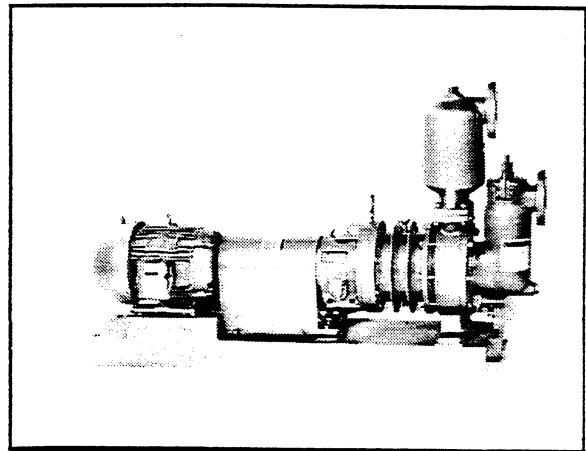


MHL/MPL-Series Specifications	
Number of Models	5
Model Numbers	10W, 12W, 15W, 20XW & 23XW
Size (Suction X Discharge)	2.0" X 2.0" to 3.0" X 3.0"
Impeller Type	Open
Impeller Dia.	6.13" to 10.00"
RPM	1150 to 3500
Max. Flow (GPM)	400
Max. Head (Ft.)	280
Max. Motor (HP)	30
Motor Type	Ft Mnt NEMA
Magnet Torque (Lb-Ft)	70
Max. W.P. (PSI @ °F)	150
Max. Hydro Test (PSI)	225
Temperature Range (°F)	32 - 250
Minimum Flow (GPM)	10
Viscosity: up to (cp) (Max.)	154
at specific gravity	1.2
Solids: Particle Size (Max.)	200 microns
Max. Concentration	5% by weight
Diametrical Clearance:	
Teflon® Bearing (In.)	.012
Stellite® Bearing (In.)	.006
Graohite® Bearing (In.)	.006
Axial Brg. Clearance (In.)	.011
Materials:	
Casing	Ductile Iron, 316SS, ELCOMET "K", R-55*, A-48*, Y-17*
Impeller	316SS, ELCOMET "K", R-55*, A-48*, Y-17*
Bushing Plate	316SS, ELCOMET "K", R-55*, A-48*, Y-17*
Rear Casing	Y-17*
Impeller Shaft	316SS, 20SS, Nitronic 50®, Hastelloy "C22"®
Secondary Containment	C Steel, 316SS, 20SS
Magnet Lining	PFA
Magnetic Material	Rare Earth
Sleeve Bearings & Thrust Bearings	Rulon #123®, Stellite®, Graphalloy®
Gaskets/O-Rings	SEPCO 6234®/ FPM / Teflon® Encapsulated Silicon
Weight (bare pump in Lbs.)	420 to 880

® - For information on registered trademarks and material descriptions, please refer to form 1-PHE-1.0-0-C and section 1-PSS-8.4.0-0-C.
* - This material is named by the LaBour designation. For more info, refer to pages in section 1-PSS-8.4.0-0-C.



**SEALLESS LaBOUR
MHL/MPL-SERIES**

LaBOUR MHL/MPL...Control fugitive emissions with the superior self-priming pump for handling many toxic, corrosive, or expensive liquids when metallic construction is required.

MHL/MPL Features/Benefits

SEALLESS MAGNETIC DRIVE DESIGN - Mechanical shaft seals or packing and the inherent leakage from their use is eliminated. Seal flush is not needed so pumped product will not be diluted or contaminated. Expensive, complicated, and difficult to maintain double seal flushing systems are no longer required. Soon to be implemented EPA emissions standards necessitating monitoring for many services utilizing conventional pump designs is not required.

OPTIMAL DESIGN - The MHL/MPL's back pull-out design allows maintenance to be completed without removing the casing from the piping. A fully open, radial vane impeller design reduces axial thrust assuring extended bearing life while offering improved vapor handling capabilities reducing priming times vs. conventional impeller designs. Our time proven, superior performance "Hydro-balance" principle self-priming design has been perfected since it's introduction in 1922 by the founder of LaBour Pump Company.

METALLIC CONSTRUCTION - The strength and durability of a wide range of alloys plus Ductile Iron is available to handle the toughest applications. To extend bearing life, external and recirculated flush arrangements are available when process fluid contain abrasive solids.

MHL/MPL OPTIONS

<u>OPTIONS</u>	<u>LOCATION</u>
Oil Leveler _____	1-MHL/MPL-7.8.0-0-C
Oil Mist Lubrication _____	Contact Factory
Labyrinth Oil Seals _____	Contact Factory
Flush Flange Adapter _____	Contact Factory
Flushing Arrangements Including Cyclone Separators _____	Contact Factory
Drain / Vent & Gage Connectors _____	1-MHL/MPL-7.8.3-0-C
Dry Run Protector (Dual Trip Current Sensor) _____	1-ACC-C.2.0-0-C
w/ Pressure Switch _____	Contact Factory
w/ Flow Switch _____	Contact Factory
w/ Thermostat _____	Contact Factory
Leak Detector _____	Contact Factory
Channel Base w/ Stilt Legs _____	1-MHL/MPL-7.8.1-0-C
Channel Base w/ Drip Rim or Drip Pans _____	1-MHL/MPL-7.8.2-0-C
Non-Metallic Base Plate _____	Contact Factory
Shaft w/ Wear Resistant Coatings _____	Contact Factory
Shaft w/ Replaceable Sleeve _____	Contact Factory
Corrosion Resistant Paints _____	Contact Factory
Couplings _____	1-ACC-C.3.0-0-C
Coupling Gaurds _____	1-ACC-C.4.0-0-C
Bearing Housing and Adapter Upgrades to 316SS or Elcomet K _____	Contact Factory
Casings Available w/ 150 PSI Flanges or 300 PSI Flanges _____	Contact Factory
Seperator without Suction Trap & Strainer _____	Contact Factory

