

### Submersible Grinder XP

## Specifications:

### DISCHARGE:

XGV Vertical ..... 2" NPT  
 XGVH Flange ..... 2 1/2.50"/3", Horizontal  
 XGVHH Flange ..... 2.50"/3", Horizontal

**LIQUID TEMPERATURE** ..... 104°F (40°C) Continuous

**VOLUTE** ..... Cast Iron ASTM A-48, Class 30

**MOTOR HOUSING** ..... Cast Iron ASTM A-48, Class 30

**SEAL PLATE** ..... Cast Iron ASTM A-48, Class 30

**IMPELLER: Design** ..... 12 Vane, Vortex, With Pump Out Vanes  
 On Back Side. Dynamically Balanced,  
 ISO G6.3

*Material* ..... Cast Iron ASTM A-48, Class 30

**SHREDDING RING** ..... Hardened 440C Stainless Steel,  
 Rockwell® C-55

**CUTTER** ..... Hardened 440C Stainless Steel,  
 Rockwell® C-55

**SHAFT** ..... 416 Stainless Steel

**SQUARE RINGS** ..... Buna-N

**HARDWARE** ..... 300 Series Stainless Steel

**PAINT** ..... Air Dry Enamel

**SEAL: Design** ..... Tandem Mechanical, Oil Filled Reservoir

*Material* ..... Rotating Faces - Carbon  
 Stationary Faces - Ceramic  
 Elastomer - Buna-N

Hardware -300 Series Stainless

**CORD ENTRY** ..... Custom Molded, Quick Connected  
 for Sealing and Strain Relief

**POWER CORD** ..... CSA Certified Submersible Power  
 Cable 2000V - Ordered Separately

### UPPER BEARING:

*Design* ..... Single Row, Ball, Oil Lubrication

*Load* ..... Radial

### LOWER BEARING:

*Design* ..... Double Row, Ball, Oil Lubrication

*Load* ..... Radial & Thrust

**MOTOR: Design** ..... NEMA B

Three Phase Torque Curve  
 Oil-Filled, Squirrel Cage Induction,  
 Inverter Duty rated per NEMA MG1

*Insulation* ..... Class H Varnish & Magnet Wire

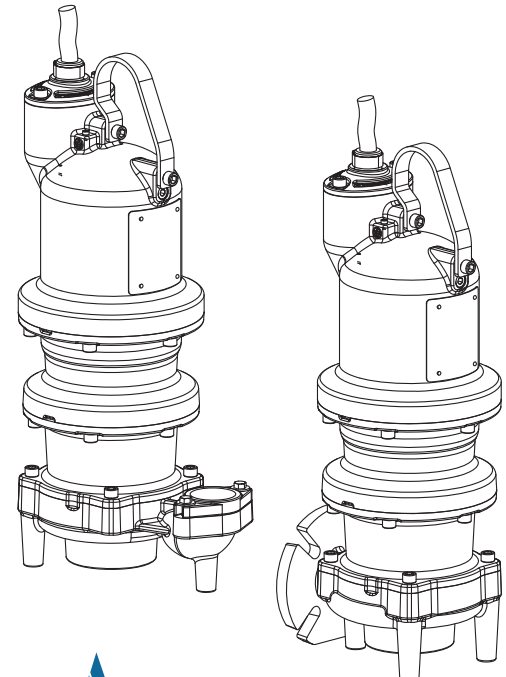
**SINGLE PHASE** ..... Requires overload protection to be  
 included in control panel. Requires start  
 components to be included in panel.  
 Provided with pump

**THREE PHASE** ..... Requires overload protection to be  
 included in control panel

**MOISTURE SENSORS** ..... Normally Open (N/O), Requires relay  
 in control panel

**TEMPERATURE SENSOR** ..... Normally Closed (N/C)  
 To be wired in series with control circuit

**OPTIONAL EQUIPMENT** ..... Seal Material, Impeller Trims,  
 Cord Length, Leg Kit



## BLADE

**Series: XGV**  
**3, 5, 7.5 & 10HP,**  
**3450RPM, 60Hz**

**Explosion Proof, Class 1,**  
**Division 1, Groups C & D, T4**

Sample Specifications: Section 3 Page 15.

