RoHS

The pulling strength for the plugs and sockets has been improved. Twice as strong as the current models.

KK Series

- **With sleeve lock** (Except for KK2)
- **Effective area 3.8 to 82 mm²**

KK2 Series

Sleeve cover standardized

KK3/4/6 Series

KKH Series

- **Without sleeve lock**
- **Effective area is equivalent to that of KK series.**

Variations

KK Series ..... 215 to 223

Male thread type

Series	Port size					
	M5	R1/8	R1/4	R3/8	R1/2	R3/4
KK2	●	●				
KK3		●	●	●		
KK4		●	●	●	●	
KK6				●	●	●

Female thread type

Series	Port size				
	M5	Rc1/8	Rc1/4	Rc3/8	Rc1/2
KK2	●				
KK3		●	●	●	
KK4			●	●	
KK6				●	●

Nut fitting type (for fiber reinforced urethane hose)

Series	Applicable hose I.D./O.D. mm					
	5/8	6/9	6.5/10	8/12	8.5/12.5	11/16
KK3	●	●	●			
KK4	●	●	●	●	●	
KK6				●	●	●

One-touch fitting type (Straight/Elbow/Bulkhead)

Series	Applicable tubing O.D. mm						
	ø3.2	ø4	ø6	ø8	ø10	ø12	ø16
KK2	●	●	●				
KK3		●	●	●	●		
KK4			●	●	●	●	
KK6						●	●

KK3/4/6 Series

KK2 Series

KKH Series ..... 224 to 226

Male thread type

Series	Port size			
	R1/8	R1/4	R3/8	R1/2
KKH3	●	●	●	
KKH4	●	●	●	●

Female thread type

Series	Port size		
	Rc1/8	Rc1/4	Rc3/8
KKH3	●	●	●
KKH4		●	●

Nut fitting type (for fiber reinforced urethane hose)

Series	Applicable hose I.D./O.D. mm				
	5/8	6/9	6.5/10	8/12	8.5/12.5
KKH3	●	●	●		
KKH4	●	●	●	●	●

KKA Series Stainless steel type ..... 341 to 348

Male/Female thread type

Series	Port size							
	R·Rc1/8	R·Rc1/4	R·Rc3/8	R·Rc1/2	R·Rc3/4	R·Rc1	R·Rc1 1/4	R·Rc1 1/2
KKA3	●	●	●					
KKA4		●	●	●				
KKA6			●	●	●			
KKA7				●	●	●		
KKA8					●	●	●	
KKA9						●	●	●

KK Series

The pulling strength for the plugs and sockets has been improved.

Twice

as strong as the current models

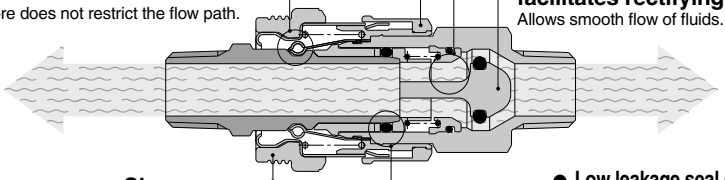
We standardized the product with a sleeve cover. Changing the lock ring material to a shock absorbent PBT further improved the shock absorbent performance.

Lock ring
Shock absorbent PBT

No spring located in the flow path
Loss of effective area is minimized because there is no valve spring to block the flow path.

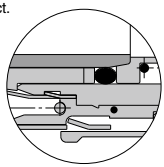
Employs a unique connection method
A slim body design and large effective area are achieved with a construction that does not use steel balls and therefore does not restrict the flow path.

Check valve end configuration facilitates rectifying effect
Allows smooth flow of fluids.



Sleeve cover
(Except for KK2 series)

Low leakage seal construction
Reliable sealing is achieved by surface contact.



Lightweight

Together with a reduction of the body size, pressing parts and resin parts are used to achieve an overall weight reduction.

Series	Plug no.	Socket no.	Effective area (mm²) Note 1)	Body O.D. (mm)	Mass (g) Note 2)
KK2 Series	KK2P-M5M	KK2S-M5M	3.8	ø10.0	6.1
KK3 Series	KK3P-01MS	KK3S-01MS	20	ø20.2	20.1
KK4 Series	KK4P-02MS	KK4S-02MS	39	ø28.0	44.1
KK6 Series	KK6P-04MS	KK6S-04MS	82	ø31.6	90.1

Note 1) Values when plug and socket are connected.
Note 2) Values for socket only.

■ One-touch fitting type standardized

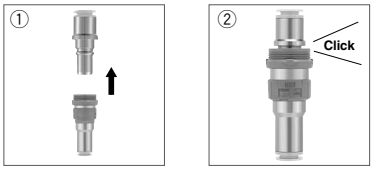
Four types from ø3.2 to ø16 added to series.

■ Flow is possible from the plug side or socket side.

■ Fluids: Air and Water

■ One-touch connection

Simple connection with one hand simplifies work.



■ Sleeve lock mechanism

Prevents accidents caused by unexpected separation.

Note) Except for M5 type (KK2 series).

Plug (P)

Male thread type

Body size	Port size	Part no.
M5	M5 x 0.8	**KK2P-M5M**
	R 1/8	**-01MS**
1/8	R 1/8	**KK3P-01MS**
	R 1/4	**-02MS**
	R 3/8	**-03MS**
1/4	R 1/8	**KK4P-01MS**
	R 1/4	**-02MS**
	R 3/8	**-03MS**
	R 1/2	**-04MS**
1/2	R 3/8	**KK6P-03MS**
	R 1/2	**-04MS**
	R 3/4	**-06MS**

Female thread type

Body size	Port size	Part no.
M5	M5 x 0.8	**KK2P-M5F**
1/8	R 1/8	**KK3P-01F**
	Rc 1/4	**-02F**
	Rc 3/8	**-03F**
1/4	Rc 1/4	**KK4P-02F**
	Rc 3/8	**-03F**
1/2	Rc 3/8	**KK6P-03F**
	Rc 1/2	**-04F**

Nut fitting type (for fiber reinforced urethane hose)

Body size	Applicable hose I.D./O.D. mm	Part no.
1/8	5/8	**KK3P-50N**
	6/9	**-60N**
	6.5/10	**-65N**
1/4	5/8	**KK4P-50N**
	6/9	**-60N**
	6.5/10	**-65N**
	8/12	**-80N**
	8.5/12.5	**-85N**
1/2	8/12	**KK6P-80N**
	8.5/12.5	**-85N**
	11/16	**-110N**

Straight type with One-touch fitting

Body size	Applicable tubing O.D. mm	Part no.
M5	3.2	**KK2P-23H**
	4	**-04H**
	6	**-06H**
1/8	4	**KK3P-04H**
	6	**-06H**
	8	**-08H**
	10	**-10H**
1/4	6	**KK4P-06H**
	8	**-08H**
	10	**-10H**
	12	**-12H**
1/2	12	**KK6P-12H**
	16	**-16H**

