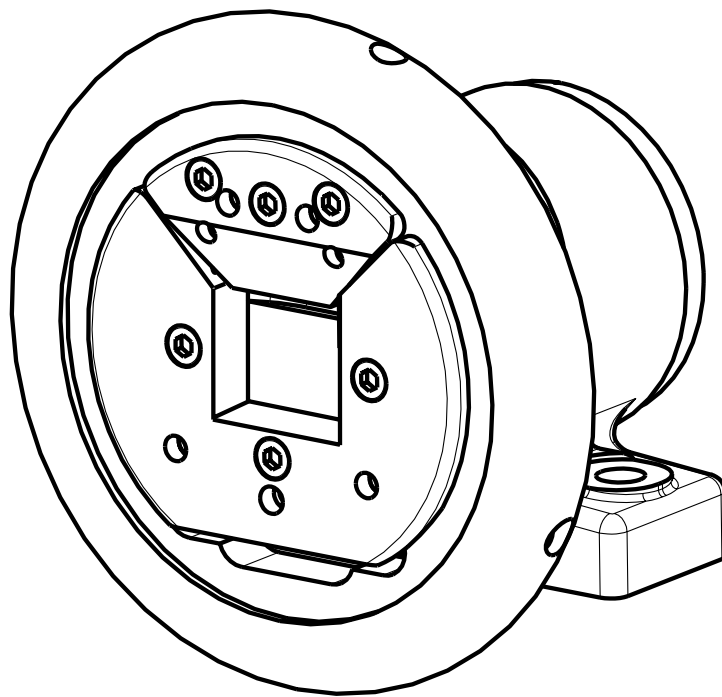


Training

Boschert Safety Chucks



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available in 6 sizes:

<i>Model</i>	<i>max. beam weight / kg</i>	<i>max. torque / Nm</i>	<i>Square bar / mm</i>	<i>Standard square bar / mm</i>	<i>Type C</i>	<i>Type VT</i>
Mini	150	40	14-20	20	x	
	330 lbs	29.5 ft/lb	0.5512" - 0.7874"	0.7874"		
19-25	400	120	19-25	25	x	
	880 lbs	88.5 ft/lb	0.748" - 0.9843"	0.9843"		
22-30	800	180	22-30	30	x	x
	1760 lbs	132.8 ft/lb	0.8661" - 1.1811"	1.1811"		
30-40	1600	350	30-40	40	x	x
	3530 lbs	258.1 ft/lb	1.1811" - 1.5748"	1.5748"		
40-50	2800	1100	40-50	50	x	x
	6170 lbs	800 ft/lb	1.5748" - 1.9685"	1.9685"		
50-80	7000	2350	50-80	80		x
	15430 lbs	1700 ft/lb	1.9685" - 3.1496"	1.5748"		

Type (example): Boschert-C-Chuck STW 22-30

Boschert **C**-chuck: **C**lassic-version

Boschert **VT**-chuck: version with wearing (**VT**) parts

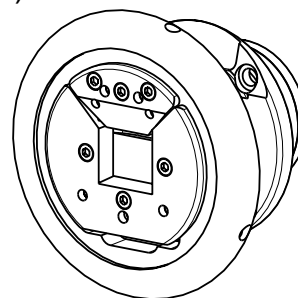
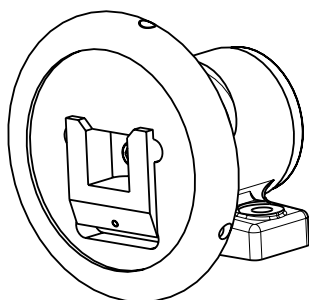
STW = foot mounted chuck with shaft end

STO = foot mounted chuck without shaft end

FLW = flange mounted chuck with shaft end

FLO = flange mounted chuck without shaft end

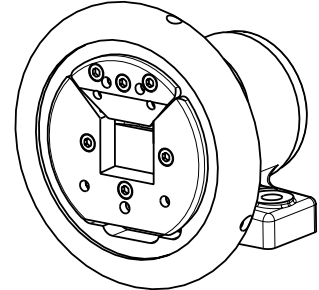
22-30: size of chuck (range of square bar 22 mm to 30 mm)



Difference between foot mounted (STW) and flange mounted (FLW) chucks

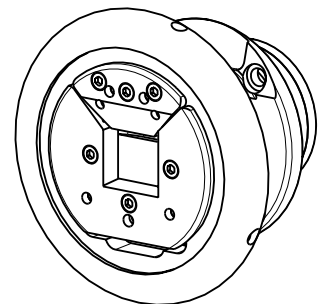
Foot mounted:

Chucks are mounted on non deflecting horizontal surfaces which are parallel to the winding equipment.



Flange mounted:

Chucks are mounted on non deflecting vertical surfaces which are parallel vertical to the winding equipment.
Used for example in turret winders.



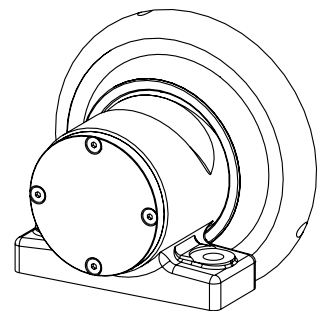
Shaft ends:

Without shaft end:

There is a cover at the end of the housing which protects the parts inside the housing.

Marking: **O**

Model: **FLO** or **STO**

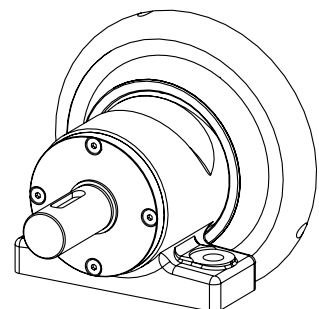


With shaft end:

Chuck with shaft end for mounting a drive or a brake. The cover has a hole allowing the drive shaft to pass through

Marking: **W**

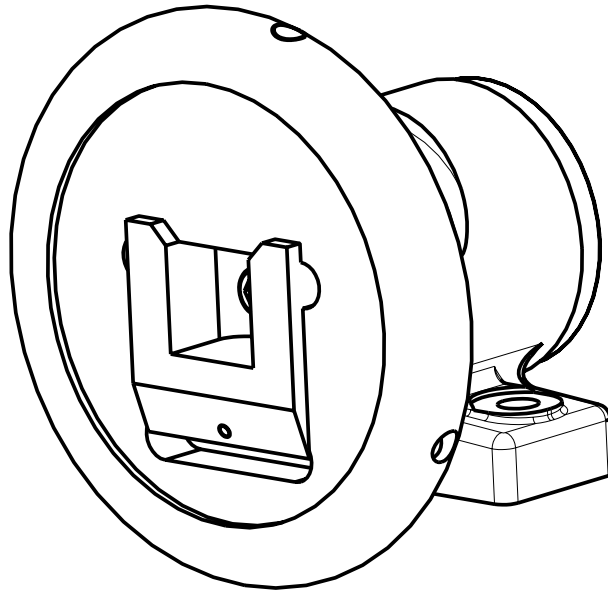
Model: **FLW** or **STW**



Difference between C- / VT-Lager

Difference between Boschert C-Chucks and Boschert VT-chucks:

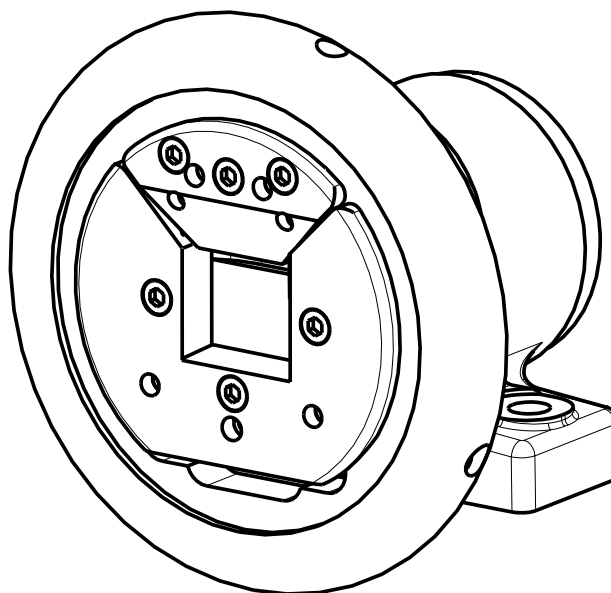
Boschert C-Chucks:

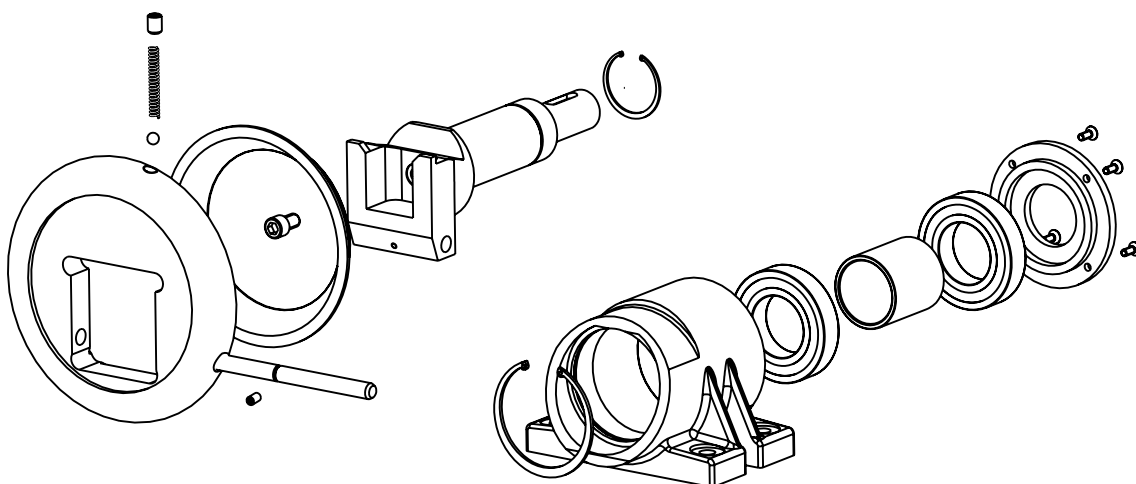
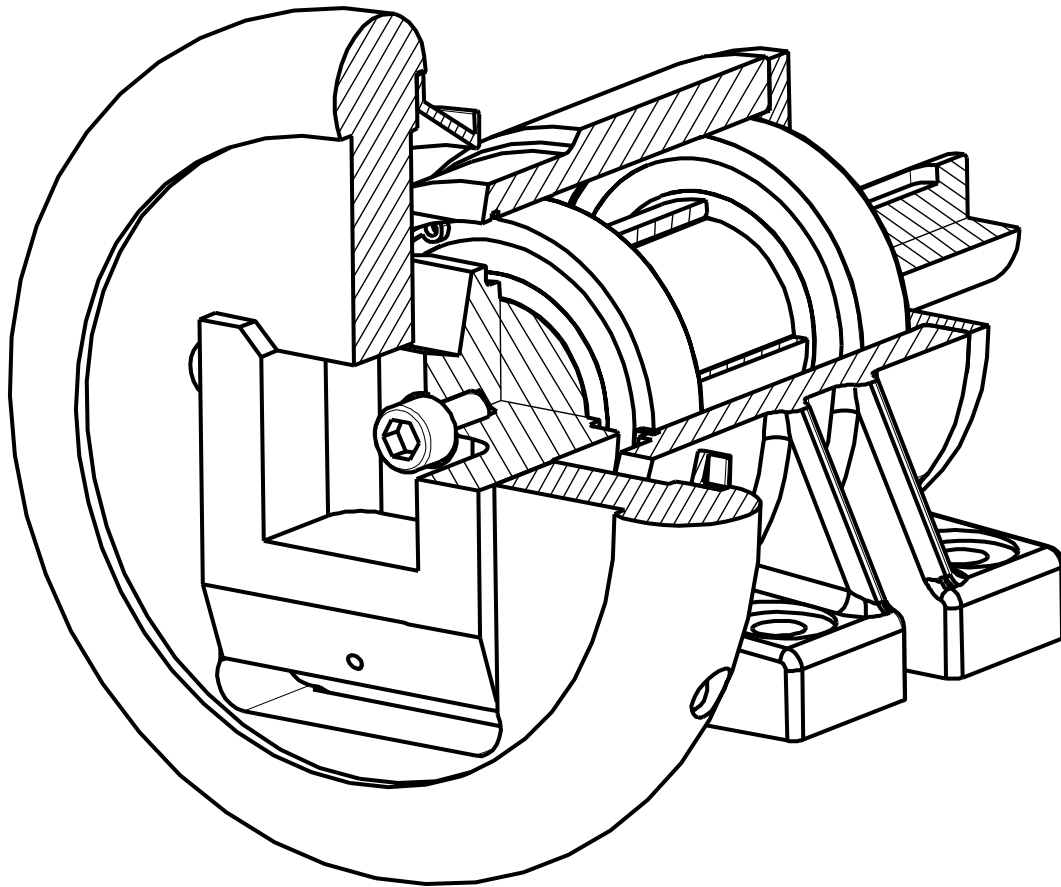


