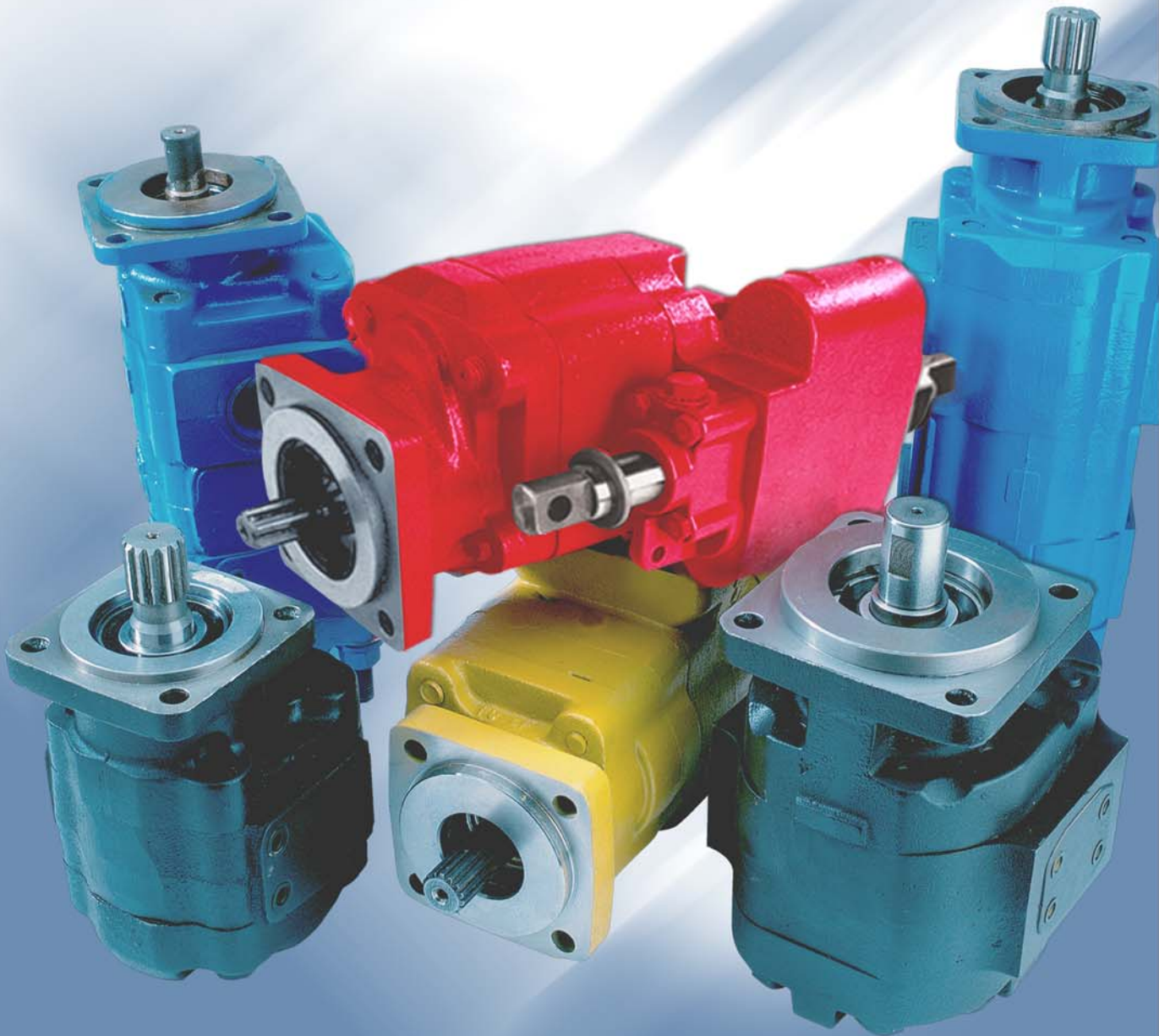


*GENUINE* **METARIS**



**METARIS GEAR CODE BOOK**

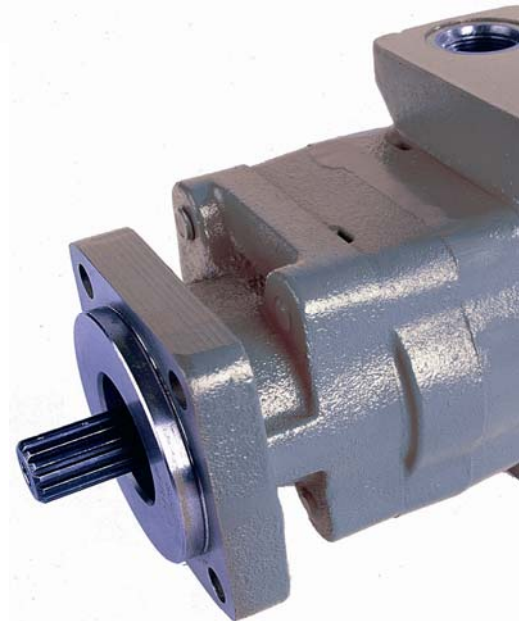
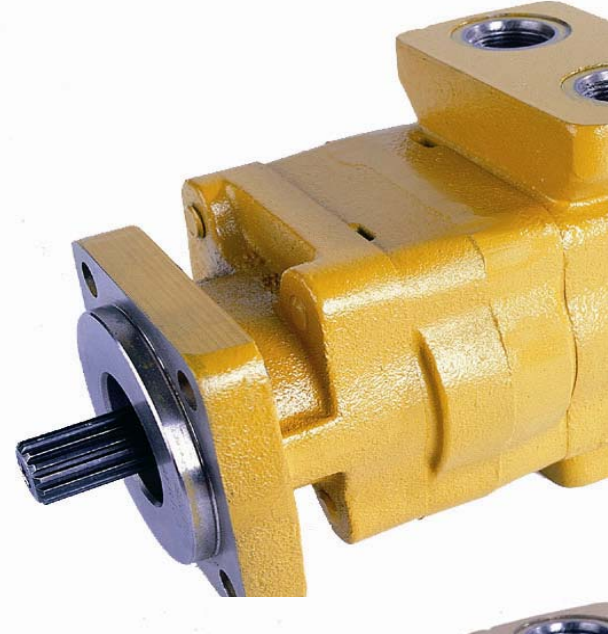
**YOUR SOURCE FOR HIGH QUALITY  
HYDRAULIC GEAR PRODUCTS**

**THIS CATALOG REPLACES OUR PREVIOUS GEAR CATALOGS. ALL PREVIOUS METARIS GEAR  
CATALOGS IN YOUR POSSESSION SHOULD BE DESTROYED.**

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# GEAR PUMPS AND MOTORS

## FLUID POWER FOR MOBILE EQUIPMENT

**METARIS** pumps and motors are particularly well suited for heavy duty mobile equipment applications. They are designed for extreme duty cycles and continuous heavy duty operation. The pumps and motors are a rugged design, but precision manufactured.

Pumps are available in single section units or several sections can be combined into one unit. A wide selection of mounting flanges and drive shafts are available to fit most applications. Pipe thread, "O" ring, or split flange are available in both metric and SAE standards.

Metaris pumps and motors are manufactured under strict quality control systems which are monitored by ISO 9001-2000 standards.

## METARIS PUMP / MOTOR FEATURES

Sectional construction; Quality gear construction, high strength gray and ductile iron castings, repair components available throughout the world and a wide range of configurations to suit most applications.

Multiple Pump Units; Several pump sections or piggyback units can be combined on a single drive, to eliminate multiple power take-off drives.

Precision Matched Gears; All gear sets are designed, and machined from high alloy bar, surfaces are precision finished and each gear set is matched for maximum efficiency. The 10 tooth construction gives maximum output per centimeter width per revolution.

Bearings; Quality roller bearings are utilized on journals to reduce the wear caused from contamination within the hydraulic system.

Bushing Pumps; Bushings are constructed from quality materials and Teflon coated for maximum wear life.

## INTERCHANGEABILITY

Metaris hydraulic units are directly interchangeable with most other manufactures.

**ALL MANUFACTURERS NAME SYMBOLS AND DESCRIPTIONS IN THIS DOCUMENT ARE FOR REFERENCE PURPOSES ONLY. IT IS NOT IMPLIED THAT ANY PART LISTED IS THE PRODUCT OF THESE MANUFACTURERS.**



# METARIS MH SERIES UNITS

## HOW TO SPECIFY AND CODE

THIS CATALOG CONTAINS CODES FOR MOST WIDELY USED MODELS ONLY; OTHER ASSEMBLY CODES ARE AVAILABLE FROM OUR SALES REPRESENTATIVES.

## SINGLE UNITS / MULTIPLE UNITS

METARIS PUMPS AND MOTORS ARE AVAILABLE AS SINGLE UNITS OR MULTIPLE ASSEMBLIES THE FULL ASSEMBLY CODE FOR THE FINISHED UNIT COMBINES INDIVIDUAL CODES FOR SHAFT END COVER, PORT END COVER, GEAR HOUSING, AND DRIVE SHAFT. THE CODE IS PRECEDED BY THE LETTER "P" FOR PUMP OR "M" FOR MOTOR, AND THE LETTER "A" , "B" , OR "C" FOR MODEL. NOTE THE EXAMPLE OF THE PROCEDURE.

### SINGLE UNIT

ASSEMBLY CODE MHM50A-842-BE-OL15-43

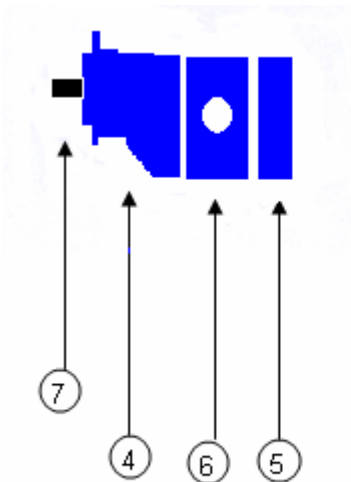
1	MOTOR	M
2	SERIES	50
3	MODEL	A
4	SHAFT END COVER	842
5	PORT END COVER	BE
6	GEAR HOUSING	OL15
7	DRIVE SHAFT	43

### MULTIPLE UNIT

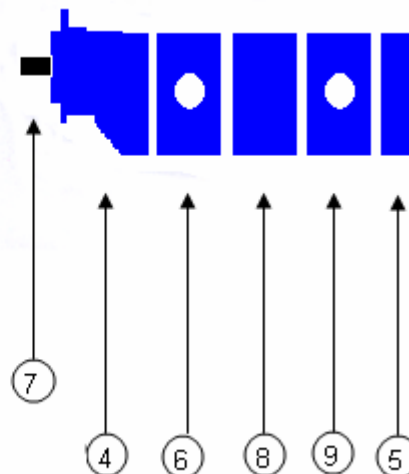
ASSEMBLY CODE MHP75B-178-BI-OK15-7-C-OK12-1

1	PUMP	P
2	SERIES	75
3	MODEL	B
4	SHAFT END COVER	178
5	PORT END COVER	BI
6	GEAR HOUSING	OK15
7	DRIVE SHAFT	7
8	BEARING CARRIER	C
9	GEAR HOUSING	OK12

### MHM50 SINGLE MOTOR



### MHP75 MULTIPLE PUMP

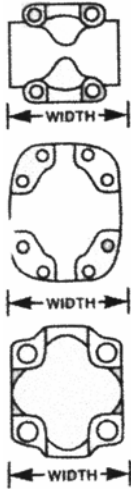




# IDENTIFYING METARIS HYDRAULIC PUMPS / MOTORS

- 1- LOOK AT THE UNIT FROM THE PORT END; SEE WHICH EXAMPLE IT MATCHES THE CLOSEST. INCLUDE THE SHAPE
- 2- MEASURE THE OVERALL WIDTH OF THE UNIT, THEN MATCH THE WIDTH TO THE CHART BESIDE THE PORT END COVER
- 3- NOTE: IDENTIFICATION SIZE MAY DIFFER WITH DIFFERENT PORTING

## PORT END COVER



SERIES	MH315	MH330	MH350	MH365
SIDE PORT WIDTH	4.25	6.68	7.12	7.38
UNPORTED WIDTH	4.00	4.81	5.75	6.25

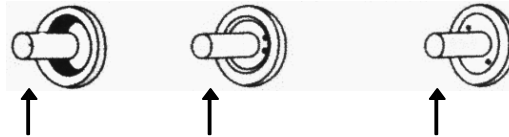
SERIES	MH37X	MH75	MH76
WIDTH	5.12	6.13	6.13

SERIES	MH15	MH20	MH25X	MH30/31	MH50/51
WIDTH	4.38	4.5	4.94	4.81	4.94

## SHAFT END COVER

LOOK AT THE SHAFT END AND COMPARE IT TO THE VIEWS BELOW, SELECT THE SHAFT TYPE OF YOUR UNIT.

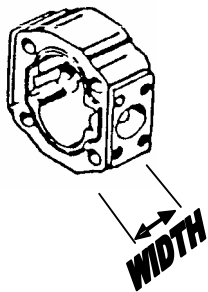
SERIES MH30, MH31, MH50, MH51      MH25X, MH37X



NO RETAINER OUTBOARD BEARING      WITH OUTBOARD BEARING      SCREW IN RETAINER

## GEAR HOUSING

SERIES MH31 / MH51 / MH76 - THE ONLY WAY TO DETERMINE THIS SERIES IS TO DISASSEMBLE THE UNIT AND LOOK FOR DOWEL PINS



MH 20,25,30,31,50,51								
HOUSING WIDTH	1.25	1.5	1.75	2	2.25	2.5	2.75	3
GEAR WIDTH	0.5	0.75	1	1.25	1.5	1.75	2	2.25
MH 37X,75,76								
HOUSING WIDTH	1.5	1.75	2	2.25	2.5	2.75	3	4
GEAR WIDTH	0.5	0.75	1	1.25	1.5	1.75	2	3
MH 315								
HOUSING WIDTH	0.9	1.15	1.4	1.65	1.9	2.15	2.4	N/A
GEAR WIDTH	0.5	0.75	1	1.25	1.5	1.75	2	N/A
MH 330								
HOUSING WIDTH	1	1.5	1.75	2	2.25	2.5	N/A	N/A
GEAR WIDTH	0.5	1	1.25	1.5	1.75	2	N/A	N/A
MH 350								
HOUSING WIDTH	1	1.5	1.75	2	2.25	2.5	2.75	3
GEAR WIDTH	0.5	1	1.25	1.5	1.75	2	2.25	2.5
MH 365								
HOUSING WIDTH	1.5	1.75	2	2.25	2.5	2.75	3	N/A
GEAR WIDTH	1	1.25	1.5	1.75	2	2.25	2.5	N/A

# WEIGHTS

## SINGLE 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 3/4"	3"
MH15	Pounds	24	25	26	27.5	29	30.5	32.5	*	*	*	*
MH20	Pounds	24	25	26	27.5	29	30.5	32.5	*	*	*	*
MH25	Pounds	36	39	42	43.5	45	46.5	48	50	52	*	*
MH30 / 31	Pounds	30	31	32	33	34	35	36	*	38.5	*	*
MH37	Pounds	52	54	56	58	60	62	65	68	71	*	78
MH50 / 51	Pounds	37	40	43	44.5	46	47.5	49	51	53.5	*	*
MH75 / 76	Pounds	67	70	72	74	76	79	82	85	88	*	92
MH 315	Pounds	16	17	18	19	20	21	22	*	*	*	*
MH 330	Pounds	*	34.8	36	37.3	38.5	39.8	41	42.3	43.5	*	*
MH 350	Pounds	*	49.5	51	52.5	54	55.5	57	58.5	60	*	*
MH 365	Pounds	*	*	56	58.5	61	63.5	66	68.5	71	73.5	76
MHC 101	Pounds	*	*	*	*	*	*	67	*	69	*	*
MHC 102	Pounds	*	*	*	*	*	*	68	*	70	*	*
MHG 101	Pounds	*	31	*	*	35	*	38	*	*	*	*
MHG 102	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 3/4"	3"
MH15	Pounds	21	22	23	24	25	26	28	*	*	*	*
MH20	Pounds	21	22	23	24	25	26	28	*	*	*	*
MH25	Pounds	28.5	30	31.5	33	34.5	36	37	41	44	*	*
MH30 / 31	Pounds	23	24	26	27	28	30	31	*	*	*	*
MH37	Pounds	43	45	47	50	53	56	59	62	65	*	68
MH50 / 51	Pounds	29.5	31	32.5	34	35.5	37	38	42	45	*	*
MH75 / 76	Pounds	54	57	60	63	65	67	69	71	73.5	*	76
MH 315	Pounds	16	17	18	19	20	21	22	*	*	*	*
MH 330	Pounds	*	31.3	32.5	33.8	35	36.3	37.5	38.8	40	*	*
MH 350	Pounds	*	49.5	51	52.5	54	55.5	57	58.5	60	*	*
MH 365	Pounds	*	*	56	58.5	61	63.5	66	68.5	71	73.5	76

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. MH15 single unit 3/4" gear width is 25 pounds plus MH15 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  
(e.g. 47 pounds ÷ 2.2 = 21.36 kilograms)

## PL Factor

Each section of a multiple unit 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" being the summation of the total 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 with the performance data.

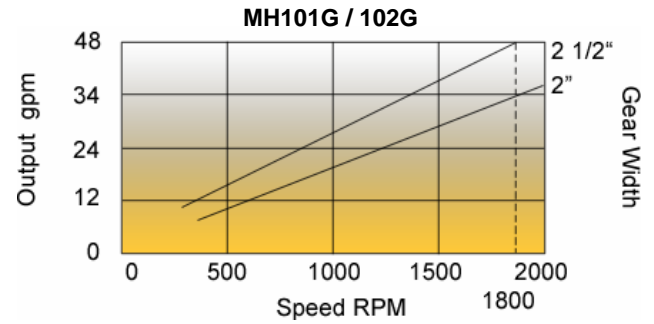
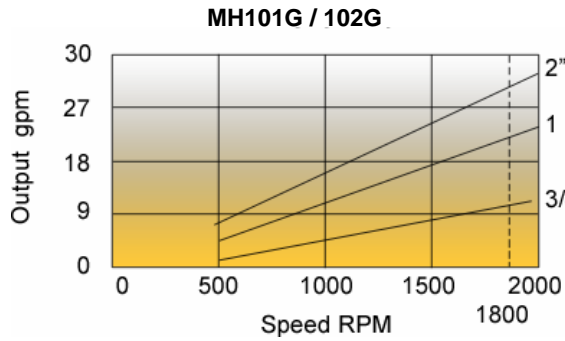
$$\text{Pressure X Total Gear Width} = \text{PL}$$



# DUMP PUMPS

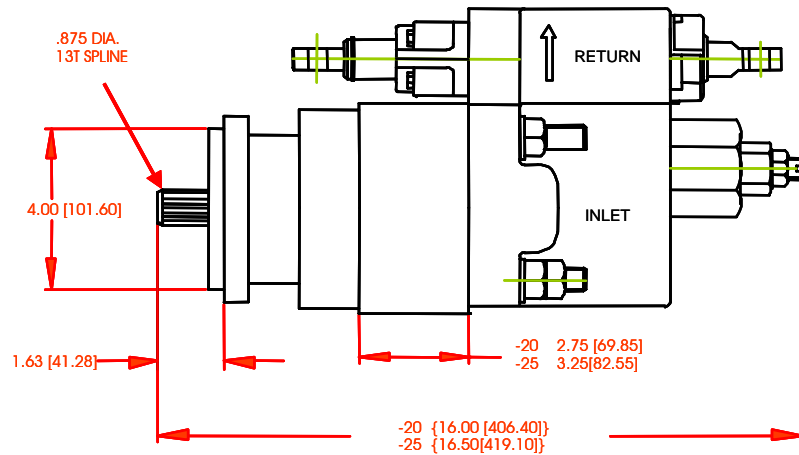
Speed RPM	RPM		3/4"	1 1/2"	2"	2 1/2"
MHG101	1800	GPM	9.5	21	29	-
	1800	LPM	36	79.5	109.3	-
MHG102	1800	GPM	9.5	21	29	-
	1800	LPM	36	79.5	109.3	-
MHC101	1800	GPM	-	-	39	48
	1800	LPM	-	-	147	180.5
MHC102	1800	GPM	-	-	39	48
	1800	LPM	-	-	147	180.5

Maximum RPM 2400

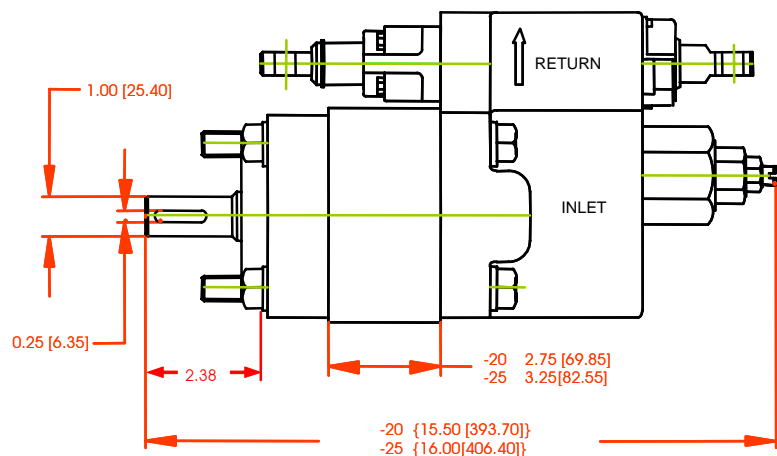


Performance data shown are the average results based on series of tests of production units and not necessarily representative of any one unit. Tests were run with oil viscosity 150 SUS at 100°F

MH102



MH101





# MH 101 / 102 SERIES COMBINATION PUMPS

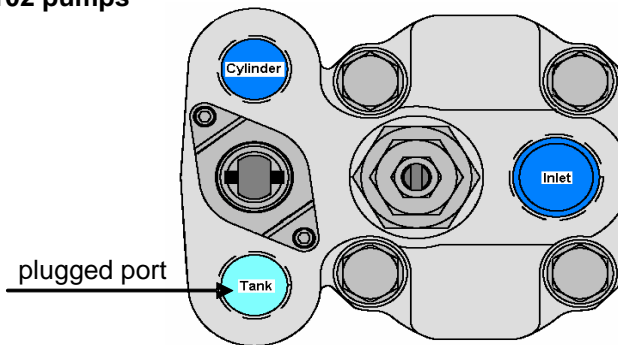
## Installation and Operation of the MH101 /102 pumps

Note: For intermittent use only

### Two Line Installation

- \* One Line to the to the cylinder
- \* One Line to the to the supply line of the reservoir
- \* Tank port on the pump is plugged

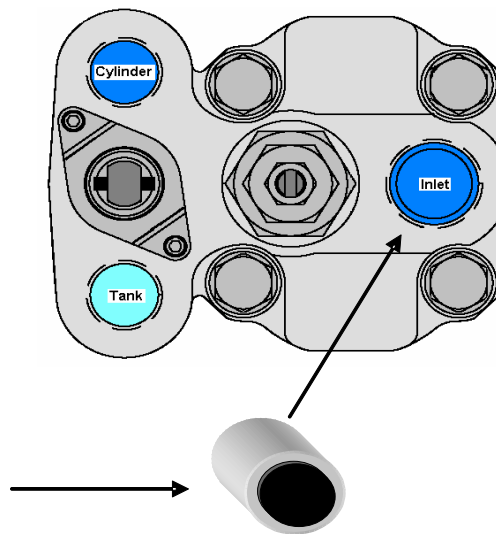
- \* When the spool is in neutral oil recirculates internally
- \* When the spool is in the raised position oil is routed to the cylinder port to raise the cylinder
- \* When the spool is in the lower position oil flow from the cylinder is routed back through the relief back to the inlet of the pump.



Note: For intermittent of continuous use

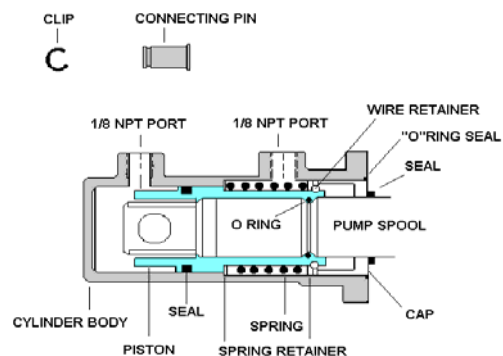
### Three line Installation

- \* One Line to the to the cylinder
- \* One Line to the to the supply line of the reservoir
- \* One Line to the to the return line of the reservoir
- \* The sleeve is installed in the inlet port of the pump



### When installing Air shifters

- \* Lubricate all moving parts before assembly
- \* Do not over tighten the mounting bolts
- \* Operate the spool by air to inspect proper movement .



Performance data shown are the average results based on series of tests of production units and not necessarily representative of any one unit. Tests were run with oil viscosity 150 SUS at 100°F

## PUMP PERFORMANCE DATA

Speed RPM		1/2"	3/4"	1"	1 1/4"	1 1/2"	1 3/4"	2"
900	GPM	2	3.2	4.4	5.5	6.7	7.9	9
	LPM	8	12	17	21	26	30	34
1200	GPM	2.8	4.4	6	7.6	9.2	10.7	12.2
	LPM	11	17	23	29	35	40	46
1500	GPM	3.6	5.6	7.7	9.6	11.6	13.5	15.4
	LPM	14	21	29	36	44	51	58
1800	GPM	4.4	6.8	9.3	11.6	14	16.3	18.6
	LPM	17	26	35	44	53	62	70
2100	GPM	5.2	8.1	10.9	13.6	16.4	19.1	21.8
	LPM	20	30	41	51	62	72	83
2400	GPM	6	9.3	12.5	15.6	18.8	21.9	25.1
	LPM	23	35	47	59	71	83	95
3000	GPM	7.7	11.7	15.7	19.6	23.7	27.6	31.5
	LPM	29	44	59	74	90	104	119



## MOTOR PERFORMANCE DATA

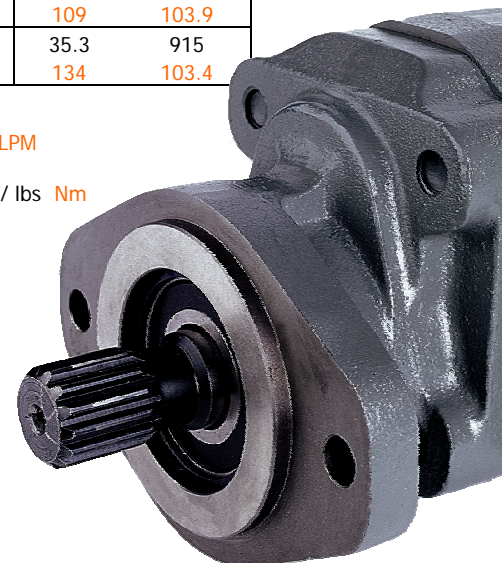
Speed RPM	1" 3500 PS1		1 1/4" 3500 PS1		1 1/2" 3250 PSI		1 3/4" 2900 PSI		2" 2500 PSI	
	A	B	A	B	A	B	A	B	A	B
	900	7.1 27	665 75.1	8.3 32	830 93.8	9.6 37	925 104.5	10.9 41	965 109	12.2 46
1200	8.8 33	665 75.1	10.5 40	830 93.8	12.2 46	925 104.5	13.8 52	965 109	15.5 59	950 107.3
1500	10.6 40	660 74.6	12.6 48	825 93.2	14.7 56	920 103.9	16.7 63	955 107.9	18.8 71	945 106.8
1800	12.3 46	665 74	14.7 56	820 92.6	17.2 65	915 103.4	19.6 74	950 107.3	22.1 84	940 106.2
2100	14 53	665 74	16.8 64	820 92.6	19.7 75	915 103.4	22.5 85	950 107.3	25.4 96	940 106.2
2400	15.7 59	640 72.3	18.9 72	800 90.4	22.2 84	895 101.1	25.4 96	930 105.1	28.8 109	920 103.9
3000	19 72	640 72.3	23 87	800 90.4	27.2 103	890 100.6	31.2 118	925 104.5	35.3 134	915 103.4

MH315 PL CHART		
Shaft Style	Integral	Two Piece
SAE "A" Spline (To 1.25 G.W)	4,450	
SAE "A" Key	3600	
SAE "B" Spline	13,400	
SAE "B" Key	9,900	
Connecting Shaft		5,550

A: Input Flow GPM / LPM

B: Output Torque IN / lbs Nm

GW: Gear Width



# MODEL MH330

Performance data shown are the average results based on series of tests of production units and not necessarily representative of any one unit. Tests were run with oil viscosity 150 SUS at 100°F

## PUMP PERFORMANCE DATA

Speed RPM		1/2" G.W.	3/4" G.W.	1" G.W.	1 1/4" G.W.	1 1/2" G.W.	1 3/4" G.W.	2" G.W.
900	GPM	3.2	5.1	7	8.8	10.6	12.4	14.3
	LPM	12	19	26	33	40	47	54
1200	GPM	4.5	7	9.5	12	14.5	16.9	19.4
	LPM	17	26	36	45	55	64	73
1500	GPM	5.8	8.9	12.1	15.2	18.3	21.4	24.5
	LPM	22	34	46	57	69	81	93
1800	GPM	7.1	10.8	14.7	18.4	22.1	25.9	29.6
	LPM	27	41	55	70	84	98	112
2100	GPM	8.4	12.7	17.2	21.6	26	30.3	34.7
	LPM	32	48	65	82	98	115	131
2400	GPM	9.6	14.7	19.8	24.8	29.8	34.8	39.8
	LPM	36	55	75	94	113	132	151
3000	GPM	12.2	18.5	24.9	31.2	37.5	43.8	50.1
	LPM	46	70	94	118	142	166	190

## MOTOR PERFORMANCE DATA

Speed RPM	1" G.W. 3500 PSI		1 1/4" G.W. 3500 PSI		1 1/2" G.W. 3500 PSI		1 3/4" G.W. 3250 PSI		2" G.W. 3000 PSI	
	A	B	A	B	A	B	A	B	A	B
900	10.1	1010	12.3	1270	14.5	1530	16.7	1665	19	1770
	38	114.1	47	143.5	55	172.9	63	188.1	72	200
1200	12.8	1005	15.7	1265	18.6	1525	21.4	1660	24.3	1760
	49	113.6	59	142.9	70	172.3	81	187.6	92	198.9
1500	15.6	1000	19.1	1255	22.6	1515	26.1	1650	29.6	1750
	59	113	72	141.8	85	171.2	99	186.4	112	197.7
1800	18.4	995	22.5	1250	26.6	1505	30.8	1640	34.9	1740
	69	112.4	85	141.2	101	170	116	185.3	132	196.6
2100	21.1	990	25.9	1240	30.7	1495	35.4	1625	40.2	1720
	80	111.9	98	140.1	116	168.9	134	183.6	152	194.3
2400	23.9	985	29.3	1235	34.7	1480	40.1	1605	45.5	1695
	90	111.3	111	139.5	131	167.2	152	181.3	172	191.5
3000	29.2	980	35.9	1230	42.6	1475	49.3	1595	56	1685
	110	110.7	136	139	161	166.7	186	180.2	212	190.4

A: Input Flow GPM / LPM

B: Output Torque IN / lbs Nm

GW: Gear Width

MH330 PL CHART		
Shaft Style	Integral	Two Piece
SAE "BB" Spline	13,000	6,250
SAE "BB" Key	9,300	6,250
SAE "B" Spline	8,450	6,250
SAE "B" Key	6,250	6,250
SAE "C" Spline	*	6,250
SAE "C" Key	*	6,250
Connecting Shaft		6,250



Performance data shown are the average results based on series of tests of production units and not necessarily representative of any one unit. Tests were run with oil viscosity 150 SUS at 100°F

