

3MW SERIES

3" Non-Clog Wastewater Pumps
Vertical Discharge
2" Solids Handling - 3450 RPM
2½" Solids Handling - 1750 RPM



THE HEAVY-DUTY MYERS 3MW SERIES SEWAGE PUMPS ARE DESIGNED FOR USE IN RESIDENTIAL RAW SEWAGE AND LIGHT COMMERCIAL APPLICATIONS. 3MW pumps are available in single and double seal configuration. The enclosed two-vane impeller provides high efficiency pumping and easily handles trashy solids normally found in sewage applications. This series is offered with vertical discharge and easily adapts to a quick-disconnect slide rail system. For more information, call your Myers distributor or the Myers Ohio sales office at 419-289-6898.

ADVANTAGES BY DESIGN

- High efficiency hydraulic design cuts pumping costs and extends life of fluid end components.
- Two-vaned rounded port impellers easily handle solids at high operating efficiencies.
- Offered in two speeds to cover larger operating range.
- Hydraulic end virtually maintenance free. No close running tolerances have to be maintained or adjusted.
- Volute seal ring replaces in minutes if wear should occur with no adjustments needed.

DURABLE MOTOR WILL DELIVER MANY YEARS OF RELIABLE SERVICE

- Oil-filled motor for maximum heat dissipation and constant bearing lubrication.
- High torque, permanent split capacitor (PSC), single phase motors. No starting switches or relays to wear out.
- Optional seal leak probe warns of seal leak condition. (Dual seal motors only.) Helps prevent costly motor damage.
- Motors have on winding current and temperature sensitive overload. (Single phase only.)
- Motor is held in place by 4 bolts. Easily removed if service is ever needed.

PRODUCT CAPABILITIES

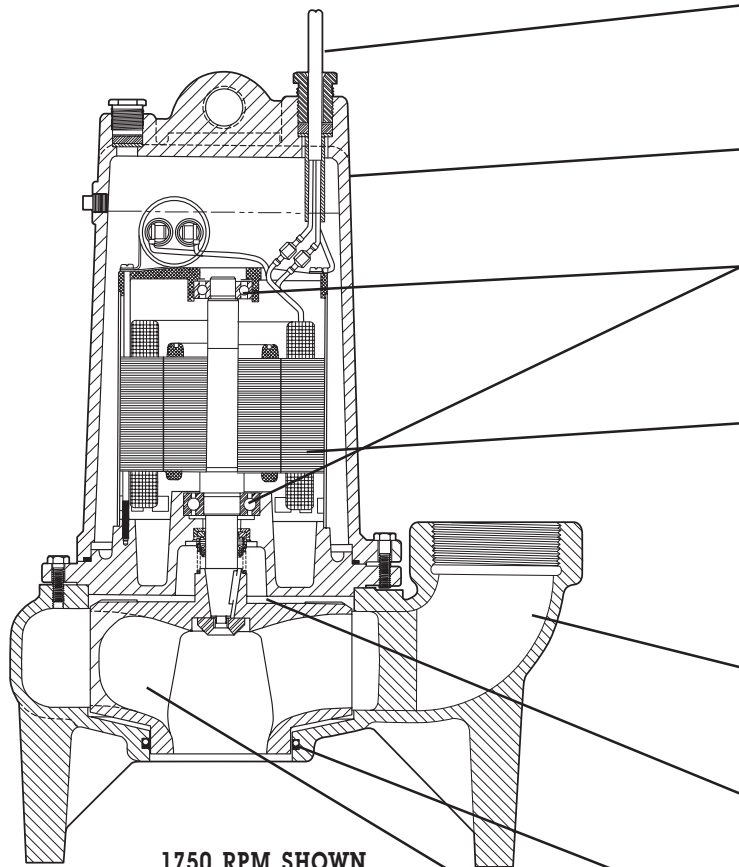
Capacities To	330 gpm	20.82 lps
Heads To	92 ft.	28.0 m
Solids Handling		
1750 rpm	2½ in.	63.5 mm
3450 rpm	2 in.	50.6 mm
Liquids Handling	raw sewage, rain water, effluent	
Intermittent Liquid Temp.	140°F	60°C
Winding Insulation Temp. (Class B)	266°F	130°C
Available Motors (single phase are psc type; three phase need Myers control panel.)	1750 rpm 1½-3 HP 208/230 volt 1Ø, 60 Hz	3450 rpm 1-3 HP 200/230/460/575 volt, 3Ø, 60 Hz
Third Party Approval	UL Pending, CSA	
Acceptable pH Range	6 - 9	
Specific Gravity	.9 - 1.1	
Viscosity	28-35 SSU	
Discharge, Vertical	3" NPT	
Minimum Sump Dia. (Duplex)	48 in.	1.2 m

