

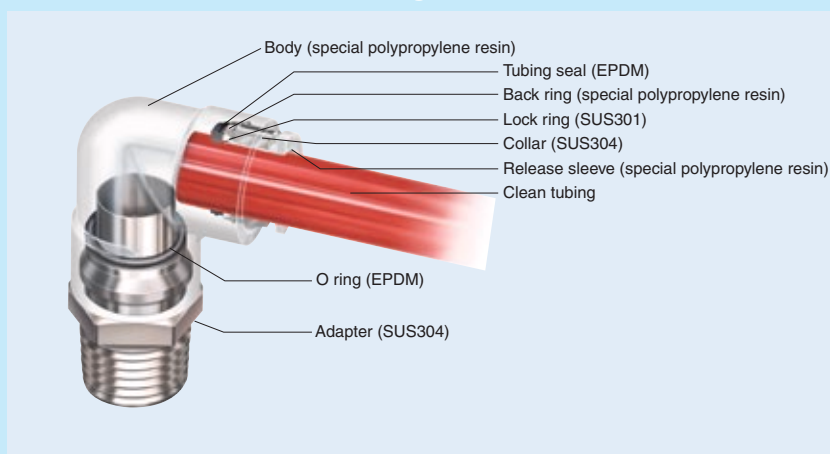
Chemifit™ C1S Series

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

Features

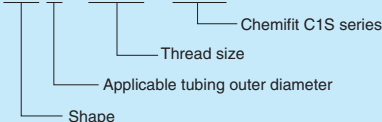
- **Made in oil-free process**
Assembled after cleaning each part in a clean room. No oil or fat is used in the sealing materials.
- **PushOne connection of tubing**
The tubes can be connected without using a jig or tools.
- **SUS304 thread**
High thread strength.
- **Double clean package**
Each fitting is packed in a clean room and put in a zipper sealed bag.
- **Easy directional setting of tubing**
The direction of elbows, tees, etc., can be decided at the time of piping installation.

Cross-sectional structure diagram



Product number example

EL 6 - R1/4 - C1S



Distinction of millimeter/inch sizes

- The tubing 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

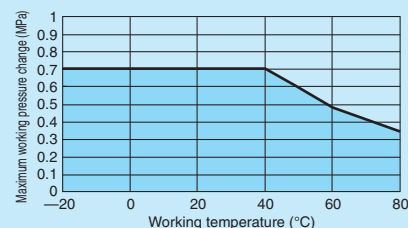
- ☞ Contact us for various chemical liquids.
- ☞ See "Combination List of Tubing and Fitting" on page 8.

Pressure condition

Maximum working pressure: 0.7MPa (at 20°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.

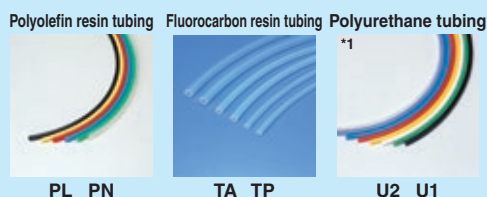


Handling instructions

- ⚠ **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 tubing insertion port (sleeve end) of the fitting. Keep the tubing straight for twice as long as the tubing diameter from the insertion port.

- ☞ See page 34 for the common handling instructions for fittings.

Applicable tubing



Related products and product introduction



Reference

Instruction manualP.176
Chemical resistance specification tableP.198
Effective sectional area ..P.168
Negative-pressure performance listP.169

(*1) Combinatory use of U2 or U1 tubing and Chemifit C1S series mixes general and clean type performances. When using them together in a clean environment, be aware of how this could lower the cleanliness level.

Chemifit™ C1S Series

Shape list



See Chemifit C1 series for union type shape.

