



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

## ENGINEERED PRODUCTS

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# INSTALLATION PROCEDURES

Notice to installing contractor: Instructions must remain with installation.

## Zoeller Engineered Products EZ-Out Rail Systems 1¼" Thru 3" NPT Vertical Discharge Pumps



### GENERAL INFORMATION

**Lift-Out Coupling Models:** These instructions cover Zoeller's entire range of EZ-Out Rail Systems. These lift-out couplings are designed for pumps with a threaded vertical discharge. We also offer rail systems designed for flanged discharge pumps, see ZM1170.

**General Construction:** The standard lift-out coupling base, as well as the slide plate assembly, are made of cast iron. The guide plate, top rail support and intermediate rail support are made of galvanized or stainless steel. The slide plate assembly is also available in non-sparking brass.

**Lifting Cable:** Lifting cables are available in galvanized or stainless steel. These cables are designed to attach to the top of the pumps and allow the pumps to be safely hoisted up and down guide rails. For 6160, 6180, 6280, 6290 and 6820 series, use P/N 10-0789 stainless steel lifting bail to properly position lifting cable on top of pump.

**Rail Support Bracket:** All the lift-outs are designed to use ¾" standard pipe for guide rails, which are provided by others. A top rail support is available to be mounted to the hatch frame. Intermediate brackets are available for deep installations. It is recommended that if the rail length is over 12 feet, an intermediate bracket be installed.

### INSTALLING RAIL SYSTEM PARTS

#### Discharge Base and Rails:

1. Lower the base coupling into the basin.
2. Position the base coupling by dropping a plumb line from the center of pipe supports, located on top rail support, to center of rail pins protruding from the base elbow. Level the elbow flange in two directions 90° to each other. Mark the position of the base, holding down bolts through the holes in the base.
3. Move the base aside to allow for installation of ½" mounting bolts (not included). Secure base in mounting bolts.
4. Cut the ¾" pipe guide rails (supplied by others) to the proper length and install them between the pipe supports at the top of the basin and the pins on the base. It is recommended that the guide rails are to be schedule 40, galvanized or stainless steel.

**IMPORTANT:** Discharge pipe and guide rails must be parallel if intermediated guide bracket is used.

**INSTALLING INTERMEDIATE GUIDE BRACKET (Required for each 12 feet of basin depth)**

1. Remove guide rails and cut a piece from each one. These pipes must be exactly the same length and of a length that will permit installing the intermediate guide bracket in the desired location.
2. Place the cut pieces of pipe over the guide rail pins located in the base.
3. Set the intermediated guide bracket in position with guides into pipe. Put U-Bolt around discharge pipe and tighten lightly.
4. Measure from joint on plug on intermediate guide bracket to joint on plug on top rail support and cut two (2) rails to the length. Put rails in place and tighten screws in top of support.
5. Recheck rails; they must be straight and plumb. Move intermediate guide bracket if necessary to perfectly align rails. After alignment is secured, tighten nuts on U-Bolt.
6. If a second intermediate guide bracket is used, the above procedure is followed for installation.

### ATTACHING THREADED DISCONNECT TO PUMP

1. Remove close quarter elbow from sealing plate. Three cap screws hold elbow to sealing plate.
2. Thread elbow into pump volute.
3. Bolt on sealing plate.
4. Attach the lifting bail (P/N 10-0789) to the pump, if not factory installed.

### INSTALLING PUMP AND DISCONNECT

**IMPORTANT:** When lifting pump up and down the guide rails, the pump should be slightly tipped forward toward the discharge and plumb (vertical) from side to side when facing the discharge.

