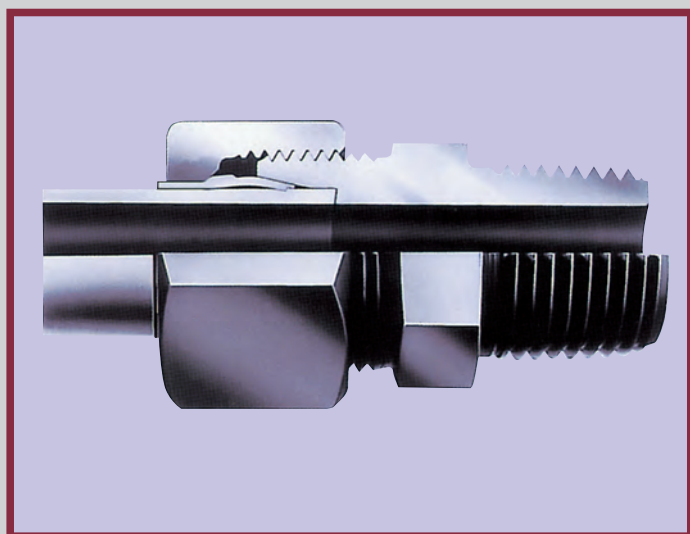




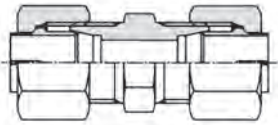
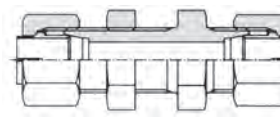
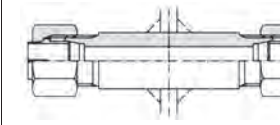
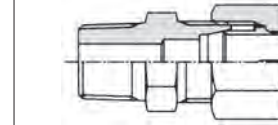
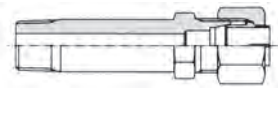


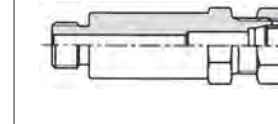
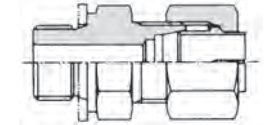
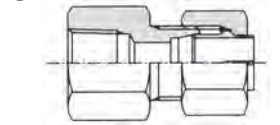
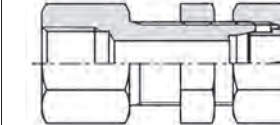



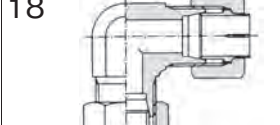
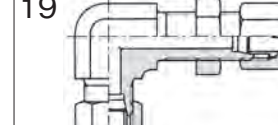
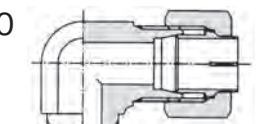
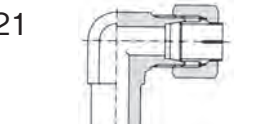
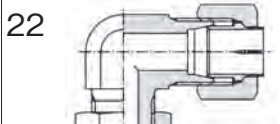
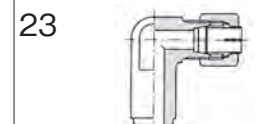
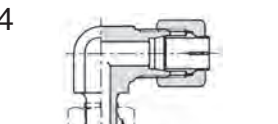
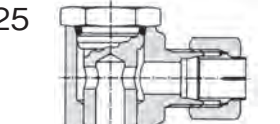
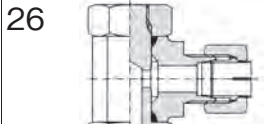
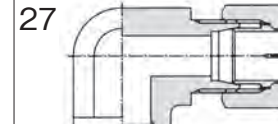

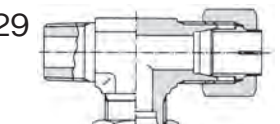
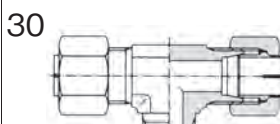
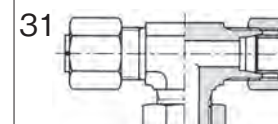
NE BITE TYPE TUBE FITTINGS



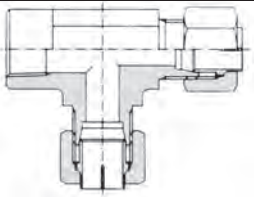
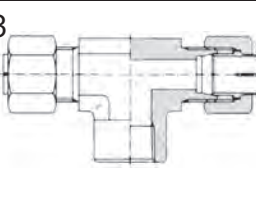
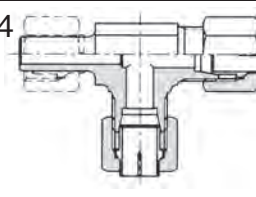
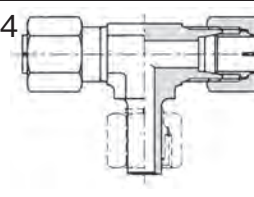
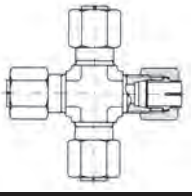
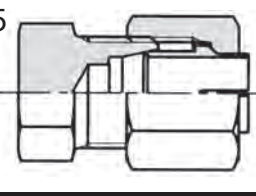
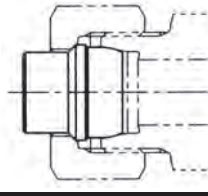
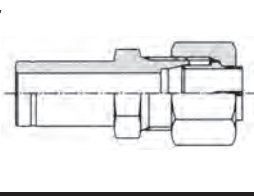
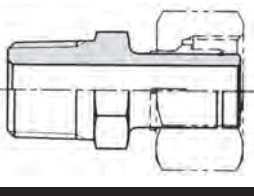
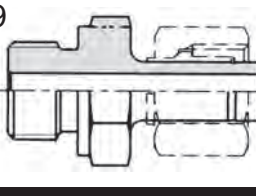
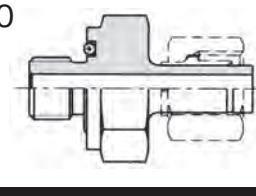
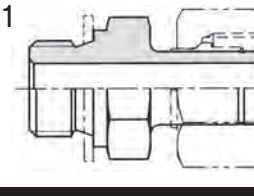

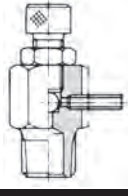
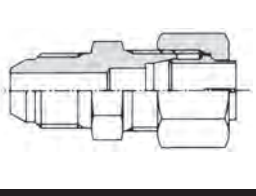
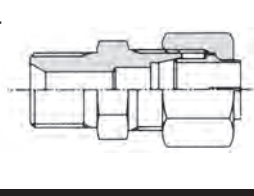
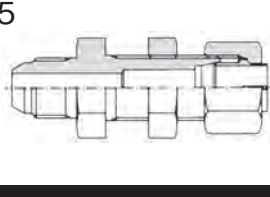
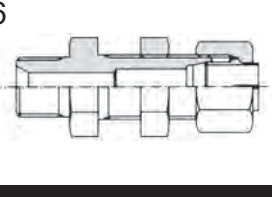
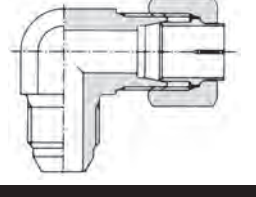
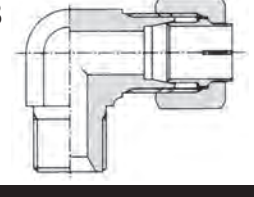
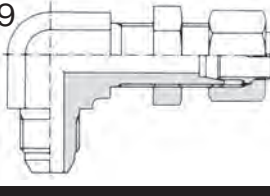
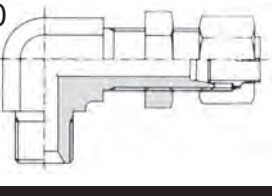
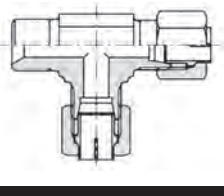
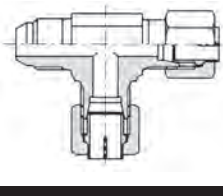
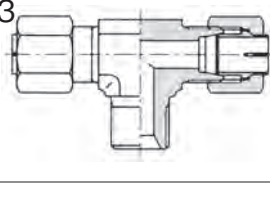
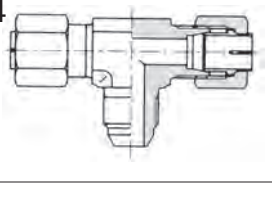
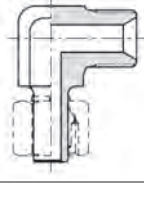
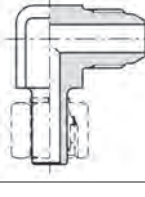
Dimension Sheet

Dimension Sheet


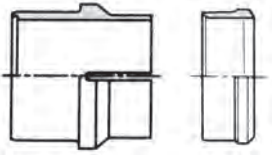
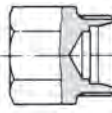
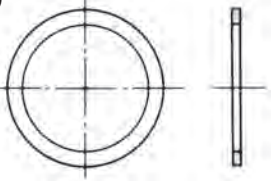
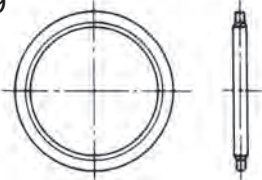

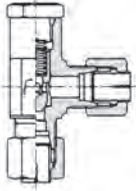
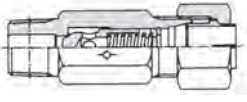
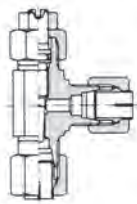
NE BITE TYPE TUBE FITTINGS VISUAL INDEX

Union: KUA	Bulkhead Union: KSU	Bulkhead Weld Union: KUW	Male Connector: KCT
4 	5 	6 	7 
Extended Male Connector: KCC	Straight Thread Connector: KCO	O-ring Seal Straight Thread Connector: KCD	Straight Thread Extended Male Connector: KCG
8 	9 	10 	11 
Straight Thread Connector: KCJ	Female Connector: KSA	Bulkhead Female Socket: KSS	Connector for Pressure Gauge: KGA
12 	13 	14 	15 
Connector for Pressure Gauge (O-Ring Seal): KGO	Weld Male Connector: KCW	Union Elbow: KLA	Bulkhead Union Elbow: KSL
16 	17 	18 	19 
Male Elbow: KLN	Extended Male Elbow: KLL	O-Seal Male Elbow: KLO	O-Seal Extended Male Elbow: KLG
20 	21 	22 	23 
Adjustable Elbow: KLC	Stud Elbow (B type): KMB	Stud Elbow (Ctype): KMC	Female Elbow: KLF
24 	25 	26 	27 
Union Tee: KTA	Male Run Tee: KTK	Male Branch Tee: KTN	O-Seal Male Branch Tee: KTO
28 	29 	30 	31 

NE BITE TYPE TUBE FITTINGS VISUAL INDEX

Female Run Tee: KTF	Female Branch Tee: KTH	Adjustable Run Tee: KTC	Adjustable Branch Tee: KTB
32 	33 	34 	34 
Union Cross: KXA	Cap: KCA	Plug: KBA	Reducer: KRE
35 	35 	36 	37 
Adapter: KHA	Straight Thread Adapter: KHB	O-Ring Seal Straight Thread Adapter: KHO	Straight Thread Adapter (For Copper Gasket): KHC
38 	39 	40 	41 
Air-Purge Valve: KAP	Air-Purge Valve: SAP	Male Seat Hose Connection Union: KUC	Female Seat Hose Connection Union: KUD
42 	42 	43 	44 
Male Seat Hose Connection Bulkhead Union: KUE	Female Seat Hose Connection Bulkhead Union: KUF	Male Seat Hose Connection Union Elbow: KLD	Female Seat Hose Connection Union Elbow: KLE
45 	46 	47 	48 
Male Seat Hose Connection Bulkhead Elbow: KLH	Female Seat Hose Connection Bulkhead Elbow: KLS	Female Seat Hose Connection Run Tee: KTG	Male Seat Hose Connection Run Tee: KTJ
49 	50 	51 	52 
Female Seat Hose Connection Branch Tee: KTE	Male Seat Hose Connection Branch Tee: KTD	Female Seat Hose Connection Elbow: HLE	Male Seat Hose Connection Elbow: HLD
53 	54 	55 	56 

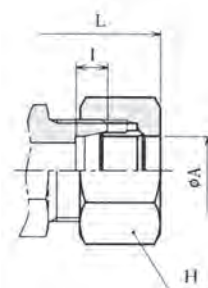
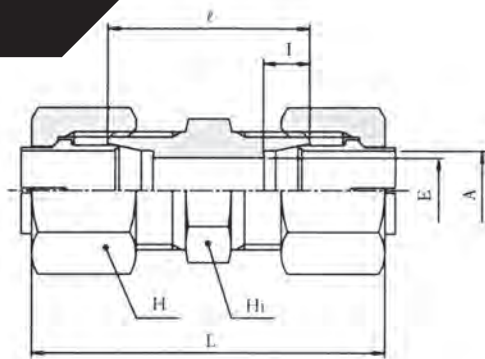
NE BITE TYPE TUBE FITTINGS VISUAL INDEX

Nut: KKN	Sleeve: KKO	Hand Presetting Tool: PJA	Copper Gasket: KP-A
57 	57 	58 	59 
Bonded Seal: KP-C	Check Union: KZU	Check Elbow: KZL	Check Connector: KZC
59 	62 	63 	64 
Orifice Adjustable Fitting: KTP			
65 			

Directions meaning shown in this catalogue

- ⚠ **WARNING:** Irregular handling with disregard for this direction can induce physical disability and accidental death.
- ⚠ **CAUTION:** Irregular handling with disregard for this direction can induce functional defect of bite tipe fitting.

UNION



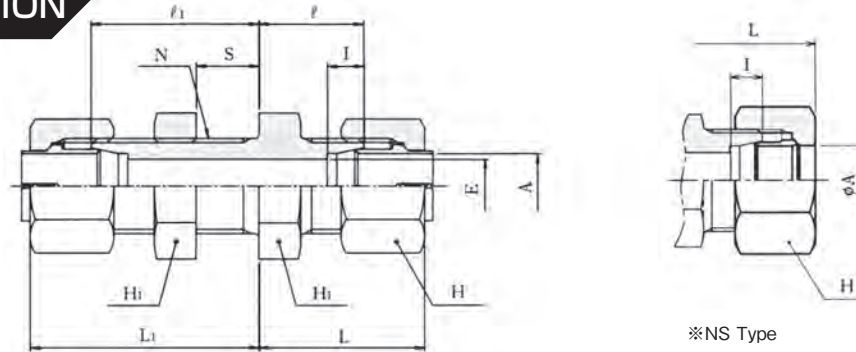
※NS Type

Unit: mm

Part No.	Out. Dia. of Applied Pipe A		E	Hex Width		I	ℓ	Fingertight Length (about) L	Weight (kg)
	Nominal sizes	Out. Dia.		H ₁	H				
※KUA04-000N		4	2.5	12	12	6	20	35	0.022
KUA06-000E		6	4	14	14	7	30	51	0.042
KUA08-000E		8	6	17	17	7	31	52	0.059
KUA10-000E		10	8	17	19	7	31	54	0.068
KUA12-000E		12	10	19	22	7	31	54	0.093
KUA15-000E		15	12	24	27	7.5	36	61	0.165
KUA16-000E		16	13	27	30	7.5	36	61	0.216
KUA18-000E		18	14	27	32	8	36	61	0.227
KUA20-000E		20	17	30	36	8	38	63	0.305
KUA22-000E		22	18	32	36	9	38	63	0.279
KUA25-000E		25	20	36	41	10	39	66	0.395
KUA28-000E		28	22	41	46	10	43	71	0.535
KUA30-000E		30	25	41	46	10	43	72	0.512
KUA35-000E		35	28	46	55	11	44	79	0.788
※KUA38-000N		38	32	50	60	12	46	85	1.013
※KUA40-000N		40	32	55	60	12	55	94	1.137
※KUA42-000N		42	34	55	60	12	55	94	1.071
※KUA50-000N		50	40	65	75	12	60	103	1.909
※KUA11-000N	1/8	10.5	8	17	19	7	31	54	0.072
※KUA13-000N	1/4	13.8	11	22	24	7.5	36	60	0.130
※KUA17-000N	3/8	17.3	14	27	32	8	36	61	0.230
※KUA21-000N	1/2	21.7	18	32	36	9	38	63	0.287
※KUA27-000N	3/4	27.2	22	41	46	10	43	71	0.542
※KUA34-000N	1	34.0	28	46	55	11	44	79	0.801
※KUA43-000N	1 1/4	42.7	34	60	65	12	57	96	1.432
※KUA48-000N	1 1/2	48.6	40	65	75	12	60	103	1.942

Note. Dimensions might be modified due to improvement of quality and performance.

BULKHEAD UNION



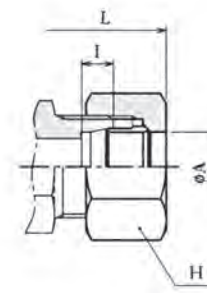
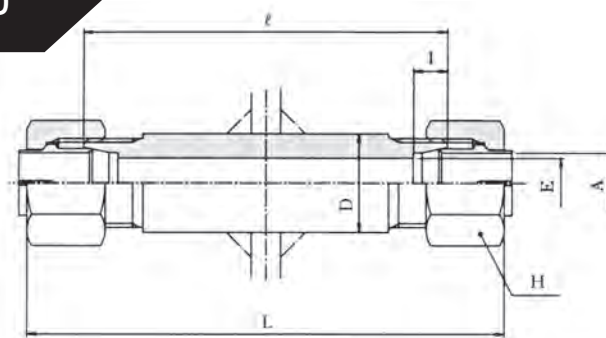
Unit: mm

Part No.	Out. Dia. of Applied Pipe A		E	Hex Width		I	l_1	l	Fingertight Length (about)		N	Max S	Weight (kg)
	Nominal sizes	Out. Dia.		H ₁	H				L ₁	L			
※KSU04-000N		4	2.5	14	12	6	25	14	32.5	21.5	M10×1.25	13	0.041
KSU06-000E		6	4	17	14	7	32	19	42.5	29.5	M12×1.5	13	0.070
KSU08-000E		8	6	19	17	7	32	19	42.5	29.5	M14×1.5	13	0.092
KSU10-000E		10	8	22	19	7	32	20	43.5	31.5	M16×1.5	13	0.122
KSU12-000E		12	10	24	22	7	32	20	43.5	31.5	M18×1.5	13	0.148
KSU15-000E		15	12	27	27	7.5	37	22	49.5	34.5	M22×1.5	15	0.232
KSU16-000E		16	13	30	30	7.5	37	24	49.5	36.5	M24×1.5	15	0.314
KSU18-000E		18	14	32	32	8	39	24	51.5	36.5	M26×1.5	15	0.252
KSU20-000E		20	17	36	36	8	39	24	51.5	36.5	M28×1.5	15	0.405
KSU22-000E		22	18	36	36	9	39	25	51.5	37.5	M30×1.5	15	0.425
KSU25-000E		25	20	41	41	10	39	25	52.5	38.5	M35×1.5	15	0.588
KSU28-000E		28	22	46	46	10	41	28	55	42	M38×1.5	15	0.785
KSU30-000E		30	25	46	46	10	41	28	55.5	42.5	M40×1.5	15	0.722
KSU35-000E		35	28	50	55	11	43	30	60.5	47.5	M45×1.5	15	1.068
※KSU38-000N		38	32	55	60	12	45	31	64.5	50.5	M48×1.5	15	1.384
※KSU40-000N		40	32	60	60	12	50	37	69.5	56.5	M52×2	15	1.646
※KSU50-000N		50	40	70	75	12	50	43	71.5	64.5	M64×2	15	2.639
※KSU11-000N	1/8	10.5	8	22	19	7	32	20	43.5	31.5	M16×1.5	13	0.120
※KSU13-000N	1/4	13.8	11	27	24	7.5	37	22	49	34	M20×1.5	15	0.188
※KSU17-000N	3/8	17.3	14	32	32	8	39	24	51.5	36.5	M26×1.5	15	0.345
※KSU21-000N	1/2	21.7	18	36	36	9	39	25	51.5	37.5	M30×1.5	15	0.433
※KSU27-000N	3/4	27.2	22	46	46	10	41	28	55	42	M38×1.5	15	0.764
※KSU34-000N	1	34.0	28	50	55	11	43	30	60.0	47.5	M45×1.5	15	1.106
※KSU43-000N	1 1/4	42.7	34	65	65	12	50	40	69.5	59.5	M56×2	15	2.058
※KSU48-000N	1 1/2	48.6	40	70	75	12	50	43	71.5	64.5	M64×2	15	2.672

⚠ **CAUTION:** This type of fitting is designed to be used for wall penetration. When used in the place of strong vibration and / or pressure fluctuation, proper vibration measures such as fixing the piping by clamp are required.

Note. Dimensions might be modified due to improvement of quality and performance.

BULKHEAD WELD UNION



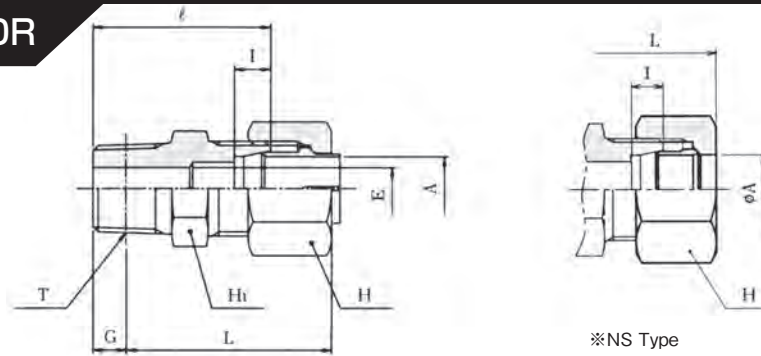
※NS Type

Unit: mm

Part No.	Out. Dia. of Applied Pipe A		E	D	Hex Width H	I	ℓ	Fingertight Length (about) L	Weight (kg)
	Nominal sizes	Out. Dia.							
KUW06-000E	6		4	16	14	7	74	95	0.110
KUW08-000E	8		6	16	17	7	74	95	0.119
KUW10-000E	10		8	19	19	7	74	97	0.156
KUW12-000E	12		10	20	22	7	74	97	0.174
KUW15-000E	15		12	26	27	7.5	78	103	0.205
KUW16-000E	16		13	28	30	7.5	78	103	0.374
KUW18-000E	18		14	28	32	8	78	103	0.379
KUW20-000E	20		17	32	36	8	78	103	0.500
KUW22-000E	22		18	32	36	9	78	103	0.447
KUW25-000E	25		20	38	41	10	78	105	0.648
KUW28-000E	28		22	39	46	10	82	110	0.762
KUW30-000E	30		25	46	46	10	82	111	0.878
KUW35-000E	35		28	46	55	11	82	117	1.056
※KUW38-000N	38		32	55	60	12	82	121	1.472
※KUW40-000N	40		32	55	60	12	90	129	1.539
※KUW50-000N	50		40	65	75	12	90	133	2.342
※KUW11-000N	1/8	10.5	8	19	19	7	74	97	0.153
※KUW13-000N	1/4	13.8	11	22	24	7.5	78	102	0.222
※KUW17-000N	3/8	17.3	14	28	32	8	78	103	0.381
※KUW21-000N	1/2	21.7	18	32	36	9	78	103	0.455
※KUW27-000N	3/4	27.2	22	39	46	10	82	110	0.769
※KUW34-000N	1	34.0	28	46	55	11	82	117	1.094
※KUW43-000N	1 1/4	42.7	34	58	65	12	90	129	1.813
※KUW48-000N	1 1/2	48.6	40	65	75	12	90	133	2.375

Note. Dimensions might be modified due to improvement of quality and performance.

MALE CONNECTOR

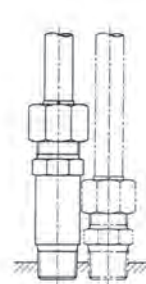
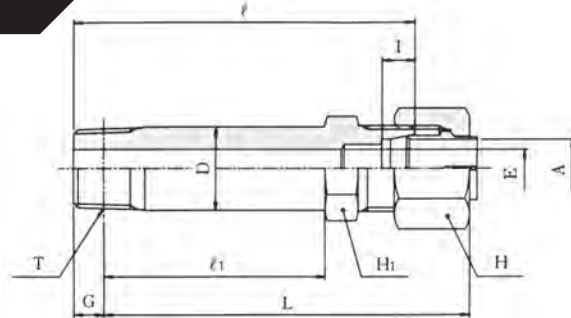


Unit: mm

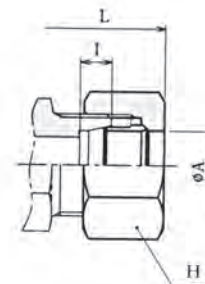
Part No.	Out. Dia. of Applied Pipe A		(R) T	E	Engagement Fingertight G	Hex Width		I	ℓ	Fingertight Length (about) L	Weight (kg)
	Nominal sizes	Out. Dia.				H ₁	H				
※KCT04-010N	4		1/8	2.5	3.97	12	12	6	22	25.5	0.018
KCT06-010E	6		1/8	4	3.97	14	14	7	28	34.5	0.029
KCT06-020E	6		1/4	4	6.01	17	14	7	33	37.5	0.038
KCT06-030E	6		3/8	4	6.35	19	14	7	34	38	0.056
KCT08-010E	8		1/8	4	3.97	17	17	7	29	35.5	0.043
KCT08-020E	8		1/4	6	6.01	17	17	7	33	37.5	0.046
KCT08-030E	8		3/8	6	6.35	19	17	7	34	38	0.064
KCT10-020E	10		1/4	7	6.01	17	19	7	33	38.5	0.051
KCT10-030E	10		3/8	8	6.35	19	19	7	34	39	0.059
KCT10-040E	10		1/2	8	8.16	22	19	7	39	42.5	0.095
KCT12-020E	12		1/4	7	6.01	19	22	7	33	38.5	0.068
KCT12-030E	12		3/8	9	6.35	19	22	7	34	39	0.071
KCT12-040E	12		1/2	10	8.16	24	22	7	39	42.5	0.103
KCT15-030E	15		3/8	9	6.35	24	27	7.5	37	43	0.114
KCT15-040E	15		1/2	12	8.16	24	27	7.5	41	45.5	0.120
KCT16-030E	16		3/8	9	6.35	27	30	7.5	37	43	0.144
KCT16-040E	16		1/2	12	8.16	27	30	7.5	41	45.5	0.148
KCT18-030E	18		3/8	9	6.35	27	32	8	37	43	0.151
KCT18-040E	18		1/2	12	8.16	27	32	8	41	45.5	0.162
KCT20-040E	20		1/2	12	8.16	30	36	8	43	47.5	0.212
KCT20-060E	20		3/4	16	9.53	30	36	8	45	48	0.228
KCT22-040E	22		1/2	12	8.16	32	36	9	43	47.5	0.203
KCT22-060E	22		3/4	16	9.53	32	36	9	45	48	0.220
KCT25-060E	25		3/4	16	9.53	36	41	10	46	50	0.292
KCT25-080E	25		1	20	10.39	36	41	10	49	52	0.327
KCT28-060E	28		3/4	16	9.53	41	46	10	48	52.5	0.381
KCT28-080E	28		1	22	10.39	41	46	10	51	54.5	0.396
KCT30-080E	30		1	22	10.39	41	46	10	51	55	0.389
KCT30-100E	30		1 1/4	25	12.70	46	46	10	55	57	0.513
KCT35-100E	35		1 1/4	28	12.70	46	55	11	55	60	0.684
※KCT38-120N	38		1 1/2	32	12.70	50	60	12	57	64	0.769
※KCT40-120N	40		1 1/2	32	12.70	55	60	12	62	69	0.867
※KCT42-120N	42		1 1/2	34	12.70	55	60	12	62	69	0.805
※KCT50-160N	50		2	40	15.88	65	75	12	71	76.5	1.489
※KCT11-010N	1/8	10.5	1/8	4	3.97	17	19	7	29	36.5	0.048
※KCT11-020N	1/8	10.5	1/4	7	6.01	17	19	7	33	38.5	0.052
※KCT13-020N	1/4	13.8	1/4	7	6.01	22	24	7.5	36	42	0.088
※KCT13-030N	1/4	13.8	3/8	9	6.35	22	24	7.5	37	42.5	0.093
※KCT17-030N	3/8	17.3	3/8	9	6.35	27	32	8	37	43	0.150
※KCT17-040N	3/8	17.3	1/2	12	8.16	27	32	8	41	45.5	0.163
※KCT21-040N	1/2	21.7	1/2	12	8.16	32	36	9	43	47.5	0.207
※KCT21-060N	1/2	21.7	3/4	16	9.53	32	36	9	45	48	0.224
※KCT27-060N	3/4	27.2	3/4	16	9.53	41	46	10	48	52.5	0.361
※KCT27-080N	3/4	27.2	1	22	10.39	41	46	10	51	54.5	0.399
※KCT34-080N	1	34.0	1	22	10.39	46	55	11	52	59	0.560
※KCT34-100N	1	34.0	1 1/4	28	12.70	46	55	11	55	60	0.603
※KCT43-100N	1 1/4	42.7	1 1/4	31	12.70	60	65	12	64	71	0.998
※KCT43-120N	1 1/4	42.7	1 1/2	34	12.70	60	65	12	64	71	1.031
※KCT48-120N	1 1/2	48.6	1 1/2	36	12.70	65	75	12	67	76	1.344
※KCT48-160N	1 1/2	48.6	2	40	15.88	65	75	12	71	76.5	1.505

Note. Dimensions might be modified due to improvement of quality and performance.

