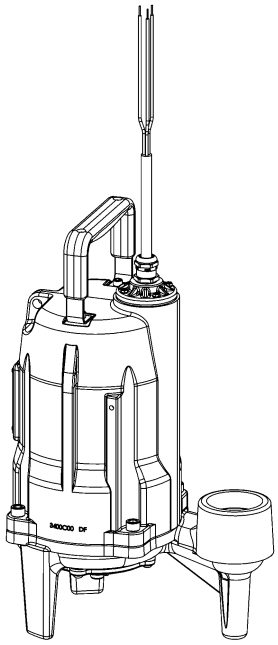
Pump Specifications

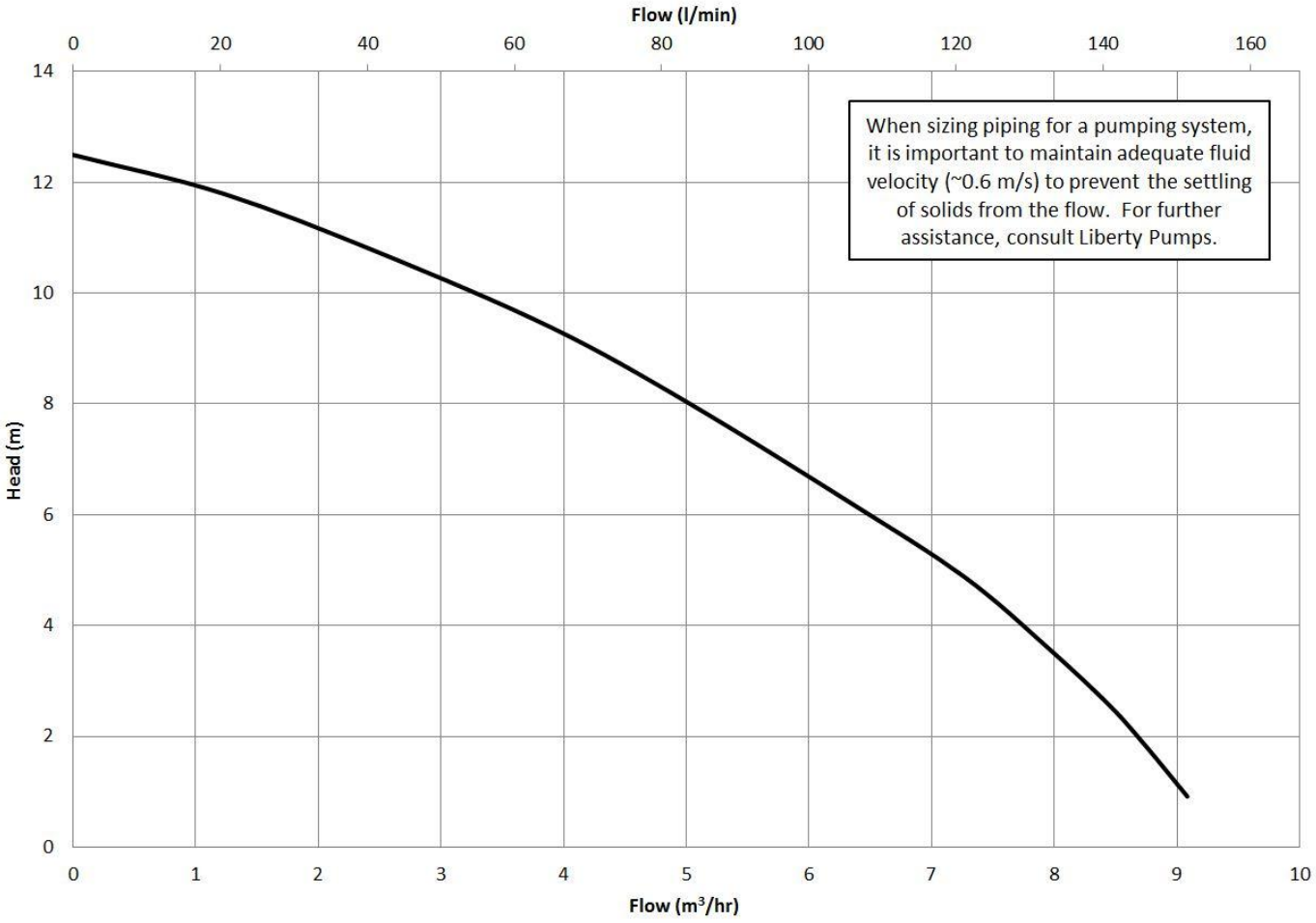
PRG100-E SERIES Residential Grinder Pump

ProVore®

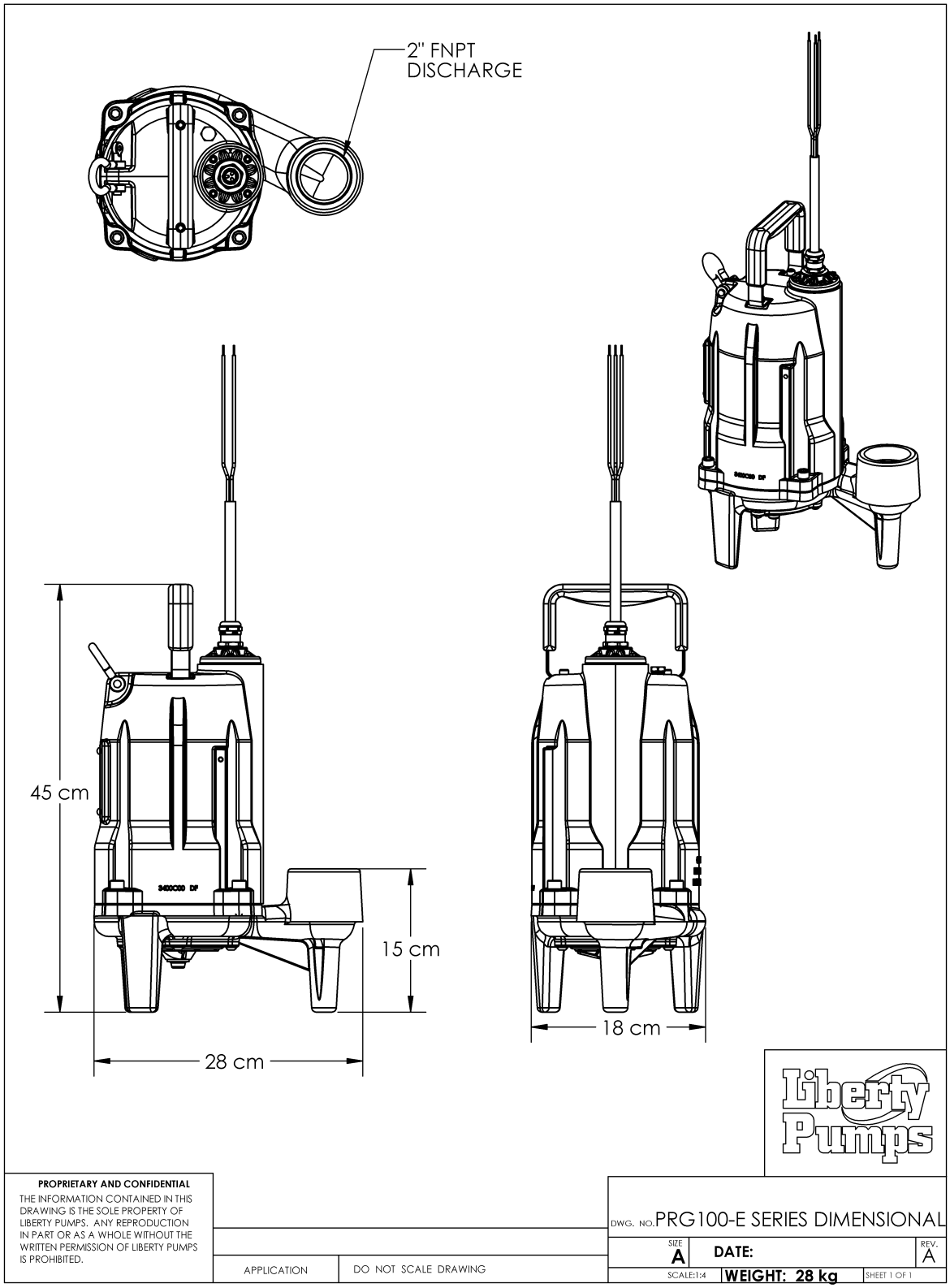


50 Hz Hydraulic Performance

Provore® Residential Grinder



ProVore® PRG100-E Series Dimensional data



PROPRIETARY AND CONFIDENTIAL

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APPLICATION | DO NOT SCALE DRAWING

DWG. NO. PRG100-E SERIES DIMENSIONAL

SIZE A | DATE: | REV. A

SCALE:1:4 | **WEIGHT: 28 kg** | SHEET 1 OF 1

ProVore® PRG100-E Series Electrical data

MODEL	kW	HP	VOLTAGE	PHASE	SF	FULL LOAD AMPS	LOCKED ROTOR AMPS	THERMAL OVERLOAD TEMP	STATOR WINDING CLASS	CORD LENGTH M	DISCHARGE
PRG102M-3E	.75	1	230	1	1.0	3.4	41	105˚C 221°F	B	10	2” NPT

Notes:

1. All PRG100M-3E pumps are manual models and have 10 m bare lead power cords.
2. The voltage of 230 above is an EN Harmonized voltage and covers system voltages 220-240.

ProVore® PRG100-E Series Technical Data

IMPELLER	CAST IRON
PROTECTIVE COATING	POWDER COAT EPOXY
MAX LIQUID TEMP	40˚C 104˚F
MAX STATOR TEMP	105˚C
THERMAL OVERLOAD	105˚C 221°F
DISCHARGE SIZE	2” FNPT
POWER CORD TYPE	H07RN-F 3Gx1.0mm^2, 700V
MOTOR HOUSING	CLASS 25 CAST IRON
VOLUTE	CLASS 25 CAST IRON
SHAFT	303 SERIES S.S.
HARDWARE	STAINLESS
ORINGS	BUNA N
MECHANICAL SEAL	UNITIZED SILICON CARBIDE
MIN BEARING LIFE	50,000 HRS
CUTTER & CUTTER PLATE	V-SLICE® DESIGN, 440 STAINLESS STEEL ROCKWELL 58 C
BOX DIMENSIONS	35 x 25 x 56 (L x W x H, cm)
SHIIPING WEIGHT	29 kg

ProVore® PRG100-E Series Specifications

1.01 OPERATING CONDITIONS:

Each submersible pump shall be rated at 0,75 kW _____volts single phase 50 Hz. 2875 RPM. The unit shall produce_____ m^3/hr at_____ meters of total dynamic head.

The submersible pump shall be capable of handling residential sewage and grinding it into a fine slurry, enabling it to be pumped over long distances in pipelines as small as 32 mm in diameter. The PRG series single stage submersible pump shall have a shut-off head of 12 meters and a maximum flow of 8 m^3/hr @ 3 meters of total dynamic head.

2.01 CONSTRUCTION:

Each centrifugal grinder pump shall be equal to the CE certified PRG Series Grinder pumps as manufactured by Liberty Pumps, Bergen NY. The castings shall be constructed of class 25 cast iron. The motor housing shall be oil filled to dissipate heat. Air filled motors shall not be considered equal since they do not properly dissipate heat from the motor. All mating parts shall be machined and sealed with a Buna-N o-ring. All fasteners exposed to the liquid shall be stainless steel. The motor shall be protected on the top side with an IP68 rated cord entry system, eliminating the ability of water to enter internally through the cord. The motor shall be protected on the lower side with a unitized hard face silicon carbide seal with stainless steel housings and spring.

