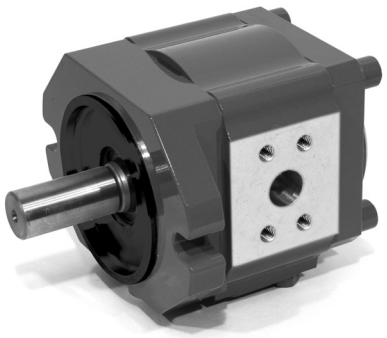


5.4 MEDIUM HEAVY DUTY SERIES SIZE 5/6

CONTENTS PGI103

ORDERING CODE

5.4.1 Medium Heavy Duty Series

PGI103 – 5 – 064 – R A 2 3 – 10 – XXXX

Medium Heavy Duty Series

Size

Displacement

PGI103-5-		PGI103-6-	
064	65.3 cm³/rev	125	125.7 cm³/rev
080	80.4 cm³/rev	160	160.1 cm³/rev
100	100.5 cm³/rev	200	200.9 cm³/rev
		250	249.9 cm³/rev

Shaft rotation (viewed from shaft end)

R Clockwise
L Anti-clockwise

Shaft

A Parallel shaft with key
B Splined shaft SAE C

Mounting flange

2 SAE J744 127-2 C - Ø 127 mm (size 5)
SAE J744 152-2 D - Ø 152.4 mm (size 6)

Ports

3 SAE flange

Series

Modification number

XXXX Determined by manufacturer

TECHNICAL INFORMATION

5.4.2 Specifications

Pump size			PGI103-5		
			064	080	100
Geometric displacement		[cm³/rev]	65.3	80.4	100.5
Pressure	Rated	[bar]	210		
	Intermittent		230		
	Peak		250		
Drive speed	min.	[rpm]	100		
	max.		3000	3000	2500
Approx. weight		[kg]	11.2	13	13.5

Pump size			PGI103-6			
			125	160	200	250
Geometric displacement		[cm³/rev]	125.7	160.1	200.9	249.9
Pressure	Rated	[bar]	250		160	150
	Intermittent		280		170	150
	Peak		300		180	160
Drive speed	min.	[rpm]	400			
	max.		2200	2000	2200	
Approx. weight		[kg]	27.3	29.9	35.5	37

5.4.3 Hydraulic fluids

The pump series is designed for use with

HLP	Hydraulic oil

Before using synthetic fluids, please contact HYDAC:

HEES, HETG	Environmentally-friendly fluids
HFC	Water glycol
HFD-U	Fire-resistant fluids based on polyolester
HFD-R	Fire-resistant fluids based on phosphate ester

5.4.4 Viscosity range

	cSt (mm^2/s)
Minimum viscosity:	10
Normal operating viscosity:	10 - 300
Maximum viscosity:	2,000

5.4.5 Temperature range

Temperature range
-20 to 100 °C

Maximum ambient temperature
-40 to 80 °C

Maximum fluid temperature
-40 to 120 °C

5.4.6 Seals

The pump series is equipped with FPM (Viton) seals as standard. Before using synthetic fluids, please contact HYDAC.

5.4.7 Filtration

For maximum service life of the pump and system components, the system should be protected from contamination by effective filtration.

Cleanliness class:

20/ 18/ 15 to ISO 4406:1999
or
Class 9 to NAS 1638 or cleaner.

To ensure a longer service life, cleanliness class:

18/16/13 to ISO 4406:1999
or
Class 9 to NAS 1638.

5.4.8 Installation notes

A. Mounting

The pump can be installed horizontally or vertically with the shaft at the top. If the pump is installed on the tank or above the oil level, the distance between the pump inlet and the oil level should not exceed 1 metre.

When installing a HYDAC pump always ensure that the fluid remains in the pump during stoppages.

B. Suction pipe

If the pump is installed above the oil level, particular attention must be paid to the suction pressure. The cross-section of the suction pipe must be equal to or larger than the cross-section of the pump port. The suction pressure must be kept within the values specified.

Minimum suction pressure: 0.8 bar abs.

Maximum suction pressure: 2.0 bar abs.

When installing a HYDAC pump always ensure that the fluid remains in the pump during stoppages.

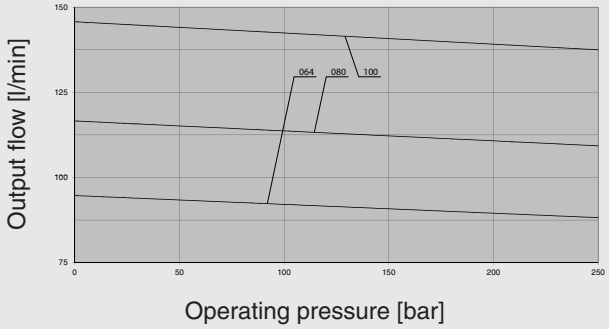
C. Drive

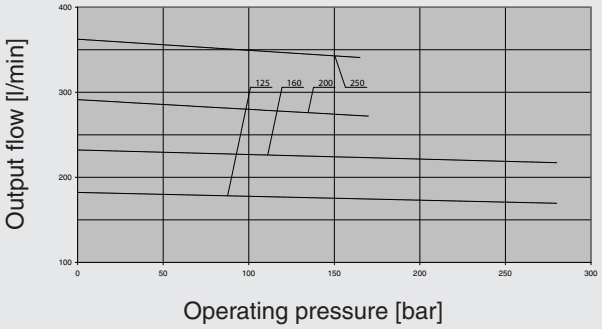
Use a flexible coupling whenever possible. There must not be any radial or axial forces on the pump shaft. The maximum misalignment is 0.2 mm and the angular deviation must be less than 0.2°.