## PUMP PERFORMANCE DATA

Speed RPM		1/2" G.W.	3/4" G.W.	1" G.W.	1 1/4" G.W.	1 1/2" G.W.	1 3/4" G.W.	2" G.W.	2 1/4" G.W.	2 1/2" G.W.
900	GPM	4	6.4	8.8	11.2	13.7	16.1	18.6	21	23.4
	LPM	15	24	33	42	52	61	70	70	90
1200	GPM	5.6	8.8	12.1	15.4	18.7	21.9	25.2	28.4	31.7
	LPM	21	33	46	58	71	83	95	108	120
1500	GPM	7.3	11.3	15.5	19.5	23.6	27.7	31.8	35.9	40
	LPM	28	43	59	74	89	105	120	136	151
1800	GPM	8.9	13.8	18.8	23.6	28.6	33.5	38.4	43.3	48.3
	LPM	34	52	71	89	108	127	145	164	183
2100	GPM	10.6	16.3	22.1	27.8	33.6	39.3	45.1	50.8	56.6
	LPM	40	62	84	105	127	149	171	192	214
2400	GPM	12.2	18.8	25.4	31.9	38.5	45.1	51.7	58.2	64.8
	LPM	46	71	96	121	146	171	196	220	245

## MOTOR PERFORMANCE DATA

Speed RPM	1" G.W. 3500 PSI		1 1/4" G.W. 3500 PSI		1 1/2" G.W. 3500 PSI		1 3/4" G.W. 3250 PSI		2" G.W. 3000 PSI	
	A	B	A	B	A	B	A	B	A	B
900	13.4	1320	16	1670	18.6	2025	21.2	2225	23.8	2350
	51	149.1	61	188.7	70	228.8	80	251.4	90	265.5
1200	15.9	1315	20.4	1660	23.8	2015	27.2	2215	30.6	2340
	64	148.6	77	187.6	90	227.7	103	250.3	116	264.4
1500	20.5	1300	24.7	1640	28.9	1990	33.2	2195	37.4	2315
	77	146.9	93	185.3	110	224.8	126	248	142	261.6
1800	24	1295	29	1635	34.1	1980	39.2	2180	44.2	2300
	91	146.3	110	184.7	129	223.7	148	246.3	167	259.9
2100	27.5	1285	33.4	1620	39.3	1965	45.2	2165	51.1	2285
	104	145.2	126	183	149	222	171	244.6	193	258.2
2400	31	1265	37.7	1600	44.4	1940	51.2	2135	57.9	2255
	117	142.9	143	180.8	168	219.2	194	241.2	219	254.8

Speed RPM	2 1/4" G.W. 2750 PSI		2 1/2" G.W. 2500 PSI	
	A	B	A	B
900	26.4	2425	28.9	2450
	100	274	110	276.8
1200	34	2410	37.4	2435
	129	272.3	142	275.1
1500	41.7	2385	45.9	2410
	158	269.5	174	272.3
1800	49.3	2375	54.4	2395
	187	268.3	206	270.6
2100	57	2355	62.9	2380
	216	266.1	238	268.9
2400	64.6	2325	71.3	2350
	245	262.7	270	265.5

A: Input Flow GPM / LPM

B: Output Torque IN / lbs Nm

GW: Gear Width

MH350 PL CHART		
Shaft Style	Integral	Two Piece
SAE "BB" Spline	9,900	9,000
SAE "BB" Key	7,100	7,100
SAE "B" Spline	6,450	6,450
SAE "B" Key	4,750	4,750
SAE "C" Spline	19,100	9,000
SAE "C" Key	13,900	9,000
Connecting Shaft		9,000

# MODEL MH365

Performance data shown are the average results based on series of tests of production units and not necessarily representative of any one unit. Tests were run with oil viscosity 150 SUS at 100°F

## PUMP PERFORMANCE DATA

Speed RPM	3/4" G.W.	1" G.W.	1 1/4" G.W.	1 1/2" G.W.	1 3/4" G.W.	2" G.W.	2 1/4" G.W.	2 1/2" G.W.
900	8	11.5	14.9	18.4	21.8	25.4	28.8	32.3
	30	44	57	70	83	96	109	122
1200	11.5	16.2	20.8	25.5	30	34.7	39.3	44
	44	61	79	96	114	131	149	166
1500	15	20.9	26.6	32.5	38.2	44.1	49.8	55.6
	57	79	101	123	145	167	188	211
1800	18.5	25.6	32.5	39.5	46.4	53.4	60.3	67.3
	70	97	123	149	176	202	228	255
2100	22	30.2	38.3	46.5	54.6	62.8	70.8	79
	83	114	145	176	207	238	268	299
2400	25.6	34.9	44.2	53.5	62.8	72.1	81.4	90.7
	97	132	167	203	238	273	308	343

## MOTOR PERFORMANCE DATA

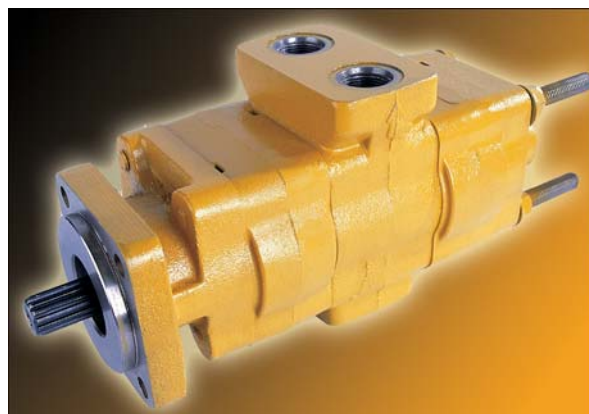
Speed RPM	1" G.W. 3500 PSI		1 1/4" G.W. 3500 PSI		1 1/2" G.W. 3500 PSI		1 3/4" G.W. 3250 PSI		2" G.W. 3000 PSI		2 1/4" G.W. 2750 PSI		2 1/2" G.W. 2500 PSI	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
	900	18.4	1865	22	2355	25.6	2860	29.2	3370	32.9	3850	36.5	4020	40.1
	70	210.7	83	266.1	97	323.1	111	380.8	124	435	138	454.2	152	466.1
1200	23.3	1845	28.1	2330	32.9	2830	37.6	3335	42.4	38	47.2	3980	52	4080
	88	208.5	106	263.3	124	319.7	142	376.8	160	430.5	179	449.7	197	461
1500	28.2	1815	34.1	2295	40.1	2780	46	3280	52	3750	57.9	3915	63.8	4020
	107	205.1	129	259.3	152	314.1	174	370.6	197	423.7	219	442.3	242	454.2
1800	33.1	1805	40.2	2280	47.3	2765	54.4	3265	61.5	3730	68.6	3895	75.7	3995
	125	203.9	152	257.6	179	312.4	206	368.9	233	421.4	260	440.1	287	451.4
2100	37.9	1755	46.2	2220	54.4	2690	62.8	3160	71.1	3610	79.3	3770	87.6	3865
	144	198.3	175	250.8	206	303.9	238	357	269	407.9	300	426	332	436.7
2400	42.8	1705	52.3	2155	61.7	2615	71.2	3055	80.6	3490	90.1	3645	99.5	3740
	162	192.6	198	243.5	234	295.5	269	345.2	305	394.3	341	411.8	377	422.6

A: Input Flow GPM / LPM

B: Output Torque IN / lbs Nm

GW: Gear Width

MH365 PL CHART		
Shaft Style	Integral	Two Piece
SAE "BB" Spline	7,750	7,750
SAE "BB" Key	5,550	5,550
SAE "B" Spline	5,050	5,050
SAE "B" Key	3,700	3,700
SAE "C" Spline	14,900	11,950
SAE "C" Key	10,800	10,800
Connecting Shaft		11,950



Performance data shown are the average results based on series of tests of production units and not necessarily representative of any one unit. Tests were run with oil viscosity 150 SUS at 100°F

## PUMP PERFORMANCE DATA

Speed RPM		1" G.W.	1 1/4" G.W.	1 1/2" G.W.	1 3/4" G.W.	2" G.W.
900	GPM	6.5	8	10	12	13.5
	LPM	24.5	30	38	45.5	51
1200	GPM	9	11.5	14	16	18.5
	LPM	34	43.5	53	60.5	70
1500	GPM	11.5	14.5	17.5	20.5	23.5
	LPM	43.5	55	66	77.5	89
1800	GPM	14	18	21.5	25	29
	LPM	53	68	81.5	94.5	110
2100	GPM	16.5	21	25	29.5	34
	LPM	62.5	79.5	94.5	112	129
2400	GPM	19	24	29	34	39
	LPM	72	91	110	129	148



## MOTOR PERFORMANCE DATA

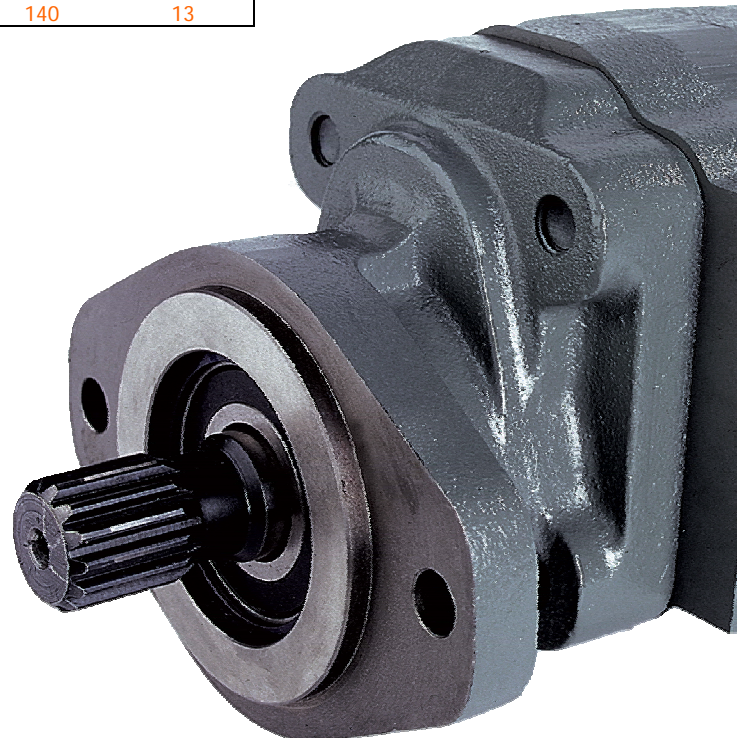
Speed RPM	1" G.W.		1 1/2" G.W.		2" G.W.	
	2000 psi	140 bar	2000 psi	140 bar	2000 psi	140 bar
	A	B	A	B	A	B
800	9	550	13	870	17	1150
	34	6.5	49	10	64.5	13
1200	13	550	18	870	23.5	1150
	49	6.5	68	10	89	13
1600	16	550	23	860	30.5	1140
	60.5	6.5	87	10	115	13
2000	19.5	550	28	850	37	1125
	74	6.5	106	10	140	13

A: Input Flow GPM / LPM

B: Output Torque IN / lbs Nm

GW: Gear Width

MH20 PL CHART		
Shaft Style	Integral	Two Piece
SAE "BB" Spline	13,000	5,500
SAE "BB" Key	8,600	5,500
SAE "B" Spline	8,300	5,500
SAE "B" Key	5,700	5,500
SAE "C" Spline	*	*
SAE "C" Key	*	*
Connecting Shaft		5,500





# MODEL MH30/31

Performance data shown are the average results based on series of tests of production units and not necessarily representative of any one unit. Tests were run with oil viscosity 150 SUS at 100°F

## MH30/31 PUMP PERFORMANCE DATA

Speed RPM		1" G.W.	1 1/4" G.W.	1 1/2" G.W.	1 3/4" G.W.	2" G.W.
900	GPM	6.5	8	10	12	13.5
	LPM	24.5	30	38	45.5	51
1200	GPM	9	11.5	14	16	18.5
	LPM	34	43.5	53	60.5	70
1500	GPM	11.5	14.5	17.5	20.5	23.5
	LPM	43.5	55	66	77.5	89
1800	GPM	14	18	21.5	25	29
	LPM	53	68	81.5	94.5	110
2100	GPM	16.5	21	25	29.5	34
	LPM	62.5	79.5	94.5	112	129
2400	GPM	19	24	29	34	39
	LPM	72	91	110	129	148

## MH30 MOTOR PERFORMANCE DATA

Speed RPM	1" G.W.		1 1/2" G.W.		2" G.W.	
	2000 psi	140 bar	2000 psi	140 bar	2000 psi	140 bar
	A	B	A	B	A	B
800	9	550	13	870	17	1150
	34	6.5	49	10	64.5	13
1200	13	550	18	870	23.5	1150
	49	6.5	68	10	89	13
1600	16	550	23	860	30.5	1140
	60.5	6.5	87	10	115	13
2000	19.5	550	28	850	37	1125
	74	6.5	106	10	140	13

## MH31 MOTOR PERFORMANCE DATA

Speed RPM	1" G.W.		1 1/2" G.W.		2" G.W.	
	2500 psi	175 bar	2500 psi	175 bar	2500 psi	175 bar
	A	B	A	B	A	B
800	9	675	13	1035	17	1385
	34	8	49	12	64.5	16
1200	13	685	18	1055	23.5	1410
	49	8	68	12	89	16
1600	16	680	23	1030	30.5	1390
	60.5	8	87	12	115	16
2000	19.5	660	28	1010	37	1370
	74	7.5	106	11.5	140	16

A: Input Flow GPM / LPM

B: Output Torque IN / lbs Nm

GW: Gear Width

MH30/31 PL CHART		
Shaft Style	Integral	Two Piece
SAE "BB" Spline	13,000	5,500
SAE "BB" Key	8,600	5,500
SAE "B" Spline	8,300	5,500
SAE "B" Key	5,700	5,500
SAE "C" Spline	*	*
SAE "C" Key	*	*
Connecting Shaft		5,500

# MODEL MH25/50/51

Performance data shown are the average results based on series of tests of production units and not necessarily representative of any one unit. Tests were run with oil viscosity 150 SUS at 100°F

## MH25/50/51 PUMP PERFORMANCE DATA

Speed RPM		1" G.W.	1 1/4" G.W.	1 1/2" G.W.	1 3/4" G.W.	2" G.W.	2 1/4" G.W.	2 1/2" G.W.
900	GPM	8.5	10.5	13	15	17.5	20	22
	LPM	32	39.5	49	57	66	75.5	83.5
1200	GPM	12	15	18	21	24	27	30
	LPM	46.5	57	68	79.5	91	102	114
1500	GPM	15	19	23	27	31	35	39
	LPM	57	72	87	102	117	132	146
1800	GPM	18	23	27.5	32.5	37.5	42	47
	LPM	68	87	104	123	142	159	178
2100	GPM	21.5	27	32.5	38.5	44	48.5	55
	LPM	81.5	102	123	146	167	187	208
2400	GPM	25	31	37	44	51	57	63.5
	LPM	94.5	117	140	167	193	216	240

## MH25/50 MOTOR PERFORMANCE DATA

Speed RPM	1" G.W.		1 1/2" G.W.		2" G.W.		2 1/2" G.W.	
	2000 psi	140 bar	2000 psi	140 bar	2000 psi	140 bar	2000 psi	140 bar
	A	B	A	B	A	B	A	B
800	10.5	670	15.5	1070	21	1450	26	1850
	39.5	7.5	58.5	12.5	79.5	16.5	98.5	21.5
1200	15.5	680	22.5	1075	30.5	1450	37.5	1840
	58.5	8	85	12.5	115	16.5	142	21
1600	20	670	30	1045	40	1440	49.5	1750
	75.5	7.5	114	12	151	16.5	187	20
2000	25	660	37	1030	49	1415	61.5	1720
	94.5	7.5	140	12	185	16.5	233	20

## MH51 MOTOR PERFORMANCE DATA

Speed RPM	1" G.W.		1 1/2" G.W.		2" G.W.		2 1/2" G.W.	
	2500 PSI	175 bar	2500 PSI	175 bar	2500 PSI	175 bar	2250 PSI	175 bar
	A	B	A	B	A	B	A	B
800	10.5	825	15.5	1310	21	1810	26	2330
	39.5	9.5	58.5	15	79.5	21	98.5	27
1200	15.5	850	22.5	1340	30.5	1830	37.5	2340
	58.5	10	85	15.5	115	21	142	27
1600	20	830	30	1330	40	1805	49.5	2300
	75.5	9.5	114	15.5	151	21	187	26.5
2000	25	800	37	1290	49	1770	61.5	2250
	94.5	9	140	15	185	20.5	233	26

MH50/51 PL CHART		
Shaft Style	Integral	Two Piece
SAE "BB" Spline	9,900	8,000
SAE "BB" Key	6,600	6,600
SAE "B" Spline	6,400	6,400
SAE "B" Key	5,750	5,750
SAE "C" Spline	13,850	8,000
SAE "C" Key	13,000	8,000
Connecting Shaft		8,000

A: Input Flow GPM / LPM

B: Output Torque IN / lbs Nm

GW: Gear Width

# MODEL MH37

Performance data shown are the average results based on series of tests of production units and not necessarily representative of any one unit. Tests were run with oil viscosity 150 SUS at 100°F

## PUMP PERFORMANCE DATA

Speed RPM	1" G.W.	1 1/4" G.W.	1 1/2" G.W.	1 3/4" G.W.	2" G.W.	2 1/4" G.W.	2 1/2" G.W.	3" G.W.
600	4.5	6.5	8.5	10.5	12.5	14	16.5	20
	17	25	32	40	47	53	62	76
1200	12.5	16.5	20	24	28	31.5	35.5	43
	47	62	76	91	106	119	134	163
1800	20	26	31.5	37.5	43.5	49.5	55	66.5
	76	98	119	142	165	187	208	252
2100	24	31	37.5	44.5	51	58	64.5	78
	91	117	142	168	193	219	244	295
2400	28	36	43.5	51	59	67	74.5	90
	106	136	165	193	223	254	282	341

## MOTOR PERFORMANCE DATA

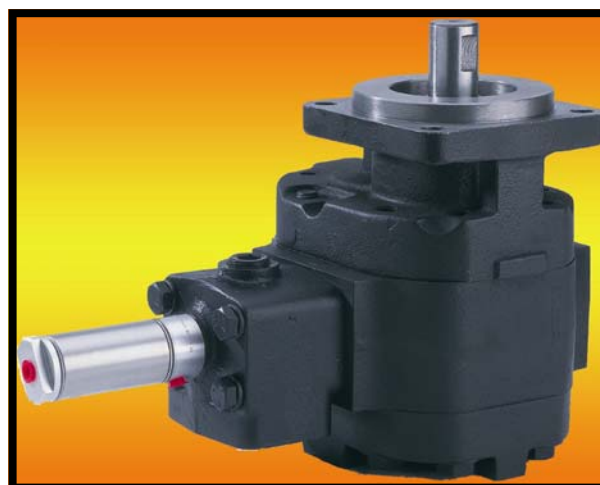
Speed RPM	1" G.W.		1 1/2" G.W.		2" G.W.		2 1/2" G.W.		3" G.W.	
	2000 psi	140 bar	2000 psi	140 bar	2000 psi	140 bar	2000 psi	140 bar	2000 psi	140 bar
	A	B	A	B	A	B	A	B	A	B
900	10.5	750	15	1200	20	1650	24.5	2125	28	2670
	40	8.5	57	13.5	76	19	93	24.5	106	30.5
1000	16	745	23	1180	31	1630	38	2115	44	2635
	61	8.5	87	13.5	117	18.5	144	24	167	30
1400	21	730	31	1165	41	1610	51	2100	60	2595
	79	8.5	117	13.5	155	18.5	193	24	227	30
1800	26.5	700	39	1140	52	1590	64	2075	76	2560
	100	8	147	13	197	18	242	24	288	29.5

MH37 PL CHART	
Shaft Style	Two Piece
SAE "BB" Spline	7,750
SAE "BB" Key	5,550
SAE "B" Spline	5,050
SAE "B" Key	3,700
SAE "C" Spline	11,950
SAE "C" Key	11,950
Connecting Shaft	11,950

A: Input Flow GPM / LPM

B: Output Torque IN / lbs Nm

GW: Gear Width



# MODEL MH75/76

Performance data shown are the average results based on series of tests of production units and not necessarily representative of any one unit. Tests were run with oil viscosity 150 SUS at 100°F

## MH75/76 PUMP PERFORMANCE DATA

Speed RPM	1" G.W.	1 1/4" G.W.	1 1/2" G.W.	1 3/4" G.W.	2" G.W.	2 1/4" G.W.	2 1/2" G.W.	2 3/4" G.W.	3" G.W.
900	11.5	15.5	19.5	23	27	30.5	34.5	38	42
	43.5	58.5	74	87	102	115.5	130.5	144	159
1200	17	22	27	32	37.5	42	48	52.5	58
	64.5	83.5	102	121	142	159	182	199	220
1500	22	29	35.5	41.5	48	54.5	61	67	74
	83.5	110	134	157	182	206	231	254	280
1800	27.5	35.5	43.5	51	59	66	74	81.5	90
	104	134	165	193	223	250	280	308	341
2100	33	42	51.5	60	69.5	78	87	96.5	106
	125	159	195	227	263	295	329	365	401
2400	38	49	59.5	70	80	90	101	111	122
	144	185	225	265	303	341	382	420	462

## MH75 MOTOR PERFORMANCE DATA

Speed RPM	1" G.W.		1 1/2" G.W.		2" G.W.		2 1/2"		3"	
	2000 psi A	140 bar B	2000 psi A	140 bar B	2000 psi A	140 bar B	2000 psi A	140 bar B	2000 psi A	140 bar B
800	20.5	1050	28	1650	35.5	2200	43	2875	50.5	3625
	77.5	12	106	19	134	25.5	163	33	191	42
1200	27.5	1025	38	1600	49.5	2200	60.5	2850	72	3575
	104	12	144	18.5	187	25.5	229	33	273	41
1600	34	1000	49	1575	64	2175	78.5	2800	93	3500
	129	11.5	185	18	242	25	297	32.5	352	40.5
2000	41.5	950	59	1550	78	2175	96.5	2750	114	3425
	157	11	223	18	295	25	365	31.5	431	39.5

## MH76 MOTOR PERFORMANCE DATA

Speed RPM	1" G.W.		1 1/2" G.W.		2" G.W.		2 1/2" G.W.		3" G.W.	
	2500 PSI A	175 bar B	2500 PSI A	175 bar B	2500 PSI A	175 bar B	2500 PSI A	175 bar B	2500 PSI A	175 bar B
800	20.5	1410	28	2140	35.5	2875	43	3650	50.5	4400
	77.5	16	106	24.5	134	33	163	42	191	50.6
1200	27.5	1400	38	2140	49.5	2870	60.5	3650	72	4385
	104	16	144	24.5	187	33	229	42	273	50.5
1600	34	1375	49	2110	64	2830	78.5	3600	93	4320
	129	16	185	24.5	242	32.5	297	41.5	352	49.7
2000	41.5	1350	59	2090	78	2800	96.5	3500	114	4200
	157	15.5	223	24	295	32.5	365	40.5	431	48.3

A: Input Flow GPM / LPM

B: Output Torque IN / lbs Nm

GW: Gear Width

MH75/76 PL CHART		
Shaft Style	Integral	Two Piece
SAE "BB" Spline	7,750	7,750
SAE "BB" Key	5,550	5,550
SAE "B" Spline	5,050	5,050
SAE "B" Key	3,700	3,700
SAE "C" Spline	8,600	7,750
SAE "C" Key	8,300	7,750
Connecting Shaft		7,750



# SHAFT END COVERS

Series

	A	B	C	CODE
MH15	4.19	3.25	0.44	01
MH20	4.19	3.25	0.44	94
MH25	Not Available			
MH30	4.19	3.25	0.44	94
MH31	4.19	3.25	0.44	94
MH37	Not Available			
MH50	Not Available			
MH51	Not Available			
MH75	Not Available			
MH76	Not Available			
MH315	4.19	3.25	0.44	93
MH330	Not Available			
MH350	Not Available			
MH365	Not Available			

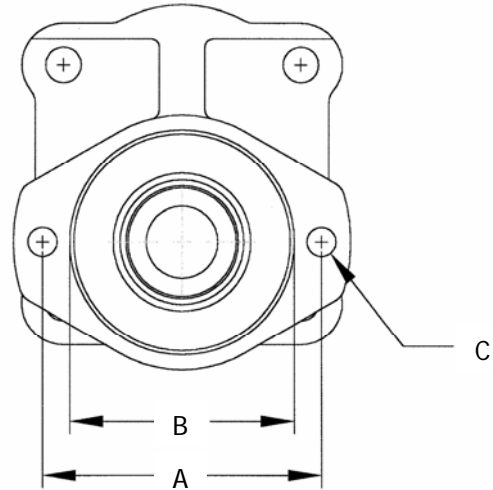
Series

	A	B	C	CODE
MH15	5.75	4.00	0.56	07
MH20	5.75	4.00	0.56	97
MH25	5.75	4.00	0.56	97
MH30	5.75	4.00	0.56	97
MH31	5.75	4.00	0.56	97
MH37	Not Available			
MH50	5.75	4.00	0.56	97
MH51	5.75	4.00	0.56	97
MH75	Not Available			
MH76	Not Available			
MH315	5.75	4.00	0.56	96
MH330	5.75	4.00	0.56	97
MH350	5.75	4.00	0.56	97
MH365	5.75	4.00	0.56	97

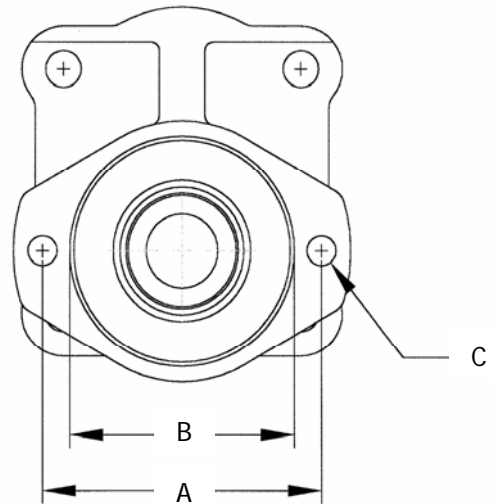
Series

	A	B	C	CODE
MH15	Not Available			
MH20	Not Available			
MH25	7.125	4.999	0.69	98
MH30	Not Available			
MH31	Not Available			
MH37	7.125	4.999	0.69	98
MH50	7.125	4.999	0.69	98
MH51	7.125	4.999	0.69	98
MH75	7.125	4.999	0.69	98
MH76	7.125	4.999	0.69	98
MH315	Not Available			
MH330	Not Available			
MH350	7.125	4.999	0.69	98
MH365	7.125	4.999	0.69	98

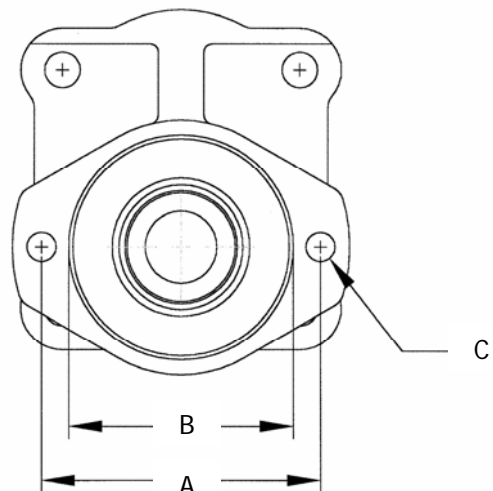
2 Bolt "A" Mount



2 Bolt "B" Mount



2 Bolt "C" Mount

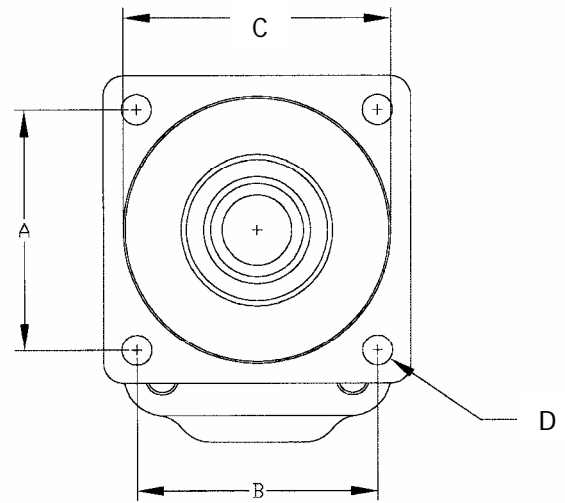


# SHAFT END COVERS

Series

	A	B	C	D	CODE
MH15	3.536	3.536	3.999	0.56	12
MH20	3.536	3.536	3.999	0.56	42
MH25	3.536	3.536	3.999	0.56	42
MH30	3.536	3.536	3.999	0.56	42
MH31	3.536	3.536	3.999	0.56	42
MH37	3.536	3.536	3.999	0.56	42
MH50	3.536	3.536	3.999	0.56	42
MH51	3.536	3.536	3.999	0.56	42
MH75	3.536	3.536	3.999	0.56	42
MH76	3.536	3.536	3.999	0.56	42
MH315	Not Available				
MH330	3.536	3.536	3.999	0.56	42
MH350	3.536	3.536	3.999	0.56	42
MH365	3.536	3.536	3.999	0.56	42

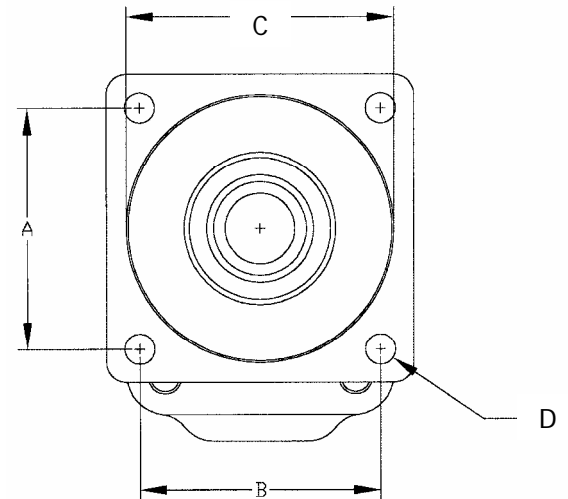
4 Bolt "B" Mount



Series

	A	B	C	D	CODE
MH15	Not Available				
MH20	Not Available				
MH25	4.508	4.508	4.999	0.56	78
MH30	4.508	4.508	4.999	0.56	78
MH31	4.508	4.508	4.999	0.56	78
MH37	4.508	4.508	4.999	0.56	78
MH50	4.508	4.508	4.999	0.56	78
MH51	4.508	4.508	4.999	0.56	78
MH75	4.508	4.508	4.999	0.56	78
MH76	4.508	4.508	4.999	0.56	78
MH315	Not Available				
MH330	4.508	4.508	4.999	0.56	78
MH350	4.508	4.508	4.999	0.56	78
MH365	4.508	4.508	4.999	0.56	78

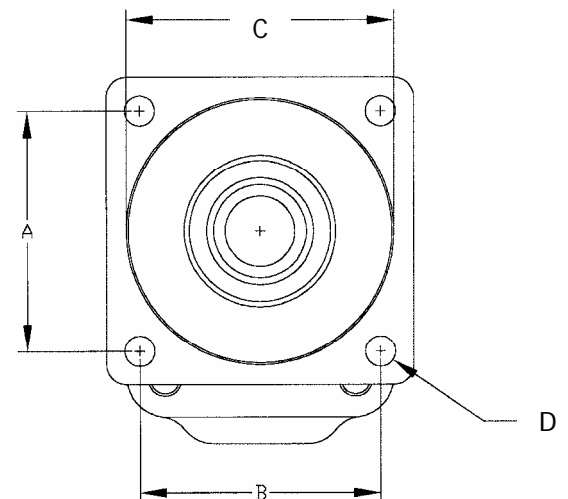
4 Bolt "C" Mount



Series

	A	B	C	D	CODE
MH15	Not Available				
MH20	Not Available				
MH25	Not Available				
MH30	Not Available				
MH31	Not Available				
MH37	Not Available				
MH50	Not Available				
MH51	Not Available				
MH75	6.364	6.364	5.999	0.81	80
MH76	6.364	6.364	5.999	0.81	80
MH315	Not Available				
MH330	Not Available				
MH350	Not Available				
MH365	Not Available				

