LÜDECKE

Since 1930. The perfect connection.

Coupling Systems and Accessories for the Construction Industry

Edition 1.0

LÜDECKE MADE IN GERMANY

Robust Coupling Systems for **Outdoor Applications at Construction Sites**

Whether in classic construction, mining and tunnelling, ship yards, petrochemical industry, agriculture or in gardening and landscaping: In these areas, reliable coupling systems are required which withstand extreme use and weather conditions.

The **LÜDECKE** construction product portfolio offers high-quality and robust products - optimised for a number of challenging applications and different media.

Advantages:

- First-class and especially solid materials
- Safe, reliable and durable
- Simple and intuitive handling
- Different sizes and connection types
- From standard range to individual solutions and customised hose assemblies

Quality and Service

Lifetime-Guarantee: Original **LÜDECKE** Claw Couplings and Clamps made of malleable iron from the 60s still used today in pneumatic demolition hammers

Engineered and Made in Germany - with this promise we do not only guarantee excellent products but also a comprehensive customer service.

On the following pages, we will give you an insight on how important it is to choose high-quality couplings and fittings in this area.
Avoid unnecessary safety risks with the **LÜDECKE** construction range which has been tested and meets the DIN standards.
Also, take the chance and have **LÜDECKE** customise your products for the hose you want.

Materials

For all products, LÜDECKE only uses premium materials which are customised to the application.

Malleable iron

Most of the LÜDECKE construction fittings are made of malleable cast iron. This material has perfect mechanical properties (e.g. high tensile strength) which prevent brittle fractures when subject to excess strain. As a result, malleable cast iron is perfect for applications in which the components are exposed to strong dynamic stress (e.g. vibrations) and high mechanical forces. LÜDECKE only works with galvanised and yellow passivated malleable cast iron (free of chrome VI) in accordance with the RoHS guideline.

Steel (Hardened/ Nickel-Plated/ Zinc-Plated)

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.

Aluminium

Products made of aluminium impress with their very low weight (up to 60% weight reduction). This makes them much easier to handle when in continuous operation. Aluminium is resistant to corrosion as well as chemical media and is ideally suited for machining.

Brass (Plain/ Nickel-Plated)

The material brass MS 58 (machining brass) is a very sturdy material which guarantees high durability and is perfectly suited for galvanisation (nickel, chrome). In the construction sector, this material is applied for complementary products (e.g. locking nuts).

Stainless Steel

In areas 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.

Seals

Depending on the requirements, LÜDECKE offers various types of high-quality sealings made of NBR, brass, PTFE and PUR.

Broad Range

From classic claw couplings, mortar couplings and sandblast couplings to hose clamps and throttle valves: At LÜDECKE you will surely find the right product for a wide range of applications.

Top Quality
for Safe Working

High-Risk Potential Caused by Inferior Material

Fracture test - left: **LÜDECKE** hose clamp (no crack/ fracture), right: hose clamp from the Far East (complete fracture)

Again and again, you will find cheap copies of claw couplings and their matching hose clamps on the market. They are mostly manufactured in the Far East.

Lack of functionality
However, using such products comes with a high-risk potential: On the one hand, many cast components have great tolerances. Often, the couplings can no longer be tightly connected and or lead to leakages. Moreover, due to the unproperly casted hose barbs and high tolerances of the clamps, a safe fitting of a hose cannot be guaranteed!

High Potential of Fractures
As these copies are often produced with low-quality and non-approved materials such as chilled cast iron (white iron), the products may easily fracture under high strain (i.e. when installed in strongly vibrating construction machines with compressed air).

Using such unsuitable products poses a high liability risk!

Safety with High-Quality and Standardised Components

To avoid these great safety risks, pay attention to the following:

- White iron and other inferior materials are hard and very brittle due to their high amount of cementite steel. As a result, they are inappropriate materials for high stress applications
- The production of malleable cast iron is more time-consuming and expensive as it undergoes an additional annealing treatment. However, this provides malleable cast iron with enhanced mechanical properties and makes it perfect for extreme conditions.
- Only components should be sold and used which follow the current standards (DIN 3489, DIN 3238, DIN 20039) and show the obligatory manufacturer's branding.

