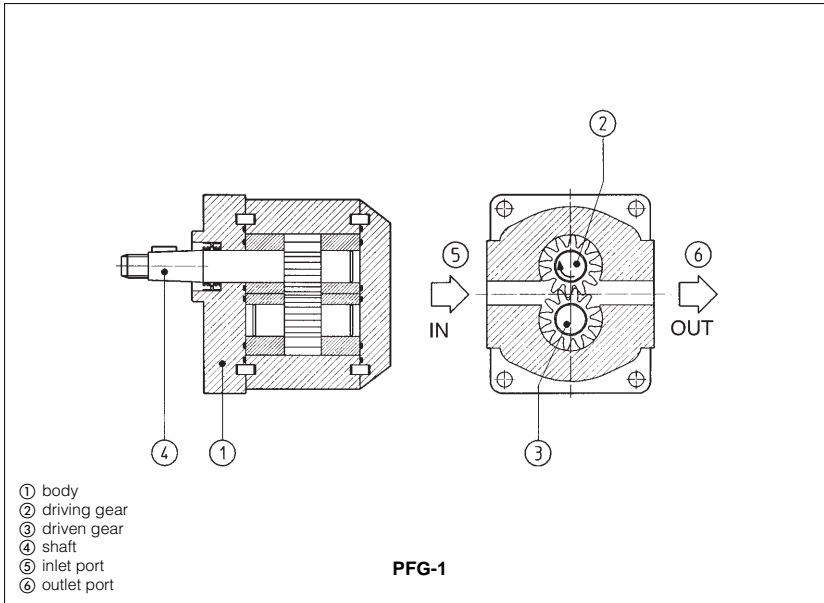


# Gear pumps type PFG

external gears - fixed displacement



PFG are fixed displacement external gear pumps, axial hydraulic balancing, simple and sturdy construction, low noise level.

Suitable for hydraulic oils or synthetic fluids having similar lubricating characteristics.

Mounting according to SAE and ISO 3019 standards.

Wide variety of displacements: from 1,3 up to 51,4 cm<sup>3</sup>/rev.

Max pressure up to 230 bar.

## 1 MODEL CODE

<b>PFG</b>	*	-	<b>2</b>	<b>14</b>	/	<b>D</b>	<b>**</b>
Fixed displacement gear pump							Design number
Additional suffix for pumps PFG-3 provided to be coupled with radial piston pumps type PFR (tab. A045), see tab. A190 <b>XF</b> = provided to be coupled with PFRXP-3 <b>XP</b> = provided to be coupled with PFRXF-2							
Size, see section 2: <b>1, 2, 3</b>							
Displacement [cm <sup>3</sup> /rev], see section 2: for PFG 1: <b>14, 20, 28, 42, 60, 74, 87, 99</b> for PFG 2: <b>10, 11, 14, 18, 21</b> for PFG 3: <b>27, 40, 54</b>							
Direction of rotation (as viewed at the shaft end): <b>D</b> = clockwise (supplied standard if not otherwise specified) <b>S</b> = counterclockwise Note: PFG are not reversible. The direction of rotation is indicated by an arrow on the pump casing; the same arrow shows also the direction of the oil flow (from the inlet to the outlet port)							

