

Gear Pumps

Series PGP
Fixed Displacement Pumps,
Aluminium Designs

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



ENGINEERING YOUR SUCCESS.

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PGP 500 pumps offer superior performance, high efficiency and low noise operation at high operating pressures. They are produced in four frame sizes (PGP 502, PGP 505, PGP 511, PGP 517) with displacements ranging from 0.8 to 70 cm³/rev. A wide variety of standard options is available to meet specific application requirements.



Characteristics

- **Up to 280 bar continuous operation**
High strength materials and large journal diameters provide low bearing loads for high pressure operation.
- **Low noise**
PGP 502 - 9 tooth gear profile, PGP 505 and 517 - 13 tooth gear profile, PGP 511 - 12 tooth gear profile and optimized flow metering provide reduced pressure pulsation and exceptionally quiet operation (PGP511 also available as noise reduced “stealth” version).

- **High efficiency**
Pressure balanced bearing blocks assure maximum efficiency under all operating conditions.
- **Application flexibility**
International mounts and connections, integrated valve capabilities and common inlet multiple pump configurations provide unmatched design and application versatility.
- **Large range of integrated valves**



Technical data

Pump type	Heavy-duty, aluminium, external gear.
Mounting	SAE, rectangular, thru-bolt standard specials on request.
Ports	SAE and metric split flanges and others
Shaft style	SAE splined, keyed, tapered, cylindrical tang drive, specials on request.
Speed	500 - 5000 rpm, see Technical Data
Theor. displacement	See Technical Data
Drive	Drive direct with flexible coupling is recommended.
Axial / Radial load	Units subject to axial or radial loads must be specified with an outboard bearing.
Inlet pressure	Operating range 0.8 to 2 bar abs. Min. inlet pressure 0.5 bar abs. Short time without load. Consultation is recommended.
Outlet pressure	See Technical Data
Pressure rising rate	Max. 3000 bar/s
Flow velocity	See Nomograph for Pipe Velocity
Hydraulic fluids	Hydraulic oil HLP, DIN 51524-2
Fluid temperature	Range of operating temperature -15 to +80 °C. Max. permissible operating pressure dependent on fluid temperature. Temperature for cold start -20 to -15 °C at speed ≤ 1500 rpm. Max. permissible operating pressure dependent on fluid temperature.

Fluid viscosity	Range of operating viscosity 8 to 1000 mm ² /s (511 & 517) 20 to 1000 mm ² /s (502 & 505) Max. permissible operating pressure dependent on viscosity. Viscosity range for cold start 1000 to 2000 mm ² /s at operating pressure p ≤ 10 bar and speed n ≤ 1500 rpm.
Range of ambient temperature	-40 °C to +70 °C
Filtration	According to ISO 4406 Cl. 18/16/13
Direction of rotation (looking at the drive shaft)	Clockwise, counter-clockwise or double. Attention! Drive pump only in indicated direction of rotation.
Multiple pump assemblies	<ul style="list-style-type: none"> • Available in two or three section configuration. • Max. shaft load must be conform to the limitations shown in the shaft loading rating table in this catalogue. • Max. load is determined by adding the torque values for each pumping section that will be simultaneously loaded.
Separate or common inlet capability	Separate inlet configuration: <ul style="list-style-type: none"> • Each gear housing has individual inlet and outlet ports. Common inlet configuration: <ul style="list-style-type: none"> • Two gear sets share a common inlet.



Gear design

Type

502

Unit

**Dis-
placement**

Rotation

Shaft

Flange

Shaft seal

Inlet

Outlet

side ports option

B 1 B 1

No rear ports
 (rear ports on request)

Code	Type
P	Pump

Code	Unit
	Pump
A	Single unit
B	Multiple unit

Displacement	
Code	ccm
0008	0.8
0012	1.2
0016	1.6
0021	2.1
0025	2.5
0033	3.3
0036	3.6
0043	4.3
0048	4.8
0058	5.8
0062	6.2
0079	7.9

Code	Rotation
C	Clockwise
A	Counter-clockwise

Code	Shaft
H1 ²⁾	Ø10, 3.0 key, no thread, 36L, parallel
P2 ³⁾	Ø9.35, 8.8L, 2.4 key, M6, taper 1:8
V1 ⁴⁾	5x6.5 long shaft w/o coupling tang drive
V2 ⁵⁾	5x4.5 short shaft w/o coupling tang drive

Code	Port options
E3E2	1/2" - 14 BSP thread/ 3/8" - 19 BSP thread
J4J3	Ø12 mm - Ø30 mm - M6 square flange/ Ø8 mm - Ø30 mm - M6 square flange

Example: E3 = inlet port
 E2 = outlet port

Code	Shaft seal
X	No seal
N	NBR

Code	Flange
D1	52.2x72.0 - Ø25.4 rectangular
H1	82.5 - Ø50.8 SAE "A-A" 2 bolt flange
P3	40.0x40.0 - Ø32.0 w/ seal, thru bolt flange
P4	40.0x40.0 - Ø32.0 w/ seal f. short shaft, thru bolt flange

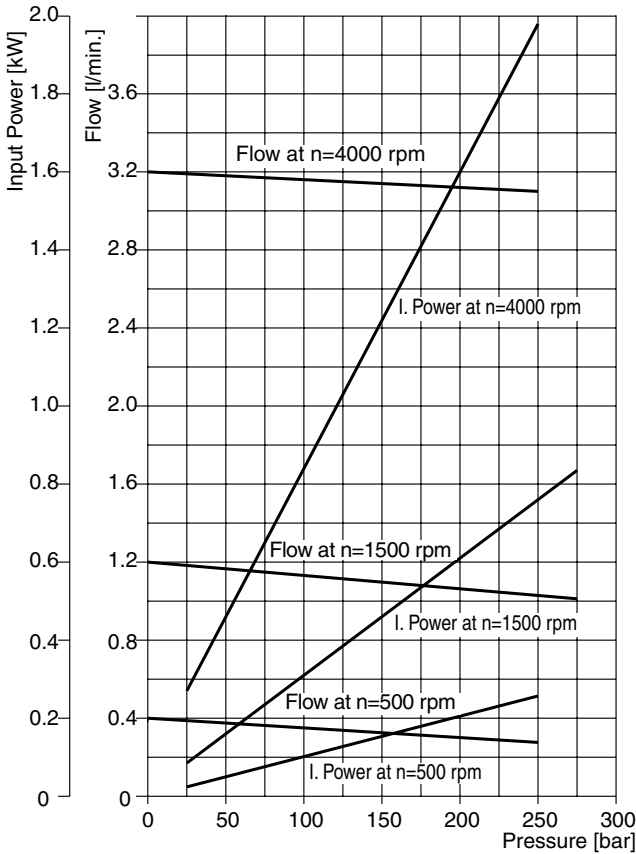
²⁾ Only used with flange H1, D1.

³⁾ Only used with flange D1.

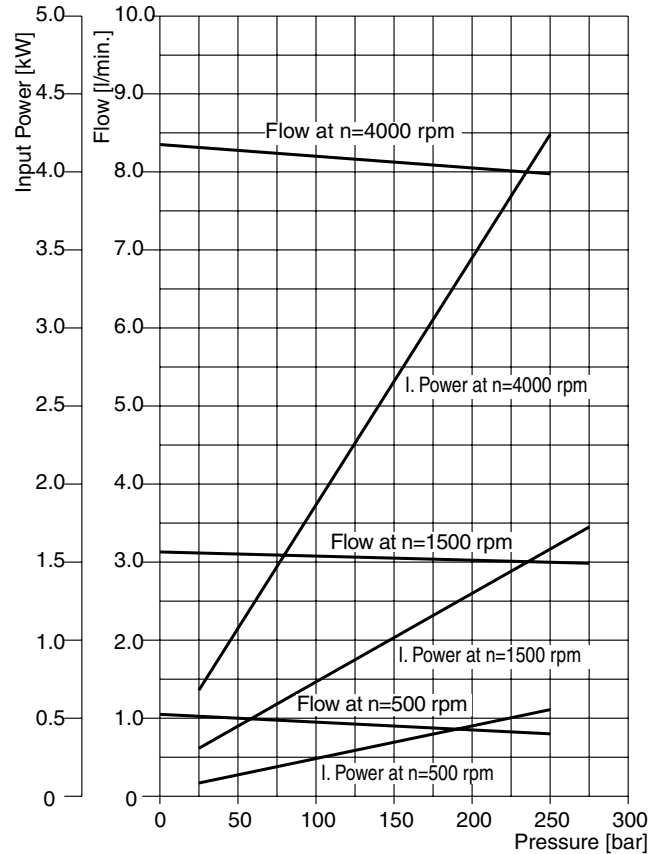
⁴⁾ Only used with flange H1.

⁵⁾ Only used with flange P3, P4.

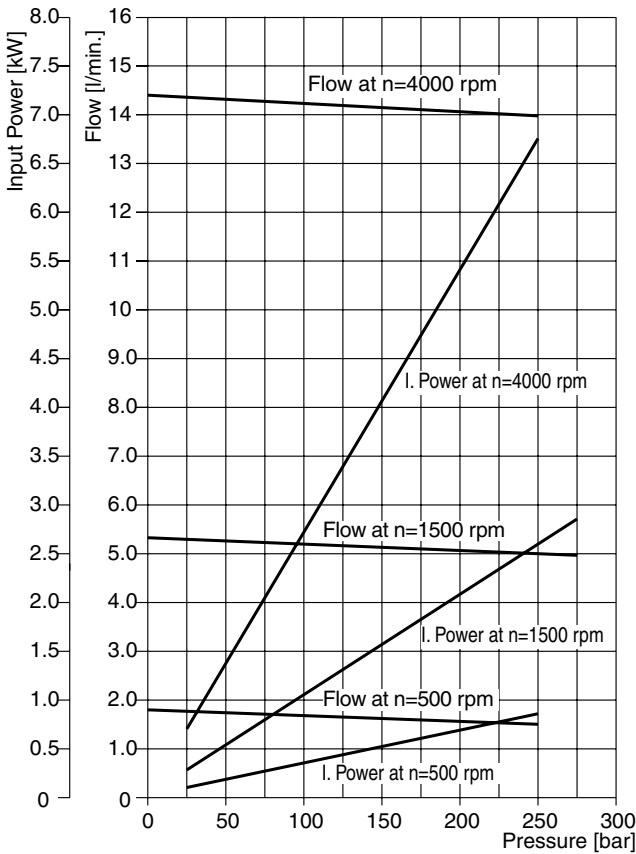
PGP502 - 0.8 CC



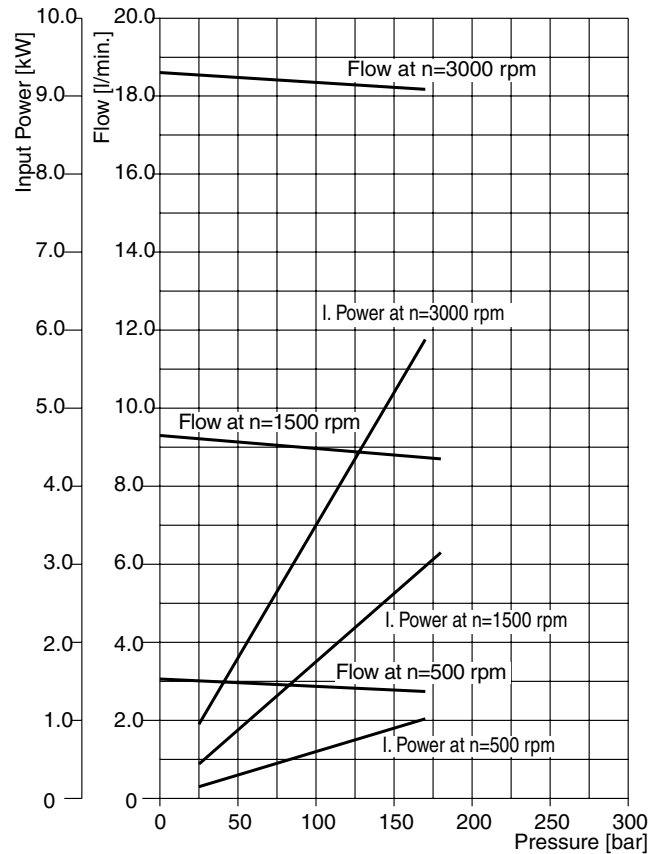
PGP502 - 2.1 CC



PGP502 - 3.6 CC



PGP502 - 6.2 CC



04-01_PGP-500-UK-112

Fluid temperature: 45 °C± 2K ;

Viscosity: 36mm²/s ;

