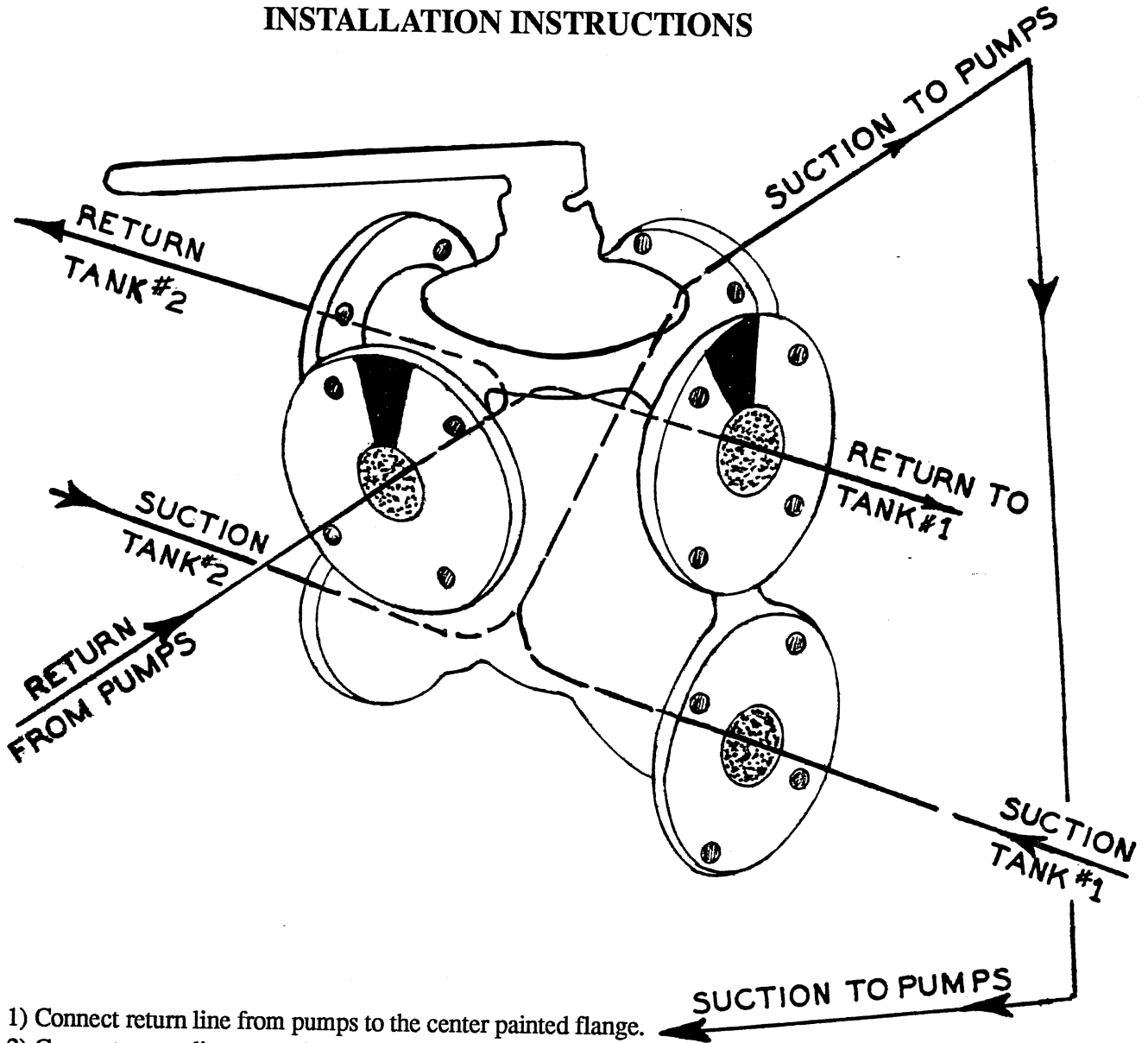


PREFERRED TANK SELECTOR VALVE INSTALLATION INSTRUCTIONS



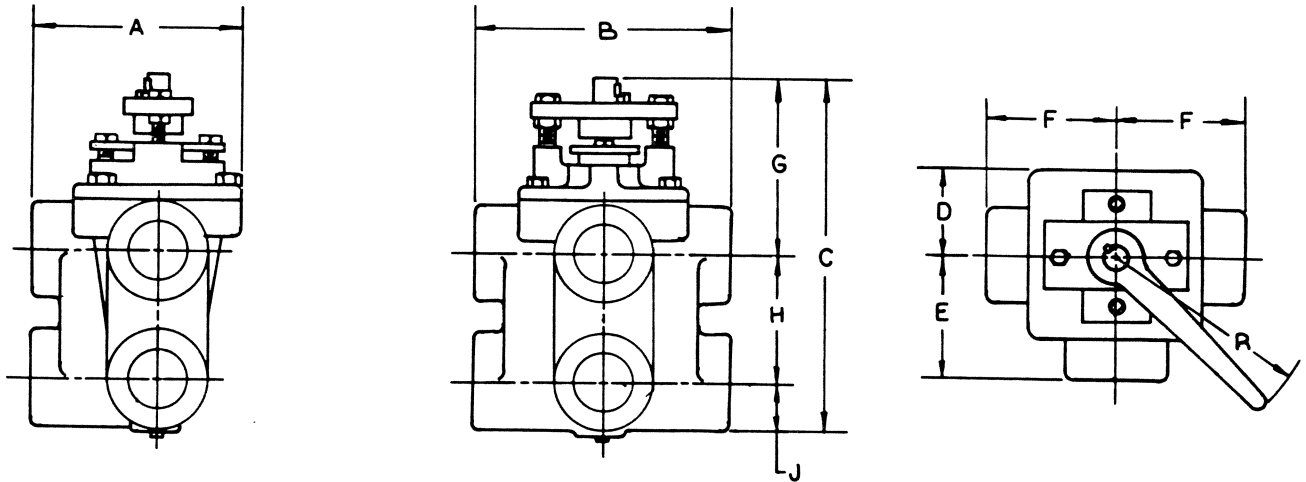
- 1) Connect return line from pumps to the center painted flange.
- 2) Connect return lines to tanks to top (painted) flanges on side.
- 3) Handle swings to front towards return line from pumps. On those sizes having scribed lines on top of plug stem make sure they point to the two stops on locking flange before installing handle.
- 4) On valves equipped with locking flanges the two locking flange bolts can be loosened to allow plug to move freely.
- 5) Position handle towards tank connections to be used.
- 6) Tighten locking flange bolts evenly. Do not use excessive torque.

PREFERRED UTILITIES MANUFACTURING CORPORATION

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PREFERRED TANK SELECTOR VALVE

