



**MYERS<sup>®</sup>**  
**4RH and 4RHX**  
**SOLIDS HANDLING**  
**WASTEWATER PUMPS**  
**STANDARD AND HAZARDOUS**  
**LOCATION CONSTRUCTION**



# TECHNICAL INFORMATION



## THE RIGHT CHOICE

The 4RH and 4RHX (hazardous location) submersible wastewater pumps are the right choice when difficult to pump fibrous or stringy solids are to be expected. The 4RH/4RHX series provides smooth, vibration-free operation when operating at heads higher than peak 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.

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

- Recessed impeller design has completely open passage in volute. Pumping action is by vortex.
- 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 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 burn-out.

## AVAILABLE WITH OPTIONAL FM APPROVAL FOR USE IN CLASS 1, GROUPS C & D HAZARDOUS LOCATIONS (4RHX ONLY).

### Product Capabilities

Capacities To	700 gpm	44 l/s
Heads To	130 ft.	39.5 m
Solids Handling	3 in.	76 mm
Liquids Handling	raw unscreened sewage, fibrous wastewater, effluent, storm water	
Intermittent Liquid Temp.	up to 140°F	up to 60°C
Winding Insulation Temp. (Class H)	356°F	180°C
Available Motors	1150 RPM, 1750 RPM, 3450 RPM 3–15 HP, 200/230/460/575V 3Ø, 60 Hz 20 HP, 230/460/575V 3Ø, 60 Hz	
Std. Third Party Approvals	CSA	
Optional Approvals	FM, Class 1, Groups C & D (4RHX 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, Class 30, ASTM A48
Recessed Impeller	ductile iron, Class 65 ASTM A536
Power and Control Cord	SOOW, W
Mechanical Seals Standard Optional	double tandem, type 21 carbon and ceramic lower tungsten, carbide
Pump, Motor Shaft	416 SST
Fasteners	300 Series SST

# ADVANTAGES BY DESIGN

## 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.

## HEAVY 416 SST SHAFT

Corrosion resistant.

## SLEEVE BEARING

Takes radial shock load; provides flame path.

## RECESSED IMPELLER

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

## 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.

## SHAFT SEALS

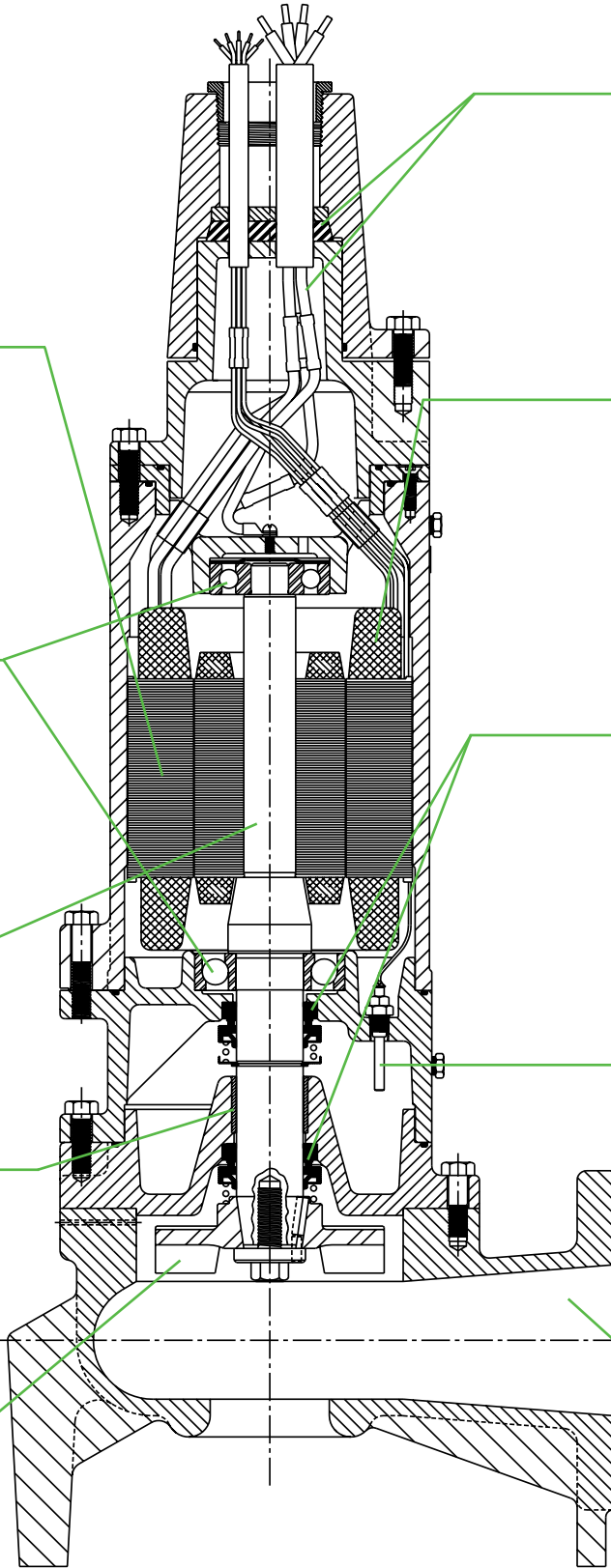
Double tandem mechanical shaft seals protect motor. Oil-filled seal chamber provides continuous lubrication.