### DESCRIPTION:

THE GRINDER PUMP IS FOR USE IN **HAZARDOUS** LOCATIONS AND IS DESIGNED TO REDUCE DOMESTIC, COMMERCIAL, INSTITUTIONAL AND LIGHT INDUSTRIAL SEWAGE TO A FINELY GROUND SLURRY.

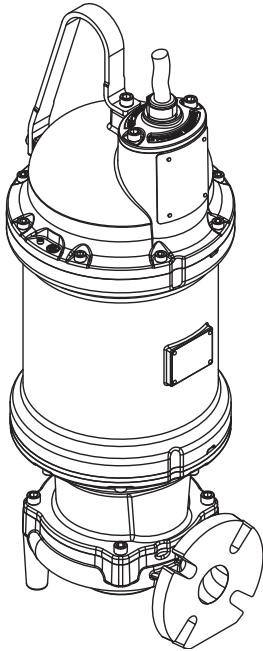


### WARNING:

CANCER AND REPRODUCTIVE HARM -  
 WWW.P65WARNINGS.CA.GOV



## Submersible Grinder XP



# BLADE

**Series: XGV**  
**15HP,**  
**3450RPM, 60Hz**

**Explosion Proof, Class 1,**  
**Division 1, Groups C & D, T4**

Sample Specifications: Section 3 Page 15.

### DESCRIPTION:

THE GRINDER PUMP IS FOR USE IN **HAZARDOUS** LOCATIONS AND IS DESIGNED TO REDUCE DOMESTIC, COMMERCIAL, INSTITUTIONAL AND LIGHT INDUSTRIAL SEWAGE TO A FINELY GROUND SLURRY.



**WARNING:**  
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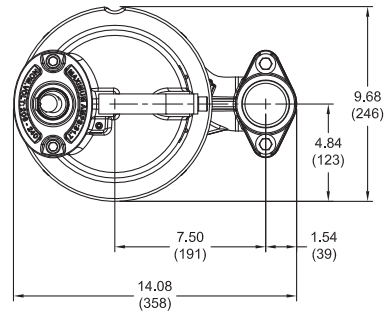
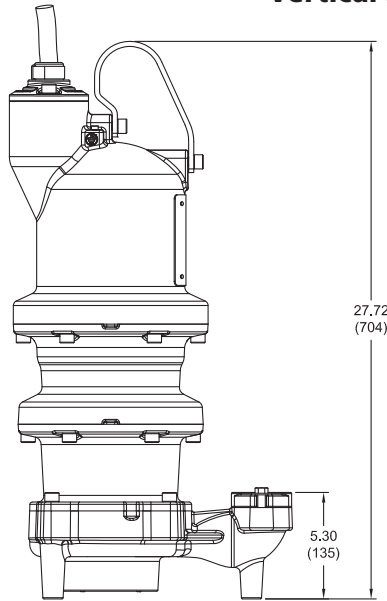
## Specifications:

