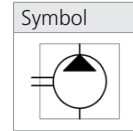


**Technical Features**

- › 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**

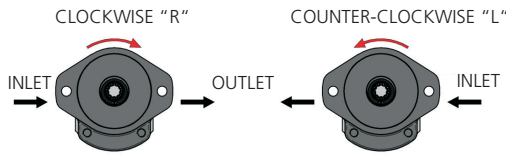
Nominal Size Parameters		Symbol	Unit	Displacement									
				Code	4,5	6,3	8,2	10	12	16	19	22	25
Actual displacement		$V_g$	[cm <sup>3</sup> ]	4.5	6.3	8.2	10	12	16	19	22	25	32
			[in <sup>3</sup> ]	0.275	0.384	0.500	0.610	0.732	0.976	1.159	1.343	1.526	1.953
Rotation speed	nominal	$n_n$	[min <sup>-1</sup> ]	1500									
	minimum	$n_{min}$	[min <sup>-1</sup> ]	650									
	maximum	$n_{max}$	[min <sup>-1</sup> ]	3500			3000		2500		2000		
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				200	180	160	120		
			[PSI]	3625				2900	2610	2320	1740		
	maximum	$p_{2max}$	[bar]	270			260	220	190	170	130		
			[PSI]	3915			3770	3190	2755	2465	1885		
	peak	$p_3$	[bar]	280				230	200	180	140		
			[PSI]	4061				3335	2900	2610	2030		
Nominal flow rate (min.) at $n_n$ and $p_{2n}$	$Q_n$	[l·min <sup>-1</sup> ]	6.14	8.69	11.32	13.95	16.92	23.04	27.36	31.68	36	46.08	
		[GPM]	1.62	2.30	2.99	3.69	4.47	6.09	7.23	8.37	9.51	12.17	
Maximum flow rate at $n_{max}$ and $p_{2max}$	$Q_{max}$	[l·min <sup>-1</sup> ]	14.33	20.29	26.4	32.55	39.48	38.4	45.6	42.24	48	61.44	
		[GPM]	3.79	5.36	6.97	8.60	10.43	10.14	12.05	11.16	12.68	16.23	
Nominal input power (max.) at $n_n$ and $p_{2n}$		$P_n$	[kW]	3.20	4.53	5.90	7.27	8.81	12.00	11.40	11.88	12.00	11.52
Maximum input power at $n_{max}$ and $p_{2max}$		$P_{max}$	[kW]	8.06	11.41	14.85	18.31	22.21	20.80	20.90	16.72	17.00	16.64

- 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		GP2 - 4 ... 32 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

**GP2** - [ ] - [ ] - [ ] - [ ] - [ ] - **N9** [ ]

**Gear pump serie 2**

**Displacement**

4,5  
6,3  
8,2  
10  
12  
16  
19  
22  
25  
32

**Direction of rotation**  
Counter clockwise  
Clockwise

**Flange design**

L  
R

AI  
AH  
AJ  
RE  
RF  
SB

CH  
CI  
CJ  
CK  
DD  
DJ  
KH  
VJ

GCGC  
GDGC  
GEGD  
UEUE  
UHUE  
HFHE  
HFHF  
KAKA  
KBKA  
KBKB

**Shaft seal**  
No designation  
04

standard  
without shaft seal

**Seals**  
NBR

**Inlet / Outlet ports**

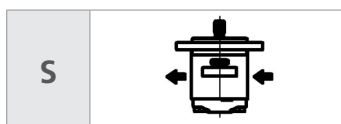
**Ports orientation**

**Shaft Type**

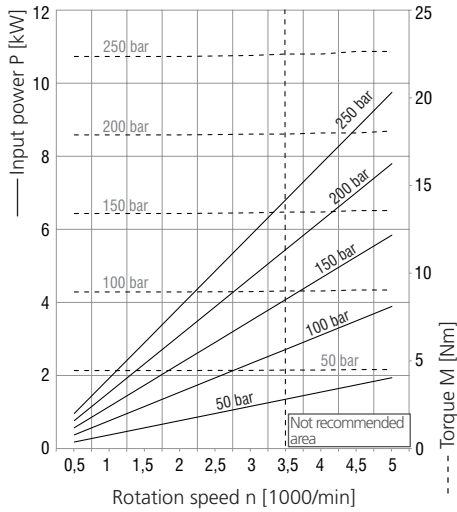
### Combination of Flanges and Shafts

Code	Shaft Type	Flange Design					
		RE	RF	AI	AH	AJ	SB
CH		●					
CI		●					
CJ		●					
CK			●				
DD							●
DJ			●	●	●		
VJ							●
KH						●	

