

zehnder *excelsior*

zehnder



Subject to technical and price changes.

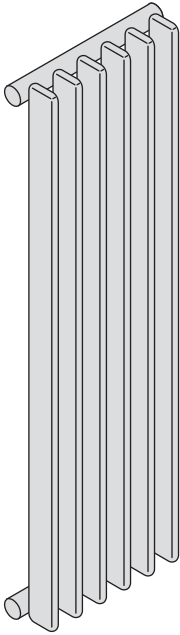
© Copyright Zehnder – a division of Zehnder Group UK Ltd

All rights, especially those of reproduction, dissemination and translation, are reserved.

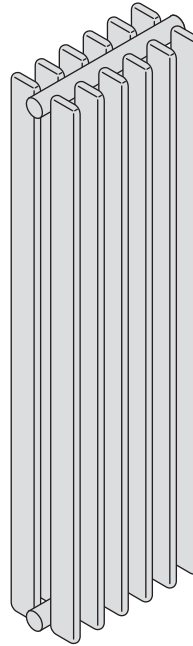
No part of this publication may be reproduced in any form or by any means (printing, photocopying, microfilm, scanning or otherwise), or electronically processed, duplicated, stored or distributed without the prior written approval of Zehnder Group.

Models overview	4
Product description	5
Technical data:	
– Section spacing 30 mm	7
– Section spacing 40 mm	8
– Section spacing 50 mm	9
– Section spacing 60 mm	10
– Table of overall lengths per number of sections	11
Pressure loss	12
Connection possibilities	13
Series-connections	15
Fixing provisions	16
Serial configurations / support legs	18
Special versions	19
Heat emission / technical data per section:	
– Overall length 210– 280 mm	20
– Overall length 280– 350 mm	21
– Overall length 350– 405 mm	22
– Overall length 405– 500 mm	23
– Overall length 600– 700 mm	24
– Overall length 700– 800 mm	25
– Overall length 800– 900 mm	26
– Overall length 900–1000 mm	27
– Overall length 1200–1400 mm	28
– Overall length 1400–1600 mm	29
– Overall length 1600–1800 mm	30
– Overall length 1800–2000 mm	31
– Overall length 2200–2400 mm	32
– Overall length 2400–2600 mm	33
– Overall length 2600 mm	34
Configuration examples	35
Conversion factors	36

zehnder *excelsior*



zehnder *excelsior* single-row
Models Excelsior 1000



zehnder *excelsior* double-row
Models Excelsior 2000

Radiators taller than 1600 mm are supplied, as standard, with welded-on strengthener to stabilize the elements.

General

The **zehnder excelsior** radiator consists of narrow, vertical, flat oval, pressure-welded, precision steel tubes. It is available in single-row or double-row configuration with a range of tube spacings as follows: 30, 40, 50, 60, 80, 100 mm.

Materials used

Flat oval tubes	70 x 8 mm
Collectors	ø 30 mm

Particularly advantageous features

- Lightweight, high heat emission
- Ideal flow conditions are obtained by the vertical configuration, which results in optimised heat emission
- Low content means fast reaction times
- Eminently suitable for compliance with stringent hygiene requirements and where ease of cleaning is essential

- Rounded, accident-proof edges preclude any risk of injury
- Ideal as a balustrade, railing, in front of windows or on stairways

Application

The **zehnder excelsior** radiator features contemporary styling and has a wide range of applications. It can be installed as a room divider or, because of its low-light blockage design, in front of glass windows. It has been highly commended by the Heinrich Heine University of Düsseldorf, Germany, for its compliance with stringent hygiene requirements.

Dimensions

The minimum overall length for all models is 4 sections. The maximum overall length is model-dependent and can be obtained from the following tables.

An average length tolerance of ± 2 mm per metre run must be allowed for.

Important: remember transport limitations!

The British Standard Code of Practice BS7593: 1992 Treatment of Water in Hot Water Central Heating Systems, should be observed when installing a system.

All Zehnder products are supplied with a 2 year warranty on materials and manufacture. However, this may be invalidated should adequate water treatment not be applied during installation and throughout the life of the system.

Length calculation formula

(For overall lengths per number of sections see page 15)

Basic formula

L = X(E-1)+40
 L = overall length (in mm)
 E = Number of sections
 X = Section spacing (in mm)

Test pressure

Standard	6 bar
High pressure (price suppl.)	13 bar

Operating pressure (EN 442)

Standard	max. 4.5 bar
High pressure (price suppl.)	max. 10 bar

Operating temperature

max. 120 °C

Basic delivery schedule for standard configuration

Supplied ready-to-install with 2, 3 or 4 connectors for flow, return, vent and drain welded in. Stove-enamelled in RAL 9016 standard pure white with transport packing.

Special versions

- Curved or angled configuration, on request and according to drawing
- Intermediate overall heights
- High-pressure version
- Overall height up to 4000 mm (on request)
- Overlengths (on request)
- *completto* version: with thermostat valve incorporated in top collector; connections from below
- Non-removable weld-attached support legs, adjustable and non-adjustable (see page 18/19)
- Fixing with weld-attached mounting plates (on request)
- Recessed sections
- Section spacing 80/100/120 mm
- Overall heights 210, 280, 350 mm

Stove enamelling

Standard version RAL 9016 pure white

Special enamelling with price supplement

- Zehnder colour range
- Other RAL, NCS-S and sanitary ware colours

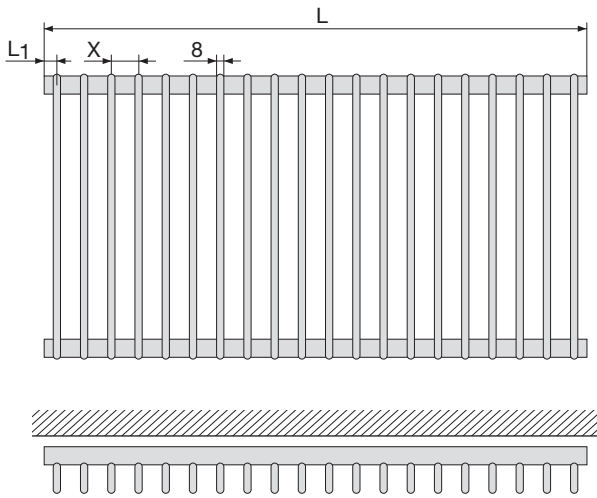
Optional on request

Metallic enamelling, clear lacquer and RAL luminous colours on request

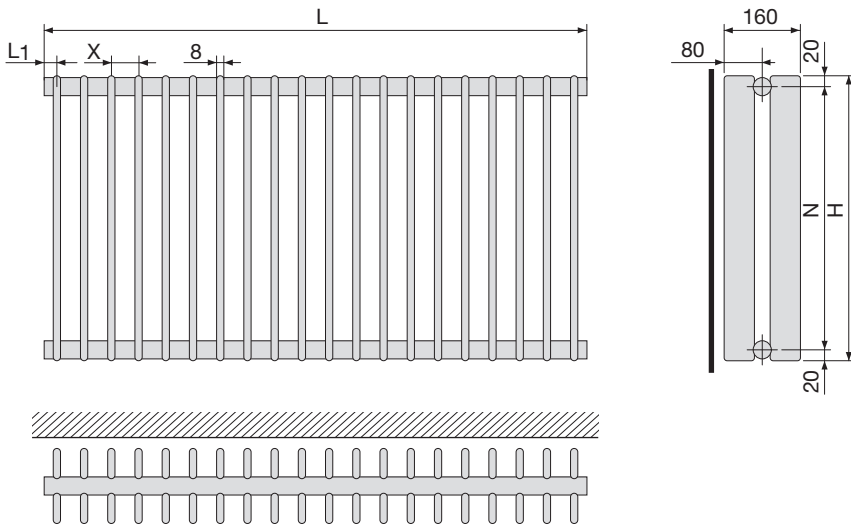
Slight variations in comparison with the original RAL or NCS colours are possible, due to varying glazes and production techniques.

Galvanized version not available

zehnder excelsior 1000 (single-row)



zehnder excelsior 2000 (double-row)



- H = overall height [mm]
- L = overall length [mm]
- N = connection spacing = overall height -40 mm
- L = Overall lengths incl. connections [mm]
- L₁ = connection boss length 20 mm
- X = Section spacing

Technical data per section (section spacing 30 mm)

Model	H mm	N mm	A m ²	V dm ³	M kg	s _k %	q _{ms} kg/h	Exp. n	Φ _L =∅T 50 K EN 442 Watt
E1021/30	210	170	0.039	0.12	0.451	21	1.42	1.20	16.5
E1028/30	280	240	0.050	0.15	0.572	18	1.75	1.20	20.4
E1035/30	350	310	0.060	0.17	0.682	22	2.08	1.21	24.2
E1040/30	405	365	0.066	0.18	0.759	19	2.32	1.21	27.0
E1050/30	500	460	0.080	0.22	0.913	20	2.74	1.21	31.9
E1060/30	600	560	0.095	0.25	1.078	20	3.17	1.22	36.9
E1070/30	700	660	0.110	0.29	1.243	20	3.60	1.22	41.9
E1080/30	800	760	0.125	0.32	1.419	20	4.02	1.23	46.8
E1090/30	900	860	0.140	0.36	1.584	20	4.45	1.23	51.8
E1100/30	1000	960	0.155	0.40	1.749	20	4.88	1.24	56.8
E1120/30	1200	1160	0.185	0.47	2.090	20	5.76	1.25	67.0
E1140/30	1400	1360	0.215	0.55	2.442	20	6.66	1.26	77.5
E1160/30	1600	1560	0.245	0.62	2.761	20	7.59	1.26	88.3
E1180/30	1800	1760	0.274	0.69	3.091	19	8.56	1.28	99.5
E1200/30	2000	1960	0.304	0.76	3.432	19	9.54	1.29	111.0
E1220/30	2200	2160	0.334	0.84	3.762	19	10.58	1.29	123.0
E1240/30	2400	2360	0.364	0.92	4.114	19	11.69	1.30	136.0
E1260/30	2600	2560	0.394	0.99	4.444	18	12.81	1.31	149.0
E2021/30	210	170	0.069	0.17	0.759	14	2.52	1.28	29.3
E2028/30	280	240	0.090	0.24	1.023	14	3.12	1.28	36.3
E2035/30	350	310	0.111	0.29	1.254	14	3.69	1.28	43.0
E2040/30	405	365	0.127	0.33	1.419	13	4.13	1.29	48.0
E2050/30	500	460	0.155	0.40	1.760	13	4.86	1.30	56.5
E2060/30	600	560	0.185	0.47	2.090	13	5.61	1.30	65.2
E2070/30	700	660	0.215	0.54	2.431	13	6.34	1.30	73.7
E2080/30	800	760	0.245	0.62	2.761	12	7.06	1.31	82.1
E2090/30	900	860	0.275	0.69	3.102	12	7.77	1.31	90.4
E2100/30	1000	960	0.305	0.76	3.432	12	8.49	1.31	98.7
E2120/30	1200	1160	0.364	0.91	4.103	12	9.89	1.30	115.0
E2140/30	1400	1360	0.420	1.07	4.763	12	11.33	1.32	132.0
E2160/30	1600	1560	0.484	1.20	5.445	12	12.81	1.33	149.0
E2180/30	1800	1760	0.543	1.34	6.116	12	14.27	1.34	166.0
E2200/30	2000	1960	0.603	1.49	6.787	12	15.73	1.34	183.0
E2220/30	2200	2160	0.663	1.64	7.458	12	17.28	1.35	201.0
E2240/30	2400	2360	0.719	1.80	8.118	12	18.83	1.35	219.0
E2260/30	2600	2560	0.747	1.94	8.800	12	20.44	1.36	237.7

- H = overall height [mm]
- N = connection spacing = overall height –40 mm
- A = surface area per section [m²]
- V = water content [dm³]
- M = dry weight [kg]
- s_k = radiation percentage [%]
- q_{ms} = rated water flow [kg/h]
- n = exponent

Technical data per section (section spacing 40 mm)

Model	H mm	N mm	A m ²	V dm ³	M kg	s _k %	q _{ms} kg/h	Exp. n	Φ _L =∅T 50 K EN 442 Watt
E1021/40	210	170	0.039	0.12	0.451	21	1.57	1.20	18.3
E1028/40	280	240	0.050	0.15	0.572	18	1.93	1.20	22.4
E1035/40	350	310	0.060	0.17	0.682	22	2.26	1.21	26.3
E1040/40	405	365	0.068	0.19	0.781	23	2.53	1.21	29.4
E1050/40	500	460	0.082	0.23	0.935	23	2.96	1.22	34.4
E1060/40	600	560	0.097	0.26	1.100	24	3.41	1.22	39.7
E1070/40	700	660	0.112	0.30	1.276	24	3.87	1.23	45.0
E1080/40	800	760	0.127	0.34	1.441	25	4.32	1.24	50.3
E1090/40	900	860	0.142	0.37	1.606	25	4.78	1.24	55.6
E1100/40	1000	960	0.157	0.41	1.771	25	5.25	1.25	61.1
E1120/40	1200	1160	0.187	0.48	2.112	25	6.21	1.26	72.2
E1140/40	1400	1360	0.217	0.54	2.442	25	7.21	1.27	83.8
E1160/40	1600	1560	0.246	0.63	2.783	24	8.25	1.29	96.0
E1180/40	1800	1760	0.276	0.70	3.113	24	9.37	1.30	109.0
E1200/40	2000	1960	0.306	0.77	3.454	23	10.49	1.31	122.0
E1220/40	2200	2160	0.336	0.85	3.784	23	11.78	1.33	137.0
E1240/40	2400	2360	0.366	0.91	4.114	23	13.07	1.30	152.0
E1260/40	2600	2560	0.396	0.99	4.455	22	14.44	1.32	168.0
E2021/40	210	170	0.071	0.18	0.781	16	2.68	1.28	31.2
E2028/40	280	240	0.092	0.25	1.045	16	3.34	1.28	38.9
E2035/40	350	310	0.114	0.30	1.276	16	3.97	1.28	46.2
E2040/40	405	365	0.129	0.34	1.463	16	4.45	1.28	51.7
E2050/40	500	460	0.157	0.41	1.782	16	5.25	1.29	61.1
E2060/40	600	560	0.187	0.48	2.112	15	6.07	1.29	70.6
E2070/40	700	660	0.217	0.55	2.453	15	6.89	1.29	80.1
E2080/40	800	760	0.247	0.63	2.783	15	7.69	1.30	89.4
E2090/40	900	860	0.277	0.70	3.102	15	8.49	1.30	98.7
E2100/40	1000	960	0.306	0.77	3.454	15	9.29	1.31	108.0
E2120/40	1200	1160	0.366	0.92	4.125	15	10.92	1.32	127.0
E2140/40	1400	1360	0.422	1.06	4.785	15	12.49	1.32	145.0
E2160/40	1600	1560	0.485	1.21	5.467	15	14.10	1.32	164.0
E2180/40	1800	1760	0.545	1.36	6.138	15	15.82	1.33	184.0
E2200/40	2000	1960	0.605	1.50	6.809	15	17.54	1.34	204.0
E2220/40	2200	2160	0.664	1.65	7.480	15	19.26	1.34	224.0
E2240/40	2400	2360	0.720	1.79	8.140	15	21.04	1.35	244.7
E2260/40	2600	2560	0.748	1.94	8.822	14	22.88	1.36	266.1

- H = overall height [mm]
- N = connection spacing = overall height –40 mm
- A = surface area per section [m²]
- V = water content [dm³]
- M = dry weight [kg]
- s_k = radiation percentage [%]
- q_{ms} = rated water flow [kg/h]
- n = exponent

Technical data per section (section spacing 50 mm)

Model	H mm	N mm	A m ²	V dm ³	M kg	s _k %	q _{ms} kg/h	Exp. n	Φ _{L=∅T} 50 K EN 442 Watt
E1021/50	210	170	0.043	0.12	0.473	25	1.71	1.20	19.9
E1028/50	280	240	0.054	0.15	0.594	22	2.08	1.20	24.2
E1035/50	350	310	0.063	0.17	0.704	26	2.43	1.21	28.3
E1040/50	405	365	0.070	0.20	0.803	26	2.70	1.22	31.4
E1050/50	500	460	0.084	0.24	0.957	27	3.16	1.22	36.8
E1060/50	600	560	0.099	0.27	1.122	28	3.64	1.23	42.3
E1070/50	700	660	0.114	0.31	1.298	28	4.12	1.24	47.9
E1080/50	800	760	0.129	0.35	1.463	29	4.60	1.25	53.5
E1090/50	900	860	0.144	0.38	1.628	29	5.09	1.25	59.2
E1100/50	1000	960	0.159	0.42	1.793	29	5.60	1.26	65.1
E1120/50	1200	1160	0.189	0.49	2.134	29	6.63	1.28	77.1
E1140/50	1400	1360	0.219	0.55	2.464	29	7.73	1.27	89.9
E1160/50	1600	1560	0.248	0.64	2.805	28	8.86	1.31	103.0
E1180/50	1800	1760	0.278	0.71	3.135	28	10.15	1.32	118.0
E1200/50	2000	1960	0.308	0.79	3.476	27	11.44	1.34	133.0
E1220/50	2200	2160	0.338	0.86	3.806	27	12.90	1.35	150.0
E1240/50	2400	2360	0.368	0.92	4.136	27	14.44	1.30	168.0
E1260/50	2600	2560	0.398	1.00	4.477	26	16.08	1.32	187.0
E2021/50	210	170	0.073	0.19	0.803	18	2.69	1.28	31.2
E2028/50	280	240	0.094	0.26	1.067	18	3.43	1.28	39.9
E2035/50	350	310	0.115	0.31	1.298	18	4.15	1.28	48.3
E2040/50	405	365	0.131	0.35	1.485	19	4.70	1.30	54.7
E2050/50	500	460	0.159	0.42	1.804	18	5.63	1.30	65.5
E2060/50	600	560	0.189	0.49	2.134	18	6.59	1.30	76.7
E2070/50	700	660	0.219	0.57	2.475	18	7.53	1.30	87.6
E2080/50	800	760	0.249	0.64	2.805	18	8.46	1.30	98.4
E2090/50	900	860	0.279	0.71	3.146	18	9.37	1.31	109.0
E2100/50	1000	960	0.308	0.78	3.476	17	10.32	1.31	120.0
E2120/50	1200	1160	0.368	0.93	4.147	17	12.12	1.31	141.0
E2140/50	1400	1360	0.424	1.07	4.807	17	13.87	1.33	161.0
E2160/50	1600	1560	0.487	1.22	5.489	17	15.65	1.31	182.0
E2180/50	1800	1760	0.547	1.37	6.160	17	17.37	1.31	202.0
E2200/50	2000	1960	0.607	1.51	6.831	17	19.17	1.32	223.0
E2220/50	2200	2160	0.666	1.66	7.502	17	20.89	1.32	243.0
E2240/50	2400	2360	0.722	1.80	8.162	17	22.69	1.34	264.0
E2260/50	2600	2560	0.750	1.95	8.844	17	24.47	1.35	284.6

- H = overall height [mm]
- N = connection spacing = overall height –40 mm
- A = surface area per section [m²]
- V = water content [dm³]
- M = dry weight [kg]
- s_k = radiation percentage [%]
- q_{ms} = rated water flow [kg/h]
- n = exponent

Technical data per section (section spacing 60 mm)

Model	H mm	N mm	A m ²	V dm ³	M kg	s _k %	q _{ms} kg/h	Exp. n	Φ _L =∅T 50 K EN 442 Watt
E1021/60	210	170	0.047	0.12	0.495	29	1.81	1.20	21.0
E1028/60	280	240	0.057	0.15	0.616	26	2.21	1.20	25.7
E1035/60	350	310	0.065	0.17	0.726	30	2.59	1.21	30.1
E1040/60	405	365	0.072	0.22	0.825	29	2.88	1.22	33.5
E1050/60	500	460	0.086	0.25	0.979	30	3.37	1.22	39.2
E1060/60	600	560	0.101	0.29	1.155	31	3.89	1.23	45.2
E1070/60	700	660	0.116	0.32	1.320	31	4.39	1.24	51.1
E1080/60	800	760	0.131	0.36	1.485	32	4.91	1.24	57.1
E1090/60	900	860	0.146	0.40	1.650	32	5.43	1.25	63.1
E1100/60	1000	960	0.161	0.43	1.826	32	5.95	1.26	69.2
E1120/60	1200	1160	0.191	0.51	2.156	32	7.04	1.27	81.9
E1140/60	1400	1360	0.221	0.59	2.486	32	8.18	1.28	95.1
E1160/60	1600	1560	0.250	0.65	2.827	32	9.37	1.30	109.0
E1180/60	1800	1760	0.280	0.72	3.168	31	10.66	1.31	124.0
E1200/60	2000	1960	0.310	0.80	3.498	31	12.04	1.32	140.0
E1220/60	2200	2160	0.340	0.87	3.839	31	13.41	1.34	156.0
E1240/60	2400	2360	0.370	0.95	4.169	31	14.96	1.31	174.0
E1260/60	2600	2560	0.399	1.02	4.499	30	16.59	1.33	193.0
E2021/60	210	170	0.075	0.20	0.825	20	2.88	1.28	33.6
E2028/60	280	240	0.096	0.27	1.089	20	3.62	1.28	42.1
E2035/60	350	310	0.117	0.32	1.320	20	4.33	1.28	50.4
E2040/60	405	365	0.133	0.36	1.507	21	4.88	1.28	56.7
E2050/60	500	460	0.161	0.43	1.826	21	5.80	1.28	67.4
E2060/60	600	560	0.191	0.50	2.156	21	6.74	1.29	78.4
E2070/60	700	660	0.221	0.58	2.497	20	7.68	1.29	89.3
E2080/60	800	760	0.251	0.65	2.827	20	8.60	1.29	100.0
E2090/60	900	860	0.280	0.72	3.168	20	9.54	1.30	111.0
E2100/60	1000	960	0.310	0.80	3.498	20	10.49	1.30	122.0
E2120/60	1200	1160	0.370	0.94	4.169	20	12.38	1.31	144.0
E2140/60	1400	1360	0.426	1.08	4.829	20	14.25	1.32	166.0
E2160/60	1600	1560	0.489	1.23	5.511	19	16.16	1.32	188.0
E2180/60	1800	1760	0.549	1.38	6.182	19	18.14	1.33	211.0
E2200/60	2000	1960	0.609	1.53	6.853	19	20.21	1.34	235.0
E2220/60	2200	2160	0.668	1.67	7.524	19	22.27	1.34	259.0
E2240/60	2400	2360	0.724	1.81	8.184	19	24.45	1.33	284.4
E2260/60	2600	2560	0.752	1.96	8.866	19	26.67	1.35	310.2

- H = overall height [mm]
- N = connection spacing = overall height –40 mm
- A = surface area per section [m²]
- V = water content [dm³]
- M = dry weight [kg]
- s_k = radiation percentage [%]
- q_{ms} = rated water flow [kg/h]
- n = exponent

Overall lengths L in mm

$$L = X (E-1) + 40 \text{ mm}$$

Number of sections	Section spacing X					
	30 mm	40 mm	50 mm	60 mm	80 mm	100 mm
4	130	160	190	220	280	340
5	160	200	240	280	360	440
6	190	240	290	340	440	540
7	220	280	340	400	520	640
8	250	320	390	460	600	740
9	280	360	440	520	680	840
10	310	400	490	580	760	940
11	340	440	540	640	840	1040
12	370	480	590	700	920	1140
13	400	520	640	760	1000	1240
14	430	560	690	820	1080	1340
15	460	600	740	880	1160	1440
16	490	640	790	940	1240	1540
17	520	680	840	1000	1320	1640
18	550	720	890	1060	1400	1740
19	580	760	940	1120	1480	1840
20	610	800	990	1180	1560	1940
21	640	840	1040	1240	1640	2040
22	670	880	1090	1300	1720	2140
23	700	920	1140	1360	1800	2240
24	730	960	1190	1420	1880	2340
25	760	1000	1240	1480	1960	2440
26	790	1040	1290	1540	2040	2540
27	820	1080	1340	1600	2120	2640
28	850	1120	1390	1660	2200	2740
29	880	1160	1440	1720	2280	2840
30	910	1200	1490	1780	2360	2940
31	940	1240	1540	1840	2440	3040
32	970	1280	1590	1900	2520	3140
33	1000	1320	1640	1960	2600	3240
34	1030	1360	1690	2020	2680	3340
35	1060	1400	1740	2080	2760	3440
36	1090	1440	1790	2140	2840	3540
37	1120	1480	1840	2200	2920	3640
38	1150	1520	1890	2260	3000	3740
39	1180	1560	1940	2320	3080	3840
40	1210	1600	1990	2380	3160	3940
41	1240	1640	2040	2440	3240	4040
42	1270	1680	2090	2500	3320	4140
43	1300	1720	2140	2560	3400	4240
44	1330	1760	2190	2620	3480	4340
45	1360	1800	2240	2680	3560	4440
46	1390	1840	2290	2740	3640	4540
47	1420	1880	2340	2800	3720	4640
48	1450	1920	2390	2860	3800	4740
49	1480	1960	2440	2920	3880	4840
50	1510	2000	2490	2980	3960	4940

Minimum water flow $q_{m \text{ min}}$.

