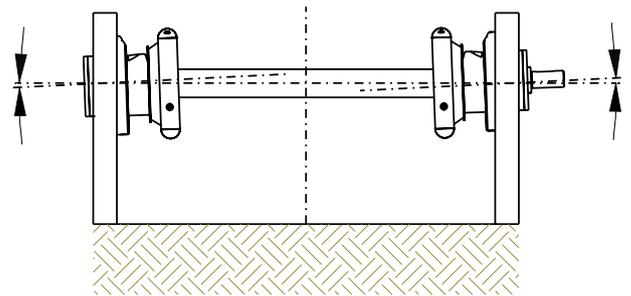
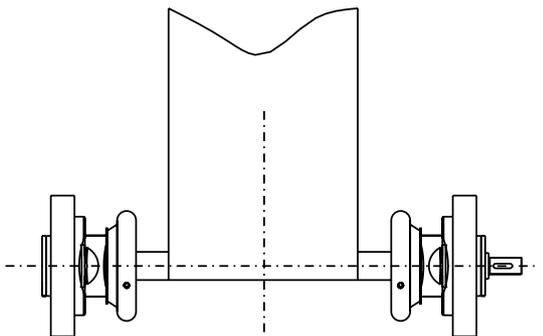


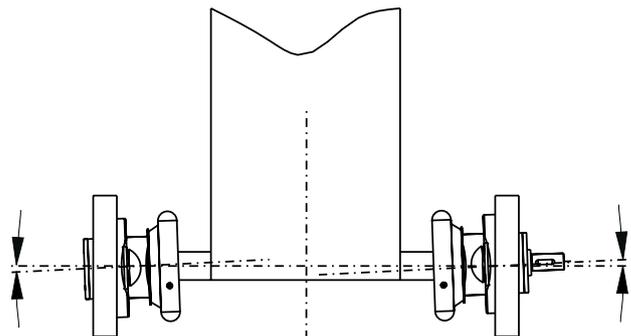
right



wrong



right



wrong

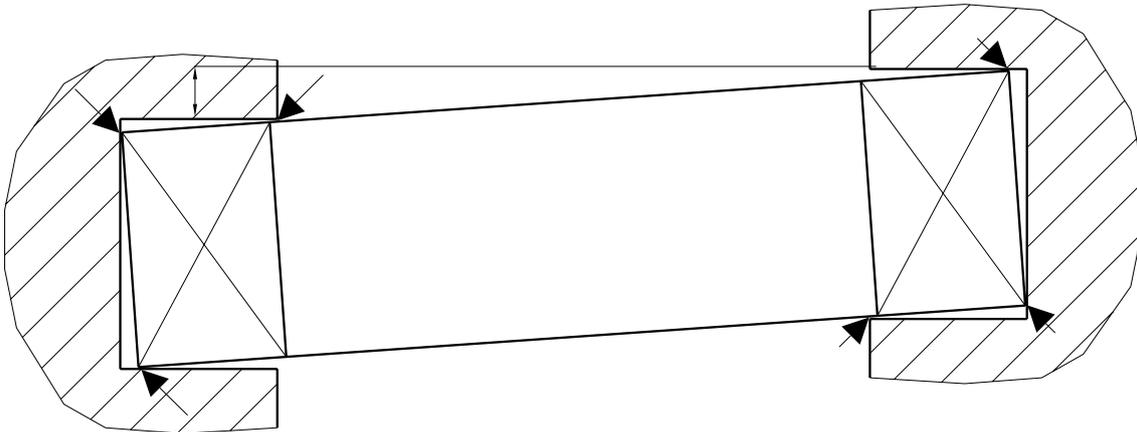
- Boschert Chucks have to be mounted in an alignment
- please make sure that the winding shafts are mounted in the same height and same distance
- No more than 0.3° misalignment.

- is the winding shaft installed correct and in alignment
- there are cases where the winding shaft is installed correct and in alignment, but the Boschert Chucks are mounted incorrectly (no alignment), you have to expect that the square pocket of the Boschert Chuck will wear very fast.

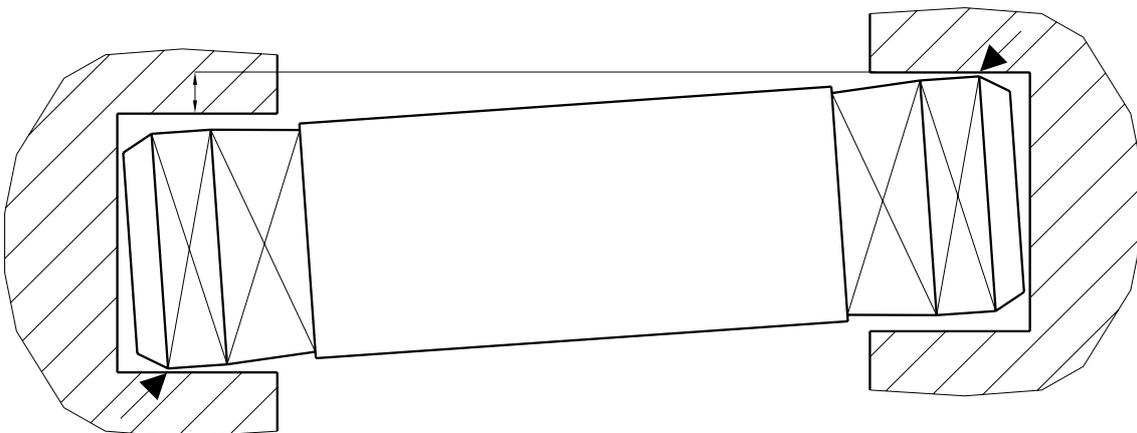
The result are vibrations of the stand or the machine.

Precise alignment of the Chucks protects against increased wear. Any misalignment will affect the life of both the Safety Chucks and the shaft ends.

