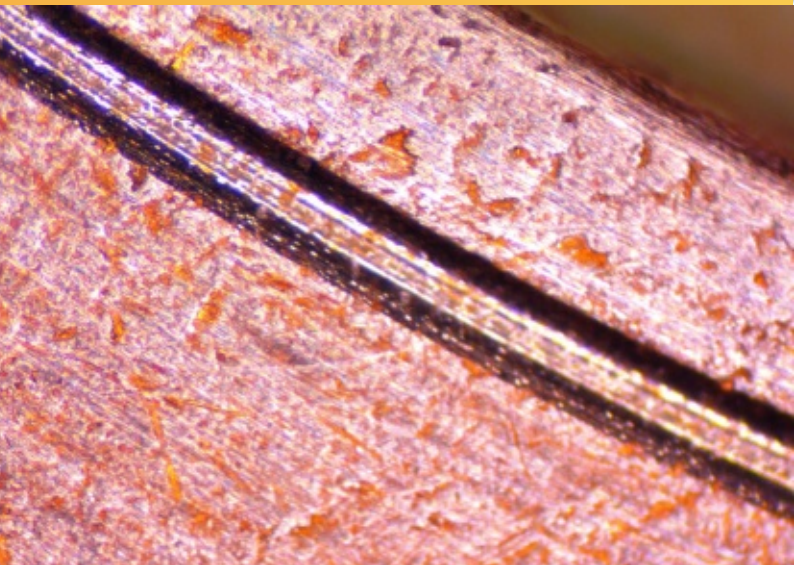
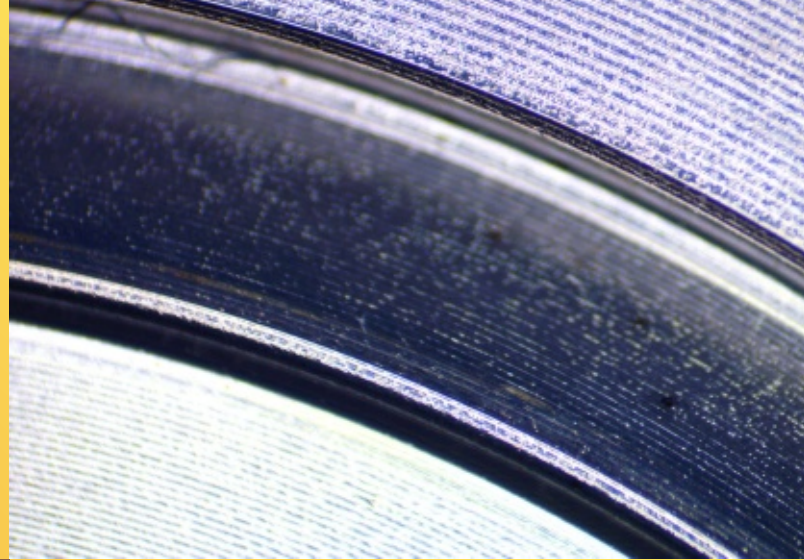


**biallec**

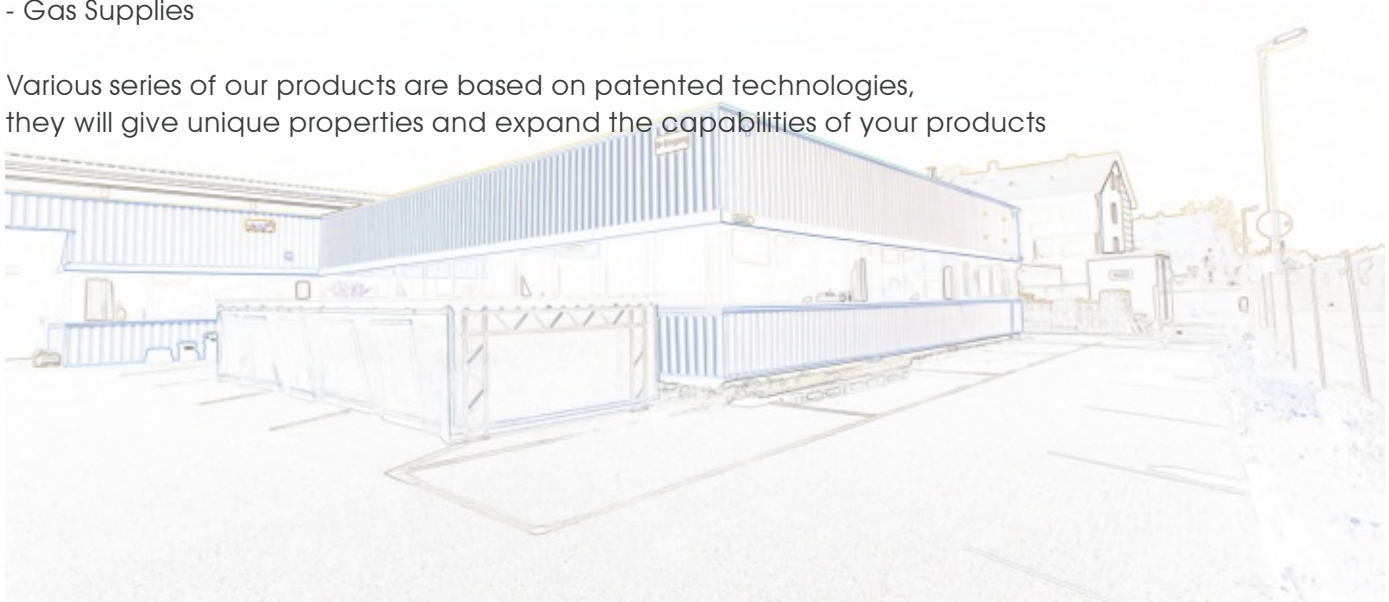


**High Level Connections**

**Connecting tubes is an essential step in industry.  
Biallec is a specialist for connections, where high leak tightness and demountability is essential.**

