

# SOLIDS HANDLING WASTEWATER PUMPS

MODELS 4R AND 4RX

STANDARD (4R) AND HAZARDOUS LOCATION (4RX) CONSTRUCTION







## PENTAIR® MYERS® MODELS 4R AND 4RX

#### Solids Handling Wastewater Pumps

#### THE RIGHT CHOICE

The 4V and 4VX (hazardous location) submersible wastewater pumps pass a full 3" spherical solid and are the ideal choice when selecting a pump for your next application. Myers rounded port, 2-vane, enclosed impellers prevent solids from binding or clogging and offer high operating efficiencies to cut your pumping costs. The 4V series modified constant velocity volute case provides smooth operation over an extended portion of the performance curve for longer seal and bearing life. For use in municipal lift stations, treatment plants and industrial waste applications. Myers offers a complete line of wastewater pumps, lift-out rail assemblies, controls and accessories to meet your needs.

Product Capabilities									
Capacities To	600 gpm	37.8 l/s							
Heads To	63.5 ft.	19 m							
Solids Handling (dia.)	3 in.	76 mm							
Liquid Handling	Raw unscreened sewage, fibrous wastewater, effluent, storm water								
Intermittent Liquid Temp.	Up to 140ºF	Up to 60ºC							
Winding Insulation Temp. (Class F)	311ºF	155ºC							
Motor Electrical Data	11E0 DDM 1	7.110							

(Single phase motors are capacitor start type. Myers control panels or capacitor kits are required for proper operation and warranty.)

1150 RPM, 1 - 3 HP, 1 Phase, 230V 3 Phase, 208/230/460/575V 1750 RPM, 3 - 5 HP 1 Phase, 230V, 60 Hz 3 - 10 HP, 60 Hz 3 Phase, 208/230/460/575V

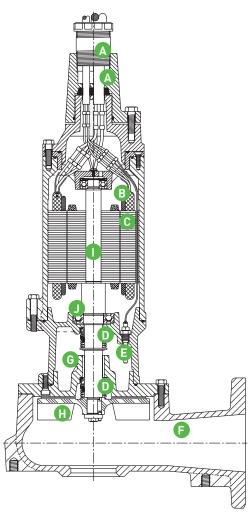
Std. Third Party CSA Approvals FM Class 1, Division 1, Group D Optional Approvals (4RX only)					
Acceptable pH Range	6 – 9				
Specific Gravity	.9 – 1.1				
Viscosity	28 - 35 SS	U			
Discharge, Flanged Ceterline (Horizontal)	4 in. 125 lb. ANSI	101.6 mm			

Note: Consult factory for applications outside these recommendations.



Construction Materials									
Motor Housing, Seal Housing, Cord Cap and Volute Case	Cast iron, Class 30, ASTM A48								
Recessed, Impeller	Ductile Iron, Class 65, ASTM A536								
Power Cord	SOOW, W								
Control Cord	SOOW								
Mechanical Seals Standard Optional	Double tandem, type 21 carbon and ceramic lower tungsten, carbide								
Pump, Motor Shaft	416 SST								
Fasteners	300 Series SST								

### PUMP FEATURES AND APPLICATIONS



#### A. CABLE ENTRY SYSTEM

Provides double seal protection. Cable jacket sealed by compression grommet. Individual wires sealed by epoxy potting.

#### B. HEAT SENSOR

Protects motor from burnout due to excessive heat from any overload condition. Automatically resets when motor has cooled.

#### C. MOTOR STATOR

Heat shrunk into housing for perfect alignment and best heat transfer. Oil-filled motor conducts heat and lubricates bearings.

#### D. SHAFT SEALS

Double tandem mechanical shaft seals protect motor.
Oil-filled seal chamber provides continuous lubrications.

#### E. SEAL LEAK PROBES

Detect water in seal housing.

Activate warning light in control panel (Test resistor on FM Listed models).

#### F. VOLUTE CASE

Handles 3" solids. Completely open from inlet to discharge. 4" ANSI 125 lb. flange.

#### G. SLEEVE BEARING

Takes radial shock load; provides flame path.

#### H. RECESSED IMPELLER

Handles stringy trash and slurries without clogging or binding. Pumpout vanes help keep trash from seal; reduce pressure at seal faces.

#### I. HEAVY 416 SST SHAFT

Corrosion resistant.

#### J. BALL BEARINGS

Upper and lower ball bearings support shaft and rotor and take axial and radial loads.

## PASSES STRINGY TRASH, FIBROUS WASTES, SLURRIES, AND OTHER DIFFICULT TO PUMP SOLIDS THAT STANDARD ENCLOSED OR SEMIOPEN IMPELLERS CANNOT.

- Recessed impeller design has completely open passage in volute
- Pumping action is by vortex; solids can't get caught in impeller.
- Operates without vibration or cavitation over entire performance curve. Operates near shut-off without harming pump.

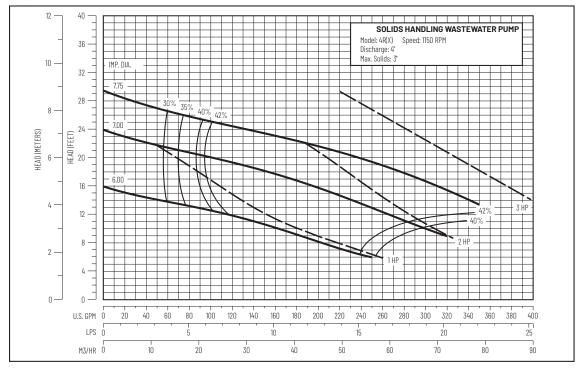
### DURABLE MOTOR BUILT FOR RELIABLE SERVICE.

- Recessed impeller greatly increases bearing life by reducing radial load.
- Oil-filled motor for maximum heat dissipation and constant bearing lubrication.
- Heat sensor thermostats embedded in windings protect motor from overheat conditions.
- Seal leak probes warn of moisture entry; help prevent costly motor burnout.

AVAILABLE WITH OPTIONAL FM APPROVAL FOR USE IN CLASS 1, GROUP D HAZARDOUS LOCATIONS (4RX ONLY).

## **PERFORMANCE DATA**

#### 1150 RPM

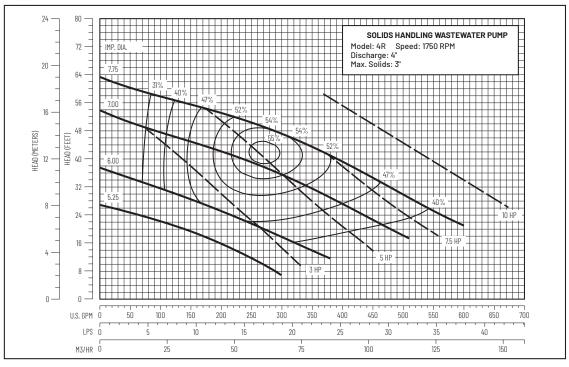


Availab	le Models	Motor Electrical Data											
Standard	Hazardous Location	HP	Volts	Phase	Hertz	Start Amps	Full Load Amps	Service Factor Amps	Full Load kW	Start KVA	Full Load KVA	NEC Code Letter	Service Factor
4R10M6-21	4RX10M6-21	1	230	1	60	47	9.0	10.8	1.4	10.8	2.1	М	1.2
4R10M6-03	4RX10M6-03	1	208	3	60	30	7.4	8.9	2.3	10.3	2.7	М	1.2
4R10M6-23	4RX10M6-23	1	230	3	60	26	6.4	7.8	2.2	10.3	2.5	М	1.2
4R10M6-43	4RX10M6-43	1	460	3	60	13	3.2	3.9	2.2	9.9	2.5	М	1.2
4R10M6-53	4RX10M6-53	1	575	3	60	10	2.6	3.1	2.3	9.7	2.6	L	1.2
4R20M6-21	4RX20M6-21	2	230	1	60	71	18.0	21.0	3.0	16.3	4.1	K	1.2
4R20M6-03	4RX20M6-03	2	208	3	60	43	12.0	14.5	3.8	15.5	4.3	J	1.2
4R20M6-23	4RX20M6-23	2	230	3	60	42	10.5	12.6	3.8	16.7	4.4	K	1.2
4R20M6-43	4RX20M6-43	2	460	3	60	21	5.2	6.3	3.8	16.7	4.4	K	1.2
4R20M6-53	4RX20M6-53	2	575	3	60	17	4.2	5.0	3.8	16.9	4.4	K	1.2
4R30M6-21	-	3	230	1	60	71	21.0	21.0	3.7	16.3	4.8	F	1.0
4R30M6-03	-	3	208	3	60	43	16.8	16.8	5.3	15.5	6.0	F	1.0
4R30M6-23	-	3	230	3	60	42	14.0	14.0	4.8	16.7	5.6	F	1.0
4R30M6-43	-	3	460	3	60	21	7.0	7.0	4.8	16.7	5.6	F	1.0
4R30M6-53	-	3	575	3	60	17	5.6	5.6	5.0	16.9	5.6	G	1.0

	Motor Efficiencies and Power Factor										
		Motor Effi	Power Factor %								
HP	Phase	Service Factor Load	100% Load	75% Load	50% Load	Service Factor Load	100% Load	75% Load	50% Load		
1	1	60	58	53	44.5	75	72	66	58		
1	3	64	62	56	46	76	71	62	49		
2	1	61	59	54	46	73	68	60	51		
2	3	71	69	64	54	72	59	51	43		
3	1	60	60	60	54	78	78	71	60		
3	3	73	73	71	64	69	69	62	51		