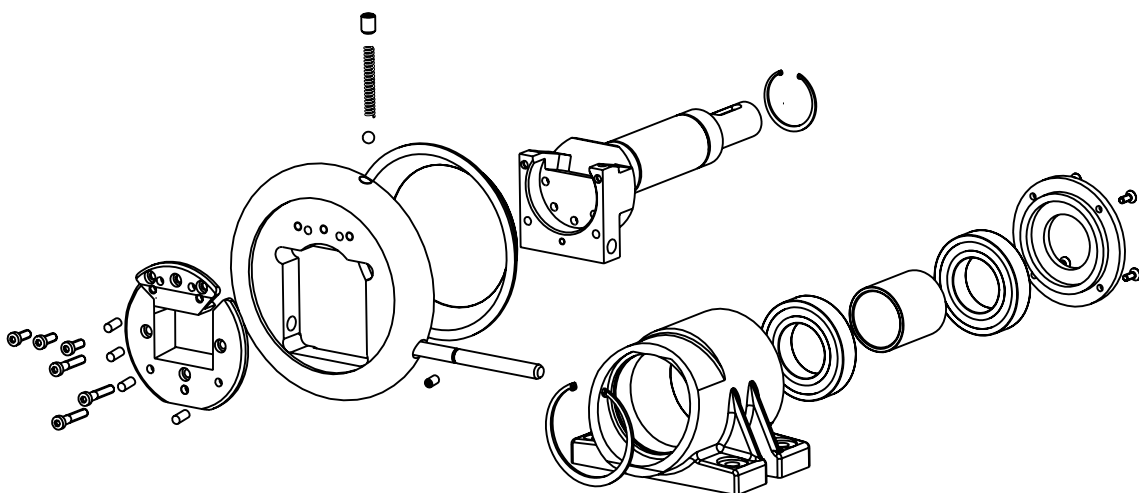
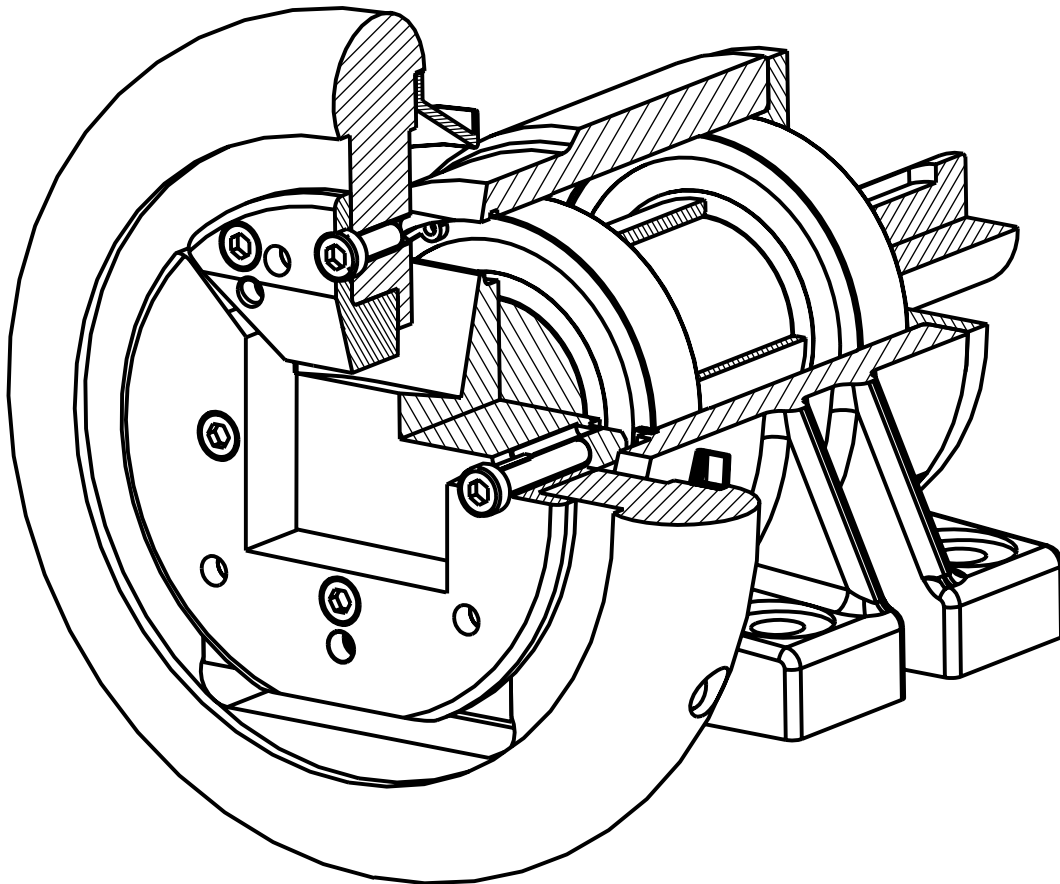
Chucks are available with square seat, sizes Mini and 19-25 are also available with Triangular seat.

Square seats are not interchangeable.

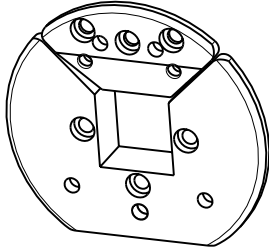
Boschert VT-Chucks:



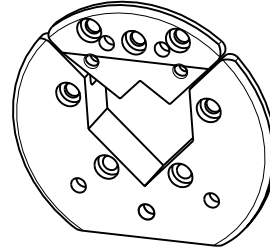




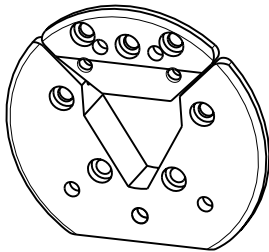
Available geometrie:



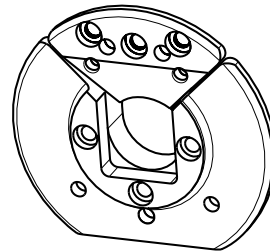
VT1 square bar



VT2 square bar 45° turned



VT6 triangular seat



VT7 square / round

Advantage:

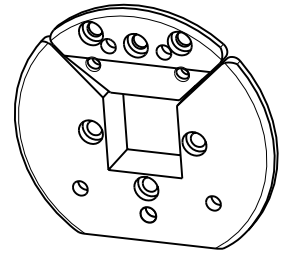
- VT-part (square seat) can be changed
- Low stocking costs, because you just have to put the VT-part in stock.
- Hardness of VT-parts can be tuned to hardness of winding shaft ends, without problems. Case hardened to customer specification.
- Easy change to other square sizes or shapes.
- Short delivery-times for spare VT-inserts.

It is very important that you give us the square bar dimensions on every order.

Wearing-parts VT1, VT2, VT6, VT7

Wear Part VT1:

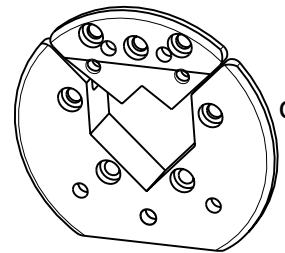
- Journal shaft easy to produce
- Tolerances of journal shaft easy to keep
- Winding shaft support and torque transfer very good
- The journal shaft must be put in accurately



VT1

Wear Part VT2:

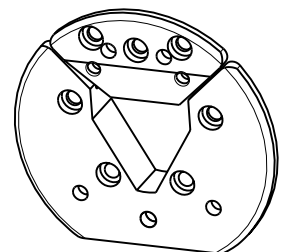
- Shaft journal easy to produce
- Tolerances of shaft journal easy to keep
- Winding shaft support and torque transfer only 70% maximum torque and 80% of maximum weight
- The shaft journal is very easy to install



VT2

Wear Part VT6:

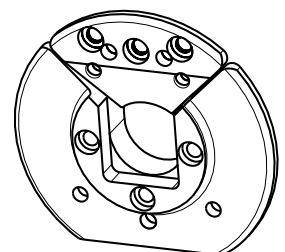
- Journal difficult to produce
- Tolerances of journal shaft difficult to keep
- Winding shaft support and torque transfer very good
- The journal is very easy to put in
- Journal only fall twice every revolution as opposed to 4 times every revolution with the VT1.



