



FIGURE 15LC SAFETY VALVE

FIGURE 15 SERIES

SIZES 3/4" – 3"
PRESSURES to 15 PSIG at 400°F

- Air & Non-hazardous Service
- Low Cost
- High Capacity
- Cast Iron or Aluminum Body
- Dependable
- Tight Shutoff
- Sharp Popping & Closing Action
- High Degree of Repeatability
- Unitized Body

OPTIONS

- Stainless Trim
- Set Pressures 15 to 60 psi (Consult Factory)
- Polyurethane Soft Seat Available (Consult Factory)

MODELS

- 015C - Cast Iron Body, Bronze Seats, Pull Ring
- 015A - Cast Iron Body, Bronze Seats, Sealed Cap
- 15LC - Aluminum Body on 015C (2 x 2½ only)
- 15LA - Aluminum Body on 015A (2 x 2½ only)

APPLICATION DATA

- Bulk Hauling Railroad and Truck Tank Cars
- High Volume Blowers
- Compressors
- Dryers
- Pneumatic Equipment
- Tanks

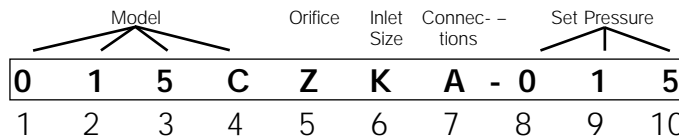
VALVE RATINGS

Model	Pressure PSIG (bar)	Temperature °F (°C)
All	5 to 15 (.3 to 1)	-20 to 400 (-29 to 204)

APPLICABLE CODES

- ASME Section VIII "UV" for Air (2" Figure 15C & 15LC only)
- Canadian Registration #OG0591.9C — 015C, 015LC
#OH0591.9C — 015A, 015LA

CODE SELECTION CHART



Model - Position 1, 2, 3 & 4 015C = Cast Iron Body, Brz Seats, Pull Ring 015A = Cast Iron Body, Brz Seats, Sealed Cap 15LC = Aluminum Body on 015C (2 x 2½ only) 15LA = Aluminum Body on 015A (2 x 2½ only)
Orifice - Position 5 Z

Inlet Size - Position 6 D = ¾ E = 1 F = 1¼ G = 1½ H = 2 J = 2½ K = 3

Connections - Position 7 A = MPT x FPT
Set Pressure - Position 8, 9 & 10 ___ = Actual Setting LAS - Loosely Assembled†

† Spence Certified Assemblers Only

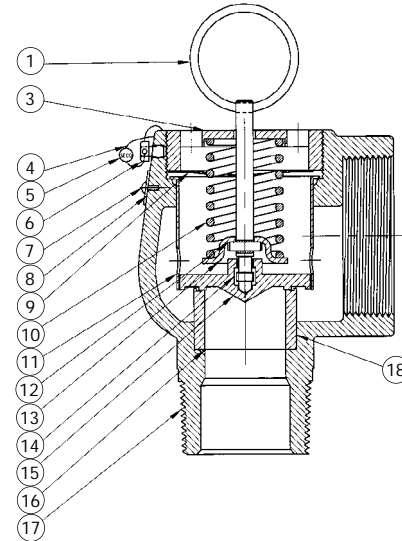
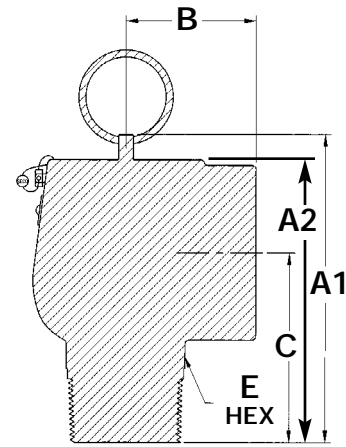
FIGURE 15 SERIES

SPECIFICATION

The valve inlet and outlet shall be one integral casting assuring proper alignment of disc, seat and spindle for smooth action. The valve shall maintain a high degree of repeatability. The valve shall be top guided by a disc guide fitted into the body. The valve shall have a non-adjustable blowdown.

MATERIALS OF CONSTRUCTION

Ref	Part Name	Material
1	Pull Ring	SST
3	Compression Screw	Stl. plated CI ASTM A108/A126
4	Seal Wire	SST
5	Seal	Lead
6	Lock Screw	Brass ASTM B16
7	Drive Screw	SST
8	Nameplate	SST
9	Wave Washer	Plated Steel
10	Spring	Plated Steel
11	Disc Guide	Brass/Bronze ASTM B135/B505
12	Spindle Pin	Plated Steel
13	Spring Washer	Plated Steel
14	Spindle	Steel ASTM A108
15	Disc	Brass/Bronze ASTM B16/B62
16	Seat	Brass/Bronze ASTM B16/B505
17	Body Body	Cast Iron ASTM A126 Aluminum ASTM B26, A03560, T6
18	Sealant	Sealant
19	Bushing 015A/15LA	Brass ASTM B16