Inlet pressure: 0.9 + 0.1 bar absolute

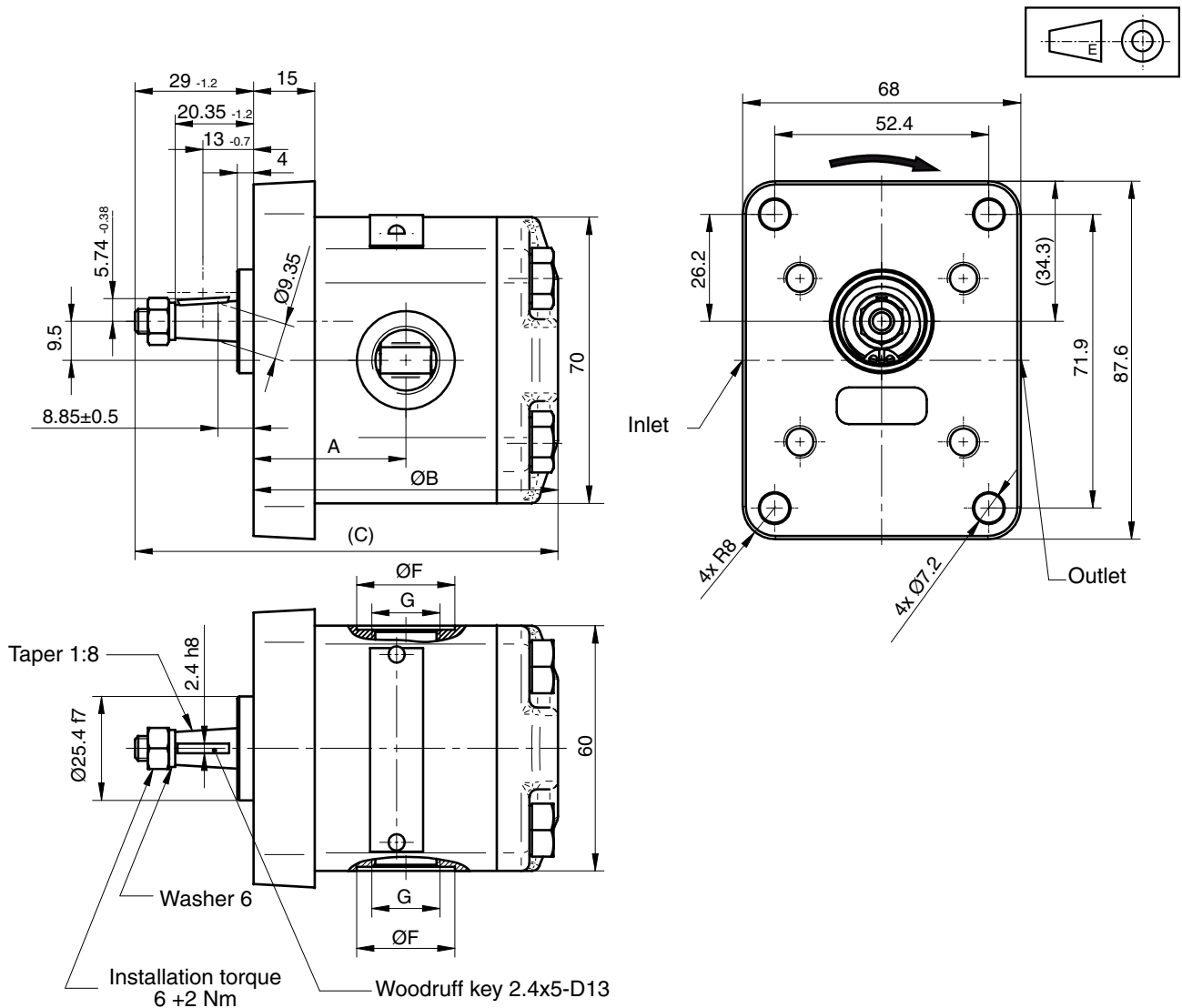


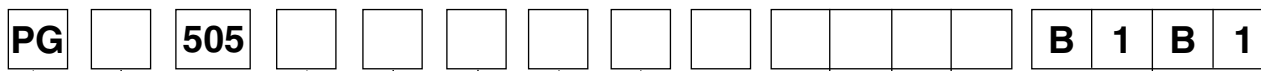
PGP502 A XXXX Y P2 D1 N SS PP B1 B1

“Y” = C (clockwise rotation)
 = A (counter-clockwise rotation)

Displacement XXXX	cm ³ /rev	Dimension			Inlet port			Outlet port			Speed of rotation		Working pressure max. bar	Order number direction of rotation	
		A mm	B mm	C mm	SS	G mm	F mm	PP	G mm	F mm	min. rpm	max. rpm		clockwise	counter-clockwise
0008	0.8	32.6	65.3	94.0	E3	G 1/2"	33	E2	G 3/8"	24	500	5000	280	330 9111 346	330 9112 233
0012	1.2	33.4	66.8	96.0	E3	G 1/2"	33	E2	G 3/8"	24	500	5000	280	330 9111 347	330 9112 234
0016	1.6	34.1	68.3	97.5	E3	G 1/2"	33	E2	G 3/8"	24	500	5000	280	330 9111 348	330 9112 235
0021	2.1	34.9	69.9	99.0	E3	G 1/2"	33	E2	G 3/8"	24	500	4500	280	330 9111 349	
0025	2.5	35.7	71.5	100.5	E3	G 1/2"	33	E2	G 3/8"	24	500	4500	280	330 9111 350	330 9112 236
0033	3.3	37.2	74.5	103.5	E3	G 1/2"	33	E2	G 3/8"	24	500	4000	280	330 9111 351	330 9112 237
0036	3.6	37.8	75.6	104.5	E3	G 1/2"	33	E2	G 3/8"	24	500	4000	260	330 9111 352	330 9112 238
0043	4.3	39.2	78.5	107.5	E3	G 1/2"	33	E2	G 3/8"	24	500	4000	250	330 9111 353	
0048	4.8	40.0	80.0	109.0	E3	G 1/2"	33	E2	G 3/8"	24	500	3800	230	330 9111 354	330 9112 239
0058	5.8	41.9	83.8	113.0	E3	G 1/2"	33	E2	G 3/8"	24	500	3800	200	330 9111 355	330 9112 240
0062	6.2	42.6	85.3	114.5	E3	G 1/2"	33	E2	G 3/8"	24	500	3500	180	330 9111 356	330 9112 241
0079	7.9	45.8	91.6	121.0	E3	G 1/2"	33	E2	G 3/8"	24	500	3000	160	330 9111 357	

Dimensions (clockwise rotation shown)





PG
 Gear design

Type

505

Unit

**Dis-
 placement**

Rotation

Shaft

Flange

Shaft seal

Inlet

Outlet

side ports

option

B

1

B

1

No rear ports
 (rear ports on request)

Code	Type
P	Pump

Code	Unit Pump
A	Single unit
M	Single distributor unit
B	Multiple unit

Displacement	
Code	ccm
0030	3.0
0040	4.0
0060	6.0
0080	8.0
0100	10.0
0120	12.0

Code	Rotation
C	Clockwise
A	Counter-clockwise

Code	Shaft
A1 ²⁾	9T, 16/32DP, 32L, SAE "A" spline
J1 ²⁾	Ø12.7, 3.2 key, no thread, 38L, parallel
K1 ³⁾	Ø15.88, 4.0 key, no thread, 32L, SAE "A", parallel
Q2 ⁴⁾	Ø14.25, 5.5L, 3.0key, M10x1, taper 1:8

²⁾ Only used with flange H1, H2.
³⁾ Only used with flange H2.
⁴⁾ Only used with flange D2.

Code	Port options
E5E3	3/4" - 14 BSP thread/ 1/2" - 14 BSP thread
J7J5	Ø20 mm - Ø40 mm - M6 square flange/ Ø15 mm - Ø35 mm - M6 square flange

Example: J7 = inlet port
 J5 = outlet port

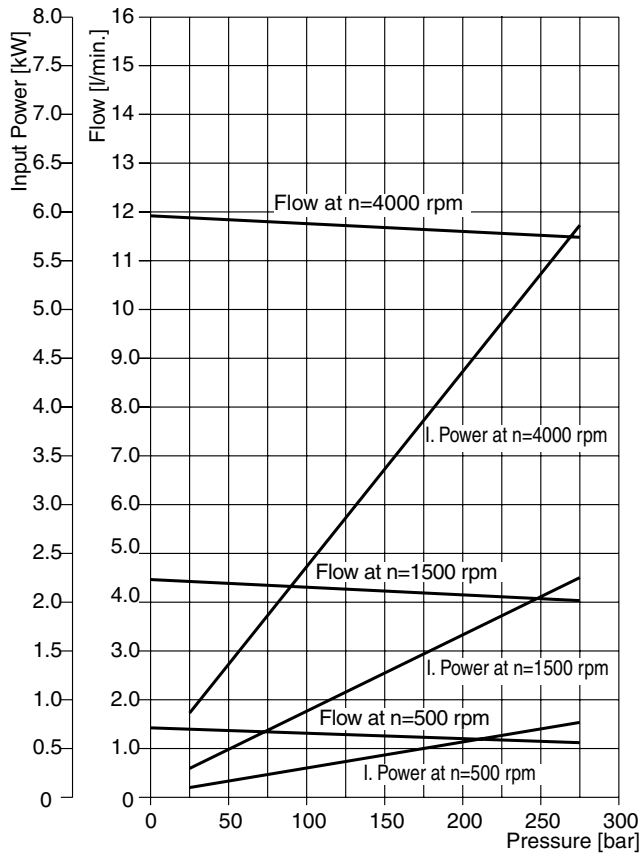
Code	Shaft seal
X	No seal
N	NBR

Code	Flange
D2 ⁵⁾	56.0x73.0 - Ø30.0 rectangular
H1	82.5 - Ø50.8 SAE "A-A" 2 bolt flange
H2 ⁶⁾	106.4 - Ø82.55 SAE "A" 2 bolt flange

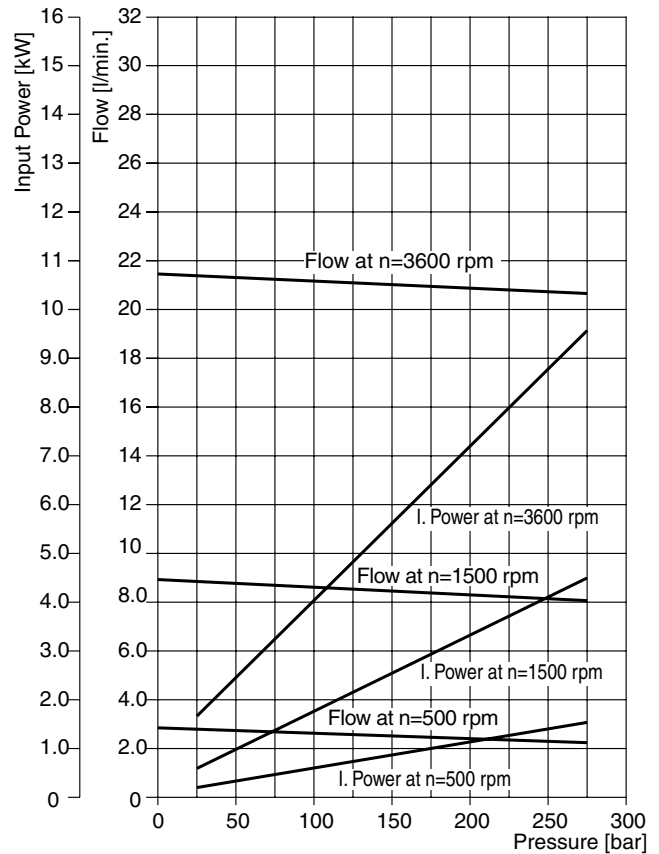
⁵⁾ Only used with ports J*J*.
⁶⁾ Only used with ports E*E*.



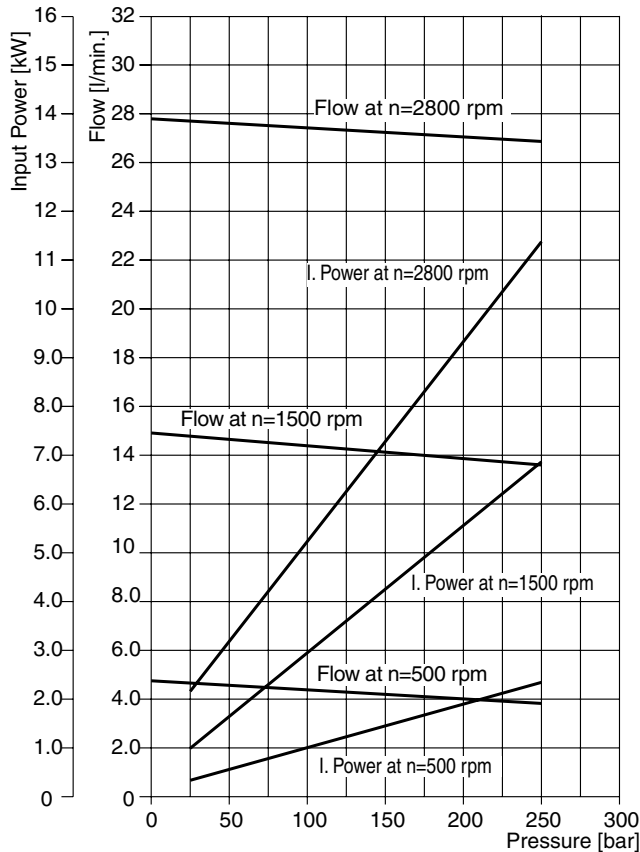
PGP505 - 3.0 CC



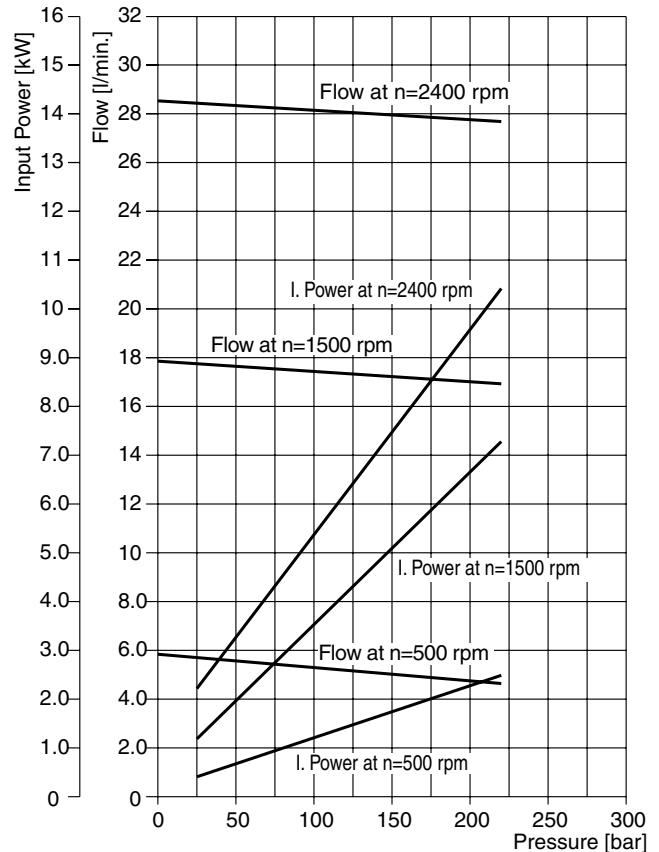
PGP505 - 6.0 CC



PGP505 - 10.0 CC



PGP505 - 12.0 CC



04-01_PGP-500-UK-112

Fluid temperature: 45 °C ± 2K ; Viscosity: 36mm²/s ;

