Speed Controller with One-touch Fitting
Stainless Steel Type `Push-lock Type`
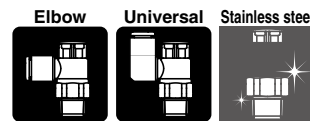
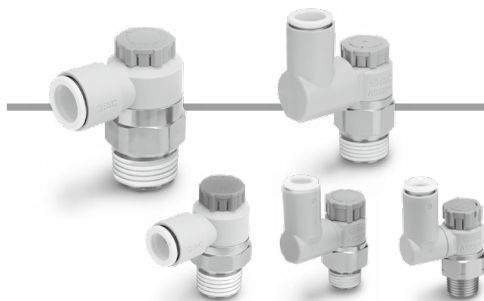### Elbow Type/Universal Type
AS-FG Series

In-line Type
AS-FG Series

`RoHS`

This product (standard product) is a secondary battery compatible product. For details on specifications and dimensions, refer to the **Web Catalog**.

Elbow **Universal** **Stainless steel**

How to Order

● **Applicable tubing O.D.** *1

Metric size		Inch size	
02	ø2	01	ø1/8"
23	ø3.2 *2	03	ø5/32"
04	ø4	07	ø1/4"
06	ø6		

*1 For selecting applicable tubing O.D., refer to the "Model" on the **Web Catalog**. The color of the release button is white (metric, inch).
*2 Use ø1/8" tube.

● **Body size**

1	M5 x 0.8 10-32 UNF

● **Port size**

M5	M5 x 0.8
U10/32	10-32 UNF

Body size 1 **AS 1 2 0 1 FG – M5 – 06 A**

Body size 2/3/4 **AS 2 2 0 1 FG – ☐ 01 – 06 S A**

● **Push-lock type**

● **Body size**

2	1/8, 1/4
3	3/8
4	1/2

● **Type**

2	Elbow
3	Universal

● **Control type** *1

0	Meter-out
1	Meter-in

*1 Meter-out and meter-in types can be visually identified by color of the knob.
Meter-out: Gray
Meter-in: Light blue

Stainless steel type (Stainless steel 303)
* The material can be visually identified by color of the release button.
Stainless steel type: White
* White is also used for inch size.

● **Thread type**

Nil	R
N	NPT
G	G

● **Port size**

01	1/8
02	1/4
03	3/8
04	1/2

● **Applicable tubing O.D.** *1

Metric size		Inch size *3	
23	ø3.2 *2	01	ø1/8"
04	ø4	03	ø5/32"
06	ø6	07	ø1/4"
08	ø8	09	ø5/16"
10	ø10	11	ø3/8"
12	ø12	13	ø1/2"
16	ø16		

● **Seal method**

Nil	Without sealant
S	With sealant

* Face seal method is used for the G thread type.
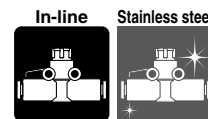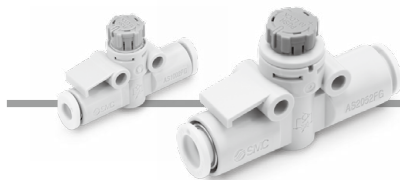Select "Nil/Without sealant."
Example) AS2201FG-G01-06A

*1 For selecting applicable tubing O.D., refer to the "Model" on the **Web Catalog**. The color of the release button is white (metric, inch).
*2 Use ø1/8" tube.
*3 Only the metric size is available for the G thread type.

In-line **Stainless steel**

How to Order

AS 200 2 FG – 06 A

● **Push-lock type**

● **Body size**

100	M5 standard
200	1/8 standard
205	1/4 standard
300	3/8 standard
400	1/2 standard

With One-touch fittings

Stainless steel type (Stainless steel 303)
* The material can be visually identified by color of the release button.
Stainless steel type: White
* White is also used for inch size.

● **Applicable tubing O.D.** *1

Metric size		Inch size	
23	ø3.2 *2	01	ø1/8"
04	ø4	03	ø5/32"
06	ø6	07	ø1/4"
08	ø8	09	ø5/16"
10	ø10	11	ø3/8"
12	ø12	13	ø1/2"

*1 For selecting applicable tubing O.D., refer to the "Model" on the **Web Catalog**.
*2 Use ø1/8" tubing.