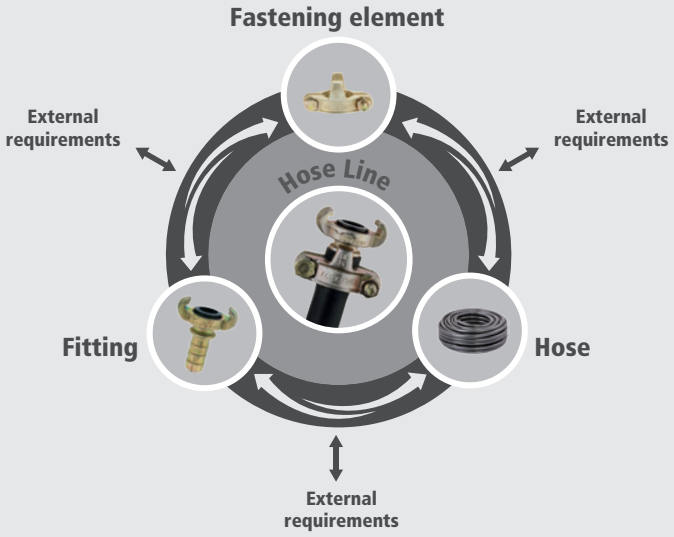
Original **LÜDECKE** Claw Coupling according to DIN 3489

Counterfeit from the Far East (no manufacturer's branding, inferior material)

The products of the **LÜDECKE** construction range undergo continuous, strict quality tests. In this way, we always guarantee high reliability for permanent use.

Assembly of
Hoses and Fittings

It is all about the perfect connection



High-quality couplings and fittings are essential for reliable and safe operation. However, long-term and satisfying results are only achieved, when all components of a hose line interact perfectly.

Problems when assembling fittings on hoses:
There are a number of hose manufacturers which often offer different materials and dimensions for identical hose sizes and purposes due to missing standards.

Then there are the fittings manufacturers. They produce diverse fittings for standard hose sizes and use different assembly methods. These fittings have also dimensional tolerances just as the hoses. This is why barb contours from various manufacturers can vary in form and dimension.

General Statements are not always Possible

Assembled hose lines often act very differently under pressure and temperature. Depending on the application, this will hamper a secure connection between hose and fitting.
Moreover, the requirements hose lines have to meet are continuously increasing with regards to resistance to operating pressures, ambient and operating temperature, chemical substances and external mechanical strain.
Due to the variety of impacting parameters, it is not possible to make a generalised statement about the reliability of hose assemblies based on their individual components.

Professional Hose Assemblies with LÜDECKE

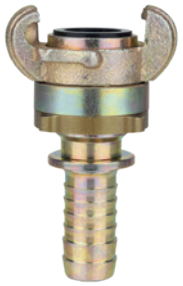
Based on the desired hose type, LÜDECKE helps to select the right fitting and assembly method.

All hose assemblies are also tested in our own test centre using a wide range of criteria.
Our specially trained experts (persons qualified to test hose assemblies in accordance to German law § 2 Para. 6 BetrSichV) can make reliable statements about their suitability for the applications and media in question.

If you cannot find a properly sized fitting for your hose, we will be happy to produce a customised solution.

Claw Couplings

	also in Stainless Steel Standard	Swivelling	also in Stainless Steel MODY-Safety-Screwing Coupling	With Brass Seal
	DIN 3489	DIN 3489	DIN 3238	
				
Materials				
Claw:	Malleable iron (zinc-plated + yellow passivated)	Malleable iron (zinc-plated + yellow passivated)	Malleable iron (zinc-plated + yellow passivated)	Malleable iron (zinc-plated + yellow passivated)
Connector:	Malleable iron (zinc-plated + yellow passivated)	Steel (zinc-plated + yellow passivated)	Steel (zinc-plated + yellow passivated)	Malleable iron (zinc-plated + yellow passivated)
Locking nut:	-	-	MS 58 plain	-
Screw:	-	-	-	Steel (zinc-plated + yellow passivated)
Seals:	NBR	NBR	NBR, Brass	Brass
Special seals on request:	TFEP, FKM, EPDM	TFEP, FKM, EPDM	TFEP, FKM, EPDM	TFEP, FKM, EPDM
Max. Working Pressure:	PN 10 bar	PN 16 bar	PN 16 bar	PN 10 bar
Temperature:	-40°C - + 95°C	-40°C - + 95°C	-40°C - + 95°C	-40°C - + 95°C
Thread types:	ISO 228, NPT	ISO 228	ISO 228, NPT	ISO 228
Claw distance:	42 mm	42 mm	42 mm	42 mm
Others:	also available in stainless steel	-	also available in stainless steel, also available with colour coated claw	-

With Bore for Safety-Clips	Left-Closing	Made of Hardened Steel	Made of Forged Brass	US-Version with Bore for Safety Clips	US-Version with Bore for Safety Clips - MODY
					
