

Since 1930. The perfect connection.



## **Quick Connect Couplings and Accessories**for Pneumatics

**Edition 1.0** 



## **Professional Compressed Air Supply**



Due to the high level of automation of modern manufacturing facilities, compressed air plays a significant role as an energy source within industrial companies. An easy and efficient compressed air supply is essential for every industrial factory.

The versatile, high-quality **LUDECKE** quick connect coupling systems are ideally suited for compressed air applications of all kinds. They can be used to quickly connect/disconnect media-carrying lines to tools, machines and equipment.

#### Advantages:

- High-quality materials
- Sturdy, reliable and durable
- Easy to couple
- Various sizes and connection types
- Energy-efficient quick connect couplings as well as couplings equipped with different safety mechanisms
- Numerous possible applications for pneumatics, measurement and control technology

## **Broad Range**

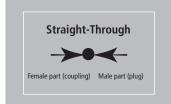
The **LUDECKE** product range contains a large selection of European and International plug profiles. They cover the world's most common plug profiles and ensure high compatibility.

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.

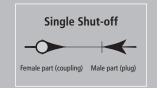


#### **Valve Designs**

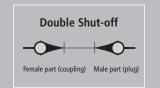
The **LUDECKE** quick connect couplings are available in different valve designs.



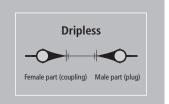
- · No valve neither within the coupling nor within the plug
- Maximum flow rate
- During disconnection: media will leak from the coupling and plug line



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



- Valves on both sides (male/ female)
- During disconnection: media will stay in the hose of both connection lines, constant pressure is maintained
- Valve construction designed for media flow from coupling to



- Valves on both sides (male/ female) - without dead space volume
- During disconnection: only a minimal film of the media will leak (no drops will form)

#### **Materials**

For all products, **LUDECKE** only uses 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 applications with specific hygiene standards or when conveying various difficult media, quick connect couplings made of stainless steel are required. For further information please refer to our program for the processing industry.

#### Steel (machining steel)

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.

#### Seals

Depending on the application and/or requirement, LUDECKE offers various types of sealings made of NBR, EPDM, FKM or FFKM.

## **Connecting within Seconds**

The **LUDECKE** 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 of the coupling (comes with automatic locking mechanism in shut-off couplings and plugs)

## **Quick Connect Couplings with European Plug Profiles**

Each application area is confronted with various challenges and sets priorities in accordance with the individual requirements. To comply to all demands, LUDECKE offers three different lines of quick connect coupling systems with European plug profiles.

#### **Quality-Line Unlimited Flexibility**



The **LUDECKE Quality-Line** Line provides high-class couplings in various sizes to cover all types of applications.

- Micro Quick Connect Couplings, Series ESMC DN 2.7
- Mini Quick Connect Couplings, Series ESM DN 5
- Quick Connect Couplings, Series ES DN 7.2

#### **OptiFlow-Line**

#### **Energy-Efficient Quick Connect Couplings**



Despite many advantages, compressed air has a reputation for being a costly media – in many cases, this is not true. When using the right components, an energy-efficient operation is possible.

The **LUDECKE OptiFlow-Line** offers energy-optimised coupling systems which achieve higher flow rates and significantly reduce energy consumption. This in turn leads to decreasing energy costs as well as increasing durability and lifetime of machines and tools.

#### **LUDECKE OptiFlow-Line**

- Patented OptiFlow by **LUDECKE®** valve technology
- Extremely high flow rates
- Low pressure drop
- High durability
- Great operational safety and best sealing characteristics





→ For series ESI1A DN 7.4 / ESI2A DN 7.4 / ESI DN 7.8 / ESIK DN 7.8 / ESIS DN 7.8 / ESIFK DN 7.8 / ESIG DN 10 / ESG DN 19

#### SafeConnect-Line

#### **Quick Connect Couplings For High-Safety Standards**



Compressed air is a media with great potential risks. In case of improper use and when safety regulations are not being followed, huge forces can be released and put the operator in a dangerous situation.