<b>DISCHARGE:</b>	
<i>Flange</i> .....	2.50"/3", Horizontal
<b>LIQUID TEMPERATURE</b> .....	104°F (40°C) Continuous
<b>VOLUTE</b> .....	Cast Iron ASTM A-48, Class 30
<b>MOTOR HOUSING</b> .....	Cast Iron ASTM A-48, Class 30
<b>SEAL PLATE</b> .....	Cast Iron ASTM A-48, Class 30
<b>IMPELLER: Design</b> .....	12 Vane, Vortex, With Pump Out Vanes On Back Side. Dynamically Balanced, ISO G6.3
<i>Material</i> .....	Cast Iron ASTM A-48, Class 30
<b>SHREDDING RING</b> .....	Hardened 440C Stainless Steel, Rockwell® C-55
<b>CUTTER</b> .....	Hardened 440C Stainless Steel, Rockwell® C-55
<b>SHAFT</b> .....	416 Stainless Steel
<b>SQUARE RINGS</b> .....	Buna-N
<b>HARDWARE</b> .....	300 Series Stainless Steel
<b>PAINT</b> .....	Air Dry Enamel
<b>SEAL: Design</b> .....	Tandem Mechanical, Oil Filled Reservoir
<i>Material</i> .....	Rotating Faces - Carbon Stationary Faces - Ceramic Elastomer - Buna-N Hardware -300 Series Stainless
<b>CORD ENTRY</b> .....	Custom Molded, Quick Connection for Sealing and Strain Relief
<b>POWER CORD</b> .....	CSA Certified Submersible Power Cable 2000V - Ordered Separately
<b>UPPER BEARING:</b>	
<i>Design</i> .....	Single Row, Ball, Oil Lubrication
<i>Load</i> .....	Radial
<b>LOWER BEARING:</b>	
<i>Design</i> .....	Double Row, Ball, Oil Lubrication
<i>Load</i> .....	Radial & Thrust
<b>MOTOR: Design</b> .....	NEMA B Three Phase Torque Curve Oil-Filled, Squirrel Cage Induction, Inverter Duty rated per NEMA MG1 Class H Varnish & Magnet Wire
<i>Insulation</i> .....	Class H Varnish & Magnet Wire
<b>SINGLE PHASE</b> .....	Requires overload protection to be included in control panel. Requires start components to be included in panel. Provided with pump
<b>THREE PHASE</b> .....	Requires overload protection to be included in control panel
<b>MOISTURE SENSORS</b> .....	Normally Open (N/O), Requires relay in control panel
<b>TEMPERATURE SENSOR</b> .....	Normally Closed (N/C) To be wired in series with control circuit
<b>OPTIONAL EQUIPMENT</b> .....	Seal Material, Impeller Trims, Cord Length, Leg Kit



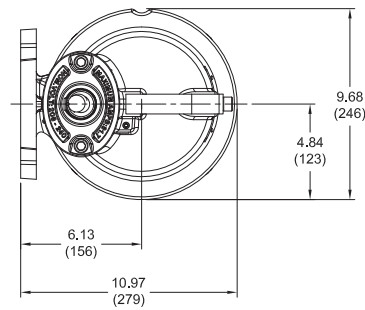
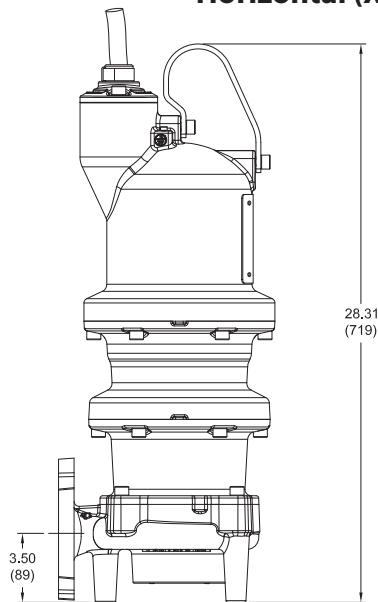
## Submersible Grinder XP

### Vertical (XGV - 18 Frame)

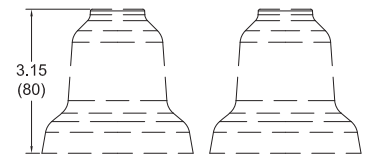


inches  
(mm)

