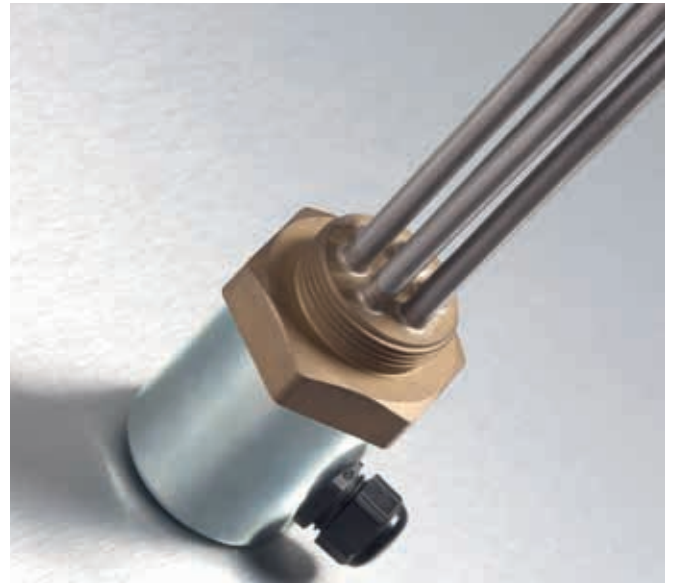




TANK HEATERS

TANK HEATERS

TANK HEATERS



CONTENT

VR immersion heaters with magnetic clamp	59
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Shaped	65
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VR IMMERSION HEATERS WITH MAGNETIC CLAMP

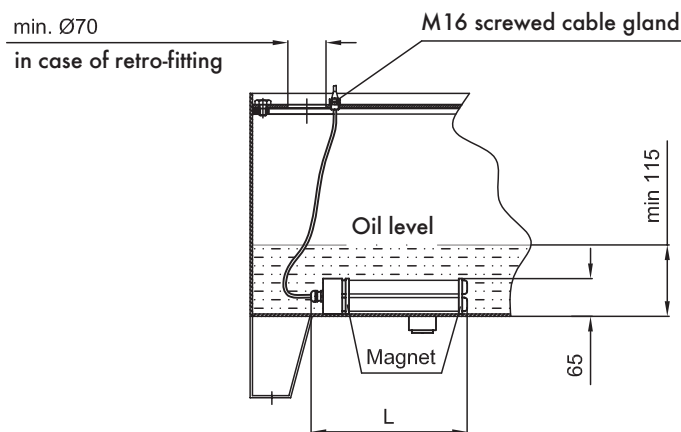
PRODUCT DESCRIPTION

- Pre-heating of the medium by direct heating
- Stable welded version
- Easy installation
- No lateral tank machining
- Low minimum oil level in horizontal position
- Pick up of iron particles with integrated magnetic clamps
- Protection class IP 68
- Integrated thermostat with switch-off temperature +40°C (other temperatures on request)
- Intergrated temperature limiter, wired for direct switching
- 3 pole, 4 mtr. long cable with screwed cable gland M16
- Temperature resistant up to -20°C
- Medium touched pieces made of stainless steel 1.4571 (protection tubes), brass (cable gland) and plastics (cable)
- Resistant against HLP and HFA fluids, diesel, heating and vegetable oil (for other fluids, e.g. HFC, please contact HBE)



Order code				
Art. No.	Type	Power		Surface charge
1962	VR	1,000 W	/	1.2-M

DIMENSIONS



ASSEMBLY INFORMATION

- Fixing of the heater by magnetic clamps either horizontally at the tank bottom or vertically at the tank wall
- Do not hang up the heater at the cable
- Lead the cable outside above oil level and fix it at the lid or tank with screwed cable gland M16
- Tank heater must be covered by at least 50 mm of the medium
- A retro-fitting requires an opening in the tank lid of Ø 70 mm

Art. No.	Type	Power [W]	L [mm]	Voltage [V]	Surface charge [W/cm ²]
1955	VR 125 W/0,6-M	125	200	230 V/AC	0.6 HFA/HFD-R
1956	VR 250 W/0,6-M	250	300		0.6 HFA/HFD-R
1957	VR 500 W/0,6-M	500	500		0.6 HFA/HFD-R
1960	VR 250 W/1,2-M	250	200		1.2 HLP*
1961	VR 500 W/1,2-M	500	300		1.2 HLP*
1962	VR 1000 W/1,2-M	1000	500		1.2 HLP*
1963	VR 250 W/1,2-M	250	300	24 V/DC	1.2 HLP*

*available at short notice

SCREWED-IN HEATERS

PRODUCT DESCRIPTION

- Heater for pre-heating of hydraulic oil on mineral oil base
- For horizontal mounting under oil level
- Surface charge approx. 1.5 W/cm² for hydraulic oils
- Bright galvanised steel cap
- Material: steel (further materials on request)
- Wiring schemes for various supply voltages on request

SERIES PTHK 90

- Exchangeable ceramic heating insert (mounting / dismounting possible without oil drain)
- Protection class IP 65



Series PTHK 90

SERIES PTHK 92

- Exchangeable ceramic heating insert (mounting / dismounting possible without oil drain)
- Temperature control for internal (THI) or external (THA) regulation, single pole 0 - 85°C, 16 ampere
- Protection class IP 54 for THA resp. IP 65 for THI



Series PTHK 92

SERIES RHK - G1 1/2"

- Protection class IP 65



Series RHK - G 1 1/2"

SERIES RHK - G1 1/2" THA / THI

- Temperature control for internal (THI) or external (THA) regulation, single pole 0 - 85°C, 16 ampere
- Protection class IP 54 for THA resp. IP 65 for THI



Series RHK - G 1 1/2" THA / THI

SERIES WHK G 1 1/2"

- Mounting via tank lid
- Protection class IP 54
- Optional with temperature control for internal regulation (THI)

Order code				
Art. No.		Type		Voltage*
1808	-	PTHK 92 - G 2" THA	-	2 x 400 V
		PTHK 90 - G 1 1/2"		1 x 230V
		PTHK 90 - G 2"		2 x 380V
		PTHK 92 - G 2" THA		3 x 380V
		PTHK 92 - G 2" THI		2 x 400V
		RHK - G 1 1/2"		3 x 400V
		RHK - G 1 1/2" THA		
		RHK - G 1 1/2" THI		
		WHK - G 1 1/2"		
		WHK - G 1 1/2" THI		

*available at extra charge:

3 phases
> 400 V

REQUIRED DETAILS FOR QUOTATION

In order to provide you a specific quotation, we need the following information:

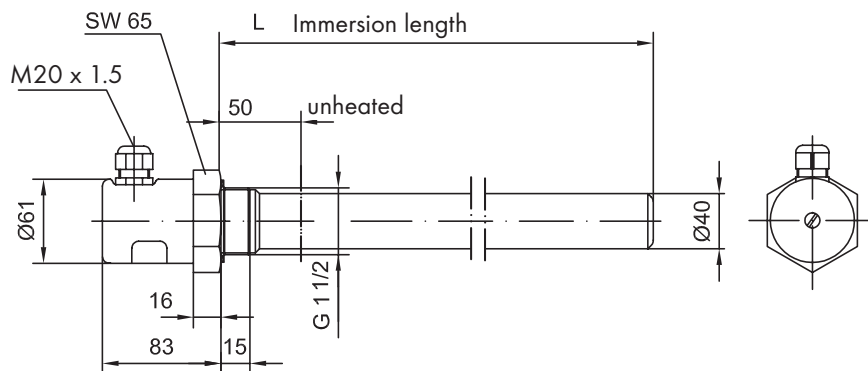
- Power
- Max. immersion length
- Voltage
- Surface load
- Thermostat yes / no

For the calculation of the tank heater, you will find a questionnaire and selection programme in the download section of our website www.hbe-hydraulics.com.



