

Beyond Innovation



Quick Push Connector to Refrigerant Line

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



Quick Push Connector to Refrigerant Line



SB1

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to Refrigerant Line*

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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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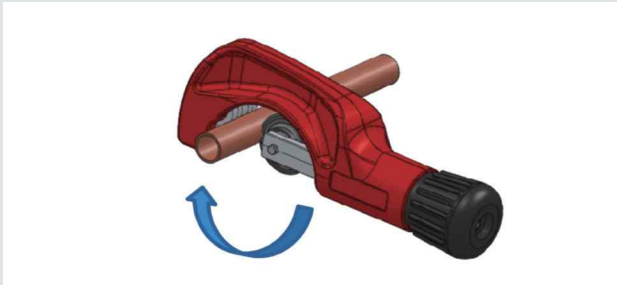
Handy, Eco-friendly and Easy assembly

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

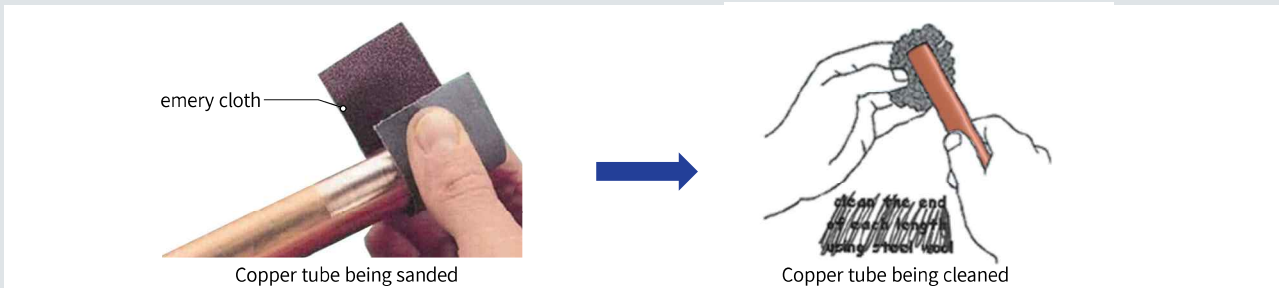
1 Cut the Tube



2 De-burring



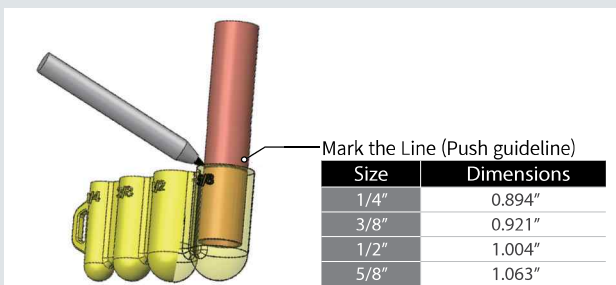
3 Mark the Insertion Depth



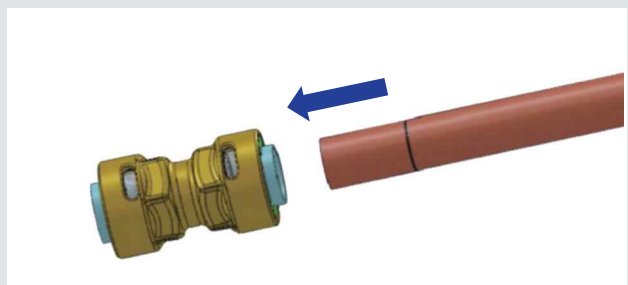
CAUTION

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

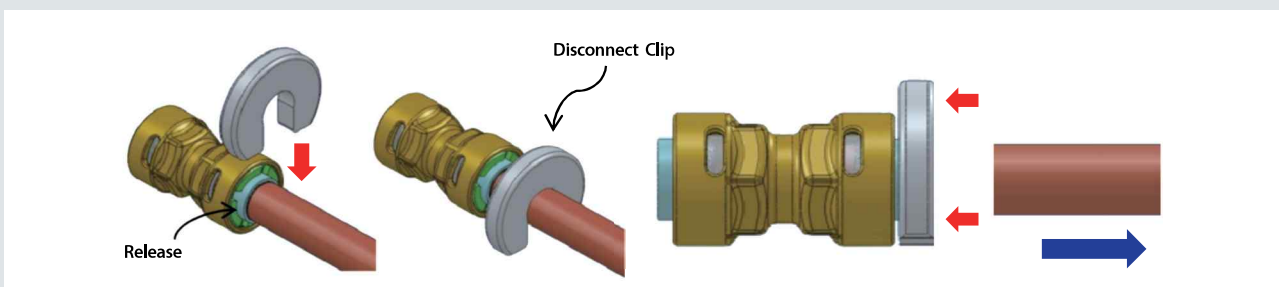
4 Mark the Insertion Depth



5 Push into Fitting



DISCONNECTING FITTING



Press release with Disconnect clip to remove tubing.

