



NEW RANGE FOR
NEXT GENERATION
REFRIGERANTS

Ball Valves

OBF & OBC series

OBL & OBH series

EBV-PR series



ENGINEERING YOUR SUCCESS.

Parker products support the environmental sustainability. The EU regulation No. 517/2014 has implemented some measures aimed at reducing the use of high GWP fluorinated gases (F-Gas). To achieve this goal, next generation refrigerants have been introduced to replace the current high GWP refrigerants: the market now offer new HFO blends with lower environmental effects and comparable performances. Beside these new artificial fluids, natural refrigerants like hydrocarbons are widely being adopted. The new Parker OBF/OBC valves have been designed to ensure maximum compatibility with the new HFO refrigerants and HFC/HFO blends, as well as HC, thanks to an extended range provided of HNBR seals. The OBL and OBH series are especially designed for CO₂ systems, and Parker EBV-PR series, with its integral pressure relieve that eliminates the need of check valve in parallel, complete the range.

Parker embraces the efforts of thousands of customers in moving towards environmental friendly systems and provides the best of his knowledge to develop new ranges of products that meet the upcoming market requirements.

Advantages:

- Compact
- Reliable
- Compatible with new generation refrigerants
- Sealing of valve stem is ensured by 2 seals and a PTFE gasket on the cap
- Wide operating temperature range
- Vented cap
- Long life
- Balanced ball

Technical specifications:

Cap:

Brass cap thread broached in three places to ensure adequate venting when the cap is removed.

The cap is also tagged to accommodate wiring and sealing where legislation demands for it.



Ball features:

A small hole in one sealing face of the ball prevents refrigerant being trapped within the ball when closed. It also allows the ball to exert a greater force against the Teflon ball seals when closed, giving greater close-off security.

OBF - OBC

Ball valves for HFC, HFO, HC refrigerants

Technical Specifications

	OBF	OBC
Maximum allowable pressure (PS)	up to 50 bar	
Maximum working temperature (TS)	-40°C to +150°C	
Compatible refrigerants	R134a, R410A, R407C, R507, R32, R1234yf, R1234ze, R452A, R452B, R454A, R454C, R513A	R290, R600, R600a, HFC/HFO with limitation (please see table below)
Approvals	PED, REACH, RoHS, leak rate as per ISO14903	

Compatibility matrix

		Oil type				
		POE	PAG	PAO	MO	AB
Refrigerants	HFC - HFO	OBF •••	OBF •••	OBF •••	•	•
	HC	OBC ••	OBC •••	OBC ••	OBC •••	OBC •••

- : Not compatible. Do not use.
- : Compatible, possible swelling of the seals if additives in oil. Install the valve with the cap upward.
- : Fully compatible.

Nomenclature

Model	Access fitting option	ODS connection size	Connection type
OBF: HFC/HFO OBC: HC	No code: no access fitting T: with Schraeder valve	Size from selection table*	No code: imperial MM: metric

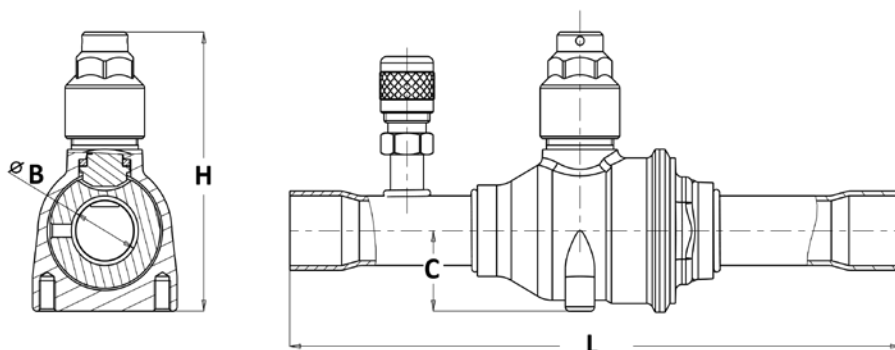
* sizes 5, 11, 17 are suitable both for metric and imperial connection:

