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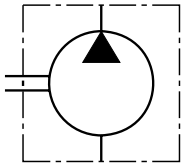
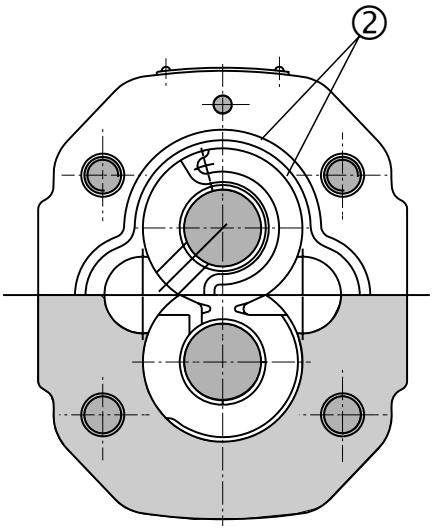
P_{max} 2900 to 4500 PSI • Q_{max} 7.1 to 42.8 GPM

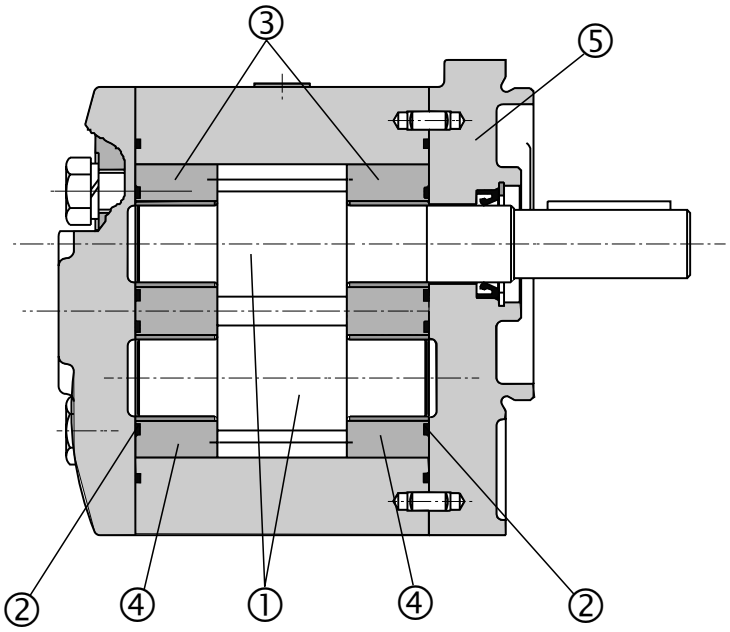


- High reliability
- High dimensional and general effect
- Low noise level in whole operating range
- High volumetric efficiency

Functional Description

The gear Pumps Series GP1-Q consists of 2 intermeshing gears (1), one of them connected to the drive shaft. Right or Left hand rotation on the drive shaft generates pressure and flow as given in the technical data section on page 2. The pumps have optimized efficiency through pressurized internal sealing technology (2). The floating bushings (3) with special bearings (4) are pressure dependent pushed against the gears which guarantee minimum gap clearance between bushing and gears thereby sealing the gears axially. The radial sealing is done by forcing the gears against the body. The gear pumps have 2-Bolt SAE mounting flange (5) and keyed shaft. Pressure port is SAE O-Ring Port and Suction ports are SAE - Flange Ports.





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Order Code

GP1- Q [ ][ ][ ][ ][ ][ ][ ]

Gear pump

Series

Nominal displacement

0.610 cinch/rev (10cm^3/rev)	**10**
1.037 cinch/rev (17cm^3/rev)	**17**
1.648 cinch/rev (27cm^3/rev)	**27**
2.075 cinch/rev (34cm^3/rev)	**34**
2.624 cinch/rev (43cm^3/rev)	**43**
3.112 cinch/rev (51cm^3/rev)	**51**
3.723 cinch/rev (61cm^3/rev)	**61**
4.333 cinch/rev (71cm^3/rev)	**71**
5.004 cinch/rev (82cm^3/rev)	**82**
6.102 cinch/rev (100cm^3/rev)	**100**

Direction of rotation:

