



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





PGP020™ Series

Pumps and Motors





ENGINEERING YOUR SUCCESS.

The Parker Hannifin Gear Pump Division Assures:

- Consistent quality
- Technical innovation
- Premier customer service

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We manufacture hydraulic components for a wide range of industries including:

- Construction
- Refuse/dump truck
- Material handling
- Forestry
- Agriculture
- Industrial









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PGP020™ Series

Pumps and Motors

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Table of Contents/Performance Data



Big Performance In A Small Package

Parker Hannifin's PGP020 gear pumps and motors are an ideal power for the truck industry. With the ½" gears, it measures only 6" from mounting flange to the port end cover and weighs only 25 lbs.

The PGP020 can produce flows up to 29 gpm @ 2400 rpm up to 3000 psi; output to 39 gpm @ 2400 rpm up to 2500 psi. Motors and pumps can be bi-rotational.

A variety of drive shafts and mounting styles are offered to meet your needs. Standard features include rigid, one-piece drive shaft and gears and pressure-balanced thrust plated, which assure top efficiency. A rugged, high-strength, cast iron body provides durability.

Multiple Units

PGP020 pumps and motors can be assembled in tandem to provide additional pump flow or more motor torque from on the drive shaft. Each gear section is connected to the drive shaft by a connecting shaft. The strength of the shafts (their PL factor) determines the maximum gear width the pump or motor can turn at a given pressure.

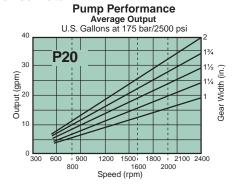
To determine the unit's PL, multiply the operating pressure (P) by the total gear width (L). Example: Assume a PGP020 pump will be operating at 3000 psi and have a $1\frac{1}{2}$ " gear housing. Multiply the total gear width of $1\frac{1}{2}$ " by the operating pressure.

(1.5" gear width X 3000 psi) = 4500

This pump needs a drive shaft with a PL factor of 4500 or more to operate successfully. The PL factor for each drive shaft is given on pages 10 and 11.

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

Performance Data

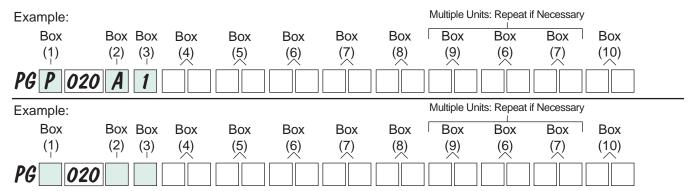


Pump		Gear Width-Output (GPM)							
Speed	1"	1 ½"	1½"	1 ¾"	2"				
900	6.5	8.0	10.0	12.0	13.5				
1200	9.0	11.5	14.0	16.0	18.5				
1500	11.5	14.5	17.5	20.5	23.5				
2100	16.5	21.0	25.0	29.5	34.0				

		(Gear Width	1		
	1"		1½"		2"	
Motor	Torque		Torque		Torque	
Speed	in lbs.	GPM	in lbs.	GPM	in lbs.	GPM_
800	550	9.0	870	13.0	1150	17.0
1200	550	13.0	870	18.0	1150	23.5
1600	550	16.0	860	23.0	1140	30.5
2000	550	19.5	850	28.0	1125	37.0



PGP020[™] How to Specify Code (Boxes 1-3)

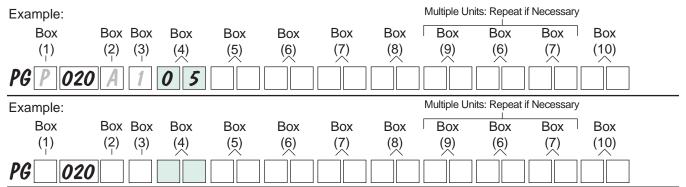


Вс	x 1 Description
Р	Pump
М	Motor

Вс	x 2 Unit
Α	Single
В	Tandem

Box 3 S	haft End Cover
ORDER CODE	ROTATION – OUTBEARING – DRAIN PORT
1	Clockwise (CW) rotation
2	Counter clockwise rotation (CCW); no outboard bearing
3	Double rotation; no outboard bearing
4	CW rotation with outboard bearing
5	CCW rotation with outboard bearing
6	Double rotation with outboard bearing
8	Double rotation with outboard bearing (motor) 1/4" NPT drain
9	Double rotation ; no outboard bearing (motor) 1/4" NPT drain

