C L I

CLI:
BLAZING THE TRAIL WITH INNOVATION AND EFFICIENCY

With an experience of over 21 years in the copper tube industry, Cannelle Holdings has evolved be able to manufacture its own range of copper pipes and fittings 'CLI' As a result of our prolific and loyal customer base, CLI has become a successful and known brand in the manufacture and distribution of copper tubes for, air conditioning, refrigeration, water supply and a variety of other commercial applications.

The reason for this speedy success is owing to the fact that we understand customer satisfaction is not only driven by innovative products but also efficiency in quality of services and products. Our employees take pride in ensuring we meet our customer needs and requirements: from timely deliveries to efficient sales and service departments, to utmost products quality.

Driven to Quality efficiency

CLI implements stringent testing methods and controls to ensure the highest quality of tubes reaches our customers. From acquiring raw materials to the final packaging; our tubes and fittings are tested at all stages of production and distribution until it reaches the final consumer. This ensures defects, if any, are immediately detected and dealt with.

Material

Type DHP (UNS C12200) Copper. This material meets the requirements of CLI Premium +.

Cleanliness and Appearance

As per the requirements of standard CLI Premium +, any residue on the inside of the tube will not exceed 0.0035 gm/ft2 (0.038 g/m2) Both the inside and outside diameter surfaces will be clean and bright, with the finish being smooth and free from silvers, scale, open grain and major metal defects such as inclusions. Level wound coils with insignificant surface damage, such as minor dents that will not interfere with the tubing's end use, will be shipped.

Product	Application	Temper	Standards
Refrigeration Tube	Air Conditioning Refrigeration Service	Soft Annealed	ASTM B 280 ASTM B 743
ACR L Tube (Degreased Cleaned & Capped)	Air Conditioning Refrigeration National Gas	Hard drawn	ASTM B 280 ASTM B 743 ASTM B 75
Tube TYPE L, TYPE K	Domestic Service, Fire Protection, Solar, Fuel Oil, HVAC and Natural Gas	Hard drawn	ASTM B 280 ASTM B 88

CLI copper tubes are manufactured as per CLI PREMIUM + Standards with highest precision and cleanliness needed for the demanding conditions of HVAC and refrigeration applications. Our products are purged with nitrogen to provide maximum protection against the formation of harmful oxides during brazing operations. CLI copper tubes are degreased, dehydrated and packed in eco – friendly individual cartons for the highest level of protection.

Temper Designation		Form	Tensile Strength Min		Elongation in 2 in, min, %	Average Grain Size, mm	Expansion of Outside Diameter %
Standard	Former		Ksi	(Mpa)			
O60	Soft Annealed	Coiled Lengths	30	(205)	40	0.040 Min	40
H58	Drawn General Purpose	Straight Lengths	36	(250)	N/A	N/A	N/A

SIZES	HARD DRAWN LENGTHS	SOFT ANNEALED STANDARDS
	WT	WT
1/8	-	0.030
3/16	-	0.030
1/4	-	0.030
5/16	-	0.032
3/8	0.030	0.032
1/2	0.035	0.032
5/8	0.040	0.035
3/4	0.042	0.035
7/8	0.045	0.045
1 1/8	0.050	0.050
1 3/8	0.055	-
1 5/8	0.060	-
2 1/8	0.070	-
2 5/8	0.080	-
3 1/8	0.090	-
3 5/8	0.100	-
4 1/8	0.110	-

CLI copper tubes are manufactured as per CLI PERFORM with highest precision and cleanliness needed for the demanding conditions of HVAC and refrigeration applications. ACR Perform Coils & Pipes are dehydrated, degreased, purged with nitrogen and capped to maintain the internal cleanliness of the product.

Temper Designation	Wall Thickness in (mm)	Rockwell Hardness		Tensile Strength Min		Yield Strength Min		Enlogation in 2 in Min %	Average Grain Size mm
		Scale	Value	Ksi	(Mpa)	Ksi	(Mpa)		
H58	0.020 an over (0.508)	30T	30 Min	36	(250)	36	(250)	N/A	N/A
050	0.020 to 0.035 (0.508 to 0.889) Over 0.035 (0.889)	15T F	65 Max 55 Max	30	(205)	9	(62)	40	0.040 Máx.
060	0.020 to 0.035 (0.508 to 0.889) Over 0.035 (0.889)	15T F	60 Max 50 Max	30	(205)	6	(40)	40	0.040 Min.