Malleable iron (zinc-plated + yellow passivated)	Malleable iron (zinc-plated + yellow passivated)	Steel (hardened, zinc-plated + yellow passivated)	MS 58 plain	Malleable iron (zinc-plated + yellow passivated)	Malleable iron (zinc-plated + yellow passivated)
Malleable iron (zinc-plated + yellow passivated)	Steel (zinc-plated + yellow passivated)	Steel (hardened, zinc-plated + yellow passivated)	MS 58 plain	Malleable iron (zinc-plated + yellow passivated)	Steel (zinc-plated + yellow passivated)
-	MS 58 plain	MS 58 plain	-	-	MS 58 plain
-	-	-	-	-	-
NBR	NBR/ Brass	NBR	NBR	NBR	NBR
TFEP, FKM, EPDM	TFEP, FKM, EPDM	TFEP, FKM, EPDM	-	-	TFEP, FKM, EPDM
PN 10 bar	PN 16 bar	PN 16 bar	PN 10 bar	PN 10 bar	PN 16 bar
-40°C - + 95°C	-40°C - + 95°C	-40°C - + 95°C	-40°C - + 95°C	-40°C - + 95°C	-40°C - + 95°C
ISO 228, NPT	ISO 228	ISO 228, NPT	ISO 228	ISO 228, NPT	ISO 228, NPT
42 mm	42 mm	42 mm	42 mm	41 mm	41 mm
available incl. safety clips (Steel zinc-plated)	also available with colour coated claw	-	French system (according to Norm NF E 29-573)	US-version, available incl. safety clips (Steel zinc-plated)	US-version, available incl. safety clips (Steel zinc-plated)

Screwings

Complete Screwing Sets

DIN 8537/ 20 033

Materials	
Tapered stem:	Steel/ Malleable iron (zinc-plated + yellow passivated)
Connecting nut:	Malleable iron (zinc-plated + yellow passivated)
Seals:	NBR
Max. Working Pressure:	PN 16/ 25 bar*
Temperature:	-40°C - + 95°C
Thread types:	ISO 228/ DIN 405

Flat Hose Screwings

DIN 3238/ 20 033

Materials	
Connecting nut:	Malleable iron (zinc-plated + yellow passivated)
Hose connections, squeeze ring, squeeze nut:	Steel (zinc-plated + yellow passivated)
Locking nut:	MS 58 plain
Seals:	NBR
Max. Working Pressure:	PN 16/ 25 bar*
Temperature:	-40°C - + 100°C
Thread types:	ISO 228/ DIN 405

Hot Tar Screwings

Materials	
Tapered stem:	Steel (zinc-plated + yellow passivated)
Wing nut:	Malleable iron (zinc-plated + yellow passivated)
Nipple:	Steel (zinc-plated + yellow passivated)
Max. Working Pressure:	PN 25 bar
Temperature:	up to +200°C
Thread types:	ISO 228

*subject to temperature and assembly method

Double Nipples

Connecting Nipples

Thread Stems

Hose Connections

Thread Ferrule Screwings

Materials	Double Nipples	Connecting Nipples	Thread Stems	Hose Connections	Thread Ferrule Screwings
Body:	Steel (zinc-plated + yellow passivated)	Steel/ Malleable iron (zinc-plated + yellow passivated)	Steel (zinc-plated + yellow passivated)	Steel (zinc-plated + yellow passivated)	Steel (zinc-plated + yellow passivated)
Max. Working Pressure:	PN 25 bar	PN 25 bar	PN 16/ 25 bar	PN 16/ 25 bar	PN 16/ 25 bar
Thread types:	ISO 228/ DIN 405	ISO 228/ DIN 405	ISO 228/ DIN 405	-	ISO 228

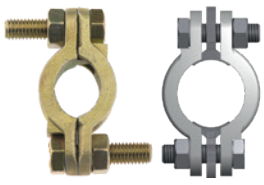
Mortar Couplings

	Standard	For Hydraulic Hose Crimping	Made of Aluminium	System „Mai"
	22 and 23.5	22 and 23.5	X25	Mai
				
