

# Data Sheet

## Thermal Deaerators

**KARRASCH & ECKERT**  
Gesellschaft für Wassertechnologie mbH



Tray-type deaerator for thermal deaeration of boiler feed water. Design: cylindrical vessel made of stainless steel, with dished heads, flange connection to feed water tank. Length of sockets 150 mm, for insulation 100 mm thick.

Exemplary design for: make-up water 12 °C, condensate 80 °C, heating steam 10 bar 180 °C. Normal operating overpressure and temperature 0,2 bar and 104,8 °C. Residual oxygen content ≤ 0,02 ppm.

Accessories: Non-return valves for make-up water and condensate, heating steam throttling valve (starting with Ø1000), vapours orifice, pressure gauge with water siphon and pressure gauge valve.

### Deaerator, operating overpressure max. 0,5 bar, operating temperature max. 110 °C

diameter	Ø 300 mm	Ø 400 mm	Ø 500 mm	Ø 600 mm	Ø 700 mm	Ø 800 mm	Ø 900 mm	Ø 1000 mm	Ø 1200 mm	Ø 1400 mm	Ø 1600 mm	Ø 1800 mm	Ø 2000 mm	Ø 2200 mm	Ø 2400 mm	Ø 2600 mm
cylindrical shell height	750 mm	750 mm	1000 mm	1000 mm	1250 mm	1250 mm	1250 mm	1500 mm	2000 mm	2000 mm	2500 mm	2500 mm	2500 mm	2500 mm	2500 mm	2500 mm
total height	828 mm	852 mm	1127 mm	1146 mm	1416 mm	1440 mm	1459 mm	1729 mm	2268 mm	2614 mm	3200 mm	3278 mm	3356 mm	3432 mm	3512 mm	3588 mm
vessel flange	DN 300	DN 400	DN 500	DN 600	DN 700	DN 800	DN 900	DN 1000	DN 1200	DN 800	DN 800	DN 800	DN 800	DN 1000	DN 1000	DN 1000
wall thickness shell	3 mm	3 mm	3 mm	4 mm	4 mm	4 mm	4 mm	4 mm	4 mm	4 mm	4 mm	5 mm	5 mm	6 mm	6 mm	6 mm
wall thickness heads	3 mm	3 mm	3 mm	4 mm	4 mm	4 mm	4 mm	4 mm	4 mm	4 mm	5 mm	6 mm	6 mm	7 mm	8 mm	8 mm
vessel volume	55 l	101 l	210 l	305 l	516 l	684 l	876 l	1287 l	2443 l	3701 l	5957 l	7661 l	9627 l	11834 l	14323 l	17092 l
insulation surface	1,4 m <sup>2</sup>	1,8 m <sup>2</sup>	2,7 m <sup>2</sup>	3,1 m <sup>2</sup>	4,3 m <sup>2</sup>	4,9 m <sup>2</sup>	5,5 m <sup>2</sup>	7,1 m <sup>2</sup>	10,7 m <sup>2</sup>	15,1 m <sup>2</sup>	20,6 m <sup>2</sup>	23,6 m <sup>2</sup>	26,9 m <sup>2</sup>	30,3 m <sup>2</sup>	33,8 m <sup>2</sup>	37,5 m <sup>2</sup>
empty weight	40 kg	54 kg	80 kg	117 kg	165 kg	195 kg	246 kg	314 kg	456 kg	554 kg	790 kg	1098 kg	1278 kg	1707 kg	2030 kg	2292 kg
operating weight	61 kg	91 kg	138 kg	200 kg	317 kg	394 kg	498 kg	625 kg	905 kg	1167 kg	1591 kg	2110 kg	2528 kg	3220 kg	3831 kg	4405 kg
test weight	95 kg	155 kg	290 kg	422 kg	680 kg	880 kg	1122 kg	1600 kg	2899 kg	4256 kg	6748 kg	8759 kg	10905 kg	13541 kg	16353 kg	19383 kg

