

Notice to installing contractor: Instructions must remain with installation.

SECTION: Z5.00.165

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ZM2818

0617

Supersedes

0615

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



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INSTALLATION PROCEDURES

Z-Rail® Disconnect Systems

1-1/4", 1-1/2", 2" and 3" NPT Vertical Discharge Pumps



General Information: These instructions cover Zoeller's Z-Rail® Disconnect Systems. These disconnects are designed for pumps with a threaded vertical discharge. We also offer rail systems designed for flanged discharge pumps, see ZM1170.

General Construction: Major system components, disconnect fitting, guide rail plate and upper rail support bracket are made of powder coated epoxy ductile iron. The optional individual stabilizer bracket is stainless steel.

Lifting Cable: Stainless steel lifting cables are available. 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 7010 series, use P/N 10-0789 stainless steel lifting bail to properly position lifting cable on top of pump.

Rail Support Bracket: The system is designed to be used with 3/4" schedule 40 galvanized or stainless steel rail pipe, which is provided by others. A top rail support is designed 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

Disconnect Fitting and Rails:

1. Lower the disconnect fitting into the basin.
2. Position the disconnect fitting by dropping a plumb line from the center of pipe supports, located on the upper rail support, to center of rail pins protruding from the fitting. Level its mounting flange in two directions 90° to each other. Mark the position of the fitting, holding down bolts through the holes in the base.
3. Move the fitting aside to allow for installation of 1/2" mounting bolts (not included). Secure fitting in mounting bolts.
4. Cut the 3/4" pipe guide rails (supplied by others) to the proper length and install them between the upper rail support at the top of the basin and the pins on the fitting. The guide rails are to be 3/4" pipe 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 basin depths greater than 12'.)

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 pump elbow from the guide rail plate. Three cap screws hold elbow to the guide rail plate.
2. Thread elbow into pump volute.
3. Reassemble guide rail plate to pump elbow. Ensure o-ring between guide rail plate and pump elbow remains intact. Tighten 3 cap screws.
4. Attach the lifting bail (P/N 10-0789) to the pump, if not factory installed.
5. The guide rail can now be slid down the rail pipe for mounting the disconnect fitting

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 angled surface of guide rail 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
39-0134	1-1/4" V	2" V	Ductile iron, powder coated epoxy	41
39-0135	1-1/4" V	2" V	Ductile iron, powder coated epoxy with SS upper rail supports	43
39-0136	1-1/4" V	2" V	Powder coated ductile iron / brass for non-sparking	44
39-0143	1-1/4" V	2" V	Powder coated ductile iron w/ SS upper rail support / brass for non-sparking	43
39-0131	1-1/2" V	2" V	Ductile iron, powder coated epoxy	41
39-0132	1-1/2" V	2" V	Ductile iron, powder coated epoxy with SS upper rail supports	43
39-0133	1-1/2" V	2" V	Powder coated ductile iron / brass for non-sparking	44
39-0142	1-1/2" V	2" V	Powder coated ductile iron w/ SS upper rail support / brass for non-sparking	43
39-0128	2" V	2" V	Ductile iron, powder coated epoxy	42
39-0129	2" V	2" V	Ductile iron, powder coated epoxy with SS upper rail supports	43
39-0130	2" V	2" V	Powder coated ductile iron / brass for non-sparking	43
39-0141	2" V	2" V	Powder coated ductile iron w/ SS upper rail support / brass for non-sparking	44
39-0146	2" V	2" V	71 Series Grinder - Powder coated ductile iron	43
39-0148	2" V	2" V	71 Series Grinder - Powder coated ductile iron w/ SS upper rail support	45
39-0147	2" V	2" V	71 Series Grinder - Powder coated ductile iron / brass for non-sparking	43
39-0149	2" V	2" V	71 Series Grinder - Powder coated ductile iron w/ SS rail support / brass for non-sparking	44
39-0122	3" V	3" V	Ductile iron, powder coated epoxy	47
39-0123	3" V	3" V	Ductile iron, powder coated epoxy with SS upper rail supports	47
39-0124	3" V	3" V	Powder coated ductile iron / brass for non-sparking	47
39-0125	3" V	3" V	Powder coated ductile iron w/ SS upper rail support / brass for non-sparking	47

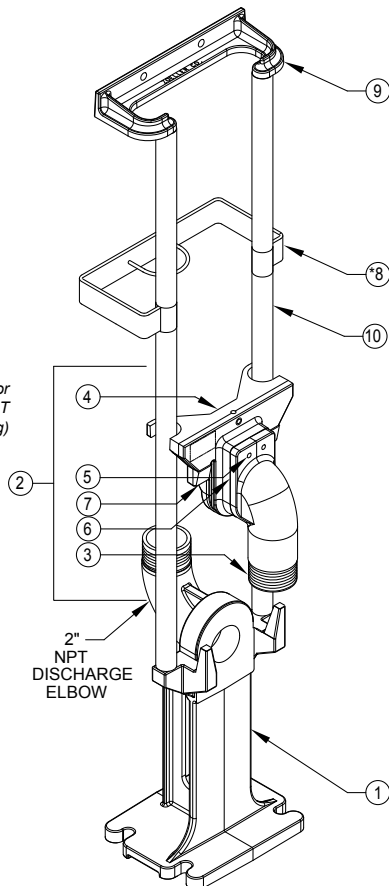
ACCESSORIES

Intermediate rail brackets are required for each 12' of basin depth.

39-0139	Intermediate Rail Bracket 1-1/4", 1-1/2" and 2" discharge - Stainless Steel	4
39-0140	Intermediate Rail Bracket 3" discharge - Stainless Steel	4
** 10-0789	SS lifting bail for 6160, 6180, 6280, 6290 & 7010 Series	1

* Disconnect fitting, guide rail plate, rail guide, upper rail support bracket

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



NOTE: Guide Rail Plate for 3" (39-0122) Z-Rail® is NOT threaded (see #4 on drawing) for bale installation.

