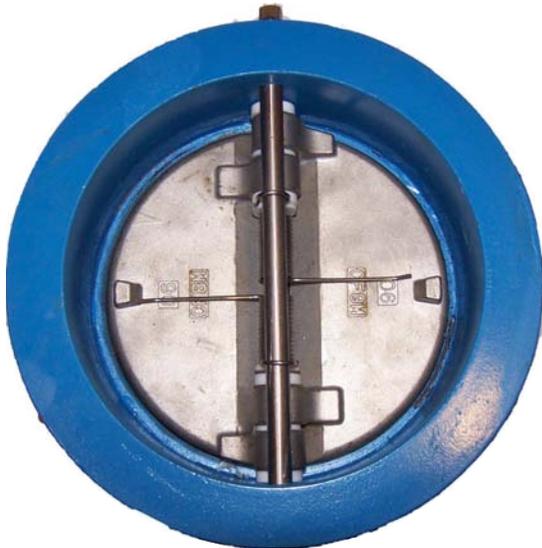




<u>DESCRIPTION</u>	<u>BULLETIN NO.</u>
Cover Page - Series 60 Wafer Check Valves	CV-100
Standard Features	CV-101R3
<u>VALVE DIMENSIONS - DIN 3202</u>	<u>DRAWING NO.</u>
2" to 12" (Inches) / CV Values & Construction Materials	CH-200R4
50 to 300 (Millimetres) / CV Values & Construction Materials	CH-200MR4
<u>VALVE DIMENSIONS - API 594</u>	
2" to 12" (Inches) / CV Values & Construction Materials	CH-201
50 to 300 (Millimetres) / CV Values & Construction Materials	CH-201M

# CHALLENGER

## SERIES 60 WAFER CHECK VALVES



Bulletin No.  
CV-100

**Pressure Temperature Rating**

CLASS 125 C.I.      -20° to 150° F  
200 PSI (1379 KPA)    -29° to 66° C

CLASS 150 D.I.      -20° to 100° F  
250 PSI (1724 KPA)    -29° to 38° C

**Temperature Range/Buna -N Seat**

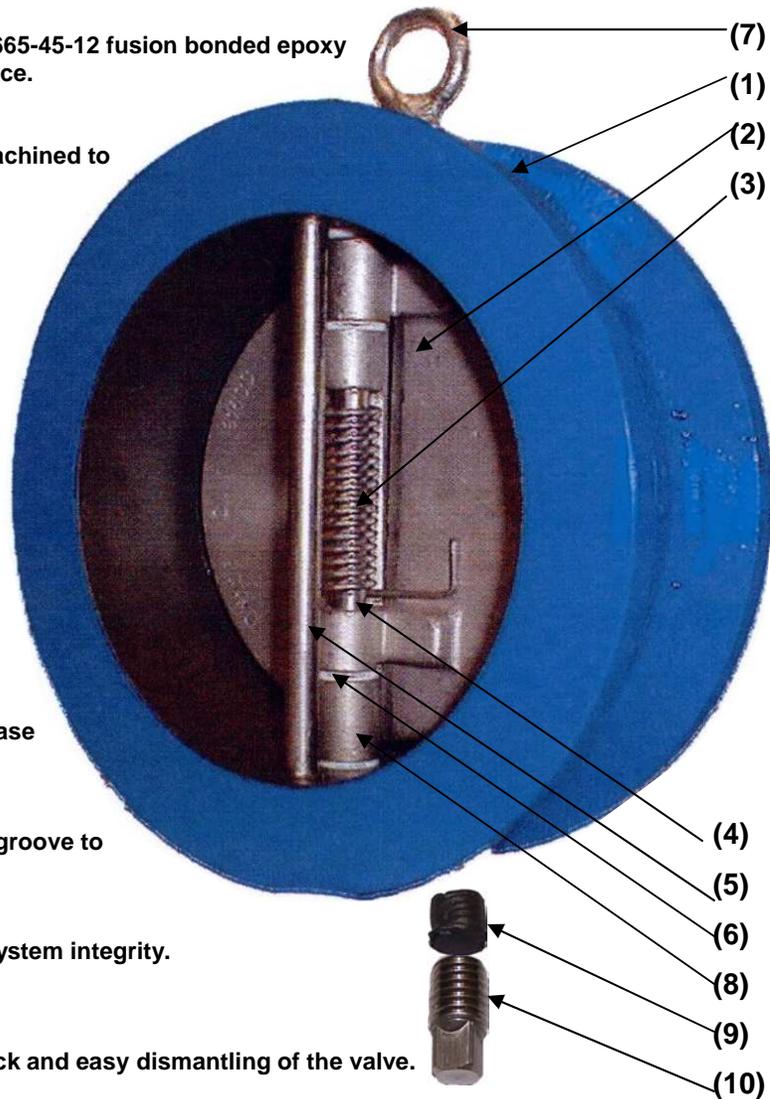
Maximum      -212° F (100° C)  
Minimum      -0° f (-17° C)

