

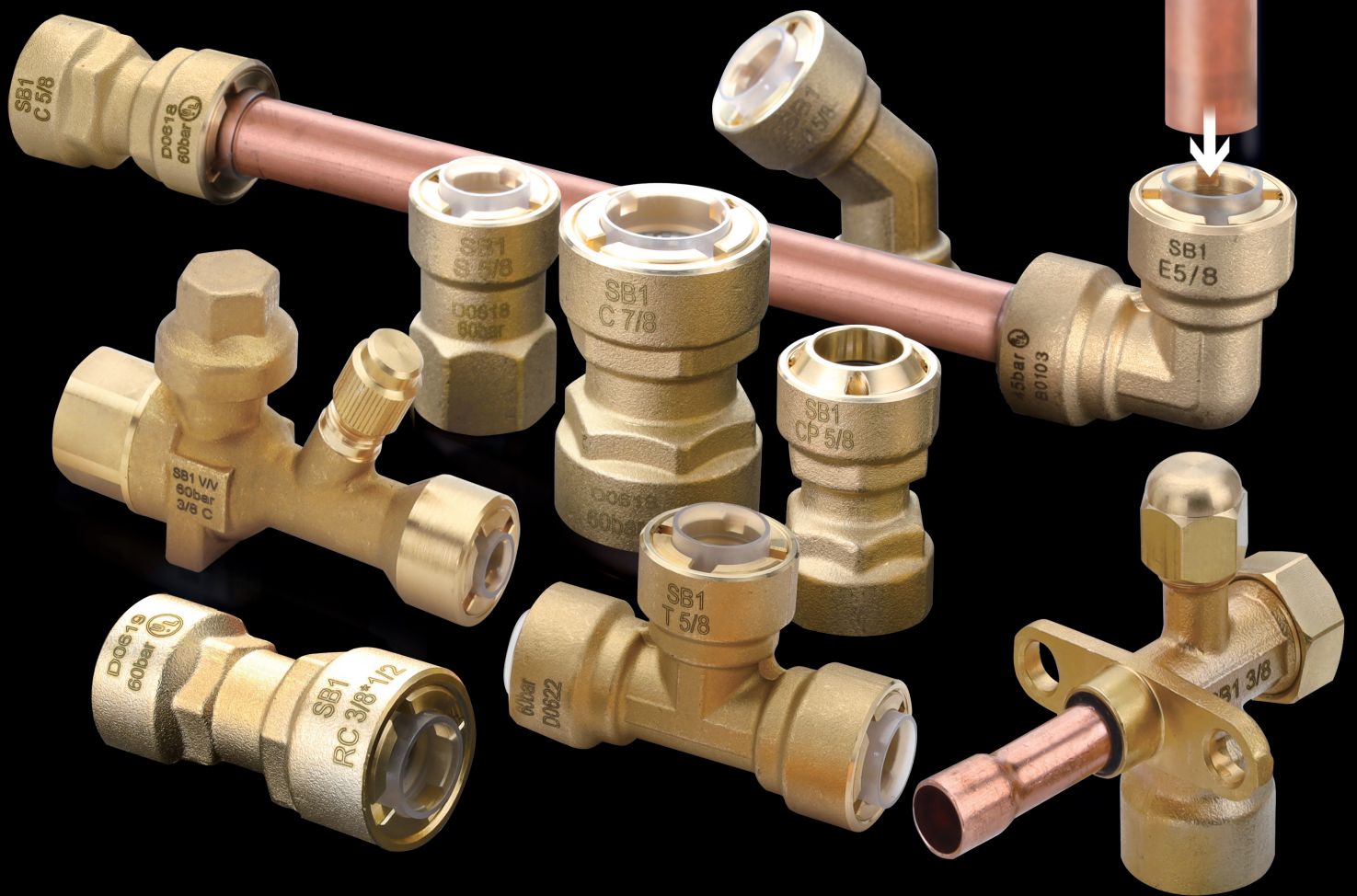
Beyond Innovation

SB1



Quick Push Connector to Refrigerant Line

- No Tool, No Brazing, No Torque
- Work Safer, Faster and Easier
- Increase Productivity, Save time and Labor costs



SB1

Quick Push Connector to Refrigerant Line





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No Tool, No Brazing, No Torque

