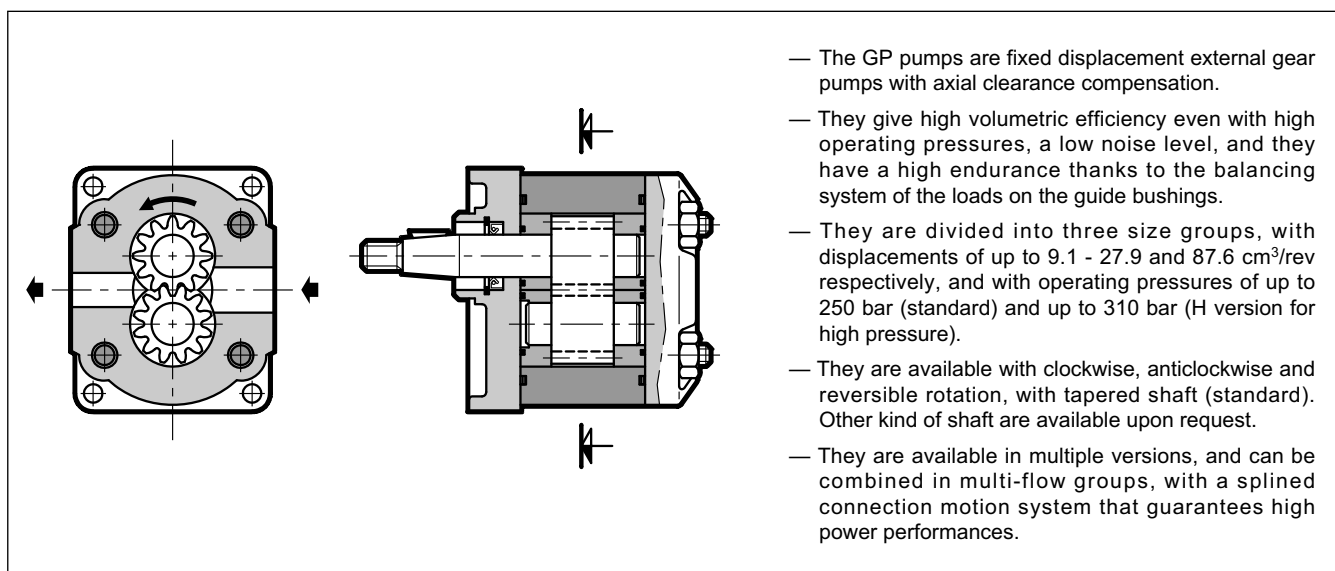


# GP

## EXTERNAL GEAR PUMPS

### SERIES 20

#### OPERATING PRINCIPLE

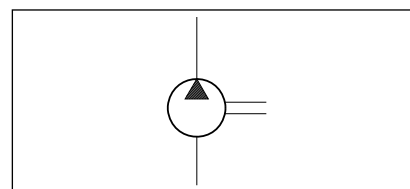


#### TECHNICAL SPECIFICATIONS

| GP PUMP SIZE                        |                      | GP1   | GP2                    | GP3                   |
|-------------------------------------|----------------------|---|------------------------|-----------------------|
| Displacement range                  | cm <sup>3</sup> /rev | 1.3 ÷ 9.1   | 7 ÷ 27.9               | 20.7 ÷ 87.6           |
| Flow rate and operating pressures   |                      | see table 3 - Performances  |                        |                       |
| Rotation speed                      |                      | see table 3 - Performances  |                        |                       |
| Rotation direction                  |                      | clockwise, anticlockwise or reversible (seen from the shaft side) |                        |                       |
| Loads on the shaft                  |                      | radial and axial load are not allowed                             |                        |                       |
| Max torque applicable to the shaft  |                      | see paragraph 14.1  |                        |                       |
| Hydraulic connection                |                      | flanged fittings (see paragraph 16)                               |                        |                       |
| Type of mounting                    |                      | 4-holes flange - rectangular type                                 |                        |                       |
| Mass: standard version<br>H version | kg                   | 1.2 ÷ 1.6<br>1.9 ÷ 2.3  | 2.6 ÷ 3.5<br>3.8 ÷ 4.7 | 6 ÷ 8.5<br>8.7 ÷ 11.2 |

|                            |                   |           |
|----------------------------|-------------------|-----------|
| Ambient temperature range  | °C                | -20 / +50 |
| Fluid temperature range    | °C                | -15 / +80 |
| Fluid viscosity range      | see paragraph 2.2 |           |
| Fluid contamination degree | see paragraph 2.3 |           |
| Recommended viscosity      | cSt               | 25 ÷ 100  |

#### HYDRAULIC SYMBOL



## 1 - IDENTIFICATION CODE

### 1.1 - Identification code for single and front pumps

|          |          |  |  |          |  |  |  |  |  |          |           |          |  |
|----------|----------|--|--|----------|--|--|--|--|--|----------|-----------|----------|--|
| <b>G</b> | <b>P</b> |  |  | <b>-</b> |  |  |  |  |  | <b>/</b> | <b>20</b> | <b>N</b> |  |
|----------|----------|--|--|----------|--|--|--|--|--|----------|-----------|----------|--|