The upper and lower bearing shall be capable of handling all radial thrust loads. The lower bearing shall have the additional ability to handle the downward axial thrust produced by the impeller and cutters. The pump shall be furnished with stainless steel handle having a nitrile grip.

3.01 ELECTRICAL POWER CORD:
The submersible pump shall be supplied with 10 meters of multi-conductor power cord. It shall be cord type H07RN-F capable of continued exposure to the pumped liquid. The power cord shall be sized for the rated full load amps of the pump in accordance with the IEC 60335-1. The power cable enters the motor housing directly by means of a water tight compression fitting, with a cast iron cord plate, sealed to the housing by a Buna-N gasket. The power cord termination internal to the pump has been epoxied, to eliminate the ability of water to enter the pump housing through the cord, by means of wicking through a damaged cord insulation jacket. The power cord entry system shall carry an IP68 degree of protection. On all single phase models, the capacitor circuit shall be mounted internally and motors shall have an integral solid state starting circuit switch for switching the start winding off.

4.01 MOTORS:
Single phase motors shall be oil filled, capacitor start / capacitor run, class B insulated NEMA B design, rated for continuous duty. At maximum load the winding temperature shall not exceed 105 degrees C unsubmerged. Since air filled motors are not capable of dissipating heat they shall not be considered equal. Single phase pump motors shall have an integral thermal overload switch in the windings for protecting the motor. On all single phase models, the capacitor circuit shall be mounted internally and motors shall have an integral solid state starting circuit switch for switching the start winding off.

5.01 SEALS:
The pump shall have a unitized silicon carbide hard face seal with stainless steel housings and spring equal to Crane Type T-6a.

6.01 IMPELLER:
The impeller shall be class 25 gray cast iron with pump out vanes on the back shroud to keep debris away from the seal area. It shall be keyed and bolted to the motor shaft.

7.01 CUTTER MECHANISM:
The cutter and plate shall be of the V-Slice® design and consist of 440 stainless steel with a Rockwell C hardness of 55-60. The stationary cutter plate shall have specially designed orifices through it, which enable the slurry to flow through the pump housing at an equalized pressure and velocity. The stationary cutter shall consist of V shapes to maximize cutting action and arc shape exclusion slots to outwardly eject debris from under the rotary cutter. The rotary cutter shall have (2) blades and be designed with a recessed area behind the cutting edge to prevent the accumulation and binding of any material between rotary cutter and the stationary cutter. The cutting system must incorporate close tolerances for optimum performance. Ring or radial cutters, or those that grind on the outside circumference of shall not be considered equal.

8.01 CONTROLS:
All PRG100-E series pumps must be operated by means of control panel. Control panel components must comply with national and local electrical codes, and be set using the pump electrical ratings to function properly.

9.01 PROTECTIVE COATING:
The exterior of the casting shall be protected with Powder Coat Epoxy.

10.01 SUPPORT:
The pump shall have cast iron support legs, enabling it to be a free standing unit. The legs will be high enough to allow solids and long stringy debris to enter the cutter assembly.

11.01 SERVICEABILTY:
Components required for the repair of the pump shall be shipped within a period of 24 hours.

12.01 TESTING:
The pump shall have an earth continuity check and the motor chamber shall be submitted to an electrical strength test, to test for electrical integrity, moisture content and insulation defects. The motor and volute housing shall be pressurized, and an air leak decay test is performed to ensure integrity of the motor housing. The pump shall be run where, the voltage and current is monitored, and checked for noise or other malfunction.

13.01 QUALITY CONTROL
The pump shall be manufactured in an ISO 9001 certified Facility.

14.01 WARRANTY
Standard limited warranty shall be 3 years.