Construction Materials

Motor Housing, Seal	cast iron, class 30
Housing, Volute Case	ASTM A48
Enclosed 2-Vane Impeller	ductile iron, class 65 ASTM A536
Power, Control Cords	SJOW/SJOWA, SOOW, 20 ft.
Mechanical Seal	single, type 21 standard-carbon/ceramic optional-tungsten carbide
Pump, Motor Shaft	416 SST
Fasteners	300 series SST

WHERE INNOVATION MEETS TRADITION

Myers[®]
Pentair Water



1750 RPM SHOWN
Handles 2 1/2" spherical solids.

POWER CORD

Jacket sealed with compression fittings. Individual wires potted with epoxy to prevent wicking in case of cord damage.

MOTOR HOUSING

Cast iron for efficient heat transfer and corrosion resistance.

BEARINGS

Upper and lower ball support rotor. Take radial and thrust loads.

MOTOR

1, 1 1/2, 2 and 3 HP single or three phase, 60 Hz, 3450 RPM. 1 1/2, 2 and 3 HP single or three phase, 60 Hz, 1750 RPM. Single phase PSC motors have built-in winding overload protection, oil-cooled and lubricated.

HIGH EFFICIENT CAST IRON VOLUTE

Corrosion resistant. 3" NPT vertical discharge with legs.

PUMP OUT VANES

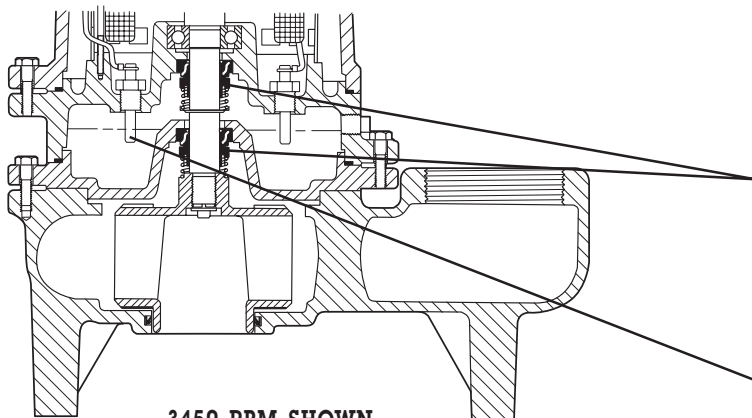
Help keep trash from seal, reduces pressure at seal faces.

VOLUTE/IMPELLER SEAL RING

Maintains high efficiency and reduces recirculation. Replaceable.

ENCLOSED TWO VANE IMPELLER

High efficiency. Standard cast iron construction.



3450 RPM SHOWN
Handles 2" spherical solids

SHAFT SEAL(S)

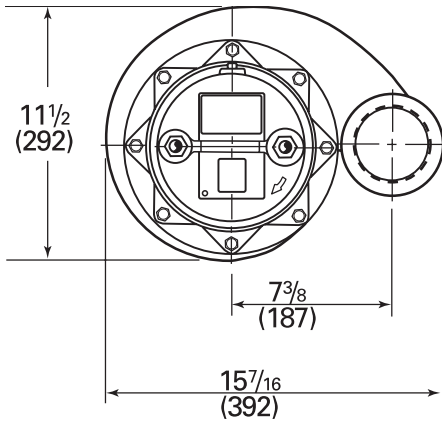
Carbon and ceramic faces. Dual tandem seals extends motor life. Optional tungsten carbide.

