

# Series KKA

## Plug (P)

### Male thread type

|                                                                                   | Body size | Port size | Part no.         |                     |
|-----------------------------------------------------------------------------------|-----------|-----------|------------------|---------------------|
|                                                                                   |           |           | With check valve | Without check valve |
|  | 1/8       | R 1/8     | <b>KKA3P-01M</b> | <b>KKA3P-01M-1</b>  |
|                                                                                   |           | R 1/4     | <b>-02M</b>      | <b>-02M-1</b>       |
|                                                                                   |           | R 3/8     | <b>-03M</b>      | <b>-03M-1</b>       |
|  | 1/4       | R 1/4     | <b>KKA4P-02M</b> | <b>KKA4P-02M-1</b>  |
|                                                                                   |           | R 3/8     | <b>-03M</b>      | <b>-03M-1</b>       |
|                                                                                   |           | R 1/2     | <b>-04M</b>      | <b>-04M-1</b>       |
|                                                                                   | 1/2       | R 3/8     | <b>KKA6P-03M</b> | <b>KKA6P-03M-1</b>  |
|                                                                                   |           | R 1/2     | <b>-04M</b>      | <b>-04M-1</b>       |
|                                                                                   |           | R 3/4     | <b>-06M</b>      | <b>-06M-1</b>       |
|                                                                                   | 3/4       | R 1/2     | <b>KKA7P-04M</b> | —                   |
|                                                                                   |           | R 3/4     | <b>-06M</b>      | —                   |
|                                                                                   |           | R 1       | <b>-10M</b>      | —                   |
|                                                                                   | 1         | R 3/4     | <b>KKA8P-06M</b> | —                   |
|                                                                                   |           | R 1       | <b>-10M</b>      | —                   |
|                                                                                   |           | R 1 1/4   | <b>-12M</b>      | —                   |
|                                                                                   | 1 1/4     | R 1       | <b>KKA9P-10M</b> | —                   |
|                                                                                   |           | R 1 1/4   | <b>-12M</b>      | —                   |
|                                                                                   |           | R 1 1/2   | <b>-14M</b>      | —                   |

### Female thread type

|                                                                                     | Body size | Port size | Part no.         |                     |
|-------------------------------------------------------------------------------------|-----------|-----------|------------------|---------------------|
|                                                                                     |           |           | With check valve | Without check valve |
|  | 1/8       | Rc 1/8    | <b>KKA3P-01F</b> | <b>KKA3P-01F-1</b>  |
|                                                                                     |           | Rc 1/4    | <b>-02F</b>      | <b>-02F-1</b>       |
|                                                                                     |           | Rc 3/8    | <b>-03F</b>      | <b>-03F-1</b>       |
|  | 1/4       | Rc 1/4    | <b>KKA4P-02F</b> | <b>KKA4P-02F-1</b>  |
|                                                                                     |           | Rc 3/8    | <b>-03F</b>      | <b>-03F-1</b>       |
|                                                                                     |           | Rc 1/2    | <b>-04F</b>      | <b>-04F-1</b>       |
|                                                                                     | 1/2       | Rc 3/8    | <b>KKA6P-03F</b> | <b>KKA6P-03F-1</b>  |
|                                                                                     |           | Rc 1/2    | <b>-04F</b>      | <b>-04F-1</b>       |
|                                                                                     |           | Rc 3/4    | <b>-06F</b>      | <b>-06F-1</b>       |
|                                                                                     | 3/4       | Rc 1/2    | <b>KKA7P-04F</b> | —                   |
|                                                                                     |           | Rc 3/4    | <b>-06F</b>      | —                   |
|                                                                                     |           | Rc 1      | <b>-10F</b>      | —                   |
|                                                                                     | 1         | Rc 3/4    | <b>KKA8P-06F</b> | —                   |
|                                                                                     |           | Rc 1      | <b>-10F</b>      | —                   |
|                                                                                     |           | Rc 1 1/4  | <b>-12F</b>      | —                   |
|                                                                                     | 1 1/4     | Rc 1      | <b>KKA9P-10F</b> | —                   |
|                                                                                     |           | Rc 1 1/4  | <b>-12F</b>      | —                   |
|                                                                                     |           | Rc 1 1/2  | <b>-14F</b>      | —                   |