Max. drive torques

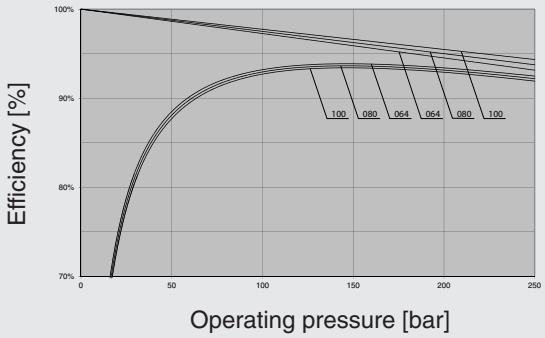
Displacement	Drive torque	
	Rated	Max.
064 - 100	720 Nm	900 Nm
125 - 250	1100 Nm	1300 Nm

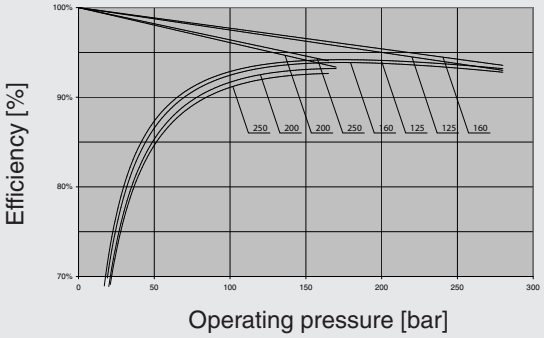
Output flow



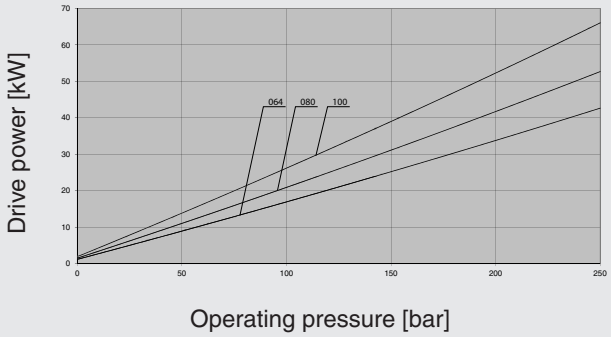


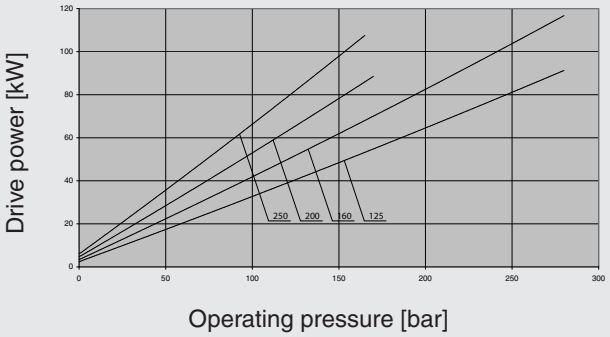
Efficiency



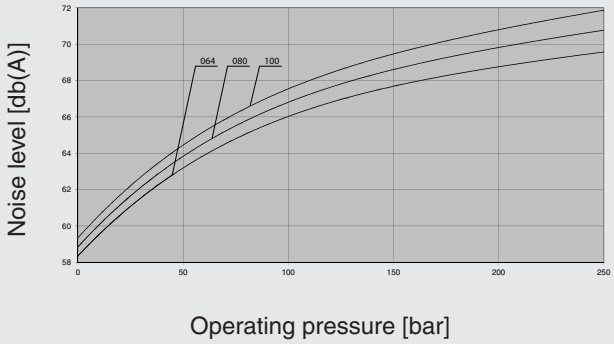


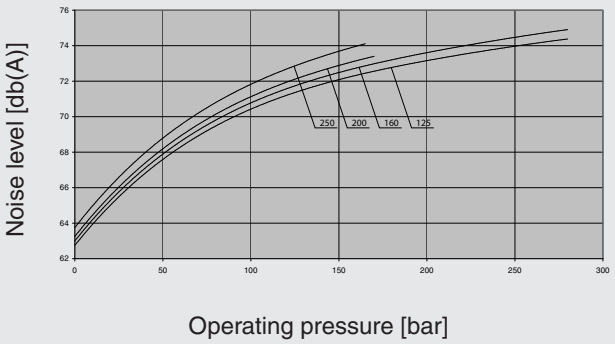
Drive power





Noise level



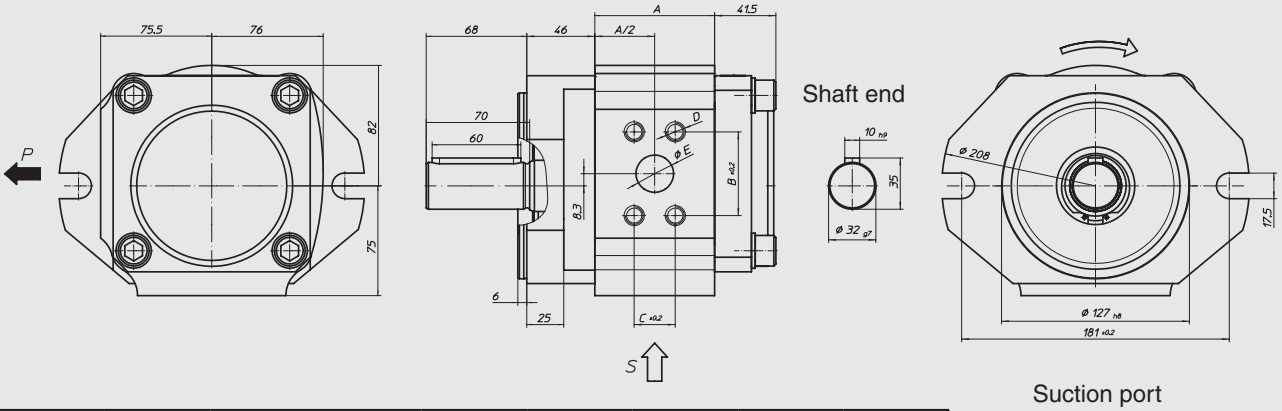


Measurement conditions:
Drive speed 1450 rpm, viscosity 46 mm²/sec, operating temperature 40 °C
Acoustic pressure measured in an anechoic room to DIN 45 635 Sheet 26;
Microphone distance 1.0 m axial.

DIMENSIONS

