4R and 4RX

4" Non-Clog Wastewater Pumps
Standard (4R) and Explosion-Proof (4RX) Construction

4RX only

THE 4R AND 4RX (EXPLOSION-PROOF) SUBMERSIBLE WASTEWATER PUMPS ARE THE RIGHT CHOICE WHEN DIFFICULT TO PUMP FIBROUS OR STRINGY SOLIDS ARE TO BE EXPECTED. The 4R series provides smooth, vibration-free operation when operating at heads higher than peek efficiency. 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. Call your Myers distributor, or the Myers Ohio sales office at 419-289-1144 for more details.

ADVANTAGES BY DESIGN

PASSES STRINGY TRASH, FIBROUS WASTES, SLURRIES, AND OTHER DIFFICULT TO PUMP SOLIDS THAT STANDARD ENCLOSED OR SEMI-OPEN IMPELLERS CAN NOT.

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

DURABLE MOTOR WILL DELIVER MANY YEARS OF RELIABLE SERVICE

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

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

PRODUCT CAPABILITIES

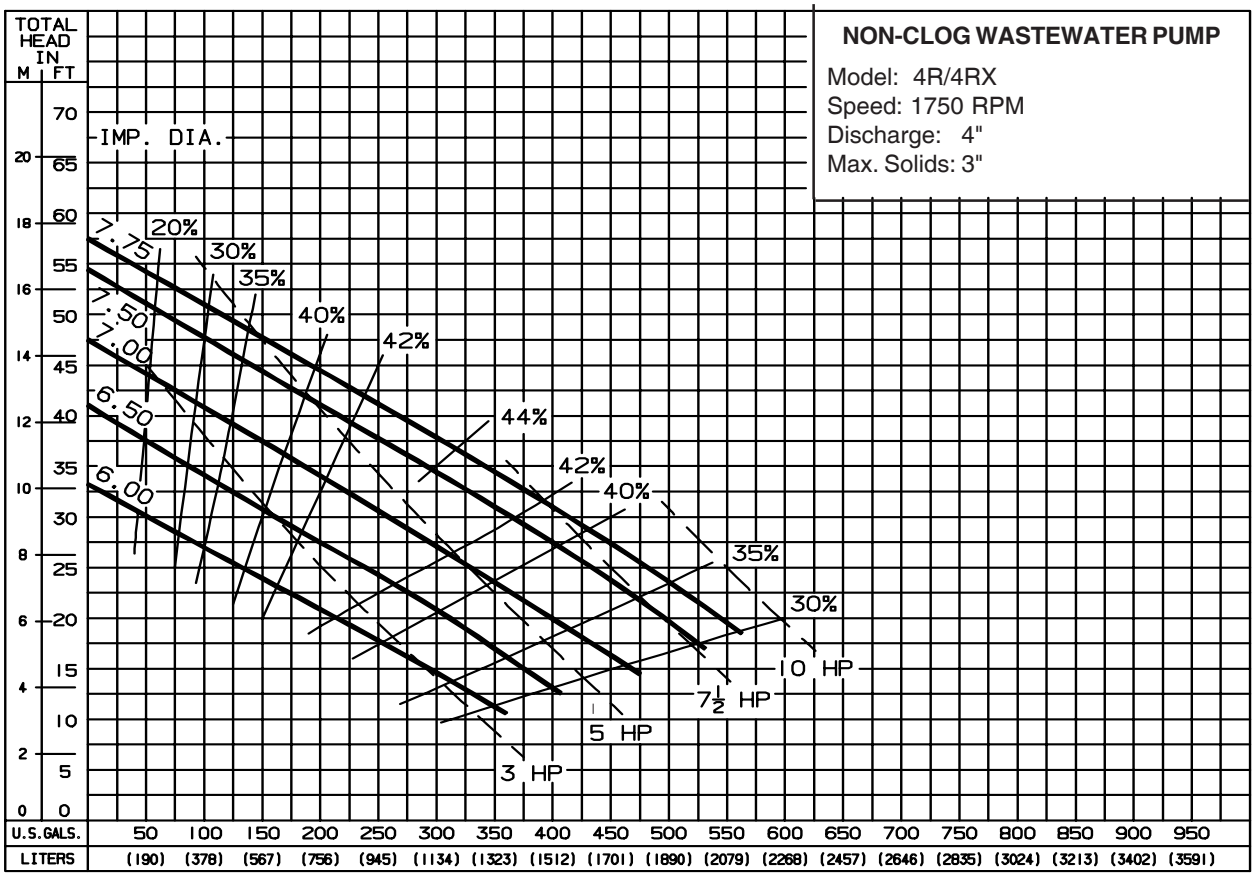
Capacities To	565 gpm	35.7 l/s
Heads To	57.5 ft.	17.5 m
Solids Handling	3 in.	76 mm
Liquids Handling	raw unscreened sewage, fiberous wastewater, effluent, storm water	
Intermittent Liquid Temp.	up to140°F	up to 60°C
Winding Insulation Temp. (Class F)	311°F	155°C
Available Motors (Single phase motors 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, 200/230/460/575V 1750 RPM, 3-5 HP 1 Phase, 230V, 60 Hz 3-10 HP, 60 Hz 3 Phase, 200/230/460/575V	
Std. Third Party Approvals Optional Approvals	CSA UL Class 1, Div. 1, Group D (4RX only)	
Acceptable pH Range	6 - 9	
Specific Gravity	.9 - 1.1	
Viscosity	28 - 35 SSU	
Discharge, Horizontal Flanged Centerline	4 in. 125 lb. ANSI	101.6 mm