DIMENSIONS inches (mm) AND WEIGHTS pounds (kg)

Model	Inlet	Orifice	Outlet	A1	A2	B	C	E Hex	Weight
****ZDA	3/4 (20)	Z	1 (25)	3 5/16 (76)	3 (76)	1 1/2 (38)	2 3/16 (56)	1 1/4 (32)	1 (.4)
****ZEA	1 (25)	Z	1 1/4 (32)	4 (95)	3 3/4 (95)	2 (51)	2 5/16 (67)	1 1/2 (38)	2 (.9)
****ZFA	1 1/4 (32)	Z	1 1/2 (40)	5 (108)	4 1/4 (108)	2 1/8 (54)	3 (76)	1 5/8 (48)	3 (1.4)
****ZGA	1 1/2 (40)	Z	2 (50)	5 1/8 (117)	4 5/8 (117)	2 3/16 (56)	3 3/16 (81)	2 (51)	4 (1.8)
****ZHA	2 (50)	Z	2 1/2 (65)	6 11/16 (156)	6 1/8 (156)	2 7/8 (73)	4 (102)	3 (76)	8 (3.6)
****ZJA	2 1/2 (65)	Z	2 1/2 (65)	8 3/8 (194)	7 7/8 (194)	3 3/8 (95)	4 3/8 (111)	3 1/4 (83)	14 (6.3)
****ZKA	3 (80)	Z	3 (80)	9 1/2 (229)	9 (229)	3 7/8 (98)	5 1/8 (130)	4 (102)	22 (10)

**** Use appropriate Model Number.

AIR CAPACITY CHART – MODELS 015C, 015A, 15LC, 15LA

**ASME Section VIII "UV" 90% rated at 3 PSI Overpressure SCFM (M³/HR)

SCFM

Set Pressure PSIG	Valve & Orifice Area, in ²						
	3/4 Z 1	1 Z 1 1/4	1 1/4 Z 1 1/2	1 1/2 Z 2	2 Z 2 1/2	2 1/2 Z 2 1/2	3 Z 3
5*	82	145	226	328	579	906	1311
10*	100	177	276	400	706	1105	1599
15	118	209	326	472	834	1305	1888

M³/HR

Set Pressure Barg	Valve & Orifice Area cm ²						
	20 Z 25	25 Z 32	32 Z 40	40 Z 50	50 Z 65	65 Z 65	80 Z 80
0.4*	144	255	398	576	1018	1593	2305
0.7*	171	302	472	683	1207	1888	2732
1.0*	197	350	545	790	1395	2183	3159

* Pressure settings below 15 PSIG (1.034 barg) are non code.

**Only 2" size is ASME Certified.

Consult factory for capacities below 5 psi or between 15 to 60 psi.



FIGURE 15V SERIES SAFETY VALVE

FIGURE 15V SERIES

SIZES 3/4" – 3"
PRESSURES to 30" HG at 400°F

- Vacuum Service
- Low Cost
- High Capacity
- Cast Iron or Aluminum Body
- Dependable
- Tight Shutoff
- Sharp Popping & Closing Action
- High Degree of Repeatability
- Unitized Body

OPTIONS

- Stainless Trim

MODELS

- 015V - Cast Iron Body, Bronze Seats, Vacuum Service
- 015LV - Aluminum Body on 015V (2" x 2½" only)

APPLICATION DATA

- Vacuum Pumps
- Bulk Hauling Railroad & Truck Tank Cars
- Pneumatic Equipment
- Tanks

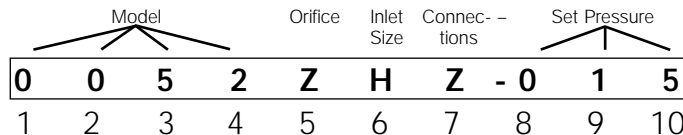
VALVE RATINGS

Model	Pressure in.HG (mmHG)	Temperature °F (°C)
All	5 to 30 (.2 to 1)	-20 to 400 (-29 to 204)

APPLICABLE CODES

- Canadian Registration #0H0591.9C

CODE SELECTION CHART



Model -
Position 1, 2, 3 & 4
0050 = Bronze Body, Viton Soft Seat
0051 = Pull Ring on 0050
0052 = Aluminum Body, Viton Soft Seat
0053 = Pull Ring on 0052

Orifice -
Position 5
Z
Inlet Size -
Position 6
H = 2

Connections -
Position 7
Z
Set Pressure -
Position 8, 9 & 10
_ _ _ = Actual Setting