Elbow type with One-touch fitting

Body size	Applicable tubing O.D. mm	Part no.
M5	3.2	**KK2P-23L**
	4	**-04L**
	6	**-06L**
1/8	4	**KK3P-04L**
	6	**-06L**
	8	**-08L**
	10	**-10L**
1/4	6	**KK4P-06L**
	8	**-08L**
	10	**-10L**
	12	**-12L**
1/2	12	**KK6P-12L**
	16	**-16L**

Bulkhead type with One-touch fitting

Body size	Applicable tubing O.D. mm	Part no.
M5	3.2	**KK2P-23E**
	4	**-04E**
	6	**-06E**
1/8	4	**KK3P-04E**
	6	**-06E**
	8	**-08E**
	10	**-10E**
1/4	6	**KK4P-06E**
	8	**-08E**
	10	**-10E**
	12	**-12E**
1/2	12	**KK6P-12E**
	16	**-16E**

Socket (S)

Male thread type

Body size	Port size	Part no.
M5	M5 x 0.8	**KK2S-M5M**
	R 1/8	**-01MS**
1/8	R 1/8	**KK3S-01MS**
	R 1/4	**-02MS**
	R 3/8	**-03MS**
1/4	R 1/8	**KK4S-01MS**
	R 1/4	**-02MS**
	R 3/8	**-03MS**
	R 1/2	**-04MS**
1/2	R 3/8	**KK6S-03MS**
	R 1/2	**-04MS**
	R 3/4	**-06MS**

Female thread type

Body size	Port size	Part no.
M5	M5 x 0.8	**KK2S-M5F**
1/8	Rc 1/8	**KK3S-01F**
	Rc 1/4	**-02F**
	Rc 3/8	**-03F**
1/4	Rc 1/4	**KK4S-02F**
	Rc 3/8	**-03F**
1/2	Rc 3/8	**KK6S-03F**
	Rc 1/2	**-04F**

Nut fitting type (for fiber reinforced urethane hose)

Body size	Applicable hose I.D./O.D. mm	Part no.
1/8	5/8	**KK3S-50N**
	6/9	**-60N**
	6.5/10	**-65N**
1/4	5/8	**KK4S-50N**
	6/9	**-60N**
	6.5/10	**-65N**
	8/12	**-80N**
	8.5/12.5	**-85N**
1/2	8/12	**KK6S-80N**
	8.5/12.5	**-85N**
	11/16	**-110N**

Straight type with One-touch fitting

Body size	Applicable tubing O.D. mm	Part no.
M5	3.2	**KK2S-23H**
	4	**-04H**
	6	**-06H**
1/8	4	**KK3S-04H**
	6	**-06H**
	8	**-08H**
	10	**-10H**
1/4	6	**KK4S-06H**
	8	**-08H**
	10	**-10H**
	12	**-12H**
1/2	12	**KK6S-12H**
	16	**-16H**

Elbow type with One-touch fitting

Body size	Applicable tubing O.D. mm	Part no.
M5	3.2	**KK2S-23L**
	4	**-04L**
	6	**-06L**
1/8	4	**KK3S-04L**
	6	**-06L**
	8	**-08L**
	10	**-10L**
1/4	6	**KK4S-06L**
	8	**-08L**
	10	**-10L**
	12	**-12L**
1/2	12	**KK6S-12L**
	16	**-16L**

Bulkhead type with One-touch fitting

Body size	Applicable tubing O.D. mm	Part no.
M5	3.2	**KK2S-23E**
	4	**-04E**
	6	**-06E**
1/8	4	**KK3S-04E**
	6	**-06E**
	8	**-08E**
	10	**-10E**
1/4	6	**KK4S-06E**
	8	**-08E**
	10	**-10E**
	12	**-12E**
1/2	12	**KK6S-12E**
	16	**-16E**

S Couplers
KK Series

RoHS

KK2 Series

KK3/4/6 Series

Specifications

Fluid	Air, Water Note 2)
Operating pressure range Note 1)	KK2: –100 kPa to 1 MPa KK3: –90 kPa to 1 MPa KK4/6: 0 to 1 MPa
Proof pressure	1.5 MPa
Ambient and fluid temperature	Air: –5 to 60°C Water: 5 to 40°C (No freezing)
Plating, Sealant	Electroless nickel plated (copper-free and fluorine-free application), With male thread sealant

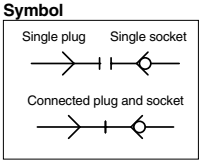
Note 1) Do not use the S couplers with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.
Note 2) Deionized water is not recommended for use as it may affect the material used in the fittings. In addition, it is known to degrade the water quality.

Performance

Plug and socket connection	One-touch connection and release
Check valve	Socket: Built-in check valve (standard)
Sleeve lock mechanism Note)	Manual locking type (standard)

Note) KK2 series is not provided with lock mechanism.

Symbol



Effective Area

Body size	Plug	Socket	Effective area mm²
M5	**KK2P-M5M**	**KK2S-M5M**	3.8
1/8	**KK3P-01MS**	**KK3S-01MS**	20
1/4	**KK4P-02MS**	**KK4S-02MS**	39
1/2	**KK6P-04MS**	**KK6S-04MS**	82

How to Order

KK 4 S – 02 M S

Body size

2	M5
3	1/8
4	1/4
6	1/2

Socket/Plug designation

S	Socket
P	Plug

With sealant (male thread)

Connection type

Symbol	Type
M	Male thread
F	Female thread
N	With nut fitting
H	Straight with One-touch fitting
L	Elbow with One-touch fitting
E	Bulkhead with One-touch fitting

Piping port size variation

Male/Female thread type

Symbol	Thread size
M5	M5 x 0.8
01	R, Rc 1/8
02	R, Rc 1/4
03	R, Rc 3/8
04	R, Rc 1/2
06	R, Rc 3/4

One-touch fitting type

Symbol	Applicable tubing O.D. mm
23	ø3.2
04	ø4
06	ø6
08	ø8
10	ø10
12	ø12
16	ø16

Nut fitting type

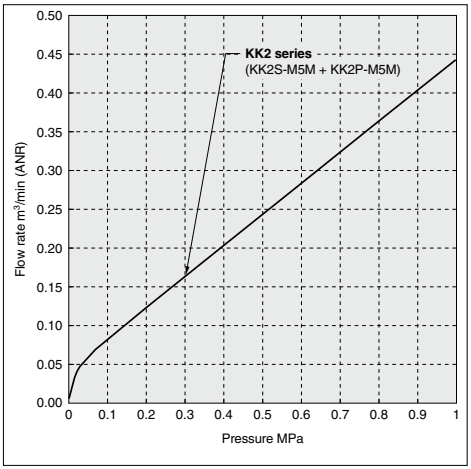
Symbol	Applicable hose I.D./O.D. mm
50	5/8
60	6/9
65	6.5/10
80	8/12
85	8.5/12.5
110	11/16

For details on body size and port size variation combinations for each model, refer to the charts on the Dimensions page.