NOTE: Consult factory for applications outside of these recommendations.

Construction Materials	
Motor Housing, Seal Housing, Cord Cap and Volute Case	cast iron, Class30 ASTM A48
Recessed, Impeller	ductile iron, Class 65 ASTM A536
Power and Control Cord	25 ft. SOOW
Mechanical Seals Standard Optional	double tandem, type 21 carbon and ceramic lower tungsten, carbide
Pump, Motor Shaft	416 SST
Fasteners	300 Series SST

WHERE INNOVATION MEETS TRADITION

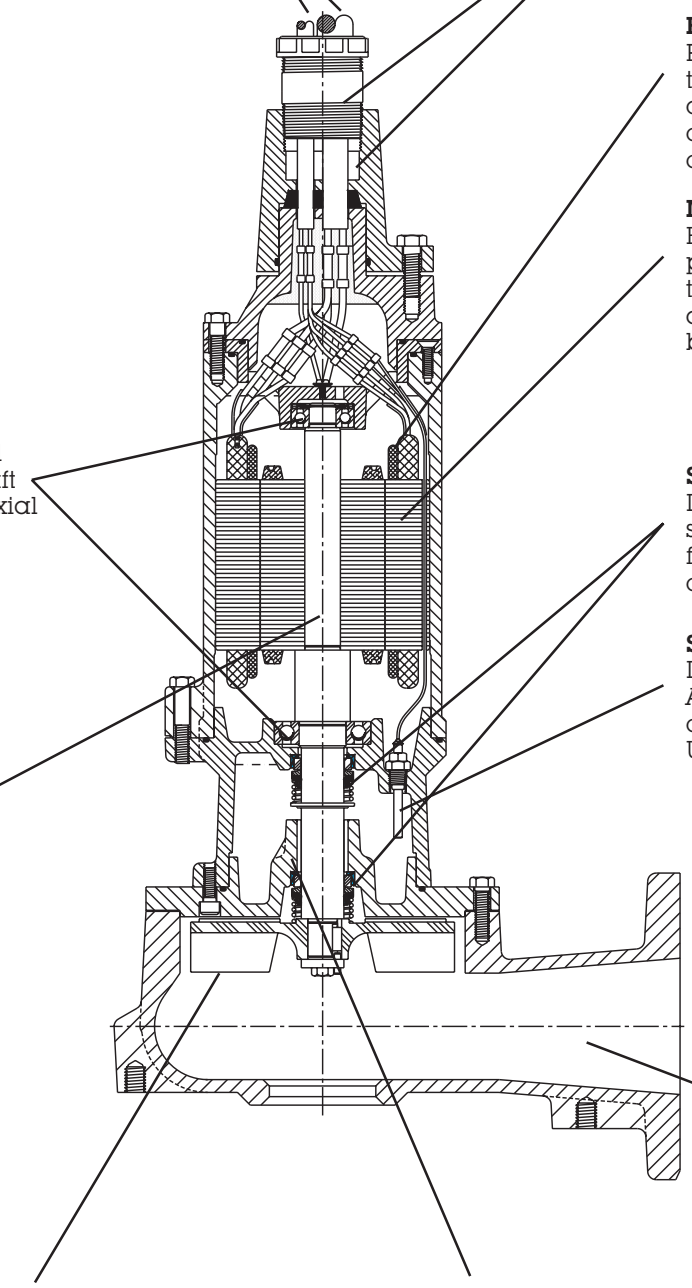
Myers®
Pentair Water



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.

Available Models		Motor Electrical Data											
Standard	Explosion Proof	HP	Volts	Phase	Start Amps	Run Amps	Service Factor Amps	Run KW	Service Factor KW	Start KVA	Run KVA	NEC Code Letter	Service Factor
4R30M4-21	4RX30M4-21	3	230	1	101	17.5	21	2.1	2.5	23.2	4.0	J	1.2
4R30M4-03	4RX30M4-03	3	200	3	66.7	15	18	3.5	4.3	23.0	5.0	G	1.2
4R30M4-23	4RX30M4-23	3	230	3	58	12	14.4	3.5	4.3	23.0	5.0	G	1.2
4R30M4-43	4RX30M4-43	3	460	3	29	6	7.2	3.5	4.3	23.0	5.0	G	1.2
4R30M4-53	4RX30M4-53	3	575	3	21.3	5	6	3.5	4.3	23.0	5.0	G	1.2