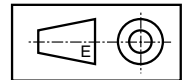
Inlet pressure: 0.9 + 0.1 bar absolute

PGP505 A XXXX Y A1 H2 N SS PP B1 B1

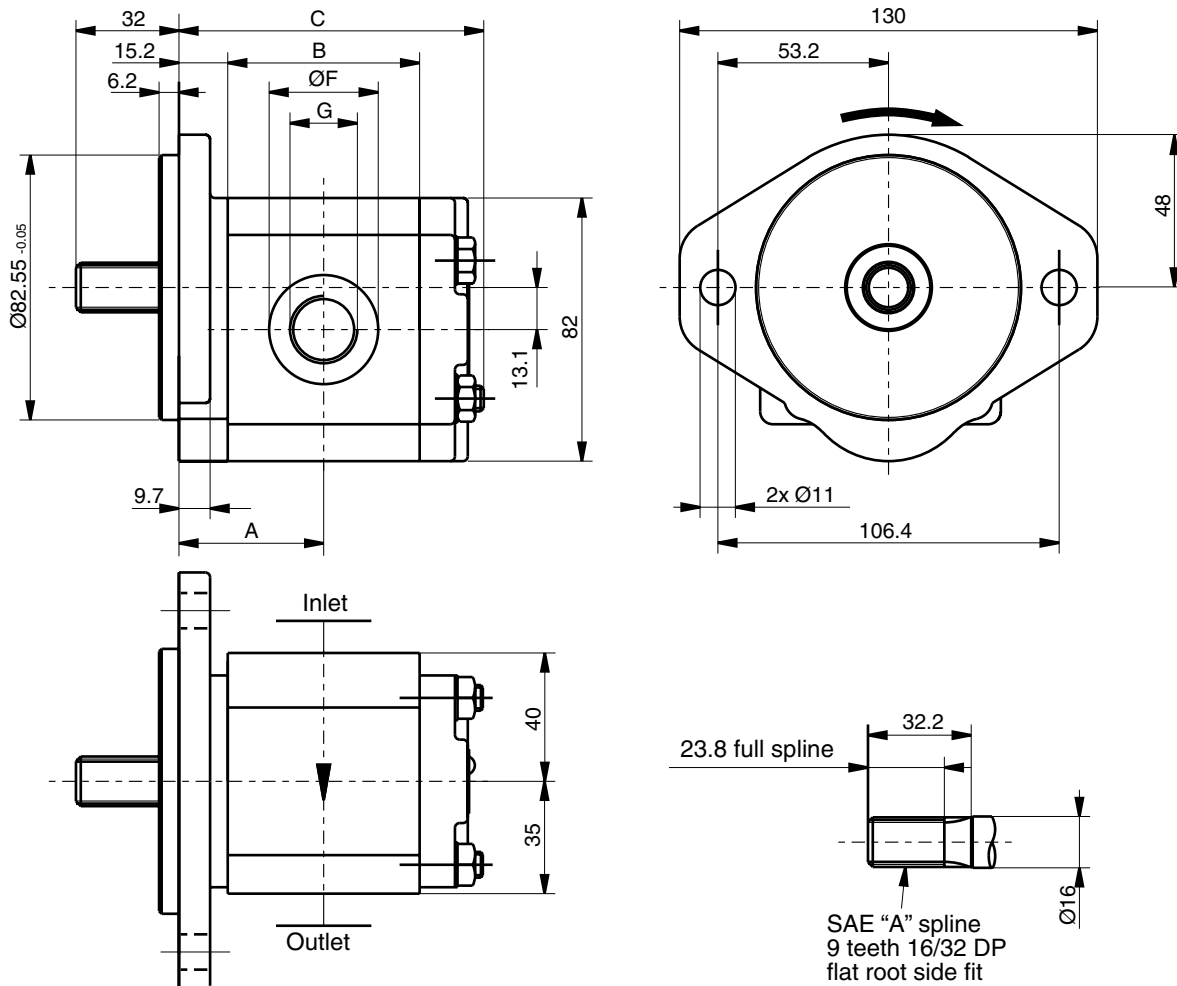
“Y” = C (clockwise rotation)
 = A (counter-clockwise rotation)

Displacement XXXX	cm ³ /rev	Dimension			Inlet port			Outlet port			Speed of rotation		Working pressure max. bar	Order number direction of rotation	
		A	B	C	SS	G	F	PP	G	F	min. rpm	max. rpm		clockwise	counter-clockwise
0030	3.0	35.9	41.1	79.8	E5	3/4"-14 BSP	42.0	E3	1/2"-14 BSP	34.0	500	4000	275	331 9111 385	
0040	4.0	37.2	43.8	79.8	E5	3/4"-14 BSP	42.0	E3	1/2"-14 BSP	34.0	500	4000	275	331 9111 386	
0060	6.0	39.8	49.1	84.8	E5	3/4"-14 BSP	42.0	E3	1/2"-14 BSP	34.0	500	3600	275	331 9111 387	
0080	8.0	42.5	54.5	89.8	E5	3/4"-14 BSP	42.0	E3	1/2"-14 BSP	34.0	500	3000	275	331 9111 383	331 9112 136
0100	10.0	45.2	59.8	100.8	E5	3/4"-14 BSP	42.0	E3	1/2"-14 BSP	34.0	500	2800	250	331 9111 388	
0120	12.0	47.9	65.2	104.8	E5	3/4"-14 BSP	42.0	E3	1/2"-14 BSP	34.0	500	2400	220	331 9111 389	

Dimensions (clockwise rotation shown)



4

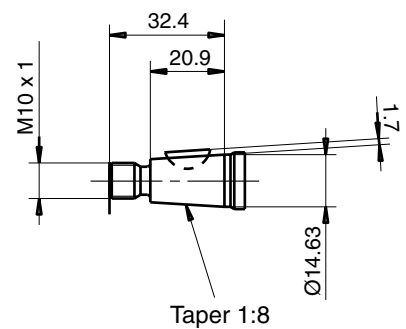
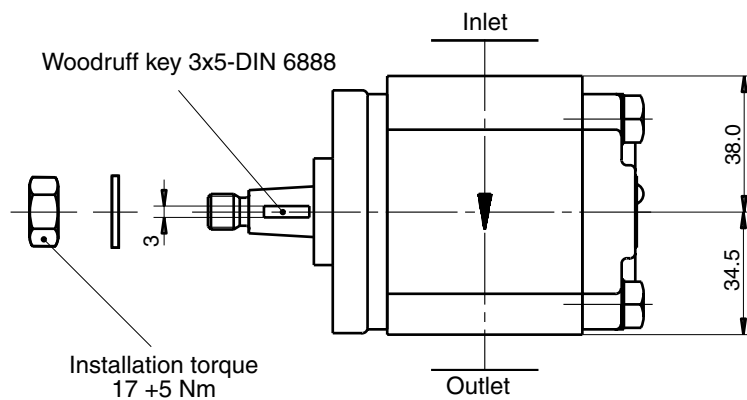
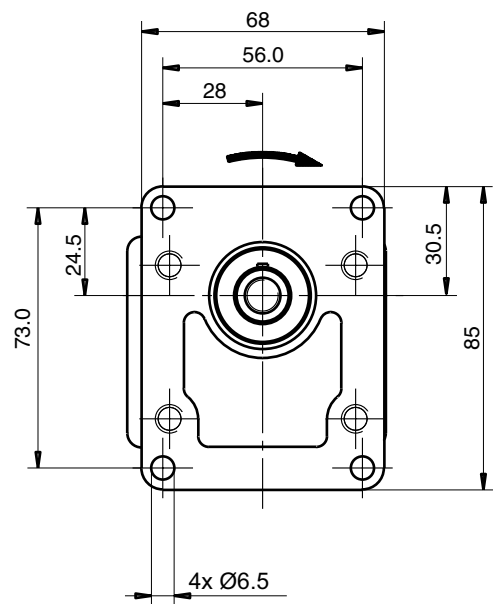
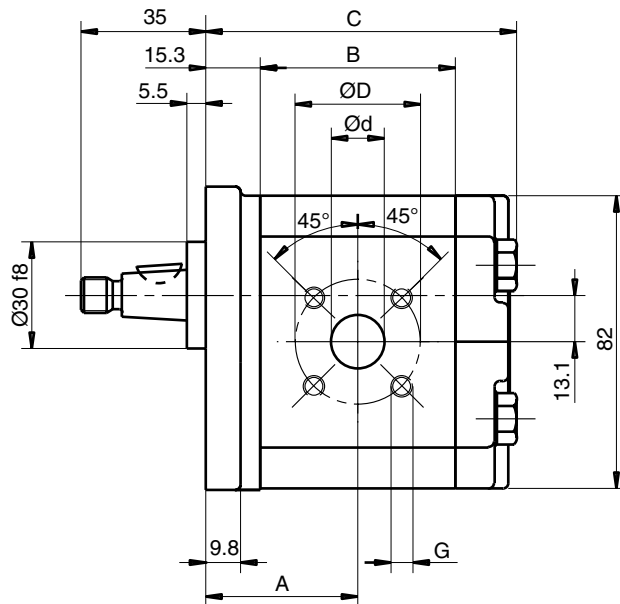
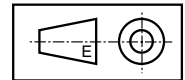


PGP505 A XXXX Y Q2 D2 N SS PP B1 B1

“Y” = C (clockwise rotation)
 = A (counter-clockwise rotation)

Displacement	Dimension	Inlet port			Outlet port			Speed of rotation		Working pressure	Order number direction of rotation						
		XXXX	cm ³ /rev	A	B	C	SS	d	D		G	PP	d	D	G	min. rpm	max. rpm
0030	3.0	35.9	41.1	74.3	J7	20.0	40.0	M6	J5	15.0	35.0	M6	500	4000	275	331 9111 334	
0040	4.0	37.2	43.8	76.4	J7	20.0	40.0	M6	J5	15.0	35.0	M6	500	4000	275	331 9111 039	331 9112 061
0060	6.0	39.8	49.1	81.7	J7	20.0	40.0	M6	J5	15.0	35.0	M6	500	3600	275	331 9111 040	331 9112 077
0080	8.0	42.5	54.5	87.1	J7	20.0	40.0	M6	J5	15.0	35.0	M6	500	3000	275	331 9111 041	331 9112 078
0100	10.0	45.2	59.8	92.4	J7	20.0	40.0	M6	J5	15.0	35.0	M6	500	2800	250	331 9111 087	331 9112 033
0120	12.0	47.9	65.2	97.8	J7	20.0	40.0	M6	J5	15.0	35.0	M6	500	2400	220	331 9111 246	331 9112 135

Dimensions (clockwise rotation shown)





Gear design	
Code	Type
P	Pump

Unit	
Code	Unit Pump
A	Single unit
M	Single distributor unit
B	Multiple unit

Displacement	
Code	ccm
0040	4.0
0060	6.0
0080	8.0
0100	10.0
0110	11.0
0140	14.0
0160	16.0
0190	19.0
0230	23.0
0270	27.0
0310	31.0
0330	33.0

Code	Rotation
C	Clockwise
A	Counter-clockwise
B	Bi-directional

Code	Shaft
A1 ²⁾	9T, 16/32DP, 32L, SAE "A" spline
C1 ³⁾	11T, 16/32DP, 38.2L, SAE 19-4 spline
F1 ⁴⁾	9T, B17x14, 23L, DIN 5482 spline
K1 ²⁾	Ø15.88, 4.0 key, no thread, 32L, SAE "A", parallel
L6 ²⁾	Ø19.05, 4.8 key, no thread, 32L, SAE 19-1, parallel
S1 ⁴⁾	Ø17.0, 7.7L, 3.0 key, M12x1.5, taper 1:5
S2 ⁵⁾	Ø16.65, 12.0L, 3.2 key, M12x1.5, taper 1:8
S4 ⁵⁾	Ø16.65, 12.0L, 4.0 key, M12x1.5, taper 1:8