EXTENDED MALE CONNECTOR



Example of Use



※NS Type

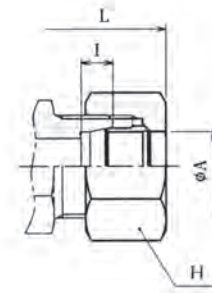
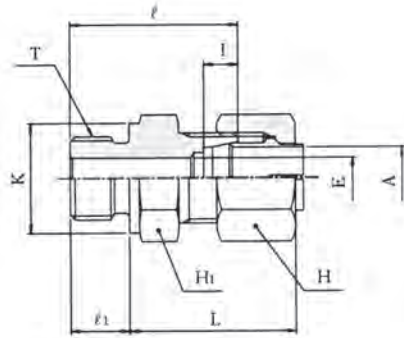
Unit: mm

Part No.	Out. Dia. of Applied Pipe A		(R) T	E	Engagement Fingertight G	Hex Width		I	D	ℓ	ℓ ₁	Fingertight Length (about) L	Weight (kg)
	Nominal sizes	Out. Dia.				H ₁	H						
※KCC04-010N		4	1/8	2.5	3.97	12	12	6	10.5	46	30	49.5	0.034
KCC06-010E		6	1/8	4	3.97	14	14	7	10.5	63	41	69.5	0.048
KCC06-020E		6	1/4	4	6.01	14	14	7	14	69	45	73.5	0.074
KCC08-010E		8	1/8	4	3.97	17	17	7	10.5	65	42	71.5	0.063
KCC08-020E		8	1/4	6	6.01	17	17	7	14	70	45	74.5	0.083
KCC10-020E		10	1/4	7	6.01	17	19	7	14	71	46	76.5	0.088
KCC10-030E		10	3/8	8	6.35	19	19	7	17.5	72	46.5	77	0.121
KCC12-020E		12	1/4	7	6.01	19	22	7	14	71	46	76.5	0.099
KCC12-030E		12	3/8	9	6.35	19	22	7	17.5	72	46.5	77	0.124
KCC15-030E		15	3/8	9	6.35	24	27	7.5	17.5	81	52.5	87	0.184
KCC15-040E		15	1/2	12	8.16	24	27	7.5	22	86	56	90.5	0.219
KCC16-030E		16	3/8	9	6.35	27	30	7.5	17.5	81	52.5	87	0.206
KCC16-040E		16	1/2	12	8.16	27	30	7.5	22	86	56	90.5	0.250
KCC18-040E		18	1/2	12	8.16	27	32	8	22	86	56	90.5	0.254
KCC20-040E		20	1/2	12	8.16	30	36	8	22	90	58	94.5	0.306
KCC20-060E		20	3/4	16	9.53	30	36	8	27.5	92	58.5	95	0.373
KCC22-060E		22	3/4	16	9.53	32	36	9	27.5	93	59.5	96	0.366
KCC25-080E		25	1	20	10.39	36	41	10	34	99	63.5	102	0.570
KCC28-080E		28	1	22	10.39	41	46	10	34	104	66.5	107.5	0.626
KCC30-100E		30	1 1/4	25	12.70	46	46	10	42.5	109	68.5	111	0.920
KCC35-100E		35	1 1/4	28	12.70	46	55	11	43	113	72.5	118	0.936
※KCC11-020N	1/8	10.5	1/4	7	6.01	17	19	7	14	71	46	76.5	0.085
※KCC13-030N	1/4	13.8	3/8	9	6.35	22	24	7.5	17.5	81	52.5	86.5	0.139
※KCC17-030N	3/8	17.3	3/8	9	6.35	27	32	8	17.5	81	52.5	87	0.210
※KCC17-040N	3/8	17.3	1/2	12	8.16	27	32	8	22	86	56	90.5	0.255
※KCC21-060N	1/2	21.7	3/4	16	9.53	32	36	9	27.5	93	59.5	96	0.370
※KCC27-080N	3/4	27.2	1	22	10.39	41	46	10	34	104	66.5	107.5	0.929

Note. Dimensions might be modified due to improvement of quality and performance.

STRAIGHT THREAD CONNECTOR

(for O-ring and bonded seal)



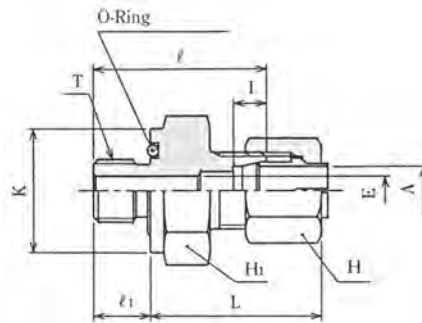
※NS Type

Unit: mm

Part No.	Out. Dia. of Applied Pipe A		(R) T	E	Hex Width		I	K	ℓ ₁	ℓ	Fingertight Length (about) L	Weight (kg)
	Nominal sizes	Out. Dia.			H ₁	H						
※KC004-010N	4		1/8	2.5	14	12	6	14	8	23	22.5	0.022
KC006-010E	6		1/8	4	14	14	7	14	8	28	30.5	0.030
KC006-020E	6		1/4	4	19	14	7	19	12	33	31.5	0.048
KC006-030E	6		3/8	4	22	14	7	22	12	34	32.5	0.064
KC008-010E	8		1/8	4	17	17	7	14	8	28	30.5	0.042
KC008-020E	8		1/4	6	19	17	7	19	12	33	31.5	0.053
KC008-030E	8		3/8	6	22	17	7	22	12	34	32.5	0.069
KC010-020E	10		1/4	6	19	19	7	19	12	33	32.5	0.060
KC010-030E	10		3/8	8	22	19	7	22	12	34	33.5	0.073
KC010-040E	10		1/2	8	27	19	7	27	14	39	36.5	0.115
KC012-020E	12		1/4	6	19	22	7	19	12	33	32.5	0.069
KC012-030E	12		3/8	8	22	22	7	22	12	34	33.5	0.087
KC012-040E	12		1/2	10	27	22	7	27	14	39	36.5	0.119
KC015-030E	15		3/8	8	24	27	7.5	22	12	37	37.5	0.120
KC015-040E	15		1/2	12	27	27	7.5	27	14	41	39.5	0.141
KC016-030E	16		3/8	8	27	30	7.5	22	12	38	38.5	0.152
KC016-040E	16		1/2	12	27	30	7.5	27	14	41	39.5	0.164
KC018-040E	18		1/2	12	27	32	8	27	14	41	39.5	0.170
KC020-040E	20		1/2	12	30	36	8	27	14	42	40.5	0.217
KC020-060E	20		3/4	16	36	36	8	36	16	46	42.5	0.293
KC022-040E	22		1/2	12	32	36	9	27	14	43	41.5	0.217
KC022-060E	22		3/4	16	36	36	9	36	16	46	42.5	0.263
KC025-060E	25		3/4	16	36	41	10	36	16	46	43.5	0.311
KC025-080E	25		1	20	41	41	10	41	18	50	45.5	0.384
KC028-080E	28		1	22	41	46	10	41	18	52	48	0.424
KC030-080E	30		1	22	41	46	10	41	18	52	48.5	0.417
KC030-100E	30		1 1/4	25	50	46	10	50	20	57	51.5	0.604
KC035-100E	35		1 1/4	28	50	55	11	50	20	57	54.5	0.673
※KC038-120N	38		1 1/2	32	55	60	12	55	21	58	56.5	0.861
※KC040-120N	40		1 1/2	32	55	60	12	55	21	62	60.5	0.895
※KC042-120N	42		1 1/2	34	55	60	12	55	21	62	60.5	0.833
※KC050-160N	50		2	40	75	75	12	75	25	73	69.5	1.815
※KC011-010N	1/8	10.5	1/8	4	17	19	7	14	8	29	32.5	0.050
※KC011-020N	1/8	10.5	1/4	6	19	19	7	19	12	33	32.5	0.059
※KC013-020N	1/4	13.8	1/4	6	22	24	7.5	19	12	36	36	0.091
※KC013-030N	1/4	13.8	3/8	8	22	24	7.5	22	12	36	36	0.096
※KC017-030N	3/8	17.3	3/8	8	27	32	8	22	12	38	38.5	0.164
※KC017-040N	3/8	17.3	1/2	12	27	32	8	27	14	41	39.5	0.171
※KC021-040N	1/2	21.7	1/2	12	32	36	9	27	14	43	41.5	0.221
※KC021-060N	1/2	21.7	3/4	16	36	36	9	36	16	46	42.5	0.267
※KC027-060N	3/4	27.2	3/4	16	41	46	10	36	16	50	48	0.428
※KC027-080N	3/4	27.2	1	22	41	46	10	41	18	52	48	0.426
※KC034-080N	1	34.0	1	22	46	55	11	41	18	54	53.5	0.613
※KC034-100N	1	34.0	1 1/4	28	50	55	11	50	20	57	54.5	0.692
※KC043-100N	1 1/4	42.7	1 1/4	31	60	65	12	50	20	63	62.5	1.032
※KC043-120N	1 1/4	42.7	1 1/2	34	60	65	12	55	21	64	62.5	1.070
※KC048-120N	1 1/2	48.6	1 1/2	36	65	75	12	55	21	65	62.5	1.340
※KC048-160N	1 1/2	48.6	2	40	75	75	12	75	25	73	69.5	1.709

- Note.
- O-ring and bonded-seal can be used as corresponding gasket. The gasket is not included in standard.
 - Shape and dimension of mating port is shown in page 60. (range of working temperature: -20°C~120°C)
 - Diameter of O-ring groove and applied O-ring on G_{3/4} straight thread is based on JIS B 2351 prior to modified in 1990. Port diameter of entrance is recommended φ30.5 to protect from damage of O-ring as shown in page 60. Port inlet diameter that is specified in JIS B2351 is φ29.8 for both new and old standard. (Please specify when require one of new Standard.)
 - Dimensions might be modified due to improvement of quality and performance.

STRAIGHT THREAD CONNECTOR (for O-SEAL)

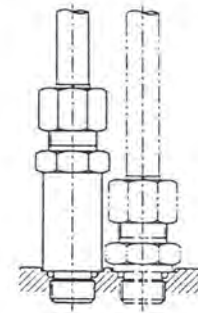
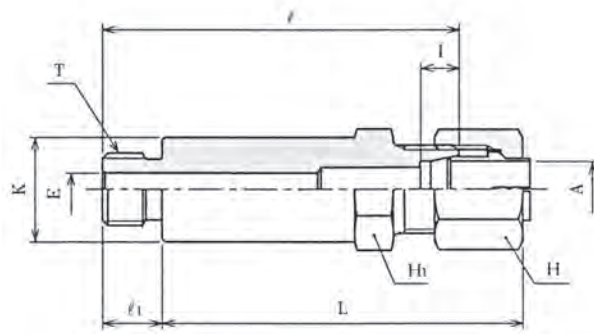


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	Hex Width		I	K	l ₁	l	Fingertight Length (about) L	O-Ring JIS B 2401 -1B	Weight (kg)
				H ₁	H							
KCD06-010E	6	1/8	4	22	14	7	22	8	30	32.5	P12.5	0.052
KCD06-020E	6	1/4	4	27	14	7	26	12	37	35.5	P16	0.095
KCD08-010E	8	1/8	4	22	17	7	22	8	30	32.5	P12.5	0.056
KCD08-020E	8	1/4	6	27	17	7	26	12	37	35.5	P16	0.093
KCD10-020E	10	1/4	6	27	19	7	26	12	37	36.5	P16	0.100
KCD10-030E	10	3/8	8	30	19	7	30	12	37	36.5	P20	0.118
KCD12-020E	12	1/4	6	27	22	7	26	12	37	36.5	P16	0.107
KCD12-030E	12	3/8	8	30	22	7	30	12	37	36.5	P20	0.128
KCD15-030E	15	3/8	8	30	27	7.5	30	12	39	39.5	P20	0.157
KCD15-040E	15	1/2	12	36	27	7.5	36	14	44	42.5	G25	0.215
KCD16-030E	16	3/8	8	30	30	7.5	30	12	39	39.5	P20	0.173
KCD16-040E	16	1/2	12	36	30	7.5	36	14	44	42.5	G25	0.238
KCD18-040E	18	1/2	12	36	32	8	36	14	44	42.5	G25	0.242
KCD20-040E	20	1/2	12	36	36	8	36	14	44	42.5	G25	0.272
KCD20-060E	20	3/4	16	41	36	8	41	16	48	44.5	G30	0.343
KCD22-040E	22	1/2	12	36	36	9	36	14	44	42.5	G25	0.263
KCD22-060E	22	3/4	16	41	36	9	41	16	48	44.5	G30	0.332
KCD25-060E	25	3/4	16	41	41	10	41	16	48	45.5	G30	0.369
KCD25-080E	25	1	22	50	41	10	50	18	53	48.5	P38	0.530
KCD28-080E	28	1	22	50	46	10	50	18	55	51	P38	0.560
KCD30-080E	30	1	22	50	46	10	50	18	55	51.5	P38	0.558
KCD30-100E	30	1 1/4	25	65	46	10	64	20	60	54.5	P48	0.925
KCD35-100E	35	1 1/4	28	65	55	11	64	20	60	57.5	P48	0.965

Note. 1. O-ring of JIS B 2401 (NBR) is installed. (range of working temperature: -20°C~120°C)
2. Dimensions might be modified due to improvement of quality and performance.

STRAIGHT THREAD EXTENDED MALE CONNECTOR (for O-ring and bonded seal)



Example of Use

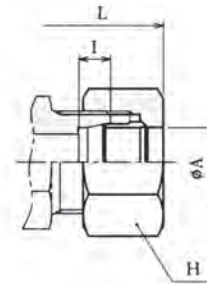
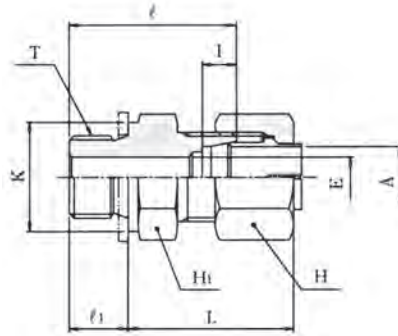
Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	K	Hex Width		I	ℓ_1	ℓ	Fingertight Length (about) L	O-Ring JIS B 2401 -1B	Weight (kg)
					H ₁	H						
KCG08-020E	8	1/4	6	19	19	17	7	12	62	60.5	P11	0.112
KCG10-020E	10	1/4	6	19	19	19	7	12	66	65.5	P11	0.128
KCG10-030E	10	3/8	8	22	22	19	7	12	66	65.5	P14	0.164
KCG12-020E	12	1/4	6	19	19	22	7	12	67	66.5	P11	0.139
KCG12-030E	12	3/8	8	22	22	22	7	12	67	66.5	P14	0.176
KCG15-040E	15	1/2	12	27	27	27	7.5	14	71.5	77.5	P18	0.253
KCG16-030E	16	3/8	8	22	27	30	7.5	12	77	77.5	P14	0.246
KCG16-040E	16	1/2	12	27	27	30	7.5	14	79	77.5	P18	0.303
KCG18-040E	18	1/2	12	27	27	32	8	14	76	77.5	P18	0.293
KCG20-040E	20	1/2	12	27	30	36	8	14	83	81.5	P18	0.346
KCG20-060E	20	3/4	16	36	36	36	8	16	87	83.5	P24	0.540
KCG22-040E	22	1/2	12	27	32	36	9	14	81	82.5	P18	0.322
KCG22-060E	22	3/4	16	36	36	36	9	16	83	83.5	P24	0.499
KCG25-080E	25	1	20	41	41	41	10	18	94	89.5	P29	0.733

- Note.**
1. Shape and dimension of mating port is shown in page 60.
 2. O-ring and bonded seal can be used as corresponding gasket. The gasket is not included in standard. (range of working temperature: -20°C~120°C)
 3. Diameter of O-ring groove and applied O-ring on G $\frac{3}{4}$ straight thread is based on JIS B 2351 prior to modified in 1990. Port diameter of entrance is recommended ϕ 30.5 to protect from damage of O-ring as shown in page 60. Port inlet diameter that is specified in JIS B2351 is ϕ 29.8 for both new and old standard. (Please specify when require one of new Standard.)
 4. Dimensions might be modified due to improvement of quality and performance.

STRAIGHT THREAD CONNECTOR

(for copper gasket)



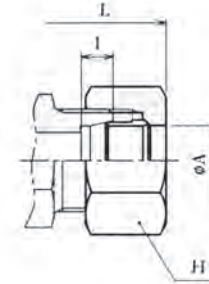
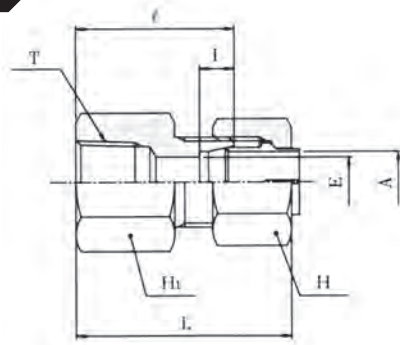
※NS Type

Unit: mm

Part No.	Out. Dia. of Applied Pipe A		(G) T	E	Hex Width		I	K	ℓ ₁	ℓ	Fingertight Length (about) L	Weight (kg)
	Nominal sizes	Out. Dia.			H ₁	H						
※KCJ04-010N		4	1/8	2.5	14	12	6	14	8	23	22.5	0.022
KCJ06-010E		6	1/8	4	14	14	7	14	8	28	30.5	0.031
KCJ06-020E		6	1/4	4	19	14	7	18	12	33	31.5	0.048
KCJ08-010E		8	1/8	4	17	17	7	14	8	28	30.5	0.042
KCJ08-020E		8	1/4	6	19	17	7	18	12	33	31.5	0.053
KCJ10-020E		10	1/4	6	19	19	7	18	12	33	32.5	0.060
KCJ10-030E		10	3/8	8	22	19	7	21.5	12	34	33.5	0.074
KCJ12-020E		12	1/4	6	19	22	7	18	12	33	32.5	0.069
KCJ12-030E		12	3/8	8	22	22	7	21.5	12	34	33.5	0.088
KCJ12-040E		12	1/2	10	27	22	7	25.5	14	39	36.5	0.119
KCJ15-030E		15	3/8	8	24	27	7.5	21.5	12	37	37.5	0.121
KCJ15-040E		15	1/2	12	27	27	7.5	25.5	14	41	39.5	0.141
KCJ16-040E		16	1/2	12	27	30	7.5	25.5	14	41	39.5	0.164
KCJ18-040E		18	1/2	12	27	32	8	25.5	14	41	39.5	0.170
KCJ20-060E		20	3/4	16	32	36	8	31.5	16	46	42.5	0.252
KCJ22-040E		22	1/2	12	32	36	9	25.5	14	43	41.5	0.217
KCJ22-060E		22	3/4	16	32	36	9	31.5	16	46	42.5	0.235
KCJ25-060E		25	3/4	16	36	41	10	31.5	16	46	43.5	0.307
KCJ25-080E		25	1	20	41	41	10	38	18	50	45.5	0.383
KCJ28-080E		28	1	22	41	46	10	38	18	52	48	0.422
KCJ30-080E		30	1	22	41	46	10	38	18	52	48.5	0.418
KCJ30-100E		30	1 1/4	25	50	46	10	48.5	20	57	51.5	0.605
KCJ35-100E		35	1 1/4	28	50	55	11	48.5	20	57	54.5	0.674
※KCJ38-120N		38	1 1/2	32	55	60	12	53.5	21	58	56.5	0.861
※KCJ40-120N		40	1 1/2	32	55	60	12	53.5	21	62	60.5	0.895
※KCJ42-120N		42	1 1/2	34	55	60	12	53.5	21	62	60.5	0.833
※KCJ50-160N		50	2	40	70	75	12	66	25	73	69.5	1.675
※KCJ11-010N	1/8	10.5	1/8	4	17	19	7	14	8	29	32.5	0.050
※KCJ11-020N	1/8	10.5	1/4	6	19	19	7	18	12	33	32.5	0.059
※KCJ13-020N	1/4	13.8	1/4	6	22	24	7.5	18	12	36	36	0.090
※KCJ13-030N	1/4	13.8	3/8	8	22	24	7.5	21.5	12	36	36	0.097
※KCJ17-030N	3/8	17.3	3/8	8	27	32	8	21.5	12	38	38.5	0.165
※KCJ17-040N	3/8	17.3	1/2	12	27	32	8	25.5	14	41	39.5	0.171
※KCJ21-040N	1/2	21.7	1/2	12	32	36	9	25.5	14	43	41.5	0.221
※KCJ21-060N	1/2	21.7	3/4	16	32	36	9	31.5	16	46	42.5	0.239
※KCJ27-060N	3/4	27.2	3/4	16	41	46	10	31.5	16	50	48	0.424
※KCJ27-080N	3/4	27.2	1	22	41	46	10	38	18	52	48	0.426
※KCJ34-080N	1	34.0	1	22	46	55	11	38	18	54	53.5	0.612
※KCJ34-100N	1	34.0	1 1/4	28	50	55	11	48.5	20	57	54.5	0.693
※KCJ43-100N	1 1/4	42.7	1 1/4	31	60	65	12	48.5	20	63	62.5	1.050
※KCJ43-120N	1 1/4	42.7	1 1/2	34	60	65	12	53.5	21	64	62.5	1.071
※KCJ48-120N	1 1/2	48.6	1 1/2	36	65	75	12	53.5	21	65	65.5	1.364
※KCJ48-160N	1 1/2	48.6	2	40	70	75	12	66	25	73	69.5	1.692

- Note. 1. Shape and dimension of mating port is shown in page 60.
 2. The gasket is not included in standard.
 3. Dimensions might be modified due to improvement of quality and performance.

FEMALE CONNECTOR



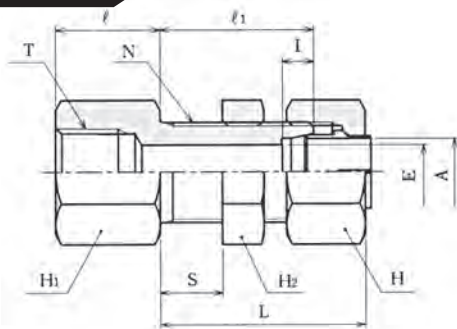
※NS Type

Unit: mm

Part No.	Out. Dia. of Applied Pipe A		(Rc) T	E	Hex Width		I	ℓ	Fingertight Length (about) L	Weight (kg)
	Nominal sizes	Out. Dia.			H ₁	H				
KSA06-010E	6		1/8	4	17	14	7	25	35.5	0.038
KSA06-020E	6		1/4	4	19	14	7	30	40.5	0.048
KSA08-010E	8		1/8	6	17	17	7	25	35.5	0.045
KSA08-020E	8		1/4	6	19	17	7	30	40.5	0.056
KSA10-020E	10		1/4	8	19	19	7	30	41.5	0.062
KSA10-030E	10		3/8	8	24	19	7	32	43.5	0.085
KSA12-020E	12		1/4	10	19	22	7	30	41.5	0.070
KSA12-030E	12		3/8	10	24	22	7	32	43.5	0.093
KSA15-030E	15		3/8	12	24	27	7.5	34	46.5	0.122
KSA15-040E	15		1/2	12	30	27	7.5	39	51.5	0.173
KSA16-030E	16		3/8	13	27	30	7.5	34	46.5	0.164
KSA16-040E	16		1/2	13	30	30	7.5	39	51.5	0.195
KSA18-040E	18		1/2	14	30	32	8	39	51.5	0.201
KSA20-040E	20		1/2	17	30	36	8	39	51.5	0.231
KSA20-060E	20		3/4	17	36	36	8	41	53.5	0.279
KSA22-060E	22		3/4	18	36	36	9	41	53.5	0.261
KSA25-060E	25		3/4	20	36	41	10	41	54.5	0.307
KSA25-080E	25		1	20	46	41	10	45	58.5	0.442
KSA28-080E	28		1	22	46	46	10	47	61	0.498
KSA30-080E	30		1	25	46	46	10	47	61.5	0.489
KSA30-100E	30		1 1/4	25	55	46	10	51	65.5	0.632
KSA35-100E	35		1 1/4	28	55	55	11	51	68.5	0.737
※KSA38-120N	38		1 1/2	32	65	60	12	51	70.5	1.030
※KSA40-120N	40		1 1/2	32	65	60	12	55	74.5	1.061
※KSA42-120N	42		1 1/2	34	65	60	12	55	74.5	1.030
※KSA50-160N	50		2	40	80	75	12	60	81.5	1.770
※KSA11-020N	1/8	10.5	1/4	8	19	19	7	30	41.5	0.060
※KSA13-030N	1/4	13.8	3/8	11	24	24	7.5	34	46	0.106
※KSA17-040N	3/8	17.3	1/2	14	30	32	8	39	51.5	0.201
※KSA21-060N	1/2	21.7	3/4	18	36	36	9	41	53.5	0.264
※KSA27-080N	3/4	27.2	1	22	46	46	10	47	61	0.501
※KSA34-100N	1	34.0	1 1/4	28	55	55	11	51	68.5	1.162
※KSA43-120N	1 1/4	42.7	1 1/2	34	65	65	12	55	75.5	1.162
※KSA48-160N	1 1/2	48.6	2	40	80	75	12	60	81.5	1.787

Note. Dimensions might be modified due to improvement of quality and performance.