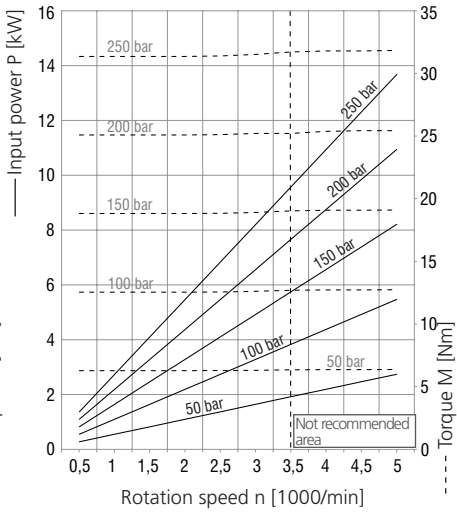
### Ports orientation



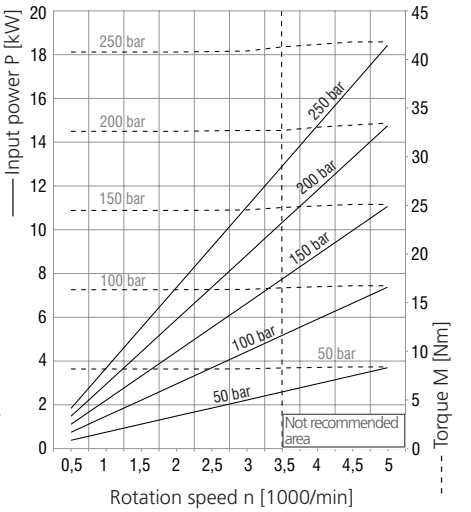
**4,5 ccm**



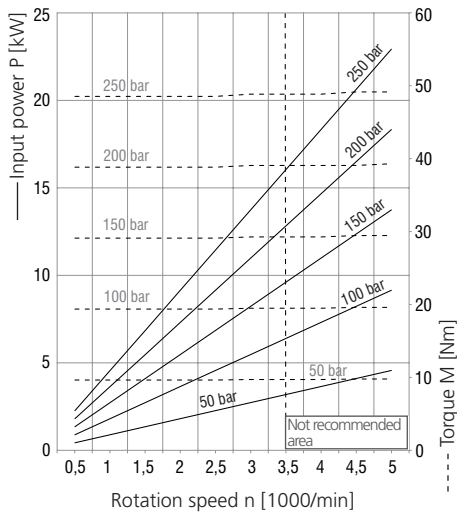
**6,3 ccm**



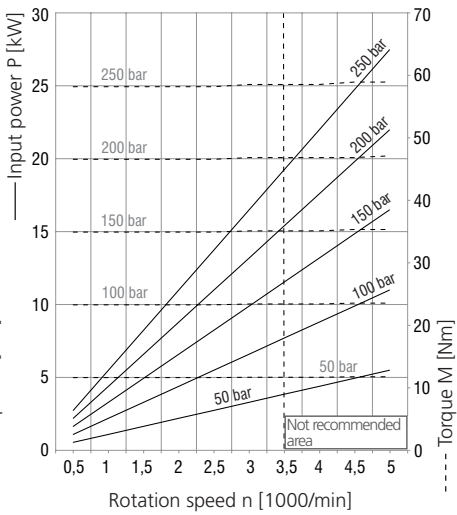
**8,2 ccm**



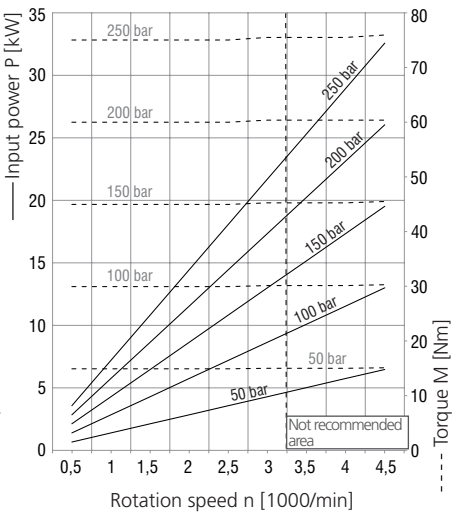
