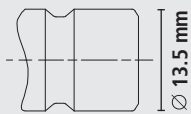


Temperature Regulation Quick Connect Couplings

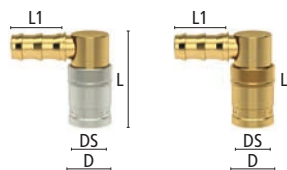
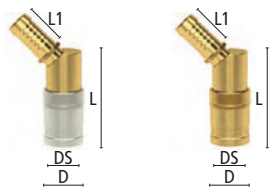
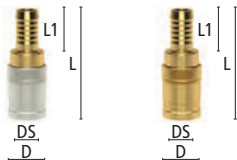
Series ESDF Plug size 13.5 mm

DN 9

Plug Profile (original size)



International Plug Profile



- Quick connect couplings made of brass MS 58, flat-sealing with two-hand operation
- For temperature regulation applications with hot or cold water as well as tempered oil
- Optional available with straight-through, single or double shut-off valves
- Hose couplings available with standard stem profile for standard hoses or quick-fit profile for quick-fit hoses

Materials

- Body, valve body, valve: Brass MS 58 plain
- Sleeve, plug: Brass MS 58 plain/ nickel-plated
- Springs, retaining ring: Stainless steel 1.4310
- Balls: Stainless steel 1.4034
- Seals: FKM (flat-sealing)

| Max. Working Pressure | Temperature | DN | Thread | Operation | Type of valve | Media | |
|-----------------------|-----------------|----|------------------|-----------|--------------------------------|----------------|--------------------|
| PN 15 bar | -20°C – +200°C* | 9 | ISO 228 / DIN 13 | Two-hands | Single/double/straight-through | Tempered media | Coupl. 5 / Plug 10 |

Couplings with straight standard hose stem without/with valve

| Hose connection | L | D | L1 | DS | Passage | Weight | Type No. w/o valve | Type No. w valve |
|-----------------|------|----|----|------|---------|--------|--------------------|------------------|
| Hose i.D. 9 | 61.5 | 22 | 25 | 13.5 | 7 | 72 | ESDF 9 TL | ESDF 9 TLAB |
| Hose i.D. 13 | 61.5 | 22 | 25 | 13.5 | 9 | 81 | ESDF 13 TL | ESDF 13 TLAB |

NEW! Couplings with straight quick-fit hose stem without/with valve

| Hose connection | L | D | L1 | DS | Passage | Weight | Type No. w/o valve | Type No. w valve |
|-----------------|------|----|----|------|---------|--------|--------------------|------------------|
| Hose i.D. 10 | 69.5 | 22 | 28 | 13.5 | 7 | 97 | ESDF 10 T | ESDF 10 TAB |
| Hose i.D. 13 | 69.5 | 22 | 28 | 13.5 | 9 | 104 | ESDF 13 T | ESDF 13 TAB |

Couplings with 45° standard hose stem without/with valve

| Hose connection | L | D | L1 | DS | Passage | Weight | Type No. w/o valve | Type No. w valve |
|-----------------|----|----|----|------|---------|--------|--------------------|------------------|
| Hose i.D. 9 | 51 | 22 | 30 | 13.5 | 7 | 103 | ESDF 9 TL-45 | ESDF 9 TL-45AB |
| Hose i.D. 13 | 51 | 22 | 30 | 13.5 | 9 | 109 | ESDF 13 TL-45 | ESDF 13 TL-45AB |

NEW! Couplings with 45° quick-fit hose stem without/with valve

| Hose connection | L | D | L1 | DS | Passage | Weight | Type No. w/o valve | Type No. w valve |
|-----------------|------|----|----|------|---------|--------|--------------------|------------------|
| Hose i.D. 10 | 55.5 | 22 | 28 | 13.5 | 7 | 128 | ESDF 10 T-45 | ESDF 10 T-45AB |
| Hose i.D. 13 | 55.5 | 22 | 28 | 13.5 | 9 | 134 | ESDF 13 T-45 | ESDF 13 T-45AB |

Couplings with 90° standard hose stem without/with valve

| Hose connection | L | D | L1 | DS | Passage | Weight | Type No. w/o valve | Type No. w valve |
|-----------------|------|----|----|------|---------|--------|--------------------|------------------|
| Hose i.D. 9 | 55.5 | 22 | 30 | 13.5 | 7 | 105 | ESDF 9 TL-90 | ESDF 9 TL-90AB |
| Hose i.D. 13 | 55.5 | 22 | 30 | 13.5 | 9 | 111 | ESDF 13 TL-90 | ESDF 13 TL-90AB |