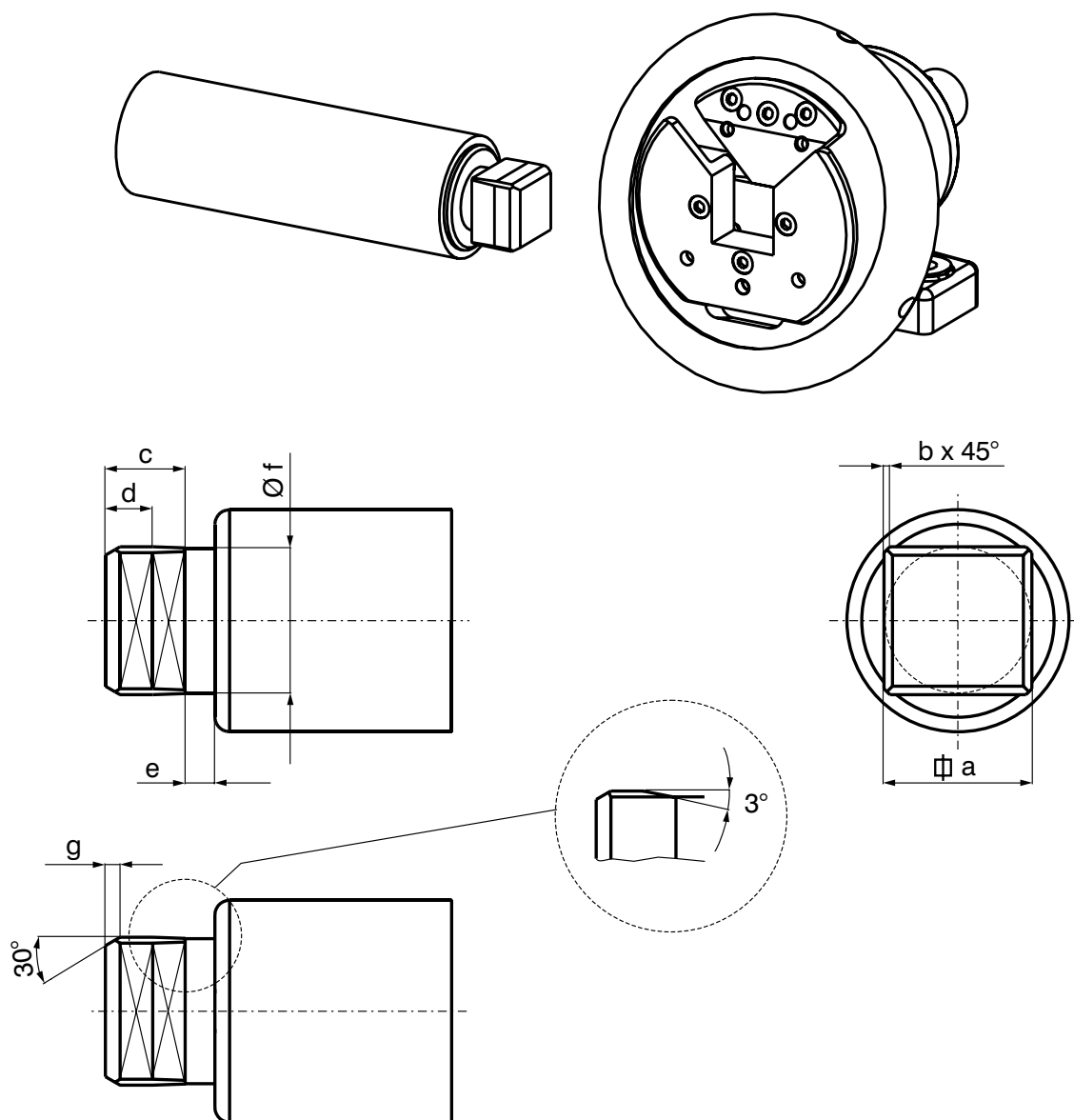
VT6

Wear Part VT7:

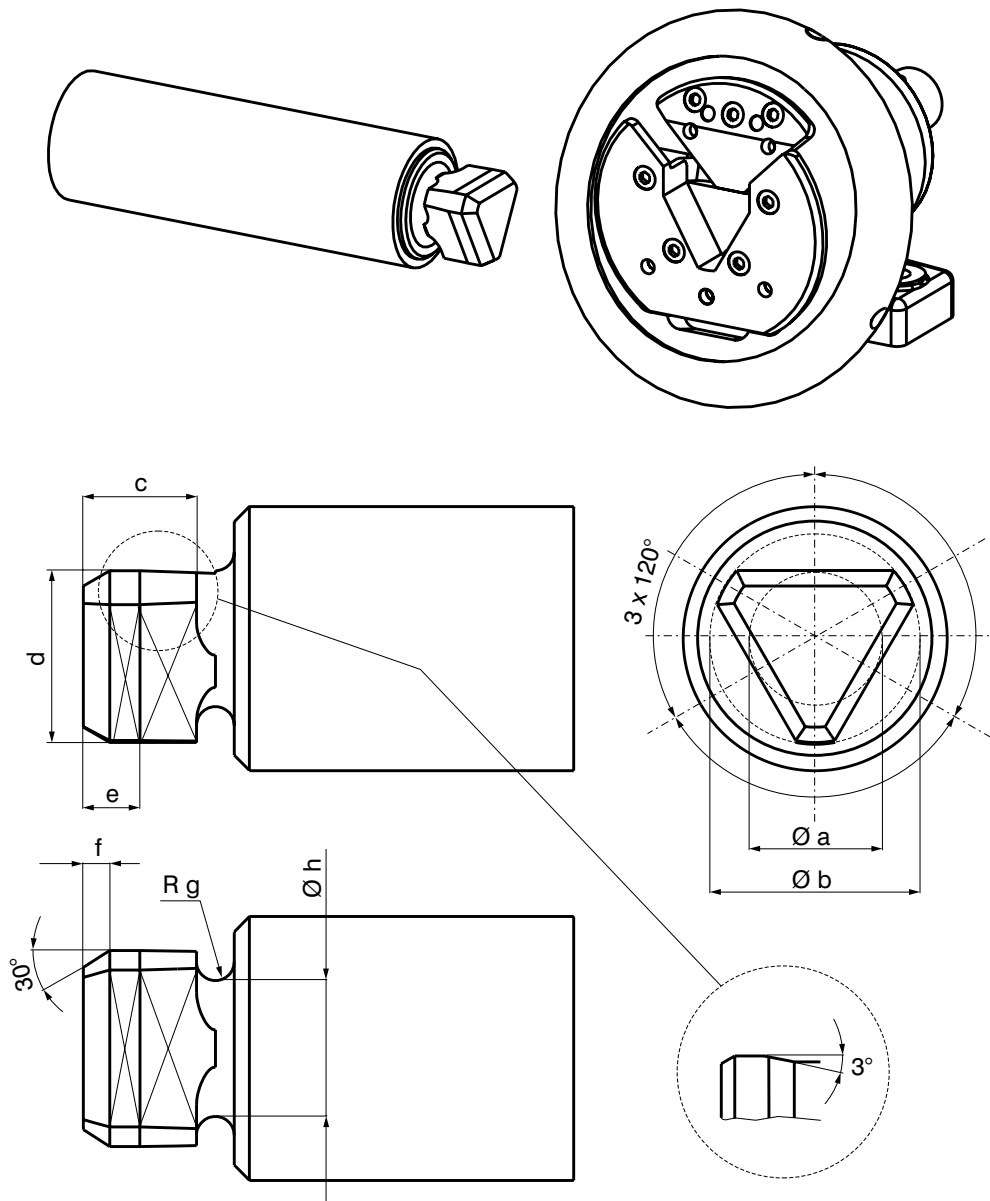
- Journal shaft difficult to produce
- Tolerances of journal shaft difficult to keep
- Winding shaft support and torque transfer very good
- The journal is easy to install
- If the square is worn, the quality of alignment remains good
- Journal does not fall every revolution.



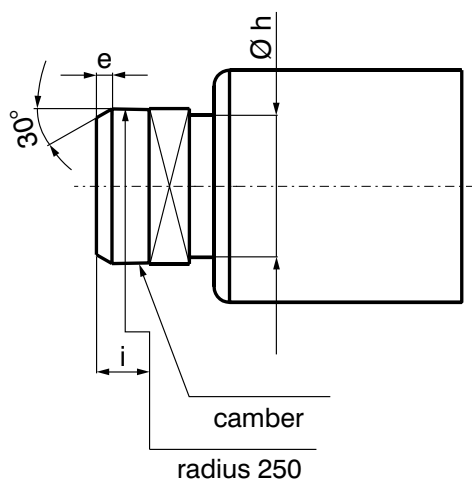
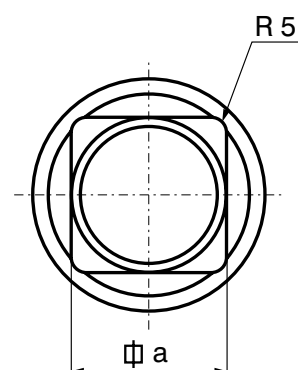
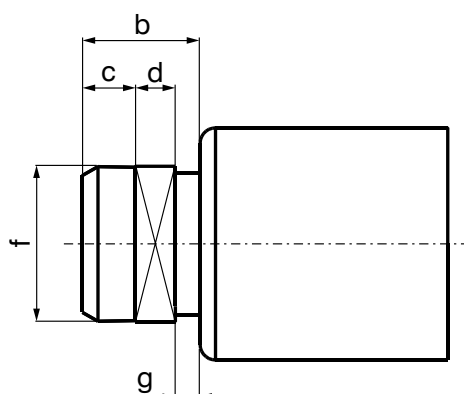
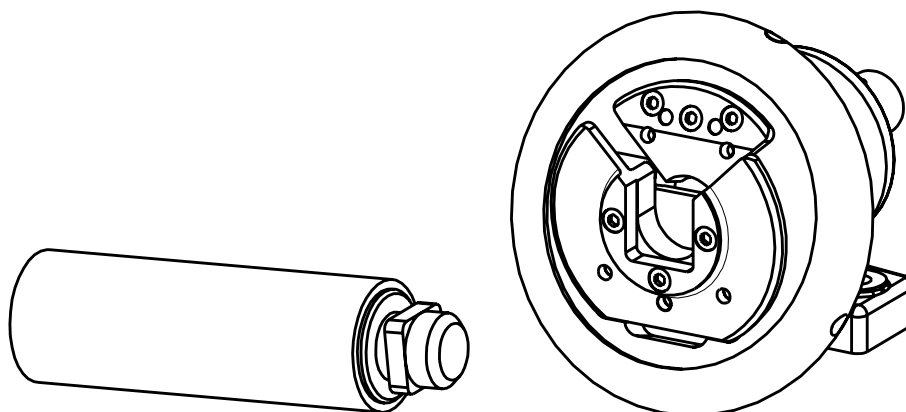
VT7



	C / VT1/VT2						
	a f7	b	c	d	e	f	g ⁺¹ ₀
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
120-180	120 - 180	5	64 -0.5	35	25	a-1 -0.1/-0.3	20
170-230	170 - 230	6	89 -0.5	48	25	a-1 -0.1/-0.3	32



	VT6							
	a f7	b f7	c	d f7	e	f ⁺¹ ₀	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



	VT7								
	a	b	c	d	e ⁺¹ / ₀	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

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.