SIZES	HARD DRAWN LENGTHS	SOFT ANNEALED STANDARDS
	WT	WT
1/4	-	0.024
5/16	-	0.024
3/8	0.024	0.024
1/2	0.024	0.028
5/8	0.028	0.028
3/4	0.028	0.032
7/8	0.032	0.035
1 1/8	0.036	0.040
1 3/8	0.040	-
1 5/8	0.042	-
2 1/8	0.056	-
2 5/8	0.064	-
3 1/8	0.070	-
4 1/8	0.080	-

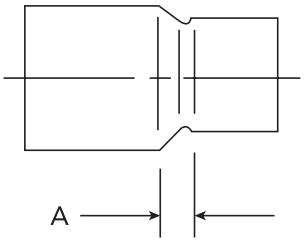
CLI copper tubes are manufactured as per ASTM Standards with highest precision and cleanliness needed for HVAC and refrigeration applications. Our CLI soft copper tubes are degreased & dehydrated, products are purged with nitrogen to provide maximum protection against the formation of harmful oxides during brazing operations.

SIZES		WALL THICKNESS	
(mm)	(inch)	(mm)	(inch)
6.35	1/4	0.51	0.020
7.94	5/16	0.51	0.020
9.53	3/8	0.56	0.022
12.70	1//2	0.61	0.024
15.88	5/8	0.66	0.026
19.05	3/4	0.71	0.028
22.23	7/8	0.76	0.030

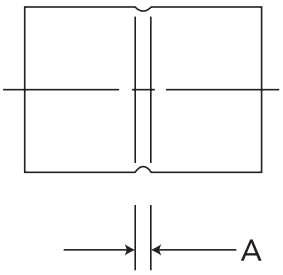
COPPER TUBE PLUMBING RANGE TYPE K

SIZE		Type K		
NOM	O.D. (in.)	WALL THICKNESS	WEIGHT (Kg/m)	lb/ft Nominal
1/4	3/8	0.030	0,1876	0,126
3/8	1/2	0.035	0,295	0,198
1/2	5/8	0,040	0,424	0,285
5/8	3/4	0,042	0,539	0,362
3/4	7/8	0,045	0,677	0,455
1	11/8	0,050	0.974	0,655
11/4	13/8	0,055	1,316	0,884
11/2	15/8	0,060	1,697	1,14
2	2 1/8	0,070	2,604	1,75
2 1/2	2 5/8	0,080	3,691	2,48
3	3 1/8	0,090	4,956	3,33
3 1/2	3 5/8	0,100	6,384	4,29
4	4 1/8	0,110	8,006	5,38
5	5 1/8	0,125	11.325	7,61
6	6 1/8	0,140	15.179	10,20
8	8 1/8	0,200	28.722	19,30

