BELLHOUSING WITH INTEGRATED OIL COOLER

PRODUCT DESCRIPTION

- Series PTÖK: bellhousing with oil air cooler
- Model series for electric motors 0.55 – 22 kW (IMB 5/IMB 35/IMV 1)
- Noise reduced design, form B
- Cooling capacity 0.95 – 5.15 kW
- 4 model series available (ø200 – ø350)
- All bellhousing lengths comply with VDMA 24561
- The standard bellhousing can be replaced easily with a bellhousing with oil cooler at any time due to identical installation lengths
- Horizontal – IMB 5/IMB 35 – and vertical – IMV 1 – use possible
- Foot flanges type PTFL and PTFS mountable acc. to VDMA 24561

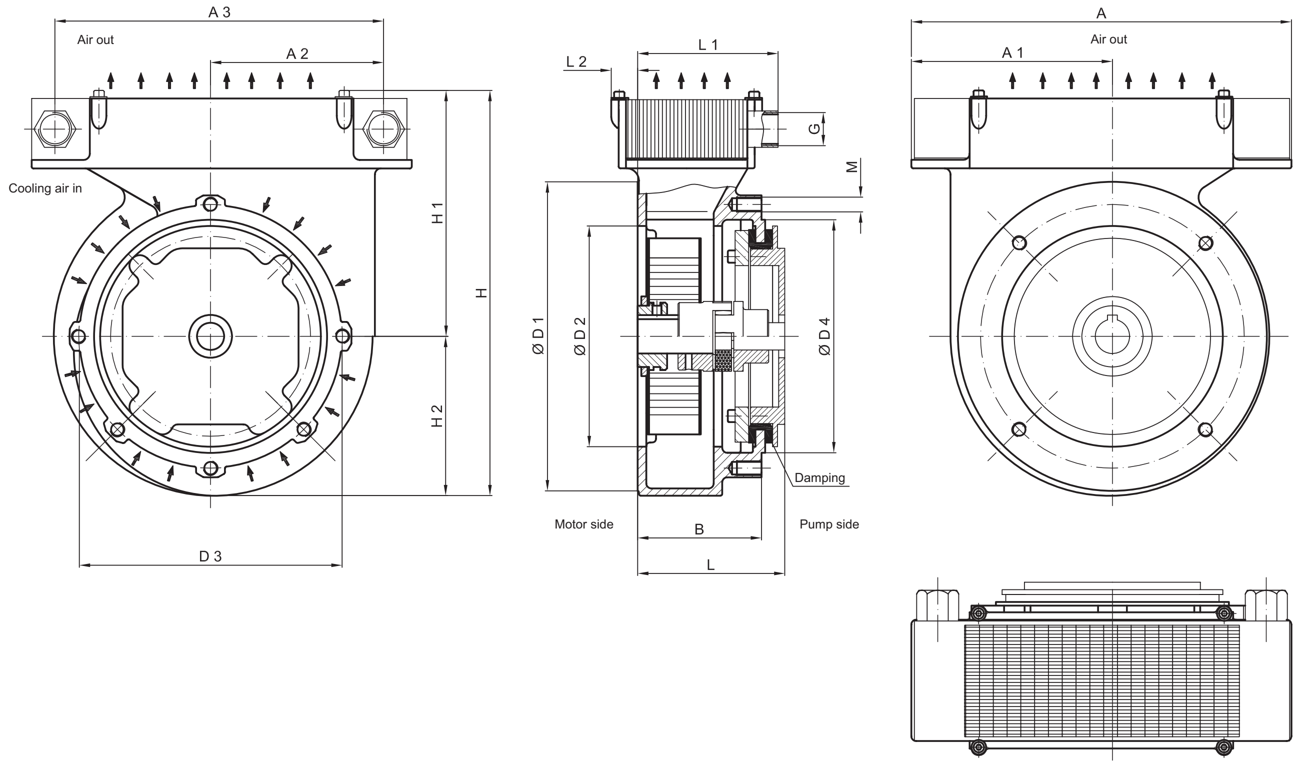
Order code							
Type	Size		Length		Ø Fan wheel		Pump face code
PTÖK	250	/	120	/	LR28	/	20

TECHNICAL ADVANTAGES

- High cooling capacity with low noise output on the smallest installation space
- Suitable as reflux or leak oil cooler
- Requires no electrical installation
- Easy to maintain due to simple installation and removal of the cooling element
- Due to standard damping, reduction of noise level up to 6 dB (A) possible

TECHNICAL DATA

Operating pressure:	16 bar
Load change:	1×10^6, f = 2 Hz
Max. static pressure:	10 bar



Type	E-motor size	Power [kW]	Shaft	Foot flanges type	Dimensions [mm]																
					A	A1	A2	A3	B	⌀D1	⌀D2	D3	⌀D4	G	H	H1	H2	L	L1	L2	M
PTÖK 200	80	0.55 0.75	19 x 24	PTFL 200	242	139	101.5	203	70	200	130	165	145	G 1/2	285	180	100	100 110 118 124 140	88	10,3	M10
	90 S + L	1.1 1.5	24 x 50																		
PTÖK 250	100 L	2.2 3.0	28 x 60	PTFL 250 PTFS 250	310	164	144.5	267	102	252	180	215	190	G 3/4	329	199	130	120 124 128 135 148 175	101.5	22	M12
	112 M	4																			
PTÖK 300	132 S +M	5.5 7.5	38 x 80	PTFL 300 PTFS 300	310	191	168.5	267	126	300	230	265	234	G 3/4	384	234	150	144 150 155 168 196	128.5	8	M12
PTÖK 350	160 M + L	11 15	42 x 110	PTFL 350 PTFS 350	355	230	210.5	316	152	350	250	300	260	G 3/4	426	251	175	188 204 228 256	155	6	M16
	180 M + L	18.5 22	48 x 110																		

