

# LUDECKE

Since 1930. The perfect connection.




## Coupling Systems and Accessories for the Processing Industry

Edition 1.0



**Clean  
Connect**  
by **LUDECKE**



**LUDECKE** MADE IN GERMANY 

# Innovative Coupling Systems for the Processing Industry



For applications with specific hygiene standards or in lines carrying aggressive media (i.e. gases, chemicals, pharmaceuticals or varnish products etc.), especially reliable and temperature resistant couplings and fittings are required.

With the CleanConnect product portfolio **LUDECKE** offers a superior range mostly made of stainless steel and perfectly adapted to these extraordinary requirements.

The dripless LiquiSafe by **LUDECKE**® quick connect couplings as well as the energy-efficient coupling systems and the couplings equipped with various safety mechanisms deserve special mention. They guarantee maximum safety and reliability in daily work.

#### Advantages:

- High-quality materials (stainless steel)
- Robust, safe and reliable
- Absolutely leakage-proof and durable
- Easy handling
- Different sizes, connection and valve types
- Smooth surfaces to avoid dirt from collecting
- Dripless products
- Energy-efficient coupling systems and couplings with different safety mechanisms

**Clean  
Connect**  
by **LUDECKE**


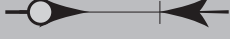
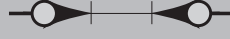
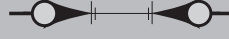
## Broad Range

From classic claw couplings and quick connect couplings to chemical and industrial fittings as well as fittings for snowmaking machines: at **LUDECKE** you will find the right product for various applications.



# Valve Designs

The **LUDECKE** couplings are available in different valve designs.

<p><b>Straight-Through</b></p>  <p>Female part (Coupling) Male part (plug)</p>	<p><b>Single Shut-off</b></p>  <p>Female part (Coupling) Male part (plug)</p>	<p><b>Double Shut-off</b></p>  <p>Female part (Coupling) Male part (plug)</p>	<p><b>Dripless</b></p>  <p>Female part (Coupling) Male part (plug)</p>
<ul style="list-style-type: none"> <li>• No valve - neither within the coupling nor within the plug</li> <li>• Maximum flow rate</li> <li>• During disconnection: media will leak from the coupling and plug line</li> </ul>	<ul style="list-style-type: none"> <li>• Straight-through plug</li> <li>• Coupling with valve</li> <li>• During disconnection: media might leak from the plug line</li> </ul>	<ul style="list-style-type: none"> <li>• Valves on both sides (male/female)</li> <li>• During disconnection: media will stay in the hose of both connection lines, constant pressure is maintained</li> <li>• Valve construction designed for media flow from coupling to plug</li> </ul>	<ul style="list-style-type: none"> <li>• Valves on both sides (male/female) - without dead space volume</li> <li>• During disconnection: only a minimal film of the media will leak (no drops will form)</li> </ul>

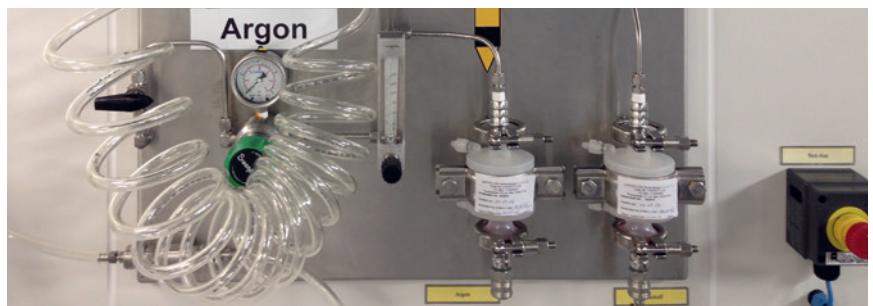
# Materials

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

<p><b>Stainless Steel</b></p> <p>Most of the processing industry couplings and fittings consist of stainless steel - a material with a special degree of purity. The <b>LUDECKE</b> products are made of stainless steel 1.4035, 1.4401 and 1.4404 (1.4571 on request).</p>	<p><b>Steel (machining steel)</b></p> <p>If products are used under tough conditions (i.e. in foundries), they need to be manufactured out of machining steel (hardened, nickel-plated or zinc-plated). This material has good case-hardening properties and a long lifetime.</p>
<p><b>Brass (plain/ nickel-plated)</b></p> <p>Brass MS 58 (machining brass) is a very sturdy material which guarantees high durability and is perfectly suited for galvanization (nickel, chrome).</p>	<p><b>Seals</b></p> <p>Depending on the requirement, <b>LUDECKE</b> offers different types of sealings made of NBR, EPDM, FKM or FFKM.</p>

# Various Applications

The processing industry products can be utilized in pharmacy, medical, control, measurement and regulation technology, food and chemical industry, temperature regulation technology as well as in machinery and plant construction.