4 Bolt "D" Mount

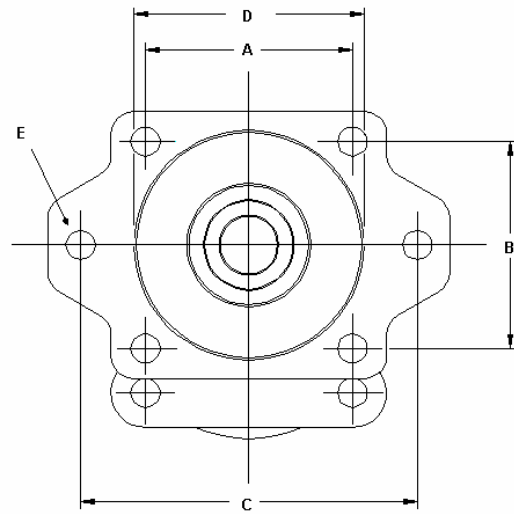


# SHAFT END COVER

Series

	A	B	C	D	E	CODE
MH15	Not Available					
MH20	3.536	3.536	5.750	4.00	0.56	46
MH25	Not Available					
MH30	3.536	3.536	5.750	4.00	0.56	46
MH31	3.536	3.536	5.750	4.00	0.56	
MH37	Not Available					
MH50	3.536	3.536	5.750	4.00	0.56	46
MH51	3.536	3.536	5.750	4.00	0.56	46
MH75	Not Available					
MH76	Not Available					
MH315	Not Available					
MH330	3.536	3.536	5.750	4.00	0.56	46
MH350	3.536	3.536	5.750	4.00	0.56	46
MH365	Not Available					

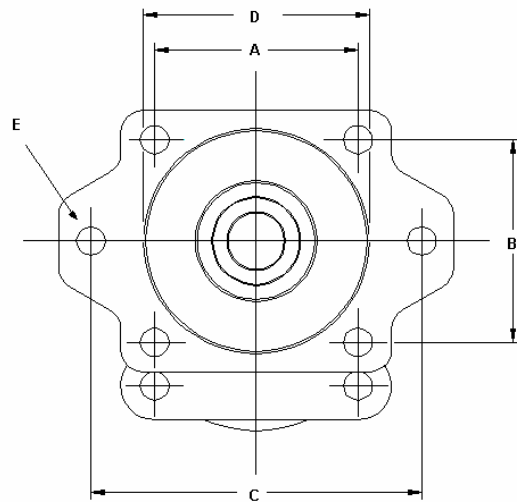
2/4 Bolt B mount



Series

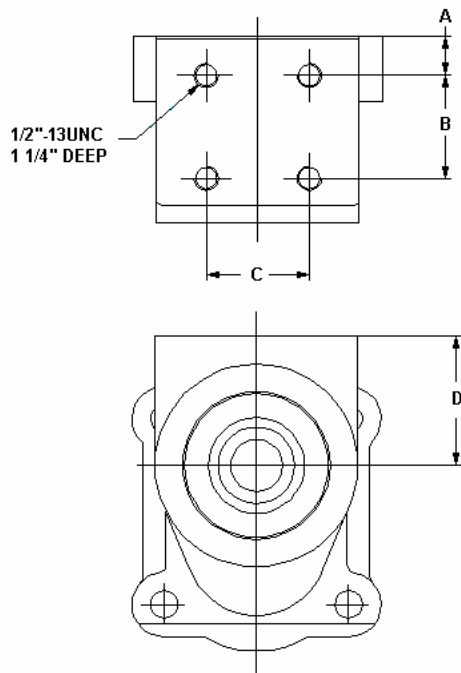
	A	B	C	D	E	CODE
MH15	Not Available					
MH20	Not Available					
MH25	Not Available					
MH30	Not Available					
MH31	Not Available					
MH37	Not Available					
MH50	4.508	4.508	7.125	5.00	0.56	N/A
MH51	4.508	4.508	7.125	5.00	0.56	N/A
MH75	Not Available					
MH76	Not Available					
MH315	Not Available					
MH330	Not Available					
MH350	4.508	4.508	7.125	5.00	0.56	N/A
MH365	Not Available					

2/4 Bolt C mount



# SHAFT END COVERS

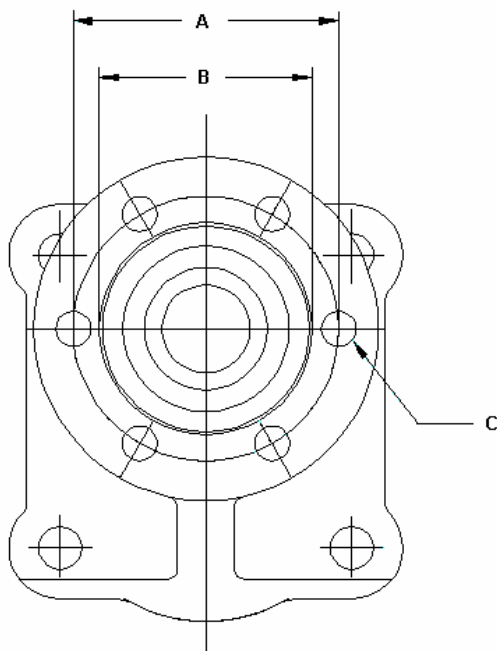
## Pad mount



## Series

	A	B	C	D	CODE
MH15	Not Available				
MH20	Not Available				
MH25	0.69	2.00	2.00	2.50	00
MH30	0.69	2.00	2.00	2.50	00
MH31	0.69	2.00	2.00	2.50	00
MH37	.875	2.50	3.50	2.50	00
MH50	0.69	2.00	2.00	2.50	00
MH51	0.69	2.00	2.00	2.50	00
MH75	Not Available				
MH76	Not Available				
MH315	Not Available				
MH330	Not Available				
MH350	Not Available				
MH365	Not Available				

## 6 Bolt Round



## Series

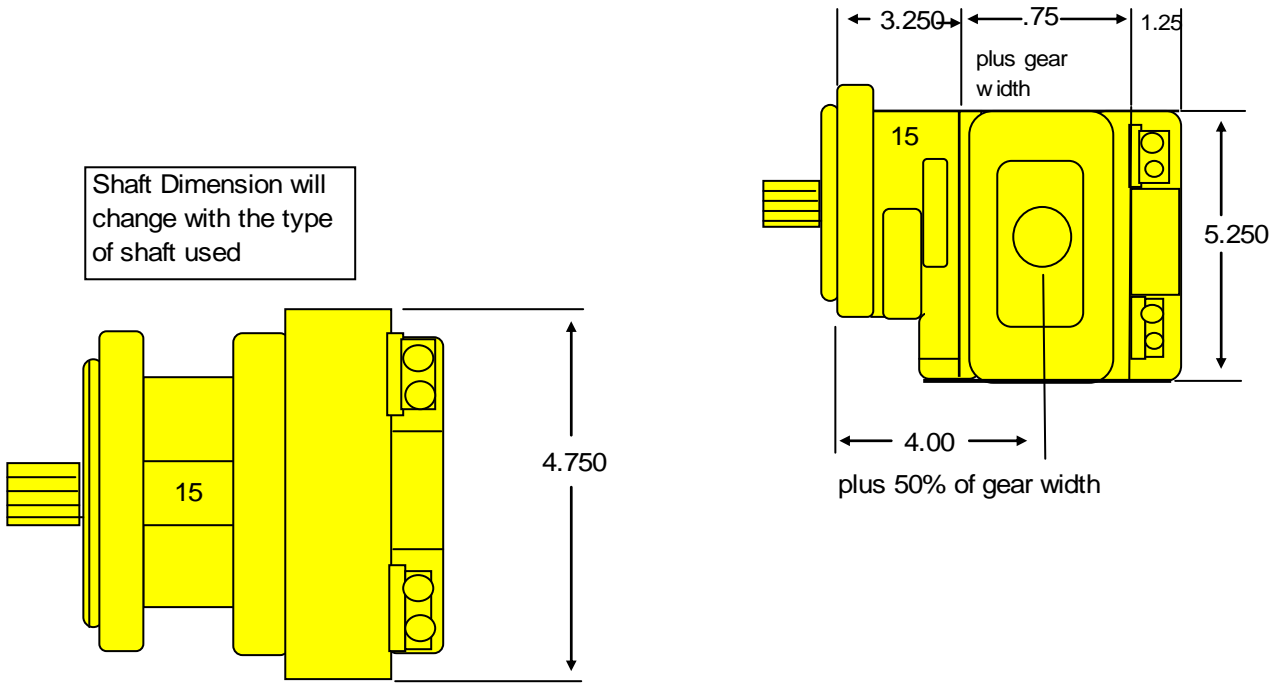
	A	B	C	CODE
MH15	Not Available			
MH20	3.25	2.625	.44	05
MH25	4	3.148	5.625	05
MH30	3.25	2.625	.44	05
MH31	3.25	2.625	.44	05
MH37	Not Available			
MH50	Not Available			
MH51	Not Available			
MH75	Not Available			
MH76	Not Available			
MH315	Not Available			
MH330	Not Available			
MH350	Not Available			
MH365	Not Available			



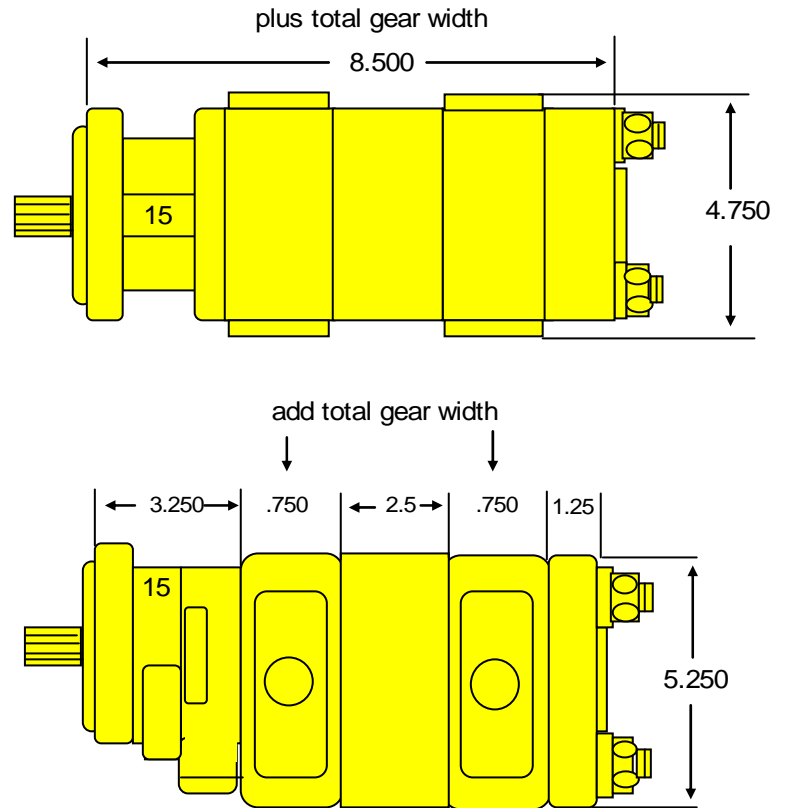
# DIMENSIONAL DATA

## MH15 SERIES SINGLE UNIT

Shaft Dimension will change with the type of shaft used



## MH15 SERIES MULTIPLE UNIT



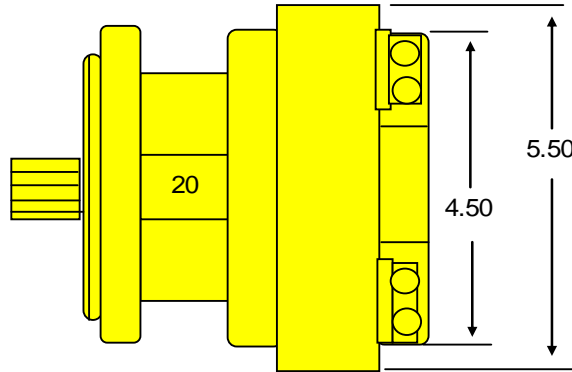
All dimensions in inches. Unfinished casting dimensions may vary

# DIMENSIONAL DATA

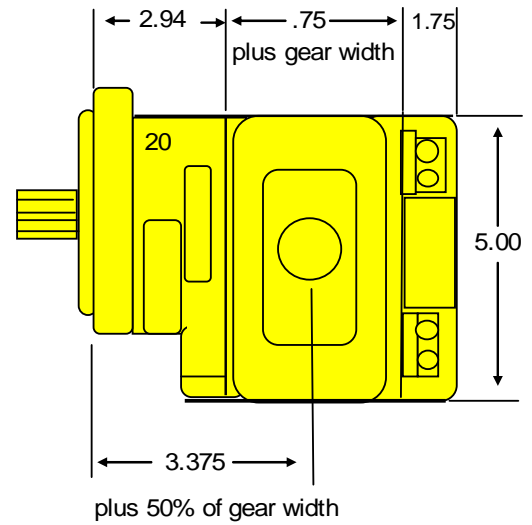
## MH20 SERIES SINGLE UNIT



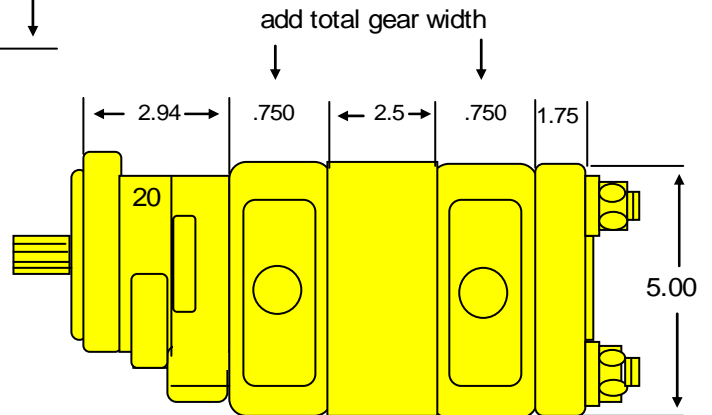
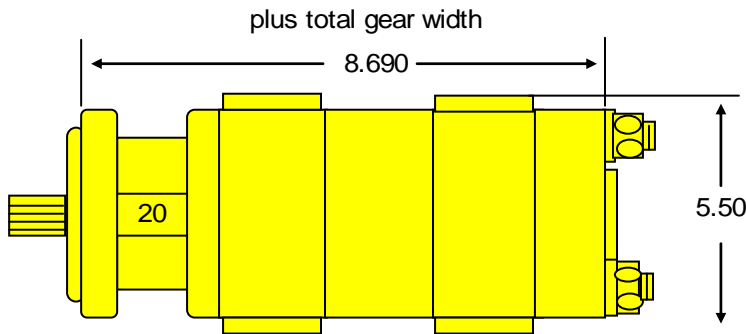
Shaft Dimension will change with the type of shaft used



Width will change with size of gear housing



## MH20 SERIES MULTIPLE UNIT



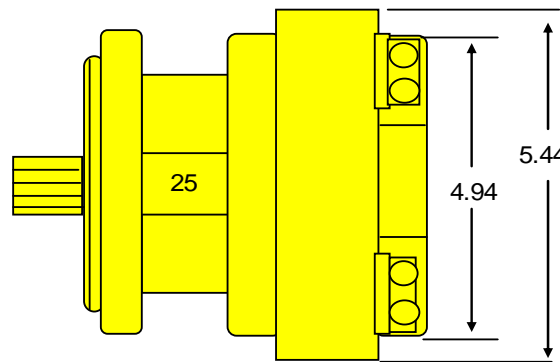
All dimensions in inches. Unfinished casting dimensions may vary

# DIMENSIONAL DATA

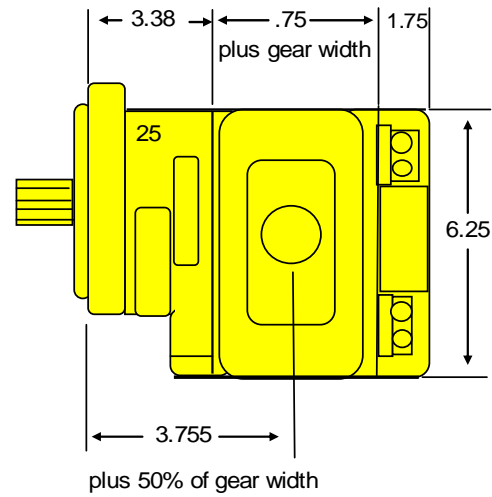
## MH25 SERIES SINGLE UNIT



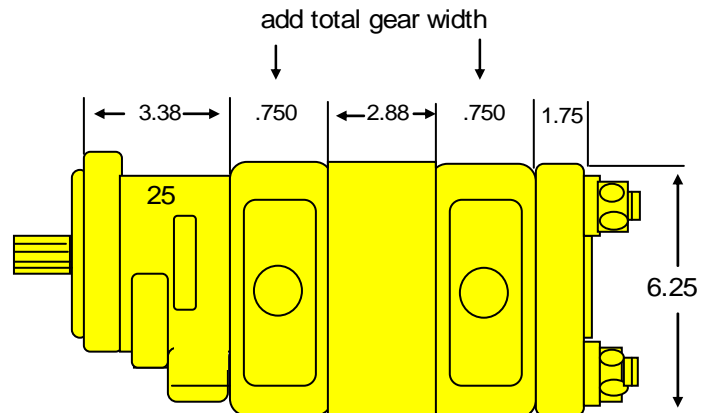
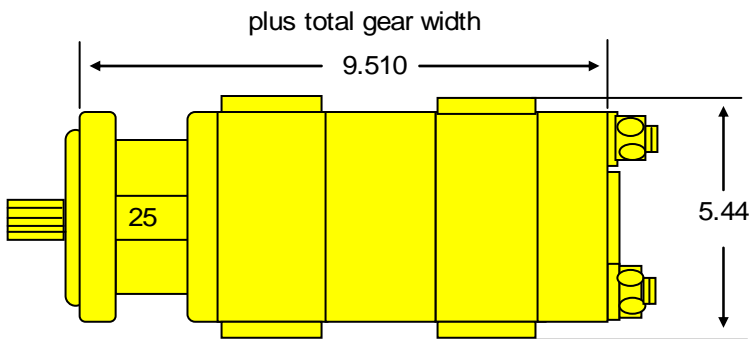
Shaft Dimension will change with the type of shaft used



Width will change with size of gear housing



## MH25 SERIES MULTIPLE UNIT

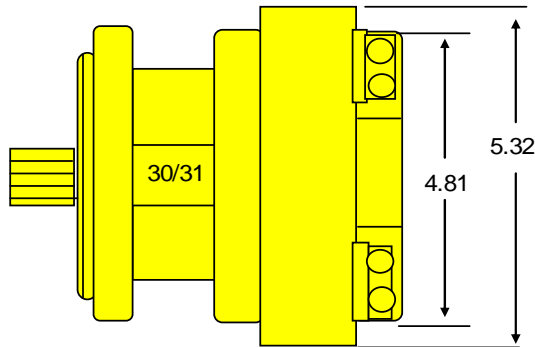


All dimensions in inches. Unfinished casting dimensions may vary

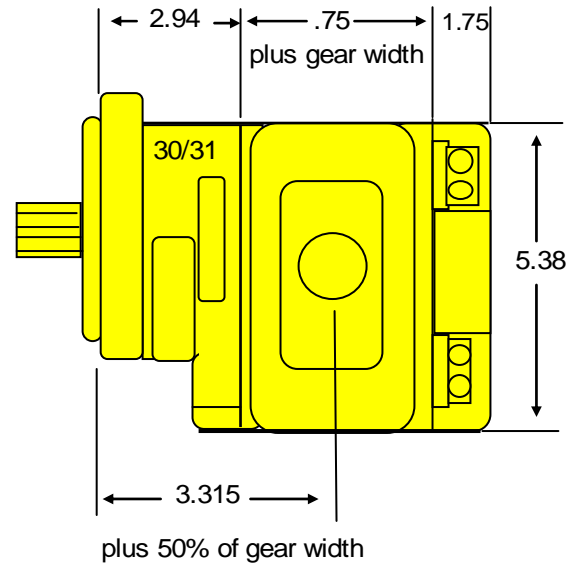
# DIMENSIONAL DATA

## MH30 SERIES SINGLE UNIT

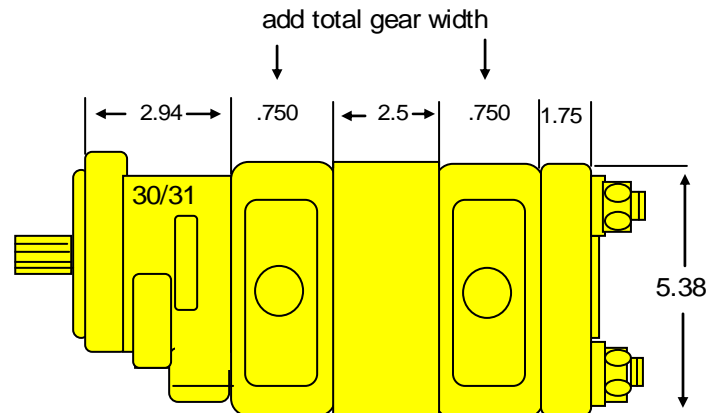
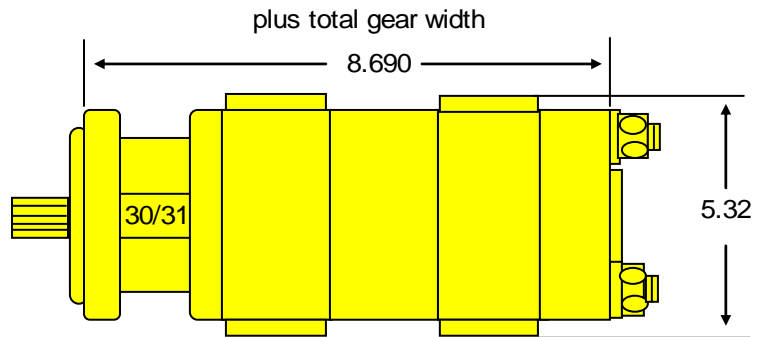
Shaft Dimension will change with the type of shaft used



Width will change with size of gear housing



## MH30 SERIES MULTIPLE UNIT



All dimensions in inches. Unfinished casting dimensions may vary

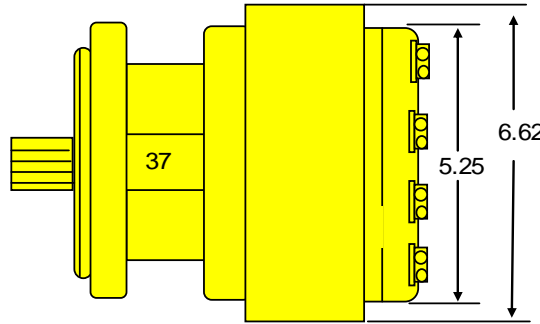


# DIMENSIONAL DATA

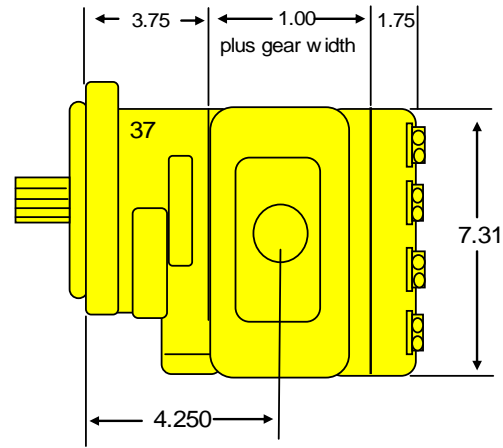
## MH37 SERIES SINGLE UNIT



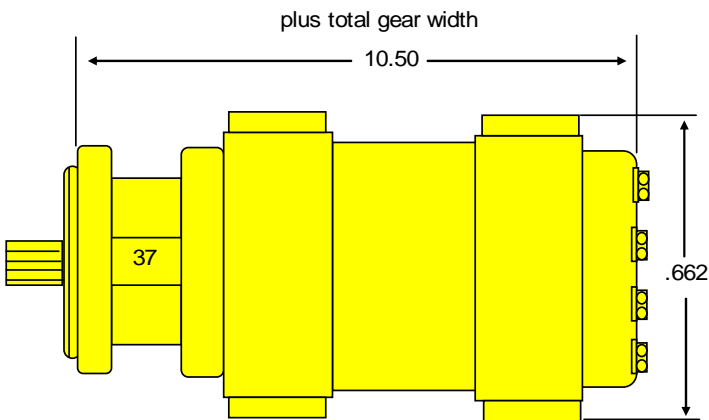
Shaft Dimension will change with the type of shaft used



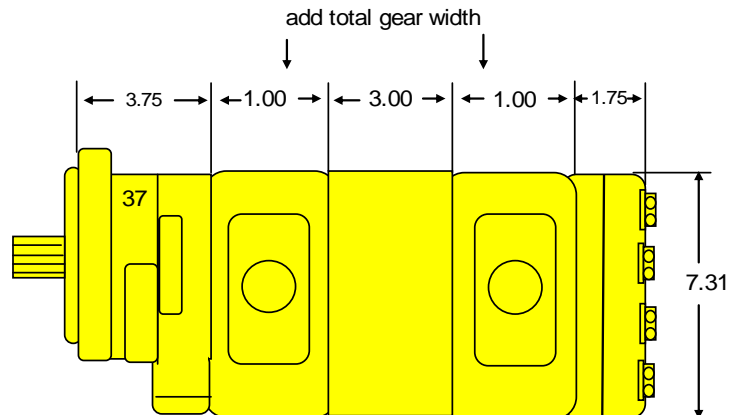
Width will change with size of gear housing



## MH37 SERIES MULTIPLE UNIT



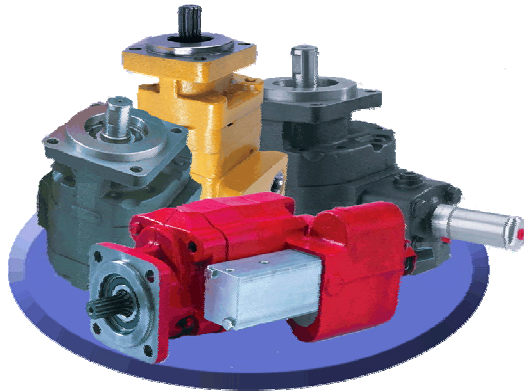
plus 50% of gear width



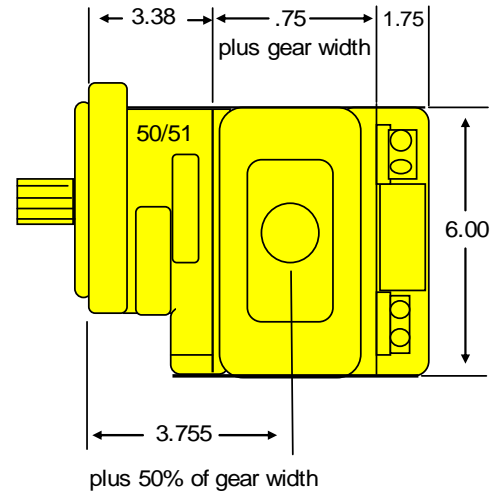
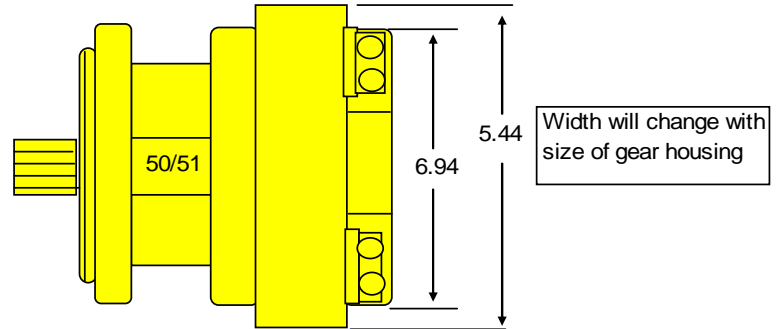
All dimensions in inches. Unfinished casting dimensions may vary

# DIMENSIONAL DATA

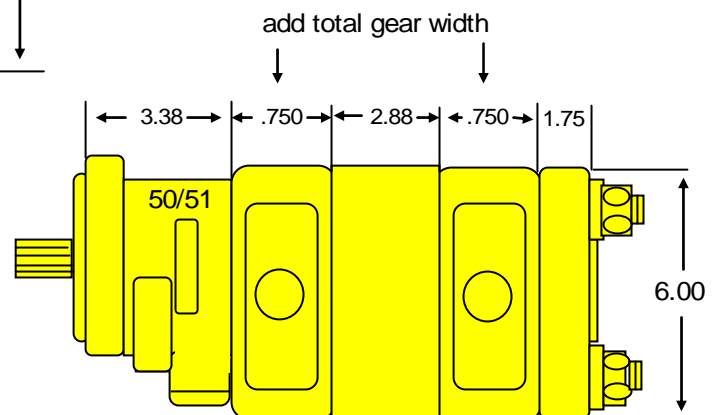
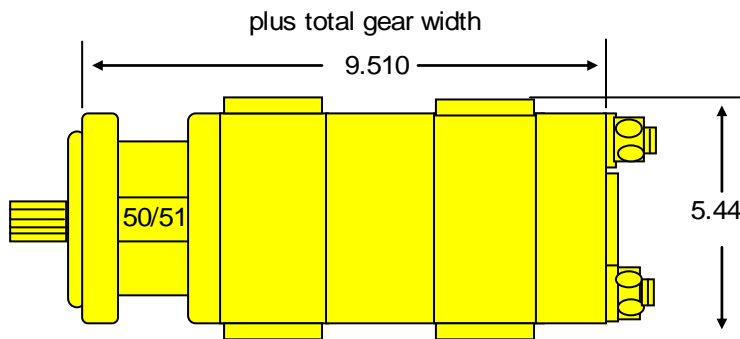
## MH50 SERIES SINGLE UNIT



Shaft Dimension will change with the type of shaft used



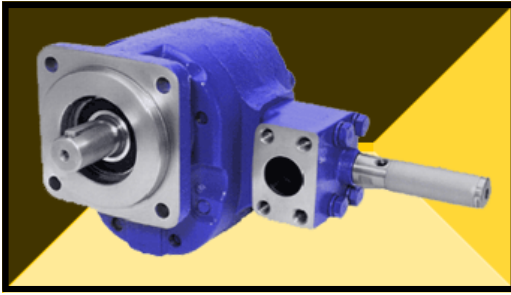
## MH50 SERIES MULTIPLE UNIT



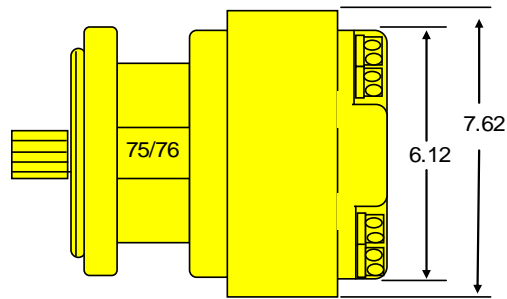
All dimensions in inches. Unfinished casting dimensions may vary

# DIMENSIONAL DATA

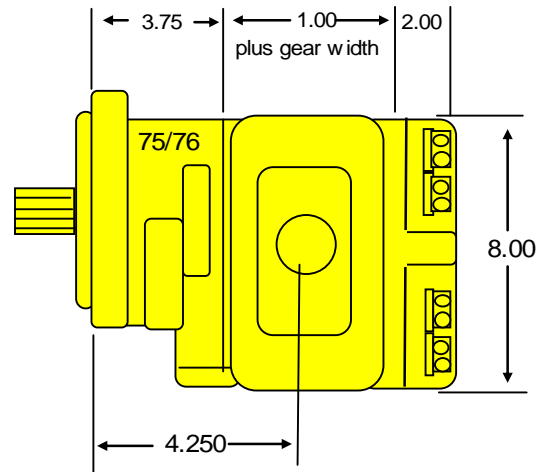
## MH75 SERIES SINGLE UNIT



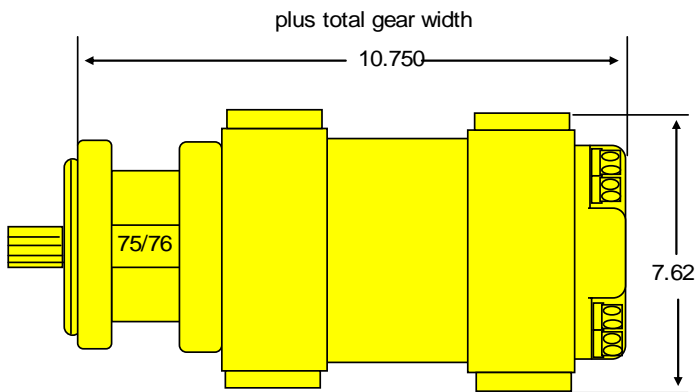
Shaft Dimension will change with the type of shaft used