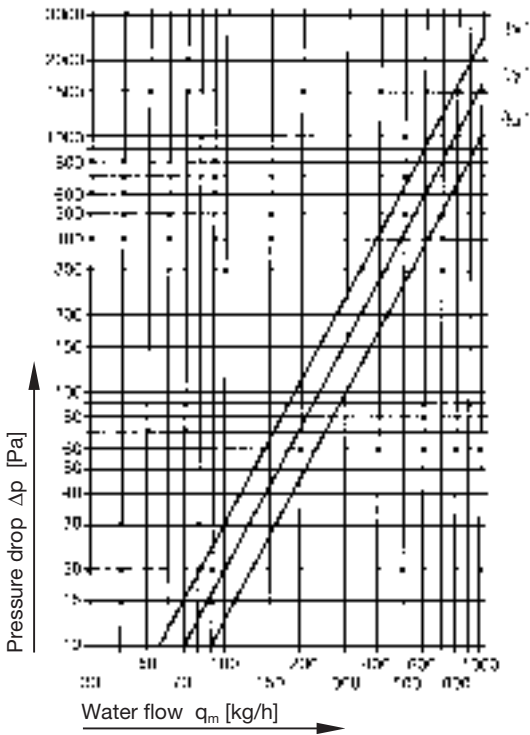
The rated water flow $q_{m \text{ s}}$ for each model is given in the technical data tables. The effective water flow q_m through the **zehnder Excelsior** should not normally be less than 17% of the rated water flow $q_{m \text{ s}}$.

Pressure drop Δp

The pressure drop Δp of a **zehnder Excelsior** radiator as a function of the size and water flow q_m is obtained from one of the three graphs for any particular connection type.

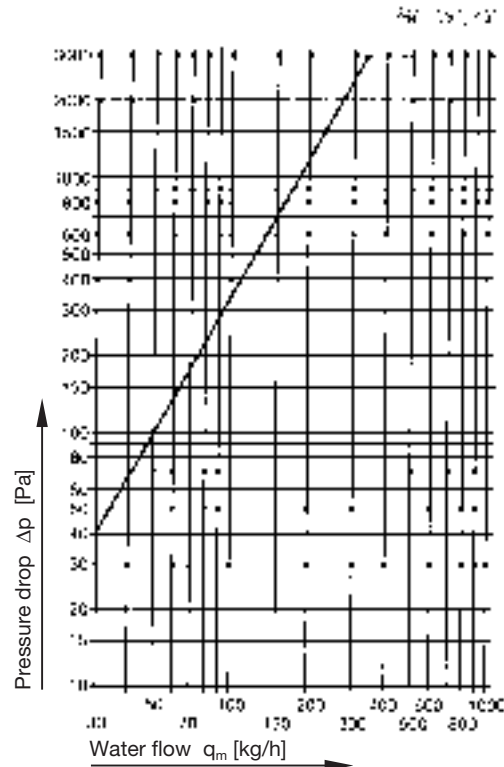
Standard connections

Connection types 120/340, 140/320



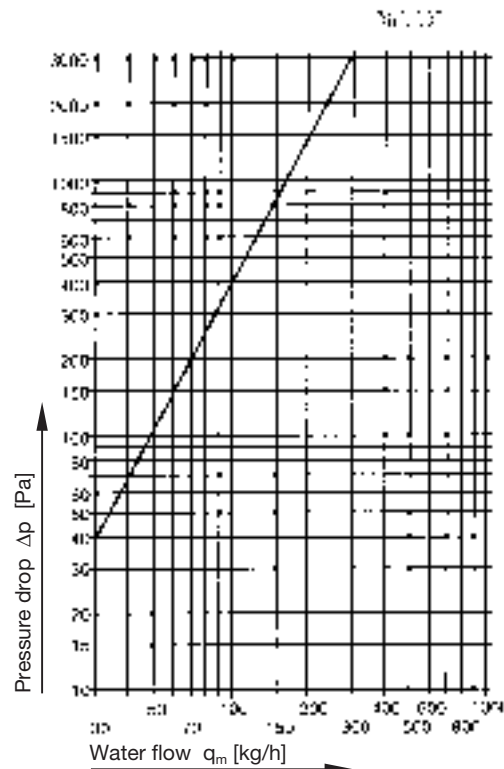
Special connections

Connection types 240/420, 130/310



Top and bottom connections

Connection types 243/423, 223/443, 134/314



Pressure loss with all other connection types

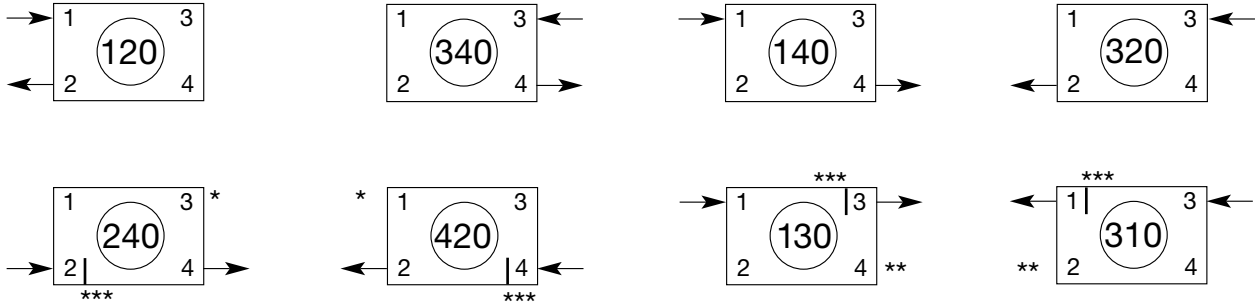
For all connection types not shown, an inlet and outlet resistance-loss coefficient of $\zeta = 2.5$ for connection sizes $\frac{3}{8}$ " to $\frac{3}{4}$ " and water velocities up to 1 m/s can be used for calculation purposes. The internal resistance can be neglected.

Series-connected radiators

With series-connected **zehnder Excelsior** radiators, an inlet and outlet resistance-loss coefficient of $\zeta = 2.5$ per radiator can be used for calculation purposes. The radiator link pipes must be additionally allowed for.

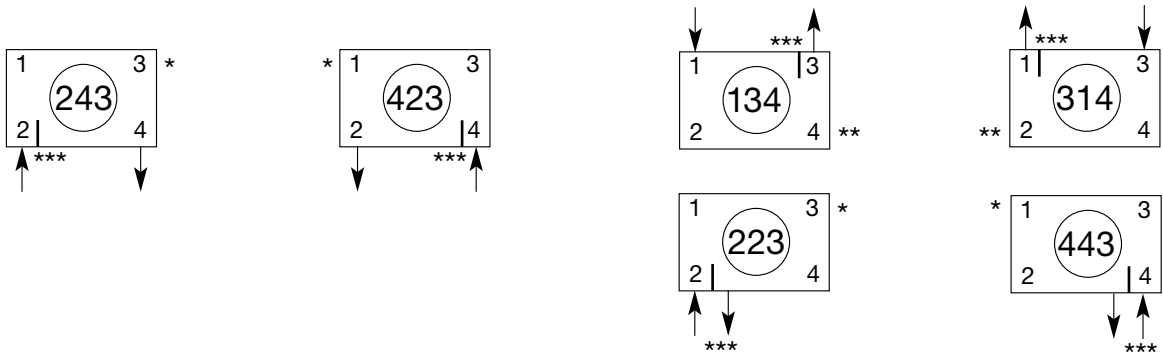
Connections to two-pipe systems

Normal connections 1/4", 3/8", 1/2", 3/4":



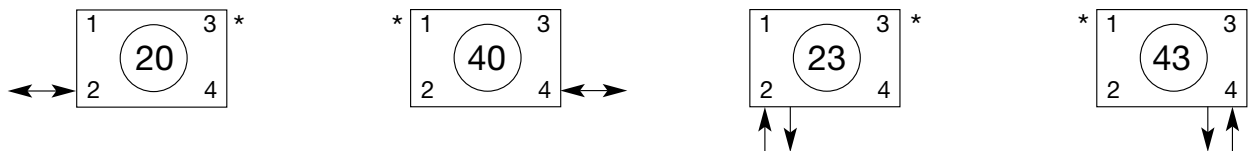
Special connections to two-pipe systems

Standard connections 1/4", 3/8", 1/2":



Standard connections to single entry systems

Technical data concerning the operation of the radiators with various valve types supplied on request.



Available with insert-tube valves only

Available with special valves only.
Flow inlet always outside

- * Vent mandatory
- ** Drain mandatory
- *** Baffle

Further special connections on request.

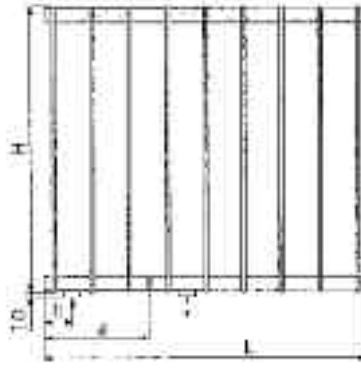
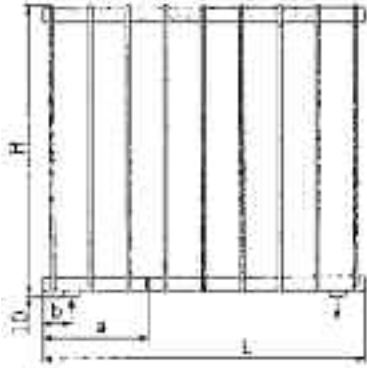
Two-pipe valves

Connection types 243, 423:

Connections from below-opposite ends, baffle located in the lower header.

Connection types 223, 443:

Connections from below-opposite ends, baffle located in the lower header.



a = number of spaces allowed for the flow

a = number of spaces allowed for the flow

$$b = \frac{\text{spacing}}{2} + 20 \text{ [mm]}$$

$$b = \frac{\text{spacing}}{2} + 20 \text{ [mm]}$$

Baffle location

E 1000 E 2000	Number of spaces allowed for the flow									
	2 spaces	3 spaces	4 spaces	5 spaces	6 spaces	7 spaces	8 spaces	9 spaces	10 spaces	
Overall height [mm]	Total number of spaces									
210- 350	4-36	37-54	55-72	73-90	91					
351- 450	4-36	37-54	55-72	73-90	91					
451- 600	4-28	29-42	43-56	57-70	71-84	85-98				
601- 900	4-20	21-29	30-39	40-49	50-58	59-68	69-78	79-88	89	
901-1400	4-15	16-22	23-30	31-37	38-44	45-52	53-59	60-66	67	
1401-1800	4-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46	
1801-2400	4- 8	9-12	13-17	18-21	22-25	26-29	30-33	34-37	38	
2401-3000	4- 6	7- 9	10-12	13-15	16-18	19-21	22-24	25-27	28	
3001-6000	4	6	8	10	12	14	16	18	20	

H = overall height [mm]
L = overall length [mm]

Series-connected radiators

Basic principles

Technically, series-connected radiators can be recorded as a single radiator.

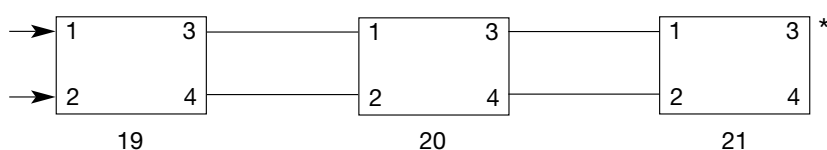
Link piping

The flow-resistance through the link pipes of the individual radiators should not be excessive. These pipes should at least be one size larger than the supply pipes.

The recommended coupling size is 3/4".

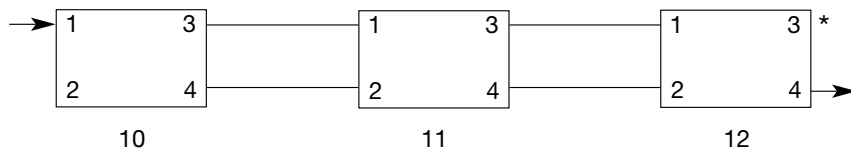
Same-side connection

The overall length of the entire series of **zehnder** *Excelsior* radiators is limited to 6 metres (max. 5 radiator units).

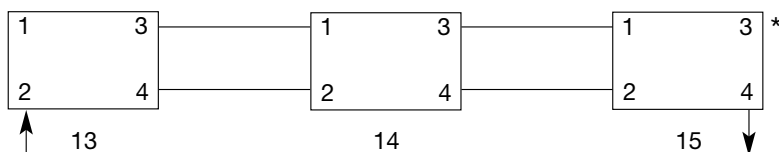


Opposite-side connection

The overall length of the entire series of **zehnder** *Excelsior* radiators is limited to 18 metres (max. 5 radiator units).



Vertical connection



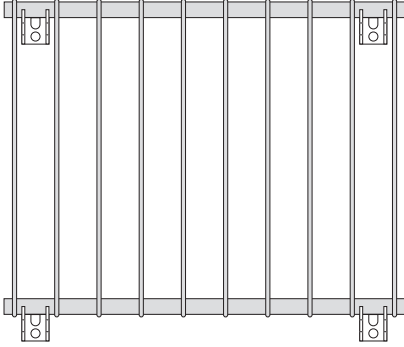
Baffle location when radiators are series-connected provided on request.

* vent mandatory

Fixing provisions

Fixing points

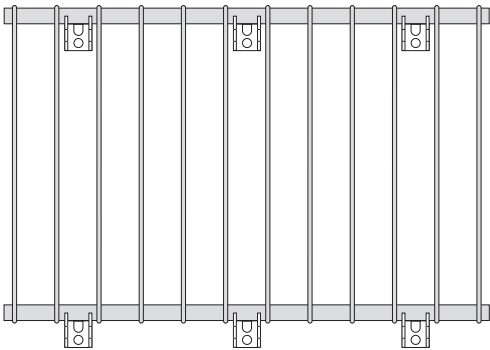
Standard version with wall brackets



With higher stability requirements and with radiators weighing over 100 kg, the number of fixing points should be increased accordingly.

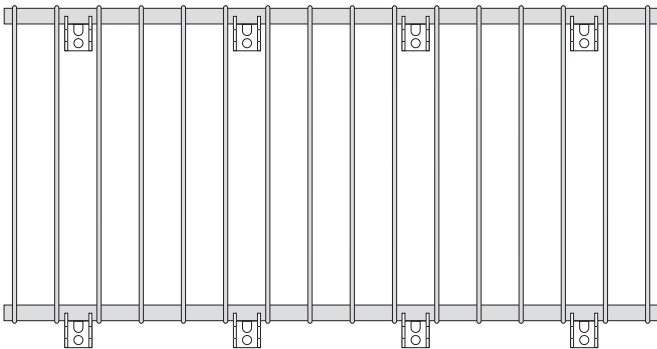
4 fixing points

For radiators with overall lengths up to 1500 mm



6 fixing points

For radiators with overall lengths up to 3500 mm



8 fixing points

For radiators with overall lengths up to 6000 mm

Wall bracket K 69, K 71

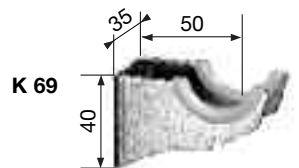
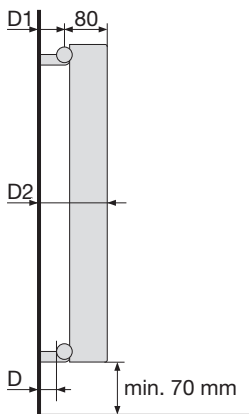
Application: Screw-on wall supports for use with **zehnder Excelsior**, with anti-friction/noise cushions

Dimensions from wall

The distance from the wall depends on the wall bracket used

Type		Bracket type	at	Front face to centre of connection	Depth radiator	Back face to finished wall	Connection centres from finished wall	Front face from finished wall
			P mm	mm	T mm	D mm	D1 mm	D2 mm
E 1000 E 2000	single	K 69	50	80	95	35	50	130
	double	K 71	100	80	160	20	100	180

E 1000



K 69 with SRS security clip

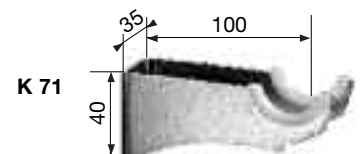
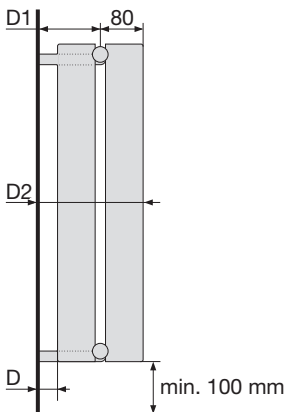
SRS



Security clips SRS

Application: For use with K 69, K 71 wall supports. (supplied on request at additional cost)

E 2000



K 71 with SRS security clip



Weld-attached flat-tube, E 1000 fixed foot

Welded-on support legs

Application:

Regarding stability requirements, support legs are suitable for freestanding Zehnder Excelsior installations with a total height of up to about 1000 mm (radiator + support leg). Stability should be adequate for a freestanding installation for overall heights of up to about 1000 mm. The determining factors are the state of the supporting surface, the size of the radiator and any imposed requirements. Fixing at the top should be considered if such requirements are particularly exacting.



Weld-attached flat-tube, E 1000 adjustable foot



Weld-attached flat-tube, E 2000 fixed foot



Weld-attached flat-tube, E 2000 adjustable foot

Description	Distance from floor H mm	Sleeve length A mm
Flat tube foot, fixed (standard)	100	-
Flat tube foot, fixed (vertical entry connections)	120	-
Flat tube foot, fixed	Customer request	-
Flat tube foot, adjustable (standard)	120 - 170	105
Flat tube foot, adjustable (standard)	150 - 200	105
Flat tube foot, adjustable (standard)	200 - 250	105



Base plate cover

A painted steel base plate cover is available, dimensions 123 x 73 x 20 mm. The foot opening is recessed on the wall side, to facilitate assembly after installation.

Foot cover for flat-tube with base plate 120 x 70 mm

Designation	Description	RAL 9016 Art. N°	Special colour Art. N°
Cover	1-part 123 x 73 x 20	753131	753139

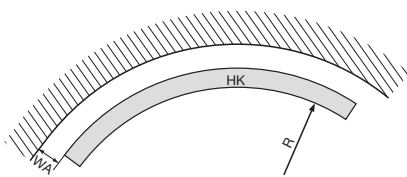
Curved configuration for radiators with spacing of at least 40 mm

Inside radius R_{min} 800 mm

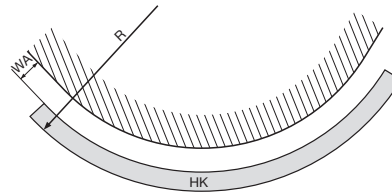
Outside radius R_{min} 800 mm

Available for E 1000 + E 2000 radiators

Please supply drawing with order



Inside radius



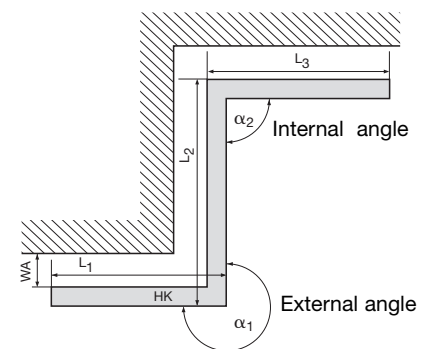
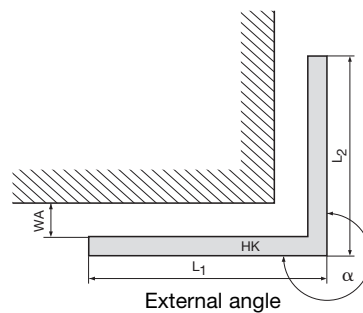
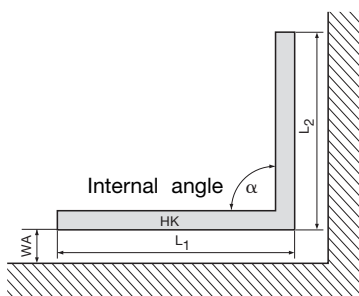
Outside radius

Angled configuration

Radiators with several angles can be supplied (max. 3 or 4 angles)

Available for E 1000 + E 2000 radiators

Please supply drawing with order



Important: please take transportability into account with special models.
All the special models are available on request.