Tubing

Clean tubing

Processed tubing

PushOne fitting

QuickSeal fitting

Clean fitting/
Chemifit

Bamboo-shoot fitting

Control switch/
Detachable series

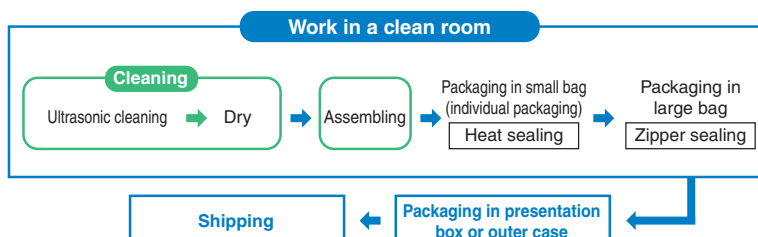
Jig/Tool/
Accessory

Technical information

Reference

Oil-free processing, Clean wrapping and packaging

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



● High-barrier sheet packaging available

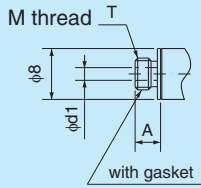
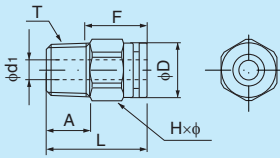
What is high-barrier sheet packaging?

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 provides high-barrier bags with a high gas barrier performance also for nitrogen sealing or atmospheric sealing.



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

Connector



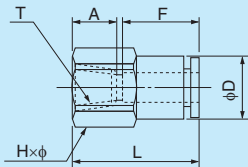
●Millimeter size type

Product number	Applicable tubing outer diameter (mm)	T Thread size (R,M)	L (mm)	A (mm)	F Tubing insertion length (mm)	H x phi Width across flat (mm)	D (mm)	d1 (mm)	Effective sectional area (mm ²)	Weight (g)
EC3-M5-C1S	3	M5x0.8	15.9	3.5	11	7.0x7.7	5.5	2.0	2.0	2.0
EC4-M5-C1S	4	M5x0.8	19.4	4.0	14	10.0x11.0	10.0	2.0	3.0	6.0
EC4-R1/8-C1S	4	R1/8	19.4	8.0	14	10.0x11.0	10.0	2.5	4.0	7.0
EC6-M5-C1S	6	M5x0.8	23.2	4.0	15	12.0x13.0	12.0	2.0	3.5	9.0
EC6-R1/8-C1S	6	R1/8	21.6	8.0	15	12.0x13.0	12.0	4.0	10.5	9.0
EC6-R1/4-C1S	6	R1/4	24.6	11.0	15	14.0x15.4	12.0	4.0	10.5	18.0
EC8-R1/8-C1S	8	R1/8	28.2	9.0	16	14.0x15.4	13.9	6.0	20.0	14.0
EC8-R1/4-C1S	8	R1/4	25.2	11.0	16	14.0x15.4	13.9	6.0	25.0	16.0
EC10-R1/4-C1S	10	R1/4	28.1	11.0	19	17.0x18.5	16.9	8.0	40.0	21.0
EC10-R3/8-C1S	10	R3/8	29.1	12.0	19	17.0x18.5	16.9	8.0	40.0	29.0
EC12-R3/8-C1S	12	R3/8	30.0	12.0	20	19.0x21.0	19.0	10.0	50.0	31.0
EC12-R1/2-C1S	12	R1/2	33.0	15.0	20	22.0x24.0	19.0	10.0	50.0	58.0

●Inch size type

Product number	Applicable tubing outer diameter (inch)	T Thread size (M)	L (mm)	A (mm)	F Tubing insertion length (mm)	H x phi Width across flat (mm)	D (mm)	d1 (mm)	Effective sectional area (mm ²)	Weight (g)
EC1/8-M5-C1S	1/8	M5x0.8	16.2	3.5	11	8.0x8.8	8	2.5	—	—

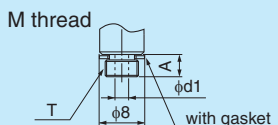
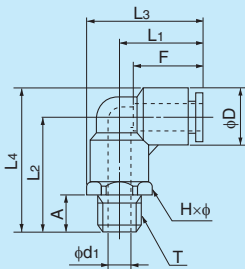
Internal connector