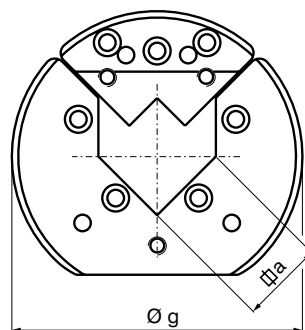
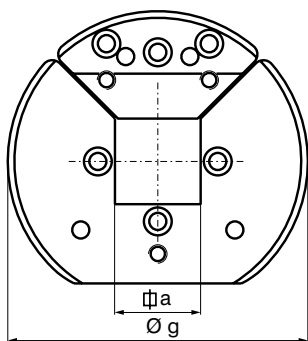
However it is possible to covert C-chucks to VT-chucks by changing the shafts and handwheels with the VT type.

Note at VT2 chucks:

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

Generally safety chucks have to be closed by hand always.

Dimension sheet VT-inserts

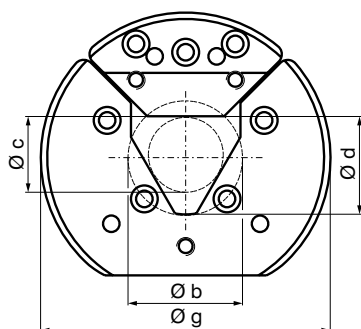


VT 1 / VT 2

	dimension a (mm) H8											g
22-30	25	30										104
30-40		30	32	35	40							140
40-50					40	45	50					144
50-80							50	60	80			195
80-120									80	100	120	230

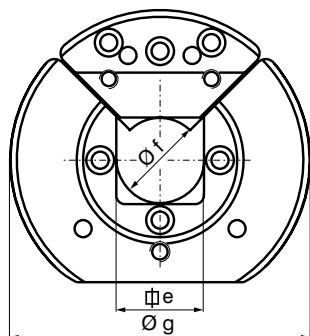
	dimension a (inch/mm) H8											g
22-30	1"	1 1/8"	1 1/4"									104
	25,4	28,57	31,75									
30-40			1 1/4"	1 1/2"								140
			31,75	38,1								
40-50			1 1/4"	1 1/2"		1 3/4"	2"					144
			31,75	38,1		44,45	50,8					
50-80							2"	2 1/2"				195
							50,8	63,5				
80-120										4"		230
										101,6		

VT2: 50-80 a = max. 63,5



VT 6

	dimensions (mm)			
	b	c	d	g
22-30	45	30	37,5	104
30-40	55	36	45,5	140
40-50	70	46	58	144
50-80	105	67	86	195
80-120	150	96	123	230



VT 7

	dimensions (mm)		
	e	f F7	g
22-30	31	30	104
30-40	41	40	140
40-50	51	50	144
50-80	51	50	195,5
	81	80	195,5

Special version on customer request

Generally safety chucks have to be closed by hand always.

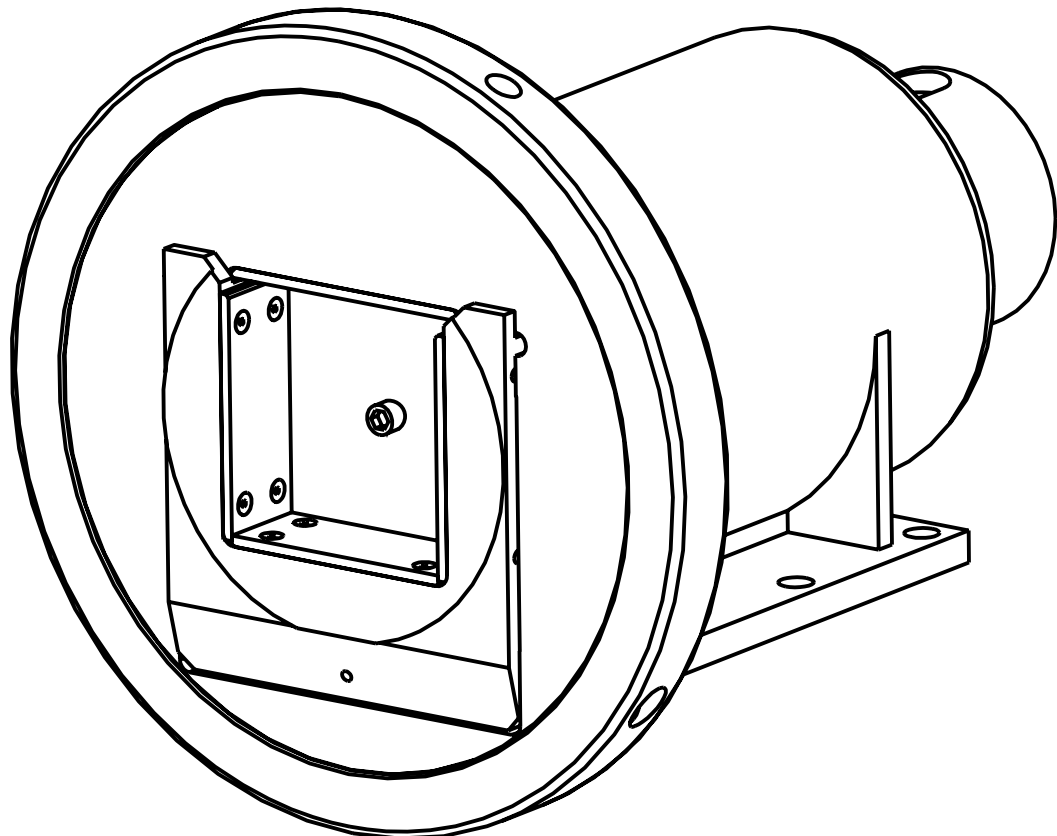
Heavy load chucks

Boschert Heavy Load Chucks:

Available in 3 sizes:

<i>Model</i>	<i>max. beam weight / kg</i>	<i>max. torque / Nm</i>	<i>Square bar / mm</i>	<i>Standard square bar / mm</i>	<i>Type VT</i>
80-120	12000	10000	80-120	120	x
	24460 lbs	7230 ft/lb	3.1496" - 4.7244"	4.744"	
120-180	22000	20000	120-180	180	x
	48500 lbs	14468 ft/lb	4.7244" - 7.0866"	7.0866"	
170-230	64000	41000	170-230	230	x
	141090 lbs	29660 ft/lb	6.6929" - 9.0551"	9.551"	

Sizes 120-180 and larger available only with square (U-style) opening, that means every chuck has 4 wear-plates which can be changed with wear.



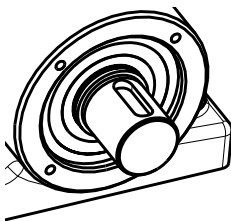
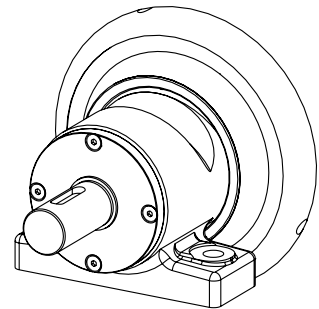
Types of shaft ends:

Standard – shafts:

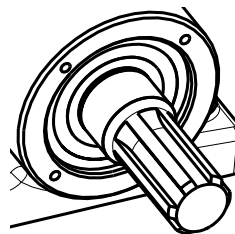
Boschert standard dimensions (Without additional prices)

Shafts for fixing Boschert-components:

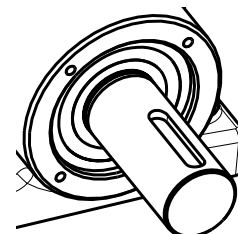
For example brakes and clutches



ESB



DSB

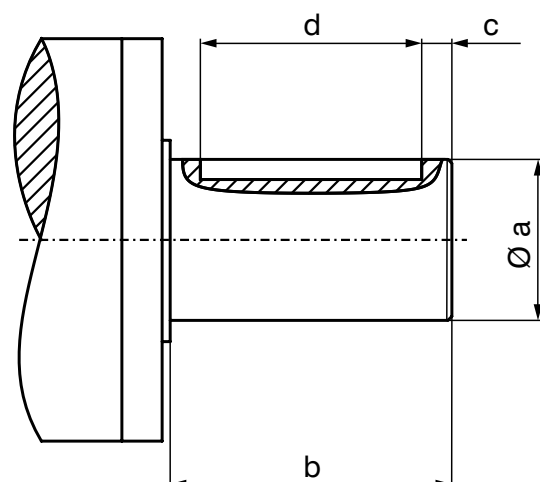


RU

Above shaft ends are only available together with Boschert-components.

It is very important to supply us on orders for special shafts with the following information:

- shaft diameter (a), tolerance
- shaft length (b)
- length (d) and position (c) of keyway



Sliding chuck

available in 3 sizes:

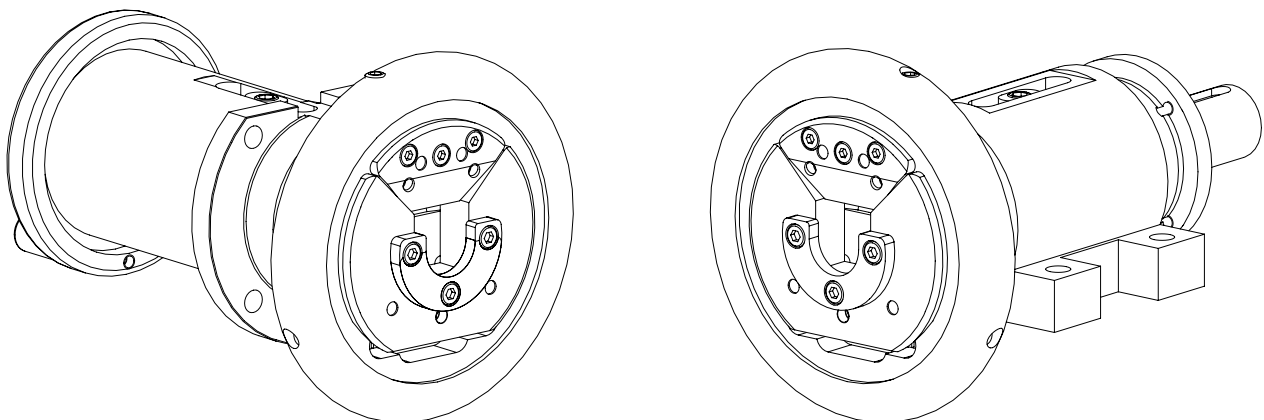
	beam weight max.	torque	square bar
22-30	800 kg (1760 lbs)	180 Nm (130 ft/lb)	22-30 mm (0.8661" - 1.1811")
30-40	1600 kg (3530 lbs)	350 Nm (250 ft/lb)	30-40 mm (1.1811" - 1.5748")
40-50	2800 kg (6170 lbs)	1100 Nm (800 ft/lb)	40-50 mm (1.5748" - 1.9685")

50 mm adjustment (+ - 25mm)		
22-30	30-40	40-50

100 mm adjustment (+ - 50mm)		
22-30	30-40	40-50

These chucks can be adjusted in axial direction. So it is possible to move the roll to the left or to the right. It is also possible to balance length tolerances of the winding shaft with help of a sliding chuck.