Clockwise	**R**
Counterclockwise	**L**

K7 — Cylindrical Keyed Shaft 7/8

F — **Suction Ports**: Flange face to SAE J518

O — **Pressure Ports**: O-ring Ports to SAE J1926 (ISO 11926)

B — **Flange**: SAE B (SAE J744C)

Seals: no designation — NBR (Other upon request)

Technical Data

Nominal series specifications		Q 10	Q 17	Q 27	Q 34	Q 43	Q 51	Q 61	Q 71	Q 82	Q 100
Nominal displacement	cinch	0.610	1.037	1.648	2.075	2.624	3.112	3.723	4.333	5.004	6.102
Speed - nominal	RPM	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
maximum	RPM	3000	3000	3000	2800	2500	2500	2000	1800	1800	1800
minimum	RPM	600	600	600	600	600	500	500	500	500	500
Pressure on the inlet -nominal maximum minimum	PSI	+7.25 - 4.35									
Pressure on the outlet											
max.continuous	PSI	3916	4206	4206	4061	3916	3624	3334	3044	2611	2611
maximum	PSI	4206	4496	4496	351	4206	3916	3624	3334	2901	2901
Nominal outlet flow (min.)*	GPM	4.200	7.133	11.359	14.318	18.096	21.477	25.676	29.904	34.607	42.135
Max. flow **	GPM	7.133	12.152	19.020	22.719	25.625	30.380	28.795	30.380	34.870	42.796
Power demand-nominal(max.)*	HP	12.605	23.066	36.476	44.254	54.043	59.00	65.308	69.063	69.063	83.814
Max. Power demand **	HP	19.713	41.572	65.710	75.097	81.132	87.166	77.109	73.756	77.779	95.212
Efficiency - hydraulic total		min. 0.9 min. 0.8									
Pressure fluid		Petroleum oils HM, HV, according CETOP RP 91 H Viscosity classes SO VG 32, 46 and 68									
Fluid temperature range (operating)	°F	+5 to +158									
Operating viscosity range	SUS	98 to 1840									
Maximum degree of fluid contamination		Class 21/18/15 according to ISO 4406 (1999)									
Ambient temperature range	°F	-4 to +131									
Mass	lb (kg)	17.09 (7.75)	19.84 (9.00)	20.28 (9.20)	20.94 (9.50)	21.83 (9.90)	22.60 (10.25)	23.24 (10.54)	24.45 (11.09)	25.09 (11.38)	25.73 (11.67)
Mounting position		any									

* at nominal speed and maximum continuous pressure ** at maximum speed and maximum pressure

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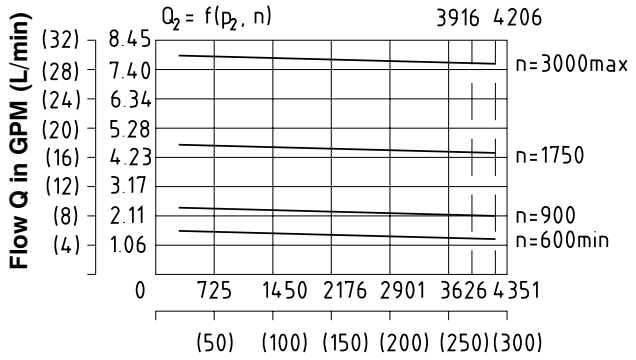
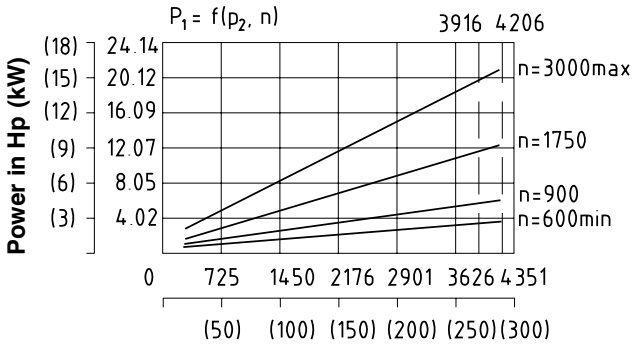
Performance Data

measured at ν = 166 SUS (35 $mm^2.s^{-1}$) and t = 122°F (50°C)