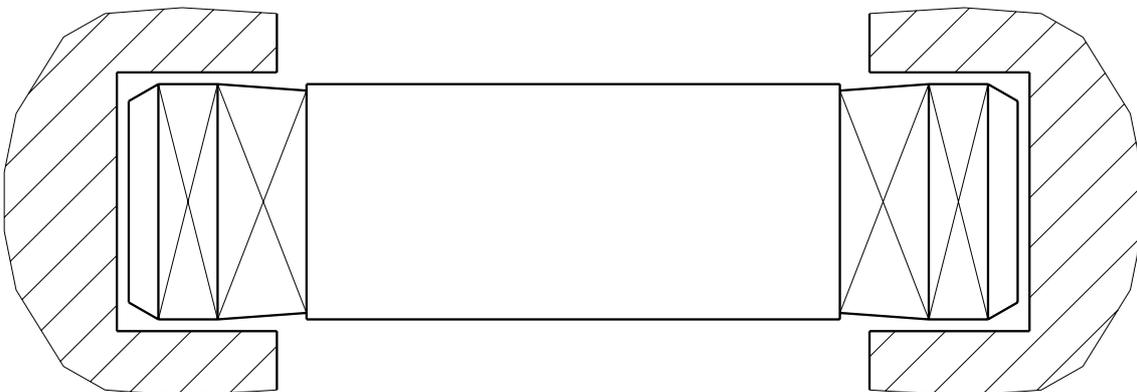
The factory cannot provide any warranty if the chucks are not mounted as we recommend.



wrong alignment



wrong alignment



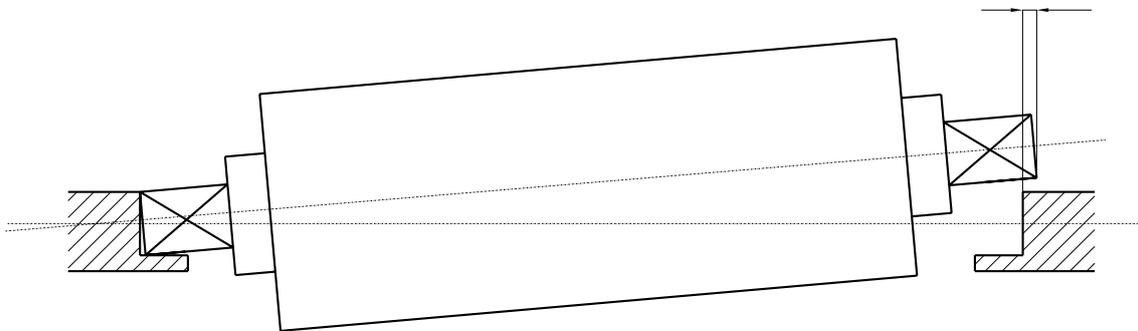
correct alignment

Advantages of close tolerances - Selection of the winding bar

Here especially measure „x“ see page 8.

Only slight axial space between safety chuck and winding bar results in troublefree winding. On the other hand, there has to be enough space to put the winding bar in. Since the space differs from application to application, we here show the main influences on examples.

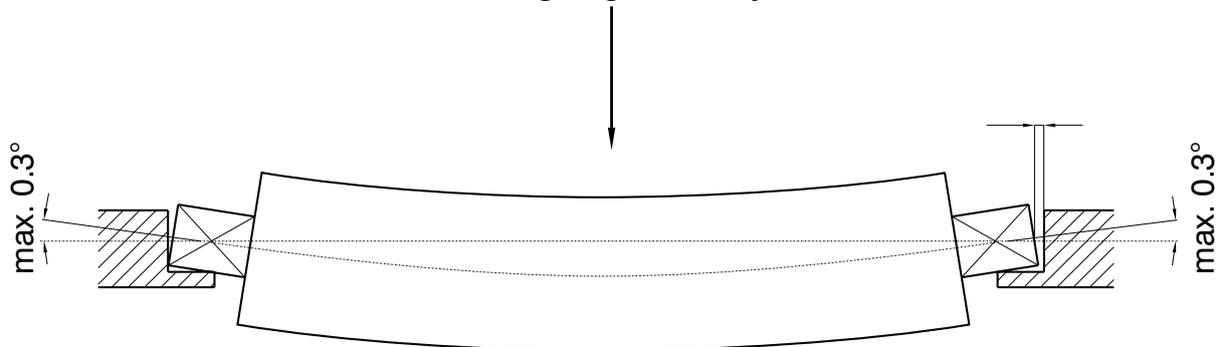
Winding shaft cannot be inserted in alignment with the shaft



More space necessary !

Wrong choice of winding shaft- deflection too big.

