

WG(X)75HH/100H/150H

Standard and Explosion-Proof
7½, 10, and 15 HP High Head
Submersible Grinder Pumps



APPROVED
(WG75HH/100H/150H only)

MYERS HIGH HEAD 7½, 10 & 15 HORSEPOWER SUBMERSIBLE CENTRIFUGAL GRINDER PUMPS ARE DESIGNED FOR MUNICIPAL, COMMERCIAL OR INDUSTRIAL APPLICATIONS. These pumps are especially suited for use in pressure sewer applications or in systems with long discharge runs or high static heads. The pumps feature a heavy-duty cutter mechanism and recessed impeller designed to efficiently grind typical sewage solids into a fine slurry.

The grinder pumps are available in standard and FM Listed explosion-proof construction for use in Class 1, Groups C & D hazardous locations.

Myers grinder pumps can be installed in a variety of packaged systems. Factory-assembled simplex or duplex packages with guide rail systems are available. Individual rail components are also available for installation in onsite concrete systems. Myers offers a complete line of submersible sump, sewage, effluent, grinder, non-clog wastewater pumps, controls, basins and accessories. For additional information, please contact your local Myers representative or the Myers Ashland, Ohio sales office at 419-289-1144.

ADVANTAGES BY DESIGN

IDEAL FOR USE IN PRESSURE SEWER SYSTEMS.

- Recessed impeller provides steep non-overloading operating curve.

DURABLE MOTOR WILL DELIVER MANY YEARS OF RELIABLE SERVICE.

- Oil-filled motor for maximum heat dissipation and constant bearing lubrication.
- Recessed impeller reduces radial bearing loads; increases bearing life.
- High-torque three phase motors for assured starting under heavy load.
- Seal leak probes and on-winding heat sensors warn of seal leak condition, and stop motor if motor overheats. Helps prevent costly motor damage.

DESIGNED FOR EASY MAINTENANCE.

- Shredding ring and grinder impeller are replaceable without dismantling pump or motor.

PRODUCT CAPABILITIES

| | | |
|------------------------------------|---|------------|
| Capacities To | 150 gpm | 568 lpm |
| Heads To | 257 ft. | 78 m |
| Liquids Handling | domestic raw sewage | |
| Intermittent Liquid Temp. | up to 140°F | up to 60°C |
| Winding Insulation Temp. (Class H) | 356°F | 180°C |
| Motor Electrical Data | 3450 RPM 7½, 10 and 15 HP 200/230/460/575 volts 3 phase, 60 Hz | |
| Std. Third Party Approvals | CSA | |
| Optional Approvals | FM Class 1, Groups C & D (WG75HH/100H/150H only) | |
| Acceptable pH Range | 6 – 9 | |
| Specific Gravity | .9 – 1.1 | |
| Viscosity | 28 – 35 SSU | |
| Discharge (Flange Dim.) | 2½ in. | 63.5 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 |
| Impeller, recessed | ductile iron |
| Power and Control Cord | 25 ft. SOOW |
| Mechanical Seals Standard Optional | double tandem carbon and ceramic lower tungsten, carbide |
| Pump, Motor Shaft | 416 SST |
| Fasteners | 300 series SST |
| Shredding Ring and Grinder Impeller | 440 SST, 58-60 Rockwell |

WHERE INNOVATION MEETS TRADITION

Myers[®]

Pentair Water

HEAT SENSOR

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

CABLE ENTRY SYSTEM

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

BALL BEARINGS

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

HEAVY 416 SST SHAFT

Corrosion resistant. Reduces shaft deflection due to grinding loads.

STATOR

3450 RPM, 3 phase. Press fit for perfect alignment and best heat transfer. Oil-filled motor conducts heat and lubricates bearings. Class H, VFD/continuous duty operation.

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 FM listed pumps only.)

SLEEVE BEARING

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

VOLUTE CASE

Cast iron; horizontal discharge. (Drilled for 2 1/2" pipe flange.)