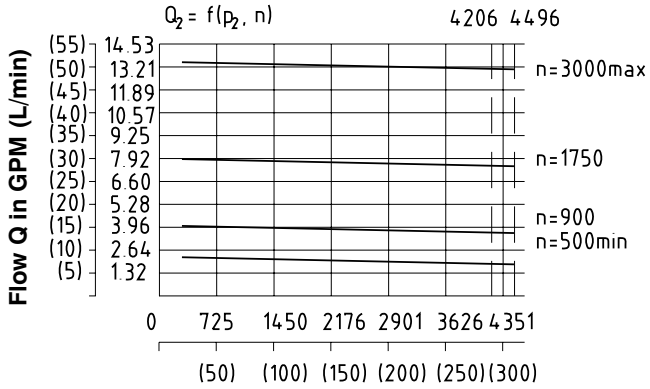
Outlet flow in relation to power demand and outlet pressure

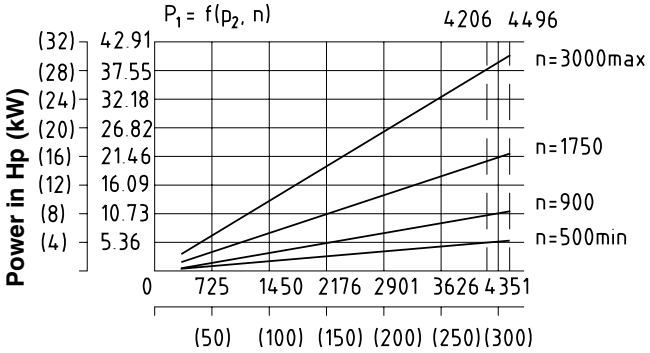
Nominal Size 10



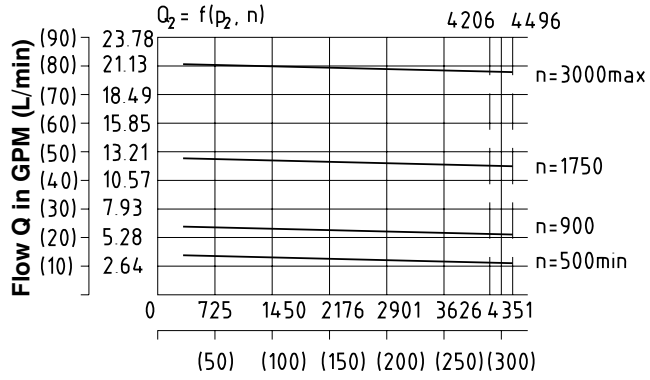


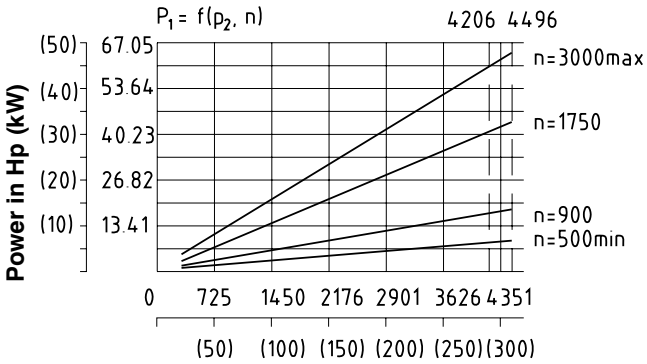
Nominal Size 17





Nominal Size 27





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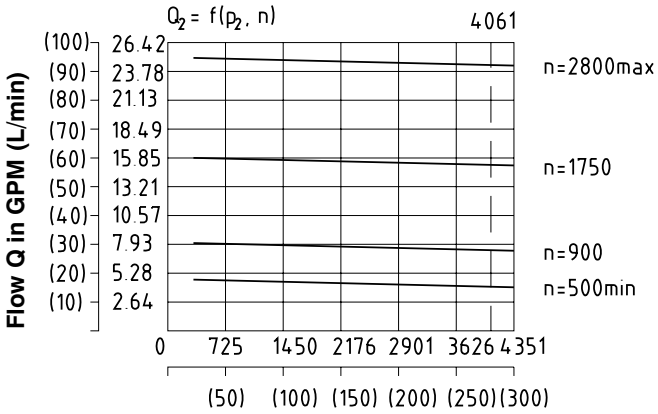
