

GLOBAL TOP VALVE MAKER



VALVE FOR HVAC



Head office

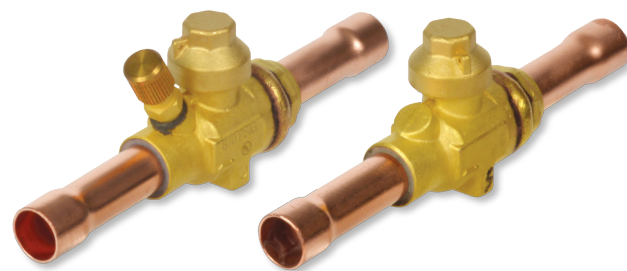
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Ball Valve for Refrigerant

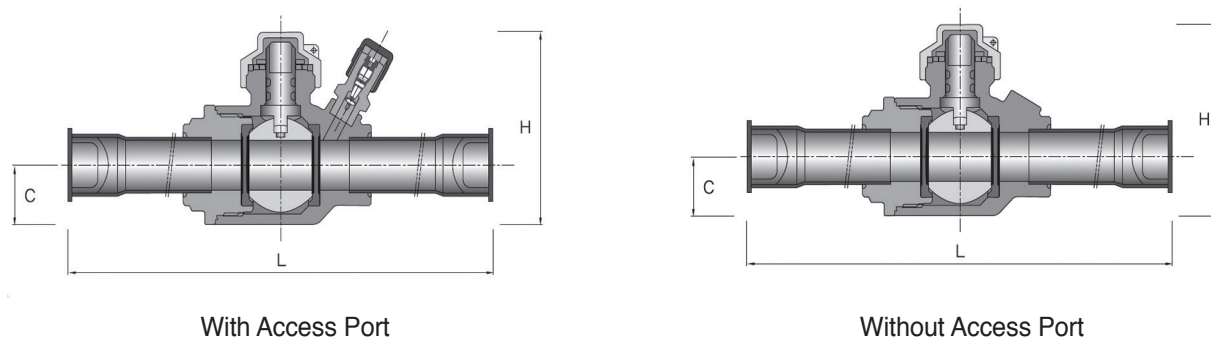


FEATURES

- Temperature rating : -40°F(-40°C) ~ 248°F(120°C)
- Bi-directional application
- Improved internal parts design to guarantee zero leakage
- Robust Brass Body and Cap design
- Full range of sizes from 3/8" to 4-1/8" ODF model
- Charge Port available as an option for all sizes
- UL and CE listed

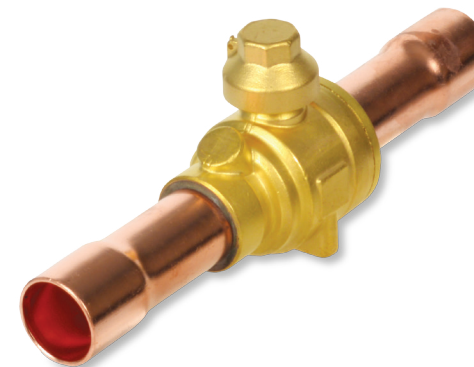
Essen offers the most reliable and efficient Refrigerant Ball Valves for your A/C and Refrigeration system.