SEAL LEAK PROBE

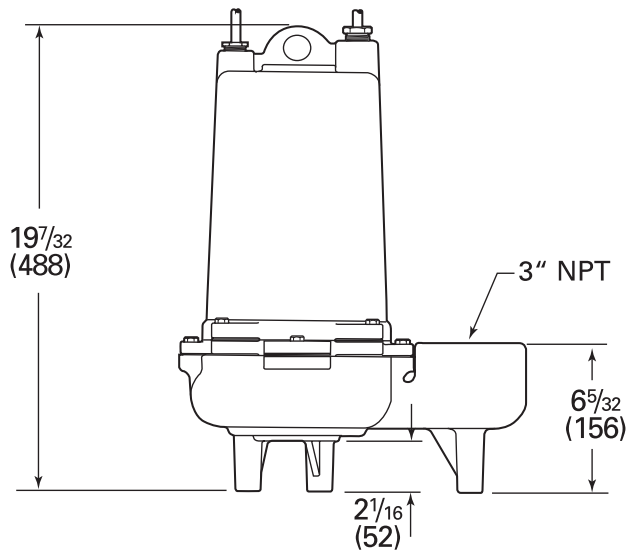
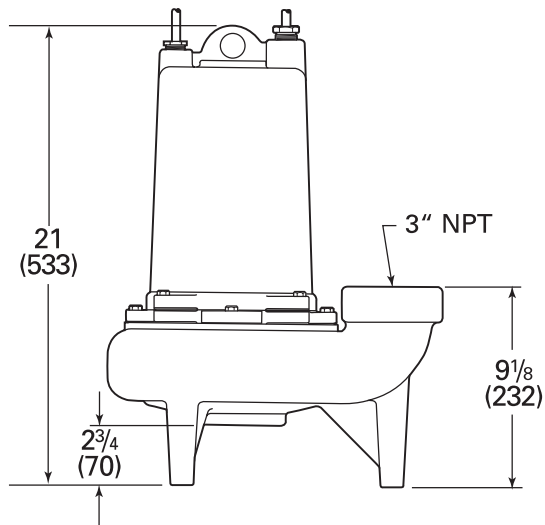
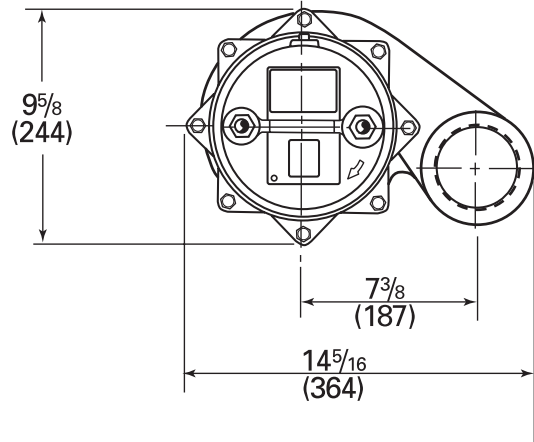
Optional probes (dual seal only) detect water leakage in seal housing. Activates warning light.

