

DUO-CHEK[®]

brands you trust.



DUO-CHEK[®] High Performance Non-Slam Check Valves
Europe, Middle East and Africa (MEA) Regions

CRANE[®]

Energy Flow Solutions

www.craneenergy.com

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High Performance Non-Slam Check Valves Key Features

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

High Performance Non-Slam Check Valves Wafer Style

Wafer Style Valves

Size Range: 2" - 24"

Carbon Steel to ASTM A216 Grade WCB

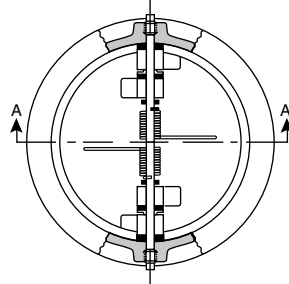
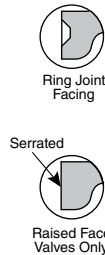
Stainless Steel to ASTM A351 Grade CF8M

Low Temperature Carbon Steel to ASTM A352 Grade LCC

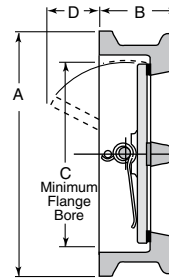
Retainered and retainerless wafer body valves are designed with flangeless bodies with short face-to-face dimensions per API 594. They are mounted between mating flanges which are connected with stud bolts and nuts.



H-Retainerless



G-Retainered



Section A

Flow Direction

This view is rotated 90° to show the actual operating position of the valve. The pin must be vertical for horizontal flow.

ASME Class 150

Size		A		B		C		D		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	4 1/8	105	2 3/8	60	1 15/16	49	-	-	6	3
2 1/2"	65	4 7/8	124	2 5/8	67	2 11/32	60	-	-	10	5
3"	80	5 3/8	137	2 7/8	73	2 29/32	74	1/4	6	13	6
4"	100	6 7/8	175	2 7/8	73	3 53/64	97	5/8	16	17	8
5"	125	7 3/4	197	3 3/8	86	4 13/16	122	7/8	22	27	12
6"	150	8 3/4	222	3 7/8	98	5 49/64	146	1 3/8	35	35	16
8"	200	11	279	5	127	7 5/8	194	2 1/8	54	70	32
10"	250	13 3/8	340	5 3/4	146	9 9/16	243	2 3/4	70	106	48
12"	300	16 1/8	410	7 1/8	181	11 3/8	289	3 1/4	83	172	78
14"	350	17 3/4	451	7 1/4	184	12 1/2	318	3 1/4	83	200	91
16"	400	20 1/4	514	7 1/2	191	15	381	4 7/16	113	275	125
18"	450	21 5/8	549	8	203	16 7/8	429	5 3/8	137	315	143
20"	500	23 7/8	606	8 5/8	219	18 13/16	478	6 5/16	160	435	197
24"	600	28 1/4	718	8 3/4	222	22 5/8	575	8 1/4	210	620	281

ASME Class 600

Size		A		B		C		D		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	4 3/8	111	2 3/8	60	1 15/16	49	-	-	7	3
2 1/2"	65	5 1/8	130	2 5/8	67	2 11/32	60	1/8	3	11	5
3"	80	5 7/8	149	2 7/8	73	2 29/32	74	1/4	6	15	7
4"	100	7 5/8	194	3 1/8	79	3 53/64	97	7/8	22	26	12
5"	125	9 1/2	241	4 1/8	105	4 13/16	122	1	25	50	22.7
6"	150	10 1/2	267	5 3/8	136	5 49/64	146	1 7/16	36	80	36
8"	200	12 5/8	321	6 1/2	165	7 5/8	194	2	51	135	61
10"	250	15 3/4	400	8 3/8	213	9 9/16	243	2 9/32	58	238	108
12"	300	18	457	9	229	11 3/8	289	3 15/32	88	333	151
14"	350	19 3/8	492	10 3/4	273	12 1/2	318	2 3/4	70	455	206
16"	400	22 1/4	565	12	305	14 5/16	364	4 5/16	110	640	290
18"	450	24 1/8	613	14 1/4	362	16 1/8	410	3 11/16	94	890	404
20"	500	26 7/8	683	14 1/2	368	17 15/16	456	5 5/16	135	1120	508
24"	600	31 1/8	791	17 1/4	438	21 1/16	548	6 9/16	167	2040	925

ASME Class 300

Size		A		B		C		D		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	4 3/8	111	2 3/8	60	1 15/16	49	-	-	7	3
2 1/2"	65	5 1/8	130	2 5/8	67	2 11/32	60	-	-	11	5
3"	80	5 7/8	149	2 7/8	73	2 29/32	74	1/4	6	15	7
4"	100	7 1/8	181	2 7/8	73	3 53/64	97	5/8	16	18	8
5"	125	8 1/2	216	3 3/8	86	4 13/16	122	7/8	22	35	16
6"	150	9 7/8	251	3 7/8	98	5 49/64	146	1 3/8	35	45	20
8"	200	12 1/8	308	5	127	7 5/8	194	2 1/8	54	82	37
10"	250	14 1/4	362	5 3/4	146	9 9/16	243	2 3/4	70	125	57
12"	300	16 5/8	422	7 1/8	181	11 3/8	289	3 1/4	83	200	91
14"	350	19 1/8	486	8 3/4	222	12 1/2	318	3 3/16	81	325	147
16"	400	21 1/4	540	9 1/8	232	14 5/16	364	4 1/8	105	415	188
18"	450	23 1/2	597	10 3/8	264	16 7/8	429	4 13/16	122	555	252
20"	500	25 3/4	654	11 1/2	292	17 15/16	456	5 5/8	143	725	329
24"	600	30 1/2	775	12 1/2	318	21 9/16	548	7 1/16	179	1100	499

