

SAFELOK

IV SERIES NEEDLE VALVES

Catelog 2014



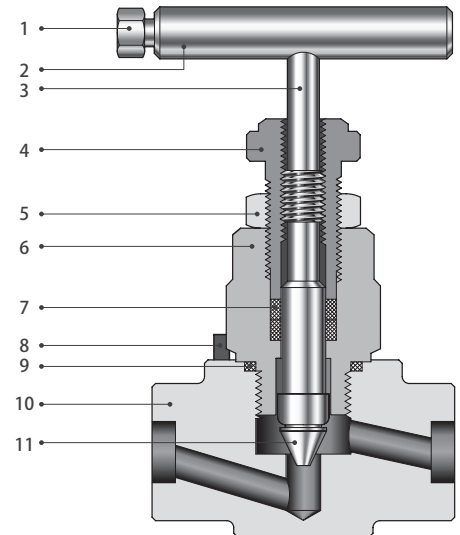
IV SERIES UNDER-CRITICAL NEEDLE VALVES

CONSTRUCTION FEATURES

- Body to bonnet design ensures high reliable Seal under severe service conditions.
- Gland packing PTFE(225°C), Graphoil(649°C).
- Non-rotating self-centering, anti-galling stem tip assembly assures bubble tight shut off.
- Stem packing below the threads prevents media contamination and thread lubricant washout.
- Stem threads rolled to eliminate galling. A special ten micro inch super finish on the seal diameter dramatically reduces operating torque.
- The stem is anti-blowout/non-removable a major safety feature.
- Packing adjustment without the valve disassembly.
- Back seating of the spindle against the bonnet provides safety by preventing the spindle from being backed out of the valve.
- Metric and fractional tube compression end connection.
- 100% factory tested.
- Fully traceable material.
- Standard material 316 Stainless Steel, Carbon Steel, Monel.
- Alternative materials available on request.

MATERIAL OF CONSTRUCTION

Item	Part description	Material
1	Nut	SS304
2	T Bar handle	SS304
3	Spindle	SS316H
4	Gland retainer	SS416
5	Check nut	SS304
6	Gland body	SS316H
7	Gland seal	GRAPHOIL
8	Lock pin	SS316
9	Sheet gasket	Alloy
10	Body	SS316H
11	Trim	STELLITE



SPECIFICATIONS

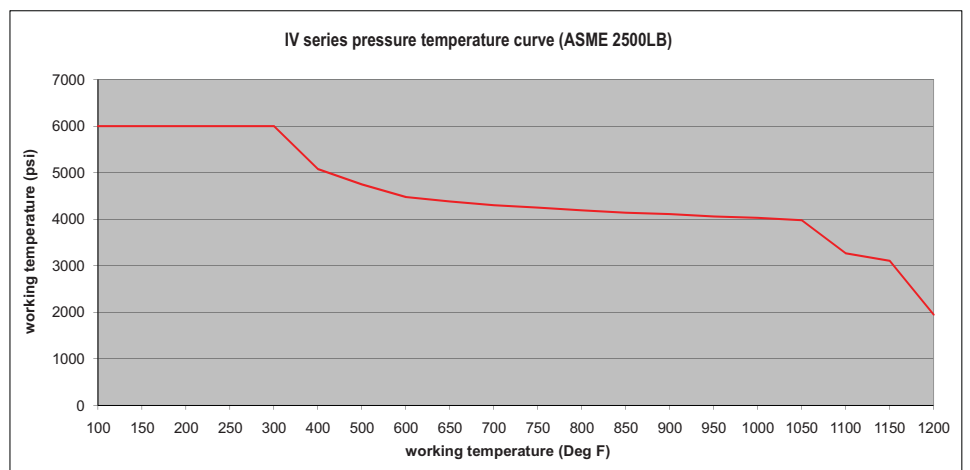
Temperature Pressure Ratings:
 ASME CLASS 2500LB —
 6000psi (414bar),
 -65°C to 1200°C (-54°C to 649°C)

Orifice Size:
 0.156" to 0.78" (4mm to 20mm)

Flow Coefficient (Cv):
 From 0.35 to 7.0

Connections:
 Socket weld (ASME B16.11)
 Butt weld (ASME B16.25)
 Twin ferrule
 Threaded

Pressure Temperature Curve



Note: Curves are based on manual valves with optional Graphoil packing. Other packing material will affect the curves.