max. bending angle at the journals 0.3°

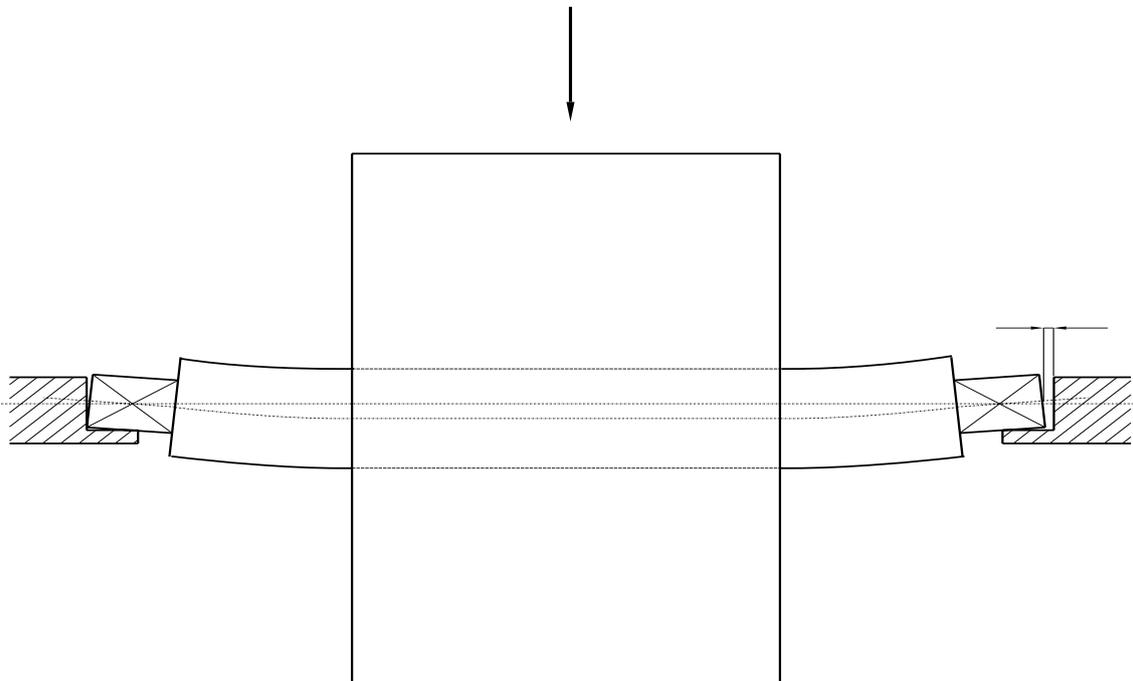
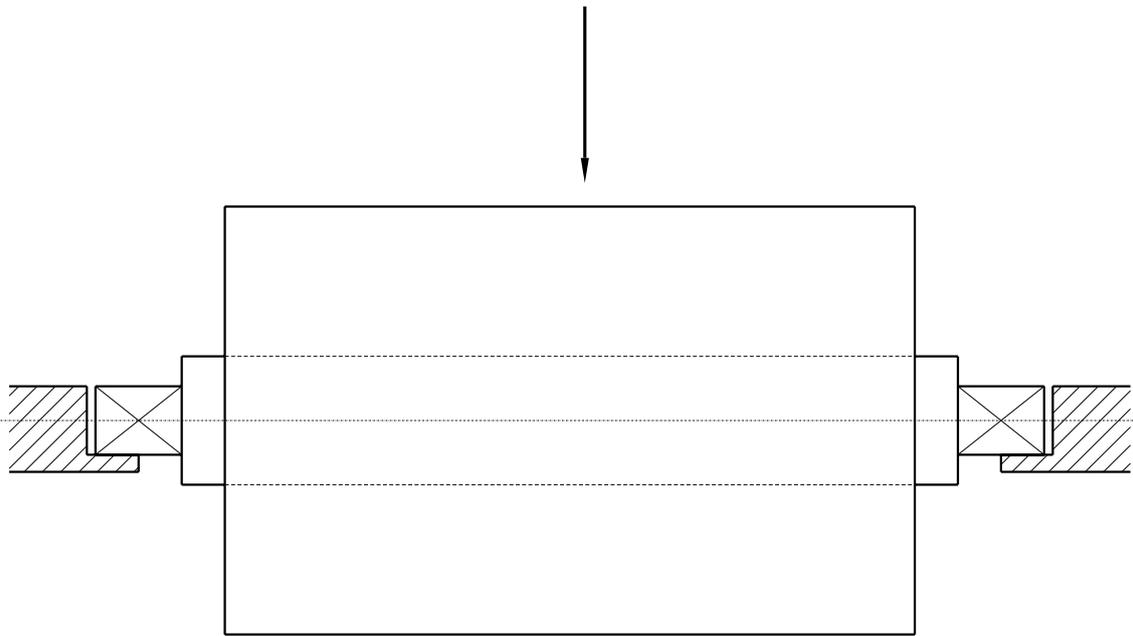


Space becomes larger !

Important: please see page 8

Different roll widths on the same winding shaft

The width of a roll affects the deflection of the roll shaft. A narrow width roll on a long roll shaft is more likely to cause deflection than a roll which is nearly the same width as the length of the roll body.



Effect of narrow width roll on roll shaft

1. Manufacturer

Boschert GmbH & Co. KG
Mattenstrasse 1
D-79541 Loerrach-Hauingen
phone-no.: +49 (0) 7621 9593 0
Fax-no.: +49 (0) 7621 5518 4

2. Range of application

Boschert Safety Chucks are used to wind and unwind all different web materials. It is possible to work with Boschert Safety Chucks in temperatures between - 30 degrees and +80 degrees Celsius. For temperatures which are not in this range, you need a special permission from the manufacturer.

2.1 General view

Boschert Safety Chucks consist of two assembly groups:

Housing, shaft + handwheel

With help of the tilting handwheel the roll shaft can be inserted very fast.

To guarantee a safe supporting of the winding shaft, the Boschert Safety Chucks are provided with three safety-systems.

- a) The spring-ball lock in the handwheel holds the handwheel in a safe and closed condition during operation.
- b) The housing of the chuck has a slope which prevents the handwheel opening in a wrong position. That means that the handwheel cannot open in a vertical position.
- c) A finger-guard which is fixed on the handwheel makes access to the pinch point of the behind the hand wheel impossible.

2.2 Position of operator

During operation of the machine, the operator should stay clear of the winding shaft.

2.3 Noises

During operation, the Boschert Safety Chuck does not produce any noises.

2.4 Emissions

The Safety Chuck doesn't emit radiation, gas, exhaust or dust.

2.5 Electrical device

You don't need any electrical equipment to work with the chuck.

3. Transport

For transport a rust protection has to be applied. The chucks have to be protect against mechanical damage.

4. Putting into operation

4.1 Installation

Please fix the Boschert Safety Chucks with help of the bolt holes provided. Please be sure that the alignment is correct. No more than 0.3° misalignment. It is imperative that the handwheel can be opened in the top position (12 o'clock position)

4.2 Foundations

There are no special demands for the foundation.

4.3 Space

Please be sure that there is a good accessibility to the handwheel.

4.4 It is not allowed to work with the chucks in:

- bad surroundings (corundum abrasive dust)
- acid air
- acid steam
- temperatures less than - 30 degr. / more than 80 degr. Celsius

4.5 Safety measure

User has to make sure, that the finger-guard is glued to the handwheel.

5. Working with the chuck

5.1 Function

The only part to adjust on the Boschert Safety Chuck is the handwheel. Move the handwheel back for changing the winding shaft. The handwheel has to be closed before starting the machine. While insert the shaft in the square bar please go sure that no bodily parts are between winding material and Safety chuck.

In the case of axial sliding chucks, it must also be ensured during insertion that the winding shaft journal lies completely in the chuck. For safety reasons it is recommended to move the sliding chucks to the rear end position of the passive side to change the winding shaft.

5.2 Equipment, modification

After modification and changing the machine, please check the function of the slope of the housing and of the spring and ball detent system.

5.3 Risks

A dangerous situation occurs when the material have to be changed, the chuck is not fully opened and the winding shaft is lifted up one sided. The result is a load which can destroy the Boschert Safety Chuck.

6. Servicing

To guarantee a safe work environment, following chucks have to be made weekly:

- Is finger-guard still fixed on the handwheel
- Does the ball-spring-locking device keep the handwheel closed

c) Check if the champfer still works properly.

To do this, please remove the winding shaft. Turn the closed, but empty Safety chuck 180°, so that the handwheel opening is at the bottom. Try to open the handwheel in this position.

Does the handwheel stop at the housing after 1-2 mm (0,0394" - 0,0787")?

If yes this is perfect.

Does the handwheel move more than 2 mm (0,0787"), the chuck has to be checked frequently, due to wear and tear.