### Horizontal (XGVH - 18 Frame)



#### Optional Leg Kit - p/n 125506



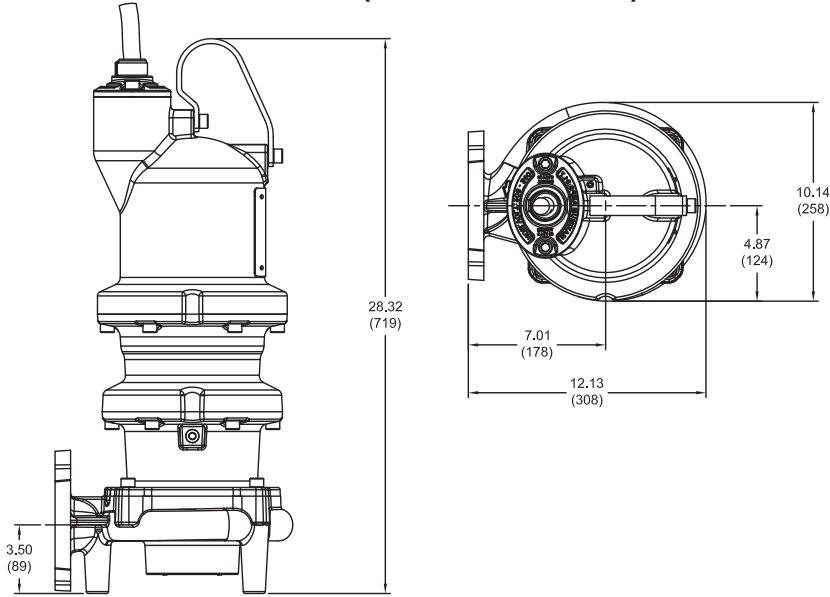
#### IMPORTANT !

- 1.) MOISTURE AND TEMPERATURE SENSORS MUST BE CONNECTED TO VALIDATE THE CSA LISTING.
- 2.) A SPECIAL MOISTURE SENSOR RELAY IS REQUIRED IN THE CONTROL PANEL FOR PROPER OPERATION OF THE MOISTURE SENSORS. CONTACT BARNES PUMPS FOR INFORMATION CONCERNING MOISTURE SENSING RELAYS FOR CUSTOMER SUPPLIED CONTROL PANELS.
- 3.) THESE PUMPS ARE CSA AND LISTED FOR PUMPING WATER AND WASTEWATER. **DO NOT USE TO PUMP FLAMMABLE LIQUIDS.** NOT SUITABLE FOR ENVIRONMENTS CONTAINING GASOLINE OR HEXANE.
- 4.) INSTALLATIONS SUCH AS DECORATIVE FOUNTAINS OR WATER FEATURES PROVIDED FOR VISUAL ENJOYMENT MUST BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE ANSI/NFPA 70 AND/OR THE AUTHORITY HAVING JURISDICTION. THIS PUMP IS NOT INTENDED FOR USE IN SWIMMING POOLS, RECREATIONAL WATER PARKS, OR INSTALLATIONS IN WHICH HUMAN CONTACT WITH PUMPED MEDIA IS A COMMON OCCURRENCE.
- 5.) A **NON-SPARKING** BREAKAWAY FITTING MUST BE USED TO VALIDATE THE EXPLOSION PROOF LISTING.

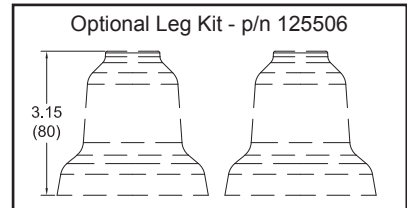
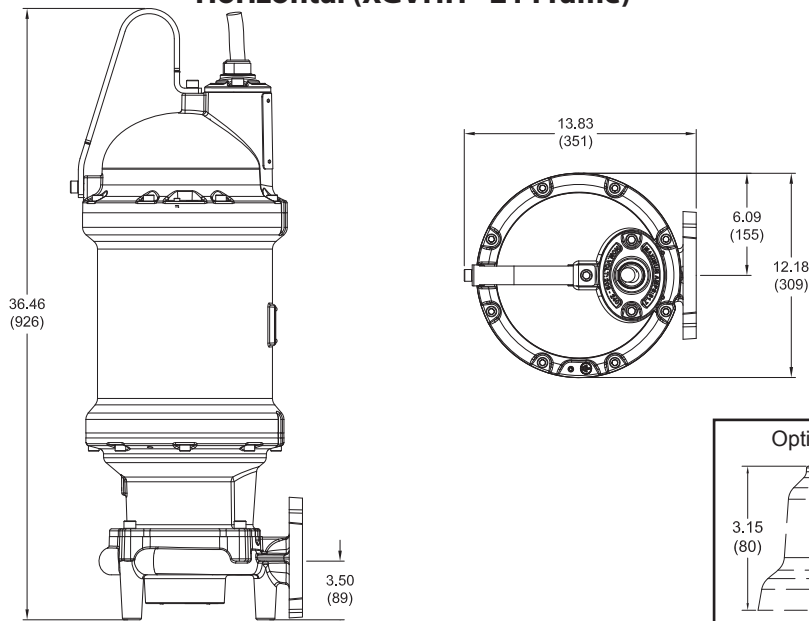
**Submersible Grinder XP**