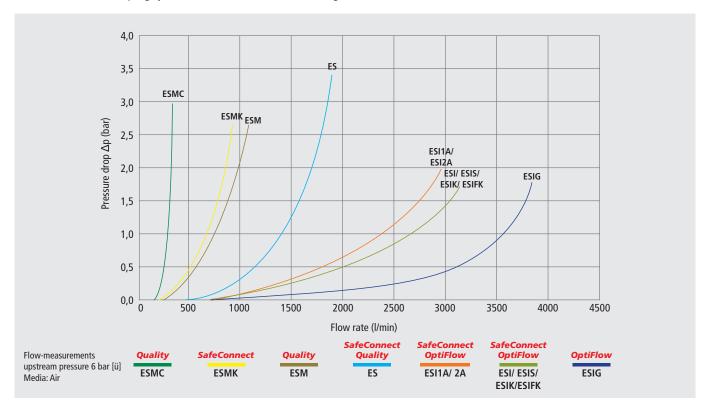
The **LUDECKE SafeConnect-Line** offers various coupling systems with a reliable protection against these problems (whiplash-effect, high noise level, false

→ For series ESIS DN 7.8 / ES DN 7.2 / ESI DN 7.8 / ESIK DN 7.8 / ESI1A DN 7.4 / ESI2A DN 7.4 / ESMK DN 5 / ESIFK DN 7.8

Quick Connect Couplings with Self-Venting	Quick Connect Couplings with Sleeve Lock Mechanism			Quick Connect Couplings with Visual Identification		
Pressure relief and anti-hose whip reduce noise levels and prevent whiplash-effect	Various security m	ous security mechanisms prevent accidental disconnection of the coupling			Colour and shape and plugs preve	e coded couplings nt false coupling
Sleeve concept	Locking nut	Locking nut	Locking nut + plug coding	Two-hand operation	Plug and colour coding	Plug and colour coding
Series: ESIS DN 7.8	Series: ES DN 7.2	Series: ESI DN 7.8	Series: ESIK DN 7.8	Series: ESI1A DN 7.4 ESI2A DN 7.4	Series: ESMK DN 5	Series: ESIFK DN 7.8

## **Comparison Chart of Flow Rates**

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



## **Overview of Quick Connect Couplings with**

#### **Quality-Line OptiFlow-Line ESMC ESM ES ESI** ESIS\* **ESIG ESG** Series **DN 19** DN 5 DN 7.8 **DN 10 DN 7.2 DN 7.8 DN 2.7** Plug Profile (original size) Ø 12 mm Ø 12 mm Ø 12 mm Ø 15 mm Ø 27 mm AFE 1 2 COM

Materials			LODEONE		COLORS.		
Body:	MS 58 (plain/n-plated)	MS 58 (plain/n-plated)	MS 58 (plain/n-plated)	MS 58 nickel-plated	MS 58 nickel-plated	MS 58 nickel-plated	MS 58 plain
Sleeve:	MS 58 (plain/n-plated)	MS 58 (plain/n-plated)	MS 58 (plain/n-plated)	Steel hardened + nickel-pl.	Steel hardened + nickel-pl.	Steel hardened + nickel-pl.	MS 58 plain
Valve Body:	MS 58 (plain/n-plated)	MS 58 (plain/n-plated)	MS 58 (plain/n-plated)	MS 58 nickel-plated	MS 58 nickel-plated	MS 58 nickel-plated	MS 58 plain
Valve:	MS 58 (plain/n-plated)	MS 58 (plain/n-plated)	MS 58 (plain/n-plated)	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	Stainless Steel 1.4310
Balls:	Stainless Steel 1.3541	Stainless Steel 1.3541	-	Stainless Steel 1.4034	Stainless Steel 1.4034	Stainless Steel 1.4034	Stainless Steel 1.4034
Pins:	-	-	Stainless Steel 1.4305	-	-	-	-
Seals:	NBR	NBR	NBR	NBR	NBR	NBR	NBR
Special seals for other media on request:	EPDM, FKM, FFKM	EPDM, FKM, FFKM	EPDM, FKM, FFKM	EPDM, FKM, FFKM	EPDM, FKM, FFKM	EPDM, FKM	EPDM, FKM, FFKM
Plugs:	MS 58 (plain/nickel-plated)	MS 58 (plain/nickel-plated)/ steel zinc-plated	MS 58 (plain/nickel-plated)/ steel zinc-plated	Steel hardened + nickel-plated/ MS 58 nickel-plated	Steel hardened + nickel-plated	Steel hardened + nickel-plated	MS 58 plain
Max. Working Pressure:	PN 35 bar	PN 35 bar	PN 35 bar	PN 35 bar	PN 12 bar	PN 35 bar	PN 35 bar
Temperature:	-20°C – +100°C	-20°C - +100°C	-20°C – +100°C	-20°C - +100°C	-20°C - +100°C	-20°C – +100°C	-20°C - +100°C
Thread types:	ISO 228/ DIN 13	ISO 228/ DIN 13	ISO 228/ DIN EN 10226/ DIN 13	ISO 228/ DIN EN 10226	ISO 228/ DIN EN 10226	ISO 228/ DIN EN 10226	ISO 228
Flow rate: at 6 bar [ü] and 0.5 bar pressure drop single shut-off	165 l/min	510 l/min	1100 l/min	2000 l/min	2000 l/min	3200 l/min	8000 l/min
Type of valve:	single/ double/ straight-through	single/ double/ straight-through	single/ double/ straight-through	single/ double/ straight-through	single	single/ double/ straight-through	single/ double
Operation:	One-Hand	One-Hand	One-Hand	One-Hand	One-Hand	One-Hand	One-Hand
Interchange:	Parker Rectus Series 20	Parker Rectus Series 21	Parker Rectus Series 25/26 Cejn 320	Parker Rectus Series 25/26 Cejn 320	Parker Rectus Series 25/26 Cejn 320	Parker Rectus Series 27/41/1700 Cejn 410	Parker Rectus Series 39 Hansen 7000