BULKHEAD FEMALE CONNECTOR



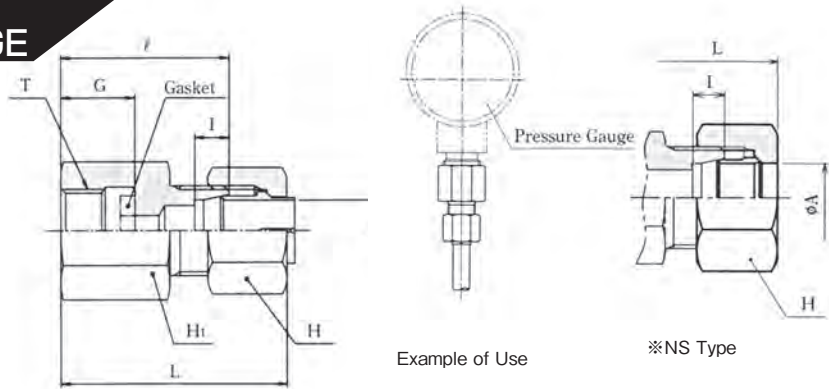
Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(Rc) T	E	Hex Width			I	l ₁	l	Fingertight Length (about) L	N	Max S	Weight (kg)
				H ₁	H ₂	H							
KSS06-010E	6	1/8	4	17	17	14	7	32	13	42.5	M12×1.5	13	0.060
KSS06-020E	6	1/4	4	17	17	14	7	32	13	42.5	M12×1.5	13	0.068
KSS08-010E	8	1/8	6	19	19	17	7	32	18	42.5	M14×1.5	13	0.095
KSS08-020E	8	1/4	6	19	19	17	7	32	18	42.5	M14×1.5	13	0.083
KSS10-020E	10	1/4	8	19	22	19	7	32	18	43.5	M16×1.5	13	0.099
KSS10-030E	10	3/8	8	24	22	19	7	32	20	43.5	M16×1.5	13	0.122
KSS12-020E	12	1/4	10	22	24	22	7	32	18	43.5	M18×1.5	13	0.112
KSS12-030E	12	3/8	10	24	24	22	7	32	20	43.5	M18×1.5	13	0.134
KSS15-030E	15	3/8	12	27	27	27	7.5	37	20	49.5	M22×1.5	15	0.181
KSS15-040E	15	1/2	12	30	27	27	7.5	37	25	49.5	M22×1.5	15	0.234
KSS16-030E	16	3/8	13	30	30	27	7.5	37	20	49.5	M24×1.5	15	0.265
KSS16-040E	16	1/2	13	30	30	30	7.5	37	25	49.5	M24×1.5	15	0.275
KSS18-040E	18	1/2	14	30	32	32	8	39	25	51.5	M26×1.5	15	0.299
KSS20-040E	20	1/2	17	36	36	36	8	39	25	51.5	M28×1.5	15	0.445
KSS20-060E	20	3/4	17	36	36	36	8	39	27	51.5	M28×1.5	15	0.369
KSS22-060E	22	3/4	18	36	36	36	9	39	27	51.5	M30×1.5	15	0.381
KSS25-060E	25	3/4	20	41	41	41	10	39	27	52.5	M35×1.5	15	0.539
KSS25-080E	25	1	20	46	41	41	10	39	31	52.5	M35×1.5	15	0.608
KSS28-080E	28	1	22	46	46	46	10	41	31	55	M38×1.5	15	0.706
KSS30-080E	30	1	25	46	46	46	10	41	31	55.5	M40×1.5	15	0.682
KSS30-100E	30	1 1/4	25	55	46	46	10	41	35	55.5	M40×1.5	15	0.830
KSS35-100E	35	1 1/4	28	55	50	55	11	43	35	60.5	M45×1.5	15	1.040

⚠ CAUTION: This type of fitting is designed to be used for wall penetration. When used in the place of strong vibration and / or pressure fluctuation, proper vibration measures such as fixing the piping by clamp are required.

Note. Dimensions might be modified due to improvement of quality and performance.

CONNECTOR For PRESSURE GAUGE

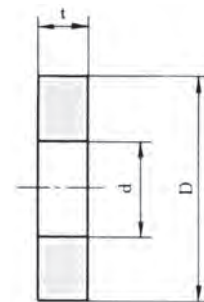


Unit: mm

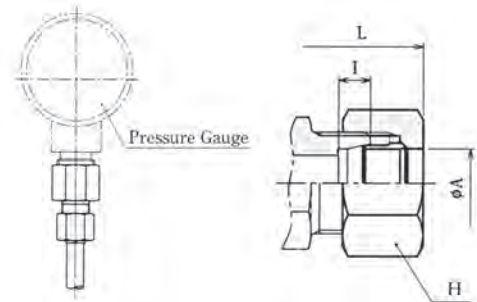
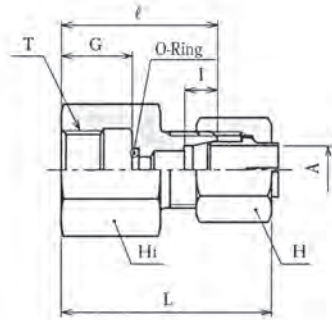
Part No.	Out. Dia. of Applied Pipe A	(G) T	G	Hex Width		I	ℓ	Fingertight Length (about) L	Nominal of Gasket KP-B or KP-D	Weight (kg)
				H ₁	H					
※KGA04-020N	4	1/4	14	19	12	6	29	36.5	-01	0.046
※KGA04-030N	4	3/8	15	24	12	6	30	37.5	-02	0.070
KGA06-020E	6	1/4	14	19	14	7	32	42.5	-01	0.052
KGA06-030E	6	3/8	15	24	14	7	34	44.5	-02	0.078
KGA06-040E	6	1/2	16	30	14	7	36	46.5	-03	0.121
KGA08-020E	8	1/4	14	19	17	7	32	42.5	-01	0.058
KGA08-030E	8	3/8	15	24	17	7	34	44.5	-02	0.085
KGA08-040E	8	1/2	16	30	17	7	36	46.5	-03	0.128
KGA10-020E	10	1/4	14	19	19	7	32	43.5	-01	0.064
KGA10-030E	10	3/8	15	24	19	7	34	45.5	-02	0.090
KGA10-040E	10	1/2	16	30	19	7	36	47.5	-03	0.133
KGA12-020E	12	1/4	14	19	22	7	32	43.5	-01	0.073
KGA12-030E	12	3/8	15	24	22	7	34	45.5	-02	0.099
KGA12-040E	12	1/2	16	30	22	7	36	47.5	-03	0.140

- Note.** 1. Gasket are not provided as standard accessories. Please specify when required. For such case, ※dimension and material of Ihara's standard gasket is as below.
2. Dimensions might be modified due to improvement of quality and performance.

Nominal of Gasket	Dimension			Material
	d	D	t	
KP-B-01	6	11	3	Chrome leather
KP-B-02	6	14	3	
KP-B-03	6	18	3	
KP-D-01	6	11	2	Phosphorous-deoxidized copper
KP-D-02	6	14	2	
KP-D-03	6	18	2	



CONNECTOR For PRESSURE GAUGE (O-SEAL)



Example of Use

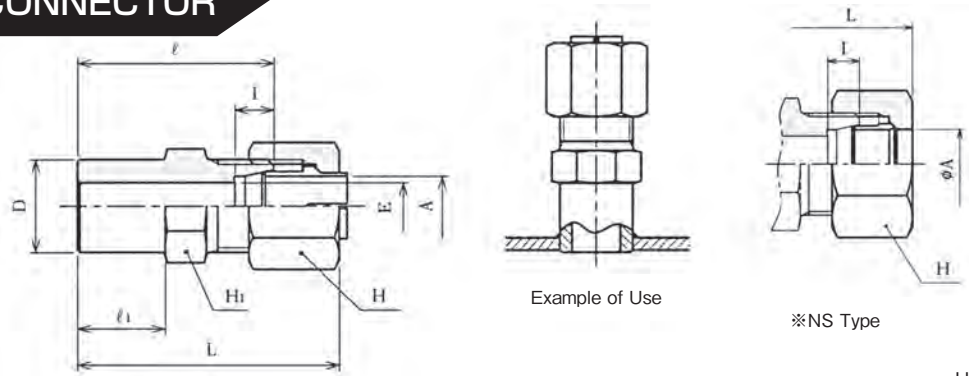
※NS Type

Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	G	Hex Width		I	ℓ	Fingertight Length (about) L	JIS B2405 -1B o-ring	Weight (kg)
					H ₁	H					
※KGO04-020N	4	1/4	2.5	14	19	12	6	30	37.5	S6	0.049
※KGO04-030N	4	3/8	2.5	15	24	12	6	31	38.5	P6	0.075
KGO06-020E	6	1/4	4	14	19	14	7	33	43.5	S6	0.055
KGO06-030E	6	3/8	4	15	24	14	7	35	45.5	P6	0.084
KGO06-040E	6	1/2	4	16	30	14	7	36	46.5	P7	0.125
KGO08-020E	8	1/4	6	14	19	17	7	33	43.5	S6	0.063
KGO08-030E	8	3/8	6	15	24	17	7	35	45.5	P6	0.091
KGO08-040E	8	1/2	6	16	30	17	7	36	46.5	P7	0.132
KGO10-020E	10	1/4	6	14	19	19	7	36	47.5	S6	0.077
KGO10-030E	10	3/8	6	15	24	19	7	33	44.5	P6	0.091
KGO10-040E	10	1/2	6	16	30	19	7	35	46.5	P7	0.134
KGO12-020E	12	1/4	6	14	19	22	7	36	47.5	S6	0.086
KGO12-030E	12	3/8	6	15	24	22	7	35	46.5	P6	0.108
KGO12-040E	12	1/2	6	16	30	22	7	36	47.5	P7	0.149

- Note. 1. O-ring of JIS B2401 (NBR) or S size is installed. (range of working temperature: -20°C~120°C)
 2. Dimensions might be modified due to improvement of quality and performance.

WELD MALE CONNECTOR

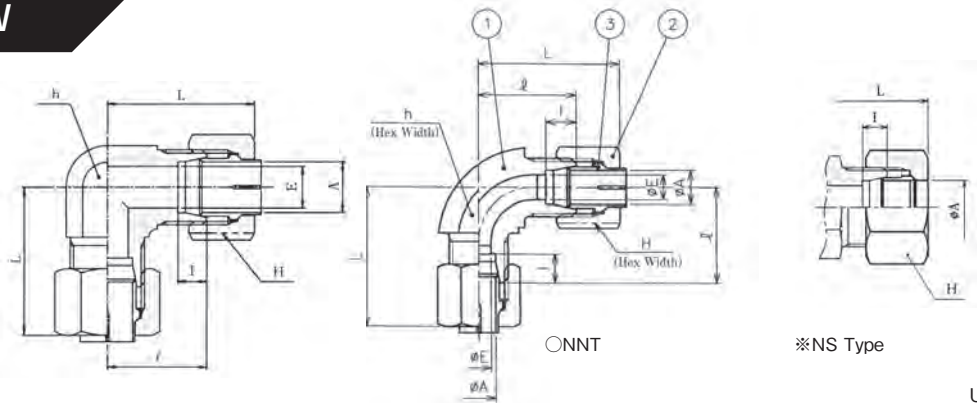


Unit: mm

Part No.	Out. Dia. of Applied Pipe A		D	E	Hex Width		I	l ₁	l	Fingertight Length (about) L	Weight (kg)
	Nominal sizes	Out. Dia.			H ₁	H					
KCW06-000E	6		12	4	14	14	7	11	29	39.5	0.035
KCW08-000E	8		14	6	17	17	7	15	34	44.5	0.053
KCW10-000E	10		16	8	17	19	7	15	34	45.5	0.062
KCW12-000E	12		18	10	19	22	7	15	34	45.5	0.075
KCW15-000E	15		21	12	24	27	7.5	18	40	52.5	0.127
KCW16-000E	16		22	13	27	30	7.5	22	44	56.5	0.165
KCW18-000E	18		25	14	27	32	8	22	44	56.5	0.198
KCW20-000E	20		28	17	30	36	8	22	46	58.5	0.239
KCW22-000E	22		28	18	32	36	9	22	46	58.5	0.227
KCW25-000E	25		33	20	36	41	10	26	51	64.5	0.340
KCW28-000E	28		36	22	41	46	10	28	55	69	0.463
KCW30-000E	30		39	25	41	46	10	28	55	69.5	0.448
KCW35-000E	35		43	28	46	55	11	28	56	73.5	0.635
※KCW38-000N	38		45	32	50	60	12	28	58	77.5	0.750
※KCW40-000N	40		46	32	55	60	12	30	65	84.5	0.877
※KCW50-000N	50		57	40	65	75	12	30	70	91.5	1.448
※KCW11-000N	1/8	10.5	16	8	17	19	7	15	34	45.5	0.058
※KCW13-000N	1/4	13.8	19	11	22	24	7.5	18	40	52	0.101
※KCW17-000N	3/8	17.3	24	14	27	32	8	22	44	56.5	0.181
※KCW21-000N	1/2	21.7	28	18	32	36	9	22	46	58.5	0.231
※KCW27-000N	3/4	27.2	30	22	41	46	10	25	52	66	0.381
※KCW34-000N	1	34.0	40	28	46	55	11	28	56	73.5	0.597
※KCW43-000N	1 1/4	42.7	47	34	60	65	12	28	65	84.5	1.042
※KCW48-000N	1 1/2	48.6	55	40	65	75	12	30	70	91.5	1.428

- Note.** 1. The material of this type of fitting body is JIS S25C or equivalent.
 2. Dimensions might be modified due to improvement of quality and performance.

UNION ELBOW

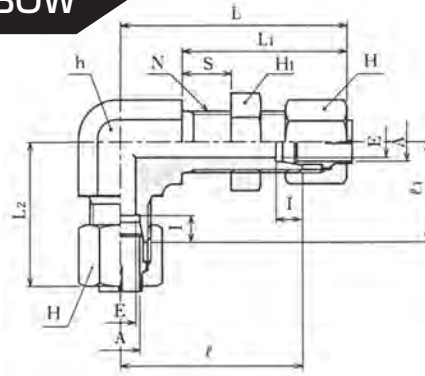


Unit: mm

Part No.	Out. Dia. of Applied Pipe A		E	Width across flats h	Hex Width H	I	ℓ	Fingertight Length (about) L	Weight (kg)
	Nominal sizes	Out. Dia.							
KLA06-000E	6		4	14	14	7	20	30.5	0.048
○KLA08-000KNNT	8		6	17	17	7	23	33.5	0.081
○KLA10-000KNNT	10		8	17	19	7	23	34.5	0.089
○KLA12-000KNNT	12		10	19	22	7	24	35.5	0.116
KLA15-000E	15		12	24	27	7.5	29	41.5	0.221
KLA16-000E	16		13	27	30	7.5	32	44.5	0.319
KLA18-000E	18		14	27	32	8	32	44.5	0.325
KLA20-000E	20		17	30	36	8	33	45.5	0.405
KLA22-000E	22		18	32	36	9	34	46.5	0.403
KLA25-000E	25		20	36	41	10	36	49.5	0.584
KLA28-000E	28		22	41	46	10	41	55	0.870
KLA30-000E	30		25	41	46	10	41	55.5	0.812
KLA35-000E	35		28	46	55	11	46	63.5	1.169
※KLA38-000N	38		32	50	60	12	50	69.5	1.518
※KLA40-000N	40		32	55	60	12	55	74.5	1.802
※KLA42-000N	42		34	55	60	12	55	74.5	1.690
※KLA50-000N	50		40	65	75	12	62	83.5	2.964
○※KLA11-000N	1/8	10.5	8	17	19	7	23	34.5	0.089
※KLA13-000N	1/4	13.8	11	22	24	7.5	28	40	0.172
※KLA17-000N	3/8	17.3	14	27	32	8	32	44.5	0.327
※KLA21-000N	1/2	21.7	18	32	36	9	34	46.5	0.414
※KLA27-000N	3/4	27.2	22	41	46	10	41	55	0.876
※KLA34-000N	1	34.0	28	46	55	11	46	63.5	1.207
※KLA43-000N	1 1/4	42.7	34	60	65	12	57	77.5	2.263
※KLA48-000N	1 1/2	48.6	40	65	75	12	62	83.5	2.998

Note. Dimensions might be modified due to improvement of quality and performance.

BULKHEAD UNION ELBOW



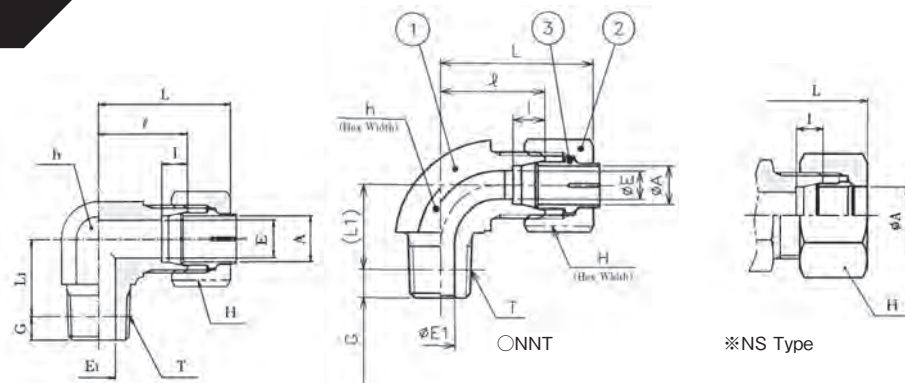
Unit: mm

Part No.	Out. Dia. of Applied Pipe A	E	Width across flats h	Hex Width		I	l ₁	l	Fingertight Length (about) L			N	Max S	Weight (kg)
				H ₁	H				L ₁	L ₂	L			
KSL06-000E	6	4	17	17	14	7	23	45	42.5	33.5	55.5	M12×1.5	13	0.102
KSL08-000E	8	6	19	19	17	7	24	46	42.5	34.5	56.5	M14×1.5	13	0.132
KSL10-000E	10	8	22	22	19	7	26	48	43.5	37.5	59.5	M16×1.5	13	0.178
KSL12-000E	12	10	24	24	22	7	27	49	43.5	38.5	60.5	M18×1.5	13	0.217
KSL15-000E	15	12	27	27	27	7.5	31	57	49.5	43.5	69.5	M22×1.5	15	0.336
KSL16-000E	16	13	30	30	30	7.5	33	59	49.5	45.5	71.5	M24×1.5	15	0.449
KSL18-000E	18	14	32	32	32	8	33	63	51.5	45.5	75.5	M26×1.5	15	0.504
KSL20-000E	20	17	32	36	36	8	33	65	51.5	45.5	77.5	M28×1.5	15	0.561
KSL22-000E	22	18	36	36	36	9	36	65	51.5	48.5	77.5	M30×1.5	15	0.672
KSL25-000E	25	20	41	41	41	10	39	68	52.5	52.5	81.5	M35×1.5	15	0.982
KSL28-000E	28	22	41	46	46	10	41	70	55	55	84	M38×1.5	15	1.114
KSL30-000E	30	25	46	46	46	10	46	74	55.5	60.5	88.5	M40×1.5	15	1.222

⚠ CAUTION: This type of fitting is designed to be used for wall penetration. When used in the place of strong vibration and / or pressure fluctuation, proper vibration measures such as fixing the piping by clamp are required.

Note. Dimensions might be modified due to improvement of quality and performance.

MALE ELBOW

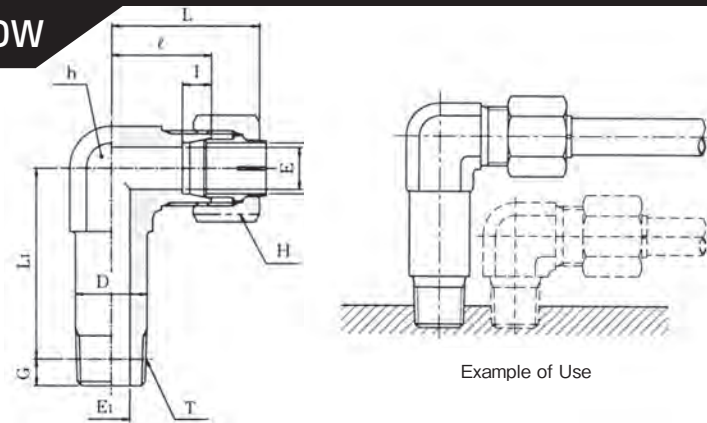


Unit: mm

Part No.	Out. Dia. of Applied Pipe A		(R) T	E	E ₁	Engagement Fingertight G	Width across flats h	Hex Width H	I	ℓ	Fingertight Length (about) L	(about) L ₁	Weight (kg)
	Nominal sizes	Out. Dia.											
※KLN04-010N	4		1/8	2.5	4	3.97	12	12	6	15	22.5	13	0.025
KLN06-010E	6		1/8	4	4	3.97	14	14	7	20	30.5	14	0.039
○KLN06-020KNNT	6		1/4	4	4.5	6.01	17	14	7	23	33.5	17	0.058
KLN06-030E	6		3/8	4	9	6.35	19	14	7	24	34.5	19.5	0.082
KLN08-010E	8		1/8	6	4	3.97	17	17	7	23	33.5	16	0.063
○KLN08-020KNNT	8		1/4	6	6.5	6.01	17	17	7	23	33.5	18	0.064
KLN08-030E	8		3/8	6	9	6.35	19	17	7	24	34.5	19.5	0.086
○KLN10-020KNNT	10		1/4	8	7.5	6.01	17	19	7	23	34.5	19	0.066
○KLN10-030KNNT	10		3/8	8	8.5	6.35	19	19	7	24	35.5	19.5	0.085
KLN10-040E	10		1/2	8	12	8.16	24	19	7	29	40.5	26	0.137
○KLN12-020KNNT	12		1/4	10	7.5	6.01	19	22	7	24	35.5	20	0.090
○KLN12-030KNNT	12		3/8	10	9.5	6.35	19	22	7	24	35.5	20.5	0.093
KLN12-040E	12		1/2	10	12	8.16	24	22	7	29	40.5	26	0.164
KLN15-030E	15		3/8	12	9	6.35	24	27	7.5	29	41.5	23.5	0.172
KLN15-040E	15		1/2	12	12	8.16	24	27	7.5	29	41.5	26	0.182
KLN16-030E	16		3/8	13	9	6.35	27	30	7.5	32	44.5	25.5	0.247
KLN16-040E	16		1/2	13	12	8.16	27	30	7.5	32	44.5	27	0.255
KLN18-030E	18		3/8	14	9	6.35	27	32	8	32	44.5	27.5	0.256
KLN18-040E	18		1/2	14	12	8.16	27	32	8	32	44.5	30	0.263
KLN20-040E	20		1/2	17	12	8.16	30	36	8	33	45.5	32	0.330
KLN20-060E	20		3/4	17	16	9.53	30	36	8	33	45.5	30.5	0.330
KLN22-040E	22		1/2	18	12	8.16	32	36	9	34	46.5	32	0.344
KLN22-060E	22		3/4	18	16	9.53	32	36	9	34	46.5	32.5	0.353
KLN25-060E	25		3/4	20	16	9.53	36	41	10	36	49.5	33.5	0.493
KLN25-080E	25		1	20	22	10.39	36	41	10	36	49.5	35.5	0.499
KLN28-060E	28		3/4	22	16	9.53	41	46	10	41	55	37.5	0.740
KLN28-080E	28		1	22	22	10.39	41	46	10	41	55	39.5	0.740
KLN30-080E	30		1	25	22	10.39	41	46	10	41	55.5	39.5	0.706
KLN30-100E	30		1 1/4	25	31	12.70	46	46	10	46	60.5	42.5	0.922
KLN35-100E	35		1 1/4	28	31	12.70	46	55	11	46	63.5	45.5	0.926
※KLN38-120N	38		1 1/2	32	36	12.70	50	60	12	50	69.5	48.5	1.146
※KLN40-120N	40		1 1/2	32	36	12.70	55	60	12	55	74.5	49.5	1.141
※KLN42-120N	42		1 1/2	34	36	12.70	55	60	12	55	74.5	49.5	1.365
※KLN50-160N	50		2	40	46	15.88	65	75	12	62	83.5	58	2.293
※KLN11-010N	1/8	10.5	1/8	8	4	3.97	17	19	7	23	34.5	17	0.065
○※KLN11-020KNNT	1/8	10.5	1/4	8	7.5	6.01	17	19	7	23	34.5	19	0.066
※KLN13-020N	1/4	13.8	1/4	11	7	6.01	22	24	7.5	28	40	22	0.136
※KLN13-030N	1/4	13.8	3/8	11	9	6.35	22	24	7.5	28	40	22.5	0.139
※KLN17-030N	3/8	17.3	3/8	14	9	6.35	27	32	8	32	44.5	27.5	0.262
※KLN17-040N	3/8	17.3	1/2	14	12	8.16	27	32	8	32	44.5	30	0.264
※KLN21-040N	1/2	21.7	1/2	18	12	8.16	32	36	9	34	46.5	32	0.384
※KLN21-060N	1/2	21.7	3/4	18	16	9.53	32	36	9	34	46.5	32.5	0.357
※KLN27-060N	3/4	27.2	3/4	22	16	9.53	41	46	10	41	55	37.5	0.725
※KLN27-080N	3/4	27.2	1	22	22	10.39	41	46	10	41	55	39.5	0.748
※KLN34-080N	1	34.0	1	28	22	10.39	46	55	11	46	63.5	44.5	0.997
※KLN34-100N	1	34.0	1 1/4	28	31	12.70	46	55	11	46	63.5	44.5	0.945
※KLN43-100N	1 1/4	42.7	1 1/4	34	31	12.70	60	65	12	57	77.5	51.5	1.853
※KLN43-120N	1 1/4	42.7	1 1/2	34	36	12.70	60	65	12	57	77.5	51.5	1.805
※KLN48-120N	1 1/2	48.6	1 1/2	40	36	12.70	65	75	12	62	83.5	57.5	2.443
※KLN48-160N	1 1/2	48.6	2	40	46	15.88	65	75	12	62	83.5	58	3.310

Note. Dimensions might be modified due to improvement of quality and performance.

EXTENDED MALE ELBOW

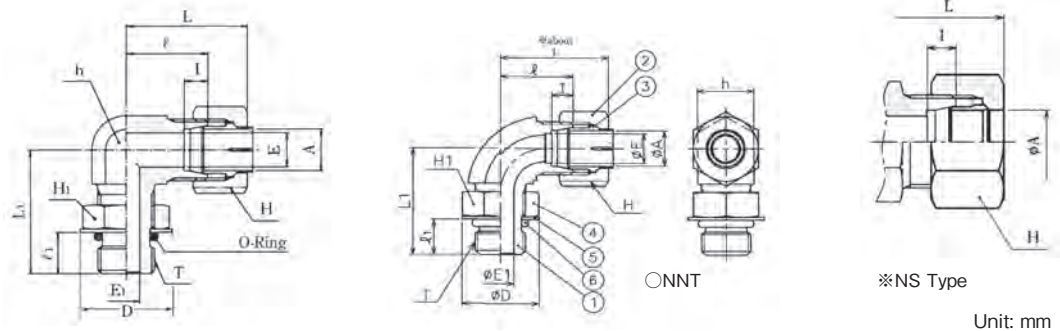


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(R) T	E	E ₁	Engagement Fingertight G	Width across flats h	Hex Width H	I	D	ℓ	Fingertight Length (about) L	(about) L ₁	Weight (kg)
KLL06-010E	6	1/8	4	4	3.97	14	14	7	12	20	30.5	36	0.058
KLL06-020E	6	1/4	4	7	6.01	17	14	7	16	23	33.5	40	0.093
KLL08-020E	8	1/4	6	7	6.01	17	17	7	16	23	33.5	43	0.103
KLL08-030E	8	3/8	6	9	6.35	19	17	7	18	24	34.5	48.5	0.121
KLL10-020E	10	1/4	8	7	6.01	17	19	7	16	23	34.5	46	0.113
KLL12-020E	12	1/4	10	7	6.01	19	22	7	18	24	35.5	52	0.156
KLL12-030E	12	3/8	10	9	6.35	19	22	7	18	24	35.5	53	0.156
KLL15-030E	15	3/8	12	9	6.35	22	27	7.5	23	29	41.5	61.5	0.259
KLL15-040E	15	1/2	12	12	8.16	22	27	7.5	23	29	41.5	67	0.261
KLL16-030E	16	3/8	13	9	6.35	24	30	7.5	24	32	44.5	68.5	0.331
KLL16-040E	16	1/2	13	12	8.16	24	30	7.5	24	32	44.5	70	0.329
KLL18-040E	18	1/2	14	12	8.16	27	32	8	26	32	44.5	77	0.425
KLL20-040E	20	1/2	17	12	8.16	30	36	8	28	33	45.5	84	0.538
KLL20-060E	20	3/4	17	16	9.53	30	36	8	28	33	45.5	82.5	0.507
KLL22-060E	22	3/4	18	16	9.53	32	36	9	30	34	46.5	83.5	0.566
KLL25-060E	25	3/4	20	16	9.53	36	41	10	35	36	49.5	90.5	0.974
KLL25-080E	25	1	20	22	10.39	36	41	10	35	36	49.5	91.5	0.898
KLL28-080E	28	1	22	22	10.39	41	46	10	40	41	55	104.5	1.195
KLL30-100E	30	1 1/4	25	31	12.70	46	46	10	44	46	60.5	104.5	1.242
KLL35-100E	35	1 1/4	28	31	12.70	46	55	11	44	46	63.5	121.5	1.401

Note. Dimensions might be modified due to improvement of quality and performance.