SMC

Speed Controller with Indicator
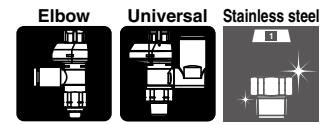## Stainless Steel Series
Elbow Type/Universal Type
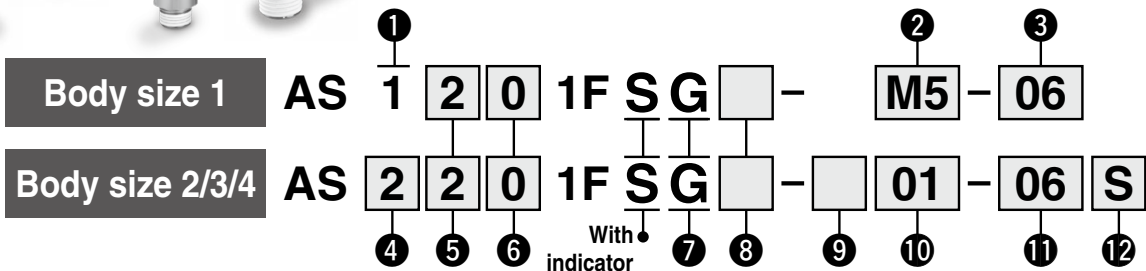# *AS-FSG Series*
In-line Type
AS-FSG Series

This product (standard product) is a secondary battery compatible product. For details on specifications and dimensions, refer to the **Web Catalog**.

RoHS

Elbow | Universal | Stainless steel

How to Order

Body size 1   AS **1** 2 0 1F SG ☐ – M5 – 06

Body size 2/3/4   AS 2 2 0 1F SG ☐ – ☐ 01 – 06 S

With indicator

❶ **Body size**

| 1 | M5 x 0.8 / 10-32 UNF |

❷ **Port size**

| M5 | M5 x 0.8 |
| U10/32 | 10-32 UNF |

❻ **Control type**[*1]

| 0 | Meter-out |
| 1 | Meter-in |

*1 Meter-out and meter-in types can be visually identified by color of the knob.
Meter-out: Gray
Meter-in: Light blue

❸ **Applicable tubing O.D.**[*1]

Metric size		Inch size	
02	ø2	01	ø1/8"
23	ø3.2[*2]	03	ø5/32"
04	ø4	07	ø1/4"
06	ø6		

*1 For selecting applicable tubing O.D., refer to the "Model" on the **Web Catalog**. Metric size and inch size types can be visually identified by color of the release button.
Stainless steel type: White
White is also used for inch size.
*2 Use ø1/8" tubing.

❼ **Stainless steel type**

* Metric size and inch size types can be visually identified by color of the release button.
Stainless steel type: White
* White is also used for inch size.

⑪ **Applicable tubing O.D.**[*1]

Metric size		Inch size[*3]	
23	ø3.2[*2]	01	ø1/8"
04	ø4	03	ø5/32"
06	ø6	07	ø1/4"
08	ø8	09	ø5/16"
10	ø10	11	ø3/8"
12	ø12	13	ø1/2"
16	ø16		

*1 For selecting applicable tubing O.D., refer to the "Model" on the **Web Catalog**.
*2 Use ø1/8" tubing.
*3 Only the metric size is available for the G thread type.

❹ **Body size**

2	1/8, 1/4
3	3/8
4	1/2

❺ **Type**

| 2 | Elbow |
| 3 | Universal |

❾ **Thread type**

Nil	R
N	NPT
G	G

⑩ **Port size**

01	1/8
02	1/4
03	3/8
04	1/2

⑫ **Seal method**

| Nil | Without sealant |
| S | With sealant |

* Face seal type is used for the G thread type.
Select "Nil/Without sealant".
Example) AS2201FSG-G01-06

❽ **Indicator window direction**

		Elbow	Universal
Nil	0° Indicator window	●	—
1	180° Indicator window	●	●
2	90° Indicator window	●	—
3	270° Indicator window	●	—

* Orientation of indicator direction is fixed when manufacturing, and cannot be changed by the user. In addition, the universal type is only available with 180° setting.

In-line | Stainless steel

How to Order

AS 200 2F SG 1 – 06

With indicator

❶ **Body size**

100	M5 standard
200	1/8 standard
205	1/4 standard
300	3/8 standard
400	1/2 standard

❷ **Stainless steel type (Stainless steel 303)**

* The material can be visually identified by color of the release button.
Stainless steel type: White
* White is also used for inch size.

❹ **Applicable tubing O.D.**[*1]

Metric size				Inch size			
23	ø3.2[*2]	08	ø8	01	ø1/8"	09	ø5/16"
04	ø4	10	ø10	03	ø5/32"	11	ø3/8"
06	ø6	12	ø12	07	ø1/4"	13	ø1/2"

*1 For selecting applicable tubing O.D., refer to the "Model" on the **Web Catalog**.
*2 Use ø1/8" tubing.

❸ **Indicator direction**

Nil	0° Indicator window Index plate	2	90° Index plate
1	180° Indicator window Index plate	3	270° Indicator window Index plate

SMC

Clean Speed Controller with One-touch Fitting

AS-FPQ/AS-FPG Series

RoHS

AS-FPG Series

AS-FPQ Series

Speed controllers for clean room use

AS-FPQ: Brass (electroless nickel plated) and AS-FPG: Stainless steel 304 are now available as a series.