## SEAL LEAK PROBES

Detect water in seal housing. Activates warning light in control panel.

## VOLUTE CASE

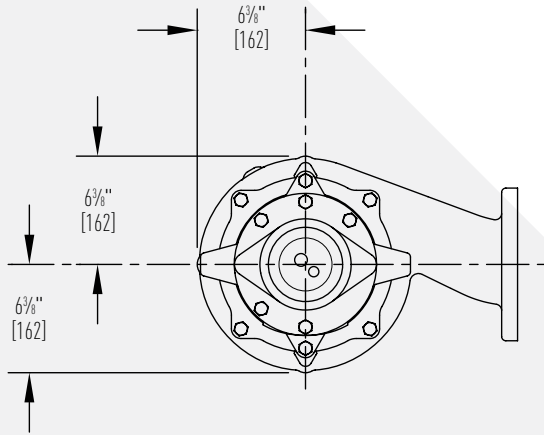
Handles 3" solids. Completely open from inlet to discharge. 4" ANSI 125 lb. flange.



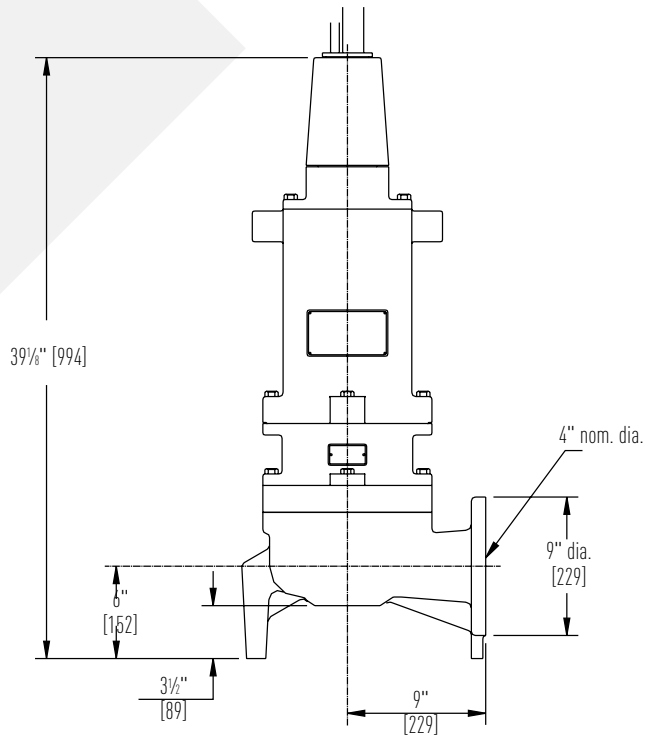
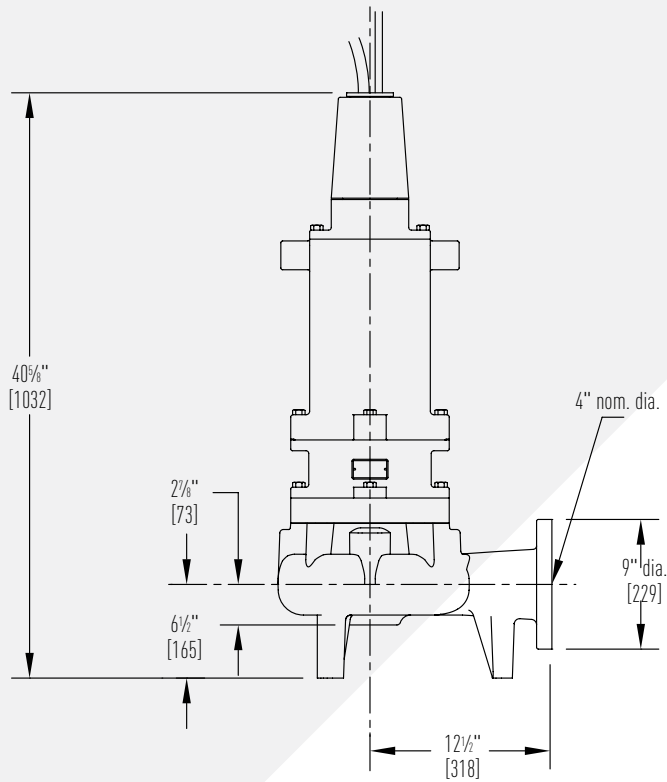
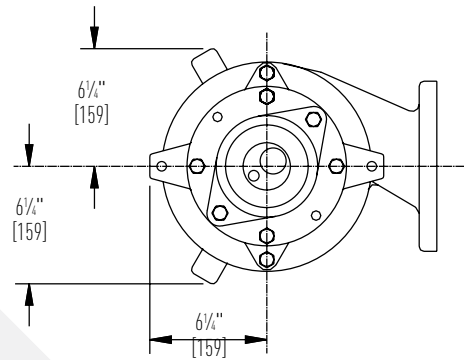
# PUMP DIMENSIONS