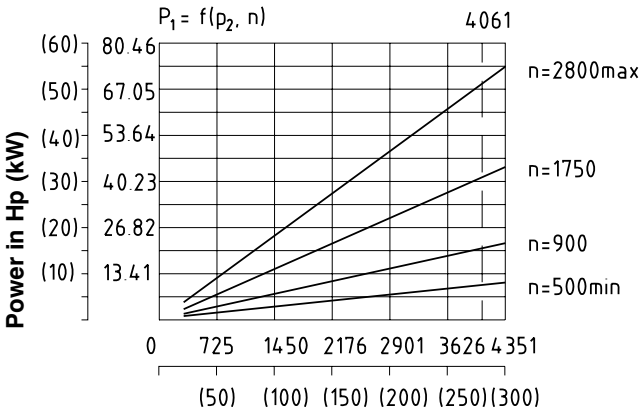
Performance Data

measured at ν = 166 SUS (35 $mm^2.s^{-1}$) and t = 122°F (50°C)

Nominal Size 34

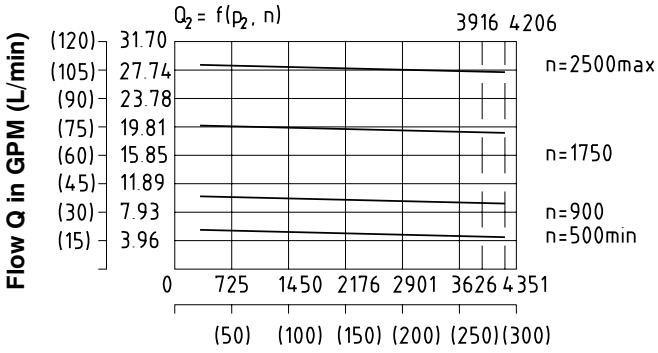


Pressure p_2 in PSI (bar)

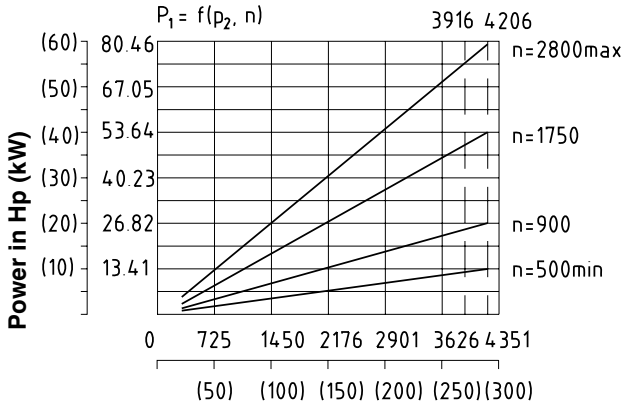


Pressure p_2 in PSI (bar)

Nominal Size 43

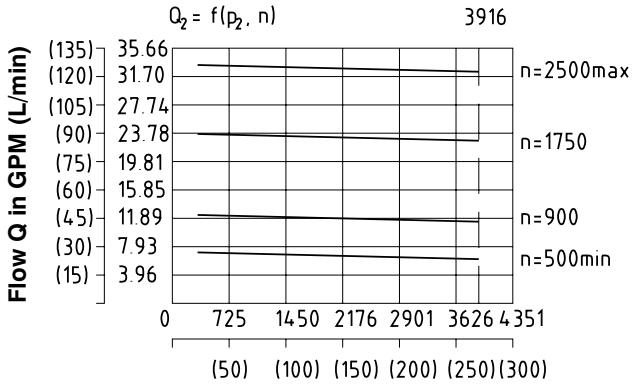


Pressure p_2 in PSI (bar)

