



MYERS[®]
3V AND 3VX
3" SOLIDS HANDLING WASTEWATER
PUMPS STANDARD (3V) AND
HAZARDOUS LOCATION (3VX)
CONSTRUCTION

MYERS® 3V AND 3VX

TECHNICAL INFORMATION



THE IDEAL CHOICE WHEN SELECTING A PUMP FOR YOUR NEXT APPLICATION

MYERS 3V and 3VX (hazardous location) submersible wastewater pumps pass a full 2-1/2" spherical solid. MYERS rounded port, 2-vane, enclosed impeller prevents solids from binding or clogging and offers high operating efficiencies to cut your pumping costs. The 3V series modified constant velocity volute case provides smooth operation over an extended portion of the performance curve for extended 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.

HIGH EFFICIENCY HYDRAULIC DESIGN CUTS PUMPING COSTS AND EXTENDS LIFE OF FLUID END COMPONENTS.

- Two-vane, rounded port, enclosed type impeller handles 2-1/2" solids with ease at high operating efficiencies.
- Modified constant velocity volute offers quiet operation, 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 burnout.
- Double tandem shaft seals prevent sewage from entering motor.
- Power and control cables are double sealed with epoxy and compression grommet.

Product Capabilities

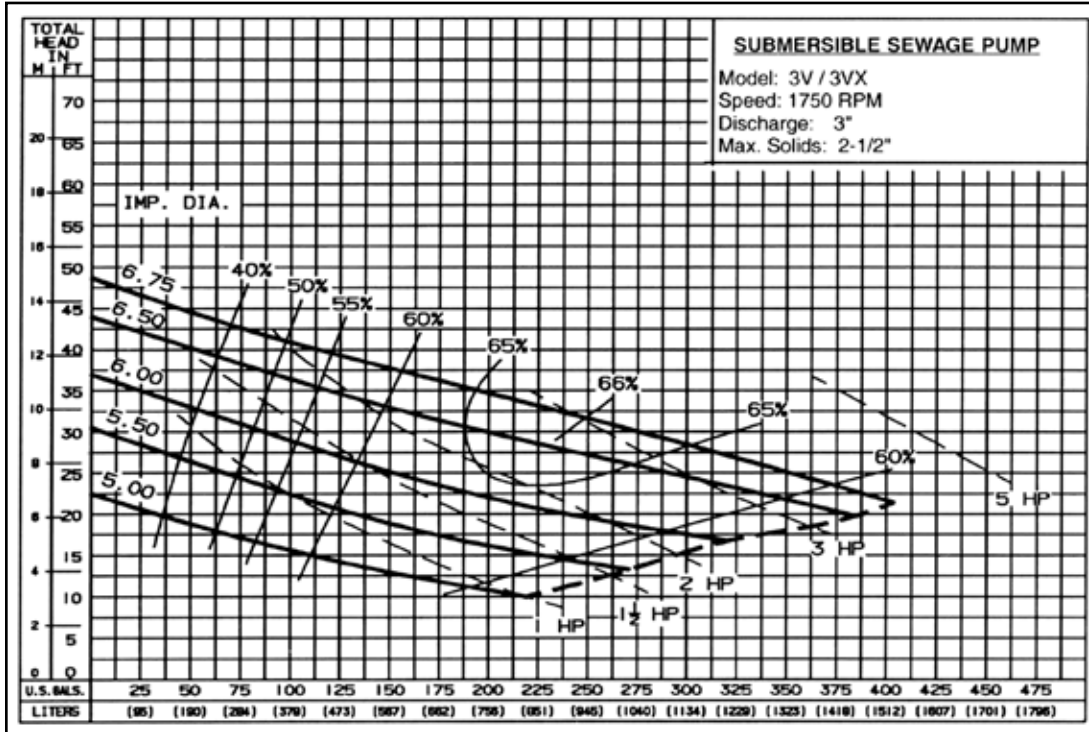
Capacities To	400 gpm	25.24 lps
Heads To	48 ft.	14.6 m
Solids Handling Capacity	2-1/2 in.	63.5 mm
Liquids Handling	raw unscreened sewage, effluent, storm water	
Intermittent Liquid Temp.	up to 140°F	up to 60°C
Winding Insulation Temp. (Class F)	311°F	155°C
Motor Electrical Data	1750 RPM 1 – 5 HP, 230V, 1Ø, 60 Hz 1 – 5 HP, 200/230/460/575V, 3Ø, 60 Hz	
Std. Third Party Approvals	CSA	
Optional Approvals	FM Class 1, Groups C & D (3VX only)	
Acceptable pH Range	6 – 9	
Specific Gravity	.9 – 1.1	
Viscosity	28 – 35 SSU	
Discharge (Flange Dim.)	3 in.	76 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
Enclosed 2-Vane 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
Volute Wear Ring	brass