REDUCING COUPLING C x C – WROT

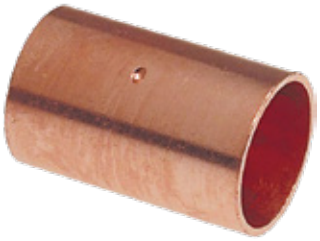


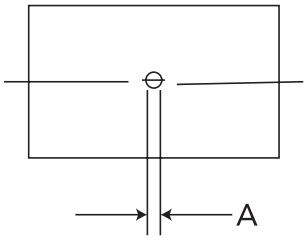
REDUCING COUPLING C x C - WROT		REDUCING COUPLING C x C - WROT	
NOMINAL SIZE	DIMENSIONS A INCHES	NOMINAL SIZE	DIMENSIONS A INCHES
1/8 X 3/16	5/32	2 1/8 X 3/4	17/32
5/16 X 1/8	1/4	2 1/8 X 1/2	7/16
1/4 X 5/16	3/16	2 1/8 X 1 3/8	11/16
1/4 X 1/8	3/16	2 1/8 X 1 5/8	9/16
3 /8 X 1/4	3/16	2 5/8 X 1 1/8	29/32
3/8 X 5/16	1/4	2 5/8 X 1 3/8	13/16
3/8 X 1/8	1/4	2 5/8 X 1 5/8	11/16
1/2 X 1/8	11/32	2 5/8 X 21/8	1/2
1/2 X 1/4	1/4	3 1/8 X 1 5/8	1 1/32
1/2 X 3/8	3/16	3 1/8X 21/8	15/16
5/8 X 1/4	13/32	3 1/8 X 2 5/8	1/2
5/8 X 3/8	11/32	3 5/8 X 31/8	17/32
5/8 X 1/2	3/16	4 1/8 X 2 1/8	1 3/8
3/4 X 1/4	11/32	41/8 X 2 5/8	1 1/8
3/4 X 3/8	3/8	41/8 X 3 1/8	27/32
3/4 X 1/2	5/16	41/8 X 3 5/8	19/32
3/4 X 5/8	3/16	51/8 X 21/8	2 1/32
1 1/8 X 3/8	13/32	51/8 X 2 5/8	1 15/16
1 1/8 X 1/2	11/32	51/8 X 31/8	1 11/16
1 1/8 X 5/8	3/8	5 1/8 X 4 1/8	1 3/8
1 1/8 X 3/4	11/32	61/8 X 21/8	2 9/16
1 3/8 X 1/2	7/16	61/8 X 2 5/8	2 7/16
1 3/8 X 5/8	19/32	61/8 X 31/8	2 3/8
1 3/8 X 3/4	17/32	61/8 X 41/8	1 3/4
1 3/8 X 1 1/8	5/16	61/8 X 51/8	1 3/8
1 5/8 X 1/2	1/2	81/8 X 2 5/8	3 3/8
1 5/8 X 3/4	3/8	81/8 X 3 1/8	3 3/32
1 5/8 X 1 1/8	9/16	81/8 X 41/8	2 19/32
1 5/8 X 1 3/8	5/16	81/8 X 6 1/8	1 19/32
21/8 X 1/2	23/32		



COUPLING WITH ROLLED TUBE STOP C x C – WROT

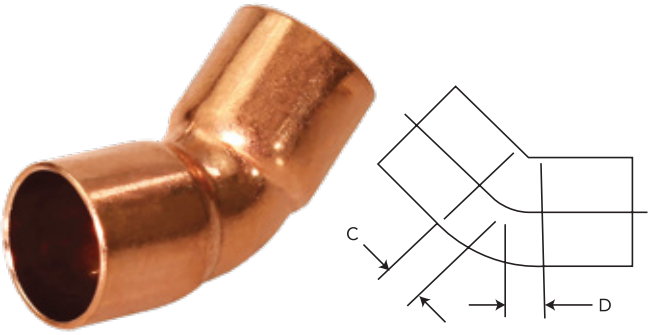
REDUCING COUPLING C x C - WROT	
NOMINAL SIZE	DIMENSIONS A INCHES
3/16	1/8
1/8	1/8
5/16	1/8
1/4	1/8
3/8	3/32
1/2	3/32
5/8	3/32
3/4	3/32
7/8	3/32
1 1/8	3/32
1 3/8	1/8
1 5/8	1/8
2 1/8	1/8
2 5/8	1/8
3 1/8	1/8
3 5/8	5/32
4 1/8	7/32





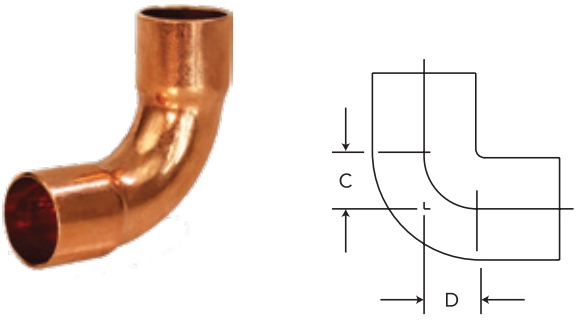
COUPLING WITH DIMPLED TUBE STOP C x C – WROT

COUPLING C x C - WROT	
NOMINAL SIZE	DIMENSIONS A INCHES
3/16	3/32
1/8	1/16
5/16	3/32
1/4	1/16
3/8	3/32
1/2	3/32
5/8	3/32
3/4	3/32
7/8	3/32
1 1/8	3/32
1 3/8	1/8
1 5/8	1/8
2 1/8	1/8
2 5/8	1/8
3 1/8	1/8
3 5/8	5/32
4 1/8	7/32
5 1/8	7/32
6 1/8	7/32
8 1/8	15/32



