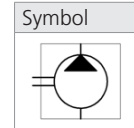




**Technical Features**

- › Operating pressure 250 bar, Peak pressure 280 bar
- › High-strength quality aluminum alloys pump with axial play compensation
- › Low noise level in whole operating range
- › High operational reliability and service life for 3000 operation hours
- › High volumetric efficiency up to 98%
- › International standard flanges acc.to SAE, ISO, DIN



**Technical Data**

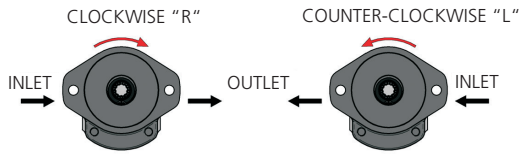
Nominal Size Parameters		Symbol	Unit	Displacement					
				Code	22,5	28	32	42	50
Actual displacement		$V_g$	[cm <sup>3</sup> ]	22.5	28	32	42	50	60
			[in <sup>3</sup> ]	1.37	1.71	1.95	2.56	3.05	3.66
Rotation speed	nominal	$n_n$	[min <sup>-1</sup> ]	1500					
	minimum	$n_{min}$	[min <sup>-1</sup> ]	650					
	maximum	$n_{max}$	[min <sup>-1</sup> ]	3000	3000	2500	2300	2100	1750
Pressure at inlet	minimum	$p_{1min}$	[bar]	-0.2 (-2.9 PSI)					
	maximum	$p_{1max}$	[bar]	0.5 (7.3 PSI)					
Pressure at outlet	max. continuous	$p_{2n}$	[bar]	250			230	185	150
			[PSI]	3625			3335	2683	2175
	maximum	$p_{2max}$	[bar]	270			240	200	160
			[PSI]	3915			3480	2900	2320
	peak	$p_3$	[bar]	280			250	210	180
			[PSI]	4061			3625	3045	2610
Nominal flow rate (min.) at $n_n$ and $p_{2n}$		$Q_n$	[l·min <sup>-1</sup> ]	31.7	39.5	45.1	59.9	71.3	85.5
			[GPM]	8.37	10.43	11.91	15.82	18.84	22.59
Maximum flow rate at $n_{max}$ and $p_{2max}$		$Q_{max}$	[l·min <sup>-1</sup> ]	63.5	79	90.2	99.8	99.8	99.8
			[GPM]	16.77	20.87	23.83	26.36	26.36	26.36
Nominal input power (max.) at $n_n$ and $p_{2n}$		$P_n$	[kW]	16.51	20.57	23.49	28.70	27.48	26.72
Maximum input power at $n_{max}$ and $p_{2max}$		$P_{max}$	[kW]	35.72	44.44	50.74	49.90	41.58	33.27

- 1)  $p_{2n}$  maximum continuous pressure - maximum working pressure, at which the pump can be operated without time limitation.
- 2)  $p_{2max}$  maximum pressure - maximum pressure permissible for a short time, max. 20 s.
- 3)  $p_3$  peak pressure - short-time pressure (fractions of a second) arising in case of a sudden change of the operating mode; any excess of this pressure during operation is impermissible.

Gear Pump / Size		GP3 - 22.5 ... 60 ccm
Volumetric efficiency	%	92 ÷ 98
Mechanical efficiency	%	85
Fluid temperature range (NBR)	°C (°F)	-25 ... 80 (-13 ... 176)
Viscosity range	mm <sup>2</sup> /s (SUS)	16 ... 200 (75 ... 927), 1200 (5849) for cold start
Hydraulic fluid		Hydraulic oils of power classes (HL, HLP) to DIN 51524
Max. degree of fluid contamination for $p_2 \leq 200$ bar		Class 21/18/15 acc. to ISO 4406
Max. degree of fluid contamination for $p_2 \geq 200$ bar		Class 20/17/14 acc. to ISO 4406

**Direction of rotation**

Determine direction of rotation by looking at the drive shaft.  
The pump can be used only in the specified direction of rotation.