## **PERFORMANCE DATA**

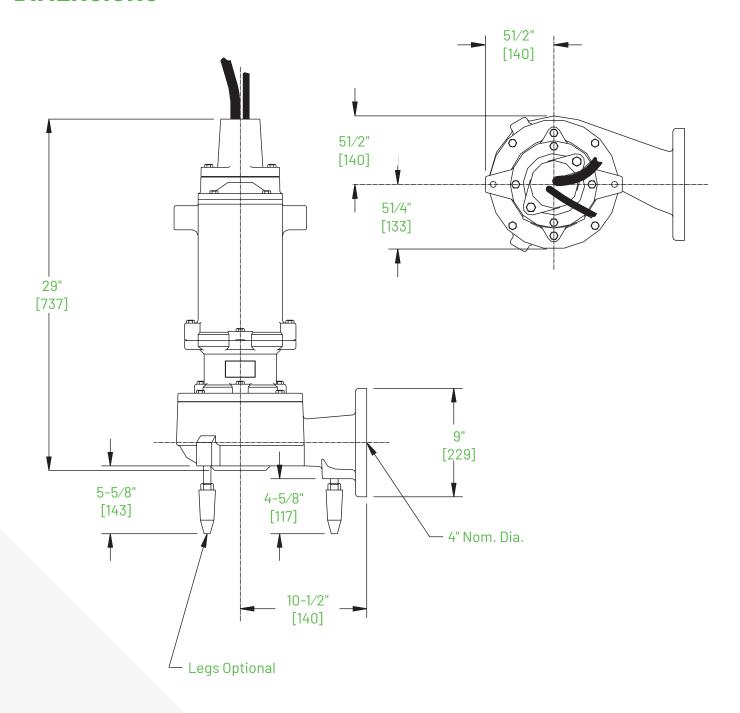
#### 1750 RPM



Availab	le Models	Motor Electrical Data										
Standard	Hazardous Location	HP	Volts	Phase	Start Amps	Full Load Amps	Service Factor Amps	Full Load kW	Start KVA	Full Load KVA	NEC Code Letter	Service Factor
4R30M4-21	4RX30M4-21	3	230	1	98	17.5	20.2	3.4	22.5	4.0	J	1.2
4R30M4-03	4RX30M4-03	3	208	3	51	15.0	17.0	4.5	18.4	5.6	G	1.2
4R30M4-23	4RX30M4-23	3	230	3	46	13.0	15.2	4.3	18.3	5.2	G	1.2
4R30M4-43	4RX30M4-43	3	460	3	23	6.0	7.6	4.3	18.3	5.2	G	1.2
4R30M4-53	4RX30M4-53	3	575	3	19	5.0	6.0	4.4	18.9	5.2	Н	1.2
4R50M4-21	4RX50M4-21	5	230	1	108	34.0	44.0	6.3	24.8	7.8	E	1.2
4R50M4-03	4RX50M4-03	5	208	3	106	21.6	26.0	6.1	38.1	7.8	J	1.2
4R50M4-23	4RX50M4-23	5	230	3	96	18.0	21.6	6.0	38.2	7.2	J	1.2
4R50M4-43	4RX50M4-43	5	460	3	48	9.0	10.8	6.0	38.2	7.2	J	1.2
4R50M4-53	4RX50M4-53	5	575	3	39	7.2	8.6	6.1	38.8	7.2	J	1.2
4R75M4-03	4RX75M4-03	7.5	208	3	135	32.2	37.0	9.3	48.6	11.1	Н	1.2
4R75M4-23	4RX75M4-23	7.5	230	3	122	28.0	33.0	9.1	48.5	11.1	Н	1.2
4R75M4-43	4RX75M4-43	7.5	460	3	61	14.0	16.5	9.1	48.5	11.1	Н	1.2
4R75M4-53	4RX75M4-53	7.5	575	3	49	11.2	13.0	8.9	48.7	11.1	Н	1.2
4R100M4-03	_	10	208	3	135	38.5	38.5	11.1	48.6	13.9	E	1.0
4R100M4-23	_	10	230	3	122	32.7	32.7	10.9	48.5	13	E	1.0
4R100M4-43	_	10	460	3	61	16.3	16.3	10.9	48.5	13	Ε	1.0
4R100M4-53	-	10	575	3	49	13.8	13.8	10.7	48.7	13.7	Ε	1.0

	Motor Efficiencies and Power Factor											
	Motor Efficiency %							Power Factor %				
НР	Phase	Service Factor Load	100% Load	75% Load	50% Load	Service Factor Load	100% Load	75% Load	50% Load			
3	1	69	68	65	57	87	85	81	73			
3	3	68	71	71	67	87	88	87	83			
5	1	64	69	68	61	86	87	84	75			
5	3	76	76	75	71	85	82	75	63			
7.5	3	75	76	75	71	83	80	71	60			
10	3	75	75	76	74	83	83	77	66			

## **DIMENSIONS**



Dimensions in inches, [Dimensions in mm]

## CONTACT PENTAIR MYERS FOR ALL OF YOUR ENGINEERED WASTEWATER SYSTEMS





**SOLIDS HANDLING PUMPS** 

**CUSTOM CONTROLS** 



**GRINDER PUMPS** 



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