

Nara

VIBRATION ABSORBER
REFRIGERATION HOSE
ASSEMBLY MACHINE
FITTING

www.naracontrols.com

 **NARA E&C INC.**

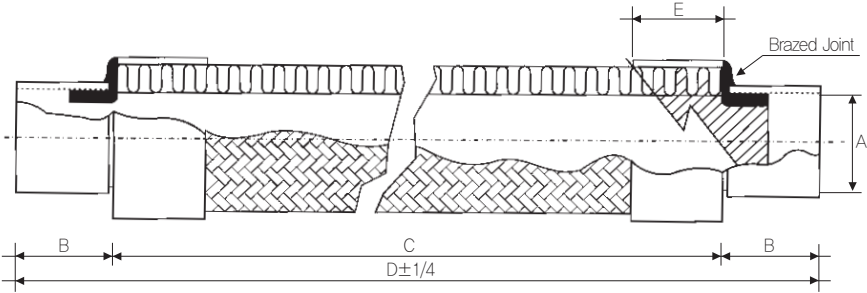
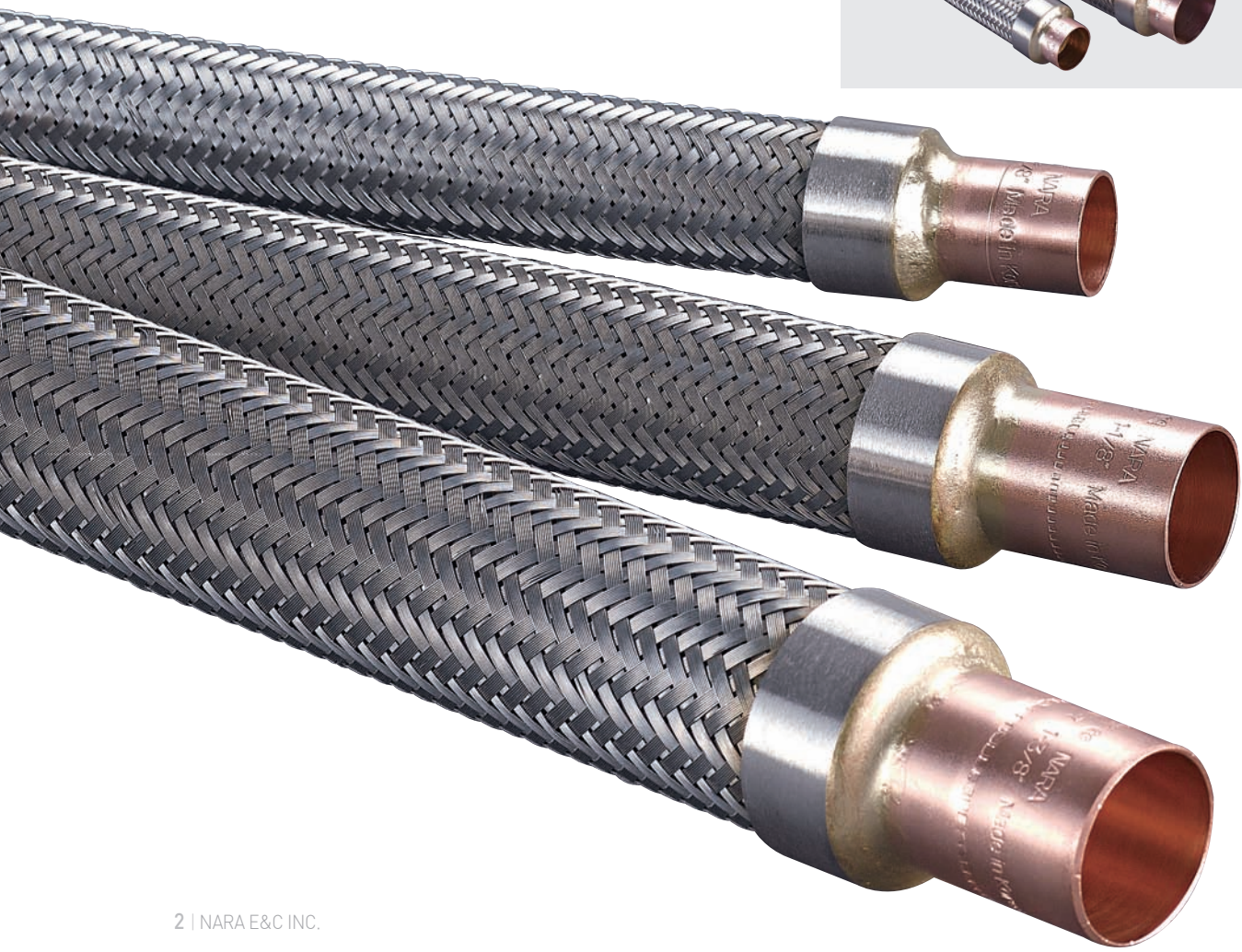
503-1, Hanshin IT Tower-II, 60-18, Gasan-dong,
Geumcheon-gu, Seoul, Korea 153-801
TEL : +82-2-2619-0277 FAX : +82-2-2619-0278
E-mail : naracontrols@naracontrols.com

 **NARA E&C INC.**

Vibration Absorber

Vibration Absorbers are installed in the suction and discharge lines of air conditioning and refrigeration system for eliminating vibration delivered through system pipes which is transmitted from compressor. Each vibration absorber is conducted leak test, cleaned, dried and packed in plastic film and paper carton. Each model is passed burst pressure test that burst pressure exceeds the standard.

