

LÜDECKE

Since 1930. The perfect connection.



Quick Connect Couplings and Accessories for Temperature Regulation Applications


Edition 1.0



**Temp[®]
Secure**
by LÜDECKE

**Temp[®]
Tec**
by LÜDECKE



LÜDECKE MADE IN GERMANY 

Safety without Compromise for Temperature Regulation Applications



Plastic processing companies rely on particularly robust and sturdy couplings and fittings. The reason: They are used to cool and heat moulding units during injection moulding or pressure casting and have to withstand extreme temperatures.

The sophisticated TempTec by **LUDECKE**® quick connect couplings guarantee first-class quality, full reliability and are easy and fast to operate.

In particular, we would like to point out our TempSecure by **LUDECKE**® series which offers simple and effective protection against unintentional disconnection under pressure.

Advantages:

- High-class material
- Robust, safe and reliable
- Completely leakage-proof and durable
- Easy to couple
- Various sizes, connection and valve types
- Particularly safe and flexible solutions for temperature regulation applications

**Temp
Tec**
by **LUDECKE**

Broad Range

The **LUDECKE** product range contains a large selection of European and International plug profiles. They cover the world's most common plug profiles and ensure high compatibility.




If there is no coupling system in our product range which meets your requirements, we will be pleased to develop an individual solution with you.

Valve Designs

The **LUDECKE** quick connect couplings for temperature regulation applications are available in different valve designs.

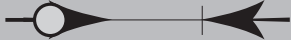
Straight-Through



Female part (coupling) Male part (plug)

- No valve - neither within the coupling nor within the plug
- Maximum flow rate
- During disconnection: media will leak from the coupling and plug line

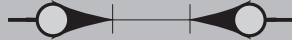
Single Shut-off



Female part (coupling) Male part (plug)

- Straight-through plug
- Coupling with valve
- During disconnection: media might leak from the plug line

Double Shut-off



Female part (coupling) Male part (plug)

- Valves on both sides (male/female)
- During disconnection: media will stay in the hose of both connection lines, constant pressure is maintained

Materials

LUDECKE only works with premium materials which are customised to the application.

Brass (plain/ nickel-plated)

Most of the **LUDECKE** quick connect couplings consist of brass MS 58 (machining brass). It is a very sturdy material which guarantees high durability and is perfectly suited for galvanization (nickel, chrome).

Stainless Steel

For clean-room applications or when aggressive media are used to cool down or heat up moulding units, we recommend quick connect couplings made of stainless steel (1.4305). For further information, please refer to our program for the processing industry.

High Resistant Special Brass

This innovative material combines the processing features of brass and the solidity of stainless steel. High resistant special brass contains no toxic additives nor lead and maintains its natural shine. This material is mainly used in the TempSecure by **LUDECKE**® Series.

Seals

For temperature regulation applications **LUDECKE** offers high-performance seals made of FKM. They are characterized by great heat resistance, perfect gliding properties, minimum wear as well as high elasticity and high abrasion resistance which guarantee significantly longer life times of couplings. Depending on the requirement, special high-performance seals made of FKM, EPDM and FFKM are used.

Connecting within Seconds

The **LUDECKE** temperature regulation quick connect couplings are extremely easy to handle.



One-hand operation: To connect, simply push the plug into the coupling.