DIMENSIONS



Model Number		Connection Size (inch)	Port Size (Inch)	Dimension (mm)			Kv (m3/h)	MWP
Without Access Port	With Access Port			L	H	C		
RBV6	RBV6C	1/4"	1/2"	165	54.4	16	1.62	60bar
RBV10	RBV10C	3/8"	1/2"	165	54.4	16	5.26	60bar
RBV12	RBV12C	1/2"	1/2"	165	54.4	16	8.54	60bar
RBV16	RBV16C	5/8"	1/2"	165	54.4	16	12.21	60bar
RBV18	RBV18C	3/4"	3/4"	184	69.9	21	20.32	60bar
RBV22	RBV22C	7/8"	3/4"	184	69.9	21	27.98	60bar
RBV28	RBV28C	1-1/8"	1"	216	75.7	25.5	49.47	60bar
RBV35	RBV35C	1-3/8"	1-1/4"	235	94	31.1	78.75	48bar
RBV42	RBV42C	1-5/8"	1-1/2"	254	109	39	117.64	48bar
RBV54	RBV54C	2-1/8"	2"	290	131.5	47.5	220.34	48bar
RBV64	RBV64C	2-5/8"	2"	327	131.5	47.5	243.26	48bar
RBV76	RBV76C	3-1/8"	2-1/2"	365	154	60	315.17	48bar
RBV79F	RBV79FC	3-1/8"	3-1/8"	420	178.4	72	430	48bar
RBV92	RBV92C	3-5/8"	3-1/8"	420	178.4	72	442	48bar
RBV105	RBV105C	4-1/8"	3-1/8"	420	178.4	72	450	48bar

Laser welded type Ball Valves



APPLICATION

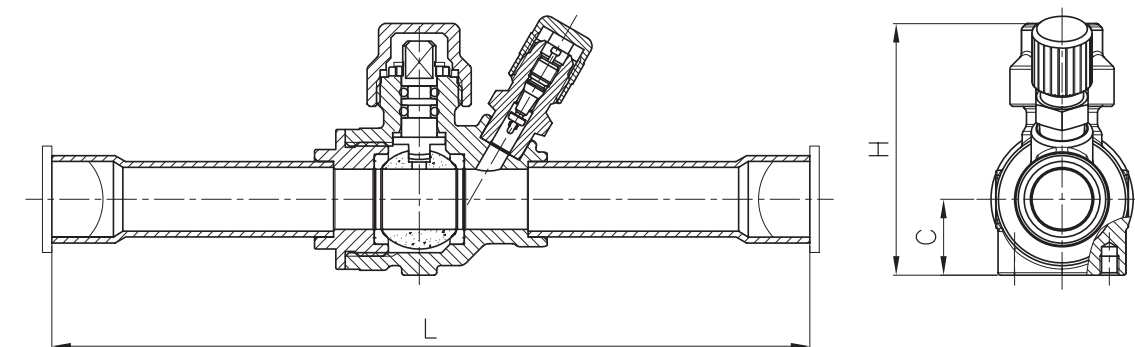
- High pressure HVAC/R

FEATURES

The specific design of ESSEN Ball Valves :

- HCFC & HFC Refrigerants
- Maximum working pressure : 700psig (48bar, 49kg/cm2)
- Temperature range : -40°F(-40°C)~ 248°F(120°C)
- Bi-directional application
- Welded body joint and improved internal parts design to guarantee leak-free performance
- Robust brass body and cap design
- Prevents any risk of ejection or explosion of the spindle
- Selectable charge port
- Economical Type ball valve

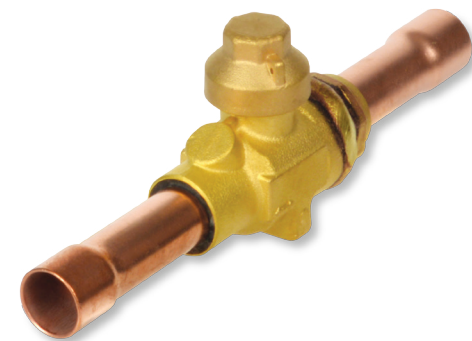
Essen offers the most reliable and efficient Refrigerant Ball Valves for your A/C and Refrigeration system.