# Dripless Quick Connect Couplings



The innovative LiquiSafe by **LUDECKE**® quick connect couplings allow for a dripless coupling process. This ensures maximum operator safety and reliable protection against contamination when uncoupling.

The ergonomic sleeve shape provides very good grip and easy handling even if installations are difficult.

The coupling system is perfectly suited for liquid media in plant construction, temperature regulation technology, control cabinet cooling and many more.

#### Advantages:

- When decoupling, reduces the risk of media leakage to a minimum
- High efficiency due to maximum flow rate at low pressure drop
- Robust, safe, absolutely leakage-proof and durable
- Simple and intuitive coupling process
- Ergonomic design
- Smooth surfaces to avoid dirt from collecting
- Different sizes, materials and connection types

**LiquiSafe**  
by **LUDECKE**

## Functional Principle:

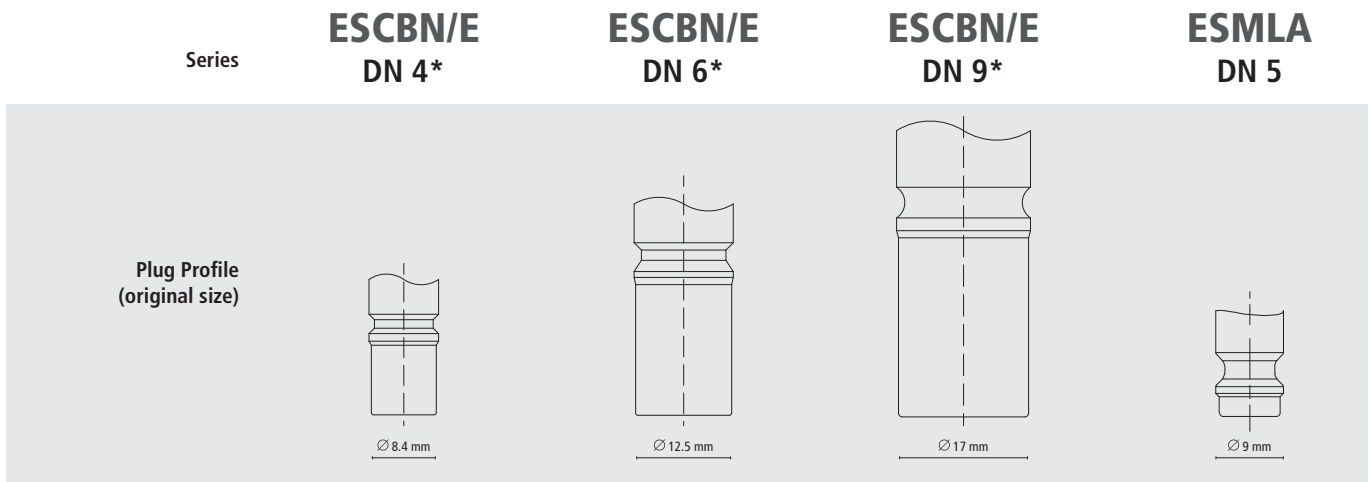
**Coupling:** To connect, push the plug as far as possible into the coupling in an axial centre. The locking sleeve engages in the direction of the plug without any support. The valves in the coupling and plug open automatically and release the volume flow.



**Uncoupling:** To disconnect, firmly grip the plug with one hand, push back the locking sleeve towards the thread connection and disconnect. The plug can be pulled from the coupling.

The shut-off valve of the coupling and plug closes automatically when uncoupling. This means that no media can leak from either side.

