

Gear Pump – Lightline Version

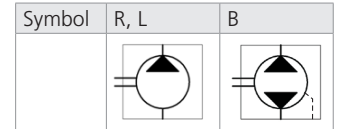
GP2L

Displacement up to 30 cm³ (1.83 inch³) • p_{max} 300 bar (4350 PSI) • Speed from 400 to 4000 RPM

Technical Features



- › Operating pressure 270 bar, Peak pressure 300 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, GOST



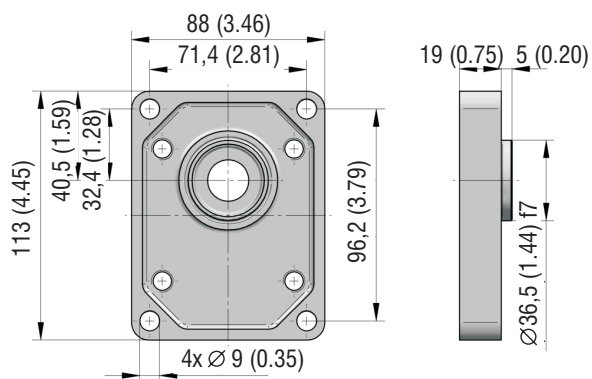
Technical Data

Nominal Size Parameters	Symbol	Unit	Displacement													
			3	4	6	8	10	12	14	16	18	20	22	25	28	30
Actual displacement	V_g	[in ³]	0.183	0.244	0.366	0.488	0.610	0.732	0.854	0.976	1.098	1.220	1.343	1.526	1.709	1.831
Rotation speed	nominal	n_n	1500													
	minimum	n_{min}	800	600			500				400					
	maximum	n_{max}	4000			3500	3000		4000		3600	3200	3000		2500	
Pressure at inlet*	minimum	p_{1min}	-0,3 (-4.4 PSI)													
	maximum	p_{1max}	0,5 (7.3 PSI)													
Pressure at outlet**	max. continuous	p_{2n}	270				250				220		200	180	160	
		[PSI]	3916				3626				3191		2901	2611	2321	
	maximum	p_{2max}	285				265				235		215	190	170	
		[PSI]	4134				3844				3408		3118	2756	2466	
	peak	p_3	300				280				250		230	200	180	
		[PSI]	4351				4061				3626		3336	2901	2611	
Weight	m	[kg]	2,6	2,63	2,65	2,75	2,8	2,95	3,03	3,1	3,22	3,35	3,4	3,5	3,8	3,97
		[lbs]	5.73	5.80	5.84	6.06	6.17	6.50	6.68	6.83	7.10	7.39	7.50	7.72	8.38	8.75

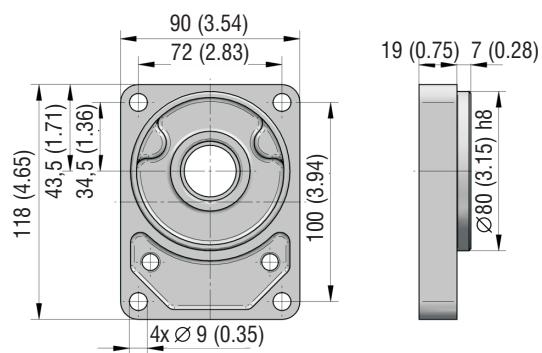
- 1) *Inlet pressure in the reversible design can be up to $p_1 = p_{2n} - 70$ bar max. External drainage must be used in case of the reversible design.
- 2) **Outlet pressure in the reversible design is 10% lower than shown in the table (depending on operating conditions).
- 3) p_{2n} maximum continuous 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		GP2L - 3 ...30 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	mm ² /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

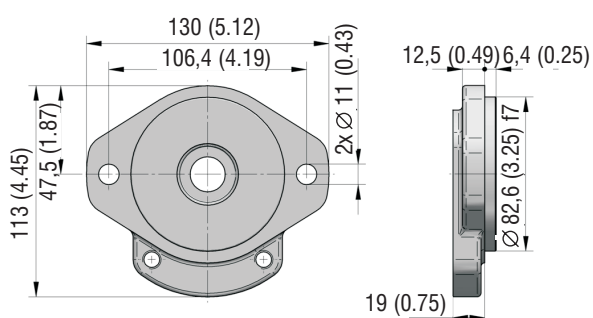
RE



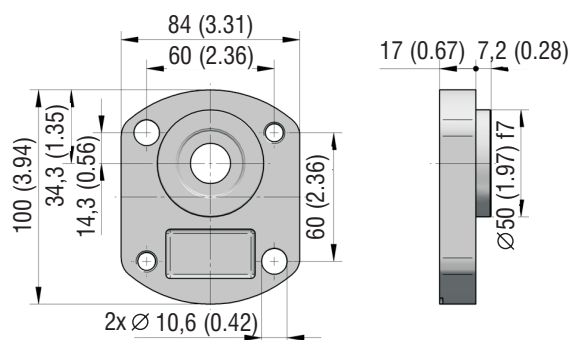
RF



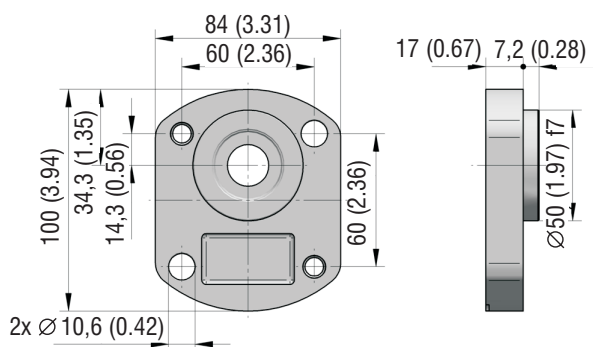
SB



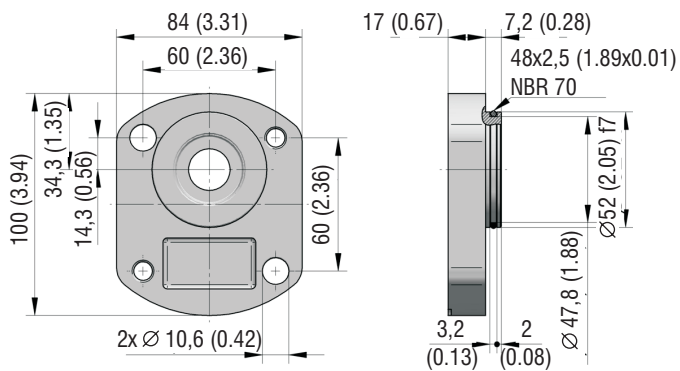
AH



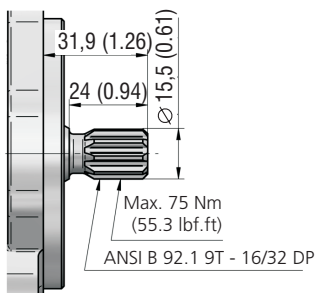
AI



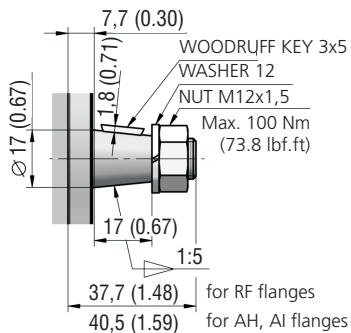
AJ



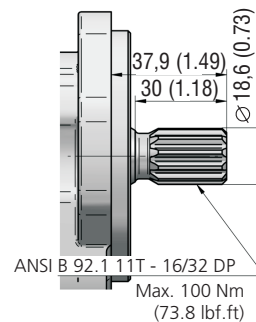
DD



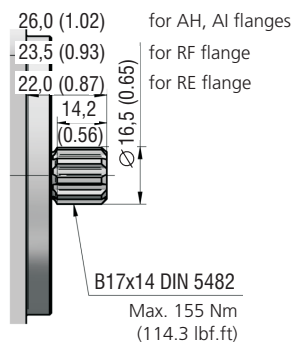
CK



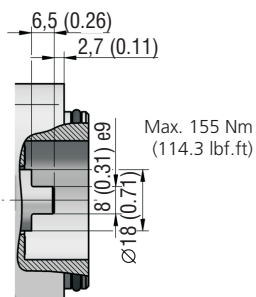
DH



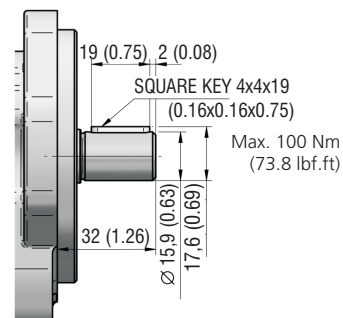
DJ



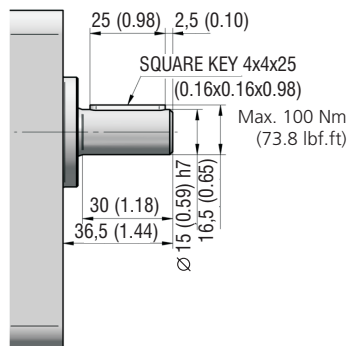
KH



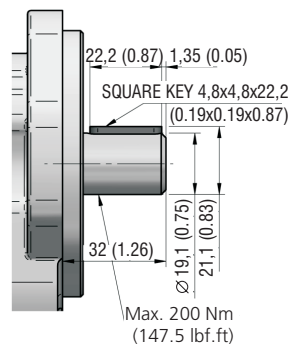
VJ

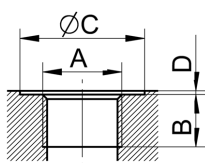


VL

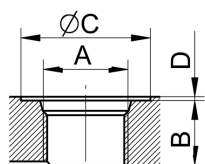


VM

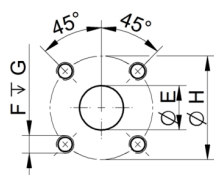


BSPP pipe thread according to ISO 228 -1


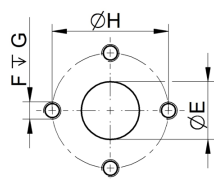
Displacement [cm ³ (in ³)]	Inlet Code	Dimension				Outlet Code	Dimension			
		A	B	C	D		A	B	C	D
3-6 (0.18-0.34)	GC	G1/2	14 (0.55)	33 (1.30)	1 (0.04)	GC	G1/2	14 (0.55)	33 (1.30)	1 (0.04)
8-30 (0.49-1.83)	GD	G3/4	16 (0.63)	39 (1.53)						
16-30 (0.98-1.83)	GE	G1	18 (0.71)	45 (1.77)						

UNF thread according to SAE


Displacement [cm ³ (in ³)]	Inlet Code	Dimension				Outlet Code	Dimension			
		A	B	C	D		A	B	C	D
ALL	UD	7/8-14 UNF-2B	17 (0.67)	34 (1.34)	1 (0.04)	UD	7/8-14 UNF-2B	17 (1.04)	33 (1.30)	1 (0.04)
	UE	1-1/16-12 UNF-2B	19 (0.75)	41 (1.61)						
	UH	1-5/16 UNF-2B	23 (0.91)	49 (1.93)						

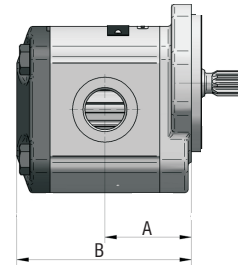
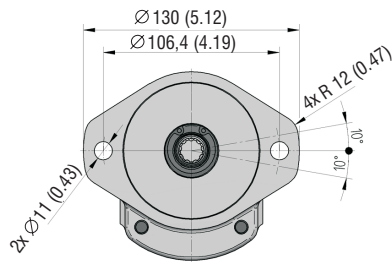
Flanged fittings according to DIN 8901/8902


Displacement [cm ³ (in ³)]	Inlet Code	Dimension				Outlet Code	Dimension			
		E	F	G	H		E	F	G	H
ALL	HF	20 (0.79)	M6	13 (0.51)	40 (1.57)	HE	15 (0.59)	M6	13 (0.51)	35 (1.38)
16-30 (0.98-1.83)	HK	25 (0.98)	M8	13 (0.51)	55 (2.17)					

Flanged fittings - „cross“


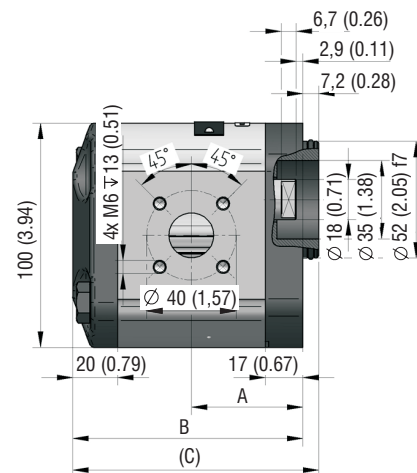
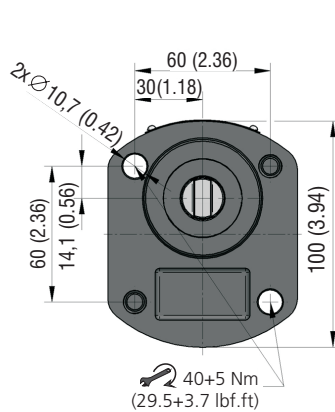
Displacement [cm ³ (in ³)]	Inlet Code	Dimension				Outlet Code	Dimension			
		E	F	G	H		E	F	G	H
ALL	KB	20 (0.79)	M8	13 (0.51)	40 (1.57)	KA	13,5 (0.53)	M6	13 (0.51)	30 (1.18)
	KH	14 (0.55)			38 (1.50)					38 (1.50)
	KI	19 (0.75)								

GP2L-*R-SBDD-SG*G*-N



Displacement [cm ³ (in ³)/rev]	A	B	Displacement [cm ³ (in ³)/rev]	A	B
3 (0.18)	43,6 (1.72)	91,1 (3.59)	16 (0.98)	54,4 (2.14)	112,7 (4.44)
4 (0.24)	44,4 (1.75)	92,7 (3.65)	18 (1.10)	56,0 (2.20)	116,0 (4.57)
6 (0.37)	46,0 (1.81)	96,0 (3.78)	20 (1.22)	57,7 (2.27)	119,3 (4.70)
8 (0.49)	47,7 (1.88)	99,3 (3.91)	22 (1.34)	59,3 (2.33)	122,6 (4.83)
10 (0.61)	49,3 (1.94)	102,6 (4.04)	25 (1.53)	61,8 (2.43)	127,6 (5.02)
12 (0.73)	51,0 (2.01)	105,9 (4.17)	28 (1.71)	64,3 (2.53)	132,6 (5.22)
14 (0.85)	52,7 (2.07)	109,3 (4.30)	30 (1.83)	66,0 (2.60)	135,9 (5.35)

GP2L-*R-AJKH-SH*H*-N



Displacement [cm ³ (in ³)/rev]	A	B	C	Displacement [cm ³ (in ³)/rev]	A	B	C
3 (0.18)	37,4 (1.47)	88,6 (3.49)	95,8 (3.77)	16 (0.98)	45,0 (1.77)	110,2 (4.34)	117,4 (4.62)
4 (0.24)	37,4 (1.47)	90,2 (3.55)	97,4 (3.83)	18 (1.10)	45,0 (1.77)	113,5 (4.47)	120,7 (4.75)
6 (0.37)	38,6 (1.52)	93,5 (3.68)	100,7 (3.96)	20 (1.22)	45,0 (1.77)	116,8 (4.60)	124,0 (4.88)
8 (0.49)	40,7 (1.60)	96,8 (3.81)	104,0 (4.09)	22 (1.34)	52,6 (2.07)	120,1 (4.73)	127,3 (5.01)
10 (0.61)	41,2 (1.62)	100,1 (3.94)	107,3 (4.22)	25 (1.53)	59,3 (2.33)	125,1 (4.93)	132,3 (5.21)
12 (0.73)	45,0 (1.77)	103,4 (4.07)	110,6 (4.35)	28 (1.71)	61,8 (2.43)	130,1 (5.12)	137,3 (5.41)
14 (0.85)	45,0 (1.77)	106,8 (4.20)	114,0 (4.49)	30 (1.83)	63,5 (2.50)	133,4 (5.25)	140,6 (5.54)