PGP020[™] How to Specify (Box 4)



Box 4 S	haft End Cover Codes	Box 4	Shaft End Cover Codes
ORDER CODE	PICTURE / MOUNTING FLANGE TYPE	ORDER CODE	PICTURE / MOUNTING FLANGE TYPE
05	6 BOLT FLANGE – 3.25 DIA. BOLT CIRCLE	46	SAE 2/4 BOLT "B" ANSI 101 – 2/4
10	2 BOLT PAD MOUNT	94	SAE 2 BOLT "A" ANSI 82-2
27	4 BOLT CLOVERLEAF	96	SAE 2 BOLT "B" ANSI 101-2 TYPE II
42	SAE 4 BOLT "B" ANSI 101-4	97	SAE 2 BOLT "B" ANSI 101-2

PGP020™ How to Specify (Box 5)

Example:		_					Multiple Un	its: Repeat i	f Necessary	
Box	Box Box	Box	Box	Box	Box	Box	Box	Box	Box	Box
(1)	(2) (3)	(4)	(5)	(6)	(7)	(8)	(9)	(6)	(7)	(10)
PG P 020	A 1	0 5	$C \mid E \mid$							
Example:							Multiple Un	its: Repeat i	f Necessary	
Example: Box	Box Box	Вох	Вох	Вох	Box	Box	Multiple Un	its: Repeat i	f Necessary Box	Box
•	Box Box (2) (3)	Box (4)	Box (5)	Box (6)	Box (7)	Box (8)		ĺ		Box (10)

Box 5	Port End	ort End Cover Codes					Box 5 Port End Cover Codes					
	Order Codes O.D.T. Porting						Order (Codes	N.P.T. Porting			
Single W/O ST	Units W/ST	Tander W/O ST	n Units W/ST	Port LEFT	Port Size		Single Units Tandem Ur W/O ST W/ST W/O ST W		n Units W/ST	Port Size LEFT RIGHT		
CE	CY	CI	CY	3/4	none	BE	BY	BI	BY	no port	no port	
DE	DY	DI	DY	none	3/4	KE	KY	KI	KY	3/4	none	
FE	FY	FI	FY	3/4	3/4	LE	LY	LI	LY	none	3/4	
GE	GY	GI	GY	1	3/4	ME	MY	MI	MY	3/4	3/4	
HE	HY	HI	HY	3/4	1	QU	QQ	QD	QQ	1	1	
JE	JY	JI	JY	1	1	Al		AI		3/4	1	
MA	Y0	MU	Y0	1	none	El		EI		1	3/4	
RA	R0	SU	R0	none	1							

NOTE: W/O ST columns denote units without support studs, and W/ST columns denote units with support studs.



PGP020[™] How to Specify N.P.T. Ports (Boxes 6 & 7) (Only When Ordering N.P.T. Ports, See Pages 5-6 for O.D Tube Porting and Page 7 for Split Flange Porting)

Example:							Multi	ple Units: Repeat	if Necessary	
Box	Box Box	Box	Box	Box	Box	Box	В	ox Box	Box	Box
(1)	(2) (3)	(4)	(5)	(6)	(7)	(8)	(9	9) (6)	(7)	(10)
PG P 020	D A 1	0 5	CE	AB	0 7					
Example:							Multi	ple Units: Repeat	if Necessary	
Example: Box	Box Box	Box	Box	Вох	Box	Box		ple Units: Repeat	if Necessary Box	Box
	Box Box (2) (3)	Box (4)	Box (5)	Box (6)	Box (7)	Box (8)	В	i i		Box (10)