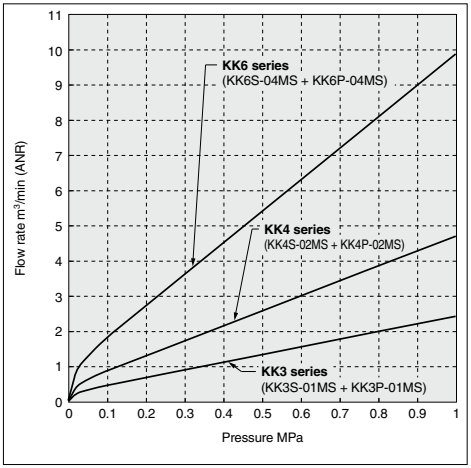
Flow Rate Characteristics

Air (0 to 1 MPa)

KK2

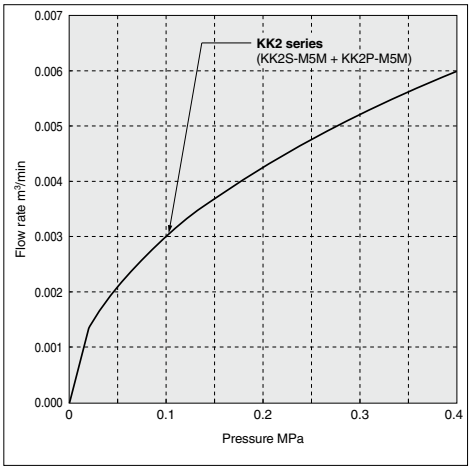


KK3/4/6

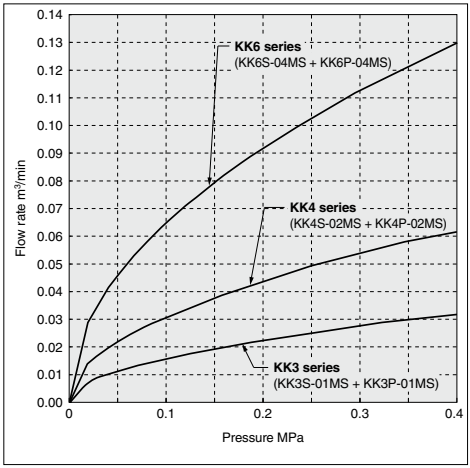


Water (0 to 0.4 MPa)

KK2

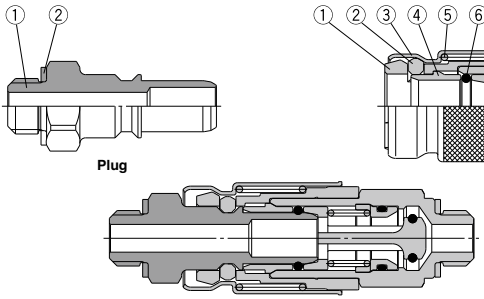


KK3/4/6



Construction

KK2



Plug

No.	Description	Material	Note
1	**Stem**	C3604	Electroless nickel plated
2	**Gasket**	Stainless steel 304, NBR	

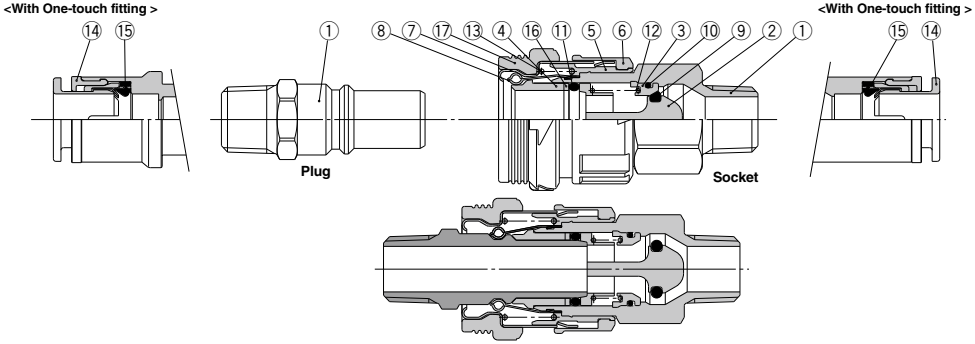
KK2 Series Spare Parts

Description	Part no.	No.
Gasket	M-5G2	Plug②
		Socket⑬

Socket

No.	Description	Material	Note
1	**Spacer**	PBT	
2	**Chuck**	PBT	
3	**Sleeve**	C2680	Electroless nickel plated
4	**Collar**	C3604	Electroless nickel plated
5	**Sleeve spring**	Stainless steel 304	
6	**Plug O-ring**	NBR	
7	**Valve seat**	PBT	
8	**Valve spring**	Stainless steel 304	
9	**Valve seat O-ring**	NBR	
10	**Valve O-ring**	FKM	
11	**Valve**	PBT	
12	**Socket body**	C3604	Electroless nickel plated
13	**Gasket**	Stainless steel 304, NBR	

KK3/4/6



Plug

No.	Description	Material	Note
1	**Stem**	C3604	Electroless nickel plated
14	**Cassette**	—	
15	**Seal**	NBR	

KK/KKH Series Spare Parts

Description	Part no.	No.
Sleeve cover	KK3S-P01	Socket⑰
	KK4S-P01	
	KK6S-P01	

Socket

No.	Description	Material	Note
1	**Body**	C3604	Electroless nickel plated
2	**Valve**	PBT	
3	**Valve seat**	PBT	
4	**Collar**	PBT	
5	**Spacer**	PBT	
6	**Lock ring**	Shock absorbent PBT	
7	**Sleeve**	Cold rolled carbon steel sheet	Electroless nickel plated
8	**Chuck**	Stainless steel 304	
9	**Valve O-ring**	FKM	
10	**Valve seat O-ring**	NBR	
11	**Plug O-ring**	NBR	
12	**Valve spring**	Stainless steel 304	
13	**Sleeve spring**	Stainless steel 304	
14	**Cassette**	—	
15	**Seal**	NBR	
16	**Collar 2**	Stainless steel 304	
17	**Sleeve cover**	Weather resistant NBR	

Dimensions/Plug (P)

Male thread type

(mm)

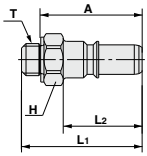
KK2

KK3/4/6

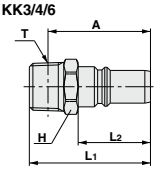
Body size	Model	T Connection port size	H Width across flats	L_1	L_2	A*	Min. bore size	Effective area mm²	Weight g
M5	**KK2P-M5M**	M5 x 0.8	7	18.8	12.3	15.8	2.2	4.4	2.6
	-01MS	R 1/8	10	22.3		19.2	3.4	8.1	3.0
1/8	**KK3P-01MS**	R 1/8		29.5	18.4	26.4	6.0	22.6	8.4
	-02MS	R 1/4	14	32.9		27.4			14.2
	-03MS	R 3/8	17	34.3		28.9			28.1
1/4	**KK4P-01MS**	R 1/8	14	36.1	25.2	33.0	9.0	50.9	17.0
	-02MS	R 1/4		39.7		34.2			20.2
	-03MS	R 3/8	17	41.1		35.7			32.5
	-04MS	R 1/2	22	45.3		38.2			57.4
1/2	**KK6P-03MS**	R 3/8	19	46.9	31.0	41.5	11.0	76.0	44.7
	-04MS	R 1/2	22	51.1		44.0	13.0	106.2	53.7
	-06MS	R 3/4	27	55		45.5			94.4

∗ Reference dimension for R threads after installation.