MHL/MPL PRODUCT SPECIFICATIONS

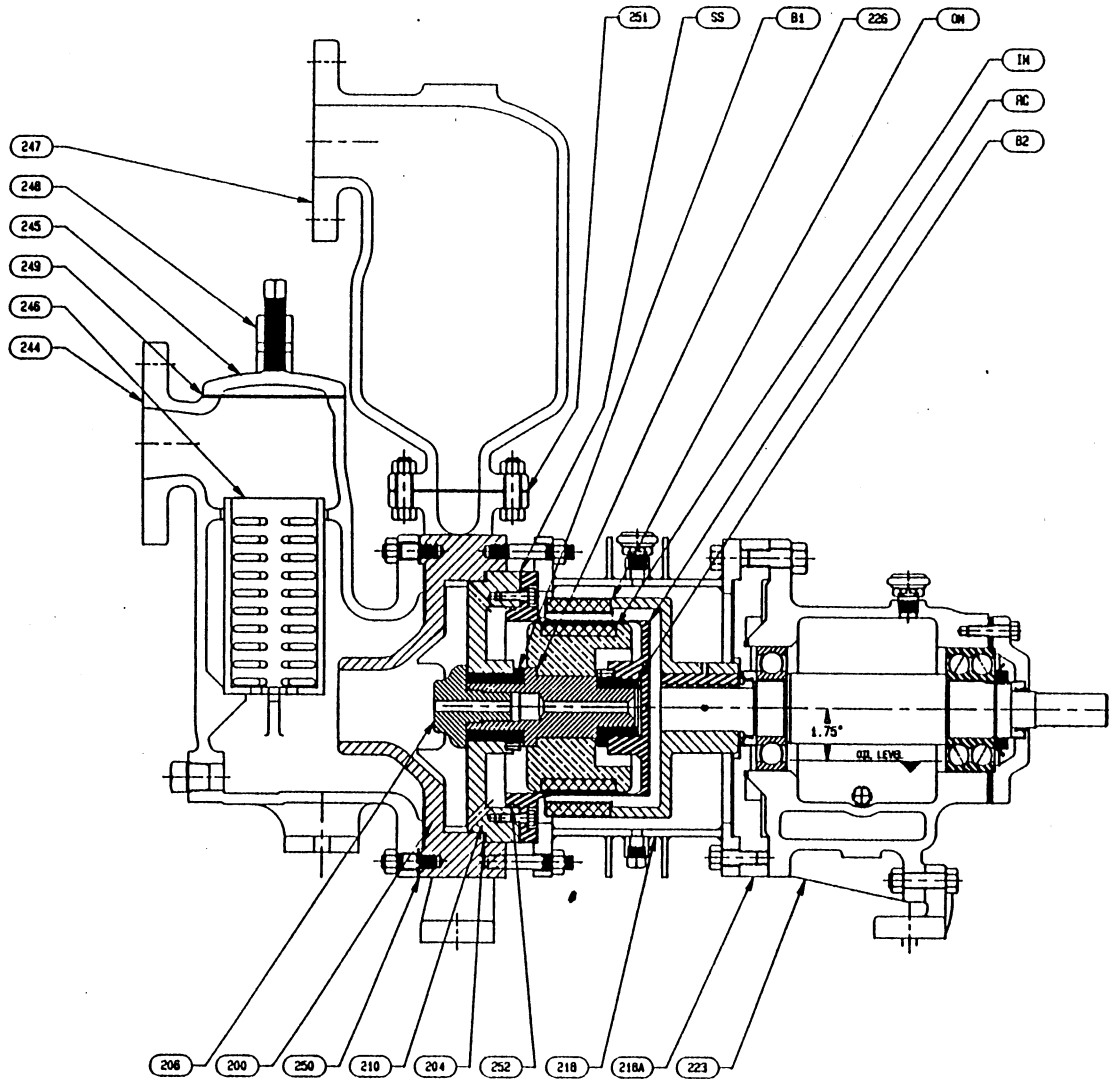
TYPES	MHL-10W 1750 RPM	MHL-10W 3500 RPM		
Number of Models Model Discriptions	1 10W	1 10W		
Size (Suction X Discharge)	2.0" X 2.0"	2.0" X 2.0"		
Impeller Type	Open	Open		
Impeller Dia. (Max. - Min.)	6.88" - 6.13"	6.88" - 6.13"		
RPM	1750	3500		
Max. Flow (GPM)	70	140		
Max. Head (Ft.)	42	200		
Max. Motor (HP)	7.5	30		
Motor Type	Ft Mnt NEMA	Ft Mnt NEMA		
Magnet Torque (Lb-Ft)	70	70		
Max. W.P. (PSI)	150	150		
Max. Hydro Test (PSI)	225	225		
Temperature Range (°F)	32 - 250	32 - 250		
Minimum Flow (GPM)	10	30		
Viscosity: up to (cp) (Max.) at specific gravity	154 1.2	154 1.2		
Solids: Particle Size (Max.) Max. Concentration	200 microns 5% by weight	200 microns 5% by weight		
Diametrical Clearance:				
Teflon® Bearing (In.)	.012	.012		
Stellite® Bearing (In.)	.006	.006		
Graohite® Bearing (In.)	.006	.006		
Axial Brg. Clearance (In.)	.011	.011		
Materials:				
Casing	Ductile Iron, 316 SS (CF-8M), ELCOMET "K" (CN-7M), R-55, A-48 (CD4-MCu), Y-17 (Hastelloy "C"®)			
Impeller	316 SS (CF-8M), ELCOMET "K" (CN-7M), R-55, A-48 (CD4-MCu), Y17 (Hastelloy "C"®)			
Bushing Plate	316 SS (CF-8M), ELCOMET "K" (CN-7M), R-55, A-48 (CD4-MCu), Y-17 (Hastelloy "C"®)			
Rear Casing	Y-17 (Hastelloy "C"®)			
Impeller Shaft	316 SS, 20 SS, Nitronic 50®, Hastelloy "C22"®			
Secondary Containment	Carbon Steel, 316 SS, 20 SS			
Magnet Lining	PFA			
Magnetic Material	Rare Earth			
Sleeve Bearings & Thrust Bearings	Rulon #123®, Stellite®, Graphalloy®			
Gaskets/O-Rings	SEPCO 6234® / FPM / Teflon® Encapsulated Silicone			
Weight (bare pump in Lbs.)	420	420		
REMARKS:	® = For information on registered trademarks and material descriptions, please refer to form 1-PRE-1.1.0-0-C an section 1-PSS-B.4.0-0-C. Performance limits may vary depending on overall conditions of the application. Please consult your local LaBour representative with specific application requirements.			
Ft Mnt -- Foot Mounted				

