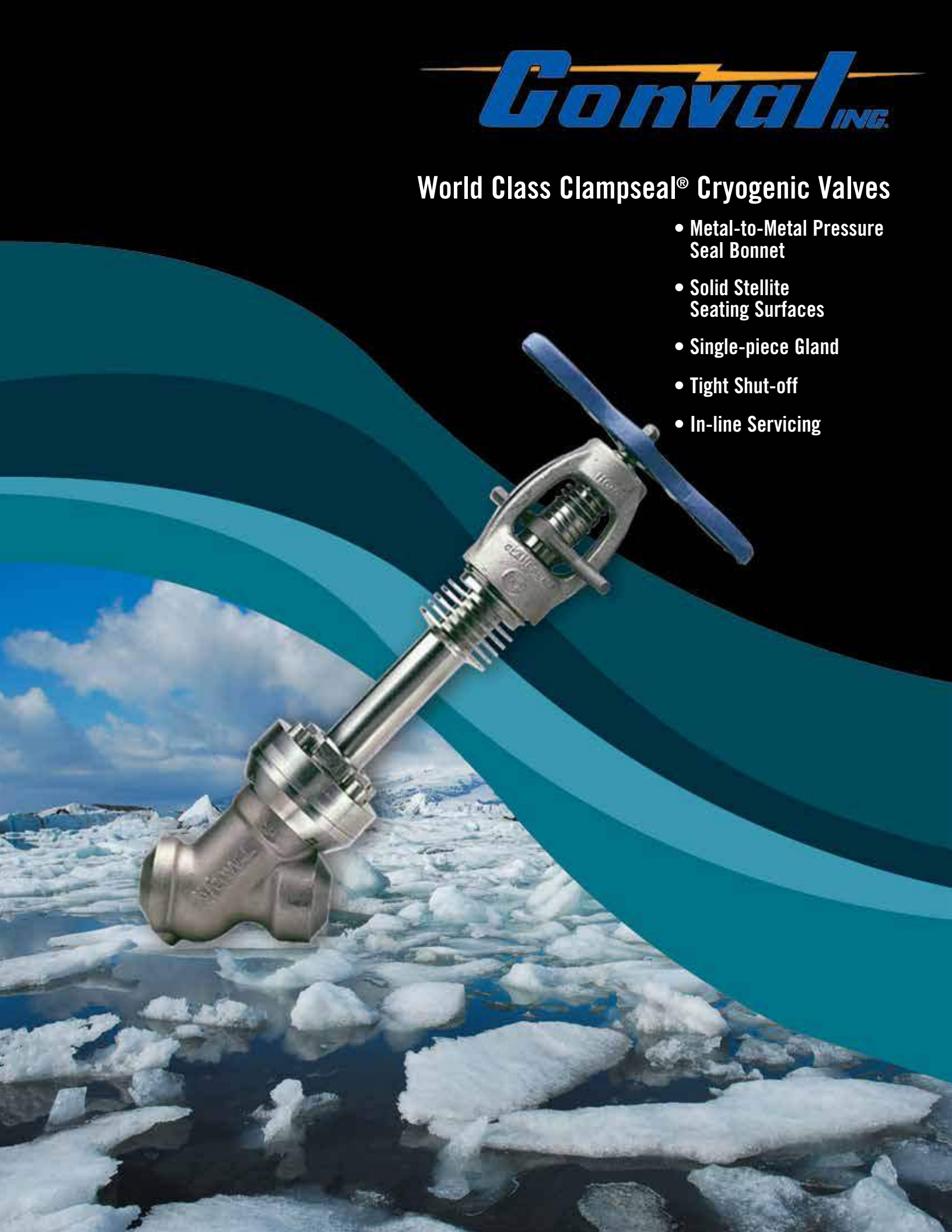
Conval INC.

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, ASME B16.34
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 seat and disc.

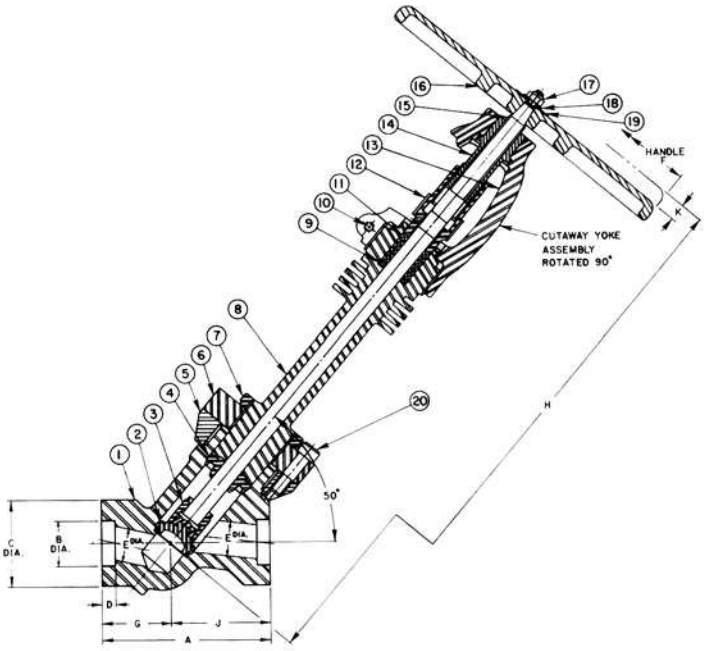
Single-piece Gland
In extreme environments, the simpler the design and the fewer the parts, the better. The durable, single-piece stainless steel gland contributes to the longevity of the cryogenic valve.

