Parker Series 300

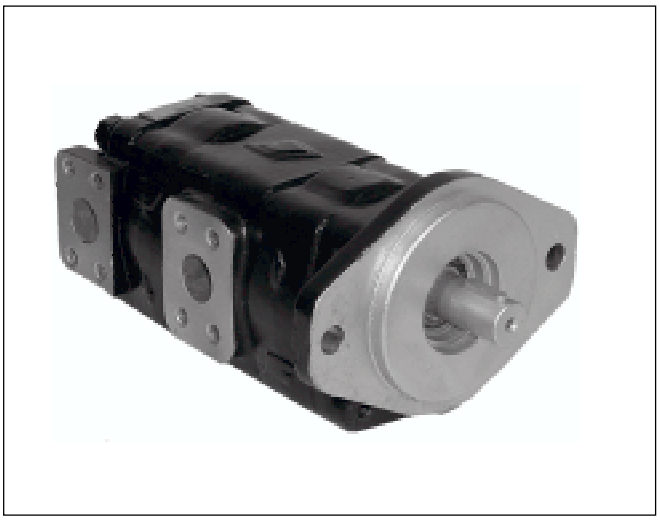
Design

- Three-piece cast-iron construction
- Low-friction bushing design
- Heavy-duty application
- Single, multiple, piggyback, and thru-drive assemblies

Description

The Parker 300 Series pumps and motors set the standard for superior performance and reliability in heavy-duty hydraulic application. The three-piece cast-iron construction with large area, low-friction bushings provide strength, high efficiency, and long life in severe operating environments. The design includes an advanced thrust plate and seal configuration, which optimizes performance even in high temperature and low viscosity conditions.

300 Series pumps are available in single, multiple, piggyback, and thru-drive assemblies. Multiple pumps reduce mounting costs, allow for a small package size and common inlet capabilities. Assemblies up to six pumping sections are available.
Piggyback pumps allow the combination of pump sections of different frame sizes in a common inlet, tandem configuration, while the thru-drive feature allows an independent piston or gear pump to be mounted to a rear SAE drive pad. Multiple section motors are also available providing enhanced torque and speed control as well as smooth torque ripple.
Relief valve, priority valve, load-sense unloading, and other integrated or bolt-on valve options are also available.



PGP 315B

Characteristics

Pump type	Heavy-duty, cast-iron, external gear
Mounting	SAE standard flanges, ZF, others
Ports	SAE split flanges and other types of threaded ports (cp. table)
Shaft style	SAE splined, keyed, and others (see table)
Drive	Clockwise, counter-clockwise, double. Drive direct with flexible coupling is recommended. Pumps subject to radial loads must be specified with an outward bearing. Axial loading is not allowed.
Speed	From 400 to 3000 rev/min
Theoretical displacem.	See table
Max. radial loads with outboard bearing	PGP 315 = 3200 N PGP 330 = 3500 N PGP 350 = 5000 N PGP 365 = 6500 N
Inlet pressure	0.8 to 2 bar absolute at operating temp.
Outlet pressure	See table
Hydraulic fluids	Mineral oil, fire resistant fluids: - water-oil emulsions 60/40, HFB - water-glycol, HFC - phosphate-esters, HFD
Fluid temperature	Mineral oil with standard seals: -20°C to 80°C Fire resistant fluids HFB, HFC -20°C to +60°C
Fluid viscosity	From 7.5 to 1600 cSt Recommended 15 to 75 cSt

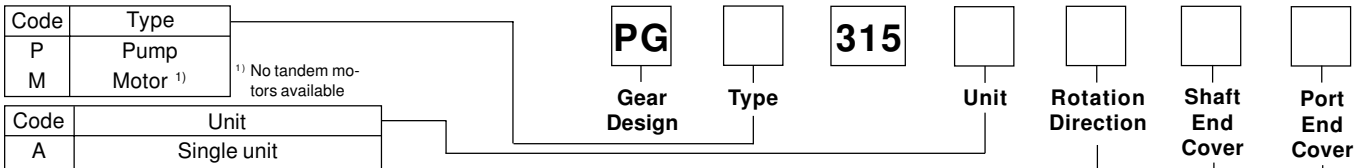
Filtration	ISO 4406 code: - 19/16 at 140 bar - 17/14 at 210 bar - 15/12 at 275 bar
Flow velocity	Mineral oil and HFD - Inlet up to 2.5 m/s - Outlet up to 6.0 m/s Fire resistant fluids HFB, HFC - Inlet up to 1.5 m/s - Outlet up to 4.0 m/s
Multiple pump assemblies	Up to 6 gear sections of the same model, even with different gear widths
Piggyback assemblies	Several models can be mounted together, one at the rear of the other. Fluids are intermixing even from separate reservoirs: 330/315, 350/315, 365/330, 365/330/315
Add-a-pump assemblies	Similar to piggyback, but fluids are not intermixing. (Al: aluminium pumps) 350/Al, 350/330, 350/350, 330/Al, 365/Al, 365/330, 365/350
Priority outlet pumps	Available for models 315, 330, 350
General	- For operations outside given parameters, please contact us. - The smallest gear is not recommended for single units at the max. rated pressure. - Theoretical displacement is equal to theoretical flow at 1.000 rev/min.

Code	Type
P	Pump
M	Motor [1]

[1] No tandem motors available

Code	Unit
A	Single unit
B	Tandem unit (flush studs)
L	Unit with extended studs

Code	Rotation Direction
1	Pump, cw w/o O.B. bearing
2	Pump, ccw w/o O.B. bearing
4	Pump, cw with O.B. bearing (code 490 only)
5	Pump, ccw with O.B. bearing (code 590 only)
9	Motor double-rotation w/o O.B. bearing + 1/4" ODT drain



Code	Shaft End Cover
90	4 bolt 72x100mm, 80mm pilot
93	SAE *A* 2 bolt
95	Pad mount for clutch
96	SAE *B* 2 bolt

Port End Cover

Side Ported Pumps

Ports		OD Tube Porting		BSPP Porting		SAE Split Flange		National Pipe Thread		Metric Split Flange	
IN	OUT	CW Code	CCW Code	CW Code	CCW Code	CW Code	CCW Code	CW Code	CCW Code	CW Code	CCW Code
1 1/4"	1"	FB	BF	FN	NF	—	—	AJ	JA	—	—
1 1/4"	7/8"	FC	CF	FP	PF	—	—	—	—	—	—
1 1/4"	3/4"	FG	GF	FR	RF	—	—	AK	KA	—	—
1 1/4"	5/8"	FJ	JF	—	—	—	—	—	—	—	—
1"	1"	FL	LF	FS	SF	—	—	AL	LA	—	—
1"	7/8"	FV	VF	FT	TF	—	—	—	—	—	—
1"	3/4"	FW	WF	BP	PB	EJ	JE	AM	MA	EV	VE
1"	5/8"	FX	XF	—	—	—	—	—	—	—	—
1"	1/2"	—	—	—	—	EK	KE	—	—	EW	WE
7/8"	7/8"	FY	YF	BQ	QB	—	—	—	—	—	—
7/8"	3/4"	FZ	ZF	BR	RB	—	—	—	—	—	—
7/8"	5/8"	BC	CB	—	—	—	—	—	—	—	—
7/8"	1/2"	BG	GB	BT	TB	—	—	—	—	—	—
3/4"	3/4"	BJ	JB	BU	UB	EL	LE	AR	RA	EX	XE
3/4"	5/8"	BL	LB	—	—	—	—	—	—	—	—
3/4"	1/2"	BN	NB	PQ	QP	EM	ME	—	—	EY	YE
1 1/4"	—	BV	VB	PR	RP	—	—	—	—	—	—
1"	—	BW	WB	PS	SP	OE	EO	—	—	OP	PO
7/8"	—	BX	XB	PT	TP	—	—	—	—	—	—
3/4"	—	BY	YB	PV	VP	—	—	—	—	OR	RO
—	1"	BZ	ZB	PW	WP	—	—	—	—	—	—
—	7/8"	PD	DP	PX	XP	—	—	—	—	—	—
—	3/4"	PE	EP	PY	YP	OJ	JO	—	—	OT	TO
—	5/8"	PM	MP	—	—	—	—	—	—	—	—
—	1/2"	PN	NP	PZ	ZP	OL	LO	—	—	OV	VO

Rear Ported Pumps

OD Tube Porting		BSPP Porting	
CW Code	CCW Code	CW Code	CCW Code
UC	CU	US	SU
UF	FU	UT	TU
UN	NU	UV	VU
—	—	—	—
UD	DU	UW	WU
UP	PU	UX	XU
UQ	QU	UY	YU
UR	RU	—	—
—	—	—	—
LN	NL	LU	UL
LP	PL	LV	VL
LQ	QL	—	—
—	—	—	—
LR	RL	LX	XL
LS	SL	—	—
LT	TL	LZ	ZL
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