**10 ccm**



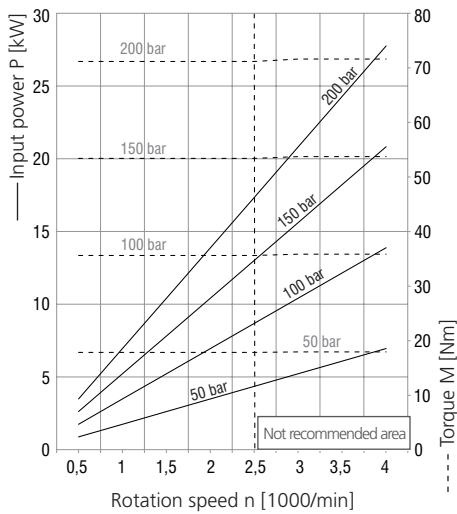
**12 ccm**



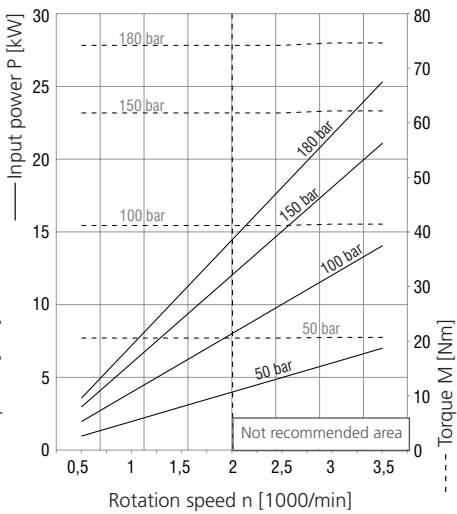
**16 ccm**



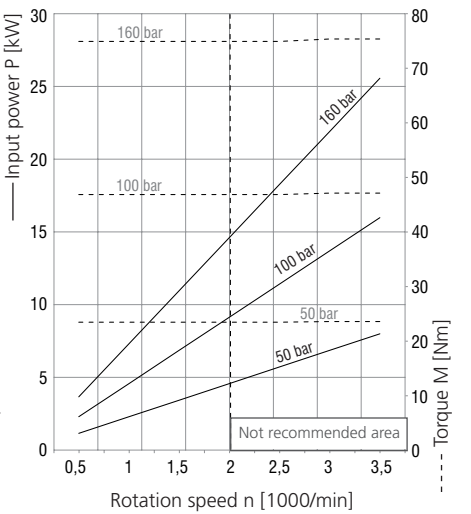
**19 ccm**



**22 ccm**

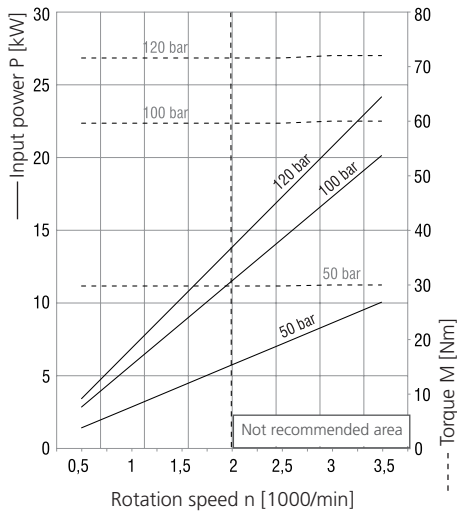


**25 ccm**

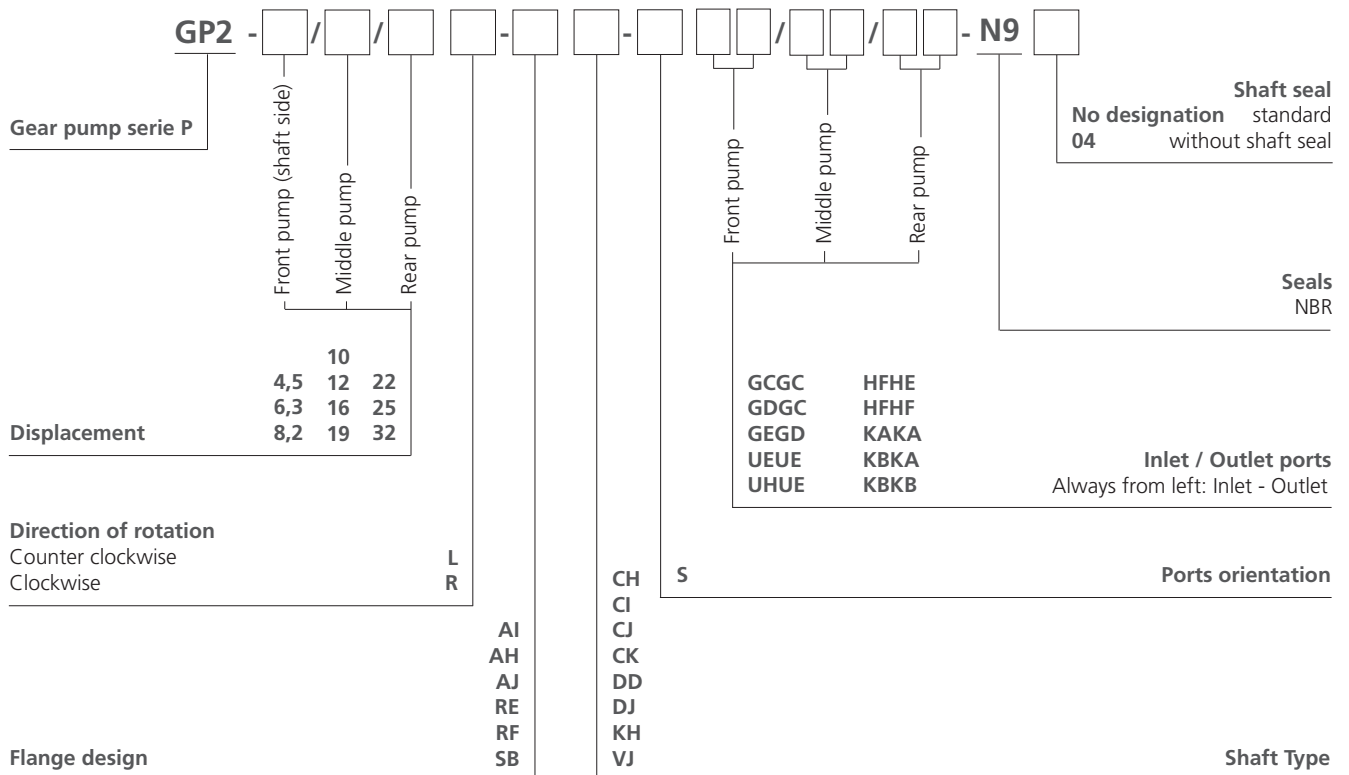