## **European Plug Profiles**

#### SafeConnect-Line

ESIS\* **DN 7.8** 

ES **DN 7.2** 

ESI\* **DN 7.8** 

ESIK\* **DN 7.8** 

ESI1A/2A\* **DN 7.4** 

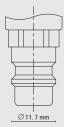
**ESMK** DN 5

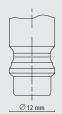
NEW! ESIFK\* **DN 7.8** 



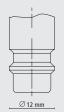
































MS 58 plain



Series 25/26

Cejn 320



MS 58 nickel-plated Steel hardened + nickel-pl. MS 58 nickel-plated MS 58 plain Stainless Steel 1.4310 Stainless Steel 1.4034 NBR EPDM, FKM, FFKM Steel hardened + nickel-plated PN 35 bar -20°C - +100°C ISO 228/ **DIN EN 10226** 2000 l/min single One-Hand Parker|Rectus

Series 25/26

Cejn 320



Steel hardened + nickel-pl. MS 58 nickel-plated MS 58 plain Stainless Steel 1.4310 Stainless Steel 1.4034 NBR EPDM, FKM, FFKM Steel hardened + nickel-plated PN 35 bar -20°C - +100°C ISO 228/ **DIN EN 10226** 2000 I/min single One-Hand

Parker|Rectus

Series 25/26, Cejn 320

Steinco Series 125



MS 58 nickel-plated MS 58 nickel-plated Aluminium anodised MS 58 nickel-plated MS 58 plain Stainless Steel 1.4310 Stainless Steel 1.4034 NBR EPDM, FKM, FFKM MS 58 nickel-plated PN 35 bar -20°C - +100°C ISO 228/ **DIN EN 10226** 1800 l/min single Two-Hands

Parker|Rectus

Series 95/96

Cejn 320



MS 58 plain

MS 58 plain MS 58 plain Stainless Steel 1.4310 Stainless Steel 1.3541 NBR EPDM, FKM, FFKM MS 58 plain with anodized aluminium ring PN 35 bar -20°C - +100°C ISO 228 500 l/min single/ double One-Hand

Parker|Rectus

Series 21



MS 58 plain Aluminium anodised MS 58 plain MS 58 plain Stainless Steel 1.4310 Stainless Steel 1.4034 NBR EPDM, FKM, FFKM MS 58 plain with anodized aluminium ring PN 35 bar -20°C - +100°C ISO 228 2000 l/min single One-Hand Parker|Rectus Series 25 KA

## **Overview of Quick Connect Couplings with**

Series

**ESB DN 5.5**  **ESBI** DN<sub>5</sub>

**ESA DN 5.5** 

**ESAI DN 5.5**  NEW! **ESAIS DN 5.5** 

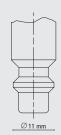
**ESO DN 5.5** 

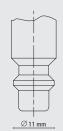
**ESOI DN 5.5** 





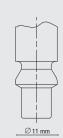






























Steel hardened + nickel-pl







Milton, Gromelle 600

USA, Spain, France





MS 58 nickel-pl.

