

### 20/21 Series Gear Pump & Motor

Standardization, universalization, serialization design. Connecting dimensions are SAE standard, multiple assemblies are available.

ODisplacement range:16.1ml/r - 64.6 ml/r,

Max rated pressure: 207bar, Intermittent: 245bar,

Speed range: 600-2400 RPM.



#### PERFORMANCE

Bearing series pressure and displacement

CODE		05	07	10	12	15	17	20
Gear Wid	ith	1/2"	3/4"	1"	1-1/4"	1-1/2"	1-3/4"	2"
Displacem	ont	0.98	1.48	1.97	1"     1-1/4"     1-1/2"     1-3/4"       1.97     2.47     2.95     3.45       32.3     40.4     48.4     56.5       2500     2500     2500     2250       172     172     172     155       3000     3000     2500     2500       207     207     172     172	3.94		
Gear Width Displacement 30 Max	ent	16.1	24.2	32.3	40.4	48.4	56.5	64.6
Max	20	2500	2500	2500	2500	2500	2250	2250
	30	172	172	172	172	172	155	155
Pressure	21	3000	3000	3000	3000	3000	2500	2500
	31	207	207	207	207	207	172	172
Speed RPM				600-2400	•			

Flow: GPM/LPM Pressure: PSI/bar

### P20/21 Flow and Power data at 2500 PSI (172 bar)

				Gear Width	Output (gpm	/lpm) and Inch	nes (HP/KW)			
Speed RPM		1"	1-	1-1/4"		1/2"	1	-3/4"	2	2"
	Flow	Power	Flow	Power	Flow	Power	Flow	Power	Flow	Powe
000	24.5	11	30	13	38	15	45.5	17	51	19
900	6.5	14	8	17	10	20	12	23	13.5	25
1200	34	14	43.5	17	53	20	60.5	22	70	25
1200	9	19	11.5	22	14	26	16	30	18.5	33
1500	43.5	17	55	21	66	24	77.5	27	89	31
1500	11.5	23	14.5	28	17.5	33	20.5	37	23.5	42
1800	53	20	68	25	81.5	29	94.5	27	110	37
1800	14	27	18	33	21.5	39	25	44	29	50
2400	62.5	24	79.5	29	94.5	34	112	38	129	43
2100	16.5	32	21	38	25	45	29.5	51	34	58
2400	72	26	91	33	110	38	129	43	148	49
2400	19	36	24	44	29	51	34	58	39	66

Flow: GPM/LPM Power: HP/kW



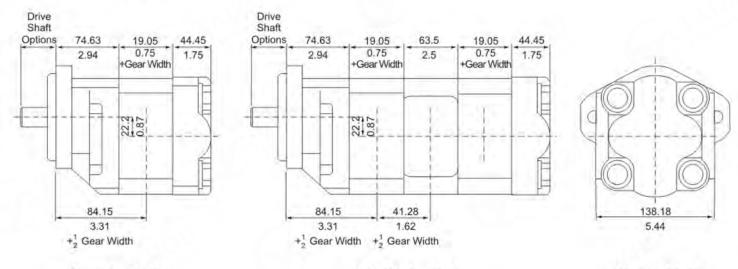
### M21 Motor performance data at 2500 PSI (172 bar).

			Torqu	e: Inlbs. / Nm	Flow: GPM/LF	PM Power: HP	P/KW			
Speed		1"			1-1/2"			2"		
RPM	Out	put	Input	Output		Input	Output		Input	
	Torque	Power	Flow	Torque	Power	Flow	Torque	Power	Flow	
800	675	8.5	9	1035	13	13	1385	17.5	17	
800	76.5	6.5	34	117	9.5	49	156.5	13	64.5	
1200	685	13	13	1055	20	18	1410	27	23.5	
1200	77.5	9.5	49	119	15	68	159.5	20	89	
1600	680	17.5	16	1030	26	23	1390	35	30.5	
1000	77	13	60.5	116.5	19.5	87	157	26	115	
2000	660	21	19.5	1010	32	28	1370	43.5	37	
2000	74.5	15.5	74	114	24	106	155	32.5	140	

Torque: In. -lbs./Nm Flow: GPM/LPM Power: HP/kW

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 the oil reservoir temperature at 120 F and viscosity 150 SSU at 100 F, Requests for more specific data should be directed to our Product Support Department through our sales representatives.

#### **Dimensional Date**



Single Unit

Multiple Unit

Single Unit

## P系列齿轮泵/M系列马达

### P Series Gear Pump/ M Series Motor



### 20/21 Series Coding

## 20/21 2 3 4

#### 1 PUMP / MOTOR

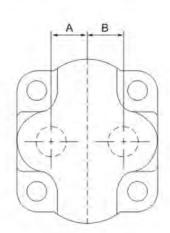
P PUMP M MOTOR

#### 2 UNIT

A SINGLE UNIT **B TANDEM UNITS** 

#### 3 SHAFT END COVER

- 1 PUMP WITHOUT SHAFT BEARING CLOCKWISE ROTATION
- 2 PUMP WITHOUT SHAFT BEARING COUNTER CLOCKWISE ROTATION
- 3 PUMP WITHOUT SHAFT BEARING DOUBLE ROTATION
- 4 PUMP WITH SHAFT BEARING CLOCKWISE ROTATION
- 5 PUMP WITH SHAFT BEARING COUNTER CLOCKWISE ROTATION
- 6 PUMP WITH SHAFT BEARING DOUBLE ROTATION
- 8 MOTOR WITH SHAFT BEARING 1/4" DRAIN PORT
- 9 MOTOR WITHOUT SHAFT BEARING & 1/4" DRAIN PORT



REPEAT FOR TANDEM UNITS

#### 4 SHAFT END COVER

- 05 6 BOLT FLANGE 3.25" DIA. BOLT CIRCLE
- 10 2 BOLT PAD MOUNT
- 27 4 BOLT CLOVERLEAF
- 42 S.A.E. 4 BOLT "B" MOUNT
- 46 SAE 2/4 BOLT "B" MOUNT
- 94 S.A.E. 2 BOLT "A" MOUNT
- 96 S.A.E. 2 BOLT "B" MOUNT type 2
- 97 S.A.E. 2 BOLT "B" MOUNT

### "O" Ring Ports

	CC	DDE		POR	T SIZE		
SIN	GLE	TAN	DEM	LEFT	RIGHT	A	В
CE	CY	CI	CY	3/4"	NONE	N/A	1.25
DE	DY	DI	DY	NONE	3/4"	1.25	N/A
FE	FY	FI	FY	3/4"	3/4"	1.25	1.25
GE	GY	GI	GY	1"	3/4"	1.25	1.382
HE	HY	HI	HY	3/4"	1"	1.382	1.25
MA	YO	MU	YO	1"	NONE	N/A	1.382
RA	RO	SU	RO	NONE	1"	1.382	N/A
JE	JY	JI	JY	1"	1"	1.382	1.382

### 5 PORT END COVER CODES



#### NPT PORT

	CO	DE		PORT	SIZE		
SIN	GLE	TAN	DEM	LEFT	RIGHT	Α	В
BE	BY	ВІ	BY	NONE	NONE	N/A	N/A
KE	KY	KI	KY	3/4"	NONE	N/A	1.25
LE	LY	LI	LY	NONE	3/4"	1.25	N/A
ME	MY	MI	MY	3/4"	3/4"	1.25	1.25
QU	QQ	QD	QQ	1"	1"	1.382	1.382
Al		Al		3/4"	3/4"	1.382	1.25
EI		El		3/4"	1"	1.25	1.382
1	1	- 5	1_		UPPORT		

WITHOUT SUPPORT STUDS



### 6 Gear Housing

- ♦N.P.T. PORTING IS NOT RECOMMENDED FOR PRESSURES ABOVE 1500 P.S.I.
- OPORTS MARKED WITH A "O" ARE RECOMMENDED PORTING, FOR ALL OTHER PORTING PLEASE CONSULT THE FACTORY
- **SHADED CELLS ARE GOOD FOR MOTOR UNITS**
- ORIENTATION IS VIEWED FROM THE SHAFT END

R.I	DT	PO	DT

			INFIFC	2111					
NPT.CODE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	1	1	<b>√</b>	V	1	1	4
IL	1/2"	NONE	4	1	4				
IM	NONE	1/2"	1	1	1				
IR	1/2"	1/2"	4	1					
IC	3/4"	NONE		1	1	4	4	4	1
ID	NONE	3/4"		1	4	4	1	1	1
IF	3/4"	3/4"		1	<b>√</b>	1	4	1	V
IG	3/4"	1"			4	4	4	4	1
IH	3/4"	1 1/4"					4	1	
IJ	1"	3/4"			4	4	√,	4	4
IK	1 1/4"	3/4"					<b>√</b>	~	
YC	1"	NONE			4	4	4	~	4
YD	NONE	1"			4	1	1	1	4
YF	1"	1"			1	V	4	1	1
YG	1°	1 1/4" +				¥	4.	1	1
YH	16	1 1/2"					4		
YJ	1 1/4" *	1"					4	1	4
YK	1 1/2"	1"							
IA	1 1/4" *	NONE					×.	~	4
IB	NONE	1 1/4" *					4.	1	V
YL	1 1/4"	1 1/4"				18.24	1	1	4

#### **BSPP PORT**

BSPP.CODE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	1	1	4	1	4	1	1
YN	3/4"	NONE		1	1	-1	4	1	1
YQ	NONE	3/4"		~	4	1	√	1	V
YS	3/4"	3/4"			~	1		1	4
YT	3/4"	1"			4	J			
YU	3/4"	1 1/4"						√	4
YV	1"	3/4"	. 1		4	V	4	4	
YW	1 1/4"	3/4"						- 1	~
SL	1"	NONE				1	√.	1	4
RQ	NONE	1"				4	√	1	1
MP	1"	1"				7	4	4	
VY	10	1 1/4" *					*	1	1
10	1 1/4" *	1"					*	1	4
NJ	1 1/4" *	NONE						1	4
UI	NONE	1 1/4" *						4	1
PF	1 1/4"	1 1/4"							1



	TI		

			0.010			10.70	-		-
O.D TUBE.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	1	1	1	4	- 1		
EC	3/4"	NONE	1	1	4	1	1	1	1
ED	NONE	3/4"		1	1	1	4	<b>√</b>	4
EF	3/4"	3/4"		~	1	√.	- 2	J.	4
EG	3/4"	1"			1	1	V.	4	4
EH	3/4"	1 1/4"				1	4	4	4
IN	3/4"	1 1/2"						4	4
EJ	1"	3/4"			1	1	1	4	4
EK	1 1/4"	3/4"				1	4	1	4
IP	1 1/2"	3/4"						4	1
EZ	7/8"	NONE				4			
EL	7/8"	1"			<b>√</b>	1			
EM	1"	7/8"			V				
AC	1"	NONE			1	1	4.	<b>√</b>	1
AD	NONE	1"			V	1	1	J	1
AF	1"	T"					1	1	1
AG	1"	1 1/4" *					1	4	V
AH	1"	1 1/2" *						4	4
AJ	1 1/4" *	1"					1	1	4
AK	1 1/2" *	1"						V	4
AA	1 1/4" *	NONE				1	¥	1	4
AO	NONE	1 1/4" *				1	1	4	1
AL	1 1/4"	1 1/4"				- 5	1	1	1
AM	1 1/4"	1 1/2" *						1	1
AP	1 1/2" *	1 1/4"						4	¥
AE	1 1/2" *	NONE						1	4
AU	NONE	1 1/2" *						1	4

#### SPLIT FLANGE

SPLIT FLANGE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	4	4	1	1	4	1	1
UC	3/4"	NONE		1	4	4	V	4	1
UD	NONE	3/4"		1	1	1	4	4	4
UF	3/4"	3/4"		1	4	4	4	4	
UG	3/4"	1"			1	1	4	1	
UH	3/4"	1 1/4"				1	1	1	1
ΠΊ	1"	3/4"	1 20		V	1	V	V	4
UK	1 1/4"	3/4"				1	4	1	4
ос	1"	NONE				~	4	1	4
OD	NONE	1"				1	4	1	4
OF	1"	1"			4	4	4	1	4
ÖĞ	1"	1 1/4" *				1	4	1	4
ОН	1"	1 1/2" *						4	4
Ol	1 1/4"*	4"				4	4	4	1
OK	1 1/2**	1"						4	1
OA	1 1/4" *	NONE				1	4	√	1
ОВ	NONE	1 1/4" *				√.	- 2	4	4
OL	1 1/4"	1 1/4"					1	1	1
OM	1 1/4"	1 1/2" *						1	4
OP	1 1/2" *	1 1/4"						4	4
OE	1 1/2" *	NONE						√	4
OU	NONE	1 1/2"						1	4



#### METRIC S. F.

METRIC S. F.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	1	4	4	4	4	V	4
VN	3/4"	NONE			1	J	4	4	
VQ	NONE	3/4"			4	4	4	4	
VS	3/4"	3/4"			1	1	~	4	
VT	3/4"	1"			4	1	4	4	
RV	1"	3/4"			1	<b>√</b>	V	1	
RU	3/4"	1 1/4"				4	1	1	
RW	1 1/4"	3/4"				√	4	3	
UL	1"	NONE			1	1	1	1	<b>√</b>
UR	NONE	1"			4	√	4	1	4
UM	15	1"				1	4	~	
VU	1"	1 1/4" *	125.00			¥	-2	V	4
UX	1 1/4" *	1"				4	- 4	4	J
НО	1"	1 1/2" *						1	1
VO	1 1/2" *	1"						4	V
NO	1 1/4" *	NONE			-		4	J.	1
UO	NONE	1 1/4" *					-4	4	V
PO	1 1/4"	1 1/4"					1	1	1
QO	1 1/4"	1 1/2" *						1	4
so	1 1/2" *	1 1/4"						V	1
UY	1 1/2" *	NONE					1	4	2.50
TO	NONE	1 1/2"					4	4	

#### METRIC STR. THD

METRIC STR. THD.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	1	1	4	4	4	4	4
EN	3/4"	NONE			1	1	1		
TQ	NONE	3/4"			4	<b>V</b>	4		
ES	3/4"	3/4"			4	1			
ET.	3/4"	1"			4	¥			
EV	1"	3/4"			~	1	4	√_	
NL	1"	NONE			4	1	1		
ER	NONE	1"			~	1	4	1	1
СМ	1"	1"				V	4		
VE	1"	1 1/4" *					1	<b>√</b>	4
EX	1 1/4" *	1"					4	<b>√</b>	4
PA	1 1/4"	1 1/4"				1 /-		4	4
QA	1 1/4"	1 1/2" *							V
SA	1 1/2" *	1 1/4"							4

### 7 GEAR SIZE

0005		Displacement		Housing Width		Max F	Pressure
CODE	Gear Size	in.3/rev.	cm <sub>3</sub> /rev.	inch	mm	20 Series	21 Series
05	1/2"	0.99	16.1	1.25	31.75	2500 psi (172 bar)	3000 psi (207 bar)
07	3/4"	1.48	24.2	1,5	38.1	2500 psi (172 bar)	3000 psi (207 bar)
10	1"	1.97	32.3	1.75	44.45	2500 psi (172 bar)	3000 psi (207 bar)
12	1 1/4"	2.46	40.4	2	50.8	2500 psi (172 bar)	3000 psi (207 bar)
15	1 1/2"	2.96	48.4	2.25	57.15	2500 psi (172 bar)	3000 psi (207 bar)
17	1 3/4"	3.45	56.5	2.5	63.5	2250 psi (155 bar)	2500 psi (172 bar)
20	2"	3.94	64.6	2.75	69.85	2250 psi (155 bar)	2500 psi (172 bar)

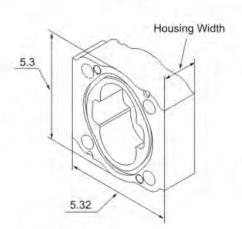
## TAIZHOU OFTERNAL HYDRAULIC

#### **8 SHAFT TYPE**

CODE 07 S.A.E. "C" 14 TOOTH SPLINE 1.250" dia - CONTINENTAL ONLY

12 KEYED SHAFT ,75" dia. X 1.56 KEY CONTINENTAL ONLY

- 15 S.A.E. B KEYED .875" dia. WITH 5/8" -18 THREAD CONTINENTAL ONLY
- 25 S.A.E. "B" 13 TOOTH SPLINE .88" dia
- 30 S.A.E. "B" KEYED .88" dia 1/4" X 3/8" X1" KEY
- 32 CLUTCH PUMP SHAFT
- 43 S.A.E. B B KEYED 1" dia. 1/4" X 3/8" X 1 1/4" KEY
- 65 S.A.E. "B" 13 TOOTH SPLINE .875" dia TYPE 2
- 66 S.A.E. "B" KEYED .88" dia 1/4" X3/8" X1" KEY TYPE 2
- 67 S.A.E. B B KEYED 1" dla. 1/4" X3/8"X 1 1/4" KEY TYPE 2
- 68 6 TOOTH SPLINE 1" dia.
- 90 S.A.E. "B" THREADED + KET ANSI 22-2 MODIFED
- 95 S.A.E. A 9 TOOTH SPLINE .62" dia.
- 98 S.A.E. B B 15 TOOTH SPLINE 1" dia.



#### 9 BEARING CARRIERS ORIENTATION IS FROM THE SHAFT END

NPT PORT		CC	DDE	S.A.E. SPL	IT FLANGE		CODE
IN	OUT	CW	ccw	IN	OUT	cw	ccw
	10.75		1-1-1-1	4.0	Control of the Control		
NONE	NONE	C	D	1"	NONE	LB	BL
NONE	NONE	A	J	1 1/4"	NONE	MB	ВМ
	10211			1 1/2"	NONE	NB	BN
1"	NONE	TB	VB	a distributed	Code		
1 1/4"	NONE	BT	BV	NONE	3/4"	BR	RB
				1"	3/4"	LR	RL
1"	3/4"	TX	XT	1 1/4"	3/4"	MR	RM
1 1/4"	3/4"	VX	XV	1 1/2"	3/4"	NR	RN
1 1/4°	1"	VZ	ZV	1 1/4"	1"	MS	SM
				1 1/2"	1"	NS	SN
1"	3/4"	TJ	JT				
1 1/4"	3/4"	VJ	JV	1"	3/4"	LX	XL
1 1/4"	1"	VK	KV	1 1/4"	3/4"	MX	XM
1 1/2"	1"	KW	WK	1 1/2"	3/4"	NX	XN
				1 1/4"	1"	MZ	ZM
1"	3/4"	ZX	XZ	1 1/2"	1"	NZ	ZN
1"	3/4"	ZS	SZ	1"	3/4"	SR	RS
A.E. ORING		CC	DDE				
				1"	3/4"	RZ	ZR
1"	NONE	СВ	BC				
1 1/4"	NONE	DB	BD	MOTORS ON	ILY		CODE
1 1/2"	NONE	FB	BF	IN	OUT	DUAL	
NONE	3/4"	PJ	JP	NONE	NONE	В	
1"	3/4"	CJ	JC				
1 1/4"	3/4"	DJ	JD	1"	1"	TT	NPT
1 1/2"	3/4"	FJ	JF	1 1/4"	1 1/4"	VV	NPT
1 1/4"	1"	DK	KD	1"	1"	CC	SAE O RING
1 1/2"	1"	FK	KF	1 1/4"	1 1/4"	ВВ	SAE O RING
	1			1 1/2"	1 1/2"	FF	SAE O RING
1"	3/4"	KJ	JK	1"	1"	LL	SAE SPLIT FLANGE
	<b>9</b> , 1			1 1/4"	1 1/4"	MM	SAE SPLIT FLANGE
1"	3/4"	KX	XK	1 1/2"	1 1/2"	NN	SAE SPLIT FLANGE
				L MULTIPLE U			



### 30/31 Series Gear Pump & Motor

Standardization, universalization, serialization design. Connecting dimensions are SAE standard, multiple assemblies are available.