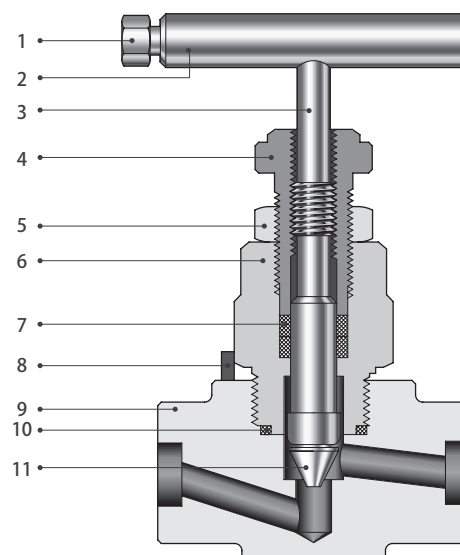
IV SERIES OVER-CRITICAL NEEDLE VALVE

CONSTRUCTION FEATURES

- Special body to bonnet and strengthened thread design ensures high reliable Seal under severe service conditions.
- Special material sheet gasket between body and bonnet is suitable for over-critical power station.
- Gland packing PTFE(225°C), Graphoil(649°C).
- Non-rotating self-centering, anti-galling stem tip assembly assures bubble tight shut off.
- Stem packing below the threads prevents media contamination and thread lubricant washout.
- Stem threads rolled to eliminate galling. A special ten micro inch super finish on the seal diameter dramatically reduces operating torque.
- The stem is anti-blowout/non-removable a major safety feature.
- Packing adjustment without the valve disassembly.
- Back seating of the spindle against the bonnet provides safety by preventing the spindle from being backed out of the valve.
- Metric and fractional tube compression end connection.
- 100% factory tested.
- Fully traceable material.
- Standard material 316 Stainless Steel, Carbon Steel, Monel.
- Alternative materials available on request.

MATERIAL OF CONSTRUCTION

Item	Part description	Material
1	Nut	SS304
2	T Bar handle	SS304
3	Spindle	SS316H
4	Gland retainer	SS416
5	Check nut	SS304
6	Gland body	SS316H
7	Gland seal	GRAPHOIL
8	Lock pin	SS316
9	Body	SS316H
10	Sheet gasket	Alloy
11	Trim	STELLITE



SPECIFICATIONS

Temperature Pressure Ratings:

ASME CLASS 4500LB —
10,000psi (689bar),
-65°C to 1200°C (-54°C to 649°C)

Orifice Size:

0.156" to 0.78" (4mm to 20mm)

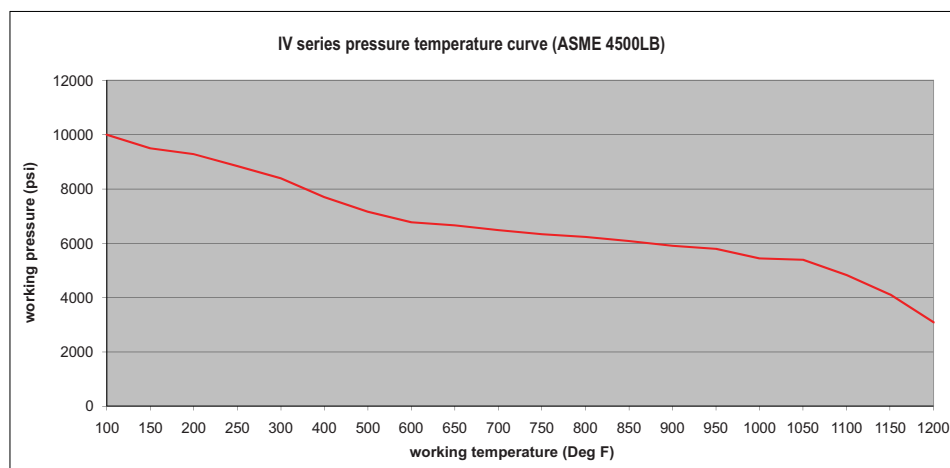
Flow Coefficient (Cv):

From 0.35 to 7.0

Connections:

Socket weld (ASME B16.11)
Butt weld (ASME B16.25)
Twin ferrule

Pressure Temperature Curve



Note: Curves are based on manual valves with optional Graphoil packing. Other packing material will affect the curves.

