



The **CLAMPEX®** clamping set is a frictionally engaged, detachable shaft - hub connection for cylindrical shafts and bores without feather key.

General Hints

Please read through these mounting instructions carefully before assembling the clamping set. Please pay special attention to the safety instructions! The mounting instructions are part of your product. Please keep them carefully and close to the clamping set. The copyright for these mounting instructions remains with **KTR Kupplungstechnik GmbH**.

Safety and Advice Hints



DANGER! Danger of injury to persons.



CAUTION! Damages on the machine possible.



ATTENTION! Pointing to important items.



PRECAUTION! Hints concerning explosion protection.

General Hints to Danger



DANGER! With assembly and disassembly of the clamping set it has to be made sure that the entire drive train is protected against unintentional engagement. You can be seriously hurt by rotating parts. Please make absolutely sure to read through and observe the following safety instructions.

- All operations on and with the clamping set have to be performed taking into account "safety first".
- Please make sure to disengage the power pack before you perform your work at the clamping set.
- Protect the power pack against unintentional engagement, e. g. by providing hints at the place of engagement or removing the fuse for current supply.
- Do not touch the operation area of the machine as long as it is in operation.
- Please protect the rotating drive parts against unintentional touch. Please provide for the necessary protection devices and caps.

Proper Use

You may only assemble and disassemble the clamping set if you

- carefully read through the mounting instructions and understood them
- had technical training
- are authorized to do so by your company

The clamping set may only be used in accordance with the technical data (see sheet 3). Unauthorized modifications on the clamping set are not admissible. We do not take any warranty for resulting damages. To further develop the product we reserve the right for technical modifications.

The **CLAMPEX®** clamping set described in here corresponds to the technical status at the time of printing of these mounting instructions.

Schutzvermerk ISO 16016 beachten.	Gezeichnet: 15.07.09 Pz/Hg	Ersatz für: KTR-N vom 19.12.07
	Geprüft: 15.07.09 Pz	Ersetzt durch:



The clamping set is generally delivered in assembled condition.

Tolerances, surfaces

A good rotating process is sufficient:

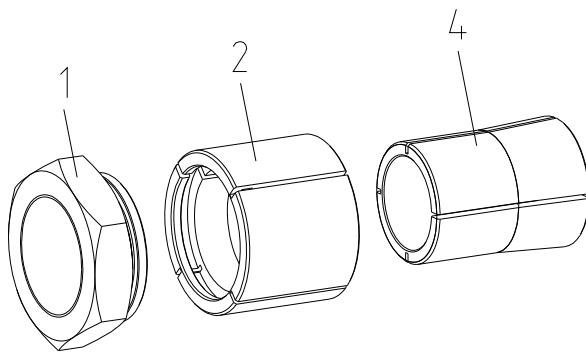
$$Rz \leq 16\mu\text{m}$$

Highest permissible tolerance:

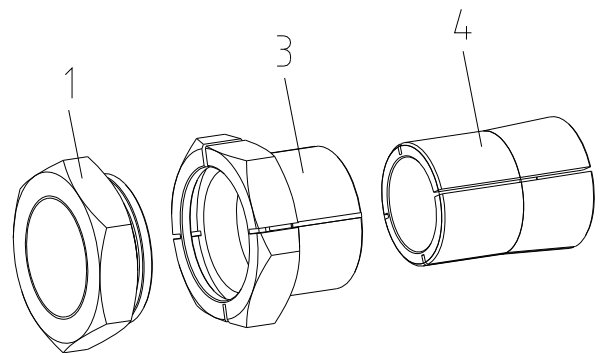
$$d = h9/H9 - \text{shaft/hub}$$

Components of CLAMPEX® KTR 130/KTR 131

component	quantity	designation
1	1	hexagon nut
2	1	external ring (slotted)
3	1	external ring with counter hexagon screw (slotted)
4	1	internal ring (slotted)



picture 1: CLAMPEX® KTR 130



picture 2: CLAMPEX® KTR 131



ATTENTION!

