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Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.

ZOELLER® ENGINEERED PRODUCTS

**60 Hz**

ZM2623_Ea
0519
Supersedes
0315

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# 70 SERIES • MODELS 7011-7012-7013

## PRODUCT FEATURES

## 2 HP Grinder Pumps - Dual Seal

Covered by US Patent Number 6,364,620.

## APPLICATIONS

- Pump stations
- Housing developments
- Pressure sewers

## MATERIAL FEATURES

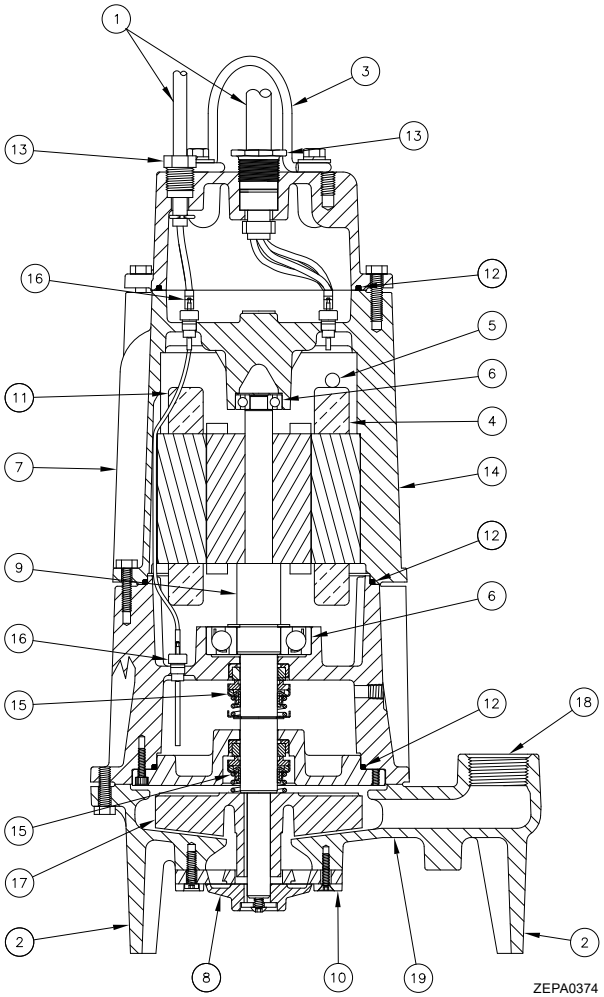
### PUMP:

- 440C stainless steel cutter and plate hardened to Rockwell C55-60
- Discharge size - 1-1/4" NPT
- Seals - dual mechanical carbon/ceramic upper, carbon/silicon carbide lower
- Moisture detection system
- Construction - cast iron ASTM A-48, Class 30, 30,000# tensile strength, protected with a corrosion-resistant, baked-on epoxy powder coating
- Attaching hardware - 304 stainless steel
- Square ring seals - Viton
- Vortex impeller - ductile iron
- Optional:
  - ☐ Trimmed impeller (reversing models only)
  - ☐ Silicon carbide seal(s)
  - ☐ 25' (8 m) power and sensor cables
  - ☐ 35' (11 m) power and sensor cables
  - ☐ Bronze impeller
  - ☐ 7011 Reversing model
  - ☐ 7012 High head model
  - ☐ 7013 High flow model
  - ☐ 50' (15 m) power and sensor cables

### MOTOR:

- 2 HP, 3450 RPM
- 1 Phase - 200/230 Volt
- 3 Phase - 200/230/380/460/575 Volt
- Stator - Class F insulation and lead wires Nema B design
- Integral thermal overload (1 Phase)
- Thermal sensor with leads (3 Phase)
- Housing - cast iron, oil-filled
- Ball bearings - upper and lower high carbon chromium steel
- Power and sensor cable length - 20' (6 m)

C SA US
(Tested to UL778 and CSA22.2 108 Standards)



ZEPA0374

### FEATURES

1. 20' (6 m) power and sensor cable.
2. Cast iron support legs enabe the pump to be free-standing.
3. Stainless steel lifting bail.
4. Stator - Class F insulation and lead wires Nema B design.
5. Thermal sensor protection. Oil-filled motor housing ensures uniform heat distribution, lubricates bearings, and conducts heat for cooler running.
6. Upper and lower high carbon chromium steel ball bearings.
7. Finned motor housing and adapter for quicker heat dissipation.
8. "Star" type, stainless steel cutter and plate hardened to Rockwell C55-60.
9. Stainless steel shaft and hardware resist corrosion.
10. Protective cutter ring helps extend cutter life.
11. Heavy-duty motor features ball bearing construction. Class F motor insulation is double-dipped and baked. End connections and lead wires are Class F. At maximum load, winding temperature will not exceed 250 °F (121 °C) with motor housing not submerged.
12. Viton square ring seals.
13. Heavy-duty cord connections.
14. Class 30 cast iron housing protected with corrosion-resistant, baked-on epoxy powder coating.
15. Tandem seals. Carbon/rotating, ceramic/stationary upper, carbon/silicon carbide lower, Buna-N elastomers.
16. Patented moisture-detection system with upper and lower probes protect the motor from liquid entry.
17. Vortex impeller design, fully balanced with integral pump-out vane to clear debris.
18. 1-1/4" NPT vertical discharge.
19. Concentric pump housing with centerline discharge reduces radial loading for longer bearing and shaft seal life.