IV SERIES NEEDLE VALVE

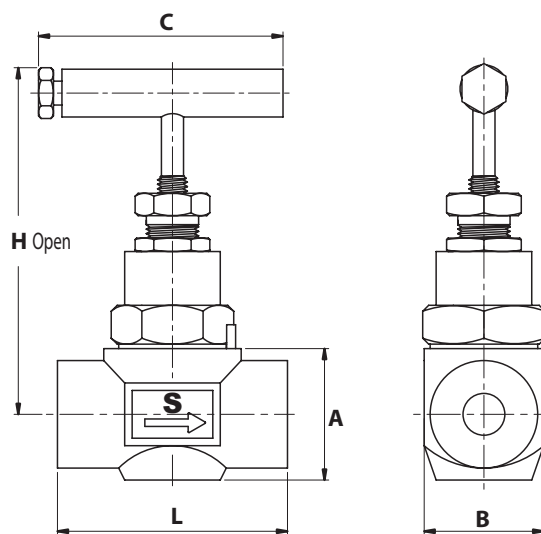
TABLE OF DIMENSIONS (Under-Critical design)



Orifice ≤14mm



Orifice >14mm



BASIC ORDERING NUMBER	ORIFICE (mm)	Cv	CONNECTION SIZE		L mm	A mm	H open mm	C mm	B mm		
			INLET	OUTLET							
IV12MC2S-6-GP-ST	6	0.86	12mm Tube fittings	12mm Tube fittings	70	32	107	60	32		
IV14MC2S-6-GP-ST			14mm Tube fittings	14mm Tube fittings	70	32	107	60	32		
IV4C2S-6-GP-ST			1/2" Tube fittings	1/2" Tube fittings	70	32	107	60	32		
IVM20×1.5-6-GP-ST			M20×1.5 Male	M20×1.5 Male	70	32	107	60	32		
IVM22×1.5-6-GP-ST			M22×1.5 Male	M22×1.5 Male	70	32	107	60	32		
IVM24×1.5-6-GP-ST			M24×1.5 Male	M24×1.5 Male	70	32	107	60	32		
IV12MSWS-6-GP-ST			12mm Socket Weld	12mm Socket Weld	70	32	107	60	32		
IV14MSWS-6-GP-ST			14mm Socket Weld	14mm Socket Weld	70	32	107	60	32		
IV16MSWS-6-GP-ST			16mm Socket Weld	16mm Socket Weld	70	32	107	60	32		
IV12MBWS-6-GP-ST			12mm Butt Weld	12mm Butt Weld	70	32	107	60	32		
IV14MBWS-6-GP-ST			14mm Butt Weld	14mm Butt Weld	70	32	107	60	32		
IV16MBWS-6-GP-ST			16mm Butt Weld	16mm Butt Weld	70	32	107	60	32		
IV14MC2S-10-GP-ST			10	2.2	14mm Tube fittings	14mm Tube fittings	76	42	136	84	42
IV4C2S-10-GP-ST					1/2" Tube fittings	1/2" Tube fittings	76	42	136	84	42
IV14MSWS-10-GP-ST	14mm Socket Weld	14mm Socket Weld			76	42	136	84	42		
IV16MSWS-10-GP-ST	16mm Socket Weld	16mm Socket Weld			76	42	136	84	42		
IV18MSWS-10-GP-ST	18mm Socket Weld	18mm Socket Weld			76	42	136	84	42		
IV14MBWS-10-GP-ST	14mm Butt Weld	14mm Butt Weld			76	42	136	84	42		
IV16MBWS-10-GP-ST	16mm Butt Weld	16mm Butt Weld			76	42	136	84	42		
IV18MBWS-10-GP-ST	18mm Butt Weld	18mm Butt Weld			76	50.8	145	84	42		
IV25MSWS-20-GP-ST	25mm Socket Weld	25mm Socket Weld			130	50.8	145	84	42		
IV28MSWS-20-GP-ST	28mm Socket Weld	28mm Socket Weld			130	50.8	145	84	42		
IV25MBWS-20-GP-ST	20	7.0	25mm Butt Weld	25mm Butt Weld	130	80	250	150	70		
IV28MBWS-20-GP-ST			28mm Butt Weld	28mm Butt Weld	130	80	250	150	70		
IV25MBWS-20-GP-ST			25mm Butt Weld	25mm Butt Weld	130	80	250	150	70		
IV28MBWS-20-GP-ST			28mm Butt Weld	28mm Butt Weld	130	80	250	150	70		

Note: The part number is for the Graphoil packing and 316SS body, you can choose the other material and packing.