Quick Exhaust Valve with One-touch Fittings
25A-AQ240F/340F Series
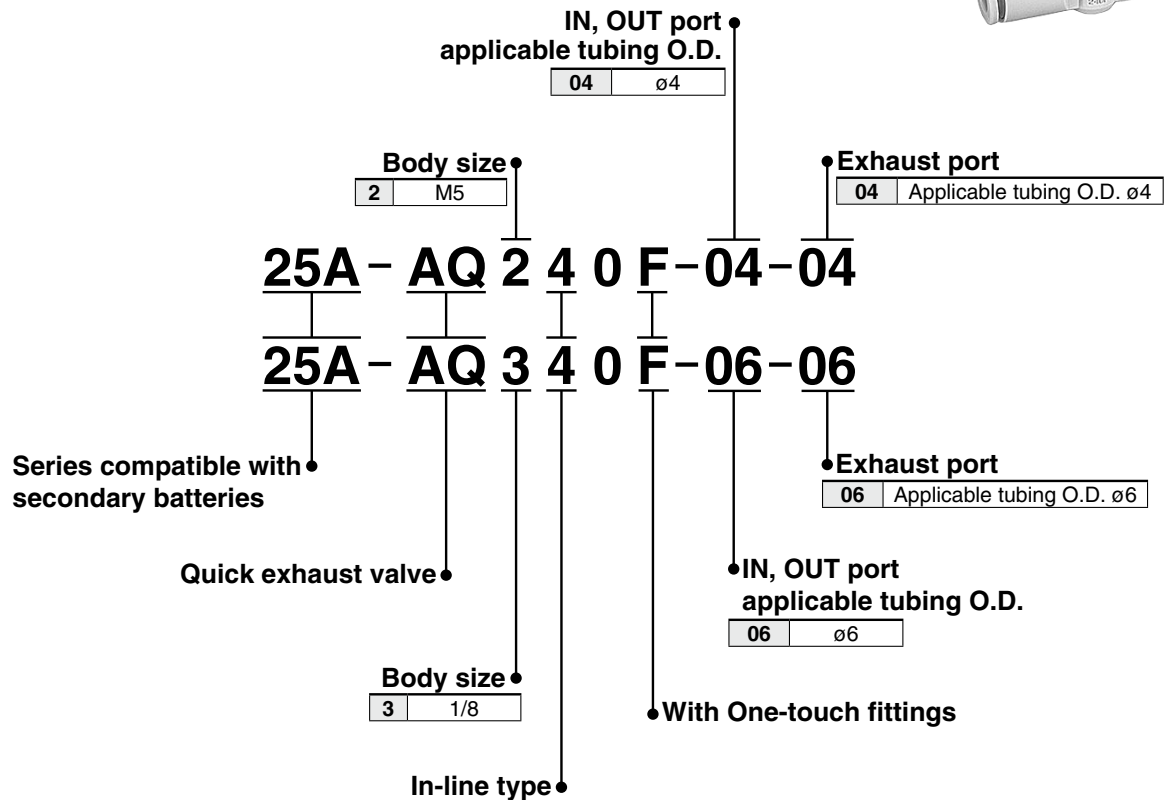
RoHS

How to Order

IN, OUT port applicable tubing O.D.

| 04 | ø4 |

Body size

| 2 | M5 |

Exhaust port

| 04 | Applicable tubing O.D. ø4 |

25A – AQ 2 4 0 F – 04 – 04

25A – AQ 3 4 0 F – 06 – 06

Series compatible with secondary batteries

Quick exhaust valve

Body size

| 3 | 1/8 |

In-line type

Exhaust port

| 06 | Applicable tubing O.D. ø6 |

IN, OUT port applicable tubing O.D.

| 06 | ø6 |

With One-touch fittings

∗ The 25A- series specifications and dimensions are the same as those of the standard model.

For details, refer to the Web Catalog.

SMC

Check Valve
with One-touch Fittings
25A-AKH Series

RoHS

How to Order

Straight type   **25A** – **AKH** **04** – **00**

Series compatible with
secondary batteries

Applicable tubing O.D.
Metric size

04	ø4
06	ø6
08	ø8
10	ø10
12	ø12

∗ The 25A- series specifications and dimensions
  are the same as those of the standard model.

For details, refer to the Web Catalog.

