



Suction Diffuser (10" and Up)

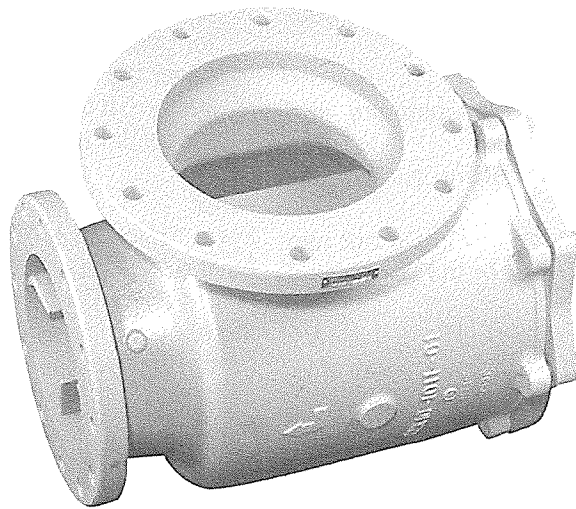
302-035

Installation, Operation & Maintenance Manual

SUPERSEDES: New

EFFECTIVE: November 15, 1999

Plant ID No. 001-976



RECEIVING, HANDLING & INSPECTION

1. Unpack and inspect suction diffuser for damage which may have occurred during shipping. Any damage should be reported to the carrier immediately.
2. Remove suction diffuser flange covers and inspect for any foreign matter that could be washed downstream when the suction diffuser is put into service.
3. Carefully check the pressure and temperature ratings on the suction diffuser body or nameplate to be sure that they are correct for the intended application. Store the suction diffuser in a dry, clean area until it is installed.

RECOMMENDED MOUNTING POSITION

The upstream side of the suction diffuser may be placed vertically or horizontally. Positioning bosses for a pipe support are located on 3 sides of the suction diffuser body. See table for pipe support inside diameters to fit each size of suction diffuser.

INSTALLATION

1. Two dimensions are used to designate the size of suction diffusers. The first is the inlet size, the second is the outlet size. Example: a 12x10 suction diffuser has a 12 inch inlet and a 10 inch outlet flange.

2. Place the suction diffuser so that the head of the flow arrow points to the suction flange (inlet) of the pump. Full face gaskets must be used on flat face flanges. Pump and suction diffuser flanges should be aligned **before** final connections are made. Do not draw piping into place by force. Flange bolts should be only finger tight.
3. Suction and discharge piping should be properly supported so that the weight of piping does not rest on pump. To support the suction diffuser, cut a piece of pipe with the correct inside diameter (see table) to the approximate length from the boss to the adjustable foot. Take this measure with the foot adjusted to its shortest position. Place the pipe over the boss and on the foot. Adjust the nut upward until the weight of the suction diffuser is properly supported.
4. Tighten all flange bolts in sequence crossing to opposites. Slowly bring system to working pressure and check for leaks. If pressure gauges are installed be sure that threaded fittings are properly sealed. If leaks occur check for piping and flange misalignment. If there is no misalignment, retighten flange bolting.

START-UP SERVICE

After 30 days of operation, the temporary mesh sleeve around the perforated screen should be removed. See Cleaning & Servicing. (Back page)

Installation, Operation & Maintenance

Models 10" and Larger

CLEANING & SERVICING

We recommend that pressure gauges be installed on the suction diffuser inlet and outlet or the suction diffuser inlet and suction side of the pump to indicate when cleaning is required.