O-SEAL MALE ELBOW



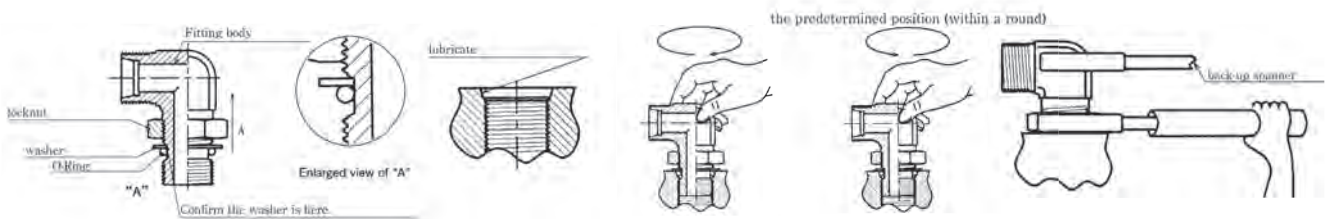
Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	E ₁	Width across flats h	Hex Width		I	l ₁	l	L ₁	Fingertight Length (about) L	D	O-Ring JIS B2401 -1B	Weight (kg)
						H ₁	H								
KL006-010E	6	1/8	4	4	14	14	14	7	10	20	30	30.5	17	P8	0.052
○KL008-020KNNT	8	1/4	6	6.5	17	19	17	7	12	23	34	33.5	20	P11	0.079
○KL010-020KNNT	10	1/4	8	7.5	17	19	19	7	12	23	35	34.5	20	P11	0.086
○KL010-030KNNT	10	3/8	8	8.5	19	22	19	7	12	24	36	35.5	25.6	P14	0.109
○KL012-020KNNT	12	1/4	10	7.5	19	19	22	7	12	24	36	35.5	20	P11	0.104
○KL012-030KNNT	12	3/8	10	9.5	19	22	22	7	12	24	36	35.5	25.6	P14	0.115
KL012-040E	12	1/2	10	12	24	27	22	7	16	24	46	35.5	29	P18	0.182
KL015-030E	15	3/8	12	9	24	22	27	7.5	12	29	40	41.5	25.6	P14	0.158
KL015-040E	15	1/2	12	12	24	27	27	7.5	16	29	46	41.5	29	P18	0.215
KL016-030E	16	3/8	13	9	24	22	27	7.5	12	32	40	44.5	25.6	P14	0.195
KL016-040E	16	1/2	13	12	24	27	30	7.5	16	32	46	44.5	29	P18	0.244
KL018-040E	18	1/2	14	12	30	27	32	8	16	32	52	44.5	29	P18	0.343
KL020-040E	20	1/2	17	12	30	27	36	8	16	33	52	45.5	29	P18	0.385
KL020-060E	20	3/4	17	16	30	36	36	8	17	33	52	45.5	38	P24	0.401
KL022-060E	22	3/4	18	16	32	36	36	9	17	34	52	46.5	38	P24	0.416
KL025-060E	25	3/4	20	16	36	36	41	10	17	36	60	49.5	38	P24	0.590
KL025-080E	25	1	20	22	36	41	41	10	21	36	62	49.5	44	P29	0.591
KL028-080E	28	1	22	22	41	41	46	10	21	41	62	55	44	P29	0.807
KL030-080E	30	1	25	22	41	41	46	10	21	41	66	55.5	44	P29	0.807
KL030-100E	30	1 1/4	25	31	41	50	46	10	21	44	66	58.5	58	P38	0.774
KL035-100E	35	1 1/4	28	31	46	50	55	11	21	46	66	63.5	58	P38	1.018
※KL038-120N	38	1 1/2	32	36	50	55	60	12	21	50	73	69.5	64	P44	1.277

- Note.**
1. Shape and dimension of mating port is shown in page 60.
 2. O-ring of JIS B 2401 (NBR) is installed. (range of working temperature: -20°C~120°C)
 3. Diameter of O-ring groove and applied O-ring on G³/₄ straight thread is based on JIS B 2351 prior to modified in 1990. Port diameter of entrance is recommended φ30.5 to protect from damage of O-ring as shown in page 60. Port inlet diameter that is specified in JIS B2351 is φ29.8 for both new and old standard. (Please specify when require one of new Standard.)
 4. Dimensions might be modified due to improvement of quality and performance.

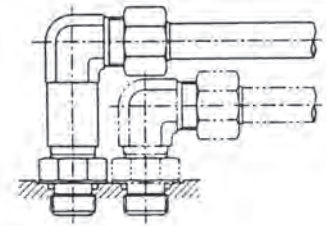
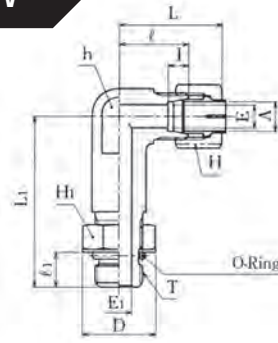
Thread Size	Rated Pressure
G ¹ / ₈	35MPa
G ¹ / ₄	〃
G ³ / ₈	〃
G ¹ / ₂	〃
G ³ / ₄	〃
G 1	〃
G 1 1/4	21MPa
G 1 1/2	〃

Assembly figure of O-ring Port



1. Move the locknut until coming out of O-ring groove. (to A-direction)
2. Screw in to the mating port until the back-up washer bottoms.
3. Adjust the direction by reversing (within a round) up to the predetermined position.
4. Fix the fitting body with back-up spanner and tighten the locknut.

O-SEAL EXTENDED MALE ELBOW



Example of Use

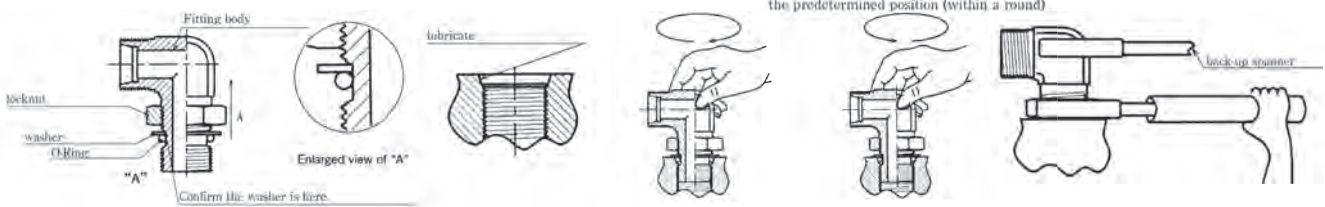
Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	E ₁	Width across flats h	Hex Width		I	ℓ ₁	ℓ	L ₁	Fingertight Length (about) L	D	JISB2401 -1B O-ring	Weight (kg)
						H ₁	H								
KL G08 - 020E	8	1/4	6	6	17	19	17	7	12	23	54	33.5	20	P11	0.142
KL G10 - 020E	10	1/4	8	6	19	19	19	7	12	24	59	35.5	20	P11	0.153
KL G10 - 030E	10	3/8	8	9	19	22	19	7	12	24	59	35.5	25.6	P14	0.156
KL G12 - 020E	12	1/4	10	6	22	19	22	7	12	25	67	36.5	20	P11	0.221
KL G12 - 030E	12	3/8	10	9	22	22	22	7	12	25	67	36.5	25.6	P14	0.225
KL G15 - 040E	15	1/2	12	12	24	27	27	7.5	16	29	77	41.5	29	P18	0.306
KL G16 - 030E	16	3/8	13	9	24	22	30	7.5	12	32	75	44.5	25.6	P14	0.321
KL G16 - 040E	16	1/2	13	12	24	27	30	7.5	16	32	79	44.5	29	P18	0.331
KL G18 - 040E	18	1/2	14	12	30	27	32	8	16	32	83	44.5	29	P18	0.479
KL G20 - 040E	20	1/2	17	12	30	27	36	8	16	33	90	45.5	29	P18	0.443
KL G20 - 060E	20	3/4	17	16	30	36	36	8	17	33	91	45.5	38	P24	0.527
KL G22 - 040E	22	1/2	18	12	32	27	36	9	16	34	88	46.5	29	P18	0.598
KL G22 - 060E	22	3/4	18	16	32	36	36	9	17	34	88	46.5	38	P24	0.584
KL G25 - 080E	25	1	20	22	36	41	41	10	21	36	108	49.5	44	P29	0.801

- Note. 1. Shape and dimension of mating port is shown in page 60.
 2. O-ring of JIS B 2401 (NBR) is installed. (range of working temperature: -20°C~120°C)
 3. Diameter of O-ring groove and applied O-ring on G³/₈ straight thread is based on JIS B 2351 prior to modified in 1990. Port diameter of entrance is recommended φ30.5 to protect from damage of O-ring as shown in page 60. Port inlet diameter that is specified in JIS B2351 is φ29.8 for both new and old standard. (Please specify when require one of new Standard.)
 4. Dimensions might be modified due to improvement of quality and performance.

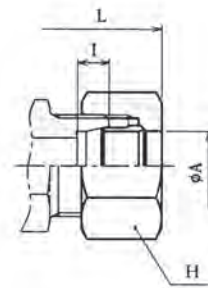
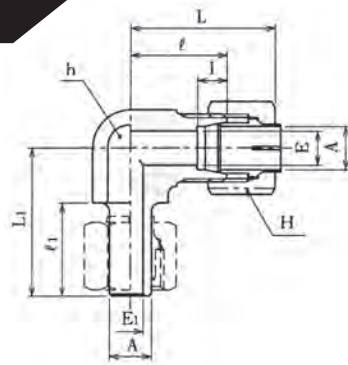
Thread Size	Rated Pressure
G ¹ / ₈	35MPa
G ¹ / ₄	∕
G ³ / ₈	∕
G ¹ / ₂	∕
G ³ / ₄	∕
G1	∕
G1 ¹ / ₄	21MPa
G1 ¹ / ₂	∕

Assembly figure of O-ring Port



1. Move the locknut until coming out of O-ring groove. (to A-direction)
2. Screw in to the mating port until the back-up washer bottoms.
3. Adjust the direction by reversing (within a round) up to the predetermined position.
4. Fix the fitting body with back-up spanner and tighten the locknut.

ADJUSTABLE ELBOW



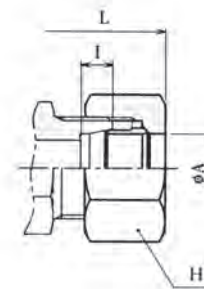
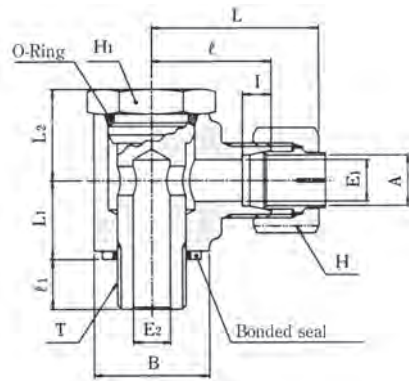
※NS Type

Unit: mm

Part No.	Out. Dia. of Applied Pipe A	E	E ₁	Width across flats h	Hex Width H	I	l	l ₁	Fingertight Length (about) L	L ₁	Weight (kg)
KLC06-000E	6	4	3	17	14	7	22	22	32.5	31	0.071
KLC08-000E	8	6	5	17	17	7	23	21	33.5	32	0.079
KLC10-000E	10	8	6	17	19	7	23	22	34.5	35	0.082
KLC12-000E	12	10	8	19	22	7	24	22.5	35.5	37	0.093
KLC15-000E	15	12	10	27	27	7.5	32	24.5	44.5	43	0.237
KLC16-000E	16	13	11	27	30	7.5	32	24.5	44.5	43	0.255
KLC18-000E	18	14	12	27	32	8	32	24.5	44.5	43	0.263
KLC20-000E	20	17	14	30	36	8	33	26	45.5	45	0.326
KLC22-000E	22	18	14	32	36	9	34	27	46.5	46	0.349
KLC25-000E	25	20	17	36	41	10	36	29.5	49.5	49	0.481
KLC28-000E	28	22	18	41	46	10	41	29.5	55	53	0.747
KLC30-000E	30	25	20	41	46	10	41	30.5	55.5	54	0.710
KLC35-000E	35	28	23	46	55	11	46	34	63.5	58	0.810
※KLC38-000N	38	32	26	50	60	12	50	36	69.5	72	1.332

Note. Dimensions might be modified due to improvement of quality and performance.

STUD ELBOW (B)



※NS Type

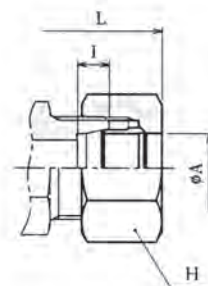
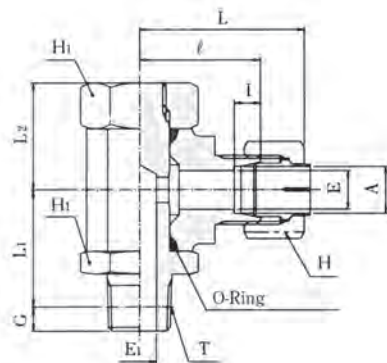
Unit: mm

Part No.	Out. Dia. of Applied Pipe A		(G) T	B	E ₁	E ₂	Hex Width		I	ℓ ₁	ℓ	L ₁	L ₂	Fingertight Length (about) L	Bonded seal K-PC-	O-ring JIS B2401 -1B	Weight (kg)
	Nominal sizes	Out. Dia.					H ₁	H									
KMB06-010E	6		1/8	18	4	4	17	14	7	8	23	13	14	33.5	01	P10	0.078
KMB08-020E	8		1/4	22	6	7	22	17	7	12	25	16	17	35.5	02	P12	0.127
KMB10-020E	10		1/4	22	8	7	22	19	7	12	25	16	17	36.5	02	P12	0.132
KMB12-030E	12		3/8	28	10	9	27	22	7	12	29	19	22	40.5	03	P18	0.232
KMB15-040E	15		1/2	37	12	12	30	27	7.5	14	36	24	28	48.5	04	P22	0.484
KMB16-040E	16		1/2	37	13	12	30	30	7.5	14	36	24	28	48.5	04	P22	0.505
KMB18-040E	18		1/2	37	14	12	30	32	8	14	36	24	28	48.5	04	P22	0.510
KMB20-060E	20		3/4	42	17	16	41	36	8	16	38	28	32	50.5	05	P28	0.723
KMB22-060E	22		3/4	42	18	16	41	36	9	16	38	28	32	50.5	05	P28	0.708
KMB25-080E	25		1	50	20	22	50	41	10	18	42	37	38	55.5	06	P36	1.182
KMB28-080E	28		1	50	22	22	50	46	10	18	42	37	38	56	06	P36	1.210
※KMB11-020N	1/8	10.5	1/4	22	8	7	22	19	7	12	25	16	17	36.5	02	P12	0.130
※KMB13-030N	1/4	13.8	3/8	28	11	9	27	24	7.5	12	29	19	22	41	03	P18	0.235
※KMB17-040N	3/8	17.3	1/2	37	14	12	30	32	8	14	36	24	28	48.5	04	P22	0.511
※KMB21-060N	1/2	21.7	3/4	42	18	16	41	36	9	16	38	28	32	50.5	05	P28	0.712
※KMB27-080N	3/4	27.2	1	50	22	22	50	46	10	18	42	37	38	56	06	P36	1.215

- Note.**
1. Shape and dimension of mating port is shown in page 60.
 2. O-ring of JIS B 2401 (NBR) is installed.
 3. Range of working temperature: -20°C~120°C
 4. Dimensions might be modified due to improvement of quality and performance.

⚠ **CAUTION:** Fitting is designed to be fixedly used. Never use it for rotating purpose as replacement of swivel joint.

STUD ELBOW (C)



※NS Type

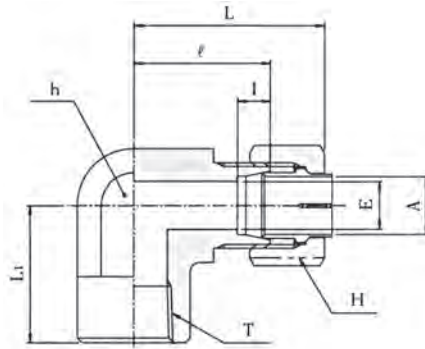
Unit: mm

Part No.	Out. Dia. of Applied Pipe A		(R) T	E	E ₁	G	Hex Width		I	ℓ	L ₁	L ₂	Fingertight Length (about) L	O-ring JIS B2401 -1B	Weight (kg)
	Nominal sizes	Out. Dia.					H ₁	H							
KMC06-010E	6		1/8	4	4	3.97	17	14	7	23	22	19	33.5	P9	0.091
KMC08-020E	8		1/4	6	7	6.01	22	17	7	29	26	23	39.5	P12.5	0.165
KMC10-020E	10		1/4	8	7	6.01	22	19	7	29	26	23	40.5	P12.5	0.170
KMC12-030E	12		3/8	10	9	6.35	27	22	7	32	31	28	44.5	P16	0.298
KMC15-040E	15		1/2	12	12	8.16	27	27	7.5	33	35	30	45.5	P18	0.360
KMC16-040E	16		1/2	13	12	8.16	27	30	7.5	33	35	30	45.5	P18	0.381
KMC18-040E	18		1/2	14	12	8.16	27	32	8	33	35	30	45.5	P18	0.386
KMC20-060E	20		3/4	17	16	9.53	36	36	8	41	44.5	38	53.5	P25	0.800
KMC22-060E	22		3/4	18	16	9.53	36	36	9	41	44.5	38	53.5	P25	0.783
KMC25-080E	25		1	20	20	10.39	46	41	10	50	53.5	44	63.5	P32	1.411
KMC28-080E	28		1	22	20	10.39	46	46	10	50	53.5	44	64	P32	1.436
※KMC11-020N	1/8	10.5	1/4	8	7	6.01	22	19	7	29	26	23	40.5	P12.5	0.169
※KMC13-030N	1/4	13.8	3/8	11	9	6.35	27	24	7.5	32	31	28	44	P16	0.312
※KMC17-040N	3/8	17.3	1/2	14	12	8.16	27	32	8	33	35	30	45.5	P18	0.387
※KMC21-060N	1/2	21.7	3/4	18	16	9.53	36	36	9	41	44.5	38	53.5	P25	0.787
※KMC27-080N	3/4	27.2	1	22	20	10.39	46	46	10	50	53.5	44	64	P32	1.439

- Note.**
- O-ring of JIS B 2401 (NBR) is installed.
 - Range of working temperature: -20°C~120°C
 - Dimensions might be modified due to improvement of quality and performance.

⚠CAUTION: Fitting is designed to be fixedly used. Never use it for rotating purpose as replacement of swivel joint.

FEMALE ELBOW

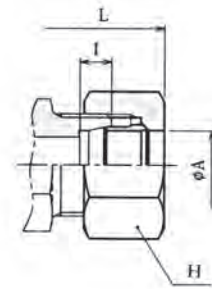
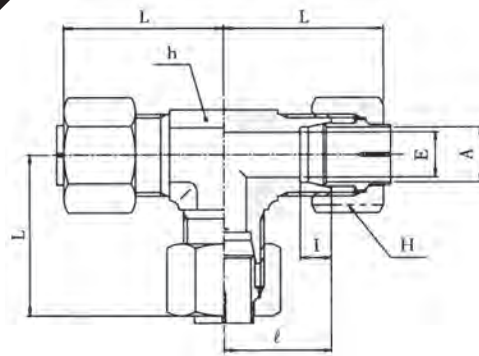


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(Rc) T	E	Width across flats h	Hex Width H	I	ℓ	L ₁	Fingertight Length (about) L	Weight (kg)
KLF08-020E	8	1/4	6	19	17	7	24	24	34.5	0.090
KLF10-020E	10	1/4	8	19	19	7	24	24	35.5	0.095
KLF12-020E	12	1/4	10	19	22	7	24	24	35.5	0.101
KLF12-030E	12	3/8	10	24	22	7	29	29	40.5	0.158
KLF15-030E	15	3/8	12	24	27	7.5	29	29	41.5	0.173
KLF15-040E	15	1/2	12	30	27	7.5	33	33	45.5	0.288
KLF16-040E	16	1/2	13	30	30	7.5	33	33	45.5	0.289
KLF18-040E	18	1/2	14	30	32	8	33	33	45.5	0.293
KLF20-060E	20	3/4	17	36	36	8	36	36	48.5	0.439
KLF22-060E	22	3/4	18	36	36	9	36	36	48.5	0.428
KLF25-060E	25	3/4	20	36	41	10	36	36	49.5	0.459
KLF25-080E	25	1	20	46	41	10	46	46	59.5	0.869
KLF28-080E	28	1	22	46	46	10	46	46	60	0.879
KLF30-100E	30	1 1/4	25	55	46	10	55	55	69.5	1.295
KLF35-100E	35	1 1/4	28	55	55	11	55	55	72.5	1.370

Note. Dimensions might be modified due to improvement of quality and performance.

UNION TEE



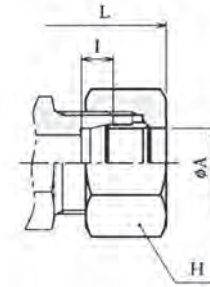
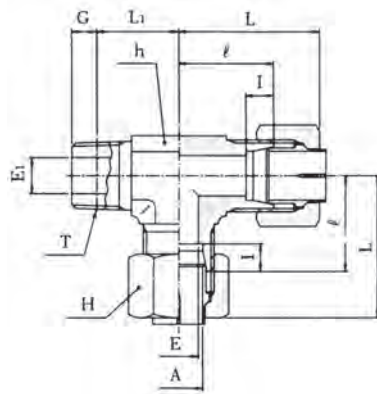
※NS Type

Unit: mm

Part No.	Out. Dia. of Applied Pipe A		E	Width across flats h	Hex Width H	I	ℓ	Fingertight Length (about) L	Weight (kg)
	Nominal sizes	Out. Dia.							
※KTA04-000N		4	2.5	12	12	6	15	22.5	0.044
KTA06-000E		6	4	14	14	7	20	30.5	0.069
KTA08-000E		8	6	17	17	7	23	33.5	0.122
KTA10-000E		10	8	17	19	7	23	34.5	0.136
KTA12-000E		12	10	19	22	7	24	35.5	0.172
KTA15-000E		15	12	24	27	7.5	29	41.5	0.306
KTA16-000E		16	13	27	30	7.5	32	44.5	0.436
KTA18-000E		18	14	27	32	8	32	44.5	0.489
KTA20-000E		20	17	30	36	8	33	45.5	0.563
KTA22-000E		22	18	32	36	9	34	46.5	0.552
KTA25-000E		25	20	36	41	10	36	49.5	0.789
KTA28-000E		28	22	41	46	10	41	55	1.117
KTA30-000E		30	25	41	46	10	41	55.5	1.044
KTA35-000E		35	28	46	55	11	46	63.5	1.589
※KTA38-000N		38	32	50	60	12	50	69.5	2.052
※KTA40-000N		40	32	55	60	12	55	74.5	2.422
※KTA42-000N		42	34	55	60	12	55	74.5	2.276
※KTA50-000N		50	40	65	75	12	62	83.5	4.010
※KTA11-000N	1/8	10.5	8	17	19	7	23	34.5	0.132
※KTA13-000N	1/4	13.8	11	22	24	7.5	28	40	0.240
※KTA17-000N	3/8	17.3	14	27	32	8	32	44.5	0.452
※KTA21-000N	1/2	21.7	18	32	36	9	34	46.5	0.564
※KTA27-000N	3/4	27.2	22	41	46	10	41	55	1.127
※KTA34-000N	1	34.0	28	46	55	11	46	63.5	1.647
※KTA43-000N	1 1/4	42.7	34	60	65	12	57	77.5	3.022
※KTA48-000N	1 1/2	48.6	40	65	75	12	62	83.5	4.059

Note. Dimensions might be modified due to improvement of quality and performance.

MALE RUN TEE



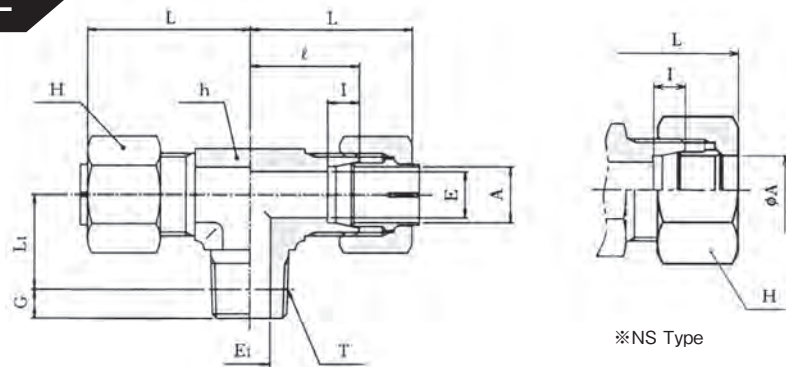
※NS Type

Unit: mm

Part No.	Out. Dia. of Applied Pipe A		(R) T	E	E ₁	Engagement Fingertight G	Width across flats h	Hex Width H	I	ℓ	Fingertight Length (about) L	(about) L ₁	Weight (kg)
	Nominal sizes	Out. Dia.											
※KTK04-010N	4		1/8	2.5	4	3.97	12	12	6	15	22.5	13	0.037
KTK06-010E	6		1/8	4	4	3.97	14	14	7	20	30.5	14	0.062
KTK06-020E	6		1/4	4	7	6.01	17	14	7	23	33.5	17	0.087
KTK08-010E	8		1/8	6	4	3.97	17	17	7	23	33.5	16	0.098
KTK08-020E	8		1/4	6	7	6.01	17	17	7	23	33.5	18	0.102
KTK10-020E	10		1/4	8	7	6.01	17	19	7	23	34.5	19	0.114
KTK10-030E	10		3/8	8	9	6.35	19	19	7	24	35.5	19.5	0.136
KTK12-020E	12		1/4	10	7	6.01	19	22	7	24	35.5	18	0.135
KTK12-030E	12		3/8	10	9	6.35	19	22	7	24	35.5	20.5	0.143
KTK15-030E	15		3/8	12	9	6.35	24	27	7.5	29	41.5	23.5	0.255
KTK15-040E	15		1/2	12	12	8.16	24	27	7.5	29	41.5	26	0.267
KTK16-040E	16		1/2	13	12	8.16	27	30	7.5	32	44.5	27	0.368
KTK18-040E	18		1/2	14	12	8.16	27	32	8	32	44.5	30	0.387
KTK20-060E	20		3/4	17	16	9.53	30	36	8	33	45.5	30.5	0.486
KTK22-060E	22		3/4	18	16	9.53	32	36	9	34	46.5	32.5	0.496
KTK25-060E	25		3/4	20	16	9.53	36	41	10	36	49.5	33.5	0.687
KTK25-080E	25		1	20	22	10.39	36	41	10	36	49.5	35.5	0.690
KTK28-080E	28		1	22	22	10.39	41	46	10	41	55	39.5	0.986
KTK30-080E	30		1	25	22	10.39	41	46	10	41	55.5	39.5	0.929
KTK30-100E	30		1 1/4	25	31	12.70	46	46	10	46	60.5	42.5	1.140
KTK35-100E	35		1 1/4	28	31	12.70	46	55	11	46	63.5	45.5	1.347
※KTK38-120N	38		1 1/2	32	36	12.70	50	60	12	50	69.5	48.5	1.688
※KTK40-120N	40		1 1/2	32	36	12.70	55	60	12	55	74.5	49.5	2.084
※KTK50-160N	50		2	40	46	15.88	65	75	12	62	83.5	58	3.327
※KTK11-020N	1/8	10.5	1/4	8	7	6.01	17	19	7	23	34.5	19	0.110
※KTK13-030N	1/4	13.8	3/8	11	9	6.35	22	24	7.5	28	40	22.5	0.204
※KTK17-040N	3/8	17.3	1/2	14	12	8.16	27	32	8	32	44.5	30	0.389
※KTK21-060N	1/2	21.7	3/4	18	16	9.53	32	36	9	34	46.5	32.5	0.504
※KTK27-080N	3/4	27.2	1	22	22	10.39	41	46	10	41	55	39.5	0.993
※KTK34-100N	1	34.0	1 1/4	28	31	12.70	46	55	11	46	63.5	45.5	1.387
※KTK43-120N	1 1/4	42.7	1 1/2	34	36	12.70	60	65	12	57	77.5	51.5	2.561
※KTK48-160N	1 1/2	48.6	2	40	46	15.88	65	75	12	62	83.5	58	3.363

Note. Dimensions might be modified due to improvement of quality and performance.