IMPELLER

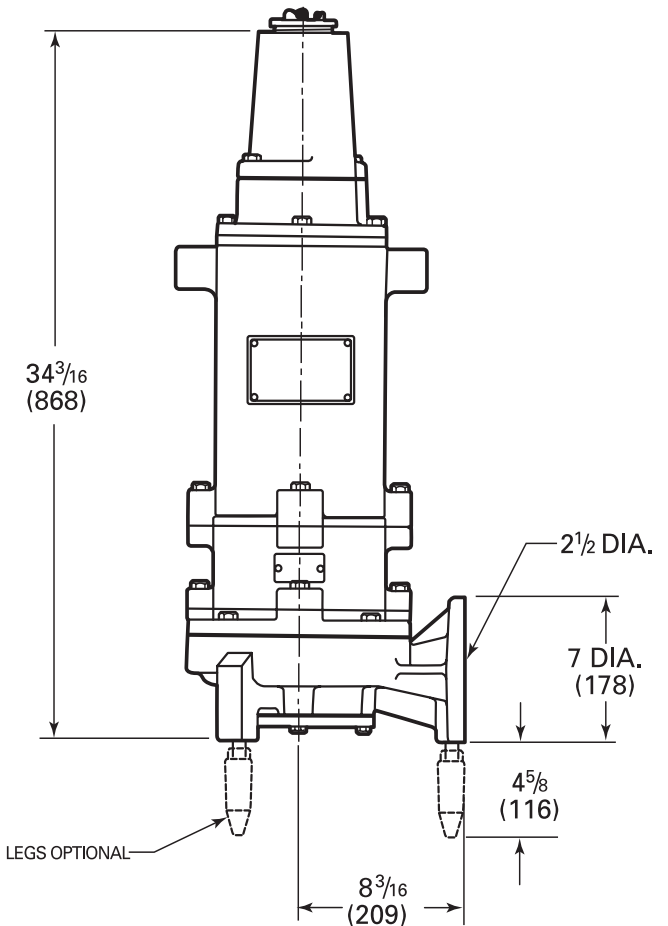
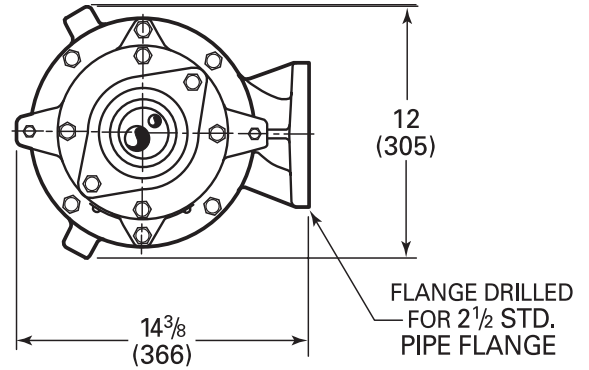
Ductile iron recessed impeller handles ground slurry without clogging or binding. Provides unobstructed flow passage. Reduces radial loads. Pump-out vanes help keep trash from seal; reduces pressure at seal faces.