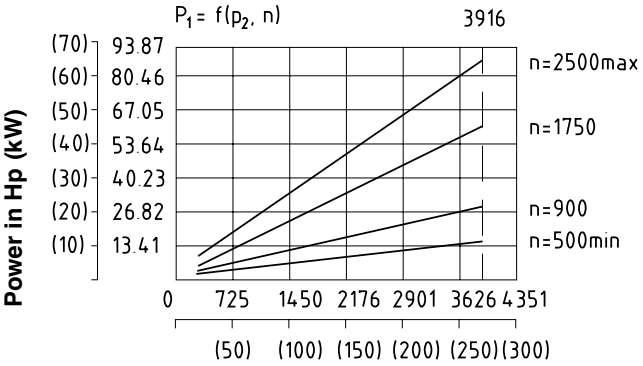


Pressure p_2 in PSI (bar)

Nominal Size 51



Pressure p_2 in PSI (bar)



Pressure p_2 in PSI (bar)

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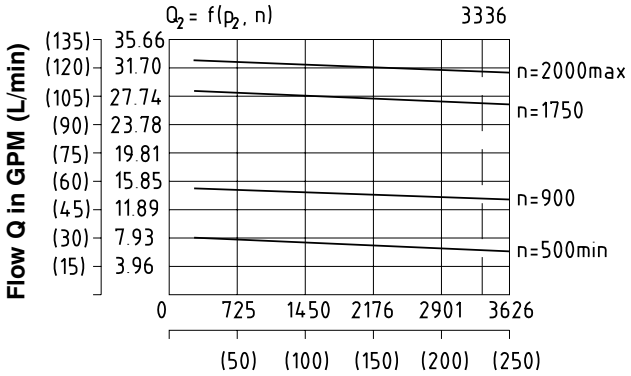
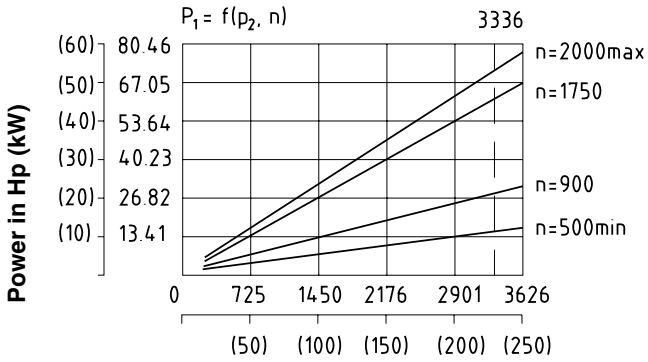
Performance Data

measured at ν = 166 SUS (35 $mm^2.s^{-1}$) and t = 122°F (50°C)

Nominal Size 61

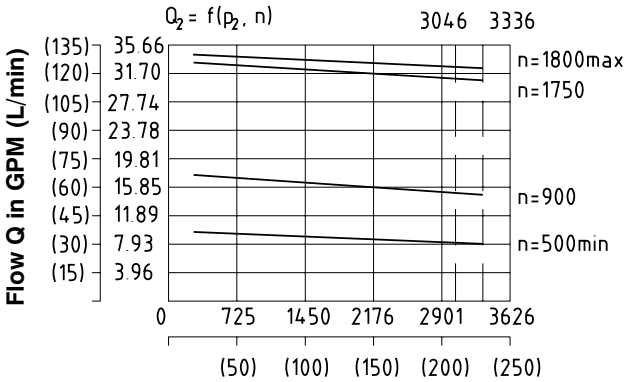


Pressure p_2 in PSI (bar)

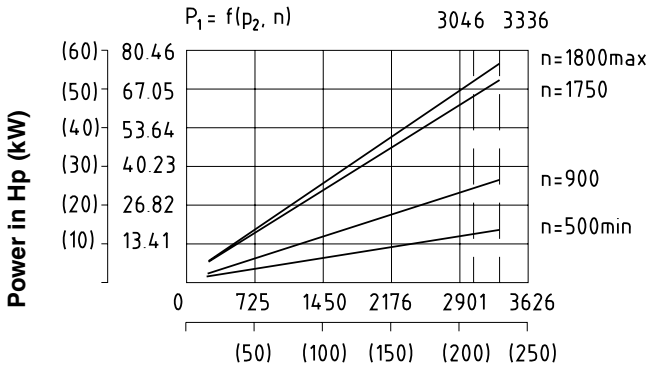


Pressure p_2 in PSI (bar)

