

# Rectangular Multi-connector Series *KDM*

No. of Connecting Tubes: 10, 20

RoHS

**Multi-connector is effective in saving labor for separate transportation of the panel and the machine, and for exchanging units due to failure.**

## Substantial reduction in mounting space

In comparison with a model requiring many union joints for panels and partitions, this model needs only a small space.

## One-touch connection/disconnection of connector

Multiple pipes can be connected/disconnected in one-touch operation without connection error. Thus man-hours for connection/disconnection are cut down substantially.

## One-touch tube connection

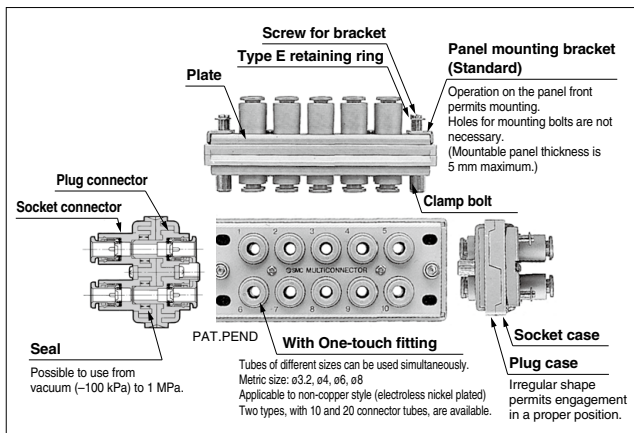
One-touch fittings substantially cuts down man-hours for piping.



KDM20



KDM10



## Model

| No. of connecting tubes | Tubing O.D. | Model    | Weight (g) | Color of release button |
|-------------------------|-------------|----------|------------|-------------------------|
| 10                      | ø3.2        | KDM10-23 | 300        | Blue                    |
|                         | ø4          | KDM10-04 |            |                         |
|                         | ø6          | KDM10-06 | 520        |                         |
|                         | ø8          | KDM10-08 |            |                         |
| 20                      | ø3.2        | KDM20-23 | 520        |                         |
|                         | ø4          | KDM20-04 |            |                         |
|                         | ø6          | KDM20-06 | 950        |                         |
|                         | ø8          | KDM20-08 |            |                         |

## Applicable Tubing

|                 |   |
|-----------------|---|
| Tubing material | FEP, PFA, Nylon, Soft nylon, Polyurethane |
| Tubing O.D.     | ø3.2, ø4, ø6, ø8                          |

## Specifications

|  |                          |
|--|--------------------------|
| Fluid  | Air                      |
| Operating pressure range <small>Note</small> | -100 kPa to 1 MPa        |
| Proof pressure                               | 1.5 MPa                  |
| Ambient and fluid temperature                | -5 to 60°C (No freezing) |

Note) Please avoid using in a vacuum holding application such as a leak tester, since there is leakage.



**Made to Order**  
(Refer to page 208 for details.)

## Caution

Be sure to read before handling.  
Refer to front matter 56 for  
Safety Instructions and pages  
13 to 16 for Fittings and Tubing  
Precautions.

KQ2  
KQ82  
KS  
KX  
KM  
KF  
M  
H/DL  
L/L  
KC  
KK  
KK130  
DM  
KDM  
KB  
KR  
KA  
KQ62  
KG  
KFG2  
MS  
KKA  
KP  
LQ  
MQR  
T

Principal Parts Material

|   |                           |   |
|---|---------------------------|---|
| Plug case, Socket case  |                           | POM   |
| Plate, Bracket  |                           | SPCC plated   |
| Plug connector,<br>Socket connector                                 | Body                      | PBT, C3604 Electroless nickel plated (ø8)                         |
|   | Chuck                     | Stainless steel 304   |
|   | Guide                     | Stainless steel 304, C3604<br>Electroless nickel plated, PBT (ø8) |
|   | Collet,<br>Release button | POM   |
|   | Seal                      | NBR   |
| Clamp bolt, Screw for bracket,<br>Cross-recessed head machine screw |                           | SWRM (Nickel plated)  |
| Type E retaining ring   |                           | Stainless steel 304   |