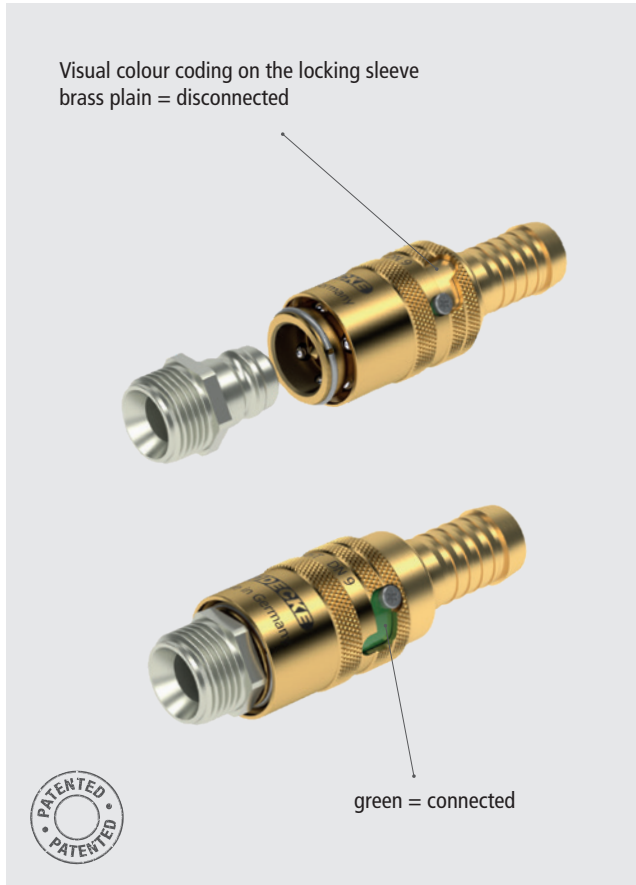


To disconnect, pull back the sleeve from the coupling (comes with automatic locking mechanism in shut-off couplings).



Flexible Components

The **LUDECKE** temperature regulation product range can be extended with various features and thus be ideally adapted to the respective requirement.



TempSecure by **LUDECKE**[®] Safety Quick Connect Couplings

The patented TempSecure by **LUDECKE**[®] temperature regulation quick connect coupling system features an automatic safety locking mechanism which prevents unintentional disconnection and unlocking.

As a result, this coupling is especially suited when using aggressive media as well as for temperature regulation applications with hot or cold water and tempered oil between - 20°C and + 200°C*. Superior FKM O-rings make the coupling an ideal media carrier especially in high-temperature applications.

*subject to used media

Advantages:

- Maximum safety against unintended disconnection and unlocking
- Simple and intuitive coupling process with forced guidance
- Visual colour coding (DN 6, DN 9)
- Controlled, manual disconnection
- High-temperature seals for best performance
- Versions with additional O-ring sealing at connection port to prevent leakage in high-temperature applications
- Available in various sizes, connections and valve types



Security Lock

In addition to the TempSecure by **LUDECKE**[®] series, we offer a simplified security lock.

- Disconnection only possible when safety pin engaged correctly into sleeve notch
- Prevention of fluid or pressure loss in the circulation during operation
- Prevention of human injury and harm to the environment, machine and tool
- Available for the series ESHM, ESHME, ESH, ESHE as well as ESDM and ESD



360° Rotatable Connector

The hose barb and male thread couplings of the series ESHM and ESH are also available with a rotatable connector, consisting of a high-quality ball-and-socket joint with double O-ring sealing*.

- Swivel joint absorbs the pulling and rotary motion when opening and closing the tool in the machine and prevents the fast wearing and abrasion of the O-ring inside the coupling through the permanent turning of the plug
- Prevention of leaks in the temperature regulation circuit
- Reduces the danger of bending hoses on their way to the tool

*Other coupling series on request

Seals

FKM

LUDECKE offers high-resistant seals made of FKM for temperature regulation applications.

Advantages:

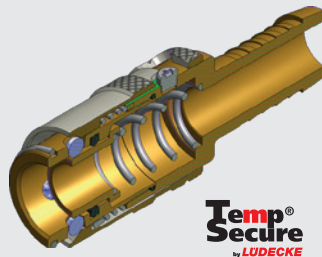
- Heat resistant up to 200°C (oil: 200°C, water: 150°C, air: 200°C)
- Highly resistant against all common tempered media
- Significantly better gliding properties and minimum wear (low adhesive tendency)
- High elasticity (no crack formation) according to DIN 53504
- High abrasion resistance of the O-ring
- Significantly increased life times of couplings

High-Performance FKM

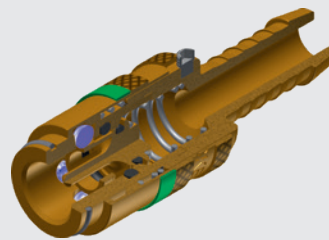
The temperature regulation couplings of the TempSecure by **LUDECKE**® series contain a high-performance FKM sealing ring which has been developed for the special requirements of high-temperature applications.