Steel hardened + nickel-pl.

MS 58 nickel-plated

Orion 44510, Parker 50

Benelux, Switzerland

Madania	
Material	и

Body:
Sleeve:
Valve body:
Valve:
Springs, Retaining ring:
Balls:
Pins:
Seals:
Special seals for other
media on request:
Plug:
Max. Working Pressure:
Temperature:
Thread type:
Max. Flow Capacity: at 6 bar [ü] and 0.5 bar Pressure drop Single shut-off
Type of valve:
Operation:
Norm:

Juy.	Mis so micker-plated
eve:	Steel hardened + nickel-pl
ody:	MS 58 nickel-plated
lve:	MS 58 plain
ing:	Stainless Steel 1.4310
alls:	Stainless Steel 1.4034
ins:	-
als:	NBR
ther est:	-
lug:	Steel hardened + nickel-plated
ure:	PN 35 bar
ure:	-20°C – +100°C
pe:	ISO 228/ DIN EN 10226
bar lrop -off	800 l/min
lve:	single
ion:	One-Hand
rm:	_

MS 58 nickel-plated	Steel hardened + zinc-pl	MS
MS 58 plain	MS 58 plain	MS
Stainless Steel 1.4310	Stainless Steel 1.4310	Stainles
Stainless Steel 1.4034	Stainless Steel 1.4034	
-	-	Stainles
NBR	NBR	
-	EPDM/ FKM/ FFKM	EPDM/
Steel hardened + nickel-plated	Steel hardened + nickel-plated	MS Stee yellow
PN 35 bar	PN 35 bar	PI
-20°C – +100°C	-20°C – +100°C	-20°C
ISO 228/ DIN EN 10226	ISO 228/ DIN EN 10226	ISO
800 l/min	950 l/min	77
single	single	
One-Hand	One-Hand	Or
-		ISC US-MIL Industr. Ir

Parker|Rectus

Series 19

PCL60 (UK)

**Great Britain** 

	MS 58 plain
	MS 58 plain
	MS 58 plain
	MS 58 plain
)	Stainless Steel 1.431
ļ	-
	Stainless Steel 1.430
	NBR
	EPDM/ FKM/ FFKM
	MS 58 plain/

Parker|Re

Hansen

Parker|Rectus

Series 17

Schrader NW5

Great Britain, Europe

NBR	NBR
EPDM/ FKM/ FFKM	EPDM/ FKM/ FFKM
MS 58 plain/ Steel zinc-pl.+ yellow passivated	Steel hardened + nickel-plated
PN 35 bar	PN 35 bar
-20°C – +100°C	-20°C - +100°C
ISO 228/ NPT	ISO 228/ DIN EN 10226
775 l/min	1100 l/min
single	single
One-Hand	One-Hand
ISO 6150 B JS-MIL-Spec. C4109 dustr. Interchange 1/4"	ISO 6150 B US-MIL-Spec. C4109 Industr. Interchange 1/4"
arker Rectus Series 23/24, Hansen 3000, Cejn 310, Milton, Gromelle 600	Parker Rectus Series 23/24 Hansen 3000, Cejn 310, Milton, Gromelle 600
USA, Spain, France	USA, Spain, France

	4.07
MS 58 nickel-pl.	MS 58 n
Steel hardened + nickel-pl.	Steel hardene
MS 58 nickel-plated	MS 58 nic
MS 58 plain	MS 58
Stainless Steel 1.4310	Stainless St
Stainless Steel 1.4034	Stainless St
-	-
NBR	NE
EPDM/ FKM/ FFKM	EPDM/ FK
Steel hardened + nickel-plated	Steel har nickel-
PN 35 bar	PN 12