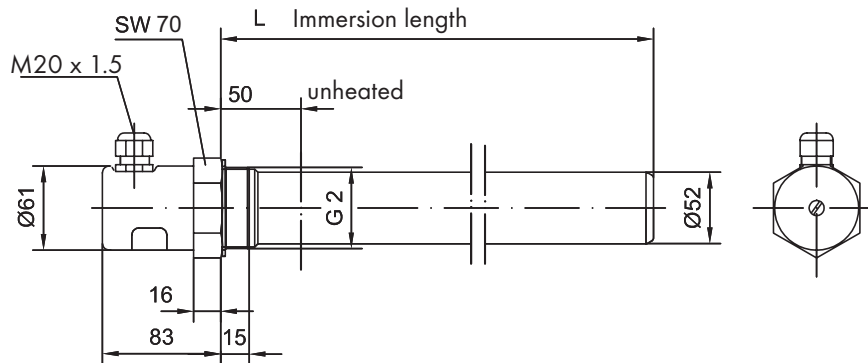
CARTRIDGE SCREWED-IN HEATERS

PTHK 90 - G 1 1/2"



Art. No.	Power [W]	L= Immersion depth [mm]
1705*	400	200
1707*	600	300
1709*	800	400
1711*	1000	500
1713*	1200	600
1715*	1400	700
1717	1600	800
1719	1800	900
1721	2000	1000
1723	2200	1100
1725	2400	1200
1727	2800	1400
1729	3200	1600
1731	3600	1800
1733	4000	2000

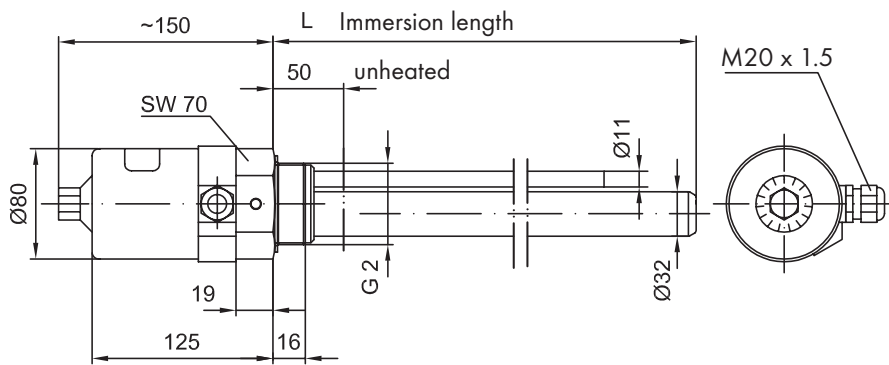
PTHK 90 - G 2"



Art. No.	Power [W]	L= Immersion depth [mm]
1750*	500	200
1752*	750	300
1754	1000	400
1756	1250	500
1758	1450	600
1760	1700	700
1762	1950	800
1764	2200	900
1766	2450	1000
1768	2700	1100
1770	2950	1200
1772	3450	1400
1774	3900	1600
1776	4400	1800
1778	4900	2000

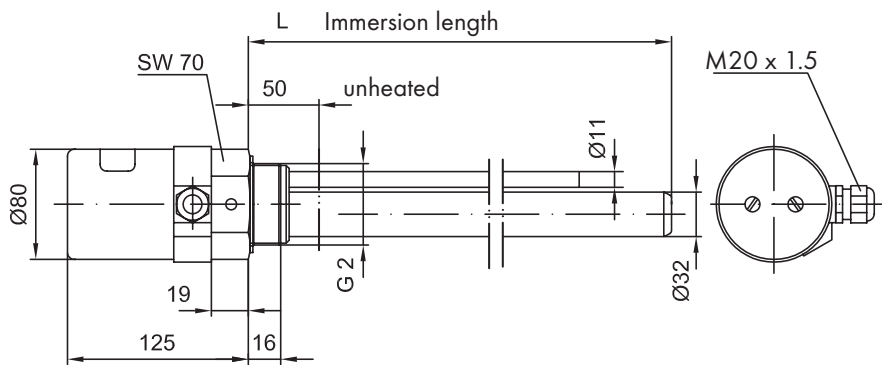
*Voltage two-phase max.

PTHK 92 - G 2" THA



Art. No.	Power [W]	L= Immersion depth [mm]
1800*	450	300
1802*	600	400
1804*	750	500
1806*	900	600
1808*	1050	700
1810	1200	800
1812	1350	900
1814	1500	1000
1816	1580	1100
1818	1730	1200
1820	1880	1300
1822	2030	1400
1824	2180	1500
1826	2330	1600

PTHK 92 - G 2" THI

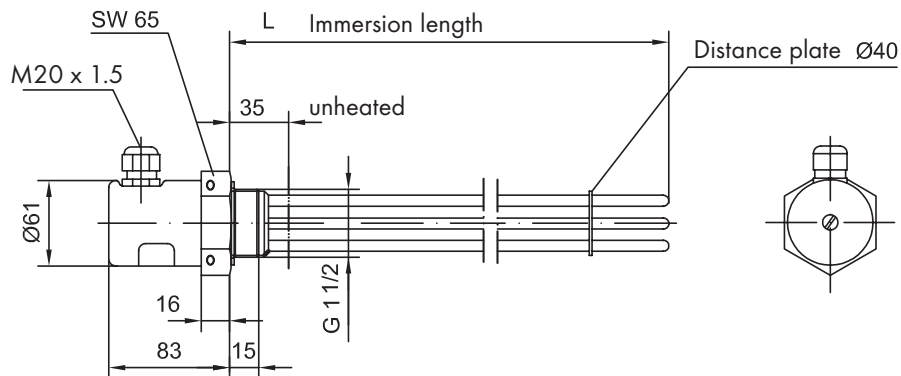


Art. No.	Power [W]	L= Immersion depth [mm]
1801*	450	300
1803*	600	400
1805*	750	500
1807*	900	600
1809*	1050	700
1811*	1200	800
1813	1350	900
1815	1500	1000
1817	1580	1100
1819	1730	1200
1821	1880	1300
1823	2030	1400
1825	2180	1500
1827	2330	1600

*Voltage two-phase max.