Nominal Size 71

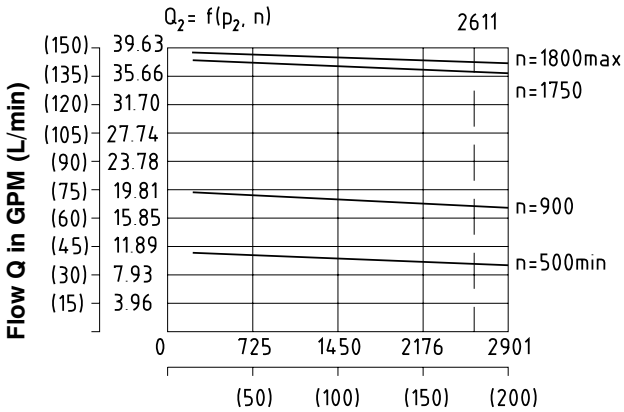


Pressure p_2 in PSI (bar)

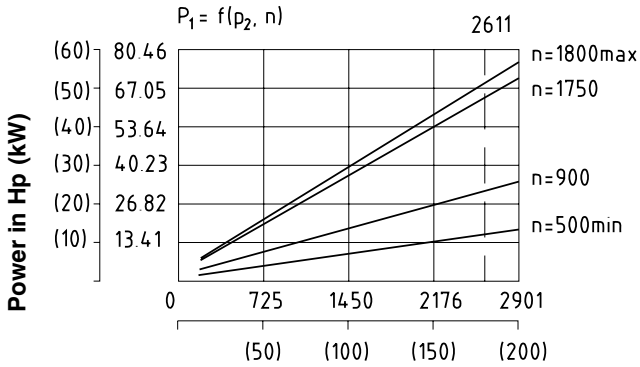


Pressure p_2 in PSI (bar)

Nominal Size 82



Pressure p_2 in PSI (bar)



Pressure p_2 in PSI (bar)

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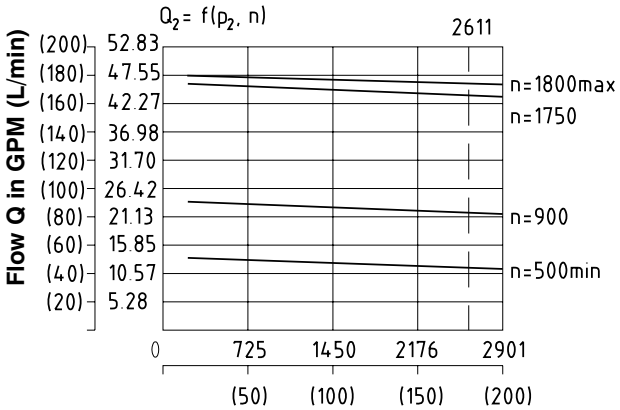
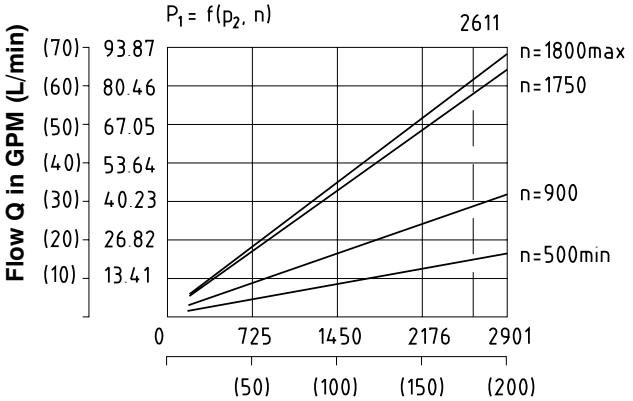
Performance Data