### Flow capacity and connections for a condensate return of 99%

flow capacity, max.	2,4 t/h	4,2 t/h	8,7 t/h	12,6 t/h	16 t/h	21 t/h	26 t/h	41 t/h	59 t/h	80 t/h	126 t/h	159 t/h	196 t/h	237 t/h	283 t/h	332 t/h
flow capacity, min.	0,5 t/h	0,8 t/h	1,7 t/h	2,5 t/h	3,2 t/h	4,2 t/h	5,3 t/h	8,2 t/h	12 t/h	16 t/h	25 t/h	32 t/h	39 t/h	47 t/h	57 t/h	66 t/h
diam. nom. make-up water	DN 15	DN 15	DN 15	DN 15	DN 15	DN 15	DN 15	DN 15	DN 15	DN 15	DN 15	DN 15	DN 15	DN 15	DN 15	DN 20
diam. nom. condensate	DN 20	DN 25	DN 32	DN 40	DN 50	DN 50	DN 65	DN 80	DN 100	DN 100	DN 150	DN 150	DN 150	DN 200	DN 200	DN 250
diam. nom. heating steam								DN 80	DN 100	DN 125	DN 150	DN 150	DN 150	DN 200	DN 200	DN 250
Zulässige Geschwindigkeit	80,0 m/s	80,0 m/s	80,0 m/s	80,0 m/s	80,0 m/s	80,0 m/s	80,0 m/s	80,0 m/s	80,0 m/s	80,0 m/s	80,0 m/s	80,0 m/s	80,0 m/s	80,0 m/s	80,0 m/s	80,0 m/s
diam. nom. vapours	DN 15	DN 15	DN 20	DN 25	DN 25	DN 32	DN 32	DN 40	DN 50	DN 65	DN 80	DN 80	DN 100	DN 100	DN 125	DN 125

### Flow capacity and connections for a condensate return of 50%

flow capacity, max.	1,8 t/h	3,1 t/h	6,5 t/h	9,4 t/h	12 t/h	16 t/h	20 t/h	31 t/h	44 t/h	60 t/h	94 t/h	119 t/h	147 t/h	178 t/h	212 t/h	249 t/h
flow capacity, min.	0,4 t/h	0,6 t/h	1,3 t/h	1,9 t/h	2,4 t/h	3,1 t/h	4,0 t/h	6,1 t/h	8,8 t/h	12 t/h	19 t/h	24 t/h	29 t/h	36 t/h	42 t/h	50 t/h
diam. nom. make-up water	DN 15	DN 15	DN 20	DN 25	DN 25	DN 32	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 100	DN 100	DN 125	DN 125
diam. nom. condensate	DN 15	DN 15	DN 20	DN 25	DN 25	DN 32	DN 32	DN 50	DN 50	DN 65	DN 80	DN 100	DN 100	DN 100	DN 125	DN 125
diam. nom. heating steam								DN 100	DN 125	DN 150	DN 150	DN 200	DN 250	DN 250	DN 250	DN 300
diam. nom. vapours	DN 15	DN 15	DN 20	DN 25	DN 25	DN 32	DN 32	DN 50	DN 50	DN 65	DN 80	DN 100	DN 100	DN 100	DN 125	DN 125

### Flow capacity and connections for a condensate return of 0%

flow capacity, max.	1,4 t/h	2,5 t/h	5,2 t/h	7,5 t/h	10 t/h	13 t/h	16 t/h	25 t/h	35 t/h	48 t/h	75 t/h	95 t/h	118 t/h	142 t/h	170 t/h	199 t/h
flow capacity, min.	0,3 t/h	0,5 t/h	1,0 t/h	1,5 t/h	2,0 t/h	2,6 t/h	3,2 t/h	5,0 t/h	7,0 t/h	10 t/h	15 t/h	19 t/h	24 t/h	28 t/h	34 t/h	40 t/h
diam. nom. make-up water	DN 15	DN 20	DN 25	DN 32	DN 32	DN 40	DN 50	DN 65	DN 65	DN 80	DN 100	DN 125	DN 125	DN 125	DN 150	DN 150
diam. nom. heating steam								DN 125	DN 125	DN 150	DN 200	DN 250	DN 250	DN 250	DN 300	DN 300
diam. nom. vapours	DN 15	DN 15	DN 20	DN 25	DN 32	DN 32	DN 32	DN 50	DN 50	DN 65	DN 80	DN 100	DN 100	DN 125	DN 125	DN 125

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Tray-type deaerator for thermal deaeration of boiler feed water. Design: cylindrical vessel made of stainless steel, with dished heads, flange connection to feed water tank. Length of sockets 150 mm, for insulation 100 mm thick.

Exemplary design for: make-up water 12 °C, condensate 80 °C, heating steam 10 bar 180 °C. Normal operating overpressure and temperature 0,2 bar and 104,8 °C. Residual oxygen content ≤ 0,02 ppm.

Accessories: Non-return valves for make-up water and condensate, heating steam throttling valve (starting with Ø1200), vapours valve, pressure gauge with water siphon and pressure gauge valve.