- HK = Radiator
- WA = Distance from wall [mm]
- R = Radius [mm]
- $\alpha, \alpha_1, \alpha_2$ = Angle [°]
- L_1, L_2, L_3 = Lengths [mm]

Overall length = 210–280 mm $\Phi_L = \Delta T 50 K EN 442 (SN 384.501-503)$

Mod.	E1021/30			E2021/30			E1021/40			E2021/40			E1021/50			E2021/50			E1021/60			E2021/60			E1028/30			E2028/30				
	T mm	H mm	Exp. n	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56
4	66	76	82	117	135	148	73	84	91	125	144	158	80	91	99	125	144	158	84	96	105	134	155	170	82	93	102	145	168	183		
5	83	95	103	147	169	185	92	105	114	156	180	197	100	114	124	156	180	197	105	120	131	168	194	212	102	117	127	182	210	229		
6	99	113	123	176	203	222	110	126	137	187	216	236	119	137	149	187	216	236	126	144	157	202	233	255	122	140	152	218	252	275		
7	116	132	144	205	237	259	128	147	159	218	252	276	139	160	173	218	252	276	147	168	183	235	272	297	143	164	178	254	294	321		
8	132	151	164	234	271	296	146	168	182	250	289	315	159	182	198	250	289	315	168	192	209	269	311	339	163	187	203	290	336	367		
9	149	170	185	264	305	333	165	189	205	281	325	355	179	205	223	281	325	355	189	217	235	302	350	382	184	210	229	327	378	413		
10	165	189	205	293	339	370	183	210	228	312	361	394	199	228	248	312	361	394	210	241	261	336	388	424	204	234	254	363	420	458		
11	182	208	226	322	373	407	201	231	251	343	397	433	219	251	272	343	397	433	231	265	287	370	427	467	224	257	279	399	462	504		
12	198	227	246	352	406	444	220	252	273	374	433	473	239	274	297	374	433	473	252	289	314	403	466	509	245	280	305	436	504	550		
13	215	246	267	381	440	481	238	273	296	406	469	512	259	296	322	406	469	512	273	313	340	437	505	552	265	304	330	472	546	596		
14	231	265	287	410	474	518	256	294	319	437	505	552	279	319	347	437	505	552	294	337	366	470	544	594	286	327	355	508	588	642		
15	248	284	308	440	508	555	275	314	342	468	541	591	299	342	372	468	541	591	315	361	392	504	583	636	306	351	381	545	630	688		
16	264	302	329	469	542	592	293	335	364	499	577	630	318	365	396	499	577	630	336	385	418	538	622	679	326	374	406	581	671	733		
17	281	321	349	498	576	629	311	356	387	530	613	670	338	388	421	530	613	670	357	409	444	571	660	721	347	397	432	617	713	779		
18	297	340	370	527	610	666	329	377	410	562	649	709	358	410	446	562	649	709	378	433	470	605	699	764	367	421	457	653	755	825		
19	314	359	390	557	644	703	348	398	433	593	685	749	378	433	471	593	685	749	399	457	497	638	738	806	388	444	482	690	797	871		
20	330	378	411	586	677	740	366	419	456	624	721	788	398	456	495	624	721	788	420	481	523	672	777	849	408	467	508	726	839	917		
21	347	397	431	615	711	777	384	440	478	655	757	827	418	479	520	655	757	827	441	505	549	706	816	891	428	491	533	762	881	963		
22	363	416	452	645	745	814	403	461	501	686	794	867	438	502	545	686	794	867	462	529	575	739	855	933	449	514	559	799	923	1009		
23	380	435	472	674	779	851	421	482	524	718	830	906	458	524	570	718	830	906	483	553	601	773	893	976	469	538	584	835	965	1054		
24	396	454	493	703	813	888	439	503	547	749	866	946	478	547	594	749	866	946	504	577	627	806	932	1018	490	561	609	871	1007	1100		
25	413	473	513	733	847	925	458	524	569	780	902	985	498	570	619	780	902	985	525	601	653	840	971	1061	510	584	635	908	1049	1146		
26	429	491	534	762	881	962	476	545	592	811	938	1024	517	593	644	811	938	1024	546	626	680	874	1010	1103	530	608	660	944	1091	1192		
27	446	510	554	791	915	999	494	566	615	842	974	1064	537	616	669	842	974	1064	567	650	706	907	1049	1146	551	631	686	980	1133	1238		
28	462	529	575	820	948	1036	512	587	638	874	1010	1103	557	638	693	874	1010	1103	588	674	732	941	1088	1188	571	654	711	1016	1175	1284		
29	479	548	596	850	982	1073	531	608	660	905	1046	1143	577	661	718	905	1046	1143	609	698	758	974	1127	1231	592	678	736	1053	1217	1329		
30	495	567	616	879	1016	1110	549	629	683	936	1082	1182	597	684	743	936	1082	1182	630	722	784	1008	1165	1273	612	701	762	1089	1259	1375		
31	512	586	637	908	1050	1147	567	650	706	967	1118	1221	617	707	768	967	1118	1221	651	746	810	1042	1204	1315	632	725	787	1125	1301	1421		
32	528	605	657	938	1084	1184	586	671	729	998	1154	1261	637	730	793	998	1154	1261	672	770	836	1075	1243	1358	653	748	812	1162	1343	1467		
33	545	624	678	967	1118	1221	604	692	752	1030	1190	1300	657	752	817	1030	1190	1300	693	794	862	1109	1282	1400	673	771	838	1198	1385	1513		
34	561	643	698	996	1152	1258	622	713	774	1061	1226	1340	677	775	842	1061	1226	1340	714	818	889	1142	1321	1443	694	795	863	1234	1427	1559		
35	578	662	719	1026	1186	1295	641	734	797	1092	1262	1379	697	798	867	1092	1262	1379	735	842	915	1176	1360	1485	714	818	889	1271	1469	1604		
36	594	681	739	1055	1219	1332	659	755	820	1123	1299	1418	716	821	892	1123	1299	1418	756	866	941	1210	1398	1528	734	841	914	1307	1511	1650		
37	611	699	760	1084	1253	1369	677	776	843	1154	1335	1458	736	844	916	1154	1335	1458	777	890	967	1243	1437	1570	755	865	939	1343	1553	1696		
38	627	718	780	1113	1287	1406	695	797	865	1186	1371	1497	756	866	941	1186	1371	1497	798	914	993	1277	1476	1612	775	888	965	1379	1595	1742		
39	644	737	801	1143	1321	1443	714	818	888	1217	1407	1537	776	889	966	1217	1407	1537	819	938	1019	1310	1515	1655	796	911	990	1416	1637	1788		
40	660	756	821	1172	1355	1480	732	839	911	1248	1443	1576	796	912	991	1248	1443	1576	840	962	1045	1344	1554	1697	816	935	1016	1452	1679	1834		
41	677	775	842	1201	1389	1517	750	860	934	1279	1479	1615	816	935	1015	1279	1479	1615	861	986	1072	1378	1593	1740	836	958	1041	1488	1721	1880		
42	693	794	862	1231	1423	1554	769	881	957	1310	1515	1655	836	958	1040	1310	1515	1655	882	1010	1098	1411	1632	1782	857	982	1066	1525	1763	1925		
43	710	813	883	1260	1457	1591	787	902	979	1342	1551	1694	856	980	1065	1342	1551	1694	903	1035	1124	1445	1670	1825	877	1005	1092	1561	1805	1971		
44	726	832	904	1289	1490	1628	805	922	1002	1373	1587	1734	876	1003	1090	1373	1587	1734	924	1059	1150	1478	1709	1867	898	1028	1117	1597	1847	2017		
45	743	851	924	1319	1524	1665	824	943	1025	1404	1623	1773	896	1026	1115	1404	1623	1773	945	1083	1176	1512	1748	1909	918	1052	1143	1634	1889	2063		
46	759	870	945	1348	1558	1702	842	964	1048	1435	1659	1812	915	1049	1139	1435	1659	1812	966	1107	1202	1546	1787	1952	938	1075	1168	1670	1930	2109		
47	776	888	965	1377	1592	1739	860	985	1070	1466	1695	1852	935	1072	1164	1466	1695	1852	987	1131	1228	1579	1826	1994	959	1098	1193	1706	1972	2155		
48	792	907	986	1406	1626	1776	878	1006	1093	1498	1731	1891	955	1094	1189	1498	1731	1891	1008	1155	1255	16										

Overall length = 280–350 mm $\Phi_L = \Delta T 50 K EN 442$ (SN 384.501-503)

Mod.	E1028/40			E2028/40			E1028/50			E2028/50			E1028/60			E2028/60			E1035/30			E2035/30			E1035/40			E2035/40					
	T mm	H mm	Exp. n	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60			
4	95	280	1.2	90	103	112	156	180	196	97	111	120	160	185	202	103	118	128	168	195	213	97	111	121	172	199	217	105	121	131	185	214	233
5	95	280	1.2	112	128	139	195	225	246	121	139	151	200	231	252	129	147	160	211	243	266	121	139	151	215	249	272	132	151	164	231	267	292
6	95	280	1.2	134	154	167	233	270	295	145	166	181	239	277	302	154	177	192	253	292	319	145	167	181	258	298	326	158	181	197	277	320	350
7	95	280	1.2	157	180	195	272	315	344	169	194	211	279	323	353	180	206	224	295	341	372	169	194	211	301	348	380	184	211	230	323	374	408
8	95	280	1.2	179	205	223	311	360	393	194	222	241	319	369	403	206	236	256	337	389	425	194	222	241	344	398	434	210	241	262	370	427	467
9	95	280	1.2	202	231	251	350	405	442	218	250	271	359	415	453	231	265	288	379	438	478	218	250	272	387	447	489	237	271	295	416	481	525
10	160	350	1.21	224	257	279	389	450	491	242	277	301	399	461	504	257	294	320	421	487	532	242	278	302	430	497	543	263	302	328	462	534	583
11	160	350	1.21	246	282	307	428	495	540	266	305	331	439	507	554	283	324	352	463	535	585	266	305	332	473	547	597	289	332	361	508	588	642
12	160	350	1.21	269	308	335	467	540	589	290	333	361	479	554	605	308	353	384	505	584	638	290	333	362	516	597	652	316	362	394	554	641	700
13	160	350	1.21	291	334	362	506	585	639	315	360	392	519	600	655	334	383	416	547	633	691	315	361	392	559	646	706	342	392	426	601	694	758
14	160	350	1.21	314	359	390	545	630	688	339	388	422	559	646	705	360	412	448	589	681	744	339	389	422	602	696	760	368	422	459	647	748	817
15	160	350	1.21	336	385	418	584	675	737	363	416	452	599	692	756	386	442	480	632	730	797	363	416	453	645	746	815	395	452	492	693	801	875
16	160	350	1.21	358	411	446	622	720	786	387	444	482	638	738	806	411	471	512	674	779	851	387	444	483	688	795	869	421	483	525	739	855	933
17	160	350	1.21	381	436	474	661	765	835	411	471	512	678	784	857	437	501	544	716	827	904	411	472	513	731	845	923	447	513	557	785	908	992
18	160	350	1.21	403	462	502	700	810	884	436	499	542	718	830	907	463	530	576	758	876	957	436	500	543	774	895	977	473	543	590	832	961	1050
19	160	350	1.21	426	488	530	739	854	933	460	527	572	758	876	957	488	559	608	800	925	1010	460	527	573	817	945	1032	500	573	623	878	1015	1109
20	160	350	1.21	448	513	558	778	899	982	484	555	602	798	923	1008	514	589	640	842	973	1063	484	555	603	860	994	1086	526	603	656	924	1068	1167
21	160	350	1.21	470	539	585	817	944	1032	508	582	632	838	969	1058	540	618	672	884	1022	1116	508	583	634	903	1044	1140	552	633	689	970	1122	1225
22	160	350	1.21	493	565	613	856	989	1081	532	610	663	878	1015	1109	565	648	704	926	1071	1170	532	611	664	946	1094	1195	579	664	721	1016	1175	1284
23	160	350	1.21	515	590	641	895	1034	1130	557	638	693	918	1061	1159	591	677	736	968	1119	1223	557	638	694	989	1143	1249	605	694	754	1063	1228	1342
24	160	350	1.21	538	616	669	934	1079	1179	581	665	723	958	1107	1209	617	707	768	1010	1168	1276	581	666	724	1032	1193	1303	631	724	787	1109	1282	1400
25	160	350	1.21	560	642	697	973	1124	1228	605	693	753	998	1153	1260	643	736	800	1053	1217	1329	605	694	754	1075	1243	1358	658	754	820	1155	1335	1459
26	160	350	1.21	582	667	725	1011	1169	1277	629	721	783	1037	1199	1310	668	766	832	1095	1265	1382	629	722	785	1118	1293	1412	684	784	853	1201	1389	1517
27	160	350	1.21	605	693	753	1050	1214	1326	653	749	813	1077	1245	1360	694	795	864	1137	1314	1435	653	749	815	1161	1342	1466	710	814	885	1247	1442	1575
28	160	350	1.21	627	719	781	1089	1259	1375	678	776	843	1117	1292	1411	720	824	896	1179	1363	1489	678	777	845	1204	1392	1520	736	845	918	1294	1496	1634
29	160	350	1.21	650	744	808	1128	1304	1425	702	804	873	1157	1338	1461	745	854	928	1221	1411	1542	702	805	875	1247	1442	1575	763	875	951	1340	1549	1692
30	160	350	1.21	672	770	836	1167	1349	1474	726	832	904	1197	1384	1512	771	883	960	1263	1460	1595	726	833	905	1290	1491	1629	789	905	984	1386	1602	1750
31	160	350	1.21	694	796	864	1206	1394	1523	750	859	934	1237	1430	1562	797	913	992	1305	1509	1648	750	860	935	1333	1541	1683	815	935	1017	1432	1656	1809
32	160	350	1.21	717	821	892	1245	1439	1572	774	887	964	1277	1476	1612	822	942	1024	1347	1558	1701	774	888	966	1376	1591	1738	842	965	1049	1478	1709	1867
33	160	350	1.21	739	847	920	1284	1484	1621	799	915	994	1317	1522	1663	848	972	1056	1389	1606	1754	799	916	996	1419	1641	1792	868	995	1082	1525	1763	1925
34	160	350	1.21	762	873	948	1323	1529	1670	823	943	1024	1357	1568	1713	874	1001	1088	1431	1655	1808	823	944	1026	1462	1690	1846	894	1026	1115	1571	1816	1984
35	160	350	1.21	784	898	976	1362	1574	1719	847	970	1054	1397	1615	1764	900	1031	1119	1474	1704	1861	847	971	1056	1505	1740	1901	921	1056	1148	1617	1869	2042
36	160	350	1.21	806	924	1004	1400	1619	1768	871	998	1084	1436	1661	1814	925	1060	1151	1516	1752	1914	871	999	1086	1548	1790	1955	947	1086	1181	1663	1923	2100
37	160	350	1.21	829	950	1031	1439	1664	1818	895	1026	1114	1476	1707	1864	951	1089	1183	1558	1801	1967	895	1027	1116	1591	1839	2009	973	1116	1213	1709	1976	2159
38	160	350	1.21	851	975	1059	1478	1709	1867	920	1054	1145	1516	1753	1915	977	1119	1215	1600	1850	2020	920	1055	1147	1634	1889	2063	999	1146	1246	1756	2030	2217
39	160	350	1.21	874	1001	1087	1517	1754	1916	944	1081	1175	1556	1799	1965	1002	1148	1247	1642	1898	2073	944	1083	1177	1677	1939	2118	1026	1176	1279	1802	2083	2275
40	160	350	1.21	896	1027	1115	1556	1799	1965	968	1109	1205	1596	1845	2016	1028	1178	1279	1684	1947	2127	968	1110	1207	1720	1989	2172	1052	1207	1312	1848	2136	2334
41	160	350	1.21	918	1052	1143	1595	1844	2014	992	1137	1235	1636	1891	2066	1054	1207	1311	1726	1996	2180	992	1138	1237	1763	2038	2226	1078	1237	1344	1894	2190	2392
42	160	350	1.21	941	1078	1171	1634	1889	2063	1016	1164	1265	1676	1937	2116	1079	1237	1343	1768	2044	2233	1016	1166	1267	1806	2088	2281	1105	1267	1377	1940	2243	2450
43	160	350	1.21	963	1104	1199	1673	1934	2112	1041	1192	1295	1716	1984	2167	1105	1266	1375	1810	2093	2286	1041	1194	1297	1849	2138	2335	1131	1297	1410	1987	2297	2509
44	160	350	1.21	986	1129	1227	1712	1979	2161	1065	1220	1325	1756	2030	2217	1131	1296																

Overall length = 350–405 mm $\Phi_L = \Delta T 50 K EN 442 (SN 384.501-503)$

Mod.	E1035/50			E2035/50			E1035/60			E2035/60			E1040/30			E2040/30			E1040/40			E2040/40			E1040/50			E2040/50					
	T mm	H mm	Exp. n	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60
4	95	350	1.21	113	130	141	193	223	244	120	138	150	202	233	255	108	124	135	192	222	183	118	135	147	207	239	261	126	144	157	219	254	277
5	160	350	1.28	142	162	176	242	279	305	151	173	188	252	291	318	135	155	168	240	278	229	147	169	183	259	299	326	157	180	196	274	317	347
6	95	405	1.21	170	195	212	290	335	366	181	207	225	302	350	382	162	186	202	288	333	275	176	202	220	310	359	392	188	216	235	328	380	416
7	160	405	1.29	198	227	247	338	391	427	211	242	263	353	408	446	189	217	236	336	389	321	206	236	257	362	418	457	220	252	275	383	444	485
8	95	405	1.21	226	260	282	386	447	488	241	276	300	403	466	509	216	248	269	384	444	367	235	270	293	414	478	522	251	288	314	438	507	555
9	160	405	1.22	255	292	318	435	503	549	271	311	338	454	524	573	243	279	303	432	500	413	265	303	330	465	538	588	283	325	353	492	570	624
10	95	450	1.21	283	325	353	483	558	610	301	345	375	504	583	636	270	310	337	480	556	458	294	337	367	517	598	653	314	361	392	547	634	693
11	160	450	1.28	311	357	388	531	614	671	331	380	413	554	641	700	297	341	370	528	611	504	323	371	403	569	657	718	345	397	431	602	697	763
12	95	500	1.21	340	390	423	580	670	732	361	414	450	605	699	764	324	372	404	576	667	550	353	405	440	620	717	783	377	433	471	656	761	832
13	160	500	1.29	368	422	459	628	726	793	391	449	488	655	757	827	351	403	438	624	722	596	382	438	477	672	777	849	408	469	510	711	824	901
14	95	550	1.21	396	454	494	676	782	854	421	483	525	706	816	891	378	434	471	672	778	642	412	472	513	724	837	914	440	505	549	766	887	971
15	160	550	1.22	425	487	529	725	838	915	452	518	563	756	874	955	405	465	505	720	833	688	441	506	550	776	897	979	471	541	588	821	951	1040
16	95	600	1.21	453	519	565	773	893	976	482	552	600	806	932	1018	432	495	539	768	889	733	470	540	587	827	956	1045	502	577	628	875	1014	1109
17	160	600	1.28	481	552	600	821	949	1037	512	587	638	857	991	1082	459	526	572	816	944	779	500	573	623	879	1016	1110	534	613	667	930	1078	1179
18	95	650	1.21	509	584	635	869	1005	1098	542	621	676	907	1049	1146	486	557	606	864	1000	825	529	607	660	931	1076	1175	565	649	706	985	1141	1248
19	160	650	1.29	538	617	670	918	1061	1159	572	656	713	958	1107	1209	513	588	640	912	1056	871	559	641	696	982	1136	1240	597	685	745	1039	1204	1317
20	95	700	1.21	566	649	706	966	1117	1220	602	690	751	1008	1165	1273	540	619	673	960	1111	917	588	674	733	1034	1195	1306	628	721	784	1094	1268	1387
21	160	700	1.28	594	682	741	1014	1173	1281	632	725	788	1058	1224	1337	567	650	707	1008	1167	963	617	708	770	1086	1255	1371	659	757	824	1149	1331	1456
22	95	750	1.21	623	714	776	1063	1228	1342	662	760	826	1109	1282	1400	594	681	741	1056	1222	1009	647	742	806	1137	1315	1436	691	793	863	1203	1394	1525
23	160	750	1.29	651	747	812	1111	1284	1403	692	794	863	1159	1340	1464	621	712	774	1104	1278	1054	676	776	843	1189	1375	1502	722	829	902	1258	1458	1595
24	95	800	1.21	679	779	847	1159	1340	1464	722	829	901	1210	1398	1528	648	743	808	1152	1333	1100	706	809	880	1241	1435	1567	754	865	941	1313	1521	1664
25	160	800	1.28	708	811	882	1208	1396	1525	753	863	938	1260	1457	1591	675	774	842	1200	1389	1146	735	843	916	1293	1494	1632	785	901	981	1368	1585	1733
26	95	850	1.21	736	844	917	1256	1452	1586	783	898	976	1310	1515	1655	702	805	875	1248	1444	1192	764	877	953	1344	1554	1698	816	937	1020	1422	1648	1803
27	160	850	1.29	764	876	953	1304	1508	1647	813	932	1013	1361	1573	1718	729	836	909	1296	1500	1238	794	910	990	1396	1614	1763	848	974	1059	1477	1711	1872
28	95	900	1.21	792	909	988	1352	1564	1708	843	967	1051	1411	1632	1782	756	867	943	1344	1556	1284	823	944	1026	1448	1674	1828	879	1010	1098	1532	1775	1941
29	160	900	1.28	821	941	1023	1401	1619	1769	873	1001	1088	1462	1690	1846	783	898	976	1392	1611	1329	853	978	1063	1499	1733	1893	911	1046	1137	1586	1838	2011
30	95	950	1.21	849	974	1059	1449	1675	1830	903	1036	1126	1512	1748	1909	810	929	1010	1440	1667	1375	882	1012	1100	1551	1793	1959	942	1082	1177	1641	1901	2080
31	160	950	1.29	877	1006	1094	1497	1731	1891	933	1070	1163	1562	1806	1973	837	960	1044	1488	1722	1421	911	1045	1136	1603	1853	2024	973	1118	1216	1696	1965	2149
32	95	1000	1.21	906	1039	1129	1546	1787	1952	963	1105	1201	1613	1865	2037	864	991	1077	1536	1778	1467	941	1079	1173	1654	1913	2089	1005	1154	1255	1750	2028	2219
33	160	1000	1.28	934	1071	1164	1594	1843	2013	993	1139	1238	1663	1923	2100	891	1022	1111	1584	1833	1513	970	1113	1210	1706	1972	2155	1036	1190	1294	1805	2092	2288
34	95	1050	1.21	962	1104	1200	1642	1899	2074	1023	1174	1276	1714	1981	2164	918	1053	1145	1632	1889	1559	1000	1147	1246	1758	2032	2220	1068	1226	1334	1860	2155	2357
35	160	1050	1.29	991	1136	1235	1691	1954	2135	1054	1208	1314	1764	2039	2228	945	1084	1178	1680	1944	1604	1029	1180	1283	1810	2092	2285	1099	1262	1373	1915	2218	2427
36	95	1100	1.21	1019	1169	1270	1739	2010	2196	1084	1243	1351	1814	2098	2291	972	1115	1212	1728	2000	1650	1058	1214	1320	1861	2152	2350	1130	1298	1412	1969	2282	2496
37	160	1100	1.28	1047	1201	1306	1787	2066	2257	1114	1277	1389	1865	2156	2355	999	1146	1246	1776	2056	1696	1088	1248	1356	1913	2212	2416	1162	1334	1451	2024	2345	2565
38	95	1150	1.21	1075	1233	1341	1835	2122	2318	1144	1312	1426	1915	2214	2419	1026	1177	1279	1824	2111	1742	1117	1281	1393	1965	2271	2481	1193	1370	1490	2079	2409	2635
39	160	1150	1.29	1104	1266	1376	1884	2178	2379	1174	1346	1464	1966	2272	2482	1053	1208	1313	1872	2167	1788	1147	1315	1430	2016	2331	2546	1225	1406	1530	2133	2472	2704
40	95	1200	1.21	1132	1298	1411	1932	2234	2440	1204	1381	1501	2016	2331	2546	1080	1239	1347	1920	2222	1834	1176	1349	1466	2068	2391	2612	1256	1442	1569	2188	2535	2773
41	160	1200	1.28	1160	1331	1447	1980	2289	2501	1234	1415	1539	2066	2389	2610	1107	1270	1380	1968	2278	1880	1205	1383	1503	2120	2451	2677	1287	1478	1608	2243	2599	2843
42	95	1250	1.21	1189	1363	1482	2029	2345	2562																								

Overall length = 405–500 mm $\Phi_L = \Delta T 50 K EN 442$ (SN 384.501–503)

