

# DUO-CHEK<sup>®</sup>

brands you trust.



DUO-CHEK<sup>®</sup> High Performance Non-Slam Check Valves  
Europe, Middle East and Africa (MEA) Regions

**CRANE**<sup>®</sup>

Energy Flow Solutions

[www.craneenergy.com](http://www.craneenergy.com)

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## High Performance Non-Slam Check Valves Key Features

Features	Benefits
<b>Lightweight and Compact Wafer Design</b>	Installs between mating flanges with 10 to 20% the weight of flanged swing checks in popular sizes - <b>Saves money in initial valve cost and provides lower installation cost.</b>
<b>Dual Plate, Flat Seat Design</b>	<b>Gives superior performance and tight shutoff to meet industry standards.</b>
<b>Independent Spring Action</b>	Maximum deflection of 140°, provides improved valve response and longer life - <b>Saves money with longer valve life and improved system performance by reducing water hammer.</b>
<b>Independent Plate Suspension with Unique Hinge Design (larger sizes)</b>	Improves valve response and reduces friction forces by 66% - <b>Further assurances of non-slam performance with faster valve response.</b>
<b>Simple, External Body Geometry</b>	Configuration simplifies valve insulation - <b>Saves money.</b>
<b>Variety of Body Designs Available - Lug and Double Flange</b>	Provides options to suit application needs - <b>Eases your selection process by utilizing the industry leader as your single source.</b>
<b>Wide Variety of Materials</b>	Versatility for many services - <b>Satisfies more application needs.</b>
<b>Flexibility in Installation Position</b>	Provides more rigidity than pipe, eliminating concerns of pipe bending loads of flanged valves - <b>Safety against thermal or seismic catastrophes.</b>
<b>Body Strength and Rigidity</b>	Some sizes suitable for horizontal or vertical up positions - <b>Simplifies piping design, eliminates constraints that swing checks create.</b>
<b>Retainerless Duo-Chek Design Eliminates Body Penetrations</b>	For critical service applications, prevents possible escape of unwanted and/or hazardous materials to atmosphere - <b>Provides safety in critical services by eliminating environmental concerns.</b>
<b>Vertical Hinged Design</b>	In horizontal position flow allows plates to function freely and full open under lower flow conditions as compared to swing check - <b>Reduces pressure loss, improves dynamic response and eliminates valve chatter.</b>
<b>Special Valves Meet Market Needs:</b> <ul style="list-style-type: none"> <li>• Special Lined</li> <li>• Hub Ends</li> <li>• Weld Ends</li> <li>• PED Certified (CE)</li> <li>• Low Temperature Applications - Cryogenic</li> <li>• ABS Certified</li> <li>• CRN Registration</li> </ul>	Wide size range, pressure range and added options allow further market needs to be met - <b>Reliance on world's largest wafer check line to supply more needs.</b>



## High Performance Non-Slam Check Valves Lug Style

### Lug Style Valves

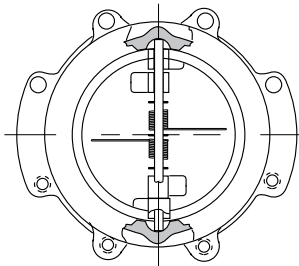
**Size Range:** 2" - 24"

Carbon Steel to ASTM A216 Grade WCB

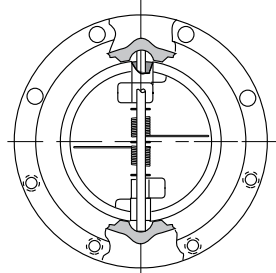
Stainless Steel to ASTM A351 Grade CF8M

Low Temperature Carbon Steel to ASTM A352 Grade LCC

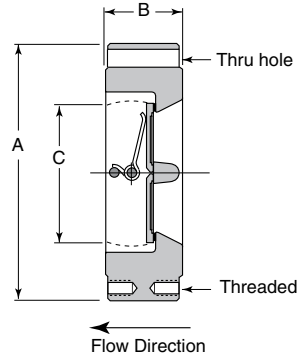
Lug valves are furnished with thru-hole bolting in accordance with API 594. Threaded bolt holes are available but nonstandard as valve is not designed nor should be used for dead-end service.



Scallop



Full Body



Pin must be vertical for horizontal flow.

