

# **Conval** INC.

## World Class Clampseal® Cryogenic Valves

- *Metal-to-Metal Pressure Seal Bonnet*
- *Solid Stellite Seating Surfaces*
- *Single-piece Gland*
- *Tight Shut-off*
- *In-line Servicing*



# Conval Clampseal® Cryogenic Valves are designed for high-pressure, low-temperature applications to -320°F.



## **STANDARD SIZES**

1/2" through 4"  
SW and BW Ends  
Special ends available

## **PRESSURE RATING**

ASME 1500 and 2500  
ANSI B31.3, ANSI B16.34, MSS SP-84  
Special pressure classes available

## **STANDARD MATERIALS**

Forged Stainless Steel SA 182 F316  
Special materials available

## **DESIGN FEATURES**

### ***Metal-to-metal Pressure Seal Bonnet***

The simple and effective pressure seal bonnet provides ready access for servicing with no welds to cut or seal rings or gaskets to replace. The body-to-bonnet joint integrity is maintained through countless thermal cycles.

### ***Solid Stellite Seating Surfaces***

Positive shut-off is achieved in extreme cold conditions, over a very long operational life, due to the solid Stellite bonnet and disc.

### ***Single-piece Gland***

In extreme environments, the simpler the design and the fewer the parts, the better. The durable, single-piece stainless steel gland contributes to the longevity of the cryogenic valve.

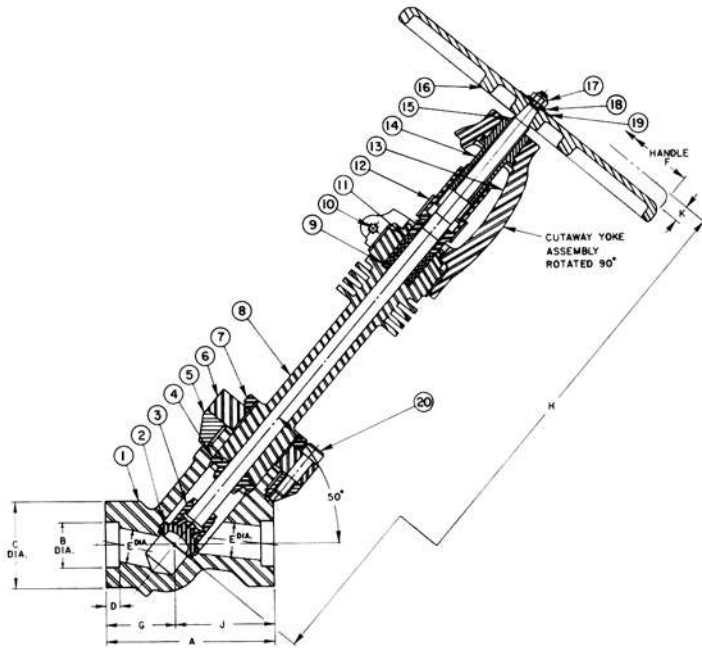
### ***In-line Servicing***

Conval's cryogenic valve is the world's most serviceable valve of its type. Repacking can be accomplished by swapping the bonnet chamber with the fresh pre-packed unit.

### ***Two-Year Warranty***

Conval is committed to unsurpassed quality. We are so confident of the quality of our product, that we offer a two-year warranty.

# SPECIFICATIONS



## LIST OF MATERIALS

NO.	NAME	QTY	MATERIAL	SPECIFICATIONS
1	BODY	1	FORGED STAINLESS	SA 182 F316
2	DISC	1	STELLITE NO. 6	AMS 5387
3	RETAINER	1	STAINLESS	SA 479 316
4	BONNET	1	STELLITE NO. 21	AMS 5385
5	FLANGE	1	STAINLESS	SA 479 316
6	CLAMP RING	1	STAINLESS	SA 479 316
7	CHECK NUT	1	STAINLESS	SA 479 316
8	CHAMBER	1	STAINLESS	SA 479 316
9	GUIDE RING	1	TEFLON	
10	CLAMP BOLT	1	STAINLESS	SA193 GR B8M
11	PACKING RING	6	GRAPHITE	
12	GLAND	1	STAINLESS	SA 479 316
13	YOKE	1	FORGED STAINLESS	SA 182 F316
14	YOKE BUSHING	1	NITRONIC 60	SA 479 UNS S21800
15	STEM	1	STAINLESS	SA 193 GR B8M
16	HANDLE	1	DUCTILE IRON	SA 536
17	LOCKNUT	1	STEEL	
18	WASHER	1	STEEL	
19	I.D. PLATE	1	ALUMINUM	
24	BOLT	6	STAINLESS	SA 320 GRB8 CLASS 1