**Characteristics** measured at  $v = 32 \text{ mm}^2/\text{s}$  (156 SUS)

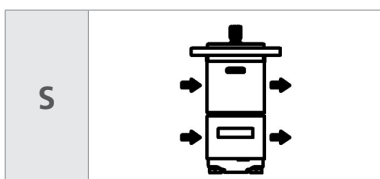
**32 ccm**



**Ordering Code - Multiple Version**

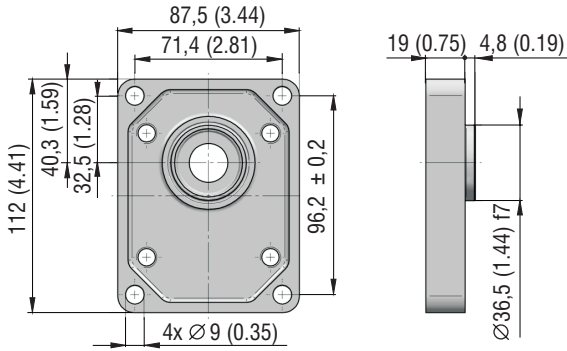


**Ports orientation**

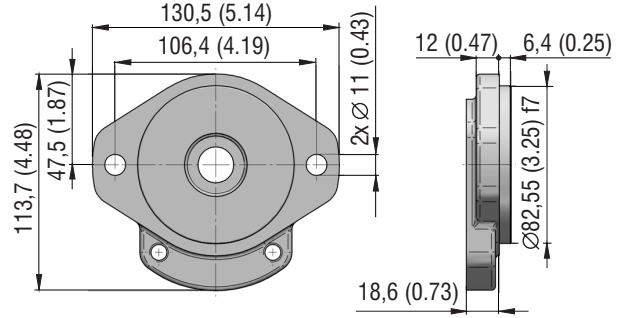


Flange design in millimeters (inches)

