



Highest Quality for Safe Working

Avoid Safety Risks through Quality

Enormous Hazard Potential Caused by Inferior Material



Above: Original **LUDECKE** hose clamp DIN 20039 (malleable iron)

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

Often cheap copies are offered on the claw coupling market – mostly with low grade casted material and poorly manufactured.

Also hose sets are highly affected due to the use of low quality hose clamps which are assembled and supplied, mostly from the Far East.

The use of such assemblies (couplings and hose clamps) contain an uncontrollable risk in operation. Due to imprecise casted hose barsb and high tolerances of hose clamps, a safe fitting on the hose barb cannot be guaranteed.

Many casted components show significant tolerances, which often leads to leakages and does not allow a tight and safe connection.

Copies of Standardized Compressed Air Fittings often show a High Potential of Cracking

Geometric differences of the fittings are one visual part of the overall hazardous potential. More difficult to recognize is the fact, that copies are often manufactured with low quality materials and non-approved materials are used, i.e. white iron. The components may easily break or crack under heavy-duty utilization (i.e. assembled on strongly vibrating machines).



Original **LUDECKE** Claw Coupling
(DIN 3489)

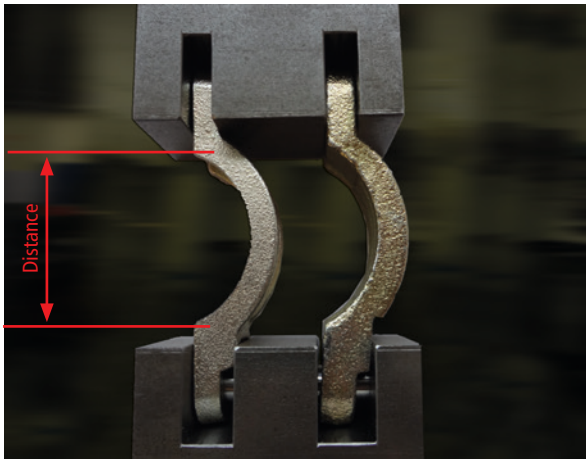


Counterfeit from the Far East
(no manufacturer's branding, inferior material)

Torn off claw within a very short period of time

The above mentioned couplings and clamps contain an enormous safety risk in operation! For safety reasons we strongly recommend not to use these products. These products do not at all comply with DIN 3489/3238 for claw couplings and DIN 20039 for clamps.

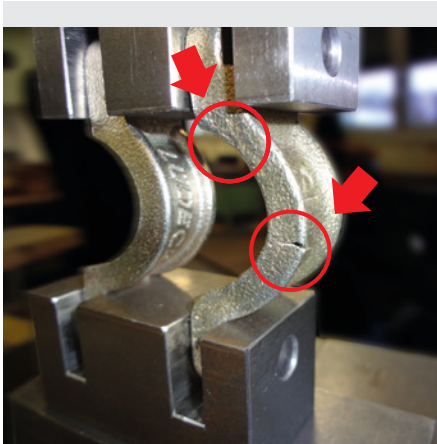
Breakage Test with Hose Clamps



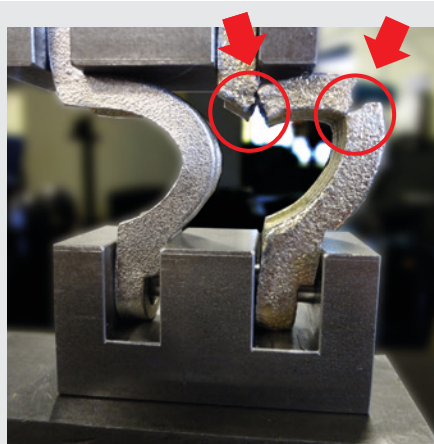
Test Setup - distance of 44,7 mm (left hand **LUDECKE** hose clamp, right hand: counterfeit from far east)

To illustrate the differences between the material qualities, **LUDECKE** conducted a fracture test with two hose clamps (original **LUDECKE**-hose clamp vs. a counterfeit from Far East). The hose clamps were inserted into a hydraulic press and tested under pressure.

Increasing the pressure at a distance of 40 mm the Far East counterfeit already shows cracking. While increasing the pressure slightly the clamp breaks completely. The original **LUDECKE** hose clamp made of malleable iron does not break despite major deformation.



Distance of 40 mm (no cracks in the **LUDECKE** hose clamp, cracking in the counterfeit)



Distance of 28 mm (no rupture in the **LUDECKE** hose clamp, complete break in the counterfeit)



Distance of 23 mm (no cracks in the **LUDECKE** hose clamp, completely destroyed counterfeit)

Safety by High-Quality and Standardized Components

To avoid such safety risks the following essential facts requires your attention:

- White iron and other inferior materials are hard and very brittle due to the high amount of cementite steel and therefore are inappropriate materials for heavy duty applications
- The production of malleable iron cast is cost intensive and therefore expensive because it undergoes an additional annealing heat treatment. This results in strongly improved mechanical characteristics (ie. high tensile strength and ductility), and is therefore suitable in applications for components which are subject to strong dynamic strains (ie. vibrations), and high mechanical loads
- To avoid the utilization of plagiarism, it is necessary to ensure, that the products are marked with a manufacturer's branding according to the current standards
- Only components that are in compliance with the existing standards (DIN 3489, DIN 3238, DIN 20039) should be sold and installed