- Extreme heat resistance up to 220°C continuous temperature (oil: 220°C, water: 180°C, air: 220°C)
- High resistance against synthetic oils used as tempered media
- Very good chemical resistance and high resistance against aliphatic hydrocarbons (fuels)
- Steam/ hot water optimised

On request, the high-performance FKM sealing ring is also available for other temperature regulation couplings (For easy identification, the coupling sleeve is marked with a green anodized aluminium ring).



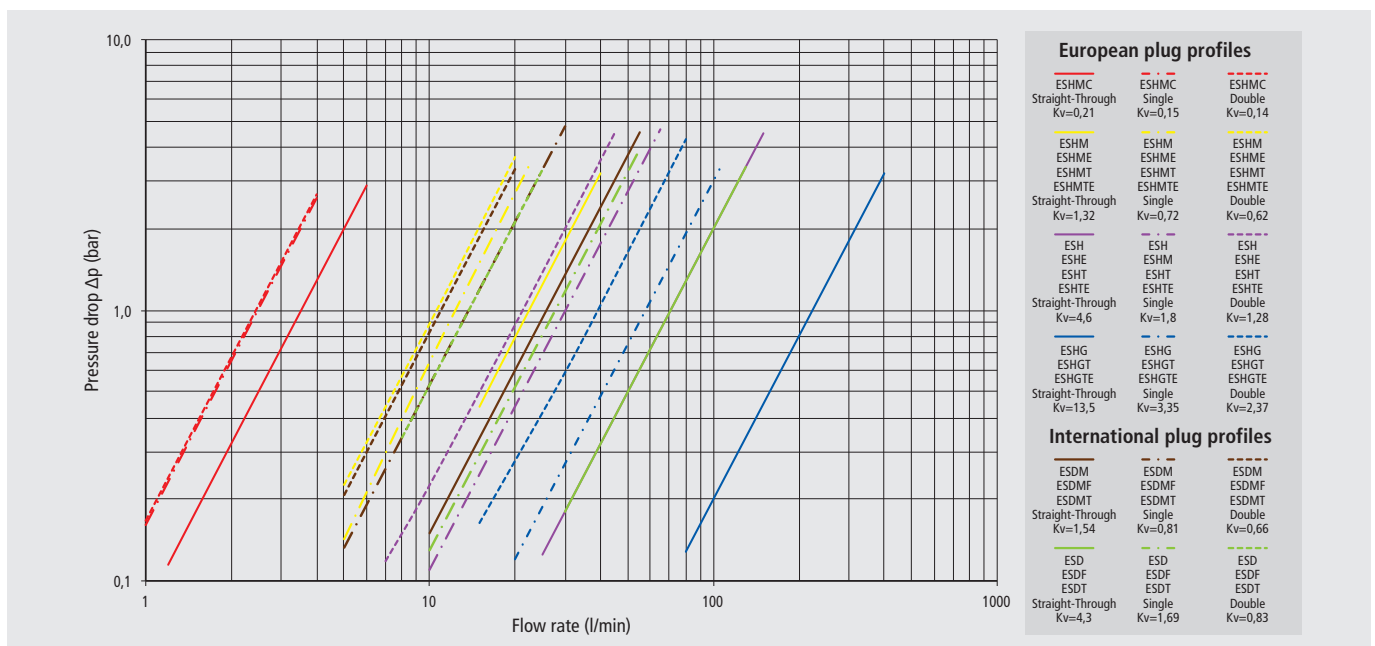
TempSecure
by **LUDECKE**



Other special seals
(e.g. EPDM, FFKM) on request.

Flow Chart

The flow rates of the different coupling systems are summarized in the following chart.

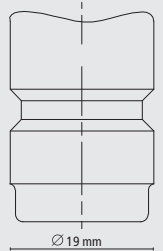
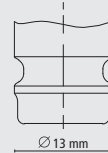
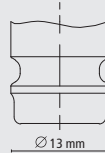
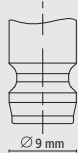
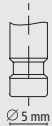


Overview of Quick Connect Couplings with



| Series | ESHMC DN 2.7 | ESHM DN 6 | ESHMT DN 6 | ESH DN 9 | ESHT DN 9 | ESHG DN 13 |
|--------|------------------------|---------------------|----------------------|--------------------|---------------------|----------------------|
|--------|------------------------|---------------------|----------------------|--------------------|---------------------|----------------------|

