



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

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visit our web site:  
[www.zoeller.com](http://www.zoeller.com)

**COMPARE THESE FEATURES**

- Non-clogging vortex impeller design bronze class 88-8-0-4 (180 Series).
- Enclosed impeller design (191 Series).
- Float operated, submersible (NEMA 6) 2-pole mechanical switch.
- Durable cast construction. Cast iron switch case, base, motor and pump housing. No sheet metal parts to rust or corrode.
- Stainless steel screws, bolts, float rod, handle, guard, arm and seal assembly.
- 20 ft. UL Listed 3-wire neoprene cord and plug. Extra cord lengths available in 25-35-50 foot length only.
- Motor - 60 Hz, 3450 RPM, oil-filled, hermetically sealed, automatic reset, thermal overload protected (1 PH only).
- Maximum temperature for effluent or dewatering 130°F (54°C), WD189 120°F (49°C).
- Variable level control systems available.
- Square Ring & Gasket - Neoprene.
- Shaft Seal - Stainless steel carbon & ceramic rotary.
- Upper sleeve bearing and lower ball bearing running in bath of oil.
- All 180/4180 series pass 3/4-inch spherical solids. Model 191 pump passes 5/8 - inch spherical solids.
- On point 14 3/4" • Off point 5" (automatic units).
- Major width 12 3/4" • Height 18 9/16". (Single seal pumps)
- 1 1/2" NPT discharge with 2" or 3" flange available. (Model 191 is not available with 3" flange)
- Corrosion resistant powder coated epoxy finish.

**MODELS 4185-4186-4188-4189  
DOUBLE SEAL PUMPS (Nonauto only)**

- Protects motor from seal leaks.
- Improved bearing lubrication.
- Helps eliminate seal and bearing damage from dry runs.
- Major width 12 3/4". Height 20 7/16".

**Note:** The sizing of effluent systems normally requires variable level float(s) controls and properly sized basins to achieve required pumping cycles or dosing timers with nonautomatic pumps.

**AUTOMATIC UNITS NOT RECOMMENDED FOR USE IN EFFLUENT SYSTEMS**

\*NOTE: No UL Listing for 200/208 1 Phase Pumps, Model 186 & 191, or Double Seal Series. See Back Page for UL & CSA Listings


Nonautomatic Model for variable level systems

**185 - 186 - 188 - 189 Single Seal Series**  
**4185 - 4186 - 4188 - 4189 Double Seal Series**  
**191 Single Seal Drip Pump**  
(For Pump Prefix Identification see News & Views 0052)

**HIGH HEAD**  
**“FLOW-MATE”**  
FOR SEPTIC TANK • LOW PRESSURE PIPE (LPP)  
AND ENHANCED FLOW STEP SYSTEMS  
**EFFLUENT**  
OR DEWATERING PUMP • SUBMERSIBLE  
1 1/2" NPT DISCHARGE STANDARD • 2" or 3" FLANGE AVAILABLE



\*  
Tested to UL Standard UL778  
& Certified to CSA  
Standard C22.2 No. 108










230V Automatic  
Controlled by variable  
level float switch  
integral to the pump in  
WD189/WD4189  
Series only.




**Double  
Seal  
Pump**



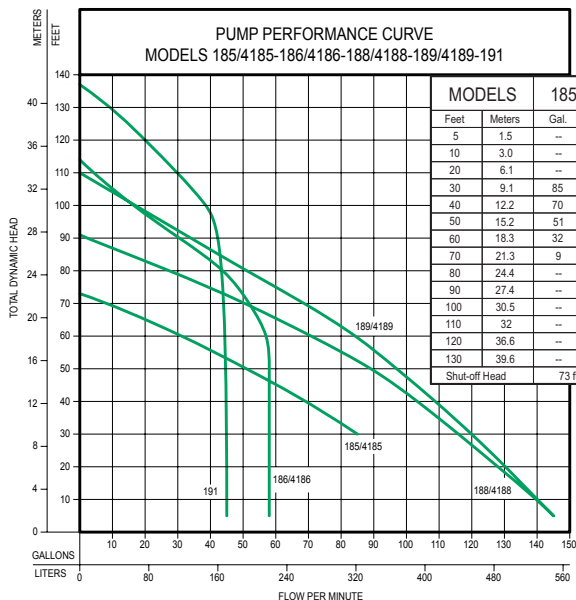
230V/1PH Automatic  
Available in 185,  
186, 188,  
189 Series



230V/1PH  
Nonautomatic  
Available in  
185/4185,  
186/4186,  
188/4188,  
189/4189 Series



**POWDER  
COATED  
TOUGH™**

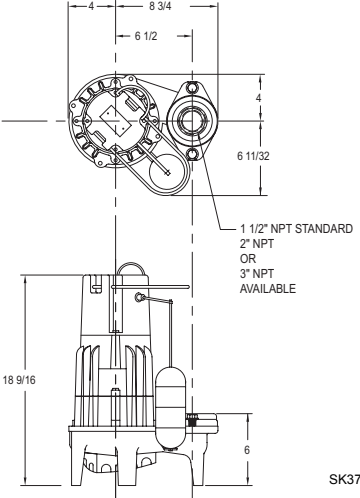


MODELS		185/4185		186/4186		188/4188		189/4189		191	
Feet	Meters	Gal.	Liters	Gal.	Liters	Gal.	Liters	Gal.	Liters	Gal.	Liters
5	1.5	--	--	58	220	145	549	145	549	45	170
10	3.0	--	--	58	220	140	530	140	530	45	170
20	6.1	--	--	58	220	128	484	130.5	494	45	170
30	9.1	85	322	58	220	116	439	120	454	45	170
40	12.2	70	265	58	220	103.5	392	109	413	45	170
50	15.2	51	193	58	220	90	341	97	367	45	170
60	18.3	32	121	58	220	71	269	85	322	45	170
70	21.3	9	34	52	197	51	193	69	261	45	170
80	24.4	--	--	45	170	28	106	51	193	45	170
90	27.4	--	--	30.5	115	2	8	34	129	45	170
100	30.5	--	--	16	60	--	--	17	64	40	151
110	32	--	--	4	15	--	--	--	30	114	
120	36.6	--	--	--	--	--	--	--	20	76	
130	39.6	--	--	--	--	--	--	--	10	38	
Shut-off Head		73 ft. (22m)		114 ft. (35m)		91 ft. (28m)		110 ft. (34m)		137 ft. (42m)	

009903

**WARNING: Model 185 should not be subjected to heads less than 30 feet TDH.**

**Single Seal-180 Series Automatic Design Weight 82-89 lbs.**



SK374

185 MODELS	4185 MODELS	Standard all models - 20 ft. cord - 1 H.P.				Control Selection		Listings	
Single Seal	Double Seal	Volts	Ph	Mode	Amps	Simplex	Duplex	CSA	UL
D185	---	230	1	Auto	9.8	1	---	Y	Y
E185	E4185	230	1	Non	9.8	2 or 3	4	Y	Y
* H185	---	200-208	1	Auto	11.5	1	---	N	N
* I185	* I4185	200-208	1	Non	11.5	2 or 3	4	N	N
* F185	* F4185	230	3	Non	7.4	3 & 5	4 & 5	Y	Y
* J185	* J4185	200-208	3	Non	7.5	3 & 5	4 & 5	Y	Y
* G185	* G4185	460	3	Non	3.7	3 & 5	4 & 5	Y	Y
* BA185	---	575	3	Non	3.3	3 & 5	4 & 5	Y	N

186 MODELS	4186 MODELS	Standard all models - 20 ft. cord - 1 1/2 H.P.				Control Selection		Listings	
Single Seal	Double Seal	Volts	Ph	Mode	Amps	Simplex	Duplex	CSA	UL
D186	---	230	1	Auto	13.7	1	---	N	N
E186	E4186	230	1	Non	13.7	2 or 3	4	N	N
* F186	* F4186	230	3	Non	9.2	3 & 5	4 & 5	N	N
* G186	* G4186	460	3	Non	4.6	3 & 5	4 & 5	N	N

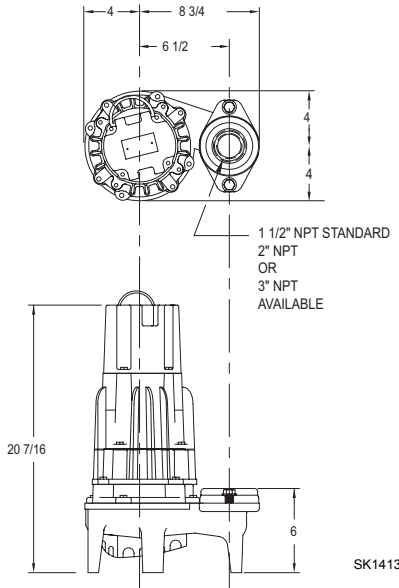
188 MODELS	4188 MODELS	Standard all models - 20 ft. cord - 1 1/2 H.P.				Control Selection		Listings	
Single Seal	Double Seal	Volts	Ph	Mode	Amps	Simplex	Duplex	CSA	UL
D188	---	230	1	Auto	14.0	1	---	Y <sup>(2)</sup>	Y <sup>(1)</sup>
E188	E4188	230	1	Non	14.0	2 or 3	4	Y	Y <sup>(1)</sup>
* H188	---	200-208	1	Auto	16.8	1	---	N	N
* I188	* I4188	200-208	1	Non	16.8	2 or 3	4	N	N
* F188	* F4188	230	3	Non	8.9	3 & 5	4 & 5	Y	Y
* J188	* J4188	200-208	3	Non	10.3	3 & 5	4 & 5	Y	Y
* G188	* G4188	460	3	Non	4.6	3 & 5	4 & 5	Y	Y
* BA188	---	575	3	Non	3.5	3 & 5	4 & 5	Y	N

189 MODELS	4189 MODELS	Standard all models - 20 ft. cord - 2 H.P.				Control Selection		Listings	
Single Seal	Double Seal	Volts	Ph	Mode	Amps	Simplex	Duplex	CSA	UL
<sup>(3)</sup> D189	---	230	1	Auto	17.1	1	---	Y <sup>(2)</sup>	Y <sup>(1)</sup>
<sup>(3)</sup> E189	<sup>(3)</sup> E4189	230	1	Non	17.1	2 or 3	4	Y <sup>(2)</sup>	Y <sup>(1)</sup>
* H189	---	200-208	1	Auto	20.5	1	---	N	N
* I189	* I4189	200-208	1	Non	20.5	2 or 3	4	N	N
* F189	* F4189	230	3	Non	11.2	3 & 5	4 & 5	Y	Y
* J189	* J4189	200-208	3	Non	13.2	3 & 5	4 & 5	Y	Y
* G189	* G4189	460	3	Non	6.0	3 & 5	4 & 5	Y	Y
* BA189	---	575	3	Non	5.8	3 & 5	4 & 5	Y	N
<sup>(3)</sup> WD189	* WD4189	230	1	Auto	17.1	1	4	N	N

191 MODEL	Standard all models - 20 ft. cord - 2 H.P.				Control Selection		Listings		
Single Seal	Double Seal	Volts	Ph	Mode	Amps	Simplex	Duplex	CSA	UL
E191	---	230	1	Non	14.5	2 or 3	4	N	N

\* No Molded Plug  
 (1) UL Listed unit available with 20 Amp plug.  
 (2) CSA Approval with 20 Amp plug.  
 (3) 20 Amp Outlet, P/N 10-0060 must be used.

**Double Seal-4180 Series / Weight 89-94 lbs.**



SK1413

**SELECTION GUIDE**

1. Integral float operated mechanical switch, no external control required.
2. For automatic use single piggyback variable level float switch or double piggyback variable level float switch. Refer to FM0477.
3. See FM1228 for correct model of simplex control panel.
4. See FM0712 for correct model of duplex control panel.
5. Variable level control switch 10-0743 used as a control activator, specify simplex (3) float or duplex (4) float system. Refer to FM0526.

**CAUTION**

All installation of controls, protection devices and wiring should be done by a qualified licensed electrician. All electrical and safety codes should be followed including the most recent National Electric Code (NEC) and the Occupational Safety and Health Act (OSHA).

For information on additional Zoeller products refer to catalog on Piggyback Variable Level Float Switches, FM0477; Electrical Alternator, FM0486; Mechanical Alternator, FM0495; Sump/Sewage Basins, FM0487; Simplex Pump Control, FM1596; Alarm Systems, FM0732; and Disconnect/Rail Systems, FM0787.

**RESERVE POWERED DESIGN**

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

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