MHL/MPL PRODUCT SPEC. CONT.

TYPES	MHL-12W 1750 RPM	MHL-12W 3500 RPM	MPL-15W 1750 RPM	
Number of Models Model Discriptions	1 12W	1 12W	1 15W	
Size (Suction X Discharge)	2.0" X 2.0"	2.0" X 2.0"	2.5" X 2.5"	
Impeller Type	Open	Open	Open	
Impeller Dia. (Max. - Min.)	8.0" - 7.0"	8.0" - 7.0"	8.38" - 7.38"	
RPM	1750	3500	1750	
Max. Flow (GPM)	80	150	180	
Max. Head (Ft.)	62	280	84	
Max. Motor (HP)	7.5	30	15	
Motor Type	Ft Mnt NEMA	Ft Mnt NEMA	Ft Mnt NEMA	
Magnet Torque (Lb-Ft)	70	70	70	
Max. W.P. (PSI)	150	150	150	
Max. Hydro Test (PSI)	225	225	225	
Temperature Range (°F)	32 - 250	32 - 250	32 - 250	
Minimum Flow (GPM)	10	30	40	
Viscosity: up to (cp) (Max.)	154	154	154	
at specific gravity	1.2	1.2	1.2	
Solids: Particle Size (Max.)	200 microns	200 microns	200 microns	
Max. Concentration	5% by weight	5% by weight	5% by weight	
Diametrical Clearance:				
Teflon® Bearing (In.)	.012	.012	.012	
Stellite® Bearing (In.)	.006	.006	.006	
Graphite® Bearing (In.)	.006	.006	.006	
Axial Brg. Clearance (In.)	.011	.011	.011	
Materials:				
Casing	Ductile Iron, 316 SS (CF-8M), ELCOMET "K" (CN-7M), R-55, A-48 (CD4-MCu), Y-17 (Hastelloy "C"®)			
Impeller	316 SS (CF-8M), ELCOMET "K" (CN-7M), R-55, A-48 (CD4-MCu), Y17 (Hastelloy "C"®)			
Bushing Plate	316 SS (CF-8M), ELCOMET "K" (CN-7M), R-55, A-48 (CD4-MCu), Y-17 (Hastelloy "C"®)			
Rear Casing	Y-17 (Hastelloy "C"®)			
Impeller Shaft	316 SS, 20 SS, Nitronic 50®, Hastelloy "C22"®			
Secondary Containment	Carbon Steel, 316 SS, 20 SS			
Magnet Lining	PFA			
Magnetic Material	Rare Earth			
Sleeve Bearings & Thrust Bearings	Rulon #123®, Stellite®, Graphalloy®			
Gaskets/O-Rings	SEPCO 6234® / FPM / Teflon® Encapsulated Silicone			
Weight (bare pump in Lbs.)	470	470	600	
REMARKS:	<p>® = For information on registered trademarks and material descriptions, please refer to form 1-PRE-1.1.0-0-C an section 1-PSS-B.4.0-0-C.</p> <p>Performance limits may vary depending on overall conditions of the application.</p> <p>Please consult your local LaBour representative with specific application requirements.</p>			
Ft Mnt = Foot Mounted				

MHL/MPL PRODUCT SPEC. CONT.

TYPES	MPL-20XW 1150 RPM	MPL-20XW 1750 RPM	MPL-23XW 1150 RPM	MPL-23XW 1750 RPM
Number of Models	1	1	1	1
Model Discriptions	20XW	20XW	23XW	23XW
Size (Suction X Discharge)	3.0" X 3.0"	3.0" X 3.0"	3.0" X 3.0"	3.0" X 3.0"
Impeller Type	Open	Open	Open	Open
Impeller Dia. (Max. - Min.)	9.38" - 8.25"	9.38" - 8.25"	10.0" - 9.0"	10.0" - 9.0"
RPM	1150	1750	1150	1750
Max. Flow (GPM)	200	260	250	400
Max. Head (Ft.)	44	94	50	120
Max. Motor (HP)	10	15	10	15
Motor Type	Ft Mnt NEMA	Ft Mnt NEMA	Ft Mnt NEMA	Ft Mnt NEMA
Magnet Torque (Lb-Ft)	70	70	70	70
Max. W.P. (PSI)	150	150	150	150
Max. Hydro Test (PSI)	225	225	225	225
Temperature Range (°F)	32 - 250	32 - 250	32 - 250	32 - 250
Minimum Flow (GPM)	25	50	50	80
Viscosity: up to (cp) (Max.)	154	154	154	154
at specific gravity	1.2	1.2	1.2	1.2
Solids: Particle Size (Max.)	200 microns	200 microns	200 microns	200 microns
Max. Concentration	5% by weight	5% by weight	5% by weight	5% by weight
Diametrical Clearance:				
Teflon® Bearing (In.)	.012	.012	.012	.012
Stellite® Bearing (In.)	.006	.006	.006	.006
Graphite® Bearing (In.)	.006	.006	.006	.006
Axial Brg. Clearance (In.)	.011	.011	.011	.011
Materials:				
Casing	Ductile Iron, 316 SS (CF-8M), ELCOMET "K" (CN-7M), R-55, A-48 (CD4-MCu), Y-17 (Hastelloy "C"®)			
Impeller	316 SS (CF-8M), ELCOMET "K" (CN-7M), R-55, A-48 (CD4-MCu), Y17 (Hastelloy "C"®)			
Bushing Plate	316 SS (CF-8M), ELCOMET "K" (CN-7M), R-55, A-48 (CD4-MCu), Y-17 (Hastelloy "C"®)			
Rear Casing	Y-17 (Hastelloy "C"®)			
Impeller Shaft	316 SS, 20 SS, Nitronic 50®, Hastelloy "C22"®			
Secondary Containment	Carbon Steel, 316 SS, 20 SS			
Magnet Lining	PFA			
Magnetic Material	Rare Earth			
Sleeve Bearings & Thrust Bearings	Rulon #123®, Stellite®, Graphalloy®			
Gaskets/O-Rings	SEPCO 6234® / FPM / Teflon® Encapsulated Silicone			
Weight (bare pump in Lbs.)	830	830	880	880
REMARKS:				
Ft Mnt = Foot Mounted	® = For information on registered trademarks and material descriptions, please refer to form 1-PRE-1.1.0-0-C an section 1-PSS-B.4.0-0-C. Performance limits may vary depending on overall conditions of the application. Please consult your local LaBour representative with specific application requirements.			



