

# Storz Couplings, industrial and firefighting use

We provide Storz quick-disconnect couplings for either industrial or firefighting applications. They are produced in basically intensified aluminum light-alloy, brass and stainless steel materials.

DIN Storz couplings are available in the range of 25D ~ 150, with hose tail end for lat flat assembly, thread connection for hydrant use, caps plugs and reduction adapters.

The series are made according to basically German EN / DIN standards or tailored dimensions per specific demands for equipments.



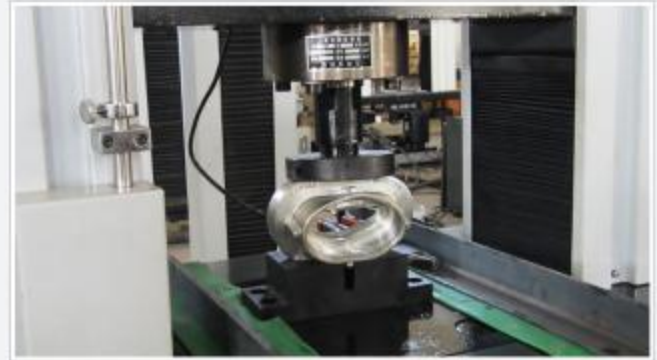
Forge-fabricated Storz head, hose tail by multiple serration, smooth with collar fitted with DIN safety clamps.

## Compression and Snatch Test

A Storz coupling is a quarter turn internal lug coupling, easy to connect to each other by the force of lugs which are on the inside of the coupling.

Storz coupling is widely used by fire services worldwide and was invented for this purpose by Guido Storz in 1882. It is commonly used on fire hoses to connect to fire hydrants in western Europe, esp. Denmark, Germany, Austria, Switzerland, Sweden and the Netherlands.

In some industry usage like agriculture and irrigation, it can be casting made for general hose connection and pressure undertake.



A forged Storz head is being distorted yet no substantial cracks are visually observed.

However if it is used in firefighting which is rather demanding, a forged artifact is always demanded to guarantee the safety and duration of the couplings.

As the metal is shaped during the forging process, its internal grain deforms to follow the general shape of the part. As a result, the grain is continuous throughout the part, giving rise to a piece with improved strength characteristics.

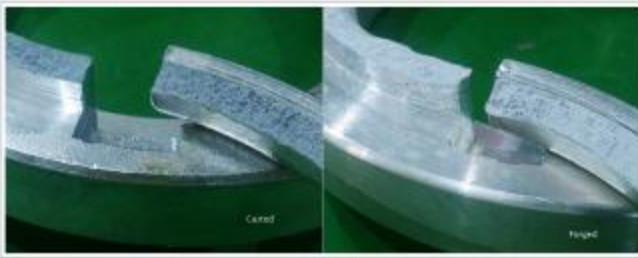
Compression type test is thus carried out to check the tensile strength; and snatch test on Storz claws is performed taking casted and forged pieces in comparison, both in line with DIN standard requirements.

## Compression test to justify forged tensile strength over casted pieces

To squeeze a forged Storz head by hydraulic compression test machine, we did not witness fractures anywhere at the bending areas when the test piece was seriously distorted.

That proves the metallurgy fibres are well connected adding to its greater tensile strength that can endure heavier impacts thus promises a secured and longer life.

time resulted from forging fabrication, as in comparison to the casted.



The cross-section at the claw broken position, forged right, from snatch test.

## Snatch type test: casted vs. forged

In snatch test we pulled storz claws of a casted aluminum-alloy and a forged alloy piece respectively by hydraulic pulling machine.

Claws of the forged-alloy was torn apart as the accumulative force hit 984kN, when the casted capacity was observed only 354kN. The forged structural length was proved 2.8 times greater in laboratory.

Furtherly the broken cross-section makes it visually possible to distinguish the continuous forces happens inside the material proving forging quality over casting ones which is a must in firefighting application.