Advantages

- No Tool, No Brazing, No Torque
- Work Safer, Faster and Easier
- Increase Productivity, Save time and Labor costs

Application

- Refrigerants : R22, R134a, R410a, R507, R600, R290, R32
- Maximum Working Pressure : 870psig (60bar)
- Temperature Range : -40°C ~ 120°C
- Annual Leakage : 1.5g/yr ↓

Features

- The Specific Design of ESSEN Innovation Fittings
- Push to Connect Type
- Leak-Proof Double Rubber Sealing Type
- Robust Brass Body Design



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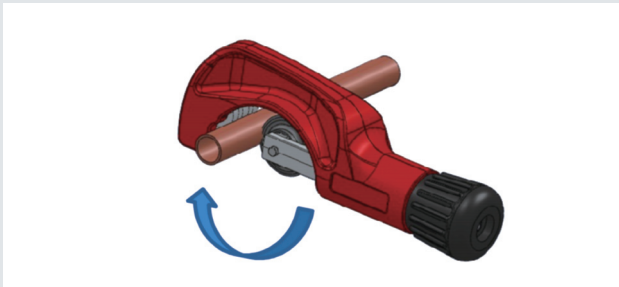
Handy, Eco-friendly and Easy assembly

Installation or replacement of fittings can be done in a more practical and efficient manner which will enable you to significantly increase productivity, save time and labor costs.

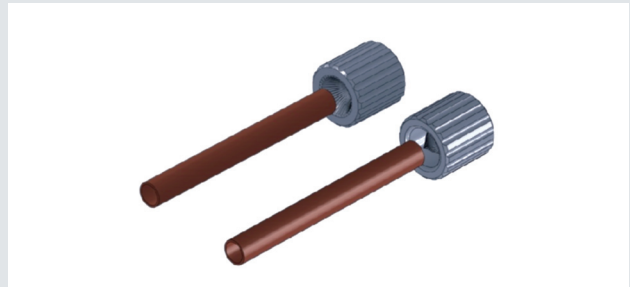
SBI Installation

CONNECTING FITTING

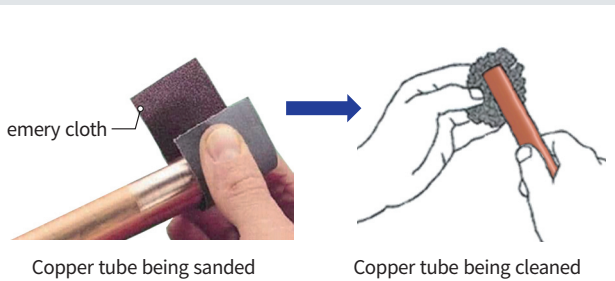
1 Cut the Tube



2 De-burr the Tube

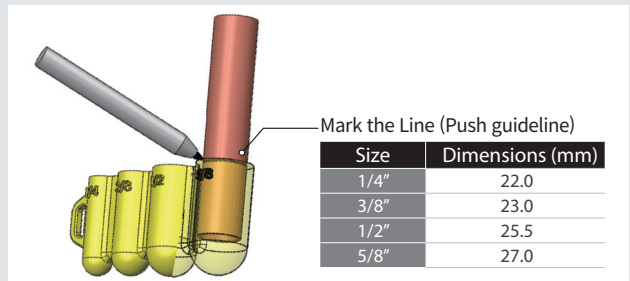


3 Sanding/Cleaning the Tube



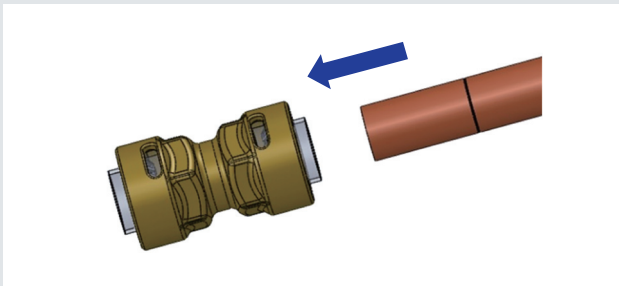
Ensure the tube is clean and not out of shape. Check that the tube has no defects.