- Fittable for copper tubing from 3/8" to 4-1/8" O.D.
- Certified by CE and UL, file No. SA13017
- Available for all HFC, HCFC and CFC refrigerants
- The length of tube and copper ends are adjustable



Specifications

Model No.	Actual OD of Copper Tubing (inch)	Dimensions					Max. Working Pressure (psiG)	Burst Pressure (psiG)
		A (I.D) (inch)	B (±1/8) (inch)	C (±1/8) (inch)	D (±1/4) (inch)	E (±1/16) (inch)		
NF-1	3/8	3/8	13/16	6-15/16	8-9/16	1/2	500	2500
NF-2	1/2	1/2	7/8	7-1/4	9	1/2	500	2500
NF-3	5/8	5/8	15/16	8	9-7/8	11/16	500	2500
NF-4	3/4	3/4	1-1/4	8-1/16	10-9/16	11/16	500	2500
NF-5	7/8	7/8	1-7/16	9-1/8	12	13/16	500	2500
NF-6	1-1/8	1-1/8	1-13/16	9-7/16	13-1/16	13/16	500	2500
NF-7	1-3/8	1-3/8	2	11-1/2	15-9/16	7/8	500	2500
NF-8	1-5/8	1-5/8	2-1/4	12-3/8	16-7/8	15/16	500	2500
NF-9	2-1/8	2-1/8	2-3/4	15-3/16	20-5/8	15/16	390	1950
NF-10	2-5/8	2-5/8	3-1/8	18-1/16	24-5/16	1-1/4	340	1700
NF-11	3-1/8	3-1/8	3-7/16	20	26-15/16	1-1/2	300	1500
NF-12	3-5/8	3-5/8	4-1/8	24	32-3/16	1-9/16	175	525
NF-13	4-1/8	4-1/8	4-7/16	24	32-15/16	1-9/16	175	525

Model No.	Actual OD of Copper Tubing (mm)	Dimensions						Max. Working Pressure (psiG)	Burst Pressure (psiG)
		A(mm)		B (±1/8) (inch)	C (±1/8) (inch)	D (±1/4) (inch)	E (±1/16) (inch)		
		I.D	Tolerance						
NF-1M	10	10.20	±0.03	13/16	6-15/16	8-9/16	1/2	500	2500
NF-2M	12	12.81	±0.03	7/8	7-1/4	9	1/2	500	2500
NF-3M	16	16.30	±0.03	15/16	8	9-7/8	11/16	500	2500
NF-4M	19	19.19	±0.03	1-1/4	8-1/16	10-9/16	11/16	500	2500
NF-5M	22	22.36	±0.03	1-7/16	9-1/8	12	13/16	500	2500
NF-6M	28	28.75	±0.04	1-13/16	9-7/16	13-1/16	13/16	500	2500
NF-7M	35	35.11	±0.04	2	11-1/2	15-9/16	7/8	500	2500
NF-8M	42	42.40	±0.05	2-1/4	12-3/8	16-7/8	15/16	500	2500
NF-9M	54	54.22	±0.05	2-3/4	15-3/16	20-5/8	15/16	390	1950
NF-10M	66	66.96	±0.05	3-1/8	18-1/16	24-5/16	1-1/4	340	1700
NF-11M	79	79.66	±0.05	3-7/16	20	26-15/16	1-1/2	300	1500
NF-12M	92	92.12	±0.05	4-1/8	24	32-3/16	1-9/16	175	525
NF-13M	105	105.12	±0.05	4-7/16	24	32-15/16	1-9/16	175	525

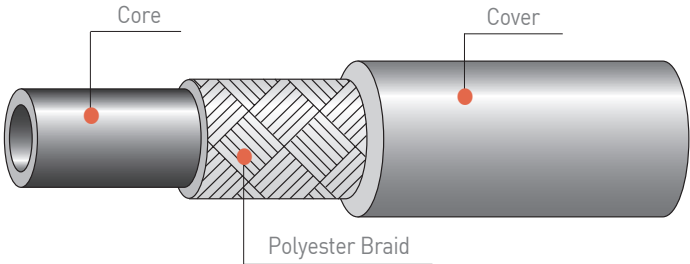
Flexible Capillary Tube & Refrigerant Hose

RH is designed for the flow of refrigerants, gases and oil in air conditioning and refrigerator system. Flexible and durable RH contributes to simple and convenient working and non-leakage operation.

- Suitable for all CFC, HFC and HCFC refrigerants, natural gases and ammonia
- Working temperature range is from -40℃ to +130℃
- Durable under high pressure
- Easy to crimp hose and fittings by its tools

Special Note

- Do not use in injection line
- Completely assembled products are supplied.
(Please consult with requirements.)



Flexible Capillary Tube

Specifications

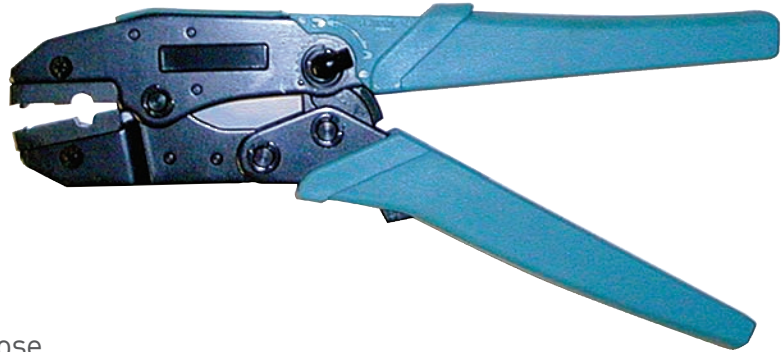
Model No.	ID (mm)	OD (mm)	Max. Working Pressure MPa(bar)	Min. Burst Pressure MPa(bar)	Min. Bend Radius (mm)	Weight (g/m)	Color
RH -01	2.5	5.5	19.6(200)	78.4(800)	15	22	Black
RH -02	3.6	7.0	9.8(100)	39.2(400)	20	45	Black

Refrigerant Hose

Specifications

Model No.	ID (mm)	OD (mm)	Max. Working Pressure MPa(bar)	Min. Burst Pressure MPa(bar)	Min. Bend Radius (mm)	Weight (g/m)	Color
RH -04	6.3	10.4	5(50)	25(250)	30	60	Black
RH -06	9.6	14.0			60	87	Black
RH -08	12.9	17.7			80	120	Black
RH -10	15.9	20.9			120	155	Black
RH -12	19.1	24.9			160	194	Black

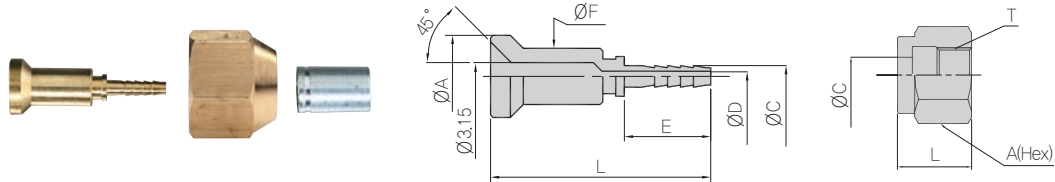
Fitting by Hand Plier



Hand Plier is a manual tool for only RH-01 hose.