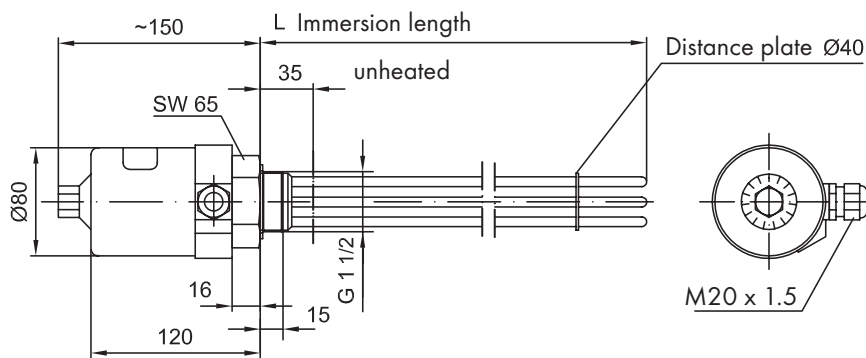
TUBE SCREWED-IN HEATERS

RHK - G 1 1/2"



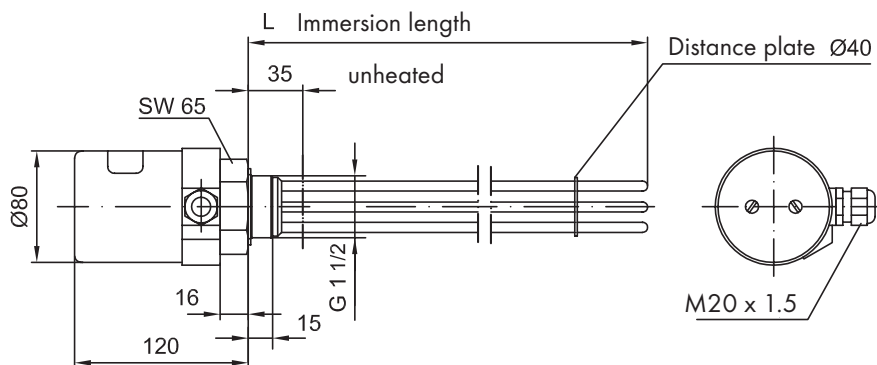
Art. No.	Power [W]	L= Immersion depth [mm]
1830*	380	200
1832*	500	250
1834	750	350
1836	990	450
1838	1450	650
1840	1825	800
1842	2300	1000

RHK - G 1 1/2" THA



Art. No.	Power [W]	L= Immersion depth [mm]
1860*	380	200
1862*	500	250
1864	750	350
1866	990	450
1868	1460	650
1870	1825	800
1872	2300	1000

RHK - G 1 1/2" THI



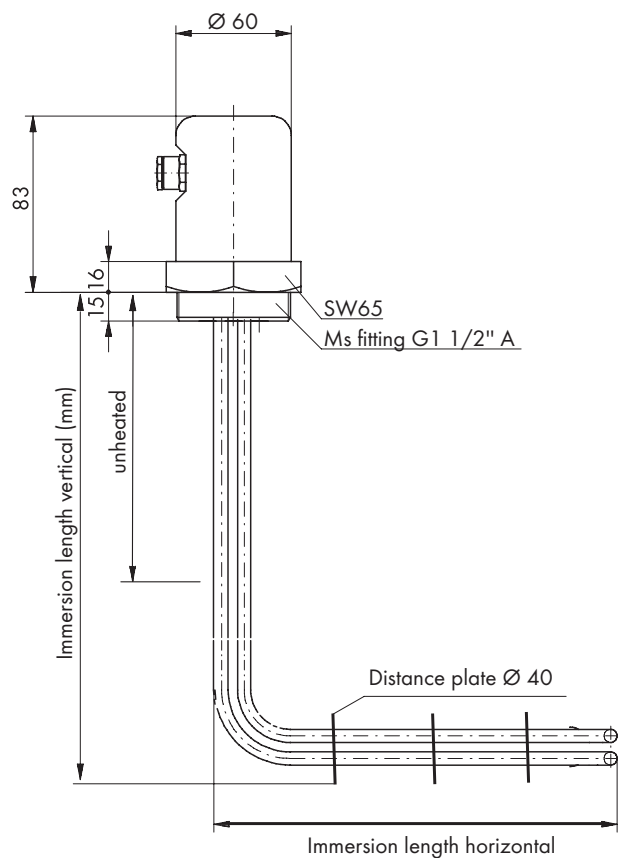
Art. No.	Power [W]	L= Immersion depth [mm]
1861*	380	200
1863*	500	250
1865	750	350
1867	990	450
1869	1460	650
1871	1825	800
1873	2300	1000

*Voltage two-phase max.

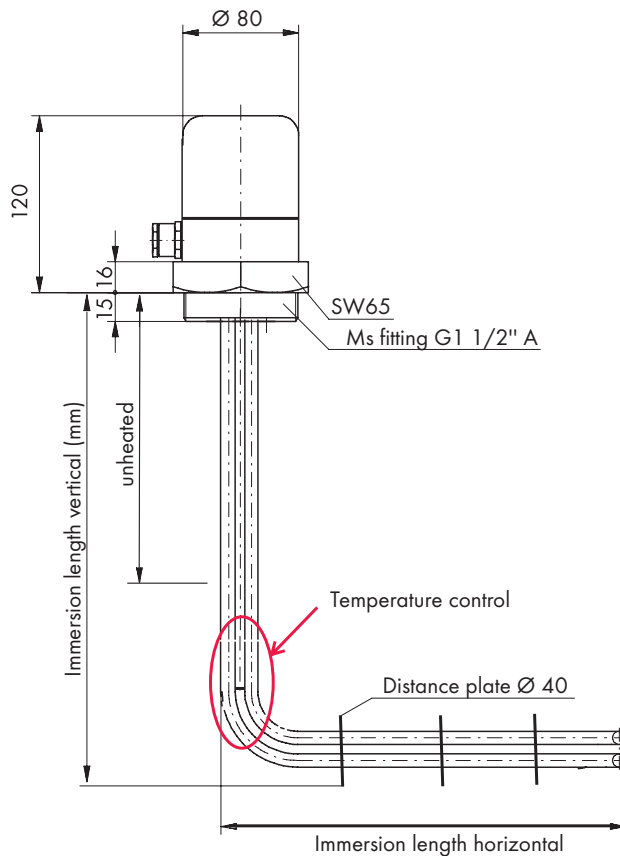
TUBE SCREWED-IN HEATERS – SHAPED

DIMENSIONS

STANDARD VERSION



VERSION WITH TEMPERATURE CONTROL (THI)



Art. No.		Power [W]	Length [mm]			No. of RHK
Standard	THI		vertical	horizontal	unheated	
1633*	1643*	260	265	300	250	1
1634*	1644*	370	320	430	300	1
1635*	1645*	800	365	490	350	2
1636*	1646*	1000	425	600	410	2
1637*	1647*	1200	480	740	460	2

*Voltage two-phase max.

OIL PRE-HEATER EDH

PRODUCT DESCRIPTION

- For the pre-heating of hydraulic oil, heating oil or other hard-inflammable agents
- The fluid to be heated is lead through a heating element bundle with the aid of baffles
- With pre-determined minimum flow rate a sufficient flow velocity is reached
- Thus, the carbonisation temperature is avoided

PRODUCT FEATURES

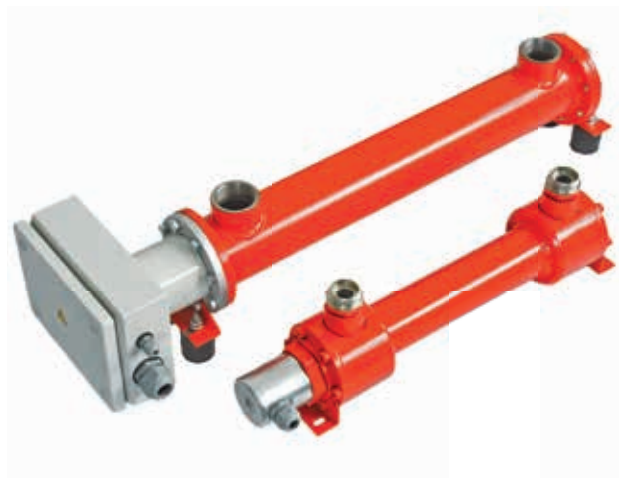
- The mounting position is either vertically or horizontally. Vertically: Provide electrical connection on top.
- Heating capacity 0 - 90 kW
- Thermostat: 0 - 90°C (without EDH-500)
- Temperature limiter at 100°C (without EDH-500)

RECOMMENDATIONS

- Installation of a flow control
- Avoid after-heating effect / Make sure that baffles are cooled down (let the medium flow further for app. 15 min after device is turned off)

TECHNICAL DATA

Caution: Incorrect installation can lead to damage to the oil pre-heater.



