

Chemifit® C1S Series

product

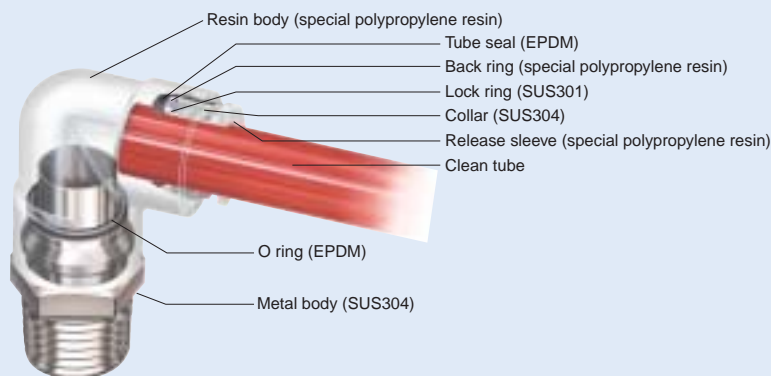
PushOne® fitting for clean air, pure water and chemical liquids

Features

- **No-oil processed**
Assembled after cleaning each part in a clean room. No oil or fat are used in the sealing materials.
- **PushOne® connection of tube**
The tubes can be connected without using a jig or tools.
- **SUS304 thread**
High thread strength
- **Double clean package**
Each fitting is packed in a clean room and put in a zipper sealed bag.
- **Easy directional setting of tube.**

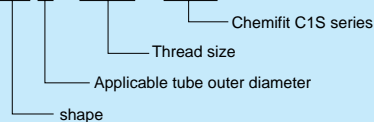


Cross-sectional structure diagram



Product number example

EL 6 - R1/4 - C1S



Distinction of millimeter/inch sizes

- The tube size is shown on the release sleeve.

Operating fluid, working temperature range

Operating fluid	Working temperature range
Air (clean air)	-20°C~+80°C
Water (pure water)	0°C~+80°C

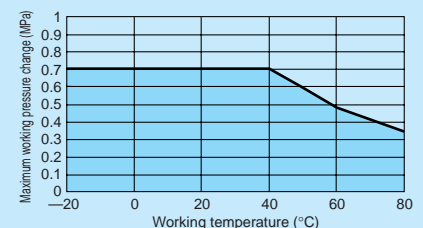
- ☞ Contact us for various chemical liquids.
- ☞ See "Combination List of Tube and Fitting" on page 8.

Pressure condition

Maximum working pressure: 0.7MPa(at20°C)
Negative pressure performance: -99.975kPa

Relation between the working temperature and the maximum working pressure

Maximum working pressure varies with working temperature (environmental temperature). For use at an abnormal temperature, always check the maximum working pressure change in the graph below and keep pressure within the range.

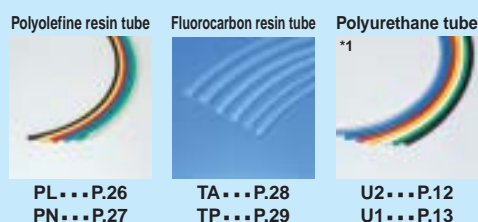


Handling instructions

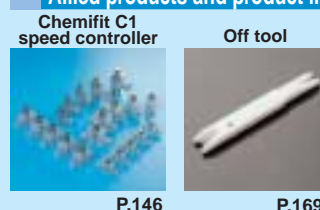
- ⚠ **Caution** When the working conditions of tubes and fittings differ, use them under the lower specified conditions.
- ⚠ **Caution** When water is used as the operating fluid, do not allow it to freeze.
- ⚠ **Caution** Do not bend the pipe sharply near the tube insertion port (sleeve end) of the fitting. Keep the tube straight for twice as long as the tube diameter from the insertion port.

- ☞ See page34 for the common handling instructions for tube fittings.

Applicable tube



Allied products and product introduction



Reference

- Instruction manual.....P.186
- Chemical resistance specification table.....P.209
- Effective cross-sectional area.....P.178
- Negative-pressure performance list.....P.179

(*1) Combinatory use of U2 or U1 tube and Chemifit C1S series mixes general and clean type performances. When using them in a clean environment, pay attention to the clean level that could be lowered.