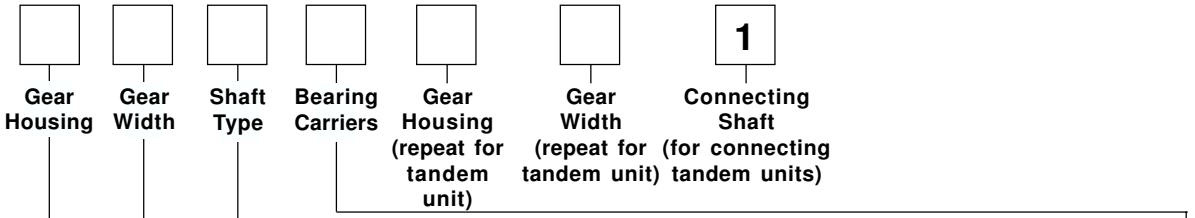
Unported (Tandem)	Code BI

Side Ported Motors (Double Rotation)

Ports		OD Tube Porting	BSPP Porting	SAE Split Flange	National Pipe Thread	Metric Split Flange
IN	OUT	Code	Code	Code	Code	Code
1"	1"	VN	VY	DR	DM	DV
3/4"	3/4"	VR	VZ	DS	DN	DW
1/2"	1/2"	VQ	VV	—	DQ	—

Rear Ported Motors (Double Rotation)

OD Tube Porting	BSPP Porting	National Pipe Thread
Code	Code	Code
RN	RT	RX
RQ	RV	RY
RS	RW	RZ



Code	Gear Housing
AB	Pump
EB	Motor

Gear Width			
Code	Gear Width	cm³/rev	Max. Pressure
03	3/8"	7.6	245 bar
05	1/2"	10.2	245 bar
06	5/8"	12.7	245 bar
07	3/4"	15.2	245 bar
08	7/8"	17.8	245 bar
10	1"	20.3	245 bar
11	1 1/8"	22.9	245 bar
12	1 1/4"	25.4	245 bar
13	1 3/8"	27.9	245 bar
15	1 1/2"	30.5	225 bar
16	1 5/8"	33.0	215 bar
17	1 3/4"	35.6	200 bar
18	1 7/8"	38.1	190 bar
20	2"	40.6	175 bar

Code	Shaft Type
97	SAE "A" Keyed
96	SAE "A" Splined
66	SAE "B" Keyed
65	SAE "B" Splined
60[2)]	Tapered, M12x1.5 thd. 3x5mm Keyed; 1:5 taper
56[3)]	Clutch Pump Tapered; 5/16 - 24 thd. (internal), Woodruff keyed; 1:4 taper

[2)] 90 SEC only
[3)] Single unit only

Bearing Carriers

Dual Outlet Pumps

Note
Outlets: For clockwise porting the top port number comes first. For counter-clockwise porting the bottom port number comes first.

Ports			OD Tube Porting		BSPP Porting		SAE Split Flange		Metric Split Flange	
			CW	CCW	CW	CCW	CW	CCW	CW	CCW
IN	OUT	OUT	Code	Code	Code	Code	Code	Code	Code	Code
1 1/2"	1"	1"	JG	GJ	HJ	JH	—	—	—	—
1 1/2"	1"	7/8"	KG	GK	KJ	JK	—	—	—	—
1 1/2"	7/8"	7/8"	LG	GL	LJ	JL	—	—	—	—
1 1/2"	1"	3/4"	MG	GM	MJ	JM	—	—	—	—
1 1/2"	3/4"	3/4"	NG	GN	NJ	JN	—	—	—	—
1 1/4"	1"	1"	PG	GP	PJ	JP	—	—	—	—
1 1/4"	1"	7/8"	QQ	QQ	QJ	JQ	—	—	—	—
1 1/4"	7/8"	7/8"	RG	GR	RJ	JR	—	—	—	—
1 1/4"	1"	3/4"	SG	GS	SJ	JS	—	—	—	—
1 1/4"	3/4"	3/4"	TG	GT	TJ	JT	CA	AC	BD	DB
1 1/4"	3/4"	5/8"	UG	GU	—	—	—	—	—	—
1 1/4"	3/4"	1/2"	VG	GV	UJ	JU	DA	AD	CD	DC
1 1/4"	5/8"	5/8"	WG	GW	—	—	—	—	—	—
1 1/4"	1/2"	1/2"	XG	GX	VJ	JV	EA	AE	ED	DE
1"	1"	1"	YG	GY	WJ	JW	—	—	—	—
1"	1"	7/8"	ZG	GZ	XJ	JX	—	—	—	—
1"	7/8"	7/8"	RC	CR	YJ	JY	—	—	—	—
1"	1"	3/4"	SC	CS	ZJ	JZ	—	—	—	—
1"	3/4"	3/4"	TC	CT	JD	DJ	FA	AF	FD	DF
1"	3/4"	5/8"	VC	CV	—	—	—	—	—	—
1"	5/8"	5/8"	XC	CX	—	—	—	—	—	—
1"	3/4"	1/2"	WC	CW	KD	DK	GA	A**G**	GD	DG
1"	1/2"	1/2"	**YC**	**CY**	**LD**	**DL**	**HA**	**AH**	HD	DH

Single Outlet Pumps

Note
Outlet for front section.

Ports		OD Tube Porting		BSPP Porting		SAE Split Flange		Metric Split Flange	
		CW	CCW	CW	CCW	CW	CCW	CW	CCW
IN	OUT	Code	Code	Code	Code	Code	Code	Code	Code
1 1/2"	1 1/2"	KB	BK	KR	RK	—	—	—	—
1 1/2"	1 1/4"	KC	CK	KS	SK	—	—	—	—
1 1/2"	1"	KF	FK	KT	TK	—	—	—	—
1 1/2"	7/8"	KL	LK	KU	UK	—	—	—	—
1 1/2"	3/4"	KM	MK	KV	VK	—	—	—	—
1 1/4"	1 1/4"	KN	NK	KW	WK	CJ	JC	CN	NC
1 1/4"	1"	KO	OK	KX	XK	CL	LC	CP	PC
1 1/4"	7/8"	KP	PK	KY	YK	—	—	—	—
1 1/4"	3/4"	KQ	QK	KZ	ZK	CM	MC	CQ	QC
1 1/4"	5/8"	MB	BM	—	—	—	—	—	—
1 1/4"	1/2"	ML	LM	HO	OH	HB	BH	HR	RH
1"	1"	MN	NM	HP	PH	HC	CH	HS	SH
1"	7/8"	MQ	QM	HQ	QH	—	—	—	—
1"	3/4"	MR	RM	HX	XH	HF	FH	HT	TH
1"	5/8"	MS	SM	—	—	—	—	—	—
1"	1/2"	MT	TM	HY	YH	HL	LH	HU	UH
3/4"	3/4"	MU	UM	HZ	ZH	HM	MH	HV	VH
3/4"	5/8"	MV	VM	—	—	—	—	—	—
3/4"	1/2"	MW	WM	MX	XM	HN	NH	HW	WH

Common inlet passage	CW	CCW
No ports	C	D

Code	Type
P	Pump
M	Motor

PG		330				
Gear Design	Type		Unit	Rotation Direction	Shaft End Cover	Port End Cover

Code	Unit
A	Single unit
B	Tandem unit (flush studs)
C	Single or Tandem w. two piece shaft (O.B. bearing required)
L	Unit with extended studs

Code	Rotation Direction
1	Pump, cw w/o O.B. bearing
2	Pump, ccw w/o O.B. bearing
4	Pump, cw with O.B. bearing
5	Pump, ccw with O.B. bearing
8	Motor double-rotation with O.B. bearing + ¼" ODT drain
9	Motor double-rotation w/o O.B. bearing + ¼" ODT drain
18 [2]	Motor double-rotation with O.B. bearing + ¼" BSPP drain
19 [3]	Motor double-rotation w/o O.B. bearing + ¼" BSPP drain

[2] 78 only
[3] 42 and 78 only

Code	Shaft End Cover
42	SAE 4 bolt "B"
78	SAE 4 bolt "C"
97	SAE 2 bolt "B"

Port End Cover

Side Ported Pumps

Ports		OD Tube Porting		BSPP Porting		SAE Split Flange		Metric Split Flange	
IN	OUT	CW Code	CCW Code	CW Code	CCW Code	CW Code	CCW Code	CW Code	CCW Code
1 ½"	1 ¼"	—	—	—	—	EJ	JE	EV	VE
1 ½"	1"	—	—	—	—	EK	KE	EW	WE
1 ¼"	1 ¼"	—	—	—	—	EL	LE	EX	XE
1 ¼"	1"	FJ	JF	FS	SF	EM	ME	EY	YE
1"	1"	FL	LF	FT	TF	EN	NE	EZ	ZE
1 ½"	—	—	—	—	—	OF	FO	OR	RO
1 ¼"	—	BG	GB	BQ	QB	OG	GO	OS	SO
1"	—	BJ	JB	BR	RB	OJ	JO	OT	TO
—	1 ¼"	—	—	—	—	OM	MO	OW	WO
—	1"	BN	NB	BU	UB	ON	NO	OX	XO