CAUTION



Do not insert fingers in the grip ring inside the fitting. Immediate emergency medical attention may be required for removal.

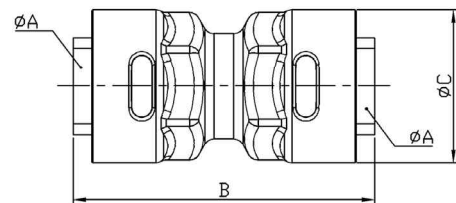
Removable Type



COUPLING



Dimensions



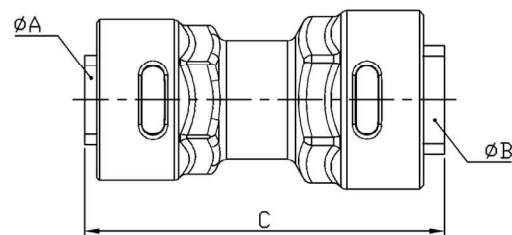
Model	Dimensions (mm)		
Number	ØA	B	ØC
SB1C 1/4	6.35	48	20
SB1C 3/8	9.52	50	24
SB1C 1/2	12.7	54	27
SB1C 5/8	15.88	57	30
SB1C 3/4	19.05	65.5	37
SB1C 7/8	22.22	66.5	40

* 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

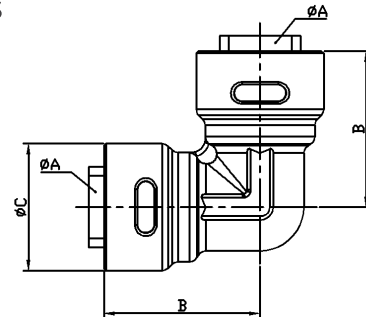
Removable Type



ELBOW



Dimensions



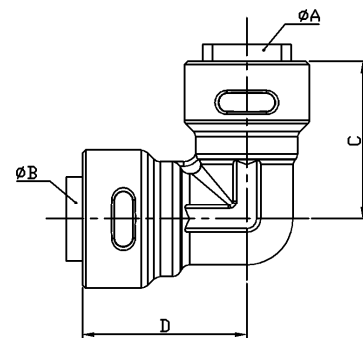
Model Number	Dimensions (mm)		
	ØA	B	ØC
SB1E 1/4	6.35	29.5	20
SB1E 3/8	9.52	32	24
SB1E 1/2	12.7	36	27
SB1E 5/8	15.88	39	30
SB1E 3/4	19.05	44	37
SB1E 7/8	22.22	45	40

* Coming Soon : 1-1/8"

ELBOW REDUCER



Dimensions

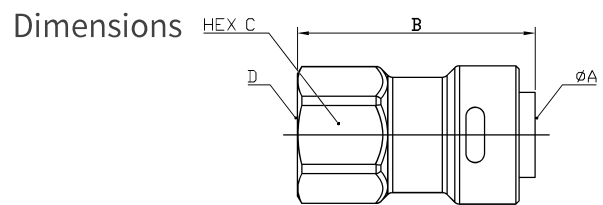


Model Number	Dimensions (mm)			
	ØA	ØB	C	D
SB1RE 1/4 X 3/8	6.35	9.52	26	30
SB1RE 3/8 X 1/2	9.52	12.7	30	34
SB1RE 1/2 X 5/8	12.7	15.88	34	35.5

Removable Type

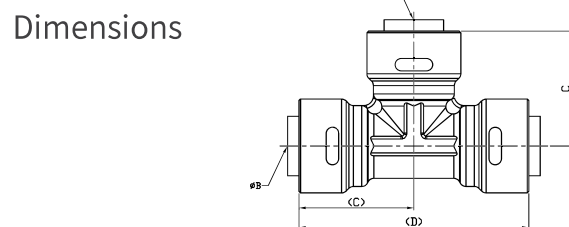


FLARE ADAPTER



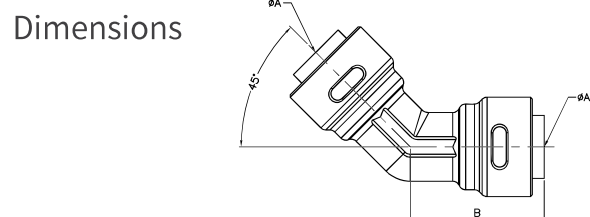
Model Number	Dimensions (mm)			
	ØA	B	ØC	D
SB1S 1/4	6.35	38.5	17	7/16-20 UNF
SB1S 3/8	9.52	41.5	22	5/8-18 UNF
SB1S 1/2	12.7	46.5	24	3/4-16 UNF
SB1S 5/8	15.88	53	27	7/8-14 UNF