DIMENSIONS

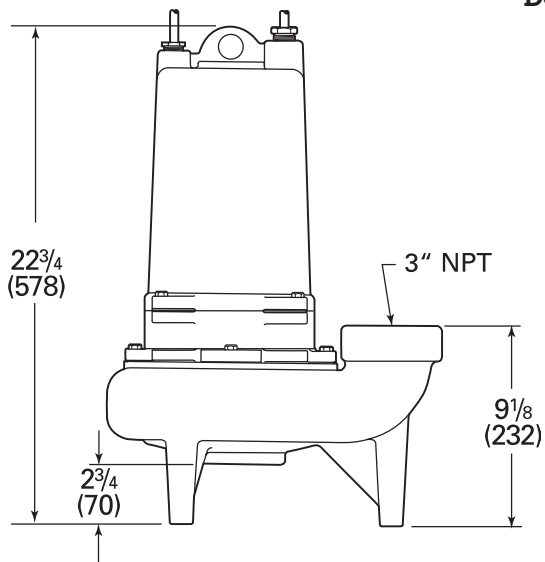
[] Dimensions in mm



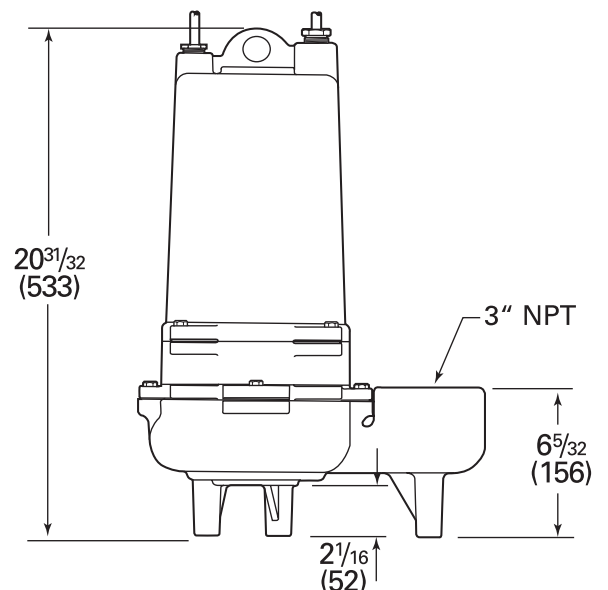
Single Seal



Double Seal

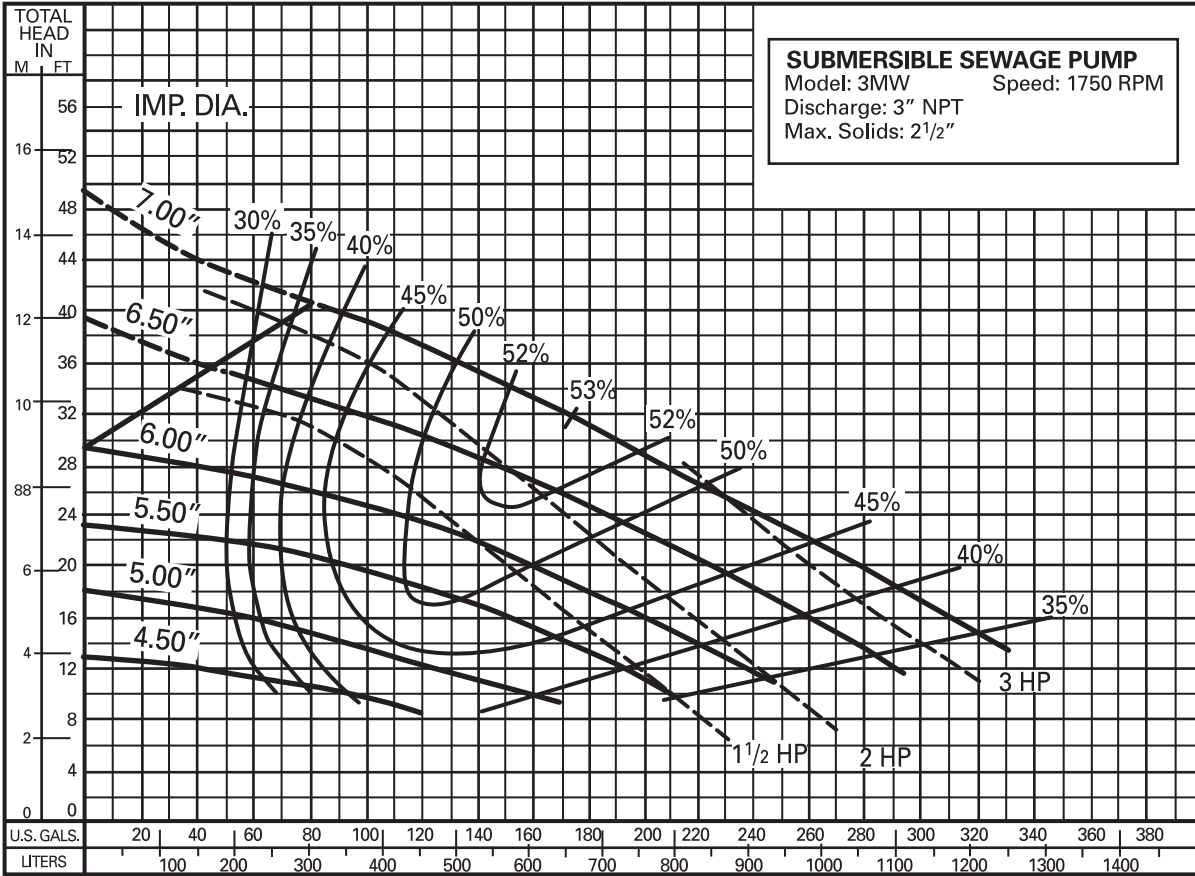


1750 RPM



3450 RPM

PUMP PERFORMANCE

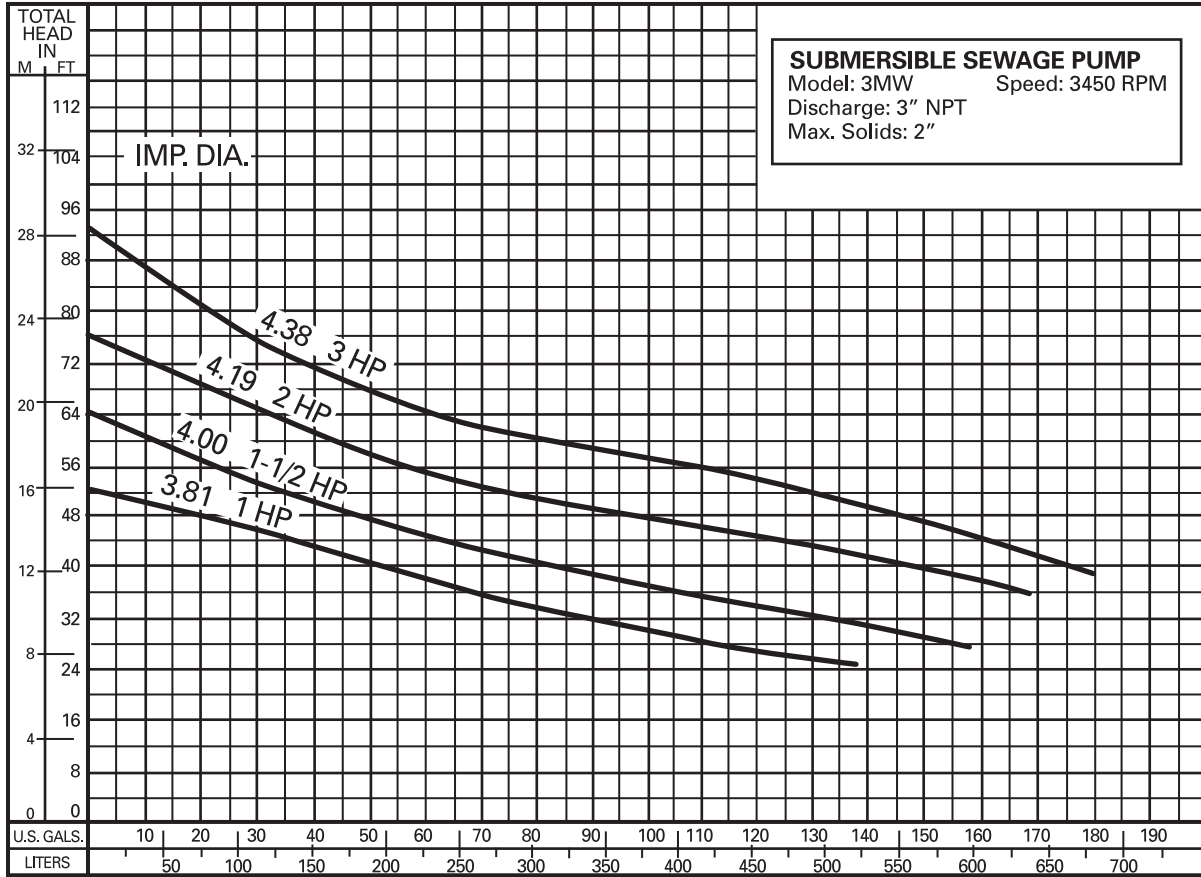


Pump performance is based on clear water (1.0 specific gravity @ 68°F) and pump fluid end (hydraulic) efficiency. Motor data based on 40°C ambient temperature.

Motor Electrical Data													
Model	HP	Volts	Phase	Hertz	Start Amps	Run Amps	Service Factor Amps	Run KW	Service Factor KW	Start KVA	Run KVA	NEC Code Letter	Service Factor
3MW15M4-01	1.5	200	1	60	25.2	13.8	13.8	3.1	3.1	5.0	2.8	A	1.0
3MW15M4-21	1.5	230	1	60	24.0	12.0	12.0	2.7	2.7	5.5	2.8	A	1.0