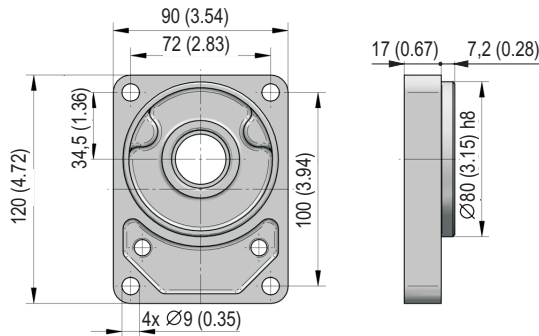
RE



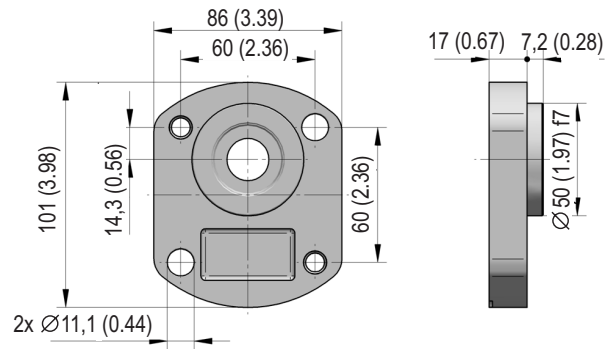
SB



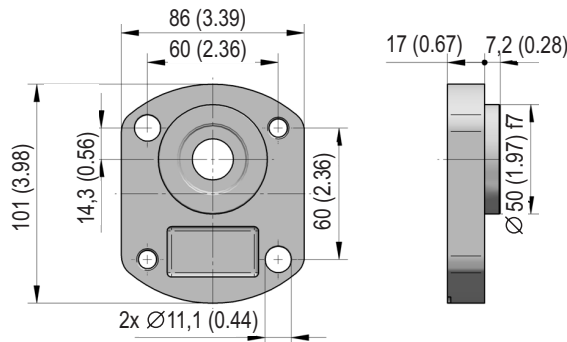
RF



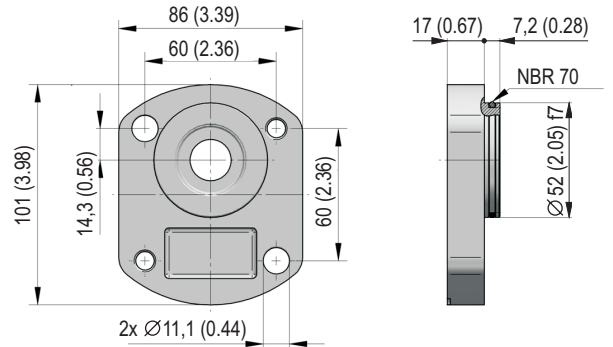
AI



AH

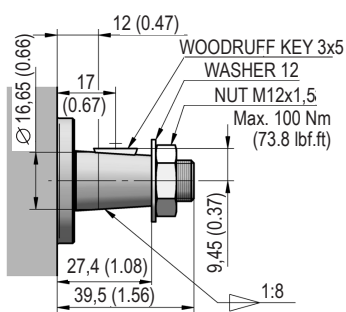


AJ

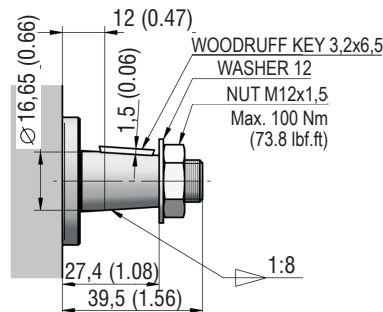


Shaft design in millimeters (inches)