Mod.	E1040/60			E2040/60			E1050/30			E2050/30			E1050/40			E2050/40			E1050/50			E2050/50			E1050/60			E2050/60					
	T mm	H mm	Exp. n	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60			
4	95	405	1.22	134	154	167	227	262	286	128	146	159	226	262	286	138	158	172	244	283	309	147	169	184	262	304	332	157	180	196	270	312	340
5	95	405	1.22	168	192	209	284	328	358	160	183	199	283	327	358	172	198	215	306	354	387	184	211	230	328	379	415	196	225	245	337	390	426
6	95	405	1.22	201	231	251	340	393	430	191	220	239	339	393	430	206	237	258	367	424	464	221	254	276	393	455	498	235	270	294	404	468	511
7	95	405	1.22	235	269	293	397	459	501	223	256	278	396	458	501	241	277	301	428	495	541	258	296	322	459	531	581	274	315	343	472	545	596
8	95	405	1.22	268	308	335	454	524	573	255	293	318	452	524	573	275	316	344	489	566	618	294	338	368	524	607	664	314	360	392	539	623	681
9	95	405	1.22	302	346	377	510	590	644	287	329	358	509	589	645	310	356	387	550	636	696	331	380	414	590	683	747	353	405	441	607	701	766
10	160	500	1.28	335	385	418	567	656	716	319	366	398	565	655	716	344	395	430	611	707	773	368	423	460	655	759	830	392	450	490	674	779	851
11	160	500	1.28	369	423	460	624	721	788	351	402	438	622	720	788	378	435	473	672	778	850	405	465	506	721	835	913	431	495	539	741	857	936
12	160	500	1.28	402	462	502	680	787	859	383	439	477	678	786	859	413	474	516	733	849	928	442	507	552	786	911	996	470	540	588	809	935	1021
13	160	500	1.28	436	500	544	737	852	931	415	476	517	735	851	931	447	514	559	794	919	1005	478	549	598	852	987	1079	510	585	637	876	1013	1107
14	160	500	1.28	469	539	586	794	918	1002	447	512	557	791	917	1003	482	553	602	855	990	1082	515	592	644	917	1063	1162	549	630	686	944	1091	1192
15	160	500	1.28	503	577	628	851	983	1074	479	549	597	848	982	1074	516	593	645	917	1061	1160	552	634	690	983	1138	1245	588	675	734	1011	1169	1277
16	160	500	1.28	536	615	670	907	1049	1146	510	585	636	904	1047	1146	550	632	688	978	1131	1237	589	676	735	1048	1214	1328	627	720	783	1078	1247	1362
17	160	500	1.28	570	654	711	964	1114	1217	542	622	676	961	1113	1217	585	672	730	1039	1202	1314	626	718	781	1114	1290	1411	666	765	832	1146	1325	1447
18	160	500	1.28	603	692	753	1021	1180	1289	574	659	716	1017	1178	1289	619	711	773	1100	1273	1391	662	761	827	1179	1366	1494	706	810	881	1213	1403	1532
19	160	500	1.28	637	731	795	1077	1245	1360	606	695	756	1074	1244	1361	654	751	816	1161	1344	1469	699	803	873	1245	1442	1577	745	855	930	1281	1481	1617
20	160	500	1.28	670	769	837	1134	1311	1432	638	732	795	1130	1309	1432	688	790	859	1222	1414	1546	736	845	919	1310	1518	1660	784	900	979	1348	1558	1702
21	160	500	1.28	704	808	879	1191	1377	1504	670	768	835	1187	1375	1504	722	830	902	1283	1485	1623	773	887	965	1376	1594	1743	823	945	1028	1415	1636	1787
22	160	500	1.28	737	846	921	1247	1442	1575	702	805	875	1243	1440	1575	757	869	945	1344	1556	1701	810	930	1011	1441	1670	1826	862	990	1077	1483	1714	1873
23	160	500	1.28	771	885	962	1304	1508	1647	734	842	915	1300	1506	1647	791	909	988	1405	1627	1778	846	972	1057	1507	1746	1909	902	1035	1126	1550	1792	1958
24	160	500	1.28	804	923	1004	1361	1573	1718	766	878	955	1356	1571	1719	826	948	1031	1466	1697	1855	883	1014	1103	1572	1822	1992	941	1080	1175	1618	1870	2043
25	160	500	1.28	838	962	1046	1418	1639	1790	798	915	994	1413	1637	1790	860	988	1074	1528	1768	1933	920	1056	1149	1638	1897	2075	980	1125	1224	1685	1948	2128
26	160	500	1.28	871	1000	1088	1474	1704	1862	829	951	1034	1469	1702	1862	894	1027	1117	1589	1839	2010	957	1099	1195	1703	1973	2158	1019	1170	1273	1752	2026	2213
27	160	500	1.28	905	1039	1130	1531	1770	1933	861	988	1074	1526	1768	1934	929	1067	1160	1650	1909	2087	994	1141	1241	1769	2049	2242	1058	1215	1322	1820	2104	2298
28	160	500	1.28	938	1077	1172	1588	1835	2005	893	1024	1114	1582	1833	2005	963	1106	1203	1711	1980	2164	1030	1183	1287	1834	2125	2325	1098	1260	1371	1887	2182	2383
29	160	500	1.28	972	1116	1214	1644	1901	2077	925	1061	1153	1639	1899	2077	998	1146	1246	1772	2051	2242	1067	1225	1333	1900	2201	2408	1137	1305	1420	1955	2260	2468
30	160	500	1.28	1005	1154	1255	1701	1967	2148	957	1098	1193	1695	1964	2148	1032	1185	1289	1833	2122	2319	1104	1268	1379	1965	2277	2491	1176	1350	1469	2022	2338	2553
31	160	500	1.28	1039	1192	1297	1758	2032	2220	989	1134	1233	1752	2030	2220	1066	1225	1332	1894	2192	2396	1141	1310	1425	2031	2353	2574	1215	1395	1518	2089	2416	2639
32	160	500	1.28	1072	1231	1339	1814	2098	2291	1021	1171	1273	1808	2095	2292	1101	1264	1375	1955	2263	2474	1178	1352	1471	2096	2429	2657	1254	1440	1567	2157	2493	2724
33	160	500	1.28	1106	1269	1381	1871	2163	2363	1053	1207	1313	1865	2160	2363	1135	1304	1418	2016	2334	2551	1214	1394	1517	2162	2505	2740	1294	1485	1616	2224	2571	2809
34	160	500	1.28	1139	1308	1423	1928	2229	2435	1085	1244	1352	1921	2226	2435	1170	1343	1461	2077	2404	2628	1251	1437	1563	2227	2580	2823	1333	1530	1665	2292	2649	2894
35	160	500	1.28	1173	1346	1465	1985	2294	2506	1117	1281	1392	1978	2291	2506	1204	1383	1504	2139	2475	2706	1288	1479	1609	2293	2656	2906	1372	1575	1714	2359	2727	2979
36	160	500	1.28	1206	1385	1506	2041	2360	2578	1148	1317	1432	2034	2357	2578	1238	1422	1547	2200	2546	2783	1325	1521	1655	2358	2732	2989	1411	1620	1763	2426	2805	3064
37	160	500	1.28	1240	1423	1548	2098	2425	2649	1180	1354	1472	2091	2422	2650	1273	1462	1590	2261	2617	2860	1362	1563	1701	2424	2808	3072	1450	1665	1812	2494	2883	3149
38	160	500	1.28	1273	1462	1590	2155	2491	2721	1212	1390	1511	2147	2488	2721	1307	1501	1633	2322	2687	2937	1398	1606	1747	2489	2884	3155	1490	1710	1861	2561	2961	3234
39	160	500	1.28	1307	1500	1632	2211	2557	2793	1244	1427	1551	2204	2553	2793	1342	1541	1676	2383	2758	3015	1435	1648	1793	2555	2960	3238	1529	1755	1910	2629	3039	3320
40	160	500	1.28	1340	1539	1674	2268	2622	2864	1276	1464	1591	2260	2619	2864	1376	1580	1719	2444	2829	3092	1472	1690	1839	2620	3036	3321	1568	1800	1959	2696	3117	3405
41	160	500	1.28	1374	1577	1716	2325	2688	2936	1308	1500	1631	2317	2684	2936	1410	1620	1762	2505	2899	3169	1509	1733	1885	2686	3112	3404	1607	1846	2008	2763	3195	3490
42	160	500	1.28	1407	1616	1757	2381	2753	3007	1340	1537	1671	2373	2750	3008	1445	1659	1805	2566	2970	3247	1546	1775	1931	2751	3188	3487	1646	1891	2057	2831	3273	3575
43	160	500	1.28	1441	1654	1799	2438	2819	3079	1372	1573	1710	2430	2815	3079	1479	1699	1848	2627	3041	332												

Overall length = 600-700 mm $\Phi_L = \Delta T 50 K EN 442 (SN 384.501-503)$

Mod.	E1060/30			E2060/30			E1060/40			E2060/40			E1060/50			E2060/50			E1060/60			E2060/60			E1070/30			E2070/30					
	T mm	H mm	Exp. n	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60			
4	95	600	1.22	148	169	184	261	302	331	159	182	198	282	327	357	169	195	212	307	355	389	181	208	226	314	363	397	168	192	209	295	342	374
5	95	600	1.22	185	212	230	326	378	413	199	228	248	353	409	447	212	243	265	384	444	486	226	260	283	392	454	496	210	241	262	369	427	467
6	95	600	1.22	221	254	277	391	453	496	238	274	298	424	490	536	254	292	318	460	533	583	271	312	339	470	544	595	251	289	314	442	512	560
7	95	600	1.22	258	297	323	456	529	578	278	319	347	494	572	625	296	340	371	537	622	681	316	364	396	549	635	694	293	337	366	516	598	654
8	95	600	1.22	295	339	369	522	604	661	318	365	397	565	654	715	338	389	423	614	711	778	362	416	453	627	726	794	335	385	419	590	683	747
9	95	600	1.22	332	381	415	587	680	744	357	410	446	635	735	804	381	438	476	690	800	875	407	468	509	706	817	893	377	433	471	663	769	841
10	160	700	1.22	369	424	461	652	755	826	397	456	496	706	817	893	423	486	529	767	889	972	452	520	566	784	907	992	419	481	523	737	854	934
11	160	700	1.22	406	466	507	717	831	909	437	501	545	777	899	983	465	535	582	844	978	1069	497	572	622	862	998	1091	461	529	576	811	939	1028
12	160	700	1.22	443	508	553	782	907	992	476	547	595	847	981	1072	508	584	635	920	1066	1167	542	624	679	941	1089	1190	503	577	628	884	1025	1121
13	160	700	1.22	480	551	599	848	982	1074	516	593	645	918	1062	1161	550	632	688	997	1155	1264	588	675	735	1019	1180	1289	545	625	680	958	1110	1214
14	160	700	1.22	517	593	645	913	1058	1157	556	638	694	988	1144	1250	592	681	741	1074	1244	1361	633	727	792	1098	1270	1389	587	674	733	1032	1196	1308
15	160	700	1.22	554	636	691	978	1133	1240	596	684	744	1059	1226	1340	635	729	794	1151	1333	1458	678	779	848	1176	1361	1488	629	722	785	1106	1281	1401
16	160	700	1.22	590	678	737	1043	1209	1322	635	729	793	1130	1307	1429	677	778	847	1227	1422	1555	723	831	905	1254	1452	1587	670	770	837	1179	1366	1495
17	160	700	1.22	627	720	784	1108	1284	1405	675	775	843	1200	1389	1518	719	827	900	1304	1511	1653	768	883	962	1333	1543	1686	712	818	890	1253	1452	1588
18	160	700	1.22	664	763	830	1174	1360	1487	715	821	893	1271	1471	1608	761	875	953	1381	1600	1750	814	935	1018	1411	1633	1785	754	866	942	1327	1537	1681
19	160	700	1.22	701	805	876	1239	1435	1570	754	866	942	1341	1553	1697	804	924	1006	1457	1689	1847	859	987	1075	1490	1724	1885	796	914	994	1400	1623	1775
20	160	700	1.22	738	847	922	1304	1511	1653	794	912	992	1412	1634	1786	846	973	1059	1534	1777	1944	904	1039	1131	1568	1815	1984	838	962	1047	1474	1708	1868
21	160	700	1.22	775	890	968	1369	1587	1735	834	957	1041	1483	1716	1876	888	1021	1112	1611	1866	2042	949	1091	1188	1646	1906	2083	880	1010	1099	1548	1793	1962
22	160	700	1.22	812	932	1014	1434	1662	1818	873	1003	1091	1553	1798	1965	931	1070	1165	1687	1955	2139	994	1143	1244	1725	1996	2182	922	1058	1151	1621	1879	2055
23	160	700	1.22	849	975	1060	1500	1738	1901	913	1048	1141	1624	1879	2054	973	1118	1217	1764	2044	2236	1040	1195	1301	1803	2087	2281	964	1107	1204	1695	1964	2148
24	160	700	1.22	886	1017	1106	1565	1813	1983	953	1094	1190	1694	1961	2144	1015	1167	1270	1841	2133	2333	1085	1247	1358	1882	2178	2381	1006	1155	1256	1769	2050	2242
25	160	700	1.22	923	1059	1152	1630	1889	2066	993	1140	1240	1765	2043	2233	1058	1216	1323	1918	2222	2430	1130	1299	1414	1960	2269	2480	1048	1203	1308	1843	2135	2335
26	160	700	1.22	959	1102	1198	1695	1964	2149	1032	1185	1289	1836	2125	2322	1100	1264	1376	1994	2311	2528	1175	1351	1471	2038	2359	2579	1089	1251	1361	1916	2220	2429
27	160	700	1.22	996	1144	1244	1760	2040	2231	1072	1231	1339	1906	2206	2412	1142	1313	1429	2071	2400	2625	1220	1403	1527	2117	2450	2678	1131	1299	1413	1990	2306	2522
28	160	700	1.22	1033	1186	1291	1826	2115	2314	1112	1276	1389	1977	2288	2501	1184	1362	1482	2148	2488	2722	1266	1455	1584	2195	2541	2777	1173	1347	1465	2064	2391	2616
29	160	700	1.22	1070	1229	1337	1891	2191	2397	1151	1322	1438	2047	2370	2590	1227	1410	1535	2224	2577	2819	1311	1507	1640	2274	2632	2876	1215	1395	1518	2137	2477	2709
30	160	700	1.22	1107	1271	1383	1956	2266	2479	1191	1368	1488	2118	2451	2680	1269	1459	1588	2301	2666	2916	1356	1559	1697	2352	2722	2976	1257	1443	1570	2211	2562	2802
31	160	700	1.22	1144	1314	1429	2021	2342	2562	1231	1413	1537	2189	2533	2769	1311	1507	1641	2378	2755	3014	1401	1611	1753	2430	2813	3075	1299	1491	1622	2285	2647	2896
32	160	700	1.22	1181	1356	1475	2086	2418	2644	1270	1459	1587	2259	2615	2858	1354	1556	1694	2454	2844	3111	1446	1663	1810	2509	2904	3174	1341	1540	1675	2358	2733	2989
33	160	700	1.22	1218	1398	1521	2152	2493	2727	1310	1504	1636	2330	2697	2948	1396	1605	1747	2531	2933	3208	1492	1715	1867	2587	2994	3273	1383	1588	1727	2432	2818	3083
34	160	700	1.22	1255	1441	1567	2217	2569	2810	1350	1550	1686	2400	2778	3037	1438	1653	1800	2608	3022	3305	1537	1767	1923	2666	3085	3372	1425	1636	1779	2506	2904	3176
35	160	700	1.22	1292	1483	1613	2282	2644	2892	1390	1596	1736	2471	2860	3126	1481	1702	1853	2685	3111	3403	1582	1819	1980	2744	3176	3472	1467	1684	1832	2580	2989	3269
36	160	700	1.22	1328	1525	1659	2347	2720	2975	1429	1641	1785	2542	2942	3216	1523	1751	1906	2761	3199	3500	1627	1871	2036	2822	3267	3571	1508	1732	1884	2653	3074	3363
37	160	700	1.22	1365	1568	1705	2412	2795	3058	1469	1687	1835	2612	3023	3305	1565	1799	1959	2838	3288	3597	1672	1923	2093	2901	3357	3670	1550	1780	1936	2727	3160	3456
38	160	700	1.22	1402	1610	1752	2478	2871	3140	1509	1732	1884	2683	3105	3394	1607	1848	2011	2915	3377	3694	1718	1975	2149	2979	3448	3769	1592	1828	1989	2801	3245	3550
39	160	700	1.22	1439	1652	1798	2543	2946	3223	1548	1778	1934	2753	3187	3483	1650	1896	2064	2991	3466	3791	1763	2026	2206	3058	3539	3868	1634	1876	2041	2874	3331	3643
40	160	700	1.22	1476	1695	1844	2608	3022	3306	1588	1823	1984	2824	3269	3573	1692	1945	2117	3068	3555	3889	1808	2078	2263	3136	3630	3968	1676	1925	2094	2948	3416	3736
41	160	700	1.22	1513	1737	1890	2673	3098	3388	1628	1869	2033	2895	3350	3662	1734	1994	2170	3145	3644	3986	1853	2130	2319	3214	3720	4067	1718	1973	2146	3022	3501	3830
42	160	700	1.22	1550	1780	1936	2738	3173	3471	1667	1915	2083	2965	3432	3751	1777	2042	2223	3221	3733	4083	1898	2182	2376	3293	3811	4166	1760	2021	2198	3095	3587	3923
43	160	700	1.22	1587	1822	1982	2804	3249	3553	1707	1960																						

Overall length = 700–800 mm

$$\Phi_L = \Delta T \text{ 50 K EN 442 (SN 384.501-503)}$$

Mod.	E1070/40			E2070/40			E1070/50			E2070/50			E1070/60			E2070/60			E1080/30			E2080/30			E1080/40			E2080/40		
	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60
4	180	207	225	320	371	405	192	221	240	350	406	444	204	235	256	357	413	452	187	215	234	328	381	417	201	232	252	358	414	453
5	225	259	282	401	464	507	240	276	300	438	508	555	256	294	320	447	517	565	234	269	293	411	476	521	252	289	315	447	518	567
6	270	310	338	481	556	608	287	331	360	526	609	666	307	353	384	536	620	678	281	323	351	493	571	625	302	347	378	536	622	680
7	315	362	394	561	649	709	335	386	420	613	711	777	358	412	448	625	724	791	328	377	410	575	667	730	352	405	441	626	725	793
8	360	414	451	641	742	811	383	441	480	701	812	888	409	470	513	714	827	904	374	430	469	657	762	834	402	463	504	715	829	906
9	405	466	507	721	834	912	431	496	540	788	914	999	460	529	577	804	930	1017	421	484	527	739	857	938	453	521	568	805	932	1020
10	450	517	563	801	927	1013	479	551	601	876	1015	1110	511	588	641	893	1034	1130	468	538	586	821	952	1042	503	579	631	894	1036	1133
11	495	569	619	881	1020	1115	527	606	661	964	1117	1221	562	647	705	982	1137	1243	515	592	644	903	1048	1147	553	637	694	983	1139	1246
12	540	621	676	961	1113	1216	575	662	721	1051	1218	1332	613	706	769	1072	1240	1356	562	646	703	985	1143	1251	604	695	757	1073	1243	1360
13	585	673	732	1041	1205	1317	623	717	781	1139	1320	1443	664	765	833	1161	1344	1469	608	699	761	1067	1238	1355	654	753	820	1162	1347	1473
14	630	724	788	1121	1298	1419	671	772	841	1226	1421	1554	715	823	897	1250	1447	1582	655	753	820	1149	1333	1459	704	810	883	1252	1450	1586
15	675	776	845	1202	1391	1520	719	827	901	1314	1523	1665	767	882	961	1340	1550	1695	702	807	878	1232	1429	1564	755	868	946	1341	1554	1700
16	720	828	901	1282	1483	1621	766	882	961	1402	1624	1776	818	941	1025	1429	1654	1808	749	861	937	1314	1524	1668	805	926	1009	1430	1657	1813
17	765	879	957	1362	1576	1723	814	937	1021	1489	1726	1888	869	1000	1089	1518	1757	1921	796	915	996	1396	1619	1772	855	984	1072	1520	1761	1926
18	810	931	1014	1442	1669	1824	862	992	1081	1577	1827	1999	920	1059	1153	1607	1860	2034	842	968	1054	1478	1714	1876	905	1042	1135	1609	1865	2040
19	855	983	1070	1522	1761	1925	910	1047	1141	1664	1929	2110	971	1117	1217	1697	1964	2147	889	1022	1113	1560	1810	1981	956	1100	1198	1699	1968	2153
20	900	1035	1126	1602	1854	2027	958	1103	1201	1752	2030	2221	1022	1176	1281	1786	2067	2260	936	1076	1171	1642	1905	2085	1006	1158	1261	1788	2072	2266
21	945	1086	1183	1682	1947	2128	1006	1158	1261	1840	2132	2332	1073	1235	1345	1875	2171	2373	983	1130	1230	1724	2000	2189	1056	1216	1324	1877	2175	2380
22	990	1138	1239	1762	2040	2229	1054	1213	1321	1927	2233	2443	1124	1294	1409	1965	2274	2486	1030	1184	1288	1806	2095	2293	1107	1274	1387	1967	2279	2493
23	1035	1190	1295	1842	2132	2331	1102	1268	1381	2015	2335	2554	1175	1353	1473	2054	2377	2599	1076	1237	1347	1888	2191	2398	1157	1331	1450	2056	2383	2606
24	1080	1242	1352	1922	2225	2432	1150	1323	1441	2102	2436	2665	1226	1411	1538	2143	2481	2711	1123	1291	1406	1970	2286	2502	1207	1389	1513	2146	2486	2719
25	1125	1293	1408	2003	2318	2533	1198	1378	1501	2190	2538	2776	1278	1470	1602	2233	2584	2824	1170	1345	1464	2053	2381	2606	1258	1447	1576	2235	2590	2833
26	1170	1345	1464	2083	2410	2635	1245	1433	1561	2278	2639	2887	1329	1529	1666	2322	2687	2937	1217	1399	1523	2135	2476	2710	1308	1505	1640	2324	2693	2946
27	1215	1397	1520	2163	2503	2736	1293	1488	1621	2365	2741	2998	1380	1588	1730	2411	2791	3050	1264	1453	1581	2217	2571	2815	1358	1563	1703	2414	2797	3059
28	1260	1448	1577	2243	2596	2837	1341	1544	1681	2453	2842	3109	1431	1647	1794	2500	2894	3163	1310	1506	1640	2299	2667	2919	1408	1621	1766	2503	2901	3173
29	1305	1500	1633	2323	2689	2939	1389	1599	1741	2540	2944	3220	1482	1705	1858	2590	2997	3276	1357	1560	1698	2381	2762	3023	1459	1679	1829	2593	3004	3286
30	1350	1552	1689	2403	2781	3040	1437	1654	1802	2628	3045	3331	1533	1764	1922	2679	3101	3389	1404	1614	1757	2463	2857	3127	1509	1737	1892	2682	3108	3399
31	1395	1604	1746	2483	2874	3142	1485	1709	1862	2716	3147	3442	1584	1823	1986	2768	3204	3502	1451	1668	1816	2545	2952	3232	1559	1795	1955	2771	3211	3513
32	1440	1655	1802	2563	2967	3243	1533	1764	1922	2803	3248	3553	1635	1882	2050	2858	3307	3615	1498	1722	1874	2627	3048	3336	1610	1852	2018	2861	3315	3626
33	1485	1707	1858	2643	3059	3344	1581	1819	1982	2891	3350	3664	1686	1941	2114	2947	3411	3728	1544	1775	1933	2709	3143	3440	1660	1910	2081	2950	3418	3739
34	1530	1759	1915	2723	3152	3446	1629	1874	2042	2978	3451	3775	1737	2000	2178	3036	3514	3841	1591	1829	1991	2791	3238	3544	1710	1968	2144	3040	3522	3853
35	1575	1811	1971	2804	3245	3547	1677	1929	2102	3066	3553	3886	1789	2058	2242	3126	3618	3954	1638	1883	2050	2874	3333	3649	1761	2026	2207	3129	3626	3966
36	1620	1862	2027	2884	3338	3648	1724	1985	2162	3154	3654	3997	1840	2117	2306	3215	3721	4067	1685	1937	2108	2956	3429	3753	1811	2084	2270	3218	3729	4079
37	1665	1914	2084	2964	3430	3750	1772	2040	2222	3241	3756	4108	1891	2176	2370	3304	3824	4180	1732	1991	2167	3038	3524	3857	1861	2142	2333	3308	3833	4193
38	1710	1966	2140	3044	3523	3851	1820	2095	2282	3329	3857	4219	1942	2235	2434	3393	3928	4293	1778	2044	2225	3120	3619	3961	1911	2200	2396	3397	3936	4306
39	1755	2018	2196	3124	3616	3952	1868	2150	2342	3416	3959	4330	1993	2294	2498	3483	4031	4406	1825	2098	2284	3202	3714	4066	1962	2258	2459	3487	4040	4419
40	1800	2069	2253	3204	3708	4054	1916	2205	2402	3504	4060	4441	2044	2352	2563	3572	4134	4519	1872	2152	2343	3284	3810	4170	2012	2316	2522	3576	4144	4532
41	1845	2121	2309	3284	3801	4155	1964	2260	2462	3592	4162	4552	2095	2411	2627	3661	4238	4632	1919	2206	2401	3366	3905	4274	2062	2373	2585	3665	4247	4646
42	1890	2173	2365	3364	3894	4256	2012	2315	2522	3679	4263	4663	2146	2470	2691	3751	4341	4745	1966	2260	2460	3448	4000	4378	2113	2431	2649	3755	4351	4759
43	1935	2224	2421	3444	3987	4358	2060	2370	2582	3767	4365	4774	2197	2529	2755	3840	4444	4858	2012	2313	2518	3530	4095	4483	2163	2489	2712	3844	4454	4872
44	1980	2276	2478	3524	4079	4459	2108	2426	2642	3854	4466	4885	2248	2588	2819	3929	4548	4971	2059	2367	2577	3612	4191	4587	2213	2547	2775	3934	4558	4986
45	2025	2328	2534	3605	4172	4560	2156	2481	2702	3942	4568	4996	2300	2646	2883	4019	4651	5084	2106	2421	2635	3695	4286	4691	2264	2605	2838	4023	4662	5099
46	2070	2380	2590	3685	4265	4662	2203	2536	2762	4030	4669	5107																		