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Submersible Wastewater Pump Association
SWPA
Approved Curve and Data Format

# 70 SERIES • MODELS 7011-7012-7013

## TECHNICAL DATA

## 2 HP Grinder Pumps - Dual Seal

| MODELS: | ☐ 7011 | ☐ 7012 | ☐ 7013 |
|---|---|---|---|
| CONFIGURATION: | REVERSING | HIGH HEAD | HIGH FLOW |
| PUMP NAME PLATE HORSEPOWER: | 2.0 | 2.0 | 2.0 |
| SERVICE FACTOR: | 1.2 | 1.2 | 1.2 |
| NEC LOCKED ROTOR CODE: | K | K | K |
| MAXIMUM KW INPUT: | 3.9 | 3.9 | 3.9 |
| STANDARD IMPELLER DIAMETER: | 5.560" (141.2 mm) | 6.125" (155.6 mm) | 6.188" (157.2 mm) |
| DISCHARGE SIZE: | 1.25" NPT | 1.25" NPT | 1.25" NPT |

| | | | |
|---|---|---|---|
| IMPELLER TYPE: | VORTEX | TANDEM SEALS: | STANDARD |
| CUTTER & PLATE: | 440 C SS HARDENED TO 55-60 ROCKWELL | MOTOR DESIGN LETTER: | NEMA B (3 Ph) NEMA L (1Ph) |
| PUMP NET WEIGHT: | 137 lbs. (62 kg) [1 PH], 132 lbs. (60 kg) [3 PH] | POWER CORD LENGTH: ft (m) (20' [6 m] STANDARD) | ☐ 25 (7.6 m) ☐ 35 (10.7 m) ☐ 50' (15.2 m) |
| SQUARE RINGS: | VITON | | |
| MOTOR SHAFT: | 416 SS | POWER CORD: | 14 GAUGE SOW |
| RPM: | 3450 | STATOR & LEAD WIRES INSULATION: | CLASS F |
| MOTOR TYPE: | SUBMERSIBLE | MAXIMUM STATOR TEMPERATURE: | 311 °F (155 °C) |

| | | |
|---|---|---|
| SHAFT SEAL CONSTRUCTION: | STANDARD | CARBON/CERAMIC UPPER<br>CARBON/SILICON CARBIDE LOWER |
| | OPTIONAL UPPER | ☐ CARBON /SILICON CARBIDE ☐ SILICON CARBIDE/SILICON CARBIDE |
| | OPTIONAL LOWER | ☐ SILICON CARBIDE/SILICON CARBIDE |
| STANDARD SENSING DEVICES* | MOTOR THERMAL SHUTOFF | INTEGRAL ON-LEAD (1 PH) OR THERMAL CUT-OUT (3 PH) |
| | MOISTURE DETECTION | MOISTURE SENSING PROBES |
| IMPELLER MATERIAL | 7011,7012 & 7013 | STANDARD DUCTILE IRON ☐ OPTIONAL BRONZE |
| IMPELLER TRIM - REVERSING MODELS ONLY:☐ OPTIONAL | | DESIGN POINT: ____ GPM @ ____' TDH, IMPELLER DIA. ____" |
| MAXIMUM WATER TEMPERATURE: | | 130 °F (54 °C) |

* Requires a circuit in control panel to function.

| MODEL | HP | SERVICE FACTOR | ☐ 200V / 1 PH | | ☐ 230V / 1 PH | | ☐ 200V / 3 PH | | ☐ 230 V / 3 PH | | ☐ 380V / 3 PH | | ☐ 460V / 3 PH | | ☐ 575V / 3 PH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | FLA | LRA | FLA | LRA | FLA | LRA | FLA | LRA | FLA | LRA | FLA | LRA | FLA | LRA |
| 7011 | 2.0 | 1.2 | 20.0 | 60.7 | 17.2 | 57.3 | 12.3 | 47.0 | 10.8 | 41.2 | 6.8 | 28.0 | 5.5 | 20.6 | 4.5 | 16.2 |
| 7012 | 2.0 | 1.2 | 20.0 | 60.7 | 17.2 | 57.3 | 12.3 | 47.0 | 10.8 | 41.2 | 6.8 | 28.0 | 5.5 | 20.6 | 4.5 | 16.2 |
| 7013 | 2.0 | 1.2 | 20.0 | 60.7 | 17.2 | 57.3 | 12.3 | 47.0 | 10.8 | 41.2 | 6.8 | 28.0 | 5.5 | 20.6 | 4.5 | 16.2 |

## RESERVE POWERED DESIGN

For unusual conditions a reserve safety factor is engineered into the design of every Zoeller® pump.

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*SWPA Data Categories Presented -- Data on this sheet supply design information as the minimum recommended by the Submersible Wastewater Pump Association and is defined in accordance with SWPA's Standardized Definitions for Pump and Motor Characteristics. The accuracy of the data is the responsibility of Zoeller® Engineered Products.*

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