Oisplacement range:16.4ml/r-80.7 ml/r,

Max rated pressure: 207bar, Intermittent: 245bar,

Speed range: 600-2400 RPM.



#### PERFORMANCE

Bearing series pressure and displacement

CODE	E	05	07	10	12	15	17	20	22	25
Gear W	idth	1/2"	3/4"	1"	1-1/4"	1-1/2"	1-3/4"	2"	2-1/4"	2-1/2
Displacer	mont	0.98	1.48	1.97	2.47	2.95	3.45	3.94	4.43	4.92
Displacei	ment	16.1	24.2	32.3	40.4	48.4	56.5	64.6	72.6	80.7
30	2500	2500	2500	2500	2500	2250	2250	2000	1800	
Max	30	172	172	172	172	172	155	155	145	125
Pressure	31	3000	3000	3000	3000	3000	2500	2500	2250	2000
	31	207	207	207	207	207	172	172	155	135
Speed R	PM	600-2400								

Flow: GPM/LPM Pressure: PSI/bar

### P30/31 Flow and Power data at 2500 PSI (172 bar)

				Gear Width	Output (gpm	/lpm) and Inch	nes (HP/KW)			
Speed RPM	-	Î"	1-1/4"		1-	-1/2"		-3/4"	- 32	2"
	Flow	Power	Flow	Power	Flow	Power	Flow	Power	Flow	Power
900	24.5	11	30	13	38	15	45.5	17	51	19
900	6.5	14	8	17	10	20	12	23	13.5	25
1200	34	14	43.5	17	53	20	60.5	22	70	25
1200	9	19	11.5	22	14	26	16	30	18.5	33
1500	43.5	17	55	21	66	24	77.5	27	89	31
1500	11.5	23	14.5	28	17.5	33	20.5	37	23.5	42
1900	53	20	68	25	81.5	29	94.5	27	110	37
1800	14	27	18	33	21.5	39	25	44	29	50
2100	62.5	24	79.5	29	94.5	34	112	38	129	43
2100	16.5	32	21	38	25	45	29.5	51	34	58
2400	72	26	91	33	110	38	129	43	148	49
2400	19	36	24	44	29	51	34	58	39	66

Flow: GPM/LPM Power: HP/kW



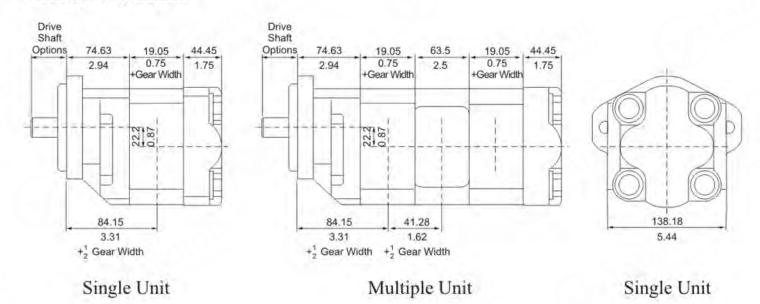
### M31 Motor performance data at 2500 PSI (172 bar).

			Torqu	ie: Inlbs. / Nm	Flow: GPM/LF	PM Power: HP	P/KW			
Speed		1"			1-1/2"			2"		
RPM	Out	Output		Output Input Outp	Output		put	Input		
	Torque	Power	Flow	Torque	Power	Flow	Torque	Power	Flow	
800	675	8.5	9	1035	13	13	1385	17.5	17	
800	76.5	6.5	34	117	9.5	49	156.5	13	64.5	
1200	685	13	13	1055	20	18	1410	27	23.5	
1200	77.5	9.5	49	119	15	68	159.5	20	89	
1600	680	17.5	16	1030	26	23	1390	35	30.5	
1000	77	13	60.5	116.5	19.5	87	157	26	115	
2000	660	21	19.5	1010	32	28	1370	43.5	37	
2000	74.5	15.5	74	114	24	106	155	32.5	140	

Torque: In. -lbs./Nm Flow: GPM/LPM Power: HP/kW

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 the oil reservoir temperature at 120 F and viscosity 150 SSU at 100 F, Requests for more specific data should be directed to our Product Support Department through our sales representatives.

#### **Dimensional Date**





### 30/31 Series Coding

## 1 30/31 2 3 4 5 6 7 8 9 6 7 10

#### 1 PUMP / MOTOR

P PUMP M MOTOR

#### 2 UNIT

A SINGLE UNIT B TANDEM UNITS

C SINGLE OR TANDEM WITH A CONTINENTAL SHAFT

#### 3 SHAFT END COVER

- 1 PUMP WITHOUT SHAFT BEARING CLOCKWISE ROTATION
- 2 PUMP WITHOUT SHAFT BEARING COUNTER CLOCKWISE ROTATION
- 3 PUMP WITHOUT SHAFT BEARING DOUBLE ROTATION
- 4 PUMP WITH SHAFT BEARING CLOCKWISE ROTATION
- 5 PUMP WITH SHAFT BEARING COUNTER CLOCKWISE ROTATION
- 6 PUMP WITH SHAFT BEARING DOUBLE ROTATION
- 8 MOTOR WITH SHAFT BEARING 1/4" DRAIN PORT
- 9 MOTOR WITHOUT SHAFT BEARING & 1/4" DRAIN PORT

#### 4 SHAFT END COVER

00 PAD MOUNT

05 6 BOLT FLANGE 3.25" DIA. BOLT CIRCLE

42 S.A.E. 4 BOLT "B" MOUNT

78 S.A.E. 4 BOLT "C" MOUNT

91 31/51 PIGGY BACK MOUNT

92 76/31 PIGGY BACK MOUNT

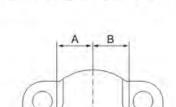
94 S.A.E. 2 BOLT "A" MOUNT

96 S.A.E. 2 BOLT "B" MOUNT type 2

97 S.A.E. 2 BOLT "B" MOUNT

#### 5 PORT END COVER CODES





REPEAT FOR TANDEM UNITS

### "O" Ring Ports

со	DE		POR	T SIZE		
SINGLE	TANDEM		LEFT	RIGHT	Α	В
GU	GU		1 1/4"	1"	1.38	1.38
HU	HU		1"	1 1/4"	1.38	1.38
TU	TU	SIDE	1 1/4"	1"	N/A	N/A
XU	XU	SIDE	1"	1 1/4"	N/A	N/A

	CC	DDE		POR	T SIZE		
SIN	GLE	TAN	DEM	LEFT	RIGHT	A	В
CE	CY	CI	CY	3/4"	NONE	N/A	1.25
CA	CO	CU	CO	3/4"	NONE	N/A	1.382
DE	DY	DI	DY	NONE	3/4"	1.25	N/A
DA	DO	DU	DO	NONE	3/4"	1.25	N/A
FE	FY	FI	FY	3/4"	3/4"	1.25	1.25
JA	ВО	JU	ВО	3/4"	3/4"	1.382	1.382
GE	GY	GI	GY	1"	3/4"	1.25	1.382
KA		KU		1"	3/4"	1.382	1.382
HE	HY	HI	HY	3/4"	1"	1.382	1.25
LA		LU		3/4"	1"	1.382	1.382
MA	YO	MU	YO	1"	NONE	N/A	1.382
RA	RO	SU	RO	NONE	1"	1.382	N/A
JE	JY	JI	JY	1"	1"	1.382	1.382
ZA	ZO	ZU	ZO	1"	1"	1.382	1.382

#### NPT PORT

	co	DE		PORT	SIZE	-	744
SIN	GLE	TAN	DEM	LEFT	RIGHT	Α	В
BE	BY	BI	BY	NONE	NONE	N/A	N/A
KE	KY	KI	KY	3/4"	NONE	N/A	1.25
LE	LY	LI	LY	NONE	3/4"	1.25	N/A
ME	MY	MI	MY	3/4"	3/4"	1.25	1.25
-	4		1				

WITH SUPPORT STUDS WITHOUT SUPPORT STUDS



### 6 Gear Housing

- ON.P.T. PORTING IS NOT RECOMMENDED FOR PRESSURES ABOVE 1500 P.S.I.
- OPORTS MARKED WITH A "O" ARE RECOMMENDED PORTING, FOR ALL OTHER PORTING PLEASE CONSULT THE FACTORY
- SHADED CELLS ARE GOOD FOR MOTOR UNITS
- ORIENTATION IS VIEWED FROM THE SHAFT END

#### NPT PORT

NPT.CODE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	1	4	4	-1	7	1	4
1L	1/2"	NONE	1	4					
(M	NONE	1/2"	1	4					
IR	1/2"	1/2"	*	1					-
ic	3/4"	NONE			1	4	4	4	4
ID	NONE	3/4"			4	1	4	1	4
IF	3/4"	3/4"			<b>*</b>	4	- V	4	4
IG	3/4"	1"			1	1	1	4	
TH.	3/4"	1 1/4"					V	4	
IJ	1"	3/4"			1	1	1	1	
IK	1 1/4"	3/4"					1	<b>V</b>	
YC	1"	NONE			1	<b>→</b>	1	V	
YD	NONE	1"			1	√	4	4	152
YF	1"	- 1"				<b>√</b>	<b>√</b>	4	
YG	1"	1 1/4" *				1 01	V	1	4
YH	1"	1 1/2"					4	4	4
YJ	1 1/4" *	1"					4	1	4
YK	1 1/2"	1"					4	4	4
IA	1 1/4" *	NONE					1	1	1
IB	NONE	1 1/4" *					4	√	1
YL	1 1/4"	1 1/4"						1	1
YM	1 1/4"	1 1/2" *	14 451			1 7 3			4
YP	1 1/2"	1 1/4"							4
YA	1 1/2" *	NONE							4
YB	NONE	1 1/2" *							4

#### **BSPP PORT**

BSPP.CODE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	4	7	√	4	Q.=	√	1
YN	3/4"	NONE		1	4	1		1	4
YQ	NONE	3/4"		4	1	4	4	4	4
YS	3/4"	3/4"			4	4.		1	4
YT	3/4"	1"			4	1			
YU	3/4"	1 1/4"						4	1
YV	1"	3/4"			4	1	V	- 1	
YW	1 1/4"	3/4"						4	V
SL	1"	NONE				1	1	4	1
RQ	NONE	1"			- 1	1	1	4	1
MP	1"	1"				1	V	V	
VY	1"	1 1/4" *					4	V	4
10	1 1/4" *	1"				1000	4.	1	1
NJ	1 1/4" *	NONE						1	1
UI	NONE	1 1/4" *						√	4
PF	1 1/4"	1 1/4"	-						4



0	TI	ID	_
•	 	, no	Е.

			0.010	DC.					
O.D TUBE.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	4	1	√	4	4	4	1
EC	3/4"	NONE	-		1	1	1	1	
ED	NONE	3/4"			√°	1	1	1	
EF	3/4"	3/4"			4	~	1	1	1
EG	3/4"	1"	1		4	4	1	4	4
EH	3/4"	1 1/4"					1	√	
IN	3/4"	1 1/2"						7	1
EJ	4"	3/4"			4	1	1	√	V
EK	1 1/4"	3/4"					4	4	
IP	1 1/2"	3/4"							4
EZ	7/8"	NONE				1			
EL	7/8"	1"			4	1			
EM	1"	7/8"			1	4			
AC	1"	NONE			1	4	1	√	4
AD	NONE	1"			1	4	4	1	1
AF	1"	1"					4	1	4
AG	1"	1 1/4" *					J	4	1
AH	- 1"	1 1/2" *	1					√.	-1
AJ	1 1/4" *	1"					1	4	1
AK	1 1/2" *	1"						1	1
AA	1 1/4" *	NONE				1	1	1	
AO	NONE	1 1/4" *			1	1	1	4	
AL	1 1/4"	1 1/4"		-				1	1
AM	1 1/4"	1 1/2" *						1	4
AP	1 1/2" *	1 1/4"						4	1
AE	1 1/2" *	NONE						4	4
AU	NONE	1 1/2" *						1	-4

#### SPLIT FLANGE

SPLIT FLANGE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	1	1	7	1	1	4	1
UC	3/4"	NONE			√'	4	1	1	
UD	NONE	3/4"			4	4	1	4	
UF	3/4"	3/4*		1	4	~	4		
UG	3/4"	1*		1	1	4	4		
UH	3/4"	1 1/4"				~	V	4	1
UJ	1"	3/4"			4	4	4	1	1
UK	1 1/4"	3/4"				4	V	J	1
oc	1"	NONE				1	1	4	
OD	NONE	1"				1	1	1	1
OF	1"	1"			4	4	4	1	4
OG	1"	1 1/4" *				4	1	J	- 1
ОН	1"	1 1/2" *						1	J
OJ	1 1/4**	1"				4	1	1	1
ОК	1 1/2"*	1"		97.				4	1
OA	1 1/4" *	NONE				4	4	1	J
ОВ	NONE	1 1/4" *				1	1	1	1
OL	1 1/4"	1 1/4"				000	1	1	1
OM	1 1/4"	1 1/2" *						4	1
OP	1 1/2" *	1 1/4"						1	1
OE	1 1/2" *	NONE						1	1
OU	NONE	1 1/2"						1	V.



#### METRIC S. F.

METRICS. F.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	4	1	4	4	4	4	1
VN	3/4"	NONE			4	1	1	1	
VQ	NONE	3/4"			4	1	1	1	
VS	3/4"	3/4"			1	V	- V	1	
VT	3/4"	1"	1		1	4	1	~	
RV	1"	3/4"	1,000		4	1	1	1	
RU	3/4"	1 1/4"				1	J	4	
RW	1 1/4"	3/4"				V	4	~	
UL	1"	NONE			~	1	J	7	V
UR	NONE	1"			4	V	1	√	1
UM	1"	1"				4	4	4	
VU	1"	1 1/4" *		-0.5		i/	4	√	1
UX	1 1/4" *	1*				4	- 1	4	1
НО	1"	1 1/2" *						4	1
VO	1 1/2" *	1"						1	1
NO	1 1/4" *	NONE					4	~	1
UO	NONE	1 1/4" *					1	1	V
PO	1.1/4"	1 1/4"					1	V	1
QO	1 1/4"	1 1/2" *						4	1
so	1 1/2" *	1 1/4"						√	V
UY	1 1/2" *	NONE					₩.	4	
TO	NONE	1 1/2"					4	<b>√</b>	

#### METRIC STR. THD.

METRIC STR. THD.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	4	1	-	4	1	1	4
EN	3/4"	NONE			4	4	4		
TQ	NONE	3/4"			4	4	1		
ES	3/4"	3/4"			4	4			
ĒΤ	3/4"	1"			1	1			
EV	1"	3/4"			4	4	1	¥-	
NL	1"	NONE			4	1	4		
ER	NONE	1"			1	1	1	1	1
CM	1"	1"				1	1		
VE	1"	1 1/4" *					1	1	4
EX	1 1/4" *	1"					4	1	4
PA	1 1/4"	1 1/4"						√	4
QA	1 1/4"	1 1/2" *	1000						4
SA	1 1/2" *	1 1/4"							4

### 7 GEAR SIZE

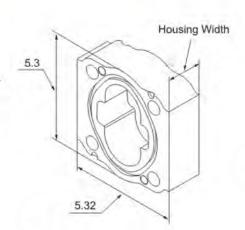
CODE	00	Displa	cement	Housing	g Width	Max F	Pressure
CODE	Gear Size	in. <sub>3</sub> /rev.	cm₃/rev.	inch	mm	30 Series	31 Series
05	1/2"	0.99	16.1	1.25	31.75	2500 psi (172 bar)	3000 psi (207 bar)
07	3/4"	1.48	24.2	1.5	38.1	2500 psi (172 bar)	3000 psi (207 bar)
10	- 1"	1.97	32.3	1.75	44.45	2500 psi (172 bar)	3000 psi (207 bar
12	1 1/4"	2.46	40.4	2	50.8	2500 psi (172 bar)	3000 psi (207 bar
15	1 1/2"	2.96	48.4	2.25	57.15	2500 psi (172 bar)	3000 psi (207 bar
17	1 3/4"	3.45	56.5	2.5	63.5	2250 psi (155 bar)	2500 psi (172 bar
20	2"	3.94	64.6	2.75	69.85	2250 psi (155 bar)	2500 psi (172 bar)



#### **8 SHAFT TYPE**

CODE

- 07 S.A.E. "C" 14 TOOTH SPLINE 1.250" dia CONTINENTAL ONLY
- 12 KEYED SHAFT .75" dia. X 1.56 KEY CONTINENTAL ONLY
- 15 S.A.E. B KEYED .875" dia. WITH 5/8" -18 THREAD CONTINENTAL ONLY
- 25 S.A.E. "B" 13 TOOTH SPLINE .88" dia
- 30 S.A.E. "B" KEYED .88" dia 1/4" X 3/8" X1" KEY
- 43 S.A.E. B B KEYED 1" dia. 1/4" X 3/8" X 1 1/4" KEY
- 65 S.A.E. "B" 13 TOOTH SPLINE .875" dia TYPE 2
- 66 S.A.E. "B" KEYED .88" dia 1/4" X3/8" X1" KEY TYPE 2
- 67 S.A.E. B B KEYED 1" dia. 1/4" X3/8"X 1 1/4" KEY TYPE 2
- 68 6 TOOTH SPLINE 1" dia.
- 95 S.A.E. A 9 TOOTH SPLINE .62" dia.
- 98 S.A.E. B B 15 TOOTH SPLINE 1" dia.