Pressure Class	Figure Number	Size	Cv	WT Lbs.	Valve Outline Dimensions																						
					SW	BW	A	B	C	D	E	F	SW	BW	H	SW	BW	J	BW	K							
2155	12J2-316 SW	1/2	6	8	3 3/4	0.855	1 5/8	3/8	1/2	6 1/2	1 1/2	13 3/4	2 1/4	9/16	3.6	95	22	41	10	13	165	38	349	57	14		
		3/4	9.5	16	4 1/2	4 3/4	1.065	2 5/16	1/2	5/8	8	1 3/4	16 5/16	2 3/4	3	7.3	114	27	59	13	16	203	44	414	70	76	17
		1	15.4	15	4 1/2	4 3/4	1.330	2 5/16	1/2	13/16	8	1 3/4	16 3/8	2 3/4	3	6.8	114	34	59	13	21	203	44	416	70	76	19
		1 1/4	24	35	6 1/4	6 1/2	1.675	3 3/16	1/2	1	12	2 9/16	22 5/16	3 11/16	3 15/16	15.9	159	43	81	13	25	305	65	567	94	100	30
		1 1/2	38	34	6 1/4	6 1/2	1.915	3 3/16	1/2	1 1/4	12	2 9/16	22 5/16	3 11/16	3 15/16	15.4	159	49	81	13	32	305	65	567	94	100	30
	12J4-316 BW	2	62	53	7 1/4	2.406	3 3/4	5/8	1 1/2	14	2 11/16	26 1/8	4 9/16	1 5/8	24.1	184	61	95	16	38	356	68	664	116	41		
		2 1/2	86	90	9	9 5/8	2.906	4	5/8	1 7/8	17	3 5/16	3 5/8	2 1/8	40.9	229	74	102	16	48	432	84	759	144	152	54	
		3	122	140	*	12	*	4 7/8	*	2 1/4	21	*	5 5/16	34 1/16	*	63.6	*	305	*	57	533	*	865	*	170	56	
		4	122	140	*	12	*	4 7/8	*	2 1/4	21	*	5 5/16	34 1/16	*	3.6	*	305	*	57	533	*	865	*	170	56	
						*	305	*	124	*	57	533	*	135	865	*											
3045	13J2-316 SW	1/2	4.1	9	3 3/4	0.855	1 5/8	3/8	7/16	6 1/2	1 1/2	13 13/16	2 1/4	1/2	4.1	95	22	41	10	11	165	38	351	57	13		
		3/4	9.5	16	4 1/2	4 3/4	1.065	2 5/16	1/2	5/8	8	1 3/4	16 5/16	2 3/4	3	7.3	114	27	59	13	16	203	44	414	70	76	17
		1	9.5	16	4 1/2	4 3/4	1.330	2 5/16	1/2	5/8	8	1 3/4	16 5/16	2 3/4	3	7.3	114	34	59	13	16	203	44	414	70	76	17
		1 1/4	24	35	6 1/4	6 1/2	1.675	3 3/16	1/2	1	12	2 9/16	22 5/16	3 11/16	3 15/16	15.9	159	43	81	13	25	305	65	567	94	100	30
		1 1/2	24	35	6 1/4	6 1/2	1.915	3 3/16	1/2	1	12	2 9/16	22 5/16	3 11/16	3 15/16	15.9	159	49	81	13	25	305	65	567	94	100	30
	13J4-316 BW	2	38	54	7 1/4	2.406	3 3/4	5/8	1 1/4	14	2 11/16	25 7/8	4 9/16	1 1/4	24.5	184	61	95	16	32	356	68	657	116	32		
		2 1/2	62	92	*	9 5/8	*	4	*	1 1/2	17	*	3 5/8	29 9/16	*	41.8	*	244	*	38	432	*	751	*	6	1 13/16	
		3	86	142	&	12	*	4 7/8	*	1 7/8	21	*	5 5/16	34	*	64.5	*	305	*	48	533	*	864	*	170	54	
			86	142	*	12	*	4 7/8	*	1 7/8	21	*	5 5/16	34	*	64.5	*	305	*	48	533	*	864	*	170	54	

\* Socket weld ends not available in these sizes

Numbers shown in black indicate dimensions in inches and weight in pounds. Numbers shown in blue indicate dimensions in millimeters and weight in kilograms.

## The Conval Story

In 1962, Mr. Chester Siver completed designs for a revolutionary line of high-pressure, forged steel valves. Hamilton Standard (now Hamilton Sunstrand), a division of United Technologies Corporation, was asked to use their then-new Electron Beam Welding technology for joining of parts into valves for subassemblies. Hamilton Standard became intrigued with the valve as an ideal application of the Electron Beam Welding technique, and negotiated a contract for the rights to manufacture and sell the valve. Mr. Siver served as manager of the valve project.



The first CLAMPSEAL® valves were introduced to the market by Hamilton Standard in 1964. However, in the mid-1960's, growing demand for the firm's popular aerospace products forced Hamilton Standard to make the decision to abandon its industrial products projects. The rights to the CLAMPSEAL valve reverted back to Mr. Siver. Since CLAMPSEAL valves were born in Connecticut, Mr. Siver founded "Conval" (short for Connecticut Valve) in 1967. Today, the valves are still manufactured in Connecticut, a state with a longstanding reputation for technological innovation and manufacturing excellence.

Conval celebrated its 40th anniversary in 2007 with the launch of the new Conval Ball Valve. Conval has grown into a leader in valves for the world's most demanding applications. We have a global team of experts to help to meet your most challenging needs. We invite you to contact us today.

**High-pressure, high-temperature ball, bellows, bonnetless, check, gate, globe, throttling, and urea service valves for the world's most demanding applications.**



**1967-2007**

***Celebrating 40+ years of excellence!***

***Thank you for your business.***



**MADE IN USA**

***ISO 9001 certified since  
September 11, 1992***

***Conval*** **INC.**

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