4 Mark the Insertion Depth



3/4", 7/8" Line markers are built-in type combined with Disconnection Clip

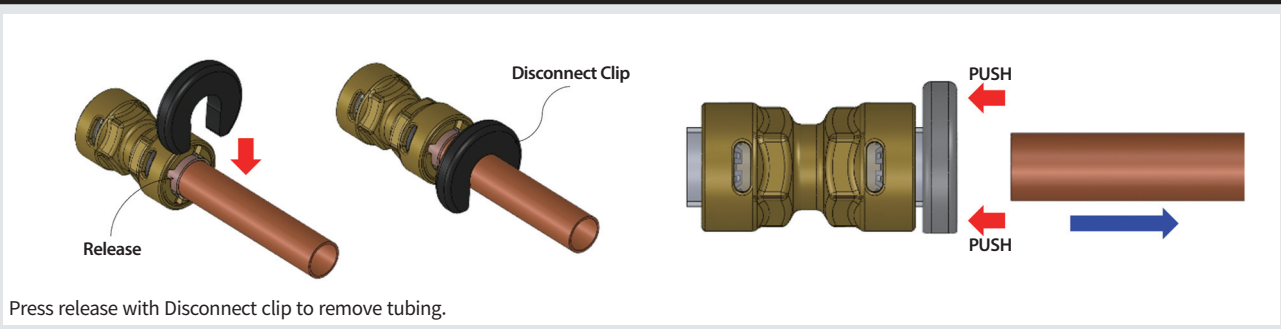
5 Push into Fitting & CAUTION



CAUTION!



DISCONNECTING FITTING



CAUTION



- Do not insert fingers in the grip ring inside the fitting.
- Immediate emergency medical attention may be required for removal.
- Please use appropriate tubes that comply with KS D5301, JIS B 8607 and ASTM B280

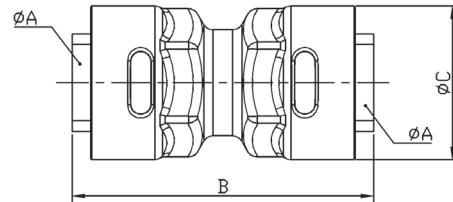
Removable Type



COUPLING



Dimensions



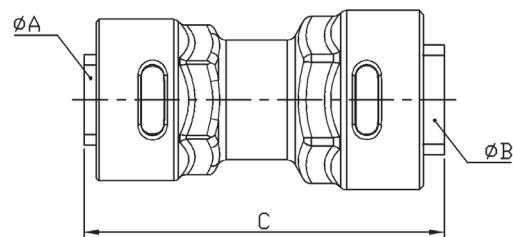
Model	Dimensions (mm)		
Number	ØA	B	ØC
SB1C 1/4	6.35	48	20
SB1C 3/8	9.52	50	24
SB1C 1/2	12.7	54	27
SB1C 5/8	15.88	57	30
SB1C 3/4	19.05	65.5	37
SB1C 7/8	22.22	66.5	40

* Coming Soon : 1-1/8"

COUPLING REDUCER



Dimensions



Model	Dimensions (mm)		
Number	ØA	B	C
SB1RC 1/4 X 3/8	6.35	9.52	50
SB1RC 3/8 X 1/2	9.52	12.7	55
SB1RC 1/2 X 5/8	12.7	15.88	60

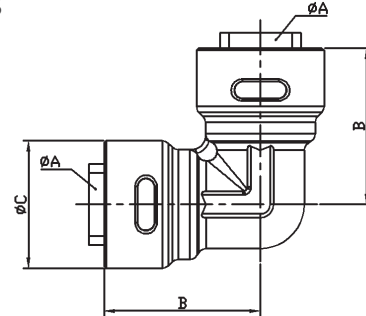


Removable Type

ELBOW



Dimensions



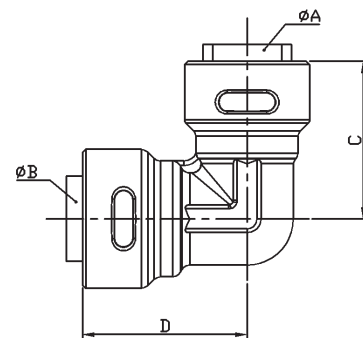
Model Number	Dimensions (mm)		
	ØA	B	ØC
SB1E 1/4	6.35	29.5	20
SB1E 3/8	9.52	32	24
SB1E 1/2	12.7	36	27
SB1E 5/8	15.88	39	30
SB1E 3/4	19.05	44	37
SB1E 7/8	22.22	45	40