DIMENSIONS

Model Number		Connection Size (inch)	Dimension(mm)			Kv (m3/h)
Without Access Port	With Access Port		L	H	C	
LRBV6	LRBV6C	1/4"	160	16	53	1.62
LRBV10	LRBV10C	3/8"	160	16	53	5.26
LRBV12	LRBV12C	1/2"	160	16	53	5.54
LRBV16	LRBV16C	5/8"	160	16	53	12.21
LRBV18	LRBV18C	3/4"	178	20	63.5	20.32
LRBV22	LRBV22C	7/8"	178	20	63.5	27.98
LRBV28	LRBV28C	1-1/8"	213	25	73	49.47

Ball valve for r744(CO₂) Transcritical

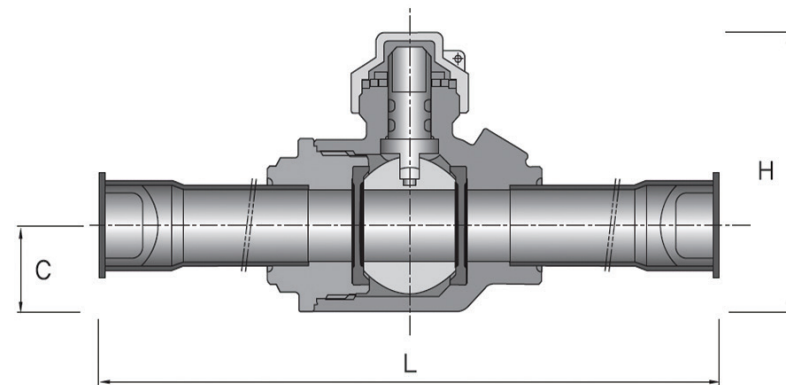


■ FEATURES

- Maximum working pressure : 1,740psig(120bar, 122kg/cm²)
- Refrigerant : R744(CO₂)
- Temperature rating : -40°F(-40°C) ~ 248°F(120°C)
- Improved internal parts design to guarantee zero leakage
- Robust Brass Body and Cap design
- UL list

Essen offers the most reliable and efficient Refrigerant Ball Valves for your A/C and Refrigeration system.

■ DIMENSIONS



Without Access Port

Model Number	Connection Size (inch)	Port Size (Inch)	Dimension (mm)			Kv (m3/h)
			L	H	C	
CRBV6	1/4"	1/2"	165	54.4	16	1.62
CRBV10	3/8"	1/2"	165	54.4	16	5.26
CRBV12	1/2"	1/2"	165	54.4	16	8.54
CRBV16	5/8"	1/2"	165	54.4	16	12.21
CRBV18	3/4"	3/4"	184	69.9	21	20.32
CRBV22	7/8"	3/4"	184	69.9	21	27.98
CRBV28	1-1/8"	1"	216	75.7	25.5	49.47
CRBV35	1-3/8"	1-1/4"	235	94	31.1	78.75
CRBV42	1-5/8"	1-1/2"	254	109	39	117.64

Ball Valve with Sight Glass

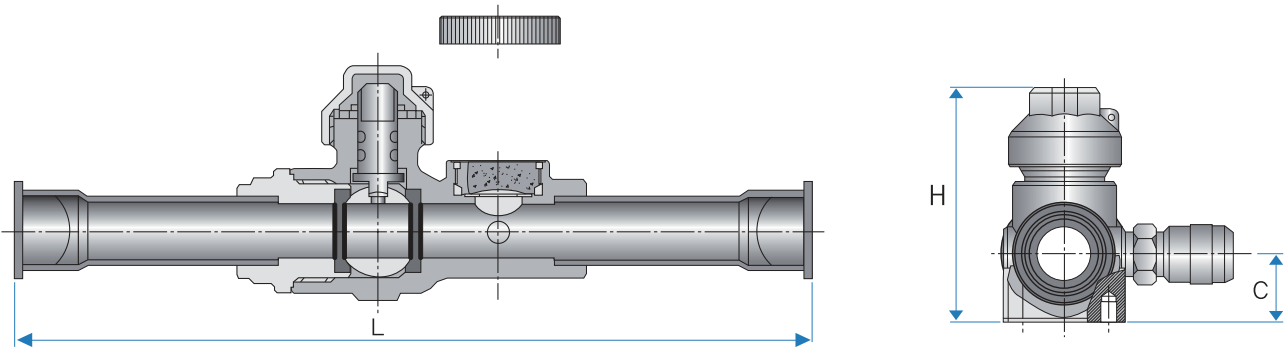


■ FEATURES

- Maximum working pressure : 700psig(48bar, 49kg/cm²)
- Temperature Rating : -40F(-40°C) ~ 248F(120°C)
- Reducing a brazing point due to combine ball valve with sight glass
- Charge port available as an option all sizes
- Robust body and Cap design
- UL listed

