

P76

Reliability

Series 76 and 75 pumps and motors are quite similar except that Series 76 units have steel alignment dowel pins which allow them to be rated for 500 psi higher pressure operation. Both are cast from hi-tensile gray iron and offer a wide variety of drive shafts designed for high torque input/output. Unique pressure balanced thrust plates contribute to operating efficiencies of over 90%.

These units are designed for continuous operation in heavy-duty implement circuits. They're equally at home on lift trucks, auto wreckers and small dump body applications.

Call our Component sales team for quick application assistance and pump specifications.

Performance Data

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. Requests for more specific data should be directed to our sales representatives.

Performance data for pumps and motors having other gear widths can be approximated by multiplying values in tables below by actual gear width.

Pump Speed rpm	Avg. Output (gpm) @ 2000 psi Gear Width (inches)				
	1	1-1/2	2	2-1/2	3
600	6.0	11.5	16.5	21.0	26.0
1200	17.0	27.0	37.5	48.0	58.0
1500	22.0	35.5	48.0	61.0	74.0
2100	33.0	51.5	69.5	87.0	106.0

Motor Speed rpm	Avg. Input/Output (gpm) @ 2000 psi					
	1" gear		2" gear		2-1/2" gear	
	gpm	hp	gpm	hp	gpm	hp
800	20.5	18.0	35.5	36.5	43.0	46.5
1200	27.5	26.5	49.5	54.5	60.5	69.5
1600	34.0	35.0	64.0	72.0	78.5	91.5
2000	41.5	43.0	78.0	89.0	96.5	111.0

How To Specify and Code

This catalog contains codes for our most popular models. Complete codes for all configurations are readily available upon request.

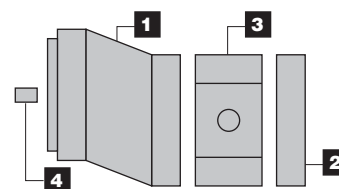
Single Units

Full assembly codes for single units combine shaft end cover, port end cover, gear housing and drive shaft codes. They are preceded by the letter P or M for pump or motor — and by 76 to designate the series and model. An example of an assembly code follows:

M75 SINGLE MOTOR

Assembly Code: **M 76A 942 BE YF15-7**

- MotorM
Series76
ModelA
1. Shaft End Cover942
2. Port End CoverBE
3. Gear HousingYF15
4. Drive Shaft7

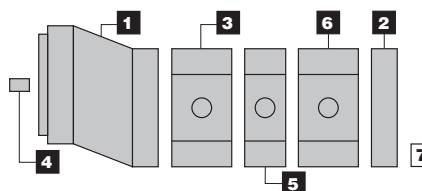


Multiple Units

Coding is the same as single units except that codes for added components must be included. Each gear unit added also requires code for a bearing carrier, the additional gear housing and connecting shaft. An example of an assembly code for a two-section Series 76 pump follows:

P76 MULTIPLE PUMP

Assembly Code: **P 76B 178 BI OK15-7 C OK12-1**



- PumpP
Series76
ModelB
1. Shaft End Cover178
2. Port End CoverBI
3. Gear HousingOK15
4. Drive Shaft7
5. Bearing CoverD
6. Gear HousingOK12
7. Connecting Shaft1

Variations

Series 76 units are available with gear sections ranging from 1/2" to 2-1/2" in 1/4" increments. Two or more gear sections can be assembled on one drive shaft to provide larger flows, supply other circuits or make smoother, more powerful motors.

When specifying multiple units you must consider the drive shaft's strength. This is called a PL factor in which P = operating pressure and L = sum of gear widths. The recommended PL factors for various Series 76 shafts are shown with the shaft codes and are offered as a guide to shaft selection. A PL of 8000 means a maximum of 4" of gear can be operated at 2000 psi (2000 psi X 4" = 8000) without overloading the shaft. The gear widths can be divided many ways, eg. (2"-1"-1", 1"-1"-1"-1", 1-1/2"-1-1/2"-1/2") to provide the output you need for several circuits.