External gear pump \_\_\_\_\_

Pump size: \_\_\_\_\_  
**1** = from 1.3 to 9.1 cm<sup>3</sup>/rev  
**2** = from 7.0 to 27.9 cm<sup>3</sup>/rev  
**3** = from 20.7 to 87.6 cm<sup>3</sup>/rev

Omit for single pumps (**standard**) \_\_\_\_\_  
**F** = only for front pump to be coupled

Nominal size \_\_\_\_\_  
 (see table 3 - Performances)

Direction of rotation (seen from the shaft side) \_\_\_\_\_  
**R** = clockwise (**standard**)  
**L** = anticlockwise  
**D** = reversible (option available for single pumps only)

Mounting flange \_\_\_\_\_  
**9** = 4-holes - rectangular type (**standard**)  
**0** = SAE J744 - 2 holes

**NOTE 1:** See at table 1.4 compatibility among mounting flange, type of shaft and type of hydraulic connection.

**H** = version for high pressure.  
 Omit for standard pressure.

NBR seals for mineral oils

Series No.  
 (from 20 to 29 sizes and mounting dimensions remain unchanged)

Hydraulic connection  
**F** = flanged ports (**standard**)  
**B** = BSP threaded ports  
**U** = UNF threaded ports

Shaft end type - see **NOTE 1**  
**7** = tapered keyed with thread (**standard**)  
**5** = cylindrical keyed  
 (available for single pumps only)  
**0** = cylindrical keyed SAE-J744  
**1** = splined SAE-J744

### 1.2 - Identification code for intermediate and rear pumps

|          |          |  |  |          |  |  |  |  |  |          |           |          |  |
|----------|----------|--|--|----------|--|--|--|--|--|----------|-----------|----------|--|
| <b>G</b> | <b>P</b> |  |  | <b>-</b> |  |  |  |  |  | <b>/</b> | <b>20</b> | <b>N</b> |  |
|----------|----------|--|--|----------|--|--|--|--|--|----------|-----------|----------|--|

External gear pump \_\_\_\_\_

Pump size: \_\_\_\_\_  
**1** = from 1.3 to 9.1 cm<sup>3</sup>/rev  
**2** = from 7.0 to 27.9 cm<sup>3</sup>/rev  
**3** = from 20.7 to 87.6 cm<sup>3</sup>/rev

Pump position: \_\_\_\_\_  
**M** = intermediate  
**R** = rear

Nominal size \_\_\_\_\_  
 (see table 3 - Performances)

Direction of rotation (seen from the shaft side) \_\_\_\_\_  
**R** = clockwise (**standard**)  
**L** = anticlockwise

**NOTE 2:** Front, intermediate and rear pumps for multiple groups are supplied without mating joint, which must be ordered separately (see paragraph 1.5). To order a group of one or more pumps completely assembled see paragraph 1.3.

**H** = version for high pressure.  
 Omit for standard pressure.

NBR seals for mineral oils

Series No.  
 (from 20 to 29 sizes and mounting dimensions remain unchanged)

Hydraulic connection  
**F** = flanged ports (**standard**)  
**B** = BSP threaded ports  
**U** = UNF threaded ports

### 1.3 - Identification code for multiple pumps

identification code front pump      +      identification code intermediate pump (omit for double pumps)      +      identification code rear pump

### 1.4 - Compatibility among mounting flange, type of shaft and type of hydraulic connection

| FLANGE CODE | SHAFT CODE |     |     |     | HYDRAULIC CONNECTION CODE |     |     |
|-------------|------------|-----|-----|-----|---------------------------|-----|-----|
|             | 7          | 5   | 0   | 1   | F                         | B   | U   |
| 9           | yes        | yes | no  | no  | yes                       | yes | no  |
| 0           | no         | no  | yes | yes | yes                       | no  | yes |

### 1.5 - Identification code for mating joints

| FIRST PUMP | SECOND PUMP |            |            |
|------------|-------------|------------|------------|
|            | GP1         | GP2        | GP3        |
| GP1        | 3101100003  | -          | -          |
| GP2        | 3101100004  | 3101100005 | -          |
| GP3        | 3101100006  | 3101100007 | 3101100008 |

### 1.6 - Examples

a) single pump size 1 - 1.3 cm<sup>3</sup>/rev - anticlockwise rotation - standard flange and shaft

**GP1-0013L97F/20N**

b) single pump size 2 - 14 cm<sup>3</sup>/rev - clockwise rotation - standard flange and shaft

**GP2-0140R97F/20N**

c) single pump size 3 - 22.5 cm<sup>3</sup>/rev - clockwise rotation - SAE flange and shaft

**GP3-0225R01F/20N**

d) double pump made of:

- pump size 2 - 7 cm<sup>3</sup>/rev - clockwise rotation
- pump size 1 - 2 cm<sup>3</sup>/rev - high pressure

**GP2F-0070R97F/20N + GP1R-0020RF/20NH**

e) triple pump made of:

- pump size 3 - 22.5 cm<sup>3</sup>/rev
- pump size 2 - 14 cm<sup>3</sup>/rev
- pump size 1 - 2 cm<sup>3</sup>/rev

**GP3F-0225R97F/20N + GP2M-0140RF/20N + GP1R-0020RF/20N**

## 2 - HYDRAULIC FLUID

### 2.1 Type of fluid

Use mineral oil based hydraulic fluids with anti-foam and antioxidant additives, in conformity with the requisites of the following standards:

- FZG test - 11<sup>th</sup> stage
- DIN 51525
- VDMA 24317

For use with other types of fluid (water glycol, phosphate esters and others), consult our technical dept. Operation with fluid at a temperature greater than 80°C causes a premature deterioration of the fluid quality and of the seals. The physical and chemical properties of the fluid must be maintained.

