DeZurik KGC Knife Gate Valve

Installation Instructions

General Instructions

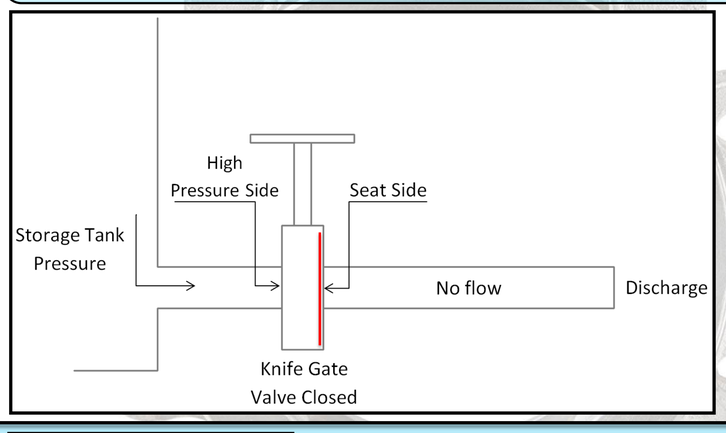
- In all wet applications the seat of a unidirectional Knife Gate Valve must always face the Low Pressure side. The higher pressure will force the gate against the seat and form a better seal.
- A Knife Gate Valve only works when in the closed position, the flow direction is irrelevant and it is rather the pressure during isolation that determines on which side the seat must be.
- Valves must not be installed on a corner; this will cause unnecessary extra wear on the valve.
- Knife Gate Valves must not be installed laterally, rather rotate at least one hole if it needs to be installed almost fully lateral.
- Install the valves as far away from a Y-piece as possible to limit gate damage due to turbulence.

Gland Follower

The packing gland is loosened prior to shipping, tighten during installation or if leakage occurs.
Remember to tighten ALL the nuts in a crisscross pattern. Tighten nuts evenly and gently – just enough to stop the leak. Overtightening will cause excessive operating torques and decrease the life of the packing.

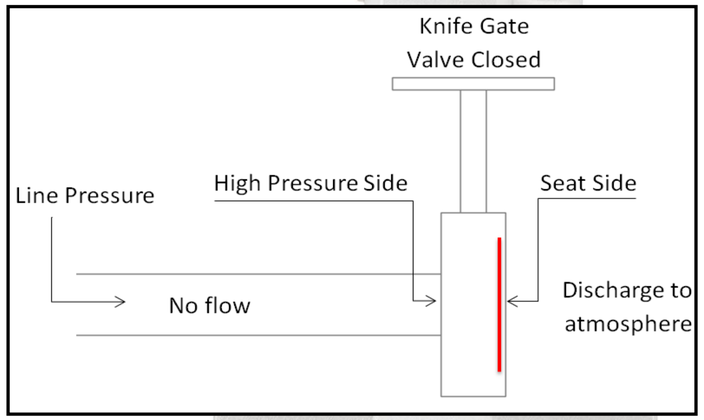
Storage Tank

The pressure from the tank will force the gate to the opposite side. The seat must therefore be on the low pressure side which is facing away from the tank.



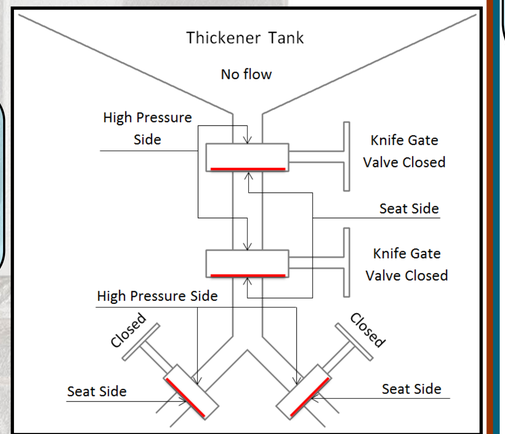
Open end / Drain line

The line pressure will force the gate towards the open end. The seat must therefore be on the open end which is also the low pressure side.



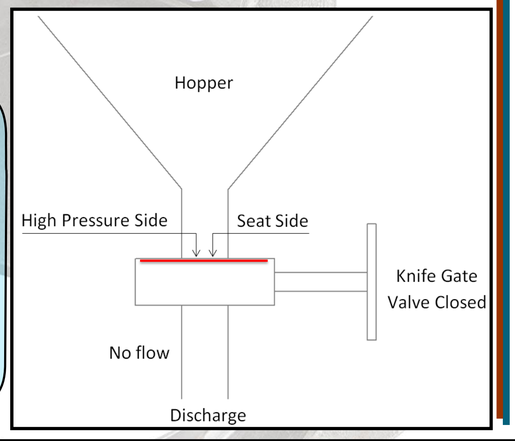
Thickener Tank

The pressure from the tank will force the gate downwards and away from the tank. The seat must therefore be on the low pressure side which is facing away from the tank.



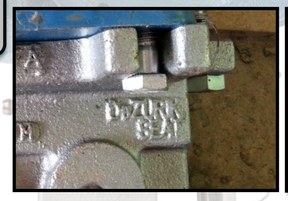
Dry Media Hopper

The dry media hopper is a special case where the seat will actually be facing the high pressure side. Installing the valves with the seat side upstream prevents process media buildup in the seat and chest area of the valves. This orientation also allows the seat to act as an integral deflection cone, protecting the seat from wear.



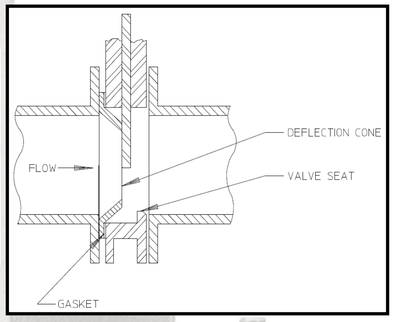
Locating the seat

The DeZurik KGC has the word “SEAT” cast in the body and also punched into the gate



Deflection Cone

The purpose of the deflection cone is to divert the flow away from the valve seat. It must therefore be installed on the opposite side of the seat and in the flow path. In specific instances where the seat side is facing the flow direction, the deflector cone cannot be installed on the seat side and will therefore not be installed. The seat will then act as a built-in deflector.



Pump Installation

The flow direction on the discharge side of the pump is normally away from the pump. When the pump is isolated (valves closed and pump switched off), the reverse pressure will be in the opposite direction – towards the pump. The highest pressure on both valves will be on the side opposite to the pump, therefore the seat must be on the pump side.