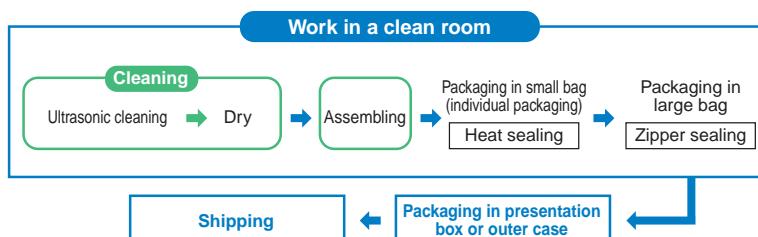
Shape list



See Chemifit C1 series for union type shape.

No-oil processing, Clean wrapping and packaging

- Ultrasonic cleaning with no oil or fat used for assembling in a clean room



- High-barrier sheet packaging available

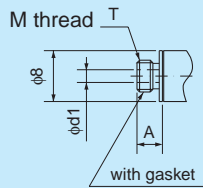
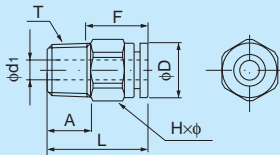
What is high-barrier sheet packaging?

In order to maintain the cleanliness of our products, no space for oxygen, water, or corrosive gas is allowed inside the package so a packaging bag with a high gas barrier is needed for protecting the content from these gases. To meet this requirement, Nitta Moore provides high-barrier bags with a high gas barrier performance also for nitrogen sealing or atmospheric sealing.



- The packaging bags that Nitta Moore uses have the highest gas barrier performance among clear bags.
- The bags do not contain halogen, etc, for safe burning.

Connector



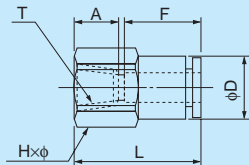
●Millimeter size type

Product number	Applicable tube outer diameter (mm)	T Thread size (R,M)	L (mm)	A (mm)	F Tube insertion length (mm)	H×φ Width across flat (mm)	D (mm)	d ₁ (mm)	Effective cross-sectional area (mm ²)	Weight (g)
EC3-M5-C1S	3	M5×0.8	13.0	3.0	11	5.5×6.0	5.6	1.5	2.0	2.0
EC4-M5-C1S	4	M5×0.8	20.5	4.0	14	10.0×11.0	10.0	2.0	3.0	6.0
EC4-R1/8-C1S	4	R1/8	20.5	8.0	14	10.0×11.0	10.0	2.5	4.0	7.0
EC6-M5-C1S	6	M5×0.8	24.3	4.0	15	12.0×13.0	12.0	2.0	3.5	9.0
EC6-R1/8-C1S	6	R1/8	22.7	8.0	15	12.0×13.0	12.0	4.0	10.5	9.0
EC6-R1/4-C1S	6	R1/4	25.7	11.0	15	14.0×15.4	12.0	4.0	10.5	18.0
EC8-R1/8-C1S	8	R1/8	29.3	9.0	16	14.0×15.4	13.9	6.0	20.0	14.0
EC8-R1/4-C1S	8	R1/4	26.3	11.0	16	14.0×15.4	13.9	6.0	25.0	16.0
EC10-R1/4-C1S	10	R1/4	29.2	11.0	19	17.0×18.5	17.0	8.0	40.0	21.0
EC10-R3/8-C1S	10	R3/8	30.2	12.0	19	17.0×18.5	17.0	8.0	40.0	29.0
EC12-R3/8-C1S	12	R3/8	31.1	12.0	20	19.0×21.0	19.0	10.0	50.0	31.0
EC12-R1/2-C1S	12	R1/2	34.1	15.0	20	22.0×24.5	19.0	10.0	50.0	58.0

●Inch size type

Product number	Applicable tube outer diameter (inch)	T Thread size (M)	L (mm)	A (mm)	F Tube insertion length (mm)	H×φ Width across flat (mm)	D (mm)	d ₁ (mm)	Effective cross-sectional area (mm ²)	Weight (g)
EC1/8-M5-C1S	1/8	M5×0.8	16.0	3.5	11	8.0×8.8	8	2.5	—	—

