



SUPERFREEZE



BUTT WELDING SHUT-OFF VALVES
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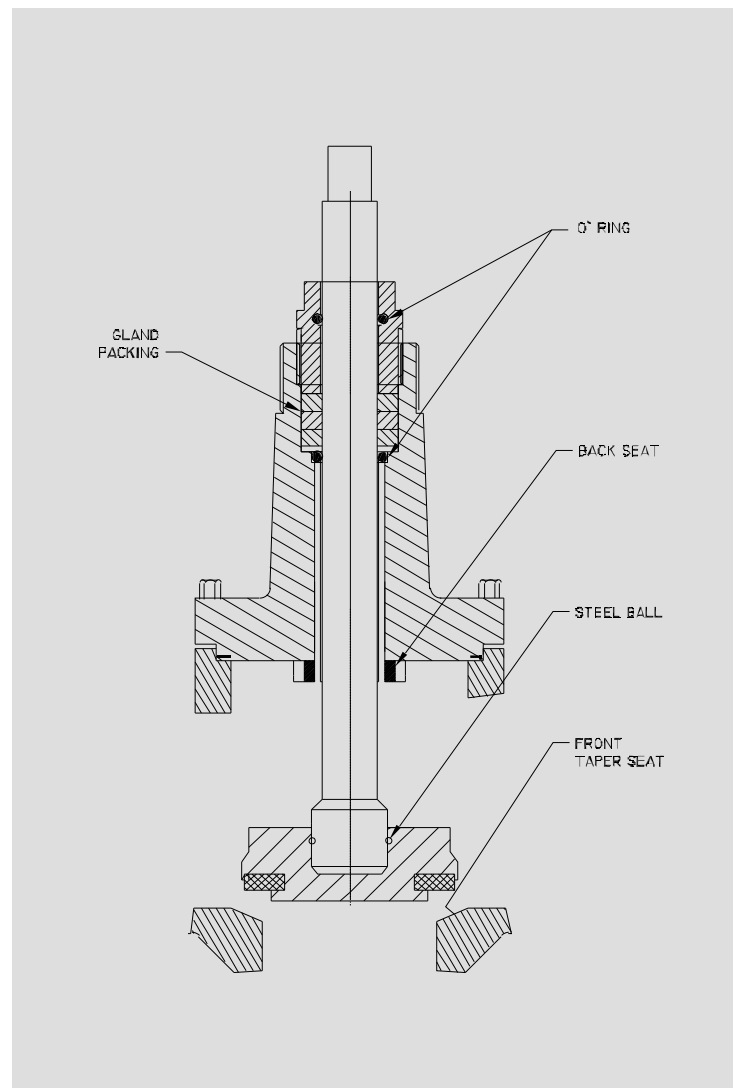
TYPE : SBW
PORT SIZE : 1 ½ " thru 12" (40mm-300mm) for Globe & Angle form.

REFRIGERANTS

Suitable for all common refrigerants including R-717 (Ammonia), R-134 a, R-404, neutral, gaseous and liquid media.

INTRODUCTION

These well-designed and constructed low pressure drop refrigerant shut-off valves are butt-weldable directly to steel piping, thereby eliminating potential leaky flanges or threaded joints, and simplifying installation. The important feature of these valves is non leak packing and back seat design.



APPLICATIONS

Ammonia refrigeration system suction, liquid discharge, recirculating liquid, hot gas and oil lines, using handwheel of seal cap models and also compressor suction, discharge connections, condenser, evaporator inlet and outlet connections in ammonia, R22, R134a and other approved refrigerant.



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SPECIFICATIONS

Body	: ASTM A-352 Grade LCB
Stem	: Stainless/ forged steel Zn. Plated.
Disc Holder	: steel (stainless/ Zn. Plated).
Seat Disc	: PTFE Teflon.
Packing Nut	: steel.
Stem Packing	: Neoprene "O" Rings with graphite gland packing.
Handwheel	: steel / Iron Alloy.
Seal Cap	: Aluminum, vented.
Safe working pressure	: 365 psig (25 bar).
Temperature range	: -46°C to +116° C (-50 F to + 240 F).
Temperature below	: -60 F at lower pressure.