ITEM NO.	DESCRIPTION
1	DISCONNECT FITTING
2	COMPLETE SLIDE ASSEMBLY TO INCLUDE PART NO. 3,4,5,6,7 (SEE BELOW)
3	PUMP ELBOW
4	DUCTILE IRON GUIDE RAIL PLATE -NORMAL BRASS GUIDE RAIL PLATE -NON-SPARKING
5	SS SCREWS (3)
6	INTERNAL O-RING
7	GUIDE PLATE O-RING SEAL
*8	INTERMEDIATE RAIL SUPPORT-SS
9	UPPER RAIL SUPPORT BRACKET -DUCTILE IRON OR SS
10	BY OTHERS - TWO 3/4 RAIL PIPES

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

DUCTILE IRON		
RAIL SYSTEM PART NO.	ITEM 2 PART NO.	SIZE
39-0134	152831	1-1/4" V
39-0131	152830	1-1/2" V
39-0128	152829	2" V
39-0122	152762	3" V

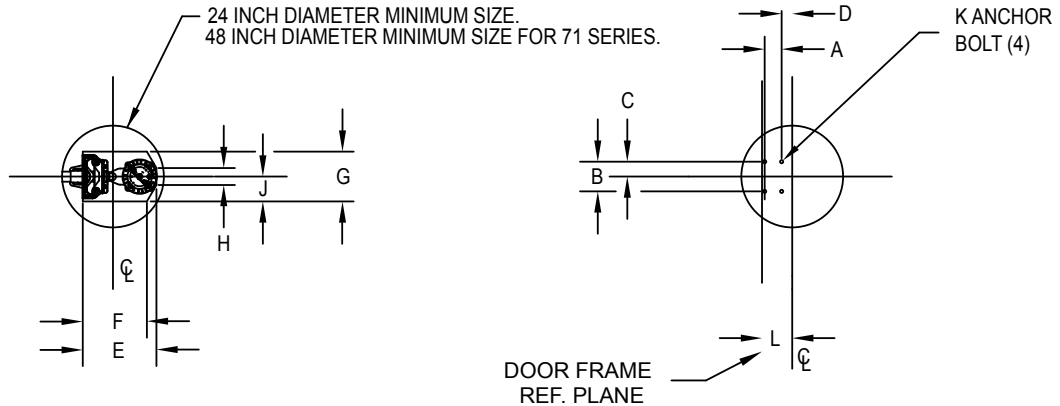
NON-SPARKING BRASS		
RAIL SYSTEM PART NO.	ITEM 2 PART NO.	SIZE
39-0136	152877	1-1/4" V
39-0133	152876	1-1/2" V
39-0130	152875	2" V
39-0124	152763	3" V

ITEM 7 PART NO.	SIZE
152387	1-1/4; 1-1/2; 2"
152389	3"

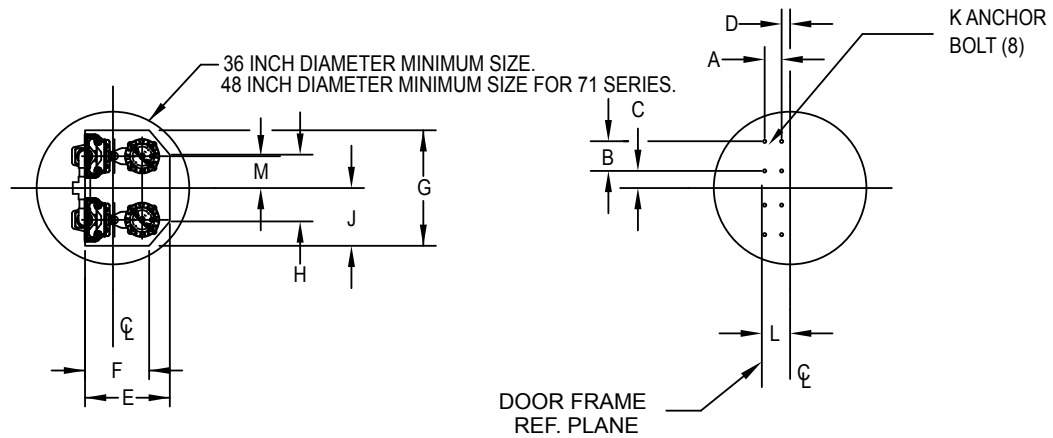
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LIFT STATION DIMENSIONAL DATA

1-1/4", 1-1/2", 2" and 3" NPT Vertical Discharge Pumps Z-Rail® Disconnect Systems



ZOELLER RAIL SYSTEM SIMPLEX DIMENSIONAL CHART											
NOM. SIZE	A	B	C	D	E	F	G	H	J	K	L
1.25"-2" DISCHARGE	4	7	3-1/2	2-1/2	17-3/8	15-1/8	11-3/4	4	5-7/8	1/2	7-1/8
2" 71 SERIES GRINDER & 3" DISCHARGE	4	7	3-1/2	3-3/8	26	-	24	-	12	1/2	8



ZOELLER RAIL SYSTEM DUPLEX DIMENSIONAL CHART												
NOM. SIZE	A	B	C	D	E	F	G	H	J	K	L	M
1.25"-2" DISCHARGE	4	7	4-1/32	2	20	15-1/8	27-1/4	15-3/4	13-5/8	1/2	6-11/16	7-1/2
2" 71 SERIES GRINDER & 3" DISCHARGE	4	7	4	7-7/8	29	-	30	-	15	1/2	12-7/16	7-3/8

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