Does the handwheel move more than 5 mm (0,1969"), the chuck has to be put out of operation instantly.

d) Check Centering seat of hinge pin

e) Check Seat of the fastening screws

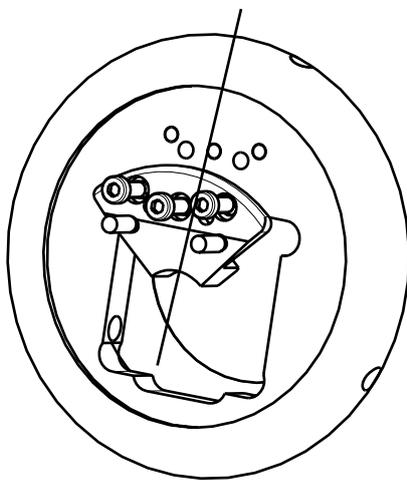
7. Disassembling

If is necessary to disassemble the chucks, please take care that each shaft and it's handwheel are a set and you should not it is possible to assemble incorrectly, to assemble parts that don't belong together. Changes cause an incorrect movement and stresses the chucks.

8. Spare parts

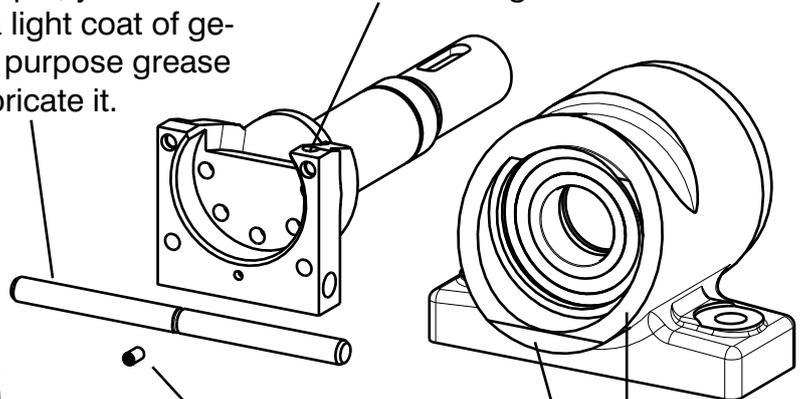
Please use only original spare parts. Boschert uses harmonized materials with proofed quality. Don't economize on quality.

Fingerguard is securely glued to hand wheel and not worn

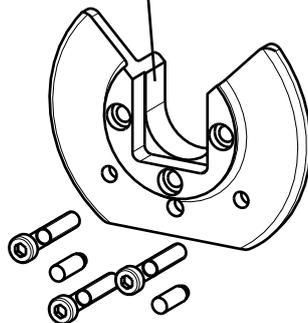


After inspecting, or when replacing the hinge pin, you should use a light coat of general purpose grease to lubricate it.

Check to see that the detent in the shoulder of the seat opening is concentric, not deformed or elongated



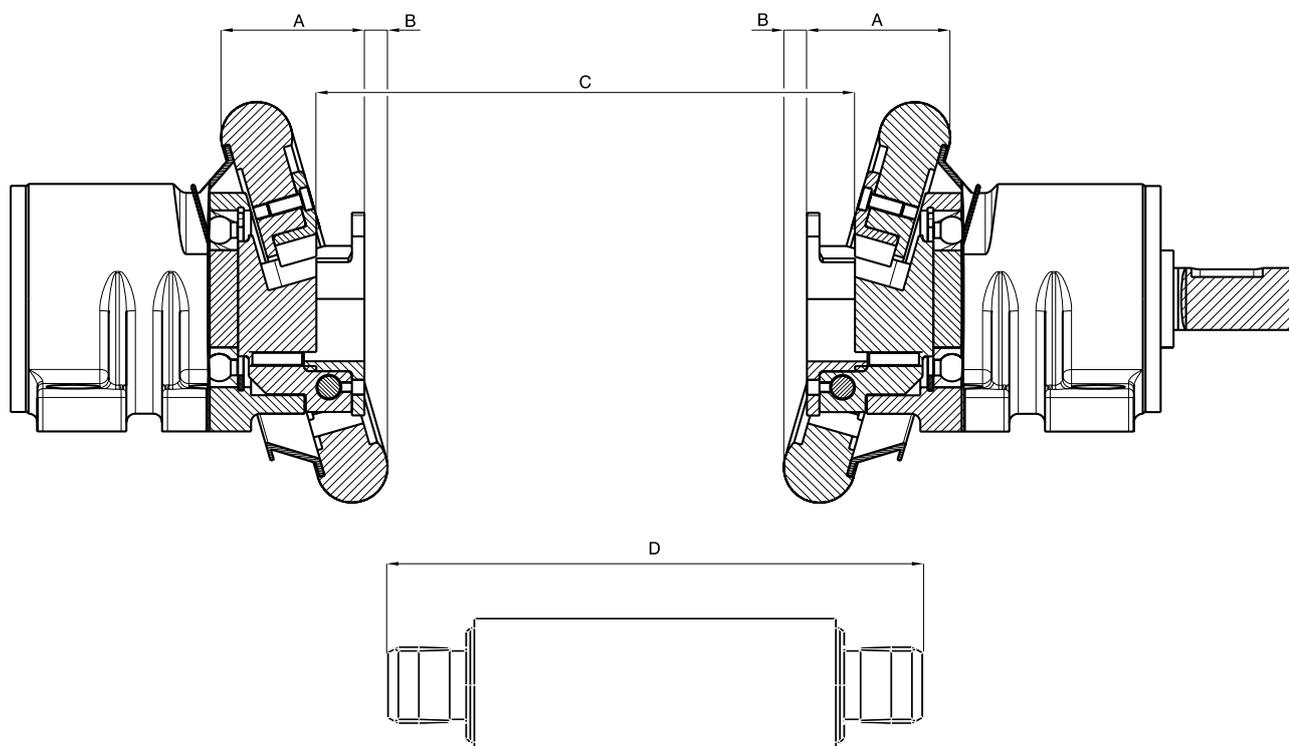
This set screw locates the position of the hinge pin. It is a size (M5) and can be removed with a 2.5 Allen wrench.



The bottom of the housing is 1-1.5 mm behind the hand wheel. Check to see that the housing is not worn at this location.

Manual chucks have to be closed by hand.