KK2



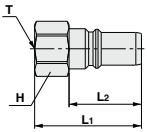
KK3/4/6



Female thread type

(mm)

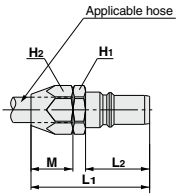
Body size	Model	T Connection port size	H Width across flats	L_1	L_2	Min. bore size	Effective area mm²	Weight g
M5	**KK2P-M5F**	M5 x 0.8	8	17.6	12.3	3.4	8.1	2.6
1/8	**KK3P-01F**	Rc 1/8	14	28.3	18.4	6.0	22.6	10.4
	-02F	Rc 1/4	17	33.5				20.8
	-03F	Rc 3/8	19	35.3				23.2
1/4	**KK4P-02F**	Rc 1/4	17	37.2	25.2	9.0	50.9	23.9
	-03F	Rc 3/8	19	39.8				24.6
1/2	**KK6P-03F**	Rc 3/8	19	43.3	31.0	13.0	106.2	28.6
	-04F	Rc 1/2	24	50.2				43.9



Nut fitting type (for fiber reinforced urethane hose)

(mm)

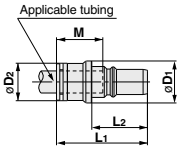
Body size	Model	Applicable hose I.D./O.D.	H_1 Width across flats	H_2 Width across flats	L_1	L_2	M	Min. bore size	Effective area mm²	Weight g
1/8	**KK3P-50N**	5/8	14	14	36.1	18.4	13.7	4.5	12.7	21.4
	-60N	6/9	17	17	39.9		16.5	5.4	18.3	38.8
	-65N	6.5/10						5.9	21.9	35.9
1/4	**KK4P-50N**	5/8	17	14	43.9	25.2	13.7	4.5	12.7	34.7
	-60N	6/9		17	46.7		16.5	5.4	18.3	48.4
	-65N	6.5/10						5.9	21.9	45.1
	-80N	8/12	19	19	47.6		17.4	7.4	34.4	53.2
	-85N	8.5/12.5						7.8	38.2	55.6
1/2	**KK6P-80N**	8/12			53.4	31.0		7.4	34.4	60.5
	-85N	8.5/12.5						7.8	38.2	62.8
	-110N	11/16	24	24	57.2		20.1	10.2	65.4	96.5



Straight type with One-touch fitting

(mm)

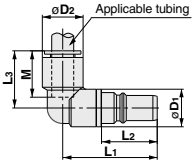
Body size	Model	Applicable tubing O.D.	øD1	øD2	L1	L2	M	Min. bore size	Effective area mm² Urethane tubing	Effective area mm² Nylon tubing	Weight g
M5	KK2P-23H	ø3.2	10.0	7.0	23.7	12.3	12.7	2.5	3.7	4.4	3.3
	-04H	ø4		8.0				3.4	8.1	8.1	3.4
	-06H	ø6		10.0	26.7		13.5				4.0
1/8	KK3P-04H	ø4	12.0	10.0	35.4	18.4	16.0	3.2	3.9	5.6	7.9
	-06H	ø6	14.0	12.0			17.0	4.7	10.1	12.8	9.1
	-08H	ø8	16.0	14.0	38.6		18.5	6.0	15.7	22.6	13.2
	-10H	ø10	19.0	17.0	39.7		21.0		22.6		17.6
1/4	KK4P-06H	ø6	14.0	12.0	46.2	25.2	17.0	4.7	10.1	12.8	22.3
	-08H	ø8	16.0	14.0			18.5	6.2	19.8	22.6	23.0
	-10H	ø10	19.0	17.0			21.0	7.7	27.6	35.3	27.1
	-12H	ø12	21.0	19.0	47.5		22.0	9.0	40.2	50.9	30.0
1/2	KK6P-12H				56.1	31.0		9.2	41.2		44.4
	-16H	ø16	26.0	23.8			25.0	13.0	—	106.2	50.7



Elbow type with One-touch fitting

(mm)

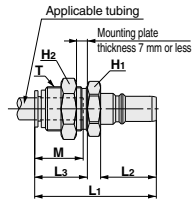
Body size	Model	Applicable tubing O.D.	øD1	øD2	L1	L2	L3	M	Min. bore size	Effective area mm² Urethane tubing	Effective area mm² Nylon tubing	Weight g
M5	KK2P-23L	ø3.2	10.0	9.3	24.0	12.3	16.5	12.7	2.5	3.6	4.3	5.8
	-04L	ø4										
	-06L	ø6		11.6	25.1		16.6	13.5	3.4	7.8	7.8	6.4
1/8	KK3P-04L	ø4		10.4	31.6	18.4	18.0	16.0	3.0	3.7	5.3	7.2
	-06L	ø6		12.8	32.8		20.0	17.0	4.5	10.1	11.4	8.0
	-08L	ø8	12.0	15.2	34.0		23.0	18.5	6.0	15.0	16.8	9.7
	-10L	ø10	17.0	18.5	36.0		26.5	21.0		18.0	18.5	23.0
1/4	KK4P-06L	ø6	14.0	12.8	40.2	25.2	20.0	17.0	4.5	10.1	11.4	19.6
	-08L	ø8		15.2	41.4		23.0	18.5	6.0	17.5	19.8	21.3
	-10L	ø10	17.0	18.5	42.8		26.5	21.0	7.5	24.7	27.5	25.7
	-12L			20.9	44.0		28.5	22.0	9.0	29.0	29.6	28.0
1/2	KK6P-12L	ø12	19.0		49.9	31.0				38.1	39.7	40.3
	-16L	ø16	21.0	26.5	53.5		34.0	25.0	13.0	—	58.7	48.7



Bulkhead type with One-touch fitting

(mm)