**FACE TO FACE DIMENSIONS**  
**API 594 AND DIN 3202**

**STANDARD FEATURES**

The Challenger Series 60 Wafer Check Valve was designed for water, oil or gas applications and is suitable for installation in both horizontal or vertical lines between A.N.S.I. 125/150 lbs. flanges.

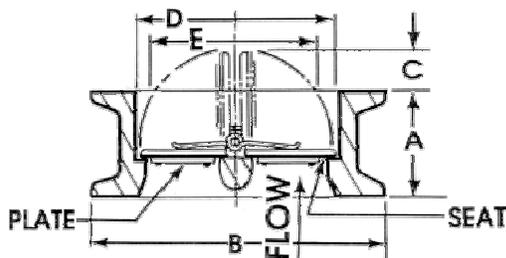
- (1) **Body**  
Cast iron A126/Ductile iron A53665-45-12 fusion bonded epoxy for maximum corrosion resistance.
- (2) **Plates**  
Investment cast 316 S.S. and machined to provide full seat contact.
- (3) **Spring**  
Heavy duty 304 S.S. providing instantaneous response to system changes.
- (4) **Hinge Pin**  
Heavy Duty 304 S.S. designed to handle severe service.
- (5) **Fixed Pin**  
304 S.S. designed to prevent over travel of the plates.
- (6) **Spacers**  
P.T.F.E. designed to maintain plate alignment.
- (7) **Lifting Bolt**  
Provided in sizes 8" to 12" for ease of installation.
- (8) **Seat**  
BUNA-N, Bonded into the body groove to assure long service life.
- (9) **Body Seals**  
BUNA-N designed to maintain system integrity.
- (10) **Body Plugs**  
Steel / zinc plated providing quick and easy dismantling of the valve.



**DIN 3202 VALVE DIMENSIONS - INCHES (Imperial)**

Valve Size	A	B	C	D	E	C <sub>v</sub>	Weight Lbs.
2	1.69	4.06	0.39	2.56	1.87	63	2.2
2.5	1.81	4.80	0.63	3.15	2.37	100	3.3
3	2.52	5.20	0.61	3.70	3.0	177	4.4
4	2.52	6.18	1.02	4.61	4.37	345	8.8
5	2.76	7.40	1.41	5.71	5.0	567	13.2
6	2.99	8.58	1.87	6.69	6.0	856	17.6
8	3.50	10.55	2.81	8.82	7.75	1768	30.9
10	4.49	12.91	3.03	10.43	10.0	3180	50.0
12	4.49	16.02	4.15	12.20	10.87	4935	79.4

Note: Dimension "E" is the minimum bore diameter of mating flange to clear the plates.  
C<sub>v</sub> = The volume of water in U.S./G.P.M. that will flow through a given restriction or valve opening with a pressure drop of 1 P.S.I.