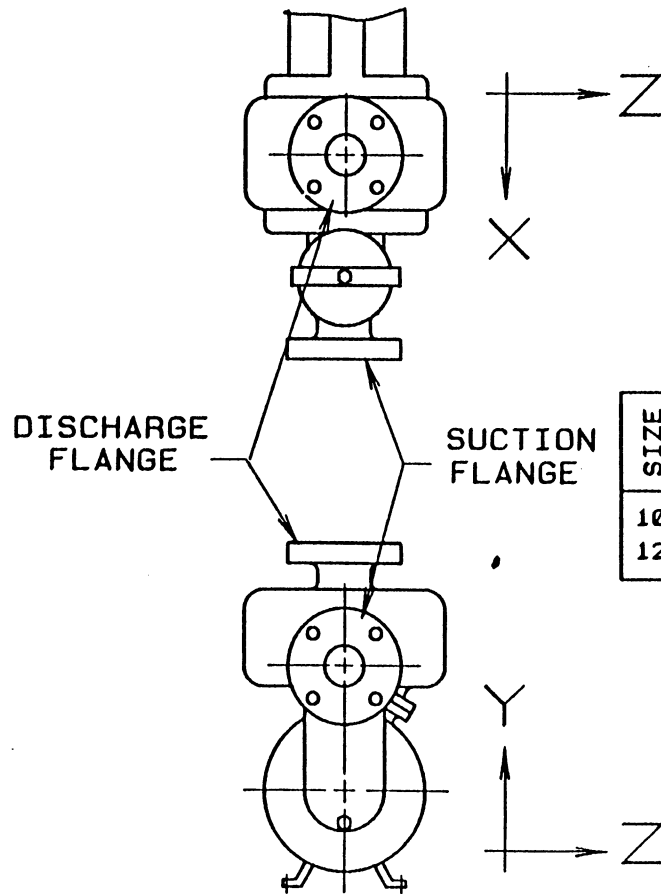
PC. NO.	NO. REQD.	PART NAME	MET END MATERIAL
200	1	CASING	DUCTILE IRON
204	X	CASING GASKET	SEPCO 6234
206	1	IMPELLER	316 S.S.
210	1	COVER/ BUSHING PLATE	316 S.S.
218	1	ADAPTER	CARBON STEEL
218A	1	ADAPTER COVER	CARBON STEEL
223	1	BEARING HOUSING	CAST IRON
226	1	SHAFT	NITRONIC 50
244	1	TRAP	DUCTILE IRON
245	1	TRAP COVER	DUCTILE IRON
246	1	STRAINER	DUCTILE IRON
247	1	SEPERATOR	DUCTILE IRON
248	1	CLAMP	304 S.S.
249	1	GASKET, TRAP COVER	SEPCO 6234
250	1	GASKET, TRAP	SEPCO 6234
251	1	GASKET, SEPERATOR	SEPCO 6234
252	1	"O" RING, REAR CASING	VITON
B1	1	FRONT BEARING	RULON 123
B2	1	REAR BEARING	RULON 123
IM	1	INNER MAGNET	TEFLON COATED
OM	1	OUTER MAGNET	CARBON STEEL MOUNTED
RC	1	REAR CASING	HASTELLOY
SS	1	SHIMS, ADJUSTING	STAINLESS STEEL

1-MHL/MPL-7.6.0-0-C

CONFIDENTIAL

This drawing is the property of LaBour Pump Company and is to be kept in confidence. It is not to be employed for any manufacturing purpose except on the explicit instruction of LaBour Pump Company.

MPL/MHL CROSS SECTIONAL DRAWING & PARTS LIST



MHL NOZZLE LOADS

MAXIMUM PERMISSIBLE NOZZLE LOADS

(FORCES = LBS., MOMENTS = FT-LBS.)

SIZE	SUCTION FLANGE						DISCHARGE FLANGE					
	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mx	My	Mz
10W	200	130	160	340	260	170	100	65	80	170	130	85
12W	200	130	160	340	260	170	100	65	80	170	130	85

THE MAXIMUM LOADS GIVEN ABOVE DO NOT REFLECT THE RECOMMENDED PRACTICES OF THE "HYDRAULIC INSTITUTE", WHICH STATES; "IT IS DESIRABLE TO SUPPORT AND RESTRAIN BOTH THE SUCTION AND DISCHARGE PIPES TO AVOID APPLICATION OF FORCES AND MOMENTS TO THE PUMP CASING".

