,891	0,887	0,883	0,878	0,874	0,811	0,804	0,797	0,790	0,784	0,726	0,717	0,707	0,698	0,689	0,634	0,622	0,611	0,599	0,588
	18		0,893	0,889	0,885	0,881	0,877	0,817	0,810	0,803	0,797	0,790	0,736	0,727	0,718	0,709	0,700	0,649	0,638	0,627	0,615	0,604	0,554	0,540	0,527	0,514	0,502
	20		0,844	0,839	0,833	0,827	0,821	0,768	0,759	0,751	0,743	0,735	0,686	0,676	0,665	0,655	0,644	0,598	0,585	0,573	0,561	0,549	0,499	0,484	0,471	0,457	0,444
	22		0,796	0,788	0,781	0,773	0,766	0,719	0,709	0,699	0,690	0,680	0,636	0,624	0,613	0,601	0,590	0,546	0,532	0,519	0,506	0,494	0,442	0,427	0,413	0,399	0,386
24		0,748	0,739	0,730	0,721	0,712	0,670	0,659	0,648	0,637	0,627	0,586	0,573	0,561	0,548	0,536	0,493	0,479	0,465	0,452	0,438	0,383	0,368	0,353	0,340	0,326	
75	10		1,040	1,042	1,044	1,045	1,047	0,967	0,966	0,964	0,963	0,962	0,891	0,887	0,883	0,878	0,811	0,804	0,797	0,790	0,784	0,726	0,717	0,707	0,698	0,689	
	15		0,918	0,914	0,911	0,908	0,904	0,844	0,839	0,833	0,827	0,821	0,768	0,759	0,751	0,743	0,735	0,686	0,676	0,665	0,655	0,644	0,598	0,585	0,573	0,561	0,549
	18		0,845	0,839	0,833	0,827	0,822	0,772	0,763	0,755	0,747	0,739	0,694	0,684	0,673	0,663	0,653	0,611	0,599	0,587	0,575	0,563	0,520	0,506	0,492	0,479	0,466
	20		0,797	0,789	0,782	0,775	0,767	0,723	0,714	0,704	0,695	0,685	0,645	0,634	0,622	0,611	0,600	0,561	0,548	0,535	0,522	0,510	0,467	0,452	0,438	0,424	0,411
	22		0,749	0,740	0,732	0,723	0,714	0,676	0,665	0,654	0,643	0,633	0,597	0,584	0,572	0,560	0,548	0,511	0,497	0,483	0,470	0,457	0,412	0,397	0,383	0,369	0,355
24		0,702	0,692	0,682	0,672	0,662	0,628	0,616	0,604	0,592	0,581	0,548	0,535	0,521	0,508	0,496	0,460	0,445	0,431	0,417	0,404	0,355	0,340	0,326	0,312	0,299	
70	10		0,988	0,987	0,987	0,986	0,986	0,918	0,914	0,911	0,908	0,904	0,844	0,839	0,833	0,827	0,821	0,768	0,759	0,751	0,743	0,735	0,686	0,676	0,665	0,655	0,644
	15		0,867	0,862	0,857	0,852	0,847	0,797	0,789	0,782	0,775	0,767	0,723	0,714	0,704	0,695	0,685	0,645	0,634	0,622	0,611	0,600	0,561	0,548	0,535	0,522	0,510
	18		0,796	0,788	0,781	0,773	0,766	0,726	0,716	0,707	0,697	0,688	0,652	0,640	0,629	0,618	0,607	0,572	0,559	0,546	0,534	0,522	0,485	0,471	0,457	0,443	0,430
	20		0,749	0,740	0,731	0,722	0,713	0,678	0,668	0,657	0,646	0,636	0,604	0,592	0,579	0,567	0,555	0,524	0,510	0,496	0,483	0,470	0,434	0,419	0,405	0,391	0,378
	22		0,702	0,692	0,682	0,672	0,662	0,632	0,620	0,608	0,596	0,585	0,557	0,543	0,530	0,517	0,505	0,475	0,460	0,446	0,433	0,420	0,382	0,367	0,352	0,338	0,325