1750 RPM PERFORMANCE CURVE

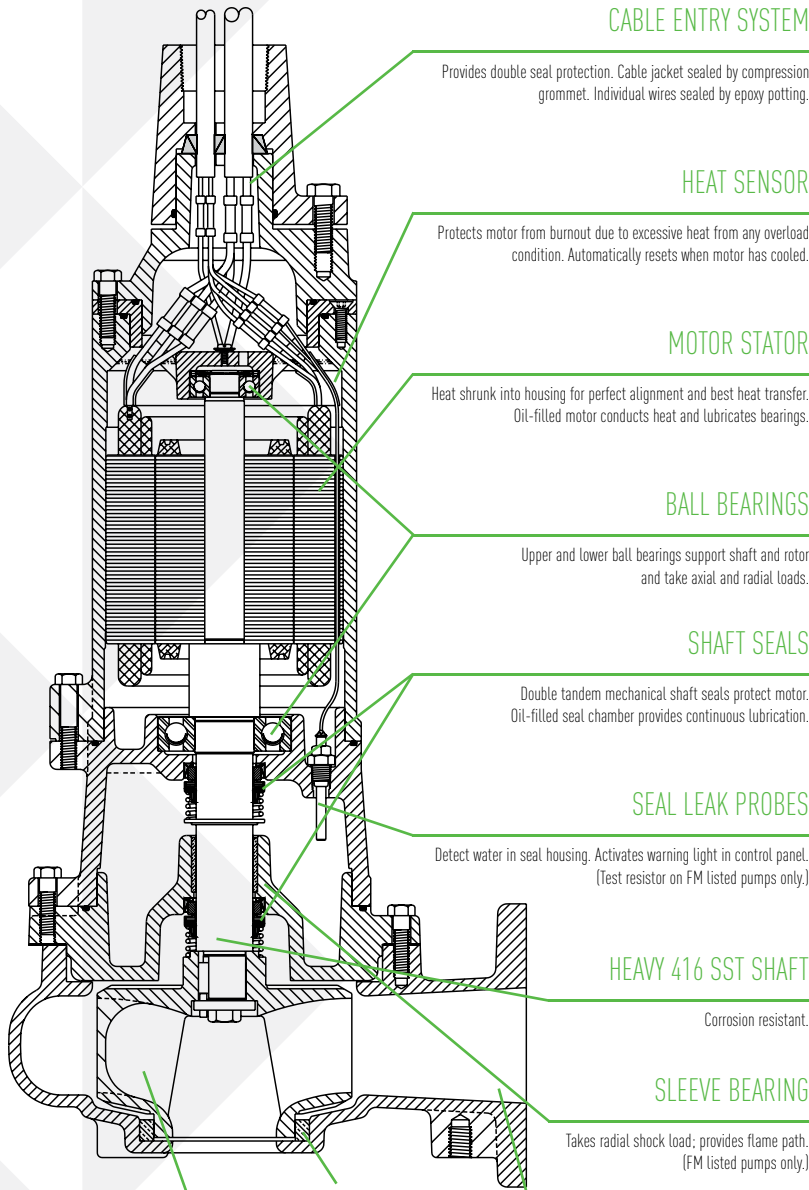


Pump performance is based on clear water (1.0 specific gravity @ 68°F) and pump fluid end (hydraulic) efficiency. Motor data based on 40°C ambient temperature.