NEW! Couplings with 90° quick-fit hose stem without/with valve

| Hose connection | L | D | L1 | DS | Passage | Weight | Type No. w/o valve | Type No. w valve |
|-----------------|------|----|----|------|---------|--------|--------------------|------------------|
| Hose i.D. 10 | 55.5 | 22 | 28 | 13.5 | 7 | 131 | ESDF 10 T-90 | ESDF 10 T-90AB |
| Hose i.D. 13 | 55.5 | 22 | 28 | 13.5 | 9 | 137 | ESDF 13 T-90 | ESDF 13 T-90AB |

Marking rings for easy and clear identification of quick-fit hose lines

| Version | D | Colour | | Weight | Type No. |
|------------------|----|--------|----|--------|----------|
| For Hose i.D. 10 | 17 | blue | 50 | 0.5 | AR-BL 10 |
| For Hose i.D. 10 | 17 | red | 50 | 0.5 | AR-RO 10 |
| For Hose i.D. 10 | 17 | yellow | 50 | 0.5 | AR-GE 10 |
| For Hose i.D. 13 | 20 | blue | 50 | 0.7 | AR-BL 13 |
| For Hose i.D. 13 | 20 | red | 50 | 0.7 | AR-RO 13 |
| For Hose i.D. 13 | 20 | yellow | 50 | 0.7 | AR-GE 13 |

To put on coupling or plug stem before assembling the quick-fit hose

Suitable hose clips, double-ear hose clips or crimping ferrules for standard hoses (© page 194 - 197)

Safety instruction: Only use quick-fit hose stems in combination with suitable quick-fit hoses (up to max. 100°C)!

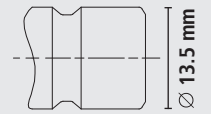
*subject to media (oil: 200°C, water: 150°C, air: 200°C)

Temperature Regulation Quick Connect Couplings

Plug size 13.5 mm **Series ESDF**

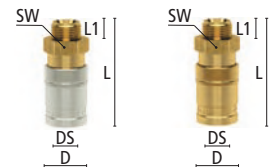
DN 9

Plug Profile (original size)



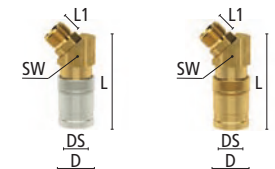
Couplings with straight male thread without/with valve (inner cone DIN 3863)

| Thread connect. | L | SW | D | L1 | DS | Passage | Weight | Type No. w/o valve | Type No. w valve |
|-----------------|----|----|----|----|------|---------|--------|--------------------|------------------|
| G 1/4 m | 52 | 22 | 22 | 9 | 13.5 | 9 | 90 | ESDF 14 A | ESDF 14 AAB |
| G 3/8 m | 52 | 22 | 22 | 11 | 13.5 | 9 | 94 | ESDF 38 A | ESDF 38 AAB |
| G 1/2 m | 53 | 24 | 22 | 12 | 13.5 | 9 | 95 | ESDF 12 A | ESDF 12 AAB |
| M 16x1.5 m | 52 | 22 | 22 | 11 | 13.5 | 9 | 93 | ESDF 1615 A | ESDF 1615 AAB |



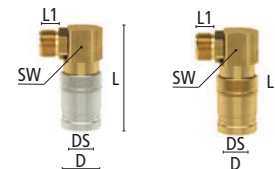
Couplings with 45° male thread without/with valve (inner cone DIN 3863)

| Thread connect. | L | SW | D | L1 | DS | Passage | Weight | Type No. w/o valve | Type No. w valve |
|-----------------|----|----|----|----|------|---------|--------|--------------------|------------------|
| G 3/8 m | 54 | 22 | 22 | 11 | 13.5 | 9 | 114 | ESDF 38 A-45 | ESDF 38 A-45AB |
| M 16x1.5 m | 54 | 22 | 22 | 11 | 13.5 | 9 | 114 | ESDF 1615 A-45 | ESDF 1615A-45AB |