### 2.2 - Fluid viscosity

The operating fluid viscosity must be within the following range:

|                   |              |  |
|-------------------|--------------|--|
| minimum viscosity | 12 cSt       | referred to the maximum fluid temperature of 80 °C             |
| optimum viscosity | 25 + 100 cSt | referred to the operating temperature of the fluid in the tank |
| maximum viscosity | 1600 cSt     | limited to only the start-up phase of the pump                 |

### 2.3 - Degree of fluid contamination

The maximum degree of fluid contamination must be according to ISO 4406:1999 class 20/18/15; therefore, use of a filter with  $\beta_{20} \geq 75$  is recommended. A degree of maximum fluid contamination according to ISO 4406:1999 class 18/16/13 is recommended for optimum endurance of the pump. Hence, use of a filter with  $\beta_{10} \geq 100$  is recommended.

If there is a filter installed on the suction line, be sure that the pressure at the pump inlet is not lower than the values specified in paragraph 13.

The suction filter must be equipped with a by-pass valve and, if possible, with a clogging indicator.

### 3 - PERFORMANCE RATINGS

(values obtained with mineral oil with viscosity of 36 cSt at 50°C)

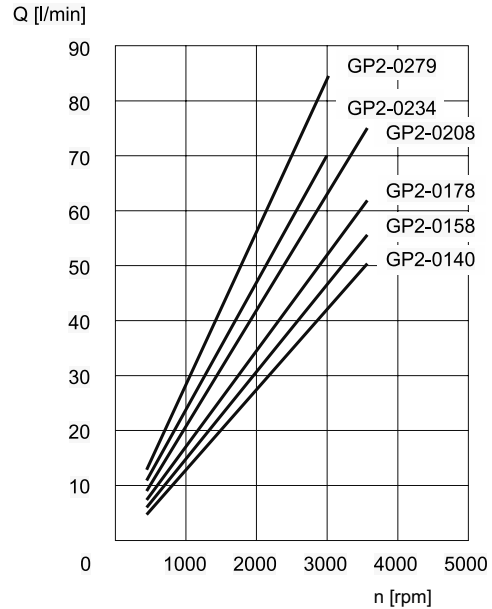
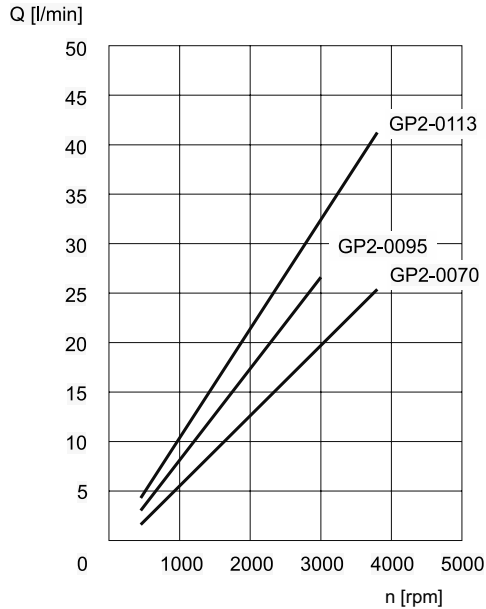
Values in brackets refer to the version **H**, for high pressure. The max pressure values for reversible high pressure pumps (rotation type **D**) must be reduced by 15%.