## 2 OPERATING CHARACTERISTICS at 1500 rpm with hydraulic oil having a viscosity of 24 mm<sup>2</sup>/s and 40°C

Model	Displacement cm <sup>3</sup> /rev	Max pressure (1)	Speed range rpm	7 bar (2)		100 bar (2)		210 bar (2)	
				l/min	kW	l/min	kW	l/min	kW
PFG-114	1,3	220 bar	500 - 5000	2	0,1	1,9	0,4	1,8	0,8
PFG-120	2,0			3	0,1	2,8	0,6	2,6	1,3
PFG-128	2,7	200 bar	500 - 3800	4,2	0,1	3,9	0,8	3,7	1,7
PFG-142	4,1			6,3	0,1	5,8	1,1	5,5	2,3
PFG-160	6,1	160 bar	500 - 2600	9	0,1	8,3	1,6		
PFG-174	7,4			11	0,1	10,2	2		
PFG-187	9,1	140 bar	500 - 2200	13	0,2	11,5	2,3		
PFG-199	10,8			16	0,2	14,5	2,9		
PFG-210	9,5	220 bar	500 - 3000	14,5	0,3	13,3	2,6	12,5	5,5
PFG-211	11,3			17	0,3	15,6	3,1	14,8	6,5
PFG-214	14	200 bar	500 - 3600	20,5	0,3	19	3,8		
PFG-218	17,8			26	0,3	24,1	4,8		
PFG-221	20,8	180 bar	500 - 3200	31	0,3	28,5	5,6		
PFG-327	26,4	230 bar	500 - 2500	40,5	0,4	37,3	7,5	35,2	14,5
PFG-340	39,4	200 bar		60,5	0,6	55,7	11		
PFG-354	51,4			80	0,8	74,2	14,5		

(1) For intermittent duty, 20% higher peak pressures are admitted.  
 (2) Flow rate and power consumption are proportional to revolution speed.

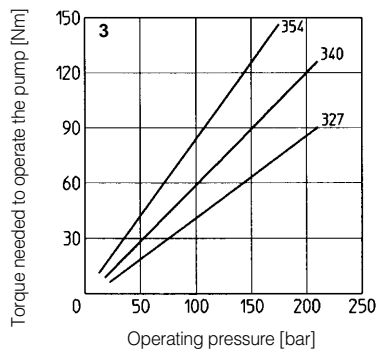
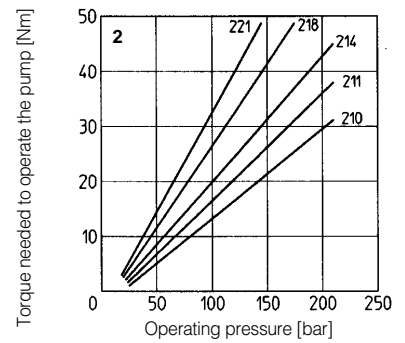
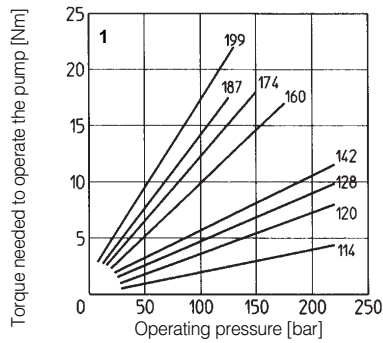
### 3 MAIN CHARACTERISTICS OF GEAR PUMPS TYPE PFG

Installation position	Any position.
Loads on the shaft	Axial and radial loads are not allowed on the shaft. The coupling should be sized to absorb the peak horsepower developed.
Ambient temperature	from -20°C to +70°C
Fluid	Hydraulic oil as per DIN 51524...535; for other fluids, consult our technical office
Recommended viscosity	max at cold start 800 mm <sup>2</sup> /s max at full power 100 mm <sup>2</sup> /s during operation 24 mm <sup>2</sup> /s min at full power 10 mm <sup>2</sup> /s
Fluid contamination class	ISO 19/16 (filters at 25 µm value with β <sub>25</sub> ≥ 75 recommended)
Fluid temperature	T < 80°C

### 4 DIAGRAMS

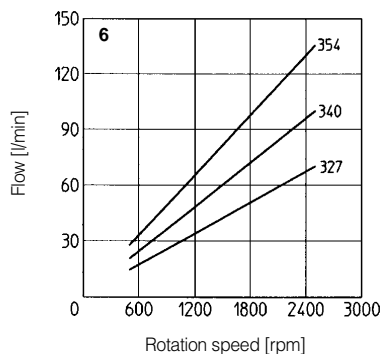
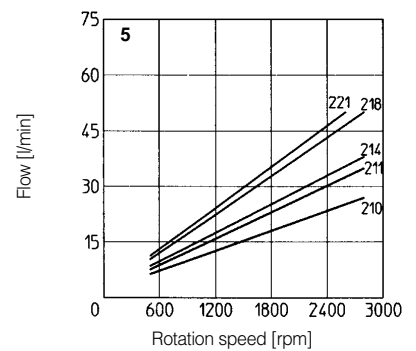
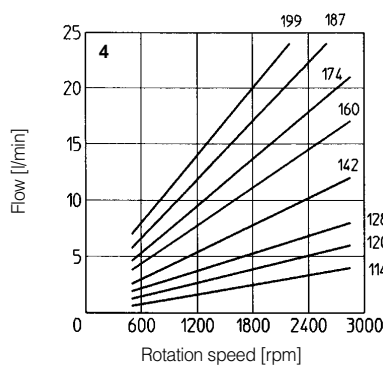
#### 4.1 = Torque versus pressure diagram