OPTION

- Surface charge: 1 W/cm²
- Water and water mixtures
- Temperature regulation (without EDH-500)

Maximum operating pressure = 16 bar

Higher operating pressures on request

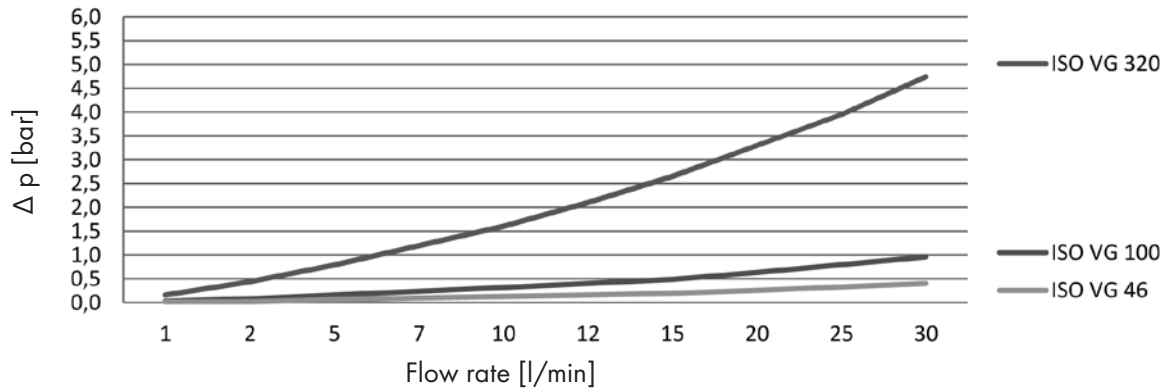
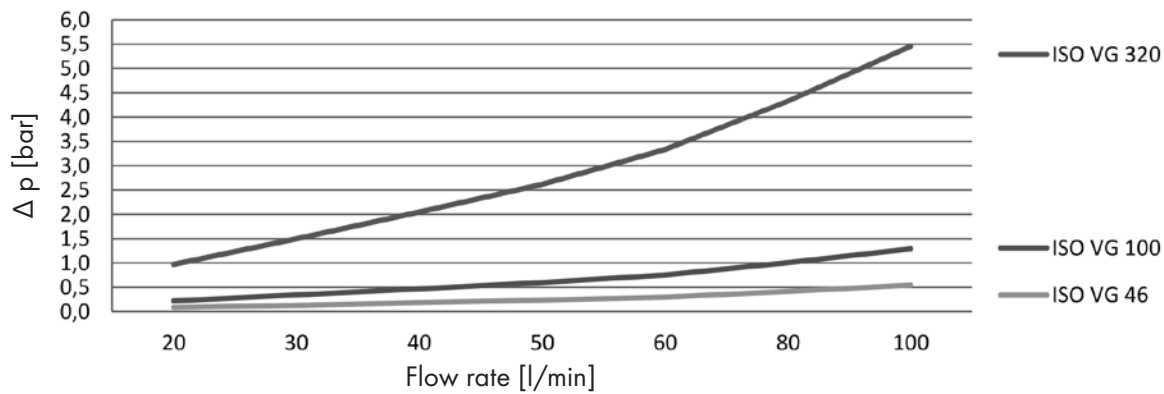
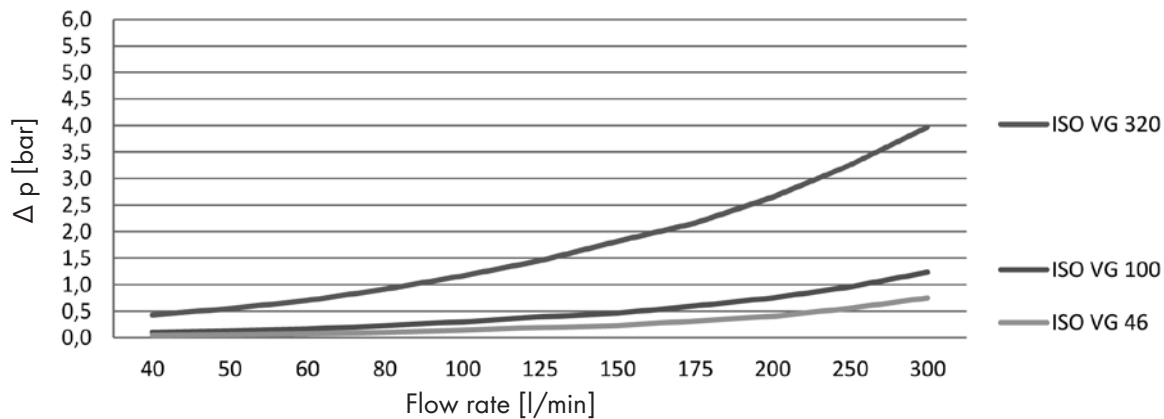
Operating temperature = 0 - 95°C

Size	Heating capacity [kW]	Surface charge [W/cm ²]	Minimum oil flow [l/min]	Recommended oil flow [l/min]	Thermostat [°C]	Differential [K]
EDH - 500	0.5 - 3	0.8 - 2	1	5	-	-
EDH - 700	2.5 - 5	1 - 2	20	30	0 - 90	2
EDH - 1000	5 - 10	1 - 2	40	50	0 - 90	2
EDH - 1200	7.5 - 30	1 - 2	60	75	0 - 90	2
EDH - 1700	22.5 - 90	1 - 2	80	100	0 - 90	2

For media with a viscosity of more than 1000 cSt, a surface charge of 1 W/cm² is recommended.

Order code						
Type		Size		Power		Voltage*
EDH	-	1036	-	10 kW	-	3 x 400 V

*Other voltages on request

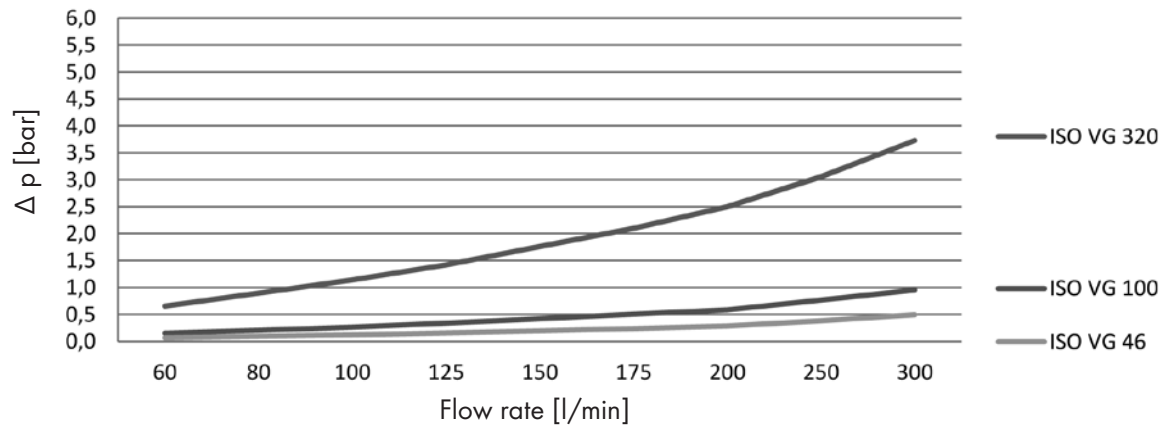
PERFORMANCE DATA***EDH 524-24-1,5kW****EDH 724-3-5kW****EDH 1036-5-10kW**

*The performance data are based on a medium intake temperature of 5°C and are theoretically determined with the VDI heat atlas.