Box 6 Gear	Housing - N.P.T	Box 7 Gear Housing - N.P.T. Ports ≤ 3000 psi								
	N.P.T. P	PORTING			GEAR WII	OTH AVAIL	ABILITY			
ORDER CODE	PORT LEFT	T SIZE RIGHT	05	07	10	12	15	17	20	
AB	none	none	Х	Х	Х	х	Х	Х	Х	
IL	1/2	none	Х	Х	Х	-	-	-	-	
IM	none	1/2	Х	Х	Х	-	-	-	-	
IR	1/2	1/2	Х	Х	-	-	-	-	-	
IC	3/4	none	-	Х	Х	Х	Х	Х	Х	
ID	none	3/4	-	Х	Х	Х	Х	Х	Х	
IF	3/4	3/4	-	Х	Х	Х	Х	Х	х	
IG	3/4	1	-	-	Х	Х	Х	Х	Х	
IH	3/4	1 1/4	-	-	-	-	Х	Х	-	
IJ	1	3/4	-	-	Х	Х	Х	Х	Х	
IK	1 1/4	3/4	-	-	-	-	Х	Х	-	
YC	1	none	-	-	Х	Х	Х	Х	Х	
YD	none	1	-	-	Х	Х	Х	Х	Х	
YF	1	1	-	-	Х	Х	Х	Х	Х	
YG	1	1 1/4	-	-	-	Х	Х	Х	Х	
YH	1	1 ½	-	-	-	-	-	-	-	
YJ	1 1/4	1	-	-	-	-	Х	Х	Х	
YK	1 ½	1	-	-	-	-	-	-	-	
IA	1 1/4	none	-	-	-	-	Х	Х	Х	
IB	none	1¼	-	-	-	-	Х	Х	Х	
YL	1 1/4	1 1/4	-	-	-	-	Х	Х	Х	



PGP020[™] How to Specify O.D. Tubes (Boxes 6 & 7)

Example:							Multiple l	Jnits: Repeat i	f Necessary	
Box	Box Box	Box	Box	Box	Box	Box	Box	Box	Box	Box
(1)	(2) (3)	(4)	(5)	(6)	(7)	(8)	(9)	(6)	(7)	(10)
PG P 020	A 1	0 5	CE	AB	0 7					
Example:							Multiple l	Jnits: Repeat i	f Necessary	
Example: Box	Box Box	Box	Box	Box	Box	Box	Multiple l	Jnits: Repeat i	f Necessary Box	Вох
•	Box Box (2) (3)	Box (4)	Box (5)	Box (6)	Box (7)	Box (8)		Ĺ		Box (10)

Pay C. Coor		the Ports (2500 mai	Po	v 7. Coor	Haveine		uba Danta	-2500 m	
Box 6 Gear		ube Ports <u><</u> 2500 psi	ВО	x 7 Gear				<∠ouu ps	51
		PORTING			GEAR WII	OTH AVAILA	ABILITY		
ORDER CODE	PORT LEFT	T SIZE RIGHT	05	07	10	12	15	17	20
AB EC	none 3/4	none	Х	X	X	X	X	X	X
ED		none ¾	-	X	X	X	X	X	X
EF	none 3/4	³ / ₄		X	X	X	X	X	X
EG	3/4	1	-	Х	X	X	X	X	X
EH	3/4	1 1/4*	-	-	Х	X	X	X	X
IN	3/4	1 ½	-	-	-	Χ*	Х	X	X X
EJ	1	3/4	-	-	- V	- Х	х	Х	Х
EK	1 1/4*	3/4	-	-	Х	χ*	X	X	Х
IP	1 ½	3/4	-	-	-	- X	-	X	X
EZ	7/8	none		-	-	Х	-	_	_
EL	7/8	1		-	X	-	-	-	-
EM	1	7/8	-	_	X	-	_	-	-
AC	1	none	-	_	X	X	Х	X	Х
AD	none	1	-	_	X	X	X	X	X
AF	1	1		_	-	X*	X	X	X
AG	1	1 1/4*		-	-	X*	X	X	Х
AH	1	1 ½		-	-	-	-	X	X
AJ	1 1/4*	1		-	-	Х*	х	X	X
AK	1 ½	1	-	-	-	-	-	X	X
AA	1 1/4*	none	-	-	-	Х*	х	Х	Х
AO	none	1 1/4*	-	-	-	χ*	X	X	X
AL	1 1/4	1 1/4	-	-	-	-	Х	Х	Х
AM	1 1/4	1 ½		-	-	-	-	X	Х
AP	1 ½	1 1/4	-	-	-	-	-	Х	X
AE	1 ½	none	-	-	-	-	-	Х	Х
AU	none	1 ½	-	-	-	-	-	Х	Х

^{*} Ports designated by an asterisk * are for use as the low-pressure inlet port only.



PGP020[™] How to Specify O.D. Tubes (Boxes 6 & 7)

Example:							Multiple	Units: Repeat i	f Necessary	
Box	Box Box	Box	Box	Box	Box	Box	Box	Box	Box	Box
(1)	(2) (3)	(4)	(5)	(6)	(7)	(8)	(9)	(6)	(7)	(10)
PG P 020	A 1	0 5	$C \mid E$	AB	0 7					
Example:							Multiple	Units: Repeat i	f Necessary	
Example: Box	Box Box	Box	Box	Box	Box	Box	Multiple	Units: Repeat i	f Necessary Box	Вох
•	Box Box (2) (3)	Box (4)	Box (5)	Box (6)	Box (7)	Box (8)				Box (10)

Box 6 Gear		ıbe Ports <u><</u> 3000 psi	Во	x 7 Gear				<u><</u> 3000 ps	SI
		PORTING			GEAR WII	OTH AVAIL	ABILITY		
ORDER CODE	PORT LEFT	SIZE RIGHT	0E	07	10	40	46	47	20
			05	07	10	12	15 	17	20
AB EC	none 3/4	none	Х	X	X	X	Х	X	X
ED		none 3⁄4	-	X	X	X	Х	X	X
EF	none 3⁄4	³ / ₄	-	X	X	X	Х	X	X
EG	3/4	1*	_	X	X	X	X	X	X
EH	3/4	1 1/4*		-	Х*	Х	X X*	X	X X
IN	3/4	1 ½*	-	-	-	-	X^ -	X X*	X
EJ	1*	3/4	-	-	- X*	X	X	X	X
EK	1 1/4*	3/4			_	_	X*	X	X
IP	1 ½*	3/4		_	_	_	_	X*	X
EZ	7/8	none	-	-	-	Х	-	-	-
EL	7/8	1*		_	Х*	-	-	-	-
EM	1*	7/8		-	X*	-	-	-	-
AC	1*	none		-	X*	Х	Х	Х	Х
AD	none	1*		-	X*	X	X	Х	Х
AF	1	1		-	-	Х*	Х	Х	Х
AG	1	1 1/4*	-	-	-	Х*	Х*	Х	Х
AH	1	1 ½*		-	-	-	-	Х*	Х
AJ	1 1/4*	1	-	-	-	Х*	Х*	Х	Х
AK	1 ½ *	1		-	-	-	-	Х*	Х
AA	1 1/4 *	none	-	-	-	Х*	Х*	Х	Х
A0	none	1 1/4*		-	-	Х*	Х*	Х	Х
AL	1 1/4	1 1/4	-	-	-	-	-	Х	Х
AM	1 1/4	1 ½*		-	-	-	-	χ*	Х
AP	1 ½*	1 1/4	-	-	-	-	-	χ*	Х
AE	1 ½*	none	-	-	-	-	-	Х*	Х
AU	none	1 ½*	-	-	-	-	-	Х*	Х

 $^{^{\}star}$ Ports designated by an asterisk * are for use as the low-pressure inlet port only.



PGP020[™] How to Specify Split Flange Porting (Boxes 6 & 7)

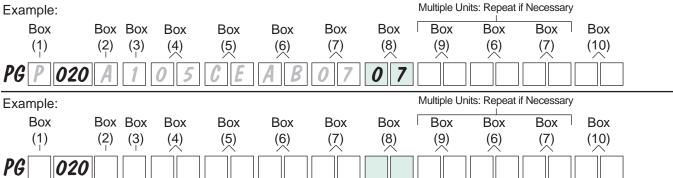
Example:							Multiple Ur	nits: Repeat i	f Necessary	
Box	Box Box	Box	Box	Box	Box	Box	Box	Box	Box	Box
(1)	(2) (3)	(4)	(5)	(6)	(7)	(8)	(9)	(6)	(7)	(10)
PG P 020	9 A 1	0 5	CE	AB	0 7					
Example:							Multiple Ur	nits: Repeat i	f Necessary	
Example: Box	Box Box	Box	Вох	Box	Box	Box	Multiple Ur Box	nits: Repeat i	f Necessary Box	Box
•	Box Box (2) (3)	Box (4)	Box (5)	Box (6)	Box (7)	Box (8)		i		Box (10)

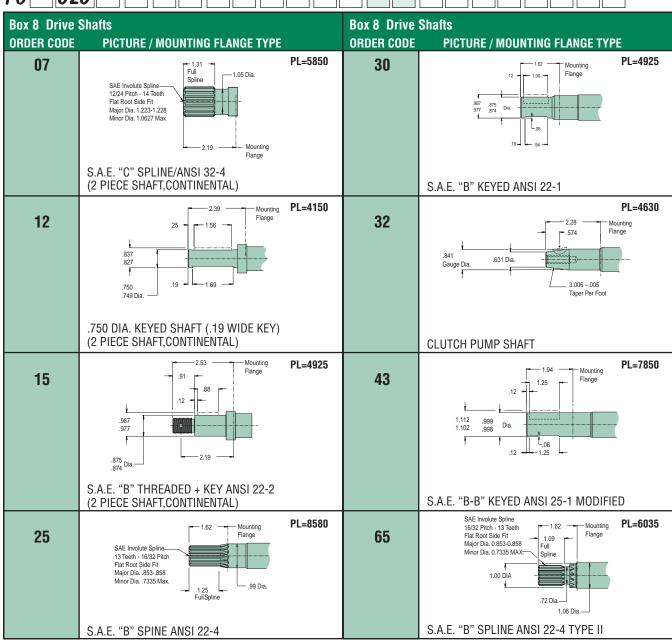
Box 6 Gear I	Housing - Split Flan	ge Porting ≤3000 psi	Вох	7 Gear F	lousing -	Split Flar	ige Portin	g <u>≤</u> 3000 p	si
	SPLIT FLAI	NGE PORTING			GEAR WII	OTH AVAIL	BILITY		
ORDER CODE	PORT LEFT	T SIZE RIGHT	05	07	10	12	15	17	20
AB	none	none	Х	Х	Χ	Х	Χ	Х	Х
UC	3/4	none	-	Х	Х	Х	Х	Х	Х
UD	none	3/4	-	Х	Х	Х	Х	Х	Х
UF	3/4	3/4	-	Х	Х	Х	Х	Х	-
UG	3/4	1	-	-	Х	Х	Х	Х	Х
UH	3/4	1 1⁄4	-	-	-	Х	Х	Х	Х
UJ	1	3/4	-	-	Х	Х	Х	Х	Х
UK	1 1/4	3/4	-	-	-	Х	Х	Х	Х
OC	1	none	- 1	-	-	Х	Х	Х	Х
OD	none	1	-	-	-	Х	Х	Х	Х
0F	1	1	- 1	-	Х	Х	Х	Х	Х
OG	1	1 1⁄4	-	-	-	Х	Х	Х	Х
OH	1	1 ½	- 1	-	-	-	-	Х	Х
0J	1 1/4	1	-	-	-	Х	Х	Х	Х
OK	1 ½	1	-	-	-	-	-	Х	Х
0A	1 1/4	none	-	-	-	Х	Х	Х	Х
OB	none	1 1/4	-	-	-	Х	Х	Х	Х
0L	1 1/4	1 1/4	-	-	-	-	Х	Х	χ
OM	1 1/4	1 ½	-	-	-	-	-	Х	Х
OP	1 ½	1 1/4	-	-	-	-	-	Х	χ
0E	1 ½	none	-	-	-	-	-	Х	Х
OU	none	1 ½	-	-	-	-	-	Х	Х



9

PGP020[™] How to Specify (Box 8)

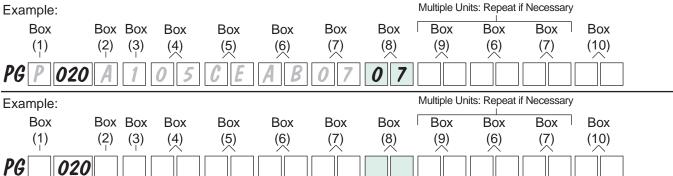


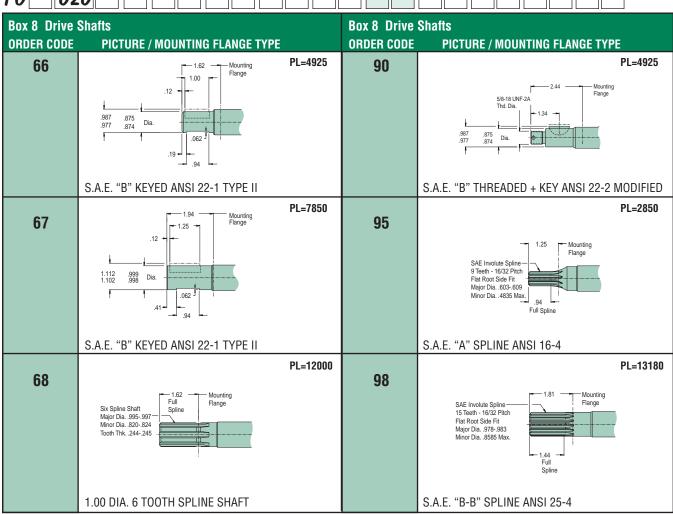


CONTINUED ON NEXT PAGE



PGP020[™] How to Specify (Box 8)





PGP020[™] How to Specify (Box 9)

Example:						Multiple Uni	ts: Repeat i	f Necessary	
Box	Box Box	Box	Box Box	Box	Box	Box	Box	Box	Box
(1)	(2) (3)	(4)	(5) (6)	(7)	(8)	(9)	(6)	(7)	(10)
PG P 020	A 1	0 5 0	EAB	0 7	0 7		AB	0 7	
Example:						Multiple Uni	ts: Repeat i	f Necessary	
Example: Box	Box Box	Box	Box Box	Box	Box	Multiple Uni Box	ts: Repeat i	f Necessary Box	Вох
•	Box Box (2) (3)	Box (4)	Box Box (5) (6)	Box (7)			Ĺ		Box (10)

Box 9 Bearing Carr	ier Code	es- Flow Divid	ders								
ROTATION FLOWPATH CW-Clockwise		N.P.T. PORT Port	ING SIZE		SPLIT FLANGE F Port	SIZE		O.D.T. PORTING PORT SIZE			
CCW-Cnt. Clockwise	CODE	LEFT	RIGHT	CODE	LEFT	RIGHT	CODE	LEFT	RIGHT		
CD SHT RF 20-H1	C TB VB	none 1 1 1/4	none none none	LB - -	1 - -	none - -	CB DB FB	1 1 ½ 1 ½	none none none		
CD SHT RF 20-H2	D BT BV	none none none	none 1 1 1/4	BL - -	none - -	1 - -	BC BD BF	none none none	1 1 ½ 1 ½		
CD SHT RF 20-H4	TX VX VZ -	1 1 ½ 1 ½ - -	3/4 3/4 1 -	LR BR - -	1 none - - -	3/4 3/4 - - -	CJ DJ DK FJ FK	1 1 ½ 1 ½ 1 ½ 1 ½	3/4 3/4 1 3/4 1		
CD SHT RF 20-H5	JT JV KV -	3/4 3/4 1 -	1 1 ¹ / ₄ 1 ¹ / ₄ -	XL - - -	3/4 - - - -	- - -	RC RD RF SD SF	3/4 3/4 3/4 1 1	1 1 ½ 1 ½ 1 ¼ 1 ½		
CD SHT RF 20-H6	TJ VJ VK -	1 1 ½ 1 ½ - -	3/4 3/4 1 -	LX - - - -	1 - - -	CR DR - -	1 1 ½ DS FR FS	3/4 3/4 1 1/4 1 1/2 1 1/2	1 34 1		
CD SHT RF 20-H7	XT XV ZV - -	3/4 3/4 1 - -	1 1 ½ 1 ½ - -	RB RL - -	3/4 3/4 - - - -	none 1 - - -	JC JD JP JF KD	3/4 3/4 3/4 3/4 1 1	1 1 ½ none 1 ½ 1 ¼ 1 ½		
CD SHT RF 20-H8	ZX	1	3/4	SR	1	3/4	KJ	1	3/4		



PGP020[™] How to Specify (Box 9) (Continued)