- 1 = PFG-1
- 2 = PFG-2
- 3 = PFG-3

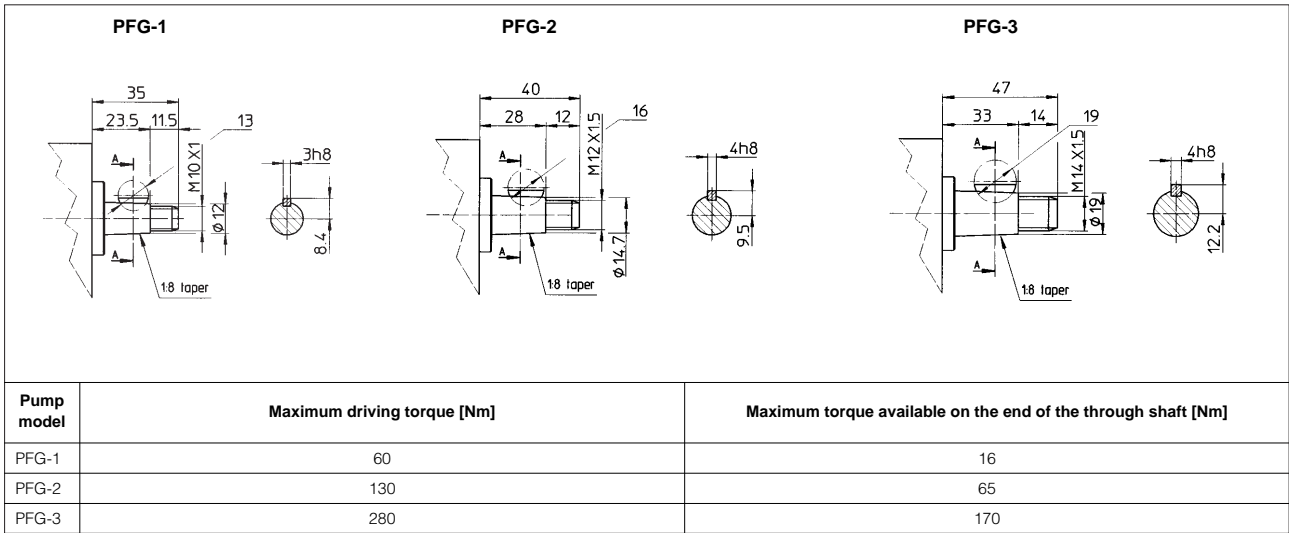


#### 4.2 = Flow versus speed diagram stated at 7 bar

- 4 = PFG-1
- 5 = PFG-2
- 6 = PFG-3

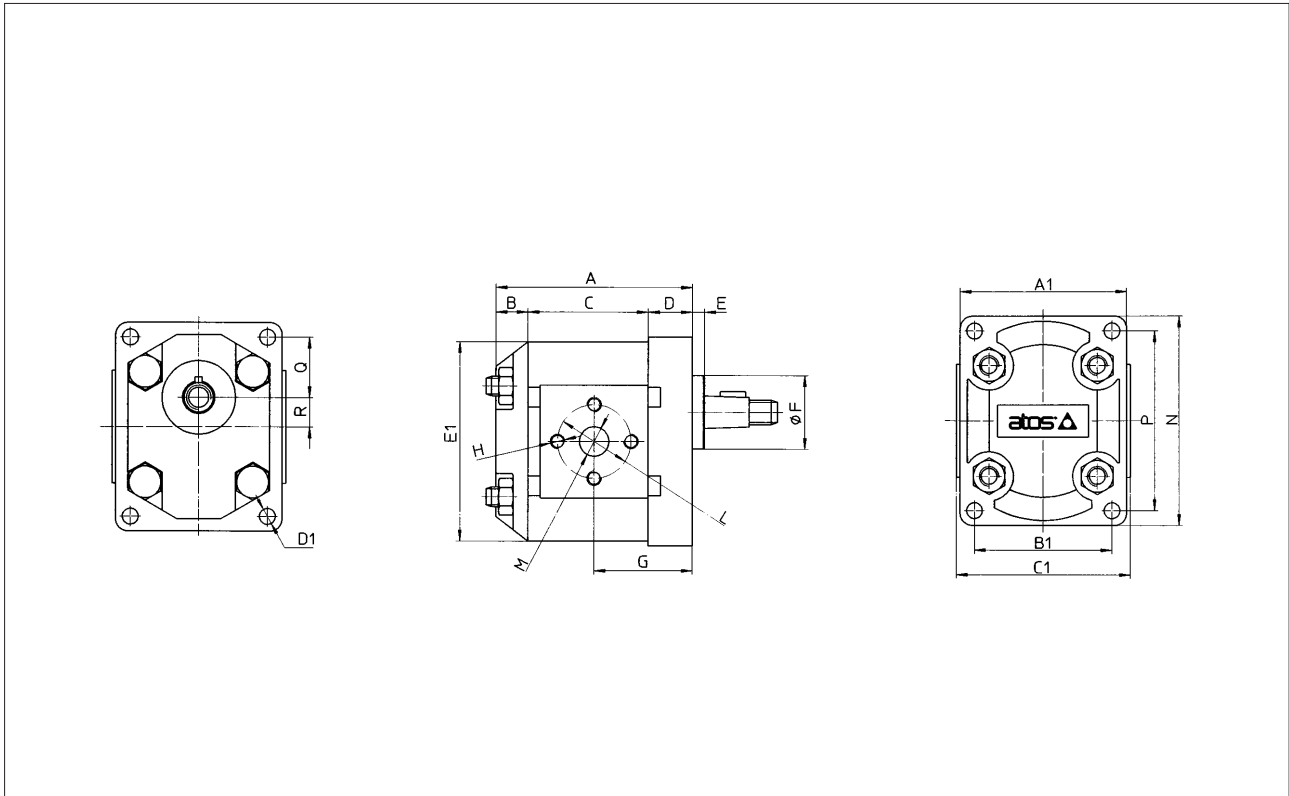


**5 DRIVE SHAFT AND LIMIT OF TORQUE**



The values of torque needed to operate the pumps are shown for each type of the "torque versus pressure diagram" at section 4.

**6 DIMENSIONS OF SINGLE PUMPS [mm]**



Elbow adaptors can be supplied with the pump, see tab. K120

Pump model	A	B	C	D	E	ØF	G	H	ØL	ØM	In	Out	N	P	Q	R	A1	B1	C1	ØD1	E1	Mass Kg
PFG-114	80	19	43	18	5,5	30 f8	40	M6	30	12	12	85	73	24,5	12	68	56	71	6,5	81	1,5	
PFG-120	82		45				41															
PFG-128	84		47				42															
PFG-142	88		51				44															
PFG-160	94		57				47															
PFG-174	98		61				49															
PFG-187	103		66				51,5															
PFG-199	108		71				54															
PFG-210	103	25	59	19	5	36,5 f8	19,5	M8	40	19	13	113,5	96	32,49	15,5	89	71,5	90	8,5	102	2,5	
PFG-211	106		62				51															
PFG-214	110		66				53															
PFG-218	116		72				56															
PFG-221	121		77				58,5															
PFG-327	133,5	26,5	83	24	5	50,8 f8	66	M10	56	27	19	149	128	43	22	118	98,5	120	10,5	149	6	
PFG-340	142,5		92				70,5														6,5	
PFG-354	151,5		101				75														7	