4R50M4-21	4RX50M4-21	5	230	1	141	34	41	6.3	7.7	32.4	7.8	H	1.2
4R50M4-03	4RX50M4-03	5	200	3	111	21.6	26	5.6	6.9	38.4	7.2	H	1.2
4R50M4-23	4RX50M4-23	5	230	3	96	18	21.6	5.6	6.9	38.4	7.2	H	1.2
4R50M4-43	4RX50M4-43	5	460	3	48	9	10.8	5.6	6.9	38.4	7.2	H	1.2
4R50M4-53	4RX50M4-53	5	575	3	39	7.2	8.6	5.6	6.9	38.4	7.2	H	1.2
4R75M4-03	4RX75M4-03	7.5	200	3	172	32.2	37	8.0	9.9	59.5	11.1	J	1.2
4R75M4-23	4RX75M4-23	7.5	230	3	150	28	32	8.0	9.9	59.7	11.1	J	1.2
4R75M4-43	4RX75M4-43	7.5	460	3	74.8	14	16	8.0	9.9	59.7	11.1	J	1.2
4R75M4-53	4RX75M4-53	7.5	575	3	67.2	11.2	13	8.0	9.9	66.8	11.1	K	1.2
4R100M4-03		10	200	3	172	37	37	10.1	10.1	59.5	12.8	G	1.0
4R100M4-23		10	230	3	150	32	32	10.1	10.1	59.7	12.8	G	1.0
4R100M4-43		10	460	3	74.8	16	16	10.1	10.1	59.7	12.8	G	1.0
4R100M4-53		10	575	3	67.2	13	13	10.1	10.1	66.8	12.8	H	1.0

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
3	1	71	70	67	59	52	51	49	45
3	3	74	73.5	69.5	61.5	73	70.5	62.5	52
5	1	67.5	68	65	56	83	81	73	62.5
5	3	77	77	77	70.5	80	77.5	71	59.5
7.5	3	75	75	72.5	65	77	72	62	49.5
10	3	75	75	75	71	79	79	72	58



POWER & CONTROL CORDS
SOOW, UL and CSA approved oil-resistant cable.