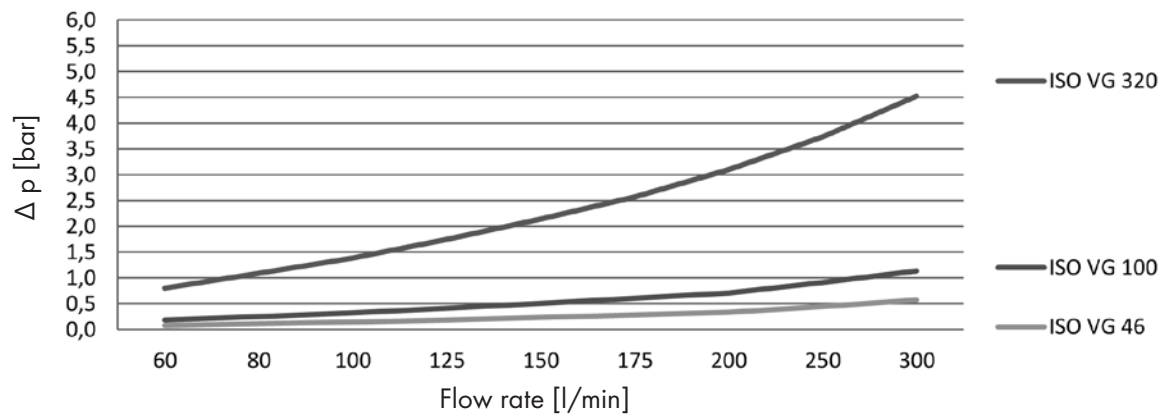
OIL PRE-HEATER EDH

PERFORMANCE DATA*

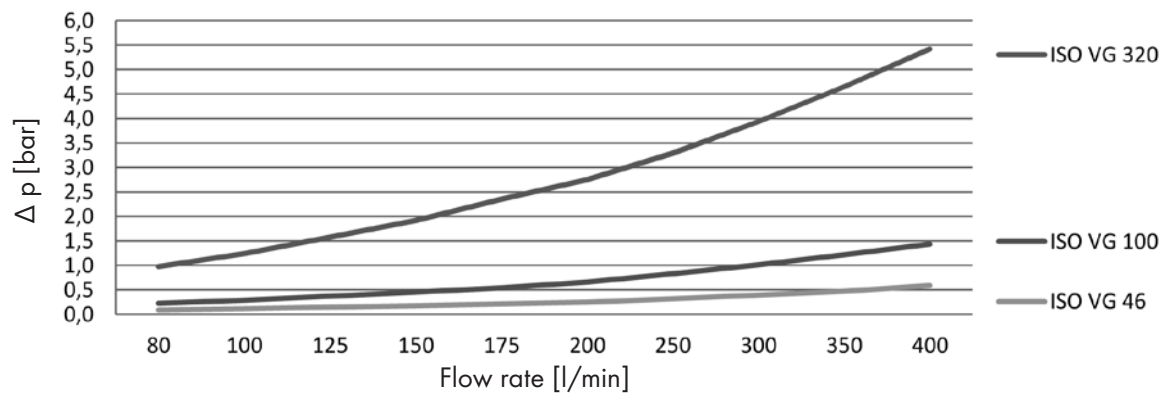
EDH 1236-5-15kW



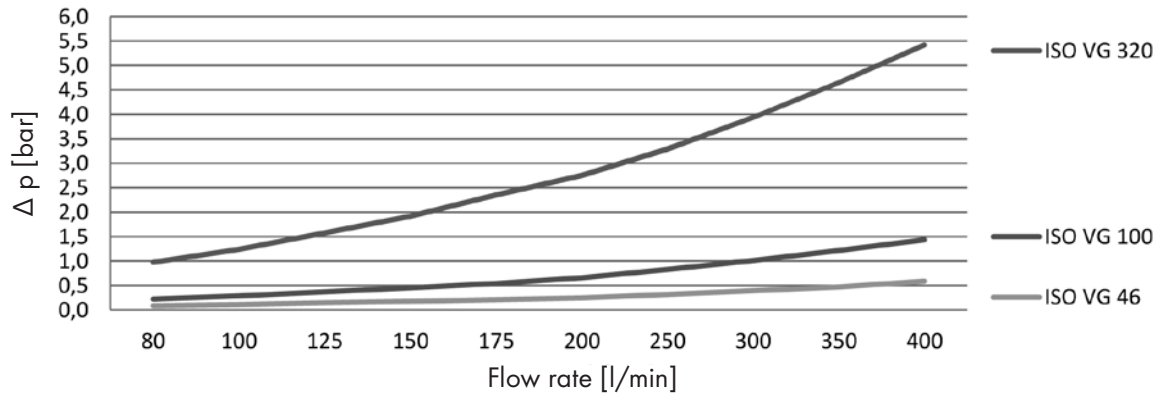
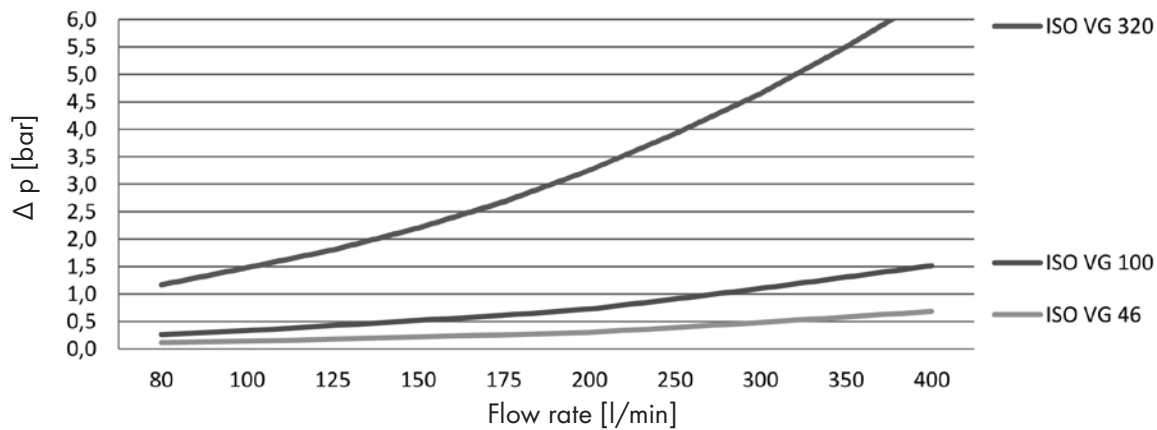
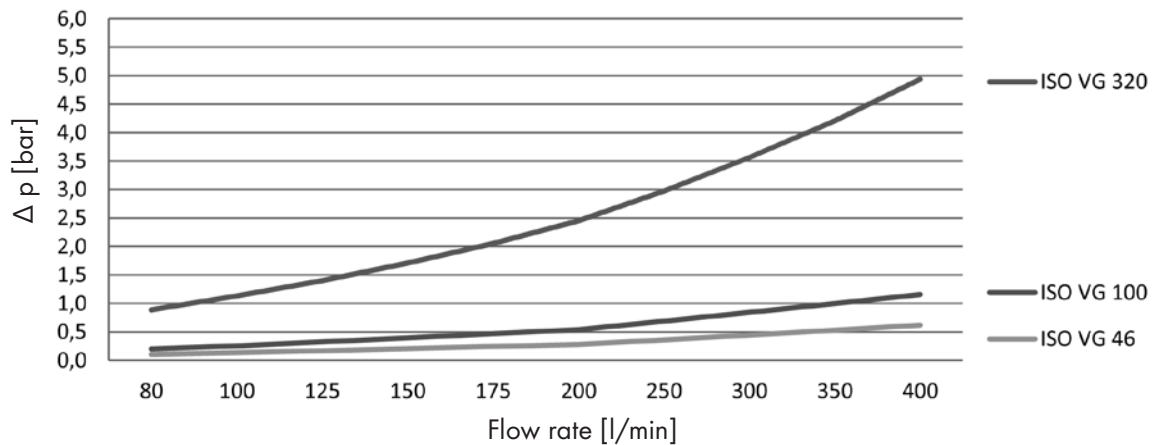
EDH 1248-5-20kW