Overall length = 800–900 mm $\Phi_L = \Delta T 50 K EN 442 (SN 384.501-503)$

Mod.	E1080/50			E2080/50			E1080/60			E2080/60			E1090/30			E2090/30			E1090/40			E2090/40			E1090/50			E2090/50					
	T mm	H mm	Exp. n	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60			
4	95	800	1.25	214	247	269	394	456	499	228	263	286	400	463	506	207	238	259	362	419	459	222	256	279	395	457	500	237	273	297	436	506	554
5	95	800	1.25	268	308	336	492	570	624	286	329	358	500	579	633	259	298	324	452	524	574	278	320	349	494	572	625	296	341	372	545	632	692
6	95	800	1.25	321	370	403	590	684	748	343	394	430	600	694	759	311	357	389	542	629	689	334	384	418	592	686	751	355	409	446	654	759	830
7	95	800	1.25	375	431	470	689	798	873	400	460	501	700	810	886	363	417	454	633	734	804	389	448	488	691	801	876	414	477	520	763	885	969
8	95	800	1.25	428	493	538	787	912	998	457	526	573	800	926	1012	414	476	519	723	839	918	445	512	558	790	915	1001	474	546	595	872	1012	1107
9	95	800	1.25	482	555	605	886	1026	1122	514	591	644	900	1042	1139	466	536	583	814	944	1033	500	576	627	888	1029	1126	533	614	669	981	1138	1246
10	160	800	1.3	535	616	672	984	1140	1247	571	657	716	1000	1157	1265	518	595	648	904	1049	1148	556	640	697	987	1144	1251	592	682	744	1090	1264	1384
11	160	800	1.3	589	678	739	1082	1254	1372	628	723	787	1100	1273	1392	570	655	713	994	1154	1263	612	704	767	1086	1258	1376	651	750	818	1199	1391	1522
12	160	800	1.3	642	740	806	1181	1368	1497	685	789	859	1200	1389	1518	622	715	778	1085	1258	1377	667	768	836	1184	1372	1501	710	819	892	1308	1517	1661
13	160	800	1.3	696	801	874	1279	1482	1621	742	854	931	1300	1505	1645	673	774	843	1175	1363	1492	723	832	906	1283	1487	1626	770	887	967	1417	1644	1799
14	160	800	1.3	749	863	941	1378	1596	1746	799	920	1002	1400	1620	1771	725	834	908	1266	1468	1607	778	896	976	1382	1601	1751	829	955	1041	1526	1770	1938
15	160	800	1.3	803	925	1008	1476	1710	1871	857	986	1074	1500	1736	1898	777	893	972	1356	1573	1722	834	960	1046	1481	1716	1876	888	1023	1115	1635	1897	2076
16	160	800	1.3	856	986	1075	1574	1824	1995	914	1051	1145	1600	1852	2024	829	953	1037	1446	1678	1837	890	1024	1115	1579	1830	2002	947	1091	1190	1744	2023	2214
17	160	800	1.3	910	1048	1142	1673	1938	2120	971	1117	1217	1700	1968	2151	881	1012	1102	1537	1783	1951	945	1088	1185	1678	1944	2127	1006	1160	1264	1853	2150	2353
18	160	800	1.3	963	1110	1209	1771	2052	2245	1028	1183	1289	1800	2083	2277	932	1072	1167	1627	1888	2066	1001	1152	1255	1777	2059	2252	1066	1228	1338	1962	2276	2491
19	160	800	1.3	1017	1171	1277	1870	2166	2370	1085	1249	1360	1900	2199	2404	984	1131	1232	1718	1992	2181	1056	1216	1324	1875	2173	2377	1125	1296	1413	2071	2402	2630
20	160	800	1.3	1070	1233	1344	1968	2280	2494	1142	1314	1432	2000	2315	2530	1036	1191	1296	1808	2097	2296	1112	1280	1394	1974	2287	2502	1184	1364	1487	2180	2529	2768
21	160	800	1.3	1124	1294	1411	2066	2394	2619	1199	1380	1503	2100	2431	2657	1088	1251	1361	1898	2202	2411	1168	1344	1464	2073	2402	2627	1243	1432	1561	2289	2655	2907
22	160	800	1.3	1177	1356	1478	2165	2508	2744	1256	1446	1575	2200	2546	2783	1140	1310	1426	1989	2307	2525	1223	1408	1533	2171	2516	2752	1302	1501	1636	2398	2782	3045
23	160	800	1.3	1231	1418	1545	2263	2622	2869	1313	1511	1646	2300	2662	2910	1191	1370	1491	2079	2412	2640	1279	1472	1603	2270	2630	2877	1362	1569	1710	2507	2908	3183
24	160	800	1.3	1284	1479	1613	2362	2736	2993	1370	1577	1718	2400	2778	3036	1243	1429	1556	2170	2517	2755	1334	1536	1673	2369	2745	3002	1421	1637	1784	2616	3035	3322
25	160	800	1.3	1338	1541	1680	2460	2850	3118	1428	1643	1790	2500	2894	3163	1295	1489	1621	2260	2622	2870	1390	1600	1743	2468	2859	3127	1480	1705	1859	2725	3161	3460
26	160	800	1.3	1391	1603	1747	2558	2965	3243	1485	1709	1861	2600	3009	3289	1347	1548	1685	2350	2727	2984	1446	1664	1812	2566	2974	3253	1539	1773	1933	2834	3288	3599
27	160	800	1.3	1445	1664	1814	2657	3079	3367	1542	1774	1933	2700	3125	3416	1399	1608	1750	2441	2831	3099	1501	1728	1882	2665	3088	3378	1598	1842	2008	2943	3414	3737
28	160	800	1.3	1498	1726	1881	2755	3193	3492	1599	1840	2004	2800	3241	3542	1450	1667	1815	2531	2936	3214	1557	1792	1952	2764	3202	3503	1658	1910	2082	3052	3540	3875
29	160	800	1.3	1552	1788	1949	2854	3307	3617	1656	1906	2076	2900	3357	3669	1502	1727	1880	2622	3041	3329	1612	1856	2021	2862	3317	3628	1717	1978	2156	3161	3667	4014
30	160	800	1.3	1605	1849	2016	2952	3421	3742	1713	1971	2148	3000	3472	3795	1554	1786	1945	2712	3146	3444	1668	1920	2091	2961	3431	3753	1776	2046	2231	3270	3793	4152
31	160	800	1.3	1659	1911	2083	3050	3535	3866	1770	2037	2219	3100	3588	3922	1606	1846	2009	2802	3251	3558	1724	1984	2161	3060	3545	3878	1835	2114	2305	3379	3920	4291
32	160	800	1.3	1712	1973	2150	3149	3649	3991	1827	2103	2291	3200	3704	4048	1658	1906	2074	2893	3356	3673	1779	2048	2231	3158	3660	4003	1894	2183	2379	3488	4046	4429
33	160	800	1.3	1766	2034	2217	3247	3763	4116	1884	2169	2362	3300	3819	4175	1709	1965	2139	2983	3461	3788	1835	2112	2300	3257	3774	4128	1954	2251	2454	3597	4173	4567
34	160	800	1.3	1819	2096	2285	3346	3877	4240	1941	2234	2434	3400	3935	4302	1761	2025	2204	3074	3566	3903	1890	2176	2370	3356	3888	4253	2013	2319	2528	3706	4299	4706
35	160	800	1.3	1873	2157	2352	3444	3991	4365	1999	2300	2505	3500	4051	4428	1813	2084	2269	3164	3670	4018	1946	2240	2440	3455	4003	4378	2072	2387	2602	3815	4426	4844
36	160	800	1.3	1926	2219	2419	3542	4105	4490	2056	2366	2577	3600	4167	4555	1865	2144	2334	3254	3775	4132	2002	2304	2509	3553	4117	4504	2131	2456	2677	3924	4552	4983
37	160	800	1.3	1980	2281	2486	3641	4219	4615	2113	2431	2649	3700	4282	4681	1917	2203	2398	3345	3880	4247	2057	2368	2579	3652	4232	4629	2190	2524	2751	4033	4678	5121
38	160	800	1.3	2033	2342	2553	3739	4333	4739	2170	2497	2720	3800	4398	4808	1968	2263	2463	3435	3985	4362	2113	2432	2649	3751	4346	4754	2250	2592	2825	4142	4805	5259
39	160	800	1.3	2087	2404	2621	3838	4447	4864	2227	2563	2792	3900	4514	4934	2020	2322	2528	3526	4090	4477	2168	2496	2718	3849	4460	4879	2309	2660	2900	4251	4931	5398
40	160	800	1.3	2140	2466	2688	3936	4561	4989	2284	2629	2863	4000	4630	5061	2072	2382	2593	3616	4195	4592	2224	2560	2788	3948	4575	5004	2368	2728	2974	4360	5058	5536
41	160	800	1.3	2194	2527	2755	4034	4675	5113	2341	2694	2935	4100	4745	5187	2124	2441	2658	3706	4300	4706	2280	2624	2858	4047	4689	5129	2427	2797	3048	4469	5184	5675
42	160	800	1.3	2247	2589	2822	4133	4789	5238	2398	2760	3007	4200	4861	5314	2176	2501	2723	3797	4404	4821	2335	2688	2928	4145	4803	5254	2486	2865	3123	4578	5311	5813

Overall length = 900–1000 mm $\Phi_L = \Delta T$ 50 K EN 442 (SN 384.501-503)

Mod.	E1090/60			E2090/60			E1100/30			E2100/30			E1100/40			E2100/40			E1100/50			E2100/50			E1100/60			E2100/60		
	T mm	H mm	Exp. n	95	160	95	160	95	160	95	160	95	160	95	160	95	160	95	160	95	160	95	160	95	160	95	160	95	160	
Sections	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60
4	252	291	317	444	514	563	227	261	285	395	458	501	244	282	307	432	501	549	260	300	328	480	557	609	277	319	348	488	565	619
5	316	364	396	555	643	703	284	327	356	494	572	627	306	352	384	540	626	686	326	375	410	600	696	762	346	399	435	610	707	773
6	379	436	476	666	772	844	341	392	427	592	687	752	367	422	460	648	752	823	391	451	491	720	835	914	415	479	522	732	848	928
7	442	509	555	777	900	985	398	458	498	691	801	877	428	493	537	756	877	960	456	526	573	840	974	1067	484	559	609	854	990	1082
8	505	582	634	888	1029	1126	454	523	570	790	916	1003	489	563	614	864	1002	1097	521	601	655	960	1114	1219	554	639	697	976	1131	1237
9	568	654	713	999	1158	1266	511	588	641	888	1030	1128	550	634	691	972	1128	1234	586	676	737	1080	1253	1371	623	718	784	1098	1272	1392
10	631	727	793	1110	1286	1407	568	654	712	987	1145	1253	611	704	767	1080	1253	1371	651	751	819	1200	1392	1524	692	798	871	1220	1414	1546
11	694	800	872	1221	1415	1548	625	719	783	1086	1259	1379	672	774	844	1188	1378	1508	716	826	901	1320	1531	1676	761	878	958	1342	1555	1701
12	757	872	951	1332	1543	1688	682	784	855	1184	1374	1504	733	845	921	1296	1503	1646	781	901	983	1440	1670	1828	830	958	1045	1464	1696	1856
13	820	945	1030	1443	1672	1829	738	850	926	1283	1488	1629	794	915	998	1404	1629	1783	846	976	1065	1560	1810	1981	900	1038	1132	1586	1838	2010
14	883	1018	1110	1554	1801	1970	795	915	997	1382	1603	1755	855	986	1074	1512	1754	1920	911	1051	1147	1680	1949	2133	969	1118	1219	1708	1979	2165
15	947	1091	1189	1665	1929	2110	852	981	1068	1481	1717	1880	917	1056	1151	1620	1879	2057	977	1126	1229	1800	2088	2286	1038	1197	1306	1830	2120	2319
16	1010	1163	1268	1776	2058	2251	909	1046	1139	1579	1832	2005	978	1126	1228	1728	2005	2194	1042	1201	1311	1920	2227	2438	1107	1277	1393	1952	2262	2474
17	1073	1236	1347	1887	2187	2392	966	1111	1211	1678	1946	2131	1039	1197	1305	1836	2130	2331	1107	1277	1393	2040	2366	2590	1176	1357	1480	2074	2403	2629
18	1136	1309	1427	1998	2315	2532	1022	1177	1282	1777	2061	2256	1100	1267	1381	1944	2255	2468	1172	1352	1474	2160	2506	2743	1246	1437	1567	2196	2545	2783
19	1199	1381	1506	2109	2444	2673	1079	1242	1353	1875	2175	2381	1161	1338	1458	2052	2380	2606	1237	1427	1556	2280	2645	2895	1315	1517	1654	2318	2686	2938
20	1262	1454	1585	2220	2572	2814	1136	1307	1424	1974	2290	2507	1222	1408	1535	2160	2506	2743	1302	1502	1638	2400	2784	3047	1384	1596	1741	2440	2827	3093
21	1325	1527	1664	2331	2701	2954	1193	1373	1495	2073	2404	2632	1283	1478	1612	2268	2631	2880	1367	1577	1720	2520	2923	3200	1453	1676	1828	2562	2969	3247
22	1388	1599	1744	2442	2830	3095	1250	1438	1567	2171	2519	2757	1344	1549	1688	2376	2756	3017	1432	1652	1802	2640	3063	3352	1522	1756	1916	2684	3110	3402
23	1451	1672	1823	2553	2958	3236	1306	1504	1638	2270	2633	2883	1405	1619	1765	2484	2882	3154	1497	1727	1884	2760	3202	3505	1592	1836	2003	2806	3251	3557
24	1514	1745	1902	2664	3087	3377	1363	1569	1709	2369	2748	3008	1466	1690	1842	2592	3007	3291	1562	1802	1966	2880	3341	3657	1661	1916	2090	2928	3393	3711
25	1578	1818	1981	2775	3215	3517	1420	1634	1780	2468	2862	3133	1528	1760	1918	2700	3132	3428	1628	1877	2048	3000	3480	3809	1730	1996	2177	3050	3534	3866
26	1641	1890	2061	2886	3344	3658	1477	1700	1851	2566	2977	3259	1589	1830	1995	2808	3257	3566	1693	1952	2130	3120	3619	3962	1799	2075	2264	3172	3676	4020
27	1704	1963	2140	2997	3473	3799	1534	1765	1923	2665	3091	3384	1650	1901	2072	2916	3383	3703	1758	2027	2212	3240	3759	4114	1868	2155	2351	3294	3817	4175
28	1767	2036	2219	3108	3601	3939	1590	1830	1994	2764	3206	3509	1711	1971	2149	3024	3508	3840	1823	2103	2294	3360	3898	4266	1938	2235	2438	3416	3958	4330
29	1830	2108	2298	3219	3730	4080	1647	1896	2065	2862	3320	3634	1772	2042	2225	3132	3633	3977	1888	2178	2375	3480	4037	4419	2007	2315	2525	3538	4100	4484
30	1893	2181	2378	3330	3859	4221	1704	1961	2136	2961	3435	3760	1833	2112	2302	3240	3759	4114	1953	2253	2457	3600	4176	4571	2076	2395	2612	3660	4241	4639
31	1956	2254	2457	3441	3987	4361	1761	2026	2207	3060	3549	3885	1894	2182	2379	3348	3884	4251	2018	2328	2539	3720	4315	4724	2145	2474	2699	3782	4382	4794
32	2019	2326	2536	3552	4116	4502	1818	2092	2279	3158	3664	4010	1955	2253	2456	3456	4009	4388	2083	2403	2621	3840	4455	4876	2214	2554	2786	3904	4524	4948
33	2082	2399	2615	3663	4244	4643	1874	2157	2350	3257	3778	4136	2016	2323	2532	3564	4134	4525	2148	2478	2703	3960	4594	5028	2284	2634	2873	4026	4665	5103
34	2145	2472	2695	3774	4373	4783	1931	2223	2421	3356	3893	4261	2077	2394	2609	3672	4260	4663	2213	2553	2785	4080	4733	5181	2353	2714	2960	4148	4806	5257
35	2209	2545	2774	3885	4502	4924	1988	2288	2492	3455	4007	4386	2139	2464	2686	3780	4385	4800	2279	2628	2867	4200	4872	5333	2422	2794	3047	4270	4948	5412
36	2272	2617	2853	3996	4630	5065	2045	2353	2564	3553	4122	4512	2200	2534	2763	3888	4510	4937	2344	2703	2949	4320	5011	5485	2491	2874	3135	4392	5089	5567
37	2335	2690	2932	4107	4759	5205	2102	2419	2635	3652	4236	4637	2261	2605	2839	3996	4636	5074	2409	2778	3031	4440	5151	5638	2560	2953	3222	4514	5231	5721
38	2398	2763	3012	4218	4888	5346	2158	2484	2706	3751	4351	4762	2322	2675	2916	4104	4761	5211	2474	2854	3113	4560	5290	5790	2630	3033	3309	4636	5372	5876
39	2461	2835	3091	4329	5016	5487	2215	2549	2777	3849	4465	4888	2383	2746	2993	4212	4886	5348	2539	2929	3195	4680	5429	5943	2699	3113	3396	4758	5513	6031
40	2524	2908	3170	4440	5145	5628	2272	2615	2848	3948	4580	5013	2444	2816	3070	4320	5011	5485	2604	3004	3276	4800	5568	6095	2768	3193	3483	4880	5655	6185
41	2587	2981	3249	4551	5273	5768	2329	2680	2920	4047	4694	5138	2505	2886	3146	4428	5137	5623	2669	3079	3358	4920	5707	6247	2837	3273	3570	5002	5796	6340
42	2650	3054	3329	4662	5402	5909	2386	2746	2991	4145	4809	5264	2566	2957	3223	4536	5262	5760	2734	3154	3440	5040	5847	6400	2906	3353	3657	5124	5937	6494
43	2713	3126	3408	4773	5531	6050	2442	2811	3062	4244	4923	5389	2627	3027	3300	4644	538													

Overall length = 1200–1400 mm

$\Phi_L = \Delta T \text{ 50 K EN 442 (SN 384.501-503)}$

Mod.	E1120/30			E2120/30			E1120/40			E2120/40			E1120/50			E2120/50			E1120/60			E2120/60			E1140/30			E2140/30					
	T mm	H mm	Exp. n	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60			
4	95	1200	1.25	268	309	337	460	533	583	289	333	363	508	590	646	308	357	389	564	654	716	328	378	413	576	668	731	310	358	390	528	613	672
5	95	1200	1.25	335	386	421	575	666	729	361	416	454	635	737	808	386	446	487	705	818	895	410	473	516	720	835	914	388	447	488	660	766	840
6	95	1200	1.25	402	463	505	690	800	875	433	500	545	762	885	969	463	535	584	846	981	1074	491	567	619	864	1002	1097	465	536	585	792	920	1007
7	95	1200	1.25	469	540	589	805	933	1020	505	583	636	889	1032	1131	540	624	682	987	1145	1253	573	662	723	1008	1169	1280	543	626	683	924	1073	1175
8	95	1200	1.25	536	618	673	920	1066	1166	578	666	727	1016	1180	1292	617	713	779	1128	1309	1432	655	757	826	1152	1336	1463	620	715	780	1056	1226	1343
9	95	1200	1.25	603	695	757	1035	1199	1312	650	750	818	1143	1327	1454	694	802	876	1269	1472	1611	737	851	929	1296	1503	1646	698	805	878	1188	1380	1511
10	160	1200	1.3	670	772	841	1150	1333	1458	722	833	908	1270	1475	1616	771	891	974	1410	1636	1790	819	946	1032	1440	1670	1828	775	894	975	1320	1533	1679
11	160	1200	1.3	737	849	926	1265	1466	1603	794	916	999	1397	1622	1777	848	980	1071	1551	1799	1969	901	1040	1136	1584	1838	2011	853	983	1073	1452	1686	1847
12	160	1200	1.3	804	926	1010	1380	1599	1749	866	999	1090	1524	1770	1939	925	1070	1168	1692	1963	2148	983	1135	1239	1728	2005	2194	930	1073	1170	1584	1840	2015
13	160	1200	1.3	871	1004	1094	1495	1732	1895	939	1083	1181	1651	1917	2100	1002	1159	1266	1833	2126	2328	1065	1230	1342	1872	2172	2377	1008	1162	1268	1716	1993	2183
14	160	1200	1.3	938	1081	1178	1610	1866	2041	1011	1166	1272	1778	2065	2262	1079	1248	1363	1974	2290	2507	1147	1324	1445	2016	2339	2560	1085	1252	1365	1848	2146	2351
15	160	1200	1.3	1005	1158	1262	1725	1999	2186	1083	1249	1363	1905	2212	2423	1157	1337	1460	2115	2453	2686	1229	1419	1549	2160	2506	2743	1163	1341	1463	1980	2299	2519
16	160	1200	1.3	1072	1235	1346	1840	2132	2332	1155	1333	1454	2032	2360	2585	1234	1426	1558	2256	2617	2865	1310	1513	1652	2304	2673	2926	1240	1430	1560	2112	2453	2687
17	160	1200	1.3	1139	1312	1431	1955	2265	2478	1227	1416	1544	2159	2507	2746	1311	1515	1655	2397	2781	3044	1392	1608	1755	2448	2840	3108	1318	1520	1658	2244	2606	2855
18	160	1200	1.3	1206	1390	1515	2070	2399	2624	1300	1499	1635	2286	2655	2908	1388	1604	1753	2538	2944	3223	1474	1702	1858	2592	3007	3291	1395	1609	1755	2376	2759	3022
19	160	1200	1.3	1273	1467	1599	2185	2532	2769	1372	1582	1726	2413	2802	3070	1465	1694	1850	2679	3108	3402	1556	1797	1962	2736	3174	3474	1473	1699	1853	2508	2913	3190
20	160	1200	1.3	1340	1544	1683	2300	2665	2915	1444	1666	1817	2540	2950	3231	1542	1783	1947	2820	3271	3581	1638	1892	2065	2880	3341	3657	1550	1788	1950	2640	3066	3358
21	160	1200	1.3	1407	1621	1767	2415	2798	3061	1516	1749	1908	2667	3097	3393	1619	1872	2045	2961	3435	3760	1720	1986	2168	3024	3508	3840	1628	1877	2048	2772	3219	3526
22	160	1200	1.3	1474	1698	1851	2530	2932	3207	1588	1832	1999	2794	3245	3554	1696	1961	2142	3102	3598	3939	1802	2081	2271	3168	3675	4023	1705	1967	2145	2904	3373	3694
23	160	1200	1.3	1541	1776	1935	2645	3065	3352	1661	1915	2089	2921	3392	3716	1773	2050	2239	3243	3762	4118	1884	2175	2374	3312	3842	4206	1783	2056	2243	3036	3526	3862
24	160	1200	1.3	1608	1853	2020	2760	3198	3498	1733	1999	2180	3048	3540	3877	1850	2139	2337	3384	3926	4297	1966	2270	2478	3456	4009	4388	1860	2145	2340	3168	3679	4030
25	160	1200	1.3	1675	1930	2104	2875	3331	3644	1805	2082	2271	3175	3687	4039	1928	2228	2434	3525	4089	4476	2048	2364	2581	3600	4176	4571	1938	2235	2438	3300	3832	4198
26	160	1200	1.3	1742	2007	2188	2990	3465	3790	1877	2165	2362	3302	3835	4200	2005	2318	2532	3666	4253	4655	2129	2459	2684	3744	4343	4754	2015	2324	2535	3432	3986	4366
27	160	1200	1.3	1809	2084	2272	3105	3598	3935	1949	2249	2453	3429	3982	4362	2082	2407	2629	3807	4416	4834	2211	2554	2787	3888	4510	4937	2093	2414	2633	3564	4139	4534
28	160	1200	1.3	1876	2162	2356	3220	3731	4081	2022	2332	2544	3556	4130	4524	2159	2496	2726	3948	4580	5013	2293	2648	2891	4032	4677	5120	2170	2503	2730	3696	4292	4702
29	160	1200	1.3	1943	2239	2440	3335	3864	4227	2094	2415	2635	3683	4277	4685	2236	2585	2824	4089	4743	5192	2375	2743	2994	4176	4844	5303	2248	2592	2828	3828	4446	4870
30	160	1200	1.3	2010	2316	2524	3450	3998	4373	2166	2498	2725	3810	4425	4847	2313	2674	2921	4230	4907	5371	2457	2837	3097	4320	5011	5485	2325	2682	2925	3960	4599	5037
31	160	1200	1.3	2077	2393	2609	3565	4131	4519	2238	2582	2816	3937	4572	5008	2390	2763	3018	4371	5071	5550	2539	2932	3200	4464	5178	5668	2403	2771	3023	4092	4752	5205
32	160	1200	1.3	2144	2470	2693	3680	4264	4664	2310	2665	2907	4064	4720	5170	2467	2852	3116	4512	5234	5729	2621	3027	3304	4608	5345	5851	2480	2861	3120	4224	4906	5373
33	160	1200	1.3	2211	2547	2777	3795	4397	4810	2383	2748	2998	4191	4867	5331	2544	2941	3213	4653	5398	5908	2703	3121	3407	4752	5513	6034	2558	2950	3218	4356	5059	5541
34	160	1200	1.3	2278	2625	2861	3910	4531	4956	2455	2832	3089	4318	5015	5493	2621	3031	3310	4794	5561	6087	2785	3216	3510	4896	5680	6217	2635	3039	3315	4488	5212	5709
35	160	1200	1.3	2345	2702	2945	4025	4664	5102	2527	2915	3180	4445	5162	5654	2699	3120	3408	4935	5725	6266	2867	3310	3613	5040	5847	6400	2713	3129	3413	4620	5365	5877
36	160	1200	1.3	2412	2779	3029	4140	4797	5247	2599	2998	3270	4572	5310	5816	2776	3209	3505	5076	5888	6445	2948	3405	3717	5184	6014	6583	2790	3218	3511	4752	5519	6045
37	160	1200	1.3	2479	2856	3114	4255	4930	5393	2671	3081	3361	4699	5457	5978	2853	3298	3603	5217	6052	6624	3030	3499	3820	5328	6181	6765	2868	3308	3608	4884	5672	6213
38	160	1200	1.3	2546	2933	3198	4370	5064	5539	2744	3165	3452	4826	5605	6139	2930	3387	3700	5358	6216	6803	3112	3594	3923	5472	6348	6948	2945	3397	3706	5016	5825	6381
39	160	1200	1.3	2613	3011	3282	4485	5197	5685	2816	3248	3543	4953	5752	6301	3007	3476	3797	5499	6379	6983	3194	3689	4026	5616	6515	7131	3023	3486	3803	5148	5979	6549
40	160	1200	1.3	2680	3088	3366	4600	5330	5830	2888	3331	3634	5080	5900	6462	3084	3565	3895	5640	6543	7162	3276	3783	4130	5760	6682	7314	3100	3576	3901	5280	6132	6717
41	160	1200	1.3	2747	3165	3450	4715	5463	5976	2960	3415	3725	5207	6047	6624	3161	3655	3992	5781	6706	7341	3358	3878	4233	5904	6849	7497	3178	3665	3998	5412	6285	6885
42	160	1200	1.3	2814	3242	3534	4830	5597	6122	3032	3498	3816	5334	6195</																			