Body size	Model	Applicable tubing O.D.	T Threads	H1 Width across flats	H2 Width across flats	L1	L2	L3	M	Min. bore size	Effective area mm² Urethane tubing	Effective area mm² Nylon tubing	Weight g
M5	KK2P-23E	ø3.2	M8 x 0.75	10	10	28.3	12.3	12.5	12.7	2.5	3.7	4.4	6.0
	-04E	ø4	M9 x 0.75		11					3.4	8.1	8.1	6.6
	-06E	ø6	M11 x 0.75	14	14	28.6		12.7	13.5				9.7
1/8	KK3P-04E	ø4	M12 x 1			39.3	18.4	16.9	16.0	3.2	3.9	5.6	16.6
	-06E	ø6	M14 x 1	17	17	40.2		16.8	17.0	4.7	10.1	12.8	22.3
	-08E	ø8	M16 x 1		19	43.4		20.0	18.5	6.0	15.7	22.6	30.2
	-10E	ø10	M20 x 1	22	24	46.4		22.0	21.0		22.6		54.7
1/4	KK4P-06E	ø6	M14 x 1	17	17	47.0	25.2	16.8	17.0	4.7	10.1	12.8	30.6
	-08E	ø8	M16 x 1		19	50.2		20.0	18.5	6.2	19.8	22.6	38.2
	-10E	ø10	M20 x 1	22	24	53.2		22.0	21.0	7.7	27.6	35.3	61.4
	-12E	ø12	M22 x 1	24	27	54.2		23.0	22.0	9.0	40.2	50.9	75.2
1/2	KK6P-12E					60.1	31.0			9.2	41.2		86.1
	-16E	ø16	M28 x 1.5	30	32	62.6		24.5	25.0	13.0	—	106.2	125.0



Click here for applicable color caps.

Dimensions/Socket (S)

Male thread type

(mm)

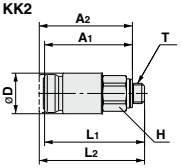
KK2

KK3/4/6

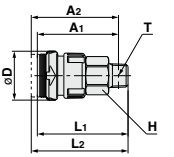
Body size	Model	T Connection port size	H Width across flats	øD	L_1	L_2 When connected	A_1*	A_2* When connected	Min. bore size	Effective area mm²	Weight g
M5	**KK2S-M5M**	M5 x 0.8	8	10.0	24.7	26.2	21.3	23.2	2.2	3.8	6.1
	-01MS	R 1/8	10		24.4	25.9		22.8	4.7	5.8	9.1
1/8	**KK3S-01MS**	R 1/8	14	20.2	36.6	39.1	33.5	36.0	6.0	20.4	20.1
	-02MS	R 1/4			37.0	39.5	31.5	34.0	9.0	21.1	19.2
	-03MS	R 3/8	17		37.6	40.1	32.2	34.5			29.0
1/4	**KK4S-01MS**	R 1/8	19	28.0	49.5	53.2	46.4	50.1	6.0	22.9	47.5
	-02MS	R 1/4			50.5	54.2	45.0	48.7	9.0	38.9	44.1
	-03MS	R 3/8			48.9	52.6	43.5	47.2	11.0	40.4	50.9
	-04MS	R 1/2	22		48.8	52.5	41.7	45.4	13.0	42.7	61.2
1/2	**KK6S-03MS**	R 3/8	24	31.6	59.1	64.4	53.7	59.0	11.0	71.7	87.9
	-04MS	R 1/2			59.3	64.6	52.2	57.5	13.0	82.3	90.1
	-06MS	R 3/4	27		60.2	65.5	50.7	56.0	15.0	83.8	113.3

* Reference dimension for R threads after installation.

KK2



KK3/4/6



Female thread type

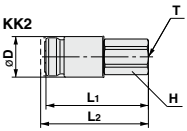
(mm)

KK2

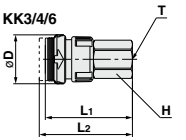
KK3/4/6

Body size	Model	T Connection port size	H Width across flats	øD	L_1	L_2 When connected	Min. bore size	Effective area mm²	Weight g
M5	**KK2S-M5F**	M5 x 0.8	8	10.0	25.3	26.8	4.2	5.4	6.4
1/8	**KK3S-01F**	Rc 1/8	14	20.2	36.0	38.5	8.2	20.6	23.6
	-02F	Rc 1/4	17		40.1	42.6		21.1	34.4
	-03F	Rc 3/8			41.9	44.4			38.8
1/4	**KK4S-02F**	Rc 1/4	19	28.0	50.4	54.1	10.9	39.6	56.9
	-03F	Rc 3/8			51.1	54.8	14.4	42.7	46.2
1/2	**KK6S-03F**		24	31.6	58.6	63.9		83.1	93.6
	-04F	Rc 1/2			61.0	66.3	18.0	83.8	87.4

KK2



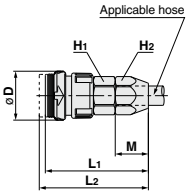
KK3/4/6



Nut fitting type (for fiber reinforced urethane hose)

(mm)

Body size	Model	Applicable hose I.D./O.D.	H_1 Width across flats	H_2 Width across flats	øD	L_1	L_2 When connected	M	Min. bore size	Effective area mm²	Weight g
1/8	**KK3S-50N**	5/8	14	14	20.2	42.6	45.1	13.7	4.5	12.2	32.1
	-60N	6/9	17	17		44.4	46.9	16.5	5.4	18.3	48.7
	-65N	6.5/10							5.9	19.2	46.4
1/4	**KK4S-50N**	5/8	19	14	28.0	54.1	57.8	13.7	4.5	12.2	55.8
	-60N	6/9		17		56.8	60.5	16.5	5.4	20.4	69.3
	-65N	6.5/10							5.9	24.1	66.8
	-80N	8/12		19		55.4	59.1	17.4	7.4	35.1	68.5
	-85N	8.5/12.5							7.8	36.6	71.1
1/2	**KK6S-80N**	8/12	24		31.6	66.0	71.3		7.4		107.5
	-85N	8.5/12.5							7.8	41.2	110.2
	-110N	11/16		24		64.4	69.7	20.1	10.2	68.4	119.8



Straight type with One-touch fitting

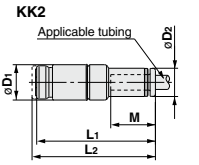
(mm)

KK2

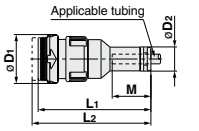
KK3/4/6

Body size	Model	Applicable tubing O.D.	øD1	øD2	L1	L2 When connected	M	Min. bore size	Effective area mm² Urethane tubing	Effective area mm² Nylon tubing	Weight g
M5	KK2S-23H	ø3.2	10.0	7.0	33.8	35.3	12.7	2.5	3.8	4.6	6.4
	-04H	ø4		8.0	33.6	35.1		3.4	4.0	4.8	6.5
	-06H	ø6		10.0	33.9	35.4	13.5	4.7	5.8	5.8	7.9
1/8	KK3S-04H	ø4	20.2	10.0	46.6	49.1	16.0	3.2	3.8	5.8	22.5
	-06H	ø6		12.0	47.1	49.6	17.0	4.7	10.4	13.4	24.4
	-08H	ø8		14.0	48.9	51.4	18.5	6.2	16.8	18.9	27.3
	-10H	ø10		17.0	49.9	52.4	21.0	7.7	19.1	19.1	37.1
1/4	KK4S-06H	ø6	28.0	12.0	58.2	61.9	17.0	4.7	10.4	13.4	51.4
	-08H	ø8		14.0	60.1	63.8	18.5	6.2	18.3	21.8	51.3
	-10H	ø10		17.0	61.5	65.2	21.0	7.7	27.0	29.4	54.8
	-12H	ø12		19.0	62.5	66.2	22.0	9.2	30.5	32.0	59.4
1/2	KK6S-12H		31.6		70.1	75.4			42.7	48.8	84.1
	-16H	ø16		25.7	72.3	77.6	25.0	13.2	53.4	62.5	99.9