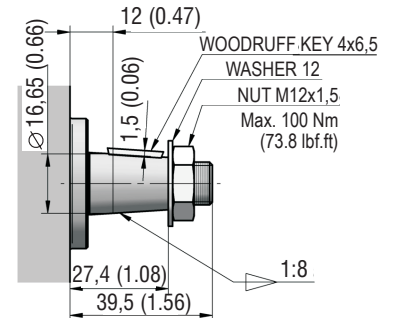
CH



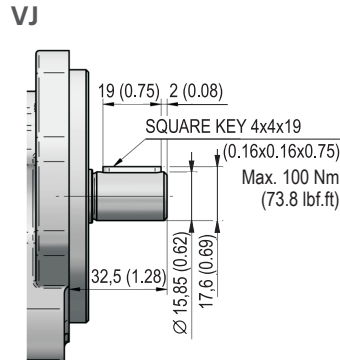
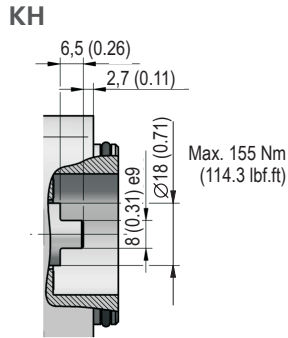
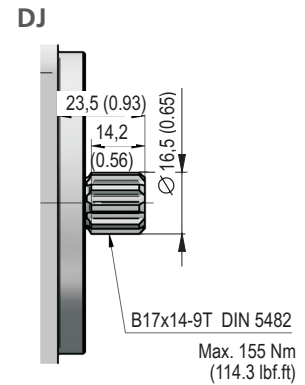
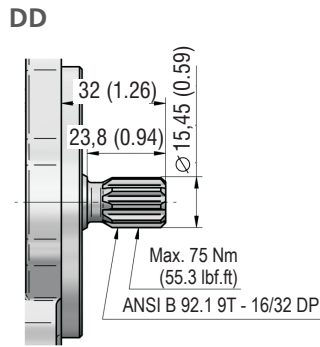
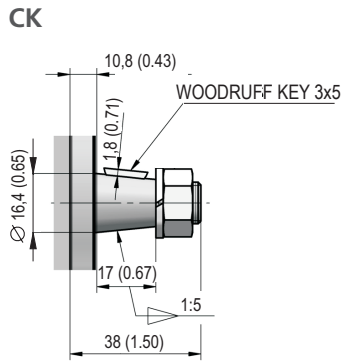
CI



CJ

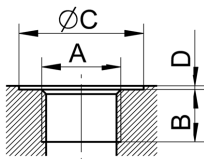


**Shaft design** in millimeters (inches)



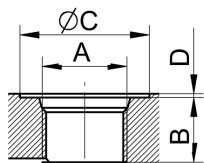
**Ports design** in millimeters (inches)

**BSPB pipe thread according to ISO 228 -1**



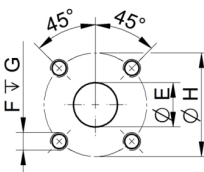
Displacement [cm <sup>3</sup> (in <sup>3</sup> )]	Inlet Code	Dimension				Outlet Code	Dimension			
		A	B	C	D		A	B	C	D
to 8.2 (0.50)	GC	G1/2	14 (0.55)	33 (1.30)	1 (0.04)	GC	G1/2	14 (0.55)	33 (1.30)	1 (0.04)
10-25 (0.61-1.53)	GD	G3/4	16 (0.63)	39 (1.53)						
above 25 (1.53)	GE	G1	18 (0.71)	45 (1.77)						

**UNF thread according to SAE**



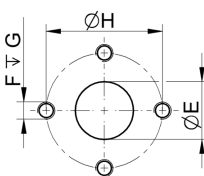
Displacement [cm <sup>3</sup> (in <sup>3</sup> )]	Inlet Code	Dimension				Outlet Code	Dimension			
		A	B	C	D		A	B	C	D
to 25 (1.526)	UE	1-1/16-12 UN-2B	19 (0.75)	41 (1.61)	1 (0.04)	UE	1/16-12 UNF	19 (0.75)	41 (1.61)	1 (0.04)
32 (1.953)	UH	1-5/16-12 UNF	23 (0.91)	49 (1.93)						

**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
to 25 (1.526)	HF	20 (0.79)	M6	13 (0.51)	40 (1.57)	HE	15 (0.59)	M6	13 (0.51)	35 (1.38)
32 (1.953)	HF	20 (0.79)	M6	13 (0.51)	40 (1.57)	HF	20 (0.79)	M6	13 (0.51)	40 (1.57)