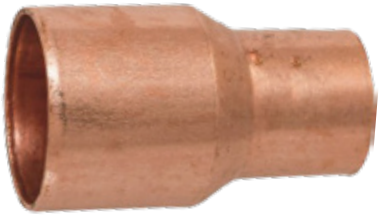
45° ELBOW C x C – WROT

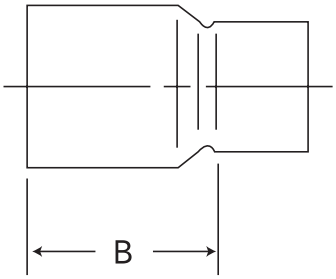
45° ELBOW - CLOSE ROUGH	
NOMINAL SIZE	DIMENSIONS A INCHES
1/8	11/32
1/4	9/32
3/8	3/16
1/2	9/32
5/8	15/32
3/4	11/32
7/8	11/16
1 1/8	3/8
1 3/8	17/32
1 5/8	19/32
2 1/8	25/32
2 1/2	29/32
3 1/8	1 1/8
4 1/8	1 9/16
5 1/8	1 9/16
6 1/8	2 1/8
8 1/8	2 9/32



90° ELBOW – CLOSE ROUGH C x C - WROT

45° ELBOW - CLOSE ROUGH	
NOMINAL SIZE	DIMENSIONS A INCHES
1/8	13/32
1/4	3/8
3/8	1/2
3/8 X 1/4	-
1/2	11/32
1/2 X 3/8	21/32
3/4	1/2
3/4 X 1/2	25/32
3/4 X 5/8	7/8
7/8	29/32
1 1/8	21/32
1 X 1/2	–
1 X 3/4	1 1/16
1 3/8	15/16
1 1/4 X 1 1/8	1 15/32
1 5/8	1 1/32
1 1/2 X 1 1/4	1 3/32
21/8	1 13/32
21/8 X 1 1/2	1 1/4
2 5/8	1 5/8
31/8	2 1/8
3 1/2	2 7/16
41/8	2 16/32
51/8	3 1/32
61/8	3 5/8
81/8	4 21/32