M/ FFKM	EPDM/ FKM/ FF
dened + plated	Steel hardened nickel-plated
5 bar	PN 12 bar
+100°C	-20°C - +100°
N EN 10226	ISO 228/ DIN EN 1
l/min	1100 l/min
gle	single
Hand	One-Hand
150 B ec. C4109 change 1/4"	ISO 6150 B US-MIL-Spec. C4 Industr. Interchange
Series 23/24,	Parker Rectus Series

The state of the s	= =
MS 58 nickel-pl.	MS 58 plain
hardened + nickel-pl.	MS 58 plain
58 nickel-plated	MS 58 plain
MS 58 plain	MS 58 plain
nless Steel 1.4310	Stainless Steel 1.4
nless Steel 1.4034	-
-	Stainless Steel 1.4
NBR	NBR
DM/ FKM/ FFKM	EPDM/ FKM/ FFk
teel hardened +	MC 58 plain

MS 58 plain	MS 58 plain	MS 58 plain	
Stainless Steel 1.4310	Stainless Steel 1.4310	Stainless Steel 1.4310	
Stainless Steel 1.4034	-	Stainless Steel 1.4034	
-	Stainless Steel 1.4305	-	
NBR	NBR	NBR	
EPDM/ FKM/ FFKM	EPDM/ FKM/ FFKM	EPDM/ FKM/ FFKM	
Steel hardened + nickel-plated	MS 58 plain	Steel hardened + nickel-plated	
PN 12 bar	PN 35 bar	PN 35 bar	
-20°C – +100°C	-20°C - +100°C	-20°C - +100°C	
ISO 228/ DIN EN 10226	ISO 228	ISO 228/ DIN EN 10226	
1100 l/min	775 l/min	1140 l/min	
single	single	single	
One-Hand	One-Hand	One-Hand	
ISO 6150 B US-MIL-Spec. C4109 Industr. Interchange 1/4"	-	-	
Parker Rectus Series 23/24, Hansen 3000, Cejn 310,	Parker Rectus Series 14/22, ARO 210, Cejn 300,Orion	Parker Rectus Series 14/22, ARO 210, Cejn 300,	

44510, Parker 50

Benelux, Switzerland

Interchange:

Area:

## **International Plug Profiles**



**ESOIG** DN<sub>9</sub>

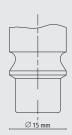
**ESK DN 7.5**  **ESAC DN 8** 

**ESACG DN 10** 



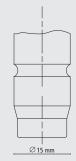
F1K **DN8** 



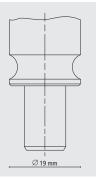






























MS 58 plain

MS 58 plain

MS 58 plain

MS 58 plain

Stainless Steel 1.4310

Stainless Steel 1.4305





Steel hardened + nickel-pl.





MS 58 nickel-plated

MS 58 nickel-plated

MS 58 nickel-plated

MS 58 plain



MS 58 nickel-plated Steel hardened + nickel-pl. MS 58 nickel-plated MS 58 plain Stainless Steel 1.4310 Stainless Steel 1.4034

NBR EPDM/ FKM/ FFKM Steel hardened +

One-Hand

Parker Rectus Series 14/22,

ARO 210, Cein 300,

Orion 44510, Parker 50

Benelux, Switzerland

NRR EPDM/ FKM/ FFKM Steel hardened + nickel-plated nickel-plated PN 12 bar PN 35 bar -20°C - +100°C -20°C - +100°C ISO 228/ DIN EN 10226 ISO 228/ DIN EN 10226 1140 l/min 1400 l/min single

single One-Hand Rectus Series 40 KA, ARO 310, Orion

44520, Orion 44530

Benelux, Switzerland

MS 58 nickel-pl. MS 58 plain MS 58 plain Stainless Steel 1.4310 Stainless Steel 1.4305 NRR EPDM/ FKM/ FFKM Steel hardened + nickel-plated PN 35 bar -20°C - +100°C ISO 228/ DIN EN 10226 1375 l/min single One-Hand

Parker|Rectus Series 13/03,

Nitto Kohki 200

Cejn 314/315

especially Asia

Steel hardened + zinc-pl. MS 58 plain Stainless Steel 1.4310 Stainless Steel 1.4034 NRR EPDM/ FKM/ FFKM Steel hardened + zinc-plated PN 35 bar -20°C - +100°C ISO 228/ DIN EN 10226 1650 l/min single One-Hand