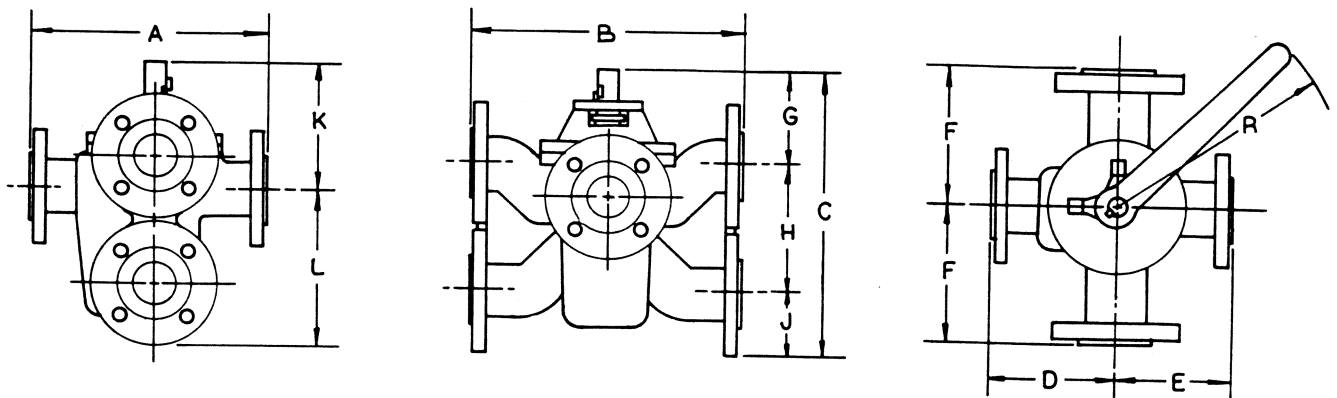
Screwed Connections



DIMENSIONS IN INCHES

SIZE	A	B	C	D	E	F	G	H	J	K	L	R
3/4" screwed	7 1/2	5 1/4	7 5/8	1 3/4	2 5/8	2 5/8	3 7/8	2 5/8	1 1/8	—	4 1 1/16	8
1" screwed	7 1/2	5 1/4	7 5/8	1 3/4	2 5/8	2 5/8	3 7/8	2 5/8	1 1/8	—	4 1 1/16	8
1 1/2" flanged	9 3/8	10	14 1/2	4 15/16	4 7/16	5	5 5/8	6 3/8	2 1/2	6 5/8	7 7/8	12 1/8
2" flanged	12	12	16 3/8	6 1/4	5 3/4	6	6 5/8	6 3/4	3	7 1/16	9 5/16	12 1/8
2 1/2" flanged	12 5/8	13	17 7/8	6 1/2	6 1/8	6 1/2	6 5/8	7 3/4	3 1/2	7 1/16	10 1 1/16	12 1/8
3" flanged	12 1/2	14	18 7/16	6 7/8	5 5/8	7	6 15/16	7 3/4	3 3/4	7 1/16	11 3/8	12 1/8

Flanged Connections



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PREFERRED TANK SELECTOR VALVE

OPERATION AND MAINTENANCE INSTRUCTIONS

CAUTION: PLEASE READ CAREFULLY BEFORE OPERATION!

ASSEMBLY AND OPERATION

The Preferred Tank Selector Valves provide a manual means to transfer flow from one of two parallel circuits to the alternate circuit without flow interruption. To direct the flow from one circuit to the other it is only necessary to swing the valve handle (fig.1, pc.1) through 90° to its other extreme position. The side in use is shown by the indicator which is cast as an integral part of the handle. Normally, the handle swings over the inlet port of the valve but a reverse handle which swings over the outlet port is also available. The handle is usually packed separately for shipment and should be assembled on the valve stem (pc.19) with key (fig.2, pc.28) and set screw (pc.29). On models so provided, place handle lug down between stops. See further instructions for handle assembly with models provided with lifting jack.

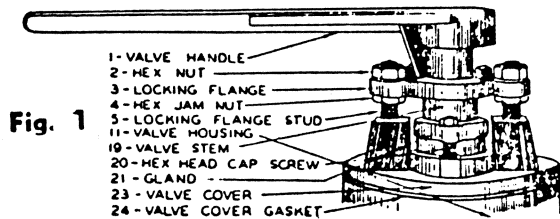


Fig. 1

ADJUSTING THE VALVE PLUG

It is possible, that at high temperatures the valve plug assembly (fig.2, pc.19) may become jammed at the valve seat faces because of unequal expansion of adjacent parts. Jamming can also occur if the selector valve is accidentally hit or dropped on the valve stem. To remedy this condition, proceed as follows:

- A. Loosen hex nuts (pc.2) slightly and be sure that the set screw (pc.29) in the handle (pc.1) hub is tight.
- B. Place a piece of flat stock under the hub of the valve handle (pc.1) and using locking flange stud (pc.5) as a

fulcrum, pry firmly so that the valve plug assembly is lifted in a vertical direction while the housing (pc.11) casting is tapped with a hammer.

C. In rare instances it may be necessary to tap the underside of the valve handle hub lightly in a vertical direction to break the valve free of its seat.