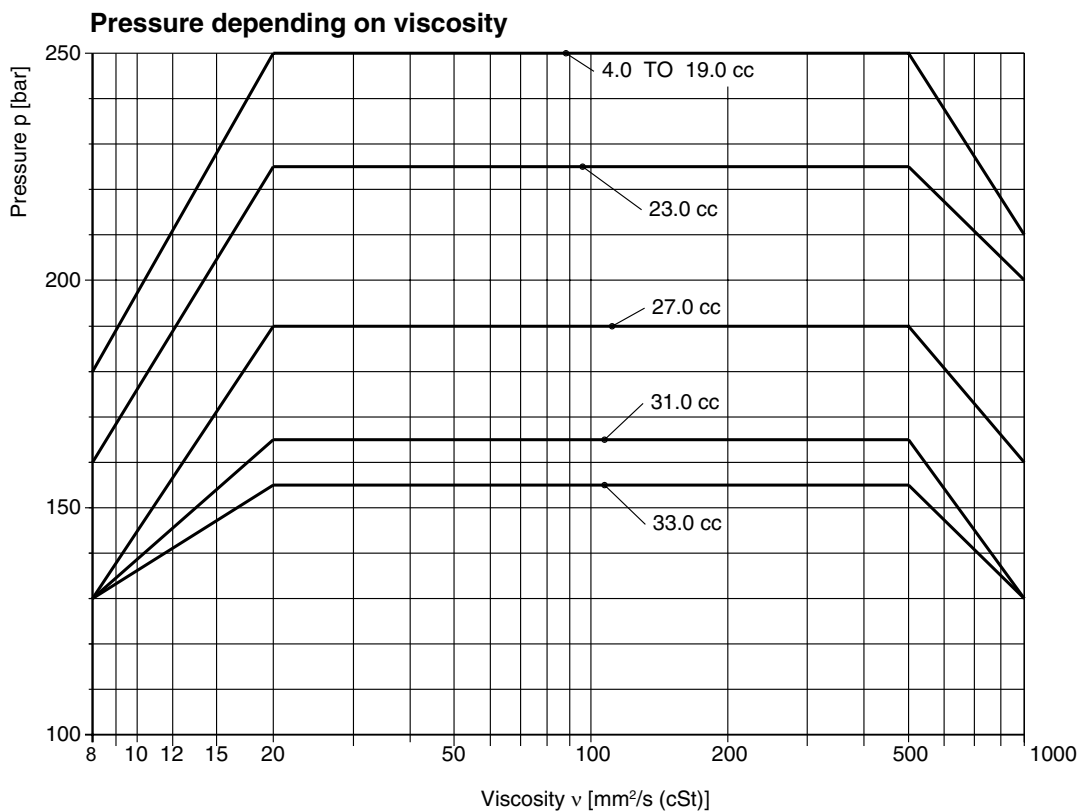
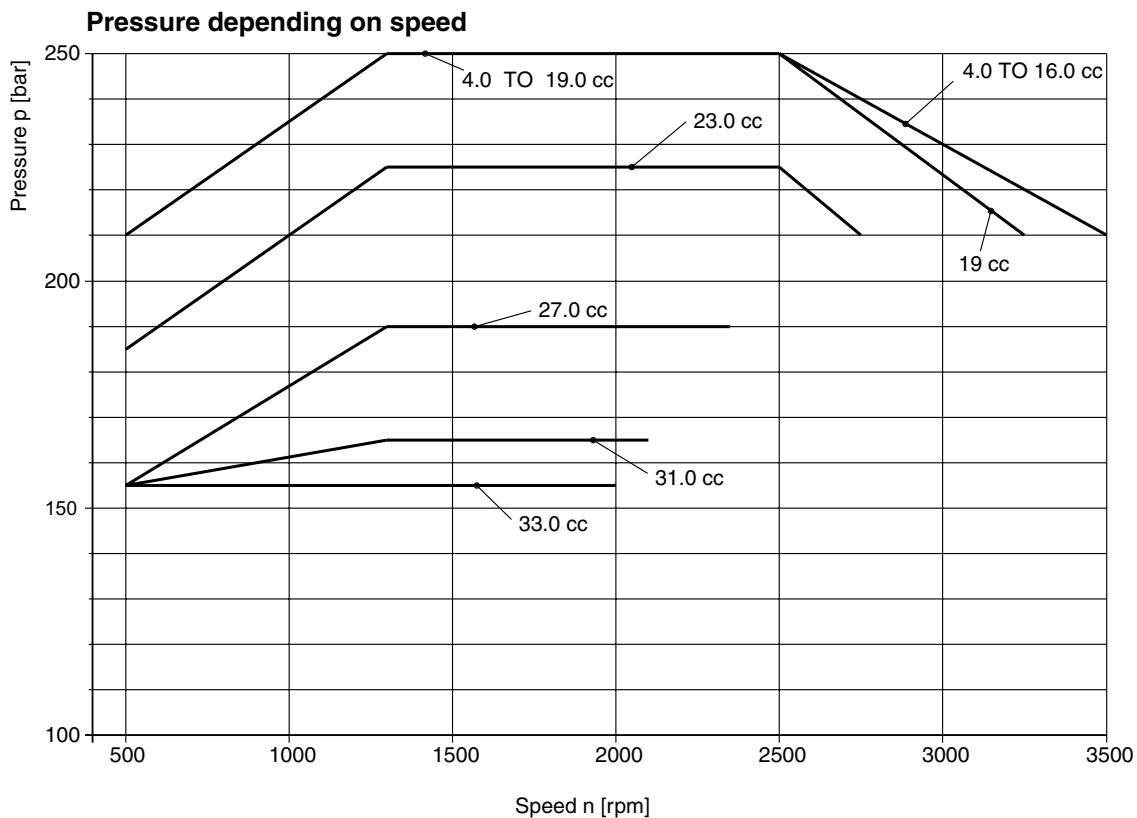
Code	Shaft seal
X	No seal
N	NBR
V	FPM

Code	Port options
E5E3	3/4" - 14 BSP thread/ 1/2" - 14 BSP thread rec. from 4 ccm to 16 ccm
E6E5	1"-11 BSP thread/ 3/4"-14 BSP thread rec. from 14 ccm to 23 ccm
E7E5	1 1/4"-11 BSP thread/ 3/4"-14 BSP thread rec. from 27 ccm to 33 ccm
J7J5	Ø20 mm-Ø40 mm-M6 square flange Ø15 mm-Ø35 mm-M6 square flange rec. from 4 ccm to 16 ccm
J9J8	Ø26 mm-Ø55 mm-M8 square flange Ø18 mm-Ø55 mm-M8 square flange rec. from 14 ccm to 33 ccm
L1L1	Ø13 mm-Ø30 mm-M6 diamond flange Ø13 mm-Ø30 mm-M6 diamond flange rec. from 4 ccm to 8 ccm
L2L1	Ø19 mm-Ø40 mm-M8 diamond flange Ø13 mm-Ø30 mm-M6 diamond flange rec. from 10 ccm to 16 ccm
L2L2	Ø19 mm-Ø40 mm-M8 diamond flange Ø19 mm-Ø40 mm-M8 diamond flange rec. from 19 ccm to 33 ccm

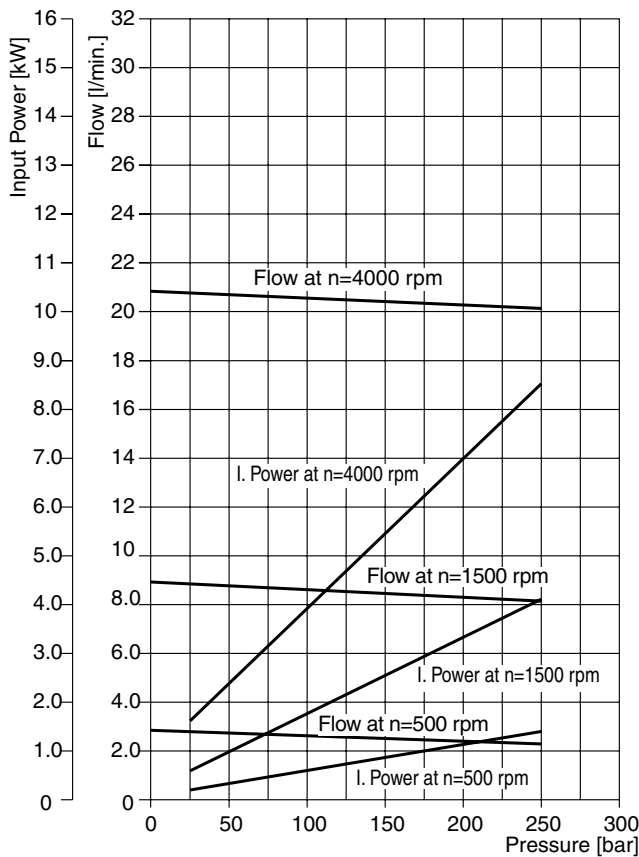
Example: J7 = inlet port
 J5 = outlet port

Code	Flange
D3	71.4x96.0 - Ø36.47 rectangular
D4	72.0x100.0 - Ø80 rectangular
H2	106.4 - Ø82.55 SAE "A" 2 bolt flange
H3	146.1 - Ø101.06 SAE "B" 2 bolt flange
Q2	60.0x60.0 - Ø50.0 w. seal O', thrubolt flange
Q4	60.0x60.0 - Ø50.0 w. seal O', thrubolt flange

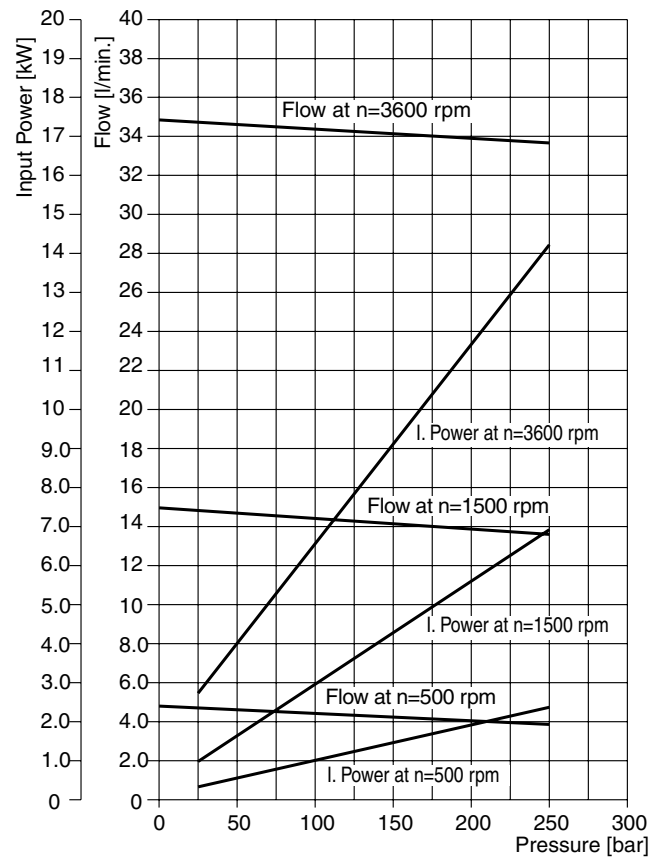
²⁾ Only used with flange H2.
³⁾ Only used with flange H2, H3.
⁴⁾ Only used with flange D4, Q2, Q4.
⁵⁾ Only used with flange D3.



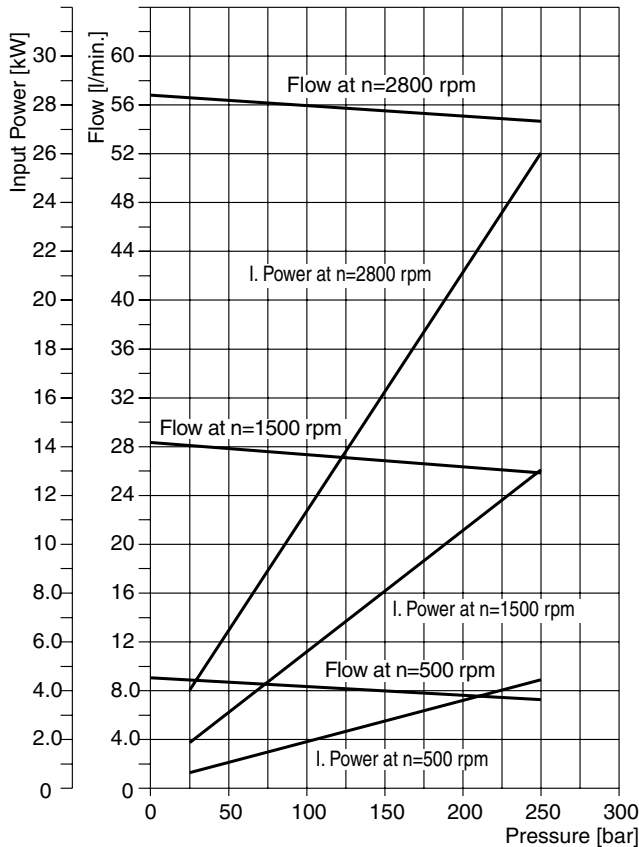
PGP511 - 6.0 CC



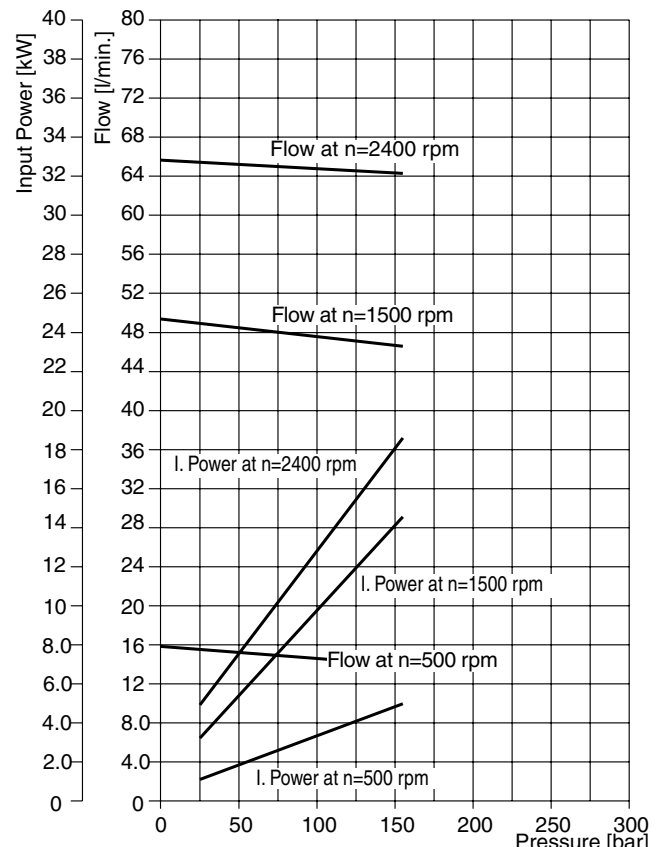
PGP511 - 10.0 CC



PGP511 - 19.0 CC



PGP511 - 33.0 CC



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Fluid temperature: 45 °C ± 2K ; Viscosity: 36mm²/s ;