#### ASME Class 150

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	6	152	2 3/8	60	1 15/16	49	17	8
2 1/2"	65	7	178	2 5/8	67	2 11/32	60	17	8
3"	80	7 1/2	191	2 7/8	73	2 29/32	74	44	20
4"	100	9	229	2 7/8	73	3 53/64	97	44	20
5"	125	10	254	3 3/8	86	4 13/16	122	48 1/2	22
6"	150	11	279	3 7/8	98	5 49/64	146	77	35

#### ASME Class 900

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	8 1/2	216	2 3/4	70	1 11/16	43	37	17
3"	80	9 1/2	241	3 1/4	83	2 5/8	67	57	26
4"	100	11 1/2	292	4	102	3 7/16	87	98	45
6"	150	15	381	6 1/4	159	5 3/16	132	252	114
8"	200	18 1/2	470	8 1/8	206	6 13/16	173	441	200
10"	250	21 1/2	546	9 1/2	241	8 1/2	216	787	357

#### ASME Class 300

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	6 1/2	165	2 3/8	60	1 15/16	49	18	8
2 1/2"	65	7 1/2	191	2 5/8	67	2 11/32	60	22	10
3"	80	8 1/4	210	2 7/8	73	2 29/32	74	30	14
4"	100	10	254	2 7/8	73	3 53/64	97	44	20
5"	125	11	279	3 3/8	86	4 13/16	122	51	23
6"	150	12 1/2	318	3 7/8	98	5 49/64	146	84	38
8"	200	15	381	5	127	7 5/8	194	163	74
10"	250	17 1/2	445	5 3/4	146	9 9/16	243	270	123

#### ASME Class 1500

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	8 1/2	216	2 3/4	70	1 11/16	43	37	17
3"	80	10 1/2	267	3 1/4	83	2 5/8	67	70	32
4"	100	12 1/4	311	4	102	3 7/16	87	112	51
6"	150	15 1/2	394	6 1/4	159	5 3/16	132	262	119
8"	200	19	483	8 1/8	206	6 13/16	173	488	221
10"	250	23	584	9 3/4	248	8 1/2	216	917	416
12"	300	26 1/2	673	12	305	10 1/8	257	1425	646
14"	350	29 1/2	749	14	356	11 1/2	292	2045	928
16"	400	32 1/2	826	15 1/8	384	12 13/16	325	2600	1179
18"	450	36	914	18 7/16	468	13 3/4	349	3883	1761
20"	500	38 3/4	984	21	533	14 3/4	348	5700	2580
24"	600	46	1168	22	559	15 1/8	384	7150	3236

#### ASME Class 600

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	6 1/2	165	2 3/8	60	1 15/16	49	18	8
2 1/2"	65	7 1/2	191	2 5/8	67	2 11/32	60	22	10
3"	80	8 1/4	210	2 7/8	73	2 29/32	74	30	14
4"	100	10 3/4	273	3 1/8	79	3 53/64	97	60	27
6"	150	14	356	5 3/8	136	5 49/64	146	183	83
8"	200	16 1/2	419	6 1/2	165	7 5/8	194	295	134
10"	250	20	508	8 3/8	213	9 9/16	243	540	245

Sections highlighted in green are available with 2 week leadtime ex works, for the remainder please consult factory.

## High Performance Non-Slam Check Valves Double Flanged

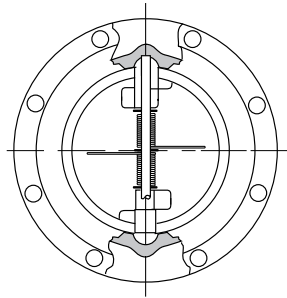
### Double Flanged Style Valves

Size Range: 8" - 24"

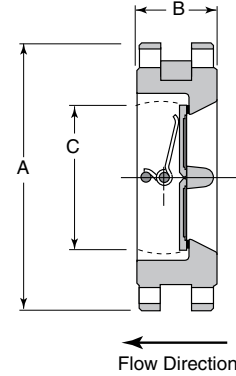
Carbon Steel to ASTM A216 Grade WCB

Stainless Steel to ASTM A351 Grade CF8M

Low Temperature Carbon Steel to ASTM A352 Grade LCC



Pin must be vertical for horizontal flow.



#### ASME Class 150

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
8"	200	13 1/2	343	5	127	7 5/8	194	93	42
10"	250	16	406	5 3/4	146	9 9/16	243	189	86
12"	300	19	483	7 1/8	181	11 3/8	289	308	140
14"	350	21	533	7 1/4	184	12 1/2	318	352	160
16"	400	23 1/2	597	7 1/2	191	15	381	496	225
18"	450	25	635	8	203	16 7/8	428	551	250
20"	500	27 1/2	699	8 5/8	219	18 1/8	480	661	300
24"	600	32	813	8 3/4	222	22 5/8	575	860	389