Dimensions are for reference only and are subject to change without notice.

IV SERIES NEEDLE VALVE

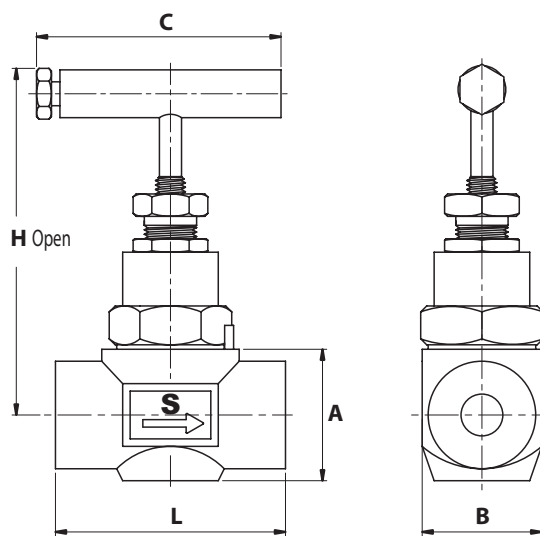
TABLE OF DIMENSIONS (OVER-CRITICAL DESIGN)



Orifice ≤14mm



Orifice >14mm



BASIC ORDERING NUMBER	ORIFICE	Cv	CONNECTION SIZE		L mm	A mm	H open mm	C mm	B mm
	(mm)		INLET	OUTLET					
IVM20×1.5-6-GP-ST-OC	6	0.86	M20×1.5 Male	M20×1.5 Male	70	39	114	60	32
IVM22×1.5-6-GP-ST-OC			M22×1.5 Male	M22×1.5 Male	70	39	114	60	32
IVM24×1.5-6-GP-ST-OC			M24×1.5 Male	M24×1.5 Male	70	39	114	60	32
IV12MSWS-6-GP-ST-OC			12mm Socket Weld	12mm Socket Weld	70	39	114	60	32
IV14MSWS-6-GP-ST-OC			14mm Socket Weld	14mm Socket Weld	70	39	114	60	32
IV16MSWS-6-GP-ST-OC			16mm Socket Weld	16mm Socket Weld	70	39	114	60	32
IV12MBWS-6-GP-ST-OC			12mm Butt Weld	12mm Butt Weld	70	39	114	60	32
IV14MBWS-6-GP-ST-OC			14mm Butt Weld	14mm Butt Weld	70	39	114	60	32
IV16MBWS-6-GP-ST-OC			16mm Butt Weld	16mm Butt Weld	70	39	114	60	32
IV14MSWS-10-GP-ST-OC	10	2.2	14mm Socket Weld	14mm Socket Weld	76	50	145	84	40
IV16MSWS-10-GP-ST-OC			16mm Socket Weld	16mm Socket Weld	76	50	145	84	40
IV18MSWS-10-GP-ST-OC			18mm Socket Weld	18mm Socket Weld	76	50	145	84	40
IV14MBWS-10-GP-ST-OC			14mm Butt Weld	14mm Butt Weld	76	50	145	84	40
IV16MBWS-10-GP-ST-OC			16mm Butt Weld	16mm Butt Weld	76	50	145	84	40
IV18MBWS-10-GP-ST-OC			18mm Butt Weld	18mm Butt Weld	76	50	145	84	40
IV25MSWS-20-GP-ST-OC	20	7.0	25mm Socket Weld	25mm Socket Weld	130	80	250	84	40
IV28MSWS-20-GP-ST-OC			28mm Socket Weld	28mm Socket Weld	130	80	250	150	65
IV25MBWS-20-GP-ST-OC			25mm Butt Weld	25mm Butt Weld	130	80	250	150	65
IV28MBWS-20-GP-ST-OC			28mm Butt Weld	28mm Butt Weld	130	80	250	150	65

Note: The part number is for the Graphoil packing and 316SS body, you can choose the other material and packing.

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HOW TO ORDER SAFELOK NEEDLE VALVES