KK2



KK3/4/6



Elbow type with One-touch fitting

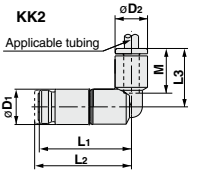
(mm)

KK2

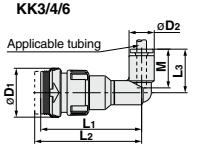
KK3/4/6

Body size	Model	Applicable tubing O.D.	øD1	øD2	L1	L2 When connected	L3	M	Min. bore size	Effective area mm² Urethane tubing	Effective area mm² Nylon tubing	Weight g
M5	KK2S-23L	ø3.2	10.0	9.3	26.0	27.5	16.5	12.7	2.5	3.7	4.4	6.7
	-04L	ø4		11.6	27.2	28.3	16.6	13.5	4.5	5.6	5.6	7.2
1/8	KK3S-04L	ø4	20.2	10.4	41.7	44.2	18.0	16.0	3.0	3.7	5.3	23.2
	-06L	ø6		12.8	42.9	45.4	20.0	17.0	4.5	10.1	11.4	24.0
	-08L	ø8		15.2	43.1	45.6	23.0	18.5	6.0	15.0	16.8	25.0
	-10L	ø10		18.5	42.9	45.4	26.5	21.0	7.5	18.0	18.5	34.4
1/4	KK4S-06L	ø6	28.0	12.8	54.3	58.0	20.0	17.0	4.5	10.1	11.4	53.5
	-08L	ø8		15.2	55.5	59.2	23.0	18.5	6.0	17.5	19.8	53.1
	-10L	ø10		18.5	54.2	57.9	26.5	21.0	7.5	24.7	27.5	54.7
	-12L	ø12		20.9	55.4	59.1	28.5	22.0	9.0	29.0	29.6	57.0
1/2	KK6S-12L		31.6		66.3	71.6			13.0	38.1	39.7	91.4
	-16L	ø16		26.5	66.9	72.2	34.0	25.0		50.3	58.7	93.5

KK2



KK3/4/6



Bulkhead type with One-touch fitting

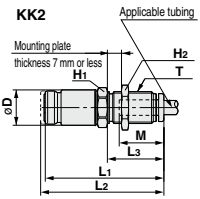
(mm)

KK2

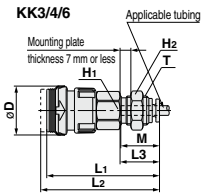
KK3/4/6

Body size	Model	Applicable tubing O.D.	T Threads	H1 Width across flats	H2 Width across flats	øD	L1	L2 When connected	L3	M	Min. bore size	Effective area mm² Urethane tubing	Effective area mm² Nylon tubing	Weight g
M5	KK2S-23E	ø3.2	M8 x 0.75	10	10	10.0	33.8	35.3	13.0	12.7	2.5	3.8	4.6	9.6
	-04E	ø4	M9 x 0.75		11		33.5	35.0			3.4	4.0	4.8	9.1
	-06E	ø6	M11 x 0.75	14	14		33.9	35.4	13.1	13.5	4.7	5.8	5.8	12.6
1/8	KK3S-04E	ø4	M12 x 1		14	20.2	46.6	49.1	16.9	16.0	3.2	3.8	5.8	29.0
	-06E	ø6	M14 x 1	17	17		47.1	49.6	16.8	17.0	4.7	10.4	13.4	39.4
	-08E	ø8	M16 x 1		19		49.0	51.5	20.0	18.5	6.2	16.8	18.9	43.4
	-10E	ø10	M20 x 1	22	24		49.9	52.4	22.0	21.0	7.7	19.1	19.1	68.3
1/4	KK4S-06E	ø6	M14 x 1	19	17	28.0	58.2	61.9	16.8	17.0	4.7	10.4	13.4	57.2
	-08E	ø8	M16 x 1		19		60.1	63.8	20.0	18.5	6.2	18.3	21.8	60.6
	-10E	ø10	M20 x 1	22	24		61.7	65.4	22.0	21.0	7.7	27.0	29.4	86.8
	-12E	ø12	M22 x 1	24	27		62.7	66.4	23.0	22.0	9.2	30.5	32.0	105.7
1/2	KK6S-12E					31.6	70.1	75.4	24.5	25.0		42.7	48.8	116.0
	-16E	ø16	M28 x 1.5	30	32		72.5	77.8			13.2	53.4	62.5	183.2

KK2



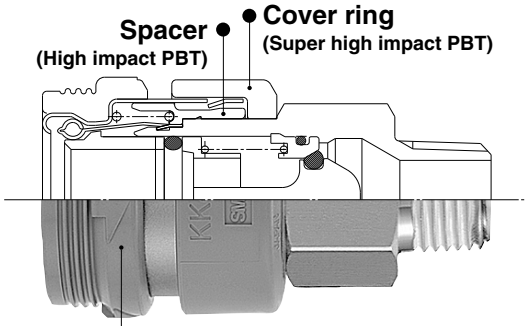
KK3/4/6



Click here for applicable color caps.

KKH Series

- **Able to absorb drop impact (equivalent to impact energy of 0.5 J).**
- **The pulling strength for the plugs and sockets has been improved. Twice as strong as the current models.**



- **Same effective sectional area as that of KK series.**

Plug (P)

Male thread type

Body size	Connection port size	Part no.
1/8	R 1/8	**KK3P-01MS**
	R 1/4	**-02MS**
	R 3/8	**-03MS**
1/4	R 1/8	**KK4P-01MS**
	R 1/4	**-02MS**
	R 3/8	**-03MS**
	R 1/2	**-04MS**

Female thread type

Body size	Connection port size	Part no.
1/8	Rc 1/8	**KK3P-01F**
	Rc 1/4	**-02F**
	Rc 3/8	**-03F**
1/4	Rc 1/4	**KK4P-02F**
	Rc 3/8	**-03F**

Nut fitting type (for fiber reinforced urethane hose)