[Dimensions in mm]

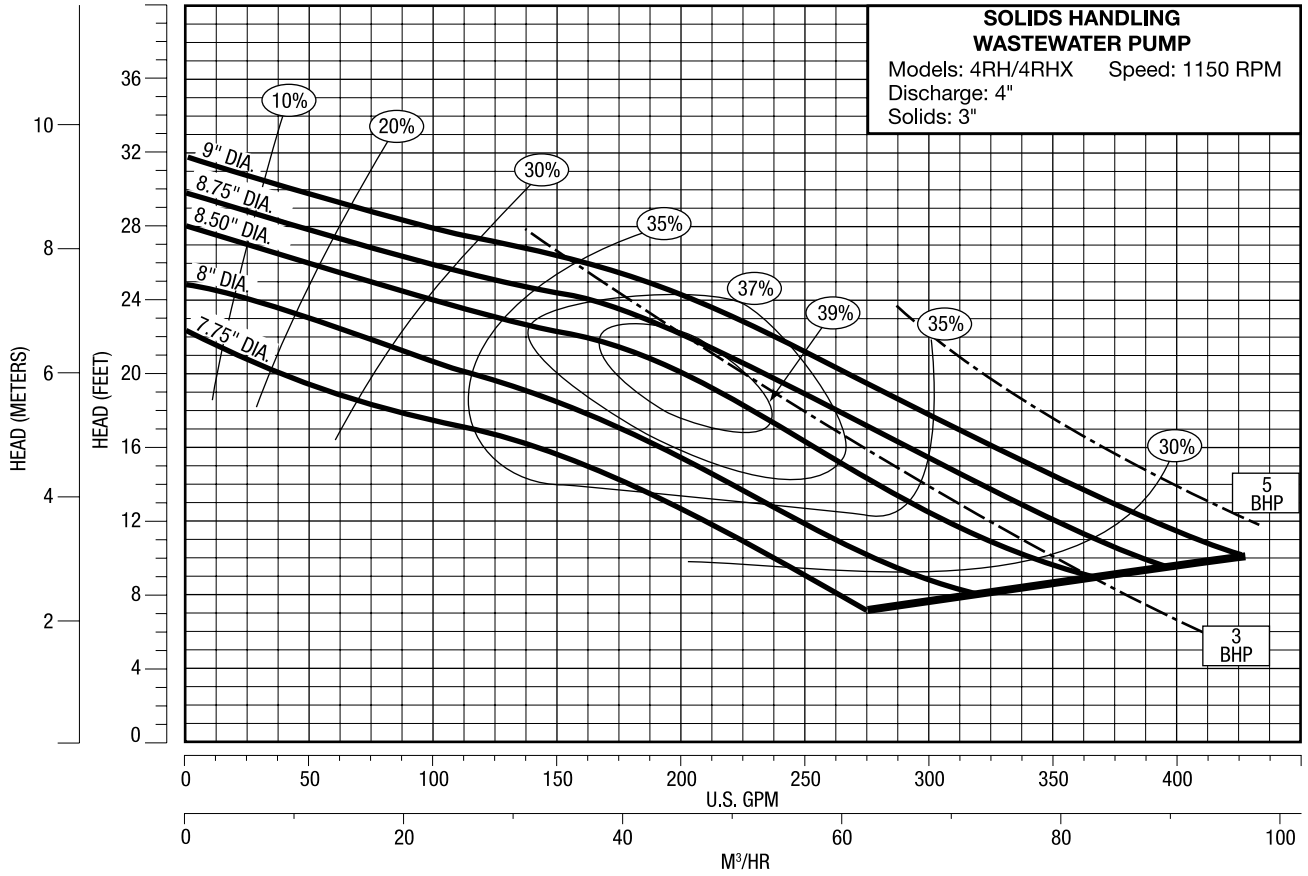
4RH/4RHX -  
1150/1750 RPM



4RH/4RHX -  
3450 RPM



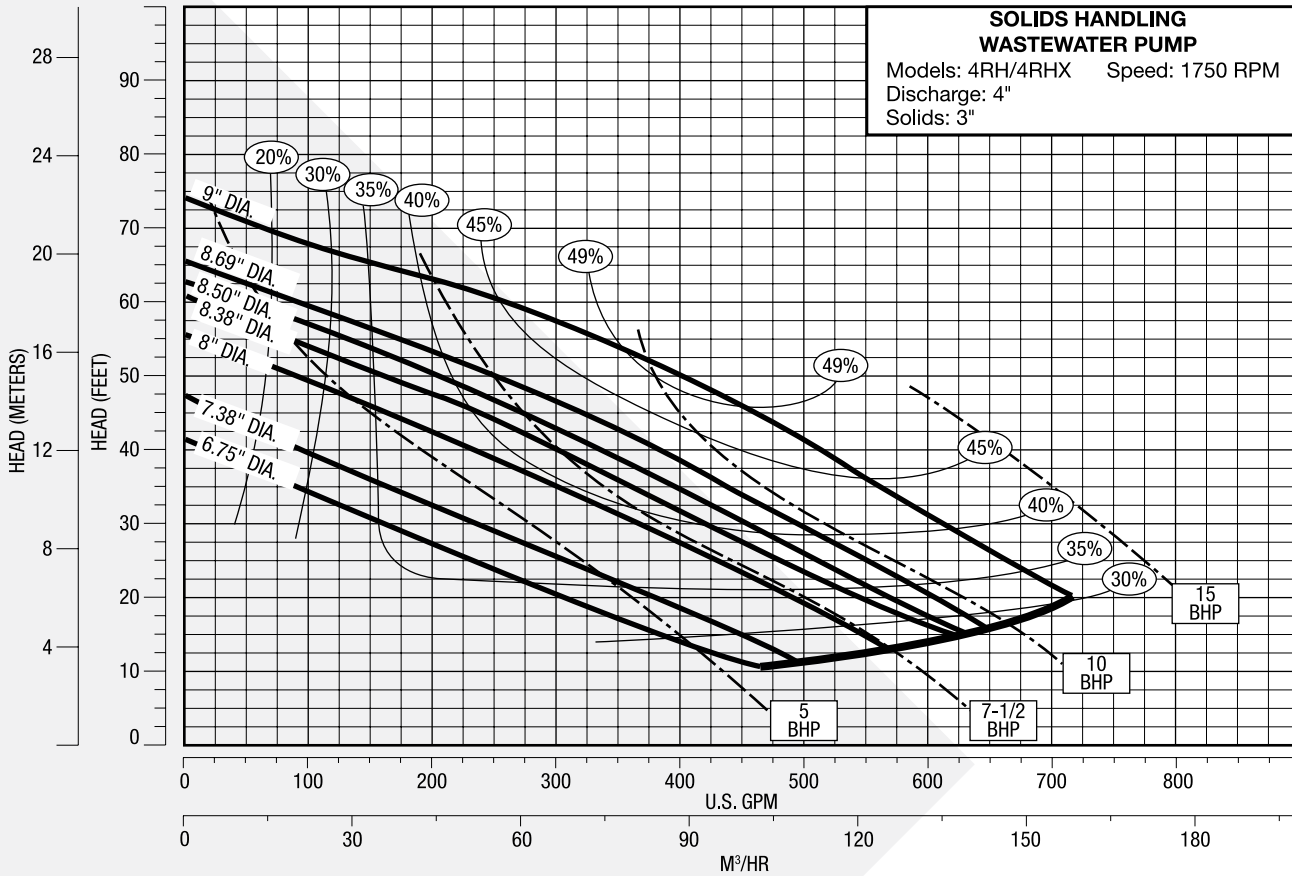
# 1150 RPM PERFORMANCE CURVE



Available Models		Motor Electrical Data												
Standard	Hazardous Location	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
4RH30M6-03	4RHX30M6-03	3	208	3	60	77	15.9	19	3.3	4.3	26.7	5.5	K	1.2
4RH30M6-23	4RHX30M6-23	3	230	3	60	67	13.8	16.6	3.3	4.3	26.7	5.5	K	1.2
4RH30M6-43	4RHX30M6-43	3	460	3	60	33	7	8.3	3.3	4.3	26.7	5.5	K	1.2
4RH30M6-53	4RHX30M6-53	3	575	3	60	27	5.5	6.6	3.3	4.3	26.7	5.5	K	1.2
4RH50M6-03	4RHX50M6-03	5	208	3	60	115	24	29	5.4	6.9	39.8	8.3	J	1.2
4RH50M6-23	4RHX50M6-23	5	230	3	60	100	21	25.2	5.4	6.9	39.8	8.3	J	1.2
4RH50M6-43	4RHX50M6-43	5	460	3	60	50	10.5	12.6	5.4	6.9	39.8	8.3	J	1.2
4RH50M6-53	4RHX50M6-53	5	575	3	60	40	8.3	10	5.4	6.9	39.8	8.3	J	1.2

Motor Efficiencies and Power Factor									
HP	Phase	Motor Efficiency %				Power Factor %			
		Service Factor Load	100% Load	75% Load	50% Load	Service Factor Load	100% Load	75% Load	50% Load
3	3	73	72	68	58.5	66	61	53.5	44
5	3	74	73	69.5	64	68.5	65	59	48.5