D. To readjust the valve, after it has been freed, tighten hex nuts (pc.2) evenly and a very little at a time. While doing this, constantly try the action of the valve plug assembly (pc.19) by moving the valve handle (pc.1) through its cycle of operation. When the action just begins to feel tight or snug, the valve is in its proper position.

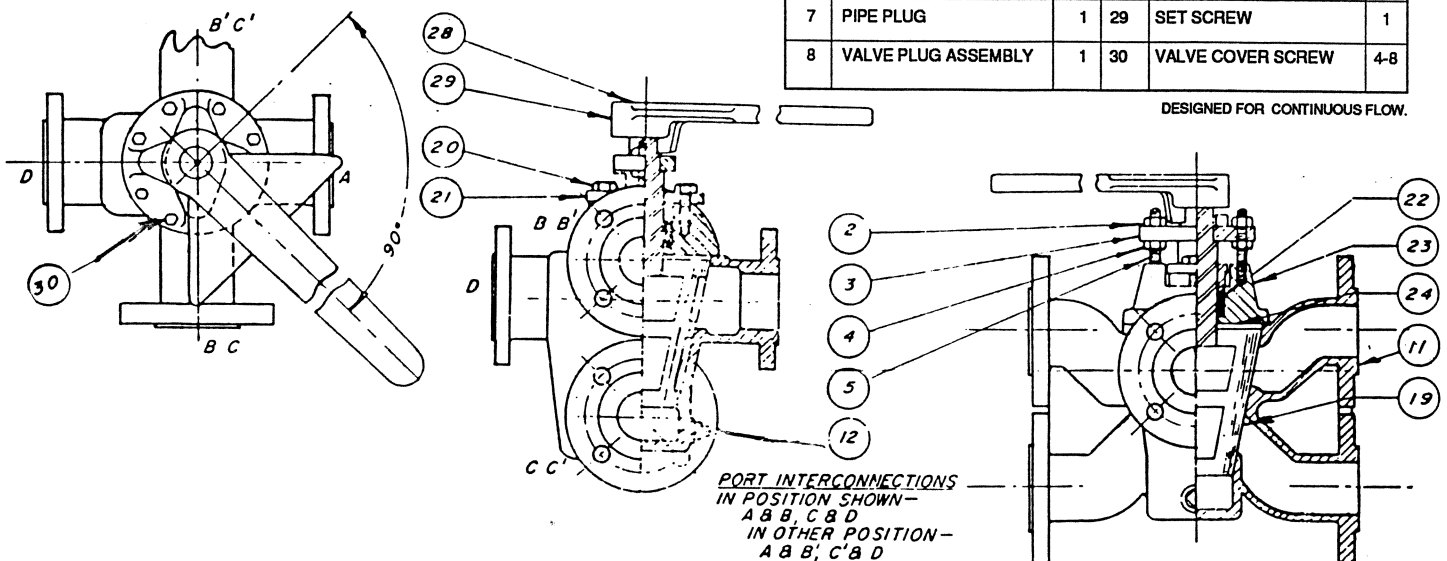
E. To hold plug in position, bring the hex jam nuts (pc.4) up against the underside of the locking flange (pc.3) and the unit is ready for operation.

NOTE: NEVER try to force the valve plug assembly through its cycle of operation. It should at all times move freely without the aid of any additional leverage other than that provided through the mechanical advantage of the valve handle.

Each valve plug is individually mated with the valve seat to produce a close fit. Therefore, **NEVER** put any pressure on the top of the valve assembly as this could result in damaging the seat surfaces.

PARTS LIST					
ITEM #	PART NAME	QUAN	ITEM #	PART NAME	QUAN.
1	VALVE HANDLE	1	20	GLAND CAP SCREW	2
2	HEX NUT	2	21	GLAND	1
3	LOCKING FLANGE	1	22	PACKING	1
4	HEX JAM NUT	2	23	VALVE COVER	1
5	LOCKING FLANGE STUD	2	24	VALVE COVER GASKET	1
6	VALVE HOUSING	1	28	KEY	1
7	PIPE PLUG	1	29	SET SCREW	1
8	VALVE PLUG ASSEMBLY	1	30	VALVE COVER SCREW	4-8

DESIGNED FOR CONTINUOUS FLOW.