- OBF5/OBC5: 5/8" and 16 mm
- OBF11/OBC11: 1" 3/8 and 35 mm
- OBF17/OBC17: 2" 1/8 and 54 mm

Example:

OBF	T	22	MM
Ball Valves for HFC/HFO	with Schraeder valve	22 mm ODS connections	Metric size

Drawings



Dimensions and weights

Metric reference

	HFC/HFO item number	HC item number	ODS connection mm	Kv m ³ /h	PS bar	PED category	B mm	L mm	C mm	H mm	Weight g		
without access fitting	OBF6MM	OBC6MM	6	1.6	50	Art. 4.3	10	126	13	49	159		
	OBF8MM	OBC8MM	8	4.2			10	132	13	49	163		
	OBF10MM	OBC10MM	10	5.3			10	132	13	49	168		
	OBF12MM	OBC12MM	12	6.6			10	140	13	49	171		
	OBF15MM	OBC15MM	15	13			16	146	18.5	61	293		
	OBF5	OBC5	16	13			16	146	18.5	61	295		
	OBF18MM	OBC18MM	18	17			16	146	18.5	61	297		
	OBF22MM	OBC22MM	22	26			20	185	21	72	510		
	OBF28MM	OBC28MM	28	41			25	205	26	78	760		
	OBF11	OBC11	35	86			45	Cat. II	32	208	32	92	1300
OBF42MM	OBC42MM	42	110	38	242	38.5			112	2300			
OBF17	OBC17	54	208	50	273	48.5			130	3475			
OBF64MM	OBC64MM	64	185	62	280	45			131	3800			
OBF76MM	OBC76MM	76	340	64	378	60			177	6700			
OBF89MM	OBC89MM	89	480	83	423	76			209,6	12250			
OBF108MM	OBC108MM	108	470	45	Cat. III	83			423	76	209,6	13100	
with access fitting	OBF6MM	-	6	1.6	50	Art. 4.3	10	126	13	49	159		
	OBF8MM	-	8	4.2			10	132	13	49	163		
	OBF10MM	OBCT10MM	10	5.3			10	132	13	49	168		
	OBF12MM	OBCT12MM	12	6.6			10	140	13	49	171		
	OBF15MM	OBCT15MM	15	13			16	146	18.5	61	293		
	OBF5	OBCT5	16	13			16	146	18.5	61	295		
	OBF18MM	OBCT18MM	18	17			16	146	18.5	61	297		
	OBF22MM	OBCT22MM	22	26			20	185	21	72	510		
	OBF28MM	OBCT28MM	28	41			25	205	26	78	760		
	OBF11	OBCT11	35	86			45	Cat. II	32	208	32	92	1300
	OBF42MM	OBCT42MM	42	110					38	242	38.5	112	2300
	OBF17	OBCT17	54	208					50	273	48.5	130	3475
	OBF64MM	OBCT64MM	64	185					62	280	45	131	3800
	OBF76MM	OBCT76MM	76	340					64	378	60	177	6700
	OBF89MM	OBCT89MM	89	480					83	423	76	209,6	12250
	OBF108MM	OBCT108MM	108	470					45	Cat. III	83	423	76