SMC

Rotary One-touch Fittings
25A-KX Series
High Speed Type

RoHS

How to Order

25A–KX H 06 – 01S

Series compatible with secondary batteries

Rotary One-touch fittings High speed type

Model

Symbol	Model
H	Male connector
L	Male elbow

Bore size

	Symbol	Size
Thread connection	**M5**	M5 x 0.8
	01S	R1/8
	02S	R1/4
	G01	G1/8
	G02	G1/4

Applicable tubing O.D.

Symbol	Size
04	ø4
06	ø6
08	ø8
10	ø10

Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	ø4, ø6, ø8, ø10

KX Series

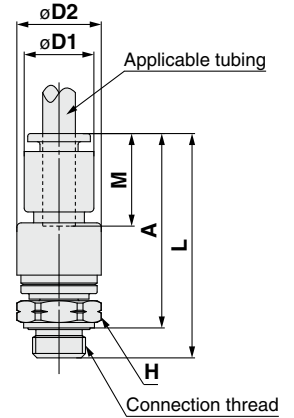| Model	Connection thread	Applicable tubing O.D. [mm]			
		ø4	ø6	ø8	ø10
Male connector **25A-KXH**	M5 x 0.8	●	●		
	R 1/8		●	●	
	R 1/4		●	●	●
	G 1/8		●	●	●
	G 1/4		●	●	●
Male elbow **25A-KXL**	M5 x 0.8	●	●		
	R 1/8		●	●	
	R 1/4		●	●	●
	G 1/8		●	●	●
	G 1/4		●	●	●

∗ The 25A- series specifications are the same as those of the standard model.
The G thread dimensions vary from those of the standard product. Refer to page 258-2 for details.

**For details, refer to the Web Catalog.**

SMC

Male Connector: KXH (High speed)

Applicable tubing O.D. [mm]	Connection thread	Model	H (Width across flats)	øD1	øD2	L	A	M	Min. port size	Effective area [mm²]		Weight [g]
										Nylon	Urethane	
6	G1/8	25A-KXH06-G01	14	12.8	15.5	41.2	35.7	17	4	10.4	10.4	21
8	G1/8	25A-KXH08-G01	17	15.2	18	46.1	40.6	18.5	6	26.1	18	30
10	G1/4	25A-KXH10-G02	22	18.5	24.5	55.1	48.6	21	7	36.3	29.5	67

Male Elbow: KXL (High speed)

Applicable tubing O.D. [mm]	Connection thread	Model	H (Width across flats)	øD1	øD2	L1	L2	A	M	Min. port size	Effective area [mm²]		Weight [g]
											Nylon	Urethane	
6	G1/8	25A-KXL06-G01	14	12.8	15.5	24	24.5	25.4	17	4	8.6	8.6	21
8	G1/8	25A-KXL08-G01	17	15.2	18	27	28.5	30.6	18.5	6	21.6	14.9	30
10	G1/4	25A-KXL10-G02	22	18.5	24.5	32	35.2	37.9	21	7	30.5	25	68
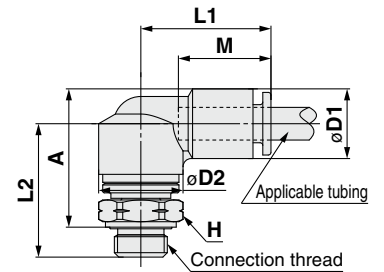
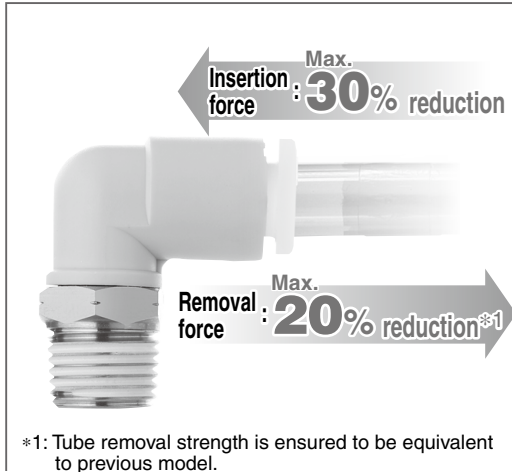# One-touch Fittings Stainless Steel