TEE



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

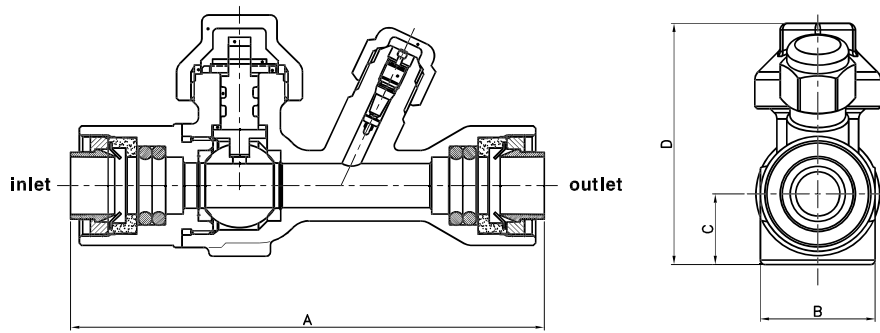
Removable Type



BALL VALVE



Dimensions



- Charge Port Flare thread : 1/2-20UNF (option : 7/16-20UNF)

Application

- Refrigerants : R22, R134a, R410a, R507, R600, R290, R32
- Maximum Working Pressure : 870psig (60bar)
- 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 With Access Port	Connection Size (inch)		Dimensions (mm)			
	inlet	outlet	A	B	C	D
SBV 06C	1/4"		95	26	16	55
SBV 10C	3/8"		101	26	16	55
SBV 12C	1/2"		107	26	16	55
SBV 16C	5/8"		106	28	19	60
SBV 18C	3/4"		117	28	19	60
SBV 22C	7/8"		127	41	21	67
SBV 1006C	3/8"	1/4"	96	26	16	55
SBV 0610C	1/4"	3/8"	103	26	16	55
SBV 1210C	1/2"	3/8"	100	26	16	55
SBV 1012C	3/8"	1/2"	105	26	16	55
SBV 1612C	5/8"	1/2"	108	26	16	55
SBV 1216C	1/2"	5/8"	108	28	19	60

