PENTAIR

MYERS®

MODELS 4VHS AND 4VHSX

SOLIDS HANDLING WASTEWATER PUMPS

FM APPROVED
(4VHSX only)

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MYERS® MODELS 4VHS AND 4VHSX
Solids Handling Wastewater Pumps

Cutting Your Pumping Costs

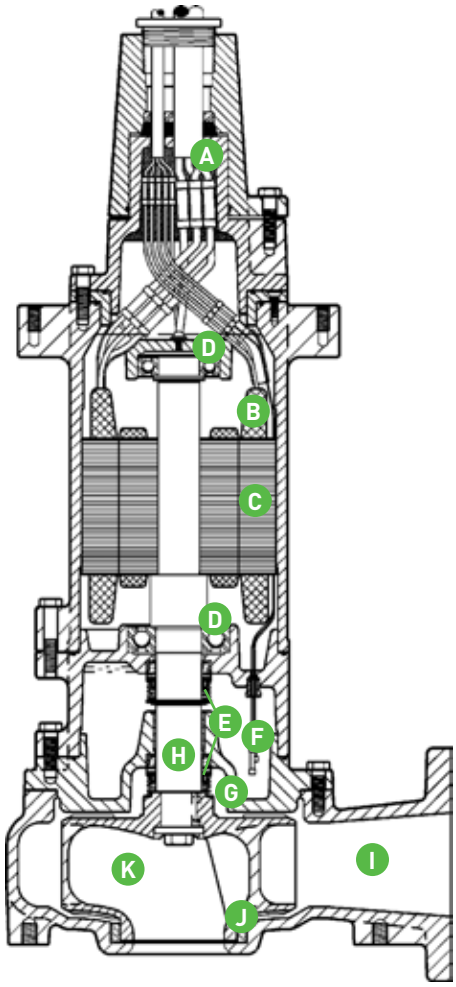
The 4VHS and 4VHSX (hazardous location) submersible wastewater pumps are a heavy-duty 4" solids handling series capable of passing a full 3" spherical solid. Myers single vane impeller prevents solids from binding or clogging and offers high operating efficiencies to cut your pumping costs. The 4VHS 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. Call your Myers distributor or the Myers Ohio sales office at 419-289-1144 for more details.

Product Capabilities		
Capacities To	730 gpm	2,763 lpm
Heads To	90 ft.	27 m
Solids Handling	3 in.	76 mm
Liquids Handling	raw unscreened sewage, 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	1750 RPM, 7½ HP 230 volt, 1ø, 60 Hz 220/230/460/575 volts 3ø, 60 Hz 10 HP 200/230/460/575 volts 3ø, 60 Hz	
Std. Third Party Approvals Optional Approvals	CSA FM, Class 1, Groups C & D (4VHSX 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

Construction Materials	
Motor Housing, Seal Housing, Cord Cap and Volute Case	cast iron, Class 30, ASTM A48
Single Vane 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
Volute Wear Ring	brass

Note: Consult factory for applications outside these recommendations.

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. Ball Bearings

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

E. Shaft Seals

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

F. Seal Leak Probes

Detect water in seal housing. Activate warning light in control panel. (Test resistor on hazardous location models.)

G. Sleeve Bearing

Takes radial shock load; provides flame path (Hazardous location pumps).

H. Heavy 416 SST Shaft

Corrosion resistant.

I. Volute Case

Modified constant velocity volute handles 3" solids. 4" ANSI 125 lb. flange.

J. Brass Wear Ring

Prevents rust buildup and reduces leakage and water. Replaceable to restore original running clearances and pump efficiencies.

K. High Efficiency Impeller

Single vane impeller handles 3" solids. Pump-out vanes help keep trash from seal; reduces pressure at seal faces.

High Efficiency Hydraulic Design Cuts Pumping Costs and Extends Life of Fluid End Components.

- Single vane impeller provides a steeper, non-overloading performance curve and handles 3" solids with ease.
- Modified constant velocity volute offers quiet operation and low radial loads over extended portion of performance curve.