* Coming Soon : 1-1/8"

ELBOW REDUCER



Dimensions

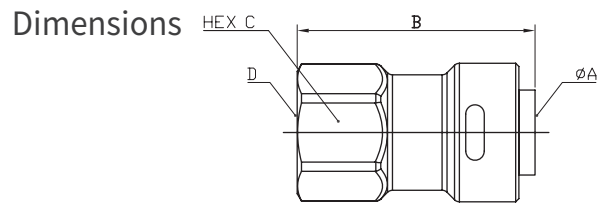


Model Number	Dimensions (mm)			
	ØA	ØB	C	D
SB1RE 1/4 X 3/8	6.35	9.52	26	30
SB1RE 3/8 X 1/2	9.52	12.7	30	34
SB1RE 1/2 X 5/8	12.7	15.88	34	35.5

Removable Type

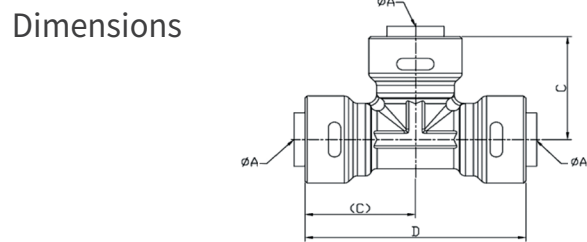


FLARE ADAPTER



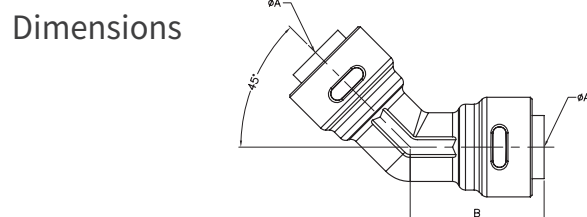
Model Number	Dimensions (mm)			
	ØA	B	HEX C	D
SB1S 1/4	6.35	38.5	17	7/16-20 UNF
SB1S 3/8	9.52	41.5	22	5/8-18 UNF
SB1S 1/2	12.7	46.5	24	3/4-16 UNF
SB1S 5/8	15.88	53	27	7/8-14 UNF

TEE



Model Number	Dimensions (mm)		
	ØA	C	D
SB1T 1/4	6.35	26	52
SB1T 3/8	9.52	30	60
SB1T 1/2	12.7	34	68
SB1T 5/8	15.88	35.5	71

45° ELBOW



Model Number	Dimensions (mm)	
	ØA	B
SB1D 1/4	6.35	26
SB1D 3/8	9.52	30
SB1D 1/2	12.7	34
SB1D 5/8	15.88	35.5

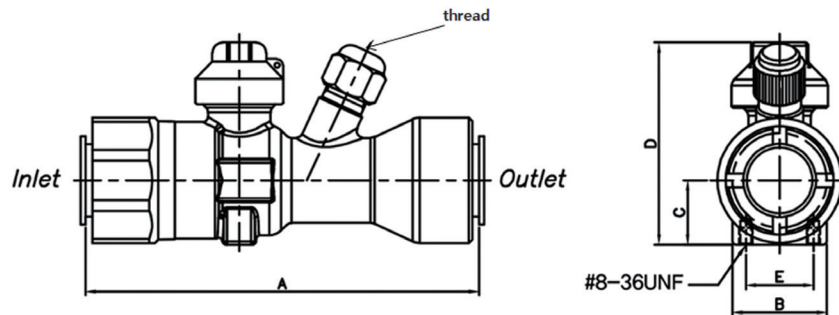
Removable/Permanent Type



BALL VALVE



Dimensions



- Charge Port Flare thread : 1/2-20UNF

Application

- Refrigerants : R22, R134a, R410a, R507, R600, R290, R32
- Maximum Working Pressure : 870psig (60bar)
- Temperature Range : -30°C ~ 120°C

Features

- The Specific Design of ESSEN Innovation Fittings
- Push to Connect Type
- Leak-Proof Double Rubber Sealing Type
- Robust Brass Body Design