## Socket (S)

### Male thread type

|                                                                                    | Body size | Port size | Part no.         |                     |
|------------------------------------------------------------------------------------|-----------|-----------|------------------|---------------------|
|                                                                                    |           |           | With check valve | Without check valve |
|  | 1/8       | R 1/8     | <b>KKA3S-01M</b> | <b>KKA3S-01M-1</b>  |
|                                                                                    |           | R 1/4     | <b>-02M</b>      | <b>-02M-1</b>       |
|                                                                                    |           | R 3/8     | <b>-03M</b>      | <b>-03M-1</b>       |
|                                                                                    | 1/4       | R 1/4     | <b>KKA4S-02M</b> | <b>KKA4S-02M-1</b>  |
|                                                                                    |           | R 3/8     | <b>-03M</b>      | <b>-03M-1</b>       |
|                                                                                    |           | R 1/2     | <b>-04M</b>      | <b>-04M-1</b>       |
|                                                                                    | 1/2       | R 3/8     | <b>KKA6S-03M</b> | <b>KKA6S-03M-1</b>  |
|                                                                                    |           | R 1/2     | <b>-04M</b>      | <b>-04M-1</b>       |
|                                                                                    |           | R 3/4     | <b>-06M</b>      | <b>-06M-1</b>       |
|                                                                                    | 3/4       | R 1/2     | <b>KKA7S-04M</b> | —                   |
|                                                                                    |           | R 3/4     | <b>-06M</b>      | —                   |
|                                                                                    |           | R 1       | <b>-10M</b>      | —                   |
|                                                                                    | 1         | R 3/4     | <b>KKA8S-06M</b> | —                   |
|                                                                                    |           | R 1       | <b>-10M</b>      | —                   |
|                                                                                    |           | R 1 1/4   | <b>-12M</b>      | —                   |
|                                                                                    | 1 1/4     | R 1       | <b>KKA9S-10M</b> | —                   |
|                                                                                    |           | R 1 1/4   | <b>-12M</b>      | —                   |
|                                                                                    |           | R 1 1/2   | <b>-14M</b>      | —                   |

### Female thread type

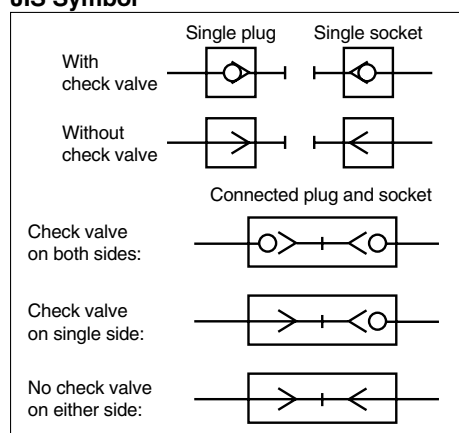
|                                                                                      | Body size | Port size | Part no.         |                     |
|--------------------------------------------------------------------------------------|-----------|-----------|------------------|---------------------|
|                                                                                      |           |           | With check valve | Without check valve |
|  | 1/8       | Rc 1/8    | <b>KKA3S-01F</b> | <b>KKA3S-01F-1</b>  |
|                                                                                      |           | Rc 1/4    | <b>-02F</b>      | <b>-02F-1</b>       |
|                                                                                      |           | Rc 3/8    | <b>-03F</b>      | <b>-03F-1</b>       |
|                                                                                      | 1/4       | Rc 1/4    | <b>KKA4S-02F</b> | <b>KKA4S-02F-1</b>  |
|                                                                                      |           | Rc 3/8    | <b>-03F</b>      | <b>-03F-1</b>       |
|                                                                                      |           | Rc 1/2    | <b>-04F</b>      | <b>-04F-1</b>       |
|                                                                                      | 1/2       | Rc 3/8    | <b>KKA6S-03F</b> | <b>KKA6S-03F-1</b>  |
|                                                                                      |           | Rc 1/2    | <b>-04F</b>      | <b>-04F-1</b>       |
|                                                                                      |           | Rc 3/4    | <b>-06F</b>      | <b>-06F-1</b>       |
|                                                                                      | 3/4       | Rc 1/2    | <b>KKA7S-04F</b> | —                   |
|                                                                                      |           | Rc 3/4    | <b>-06F</b>      | —                   |
|                                                                                      |           | Rc 1      | <b>-10F</b>      | —                   |
|                                                                                      | 1         | Rc 3/4    | <b>KKA8S-06F</b> | —                   |
|                                                                                      |           | Rc 1      | <b>-10F</b>      | —                   |
|                                                                                      |           | Rc 1 1/4  | <b>-12F</b>      | —                   |
|                                                                                      | 1 1/4     | Rc 1      | <b>KKA9S-10F</b> | —                   |
|                                                                                      |           | Rc 1 1/4  | <b>-12F</b>      | —                   |
|                                                                                      |           | Rc 1 1/2  | <b>-14F</b>      | —                   |