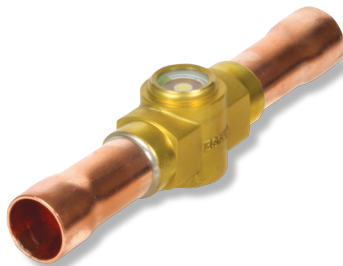
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■ DIMENSIONS



Model Number	Connection Size (inch)	Port Size (Inch)	Dimension (mm)		
			L	H	C
SRBV6C	1/4"	1/2"	185.4	54.4	16
SRBV10C	3/8"	1/2"	185.4	54.4	16
SRBV12C	1/2"	1/2"	185.4	54.4	16
SRBV16C	5/8"	1/2"	185.4	54.4	16
SRBV18C	3/4"	3/4"	211	67	21
SRBV22C	7/8"	3/4"	211	67	21
SRBV28C	1-1/8"	1"	237	76	26

Sight Glass with Moisture Indicator



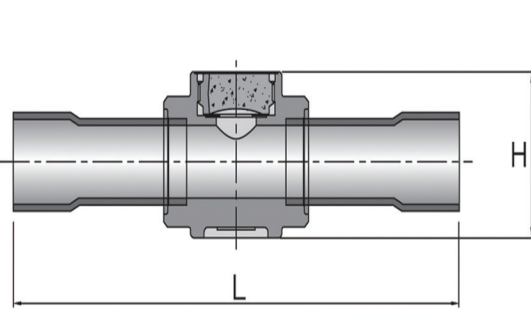
■ FEATURES

- Maximum working pressure : 700psig(48bar, 49kg/cm²)
- Max Temperature rating : -40°F(-40°C) ~ 248°F(120°C)
- Large and clean view Sight Glass
- Zero leakage by High Frequency application
- Both for Solder and Flare Type connection
- UL listed

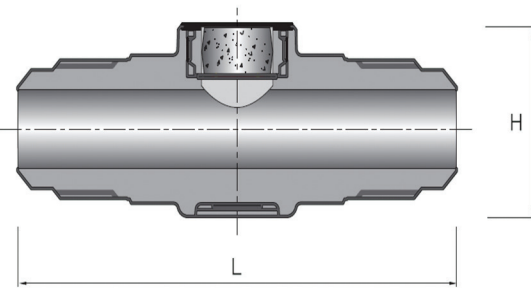
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■ MOISTURE CONTENT PPM

Indicator Color	R22			R134a			R410A			R404A			R407C			R507		
	75°F (24°C)	100°F (38°C)	125°F (52°C)	75°F (24°C)	100°F (38°C)	125°F (52°C)	75°F (24°C)	100°F (38°C)	125°F (52°C)	75°F (24°C)	100°F (38°C)	125°F (52°C)	75°F (24°C)	100°F (38°C)	125°F (52°C)	75°F (24°C)	100°F (38°C)	125°F (52°C)
Green-Dry	20	30	45	30	50	70	20	30	50	20	35	45	15	20	40	15	20	35
Intermed.Color	20-85	30-90	45-110	30-90	50-120	70-150	20-100	30-120	50-150	20-100	35-130	45-200	15-90	20-120	40-210	15-80	20-90	35-110
Yellow-Wet	85	90	110	90	120	150	100	120	150	100	130	200	90	120	210	80	90	110



ESMM series



ESMM series

Model Number	Connection Size (inch)	Connection (Type)	Dimension (mm)	
			L	H
ESM6	1/4"	Sweat x Sweat Standard	111	30.5
ESM10	3/8"		111	30.5
ESM12	1/2"		111	30.5
ESM16	5/8"		111	30.5
ESM18	3/4"		151.4	69.9
ESM22	7/8"		184	38
ESM28	1-1/8"		176	43.5
ESMM6	1/4"	Male Flare x Male Flare	70.1	30.5
ESMM10	3/8"		76.8	30.5
ESMM12	1/2"		83.1	30.5
ESMM16	5/8"		89.7	30.5