Dimensions and weights

Imperial reference

	HFC/HFO item number	HC item number	ODS connection inches	Kv m ³ /h	PS bar	PED category	B mm	L mm	C mm	H mm	Weight g
without access fitting	OBF8MM	-	5 1/16"	4.2	50	Art 4.3	10	132	13	49	163
	OBF2	OBC2	1/4"	1.6			10	126	13	49	159
	OBF3	OBC3	3/8"	5.3			10	132	13	49	168
	OBF4	OBC4	1/2"	6.6			10	140	13	49	171
	OBF5	OBC5	5/8"	13			16	146	18.5	61	295
	OBF6	OBC6	3/4"	17			16	146	18.5	61	297
	OBF7	OBC7	7/8"	26			20	185	21	72	510
	OBF9	OBC9	1 1/8"	41			25	205	26	78	760
	OBF11	OBC11	1" 3/8	86			45	Cat. II	32	208	32
	OBF13	OBC13	1" 5/8	110	38	242			38.5	112	2300
	OBF17	OBC17	2" 1/8	208	50	273			48.5	130	3475
	OBF21	OBC21	2" 5/8	185	62	280			45	131	3800
	OBF25	OBC25	3" 1/8	340	64	378			60	177	6700
	OBF29	OBC29	3" 5/8	480	83	423			76	209,6	12250
	OBF33	OBC33	4" 1/8	470	45	Cat. III	83	423	76	209,6	13100
with access fitting	OBFT8MM	-	5/16"	4.2	50	Art 4.3	10	132	13	49	163
	OBFT2	-	1/4"	1.6			10	126	13	49	159
	OBFT3	OBCT3	3/8"	5.3			10	132	13	49	168
	OBFT4	OBCT4	1/2"	6.6			10	140	13	49	171
	OBFT5	OBCT5	5/8"	13			16	146	18.5	61	295
	OBFT6	OBCT6	3/4"	17			16	146	18.5	61	297
	OBFT7	OBCT7	7/8"	26			20	185	21	72	510
	OBFT9	OBCT9	1" 1/8	41			25	205	26	78	760
	OBFT11	OBCT11	1" 3/8	86			45	Cat. II	32	208	32
	OBFT13	OBCT13	1" 5/8	110	38	242			38,5	112	2300
	OBFT17	OBCT17	2" 1/8	208	50	273			48,5	130	3475
	OBFT21	OBCT21	2" 5/8	185	62	280			45	131	3800
	OBFT25	-	3" 1/8	340	64	378			60	177	6700
	OBFT29	-	3" 5/8	480	83	423			76	209,6	12250
	OBFT33	-	4" 1/8	470	45	Cat. III	83	423	76	209,6	13100

OBL - OBH

Ball valves for CO₂:

- OBL: up to 70 bar
- OBH: up to 120 bar

Technical Specifications

	OBL	OBH
Maximum allowable pressure (PS)	70 bar	120 bar
Maximum working temperature (TS)	-40°C to +150°C	
Compatible refrigerants	R744	
Approvals	PED, REACH, RoHS	

Nomenclature

Model	ODS connection size	Connection type
OBL: low pressure OBH: high pressure	Size from selection table*	No code: imperial MM: metric

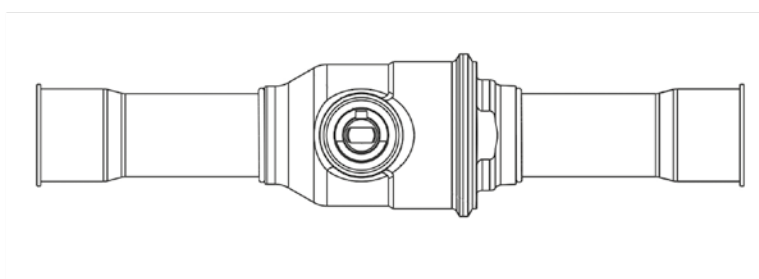
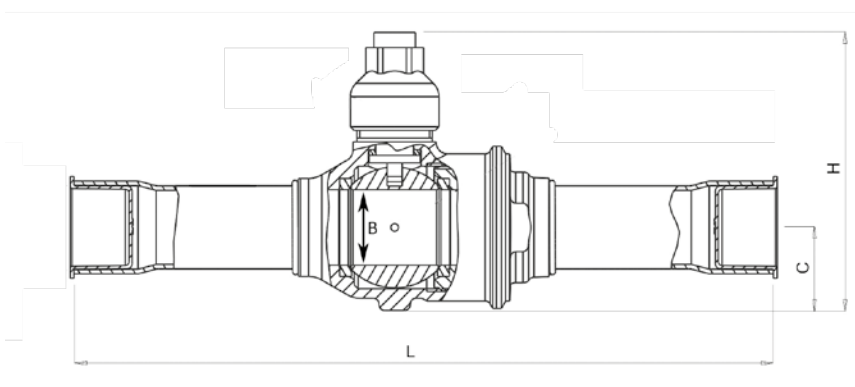
* sizes 5, 11, 17 are suitable both for metric and imperial connection:

