quality . service innovation . integrity

# 180, 190 Series





### **Features**

The "Flow-Mate" series of submersible pumps is designed for use in residential or light commercial dewatering applications and can be used to transfer groundwater or effluent. These durable cast iron pumps include a powder coated epoxy finish to prevent corrosion, and are designed to provide great heat dissipation from the motor, ensuring a long service life. As with every Zoeller pump, each one is 100% pressure-tested, submerged and run to ensure quality and reliability for years of trouble-free performance!

- Automatic models include a float-operated, 2-pole mechanical switch, a stainless steel float guard and switch arm, and a buoyant polystyrene float.
- Nonautomatic units are ideal for use in septic systems, low pressure pipe (LPP), and enhanced flow STEP systems.
- For nonautomatic pumps, variable level control systems and containers of various sizes are available for longer cycles.
- Double seal models are available to prevent leaks and damage to seals or bearings during dry run conditions as well as improve bearing lubrication.
- Includes a stainless steel handle for easy installation and removal.
- All models are hermetically sealed to be watertight, dust-tight, and completely submersible.

Reserve Powered Design: For unusual conditions, a reserve safety factor is engineered into the design of every pump.

## **Specifications**

#### Motor Characteristics

 Motor
 1 - 2 HP

 Voltage
 200 - 575 V

 Phase
 1 or 3 Ph

 Hertz
 60 Hz

 RPM
 3450 RPM

Type Permanent split capacitor or 3 phase

Insulation Class B
Amps 3.3 - 20.5 Amps

#### **Pump Characteristics**

Operation Automatic or nonautomatic

Auto On/ Off Points 15-3/4" / 5-1/4" (40 cm / 13.3 cm)

Discharge Size 1-1/2" NPT (optional 2" or 3" flange)

Solids Handling 3/4", 5/8" (19 mm, 15 mm) spherical solids

Cord Length 20' (6 m) standard

Cord Type UL listed, 3-wire neoprene cord and plug (1

Ph) or 4-wire cord with no plug (3 Ph)

Max Head 137' (42 m)

Max Flow Rate 145 GPM (549 LPM)

Max Operating Temp 130° F (54° C), (model WD189 120°F [49°C])

Cooling Oil filled

Motor Protection Auto reset thermal overload (1 Ph)

#### **Materials Characteristics**

Cap Cast iron Class 30 30,000 tensile strength
Motor Housing Cast iron Class 30 tensile strength
Pump Housing Cast iron Class 30 tensile strength
Base Cast iron Class 30 tensile strength

Upper Bearing Ball bearing
Lower Bearing Ball bearing
Mechanical Seals Carbon and ceramic
Impeller Type Non-clogging vortex

ImpellerBronzeHardwareStainless steel

Motor Shaft 1117 carbon steel or 416 stainless steel
Gasket Neoprene square ring and gasket







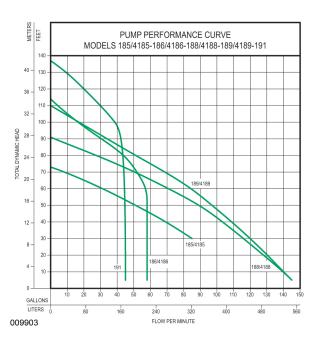


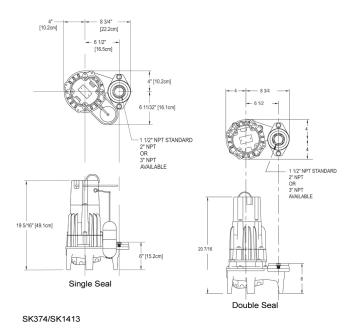






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#### Model

Model Number	Seal	Mode	Volts	Phase	Amps	HP	Hz	Lbs	Kg
D185 / H185	Single	Auto	230 / 200	1	9.8 / 11.5	1	60	85 / 86	38 / 39
E185/E4185	Single / Dbl	Non	230	1	9.8	1	60	85 / 92	38 / 41
l185/l4185	Single / Dbl	Non	200	1	11.5	1	60	85 / 92	38 / 41
F185/F4185	Single / Dbl	Non	230	3	7.4	1	60	85 / 92	38 / 41
J185/J4185	Single / Dbl	Non	200	3	7.5	1	60	85 / 92	38 / 41
G185/G4185	Single / Dbl	Non	460	3	3.7	1	60	85 / 92	38 / 41
BA185	Single	Non	575	3	3.3	1	60	85	38
D186 / H186	Single	Auto	230 / 200	1	13.7 / 17.2	1-1/2	60	91	41
E186/E4186	Single / Dbl	Non	230	1	13.7	1-1/2	60	90 / 97	40 / 43
I186/I4186	Single / Dbl	Non	200	1	17.2	1-1/2	60	90 / 97	40 / 43
F186/F4186	Single / Dbl	Non	230	3	9.2	1-1/2	60	90 / 97	40 / 43
J186/J4186	Single / Dbl	Non	200	3	10.3	1-1/2	60	90 / 97	40 / 43
G186/G4186	Single / Dbl	Non	460	3	4.6	1-1/2	60	90 / 97	40 / 43
D188 / H188	Single	Auto	230 / 200	1	14.0 / 16.8	1-1/2	60	91	41
E188/E4188	Single / Dbl	Non	230	1	14.0	1-1/2	60	90 / 97	40 / 43
l188/l4188	Single / Dbl	Non	200	1	16.8	1-1/2	60	90 / 97	40 / 43
F188/F4188	Single / Dbl	Non	230	3	8.9	1-1/2	60	90 / 97	40 / 43
J188/J4188	Single / Dbl	Non	200	3	10.3	1-1/2	60	90	40 / 43
G188/G4188	Single / Dbl	Non	460	3	4.6	1-1/2	60	95 / 97	43 / 43
BA188	Single	Non	575	3	3.5	1-1/2	60	90	40
D189 / H189	Single	Auto	230 / 200	1	17.1 / 20.5	2	60	91	41
E189/E4189	Single / Dbl	Non	230	1	17.1	2	60	90 / 97	40 / 43
l189/l4189	Single / Dbl	Non	200	1	20.5	2	60	90 / 97	40 / 43
F189/F4189	Single / Dbl	Non	230	3	11.2	2	60	90 / 97	40 / 43
J189/J4189	Single / Dbl	Non	200	3	13.2	2	60	90 / 97	40 / 43
G189/G4189	Single / Dbl	Non	460	3	6.0	2	60	90 / 97	40 / 43
BA189	Single	Non	575	3	5.8	2	60	90	40
WD189/4189	Single / Dbl	Auto	230	1	17.1	2	60	93 / 100	42 / 45
E191	Single	Non	230	1	14.5	2	60	87	39

WD models are controlled by an integral variable level pump switch. H, I, J, F, G and BA models do not have a molded plug. Additional cord lengths are available in 25' (8 m) 35' (11 m) and 50' (15 m).

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