- Vacuum Technology
- Air Conditioning
- Liquids and cryo' liquids
- Gas Supplies

Various series of our products are based on patented technologies, they will give unique properties and expand the capabilities of your products



## Components for the most demanding situations

Tube connections with lowest possible leak rates but simple handling

CF Ultra-High-Vacuum Flanges for use with Aluminium chambers

Chain clamps for metal seals, for overpressure, high temperature and glass components

Chamber and reactor components made from Pyrex and Quartz

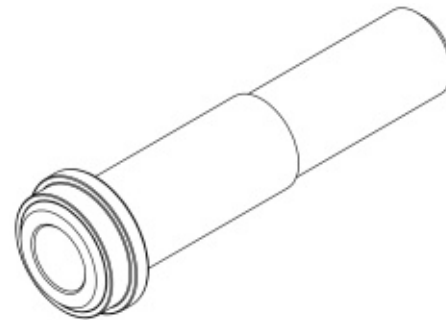




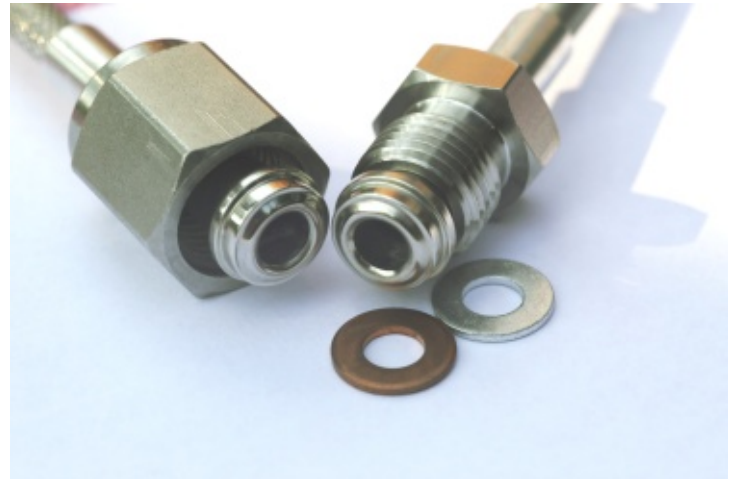
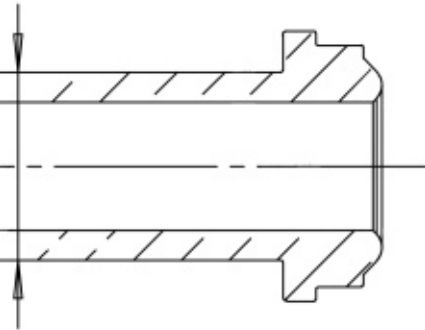
Patent pending

## UTJ All Metal seal connection for joining Aluminium Tubes to Al or Stainless Steel

- ▶ Leak rate 1 cm<sup>3</sup> in 300 years
- ▶ no special tools required, easily demountable
- ▶ fully compatible to VCR connections
- ▶ easy to open and re-close
- ▶ metal seals (Aluminium or Copper)



- ▶ Suitable for cryo applications
- ▶ Connection parts made from Aluminium 6082-T6
- ▶ In field connection within seconds



## Aluminium CF Flanges with hard coated surface

- ▶ Can be directly welded to Aluminium tubes
- ▶ Coating allows the use of standard copper gaskets
- ▶ very reliable surface, harder than Stainless Steel



- ▶ Low magnetic permeability
- ▶ patented coating process, high density wear resistant coating

**Patent pending**

## CF Flanges Titanium - Aluminum

- ▶ Surface and knife edge made from Titanium Grade 5
- ▶ Typical tensile strength  $>900\text{N/mm}^2$  (= 2.5x value of Stainles Steel)
- ▶ Fitted with Aluminium tube



Patent pending



- ▶ Long tube length reduces welds on chamber manufacturing
- ▶ Rotatable flange
- ▶ Flange ring made out of Aluminium
- ▶ Zero magnetism





Please note: The sale of chain clamps is restricted in some areas until August 2017

## Chain Clamps for Many Sealing Applications

- ▶ Polymer clamps for electrical insulation and glass components
- ▶ Aluminium clamps for temperatures up to 150°C and overpressure
- ▶ Stainless Steel clamps for high temperatures and overpressure
- ▶ Aluminium and Stainless Steel clamps for metal seals





All the Klein Flange (KF) sizes are offered DN16/25/40/50 and including DN63KF

If used with metal seals, Ultra-High-Vacuum can be achieved with KF components



For bigger flanges, fitting chain clamps can be offered. Chain clamps for flanges with up to 1m diameter and more are possible!



## Pyrex and Quartz

Components made completely out of glass or Quartz are offered

In addition, transitions from glass to metal are available in many sizes as tubes or with flanges CF / KF / ISO



Polymer Centring Rings used together with polymer chain clamps avoid damage to the glass



## Custom Fabrication

We offer customized products, designed according your requirements and specifications.



Examples shown here:

- ▶ Custom chain clamp for non-standard flange size
- ▶ Complex gas supply flange system



**Biallec GmbH**  
**Siederstr. 40**  
**78054 Villingen-Schwenningen**

**Tel. +49-(0)7720 696 984-0**  
**Fax +49-(0)7720 696 984-1**  
**info@biallec.com**