P76 Parts Breakdown Typical Parts List

For Series P76 Seal Kits and Repair
Parts, See Pages 475 - 477

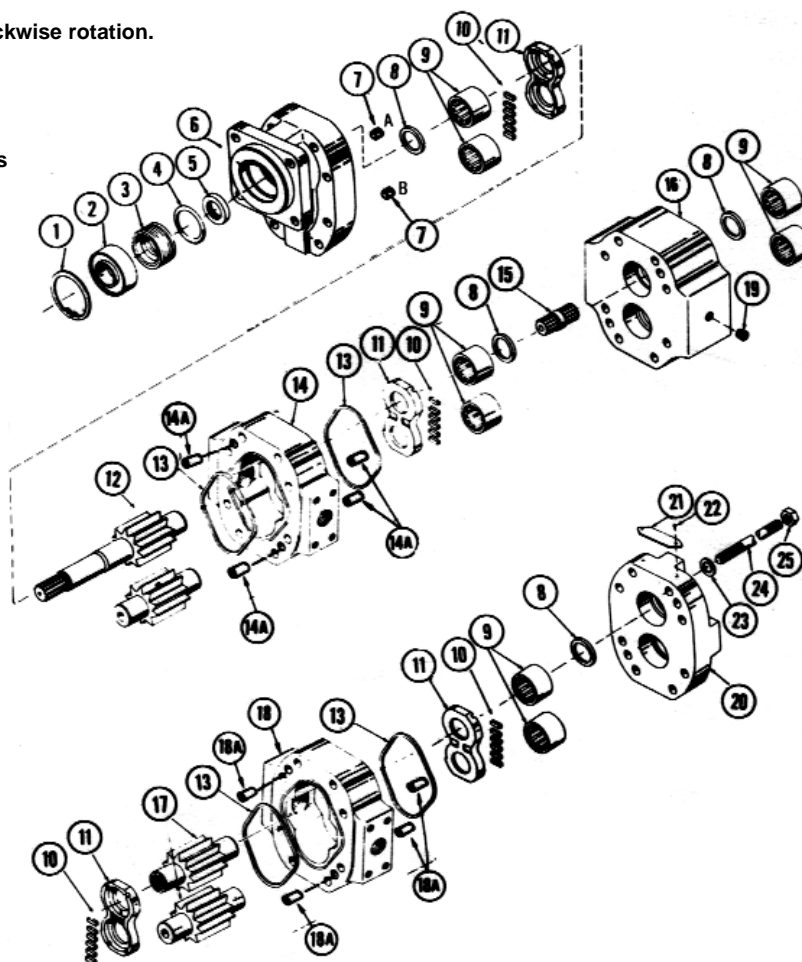
Note:

This page shows the typical arrangement of a 2-section unit.
It may not be pictorially correct and is not to scale.

Plug 7 in position B gives clockwise rotation.

Plug 7 in position A gives
counter-clockwise rotation.

Check valves in both positions
give bi-directional rotation.

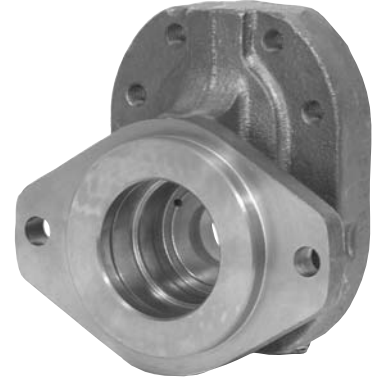


Item	Description	Part Number	Item	Description	Part Number
1	Snap Ring	CM-391-2686-025	13	Gasket Seals	
2	Outboard Bearing	CM-391-0381-078	14	Gear Housing	See Option List
	Spacer	CM-391-3383-018	14A	Dowel Pins	
3	Seal Retainer	CM-391-2584-051	15	Connecting Shaft	See Option List
4	"O" Ring	CM-391-2881-457	16	Bearing Carrier	See Option List
5	Seal (Pump)	CM-391-2883-052	17	Matched Gear Set	See Option List
	Seal (Motor)	CM-391-2883-094	18	Gear Housing	See Option List
6	Shaft End Cover		18A	Dowel Pins	
7	Check Assemblies	CM-391-3681-001	19	Plug	
	Plug	CM-391-2286-004	20	Port End Cover	
8	Ring Seals	CM-391-2585-011	21	Name Plate	
9	Roller Bearings	CM-391-0381-904	22	Drive Screws	
10	Pocket Seals	CM-391-2282-084	23	Washers	
11	Thrust Plates	CM-391-2185-920	24	Studs or Cap Screws	
12	Integral Drive Shaft and Gear Set	See Option List	25	Nuts	

