

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

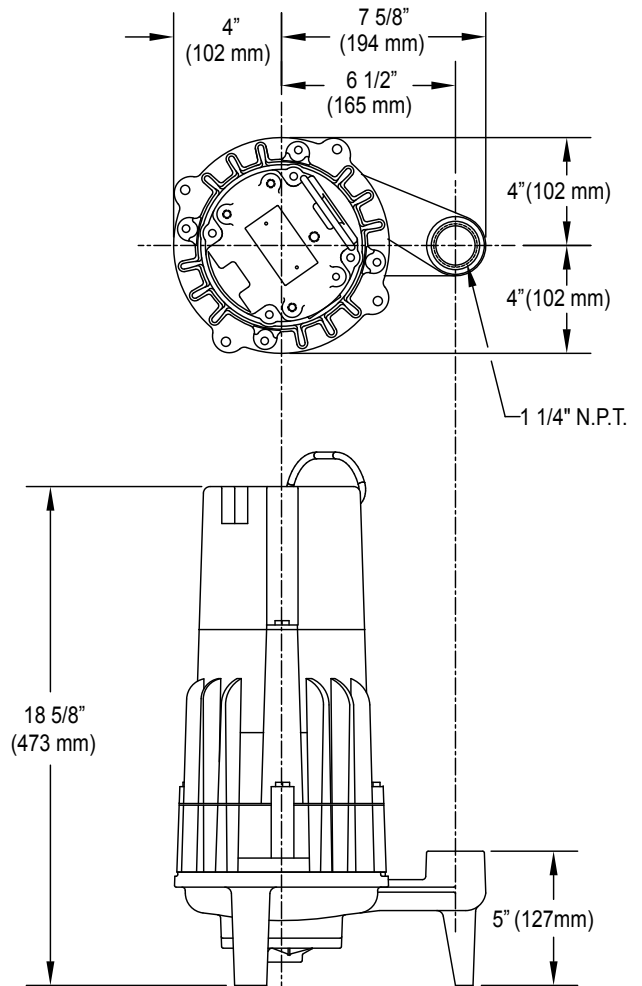

PUMP COMPANY
Zoeller Family of Water Solutions™

TECHNICAL DATA SHEET

THE SHARK^{Series} Model 820 Grinder Pumps

PRODUCT SPECIFICATIONS

MOTOR	Horse Power	2
	Voltage	200 - 230
	Phase	1 Ph
	Hertz	60 Hz
	RPM	3450
	Type	Capacitor start / capacitor run
	Insulation	Class B
	Amps	13.7 - 15.5
PUMP	Operation	Automatic or nonautomatic
	Auto On / Off	Variable level float switch, customer sets
	Discharge Size	1-1/4" NPT vertical discharge
	Cord Length	20' (6 m) standard
	Cord Type	UL listed, SOW or SOOW multi-wire neoprene
	Max. Head	107' (32.6 m)
	Max. Flow Rate	46 GPM (174 LPM)
	Max. Operating Temp.	130°F (54°C)
	Cooling	Oil filled
	Motor Protection	Auto reset thermal overload
MATERIALS	Cap	Cast iron
	Motor Housing	Cast iron
	Adapter	Cast iron
	Pump Housing	Cast iron
	Upper Bearing	Ball bearing
	Lower Bearing	Ball bearing
	Mechanical Seals	Carbon/ceramic
	Impeller Type	Vortex
	Impeller	Engineered plastic
	Hardware	Stainless steel
	Motor Shaft	Stainless steel
	Gasket & Square Ring	Neoprene
	Cutter	Hardened stainless steel, Rockwell C55-60



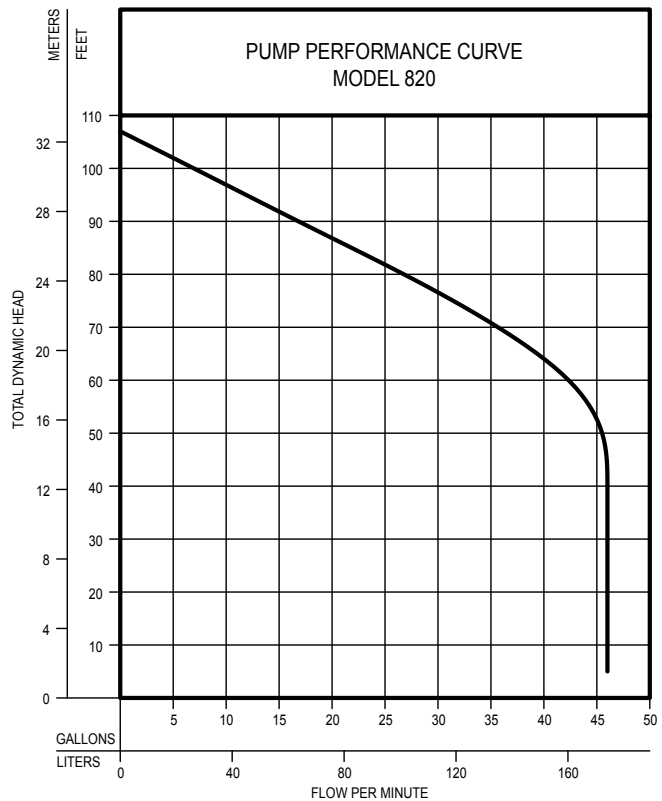
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NOTE: See model comparison chart for specific details.



TOTAL DYNAMIC HEAD FLOW PER MINUTE

MODEL		820	
Feet	Meters	Gal.	Liters
5	1.5	46	174
10	3.0	46	174
20	6.1	46	174
30	9.1	46	174
40	12.2	46	174
50	15.2	46	174
60	18.3	43	163
70	21.3	36	136
80	24.4	27	102
90	27.4	16.7	63
100	30.5	7	26
Shut-off Head:		107 ft.(32.6m)	



010440

Model	MODEL COMPARISON								
	Seal	Mode	Volts	Ph	Amps	HP	Hz	Lbs	Kg
* WD820	Single	Auto	230	1	13.7	2	60	89	40
E820	Single	Non	230	1	13.7	2	60	88	40
* WH820	Single	Auto	200	1	15.5	2	60	89	40
I820	Single	Non	200	1	15.5	2	60	88	40

* Integral control on automatic models only.

Simplex grinder package systems are available assembled or unassembled.

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 Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

GRINDER SYSTEMS

(A) GRINDER MODEL 820

STANDARD FEATURES:

- 1¼" NPT vertical discharge
- Carbon/ceramic seal
- Thermal overload protection
- Engineered, glass-filled plastic impeller with stainless steel insert
- Stainless steel cutter plate/cutter
- Stainless steel shaft
- Stainless steel hardware
- 20' (6 m) power cord

Options:

- ☐ Extra length cords (consult factory)

A)

820 GRINDER 2 HP, 1¼" N.P.T. VERTICAL DISCHARGE

	P/N	WGT.	MODEL	VOLTS	PH	MODE	AMP
<input type="checkbox"/>	820-0011	89 lb (40.3 kg)	WD820*	230	1	Auto	13.7
<input type="checkbox"/>	820-0004	88 lb (39.9 kg)	E820	230	1	Nonauto	13.7
<input type="checkbox"/>	820-0005	89 lb (40.3 kg)	WH820*	200	1	Auto	15.5
<input type="checkbox"/>	820-0006	88 lb (39.9 kg)	I820	200	1	Nonauto	15.5

* WD & WH grinder pumps are completely automatic with starting controls in pump switch case.

Note: 230V pumps are supplied with a 20 amp plug.

(B) CONTROL PANELS & ALARM SYSTEMS**STANDARD FEATURES:**

- Audible and visual alarm
 - Alarm silence switch
 - Test switch for alarm and light
 - UL listed
- Simplex panels:
- ☐ P/N 10-1037 includes alarm and 3 floats for E820.
 - ☐ P/N 10-1038 includes alarm and 3 floats for I820.
 - ☐ P/N 10-0125* includes alarm and 3 floats for E or I models.
- Alarm paks only:
- ☐ P/N 10-0053 indoor only.
 - ☐ P/N 10-0623 outdoor.
 - ☐ P/N 10-0126 outdoor w/ dry alarm contacts.

*Branch circuit protection provided by electrical installer.

(C) VARIABLE LEVEL FLOAT SWITCHES

- ☐ P/N 10-0033* Switch without weight and bracket for E820. WGT. 2 lb (0.9 kg)
- ☐ P/N 10-0748 Switch without weight and bracket for I820. WGT. 2 lb (0.9 kg)
- ☐ P/N 10-0661 1 weight and bracket only. WGT. 3 lb (1.4 kg)
- ☐ P/N 10-0689 1 weight only. WGT. 2.5 lb (1.1 kg)
- ☐ P/N 10-1366 Set of weights and brackets. Use with 10-0125/10-1037 and 10-1038. WGT. 6.5 lb (2.9 kg)

*Remove plug.