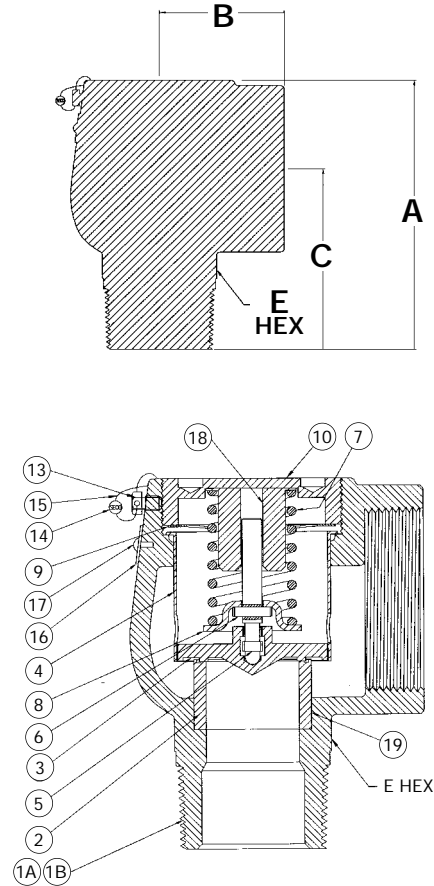
FIGURE 15V SERIES

SPECIFICATION

The valve inlet and outlet shall be one integral casting assuring proper alignment of disc, seat and spindle for smooth action. The valve shall maintain a high degree of repeatability. The valve shall be top guided by a disc guide fitted into the body. The valve shall have a non-adjustable blowdown.

MATERIALS OF CONSTRUCTION

Ref	Part Name	Material
1A	Body	Cast ASTM A126
1B	Body	Aluminum ASTM B26, A03560, T6
2	Seat	Bronze ASTM B505
3	Disc	Brass/Bronze ASTM B505
4	Disc Guide	Brass ASTM B135
5	Spindle	Steel ASTM A108
6	Spindle Pin	Plated Steel
7	Spring	Plated Steel
8	Spring Washer	Plated Steel
9	Wave Washer	Plated Steel
10	Compression Screw	Cast Iron ASTM A126
13	Lock Screw	Brass ASTM B16
14	Seal	Lead
15	Seal Wire	SST
16	Nameplate	SST
17	Drive Screw	SST
18	Bushing	Brass ASTM B16



DIMENSIONS inches (mm) AND WEIGHTS pounds (kg)

Model	Inlet	Orifice	Outlet*	A1	B	C	E Hex	Weight
****ZDA	¾ (20)	Z	1 (25)	3 (76)	1½ (38)	2⅞ (56)	1¼ (32)	1 (.4)
****ZEA	1 (25)	Z	1¼ (32)	3¼ (95)	2 (51)	2⅞ (67)	1½ (38)	2 (.9)
****ZFA	1¼ (32)	Z	1½ (40)	4¼ (108)	2⅞ (54)	3 (76)	1⅞ (48)	3 (1.4)
****ZGA	1½ (40)	Z	2 (50)	4⅞ (117)	2⅞ (56)	3⅞ (81)	2 (51)	4 (1.8)
****ZHA	2 (50)	Z	2½ (65)	6⅞ (156)	2⅞ (73)	4 (102)	3 (76)	8 (3.6)
****ZJA	2½ (65)	Z	2½ (65)	7⅞ (194)	3⅞ (95)	4⅞ (111)	3¼ (83)	14 (6.3)
****ZKA	3 (80)	Z	3 (80)	9 (229)	3⅞ (98)	5⅞ (130)	4 (102)	22 (10)

**** Add appropriate model number

* Valve outlet should be mounted at vacuum side of system.

AIR CAPACITY CHART – MODELS 015V & 015LV

Rated Flow SCFM (M³/HR)

Set*	Valve & Orifice Area, in**						
	¾ Z 1	1 Z 1¼	1¼ Z 1½	1½ Z 2	2 Z 2½	2½ Z 2¾	3 Z 3
Pressure in. HG	0.276	0.49	0.765	1.107	1.961	3.063	4.43
5	36	85	132	191	337	528	764
6	39	90	140	203	359	561	812
7	41	94	147	213	376	588	851
8	42	98	152	221	389	609	881
9	43	100	156	227	400	625	904
10	44	102	159	231	407	637	922
11	45	104	161	234	412	645	933
12	45	104	162	236	415	650	940
12.8-30	45	105	163	236	417	651	943

Set	Valve & Orifice Area cm**						
	20 Z 25	25 Z 32	32 Z 40	40 Z 50	50 Z 65	65 Z 65	80 Z 80
Pressure mmHG	1.78	3.16	4.94	7.14	12.65	19.76	25.58
127	62	144	224	325	573	897	1297
152	66	153	238	346	610	953	1380
178	69	160	249	362	639	999	1445
203	71	166	258	375	661	1034	1497
229	73	171	265	385	679	1062	1536
254	75	174	270	392	692	1082	1566
279	76	176	274	397	701	1096	1586
305	76	177	276	400	706	1104	1597
325-762	76	178	276	401	708	1107	1601

*Valve outlet should be mounted at vacuum side of system.