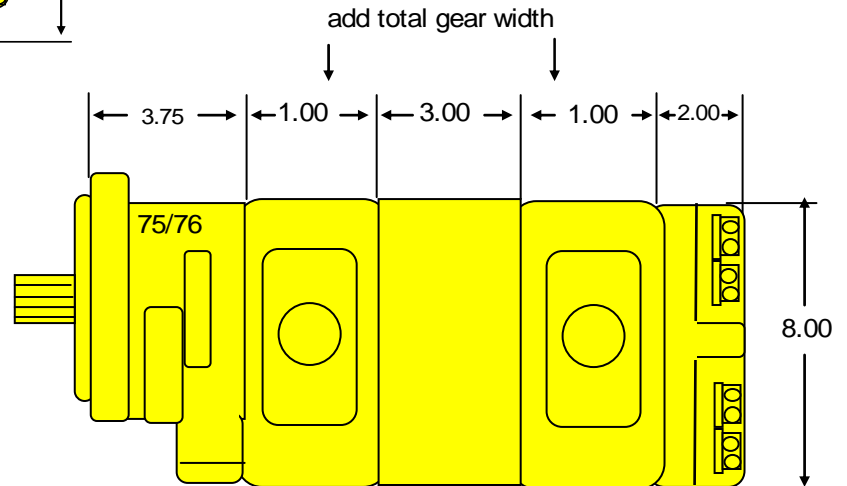
Width will change with size of gear housing



## MH75 SERIES MULTIPLE UNIT



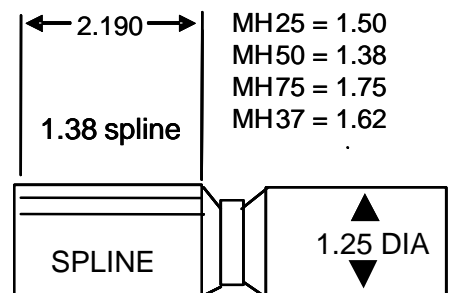
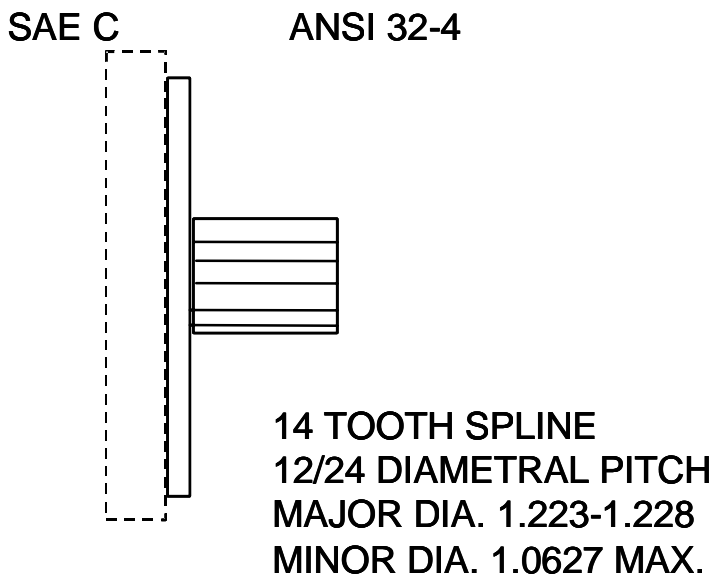
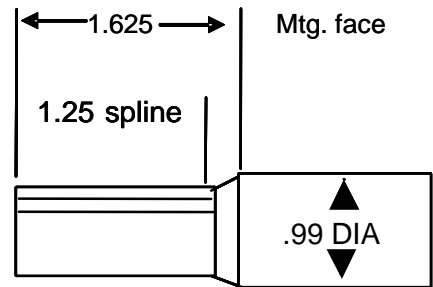
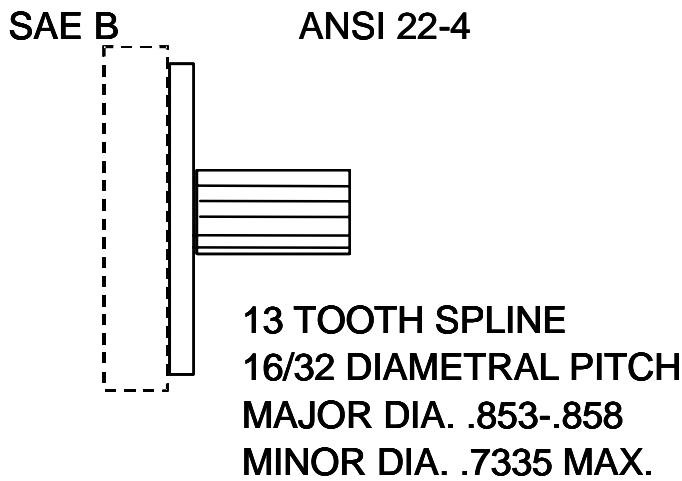
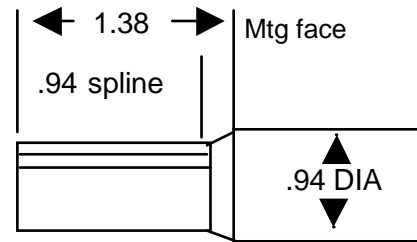
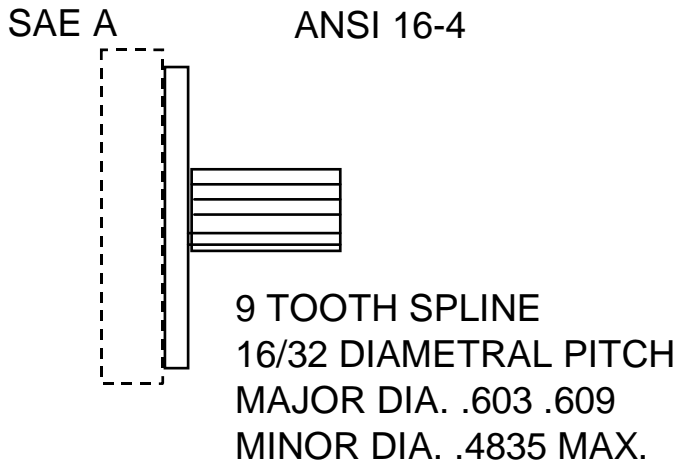
plus 50% of gear width



All dimensions in inches. Unfinished casting dimensions may vary

# DRIVE SHAFT DIMENSIONS

Shaft extension may change according to models

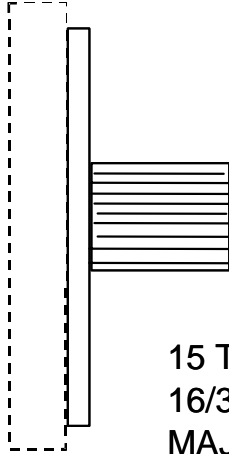




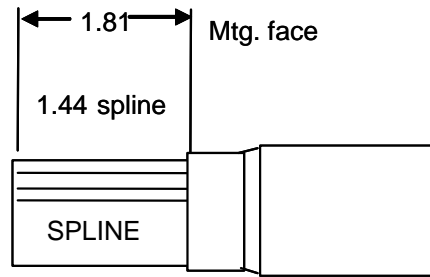
# DRIVE SHAFT DIMENSIONS

SAE BB

ANSI 25-4



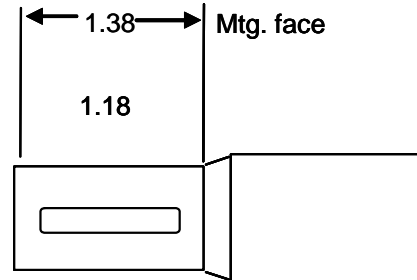
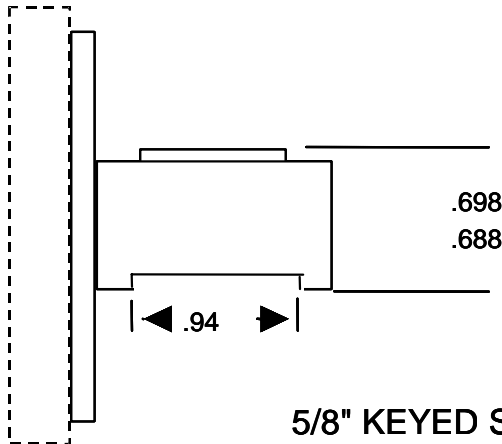
Shaft extension may change according to models



15 TOOTH SPLINE  
16/32 DIAMETRAL PITCH  
MAJOR DIA. .978 -.996  
MINOR DIA. .840 MAX.

SAE A

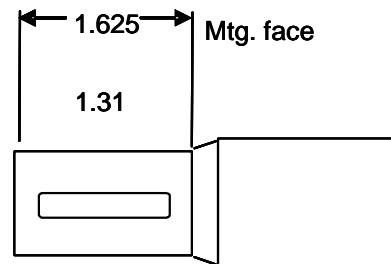
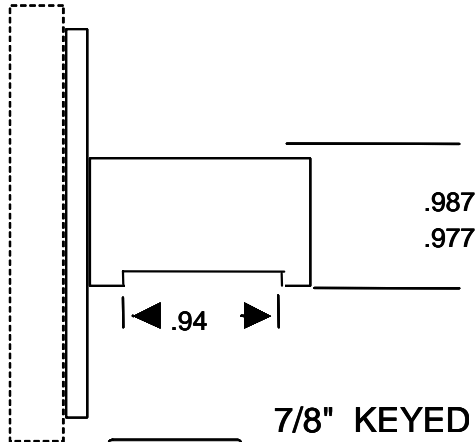
ANSI 16 -1



5/8" KEYED SHAFT  
SQUARE KEY .16 x .16 x .750  
MAJOR DIA. .625  
MINOR DIA. .624

SAE B

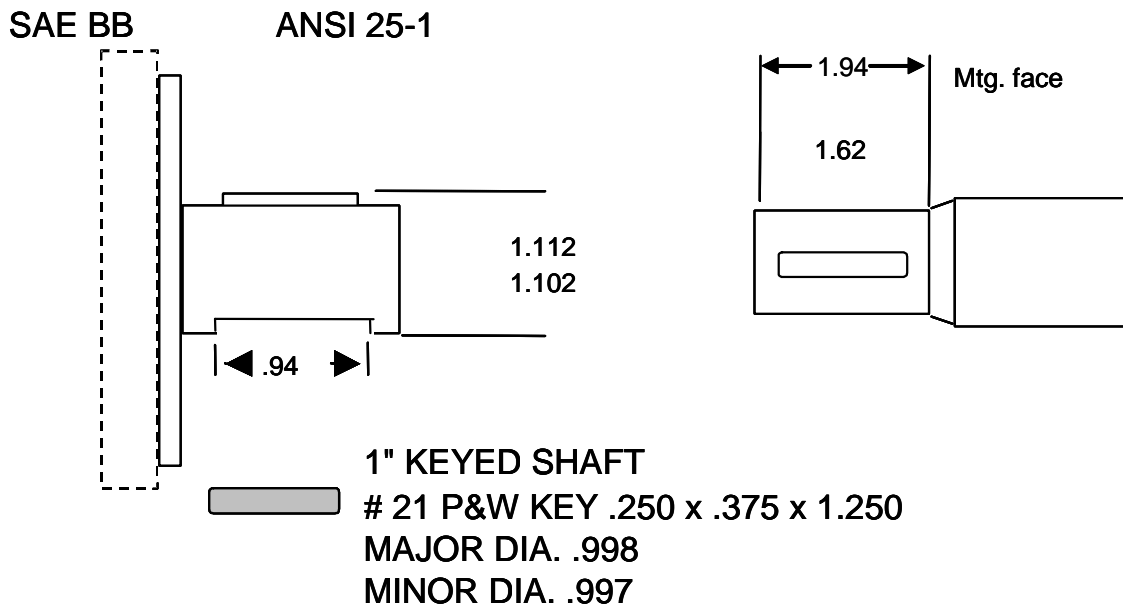
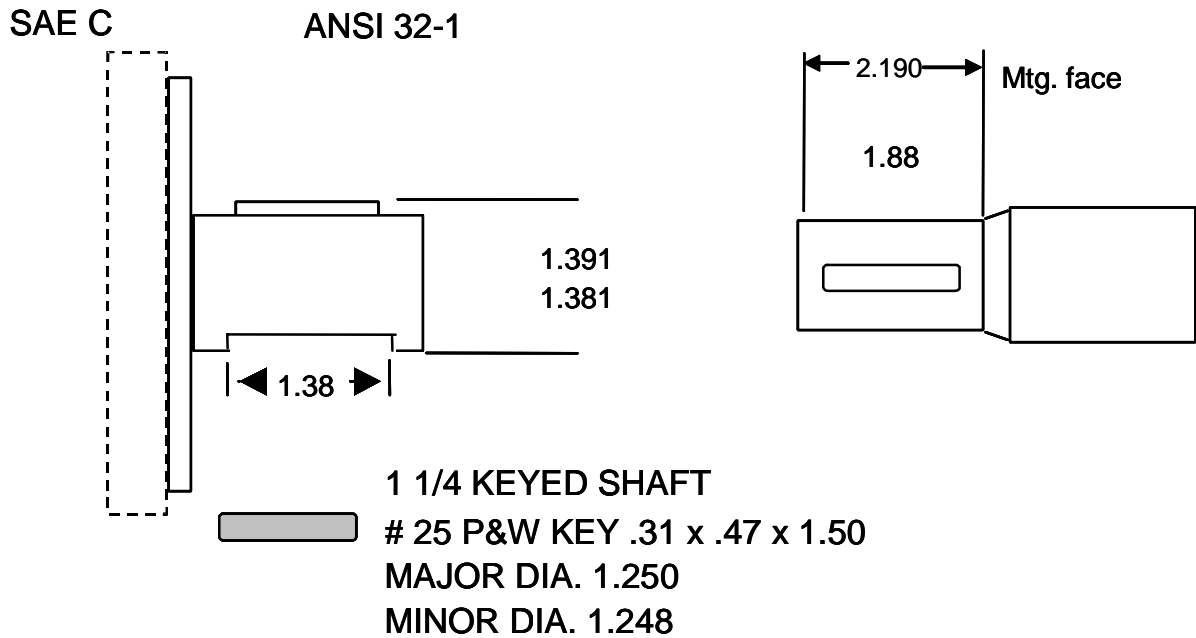
ANSI 22-1



7/8" KEYED SHAFT  
# 15 P&W KEY .250 x .375 x 1  
MAJOR DIA. .875  
MINOR DIA. .874

# DRIVE SHAFT DIMENSIONS

Shaft extension may change according to models

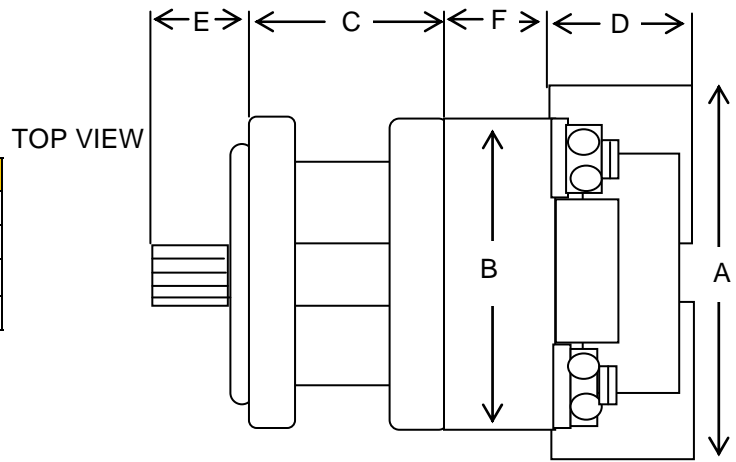


# DIMENSIONAL DATA

## MH300 SERIES PUMP & MOTOR

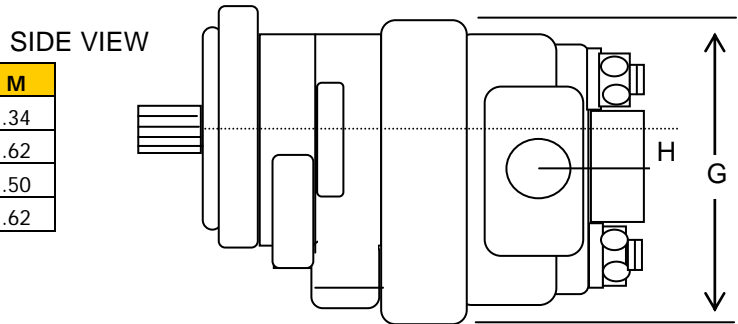
Model	A	B	C	D	E	F
MH315	5.00	4.00	1.88	1.75	1.62	.375 + GW
MH330	6.78	4.81	3.12	2.25	1.62	.5 + GW
MH350	7.69	5.75	3.50	2.25	2.19	.5 + GW
MH365	8.38	6.25	3.75	2.62	2.19	.5 + GW

GW = GEAR WIDTH

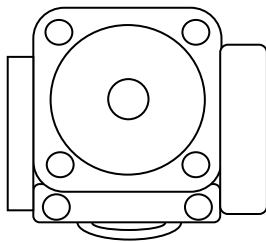


Model	G	H	I	J	K	L	M
MH315	4.75	2.62	1.84	2.62	1.75	3.50 + GW	.34
MH330	5.88	3.50	2.38	3.50	2.25	5.38 + GW	.62
MH350	6.00	3.50	2.50	3.50	2.25	5.75 + GW	.50
MH365	7.25	4.00	2.88	4.00	2.62	6.25 + GW	.62

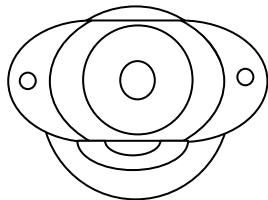
GW = GEAR WIDTH



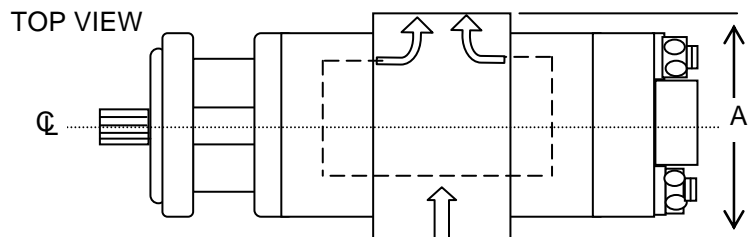
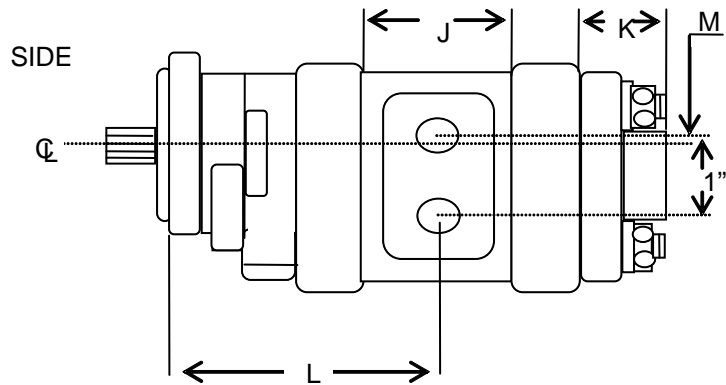
FRONT VIEW



4 BOLT B or C



2 BOLT A or B or C



## BEARING SERIES PRESSURE AND DISPLACEMENT

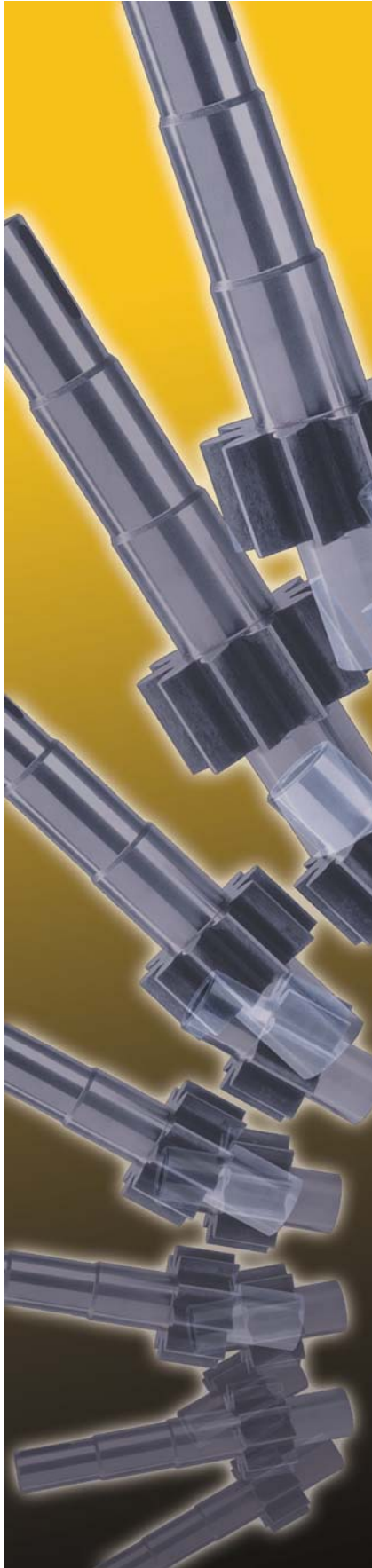
MH20	Gear size	In. <sup>3</sup> /rev	cm. <sup>3</sup> /rev	Max Pressure	
.05	1/2"	.99	16.1	3000 psi	207 bar
.07	3/4"	1.48	24.2	3000 psi	207 bar
1.	1"	1.97	32.3	3000 psi	207 bar
1.25	1 1/4"	2.46	40.4	3000 psi	207 bar
1.50	1 1/2"	2.96	48.4	3000 psi	207 bar
1.75	1 3/4"	3.45	56.5	2500 psi	172 bar
2.	2"	3.94	64.6	2500 psi	172 bar

MH30/31	Gear size	In. <sup>3</sup> /rev	cm. <sup>3</sup> /rev	Max Pressure		Max Pressure dowelled	
.05	1/2"	.99	16.1	2500 psi	172 bar	3000 psi	207 bar
.07	3/4"	1.48	24.2	2500 psi	172 bar	3000 psi	207 bar
1.	1"	1.97	32.3	2500 psi	172 bar	3000 psi	207 bar
1.25	1 1/4"	2.46	40.4	2500 psi	172 bar	3000 psi	207 bar
1.50	1 1/2"	2.96	48.4	2500 psi	172 bar	3000 psi	207 bar
1.75	1 3/4"	3.45	56.5	2250 psi	145 bar	2500 psi	172 bar
2.	2"	3.94	64.6	2250 psi	145 bar	2500 psi	172 bar

MH50/51	Gear size	In. <sup>3</sup> /rev	cm. <sup>3</sup> /rev	Max Pressure		Max Pressure dowelled	
.05	1/2"	1.28	20.9	2500 psi	172 bar	3000 psi	207 bar
.07	3/4"	1.91	31.3	2500 psi	172 bar	3000 psi	207 bar
1.	1"	2.55	41.8	2500 psi	172 bar	3000 psi	207 bar
1.25	1 1/4"	3.19	52.2	2500 psi	172 bar	3000 psi	207 bar
1.50	1 1/2"	3.83	62.7	2500 psi	172 bar	3000 psi	207 bar
1.75	1 3/4"	4.46	73.1	2000 psi	145 bar	3000 psi	207 bar
2.	2"	5.10	83.6	2000 psi	145 bar	2500 psi	172 bar
2.25	2 1/4"	5.74	94.0	2000 psi	145 bar	2500 psi	172 bar
2.5	2 1/2"	6.38	104.5	2000 psi	145 bar	2500 psi	172 bar

MH75/76	Gear size	In. <sup>3</sup> /rev	cm. <sup>3</sup> /rev	Max Pressure		Max Pressure dowelled	
.07	3/4"	3.07	50.28	2500 psi	172 bar	3000 psi	207 bar
1.	1"	4.1	67.15	2500 psi	172 bar	3000 psi	207 bar
1.25	1 1/4"	5.12	83.85	2500 psi	172 bar	3000 psi	207 bar
1.50	1 1/2"	6.15	100.7	2500 psi	172 bar	3000 psi	207 bar
1.75	1 3/4"	7.17	117.45	2500 psi	172 bar	3000 psi	207 bar
2.	2"	8.2	134.3	2500 psi	172 bar	2500 psi	172 bar
2.25	2 1/4"	9.22	151	2250 psi	155 bar	2500 psi	172 bar
2.5	2 1/2"	10.25	167.8	2250 psi	155 bar	2500 psi	172 bar
2.75	2 3/4"	11.275	185	2000 psi	145 bar	2000 psi	145 bar
3	3"	12.3	201	2000 psi	145 bar	2000 psi	145 bar

# BUSHING SERIES PRESSURE & DISPLACEMENT



MH315 Gear Size		In. <sup>3</sup> /rev	cm. <sup>3</sup> /rev	Max Pressure	
.05	1/2"	.62	10.2	3500 psi	241 bar
.07	3/4"	.93	15.2	3500 psi	241 bar
1.	1"	1.24	20.3	3500 psi	241 bar
1.25	1 1/4"	1.55	25.4	3500 psi	241 bar
1.50	1 1/2"	1.86	30.5	3300 psi	228 bar
1.75	1 3/4"	2.17	35.6	2900 psi	200 bar
2.	2"	2.48	40.6	2500 psi	172 bar

MH330 Gear Size		In. <sup>3</sup> /rev	cm. <sup>3</sup> /rev	Max Pressure	
.05	1/2"	.99	16.1	3500 psi	241 bar
.07	3/4"	1.48	24.2	3500 psi	241 bar
1.	1"	1.97	32.3	3500 psi	241 bar
1.25	1 1/4"	2.46	40.4	3500 psi	241 bar
1.50	1 1/2"	2.96	48.4	3500 psi	241 bar
1.75	1 3/4"	3.45	56.5	3250 psi	224 bar
2.	2"	3.94	64.6	3000 psi	207 bar

MH350 Gear Size		In. <sup>3</sup> /rev	cm. <sup>3</sup> /rev	Max Pressure	
.05	1/2"	1.28	20.9	3500 psi	241 bar
.07	3/4"	1.91	31.3	3500 psi	241 bar
1.	1"	2.55	41.8	3500 psi	241 bar
1.25	1 1/4"	3.19	52.2	3500 psi	241 bar
1.50	1 1/2"	3.83	62.7	3500 psi	241 bar
1.75	1 3/4"	4.46	73.1	3250 psi	224 bar
2.	2"	5.10	83.6	3000 psi	207 bar
2.25	2 1/4"	5.74	94.0	2750 psi	190 bar
2.5	2 1/2"	6.38	104.5	2500 psi	172 bar

MH365 Gear Size		In. <sup>3</sup> /rev	cm. <sup>3</sup> /rev	Max Pressure	
.07	3/4"	2.70	44.3	3500 psi	241 bar
1.	1"	3.60	59.0	3500 psi	241 bar
1.25	1 1/4"	4.50	73.8	3500 psi	241 bar
1.50	1 1/2"	5.40	88.5	3500 psi	241 bar
1.75	1 3/4"	6.30	103.3	3500 psi	241 bar
2.	2"	7.20	118.0	3500 psi	241 bar
2.25	2 1/4"	8.10	132.8	3250 psi	224 bar
2.5	2 1/2"	9.00	147.5	3000 psi	207 bar



# FLOW DIVIDERS

To build an assembly code number for a flow divider

This is the code for a three section flow divider

→ **MFD50B-BY-OD12-1-E-OJ25-1-E-UD10-BY**

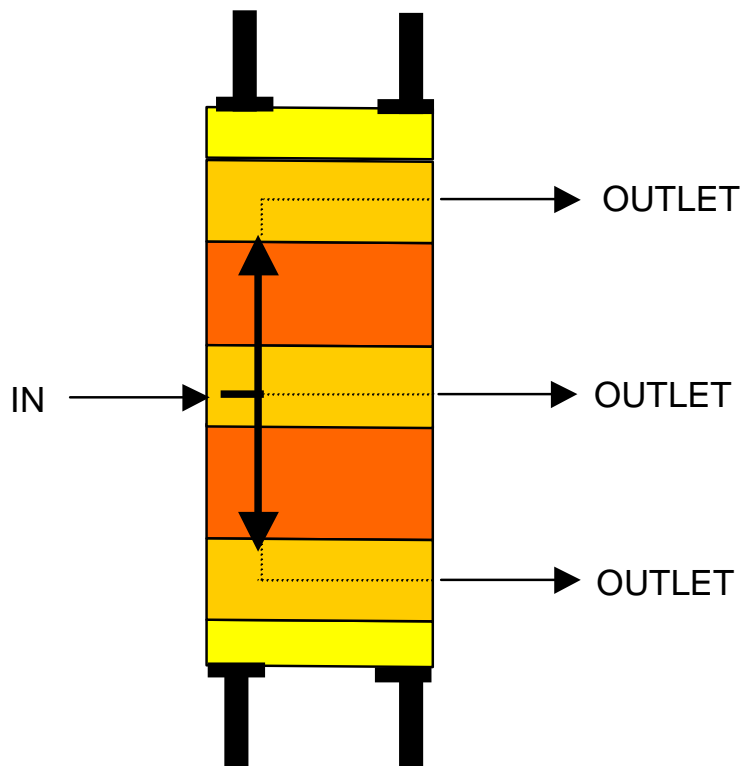
The code letters and numbers are the same found when building codes for pumps/motors.

When selecting the correct code for the flow divider use the clockwise gear housing and end cover codes from the pump code section for the series required.