●Millimeter size type

Product number	Applicable tubing outer diameter (mm)	T Thread size (RC)	L (mm)	A (mm)	F Tubing insertion length (mm)	H x phi Width across flat (mm)	D (mm)	Effective sectional area (mm ²)	Weight (g)
EFC4-R1/8-C1S	4	RC1/8	23.9	8.7	14	14.0x15.4	10.0	4.0	16.0
EFC6-R1/8-C1S	6	RC1/8	25.0	8.7	15	14.0x15.4	12.0	10.5	17.0
EFC6-R1/4-C1S	6	RC1/4	29.5	13.0	15	17.0x18.5	12.0	10.5	26.0
EFC8-R1/4-C1S	8	RC1/4	30.9	13.0	16	17.0x18.5	13.9	25.0	28.0
EFC10-R1/4-C1S	10	RC1/4	33.9	13.0	19	17.0x18.5	16.9	40.0	34.0
EFC10-R3/8-C1S	10	RC3/8	34.4	13.5	19	22.0x24.5	16.9	40.0	50.0
EFC10-R1/2-C1S	10	RC1/2	38.4	17.5	19	24.0x26.5	16.9	40.0	56.0
EFC12-R3/8-C1S	12	RC3/8	35.3	13.5	20	22.0x24.5	19.0	50.0	50.0
EFC12-R1/2-C1S	12	RC1/2	39.3	17.5	20	24.0x26.5	19.0	50.0	58.0

90 degree elbow



●Millimeter size type

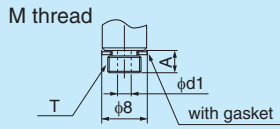
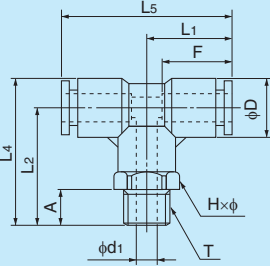
Product number	Applicable tubing outer diameter (mm)	T Thread size (R,M)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	A (mm)	F Tubing insertion length (mm)	H x phi Width across flat (mm)	D (mm)	d1 (mm)	Min. inner diameter (mm)	Effective sectional area (mm ²)	Weight (g)
EL3-M5-C1S	3	M5x0.8	12.6	13.0	16.4	16.2	3.5	11	7.0x7.7	6.3	2.5	1.5	1.5	—
EL4-M5-C1S	4	M5x0.8	17.7	20.2	23.2	25.2	4.0	14	10.0x11.0	10.0	2.0	2.0	3.0	7.0
EL4-R1/8-C1S	4	R1/8	17.7	22.7	23.2	27.7	8.0	14	10.0x11.0	10.0	5.0	3.0	4.0	9.0
EL6-M5-C1S	6	M5x0.8	18.9	22.7	25.4	29.2	4.0	15	12.0x13.0	13.0	2.0	2.0	3.5	10.0
EL6-R1/8-C1S	6	R1/8	18.9	25.2	25.4	31.7	8.0	15	12.0x13.0	13.0	5.0	4.5	12.0	18.0
EL6-R1/4-C1S	6	R1/4	18.9	29.2	26.6	35.7	11.0	15	14.0x15.4	13.0	7.0	4.5	12.0	18.0
EL8-R1/8-C1S	8	R1/8	21.1	27.2	28.8	34.7	8.0	16	14.0x15.4	15.0	6.5	6.5	18.5	15.0
EL8-R1/4-C1S	8	R1/4	21.1	31.2	28.8	38.7	12.0	16	14.0x15.4	15.0	6.5	6.5	23.0	20.0
EL10-R1/4-C1S	10	R1/4	25.0	37.2	34.3	46.2	12.0	19	17.0x18.5	18.0	8.0	8.0	34.5	27.0
EL10-R3/8-C1S	10	R3/8	25.0	37.2	34.3	46.2	14.0	19	17.0x18.5	18.0	9.0	8.0	37.0	33.0
EL12-R3/8-C1S	12	R3/8	26.7	38.7	37.2	49.0	14.0	20	19.0x21.0	20.5	10.0	10.0	43.0	39.0
EL12-R1/2-C1S	12	R1/2	26.7	41.7	38.7	52.0	16.0	20	22.0x24.0	20.5	12.0	9.5	43.0	56.0