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

HEAT SENSOR
Protects motor from burn-out due to excessive heat from any overload condition. Automatically resets when motor has cooled.

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

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

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

SEAL LEAK PROBES
Detect water in seal housing. Activates warning light in control panel. (Test resistor on UL Listed models.)

HEAVY 416 SST SHAFT
Corrosion resistant.

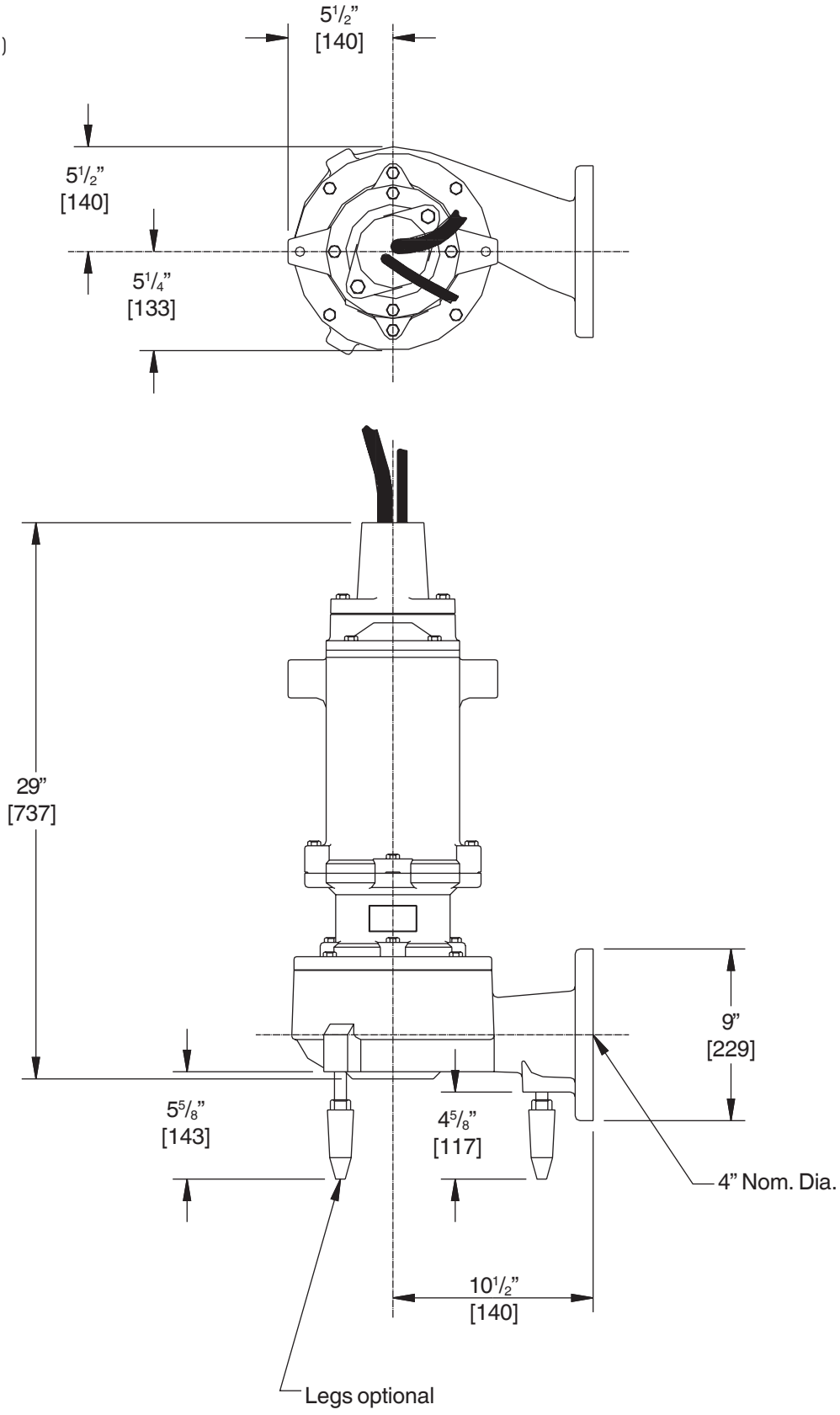
VOLUTE CASE
Handles 3" solids. Completely open from inlet to discharge. 4" ANSI 125 lb. flange.