Magnetic Type Check Valve

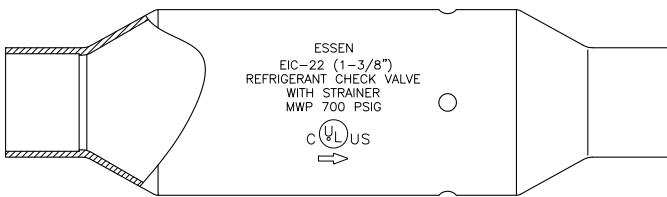


■ FEATURES

- Temperature rating : -40°F(-40°C) ~ 248°F(120°C)
- Multi-function with Check Valves and Strainer.
- Less pressure-drop with better flow efficiency comparing to Ball type check valves
- Guarantee min. design leakage by Magnetic Actuation
- Full range of sizes with 1/4"~2-5/8"for small to large system

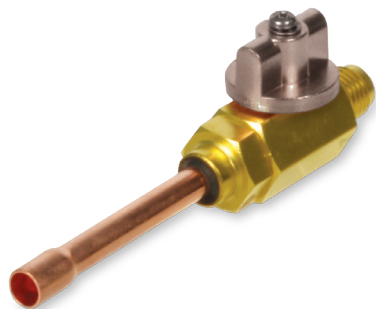
Essen Magnetic Check Valve prevents reverse flow of refrigerant when operation-stop, and protects seat surface from debris by inner Mesh Screen.

■ DIMENSIONS



Model Number	Connection Size (inch)	A (in.)	B (in.)	C (in.)	D (in.)	Opening Pressure (oz./sq.in.)	MWP (psig)	Leak Rate CIM @60 psi	Burst Pressure (psig)	Strainer Mesh Size	Leak Rate (CIM)
EIC-4	1/4 ODF	4	7/8	.254±.002	0.19	1.2	800	0.015	4000	30 MESH PER INCH	0.015
EIC-4	3/8 ODF	4	7/8	.379±.002	0.40	1.3	800	0.015	4000		0.015
EIC-4	1/2 ODF	5	1-1/8	.504±.002	0.31	3.5	700	0.034	3400		0.034
EIC-4	5/8 ODF	5	1-1/8	.629±.002	0.50	3.5	700	0.034	2040		0.034
EIC-4	3/4 ODF	7	1-5/8	.754±.002	0.63	3.8	700	0.074	2040		0.074
EIC-4	7/8 ODF	7	1-5/8	.879±.002	0.75	3.8	700	0.074	2040		0.074
EIC-4	1-1/8 ODF	8-3/8	2-1/8	.254±.002	0.94	6.8	700	0.122	2040		0.122
EIC-4	1-3/8 ODF	9-3/8	2-5/8	.254±.002	1.04	10.2	700	0.172	2040		0.172
EIC-4	1-5/8 ODF	10-1/2	3-1/8	.254±.002	1.07	11.4	700	0.272	2040		0.272
EIC-4	2-1/8 ODF	12	3-5/8	.254±.002	1.34	18.1	700	0.386	2040		0.386
EIC-4	2-5/8 ODF	13	4-1/8	.254±.002	1.50	23	700	0.512	2040		0.512

Shut-off Valves for Refrigerant



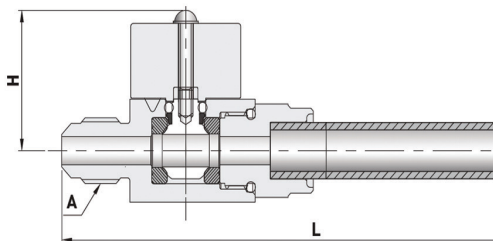
APPLICATION

- High pressure HVAC/R

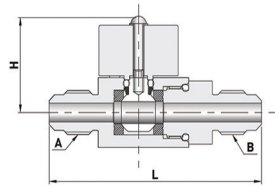
FEATURES

- HCFC & HFC Refrigerants and oils
- Maximum working pressure : 700psig (48bar, 49 kg/cm2)
- Temperature range : -40°F(-40°C)~ 248°F(120°C)
- Capable of holding a vacuum of 300 microns