# S Couplers Series KKA

Stainless steel type



## JIS Symbol



## Characteristics with check valve on both sides

| Body size | Liquid dripping<br>cm <sup>3</sup> at each removal | Aeration<br>cm <sup>3</sup> at each removal |
|-----------|----------------------------------------------------|---------------------------------------------|
| KKA3      | 0.02                                               | 0.1                                         |
| KKA4      | 0.04                                               | 0.1                                         |
| KKA6      | 0.06                                               | 0.2                                         |
| KKA7      | 0.14                                               | 0.5                                         |
| KKA8      | 0.27                                               | 0.9                                         |
| KKA9      | 0.77                                               | 2.7                                         |

### Liquid dripping:

Volume of water leakage at the time when the plug and socket are uncoupled.

### Aeration:

Volume of external air entrained when the plug and socket are connected.

## Specifications

|                               |                                                                                                                  |
|-------------------------------|------------------------------------------------------------------------------------------------------------------|
| Fluid                         | Water, Air                                                                                                       |
| Operating pressure range      | Note 1)<br>KKA3: -100 kPa to 1 MPa<br>KKA4/6/7/8/9: 0 to 1 MPa                                                   |
| Proof pressure                | 10 MPa                                                                                                           |
| Ambient and fluid temperature | -5 to 150°C (No freezing)<br>Note) This product should not be used with steam.                                   |
| Non-greased specification     | No grease is used.<br>Rubber: Fluorine coated,<br>(Metal sliding parts: Plated with fluorine-contained material) |
| Material                      | Metal part: Stainless steel 304, Rubber material: Fluoro rubber (Special FKM)                                    |
| Seal                          | 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) When fluid contains copper ions, please use KKA□-X70. (p. 275)

## Performance

|                            |                                                |
|----------------------------|------------------------------------------------|
| Plug and socket connection | One-touch connection and release               |
| Check valve                | Check valve on both sides, Without check valve |

Note) Series KKA cannot be connected with Series KK or Series KKH.

## Effective Area

| Built-in check valve                                     | Plug        | Socket      | Effective area mm <sup>2</sup> |
|----------------------------------------------------------|-------------|-------------|--------------------------------|
| Plug: With check valve<br>Socket: With check valve       | KKA3P-01F   | KKA3S-01F   | 17.4                           |
|                                                          | KKA4P-02F   | KKA4S-02F   | 26.4                           |
|                                                          | KKA6P-04F   | KKA6S-04F   | 54.2                           |
|                                                          | KKA7P-06F   | KKA7S-06F   | 99.6                           |
|                                                          | KKA8P-10F   | KKA8S-10F   | 168.3                          |
|                                                          | KKA9P-12F   | KKA9S-12F   | 332.1                          |
| Plug: Without check valve<br>Socket: With check valve    | KKA3P-01M-1 | KKA3S-01M   | 18.5                           |
|                                                          | KKA4P-02M-1 | KKA4S-02M   | 31.8                           |
|                                                          | KKA6P-04M-1 | KKA6S-04M   | 55.3                           |
| Plug: Without check valve<br>Socket: Without check valve | KKA3P-01M-1 | KKA3S-01M-1 | 22.6                           |
|                                                          | KKA4P-02M-1 | KKA4S-02M-1 | 40.2                           |
|                                                          | KKA6P-04M-1 | KKA6S-04M-1 | 76.0                           |