Straight Kit

[RH-01]



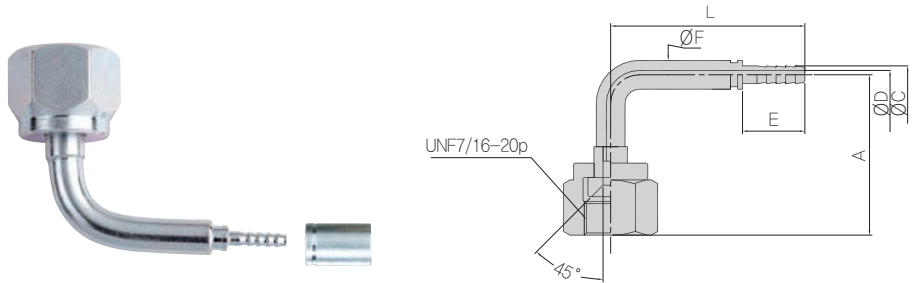
Specifications

Model No.	Hose	A (mm)	C (mm)	D (mm)	E (mm)	F (mm)	L (mm)	Socket	Material
RHN-01	RH- 01	9.5	2.6	1.0	10.0	6.5	26.5	RHS-01	Brass

Model No.	Hose	A (HEX)	C (mm)	L (mm)	T (Thread)	Material
N7/16	RH- 01	17	6.7	15	UNF7/16-20	Brass

Elbow Kit

[RH-01]

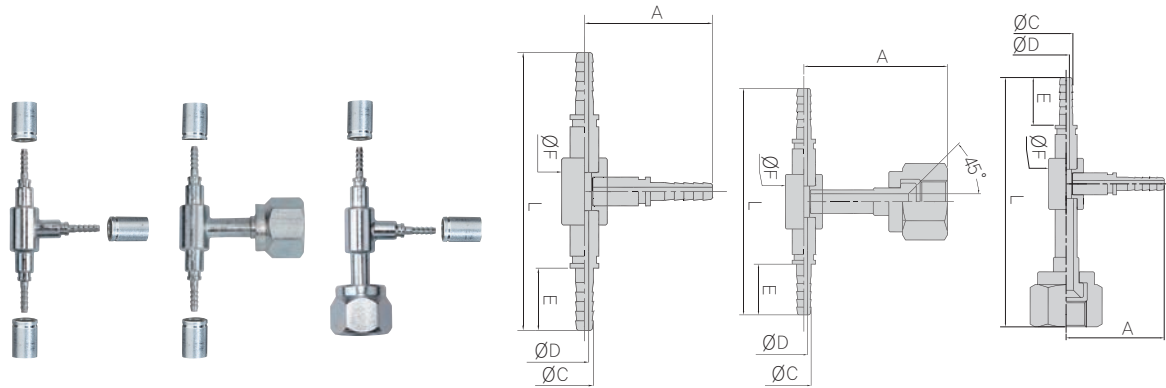


Specifications

Model No.	Hose	A (mm)	C (mm)	D (mm)	E (mm)	F (mm)	L (mm)	Socket	Material
RHL-01	RH - 01	33.4	2.6	1.0	10.0	6.0	37.5	RHS-01	Steel

Tee Kit

[RH-01]



Specifications

Model No.	Hose	A (mm)	C (mm)	D (mm)	E (mm)	F (mm)	L (mm)	Socket	Material
RHUT-01	RH- 01	24.0	2.6	1.0	10.0	9.5	52.0	RHS-01	Steel
RHT-01	RH- 01	36.75	2.6	1.0	10.0	9.5	52.0	RHS-01	Steel
RHST-01	RH- 01	24.0	2.6	1.0	10.0	9.5	65.0	RHS-01	Steel

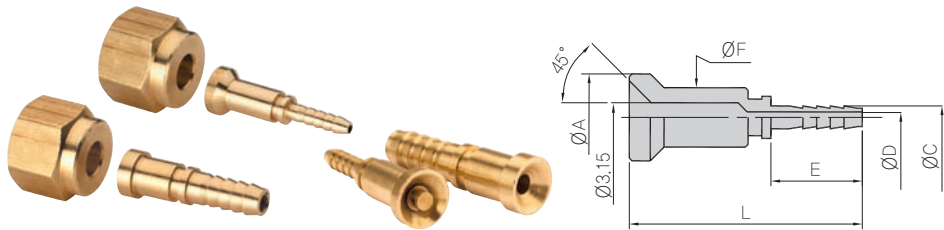
Fitting by NP-4

NP-4 is by air pressure for RH-01, 02 and 04, three hoses. It's small and light crimping machine which measurement is 40x35x25(H)cm and weight is about 30kg.