### Deaerator, operating overpressure max. 8 bar, operating temperature max. 200 °C, vacuum-proof

diameter	Ø 600 mm	Ø 700 mm	Ø 800 mm	Ø 900 mm	Ø 1000 mm	Ø 1200 mm	Ø 1400 mm	Ø 1600 mm	Ø 1800 mm	Ø 2000 mm	Ø 2200 mm	Ø 2400 mm	Ø 2600 mm	Ø 2800 mm	Ø 3000 mm	Ø 3200 mm
cylindrical shell height	1000 mm	1250 mm	1250 mm	1250 mm	1500 mm	2000 mm	2000 mm	2500 mm	2500 mm	2500 mm	2500 mm	2500 mm	2500 mm	2500 mm	2500 mm	2500 mm
total height	1146 mm	1416 mm	1440 mm	1459 mm	1729 mm	2536 mm	2614 mm	3200 mm	3278 mm	3356 mm	3432 mm	3512 mm	3588 mm	3664 mm	3742 mm	3822 mm
vessel flange	DN 600	DN 700	DN 800	DN 900	DN 1000	DN 800	DN 800	DN 800	DN 800	DN 800	DN 800	DN 1000	DN 1000	DN 1000	DN 1000	DN 1000
wall thickness shell	3 mm	4 mm	4 mm	5 mm	5 mm	6 mm	7 mm	8 mm	9 mm	10 mm	11 mm	12 mm	13 mm	14 mm	15 mm	16 mm
wall thickness heads	4 mm	5 mm	5 mm	6 mm	6 mm	7 mm	8 mm	9 mm	10 mm	11 mm	12 mm	13 mm	14 mm	16 mm	17 mm	18 mm
vessel volume	307 l	516 l	684 l	873 l	1282 l	2640 l	3675 l	5907 l	7605 l	9549 l	11748 l	14211 l	16950 l	19970 l	23285 l	26999 l
insulation surface	3,1 m <sup>2</sup>	4,3 m <sup>2</sup>	4,9 m <sup>2</sup>	5,5 m <sup>2</sup>	7,1 m <sup>2</sup>	12,7 m <sup>2</sup>	15,1 m <sup>2</sup>	20,6 m <sup>2</sup>	23,6 m <sup>2</sup>	26,9 m <sup>2</sup>	30,3 m <sup>2</sup>	33,8 m <sup>2</sup>	37,5 m <sup>2</sup>	41,4 m <sup>2</sup>	45,4 m <sup>2</sup>	49,6 m <sup>2</sup>
empty weight	102 kg	169 kg	201 kg	287 kg	367 kg	636 kg	885 kg	1347 kg	1747 kg	2212 kg	2745 kg	3366 kg	4047 kg	4932 kg	5794 kg	6744 kg
operating weight	144 kg	245 kg	300 kg	413 kg	523 kg	860 kg	1190 kg	1745 kg	2251 kg	2834 kg	3498 kg	4262 kg	5098 kg	6151 kg	7193 kg	8337 kg
test weight	409 kg	685 kg	885 kg	1160 kg	1649 kg	3276 kg	4560 kg	7254 kg	9352 kg	11761 kg	14494 kg	17577 kg	20996 kg	24902 kg	29079 kg	33744 kg

### Flow capacity and connections for a condensate return of 99%

flow capacity, max.	12 t/h	16 t/h	20 t/h	30 t/h	40 t/h	60 t/h	90 t/h	120 t/h	160 t/h	200 t/h	240 t/h	280 t/h	340 t/h	400 t/h	450 t/h	500 t/h
≈	3,3 kg/s	4,4 kg/s	5,6 kg/s	8,3 kg/s	11 kg/s	17 kg/s	25 kg/s	33 kg/s	44 kg/s	56 kg/s	67 kg/s	78 kg/s	94 kg/s	111 kg/s	125 kg/s	139 kg/s
flow capacity, min.	2,4 t/h	3,2 t/h	4,0 t/h	6,0 t/h	8,0 t/h	12 t/h	18 t/h	24 t/h	32 t/h	40 t/h	48 t/h	56 t/h	68 t/h	80 t/h	90 t/h	100 t/h
≈	0,7 kg/s	0,9 kg/s	1,1 kg/s	1,7 kg/s	2,2 kg/s	3,3 kg/s	5,0 kg/s	6,7 kg/s	8,9 kg/s	11 kg/s	13 kg/s	16 kg/s	19 kg/s	22 kg/s	25 kg/s	28 kg/s
diam. nom. make-up water	DN 15	DN 15	DN 15	DN 15	DN 15	DN 15	DN 15	DN 15	DN 20	DN 20	DN 25	DN 25	DN 25	DN 32	DN 32	DN 32
diam. nom. condensate	DN 40	DN 50	DN 50	DN 65	DN 80	DN 100	DN 125	DN 125	DN 150	DN 150	DN 200	DN 200	DN 250	DN 250	DN 250	DN 300
diam. nom. heating steam						DN 125	DN 150	DN 150	DN 150	DN 200	DN 250	DN 250	DN 250	DN 300	DN 300	DN 300
diam. nom. vapours	DN 15	DN 20	DN 20	DN 25	DN 25	DN 32	DN 40	DN 50	DN 65	DN 65	DN 65	DN 80	DN 80	DN 100	DN 100	DN 100