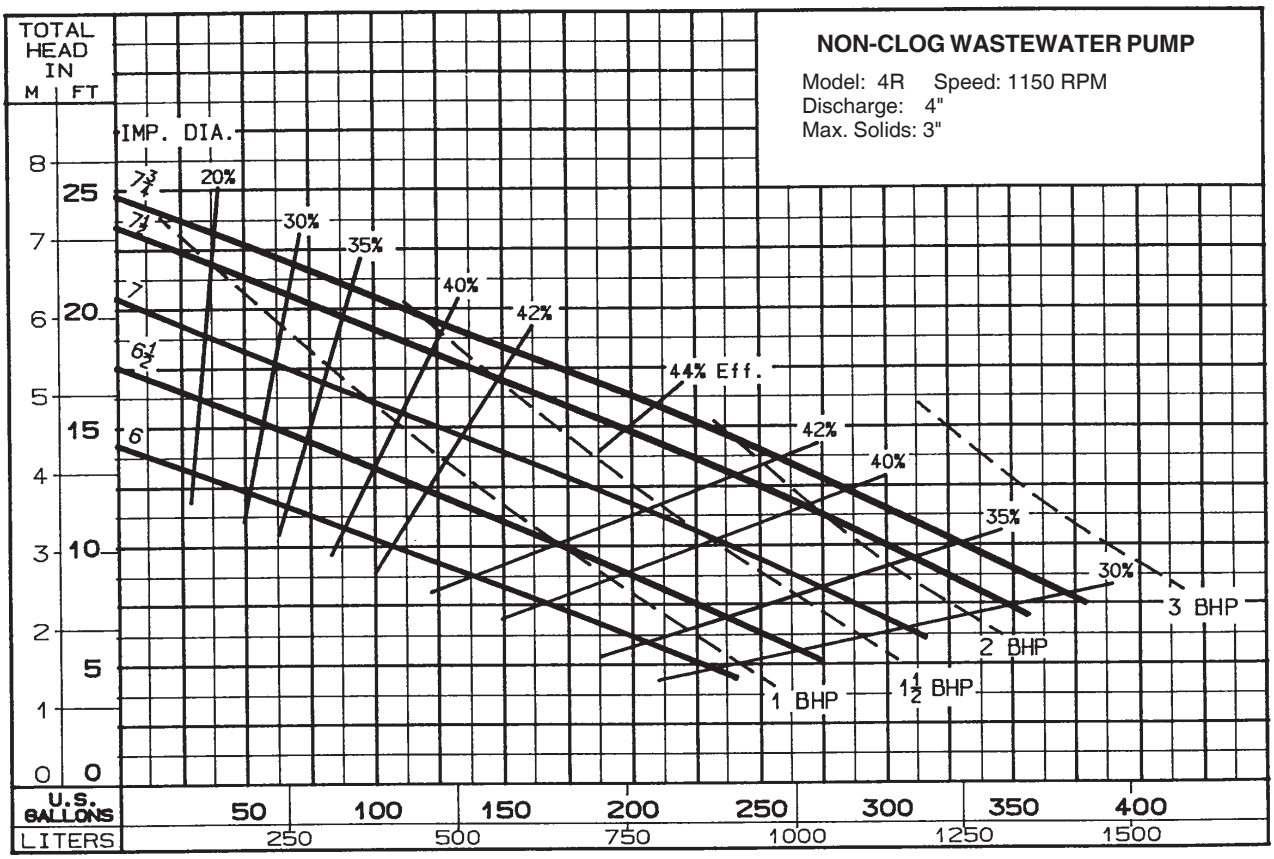
RECESSED IMPELLER
Handles stringy trash and slurries without clogging or binding. Pump out vanes help keep trash from seal; reduces pressure at seal faces.