Unported (Tandem)	Code BI

Side Ported Motors (Double Rotation)

Ports		OD Tube Porting	BSPP Porting	SAE Split Flange	Metr. Straight Thread	Metric Split Flange
IN	OUT	Code	Code	Code	Code	Code
1 ¼"	1 ¼"	VC	VX	CS	VS	CX
1"	1"	VN	VY	CT	VT	CY
¾"	¾"	VR	VZ	CV	VW	CZ

Unported (Tandem)	Code BA

Gear Housing	Gear Width	Shaft Type	Bearing Carriers	Gear Housing (repeat for tandem unit)	Gear Width (repeat for tandem unit)	Connecting Shaft (for connecting tandem units)
□	□	□	□	□	□	1

Code	Gear Housing
AB	Pump
EB	Motor

Gear Width			
Code	Gear Width	cm³/rev	Max. Pressure
05	½"	16.1	245 bar
07	¾"	24.2	245 bar
10	1"	32.3	245 bar
12	1 ¼"	40.4	245 bar
15	1 ½"	48.4	245 bar
17	1 ¾"	56.5	225 bar
20	2"	64.6	210 bar

Code	Shaft Type [4]
07	SAE "C" Spline (two piece only)
25	SAE "B" Spline
30	SAE "B" Keyed
98	SAE "BB" Splined
43	SAE "BB" Keyed

[4] For single, tandem or two piece shaft, unless noted.

Bearing Carriers

Dual Outlet Pumps

Note Outlets: For clockwise porting the top port number comes first. For counter-clockwise porting the bottom port number comes first.

Ports			SAE Split Flange		Metric Split Flange		OD Tube Porting	
IN	OUT	OUT	CW Code	CCW Code	CW Code	CCW Code	CW Code	CCW Code
2"	1 ¼"	1 ¼"	AM	MA	DM	MD	—	—
2"	1 ¼"	1"	AN	NA	DN	ND	—	—
2"	1"	1"	AP	PA	DP	PD	—	—
1 ½"	1 ¼"	1 ¼"	AT	TA	DT	TD	—	—
1 ½"	1 ¼"	1"	AU	UA	DU	UD	—	—
1 ½"	1"	1"	AV	VA	DV	VD	GV	VG
1 ¼"	1 ¼"	1 ¼"	AW	WA	DW	WD	—	—
1 ¼"	1 ¼"	1"	AX	XA	DX	XD	—	—
1 ¼"	1"	1"	AY	YA	—	—	GY	YG
1"	1"	1"	AZ	ZA	DZ	ZD	GZ	ZG

Common inlet passage	CW	CCW
No ports	C	D

Single Outlet Pumps

Note
Outlet for front section.

Ports		SAE Split Flange		Metric Split Flange		OD Tube Porting	
IN	OUT	CW Code	CCW Code	CW Code	CCW Code	CW Code	CCW Code
2"	1 ½"	HB	BH	HR	RH	—	—
2"	1 ¼"	HC	CH	HS	SH	—	—
2"	1"	HF	FH	HT	TH	—	—
1 ½"	1 ½"	HL	LH	HU	UH	—	—
1 ½"	1 ¼"	HM	MH	HV	VH	KM	MK
1 ½"	1"	HN	NH	HW	WH	KN	NK
1 ¼"	1 ¼"	HO	OH	HX	XH	KO	OK
1 ¼"	1"	HP	PH	HY	YH	KP	PK
1"	1"	HQ	QH	HZ	ZH	KQ	QK
[5] 1¼"	1"	RS	SR	—	—	—	—

[5] Outlet port for rear section

Combined Outlet Pumps

SAE Split Flange		OD Tube Porting	
CW Code	CCW Code	CW Code	CCW Code
UN	NU	—	—
UO	OU	—	—
—	—	—	—
UP	PU	—	—
UQ	QU	PQ	QP
—	—	—	—
UR	RU	PR	RP
—	—	—	—
—	—	—	—
—	—	—	—

Combined Outlet Motors (Double Rotation)

Ports		OD Tube Porting	BSPP Porting	SAE Split Flange	Metr. Straight Thread	Metric Split Flange
IN	OUT	Code	Code	Code	Code	Code
1 ½"	1 ½"	—	—	BB	—	HH
1 ¼"	1 ¼"	NN	XX	CC	TT	JJ
1"	1"	QQ	YY	EE	UU	KK
¾"	¾"	RR	ZZ	FF	VV	LL

Code	Type
P	Pump
M	Motor

PG		350				
Gear Design	Type		Unit	Rotation Direction	Shaft End Cover	Port End Cover

Code	Unit
A	Single unit
B	Tandem unit (flush studs)
C	Single or Tandem w. two piece shaft (O.B. bearing required)
L	Unit with extended studs

Code	Rotation Direction
1	Pump, cw w/o O.B. bearing
2	Pump, ccw w/o O.B. bearing
4	Pump, cw with O.B. bearing
5	Pump, ccw with O.B. bearing
8	Motor double-rotation with O.B. bearing + ¼" ODT drain
9	Motor double-rotation w/o O.B. bearing + ¼" ODT drain
18 [2)]	Motor double-rotation with O.B. bearing + ¼" BSPP drain
19 [2)]	Motor double-rotation w/o O.B. bearing + ¼" BSPP drain

Code	Shaft End Cover
42	SAE 4 bolt "B"
46	SAE 2/4 bolt "B"
62	"ZF" 4 bolt (462 only), 80mm pilot, 80x80mm
78	SAE 4 bolt "C"
97	SAE 2 bolt "B"
98	SAE 2 bolt "C"

[2)] For shaft end cover code 78 only

Port End Cover

Side Ported Pumps

Ports		OD Tube Porting		BSPP Porting		SAE Split Flange		Metric Split Flange	
IN	OUT	CW Code	CCW Code	CW Code	CCW Code	CW Code	CCW Code	CW Code	CCW Code
2"	1 ½"	—	—	—	—	EC	CE	ER	RE
2"	1 ¼"	—	—	—	—	EF	FE	ES	SE
2"	1"	—	—	—	—	EG	GE	ET	TE
1 ½"	1 ½"	—	—	—	—	EH	HE	EU	UE
1 ½"	1 ¼"	FB	BF	FN	NF	EJ	JE	EV	VE
1 ½"	1"	FC	CF	FP	PF	EK	KE	EW	WE
1 ¼"	1 ¼"	FG	GF	FR	RF	EL	LE	EX	XE
1 ¼"	1"	FJ	JF	FS	SF	EM	ME	EY	YE
1"	1"	FL	LF	FT	TF	EN	NE	EZ	ZE
2"	—	—	—	—	—	OE	EO	OP	PO
1 ½"	—	BC	CB	BP	PB	OF	FO	OR	RO
1 ¼"	—	BG	GB	BQ	QB	OG	GO	OS	SO
1"	—	BJ	JB	BR	RB	OJ	JO	OT	TO
—	1 ½"	—	—	—	—	OL	LO	OV	VO
—	1 ¼"	BL	LB	BT	TB	OM	MO	OW	WO
—	1"	BN	NB	BU	UB	ON	NO	OX	XO

Unported (Tandem)	CW Code	BI	CCW Code	IB

Side Ported Motors (Double Rotation)

Ports		OD Tube Porting	BSPP Porting	SAE Split Flange	Metr. Straight Thread	Metric Split Flange
IN	OUT	Code	Code	Code	Code	Code
1 ½"	1 ½"	—	—	CR	—	CW
1 ¼"	1 ¼"	VC	VX	CS	VS	CX
1"	1"	VN	VY	CT	VT	CY
¾"	¾"	VR	VZ	CV	VW	CZ

Unported (Tandem)	Code BA

□	□	□	□	□	□	1
Gear Housing	**Gear Width**	**Shaft Type**	**Bearing Carriers**	**Gear Housing (repeat for tandem unit)**	**Gear Width (repeat for tandem unit)**	**Connecting Shaft (for connecting tandem units)**

Code	Gear Housing
AB	Pump
EB	Motor

Gear Width			
Code	Gear Width	cm³/ rev	Max. Pressure
05	½"	20.9	245 bar
07	¾"	31.3	245 bar
10	1"	41.8	245 bar
12	1 ¼"	52.2	245 bar
15	1 ½"	62.7	245 bar
17	1 ¾"	73.1	225 bar
20	2"	83.6	210 bar
22	2 ¼"	94.0	190 bar
25	2 ½"	104.5	175 bar

Code	Shaft Type [3]
06	B8x32x36 DIN 5462 Spline (two piece only)
07	SAE "C" Spline
11	SAE "C" Keyed
25	SAE "B" Spline
43	SAE "BB" Keyed
73	SAE "C" Keyed long (single and two piece only)
98	SAE "BB" Splined (tandem only)

[3] For single, tandem or two piece shaft, unless noted.