Dirty or used clamping sets must be disassembled, cleaned and afterwards oiled with thin-bodied oil (e. g. Castrol 4 in 1 or Klüber Quietsch-Ex) before the assembly.

Assembly

- Check the position of shaft and hub regarding the stipulated tolerance (h9/H9).
- Clean the hub bore and the shaft and afterwards oil them with thin-bodied oil (e. g. Castrol 4 in 1 or Klüber Quietsch-Ex).



CAUTION!

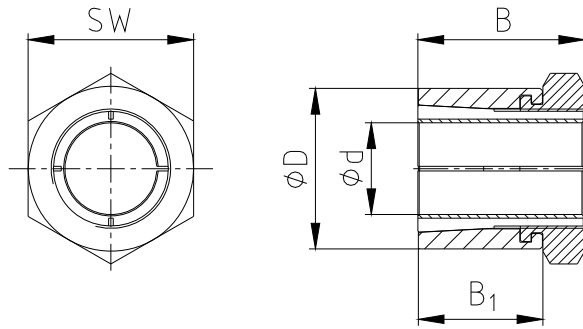
Do not use oils and greases with molybdenum disulphide or high pressure additions as well as slide grease pastes.

- Unscrew the hexagon nut and insert the clamping set KTR 130/KTR 131 between shaft and hub.
- Slightly tighten the hexagon nut and align the clamping set with hub part.
- Tighten the hexagon nut to the tightening torque T_A mentioned in table 1

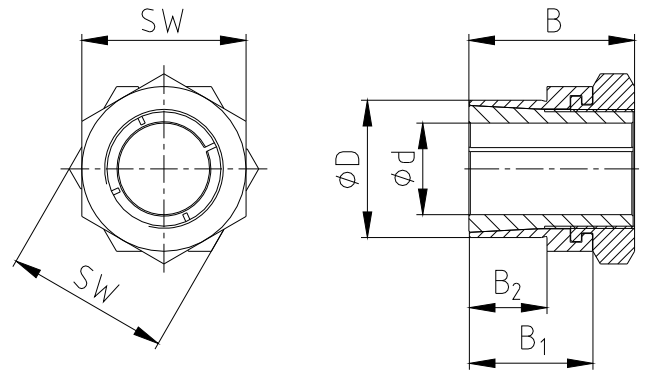
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Technical Data



picture 3: dimensions CLAMPEX® KTR 130



picture 4: dimensions CLAMPEX® KTR 131

Table 1:

KTR 130					KTR 131					
dimensions [mm]			clamping screw		dimensions [mm]				clamping screw	
d x D	B	B ₁	width across flats SW	T _A [Nm]	d x D	B	B ₁	B ₂	width across flats SW	T _A [Nm]
5 x 14	19	15	14	10	5 x 12	19	15	9	14	10
6 x 14	19	15	14	10	6 x 12	19	15	9	14	10
8 x 16	22	17	17	17	8 x 14	22	17	11	17	17
9 x 20	24	19	22	35	10 x 18	24	19	12	22	35
10 x 20	24	19	22	35	12 x 20	24	19	12	22	44
12 x 22	24	19	22	44	14 x 24	28	22	15	27	65
14 x 26	28	22	27	65	15 x 24	28	22	15	27	65
15 x 26	28	22	27	65	16 x 24	28	22	15	27	65
16 x 26	28	22	27	65	18 x 30	36	27	17	36	161
18 x 35	36	27	36	161	19 x 30	36	27	17	36	161
19 x 35	36	27	36	161	20 x 30	36	27	17	36	161
20 x 35	36	27	36	161	22 x 38	41	30	20	46	250
22 x 42	41	30	46	250	24 x 38	41	30	20	46	250
24 x 42	41	30	46	250	25 x 38	41	30	20	46	250
25 x 42	41	30	46	250	30 x 42	44	33	23	50	355
30 x 47	44	33	50	355	32 x 50	51	38	28	55	490
32 x 55	51	38	55	490	35 x 50	51	38	28	55	490
35 x 55	51	38	55	490						
40 x 62	58	43	65	800						
45 x 65	63	48	65	900						
48 x 75	73	58	75	1290						
50 x 75	73	58	75	1290						



ATTENTION!