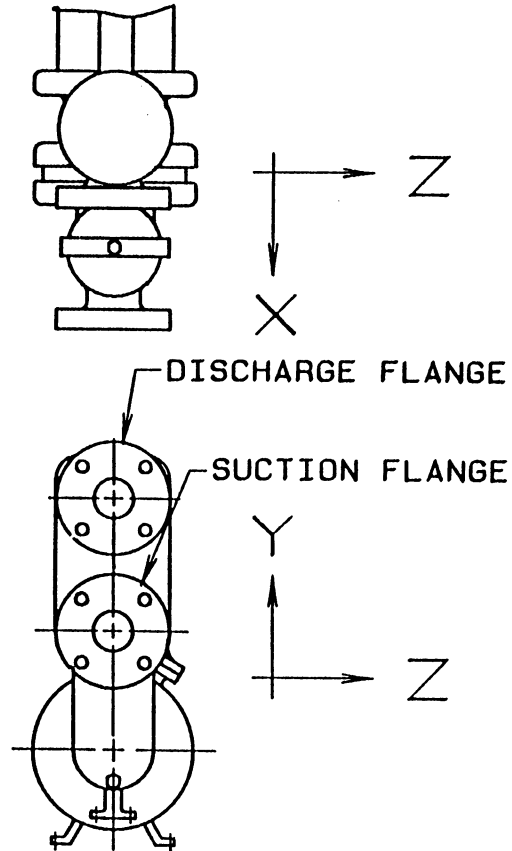
1-MHL/MPL-7.7.0-0-C

MPL NOZZLE LOADS

MAXIMUM PERMISSIBLE NOZZLE LOADS

(FORCES = LBS., MOMENTS = FT-LBS.)

SIZE	SUCTION FLANGE						DISCHARGE FLANGE					
	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mx	My	Mz
15W	200	130	80	70	260	170	100	60	80	170	130	80
20XW	300	200	100	100	530	350	150	100	120	350	260	170
23XW	300	200	100	100	530	350	150	100	120	350	260	170



THE MAXIMUM LOADS GIVEN ABOVE DO NOT REFLECT THE RECOMMENDED PRACTICES OF THE "HYDRAULIC INSTITUTE", WHICH STATES; "IT IS DESIRABLE TO SUPPORT AND RESTRAIN BOTH THE SUCTION AND DISCHARGE PIPES TO AVOID APPLICATION OF FORCES AND MOMENTS TO THE PUMP CASING".

GENERAL OILER INFORMATION

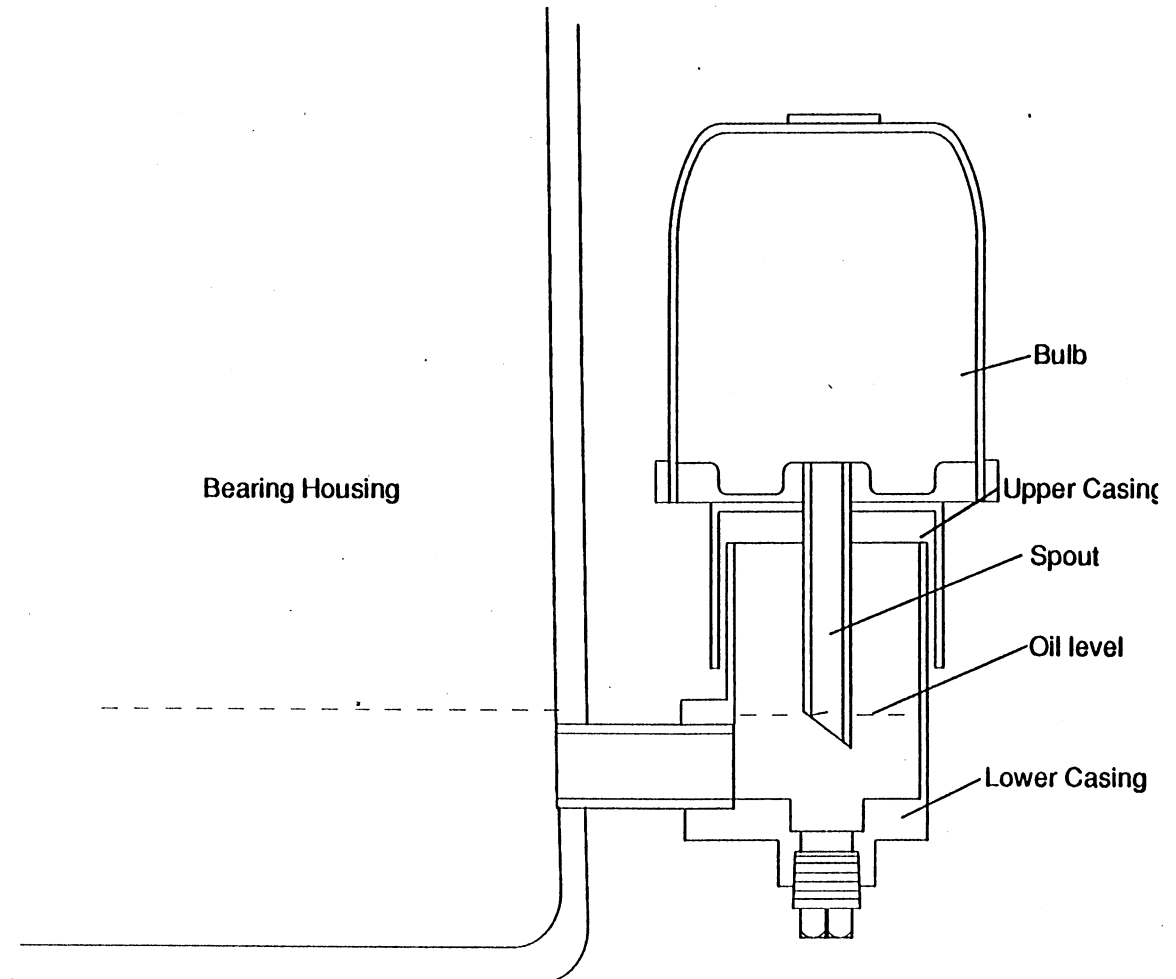
A: Fill the bulb with oil then place your thumb over bulb's spout, invert and screw the bulb down onto the cup. Allow the bulb to empty, filling the bearing housing. Depending on the size and capacity of the bearing housing several fillings of the bulb may be required before the actual level is reached. **NEVER USE LOWER CUP ONLY AS A FILL SPOUT, ALWAYS FILL THRU RESERVOIR.** When oil level is reached, no more oil will run out of the reservoir bottle.