GRINDER ASSEMBLY

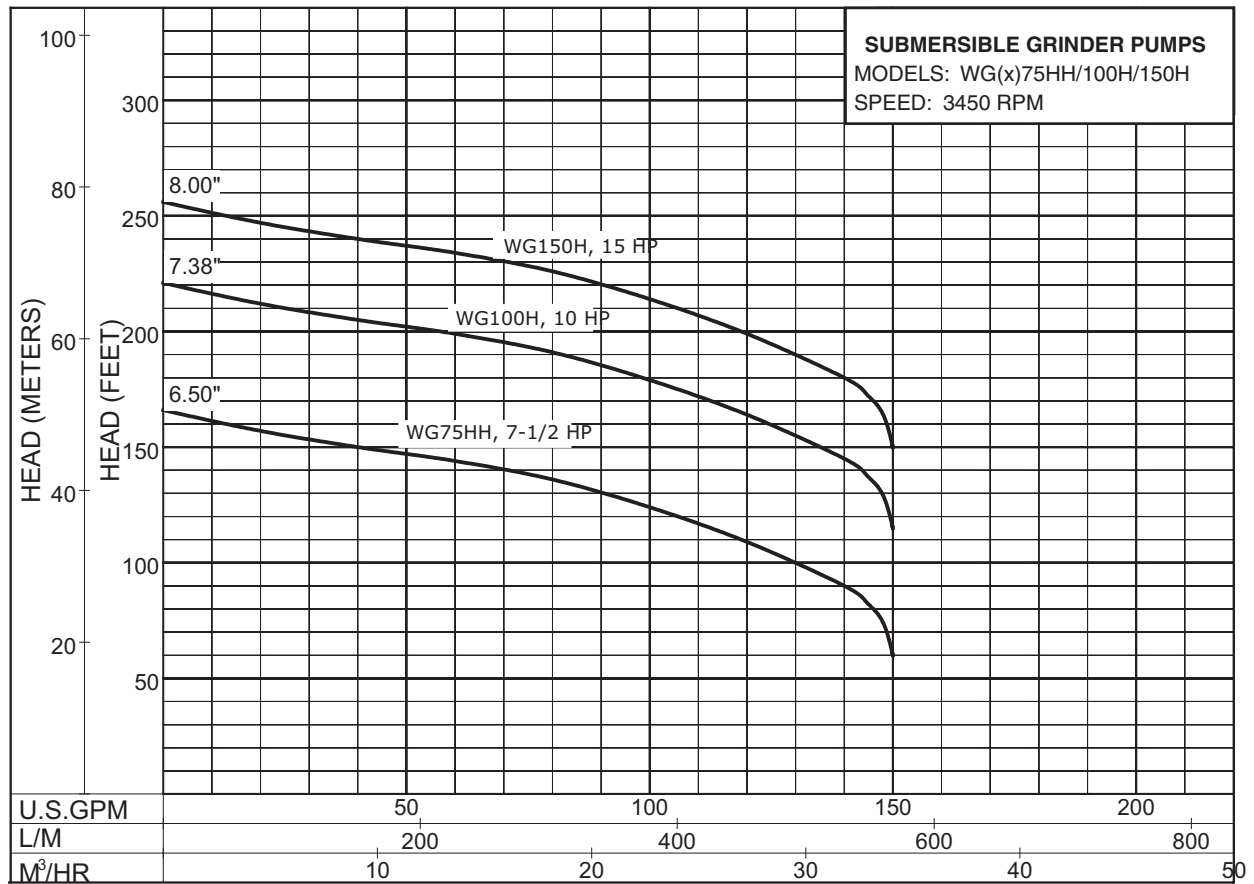
Grinder impeller and shredding ring are replaceable without dismantling pump. Constructed of 440 SST hardened to 58-60 Rockwell.