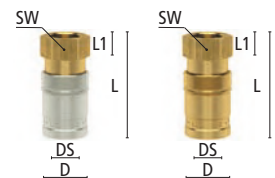
Couplings with 90° male thread without/with valve (inner cone DIN 3863)

| Thread connect. | L | SW | D | L1 | DS | Passage | Weight | Type No. w/o valve | Type No. w valve |
|-----------------|----|----|----|----|------|---------|--------|--------------------|------------------|
| G 3/8 m | 54 | 22 | 22 | 11 | 13.5 | 9 | 126 | ESDF 38 A-90 | ESDF 38 A-90AB |
| M 16x1.5 m | 54 | 22 | 22 | 11 | 13.5 | 9 | 126 | ESDF 1615 A-90 | ESDF 1615A-90AB |



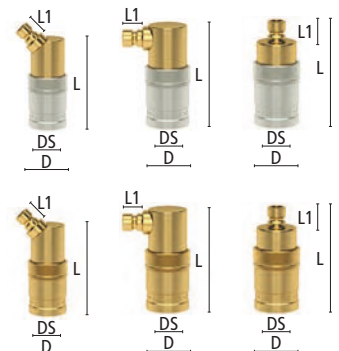
Couplings with straight female thread without/with valve

| Thread connect. | L | SW | D | L1 | DS | Passage | Weight | Type No. w/o valve | Type No. w valve |
|-----------------|------|----|----|----|------|---------|--------|--------------------|------------------|
| G 1/4 f | 44.5 | 17 | 22 | 9 | 13.5 | 9 | 75 | ESDF 14 I | ESDF 14 IAB |
| G 3/8 f | 46 | 22 | 22 | 9 | 13.5 | 9 | 84 | ESDF 38 I | ESDF 38 IAB |
| G 1/2 f | 49 | 24 | 22 | 12 | 13.5 | 9 | 110 | ESDF 12 I | ESDF 12 IAB |



Couplings with plug DN 6 - ESHM - System Adapter and ESH-ESDF System Adapter

| Connection | L | D | L1 | DS | Passage | Version | Weight | Type No. w/o valve | Type No. w valve |
|-------------|----|----|------|------|---------|----------|--------|--------------------|------------------|
| DN 9 - DN 6 | 48 | 22 | 10.5 | 13.5 | 6 | straight | 85 | ESDFK-ESDMS | ESDFK-ESDMS-AB |
| DN 9 - DN 6 | 54 | 22 | 10.5 | 13.5 | 6 | 45° | 100 | ESDFK-ESDMS-45 | ESDFK-ESDMS45AB |
| DN 9 - DN 6 | 54 | 22 | 10.5 | 13.5 | 6 | 90° | 100 | ESDFK-ESDMS-90 | ESDFK-ESDMS90AB |
| DN 9 - DN 6 | 51 | 22 | 14 | 13.5 | 6 | straight | 85 | ESDFK-ESHMS | ESDFK-ESHMS-AB |
| DN 9 - DN 9 | 51 | 22 | 14 | 13.5 | 9 | straight | 100 | ESDFK-ESHS | ESDFK-ESHS-AB |

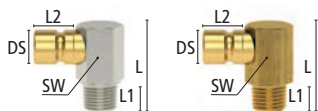
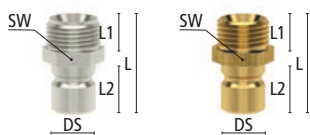
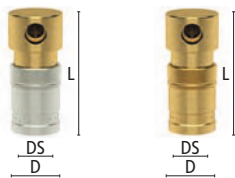
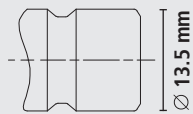


Temperature Regulation Quick Connect Couplings

Series ESDF Plug size 13.5 mm

DN 9

Plug Profile (original size)



Diversion coupling for temperature regulation bridges for tube connection 90° with/without valve

| Connection | L | D | DS | Passage | Weight | Type No. w/o valve | Type No. w valve |
|------------|----|----|------|---------|--------|--------------------|------------------|
| Tube 10/8 | 58 | 22 | 13.5 | 8 | 118 | ESDF 10-U | ESDF 10-UAB |

Tube (chamfered) for diversion couplings (temperature regulation tube), hardened brass

| Connection | L | D | Passage | Weight | Type No. |
|------------|-----|----|---------|--------|-----------|
| Tube 10/8 | 250 | 10 | 8 | 60 | TR 250-10 |
| Tube 10/8 | 500 | 10 | 8 | 120 | TR 500-10 |

Plain End Coupling

| Connection | L | D | DS | Weight | Type No. |
|------------|----|----|------|--------|----------|
| closed | 37 | 22 | 13.5 | 67 | ESDF-B |