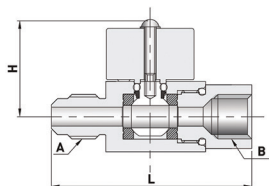
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▲ Type : Flare Male – Solder Tube



▲ Type : Flare Male - Flare Male



▲ Type : Flare Male - Flare Female

DIMENSIONS

Connection Type	Connection Size			Dimension	
	Flare Thread (A)	Inner Diameter (B)	Length (C)	Length (L)	Height (H)
Flare Male - Solder Tube	1/4 SAE (7/16-20 UNF)	1/4" Female Tube Φ 6.45	1/4" Female Tube 8.0	100.8mm (3.97")	24.1mm (0.96")
Flare Male - Solder Tube	1/4 SAE (7/16-20 UNF)	3/8" Female Tube Φ 9.63	3/8" Female Tube 8.0	100.8mm (3.97")	24.1mm (0.96")

Connection Type	Connection Size		Dimension	
	Flare Thread (A)	Flare Thread (A)	Length (L)	Height (H)
Flare Male - Flare Male	"1/4 SAE (7/16-20 UNF)"	"1/4 SAE (7/16-20 UNF)"	58.3.8mm (2.30")	24.1mm (0.96")
Flare Male - Flare Female	"1/4 SAE (7/16-20 UNF)"	"1/4 SAE (7/16-20 UNF)"	49.7mm (1.96")	24.1mm (0.96")

ODS/SAE ball valve for refrigerant



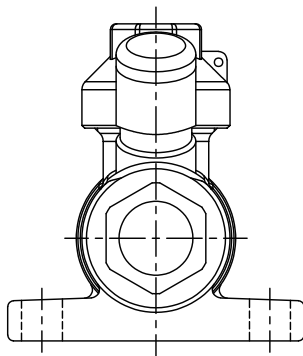
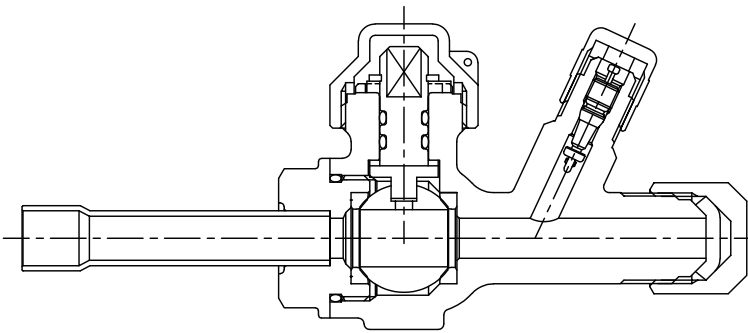
APPLICATION

- High pressure HVAC/R

FEATURES

- Compatible with HCFC & HFC Refrigerants and oils
- Maximum working pressure : 700psig(48bar, 49kg/cm2)
- Temperature Rating : -40°F(-40°C) ~ 248°F(120°C)
- Robust body and Cap design
- Charge port combined type
- UL listed

Essen offers the most reliable and efficient Refrigerant Ball Valves for your A/C and Refrigeration system.



