



All valves shall be a KSV Severe Service Knife Gate Valves as manufactured by DeZURIK or approved equal.

Valve shall be the _____ (bonnetless) (bonneted) knife gate.

Gate shall have a beveled knife edge and shall be finish ground with rounded edges. Gate material shall be appropriate for media abrasion and corrosive requirements.

Valve Packing System shall fit a rounded machined packing chamber. Packing shall consist of multiple layers of square braided synthetic packing with a live load ring and metal scraper ring. An additional scraper ring shall be isolated from the sealing rings. The packing box shall be of the bolt-on type, independent of the valve body. Packing shall be replaceable without removing the valve from the pipeline. The packing gland shall match the body material.

Body shall be a one-piece casting with integral full-face flanges. Valve bodies shall meet ASME B16.34 pressure vessel standards. Valves shall comply with Manufacturers Standardization Society MSS-SP135 *High Pressure Knife Gate Valves* standard. Valve bodies shall have purge ports in the chest area.

Seat shall be _____ (resilient) (metal) seated. Valves shall have a _____ (round) (V-orifice) (diamond) (square) port. Round port valves shall have no restrictions or protrusions. The valve port diameter for ANSI Class 150 valves shall match standard pipe ID and ANSI Class 300 valves shall match extra strong pipe ID per ASME B36.10 *Welded and Seamless Wrought Steel Pipe* standard. The gate sealing surface and port diameter shall have an overlay of hard surfacing material when required. Valves shall be capable of bi-directional dead end service without the use of ring or backup flanges.

Resilient seated valves shall be of the mechanically retained face seal type and be isolated out of the flow stream. Resilient seat shall provide bi-directional drip-tight shutoff. The resilient seal shall not be subject to any compressive load from the gate. Resilient seat material shall be _____ (specify seat material) suitable for use with _____ (specify flowing media and temperature).

Metal seated valves shall provide shutoff per MSS SP-135. Seat rings shall be fully rotatable, interchangeable and field replaceable.

Face-to-face dimension shall meet _____

- MSS-SP135 Long Pattern for Class 150 or 300, 2-24" (50-600mm)
- MSS-SP135 Short Pattern for Class 150 or 300, 26-48" (650-1200mm)

Valve Pressure/Temperature Rating shall be per ANSI B16.34.

Flanges shall be full raised face with drilling in accordance with _____

- ASME B16.5 Class 150 or Class 300, 2-24" (50-600mm)
- ASME B16.47 Series A Class 150 or 300, 26-48" (650-1200mm)
- (specify)

Actuation The actuator stem is to be stainless steel. Yoke sleeves shall be aluminum bronze, 17-4 stainless steel or brass containing less than 10% zinc.

Manual Actuators shall be of the bevel gear reduction type with a maximum rim pull of 80 foot-pounds.

Power Actuated Valves shall be furnished with hydraulic cylinders. Cylinder actuators shall be sized to operate with 1500 psig (10350 kPa) supply and be capable of 3000 psig (20700 kPa) non-shock pressure. Actuators shall be sized for a 2:1 safety factor at 1500 psig (10350 kPa).

Cylinder controls shall include _____ (solenoid valve) (speed control valves) (switches) mounted on the valve assembly.

Lock-Outs All valve actuators shall have open and closed position lockout devices that are capable of withstanding the full actuator force and are designed in accordance with OSHA Standard 1910.147.

Two Year Warranty shall be provided for all valves.