- OBL5/OBH5: 5/8" and 16 mm
- OBL11/OBH11: 1"3/8 and 35 mm
- OBL17/OBH17: 2"1/8 and 54 mm

Example:

OBL	8	MM
Ball Valve for CO ₂ low pressure	8 mm ODS connections	Metric size

Drawings



Dimensions and weights OBL

Metric reference

CO ₂ Low Pressure item number	Description	ODS connection mm	Kv m ³ /h	PS bar	PED category	B mm	L mm	C mm	H mm	Weight g
OBL6mm	BV CO ₂ 70bar 6mm	6	1,6	70	Art. 4.3	10	126	13	51	161
OBL8mm	BV CO ₂ 70bar 8mm	8	4,2			10	132	13	51	171
OBL10mm	BV CO ₂ 70bar 10mm	10	5,3			10	132	13	51	182
OBL12mm	BV CO ₂ 70bar 12mm	12	6,6			10	140	13	51	188
OBL15mm	BV CO ₂ 70bar 15mm	15	13			16	146	18,5	64	249
OBL5	BV CO ₂ 70bar 5/8"&16mm	16	13			16	146	18,5	64	310
OBL18mm	BV CO ₂ 70bar 18mm	18	17			16	146	18,5	64	340
OBL22mm	BV CO ₂ 70bar 22mm	22	26			20	185	21	74	620
OBL28mm	BV CO ₂ 70bar 28mm	28	41			25	205	26	80	940
OBL11	BV CO ₂ 70bar 1 3/8"&35mm	35	86		Cat. I	32	208	32	95	1380

Imperial reference

CO ₂ Low Pressure item number	Description	ODS connection inches	Kv m ³ /h	PS bar	PED category	B mm	L mm	C mm	H mm	Weight g
OBL2	BV CO ₂ 70bar 1/4"	1/4"	1,6	70	Art. 4.3	10	126	13	51	161
OBL3	BV CO ₂ 70bar 3/8"	3/8"	5,3			10	132	13	51	182
OBL4	BV CO ₂ 70bar 1/2"	1/2"	6,6			10	140	13	51	188
OBL5	BV CO ₂ 70bar 5/8"&16mm	5/8"	13			16	146	18,5	64	310
OBL6	BV CO ₂ 70bar 3/4"	3/4"	17			16	146	18,5	64	340
OBL7	BV CO ₂ 70bar 7/8"	7/8"	26			20	185	21	74	620
OBL9	BV CO ₂ 70bar 1 1/8"	1" 1/8"	41			25	205	26	80	940
OBL11	BV CO ₂ 70bar 1 3/8"&35mm	1" 3/8"	86			Cat. I	32	208	32	95

Dimensions and weights OBH

Metric reference

CO ₂ High Pressure item number	Description	ODS connection mm	Kv m ³ /h	PS bar	PED category	B mm	L mm	C mm	H mm	Weight g
OBH6mm	BV CO ₂ 120bar 6mm	6	1,6	120	Art. 4.3	10	126	13	51	161
OBH8mm	BV CO ₂ 120bar 8mm	8	4,2			10	132	13	51	171
OBH10mm	BV CO ₂ 120bar 10mm	10	5,3			10	132	13	51	182
OBH12mm	BV CO ₂ 120bar 12mm	12	6,6			10	140	13	51	188
OBH15mm	BV CO ₂ 120bar 15mm	15	13			16	146	18,5	64	249
OBH5	BV CO ₂ 120bar 5/8" & 16mm	16	13			16	146	18,5	64	310
OBH18mm	BV CO ₂ 120bar 18mm	18	17			16	146	18,5	64	340
OBH22mm	BV CO ₂ 120bar 22mm	22	26			20	185	22	74	620
OBH28mm	BV CO ₂ 120bar 28mm	28	41			25	205	26	80	940
OBH11	BV CO ₂ 120bar 1 3/8" & 35mm	35	86			32	208	32	95	1380
OBH42mm	BV CO ₂ 120bar 42mm	42	110		Cat. I	38	242	38,5	117	2400
OBH17	BV CO ₂ 120bar 2 1/8" & 54mm	54	208			50	273	48,5	134	3725