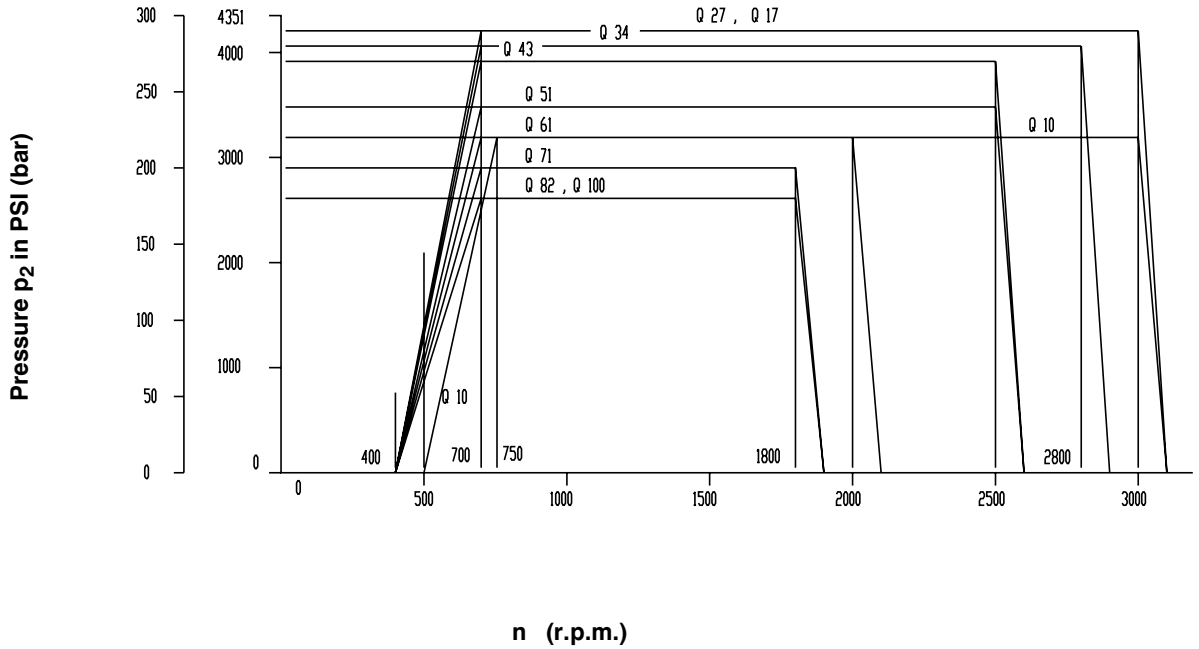
measured at ν = 166 SUS (35 $mm^2.s^{-1}$) and t = 122°F (50°C)