In-line Servicing
Conval's cyrogenic 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.

Manufactured under one or more of the following US Patents: 3,219,311; 3,257,095; 3,275,290; 3,418,708 and various foreign patents. Other US and foreign patents pending.

SPECIFICATIONS



LIST OF MATERIALS

NO.	NAME	QTY	MATERIAL	SPECIFICATIONS
I	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	GRAPHITE OR TEFLON
12	GLAND	1	STAINLESS	SA 479 316
13	YOKE	1	FORGED STAINLESS	SA 182 F316
14	YOKE BUSHING	1	NITTRONIC 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	STAINLESS	
24	BOLT	6	STAINLESS	SA 320 GRB8 CLASS 1

*Up to 2" includes handle; above 2" includes hand wheel.

Pressure Class	Figure Number	Size	Cv	WT Lbs.	Valve Outline Dimensions A SW	A BW	B	C	D	E	F	G SW	G BW	H	J SW	J BW	K
2155	12J2-316 SW	1/2	6	8 3.6	3 3/4 95		0.855 22	1 5/8 41	3/8 10	1/2 13	6 1/2 165	1 1/2 38		13 3/4 349	2 1/4 57		9/16 14
		3/4	9.5	16 7.3	4 1/2 114	4 3/4 121	1.065 27	2 5/16 59	1/2 13	5/8 16	8 203	1 3/4 44		16 5/16 414	2 3/4 70	3 76	11/16 17
		1	15.4	15 6.8	4 1/2 114	4 3/4 121	1.330 34	2 5/16 59	1/2 13	13/16 21	8 203	1 3/4 44		16 3/8 416	2 3/4 70	3 76	3/4 19
		1 1/4	24	35 15.9	6 1/4 159	6 1/2 165	1.675 43	3 3/16 81	1/2 13	1 25	12 305	2 9/16 65		22 5/16 567	3 11/16 94	3 15/16 100	1 3/16 30
		1 1/2	38	34 15.4	6 1/4 159	61/2 165	1.915 49	3 3/16 81	1/2 13	1 1/4 32	12 305	2 9/16 65		22 5/16 567	3 11/16 94	3 15/16 100	1 3/16 30
	12J4-316 BW	2	62	53 24.1	7 1/4 184		2.406 61	3 3/4 95	5/8 16	1 1/2 38	14 356	2 11/16 68		26 1/8 664	4 9/16 116		1 5/8 41
		2 1/2	86	90 40.9	9 229	9 5/8 244	2.906 74	4 102	5/8 16	1 7/8 48	17 432	3 5/16 84	3 5/8 92	29 7/8 759	5 11/16 144	6 152	2 1/8 54
		3	122	140 63.6	* *	12 305	* *	4 7/8 124	* *	2 1/4 57	21 533	* *	5 5/16 135	34 1/16 865	* *	6 11/16 170	2 3/16 56
		4	122	140 3.6	* *	12 305	* *	4 7/8 124	* *	2 1/4 57	21 533	* *	5 5/16 135	34 1/16 865	* *	6 11/16 170	2 3/16 56
3045	13J2-316 SW	1/2	4.1	9 4.1	3 3/4 95		0.855 22	1 5/8 41	3/8 10	7/16 11	6 1/2 165	1 1/2 38		13 13/16 351	2 1/4 57		1/2 13
		3/4	9.5	16 7.3	4 1/2 114	4 3/4 121	1.065 27	2 5/16 59	1/2 13	5/8 16	8 203	1 3/4 44		16 5/16 414	2 3/4 70	3 76	11/16 17
		1	9.5	16 7.3	4 1/2 114	4 3/4 121	1.330 34	2 5/16 59	1/2 13	5/8 16	8 203	1 3/4 44		16 5/16 414	2 3/4 70	3 76	11/16 17
		1 1/4	24	35 15.9	6 1/4 159	6 1/2 165	1.675 43	3 3/16 81	1/2 13	1 25	12 305	2 9/16 65		22 5/16 567	3 11/16 94	3 15/16 100	1 3/16 30
		1 1/2	24	35 15.9	6 1/4 159	61/2 165	1.915 49	3 3/16 81	1/2 13	1 25	12 305	2 9/16 65		22 5/16 567	3 11/16 94	3 15/16 100	1 3/16 30
	13J4-316 BW	2	38	54 24.5	7 1/4 184		2.406 61	3 3/4 95	5/8 16	1 1/4 32	14 356	2 11/16 68		25 7/8 657	4 9/16 116		1 1/4 32
		2 1/2	62	92 41.8	* *	9 5/8 244	* *	4 102	* *	1 1/2 38	17 432	* *	3 5/8 92	29 9/16 751	* *	6 152	1 13/16 46
		3	86	142 64.5	& *	12 305	* *	4 7/8 124	* *	1 7/8 48	21 533	* *	5 5/16 135	34 864	* *	6 11/16 170	2 1/8 54
		4	86	142 64.5	* *	12 305	* *	4 7/8 124	* *	1 7/8 48	21 533	* *	5 5/16 135	34 864	* *	6 11/16 170	2 1/8 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.

Founded in 1967, 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.

N NPT

Thank you for your business!
ISO 9001 certified since 1992
PED certified since 2003
Nuclear N-stamp since 2006



MADE IN U. S. A

Conval INC.

ARMOUR VALVE

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Website: armourvalve.com

Conval's policy is one of continuous development and improvement. Every effort is made to produce up-to-date literature but this catalog should not be regarded as an infallible guide to current specifications and does not form part of any contract. Conval reserves the right to make product improvements and changes without prior notice.

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