Bearing Carriers

Dual Outlet Pumps

Note Outlets: For clockwise porting the top port number comes first. For counter-clockwise porting the bottom port number comes first.

Ports			SAE Split Flange		Metric Split Flange		OD Tube Porting	
IN	OUT	OUT	CW Code	CCW Code	CW Code	CCW Code	CW Code	CCW Code
2 ½"	1 ¼"	1 ¼"	AF	FA	—	—	—	—
2 ½"	1 ¼"	1"	AG	GA	—	—	—	—
2 ½"	1"	1"	AH	HA	—	—	—	—
2"	1 ¼"	1 ¼"	AM	MA	DM	MD	GM	MG
2"	1 ¼"	1"	AN	NA	DN	ND	GN	NG
2"	1"	1"	AP	PA	DP	PD	GP	PG
1 ½"	1 ¼"	1 ¼"	AT	TA	DT	TD	GT	TG
1 ½"	1 ¼"	1"	AU	UA	DU	UD	GU	UG
1 ½"	1"	1"	AV	VA	DV	VD	GV	VG
1 ¼"	1 ¼"	1 ¼"	AW	WA	DW	WD	GW	WG
1 ¼"	1 ¼"	1"	AX	XA	DX	XD	GX	XG
1 ¼"	1"	1"	AY	YA	DY	YD	GY	YG
1"	1"	1"	AZ	ZA	DZ	ZD	GZ	ZG

Single Outlet Pumps

Note
Outlet for front section.

Ports		SAE Split Flange		Metric Split Flange		BSPP Porting		OD Tube Porting	
IN	OUT	CW Code	CCW Code	CW Code	CCW Code	CW Code	CCW Code	CW Code	CCW Code
2"	1 ½"	HB	BH	RH	HR	KR	RK	KB	BK
2"	1 ¼"	HC	CH	SH	HS	KS	SK	KC	CK
2"	1"	HF	FH	TH	HT	KT	TK	KF	FK
1 ½"	1 ½"	HL	LH	UH	HU	KU	UK	KL	LK
1 ½"	1 ¼"	HM	MH	VH	HV	KV	VK	KM	MK
1 ½"	1"	HN	NH	WH	HW	KW	WK	KN	NK
1 ¼"	1 ¼"	HO	OH	XH	HX	KX	XK	KO	OK
1 ¼"	1"	HP	PH	YH	HY	KY	YK	KP	PK
1"	1"	HQ	QH	ZH	HZ	KZ	ZK	KQ	QK
[4] 1 ¼"	1"	RS	SR	—	—	—	—	—	—

Common inlet passage	CW	CCW
No ports	C	D

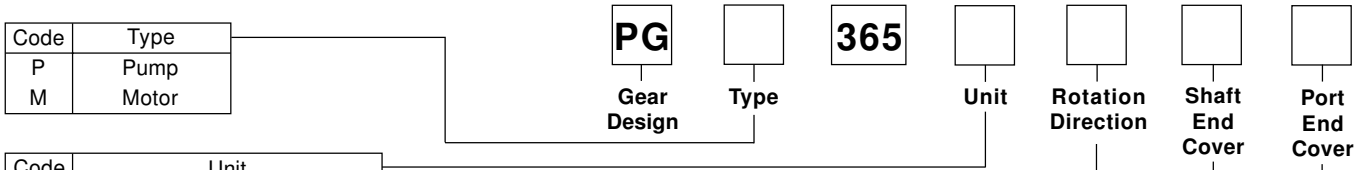
[4] Outlet port for rear section

Combined Outlet Motors (Double Rotation)

Ports		OD Tube Porting	BSPP Porting	SAE Split Flange	Metr. Straight Thread	Metric Split Flange
IN	OUT	Code	Code	Code	Code	Code
2"	2"	—	—	AA	—	GG
1 ½"	1 ½"	MM	WW	BB	SS	HH
1 ¼"	1 ¼"	NN	XX	CC	TT	JJ
1"	1"	QQ	YY	EE	UU	KK
¾"	¾"	RR	ZZ	FF	VV	LL

Combined Outlet Pumps

Ports		SAE Split Flange		Metric Split Flange		OD Tube Porting	
IN	OUT	CW Code	CCW Code	CW Code	CCW Code	CW Code	CCW Code
2"	1 ½"	UN	NU	VU	UV	PE	EP
2"	1 ¼"	UO	OU	WU	UW	PM	MP
1 ½"	1 ½"	UP	PU	XU	UX	PN	NP
1 ½"	1 ¼"	UQ	QU	YU	UY	PQ	QP
1 ¼"	1 ¼"	UR	RU	ZU	UZ	PR	RP



Code	Type
P	Pump
M	Motor

Code	Unit
A	Single unit
B	Tandem unit (flush studs)
C	Single or Tandem w. two piece shaft (O.B. bearing required)
L	Unit with extended studs

Code	Rotation Direction
1	Pump, cw w/o O.B. bearing
2	Pump, ccw w/o O.B. bearing
4	Pump, cw with O.B. bearing
5	Pump, ccw with O.B. bearing
8	Motor double-rotation with O.B. bearing + ¼" ODT drain
9	Motor double-rotation w/o O.B. bearing + ¼" ODT drain

Code	Shaft End Cover
42	SAE 4 bolt "B"
78	SAE 4 bolt "C"
97	SAE 2 bolt "B"
98	SAE 2 bolt "C"

Port End Cover

Side Ported Pumps

Ports		OD Tube Porting		BSPP Porting		SAE Split Flange		Metric Split Flange	
IN	OUT	CW Code	CCW Code	CW Code	CCW Code	CW Code	CCW Code	CW Code	CCW Code
2"	1 ½"	—	—	—	—	EC	CE	ER	RE
2"	1 ¼"	—	—	—	—	EF	FE	ES	SE
2"	1"	—	—	—	—	EG	GE	ET	TE
1 ½"	1 ½"	—	—	—	—	EH	HE	EU	UE
1 ½"	1 ¼"	FB	BF	FN	NF	EJ	JE	EV	VE
1 ½"	1"	FC	CF	FP	PF	EK	KE	EW	WE
1 ¼"	1 ¼"	FG	GF	FR	RF	EL	LE	EX	XE
1 ¼"	1"	FJ	JF	FS	SF	EM	ME	EY	YE
1"	1"	FL	LF	FT	TF	EN	NE	EZ	ZE
2"	—	—	—	—	—	OE	EO	OP	PO
1 ½"	—	BC	CB	BP	PB	OF	FO	OR	RO
1 ¼"	—	BG	GB	BQ	QB	OG	GO	OS	SO
1"	—	BJ	JB	BR	RB	OJ	JO	OT	TO
—	1 ½"	—	—	—	—	OL	LO	OV	VO
—	1 ¼"	BL	LB	BT	TB	OM	MO	OW	WO
—	1"	BN	NB	BU	UB	ON	NO	OX	XO

Unported (Tandem)	CW Code	BI	CCW Code	IB

Side Ported Motors (Double Rotation)

Ports		OD Tube Porting	BSPP Porting	SAE Split Flange	Metr. Straight Thread	Metric Split Flange
IN	OUT	Code	Code	Code	Code	Code
1 ½"	1 ½"	—	—	CR	—	CW
1 ¼"	1 ¼"	VC	VX	CS	VS	CX
1"	1"	VN	VY	CT	VT	CY
¾"	¾"	VR	VZ	CV	VW	CZ

Unported (Tandem)	Code BA

Gear Housing	Gear Width	Shaft Type	Bearing Carriers	Gear Housing (repeat for tandem unit)	Gear Width (repeat for tandem unit)	Connecting Shaft (for connecting tandem units)
□	□	□	□	□	□	1

Code	Gear Housing
AB	Pump
EB	Motor

Gear Width			
Code	Gear Width	cm³/rev	Max. Pressure
07	¾"	44.3	245 bar
10	1"	59.0	245 bar
12	1 ¼"	73.8	245 bar
15	1 ½"	88.5	245 bar
17	1 ¾"	103.3	245 bar
20	2"	118.0	245 bar
22	2 ¼"	132.8	225 bar
25	2 ½"	147.5	210 bar

Code	Shaft Type [3]
07	SAE "C" Spline (single and tandem only)
11	SAE "C" Keyed
25	SAE "B" Spline (single only)

[3] For single, tandem or two piece shaft, unless noted.

Bearing Carriers

Dual Outlet Pumps

Note Outlets: For clockwise porting the top port number comes first. For counter-clockwise porting the bottom port number comes first.