EDH 1260-5-30kW



*The performance data are based on a medium intake temperature of 5°C and are theoretically determined with the VDI heat atlas.

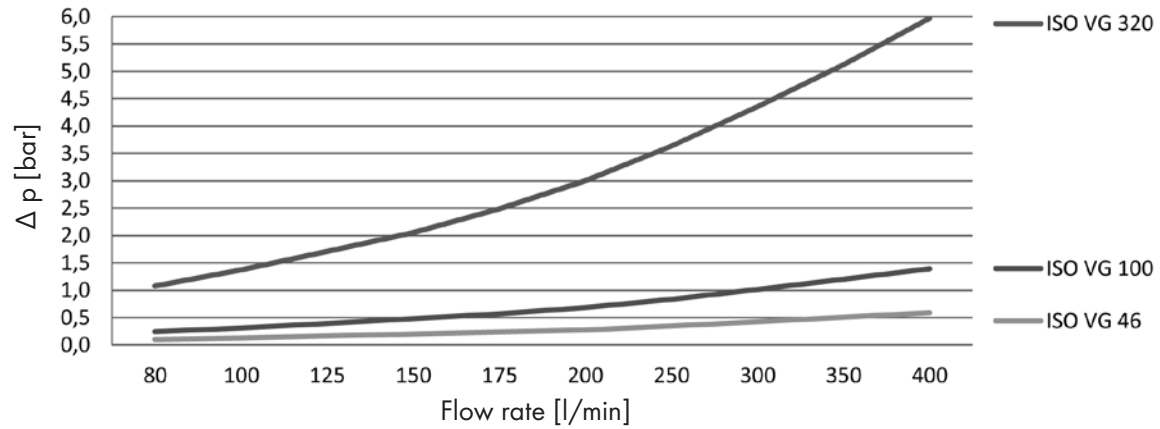
PERFORMANCE DATA***EDH 1748-5-45kW****EDH 1760-5-60kW****EDH 1772-8-75kW**

*The performance data are based on a medium intake temperature of 5°C and are theoretically determined with the VDI heat atlas.

OIL PRE-HEATER EDH

PERFORMANCE DATA*

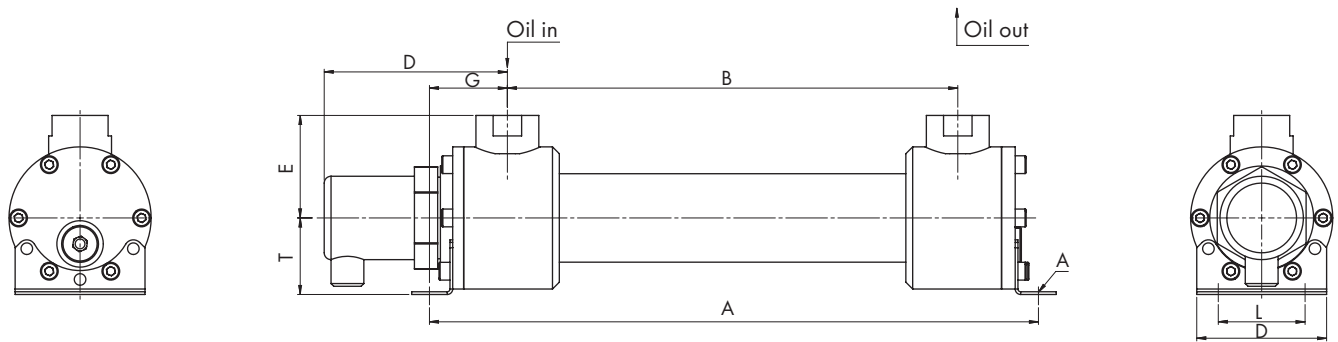
EDH 1784-7-90kW



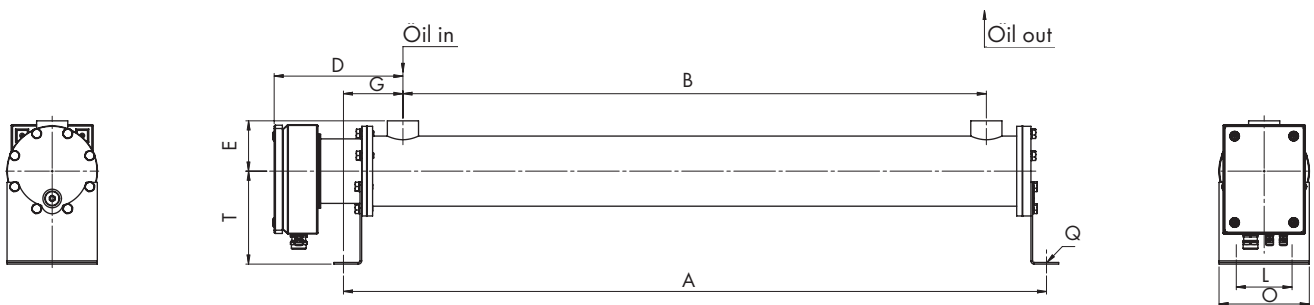
*The performance data are based on a medium intake temperature of 5°C and are theoretically determined with the VDI heat atlas.