Model

| No. of connection<br>tubes | Tubing<br>O.D. | Model     |           | Color of<br>release button |
|----------------------------|----------------|-----------|-----------|----------------------------|
|                            |                | Plug      | Socket    |                            |
| 10                         | ø3.2           | KDM10P-23 | KDM10S-23 | Blue                       |
|                            | ø4             | KDM10P-04 | KDM10S-04 |                            |
|                            | ø6             | KDM10P-06 | KDM10S-06 |                            |
|                            | ø8             | KDM10P-08 | KDM10S-08 |                            |
| 20                         | ø3.2           | KDM20P-23 | KDM20S-23 |                            |
|                            | ø4             | KDM20P-04 | KDM20S-04 |                            |
|                            | ø6             | KDM20P-06 | KDM20S-06 |                            |
|                            | ø8             | KDM20P-08 | KDM20S-08 |                            |

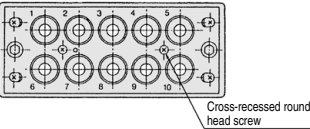
Mixed Sizes of Plug Connectors and Socket Connectors

The rectangular multi-connector permits connector exchange in any desired position, thus allowing use of different sizes of tubes.

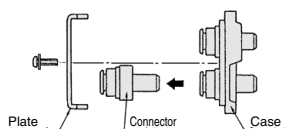
Model

| Connector                          | Tubing<br>O.D. | Model   | Color of<br>release button |
|------------------------------------|----------------|---------|----------------------------|
| Plug<br>connector                  | ø3.2           | KDMP-23 | Blue                       |
|                                    | ø4             | KDMP-04 |                            |
|                                    | ø6             | KDMP-06 |                            |
|                                    | ø8             | KDMP-08 |                            |
| Socket<br>connector<br>(with seal) | ø3.2           | KDMS-23 |                            |
|                                    | ø4             | KDMS-04 |                            |
|                                    | ø6             | KDMS-06 |                            |
|                                    | ø8             | KDMS-08 |                            |

1. Loosen the cross-recessed head machine screw by using a Phillips screwdriver to remove the plate from the case.



2. After exchanging connectors in desired places, fix the plate to the case by using a Phillips screwdriver.

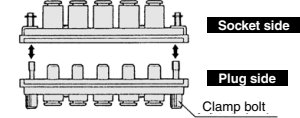


How to Use

**Caution**

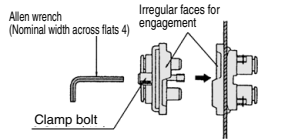
**Separation**

Loosen the clamp bolt to separate the plug side from the socket side.



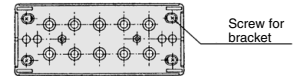
**Connection**

Put together the irregular faces for engagement and connect the plug case to the socket. After tightening the clamp bolt by hand, tighten it further with allen wrench (nominal width across flats: 4).

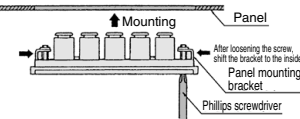


**Panel mounting**

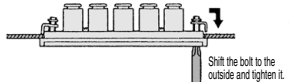
1. Loosen (4) screws for bracket on the socket side using a Phillips screwdriver (JIS nominal No. 2) until the bracket touches the stop ring.



2. Shift the panel mounting bracket to the inside (Move the screw for bracket in the longitudinal direction of the slot) and put the connector in the panel mounting hole. (Panel-mounting hole: See Dimensions.)



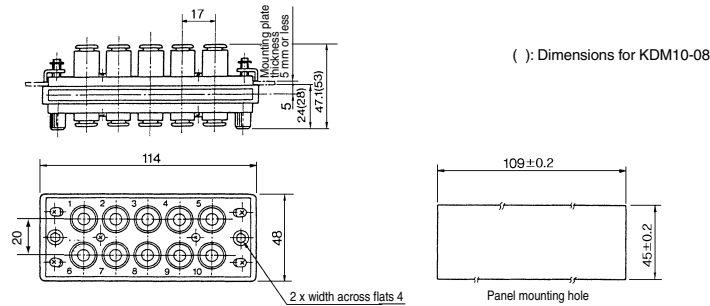
3. After shifting the bolt for bracket to the outside, tighten the bolt by a Phillips screwdriver to fix the socket case.