Sliding chucks are in VT-style available only!



Regarding VT-parts, foot- or flange mounted model and options, there are no differences between Boschert chucks and Boschert sliding chucks. VT parts are interchangeable between stationary chucks and sliding chucks.

Type (example): Boschert **VT**-chuck SKO 22-30 SW50

Boschert **VT**-chuck: version with wearing (**VT**) parts

SKW = sliding chuck, foot mounted, with shaft end. idler side
 SKO = sliding chuck, foot mounted without shaft end. driver side
 SKW-F = sliding chuck, flange mounted, with shaft end. idler side
 SKO-F = sliding chuck, flange mounted, without shaft end. driver side

22-30: size of chuck range of square bar 22 to 30 mm

SW: 50 mm adjustment

Description Sliding chuck



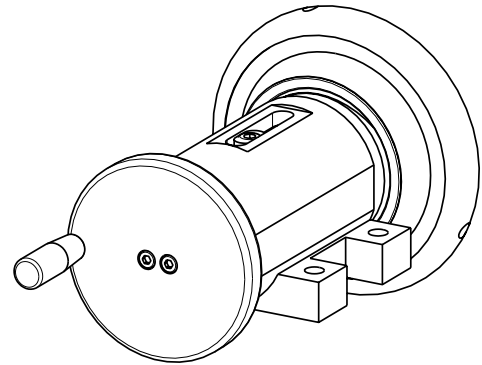
What do you need to know about Boschert sliding chucks:

Sliding chuck without shaft end (SKO or SKO-F):

This is the driver safety chuck.

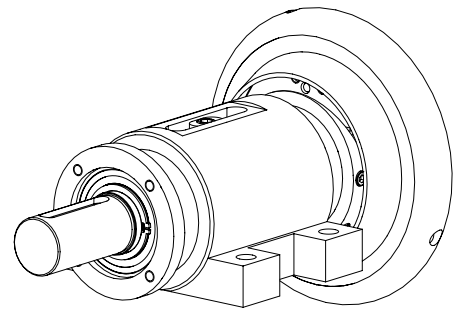
With use of a crank, it is possible to adjust the roll.

This is the active side.



Sliding chuck with shaft end (SKW or SKW-F):

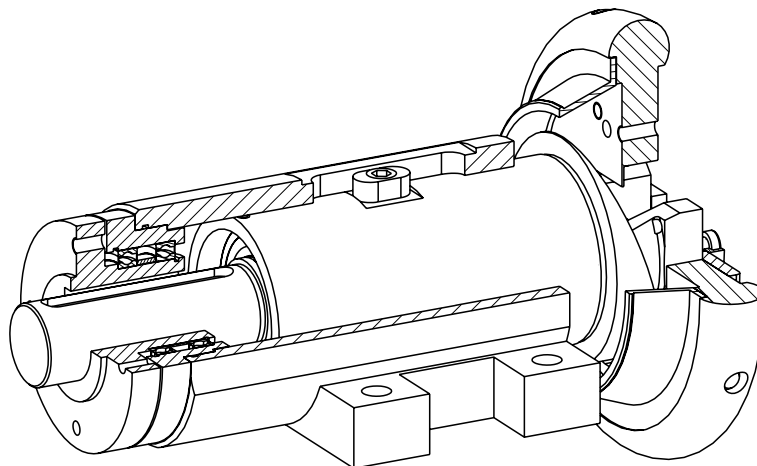
A motor, brake or clutch can be fixed on the free shaft end, which is „driving with“!



This chuck is the idler side of the application. This chuck is coupled to the driver side chuck by means of the roll shaft.

Options:

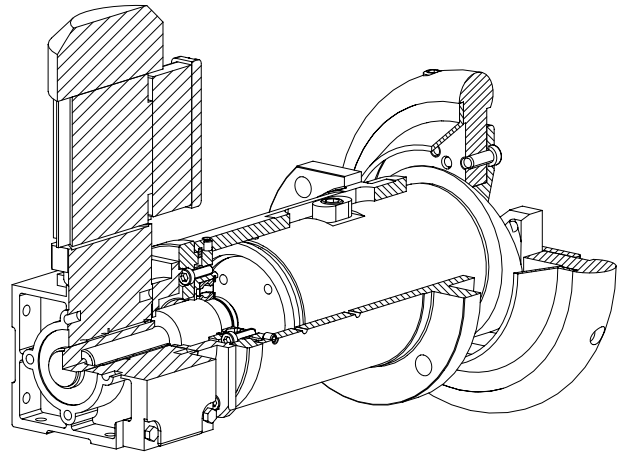
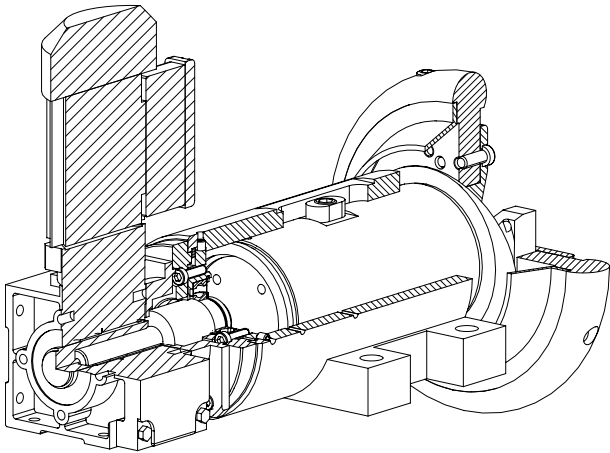
- Shaft end with axial fixed drive



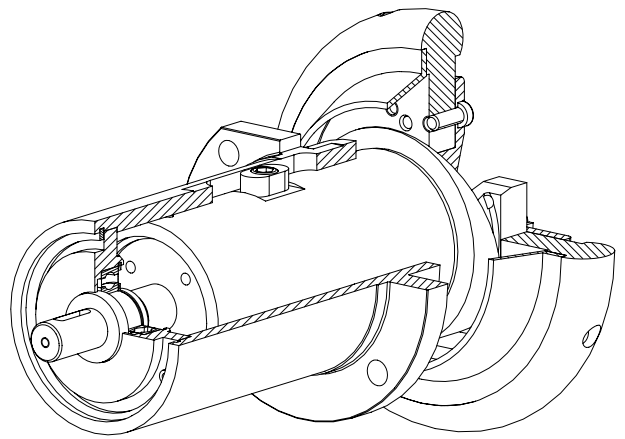
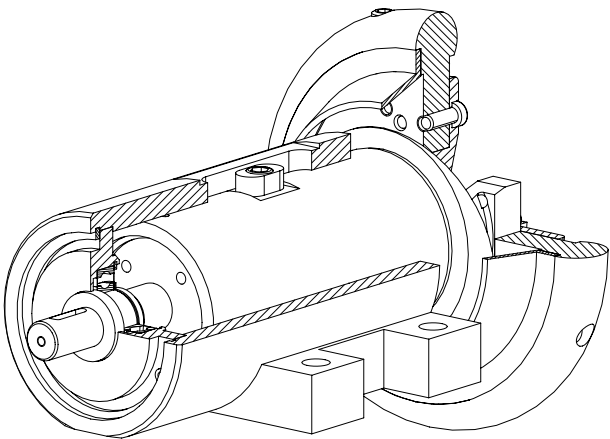
Function is the same as on the standard versions SKW and SKW-F. Just the driving unit is the special part of the chuck. The driving components (sprocket, pulley) can continue to run during axial adjustment to the chuck. On this special unit, the driving components are fixed at one point and do not move axially.

Sliding chuck options

- with motorized adjustment



- for motorized adjustment

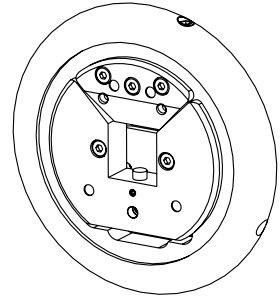


Containing the roll shaft in the safety chuck

The fact, that the sliding chuck can be moved axially, requires a system to prevent the roll shaft from falling out of the safety chuck. To prevent the shaft from falling out of the safety chuck.

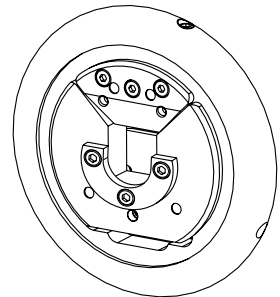
DRIVER PIN SYSTEM: (Older technology. Not recommended.)

With this system you have to take special care during loading and unloading the shaft. While unloading the full winding shafts, there can occur operation errors, which can damage the driver pin.



Axial secure through DRIVER DISC: (Current technology. Recommended.)

With this system, you have to machine a groove in the winding shaft. When seating the shaft into the chuck, the groove is connected to the driver disc. When unloading the winding shafts, shearforces are less likely.



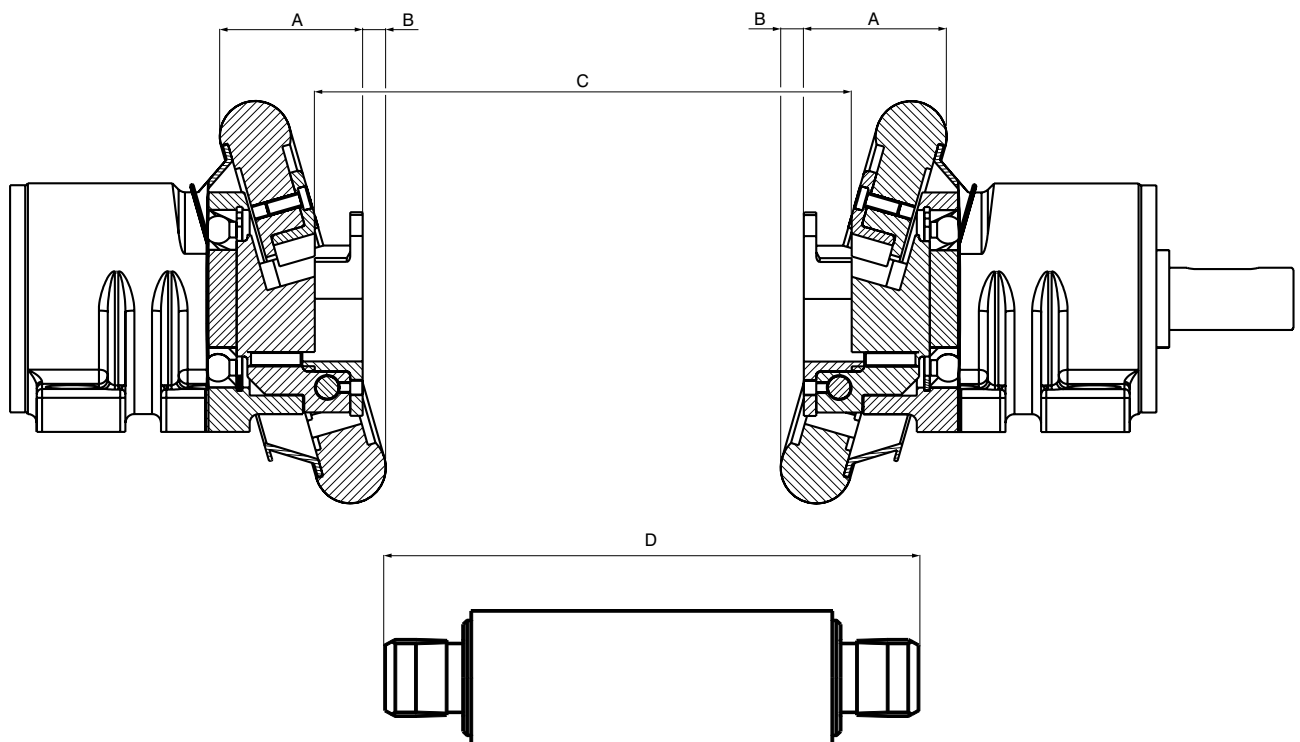
Boschert regulations:

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.