KQ2-G Series

RoHS

Metal material: Stainless steel 303

Improved tube insertion/removal

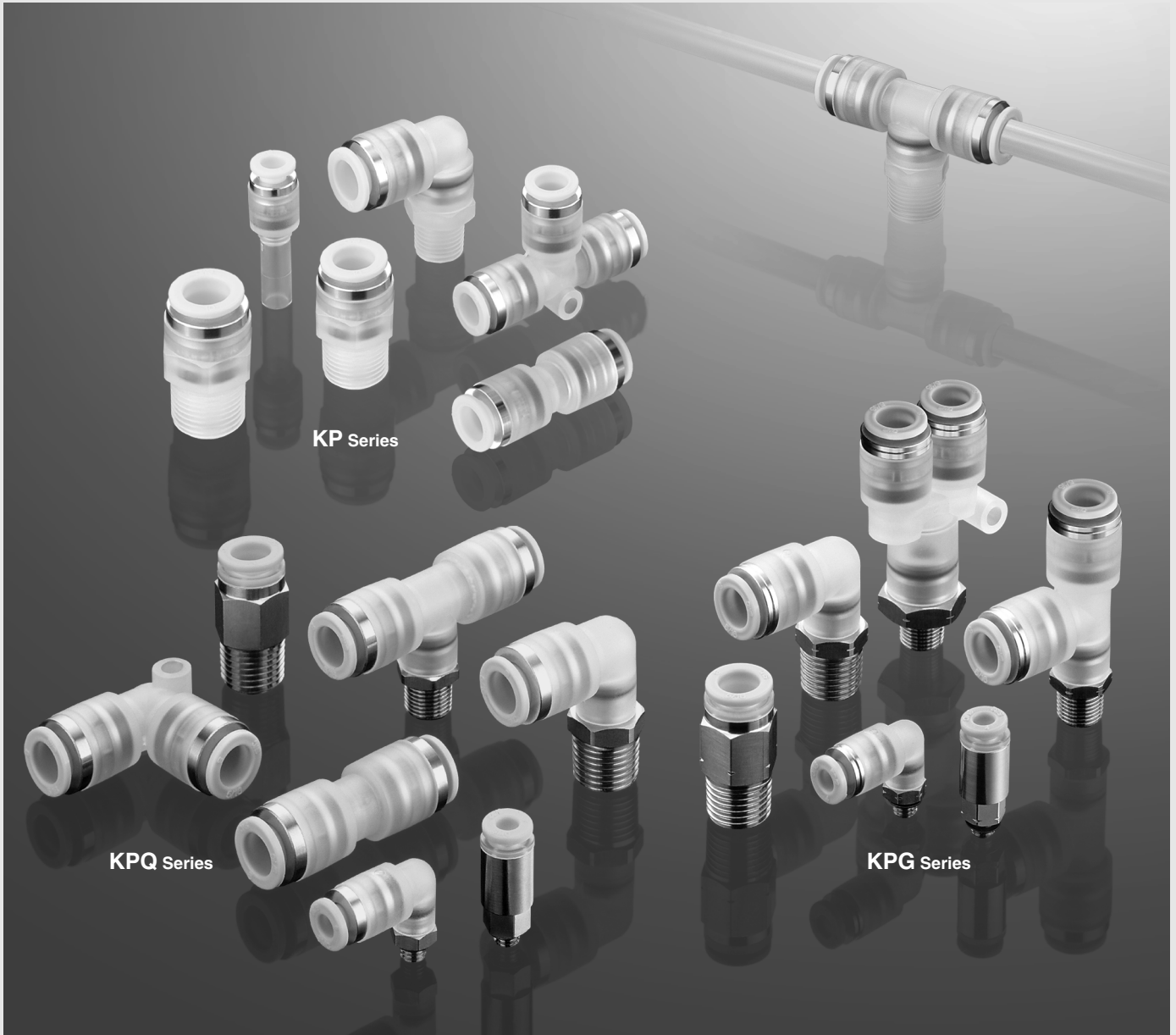Insertion force : Max. **30**% reduction

Removal force : Max. **20**% reduction*1

*1: Tube removal strength is ensured to be equivalent to previous model.

Compact and lightweight

Dimensions Height **24**%*1 shorter

Weight **57**%*1 lighter

Dimensions Length **23**%*1 shorter

15.5
19.4
ø10.4

New **KQ2-G**

20
25.5
ø12.8

Previous model **KG**

*1: Previous KG series model: Male elbow, applicable tubing O.D. ø6, connection thread R1/8
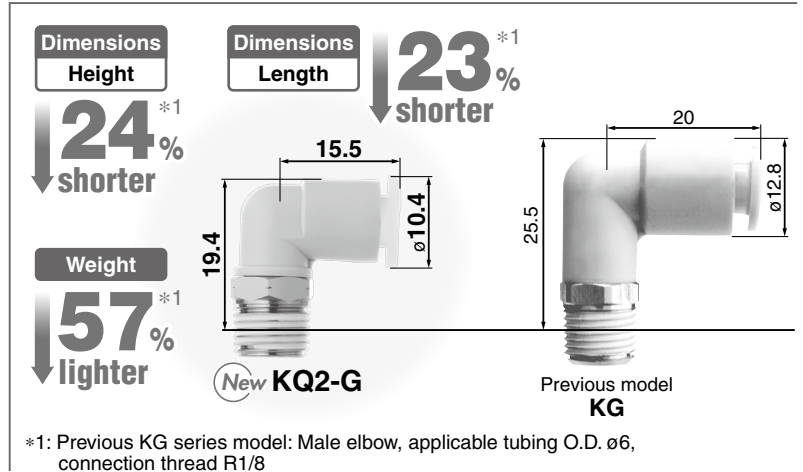
Body type: total of **27** models