Model Number With Access Port	Connection Size (inch)		Dimensions (mm)				
	inlet	outlet	A	B	C	D	E
SBV 06C	1/4"		95	26	16	55	20.0
SBV 10C	3/8"		101	26	16	55	20.0
SBV 12C	1/2"		107	26	16	55	20.0
SBV 16C	5/8"		106	28	19	60	20.0
SBV 18C	3/4"		117	28	19	60	20.0
SBV 22C	7/8"		127	41	21	67	32.0
SBV 1006C	3/8"	1/4"	100	26	16	55	20.0
SBV 0610C	1/4"	3/8"	96	26	16	55	20.0
SBV 1210C	1/2"	3/8"	103	26	16	55	20.0
SBV 1012C	3/8"	1/2"	103	26	16	55	20.0
SBV 1612C	5/8"	1/2"	108	26	16	55	20.0
SBV 1216C	1/2"	5/8"	105	28	19	60	20.0

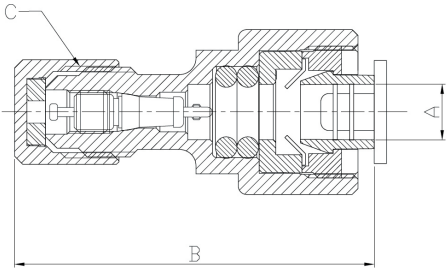


Removable Type

CHARGE NIPPLE



Dimensions

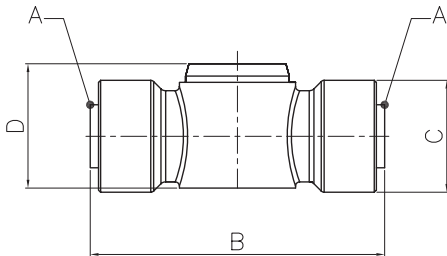


Model Number	Dimensions (mm)		
	ØA	B	C
SB1 CN 1/4	6.35	43.8	7/16 20 UNF

SIGHT GLASS



Dimensions



Application

- Refrigerants : R22, R134a, R410a, R507, R600, R290, R32
- Maximum Working Pressure : 653psig(45bar, 45kg/cm²)
- Temperature Range : -40°C ~ 120°C

Features

- The Specific Design of ESSEN Innovation Fittings
- Push to Connect Type
- Leak-Proof Double Rubber Sealing Type
- Robust Brass Body Design

Model Number	Dimensions (mm)			
	A	B	C	D
SB1SG 1/4	6.35	69	20	24
SB1SG 3/8	9.52	69	24	30
SB1SG 1/2	12.7	71	27	30
SB1SG 5/8	15.88	73	30	30

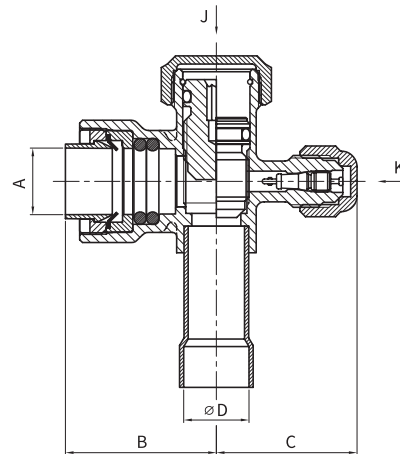
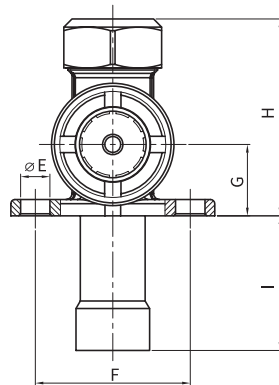
Removable Type



SERVICE VALVES



Dimensions



Model Number	Connections (mm)			Dimensions (mm)							Wrench Size (mm)			Flow rate (L/min)
	ØA	ØD	Charge Port Flare [inch]	B	C	ØE	F	G	H	I	Valve Cap (J)	Valve Stem (J)	Charge Port cap (K)	
SSV1-1/4	6.35	6.6	-	29.2	-	7.2	38	14	36.6	33	18	4	-	1
SSV1-3/8	9.52	9.7	7/16-20UNF	30.5	31.5	7.2	38	14.5	39.5	33	19	4	14	6
SSV1-1/2	12.7	12.9	7/16-20UNF	34.5	33.5	7.2	38	16	46.6	33	23	4	14	10
SSV1-5/8	15.88	16.1	7/16-20UNF	37	34.5	7.2	38	17.5	48.3	33	24	4	14	14
SSV1-1/4N	6.35	6.6	-	29.2	-	7.2	38	14	36.6	33	18	4	-	1
SSV1-3/8N	9.52	9.7	1/2-20UNF	30.5	31.5	7.2	38	14.5	39.5	33	19	4	15	6
SSV1-1/2N	12.7	12.9	1/2-20UNF	34.5	33.5	7.2	38	16	46.6	33	23	4	15	10
SSV1-5/8N	15.88	16.1	1/2-20UNF	37	34.5	7.2	38	17.5	48.3	33	24	4	15	14