Ports			SAE Split Flange		Metric Split Flange		OD Tube Porting		BSPP Porting	
			CW	CCW	CW	CCW	CW	CCW	CW	CCW
IN	OUT	OUT	Code	Code	Code	Code	Code	Code	Code	Code
2 ½"	1 ½"	1 ½"	AC	CA	DB	BD	—	—	—	—
2 ½"	1 ½"	1 ¼"	AD	DA	DC	CD	—	—	—	—
2 ½"	1 ½"	1"	AE	EA	DE	ED	—	—	—	—
2 ½"	1 ¼"	1 ¼"	AF	FA	DF	FD	—	—	—	—
2 ½"	1 ¼"	1"	AG	GA	DG	GD	—	—	—	—
2 ½"	1"	1"	AH	HA	DH	HD	—	—	—	—
2"	1 ½"	1 ½"	AJ	JA	DJ	JD	GJ	JG	JH	HJ
2"	1 ½"	1 ¼"	AK	KA	DK	KD	GK	KG	JK	KJ
2"	1 ½"	1"	AL	LA	DL	LD	GL	LG	JL	LJ
2"	1 ¼"	1 ¼"	AM	MA	DM	MD	GM	MG	JM	MJ
2"	1 ¼"	1"	AN	NA	DN	ND	GN	NG	JN	NJ
2"	1"	1"	AP	PA	DP	PD	GP	PG	JP	PJ
1 ½"	1 ½"	1 ½"	AQ	QA	DQ	QD	GQ	QG	JQ	QJ
1 ½"	1 ½"	1 ¼"	AR	RA	DR	RD	GR	RG	JR	RJ
1 ½"	1 ½"	1"	AS	SA	DS	SD	GS	SG	JS	SJ
1 ½"	1 ¼"	1 ¼"	AT	TA	DT	TD	GT	TG	JT	TJ
1 ½"	1 ¼"	1"	AU	UA	DU	UD	GU	UG	JU	UJ
1 ½"	1"	1"	AV	VA	DV	VD	GV	VG	JV	VJ
1 ¼"	1 ¼"	1 ¼"	AW	WA	DW	WD	GW	WG	JW	WJ
1 ¼"	1 ¼"	1"	AX	XA	DX	XD	GX	XG	JX	XJ
1 ¼"	1"	1"	AY	YA	DY	YD	GY	YG	JY	YJ
1"	1"	1"	AZ	ZA	DZ	ZD	GZ	ZG	JZ	ZJ

Single Outlet Pumps

Note
Outlet for front section.

Ports		SAE Split Flange		Metric Split Flange		OD Tube Porting	
		CW	CCW	CW	CCW	CW	CCW
IN	OUT	Code	Code	Code	Code	Code	Code
2 ½"	1 ½"	CJ	JC	CN	NC	—	—
2 ½"	1 ¼"	CL	LC	CP	PC	—	—
2 ½"	1"	CM	MC	CQ	QC	—	—
2"	1 ½"	HB	BH	HR	RH	KB	BK
2"	1 ¼"	HC	CH	HS	SH	KC	CK
2"	1"	HF	FH	HT	TH	KF	FK
1 ½"	1 ½"	HL	LH	HU	UH	KL	LK
1 ½"	1 ¼"	HM	MH	HV	VH	KM	MK
1 ½"	1"	HN	NH	HW	WH	KN	NK
1 ¼"	1 ¼"	HO	OH	HX	XH	KO	OK
1 ¼"	1"	HP	PH	HY	YH	KP	PK
1"	1"	HQ	QH	HZ	ZH	KQ	QK
[4] 2½"	1 ½"	NR	RN	—	—	—	—
[4] 1¼"	1"	RS	SR	—	—	—	—

[4] Outlet port for rear section

Combined Outlet Pumps

Ports		SAE Split Flange		OD Tube Porting	
IN	OUT	CW	CCW	CW	CCW
2 ½"	1 ½"	UC	CU	—	—
2 ½"	1 ¼"	UF	FU	—	—
2"	1 ½"	UN	NU	PE	EP
2"	1 ¼"	UO	OU	PM	MP
1 ½"	1 ½"	UP	PU	PN	NP
1 ½"	1 ¼"	UQ	QU	PQ	QP
1 ¼"	1 ¼"	UR	RU	PR	RP

Common inlet passage	CW	CCW
No ports	C	D

Combined Outlet Motors

Ports		OD Tube Porting	BSPP Porting	SAE Split Flange	Metr. Straight Thread	Metric Split Flange
IN	OUT	Code	Code	Code	Code	Code
2"	2"	—	—	AA	—	GG
1 ½"	1 ½"	MM	WW	BB	SS	HH
1 ¼"	1 ¼"	NN	XX	CC	TT	JJ
1"	1"	QQ	YY	EE	UU	KK
¾"	¾"	RR	ZZ	FF	VV	LL

PGP/PGM

Model PGP =pump PGM =motor	Gear width			Theoret. displacem. $cm^3/rev.$	Mineral Oil max. pressure bar		Weight Single	Weight Multiple add per sect.
	Inch	Code	mm		Cont.	Intermitt.	kg	kg
PGP 315	1/2	05	12.7	10.2	245	275	6.7	6.7
PGM 315	5/8	06	15.9	12.7	245	275	6.9	6.9
	3/4	07	19.1	15.2	245	275	7.1	7.1
	7/8	08	22.2	17.8	245	275	7.3	7.3
	1	10	25.4	20.3	245	275	7.6	7.6
	1 1/8	11	28.6	22.9	245	275	7.8	7.8
	1 1/4	12	31.8	25.4	245	265	8.1	8.1
	1 3/8	13	34.9	27.9	245	255	8.3	8.3
	1 1/2	15	38.1	30.5	225	245	8.5	8.5
	1 5/8	16	41.3	33.0	215	230	8.7	8.7
	1 3/4	17	44.5	35.6	200	215	9.0	9.0
	1 7/8	18	47.6	38.1	190	205	9.2	9.2
	2	20	50.8	40.6	175	190	9.4	9.4
PGP 330	1/2	05	12.7	16.1	245	275	15.0	12.0
PGM 330	3/4	07	19.1	24.2	245	275	15.5	12.5
	1	10	25.4	32.3	245	275	16.0	13.0
	1 1/4	12	31.8	40.4	245	275	16.5	13.5
	1 1/2	15	38.1	48.4	245	265	17.0	14.0
	1 3/4	17	44.5	56.5	225	245	17.5	14.5
	2	20	50.8	64.6	210	225	18.0	15.0
PGP 350	1/2	05	12.7	20.9	245	275	19.0	16.0
PGM 350	3/4	07	19.1	31.3	245	275	20.0	17.0
	1	10	25.4	41.8	245	275	21.0	18.0
	1 1/4	12	31.8	52.2	245	275	22.0	19.0
	1 1/2	15	38.1	62.7	245	265	23.0	20.0
	1 3/4	17	44.5	73.1	225	245	24.0	21.0
	2	20	50.8	83.6	210	225	25.0	22.0
	2 1/4	22	57.2	94.0	190	210	26.0	23.0
	2 1/2	25	63.5	104.5	175	190	27.0	24.0
PGP 365	3/4	07	19.1	44.3	245	275	26.0	23.0
PGM 365	1	10	25.4	59.0	245	275	27.0	24.0
	1 1/4	12	31.8	73.8	245	275	28.0	25.0
	1 1/2	15	38.1	88.5	245	275	29.0	26.0
	1 3/4	17	44.5	103.3	245	275	30.0	27.0
	2	20	50.8	118.0	245	265	31.0	28.0
	2 1/4	22	57.2	132.8	225	245	32.0	29.0
	2 1/2	25	63.5	147.5	210	225	33.0	30.0

Pump Performance Data

PGP 315

Speed	Output flow	Gear Widths						
RPM	Input power	1/2"	3/4"	1"	1 1/4"	1 1/2"	1 3/4"	2"
900	LPM	8	12	17	21	26	30	34
	kW	4	6	8	10	11	11	11
1200	LPM	11	17	23	29	35	40	46
	kW	5	8	11	13	15	15	15
1500	LPM	14	21	29	36	44	51	58
	kW	7	10	13	16	19	19	19
1800	LPM	17	26	35	44	53	62	70
	kW	8	12	16	20	22	23	23
2100	LPM	20	30	41	51	62	72	83
	kW	9	14	18	23	26	27	26
2400	LPM	23	35	47	59	71	83	95
	kW	11	16	21	26	30	31	30
3000	LPM	29	44	59	74	90	104	119
	kW	13	20	26	33	37	38	38

Performance data shown are the average results based on a series of laboratory tests of production units and are not necessarily representative of any one unit. Tests were run with an oil reservoir temperature of 50°C and a viscosity of 38mm^2/s at 40°C.