SMC

Clean One-touch Fittings

KP/KPQ/KPG Series

RoHS

KP Series

KPQ Series

KPG Series

Stainless Steel 316 Fittings

KQG2 Series

RoHS

Compact and Light

Dimensions Approx.**30**%
∗ KQG2L06-01S

Weight Approx.**62**%
∗ KQG2L06-01S

Shorter

Lighter

New
KQG2L06-01S
15.9 mm
10.1 g

Previous model
KQGL06-01S
22.1 mm
26 g
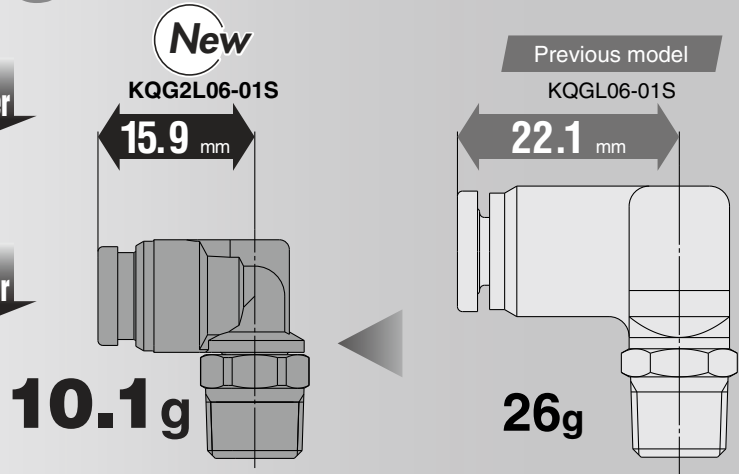
Material

Stainless steel 316

Seal parts: Special FKM

Fluid temperature

−5 to **150** °C

Applicable tubing

Metric size, Inch size

Connection thread

M, R, Rc, UNF, NPT

○ Grease-free/Can be used with steam.

○ Certified to meet current Food Sanitation Law standards.
(Component materials have met apparatuses and container-packages standards.)
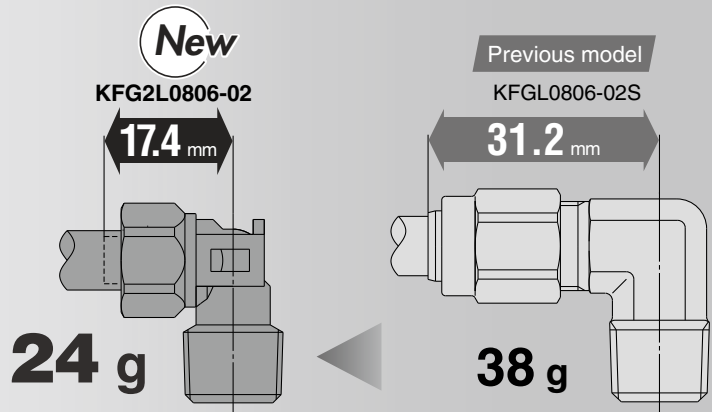
SMC
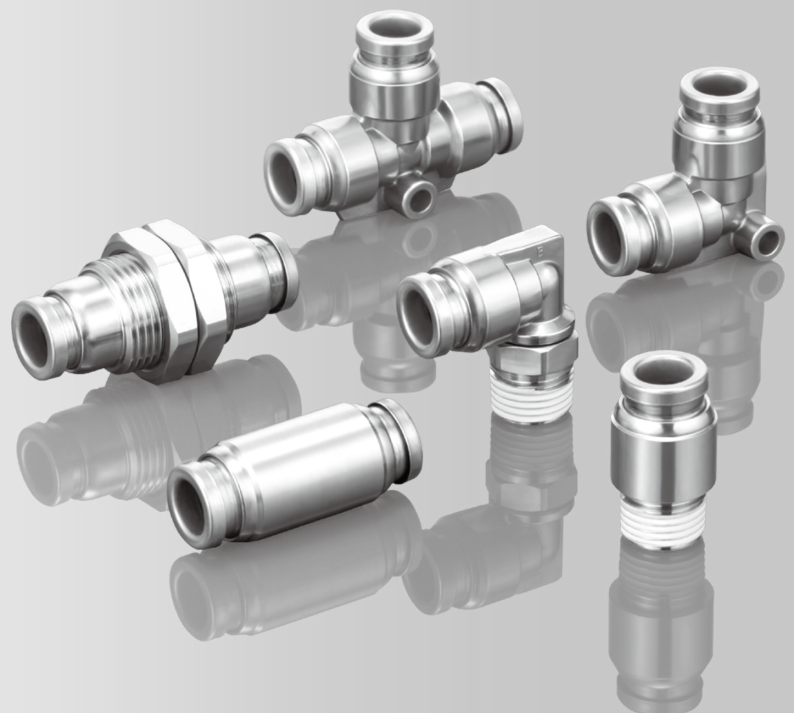
Stainless Steel 316 Fittings