1 & 2 Shaft & Port End Covers

P76 SHAFT END COVERS - PORT END COVERS

Description	Outboard Bearing	PUMPS		MOTORS	
		CW	CCW	1/4" NPT DRAIN	1/4" BSPP DRAIN
SAE D - 4 Bolt	Without	180	280	980	1980
	With	480	580	880	1880
SAE C - 2 Bolt	Without	198	298	998	1998
	With	498	598	898	1898
SAE B - 4 Bolt	Without	142	242	942	1942
	With	442	542	842	1842
SAE C - 4 Bolt	Without	178	278	978	1978
	With	478	578	878	1878



P76 PORT END COVERS

Description	Single Pumps	Multiple Pumps		Porting	
		w/Reg Studs	w/2 Ext Studs	LH	RH
No Port	BE	BI	BY	—	—
SAE Straight Thread Ports	JE	JI	JY	1	1
Metric Straight Thread Ports	TE	TI	TY	1	1
Piggyback Port End Cover	Type 75-50 75-30	CW KO	CCW LO	DUAL MO	



P76 GEAR & SHAFT COMBINATIONS

Shaft Description	Code	
	Type 1	Type 2
SAE C - 14 Tooth Spline - 1 5/16" Long For Single Units 1.2480" Major Dia.	7	—
SAE C - 14 Tooth Spline - 1 3/4" Spline For Multiple Units 1.248" Major Dia	7* (c)	—
SAE C - Straight (Shaft Only) For P75C Models. 1.250" Dia. 5/16 x 1 1/2" Key	11*	—
Connecting Shaft - Multiple Units	1	1
Connecting Shaft - Piggyback Pump	23	—

* Available for special application upon request. Not a stock item.

4 Drive Shafts

P76 DRIVE SHAFT CODE

Gear Width	1-23	7	7* (c)	11*
3/4	•	N/A	Same	•
1	•	•	as	•
1 1/4	•	•	Regular	•
1 1/2	•	•	Code 7	•
1 3/4	•	•		•
2	•	•		•
2 1/4	•	•		•
2 1/2	•	•		•
2 3/4	•	•		•
3	•	•		•

* Available for special application upon request. Not a stock item.



3 & 6 Gear Housings

**P76 GEAR HOUSINGS - BSPP PORTS**

Porting											
LH	RH	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3
—	—	AB07	AB10	AB12	AB15	AB17	AB20	AB22	AB25	AB27	AB30
—	3/4	YQ07	YQ10	YQ12	YQ15						
3/4	1‡	YT07‡*	YT10‡								
1‡	3/4	YV07‡*	YV10‡	YV12	YV15		YV20	YV22			
1‡	—		SL10‡								
—	1				RQ12	RQ15		RQ20	RQ22	RQ25	
1	1				MP12*	MP15	MP17				
1	1 1/4‡				VY12‡*				VY22		
1 1/4‡	1				IX12‡*	IX15‡			IX22		
1 1/2‡	1					VI15‡		VI20‡			
—	1 1/4									UI25	
1 1/4	1 1/4								PF22*	PF25	PF30
1 1/2‡	1 1/4							IS20‡*	IS22‡*		
3/4	3/4		YS10								
1 1/4	3/4									YW25	

‡ Low pressure only.

* 2500 PSI maximum.

P76 GEAR HOUSINGS - OD TUBE PORTS

Porting											
LH	RH	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3
—	—	AB07	AB10	AB12	AB15	AB17	AB20	AB22	AB25	AB27	AB30
3/4	1‡	EG07‡*									
1‡	3/4	EJ07‡*									
1	1				AF12*	AF15					
3/4	1 1/4‡		EH10‡								
1 1/4‡	3/4		EK10‡								
—	1			AD12*	AD15						
1	1 1/4‡			AG12‡*	AG15‡						
1	1 1/2‡			AH15‡							
1 1/4‡	1			AJ12‡*	AJ15‡						
1 1/2‡	1			AK15‡							
1	—			AC12*	AC15						

‡ Low pressure only.

* 2500 PSI maximum.