●Inch size type

Product number	Applicable tubing outer diameter (inch)	T Thread size (M)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	A (mm)	F Tubing insertion length (mm)	H x phi Width across flat (mm)	D (mm)	d1 (mm)	Min. inner diameter (mm)	Effective sectional area (mm ²)	Weight (g)
EL1/8-M5-C1S	1/8	M5x0.8	14.7	12.0	19.1	16.0	3.5	11	8.0x8.8	8	2.5	2.5	—	—

Tubing
Clean tubing
Processed tubing
PushOne fitting
QuickSeal fitting
Clean fitting/ Chemifit
Bamboo-shoot fitting
Control switch/ Detachable series
Jig/Tool/ Accessory
Technical information
Reference

Tee



●Millimeter size type

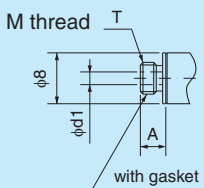
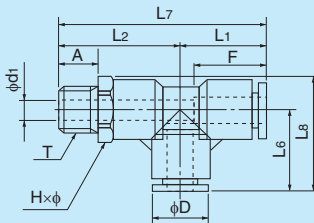
Product number	Applicable tubing outer diameter (mm)	T Thread size (R,M)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	A (mm)	F Tubing insertion length (mm)	H×φ Width across flat (mm)	D (mm)	d1 (mm)	Min. inner diameter (mm)	Effective sectional area (mm ²)	Weight (g)
ET3-M5-C1S	3	M5×0.8	12.6	13.0	16.2	25.1	3.5	11	7.0×7.7	6.3	2.5	1.5	1.5	2.0
ET4-M5-C1S	4	M5×0.8	17.7	20.2	25.2	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	22.7	27.7	35.3	8.0	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	29.2	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	25.2	31.7	37.9	8.0	15	12.0×13.0	13.0	5.0	4.5	12.0	14.0
ET6-R1/4-C1S	6	R1/4	18.9	29.2	35.7	37.9	11.0	15	14.0×15.4	13.0	7.0	4.5	12.0	21.0
ET8-R1/8-C1S	8	R1/8	21.1	27.2	34.7	42.2	8.0	16	14.0×15.4	15.0	6.5	6.5	18.5	18.0
ET8-R1/4-C1S	8	R1/4	21.1	31.2	38.7	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	46.2	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	46.2	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	49.0	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	52.0	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 tubing outer diameter (inch)	T Thread size (M)	L1 (mm)	L2 (mm)	L4 (mm)	L5 (mm)	A (mm)	F Tubing insertion length (mm)	H×φ Width across flat (mm)	D (mm)	d1 (mm)	Min. inner diameter (mm)	Effective sectional area (mm ²)	Weight (g)
ET1/8-M5-C1S	1/8	M5×0.8	15.2	12.0	16.0	30.4	3.5	11	8×8.8	8.0	2.5	2.5	13.0	5.0

Service tee



●Millimeter size type

Product number	Applicable tubing outer diameter (mm)	T Thread size (R,M)	L1 (mm)	L2 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	A (mm)	F Tubing insertion length (mm)	H×φ Width across flat (mm)	D (mm)	d1 (mm)	Min. inner diameter (mm)	Effective sectional area (mm ²)	Weight (g)
EST4-M5-C1S	4	M5×0.8	17.7	20.2	17.7	38.0	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	22.7	17.7	40.4	23.2	8.0	14	10.0×11.0	10.0	5.0	3.0	4.0	10.0
EST6-M5-C1S	6	M5×0.8	18.9	22.7	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	25.2	18.9	44.1	25.4	8.0	15	12.0×13.0	13.0	5.0	4.5	12.0	14.0
EST6-R1/4-C1S	6	R1/4	18.9	29.2	18.9	48.1	26.6	11.0	15	14.0×15.4	13.0	7.0	4.5	12.0	21.0
EST8-R1/8-C1S	8	R1/8	21.1	27.2	21.1	48.3	28.8	8.0	16	14.0×15.4	15.0	6.5	6.5	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

