

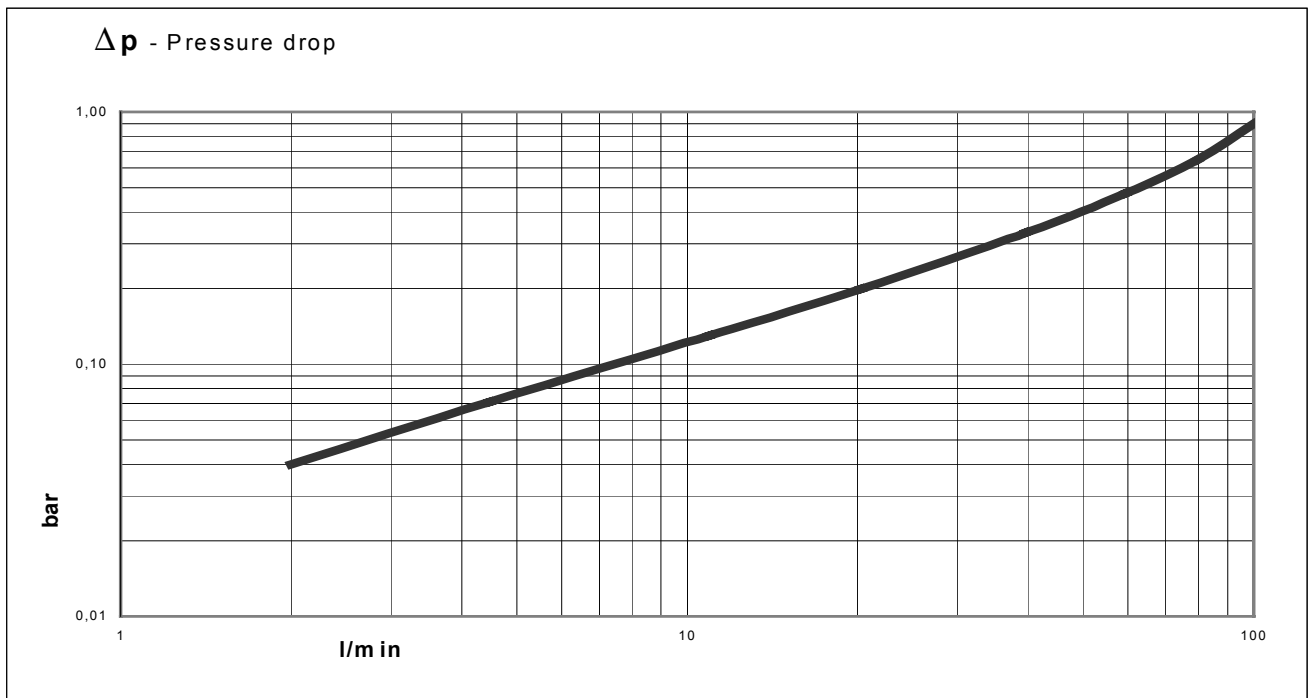
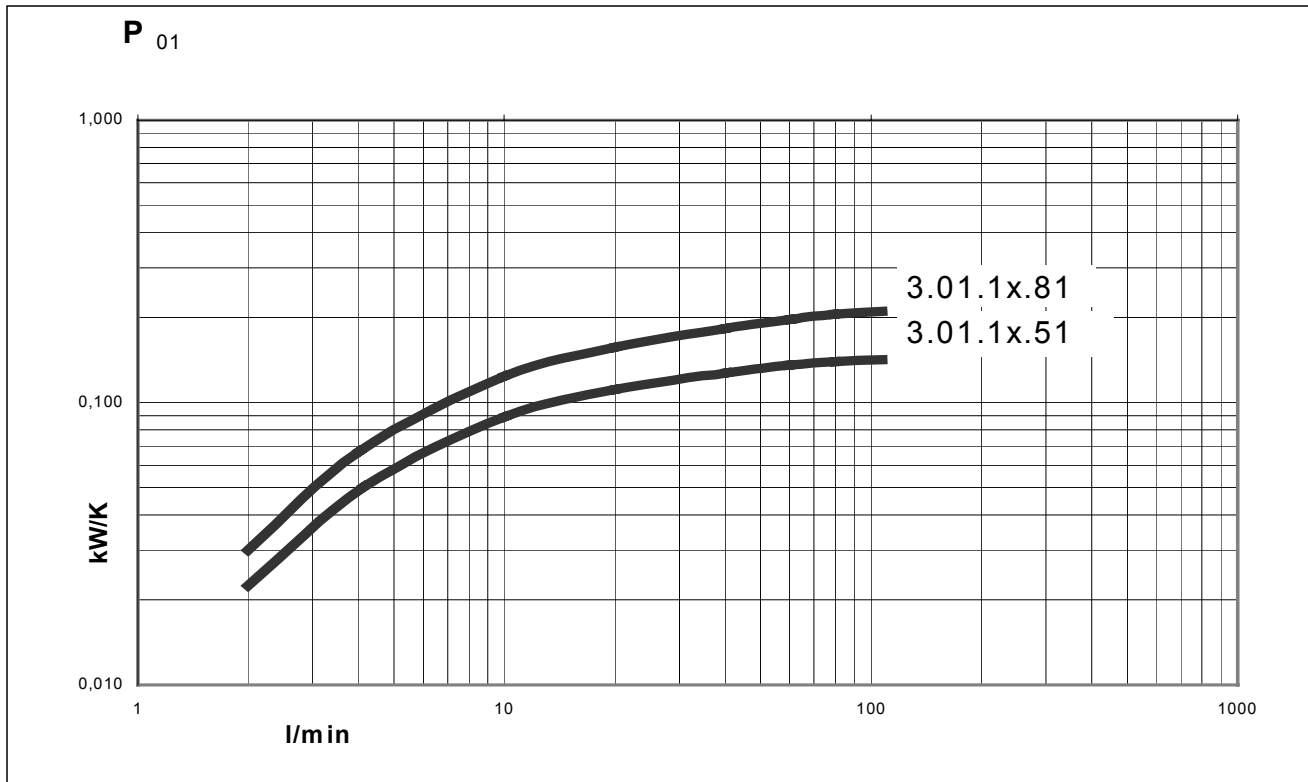
Application	Cooling of: Oil, HFA, HFB, HFC, HFD – liquids up to $v = 100 \times 10^{-6} \text{ m}^2/\text{s}$ water/glycol 65:35, <u>By no means water</u> without anticorrosive agent Cooling medium: air
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Technical Data	Type	3.01.1x.81	3.01.1x.51	
	Frontal area	m ²	0,077	0,077
	Fan speed	1/min	3000	1500
	Air-flow rate	Kg/s	~ 0,43	~ 0,19
	Driving power	kW	0,25	0,18
	Electric motor, size		IM B14 C90-63	IM B14 C90-63
	Noise level (1m / 7m)	dB(A)	78 / 66	63 / 51
	Weight	kg	16	16
	Oil content	L	2	2
	Allow.operating temp.	°C	120	120
Allow.operating pressure	bar	16	16	