5.10 Winding shaft tolerances



	A	B	$x=(C-D)$	$y=(C-D)$
Mini	38	8	0.5	1
19-25	54	9	0.5	1
22-30	61	8	0.5	1
30-40	73	13	0.5	1
40-50	81	13	0.5	1
50-80	106	16	0.5	1
80-120	145	18	0.5	1
120-180	175	24	1	2
170-200	216	24	1	2
170-230	230	18	1	2

x = min. clearance

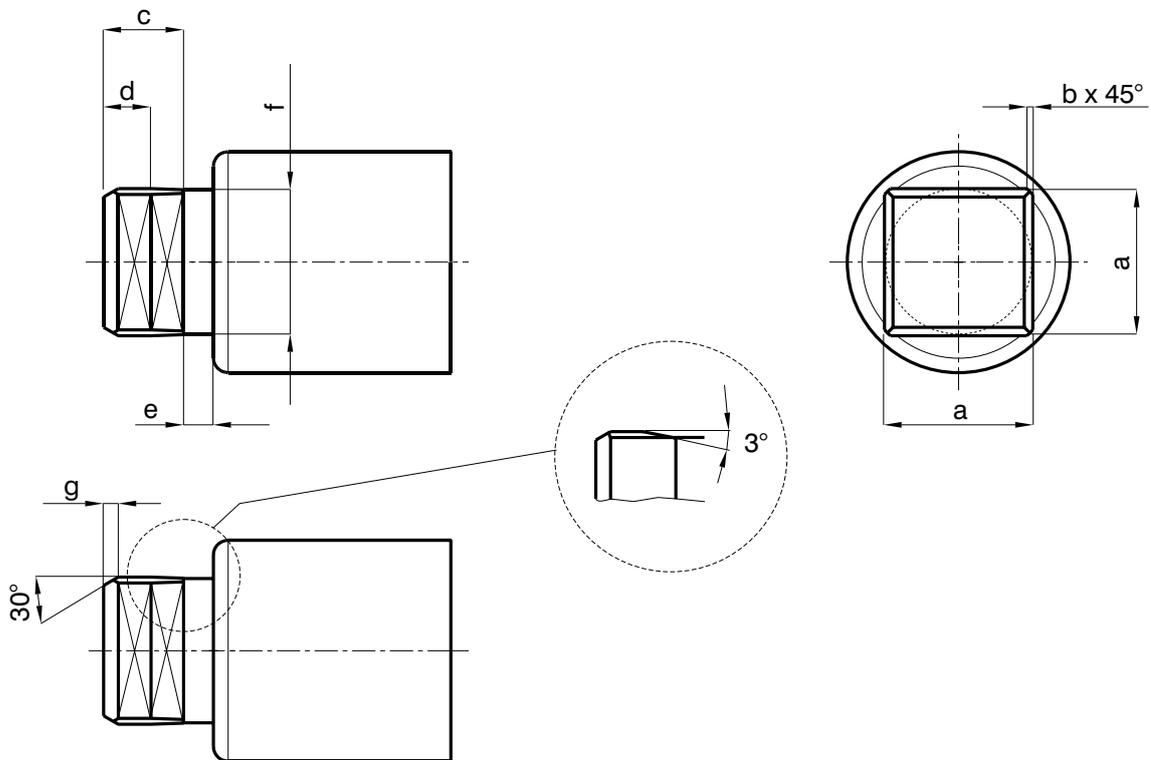
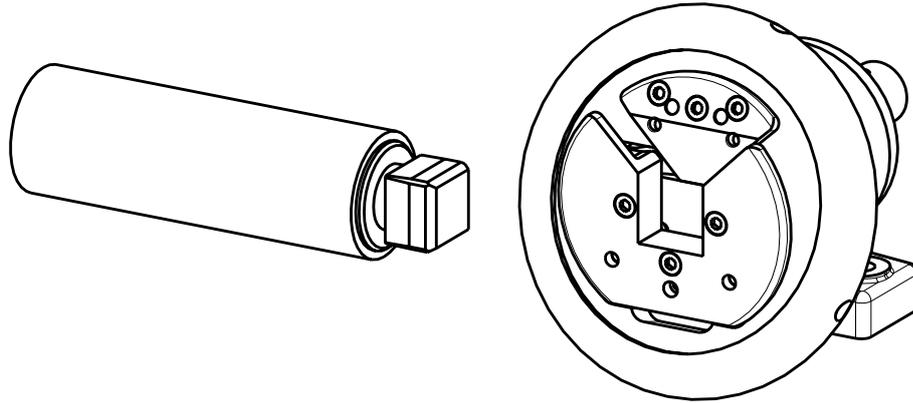
y = max. clearance

Attention!

We emphasize that the close tolerances and exact manufacture of our new chucks make it necessary to **machine the winding shafts referring to the drawings and dimensions above.**

Before running the chucks for the first time, **please check if the handwheels close easily to ensure that the winding bar fits correctly.**

