TPF2G2-M4X Series

Mobile

External Gear Pump Sizes: 3 to 40 cc/rev. Max. pressure: 270 bar

Industrial

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Features

- Unique sealing design to operate up to 270 bar continous
- Special alloy bush with unique lock design for maximum rigidity
- Modified gear tooth to lower operating torque
- 100% testing on computerised test bench
- Long service life
- Pumps in "V" option available to operate up to -10°C and +120°C
- "G" -BSP ports as per ISO228/1 as standard and other threaded and flange ports availble
- New principle of hydraulic gap compensation

Features







Hydraulic Hydraulics | Hydraulics Power Packs Hydraulic Cylinders

Services



Technical data

Please strictly follow assembly and use indications given in this catalogue for top performance and longer life of THM gear pump

Installation Notes:

Before starting the system on a continuous basis, we suggest to adopt as follows precautions:

- Check whether the rotation direction of the pump is opposite to that of the output shaft of the engine, be sure no reversion revolved.
- The driving shaft of the pump is not allowed to bear radial and axial forces, and the installed coaxiality of the drive shaft and the output shaft of the prime mover shall not be greater than 0.08mm, and the perpendicularity between the installation plane and the stop port of the pump support shall not be greater than 0.05mm.
- Under standard operating conditions, the pressure of the suction pipe shall be lower than atmospheric pressure, and the pressure of the oil inlet shall be between 0.7 and 3bar (absolute pressure) during operation, the suction height of the pump shall not be greater than 0.5m, and the inlet and outlet pipelines and flanges of the pump shall not leak air.
- The working oil shall be kept clean, and the suction pipe shall be installed with an oil filter with filtration accuracy of 80 to 100 micron, and the return pipe shall be installed with an oil filter with filtration accuracy of 10 to 20 micron, the effective flow rate of the oil intake filter shall be more than twice the maximum oil absorption rate of the pump, And keep the pipeline unblocked, prevent blockage, and according to the pollution situation to regularly clean the pipeline or replace the oil.
- Pump before the first start, must be filled with oil to remove the air in the pipeline, to ensure that the pump at the start of the timely absorption of oil, to avoid early wear

Hydraulic Fluids

Use specific mineral oil based hydraulic fluids having good antioxidant, anti-foaming (rapid deaeration), anti-wear, anti-corrosion, and lubricating properties, Fluids should also comply with DIN 51525 and VDMA 24317 standards and get through 11th stage of FZG test. For the standard models, the temperature of the fluid should range between -10°C and 80°C.

Fluid kinematic viscosity ranges are the follow

Allowed range	6~500 cSt
Recommended range	10~100 cSt
Value allowed at startup	~2000 cSt

Filter Recommendation

It is widely known that most pumps early failures are due to contaminated fluids, as our quality assurance does not cover wear caused by particles in the hydraulic system, we recommend a filter to be used, which can reduce the degree of contamination to a permissible dimension in terms of the size and concentration of dirt particles.

The filtering system shall always ensure contamination levels not exceeding the values

Pressure	<140 Bar	140~210 bar	>210 Bar
NAS 1638 Class	10	9	8
ISO 4406 Class	19/16	18/15	17/14
Ratio $\beta x = 75$	25~40mµ	12~15mµ	6~12mµ

Inlet and Delivery lines

Hydraulic system pipes should show no sudden changes of direction, sharp bends and sudden differences in cross-section. They should not be too long or out of proportion. Pipe cross-section should be sized so that fluid velocity does not exceed recommended values. It is advisable to carefully consider the possible diameter reduction of the inlet or outlet pipes fitted on flange fittings. Reference values are the following :