* N model : R22, R410A

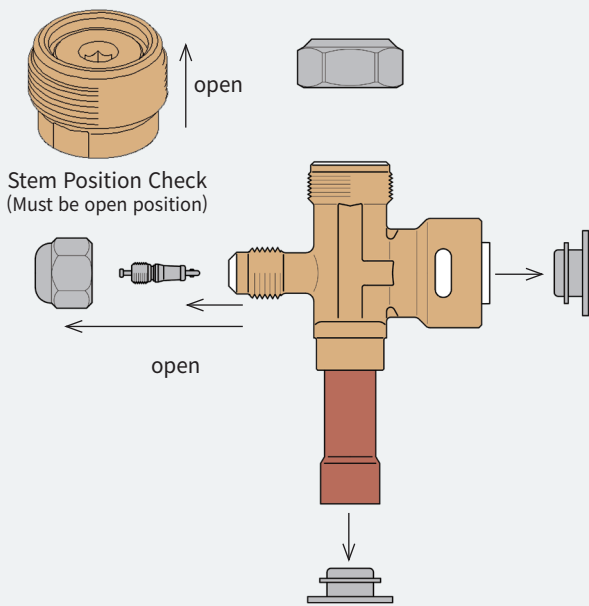
* Maximum Working Pressure : 653psig (45bar, 45kg/cm²)

SBI SERVICE VALVE INSTALLATION

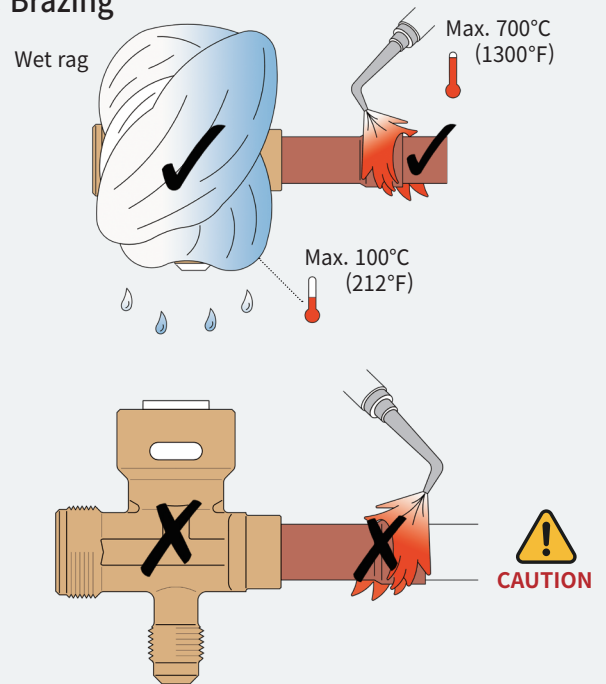
BRASS SERVICE VALVE series SSV1

- Range of temperature allowance : -40°C to +120°C (-40°C to +248°F)
- Design Pressure(Pressure Limit) : 45bar(653psi) ※The valve is designed to withstand the parameter mentioned.

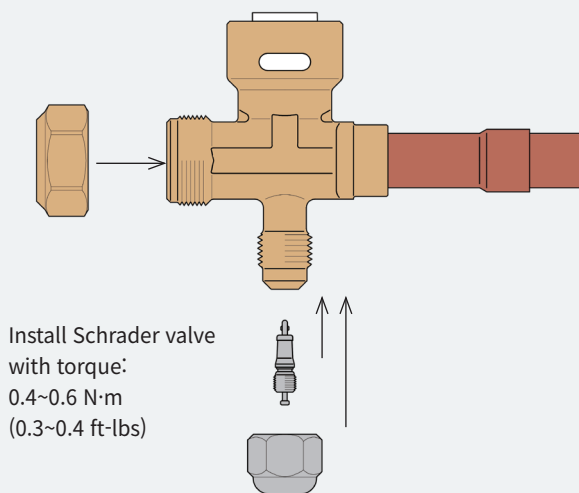
1. Remove cap, Schrader valve and dust cap