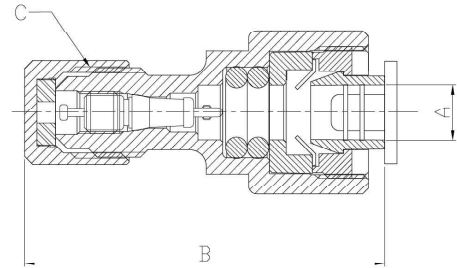
Removable Type



CHARGE NIPPLE



Dimensions

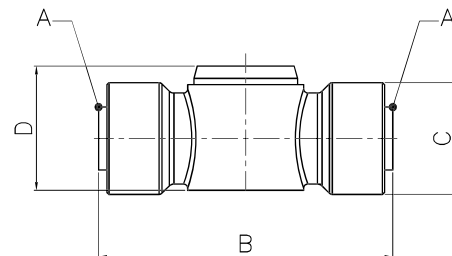


Model Number	Dimensions (mm)		
	ØA	B	C
SB1 CN 1/4	6.35	43.8	7/16 20 UNF

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

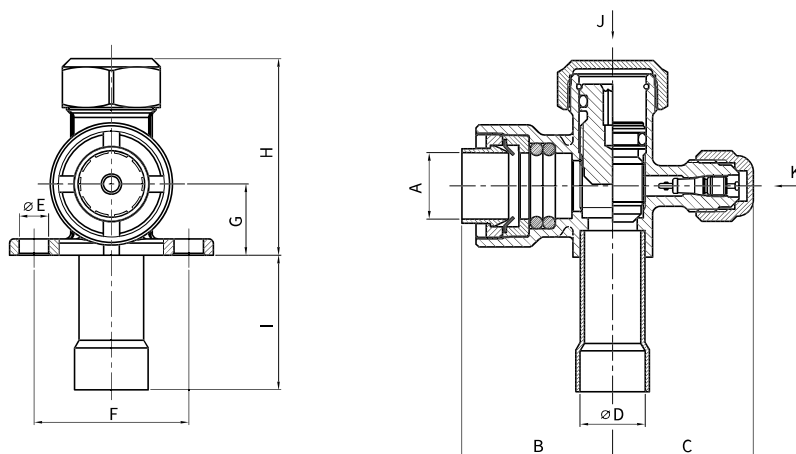
Removable Type



SERVICE VALVES



Dimensions



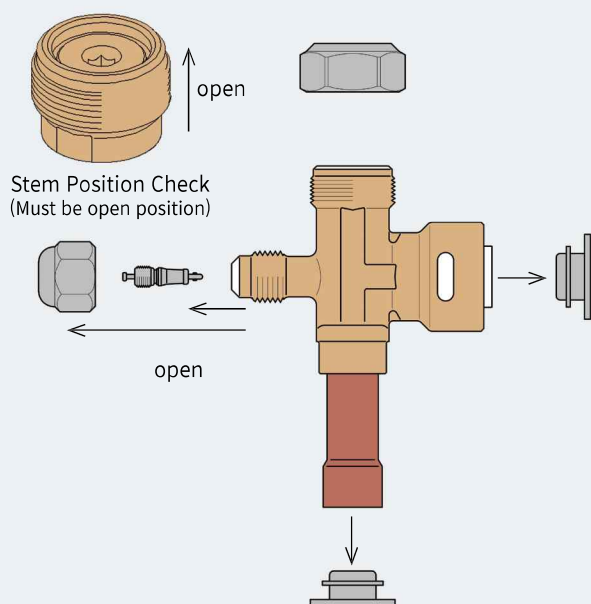
Model Number	Connections (mm)			Dimensions (mm)								Wrench Size (mm)			Flow rate (L/min)
	ØA	ØD	Charge Port Flare [inch]	B	C	ØE	F	G	H	I	B	Valve Cap (J)	Valve Stem (J)	Charge Port cap (K)	B
SSV1-1/4	6.35	6.6	-	29.2	-	7.2	38	14	36.6	33	18	4	-	1	48
SSV1-3/8	9.52	9.7	7/16-20UNF	30.5	31.5	7.2	38	14.5	39.5	33	19	4	14	6	50
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	54
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	57
SSV1-1/4N	6.35	6.6	-	29.2	-	7.2	38	14	36.6	33	18	4	-	1	65.5
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	57
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	65.5
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	66.5

SBI SERVICE VALVE INSTALLATION

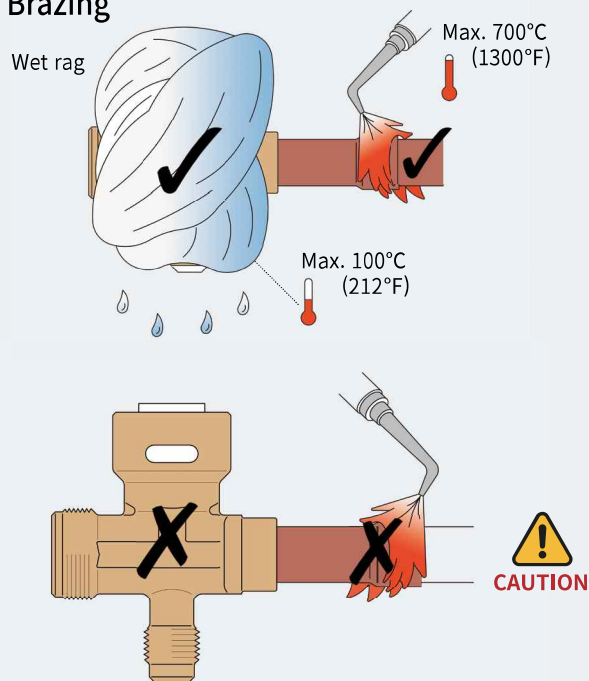
BRASS SERVICE VALVE series SSV1

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

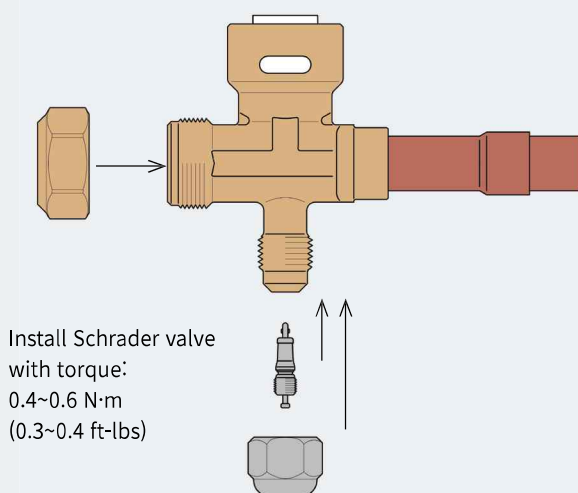
1. Remove cap, Schrader valve and dust cap