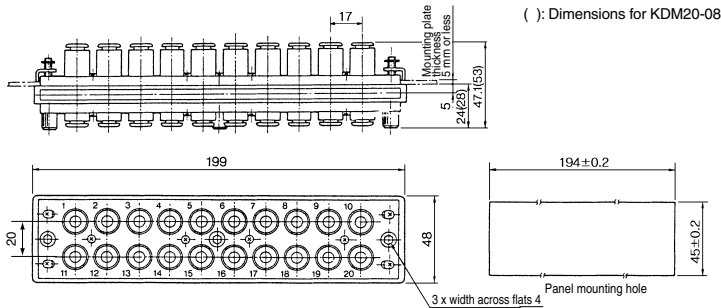
4. Loosen the screw for bracket until the bracket touches the stop ring and shift the bracket to the inside to remove the connector from the panel.

Dimensions

KDM10



KDM20



KQ2

KQB2

KS  
KX

KM

KF

M

H/DL  
L/LL

KC

KK

KK130

DM

**KDM**

KB

KR

KA

KQG2

KG

KFG2

MS

KKA

KP

LQ

MQR

T



## 1 Grease-free Specifications

| Symbol     | Specifications   |
|------------|--|
| <b>X17</b> | Grease-free<br>Rubber material: NBR (With fluorine coating)<br>Release button color: Light blue  |
| <b>X39</b> | Grease-free<br>Rubber material: NBR (With fluorine coating)<br>Release button color: Light blue<br>Clean (Copper-free, air blow, double package) |

Suffix "X17" to the end of part number.

Example) **KDM10-04-X17**

## 2 Other Specifications

| Symbol     | Specifications   |
|------------|--|
| <b>X12</b> | Lubricant: White Vaseline<br>Release button color: White |

## 3 Mixed Tubing Size Type and Other Tubing Size

### ■ Mixed Tubing Size Type

Mixed tubing size manifolds are available to meet your individual requirements. Please consult with SMC for availability.

### ■ Other Tubing Size

| Tubing size<br>O.D. | Connection<br>no. | Part no.  |
|---------------------|-------------------|-----------|
| ø10                 | 6                 | IN-254-52 |
| ø12                 | 6                 | IN-254-53 |

# Inch-size Rectangular Multi-connector Series *KDM*

No. of Connecting Tubes: 10, 20

**Multi-connector is effective in saving labor for separate transportation of the panel and the machine, and for exchanging units due to failure.**

## Substantial reduction in mounting space

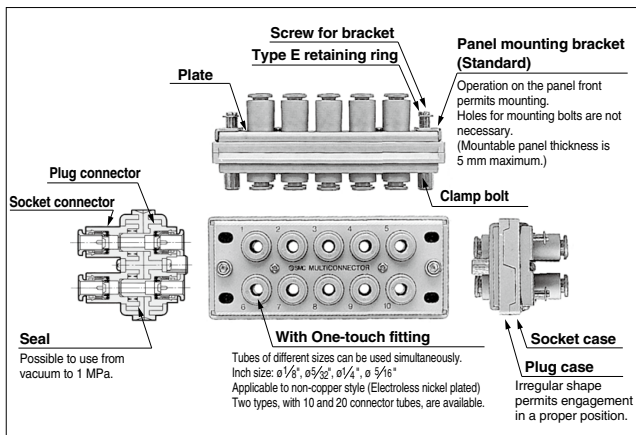
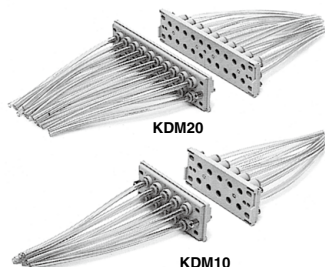
In comparison with a model requiring many union joints for panels and partitions, this model needs only a small space.

## One-touch connection/disconnection of connector

Multiple pipes can be connected/disconnected in one-touch operation without connection error. Thus man-hours for connection/disconnection are cut down substantially.

## One-touch tube connection

One-touch fittings substantially cuts down man-hours for piping.