Note: All variable level float switches in this section are mechanically activated and do not contain mercury.

(D) CHECK VALVES

- 1¼" Cast iron NPT female
- ☐ P/N 30-0163 WGT. 7.5 lb (3.4 kg)
- 1½" Cast iron NPT female
- ☐ P/N 30-0164 WGT. 7.5 lb (3.4 kg)
- 2" Cast iron NPT female
- ☐ P/N 30-0152 WGT. 10 lb (4.5 kg)

(E) JUNCTION BOXES (Contact factory if used in conjunction with a control panel)**INDOOR BASIN INSTALLATIONS**

4 holes with seals for (1) power cord, (1) pump cord, (1) alarm switch, and (1) alarm return feed.

- ☐ P/N 10-0666 WGT. 2.5 lb (1.1 kg)

OUTDOOR BASIN INSTALLATIONS

Qwik-Box connection (for use with WD models only) with seals for (1) power cord, (1) pump cord, and (1) alarm switch cord. Alarm float switch must operate on low voltage to be used w/ Qwik Box.

- ☐ P/N 10-0580 WGT. 3 lb (1.4 kg)
- 4 =holes with seals for (1) pump cord, (3) control float switch cords and (1) conduit connection, use with control panel/s (B).
- ☐ P/N 10-0647 WGT. 2.5 lb (1.1 kg)
- 4 holes with seals for (1) pump cord, (1) control float, (1) alarm switch, and (1) conduit connection for incoming power and alarm return.
- ☐ P/N 10-0677 WGT. 2.5 lb (1.1 kg)

(F) INDOOR BASIN, COVER, AND HARDWARE - PREPACKAGED STANDARD EQUIPMENT

- Fiberglass basin
- Rust-resistant steel cover (epoxy coated)
- Inspection plate
- Pump cover
- 3" Adaptaflex vent seal
- 1¼" Adaptaflex discharge pipe seal
- Cord seal
- 1-4" rubber inlet pipe seal - field-installed
- Pump support hardware
- 1¼" check valve
- Ball valve

SIMPLEX

- ☐ 24" x 36" (61 x 91 cm) P/N 32-0011 WGT. 107 lb (48.5 kg)

(I) BALL VALVE

- 1¼" IPS
- ☐ P/N 30-0165 WGT. 2 lb (0.9 kg)
- 1½" IPS
- ☐ P/N 30-0166 WGT. 2 lb (0.9 kg)
- 2" IPS
- ☐ P/N 30-0167 WGT. 2.5 lb (1.1 kg)

(G) OUTDOOR BASIN, COVER, AND RAIL SYSTEM ASSEMBLIES - STANDARD EQUIPMENT

- Fiberglass basin with anti-flotation ring
- 1¼" PVC discharge pipe
- 1¼" rubber discharge pipe seal
- Stainless steel square guide rail
- 1' (0.3 m) Pull rod
- 8' (2.4 m) stainless steel lifting cable for basin depths to 84" (213 cm), and 12' (3.7 m) stainless steel lifting cable for basin depths of 96" (244 cm)
- 1¼" PVC ball valve
- 1¼" cast iron check valve
- 1-4" rubber inlet pipe seal - field-installed
- Fiberglass cover

SIMPLEX

- ☐ 24" x 48" (61 x 122 cm) P/N 33-0185 WGT. 206 lb (93.4 kg)
- ☐ 24" x 60" (61 x 152 cm) P/N 33-0186 WGT. 219 lb (99.3 kg)
- ☐ 24" x 72" (61 x 183 cm) P/N 33-0187 WGT. 233 lb (105.7 kg)
- ☐ 24" x 84" (61 x 213 cm) P/N 33-0188 WGT. 264 lb (119.7 kg)
- ☐ 24" x 96" (61 x 244 cm) P/N 33-0189 WGT. 277 lb (125.6 kg)

OPTIONS

- 1¼" stainless steel pipe from pump to bracket.
 - Anti-siphon device.
 - Pre-wired conduit (consult factory).
- *Other sizes available (consult factory).