## How to Order

KKA 4 P - 02 M

### Body size

|   |       |
|---|-------|
| 3 | 1/8   |
| 4 | 1/4   |
| 6 | 1/2   |
| 7 | 3/4   |
| 8 | 1     |
| 9 | 1 1/4 |

### Socket/Plug designation

|   |        |
|---|--------|
| P | Plug   |
| S | Socket |

### Port size

| Symbol | Thread size |
|--------|-------------|
| 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   |
| 10     | R, Rc 1     |
| 12     | R, Rc 1 1/4 |
| 14     | R, Rc 1 1/2 |

### Built-in check valve

|     |                     |
|-----|---------------------|
| Nil | With check valve    |
| -1  | Without check valve |

Note) KKA7/8/9 is not available without a check valve. Contact us when such a type is needed.

### Connection type

| Symbol | Type                       |
|--------|----------------------------|
| M      | Male thread (with sealant) |
| F      | Female thread              |

| Built-in check valve | Plug | Socket | Availability |
|----------------------|------|--------|--------------|
| Yes                  | Yes  | Yes    | ○            |
| No                   | Yes  | No     | ○            |
| No                   | No   | No     | ○            |
| Yes                  | No   | No     | ×            |

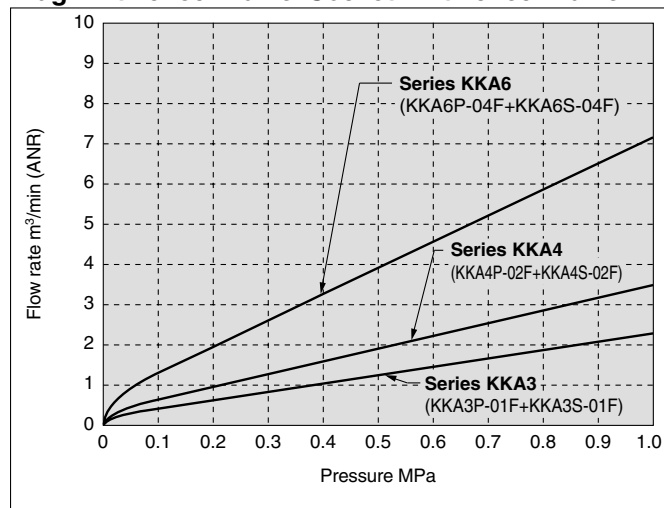
Note) A plug with check valve should be used in combination with a socket with check valve.  
If a socket without check valve is used, the check valve of the plug will not open.