**Horizontal (XGVHH - 18 Frame)**

inches  
(mm)



**Horizontal (XGVHH - 21 Frame)**



**IMPORTANT !**

- 1.) MOISTURE AND TEMPERATURE SENSORS MUST BE CONNECTED TO VALIDATE THE CSA LISTING.
- 2.) A SPECIAL MOISTURE SENSOR RELAY IS REQUIRED IN THE CONTROL PANEL FOR PROPER OPERATION OF THE MOISTURE SENSORS. CONTACT BARNES PUMPS FOR INFORMATION CONCERNING MOISTURE SENSING RELAYS FOR CUSTOMER SUPPLIED CONTROL PANELS.
- 3.) THESE PUMPS ARE CSA LISTED FOR PUMPING WATER AND WASTEWATER. **DO NOT USE TO PUMP FLAMMABLE LIQUIDS.** NOT SUITABLE FOR ENVIRONMENTS CONTAINING GASOLINE OR HEXANE.
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- 5.) A **NON-SPARKING** BREAKAWAY FITTING MUST BE USED TO VALIDATE THE EXPLOSION PROOF LISTING.

### Submersible Grinder XP

MODEL NO	PART NO	HP	VOLT	PH	Hz	RPM (Nom)	NEMA START CODE	FULL LOAD AMPS	SERVICE FACTOR	LOCKED ROTOR AMPS	DRIVER FRAME	CORD P/N ▲	CORD SIZE	CORD O.D.
XGV3072	141339	3.0	208	1	60	3450	J	25.0	1.0	113.2	18	125496	12/4 - 18/4	.86 ± .02
			230				M	23.2		131.2				
			208				P	12.1		85.4				
XGV30N2	141340	3.0	230	3	60	3450	P	12.6	1.0	95.2	18	125496	12/4 - 18/4	.86 ± .02
			460				6.3	47.6						
			575				5.0	38.1						
XGV3052	141342	3.0	575	3	60	3450	P	5.0	1.0	38.1	18	125497	12/4 - 18/4	.86 ± .02
			208				E	34.1		113.2				
			230				G	29.9		131.2				
XGV5072	141343	5.0	208	1	60	3450	E	34.1	1.0	113.2	18	125498	8/4 - 18/4	1.12 ± .02
			230				G	29.9		131.2				
			208				J	17.8		85.4				
XGV50N2	141344	5.0	230	3	60	3450	J	16.0	1.0	95.2	18	125496	12/4 - 18/4	.86 ± .02
			460				8.0	47.6						
			575				6.4	38.1						
XGV5052	141346	5.0	575	3	60	3450	J	6.4	1.0	38.1	18	125497	12/4 - 18/4	.86 ± .02
			208				M	28.0		173.9				
			230				M	28.2		201.0				
XGV75N2	141347	7.5	230	3	60	3450	M	14.1	1.0	100.5	18	125496	12/4 - 18/4	.86 ± .02
			460				11.3	80.4						
			575				11.3	80.4						
XGV7552	141349	7.5	575	3	60	3450	M	11.3	1.0	80.4	18	125497	12/4 - 18/4	.86 ± .02

BLADE XGV Pump - Vertical

**IMPORTANT !**

Moisture and Temperature sensor leads are integral to power cord.  
 Pump rated for operation at ± 10% voltage at motor.  
 ▲ Cord Suffix: XC - 30 Feet, XF - 50 Feet, XJ - 75 Feet, or XL - 100 Feet.  
 ▲ Cord sold separately.  
 Single Phase pumps require start components to be included in panel. Provided with pump.