Overall length = 1400-1600 mm

$$\Phi_L = \Delta T \text{ 50 K EN 442 (SN 384.501-503)}$$

Mod.	E1140/40			E2140/40			E1140/50			E2140/50			E1140/60			E2140/60			E1160/30			E2160/30			E1160/40			E2160/40		
	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60
4	335	387	423	580	674	738	360	415	453	644	749	821	380	440	480	664	771	845	353	407	444	596	693	760	384	444	486	656	762	834
5	419	484	528	725	842	922	450	519	567	805	936	1026	476	550	600	830	964	1056	442	509	556	745	866	949	480	556	607	820	952	1043
6	503	581	634	870	1010	1107	539	623	680	966	1123	1231	571	660	721	996	1157	1267	530	611	667	894	1039	1139	576	667	729	984	1143	1252
7	587	677	739	1015	1179	1291	629	727	793	1127	1310	1436	666	770	841	1162	1350	1478	618	713	778	1043	1213	1329	672	778	850	1148	1333	1460
8	670	774	845	1160	1347	1476	719	831	907	1288	1498	1641	761	880	961	1328	1542	1689	706	815	889	1192	1386	1519	768	889	972	1312	1524	1669
9	754	871	951	1305	1516	1660	809	934	1020	1449	1685	1847	856	990	1081	1494	1735	1901	795	917	1000	1341	1559	1709	864	1000	1093	1476	1714	1878
10	838	968	1056	1450	1684	1845	899	1038	1133	1610	1872	2052	951	1099	1201	1660	1928	2112	883	1019	1111	1490	1732	1899	960	1111	1215	1640	1905	2086
11	922	1064	1162	1595	1852	2029	989	1142	1247	1771	2059	2257	1046	1209	1321	1826	2121	2323	971	1120	1222	1639	1906	2089	1056	1222	1336	1804	2095	2295
12	1006	1161	1268	1740	2021	2213	1079	1246	1360	1932	2246	2462	1141	1319	1441	1992	2313	2534	1060	1222	1333	1788	2079	2279	1152	1333	1457	1968	2286	2503
13	1089	1258	1373	1885	2189	2398	1169	1350	1473	2093	2433	2667	1236	1429	1561	2158	2506	2745	1148	1324	1444	1937	2252	2469	1248	1444	1579	2132	2476	2712
14	1173	1355	1479	2030	2358	2582	1259	1453	1587	2254	2621	2873	1331	1539	1681	2324	2699	2956	1236	1426	1555	2086	2425	2658	1344	1556	1700	2296	2666	2921
15	1257	1452	1585	2175	2526	2767	1349	1557	1700	2415	2808	3078	1427	1649	1801	2490	2892	3168	1325	1528	1667	2235	2599	2848	1440	1667	1822	2460	2857	3129
16	1341	1548	1690	2320	2694	2951	1438	1661	1813	2576	2995	3283	1522	1759	1922	2656	3085	3379	1413	1630	1778	2384	2772	3038	1536	1778	1943	2624	3047	3338
17	1425	1645	1796	2465	2863	3136	1528	1765	1926	2737	3182	3488	1617	1869	2042	2822	3277	3590	1501	1732	1889	2533	2945	3228	1632	1889	2065	2788	3238	3547
18	1508	1742	1901	2610	3031	3320	1618	1869	2040	2898	3369	3693	1712	1979	2162	2988	3470	3801	1589	1833	2000	2682	3118	3418	1728	2000	2186	2952	3428	3755
19	1592	1839	2007	2755	3200	3505	1708	1973	2153	3059	3557	3898	1807	2089	2282	3154	3663	4012	1678	1935	2111	2831	3292	3608	1824	2111	2308	3116	3619	3964
20	1676	1935	2113	2900	3368	3689	1798	2076	2266	3220	3744	4104	1902	2199	2402	3320	3856	4223	1766	2037	2222	2980	3465	3798	1920	2222	2429	3280	3809	4172
21	1760	2032	2218	3045	3536	3874	1888	2180	2380	3381	3931	4309	1997	2309	2522	3486	4049	4435	1854	2139	2333	3129	3638	3988	2016	2333	2551	3444	4000	4381
22	1844	2129	2324	3190	3705	4058	1978	2284	2493	3542	4118	4514	2092	2419	2642	3652	4241	4646	1943	2241	2444	3278	3811	4178	2112	2444	2672	3608	4190	4590
23	1927	2226	2430	3335	3873	4242	2068	2388	2606	3703	4305	4719	2187	2529	2762	3818	4434	4857	2031	2343	2555	3427	3985	4367	2208	2556	2793	3772	4381	4798
24	2011	2323	2535	3480	4042	4427	2158	2492	2720	3864	4493	4924	2282	2639	2882	3984	4627	5068	2119	2444	2666	3576	4158	4557	2304	2667	2915	3936	4571	5007
25	2095	2419	2641	3625	4210	4611	2248	2595	2833	4025	4680	5130	2378	2749	3002	4150	4820	5279	2208	2546	2778	3725	4331	4747	2400	2778	3036	4100	4762	5216
26	2179	2516	2746	3770	4378	4796	2337	2699	2946	4186	4867	5335	2473	2859	3123	4316	5012	5490	2296	2648	2889	3874	4504	4937	2496	2889	3158	4264	4952	5424
27	2263	2613	2852	3915	4547	4980	2427	2803	3060	4347	5054	5540	2568	2969	3243	4482	5205	5702	2384	2750	3000	4023	4677	5127	2592	3000	3279	4428	5143	5633
28	2346	2710	2958	4060	4715	5165	2517	2907	3173	4508	5241	5745	2663	3078	3363	4648	5398	5913	2472	2852	3111	4172	4851	5317	2688	3111	3401	4592	5333	5841
29	2430	2806	3063	4205	4884	5349	2607	3011	3286	4669	5429	5950	2758	3188	3483	4814	5591	6124	2561	2954	3222	4321	5024	5507	2784	3222	3522	4756	5523	6050
30	2514	2903	3169	4350	5052	5534	2697	3114	3400	4830	5616	6155	2853	3298	3603	4980	5784	6335	2649	3056	3333	4470	5197	5697	2880	3333	3644	4920	5714	6259
31	2598	3000	3275	4495	5220	5718	2787	3218	3513	4991	5803	6361	2948	3408	3723	5146	5976	6546	2737	3157	3444	4619	5370	5887	2976	3444	3765	5084	5904	6467
32	2682	3097	3380	4640	5389	5903	2877	3322	3626	5152	5990	6566	3043	3518	3843	5312	6169	6757	2826	3259	3555	4768	5544	6076	3072	3556	3887	5248	6095	6676
33	2765	3193	3486	4785	5557	6087	2967	3426	3740	5313	6177	6771	3138	3628	3963	5478	6362	6969	2914	3361	3666	4917	5717	6266	3168	3667	4008	5412	6285	6885
34	2849	3290	3592	4930	5726	6271	3057	3530	3853	5474	6365	6976	3233	3738	4083	5644	6555	7180	3002	3463	3778	5066	5890	6456	3264	3778	4129	5576	6476	7093
35	2933	3387	3697	5075	5894	6456	3147	3634	3966	5635	6552	7181	3329	3848	4203	5810	6748	7391	3091	3565	3889	5215	6063	6646	3360	3889	4251	5740	6666	7302
36	3017	3484	3803	5220	6062	6640	3236	3737	4080	5796	6739	7387	3424	3958	4323	5976	6940	7602	3179	3667	4000	5364	6237	6836	3456	4000	4372	5904	6857	7510
37	3101	3581	3908	5365	6231	6825	3326	3841	4193	5957	6926	7592	3519	4068	4444	6142	7133	7813	3267	3769	4111	5513	6410	7026	3552	4111	4494	6068	7047	7719
38	3184	3677	4014	5510	6399	7009	3416	3945	4306	6118	7113	7797	3614	4178	4564	6308	7326	8024	3355	3870	4222	5662	6583	7216	3648	4222	4615	6232	7238	7928
39	3268	3774	4120	5655	6568	7194	3506	4049	4420	6279	7300	8002	3709	4288	4684	6474	7519	8236	3444	3972	4333	5811	6756	7406	3744	4333	4737	6396	7428	8136
40	3352	3871	4225	5800	6736	7378	3596	4153	4533	6440	7488	8207	3804	4398	4804	6640	7711	8447	3532	4074	4444	5960	6930	7596	3840	4444	4858	6560	7619	8345
41	3436	3968	4331	5945	6904	7563	3686	4256	4646	6601	7675	8412	3899	4508	4924	6806	7904	8658	3620	4176	4555	6109	7103	7785	3936	4556	4980	6724	7809	8554
42	3520	4064	4437	6090	7073	7747	3776	4360	4760	6762	7862	8618	3994	4618	5044	6972	8097	8869	3709	4278	4666	6258	7276	7975	4032	4667	5101	6888	7999	8762
43	3603	4161	4542	6235	7241	7932	3866	4464	4873	6923	8049	8823	4089	4728	5164	7138	8290	9080	3797	4380	4777	6407	7449	8165	4128	4778	5223	7052	8190	8971
44	3687	4258	4648	6380	7409	8116	3956	4568	4986	7084	8236	9028	4184	4838	5284	7304	8483	9291	3885	4482	4889	6556	7623	8355	4224	4889	5344	7216	8380	9179
45	3771	4355	4754	6525	7578	8300	4046	4672	5100	7245	8424	9233	4280	4948	5404	7470	8675	9503	397											

Overall length = 1600–1800 mm

$$\Phi_L = \Delta T \text{ 50 K EN 442 (SN 384.501-503)}$$

Mod.	E1160/50			E2160/50			E1160/60			E2160/60			E1180/30			E2180/30			E1180/40			E2180/40			E1180/50			E2180/50					
	T mm	H mm	Exp. n	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60
4	95	1600	1.31	412	478	523	728	845	924	436	505	553	752	873	957	398	460	503	664	773	848	436	505	553	736	856	938	472	548	600	808	937	1026
5	95	1600	1.31	515	597	654	910	1056	1155	545	632	691	940	1092	1196	498	575	628	830	966	1060	545	632	691	920	1070	1172	590	685	751	1010	1172	1282
6	95	1600	1.3	618	717	785	1092	1267	1387	654	758	829	1128	1310	1435	597	690	754	996	1159	1272	654	758	829	1104	1284	1407	708	822	901	1212	1406	1539
7	95	1600	1.32	721	836	916	1274	1478	1618	763	884	967	1316	1528	1674	697	805	880	1162	1353	1484	763	884	967	1288	1498	1641	826	959	1051	1414	1640	1795
8	95	1800	1.28	824	956	1046	1456	1689	1849	872	1010	1105	1504	1747	1913	796	920	1005	1328	1546	1696	872	1010	1105	1472	1711	1876	944	1096	1201	1616	1875	2052
9	95	1800	1.3	927	1075	1177	1638	1900	2080	981	1137	1243	1692	1965	2152	896	1035	1131	1494	1739	1907	981	1137	1243	1656	1925	2110	1062	1233	1351	1818	2109	2308
10	95	1800	1.34	1030	1195	1308	1820	2111	2311	1090	1263	1382	1880	2183	2392	995	1150	1257	1660	1932	2119	1090	1263	1382	1840	2139	2345	1180	1370	1501	2020	2343	2565
11	95	1800	1.3	1133	1314	1439	2002	2322	2542	1199	1389	1520	2068	2402	2631	1095	1265	1382	1826	2125	2331	1199	1389	1520	2024	2353	2579	1298	1507	1651	2222	2578	2821
12	95	1800	1.32	1236	1434	1569	2184	2534	2773	1308	1516	1658	2256	2620	2870	1194	1380	1508	1992	2319	2543	1308	1516	1658	2208	2567	2814	1416	1644	1801	2424	2812	3078
13	95	1800	1.3	1339	1553	1700	2366	2745	3004	1417	1642	1796	2444	2838	3109	1294	1495	1633	2158	2512	2755	1417	1642	1796	2392	2781	3048	1534	1782	1951	2626	3046	3334
14	95	1800	1.33	1442	1673	1831	2548	2956	3235	1526	1768	1934	2632	3057	3348	1393	1610	1759	2324	2705	2967	1526	1768	1934	2576	2995	3283	1652	1919	2101	2828	3281	3591
15	95	1800	1.3	1545	1792	1962	2730	3167	3466	1635	1895	2072	2820	3275	3587	1493	1725	1885	2490	2898	3179	1635	1895	2072	2760	3209	3517	1770	2056	2252	3030	3515	3847
16	95	1800	1.32	1648	1912	2093	2912	3378	3698	1744	2021	2210	3008	3493	3826	1592	1841	2010	2656	3092	3391	1744	2021	2210	2944	3423	3752	1888	2193	2402	3232	3749	4104
17	95	1800	1.3	1751	2031	2223	3094	3589	3929	1853	2147	2349	3196	3712	4066	1692	1956	2136	2822	3285	3603	1853	2147	2349	3128	3637	3986	2006	2330	2552	3434	3984	4360
18	95	1800	1.33	1854	2151	2354	3276	3800	4160	1962	2273	2487	3384	3930	4305	1791	2071	2262	2988	3478	3815	1962	2273	2487	3312	3851	4221	2124	2467	2702	3636	4218	4617
19	95	1800	1.3	1957	2270	2485	3458	4011	4391	2071	2400	2625	3572	4148	4544	1891	2186	2387	3154	3671	4027	2071	2400	2625	3496	4065	4455	2242	2604	2852	3838	4452	4873
20	95	1800	1.34	2060	2390	2616	3640	4223	4622	2180	2526	2763	3760	4367	4783	1990	2301	2513	3320	3864	4239	2180	2526	2763	3680	4279	4690	2360	2741	3002	4040	4687	5130
21	95	1800	1.3	2163	2509	2747	3822	4434	4853	2289	2652	2901	3948	4585	5022	2090	2416	2639	3486	4058	4451	2289	2652	2901	3864	4493	4924	2478	2878	3152	4242	4921	5386
22	95	1800	1.32	2266	2629	2877	4004	4645	5084	2398	2779	3039	4136	4803	5261	2189	2531	2764	3652	4251	4663	2398	2779	3039	4048	4707	5159	2596	3015	3302	4444	5155	5643
23	95	1800	1.3	2369	2748	3008	4186	4856	5315	2507	2905	3178	4324	5022	5501	2289	2646	2890	3818	4444	4875	2507	2905	3178	4232	4920	5393	2714	3152	3452	4646	5390	5899
24	95	1800	1.33	2472	2868	3139	4368	5067	5546	2616	3031	3316	4512	5240	5740	2388	2761	3016	3984	4637	5087	2616	3031	3316	4416	5134	5628	2832	3289	3603	4848	5624	6156
25	95	1800	1.3	2575	2987	3270	4550	5278	5777	2725	3158	3454	4700	5458	5979	2488	2876	3141	4150	4831	5298	2725	3158	3454	4600	5348	5862	2950	3426	3753	5050	5858	6412
26	95	1800	1.32	2678	3107	3400	4732	5489	6009	2834	3284	3592	4888	5677	6218	2587	2991	3267	4316	5024	5510	2834	3284	3592	4784	5562	6097	3068	3563	3903	5252	6093	6669
27	95	1800	1.3	2781	3226	3531	4914	5700	6240	2943	3410	3730	5076	5895	6457	2687	3106	3393	4482	5217	5722	2943	3410	3730	4968	5776	6331	3186	3700	4053	5454	6327	6925
28	95	1800	1.33	2884	3346	3662	5096	5912	6471	3052	3536	3868	5264	6113	6696	2786	3221	3518	4648	5410	5934	3052	3536	3868	5152	5990	6566	3304	3837	4203	5656	6561	7182
29	95	1800	1.3	2987	3465	3793	5278	6123	6702	3161	3663	4006	5452	6332	6935	2886	3336	3644	4814	5603	6146	3161	3663	4006	5336	6204	6800	3422	3974	4353	5858	6796	7438
30	95	1800	1.34	3090	3585	3924	5460	6334	6933	3270	3789	4145	5640	6550	7175	2985	3451	3770	4980	5797	6358	3270	3789	4145	5520	6418	7035	3540	4111	4503	6060	7030	7695
31	95	1800	1.3	3193	3704	4054	5642	6545	7164	3379	3915	4283	5828	6768	7414	3085	3566	3895	5146	5990	6570	3379	3915	4283	5704	6632	7269	3658	4248	4653	6262	7264	7951
32	95	1800	1.32	3296	3824	4185	5824	6756	7395	3488	4042	4421	6016	6987	7653	3184	3681	4021	5312	6183	6782	3488	4042	4421	5888	6846	7504	3776	4385	4803	6464	7499	8208
33	95	1800	1.3	3399	3943	4316	6006	6967	7626	3597	4168	4559	6204	7205	7892	3284	3796	4147	5478	6376	6994	3597	4168	4559	6072	7060	7738	3894	4522	4954	6666	7733	8464
34	95	1800	1.33	3502	4062	4447	6188	7178	7857	3706	4294	4697	6392	7423	8131	3383	3911	4272	5644	6570	7206	3706	4294	4697	6256	7274	7973	4012	4659	5104	6868	7967	8721
35	95	1800	1.3	3605	4182	4578	6370	7389	8088	3815	4421	4835	6580	7642	8370	3483	4026	4398	5810	6763	7418	3815	4421	4835	6440	7488	8207	4130	4796	5254	7070	8202	8977
36	95	1800	1.32	3708	4301	4708	6552	7601	8320	3924	4547	4974	6768	7860	8610	3582	4141	4524	5976	6956	7630	3924	4547	4974	6624	7702	8442	4248	4933	5404	7272	8436	9234
37	95	1800	1.3	3811	4421	4839	6734	7812	8551	4033	4673	5112	6956	8078	8849	3682	4256	4649	6142	7149	7842	4033	4673	5112	6808	7916	8676	4366	5071	5554	7474	8670	9490
38	95	1800	1.33	3914	4540	4970	6916	8023	8782	4142	4799	5250	7144	8297	9088	3781	4371	4775	6308	7342	8054	4142	4799	5250	6992	8129	8911	4484	5208	5704	7676	8905	9747
39	95	1800	1.3	4017	4660	5101	7098	8234	9013	4251	4926	5388	7332	8515	9327	3881	4486	4900	6474	7536	8266	4251	4926	5388	7176	8343	9145	4602	5345	5854	7878	9139	10003
40	95	1800	1.34	4120	4779	5231	7280	8445	9244	4360	5052	5526	7520	8733	9566	3980	4601	5026	6640	7729	8478	4360	5052	5526	7360	8557	9380	4720	5482	6004	8080	9373	10260
41	95	1800	1.3	4223	4899	5362	7462	8656	9475	4469	5178	5664	7708	8952	9805	4080	4716	5152	6806	7922	8690	4469	5178	5664	7544	8771	9614	4838	5619	6154	8282	9608	10516
42	95	1800																															