DIMENSIONS

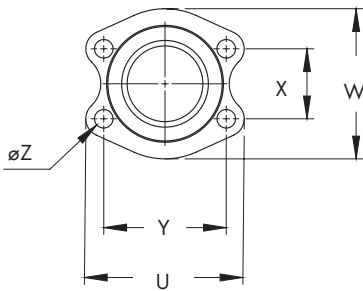
EDH 500



EDH 700/1000



Dimensions EDH [mm/BSPP]													Weight [kg]
	A	B	D	E	F	G	L	O	T	Q	X	Y	
EDH-514	446	329.5	134	75	G 1"	57	63.5	95	100	Ø 8.5 x 16	-	-	7
EDH-524	700	583.5	134	75	G 1"	57	63.5	95	100	Ø 8.5 x 16	-	-	8.5
EDH-536	1005	888.5	134	75	G 1"	57	63.5	95	100	Ø 8.5 x 16	-	-	10.5
EDH-724	670	483	225	73	G 1 1/2"	93	76	127	147	Ø 11 x 19	-	-	8
EDH-1036	990	766	235	92	G 1 1/2"	110	102	165	155	Ø 11 x 25	-	-	18
EDH-1236	970	707	260	145	SAE 1 1/2"	132	142	190	160	Ø 13 x 28	50.8	88.9	31
EDH-1248	1275	1012	260	145	SAE 1 1/2"	132	142	190	160	Ø 13 x 28	50.8	88.9	37
EDH-1260	1580	1317	260	145	SAE 1 1/2"	132	142	190	160	Ø 13 x 28	50.8	88.9	44
EDH-1748	1291	978	320	188	SAE 3"	157	178	210	226	Ø 16 x 38	62	106.4	76
EDH-1760	1596	1283	320	188	SAE 3"	157	178	210	226	Ø 16 x 38	62	106.4	90
EDH-1772	1900	1587	320	188	SAE 3"	157	178	210	226	Ø 16 x 38	62	106.4	104
EDH-1784	2205	1892	320	188	SAE 3"	157	178	210	226	Ø 16 x 38	62	106.4	118



Dimensions flange [mm]					
	U	Y	W	X	Z
SAE 1"	70	52.4	55	26.2	M10
SAE 1 1/4"	79	58.7	68	30.2	M10
SAE 1 1/2"	93	69.9	78	35.7	M12
SAE 2"	102	77.8	90	42.9	M12
SAE 2 1/2"	114	88.9	105	50.8	M12
SAE 3"	135	106.4	130.6	62	M16

OIL PRE-HEATER EDH

HEATING TIME OF A DEFINED OIL QUANTITY

The specified values are only for rough orientation. Depending on the flow rate of the pump and the installation of the system small tolerances are possible.

Desired temperature increase (ΔT) = 10K								
Electrical heating power	Tank 50 l	Tank 100 l	Tank 250 l	Tank 500 l	Tank 750 l	Tank 1000 l	Tank 2000 l	Tank 5000 l
EDH-724 - 5 kW	< 10 min	10 min	20 min	35 min	1 h	1 h 15 min	2 h 30 min	6 h
EDH-1036 - 10 kW	< 5 min	< 10 min	10 min	20 min	30 min	35 min	1 h 15 min	3 h
EDH-1236 - 15 kW	< 5 min	< 5 min	< 10 min	15 min	20 min	25 min	45 min	2 h
EDH-1248 - 20 kW	< 5 min	< 5 min	< 10 min	10 min	15 min	20 min	35 min	1 h 30 min
EDH-1260 - 30 kW	< 5 min	< 5 min	< 5 min	< 10 min	10 min	15 min	25 min	1 h
EDH-1748 - 45 kW	< 5 min	< 5 min	< 5 min	< 10 min	< 10 min	10 min	20 min	45 min
EDH-1760 - 60 kW	< 5 min	< 5 min	< 5 min	< 10 min	< 10 min	< 10 min	15 min	30 min
EDH-1772 - 75 kW	< 5 min	< 5 min	< 5 min	< 10 min	< 10 min	< 10 min	10 min	25 min
EDH-1784 - 90 kW	< 5 min	< 5 min	< 5 min	< 10 min	< 10 min	< 10 min	< 10 min	20 min

Desired temperature increase (ΔT) = 20K								
Electrical heating power	Tank 50 l	Tank 100 l	Tank 250 l	Tank 500 l	Tank 750 l	Tank 1000 l	Tank 2000 l	Tank 5000 l
EDH-724 - 5 kW	10 min	20 min	40 min	1 h 10 min	2 h	2 h 30 min	5 h	12 h
EDH-1036 - 10 kW	< 10 min	10 min	20 min	40 min	1 h	1 h 10 min	2 h 30 min	6 h
EDH-1236 - 15 kW	< 10 min	< 10 min	15 min	30 min	40 min	50 min	1 h 30 min	4 h
EDH-1248 - 20 kW	< 5 min	< 10 min	10 min	20 min	30 min	40 min	1 h 10 min	3 h
EDH-1260 - 30 kW	< 5 min	< 10 min	< 10 min	15 min	20 min	30 min	50 min	2 h
EDH-1748 - 45 kW	< 5 min	< 5 min	< 10 min	10 min	15 min	20 min	40 min	1 h 30 min
EDH-1760 - 60 kW	< 5 min	< 5 min	< 10 min	< 10 min	10 min	15 min	30 min	1 h
EDH-1772 - 75 kW	< 5 min	< 5 min	< 10 min	< 10 min	< 10 min	10 min	20 min	50 min
EDH-1784 - 90 kW	< 5 min	< 5 min	< 10 min	< 10 min	< 10 min	< 10 min	15 min	40 min

Desired temperature increase (ΔT) = 30K

Electrical heating power	Tank 50 l	Tank 100 l	Tank 250 l	Tank 500 l	Tank 750 l	Tank 1000 l	Tank 2000 l	Tank 5000 l
EDH-724 - 5 kW	15 min	30 min	1 h	1 h 45 min	3 h	3 h 45 min	7 h 30 min	18 h
EDH-1036 - 10 kW	< 10 min	15 min	30 min	1 h	1 h 30 min	1 h 45 min	3 h 45 min	9 h
EDH-1236 - 15 kW	< 10 min	< 15 min	20 min	45 min	1 h	1 h 15 min	2 h 15 min	6 h
EDH-1248 - 20 kW	< 5 min	< 10 min	15 min	30 min	45 min	1 h	1 h 45 min	4 h 30 min
EDH-1260 - 30 kW	< 5 min	< 10 min	< 15 min	20 min	30 min	45 min	1 h 15 min	3 h
EDH-1748 - 45 kW	< 5 min	< 10 min	< 10 min	15 min	20 min	30 min	1 h	2 h 15 min
EDH-1760 - 60 kW	< 5 min	< 5 min	< 10 min	< 15 min	15 min	20 min	45 min	1 h 30 min
EDH-1772 - 75 kW	< 5 min	< 5 min	< 10 min	< 15 min	< 15 min	15 min	30 min	1 h 15 min
EDH-1784 - 90 kW	< 5 min	< 5 min	< 10 min	< 10 min	< 15 min	< 15 min	25 min	1 h

Desired temperature increase (ΔT) = 40K

Electrical heating power	Tank 50 l	Tank 100 l	Tank 250 l	Tank 500 l	Tank 750 l	Tank 1000 l	Tank 2000 l	Tank 5000 l
EDH-724 - 5 kW	20 min	40 min	1 h 20 min	2 h 20 min	4 h	5 h	10 h	24 h
EDH-1036 - 10 kW	10 min	20 min	40 min	1 h 20 min	2 h	2 h 20 min	5 h	12 h
EDH-1236 - 15 kW	< 10 min	< 20 min	30 min	1 h	1 h 20 min	1 h 40 min	3 h	8 h
EDH-1248 - 20 kW	< 10 min	10 min	20 min	40 min	1 h	1 h 20 min	2 h 20 min	6 h
EDH-1260 - 30 kW	< 10 min	< 10 min	15 min	30 min	40 min	1 h	1 h 40 min	4 h
EDH-1748 - 45 kW	< 5 min	< 10 min	10 min	20 min	30 min	40 min	1 h 20 min	3 h
EDH-1760 - 60 kW	< 5 min	< 10 min	< 10 min	15 min	20 min	30 min	1 h	2 h
EDH-1772 - 75 kW	< 5 min	< 10 min	< 10 min	< 15 min	< 20 min	20 min	40 min	1 h 40 min
EDH-1784 - 90 kW	< 5 min	< 10 min	< 10 min	< 15 min	< 20 min	< 20 min	30 min	1 h 20 min

OIL PRE-HEATER EDH

HEATING POWER (kW) IN RELATION OF FLOW RATE AND DESIRED TEMPERATURE INCREASE

Depending on the type of oil, small tolerances are possible.
(Please consider the minimum flow rates of the selected device.)