# Series KKA

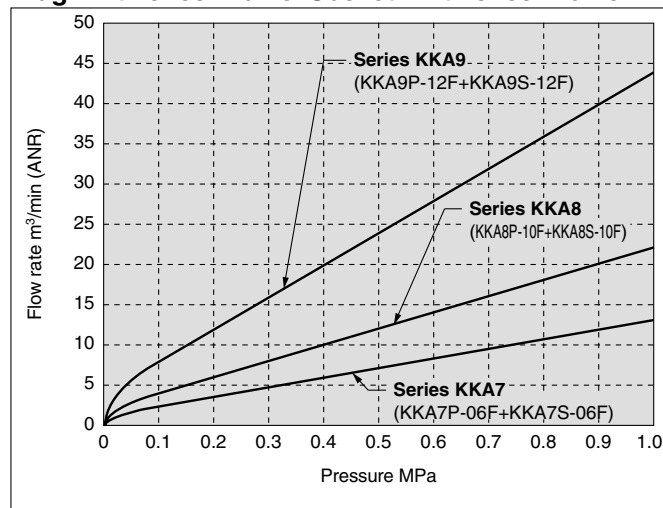
## Flow Characteristics

Air

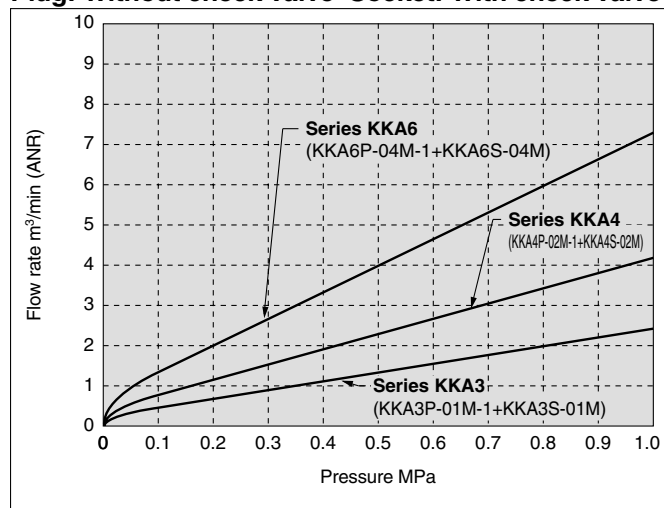
Plug: With check valve Socket: With check valve



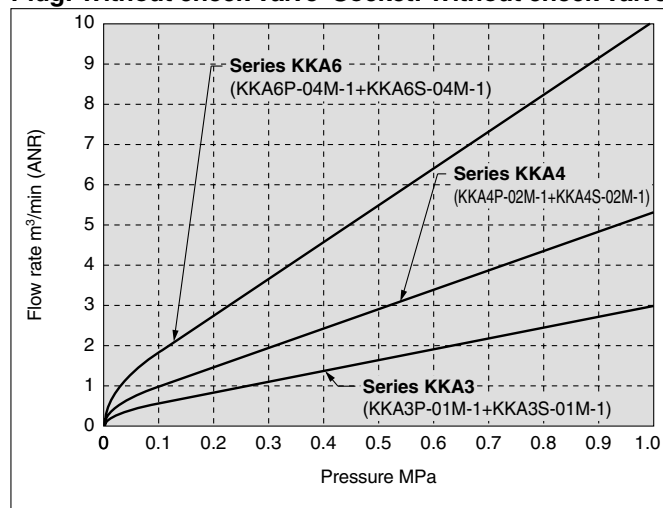
Plug: With check valve Socket: With check valve



Plug: Without check valve Socket: With check valve



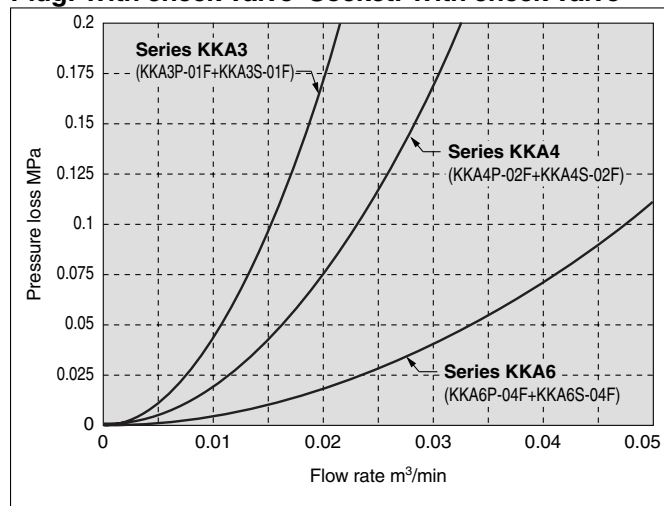
Plug: Without check valve Socket: Without check valve