MALE BRANCH TEE

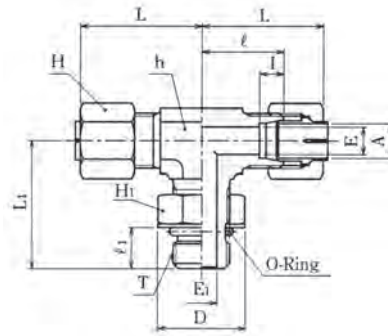


Unit: mm

Part No.	Out. Dia. of Applied Pipe A		(R) T	E	E ₁	Engagement Fingertight G	Width across flats h	Hex Width H	I	ℓ	Fingertight Length (about) L	(about) L ₁	Weight (kg)
	Nominal sizes	Out. Dia.											
※KTN04-010N		4	1/8	2.5	4	3.97	12	12	6	15	22.5	13	0.039
KTN06-010E		6	1/8	4	4	3.97	14	14	7	20	30.5	14	0.062
KTN06-020E		6	1/4	4	7	6.01	17	14	7	23	33.5	17	0.087
KTN08-010E		8	1/8	6	4	3.97	17	17	7	23	33.5	16	0.098
KTN08-020E		8	1/4	6	7	6.01	17	17	7	23	33.5	18	0.102
KTN10-020E		10	1/4	8	7	6.01	17	19	7	23	34.5	19	0.114
KTN10-030E		10	3/8	8	9	6.35	19	19	7	24	35.5	19.5	0.136
KTN12-020E		12	1/4	10	7	6.01	19	22	7	24	35.5	18	0.135
KTN12-030E		12	3/8	10	9	6.35	19	22	7	24	35.5	20.5	0.143
KTN15-030E		15	3/8	12	9	6.35	24	27	7.5	29	41.5	23.5	0.256
KTN15-040E		15	1/2	12	12	8.16	24	27	7.5	29	41.5	26	0.266
KTN16-040E		16	1/2	13	12	8.16	27	30	7.5	32	44.5	27	0.368
KTN18-040E		18	1/2	14	12	8.16	27	32	8	32	44.5	30	0.388
KTN20-060E		20	3/4	17	16	9.53	30	36	8	33	45.5	30.5	0.486
KTN22-060E		22	3/4	18	16	9.53	32	36	9	34	46.5	32.5	0.497
KTN25-060E		25	3/4	20	16	9.53	36	41	10	36	49.5	33.5	0.687
KTN25-080E		25	1	20	22	10.39	36	41	10	36	49.5	35.5	0.690
KTN28-080E		28	1	22	22	10.39	41	46	10	41	55	39.5	0.986
KTN30-080E		30	1	25	22	10.39	41	46	10	41	55.5	39.5	0.929
KTN30-100E		30	1 1/4	25	31	12.70	46	46	10	46	60.5	42.5	1.140
KTN35-100E		35	1 1/4	28	31	12.70	46	55	11	46	63.5	45.5	1.374
※KTN38-120N		38	1 1/2	32	36	12.70	50	60	12	50	69.5	48.5	1.766
※KTN40-120N		40	1 1/2	32	36	12.70	55	60	12	55	74.5	49.5	2.075
※KTN50-160N		50	2	40	46	15.88	65	75	12	62	83.5	58	3.436
※KTN11-020N	1/8	10.5	1/4	8	7	6.01	17	19	7	23	34.5	19	0.111
※KTN13-030N	1/4	13.8	3/8	11	9	6.35	22	24	7.5	28	40	22.5	0.204
※KTN17-040N	3/8	17.3	1/2	14	12	8.16	27	32	8	32	44.5	30	0.386
※KTN21-060N	1/2	21.7	3/4	18	16	9.53	32	36	9	34	46.5	32.5	0.505
※KTN27-080N	3/4	27.2	1	22	22	10.39	41	46	10	41	55	39.5	0.993
※KTN34-100N	1	34.0	1 1/4	28	31	12.70	46	55	11	46	63.5	45.5	1.412
※KTN43-120N	1 1/4	42.7	1 1/2	34	36	12.70	60	65	12	57	77.5	51.5	2.586
※KTN48-160N	1 1/2	48.6	2	40	46	15.88	65	75	12	62	83.5	58	3.468

Note. Dimensions might be modified due to improvement of quality and performance.

O-SEAL MALE BRANCH TEE



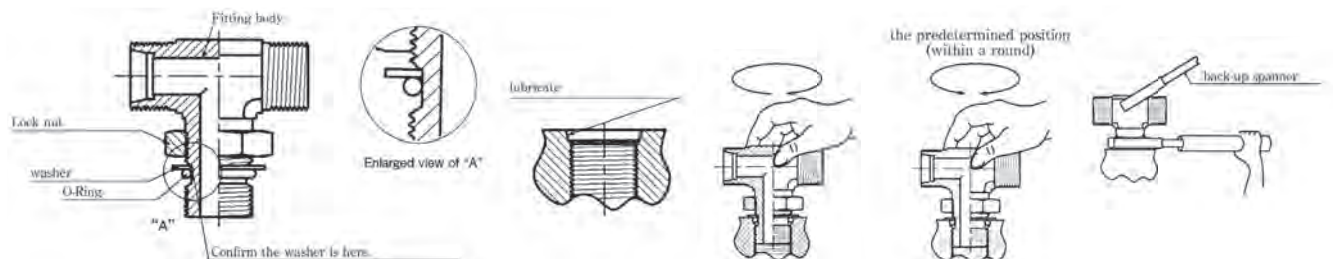
Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	E ₁	Width across flats h	Hex Width		I	l ₁	l	L ₁	Fingertight Length (about) L	D	O-ring JISB2401 -1B	Weight (kg)
						H ₁	H								
KTO08-020E	8	1/4	6	7	17	19	17	7	11	23	35	33.5	20	P11	0.118
KTO10-020E	10	1/4	8	7	17	19	19	7	11	23	35	34.5	20	P11	0.129
KTO10-030E	10	3/8	8	9	19	22	19	7	12	24	36	35.5	25.6	P14	0.156
KTO12-020E	12	1/4	10	6	19	19	22	7	11	24	37	35.5	20	P11	0.160
KTO12-030E	12	3/8	10	9	19	22	22	7	12	24	37	35.5	25.6	P14	0.168
KTO15-030E	15	3/8	12	9	27	22	27	7.5	12	32	49	44.5	25.6	P14	0.334
KTO15-040E	15	1/2	12	12	27	27	27	7.5	16	32	50	44.5	29	P18	0.410
KTO16-040E	16	1/2	13	12	27	27	30	7.5	16	32	50	44.5	29	P18	0.442
KTO18-030E	18	3/8	14	9	32	22	32	8	12	34	46	46.5	25.6	P14	0.485
KTO18-040E	18	1/2	14	12	32	27	32	8	16	34	46	46.5	29	P18	0.500
KTO20-060E	20	3/4	17	16	32	36	36	8	17	34	46.5	46.5	38	P24	0.592
KTO22-040E	22	1/2	18	12	32	27	36	9	16	34	46	46.5	29	P18	0.573
KTO22-060E	22	3/4	18	16	32	36	36	9	17	34	46.5	46.5	38	P24	0.522

- Note.** 1. Shape and dimension of mating port is shown in page 60.
 2. O-ring of JIS B 2401 (NBR) is installed. (range of working temperature: -20°C~120°C)
 3. Diameter of O-ring groove and applied O-ring on G³/₈ straight thread is based on JIS B 2351 prior to modified in 1990. Port diameter of entrance is recommended φ30.5 to protect from damage of O-ring as shown in page 60. Port inlet diameter that is specified in JIS B2351 is φ29.8 for both new and old standard. (Please specify when require one of new Standard.)
 4. Dimensions might be modified due to improvement of quality and performance.

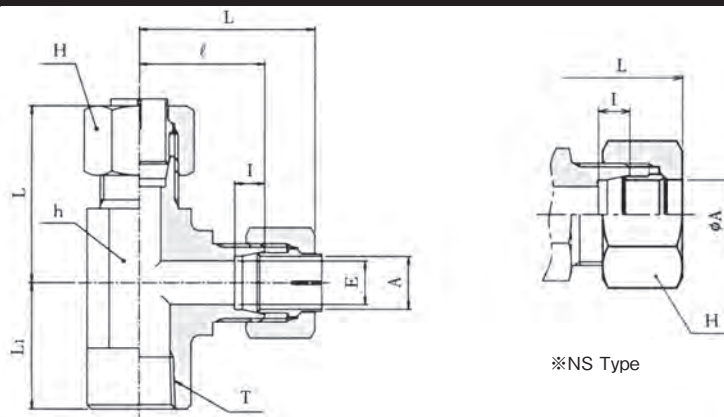
Thread Size	Rated Pressure
G ¹ / ₈	35MPa
G ¹ / ₄	〃
G ³ / ₈	〃
G ¹ / ₂	〃
G ³ / ₄	〃
G1	〃
G 1 ¹ / ₄	21MPa
G 1 ¹ / ₂	〃

Assembly figure of O-ring Port



1. Move the locknut until coming out of O-ring groove. (to A-direction)
2. Screw in to the mating port until the back-up washer bottoms.
3. Adjust the direction by reversing (within a round) up to the predetermined position.
4. Fix the fitting body with back-up spanner and tighten the locknut.

FEMALE RUN TEE

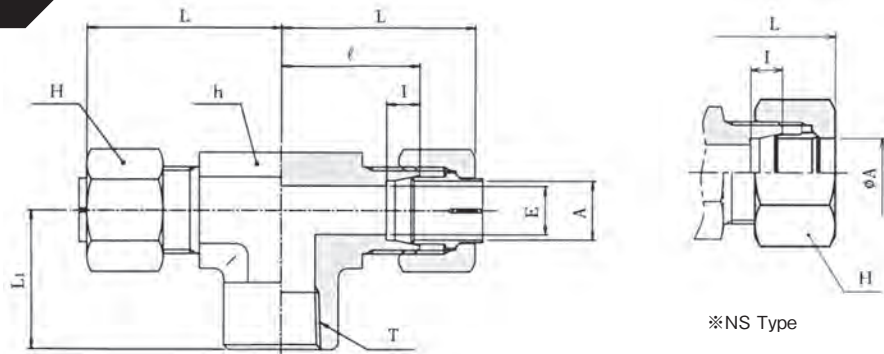


Unit: mm

Part No.	Out. Dia. of Applied Pipe A		(Rc) T	E	Width across flats h	Hex Width H	I	ℓ	Fingertight Length (about) L	L ₁	Weight (kg)
	Nominal sizes	Out. Dia.									
KTF08-020E	8		1/4	6	19	17	7	24	34.5	24	0.124
KTF10-020E	10		1/4	8	19	19	7	24	35.5	24	0.134
KTF12-020E	12		1/4	10	19	22	7	24	35.5	24	0.149
KTF12-030E	12		3/8	10	24	22	7	29	40.5	29	0.211
KTF15-030E	15		3/8	12	24	27	7.5	29	41.5	29	0.257
KTF15-040E	15		1/2	12	30	27	7.5	33	45.5	33	0.372
KTF16-040E	16		1/2	13	30	30	7.5	33	45.5	33	0.412
KTF18-040E	18		1/2	14	30	32	8	33	45.5	33	0.421
KTF20-060E	20		3/4	17	36	36	8	36	48.5	36	0.615
KTF22-060E	22		3/4	18	36	36	9	36	48.5	36	0.577
KTF25-060E	25		3/4	20	36	41	10	36	49.5	36	0.673
KTF25-080E	25		1	20	46	41	10	46	59.5	46	1.173
KTF28-080E	28		1	22	46	46	10	46	60	46	1.223
KTF30-080E	30		1	25	46	46	10	46	60.5	46	1.182
KTF30-100E	30		1 1/4	25	55	46	10	55	69.5	55	1.924
KTF35-100E	35		1 1/4	28	55	55	11	55	72.5	55	2.060
※KTF11-020N	1/8	10.5	1/4	8	19	19	7	24	35.5	24	0.131
※KTF13-030N	1/4	13.8	3/8	11	24	24	7.5	29	41	29	0.229
※KTF17-040N	3/8	17.3	1/2	14	30	32	8	33	45.5	33	0.424
※KTF21-060N	1/2	21.7	3/4	18	36	36	9	36	48.5	36	0.585
※KTF27-080N	3/4	27.2	1	22	46	46	10	46	60	46	1.230
※KTF34-100N	1	34.0	1 1/4	28	55	55	11	55	72.5	55	1.954

Note. Dimensions might be modified due to improvement of quality and performance.

FEMALE BRANCH TEE

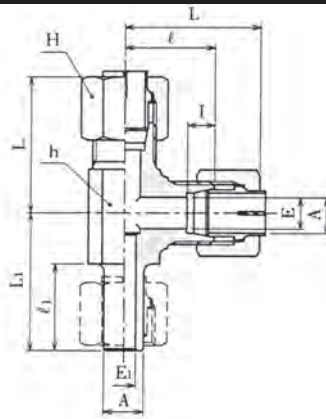


Unit: mm

Part No.	Out. Dia. of Applied Pipe A		(Rc) T	E	Width across flats h	Hex Width H	I	ℓ	Fingertight Length (about) L	L ₁	Weight (kg)
	Nominal sizes	Out. Dia.									
KTH08-020E	8		1/4	6	19	17	7	24	34.5	24	0.127
KTH10-020E	10		1/4	8	19	19	7	24	35.5	24	0.137
KTH12-020E	12		1/4	10	19	22	7	24	35.5	24	0.150
KTH12-030E	12		3/8	10	24	22	7	29	40.5	29	0.222
KTH15-030E	15		3/8	12	24	27	7.5	29	41.5	29	0.262
KTH15-040E	15		1/2	12	30	27	7.5	33	45.5	33	0.385
KTH16-040E	16		1/2	13	30	30	7.5	33	45.5	33	0.424
KTH18-040E	18		1/2	14	30	32	8	33	45.5	33	0.422
KTH20-060E	20		3/4	17	36	36	8	36	48.5	36	0.639
KTH22-060E	22		3/4	18	36	36	9	36	48.5	36	0.608
KTH25-060E	25		3/4	20	36	41	10	36	49.5	36	0.679
KTH25-080E	25		1	20	46	41	10	46	59.5	46	1.225
KTH28-080E	28		1	22	46	46	10	46	60	46	1.270
KTH30-080E	30		1	25	46	46	10	46	60.5	46	1.213
KTH30-100E	30		1 1/4	25	55	46	10	55	69.5	55	1.857
KTH35-100E	35		1 1/4	28	55	55	11	55	72.5	55	2.010
※KTH11-020N	1/8	10.5	1/4	8	19	19	7	24	35.5	24	0.134
※KTH13-030N	1/4	13.8	3/8	11	24	24	7.5	29	41	29	0.234
※KTH17-040N	3/8	17.3	1/2	14	30	32	8	33	45.5	33	0.434
※KTH21-060N	1/2	21.7	3/4	18	36	36	9	36	48.5	36	0.616
※KTH27-080N	3/4	27.2	1	22	46	46	10	46	60	46	1.277
※KTH34-100N	1	34.0	1 1/4	28	55	55	11	55	72.5	55	2.050

Note. Dimensions might be modified due to improvement of quality and performance.

ADJUSTABLE RUN TEE

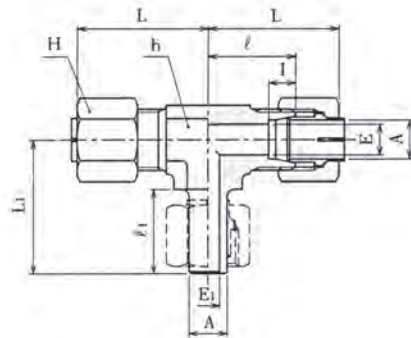


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	E	E ₁	Width across flats h	Hex Width H	I	l	l ₁	Fingertight Length (about) L	L ₁	Weight (kg)
KTC10-000E	10	8	6	17	19	7	23	22	34.5	35	0.118
KTC12-000E	12	10	8	19	22	7	24	22.5	35.5	37	0.149
KTC15-000E	15	12	10	27	27	7.5	32	24.5	44.5	43	0.332
KTC16-000E	16	13	11	27	30	7.5	32	24.5	44.5	43	0.371
KTC18-000E	18	14	12	27	32	8	32	24.5	44.5	43	0.383
KTC20-000E	20	17	14	32	36	8	33	26	45.5	45	0.490
KTC22-000E	22	18	14	32	36	9	34	27	46.5	46	0.489
KTC25-000E	25	20	17	41	41	10	41	29.5	54.5	50.5	0.740

Note. Dimensions might be modified due to improvement of quality and performance.

ADJUSTABLE BRANCH TEE

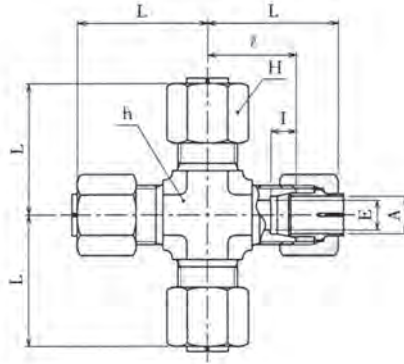


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	E	E ₁	Width across flats h	Hex Width H	I	l	l ₁	Fingertight Length (about) L	L ₁	Weight (kg)
KTB10-000E	10	8	6	17	19	7	23	22	34.5	35	0.119
KTB12-000E	12	10	8	19	22	7	24	22.5	35.5	37	0.150
KTB15-000E	15	12	10	27	27	7.5	32	24.5	44.5	43	0.333
KTB16-000E	16	13	11	27	30	7.5	32	24.5	44.5	43	0.372
KTB18-000E	18	14	12	27	32	8	32	24.5	44.5	43	0.384
KTB20-000E	20	17	14	32	36	8	33	26	45.5	45	0.492
KTB22-000E	22	18	14	32	36	9	34	27	46.5	46	0.491
KTB25-000E	25	20	17	41	41	10	41	29.5	54.5	50.5	0.741

Note. Dimensions might be modified due to improvement of quality and performance.

UNION CROSS

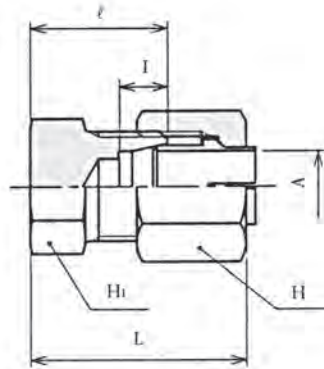


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	E	Width across flats h	Hex Width H	I	ℓ	Fingertight Length (about) L	Weight (kg)
KXA06-000E	6	4	19	14	7	23	33.5	0.148
KXA08-000E	8	6	19	17	7	23	33.5	0.175
KXA10-000E	10	8	19	19	7	24	35.5	0.190
KXA12-000E	12	10	19	22	7	24	35.5	0.230
KXA15-000E	15	12	27	27	7.5	28	40.5	0.428

Note. Dimensions might be modified due to improvement of quality and performance.

CAP

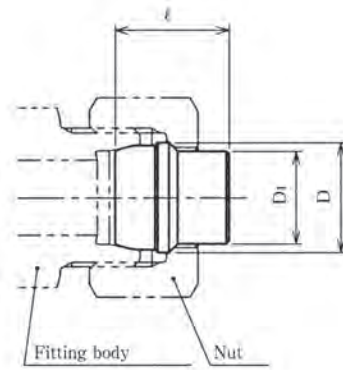


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	Hex Width		I	ℓ	Fingertight Length (about) L	Weight (kg)
		H ₁	H				
KCA06-000E	6	14	14	7	18	28.5	0.027
KCA08-000E	8	17	17	7	19	29.5	0.040
KCA10-000E	10	17	19	7	20	31.5	0.049
KCA12-000E	12	19	22	7	20	31.5	0.062
KCA15-000E	15	24	27	7.5	22	34.5	0.103
KCA16-000E	16	27	30	7.5	24	36.5	0.142
KCA18-000E	18	27	32	8	24	36.5	0.149
KCA20-000E	20	30	36	8	24	36.5	0.193
KCA22-000E	22	32	36	9	25	37.5	0.192
KCA25-000E	25	36	41	10	25	38.5	0.257
KCA28-000E	28	41	46	10	28	42	0.360
KCA30-000E	30	41	46	10	28	42.5	0.353
KCA35-000E	35	46	55	11	30	47.5	0.460

Note. Dimensions might be modified due to improvement of quality and performance.

PLUG

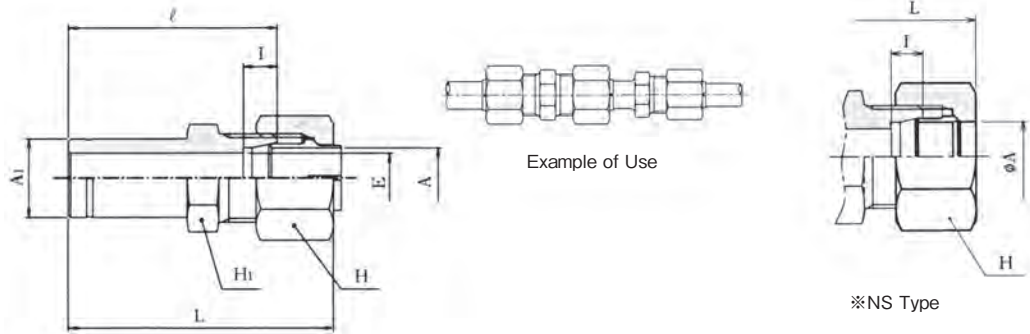


Unit: mm

Part No.	Out. Dia. of Applied Pipe	D ₁	D	ℓ	Weight (kg)
KBA06-000E	6	7.1	9.5	19	0.006
KBA08-000E	8	9.1	11.5	19	0.009
KBA10-000E	10	11.1	13.5	19	0.013
KBA12-000E	12	13.1	15.5	19	0.019
KBA15-000E	15	16.1	19	20	0.031
KBA16-0C0E	16	17.1	20	20	0.033
KBA18-000E	18	19.3	22.5	20	0.044
KBA20-000E	20	21.5	25	20	0.054
KBA22-000E	22	23.5	27	20	0.065
KBA25-000E	25	26.5	30	24	0.100
KBA28-000E	28	29.5	33	24	0.125
KBA30-000E	30	31.6	35.5	24	0.143
KBA35-000E	35	36.7	40.5	30	0.257

- Note.** 1. Assembly procedure: Tighten $\frac{1}{4}$ turn after fingertight position.
 When remake after second time, tighten nut $\frac{1}{8}$ ~ $\frac{1}{6}$ turn additionally.
2. Dimensions might be modified due to improvement of quality and performance.

REDUCER

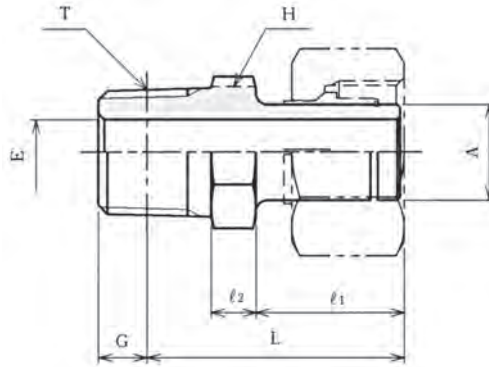


Unit: mm

Part No.	Tube Side Nominal Size	A 1	Out. Dia. of Applied Pipe A		E	Hex Width		I	ℓ	Fingertight Length (about) L	Weight (kg)
			Nominal sizes	Out. Dia.		H1	H				
KRE08-060E	8	8	6	6	4	14	14	7	39	49.5	0.032
KRE10-060E	10	10	6	6	4	14	14	7	40	50.5	0.033
KRE10-080E	10	10	8	8	6	17	17	7	40	50.5	0.046
KRE12-060E	12	12	6	6	4	14	14	7	41	51.5	0.036
KRE12-080E	12	12	8	8	6	17	17	7	41	51.5	0.048
KRE12-100E	12	12	10	10	8	17	19	7	41	52.5	0.054
KRE15-080E	15	15	8	8	6	17	17	7	43	53.5	0.055
KRE15-100E	15	15	10	10	8	17	19	7	43	54.5	0.061
KRE16-060E	16	16	6	6	4	17	14	7	43	53.5	0.049
KRE16-100E	16	16	10	10	8	17	19	7	43	54.5	0.071
KRE16-120E	16	16	12	12	10	19	22	7	43	54.5	0.076
KRE18-100E	18	18	10	10	8	19	19	7	44	55.5	0.087
KRE18-150E	18	18	15	15	12	24	27	7.5	45	57.5	0.123
KRE20-060E	20	20	6	6	4	22	14	7	45	55.5	0.072
KRE20-120E	20	20	12	12	10	22	22	7	45	56.5	0.092
KRE20-160E	20	20	16	16	13	27	30	7.5	47	59.5	0.159
KRE22-150E	22	22	15	15	12	24	27	7.5	48	60.5	0.145
KRE22-180E	22	22	18	18	14	27	32	8	48	60.5	0.175
KRE25-160E	25	25	16	16	13	27	30	7.5	50	62.5	0.177
KRE25-200E	25	25	20	20	17	30	36	8	52	64.5	0.231
KRE28-180E	28	28	18	18	14	30	32	8	52	64.5	0.210
KRE28-220E	28	28	22	22	18	32	36	9	52	64.5	0.244
KRE30-200E	30	30	20	20	17	32	36	8	53	65.5	0.291
KRE30-250E	30	30	25	25	20	36	41	10	54	67.5	0.322
KRE35-220E	35	35	22	22	18	36	36	9	58	70.5	0.383
KRE35-280E	35	35	28	28	22	36	46	10	60	74	0.464
KRE38-250E	38	38	25	25	20	41	41	10	61	74.5	0.424
KRE38-300E	38	38	30	30	25	41	46	10	63	77.5	0.475
※KRE13-110N	13 (1/4)	13.8	1/8	10.5	8	17	19	7	41	52.5	0.059
※KRE17-110N	17 (3/8)	17.3	1/8	10.5	8	19	19	7	44	55.5	0.070
※KRE17-130N	17 (3/8)	17.3	1/4	13.8	11	22	24	7.5	46	58	0.084
※KRE21-130N	21 (1/2)	21.7	1/4	13.8	11	24	24	7.5	48	60	0.123
※KRE21-170N	21 (1/2)	21.7	3/8	17.3	14	27	32	8	48	60.5	0.174
※KRE27-170N	27 (3/4)	27.2	3/8	17.3	14	30	32	8	52	64.5	0.221
※KRE27-210N	27 (3/4)	27.2	1/2	21.7	18	32	36	9	52	64.5	0.243
※KRE34-210N	34 (1)	34.0	1/2	21.7	18	36	36	9	58	70.5	0.317
※KRE34-270N	34 (1)	34.0	3/4	27.2	22	41	46	10	60	74	0.454

Note. Dimensions might be modified due to improvement of quality and performance.