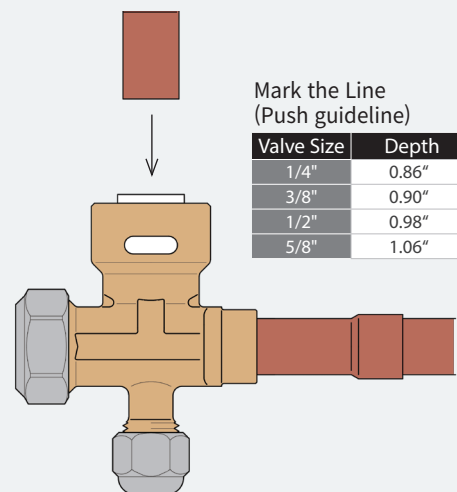
2. Brazing



3. Install Schrader valve and cap



4. Push into Fitting

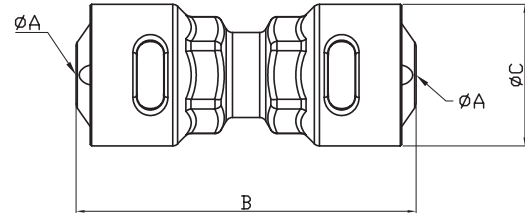


Permanent Type

COUPLING



Dimensions



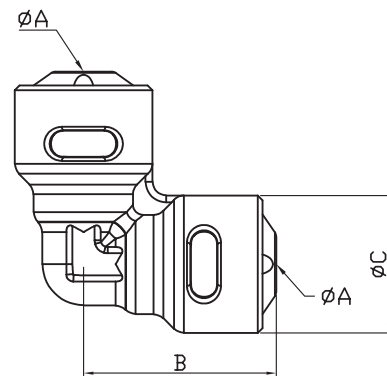
Model Number	Dimensions (mm)		
	ØA	B	ØC
SB1CP 1/4	6.35	48	20
SB1CP 3/8	9.52	50	24
SB1CP 1/2	12.7	54	27
SB1CP 5/8	15.88	57	30
SB1CP 3/4	19.05	65.5	37
SB1CP 7/8	22.22	66.5	40

* Coming Soon : 1-1/8"

ELBOW



Dimensions



Model Number	Dimensions (mm)		
	ØA	B	ØC
SB1EP 1/4	6.35	29.5	20
SB1EP 3/8	9.52	32	24
SB1EP 1/2	12.7	36	27
SB1EP 5/8	15.88	39	30
SB1EP 3/4	19.05	44	37
SB1EP 7/8	22.22	45	40

* Coming Soon : 1-1/8"

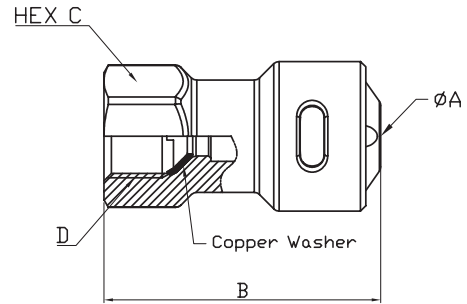
Permanent Type



FLARE ADAPTOR



Dimensions

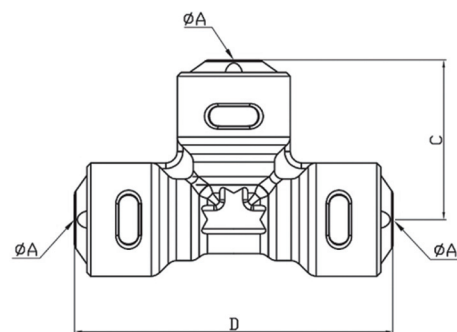


Model Number	Dimensions (mm)				Torque[N.m]
	ØA	B	HEX C	D	
SB1SP 1/4	6.35	38.5	17	7/16-20 UNF	18.0
SB1SP 3/8	9.52	41.5	22	5/8-18 UNF	32.0
SB1SP 1/2	12.7	46.5	24	3/4-16 UNF	49.0
SB1SP 5/8	15.88	53	27	7/8-14 UNF	70.0