Parker|Rectus Series 33

Atlas Copco QIC 10

worldwide

MS 58 nickel-plated Steel hardened + nickel-pl. Steel zinc-plated MS 58 plain Stainless Steel 1.4310 Stainless Steel 1.4034 NBR EPDM/ FKM Steel hardened + nickel-plated PN 35 bar -20°C - +100°C ISO 228/ DIN EN 10226 2600 l/min single One-Hand

Parker|Rectus

Series 34 KA,

Atlas Copco QIC 15

worldwide

Stainless Steel 1.4310 Stainless Steel 1.4034 NRR EPDM/ FKM Steel nickel-plated/ MS 58 nickel-plated PN 35 bar -20°C - +100°C ISO 228/ DIN EN 10226 2900 l/min single/double One-Hand/ Two-Hands Parker|Rectus Series 32, Cejn 408, Tema 1800 SF Scandinavia

Steel zinc-pl.+yellow pass. Steel zinc-pl.+yellow pass. MS 58 plain Stainless Steel 1.4310 Stainless Steel 1.4034 NBR EPDM/ FKM/ FFKM Steel zinc-plated + yellow passivated PN 35 bar -20°C - +100°C ISO 228 1800 l/min single Two-Hands worldwide

Steel zinc-pl. + yellow pass. = Steel zinc-plated and yellow passivated

# Pneumatic **Accessories**

## **MODY Spiral Hoses made of Polyurethane**



MODY spiral hoses have excellent properties allowing for flexible supply of compressed air. Even after severe deformation, MODY spiral hoses retake their original shape. Despite their wide range, the spiral hoses make work much safer. We recommend to install them on the ceiling and to use high-quality, reusable and rotatable fittings with bend protection.

- Compressed Air Blow-off Sets
- MODY Spiral Hoses
- A:S:S Antistatic Spiral Hoses
- Flamex-Spark Protecting and Hot Water Spiral Hoses
- MODY Duo Spiral Hoses
- MODY CleanConnect Spiral Hoses
- Accessories for MODY Spiral Hoses
- MODY Spiral Hose Fittings

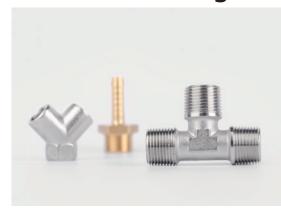
#### **Blow-off Guns and Valves**



For thorough and fast cleaning or drying of work pieces and worktops, compressed air blow-off guns and valves are chosen. Various types of nozzles offer the right dosage, the required air volume as well as low noise levels. For flexible use, we recommend a combination with MODY spiral hoses.

- Blow-off Valves made of Aluminium/ Brass/ Stainless Steel
- Blow-off Guns made of Aluminium/ Plastic
- Nozzles and Spare Parts for Compressed Air Blow-off Valves and Guns

#### **Pneumatic Fittings**



At **LUDECKE** you will get an extensive range of connecting fittings made of brass for various fields and applications.

- Pneumatic 1/3-Screwings made of Brass Plain
- Pneumatic 2/3-Screwings made of Brass Plain
- Pneumatic Fittings made of Brass Plain or Brass Nickel-Plated

#### **Hexagon Ball Valves**



Ball valves serve as shut-off fittings in pipe lines for compressed air and other media. They are especially suitable for industrial applications and seal through PTFE seals. Due to the compact control lever, miniature ball valves are ideally suited for very tight spaces.

## Hose Clamps, Hose Clips, 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

## **Testing Panel**

To train and thoroughly test our quick connect couplings, we developed Testing Panels. These sample bars represent the quick connect coupling series from DN 2.7 up to DN 10 of our Quality-, OptiFlowand **SafeConnect-Line** as well as the MODY spiral hoses under pressure.

#### Your advantages:

- Extensive information about each product and
- Testing high-quality products under real life conditions (the coupling procedure may be executed with media passing through the lines)
- Multilingual: German and English (on request, also in other languages)



# LUDECKE



Since 1930. The perfect connection.