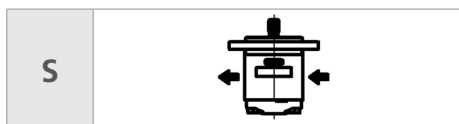
**Ordering Code**

GP3	-	[ ]	-	[ ]	-	[ ]	-	[ ]	[ ]	-	N9	[ ]	
Gear pump serie 3											GDGD GEGD HIHE HKHK ABAB ACAB ECEC KCKC KDKC	Shaft seal standard without shaft seal	
Displacement		22,5 28 32 42 50 60										No designation 04	Seals NBR
Direction of rotation													Inlet / Outlet ports
Flange design											CL CM DN DP VO		Ports orientation
													Shaft Type

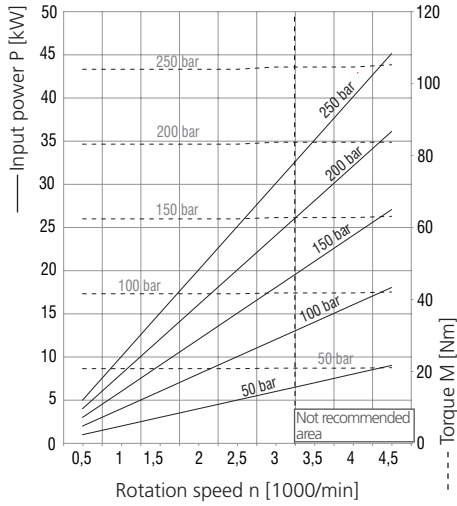
**Combination of Flanges and Shafts**

Code	Shaft Type	Flange Design		
		RL	SC	RN
CL		•		
CM				•
DN			•	
DP			•	
VO			•	