Plugs with standard hose stem without valve

| Hose connection | L | D | L1 | L2 | DS | Passage | Weight | Type No. |
|-----------------|------|------|------|------|------|---------|--------|-----------|
| Hose i.D. 6 | 41 | 14.5 | 22.5 | 15.5 | 13.5 | 5 | 20 | ESD 6 SL |
| Hose i.D. 9 | 41 | 14.5 | 22.5 | 15.5 | 13.5 | 7 | 23 | ESD 9 SL |
| Hose i.D. 13 | 43.5 | 16 | 25 | 15.5 | 13.5 | 9 | 25 | ESD 13 SL |

Plugs with straight male thread without valve (inner cone DIN 3863)

| Thread connection | L | SW | L1 | L2 | DS | Passage | Weight | Type No. |
|-------------------|------|----|----|------|------|---------|--------|-------------|
| G 1/8 m | 27 | 15 | 7 | 15.5 | 13.5 | 6 | 16 | ESD 18 NA* |
| G 1/4 m | 29 | 15 | 9 | 15.5 | 13.5 | 9 | 17 | ESD 14 NA* |
| R 1/4 m | 32 | 15 | 12 | 15.5 | 13.5 | 9 | 21 | ESD 14 NAR* |
| G 3/8 m | 29 | 17 | 9 | 15.5 | 13.5 | 9 | 22 | ESD 38 NA* |
| R 3/8 m | 32 | 17 | 12 | 15.5 | 13.5 | 9 | 26 | ESD 38 NAR* |
| G 1/2 m | 32 | 22 | 12 | 15.5 | 13.5 | 9 | 42 | ESD 12 NA* |
| G 3/4 m | 36.5 | 27 | 16 | 15.5 | 13.5 | 9 | 77 | ESD 34 NA* |
| M 10x1 m | 27 | 15 | 7 | 15.5 | 13.5 | 6.5 | 14 | ESD 101 NA |
| M 14x1.5 m | 29 | 15 | 9 | 15.5 | 13.5 | 9 | 16 | ESD 1415 NA |
| M 16x1.5 m | 29 | 17 | 9 | 15.5 | 13.5 | 9 | 20 | ESD 1615 NA |

Plugs with straight female thread without valve

| Thread connection | L | SW | L1 | L2 | DS | Passage | Weight | Type No. |
|-------------------|------|----|----|------|------|---------|--------|------------|
| G 1/4 f | 27 | 17 | 9 | 15.5 | 13.5 | 9 | 21 | ESD 14 NI* |
| G 3/8 f | 27.5 | 22 | 10 | 15.5 | 13.5 | 9 | 32 | ESD 38 NI* |
| G 1/2 f | 29.5 | 24 | 12 | 15.5 | 13.5 | 9 | 55 | ESD 12 NI* |

Plugs with 90° male thread without valve (metrical thread DIN 158/ R-Thread DIN EN 10226)

| Thread connection | L | SW | L1 | L2 | DS | Passage | Weight | Type No. |
|-------------------|------|----|----|------|------|---------|--------|----------------|
| R 1/4 m | 35.5 | 17 | 11 | 15.5 | 13.5 | 9 | 45 | ESD 14 NA-90* |
| M 14x1.5 m | 35.5 | 17 | 11 | 15.5 | 13.5 | 9 | 47 | ESD 1415 NA-90 |
| R 3/8 m | 35.5 | 17 | 12 | 15.5 | 13.5 | 9 | 45 | ESD 38 NA-90* |

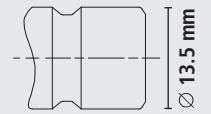
*Plugs with inch thread nickel-plated for simple distinction

Temperature Regulation Quick Connect Couplings

Plug size 13.5 mm **Series ESDF**

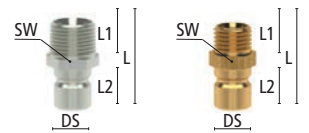
DN 9

Plug Profile (original size)



