GP3L

Displacement up to 71 cm³ (4.30 inch³) • $p_{max\ contin.}$ 230 bar (3300 PSI) • Speed from 700 to 3000 RPM

Technical Features

- Operating pressure 230 bar, Peak pressure 270 bar
- Cost effective design for circuits with a lower operating pressure
- High quality aluminum alloys pump with axial play compensation
- Service life for 1800 operation hours
- Volumetric efficiency up to 96%
- International standard flanges acc.to SAE, ISO, DIN

Symbol	R, L	B
		

Technical Data

Nominal Size Parameters		Symbol	Unit	Displacement										
			Code	20	22	26	33	39	46	50	52	55	63	71
Actual displacement		V_g	[cm³]	20	22	26	33	39	46	50	52	55	63	71
			[in³]	1.22	1.34	1.59	2.01	2.38	2.81	3.05	3.17	3.36	3.84	4.33
Rotation speed	nominal	n_n	[min⁻¹]	1500										
	minimum	n_{min}	[min⁻¹]	700										
	maximum	n_{max}	[min⁻¹]	3000								2800		2500
Pressure at inlet*	minimum	p_{1min}	[bar]	-0,3 (-4.4 PSI)										
	maximum	p_{1max}	[bar]	0,5 (7.3 PSI)										
Pressure at outlet**	max. continuous	p_{2n}	[bar]	230						200				150
			[PSI]	3336						2901				2175
	maximum	p_{2max}	[bar]	250						230				160
			[PSI]	3626						3336				2320
	peak	p_3	[bar]	270						250				180
			[PSI]	3916						3626				2610
Weight		m	[kg]											
			[lbs]											

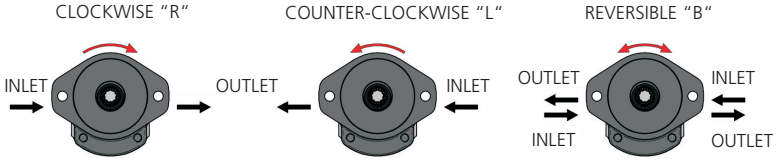
1) *Inlet pressure in the reversible design can be up to **$p_1 = p_{2n}$-70 bar max.** External drainage must be used in case of the reversible design.
2) **Outlet pressure in the reversible design is 10% lower than shown in the table (depending on operating conditions).
3) **p_{2n}** maximum continuous pressure - maximum working pressure, at which the pump can be operated without time limitation.
4) **p_{2max}** maximum pressure - maximum pressure permissible for a short time, max. 20 s.
5) **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.

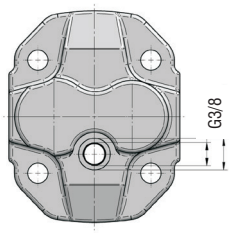
Gear Pump / Size		GF3 - 20 ...71 ccm
Volumetric efficiency	%	89 ÷ 96
Mechanical efficiency	%	85
Fluid temperature range (NBR)	°C (°F)	-20...80 (-4...176)
Fluid temperature range (FPM)	°C (°F)	-20...120 (-4...248)
Viscosity range	mm²/s (SUS)	20 ...80 (97 ...390), 1200 (5849) for cold start
Hydraulic fluid		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, reversible design

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

The pumps B codes (Bi-directional) have an external drainage with an orifice located in the cover or the flange.





Ordering Code

GP3 L - ☐ ☐ - ☐ ☐ - ☐ ☐ ☐ - ☐ ☐

Gear pump serie 3

Lightline

Displacement

		46
	20	50
	22	52
	26	55
	33	63
	39	71

Direction of rotation

Counter clockwise	L
Clockwise	R
Bi-directional	B

Flange design

RL	
RN	
SC	

Shaft Type

CL	
CM	
DN	
DP	
VO	
VP	

S	
R	
C	**Ports orientation**

MI	HI	KC	
MJ	HJ	KD	
ML	HK	KE	
MM	HL	KF	
MP	AB	SI	
GC	AC	SJ	
GD	AD	SK	
GE	AE	SL	**Inlet / Outlet ports**
GF			
UD			
UE			
UH			
UI			
UJ			