KFG2 Series

Compact and Light

Dimensions Approx.**44**% Shorter
∗ KFG2L0806-02

Weight Approx.**37**% Lighter
∗ KFG2L0806-02

New
KFG2L0806-02
17.4 mm
24 g

Previous model
KFGL0806-02S
31.2 mm
38 g

Material

Stainless steel 316

Rubber material is not used.
(Except swivel elbow)

◯ Grease-free/Can be used with steam.

◯ Certified to meet current Food Sanitation Law standards.
(Component materials have met apparatuses and container-packages standards.)
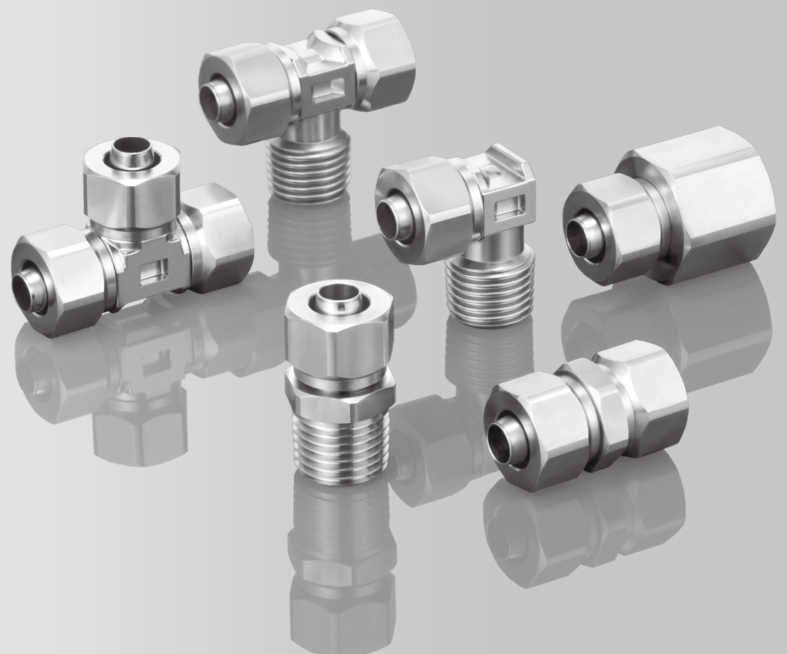
Fluid temperature

−65 to 260°C
(Swivel elbow: −5 to 150°C**)**

Applicable tubing

Metric size, Inch size

Connection thread

R, Rc, NPT

Miniature Fittings
Stainless Steel 316
MS Series

Applicable Tubes: ⌀3.2, ⌀4, ⌀6 Connection Thread: M5, R 1/8

(RoHS)

This product (standard product) is a secondary battery compatible product. For details, refer to the **Web Catalog**.

For use in corrosive environments
Stainless steel 316
Compact piping space
Tube has a large retaining force. Hose nipple assures easy installation and removal.

Line up various types
Possible for special tubing in the same direction. Accepts many types of plastic tubing

Hose nipple and hose elbow
Accepts nylon, soft nylon, and polyurethane tubing.

Made to Order
(Refer to the **Web Catalog** for details.)

Hose nipple

Barb
Configuration for easy insertion into the tube Holds the tube tightly.

Body
Stainless steel 316

Gasket
Low tightening torque Tight seal

Tube
Possible for combination use of nylon tubing and polyurethane tubing.

Cap nut
Certainly hold the tube by manual clamping Easy removal of tube by loosening Stainless steel 316

Barb fitting

Barb
Configuration for easy insertion into the tube Holds the tube tightly.

