

## Special screws





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Our delivery program contains screws, nuts and turning parts according to national and international standards, customer designs and -specifications.

To the machining comes beside the usual heat-treated steel a multiplicity of high alloyed special steels and other materials.



### The delivery program at glance



Rolled and form pressed parts  $\varnothing$  8 –  $\varnothing$  85 mm and length up to 5.000 mm

Screws, nuts and turning parts from M 6 – M 300

Bolts with rolled thread from M 16 – M 200 and length up to 6.000 mm

Quality category according to DIN EN ISO 898-1 ISO 20989-TZ – 5.6 up to 14.9

High alloyed heated steel according to EN10083 (e.g. 34CrNiMo6, 30CrMo9V)

Rust free, high temperature stability and heat resistant materials (e.g. 1.4571, 1.4057, 1.7258, 1.7709, 1.7711, 1.4913, 1.4923 or 1.4828)

American materials according to ASTM/ASME specifications (e.g. A193 Gr.B7 / B7M / B16 / B8, A194 2H / 4 / 7 / 8 / 2HM / 4M / 7M, A320 L7 / L7M)

Special materials and -alloy (e.g. Inconel, Nimonic, Titanium and Hastelloy).

All thermal treatments (e.g. hardening, nitrating, inductive hardness et al.)

All surface improving (e.g. electro galvanise, phosphatization, hot-dip galvanising, Dacromet- und Deltatonecoating, nickel plating, PTFE-coating et al).

Special methods (e.g. MK-thread safety, coating et al).

All heat treatments (for example temper, nitrogen hardening, inductive hardening et al).



The quality management system according to EN ISO 9001:2000 ensures a high and continuous product quality.

The production of connection parts is certified by different quality control companies.

The permission according to AD-Merkblatt 2000 WO, VDTÜV 1253/1, pressure device guideline 97/23/EG as well as the Framatome ANP permission according to KTA1401/QSP4a and DB-Q1 are present, too.

You will receive the product on your demand with a certificate according to EN 10204 2.1, 2.2 and 3.1 as well as 3.2 certificate in collaboration with different quality control companies.



Convince yourself, please call us.

## CobAS – Conical bolt connection

The AS Tech conical bolt connection makes it possible to transmit very high torque forces on a very small area.

The advantages of the fast and simple assembly and disassembly as well as the reusability of all construction units guarantee a very economical work.

By the expansion of the conical sleeve and the axial pretension force you achieve an optimal utilization of the material.

Due to this advantages, less bolts will be necessary and like this a reduction of the flange size will be possible.



### Operating mode:

The slit conical sleeve will be pushed into the through-hole of both flanges. The conical bolt will be placed into the conical sleeve, these operations are made manually. Using a hydraulic tensioning device, the bolt will be pulled further into the sleeve. During this process, the tensioning device brace on the end of the sleeve.



The hole will be filled out by the expansion of the conical sleeve at its entire periphery with high-strength material. The slit execution of the sleeve permits thereby a rougher fitting accuracy of the two flange halves to each other, because it's always sure that the sleeve will expand.

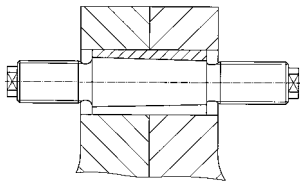
After insuring the placement of the conical parts, the nuts can be screwed onto the ends of the bolt. The bolt will be tensioned again by means of the same tensioner, the nut can be switched on now almost free of force. Caused by the axial tensioning force the bolt will not be twisted and consequently the placement of the conical parts remains perfect.

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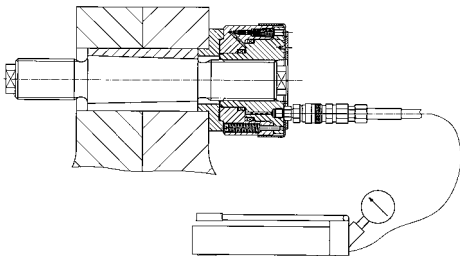
## The advantages at a glance:

- Torque transmission completely free from play	- Optimal utilization of the materials
- Safe form closure	- Simple and safe
- Axial pre-tensioned bolt	- Applicable with cramped place conditions
- Cost-saving	- Increased safety
- Time-saving	- Small Installation space

### Installation and removal of the conical bolt connection:

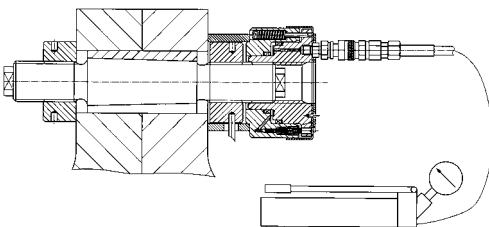


Push the sleeve and bolt manually into the flange holes

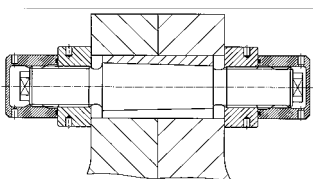


Bring the assembly ring up to the sleeve surface, screw on the tensioning device till all the parts lay on each other.

Supply the tensioning device with pressure – the bolt will be pulled into the sleeve.



Screw on the nuts on both sides, the support ring will transmit the force of the tensioning device to the flange and the bolt will be axially pretensioned.



The bolt ends will be protected with protection caps from the environmental influences.

The removal is made in the reverse order.

Irrtum und technische Änderung vorbehalten.