Overall length = 1800–2000 mm

$$\Phi_L = \Delta T \text{ 50 K EN 442 (SN 384.501-503)}$$

Mod.	E1180/60			E2180/60			E1200/30			E2200/30			E1200/40			E2200/40			E1200/50			E2200/50			E1200/60			E2200/60		
	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60
4	496	575	630	844	981	1076	444	514	562	732	852	935	488	566	620	816	950	1042	532	619	679	892	1036	1135	560	650	712	940	1094	1200
5	620	719	787	1055	1227	1345	555	642	702	915	1065	1168	610	708	775	1020	1187	1302	665	774	849	1115	1295	1418	700	813	890	1175	1368	1500
6	744	863	945	1266	1472	1613	666	771	843	1098	1278	1402	732	849	929	1224	1425	1563	798	929	1019	1338	1554	1702	840	976	1069	1410	1641	1800
7	868	1007	1102	1477	1717	1882	777	899	983	1281	1491	1636	854	991	1084	1428	1662	1823	931	1084	1189	1561	1813	1986	980	1138	1247	1645	1915	2100
8	992	1151	1260	1688	1963	2151	888	1028	1123	1464	1704	1869	976	1132	1239	1632	1900	2084	1064	1238	1358	1784	2072	2269	1120	1301	1425	1880	2188	2400
9	1116	1295	1417	1899	2208	2420	999	1156	1264	1647	1917	2103	1098	1274	1394	1836	2137	2344	1197	1393	1528	2007	2331	2553	1260	1463	1603	2115	2462	2700
10	1240	1438	1575	2110	2453	2689	1110	1285	1404	1830	2130	2336	1220	1415	1549	2040	2375	2605	1330	1548	1698	2230	2590	2837	1400	1626	1781	2350	2735	3000
11	1364	1582	1732	2321	2699	2958	1221	1413	1545	2013	2343	2570	1342	1557	1704	2244	2612	2865	1463	1703	1868	2453	2849	3120	1540	1788	1959	2585	3009	3300
12	1488	1726	1889	2532	2944	3227	1332	1542	1685	2196	2556	2804	1464	1698	1859	2448	2849	3125	1596	1858	2038	2676	3108	3404	1680	1951	2137	2820	3282	3600
13	1612	1870	2047	2743	3189	3496	1443	1670	1826	2379	2769	3037	1586	1840	2014	2652	3087	3386	1729	2013	2207	2899	3367	3688	1820	2114	2315	3055	3556	3900
14	1736	2014	2204	2954	3435	3765	1554	1799	1966	2562	2982	3271	1708	1981	2169	2856	3324	3646	1862	2167	2377	3122	3626	3971	1960	2276	2493	3290	3830	4200
15	1860	2158	2362	3165	3680	4034	1665	1927	2106	2745	3195	3505	1830	2123	2324	3060	3562	3907	1995	2322	2547	3345	3885	4255	2100	2439	2671	3525	4103	4501
16	1984	2302	2519	3376	3925	4302	1776	2056	2247	2928	3408	3738	1952	2264	2479	3264	3799	4167	2128	2477	2717	3568	4144	4539	2240	2601	2849	3760	4377	4801
17	2108	2445	2677	3587	4171	4571	1887	2184	2387	3111	3621	3972	2074	2406	2634	3468	4037	4428	2261	2632	2887	3791	4403	4823	2380	2764	3028	3995	4650	5101
18	2232	2589	2834	3798	4416	4840	1998	2313	2528	3294	3834	4206	2196	2547	2788	3672	4274	4688	2394	2787	3057	4014	4662	5106	2520	2927	3206	4230	4924	5401
19	2356	2733	2992	4009	4661	5109	2109	2441	2668	3477	4047	4439	2318	2689	2943	3876	4512	4949	2527	2941	3226	4237	4921	5390	2660	3089	3384	4465	5197	5701
20	2480	2877	3149	4220	4907	5378	2220	2569	2809	3660	4260	4673	2440	2831	3098	4080	4749	5209	2660	3096	3396	4460	5180	5674	2800	3252	3562	4700	5471	6001
21	2604	3021	3306	4431	5152	5647	2331	2698	2949	3843	4473	4907	2562	2972	3253	4284	4987	5470	2793	3251	3566	4683	5439	5957	2940	3414	3740	4935	5744	6301
22	2728	3165	3464	4642	5397	5916	2442	2826	3090	4026	4686	5140	2684	3114	3408	4488	5224	5730	2926	3406	3736	4906	5698	6241	3080	3577	3918	5170	6018	6601
23	2852	3308	3621	4853	5642	6185	2553	2955	3230	4209	4899	5374	2806	3255	3563	4692	5461	5990	3059	3561	3906	5129	5957	6525	3220	3740	4096	5405	6291	6901
24	2976	3452	3779	5064	5888	6454	2664	3083	3370	4392	5112	5607	2928	3397	3718	4896	5699	6251	3192	3715	4075	5352	6216	6808	3360	3902	4274	5640	6565	7201
25	3100	3596	3936	5275	6133	6723	2775	3212	3511	4575	5325	5841	3050	3538	3873	5100	5936	6511	3325	3870	4245	5575	6475	7092	3500	4065	4452	5875	6838	7501
26	3224	3740	4094	5486	6378	6991	2886	3340	3651	4758	5538	6075	3172	3680	4028	5304	6174	6772	3458	4025	4415	5798	6734	7376	3640	4227	4630	6110	7112	7801
27	3348	3884	4251	5697	6624	7260	2997	3469	3792	4941	5751	6308	3294	3821	4183	5508	6411	7032	3591	4180	4585	6021	6993	7659	3780	4389	4809	6345	7386	8101
28	3472	4028	4409	5908	6869	7529	3108	3597	3932	5124	5964	6542	3416	3963	4338	5712	6649	7293	3724	4335	4755	6244	7252	7943	3920	4553	4987	6580	7659	8401
29	3596	4172	4566	6119	7114	7798	3219	3726	4073	5307	6177	6776	3538	4104	4492	5916	6886	7553	3857	4490	4924	6467	7511	8227	4060	4715	5165	6815	7933	8701
30	3720	4315	4724	6330	7360	8067	3330	3854	4213	5490	6390	7009	3660	4246	4647	6120	7124	7814	3990	4644	5094	6690	7770	8510	4200	4878	5343	7050	8206	9001
31	3844	4459	4881	6541	7605	8336	3441	3983	4353	5673	6603	7243	3782	4387	4802	6324	7361	8074	4123	4799	5264	6913	8028	8794	4340	5040	5521	7285	8480	9301
32	3968	4603	5038	6752	7850	8605	3552	4111	4494	5856	6816	7477	3904	4529	4957	6528	7599	8335	4256	4954	5434	7136	8287	9078	4480	5203	5699	7520	8753	9601
33	4092	4747	5196	6963	8096	8874	3663	4240	4634	6039	7029	7710	4026	4670	5112	6732	7836	8595	4389	5109	5604	7359	8546	9361	4620	5365	5877	7755	9027	9901
34	4216	4891	5353	7174	8341	9143	3774	4368	4775	6222	7242	7944	4148	4812	5267	6936	8073	8855	4522	5264	5773	7582	8805	9645	4760	5528	6055	7990	9300	10201
35	4340	5035	5511	7385	8586	9412	3885	4497	4915	6405	7455	8178	4270	4953	5422	7140	8311	9116	4655	5418	5943	7805	9064	9929	4900	5691	6233	8225	9574	10501
36	4464	5178	5668	7596	8832	9680	3996	4625	5056	6588	7668	8411	4392	5095	5577	7344	8548	9376	4788	5573	6113	8028	9323	10212	5040	5853	6411	8460	9847	10801
37	4588	5322	5826	7807	9077	9949	4107	4754	5196	6771	7881	8645	4514	5236	5732	7548	8786	9637	4921	5728	6283	8251	9582	10496	5180	6016	6589	8695	10121	11101
38	4712	5466	5983	8018	9322	10218	4218	4882	5336	6954	8094	8878	4636	5378	5887	7752	9023	9897	5054	5883	6453	8474	9841	10780	5320	6178	6768	8930	10395	11401
39	4836	5610	6141	8229	9568	10487	4329	5010	5477	7137	8307	9112	4758	5520	6042	7956	9261	10158	5187	6038	6622	8697	10100	11063	5460	6341	6946	9165	10668	11701
40	4960	5754	6298	8440	9813	10756	4440	5139	5617	7320	8520	9346	4880	5661	6197	8160	9498	10418	5320	6192	6792	8920	10359	11347	5600	6504	7124	9400	10942	12001
41	5084	5898	6456	8651	10058	11025	4551	5267	5758	7503	8733	9579	5002	5803	6351	8364	9736	10679	5453	6347	6962	9143	10618	11631	5740	6666	7302	9635	11215	12301
42	5208	6042	6613	8862	10304	11294	4662	5396	5898	7686	8946	9813	5124	5944	6506	8568	9973	10939	5586	6502	7132	9366	10877	11914	5880	6829	7480	9870	11489	12601
43	5332	6185	6770	9073	10549	11563	4773	5524	6039	7869	9159	10047	5246	6086	6661	8772	10211	11200	5719	6657	7302	9589	11136	12198	6020	6991	7658	10105	11762	12901
44	5456	6329	6928	9284	10794	11832	4884	5653	6179	8052	9373	10280	5368	6227	6816	8976	10448	11460	5852	6812	7471	9812	11395	12482	6160	7154	7836	10340	12036	13202
45	5580	6473	7085	9495	11040	1																								

Overall length = 2200–2400 mm $\Phi_L = \Delta T$ 50 K EN 442 (SN 384.501-503)

Mod.	E1220/30			E2220/30			E1220/40			E2220/40			E1220/50			E2220/50			E1220/60			E2220/60			E1240/30			E2240/30					
	T mm	H mm	Exp. n	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60	50	56	60
4	95	2200	1.29	492	569	622	804	937	1028	548	637	698	896	1043	1144	600	699	767	972	1129	1236	624	726	797	1036	1206	1323	544	630	690	876	1021	1120
5	95	2200	1.29	615	712	778	1005	1171	1285	685	796	873	1120	1304	1430	750	874	959	1215	1411	1546	780	908	996	1295	1507	1653	680	788	862	1095	1276	1401
6	95	2200	1.29	738	854	934	1206	1405	1543	822	956	1048	1344	1564	1716	900	1049	1151	1458	1693	1855	936	1090	1195	1554	1809	1984	816	946	1034	1314	1531	1681
7	95	2200	1.29	861	997	1089	1407	1640	1800	959	1115	1222	1568	1825	2002	1050	1224	1343	1701	1975	2164	1092	1271	1394	1813	2110	2315	952	1103	1207	1533	1786	1961
8	95	2200	1.29	984	1139	1245	1608	1874	2057	1096	1274	1397	1792	2086	2288	1200	1398	1535	1944	2258	2473	1248	1453	1593	2072	2412	2645	1088	1261	1379	1752	2042	2241
9	95	2200	1.29	1107	1281	1401	1809	2108	2314	1233	1434	1571	2016	2347	2574	1350	1573	1727	2187	2540	2782	1404	1634	1793	2331	2713	2976	1224	1418	1551	1971	2297	2521
10	160	2400	1.35	1230	1424	1556	2010	2342	2571	1370	1593	1746	2240	2607	2860	1500	1748	1919	2430	2822	3091	1560	1816	1992	2590	3015	3307	1360	1576	1724	2190	2552	2801
11	160	2400	1.35	1353	1566	1712	2211	2577	2828	1507	1752	1921	2464	2868	3146	1650	1923	2110	2673	3104	3400	1716	1997	2191	2849	3316	3637	1496	1733	1896	2409	2807	3081
12	160	2400	1.35	1476	1708	1867	2412	2811	3085	1644	1911	2095	2688	3129	3432	1800	2098	2302	2916	3387	3709	1872	2179	2390	3108	3618	3968	1632	1891	2069	2628	3062	3361
13	160	2400	1.35	1599	1851	2023	2613	3045	3342	1781	2071	2270	2912	3390	3718	1950	2272	2494	3159	3669	4019	2028	2361	2589	3367	3919	4299	1768	2049	2241	2847	3318	3642
14	160	2400	1.35	1722	1993	2179	2814	3279	3599	1918	2230	2444	3136	3650	4004	2100	2447	2686	3402	3951	4328	2184	2542	2788	3626	4221	4629	1904	2206	2413	3066	3573	3922
15	160	2400	1.35	1845	2135	2334	3015	3513	3856	2055	2389	2619	3360	3911	4290	2250	2622	2878	3645	4233	4637	2340	2724	2988	3885	4522	4960	2040	2364	2586	3285	3828	4202
16	160	2400	1.35	1968	2278	2490	3216	3748	4113	2192	2549	2794	3584	4172	4576	2400	2797	3070	3888	4515	4946	2496	2905	3187	4144	4824	5291	2176	2521	2758	3504	4083	4482
17	160	2400	1.35	2091	2420	2645	3417	3982	4371	2329	2708	2968	3808	4433	4862	2550	2972	3262	4131	4798	5255	2652	3087	3386	4403	5125	5621	2312	2679	2930	3723	4338	4762
18	160	2400	1.35	2214	2563	2801	3618	4216	4628	2466	2867	3143	4032	4693	5148	2700	3146	3453	4374	5080	5564	2808	3269	3585	4662	5427	5952	2448	2837	3103	3942	4594	5042
19	160	2400	1.35	2337	2705	2957	3819	4450	4885	2603	3026	3317	4256	4954	5434	2850	3321	3645	4617	5362	5873	2964	3450	3784	4921	5728	6283	2584	2994	3275	4161	4849	5322
20	160	2400	1.35	2460	2847	3112	4020	4685	5142	2740	3186	3492	4480	5215	5720	3000	3496	3837	4860	5644	6182	3120	3632	3983	5180	6030	6614	2720	3152	3448	4380	5104	5602
21	160	2400	1.35	2583	2990	3268	4221	4919	5399	2877	3345	3666	4704	5475	6006	3150	3671	4029	5103	5926	6491	3276	3813	4183	5439	6331	6944	2856	3309	3620	4599	5359	5882
22	160	2400	1.35	2706	3132	3424	4422	5153	5656	3014	3504	3841	4928	5736	6292	3300	3846	4221	5346	6209	6801	3432	3995	4382	5698	6632	7275	2992	3467	3792	4818	5615	6163
23	160	2400	1.35	2829	3274	3579	4623	5387	5913	3151	3664	4016	5152	5997	6578	3450	4020	4413	5589	6491	7110	3588	4176	4581	5957	6934	7606	3128	3625	3965	5037	5870	6443
24	160	2400	1.35	2952	3417	3735	4824	5621	6170	3288	3823	4190	5376	6258	6864	3600	4195	4605	5832	6773	7419	3744	4358	4780	6216	7235	7936	3264	3782	4137	5256	6125	6723
25	160	2400	1.35	3075	3559	3890	5025	5856	6427	3425	3982	4365	5600	6518	7150	3750	4370	4797	6075	7055	7728	3900	4540	4979	6475	7537	8267	3400	3940	4309	5475	6380	7003
26	160	2400	1.35	3198	3701	4046	5226	6090	6684	3562	4141	4539	5824	6779	7436	3900	4545	4988	6318	7337	8037	4056	4721	5178	6734	7838	8598	3536	4097	4482	5694	6635	7283
27	160	2400	1.35	3321	3844	4202	5427	6324	6942	3699	4301	4714	6048	7040	7722	4050	4720	5180	6561	7620	8346	4212	4903	5378	6993	8140	8928	3672	4255	4654	5913	6891	7563
28	160	2400	1.35	3444	3986	4357	5628	6558	7199	3836	4460	4889	6272	7301	8008	4200	4894	5372	6804	7902	8655	4368	5084	5577	7252	8441	9259	3808	4412	4827	6132	7146	7843
29	160	2400	1.35	3567	4129	4513	5829	6793	7456	3973	4619	5063	6496	7561	8294	4350	5069	5564	7047	8184	8964	4524	5266	5776	7511	8743	9590	3944	4570	4999	6351	7401	8123
30	160	2400	1.35	3690	4271	4668	6030	7027	7713	4110	4779	5238	6720	7822	8580	4500	5244	5756	7290	8466	9274	4680	5448	5975	7770	9044	9920	4080	4728	5171	6570	7656	8403
31	160	2400	1.35	3813	4413	4824	6231	7261	7970	4247	4938	5412	6944	8083	8866	4650	5419	5948	7533	8749	9583	4836	5629	6174	8029	9346	10251	4216	4885	5344	6789	7911	8684
32	160	2400	1.35	3936	4556	4980	6432	7495	8227	4384	5097	5587	7168	8344	9152	4800	5594	6140	7776	9031	9892	4992	5811	6373	8288	9647	10582	4352	5043	5516	7008	8167	8964
33	160	2400	1.35	4059	4698	5135	6633	7730	8484	4521	5256	5762	7392	8604	9438	4950	5768	6331	8019	9313	10201	5148	5992	6573	8547	9949	10912	4488	5200	5688	7227	8422	9244
34	160	2400	1.35	4182	4840	5291	6834	7964	8741	4658	5416	5936	7616	8865	9724	5100	5943	6523	8262	9595	10510	5304	6174	6772	8806	10250	11243	4624	5358	5861	7446	8677	9524
35	160	2400	1.35	4305	4983	5446	7035	8198	8998	4795	5575	6111	7840	9126	10010	5250	6118	6715	8505	9877	10819	5460	6355	6971	9065	10552	11574	4760	5516	6033	7665	8932	9804
36	160	2400	1.35	4428	5125	5602	7236	8432	9255	4932	5734	6285	8064	9386	10296	5400	6293	6907	8748	10160	11128	5616	6537	7170	9324	10853	11904	4896	5673	6206	7884	9187	10084
37	160	2400	1.35	4551	5267	5758	7437	8666	9512	5069	5894	6460	8288	9647	10582	5550	6468	7099	8991	10421	11437	5772	6719	7369	9583	11155	12235	5032	5831	6378	8103	9443	10364
38	160	2400	1.35	4674	5410	5913	7638	8901	9770	5206	6053	6635	8512	9908	10868	5700	6642	7291	9234	10724	11747	5928	6900	7569	9842	11456	12566	5168	5988	6550	8322	9698	10644
39	160	2400	1.35	4797	5552	6069	7839	9135	10027	5343	6212	6809	8736	10169	11154	5850	6817	7483	9477	11006	12056	6084	7082	7768	10101	11758	12896	5304	6146	6723	8541	9953	10925
40	160	2400	1.35	4920	5695	6225	8040	9369	10284																								

Overall length = 2400-2600 mm

$$\Phi_L = \Delta T \text{ 50 K EN 442 (SN 384.501-503)}$$

Mod.	E1240/40			E2240/40			E1240/50			E2240/50			E1240/60			E2240/60			E1260/30			E2260/30			E1260/40			E2260/40		
	T mm	H mm	Exp. n	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60	Watt 50	Watt 56	Watt 60
4	608	705	771	979	1141	1252	672	779	852	1056	1229	1348	696	807	884	1138	1323	1450	596	691	757	951	1109	1218	672	780	855	1064	1242	1364
5	760	881	963	1224	1426	1565	840	973	1065	1320	1536	1685	870	1009	1105	1422	1653	1812	745	864	946	1189	1387	1523	840	976	1069	1331	1552	1705
6	912	1057	1156	1468	1711	1878	1008	1168	1278	1584	1844	2022	1044	1211	1326	1706	1984	2175	894	1037	1135	1426	1664	1828	1008	1171	1282	1597	1863	2046
7	1064	1233	1349	1713	1996	2191	1176	1363	1491	1848	2151	2359	1218	1413	1547	1901	2315	2537	1043	1210	1324	1664	1941	2132	1176	1366	1496	1863	2173	2387
8	1216	1409	1541	1958	2281	2504	1344	1557	1703	2112	2458	2696	1392	1615	1768	2275	2645	2900	1192	1383	1514	1902	2218	2437	1344	1561	1710	2129	2484	2728
9	1368	1585	1734	2202	2566	2817	1512	1752	1916	2376	2766	3034	1566	1817	1988	2560	2976	3262	1341	1556	1703	2139	2496	2741	1512	1756	1923	2395	2794	3069
10	1520	1761	1927	2447	2852	3130	1680	1947	2129	2640	3073	3371	1740	2018	2209	2844	3307	3624	1490	1728	1892	2377	2773	3046	1680	1951	2137	2661	3104	3410
11	1672	1937	2119	2692	3137	3443	1848	2141	2342	2904	3380	3708	1914	2220	2430	3128	3637	3987	1639	1901	2081	2615	3050	3350	1848	2146	2351	2927	3415	3751
12	1824	2114	2312	2936	3422	3756	2016	2336	2555	3168	3688	4045	2088	2422	2651	3413	3968	4349	1788	2074	2270	2852	3328	3655	2016	2341	2565	3193	3725	4092
13	1976	2290	2505	3181	3707	4069	2184	2531	2768	3432	3995	4382	2262	2624	2872	3697	4299	4712	1937	2247	2460	3090	3605	3960	2184	2536	2778	3459	4036	4433
14	2128	2466	2697	3426	3992	4382	2352	2725	2981	3696	4302	4719	2436	2826	3093	3982	4629	5074	2086	2420	2649	3328	3882	4264	2352	2732	2992	3725	4346	4774
15	2280	2642	2890	3671	4277	4695	2520	2920	3194	3960	4609	5056	2610	3028	3314	4266	4960	5437	2235	2593	2838	3566	4160	4569	2520	2927	3206	3992	4657	5115
16	2432	2818	3082	3915	4562	5008	2688	3115	3407	4224	4917	5393	2784	3230	3535	4550	5291	5799	2384	2766	3027	3803	4437	4873	2688	3122	3419	4258	4967	5456
17	2584	2994	3275	4160	4848	5321	2856	3309	3620	4488	5224	5730	2958	3431	3756	4835	5621	6162	2533	2938	3216	4041	4714	5178	2856	3317	3633	4524	5278	5797
18	2736	3170	3468	4405	5133	5634	3024	3504	3833	4752	5531	6067	3132	3633	3977	5119	5952	6524	2682	3111	3406	4279	4992	5483	3024	3512	3847	4790	5588	6138
19	2888	3346	3660	4649	5418	5947	3192	3699	4046	5016	5839	6404	3306	3835	4198	5404	6283	6886	2831	3284	3595	4516	5269	5787	3192	3707	4061	5056	5898	6479
20	3040	3523	3853	4894	5703	6260	3360	3893	4259	5280	6146	6741	3480	4037	4419	5688	6613	7249	2980	3457	3784	4754	5546	6092	3360	3902	4274	5322	6209	6820
21	3192	3699	4046	5139	5988	6573	3528	4088	4472	5544	6453	7078	3654	4239	4640	5972	6944	7611	3129	3630	3973	4992	5824	6396	3528	4097	4488	5588	6519	7161
22	3344	3875	4238	5383	6273	6886	3696	4283	4685	5808	6760	7415	3828	4441	4861	6257	7275	7974	3278	3803	4162	5229	6101	6701	3696	4292	4702	5854	6830	7502
23	3496	4051	4431	5628	6559	7199	3864	4477	4897	6072	7068	7752	4002	4643	5082	6541	7605	8336	3427	3975	4352	5467	6378	7006	3864	4488	4915	6120	7140	7843
24	3648	4227	4624	5873	6844	7512	4032	4672	5110	6336	7375	8089	4176	4844	5303	6826	7936	8699	3576	4148	4541	5705	6655	7310	4032	4683	5129	6386	7451	8184
25	3800	4403	4816	6118	7129	7825	4200	4867	5323	6600	7682	8426	4350	5046	5524	7110	8267	9061	3725	4321	4730	5943	6933	7615	4200	4878	5343	6653	7761	8525
26	3952	4579	5009	6362	7414	8138	4368	5061	5536	6864	7990	8764	4524	5248	5744	7394	8597	9424	3874	4494	4919	6180	7210	7919	4368	5073	5557	6919	8072	8866
27	4104	4755	5202	6607	7699	8451	4536	5256	5749	7128	8297	9101	4698	5450	5965	7679	8928	9786	4023	4667	5108	6418	7487	8224	4536	5268	5770	7185	8382	9207
28	4256	4932	5394	6852	7984	8764	4704	5451	5962	7392	8604	9438	4872	5652	6186	7963	9259	10148	4172	4840	5298	6656	7765	8529	4704	5463	5984	7451	8692	9547
29	4408	5108	5587	7096	8269	9077	4872	5645	6175	7656	8912	9775	5046	5854	6407	8248	9589	10511	4321	5013	5487	6893	8042	8833	4872	5658	6198	7717	9003	9888
30	4560	5284	5780	7341	8555	9390	5040	5840	6388	7920	9219	10112	5220	6055	6628	8532	9920	10873	4470	5185	5676	7131	8319	9138	5040	5853	6411	7983	9313	10229
31	4712	5460	5972	7586	8840	9703	5208	6035	6601	8184	9526	10449	5394	6257	6849	8816	10251	11236	4619	5358	5865	7369	8597	9442	5208	6048	6625	8249	9624	10570
32	4864	5636	6165	7830	9125	10016	5376	6229	6814	8448	9833	10786	5568	6459	7070	9101	10581	11598	4768	5531	6054	7606	8874	9747	5376	6243	6839	8515	9934	10911
33	5016	5812	6358	8075	9410	10329	5544	6424	7027	8712	10141	11123	5742	6661	7291	9385	10912	11961	4917	5704	6243	7844	9151	10051	5544	6439	7052	8781	10245	11252
34	5168	5988	6550	8320	9695	10642	5712	6619	7240	8976	10448	11460	5916	6863	7512	9670	11243	12323	5066	5877	6433	8082	9429	10356	5712	6634	7266	9047	10555	11593
35	5320	6164	6743	8565	9980	10955	5880	6813	7453	9240	10755	11797	6090	7065	7733	9954	11573	12686	5215	6050	6622	8320	9706	10661	5880	6829	7480	9314	10865	11934
36	5472	6341	6936	8809	10266	11268	6048	7008	7666	9504	11063	12134	6264	7267	7954	10238	11904	13048	5364	6222	6811	8557	9983	10965	6048	7024	7694	9580	11176	12275
37	5624	6517	7128	9054	10551	11581	6216	7203	7879	9768	11370	12471	6438	7468	8175	10523	12235	13410	5513	6395	7000	8795	10260	11270	6216	7219	7907	9846	11486	12616
38	5776	6693	7321	9299	10836	11894	6384	7397	8091	10032	11677	12808	6612	7670	8396	10807	12565	13773	5662	6568	7189	9033	10538	11574	6384	7414	8121	10112	11797	12957
39	5928	6869	7514	9543	11121	12207	6552	7592	8304	10296	11985	13145	6786	7872	8617	11092	12896	14135	5811	6741	7379	9270	10815	11879	6552	7609	8335	10378	12107	13298
40	6080	7045	7706	9788	11406	12520	6720	7787	8517	10560	12292	13482	6960	8074	8838	11376	13227	14498	5960	6914	7568	9508	11092	12184	6720	7804	8548	10644	12418	13639
41	6232	7221	7899	10033	11691	12833	6888	7981	8730	10824	12599	13819	7134	8276	9059	11660	13557	14860	6109	7087	7757	9746	11370	12488	6888	7999	8762	10910	12728	13980
42	6384	7397	8091	10277	11976	13146	7056	8176	8943	11088	12906	14157	7308	8478	9280	11945	13888	15223	6258	7260	7946	9983	11647	12793	7056	8195	8976	11176	13039	14321
43	6536	7573	8284	10522	12262	13459	7224	8371	9156	11352	13214	14494	7482	8679	9500	12229	14219	15585	6407	7432	8135	10221	11924	13097	7224	8390	9190	11442	13349	14662
44	6688	7750	8477	10767	12547	13772	7392	8565	9369	11616	13521	14831	7656	8881	9721	12514	14549	15948	6556	7605	8325	10459	12202	13						

Configuration examples

Various special configurations are available on request.
Please call us – we will be pleased to advise.