## Submersible Grinder XP

MODEL NO	PART NO	HP	VOLT	PH	Hz	RPM (Nom)	NEMA START CODE	FULL LOAD AMPS	SERVICE FACTOR	LOCKED ROTOR AMPS	DRIVER FRAME	CORD P/N ▲	CORD SIZE	CORD O.D.
XGVH3072	141350	3.0	208	1	60	3450	J	25.0	1.0	113.2	18	125496	12/4 - 18/4	.86 ± .02
			230				M	131.2						
			208				P	85.4						
XGVH30N2	141351	3.0	230	3	60	3450	P	12.1	1.0	95.2	18	125496	12/4 - 18/4	.86 ± .02
			460					47.6						
			575					38.1						
XGVH3052	141353	3.0	575	3	60	3450	P	5.0	1.0	38.1	18	125497	12/4 - 18/4	.86 ± .02
XGVH5072	141354	5.0	208	1	60	3450	E	34.1	1.0	113.2	18	125498	8/4 - 18/4	1.12 ± .02
			230				G	29.9						
			208				J	17.8						
XGVH50N2	141355	5.0	230	3	60	3450	J	16.0	1.0	95.2	18	125496	12/4 - 18/4	.86 ± .02
			460					47.6						
			575					38.1						
XGVH5052	141357	5.0	575	3	60	3450	J	6.4	1.0	38.1	18	125497	12/4 - 18/4	.86 ± .02
XGVH75N2	141358	7.5	208	3	60	3450	M	28.0	1.0	173.9	18	125496	12/4 - 18/4	.86 ± .02
			230					201.0						
			460					100.5						
XGVH7552	141360	7.5	575	3	60	3450	M	11.3	1.0	80.4	18	125497	12/4 - 18/4	.86 ± .02

BLADE XGVH Pump - Horizontal

**IMPORTANT !**

Moisture and Temperature sensor leads are integral to power cord.  
 Pump rated for operation at ± 10% voltage at motor.  
 ▲ Cord Suffix: XC - 30 Feet, XF - 50 Feet, XJ - 75 Feet, or XL - 100 Feet.  
 ▲ Cord sold separately.  
 Single Phase pumps require start components to be included in panel. Provided with pump.

### Submersible Grinder XP

MODEL NO	PART NO	HP	VOLT	PH	Hz	RPM (Nom)	NEMA START CODE	FULL LOAD AMPS	SERVICE FACTOR	LOCKED ROTOR AMPS	DRIVER FRAME	CORD P/N ▲	CORD SIZE	CORD O.D.
XGVHH75N2	143385	7.5	208	3	60	3450	M	28.0	1.0	173.9	18	125496	12/4 - 18/4	.86 ± .02
			230					201.0						
			460					100.5						
XGVHH7552	143386	7.5	575	3	60	3450	M	11.3	1.0	80.4	18	125497	12/4 - 18/4	.86 ± .02
XGVHH100N2	143387	10.0	208	3	60	3450	K	37.0	1.0	173.9	18	125498	8/4 - 18/4	1.12 ± .02
			230					201.0						
			460					100.5						
XGVHH10052	143388	10.0	575	3	60	3450	K	13.9	1.0	80.4	18	125497	12/4 - 18/4	.86 ± .02
XGVHH150N2	141375	15.0	208	3	60	3450	E	59.0	1.0	195.7	21	125498	8/4 - 18/4	1.12 ± .02
			230					88.5						
			460					70.8						
XGVHH15052	141377	15.0	575	3	60	3450	E	22.8	1.0	70.8	21	125497	12/4 - 18/4	.86 ± .02