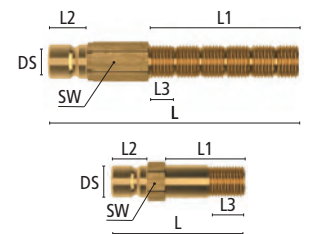
Plugs with straight male thread with valve

| Thread connection | L | SW | L1 | L2 | DS | Passage | Weight | Type No. |
|-------------------|----|----|------|------|------|---------|--------|---------------|
| G 1/4 m | 30 | 15 | 9.5 | 15.5 | 13.5 | 6 | 24 | ESD 14 NAAB* |
| G 3/8 m | 31 | 17 | 10.5 | 15.5 | 13.5 | 9 | 28 | ESD 38 NAAB* |
| R 3/8 m | 34 | 17 | 13.5 | 15.5 | 13.5 | 9 | 32 | ESD 38 NARAB* |
| M 14x1.5 m | 30 | 15 | 9.5 | 15.5 | 13.5 | 6 | 26 | ESD 1415 NAAB |
| M 16x1.5 m | 31 | 17 | 10.5 | 15.5 | 13.5 | 9 | 28 | ESD 1615 NAAB |



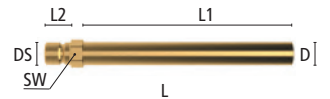
Plugs with straight male long thread without valve (for length cutting as needed)

| Thread connection | L | SW | L1 | L2 | L3 | DS | Passage | Weight | Type No. |
|-------------------|-----|----|----|------|----|------|---------|--------|----------------|
| G 1/4 m | 100 | 14 | 60 | 15.5 | 10 | 13.5 | 9 | 60 | ESD 14-60 NA |
| G 1/4 m | 57 | 15 | 34 | 15.5 | 16 | 13.5 | 9 | 38 | ESD 14 NAL18 |
| G 1/4 m | 110 | 15 | 87 | 15.5 | 16 | 13.5 | 9 | 75 | ESD 14 NAL71 |
| G 3/8 m | 100 | 17 | 60 | 15.5 | 10 | 13.5 | 9 | 91 | ESD 38-60 NA |
| M 14x1.5 m | 100 | 14 | 60 | 15.5 | 10 | 13.5 | 9 | 55 | ESD 1415-60 NA |
| M 16x1.5 m | 100 | 17 | 60 | 15.5 | 10 | 13.5 | 9 | 93 | ESD 1615-60 NA |



Plug Tubes for countersunk mould threads (for length cutting as needed)

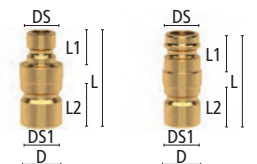
| D | L | SW | L1 | L2 | DS | Passage | Weight | Type No. |
|----|-----|----|-----|------|------|---------|--------|-----------|
| 14 | 150 | 15 | 127 | 15.5 | 13.5 | 9 | 114 | ESD 150 R |
| 14 | 300 | 15 | 277 | 15.5 | 13.5 | 9 | 230 | ESD 300 R |
| 14 | 450 | 15 | 427 | 15.5 | 13.5 | 9 | 344 | ESD 450 R |



NEW!
NEW!

Plug System Adapters

| Connection | L | D | L1 | L2 | DS | DS1 | Passage | Weight | Type No. |
|-------------|----|----|------|------|------|------|---------|--------|----------|
| DN 9 - DN 6 | 31 | 14 | 15.5 | 10.5 | 13.5 | 9.4 | 6 | 18 | ESD-ESDM |
| DN 9 - DN 9 | 34 | 14 | 15.5 | 15.5 | 13.5 | 13.5 | 9 | 24 | ESD-ESD |
| DN 9 - DN 9 | 34 | 14 | 15.5 | 14 | 13.5 | 13 | 9 | 24 | ESD-ESH |



Protection cap (plastic) for plug profile ESD

100

ESD-K

*Plugs with inch thread nickel-plated for simple distinction

Temperature Regulation Accessories

SoftFlow Material Conveying Quick Connect Couplings



The **LUDECKE** SoftFlow Material Conveying Quick Connect Couplings are a high-quality quick coupling system for pressure or vacuum-conveying bulk materials or liquids (e.g. for vacuum-conveying granulate material in the plastics industry).

The SoftFlow products are easy to handle because of their quick coupling principle with ball shut-off and their light weight. Due to the use of stainless steel for the coupling body, they are very low-wearing.

**Soft
Flow**
by **LUDECKE**

Manifolds for Temperature Regulation Lines



The **LUDECKE** manifolds made of aluminium or stainless steel allow for a clean layout of temperature regulation lines leading to increased work and production safety. The manifold guarantees a central inflow and out-flow to the temperature regulation tool and saves energy and hose lines.