- Booster Type : Direct Pressure Type
- Booster Cylinder : 150 Ø
- Pressure : 12.5Mpa
- Booster Ration : 1:25
- Jig Cylinder : 63 Ø
- Voltage : 220V
- Air Pressure : 0.5~0.8Mpa



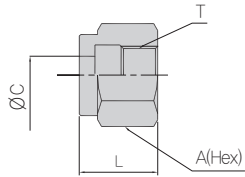
Straight Fitting



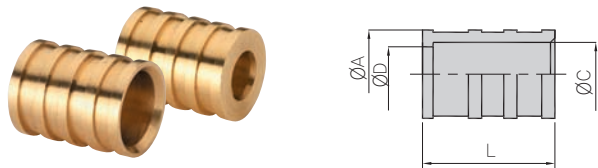
Specifications

Model No.	Hose	A (mm)	C (mm)	D (mm)	E (mm)	F (mm)	L (mm)	Socket	Material
RHN-01	RH- 01	9.5	2.6	1.0	10.0	6.5	26.5	RHS-01	Brass
RHN-02	RH- 02	9.5	3.55	1.8	13.0	6.5	29.2	RHS-02	Brass
RHN-04-7/16	RH- 04	9.5	6.45	3.6	15.0	7.7	29.5	RHS-04	Brass
RHN-04-5/8		14.0							

Model No.	Hose	A (HEX)	C (mm)	L (mm)	T (Thread)	Material
N7/16	RH- 01	17	6.7	15	UNF7/16-20	Brass
	RH- 02					
N7/16-04	RH- 04	17	7.9	15	UNF7/16-20	Brass/Steel
N5/8-04	RH- 04	22	11.8	16	UNF5/8-18	Brass/Steel



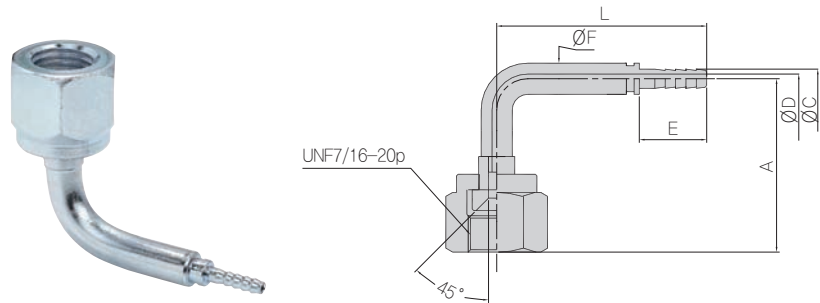
Socket



Specifications

Model No.	Hose	A (mm)	C (mm)	D (mm)	L (mm)	Material
RHS-01	RH- 01	8.0	5.7	4.8	12.0	Brass
RHS-02	RH- 02	10.0	7.2	5.9	15.0	Brass
RHS-04	RH- 04	13.8	10.7	7.5	18.0	Brass

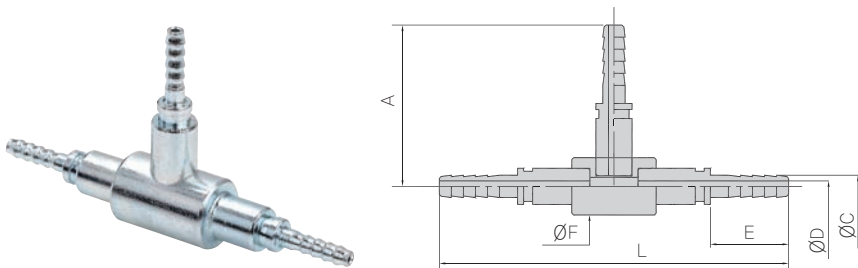
Elbow Fitting



Specifications

Model No.	Hose	A (mm)	C (mm)	D (mm)	E (mm)	F (mm)	L (mm)	Socket	Material
RHL-01	RH - 01	33.4	2.6	1.0	10.0	6.0	37.5	RHS-01	Steel
RHL-02	RH - 02	33.4	3.55	1.8	13.0	6.0	40.5	RHS-02	Steel
RHL-UNF7/16-04	RH - 04	33.4	6.45	3.6	15.0	6.0	42.5	RHS-04	Steel
RHL-UNF5/8-04		34.4							

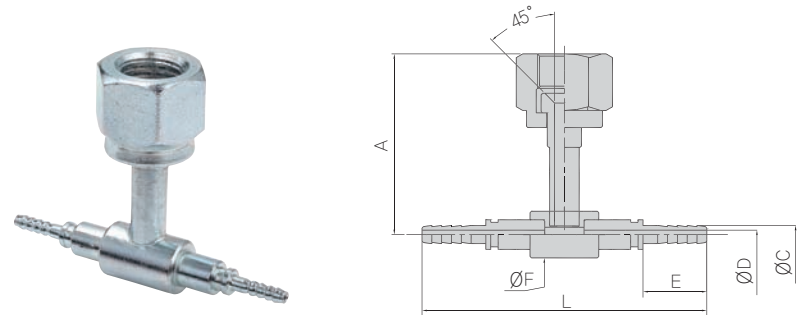
Union Tee Fitting



Specifications

Model No.	Hose	A (mm)	C (mm)	D (mm)	E (mm)	F (mm)	L (mm)	Socket	Material
RHUT-01	RH- 01	24.0	2.6	1.0	10.0	9.5	52.0	RHS-01	Steel
RHUT-02	RH- 02	26.5	3.55	1.8	13.0	9.5	58.0	RHS-02	Steel
RHUT-04	RH- 04	31.0	6.45	3.15	15.0	12.0	67.5	RHS-04	Steel

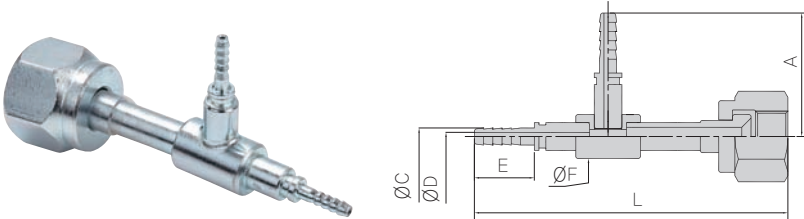
Union Nut Tee Fitting



Specifications

Model No.	Hose	A (mm)	C (mm)	D (mm)	E (mm)	F (mm)	L (mm)	Socket	Material
RHT-01	RH- 01	36.75	2.6	1.0	10.0	9.5	52.0	RHS-01	Steel
RHT-02	RH- 02	36.75	3.55	1.8	13.0	9.5	58.0	RHS-02	Steel
RHT-UNF7/16-04	RH- 04	36.75	6.45	3.6	15.0	12.0	67.5	RHS-04	Steel
RHT-UNF5/8-04		37.75							