Type : Flare Male – Solder Tube

DIMENSIONS

Model Number	Connction Size (Inch)		Dimmension (mm)					Kv (m³/h)
	A	B	C	D	E	F	L	
VRBV38C	3/8" SAE (5/8"-18 UNF)	3/8" (Ø9.63)	40	Ø7.2	18	55.6	120	3.5
VRBV12C	1/2" SAE (3/4"-16 UNF)	1/2" (Ø12.8)	40	Ø7.2	18	55.6	114	5.8

Ball Valve with Actuator

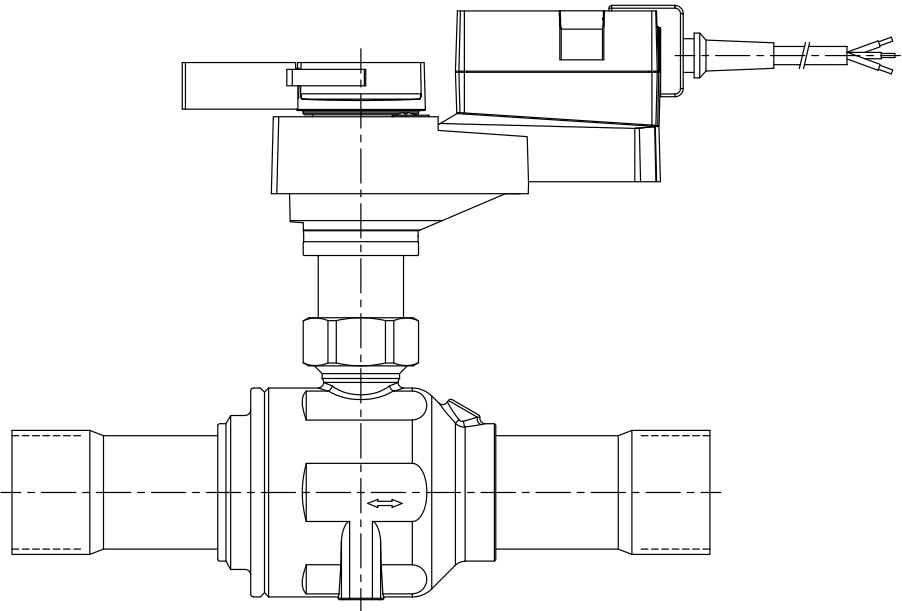


■ APPLICATION

- High pressure HVAC/R

■ FEATURES

- Compatible with HCFC & HFC Refrigerants and oils
- Valve Temperature Rating : -40°F(-40°C) ~ 248°F(120°C)
- Actuator Temperature Rating : -22°F(-30°C) ~ 122°F(50°C)
- Full Shutoff Capability
- The ball valve is operating well at low torque values
- Manual override push button switch
- IP54 Protection degree



■ SPECIFICATIONS

Model Number	Connction Size (Inch)	Dimension (mm)			MWP (bar)	Kv (m³/h)	Torque (Nm)	Running Time (sec)	Coil Ratings Volts/Cycle : Watt	Rotation Angle
		L	H	C						
ARBV10	3/8"	165	141.6	16	60	5.26	5	90	AC100~230V 50/60 : 2W AC24V 50/60 : 1.5W DC24V : 1.5W	90°
ARBV12	1/2"	165	141.6	16	60	8.54	5	90		
ARBV16	5/8"	165	141.6	16	60	12.21	5	90		
ARBV18	3/4"	184	147.6	21	60	20.32	10	90	AC100~230V 50/60 : 3W AC24V 50/60 : 2W DC24V : 2W	
ARBV22	7/8"	184	147.6	21	60	27.98	10	90		
ARBV28	1-1/8"	216	152	25.5	60	49.47	10	90		
ARBV35	1-3/8"	235	170	31	48	78.75	20	90	AC100~230V 50/60 : 3W AC24V 50/60 : 2.5W DC24V : 2.5W	
ARBV42	1-5/8"	254	177	39	48	117.64	20	90		
ARBV54	2-1/8"	290	200	47.5	48	220.34	40	150	AC100~230V 50/60 : 5W AC24V 50/60 : 4W DC24V : 4W	
ARBV64	2-5/8"	327	200	47.5	48	243.26	40	150		
ARBV76	3-1/8"	365	210	60	48	315.17	40	150		
ARBV79F	3-1/8"	420	223	72	48	430	40	150		
ARBV92	3-5/8"	420	223	72	48	442	40	150		
ARBV105	4-1/8"	420	223	72	48	450	40	150		