PREFERRED TANK SELECTOR VALVE

OPERATION AND MAINTENANCE INSTRUCTIONS

CAUTION: PLEASE READ CAREFULLY BEFORE OPERATION!

ITEM NO.	PART NAME	QUAN.
1	VALVE HANDLE	1
2	LIFTING JACK NUT	1
3	LIFTING JACK BRIDGE	1
19 A	VALVE STEM	1
21	GLAND	1
22	PACKING	1set
23	VALVE COVER	1
26 A	HANDLE NUT	2
28 B	HANDLE NUT WASHER	1

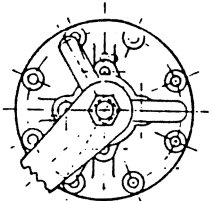
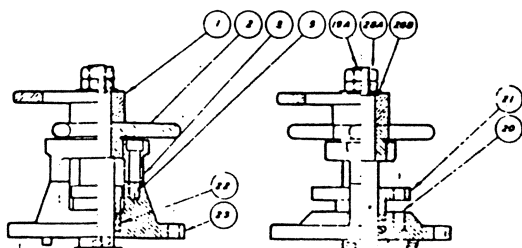


Fig. 3



REPACKING THE STUFFING BOX CONVENTIONAL MODELS:

- A. Remove the valve handle and remove the Woodruff Key (pc.28) at hub. On some models the valve stem stop is a socket head cap screw which must also be removed.
- B. Remove the locking flange (pc.3) after first removing the hex nuts.
- C. Remove the hex head cap screws (pc.20).
- D. Remove the gland (pc.21).
- E. The stuffing box may now be repacked. Order a set of replacement packing from the factory or use a good grade of 1/4" square graphited fiber valve stem packing on low pressure models.
- F. To replace component parts, reverse procedure as described above.

OPTIONAL LIFTING JACK

The tapered design of the valve plug on Tank Selector Valves does not normally require the lifting of the plug before turning. However, for certain applications, particularly where special materials of the plug and housing are involved, a lifting jack assembly may be furnished. In this case, the parts and assembly illustrated in fig.3 are substituted for the standard parts and assembly illustrated in fig.1. Before each swing over of the valve, it should be use to reseal the plug.

To assemble, adjust and operate the lifting jack assembly, proceed as follows. Turn lifting jack nut (fig.3 pc.2) clockwise (looking down) all the way by hand. Assemble washer (part 28B) and brass nuts (part 28A) tightly by hand so that washer does not rotate. Back nut off 1/4 turn. Lock with second nut. This procedure should establish adjustment so 1/3 counter-clockwise turn of lifting jack will raise the plug.

CAUTION: Over-raising may cause stop pin on plug to bind on valve cover (part 23).

PLEASE NOTE:

The Preferred Tank Selector Valve is not designed as a tight shutoff valve. While each valve is factory tested to insure that leakage between ports is minimal, some internal bypassing from return to supply, or from tank #1 to tank #2 is unavoidable. With standard cast iron construction, a 15" Hg vacuum on the suction side, and atmospheric pressure in the return side, this leakage will typically be less than a gallon per day of #2 fuel oil. With heavier fuels the leakage will be even less.

If the valve is used in a system where the return side of the valve is not continuously flooded with fuel, there is a possibility of air leaking into the suction side of the valve from the empty return side. This could cause eventual loss of prime, especially in systems with long idle periods such as emergency generator fuel pump sets. When internal leakage must be kept to a minimum, the Tank Selector Valve should be ordered with either a bronze or a teflon coated cast iron plug, and with a lifting jack. Proper use of the lifting jack is important to prevent scoring of the soft plug material.

When a valve has operated successfully over a period of time and then begins to bypass excessively, the adjustment of the valve plug should be checked.

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