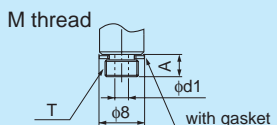
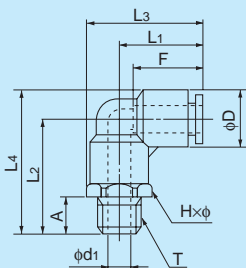
Internal connector



●Millimeter size type

Product number	Applicable tube outer diameter (mm)	T Thread size (R)	L (mm)	A (mm)	F Tube insertion length (mm)	H×φ Width across flat (mm)	D (mm)	Effective cross-sectional area (mm ²)	Weight (g)
EFC4-R1/8-C1S	4	R1/8	25.0	8.7	14	14.0×15.4	10.0	4.0	16.0
EFC6-R1/8-C1S	6	R1/8	26.1	8.7	15	14.0×15.4	12.0	10.5	17.0
EFC6-R1/4-C1S	6	R1/4	30.6	13.0	15	17.0×18.5	12.0	10.5	26.0
EFC8-R1/4-C1S	8	R1/4	32.0	13.0	16	17.0×18.5	14.0	25.0	28.0
EFC10-R1/4-C1S	10	R1/4	35.0	13.0	19	17.0×18.5	17.0	40.0	34.0
EFC10-R3/8-C1S	10	R3/8	35.5	13.5	19	22.0×24.5	17.0	40.0	50.0
EFC10-R1/2-C1S	10	R1/2	39.5	17.5	19	24.0×26.5	17.0	40.0	56.0
EFC12-R3/8-C1S	12	R3/8	36.4	13.5	20	22.0×24.5	19.0	50.0	50.0
EFC12-R1/2-C1S	12	R1/2	40.4	17.5	20	24.0×26.5	19.0	50.0	58.0

90 degree elbow



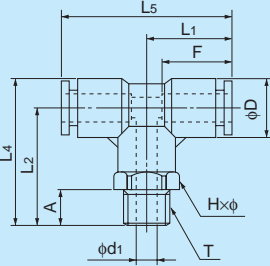
●Millimeter size type

Product number	Applicable tube outer diameter (mm)	T Thread size (R,M)	L ₁ (mm)	L ₂ (mm)	L ₃ (mm)	L ₄ (mm)	A (mm)	F Tube insertion length (mm)	H×φ Width across flat (mm)	D (mm)	d ₁ (mm)	Min. inner diameter (mm)	Effective cross-sectional area (mm ²)	Weight (g)
EL3-M5-C1S	3	M5×0.8	12.5	13.0	16.4	16.2	3.5	11	7.0×7.7	6.3	2.5	1.5	1.5	—
EL4-M5-C1S	4	M5×0.8	17.7	20.5	23.2	25.5	4.0	14	10.0×11.0	9.7	2.0	2.0	3.0	7.0
EL4-R1/8-C1S	4	R1/8	17.7	22.5	23.2	27.5	8.0	14	10.0×11.0	9.7	5.0	3.0	4.0	9.0
EL6-M5-C1S	6	M5×0.8	18.9	22.5	25.4	29.0	4.0	15	12.0×13.0	12.5	2.0	2.0	3.5	10.0
EL6-R1/8-C1S	6	R1/8	18.9	25.0	25.4	31.5	8.0	15	12.0×13.0	12.5	5.0	5.0	12.0	18.0
EL6-R1/4-C1S	6	R1/4	18.9	29.0	26.6	35.5	11.0	15	14.0×15.4	12.5	7.0	5.0	12.0	18.0
EL8-R1/8-C1S	8	R1/8	21.1	27.0	28.8	34.5	8.0	16	14.0×15.4	14.5	6.5	6.5	18.5	15.0
EL8-R1/4-C1S	8	R1/4	21.1	30.0	28.8	37.5	12.0	16	14.0×15.4	14.5	6.5	6.5	23.0	20.0
EL10-R1/4-C1S	10	R1/4	25.0	37.0	34.3	46.0	12.0	19	17.0×18.5	17.5	8.0	8.0	34.5	27.0
EL10-R3/8-C1S	10	R3/8	25.0	37.0	34.3	46.0	14.0	19	17.0×18.5	17.5	9.0	8.0	37.0	33.0
EL12-R3/8-C1S	12	R3/8	26.7	38.5	37.2	48.5	14.0	20	19.0×21.0	20.0	10.0	9.5	43.0	39.0
EL12-R1/2-C1S	12	R1/2	26.7	41.5	38.7	51.5	16.0	20	22.0×24.0	20.0	12.0	9.5	43.0	56.0

