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Ref: TI\_BVE(S)-CVE(S)\_A1\_A2L\_EN\_Rev03


Application Engineering Europe

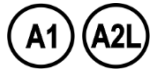
## BALL VALVES BVE(S) / CVE(S)

### General information

The **BVE(S) & CVE(S)** are ball valves with fully hermetic body design for the refrigeration and A/C industry. CVE(S) are specifically for use in CO<sub>2</sub> subcritical applications only.

### Features

- BVE(S): 45 bar maximum allowable pressure
- CVE(S): 60 bar maximum allowable pressure
- BVS / CVS models have 7/16"-20UNF – 1/4" flare connection and Schrader valve
- Hermetic design with Laser welded valve body
- Patented (pending) Laser process
- Full flow design for minimal pressure drop
- Two threads at valve body for easy mounting
- Bi-directional flow characteristics
- Valve cap retained by strap attached to main body
-  approval: only for BVE(S) (File No.: SA5312)

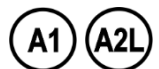




BVE / CVE



BVS / CVS

### Selection Table - BVE(S): 45 bar MWP



Type BVE	Part No.	Type BVS	Part No.	Connection size ODF		Weight (kg)	Marking
				(Inch)	(mm)		
BVE-014	806730	BVS-014	806750	1/4"		0.16	 (SA5312)  EAC
BVE-M06	806731	BVS-M06	806751		6 mm	0.16	
BVE-038	806732	BVS-038	806752	3/8"		0.16	
BVE-M10	806733	BVS-M10	806753		10 mm	0.16	
BVE-012	806734	BVS-012	806754	1/2"		0.36	
BVE-M12	806735	BVS-M12	806755		12 mm	0.38	
BVE-058	806736	BVS-058	806756	5/8"	16 mm	0.38	
BVE-034	806737	BVS-034	806757	3/4"		0.44	
BVE-078	806738	BVS-078	806758	7/8"	22 mm	0.46	
BVE-118	806739	BVS-118	806759	1-1/8"		1.04	
BVE-M28	806740	BVS-M28	806760		28 mm	1.04	CE, UK CA  (SA5312)  EAC
BVE-138	806741	BVS-138	806761	1-3/8"	35 mm	1.64	
BVE-158	806742	BVS-158	806762	1-5/8"		2.43	
BVE-M42	806743	BVS-M42	806763		42 mm	2.43	
BVE-218	806744	BVS-218	806764	2-1/8"	54 mm	4.55	
BVE-258	806745	BVS-258	806765	2-5/8"		4.65	
BVE-318	806746	BVS-318	806766	3-1/8"		5.00	


Selection table - CVE(S): 60 bar MWP (R744)

Type CVE	Part No.	Type CVS	Part No.	Connection size ODF		Weight (kg)	Marking
				(Inch)	(mm)		
CVE-014	808130	CVS-014	808150	1/4"		0.16	EAC
CVE-M06	808131	CVS-M06	808151		6 mm	0.16	
CVE-038	808132	CVS-038	808152	3/8"		0.16	
CVE-M10	808133	CVS-M10	808153		10 mm	0.16	
CVE-012	808134	CVS-012	808154	1/2"		0.36	
CVE-M12	808135	CVS-M12	808155		12 mm	0.38	
CVE-058	808136	CVS-058	808156	5/8"	16 mm	0.38	
CVE-034	808137	CVS-034	808157	3/4"		0.44	
CVE-078	808138	CVS-078	808158	7/8"	22 mm	0.46	

NOTE: For assistance with selection, please contact your local Emerson Sales offices.

Selection Table Accessory - Special seal caps (Pocan)

BVE(S) & CVE(S) Valve Size	Part No.	Thread (3)	Quantity per pack
1/4" ... 7/8" (6 ... 22 mm)	806770	M18x1	10 pcs
1-1/8" ... 1-3/8" (28 ... 35 mm)	806771	M27x1	10 pcs
1-5/8 (42 mm) ... 3-1/8"	806772	M36x1	10 pcs