ADAPTER

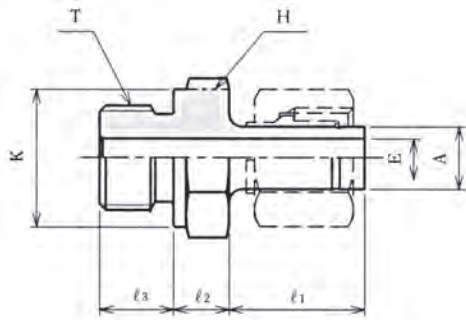


Unit: mm

Part No.	Out. Dia. of Applied Pipe A		(R) T	E	Engagement Fingertight G	Hex Width H	ℓ ₁	ℓ ₂	(about) L	Weight (kg)
	Nominal sizes	Out. Dia.								
KHA06-010E	6		1/8	3	3.97	12	21	5	32	0.013
KHA08-020E	8		1/4	5	6.01	14	21	6	35	0.024
KHA10-020E	10		1/4	6	6.01	14	22	6	36	0.026
KHA10-030E	10		3/8	6	6.35	19	22	6	36.5	0.044
KHA12-020E	12		1/4	7	6.01	14	22.5	6.5	37	0.029
KHA12-030E	12		3/8	8	6.35	19	22.5	6.5	37.5	0.042
KHA15-030E	15		3/8	8	6.35	19	24.5	7.5	40.5	0.058
KHA15-040E	15		1/2	10	8.16	22	24.5	7.5	43	0.075
KHA16-030E	16		3/8	9	6.35	19	24.5	7.5	40.5	0.051
KHA16-040E	16		1/2	11	8.16	22	24.5	7.5	43	0.073
KHA18-040E	18		1/2	12	8.16	22	24.5	7.5	43	0.076
KHA20-040E	20		1/2	12	8.16	24	26	7	44	0.083
KHA20-060E	20		3/4	14	9.53	27	26	9	46.5	0.128
KHA22-060E	22		3/4	14	9.53	27	27	9	47.5	0.142
KHA25-060E	25		3/4	16	9.53	27	29.5	8.5	49.5	0.133
KHA25-080E	25		1	17	10.39	36	29.5	9.5	52.5	0.246
KHA28-080E	28		1	18	10.39	36	29.5	9.5	52.5	0.260
KHA30-080E	30		1	20	10.39	36	30.5	9.5	53.5	0.253
KHA30-100E	30		1 1/4	20	12.70	46	30.5	10.5	55	0.442
KHA35-100E	35		1 1/4	24	12.70	46	34	11	59	0.362
KHA38-120N	38		1 1/2	26	12.70	50	36	14	64.5	0.600
KHA40-120N	40		1 1/2	28	12.70	50	36	14	64	0.583
KHA50-160N	50		2	34	15.88	65	37	20	72	1.168
KHA11-020N	1/8	10.5	1/4	6	6.01	14	21	7	36	0.027
KHA13-030N	1/4	13.8	3/8	9	6.35	19	22	8	38.5	0.046
KHA17-040N	3/8	17.3	1/2	11	8.16	22	24	8	43	0.080
KHA21-060N	1/2	21.7	3/4	14	9.53	27	26	10	47.5	0.140
KHA27-080N	3/4	27.2	1	18	10.39	36	28	11	52.5	0.252
KHA34-100N	1	34.0	1 1/4	23	12.70	46	33	12	59	0.449
KHA43-120N	1 1/4	42.7	1 1/2	29	12.70	50	36	17	67	0.641
KHA48-160N	1 1/2	48.6	2	33	15.88	65	37	20	72	1.173

Note. Dimensions might be modified due to improvement of quality and performance.

STRAIGHT THREAD ADAPTER

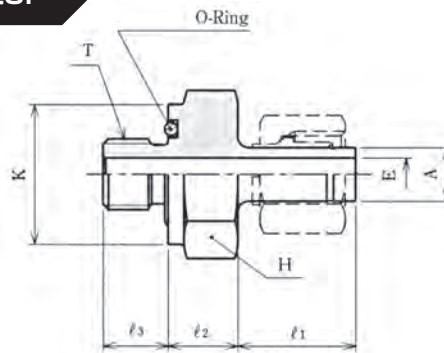


Unit: mm

Part No.	Out. Dia. of Applied Pipe A		(G) T	E	Hex Width H	K	l ₁	l ₂	l ₃	Weight (kg)
	Nominal sizes	Out. Dia.								
KHB06-010E	6		1/8	3	14	14	21	7	8	0.016
KHB08-020E	8		1/4	5	19	19	21	8	12	0.033
KHB10-020E	10		1/4	6	19	19	22	8	12	0.035
KHB10-030E	10		3/8	6	22	22	22	9	12	0.053
KHB12-020E	12		1/4	7	19	19	22.5	8.5	12	0.078
KHB12-030E	12		3/8	8	22	22	22.5	9.5	12	0.051
KHB15-030E	15		3/8	8	22	22	24.5	9.5	12	0.064
KHB15-040E	15		1/2	10	27	27	24.5	12.5	14	0.097
KHB16-030E	16		3/8	8	22	22	24.5	9.5	12	0.069
KHB16-040E	16		1/2	11	27	27	24.5	12.5	14	0.098
KHB18-040E	18		1/2	12	27	27	24.5	12.5	14	0.097
KHB20-040E	20		1/2	12	27	27	26	13	14	0.113
KHB20-060E	20		3/4	14	36	36	26	15	16	0.192
KHB22-060E	22		3/4	14	36	36	27	15	16	0.207
KHB25-060E	25		3/4	16	36	36	29.5	14.5	16	0.212
KHB25-080E	25		1	17	41	41	29.5	16.5	18	0.304
KHB28-080E	28		1	18	41	41	29.5	16.5	18	0.317
KHB30-080E	30		1	20	41	41	30.5	19.5	18	0.337
KHB30-100E	30		1 1/4	20	50	50	30.5	19.5	20	0.537
KHB35-100E	35		1 1/4	24	50	50	34	20	20	0.539
KHB38-120N	38		1 1/2	26	55	55	36	21	21	0.694
KHB40-120N	40		1 1/2	28	55	55	36	21	21	0.676
KHB50-160N	50		2	34	75	75	37	28	24	1.486
KHB11-020N	1/8	10.5	1/4	6	19	19	21	9	12	0.037
KHB13-030N	1/4	13.8	3/8	9	22	22	22	10	12	0.053
KHB17-040N	3/8	17.3	1/2	11	27	27	24	13	14	0.101
KHB21-060N	1/2	21.7	3/4	14	36	36	26	16	16	0.205
KHB27-080N	3/4	27.2	1	18	41	41	28	18	18	0.310
KHB34-100N	1	34.0	1 1/4	23	50	50	33	21	20	0.542
KHB43-120N	1 1/4	42.7	1 1/2	29	55	55	36	23	21	0.729
KHB48-160N	1 1/2	48.6	2	33	75	75	37	28	24	1.492

- Note.**
1. O-ring and bonded-seal can be used as corresponding gasket. (range of working temperature: -20°C~120°C)
 2. Shape and dimension of mating port is shown in page 60.
 3. Dimensions might be modified due to improvement of quality and performance.

O-Ring Seal Straight Thread Adapter

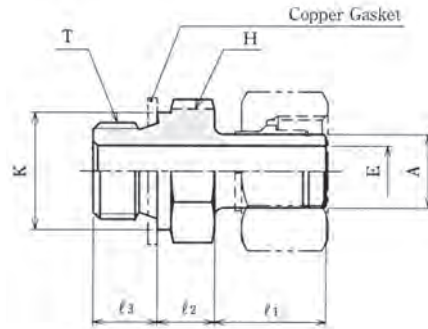


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	Hex Width H	K	ℓ ₁	ℓ ₂	ℓ ₃	O-ring JISB2401 -1B	Weight (kg)
KH006-010E	6	1/8	3	22	22	21	10	8	P12.5	0.038
KH006-020E	6	1/4	3	27	26	21	13	12	P16	0.075
KH008-010E	8	1/8	3	22	22	21	10	8	P12.5	0.042
KH008-020E	8	1/4	5	27	26	21	13	12	P16	0.074
KH010-020E	10	1/4	6	27	26	22	13	12	P16	0.076
KH010-030E	10	3/8	6	30	30	22	13	12	P20	0.099
KH012-020E	12	1/4	6	27	26	22.5	13	12	P16	0.078
KH012-030E	12	3/8	8	30	30	22.5	13	12	P20	0.097
KH015-030E	15	1/4	8	30	30	24.5	13	12	P20	0.111
KH015-040E	15	3/8	10	36	36	24.5	16	14	G25	0.172
KH016-030E	16	3/8	8	30	30	24.5	13	12	P20	0.137
KH016-040E	16	1/2	11	36	36	24.5	16	14	G25	0.171
KH018-040E	18	1/2	12	36	36	24.5	16	14	G25	0.172
KH020-040E	20	1/2	12	36	36	26	16	14	G25	0.186
KH020-060E	20	3/4	14	41	41	26	18	16	G30	0.256
KH022-040E	22	1/2	12	36	36	27	16	14	G25	0.122
KH022-060E	22	3/4	14	41	41	27	18	16	G30	0.270
KH025-060E	25	3/4	16	41	41	29.5	18	16	G30	0.278
KH025-080E	25	1	17	50	50	29.5	21	18	P38	0.455
KH028-080E	28	1	18	50	50	29.5	21	18	P38	0.465
KH030-080E	30	1	20	50	50	30.5	21	18	P38	0.461
KH030-100E	30	1-1/4	20	65	64	30.5	24	20	P48	0.875
KH035-100E	35	1-1/4	24	65	64	34	24	20	P48	0.814

Note. 1. O-ring of JIS B 2401 (NBR) is installed. (range of working temperature: -20°C~120°C)
 2. Dimensions might be modified due to improvement of quality and performance.

Straight Thread Adapter (For Copper Gasket)

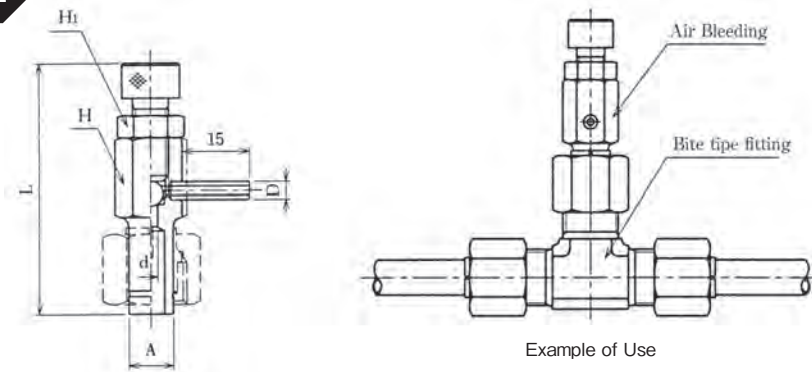


Unit: mm

Part No.	Out. Dia. of Applied Pipe A		(G) T	E	Hex Width H	K	l ₁	l ₂	l ₃	Weight (kg)
	Nominal sizes	Out. Dia.								
KHC06-010E	6		1/8	3	14	14	21	7	8	0.016
KHC08-020E	8		1/4	5	19	18	21	8	12	0.033
KHC10-020E	10		1/4	6	19	18	22	8	12	0.035
KHC10-030E	10		3/8	6	22	21.5	22	9	12	0.053
KHC12-020E	12		1/4	7	19	18	22.5	8.5	12	0.038
KHC12-030E	12		3/8	8	22	21.5	22.5	9.5	12	0.052
KHC15-030E	15		3/8	8	22	21.5	24.5	9.5	12	0.065
KHC15-040E	15		1/2	10	27	25.5	24.5	12.5	14	0.096
KHC16-040E	16		1/2	11	27	25.5	24.5	12.5	14	0.094
KHC18-040E	18		1/2	12	27	25.5	24.5	12.5	14	0.097
KHC20-060E	20		3/4	14	32	31.5	26	15	16	0.163
KHC22-060E	22		3/4	14	32	31.5	27	15	16	0.178
KHC25-060E	25		3/4	16	32	31.5	29.5	14.5	16	0.184
KHC25-080E	25		1	17	41	38	29.5	16.5	18	0.302
KHC28-080E	28		1	18	41	38	29.5	16.5	18	0.316
KHC30-080E	30		1	20	41	38	30.5	19.5	18	0.336
KHC30-100E	30		1 1/4	20	50	48.5	30.5	19.5	20	0.537
KHC35-100E	35		1 1/4	24	50	48.5	34	20	20	0.533
KHC38-120N	38		1 1/2	26	55	53.5	36	21	21	0.694
KHC40-120N	40		1 1/2	28	55	53.5	36	21	21	0.676
KHC50-160N	50		2	34	70	66	37	28	24	1.164
KHC11-020N	1/8	10.5	1/4	6	19	18	21	9	12	0.037
KHC13-030N	1/4	13.8	3/8	9	22	21.5	22	10	12	0.054
KHC17-040N	3/8	17.3	1/2	11	27	25.5	24	13	14	0.101
KHC21-060N	1/2	21.7	3/4	14	32	31.5	26	16	16	0.176
KHC27-080N	3/4	27.2	1	18	41	38	28	18	18	0.308
KHC34-100N	1	34.0	1 1/4	23	50	48.5	33	21	20	0.543
KHC43-120N	1 1/4	42.7	1 1/2	29	55	53.5	36	23	21	0.729
KHC48-160N	1 1/2	48.6	2	33	70	66	37	28	24	1.169

- Note.**
1. Shape and dimension of mating port is shown in page 60.
 2. The gasket is not included in standard.
 3. Dimensions might be modified due to improvement of quality and performance.

AIR-PURGE VALVE

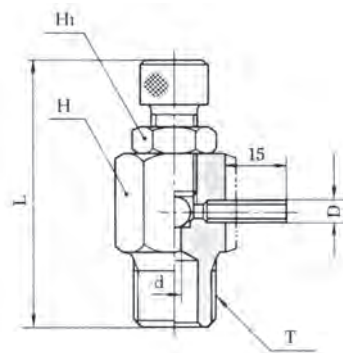


Unit: mm

Part No.	A	D	d	Hex Width		L	Steel Ball SUJ 2	Weight (kg)
				H ₁	H			
KAP06-000E	6	4	3	13	14	56	7/32	0.038
KAP08-000E	8	4	3	13	14	56	7/32	0.041
KAP10-000E	10	4	3	13	14	57	7/32	0.044
KAP12-000E	12	4	3	13	14	58	7/32	0.047
KAP15-000E	15	6	4	19	27	74	5/16	0.180
KAP16-000E	16	6	4	19	27	74	5/16	0.175
KAP18-000E	18	6	4	19	27	74	5/16	0.183
KAP20-000E	20	6	4	19	27	75	5/16	0.186
KAP22-000E	22	6	4	19	27	76	5/16	0.192
KAP25-000E	25	6	4	19	27	78	5/16	0.212
KAP28-000E	28	6	4	19	30	78	5/16	0.257
KAP11-000N	10.5	4	3	13	14	57	7/32	0.046
KAP13-000N	13.8	6	4	19	27	72	5/16	0.174
KAP17-000N	17.3	6	4	19	27	74	5/16	0.188
KAP21-000N	21.7	6	4	19	27	76	5/16	0.206
KAP27-000N	27.2	6	4	19	30	79	5/16	0.266

Note. Dimensions might be modified due to improvement of quality and performance.

AIR-PURGE VALVE

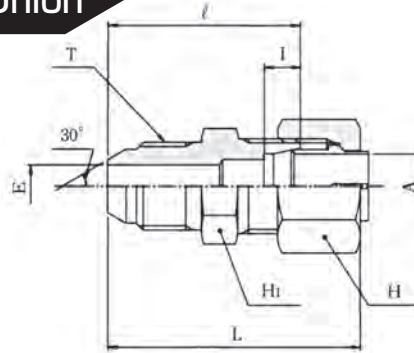


Unit: mm

Part No.	(R) T	D	d	Hex Width		L	Steel Ball SUJ 2	Weight (kg)
				H ₁	H			
SAP01-000J	1/8	4	3	13	14	51	7/32	0.056
SAP02-000J	1/4	4	3	13	14	53	7/32	0.056
SAP03-000J	3/8	6	4	19	27	66	5/16	0.200
SAP04-000J	1/2	6	4	19	27	69	5/16	0.220

⚠ CAUTION: Be careful not to direct blow-out hole of KAP and SAP against humans or fire.

Male Seat Hose Connection Union

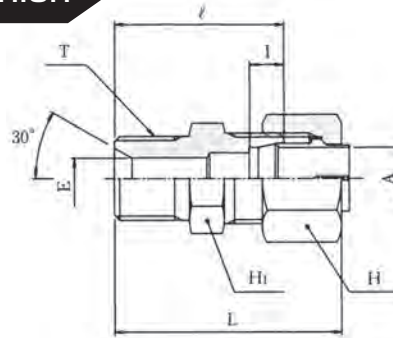


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	Hex Width		I	ℓ	Fingertight Length (about) L	Weight (kg)
				H ₁	H				
KUC08-020E	8	1/4	5.5	17	17	7	35	45.5	0.047
KUC08-030E	8	3/8	6	19	17	7	37	47.5	0.062
KUC10-020E	10	1/4	5.5	17	19	7	35	46.5	0.053
KUC10-030E	10	3/8	8	19	19	7	37	48.5	0.064
KUC10-040E	10	1/2	8	22	19	7	40	51.5	0.091
KUC12-020E	12	1/4	5.5	19	22	7	35	46.5	0.064
KUC12-030E	12	3/8	8	19	22	7	37	48.5	0.070
KUC12-040E	12	1/2	10	22	22	7	40	51.5	0.094
KUC15-030E	15	3/8	8	24	27	7.5	40	52.5	0.113
KUC15-040E	15	1/2	11	24	27	7.5	42	54.5	0.121
KUC16-030E	16	3/8	8	27	30	7.5	40	52.5	0.144
KUC16-040E	16	1/2	11	27	30	7.5	42	54.5	0.152
KUC18-040E	18	1/2	11	27	32	8	42	54.5	0.157
KUC20-060E	20	3/4	16	30	36	8	46	58.5	0.223
KUC22-040E	22	1/2	11	32	36	9	44	56.5	0.197
KUC22-060E	22	3/4	16	32	36	9	46	58.5	0.213
KUC25-060E	25	3/4	16	36	41	10	47	60.5	0.286
KUC25-080E	25	1	20	36	41	10	49	62.5	0.314
KUC28-060E	28	3/4	16	41	46	10	49	63	0.369
KUC28-080E	28	1	21.5	41	46	10	51	65	0.383
KUC30-060E	30	3/4	16	41	46	10	49	63.5	0.357
KUC30-080E	30	1	21.5	41	46	10	51	65.5	0.373
KUC35-100E	35	1 1/4	28	46	55	11	56	73.5	0.565

Note. Dimensions might be modified due to improvement of quality and performance.

Female Seat Hose Connection Union

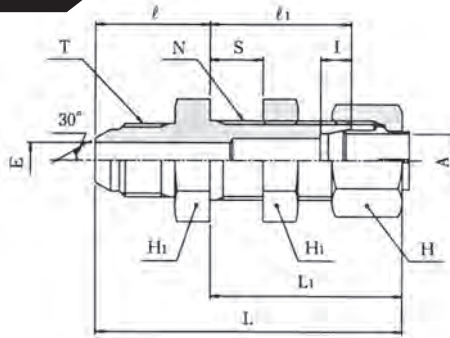


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	Hex Width		I	ℓ	Fingertight Length (about) L	Weight (kg)
				H ₁	H				
KUD08-020E	8	1/4	5.5	17	17	7	33	43.5	0.046
KUD08-030E	8	3/8	6	19	17	7	34	44.5	0.055
KUD10-020E	10	1/4	5.5	17	19	7	33	44.5	0.053
KUD10-030E	10	3/8	8	19	19	7	34	45.5	0.060
KUD10-040E	10	1/2	8	22	19	7	38	49.5	0.081
KUD12-020E	12	1/4	5.5	19	22	7	33	44.5	0.064
KUD12-030E	12	3/8	8	19	22	7	34	45.5	0.069
KUD12-040E	12	1/2	10	22	22	7	38	49.5	0.088
KUD15-030E	15	3/8	8	24	27	7.5	37	49.5	0.111
KUD15-040E	15	1/2	11	24	27	7.5	40	52.5	0.121
KUD16-030E	16	3/8	8	27	30	7.5	37	49.5	0.141
KUD16-040E	16	1/2	11	27	30	7.5	40	52.5	0.152
KUD18-040E	18	1/2	11	27	32	8	40	52.5	0.155
KUD20-060E	20	3/4	16	30	36	8	43	55.5	0.219
KUD22-040E	22	1/2	11	32	36	9	42	54.5	0.200
KUD22-060E	22	3/4	16	32	36	9	43	55.5	0.219
KUD25-060E	25	3/4	16	36	41	10	44	57.5	0.280
KUD25-080E	25	1	20	36	41	10	46	59.5	0.305
KUD28-060E	28	3/4	16	41	46	10	46	60	0.361
KUD28-080E	28	1	21.5	41	46	10	48	62	0.386
KUD30-060E	30	3/4	16	41	46	10	46	60.5	0.353
KUD30-080E	30	1	21.5	41	46	10	48	62.5	0.374
KUD35-100E	35	1 1/4	28	46	55	11	55	72.5	0.569

Note. Dimensions might be modified due to improvement of quality and performance.

Male Seat Hose Connection Bulkhead Union



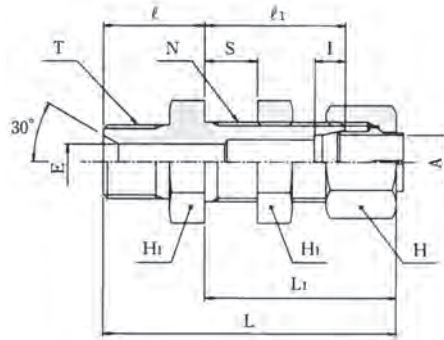
Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	Hex Width		I	ℓ ₁	ℓ	Fingertight Length (about)		N	Max S	Weight (kg)
				H ₁	H				L ₁	L			
KUE08-020E	8	1/4	5.5	19	17	7	32	23	42.5	65.5	M14×1.5	13	0.075
KUE08-030E	8	3/8	6	19	17	7	32	25	42.5	67.5	M14×1.5	13	0.086
KUE10-020E	10	1/4	5.5	22	19	7	32	24	43.5	67.5	M16×1.5	13	0.103
KUE10-030E	10	3/8	8	22	19	7	32	26	43.5	69.5	M16×1.5	13	0.108
KUE10-040E	10	1/2	8	22	19	7	32	28	43.5	71.5	M16×1.5	13	0.126
KUE12-020E	12	1/4	5.5	24	22	7	32	24	43.5	67.5	M18×1.5	13	0.122
KUE12-030E	12	3/8	8	24	22	7	32	26	43.5	69.5	M18×1.5	13	0.127
KUE12-040E	12	1/2	10	24	22	7	32	28	43.5	71.5	M18×1.5	13	0.139
KUE15-030E	15	3/8	8	27	27	7.5	37	26	49.5	75.5	M22×1.5	15	0.180
KUE15-040E	15	1/2	11	27	27	7.5	37	28	49.5	77.5	M22×1.5	15	0.188
KUE16-030E	16	3/8	8	30	30	7.5	37	28	49.5	77.5	M24×1.5	15	0.252
KUE16-040E	16	1/2	11	30	30	7.5	37	30	49.5	79.5	M24×1.5	15	0.254
KUE18-040E	18	1/2	11	32	32	8	39	30	51.5	81.5	M26×1.5	15	0.289
KUE20-060E	20	3/4	16	36	36	8	39	32	51.5	83.5	M28×1.5	15	0.329
KUE22-040E	22	1/2	11	36	36	9	39	31	51.5	82.5	M30×1.5	15	0.478
KUE22-060E	22	3/4	16	36	36	9	39	33	51.5	84.5	M30×1.5	15	0.368
KUE25-060E	25	3/4	16	41	41	10	39	33	52.5	87.5	M35×1.5	15	0.478
KUE25-080E	25	1	20	41	41	10	39	35	52.5	89.5	M35×1.5	15	0.507
KUE28-060E	28	3/4	16	46	46	10	41	34	55	89	M38×1.5	15	0.650
KUE28-080E	28	1	21.5	46	46	10	41	36	55	91	M38×1.5	15	0.635
KUE30-060E	30	3/4	16	46	46	10	41	34	55.5	89.5	M40×1.5	15	0.606
KUE30-080E	30	1	21.5	46	46	10	41	36	55.5	91.5	M40×1.5	15	0.627
KUE35-100E	35	1 1/4	28	50	55	11	43	42	60.5	102.5	M45×1.5	15	0.689

⚠ CAUTION: This type of fitting is designed to be used for wall penetration. When used in the place of strong vibration and / or pressure fluctuation, proper vibration measures such as fixing the piping by clamp are required.

Note. Dimensions might be modified due to improvement of quality and performance.

Female Seat Hose Connection Bulkhead Union



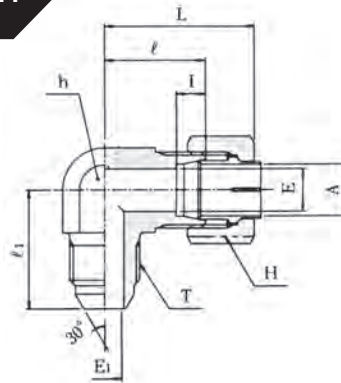
Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	Hex Width		I	ℓ_1	ℓ	Fingertight Length (about)		N	Max S	Weight (kg)
				H ₁	H				L ₁	L			
KUF08-020E	8	1/4	5.5	19	17	7	32	21	42.5	63.5	M14×1.5	13	0.074
KUF08-030E	8	3/8	6	19	17	7	32	22	42.5	64.5	M14×1.5	13	0.080
KUF10-020E	10	1/4	5.5	22	19	7	32	22	43.5	65.5	M16×1.5	13	0.101
KUF10-030E	10	3/8	8	22	19	7	32	23	43.5	66.5	M16×1.5	13	0.104
KUF10-040E	10	1/2	8	22	19	7	32	26	43.5	69.5	M16×1.5	13	0.116
KUF12-020E	12	1/4	5.5	24	22	7	32	22	43.5	65.5	M18×1.5	13	0.121
KUF12-030E	12	3/8	8	24	22	7	32	23	43.5	66.5	M18×1.5	13	0.125
KUF12-040E	12	1/2	10	24	22	7	32	26	43.5	69.5	M18×1.5	13	0.134
KUF15-030E	15	3/8	8	27	27	7.5	37	23	49.5	72.5	M22×1.5	15	0.181
KUF15-040E	15	1/2	11	27	27	7.5	37	26	49.5	75.5	M22×1.5	15	0.188
KUF16-030E	16	3/8	8	30	30	7.5	37	25	49.5	74.5	M24×1.5	15	0.250
KUF16-040E	16	1/2	11	30	30	7.5	37	28	49.5	77.5	M24×1.5	15	0.254
KUF18-040E	18	1/2	11	32	32	8	39	28	51.5	79.5	M26×1.5	15	0.289
KUF20-060E	20	3/4	16	36	36	8	39	29	51.5	80.5	M28×1.5	15	0.324
KUF22-040E	22	1/2	11	36	36	9	39	29	51.5	80.5	M30×1.5	15	0.346
KUF22-060E	22	3/4	16	36	36	9	39	30	51.5	81.5	M30×1.5	15	0.355
KUF25-060E	25	3/4	16	41	41	10	39	30	52.5	82.5	M35×1.5	15	0.489
KUF25-080E	25	1	20	41	41	10	39	32	52.5	84.5	M35×1.5	15	0.497
KUF28-060E	28	3/4	16	46	46	10	41	31	55	86	M38×1.5	15	0.624
KUF28-080E	28	1	21.5	46	46	10	41	33	55	88	M38×1.5	15	0.637
KUF30-060E	30	3/4	16	46	46	10	41	31	55.5	86.5	M40×1.5	15	0.629
KUF30-080E	30	1	21.5	46	46	10	41	33	55.5	88.5	M40×1.5	15	0.629
KUF35-100E	35	1 1/4	28	50	55	11	43	41	60.5	121.5	M45×1.5	15	0.693

⚠ CAUTION: This type of fitting is designed to be used for wall penetration. When used in the place of strong vibration and / or pressure fluctuation, proper vibration measures such as fixing the piping by clamp are required.