# Data Sheet

## Feed Water Tanks

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Feed water tank as cylindrical vessel with dished heads, made of steel, laying on 2 supports, with inner steam-jet pipe, manway, deaerator connection and further connections. Length of sockets 150 mm.

### Feed water tank with tank bottoms, operating overpressure max. 0.5 bar, operating temperature max. 110 °C

volume, total	1,7 m <sup>3</sup>	2,5 m <sup>3</sup>	3,9 m <sup>3</sup>	5,2 m <sup>3</sup>	6,6 m <sup>3</sup>	8,6 m <sup>3</sup>	10,6 m <sup>3</sup>	12,5 m <sup>3</sup>	16,8 m <sup>3</sup>	19,8 m <sup>3</sup>	26,6 m <sup>3</sup>	31,5 m <sup>3</sup>	41,1 m <sup>3</sup>	55,8 m <sup>3</sup>	68,8 m <sup>3</sup>	81,9 m <sup>3</sup>
volume, useful	1,4 m <sup>3</sup>	2,0 m <sup>3</sup>	3,2 m <sup>3</sup>	4,2 m <sup>3</sup>	5,4 m <sup>3</sup>	7,1 m <sup>3</sup>	8,7 m <sup>3</sup>	10,3 m <sup>3</sup>	13,7 m <sup>3</sup>	16,2 m <sup>3</sup>	21,8 m <sup>3</sup>	25,8 m <sup>3</sup>	33,7 m <sup>3</sup>	45,8 m <sup>3</sup>	56,5 m <sup>3</sup>	67,1 m <sup>3</sup>
diameter	Ø 1000 mm	Ø 1000 mm	Ø 1250 mm	Ø 1250 mm	Ø 1600 mm	Ø 1600 mm	Ø 1600 mm	Ø 1600 mm	Ø 2000 mm	Ø 2000 mm	Ø 2500 mm	Ø 2500 mm	Ø 2500 mm	Ø 2900 mm	Ø 2900 mm	Ø 2900 mm
cylindrical shell length	2000 mm	3000 mm	3000 mm	4000 mm	3000 mm	4000 mm	5000 mm	6000 mm	5000 mm	6000 mm	5000 mm	6000 mm	8000 mm	8000 mm	10000 mm	12000 mm
total length	2360 mm	3360 mm	3440 mm	4440 mm	3520 mm	4520 mm	5520 mm	6520 mm	5640 mm	6640 mm	5800 mm	6800 mm	8800 mm	8900 mm	10900 mm	12900 mm
total height	1400 mm	1400 mm	1650 mm	1650 mm	2000 mm	2000 mm	2000 mm	2000 mm	2400 mm	2400 mm	2900 mm	2900 mm	2900 mm	3300 mm	3300 mm	3300 mm
wall thickness shell	4 mm	5 mm	5 mm	5 mm	5 mm	5 mm	6 mm	6 mm	6 mm	8 mm	8 mm	8 mm	9 mm	10 mm	10 mm	10 mm
wall thickness heads	5 mm	5 mm	5 mm	5 mm	5 mm	5 mm	5 mm	5 mm	6 mm	6 mm	7 mm	7 mm	7 mm	9 mm	9 mm	9 mm
insulation surface	10,4 m <sup>2</sup>	14,2 m <sup>2</sup>	17,8 m <sup>2</sup>	22,4 m <sup>2</sup>	23,4 m <sup>2</sup>	29,0 m <sup>2</sup>	34,7 m <sup>2</sup>	40,3 m <sup>2</sup>	44,1 m <sup>2</sup>	51,1 m <sup>2</sup>	56,8 m <sup>2</sup>	65,3 m <sup>2</sup>	82,3 m <sup>2</sup>	96,9 m <sup>2</sup>	116,4 m <sup>2</sup>	135,9 m <sup>2</sup>
empty weight	430 kg	620 kg	800 kg	950 kg	1060 kg	1260 kg	1670 kg	1910 kg	2220 kg	3150 kg	3660 kg	4150 kg	5660 kg	7570 kg	8990 kg	10420 kg
operating weight	1830 kg	2620 kg	4000 kg	5150 kg	6460 kg	8360 kg	10370 kg	12210 kg	15920 kg	19350 kg	25460 kg	29950 kg	39360 kg	53370 kg	65490 kg	77520 kg