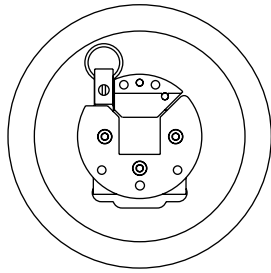
Only compliance of all specifications assure a correct function!



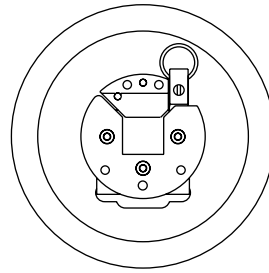
	A	B	$x=(C-D)$	$y=(C-D)$
Mini	38	8	0,5	1
19-25	54	9	0,5	1
22-30	61	8	0,5	1
30-40	73	13	0,5	1
40-50	81	13	0,5	1
50-80	106	16	0,5	1
80-120	145	18	0,5	1
120-180	175	24	1	2
170-200	216	24	1	2
170-230	230	18	1	2

x = min. clearance

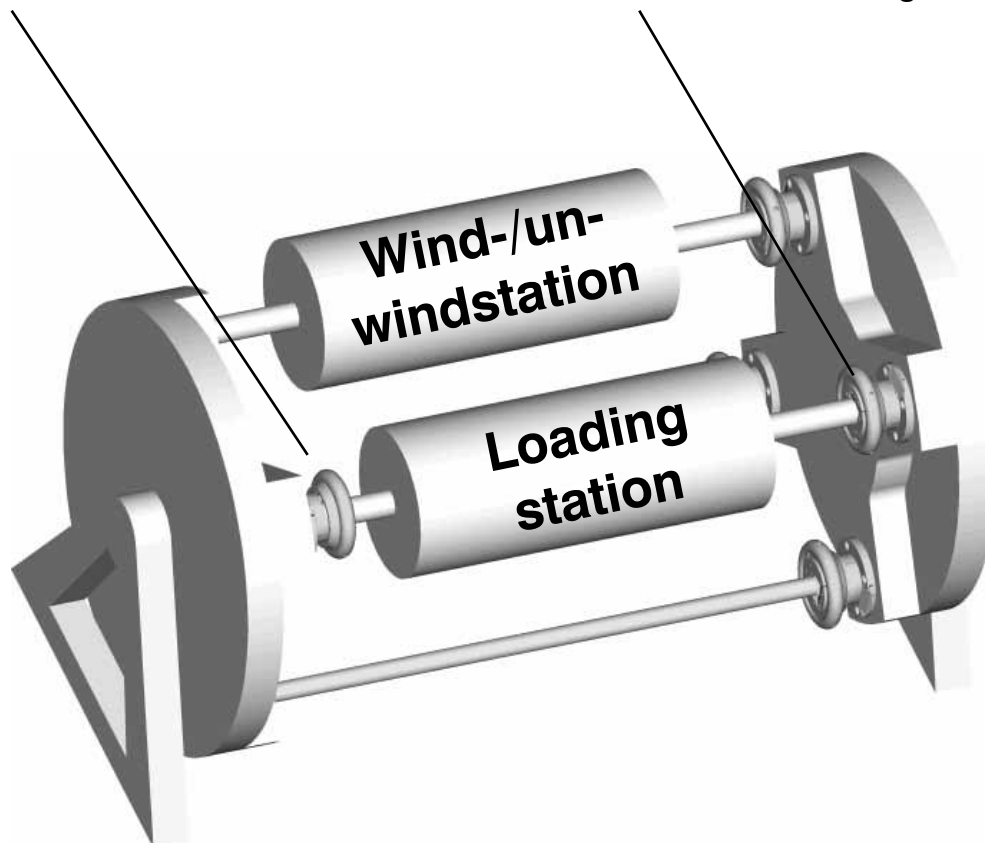
y = max. clearance



Handwheel lock left



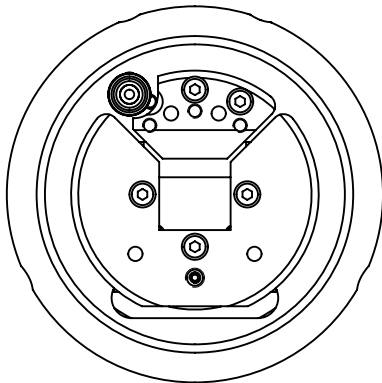
Handwheel lock right



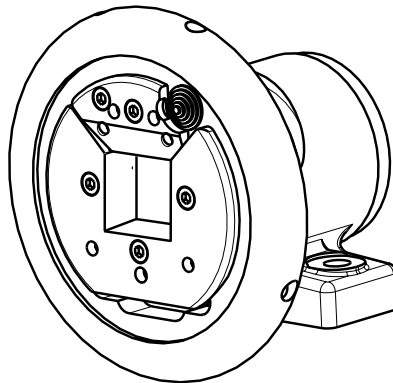
**Due to safety reasons we recommend
handwheel locks on applications in turret winders.**

Normally the face cam on the housing prevents an opening of the handwheel. On a turret winder, the safety chucks are in normal position, when they are in the loading position. For wind or unwind the chucks are turned 180° and now work upside down. In that position, the security of the face cam apex is only partly in order.

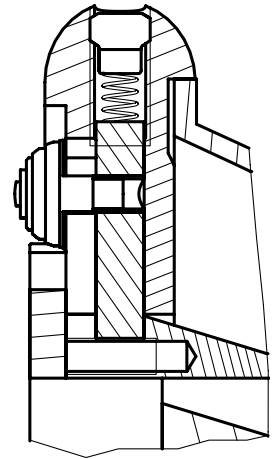
Handwheel lock type I only type 22-30



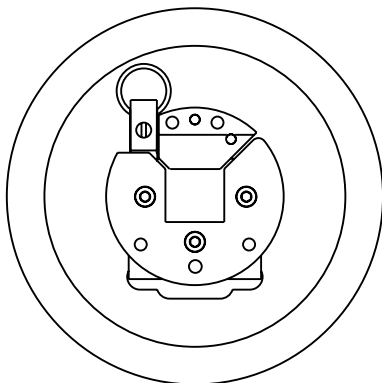
HRV I left



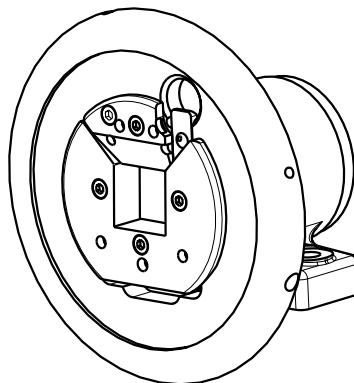
HRV I right



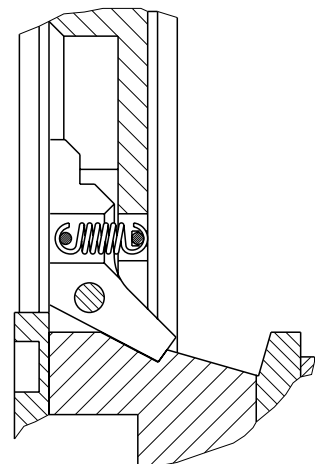
Handwheel lock type II type 30-40 / 40-50 / 50-80



HRV II left



HRV II right



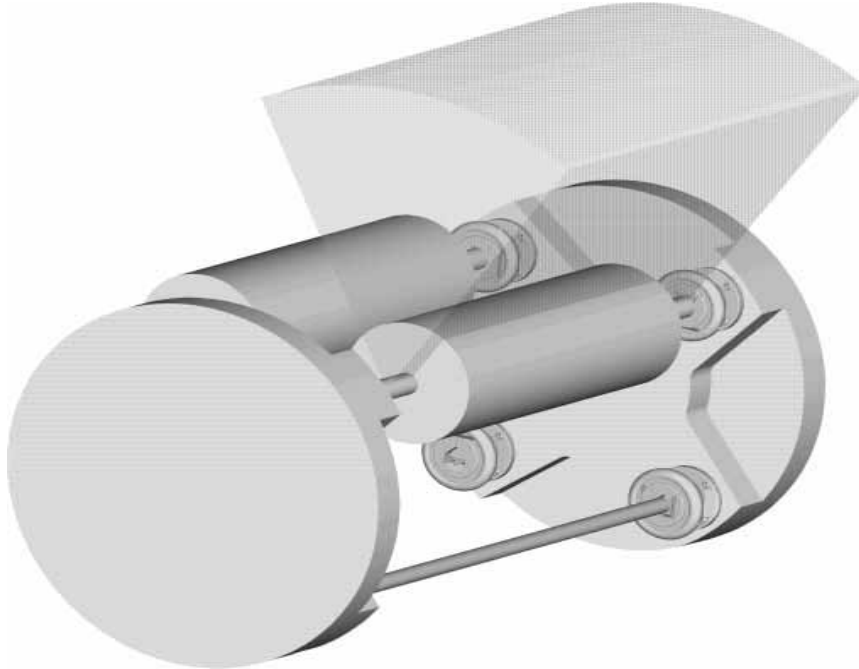
The handwheel lock type II is a very solid design.

Handwheel lock only available in VT-style.