ΔT [K]	10 l/min	20 l/min	30 l/min	40 l/min	50 l/min	75 l/min	100 l/min	125 l/min	150 l/min	175 l/min	200 l/min	300 l/min
1	0.39	0.77	1.16	1.54	1.93	2.89	3.85	4.81	5.78	6.74	7.70	11.55
2	0.77	1.54	2.31	3.08	3.85	5.78	7.70	9.63	11.55	13.48	15.40	23.10
3	1.16	2.31	3.47	4.62	5.78	8.66	11.55	14.44	17.33	20.21	23.10	34.65
4	1.54	3.08	4.62	6.16	7.70	11.55	15.40	19.25	23.10	26.95	30.80	46.20
5	1.93	3.85	5.78	7.70	9.63	14.44	19.25	24.06	28.88	33.69	38.50	57.75
6	2.31	4.62	6.93	9.24	11.55	17.33	23.10	28.88	34.65	40.43	46.20	69.30
7	2.70	5.39	8.09	10.78	13.48	20.21	26.95	33.69	40.43	47.16	53.90	80.85
8	3.08	6.16	9.24	12.32	15.40	23.10	30.80	38.50	46.20	53.90	61.60	92.40
9	3.47	6.93	10.40	13.86	17.33	25.99	34.65	43.31	51.98	60.64	69.30	103.95
10	3.85	7.70	11.55	15.40	19.25	28.88	38.50	48.13	57.75	67.38	77.00	115.50
11	4.24	8.47	12.71	16.94	21.18	31.76	42.35	52.94	63.53	74.11	84.70	127.05
12	4.62	9.24	13.86	18.48	23.10	34.65	46.20	57.75	69.30	80.85	92.40	138.60
13	5.01	10.01	15.02	20.02	25.03	37.54	50.05	62.56	75.08	87.59	100.10	150.15
14	5.39	10.78	16.17	21.56	26.95	40.43	53.90	67.38	80.85	94.33	107.80	161.70
15	5.78	11.55	17.33	23.10	28.88	43.31	57.75	72.19	86.63	101.06	115.50	173.25
16	6.16	12.32	18.48	24.64	30.80	46.20	61.60	77.00	92.40	107.80	123.20	184.80
17	6.55	13.09	19.64	26.18	32.73	49.09	65.45	81.81	98.18	114.54	130.90	196.35
18	6.93	13.86	20.79	27.72	34.65	51.98	69.30	86.63	103.95	121.28	138.60	207.90
19	7.32	14.63	21.95	29.26	36.58	54.86	73.15	91.44	109.73	128.01	146.30	219.45
20	7.70	15.40	23.10	30.80	38.50	57.75	77.00	96.25	115.50	134.75	154.00	231.00
21	8.09	16.17	24.26	32.34	40.43	60.64	80.85	101.06	121.28	141.49	161.70	242.55
22	8.47	16.94	25.41	33.88	42.35	63.53	84.70	105.88	127.05	148.23	169.40	254.10
23	8.86	17.71	26.57	35.42	44.28	66.41	88.55	110.69	132.83	154.96	177.10	265.65
24	9.24	18.48	27.72	36.96	46.20	69.30	92.40	115.50	138.60	161.70	184.80	277.20
25	9.63	19.25	28.88	38.50	48.13	72.19	96.25	120.31	144.38	168.44	192.50	288.75

ΔT [K]	10 l/min	20 l/min	30 l/min	40 l/min	50 l/min	75 l/min	100 l/min	125 l/min	150 l/min	175 l/min	200 l/min	300 l/min
26	10.01	20.02	30.03	40.04	50.05	75.08	100.10	125.13	150.15	175.18	200.20	> 300
27	10.04	20.79	31.19	41.58	51.98	77.96	103.95	129.94	155.93	181.91	207.90	> 300
28	10.78	21.56	32.34	43.12	53.90	80.85	107.80	134.75	161.70	188.65	215.60	> 300
29	11.17	22.33	33.50	44.66	55.83	83.74	111.65	139.56	167.48	195.39	223.30	> 300
30	11.55	23.10	34.65	46.20	57.75	86.63	115.50	144.38	173.25	202.13	231.00	> 300
31	11.94	23.87	35.81	47.74	59.68	89.51	119.35	149.19	179.03	208.86	238.70	> 300
32	12.32	24.64	36.96	49.28	61.60	92.40	123.20	154.00	184.80	215.60	246.40	> 300
33	12.71	25.41	38.12	50.82	63.53	95.29	127.05	158.81	190.58	222.34	254.10	> 300
34	13.09	26.18	39.27	52.36	65.45	98.18	130.90	163.63	196.35	229.08	261.80	> 300
35	13.48	26.95	40.43	53.90	67.38	101.06	134.75	168.44	202.13	235.81	269.50	> 300
36	13.86	27.72	41.58	55.44	69.30	103.95	138.60	173.25	207.90	242.55	277.20	> 300
37	14.25	28.49	42.74	56.98	71.23	106.84	142.45	178.06	213.68	249.29	284.90	> 300
38	14.63	29.26	43.89	58.52	73.15	109.73	146.30	182.88	219.45	256.03	292.60	> 300
39	15.02	30.03	45.05	60.06	75.08	112.61	150.15	187.69	225.23	262.76	> 300	> 300
40	15.40	30.80	46.20	61.60	77.00	115.50	154.00	192.50	231.00	269.50	> 300	> 300
41	15.79	31.57	47.36	63.14	78.93	118.39	157.85	197.31	236.78	276.24	> 300	> 300
42	16.17	32.34	48.51	64.68	80.85	121.28	161.70	202.13	242.55	282.98	> 300	> 300
43	16.56	33.11	49.67	66.22	82.78	124.16	165.55	206.94	248.33	289.71	> 300	> 300
44	16.94	33.88	50.82	67.76	84.70	127.05	169.40	211.75	254.10	296.45	> 300	> 300
45	17.33	34.65	51.98	69.30	86.63	129.94	173.25	216.56	259.88	> 300	> 300	> 300
46	17.71	35.42	53.13	70.84	88.55	132.83	177.10	221.38	265.65	> 300	> 300	> 300
47	18.10	36.19	54.29	72.38	90.48	135.71	180.95	226.19	271.43	> 300	> 300	> 300
48	18.48	36.96	55.44	73.92	92.40	138.60	184.80	231.00	277.20	> 300	> 300	> 300
49	18.87	37.73	56.60	75.46	94.33	141.49	188.65	235.81	282.98	> 300	> 300	> 300
50	19.25	38.50	57.75	77.00	96.25	144.38	192.50	240.63	288.75	> 300	> 300	> 300