Union Nut Tee Fitting



Specifications

Model No.	Hose	A (mm)	C (mm)	D (mm)	E (mm)	F (mm)	L (mm)	Socket	Material
RHST-01	RH- 01	24.0	2.6	1.0	10.0	9.5	65.0	RHS-01	Steel
RHST-02	RH- 02	26.5	3.55	1.8	13.0	9.5	68.0	RHS-02	Steel
RHST-UNF7/16-04	RH- 04	31.0	6.45	3.6	15.0	12.0	74.5	RHS-04	Steel
RHST-UNF5/8-04		32.0							

Fitting by NP-9

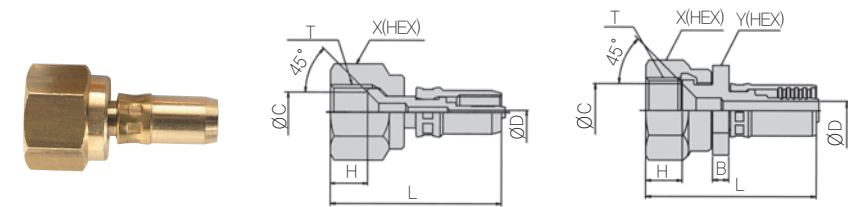
NP-9 is hydraulic crimping machine for all RH model.
Dies are compatible with each hose and Pushers follow fitting sizes and types.

- Layout : 400 x 610 x 963(H)mm
- Motor : 220V / 380V, 1.5w
- Oil pump : 200Bar, 3.15CC/rev
- Oil Tank : 4 ℓ
- Cylinder : Ø 80 x 200St



Straight Fitting

[Flare type]

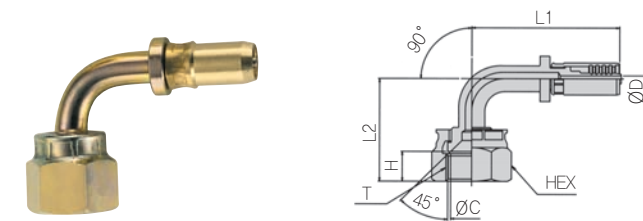


Specifications

Model No.	Hose	T	B (mm)	C (mm)	D (mm)	H (mm)	L (mm)	X (HEX)	Y (HEX)	Weight (g)	Pusher	Die
RHC-UNF7/16-01	RH-01	7/16-20UNF	-	8	0.9	8	33.5	17	-	30	PRHC-01	SP-RH- 01
RHC-UNF7/16-02	RH-02	7/16-20UNF	4	7.5	1.8	9.8	41	17	14	38	PSK7/16-02-S	SP-RH- 02
RHC-UNF5/8-02		5/8-18UNF	4	13	1.8	9.5	41	22	19	46	PRH5/8-06	SP-RH- 02

Elbow Fitting

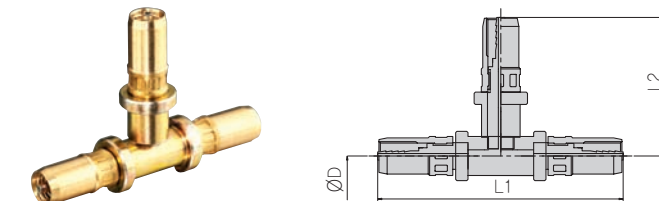
[Flare type]



Specifications

Model No.	Hose	T	C (mm)	D (mm)	H (mm)	L1 (mm)	L2 (mm)	HEX	Weight (g)	Pusher	Die
RH90-UNF7/16-01	RH-01	7/16-20UNF	8	1.2	10	39	30	17	33	PAE- 02N	SP-RH- 01
RH90-UNF7/16-02	RH-02	7/16-20UNF	8	1.8	10	41	30	17	35	PAE- 02N	SP-RH- 02
RH90-UNF5/8-02		5/8-18UNF	13	1.8	9.5	45	32	22	50	PAF- 14-04N	SP-RH- 02

Union Tee Fitting

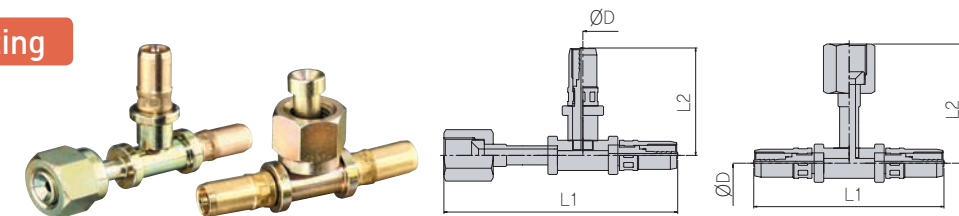


Specifications

Model No.	Hose	D (mm)	L1 (mm)	L2 (mm)	Weight (g)	Pusher	Die
SRHUT- 01	RH-01	1.2	60	33.8	39	NPTP-01	SP-RH- 01

Union Nut Tee Fitting

[Flare type]



Specifications

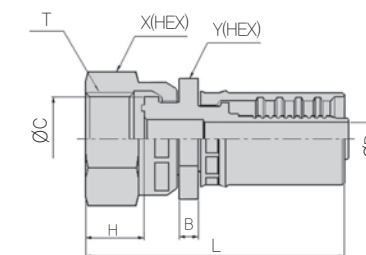
Model No.	Hose	T	D (mm)	L1 (mm)	L2 (mm)	HEX	Weight (g)	Pusher	Die
SRHST- 01	RH-01	7/16-20UNF	1.2	74	33.8	17	49	NPTP-01	SP-RH- 01
SRHT- 01	RH-01	7/16-20UNF	1.2	120	37.5	17	49	NPTP-01	SP-RH- 01

Fitting of Rotalock Valve Connection



Straight Fitting

[Female type]