# Dripless Quick Connect Couplings



Materials	ESCBN/E DN 4*	ESCBN/E DN 6*	ESCBN/E DN 9*	ESMLA DN 5
Body:	MS 58 nickel-plated/ Stainless Steel 1.4305	MS 58 nickel-plated/ Stainless Steel 1.4305	MS 58 nickel-plated/ Stainless Steel 1.4305	MS 58 plain/ MS 58 nickel-plated
Sleeve:	MS 58 nickel-plated/ Stainless Steel 1.4305	MS 58 nickel-plated/ Stainless Steel 1.4305	MS 58 nickel-plated/ Stainless Steel 1.4305	MS 58 plain/ MS 58 nickel-plated
Valve body:	MS 58 nickel-plated/ Stainless Steel 1.4305	MS 58 nickel-plated/ Stainless Steel 1.4305	MS 58 nickel-plated/ Stainless Steel 1.4305	MS 58 plain/ MS 58 nickel-plated
Valve:	MS 58 nickel-plated/ Stainless Steel 1.4305	MS 58 nickel-plated/ Stainless Steel 1.4305	MS 58 nickel-plated/ Stainless Steel 1.4305	MS 58 plain/ MS 58 nickel-plated
Springs, Retaining ring:	Stainless Steel 1.4310	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	Stainless Steel 1.3541
Seals:	FKM	FKM	FKM	NBR
Special seals for other media on request:	High-Performance FKM, EPDM, FFKM	High-Performance FKM, EPDM, FFKM	High-Performance FKM, EPDM, FFKM	EPDM, FKM, FFKM
Plug:	MS 58 nickel-plated/ Stainless Steel 1.4305	MS 58 nickel-plated/ Stainless Steel 1.4305	MS 58 nickel-plated/ Stainless Steel 1.4305	MS 58 plain/ MS 58 nickel-plated/ galvanized steel
Max. Working Pressure:	PN 35 bar	PN 35 bar	PN 35 bar	PN 8 bar
Temperature:	-20°C – + 200°C**	-20°C – + 200°C**	-20°C – + 200°C**	-20°C – +100°C
Thread types:	ISO 228/ DIN 13	ISO 228/ DIN 13	ISO 228/ DIN 13	ISO 228
Flow Rate: (at 6 bar [ü] and 0.5 bar pressure drop) single shut-off	6.5 l/min	17.7 l/min	47 l/min	on request
Type of Valve:	dripless	dripless	dripless	dripless
Operation:	One-Hand	One-Hand	One-Hand	One-Hand

\*This series is available in two versions. Accordingly, the materials of the individual components also differ.  
 \*\*Subject to media (oil: 200°C, water: 150°C, air: 200°C)

# Standard Quick Connect Couplings

**Quality-Line**

Series

**ESMCE**  
DN 2.7\*

**ESME**  
DN 5\*

**ESE**  
DN 7.2\*

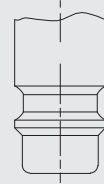
Plug Profile  
(original size)



∅ 5 mm



∅ 9 mm



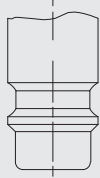
∅ 12 mm



Materials			
Body:	Stainless Steel 1.4305/ Stainless Steel 1.4404	Stainless Steel 1.4305/ Stainless Steel 1.4404	Stainless Steel 1.4305/ Stainless Steel 1.4404
Sleeve:	Stainless Steel 1.4305/ Stainless Steel 1.4404	Stainless Steel 1.4305/ Stainless Steel 1.4404	Stainless Steel 1.4305/ Stainless Steel 1.4404
Valve body:	Stainless Steel 1.4305/ Stainless Steel 1.4404	Stainless Steel 1.4305/ Stainless Steel 1.4404	Stainless Steel 1.4305/ Stainless Steel 1.4404
Valve:	Stainless Steel 1.4305/ Stainless Steel 1.4404	Stainless Steel 1.4305/ Stainless Steel 1.4404	Stainless Steel 1.4305/ Stainless Steel 1.4404
Springs, Retaining rings:	Stainless Steel 1.4310/ Stainless Steel 1.4571	Stainless Steel 1.4310/ Stainless Steel 1.4571	Stainless Steel 1.4310/ Stainless Steel 1.4571
Balls:	Stainless Steel 1.3541/ Stainless Steel 1.4404	Stainless Steel 1.3541/ Stainless Steel 1.4404	Pins: Stainless Steel 1.4305/ Stainless Steel 1.4404
Seals:	FKM	FKM	FKM
Special seals for other media on request:	EPDM, FFKM	EPDM, FFKM	EPDM, FFKM
Plug:	Stainless Steel 1.4305/ Stainless Steel 1.4404	Stainless Steel 1.4305/ Stainless Steel 1.4404	Stainless Steel 1.4305/ Stainless Steel 1.4404
Max. Working Pressure:	PN 35 bar	PN 35 bar	PN 35 bar
Temperature**:	-15°C – + 200°C	-15°C – + 200°C	-15°C – + 200°C
Thread Types:	ISO 228/ DIN 13	ISO 228/ DIN 13	ISO 228
Flow Rate: (Air - 6 bar/ 0.5 bar pressure drop) single shut-off:	165 l/min	510 l/min	1150 l/min
Type of valve:	single/ double/ straight-through	single/ double/ straight-through	single/ double/ straight-through
Operation:	One-Hand	One-Hand	One-Hand