Note:
Pump output flow is at the maximum rated pressure (see page14).

Motor Performance Data

PGM 315

Speed RPM	Gear Widths									
	1" 245 bar		1 1/4" 245 bar		1 1/2" 225 bar		1 3/4" 200 bar		2" 175 bar	
	A	B	A	B	A	B	A	B	A	B
900	27	75.1	32	93.8	37	106.2	41	109.0	46	107.3
1200	33	75.1	40	93.8	46	106.2	52	109.0	59	107.3
1500	40	74.6	48	93.2	56	105.6	63	107.9	71	106.8
1800	46	74.0	56	92.6	65	105.1	74	107.3	84	106.2
2100	53	74.0	64	92.6	75	105.1	85	107.3	96	106.2
2400	59	72.3	72	90.4	84	102.8	96	105.1	109	103.9
3000	72	72.3	87	90.4	103	102.3	118	104.5	134	103.4

A: Input Flow LPM; **B**: Output Torque Nm

Note:

In accordance with our policy of continuing development, we reserve the right to change specifications shown in this cataloque without notice.

Pump Performance Data

PGP 330

Speed RPM	Output flow / Input power	Gear Widths 1/2"	3/4"	1"	1 1/4"	1 1/2"	1 3/4"	2"
900	LPM	12	19	26	33	40	47	54
	kW	6	10	13	16	19	21	22
1200	LPM	17	26	36	45	55	64	73
	kW	8	13	17	21	25	28	29
1500	LPM	22	34	46	57	69	81	93
	kW	11	16	21	26	32	34	36
1800	LPM	27	41	55	70	84	98	112
	kW	13	19	25	32	38	41	44
2100	LPM	32	48	65	82	98	115	131
	kW	15	22	30	37	44	48	51
2400	LPM	36	55	75	94	113	132	151
	kW	17	25	34	42	51	55	58
3000	LPM	46	70	94	118	142	166	190
	kW	21	32	42	53	64	69	73

Performance data shown are the average results based on a series of laboratory tests of production units and are not necessarily representative of any one unit. Tests were run with an oil reservoir temperature of 50° C and a viscosity of 38 mm^2/s at 40° C.

Note:
Pump output flow is at the maximum rated pressure (see page14).

Motor Performance Data

PGM 330

Speed RPM	Gear Widths 1" 245 bar		1 1/4" 245 bar		1 1/2" 245 bar		1 3/4" 225 bar		2" 210 bar	
	A	B	A	B	A	B	A	B	A	B
900	38	114.1	47	143.5	55	172.9	63	188.1	72	200.0
1200	49	113.6	59	142.9	70	172.3	81	187.6	92	198.9
1500	59	113.0	72	141.8	85	171.2	99	186.4	112	197.7
1800	69	112.4	85	141.2	101	170.0	116	185.3	132	196.6
2100	80	111.9	98	140.1	116	168.9	134	183.6	152	194.3
2400	90	111.3	111	139.5	131	167.2	152	181.3	172	191.5
3000	110	110.7	136	139.0	161	166.7	186	180.2	212	190.4

A: Input Flow LPM; **B**: Output Torque Nm

Note:
In accordance with our policy of continuing development, we reserve the right to change specifications shown in this cataloque without notice.

Pump Performance Data

PGP 350

Speed RPM	Output flow / Input power	Gear Widths								
		1/2"	3/4"	1"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 1/2"
900	LPM	15	24	33	42	52	61	70	79	89
	kW	8	12	17	21	25	27	28	29	30
1200	LPM	21	33	46	58	71	83	95	108	120
	kW	11	17	22	28	33	36	38	39	39
1500	LPM	28	43	59	74	89	105	120	136	151
	kW	14	21	28	34	41	45	47	49	49
1800	LPM	34	52	71	89	108	127	145	164	183
	kW	17	25	33	41	50	54	57	58	59
2100	LPM	40	62	84	105	127	149	171	192	214
	kW	19	29	39	48	58	63	66	68	69
2400	LPM	46	71	96	121	146	171	196	220	245
	kW	22	33	44	55	66	72	76	78	79

Performance data shown are the average results based on a series of laboratory tests of production units and are not necessarily representative of any one unit. Tests were run with an oil reservoir temperature of 50° C and a viscosity of 38 mm^2/s at 40° C.

Note:
Pump output flow is at the maximum rated pressure (see page14).

Motor Performance Data

PGM 350

Speed RPM	Gear Widths													
	1" 245 bar		1 1/4" 245 bar		1 1/2" 245 bar		1 3/4" 225 bar		2" 210 bar		2 1/4" 190 bar		2 1/2" 175 bar	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
900	51	149.1	61	188.7	70	228.8	80	251.4	90	265.5	100	274.0	110	276.8
1200	64	148.6	77	187.6	90	227.7	103	250.3	116	264.4	129	272.3	142	275.1
1500	77	146.9	93	185.3	110	224.8	126	248.0	142	261.6	158	269.5	174	272.3
1800	91	146.3	110	184.7	129	223.7	148	246.3	167	259.9	187	268.3	206	270.6
2100	104	145.2	126	183.0	149	222.0	171	244.6	193	258.2	216	266.1	238	268.9
2400	117	142.9	143	180.8	168	219.2	194	241.2	219	254.8	245	262.7	270	265.5

A: Input Flow LPM; **B**: Output Torque Nm

Note:
In accordance with our policy of continuing development, we reserve the right to change specifications shown in this cataloque without notice.

Pump Performance Data

PGP 365

Speed RPM	Output flow / Input power	Gear Widths							
		3/4"	1"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 1/2"
900	LPM	30	44	57	70	83	96	109	122
	kW	18	23	29	35	41	47	49	50
1200	LPM	44	61	79	96	114	131	149	166
	kW	23	31	39	47	55	63	65	67
1500	LPM	57	79	101	123	145	167	188	211
	kW	29	39	49	59	68	78	82	84
1800	LPM	70	97	123	149	176	202	228	255
	kW	35	47	59	70	82	94	98	101
2100	LPM	83	114	145	176	207	238	268	299
	kW	41	55	68	82	96	110	114	117
2400	LPM	97	132	167	203	238	273	308	343
	kW	47	63	78	94	110	125	131	134

Performance data shown are the average results based on a series of laboratory tests of production units and are not necessarily representative of any one unit. Tests were run with an oil reservoir temperature of 50 °C and a viscosity of 38 mm^2/s at 40 °C.

Note:
Pump output flow is at the maximum rated pressure (see page14).

Motor Performance Data

PGM 365

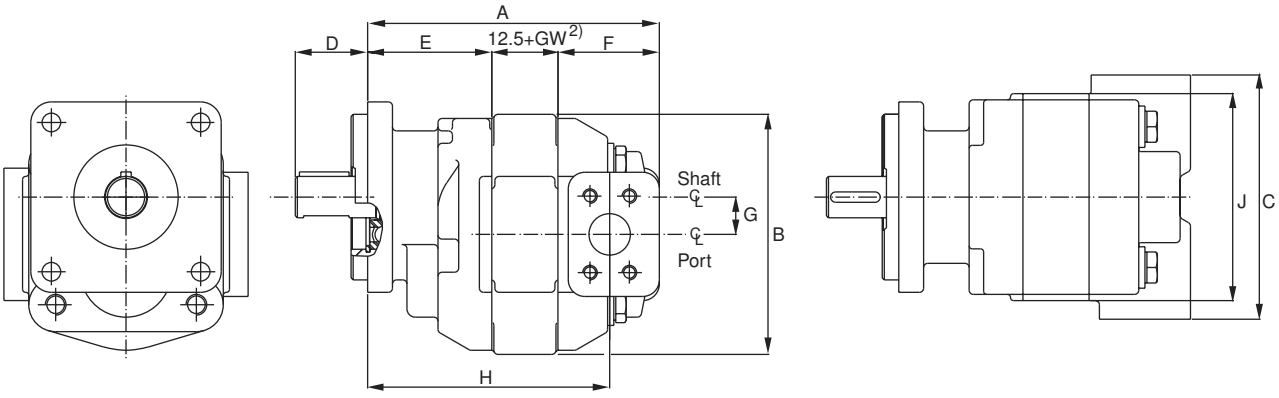
Speed RPM	Gear Widths													
	1" 245 bar		1 1/4" 245 bar		1 1/2" 245 bar		1 3/4" 245 bar		2" 245 bar		2 1/4" 225 bar		2 1/2" 210 bar	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
900	70	210.7	83	266.1	97	323.1	111	380.8	124	435.0	138	454.2	152	466.1
1200	88	208.5	106	263.3	124	319.7	142	376.8	160	430.5	179	449.7	197	461.0
1500	107	205.1	129	259.3	152	314.1	174	370.6	197	423.7	219	442.3	242	454.2
1800	125	203.9	152	257.6	179	312.4	206	368.9	233	421.4	260	440.1	287	451.4
2100	144	198.3	175	250.8	206	303.9	238	357.0	269	407.9	300	426.0	332	436.7
2400	162	192.6	198	243.5	234	295.5	269	345.2	305	394.3	341	411.8	377	422.6

A: Input Flow LPM; **B**: Output Torque Nm

Note:
In accordance with our policy of continuing development, we reserve the right to change specifications shown in this cataloque without notice.