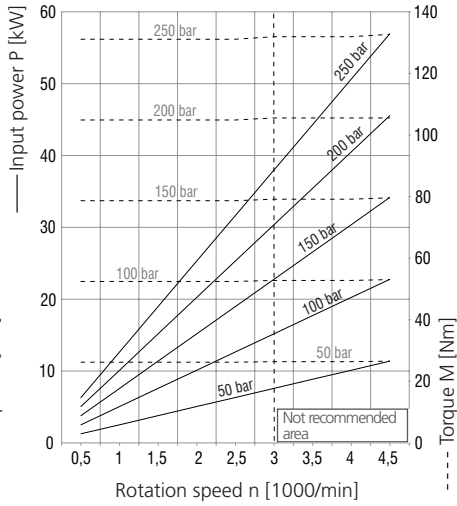
**Port orientation**



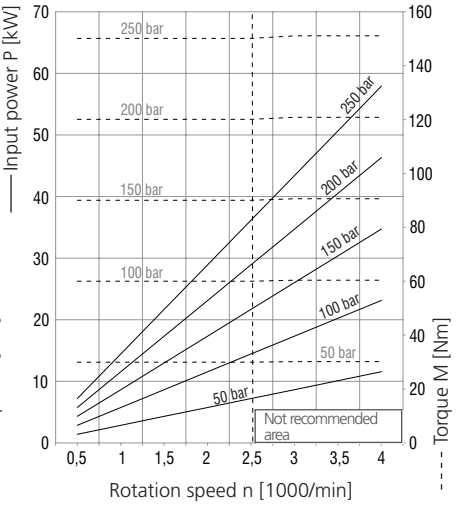
**22,5 ccm**



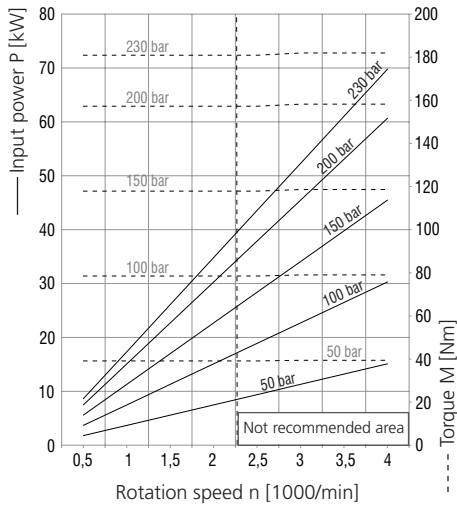
**28 ccm**



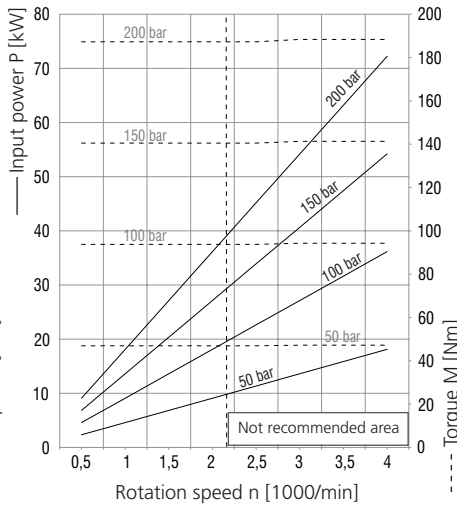
**32 ccm**



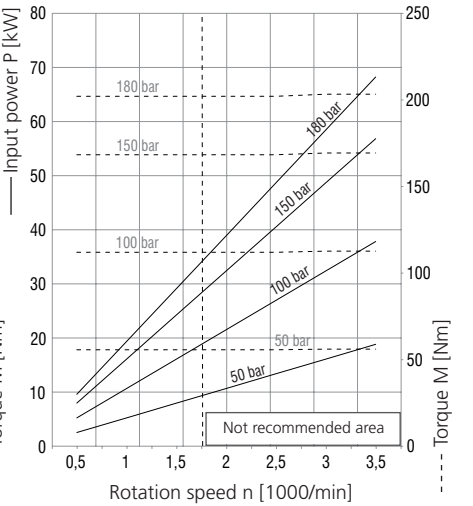