24		0,656	0,644	0,633	0,622	0,611	0,585	0,572	0,560	0,547	0,535	0,509	0,495	0,482	0,468	0,455	0,426	0,411	0,397	0,383	0,369	0,327	0,312	0,298	0,284	0,272	
65	10		0,935	0,932	0,929	0,927	0,924	0,867	0,862	0,857	0,852	0,847	0,797	0,789	0,782	0,775	0,767	0,723	0,714	0,704	0,695	0,685	0,645	0,634	0,622	0,611	0,600
	15		0,816	0,809	0,802	0,795	0,789	0,749	0,740	0,731	0,722	0,713	0,678	0,668	0,657	0,646	0,636	0,604	0,592	0,579	0,567	0,555	0,524	0,510	0,496	0,483	0,470
	18		0,746	0,737	0,728	0,719	0,710	0,679	0,668	0,657	0,647	0,636	0,608	0,596	0,584	0,572	0,560	0,533	0,519	0,506	0,493	0,480	0,450	0,436	0,421	0,408	0,394
	20		0,699	0,689	0,679	0,669	0,659	0,633	0,621	0,609	0,597	0,586	0,562	0,549	0,536	0,523	0,511	0,486	0,472	0,458	0,444	0,431	0,401	0,386	0,372	0,358	0,344
	22		0,654	0,642	0,631	0,620	0,609	0,587	0,574	0,561	0,549	0,537	0,516	0,502	0,488	0,475	0,462	0,439	0,424	0,410	0,396	0,382	0,351	0,336	0,321	0,308	0,295
24		0,608	0,596	0,584	0,572	0,560	0,542	0,528	0,515	0,502	0,489	0,470	0,456	0,441	0,428	0,415	0,391	0,376	0,362	0,348	0,335	0,299	0,284	0,270	0,257	0,244	
60	10		0,880	0,876	0,871	0,867	0,862	0,816	0,809	0,802	0,795	0,789	0,749	0,740	0,731	0,722	0,713	0,678	0,668	0,657	0,646	0,636	0,604	0,592	0,579	0,567	0,555
	15		0,763	0,755	0,746	0,738	0,730	0,699	0,689	0,679	0,669	0,659	0,633	0,621	0,609	0,597	0,586	0,562	0,549	0,536	0,523	0,511	0,486	0,472	0,458	0,444	0,431
	18		0,694	0,684	0,674	0,664	0,654	0,631	0,619	0,607	0,596	0,584	0,564	0,551	0,538	0,525	0,513	0,493	0,479	0,465	0,451	0,438	0,415	0,400	0,386	0,372	0,358
	20		0,649	0,638	0,626	0,615	0,604	0,586	0,573	0,560	0,548	0,536	0,519	0,505	0,492	0,478	0,465	0,447	0,433	0,418	0,405	0,391	0,368	0,353	0,338	0,324	0,311
	22		0,604	0,592	0,579	0,567	0,556	0,541	0,528	0,514	0,501	0,489	0,474	0,460	0,446	0,432	0,419	0,402	0,387	0,372	0,359	0,345	0,319	0,305	0,290	0,277	0,264
24		0,560	0,546	0,533	0,521	0,508	0,497	0,483	0,469	0,455	0,442	0,430	0,415	0,401	0,387	0,374	0,356	0,341	0,327	0,313	0,300	0,270	0,256	0,242	0,229	0,217	
55	10		0,825	0,818	0,812	0,805	0,799	0,763	0,755	0,746	0,738	0,730	0,699	0,689	0,679	0,669	0,659	0,633	0,621	0,609	0,597	0,586	0,562	0,549	0,536	0,523	0,511
	15		0,710	0,700	0,690	0,680	0,670	0,649	0,638	0,626	0,615	0,604	0,586	0,573	0,560	0,548	0,536	0,519	0,505	0,492	0,478	0,465	0,447	0,433	0,418	0,405	0,391
	18		0,642	0,630	0,619	0,607	0,596	0,582	0,569	0,556	0,5																