BLADE XGVHH Pump - Horizontal

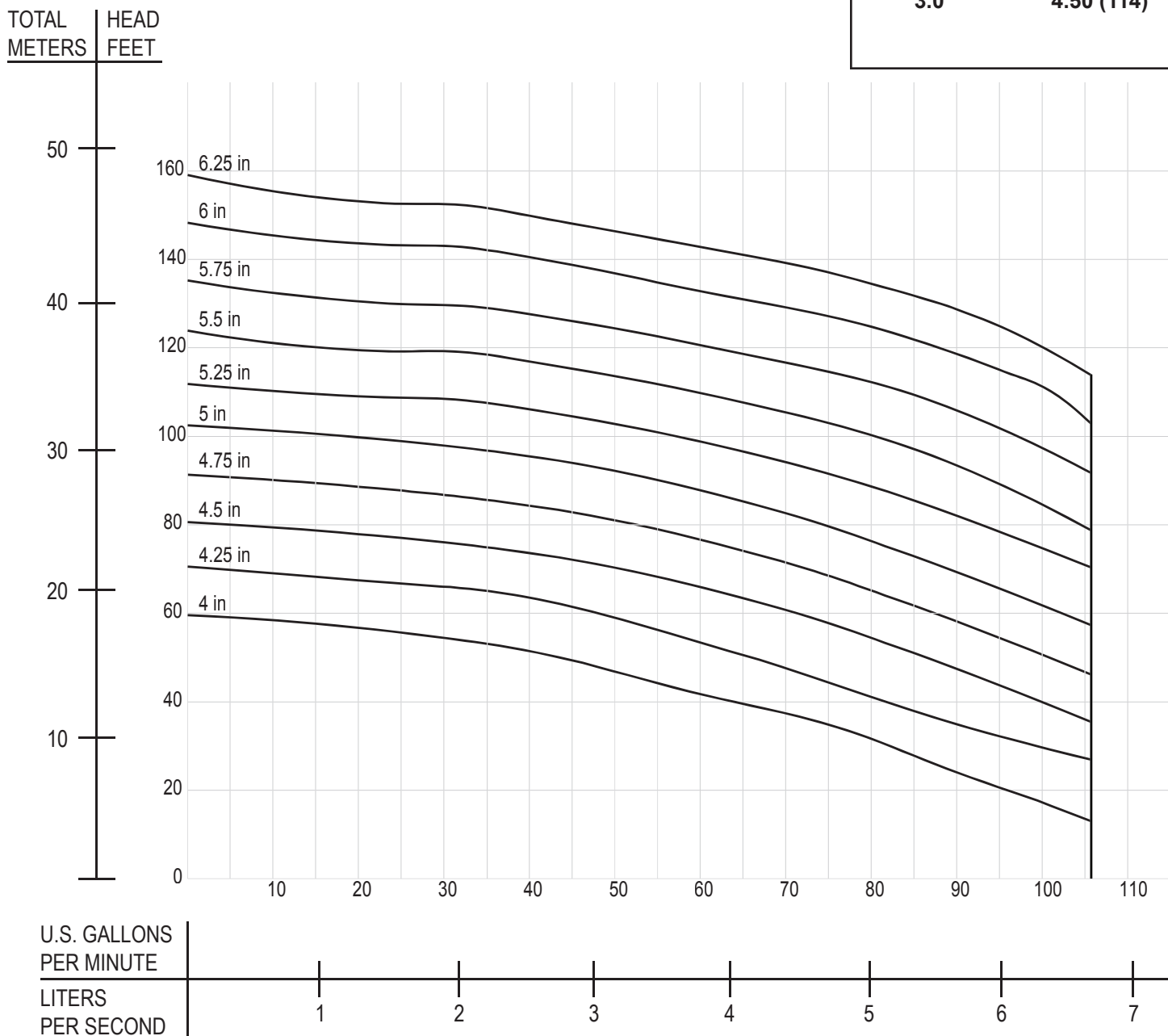
**IMPORTANT !**

Moisture and Temperature sensor leads are integral to power cord.  
 Pump rated for operation at ± 10% voltage at motor.  
 ▲ Cord Suffix: XC - 30 Feet, XF - 50 Feet, XJ - 75 Feet, or XL - 100 Feet.  
 ▲ Cord sold separately.