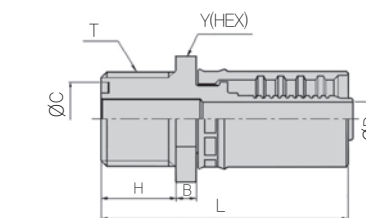


Specifications

Model No.	Hose	T	H (mm)	B (mm)	C (mm)	D (mm)	L (mm)	X (HEX)	Y (HEX)	Weight (g)	Pusher	Die
RHF-UNF3/4-06	RH-06	3/4 - 16UNF	11.2	4	17.3	6.8	53	24	22	78	PRH3/4-08	SP-14-06
RHF-UNS1-08	RH-08	1- 14UNS	12.5	4.5	24.9	9.6	59	32	27	141	PSK1-08	SP-RH-08
RHF-UNS1-10	RH-10	1- 14UNS	12.5	4.5	24.9	12.7	59	32	27	149	PSK1-08	SP-RH-10
RHF-UNF1-1/4-12	RH-12	1-1/4 - 12UNF	12.5	4.5	31.2	15.9	62	41	36	234	PSK1-1/4-12	SP-RH-12

Straight Fitting

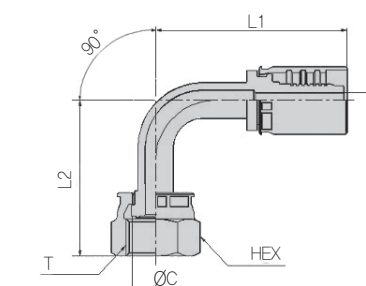
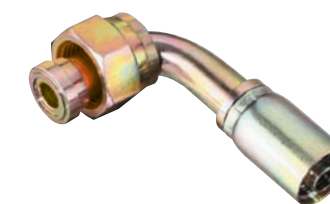
[Male type]



Specifications

Model No.	Hose	T	H (mm)	B (mm)	C (mm)	D (mm)	L (mm)	X (HEX)	Y (HEX)	Weight (g)	Pusher	Die
RHM-UNF3/4-06	RH-06	3/4 - 16UNF	15	4	14.7	6.8	49	24	22	65	PSA3/4-06	SP-14-06
RHM-UNS1-08	RH-08	1- 14UNS	15	4.5	19.5	9.6	52	32	27	104	PSA1-08	SP-RH-08
RHM-UNS1-10	RH-10	1- 14UNS	15	4.5	19.5	12.7	52	32	27	110	PSA1-08	SP-RH-10
RHM-UNF1-1/4-12	RH-12	1-1/4 - 12UNF	15	4.5	25.6	15.9	57.2	41	36	156	PSA1-1/4-12	SP-RH-12

Elbow Fitting

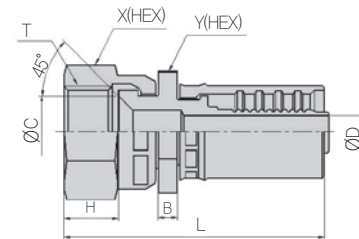


Specifications

Model No.	Hose	T	C (mm)	D (mm)	L1 (mm)	L2 (mm)	HEX	Weight (g)	Pusher	Die
RHF90-UNF3/4-06	RH-06	3/4 - 16UNF	13.75	6.8	68	48	24	105	PRH90-06	SP-14-06
RHF90-UNS1-08	RH-08	1- 14UNS	23	9.6	73	60	32	185	PAF-14-08N	SP-RH-08
RHF90-UNS1-10	RH-10	1- 14UNS	23	12.7	74	60	32	225	PRH90-10	SP-RH-10

Straight Fitting

[Flare type]

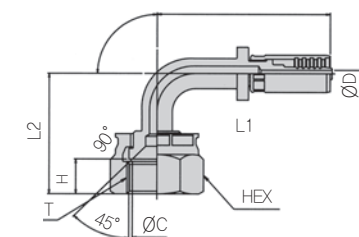


Specifications

Model No.	Hose	T	H (mm)	B (mm)	C (mm)	D (mm)	L (mm)	X (HEX)	Y (HEX)	Weight (g)	Pusher	Die
RHC-UNF7/16-04	RH-04	7/16-20UNF	9.8	4	7.5	3.5	40	17	14	40	PSK7/16-02-S	SP07-04
RHC-UNF5/8-04		5/8-18UNF	9.5	4	13	3.5	40	22	19	48	PRH5/8-06	SP07-04
RHC-UNF5/8-06	RH-06	5/8-18UNF	9.5	4	13	6.8	50	22	19	69	PRH5/8-06	SP-14-06
RHC-UNF3/4-06	RH-06	3/4-16UNF	10.8	4	14.5	6.8	53	24	22	77	PRH3/4-08	SP-14-06
RHC-UNF3/4-08	RH-08	3/4-16UNF	10.8	4	14.5	9.6	53	24	22	93	PRH3/4-08	SP- RH-08
RHC-UNF7/8-08	RH-08	7/8-14UNF	12.9	4.5	17.3	9.6	60	27	22	110	PRH7/8-10	SP- RH-08
RHC-UNF7/8-10	RH-10	7/8-14UNF	12.9	4.5	17.3	12.7	60	27	27	127	PRH7/8-10	SP-RH-10
RHC-UNS1-1/16-10	RH-10	1-1/16-14UNS	16	4.5	21.8	12.7	59	32	27	140	PSK1-08	SP-RH-10
RHC-UNS1-1/16-12	RH-12	1-1/16-14UNS	16	4.5	21.8	15.9	62	32	32	156	PSK1-08	SP-RH-12

Elbow Fitting

[Flare type]

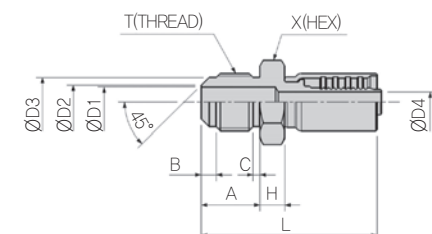


Specifications

Model No.	Hose	T	H (mm)	C (mm)	D (mm)	L1 (mm)	L2 (mm)	HEX	Weight (g)	Pusher	Die
RH90-UNF7/16-04	RH-04	7/16-20UNF	10	8	3.5	44	32	17	45	PAF-14-04N	SP07-04
RH90-UNF5/8-04		5/8-18UNF	9.5	13	3.5	44	32	22	56	PAF-14-04N	SP07-04
RH90-UNF5/8-06	RH-06	5/8-18UNF	9.5	13	6.8	63	45	22	84	PRH90-06	SP-14-06
RH90-UNF3/4-06	RH-06	3/4-16UNF	10.8	14.5	6.8	69	48	24	124	PAF-14-08N	SP-14-06
RH90-UNF3/4-08	RH-08	3/4-16UNF	10.8	14.5	9.6	70	48	24	134	PAF-14-08N	SP-RH-08
RH90-UNF7/8-08	RH-08	7/8-14UNF	12.9	17.3	9.6	75	59	27	187	PRH90-10	SP-RH-08
RH90-UNF7/8-10	RH-10	7/8-14UNF	12.9	17.3	12.7	74	59	27	173	PRH90-10	SP-RH-10