Available Models		Motor Electrical Data											
Standard	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
3V10M4-21	3VX10M4-21	1	230	1	60	55	8	10	1.4	12.7	1.8	P	1.2
3V10M4-03	3VX10M4-03	1	208	3	60	47	5.4	6.2	1.5	16.9	1.9	S	1.2
3V10M4-23	3VX10M4-23	1	230	3	60	43	4.5	5.4	1.5	17.1	1.8	S	1.2
3V10M4-43	3VX10M4-43	1	460	3	60	21	2.3	2.7	1.5	16.7	1.8	S	1.2
3V10M4-53	3VX10M4-53	1	575	3	60	14	1.8	2.2	1.5	13.9	1.8	P	1.2
3V15M4-21	3VX15M4-21	1.5	230	1	60	55	10	12	2.0	12.7	2.3	M	1.2
3V15M4-03	3VX15M4-03	1.5	208	3	60	47	6.6	8	2.0	16.9	2.4	N	1.2
3V15M4-23	3VX15M4-23	1.5	230	3	60	43	5.5	7	1.9	17.1	2.2	R	1.2
3V15M4-43	3VX15M4-43	1.5	460	3	60	21	2.8	3.5	1.9	16.7	2.2	R	1.2
3V15M4-53	3VX15M4-53	1.5	575	3	60	14	2.2	2.8	2.0	13.9	2.2	N	1.2
3V20M4-21	3VX20M4-21	2	230	1	60	72	12	14.4	2.5	16.6	2.8	K	1.2
3V20M4-03	3VX20M4-03	2	208	3	60	51	8.4	9.8	2.9	18.4	3.0	L	1.2
3V20M4-23	3VX20M4-23	2	230	3	60	54	7	8.6	2.5	21.5	2.8	M	1.2
3V20M4-43	3VX20M4-43	2	460	3	60	27	3.5	4.3	2.5	21.5	2.8	M	1.2
3V20M4-53	3VX20M4-53	2	575	3	60	18	2.8	3.4	2.6	17.9	2.8	K	1.2
3V30M4-21	3VX30M4-21	3	230	1	60	106	21	26	4.5	24.4	4.8	K	1.2
3V30M4-03	3VX30M4-03	3	208	3	60	86	15	18	5.0	30.9	5.4	M	1.2
3V30M4-23	3VX30M4-23	3	230	3	60	52	12	15.6	4.6	20.7	4.8	H	1.2
3V30M4-43	3VX30M4-43	3	460	3	60	26	6	7.8	4.5	20.7	4.8	H	1.2
3V30M4-53	3VX30M4-53	3	575	3	60	25	5	6	4.6	25.1	5.0	K	1.2
3V50M4-21	3VX50M4-21	5	230	1	60	153	34	34	6.7	35.2	7.8	H	1.0
3V50M4-03	3VX50M4-03	5	208	3	60	140	24	24	8.0	50.4	8.6	M	1.0
3V50M4-23	3VX50M4-23	5	230	3	60	125	21	21	7.6	49.7	8.4	L	1.0
3V50M4-43	3VX50M4-43	5	460	3	60	62	10.5	10.5	7.6	49.3	8.4	L	1.0
3V50M4-53	3VX50M4-53	5	575	3	60	45	8.4	8.4	7.6	44.8	8.4	K	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
1	1	74	72	67	59	84	75	66	56
1	3	70	66	60	51	70	67	61	47
1.5	1	72	74	73	68	86	84	78	67
1.5	3	71	70	68	60	70	70	62	49
2	1	75	57	50	38	81	65	58	51
2	3	71	70	68	61	66	65	52	42
3	1	70	72	73	68	89	88	85	77
3	3	74	73.5	69.5	61.5	72	70.5	62.5	52
5	1	70	70	69	65	51	51	50	47
5	3	74	74	72	67	72	72	64	58

ADVANTAGES BY DESIGN



HIGH EFFICIENCY IMPELLER

2-vane with rounded ports. Handles 2-1/2" solids. Pump-out vanes help keep trash from seal; reduce pressure to seal faces.

BRASS WEAR RING

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

CABLE ENTRY SYSTEM

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

HEAT SENSOR

Protects motor from burnout 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 lubrication.

SEAL LEAK PROBES

Detect water in seal housing. Activates warning light in control panel. (Test resistor on FM listed pumps only.)

HEAVY 416 SST SHAFT

Corrosion resistant.

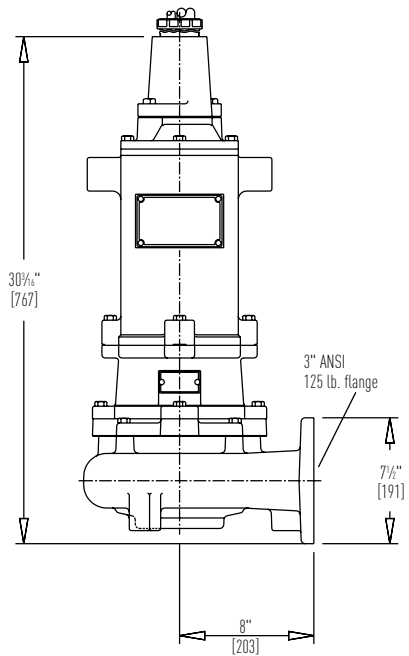
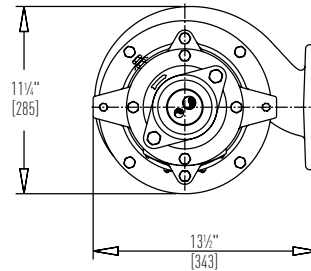
SLEEVE BEARING

Takes radial shock load; provides flame path. (FM listed pumps only.)

VOLUTE CASE

Modified constant velocity volute handles 2-1/2" solids. 3" ANSI 125 lb. flange.

DIMENSIONS [Dimensions in mm]



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