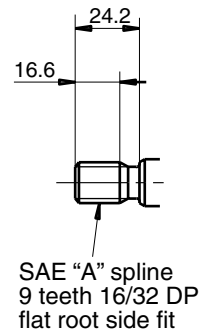
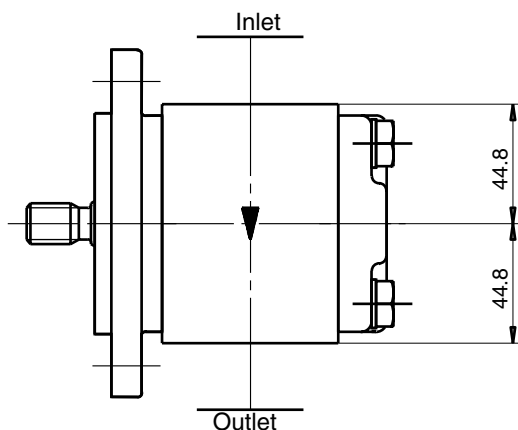
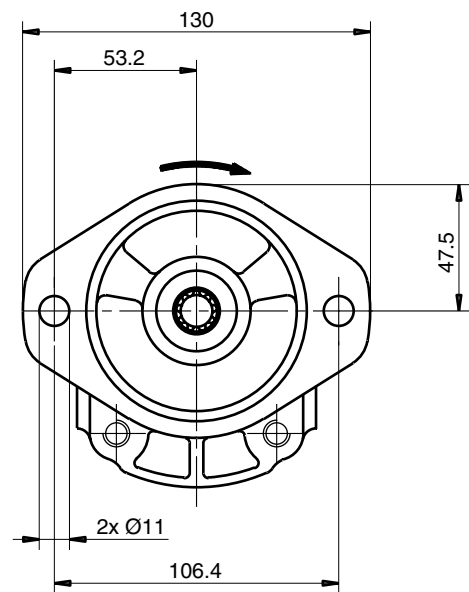
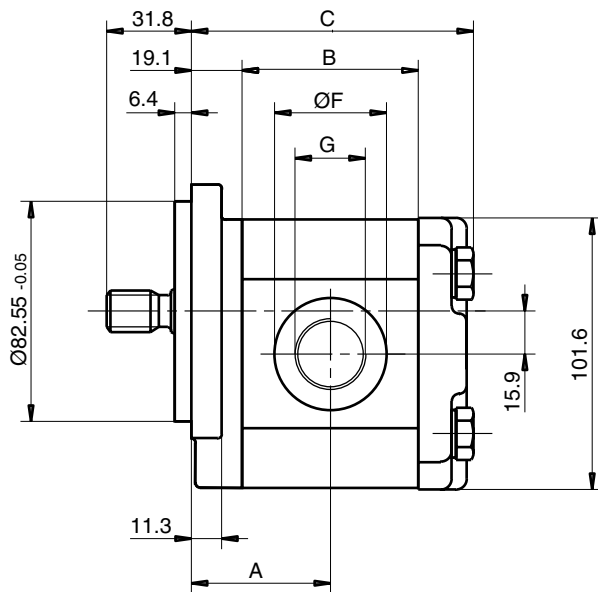
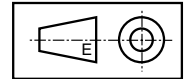
Inlet pressure: 0.9 + 0.1 bar absolute

PGP511 A XXXX Y A1 H2 N SS PP B1 B1

“Y” = C (clockwise rotation)
 = A (counter-clockwise rotation)

Displacement		Dimension			Inlet port			Outlet port			Speed of rotation		Working pressure max. bar	Order number direction of rotation	
XXXX	cm ³ /rev	A	B	C	SS	G	F	PP	G	F	min. rpm	max. rpm		clockwise	counter-clockwise
0040	4.0	42.6	47.0	86.7	E5	3/4"-14 BSP	42.0	E3	1/2"-14 BSP	34.0	500	3500	250		
0060	6.0	44.1	50.1	89.8	E5	3/4"-14 BSP	42.0	E3	1/2"-14 BSP	34.0	500	3500	250	334 9111 044	334 9112 621
0080	8.0	45.7	53.3	93.0	E5	3/4"-14 BSP	42.0	E3	1/2"-14 BSP	34.0	500	3500	250	334 9111 562	334 9112 622
0100	10.0	47.3	56.5	96.1	E5	3/4"-14 BSP	42.0	E3	1/2"-14 BSP	34.0	500	3500	250	334 9111 130	334 9112 628
0110	11.0	48.1	58.0	97.7	E5	3/4"-14 BSP	42.0	E3	1/2"-14 BSP	34.0	500	3500	250	334 9111 039	334 9112 023
0140	14.0	50.4	62.8	102.4	E5	3/4"-14 BSP	42.0	E3	1/2"-14 BSP	34.0	500	2700	250	334 9111 563	334 9112 623
0160	16.0	52.0	65.9	105.6	E6	1"-11 BSP	50.0	E5	3/4"-14 BSP	42.0	500	3500	250	334 9111 092	334 9112 060
0190	19.0	54.4	70.6	110.3	E6	1"-11 BSP	50.0	E5	3/4"-14 BSP	42.0	500	3200	250	334 9111 193	334 9112 624
0230	23.0	57.5	76.9	116.6	E6	1"-11 BSP	50.0	E5	3/4"-14 BSP	42.0	500	2700	210	334 9111 564	
0270	27.0	60.7	83.2	122.9	E6	1"-11 BSP	50.0	E5	3/4"-14 BSP	42.0	500	2300	180	334 9111 942	334 9112 494
0310	31.0	63.8	89.5	129.2	E6	1"-11 BSP	50.0	E5	3/4"-14 BSP	42.0	500	2000	160	334 9111 207	334 9112 229
0330	33.0	65.4	92.6	132.3	E6	1"-11 BSP	50.0	E5	3/4"-14 BSP	42.0	500	1800	150		334 9112 773

Dimensions (clockwise rotation shown)

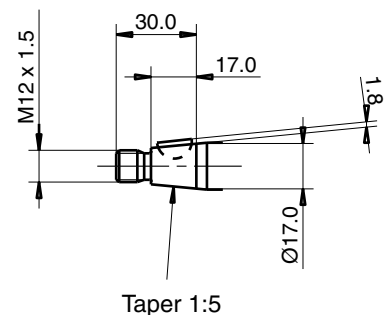
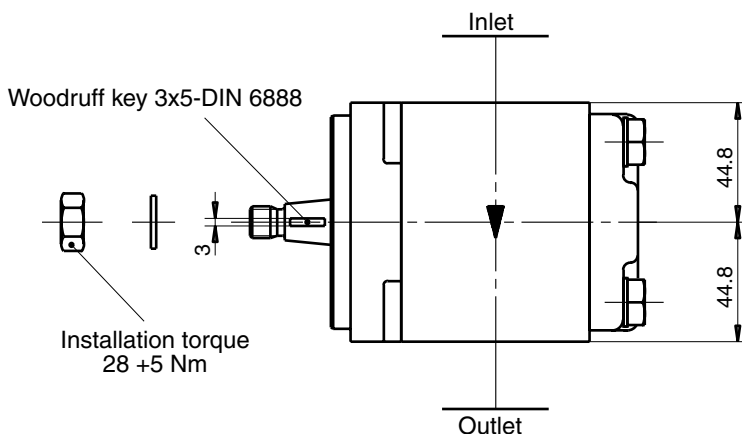
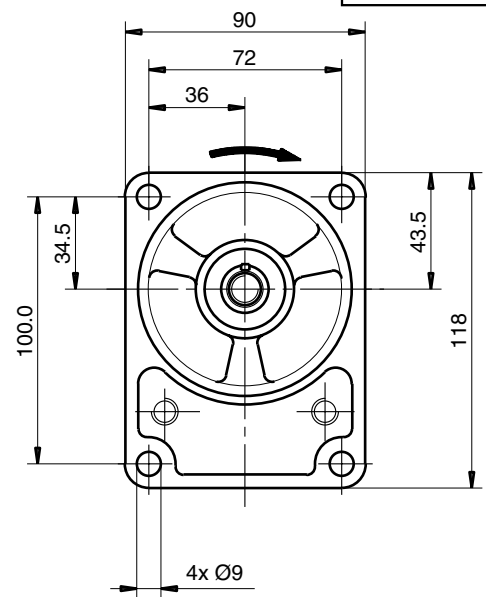
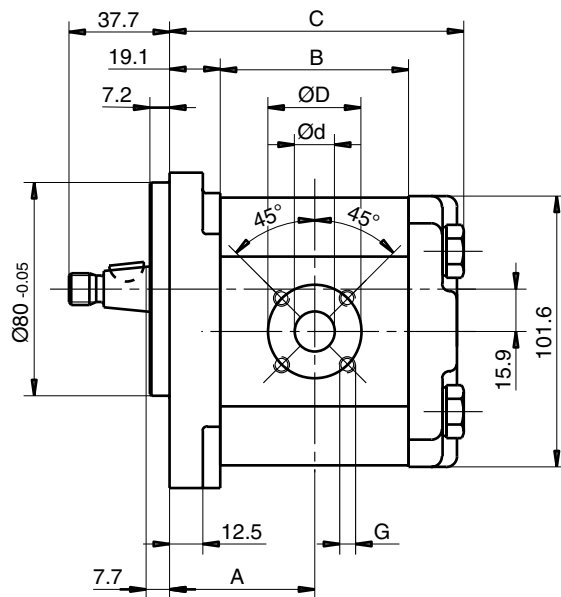
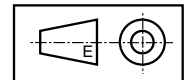


PGP511 A XXXX Y S1 D4 N SS PP B1 B1

“Y” = C (clockwise rotation)
 = A (counter-clockwise rotation)

Displacement XXXX	cm ³ /rev	Dimension			Inlet port				Outlet port				Speed of rotation		Working pressure max. bar	Order number direction of rotation	
		A	B	C	SS	d	D	G	PP	d	D	G	min. rpm	max. rpm		clockwise	counter-clockwise
0040	4.0	42.6	47.0	86.7	J7	20	40	M6	J5	15	35	M6	500	3500	250	334 9111 149	334 9112 289
0060	6.0	44.1	50.1	89.8	J7	20	40	M6	J5	15	35	M6	500	3500	250	334 9111 465	334 9112 298
0080	8.0	45.7	53.3	93.0	J7	20	40	M6	J5	15	35	M6	500	3500	250	334 9111 151	334 9112 291
0100	10.0	47.4	56.5	96.1	J7	20	40	M6	J5	15	35	M6	500	3500	250	334 9111 466	334 9112 292
0110	11.0	48.1	58.0	97.7	J7	20	40	M6	J5	15	35	M6	500	3500	250	334 9111 152	334 9112 238
0140	14.0	50.4	62.8	102.4	J7	20	40	M6	J5	15	35	M6	500	3400	250	334 9111 153	334 9112 239
0160	16.0	52.0	65.9	105.6	J7	20	40	M6	J5	15	35	M6	500	3000	250	334 9111 154	334 9112 120
0190	19.0	54.4	70.6	110.3	J9	26	55	M8	J8	18	55	M8	500	3250	250	334 9111 970	
0230	23.0	57.5	76.9	116.6	J9	26	55	M8	J8	18	55	M8	500	2750	225	334 9111 971	
0270	27.0	60.7	83.2	122.9	J9	26	55	M8	J8	18	55	M8	500	2350	190	334 9111 972	334 9112 807
0310	31.0	63.8	89.5	129.2	J9	26	55	M8	J8	18	55	M8	500	2100	165	334 9111 526	
0330	33.0	65.4	92.6	132.3	J9	26	55	M8	J8	18	55	M8	500	2000	155	334 9111 973	

Dimensions (clockwise rotation shown)

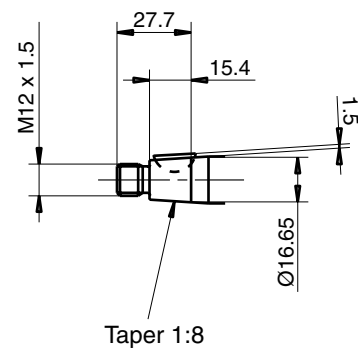
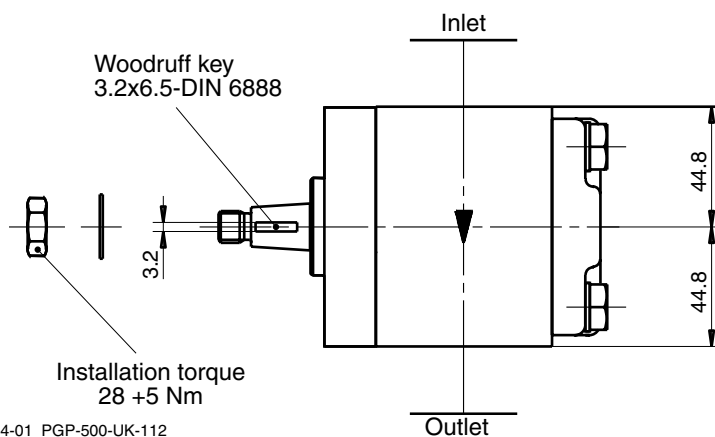
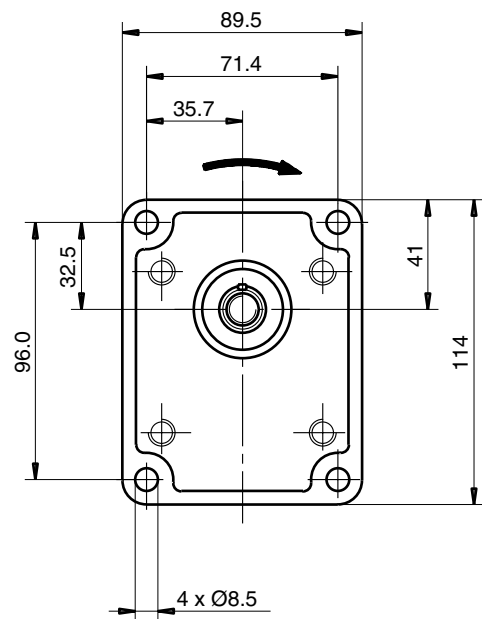
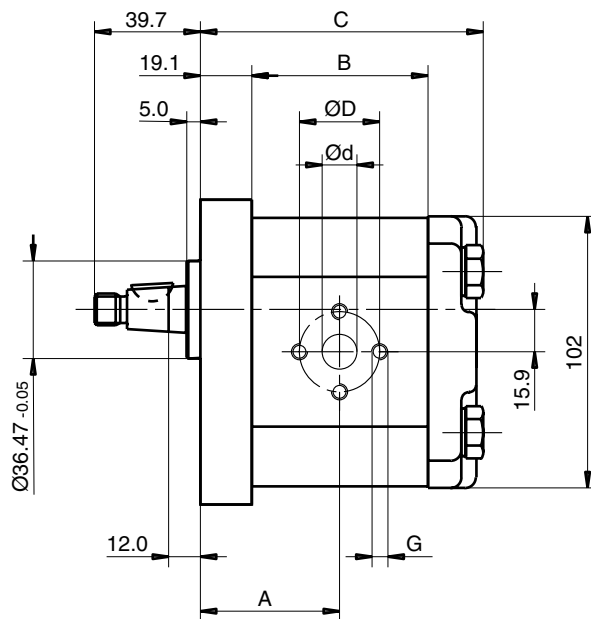
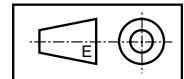