(H) RAIL SYSTEMS - (FIELD INSTALLED)**Z-Rail Disconnect System for 1¼" pump discharges (Rail System discharge is 2" NPT male thread)**

- Ductile iron constructions
- ☐ P/N 39-0134 WGT. 43 lb (19.5 kg)
- With stainless steel upper rail support
- ☐ P/N 39-0135 WGT. 43 lb (19.5 kg)

Intermediate Stabilizer Bracket for every 12' (3.7 m) of depth.

- Stainless steel
- ☐ P/N 39-0139 WGT. 6 lb (2.7 kg)

Square Guide Rail System for systems less than 96" deep)

- BASIN DEPTH
- ☐ 48" (122 cm) P/N 39-0057 WGT. 90.5 lb (41.1 kg)
- ☐ 60" (152 cm) P/N 39-0058 WGT. 94.5 lb (42.9 kg)
- ☐ 72" (183 cm) P/N 39-0059 WGT. 98.5 lb (44.7 kg)

Fits both round and square basins. Includes square guide rail

Basins over 72" (183 cm) deep require one additional angle arm bracket.

- ☐ P/N 39-0070 WGT. 11 lb (5.0 kg)

(J) PULL RODS FOR SQUARE GUIDE RAIL SYSTEMS ONLY (Field-installed systems)

- 1' (0.3 m) "L"
- ☐ P/N 39-0069 WGT. 0.5 lb (0.2 kg)
- 2.5' (0.8 m) "L"
- ☐ P/N 39-0006 WGT. 1 lb (0.5 kg)
- 3.5' (1.1 m) "L"
- ☐ P/N 39-0007 WGT. 1.5 lb (0.7 kg)
- 4.5' (1.4 m) "L"
- ☐ P/N 39-0008 WGT. 1.5 lb (0.7 kg)
- 5.5' (1.7 m) "L"
- ☐ P/N 39-0009 WGT. 2 lb (0.9 kg)

(K) STAINLESS STEEL LIFTING CABLE (Field-installed systems)

- 8' (2.4 m)
- ☐ P/N 39-0031 WGT. 1 lb (0.5 kg)
- 12' (3.7 m)
- ☐ P/N 39-0032 WGT. 1 lb (0.5 kg)
- 16' (4.9 m)
- ☐ P/N 39-0033 WGT. 1 lb (0.5 kg)
- 20' (6 m)
- ☐ P/N 39-0034 WGT. 1 lb (0.5 kg)
- 24' (7.3 m)
- ☐ P/N 39-0035 WGT. 1 lb (0.5 kg)

PREPACKAGED AND JOB READY SYSTEMS

INDOOR		OUTDOOR	
REQ.	REQ.	REQ.	REQ.
1 Grinder (auto or nonauto)	P/N _____ (A)	1 Grinder (auto or nonauto)	P/N _____ (A)
1 Alarm system (optional)	P/N _____ (B)	1 Control panel/alarm system	P/N _____ (B)
1 Weight only (required if alarm is used)	P/N 10-0689 _____ (C)	1 Float switch(es) (if required)	P/N _____ (C)
1 Junction Box (optional)	P/N 10-0666 _____ (E)	1 Weight(s) and bracket(s)	P/N _____ (C)
1 Basin, cover and hardware	P/N _____ (F)	1 Junction Box	P/N _____ (E)
		1 Basin, cover and rail system	P/N _____ (G)

FIELD-MOUNT SYSTEMS

SIMPLEX	
REQ.	REQ.
1 Grinder (auto or nonauto)	P/N _____ (A)
1 Alarm system (optional)	P/N _____ (B)
1 Variable level float switch assembly ⁽²⁾ (not required for auto pumps)	P/N _____ (C)
1 Weight and bracket only (2 required if alarm is used)	P/N 10-0661 _____ (C)
1 Junction Box (optional)	P/N _____ (E)
1 Rail system (optional)	P/N _____ (H)
1 Angle arm/intermediate bracket ⁽¹⁾	P/N _____ (H)
1 Pull rod ⁽³⁾	P/N _____ (J)
1 Stainless steel cable	P/N _____ (K)

⁽¹⁾ Required for basins over 72" (183 cm) deep (Square Guide Rail) and over 12' (3.7 m) (E-Z Out Rail). Allow for overhead clearances.

⁽²⁾ Hardwire pump, float switch, and power supply inside junction box.

⁽³⁾ For square guide rail only

Note: Contact factory for control panel selection.

Note: Access doors available on field mount systems - consult factory.

Special basin configurations - consult factory.

TYPICAL OUTDOOR SYSTEM (G)

TYPICAL INDOOR SYSTEM (F)