## Model

| No. of connecting tubes | Tubing O.D. | Model    | Weight (g) | Color of release button |
|-------------------------|-------------|----------|------------|-------------------------|
| 10                      | ø 1/8"      | KDM10-01 | 300        | Red                     |
|                         | ø 5/32"     | KDM10-03 |            |                         |
|                         | ø 1/4"      | KDM10-07 |            |                         |
|                         | ø 5/16"     | KDM10-09 |            |                         |
| 20                      | ø 1/8"      | KDM20-01 | 520        |                         |
|                         | ø 5/32"     | KDM20-03 |            |                         |
|                         | ø 1/4"      | KDM20-07 |            |                         |
|                         | ø 5/16"     | KDM20-09 |            |                         |
|                         |             |          | 950        |                         |

## Applicable Tubing

|                 |   |
|-----------------|---|
| Tubing material | FEP, PFA, Nylon, Soft nylon, Polyurethane               |
| Tubing O.D.     | $\phi 1/8"$ , $\phi 5/32"$ , $\phi 1/4"$ , $\phi 5/16"$ |

## Specifications

|                                 |                          |
|---------------------------------|--------------------------|
| Fluid                           | Air                      |
| Operating pressure range (Note) | -100 kPa to 1 MPa        |
| Proof pressure                  | 1.5 MPa                  |
| Ambient and fluid temperature   | -5 to 60°C (No freezing) |

(Note) Please avoid using in a vacuum holding application such as a leak tester, since there is leakage.



**Made to Order**  
(Refer to page 212 for details.)

KQ2  
KQB2  
KS  
KX  
KM  
KF  
M  
H/DL  
L/LL  
KC  
KK  
KK130  
DM  
KDM  
KB  
KR  
KA  
KQG2  
KG  
KFG2  
MS  
KKA  
KP  
LQ  
MQR  
T

Principal Parts Material

|   |                           |  |
|---|---------------------------|--|
| Plug case, Socket case  |                           | POM  |
| Plate, Bracket  |                           | SPCC plated  |
| Plug connector,<br>Socket connector                                 | Body                      | PBT, C3604BD Electroless nickel plated (ø5/16)                         |
|   | Chuck                     | Stainless steel 304  |
|   | Guide                     | Stainless steel 304, C3604BD<br>Electroless nickel plated, POM (ø5/16) |
|   | Collet,<br>Release button | POM  |
|   | Seal                      | NBR  |
| Clamp bolt, Screw for bracket,<br>Cross-recessed head machine screw |                           | SWRM (Nickel plated)   |
| Type E retaining ring   |                           | Stainless steel 304  |

Model

| No. of connection<br>tubes | Tubing<br>O.D. | Model     |           | Color of<br>release button |
|----------------------------|----------------|-----------|-----------|----------------------------|
|                            |                | Plug      | Socket    |                            |
| 10                         | ø 1/8"         | KDM10P-01 | KDM10S-01 | Red                        |
|                            | ø 5/32"        | KDM10P-03 | KDM10S-03 |                            |
|                            | ø 1/4"         | KDM10P-07 | KDM10S-07 |                            |
|                            | ø 5/16"        | KDM10P-09 | KDM10S-09 |                            |
| 20                         | ø 1/8"         | KDM20P-01 | KDM20S-01 | Red                        |
|                            | ø 5/32"        | KDM20P-03 | KDM20S-03 |                            |
|                            | ø 1/4"         | KDM20P-07 | KDM20S-07 |                            |
|                            | ø 5/16"        | KDM20P-09 | KDM20S-09 |                            |

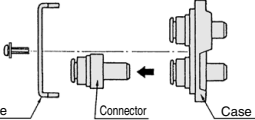
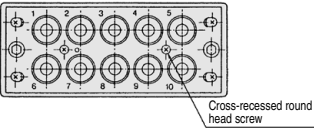
Mixed Sizes of Plug Connectors and Socket Connectors

The rectangular multi-connector permits connector exchange in any desired position, thus allowing use of different sizes of tubes.

Model

| Connector                          | Tubing<br>O.D. | Model   | Color of<br>release button |
|------------------------------------|----------------|---------|----------------------------|
| Plug<br>connector                  | ø 1/8"         | KDMP-01 | Red                        |
|                                    | ø 5/32"        | KDMP-03 |                            |
|                                    | ø 1/4"         | KDMP-07 |                            |
|                                    | ø 5/16"        | KDMP-09 |                            |
| Socket<br>connector<br>(with seal) | ø 1/8"         | KDMS-01 | Red                        |
|                                    | ø 5/32"        | KDMS-03 |                            |
|                                    | ø 1/4"         | KDMS-07 |                            |
|                                    | ø 5/16"        | KDMS-09 |                            |

1. Loosen the cross-recessed head machine screw by using a Phillips screwdriver to remove the plate from the case.
2. After exchanging connectors in desired places, fix the plate to the case by using a Phillips screwdriver.