## Submersible Grinder XP

### STANDARD IMPELLER SIZES

Pump HP	Impeller Dia. in. (mm)
7.5	6.25 (159)
5.0	5.25 (133)
3.0	4.50 (114)



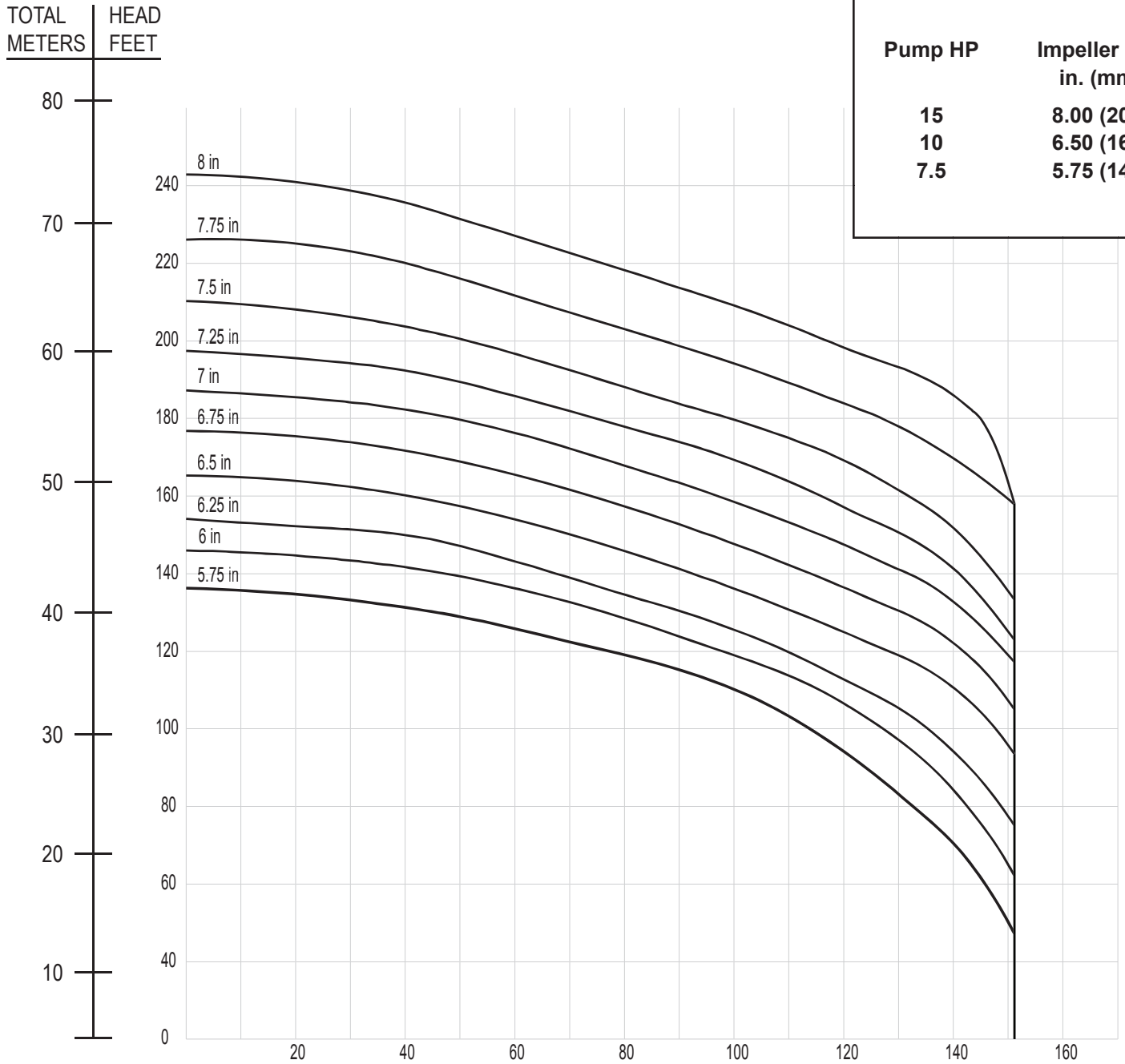
Testing is performed with water, specific gravity 1.0 @ 68° F @ (20°C), other fluids may vary performance



### Submersible Grinder XP

#### STANDARD IMPELLER SIZES

Pump HP	Impeller Dia. in. (mm)
15	8.00 (203)
10	6.50 (165)
7.5	5.75 (146)



U.S. GALLONS PER MINUTE

LITERS PER SECOND

Testing is performed with water, specific gravity 1.0 @ 68° F @ (20°C), other fluids may vary performance