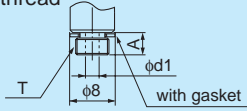
●Inch size type

Product number	Applicable tube outer diameter (inch)	T Thread size (M)	L ₁ (mm)	L ₂ (mm)	L ₃ (mm)	L ₄ (mm)	A (mm)	F Tube insertion length (mm)	H×φ Width across flat (mm)	D (mm)	d ₁ (mm)	Min. inner diameter (mm)	Effective cross-sectional area (mm ²)	Weight (g)
EL1/8-M5-C1S	1/8	M5×0.8	14.5	13.0	19	17	3.5	11	8.0×8.8	8	2.5	2.5	—	—

Tee



M thread



●Millimeter size type

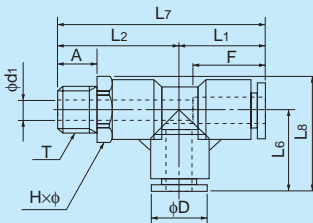
Product number	Applicable tube outer diameter (mm)	T Thread size (R,M)	L ₁ (mm)	L ₂ (mm)	L ₄ (mm)	L ₅ (mm)	A (mm)	F Tube insertion length (mm)	H×φ Width across flat (mm)	D (mm)	d ₁ (mm)	Min. inner diameter (mm)	Effective cross-sectional area (mm ²)	Weight (g)
ET3-M5-C1S	3	M5×0.8	12.5	13.0	16.0	25.0	3.5	11	7.0×7.7	6.3	2.5	1.5	1.5	2.0
ET4-M5-C1S	4	M5×0.8	17.7	20.2	25.1	35.3	4.0	14	10.0×11.0	10.0	2.0	2.0	3.0	8.0
* ET4-R1/8-C1S	4	R1/8	17.7	23.7	28.6	35.3	9.0	14	10.0×11.0	10.0	5.0	3.0	4.0	10.0
ET6-M5-C1S	6	M5×0.8	18.9	22.7	29.0	37.9	4.0	15	12.0×13.0	13.0	2.0	2.0	3.5	12.0
* ET6-R1/8-C1S	6	R1/8	18.9	26.2	32.5	37.9	9.0	15	12.0×13.0	13.0	4.5	4.5	12.0	14.0
* ET6-R1/4-C1S	6	R1/4	18.9	30.2	36.5	37.9	12.0	15	14.0×15.4	13.0	7.0	4.5	12.0	21.0
* ET8-R1/8-C1S	8	R1/8	21.1	29.2	36.5	42.2	9.0	16	14.0×15.4	15.0	6.0	6.0	18.5	18.0
* ET8-R1/4-C1S	8	R1/4	21.1	31.2	38.5	42.2	12.0	16	14.0×15.4	15.0	6.5	6.5	23.0	24.0
* ET10-R1/4-C1S	10	R1/4	25.0	37.2	46.0	50.0	12.0	19	17.0×18.5	18.0	8.0	8.0	34.5	34.0
* ET10-R3/8-C1S	10	R3/8	25.0	37.2	46.0	50.0	14.0	19	17.0×18.5	18.0	9.0	8.0	37.0	39.0
* ET12-R3/8-C1S	12	R3/8	26.7	38.7	48.8	53.4	14.0	20	19.0×21.0	20.5	10.0	10.0	43.0	48.0
* ET12-R1/2-C1S	12	R1/2	26.7	41.7	51.8	53.4	16.0	20	22.0×24.0	20.5	12.0	9.5	43.0	65.0