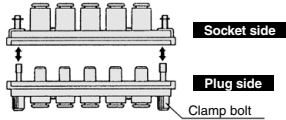


How to Use

**Caution**

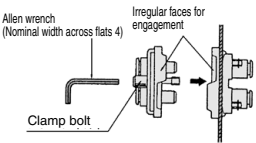
**Separation**

Loosen the clamp bolt to separate the plug side from the socket side.



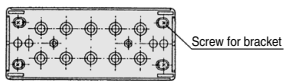
**Connection**

Put together the irregular faces for engagement and connect the plug case to the socket. After tightening the clamp bolt by hand, tighten it further with allen wrench (nominal width across flats: 4).

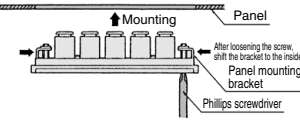


**Panel mounting**

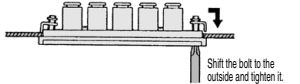
1. Loosen (4) screws for bracket on the socket side using a Phillips screwdriver (JIS nominal No. 2) until the bracket touches the stop ring.



2. Shift the panel mounting bracket to the inside (Move the screw for bracket in the longitudinal direction of the slot) and put the connector in the panel mounting hole. (Panel-mounting hole: See Dimensions.)



3. After shifting the bolt for bracket to the outside, tighten the bolt by a Phillips screwdriver to fix the socket case.

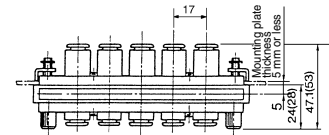


4. Loosen the screw for bracket until the bracket touches the stop ring and shift the bracket to the inside to remove the connector from the panel.

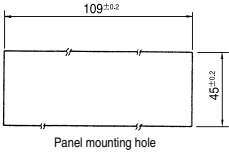
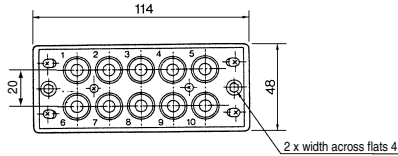


### Dimensions

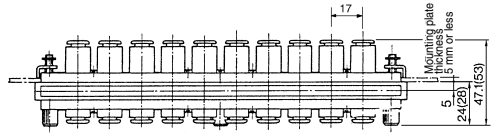
#### KDM10



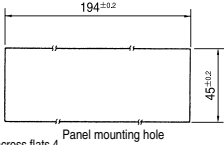
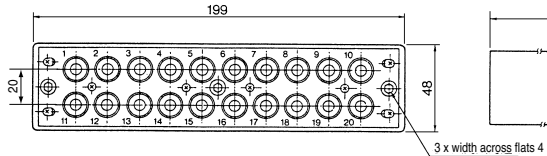
( ): Dimensions for KDM10-09



#### KDM20



( ): Dimensions for KDM20-09



### Handling of One-touch Fittings

#### ⚠ Caution

Refer to "Fittings & Tubing Precautions" for the details of installation/removal of One-touch fittings on the pages 13 to 16.

|              |
|--------------|
| KQ2          |
| KQB2         |
| KS<br>KX     |
| KM           |
| KF           |
| M            |
| H/DL<br>L/LL |
| KC           |
| KK           |
| KK130        |
| DM           |
| <b>KDM</b>   |
| KB           |
| KR           |
| KA           |
| KQG2         |
| KG           |
| KFG2         |
| MS           |
| KKA          |
| KP           |
| LQ           |
| MQR          |
| T            |



## 1 Grease-free Specifications

| Symbol     | Specifications   |
|------------|--|
| <b>X17</b> | Grease-free<br>Rubber material: NBR (With fluorine coating)<br>Release button color: Light blue  |
| <b>X39</b> | Grease-free<br>Rubber material: NBR (With fluorine coating)<br>Release button color: Light blue<br>Clean (Copper-free, air blow, double package) |

Suffix "-X17" to the end of part number.

Example) **KDM10-03-X17**

## 2 Other Specifications

| Symbol     | Specifications   |
|------------|--|
| <b>X12</b> | Lubricant: White Vaseline<br>Release button color: White |

## 3 Mixed Tubing Size Type

### ■ Mixed Tubing Size Type

Mixed tubing size manifolds are available to meet your individual requirements. Please consult with SMC for availability.