These units are built in the 30 / 31 / 50 / 51/ 75 / 76 models

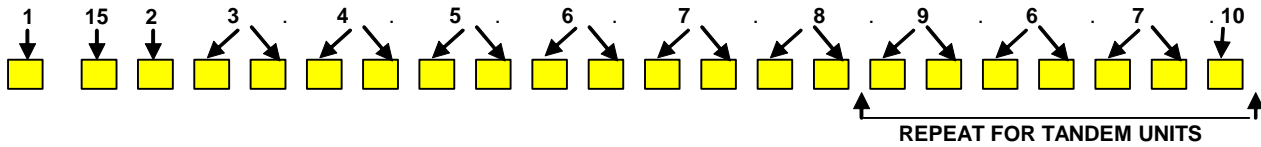
Consult the factory for codes not found in the catalog

Flow divider			
Series			<b>MFD</b>
Model			<b>50</b>
1	Port End Cover	blank with ext. studs	<b>B</b>
2	Gear Housing	1" split flange on one side	<b>BY</b>
3	Connecting Shaft	not shown	<b>OD12</b>
4	Bearing Carrier	no ports	<b>1</b>
5	Gear Housing	1 1/4" x 1" split flange	<b>E</b>
6	Connecting Shaft	not shown	<b>OJ25</b>
7	Bearing Carrier	no ports	<b>1</b>
8	Gear Housing	3/4" split flange on one side	<b>E</b>
9	Port End Cover	blank with ext. studs	<b>UD10</b>
			<b>BY</b>



# MH15 SERIES CODING

## MH 15 SERIES CODING

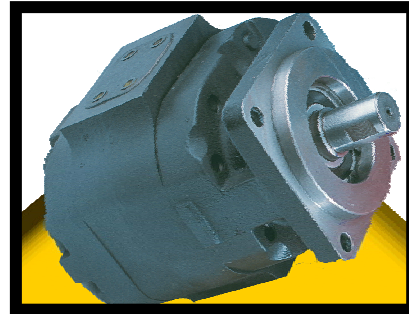


### 1 PUMP / MOTOR

MHP PUMP  
MHM MOTOR

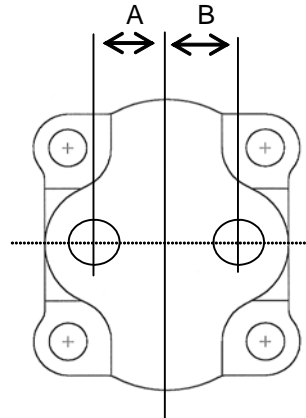
### 2 UNIT

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



### 3 SHAFT END COVER

1 PUMP WITH SHAFT BEARING **CLOCKWISE ROTATION**  
2 PUMP WITH SHAFT BEARING **COUNTER CLOCKWISE ROTATION**  
3 PUMP WITH SHAFT BEARING **DOUBLE ROTATION**  
9 MOTOR WITH SHAFT BEARING & **1/4" DRAIN PORT**



### 4 SHAFT END COVER

00 PAD MOUNT  
02 ROUND FLANGE 6 BOLT  
01 S.A.E. 2 BOLT "A" MOUNT  
07 S.A.E. 2 BOLT "B" MOUNT  
05 4 BOLT 3 3/4" "A" MOUNT  
10 4 BOLT ROUND

### 5 PORT END COVER

#### NPT CODES

SINGLE UNITS	TANDEM UNITS	PORT SIZE			
		LEFT	RIGHT	A	B
BE	BI	NONE	NONE	N/A	N/A
WE	WI	3/8"	3/8"	1.25	1.25
CE	CI	NONE	1/2"	N/A	1.25
FE	FI	1/2"	NONE	1.25	N/A
GE	GI	1/2"	1/2"	1.25	1.25
HE	HI	1/2"	3/4"	1.25	1.25
KE	KI	3/4"	1/2"	1.25	1.25
JE	JI	3/4"	NONE	1.25	N/A
DE	DI	NONE	3/4"	N/A	1.25
LE	LI	3/4"	3/4"	1.25	1.25
VE	VI	3/4"	1"	1.25	1.25
TE	TI	1"	3/4"	1.41	1.41
NE	NI	1"	NONE	1.25	N/A
ME	MI	NONE	1"	N/A	1.25
PE	PI	1"	1"	1.25	1.25
SE	SI	1/2"	1"	1.25	1.25
RE	RI	1"	1/2"	1.25	1.25

#### ORB

SINGLE UNITS	TANDEM UNITS	PORT SIZE			
		LEFT	RIGHT	A	B
MO	MU	NONE	1/2"	N/A	1.25
LO	LU	1/2"	NONE	1.25	N/A
NO	NU	1/2"	1/2"	1.25	1.25
TO	TU	NONE	5/8"	N/A	1.25
SO	SU	5/8"	NONE	1.25	N/A
VO	VU	5/8"	5/8"	1.25	1.25
DO	DU	NONE	3/4"	N/A	1.25
CO	CU	3/4"	NONE	1.25	N/A
FO	FU	3/4"	3/4"	1.25	1.25
RO	RU	1/2"	5/8"	1.25	1.25
PO	PU	5/8"	1/2"	1.25	1.25
HO	HU	1/2"	3/4"	1.25	1.25
KO	KU	3/4"	1/2"	1.25	1.25

ORIENTATION IS FROM THE SHAFT END

ORIENTATION IS FROM THE SHAFT END

WITH SUPPORT STUDS ON REQUEST

- \* N.P.T. PORTING IS NOT RECOMMENDED FOR PRESSURES ABOVE 1500 P.S.I.
- \* Ports marked with a X are recommended porting, for all other porting please consult the factory
- \* SHADED CELLS ARE GOOD FOR MOTOR UNITS
- \* ORIENTATION IS LOOKING FROM THE SHAFT END OF THE UNIT

NPT.	PORT LEFT	PORT RIGHT	5	7	10	12	15	17	20
AB	NONE	NONE	X	X	X	X	X	X	X
AP	1/2"	NONE	X	X	X				
AC	NONE	1/2"	X	X	X				
EC	1/2"	1/2"	X	X	X				
ED	1/2"	3/4"			X	X	X		
EH	3/4"	1/2"			X	X	X		
AR	3/4"	NONE		X	X	X	X	X	
AF	NONE	3/4"			X	X	X	X	X
ER	3/4"	3/4"			X	X	X	X	X
ET	3/4"	1"			X	X	X	X	X
EU	3/4"	1 1/4"					X	X	
IJ	1"	3/4"			X	X	X	X	
IQ	1 1/4"	3/4"					X	X	
AT	1"	NONE			X	X	X	X	X
AH	NONE	1"			X	X	X	X	X
IL	1"	1"				X	X	X	X
IM	1"	1 1/4"*					X	X	X
IS	1 1/4"*	1"					X	X	X
AV	1 1/4"*	NONE					X	X	X
AJ	NONE	1 1/4"*					X	X	X
IT	1 1/4"	1 1/4"					X	X	X

ORB.	PORT LEFT	PORT RIGHT	5	7	10	12	15	17	20
AB	NONE	NONE	X	X	X	X	X	X	X
UC	NONE	1/2"			X	X	X		
UP	1/2"	NONE			X	X	X		
YC	1/2"	1/2"			X	X	X	X	X
UD	NONE	5/8"			X	X			
UQ	5/8"	NONE			X	X	X	X	
YK	5/8"	5/8"			X	X			
UF	NONE	3/4"			X	X	X	X	
UR	3/4"	NONE					X	X	X
YR	3/4"	3/4"					X	X	X
UG	NONE	7/8"					X	X	X
US	7/8"	NONE					X		
YZ	7/8"	7/8"					X	X	X
YD	1/2"	5/8"					X	X	X
YJ	5/8"	1/2"			X	X	X		
YL	5/8"	3/4"			X	X	X	X	
YQ	3/4"	5/8"			X	X	X	X	
YS	3/4"	7/8"				X	X	X	X
YX	7/8"	3/4"				X	X	X	

FLANGE.	PORT LEFT	PORT RIGHT	5	7	10	12	15	17	20
AB	NONE	NONE	X	X	X	X	X	X	X
OC	NONE	1/2"		X	X				
OP	1/2"	NONE		X	X				
ZC	1/2"	1/2"		X	X				
OF	NONE	3/4"			X	X	X	X	
OR	3/4"	NONE			X	X	X	X	
ZR	3/4"	3/4"			X	X	X	X	
OH	NONE	1"				X	X	X	X
OT	1"	NONE				X	X	X	X
RL	1"	1"				X	X	X	X
OJ	NONE	1 1/4"					X	X	X
OV	1 1/4"	NONE					X	X	X
RT	1 1/4"	1 1/4"					X	X	X
ZT	3/4"	1"				X	X	X	
RJ	1"	3/4"				X	X	X	
RM	1"	1 1/4"					X	X	X
RS	1 1/4"	1"					X	X	X
ZF	1/2"	3/4"			X				
ZP	3/4"	1/2"			X				



# MH15 SERIES CODING

## 8 SHAFT TYPE

- 3 6 TOOTH SPLINE .997 MAJ. DIA. X 2 1/2" EXT
- 12 S.A.E. "C" 14 TOOTH SPLINE 1.250" DIA
- 11 1. DIA KEYED SHAFT
- 25 1.250 DIA KEYED SHAFT

## 7 GEAR SIZE MH 15

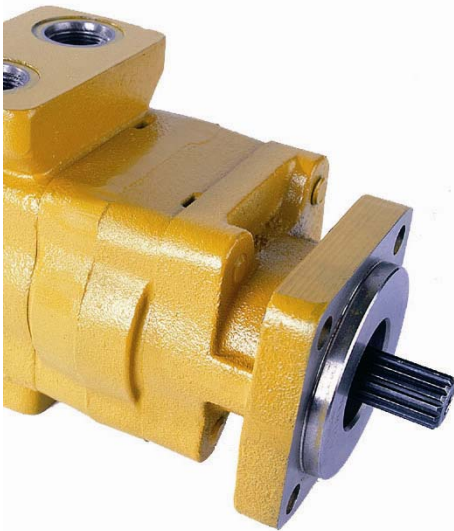
MH / 25	CU. IN.	MAX. PSI
05	.69	2000 PSI
07	1.07	2000 PSI
10	1.38	2000 PSI
12	1.73	2000 PSI
15	2.08	2000 PSI
17	2.42	2000 PSI
20	2.7	2000 PSI

## 9 BEARING CARRIERS FOR 15 UNIT

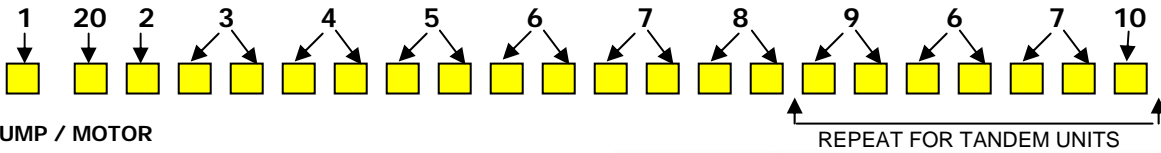
N.P.T.		cw	ccw
IN	OUT	LEFT	RIGHT
NONE	NONE	B	B
1 1/2"	NONE	TL	
NONE	1 1/2"		TJ
1 1/2"	1"	XS	
1"	1 1/2"		XT
1"	1"	DH	DH
1 1/4"	1 1/4"	BF	BF

S.A.E. O RING		cw	ccw
IN	OUT	LEFT	RIGHT
1 1/2"	NONE	TH	
NONE	1 1/2"		TM
1 1/2"	1"	TK	
1"	1 1/2"		TN
1"	1"	QD	QD
1 1/4"	1 1/4"	NV	NV

**10** CONNECTING SHAFT USE CODE #1 FOR ALL MULTIPLE UNITS



# MH20 SERIES CODING



## 1 PUMP / MOTOR

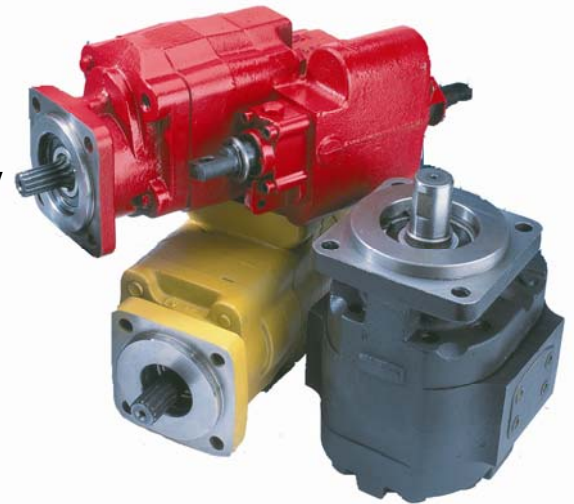
- MHP PUMP
- MHM MOTOR

## 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



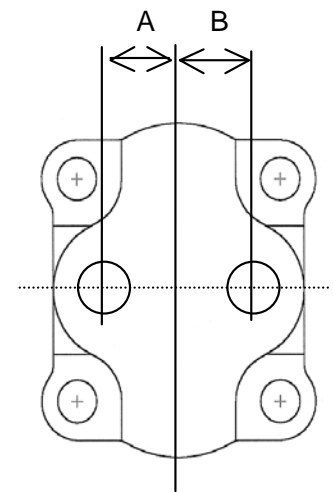
## 4 SHAFT END COVER

- 27 4 BOLT CLOVERLEAF MOUNT *TYPE 2*
- 42 S.A.E. 4 BOLT "B" MOUNT *TYPE 1*
- 46 S.A.E. 2 & 4 BOLT "B" MOUNT *TYPE 1*
- 94 S.A.E. 2 BOLT "A" MOUNT *TYPE 1*
- 96 S.A.E. 2 BOLT "B" MOUNT *TYPE 2*
- 97 S.A.E. 2 BOLT "B" MOUNT *TYPE 1*

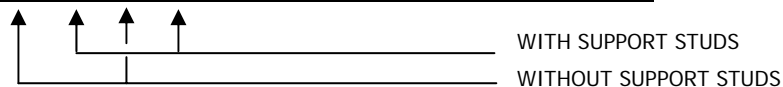
## 5 PORT END COVER

"O" RING PORTS	CODES							
	SINGLE UNITS		TANDEM UNITS		PORT SIZE			
					LEFT	RIGHT	A	B
	CE	CY	C I	CY	3/4"	NONE	N/A	1.4
	DE	DY	D I	DY	NONE	3/4"	1.4	N/A
	FE	FY	F I	FY	3/4"	3/4"	1.4	1.4
	GE	GY	G I	GY	1"	3/4"	1.4	1.4
	HE	HY	H I	HY	3/4"	1"	1.4	1.4
	JE	JY	J I	JY	1"	1"	1.4	1.4
	MA	YO	MU	YO	1"	NONE	N/A	1.4
	RA	RO	SU	RO	NONE	1"	1.4	N/A

N.P.T. PORTS								
	BE	BY	B I	BY	NONE	NONE	N/A	N/A
	KE	KY	K I	KY	3/4"	NONE	N/A	1.4
	LE	LY	L I	LY	NONE	3/4"	1.4	N/A
	ME	MY	M I	MY	3/4"	3/4"	1.4	1.4
	QU	QQ	QO	QQ	1"	1"	1.4	1.4
	A I		A I		3/4"	1"	1.4	1.4
	E I		E I		1"	3/4"	1.4	1.4



ORIENTATION IS FROM THE SHAFT END



# MH20 SERIES GEAR HOUSING PORTS

## NOTE

- \* N.P.T. PORTING IS NOT RECOMMENDED FOR PRESSURES ABOVE 1500 P.S.I.
- \* Ports marked with a "X" 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.CODE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	X	X	X	X	X	X	X
IL	1/2"	NONE	X	X	X				
IM	NONE	1/2"	X	X	X				
IR	1/2"	1/2"	X	X					
IC	3/4"	NONE		X	X	X	X	X	X
ID	NONE	3/4"		X	X	X	X	X	X
IF	3/4"	3/4"		X	X	X	X	X	X
IG	3/4"	1"			X	X	X	X	X
IH	3/4"	1 1/4"					X	X	
IJ	1"	3/4"			X	X	X	X	X
IK	1 1/4"	3/4"					X	X	
YC	1"	NONE			X	X	X	X	X
YD	NONE	1"			X	X	X	X	X
YF	1"	1"			X	X	X	X	X
YG	1"	1 1/4" *				X	X	X	X
YH	1"	1 1/2"					X	X	X
YJ	1 1/4" *	1"					X	X	X
YK	1 1/2"	1"					X	X	X
IA	1 1/4" *	NONE					X	X	X
IB	NONE	1 1/4" *					X	X	X
YL	1 1/4"	1 1/4"					X	X	X

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





# MH20 SERIES GEAR HOUSING PORTS

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

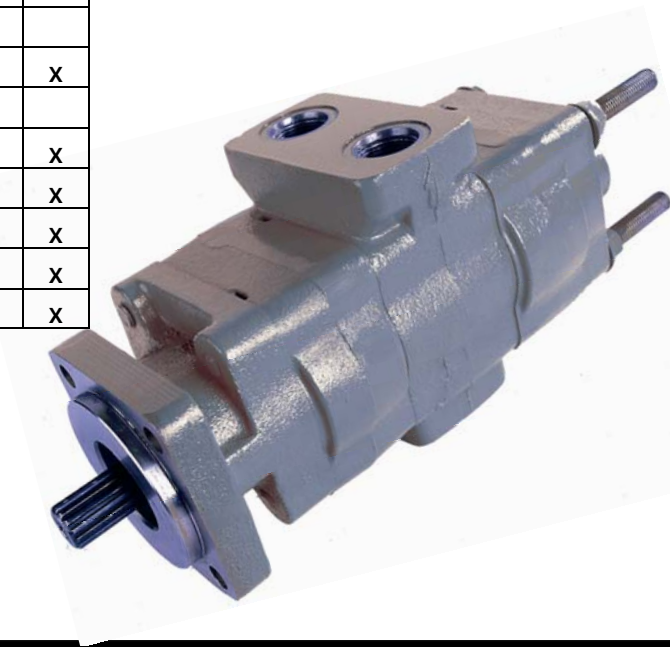
SPLIT FLANGE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	X	X	X	X	X	X	X
UC	3/4"	NONE		X	X	X	X	X	X
UD	NONE	3/4"		X	X	X	X	X	X
UF	3/4"	3/4"		X	X	X	X	X	
UG	3/4"	1"			X	X	X	X	X
UH	3/4"	1 1/4"				X	X	X	X
UJ	1"	3/4"			X	X	X	X	X
UK	1 1/4"	3/4"				X	X	X	X
OC	1"	NONE				X	X	X	X
OD	NONE	1"				X	X	X	X
OF	1"	1"			X	X	X	X	X
OG	1"	1 1/4" *				X	X	X	X
OH	1"	1 1/2" *						X	X
OJ	1 1/4" *	1"				X	X	X	X
OK	1 1/2" *	1"						X	X
OA	1 1/4" *	NONE				X	X	X	X
OB	NONE	1 1/4" *				X	X	X	X
OL	1 1/4"	1 1/4"					X	X	X
OM	1 1/4"	1 1/2" *						X	X
OP	1 1/2" *	1 1/4"						X	X
OE	1 1/2" *	NONE					X	X	X
OU	NONE	1 1/2" *					X	X	X



# MH20 SERIES GEAR HOUSING PORTS

METRIC S. F.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	X	X	X	X	X	X	X
VN	3/4"	NONE			X	X	X	X	
VO	NONE	3/4"			X	X	X	X	
VS	3/4"	3/4"			X	X	X	X	
VT	3/4"	1"			X	X	X	X	
RV	1"	3/4"			X	X	X	X	
RU	3/4"	1 1/4"				X	X	X	
RW	1 1/4"	3/4"				X	X	X	
UL	1"	NONE			X	X	X	X	X
UR	NONE	1"			X	X	X	X	X
UM	1"	1"				X	X	X	
VU	1"	1 1/4" *				X	X	X	X
UX	1 1/4" *	1"				X	X	X	X
HO	1"	1 1/2" *						X	X
VO	1 1/2" *	1"						X	X
NO	1 1/4" *	NONE					X	X	X
UO	NONE	1 1/4" *					X	X	X
PO	1 1/4"	1 1/4"					X	X	X
QO	1 1/4"	1 1/2" *						X	X
SO	1 1/2" *	1 1/4"						X	X
UY	1 1/2" *	NONE					X	X	X
TO	NONE	1 1/2" *					X	X	X

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



# MH20 SERIES CODING

## 7 GEAR SIZE MH 20

MH / 20	CU. IN.	MAX. PSI
05	.99	3000 PSI
07	1.48	3000 PSI
10	1.97	3000 PSI
12	2.46	3000 PSI
15	2.96	3000 PSI
17	3.45	2500 PSI
20	3.94	2500 PSI

## 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
95	S.A.E. A 9 TOOTH SPLINE .62" dia.
65	S.A.E. "B" SPLINE TYPE 2
66	S.A.E. "B" KEYED TYPE 2
98	S.A.E. "BB" 15 TOOTH SPLINE 1" dia.

## 9 BEARING CARRIERS ORIENTATION IS FROM THE SHAFT END

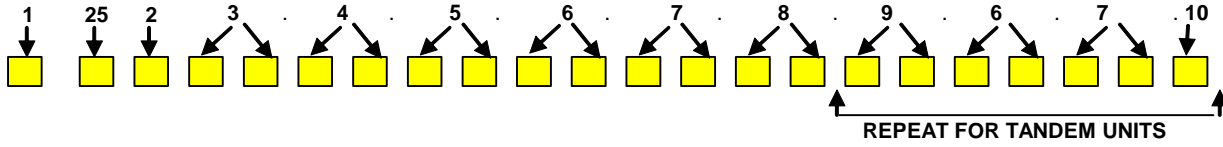
N.P.T.				S.A.E. SPLIT FLANGE			
IN	OUT	CW	CCW	IN	OUT	CW	CCW
NONE	NONE			1"	NONE	LB	BL
NONE	NONE	C	D	1 1/4"	NONE	MB	BM
		A	J	1 1/2"	NONE	NB	BN
1"	NONE						
1 1/4"	NONE	TB	BT	NONE	3/4"	BR	RB
		VB	BV	1"	3/4"	LR	RL
1"	3/4"			1 1/4"	3/4"	MR	RM
1 1/4"	3/4"	TX	XT	1 1/2"	3/4"	NR	RN
1 1/4"	1"	VX	XV	1 1/4"	1"	MS	SM
		VZ	ZV	1 1/2"	1"	NS	SN
1 1/4"	3/4"	TJ	JT	1"	3/4"	LX	XL
1 1/4"	1"	VJ	JV	1 1/4"	3/4"	MX	XM
1 1/2"	1"	VK	KV	1 1/2"	3/4"	NX	XN
		KW	.	1 1/4"	1"	MZ	ZM
				1 1/2"	1"	NZ	ZN
1"	3/4"	ZX	XZ				
				1"	3/4"	SR	RS
1"	3/4"	ZS	SZ				
				1"	3/4"	RZ	ZR
		CB	BC				
1 1/4"	NONE	DB	BD				
1 1/2"	NONE	FB	BF				
NONE	3/4"	JP	JP				
1"	3/4"	CJ	JC				
1 1/4"	3/4"	DJ	JD				
1 1/2"	3/4"	FJ	JF				
1 1/4"	1"	DK	KD				
1 1/2"	1"	FK	KF				
1"	3/4"	CR	RC				
1 1/4"	3/4"	DR	RD				
1 1/2"	3/4"	FR	RF				
1 1/4"	1"	DS	SD				
1 1/2"	1"	FS	SF				
1"	3/4"	KJ	JK				
1"	3/4"	KX	XK				

### MOTORS ONLY

IN	OUT	DUAL
NONE	NONE	B
1"	1"	TT
1 1/4"	1 1/4"	VV
1"	1"	CC
1 1/4"	1 1/4"	BB
1 1/2"	1 1/2"	FF
1"	1"	LL
1 1/4"	1 1/4"	MM
1 1/2"	1 1/2"	NN

**10** CONNECTING SHAFT USE CODE #1 FOR ALL MULTIPLE UNITS

# MH25 SERIES CODING



**1 PUMP / MOTOR**

- MHP PUMP
- MHM MOTOR

**2 UNIT**

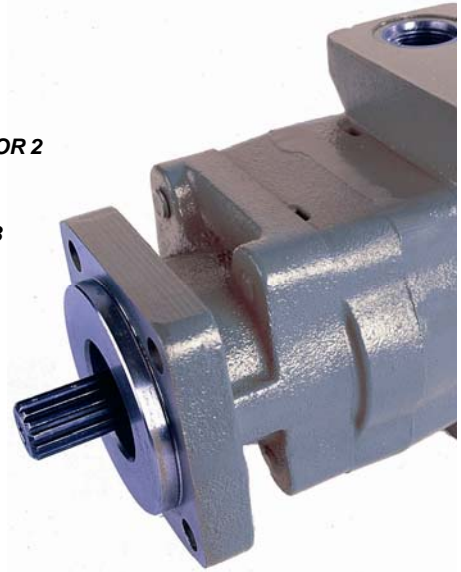
- X SINGLE OR TANDEM WITH A CONTINENTAL SHAFT

**3 SHAFT END COVER**

- 1 PUMP WITH SINGLE SHAFT BEARING **CLOCKWISE ROTATION TYPE 1 OR 2**
- 2 PUMP WITH SINGLE SHAFT BEARING **COUNTER CLOCKWISE ROTATION TYPE 1 OR 2**
- 3 PUMP WITH SINGLE SHAFT BEARING **DOUBLE ROTATION TYPE 1 OR 2**
- 4 PUMP WITH DOUBLE SHAFT BEARING **CLOCKWISE ROTATION TYPE 3**
- 5 PUMP WITH DOUBLE SHAFT BEARING **COUNTER CLOCKWISE ROTATION TYPE 3**
- 6 PUMP WITH DOUBLE SHAFT BEARING **DOUBLE ROTATION TYPE 3**
- 7 MOTOR WITH SINGLE SHAFT BEARING & 1/4" DRAIN PORT TYPE 1 OR 2
- 8 MOTOR WITH DOUBLE SHAFT BEARING & 1/4" DRAIN PORT TYPE 3
- 9 MOTOR WITH SINGLE SHAFT BEARING **NO DRAIN PORT TYPE 1 OR 2**

**4 SHAFT END COVER**

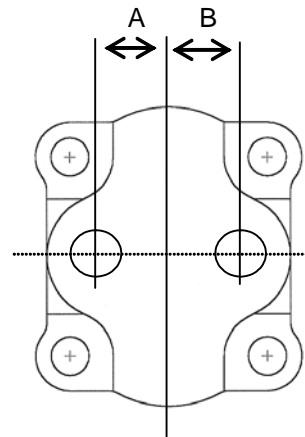
- 00 PAD MOUNT TYPE 1 OR 3
- 01 MODIFIED PAD MOUNT TYPE 1
- 03 ROUND FLANGE 6 BOLT TYPE 1
- 04 ROUND FLANGE 4 BOLT 2.883 PILOT TYPE 2
- 05 ROUND FLANGE 6 BOLT 6.625 PILOT TYPE 2
- 07 ROUND FLANGE 4 BOLT 2.883 PILOT TYPE 2 ( 58 SHAFT ONLY )
- 40 4 BOLT SQ. 3.249 PILOT TYPE 1
- 42 S.A.E. 4 BOLT "B" MOUNT TYPE 1 OR 3
- 43 S.A.E. 4 BOLT "B" MOUNT WITH 2 DRAINS TYPE 3
- 78 S.A.E. 4 BOLT "C" MOUNT TYPE 1 OR 3
- 95 S.A.E. 2 BOLT "B" MOUNT WITH 2 DRAINS TYPE 1
- 97 S.A.E. 2 BOLT "B" MOUNT TYPE 1 OR 3
- 98 S.A.E. 2 BOLT "C" MOUNT TYPE 1



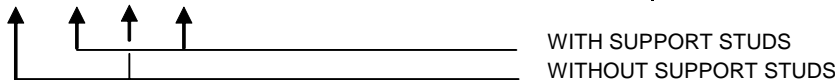
**5 PORT END COVER**

"O" RING PORTS CODES

SINGLE UNITS	TANDEM UNITS	PORT SIZE		A	B		
		LEFT	RIGHT				
HE	HY	H I	HY	1/2"	NONE	N/A	1.38
DE	DY	D I	DY	NONE	1/2"	1.38	N/A
JE	JY	J I	JY	1/2"	1/2"	1.38	1.38
UE	UY	U I	UY	5/8"	NONE	N/A	1.38
NE	NY	N I	NY	NONE	5/8"	1.38	N/A
KE	KY	K I	KY	3/4"	NONE	N/A	1.38
LE	LY	L I	LY	NONE	3/4"	1.38	N/A
ME	MY	M I	MY	3/4"	3/4"	1.38	1.38



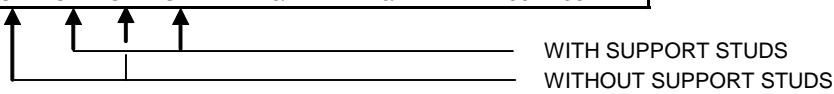
ORIENTATION IS FROM THE SHAFT END



# MH25 SERIES CODING

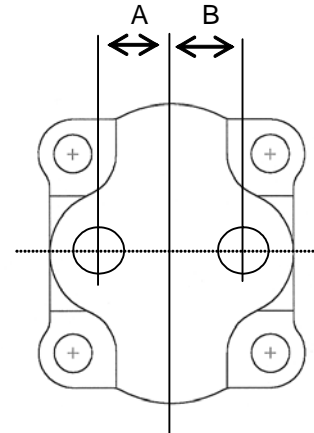
## N.P.T. PORTS

BE	BY	BI	BY	NONE	NONE	N/A	N/A
FE	FY	FI	FY	3/4"	NONE	N/A	1.38
CE	CY	CI	CY	NONE	3/4"	1.38	N/A
GE	GY	GI	GY	3/4"	3/4"	1.38	1.38



## METRIC STR. THREAD PORTING CODES

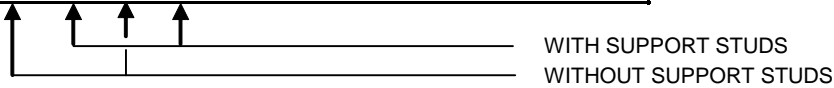
SINGLE UNITS		TANDEM UNITS		PORT SIZE		A	B
				LEFT	RIGHT		
EB	YB	IB	YB	5/8"	NONE	N/A	1.38
EF	YF	IF	YF	NONE	5/8"	1.38	N/A
EV	YV	IV	YV	5/8"	5/8"	1.38	1.38
EE	EY	EI	EY	3/4"	5/8"	N/A	1.38
VE	VY	VI	VY	5/8"	3/4"	1.38	N/A
TE	TY	TI	TY	3/4"	NONE	N/A	1.38
WE	WY	WI	WY	NONE	3/4"	1.38	N/A
XE	XY	XI	XY	3/4"	3/4"	1.38	1.38



ORIENTATION IS FROM THE SHAFT END

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

AE	AY	AI	AY	3/4"	NONE	N/A	1.38
QE	QY	QI	QY	NONE	3/4"	1.38	N/A
SE	SY	SI	SY	3/4"	3/4"	1.38	1.38



BSPP.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25
AB	NONE	NONE	X	X	X	X	X	X	X	X	X
EM	NONE	3/4"			X	X	X				
EA	3/4"	NONE			X	X	X				
EJ	3/4"	3/4"			X	X	X	X	X	X	
EK	3/4"	1"			X	X					
YU	3/4"	1 1/4"			X	X	X	X			
EN	1"	3/4"			X	X					
YW	1 1/4"	3/4"			X	X	X	X			
EP	1"	NONE					X	X	X		
IH	NONE	1"					X	X	X		
EQ	1"	1"					X	X	X	X	X
ES	1"	1 1/4" *					X				
IR	1 1/4" *	1"					X	X	X	X	X
ID	1 1/2"	1"								X	
NJ	1 1/4" *	NONE					X	X	X		
JB	NONE	1 1/4" *									X
IE	1 1/4"	1 1/4"								X	
IQ	1 1/4"	1 1/2" *									X
IS	1 1/2"	1 1/4"									X
JV	1 1/2"	1 1/2"									X



# MH25 SERIES GEAR HOUSING PORTS

## NOTE

- \* N.P.T. PORTING IS NOT RECOMMENDED FOR PRESSURES ABOVE 1500 P.S.I.
- \* Ports marked with a "X" 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
- \* ( \* ) LOW PRESSURE PORTING

NPT.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25
AB	NONE	NONE	X	X	X	X	X	X	X	X	X
AP	1/2"	NONE		X							
AC	NONE	1/2"		X							
EC	1/2"	1/2"		X	X						
ED	1/2"	3/4"		X							
EH	3/4"	1/2"		X							
AR	3/4"	NONE		X	X	X	X	X	X		
AF	NONE	3/4"		X	X	X	X	X	X		
ER	3/4"	3/4"			X	X	X	X	X	X	X
ET	3/4"	1"			X	X	X	X	X	X	X
EU	3/4"	1 1/4"						X	X		X
IJ	1"	3/4"			X	X	X	X	X	X	X
IQ	1 1/4"	3/4"						X	X		X
AT	1"	NONE			X	X	X	X	X	X	X
AH	NONE	1"			X	X	X	X	X	X	X
IL	1"	1"			X	X	X	X	X	X	X
IM	1"	1 1/4" *					X	X	X	X	X
IS	1 1/4" *	1"					X	X	X	X	X
IY	1 1/2"	1"							X	X	X
AV	1 1/4" *	NONE						X	X	X	X
AJ	NONE	1 1/4" *						X	X	X	X
IT	1 1/4"	1 1/4"						X	X	X	X
IU	1 1/4"	1 1/2" *							X	X	X
IZ	1 1/2"	1 1/4"							X	X	X
JC	1 1/2"	1 1/2"								X	X
AW	1 1/2" *	NONE							X	X	X
AK	NONE	1 1/2" *							X	X	