PGP511 A XXXX Y S2 D3 N SS PP B1 B1

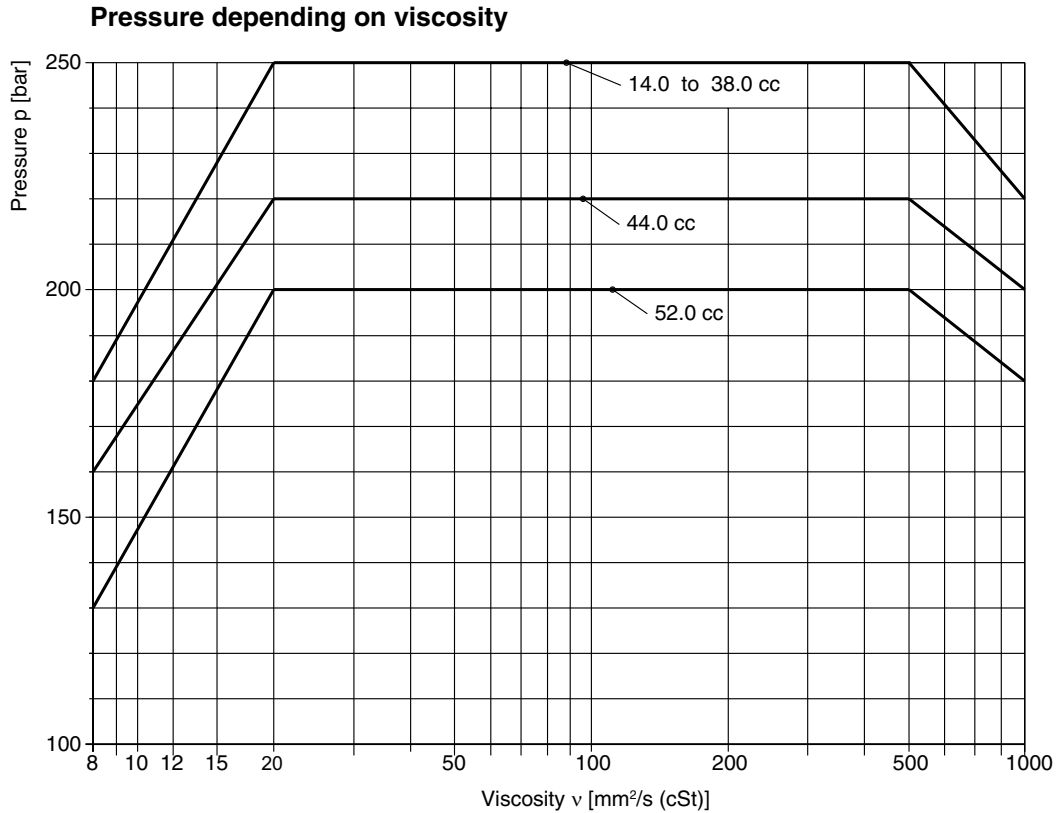
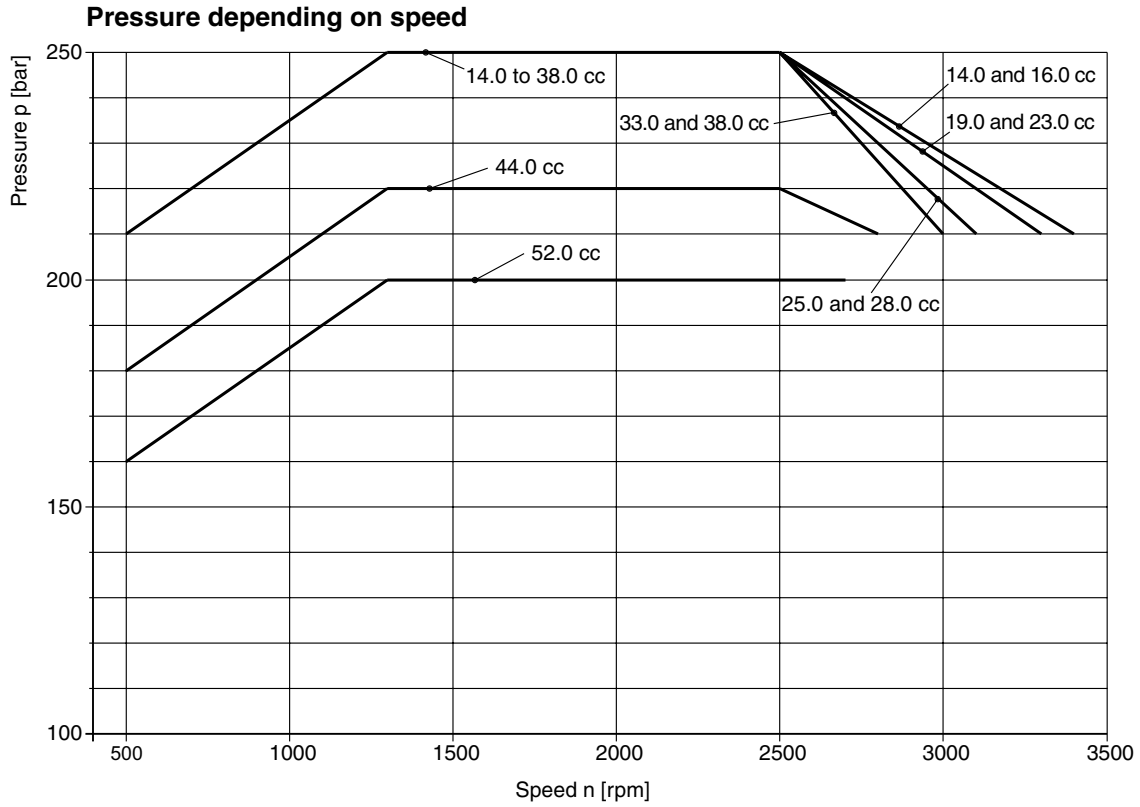
“Y” = C (clockwise rotation)
 = A (counter clockwise rotation)

Displacement		Dimension			Inlet port			Outlet port			Speed of rotation		Working pressure	Order number direction of rotation			
XXXX	cm ³ /rev	A	B	C	SS	d	D	G	PP	d	D	G	min. rpm	max. rpm	max. bar	clockwise	counter-clockwise
0040	4.0	42.6	47.0	86.7	L1	13	30	M6	L1	13	30	M6	500	3500	250	334 9111 403	334 9112 398
0060	6.0	44.1	50.1	89.8	L1	13	30	M6	L1	13	30	M6	500	3500	250	334 9111 404	334 9112 395
0080	8.0	45.7	53.3	93.0	L1	13	30	M6	L1	13	30	M6	500	2500	250	334 9111 091	334 9112 397
0100	10.0	47.3	56.5	96.1	L2	19	40	M8	L1	13	30	M6	500	3500	250	334 9111 975	334 9112 618
0110	11.0	48.1	58.0	97.7	L2	19	40	M8	L1	13	30	M6	500	3500	250	334 9111 976	334 9112 399
0140	14.0	50.4	62.8	102.4	L2	19	40	M8	L1	13	30	M6	500	3100	250	334 9111 292	334 9112 400
0160	16.0	52.0	65.9	105.6	L2	19	40	M8	L1	13	30	M6	500	2700	250	334 9111 293	334 9112 601
0190	19.0	54.4	70.6	110.3	L2	19	40	M8	L2	19	40	M8	500	2300	250	334 9111 977	
0230	23.0	57.5	76.9	116.6	L2	19	40	M8	L2	19	40	M8	500	1900	225	334 9111 295	
0270	27.0	60.7	83.2	122.9	L2	19	40	M8	L2	19	40	M8	500	1600	190	334 9111 296	
0310	31.0	63.8	89.5	129.2	L2	19	40	M8	L2	19	40	M8	500	1500	165	334 9111 978	
0330	33.0	65.4	92.6	132.3	L2	19	40	M8	L2	19	40	M8	500	1500	155	334 9111 297	

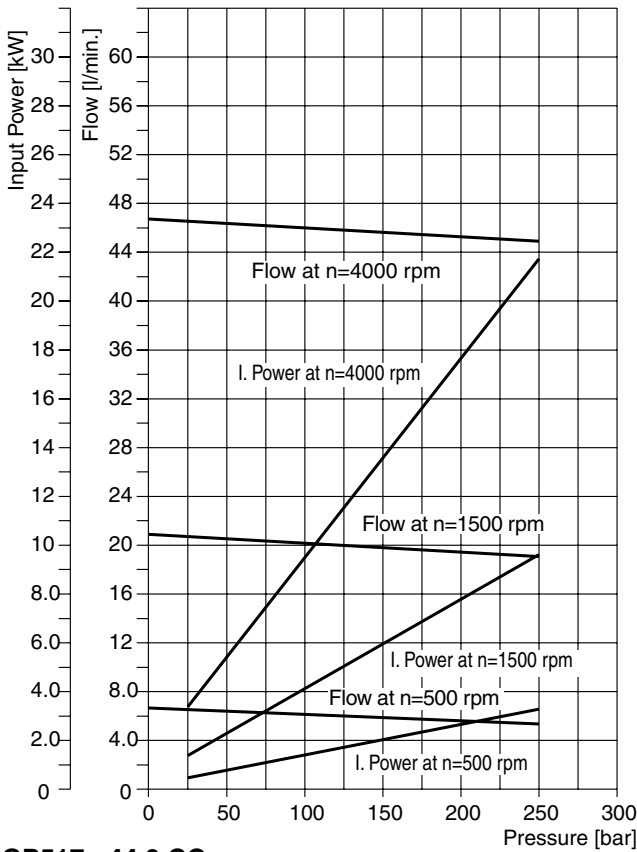
Dimensions (clockwise rotation shown)