Single pumps and motors

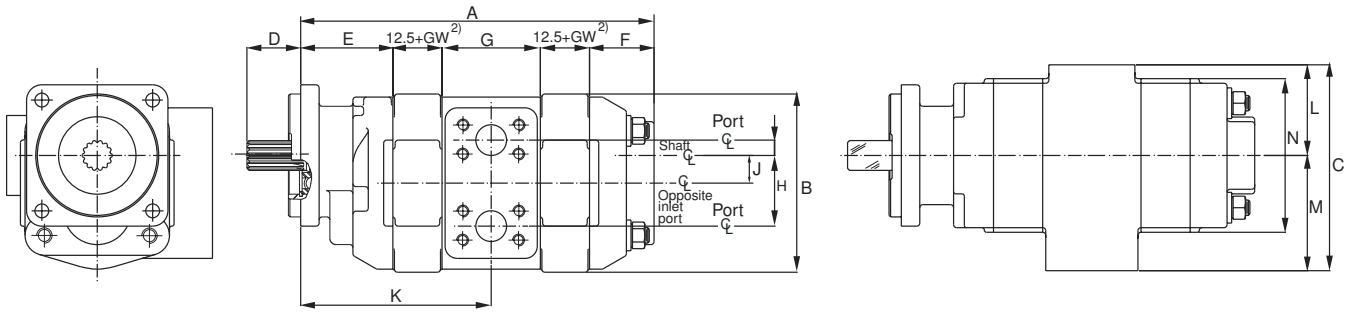
	Dimensions mm									
Model	**A**	**B**	**C**[4)]	**D**[3)]	**E**	**F**	**G**	**H**	**J(P)**	**J(M)**
315	108.5+GW[1)]	120.7	108.0	41.1	47.8	50.8	19.1	83.1+GW	101.6	106.4
330	157.2+GW	149.4	174.8	41.1	79.2	65.0	22.2	125.5+GW	122.2	127.0
350	179.3+GW	152.4	108.8	55.6	88.9	77.7	25.4	141.2+GW	146.1	146.1
365	185.7+GW	184.2	187.5	55.6	95.3	77.7	28.6	147.6+GW	158.8	158.8



Front view | Side view | Top view

Tandem pumps and motors

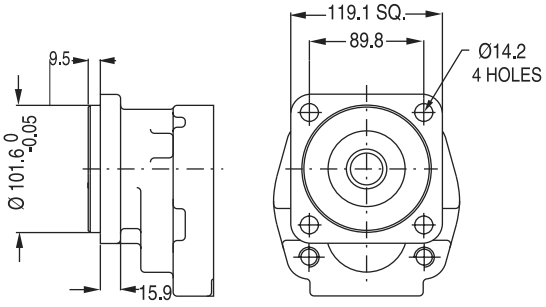
	Dimensions mm														
Model	**A**	**B**	**C**[4)]	**D**[3)]	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L****	**M****	**N(P)**	**N(M)**
315	179.1+T.GW[1)]	120.7	127.0	41.1	47.8	44.5	66.5	46.7	8.6	19.1	91.2+GW	57.2	699	101.6	106.4
330	250.9+T.GW	149.4	172.2	41.1	79.2	57.2	88.9	60.5	15.7	22.2	136.7+GW	78.5	93.7	122.2	127.0
350	260.4+T.GW	152.4	195.3	55.6	88.9	57.2	88.9	63.5	12.7	25.4	146.1+GW	90.4	104.6	146.1	146.1
365	289.1+TGW	184.2	212.9	55.6	95.3	66.5	101.6	73.3	15.7	28.6	158.8+GW	93.7	119.1	158.8	158.8



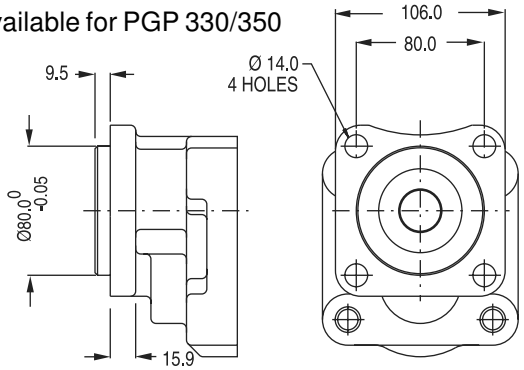
Front view | Side view | Top view

[1)]GW =Gear width
[2)]PGP 315 is 10.2+GW
[3)]This dimension will vary with type of drive shaft.
[4)]This dimension will vary with type of ports. T = Total.

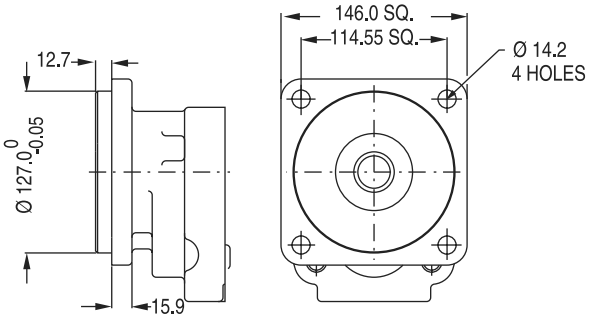
Code 42
SAE "B" 4 Bolt ANSI 101-4
available for PGP 330/350/365



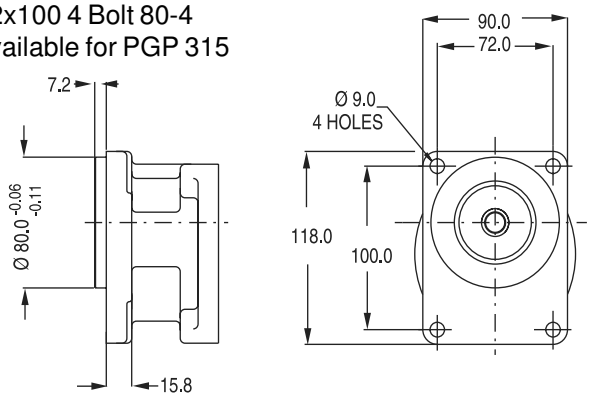
Code 62
BNA Standard NF R 17-102
available for PGP 330/350



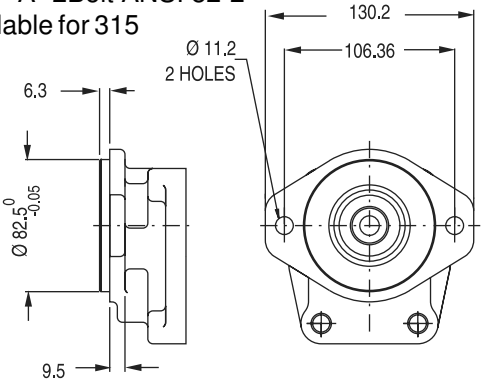
Code 78
SAE "C" 4 Bolt ANSI 127-4
available for PGP 330/350/365



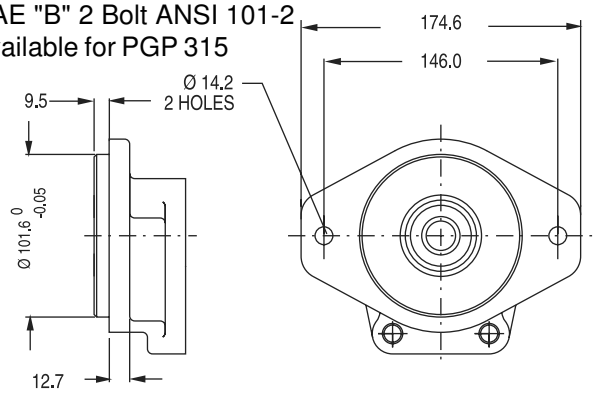
Code 90
72x100 4 Bolt 80-4
available for PGP 315



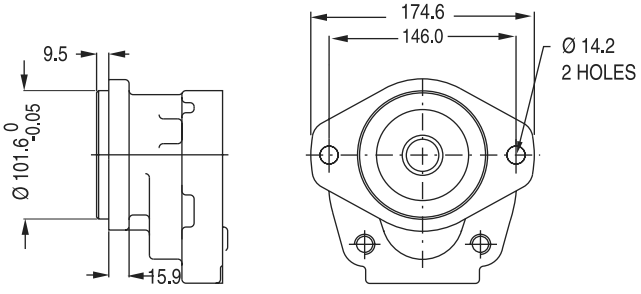
Code 93
SAE "A" 2Bolt ANSI 82-2
available for 315