Straight Fitting

[Male type]



Specifications

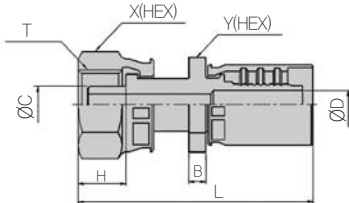
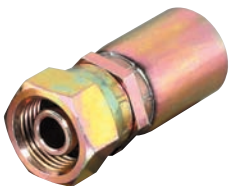
Model No.	Hose	T	X (HEX)	L (mm)	H (mm)	A (mm)	B (mm)	C (mm)	D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	Weight (g)	Pusher	Die
RHMC-UNF7/16-04	RH-04	7/16-20UNF	17	40	5.5	14	3.2	2	4.5	5.6	8.8	3.5	30	PRHMC-7/16-04	SP07-04
RHMC-UNF5/8-04		5/8-18UNF	21	43	6	17	4.8	2	7	8	13.5	3.5	46	PRHMC-5/8-04	SP07-04
RHMC-UNF3/4-06	RH-06	3/4-16UNF	24	57	8	19	4.8	2.2	10	11.2	16.3	6.8	80	PRHMC-3/4-06	SP-14-06
RHMC-UNF7/8-08	RH-08	7/8-14UNF	27	62	8	21	5	3	12.5	13.5	19.1	9.6	112	PRHMC-7/8-08	SP-RH-08

Fitting of Truck Refrigeration Unit



Straight Fitting

[O-Ring type]

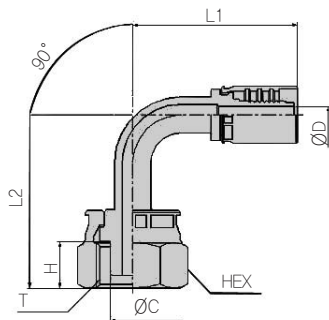
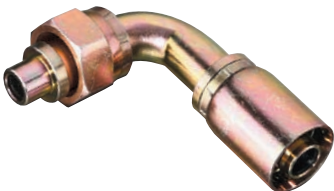


Specifications

Model No.	Hose	T	H (mm)	B (mm)	C (mm)	D (mm)	L (mm)	X (HEX)	Y (HEX)	Weight (g)	Pusher	Die
RHO-UNF5/8-06	RH-06	5/8-18UNF	9.5	4	8.55	6.8	63	22	19	79	PRH5/8-06	SP-14-06
RHO-UNF3/4-08	RH-08	3/4-16UNF	10.8	4	11.65	9.6	65	24	22	105	PRH3/4-08	SP-RH-08
RHO-UNF7/8-10	RH-10	7/8-14UNF	12.9	4.5	14.45	12.7	73	27	27	148	PRH7/8-10	SP-RH-10

Elbow Fitting

[O-Ring type]

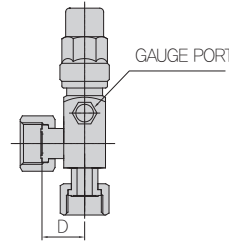
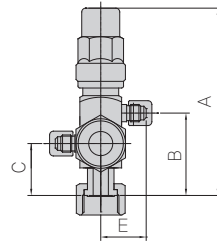


Specifications

Model No.	Hose	T	H (mm)	C (mm)	D (mm)	L ₁ (mm)	L ₂ (mm)	HEX	Weight (g)	Pusher	Die
RHO90-UNF5/8-06	RH-06	5/8-18UNF	9.5	8.55	6.8	63	45	22	90	PRH90-06	SP-14-06
RHO90-UNF3/4-08	RH-08	3/4-16UNF	10.8	11.65	9.6	70	48	24	148	PAF- 14-08N	SP-RH-08
RHO90-UNF7/8-10	RH-10	7/8-14UNF	12.9	14.45	12.7	74	59	27	202	PRH90-10	SP-RH-10

Rotalock Valve

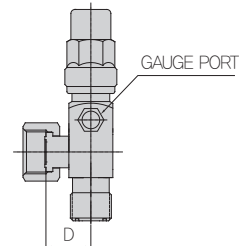
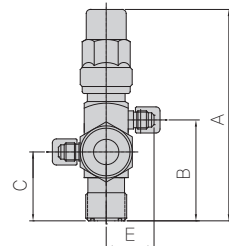
Nut Type



Specifications

Model No.	Copper Tube (OD)	Gauge Port	Body Size	Coupling Size	A	B	C	D	E
JRNV-010F	3/8"	7/16" -20UNF	19SQ	3/4" - 16	99	39	30	19.2	25
JRNV-019F	5/8"		22SQ	1" - 14	106	43	32.5	20.7	26.5
JRNV-024B	7/8"		28SQ	1 1/4" - 12	134.5	58.5	42	24	29.8
JRNV-035B	1 3/8"		38SQ	1 3/4" - 12	173.5	71.3	49.5	30.5	34

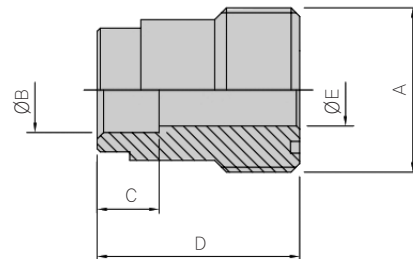
Adaptor Type



Specifications

Model No.	Copper Tube (OD)	Gauge Port	Body Size	Coupling Size	A	B	C	D	E
JRAV-010F	3/8"	7/16" -20UNF	19SQ	3/4" - 16	99	39	30	19.2	25
JRAV-019F	5/8"		22SQ	1" - 14	106	43	32.5	20.7	26.5
JRAV-024B	7/8"		28SQ	1 1/4" - 12	134.5	58.5	42	24	29.8
JRAV-035B	1 3/8"		38SQ	1 3/4" - 12	173.5	71.3	49.5	30.5	34