TEE



Dimensions



Model Number	Dimensions (mm)		
	ØA	C	D
SB1TP 1/4	6.35	26	52
SB1TP 3/8	9.52	30	60
SB1TP 1/2	12.7	34	68
SB1TP 5/8	15.88	35.5	71

Accessories



Disconnection Clip [Optional part]

SIZE	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"
------	------	------	------	------	------	------



Line Marker [Optional part]

※ 3/4", 7/8" Line markers are built-in type combined with Disconnection Clip

SIZE	1/4"	3/8"	1/2"	5/8"
------	------	------	------	------



Tube Calibration Tool [Optional part]

Coming soon

Certification



CERTIFICATE OF COMPLIANCE

Certificate Number SA13413
Report Reference SA13413-20200807
Issue Date 2020-AUGUST-13

Issued to: ESSEN TECH CO LTD
 15 Jayumyeok 2-gil
 Gunsan-si Jeollabuk-do 54001 KOREA

This certificate confirms that representative samples of VALVES, REFRIGERANT
 USL, CNL – Refrigerant-Containing Components,
 Refrigerant Charging Nipple with Fitting - Models CN 1/4,
 CNP 1/4

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: Refrigerant-Containing Components and Accessories, Nonelectrical, UL 207
 Refrigerant-Containing Components for Use in Electrical Equipment, CAN/CSA C22.2, No. 140.3.

Additional Information: See the UL Online Certifications Directory at <https://iq.ulprospector.com> for additional information.

This Certificate of Compliance does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.



Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at ULCustomerService@ul.com.

Page 1 of 1

CERTIFICATE OF COMPLIANCE

Certificate Number SA44910
Report Reference SA44910-20180117
Issue Date 2020-JULY-28

Issued to: ESSEN TECH CO LTD
 15 Jayumyeok 2-gil, Gunsan-si Jeollabuk-do 54001 KOREA

This certificate confirms that representative samples of REFRIGERATION, FITTINGS
 See addendum page

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 207- Standard for Refrigerant-Containing Components and Accessories, Nonelectrical
 CSA C22.2 No. 140.3-15- Standard for Refrigerant-Containing Components for Use in Electrical Equipment

Additional Information: See the UL Online Certifications Directory at <https://iq.ulprospector.com> for additional information.

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Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.



Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at ULCustomerService@ul.com.

Page 1 of 2

CERTIFICATE OF COMPLIANCE


Certificate Number SA44910
Report Reference SA44910-20180117
Issue Date 2020-JULY-28

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Models
 USL, CNL - Refrigerant Tubing Connectors below.

	Models					
C Series	C 1/4	C 3/8	C 1/2	C 5/8	C 3/4	C 7/8
E Series	E 1/4	E 3/8	E 1/2	E 5/8	E 3/4	E 7/8
RC Series (+)	RC 5/8*1/2	RC 1/2*3/8	RC 3/8*1/4			
RE Series (+)	RE 5/8*1/2	RE 1/2*3/8	RE 3/8*1/4			
D Series	D 1/4	D 3/8	D 1/2	D 5/8		
CP Series	CP 1/4	CP 3/8	CP 1/2	CP 5/8	CP 3/4	CP 7/8
EP Series	EP 1/4	EP 3/8	EP 1/2	EP 5/8	EP 3/4	EP 7/8
S Series	S 1/4	S 3/8	S 1/2	S 5/8		
SP Series	SP 1/4	SP 3/8	SP 1/2	SP 5/8		
CAP-R Series	CAP-R 1/4	CAP-R 3/8	CAP-R 1/2	CAP-R 5/8		
CAP-P Series	CAP-P 1/4	CAP-P 3/8	CAP-P 1/2	CAP-P 5/8		
DP Series	DP 1/4	DP 3/8	DP 1/2	DP 5/8		
RCP Series (+)	RCP 5/8*1/2	RCP 1/2*3/8	RCP 3/8*1/4			
REP Series (+)	REP 5/8*1/2	REP 1/2*3/8	REP 3/8*1/4			

(+) – For RC, RE RCP and REP Series, 5/8*1/2, 1/2*3/8, 3/8*1/4 can be switched location such as 1/2*5/8, 3/8*1/2, 1/4*3/8. Each number represents ID size of the Fitting.



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Beyond Innovation

SBI *is Innovation*
It makes your business stronger than ever



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