



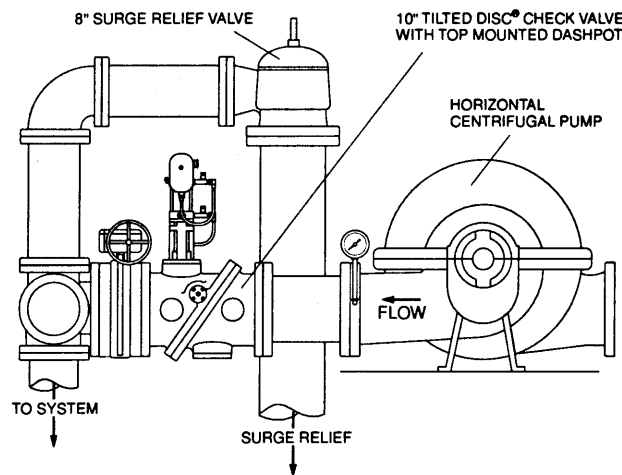
APPLICATION DATA SHEET

TILTED-DISC® CHECK VALVE FOR PUMP DISCHARGE

DESCRIPTION OF APPLICATION

Peoria Heights is located on a bluff overlooking the Mississippi River in Central Illinois. Water is pumped from five 200 foot riverside wells to a 300,000 gallon standpipe where it is chemically treated. An unmanned pump station lifts the water 260 ft. through a 1 mile long, 16" diameter pipeline to a ground storage reservoir up on the bluff. The pump station has been in operation for many years with pilot operated pump control valves.

Tilted-Disc® Check Valves are being used to replace existing globe-style control valves. The control valves were equipped with pilots and needle valves which were difficult to maintain. Because of a failure of the control valve limit switch, one pump required rebuilding after it ran against a closed valve for several hours. The Tilted-Disc® valves were also selected for their low headloss and resultant energy savings.



PEORIA HEIGHTS, IL BOOSTER STATION

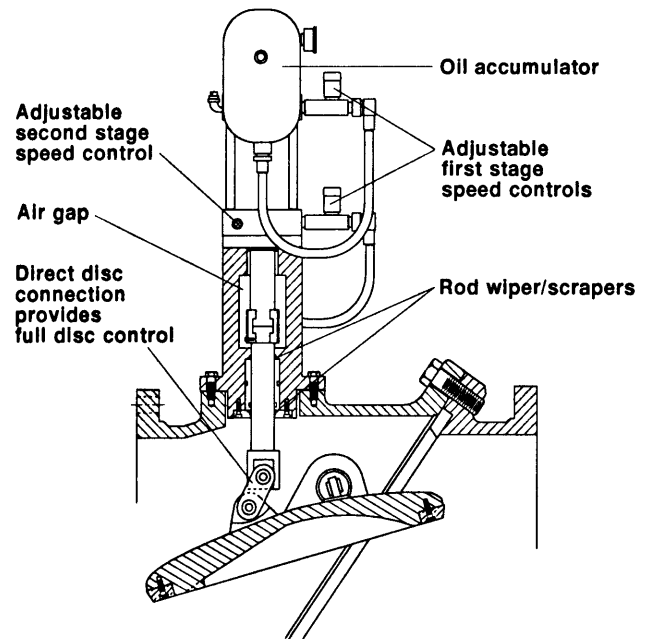
OPERATING DATA

Valve Size:	10" W/Top Mounted Dashpot
Total Static Head:	175 ft.
Flow Rate:	7.2 ft per sec.
Pump Operation:	Multiple
Surge Relief:	Anticipator Valve
Line Length:	5000 ft. of 16" Cast Iron

VAL-MATIC® EQUIPMENT:

TILTED-DISC® CHECK VALVE: Each pump is equipped with a 10"-250# Class Tilted-Disc® Check Valve to prevent reverse flow. The Tilted-Disc® with top mounted oil dashpot was specified to obtain the lowest possible headloss and reduce surges.

The valves are fully automatic and require no power or connection to the pump controls to operate. The valves feature stable operation, rugged ductile iron construction, and a gall-free aluminum-bronze seat.



TILTED-DISC® CHECK VALVE

The top mounted oil dashpot controls the valve opening and closing stroke to reduce the potential for surges. The dashpot includes mechanical linkage between the disc and a 3000 psi hydraulic cylinder. The hydraulic cylinder is fitted with speed control valves to control the opening and closing rates. The controls are set to open and close the valve in about 5 seconds to reduce surges and prevent reverse flow through the pump.

The valves work in concert with a surge anticipator valve mounted on the discharge header. When a high or low pressure is sensed, the valve rapidly opens to relieve water back to the standpipe.