As room divider



Cleaning brush



Conversion factors f_1 for ΔT temperature differences other than 50 K (EN 442)

$$f_1 = \left(\frac{\Delta T}{50}\right)^n$$

ΔT K \ n	1,16	1,17	1,18	1,19	1,20	1,21	1,22	1,23	1,24	1,25	1,26	1,27	1,28	1,29	1,30
10	0,1546	0,1521	0,1497	0,1473	0,1450	0,1426	0,1404	0,1381	0,1359	0,1337	0,1316	0,1295	0,1274	0,1254	0,1234
11	0,1727	0,1701	0,1675	0,1650	0,1625	0,1601	0,1577	0,1553	0,1530	0,1507	0,1484	0,1462	0,1440	0,1418	0,1397
12	0,1910	0,1883	0,1856	0,1830	0,1804	0,1779	0,1753	0,1728	0,1704	0,1680	0,1656	0,1633	0,1609	0,1587	0,1564
13	0,2096	0,2068	0,2040	0,2013	0,1986	0,1959	0,1933	0,1907	0,1882	0,1857	0,1832	0,1807	0,1783	0,1759	0,1736
14	0,2284	0,2255	0,2227	0,2198	0,2171	0,2143	0,2116	0,2089	0,2063	0,2037	0,2011	0,1986	0,1960	0,1936	0,1911
15	0,2474	0,2445	0,2415	0,2387	0,2358	0,2330	0,2302	0,2274	0,2247	0,2220	0,2194	0,2167	0,2141	0,2116	0,2091
16	0,2667	0,2636	0,2607	0,2577	0,2548	0,2519	0,2490	0,2462	0,2434	0,2407	0,2380	0,2353	0,2326	0,2300	0,2274
17	0,2861	0,2830	0,2800	0,2770	0,2740	0,2711	0,2682	0,2653	0,2624	0,2596	0,2568	0,2541	0,2514	0,2487	0,2460
18	0,3057	0,3026	0,2995	0,2965	0,2935	0,2905	0,2875	0,2846	0,2817	0,2789	0,2760	0,2732	0,2704	0,2677	0,2650
19	0,3255	0,3224	0,3193	0,3162	0,3131	0,3101	0,3071	0,3042	0,3013	0,2984	0,2955	0,2926	0,2898	0,2870	0,2843
20	0,3455	0,3423	0,3392	0,3361	0,3330	0,3300	0,3270	0,3240	0,3210	0,3181	0,3152	0,3123	0,3095	0,3067	0,3039
21	0,3656	0,3624	0,3593	0,3562	0,3531	0,3501	0,3470	0,3440	0,3411	0,3381	0,3352	0,3323	0,3294	0,3266	0,3238
22	0,3858	0,3827	0,3796	0,3765	0,3734	0,3703	0,3673	0,3643	0,3613	0,3584	0,3554	0,3525	0,3496	0,3468	0,3439
23	0,4063	0,4031	0,4000	0,3969	0,3938	0,3908	0,3878	0,3848	0,3818	0,3788	0,3759	0,3730	0,3701	0,3672	0,3644
24	0,4268	0,4237	0,4206	0,4175	0,4145	0,4114	0,4084	0,4054	0,4025	0,3995	0,3966	0,3937	0,3908	0,3880	0,3851
25	0,4475	0,4444	0,4414	0,4383	0,4353	0,4323	0,4293	0,4263	0,4234	0,4204	0,4175	0,4147	0,4118	0,4090	0,4061
26	0,4683	0,4653	0,4623	0,4592	0,4563	0,4533	0,4503	0,4474	0,4445	0,4416	0,4387	0,4358	0,4330	0,4302	0,4274
27	0,4893	0,4863	0,4833	0,4803	0,4774	0,4745	0,4715	0,4686	0,4658	0,4629	0,4601	0,4572	0,4544	0,4516	0,4489
28	0,5104	0,5074	0,5045	0,5016	0,4987	0,4958	0,4929	0,4901	0,4873	0,4844	0,4816	0,4788	0,4761	0,4733	0,4706
29	0,5316	0,5287	0,5258	0,5230	0,5201	0,5173	0,5145	0,5117	0,5089	0,5062	0,5034	0,5007	0,4980	0,4952	0,4926
30	0,5529	0,5501	0,5473	0,5445	0,5417	0,5390	0,5362	0,5335	0,5308	0,5281	0,5254	0,5227	0,5200	0,5174	0,5148
31	0,5743	0,5716	0,5689	0,5662	0,5635	0,5608	0,5581	0,5554	0,5528	0,5502	0,5475	0,5449	0,5423	0,5397	0,5372
32	0,5959	0,5932	0,5906	0,5880	0,5854	0,5827	0,5801	0,5776	0,5750	0,5724	0,5699	0,5673	0,5648	0,5623	0,5598
33	0,6175	0,6150	0,6124	0,6099	0,6074	0,6049	0,6023	0,5998	0,5974	0,5949	0,5924	0,5900	0,5875	0,5851	0,5826
34	0,6393	0,6368	0,6344	0,6320	0,6295	0,6271	0,6247	0,6223	0,6199	0,6175	0,6151	0,6128	0,6104	0,6080	0,6057
35	0,6612	0,6588	0,6565	0,6541	0,6518	0,6495	0,6472	0,6449	0,6426	0,6403	0,6380	0,6357	0,6335	0,6312	0,6290
36	0,6831	0,6809	0,6787	0,6764	0,6742	0,6720	0,6698	0,6676	0,6654	0,6632	0,6611	0,6589	0,6567	0,6546	0,6524
37	0,7052	0,7031	0,7010	0,6989	0,6968	0,6947	0,6926	0,6905	0,6884	0,6863	0,6843	0,6822	0,6802	0,6781	0,6761
38	0,7274	0,7254	0,7234	0,7214	0,7194	0,7174	0,7155	0,7135	0,7116	0,7096	0,7077	0,7057	0,7038	0,7019	0,6999
39	0,7496	0,7477	0,7459	0,7440	0,7422	0,7403	0,7385	0,7367	0,7348	0,7330	0,7312	0,7294	0,7276	0,7258	0,7240
40	0,7719	0,7702	0,7685	0,7668	0,7651	0,7634	0,7617	0,7600	0,7583	0,7566	0,7549	0,7532	0,7515	0,7499	0,7482
41	0,7944	0,7928	0,7912	0,7897	0,7881	0,7865	0,7850	0,7834	0,7819	0,7803	0,7788	0,7772	0,7757	0,7741	0,7726
42	0,8169	0,8155	0,8140	0,8126	0,8112	0,8098	0,8084	0,8070	0,8056	0,8042	0,8028	0,8014	0,8000	0,7986	0,7972
43	0,8395	0,8382	0,8370	0,8357	0,8344	0,8332	0,8319	0,8307	0,8294	0,8282	0,8269	0,8257	0,8244	0,8232	0,8220
44	0,8622	0,8611	0,8600	0,8589	0,8578	0,8567	0,8556	0,8545	0,8534	0,8523	0,8512	0,8501	0,8491	0,8480	0,8469
45	0,8850	0,8840	0,8831	0,8822	0,8812	0,8803	0,8794	0,8785	0,8775	0,8766	0,8757	0,8748	0,8738	0,8729	0,8720
46	0,9078	0,9071	0,9063	0,9055	0,9048	0,9040	0,9033	0,9025	0,9018	0,9010	0,9003	0,8995	0,8988	0,8980	0,8973
47	0,9307	0,9302	0,9296	0,9290	0,9284	0,9279	0,9273	0,9267	0,9261	0,9256	0,9250	0,9244	0,9239	0,9233	0,9227
48	0,9538	0,9534	0,9530	0,9526	0,9522	0,9518	0,9514	0,9510	0,9506	0,9503	0,9499	0,9495	0,9491	0,9487	0,9483
49	0,9768	0,9766	0,9764	0,9762	0,9760	0,9759	0,9757	0,9755	0,9753	0,9751	0,9749	0,9747	0,9745	0,9743	0,9741
50	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
51	1,0232	1,0234	1,0236	1,0238	1,0240	1,0243	1,0245	1,0247	1,0249	1,0251	1,0253	1,0255	1,0257	1,0259	1,0261
52	1,0465	1,0470	1,0474	1,0478	1,0482	1,0486	1,0490	1,0494	1,0498	1,0502	1,0507	1,0511	1,0515	1,0519	1,0523
53	1,0699	1,0706	1,0712	1,0718	1,0724	1,0731	1,0737	1,0743	1,0749	1,0756	1,0762	1,0768	1,0774	1,0781	1,0787
54	1,0934	1,0942	1,0951	1,0959	1,0968	1,0976	1,0984	1,0993	1,1001	1,1010	1,1018	1,1027	1,1035	1,1044	1,1052
55	1,1169	1,1180	1,1190	1,1201	1,1212	1,1222	1,1233	1,1244	1,1255	1,1265	1,1276	1,1287	1,1298	1,1308	1,1319
56	1,1405	1,1418	1,1431	1,1444	1,1457	1,1470	1,1483	1,1496	1,1509	1,1522	1,1535	1,1548	1,1561	1,1574	1,1587
57	1,1642	1,1657	1,1672	1,1687	1,1703	1,1718	1,1733	1,1749	1,1764	1,1780	1,1795	1,1811	1,1826	1,1842	1,1857
58	1,1879	1,1896	1,1914	1,1932	1,1949	1,1967	1,1985	1,2003	1,2021	1,2039	1,2056	1,2074	1,2092	1,2110	1,2128
59	1,2117	1,2137	1,2157	1,2177	1,2197	1,2217	1,2238	1,2258	1,2278	1,2299	1,2319	1,2339	1,2360	1,2380	1,2401
60	1,2355	1,2378	1,2400	1,2423	1,2446	1,2468	1,2491	1,2514	1,2537	1,2560	1,2583	1,2606	1,2629	1,2652	1,2675
61	1,2594	1,2619	1,2645	1,2670	1,2695	1,2720	1,2746	1,2771	1,2796	1,2822	1,2847	1,2873	1,2899	1,2924	1,2950
62	1,2834	1,2862	1,2890	1,2917	1,2945	1,2973	1,3001	1,3029	1,3057	1,3085	1,3113	1,3142	1,3170	1,3198	1,3227
63	1,3075	1,3105	1,3135	1,3166	1,3196	1,3227	1,3257	1,3288	1,3319	1,3349	1,3380	1,3411	1,3442	1,3473	1,3505
64	1,3316	1,3349	1,3382	1,3415	1,3448	1,3481	1,3514	1,3548	1,3581	1,3615	1,3648	1,3682	1,3716	1,3750	1,3784
65	1,3557	1,3593	1,3629	1,3664	1,3700	1,3736	1,3772	1,3809	1,3845	1,3881	1,3918	1,3954	1,3991	1,4028	1,4065
66	1,3800	1,3838	1,3876	1,3915	1,3954	1,3992	1,4031	1,4070	1,4110	1,4149	1,4188	1,4228	1,4267	1,4307	1,4347
67	1,4042	1,4084	1,4125	1,4166	1,4208	1,4249	1,4291	1,4333	1,4375	1,4417	1,4459	1,4502	1,4544	1,4587	1,4630
68	1,4286	1,4330	1,4374	1,4418	1,4463	1,4507	1,4552	1,4597	1,4642	1,4687	1,4732	1,4777	1,4823	1,4868	1,4914
69	1,4530	1,4577	1,4624	1,4671	1,4718	1,4766	1,4813	1,4861	1,4909	1,4957	1,5005	1,5054	1,5102	1,5151	1,5200
70	1,4774	1,4824	1,4874	1,4924	1,4975	1,5025	1,5076	1,5126	1,5177	1,5229	1,5280	1,5331	1,5383	1,5435	1,5487
ΔT K \ n	1,16	1,17	1,18	1,19	1,20	1,21	1,22	1,23	1,24	1,25	1,26	1,27	1,28	1,29	1,30

1,31	1,32	1,33	1,34	1,35	1,36	1,37	1,38	1,39	1,40	1,41	1,42	1,43	1,44	1,45	n	ΔT K
0,1214	0,1195	0,1176	0,1157	0,1139	0,1120	0,1103	0,1085	0,1068	0,1051	0,1034	0,1017	0,1001	0,0985	0,0969	10	
0,1376	0,1355	0,1335	0,1315	0,1295	0,1276	0,1256	0,1237	0,1219	0,1201	0,1183	0,1165	0,1147	0,1130	0,1113	11	
0,1542	0,1520	0,1499	0,1477	0,1456	0,1436	0,1415	0,1395	0,1376	0,1356	0,1337	0,1318	0,1299	0,1281	0,1263	12	
0,1712	0,1690	0,1667	0,1645	0,1623	0,1601	0,1579	0,1558	0,1537	0,1517	0,1497	0,1477	0,1457	0,1437	0,1418	13	
0,1887	0,1863	0,1840	0,1816	0,1793	0,1771	0,1748	0,1726	0,1704	0,1683	0,1661	0,1640	0,1620	0,1599	0,1579	14	
0,2066	0,2041	0,2016	0,1992	0,1968	0,1945	0,1922	0,1899	0,1876	0,1853	0,1831	0,1809	0,1788	0,1766	0,1745	15	
0,2248	0,2222	0,2197	0,2172	0,2148	0,2123	0,2099	0,2075	0,2052	0,2029	0,2006	0,1983	0,1960	0,1938	0,1916	16	
0,2434	0,2407	0,2382	0,2356	0,2331	0,2306	0,2281	0,2257	0,2232	0,2208	0,2185	0,2161	0,2138	0,2115	0,2092	17	
0,2623	0,2596	0,2570	0,2544	0,2518	0,2492	0,2467	0,2442	0,2417	0,2392	0,2368	0,2344	0,2320	0,2297	0,2273	18	
0,2815	0,2788	0,2761	0,2735	0,2708	0,2682	0,2656	0,2631	0,2606	0,2580	0,2556	0,2531	0,2507	0,2482	0,2459	19	
0,3011	0,2983	0,2956	0,2929	0,2903	0,2876	0,2850	0,2824	0,2798	0,2773	0,2747	0,2722	0,2697	0,2673	0,2648	20	
0,3210	0,3182	0,3154	0,3127	0,3100	0,3073	0,3047	0,3021	0,2994	0,2969	0,2943	0,2918	0,2892	0,2867	0,2843	21	
0,3411	0,3383	0,3356	0,3328	0,3301	0,3274	0,3247	0,3221	0,3194	0,3168	0,3142	0,3117	0,3091	0,3066	0,3041	22	
0,3616	0,3588	0,3560	0,3533	0,3505	0,3478	0,3451	0,3425	0,3398	0,3372	0,3346	0,3320	0,3294	0,3269	0,3243	23	
0,3823	0,3795	0,3767	0,3740	0,3713	0,3685	0,3658	0,3632	0,3605	0,3579	0,3553	0,3527	0,3501	0,3475	0,3450	24	
0,4033	0,4005	0,3978	0,3950	0,3923	0,3896	0,3869	0,3842	0,3816	0,3789	0,3763	0,3737	0,3711	0,3686	0,3660	25	
0,4246	0,4218	0,4191	0,4163	0,4136	0,4109	0,4082	0,4056	0,4029	0,4003	0,3977	0,3951	0,3925	0,3900	0,3874	26	
0,4461	0,4434	0,4406	0,4379	0,4352	0,4326	0,4299	0,4273	0,4246	0,4220	0,4194	0,4169	0,4143	0,4118	0,4092	27	
0,4679	0,4652	0,4625	0,4598	0,4571	0,4545	0,4519	0,4493	0,4467	0,4441	0,4415	0,4390	0,4364	0,4339	0,4314	28	
0,4899	0,4872	0,4846	0,4819	0,4793	0,4767	0,4741	0,4716	0,4690	0,4664	0,4639	0,4614	0,4589	0,4564	0,4539	29	
0,5121	0,5095	0,5069	0,5043	0,5018	0,4992	0,4967	0,4941	0,4916	0,4891	0,4866	0,4841	0,4817	0,4792	0,4768	30	
0,5346	0,5321	0,5295	0,5270	0,5245	0,5220	0,5195	0,5170	0,5145	0,5121	0,5097	0,5072	0,5048	0,5024	0,5000	31	
0,5573	0,5548	0,5524	0,5499	0,5474	0,5450	0,5426	0,5402	0,5378	0,5354	0,5330	0,5306	0,5282	0,5259	0,5236	32	
0,5802	0,5778	0,5754	0,5730	0,5707	0,5683	0,5659	0,5636	0,5613	0,5589	0,5566	0,5543	0,5520	0,5497	0,5474	33	
0,6034	0,6011	0,5987	0,5964	0,5941	0,5919	0,5896	0,5873	0,5850	0,5828	0,5805	0,5783	0,5761	0,5739	0,5717	34	
0,6267	0,6245	0,6223	0,6201	0,6178	0,6156	0,6135	0,6113	0,6091	0,6069	0,6048	0,6026	0,6005	0,5983	0,5962	35	
0,6503	0,6482	0,6460	0,6439	0,6418	0,6397	0,6376	0,6355	0,6334	0,6313	0,6293	0,6272	0,6252	0,6231	0,6211	36	
0,6741	0,6720	0,6700	0,6680	0,6660	0,6640	0,6620	0,6600	0,6580	0,6560	0,6541	0,6521	0,6501	0,6482	0,6462	37	
0,6980	0,6961	0,6942	0,6923	0,6904	0,6885	0,6866	0,6847	0,6829	0,6810	0,6791	0,6773	0,6754	0,6736	0,6717	38	
0,7222	0,7204	0,7186	0,7168	0,7150	0,7133	0,7115	0,7097	0,7080	0,7062	0,7045	0,7027	0,7010	0,6992	0,6975	39	
0,7465	0,7449	0,7432	0,7416	0,7399	0,7382	0,7366	0,7350	0,7333	0,7317	0,7301	0,7284	0,7268	0,7252	0,7236	40	
0,7711	0,7695	0,7680	0,7665	0,7650	0,7635	0,7619	0,7604	0,7589	0,7574	0,7559	0,7544	0,7529	0,7514	0,7499	41	
0,7958	0,7944	0,7930	0,7917	0,7903	0,7889	0,7875	0,7861	0,7848	0,7834	0,7820	0,7807	0,7793	0,7780	0,7766	42	
0,8207	0,8195	0,8182	0,8170	0,8158	0,8146	0,8133	0,8121	0,8109	0,8097	0,8084	0,8072	0,8060	0,8048	0,8036	43	
0,8458	0,8447	0,8436	0,8426	0,8415	0,8404	0,8393	0,8383	0,8372	0,8361	0,8351	0,8340	0,8329	0,8319	0,8308	44	
0,8711	0,8702	0,8692	0,8683	0,8674	0,8665	0,8656	0,8647	0,8638	0,8629	0,8619	0,8610	0,8601	0,8592	0,8583	45	
0,8965	0,8958	0,8950	0,8943	0,8935	0,8928	0,8921	0,8913	0,8906	0,8898	0,8891	0,8883	0,8876	0,8869	0,8861	46	
0,9221	0,9216	0,9210	0,9204	0,9199	0,9193	0,9187	0,9182	0,9176	0,9170	0,9165	0,9159	0,9153	0,9148	0,9142	47	
0,9479	0,9475	0,9472	0,9468	0,9464	0,9460	0,9456	0,9452	0,9448	0,9445	0,9441	0,9437	0,9433	0,9429	0,9425	48	
0,9739	0,9737	0,9735	0,9733	0,9731	0,9729	0,9727	0,9725	0,9723	0,9721	0,9719	0,9717	0,9715	0,9713	0,9711	49	
1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	50	
1,0263	1,0265	1,0267	1,0269	1,0271	1,0273	1,0275	1,0277	1,0279	1,0281	1,0283	1,0285	1,0287	1,0289	1,0291	51	
1,0527	1,0531	1,0535	1,0540	1,0544	1,0548	1,0552	1,0556	1,0560	1,0564	1,0569	1,0573	1,0577	1,0581	1,0585	52	
1,0793	1,0800	1,0806	1,0812	1,0818	1,0825	1,0831	1,0837	1,0844	1,0850	1,0856	1,0863	1,0869	1,0875	1,0882	53	
1,1061	1,1069	1,1078	1,1086	1,1095	1,1103	1,1112	1,1121	1,1129	1,1138	1,1146	1,1155	1,1163	1,1172	1,1181	54	
1,1330	1,1341	1,1351	1,1362	1,1373	1,1384	1,1395	1,1406	1,1417	1,1427	1,1438	1,1449	1,1460	1,1471	1,1482	55	
1,1600	1,1614	1,1627	1,1640	1,1653	1,1666	1,1680	1,1693	1,1706	1,1719	1,1733	1,1746	1,1759	1,1773	1,1786	56	
1,1873	1,1888	1,1904	1,1919	1,1935	1,1951	1,1966	1,1982	1,1998	1,2013	1,2029	1,2045	1,2061	1,2077	1,2092	57	
1,2146	1,2164	1,2182	1,2200	1,2219	1,2237	1,2255	1,2273	1,2291	1,2310	1,2328	1,2346	1,2364	1,2383	1,2401	58	
1,2421	1,2442	1,2462	1,2483	1,2504	1,2524	1,2545	1,2566	1,2587	1,2608	1,2629	1,2649	1,2670	1,2691	1,2712	59	
1,2698	1,2721	1,2744	1,2767	1,2791	1,2814	1,2837	1,2861	1,2884	1,2908	1,2931	1,2955	1,2979	1,3002	1,3026	60	
1,2976	1,3002	1,3027	1,3053	1,3079	1,3105	1,3131	1,3158	1,3184	1,3210	1,3236	1,3263	1,3289	1,3316	1,3342	61	
1,3255	1,3284	1,3312	1,3341	1,3370	1,3398	1,3427	1,3456	1,3485	1,3514	1,3543	1,3572	1,3602	1,3631	1,3660	62	
1,3536	1,3567	1,3599	1,3630	1,3662	1,3693	1,3725	1,3757	1,3788	1,3820	1,3852	1,3884	1,3916	1,3949	1,3981	63	
1,3818	1,3852	1,3886	1,3921	1,3955	1,3990	1,4024	1,4059	1,4094	1,4128	1,4163	1,4198	1,4233	1,4269	1,4304	64	
1,4102	1,4139	1,4176	1,4213	1,4250	1,4288	1,4325	1,4363	1,4401	1,4438	1,4476	1,4514	1,4553	1,4591	1,4629	65	
1,4386	1,4426	1,4466	1,4507	1,4547	1,4587	1,4628	1,4669	1,4709	1,4750	1,4791	1,4833	1,4874	1,4915	1,4957	66	
1,4673	1,4716	1,4759	1,4802	1,4845	1,4889	1,4933	1,4976	1,5020	1,5064	1,5108	1,5153	1,5197	1,5242	1,5286	67	
1,4960	1,5006	1,5052	1,5099	1,5145	1,5192	1,5239	1,5286	1,5333	1,5380	1,5427	1,5475	1,5522	1,5570	1,5618	68	
1,5249	1,5298	1,5348	1,5397	1,5447	1,5497	1,5547	1,5597	1,5647	1,5698	1,5748	1,5799	1,5850	1,5901	1,5952	69	
1,5539	1,5592	1,5644	1,5697	1,5750	1,5803	1,5856	1,5910	1,5963	1,6017	1,6071	1,6125	1,6179	1,6234	1,6289	70	
															n	ΔT K

Zehnder
A division of Zehnder Group UK Ltd

Unit 4
Watchmoor Point
Camberley
Surrey, GU15 3AD

Tel: 01252 515151
Fax: 01252 522528
www.zehnder.co.uk
sales@zehnder.co.uk

Registered in England: 2296696

zehnder