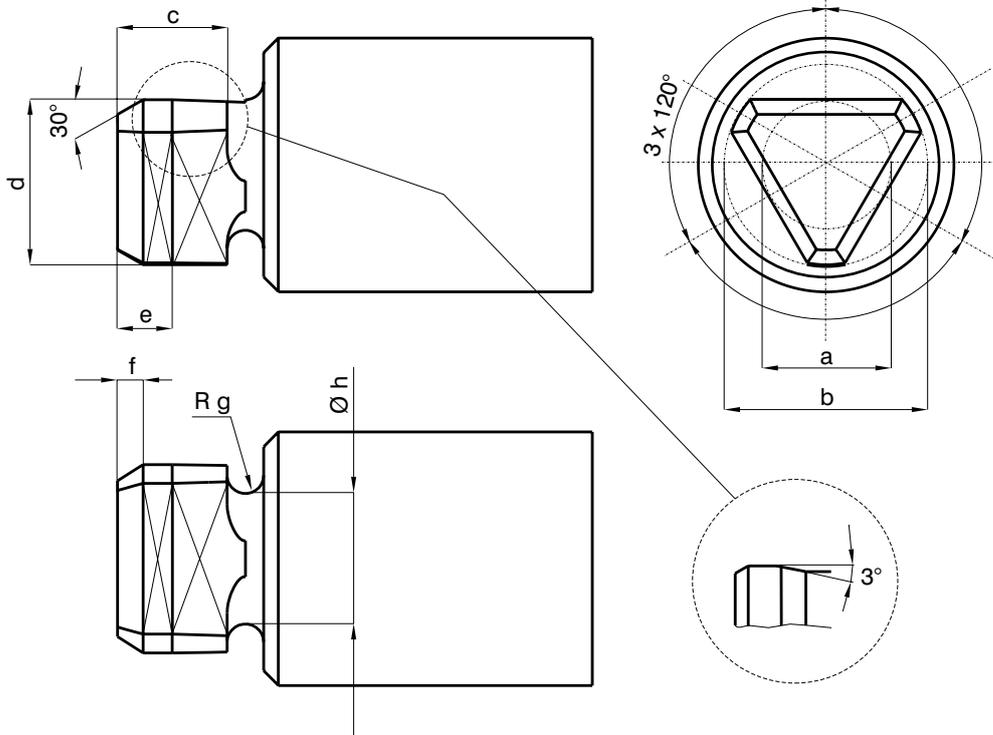
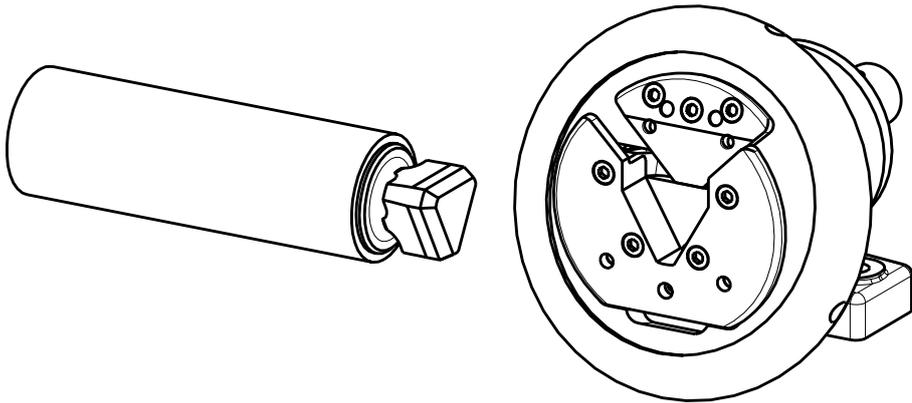
Winding shaft tolerances C / VT1 / VT2



	C / VT1 / VT2						
	a f7	b	c	d	e	Ø f	g
Mini	14-20	1	11.5 -0.2	8	8	a-1 -0.1/-0.2	3
19-25	19-25	1	18.5 -0.2	10	8	a-1 -0.1/-0.2	3
22-30	22-30	1	21 -0.2	11	8	a-1 -0.1/-0.2	4
30-40	30-40	1.5	24 -0.2	12.5	10	a-1 -0.1/-0.2	5
40-50	40-50	2	26 -0.2	13.5	10	a-1 -0.1/-0.2	5
50-80	50-80	3	34 -0.3	17.5	17	a-1 -0.1/-0.3	6
80-120	80-120	4	54 -0.5	27.5	22	a-1 -0.1/-0.3	16
120-170	120-170	5	64 -.05	35	25	a-1 -0.1/-0.3	20
170-200	170-200	6	84 -0.5	45	25	a-1 -0.1/-0.3	30
170-230	170-230	6	89 -0.5	48	25	a-1 -0.1/-0.3	32

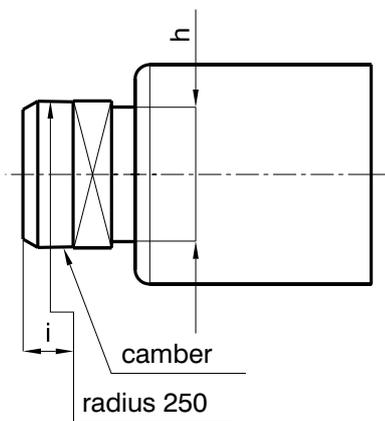
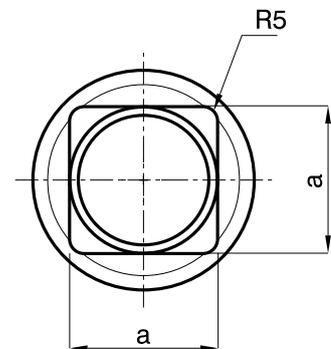
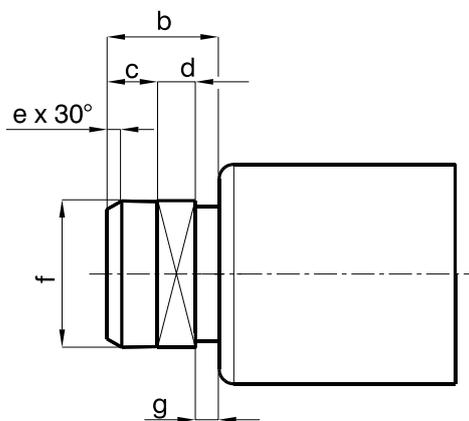
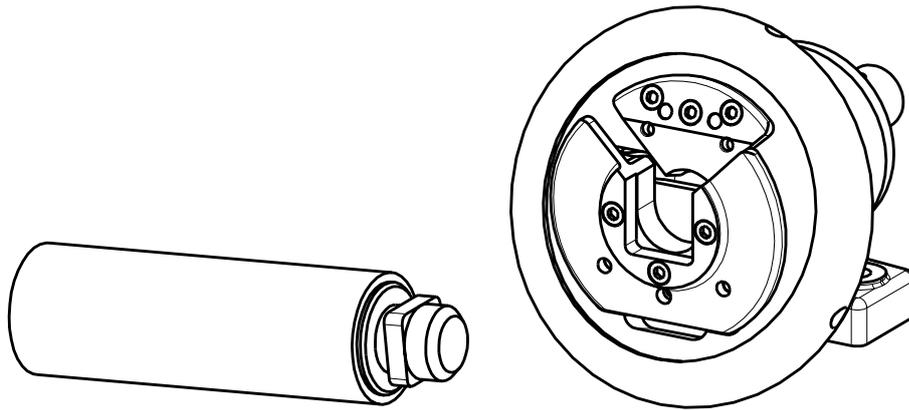
VT2: 50-80 a > 60 mm (2 1/2") = „b“ = 4