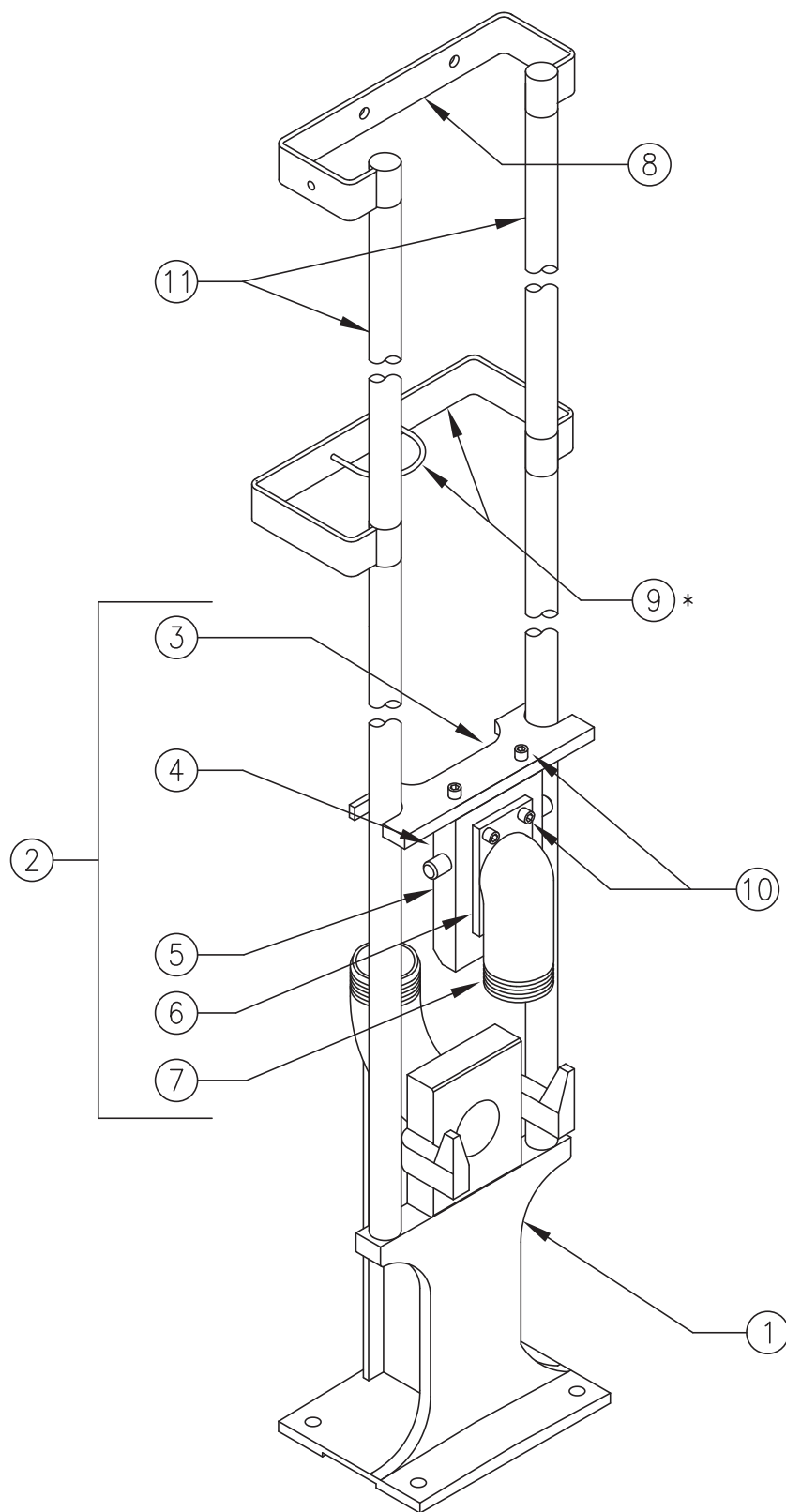
Position pump so the guide rails are located in the slots of the guide plate. Slowly lower the pump down the guide rails to the base. The locating pins (horizontal pins on sealing plate) should come to seat in the inclined surface on the arms.

After lowering the pump down the guide rail, secure the upper end of the lifting cable to the top rail support to keep it from falling into the pit.