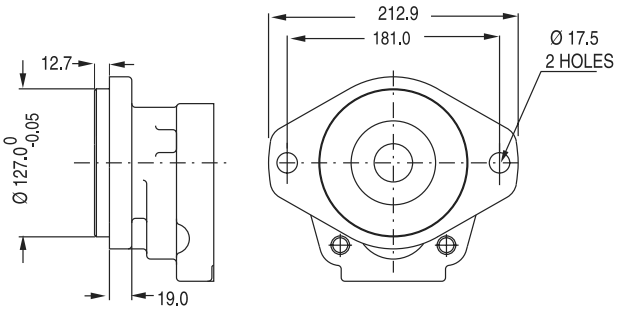
Code 96
SAE "B" 2 Bolt ANSI 101-2
available for PGP 315



Code 97
SAE "B" 2 Bolt ANSI 101-2
available for PGP 315/330/350/365

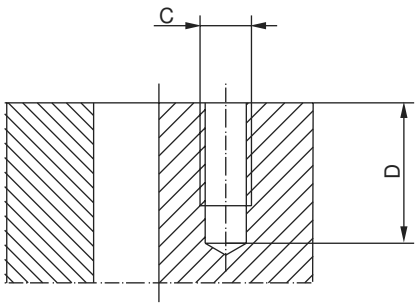


Code 98
SAE "C" 2 Bolt ANSI 127-2
available for PGP 350/365



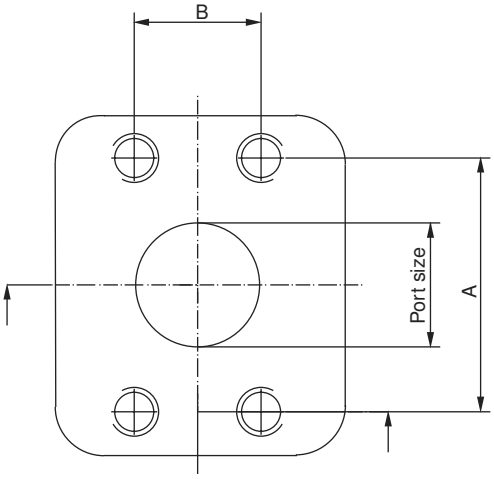
SAE flanged ports metric thread (SSM)

Port Size	B	A	C	D
mm	mm	mm	mm	mm
12.7	17.5	38.1	M8x1.25	23.9
19.1	22.2	47.6	M10x1.50	22.4
25.4	26.2	52.2	M10x1.50	22.4
31.8	30.2	58.7	M10x1.50	28.4
36.1	35.7	69.9	M12x1.75	26.9
50.8	42.9	77.8	M12x1.75	26.9
63.5	50.8	88.9	M12x1.75	30.2



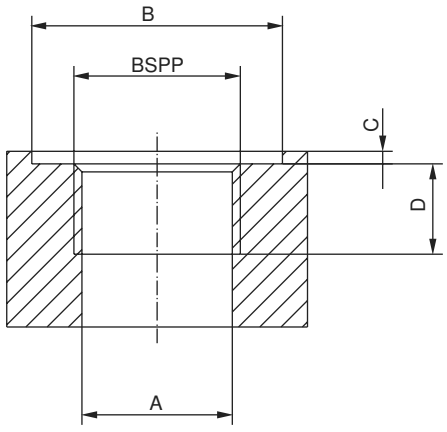
SAE flanged ports UNC (SSS)

Port Size	B	A	C	D
mm	mm	mm	mm	mm
12.7	17.5	38.1	5/16"-18	23.9
19.1	22.2	47.6	3/8"-16	22.4
25.4	26.2	52.2	3/8"-16	22.4
31.8	30.2	58.7	7/16"-14	28.4
36.1	35.7	69.9	1/2"-13	26.9
50.8	42.9	77.8	1/2"-13	26.9
63.5	50.8	88.9	1/2"-13	30.2



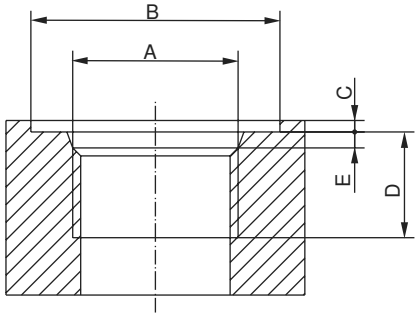
British Standard Pipe Parallel (BSPP)

BSPP	A	B	C	D
	mm	mm	mm	mm
0.50"-14	19.0	34.0	2.5	14.0
0.75"-14	24.50	40.0	2.5	16.0
1.00"-11	30.75	50.0	2.5	18.0
1.25"-11	39.50	58.0	2.5	20.0
1.50"-11	45.25	64.0	2.5	22.0
2.00"-11	56.25	78.0	3.0	24.0



SAE straight thread (ODT)

ODT	A	D	B	C	E
	UNF	mm	mm	mm	mm
1/2"	3/4"-16	14.3	30.2	2.4	2.55
5/8"	7/8"-14	16.7	34.1	2.4	2.55
3/4"	11/16"-12	19.1	41.3	2.4	3.30
7/8"	13/16"-12	19.1	44.8	2.4	3.30
1"	15/16"-12	19.1	48.5	2.4	3.35
1 1/4"	15/8"-12	19.1	57.7	2.4	3.35
1 1/2"	17/8"-12	19.1	65.0	2.4	3.35
2	2 1/2"-12	19.1	88.4	2.4	3.35



PL factor

Each section of a multiple pump should be regarded as a single unit with corresponding delivery and power input requirements. Since the entire input horsepower is fed through a common drive shaft, the power delivered to the unit is limited by the physical strength of the shaft. This limit is defined as a “PL” factor; “P” being the operating pressure in "bar" and "L" the summation of gear widths on all sections in "mm".

In multiple units the “PL” must be calculated for the first connecting shaft as well as the drive shaft. Each style or type of shaft has a unique “PL” factor as noted in the table below.

Operating Pressure (bar) x Total Gear Width (mm) = PL

PL MUST NOT EXCEED NUMBER SHOWN IN CHART FOR APPROPRIATE SHAFT.

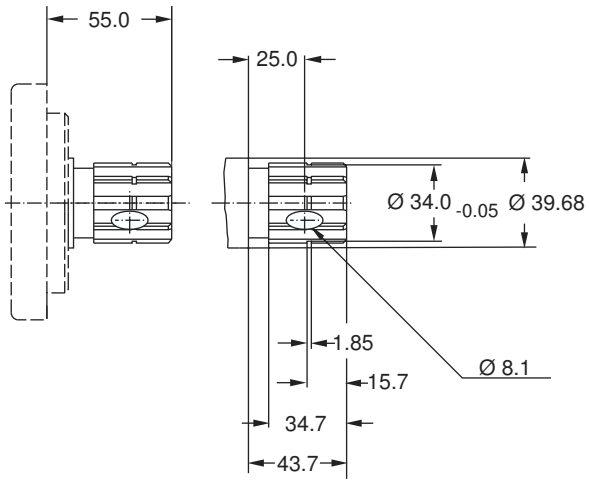
For gear width depending on displacement, see previous tables on Pump resp. Motor Performance data.

PL chart

Shaft style	Integral shaft a. gear	Cont. Shaft
PGP/PGM 315		
SAE "A" Spline (up to 1.25" GW)	7.793	-
SAE "A" Key	6.305	-
SAE "B" Spline	23.467	-
SAE "B" Key	17.338	-
Connecting Shaft	-	9720
PGP/PGM 330		
SAE "B" Spline	14.798	10.945
SAE "B" Key	10.945	10.945
SAE "B-B" Spline	22.766	10.945
SAE "B-B" Key	16.287	10.945
SAE "C" Spline	-	10.945
SAE "C" Key	-	10.945
Connecting Shaft	-	10.945
PGP/PGM 350		
SAE "B" Spline	11.296	11.296
SAE "B" Key	8.319	8.319
SAE "B-B" Spline	17.338	15.761
SAE "B-B" Key	12.434	12.434
SAE "C" Spline	33.449	15.761
SAE "C" Key	24.343	15.761
Connecting Shaft	-	15.761
PGP/PGM 365		
SAE "B" Spline	8.844	8.844
SAE "B" Key	6.480	6.480
SAE "B-B" Spline	13.572	13.573
SAE "B-B" Key	9.720	9.720
SAE "C" Spline	26.094	20.928
SAE "C" Key	18.914	20.928
Connecting Shaft	-	20.928

PGP/PGM 300 Drive Shaft

Code 06
DIN 5462 B8x32x36
available for 330/350



Code 07
SAE "C" teeth ANSI 32-4
available for 350/365