**CONSTRUCTION MATERIALS**

Description	Qty.	Material
Body	1	Cast Iron (2"-5") ASTM A126-B Ductile Iron (6"-12") ASTM A395
Plates	2	316 S.S. ASTM A351-CF8M
Spring	1	304 S.S.
Hinge Pin	1	304 S.S. UNS-S30400
Fixed Pin	1	304 S.S. UNS-S30400
Spacer	4	P.T.F.E.
Lifting Bolt	1	Steel (8"-12")
Seat	1	BUNA-N
Shaft Seal	4	BUNA-N
Plug	4	STEEL-ZINC PLATED

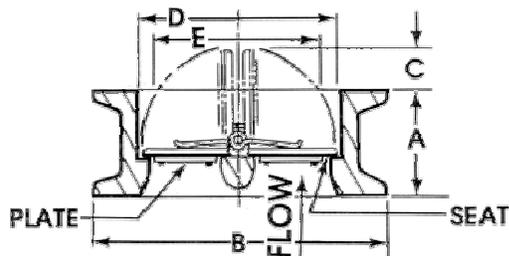
Note: For horizontal flow applications, the valve must be installed with the shaft in the vertical position.  
For vertical applications the valve must be installed with the flow up as indicated on the drawing.

Customer:	
Project:	
Valve Sizes:	
Certified By:	Date:

**DIN 3202 VALVE DIMENSIONS - MILLIMETERS (Metric)**

Valve Size	A	B	C	D	E	C <sub>v</sub>	Weight Kgs.
50	43	103	9.8	65	47.5	63	1.0
65	46	122	16.1	80	60.2	100	1.5
80	64	132	15.4	94	76.2	177	2.0
100	64	157	25.8	117	111.0	345	3.6
125	70	188	35.7	145	127.0	567	6.0
150	76	218	47.6	170	152.4	856	8.0
200	89	268	71.4	224	196.9	1768	14.0
250	114	328	77.0	265	254.0	3180	22.7
300	114	407	105.3	310	276.1	4935	36.1

Note: Dimension "E" is the minimum bore diameter of mating flange to clear the plates.  
C<sub>v</sub> = The volume of water in U.S./G.P.M. that will flow through a given restriction or valve opening with a pressure drop of 1 P.S.I.



**CONSTRUCTION MATERIALS**

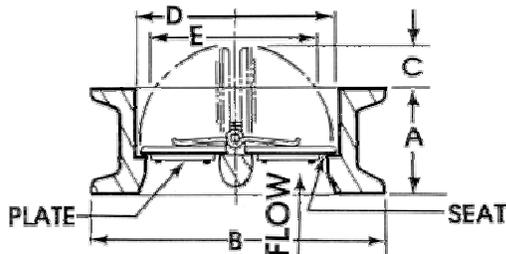
Description	Qty.	Material
Body	1	Cast Iron (2"-5") ASTM A126-B Ductile Iron (6"-12") ASTM A395
Plates	2	316 S.S. ASTM A351-CF8M
Spring	1	304 S.S.
Hinge Pin	1	304 S.S. UNS-S30400
Fixed Pin	1	304 S.S. UNS-S30400
Spacer	4	P.T.F.E.
Lifting Bolt	1	Steel (8"-12")
Seat	1	BUNA-N
Shaft Seal	4	BUNA-N
Plug	4	STEEL-ZINC PLATED

Note: For horizontal flow applications, the valve must be installed with the shaft in the vertical position. For vertical applications the valve must be installed with the flow up as indicated on the drawing.