## OptiFlow-Line

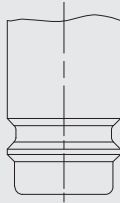
### ESIE DN 7.8\*



∅ 12 mm



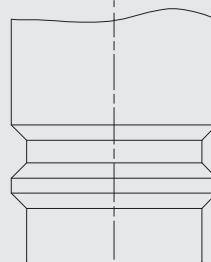
### ESIGE DN 10\*



∅ 15 mm



### ESGE DN 19\*



∅ 27 mm



Stainless Steel 1.4305/  
Stainless Steel 1.4404

Stainless Steel 1.4305/  
Stainless Steel 1.4404

Stainless Steel 1.4305/  
Stainless Steel 1.4404

Stainless Steel 1.4305/  
Stainless Steel 1.4404

Stainless Steel 1.4310/  
Stainless Steel 1.4571

Stainless Steel 1.4034/  
Stainless Steel 1.4404

FKM

EPDM, FFKM

Stainless Steel 1.4305/  
Stainless Steel 1.4404

PN 35 bar

-15°C – + 200°C

ISO 228

2000 l/min

single/ double/ straight-through  
One-Hand

Stainless Steel 1.4305/  
Stainless Steel 1.4404

Stainless Steel 1.4305/  
Stainless Steel 1.4404

Stainless Steel 1.4305/  
Stainless Steel 1.4404

Stainless Steel 1.4305/  
Stainless Steel 1.4404

Stainless Steel 1.4310/  
Stainless Steel 1.4571

Stainless Steel 1.4034/  
Stainless Steel 1.4404

FKM

EPDM, FFKM

Stainless Steel 1.4305/  
Stainless Steel 1.4404

PN 35 bar

-15°C – + 200°C

ISO 228

3200 l/min

single/ double/ straight-through  
One-Hand

Stainless Steel 1.4305/  
Stainless Steel 1.4404

Stainless Steel 1.4305/  
Stainless Steel 1.4404

Stainless Steel 1.4305/  
Stainless Steel 1.4404

Stainless Steel 1.4305/  
Stainless Steel 1.4404

Stainless Steel 1.4310/  
Stainless Steel 1.4571

Stainless Steel 1.4034/  
Stainless Steel 1.4404

FKM

EPDM, FFKM

Stainless Steel 1.4305/  
Stainless Steel 1.4404

PN 35 bar

-15°C – + 200°C

ISO 228

8000 l/min

single/ double  
One-Hand

\*These stainless steel series is available in two versions on request (1.4305 and 1.4404). Accordingly, the materials of the individual components also differ.

\*\*Subject to media and seals

# Temperature Regulation Quick Connect Couplings

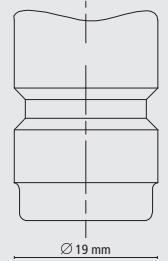
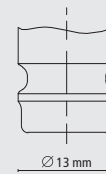
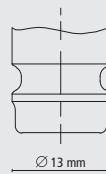
**Temp Secure**  
by LUDECKE

**Temp Secure**  
by LUDECKE

**Temp Secure**  
by LUDECKE

Series      **ESHME**      **ESHMTE**      **ESHE**      **ESHTe**      **NEW!** **ESHGTE**  
                    **DN 6**            **DN 6**            **DN 9**            **DN 9**            **DN 13**

Plug Profile  
(original size)