Plug Profile
(original size)



| Materials | ESHMC DN 2.7 | ESHM DN 6 | ESHMT DN 6 | ESH DN 9 | ESHT DN 9 | ESHG DN 13 |
|---|-------------------------------------|-------------------------------------|---|-------------------------------------|---|-------------------------------------|
| Body: | MS 58 plain | MS 58 plain | MS 58 plain | MS 58 plain | MS 58 plain | MS 58 plain |
| Sleeve*: | MS 58 (plain/ nickel-plated) | MS 58 (plain/ nickel-plated) | Special Brass (plain/ nickel-plated) | MS 58 (plain/ nickel-plated) | Special Brass (plain/ nickel-plated) | MS 58 (plain/ nickel-plated) |
| Valve Body: | MS 58 plain | MS 58 plain | MS 58 plain | MS 58 plain | MS 58 plain | MS 58 plain |
| Valve: | MS 58 plain | MS 58 plain | MS 58 plain | MS 58 plain | MS 58 plain | MS 58 plain |
| Springs, Retaining Ring: | Stainless Steel 1.4310 | Stainless Steel 1.4310 | Stainless Steel 1.4310 | Stainless Steel 1.4310 | Stainless Steel 1.4310 | Stainless Steel 1.4310 |
| Balls: | Stainless Steel 1.3541 | Stainless Steel 1.4034 | Stainless Steel 1.4034 | Stainless Steel 1.4034 | Stainless Steel 1.4034 | Stainless Steel 1.4034 |
| Seals: | FKM | FKM | High-Performance FKM | FKM | High-Performance FKM | FKM |
| Special seals for other media on request: | EPDM, FFKM | EPDM, FFKM | EPDM, FFKM | EPDM, FFKM | EPDM, FFKM | EPDM, FFKM |
| Plug: | MS 58 plain | MS 58 (plain/ nickel-pl.) | MS 58 (plain/ nickel-pl.) | MS 58 (plain/ nickel-pl.) | MS 58 (plain/ nickel-pl.) | MS 58 plain |
| Max. Working Pressure: | PN 15 bar | PN 15 bar | PN 15 bar | PN 15 bar | PN 15 bar | PN 15 bar |
| Temperature: | -20°C– +200°C** | -20°C– +200°C** | -20°C– +220°C*** | -20°C– +200°C** | -20°C– +220°C*** | -20°C– +200°C** |
| Thread Types: | DIN 13/ DIN 158 | ISO 228/ DIN 13/ DIN 158 | ISO 228/ DIN 13 | ISO 228/ DIN 13 | ISO 228/ DIN 13 | ISO 228/ DIN 13 |
| Flow Rate: | see chart page 5 | see chart page 5 | see chart page 5 | see chart page 5 | see chart page 5 | see chart page 5 |
| Connection: | straight/ 45°/ 90° | straight/ 45°/ 90° | straight/ 45°/ 90° | straight/ 45°/ 90° | straight/ 45°/ 90° | straight/ 45°/ 90° |
| Type of Valve: | single/ double/ straight-through | single/ double/ straight-through | single/ double/ straight-through | single/ double/ straight-through | single/ double/ straight-through | single/ double/ straight-through |
| Operation: | One-Hand | One-Hand | One-Hand | One-Hand | One-Hand | One-Hand |

European Plug Profiles

Temp Secure
by **LUDECKE**

Temp Secure
by **LUDECKE**

Temp Secure
by **LUDECKE**

Temp Secure
by **LUDECKE**

NEW!

ESHGT
DN 13

ESHME
DN 6

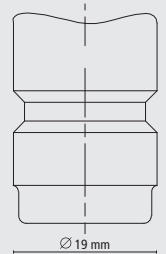
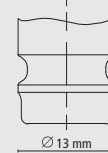
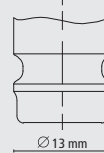
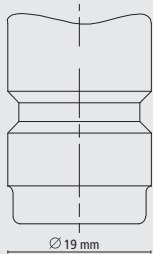
ESHMTE
DN 6

ESHE
DN 9

ESHTe
DN 9

NEW!