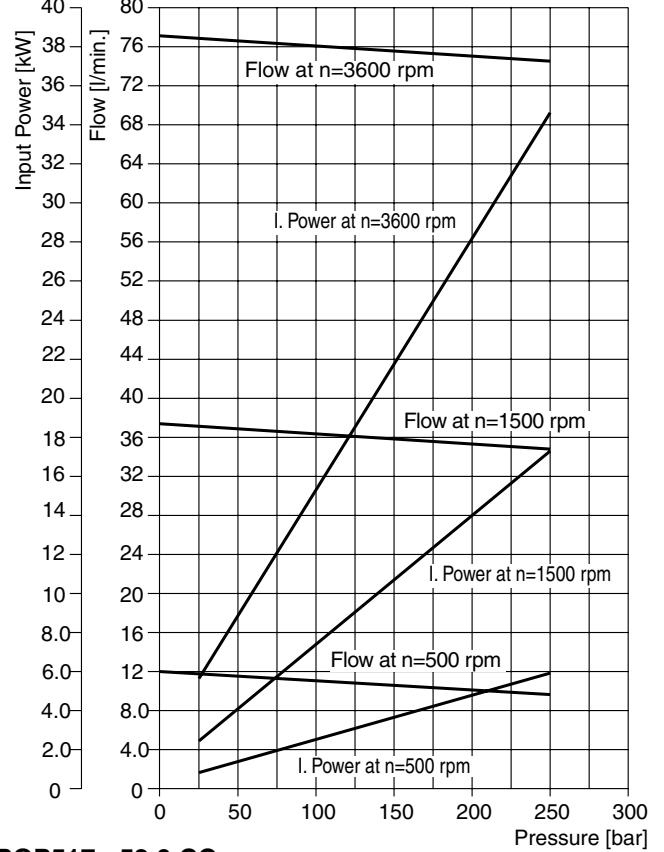
04-01_PGP-500-UK-112



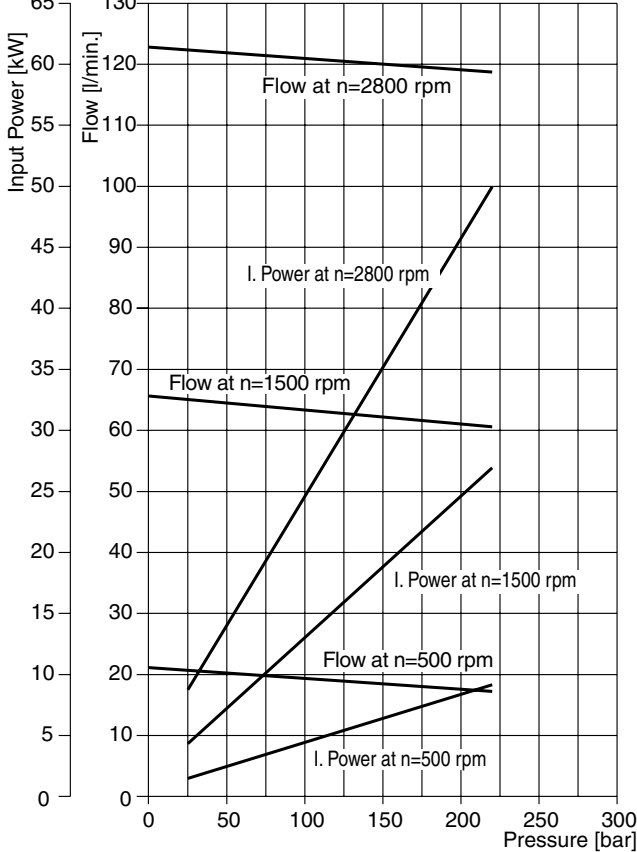
PGP517 - 14.0 CC



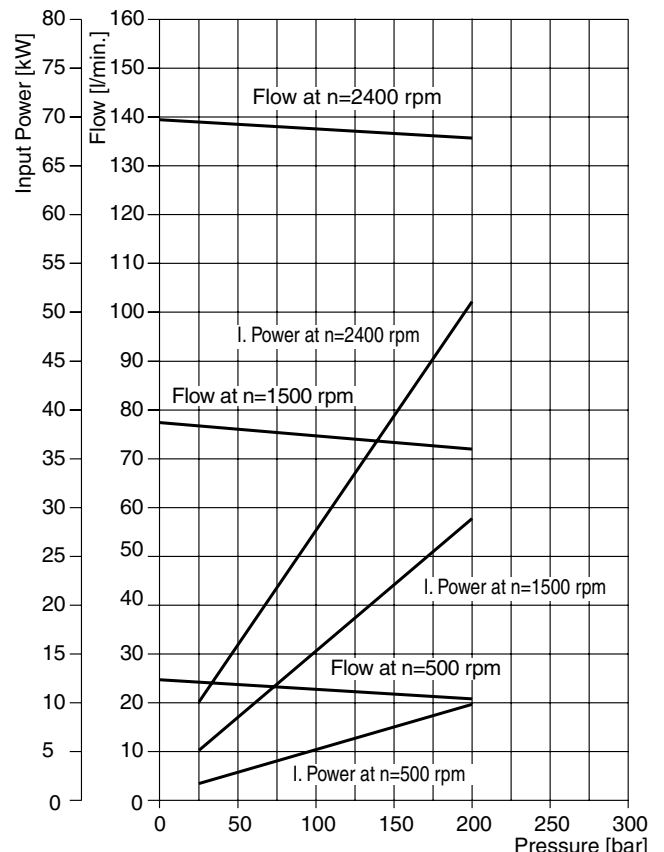
PGP517 - 25.0 CC



PGP517 - 44.0 CC



PGP517 - 52.0 CC



04-01_PGP-500-UK-112

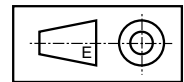
Fluid temperature: 45 °C ± 2K ; Viscosity: 36mm²/s ;

Inlet pressure: 0.9 + 0.1 bar absolute

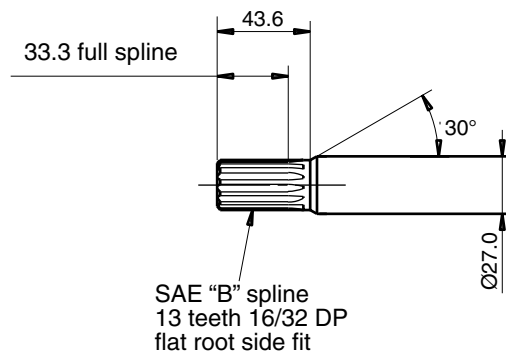
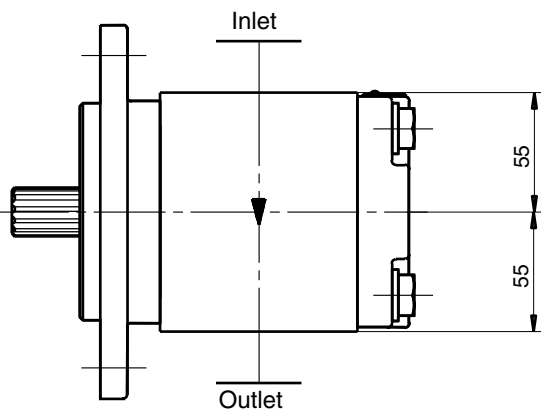
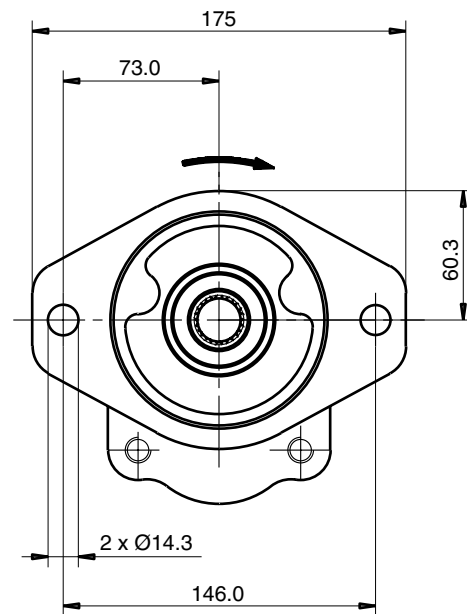
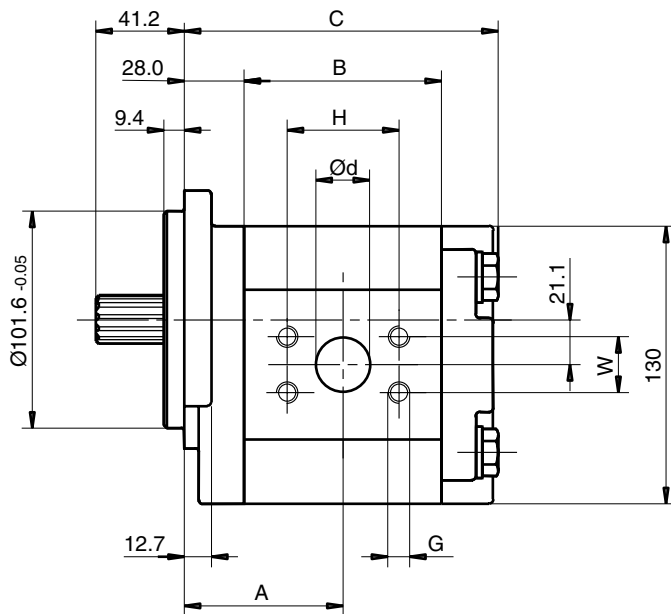
PGP517 A XXXX Y D1 H3 N SS PP B1 B1

“Y” = C (clockwise rotation)
 = A (counter-clockwise rotation)

Displacement XXXX cm ³ / rev	Dimension			Inlet port				Outlet port				Speed of rotation		Working pressure max. bar	Order number			
	A	B	C	SS	d	G	H	W	PP	d	G	H	W		min. rpm	max. rpm	direction of rotation clockwise	counter-clockwise
0140	14.0	62.1	68.3	122.8	P2	3/4"	M10	47.63	22.23	P2	3/4"	M10	47.63	22.23	500	3000	250	
0160	16.0	63.2	70.3	124.8	P3	1"	M10	52.37	26.19	P2	3/4"	M10	47.63	22.23	500	3400	250	
0190	19.0	64.7	73.3	127.8	P3	1"	M10	52.37	26.19	P2	3/4"	M10	47.63	22.23	500	3300	250	333 9112 180
0230	23.0	66.7	77.4	131.9	P3	1"	M10	52.37	26.19	P2	3/4"	M10	47.63	22.23	500	3300	250	333 9111 193 333 9112 177
0250	25.0	67.7	79.4	133.9	P4	1 1/4"	M10	58.72	30.17	P3	1"	M10	52.37	26.19	500	3100	250	333 9112 388
0280	28.0	69.2	82.4	136.9	P4	1 1/4"	M10	58.72	30.17	P3	1"	M10	52.37	26.19	500	3100	250	333 9111 669 333 9112 274
0330	33.0	71.7	87.5	142.0	P4	1 1/4"	M10	58.72	30.17	P3	1"	M10	52.37	26.19	500	3000	250	333 9112 374
0380	38.0	74.3	92.5	147.0	P4	1 1/4"	M10	58.72	30.17	P3	1"	M10	52.37	26.19	500	3000	250	333 9111 290 333 9112 412
0440	44.0	77.3	98.6	153.1	P4	1 1/4"	M10	58.72	30.17	P3	1"	M10	52.37	26.19	500	2800	225	333 9111 150 333 9112 346
0520	52.0	81.3	106.7	161.2	P5	1 1/2"	M12	69.82	35.71	P3	1"	M10	52.37	26.19	500	2700	190	333 9111 360 333 9112 357
0700	70.0	90.4	124.9	179.4	P5	1 1/2"	M12	69.82	35.71	P3	1"	M10	52.37	26.19	500	2300	165	333 9111 563



Dimensions (clockwise rotation shown)



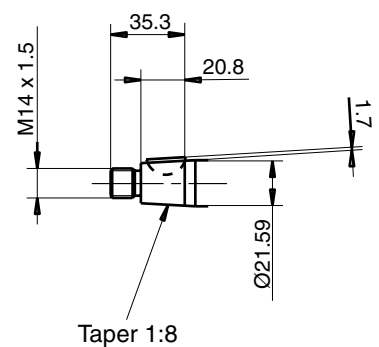
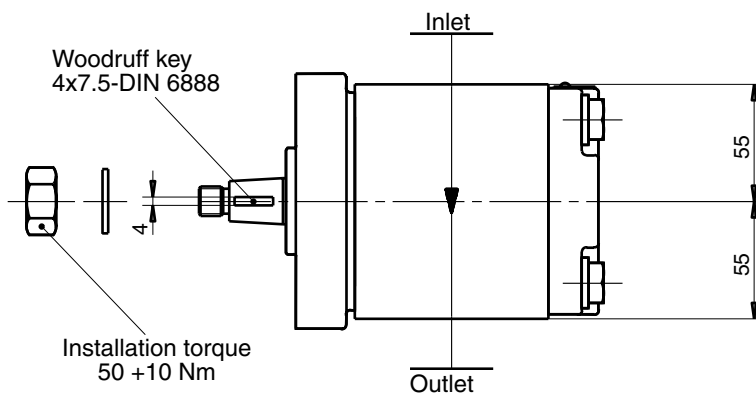
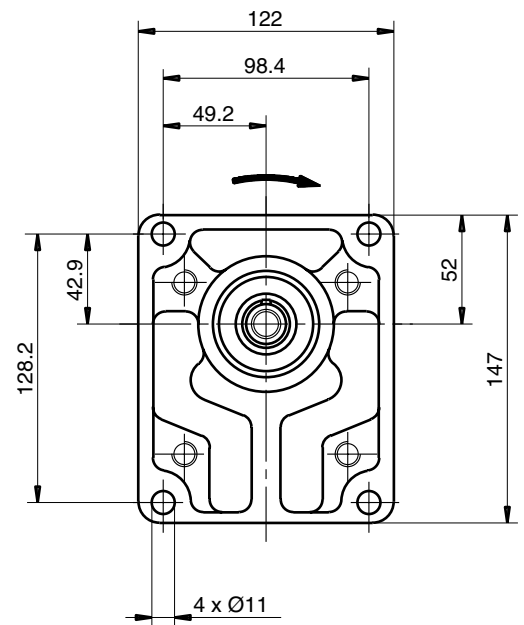
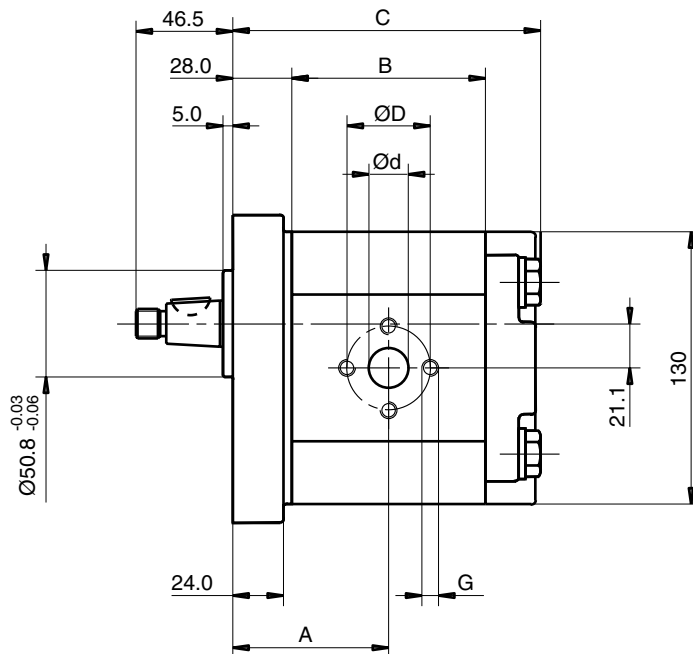
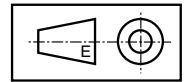
PGP517 A XXXX Y T1 D7 N SS PP B1 B1

“Y” = C (clockwise rotation)
 = A (counter-clockwise rotation)

Displacement XXXX	cm ³ /rev	Dimension			Inlet port				Outlet port				Speed of rotation		Working pressure max. bar	Order number direction of rotation	
		A	B	C	SS	d	D	G	PP	d	D	G	min. rpm	max. rpm		clockwise	counter-clockwise
0140	14.0	62.1	68.3	122.8	L3	27	51	M10	L2	19	40	M8	500	3400	250	333 9111 503	
0160	16.0	63.2	70.3	124.8	L3	27	51	M10	L2	19	40	M8	500	3400	250	333 9111 505	333 9112 430
0190	19.0	64.7	73.3	127.8	L3	27	51	M10	L2	19	40	M8	500	3300	250	333 9111 285	333 9112 212
0230	23.0	66.7	77.4	131.9	L3	27	51	M10	L2	19	40	M8	500	3300	250	333 9111 119	333 9112 213
0250	25.0	67.7	79.4	133.9	L3	27	51	M10	L2	19	40	M8	500	3100	250	333 9111 047	333 9112 068
0280	28.0	69.2	82.4	136.9	L3	27	51	M10	L2	19	40	M8	500	3100	250	333 9111 287	333 9112 214
0330	33.0	71.7	87.5	142.0	L3	27	51	M10	L2	19	40	M8	500	2600	250	333 9111 014	333 9112 035
0380	38.0	74.3	92.5	147.0	L3	27	51	M10	L2	19	40	M8	500	2300	250	333 9111 015	333 9112 036
0440	44.0	77.3	98.6	153.1	L3	27	51	M10	L2	19	40	M8	500	2000	220	333 9111 046	333 9112 040
0520	52.0	81.3	106.7	161.2	L3	27	51	M10	L2	19	40	M8	500	1700	200	333 9111 242	333 9112 215