B: Start up machine and check to see that the proper level of oil is being maintained. If oil level is too low, then the set screw, on the side of the upper casing (lower part of the bulb), should be loosened and the bulb raised slightly. Now re-tighten the set screw and repeat steps A and B. If the oil level is too high you need to lower the bulb instead of raising it and drain oil from the bearing housing, then repeat steps A and B.

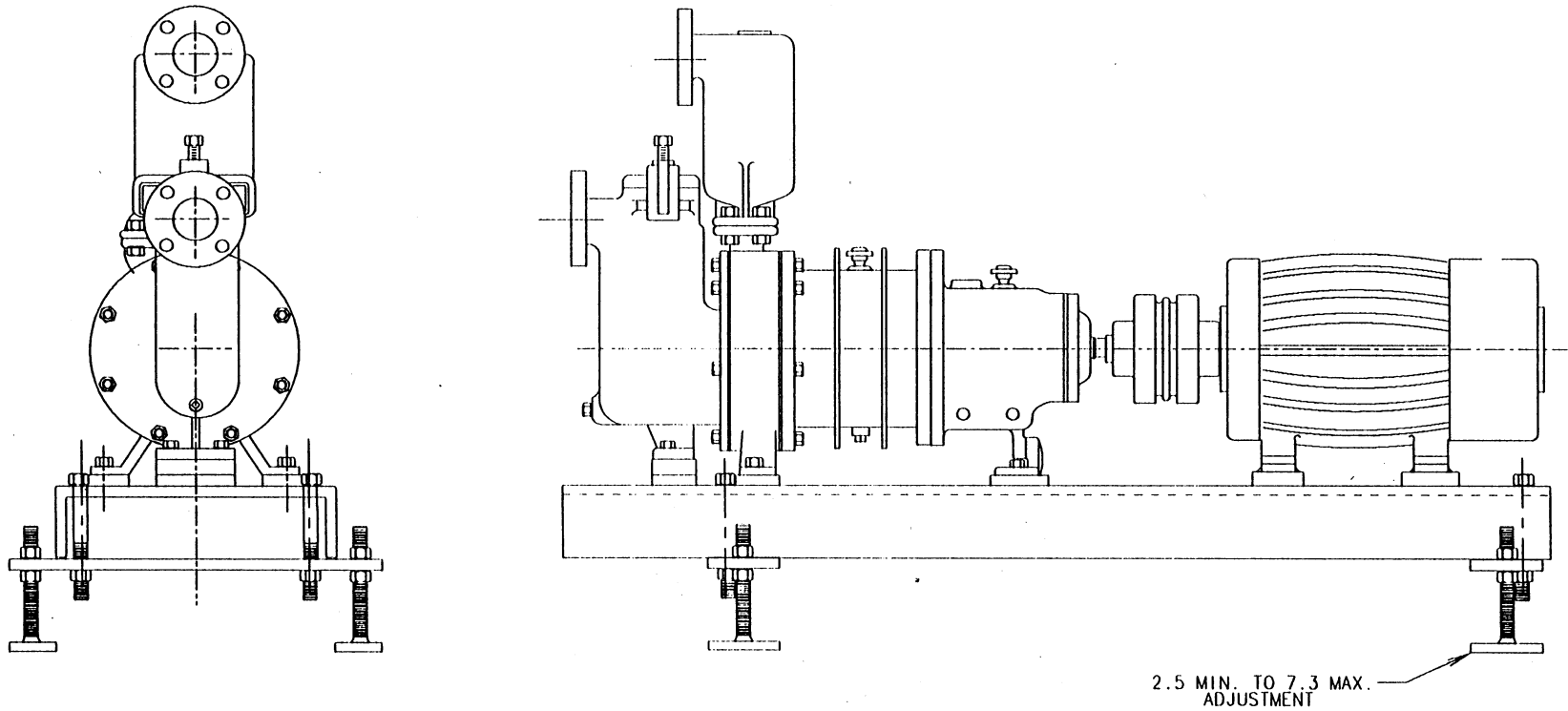
C: Now that the oil leveler is set there is no need for further adjustments, only a periodic filling of the bulb is required.

PROBLEMS

1. Oil level is too high. The oil splashes, foams, and seeps out along the shaft.
2. Oil level is too low. Excessive heating, or premature bearing failure.
3. Fan may pull oil out of bearing. Breather tubes are available.
4. Variable capacity oilers are available for extension of time between addition of oil.