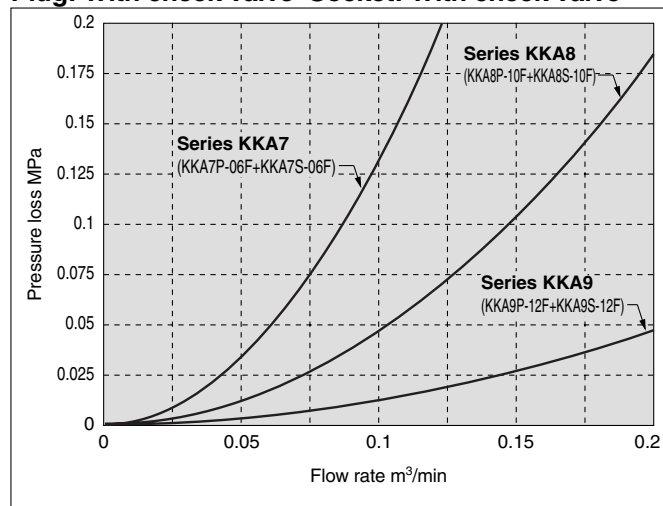
## Pressure Loss

Water

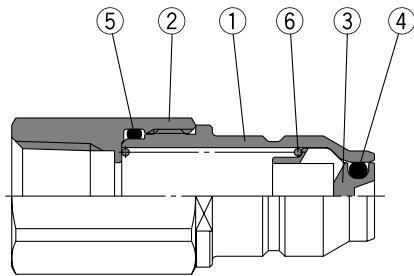
Plug: With check valve Socket: With check valve



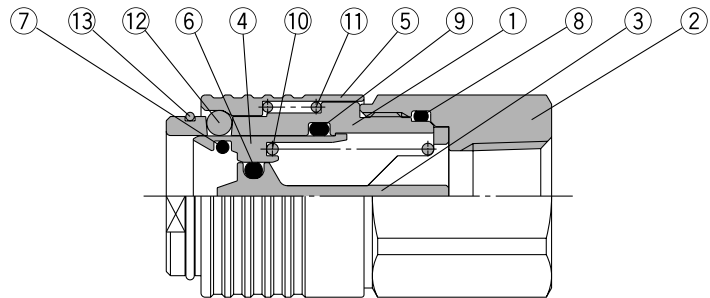
Plug: With check valve Socket: With check valve



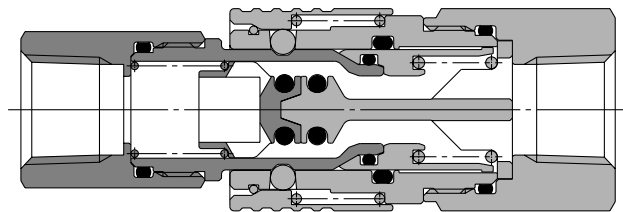
## Construction



Plug



Socket



K ☐

M ☐

H ☐

**KK**

D ☐

MS

LQ

MQR

T ☐

### Plug

| No. | Description              | Material            | Note                                    |
|-----|--------------------------|---------------------|-----------------------------------------|
| 1   | <b>Stem</b>              | Stainless steel 304 | Plated with fluorine-contained material |
| 2   | <b>Rear stem</b>         | Stainless steel 304 |                                         |
| 3   | <b>Plug valve</b>        | Stainless steel 304 |                                         |
| 4   | <b>Valve O-ring</b>      | Special FKM         | Fluorine coated                         |
| 5   | <b>Stem O-ring</b>       | Special FKM         | Fluorine coated                         |
| 6   | <b>Plug valve spring</b> | Stainless steel 304 |                                         |