SLEEVE BEARING
Takes radial shock load; provides flame path. (UL listed pumps only.)

DIMENSIONS

Metric Dimensions (mm)





Available Models		Motor Electrical Data												
Standard	Explosion Proof	HP	Volts	Phase	Hz	Start Amps	Run Amps	Service Factor Amps	Run KW	Service Factor KW	Start KVA	Run KVA	NEC Code Letter	Service Factor
4R10M6-21	4RX10M6-21	1	230	1	60	35	9	10.8	1.5	1.9	8.1	2.1	K	1.2
4R10M6-03	4RX10M6-03	1	200	3	60	23.8	7.4	8.9	1.8	2.3	8.3	2.6	K	1.2
4R10M6-23	4RX10M6-23	1	230	3	60	20.7	6.4	7.8	1.8	2.3	8.3	2.6	K	1.2
4R10M6-43	4RX10M6-43	1	460	3	60	10.4	3.2	3.9	1.8	2.3	8.3	2.6	K	1.2
4R10M6-53	4RX10M6-53	1	575	3	60	8.3	2.6	3.1	1.8	2.3	8.3	2.6	K	1.2
4R15M6-21	4RX15M6-21	1.5	230	1	60	42	11	13.2	1.9	2.4	9.7	2.5	H	1.2
4R15M6-03	4RX15M6-03	1.5	200	3	60	33.4	9.8	11.8	2.2	2.8	11.6	3.3	J	1.2
4R15M6-23	4RX15M6-23	1.5	230	3	60	29	8.5	10.2	2.2	2.8	11.6	3.3	J	1.2
4R15M6-43	4RX15M6-43	1.5	460	3	60	14.5	4.2	5.1	2.2	2.8	11.6	3.3	J	1.2
4R15M6-53	4RX15M6-53	1.5	575	3	60	11.6	3.3	4	2.2	2.8	11.6	3.3	J	1.2
4R20M6-21	4RX20M6-21	2	230	1	60	60	18	21	2.8	3.5	19.5	4.2	H	1.2
4R20M6-03	4RX20M6-03	2	200	3	60	56	12	14.5	2.4	3.6	19.5	4.2	L	1.2
4R20M6-23	4RX20M6-23	2	230	3	60	49	10.5	12.6	2.4	3.6	19.5	4.2	L	1.2
4R20M6-43	4RX20M6-43	2	460	3	60	24.5	5.2	6.3	2.4	3.6	19.5	4.2	L	1.2
4R20M6-53	4RX20M6-53	2	575	3	60	19.6	4.2	5	2.4	3.6	19.5	4.2	L	1.2
4R30M6-21		3	230	1	60	60	21	21	3.8	3.8	13.8	4.8	H	1.0
4R30M6-03		3	200	3	60	56	16.8	16.8	3.8	3.8	19.5	5.6	H	1.0
4R30M6-23		3	230	3	60	49	14	14	3.8	3.8	19.5	5.6	H	1.0
4R30M6-43		3	460	3	60	24.5	7	7	3.8	3.8	19.5	5.6	H	1.0
4R30M6-53		3	575	3	60	19.6	5.6	5.6	3.8	3.8	19.5	5.6	H	1.0