Winding shaft tolerances VT6



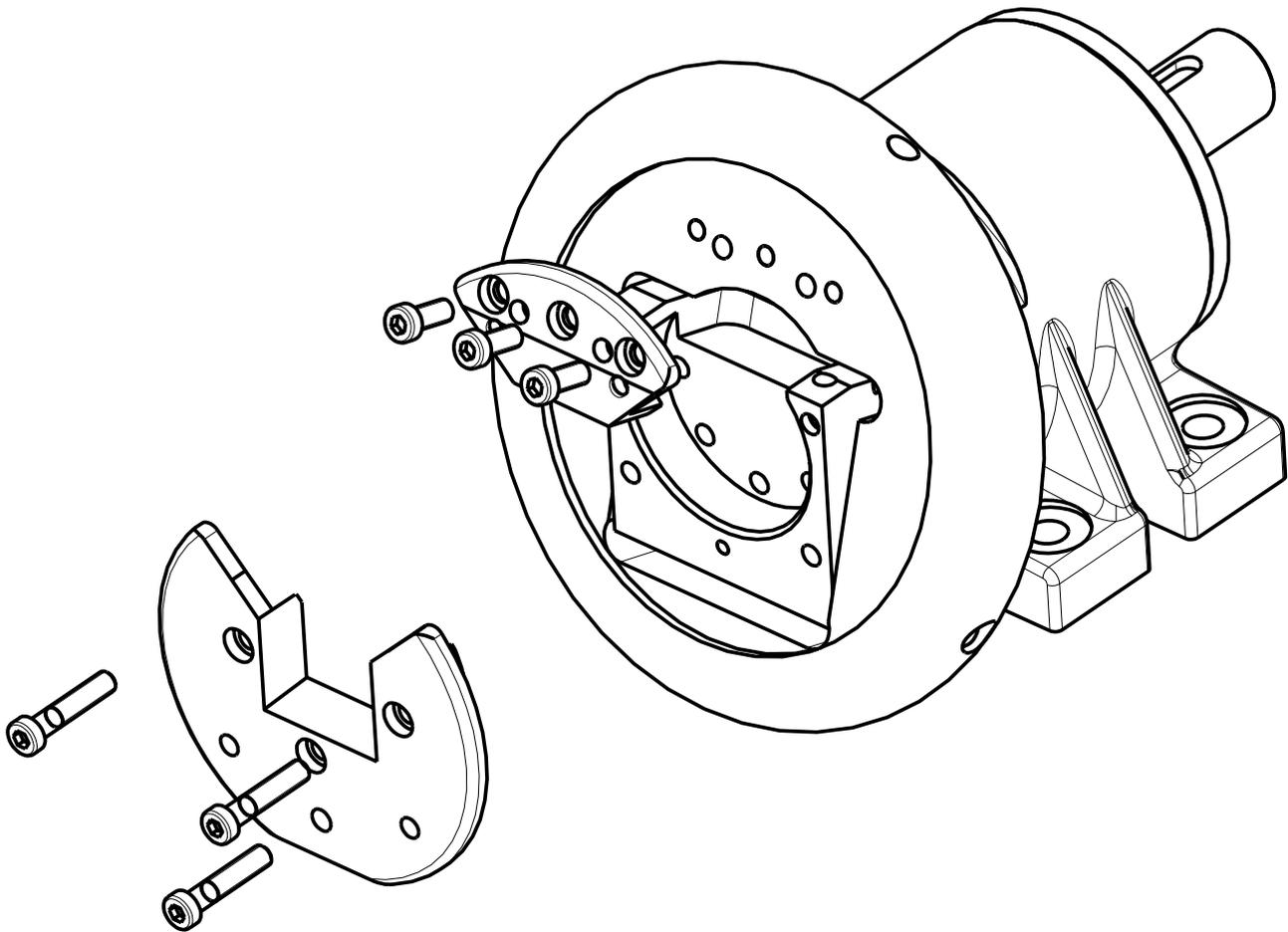
VT6								
	a f7	b f7	c	d f7	e	f x 30°	g	h
Mini	20	27	11.5	23.5	7.5	3	4	20 -0.1/-0.2
19-25	20	27	18.5	23.5	12	3	4	20 -0.1/-0.2
22-30	30	44	21.5 -0.2	37	14	5	4	30 -0.1/-0.2
30-40	36	54	24 -0.2	45	15	7	5	36 -0.1/-0.2
40-50	46	69	26 -0.2	57.5	16	7	5	46 -0.1/-0.2
50-80	67	104	34 -0.3	85.5	20	7	8.5	67 -0.2/-0.4
80-120	96	148	54 -0.5	122	30	18	11	96 -0.2/-0.4

Winding shaft tolerances VT7



VT7									
	a	b	c	d	e x 30°	Ø f h7	g	Ø h -0.2	i
22-30	30 +0.1/+0.3	32.8	14 +0.2/+0.3	10.5 -0.1	4	30	8 +0.1	26	6
30-40	40 +0.1/+0.3	37	18 +0.2/+0.3	11 -0.1	5	40	8 +0.1	36	6
40-50	50 +0.1/+0.3	38	17 +0.2/+0.3	13 -0.1	5	50	8 +0.1	46	6
50-80	50 +0.2/-0.2	55	23 +0.2/+0.3	17 -0.1	6	50	15 +0.1	45	9
	80 +0.1/+0.3	5	23 +0.2/+0.3	17 -0.1	6	80	15 +0.1	74	9

Info Wearing-Parts



Attention!

When ordering it is important that shafts from the C-chuck subsequently cannot be fitted with VT.

However it is possible to convert C-chucks to VT-chucks by changing the shafts and handwheels with the VT type.

Info Wearing-Parts



The demand for higher speed and greater torque led to the development of the VT-insert. All safety chucks of size 22-30 up to 80-120 can be delivered from BOSCHERT with VT-inserts (wearing-parts). Chucks size 120-180 up to 170-230 are provided with wear plates.

Important features of the VT-Chucks are:

- changing of VT wearing parts can be carried out in just a few minutes with the chucks in situ reducing down time to an absolute minimum
- easy change to other square sizes through replacement of the wearing parts in the same chuck
- VT parts can be supplied hardened to customers needs or in soft condition to protect the more expensive winding shafts
- low stock-keeping costs of the VT
- change from one geometry to another (SQ. to VT-7)

Especially the user, who is using safety chucks with special shaft end should consider chucks with wearing parts in order to assure a fast delivery of spare parts. The wearing parts are available from stock in most standard sizes, while, the time of delivery for shafts, especially with special shaft end, has to be arranged.

We recommend our customers who use wearing parts to put one or more sets of wearing parts in stock to be used in case of an emergency.

When ordering please remember that shafts from the C-chuck subsequently cannot be fitted with VT.

However it is possible to covert C-chucks to VT-chucks by changing the shafts and handwheels with the VT type.