Imperial reference

CO ₂ High Pressure item number	Description	ODS connection inches	Kv m ³ /h	PS bar	PED category	B mm	L mm	C mm	H mm	Weight g	
OBH2	BV CO ₂ 120bar 1/4"	1/4"	1,6	120	Art. 4.3	10	126	13	51	161	
OBH3	BV CO ₂ 120bar 3/8"	3/8"	5,3			10	132	13	51	182	
OBH4	BV CO ₂ 120bar 1/2"	1/2"	6,6			10	140	13	51	188	
OBH5	BV CO ₂ 120bar 5/8" & 16mm	5/8"	13			16	146	18,5	64	310	
OBH6	BV CO ₂ 120bar 3/4"	3/4"	17			16	146	18,5	64	340	
OBH7	BV CO ₂ 120bar 7/8"	7/8"	26			20	185	22	74	620	
OBH9	BV CO ₂ 120bar 1 1/8"	1" 1/8"	41			25	205	26	80	940	
OBH11	BV CO ₂ 120bar 1 3/8" & 35mm	1" 3/8"	86			32	208	32	95	1380	
OBH13	BV CO ₂ 120bar 1 5/8"	1" 5/8"	110			Cat. I	38	242	38,5	117	2400
OBH17	BV CO ₂ 120bar 2 1/8" & 54mm	2" 1/8"	208				50	273	48,5	134	3725

EBV-PR

Ball valves for all A1 class HFC, HFO refrigerants and CO₂:

- EBV-PR: without access fitting
- EBVT-PR: with access fitting

Technical Specifications

	EBV-PR	EBVT-PR
Maximum allowable pressure (PS)	90 bar (1.305 psi)	
Maximum working temperature (TS)	-40°C to +149°C (-40°F to +300°F)	
Compatible refrigerants	suitable for use with Class A1 refrigerants: HFC, HCFC, HFO and CO ₂	
Integral pressure relief:		
• Crack open pressure	<0,345 bar (5 psid)	
• Full open pressure	3,45 bar (50 psid)	
• Wide open flow	7,30 l/min H ₂ O @ 3,45 bar (1.93 gpm H ₂ O @ 50 psid)	
Patents	US Patent 10,107,406; International Patents Pending	
Approvals	PED, REACH, RoHS	
Access Fitting	No	Yes

Nomenclature

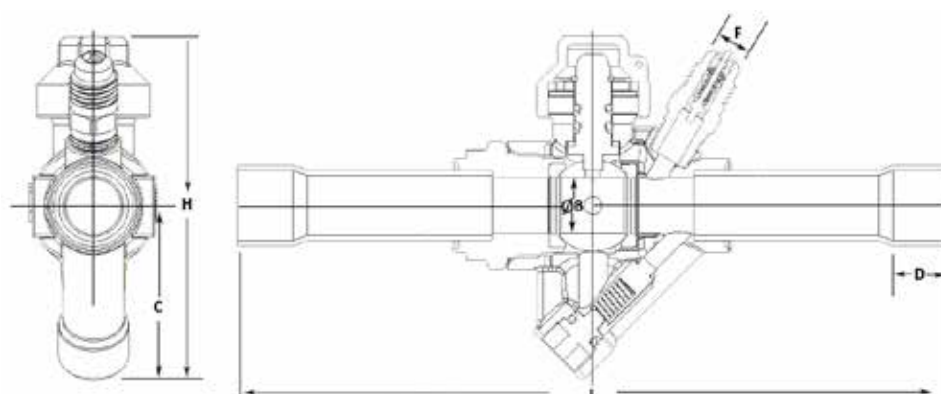
Model	ODS connection size	Connection type
EBV-PR: without access fitting EBVT-PR: with access fitting	Size from selection table	"": imperial MM: metric