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	1	59.5	58	53	44.5	75	72	66	58
1	3	64	61.5	55.5	46	75.5	71	62	48.5
1.5	1	56	59	55	47	80	77	73	67.5
1.5	3	68	67	63.5	56	69.5	66	59.5	50
2	1	61	59	54	45.5	73	68	60	51
2	3	71	69	64	54	71.5	58.5	51	43
3	1	60	60	60	54	78	78	71	60
3	3	73	73	70.5	64	69	69	62	51

SPECIFICATIONS

PUMP MODEL - Pump shall be Myers Model Number 4R/4RX Non-Clog Submersible Pump with recessed type impeller. All openings in pump shall be large enough to pass a 3" diameter sphere. Discharge flange shall be four (4) inch standard. 4RX pump and motor assembly shall be UL listed for Class 1, Group D explosion-proof service.

OPERATING CONDITIONS - Pump shall have a capacity of _____ GPM at a total head of _____feet and shall use a _____ HP motor operating at _____ RPM.

MOTOR - Pump motor shall be of the sealed submersible type rated _____ HP at _____ RPM 60 Hertz. Motor shall be for single phase 230 volts _____ or three phase 200 volts _____, 230 volts _____, 460 volts _____ or 575 volts _____. Single phase motors shall be the capacitor start, capacitor run, NEMA L type. Three phase motors shall be NEMA B type.

Stator winding shall be of the open type with Class F insulation good for 155°C (311°F) maximum operating temperature. Winding housing shall be filled with a clean high dielectric oil that lubricates bearings and seals and transfers heat from windings and rotor to outer shell. Air-filled motors which do not have the superior heat dissipating capabilities of oil-filled motors shall not be considered equal.

Motor shall have two heavy duty ball bearings to support pump shaft and take radial and thrust loads and a sleeve guide bushing directly above the lower seal to take radial load and act as flame path for seal chamber. Ball bearings shall be designed for 50,000 hours B-10 life. Stator shall be heat shrunk into motor housing.

A heat sensor thermostat shall be attached to and imbedded in the winding and be connected in series with the motor starter contactor coil to stop motor if temperature of winding is more than 120°C (248°F). Thermostat to reset automatically when motor cools to safe operating temperature. Three heat sensors to be used on 3 phase motors. The common pump motor shaft shall be of 416 stainless steel.

SEALS - Motor shall be protected by two mechanical seals mounted in tandem with a seal chamber between the seals. Seal chamber shall be oil filled to lubricate seal face and to transmit heat from shaft to outer shell.

Seal face shall be carbon and ceramic and lapped to a flatness of one light band. Lower seal faces shall be _____ carbide (optional).

A double electrode shall be mounted in the seal chamber to detect any water entering the chamber through the lower seal. Water in the chamber shall cause a red light to turn on at the control box. This signal shall not stop the motor but shall act as a warning only, indicating service is required.

IMPELLER - The impeller shall be cast ductile iron and of the recessed type. Pump-out vanes shall be used on back shroud. Impeller shall be dynamically balanced. Impeller shall be driven by stainless steel key and impeller held in position with lock screw and washer.

Impeller and motor shall have top lift-out of case so that the assembly can be removed without disturbing any piping.

PUMP CASE - The volute case shall be of cast iron and have a flanged center line discharge. Discharge flange shall be 4" standard with bolt holes straddling center line.

PUMP AND MOTOR CASTINGS - All castings shall be of high tensile cast iron and shall be treated with phosphate and chromate rinse.

BEARING END CAP - Upper motor bearing cap shall be a separate casting for easy mounting and replacement.

POWER CABLES - Power cord and control cord shall be double sealed. The power and control conductor shall be single strand sealed with epoxy potting compound and then clamped in place with rubber seal bushing to seal outer jacket against leakage and to provide for strain pull. Cords shall withstand a pull of 300 pounds to meet U.L. requirements.

Insulation of power and control cords shall be type SOOW. Both control and power cords shall have a green carrier ground conductor that attaches to motor frame.

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Myers®
Pentair Water

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