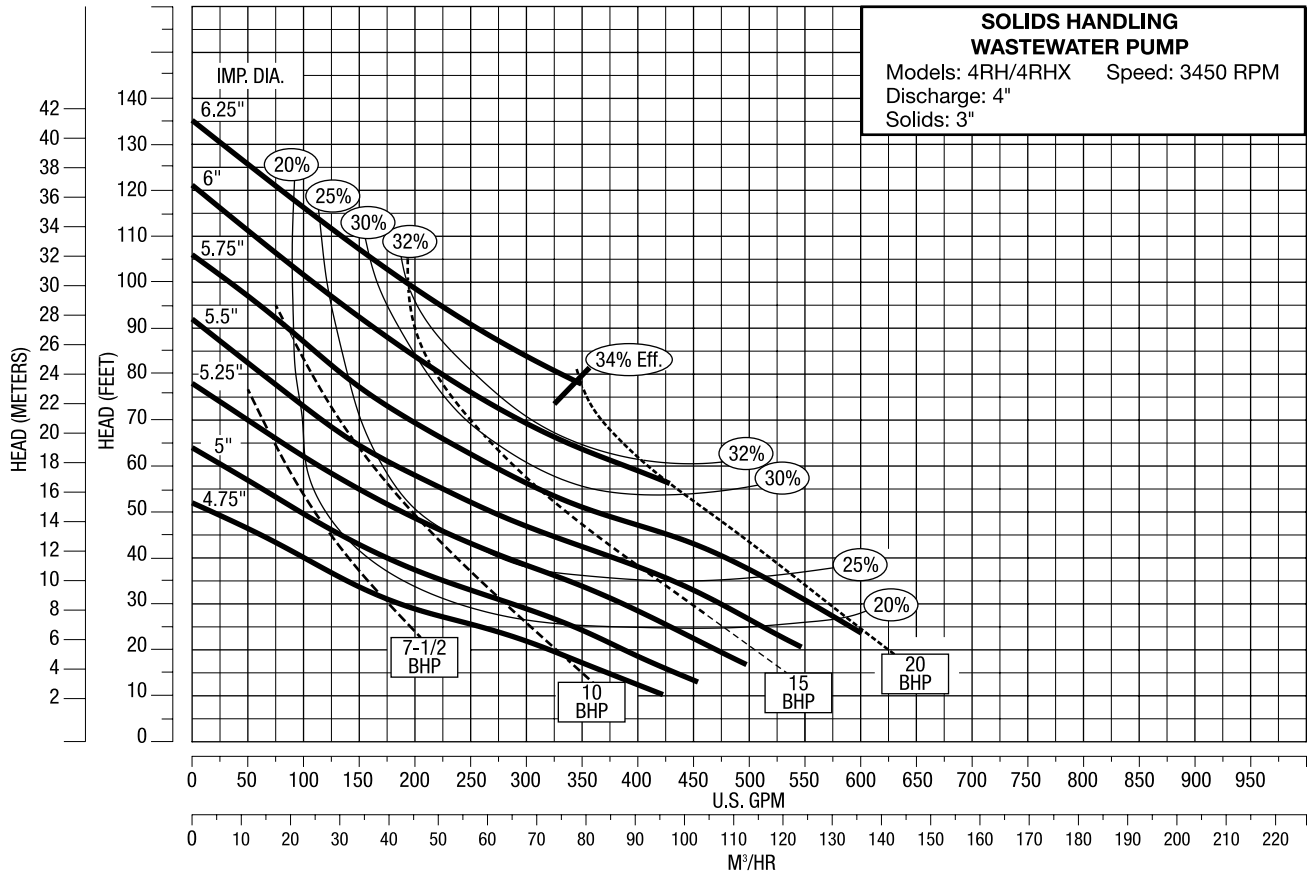
# 1750 RPM PERFORMANCE CURVE



Available Models		Motor Electrical Data												
Standard	Hazardous Location	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
4RH50M4-03	4RHX50M4-03	5	208	3	60	115	21	25.3	5.7	7.2	30.0	7.2	J	1.2
4RH50M4-23	4RHX50M4-23	5	230	3	60	100	18	22	5.7	7.2	39.9	7.2	J	1.2
4RH50M4-43	4RHX50M4-43	5	460	3	60	50	9	11	5.7	7.2	39.9	7.2	J	1.2
4RH50M4-53	4RHX50M4-53	5	575	3	60	40	7.2	8.8	5.7	7.2	39.9	7.2	J	1.2
4RH75M4-03	4RHX75M4-03	7.5	208	3	60	153	30	36.8	8.3	10.4	53.0	10.0	H	1.2
4RH75M4-23	4RHX75M4-23	7.5	230	3	60	133	26	32	8.3	10.4	53.0	10.0	H	1.2
4RH75M4-43	4RHX75M4-43	7.5	460	3	60	66	13	16	8.3	10.4	53.0	10.0	H	1.2
4RH75M4-53	4RHX75M4-53	7.5	575	3	60	53	10	12.8	8.3	10.4	53.0	10.0	H	1.2
4RH100M4-03	4RHX100M4-03	10	208	3	60	204	40	48.3	11.3	13.9	70.7	13.9	H	1.2
4RH100M4-23	4RHX100M4-23	10	230	3	60	178	35	42	11.3	13.9	70.7	13.9	H	1.2
4RH100M4-43	4RHX100M4-43	10	460	3	60	89	17.5	21	11.3	13.9	70.7	13.9	H	1.2
4RH100M4-53	4RHX100M4-53	10	575	3	60	71	14	16.8	11.3	13.9	70.7	13.9	H	1.2
4RH150M4-03	4RHX150M4-03	15	208	3	60	272	60	72	16.4	20.4	94.0	20.8	G	1.2
4RH150M4-23	4RHX150M4-23	15	230	3	60	236	52	60	16.4	20.4	94.0	20.8	G	1.2
4RH150M4-43	4RHX150M4-43	15	460	3	60	118	26	30	16.4	20.4	94.0	20.8	G	1.2
4RH150M4-53	4RHX150M4-53	15	575	3	60	94	21	25.5	16.4	20.4	94.0	20.8	G	1.2