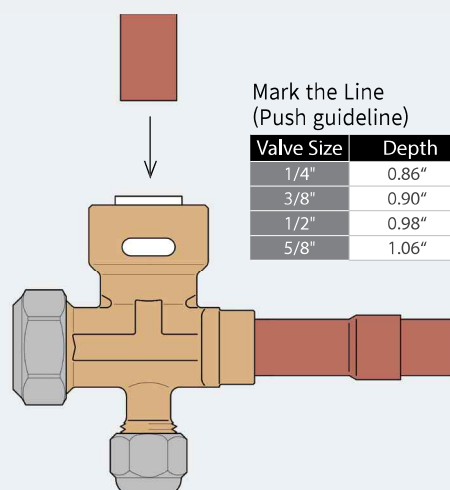
2. Brazing



3. Install Schrader valve and cap



4. Push into Fitting



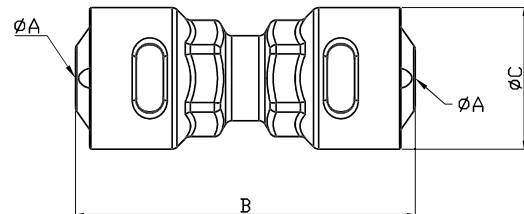
Permanent Type



COUPLING



Dimensions

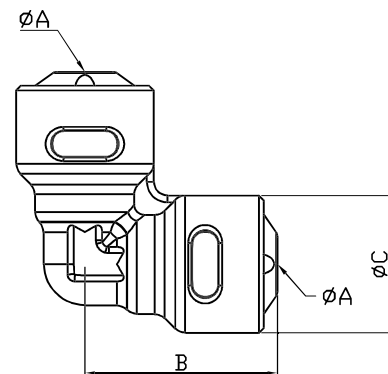


Model Number	Dimensions (mm)		
	ØA	B	ØC
SB1CP 1/4	6.35	48	20
SB1CP 3/8	9.52	50	24
SB1CP 1/2	12.7	54	27
SB1CP 5/8	15.88	57	30
SB1CP 3/4	19.05	65.5	37
SB1CP 7/8	22.22	66.5	40

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

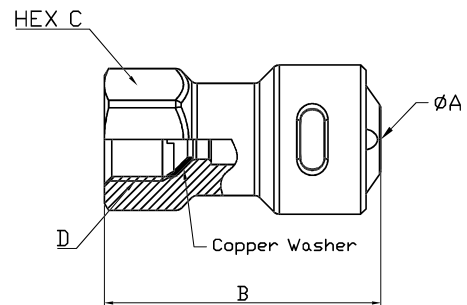
Permanent Type



FLARE ADAPTOR



Dimensions

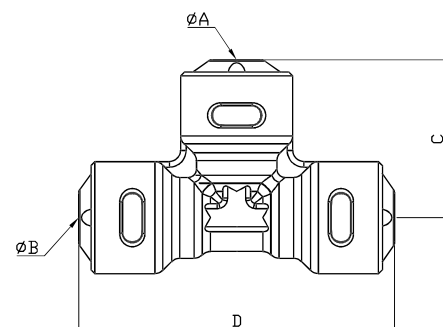


Model Number	Dimensions (mm)			
	ØA	B	HEX C	D
SB1SP 1/4	6.35	38.5	17	7/16-20 UNF
SB1SP 3/8	9.52	41.5	22	5/8-18 UNF
SB1SP 1/2	12.7	46.5	24	3/4-16 UNF
SB1SP 5/8	15.88	53	27	7/8-14 UNF

TEE



Dimensions



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

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



Tube Calibration Tool [Optional part]

Coming soon

CERTIFICATION



CERTIFICATE OF COMPLIANCE

Certificate Number SA44910
Report Reference SA44910-20180117
Issue Date 2020-APRIL-01

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 for models

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.

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

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		
EP Series	EP 1/4	EP 3/8	EP 1/2	EP 5/8		
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		

B. Mahlen

Bruce Mahlenholz, Director North American Certification Program
UL LLC

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Beyond Innovation



is Innovation

It makes your business stronger than ever



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