| PUMP<br>SIZE | NOMINAL<br>SIZE | DISPLACEMENT<br>[cm³/rev] | MAX FLOW<br>RATE<br>at 1500 rpm<br>[l/min] | MAX PRESSURE<br>at 1500 rpm [bar] |           | SPEED<br>[rpm]    |                   |      |
|--------------|-----------------|---------------------------|--|-----------------------------------|-----------|-------------------|-------------------|------|
|              |                 |                           |  | continuous<br>operating           | peak      | max<br>flange = 9 | max<br>flange = 0 | min  |
| GP1          | 0013            | 1.3                       | 2.0  | 250 (270)                         | 290 (310) | 6000              | 6000              | 800  |
|              | 0020            | 2.0                       | 3.0  |                                   |           |                   |                   |      |
|              | 0027            | 2.7                       | 4.0  |                                   |           |                   |                   |      |
|              | 0034            | 3.4                       | 5.1  |                                   |           |                   |                   |      |
|              | 0041            | 4.1                       | 6.1  | 230 (260)                         | 260 (290) | 4000              | 4000              |      |
|              | 0051            | 5.1                       | 7.6  |                                   |           | 4000              | 3500              |      |
|              | 0061            | 6.1                       | 9.1  |                                   |           | 3800              | 3000              |      |
|              | 0074            | 7.4                       | 11.1                                       |                                   |           | 200 (230)         | 230 (290)         | 3200 |
|              | 0091            | 9.1                       | 13.6                                       | 180 (210)                         | 210 (240) | 2600              | 3000              | 600  |
| GP2          | 0070            | 7.0                       | 10.5                                       | 250 (280)                         | 290 (310) | 4000              | 4000              | 600  |
|              | 0095            | 9.5                       | 14.2                                       |                                   |           | 3000              |                   |      |
|              | 0113            | 11.3                      | 16.9                                       | 230 (280)                         | 270 (310) | 4000              | 4000              |      |
|              | 0140            | 14.0                      | 21.0                                       | 230 (260)                         | 270 (300) |                   | 3200              |      |
|              | 0158            | 15.8                      | 23.7                                       | 210 (260)                         | 240 (290) | 3600              | 3800              | 500  |
|              | 0178            | 17.8                      | 26.7                                       |                                   |           |                   | 2500              |      |
|              | 0208            | 20.8                      | 31.2                                       | 180 (230)                         | 210 (260) | 3200              | 2200              |      |
|              | 0234            | 23.4                      | 35.1                                       |                                   |           | 3000              | 2000              |      |
|              | 0279            | 27.9                      | 41.8                                       | 170 (200)                         | 200 (230) | 2500              | 1800              |      |
| GP3          | 0207            | 20.7                      | 31.0                                       | 230 (280)                         | 270 (310) | 3500              | 3500              | 500  |
|              | 0225            | 22.5                      | 33.7                                       |                                   |           |                   |                   |      |
|              | 0264            | 26.4                      | 39.6                                       |                                   |           |                   |                   |      |
|              | 0337            | 33.7                      | 50.5                                       | 230 (270)                         | 270 (300) | 3000              | 3300              |      |
|              | 0394            | 39.4                      | 59.1                                       | 220 (260)                         | 260 (290) |                   | 3000              |      |
|              | 0427            | 42.7                      | 64.0                                       | 210 (250)                         | 250 (280) | 2800              | 2800              |      |
|              | 0514            | 51.4                      | 77.1                                       | 200 (230)                         | 240 (260) | 2400              | 2500              |      |
|              | 0600            | 60.0                      | 90.0                                       | 190 (210)                         | 220 (240) | 2800              | 2800              |      |
|              | 0696            | 69.6                      | 104.4                                      | 170 (200)                         | 200 (230) | 2500              | 2500              |      |
|              | 0776            | 77.6                      | 116.4                                      | 160 (180)                         | 190 (210) | 2300              | 2300              |      |
|              | 0876            | 87.6                      | 131.4                                      | 140 (160)                         | 170 (190) | 2000              | 2000              | 400  |

## 5 - CURVES AND CHARACTERISTIC DATA OF GROUP GP2 PUMPS

(values obtained with mineral oil with viscosity of 36 cSt at 50°C)

### 5.1 - Flow rate curves $Q = f(n)$ obtained with operating pressure 0 bar



### 5.2 - Efficiencies

| PUMP NOMINAL SIZE | VOLUMETRIC EFFICIENCY [%] | TOTAL EFFICIENCY [%] |
|-------------------|---------------------------|----------------------|
| 0070              | 0.92                      | 0.87                 |
| 0095              | 0.95                      | 0.88                 |
| 0113              | 0.95                      | 0.87                 |
| 0140              | 0.93                      | 0.87                 |
| 0158              | 0.95                      | 0.86                 |
| 0178              | 0.93                      | 0.85                 |
| 0208              | 0.93                      | 0.88                 |
| 0234              | 0.97                      | 0.89                 |
| 0279              | 0.94                      | 0.85                 |

The volumetric and total efficiencies for the various nominal dimensions of the Group GP2 pumps, measured at 1500 rpm and with 150 bar operating pressure, are shown in the table.