### Socket

| No. | Description          | Material            | Note                                    |
|-----|----------------------|---------------------|-----------------------------------------|
| 1   | <b>Body</b>          | Stainless steel 304 | Plated with fluorine-contained material |
| 2   | <b>Rear body</b>     | Stainless steel 304 |                                         |
| 3   | <b>Socket valve</b>  | Stainless steel 304 |                                         |
| 4   | <b>Collar</b>        | Stainless steel 304 | Plated with fluorine-contained material |
| 5   | <b>Sleeve</b>        | Stainless steel 304 | Plated with fluorine-contained material |
| 6   | <b>Valve O-ring</b>  | Special FKM         | Fluorine coated                         |
| 7   | <b>Plug O-ring</b>   | Special FKM         | Fluorine coated                         |
| 8   | <b>Body O-ring</b>   | Special FKM         | Fluorine coated                         |
| 9   | <b>Collar seal</b>   | Special FKM         | Fluorine coated                         |
| 10  | <b>Collar spring</b> | Stainless steel 304 |                                         |
| 11  | <b>Sleeve spring</b> | Stainless steel 304 |                                         |
| 12  | <b>Steel ball</b>    | Stainless steel 304 |                                         |
| 13  | <b>Stopper ring</b>  | Stainless steel 304 |                                         |

### Series KKA Spare Parts

| Description | Product no. | No.      |
|-------------|-------------|----------|
| Plug O-ring | KKA3S-P01   | Socket ⑦ |
|             | KKA4S-P01   |          |
|             | KKA6S-P01   |          |
|             | KKA7S-P01   |          |
|             | KKA8S-P01   |          |
|             | KKA9S-P01   |          |

# Series KKA

## Dimensions/Plug (P)

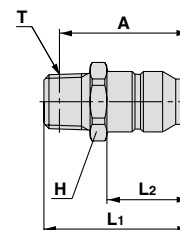
Without check valve

Male thread type

(mm)



| Body size | Model       | T Connection port size | H Width across flats | L1   | L2   | A    | Min. bore size | Effective area mm <sup>2</sup> | Mass g |
|-----------|-------------|------------------------|----------------------|------|------|------|----------------|--------------------------------|--------|
| 1/8       | KKA3P-01M-1 | R 1/8                  | 12                   | 28.5 | 16.0 | 24.5 | 6.0            | 22.6                           | 9.8    |
|           | -02M-1      | R 1/4                  | 14                   | 31.5 |      | 25.5 |                |                                | 14.6   |
|           | -03M-1      | R 3/8                  |                      | 32.5 |      | 26.0 |                |                                | 23.6   |
| 1/4       | KKA4P-02M-1 | R 1/4                  | 17                   | 34.4 | 18.9 | 28.4 | 8.0            | 40.2                           | 21.0   |
|           | -03M-1      | R 3/8                  |                      | 35.4 |      | 28.9 |                |                                | 27.9   |
|           | -04M-1      | R 1/2                  |                      | 39.4 |      | 31.4 |                |                                | 50.2   |
| 1/2       | KKA6P-03M-1 | R 3/8                  | 22                   | 37.9 | 20.4 | 31.4 | 11.0           | 76.0                           | 41.9   |
|           | -04M-1      | R 1/2                  |                      | 40.9 |      | 32.9 |                |                                | 56.0   |
|           | -06M-1      | R 3/4                  | 30                   | 42.9 |      | 33.4 |                |                                | 98.7   |

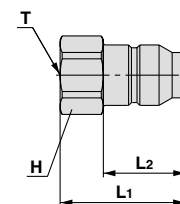


Female thread type

(mm)