Example:						Multiple Un	its: Repeat i	f Necessary	
Box	Box Box	Box B	ox Box	Box	Box	Box	Box	Box	Box
(1)	(2) (3)	(4)	5) (6)	(7)	(8)	(9)	(6)	(7)	(10)
PG P 020	A 1	0 5 0	E A B	0 7	0 7		AB	0 7	
Example:						Multiple Un	its: Repeat i	f Necessary	
Example: Box	Box Box	Box B	ox Box	Box	Box	Multiple Un	its: Repeat i	f Necessary Box	Box
•	Box Box (2) (3)		ox Box 5) (6)	Box (7)			i		Box (10)

PG 020											
Box 9 Bearing Carr	ier Cod	es- Flow Divi	ders								
ROTATION FLOWPATH CW-Clockwise CCW-Cnt. Clockwise		N.P.T. PORT Port Left	TING I Size Right	SPLIT FLG. PORTING PORT SIZE CODE LEFT RIGHT		CODE	O.D.T. PORTING PORT SIZE CODE LEFT RIGH				
CD SHT RF 20-H9	XZ	3/4	1	RS	3/4	1	JK	3/4	1		
CD SHT RF 20-H10	ZS	1	3/4	RZ	1	3/4	КХ	1	3/4		
CD SHT RF 20-H11	SZ	3/4	1	ZR	3/4	1	XK	3/4	1		
Bearing Carrier Codes	s- Motors	S									
CD SHT RF 20-H16	В	-	-	В	1	-	В	-	-		
CD SHT RF 20-H21	M N E	1 1 ¼ none	none none none	- -	1 - -	none - -	F G H	1 1 ½ 1 ½	none none none		
CD SHT RF 20-H24	BX GX HZ LZ KZ -	none 1 1 ½ 1 ½ none -	3/4 3/4 3/4 1 1 -	GR HR MT - -	none 1 none - - -	3/4 3/4 1 - - - -	GJ HJ MJ RJ PK RK BK	none 1 1 ½ 1 ½ 1 ½ 1 ½ none	3/4 3/4 3/4 3/4 1 1		

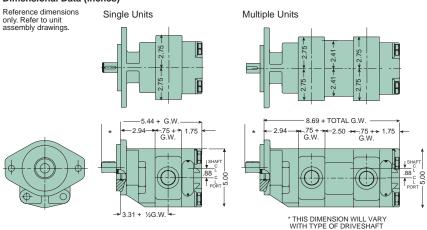


PGP020[™] How to Specify (Box 9) (Continued) (See below for How to Specify Box 10)

Example:							Multiple U	nits: Repeat i	if Necessary	
Box	Box Box	Box	Box	Box	Box	Box	Box	Box	Box	Box
(1)	(2) (3)	(4)	(5)	(6)	(7)	(8)	(9)	(6)	(7)	(10)
PG P 020		0 5	$C \mid E \mid$	AB	0 7	0 7	CV	AB	0 7	- 1
Example:							Multiple U	nits: Repeat i	if Necessary	
Example: Box	Box Box	Box	Box	Вох	Box	Box	Multiple U	nits: Repeat i	if Necessary Box	Вох
•	Box Box (2) (3)	Box (4)	Box (5)	Box (6)	Box (7)			<u> i </u>		Box (10)

Box 9 Bearing Carr	ier Cod	es- Flow Divi	ders							
ROTATION FLOWPATH CW-Clockwise	PORT SIZE				SPLIT FLG. PO Port		O.D.T. PORTING Port Size			
CCW-Cnt. Clockwise	CODE	LEFT	RIGHT	CODE	LEFT	RIGHT	CODE	LEFT	RIGHT	
CD SHT RF 20-H26	CV GV MV TK NK	none 1 1 ½ 1 ½ none	3/4 3/4 3/4 1 1	FD GD JG -	none 1 none - - -	3/4 3/4 1 - -	JH PH RH WH QC VC	none 1 1 ½ 1 ½ 1 ½ 1 ½	3/4 3/4 3/4 3/4 1 1	
CD SHT RF 20-H28	VG	1	3/4	WL	1	3/4	PC MC	none 1	3/4	
CD SHT RF 20-H29	WG	1	3/4	ZL	1	3/4	SC	1	3/4	

Dimensional Data (inches)



PGP020[™] How to Specify (Box 10) (See above for example)

Box 10 Connecting Shaft

For connecting tandem units.

-1 Connecting Shaft - Multiple Units PL=5850



Offer of Sale

PGP020™ Series

Pumps and Motors

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