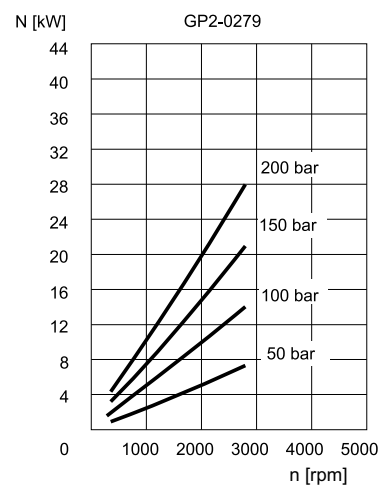
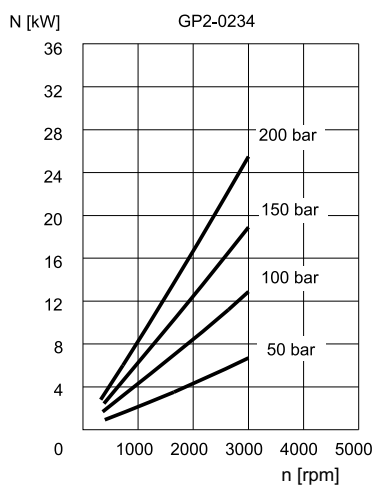
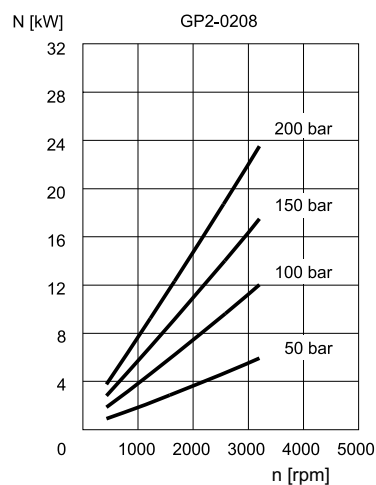
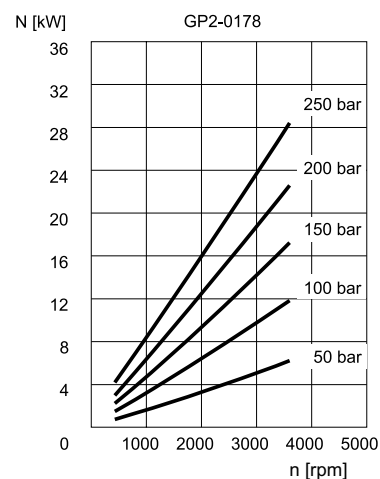
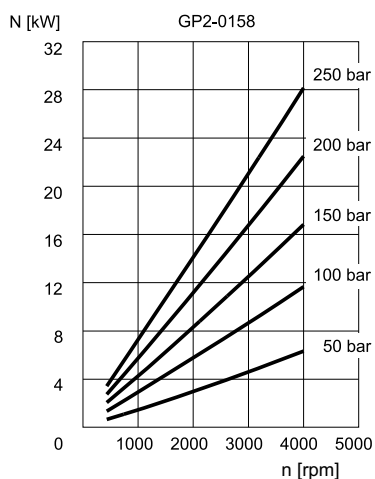
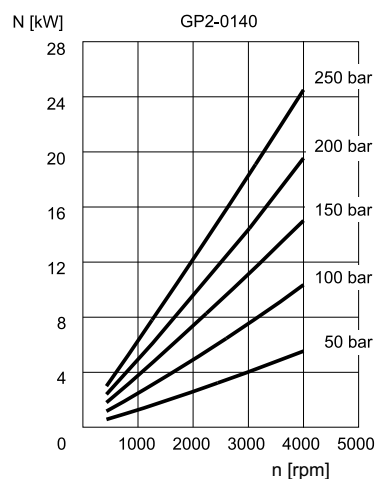
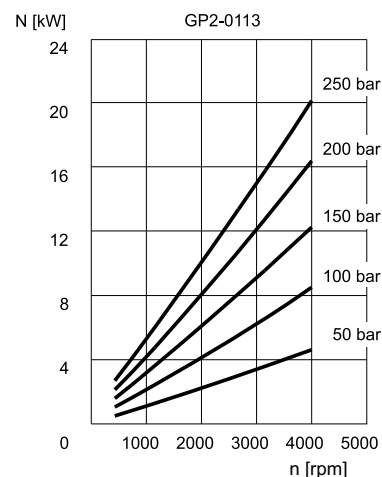
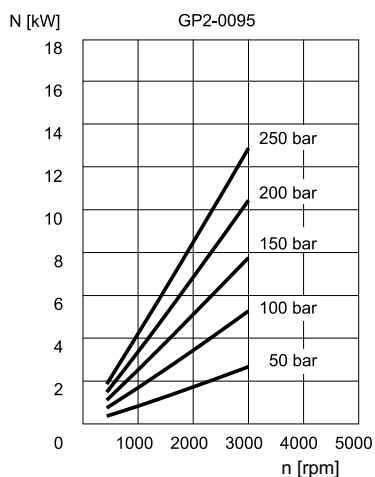
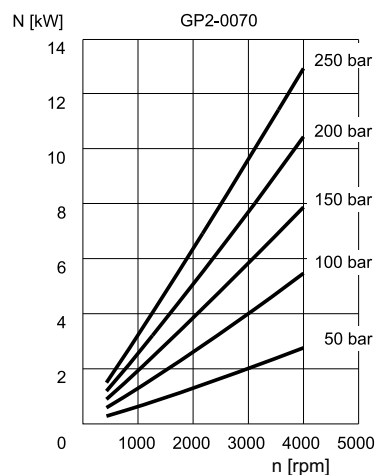
The total efficiency considers the volumetric efficiency and the mechanical efficiency of the pump in the specified operating conditions.

### 5.3 - Noise level

| PUMP NOMINAL SIZE | NOISE LEVEL [dB (A)] |
|-------------------|----------------------|
| 0070              | 75                   |
| 0095              | 77                   |
| 0113              | 77                   |
| 0140              | 72                   |
| 0158              | 72                   |
| 0178              | 73                   |
| 0208              | 74                   |
| 0234              | 76                   |
| 0279              | 76                   |

The noise levels for the various nominal dimensions of the Group GP2 pumps, measured at 1500 rpm, with 150 bar operating pressure and measured at a distance of 1 metre from the pump, are shown in the table.