**42 ccm**



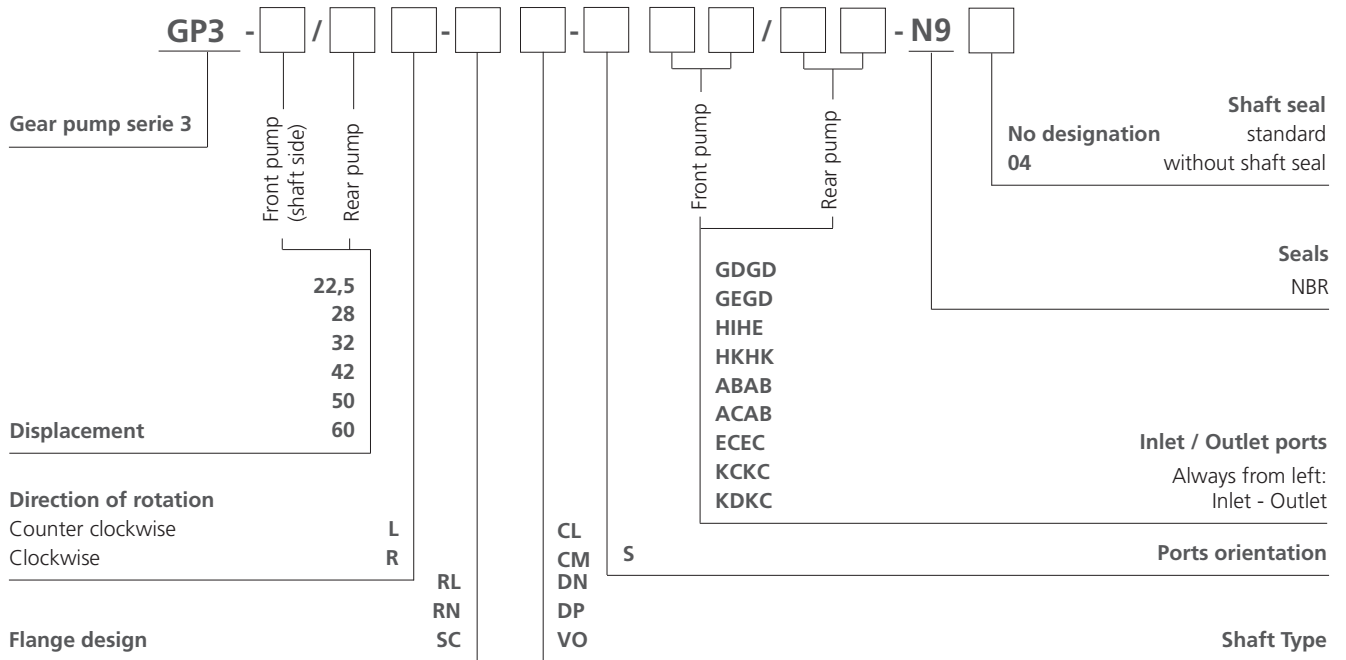
**50 ccm**



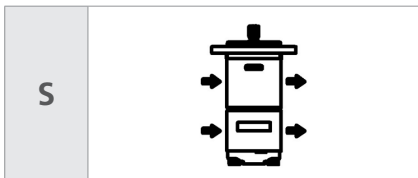
**60 ccm**



Ordering Code - Multiple Version

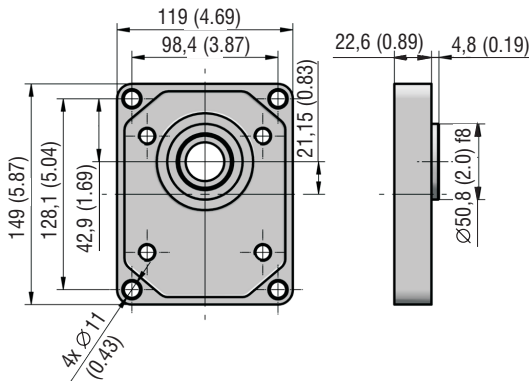


Port orientation

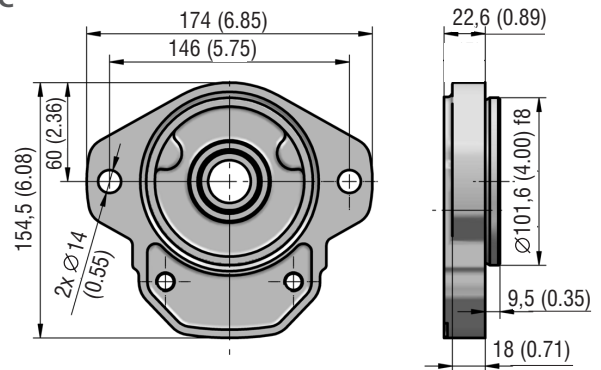


Flange design in millimeters (inches)