Tubing

Clean tubing

Processed tubing

PushOne fitting

QuickSeal fitting

Clean fitting/ Chemifit

Bamboo-shoot fitting

Control switch/ Detachable series

Jig/Tool/ Accessory

Technical information

Reference

Y joint



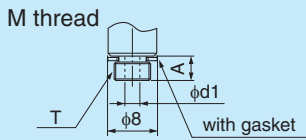
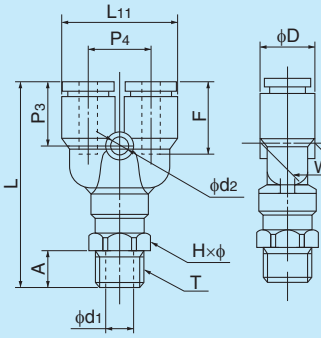
●Millimeter size type

Product number	Applicable tubing outer diameter (mm)	Thread size (R,M)	L (mm)	L ₁₁ (mm)	A (mm)	F Tubing 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 sectional area (mm ²)	Weight (g)
EY3-M5-C1S	3	M5×0.8	26.2	13.3	3.5	11	7.0×7.7	10.9	7.0	6.0	6.3	2.5	2.0	1.5	—	—
EY4-M5-C1S	4	M5×0.8	38.4	21.0	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	21.0	8.0	14	10.0×11.0	13.9	11.0	9.7	10.0	5.0	3.2	3.5	3.5	11.0
EY6-M5-C1S	6	M5×0.8	41.7	25.2	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	44.2	25.2	8.0	15	12.0×13.0	15.2	12.2	12.5	13.0	5.0	4.2	4.5	9.0	15.0
EY6-R1/4-C1S	6	R1/4	48.2	25.2	11.0	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	48.3	29.2	8.0	16	14.0×15.4	16.8	14.2	14.5	15.0	6.5	4.2	6.5	17.5	20.0
EY8-R1/4-C1S	8	R1/4	52.3	29.2	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	60.2	35.5	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	60.2	35.5	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	64.2	40.5	14.0	20	19.0×21.0	20.7	20.0	20.0	20.5	10.0	4.2	10.0	40.0	52.0
EY12-R1/2-C1S	12	R1/2	67.2	40.5	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 tubing outer diameter (inch)	Thread size (M)	L (mm)	L ₁₁ (mm)	A (mm)	F Tubing 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 sectional area (mm ²)	Weight (g)
EY1/8-M5-C1S	1/8	M5×0.8	26.4	17.0	3.5	11	8.0×8.8	11.7	9.0	8.0	8.0	2.5	3.2	2.5	—	—



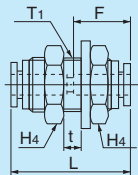
Panel touch connector

●Millimeter size type

Product number	Applicable tubing outer diameter (mm)	L (mm)	F Tubing 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 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 tubing outer diameter (inch)	L (mm)	F Tubing 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 sectional area (mm ²)	Weight (g)
EPC1/8-C1S	1/8	26.1	11	14.0	11.0	5.5	18.0	1.6	2.5	—	—



Tubing
Clean tubing
Processed tubing
Push One fitting
Quick Seal fitting
Clean fitting/Chemifit
Bamboo-shoot fitting
Control switch/Detachable series
Jig/Tool/Accessory
Technical information
Reference

Reference

Technical
information

Jig/Tool/
Accessory

Control switch/
Detachable
series

Bambo-
shoot fitting

Clean fitting/
Chemifit

QuickSeal
fitting

PushOne
fitting

Processed
tubing

Clean
tubing

Tubing