### Feed water tank with torospherical heads, operating overpressure max. 0.5 bar, operating temperature max. 110 °C

volume, total	1,6 m <sup>3</sup>	2,6 m <sup>3</sup>	3,8 m <sup>3</sup>	6,7 m <sup>3</sup>	8,9 m <sup>3</sup>	11,4 m <sup>3</sup>	17,4 m <sup>3</sup>	21,2 m <sup>3</sup>	25,5 m <sup>3</sup>	35,5 m <sup>3</sup>	45,9 m <sup>3</sup>	53,5 m <sup>3</sup>	65,6 m <sup>3</sup>	75,7 m <sup>3</sup>	89,5 m <sup>3</sup>	102,4 m <sup>3</sup>
volume, useful	1,4 m <sup>3</sup>	2,2 m <sup>3</sup>	3,2 m <sup>3</sup>	5,7 m <sup>3</sup>	7,6 m <sup>3</sup>	9,7 m <sup>3</sup>	14,8 m <sup>3</sup>	18,0 m <sup>3</sup>	21,7 m <sup>3</sup>	30,1 m <sup>3</sup>	39,0 m <sup>3</sup>	45,5 m <sup>3</sup>	55,7 m <sup>3</sup>	64,4 m <sup>3</sup>	76,1 m <sup>3</sup>	87,0 m <sup>3</sup>
diameter	Ø 800 mm	Ø 1000 mm	Ø 1200 mm	Ø 1400 mm	Ø 1600 mm	Ø 1800 mm	Ø 2000 mm	Ø 2200 mm	Ø 2400 mm	Ø 2600 mm	Ø 2600 mm	Ø 2800 mm	Ø 2800 mm	Ø 3000 mm	Ø 3000 mm	Ø 3200 mm
cylindrical shell length	3000 mm	3000 mm	3000 mm	4000 mm	4000 mm	4000 mm	5000 mm	5000 mm	5000 mm	6000 mm	8000 mm	8000 mm	10000 mm	10000 mm	12000 mm	12000 mm
total length	3380 mm	3458 mm	3536 mm	4614 mm	4700 mm	4778 mm	5856 mm	5932 mm	6012 mm	7088 mm	9088 mm	9164 mm	11164 mm	11242 mm	13242 mm	13322 mm
total height	1200 mm	1400 mm	1600 mm	1800 mm	2000 mm	2200 mm	2400 mm	2600 mm	2800 mm	3000 mm	3000 mm	3200 mm	3200 mm	3400 mm	3400 mm	3600 mm
wall thickness shell	5 mm	5 mm	5 mm	5 mm	5 mm	5 mm	6 mm	6 mm	6 mm	7 mm	8 mm	9 mm	10 mm	10 mm	11 mm	12 mm
wall thickness heads	4 mm	5 mm	5 mm	5 mm	5 mm	5 mm	6 mm	6 mm	7 mm	7 mm	7 mm	9 mm	8 mm	8 mm	8 mm	8 mm
insulation surface	11,4 m <sup>2</sup>	14,2 m <sup>2</sup>	17,1 m <sup>2</sup>	25,2 m <sup>2</sup>	29,0 m <sup>2</sup>	33,1 m <sup>2</sup>	44,1 m <sup>2</sup>	49,1 m <sup>2</sup>	54,2 m <sup>2</sup>	68,3 m <sup>2</sup>	85,9 m <sup>2</sup>	93,2 m <sup>2</sup>	112,1 m <sup>2</sup>	120,8 m <sup>2</sup>	140,9 m <sup>2</sup>	151,1 m <sup>2</sup>
empty weight	470 kg	620 kg	760 kg	1080 kg	1260 kg	1450 kg	2220 kg	2480 kg	2850 kg	3940 kg	5370 kg	6680 kg	8510 kg	9200 kg	11590 kg	13420 kg
operating weight	1870 kg	2820 kg	3960 kg	6780 kg	8860 kg	11150 kg	17020 kg	20480 kg	24550 kg	34040 kg	44370 kg	52180 kg	64210 kg	73600 kg	87690 kg	100420 kg