Body size	Applicable hose I.D./O.D. mm	Part no.
1/8	5/8	**KK3P-50N**
	6/9	**-60N**
	6.5/10	**-65N**
1/4	5/8	**KK4P-50N**
	6/9	**-60N**
	6.5/10	**-65N**
	8/12	**-80N**
	8.5/12.5	**-85N**

Socket (S)

Male thread type

Body size	Connection port size	Part no.
1/8	R 1/8	**KKH3S-01MS**
	R 1/4	**-02MS**
	R 3/8	**-03MS**
1/4	R 1/8	**KKH4S-01MS**
	R 1/4	**-02MS**
	R 3/8	**-03MS**
	R 1/2	**-04MS**

Female thread type

Body size	Connection port size	Part no.
1/8	Rc 1/8	**KKH3S-01F**
	Rc 1/4	**-02F**
	Rc 3/8	**-03F**
1/4	Rc 1/4	**KKH4S-02F**
	Rc 3/8	**-03F**

Nut fitting type (for fiber reinforced urethane hose)

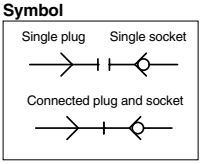
Body size	Applicable hose I.D./O.D. mm	Part no.
1/8	5/8	**KKH3S-50N**
	6/9	**-60N**
	6.5/10	**-65N**
1/4	5/8	**KKH4S-50N**
	6/9	**-60N**
	6.5/10	**-65N**
	8/12	**-80N**
	8.5/12.5	**-85N**

KKH series are only available as sockets.
KK series should be used as plugs.

S Couplers
KKH Series

RoHS

Symbol



Specifications

Fluid	Air, Water Note 2)
Operating pressure range Note 1)	KKH3: –90 kPa to 1 MPa KKH4: 0 to 1 MPa
Proof pressure	1.5 MPa
Ambient and fluid temperature	Air: –5 to 60°C Water: 5 to 40°C (No freezing)
Plating, Sealant	Electroless nickel plated (copper-free and fluorine-free application), With male thread sealant
Connection plug	KK series plug

Note 1) Do not use the S couplers with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.
Note 2) 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.

Performance

Plug and socket connection	One-touch connection and release
Check valve	Socket: Built-in check valve (standard)
Sleeve lock mechanism	———

Effective Area

Body size	Plug	Socket	Effective area mm²
1/8	**KK3P-01MS**	**KKH3S-01MS**	20
1/4	**KK4P-02MS**	**KKH4S-02MS**	39

The flow rate characteristics are the same as those of KK series.
Please refer to page 218.

How to Order

KKH 4 S – 02 M S

Body size

3	1/8
4	1/4

Socket/Plug designation

S	Socket

With sealant (male thread)

Connection type

Symbol	Type
M	Male thread
F	Female thread
N	With nut fitting

Piping port size variation

Male/Female thread type

Symbol	Connection port size
01	R, Rc 1/8
02	R, Rc 1/4
03	R, Rc 3/8
04	R, Rc 1/2

Nut fitting type

Symbol	Hose I.D./O.D. mm
50	5/8
60	6/9
65	6.5/10
80	8/12
85	8.5/12.5

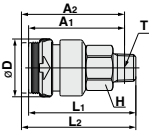
For details on body size and port size variation combinations for each model, refer to the charts on the Dimensions page.

Dimensions/Socket (S)

Male thread type

(mm)

Body size	Model	T Connection port size	H Width across flats	ø D	L1	L2 When connected	A1*	A2* When connected	Min. bore size	Effective area mm2	Weight g
1/8	KKH3S-01MS	R 1/8	14	20.2	36.6	39.1	33.5	36.0	6.0	20.4	20.3
	-02MS	R 1/4			37.0	39.5	31.5	34.0	9.0	21.1	19.4
	-03MS	R 3/8	17		37.6	40.1	32.2	34.5	9.0		27.7
1/4	KKH4S-01MS	R 1/8	19	28.0	49.5	53.2	46.4	50.1	6.0	22.9	48.7
	-02MS	R 1/4			50.5	54.2	45.0	48.7	9.0	38.9	45.3
	-03MS	R 3/8			48.9	52.6	43.5	47.2	11.0	40.4	52.1
	-04MS	R 1/2	22		48.8	52.5	41.7	45.4	13.0	42.7	62.4

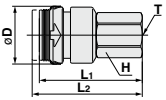


* Reference dimension for R threads after installation.

Female thread type

(mm)

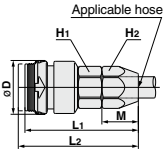
Body size	Model	T Connection port size	H Width across flats	ø D	L1	L2 When connected	Min. bore size	Effective area mm2	Weight g
1/8	KKH3S-01F	Rc 1/8	14	20.2	36.0	38.5	8.2	20.6	23.8
	-02F	Rc 1/4	17		40.1	42.4		21.1	33.1
	-03F	Rc 3/8	19		41.9	44.3			37.1
1/4	KKH4S-02F	Rc 1/4	19	28.0	50.4	54.1	10.9	39.6	58.1
	-03F	Rc 3/8			51.1	54.8	14.4	42.7	47.4



Nut fitting type (for fiber reinforced urethane hose)

(mm)

Body size	Model	Applicable hose I.D./O.D.	H1 Width across flats	H2 Width across flats	ø D	L1	L2 When connected	M	Min. bore size	Effective area mm2	Weight g
1/8	KKH3S-50N	5/8	14	14	20.2	42.6	45.1	13.7	4.5	12.2	32.3
	-60N	6/9	17	17		44.4	46.9	16.5	5.4	18.3	48.9
	-65N	6.5/10							5.9	19.2	46.6
1/4	KKH4S-50N	5/8	19	14	28.0	54.1	57.8	13.7	4.5	12.2	57.0
	-60N	6/9		17		56.8	60.5	16.5	5.4	20.4	70.5
	-65N	6.5/10							5.9	24.1	68.0
	-80N	8/12		19		55.4	59.1	17.4	7.4	35.1	69.7
	-85N	8.5/12.5							7.8	36.6	72.3



KKH series are only available as sockets. KK series should be used as plugs. For dimensions, please refer to page 220.

S Couplers
Specific Product Precautions 1

Be sure to read this before handling the products.
Refer to back page 50 for Safety Instructions and pages 13 to 17 for Fittings and Tubing Precautions.

Selection

⚠ Warning

1. Cannot be used as a stop valve that requires zero leakage. A certain amount of leakage is allowed during operation.
2. S coupler connection possibilities are shown in the table below.

Series	KK	KKH	KKA	KK130
KK	○	○		
KKH	○	○		
KKA			○	
KK130				○

∗ Before using a KK130 series S coupler with another manufacturer's product, be sure to confirm compatibility with the manufacturer, etc.