#### ASME Class 600

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
12"	300	22	559	9	229	11 3/8	289	612	277
14"	350	23 3/4	603	10 3/4	273	12 1/2	318	826	375
16"	400	27	685	12	305	14 3/8	365	951	430
18"	450	29 1/4	743	14 1/4	362	16 1/8	409	1433	650
20"	500	32	813	14 1/2	368	18	457	1763	800
24"	600	37	940	17 1/4	438	21 9/16	548	2755	1250

#### ASME Class 900

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
12"	300	24	610	11 1/2	292	10 1/8	257	770	349
14"	350	25 1/4	641	14	356	11 1/2	292	1240	561
16"	400	27 3/4	705	15 1/8	384	12 7/8	327	1653	750
18"	450	31	787	17 3/4	451	14 1/2	368	2314	1050
20"	500	33 3/4	857	17 3/4	451	18	457	2866	1300
24"	600	41	1041	19 1/2	495	21 1/2	546	4175	1893

#### ASME Class 300

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
12"	300	20 1/2	521	7 1/8	181	11 3/8	289	465	211
14"	350	23	584	8 3/4	222	12 1/2	318	593	269
16"	400	25 1/2	648	9 1/8	232	14 3/8	365	771	350
18"	450	28	711	10 3/8	264	16 1/8	409	970	440
20"	500	30 1/2	775	11 1/2	292	17 7/8	454	1078	488
24"	600	36	914	12 1/2	318	22 1/8	562	1516	686

Sections highlighted in green are available with 2 week leadtime ex works, for the remainder please consult factory.

## Check Valves Ordering Information

Size	Design	Pressure Class	Body Material	Seal	End Connection	Body Configuration	Modification No.
<b>24"</b>	<b>H</b>	<b>15</b>	<b>S</b>	<b>P</b>	<b>F</b>	<b>3</b> -	<b>9</b>

**Description:** 24" Style H, ASME Class 150, Carbon Steel Body, Metal Seal, raised face flanges, with double flange body, (modification number indicates Inconel X spring)

### 1. Size (inches)

### 2. Design

H = Retainerless (Standard Offering) in Wafer, Lug and Double Flange  
 G = Retainerless Wafer (on demand only, therefore subject to full factory lead time at time of order placement.)

### 3. Pressure Class

	Class	CWP Steel	CWP Stainless
15 =	150	285 psi (20 Bar)	275 psi (19 Bar)
30 =	300	740 psi (51 Bar)	720 psi (50 Bar)
60 =	600	1480 psi (102 Bar)	1440 psi (99 Bar)
90 =	900	2220 psi (153 Bar)	2160 psi (149 Bar)
150 =	1500	3705 psi (256 Bar)	3600 psi (248 Bar)

### 4. Body Material

GC = Low Temperature Carbon Steel - ASTM A352 Gr. LCC  
 S = Carbon Steel - ASTM A216 Gr. WCB  
 C = Stainless Steel - A351 Gr. CF8M

### 5. Type of Seal

P = Metal to Metal  
 V = Viton B

### 6. End Connection Finish

F = Serrated Raised Face (125-250 AARH as standard)  
 R = Ring Type Joint

### 7. Body Configuration

(Blank) = WAFER Style  
 2 = LUG Style (with through-bolt holes - standard)  
 3 = DOUBLE FLANGED style

### 8. Modification Number

	Body	Plates	Seat Sealing	Trim	Spring	API Trim
-9	All	As Body	M/M	Std	Inc.X750	none
-201	CS	SS	M/M	Std	Inc.X750	none
-169	CS	410 SS	410 SS	410 SS	Inc.X750	#1
-491	CS	Hard Faced	Hard Faced	Hard Faced	Inc.X750	#5
-131E	CS	410 SS	Hard Faced	Hard Faced/410 SS	Inc.X750	#8
-233	CS	316 SS	316 SS	316 SS	Inc.X750	#10
-385E	CS	316 SS	Hard Faced	Hard Faced 316 SS	Inc.X750	#12

Sections highlighted in green are available with 2 week leadtime ex works, for the remainder please consult factory.

## CRANE Energy's Product Portfolio

Focused on the oil, gas, refining and power markets, the Energy product portfolio brings well-known brands together to provide specifying engineers, process designers and end users with flow control solutions. CRANE today is a single brand that is composed of a collection of some of the best known brands in flow control history such as Flowseal®, Krombach®, Duo-Chek®, Pacific Valves®, Stockham®, Center Line®, Noz-Chek® and Aloyco® to name a few. Each of these brands have their own highly-engineered product legacy and are brought together to serve the global energy infrastructure market including Power Generation, Oil & Gas, and Petroleum Refining among others. There truly is no other portfolio like it today.

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