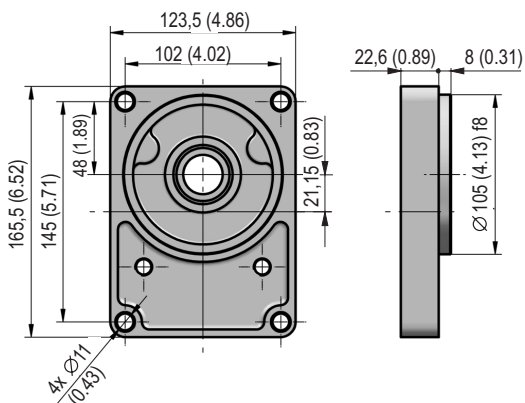
RL



SC

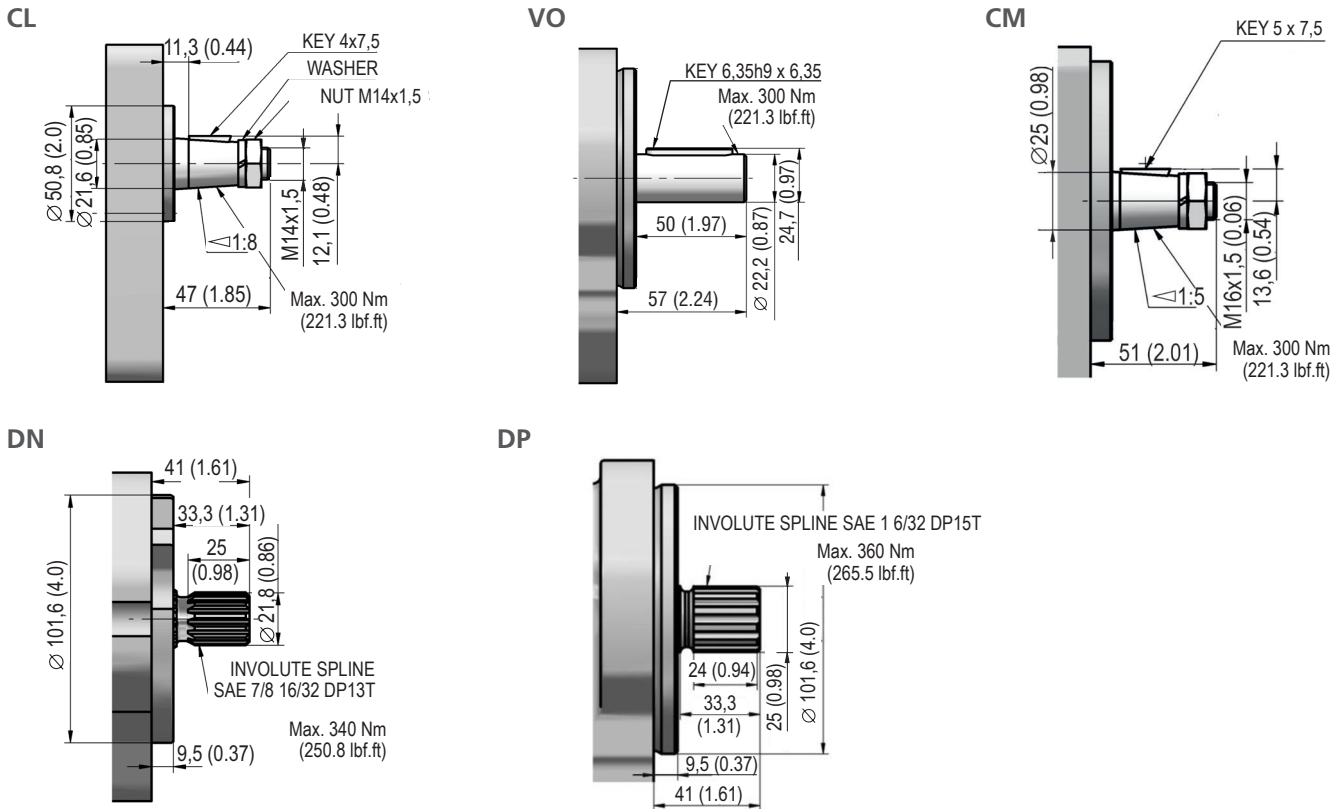


RN



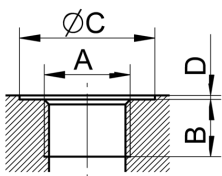
**Shaft design** in millimeters (inches)

A driving device must not generate an axial or a radial load of the pump shaft, unless this is exclusively permitted for the pump with a front-end bearing.  
Ask producer for the version with front-end bearing.



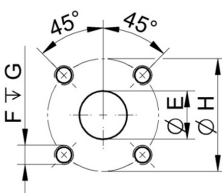
**Ports design** in millimeters (inches)

**BSPP pipe thread according to 228-1**



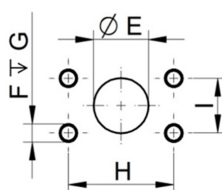
Displacement [cm <sup>3</sup> (in <sup>3</sup> )]	Inlet Code	Dimension				Outlet Code	Dimension			
		A	B	C	D		A	B	C	D
22.5 - 28 (1.37 - 1.71) including	GD	G 3/4	16 (0.63)	39 (1.54)	1 (0.04)	GD	G 3/4	16 (0.63)	39 (1.54)	
32 - 60 (1.95 - 3.66) including	GE	G 1	18 (0.71)	45 (1.77)						

**Flanged fittings according to DIN 8901/8902**



Displacement [cm <sup>3</sup> (in <sup>3</sup> )]	Inlet Code	Dimension				Outlet Code	Dimension			
		E	F	G	H		E	F	G	H
22.5 - 28 (1.37 - 1.71)	HI	20 (0.79)	M6	13 (0.51)	40 (1.57)	HE	15 (0.59)	M6	13 (0.51)	35 (1.38)
32 - 60 (1.95 - 3.66)	HK	27 (1.06)	M8	16 (0.63)	55 (2.17)	HK	27 (1.06)	M8	16 (0.63)	55 (2.17)

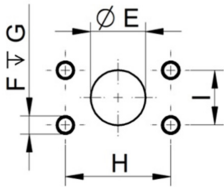
**Flanged fittings according to SAE, UNC thread**



Displacement [cm <sup>3</sup> (in <sup>3</sup> )]	Inlet Code	Dimension					Outlet Code
		E	F	G	H	I	
22.5 - 28 (1.37 - 1.71)	AB	19	3/8"-16-UNC	22 (0.87)	47.6 (1.87)	22.2 (0.87)	AB
32 - 60 (1.95 - 3.66)	AC	27			52.4 (2.06)	26.2 (1.03)	

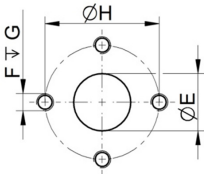
**Ports design** in millimeters (inches)

**Flanged fittings according to SAE, metric thread**



Displacement [cm <sup>3</sup> (in <sup>3</sup> )]	Inlet Code	Dimension					Outlet Code
		E	F	G	H	I	
22.5 - 60 (1.37 - 3.66)	EC	27	M8	22 (0.87)	52.4 (2.06)	26.2 (1.03)	EC

**Flanged fittings - „cross“**



Displacement [cm <sup>3</sup> (in <sup>3</sup> )]	Inlet Code	Dimension				Outlet Code
		E	F	G	H	
22.5 - 28 (1.37 - 1.71)	KC	19 (0.75)	M8	16 (0.63)	40 (1.57)	KC
32 - 60 (1.95 - 3.66)	KD	27 (1.06)	M10		51 (2.17)	

**GP3 Pumps - basic design** in millimeters (inches)

**GP3-\*R-RLCL-SG\*G\*-N**

Displacement [cm <sup>3</sup> (in <sup>3</sup> )/rev]	A	B
22.5 (1.37)	57.6 (2.27)	119.7 (4.71)
28 (1.71)	60.2 (2.37)	124.7 (4.91)
32 (1.95)	62.0 (2.44)	128.3 (5.05)
42 (2.56)	66.3 (2.61)	137.0 (5.39)
50 (3.05)	74.5 (2.93)	153.4 (6.04)
60 (3.66)	78.7 (3.10)	162.4 (6.39)