ESHGTE
DN 13



MS 58 plain
Special Brass
(plain/ nickel-plated)
MS 58 plain
MS 58 plain
Stainless Steel 1.4310
Stainless Steel 1.4034
High-Performance FKM

Stainless Steel 1.4305
Stainless Steel 1.4305
Stainless Steel 1.4305
Stainless Steel 1.4305
Stainless Steel 1.4310
Stainless Steel 1.4034
FKM

Stainless Steel 1.4305
Stainless Steel 1.4305
Stainless Steel 1.4305
Stainless Steel 1.4310
Stainless Steel 1.4034
High-Performance FKM

Stainless Steel 1.4305
Stainless Steel 1.4305
Stainless Steel 1.4305
Stainless Steel 1.4310
Stainless Steel 1.4034
FKM

Stainless Steel 1.4305
Stainless Steel 1.4305
Stainless Steel 1.4305
Stainless Steel 1.4310
Stainless Steel 1.4034
High-Performance FKM

Stainless Steel 1.4305
Stainless Steel 1.4305
Stainless Steel 1.4305
Stainless Steel 1.4310
Stainless Steel 1.4034
High-Performance FKM

EPDM, FFKM

EPDM, FFKM

EPDM, FFKM

EPDM, FFKM

EPDM, FFKM

EPDM, FFKM

MS 58 plain

Stainless Steel 1.4305

Stainless Steel 1.4305

Stainless Steel 1.4305

Stainless Steel 1.4305

Stainless Steel 1.4305

PN 15 bar

PN 15 bar

PN 15 bar

PN 15 bar

PN 15 bar

PN 15 bar

-20°C – +220°C***

-20°C – +200°C**

-20°C – +220°C***

-20°C – +200°C**

-20°C – +220°C***

-20°C – +220°C**

ISO 228/ DIN 13

ISO 228/ DIN 13

ISO 228/ DIN 13

ISO 228/ DIN 13

ISO 228/ DIN 13

ISO 228/ DIN 13

see chart page 5

see chart page 5

see chart page 5

see chart page 5

see chart page 5

see chart page 5

straight/ 45°/ 90°

straight/ 45°/ 90°

straight/ 45°/ 90°

straight/ 45°/ 90°

straight/ 45°/ 90°

straight

single/ double/

single/ double/

single/ double/

single/ double/

single/ double/

single/ double/

straight-through

straight-through

straight-through

straight-through

straight-through

straight-through

One-Hand

One-Hand

One-Hand

One-Hand

One-Hand

One-Hand

*couplings with shut-off valve: brass plain, couplings with straight-through valve: brass nickel-plated
**subject to media (oil: 200°C, water: 150°C, air: 200°C)
***subject to media (oil: 220°C, water: 180°C, air: 220°C)
Special Brass: high resistant special brass

Overview of Quick Connect Couplings with



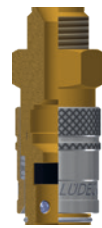
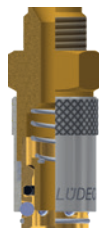
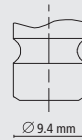
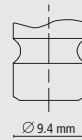
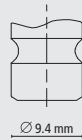
Series

ESDM
DN 6

ESDMT
DN 6

ESDMF
DN 6

Plug Profile
(original size)



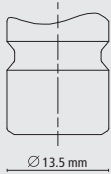
Materials

| | | | |
|---|----------------------------------|--------------------------------------|----------------------------------|
| Body: | MS 58 plain | MS 58 plain | MS 58 plain |
| Sleeve*: | MS 58 (plain/ nickel-plated) | Special Brass (plain/ nickel-plated) | MS 58 (plain/ nickel-plated) |
| Valve Body: | MS 58 plain | MS 58 plain | MS 58 plain |
| Valve: | MS 58 plain | MS 58 plain | MS 58 plain |
| Springs, Retaining Ring: | Stainless Steel 1.4310 | Stainless Steel 1.4310 | Stainless Steel 1.4310 |
| Balls: | Stainless Steel 1.4034 | Stainless Steel 1.4034 | Stainless Steel 1.4034 |
| Seals: | FKM | High-Performance FKM | FKM (flat sealing) |
| Special seals for other media on request: | EPDM, FFKM | EPDM, FFKM | - |
| Plug: | MS 58 (plain/ nickel-plated) | MS 58 (plain/ nickel-plated) | MS 58 (plain/ nickel-plated) |
| Max. Working Pressure: | PN 15 bar | PN 15 bar | PN 15 bar |
| Temperature: | -20°C– +200°C** | -20°C– +220°C*** | -20°C– +200°C** |
| Thread Types: | ISO 228, DIN 13 | ISO 228, DIN 13 | ISO 228, DIN 13 |
| Flow Rate: | see chart page 5 | see chart page 5 | see chart page 5 |
| Connection: | straight/ 45°/ 90° | straight/ 45°/ 90° | straight/ 45°/ 90° |
| Type of Valve: | single/ double/ straight-through | single/ double/ straight-through | single/ double/ straight-through |
| Operation: | One-Hand | One-Hand | Two-Hands |