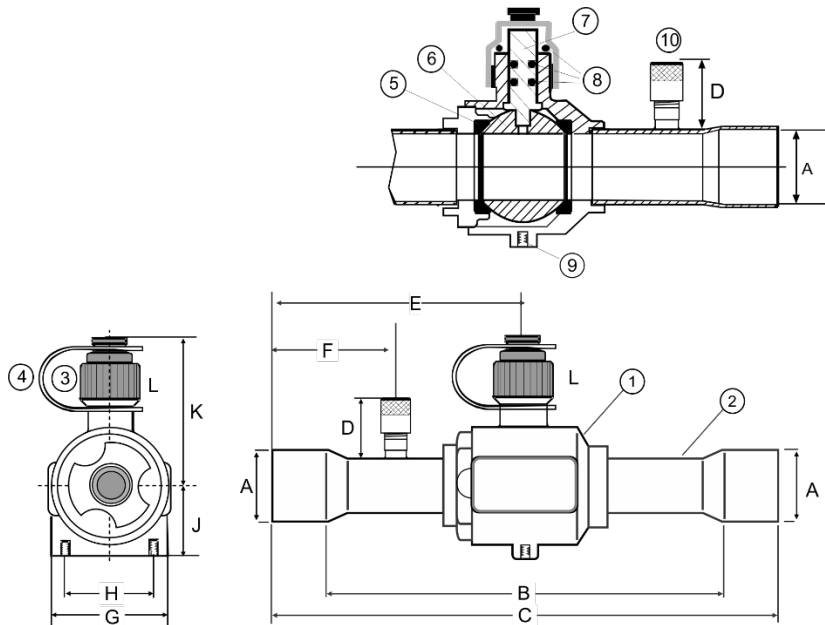


Technical Data

Max. allowable Pressure PS	BVE(S) 45 bar CVE(S) 60 bar
Max. Test Pressure PT	BVE(S) 49.5 bar CVE(S) 66 bar
Medium temperature TS	-40 ...+120 °C
Construction	Forged brass body, Copper extension tubes, Chrome plated Ball
Material	Body CW617N, Copper Tubes CW 024A acc. EN 12420
Standards	EN 12284, EN 378, PED 2014/68/EU, RoHS, AD 2000-B1

Released Refrigerants		
<b>Fluid group II</b>		
BVE(S) (all types)	R134a, R404A, R407C, R410A, R448A, R449A, R450A, R452A, R507, R513A, R1234ze(A2L)*	A1
CVE(S)	R744	
<b>Fluid group I</b>		
BVE(S) < 28 mm	R32, R452B, R455A, R454A, R454B, R454C R1234yf	A2L
NOTE: *) acc. PED 2014/68/EU		
Markings	See Selection Table	

Dimension (mm)



- (1) Sealed brass body
- (2) Copper extension tubes
- (3) Plastic stem cap (Pocan)
- (4) Label strap
- (5) PTFE seats
- (6) Chromate brass ball
- (7) Stem
- (8) O-Rings
- (9) Mounting threads
- (10) BVS/CVS with Schrader connection 7/16"-20 UNF-1/4" flare

Type	Nominal size A	B	C	D	E	F	G	H	J	K	Thread (9)	Cap (3)
BVE/S-014; CVE/S-014	1/4" ODF	104	120	24	56	26	23	15	14	41	M3	M18
BVE/S-M06; CVE/S-M06	6 mm ODF	102	118		55	25	23	15				
BVE/S-038; CVE/S-038	3/8" ODF	102	118		55	25	23	15				
BVE/S-M10; CVE/S-M10	10 mm ODF	102	118		55	25	23	15				
BVE/S-012; CVE/S-012	1/2" ODF	107	127		61	26	31	22	17	45	M4	
BVE/S-M12; CVE/S-M12	12 mm ODF	107	127		61	26	31	22				
BVE/S-058; CVE/S-058	5/8" / 16 mm ODF	101	127		61	26	31	22	20	49		
BVE/S-034; CVE/S-034	3/4" ODF	125	157		77	35	40	31				
BVE/S-078; CVE/S-078	7/8" / 22 mm ODF	118	157		77	35	40	31	26	69	M27	
BVE/S-118	1-1/8" ODF	123	169		85	39	51	38				
BVE/S-M28	28 mm ODF	123	169		85	39	51	38	31	74	M6	M36
BVE/S-138	1-3/8" / 35 mm ODF	182	231		116	52	61	48				
BVE/S-158	1-5/8" ODF	220	277		138	60	74	55	37	89		
BVE/S-M42	42 mm ODF	220	277		138	60	74	55				
BVE/S-218	2-1/8" / 54 mm ODF	228	297		148	65	93	74	47	97		
BVE/S-258	2-5/8" ODF	222	297		148	70	93	74				
BVE/S-318	3-1/8" ODF	213	297		148	80	93	74				

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