P76 GEAR HOUSINGS - METRIC STRAIGHT THREAD PORTS

Porting											
LH	RH	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3
—	—	AB07	AB10	AB12	AB15	AB17	AB20	AB22	AB25	AB27	AB30
3/4	1‡	ET07‡									
M26 X 1.5	M33 X 2										
1	3/4	EV07‡*			EV12	EV15					
M33 X 2	M26 X 1.5										
1	1				CM12*	CM15*					
M33 X 2	M33 X 2										
—	3/4‡	TQ07‡	TQ10	TQ12	TQ15						
—	M26 X 1.5										
—	1‡				ER12‡	ER15					
—	M33 X 2										

‡ Low pressure only,

* 2500 PSI maximum.

3 & 6 Gear Housings



P76 GEAR HOUSINGS - SAE SPLIT FLANGE PORTS

Porting											
LH	RH	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3
—	—	AB07	AB10	AB12	AB15	AB17	AB20	AB22	AB25	AB27	AB30
3/4	1	UG07	UG10	UG12							
3/4	1 1/4				UH12						
—	1 1/4									OB25	
1	—	OC07*									
1	3/4	OJ07	UJ10								
1	1		OF10	OF12	OF15	OF17	OF20				
1	1 1/4†		OG10†	OG12							
1 1/4†	1		OJ10†	OJ12							
1 1/4	1 1/4			OL12*	OL15	OL17	OL20	OL22	OL25	OL274	OL30
1 1/2†	1				OK12†	OK15†	OK17†				
1	1 1/2†				OH12†	OH15†	OH17†				
1 1/4	1 1/2†				OM12†*	OM15†	OM17†	OM20	OM22		
1 1/2†	1 1/4				OP12†*	OP15†	OP17†	OP20	OP22		
1 1/2	1 1/2						OR20*	OR22	OR25	OR27	OR30
1 1/4	2†					ON17†	ON20†	ON22†	ON25†	ON27	ON30
2†	1 1/4					OQ17†	OQ20†	OQ22†	OQ25†	OQ27	OQ30
1 1/2	2†						OS20†*	OS22*	OS25†	OS27	OS30
2†	1 1/2						OV20†*	OV22†	OV25†	OV27	OV30
2	2								OX25*	OX27*	OX30*
1 1/2	2 1/2†								OT25†	OT27†	OT30†
2 1/2	1 1/2								OW25†	OW27†	OW30†
1 1/2†	—				OE12†			OE20*	OE22		
—	1 1/2							OU20*	OU22		






† Low pressure only.

* 2500 PSI maximum.

5

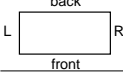





Bearing Carriers

P76 BEARING CARRIERS

	LH	RH	NPT Code	SAE Split Flange Code	ODT Code	BSPP Code	METRIC Split Flange Code	Str Thread Code
MOTORS								
	—	—	B			B		
	1 1 1/4 1 1/2	1 1 1/4 1 1/2	— — —	LL MM NN	CC BB —	EE GG HH	RR SS XX	KK JJ ZZ
PUMPS								
	—	—	C			C		
	—	—	A			A		
	—	—	D U			D U		



P76 FLOW DIVIDERS ONLY

	Ports		NPT Code	SAE Split Flange Code	ODT Code	BSPP Code	METRIC Split Flange Code	Str. Thread Code
	LH	RH						
	— 1 1 1/4 1 1/2	— — — —	E	J K L	F G H	E X Y Z	T V W	Q R S
	— 1 1 1/4 1 1/2 — 1 1/4 1 1/2	3/4 3/4 3/4 3/4 1 1 1		GR HR PR QR MT NT RT	GJ HJ MJ RJ BK PK RK	DG FG SG XG DF GF MF	TR VR WR XR FM QM VM	QJ SJ XJ ZJ ML PL QL
	— 1 1 1/4 1 1/2 — 1 1/4 1 1/2	3/4 3/4 3/4 3/4 1 1 1		FD GD MD PD JG PG RG	JH PH RH WH PC QC VC	DM NM PM TM MN QN TN	KT PT QT ZT RP PT ZP	BZ PZ QZ YZ MK QK SK
	1	3/4		WL	MC	HP	FP	CP
	1	3/4		ZL	SC	LP	GP	DP