Materials	ESHME DN 6	ESHMTE DN 6	ESHE DN 9	ESHTe DN 9	ESHGTE DN 13
Body:	Stainless Steel 1.4305	Stainless Steel 1.4305	Stainless Steel 1.4305	Stainless Steel 1.4305	Stainless Steel 1.4305
Sleeve:	Stainless Steel 1.4305	Stainless Steel 1.4305	Stainless Steel 1.4305	Stainless Steel 1.4305	Stainless Steel 1.4305
Valve body:	Stainless Steel 1.4305	Stainless Steel 1.4305	Stainless Steel 1.4305	Stainless Steel 1.4305	Stainless Steel 1.4305
Valve:	Stainless Steel 1.4305	Stainless Steel 1.4305	Stainless Steel 1.4305	Stainless Steel 1.4305	Stainless Steel 1.4305
Springs, Retaining ring:	Stainless Steel 1.4310	Stainless Steel 1.4310	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	Stainless Steel 1.4034	Stainless Steel 1.4034
Seals:	FKM	High-Performance FKM	FKM	High-Performance FKM	High-Performance FKM
Special seals for other media on request:	EPDM, FFKM	EPDM, FFKM	EPDM, FFKM	EPDM, FFKM	EPDM, FFKM
Plug:	Stainless Steel 1.4305	Stainless Steel 1.4305	Stainless Steel 1.4305	Stainless Steel 1.4305	Stainless Steel 1.4305
Max. Working Pressure:	PN 15 bar	PN 15 bar	PN 15 bar	PN 15 bar	PN 15 bar
Temperature:	-20°C – + 200°C*	-20°C – + 220°C**	-20°C – + 200°C*	-20°C – + 220°C**	-20°C – + 220°C**
Thread Types:	ISO 228/ DIN 13	ISO 228/ DIN 13	ISO 228/ DIN 13	ISO 228/ DIN 13	ISO 228/ DIN 13
Flow Rate:					
Single shut-off:	Kv = 0.72	Kv = 0.72	Kv = 1.8	Kv = 1.8	Kv = 1.8
Version:	straight / 45° / 90°	straight / 45° / 90°	straight / 45° / 90°	straight / 45° / 90°	straight
Type of Valve:	single shut-off/ double shut-off/ straight-through	single shut-off/ double shut-off/ straight-through	single shut-off/ double shut-off/ straight-through	single shut-off/ double shut-off/ straight-through	single shut-off/ double shut-off/ straight-through
Operation:	One-Hand	One-Hand	One-Hand	One-Hand	One-Hand

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

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



# Quick Connect Couplings/ Screwings for Cleaning Applications

Hose Barbs  
for Hose Crimping

Thread Stems with Male Thread  
and Hose Squeeze Nut

Quick Connect Couplings



Materials			
Body:	Stainless Steel 1.4305	Stainless Steel 1.4305	Stainless Steel 1.4305
Hexagon nut:	Stainless Steel 1.4305	-	-
Crimping ferrule:	Stainless Steel 1.4305	-	-
Sleeve:	-	-	Stainless Steel 1.4305
Valve body:	-	-	Stainless Steel 1.4305
Valve:	-	-	Stainless Steel 1.4305
Springs, Retaining ring:	-	-	Stainless Steel 1.4310
Balls:	-	-	Stainless Steel 1.4024
Seals:	-	-	EPDM
Special seals for other media on request:	-	-	FKM
Plug:	-	-	Stainless Steel 1.4305
Max. Working Pressure*:	PN 35 bar	PN 35 bar	PN 35 bar
Temperature:	up to +95°C	up to +95°C	up to +95°C
Thread types:	ISO 228	ISO 228	ISO 228
Type of valve:	-	-	straight-through
Operation:	-	-	One-hand

\*Subject to temperature and assembly method

contains O-rings, according to  
VO (EG) 1935/2004, DVGW W 270 and DVGW W 534

## Claw Couplings

Claw Couplings

MODY-Safety-Screwing  
Couplings

Norm:

DIN 3489

DIN 3238



Materials		
Claw:	Stainless Steel 1.4401	Stainless Steel 1.4401
Body:	Stainless Steel 1.4401	Stainless Steel 1.4404
Locking nut:	-	Stainless Steel 1.4305
Seals:	FKM	FKM
Special seals for other media on request:	TFEP, EPDM	TFEP, EPDM
Max. Working Pressure:	PN 16 bar	PN 16 bar
Temperature:	-30°C – + 200°C	-30°C – + 200°C
Thread Types:	ISO 228	ISO 228
Type of valve:	straight-through	straight-through
Operation:	Two-Hands	Two-Hands
Claw Distance:	42 mm	42 mm

# Chemical and Industrial Fittings

	Kamlok Quick Couplings	Steam Screwings	Thread Stems	SoftFlow Material Conveying Quick Connect Couplings
Series/Nominal diameter:	DIN EN 14 420-7	DIN EN 14 423	DIN EN 14 420-5	DN 41