FEATURES

- Back Seating and gland packing :The heart of **SUPERFREEZE** shut-off-valve is the Patented stempacking and backseat design. This Patented design is used exclusively on **SUPERFREEZE** valves and virtually eliminates stem leakage.
- Size Range :1/2" to 12" (40mm to 300mm)
- Light Weight :Ease of installation
- Flow :Can accept flow in both direction
- Available in both wheel vented cap option
- Available in angle and straight types

INSTALLATION

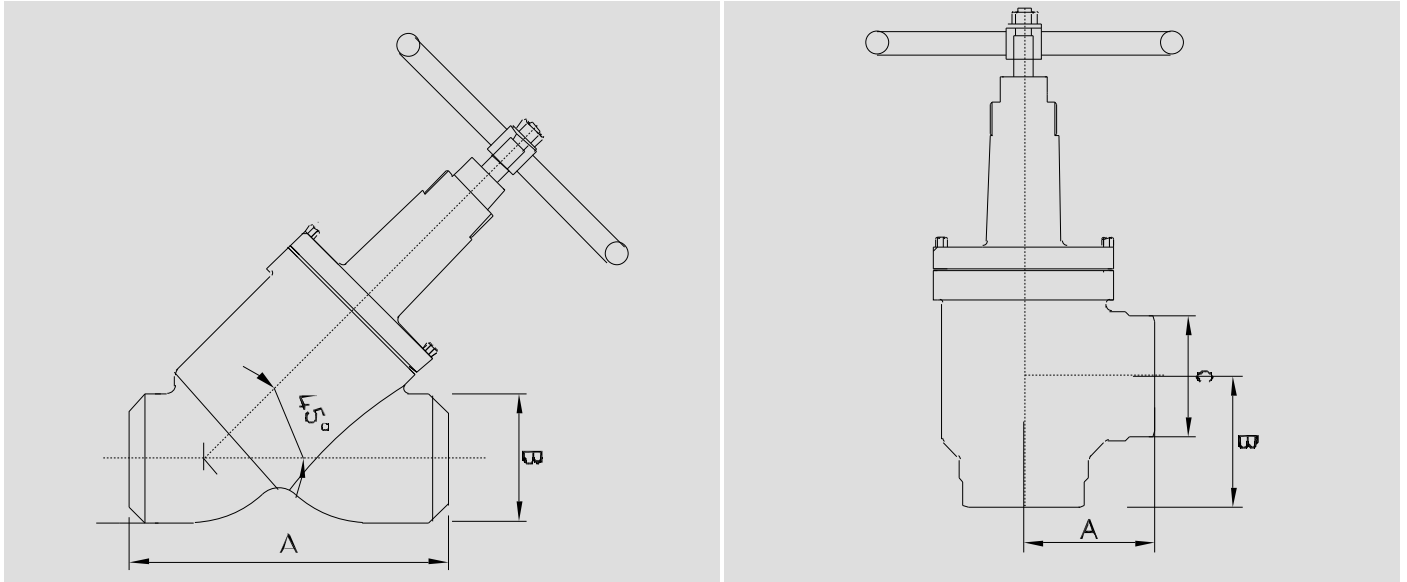
All of these valves may be installed in horizontal or vertical pipe lines. Stems may be horizontal or vertical or angled upward. Globe valves and angle valves in horizontal suction lines, liquid overfeed return lines, of condenser drain lines should preferably have stems horizontal rather than upward to avoid partial liquid trapping at valve seat orifices. Angle valves under 12" will not trap liquid or gas at the seat orifice. **Inlet pressure for all valves sizes should normally be under valve seat disc. However, high pressure difference might push the valve disc very slightly off its seat, requiring very high handwheel or wrench torque to overcome. Therefore, for pressure differences exceeding approximately 125 psi, valves 8" and larger should have inlet pressure above valve disc, using a small by pass valve for pre-opening equalization.** This makes opening torque more reasonable. Such as high pressure difference application is very unlikely except for discharge line to suction line cross over. In some cases, such as isolation pressure vessels or ammonia diffusion boxes, it may be necessary to install valve with the flow opposite normal direction in order to have inlet pressure on top of the seat.

A valve should preferably have its bonnet/stem/seat disc assembly removed before welding (refer fig. B). Which protects Teflon seat disc from welding sparks, and facilitates cleaning of welding debris from body interior prior to valve operation. The valve stem should be several turns open when removing and replacing the bonnet assembly. The Teflon seat disc should be protected when outside of the valve. Where it is necessary or when it is standard practice to weld a valve into the line without bonnet removal, stem should be opened several turns to prevent seat disc heat damage. Because of great compactness, some extra care if welded into pipelines without disassembly in order to avoid welding sparks striking the Teflon seat from the outlet weld connection.