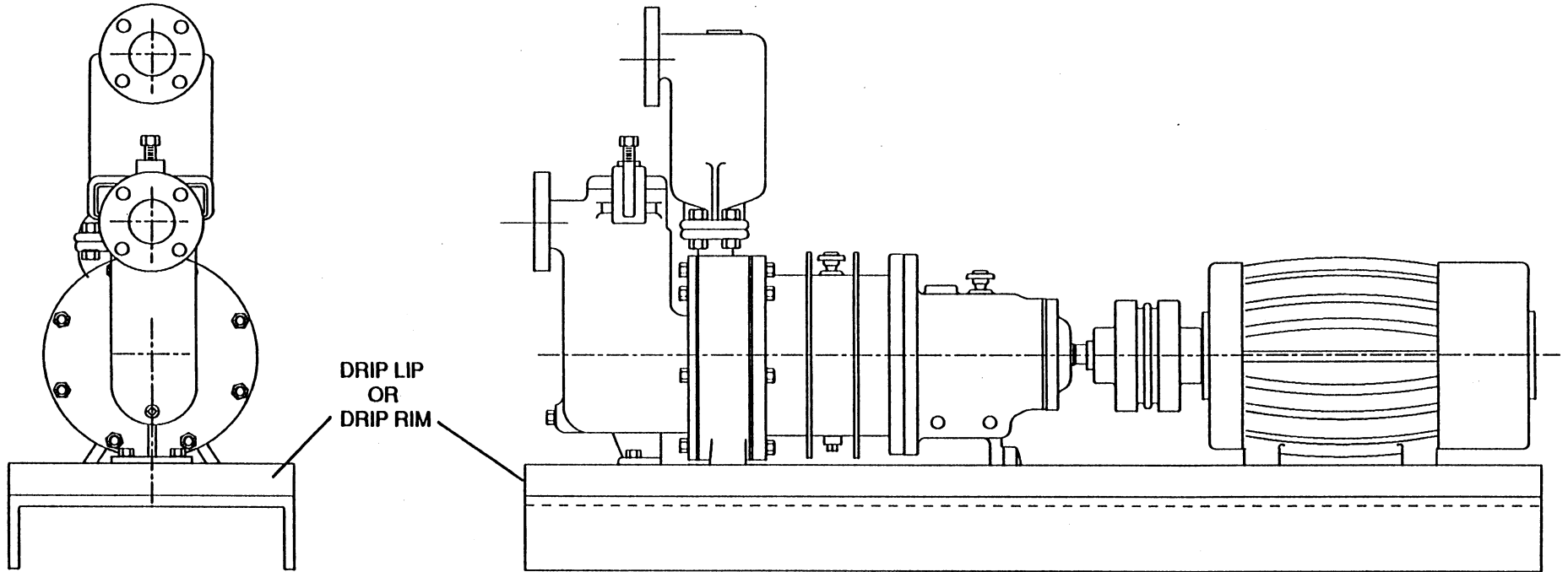
1-MHL/MPL-7.8.1-0-C



LaBour offers stilt mounting for there long coupled MHL and MPL pumps. This method of stiling allows the pump to be set on uneven surfaces and at differing heights. Adjustments to the stilts height can range from 2.3 inches to 7.5 inches. LaBour can modify this design to any of your specific needs. For more information on any options or other pumps that LaBour carries, please contact us at LaBour or your local area representative.

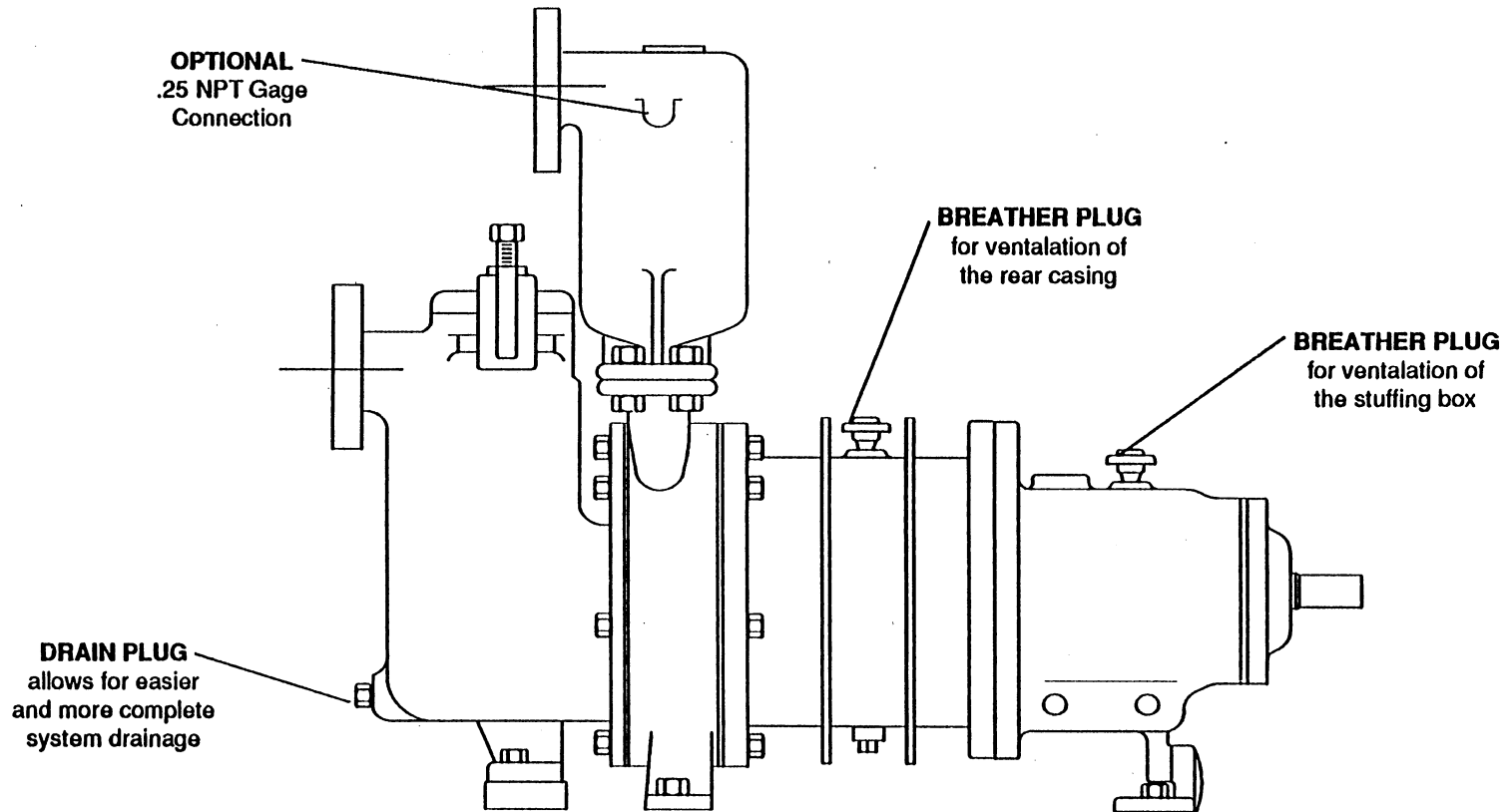
MHL/MPL / STILING FOR LONG COUPLED UNITS