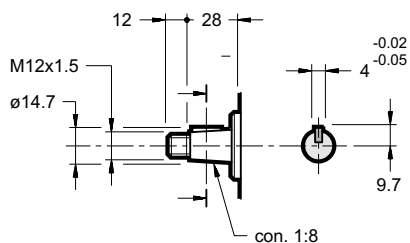
### 5.4 - Absorbed power curves $N = f(n)$ , measured with operating pressures from 50 to 250 bar



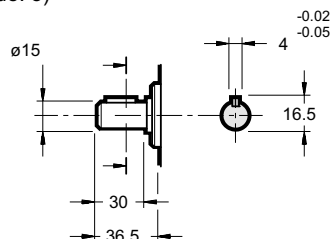
## 9 - GP2 PUMPS WITH STANDARD FLANGE - OVERALL AND MOUNTING DIMENSIONS

dimensions in mm

tapered shaft end with thread  
(**standard**, id. code 7)

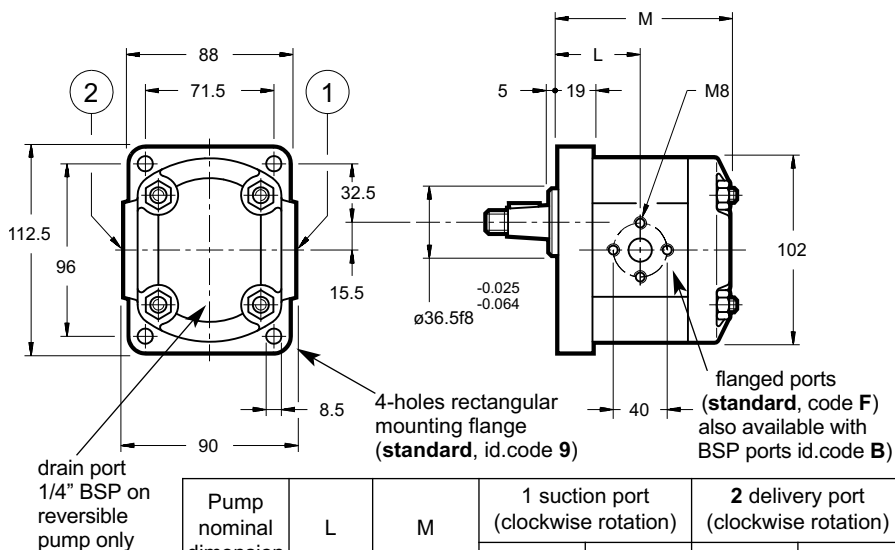


cylindrical keyed shaft end  
(id code: **5**)



**NOTE:**

1. Ports (1) and (2) are reversed on pumps with anticlockwise rotation
2. On reversible pumps the delivery port has the same size of the suction port

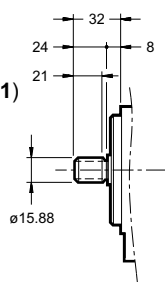


| Pump<br>nominal<br>dimension | L    | M     | 1 suction port<br>(clockwise rotation) |      | 2 delivery port<br>(clockwise rotation) |      |
|------------------------------|------|-------|--|------|---|------|
|                              |      |       | flange                                 | BSP  | flange                                  | BSP  |
| 0070                         | 47.5 | 97.5  | Ø13                                    | 1/2" | Ø13                                     | 1/2" |
| 0095                         | 49.5 | 101.5 |  |      |   |      |
| 0113                         | 51   | 104.5 | Ø19                                    | 3/4" |   |      |
| 0140                         | 53   | 108.5 |  |      |   |      |
| 0158                         | 54.5 | 111.5 |  |      |   |      |
| 0178                         | 56   | 114.5 |  |      |   |      |
| 0218                         | 58.5 | 119.5 |  |      |   |      |
| 0234                         | 60.5 | 123.5 |  |      | Ø19                                     |      |
| 0279                         | 64   | 130.5 |  |      |   |      |

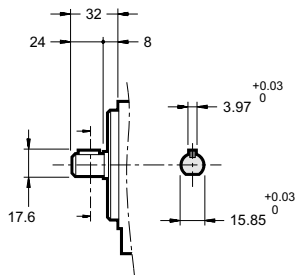
## 10 - GP2 PUMPS WITH SAE FLANGE - OVERALL AND MOUNTING DIMENSIONS

dimensions in mm

splined SAE A  
16/32 d.p. - 9T  
(**standard**, id. code 1)

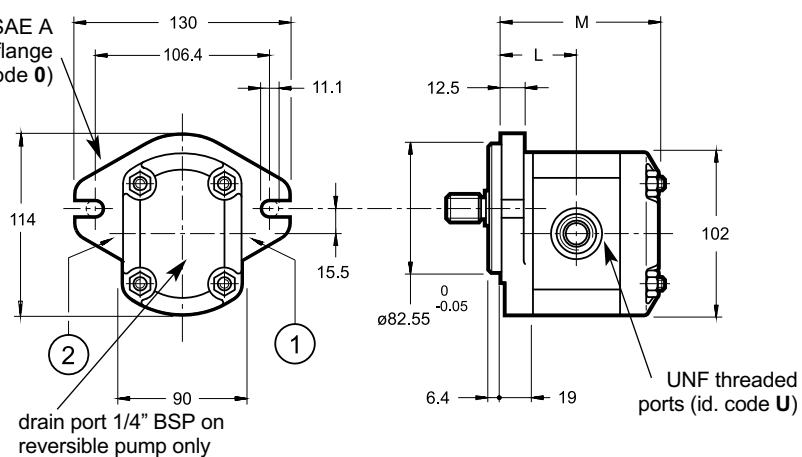


cylindrical keyed  
SAE A  
(id. code **0**)



