

JFS

BEIJING JOINT FLOW SYSTEM CO.



SLEEVE VALVE



VERTICAL PATTERN SLEEVE VALVE

The vertical pattern sleeve valve is designed for applications which high pressure drop and wide range flow control are both required. This valve can limit the cavitation damage at the minimum level in application of high differential pressure and big flow demand. This unique feature cannot be achieved by conventional control valves. The valve dissipates energy and controls flow by diverting the water through multiple orifices located within the sleeve and discharging to atmosphere or body of water. And it modulates flow by sliding one pipe called the gate inside over another pipe called the sleeve. The design controls cavitation by directing damaging implosions away from any metallic surfaces, thus reducing vibration and noise normally associated with modulating valves. And it can be built with a higher unit flow factor than conventional valves and pass large flow capacities with a very low differential head (Delta H) across the valve.



FEATURE AND BENEFIT

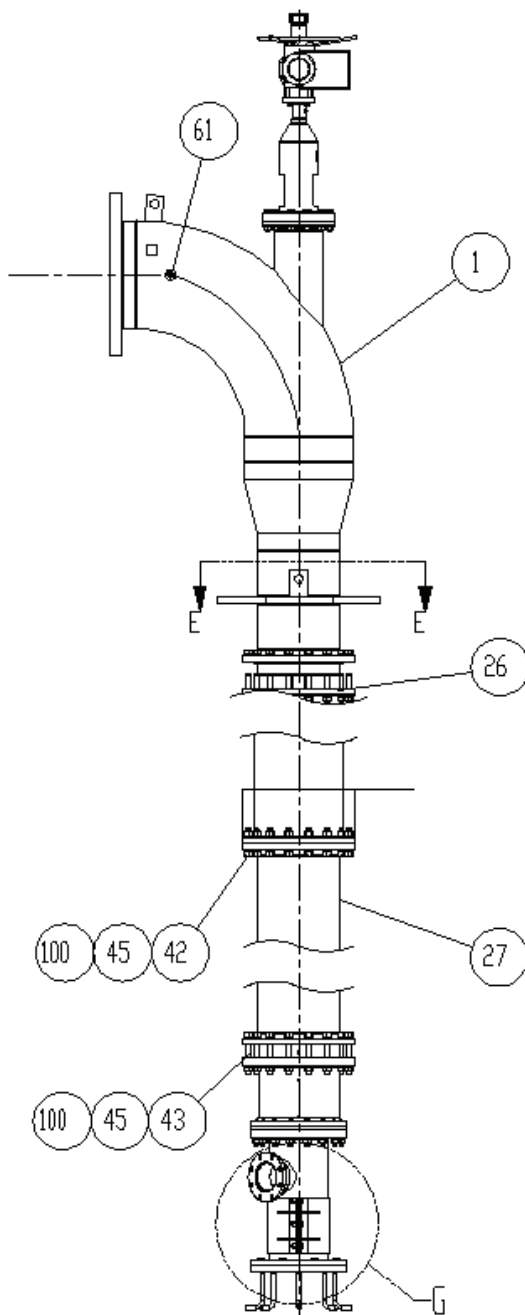
- External seat on sleeve
Provide drip tight shut off.
- Large access ports
Maintenance can be performed while the valve is in line.
- Customer's Valve Configuration
 - Allows for flange matching between valve and associated piping.
 - Multiple access options.
 - Valve material options (Carbon steel, Stainless Steel ,etc).

FORMULA

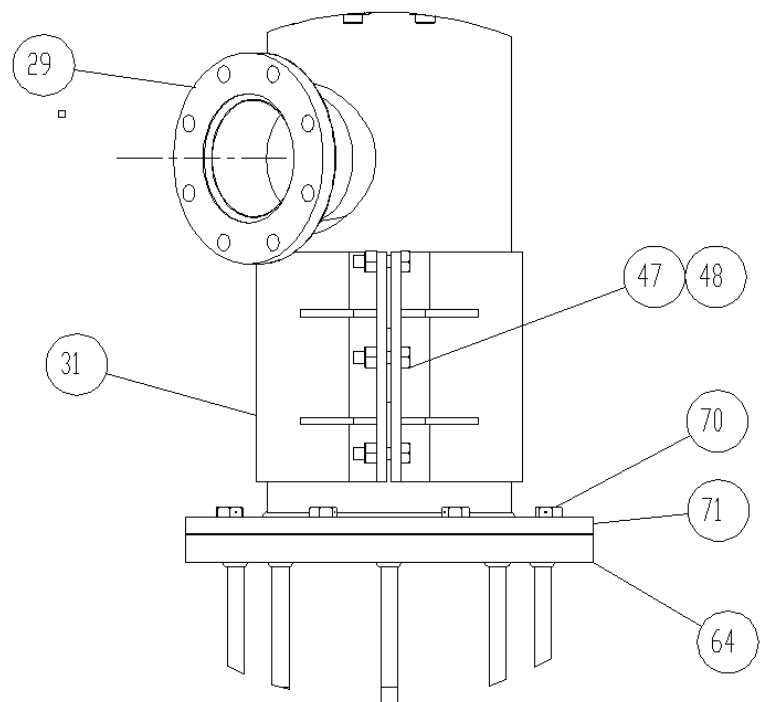
CAVITATION INDEX (σ)	$\sigma = \frac{P_1 - P_v}{P_1 - P_2} = \frac{P_2 + 14.2}{\Delta P}$ If $\sigma \leq \sigma_{cr}$, serious cavitation can occur.	
FLOW COEFFICIENT ($C_v = 1.167 K_v$)	The C_v value is the flow rate of pure water at 60°F passing through the valve when the disc is fully opened and the differential pressure between the two ends of the valve is 1 Lbf/in ² .	The K_v value is the flow rate of pure water at 15°C passing through the valve when the disc is fully opened and the differential pressure between the two ends of the valve is 1 bar.
	$C_v = \sqrt{V \frac{G}{\Delta P}}$	$K_v = \sqrt{Q \frac{G}{\Delta P}}$
	V: Max flow in US gal/min G: Specific gravity, 1 for water ΔP : Differential pressure in Lbf/in ²	Q: Max flow in m ³ /h G: Specific gravity, 1 for water ΔP : Differential pressure in bar