3MW15M4-03	1.5	200	3	60	36.8	9.8	9.8	1.7	1.7	12.7	3.4	G	1.0
3MW15M4-23	1.5	230	3	60	32.0	8.6	8.6	1.7	1.7	12.7	3.4	G	1.0
3MW15M4-43	1.5	460	3	60	16.0	4.3	4.3	1.7	1.7	12.7	3.4	G	1.0
3MW15M4-53	1.5	575	3	60	12.8	3.4	3.4	1.7	1.7	12.7	3.4	G	1.0
3MW20M4-01	2	200	1	60	25.2	15.5	15.5	3.5	3.5	5.0	3.1	A	1.0
3MW20M4-21	2	230	1	60	24.0	13.5	13.5	3.1	3.1	5.5	3.1	A	1.0
3MW20M4-03	2	200	3	60	36.8	10.4	10.4	2.2	2.2	12.7	3.6	G	1.0
3MW20M4-23	2	230	3	60	32.0	9.0	9.0	2.2	2.2	12.7	3.6	G	1.0
3MW20M4-43	2	460	3	60	16.0	4.5	4.5	2.2	2.2	12.7	3.6	G	1.0
3MW20M4-53	2	575	3	60	12.8	3.6	3.6	2.2	2.2	12.7	3.6	G	1.0
3MW30M4-21	3	230	1	60	45.5	17.7	20.0	4.0	4.5	10.5	4.6	F	1.13
3MW30M4-03	3	200	3	60	48.3	13.3	15.0	3.5	3.9	16.7	5.2	G	1.13
3MW30M4-23	3	230	3	60	42.0	12.0	13.5	3.5	3.9	16.7	5.4	G	1.13
3MW30M4-43	3	460	3	60	21.0	6.0	6.8	3.5	3.9	16.7	5.4	G	1.13
3MW30M4-53	3	575	3	60	16.8	4.9	5.5	3.5	3.9	16.7	5.4	G	1.13

Motor Efficiencies and Power Factor									
		Motor Efficiency %				Power Factor %			
HP	Phase	Service Factor Load	100% Load	75% Load	50% Load	Service Factor Load	100% Load	75% Load	50% Load
1.5	1	59	59	54	45	99	99	99	99
1.5	3	67	67	64	57	72	72	64	51
2.0	1	59	59	57	48	99	99	99	99
2.0	3	66	66	65	58	75	75	66	52
3.0	1	62	63	61	53	91	89	83	73
3.0	3	64	65	64	58	77	74	66	52

PUMP PERFORMANCE



Pump performance is based on clear water (1.0 specific gravity @ 68°F) and pump fluid end (hydraulic) efficiency. Motor data based on 40°C ambient temperature.