DIMENSIONS

() Dimensions in mm



PUMP PERFORMANCE



| Available Models | | Motor Electrical Data | | | | | | | | | | | |
|------------------|-----------------|-----------------------|-------|-------|-------|------------|----------|--------|-------------------|-----------|---------|-----------------|----------------|
| Standard | Explosion-Proof | HP | Volts | Phase | Hertz | Start Amps | Run Amps | Run KW | Service Factor KW | Start KVA | Run KVA | NEC Code Letter | Service Factor |
| WG75HH-03-25 | WGX75HH-03-25 | 7½ | 200 | 3 | 60 | 192.7 | 39.7 | 8.1 | 11.9 | 66.8 | 10.6 | H | 1.0 |
| WG75HH-23-25 | WGX75HH-23-25 | 7½ | 230 | 3 | 60 | 167.6 | 34.5 | 8.1 | 11.9 | 66.8 | 10.6 | H | 1.0 |
| WG75HH-43-25 | WGX75HH-43-25 | 7½ | 460 | 3 | 60 | 83.8 | 17.3 | 8.1 | 11.9 | 66.8 | 10.6 | H | 1.0 |
| WG75HH-53-25 | WGX75HH-53-25 | 7½ | 575 | 3 | 60 | 67.0 | 13.8 | 8.1 | 11.9 | 66.8 | 10.6 | H | 1.0 |
| WG100H-03-25 | WGX100H-03-25 | 10 | 200 | 3 | 60 | 256.2 | 55.6 | 10.2 | 15.5 | 88.7 | 11.8 | G | 1.0 |
| WG100H-23-25 | WGX100H-23-25 | 10 | 230 | 3 | 60 | 222.8 | 48.4 | 10.2 | 15.5 | 88.7 | 11.8 | G | 1.0 |
| WG100H-43-25 | WGX100H-43-25 | 10 | 460 | 3 | 60 | 111.4 | 24.2 | 10.2 | 15.5 | 88.7 | 11.8 | G | 1.0 |
| WG100H-53-25 | WGX100H-53-25 | 10 | 575 | 3 | 60 | 89.1 | 19.4 | 10.2 | 15.5 | 88.7 | 11.8 | G | 1.0 |
| WG150H-03-25 | WGX150H-03-25 | 15 | 200 | 3 | 60 | 256.2 | 68.4 | 17.6 | 19.7 | 88.7 | 16.0 | D | 1.0 |
| WG150H-23-25 | WGX150H-23-25 | 15 | 230 | 3 | 60 | 222.8 | 59.5 | 17.6 | 19.7 | 88.7 | 16.0 | D | 1.0 |
| WG150H-43-25 | WGX150H-43-25 | 15 | 460 | 3 | 60 | 111.4 | 29.8 | 17.6 | 19.7 | 88.7 | 16.0 | D | 1.0 |
| WG150H-53-25 | WGX150H-53-25 | 15 | 575 | 3 | 60 | 89.1 | 23.8 | 17.6 | 19.7 | 88.7 | 16.0 | D | 1.0 |

WG(X)75HH/100H/150H

SPECIFICATIONS

PUMP MODEL – Pump shall be of the centrifugal type Myers model _____ or equal with an integrally built-in grinder unit and submersible type motor. The grinder unit shall be capable of macerating all material in normal domestic and commercial sewage including reasonable amounts of foreign objects such as small wood, sticks, plastic, thin rubber, sanitary napkins, disposable diapers and the like to a fine slurry that will pass freely through the pump and 2" discharge pipe. Discharge shall be standard 2" flange. Pump and motor assembly shall be FM listed for Class 1, Groups C & 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 3450 RPM.

MOTOR – Pump motor shall be of the totally enclosed, submersible, squirrel cage induction type rated _____ horsepower at 3450 RPM, 60 Hz.

Motor shall be for three phase 200 volts _____, 230 volts _____, 460 volts _____ or 575 volts _____. Three phase motors shall be NEMA B type.

Stator winding shall be of the open type with Class H insulation good for 180°C (356°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 that 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 top end of motor winding and shall be connected in series with the magnetic contactor coil in control box to stop motor if motor winding temperature reaches 150°C (302°F). Thermostat to reset automatically when motor cools. Three heat sensors shall be used on 3 phase motors.

The common motor pump and grinder shaft shall be of #416 stainless steel threaded to take pump impeller and grinder impeller.

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 motor but shall act as a warning only, indicating service is required.

PUMP IMPELLER – The pump impeller shall be of the recessed Myers type to provide an open unobstructed passage through the volute for the ground solids. Impeller shall be ductile iron and shall be driven by a stainless key. Enclosed or semiopen pump impellers that might become obstructed during grinding or add excessive radial loads shall not be considered as equal.

GRINDER CONSTRUCTION – Grinder assembly shall consist of a single rotating grinder impeller and a single stationary shredding ring mounted directly below pump volute inlet. Grinder impeller shall thread onto shaft and shall be locked with a screw and washer. Shredding ring shall be held in place by a steel retaining clamp. Both shredding ring and grinder impeller shall be removable without dismantling pump. No adjustment of grinder assembly shall be necessary for proper grinder operation. Multiple grinder impeller assemblies requiring initial or periodic axial adjustment for proper operation shall not be considered equal. Grinder impeller and shredding ring shall be made of 440C stainless steel hardened to 58-60 Rockwell.

CORROSION PROTECTION – All iron castings shall be pretreated with phosphate and chromic rinse and to be painted before machining and all machined surfaces exposed to the sewage water to be repainted. All fasteners to be 304 stainless steel.

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.

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.