Motor Efficiencies and Power Factor									
HP	Phase	Motor Efficiency %				Power Factor %			
		Service Factor Load	100% Load	75% Load	50% Load	Service Factor Load	100% Load	75% Load	50% Load
5	3	72	73	70.5	64	82	80	76	66.5
7.5	3	78	77	74	67.5	81.5	80	75.5	68
10	3	80	80	77	70.5	83	81.5	75.5	67
15	3	78.5	80	79.5	74.5	82	79	72	61
20	3	77	77	80	78	82.5	82.5	79	69

# 3450 RPM PERFORMANCE CURVE



Available Models		Motor Electrical Data												
Standard	Hazardous Location	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
4RH75M2-03	4RHX75M2-03	7.5	208	3	60	128.6	27.0	30.5	8.1	9.5	44.5	6.3	G	1.2
4RH75M2-23	4RHX75M2-23	7.5	230	3	60	111.8	23.5	26.5	8.1	9.5	44.5	6.3	G	1.2
4RH75M2-43	4RHX75M2-43	7.5	460	3	60	55.9	11.8	13.3	8.1	9.5	44.5	6.4	G	1.2
4RH75M2-53	4RHX75M2-53	7.5	575	3	60	44.7	9.4	10.6	8.1	9.5	44.5	6.3	G	1.2
4RH100M2-03	4RHX100M2-03	10	208	3	60	192.7	33.9	39.7	10.2	11.9	66.8	7.9	H	1.2
4RH100M2-23	4RHX100M2-23	10	230	3	60	167.6	29.5	34.5	10.2	11.9	66.8	7.9	H	1.2
4RH100M2-43	4RHX100M2-43	10	460	3	60	83.8	14.8	17.3	10.2	11.9	66.8	8.0	H	1.2
4RH100M2-53	4RHX100M2-53	10	575	3	60	67.0	11.8	13.8	10.2	11.9	66.8	7.9	H	1.2
4RH150M2-03	4RHX150M2-03	15	208	3	60	256.2	50.4	60.3	14.7	17.6	88.7	11.8	G	1.2
4RH150M2-23	4RHX150M2-23	15	230	3	60	222.8	43.8	52.4	14.7	17.6	88.8	11.8	G	1.2
4RH150M2-43	4RHX150M2-43	15	460	3	60	111.4	21.9	26.2	14.7	17.6	88.8	11.8	G	1.2
4RH150M2-53	4RHX150M2-53	15	575	3	60	89.1	17.5	21.0	14.7	17.6	88.7	11.8	G	1.2
4RH200M2-23	4RHX200M2-23	20	230	3	60	222.8	59.5	59.5	19.7	19.7	88.8	16.0	D	1.0
4RH200M2-43	4RHX200M2-43	20	460	3	60	111.4	29.8	29.8	19.7	19.7	88.8	16.0	D	1.0
4RH200M2-53	4RHX200M2-53	20	575	3	60	89.1	23.8	23.8	19.7	19.7	88.7	16.0	D	1.0

Motor Efficiencies and Power Factor									
HP	Phase	Motor Efficiency %				Power Factor %			
		Service Factor Load	100% Load	75% Load	50% Load	Service Factor Load	100% Load	75% Load	50% Load
7.5	3	70.8	69.5	65.2	58.8	89	89	87	83
10	3	74.9	73.6	71.7	64.9	87	85	82	76
15	3	75.9	75.8	73.9	69.0	85	83	78	70
20	3	75.4	75.4	75.8	72.9	85	85	83	76



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