SPECIFICATIONS				
Rail System	Pump Discharge	Rail System Discharge	Materials of Construction*	Weight
39-0087	1 ¼" V	2" V	Cast Iron / Steel / Galvanized Steel	43
39-0088	1 ¼" V	2" V	Cast Iron / Steel / Stainless Steel	43
39-0101	1 ¼" V	2" V	Cast Iron / Brass / SS / Brass for Non-sparking	43
39-0085	1 ½" V	2" V	Cast Iron / Steel / Galvanized Steel	43
39-0086	1 ½" V	2" V	Cast Iron / Steel / Stainless Steel	43
39-0092	1 ½" V	2" V	Cast Iron / Brass / SS / Brass for Non-sparking	45
39-0083	2" V	2" V	Cast Iron / Steel / Galvanized Steel	45
39-0084	2" V	2" V	Cast Iron / Steel / Stainless Steel	45
39-0093	2" V	2" V	Cast Iron / Brass / SS / Brass for Non-sparking	47
39-0110	2" V	3" V	Cast Iron / Steel / Galvanized Steel	50
39-0111	2" V	3" V	Cast Iron / Steel / Stainless Steel	50
39-0114	2" V	3" V	Cast Iron / Brass / SS / Brass for Non-sparking	50
39-0074	3" V	3" V	Cast Iron / Steel / Galvanized Steel	55
39-0075	3" V	3" V	Cast Iron / Steel / Stainless Steel	55
39-0076	3" V	3" V	Cast Iron / Brass / SS / Brass for Non-sparking	57
ACCESSORIES				
<i>Intermediate rail brackets are required for each 12' of basin depth.</i>				
39-0089	Intermediate Rail Bracket 1¼", 1 ½" and 2" Discharge - Galvanized Steel			6
39-0090	Intermediate Rail Bracket 1¼", 1 ½" and 2" discharge - Stainless Steel			6
39-0079	Intermediate Rail Bracket 3" Discharge - Galvanized Steel			6
39-0080	Intermediate Rail Bracket 3" Discharge - Stainless Steel			6
39-0112	Intermediate Rail Bracket 2" x 3" Discharge - Galvanized Steel			6
39-0113	Intermediate Rail Bracket 2" x 3" Discharge - Stainless Steel			6
019155	2" x 3" Reducer Adapter for 39-0110, 39-0111 & 39-0114 Rail System			5
10-0789**	SS lifting bail for 6160, 6180, 6280, 6290 & 6820 Series			1

\*Coupling Base / Sealing Plate / Upper Support / Guide Plate.

\*\*Lifting bails are required on the following models to balance pump and rail plate evenly. Other models already include proper lifting device.



ITEM NO.	DESCRIPTION
1	COUPLING BASE
2	COMPLETE SLIDE ASSEMBLY TO INCLUDE PART NO. 3,4,5,6,7 (SEE BELOW)
3	GUIDE PLATE
4	SEALING PLATE O-RING (SEE BELOW)
5	SEALING PLATE
6	CLOSE QUARTER ELBOW O-RING
7	CLOSE QUARTER ELBOW
8	UPPER RAIL SUPPORT
*9	INTERMEDIATE RAIL SUPPORT AND U-BOLT
10	SOCKET HEAD SCREW
11	BY OTHERS-TWO 3/4" RAIL PIPES

\* OPTIONAL – REQUIRED FOR EACH 12'  
SECTION OF RAIL PIPE.

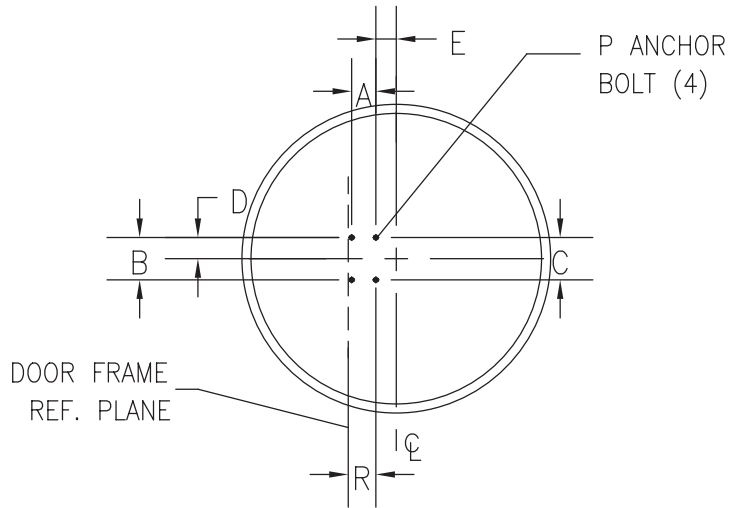
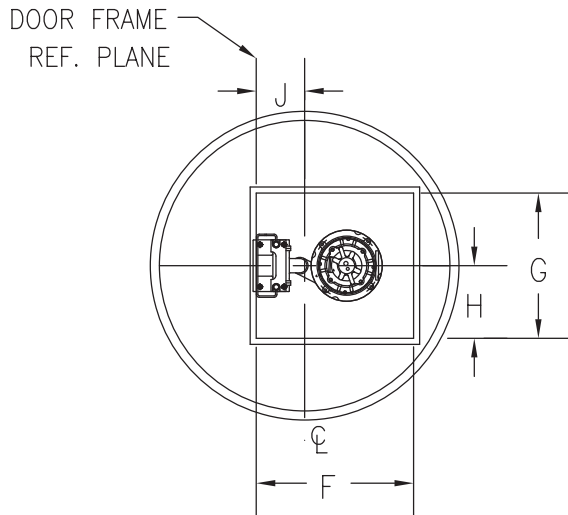
RAIL SYSTEM PART NO.	ITEM 2 PART NO.	SIZE
39-0088	014824	1 1/4" V
39-0086	014825	1 1/2"
39-0084	017427	2"
39-0093	019914	2" N.S.
39-0111	150239	2"
39-0075	017995	3"