Materials				
Coupling:	Malleable iron (zinc-plated + yellow pass.)	Malleable iron (zinc-plated + yellow pass.)	Aluminium	Malleable iron (zinc-plated + yellow pass.)
Plug:	Steel/ Malleable iron (zinc-plated + yellow pass.)	Steel (zinc-plated + yellow pass.)	-	Steel (zinc-plated + yellow pass.)
Connector:	Steel (zinc-plated + yellow pass.)	Steel (zinc-plated + yellow pass.)	Aluminium	-
Handle:	Malleable iron (zinc-plated + yellow pass.)	Malleable iron (zinc-plated + yellow pass.)	Malleable iron (zinc-plated + yellow pass.)	Malleable iron (zinc-plated + yellow pass.)
Seals:	NBR	NBR	NBR, PTFE, PUR	NBR
Max. Working Pressure:	PN 50 bar	PN 50 bar	PN 40 bar	PN 50 bar
Temperature:	-40°C – +90°C	-40°C – +90°C	-40°C – +90°C	-40°C – +90°C
Thread types:	all types	all types	ISO 228	ISO 228
Version:	Rigid/ swivelling	Rigid/ swivelling	Rigid/ swivelling	Rigid

Sandblast Couplings

Materials	Sandblast Coupling Malleable Iron	Sandblast Coupling Nylon	Nozzle Holder Aluminium	Nozzle Holder Nylon	Sandblast Throttle Valve
					
Body:	Malleable iron (zinc-pl. + yellow pass.)	Nylon	Aluminium	Nylon	Malleable iron (zinc-pl. + yellow pass.)
Seals:	NBR	NBR	NBR	NBR	-
Throttle:	-	-	-	-	Steel hardened
Handle:	-	-	-	-	Malleable iron (zinc-pl. + yellow pass.)
Max. Working Pressure:	PN 12 bar	PN 12 bar	PN 12 bar	PN 12 bar	PN 10 bar
Temperature:	up to + 100°C	up to + 100°C	up to + 100°C	up to + 100°C	- 15°C - + 80°C
Thread types:	ISO 228/ Coarse thread	ISO 228/ Coarse thread	ISO 228/ Coarse thread	ISO 228/ Coarse thread	NPT
Claw distance:	58 mm	58 mm	-	-	-

Hose Clamps and Hose Clips

Materials	Hose Clamps - Standard Version	Hose Clamps - US-Version	Double-Ear Hose Clips
			
Clamps:	Malleable iron zinc-plated and yellow passiv./ Stainl. Steel 1.4401	Malleable iron zinc-plated and yellow passivated	Unbreakable special reliable steel zinc-plated & blue chromated
Spacers:	Malleable iron zinc-plated and yellow passiv./ Stainl. Steel 1.4401	-	-
Screws:	Steel zinc-plated/ Stainl. Steel A4-70	Steel zinc-plated	-
Max. Working Pressure:	PN 16/ 25 bar	PN 25 bar	-
Norm:	DIN 20039 A/B	-	-

Ball Valves and Throttle Valves

	Ball Valves Sturdy-Version	Ball Valves Light-Version	Double Ball Valves and Airhammer Ball Valves	Throttle Valves Standard-Version	Throttle Valves US-Version
					
Materials					
Body:	Brass CW617N	Forged brass nickel-pl.	Brass CW617N	Malleable iron zinc-plated + yellow pass.	Malleable iron zinc-plated + yellow pass.
Sockets:	Brass CW617N	Forged brass nickel-pl.	Brass CW617N	-	-
Spindle and nut:	Brass MS 58 nickel-pl.	Brass MS 58 nickel-pl.	Brass MS 58 plain	-	-
Ball:	Brass MS 58 chromed	Brass MS 58 chromed	Brass MS 58 chromed	-	-
Seals:	PTFE*/FKM**	PTFE*/FKM**	PTFE glass fiber reinf.*/ NBR**	NBR/ Brass	NBR
Handle:	Die-cast aluminium red/ black lacquered	Steel zinc-plated and coated with red PVC	Steel red lacquered	Malleable iron zinc-plated + yellow pass.	Malleable iron zinc-plated + yellow pass.
Max. Working Pressure:	PN 35 bar	see diagram	PN 35 bar	PN 10 bar	PN 10 bar
Temperature:	-15°C – + 100°C	-15°C – + 120°C	-15°C – + 100°C	-15°C – + 80°C	-15°C – + 80°C
Thread:	DIN EN 10226	ISO 228	ISO 228	ISO 228	NPT, ANSI / ASME B1.20.1

*ball seals /**spindle seals

LÜDECKE

LÜDECKE

Since 1930. The perfect connection.

LÜDECKE GmbH - Heinrich-Hauck-Str. 2 - D-92224 Amberg - Phone: +49 9621 7682 0 - Fax: +49 9621 7682 99
info@luedecke.de - www.ludecke.com