Seals

N	NBR
V	FPM (Viton)
H	HNBR

Shaft seal

No designation	standard
004	without shaft seal

Combination of Flanges and Shafts

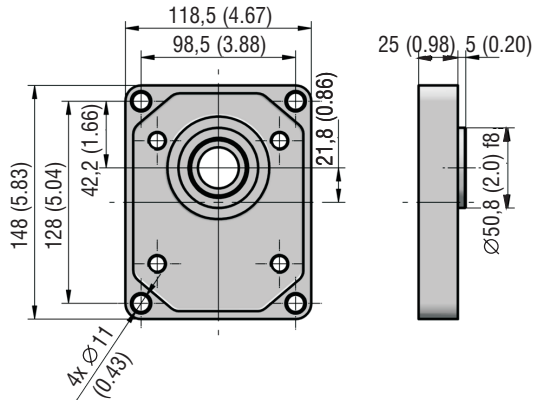
Flange Design	RL	RN	SC
Shaft Type			
CL	●		
CM		●	
DN			●
DP			●
VO			●
VP	●		

Port orientation

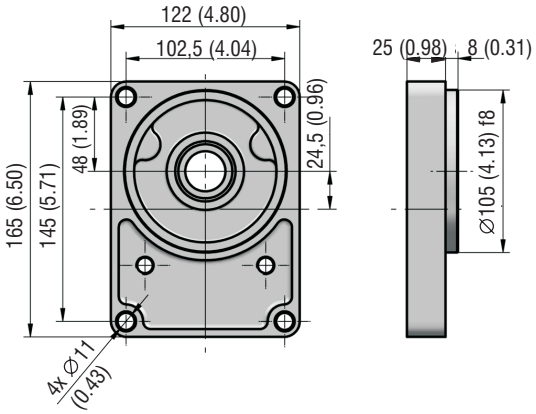
S		R		C	

Flange design in millimeters (inches)

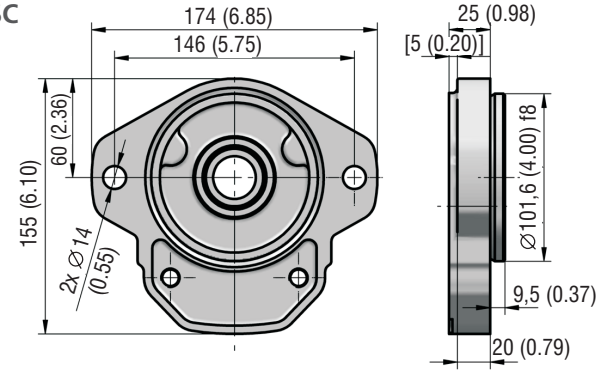
RL



RN

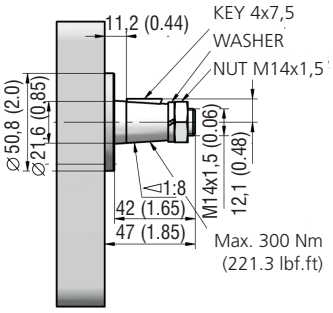


SC

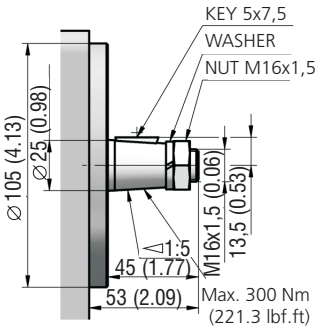


Shaft design in millimeters (inches)

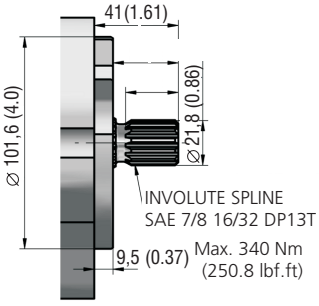
CL



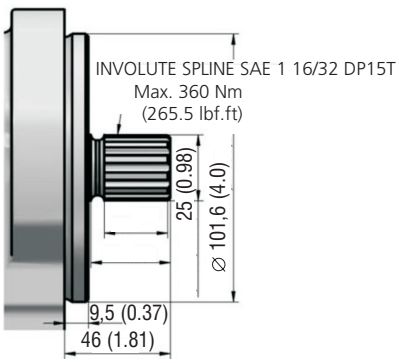
CM



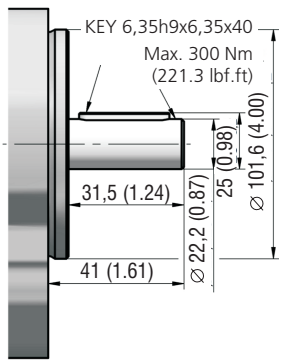
DN



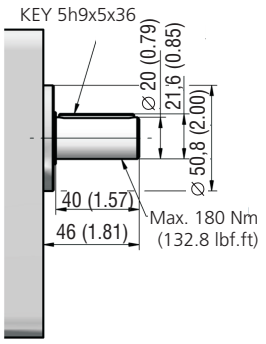
DP



VO

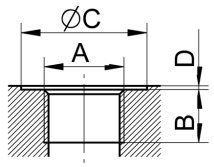


VP



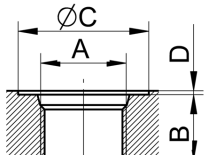
Ports design in millimeters (inches)

