Internal gear pump
Type EIPH3 high pressure pump with constant displacement volume

EIPH3

Characteristics

The series EIPH were developed particularly for the high requirements of industrial hydraulics. Their favourable noise characteristic, extremely low delivery and pressure pulsation, outstanding efficiency within broad revolution and viscosity ranges, have firmly established gap-compensated high pressure internal gear pumps among high pressure pumps. Simple combinability to multiple pumps with separate or common inlet is given.

The EIPH is a consistent advancement that already for over 40 years in the industry used gap-compensated internal gear pump technology, System Eckerle.

Technical Data:

Rated Size	014	016	020	025	032	040	050	064
Spec. volume Vth [cm^3/rev]***	14,3	15,8	20,0	24,5	31,6	39,5	49,5	65,3
Continuous operating pressure [bar]**	330					280		
Peak operating pressure [bar] max. 10 sec. 15% duty cycle**	350					300		
Cut-in pressure peak [bar]**	400					325		
Nominal speed [min^{-1}]	400 – 3.600		400 – 3.400	400 – 3.200	400 – 3.000	400 – 2.500	400 – 1.800	
Max. speed [min^{-1}]	4.000		3.400	3.200	3.000	2.500	1.800	
Nominal speed [min^{-1}]****	For rated size 040-064 avalible			400 – 3.200	400 – 3.200	400 – 3.200	400 – 3.000	400 – 2.200
Max. speed [min^{-1}]****	For rated size 040-064 avalible			4.000	3.600	3.600		2.500
Operating viscosity [mm^2/s]	10 – 300							
Starting viscosity [mm^2/s]	2.000							
Operating medium	HL – HLP DIN 51 524 part 1/2							
Max. medium temperature [°C]	80							
Min. medium temperature [°C]	-20							
Max. ambient temperature [°C]	80							
Min. ambient temperature [°C]	-20							
Max. admission pressure (intake side) [bar]	2 bar absolute							
Min. admission pressure (intake side) [bar]	0,8 bar absolute (Start 0,6)							
Weight appr. [kg]	9,4	10,1	10,5	11,2	12,0	15	17	18
Degree of filtration	Class 20/18/15 due to ISO 4406							
Life expectancy	not less than 1x 10^7 load cycles against peak operating pressure							
Efficiency η vol:	91	92	93		94	95		
Efficiency η hm:	90		91	92		93		
Pump noise* (measured in sound chamber) dB[A]	60	61	62	63	64	65	66	

n = 1.450 min^{-1} Δ p = 250 bar T = 50 °C Medium: HLP 46

* Measured in anechoic room of Eckerle Hydraulic Division; Axial microphone distance 1.0 m
** For acceptable pressure at 400-1.800 rpm. Further rpm on request.
*** Due to manufacturing tolerances the displacement volume could vary.
**** 1½" suction port for rated size 025/032; 2" suction port for rated size 040/050/064

The pumps have no corrosion protection.
The max. permissible values must not be applied cumulatively. Please contact us.