Body
Stainless steel 316

Tube

Gasket
Low tightening torque Tight seal

Specifications

Applicable tubing material	Nylon	Soft nylon		Polyurethane	PFA [1]	FEP [2]	Modified PTFE [3]	Wear resistant polyurethane [4]
Applicable tubing O.D./I.D.	⌀4/⌀2.5 ⌀6/⌀4	⌀3.18/⌀2.18	⌀4/⌀2.5 ⌀6/⌀4	⌀3.18/⌀2 ⌀4/⌀2.5 ⌀6/⌀4	⌀4/⌀2.5 ⌀6/⌀4	⌀4/⌀2.5 ⌀6/⌀4	⌀4/⌀2.5 ⌀6/⌀4	⌀4/⌀2.5 ⌀6/⌀4
Fluid	Air, N₂, Water [5, 6, 7]							
Maximum operating pressure (at 20°C)	1.5 MPa	1 MPa		0.8 MPa	1 MPa	1.5 MPa	1.4 MPa	0.8 MPa
Ambient and fluid temperature	−5 to 60°C, Water: 0 to 40°C (No freezing)							
Connection size	M5, R1/8				M5			
Thread	JIS B0205 (Metric fine thread) JIS B0203 (Taper thread for piping)				JIS B0205, Class 2 (Metric fine thread)			

Note 1) , Note 2) , Note 3) , Note 4) Applicable only for hose nipple type.
Note 5) Barb fitting, barb elbow and barb tee are not compatible with water.
Note 6) Deionized water is not recommended for use as it may affect the material used in the fittings. In addition, it is known to degrade the water quality.
Note 7) As the universal nipple comes with grease, it cannot be used when N₂ is used as clean, dry air.

Principal Parts Material

Material	Body	Stainless steel 316
	Gasket	PVC, Nylon 66, GF30%

⊗SMC

Rectangular Multi-connector
25A-KDM Series
No. of Connecting Tubes: 20

How to Order

25A–**KDM 20**–**06**

● Series compatible with secondary batteries

● No. of connecting tubes

● **Tubing O.D.**

Metric size

Symbol	Size	Color of release button
23	ø3.2	
04	ø4	Blue
06	ø6	

Inch size

Symbol	Size	Color of release button
01	ø1/8"	
03	ø5/32"	Red
07	ø1/4"	

Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane

∗ The 25A- series specifications and dimensions are the same as those of the standard model.

For details, refer to the Web Catalog.

SMC

S Couplers **Stainless steel type**

KKA Series

RoHS

- ● **Body material: Stainless steel 304**
  Seal material: Fluororubber (Special FKM)

- ● **Both plug and socket have an integral check valve.**
  Available with and without check valves depending on the operating conditions.

- ● **Reduces liquid dripping when the plug and socket are uncoupled.**
  Liquid dripping: 0.02 to 0.77 cm^3 at each removal
  Aeration: 0.1 to 2.7 cm^3 at each removal

Plug valve ●   **●Socket valve**
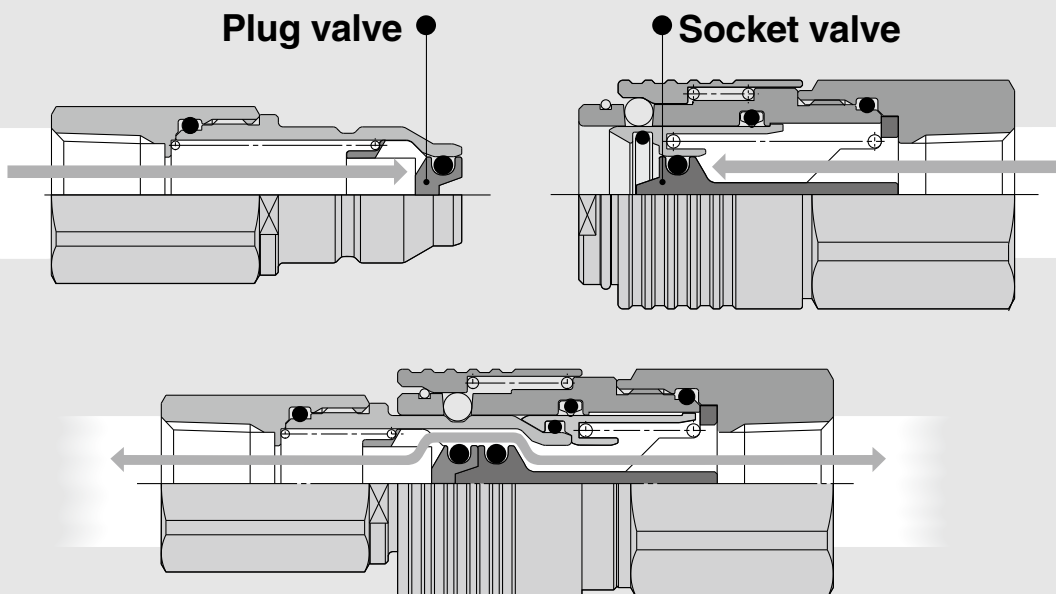
- ● **Non-greased specification (standard)**
  Allows smooth installation and removal even without grease
  • O-ring: Fluorine coated
  • Sliding parts of plug and socket: Fluorine coated is used.

- ● **Fluid: Water, Air**

- ● **Operating temperature range: –5 to 150°C**
  Note) This product should not be used with steam.

SMC