ASME Class 900

Size		A		B		C		D		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	5 5/8	143	2 3/4	70	1 11/16	43	-	-	14	6
2 1/2"	65	6 1/2	165	3 1/4	83	2 1/8	54	1/16	2	16	7
3"	80	6 5/8	168	3 1/4	83	2 5/8	67	5/16	8	24	11
4"	100	8 1/8	206	4	102	3 7/16	87	9/16	14	40	18
5"	125	9 3/4	248	-	-	4 5/16	110	-	-	-	-
6"	150	11 3/8	289	6 1/4	159	5 3/16	132	1 1/16	27	115	52
8"	200	14 1/8	359	8 1/8	206	6 13/16	173	1 13/32	36	229	104
10"	250	17 1/8	435	9 1/2	241	8 1/2	216	1 13/16	46	388	176
12"	300	19 3/8	498	11 1/2	292	10 1/8	257	2 5/16	59	540	245
14"	350	20 1/2	521	14	356	11 1/2	292	2	51	926	420
16"	400	22 5/8	575	15 1/8	384	12 13/16	325	2 5/8	67	1152	523
18"	450	25 1/8	638	17 3/4	451	14 7/16	367	2 9/16	65	1318	598
20"	500	27 1/2	699	17 3/4	451	17 15/16	456	5 5/16	135	1426	647
24"	600	33	838	19 1/2	495	21 1/2	546	5 5/8	143	2729	1238

ASME Class 1500

Size		A		B		C		D		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	5 5/8	143	2 3/4	70	1 11/16	43	-	-	14	6
2 1/2"	65	6 1/2	165	3 1/4	83	2 1/8	54	1/16	2	16	7
3"	80	6 7/8	175	3 1/4	83	2 5/8	67	5/16	8	25	11
4"	100	8 1/4	210	4	102	3 7/16	87	9/16	14	43	20
5"	125	10	254	-	-	4 5/16	110	-	-	-	-
6"	150	11 1/8	283	6 1/4	159	5 3/16	132	1 1/16	27	110	50
8"	200	13 7/8	352	8 1/8	206	6 13/16	173	1 13/32	36	219	99
10"	250	17 1/8	435	9 3/4	248	8 1/2	216	1 11/16	43	397	180
12"	300	20 1/2	521	12	305	10 1/8	257	2 1/4	57	725	329
14"	350	22 3/4	578	14	356	11 1/2	292	2	51	948	430
16"	400	25 1/4	641	15 1/8	384	12 13/16	325	2 5/8	67	1380	627
18"	450	27 3/4	705	18 7/16	468	13 3/4	349	2 11/16	68	1900	863
20"	500	29 3/4	756	21	533	14 3/4	375	4	102	2750	1247
24"	600	35 1/2	902	22	559	15 1/8	384	4 1/8	105	4409	2000

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

Sizes 26" through 84" and other materials (Aluminum Bronze, Cast Iron, etc.) are available on request, please consult factory.

High Performance Non-Slam Check Valves Lug Style

Lug Style Valves

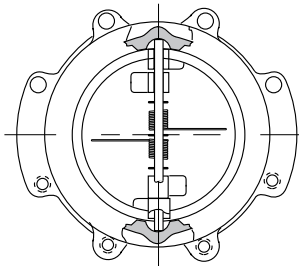
Size Range: 2" - 24"

Carbon Steel to ASTM A216 Grade WCB

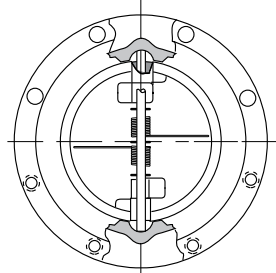
Stainless Steel to ASTM A351 Grade CF8M

Low Temperature Carbon Steel to ASTM A352 Grade LCC

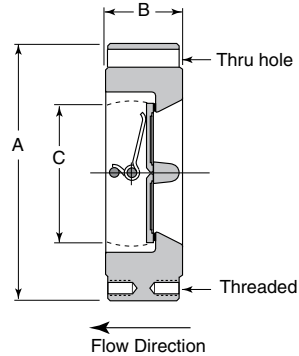
Lug valves are furnished with thru-hole bolting in accordance with API 594. Threaded bolt holes are available but nonstandard as valve is not designed nor should be used for dead-end service.



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

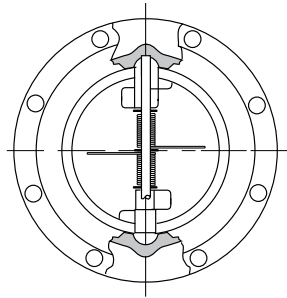
Double Flanged Style Valves

Size Range: 8" - 24"

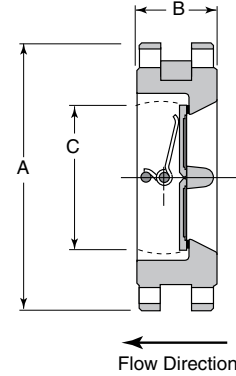
Carbon Steel to ASTM A216 Grade WCB

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.
24"	H	15	S	P	F	3 -	9

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.

Duo-CHEK®

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Fax.: (1) 936-588-8381



brands you trust.



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CRANE®

Duo-CHEK®



FK®
KROMBACH
ARMATUREN
be safe

NOZ-CHEK®



STOCKHAM®



UNI-CHEK®

NUCLEAR

VALVE SERVICES

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