3. Do not couple or uncouple the S coupler during pressurization or while residual pressure remains. The coupler may shoot out under the influence of the pressure.
4. Never apply pressure to an S coupler without check valve when it is uncoupled. The piping may move violently and cause danger.
5. An S coupler without check valve experiences leakage of fluid inside piping when it is uncoupled. Pay special attention in using fluid that can cause danger such as fluid of a high temperature and pressure. Additional use of a stop valve is recommended.
6. The S coupler becomes extremely hot when the product is operated at a high temperature. Be sure to refrain from touching it as doing so may result in burns. Insert or remove the plug and socket only after the product has returned to a normal temperature.

⚠ Caution

1. For a plug and socket connection, select a plug and socket with the same body size. If their body sizes are different, they cannot be connected. This will cause leakage, damage, and disconnection of the plug. Inserting a plug other than the specialized plug into the socket may result in equipment damage.
2. Do not use couplers with flammable, explosive, or toxic substances, such as gas, gas fuel, and refrigerant. They may leak from inside the tubing to the outside.
3. Do not use the S coupler with steam. Corrosion of the metal material and deterioration of the sealing material may result from long-term use with steam.

Mounting

⚠ Warning

1. Do not use couplers where rotation normally occurs. The couplers may be damaged.
2. Avoid applications in which vibration or shock is directly applied to the fittings.
3. Fittings with sleeve lock mechanism must be locked during operation in order to prevent sudden disconnection.
4. Install a stop valve at the supply pressure side of the socket. Emergency shutdown may not be possible without it.

⚠ Caution

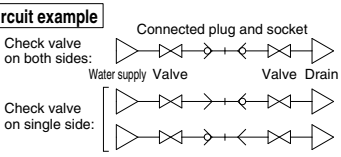
1. Mount so that couplers and tubing are not subjected to twisting, pulling or moment loads. This can cause damage to couplers and flattening, bursting or disconnection of tubing, etc.

Handling

⚠ Warning

1. When connecting the plug, hold the plug securely. The plug may be uncoupled due to reaction at the time of connection.
2. When connecting KK, KKH, and KKA series plugs, push the plug in until you hear it click into the socket. In addition, be sure to refrain from touching the sleeve until you are sure that the plug has been pushed all the way in. Failure to do so may result in a malfunction. When connecting KK130 series plugs, after pulling the sleeve straight back, push the plug in until you are sure that it has been pushed all the way in. For all S couplers, after inserting the plug, pull on it gently to make sure that it doesn't come out from the socket. If the plug is not properly inserted into the socket, the plug may fly out of the product due to pressure.
3. When connecting the plug, insert it straight into the socket. If not inserted straight, the socket and/or plug may be damaged or cause a malfunction.
4. When releasing the plug, hold it securely. The connection pipe may move due to reacting stress and/or residual pressure on the plug side.
5. Be sure to move the sleeve straight in relation to the socket. If it is rotated at all, a malfunction may result.
6. Do not press the inside of the socket with an incompatible plug and/or with a stick. The internal fluid may be ejected and cause a dangerous situation. Also, the ejecting internal fluid may cause the sealings to come apart resulting in the product not functioning.
7. If foreign matter adheres to the plug O-ring, be sure to wipe it off. If air blow is performed with the air gun air outlet in close proximity to the plug O-ring, the plug O-ring may come off.
8. For products with a sleeve lock mechanism, do not apply pressure when rotating the sleeve. If the KK130 series is pressurized during rotation, the detent of the locked and released positions may become unclear due to the pressure. In addition, operate the product in accordance with the arrows on the sleeve surface. Failure to do so may result in problems with the attaching and detaching of the mechanism.
9. If the plug and socket cannot be separated due to a malfunction of the sleeve, do not try to forcibly pull out the plug. Instead, turn the sleeve clockwise (viewed from the plug insertion side) 3 to 5 times, and then check to see if the sleeve moves properly. If the sleeve still doesn't move properly, try turning it counter-clockwise in the same manner, and check it again.
   If the aforementioned method fails to work, loosen the plug and socket connection thread and remove it from the piping.
10. Water is an incompressible fluid. Design the piping while taking the characteristics of the fluid into consideration.
    If the plug or socket piping of the type with a check valve is filled with water and the valve above said piping is closed, removing the plug or socket will result in the piping between the check valve and the closed valve filling with water. (Refer to the circuit example.)
    In order to reinsert the plug or socket while in the aforementioned state, the water would need to be compressed to allow room for the plug or socket. However, as this is not possible, the plug and socket cannot be reinserted while in this state.

Circuit example

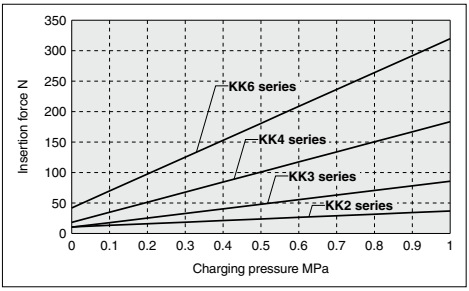


S Couplers
Specific Product Precautions 2

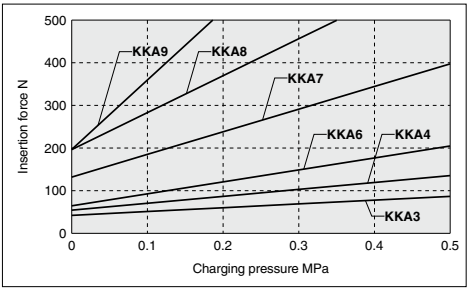
Be sure to read this before handling the products.
Refer to back page 50 for Safety Instructions and pages 13 to 17 for Fittings and Tubing Precautions.

Plug Insertion Force in Pressurized Condition

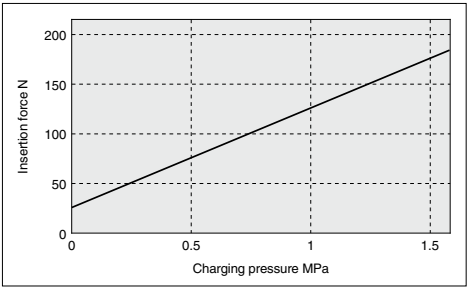
Insertion Force of KK series



Insertion Force of KKA series



Insertion Force of KK130 series



Handling of Barb Fittings and Nut Fittings

⚠ Caution

1. When using a nut fitting, insert the hose all the way to the end and securely tighten it with the nut. When the insertion of the hose or the tightening of the nut are not sufficient, the hose may slip out.
2. Disconnection may occur depending on the material or the O.D. accuracy of the hose; therefore be sure to confirm the applicability of the hose.
3. Prepare a hose band separately when using a barb fitting. If the hose band is not used, the hose may come off.

Handling of Fittings

⚠ Caution

1. Tightening of the fittings with a sealant

   Tighten fittings with sealant using the proper tightening torques in the table below. As a rule, they should be tightened 2 to 3 turns with a tool after first tightening by hand.

Connection thread size	Proper tightening torque N·m
NPT, R 3/4	28 to 30
NPT, R 1	36 to 38
NPT, R 1 1/4	40 to 42
NPT, R 1 1/2	48 to 50