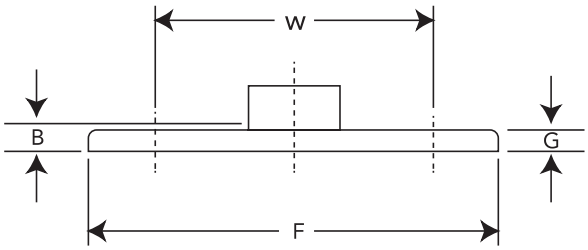




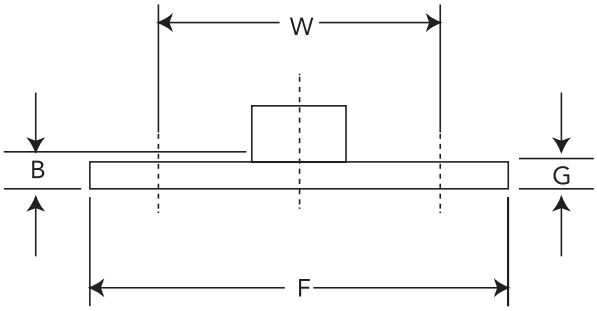
FITTING REDUCER FTG x C – WROT

FITTING REDUCER FTG x C - WROT		FITTING REDUCER FTG x C - WROT	
NOMINAL SIZE	DIMENSION B INCHES	NOMINAL SIZE	DIMENSION B INCHES
1//4 X 1/8	17/32	2 1/2 X 1 1/4	2 9/32
3/8 X 1/8	23/32	2 1/2 X 1 1/2	2 3/8
3/8 X 1/4	19/32	2 1/2 X 2 1/8	1 31/32
1/2 X 1/4	27/32	31/8 X 1 1/4	3 1/4
1/2 X 3/8	11/16	31/8 X 1 1/2	2 19/32
5/8 X 1/4	1 1/32	31/8 X 2 1/8	2 9/16
5/8 X 3/8	31/32	31/8 X 2 1/2	2 1/4
5/8 X 1/2	7/8	3 1/2 X 31/8	2 11/32
3/4 X 1/4	1 3/32	41/8 X 21/8	3 1/8
3/4 X 3/8	1 1/8	4 1/8X 2/12	3 1/32
3/4 X 1/2	1 1/8	41/8 X 3 1/8	3 1/32
3/4 X 5/8	15/16	41/8 X 3 1/2	2 5/8
1 1/8 X 3/8	1 9/32	51/8 X 2 1/8	4 11/16
1 1/8 X 1/2	1 1/4	51/8 X 2 1/2	4 19/32
11/8 X 5/8	1 3/8	51/8 X 31/8	4 5/16
1 1/8 X 3/4	1 7/32	51/8 X 41/8	3 13/16
1 1/4 X 1/2	1 3/8	61/8 X 21/8	5 23/32
1 1/4 X 3/4	1 1/2	6 1/8X 21/2	5 5/8
1 1/4 X 1 1/8	1 5/16	6 1/8X 31/8	5 7/16
1 1/2 X 1/2	1 19/32	61/8 X 41/8	4 15/16
1 1/2 X 3/4	1 17/32	61/8 X 51/8	4 15/32
1 1/2 X 1 1/8	1 5/8	81/8 X 21/8	7 7/16
1 1/2 X 1 1/4	1 13/32	81/8 X 2 /12	7 3/16
21/8 X 1/2	1 15/16	81/8 X 31/8	6 15/16
21/8 X 3/4	1 27/32	81/8 X 41/8	6 7/16
21/8 X 11/8	1 27/32	81/8 X 5 1/8	5 15/16
21/8 X 1 3/8	2 3/32	81/8 X 6 1/8	5 15/32
21/8 X 1 5/8	1 31/32		
2 5/8 X 1 1/8	2 9/32		

COMPANION FLANGE C-CAST



FLANGES - CLASS 125				
NOMINAL SIZE	DIM. B INCHES	DIM. F INCHES	DIM. G INCHES	DIM. W INCHES
1/2	1/8	3 1/2	7/32	2 3/8
3/4	1/8	3 7/8	7/32	2 3/4
1 1/8	1/8	4 3/8	1/4	3 1/8
1 3/8	1/8	4 5/8	1/4	3 5/8
1 5/8	1/8	5 1/8	5/16	3 7/8
2 1/8	1/8	6 1/8	3/8	4 3/4
2 1/2	1/8	7 1/8	3/8	5 1/2
3 1/8	1/8	7 5/8	7/16	6 1/8
4 1/8	1/8	9 1/8	7/16	7 5/8
5 1/8	1/8	10 1/8	7/16	8 5/8
6 1/8	1/8	11 1/8	1/2	9 5/8

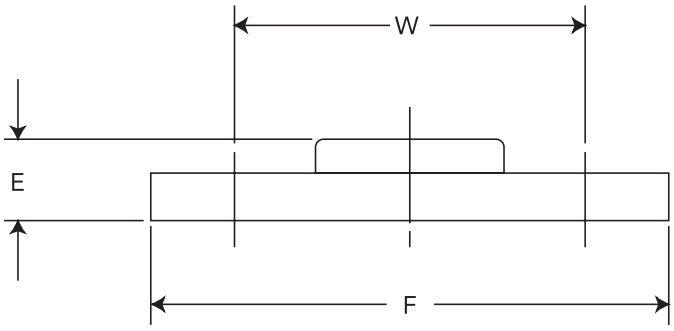


FLANGES CLASS 150

FLANGES - CLASS 150				
NOMINAL SIZE	DIM. B INCHES	DIM. F INCHES	DIM. G INCHES	DIM. W INCHES
3 /4	1/8	3 7/8	11/32	2 3/4
1 1/8	1/8	4 1/4	3/8	3 1/8
1 1/4	1/8	4 5/8	13/32	3 5/8
1 1/2	1/8	5 1/8	7/16	3 7/8
2 1/8	1/8	6 1/8	1/2	4 3/4
2 1/2	1/8	7 1/8	9/16	5 5/8
3 1/8	1/8	7 5/8	5/8	6 1/8
4 1/8	1/8	9 1/8	11/16	7 5/8
5 1/8	1/8	10 1/8	3 /4	8 5/8
6 1/8	1/8	11 1/8	13/16	9 5/8