Note at VT2 chucks:

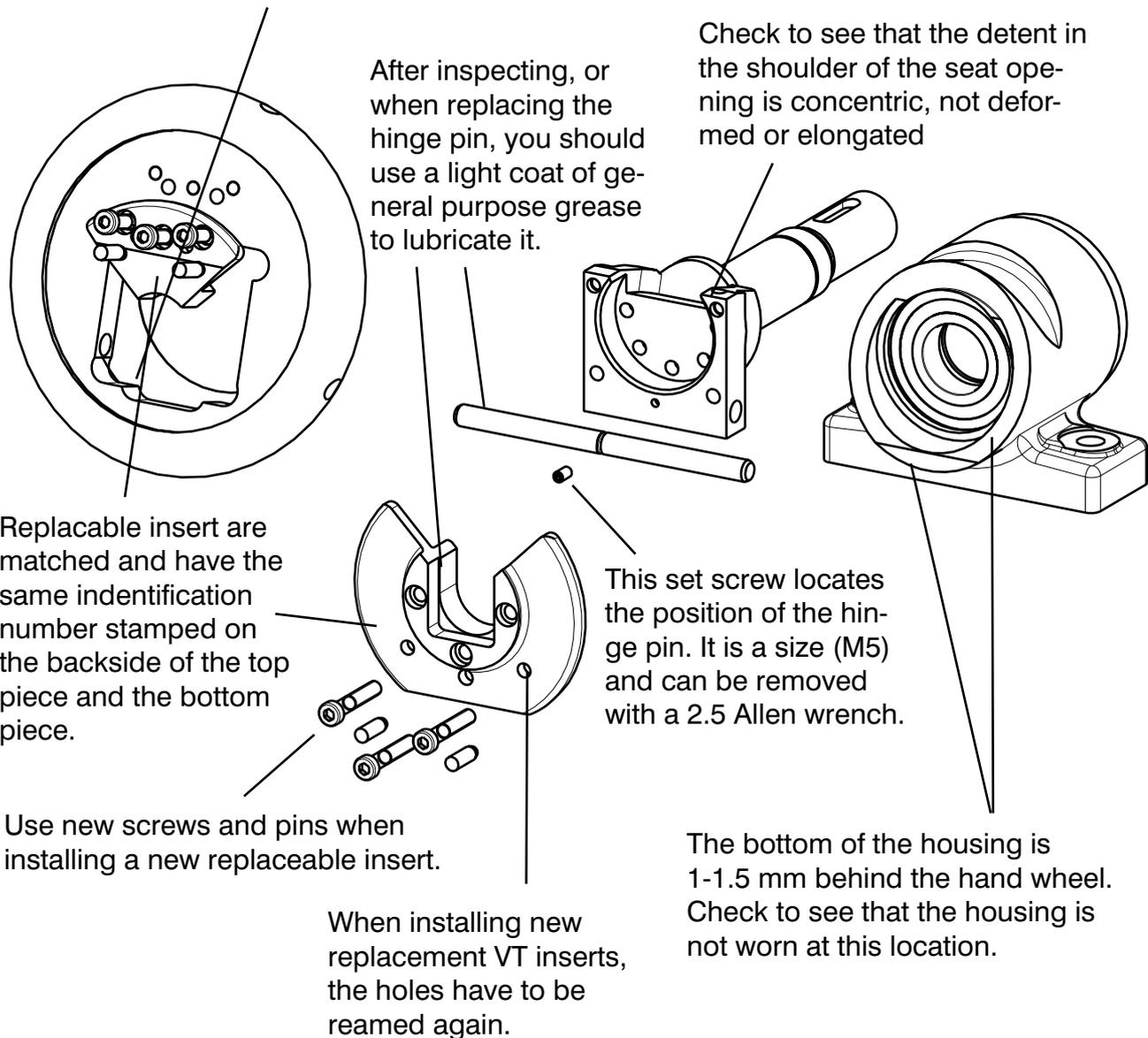
max. torque= 0.7 x catalogue value
max. weight= 0.8 x catalogue value

Maintenance inspection suggestions



To better maintain your Boschert Safety Chucks please check the following points:

Fingerguard is securely glued to hand wheel and not worn



Error description	Possible faults
It is difficult to open and close the hand wheel	<ul style="list-style-type: none"> - The journal was not made to specification as shown on catalogue page 2.10 - The journal tolerance is incorrect - There is no chamfer on the ends of the roll shaft - The Safety Chucks are not in alignment - The roll shaft is deflecting and bending up in the seat of the Safety Chuck. The seats of the Safety chucks have been rounded by wear and the roll shaft journals are cocked in the seats causing binding.
Unloaded roll shaft is difficult to rotate when in the Safety Chucks	<ul style="list-style-type: none"> - The journal tolerance is incorrect - The safety Chucks are not in alignment - The roll shaft journals are out of alignment with each other
The roll shaft is difficult to install or remove from the Safety Chucks. The roll shaft is stuck in the seat of the Safety Chucks	<ul style="list-style-type: none"> - The journal tolerance is incorrect - The safety Chucks are not in alignment - Not enough tolerance between the overall length of the roll shaft and the distance between the Safety Chuck - The seats of the Safety Chucks have been rounded by wear and the roll shaft journals are cocked in the seats causing binding
The journal is worn. The seat of the Safety Chuck is worn.	<ul style="list-style-type: none"> - Excessive weight and/or excessive torque - Limitations to VT2 insert not complied with - Overload of the chuck - The hardness of the journal and the hardness of the seat of the Safety Chuck are not compatible - The safety Chucks are not in alignment

Error description	Possible faults
Noisy operation	<ul style="list-style-type: none"> - The mounting surfaces for the Safety Chucks are not level or are misaligned - The roll shaft journal is falling inside the seat of the Safety Chuck - There is tramp material caught between the hand wheel and the housing
Empty Safety Chucks are difficult to rotate by hand	<ul style="list-style-type: none"> - The ball bearings are worn out - A drive or brake is engaged on Safety Chucks - The hinge pin is bent inside the hand wheel (see page 5.05 item 5.3)
<p>The handwheel opens during operation. There is black powder around the housing. There is a groove in the back side of the handwheel. The bottom of housing, at the front side, has been worn away</p> <p>Warning: This is a dangerous situation</p>	<ul style="list-style-type: none"> - no undercut of the journal - axial wear too big - deflection of the winding shaft too big - too much weight or torque - error in alignment - weight or torque reduction has not been considered at VT2