## Delivered as ordered

A barcode-based logistics system ensures reliable, punctual delivery. Sturdy, fully cardboard packaging prevents any kind of damage during transport and storage. An extra stretch film covering protects Zehnder Charleston during and after installation, and is only removed when you move in.

Zehnder Charleston radiators are always safely protected with stretch film and cardboard packaging:

- When in transit
- When in storage
- Until the end of the construction phase



## Reliability

- Short delivery times: 8 - 10 working days
- Express programme: 4 - 5 working days
- Fast, reliable warehouse administration
- Normally on-time delivery

## Zehnder Charleston label

- Important information such as the name of the building site, floor, room, radiator model, connection type
- Logistics optimised through use of barcodes



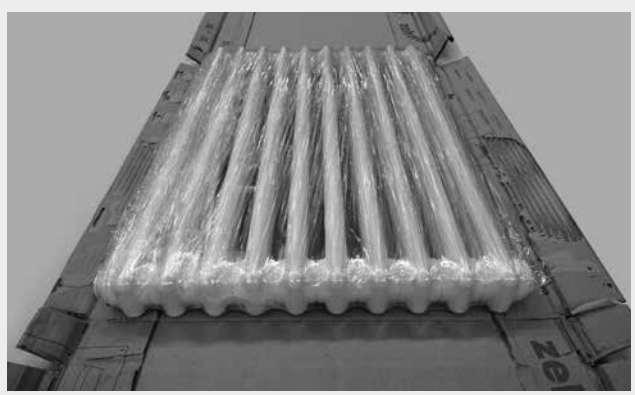
## Zehnder Charleston label

<b>Zehnder Charleston</b> <b>Modell: 3060 – 21</b> Anschluss: V001 Farbe: 9016 / RAL 9016 SO: 1002046832 000110 Kundenbestell – Nr.: 4024478474 Projekt: Raum:	<b>Kundenadresse:</b> Max Mustermann Musterstrasse 1 DE – 00000 Musterhausen Gesamtanzahl HK: 0017 Produktionsdatum: 31.10.20 <b>Route: DE – S – 011</b>	<b>N</b>
	707597 0010	 2082848

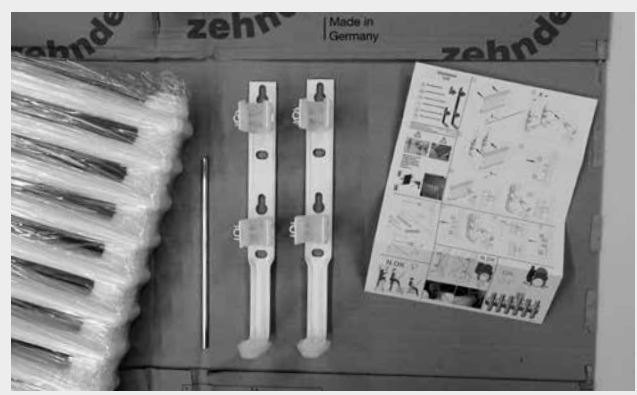
<b>Zehnder Charleston</b> <b>Modell: 3060 – 21</b> Farbe: 9016 / RAL 9016 SO: 1002046832 000110 Kundenbestell – Nr.: 4024478474 Projekt: Raum:		Höhe [mm]: 600 Länge [mm]: 992 Tiefe [mm]: 100 Bruttogewicht [kg]: 31,9/127,6 Leistung $\Delta T_{50K}$ [Watt]: 1279,2 Zubehör: 2x SMB50	 2082848
 (95)1002046832000110(96)000827119701			

# Zehnder Charleston packaging to order

## Benefits on the building site



Zehnder Charleston is laid on the original Zehnder box before installation on the building site.



The standard accessories ordered with the radiator are enclosed.



Stretch film remains in place during installation and protects the radiator until you move in.

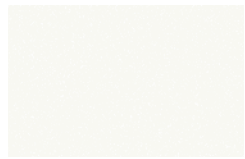


Original packaging serves as additional protection of Zehnder Charleston during the entire building phase, until you are ready to move in.