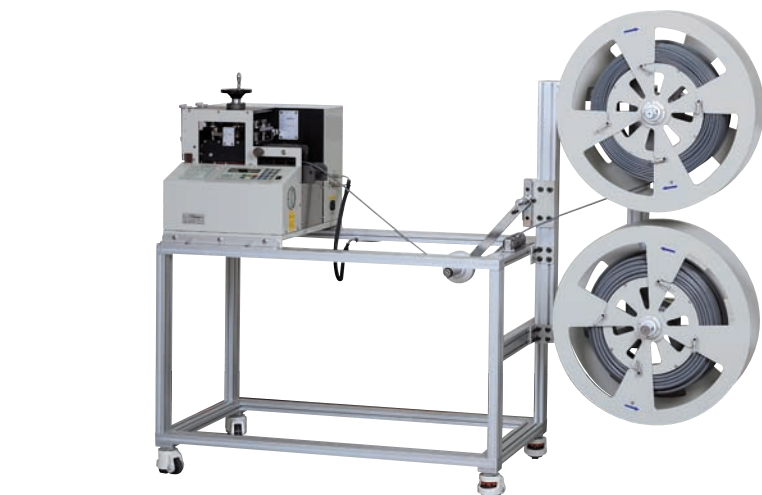
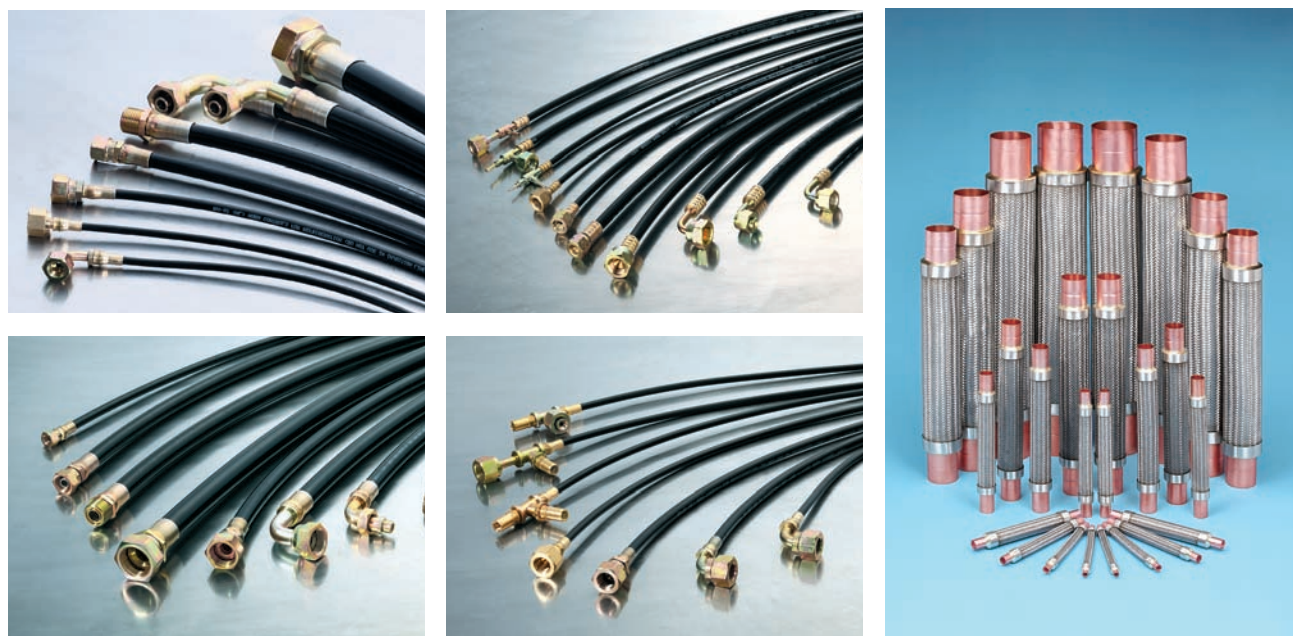
Adaptor



Specifications

Model No.	Copper Tube (OD)	A	B	C	D	E
JAN-010	3/8"	3/4" - 16	10.2	10	30	8
JAN-012	1/2"	1" - 14	13	11	31	11.5
JAN-015	5/8"	1" - 14	16.1	11	31	11.5
JAN-019	3/4"	1 1/4" - 12	19.3	15	32.5	18.5
JAN-024	7/8"	1 1/4" - 12	22.5	11	32.5	19.5
JAN-030	1 1/8"	1 3/4" - 12	28.9	15	34	26
JAN-035	1 3/8"	1 3/4" - 12	35.3	15	42	30

Main Product



Automatic Hose Cutter
TBC-58TU



Operating Tool
Hose Cutter



Manual Pressing Tool
Mark-10

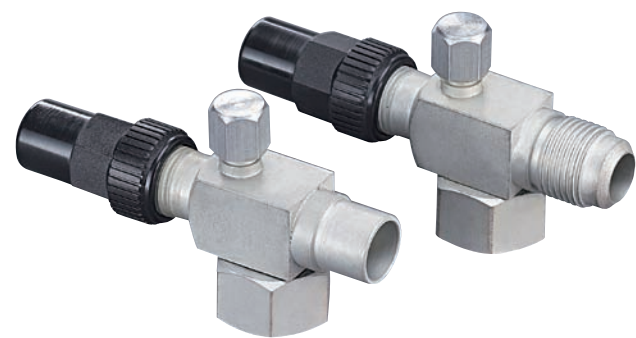
Other



Strainer



Filter Drier



Rotalock Valve



Oil Gauge



Oil Separator