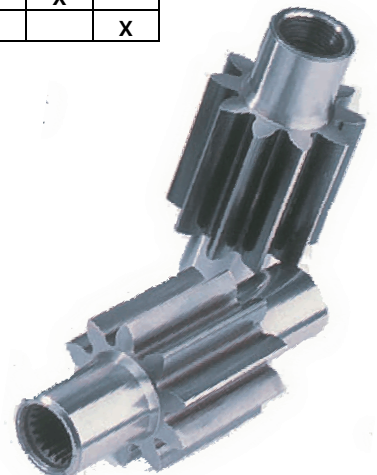




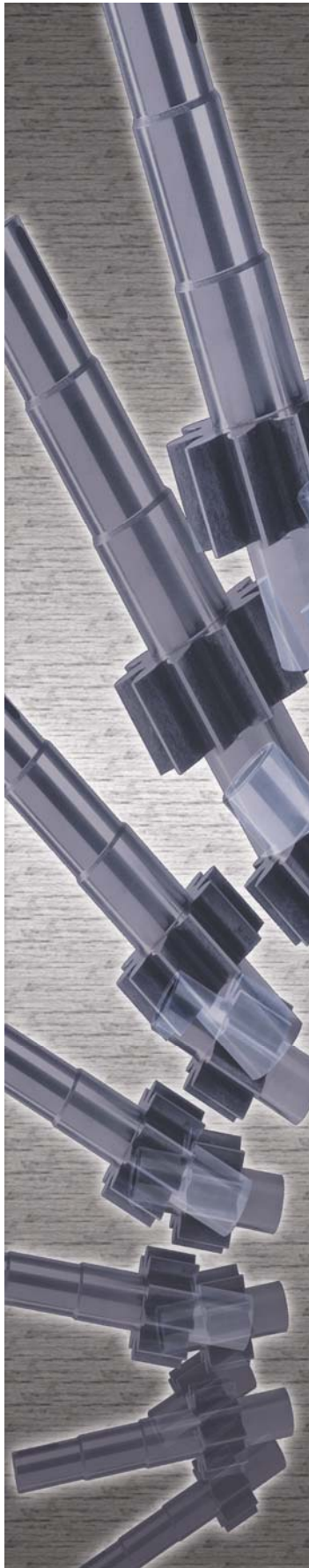
# MH25 SERIES GEAR HOUSING PORTS

ORB	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25
AB	NONE	NONE	X	X	X	X	X	X	X	X	X
UP	1/2"	NONE		X	X		X				
UC	NONE	1/2"		X	X		X				
YC	1/2"	1/2"		X	X	X	X				
YD	1/2"	5/8"		X	X		X				
YJ	5/8"	1/2"		X	X		X				
UQ	5/8"	NONE			X	X	X				
UD	NONE	5/8"			X	X	X				
YK	5/8"	5/8"			X	X	X		X		
YL	5/8"	3/4"			X	X	X	X			
YQ	3/4"	5/8"			X	X	X	X			
UR	3/4"	NONE			X	X	X	X			
UF	NONE	3/4"			X	X	X	X			
YR	3/4"	3/4"			X	X	X	X	X	X	X
YS	3/4"	7/8"								X	
YT	3/4"	1"			X						
YX	7/8"	3/4"								X	
VJ	1"	3/4"			X						
US	7/8"	NONE				X	X	X	X	X	X
UG	NONE	7/8"				X	X	X	X	X	X
YZ	7/8"	7/8"				X	X	X	X	X	X
VC	7/8"	1"				X	X	X	X	X	X
VK	1"	7/8"				X	X	X	X	X	X
UT	1"	NONE				X	X	X	X	X	X
UH	NONE	1"				X	X	X	X	X	X
VL	1"	1"				X	X	X	X	X	X
VM	1"	1 1/4" *					X	X	X	X	X
VN	1"	1 1/2" *						X			
VS	1 1/4"	1"					X	X	X	X	X
VG	1 1/2" *	1"						X			
UV	1 1/4"	NONE							X	X	X
UJ	NONE	1 1/4"							X	X	X
VT	1 1/4"	1 1/4"							X	X	X
VU	1 1/4"	1 1/2"							X	X	X
VZ	1 1/2"	1 1/4"							X	X	X
UW	1 1/2"	NONE								X	
UK	NONE	1 1/2"								X	
WC	1 1/2"	1 1/2"									X

METRIC S.F.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25
AB	NONE	NONE	X	X	X	X	X	X	X	X	X
ZQ	1"	1"					X				
ZS	1"	1 1/4"				X					
ZD	1 1/2"	1"					X				
ZE	1 1/4"	1 1/4"					X				
OA	1 1/4"	1 1/2"							X		
RF	1 1/2" *	1 1/4"						X			
RW	NONE	1 1/2" *						X			
RV	1 1/2"	1 1/2"									X
RG	1 1/2"	2" *									X



# MH25 SERIES GEAR HOUSING PORTS



SPLIT FLANGE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25
AB	NONE	NONE	X	X	X	X	X	X	X	X	X
OP	1/2"	NONE		X				X			
OC	NONE	1/2"		X				X			
ZC	1/2"	1/2"						X			
ZF	1/2"	3/4"					X	X	X	X	X
ZP	3/4"	1/2"					X	X	X	X	X
OR	3/4"	NONE				X	X	X	X	X	X
OF	NONE	3/4"				X	X	X	X	X	X
ZR	3/4"	3/4"			X	X	X	X	X	X	X
ZT	3/4"	1"			X		X	X	X	X	X
ZU	3/4"	1 1/4" *					X	X	X	X	X
RJ	1"	3/4"			X		X	X	X	X	X
RQ	1 1/4" *	3/4"					X	X	X	X	X
OT	1"	NONE			X	X	X	X	X	X	X
OH	NONE	1"			X	X	X	X	X	X	X
RL	1"	1"				X	X	X	X	X	X
RM	1"	1 1/4" *				X	X	X	X	X	X
RN	1"	1 1/2" *					X	X	X	X	X
OS	1"	2"								X	X
RS	1 1/4" *	1"				X	X	X	X	X	X
RY	1 1/2" *	1"					X	X	X	X	X
OZ	2"	1"								X	X
OV	1 1/4" *	NONE				X	X	X	X	X	X
OJ	NONE	1 1/4" *				X	X	X	X	X	X
RT	1 1/4"	1 1/4"					X	X	X	X	X
RU	1 1/4"	1 1/2" *					X	X	X	X	X
RX	1 1/4"	2" *							X	X	X
RZ	1 1/2" *	1 1/4"					X	X	X	X	X
SG	2" *	1 1/4"							X	X	X
OW	1 1/2" *	NONE					X	X	X	X	X
OK	NONE	1 1/2" *					X	X	X	X	X
SC	1 1/2"	1 1/2"						X	X	X	X
SD	1 1/2"	2" *							X	X	X
SH	2" *	1 1/2"							X	X	X
OX	2" *	NONE							X		
OL	NONE	2" *							X		



# MH25 SERIES GEAR HOUSING PORTS

7

MH / 25	CU. IN.	MAX. PSI
07	1.91	2500 PSI
10	2.55	2500 PSI
12	3.19	2500 PSI
15	3.83	2500 PSI
17	4.46	2000 PSI
20	5.10	2000 PSI
22	5.74	2000 PSI
25	6.38	2000 PSI

8  
CODE

CODE	SHAFT TYPE
3	6 TOOTH SPLINE 1.1096 MAJ. DIA. X 2 1/8" EXT. - TYPE 1
7	S.A.E. "C" 14 TOOTH SPLINE 1.250" dia - TYPE 1
11	S.A.E. "C" KEYED - TYPE 1 - 1.250"
25	S.A.E. "B" 13 TOOTH SPLINE .88" dia - TYPE 1
30	S.A.E. "B" KEYED .88" dia 1/4" X 3/8" X 1" KEY - TYPE 1
38	.8745 DIA. KEYED 1 7/16" EXT X 1 1/4" KEYED - TYPE 1
39	.8745 DIA. KEYED 2 15/16" EXT - TYPE 1
43	S.A.E. B B KEYED 1" dia. 1/4" X 3/8" X 1 1/4" KEYED - TYPE 1
45	.8745 DIA. KEYED 2 13/32" EXT. X 1 1/4" KEYED - TYPE 2
47	.9996 DIA. KEYED X 1 1/4" KEYED - TYPE 2
48	S.A.E. "B" 13 TOOTH SPLINE - TYPE 2 - .875"
53	S.A.E. "C" 14 TOOTH SPLINE - TYPE 2 - 1.250"
61	1.250 DIA KEYED X 1 1/2" KEYED - TYPE 2
73	1.249 DIA KEYED DRILLED & TAPPED X 1 1/2" - TYPE 3
76	.999 DIA KEYED GROOVED X 1 1/2" KEYED - TYPE 3

9 BEARING CARRIERS FOR 25 UNIT

N.P.T.			
IN	OUT	LEFT	RIGHT
NONE	NONE	B	B
1 1/2"	NONE	TL	
NONE	1 1/2"		TJ
1 1/2"	1"	XS	
1"	1 1/2"		XT
1"	1"	DH	DH
1 1/4"	1 1/4"	BF	BF

S.A.E. SPLIT FLANGE			
1 1/2"	NONE	FB	
NONE	1 1/2"		FT
1 1/2"	1"	XV	
1"	1 1/2"		XW
1"	1"	LP	LP
1 1/4"	1 1/4"	GL	GL

ORIENTATION IS FROM THE SHAFT END

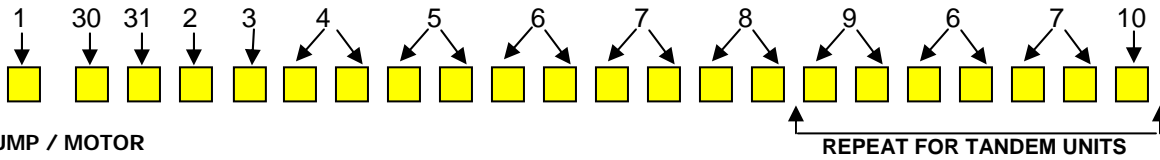
S.A.E. O RING			
IN	OUT	LEFT	RIGHT
1 1/2"	NONE	TH	
NONE	1 1/2"		TM
1 1/2"	1"	TK	
1"	1 1/2"		TN
1"	1"	QD	QD
1 1/4"	1 1/4"	NV	NV

MOTORS ONLY

IN	OUT	DUAL	
NONE	NONE	B	
1"	1"	TT	NPT
1 1/4"	1 1/4"	VV	NPT
1 1/2"	1 1/2"	WW	NPT
1"	1"	CC	SAE O RING
1 1/4"	1 1/4"	BB	SAE O RING
1 1/2"	1 1/2"	FF	SAE O RING
1"	1"	LL	SAE SPLIT FLANGE
1 1/4"	1 1/4"	MM	SAE SPLIT FLANGE

10 CONNECTING SHAFT USE CODE #1 FOR ALL MULTIPLE UNITS

# MH30/31 SERIES CODING



## 1 PUMP / MOTOR

- MHP PUMP
- MHM MOTOR

## 2 UNIT

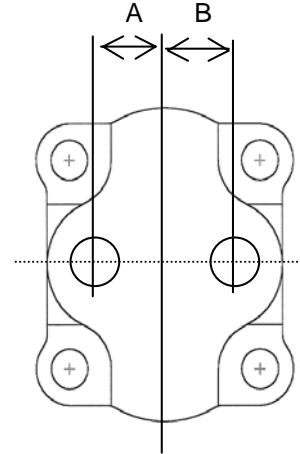
- A SINGLE UNIT
- B TANDEM UNITS
- C SINGLE OR TANDEM WITH A CONTINENTAL SHAFT

## 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



ORIENTATION IS FROM THE SHAFT END

## 5 PORT END COVER CODES

"O" RING PORTS

SINGLE UNITS	TANDEM UNITS	PORT SIZE			
		LEFT	RIGHT	A	B
GU	GU	1 1/4	1	1.38	1.38
HU	HU	1	1 1/4	1.38	1.38
TU	TU	1 1/4	1	1.38	1.38
XU	XU	1	1 1/4	1.38	1.38

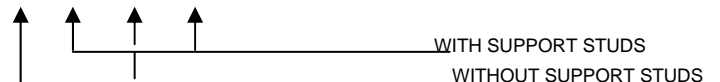
SINGLE UNITS	TANDEM UNITS	PORT SIZE			
		LEFT	RIGHT	A	B
CE CY	C I CY	3/4"	NONE	N/A	1.25
CA CO	CU CO	3/4"	NONE	N/A	1.38
DE DY	D I DY	NONE	3/4"	1.25	N/A
DA DO	DU DO	NONE	3/4"	1.25	N/A
FE FY	F I FY	3/4"	3/4"	1.25	1.25
JA BO	JU BO	3/4"	3/4"	1.38	1.38
GE GY	G I GY	1"	3/4"	1.25	1.38
KA	KU	1"	3/4"	1.38	1.38
HE HY	H I HY	3/4"	1"	1.38	1.25
LA	LU	3/4"	1"	1.38	1.38
MA YO	MU YO	1"	NONE	N/A	1.38
RA RO	SU RO	NONE	1"	1.38	N/A
JE JY	J I JY	1"	1"	1.38	1.38
ZA ZO	ZU ZO	1"	1"	1.38	1.38

N.P.T. PORTS

BE BY	B I BY	NONE	NONE	N/A	N/A
KE KY	K I KY	3/4"	NONE	N/A	1.25
LE LY	L I LY	NONE	3/4"	1.25	N/A
ME MY	M I MY	3/4"	3/4"	1.25	1.25



FOR LARGER PORTING CONSULT THE FACTORY



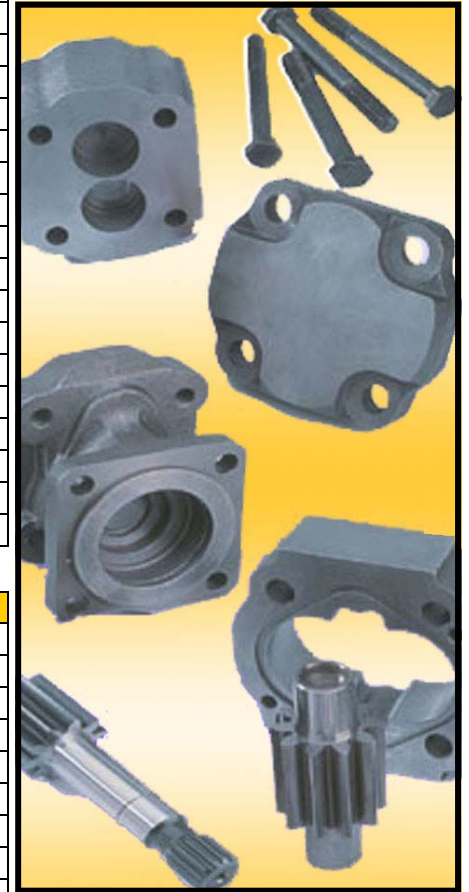
# MH30/31 SERIES GEAR HOUSING PORTS

## NOTE

- \* N.P.T. PORTING IS NOT RECOMMENDED FOR PRESSURES ABOVE 1500 P.S.I.
- \* Ports marked with a "X" 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.CODE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	X	X	X	X	X	X	X
IL	1/2"	NONE	X	X					
IM	NONE	1/2"	X	X					
IR	1/2"	1/2"	X	X					
IC	3/4"	NONE			X	X	X	X	X
ID	NONE	3/4"			X	X	X	X	X
IF	3/4"	3/4"			X	X	X	X	X
IG	3/4"	1"			X	X	X	X	
IH	3/4"	1 1/4"					X	X	
IJ	1"	3/4"			X	X	X	X	
IK	1 1/4"	3/4"					X	X	
YC	1"	NONE			X	X	X	X	
YD	NONE	1"			X	X	X	X	
YF	1"	1"				X	X	X	
YG	1"	1 1/4" *					X	X	X
YH	1"	1 1/2"					X	X	X
YJ	1 1/4" *	1"					X	X	X
YK	1 1/2"	1"					X	X	X
IA	1 1/4" *	NONE					X	X	X
IB	NONE	1 1/4" *					X	X	X
YL	1 1/4"	1 1/4"						X	X
YM	1 1/4"	1 1/2" *							X
YP	1 1/2"	1 1/4"							X
YA	1 1/2" *	NONE							X
YB	NONE	1 1/2" *							X

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





# MH30/31 SERIES GEAR HOUSING PORTS

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



SPLIT FLANGE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	X	X	X	X	X	X	X
UC	3/4"	NONE			X	X	X	X	
UD	NONE	3/4"			X	X	X	X	
UF	3/4"	3/4"		X	X	X	X		
UG	3/4"	1"		X	X	X	X		
UH	3/4"	1 1/4"				X	X	X	X
UJ	1"	3/4"			X	X	X	X	X
UK	1 1/4"	3/4"				X	X	X	X
OC	1"	NONE				X	X	X	
OD	NONE	1"				X	X	X	X
OF	1"	1"			X	X	X	X	X
OG	1"	1 1/4" *				X	X	X	X
OH	1"	1 1/2" *						X	X
OJ	1 1/4" *	1"				X	X	X	X
OK	1 1/2" *	1"						X	X
OA	1 1/4" *	NONE				X	X	X	X
OB	NONE	1 1/4" *				X	X	X	X
OL	1 1/4"	1 1/4"					X	X	X
OM	1 1/4"	1 1/2" *						X	X
OP	1 1/2" *	1 1/4"						X	X
OE	1 1/2" *	NONE						X	X
OU	NONE	1 1/2" *						X	X



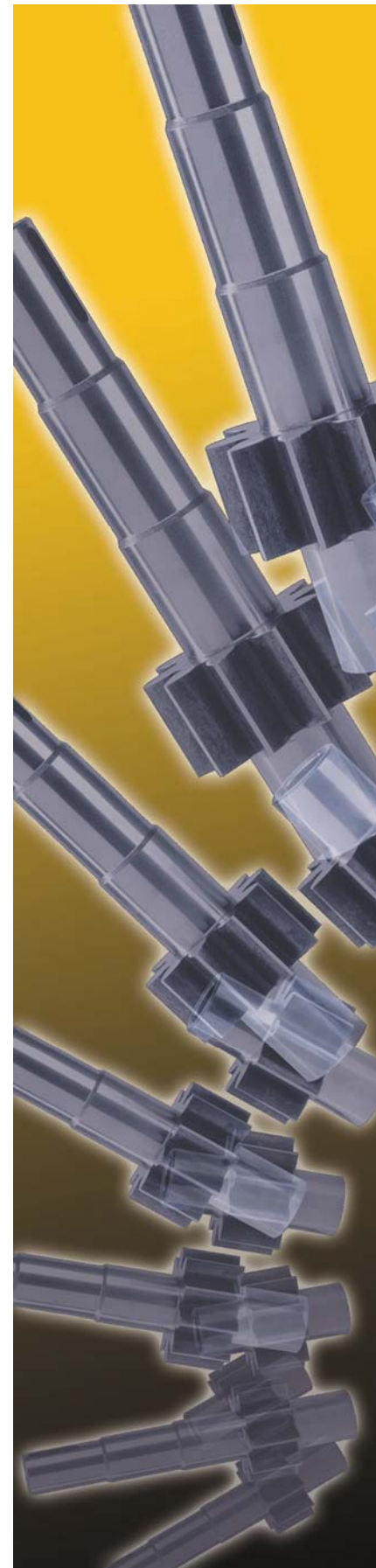
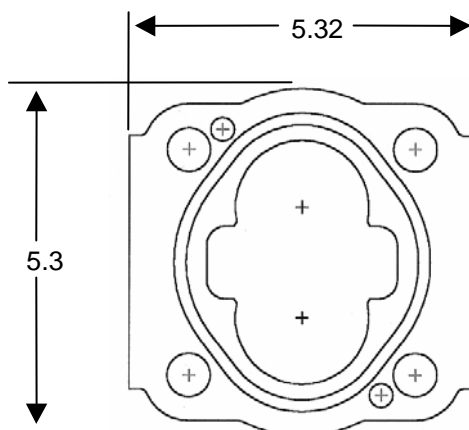
# MH30/31 SERIES GEAR HOUSING PORTS

METRIC S. F.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20
AB	NONE	NONE	X	X	X	X	X	X	X
VN	3/4"	NONE			X	X	X	X	
VQ	NONE	3/4"			X	X	X	X	
VS	3/4"	3/4"			X	X	X	X	
VT	3/4"	1"			X	X	X	X	
RV	1"	3/4"			X	X	X	X	
RU	3/4"	1 1/4"				X	X	X	
RW	1 1/4"	3/4"				X	X	X	
UL	1"	NONE			X	X	X	X	X
UR	NONE	1"			X	X	X	X	X
UM	1"	1"				X	X	X	
VU	1"	1 1/4" *				X	X	X	X
UX	1 1/4" *	1"				X	X	X	X
HO	1"	1 1/2" *						X	X
VO	1 1/2" *	1"						X	X
NO	1 1/4" *	NONE					X	X	X
UO	NONE	1 1/4" *					X	X	X
PO	1 1/4"	1 1/4"					X	X	X
QO	1 1/4"	1 1/2" *						X	X
SO	1 1/2" *	1 1/4"						X	X
UY	1 1/2" *	NONE					X	X	
TO	NONE	1 1/2" *					X	X	

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

The width of the gear housing listed below

Gear size	Housing size
1/2" Gear Size	1.25
3/4" Gear Size	1.50
1" Gear Size	1.75
1 1/4" Gear Size	2.00
1 1/2" Gear Size	2.25
1 3/4" Gear Size	2.50
2" Gear Size	2.75



# MH30/31 SERIES CODING

## 7 GEAR SIZE MH 30 / 31

MH 30/31	30		31
	CU. IN.	MAX. PSI	MAX. PSI
05	.99	2500 PSI	3000 PSI
07	1.48	2500 PSI	3000 PSI
10	1.97	2500 PSI	3000 PSI
12	2.46	2500 PSI	3000 PSI
15	2.96	2500 PSI	3000 PSI
17	3.45	2250 PSI	2500 PSI
20	3.94	2250 PSI	2500 PSI

## 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" X 3/8" X1" KEY TYPE 2
67	S.A.E. B B KEYED 1" dia. 1/4" X 3/8" 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

### N.P.T.

IN	OUT	CW	CCW
NONE	NONE	C	D
NONE	NONE	A	J
1"	NONE	TB	BT
1 1/4"	NONE	VB	BV
1"	3/4"	TX	XT
1 1/4"	3/4"	VX	XV
1 1/4"	1"	VZ	ZV
1 1/4"	3/4"	TJ	JT
1 1/4"	1"	VJ	JV
1 1/4"	1"	VK	KV
1 1/2"	1"	KW	.
1"	3/4"	ZX	XZ
1"	3/4"	ZS	SZ

### S.A.E. ORING

1"	NONE	CB	BC
1 1/4"	NONE	DB	BD
1 1/2"	NONE	FB	BF
NONE	3/4"		JP
1"	3/4"	CJ	JC
1 1/4"	3/4"	DJ	JD
1 1/2"	3/4"	FJ	JF
1 1/4"	1"	DK	KD
1 1/2"	1"	FK	KF
1"	3/4"	CR	RC
1 1/4"	3/4"	DR	RD
1 1/2"	3/4"	FR	RF
1 1/4"	1"	DS	SD
1 1/2"	1"	FS	SF
1"	3/4"	KJ	JK
1"	3/4"	KX	XK

### S.A.E. SPLIT FLANGE

IN	OUT	CW	CCW
1"	NONE	LB	BL
1 1/4"	NONE	MB	BM
1 1/2"	NONE	NB	BN
NONE	3/4"	BR	RB
1"	3/4"	LR	RL
1 1/4"	3/4"	MR	RM
1 1/2"	3/4"	NR	RN
1 1/4"	1"	MS	SM
1 1/2"	1"	NS	SN
1"	3/4"	LX	XL
1 1/4"	3/4"	MX	XM
1 1/2"	3/4"	NX	XN
1 1/4"	1"	MZ	ZM
1 1/2"	1"	NZ	ZN
1"	3/4"	SR	RS
1"	3/4"	RZ	ZR

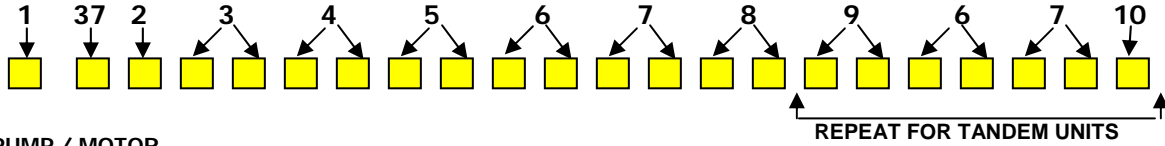
### MOTORS ONLY

IN	OUT	DUAL
NONE	NONE	B
1"	1"	TT NPT
1 1/4"	1 1/4"	VV NPT
1"	1"	CC SAE O RING
1 1/4"	1 1/4"	BB SAE O RING
1 1/2"	1 1/2"	FF SAE O RING
1"	1"	LL SAE SPLIT FLANGE
1 1/4"	1 1/4"	MM SAE SPLIT FLANGE
1 1/2"	1 1/2"	NN SAE SPLIT FLANGE

**10** CONNECTING SHAFT USE CODE #1 FOR ALL MULTIPLE UNITS

FOR PIGGYBACK UNITS CONTACT PRODUCT SUPPORT

# MH37 SERIES CODING



## 1 PUMP / MOTOR

- MHP PUMP
- MHM MOTOR

## 2 UNIT

- X SINGLE OR TANDEM WITH A CONTINENTAL SHAFT

## 3 SHAFT END COVER

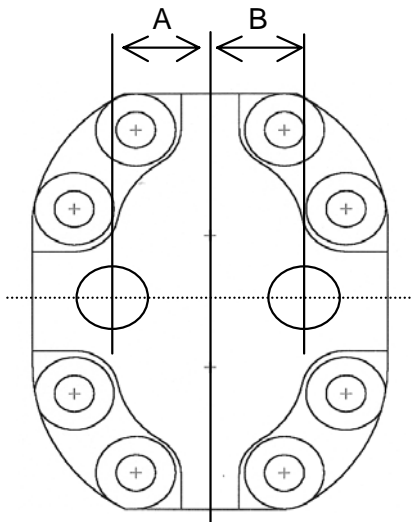
- 1 PUMP WITH SINGLE SHAFT BEARING **CLOCKWISE ROTATION**
- 2 PUMP WITH SINGLE SHAFT BEARING **COUNTER CLOCKWISE ROTATION**
- 3 PUMP WITH SINGLE SHAFT BEARING **DOUBLE ROTATION**
- 7 MOTOR WITH SINGLE SHAFT BEARING & **1/4" DRAIN PORT**
- 8 MOTOR WITH DOUBLESHAFT BEARING & **1/4" DRAIN PORT**
- 9 MOTOR WITH SINGLESHAFT BEARING **NO DRAIN PORT**

## 4 SHAFT END COVER

- 11 PAD MOUNT
- 42 S.A.E. 4 BOLT "B" MOUNT DRAIN
- 45 S.A.E. 4 BOLT "B" MOUNT DRAIN
- 78 S.A.E. 4 BOLT "C" MOUNT
- 81 ROUND FLANGE 6 BOLT 3.999 PILOT
- 98 S.A.E. 2 BOLT "C" MOUNT



## 5 PORT END COVER CODES



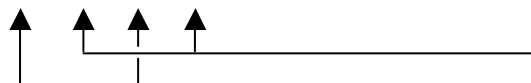
ORIENTATION IS FROM THE SHAFT END

### N.P.T. PORTS

				PORT SIZE		VIEW FROM S.E.C.	
SINGLE UNITS		TANDEM UNITS		LEFT	RIGHT	A	B
BA	BI	BY	BU	NONE	NONE	N/A	N/A
CA	CI	CY	CU	NONE	3/4"	1.43	N/A
FA	FI	FY	FU	3/4"	NONE	N/A	1.43
GA	GI	GY	GU	3/4"	3/4"	1.43	1.43
DA	DI	DY	DU	NONE	1"	1.43	N/A
JA	JI	JY	JU	1"	NONE	N/A	1.43
KA	KI	KY	KU	1"	3/4"	1.43	1.43
HA	HI	HY	HU	3/4"	1"	1.43	1.43
LA	LI	LY	LU	1"	1"	1.43	1.43

### "O"RING PORTS

MA	MI	MY	MU	3/4"	3/4"	1.43	1.43
NA	NI	NY	NU	NONE	3/4"	1.43	N/A
PA	PI	PY	PU	3/4"	NONE	N/A	1.43



WITH SUPPORT STUDS  
WITHOUT SUPPORT STUDS

# MH37 SERIES N.P.T. PORTS

- NOTE**
- \* N.P.T. PORTING IS NOT RECOMMENDED FOR PRESSURES ABOVE 1500 P.S.I.
  - \* Ports marked with a "X" 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 LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25	30
AB	NONE	NONE	X	X	X	X	X	X	X	X	X	
EC	1/2"	1/2"		X	X	X						
AR	3/4"	NONE		X	X	X	X	X				
AF	NONE	3/4"		X	X	X	X	X				
ER	3/4"	3/4"		X	X	X	X	X	X	X	X	X
ET	3/4"	1"			X	X	X	X	X	X	X	X
EU	3/4"	1 1/4"					X	X	X	X	X	X
IJ	1"	3/4"			X	X	X	X	X	X	X	X
IQ	1 1/4"	3/4"					X	X	X	X	X	X
AT	1"	NONE			X	X	X	X	X	X	X	X
AH	NONE	1"			X	X	X	X	X	X	X	X
IL	1"	1"			X	X	X	X	X	X	X	X
IM	1"	1 1/4" *					X	X	X	X	X	X
IN	1"	1 1/2"							X	X	X	X
IS	1 1/4" *	1"					X	X	X	X	X	X
IY	1 1/2"	1"							X	X	X	X
AV	1 1/4" *	NONE					X	X	X	X	X	X
AJ	NONE	1 1/4" *					X	X	X	X	X	X
IT	1 1/4"	1 1/4"					X	X	X	X	X	X
IU	1 1/4"	1 1/2" *							X	X	X	X
IZ	1 1/2"	1 1/4"							X	X	X	X
JC	1 1/2"	1 1/2"							X	X	X	X
AW	1 1/2" *	NONE								X	X	X
AK	NONE	1 1/2" *								X	X	X

BSPP.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25	30
AB	NONE	NONE	X	X	X	X	X	X	X	X	X	X
EM	NONE	3/4"			X	X	X					
EA	3/4"	NONE			X	X	X					
EJ	3/4"	3/4"			X	X	X	X				
EK	3/4"	1"			X	X						
YU	3/4"	1 1/4"			X	X	X	X				
EN	1"	3/4"			X	X						
YW	1 1/4"	3/4"			X	X	X	X				
EP	1"	NONE					X	X	X			
IH	NONE	1"					X	X	X			
EQ	1"	1"					X	X	X			
ES	1"	1 1/4" *					X					
IR	1 1/4" *	1"					X	X	X			
ID	1 1/2"	1"								X		
NJ	1 1/4" *	NONE					X	X	X			
JB	NONE	1 1/4" *								X		
IE	1 1/4"	1 1/4"								X		
IQ	1 1/4"	1 1/2" *									X	X
IS	1 1/2"	1 1/4"									X	X
JV	1 1/2"	1 1/2"									X	X

# MH37 SERIES N.P.T. PORTS

ORB	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25	30
AB	NONE	NONE	X	X	X	X	X	X	X	X	X	
UC	NONE	1/2"		X	X	X	X					
UP	1/2"	NONE		X	X	X	X					
YC	1/2"	1/2"		X	X	X	X					
UD	NONE	5/8"		X	X	X	X					
UQ	5/8"	NONE		X	X	X	X					
YK	5/8"	5/8"		X	X	X	X					
YD	1/2"	5/8"		X	X	X	X					
YJ	5/8"	1/2"		X	X	X	X					
YL	5/8"	3/4"			X	X	X	X				
YQ	3/4"	5/8"			X	X	X	X	X			
YS	3/4"	7/8"				X	X	X				
UF	NONE	3/4"			X	X	X	X				
UR	3/4"	NONE			X	X	X	X	X			
YR	3/4"	3/4"			X	X	X	X	X			
UG	NONE	7/8"				X	X	X	X			
US	7/8"	NONE				X	X	X	X			
YZ	7/8"	7/8"				X	X	X	X			
YT	3/4"	1 "			X	X	X	X	X			
VJ	1 "	3/4"			X	X	X	X	X			
YX	7/8"	3/4"				X	X	X	X			
VC	7/8"	1 "					X	X	X			
VK	1 "	7/8"					X	X	X	X	X	
UH	NONE	1 "					X	X	X	X	X	
UT	1 "	NONE					X	X	X	X	X	
VL	1 "	1 "					X	X	X	X	X	
UJ	NONE	1 1/4"						X	X	X	X	
UV	1 1/4"	NONE						X	X	X	X	
VT	1 1/4"	1 1/4"						X	X	X	X	X
VM	1 "	1 1/4"							X	X	X	X
VS	1 1/4"	1 "							X	X	X	X
VU	1 1/4"	1 1/2"							X	X	X	X
VZ	1 1/2"	1 1/4"							X	X	X	X
UK	NONE	1 1/2"									X	X
UW	1 1/2"	NONE									X	X
WC	1 1/2"	1 1/2"									X	X