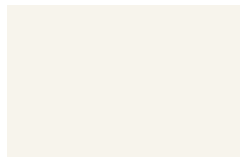
# Warm colours

**zehnder**

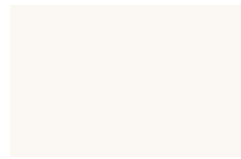
## Colour category 1: CORE



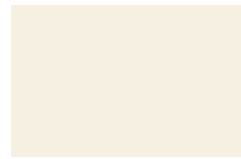
**White Quartz** <sup>1)</sup>  
0521



**Pure White** <sup>2)</sup>  
RAL 9010 / 9010



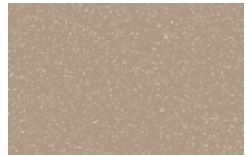
**Edelweiss**  
0067



**Cream**  
RAL 9001 / 9001



**Telegrey 4**  
RAL 7047 / 7247



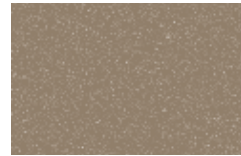
**Beige Quartz**  
0523



**Golden Sand**  
0258



**Yellow Grey**  
RAL 7034 / 7234



**Pearl Beige**  
RAL 1035 / 1235



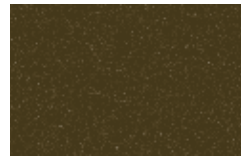
**Beach Gold**  
0272



**Concrete Grey**  
0265



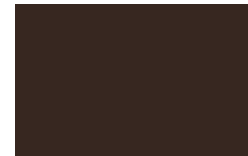
**Beige Grey**  
0267



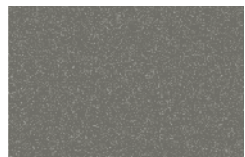
**Bronze**  
0276



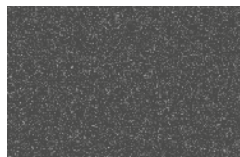
**Brown Quartz**  
0529



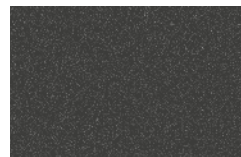
**Dark Brown**  
0270



**Grey Aluminium**  
9007



**Anthracite**  
0346



**Umbra Grey**  
RAL 7022 / 7222

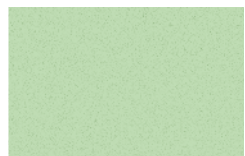


**Volcanic**  
0336



Surcharge for colour category 1: 20 %

## Colour category 2: TREND



**Pastel Green**  
RAL 6019 / 6219



**Reseda Green**  
RAL 6011 / 6211



**Cement Grey**  
RAL 7033 / 7233



**Olive Green**  
RAL 6003 / 6203



**Terracotta Faded**  
0299



**Terracotta**  
0292



**Ruby Red**  
RAL 3003 / 3003



Surcharge for colour category 2: 30 %

<sup>1)</sup> Unlike to the colour standard (here RAL tone) the Zehnder no. also includes the features matt respectively glossy. Therefore the RAL standard and Zehnder no. differ in many colours. Please note that the prices always relate to the given finishes matt or glossy, deviating finishes will be calculated like colours outside of the colour cart. These colours are finished with a gloss finish; all other colours are matt-finished.

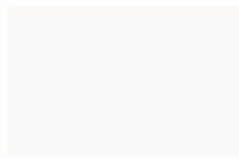
<sup>1)</sup> Not for Zehnder Nova, Nova Neo and Excelsior

<sup>2)</sup> Standard colour for Fare Tech & Alura Tech, therefore Traffic White RAL 9016 with surcharge 20 % of categorie 1

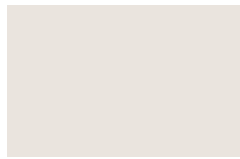
<sup>3)</sup> Only for Zehnder Charleston and Zehnder Metropolitan

# Cool colours

## Colour category 1: CORE



**White Matt**  
0556



**Light Beige**  
0253



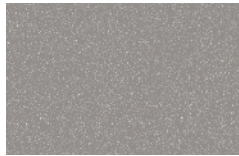
**Light Grey**  
0262



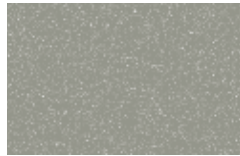
**White Aluminium**  
9006



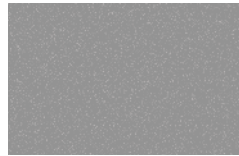
**Light Jeans**  
0264



**Titane**  
0335



**Inox Look**  
0332



**Telegrey 2**  
RAL 7046 / 7246



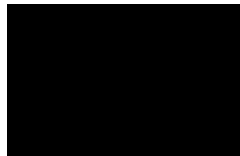
**Blue Grey**  
RAL 7031 / 7231



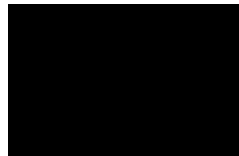
**Anthracite Grey**  
RAL 7016 / 7016



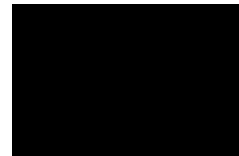
**Black Quartz**  
0550



**Black Matt**  
0557



**Traffic Black**  
RAL 9017 / 9217



**Jet Black**  
RAL 9005 / 9005

Surcharge for colour category 1: 20 %

## Colour category 2: TREND



**Pastel Blue**  
RAL 5024 / 5224



**Pigeon Blue**  
RAL 5014 / 5214



**Gentian Blue**  
RAL 5010 / 5210



**Sapphire Blue**  
RAL 5003 / 5203



**Blue Night**  
0289

Surcharge for colour category 2: 30 %

## STANDARD



**Traffic White**  
RAL 9016 / 9016



**Technoline (Clear)**<sup>3)</sup>  
0325



**Chrome (Surface)**  
0008



**Stainless steel brushed**  
9517

Some colours/surfaces are only available for selected products. Please also see the notes on the respective product pages. For Special surfaces of the Studio Collection, please see the respective product chapters. Special colours on request. Due to different manufacturing techniques of the original colours, deviations can occur in colour and polish. RAL and NCS are designations from the manufacturer. The respective colour code (ED) is set at the 9th and 10th places in the article no.

Other special finishes in the RAL, RAL-D, NCS-S, Sanitary, DB colour systems are available as required, surcharges on request.



Zehnder  
World of Colours