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COOLING CAPACITY

Type	Cooling capacity[1] P [kW] Δt = 40 k	Power E-motor[3] [kW]	Air flow [m³/h]	Input power [W]	Noise level[2] [dB (A)]	Correlation cooling and motor power %
PTÖK 200	0.95	0.55 – 1.5	72	20	52	63 – 100
PTÖK 250	2.1	2.2 – 4	260	30	58	53 – 95
PTÖK 300	3.22	5.5 – 7.5	430	90	69	43 – 59
PTÖK 350	5.15	11 – 22	780	140	70	23 – 46

(1) The indicated capacity relates to the nomina rotation for the driven machine and is 1,500 min^{-1}. In case of different speeds, please contact HBE.

(2) Noise levels of damped version with bellhousing and electric motor are measured with 1 m distance to the tested objects. The istated values of noise level will be various depending on the electric motor.

(3) Direction of pump rotation always clockwise (looking on pump shaft)

Should no additional heat sources have an effect on the hydraulic aggregate between 30 and 40 percent of the engine output is lost as heat energy when the engine is operated at an average efficiency. A part of this heat is released outwards from the individual components. Above all, the surface area of the tank plays an important role here. However, some heat energy remains which may lead to overheating of the oil. In order to avoid this, the usage of an additional cooler is required. In the vast majority of cases, a cooling capacity of between 20 to 30 percent of the engine output is sufficient – also with aggregates with a smaller tank surface area.

Meanwhile, it is hard to imagine oil hydraulics without bellhousing coolers. They are simple to install, they require very little space – particularly due to the ventilation system no longer being required – and, in most applications, achieve the complete required cooling capacity. See figure 1.

The values from figure 1 apply for an optimal amount of oil flow and applies to one Δt from 40 K. Should the oil flow be notably low or not sufficiently continual, the installation of a separate cooling circuit could be necessary – even this is effortlessly convertible with PTÖK bellhousing coolers. Figure 1 shows the dependency of the cooling capacity with the amount of oil flow. You will achieve the actual cooling capacity by multiplying the values for 1K Dt with the relevant Δt.

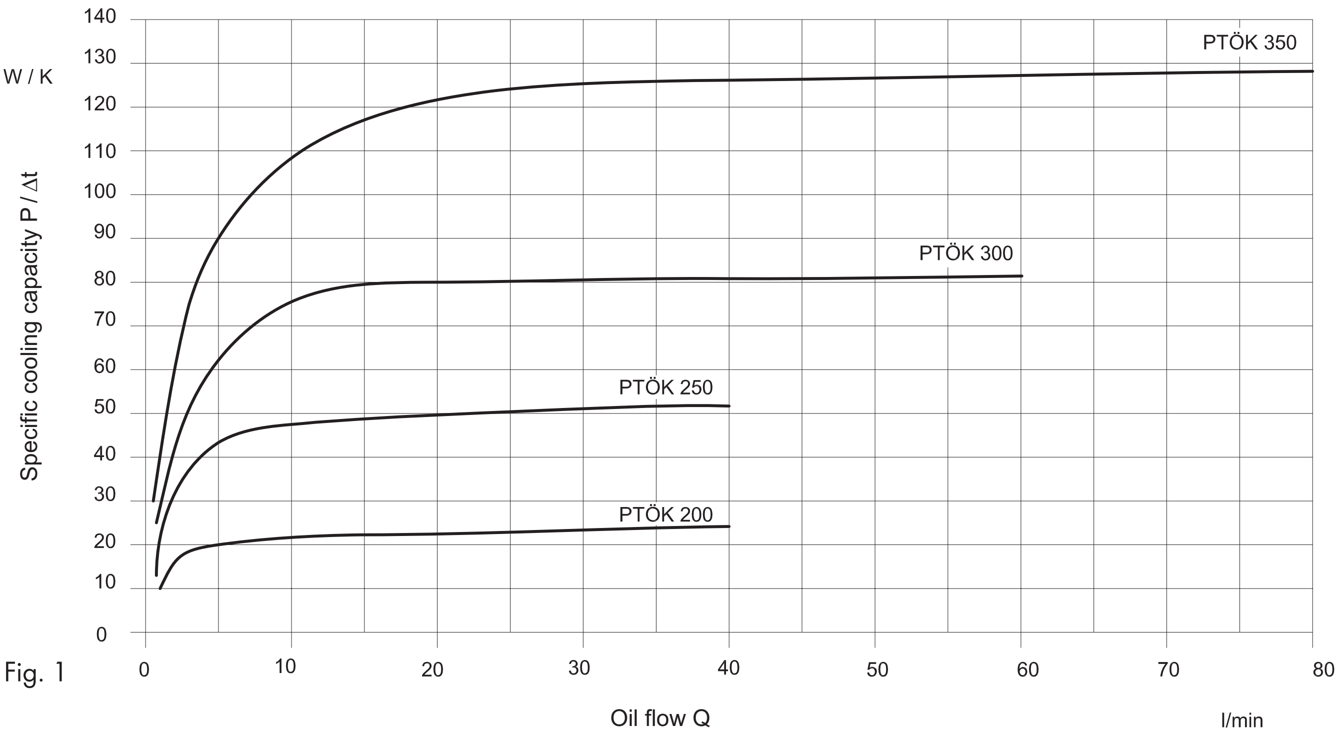

Fig. 1

Specific cooling capacity P / Δt depending on oil flow Q and temperature difference Δt = 1 K (oil inlet to air inlet).