# MH37 SERIES N.P.T. PORTS

Split Flange	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25	30
AB	NONE	NONE	X	X	X	X	X	X	X	X	X	
OC	NONE	1/2"		X	X	X	X					
OP	1/2"	NONE		X	X	X	X					
ZC	1/2"	1/2"			X	X	X					
OP	NONE	3/4"			X	X	X	X	X	X	X	X
OR	3/4"	NONE			X	X	X	X	X	X	X	X
ZR	3/4"	3/4"			X	X	X	X	X	X	X	X
OH	NONE	1"			X	X	X	X	X	X	X	X
OT	1"	NONE				X	X	X	X	X	X	X
RL	1"	1"					X	X	X	X	X	X
OJ	NONE	1 1/4"					X	X	X	X	X	X
OV	1 1/4"	NONE					X	X	X	X	X	X
RT	1 1/4"	1 1/4"						X	X	X	X	X
OK	NONE	1 1/2"						X	X	X	X	X
OW	1 1/2"	NONE						X	X	X	X	X
SC	1 1/2"	1 1/2"						X	X	X	X	X
OL	NONE	2"									X	X
OX	2"	NONE									X	X
SK	2"	2"									X	X
OM	NONE	2 1/2"										X
OY	2 1/2"	NONE										X
SQ	2 1/2"	2 1/2"										X
ZF	1/2"	3/4"		X	X	X	X					
ZP	3/4"	1/2"		X	X	X	X					
ZT	3/4"	1"			X	X	X	X	X	X	X	X
RJ	1"	3/4"			X	X	X	X	X	X	X	X
RM	1"	1 1/4"				X	X	X	X	X	X	X
RS	1 1/4"	1"				X	X	X	X	X	X	X
RQ	1 1/4"	3/4"				X	X	X	X	X	X	X
ZU	3/4"	1 1/4"				X	X	X	X	X	X	X
RU	1 1/4"	1 1/2"						X	X	X	X	X
RZ	1 1/2"	1 1/4"						X	X	X	X	X
SD	1 1/2"	2"								X	X	X
SH	2"	1 1/2"								X	X	X
RX	1 1/4"	2"									X	X
SG	2"	1 1/4"									X	X
SF	1 1/2"	2 1/2"										X
SN	2 1/2"	1 1/2"										X
RN	1"	1 1/2"					X	X	X	X	X	X
RY	1 1/2"	1"					X	X	X	X	X	X



# MH37 SERIES CODING

7		
MH / 37	CU. IN.	MAX. PSI
07	2.25	2000 psi
10	3	2000 psi
12	3.75	2000 psi
15	4.50	2000 psi
17	5.25	2000 psi
20	6	2000 psi
22	6.75	2000 psi
25	7.5	2000 psi
30	9	2000 psi

8 SHAFT TYPE	
CODE	
2	1.1247 DIA. KEYED SHAFT
3	6 TOOTH SPLINE 1.1096 MAJ. DIA. X 2 1/8" EXT.
6	.966 DIA 6 TOOTH SPLINE
7	S.A.E. "C" 14 TOOTH SPLINE 1.250" dia
8	1.250 DIA. KEYED SHAFT
10	1.1235 DIA 6 TOOTH SPLINE SHAFT
11	S.A.E "C" KEYED 1.249 DIA.
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
38	.8745 DIA. KEYED 1 7/16" EXT X 1 1/4" KEYED
73	1.249 DIA KEYED DRILLED & TAPPED X 1 1/2"

## 9 BEARING CARRIERS FOR 37 UNIT ORIENTATION IS FROM THE SHAFT END

N.P.T.			
IN	OUT	LEFT	RIGHT
NONE	NONE	B	B
1 1/2"	NONE	TL	
NONE	1 1/2"		TJ
1 1/2"	1"	XS	
1"	1 1/2"		XT
1"	1"	DH	DH
1 1/4"	1 1/4"	BF	BF

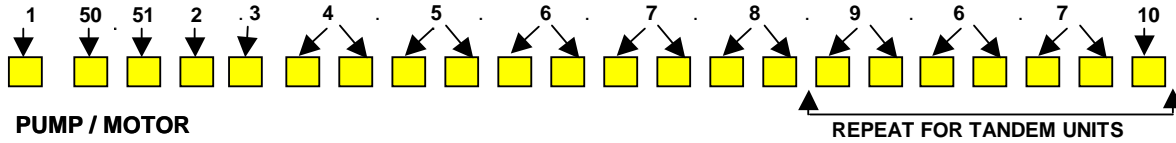
S.A.E. O RING			
IN	OUT	LEFT	RIGHT
1 1/2"	NONE	NG	
NONE	1 1/2"		NK
1 1/2"	1"	XX	
1"	1 1/2"		XZ
1"	1"	QD	QD
1 1/4"	1 1/4"	NV	NV

S.A.E. SPLIT FLANGE			
IN	OUT	LEFT	RIGHT
1 1/2"	NONE	FP	
NONE	1 1/2"		FT
1 1/2"	1"	XV	
1"	1 1/2"		XW
1"	1"	LP	LP
1 1/4"	1 1/4"	GL	GL

MOTORS ONLY			
IN	OUT	DUAL	
NONE	NONE	B	
1"	1"	TT	NPT
1 1/4"	1 1/4"	VV	NPT
1 1/2"	1 1/2"	WW	NPT
1"	1"	CC	SAE O RING
1 1/4"	1 1/4"	BB	SAE O RING
1 1/2"	1 1/2"	FF	SAE O RING
1"	1"	LL	SAE SPLIT FLANGE
1 1/4"	1 1/4"	MM	SAE SPLIT FLANGE
1 1/2"	1 1/2"	NN	SAE SPLIT FLANGE

**10** CONNECTING SHAFT USE CODE #1 FOR ALL MULTIPLE UNITS

# MH50/51 SERIES CODING



## 1 PUMP / MOTOR

- MHP PUMP
- MHM MOTOR

## 2 UNIT

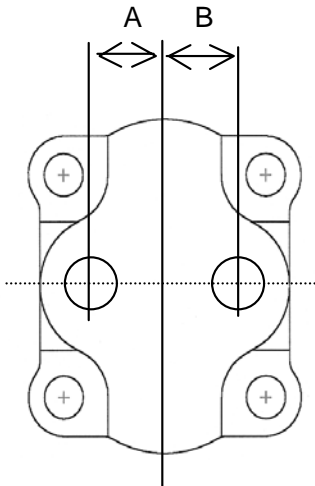
- A SINGLE UNIT
- B TANDEM UNITS
- C SINGLE OR TANDEM WITH A CONTINENTAL SHAFT

## 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 51/51 PIGGY BACK MOUNT
- 92 76/51 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



ORIENTATION IS FROM THE SHAFT END

FOR LARGER PORTING  
CONSULT THE FACTORY

## 5 PORT END COVER CODES

### "O" RING PORTS

SINGLE UNITS		TANDEM UNITS		PORT SIZE			
				LEFT	RIGHT	A	B
CE	CY	C I	CY	3/4"	NONE	N/A	1.38
DE	DY	D I	DY	NONE	3/4"	1.38	N/A
FE	FY	F I	FY	3/4"	3/4"	1.38	1.38

### N.P.T. PORTS

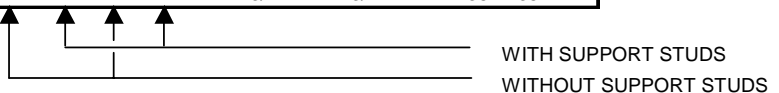
BE	BY	B I	BY	NONE	NONE	N/A	N/A
KE	KY	K I	KY	3/4"	NONE	N/A	1.38
LE	LY	L I	LY	NONE	3/4"	1.38	N/A
ME	MY	M I	MY	3/4"	3/4"	1.38	1.38

### METRIC STR. THREAD PORTS

NE	N I	NY	3/4"	NONE	N/A	1.38
PE	P I	PY	NONE	3/4"	1.38	N/A
QE	Q I	QY	3/4"	3/4"	1.38	1.38

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

WE	W I	WY	3/4"	NONE	N/A	1.38
XE	X I	XY	NONE	3/4"	1.38	N/A
ZE	Z I	ZY	3/4"	3/4"	1.38	1.38



# MH50/51 SERIES GEAR HOUSING PORTS

## NOTE

- \* N.P.T. PORTING IS NOT RECOMMENDED FOR PRESSURES ABOVE 1500 P.S.I.
- \* Ports marked with a "X" 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.CODE	PORT LEFT	PORT RIGHT	5	7	10	12	15	17	20	22	25
AB	NONE	NONE	X	X	X	X	X	X	X	X	X
IC	3/4"	NONE			X						
ID	NONE	3/4"			X	X	X	X			
IF	3/4"	3/4"			X	X	X	X	X		
IG	3/4"	1"			X	X	X				
IH	3/4"	1 1/4"					X				
IJ	1"	3/4"			X	X	X	X	X		
IK	1 1/4"	3/4"					X				
YC	1"	NONE				X	X	X	X	X	
YD	NONE	1"				X	X	X	X	X	
YF	1"	1"				X	X	X	X	X	X
YG	1"	1 1/4" *					X	X	X	X	
YH	1"	1 1/2"									X
YJ	1 1/4" *	1"					X	X	X	X	X
YK	1 1/2"	1"									X
IA	1 1/4" *	NONE					X	X	X	X	X
IB	NONE	1 1/4" *					X	X	X	X	X
YL	1 1/4"	1 1/4"						X	X	X	X
YM	1 1/4"	1 1/2" *							X	X	X
YP	1 1/2"	1 1/4"							X	X	X
YR	1 1/2"	1 1/2"							X	X	X
YA	1 1/2"	NONE							X	X	X
YB	NONE	1 1/2"							X	X	X



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

# MH50/51 SERIES GEAR HOUSING PORTS

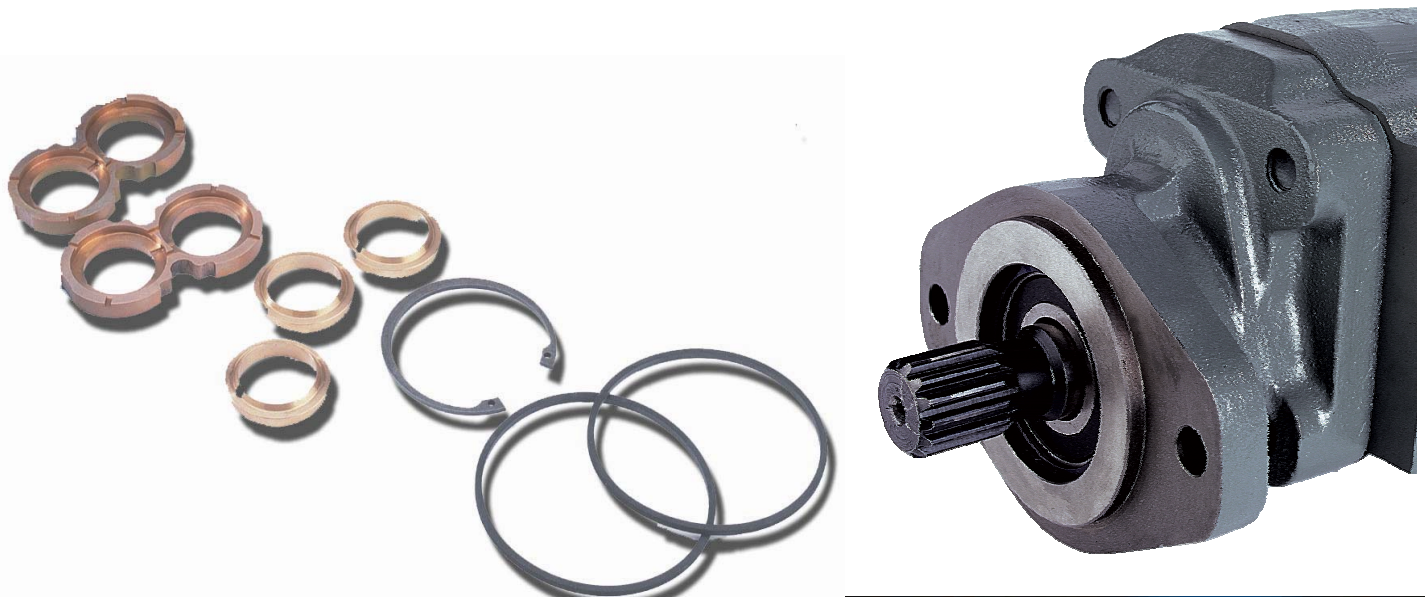
O.D TUBE.CODE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25
AB	NONE	NONE	X	X	X	X	X	X	X	X	X
EC	3/4"	NONE			X	X	X	X	X		
ED	NONE	3/4"			X	X	X	X	X		
EF	3/4"	3/4"			X	X	X	X	X		
EG	3/4"	1"			X	X	X				
EH	3/4"	1 1/4"					X	X			
EJ	1"	3/4"			X	X	X	X	X		
EK	1 1/4"	3/4"					X	X			
AC	1"	NONE			X	X	X	X			
AD	NONE	1"			X	X	X	X			
AF	1"	1"					X	X	X	X	X
AG	1"	1 1/4" *					X	X	X	X	X
AH	1"	1 1/2"						X	X	X	
AJ	1 1/4" *	1"					X	X	X	X	X
AK	1 1/2" *	1"					X	X	X	X	X
AL	1 1/4"	1 1/4"							X	X	X
AM	1 1/4"	1 1/2" *							X	X	X
AP	1 1/2" *	1 1/4"							X	X	X
AR	1 1/2"	1 1/2"									X
AA	1 1/4" *	NONE					X	X	X	X	X
AO	NONE	1 1/4" *					X	X	X	X	X
AE	1 1/2" *	NONE							X	X	
AU	NONE	1 1/2" *							X	X	

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

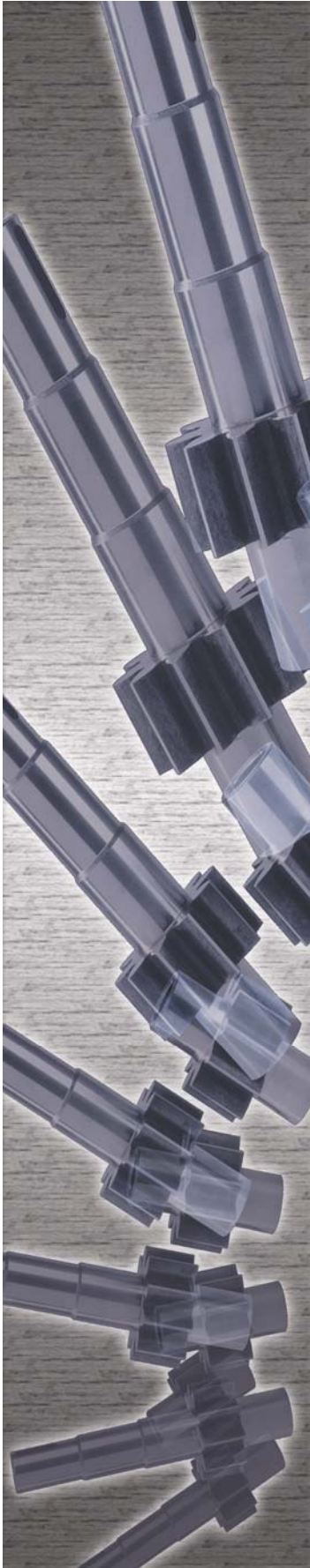


# MH50/51 SERIES GEAR HOUSING PORTS

SPLIT FLANGE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25
AB	NONE	NONE	X	X	X	X	X	X	X	X	X
UC	3/4"	NONE			X	X	X	X			
UD	NONE	3/4"			X	X	X	X			
UF	3/4"	3/4"			X	X	X	X	X	X	X
UG	3/4"	1"			X	X	X				
UH	3/4"	1 1/4"				X	X	X			
UJ	1"	3/4"			X	X	X	X	X		
UK	1 1/4"	3/4"				X	X	X			
OC	1"	NONE			X	X	X	X	X	X	X
OD	NONE	1"			X	X	X	X	X	X	X
OF	1"	1"				X	X	X	X	X	X
OG	1"	1 1/4" *				X	X	X	X		
OH	1"	1 1/2" *					X	X	X	X	X
OJ	1 1/4" *	1"				X	X	X	X	X	X
OK	1 1/2" *	1"					X	X	X	X	X
OL	1 1/4"	1 1/4"					X	X	X	X	X
OM	1 1/4"	1 1/2" *					X	X	X	X	X
ON	1 1/4"	2"							X	X	X
OP	1 1/2" *	1 1/4"					X	X	X	X	X
OQ	2"	1 1/4"							X	X	
OR	1 1/2"	1 1/2"						X	X	X	X
OS	1 1/2"	2"							X	X	X
OV	2"	1 1/2"							X	X	X
OX	2"	2"									X
OA	1 1/4" *	NONE				X	X	X	X	X	X
OB	NONE	1 1/4" *				X	X	X	X	X	X
OE	1 1/2" *	NONE					X	X	X	X	X
OU	NONE	1 1/2" *					X	X	X	X	X
UB	1"	2"							X	X	X
UQ	2"	1"							X	X	X
XB	2"	NONE							X	X	X
ZB	NONE	2"							X	X	X

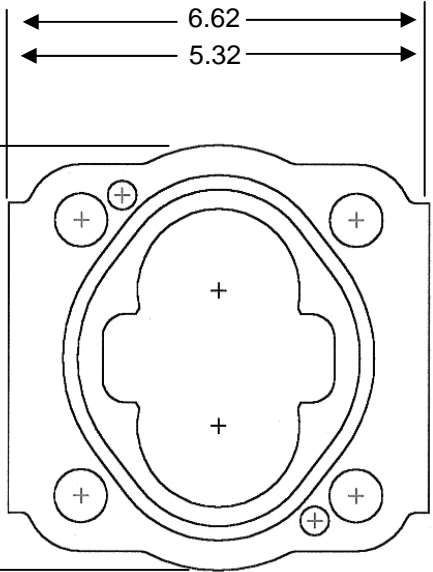


# MH50/51 SERIES GEAR HOUSING PORTS



METRIC S. F.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25
AB	NONE	NONE	X	X	X	X	X	X	X	X	X
VN	3/4"	NONE			X	X	X	X			
VQ	NONE	3/4"			X	X	X	X			
VS	3/4"	3/4"			X	X	X				
VT	3/4"	1"			X	X	X	X	X		
RV	1"	3/4"			X	X	X	X	X		
RU	3/4"	1 1/4"			X	X	X				
RW	1 1/4"	3/4"			X	X	X				
UL	1"	NONE				X	X	X	X	X	
UR	NONE	1"				X	X	X	X	X	
UM	1"	1"				X	X	X	X	X	
VU	1"	1 1/4" *				X	X	X	X	X	X
UX	1 1/4" *	1"				X	X	X	X	X	X
HO	1"	1 1/2" *					X	X	X		
VO	1 1/2" *	1"					X	X	X		
NO	1 1/4" *	NONE						X	X	X	X
UO	NONE	1 1/4" *						X	X	X	X
PO	1 1/4"	1 1/4"					X	X	X	X	X
QO	1 1/4"	1 1/2" *					X	X	X	X	X
SO	1 1/2" *	1 1/4"					X	X	X	X	X
JR	1 1/4"	2"							X	X	X
JM	2"	1 1/4"							X	X	X
UY	1 1/2" *	NONE					X	X	X	X	
TO	NONE	1 1/2" *					X	X	X	X	
SV	1 1/2"	1 1/2"							X	X	X
JN	1 1/2"	2"							X	X	X
JQ	2"	1 1/2"							X	X	X

2" gear width & up →  
under 2" gear width →



The width of the gear housing listed below

Gear size	Housing size
1/2" Gear Size	1.25
3/4" Gear Size	1.50
1" Gear Size	1.75
1 1/4" Gear Size	2.00
1 1/2" Gear Size	2.25
1 3/4" Gear Size	2.50
2" Gear Size	2.75
2 1/4" Gear Size	3.00
2 1/2" Gear Size	3.25



# MH50/51 SERIES CODING

## 8 SHAFT TYPE

CODE	DESCRIPTION
07	S.A.E. "C" 14 TOOTH SPLINE 1.250" dia
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
53	S.A.E. C 14 TOOTH SPLINE 1.25" dia.
65	S.A.E. "B" 13 TOOTH SPLINE .875" dia TYPE 2
67	S.A.E. B B KEYED 1" dia. 1/4" X 3/8" 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. — CONTINENTAL ONLY

## 7 GEAR SIZE MH 50 / 51

MH 50/51	CU. IN.	50 MAX. PSI	51 MAX. PSI
07	1.91	2500 PSI	3000 PSI
10	2.55	2500 PSI	3000 PSI
12	3.19	2500 PSI	3000 PSI
15	3.83	2500 PSI	3000 PSI
17	4.46	2000 PSI	3000 PSI
20	5.10	2000 PSI	2500 PSI
22	5.74	2000 PSI	2500 PSI
25	6.38	2000 PSI	2500 PSI

## 9 BEARING CARRIERS

ORIENTATION IS FROM THE SHAFT END

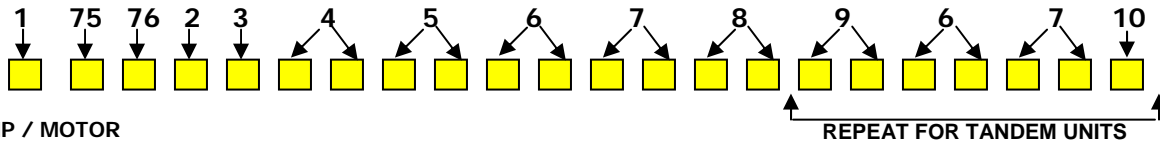
N.P.T.				S.A.E. SPLIT FLANGE			
IN	OUT	CW	CCW	IN	OUT	CW	CCW
NONE	NONE	C	D	1"	NONE	LB	BL
NONE	NONE	A	U	1 1/4"	NONE	MB	BM
1"	NONE	TB	BT	1 1/2"	NONE	NB	BN
1 1/4"	NONE	VB	BV	NONE	3/4"	BR	RB
1 1/2"	NONE	WB	BW	1"	3/4"	LR	RL
1"	3/4"	TX	XT	1 1/4"	3/4"	MR	RM
1 1/4"	3/4"	VX	XV	1 1/2"	3/4"	NR	RN
1 1/2"	3/4"	WX	XW	1 1/4"	1"	MS	SM
1 1/4"	1"	VZ	ZV	1 1/2"	1"	NS	SN
1 1/2"	1"	WZ	ZW	1"	3/4"	LX	XL
1"	3/4"	TJ	JT	1 1/4"	3/4"	MX	XM
1 1/4"	3/4"	VJ	JV	1 1/4"	1"	MZ	ZM
1 1/4"	1"	VK	KV	1 1/2"	1"	NZ	ZN
1 1/2"	1"	WK	KW	1"	3/4"	SR	RS
1"	3/4"	ZX	XZ				

S.A.E. O RING				MOTORS ONLY			
IN	OUT	CW	CCW	IN	OUT	DUAL	
1"	NONE	CB	BC	1"	1"	TT	NPT
1 1/4"	NONE	DB	BD	1 1/4"	1 1/4"	VV	NPT
1 1/2"	NONE	FB	BF	1 1/2"	1 1/2"	WW	NPT
NONE	3/4"	PJ	JP	1"	1"	CC	SAE O RING
1"	3/4"	CJ	JC	1 1/4"	1 1/4"	BB	SAE O RING
1 1/4"	3/4"	DJ	JD	1 1/2"	1 1/2"	FF	SAE O RING
1 1/2"	3/4"	FJ	JF	1"	1"	LL	SAE SPLIT FLANGE
1 1/4"	1"	DK	KD	1 1/4"	1 1/4"	MM	SAE SPLIT FLANGE
1 1/2"	1"	FK	KF	1 1/2"	1 1/2"	NN	SAE SPLIT FLANGE
1"	3/4"	CR	RC				

**10** CONNECTING SHAFT USE CODE #1 FOR ALL MULTIPLE UNITS

FOR PIGGYBACK UNITS CONTACT PRODUCT SUPPORT

# MH75/76 SERIES CODING



## 1 PUMP / MOTOR

- MHP PUMP
- MHM MOTOR

## 2 UNIT

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

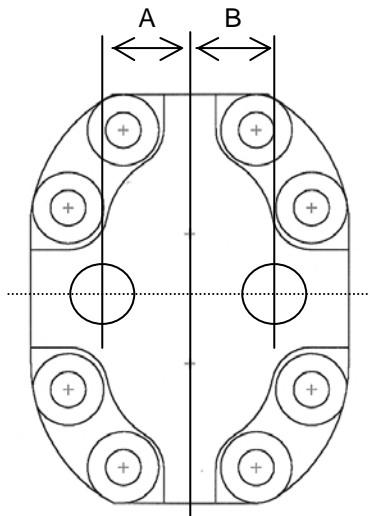
## 3 SHAFT END COVER

- 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



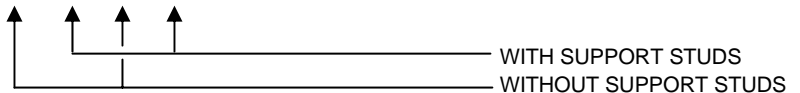
## 4 SHAFT END COVER

- 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							
SINGLE		TANDEM		PORT SIZE			
UNITS	UNITS	LEFT	RIGHT	A	B		
BE	BY	B I	BY	NONE	NONE	N/A	N/A
<b>"O"RING PORTS</b>							
JE	JY	J I	JY	1"	1"	1.62	1.62
<b>METRIC STR. THREAD PORTS</b>							
TE	TY	T I	TY	1"	1"	1.62	1.62



ORIENTATION IS FROM THE SHAFT END

FOR OTHER PORTING  
CONSULT THE FACTORY

# MH75/76 SERIES GEAR HOUSING PORTS

## NOTE

- \* N.P.T. PORTING IS NOT RECOMMENDED FOR PRESSURES ABOVE 1500 P.S.I.
- \* Ports marked with a "X" 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

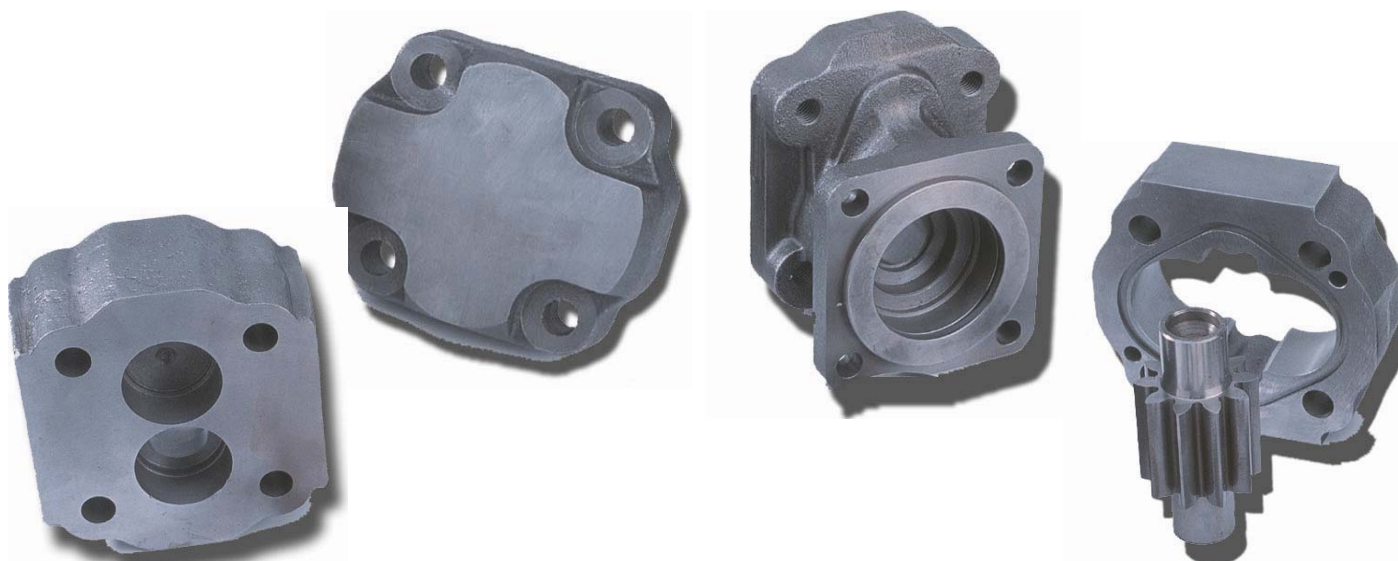
NPT.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25	27	30
AB	NONE	NONE	X	X	X	X	X	X	X	X	X	X	X
IC	3/4"	NONE											
ID	NONE	3/4"		X	X	X	X						
IF	3/4"	3/4"											
IG	3/4"	1"			X								
IH	3/4"	1 1/4"											
IJ	1"	3/4"			X	X	X						
IK	1 1/4"	3/4"											
YC	1"	NONE							X				
YD	NONE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

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



# MH75/76 SERIES GEAR HOUSING PORTS

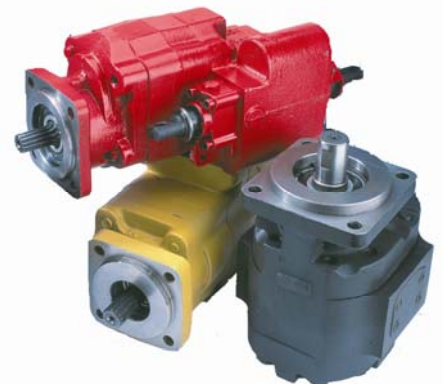
SPLIT FLANGE	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25	27	30
AB	NONE	NONE	X	X	X	X	X	X	X	X	X	X	X
UC	3/4"	NONE		X	X	X	X						
UD	NONE	3/4"		X	X	X	X						
UF	3/4"	3/4"		X									
UG	3/4"	1"		X	X								
UH	3/4"	1 1/4"											
UJ	1"	3/4"			X	X	X	X	X				
UK	1 1/4"	3/4"											
OC	1"	NONE				X							
OD	NONE	1"			X	X	X	X	X				
OF	1"	1"			X	X	X	X	X		X	X	X
OG	1"	1 1/4" *			X	X	X						
OH	1"	1 1/2" *				X	X	X	X	X			
OJ	1 1/4" *	1"			X	X	X	X	X	X	X		
OK	1 1/2" *	1"				X	X	X	X	X			
OL	1 1/4"	1 1/4"				X	X	X	X	X	X	X	X
OM	1 1/4"	1 1/2" *				X	X	X	X	X	X		
ON	1 1/4"	2"						X	X	X	X	X	X
OP	1 1/2" *	1 1/4"				X	X	X	X	X	X	X	X
OQ	2"	1 1/4"						X	X	X	X	X	X
OR	1 1/2"	1 1/2"							X	X	X	X	X
OS	1 1/2"	2"							X	X	X	X	X
OT	1 1/2"	2 1/2"									X	X	X
OV	2"	1 1/2"							X	X	X	X	X
OW	2 1/2"	1 1/2"									X	X	X
OX	2"	2"										X	X
OA	1 1/4" *	NONE				X	X	X	X	X	X		
UB	1"	2"							X				
UQ	2"	1"							X				
OB	NONE	1 1/4" *				X	X	X	X	X	X		
OE	1 1/2" *	NONE							X	X			
OU	NONE	1 1/2" *							X	X	X	X	X
OY	2"	2 1/2"											X
OZ	2 1/2"	2"											X
UN	1 1/4"	2 1/2"									X		
US	2 1/2"	1 1/4"									X		