Customer:	
Project:	
Valve Sizes:	
Certified By:	Date:

<b>API 594 VALVE DIMENSIONS - INCHES (Imperial)</b>							
Valve Size	A	B	C	D	E	C <sub>v</sub>	Weight Lbs.
2	2.12	4.02	0.39	2.56	1.87	63	5
2.5	2.36	4.76	0.63	3.15	2.37	100	8
3	2.64	5.24	0.61	3.70	3.0	177	10
4	2.64	6.73	1.02	4.61	4.37	345	12
5	3.27	7.60	1.41	5.71	5.0	567	16
6	3.74	8.62	1.87	6.69	6.0	856	20
8	5.0	10.87	2.81	8.82	7.75	1768	52
10	5.51	13.27	3.03	10.43	10.0	3180	63
12	7.13	15.98	4.15	12.20	10.87	4935	110

Note: Dimension "E" is the minimum bore diameter of mating flange to clear the plates.  
C<sub>v</sub> = The volume of water in U.S./G.P.M. that will flow through a given restriction or valve opening with a pressure drop of 1 P.S.I.



**CONSTRUCTION MATERIALS**

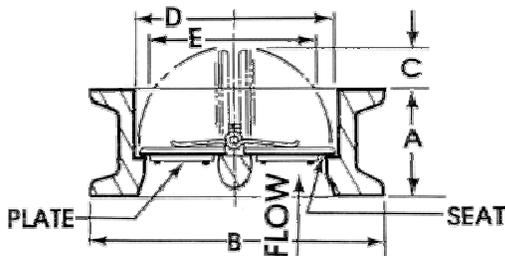
Description	Qty.	Material
Body	1	Cast Iron (2"-6") ASTM A126-B Ductile Iron (8"-12") ASTM A395
Plates	2	316 S.S. ASTM A351-CF8M
Spring	1	304 S.S.
Hinge Pin	1	304 S.S. UNS-S30400
Fixed Pin	1	304 S.S. UNS-S30400
Spacer	4	P.T.F.E.
Lifting Bolt	1	Steel (8"-12")
Seat	1	BUNA-N
Shaft Seal	4	BUNA-N
Plug	4	STEEL-ZINC PLATED

Note: For horizontal flow applications, the valve must be installed with the shaft in the vertical position.  
For vertical applications the valve must be installed with the flow up as indicated on the drawing.

Customer:	
Project:	
Valve Sizes:	
Certified By:	Date:

<u>API 594 VALVE DIMENSIONS - MILLIMETERS(Metric)</u>							
Valve Size	A	B	C	D	E	C <sub>v</sub>	Weight Lbs.
50	54.0	102	9.8	65	47.5	63	2.27
65	60.0	121	16.1	80	60.2	100	3.64
80	67.0	133	15.4	94	76.2	177	4.55
100	67.0	171	25.8	117	111.0	345	5.45
125	83.0	193	35.7	145	127.0	567	7.27
150	95.0	219	47.6	170	152.4	856	9.10
200	127.0	276	71.4	224	196.9	1768	23.6
250	140.0	337	77.0	265	254.0	3180	28.6
300	181.0	406	105.3	310	276.1	4935	50.0

Note: Dimension "E" is the minimum bore diameter of mating flange to clear the plates.  
C<sub>v</sub> = The volume of water in U.S./G.P.M. that will flow through a given restriction or valve opening with a pressure drop of 1 P.S.I.



CONSTRUCTION MATERIALS		
Description	Qty.	Material
Body	1	Cast Iron (2"-6") ASTM A126-B Ductile Iron (8"-12") ASTM A395
Plates	2	316 S.S. ASTM A351-CF8M
Spring	1	304 S.S.
Hinge Pin	1	304 S.S. UNS-S30400
Fixed Pin	1	304 S.S. UNS-S30400
Spacer	4	P.T.F.E.
Lifting Bolt	1	Steel (8"-12")
Seat	1	BUNA-N
Shaft Seal	4	BUNA-N
Plug	4	STEEL-ZINC PLATED

Note: For horizontal flow applications, the valve must be installed with the shaft in the vertical position.  
For vertical applications the valve must be installed with the flow up as indicated on the drawing.

Customer:	
Project:	
Valve Sizes:	
Certified By:	Date: