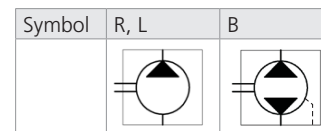


Technical Features


- › Operating pressure 250 bar, Peak pressure 280 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

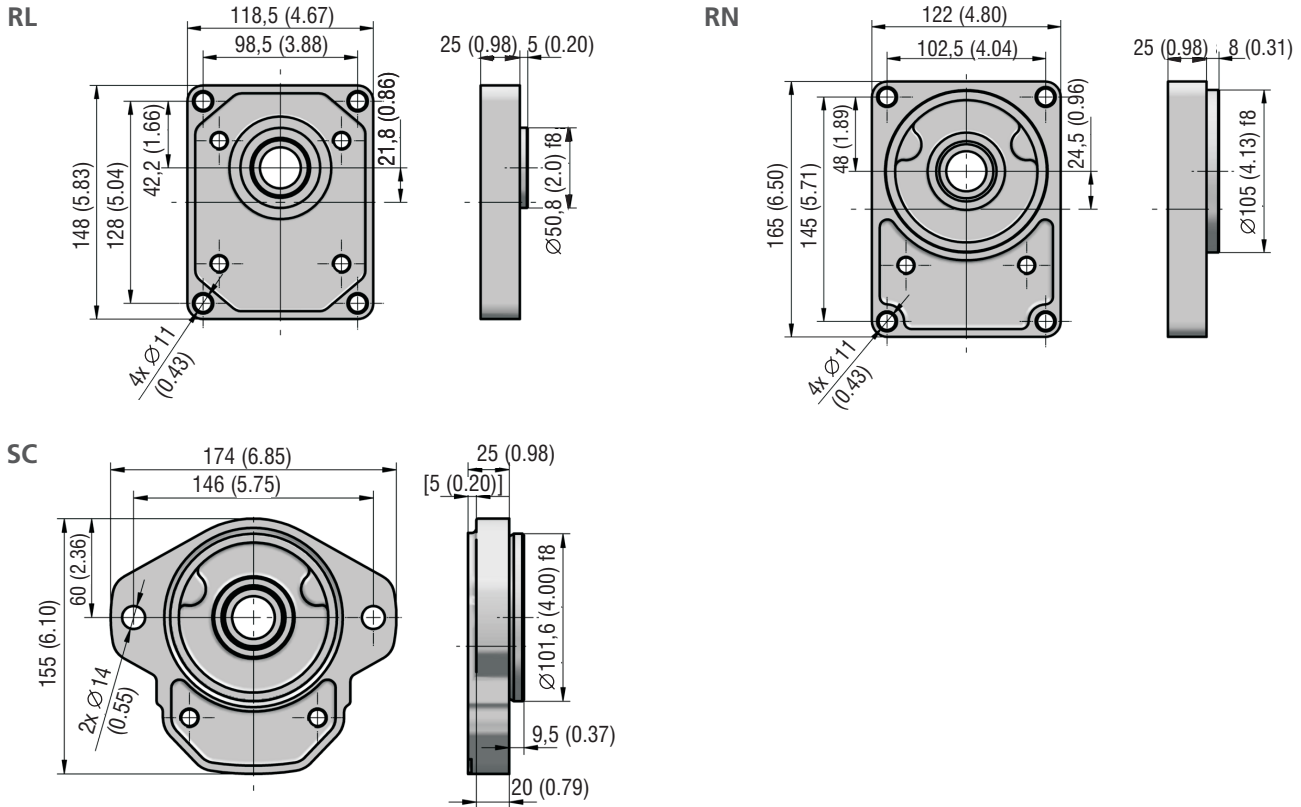

Technical Data

| Nominal Size Parameters | | Symbol | Unit | Displacement | | | | | | | | | | | | | |
|-------------------------|-----------------|------------|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|----|------|------|
| | | | | Code | 20 | 22 | 26 | 33 | 39 | 46 | 50 | 52 | 55 | 63 | 71 | | |
| Actual displacement | | V_g | [cm ³] | 20 | 22 | 26 | 33 | 39 | 46 | 50 | 52 | 55 | 63 | 71 | | | |
| | | | [in ³] | 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] | 600 | | | | | 500 | | | | | 400 | | | |
| | maximum | n_{max} | [min ⁻¹] | 3500 | | | | | 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] | 250 | | | | | 230 | | | | | 220 | | 200 | 180 |
| | | | [PSI] | 3626 | | | | | 3336 | | | | | 3191 | | 2901 | 2611 |
| | maximum | p_{2max} | [bar] | 265 | | | | | 250 | | | | | 240 | | 230 | 200 |
| | | | [PSI] | 3844 | | | | | 3626 | | | | | 3481 | | 3336 | 2901 |
| | peak | p_3 | [bar] | 280 | | | | | 270 | | | | | 260 | | 250 | 220 |
| | | | [PSI] | 4061 | | | | | 3916 | | | | | 3771 | | 3626 | 3191 |
| Weight | m | [kg] | | | | | | | | | | | | | | | |
| | | [lbs] | | | | | | | | | | | | | | | |