### Feed water tank with torospherical heads, operating overpressure max. 8 bar, operating temperature max. 200 °C, vacuum-proof

volume, total	17,2 m <sup>3</sup>	21,0 m <sup>3</sup>	25,2 m <sup>3</sup>	29,6 m <sup>3</sup>	35,1 m <sup>3</sup>	45,5 m <sup>3</sup>	53,1 m <sup>3</sup>	61,3 m <sup>3</sup>	70,3 m <sup>3</sup>	86,0 m <sup>3</sup>	97,6 m <sup>3</sup>	115,1 m <sup>3</sup>	128,9 m <sup>3</sup>	148,5 m <sup>3</sup>	164,4 m <sup>3</sup>	181,4 m <sup>3</sup>
volume, useful	14,6 m <sup>3</sup>	17,8 m <sup>3</sup>	21,4 m <sup>3</sup>	25,2 m <sup>3</sup>	29,8 m <sup>3</sup>	38,7 m <sup>3</sup>	45,1 m <sup>3</sup>	52,1 m <sup>3</sup>	59,7 m <sup>3</sup>	73,1 m <sup>3</sup>	82,9 m <sup>3</sup>	97,8 m <sup>3</sup>	109,6 m <sup>3</sup>	126,2 m <sup>3</sup>	139,8 m <sup>3</sup>	154,2 m <sup>3</sup>
diameter	Ø 2000 mm	Ø 2200 mm	Ø 2400 mm	Ø 2400 mm	Ø 2600 mm	Ø 2600 mm	Ø 2800 mm	Ø 3000 mm	Ø 3200 mm	Ø 3200 mm	Ø 3400 mm	Ø 3400 mm	Ø 3600 mm	Ø 3600 mm	Ø 3800 mm	Ø 4000 mm
cylindrical shell length	5000 mm	5000 mm	5000 mm	6000 mm	6000 mm	8000 mm	8000 mm	8000 mm	8000 mm	10000 mm	10000 mm	12000 mm	12000 mm	14000 mm	14000 mm	14000 mm
total length	5856 mm	5932 mm	6012 mm	7012 mm	7088 mm	9088 mm	9164 mm	9242 mm	9322 mm	11322 mm	11400 mm	13400 mm	13438 mm	15438 mm	15438 mm	15438 mm
total height	2400 mm	2600 mm	2800 mm	2800 mm	3000 mm	3000 mm	3200 mm	3400 mm	3600 mm	3600 mm	3800 mm	3800 mm	4000 mm	4000 mm	4200 mm	4400 mm
wall thickness shell	12 mm	13 mm	14 mm	14 mm	14 mm	14 mm	15 mm	16 mm	17 mm	17 mm	18 mm	20 mm	20 mm	22 mm	23 mm	23 mm
wall thickness heads	12 mm	13 mm	14 mm	14 mm	15 mm	15 mm	16 mm	17 mm	18 mm	18 mm	19 mm	19 mm	20 mm	20 mm	21 mm	22 mm
insulation surface	44,1 m <sup>2</sup>	49,1 m <sup>2</sup>	54,2 m <sup>2</sup>	62,4 m <sup>2</sup>	68,3 m <sup>2</sup>	85,9 m <sup>2</sup>	93,2 m <sup>2</sup>	100,7 m <sup>2</sup>	108,3 m <sup>2</sup>	129,7 m <sup>2</sup>	138,8 m <sup>2</sup>	161,4 m <sup>2</sup>	171,8 m <sup>2</sup>	195,7 m <sup>2</sup>	207,6 m <sup>2</sup>	219,7 m <sup>2</sup>
empty weight	4520 kg	5380 kg	6340 kg	7160 kg	7940 kg	9730 kg	11280 kg	12970 kg	14800 kg	17470 kg	19780 kg	24850 kg	26490 kg	32560 kg	35670 kg	37510 kg
operating weight	19120 kg	23180 kg	27740 kg	32360 kg	37740 kg	48430 kg	56380 kg	65070 kg	74500 kg	90570 kg	102680 kg	122650 kg	136090 kg	158760 kg	175470 kg	191710 kg