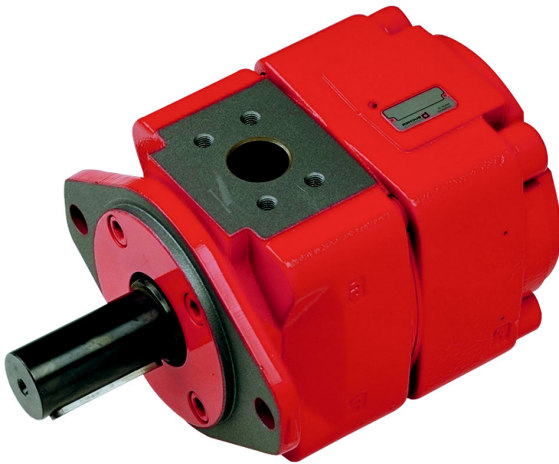


High Pressure Internal Gear Pumps

Series QXEH



1 General

1.1 Product description

The pumps in the new QXEH range are single-stage units that use just one pair of gear wheels. Their compact and heavy-duty construction introduces a new and pioneering benchmark for pumps.

The improved dimensional stability of all rotating components results in higher overall rigidity levels, and this in turn decisively enhances the performance ratings of the QXEH pumps.

In addition, a vital improvement to the hydrodynamic lubrication of the ring gear has been implemented by regulating the flow profiles in the critical bearing areas by means of selective oil supply.

The good inlet characteristics, and the extremely low noise emissions, even at high speed, are ensured by our tried and tested special gear-tooth technology.

1.2 Advantages

- Generates high pressures in just one stage
- Low noise levels
- Good reliability and long service life
- Pressure and flow pulsations are low
- Simple and compact construction
- Resists cavitation with critical fluids

2 Technical data

2.1 General

Installation attitude	unrestricted
Mounting method (standard)	oval 2-hole flange to ISO 3019/1 (SAE)
Direction of rotation	right, alternatively left (but not reversible; right = standard)
Pump drive method	in-line, through a flexible coupling
Hydraulic fluid	HLP mineral oils to DIN 51524 Part 2; other fluids - consult Bucher Hydraulics
Minimum fluid cleanliness	ISO 4406 class 20/18/15, or NAS 1638 class 9
Operating viscosity Start-up viscosity	20 - 150 mm ² /s (cSt) 20 - 300 mm ² /s (cSt)
Hydraulic fluid temperature	HLP mineral oil - 80°C max.
Inlet pressure maximum minimum	1.5 bar absolute (without external drain connection) 0.5 - 0.98 bar absolute (dependent on pump frame size and speed)
Start-up under load	maximum 20 bar
Seal material	NBR, other material - consult Bucher Hydraulics

2.2 Main characteristics

Displacement (effective)	Flow rate at speed n = 1450 rpm	Maximum speed	Type	Mineral oil to DIN 51524			Torque ³⁾
				Continuous pressure	Maximum pressure ¹⁾	Peak pressure ²⁾	
cm ³ /rev	l/min	rpm		bar	bar	bar	Nm
10,0	14,5	3400	QXEH32-010	250	280	315	46
12,6	18,3	3400	QXEH32-012				57
15,6	22,6	3400	QXEH32-016				69
20,4	29,5	3200	QXEH42-020	250	280	315	89
25,1	36,4	3200	QXEH42-025				109
32,4	46,8	3200	QXEH42-032				140
39,3	56,9	2800	QXEH52-040	250	280	315	167
50,6	73,2	2800	QXEH52-050				212
63,7	92,1	2800	QXEH52-063				265

The main characteristics are valid for hydraulic oils with viscosities from 20 to 50 mm²/s (cSt)

1) Maximum intermittent pressure for max. 10 sec. but not more than 40% of the duty cycle.

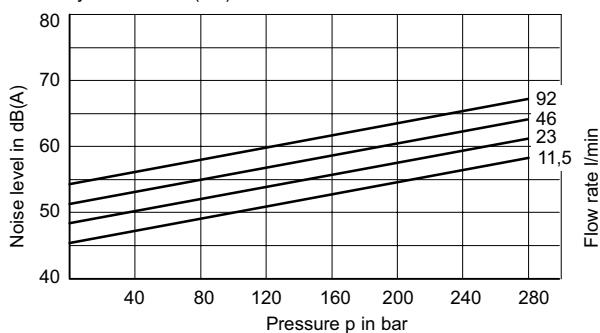
2) For other peak pressure application limits, please consult Bucher Hydraulics.

3) Value at the maximum permitted continuous pressures for mineral oil at n = 1450 rpm.

3 Performance graphs

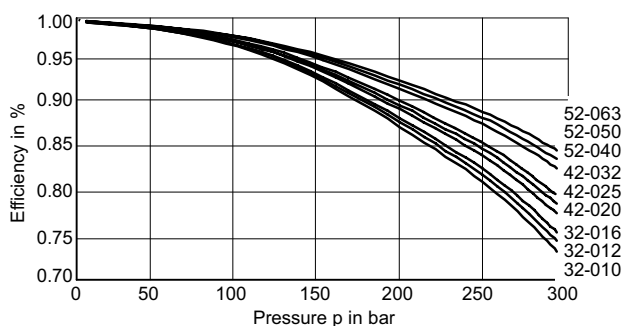
3.1 Noise level

measured to DIN 45635, Part 26, in Stuttgart University's low-echo noise measurement chamber;
speed n = 1500 rpm
viscosity = 42 mm²/s (cSt)



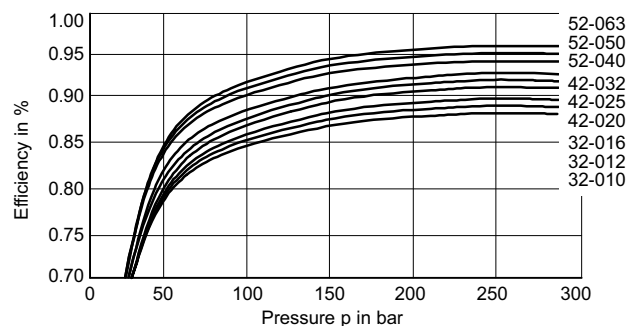
3.2 Volumetric efficiency

measured at speed 1450 rpm
viscosity 42 mm²/s (cSt)



3.3 Hydro-mechanical efficiency

measured at speed 1450 rpm
viscosity 42 mm²/s (cSt)



4 Dimensions

Frame size		3	4	5
Suction port	S	G1 1/4" ⁵⁾ thread	1 1/2" ⁴⁾	2" ⁴⁾
Pressure port	P	G3/4" ⁵⁾ thread	1" ⁴⁾	1 1/4" ⁴⁾
Mounting method: oval 2-hole flange to ISO 3019/1 (SAE) ISO 3019/2 (metric)	A	132	170	212
	B (SAE)	106	146	181
	B (Metr.)	109	140	180
	C	11	14	18
	N (SAE)	82,55 - 0,05	101,6 - 0,05	127 - 0,05
	N (Metr.)	80 h8	100 h8	125 h8
	O	8,5	10,5	12,5
	V	6	7	7
Shaft end: parallel, to ISO/R775	D	20 j6	25 j6	32 j6
	E	36	42	58
	F	6	8	10
	G	22,5	28	35
	I	44	51	68
Housing	K	44	52,5	60,5
	L	144	176	210
	T	107	133	177
	Z	60	62,5	78
Weight	kg	9,5	17	31

4) With port for pipe flanges to the SAE J518 PSI 3000 standard

5) Threaded port to DIN 3852, Part 2