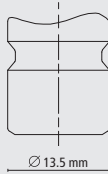
International Plug Profiles



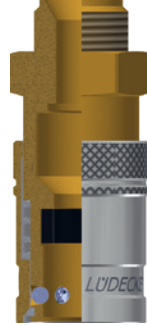
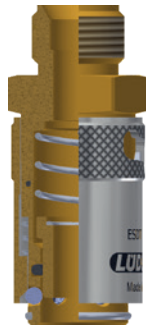
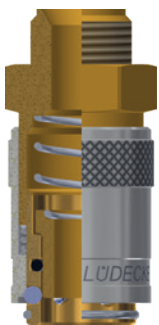
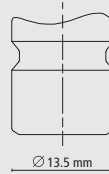
ESD
DN 9



ESDT
DN 9



ESDF
DN 9



| |
|----------------------------------|
| MS 58 plain |
| MS 58 (plain/ nickel-plated) |
| MS 58 plain |
| MS 58 plain |
| Stainless Steel 1.4310 |
| Stainless Steel 1.4034 |
| FKM |
| EPDM, FFKM |
| MS 58 (plain/ nickel-plated) |
| PN 15 bar |
| -20°C– +200°C** |
| ISO 228, DIN 13 |
| see chart page 5 |
| straight/ 45°/ 90° |
| single/ double/ straight-through |
| One-Hand |

| |
|--------------------------------------|
| MS 58 plain |
| Special Brass (plain/ nickel-plated) |
| MS 58 plain |
| MS 58 plain |
| Stainless Steel 1.4310 |
| Stainless Steel 1.4034 |
| High-Performance FKM |
| EPDM, FFKM |
| MS 58 (plain/ nickel-plated) |
| PN 15 bar |
| -20°C– +220°C*** |
| ISO 228, DIN 13 |
| see chart page 5 |
| straight/ 45°/ 90° |
| single/ double/ straight-through |
| One-Hand |

| |
|----------------------------------|
| MS 58 plain |
| MS 58 (plain/ nickel-plated) |
| MS 58 plain |
| MS 58 plain |
| Stainless Steel 1.4310 |
| Stainless Steel 1.4034 |
| FKM (flat sealing) |
| - |
| MS 58 (plain/ nickel-plated) |
| PN 15 bar |
| -20°C– +200°C** |
| ISO 228, DIN 13 |
| see chart page 5 |
| straight/ 45°/ 90° |
| single/ double/ straight-through |
| Two-Hands |

* Couplings with shut-off valve: brass plain, couplings with straight-through valve: brass nickel-plated

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

*** subject to media (oil: 220°C, water: 180°C, air: 220°C)

Special Brass: high resistant special brass

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.

Colour Coding



A red or blue anodized aluminium ring for the sleeve can be ordered to easily label and identify flow and return lines of the tempered circuit.

We offer these rings for the series ESHM, ESHME, ESH and ESHE. They are also individually available for self-assembly. To install, simply slide the ring on the coupling sleeve.

Screwings and Components



LUDECKE offers an extensive range of connecting fittings made of brass.

- Connection tubes
- Hose stems
- Connection nipples

Hose Clamps, Hose Clips and Ferrules



To fix hoses to fittings, different assembly methods can be used ranging from robust clamps to light clips to ferrules. The assembly method depends on the application, media, pressure or hose material. Criteria are: safety level of fixation, removability, easiness and devices needed for assembly as well as cleanliness and protection against injury.

- Double-Ear Hose Clips
- High-Performance Hose Clips made of Steel or Stainless Steel
- Ferrules for Low Pressure Hose Lines
- Hand-Operated Assembly Machine

LÜDECKE

LÜDECKE

Since 1930. The perfect connection.

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