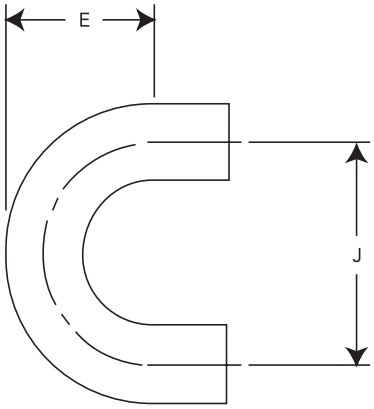
THREADED COMPANION FLANGE F- CAST

NOMINAL SIZE	DIM. E INCHES	DIM. F INCHES	DIM. W INCHES
2 1/8	1 1/8	6 1/8	4 1/8
2 5/8	1 3/16	7 1/8	5 1/2
3 1/8	1 3/16	7 5/8	6 1/8
4 1/8	1 3/16	9 1/8	7 5/8



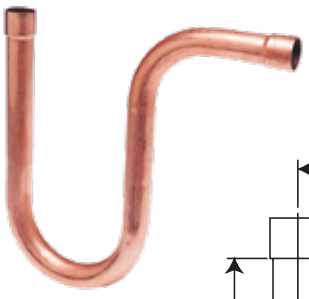
RETURN BEND C X C - WROT

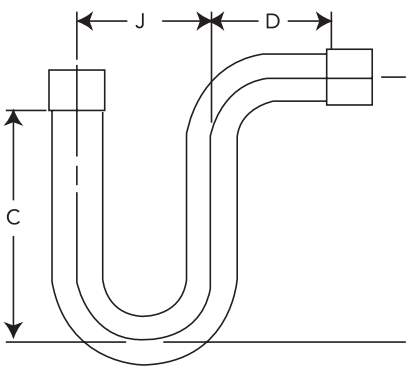
FLANGES - CLASS 125		
NOMINAL SIZE	DIM. E INCHES	DIM. G INCHES
1/8	21/32	1 1/8
1 /4	31/32	1 1/4
3/8	1 3/32	1 5/8
1 /2	1 5/8	2 1/8
3 /4	1 19/32	2 5/8
1 1/8	2 3/32	3 1/8
1 3/8	2 13/16	4 1/8
1 5/8	3 5/32	4 1/2
2 1/8	3 29/32	5 1/2



698 SUCTION LINE P-TRAP C X C - WROT

SUCTION LINE P -TRAP				
NOMINAL SIZE	DIM. C INCHES	DIM. D INCHES	DIM. J INCHES	DIM. K INCHES
1/2	5 3/8	3 1/8	3 1/8	6 1/8
5/8	5 3/8	2 7/8	3 1/8	6 1/8
3/4	5 3/8	2 21/32	3 1/8	6 1/8
1 1/8	5 1/4	2 21/32	2 31/32	6 3/8
1 1/2	5 17/32	3 1/32	3 3/4	6 1/4
2 1/8	7 29/32	3 25/32	5 1/8	8 25/32
2 1/2	8 9/32	3 29/32	6 1/8	9 13/32





BRANCH PIPE / BRANCH JOINTS KIT

Type ：
1、DAIKIN model ：22T、33T、72T、73T、75T

Type		A port diameter	B port diameter	C port diameter
22T	Gas	19/15.9/12.7	15.9/12.7	15.9/12.7
	Liquid	9.6	9.6/6.4	9.6/6.4
	Fittings	Accessory can optional.		
33T	Gas	19/22.2	19.1/15.9	15.9/12.7
	Liquid	9.6/12.7	9.6/6.4	9.6/6.4
	Fittings	Accessory can optional.		
72T	Gas	25.4/28.6/32	25.4/19.1/15.9	19/15.9/12.7
	Liquid	12.7*15.9	12.7/9.6	12.7/9.6/6.4
	Fittings	Accessory can optional.		
73T	Gas	32/38	32/28.6/25.4	25.4/19/15.9
	Liquid	19/15.9	19/15.9/12.7	15.9/12.7/9.6
	Fittings	Accessory can optional.		
75T	Gas	38/45	38/32/25.4	32
	Liquid	19/22.2	19/15.9/12.7	19
	Fittings	Accessory can optional.		