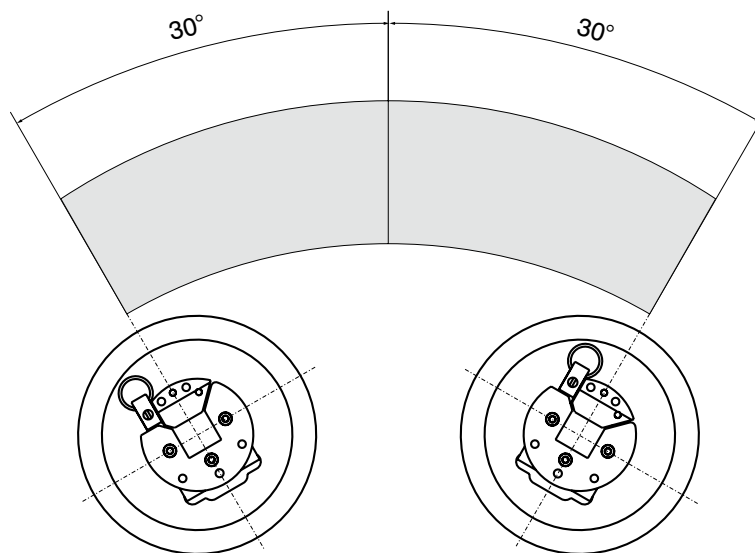
On using the handwheel lock type II on type 30-40 and 40-50 the handwheel-Ø will be 250 mm.

In case of order note: The position of the lock (left or right) is necessary.

We provide chucks with extended opening angle especially for turret winders, because it allows easy exchange of the beam even when the chuck is not in exact vertical position for loading.



Larger inlay area for turret winder application.



Optional opening angle to both sides up to max. 30°.

Foot mounted chuck for 90° mounting

Special Housing

Foot mounted chuck for 90° mounting:

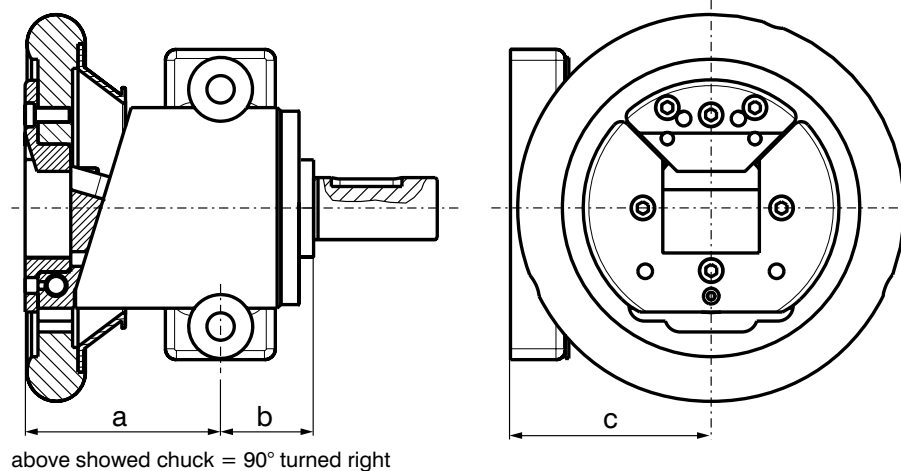
This Chuck can be fitted to a vertical surface like a flange mounted chuck.

In case of order note:

1. For one unit there is a right and a left version necessary
2. Which version (right or left) has the drive shaft

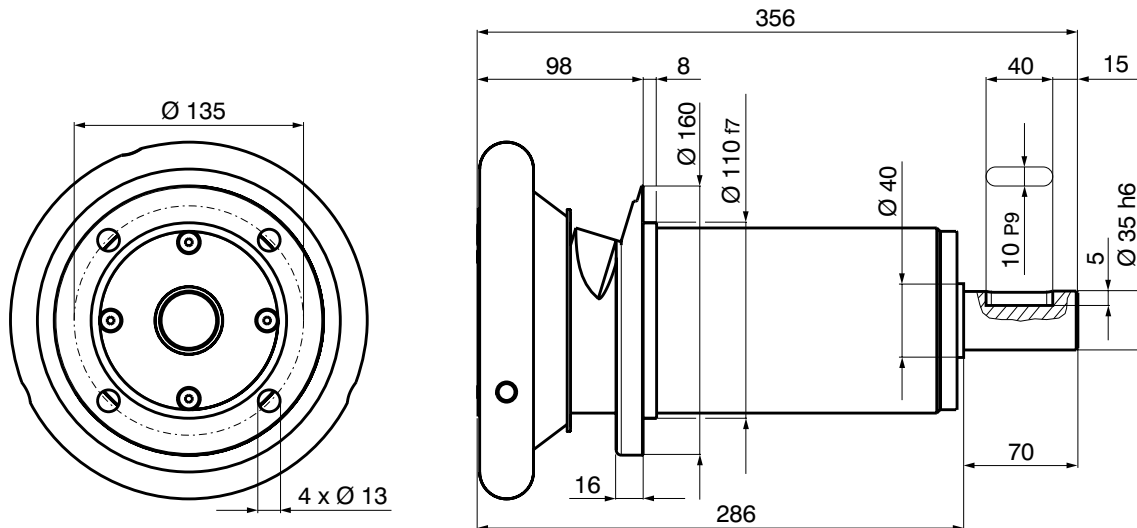
Example of order: STW 90° 30-40 right

Type 22-30 / 30-40

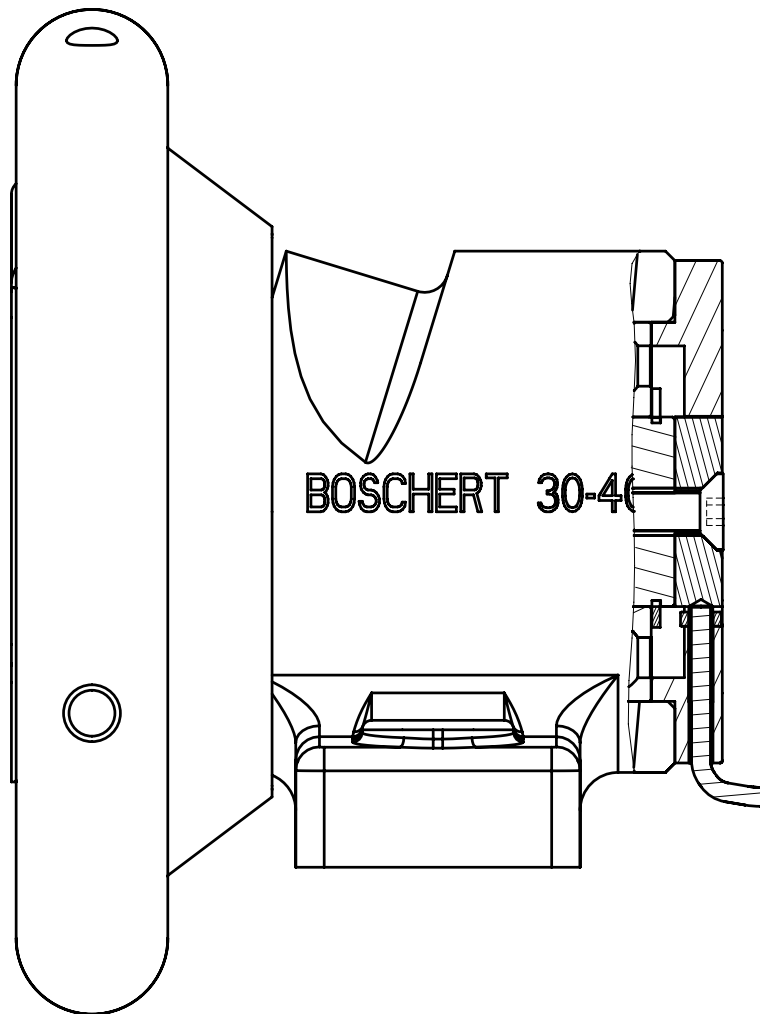


Extended Chuck

In some mounting situations, the depth of the mounting plate is too much for the standard housing. In this case you can use the special chuck with the extended housing.



Monitoring: chuck opening positioning



Shaft position location

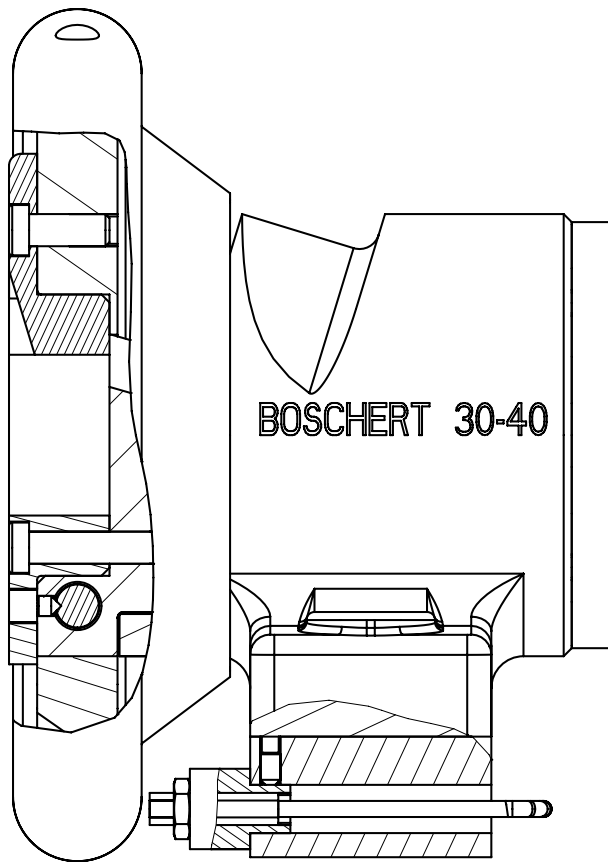
problem:

Identify the location of the hand wheel position for easy opening and closing.

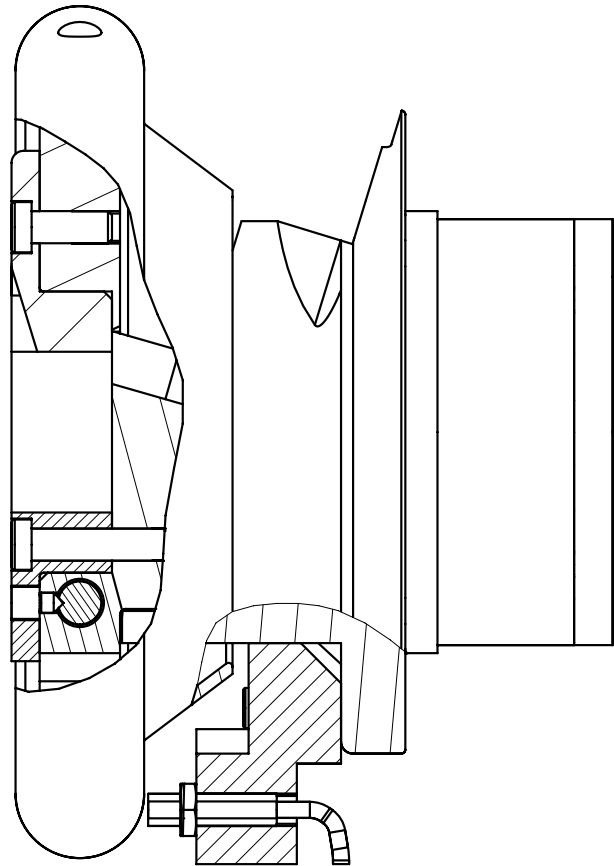
solution:

To fit a proximity sensor inside the end cover, so the shaft position can be identified electronically.