Intake line	0.5~1.6 m/s
Delivery line	2~6 m/s
Return line	1.6~3 m/s



Ordering Code

	TPF2G2-M 4X/					
Series	= 4X					
Flow cc/rev						
300	= 003					
4cc	= 004					
6cc	= 006					
8cc	= 008					
10cc	=010					
12cc	= 012					
14cc	= 014					
16cc	= 016					
18cc	= 018					
20cc	= 020					
22cc	= 022					
25cc	= 025					
28cc	= 028					
30cc	= 030					
32cc	= 032					
36cc	= 036					
40cc	= 040					
Rotation						
Clockwise rotation		= R				
Anti-clockwise		= L				
Bi-directional		= B				
Shaft Options						
Parallel keved shaft Ø17 46mm			= A			
Parallel keved shaft Ø18mm			= B			
Taper shaft 17mm.1:5			= C			
Taper shaft 1:8			= H			
Parallel keved shaft Ø15.88mm			= D			
Splined shaft, DP16/32-30°-9T			= R			
"G" BSP Thread ports as per ISO 228/1 (standard port)			- ()1		
"G" BSP Thread ports+flance ports			=	X		
			,	U.		
Casla						
Seals		0	1		,	
Version autoble for fluid at high temperatures, renge between 10°C and +	3 Dar absolute (INE	SH See	us)		/1	
Version suitable for inlet process responses and 6 ber abaclute	- 120 C (FRIVI Seal	5)		= v T		
Version suitable for inlet pressure up to max. 3 and 6 bar absolute				= 1	.	
version suitable for filler pressure up to max. S and to bar absolute				— I`	N	
Elange Options						
SAE-A 2 hole flange 82 55mm spigot					_	R
Rectangular flange, 80mm spigot					_	B
Rectangular flange, 36.5 spigot					_	
						\sim



Unit Dimensions 2 Bolt SAE Flange

- To mount the pump , four M10 screws with a torque wrench setting fixed at $67{\pm}3~\text{Nm}$



32 130 64.0.25 124 124 106 130 106 107 108 109 109 100 <tr< th=""></tr<>												
Туре	Displa- cement	Max	. Speed r	/min	Rated Pressure	Max. pressure	working	working oil temp.	L1	L	Inlet	outlet
51	cm³/rev	Min.	Rated	Max.	Bar	bar	(mm²/s)	(°C)				
TPF2G2-M4X/3R	3	800	2000	3500	220	270			43.75	92.2		
TPF2G2-M4X/4R	4	800	2000	3500	220	270			44.5	93.8	Ø40-M6 G1/2	Ø35-M6 G1/2
TPF2G2-M4X/6R	6	600	1500	3000	220	270			46	97		
TPF2G2-M4X/8R	8	600	1500	3000	220	270			47.7	100.3		
TPF2G2-M4X/10R	10	600	1500	3000	220	270			49.3	103.6		
TPF2G2-M4X/12R	12	600	1500	3000	210	260				51	106.9	
TPF2G2-M4X/14R	14	600	1500	3000	210	260			52.6	110		
TPF2G2-M4X/16R	16	600	1500	3000	210	260	23~68	-30~80	54.3	113.5	Ø40-M6	~
TPF2G2-M4X/18R	18	600	1500	3000	200	250			55.9	116.7	00/1	Ø40-M6 G3/4
TPF2G2-M4X/20R	20	600	1500	3000	200	250			57.5	120		00/4
TPF2G2-M4X/22R	22	600	1500	3000	200	250			59.2	123.4		
TPF2G2-M4X/25R	25	600	1500	3000	200	250			61.6	128		<i>α</i>
TPF2G2-M4X/28R	28	500	1500	2500	160	180			64	133	G1	040-M6 G3/4
TPF2G2-M4X/30R	30	500	1500	2500	150	170			65.8	136.6		
TPF2G2-M4X/32R	32	500	1500	2500	140	160			67.4	139.8	~··	<i><i>α</i>==</i>
TPF2G2-M4X/36R	36	500	1500	2500	120	140			70.7	146.3	Ø55-M8	Ø55-M8
TPF2G2-M4X/40R	40	500	1500	2500	100	120			74	153		



Unit Dimensions 4-Bolt Rectangular flange spigot Ø80mm

• To mount the pump , four M10 screws with a torque wrench setting fixed at 67±3 Nm.







Unit Dimensions 4-Bolt Rectangular flange spigot Ø36.5mm

To mount the pump , four M10 screws with a torque wrench setting fixed at $67{\pm}3N$







Shaft and Flange Combinations available







Shaft and Flange Combinations available





Port Details

"01"

"G" BSP Thread ports as per ISO 228/1



Sizes	Inlet	Outlet
3~8	G1/2	G1/2
8~12	G3/4	G1/2
14~22	G3/4	G3/4
25~30	G1	G3/4
32~40	G1 1/4	G1

XX

"G" BSP Thread ports with flange option



Sizes	Inlet	Outlet
3~12	Ø40-M6	Ø35-M6
14~22	Ø40-M6	Ø40-M6
25~30	Ø55-M8	Ø40-M6
32~40	Ø55-M8	Ø55-M8

Other Products you may be interested in





TPF2G1-M Sizes: 1.4 to 13.8cc/rev Max. operating pressure 250bar



Sizes: 20 to 71cc/rev Max. operating pressure 280bar



The specified data is for product description purposes only and may not be deemed to be guaranteed unless expressly confirmed in the contract.



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