| Body size | Model       | T Connection port size | H Width across flats | L1   | L2   | Min. bore size | Effective area mm <sup>2</sup> | Mass g |
|-----------|-------------|------------------------|----------------------|------|------|----------------|--------------------------------|--------|
| 1/8       | KKA3P-01F-1 | Rc 1/8                 | 14                   | 23.2 | 16.0 | 6.0            | 22.6                           | 9.6    |
|           | -02F-1      | Rc 1/4                 | 17                   | 30.3 |      |                |                                | 20.2   |
|           | -03F-1      | Rc 3/8                 | 19                   | 32.0 |      |                |                                | 26.2   |
| 1/4       | KKA4P-02F-1 | Rc 1/4                 | 17                   | 29.7 | 18.9 | 8.0            | 40.2                           | 20.0   |
|           | -03F-1      | Rc 3/8                 | 19                   | 34.0 |      |                |                                | 25.8   |
|           | -04F-1      | Rc 1/2                 | 24                   | 39.4 |      |                |                                | 46.1   |
| 1/2       | KKA6P-03F-1 | Rc 3/8                 | 22                   | 30.9 | 20.4 | 11.0           | 76.0                           | 34.3   |
|           | -04F-1      | Rc 1/2                 | 24                   | 39.6 |      |                |                                | 50.0   |
|           | -06F-1      | Rc 3/4                 | 30                   | 42.8 |      |                |                                | 78.6   |



## Dimensions/Socket (S)

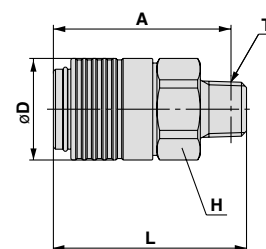
Without check valve

Male thread type

(mm)



| Body size | Model       | T Connection port size | H Width across flats | øD   | L    | A    | Min. bore size | Effective area mm <sup>2</sup> | Mass g |
|-----------|-------------|------------------------|----------------------|------|------|------|----------------|--------------------------------|--------|
| 1/8       | KKA3S-01M-1 | R 1/8                  | 17                   | 18.5 | 38.1 | 34.1 | 6.1            | 23.4                           | 36.1   |
|           | -02M-1      | R 1/4                  |                      |      | 41.1 | 35.1 |                |                                | 39.4   |
|           | -03M-1      | R 3/8                  |                      |      | 42.1 | 35.6 |                |                                | 43.9   |
| 1/4       | KKA4S-02M-1 | R 1/4                  | 22                   | 24.2 | 46.0 | 40.0 | 8.1            | 41.2                           | 71.9   |
|           | -03M-1      | R 3/8                  |                      |      | 47.0 | 40.5 |                |                                | 73.6   |
|           | -04M-1      | R 1/2                  |                      |      | 50.0 | 42.0 |                |                                | 81.7   |
| 1/2       | KKA6S-03M-1 | R 3/8                  | 30                   | 30.7 | 51.4 | 44.9 | 11.4           | 81.6                           | 138.3  |
|           | -04M-1      | R 1/2                  |                      |      | 54.4 | 46.4 |                |                                | 149.6  |
|           | -06M-1      | R 3/4                  |                      |      | 56.4 | 46.9 |                |                                | 174.0  |



Female thread type

(mm)



| Body size | Model       | T Connection port size | H Width across flats | øD   | L    | Min. bore size | Effective area mm <sup>2</sup> | Mass g |
|-----------|-------------|------------------------|----------------------|------|------|----------------|--------------------------------|--------|
| 1/8       | KKA3S-01F-1 | Rc 1/8                 | 17                   | 18.5 | 37.6 | 6.1            | 23.4                           | 44.5   |
|           | -02F-1      | Rc 1/4                 |                      |      | 41.2 |                |                                | 44.8   |
|           | -03F-1      | Rc 3/8                 | 19                   |      | 43.1 |                |                                | 49.9   |
| 1/4       | KKA4S-02F-1 | Rc 1/4                 | 22                   | 24.2 | 46.1 | 8.1            | 41.2                           | 92.2   |
|           | -03F-1      | Rc 3/8                 |                      |      | 46.9 |                |                                | 86.2   |
|           | -04F-1      | Rc 1/2                 | 24                   |      | 52.3 |                |                                | 99.4   |
| 1/2       | KKA6S-03F-1 | Rc 3/8                 | 30                   | 30.7 | 50.5 | 11.4           | 81.6                           | 178.8  |
|           | -04F-1      | Rc 1/2                 |                      |      | 56.2 |                |                                | 191.2  |
|           | -06F-1      | Rc 3/4                 |                      |      | 57.9 |                |                                | 169.8  |