During the assembly an axial displacement of the hub is effected.



ATTENTION!

The clamping set KTR 131 with counter hexagon screw to clamp onto shafts that can be twisted lightly.

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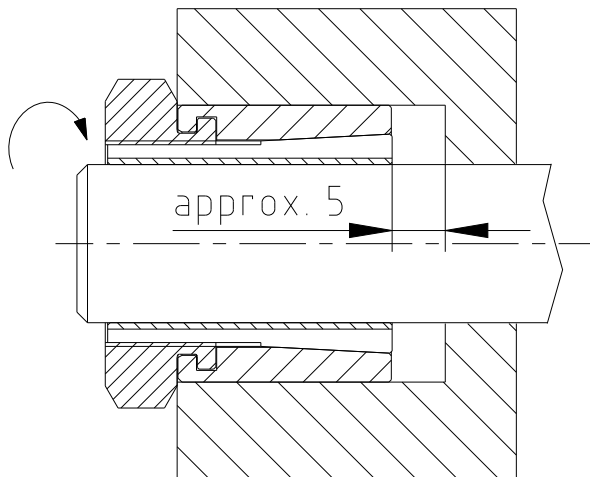
Disassembly



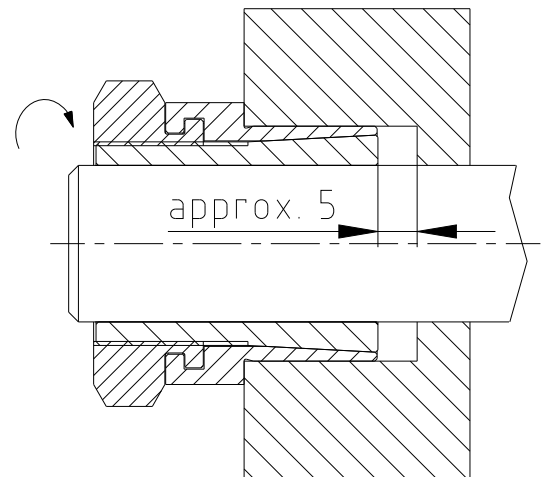
DANGER!

Loosened or falling drive parts can cause injuries to persons or damages to the machines.
Safe the drive parts before the disassembly.

- Unscrew the hexagon nut.
- Turn the hexagon nut left until the clamping set KTR 130/KTR 131 can be moved on the shaft.
- Remove the unscrewed clamping set between shaft and hub.



picture 5: unscrew the clamping set KTR 130



picture 6: unscrew the clamping set KTR 131



CAUTION!

In case of non-observance of these hints or in case of non-considerance of the operating conditions regarding the selection of the clamping set, the function of the clamping set can be influenced.

Disposal of waste:

Defective clamping sets must be cleaned and scrapped.

Remark for the use in  explosive applications according to ATEX 95

For the use in explosive applications the type and size of clamping set (applying for category 3 only) has to be selected in a way that starting from the peak torque of the machine including all operating parameters to the rated torque of the clamping set there is a service factor of at least $s = 2$.

CLAMPEX® clamping sets are not part of the standard 94/9/EG, since

- this product is a torsionally rigid, backlash-free, frictionally engaged connection with one or more taper clamping ring(s) by means of several screws.
(Clamping screws have to be secured, e. g. by means of a medium strength adhesive).
- due to the design of clamping sets a fracture/failure does not have to be expected (frictional heat is only caused by improper assembly/tightening torques, i. e. not in case of proper use).

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