Motor Electrical Data													
Model	HP	Volts	Phase	Hertz	Start Amps	Run Amps	Service Factor Amps	Run KW	Service Factor KW	Start KVA	Run KVA	NEC Code Letter	Service Factor
3MW10M2-01	1	208	1	60	21.0	10.3	10.3	2.7	2.7	4.4	2.1	D	1.0
3MW10M2-21	1	230	1	60	19.0	9.3	9.3	2.4	2.4	4.4	2.1	D	1.0
3MW10M2-03	1	208	3	60	20.2	6.6	6.6	2.1	2.1	7.3	2.4	J	1.0
3MW10M2-23	1	230	3	60	20.2	6.0	6.0	2.1	2.1	8.0	2.4	K	1.0
3MW10M2-43	1	460	3	60	10.1	3.0	3.0	2.1	2.1	8.0	2.4	K	1.0
3MW10M2-53	1	575	3	60	8.1	2.4	2.4	2.1	2.1	8.0	2.4	K	1.0
3MW15M2-01	1.5	208	1	60	25.0	14.8	14.8	3.3	3.3	5.0	2.8	B	1.0
3MW15M2-21	1.5	230	1	60	23.0	12.8	12.8	3.0	3.0	5.5	2.8	B	1.0
3MW15M2-03	1.5	208	3	60	30.0	7.7	7.7	2.5	2.5	12.7	3.4	J	1.0
3MW15M2-23	1.5	230	3	60	30.0	7.0	7.0	2.5	2.5	12.7	3.4	K	1.0
3MW15M2-43	1.5	460	3	60	15.0	3.5	3.5	2.5	2.5	12.7	3.4	K	1.0
3MW15M2-53	1.5	575	3	60	12.0	2.4	2.4	2.5	2.5	12.7	3.4	K	1.0
3MW20M2-01	2	208	1	60	39.9	15.3	15.3	3.3	3.6	8.3	3.2	D	1.0
3MW20M2-21	2	230	1	60	33.4	13.1	13.1	3.3	3.6	7.7	3.0	C	1.0
3MW20M2-03	2	208	3	60	30.0	8.5	8.5	2.8	2.8	10.8	3.4	F	1.0
3MW20M2-23	2	230	3	60	30.0	7.7	7.7	2.8	2.8	11.9	3.1	G	1.0
3MW20M2-43	2	460	3	60	15.0	3.9	3.9	2.8	2.8	11.9	3.1	G	1.0
3MW20M2-53	2	575	3	60	12.0	3.1	3.1	2.8	2.8	11.9	3.1	G	1.0
3MW30M2-21	3	230	1	60	63.0	18.0	18.0	3.8	3.8	14.5	3.7	E	1.0
3MW30M2-03	3	208	3	60	53.0	10.4	10.4	3.3	3.3	19.1	3.6	G	1.0
3MW30M2-23	3	230	3	60	46.0	9.0	9.0	3.3	3.3	18.3	3.6	G	1.0
3MW30M2-43	3	460	3	60	23.0	4.5	4.5	3.3	3.3	18.3	3.6	G	1.0
3MW30M2-53	3	575	3	60	18.4	3.6	3.6	3.3	3.3	18.3	3.6	G	1.0

3MW SERIES

SPECIFICATIONS

SEWAGE PUMPS - Pump(s) shall be F. E. Myers 3MW series single or double seal sewage pumps selected in accordance with the following design criteria:

Number of Pumps: _____
Primary Design Flow: _____
Primary Design Head: _____
Minimum Shut-off Head: _____
Motor Horsepower: _____
Motor Speed: _____ RPM
Electrical: _____

PUMP - The pump shall be designed to handle raw sewage and be capable of passing _____ inch spherical solids (2" for 3450 RPM, 2½" for 1750 RPM). The pump shall be capable of handling liquids with temperatures to 140°F intermittent and shall be capable of running dry without damage to the seals or bearings.