*Made to order

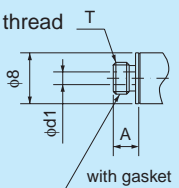
●Inch size type

Product number	Applicable tube outer diameter (inch)	T Thread size (M)	L ₁ (mm)	L ₂ (mm)	L ₄ (mm)	L ₅ (mm)	A (mm)	F Tube insertion length (mm)	H×φ Width across flat (mm)	D (mm)	d ₁ (mm)	Min. inner diameter (mm)	Effective cross-sectional area (mm ²)	Weight (g)
ET1/8-M5-C1S	1/8	M5×0.8	17.6	26.2	32.5	35.2	9.0	15	12.0×13.0	13.0	4.5	4.5	13.0	5.0

Service tee



M thread

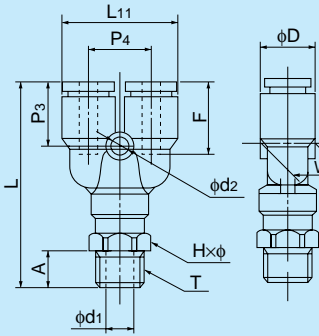


●Millimeter size type

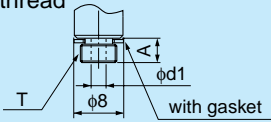
Product number	Applicable tube outer diameter (mm)	T Thread size (R,M)	L ₁ (mm)	L ₂ (mm)	L ₆ (mm)	L ₇ (mm)	L ₈ (mm)	A (mm)	F Tube insertion length (mm)	H×φ Width across flat (mm)	D (mm)	d ₁ (mm)	Min. inner diameter (mm)	Effective cross-sectional area (mm ²)	Weight (g)
EST4-M5-C1S	4	M5×0.8	17.7	20.2	17.7	37.9	23.2	4.0	14	10.0×11.0	10.0	2.0	2.0	3.0	8.0
* EST4-R1/8-C1S	4	R1/8	17.7	23.7	17.7	40.4	23.2	9.0	14	10.0×11.0	10.0	5.0	3.0	4.0	10.0
EST6-M5-C1S	6	M5×0.8	18.9	27.7	18.9	41.6	25.4	4.0	15	12.0×13.0	13.0	2.0	2.0	3.5	12.0
* EST6-R1/8-C1S	6	R1/8	18.9	26.2	18.9	44.1	25.4	9.0	15	12.0×13.0	13.0	4.5	4.5	12.0	14.0
* EST6-R1/4-C1S	6	R1/4	18.9	30.2	18.9	48.1	26.6	12.0	15	14.0×15.4	13.0	7.0	4.5	12.0	21.0
* EST8-R1/8-C1S	8	R1/8	21.1	29.2	21.1	48.3	28.8	9.0	16	14.0×15.4	15.0	6.0	6.0	18.5	18.0
* EST8-R1/4-C1S	8	R1/4	21.1	31.2	21.1	52.3	28.8	12.0	16	14.0×15.4	15.0	6.5	6.5	23.0	24.0
* EST10-R1/4-C1S	10	R1/4	25.0	37.2	25.0	62.2	34.3	12.0	19	17.0×18.5	18.0	8.0	8.0	34.5	34.0
* EST10-R3/8-C1S	10	R3/8	25.0	37.2	25.0	62.2	34.3	14.0	19	17.0×18.5	18.0	9.0	8.0	37.0	40.0
* EST12-R3/8-C1S	12	R3/8	26.7	38.7	26.7	65.4	37.2	14.0	20	19.0×21.0	20.5	10.0	10	43.0	48.0
* EST12-R1/2-C1S	12	R1/2	26.7	41.7	26.7	68.4	38.7	16.0	20	22.0×24.0	20.5	12.0	9.5	43.0	65.0