**NOTE:**

1. Ports (1) and (2) are reversed on pumps with anticlockwise rotation
2. On reversible pumps the delivery port has the same size of the suction port



| Pump<br>nominal<br>dimension | L    | M     | 1 suction port<br>(clockwise rotation) |           | 2 delivery port<br>(clockwise rotation) |        |
|------------------------------|------|-------|--|-----------|---|--------|
|                              |      |       | flange                                 | UNF       | flange                                  | UNF    |
| 0070                         | 47.5 | 97.5  | Ø13                                    | 1 1/16-12 | Ø13                                     | 7/8-14 |
| 0095                         | 49.5 | 101.5 |  |           |   |        |
| 0113                         | 51   | 104.5 | Ø19                                    |           |   |        |
| 0140                         | 53   | 108.5 |  |           |   |        |
| 0158                         | 54.5 | 111.5 |  |           |   |        |
| 0178                         | 56   | 114.5 |  |           |   |        |
| 0218                         | 58.5 | 119.5 |  |           |   |        |
| 0234                         | 60.5 | 123.5 |  |           | Ø19                                     |        |
| 0279                         | 64   | 130.5 |  |           |   |        |

### 13 - INSTALLATION

- The GP gear pumps can be installed with shaft oriented in any position.
- Check that the rotation direction of the motor corresponds to the direction of the arrow marked on the pump before commissioning.
- Before the first start up vent the air from the delivery port.
- The pump start up, especially at a cold temperature, should occur with the pump unloading.
- The suction pipe must be suitably sized to facilitate the passage of the fluid. Bends and restrictions or an excessive length of the pipeline can affect the correct operation of the pump. It is advisable not to exceed the speed of 1 ÷ 2 m/sec in suction hose.
- The minimum permissible suction pressure is -0.3 bar relative. Standard pumps cannot work with pressure at suction port, except reversible pumps, which are able to withstand pressurized inlet
- Gear pumps must not operate with a rotation speed lower than the minimum rotation speed indicated in table 3 - performance. **The pumps must be filled with the same operating fluid as the circuit before being installed.** Filling can be done through the ports connections. Rotate the pump manually if needed.
- The motor-pump connection must be carried out directly with a flexible coupling able to compensate any offsets. Couplings that generate axial or radial loads on the pump shaft are not allowed.
- The drain port of the reversible pumps must always be connected to the tank. Maximum permitted pressure rise is 6 bar

### 14 - MULTIPLE PUMPS

It's possible to create multi-flow groups with independent hydraulic circuits coupling several pumps together. While sizing multiple pumps the following conditions must be taken into account:

- Assembly can take place between pumps of the same group, or in decreasing order of size.
- The max. rotation speed is determined by the pump with the lowest speed.
- The values of the max. applicable torque can not be exceeded.

#### 14.1 - Maximum applicable torque

The input torque (M) is given for each pump by the following ratio:

$$M = \frac{9550 \cdot N}{n} = [\text{Nm}] \quad n = \text{rotation speed [rpm]}$$

where the absorbed power (N) is given by:

$$N = \frac{Q \cdot \Delta p}{600 \cdot \eta_{\text{tot}}} = [\text{kW}] \quad \begin{aligned} Q &= \text{flow rate [l/min]} \\ \Delta p &= \text{differential pressure between the pump suction and delivery [bar]} \\ \eta_{\text{tot}} &= \text{total efficiency (see diagrams in par. 4.2 - 5.2 - 6.2).} \end{aligned}$$

or it can be obtained from the diagrams ABSORBED POWER (see paragraphs 4.4 - 5.4 - 6.4).

If several pumps are coupled, the torque of each single pump has to be added to the torque of subsequent pumps when they are loaded simultaneously.

The obtained torque value for each pump has to be lower than the value specified in the table below.

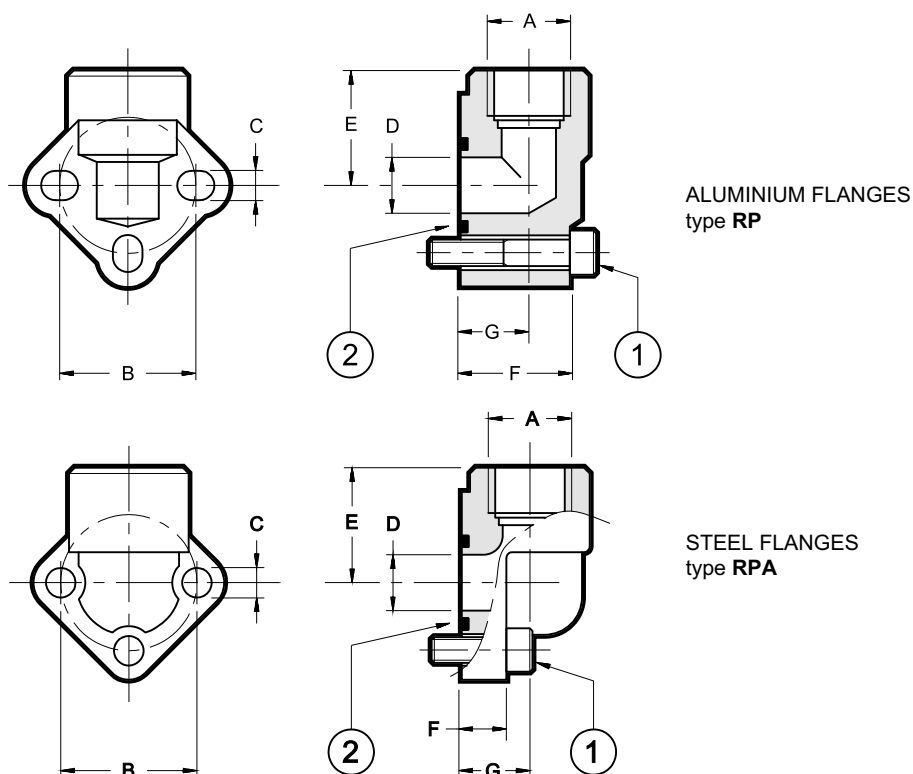
If the obtained torque values are higher than those stated in the table, reduce the working pressure value or replace the overloaded pump with a pump suitable to bear the required torque.