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PARTS LIST & MATERIAL



FRONT VIEW



DETAIL E

VERTICAL PATTERN SLEEVE VALVE

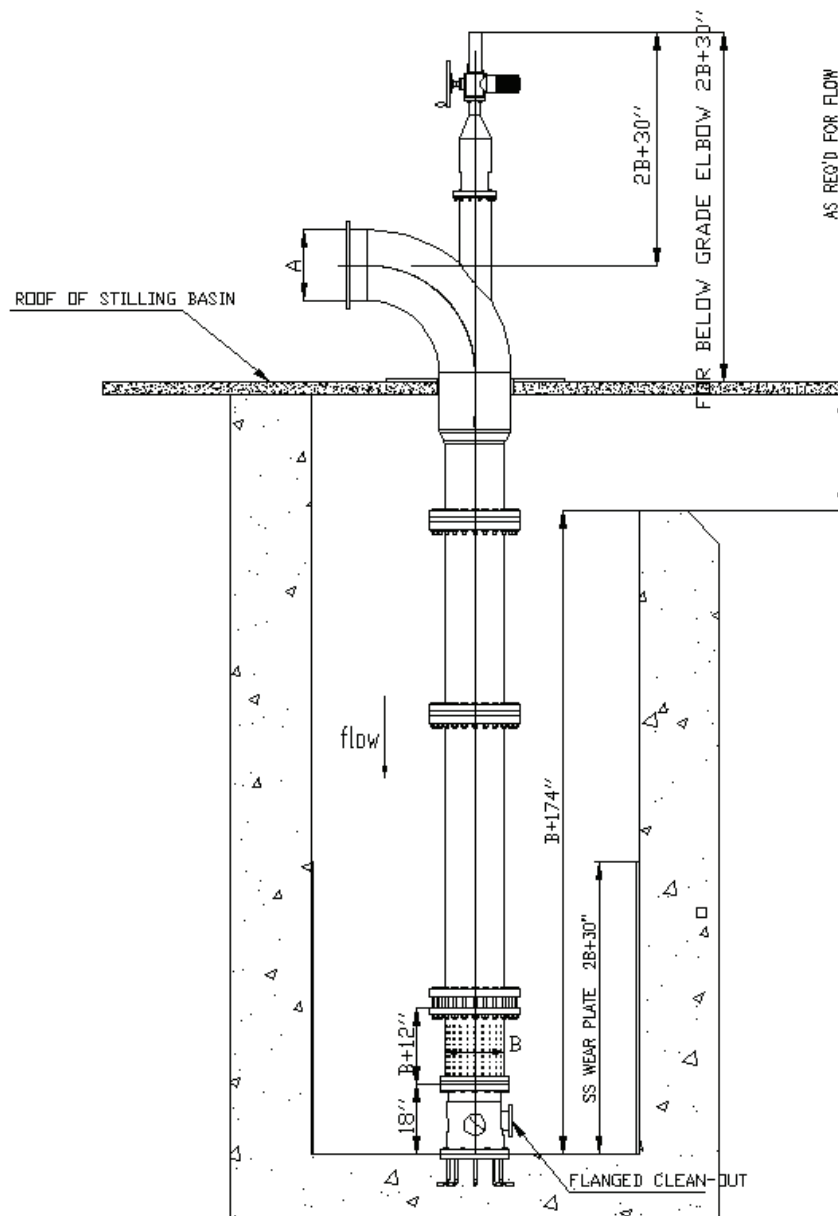
Item	Parts Name	Material
1	Inlet Elbow	Carbon steel
26	Upper Extension	Carbon steel
27	Lower Extension	Carbon steel
29	Bottom Cover	Stainless steel
31	Base Clamp	Stainless steel
42	Bolt	Stainless steel
43	Bolt	Stainless steel
45	Lock Washer	Stainless steel
47	Bolt	Stainless steel
48	Nut	Stainless steel
61	Pipe Plug	Carbon steel
64	Foundation Plate	Stainless steel
70	Bolt	Stainless steel
71	Anchor Base	Stainless steel
100	Nut	Stainless steel

*More material specifications are available on request.

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DIMENSION

Vertical pattern sleeve valve structure dimension (refer the below Fig.)



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