MOTOR - The pump motor shall be of the submersible type rated 1, 1-1/2, 2 or 3 HP as required. Motor shall operate at _____ RPM and shall be for 208 or 230 volts single phase, or 200, 230, 460, or 575 volts, 3 phase, 60 cycles. Single phase motors shall be of the permanent split capacitor type with no relays or starting switches. Three phase motors shall be squirrel cage induction type. Stator winding shall be of the open type with Class B insulation rated for 130°C maximum operating temperature. The winding housing will be filled with clean dielectric oil to lubricate bearings, seals, and transfer heat from the windings to the outer shell. The motor assembly shall be of the standard frame design and shall be secured in place by four threaded fasteners allowing for easy field serviceability.

The motor shall be capable of operating over the full range of the performance curve without overloading the motor and causing any objectionable noise or vibration. The common motor pump shaft shall be of 416 stainless steel and shall be heat shrunk into the die cast motor rotor. The motor shall have two bearings to support the rotor; an upper ball bearing to accommodate radial loads and a lower ball bearing to take thrust and radial loads. Ball bearings shall be designed for a B-10 life of 50,000 hours.

A heat sensor thermostat and overload shall be attached to the top end of the motor windings and shall be wired in series with the windings to stop the motor if the motor winding temperature reaches 130°C (266°F). The overload thermostat shall reset automatically when the motor cools to a safe operating temperature. Three phase motors shall be protected by 3 leg overload relay in control box. Overload shall be of the quick trip ambient compensated type and shall have manual reset button.

POWER AND CONTROL CORD - The motor power and control cords shall be SJOW/SJOWA or SOOW. The cable jacket shall be sealed at the motor entrance by means of a rubber compression washer and compression nut. A heat shrink tube filled with epoxy shall seal the outer cable jacket and the individual leads to prevent water from entering the motor housing.

SHAFT SEAL (Single Seal) - The motor shall be protected by a rotating mechanical shaft seal. The seal shall have carbon and ceramic seal faces lapped to a tolerance of one light band. Metal parts and springs for seals shall be 300 series stainless steel. Seal faces of tungsten carbide are optional.

SHAFT SEAL (Double Seal) - The motor shall be protected by two (2) rotating mechanical shaft seals mounted in tandem with an oil filled chamber separating the seals. The seals shall have carbon and ceramic seal faces lapped to a tolerance of one light band. Metal parts and springs for seals shall be 300 series stainless steel. Two electrical sensing probes shall be mounted in the seal chamber to detect any water leakage past the lower seal. The sensing probes shall be connected to a red warning light in the control panel. The warning light shall serve to indicate a seal leak condition and shall not stop the pump

PUMP IMPELLER - The pump impeller shall be of the two vane enclosed type. The Class 30 cast iron type impeller used with a 2-pole speed motor shall be internally threaded. The Class 65 ductile iron type impeller used with a 4-pole motor shall be internally keyed. A replaceable Buna-N sealing cup shall effect a seal between the volute and impeller in order to maintain high efficiency and prevent recirculation.

PUMP CASE - The volute case shall be cast iron and have a vertical 3" NPT threaded discharge. It shall have three cast feet that provide stable support and allow proper operation when standing on floor.

PUMP AND MOTOR CASTINGS - All castings shall be of high tensile strength Class 30 gray cast iron. Castings shall be treated with phosphate rinse and painted with a high quality air dry alkyd enamel.

FASTENERS - All exposed fasteners shall be of 300 series stainless steel.