Nominal Size 100





Pressure rating on the Q - series gear pumps in relationship to revolutions



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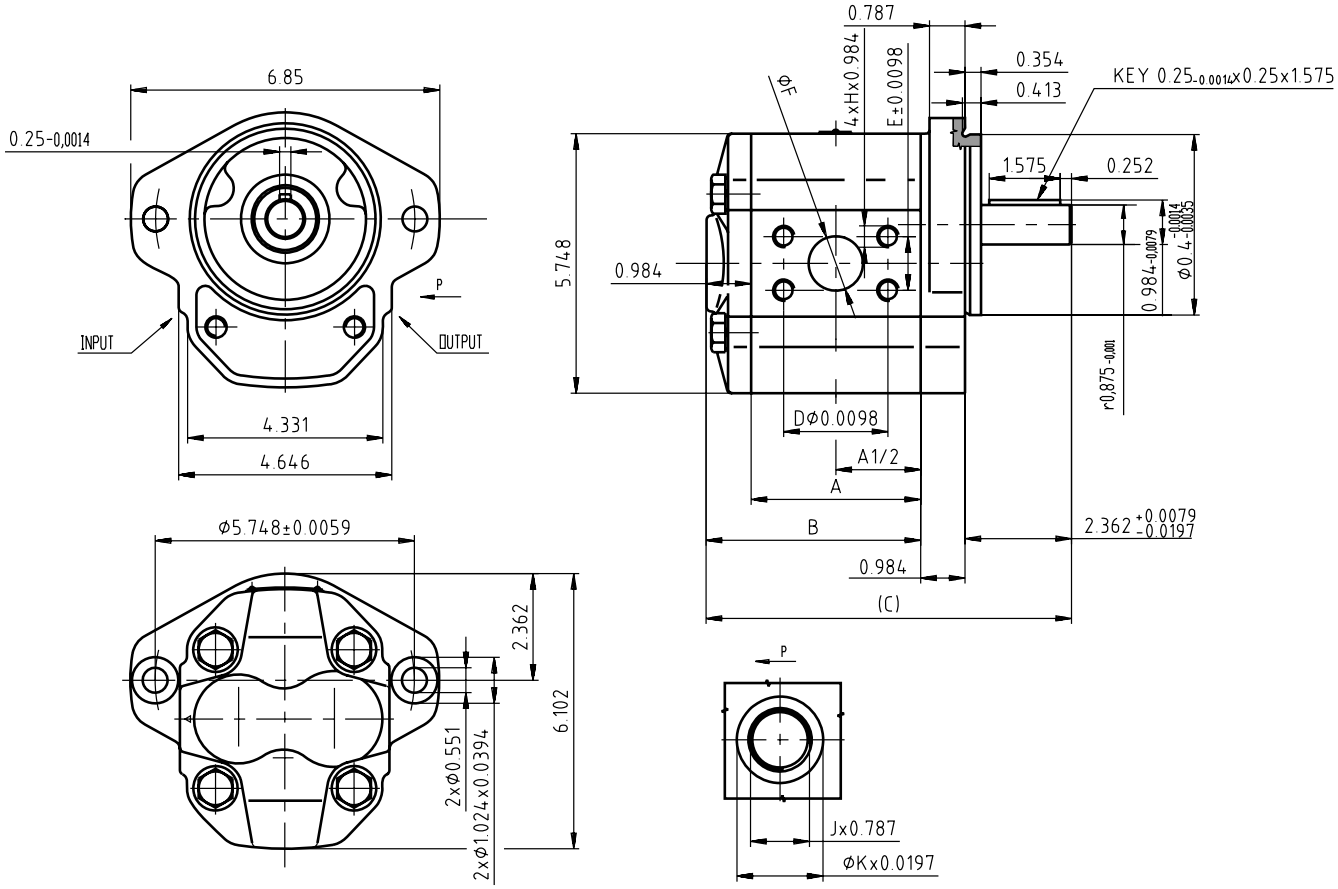
Pump Dimenions

Dimensions in inches



Note: The right hand rotation pump is drawn, the inlet and outlet ports of left hand rotation pump are interchanged.

Table of dimensions

CODE	Displ. $in^3/1$ ($cm^3/1$)	Nominal Pressure PSI (bar)	Dimension (")								
			A	B	C	D	E	F	H	J	K
Q - 10	0.610 (10.0)	3916 (270)	2.441	3.425	6.772	1.031	2.063	1.000	M10x1.5	1-1/16-12UN-2B	1.622
Q - 17	1.037 (17.0)	4206 (290)	2.677	3.661	7.008	1.031	2.063	1.000	M10x1.5	1-1/16-12UN-2B	1.622
Q - 27	1.648 (27.0)	4206 (290)	3.012	3.997	7.343	1.031	2.063	1.000	M10x1.5	1-1/16-12UN-2B	1.622
Q - 34	2.075 (34.0)	4061 (280)	3.228	4.213	7.559	1.031	2.063	1.000	M10x1.5	1-5/16-12UN-2B	1.937
Q - 43	2.624 (43.0)	3916 (270)	3.524	4.508	7.854	2.311	1.189	1.205	M12x1.75	1-5/16-12UN-2B	1.937
Q - 51	3.112 (51.0)	3624 (250)	3.799	4.783	8.130	2.752	1.406	1.457	M12x1.75	1-5/16-12UN-2B	1.937
Q - 61	3.723 (61.0)	3334 (230)	4.134	5.118	8.465	2.752	1.406	1.457	M12x1.75	1-5/16-12UN-2B	1.937
Q - 71	4.333 (71.0)	3044 (210)	4.468	5.453	8.799	2.752	1.406	1.457	M12x1.75	1-5/16-12UN-2B	1.937
Q - 82	5.004 (82.0)	2611 (180)	4.823	5.807	9.154	2.752	1.406	1.457	M12x1.75	1-5/16-12UN-2B	1.937
Q - 100	6.102 (100.0)	2611 (180)	5.276	6.713	10.060	2.752	1.406	1.457	M12x1.75	1-5/16-12UN-2B	1.937

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Caution!

- The packing foil is recyclable.
- Certified documentation is available per request.

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