2、Midea
model ：FQZHN-01、FQZHN-02、FQZHN-03、FQZHN-04、FQZHN-05

Type		A port diameter	B port diameter	C port diameter
FQZHN-01	Gas	15.9/19.1	15.9/12.7	19.1/15.9/12.7
	Liquid	9.6	9.6/6.4	9.6/6.4
	Fittings	Accessory can optional.		
FQZHN-02	Gas	22.2/25.4	19.1/15.9/12.7	22.2/19.1/15.9
	Liquid	9.6/12.7	6.4/9.6	12.7/9.6/6.4
	Fittings	Accessory can optional.		
FQZHN-03	Gas	28.6/31.8	22.2/19.1/15.88	28.6/22.2/19.1
	Liquid	15.9/19.1	12.7/9.6/6.4	15.9/12.7/9.6
	Fittings	Accessory can optional.		
FQZHN-04	Gas	35/38.1	28.6/22.2/19.1	34.9/28.6/22.2
	Liquid	19.1/22.2	15.9/12.7/9.6	19.1/15.9/12.7
	Fittings	Accessory can optional.		
FQZHN-05	Gas	41.3/44.5	44.5/41.3/34.9	41.3/35
	Liquid	22.2/25.4	19.1/15.9/12.7	22.2/19.1/15.9
	Fittings	Accessory can optional.		

3、GREE
model ：FQ01A、FQ01B、FQ02、FQ03、FQ04

Type		A port diameter	B port diameter	C port diameter
FQ01A	Gas	12.7/15.9/19.1	9.6/12.7/15.9	12.7/15.9
	Liquid	9.6	6.35/9.6	6.35/9.6
	Fittings	Accessory can optional.		
FQ01B	Gas	19.1/22.3	15.9/19.1	12.7/15.9/19.1
	Liquid	9.6/12.7	9.6/12.7	6.35/9.6/12.7
	Fittings	Accessory can optional.		
FQ02	Gas	22.3/25.4/28.6	19.1/22.2/25.4/28.6	9.6/12.7/15.9/19.1
	Liquid	9.6/12.7/15.9	9.6/12.7/15.9	6.35/9.6/12.7
	Fittings	Accessory can optional.		
FQ03	Gas	35/38.1/41.2	28.6/35/41.2	19.1/22.3/25.4/28.6
	Liquid	15.9/19.1	12.7/15.9/19.1	9.6/12.7/15.9
	Fittings	Accessory can optional.		
FQ04	Gas	41.2/54/44.5	35/41.2/54	25.4/28.6/35
	Liquid	19.1/22.3	15.9/19.1/22.3	12.7/15.9/19.1
	Fittings	Accessory can optional.		
FQ05	Gas	69.9/63.5/54	54/41.3/34.9	41.3/34.9
	Liquid	25.4/22.5/19.05	25.4/22.2/19.05/15.88	19.05/15.88
	Fittings	Accessory can optional.		

4、HITACHI
model ：52SN、102SN、162SN、242SN、302SN、462SN

Type		A port diameter	B port diameter	C port diameter
52SN	Gas	15.9/19.1	12.7/15.9	⌞12.7/15.88
	Liquid	9.6	6.35/9.6	6.35/9.6
	Fittings	Accessory can optional.		
102SN	Gas	15.9/19.1/22.3	12.7/15.9/19.1/22.3	⌞12.7/15.88
	Liquid	9.52	6.35/9.52	6.35/9.52
	Fittings	Accessory can optional.		
162SN	Gas	28.6/25.4	28.6/25.4	⌞12.7/15.9/19.1/22.3
	Liquid	12.7	9.52/12.7	6.35/9.52/12.7
	Fittings	Accessory can optional.		
242SN	Gas	28.6/25.4	28.6/25.4	⌞12.7/15.9/19.1/22.3
	Liquid	15.88/19.1	9.52/15.9/19.1	6.35/9.52/12.7/15.9
	Fittings	Accessory can optional.		
302SN	Gas	38.1/31.8	38.1/31.8	⌞28.6
	Liquid	19.1/22.2	9.52/12.7/15.9/19.1	⌞9.52/12.7/15.9/19.1
	Fittings	Accessory can optional.		
462SN	Gas	45/41.3	45/41.3	38/32/28.6
	Liquid	19.1/22	12.7/15.88/19/22	⌞9.52/12.7/15.9
	Fittings	Accessory can optional.		

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