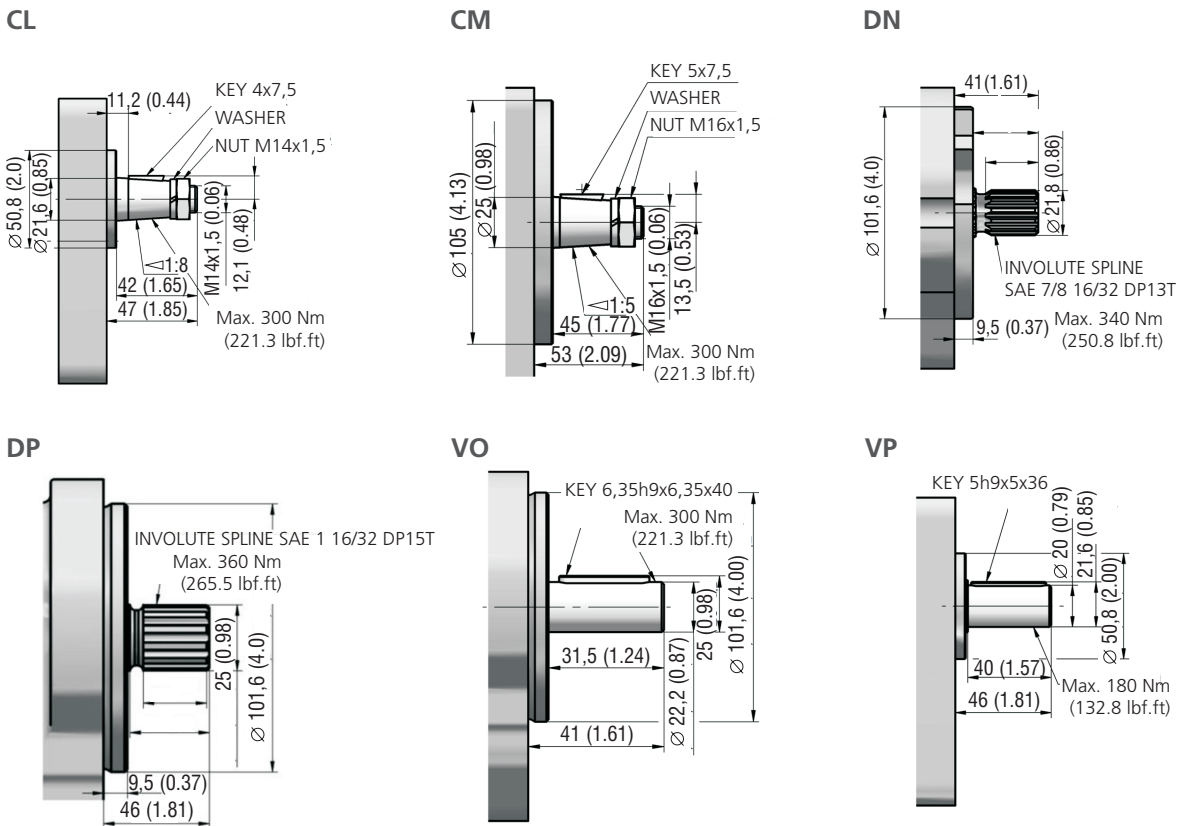
- 1) *Inlet pressure in the reversible design can be up to $p_1 = p_{2n} - 70$ bar max. External drainage must be used in case of the reversible design.
- 2) **Outlet pressure in the reversible design is 10% lower than shown in the table (depending on operating conditions).
- 3) p_{2n} maximum continuous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

Flange design in millimeters (inches)

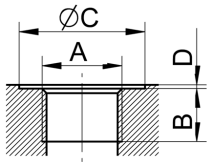


Shaft design in millimeters (inches)



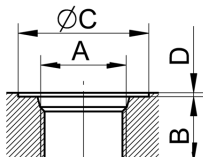
Ports design in millimeters (inches)

BSPP pipe thread according to 228-1



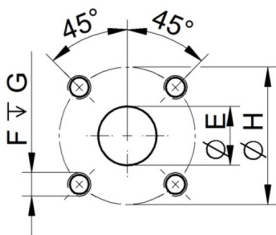
| Displacement [cm ³ (in ³)] | Inlet Code | Dimension | | | | Outlet Code | Dimension | | | |
|---|------------|-----------|-----------|-----------|----------|-------------|-----------|-----------|-----------|----------|
| | | A | B | C | D | | A | B | C | D |
| 20 - 22 (1.22 - 1.34) including | GD | 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) | | | | | | |
| 46 - 63 (2.81 - 3.84) including | GF | G 1 1/4 | | 57 (2.24) | | | | | | |
| 71 (4.33) | GH | G 1 1/2 | 24 (1.46) | 60 (3.66) | | | | | | |

UNF thread according to SAE



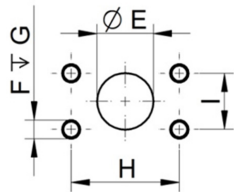
| Displacement [cm ³ (in ³)] | Inlet Code | Dimension | | | | Outlet Code | Dimension | | | |
|---|------------|----------------|-----------|-----------|----------|-------------|--------------|--------------|-----------|----------|
| | | A | B | C | D | | A | B | C | D |
| 20 - 33 (1.22 - 2.01) including | 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 | | | | | UH | 1-5/16-12UNF | | |
| 55 - 71 (3.36 - 4.33) including | UJ | 1-7/8-12UNF | | | | | | | | |

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 | 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 [cm ³ (in ³)] | 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 [cm ³ (in ³)/rev] | A | B | Displacement [cm ³ (in ³)/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) | | | |