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WELD-IN-LINE GLOBE VALVE				WELD-IN-LINE ANGEL VALVE				
SIZE		A	B	SIZE	A	B	C	
1-1/2"	40mm	142	48	1-1/2"	40mm	60	60	48
2"	50mm	164	60	2"	50mm	70	70	60
2-1/2"	65mm	200	75	2-1/2"	65mm	80	80	75
3"	80mm	238	86	3"	80mm	85	85	86
4"	100mm	276	110	4"	100mm	108	108	110
5"	125mm	328	141	5"	125mm	121	121	141
6"	150mm	409	164	6"	150mm	136	136	164
8"	200mm	490	214	8"	200mm	171	171	214
10"	250mm	850	274	10"	250mm	216	216	274
12"	300mm	1030	325	12"	300mm	273	273	324

FLOW COEFFICENTS

Size	Angle		Globe	
	Cv*	Equiv. Length Ft.	Cv*	Equiv. Length Ft
1½"	48	12	47	13
2"	83	26	80	28
2½"	141	21	131	24
3"	204	31	195	34
4"	310	54	300	58
5"	596	46	575	49
6"	818	62	788	67
8"	1435	84	1380	91
10"	2450	93	2350	101
12"	3410	115	3275	124

*The CV factor is based on flow in U.S. G.P.M. and pressure drop in PSI.



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ORDERING INFORMATION

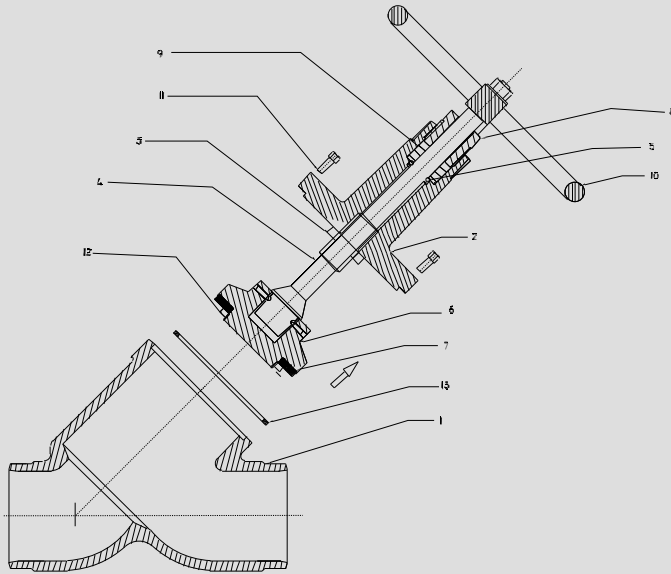
SIZE	DESCRIPTION	CAT. NO.
1½"	Globe Handwheel, Angle Handwheel, Globe Seal Cap, Angle Seal Cap	GW40H AW40H GW40C AW40C
2"	Globe Handwheel, Angle Handwheel, Globe Seal Cap, Angle Seal Cap	GW50H AW50H GW50C AW50C
2½"	Globe Handwheel, Angle Handwheel, Globe Seal Cap, Angle Seal Cap	GW65H AW65H GW65C AW65C
3"	Globe Handwheel, Angle Handwheel, Globe Seal Cap, Angle Seal Cap	GW75H AW75H GW75C AW75C
4"	Globe Handwheel, Angle Handwheel, Globe Seal Cap, Angle Seal Cap	GW100H AW100H GW100C AW100C
5"	Globe Handwheel, Angle Handwheel, Globe Seal Cap, Angle Seal Cap	GW125H AW125H GW125C AW125C
6"	Globe Handwheel, Angle Handwheel, Globe Seal Cap, Angle Seal Cap	GW150H AW150H GW150C AW150C
8"	Globe Handwheel, Angle Handwheel, Globe Seal Cap, Angle Seal Cap	GW200H AW200H GW200C AW200C
10"	Globe Handwheel, Angle Handwheel, Globe Seal Cap, Angle Seal Cap	GW250H AW250H GW250C AW250C
12"	Globe Handwheel, Angle Handwheel, Globe Seal Cap, Angle Seal Cap	GW300H AW300H GW300C AW300C



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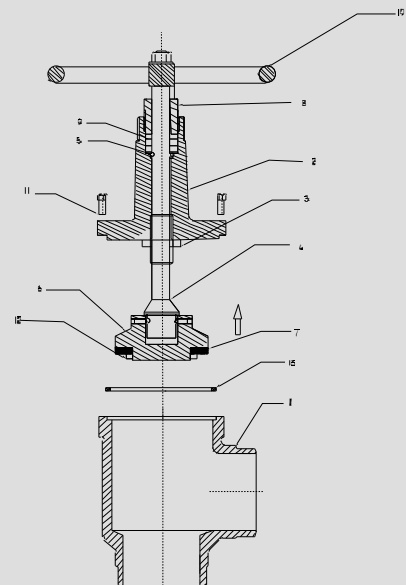
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PART LIST