|                 | MAX APPLICABLE TORQUE [Nm] |                            |   |                          |     |     |
|-----------------|----------------------------|----------------------------|---|--------------------------|-----|-----|
|                 | Front pump shaft type      |                            |   | Intermediate / rear pump |     |     |
| front pump size | tapered, keyed<br>code 7   | SAE J744 splined<br>code 1 | SAE J744<br>cylindrical keyed<br>code 0 | GP1                      | GP2 | GP3 |
| GP1             | 90                         | 55                         | 55                                      | 50                       | -   | -   |
| GP2             | 145                        | 110                        | 105                                     |                          | 110 | -   |
| GP3             | 280                        | 405                        | 295                                     |                          |     | 230 |



## 16 - CONNECTION FLANGES

dimensions in mm



ALUMINIUM FLANGES TYPE RP

Fastening bolt and O-rings included

|     | Flange code | Flange description | $p_{max}$ [bar] | ØA       | B  | C    | ØD   | E  | F  | G  | (1)<br>SHC bolts | (2)<br>seals            |
|-----|-------------|--------------------|-----------------|----------|----|------|------|----|----|----|------------------|-------------------------|
| GP1 | 0610506     | RP1 - 38           | 180             | 3/8" BSP | 30 | 6.5  | 12.5 | 30 | 26 | 18 | n°3 - M6x35      | OR 121<br>(15.88x2.62)  |
|     | 0610248     | RP1 - 12           |                 | 1/2" BSP | 30 | 6.5  | 12.5 | 30 | 26 | 18 |                  |                         |
| GP2 | 0610508     | RP2 - 12           |                 | 1/2" BSP | 40 | 8.5  | 18.5 | 40 | 31 | 20 | n°3 - M8x45      | OR 130<br>(22.22x2.62)  |
|     | 0610249     | RP2 - 34           |                 | 3/4" BSP | 40 | 8.5  | 18.5 | 40 | 31 | 20 |                  |                         |
| GP3 | 0610717     | RP3 - 34           |                 | 3/4" BSP | 51 | 10.5 | 25   | 46 | 43 | 26 | n°3 - M10x60     | OR 4118<br>(29.75x3.53) |
|     | 0610250     | RP3 - 100          |                 | 1" BSP   | 56 | 10.5 | 25   | 46 | 43 | 26 |                  |                         |

STEEL FLANGES TYPE RPA

|     | Flange code | Flange description | $p_{max}$ [bar] | ØA       | B  | C    | ØD | E  | F  | G    | (1)<br>SHC bolts | (2)<br>seals            |
|-----|-------------|--------------------|-----------------|----------|----|------|----|----|----|------|------------------|-------------------------|
| GP1 | 0771048     | RPA1 - 38          | 315             | 3/8" BSP | 30 | 6.5  | 12 | 24 | 17 | 9.5  | n°3 - M6x20      | OR 121<br>(15.88x2.62)  |
|     | 0771049     | RPA1 - 12          |                 | 1/2" BSP | 30 | 6.5  | 12 | 24 | 17 | 9.5  |                  |                         |
| GP2 | 0771050     | RPA2 - 12          |                 | 1/2" BSP | 40 | 8.5  | 20 | 36 | 22 | 11.5 | n°3 - M8x25      | OR 132<br>(23.81x2.62)  |
|     | 0770615     | RPA2 - 34          |                 | 3/4" BSP | 40 | 8.5  | 20 | 36 | 22 | 11.5 |                  |                         |
| GP3 | 0771051     | RPA3 - 34A         |                 | 3/4" BSP | 51 | 10.5 | 24 | 46 | 26 | 13   | n°3 - M10x30     | OR 3125<br>(31.42x2.62) |
|     | 0770617     | RPA3 - 100A        |                 | 1" BSP   | 51 | 10.5 | 24 | 46 | 26 | 13   |                  |                         |
|     | 0770618     | RPA3 - 34B         |                 | 3/4" BSP | 56 | 10.5 | 24 | 46 | 26 | 13   |                  |                         |
|     | 0770619     | RPA3 - 100B        |                 | 1" BSP   | 56 | 10.5 | 24 | 46 | 26 | 13   |                  |                         |
|     | 0771052     | RPA35 - 114A       |                 | 1" ¼ BSP | 62 | 13   | 31 | 55 | 35 | 17   | n°3 - M10x35     |                         |