ITEM 4 PART NO.	SIZE
015188	1.25/1.5/2"
015187	3"

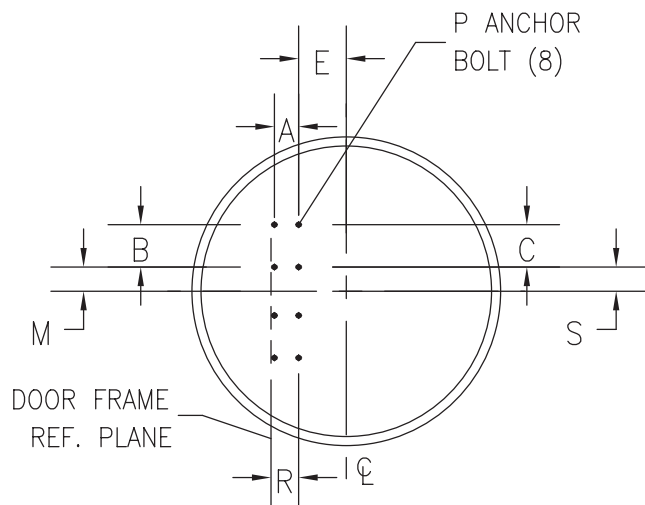
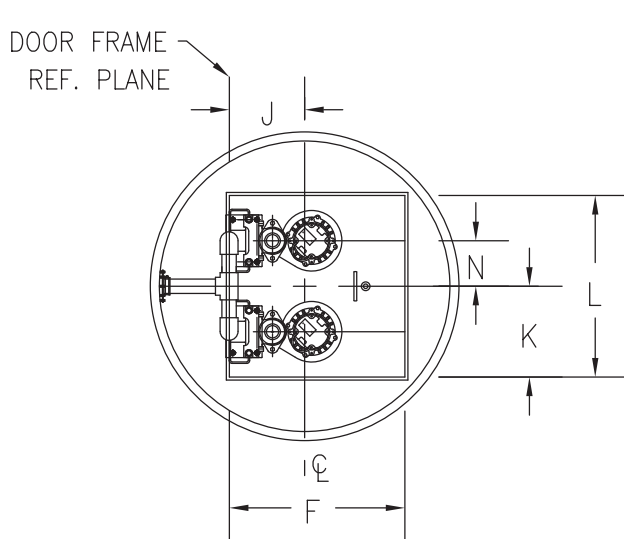
CONSULT FACTORY FOR ITEMS  
NOT LISTED

# LIFT STATION DIMENSIONAL DATA

## 1 1/4" / 2" / 3" NPT Vertical Discharge Pumps EZ-Out



SIMPLEX DIMENSIONAL CHART											
NOM. SIZE	A	B	C	D	E	F	G	H	J	P	R
1.25/1.5/2/3" VERTICAL	4	7	7	3 1/2	3 3/8	26	24	12	8	1/2	4 9/16



DUPLEX DIMENSIONAL CHART													
NOM. SIZE	A	B	C	E	F	J	K	L	M	N	P	R	S
1.25/1.5/2/3" VERTICAL	4	7	7	7 7/8	29	12 7/16	15	30	4	7 1/2	1/2	4 9/16	4