Note. Dimensions might be modified due to improvement of quality and performance.

Male Seat Hose Connection Union Elbow

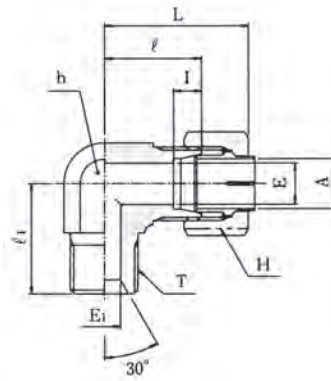


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	E ₁	Width across flats h	Hex Width H	I	l ₁	l	Fingertight Length (about) L	Weight (kg)
KLD08-020E	8	1/4	6	5.5	17	17	7	25	23	33.5	0.069
KLD08-030E	8	3/8	6	8	19	17	7	28	24	34.5	0.085
KLD10-020E	10	1/4	8	5.5	19	19	7	28	24	35.5	0.091
KLD10-030E	10	3/8	8	8	19	19	7	28	24	35.5	0.090
KLD10-040E	10	1/2	8	11	24	19	7	34	29	40.5	0.149
KLD12-020E	12	1/4	10	5.5	19	22	7	28	24	35.5	0.099
KLD12-030E	12	3/8	10	8	19	22	7	28	24	35.5	0.098
KLD12-040E	12	1/2	10	11	24	22	7	34	29	40.5	0.154
KLD15-030E	15	3/8	12	8	24	27	7.5	33	29	41.5	0.168
KLD15-040E	15	1/2	12	11	24	27	7.5	34	29	41.5	0.174
KLD16-030E	16	3/8	13	8	27	30	7.5	36	32	44.5	0.253
KLD16-040E	16	1/2	13	11	27	30	7.5	38	32	44.5	0.257
KLD18-040E	18	1/2	14	11	27	32	8	38	32	44.5	0.256
KLD20-060E	20	3/4	17	16	30	36	8	41	33	45.5	0.319
KLD22-040E	22	1/2	18	11	32	36	9	40	34	46.5	0.335
KLD22-060E	22	3/4	18	16	32	36	9	42	34	46.5	0.343
KLD25-060E	25	3/4	20	16	36	41	10	44	36	49.5	0.468
KLD25-080E	25	1	20	21.5	36	41	10	46	36	49.5	0.502
KLD28-060E	28	3/4	22	16	41	46	10	47	41	55	0.725
KLD28-080E	28	1	22	21.5	41	46	10	49	41	55	0.720
KLD30-060E	30	3/4	25	16	41	46	10	47	41	55.5	0.692
KLD30-080E	30	1	25	21.5	41	46	10	49	41	55.5	0.686
KLD35-100E	35	1 1/4	28	28	46	55	11	58	46	63.5	1.208

Note. Dimensions might be modified due to improvement of quality and performance.

Female Seat Hose Connection Union Elbow

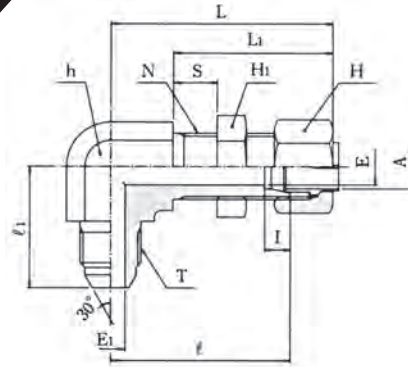


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	E ₁	Width across flats h	Hex Width H	I	l ₁	l	Fingertight Length (about) L	Weight (kg)
KLE08-020E	8	1/4	6	5.5	17	17	7	25	23	33.5	0.071
KLE08-030E	8	3/8	6	8	19	17	7	27	24	34.5	0.088
KLE10-020E	10	1/4	8	5.5	19	19	7	26	24	35.5	0.091
KLE10-030E	10	3/8	8	8	19	19	7	27	24	35.5	0.093
KLE10-040E	10	1/2	8	11	24	19	7	33	29	40.5	0.152
KLE12-020E	12	1/4	10	5.5	19	22	7	26	24	35.5	0.096
KLE12-030E	12	3/8	10	8	19	22	7	27	24	35.5	0.102
KLE12-040E	12	1/2	10	11	24	22	7	33	29	40.5	0.157
KLE15-030E	15	3/8	12	8	24	27	7.5	30	29	41.5	0.170
KLE15-040E	15	1/2	12	11	24	27	7.5	33	29	41.5	0.177
KLE16-030E	16	3/8	13	8	27	30	7.5	33	32	44.5	0.247
KLE16-040E	16	1/2	13	11	27	30	7.5	36	32	44.5	0.258
KLE18-040E	18	1/2	14	11	27	32	8	36	32	44.5	0.256
KLE20-060E	20	3/4	17	16	30	36	8	38	33	45.5	0.326
KLE22-040E	22	1/2	18	11	32	36	9	38	34	46.5	0.335
KLE22-060E	22	3/4	18	16	32	36	9	39	34	46.5	0.339
KLE25-060E	25	3/4	20	16	36	41	10	41	36	49.5	0.469
KLE25-080E	25	1	20	21.5	36	41	10	43	36	49.5	0.498
KLE28-060E	28	3/4	22	16	41	46	10	44	41	55	0.706
KLE28-080E	28	1	22	21.5	41	46	10	46	41	55	0.722
KLE30-060E	30	3/4	25	16	41	46	10	44	41	55.5	0.673
KLE30-080E	30	1	25	21.5	41	46	10	46	41	55.5	0.689
KLE35-100E	35	1 1/4	28	28	46	55	11	57	46	63.5	1.199

Note. Dimensions might be modified due to improvement of quality and performance.

Male Seat Hose Connection Bulkhead Elbow



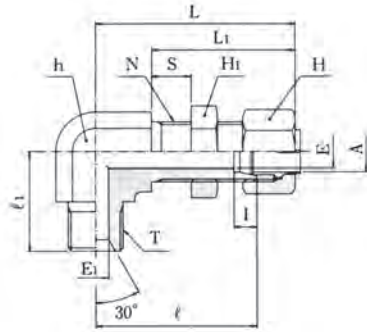
Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	E ₁	Width across flats h	Hex Width H		I	l ₁	l	Fingertight Length (about)		N	Max S	Weight (kg)
						H ₁	H				L ₁	L			
KLH08-020E	8	1/4	6	5.5	19	19	17	7	28	46	42.5	56.5	M14×1.5	13	0.113
KLH08-030E	8	3/8	6	8	19	19	17	7	30	46	42.5	56.5	M14×1.5	13	0.115
KLH10-020E	10	1/4	8	5.5	22	22	19	7	30	48	43.5	59.5	M16×1.5	13	0.134
KLH10-030E	10	3/8	8	8	22	22	19	7	32	48	43.5	59.5	M16×1.5	13	0.158
KLH10-040E	10	1/2	8	11	24	22	19	7	35	49	43.5	60.5	M16×1.5	13	0.187
KLH12-020E	12	1/4	10	5.5	24	24	22	7	31	49	43.5	60.5	M18×1.5	13	0.191
KLH12-030E	12	3/8	10	8	24	24	22	7	33	49	43.5	60.5	M18×1.5	13	0.193
KLH12-040E	12	1/2	10	11	24	24	22	7	35	49	43.5	60.5	M18×1.5	13	0.198
KLH15-030E	15	3/8	12	8	27	27	27	7.5	36	57	49.5	69.5	M22×1.5	15	0.290
KLH15-040E	15	1/2	12	11	27	27	27	7.5	37	57	49.5	69.5	M22×1.5	15	0.292
KLH16-030E	16	3/8	13	8	30	30	30	7.5	37	59	49.5	71.5	M24×1.5	15	0.382
KLH16-040E	16	1/2	13	11	30	30	30	7.5	38	59	49.5	71.5	M24×1.5	15	0.382
KLH18-040E	18	1/2	14	11	32	32	32	8	39	63	51.5	75.5	M26×1.5	15	0.450
KLH20-060E	20	3/4	16	16	36	36	36	8	40	65	51.5	77.5	M28×1.5	15	0.496
KLH22-040E	22	1/2	18	11	36	36	36	9	40	65	51.5	77.5	M30×1.5	15	0.571
KLH22-060E	22	3/4	18	16	36	36	36	9	40	65	51.5	77.5	M30×1.5	15	0.580
KLH25-060E	25	3/4	20	16	41	41	41	10	43	68	52.5	81.5	M35×1.5	15	0.844
KLH25-080E	25	1	20	21.5	46	41	41	10	48	68	52.5	81.5	M35×1.5	15	0.991
KLH28-060E	28	3/4	22	16	46	46	46	10	48	74	55	88	M38×1.5	15	1.121
KLH28-080E	28	1	22	21.5	46	46	46	10	48	74	55	88	M38×1.5	15	1.094
KLH30-060E	30	3/4	25	16	46	46	46	10	48	74	55.5	88.5	M40×1.5	15	1.071
KLH30-080E	30	1	25	21.5	46	46	46	10	51	74	55.5	88.5	M40×1.5	15	1.060

CAUTION: This type of fitting is designed to be used for wall penetration. When used in the place of strong vibration and / or pressure fluctuation, proper vibration measures such as fixing the piping by clamp are required.

Note. Dimensions might be modified due to improvement of quality and performance.

Female Seat Hose Connection Bulkhead Elbow



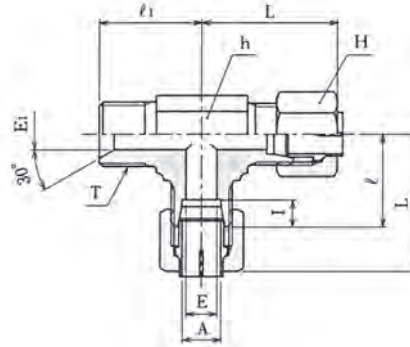
Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	E ₁	Width across flats h	Hex Width H		I	l ₁	l	Fingertight Length (about)		N	Max S	Weight (kg)
						H ₁	H				L ₁	L			
KLS08-020E	8	1/4	6	5.5	19	19	17	7	26	46	42.5	56.5	M14×1.5	13	0.115
KLS08-030E	8	3/8	6	8	19	19	17	7	27	46	42.5	56.5	M14×1.5	13	0.116
KLS10-020E	10	1/4	8	5.5	22	22	19	7	28	48	43.5	59.5	M16×1.5	13	0.155
KLS10-030E	10	3/8	8	8	22	22	19	7	29	48	43.5	59.5	M16×1.5	13	0.158
KLS10-040E	10	1/2	8	11	24	22	19	7	33	49	43.5	60.5	M16×1.5	13	0.187
KLS12-020E	12	1/4	10	5.5	24	24	22	7	30	49	43.5	60.5	M18×1.5	13	0.194
KLS12-030E	12	3/8	10	8	24	24	22	7	30	49	43.5	60.5	M18×1.5	13	0.190
KLS12-040E	12	1/2	10	11	24	24	22	7	33	49	43.5	60.5	M18×1.5	13	0.190
KLS15-030E	15	3/8	12	8	27	27	27	7.5	33	57	49.5	69.5	M22×1.5	15	0.288
KLS15-040E	15	1/2	12	11	27	27	27	7.5	36	57	49.5	69.5	M22×1.5	15	0.294
KLS16-030E	16	3/8	13	8	30	30	30	7.5	34	59	49.5	71.5	M24×1.5	15	0.352
KLS16-040E	16	1/2	13	11	30	30	30	7.5	37	59	49.5	71.5	M24×1.5	15	0.386
KLS18-040E	18	1/2	14	11	32	32	32	8	37	63	51.5	75.5	M26×1.5	15	0.452
KLS20-060E	20	3/4	16	16	36	36	36	8	40	65	51.5	77.5	M28×1.5	15	0.495
KLS22-040E	22	1/2	18	11	36	36	36	9	40	65	51.5	77.5	M30×1.5	15	0.603
KLS22-060E	22	3/4	18	16	36	36	36	9	40	65	51.5	77.5	M30×1.5	15	0.596
KLS25-060E	25	3/4	20	16	41	41	41	10	43	68	52.5	81.5	M35×1.5	15	0.869
KLS25-080E	25	1	20	21.5	41	41	41	10	43	68	52.5	81.5	M35×1.5	15	0.864
KLS28-060E	28	3/4	22	16	46	46	46	10	48	74	55	88	M38×1.5	15	1.133
KLS28-080E	28	1	22	21.5	46	46	46	10	48	74	55	88	M38×1.5	15	1.127
KLS30-060E	30	3/4	25	16	46	46	46	10	48	74	55.5	88.5	M40×1.5	15	1.083
KLS30-080E	30	1	25	21.5	46	46	46	10	48	74	55.5	88.5	M40×1.5	15	1.058

CAUTION: This type of fitting is designed to be used for wall penetration. When used in the place of strong vibration and / or pressure fluctuation, proper vibration measures such as fixing the piping by clamp are required.

Note. Dimensions might be modified due to improvement of quality and performance.

Female Seat Hose Connection Run Tee

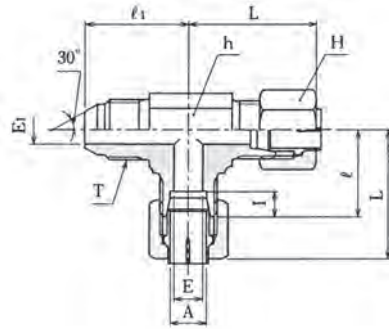


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	E 1	Width across flats h	Hex Width H	I	l 1	l	Fingertight Length (about) L	Weight (kg)
KTG08-020E	8	1/4	6	5.5	17	17	7	25	23	33.5	0.109
KTG10-020E	10	1/4	8	5.5	19	19	7	26	24	35.5	0.138
KTG10-030E	10	3/8	8	8	19	19	7	27	24	35.5	0.142
KTG12-020E	12	1/4	10	5.5	19	22	7	26	24	35.5	0.147
KTG12-030E	12	3/8	10	8	19	22	7	27	24	35.5	0.152
KTG15-030E	15	3/8	12	8	24	27	7.5	30	29	41.5	0.259
KTG15-040E	15	1/2	12	11	24	27	7.5	33	29	41.5	0.270
KTG16-030E	16	3/8	13	8	27	30	7.5	33	32	44.5	0.360
KTG16-040E	16	1/2	13	11	27	30	7.5	36	32	44.5	0.361
KTG18-040E	18	1/2	14	11	27	32	8	36	32	44.5	0.354
KTG20-040E	20	1/2	17	11	30	36	8	38	33	45.5	0.480
KTG20-060E	20	3/4	17	16	30	36	8	38	33	45.5	0.440
KTG22-040E	22	1/2	18	11	32	36	9	38	34	46.5	0.430
KTG22-060E	22	3/4	18	16	32	36	9	39	34	46.5	0.434
KTG25-080E	25	1	20	21.5	36	41	10	43	36	49.5	0.760

Note. Dimensions might be modified due to improvement of quality and performance.

Male Seat Hose Connection Run Tee

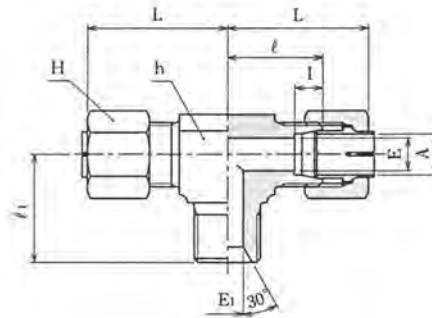


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	E 1	Width across flats h	Hex Width H	I	l 1	l	Fingertight Length (about) L	Weight (kg)
KTJ08-020E	8	1/4	5	5.5	17	17	7	26	23	33.5	0.109
KTJ10-020E	10	1/4	8	5.5	19	19	7	27	24	35.5	0.138
KTJ10-030E	10	3/8	8	8	19	19	7	29	24	35.5	0.146
KTJ12-020E	12	1/4	10	5.5	19	22	7	27	24	35.5	0.147
KTJ12-030E	12	3/8	10	8	19	22	7	29	24	35.5	0.156
KTJ15-030E	15	3/8	12	8	24	27	7.5	33	29	41.5	0.263
KTJ15-040E	15	1/2	12	11	24	27	7.5	34	29	41.5	0.276
KTJ16-030E	16	3/8	13	8	27	30	7.5	36	32	44.5	0.364
KTJ16-040E	16	1/2	13	11	27	30	7.5	38	32	44.5	0.367
KTJ18-040E	18	1/2	14	11	27	32	8	38	32	44.5	0.360
KTJ20-040E	20	1/2	17	11	30	36	8	40	33	45.5	0.484
KTJ20-060E	20	3/4	17	16	30	36	8	41	33	45.5	0.444
KTJ22-040E	22	1/2	18	11	32	36	9	40	34	46.5	0.436
KTJ22-060E	22	3/4	18	16	32	36	9	42	34	46.5	0.438
KTJ25-080E	25	1	20	21.5	36	41	10	46	36	49.5	0.769

Note. Dimensions might be modified due to improvement of quality and performance.

Female Seat Hose Connection Branch Tee

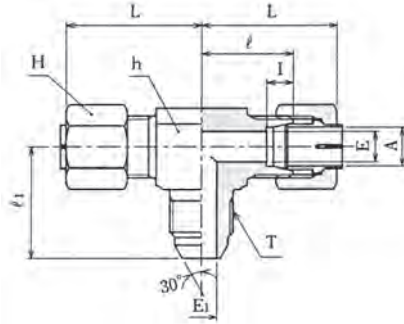


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	E ₁	Width across flats h	Hex Width H	I	l ₁	l	Fingertight Length (about) L	Weight (kg)
KTE08-020E	8	1/4	6	5.5	17	17	7	26	23	33.5	0.110
KTE10-020E	10	1/4	8	5.5	19	19	7	26	24	35.5	0.141
KTE10-030E	10	3/8	8	8	19	19	7	27	24	35.5	0.145
KTE12-020E	12	1/4	10	5.5	19	22	7	26	24	35.5	0.154
KTE12-030E	12	3/8	10	8	19	22	7	27	24	35.5	0.157
KTE15-030E	15	3/8	12	8	24	27	7.5	30	29	41.5	0.265
KTE15-040E	15	1/2	12	11	24	27	7.5	33	29	41.5	0.276
KTE16-030E	16	3/8	13	8	27	30	7.5	33	32	44.5	0.363
KTE16-040E	16	1/2	13	11	27	30	7.5	36	32	44.5	0.370
KTE18-040E	18	1/2	14	11	27	32	8	36	32	44.5	0.378
KTE20-040E	20	1/2	17	11	30	36	8	38	33	45.5	0.484
KTE20-060E	20	3/4	17	16	30	36	8	38	33	45.5	0.454
KTE22-040E	22	1/2	18	11	32	36	9	38	34	46.5	0.457
KTE22-060E	22	3/4	18	16	32	36	9	39	34	46.5	0.455
KTE25-080E	25	1	20	21.5	36	41	10	43	36	49.5	0.782

Note. Dimensions might be modified due to improvement of quality and performance.

Male Seat Hose Connection Branch Tee

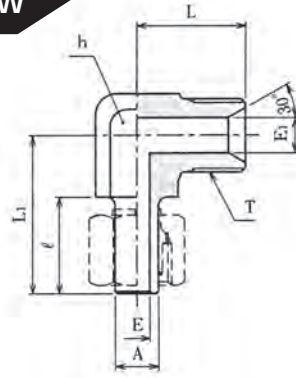


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	E ₁	Width across flats h	Hex Width H	I	l ₁	l	Fingertight Length (about) L	Weight (kg)
KTD08-020E	8	1/4	6	5.5	17	17	7	25	23	33.5	0.110
KTD10-020E	10	1/4	8	5.5	19	19	7	27	24	35.5	0.141
KTD10-030E	10	3/8	8	8	19	19	7	29	24	35.5	0.149
KTD12-020E	12	1/4	10	5.5	19	22	7	27	24	35.5	0.154
KTD12-030E	12	3/8	10	8	19	22	7	29	24	35.5	0.161
KTD15-030E	15	3/8	12	8	24	27	7.5	33	29	41.5	0.269
KTD15-040E	15	1/2	12	11	24	27	7.5	34	29	41.5	0.282
KTD16-030E	16	3/8	13	8	27	30	7.5	36	32	44.5	0.367
KTD16-040E	16	1/2	13	11	27	30	7.5	38	32	44.5	0.376
KTD18-040E	18	1/2	14	11	27	32	8	38	32	44.5	0.384
KTD20-040E	20	1/2	17	11	30	36	8	40	33	45.5	0.488
KTD20-060E	20	3/4	17	16	30	36	8	41	33	45.5	0.458
KTD22-040E	22	1/2	18	11	32	36	9	40	34	46.5	0.463
KTD22-060E	22	3/4	18	16	32	36	9	42	34	46.5	0.459
KTD25-080E	25	1	20	21.5	36	41	10	46	36	49.5	0.791

Note. Dimensions might be modified due to improvement of quality and performance.

Female Seat Hose Connection Elbow

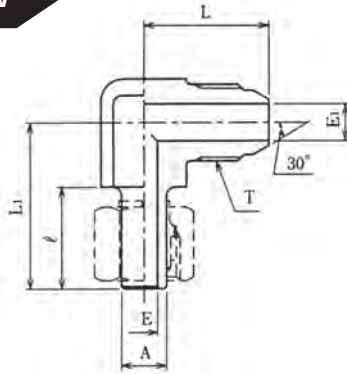


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	E ₁	Width across flats h	ℓ	L	L ₁	Weight (kg)
HLE08-020E	8	1/4	5	5.5	17	21	22	33	0.059
HLE10-020E	10	1/4	6	5.5	17	22	22	35	0.067
HLE10-030E	10	3/8	6	8	19	22	25	36	0.075
HLE10-040E	10	1/2	6	11	24	22	30	39	0.154
HLE12-020E	12	1/4	8	5.5	17	22.5	22	35	0.062
HLE12-030E	12	3/8	8	8	19	22.5	25	36	0.074
HLE12-040E	12	1/2	8	11	24	22.5	30	39	0.152
HLE16-030E	16	3/8	11	8	19	24.5	25	36	0.075
HLE16-040E	16	1/2	11	11	24	24.5	30	43	0.150
HLE20-040E	20	1/2	14	11	24	26	30	45	0.141
HLE20-060E	20	3/4	14	16	30	26	35	45	0.254
HLE25-060E	25	3/4	17	16	30	29.5	35	49	0.266
HLE25-080E	25	1	17	21.5	36	29.5	40	49	0.379
HLE30-080E	30	1	20	21.5	36	30.5	40	54	0.421
HLE30-100E	30	1 1/4	20	28	46	30.5	49	58	0.660

Note. Dimensions might be modified due to improvement of quality and performance.

Male Seat Hose Connection Elbow

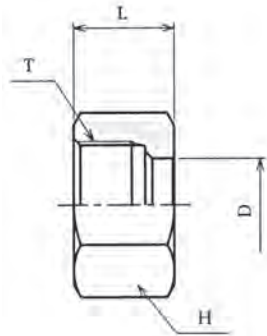


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	(G) T	E	E 1	Width across flats h	l	L	L 1	Weight (kg)
HLD08-020E	8	1/4	5	5.5	17	21	24	33	0.059
HLD10-020E	10	1/4	6	5.5	17	22	24	35	0.067
HLD10-030E	10	3/8	6	8	19	22	27.5	36	0.079
HLD10-040E	10	1/2	6	11	24	22	32	39	0.160
HLD12-020E	12	1/4	8	5.5	17	22.5	24	35	0.062
HLD12-030E	12	3/8	8	8	19	22.5	27.5	36	0.078
HLD12-040E	12	1/2	8	11	24	22.5	32	39	0.158
HLD16-030E	16	3/8	11	8	19	24.5	28	43	0.079
HLD16-040E	16	1/2	11	11	24	24.5	32	43	0.156
HLD20-040E	20	1/2	14	11	24	26	32	45	0.147
HLD20-060E	20	3/4	14	16	30	26	36.5	45	0.258
HLD25-060E	25	3/4	17	16	30	29.5	36.5	49	0.270
HLD25-080E	25	1	17	21.5	36	29.5	40.5	49	0.388
HLD30-080E	30	1	20	21.5	36	30.5	40.4	54	0.430
HLD30-100E	30	1 1/4	20	28	46	30.5	50	58	0.670

Note. Dimensions might be modified due to improvement of quality and performance.

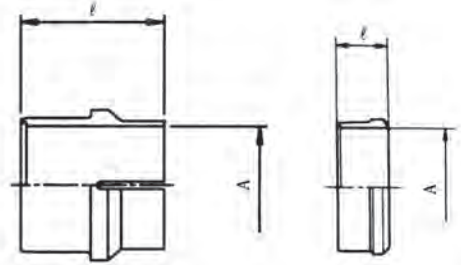
NUT



Unit: mm

Part No.	Out. Dia. of Applied Pipe		D	T	Hex Width H	L	Weight (kg)
	Nominal sizes	Out. Dia.					
※KKN04-000N	4	4	M10×1.25	12	10.5	0.006	
KKN06-000E	6	7.3	M12×1.5	14	15	0.010	
KKN08-000E	8	9.3	M14×1.5	17	15	0.015	
KKN10-000E	10	11.3	M16×1.5	19	16	0.019	
KKN12-000E	12	13.3	M18×1.5	22	16	0.026	
KKN15-000E	15	16.3	M22×1.5	27	19	0.045	
KKN16-000E	16	17.3	M24×1.5	30	19	0.061	
KKN18-000E	18	19.5	M26×1.5	32	19	0.063	
KKN20-000E	20	21.7	M28×1.5	36	19	0.071	
KKN22-000E	22	23.7	M30×1.5	36	19	0.072	
KKN25-000E	25	26.7	M35×1.5	41	20	0.102	
KKN28-000E	28	29.8	M38×1.5	46	21	0.142	
KKN30-000E	30	31.8	M40×1.5	46	22	0.130	
KKN35-000E	35	37	M45×1.5	55	25	0.223	
※KKN38-000N	38	38	M48×1.5	60	27	0.330	
※KKN40-000N	40	40	M52×2	60	29.5	0.303	
※KKN42-000N	42	42	M52×2	60	29.5	0.294	
※KKN50-000N	50	50	M64×2	75	31.5	0.532	
※KKN11-000N	1/8	10.5	M16×1.5	19	16	0.019	
※KKN13-000N	1/4	13.8	M20×1.5	24	18	0.035	
※KKN17-000N	3/8	17.3	M26×1.5	32	19	0.065	
※KKN22-000N	1/2	21.7	M30×1.5	36	19	0.080	
※KKN27-000N	3/4	27.2	M38×1.5	46	21	0.147	
※KKN34-000N	1	34.0	M45×1.5	55	25	0.245	
※KKN43-000N	1 1/4	42.7	M56×2	65	30.5	0.379	
※KKN48-000N	1 1/2	48.6	M64×2	75	31.5	0.539	

SLEEVE



※Shape of ※marked

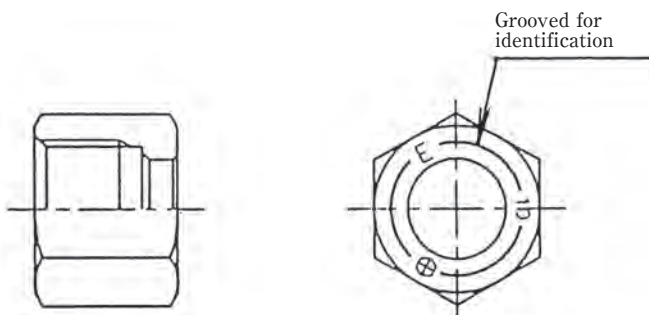
Unit: mm

Part No.	Out. Dia. of Applied Pipe		ℓ	Weight (kg)
	Nominal sizes	Out. Dia.		
※KK004-000N	4	4	7	0.001
KK006-000E	6	6	14	0.002
KK008-000E	8	8	14	0.003
KK010-000E	10	10	15	0.004
KK012-000E	12	12	15	0.004
KK015-000E	15	15	16	0.005
KK016-000E	16	16	16	0.006
KK018-000E	18	18	16.5	0.007
KK020-000E	20	20	16.5	0.009
KK022-000E	22	22	16.5	0.010
KK025-000E	25	25	18.3	0.013
KK028-000E	28	28	18.3	0.014
KK030-000E	30	30	19	0.017
KK035-000E	35	35	22	0.021
※KK038-000N	38	38	14	0.018
※KK040-000N	40	40	14	0.017
※KK042-000N	42	42	14	0.018
※KK050-000N	50	50	14	0.022
※KK011-000N	1/8	10.5	10	0.003
※KK013-000N	1/4	13.8	10	0.004
※KK017-000N	3/8	17.3	10	0.005
※KK021-000N	1/2	21.7	10	0.006
※KK027-000N	3/4	27.2	11	0.010
※KK034-000N	1	34.0	14	0.015
※KK043-000N	1 1/4	42.7	14	0.021
※KK048-000N	1 1/2	48.6	14	0.025

Note. 1. The nut for enveloped sleeve is marked as below.