Material	Core	aluminium	aluminium
	Fan	plastic	plastic
	Miscellaneous	steel, treated	steel, treated

Fitting note	Operating instruction to be followed in any case
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		Given	Calculated	
Example	Power dissipation	kW	$P_v = 6$	
	Oil flow	l/min	$V_{\text{OI}} = 60$	
	Air volume	kg/s	$V_L = 0,43 \text{ (m.a.)}$	
	Oil inlet temperature	°C	$t_{\text{Oie}} = 60$	
	Cooling air temperature	°C	$t_{\text{Le}} = 27$	
	Inlet temperature-difference ETD	K		$\text{ETD} = t_{\text{Oie}} - t_{\text{Le}} = 60 - 27 = 33 \text{ K}$
	Spec. heat dissipation ETD = 1 Kelvin, P_{O1}	kW/K		$P_{\text{O1}} = P_v / \text{ETD} = 6 / 33 = 0,18 \text{ kW/K}$
	Cooling of oil, Δt_{OI}	K		$\Delta t_{\text{OI}} = 36 \times P_v / V_{\text{OI}} = 36 \times 6 / 60 = 3,6 \text{ K}$
	Heating-up of air Δt_L	K		$\Delta t_L = P_v / V_L = 6 / 0,43 = 14,0 \text{ K}$



Δp-values of this chart apply to $v = 32 \text{ mm}^2/\text{s}$ (~ 32 cSt)

In case of divergent viscosity the calculated Δp-value shall be multiplied by f

10	15	20	32	40	50	60	80	100	150	200	250	300	400	500	mm ² /s
0,5	0,65	0,75	1,0	1,2	1,4	1,6	2,1	2,7	4,0	5,5	7,3	9,5	16,0	30,0	f