BSPP pipe thread according to 228-1



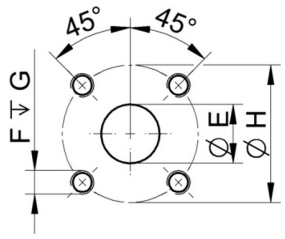
Displacement [cm³(in³)]	Inlet Code	Dimension				Outlet Code	Dimension			
		A	B	C	D		A	B	C	D
20 - 22 (1.22 - 1.34) including	GD	G 3/4	16 (0.63)	39 (1.54)	1 (0.04)	GD	G 3/4	16 (0.63)	39 (1.54)	1 (0.04)
26 - 39 (1.59 - 2.38) including	GE	G 1	18 (0.71)	45 (1.77)		GE	G 1	18 (0.71)	45 (1.77)	
46 - 63 (2.81 - 3.84) including	GF	G 1 1/4		57 (2.24)		GF	G 1 1/4			
71 (4.33)	GH	G 1 1/2	24 (1.46)	60 (3.66)						

UNF thread according to SAE



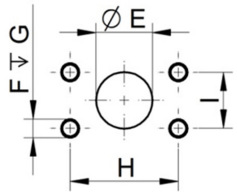
Displacement [cm³(in³)]	Inlet Code	Dimension				Outlet Code	Dimension			
		A	B	C	D		A	B	C	D
20 - 33 (1.22 - 2.01) including	UH	1-5/16-12UNF	23 (0.91)	49 (1.93)	1 (0.04)	UE	1-1/16-12UNF	19 (0.75)	41 (1.61)	1 (0.04)
39 - 52 (2.38 - 3.17) including	UI	1-5/8-12UNF 2B								
55 - 71 (3.36 - 4.33) including	UJ	1-7/8-12UNF				UH	1-5/16-12UNF			

Flanged fittings according to DIN 8901/8902



Displacement [cm³(in³)]	Inlet Code	Dimension				Outlet Code	Dimension			
		E	F	G	H		E	F	G	H
ALL	HK	25 (0.98)	M8	16 (0.63)	55 (2.17)	HJ	18 (0.71)	M8		55 (2.17)

Flanged fittings according to SAE, UNC thread



Displacement [cm³(in³)]	Inlet Code	Dimension					Outlet Code	Dimension				
		E	F	G	H	I		E	F	G	H	I
20 - 52 (1.22 - 3.17) including	AC	25,4 (1.00)	3/8-16-UNC	22 (0.87)	52,4 (2.06)	26,2 (1.03)	AB	19 (0.75)	3/8-16-UNC	22 (0.87)	47,6 (1.87)	22,2 (0.87)
55 - 71 (3.36 - 4.33) including	AD	30,5 (1.20)	7/16-14-UNC		58,7 (2.31)	30,2 (1.19)	AC	25,4 (1.00)			52,4 (2.06)	26,2 (1.03)

GPP Pumps - basic design in millimeters (inches)

GP3L-*R-RLCL-SG*G*-N

Displacement [cm³(in³)/rev]	A	B	Displacement [cm³(in³)/rev]	A	B
20 (1.22)	63 (2.48)	128 (5.04)	50 (3.05)	77 (3.03)	156 (6.14)
22 (1.34)	64 (2.52)	130 (5.12)	52 (3.17)	78 (3.07)	158 (6.22)
26 (1.59)	65 (2.56)	133(5.24)	55 (3.36)	79 (3.11)	160 (6.30)
33 (2.01)	68 (2.68)	139 (5.47)	63 (3.84)	83 (3.27)	168 (6.61)
39 (2.38)	72 (2.83)	146 (5.75)	71 (4.33)	86 (3.39)	175 (6.89)
46 (2.81)	75 (2.95)	152 (5.98)