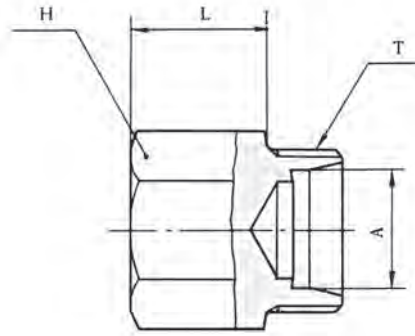
2. Dimensions might be modified due to improvement of quality and performance.

⚠ CAUTION: Do not mix enveloped sleeve (without ※mark) and nut for enveloped sleeve with the sleeve and nut of conventional NS Type.



Marking of the nut for enveloped sleeve

HAND PRESETTING TOOL

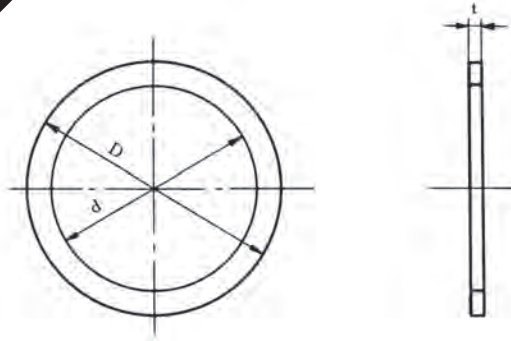


Unit: mm

Part No.	Out. Dia. of Applied Pipe A		L	H	T	Weight (kg)
	Nominal sizes	Out. Dia.				
PJA06-000E		6	40	17	M12×1.5	0.087
PJA08-000E		8	40	17	M14×1.5	0.090
PJA10-000E		10	40	17	M16×1.5	0.092
PJA12-000E		12	40	27	M18×1.5	0.230
PJA15-000E		15	40	27	M22×1.5	0.228
PJA16-000E		16	40	27	M24×1.5	0.240
PJA18-000E		18	40	27	M26×1.5	0.250
PJA20-000E		20	40	41	M28×1.5	0.490
PJA22-000E		22	40	41	M30×1.5	0.515
PJA25-000E		25	40	41	M35×1.5	0.524
PJA28-000E		28	40	41	M38×1.5	0.545
PJA30-000E		30	40	41	M40×1.5	0.554
PJA35-000E		35	40	55	M45×1.5	0.890
PJA38-000N		38	50	55	M48×1.5	1.080
PJA40-000N		40	50	55	M52×2	1.180
PJA42-000N		42	50	55	M52×2	1.120
PJA50-000N		50	50	65	M64×2	1.640
PJA11-000N	1/8	10.5	40	17	M16×1.5	0.089
PJA13-000N	1/4	13.8	40	27	M20×1.5	0.224
PJA17-000N	3/8	17.3	40	27	M26×1.5	0.241
PJA21-000N	1/2	21.7	40	41	M30×1.5	0.508
PJA27-000N	3/4	27.2	40	41	M38×1.5	0.540
PJA34-000N	1	34.0	40	55	M45×1.5	0.900
PJA43-000N	1 1/4	42.7	50	65	M56×2	1.610
PJA48-000N	1 1/2	48.6	50	65	M64×2	1.650

Note. Dimensions might be modified due to improvement of quality and performance.

Copper Gasket

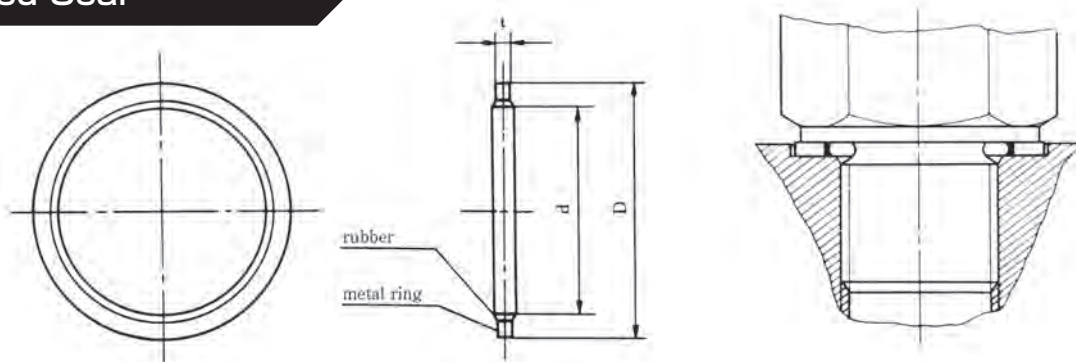


Unit: mm

Part No.	Corresponding thread	d	D	t
KP-A-01	G 1/8	10	18	2
KP-A-03	G 1/4	14	22	2
KP-A-05	G 3/8	17	26	2
KP-A-07	G 1/2	21.5	32	2
KP-A-11	G 3/4	27	38	2
KP-A-16	G 1	34	42	2
KP-A-20	G 1 1/4	43	53	2
KP-A-23	G 1 1/2	49	60	2
KP-A-28	G 2	61	72	2

Note. Material: Copper phosphate

Bonded Seal

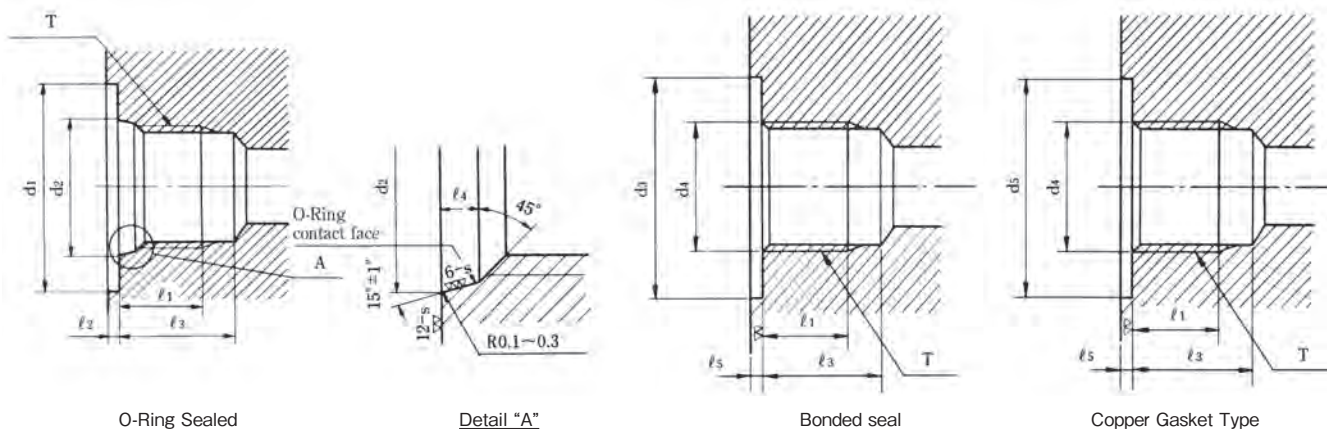


Unit: mm

Part No.	Corresponding thread	d	D	t
KP-C-01	G 1/8	9.9	17	2
KP-C-02	G 1/4	13.3	20.5	2
KP-C-03	G 3/8	16.8	24	2
KP-C-04	G 1/2	21.1	29	2
KP-C-05	G 3/4	26.6	34.5	2
KP-C-06	G 1	33.4	41.5	2.3
KP-C-07	G 1 1/4	42.1	50.5	2.3
KP-C-08	G 1 1/2	48.0	57	2.3
KP-C-09	G 2	59.8	69	2.3

Note. 1. Material of rubber is NBR and metal ring is JWG3141 (cold rolled plate) as standard.
(range of working temperature: -20°C~120°C)
2. Dimensions might be modified due to improvement of quality and performance.

Shape, dimension and applicable gasket for the mating port of straight thread type



Unit: mm

T	d ₁	d ₂ ^{+0.1} / ₀	d ₃ ^{+0.3} / ₀	(Max) d ₄	d ₅ ^{+0.3} / ₀	(Max) l ₁	(Max) l ₂	(Max) l ₃	l ₄ ^{+0.4} / ₀	l ₅	Remarks
G 1/8	18	11.6	17.4	9.7	18.2	10	1	15	2	1	
G 1/4	24	15.6	20.9	13.1	22.2	14	1.5	20	2.5	1	
G 3/8	28	18.6	24.4	16.6	26.2	14	2	20	2.5	1	
G 1/2	34	22.6	29.4	20.9	32.2	17	2.5	25	2.5	1	
※ G 3/4	45	30.5	34.9	26.4	38.2	19	2.5	27	3.5	1	
G 1	51	35.8	41.9	33.2	42.3	22	2.5	31	3.5	1	
G 1 1/4	62	44.8	50.9	41.9	53.3	24	2.5	33	3.5	1	
G 1 1/2	68	50.8	57.4	47.8	60.3	25	2.5	34	3.5	1	
G 2	76	67.2	69.4	59.6	72.3	29	2.5	38	5.5	1	

Note. Pay attention to the following points when machining connection port.

1. Thread G shall be JIS B0202 (PT thread).
2. The face contacting an O-ring must have no flaws in the axial direction nor tool marks in spiral pattern.
3. Spot facing surface d₁ must be flat and right angle to the axial line of the thread.
4. Depth l₂ of spot facing may be zero if the Note 2 and 3 are met.

T	O-Ring JIS B 2401	Bonded Seal	Copper Gasket	Remarks
G 1/8	P 8	KP-C-01	KP-A-01	
G 1/4	P11	KP-C-02	KP-A-03	
G 3/8	P14	KP-C-03	KP-A-05	
G 1/2	P18	KP-C-04	KP-A-07	
※ G 3/4	P24	KP-C-05	KP-A-11	
G 1	P29	KP-C-06	KP-A-16	
G 1 1/4	P38	KP-C-07	KP-A-20	
G 1 1/2	P44	KP-C-08	KP-A-23	
G 2	P56	KP-C-09	KP-A-28	

5. Material of O-ring must be selected according to the type fluid used.
6. The dimension of O-ring for G 3/4 PT in this catalogue (symbol of fitting: KCO, KCG, KLO, KLG, KTO, KGHB) is according to JIS B2351 before improved in a 1990.
Port inlet diameter (d₂) of G 3/4 (indicted with ※mark) is our recommended φ30.5 and size of O-ring is P-24. In case of using the fitting designed by new JIS, the dimensions of O-ring and port inlet must be carefully selected.
7. Dimensions might be modified due to improvement of quality and performance.

1 Features of Bite Type Check Fitting

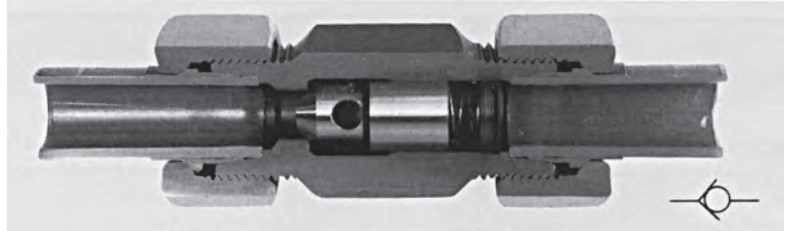
Bite type check fitting is built in a non-return mechanism and its features are as below.

(1) One complete and compact structure

As shown in above photo, one complete light and compact structure without threaded connection and sealing port.

(2) Less man-power and cost of piping work

Connection of fitting with pipes is bite type. Accordingly threading, welding, flaring, etc. are not required.



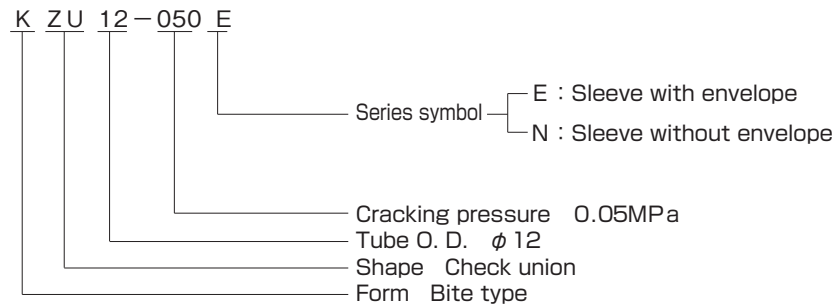
2 Cautions on Connections

When connecting those check fittings to tube, follow the setting procedures of bite type tube fittings. In presetting the sleeve, be sure to use a hand presetting tool (PJA) or pre-setting device (PSD).

3 When ordering

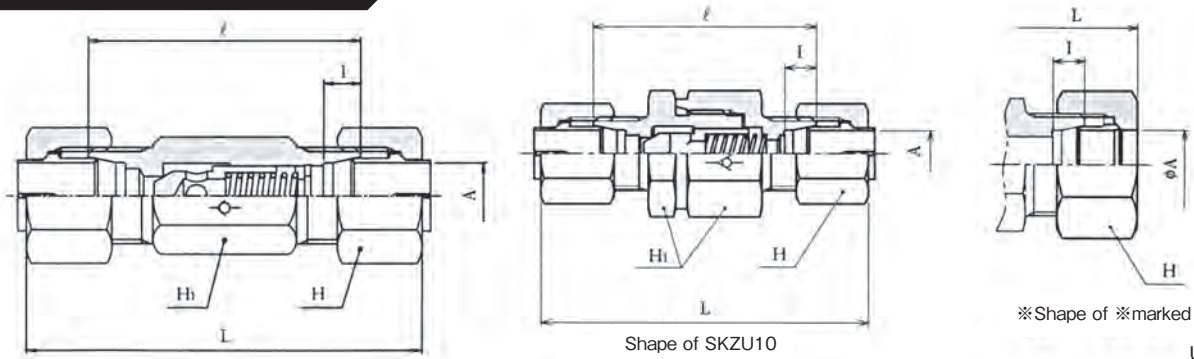
When ordering, specify the part number code as below.

For example,



Furthermore, please inquire us if any other conditions (slow return, cracking pressure, connection threads, etc.) out of this catalogue will be necessary.

Check Union



Unit: mm

Part No.	Out. Dia. of Applied Pipe A		Flow Rate ℓ /min	Cracking Pressure MPa	Hex Width		I	ℓ	Fingertight Length (about) L	Weight (kg)
	Nominal sizes	Out. Dia.			H ₁	H				
SKZU10-050E SKZU10-450E	10		18	0.05 0.45	24	19	7	49	72	0.140
KZU12-050E KZU12-450E	12		18	0.05 0.45	19	22	7	51	74	0.128
KZU15-050E KZU15-450E	15		30	0.05 0.45	24	27	7.5	58	83	0.222
KZU16-050E KZU16-450E	16		35	0.05 0.45	27	30	7.5	58	83	0.300
KZU18-050E KZU18-450E	18		45	0.05 0.45	27	32	8	63	88	0.312
KZU20-050E KZU20-450E	20		60	0.05 0.45	30	36	8	66	91	0.424
KZU22-050E KZU22-450E	22		70	0.05 0.45	32	36	9	72	97	0.440
KZU25-050E KZU25-450E	25		95	0.05 0.45	36	41	10	78	105	0.616
KZU28-050E KZU28-450E	28		120	0.05 0.45	41	46	10	83	111	0.832
KZU30-050E KZU30-450E	30		140	0.05 0.45	46	46	10	89	118	1.008
※KZU13-050N ※KZU13-450N	1/4	13.8	20	0.05 0.45	22	24	7.5	53	77	0.170
※KZU17-050N ※KZU17-450N	3/8	17.3	35	0.05 0.45	27	32	8	58	83	0.300
※KZU21-050N ※KZU21-450N	1/2	21.7	70	0.05 0.45	32	36	9	72	97	0.450
※KZU27-050N ※KZU27-450N	3/4	27.2	100	0.05 0.45	41	46	10	78	106	0.850

Main Specification

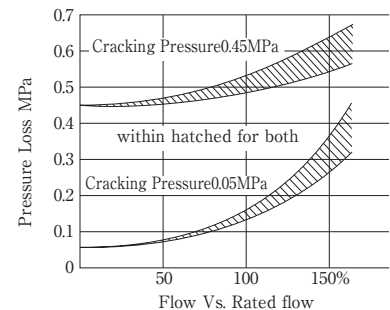
Rated Pressure
 ϕ 10~25 :31MPa
 ϕ 30 :28MPa
 $\frac{1}{8}B \sim \frac{3}{4}B$:31MPa
 Service Fluid
 Hydraulic Oil
 Service Temperature
 $-20^{\circ}C \sim 120^{\circ}C$
 Flow Rate
 Refer to table above

Pressure Loss

Pressure loss Vs. flow rate under oil viscosity of 125 SSU (26cSt) is shown in right figure.

Cracking Pressure

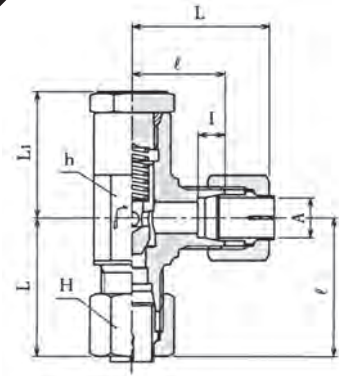
The cracking pressure of 0.05MPa (0.5kgf/cm²) and 0.45MPa (4.5kgf/cm²) are available.



Note. Dimensions might be modified due to improvement of quality and performance.

⚠ CAUTION: Please inquire us when the fitting will be used excepting hydraulic oil.

Check Elbow

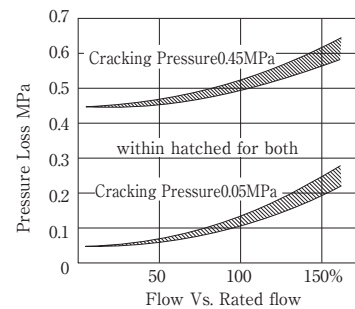


Unit: mm

Part No.	Out. Dia. of Applied Pipe A	Flow Rate ℓ /min	Cracking Pressure MPa	Width across flats h	Hex Width H	I	ℓ	L ₁	Fingertight Length (about) L	Weight (kg)
KZL10-050E KZL10-450E	10	15	0.05 0.45	19	19	7	24	32	35.5	0.168
KZL12-050E KZL12-450E	12	18	0.05 0.45	19	22	7	24	32	35.5	0.178
KZL15-050E KZL15-450E	15	30	0.05 0.45	24	27	7.5	29	40	41.5	0.372
KZL16-050E KZL16-450E	16	35	0.05 0.45	27	30	7.5	32	40	44.5	0.430
KZL18-050E KZL18-450E	18	45	0.05 0.45	27	32	8	32	42	44.5	0.432
KZL20-050E KZL20-450E	20	60	0.05 0.45	30	36	8	33	45	45.5	0.574
KZL22-050E KZL22-450E	22	70	0.05 0.45	32	36	9	34	48	46.5	0.640
KZL25-050E KZL25-450E	25	95	0.05 0.45	36	41	10	36	52	49.5	0.696
KZL28-050E KZL28-450E	28	120	0.05 0.45	41	46	10	41	57	55	1.242
KZL30-050E KZL30-450E	30	140	0.05 0.45	46	46	10	46	65	60.5	1.518

Main Specification

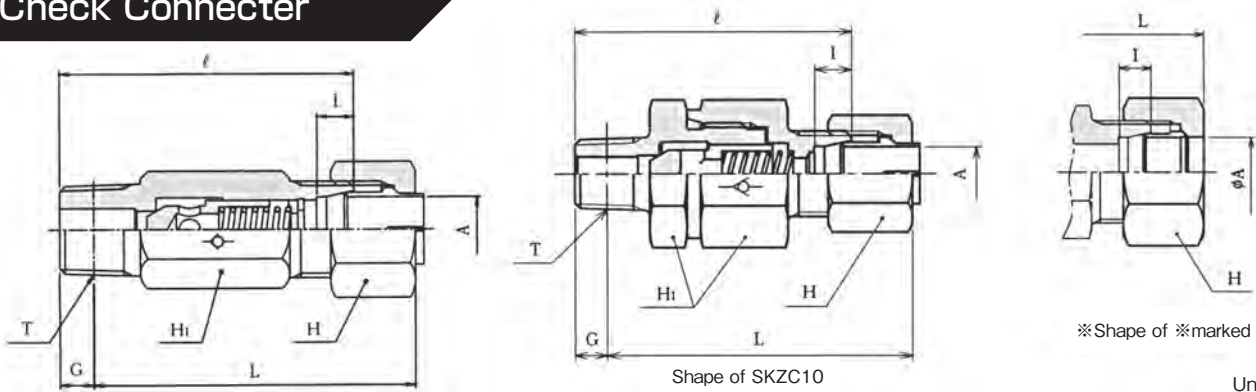
Rate Pressure
 $\phi 10 \sim 25$:31MPa
 $\phi 30$:28MPa
 $\frac{1}{8}B \sim \frac{3}{4}B$:31MPa
 Service Fluid
 Hydraulic Oil
 Service Temperature
 $-20^{\circ}C \sim 120^{\circ}C$
 Flow Rate
 Refer to table above



Pressure Loss
 Pressure loss Vs. flow rate under oil viscosity of 125 SSU (26cSt) is shown in right figure.
 Cracking Pressure
 The cracking pressure of 0.05MPa (0.5kgf/cm²) and 0.45MPa (4.5kgf/cm²) are available.

Note. Dimensions might be modified due to improvement of quality and performance.
CAUTION: Please inquire us when the fitting will be used excepting hydraulic oil.

Check Connector



Part No.	Out. Dia. of Applied Pipe A		Flow Rate ℓ /min	Cracking Pressure MPa	(R) T	Engagement Fingertight G	Hex Width		I	ℓ	Fingertight Length (about L)	Weight (kg)
	Nominal sizes	Out. Dia.					H ₁	H				
SKZC10-050E SKZC10-450E	10		18	0.05 0.45	1/4	6.01	24	19	7	53	58.5	0.128
KZC12-050E KZC12-450E	12		18	0.05 0.45	3/8	6.35	19	22	7	55	60	0.110
KZC15-050E KZC15-450E	15		30	0.05 0.45	3/8	6.35	24	27	7.5	60	66	0.176
KZC16-050E KZC16-450E	16		35	0.05 0.45	1/2	8.16	27	30	7.5	64	68.5	0.243
KZC18-050E KZC18-450E	18		45	0.05 0.45	1/2	8.16	27	32	8	69	73.5	0.260
KZC20-050E KZC20-450E	20		60	0.05 0.45	3/4	9.53	30	36	8	75	78	0.363
KZC22-050E KZC22-450E	22		70	0.05 0.45	3/4	9.53	32	36	9	80	83	0.396
KZC25-050E KZC25-450E	25		95	0.05 0.45	1	10.39	36	41	10	87	90	0.568
KZC28-050E KZC28-450E	28		120	0.05 0.45	1	10.39	41	46	10	91	94.5	0.704
KZC30-050E KZC30-450E	30		140	0.05 0.45	1 1/4	12.70	46	46	10	100	102	0.980
※KZC13-050N ※KZC13-450N	1/4	13.8	20	0.05 0.45	3/8	6.35	22	24	7.5	56	61.5	0.145
※KZC17-050N ※KZC17-450N	3/8	17.3	35	0.05 0.45	1/2	8.16	27	32	8	64	68.5	0.255
※KZC21-050N ※KZC21-450N	1/2	21.7	70	0.05 0.45	3/4	9.53	32	36	9	80	83	0.391
※KZC27-050N ※KZC27-450N	3/4	27.2	100	0.05 0.45	1	10.39	41	46	10	87	90.5	0.734

Main Specification

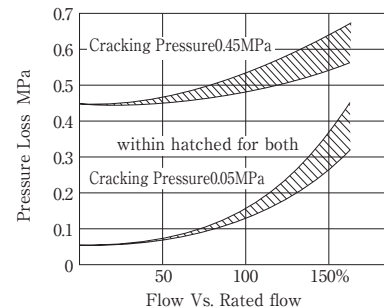
Rate Pressure
 φ10~25 :31MPa
 φ30 :28MPa
 1/8B~3/4B :31MPa
 Service Fluid
 Hydraulic Oil
 Service Temperature
 -20°C~120°C
 Flow Rate
 Refer to table above

Pressure Loss

Pressure loss Vs. flow rate under oil viscosity of 125 SSU (26cSt) is shown in right figure.

Cracking Pressure

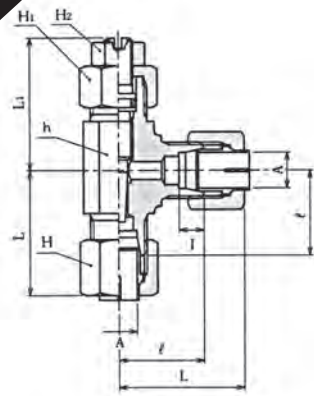
The cracking pressure of 0.05MPa (0.5kgf/cm²) and 0.45MPa (4.5kgf/cm²) are available.



Note. Dimensions might be modified due to improvement of quality and performance.

⚠CAUTION: Please inquire us when the fitting will be used excepting hydraulic oil.

Orifice Adjustable Fitting



Unit: mm

Part No.	Out. Dia. of Applied Pipe A	Width across flats h	Hex Width			I	ℓ	L ₁	Fingertight Length (about) L	Weight (kg)
			H	H ₁	H ₂					
KTP10-000E	10	17	19	19	17	7	23	36	34.5	0.150
KTP12-000E	12	19	22	19	17	7	24	38	35.5	0.192

Note. Dimensions might be modified due to improvement of quality and performance.

**WARNING**

If you don't select and handle fittings, valves and related accessories in an adequate manner, it may damage human beings and applicable systems.

Within the responsibility and authorization of users and piping designers, fittings, valves and related accessories shall be adequately selected, assembled, used and maintained based on the applicable conditions and product conformity to the system to be applied. Please read carefully our operation manual and feel free to contact with Ihara if you have any question or request.



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