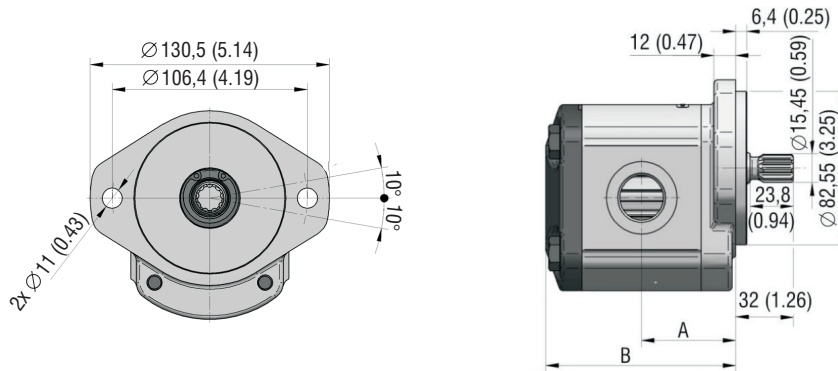
**Flanged fittings - „cross“**



Displacement [cm <sup>3</sup> (in <sup>3</sup> )]	Inlet Code	Dimension				Outlet Code	Dimension			
		E	F	G	H		E	F	G	H
4.5-8.2 (0.275-0.500)	KA	13.1 (0.52)	M6	13 (0.51)	30.2 (1.19)	KA	13.1 (0.52)	M6	13 (0.51)	30.2 (1.19)
10-22 (0.610-1.343)	KB	19 (0.75)	M8		39.7 (1.56)	KB	14.2 (0.56)			39.7 (1.56)
25-32 (1.526-1.953)	KB	19 (0.75)	M8			KB	19 (0.75)	M8		39.7 (1.56)

GP2 Pumps - basic design in millimeters (inches)

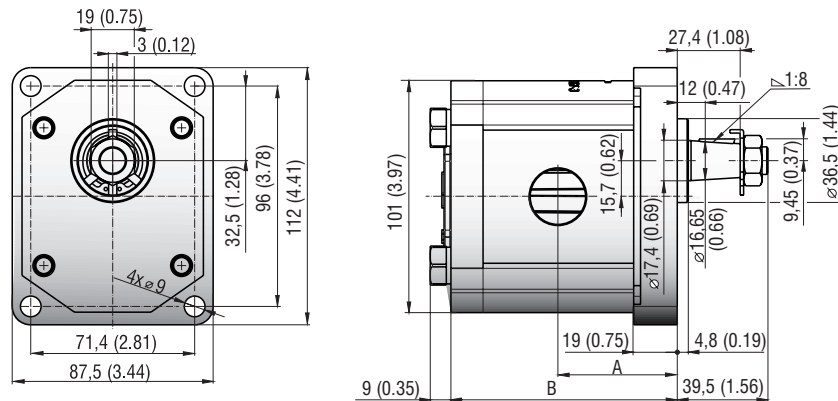
GP2-\*R-SBDD-SG\*G\*-N



Displacement [cm <sup>3</sup> (in <sup>3</sup> )/rev]	A	B	Displacement [cm <sup>3</sup> (in <sup>3</sup> )/rev]	A	B
4.5 (0.28)	42 (1.65)	79.6 (3.13)	16 (0.98)	51.6 (2.03)	98.2 (3.87)
6.3 (0.38)	43.6 (1.72)	82.6 (3.25)	19 (1.16)	53.6 (2.11)	103.1 (4.06)
8.2 (0.50)	45 (1.77)	85.6 (3.37)	22 (1.34)	61.5 (2.42)	108.1 (4.26)
10 (0.61)	46.6 (1.84)	88.7 (3.49)	25 (1.53)	58.8 (2.32)	113 (4.45)
12 (0.73)	48.2 (1.90)	91.9 (3.62)	32 (1.95)	69.6 (2.74)	134.4 (5.29)

GPT Pumps - basic design in millimeters (inches)

GP2-\*R-RECH-SG\*G\*-N



Displacement [cm <sup>3</sup> (in <sup>3</sup> )/rev]	A	B	Displacement [cm <sup>3</sup> (in <sup>3</sup> )/rev]	A	B
4.5 (0.28)	42.5 (1.67)	80 (3.15)	16 (0.98)	52 (2.05)	98.6 (3.88)
6.3 (0.38)	42.5 (1.67)	80 (3.15)	19 (1.16)	54 (2.13)	103.5 (4.08)
8.2 (0.50)	42.5 (1.67)	80 (3.15)	22 (1.34)	57 (2.24)	108.5 (4.27)
10 (0.61)	47 (1.85)	89 (3.50)	25 (1.53)	59.2 (2.33)	113.4 (4.47)
12 (0.73)	48.6 (1.91)	92.3 (3.63)	32 (1.95)	70 (2.76)	134.8 (5.31)