ITEM	DESCRIPTION	QTY	PART NO
1	BODY	1	35060100
2	BONNET	1	35060200
3	BACK SEAT	1	35060501
4	VALVE STEM	1	35060300
5	'O' RING	1	35060800
6	VALVE DISC	1	35060400
7	SEAT RING	1	35060500
8	GLAND NUT	1	35062304
9	GLAND RING	6	35061302
10	WHEEL	1	35062800
11	BOLT	4	35061002
12	RETAINER PLATE	1	35060600
13	GASKET	1	35061100

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1	BODY	1	45060100
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WELDING PROCEDURE FOR WELD-IN-LINE SHUT OFF VALVES

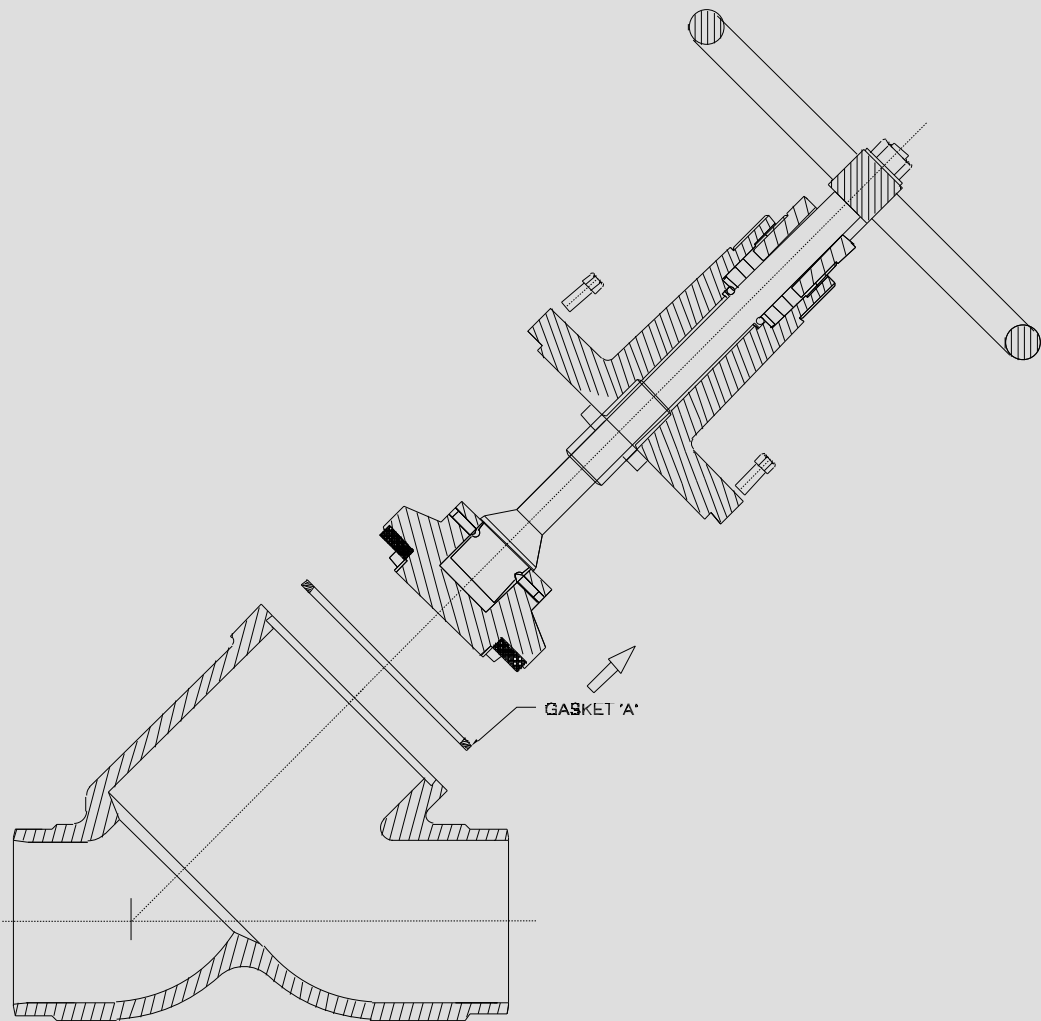


FIG - B

Before welding the valve in the line, kindly unscrew the bonnet assembly as shown in the figure above.

After welding, clean the valve seat area of any welding fluxes and then retighten the bonnet assembly making sure the gasket 'A' is properly fixed.

SUPERFREEZE INDIA LIMITED

122, Qutab Plaza DLF Phase-1
Gurgaon-122002 (Haryana), India.
Tel: +91-124-4301636, +919810048749
Fax: +91-1276-241549
Email: sales@superfreeze.com
Website: www.superfreeze.com