*Made to order

Y joint



M thread



●Millimeter size type

Product number	Applicable tube outer diameter (mm)	T Thread size (R,M)	L (mm)	L ₁₁ (mm)	A (mm)	F Tube insertion length (mm)	H×φ Width across flat (mm)	P ₃ (mm)	P ₄ (mm)	W (mm)	D (mm)	d ₁ (mm)	d ₂ (mm)	Min. inner diameter (mm)	Effective cross-sectional area (mm ²)	Weight (g)
EY3-M5-C1S	3	M5×0.8	26.2	13.0	3.5	11	7.0×7.7	10.9	7.0	6.0	6.3	2.5	2.0	2.0	—	—
EY4-M5-C1S	4	M5×0.8	40.9	20.7	4.0	14	10.0×11.0	13.9	11.0	9.7	10.0	2.0	3.2	2.0	2.0	9.0
* EY4-R1/8-C1S	4	R1/8	40.9	20.7	9.0	14	10.0×11.0	13.9	11.0	9.7	10.0	5.0	3.2	3.0	3.5	11.0
EY6-M5-C1S	6	M5×0.8	44.2	20.7	4.0	15	12.0×13.0	15.2	12.2	12.5	13.0	2.0	4.2	2.0	2.5	12.0
* EY6-R1/8-C1S	6	R1/8	46.2	24.7	9.0	15	12.0×13.0	15.2	12.2	12.5	13.0	4.5	4.2	4.5	9.0	15.0
* EY6-R1/4-C1S	6	R1/4	48.6	24.7	12.0	15	14.0×15.4	15.2	12.2	12.5	13.0	7.0	4.2	4.5	9.0	22.0
* EY8-R1/8-C1S	8	R1/8	51.7	28.7	9.0	16	14.0×15.4	16.8	14.2	14.5	15.0	6.0	4.2	6.0	17.5	20.0
* EY8-R1/4-C1S	8	R1/4	51.7	28.7	12.0	16	14.0×15.4	16.8	14.2	14.5	15.0	6.5	4.2	6.5	20.0	25.0
* EY10-R1/4-C1S	10	R1/4	59.7	35.0	12.0	19	17.0×18.5	18.7	17.5	17.5	18.0	8.0	4.2	8.0	27.5	33.0
* EY10-R3/8-C1S	10	R3/8	59.7	35.0	14.0	19	17.0×18.5	18.7	17.5	17.5	18.0	9.0	4.2	8.0	28.0	41.0
* EY12-R3/8-C1S	12	R3/8	67.2	40.0	14.0	20	19.0×21.0	20.7	20.0	20.0	20.5	10.0	4.2	10	40.0	52.0
* EY12-R1/2-C1S	12	R1/2	70.2	40.0	16.0	20	22.0×24.0	20.7	20.0	20.0	20.5	12.0	4.2	9.5	40.0	70.0

*Made to order

●Inch size type

Product number	Applicable tube outer diameter (inch)	T Thread size (M)	L (mm)	L ₁₁ (mm)	A (mm)	F Tube insertion length (mm)	H×φ Width across flat (mm)	P ₃ (mm)	P ₄ (mm)	W (mm)	D (mm)	d ₁ (mm)	d ₂ (mm)	Min. inner diameter (mm)	Effective cross-sectional area (mm ²)	Weight (g)
EY1/8-M5-C1S	1/8	M5×0.8	27.0	17.0	3.5	11	8.0×8.8	11.5	9.0	8.0	8.0	2.5	3.2	2.5	—	—

Panel touch connector



●Millimeter size type

Product number	Applicable tube outer diameter (mm)	L (mm)	F Tube insertion length (mm)	H ₄ (mm)	T ₁ Recommended panel hole diameter (mm)	t Max. panel thickness (mm)	Washer outer diameter (mm)	Washer thickness (mm)	Min. inner diameter (mm)	Effective cross-sectional area (mm ²)	Weight (g)
EPC3-C1S	3	24.8	11	12.0	9.0	4.5	15.0	1.6	2.0	2.5	—

●Inch size type

Product number	Applicable tube outer diameter (inch)	L (mm)	F Tube insertion length (mm)	H ₄ (mm)	T ₁ Recommended panel hole diameter (mm)	t Max. panel thickness (mm)	Washer outer diameter (mm)	Washer thickness (mm)	Min. inner diameter (mm)	Effective cross-sectional area (mm ²)	Weight (g)
EPC1/8-C1S	1/8	25.5	11	14.0	11.0	5.5	18.0	1.6	2.5	—	—