5.4.10 PGI103 with SAE C – 2-hole flange and parallel shaft with key

Ordering example: PGI103-...RA23-1x

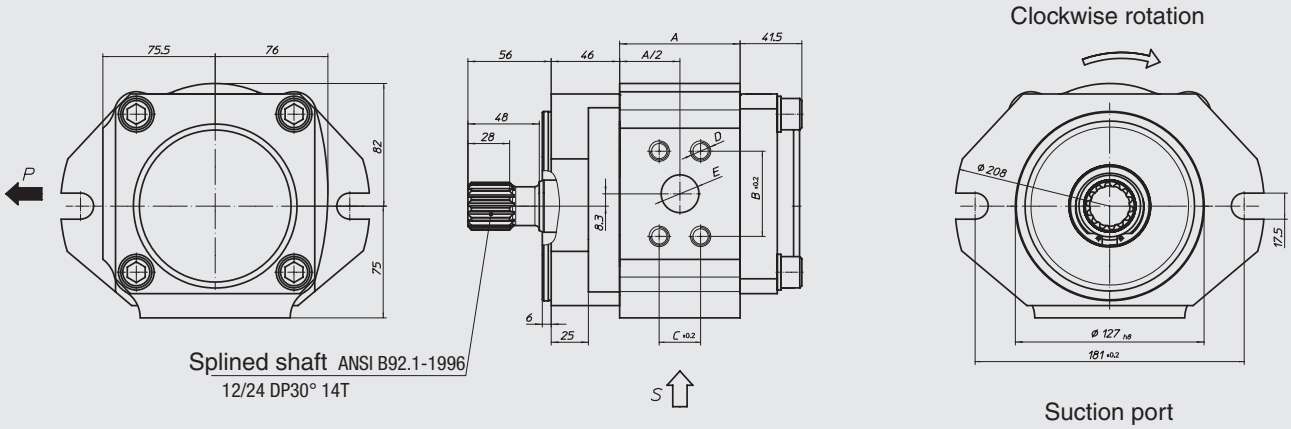


Size	A	B	C	D	E	L	M	N
064	81	57.2*	27.8*	M12x22	25.4	77.8	42.9	47.2
080	93	66.7*	31.8*	M14x24	31.75	77.8	42.9	47.2
100	109	66.7*	31.8*	M14x24	31.75	88.9	50.8	63.5

* Pressure flange ports to SAE 518C, High Pressure Series (Code 62)

5.4.11 PGI103 with SAE C – 2-hole flange and splined shaft

Ordering example: PGI103-...RB23-1x



Size	A	B	C	D	E	L	M	N
064	81	57.2*	27.8*	M12x22	25.4	77.8	42.9	47.2
080	93	66.7*	31.8*	M14x24	31.75	77.8	42.9	47.2
100	109	66.7*	31.8*	M14x24	31.75	88.9	50.8	63.5

* Pressure flange ports to SAE 518C, High Pressure Series (Code 62)