Example:

EBV-PR	12	MM
Ball Valve for CO ₂ with check valve without access fitting	12 mm ODS connections	Metric size

Drawings

EBV(T)-PR



Dimensions and weights EBV-PR

Metric reference

	Part Number	Description	ODS connection mm	Kv m ³ /h	PS bar	PED category	B mm	L mm	C mm	H mm	D mm	F inch	Weight g
without access fitting	502399	EBV-PR 10MM	10	3,67	90	Art. 4.3	12,70	165,10	39,62	78,23	7,90	-	350
	502400	EBV-PR 12MM	12	5,97			12,70	165,10	39,62	78,23	9,65	-	350
	502401	EBV-PR 16MM	16	11,86			12,70	165,10	39,62	78,23	12,70	-	355
	502402	EBV-PR 18MM	18	17,93			19,05	184,15	45,47	91,19	15,75	-	655
	502403	EBV-PR 22MM	22	25,86			19,05	184,15	45,47	91,19	19,05	-	652
	502405	EBV-PR 28MM	28	52,29			25,40	215,90	54,10	104,39	23,10	-	1005
with access fitting	502406	EBVT-PR 10MM	10	3,67	90	Art. 4.3	12,70	165,10	39,62	78,23	7,90	1/4" SAE	363
	502407	EBVT-PR 12MM	12	5,97			12,70	165,10	39,62	78,23	9,65	1/4" SAE	368
	502408	EBVT-PR 16MM	16	11,86			12,70	165,10	39,62	78,23	12,70	1/4" SAE	668
	502409	EBVT-PR 18MM	18	17,93			19,05	184,15	45,47	91,19	15,75	1/4" SAE	665
	502410	EBVT-PR 22MM	22	25,86			19,05	184,15	45,47	91,19	19,05	1/4" SAE	1018
	502411	EBVT-PR 28MM	28	52,29			25,40	215,90	54,10	104,39	23,10	1/4" SAE	104,39

Imperial reference

	Part Number	Description	ODS connection inches	Kv m ³ /h	PS bar	PED category	B mm	L mm	C mm	H mm	D mm	F inch	Weight g
without access fitting	502199	EBV-PR 3/8"	3/8"	3,67	90	Art. 4.3	12,70	165,10	39,62	78,23	7,90	-	350
	502200	EBV-PR 1/2"	1/2"	5,97			12,70	165,10	39,62	78,23	9,65	-	350
	502201	EBV-PR 5/8"	5/8"	11,86			12,70	165,10	39,62	78,23	12,70	-	355
	502202	EBV-PR 3/4"	3/4"	17,93			19,05	184,15	45,47	91,19	15,75	-	655
	502203	EBV-PR 7/8"	7/8"	25,86			19,05	184,15	45,47	91,19	19,05	-	652
	502204	EBV-PR 1-1/8"	1"1/8"	52,29			25,40	215,90	54,10	104,39	23,10	-	1005
with access fitting	502205	EBVT-PR 3/8"	3/8"	3,67	90	Art. 4.3	12,70	165,10	39,62	78,23	7,90	1/4" SAE	376
	502206	EBVT-PR 1/2"	1/2"	5,97			12,70	165,10	39,62	78,23	9,65	1/4" SAE	345
	502207	EBVT-PR 5/8"	5/8"	11,86			12,70	165,10	39,62	78,23	12,70	1/4" SAE	654
	502208	EBVT-PR 3/4"	3/4"	17,93			19,05	184,15	45,47	91,19	15,75	1/4" SAE	650
	502209	EBVT-PR 7/8"	7/8"	25,86			19,05	184,15	45,47	91,19	19,05	1/4" SAE	1013
	502210	EBVT-PR 1-1/8"	1"1/8"	52,29			25,40	215,90	54,10	104,39	23,10	1/4" SAE	52,29

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