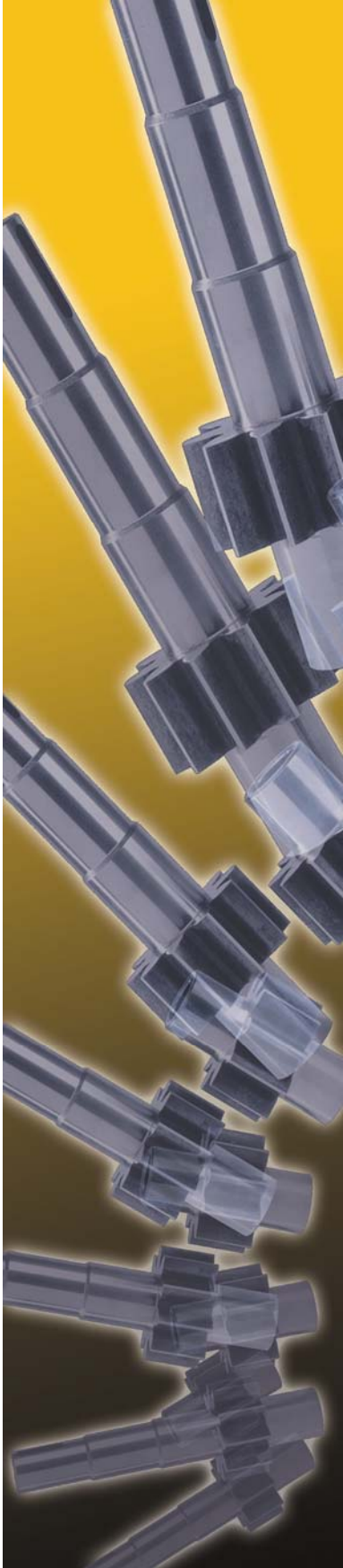
# MH75/76 SERIES GEAR HOUSING PORTS

METRIC S.F.	PORT LEFT	PORT RIGHT	05	07	10	12	15	17	20	22	25	27	30
AB	NONE	NONE	X	X	X	X	X	X	X	X	X	X	X
VN	3/4"	NONE		X	X	X	X						
VQ	NONE	3/4"		X	X	X	X						
VS	3/4"	3/4"		X	X								
VT	3/4"	1"		X	X								
RU	3/4"	1 1/4"			X								
RV	1"	3/4"		X	X	X	X	X	X				
RW	1 1/4"	3/4"			X								
UL	1"	NONE			X	X	X	X					
UR	NONE	1"			X	X	X	X					
UM	1"	1"			X	X	X	X	X				
VU	1"	1 1/4" *			X	X							
HO	1"	1 1/2" *				X	X						
UX	1 1/4" *	1"			X	X	X	X	X	X	X		
VO	1 1/2" *	1"				X	X						
NO	1 1/4" *	NONE				X	X	X	X	X	X		
UO	NONE	1 1/4" *				X	X	X	X	X	X		
PO	1 1/4"	1 1/4"				X	X	X	X	X	X	X	X
QO	1 1/4"	1 1/2" *					X	X	X	X			
SO	1 1/2" *	1 1/4"					X	X	X	X	X	X	X
JR	1 1/4"	2"						X	X	X	X		
JM	2"	1 1/4"						X	X	X	X		
UY	1 1/2" *	NONE							X	X	X		
TO	NONE	1 1/2" *							X	X	X	X	X
SV	1 1/2"	1 1/2"							X	X	X	X	X
JN	1 1/2"	2"							X	X	X	X	X
JQ	2"	1 1/2"							X	X	X	X	X
JX	1 1/2"	2 1/2"										X	X
LJ	2 1/2"	1 1/2"										X	X
JS	2"	2"											X

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



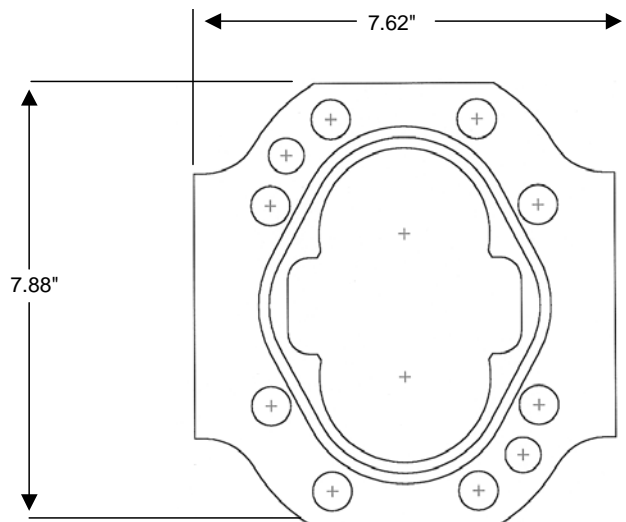
# MH75/76 SERIES GEAR HOUSING PORTS



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

The width of the gear housing listed below

Gear size	Housing size
3/4" Gear Size	1.75
1" Gear Size	2.00
1 1/4" Gear Size	2.25
1 1/2" Gear Size	2.50
1 3/4" Gear Size	2.75
2" Gear Size	3.00
2 1/4" Gear Size	3.25
2 1/2" Gear Size	3.50
2 3/4" Gear Size	3.75
3" Gear Size	4.00





# MH75/76 SERIES CODING

7 GEAR SIZE MH 75 / 76			
MH 75/ 76	CU. IN.	75 MAX. PSI	76 MAX. PSI
07	3.07	2500 PSI	3000 PSI
10	4.1	2500 PSI	3000 PSI
12	5.12	2500 PSI	3000 PSI
15	6.15	2500 PSI	3000 PSI
17	7.17	2500 PSI	3000 PSI
20	8.2	2500 PSI	2500 PSI
22	9.22	2250 PSI	2500 PSI
25	10.25	2250 PSI	2500 PSI
27	11.27	2000 PSI	2000 PSI
30	12.3	2000 PSI	2000 PSI

8 SHAFT TYPE	
CODE	
07	S.A.E. "C" 14 TOOTH SPLINE 1.250" dia
11	S.A.E. "C" KEYED 1.25" dia 5/16" X 15/32" X 1 1/2" KEY

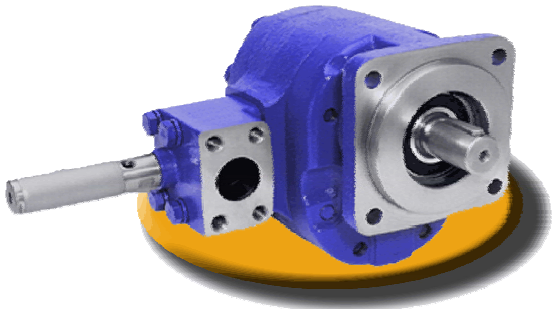
**9 BEARING CARRIERS** ORIENTATION IS FROM THE SHAFT END

N.P.T.			
IN	OUT	CW	CCW
NONE	NONE		
NONE	NONE	C	D
NONE	NONE	A	U

S.A.E. SPLIT FLANGE			
IN	OUT	CW	CCW
1"	NONE		
1 1/4"	NONE	MB	BM
1 1/2"	NONE	NB	BN
NONE	3/4"		
1"	3/4"	LR	RL
1 1/4"	3/4"	MR	RM
1 1/2"	3/4"	NR	RN
1 1/4"	1"	MS	SM
1 1/2"	1"	NS	SN
1"	3/4"		
1 1/4"	3/4"	MX	XM
1 1/4"	1"	MZ	ZM
1 1/2"	1"	NZ	ZN
1"	3/4"		

S.A.E. O RING			
IN	OUT	CW	CCW
1"	NONE		
1 1/4"	NONE	DB	BD
1 1/2"	NONE	FB	BF
NONE	3/4"		
1"	3/4"	CJ	JC
1 1/4"	3/4"	DJ	JD
1 1/2"	3/4"	FJ	JF
1 1/4"	1"	DK	KD
1 1/2"	1"	FK	KF
1"	3/4"		
1 1/4"	3/4"	DR	RD
1 1/2"	3/4"	FR	RF
1 1/4"	1"	DS	SD
1 1/2"	1"	FS	SF

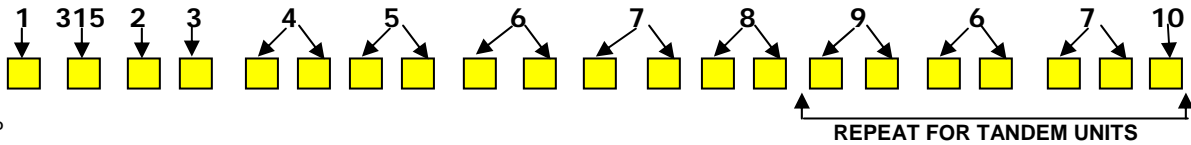
MOTORS ONLY			
IN	OUT	DUAL	
NONE	NONE		
1"	1"		SAE O RING
1 1/4"	1 1/4"	BB	SAE O RING
1"	1"	LL	SAE SPLIT FLANGE
1 1/4"	1 1/4"	MM	SAE SPLIT FLANGE
1 1/2"	1 1/2"	NN	SAE SPLIT FLANGE



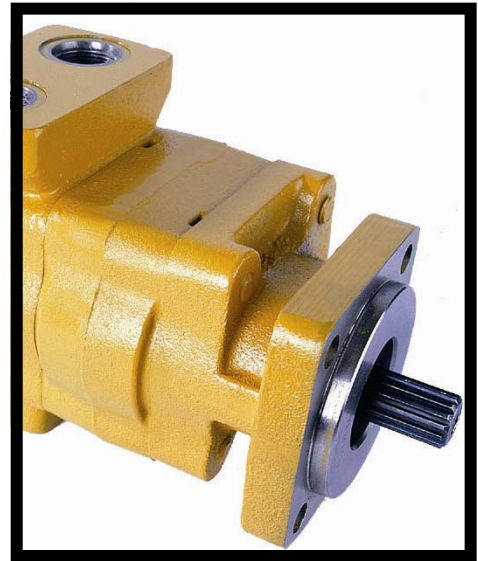
**10** CONNECTING SHAFT USE CODE #1 FOR ALL MULTIPLE UNITS

FOR PIGGYBACK UNITS CONTACT PRODUCT SUPPORT

# MH315 SERIES CODING



- 1 MHP PUMP  
MHM MOTOR
- 2 UNIT
  - A SINGLE UNIT
  - B TANDEM UNITS
  - L UNIT WITH EXTENDED STUDS
- 3 SHAFT END COVER
  - 1 PUMP COMPLETE WITHOUT SHAFT BEARING CW
  - 2 PUMP WITHOUT SHAFT BEARING CCW
  - 4 PUMP COMPLETE WITH SHAFT BEARING CW CODE 490 ONLY
  - 5 PUMP COMPLETE WITH SHAFT BEARING CCW CODE 590 ONLY
  - 9 MOTOR BI-ROTATIONAL WITHOUT SINGLE SHAFT BEARING
- 4 SHAFT END COVER
  - 90 S.A.E. 4 BOLT 72 X 100 X 80 mm
  - 93 S.A.E. 2 BOLT "A" MOUNT
  - 95 PAD MOUNT
  - 96 S.A.E. 2 BOLT "B" MOUNT



UNPORTED				
BI	NONE	X	NONE	

NPT PORTS ONLY - SIDE PORT				
CW	CCW	IN		OUT
AJ	JA	1 1/4"	X	1"
AK	KA	1 1/4"	X	3/4"
AL	LA	1"	X	1"
AM	MA	1"	X	3/4"
AR	RA	3/4"	X	3/4"
MOTOR PORT END COVER - SIDE PORT				
BI-ROTATION NPT				
DN		3/4"	X	3/4"
DM		1"	X	1"
DQ		1/2"	X	1/2"

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

REAR PORTED - S.A.E..O RING				
CW	CCW	IN		OUT
UC	CU	1 1/4"	X	1"
UF	FU	1 1/4"	X	7/8"
UN	NU	1 1/4"	X	3/4"
UD	DU	1"	X	1"
UP	PU	1"	X	7/8"
UQ	QU	1"	X	3/4"
UR	RU	1"	X	5/8"
LN	NL	7/8"	X	7/8"
LP	PL	7/8"	X	3/4"
LQ	QL	7/8"	X	5/8"
LR	RL	3/4"	X	3/4"
LS	SL	3/4"	X	5/8"
LT	TL	3/4"	X	1/2"
MOTOR REAR PORT				
BI-ROTATION S.A.E O RING				
RN		1"	X	1"
RQ		3/4"	X	3/4"
RS		1/2"	X	1/2"

MOTOR REAR PORT				
BI-ROTATION NPT				
RX		1"	X	1"
RY		3/4"	X	3/4"
RZ		1/2"	X	1/2"

# MH315 SERIES CODING

## 6 GEAR HOUSING

IN	OUT	CODE	
NONE	NONE	AB	PUMP
NONE	NONE	EB	MOTOR

## 7

GEAR	CU. IN.	MAX P.S.I	
3	3/8"	.47	3500 PSI
5	1/2"	.62	3500 PSI
6	5/8"	.78	3500 PSI
7	3/4"	.93	3500 PSI
8	7/8"	1.09	3500 PSI
10	1"	1.24	3500 PSI
11	1 1/8"	1.40	3500 PSI
12	1 1/4"	1.55	3500 PSI
13	1 3/8"	1.71	3500 PSI
15	1 1/2"	1.86	3300 PSI
16	1 5/8"	2.02	3100 PSI
17	1 3/4"	2.17	2900 PSI
18	1 7/8"	2.33	2700 PSI
20	2"	2.48	2500 PSI

## 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



## 9 BEARING CARRIERS

### DUAL OUTLET (PUMPS)

#### S.A.E SPLIT FLANGE

C W	C C W	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	GA	1"	3/4"	1/2"
HA	AH	1"	1/2"	1/2"

#### S.A.E O RING

C W	C C W	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	GO	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"

### SINGLE OUTLET (PUMPS)

#### S.A.E SPLIT FLANGE

C W	C C W	IN	OUT
CJ	JC	1 1/4"	1 1/4"
CL	LC	1 1/4"	1"
CM	MC	1 1/4"	3/4"
HB	BH	1 1/4"	1/2"
HC	CH	1"	1"
HF	FH	1"	3/4"
HL	LH	1"	1/2"
HM	MH	3/4"	3/4"
HN	NH	3/4"	1/2"

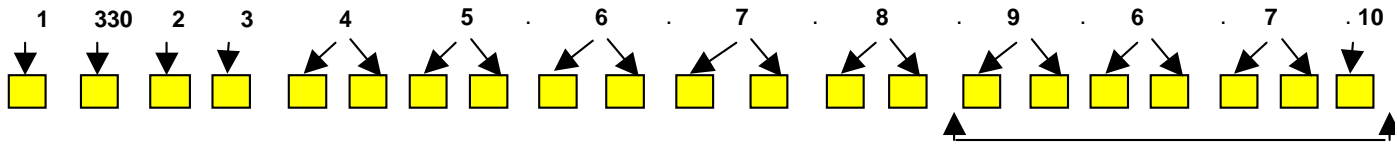
#### S.A.E O RING

C W	C C W	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"
KO	OK	1 1/4"	1"
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"

**10** CONNECTING SHAFT USE CODE #1 FOR ALL MULTIPLE UNITS



# MH330 SERIES CODING



- 1 MHP PUMP  
MHM MOTOR
- 2 UNIT
  - A SINGLE UNIT
  - B TANDEM UNITS
  - C SINGLE OR TANDEM UNIT WITH CONTINENTAL SHAFT
  - L UNIT WITH EXTENDED STUDS
- 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

UNPORTED	
BI	NONE X NONE

NPT PORTS ONLY				
CW	CCW	IN		OUT
AJ	JA	1 1/4"	X	1"
AK	KA	1 1/4"	X	3/4"
AL	LA	1"	X	1"
AM	MA	1"	X	3/4"
AR	RA	3/4"	X	3/4"
MOTOR PORT END COVER				
BI-ROTATION NPT				
DN		1"	X	1"
DM		1 1/4"	X	1 1/4"
DQ		1 1/2"	X	1 1/2"

S.A.E..O RING				
CW	CCW	IN		OUT
FJ	JF	1 1/4"	X	1"
FL	LF	1"	X	1"
BG	GB	1 1/4"	X	NONE
BJ	JB	1"	X	NONE
BN	NB	NONE	X	1"
MOTOR PORT END COVER				
BI-ROTATION S.A.E. COVER				
VR		3/4"	X	3/4"
VN		1"	X	1"
VC		1 1/4"	X	1 1/4"

S.A.E.SPLIT FLANGE				
CW	CCW	IN		OUT
EJ	JE	1 1/2"	X	1 1/4"
EK	KE	1 1/2"	X	1"
EL	LE	1 1/4"	X	1 1/4"
EM	ME	1 1/4"	X	1"
EN	NE	1"	X	1"
OF	FO	1 1/2"	X	NONE
OG	GO	1 1/4"	X	NONE
OJ	JO	1"	X	NONE
OM	MO	NONE	X	1 1/4"
ON	NO	NONE	X	1"
MOTOR SIDE PORT				
BI-ROTATION S.A.E S.F.				
CS		1 1/4"	X	1 1/4"
CT		1"	X	1"
CV		3/4"	X	3/4"

## 6 GEAR HOUSING

IN	OUT	CODE	
NONE	NONE	AB	PUMP
NONE	NONE	EB	MOTOR

## 7

GEAR	CU. IN.	MAX P.S.I	
5	1/2"	.99	3500 PSI
7	3/4"	1.48	3500 PSI
10	1"	1.97	3500 PSI
12	1 1/4"	2.46	3500 PSI
15	1 1/2"	2.96	3500 PSI
17	1 3/4"	3.45	3250 PSI
20	2"	3.94	3000 PSI

## 8 SHAFT TYPE

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

## 9 BEARING CARRIERS

DUAL OUTLET (PUMPS)

### S.A.E SPLIT FLANGE

C W	C C W	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 O RING

C W	C C W	IN	OUT	OUT
GV	VG	1 1/2"	1"	1"
GY	YG	1 1/4"	1"	1"
GZ	ZG	1"	1"	1"

SINGLE OUTLET (PUMPS)

### S.A.E SPLIT FLANGE

C W	C C W	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"
HO	OH	1 1/4"	1 1/4"

## S.A.E O RING

C W	C C W	IN	OUT
KM	MK	1 1/2"	1 1/4"
KN	NK	1 1/2"	1"
KO	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)

C W	C C W	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			
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)

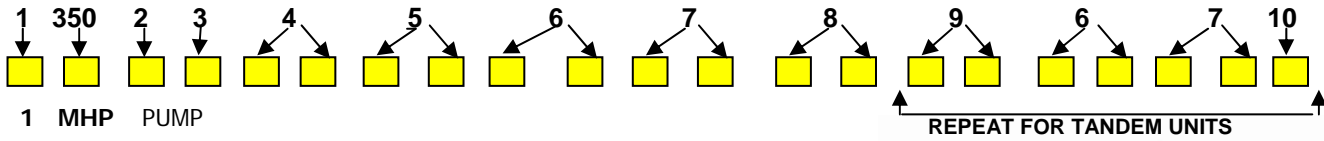
PQ	QP	1 1/2"	1 1/4"
PR	RP	1 1/4"	1 1/4"

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

BI-ROTATION			
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

# MH350 SERIES CODING



1 MHP PUMP  
MHM MOTOR

2 UNIT  
A SINGLE UNIT  
B TANDEM UNITS  
C SINGLE OR TANDEM UNIT WITH CONTINENTAL SHAFT  
L UNIT WITH EXTENDED STUDS

3 SHAFT END COVER  
1 PUMP 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 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

UNPORTED				
BI	IB	NONE	X	NONE

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

MOTOR SIDE PORT				
BI-ROTATION S.A.E O RING				
VC		1 1/4"	X	1 1/4"
VN		1"	X	1"
VR		3/4"	X	3/4"

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

MOTOR SIDE PORT				
BI-ROTATION S.A.E S.F.				
CR		1 1/2"	X	1 1/2"
CS		1 1/4"	X	1 1/4"
CT		1"	X	1"
CV		3/4"	X	3/4"



# MH350 SERIES CODING

## 6 GEAR HOUSING

IN	OUT	CODE
NONE	NONE	AB
NONE	NONE	EB

## 7

	GEAR	CU. IN.	MAX P.S.I
5	1/2"	1.28	3500 PSI
7	3/4"	1.91	3500 PSI
10	1"	2.55	3500 PSI
12	1 1/4"	3.19	3500 PSI
15	1 1/2"	3.83	3500 PSI
17	1 3/4"	4.46	3250 PSI
20	2"	5.10	3000 PSI
22	2 1/4"	5.74	2750 PSI
25	2 1/2"	6.38	2500 PSI

## 8 SHAFT TYPE

- 7 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)

#### S.A.E SPLIT FLANGE

C W	C C W	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"	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

C W	C C W	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"

**10** CONNECTING SHAFT USE CODE #1 FOR ALL MULTIPLE UNITS

### SINGLE OUTLET (PUMPS)

#### S.A.E SPLIT FLANGE

C W	C C W	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"
HO	OH	1 1/4"	1 1/4"
HP	PH	1 1/4"	1"
HQ	QH	1"	1"
RS	SR	1 1/4"	1"

### SINGLE OUTLET (PUMPS)

#### S.A.E O RING

C W	C C W	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"
KO	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)

C W	C C W	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			
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"

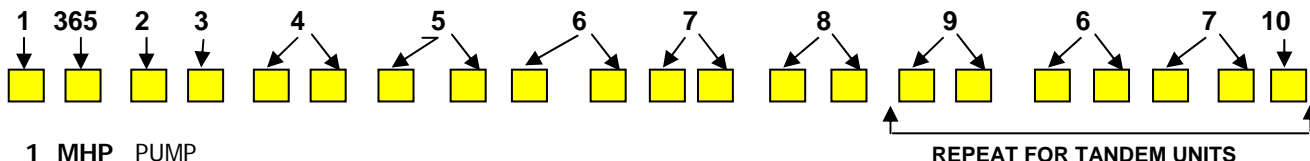
#### S.A.E O RING (PUMPS)

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			
MM		1 1/2"	1 1/2"
NN		1 1/4"	1 1/4"
QQ		1"	1"
RR		3/4"	3/4"

# MH365 SERIES CODING



1 MHP PUMP  
MHM MOTOR

## 2 UNIT

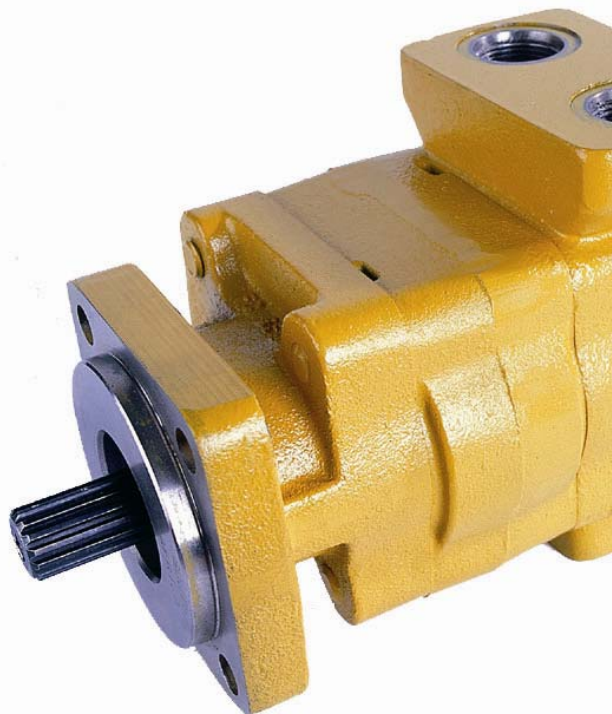
- A SINGLE UNIT
- B TANDEM UNITS
- C SINGLE OR TANDEM UNIT WITH CONTINENTAL SHAFT
- L UNIT WITH EXTENDED STUDS

## 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

UNPORTED			
BI	IB	NONE	X NONE

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

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

MOTOR SIDE PORT			
BI-ROTATION S.A.E O RING			
VC		1 1/4"	X 1 1/4"
VN		1"	X 1"
VR		3/4"	X 3/4"

MOTOR SIDE PORT			
BI-ROTATION S.A.E S.F.			
CR		1 1/2"	X 1 1/2"
CS		1 1/4"	X 1 1/4"
CT		1"	X 1"
CV		3/4"	X 3/4"

# MH365 SERIES CODING

## 6 GEAR HOUSING

IN	OUT	CODE	
NONE	NONE	AB	PUMP
NONE	NONE	EB	MOTOR

## 7

	GEAR	CU. IN.	MAX P.S.I.
07	3/4"	2.70	3500 PSI
10	1"	3.60	3500 PSI
12	1 1/4"	4.50	3500 PSI
15	1 1/2"	5.40	3500 PSI
17	1 3/4"	6.30	3500 PSI
20	2"	7.20	3500 PSI
22	2 1/4"	8.1	3250 PSI
25	2 1/2"	9	3000 PSI

## 8 SHAFT TYPE

- 7 S.A.E. "C" SPLINE
- 11 S.A.E. "C" KEYED

## 9 BEARING CARRIERS

DUAL OUTLET (PUMPS)

### S.A.E SPLIT FLANGE

C W	C C W	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

C W	C C W	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

C W	C C W	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"	1"
HO	OH	1 1/4"	1 1/4"
HP	PH	1 1/4"	1"
HQ	QH	1"	1"

SINGLE OUTLET (PUMPS)

### S.A.E O RING

C W	C C W	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"
KO	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)

C W	C C W	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			
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)

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			
MM		1 1/2"	1 1/2"
NN		1 1/4"	1 1/4"
QQ		1"	1"
RR		3/4"	3/4"

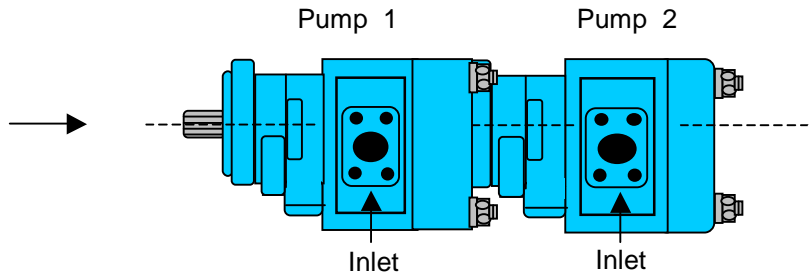
**10** CONNECTING SHAFT USE CODE #1 FOR ALL MULTIPLE UNITS

# PIGGYBACK PUMPS

The piggyback pump is two pumps sharing the same driveline. Metaris offers three types of piggyback units. The original bearing type piggyback version, the Add-A-Pump and the phase two close couple model. The Add-A-Pump allows for any type of pump to be installed to the rear of the main pump. While the close couple type requires Metaris 300 series pump added to the rear of the main pump, the bearing type requires another bearing type unit to be added to the main pump.

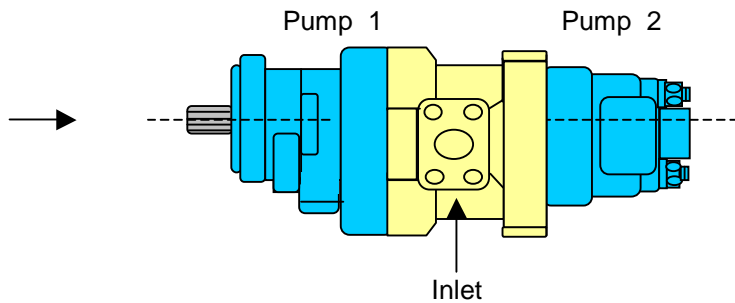
**Fig. 1**  
**Bearing Type Piggyback Pump**

- \* Single drive
- \* Two suction lines required
- \* Both pumps bearing type



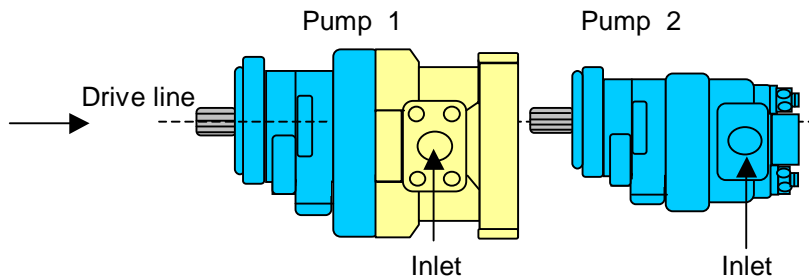
**Fig. 2**  
**Close couple Type Piggyback Pump**

- \* Single drive
- \* One suction line required
- \* Both pumps bushing type



**Fig. 3**  
**Add - A - Pump Piggyback unit**

- \* Single drive
- \* Two suction lines required
- \* Second pump can be any type



## The pump configurations

**Fig. 1**

Bearing Type Pumps	
Pump 1	Pump 2
MHP 75	MHP 50
MHP 75	MHP 30
MHP 76	MHP 51
MHP 76	MHP 31
MHP 50	MHP 50
MHP 50	MHP 30
MHP 51	MHP 51
MHP 51	MHP 31
MHP 30	MHP 30
MHP 31	MHP 31

**Fig. 2**

Bushing Type Pumps	
Pump 1	Pump 2
MHP 365	MHP 330
MHP 350	MHP 315
MHP 330	MHP 315

**Fig. 3**

Add-A-Pump Type	
Pump 1	Pad Mount
MHP 365	"A" PAD
MHP 365	"B" PAD
MHP 350	"A" PAD
MHP 350	"B" PAD

For Piggyback units please consult the factory

# WARRANTY POLICY AND PROCEDURES

## WARRANTY

Metaris Inc. and Metaris Corp. hereinafter "Metaris", warrants all of its product to be free from defects in material and workmanship under normal operating conditions and proper application in accordance with the specifications for operation as described by the manufacturer for the period of twelve (12) months in service.

## LIMITATIONS ON WARRANTY

This Warranty is expressly in lieu of any other warranties expressed or implied. Buyers sole and exclusive remedy under this Warranty shall be limited to the repair, replacement or exchange of warranted products at our option, F.O.B. our factory, or designated service center.

No special, incidental, consequential or other damage shall be recoverable. Metaris shall not be liable for consequential damages or contingent liabilities including, but not limited to, loss of life, personal injury, loss of crops, loss due to water or fire damage, loss of business income, down time costs and trade or other commercial loss arising out of failure of the product. Metaris will in no event be liable for any sum in excess of the price received by it for the product for which liability is claimed or asserted.

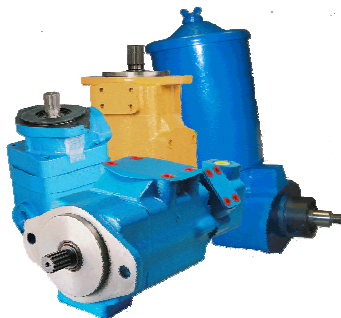
No products shall be returned without prior authorization from Metaris. Buyers and their Agents shall prepay all transportation charges for the return of such products to a Metaris location or designated service center. There will be no acceptance of any charges for labor and/or parts incidental to the removal or remounting of products repaired or replaced under Warranty.

The above Warranty does not cover conditions over which Metaris has no control, including, without limitation, contamination, pressure in excess of recommended maximum, products damaged or subject to accident abuse or misuse after shipment from our factory, products altered or repaired by anyone other than Metaris personnel, authorized Metaris factory personnel or persons so designated in writing by Metaris prior to commencement of said work.

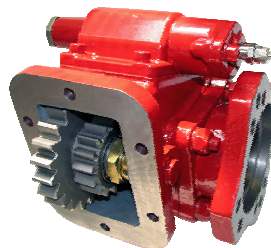
A return goods authorization number must be obtained from Metaris or a Metaris authorized service center, or a Metaris authorized agent prior to any products being returned for Warranty.

**Our growing range of pumps and components also includes:**

**VANE**



**PTO**



**PISTON**