1-MHL/MPL-7.8.2-0-C



LaBour has drip lip and drip pan options for the MHL and MPL series of pumps. The drip lip is a welded 10 gauge strip of material (usage will specify material) and is 1.13 inches in height. The drip pan closely resembles a cookie sheet and is usually made of 316 stainless steel. LaBour can modify these designs to any of your specific needs. For more information on any options or other pumps that LaBour carries, please contact us at LaBour or your local area representative.

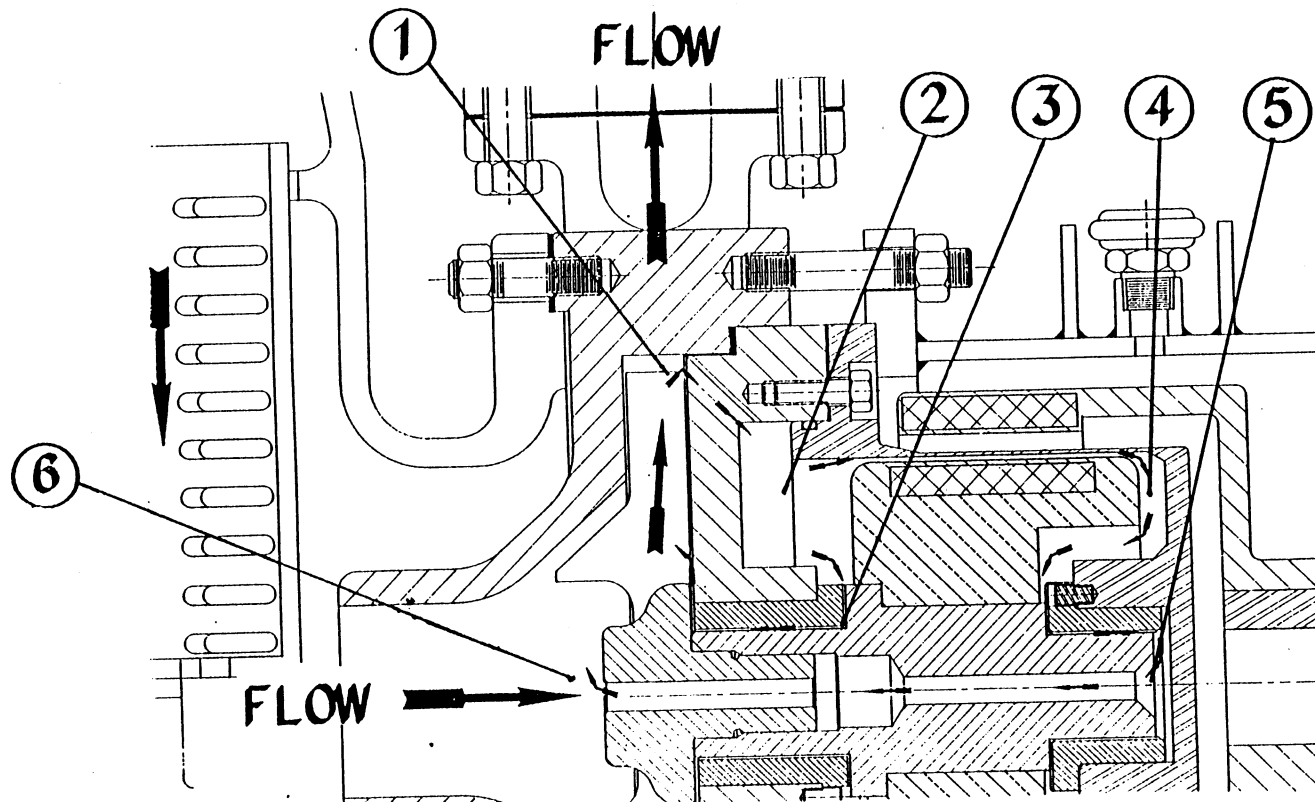
MHL/MPL OPTIONS / DRIP PANS & DRIP LIPS



1-MHL/MPL-7.8.3-0-C

LaBour's MHL/MPL series of pumps have many optional features for draining, venting, and gageing. Some of the standard features and those that are optional are shown above. Some other options include oil mist lubrication and labrinth seal. For more information on any options or other pumps that LaBour carries, please contact us at LaBour or your local area representative.

MHL/MPL OPTION / DRAIN/VENT & GAGE CONNECTIONS



1-MHL/MPL-7.9.0-0-C

Lubrication liquid follows a path from the impeller inlet to the high pressure zone ① of the casing. Then through the two circulation holes in the bushing plate to zone ②. At this point the flow divides into two different paths. Some of the liquid flows to zone ④ where it enters the rear bearing at the thrust face and continues through the straight grooves in the bore of the bearing to zone ⑤. It returns to the low pressure zone ⑥ at the suction inlet, through a centerline hole in the shaft and impeller. The rest of the liquid from zone ② flows through the front thrust and radial bearing zone ③ returning to the impeller inlet through hydraulic balance holes in the impeller.

MHL/MPL BEARING LUBRICATION CIRCULATION PATH