#### 9 BEARING CARRIERS ORIENTATION IS FROM THE SHAFT END

NPT PORT		CC	ODE	S.A.E. SPL	IT FLANGE		CODE
IN	OUT	CW	ccw	IN	OUT	CW	ccw
NONE	NONE	C	D	1"	NONE	LB	BL
NONE	NONE	A	J	1 1/4"	NONE	MB	BM
				1 1/2"	NONE	NB	BN
1"	NONE	TB	VB				
1 1/4"	NONE	BT	BV	NONE	3/4"	BR	RB
				1"	3/4"	LR	RL
1"	3/4"	TX	XT	1 1/4"	3/4"	MR	RM
1 1/4"	3/4"	VX	XV	1 1/2"	3/4"	NR	RN
1 1/4"	1"	VZ	ZV	1 1/4"	1"	MS	SM
				1 1/2"	1"	NS	SN
1"	3/4"	TJ	JT				
1 1/4"	3/4"	VJ	JV	1"	3/4"	LX	XL
1 1/4"	1"	VK	KV	1 1/4"	3/4"	MX	XM
1 1/2"	1"	KW	WK	1 1/2"	3/4"	NX	XN
				1 1/4"	1"	MZ	ZM
1"	3/4"	ZX	XZ	1 1/2"	1"	NZ	ZN
1"	3/4"	ZS	SZ	1"	3/4"	SR	RS
S.A.E. ORING		CC	ODE				
		H		1"	3/4"	RZ	ZR
1"	NONE	СВ	BC				
1 1/4"	NONE	DB	BD	MOTORS OF	NLY	- 30	CODE
1 1/2"	NONE	FB	BF	IN	OUT	DUAL	
NONE	3/4"	PJ	JP	NONE	NONE	В	
1"	3/4"	CJ	JC				
1 1/4"	3/4"	DJ	JD	1"	1"	TT	NPT
1 1/2"	3/4"	FJ	JF	1 1/4"	1 1/4"	VV	NPT
1 1/4"	1"	DK	KD	1"	1"	CC	SAE O RING
1 1/2"	1"	FK	KF	1 1/4"	1 1/4"	BB	SAE O RING
				1 1/2"	1 1/2"	FF	SAE O RING
1"	3/4"	KJ	JK	4*	1"	LL.	SAE SPLIT FLANGE
		FR		1 1/4"	1 1/4"	MM	SAE SPLIT FLANGE
				1 1/2"	1 1/2"	NN	SAE SPLIT FLANGE



### 50/51 Series Gear Pump & Motor

Standardization, universalization, serialization design, Connecting dimensions are SAE standard, multiple assemblies are available.

Obisplacement range: 20.9ml/r -125.4 ml/r,
Max rated pressure: 207bar, Intermittent: 245bar

Speed range: 600-2400 RPM.



#### PERFORMANCE

Bearing series pressure and displacement

CODE	3	05	07	10	12	15	17	20	22	25	27	30
Gear Wi	dth	1/2"	3/4"	1"	1-1/4"	1-1/2"	1-3/4"	2"	2-1/4"	2-1/2"	2-3/4"	3"
Displacer	nant	1.28	1,91	2.55	3.19	3.83	4,46	5.1	5.74	6.38	7.01	7.66
Displacei	nent	20.9	31.3	41.8	52.2	62.7	73.1	83.6	94	104.5	114.9	125.4
	50	2500	2500	2500	2500	2500	2000	2000	2000	2000	2000	1800
Max	50	172	172	172	172	172	145	145	145	145	145	125
Pressure	51	3000	3000	3000	3000	3000	3000	2500	2500	2500	2500	2250
	31	207	207	207	207	207	207	172	172	172	172	145
Speed R	PM					600-2400						

Flow: GPM/LPM Pressure: PSI/bar

### P50/51 Flow and Power data at 2500 PSI (172 bar)

					Gear V	Vidth Outp	ut (gpm/	pm) and li	nches (H	P/KW)				
Speed	332	1"	1-1/4"		1-1/2"		1-3/4"		2"		2-1/4"		2-	1/2"
13,60	Flow	Power	Flow	Power	Flow	Power	Flow	Power	Flow	Power	Flow	Power	Flow	Power
900	32	14	39.5	17	49	20	57	23	66	26	75.5	29	83.5	32
900	8.5	19	10.5	22	13	26	15	30	17.5	34	20	38	22	42
1200	45.5	18	57	22	68	26	79.5	30	91	34	102	38	114	42
1200	12	25	15	30	18	34	21	40	24	45	27	51	30	56
4E00	57	23	72	27	87	32	102	37	117	42	132	47	148	51
1500	15	31	19	37	23	43	27	50	31	56	35	63	39	69
*000	68	27	87	33	104	38	123	44	142	50	159	56	178	61
1800	18	36	23	44	27.5	51	32.5	59	37.5	67	42	75	47	82
2100	81.5	31	102	38	123	44	146	51	167	58	187	65	208	72
2100	21.5	42	27	51	32.5	60	38.5	69	44	78	49.5	87	55	96
2400	94.5	35	117	43	140	51	167	59	193	66	216	74	240	82
2400	25	47	31	57	37	68	44	79	51	89	57	99	63.5	110

Flow: GPM/LPM Power: HP/kW

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 the oil reservoir temperature at 120 F and viscosity 150 SSU at 100 F. Requests for more specific data should be directed to our Product. Support Department through our sales representatives.

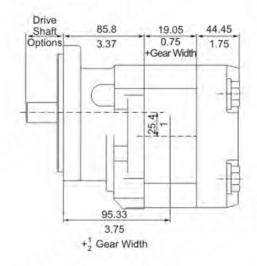


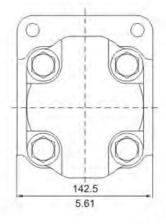
### M51 Motor performance data at 2500 PSI (172 bar).

				Torque	: Inlbs. / N	Im Flow: C	SPM/LPM F	Power: HP/	KW			
Speed		1"			1-1/2"			2"	40000		4	
RPM	0	utput	Input	Ou	itput	Input	Out	put	Input	0	utput	Input
	Torque	Power	Flow	Torque	Power	Flow	Torque	Power	Flow	Torque	Power	Flow
800	825	10.5	10.5	1310	16.5	15.5	1810	23	21	2330	29.5	26
800	93	8	39.5	148	12.5	58.5	204.5	17	79.5	263.5	22	98.5
1200	850	16	15.5	1340	25.5	22.5	1830	35	30.5	2340	44.5	37.5
1200	96	12	58.5	151.5	19	85	207	26	115	264.5	33	142
1600	830	21	20	1330	34	30	1805	46	40	2300	58.5	49.5
1000	94	15.5	75.5	150.5	25.5	114	204	34,5	151	260	43.5	187
2000	800	25.5	25	1290	41	37	1770	56	49	2250	71.5	61.5
2000	90.5	19	94.5	146	30.5	140	200	42	185	254	53.5	233

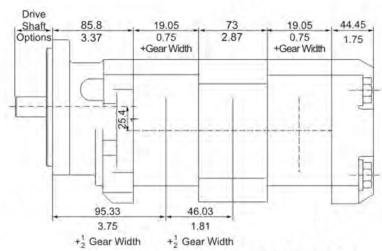
Torque: In. -lbs./Nm Flow: GPM/LPM Power: HP/kW

### **Dimensional Date**





Single Unit

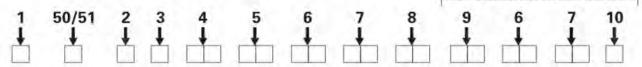


Multiple Unit



### 50/51 Series Coding

#### REPEAT FOR TANDEM UNITS



### 1 PUMP / MOTOR

P PUMP

M MOTOR

#### 2 UNIT

- A SINGLE UNIT
- **B TANDEM UNITS**
- C SINGLE OR TANDEM WITH A CONTINENTAL SHAFT

#### 3 SHAFT END COVER

- 1 PUMP WITHOUT SHAFT BEARING CLOCKWISE ROTATION
- 2 PUMP WITHOUT SHAFT BEARING COUNTER CLOCKWISE ROTATION
- 3 PUMP WITHOUT SHAFT BEARING DOUBLE ROTATION
- 4 PUMP WITH SHAFT BEARING CLOCKWISE ROTATION
- 5 PUMP WITH SHAFT BEARING COUNTER CLOCKWISE ROTATION
- 6 PUMP WITH SHAFT BEARING DOUBLE ROTATION
- 8 MOTOR WITH SHAFT BEARING 1/4" DRAIN PORT
- 9 MOTOR WITHOUT SHAFT BEARING & 1/4" DRAIN PORT

### 4 SHAFT END COVER

00 PAD MOUNT

42 S.A.E. 4 BOLT "B" MOUNT

78 S.A.E. 4 BOLT "C" MOUNT

91 31/51 PIGGY BACK MOUNT

92 76/31 PIGGY BACK MOUNT

94 S.A.E. 2 BOLT "A" MOUNT

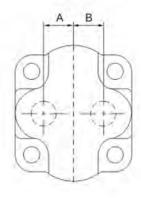
96 S.A.E. 2 BOLT "B" MOUNT type 2

97 S.A.E. 2 BOLT "B" MOUNT

98 S.A.E. 2 BOLT "C" MOUNT

99 S.A.E. 2 BOLT "C" MOUNT type 2

### 5 PORT END COVER CODES



### "O" Ring Ports

CODE			PORT	SIZE		
GLE	TAN	DEM	LEFT	RIGHT	Α	В
CY	CI	CY	3/4"	NONE	N/A	1.38
DY	DI	DY	NONE	3/4"	1.38	N/A
FY	FI	FY	3/4"	3/4"	1.38	1.38
	GLE CY DY	CY CI DY DI	GLE TANDEM CY CI CY DY DI DY	GLE         TANDEM         LEFT           CY         CI         CY         3/4"           DY         DI         DY         NONE	GLE         TANDEM         LEFT         RIGHT           CY         CI         CY         3/4"         NONE           DY         DI         DY         NONE         3/4"	GLE         TANDEM         LEFT         RIGHT         A           CY         CI         CY         3/4"         NONE         N/A           DY         DI         DY         NONE         3/4"         1.38

#### N.P.T. PORTS

	CC	DE		PORT	SIZE		
BE	BY	BI	BY	NONE	NONE	N/A	N/A
KE	KY	KI	KY	3/4"	NONE	N/A	1.38
LE	LY	LI	LY	NONE	3/4"	1.38	N/A
ME	MY	MI	MY	3/4"	3/4"	1.38	1.38

#### METRIC STR. THREAD PORTS

NE	NI	NY	3/4"	NONE	N/A	1.38
PE	PI	PY	NONE	3/4"	1.38	N/A
QE	QI	QY	3/4"	3/4"	1.38	1.38

#### B.S.P.P PORTS

WE	WI	WY	3/4"	NONE	N/A	1.38
XE	XI	XY	NONE	3/4"	1.38	N/A
ZE	ZI	ZY	3/4"	3/4"	1.38	1.38
1 1	\$		- WITH S	UPPORT S	STUDS	

WITHOUT SUPPORT STUDS





### 6 Gear Housing

- ♦ N.P.T. PORTING IS NOT RECOMMENDED FOR PRESSURES ABOVE 1500 P.S.I.
- OPORTS MARKED WITH A "O" ARE RECOMMENDED PORTING, FOR ALL OTHER PORTING PLEASE CONSULT THE FACTORY
- SHADED CELLS ARE GOOD FOR MOTOR UNITS
- ORIENTATION IS VIEWED FROM THE SHAFT END

#### NPT PORT

NPT.CODE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25
AB	NONE	NONE	1	~	4	1	1	4	4	4	4
IC	3/4"	NONE			1						
ID	NONE	3/4"	1	1	1	4	V	4			
IF	3/4"	3/4"		0	4	V	1	4	1		
IG	3/4"	1"			1	V	1				
TH	3/4"	1 1/4"					1				
IJ	1"	3/4"			4	1	1	4	4		
IK	1 1/4"	3/4"					1				
YC	1"	NONE				4	1	4	4	4	
YD	NONE	1"				4	1	4	1	4	
YF	1"	1"				4	1	4	4	4	4
YG	1"	1 1/4" +					1	1	4	1	
YH	1"	1 1/2"									V
YJ	1 1/4" *	1"					1	7	2	4	4
YK	1 1/2"	1"									~
IA	1 1/4" *	NONE					1	4	~	1	4
IB	NONE	1 1/4" *					<b>√</b>	1	√		~
YL	1 1/4"	1 1/4"						4	4	4	V
YM	1 1/4"	1 1/2" *							4	4	. 4
YP	1 1/2"	1 1/4"				<u>.                                    </u>	1		4	4	4
YR	1 1/2"	1 1/2"							*	4	4
YA	1 1/2"	NONE							4	4	V
YB	NONE	1 1/2"							1	1	2

#### **BSPP PORT**

BSPP.CODE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25
AB	NONE	NONE	1	1		1	1	1	V.	4.	V
YN	3/4"	NONE			1	1					
YQ	NONE	3/4"		1	V	1	1	~			
YS	3/4"	3/4"				1	<b>√</b>				4
YT	3/4"	1"			V	1	1				
YU	3/4"	1 1/4"			1	1	1	4			
YV	1"	3/4"			1	1	1	4	2		
YW	1 1/4"	3/4"			1	~	4	4			
SL	1"	NONE			1	1	V-				
RQ	NONE	1"					1	4	1	-1	1
MP	1"	1"					1	~	4	4	V
VY	1"	1 1/4" *		4			1	d	V	4	V
IX	1 1/4" *	1"					1	4	4	4	*
NJ	1 1/4" *	NONE					4	4	4		
UI	NONE	1 1/4" *								4	4
PF	1 1/4"	1 1/4"								4	1
IQ	1 1/4"	1 1/2"									¥-
IS	1 1/2"	1 1/4"									4



^	TI	 _

O.D TUBE.CODE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25
E-10-1-2-0-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		1,5170 111,4111							-		
AB	NONE	NONE	1	1	4	4	1	4	~	4	4
EC	3/4"	NONE			1	1	1	1	1		
ED	NONE	3/4"			1	1	4	1	V		
EF	3/4"	3/4"			4	1	4	V	V		
EG	3/4"	1"			- V	1	1		4		
EH	3/4"	1 1/4"					1	√			
EJ	1"	3/4"			4	1	1	1	4		
EK	1 1/4"	3/4"					1	1			
AC	1"	NONE			1	1	1	4			
AD	NONE	1"			4	1	1	1			
AF	1"	1"					4	V	4		4
AG	1"	1 1/4" *					1	1	1	4	4
AH	1"	1 1/2"						1	1	V	
AJ	1 1/4" *	1"					4	4	4	1	1
AK	1 1/2" *	1"					1	1	V	1	1
AL	1 1/4"	1 1/4"							4	1	1
AM	1 1/4"	1 1/2" *							1	1	V
AP	1 1/2" *	1 1/4"							1	4	<b>√</b>
AR	1 1/2"	1 1/2"									4
AA	1 1/4"	NONE					4	7	4	1	1
AO	NONE	1 1/4" *					4	1	1	4	1
AE	1 1/2" *	NONE							1	4	
AU	NONE	1 1/2" *							V	1	
			METRIC	STR. TH	ID.						

METRIC STR.THD.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25
AB	NONE	NONE	1	~	1	1	<b>√</b>	1	1	V	1
EN	3/4"	NONE			1	1	1	~			
TQ	NONE	3/4"				1	4	1			
ES	3/4"	3/4"			1	1					
ET	3/4"	1"			4	1	1	~	4		
EV	1"	3/4"			1	1	1	1	1		
NL	1"	NONE					1	1	1	1	
ER	NONE	1"					4	1	1	1	
CM	1"	1"					1	1	4		
VE	1"	1 1/4" *					4	1	4	4	1
EX	1 1/4"*	1"					4	1	4	1	1
UA	NONE	1 1/4"							1	1	
PA	1 1/4"	1 1/4"						1	4	1	4
QA	1 1/4"	1 1/2" *							V	1	4
SA	1 1/2"	1 1/4"			-				1	-1	4

#### SPLIT FLANGE

SPLIT FLANGE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25
AB	NONE	NONE	4	1	1	1	1	1	1	1	J
UC	3/4"	NONE		-	4	1	4	1			
UD	NONE	3/4"		- 0	1	V	1	1			
UF	3/4"	3/4"			1	1	1	1	1	4	1
UG	3/4"	1"			1	V	1				
UH	3/4"	1 1/4"				1	1	~			
UJ	1"	3/4"			1	1	1	1	V		- 1
UK	1 1/4"	3/4"					4	1			
oc	1"	NONE	<u></u>		1	1	1	1	- 1	<b>√</b>	~~
OD	NONE	1"			1	1	1	1	1	4	1
OF	1"	1"				1	4	4	<b>√</b>	1	1
OG	1"	1 1/4" *				1	4	4	1		
ОН	1"	1 1/2" *					4	1	√	1	1



SPI	17	AA	CE
SPI		 $\Delta I $	11.71

SPLIT FLANGE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25
OJ	1 1/4" *	1"				1	1	1	1	1	1
ОК	1 1/2" *	1"					1	4	1	<b>√</b>	- 1
OL	1 1/4"	1 1/4"					4	<b>√</b>	1	4.	V
OM	1 1/4"	1 1/2" +					4	4	1	4	1
ON	1 1/4"	2"							√	<b>√</b>	1
OP	1 1/2" *	1 1/4"					4	1	1	4	4
OQ	2"	1 1/4"							4	4	
OR	1 1/2"	1 1/2"						4	1	4	1
os	1 1/2"	2"							4	4	1
OV	2"	1 1/2"							V	1	V
OX	2"	2"		-							1
OA	1 1/4" *	NONE				1	1	~	1	1	1
OB	NONE	1 1/4" *				1	1	~	1	1	1
OE	1 1/2" *	NONE					4	1	1	1	1
OU	NONE	1 1/2" *			-		4	<b>√</b>	√	1	1
UB	1"	2"							1	√.	1
UQ	2"	1"							1	1	1
XB	2"	NONE							- √	4.	
ZB	NONE	2"							1	4.	1

#### METRIC S. F.

METRIC S. F.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25
AB	NONE	NONE	1	1	1	J	1	1	1	. V:	1
VN	3/4"	NONE			1	1	¥	1			
VQ	NONE	3/4"			1	1	1	~			
VS	3/4"	3/4"			1	1	1				
VT	3/4"	3"			1	4	4	4	1		
RV	1"	3/4"			4	1	4	4	4		
RU	3/4"	1 1/4"			V	1	1				
RW	11/4"	3/4"			V	1	4				
UL	1"	NONE				1	1	1	1	1	
UR	NONE	1"				1	1	1	~	4	
UM	1"	1"				1	√	1	1	4	
VU	1"	1 1/4"*				1	1	1	1	1	1
UX	1 1/4" *	1"				V	1	4	1	4	4
НО	1"	1 1/2"*	1	-	-		- 1	4	1		
VO	1 1/2" *	1"					4	4	1		
NO	1 1/4" *	NONE						4	1	√	1
UO	NONE	1 1/4" *						1	1	1	1
PO	1 1/4"	1 1/4"					V	1	1	1	4
QO	1 1/4"	1 1/2"*					V	4	4	1	4
so	1 1/2" *	1 1/4"					1	4	4	4	1
JR.	1 1/4"	2"							1	1	1
JM	2"	1 1/4"	1						1	4	4
UY	1 1/2 " *	NONE					4	4	1	1	
ТО	NONE	1 1/2" *					4	<b>√</b>	1	1	
sv	1 1/2"	1 1/2"							<b>V</b>	4	4
JN	1 1/2"	2"							<b>√</b>	-1	4
JQ	2"	1 1/2"				7-0			4	4	4

### 7 GEAR SIZE

	Coor Cine	Displac	ement	Housin	g Width	Max Pr	ressure
CODE	Gear Size	in.s/rev.	cm3/rev.	inch	mm	50 Series	51 Series
05	1/2"	1.28	20,9	1.25	31.75	2500 psi (172 bar)	3000 psi (207 bar
07	3/4"	1.91	31,3	1.5	38.1	2500 psi (172 bar)	3000 psi (207 bar
10	1"	2.55	41.8	1.75	44.45	2500 psi (172 bar)	3000 psi (207 bar
12	1 1/4"	3.19	52.2	2	50.8	2500 psi (172 bar)	3000 psi (207 bar
15	1 1/2"	3.83	62.7	2.25	57.15	2500 psi (172 bar)	3000 psi (207 bar
17	1 3/4"	4.46	73,1	2,5	63.5	2000 psi (138 bar)	3000 psi (207 bar)
20	2"	5.1	83.6	2.75	69.85	2000 psi (138 bar)	2500 psi (172 bar
22	2-1/4"	5.74	94	3	76.2	2000 psi (138 bar)	2500 psi (172 bar
25	2-1/2"	8 38	104.5	2.25	22.55	2000 nei /138 hari	2500 nei /172 har

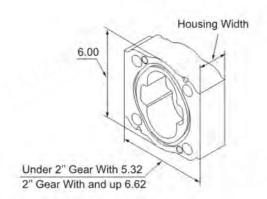


### **8 SHAFT TYPE**

#### CODE

NPT PORT

- 07 S.A.E. "C" 14 TOOTH SPLINE 1.250" dia CONTINENTAL ONLY
- 11 S.A.E. "C" KEYED 1,25" dia 5/16" X 15/32" X 1 1/2" KEY
- 25 S.A.E. "B" 13 TOOTH SPLINE .88" dia
- 43 S.A.E. B B KEYED 1" dia. 1/4" X 3/8" X 1 1/4" KEY
- 65 S.A.E. "B" 13 TOOTH SPLINE .875" dia TYPE 2
- 67 S.A.E. B B KEYED 1" dia. 1/4" X3/8"X 1 1/4" KEY TYPE 2
- 73 S.A.E. "C" KEYED 1.25" dia. 5/16" X 15/32" X 2 1/4" KEY
- 98 S.A.E. B B 15 TOOTH SPLINE 1" dia.



CODE

#### 9 BEARING CARRIERS ORIENTATION IS FROM THE SHAFT END

CODE

NPIPORI		CC	DDE	S.A.E. SPL	IT FLANGE	C	ODE
IN	OUT	CW	CCW	IN	OUT	CW	CCW
NONE	NONE	С	D	1*	NONE	LB	BL
NONE	NONE	A	J	1 1/4"	NONE	MB	BM
NONE	NOINE				NONE		BN
1"	NONE	ТВ	VB	1 1/2"	NONE	NB	DIN
1 1/4"	NONE	ВТ	BV	NONE	3/4"	BR	RB
1 1/2	NONE	WB	BW	1"	3/4"	LR	RL
				1 1/4"	3/4"	MR	RM
1"	3/4"	TX	XT	1 1/2"	3/4"	NR	RN
1 1/4"	3/4"	VX	XV	1 1/4"	1"	MS	SM
1 1/2"	3/4"	wx	xw	1 1/2"	1"	NS	SN
1 1/4"	1"	VZ	ZV			HH	
1 1/2"	1°	WZ	ZW	1"	3/4"	LX	XL
				1 1/4"	3/4"	MX	XM
1"	1-3/4"	TJ	JT	1 1/4"	1"	NX	XN
1.1/4"	3/4"	VJ	JV	1 1/2"	1"	MZ	ZM
1 1/4"	1"	VK	KV			NZ	ZN
1 1/2"	1"	KW	WK	1."	3/4"		
						SR	RS
1"	3/4"	ZX	XZ				
S.A.E. ORING		cc	DDE	MOTORS ON	ILY	С	ODE
		H		IN	OUT	DUAL	
1"	NONE	СВ	BC				
1 1/4"	NONE	DB	BD	NONE	NONE	В	
1 1/2"	NONE	FB	BF				
				1"	1"	II	NPT
NONE	3/4"	PJ	JP	1 1/4"	1 1/4"	VV	NPT
1"	3/4"	CJ	JC	1 1/2"	1 1/2"	WW	NPT
1 1/4"	3/4"	DJ	JD	1"	1"	CC	SAE O RING
				The second second	W 14 17 400	-	the same and the same of

1 1/4"

1 1/2"

1"

1 1/4"

1 1/2"

1 1/4"

1 1/2"

1"

1 1/4"

1 1/2"

BB

FF

LL

MM

SAE O RING

SAE O RING

SAE SPLIT FLANGE

SAE SPLIT FLANGE

SAE SPLIT FLANGE

SAE SPLIT FLANGE

FJ

DK

FK

CR

3/4"

1"

1"

3/4"

1 1/2"

1 1/4"

1 1/2"

JF

KD

KF

RC



### 75/76 Series Gear Pump & Motor

Standardization, universalization, serialization design. Connecting dimensions are SAE standard, multiple assemblies are available.

Displacement range: 33.58ml/r - 201.5 ml/r ,
 Max rated pressure: 207bar, Intermittent: 245bar

Speed range: 600-2400 RPM.



#### PERFORMANCE

Bearing series pressure and displacement

CODE	Ē	05	07	10	12	15	17	20	22	25	27	30
Gear Wi	dth	1/2"	3/4"	1"	1-1/4"	1-1/2"	1-3/4"	2"	2-1/4"	2-1/2"	2-3/4"	3"
Displacer	ment	2.05	3.07	4.1	5.12	6.15	7.17	8.2	9.22	10.3	11.3	12.3
Displacei	Herit	33.58	50.28	67.15	83.85	100.7	117.5	134.4	151.1	167.9	184.7	201.5
	75	2500	2500	2500	2500	2500	2500	2500	2250	2250	2000	2000
Max	15	172	172	172	172	172	172	172	155	155	145	145
Pressure	76	3000	3000	3000	3000	3000	2500	2500	2500	2500	2000	2000
	.,0	207	207	207	207	207	172	172	172	172	145	145
Speed R	PM					600-2400						

Flow: GPM/LPM Pressure: PSI/bar

### P75/76 Flow and Power data at 2500 PSI (172 bar)

					Gear W	idth Output (g	pm/lpm) and	d Inches (HP	KW)	
Speed RPM	1	0	1-1	/4"	1-1	/2"	1-3	3/4"	2	7
	Flow	Power	Flow	Power	Flow	Power	Flow	Power	Flow	Power
000	43.5	19	58.5	24	74	29	87	34	102	38
900	11.5	26	15.5	32	19.5	39	23	45	27	51
1200	64.5	26	83.5	32	102	39	121	45	142	51
1200	17	35	22	43	27	52	32	60	37.5	69
1500	83.5	33	110	41	134	49	157	57	182	65
1500	22	44	29	55	35.5	65	41.5	76	48	87
1900	104	39	134	49	165	59	193	69	223	79
1800	27.5	53	35.5	66	43.5	79	51	93	59	106
2100	125	46	159	58	195	69	227	81	263	92
2100	33	62	42	77	51.5	93	60	108	69.5	124
2400	144	53	185	66	225	79	265	92	303	105
2400	38	71	49	88	59.5	106	70	124	80	141

Flow: GPM/LPM Power: HP/kW



### P75/76 Flow and Power data at 2500 PSI (172 bar) (continued)

			Gear Wid	dth Output (gpm	/lpm) and Inch	es (HP/KW)		
Speed RPM	2-1	/4"	2-1	/2"	2-3	3/4"	3	2"
	Flow	Power	Flow	Power	Flow	Power	Flow	Power
900	115.5	43	130.5	48	144	42	159	46
900	30.5	58	34.5	64	38	57	42	62
1200	159	58	182	64	199	57	220	62
1200	42	78	48	86	52.5	76	58	83
1500	206	73	231	81	254	72	280	78
1500	54.5	98	61	109	67	96	74	105
1800	250	89	280	99	308	87	341	95
1600	66	119	74	132	81.5	116	90	127
2400	295	104	329	115	365	101	401	111
2100	78	139	87	154	96.5	136	106	148
2400	341	118	382	132	420	116	462	126
2400	90	159	101	176	111	155	122	169

<sup>\*</sup> Input data at 2000 PSI (138 bar) rated pressure.

### M76 Motor performance data at 2500 PSI (172 bar).

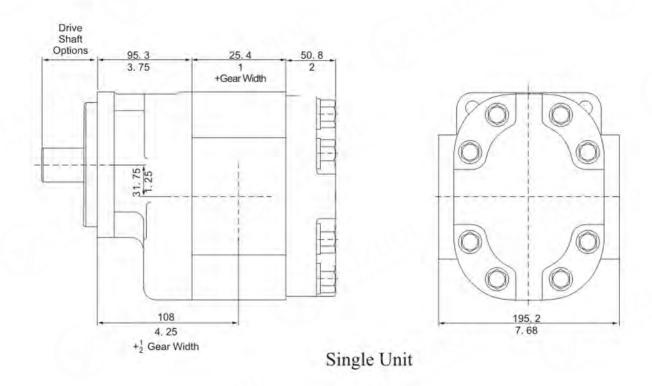
			Torque:	Inlbs. / Nm	Flow: GPM/LF	PM Power: H	IP/KW		
Speed		1"			1-1/2"			2"	
RPM	Ou	tput	Input	Outp	out	Input	Out	put	Input
	Torque	Power	Flow	Torque	Power	Flow	Torque	Power	Flow
800	1410	18	20.5	2140	27	28	2875	36,5	35,5
800	159.5	13.5	77.5	242	20	106	325	27	134
1200	1400	26.5	27.5	2140	41	38	2870	54.5	49.5
1200	158	20	104	242	30.5	144	324.5	40.5	187
1600	1375	35	34	2110	53.5	49	2830	72	64
1000	155.5	26	129	238.5	40	185	319.5	53.5	242
2000	1350	43	41.5	2090	66.5	59	2800	89	78
2000	152.5	32	157	236	49.5	223	316.5	66.5	295

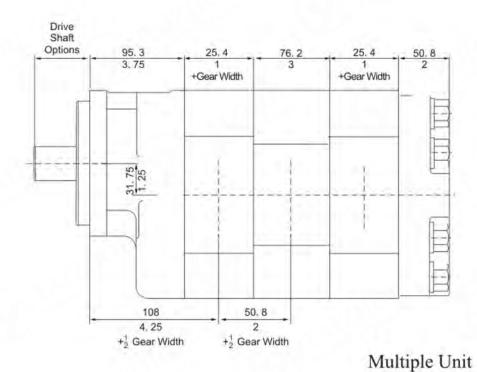
### M76 Motor performance data (Continued)

	Torqu	ue: Inlbs. /	Nm Flow:	GPM/LPM	Power: HP/k	(W)
Speed		2-1/2"			3"	
RPM	Ou	itput	Input	Oi	utput	Input
	Torque	Power	Flow	Torque	Power	Flow
800	3650	46.5	43	3625	46	50.5
600	412.5	34.6	163	409.5	34.5	191
1200	3650	69.5	60.5	3575	68	72
1200	412.5	52	229	404	50.5	273
1600	3600	91.5	78.5	3500	89	93
1600	406.5	68	297	395.5	66.5	352
2000	3500	111	96.5	3425	109	114



#### **Dimensional Date**

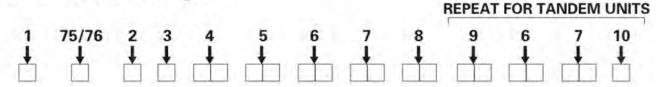




Performance data shown are the average results based on a series of laboratory tests of production units and are not necessarily representative of any one unit. Tests were run with the oil reservoir temperature at 120 F and viscosity 150 SSU at 100 F. Requests for more specific data should be directed to our Product Support Department through our sales representatives.



### 75/76 Series Coding



### 1 PUMP / MOTOR

P PUMP

M MOTOR

#### 2 UNIT

- A SINGLE UNIT
- **B TANDEM UNITS**
- C SINGLE OR TANDEM WITH A CONTINENTAL SHAFT

#### 3 SHAFT END COVER

- 1 PUMP WITHOUT SHAFT BEARING CLOCKWISE ROTATION
- 2 PUMP WITHOUT SHAFT BEARING COUNTER CLOCKWISE ROTATION
- 3 PUMP WITHOUT SHAFT BEARING DOUBLE ROTATION
- 4 PUMP WITH SHAFT BEARING CLOCKWISE ROTATION
- 5 PUMP WITH SHAFT BEARING COUNTER CLOCKWISE ROTATION
- 6 PUMP WITH SHAFT BEARING DOUBLE ROTATION
- 8 MOTOR WITH SHAFT BEARING 1/4" DRAIN PORT
- 9 MOTOR WITHOUT SHAFT BEARING & 1/4" DRAIN PORT

#### 4 SHAFT END COVER

42 S.A.E. 4 BOLT "B" MOUNT

78 S.A.E. 4 BOLT "C" MOUNT

80 S.A.E. 4 BOLT "D" MOUNT

98 S.A.E. 2 BOLT "C" MOUNT

#### 5 PORT END COVER CODES

#### NO PORTS

	CODE			POR	T SIZE		
SIN	GLE	TAN	DEM	LEFT	RIGHT	Α	В
BE	BY	BI	BY	NONE	NONE	N/A	N/A

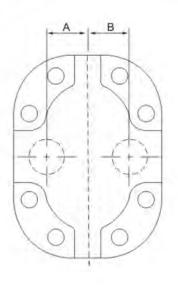
### "O" Ring Ports

100	157	11	15.6	4.00	4.0	4.00	4.00
JE	JY	JI	JY	1	1"	1.62	1.62

#### METRIC STR. THREAD PORTS

TE	TY	TI	TY	1"	1"	1.62	1.62
1	1	\$		- WITH SU	PPORT S	STUDS	
				- WITHOU	TSUPPO	RT STU	os







### 6 Gear Housing

- ♦ N.P.T. PORTING IS NOT RECOMMENDED FOR PRESSURES ABOVE 1500 P.S.I.
- OPORTS MARKED WITH A "O" ARE RECOMMENDED PORTING, FOR ALL OTHER PORTING PLEASE CONSULT THE FACTORY
- SHADED CELLS ARE GOOD FOR MOTOR UNITS
- ORIENTATION IS VIEWED FROM THE SHAFT END

#### **NPT PORT**

NPT.CODE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25	27	30
AB	NONE	NONE	4	4	4	1	1	1	4	1	-1	1	V
IC	3/4"	NONE											
ID	NONE	3/4"		4	4	4	4						
IF	3/4"	3/4"											
IG	3/4"	1"			4								
IH	3/4"	1 1/4"											
IJ	1"	3/4"			1	4	1						
IK	1 1/4"	3/4"											
YC	1"	NONE							4				
YD	NONE	1"				1	1	1	1				
YF	1"	1"		/	4	V.							
YG	I.	1 1/4" *				4	1						
YH	I"	1 1/2"											
YJ	1 1/4" *	1"				4	1	- 1					
YK	1 1/2"	1"											
YL	1 1/4"	1 1/4"				1	1	4					
YM	1 1/4"	1 1/2" *				===							
YP	1 1/2"	1 1/4"											
YR	1 1/2"	1 1/2"											

#### **BSPP PORT**

BSPP. CODE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25	27	30
AB	NONE	NONE	1	4	4	1	1	1	1	1	1	1	1
YN	3/4"	NONE			1	4							
YQ	NONE	3/4"		4	4	4	4	4	4				
YS	3/4"	3/4"											
YT	3/4"	1"		4									
YU	3/4"	1 1/4"											
YV	44	3/4"	100										
YW	1 1/4"	3/4"											
SL	1"	NONE				1	1	1	1	1	1		
RQ	NONE	1"				1	1	1	1	1	1		
MP	1"	1"				4	4			7			
VY	1"	1 1/4" *					4	4	1	√	1	4	4
IX	1 1/4" *	1"					1	~	1	1	1	4	4
NJ	1 1/4" *	NONE		7			1	4	1				
UI	NONE	1 1/4" *									1	1	4
PF	1 1/4"	1 1/4"									V		
IQ	1 1/4"	1 1/2"									1	4	1
IS	1 1/2"	1 1/4"									1	1	1
HW	1×	1 1/2"					1	1					
VI	1 1/2"	1"					4	4					



#### SPLIT FLANGE

SPLIT FLANGE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25	27	30
AB	NONE	NONE	1	1	1	1	1	1	1	1	1	1	4
UC	3/4"	NONE		4	1	1	4						
UD	NONE	3/4"		J	1	1	4	He :					
UF	3/4"	3/4"		1									
UG	3/4"	1"		1	1								
UH	3/4"	1 1/4"	-										
UJ	1"	3/4"			1	4	4	√	4				
UK	1 1/4"	3/4"	1				== 1,			[			
oc	1"	NONE				1							
OD	NONE	1"			1	4	1	4	4				
OF	1"	1"			1	4	4	4	1		4	4	4
OG	1"	1 1/4" *	1		1	1	4						
ОН	1"	1 1/2" *				1	1	1	J	1			
OJ	1 1/4" *	1"			1	1	1	1	V	1	V		
OK	1 1/2" *	1."				1	1	1	1	1			
OL	1 1/4"	1 1/4"				1	1	1	1	1	√	4	4
ОМ	1 1/4"	1 1/2" *				1	1	¥	1	1	1		
ON	1 1/4"	2"						1	J	1	1	1	1
OP	1 1/2" *	1 1/4"				1	1	4	4	1	4	4	V
OQ	2"	1 1/4"						V	1	4	4	4	1
OR	1 1/2"	1 1/2"							1	4	4	1	√.
os	1 1/2"	2"	10.00						4	4	1	V	V
OT	1 1/2"	2 1/2"									4	1	1
OV	2"	1 1/2"							1	4	4	V	1
OW	2 1/2"	1 1/2"									4	1	V
0	2"	2"										1	1
OA	1 1/4" *	NONE				1	1	1	1	1	1		
UB	1"	2"							4				
UQ	2"	1"	1					ii , sii	4				
ОВ	NONE	1 1/4" *				1	1	√	<b>√</b>	4	√		
OE	1 1/2" *	NONE	100						4	4			
OU	NONE	1 1/2" *							4	1	4	4	4
OY	2"	2 1/2"											4
OZ	2 1/2"	2"											1
UN	1 1/4"	2 1/2"					- 1				4		
US	2 1/2"	1 1/4"									1		



#### METRIC S.F.

METRIC S.F.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25	27	30
AB	NONE	NONE	1	1	1	4	1	1	1	1	1	4	4
VN	3/4"	NONE		V	4	1	1						
VQ	NONE	3/4"		1	1	1	1						
VS	3/4"	3/4"		1	1								
VT	3/4"	1"		4	4								
RU	3/4"	1 1/4"			4								
RV	1"	3/4"		4	4	4	4	1	4				
RW	1 1/4"	3/4"			1								
UL	1"	NONE			4	1	1	1					
UR	NONE	1"			V-	4	1	4					
UM	1"	1"			V	1	1	1	1				
VU	1"	1 1/4"*			1	1							
НО	1"	1 1/2"*				1	1			- 1	7		
U	1 1/4" *	1"			4	1	1	1	1	1	1		
VO	1 1/2" *	1"				1	1						
NO	1 1/4" *	NONE				1	1	1	1	1	1		
UO	NONE	1 1/4" *				1	1	1	1	1	1		
PO	1 1/4"	1 1/4"				1	4	4	4	1	<b>V</b>	4	4
QO	1 1/4"	1 1/2"*					√	4	<b>√</b>	1	- 3		
so	1 1/2" *	1 1/4"					1	1	1	-√	1	4	4
JR	1 1/4"	2"						4	4	4	V		
JM	2"	1 1/4"						1	1	4	1		
UY	1 1/2" *	NONE							4	1	1		
TO	NONE	1 1/2"*							V	4	J	4	4
SV	1 1/2"	1 1/2"							4	1	1	<b>V</b>	1
JN	1 1/2"	2"							4	1	1	1	4
JQ	2"	1 1/2"							4	1	1	4	1
J	1 1/2"	2 1/2"										4	V
LJ	2 1/2"	1 1/2"		to r								J	4
JS	2"	2"											1

#### METRIC STR. THD

METRIC STR. THD	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25	27	30
AB	NONE	NONE	1	1	1	1	4	1	4	1	V	1	1
EN	3/4"	NONE		1	4	1	1						
TQ	NONE	3/4"		1	4	~	1						
ES	3/4"	3/4"		1	4								
ET	3/4"	1"		1		1							
EV	1"	3/4"		4	1	1	4	- 1					
NL	1"	NONE				4	1	-				_ =	
ER	NONE	1"				1	4						
CM	1"	1"			4	1	1						

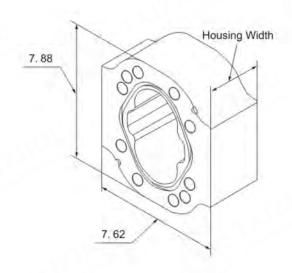


#### O.D. TUBE

O.D. TUBE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25	27	30
AB	NONE	NONE	4	1	4	4	4	4	V	1	1	1	V
EC	3/4"	NONE		1	1	V	V						
ED	NONE	3/4"		1	1	1	1						
EF	3/4"	3/4"		1									
EG	3/4"	1"		V		1	1						
EH	3/4"	1 1/4"			1								
EJ	1"	3/4"		4		V	4						
EK	1 1/4"	3/4"			1				1.53				
AC	1"	NONE											
AD	NONE	1"				4	4						
AF	1"	1"			√	V	1	1	1				
AG	1"	1 1/4" *			1	1			,				
AH	1"	1 1/2"						-					
AJ	1 1/4" *	1"			1	1							
AK	1 1/2"	1"			_		1						
AL	1 1/4"	1 1/4"					4	1	1	1	1		1
AM	1 1/4"	1 1/2" *					1	1		7			
AP	1 1/2"	1 1/4"					4	1					
AR	1 1/2"	1 1/2"						1		J	1		

### 7 GEAR SIZE

		Displa	cement	Housin	g Width	Max F	Pressure
CODE	Gear Size	in.a/rev.	cmi/rev.	inch	mm	75 Series	76 Series
05	1/2"	2.05	33.6	1.5	38.1	2500 psi (172 bar)	3000 psi (207 bar)
07	3/4"	3.07	50.3	1.75	44.45	2500 psi (172 bar)	3000 psi (207 bar)
10	1"	4.1	67.2	2	50.8	2500 psi (172 bar)	3000 psi (207 bar)
12	1 1/4"	5.13	84	2.25	57.15	2500 psi (172 bar)	3000 psi (207 bar
15	1 1/2"	6.15	100.8	2.5	63,5	2500 psi (172 bar)	3000 psi (207 bar
17	1 3/4"	7.18	117.6	2.75	69.85	2500 psi (172 bar)	3000 psi (207 bar
20	2"	8.2	134.4	3	76,2	2500 psi (172 bar)	2500 psi (172 bar
22	2 1/4"	9.23	151.2	3.25	82.55	2250 psi (155 bar)	2500 psi (172 bar
25	2 1/2"	10.25	168	3.5	88.9	2250 psi (155 bar)	2500 psi (172 bar
27	2 3/4"	11.27	184.8	3.75	95.25	2000 psi (138 bar)	2000 psi (138 bar
30	3"	12.3	201.6	4	101.6	2000 psi (138 bar)	2000 psi (138 bar





### **8 SHAFT TYPE**

CODE

07 S.A.E. "C" 14 TOOTH SPLINE 1.250" dia - CONTINENTAL ONLY

11 S.A.E. "C" KEYED 1.25" dia 5/16" X 15/32" X 1 1/2" KEY

### 9 BEARING CARRIERS ORIENTATION IS FROM THE SHAFT END

NPT PORT		C	ODE	S,A,E. SPL	IT FLANGE	C	ODE
IN	OUT	CW	ccw	IN	OUT	cw	ccw
NONE	NONE	C	D	1"	NONE	LB	BL
NONE	NONE	A	U	1 1/4"	NONE	MB	ВМ
				1 1/2"	NONE	NB	BN
S.A.E. ORING		C	ODE	NONE	3/4"	BR	RB
20020-000				1"	3/4"	LR	RL
1"	NONE	CB	PC	1 1/4"	3/4"	MR	RM
	NONE		BC	1 1/2"	3/4"	NR	RN
1 1/4"	NONE	DB	BD	1 1/4"	1"	MS	SM
1 1/2"	NONE	FB	BF	1 1/2"	1"	NS	SN
NONE	3/4"	PJ	JP	- 40			
1"	3/4"	CJ	JC	1"	3/4"	LX	XL
1 1/4"	3/4"	DJ	JD	1 1/4"	3/4"	MX	XM
1 1/2"	3/4°	FJ	JF	1 1/4"	1"	NX	XN
1 1/4"	1"	DK	KD	1 1/2"	1"	MZ	ZM
1 1/2"	1"	FK	KF	1"	3/4"	NZ	ZN
1"	3/4"	CR	RC			SR	RS
1 1/4"	3/4"	DR	RD	THE RESIDENCE OF THE PERSON NAMED IN			
1 1/2"	3/4"	FR	RF	MOTORS ON			ODE
1 1/4"	1"	DS	SD	IN	OUT	DUAL	
1 1/2"	1"	FS	SF	NONE	NONE	В	
				18	1"	CC	SAE O RING
				1 1/4"	1 1/4"	ВВ	SAE O RING
				1"	1"	LL	SAE SPLIT FLANG
				1 1/4"	1 1/4"	MM	SAE SPLIT FLANG

1 1/2"

1 1/2"

NN

SAE SPLIT FLANGE

10 CONNECTING SHAFT USE CODE #1 FOR ALL MULTIPLE UNITS



### 315 Series Gear Pump & Motor

OHeavy duty, cast iron, external gear pump.

Standardization, universalization, serialization design

Obisplacement range: 10.2m/r -40.6 ml/r,

Max rated pressure: 245bar, Intermittent: 275bar,

Speed range: 400-3000 RPM



#### PERFORMANCE

Bushing series pressure and displacement

CODE	03	05	07	08	10	12	15	16	17	20
Gear Width	3/8"	1/2 "	3/4"	7/8 "	1"	1-1/4"	1-1/2"	1-5/8"	1-3/4"	2"
Theoretical	0.62	0.78	0.93	1.09	1.24	1.52	1.86	2.02	2.17	2.48
Displacement	10.2	12.7	15.2	17.8	20.3	25.4	30.5	33	35.6	40.6
Max Pressure	3500	3500	3500	3500	3500	3500	3300	3100	2900	2500
Continuous	245	245	245	245	245	245	225	215	200	175
Max Pressure	4000	4000	4000	4000	4000	3850	3500	3350	3100	2750
Intermittent	275	275	275	275	275	265	245	230	215	190
Speed RPM					400-3000					

Flow: GPM/LPM Pressure: PSI/bar

### P315 Pump Flow and Power data

			Gea	r Width Output (g	pm/lpm) and In	ches (HP/KW)		
Speed	1/	2"	3	3/4"		1"	1	-1/4"
RPM	245	bar	245	bar .	245	i bar	245	5 bar
	Flow	Power	Flow	Power	Flow	Power	Flow	Power
900	8	4	12	8	17	8	21	10
900	2	5	3.2	8	4.4	11	5.5	13
1200	11	5	17	8	23	11	29	13
1200	2.8	7	4.4	11	6	14	7.6	18
1500	14	7	21	10	29	13	36	16
1500	3.6	9	5.6	13	7.7	18	9.6	22
1800	17	8	26	12	35	16	44	20
1800	4.4	11	6.8	16	9.3	21	11.6	27
2100	20	9	30	14	41	18	51	23
2100	5.2	12	8.1	19	10.9	25	13.6	31
2400	23	11	35	16	47	21	59	26
2400	6	14	9.3	21	12.5	28	15.6	35
2000	29	13	44	20	59	26	74	33
3000	7.7	18	11.7	27	15.7	35	19.6	44

Flow: GPM/LPM Power: HP/kW



### P315 Pump Flow and Power data (continued)

		Gear Wid	th Output (gp	m/lpm) and Inc	hes (HP/KW)		
Speed	1-1	1/2"	1-	3/4"	2"		
RPM	225 bar		220	bar	175 bar		
	Flow	Power	Flow	Power	Flow	Power	
900	26	11	30	11	34	11	
900	6.7	15	7.9	15	9	15	
1200	35	15	40	15	46	15	
1200	9.2	20	10.7	21	12.2	20	
1500	44	19	51	19	58	19	
1500	11.6	25	13.5	26	15.4	25	
1000	53	22	62	23	70	23	
1800	14	30	16.3	31	18.6	30	
2400	62	26	72	27	83	26	
2100	16.4	35	19.1	36	21.8	35	
2400	71	30	83	31	95	30	
2400	18.8	40	21.9	41	25.1	40	
2000	90	37	104	38	119	38	
3000	23.7	50	27.6	51	31.5	51	

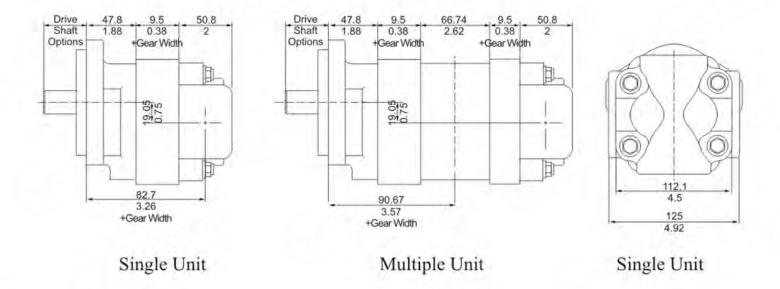
### M315 Motor performance data.

	15	1"	1-	1/4"	1-1	1/2"	1-	3/4"	1 - 1	2"
Speed RPM	3500PS	31/245bar	3500P	SI/245bar	3300P	SI/225bar	2900PS	1/200bar	2500PS	il/175bar
	Flow	Torque	Flow	Torque	Flow	Torque	Flow	Torque	Flow	Torque
900	7.1	665	8.3	830	9.6	940	10.9	965	12.2	950
900	27	75.1	32	93.8	37	106.2	41	109	46	107.3
1200	8.8	665	10.5	830	12.2	940	13.8	965	15.5.	950
1200	33	75.1	40	93.8	46	106.2	52	109	59	107.3
1500	10.6	660	12.6	825	14.7	935	16.7	955	18.8	945
1500	40	74.6	48	93.2	56	105.6	63	107.9	71	106.8
1800	12.3	655	14.7	820	17.2	930	19.6	950	22.1	940
1000	46	74	56	92.6	65	105.1	74	107.3	84	106.2
2100	14	655	16.8	820	19.7	930	22.5	950	25.4	940
2100	53	74	64	92.6	75	105.1	85	107.3	96	106.2
2400	15.7	640	18.9	800	22.2	910	25.4	930	28.8	920
2400	59	72.3	72	90.4	84	102.8	96	105.1	109	103.9
3000	19	640	23	800	27.2	905	31.2	925	35.3	915
3000	72	72.3	87	90.4	103	102.3	118	104.5	134	103.4

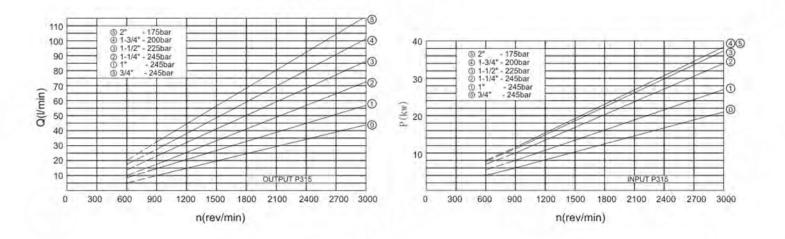
Torque: In.-lbs. / Nm Flow: GPM/LPM



#### **Dimensional Date**



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 the oil reservoir temperature at 120 F and viscosity 150 SSU at 100 F. Requests for more specific data should be directed to our Product Support Department through our sales representatives.





### 315 Series Coding

# REPEAT FOR TANDEM UNITS

#### 1 PUMP / MOTOR

P PUMP

M MOTOR

#### 2 UNIT

- A SINGLE UNIT
- **B TANDEM UNITS**
- C SINGLE OR TANDEM WITH A CONTINENTAL SHAFT

#### 3 SHAFT END COVER

- 1 PUMP WITHOUT SHAFT BEARING CLOCKWISE ROTATION
- 2 PUMP WITHOUT SHAFT BEARING COUNTER CLOCKWISE ROTATION
- 4 PUMP WITH SHAFT BEARING CLOCKWISE ROTATION

5 PUMP WITH SHAFT BEARING COUNTER CLOCKWISE ROTATION

CODE 490 ONLY CODE 590 ONLY

9 MOTOR WITHOUT SHAFT BEARING & 1/4" DRAIN PORT

#### 4 SHAFT END COVER

90 31/51 PIGGY BACK MOUNT

93 76/31 PIGGY BACK MOUNT

95 S.A.E.2 BOLT "A" MOUNT

96 S.A.E. 2 BOLT "B" MOUNT type 2

### 5 PORT END COVER SIDE PORTED

BI	NC	NE	NONE
NPT	PORTS	ONLY-SID	E PORT
CW	CCW	IN	OUT
AJ	JA	1 1/4"	1"
AK.	KA	1 1/4"	3/4"
AL	LA	1"	1"
AM	MA	1"	3/4"
AR	RA	3/4"	3/4"

S.A.E.	ORING		
CW	CCW	IN	OUT
FB	BF	1 1/4"	1"
FC	CF	1 1/4"	7/8"
FG	GF	1 1/4"	3/4"
FJ	JF	1 1/4"	5/8"
FL	LF	1"	1"
FV	VF	1"	7/8"
FW	WF	1"	3/4".
FX	XF	1"	5/8'
FY	YF	7/8"	7/8"
FZ	ZF	7/8"	3/4"
BC	CB	7/8"	5/8"
BG	GB	7/8"	1/2"
BJ	JB	3/4"	3/4"
BL	LB	3/4"	5/8"
BN	NB	3/4"	1/2"
BV	VB	1 1/4"	NONE
BW	WB	1"	NONE
BX	XB	7/8"	NONE
BY	YB	3/4"	NONE
BZ	ZB	NONE	1"
PD	DP	NONE	7/8"
PE	EP	NONE	3/4"
PM	MP	NONE	5/8"
PN	NP	NONE	1/2"

MOTOR SID	E PORT	
BI-ROTA	TION S.A.E O	RING
VN-	1"	1"
VR	3/4"	3/4"
VQ	1/2"	1/2"

CW	CCW	IN	OUT
UC	CU	1 1/4"	1"
UF	FU	1 1/4"	7/8"
UN	NU	1 1/4"	3/4"
UD	DU	1"	1"
UP	PU	1"	7/8"
UQ	QU	1"	3/4"
UR	RU	1"	5/8"
LN	NL	7/8"	7/8"
LP	PL	7/8"	3/4"
LQ	QL	7/8"	5/8"
LR	RL	3/4"	3/4"
LS	SL	3/4"	5/8"
LT	TL	3/4"	1/2"

MOTOR REAR PORT BI-ROTATION NPT			
RN	1"	1"	
RQ	3/4"	3/4"	
RS	1/2"	1/2"	

3/4"

1/2"

1"

3/4"

1/2"

RN

RQ

RS



### **6 GEAR HOUSING**

IN	OUT	CODE	
NONE	NONE	AB	PUMP
NONE	NONE	EB	MOTOR

### 9 BEARING CARRIERS

**DUAL OUTLET (PUMPS)** 

S.A.E SPLIT FLANGE						
CW	CCW	IN	OUT	OUT		
CA	AC	1 1/4"	3/4"	3/4"		
DA	AD	1 1/4"	3/4"	1/2"		
EA	AE	1 1/4"	1/2"	1/2"		
FA	AF	1"	3/4"	3/4"		
GA	AG	1"	3/4"	1/2"		
HA	AH	1"	1/2"	1/2"		

#### DUAL OUTLET (PUMPS)

S.A.E SPLIT FLANGE						
CW	CCW	IN	OUT			
CJ	JC	1 1/4"	1 1/4"			
CL	LC	1 1/4"	1"			
CM	MC	1 1/4"	3/4"			
НВ	ВН	1 1/4"	1/2"			
HC	CH	1"	1"			
HF	FH	1"	3/4"			
HL	LH	1"	1/2"			
НМ	MH	3/4"	3/4"			
HN	NH	3/4"	1/2"			

### 7 GEAR SIZE

0005	0175	Displacement		Max pre	essure
CODE	SIZE	in.3/r	cm3/r	PSI	bar
03	3/8"	0.47	7.702	3500	245
05	1/2"	0.62	10.16	3500	245
06	5/8"	0.78	12.78	3500	245
07	3/4"	0.93	15.24	3500	245
08	7/8"	1.09	17.86	3500	245
10	1"	1.24	20.32	3500	245
11	1 1/8"	1.4	22.94	3500	245
12	1 1/4"	1.55	25.4	3500	245
13	1 3/8"	1.71	28.02	3500	245
15	1 1/2"	1.86	30.48	3300	225
16	1 5/8"	2.02	33.1	3100	215
17	1 3/4"	2.17	35.56	2900	200
18	1 7/8"	2.33	38.18	2700	190
20	2"	2.48	40.64	2500	170

#### S.A.E O RING

CW	CCW	IN	OUT	OUT
JG	GJ	1.1/2"	1"	1"
KG	GK	1 1/2"	1"	7/8"
LG	GL	1 1/2"	7/8"	7/8"
MG	GM	1 1/2"	1"	3/4"
NG	GN	1 1/2"	3/4"	3/4"
PG	GP	1 1/4"	1"	1"
QG	GQ	1 1/4"	1"	7/8"
RG	GR	1 1/4"	7/8"	7/8"
SG	GS	1 1/4"	1"	3/4"
TG	GT	1 1/4"	3/4"	3/4"
UG	GU	1 1/4"	3/4"	5/8"
VG	GV	1 1/4"	3/4"	1/2"
WG	GW	1 1/4"	5/8"	5/8"
XG	GX	1 1/4"	1/2"	1/2"
YG	GY	1"	1"	1"
ZG	GZ	1"	1"	7/8"
RC	CR	1"	7/8"	7/8"
SC	CS	1"	1"	3/4"
TC	CT	1"	3/4"	3/4"
VC	CV	1"	3/4"	5/8"
WC	CW	1"	3/4"	1/2"
XC	CX	1"	5/8"	5/8"
YC	CY	1"	1/2"	1/2"

#### S.A.E O RING

S.A.L	O HING		
CW	CCW	IN	OUT
KB	BK	1 1/2"	1 1/2"
KC	CK	1 1/2"	1 1/4"
KF	FK	1 1/2"	1"
KL	LK	1 1/2"	7/8"
KM	MK	1 1/2"	3/4"
KN	NK	1 1/4"	1 1/4"
ко	OK	1 1/4"	10
KP	PK	1 1/4"	7/8"
KQ	QK	1 1/4"	3/4"
MB	BM	1 1/4"	5/8"
ML	LM	1 1/4"	1/2"
MN	NM	1"	1"
MQ	QM	1"	7/8"
MR	RM	1"	3/4"
MS	SM	1"	5/8"
MT	TM	1"	1/2"
MU	UM	3/4"	3/4"
MV	VM	3/4"	5/8"
MW	WM	3/4"	1/2"

### **8 SHAFT TYPE**

97 S.A.E. "A" KEYED 96 S.A.E. "A" SPLINE 66 S.A.E. "B" KEYED 65 S.A.E. "B" SPLINE

10 CONNECTING SHAFT USE CODE #1 FOR ALL MULTIPLE UNITS



### 330 Series Gear Pump & Motor

- OHeavy duty, cast iron, external gear pump.
- Standardization, universalization, serialization design.
- Obisplacement range :16.1m/r -64.6 ml/r ,

Max rated pressure: 245bar, Intermittent: 275bar,

Speed range :400-3000 RPM



#### PERFORMANCE

Bushing series pressure and displacement

CODE	05	06	07	10	12	15	17	20
Gear Width	1/2 "	5/8 "	3/4 "	1	1-1/4'	1-1/2"	1-3/4"	2"
Theoretical	0.99	1.23	1.48	1.97	2.46	2.96	3.45	3.94
Displacement	16.1	20.2	24.2	32.3	40.4	48.4	56.5	64.6
Max Pressure Continuous	3500	3500	3500	3500	3500	3500	3250	3000
	245	245	245	245	245	245	225	210
Max Pressure	4000	4000	4000	4000	4000	3850	3500	3300
Intermittent	275	275	275	275	275	265	245	225
Speed RPM		-		400-300	0			

Flow: GPM/LPM Pressure: PSI/bar

### P330 Pump Flow and Power data

		Gear Width Output (gpm/lpm) and Inches (HP/KW)								
Speed RPM	1/	1/2"		3/4"		1"	1	-1/4"		
	245	bar	245	bar .	245	5 bar	245	5 bar		
	Flow	Power	Flow	Power	Flow	Power	Flow	Power		
900	12	6	19	10	26	13	33	16		
900	3.2	9	5.1	13	7	17	8.8	21		
1200	17	8	26	13	36	17	45	21		
	4.5	11	7	17	9.5	23	12	28		
1500	22	11	34	16	46	21	57	26		
	5.8	14	8.9	21	12.1	28	15.2	35		
1800	27	13	41	19	55	25	70	32		
1800	7.1	17	10.8	26	14.7	34	18.4	43		
2100	32	15	48	22	65	30	82	37		
2100	8.4	20	12.7	30	17.2	40	21.6	50		
2400	36	17	55	25	75	34	94	42		
2400	9.6	23	14.7	34	19.8	45	24.8	57		
3000	46	21	70	32	94	42	118	53		
3000	12.2	28	18.5	43	24.9	57	31.2	71		

Flow: GPM/LPM Power: HP/kW



## P330 Pump Flow and Power data (continued)

	Gear Width Output (gpm/lpm) and Inches (HP/KW)						
Speed RPM	1-1	1/2"	1-	3/4"	2	pri .	
	225	bar	220 bar		175 bar		
	Flow	Power	Flow	Power	Flow	Power	
900	40	19	47	21	54	22	
900	10.6	26	12.4	28	14.3	29	
1200	55	25	64	28	73	29	
1200	14.5	34	16.9	37	19.4	39	
1500	69	32	81	34	93	36	
	18.3	43	21.4	46	24.5	49	
1000	84	38	98	41	112	44	
1800	22.1	51	25.9	55	29.6	58	
2402	98	44	115	48	131	51	
2100	26	60	30.3	65	34.7	68	
2400	113	51	132	55	151	58	
2400	29.8	68	34.8	74	39.8	78	
2000	142	64	166	69	190	73	
3000	37.5	85	43.8	92	50.1	97	

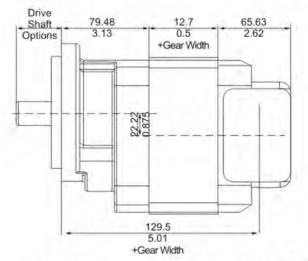
## M330 Motor performance data.

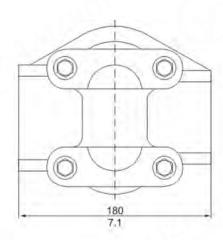
	1	1"	1-	1/4"	1-1	1/2"	1-	3/4"		2"
Speed RPM	3500PS	31/245bar	3500P	SI/245bar	3300P	SI/225bar	2900PS	81/200bar	2500PS	SI/175bar
	Flow	Torque	Flow	Torque	Flow	Torque	Flow	Torque	Flow	Torque
900	38	114.1	47	143.5	55	172.9	63	188.1	72	200
900	10.1	1010	12.3	1270	14.5	1530	16.7	1 665	19	1770
1200	49	113.6	59	142.9	70	172.3	81	187.6	92	198.9
1200	12,8	1 005	15.7	1265	18.6	1525	21,4	1660	24.3	1760
1500	59	113	72	141.8	85	171.2	99	186.4	112	197.7
1500	15.6	1000	19.1	1255	22.6.	1515	26.1	1650	29.6	1750
1800	69	112.4	85	141.2	101	170	116	185,3	132	196.6
1000	18.4	995	22.5	1250	26.6.	1 505	30.8	1 640	34,9	1740
2100	80	111.9	98	140.1	116	168.9	134	183.6	152	194.3
2100	21.1	990	25.9	1240	30.7	1495	35.4	1625	40.2	1720
2400	90	111.3	111	139.5	131	167.2	152	181.3	172	191.5
2400	23.9	985	29.3	1235	34.7	1480	40.1	1605	45.5	1695
3000	110	110.7	136	139	161	166.7	186	180.2	212	190.4
3000	29.2	980	35.9	1230	42.6	1475	49.3	1595	56	1685

Torque: In.-lbs. / Nm Flow: GPM/LPM

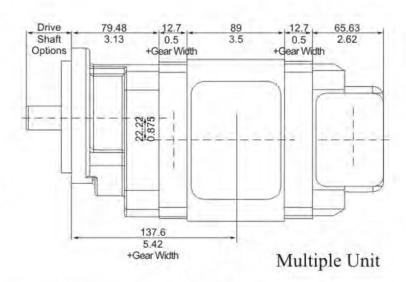


#### **Dimensional Date**

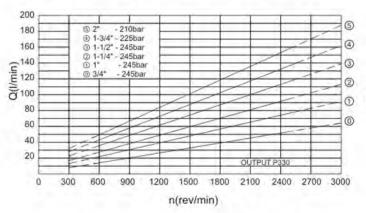


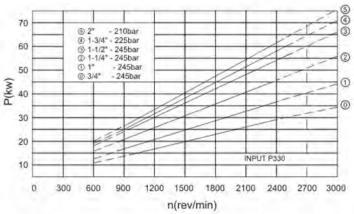


Single Unit



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 the oil reservoir temperature at 120 F and viscosity 150 SSU at 100 F. Requests for more specific data should be directed to our Product Support Department through our sales representatives.







## 330 Series Coding

# 

#### 1 PUMP / MOTOR

P PUMP

M MOTOR

#### 2 UNIT

- A. SINGLE UNIT
- **B TANDEM UNITS**
- C SINGLE OR TANDEM WITH A CONTINENTAL SHAFT

#### 3 SHAFT END COVER

- 1 PUMP COMPLETE WITHOUT SHAFT BEARING CW
- 2 PUMP WITHOUT SHAFT BEARING CCW
- 4 PUMP COMPLETE WITH SHAFT BEARING CW
- 5 PUMP COMPLETE WITH SHAFT BEARING CCW
- 8 MOTOR BI-ROTATIONAL WITH SHAFT BEARING
- 9 MOTOR BI-ROTATIONAL WITHOUT SINGLE SHAFT BEARING



#### **4 SHAFT END COVER**

42 S.A.E. 4 BOLT "B" MOUNT

78 S.A.E. 4 BOLT "C" MOUNT

97 S.A.E. 2 BOLT "B" MOUNT

#### 5 PORT END COVER SIDE PORTED

ВІ	NO	NE	NONE
NPT P	ORTS O	NLY-SIDI	E PORT
CW	CCW	IN	OUT
AJ	JA	1 1/4"	1"
AK	KA	1 1/4"	3/4"
AL	LA	1"	1"
AM	MA	1"	3/4"
AR	RA	3/4"	3/4"

MOTOR PORT END COVER			
BI-ROTATION	NPT		
DN		1"	1"
DM	1	1/4"	1 1/4"
DQ	1	1/2"	1 1/2"

S.A.E.	O RING		
CW	CCW	IN	OUT
FJ	JF	1 1/4"	1"
FL	LF	1"	1"
BG	GB	1 1/4"	NONE
BJ	JB	1"	NONE
BN	NB	NONE	1"

MOTOR POP	RT END COVE	ER
BI-ROTA	ATION S.A.E C	OVER
VR	3/4"	3/4"
VN	1"	1"
VC	1 1/4"	1 1/4"

CW	CCW	IN	OUT
EJ	JE	1 1/2"	1 1/4"
EK	KE	1 1/2"	1"
EL	LE	1 1/4"	1 1/4"
EM	ME	1 1/4"	1"
EN	NE	1"	1"
OF	FO	1 1/2"	NONE
OG	GO	1 1/4"	NONE
OJ	JO	1"	NONE
OM	MO	NONE	1 1/4"
ON	NO	NONE	4"

BI-RO	TATION S.A S	S.F.
CS	1 1/4"	1 1/4"
CT	1"	1"
CV	3/4"	3/4"



#### **6 GEAR HOUSING**

IN	OUT	CODE	
NONE	NONE	AB	PUMP
NONE	NONE	EB	MOTOR

#### 7 GEAR SIZE

CODE	CIZE	Displacement		Max pressure	
CODE	SIZE	in.a/r	cm <sub>3</sub> /r	PSI	bar
05	1/2"	0.99	16.1	3500	245
06	5/8"	1.23	20.2	3500	245
07	3/4"	1.48	24.2	3500	245
10	1"	1.97	32.3	3500	245
12	1 1/4"	2.46	40.4	3500	245
15	1 1/2"	2.96	48.4	3500	245
17	1 3/4"	3.45	56.5	3250	225
20	2"	3.94	64.6	3000	210

#### 9 BEARING CARRIERS

DUAL OUTLET (PUMPS)

CW	CCW	IN	OUT	OUT
AM	MA	2"	1 1/4"	1 1/4"
AN	NA	2"	1 1/4"	1"
AP	PA	2"	1"	1"
AT	TA	1 1/2"	1 1/4"	1 1/4"
AU	UA	1 1/2"	1 1/4"	1"
AV	VA	1 1/2"	1"	1"
AW	WA	1 1/4"	1 1/4"	1 1/4'
AX	XA	1 1/4"	1 1/4"	1"
AY	YA	1 1/4"	1"	1"
AZ	ZA	1"	1"	1"

#### S.A.E SPLIT FLANGE

CW	CCW	IN	OUT	OUT
GV	VG	1 1/2"	1"	1"
GY	YG	1 1/4"	1"	1"
GZ	ZG	1"	1"	1"

#### COMBINED OUTLET

S.A.E	SPLIT FL	ANGE(F	PUMPS)
CW	CCW	IN	OUT
UN	NU	2"	1 1/2"
UO	OU	2"	1 1/4"
UP	PU	1 1/2"	1 1/2"
UQ	QU	1 1/2"	1 1/4"
UR	RU	1 1/4"	1 1/4"

#### S.A.E SPLIT FLANGE(MOTORS)

BI-ROTATION	IN	OUT
BB	1 1/2"	1 1/2"
CC	1 1/4"	1 1/4"
EE	1"	1"
FF	3/4"	3/4"

S.A.E	O RING	(PUMPS	()
PQ	QP	1 1/2"	1 1/4"
PR	RP	1 1/4"	1 1/4"

#### 8 SHAFT TYPE

7 S.A.E. "C" SPLINE CONTINTENTAL 25 S.A.E. "B" SPLINE 30 S.A.E. "B" KEYED 98 S.A.E. "BB" SPLINE 43 S.A.E. "BB" KEYED

#### SINGLE OUTLET (PUMPS)

S,A.E SF	PLIT FLAN	GE	
CW	CCW	IN	OUT
HB	BH	2"	1 1/2"
HC	CH	2"	1 1/4"
HF	FH	2"	1"
HL	LH	1 1/2"	1 1/2"
HM	MH	1 1/2"	1 1/4"
HN	NH	1 1/2"	1"
НО	ОН	1 1/4"	1 1/4"
HP	PH	1 1/4"	1"
HQ	QH	1"	4"

#### S.A.E O RING(MOTORS)

BI-ROTATION	IN	OUT
NN	1 1/4"	1 1/4"
QQ	1"	1"
RR	3/4"	3/4"

#### S.A.E O RING

CW	CCW	IN	OUT
KM	MK	1 1/2"	1 1/4"
KN	NK	1 1/2"	1"
ко	ОК	1 1/4"	1 1/4"
KP	PK	1 1/4"	1"
KQ	QK	1"	1"

10 CONNECTING SHAFT USE CODE #1 FOR ALL MULTIPLE UNITS



## Series Gear Pump & Motor

- OHeavy duty, cast iron, external gear pump.
- Standardization, universalization, serialization design
- ♦ Displacement range : 20.9m/r -104.5 ml/r , Max rated pressure : 245bar , Intermittent :275bar ,

Speed range: 400-2400 RPM



#### **PERFORMANCE**

Bushing series pressure and displacement

CODE	05	07	10	12	15	17	20	22	25
Gear Width	1/2"	3/4 "	1"	1-1/4"	1-1/2"	1-3/4"	2"	2-1/4"	2-1/2"
Theoretical	1.28	1.91	2.55	3.19	3.83	4.46	5.1	5.74	6.38
Displacement	20.9	31.3	41.8	52.2	62.7	73.1	83.6	94	104.5
Max Pressure	3500	3500	3500	3500	3500	3250	3000	2750	2500
Continuous	245	245	245	245	245	224	207	190	172
Max Pressure	4000	4000	4000	4000	3850	3500	3300	3000	2750
Intermittent	275	275	275	275	265	245	225	210	190
Speed RPM				400-	2400				

Flow: GPM/LPM Pressure: PSI/bar

## P350 Pump Flow and Power data

				Gear Wi	dth Output (	gpm/lpm) and	Inches (HP/	KW)		
Speed	-	1/2"	3/	/4"		1"	1-1	/4"	1-1/2"	
RPM	24	5 bar	245	245 bar		245 bar		bar	245 bar	
	Flow	Power	Flow	Power	Flow	Power	Flow	Power	Flow	Power
900	15	8	24	12	33	17	42	21	52	25
900	4	11	6.4	17	8.8	22	11.2	28	13.7	33
1200	21	11	33	17	46	22	58	28	71	33
1200	5.6	15	8.8	22	12.1	30	15.4	37	18.7	44
1500	28	14	43	21	59	28	74	34	89	41
1500	7.3	18	11.3	28	15.5	37	19.5	46	23.6	55
1000	34	17	52	25	71	33	89	41	108	50
1800	8.9	22	13.8	33	18.8	44	23.6	55	28.6	67
2400	40	19	62	29	84	39	105	48	127	58
2100	10.6	26	16.3	39	22.1	52	27.8	65	33.6	78
2400	46	22	71	33	96	44.	121	55	146	66
2400	12.2	30	18.8	44	25.4	59	31.9	74	38.5	89

Flow: GPM/LPM Power: HP/kW



## P350 Pump Flow and Power data (continued)

			Gea	r Width Output (g	pm/lpm) and In	ches (HP/KW)		
Speed	1-3	3/4"		2"	2-	1/4"	2	-1/2"
RPM	225	bar	210	) bar	190	) bar	175	bar
	Flow	Power	Flow	Power	Flow	Power	Flow	Powe
900	61	27	70	28	79	29	89	30
300	16.1	36	18.6	38	21	39	23.4	40
1200	83	36	95	38	108.	39	120	39
1200	21,9	48	25.2	51	28.4	52	31.7	53
1500	105	45	120	47	136	49	151	49
1500	27.7	60	31.8	63	35.9	65	40	66
1800	127	54	145	57	164	58	183	59
1000	33.5	72	38.4	76	43.3	78	48.3	79
2100	149	63	171	66	192	68	214	68
2100	39.3	84	45.1	89	50.8	91	56.6	91
2400	171	72	196	76	220	78	245	78
2400	45.1	96	51.7	101	58.2	105	64.8	105

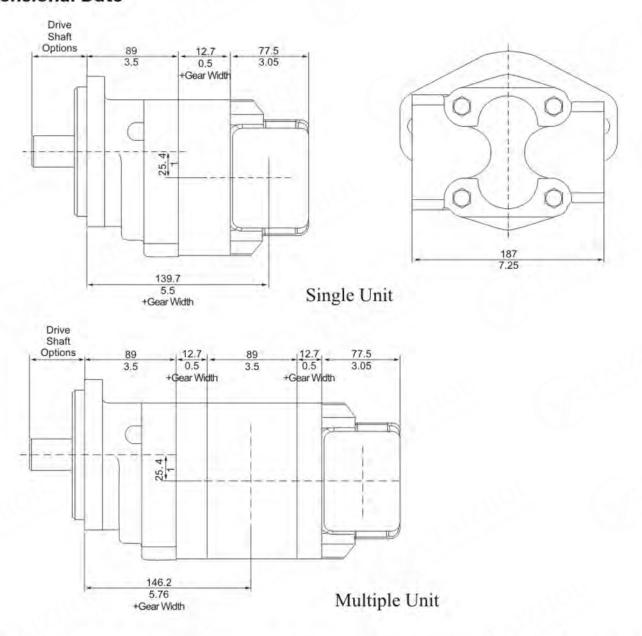
## M350 Motor performance data.

	100	1"	1-	1/4"	1-	1/2"	1-	3/4"	1	2"	1-3	3/4"	- 2	2"
Speed	2	45 bar	245	bar	245 bar		225 bar		210 bar		190 bar		175 bar	
	Flow	Torque	Flow	Torque	Flow	Torque	Flow	Torque	Flow	Torque	Flow	Torque	Flow	Torque
000	51	149.1	61	188.7	70	228.8	80	251.4	90	265.5	100	274	110	276.8
900	13.4	1320	16	1670	18.6	2025	21.2	2225	23.8	2350	26.4	2425	28.9	2450
1200	64	148.6	77	187.6	90	227.7	103	250.3	116	264.4	129	272,3	142	275.1
1200	16.9	1315	20.4	1660	23.8	2015	27.2	2215	30.6	2340	34	2410	37.4	2435
1500	77	146.9	93	185.3	110	224.8	126	248	142	261.6	158	269.5	174	272.3
1500	20.5	1300	24.7	1640	28.9	1990	33.2	2195	37.4	2315	41.7	2385	45.9	2410
1800	91	146,3	110	184.7	129	223.7	148	246.3	167	259.9	187	268.3	206	270.6
1000	24	1295	29	1635	34.1	1980	39.2	2180	44.2	2300	49.3	2375	54.4	2395
2100	104	145.2	126	183	149	222	171	244.6	193	258.2	216	266.1	238	268.9
2100	27.5	1285	33.4	1620	39.3	1965	45.2	2165	51.1	2285	57	2355	62.9	2380
2400	117	142.9	143	180.8	168	219.2	194	241.2	219	254.8	245	262.7	270	265.5
2400	31	1265	37.7	1600	44,4	1940	51.2	2135	57,9	2255	64.6	2325	71.3	2350

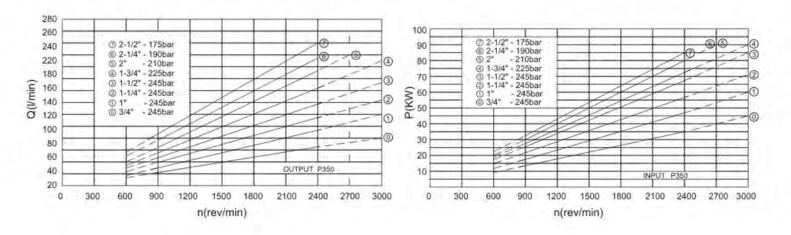
Torque: In.-lbs./Nm Flow: GPM/LPM



#### **Dimensional Date**



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 the oil reservoir temperature at 120 F and viscosity 150 SSU at 100 F. Requests for more specific data should be directed to our Product Support Department through our sales representatives.





## 350 Series Coding

# 

## 1 PUMP / MOTOR

P PUMP

M MOTOR

#### 2 UNIT

- A SINGLE UNIT
- **B TANDEM UNITS**
- C SINGLE OR TANDEM WITH A CONTINENTAL SHAFT

#### 3 SHAFT END COVER

- 1 PUMP COMPLETE WITHOUT SHAFT BEARING CW
- 2 PUMP WITHOUT SHAFT BEARING CCW
- 4 PUMP COMPLETE WITH SHAFT BEARING CW
- 5 PUMP COMPLETE WITH SHAFT BEARING CCW
- 8 MOTOR BI-ROTATIONAL WITH SHAFT BEARING
- 9 MOTOR BI-ROTATIONAL WITHOUT SINGLE SHAFT BEARING



#### **4 SHAFT END COVER**

42 S.A.E. 4 BOLT "B" MOUNT

46 S.A.E. 4/2 BOLT "B" MOUNT

78 S.A.E. 4 BOLT "C" MOUNT

97 S.A.E. 2 BOLT "B" MOUNT

98 S.A.E. 2 BOLT "C" MOUNT

#### 5 PORT END COVER SIDE PORTED

UNPO	RTED		
В	IB	NONE	NONE
S.A.E.	O RING		
CW	CCW	IN	OUT
FB	BF	1 1/2"	1 1/4"
FC	CF	1 1/2"	1"
FG	GF	1 1/4"	1 1/4"
FJ	JF	1 1/4"	1"
FL	LF	1"	1"
BC	CB	1 1/2"	NONE
BG	GB	1 1/4"	NONE
BJ	JB	1"	NONE
BL	LB	NONE	1 1/4"
BN	NB	NONE	1"

MOTOR S	DE PORT	
BI-ROTATI	ON S.A.E O R	ING
VC	1 1/4"	1 1/4"
VN	1"	1"
VR	3/4"	3/4"

	SIDE PORTED S.A.E. SPLIT FLANGE				
CW	CCW	IN	OUT		
EC	CE	2"	1 1/2"		
EF	FE	2"	1 1/4"		
EG	GE	2"	1"		
EH	HE	1 1/2"	1 1/2"		
EJ	JE	1 1/2"	1 1/4"		
EK	KE	1 1/2"	1"		
EL	LE	1 1/4"	1 1/4"		
EM	ME	1 1/4"	1"		
EN	NE	1"	1"		
OE	EO	2"	NONE		
OF	FO	1 1/2"	NONE		
OG	GO	1 1/4"	NONE		
OJ	JO	1"	NONE		
OL	JO	NONE	1 1/2"		
OM	MO	NONE	1 1/4"		
ON	NO	NONE	1"		

MOTOR SIDE PORT BI-ROTATION S.A.E S.F				
CS	1 1/4"	1 1/4"		
CT	1"	-1"		
CV	3/4"	3/4"		



#### 6 GEAR HOUSING

IN	OUT	CODE	
NONE	NONE	AB	PUMP
NONE	NONE	EB	MOTOR

## 7 GEAR SIZE

CODE	CIZE	Displacement		Max pressure	
CODE	SIZE	in.3/r	cm <sub>3</sub> /r	PSI	bar
05	1/2"	1.28	1.28	3500	245
07	3/4"	1.91	1.91	3500	245
10	1"	2.55	2.55	3500	245
12	1 1/4"	3.19	3.19	3500	245
15	1 1/2"	3.83	3.83	3500	245
17	1 3/4"	4.46	4.46	3250	224
20	2"	5.1	5.1	3000	210
22	2 1/4"	5.74	5.74	2750	190
25	2 1/2"	6.38	6.38	2500	175

#### **8 SHAFT TYPE**

07 S.A.E. "C" SPLINE.

11 S.A.E. "C" KEYED

25 S.A.E. "B" SPLINE

43 S.A.E. "BB" KEYED

73 S.A.E. "C" KEYED LONG

98 S.A.E. "BB" SPLINE

#### 9 BEARING CARRIERS

DUAL OUTLET (PUMPS)

CW	CCW	IN	OUT	OUT
AF	FA	2 1/2"	1 1/4"	1 1/4"
AG	GA	2 1/2"	1 1/4"	1"
AH	HA	2 1/2"	1"	1"
AM	MA	2"	1 1/4"	1 1/4"
AN	NA	2"	1.1/4"	4"
AP	PA	2"	1"	1"
AT	TA	1 1/2"	1 1/4"	1 1/4"
AU	UA	1 1/2"	1 1/4"	1"
AV	VA	1 1/2"	1"	1"
AW	WA	1 1/4"	1 1/4"	1 1/4"
AX	XA	1 1/4"	1 1/4"	1"
AY	YA	1 1/4"	1"	1"
AZ	ZA	1"	1"	1"

#### S.A.E O RING

CW	CCW	IN	OUT	OUT
GM	MG	2"	1 1/4"	1 1/4"
GN	NG	2"	1 1/4"	1"
GP	PG	2"	1"	1"
GT	TG	1 1/2"	1 1/4"	1 1/4"
GU	UG	1 1/2"	1 1/4"	1"
GV	VG	1 1/2"	1"	1"
GW	WG	1 1/4"	1 1/4"	1 1/4"
GX	XG	1 1/4"	1 1/4"	1"
GY	YG	1 1/4"	1"	1"
GZ	ZG	1"	1"	1"

#### SINGLE OUTLET (PUMPS)

#### S.A.E SPLIT FLANGE

CW	CCW	IN	OUT
НВ	ВН	2"	1 1/2"
HC	CH	2"	1 1/4"
HF	FH	2"	1"
HL	LH	1 1/2"	1 1/2"
HM	MH	1 1/2"	1 1/4"
HN	NH	1 1/2"	1"
НО	ОН	1 1/4"	1 1/4"
HP	PH	1 1/4"	1"
HQ	QH	12	1"
RS	SR	1 1/4"	1"

#### SINGLE OUTLET (PUMPS)

S.A.E O	RING		
CW	CCW	IN	OUT
KB	BK	2"	1 1/2"
KC	CK	2"	1 1/4"
KF	FK	2"	1"
KL	LK	1 1/2"	1 1/2"
KM	MK	1 1/2"	1 1/4"
KN	NK	1 1/2"	1"
ко	OK	1 1/4"	1 1/4"
KP	PK	1 1/4"	1"
KQ	QK	1"	1"

#### COMBINED OUTLET

S.A.E SPLIT FLANGE(PUMPS)				
CW	CCW	IN	OUT	
UN	NU	2"	1 1/2"	
UO	OU	2"	1 1/4"	
UP	PU	1 1/2"	1 1/2"	
UQ	QU	1 1/2"	1 1/4"	
UR	RU	1 1/4"	1 1/4"	

#### S.A.E SPLIT FLANGE(MOTORS)

BI-ROTATION	IN	OUT
AA	2"	2"
BB	1 1/2"	1 1/2"
CC	1 1/4"	1 1/4"
EE	1"	100
FF	3/4"	3/4"

#### S.A.E O RING (PUMPS)

PE	EP	2"	1 1/2"
PM	MP	2"	1 1/4"
PN	NP	1 1/2"	1 1/2"
PQ	QP	1 1/2"	1 1/4"
PR	RP	1 1/4"	1 1/4"

#### S.A.E O RING(MOTORS)

BI-ROTATION	IN	OUT
MM	1 1/2"	1 1/2"
NN	1 1/4"	1 1/4"
QQ	1"	1"
RR	3/4"	3/4"

10 CONNECTING SHAFT USE CODE #1 FOR ALL MULTIPLE UNITS



## 365 Series Gear Pump & Motor

- Heavy duty, cast iron, external gear pump.
- Standardization, universalization, serialization design.
- ♦ Displacement range : 44.3m/r -147.5 ml/r ,

Max rated pressure: 245bar, Intermittent: 275bar,

Speed range :400-2400 RPM



#### PERFORMANCE

Bushing series pressure and displacement

CODE	07	10	12	15	17	20	22	25
Gear Width	3/4 "	1"	1-1/4"	1-1/2"	1-3/4"	2"	2-1/4"	2-1/2"
Theoretical	2.7	3.6	4,5	5.4	6.3	7.2	8.1	9
Displacement	44.3	59	73.8	88.5	103.3	118	132.8	147.5
Max Pressure	3500	3500	3500	3500	3500	3500	3250	3000
Continuous	245	245	245	245	245	245	225	210
Max Pressure	4000	4000	4000	4000	4000	3850	3500	3300
Intermittent	275	275	275	265	275	265	245	225
Speed RPM				400-2400				

Flow: GPM/LPM Pressure: PSI/bar

## P365 Pump Flow and Power data

			Gea	r Width Output (g	pm/lpm) and In	iches (HP/KW)		
Speed	3/	4"		1"	1-	1/4"	1	-1/2"
RPM	245	bar	245 bar		245 bar		245 bar	
	Flow	Power	Flow	Power	Flow	Power	Flow	Power
900	30	18	44	23	57	29	70	35
900	8	24	11.5	31	14.9	39	18.4	47
1200 44	44	23	61	31	79	39	96	47
	11.5	31	16.2	42	20.8	52	25.5	63
57	57	29	79	39	101	49	123	59
1500	15	39	20.9	52	26.6	66	32.5	79
1800	70	35	97	47	123	59	149	70
1800	18.5	47	25.6	63	32.5	79	39.5	94
2400	83	41	114	55	145	68	176	82
2100	22	55	30.2	73	38.3	92	46.5	110
2400	97	47	132	63	167	78	203	94
2400	25,6	63	34.9	84	44.2	105	53.5	126
						4		

Flow: GPM/LPM Power: HP/kW



## P365 Pump Flow and Power data (continued)

			Gea	r Width Output (g	pm/lpm) and in	ches (HP/KW)		
Speed RPM	1-3	3/4"		2"	2-	1/4"	2	-1/2"
	245	245 bar		245 bar		225 bar		) bar
	Flow	Power	Flow	Power	Flow	Power	Flow	Power
900	83	41	96	47	109	49	122	50
21.8	21.8	55	25.4	63	28.8	66	32.3	67
1200	114	55	131	63	149	65	166	67
1200	30	73	34.7	84	39.3	88	44	90
1500	145	68	167	78	188	82	211	84
1500	38.2	92	44.1	105	49.8	110	55.6	112
4000	176	82	202	94	228	98	255	101
1800	46.4	110	53.4	126	60.3	131	67.3	135
2400	207	96	238	110	268	114	299	117
2100	54.6	128	62.8	147	70.8	153	79	157
2400	238	110	273	125	308	131	343	134
2400	62.8	147	72.1	168	81.4	175	90.7	180

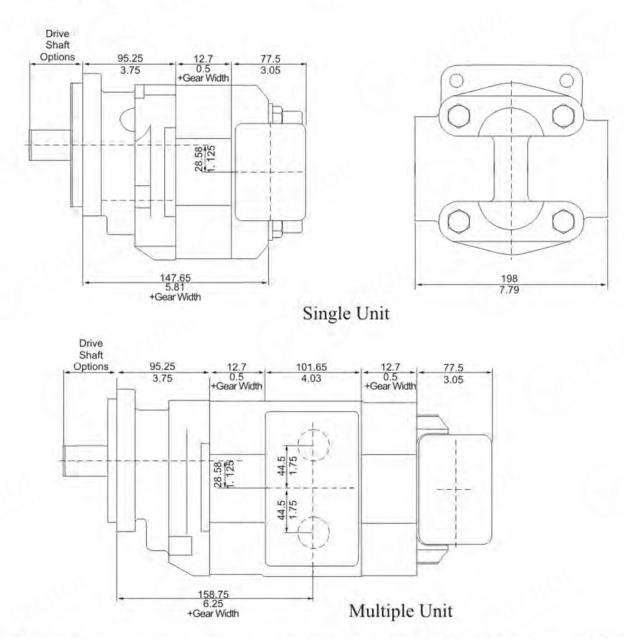
## M365 Motor performance data.

	100	1"	1-	1/4"	1-	1/2"	1-	3/4"	3	2"	1-3	3/4"	12	2"
Speed	2	45 bar	245	bar	245	bar	225	bar	210	bar	190	bar	175	bar
	Flow	Torque												
900	70	210.7	83	266.1	97	323.1	111	380.8	124	435	138	454.2	152	466.1
900	18.4	1865	22	2355	25.6	2860	29.2	3370	32.9	3850	36.5	4020	40.1	4125
1200	88	208.5	106	263.3	124	319.7	142	376.8	160	430.5	179	449.7	197	461
1200	23.3	1845	28.1	2330	32.9	2830	37.6	3335	42.4	381 0	47.2	3980	52	4080
1500	107	205.1	129	259,3	152	314. 1	174	370,6	197	423.7	219	442.3	242	454.2
1500	28.2	1815	34.1	2295	40.1	2780	46	3280	52	3750	57.9	3915	63.8	4020
1000	125	203.9	152	257.6	179	312.4	206	368.9	233	421.4	260	440.1	287	451.4
1800	33,1	1 805	40.2	2280	47.3	2765	54.4	3265	61,5	3730	68.6	3895	75.7	3995
2400	144	198.3	175	250.8	206	303.9	238	357	269	407.9	300	426	332	436.7
2100	37.9	1755	46.2	2220	54.4	2690	62.8	3160	71.1	3610	79.3	3770	87.6	3865
2400	162	192.6	198	243.5	234	295.5	269	345.2	305	394.3	341	411.8	377	422.6
2400	42.8	1705	52.3	2155	61.7	2615	71.2	3055	80.6	3490	90.1	3645	99.5	3740

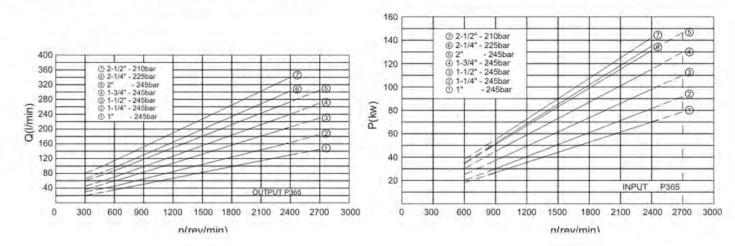
Torque: In.-lbs./Nm Flow: GPM/LPM



#### **Dimensional Date**



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 the oil reservoir temperature at 120 F and viscosity 150 SSU at 100 F. Requests for more specific data should be directed to our Product Support Department through our sales representatives.





## 365 Series Coding

## 

#### 1 PUMP / MOTOR

P PUMP

M MOTOR

#### 2 UNIT

A SINGLE UNIT

**B TANDEM UNITS** 

C SINGLE OR TANDEM WITH A CONTINENTAL SHAFT

#### 3 SHAFT END COVER

1 PUMP COMPLETE WITHOUT SHAFT BEARING CW

2 PUMP WITHOUT SHAFT BEARING CCW

4 PUMP COMPLETE WITH SHAFT BEARING CW

5 PUMP COMPLETE WITH SHAFT BEARING CCW

8 MOTOR BI-ROTATIONAL WITH SHAFT BEARING

9 MOTOR BI-ROTATIONAL WITHOUT SINGLE SHAFT BEARING

#### 4 SHAFT END COVER

42 S.A.E. 4 BOLT "B" MOUNT

78 S.A.E. 4 BOLT "C" MOUNT

97 S.A.E. 2 BOLT "B" MOUNT

98 S.A.E. 2 BOLT "C" MOUNT

#### 5 PORT END COVER SIDE PORTED

UNPO	RTED		
ВІ	IB	NONE	NONE
S.A.E.	O RING		
CW	CCW	IN	OUT
FB	BF	1 1/2"	1 1/4"
FC	CF	1 1/2"	1"
FG	GF	1 1/4"	1 1/4"
FJ	JF	1 1/4"	1"
FL	LF	1"	1"
BC	CB	1 1/2"	NONE
BG	GB	1 1/4"	NONE
BJ	JB	1"	NONE
BL	LB	NONE	1 1/4"
BN	NB	NONE	1"

MOTOR S	IDE PORT	
BI-ROTATI	ON S.A.E O R	ING
VC	1 1/4"	1 1/4"
VN	1"	1"
V/R	3/4"	3/4"

S.A.E.	SPLIT FL	ANGE	
CW	CCW	IN	OUT
EC	CE	2"	1 1/2"
EF	FE	2"	1 1/4"
EG	GE	2"	1"
EH	HE	1 1/2"	1 1/2"
EJ	JE	1 1/2"	1 1/4"
EK	KE	1 1/2"	1"
EL	LE	1 1/4"	1 1/4"
EM	ME	1 1/4"	1"
EN	NE	1"	1"
OE	EO	2"	NONE
OF	FO	1 1/2"	NONE
OG	GO	1 1/4"	NONE
OJ	JO	1"	NONE
OL	LO	NONE	1 1/2"
OM	MO	NONE	1 1/4"
ON	NO	NONE	1"

4 4 700	
1 1/2"	1 1/2"
1 1/4"	1 1/4"
1"	1"
3/4"	3/4"
	3/4"





#### **6 GEAR HOUSING**

IN	OUT	CODE	
NONE	NONE	AB	PUMP
NONE	NONE	EB	MOTOR

#### 7 GEAR SIZE

0005	0.75	Displa	cement	Max pressur	
CODE	SIZE	in.a/r	cm3/r	PSI	bar
07	3/4"	2.7	44.3	3500	245
10	1"	3.6	59	3500	245
12	1 1/4"	4.5	73.8	3500	245
15	1 1/2"	5.4	88.5	3500	245
17	1 3/4"	6.3	103.3	3500	245
20	2"	7.2	118	3500	245
22	2 1/4"	8.1	132.8	3250	224
25	2 1/2"	9	147.5	3000	210

#### **8 SHAFT TYPE**

07 S.A.E. "C" SPLINE. 11 S.A.E. "C" KEYED

#### 9 BEARING CARRIERS

DUAL OUTLET (PUMPS)

S.A.E	SPLIT F	LANGE		
CW	CCW	IN	OUT	OUT
AC	CA	2 1/2"	1 1/2"	1 1/2"
AD	DA	2 1/2"	1 1/2"	1 1/4"
AE	EA	2 1/2"	1 1/2"	1"
AF	FA	2 1/2"	1 1/4"	1 1/4"
AG	GA	2 1/2"	1 1/4"	1"
AH	HA	2 1/2"	1"	1"
AM	MA	2"	1 1/4"	1 1/4"
AN	NA	2"	1 1/4"	1"
AP	PA	2"	1"	1"
AT	TA	1 1/2"	1 1/4"	1 1/4"
AU	UA	1 1/2"	1 1/4"	1"
AV	VA	1 1/2"	1"	1"
AW	WA	1 1/4"	1 1/4"	1 1/4"
AX	XA	1 1/4"	1 1/4"	1"
AY	YA	1 1/4"	1"	1"
AZ	ZA	1"	1"	1"

#### S.A.E O RING

CW	CCW	IN	OUT	OUT
GJ	JG	2"	1 1/2"	1 1/2"
GK	KG	2"	1 1/2"	1 1/4"
GL	LG	2"	1 1/2"	1"
GM	MG	2"	1 1/4"	1 1/4"
GN	NG	2"	1 1/4"	1"
GP	PG	2"	1"	1"
GT	TG	1 1/2"	1 1/4"	1 1/4"
GU	UG	1 1/2"	1 1/4"	1"
GV	VG	1 1/2"	1"	1"
GW	WG	1 1/4"	1 1/4"	1 1/4"
GX	XG	1 1/4"	1 1/4"	1"
GY	YG	1 1/4"	1"	1"
GZ	ZG	-1"	1"	1"

#### SINGLE OUTLET (PUMPS)

#### S.A.E SPLIT FLANGE

011 1.12 01				
CW	CCW	IN	OUT	
CJ	JC	2 1/2"	1 1/2"	
CL	LC	2 1/2"	1 1/4"	
CM	MC	2 1/2"	1"	
HB	BH	2"	1 1/2"	
HC	CH	2"	1 1/4"	
HF	FH	2"	1"	
HL	LH	1 1/2"	1 1/2"	
HM	MH	1 1/2"	1 1/4"	
HN	NH	1 1/2"	7"	
НО	ОН	1.1/4"	1 1/4"	
HP	PH	1 1/4"	1"	
HQ	QH	1"	1"	

#### SINGLE OUTLET (PUMPS)

S.A.E O	RING		
CW	CCW	IN	OUT
KB	BK	2"	1 1/2"
KC	CK	2"	1 1/4"
KF	FK	2"	1"
KL	LK	1 1/2"	1 1/2"
KM	MK	1 1/2"	1 1/4"
KN	NK	1 1/2"	1"
ко	ОК	1 1/4"	1 1/4"
KP	PK	1 1/4"	1"
KQ	QK	1"	1"

#### COMBINED OUTLET (PUMPS)

S.A.E	SPLIT FL	ANGE(F	PUMPS
CW	CCW	IN	OUT
UC	CU	2 1/2"	1 1/2"
UF	FU	2 1/2"	1 1/4"
UN	NU	2*	1 1/2"
UO	OU	2"	1 1/4"
UP	PU	1 1/2"	1 1/2"
UQ	QU	1 1/2"	1 1/4"
UR	RU	1 1/4"	1 1/4"

#### S.A.E SPLIT FLANGE(MOTORS)

BI-ROTATION	IN	OUT
AA	2"	2"
BB	1 1/2"	1 1/2"
CC	1 1/4"	1 1/4"
EE	1"	-1"
FF	3/4"	3/4"

#### S.A.E O RING (PUMPS)

CW	CCW	IN	OUT
PE	EP	2"	1 1/2"
PM	MP	2"	1 1/4"
PN	NP	1 1/2"	1 1/2"
PQ	QP	1 1/2"	1 1/4"
PR	RP	1 1/4"	1 1/4"

#### S.A.E O RING(MOTORS)

IN	OUT		
1 1/2"	1 1/2"		
1 1/4"	1 1/4"		
1"	1"		
3/4"	3/4"		
	1 1/2" 1 1/4" 1"		

10 CONNECTING SHAFT USE CODE #1 FOR ALL MULTIPLE UNITS



#### PL Factor

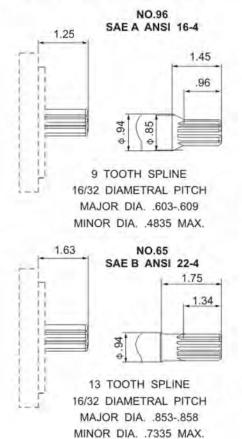
Each section of a multiple pump or motor should be regarded as a single unit with corresponding delivery and power input requirements. Since the entire input horsepower is fed through a common drive shaft, the power delivered to or from the unit is limited by the physical strength of the shaft. This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

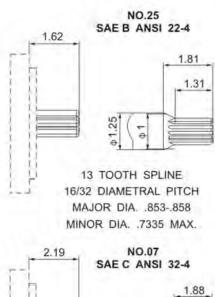
In multiple units the "PL" must be calculated for the first connecting shaft as well as the drive shaft. Each style or type of shaft has a unique "PL" factor as noted in the table below.

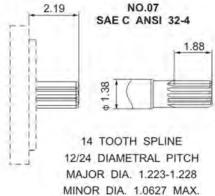
Pressure X Total Gear Width=PL

MODEL	SHAFT	SAE "A" Spline	SAE "A" Key	SAE "BB" Spline	SAE "BB" Key	SAE "B" Spline	SAE "B" Key	SAE "C" Spline	SAE "C" Key	Tandem
014/00/04	Integral	2600	-	12500	8600	8300	5050	-	-	-
GW30/31	Two-Piece	2600	-	5800	5800	5800	5050	-	5800	5800
GW37	Two-Piece	-	-	7750	5550	5050	3700	11950	11950	11950
OMEDIE	Integral	-	-	9900	6100	6400	5750	13000	11000	-
GW50/51	Two-Piece		_	8000	6100	6400	5750	8000	8000	8000
011/25/20	Integral		-	7750	5550	5050	3700	8600	8300	-
GW75/76	Two-Piece		-	7750	5550	5050	3700	7750	7750	7750
este 12	Integral	4450	3600	-	_	13400	9900	-		_
GW315	Two-Piece	- (- <del>-</del> )	-		-	_		-		5550
CIMIDO	Integral	-	-	13000	9300	8450	6250		-	-
GW330	Two-Piece	(-)	_	6250	6250	6250	6250	6250	6250	6250
Legal	Integral	Text	-	9900	7100	6450	4750	19100	13900	-
GW350	Two-Piece	5-1		9000	7100	6450	4750	9000	9000	9000
CIMPOS	Integral	_		7750	5550	5050	3700	14900	10800	-
GW365	Two-Piece		-	7750	5550	5050	3700	11950	10800	11950

#### DRIVE SHAFT DIMENSIONS

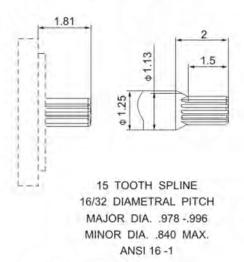


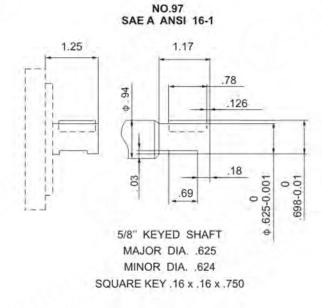


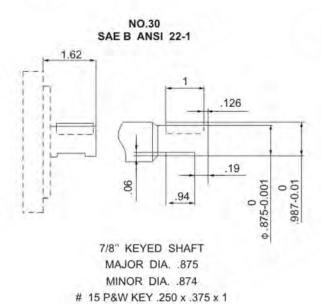


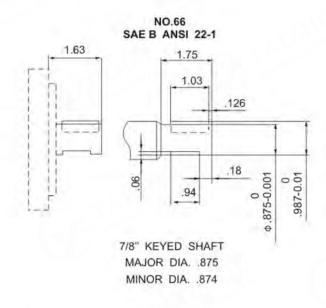


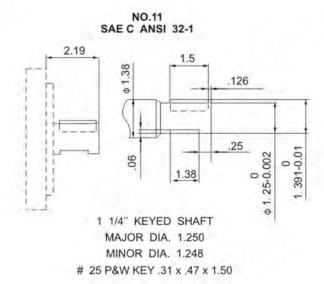
NO.98 SAE BB ANSI 25-4

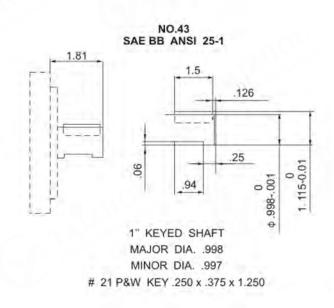






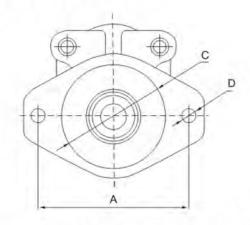


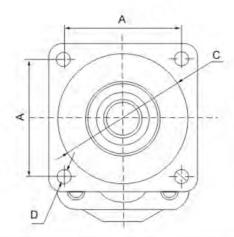






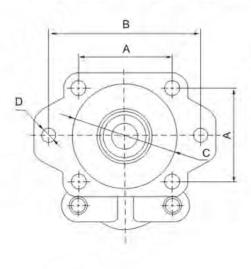
## SHAFT END COVERS

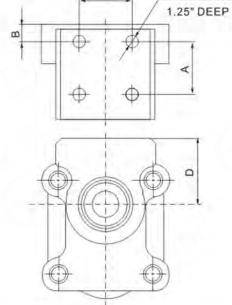


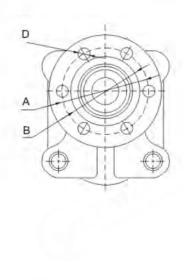


1/2" -13UNC

Shaft End Cover	A	C	D	Code	SERIES
	4.19	3.25	0.44	01	GW15
2 Bolt "A" Mount	4.19	3.25	0.44	94	GW20 GW30/31
	4.19	3.25	0.44	93	GW315
	5.75	4.00	0.56	07	GW15
2 Bolt "B" Mount	5.75	4.00	0.56	97	GW20 GW25 GW30/31 GW50/51 GW330 GW350 GW365
	5.75	4.00	0.56	96	GW315
2 Bolt "C" Mount	7.125	4.999	0.69	98	GW25 GW37 GW50/51 GW75/76 GW350 GW365
4 D - 11 # D !! A ! 1	3.536	3.999	0.56	12	GW15
4 Bolt "B" Mount	3.536	3.999	0.56	42	GW20 GW25 GW30/31 GW37 GW50/51 GW75/76 GW330 GW350 GW365
4 Bolt "C" Mount	4.508	4.999	0.56	78	GW25 GW30/31 GW37 GW50/51 GW75/76 GW330 GW350 GW365
4 Bolt "D" Mount	6.364	5.999	0.81	80	GW75/76







Shaft End Cover	A	В	C	D	Code	Series			
2/4 Bolt B Mount	3.536	5.75	4.00	0.56	46	GW20 GW30/31		GW50/51 GW	330 GW350
2/4 Bolt C Mount	4.508	7.125	5.00	0.56	N/A			GW50/51	GW350
a harrier	2.00	0.69	2.00	2.50	00	GV	V25 GW30/31	GW50/51	
Pad Mount	2.50	0.875	3.50	2.50	00		GV	V37	
v a transit di Colo	3.25	2.625		0.44	05	GW20	GW30/31		
6 Bolt Round	4.00	3.148		.625	05	GV	V25		



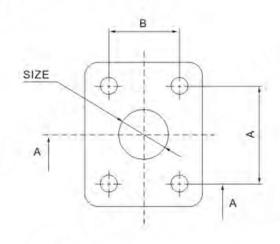
#### **PORTING**

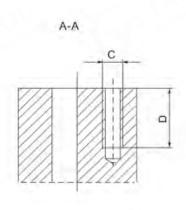
#### THREAD PORTS

SIZE	NPT ANSI.BI.20	S.A.E. O RING ISO11926	BSPP ISO1179	METRIC STR.THD SO6149-2
1/4"	1/4"-18	9	1/4"-19	
3/8"	3/8"-18	4	3/8"-19	
1/2"	1/2"-14	3/4"-16UNF	1/2"-14	M18x1.5
5/8"	~~	7/8"-14UNF	~	M22x1.5
3/4"	3/4"-14	1-1/16"-12UN	3/4"-14	M26x1.5
7/8"		1-3/16"-12UN	3	M30x1.5
1"	1"-11.5	1-5/16"-12UN	1"-11	M33x2
1-1/4"	1-1/4"-11.5	1-5/8"-12UN	1-1/4"-11	M42x2
1-1/2"	1-1/2"-11.5	1-7/8"-12UN	1-1/2"-11	M48x2
2"		2-1/2"-12UN	2"-11	
2-1/2			1.4	Sec
3"				-

#### S.A.E. SPLIT FLANGE

SIZE	Α	В	C	C	D
1/2"	1.50	0.69	5/16"-18UNC	M8x1.25	0.59
3/4"	1.87	0.87	3/8"-16UNC	M10x1.5	0.71
1"	2.06	1.03	3/8"-16UNC	M10x1.5	0.71
1-1/4"	2.31	1.19	7/16"-14UNC	M10x1.5	0.87
1-1/2"	2.75	1.41	1/2"-13UNC	M12x1.75	1.02
2"	3.06	1,69	1/2"-13UNC	M12x1.75	1.02
2-1/2"	3.50	2.00	1/2"-13UNC	M12x1.75	1.02







## WEIGHTS SINGLE UNIT APPROXIMATE WEIGHT

MODEL	Unit weight	1/2"	3/4"	-1"	1 1/4"	1 1/2"	13/4"	2"	2 1/4"	2 1/2"	2 3/4"	3
GW15	Pounds	24	25	26	27.5	29	30.5	32.5		*	*	*
GW20	Pounds	24	25	26	27.5	29	30.5	32.5		*	1.0	
GW25	Pounds	36	39	42	43.5	45	46.5	48	50	52	· •	*
GW30/31	Pounds	30	31	32	33	34	35	36	*	38.5	9.	
GW37	Pounds	52	54	56	58	60	62	65	68	71		78
GW50/51	Pounds	37	40	43	44.5	46	47.5	49	51	53.5	1.0	
GW75/76	Pounds	67	70	72	74	76	79	82	85	88		92
GW 315	Pounds	16	17	18	19	20	21	22	*			
GW330	Pounds	*	34.8	36	37.3	38.5	39.8	41	42.3	43.5	-0.	*
GW350	Pounds	*	49.5	51	52.5	54	55.5	57	58.5	60	*	*
GW365	Pounds	*	*	56	58.5	61	63.5	66	68.5	71	73.5	7.
C101	Pounds	*		*	*	**	*	67	*	69	*	*
C102	Pounds	*	•	*	#			68		70		*
G101	Pounds	*	31	*	*	35		38		*		*
G102	Pounds	*	31	*	*	35	*	38		*		*

#### MULTIPLE UNIT APPROXIMATE WEIGHT

MODEL	Unit weight	Gear Width										
		1/2"	3/4"	1"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 1/2"	2 1/4"	3'
GW15	Pounds	21	22	23	24	25	26	28	*	*	*	
GW20	Pounds	21	22	23	24	25	26	28	1.0	*	*	
GW25	Pounds	28.5	30	31.5	33	34.5	36	37	41	44	*	
GW30/31	Pounds	23	24	26	27	28	30	31		*	*	
GW37	Pounds	43	45	47	50	53	56	59	62	65	*	68
GW50/51	Pounds	29.5	31	32.5	34	35.5	37	38	42	45	*	
GW75/76	Pounds	54	57	60	63	65	67	69	71	73.5	*	7
GW315	Pounds	16	17	18	19	20	21	22	*	*	*	
GW330	Pounds		31.3	32.5	33.8	35	36.3	37.5	38.8	40	*	
GW350	Pounds		49.5	51	52.5	54	55.5	57	58.5	60	*	
GW365	Pounds		*	56	58.5	61	63.5	66	68.5	71	73.5	7

For the total weight of a multiple unit add the weight from the column of the single unit and the multiple unit column.

(e.g. P15 single unit 3/4" gear width is 25 pounds plus P15 multiple unit 3/4" gear width is 22 pounds total weight is 47 pounds)

For total weight in kilograms divide total weight in pounds by 2.2 = weight in kilograms

(6.g. 47 pounds ÷ 2.2 = 21.36 kilograms)