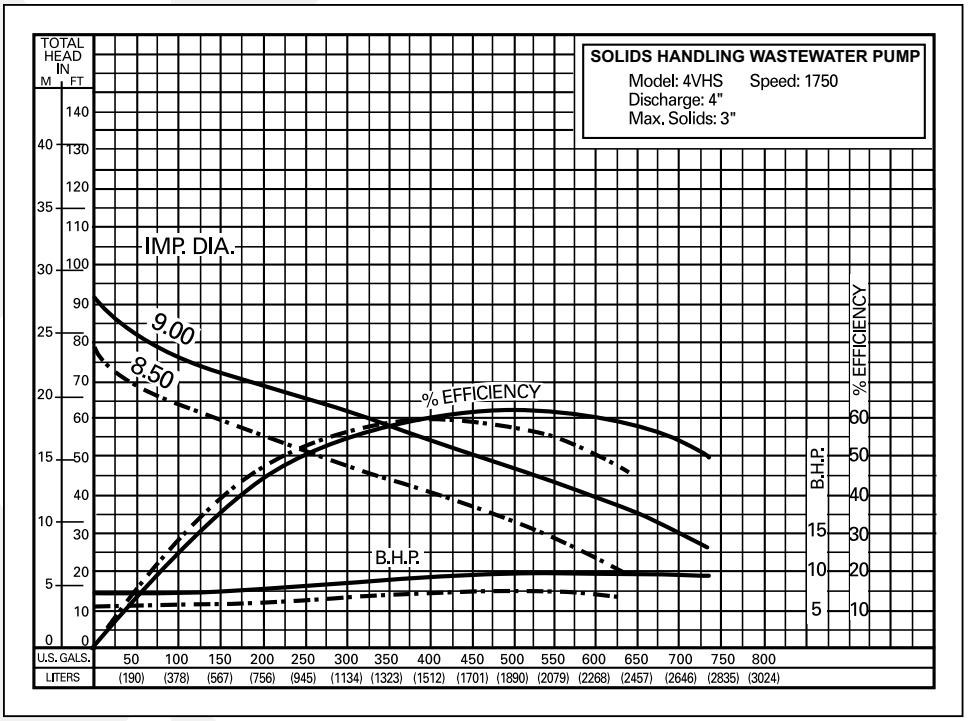
Durable Motor Will Deliver Many Years of Reliable Service.

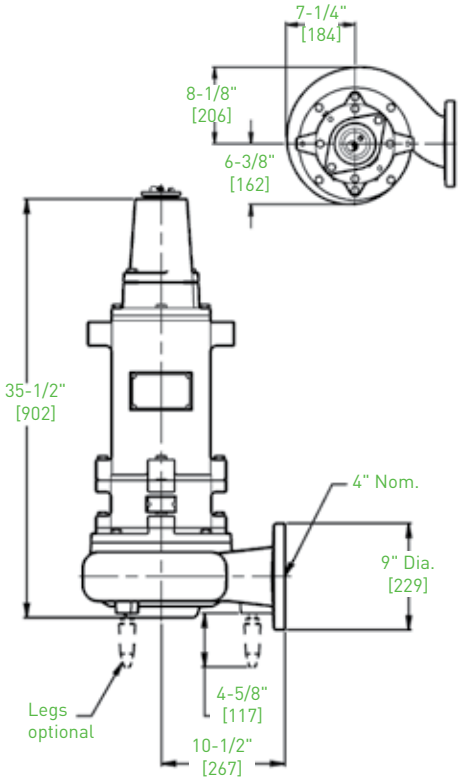
- Oil-filled motor for maximum heat dissipation and constant bearing lubrication.
- Heat sensor thermostats embedded in windings protect motor from overheat conditions.
- Seal leak probes warn of moisture entry; help prevent costly motor burn-out.
- Double tandem shaft seals prevent sewage from entering motor.
- Power and control cables are double sealed with epoxy and compression grommet.

Available with Optional FM Approval for Use in Class 1, Groups C & D Hazardous Locations (4VHSX Only).

Performance Data and Dimensions

1750 RPM





Note: Maximum impeller diameter for single phase pump is 8.5".

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
4VHS75M4-21	4VHSX75M4-21	7.5	230	1	60	137	34	40.8	8.3	10.4	31.5	7.4	D	1.2
4VHS75M4-03	4VHSX75M4-03	7.5	208	3	60	153	30	36.8	8.3	10.4	53	10	H	1.2
4VHS75M4-23	4VHSX75M4-23	7.5	230	3	60	133	26	32	8.3	10.4	53	10	H	1.2
4VHS75M4-43	4VHSX75M4-43	7.5	460	3	60	66	13	16	8.3	10.4	53	10	H	1.2
4VHS75M4-53	4VHSX75M4-53	7.5	575	3	60	53	10	12.8	8.3	10.4	53	10	H	1.2
4VHS100M4-03	4VHSX100M4-03	10	208	3	60	204	40	48.3	11.3	13.9	70.7	13.9	H	1.2
4VHS100M4-23	4VHSX100M4-23	10	230	3	60	178	35	42	11.3	13.9	70.7	13.9	H	1.2
4VHS100M4-43	4VHSX100M4-43	10	460	3	60	89	17.5	21	11.3	13.9	70.7	13.9	H	1.2
4VHS100M4-53	4VHSX100M4-53	10	575	3	60	71	14	16.8	11.3	13.9	70.7	13.9	H	1.2

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
7.5	1	77	77	75	67	98	98	97	92
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

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