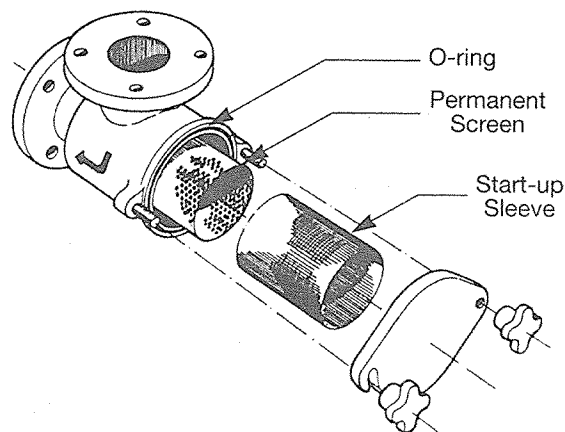
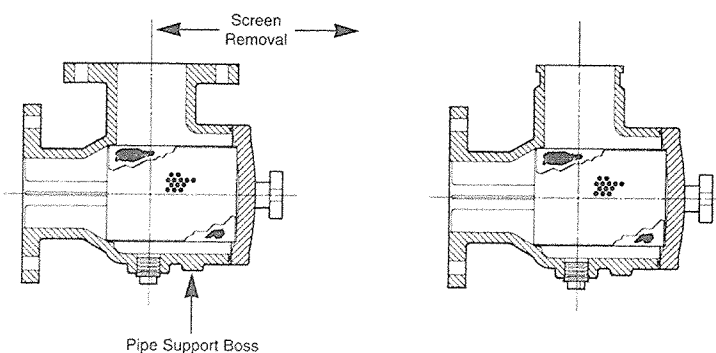
Record the pressure drop when the suction diffuser is clean. When the indicated pressure drop doubles, the suction diffuser should be cleaned.

1. Shut down the pump and close the upstream and downstream isolation valves.
2. Remove the NPT plug on the body of the suction diffuser and allow to drain.
3. Loosen knobs (or nuts) and remove cover. Do not use sharp objects to pry cover from body or the O-ring seal may be damaged.
4. Remove and clean perforated screen. The temporary mesh sleeve should be removed and thrown away after the 30 day start-up period. Inspect the perforated screen for damage and replace if necessary.

5. Before reassembling the suction diffuser, inspect the O-ring seal for cuts or other damage and replace if necessary.
6. When reassembling be sure that the O-ring is seated against the cover and that the screen is seated snugly in the recess of the cover. Reinstall cover and tighten cover knobs (or nuts) in sequence crossing to opposites.
7. Open upstream isolation valve slowly to bring the system back up to working pressure. If there are no leaks, open the downstream isolation valve and restart the system. If leakage occurs the cover should be checked for proper seating. Retighten knobs (or nuts).

Note:

For a "quick clean" a blow down valve may be substituted for the NPT plug. Opening this valve with the system running will flush out most of the accumulated sediment from the suction diffuser. We do not recommend this procedure for the first service after start-up. This procedure should be used only if it is not possible to carry out scheduled maintenance on the suction diffuser described in steps 1-7.



SCREEN REMOVAL ALLOWANCES & PIPE SUPPORT INSIDE DIAMETERS

SIZE (Inlet x Outlet)	10"X6"	10"X10"	12"X8"	12"X10"	12"X12"	14"X10"	14"X12"	14"X14"	16"X10"	16"X12"	16"X14"	16"X16"
SCREEN REMOVAL	22 ⁷ / ₈	30 ¹ / ₄	22 ⁷ / ₈	33	28 ³ / ₄	30 ³ / ₄	28 ³ / ₄	30 ¹ / ₂	28 ³ / ₄	28 ³ / ₄	31	33 ¹ / ₈
PIPE SUPPORT INSIDE DIAMETERS												
1E	1.380	2.067	1.380	2.067	2.067	2.067	2.067	2.067	2.067	2.067	2.067	2.067
1F	1.380	2.067	—	2.067	2.067	—	2.067	2.067	—	—	—	—

Do it Once. Do it Right.

TACO, INC., 1160 Cranston Street, Cranston, RI 02920 Telephone: (401) 942-8000 FAX: (401) 942-2360.

TACO (Canada), Ltd., 6180 Ordan Drive, Mississauga, Ontario L5T 2B3. Telephone: 905/564-9422. FAX: 905/564-9436.

Visit our web site at: <http://www.taco-hvac.com>

Printed in USA

Copyright 1999

TACO, Inc.