4

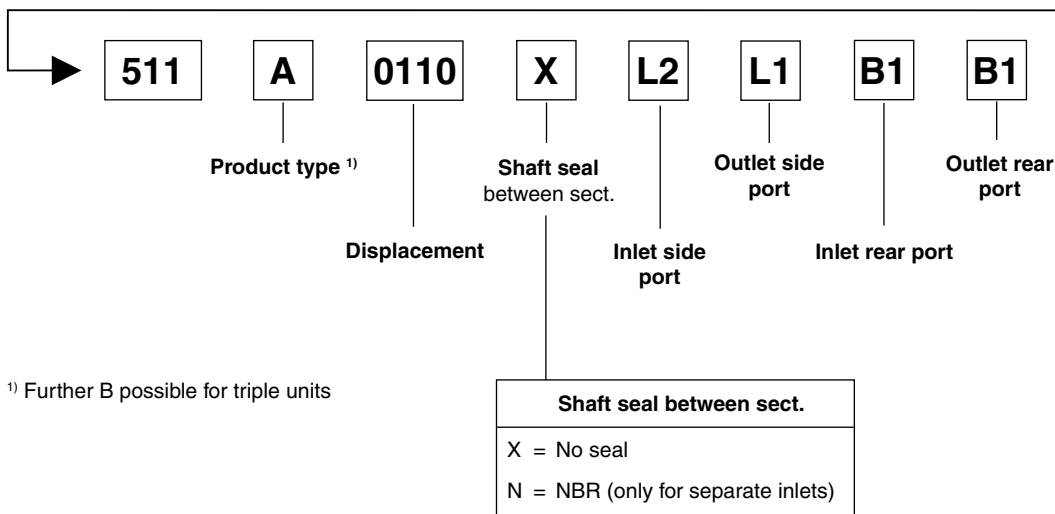
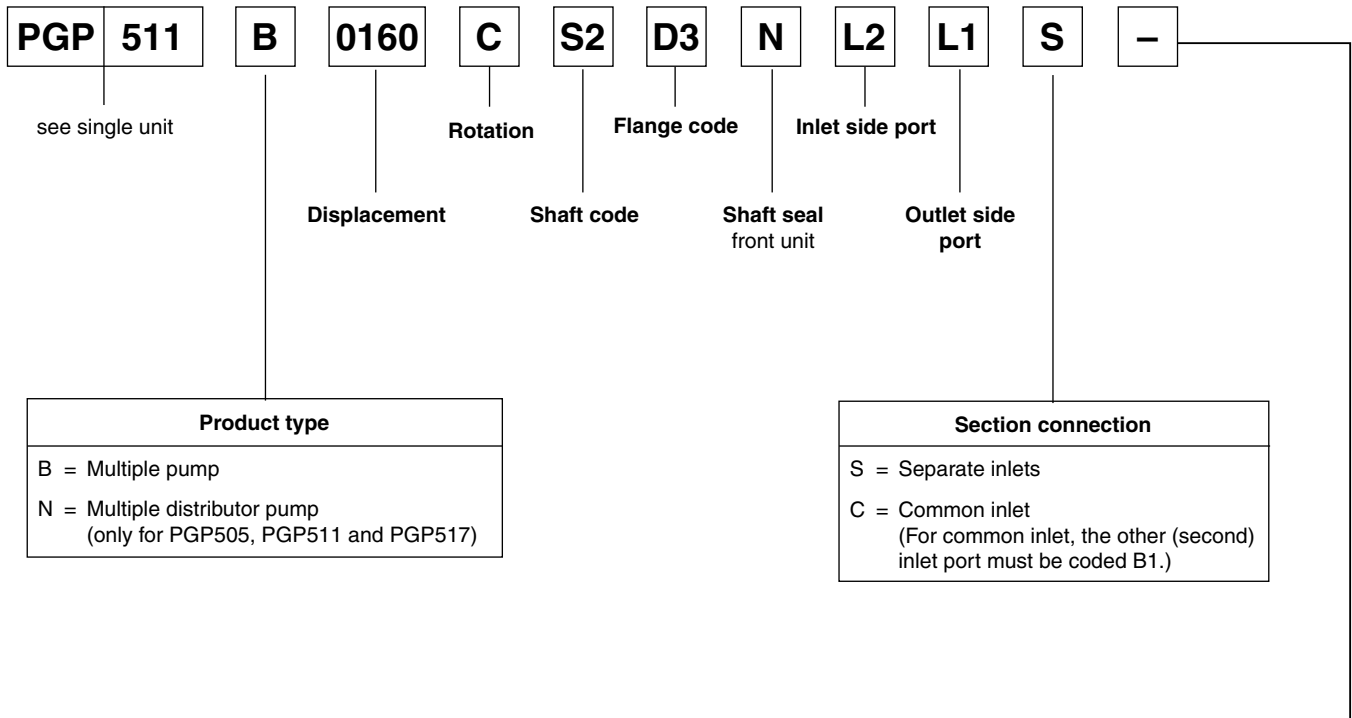
Dimensions (clockwise rotation shown)



04-01_PGP-500-UK-112



Code for multiple units



¹⁾ Further B possible for triple units

This coding system can be used for all pumps series 500.

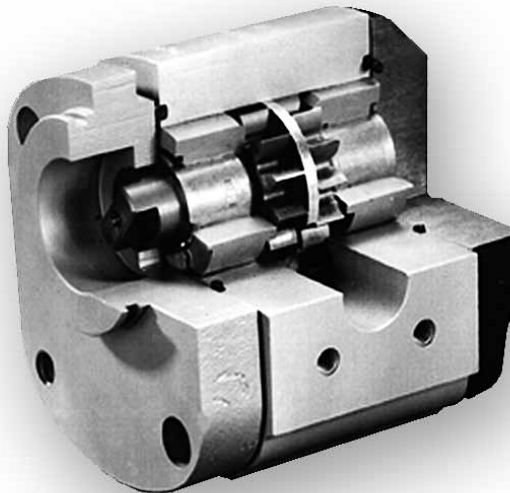
Quality pays

Aluminium bodied 'split-gear' gear pumps are designed for high pressure and speed ratings together with high efficiency and optimised noise levels.

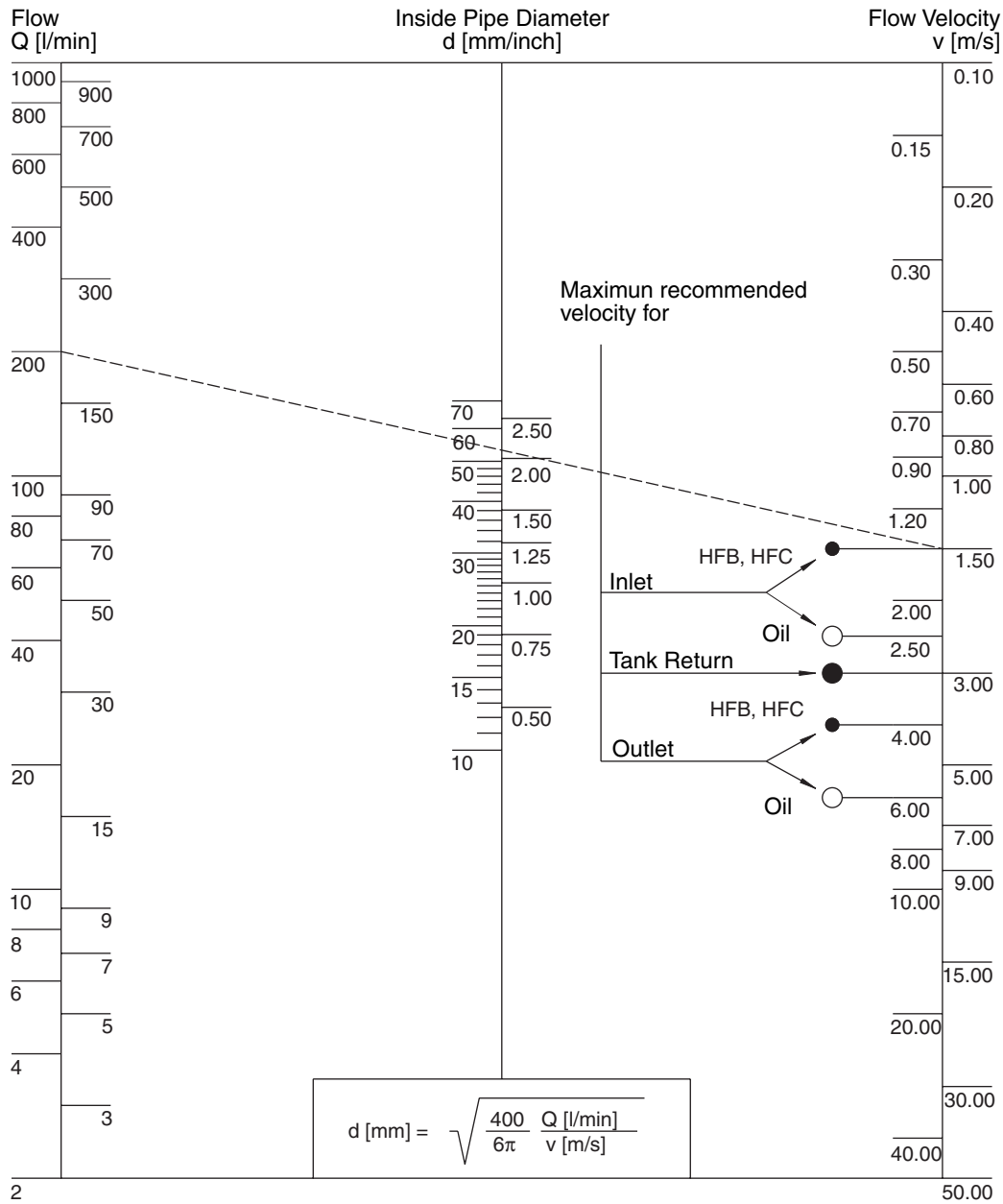
The flow pulsation is considerably decreased by phased dual element gear sets, resulting in models with clearly lower noise levels. Common inlet available for multiple section units.

Series PGP511 (on request)

- Up to 250 bar constant operation possible due to high-quality materials
- Low noise levels even in constant operation
- High efficiency thanks to precise manufacturing
- Complete product range for huge variety of applications
- Common inlet ports for double and triple pumps
- Wide choice of integrated valves, e.g. load-sensing and solenoid types
- Full range of proven motors available



Nomograph for Pipe Velocity



Shaft loads PGP500

Code	Description	Type	Torque rating [Nm]			
			PGP502	PGP505	PGP511	PGP517
H1	Ø10.0, 3.0 key, no thread, 36L	parallel	30	—	—	—
P2	Ø9.95, 8.8L, 2.4 key, M6	taper 1:8	30	—	—	—
V1	5 x 6.5 long shaft w/o coupling	tang drive	20	—	—	—
V2	5 x 4.5 short shaft w/o coupling	tang drive	20	—	—	—
A1	9T, 16/32DP, 32L, SAE "A"	splined	—	108	—	—
J1	Ø12.7, 3.2 key, no thread, 38L	parallel	—	43	—	—
K1	Ø15.88, 4.0 key, no thread, 32L, SAE "A"	parallel	—	85	—	—
Q2	Ø14.25, 5.5L, 3.0 key, M10x1	taper 1:8	—	68	—	—
A1	9T, 16/32DP, 32L, SAE "A"	splined	—	—	86	—
C1	11T, 16/32DP, 38.2L, SAE 19-4	splined	—	—	184	—
F1	9T, B17x14.23L, DIN 5482	splined	—	—	101	—
K1	Ø15.88, 4.0 key, no thread, 32L, SAE "A"	parallel	—	—	75	—
L6	Ø19.05, 4.8 key, no thread, 32L, SAE 19-1	parallel	—	—	145	—
S1	Ø17.0, 7.7L, 3.0 key, M12x1.5	taper 1:5	—	—	193	—
S2	Ø16.65, 12.0L, 3.2 key, M12x1.5	taper 1:8	—	—	198	—
S4	Ø16.65, 12.0L, 4.0 key, M12x1.5	taper 1:8	—	—	198	—
D1	13T, 16/32DP, 41.2L, SAE "B"	splined	—	—	—	345
M1	Ø22.2, 6.3 key, no thread, 41.2L, SAE "B"	parallel	—	—	—	251
M2	Ø25.4, 6.3 key, no thread, 46L, SAE "B-B"	parallel	—	—	—	395
T1	Ø21.59, 11.2L, 4.0 key, M14x1.5	taper 1:8	—	—	—	250
	Connecting shaft for multiple units		20	36	110	228



Formula to calculate shaft load

$$\text{Torque [Nm]} = \frac{\text{Displacement [cm}^3\text{/rev]} \cdot \text{Pressure [bar]}}{57.2}$$

Hydraulic fluids

Type	Fluid composition	Max. working pressure [bar]	Max. speed [min ⁻¹]	Temperature	Seal
Hydraulic fluid	Mineral oil based on hydraulic fluid acc. to ISO/DIN	See Technical Data	See Technical Data	-15 ... +80 °C -15 ... +120 °C	NBR FPM
HFB	Water-in-oil emulsion 40/60	140	1500	+2 ... +65 °C	NBR
HFC	Water-glycol 40/60	140	1500	-15 ... +65 °C	NBR
HFD	Phosphate ester	140	1500	-10 ... +80 °C	FPM

Flanges for suction and discharge ports

Please refer to Parker Bulletin 4040/UK.