Materials					
Body:	-	Steel zinc plated yellow passivated, Brass MS 58 plain, Stainless Steel 1.4305	-	-	Stainless Steel 1.4305
Sleeve:	-	-	-	-	Aluminium (hard coated)
Coupling body:	Stainless Steel 1.4401 electropolished	-	Stainless Steel 1.4408 electro-polished / MS 58 plain	-	-
Valve body:	-	-	-	-	Stainless Steel 1.4305
Clamp:	-	Brass MS 58 plain	-	-	-
Springs, Retaining ring:	-	-	-	-	Stainless Steel 1.4310
Balls:	-	-	-	-	Stainless Steel 1.4304
Screwing:	-	Dacro 500 A coated	-	-	Stainless Steel 1.4301
Seals:	NBR	Frenzelit Novapress Multi II	-	-	NBR
Special seals for other media on request:	Hypalon, EPDM, FKM	-	-	-	-
Handle:	Stainless Steel 1.4401 electropolished	-	-	-	-
Plug:	Stainless Steel 1.4401 electropolished	-	-	-	Stainless Steel 1.4305
Max. Working Pressure:	PN 16 bar	PN 18 bar	PN 25 bar	PN 10 bar	PN 10 bar
Temperature:	-40°C – + 95°C	up to +210°C (satur. steam)/ up to +120°C (hot water)	-40°C – + 95°C	-15°C – + 95°C	-15°C – + 95°C
Thread types:	-	ISO 228/ DIN EN 10226	ISO 228	-	-

# Water Fittings

## Claw Couplings for Strict Hygiene Requirements



Materials	
Claw:	Chromium steel similar to Stainless steel 1.4401
Connector:	Chromium steel similar to Stainless steel 1.4401
Seals:	FKM
Max. Working Pressure:	PN 40 bar
Temperature:	-5°C – +100°C
Thread types:	ISO 228
Type of valve:	straight-through
Operation:	Two-Hands
Claw Distance:	40 mm

# Couplings and Fittings for Snowmaking Systems

	<b>High-Pressure Quick Couplings</b>	<b>Drain Adapter</b>	<b>High-Pressure Screwings</b>
<b>Norm:</b>	<b>US-Mil-Norm C-27487/ DIN EN 14 420-7</b>		



Materials				
Body:	Steel zinc-plated + blue passivated	Stainless Steel 1.4401	Stainless Steel 1.4401	Steel zinc-plated + blue passivated
Coupling body:	Stainless Steel 1.4401	Stainless Steel 1.4401	Stainless Steel 1.4401	-
Valve:	-	-	MS 58 nickel-plated	-
Pin:	Stainless Steel 1.4401	Stainless Steel 1.4401	Stainless Steel 1.4401	-
Cord:	Stainless Steel 1.4401	Stainless Steel 1.4401	Stainless Steel 1.4401	-
Ring:	Stainless Steel 1.4401	Stainless Steel 1.4401	Stainless Steel 1.4401	-
Clip:	Steel zinc-plated	Steel zinc-plated	Steel zinc-plated	-
Seals:	NBR	NBR	NBR	PUR*
Handle:	Stainless Steel 1.4401	Stainless Steel 1.4401	Stainless Steel 1.4401	-
<b>Max. Working Pressure:</b>	PN 60 bar	PN 60 bar	PN 60 bar	PN 60 bar
<b>Temperature:</b>	-40°C – + 95°C	-40°C – + 95°C	-40°C – + 95°C	-40°C – + 95°C
<b>Thread Types:</b>	ISO 228/ DIN EN 10226	-	-	-

\* for female thread

## Accessories

	<b>Hose Clamps</b>	<b>High-Performance Hose Clips</b>
<b>Norm:</b>	<b>DIN 20039 A</b>	<b>DIN 3017</b>



Materials			
Clamps:	Stainless Steel 1.4401	Stainless Steel 1.4401	-
Spacers:	Stainless Steel 1.4401	Stainless Steel 1.4401	-
Screws:	Stainless Steel A4-70	Stainless Steel A4-70	Stainless Steel W5
Band:	-	-	Stainless Steel W5
Body:	-	-	Stainless Steel W5
<b>Max. Working Pressure:</b>	PN 16 bar	PN 16 bar	-

**LÜDECKE**

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Since 1930. The perfect connection.

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