Chuck with handwheel open/close recognition



Foot mounted chuck



Flange mounted chuck

problem:

Identify of handwheel closed

solution:

To fit a proximity sensor for recognition

Boschert P-chuck

Anwendung

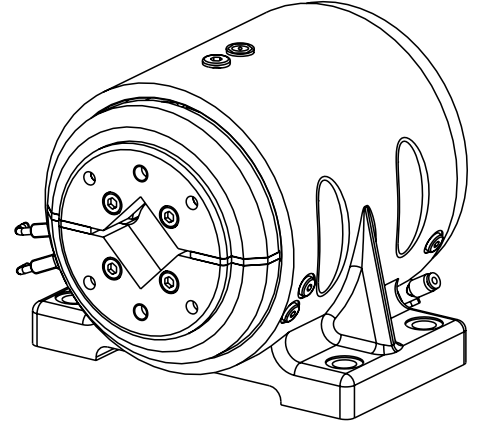
Pneumatic chuck for automatic opening and closing for automatic handling of the roll, or for remote control if the chuck can't be easily accessed.

Proximity Sensors can register:

- loading position
- chuck opened
- chuck closed

This be checked by and integrated into the logic of the machine controls.

The seat is a VT-part can be changed as required



Available in 2 sizes:

<i>Model</i>	<i>max. beam weight / kg</i>	<i>max. torque / Nm</i>	<i>Standard square bar/ mm</i>	<i>Type VT</i>
P40	1600	350	40	x
	3530 lbs	6170 lbs	1.5748"	
P50	2800	1100	50	x
	258.1 ft/lb	800 ft/lb	1.9658"	

Type: (example) **P40-chuck STW**

P-chuck: Pneumatic chuck

40 square bar 40 mm (1.5748")

STW = foot mounted chuck with shaft end

STO = foot mounted chuck without shaft end

FLW = flange mounted chuck with shaft end

FLO = flange mounted chuck without shaft end

Boschert P-Chucks are available as flange mounted or foot mounted, with or without shaft end and with wearing part VT2 and VT7. P40 available only in 40 mm or 1 1/2" or P50 in 50 mm or 2" square.

Function:

The opening and closing of the safety chuck is achieved by means of a solid and a hollow shaft with the hollow shaft being axially moveable and supporting on the solid shaft.

The square winding shaft journal rest securely fastened via VT-inserts on both the solid and the hollow shaft.

When opening, the hollow shaft slides into a recess in the housing and with it the upper half of the VT insert.

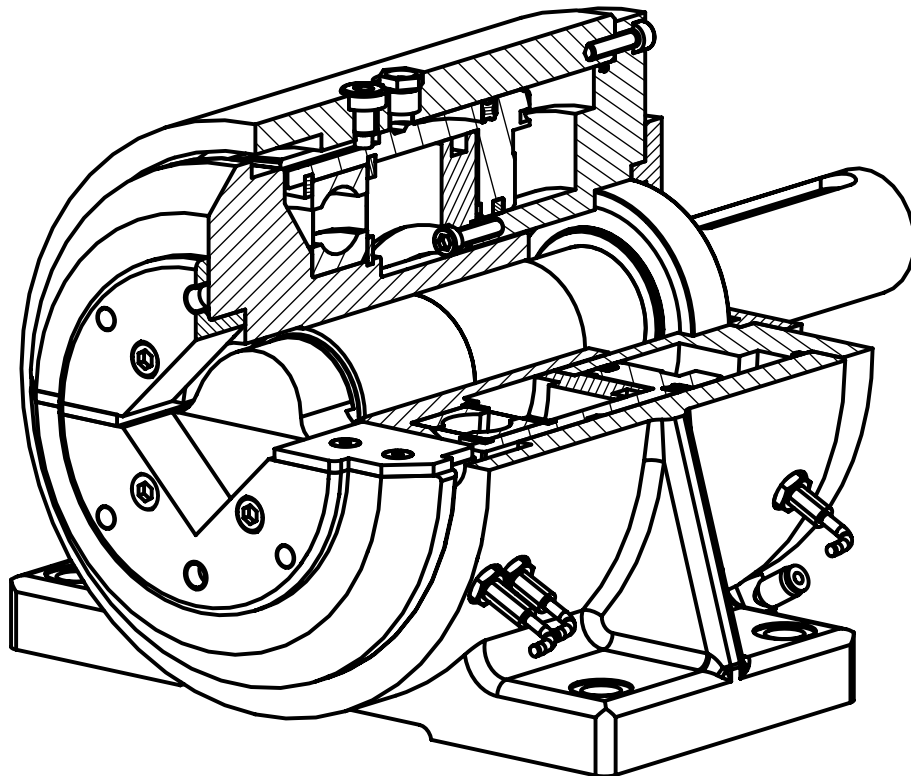
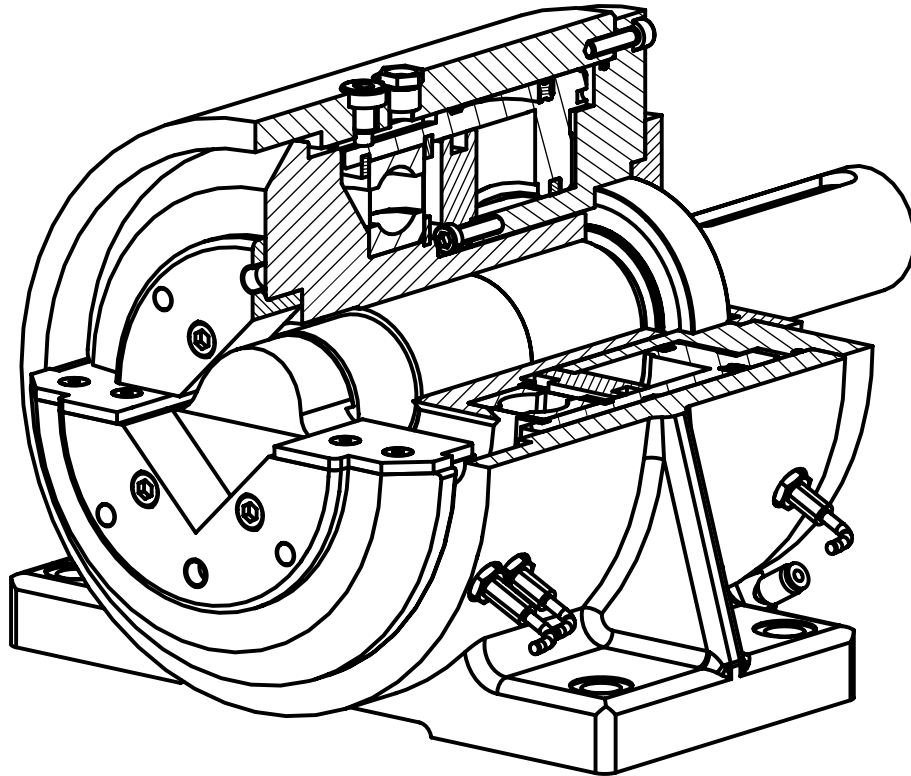
In this position, the solid and hollow shaft of the unit can be turned only minimally ($\pm 3^\circ$).

When closing, the hollow shaft and the upper part of the mounting travel forward. In this forward position of the hollow shaft, the load bearing shaft of the safety chuck is encompassed on all sides, provided the solid and the hollow shaft are flush. The units solid and hollow shafts can now be fully rotated and are simultaneously able to transmit driving or braking torque.

Specials:

All functions required for automatic operation have been integrated into the compact housing:

- Winding shaft support
- Torque transfer
- Opening and closing cylinders
- Electrical sensing device for bearing status (open, close, rotation position)
- mechanical locking preventing unintentional opening during operation



Available in 3 sizes:

Model	max. beam weight / kg	max. torque / Nm	Standard square bar / mm	Type VT
A40	1600	350	40	x
	3530 lbs	258.1 ft/lb	1.5748"	
A50	2800	1100	50	x
	6170 lbs	800 ft/lb	1.9658"	
A80	7000	2350	80	x
	15430 lbs	1700 ft/lb	3.1496"	

Type (example): **A40-chuck STW**

A-chuck: automatic chuck

40 square bar 40 mm (1.5748")

STW = foot mounted chuck with shaft end

STO = foot mounted chuck without shaft end

FLW = flange mounted chuck with shaft end

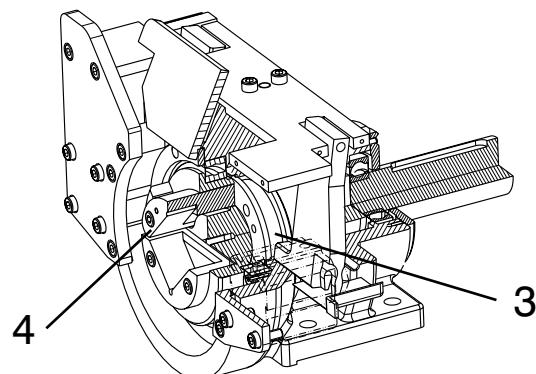
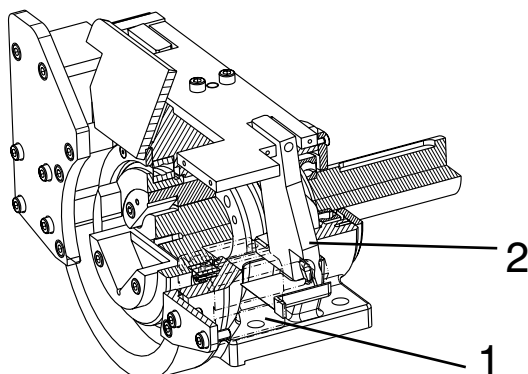
FLO = flange mounted chuck without shaft end

Boschert A-Chucks are available as flangemounted or footmounted, with or without shaft end and with wearing part VT2.

Function:

The pneumatic cylinders (1) push or pull the leverarm (2) in either direction. The sliding ring (3) is connected to the lever arm by ball bearings. The upper replaceable insert (4) is mounted on the sliding ring (3) and will be moved by the pneumatic cylinder to open and close.

This safety chuck can close mechanically if the air supply is interrupted.



Specials:

- Axial and lateral alignment shaft guide
- Redundant mechanical locking in case of electrical or pneumatic failure
- Mounting dimensions are identical with mechanical 30-40, 40-50, and 50-80 series safety chucks. You can add sensors to read back to the machine logic, whether the safety chuck is closed or open
- Einbau der Lager ohne Änderungen an der Maschine, den Befestigungssockeln oder an den Wickelwellen
- Easy access to the locking mechanism allows for simple service and installation
- Replaceable inserts are a standard feature

Boschert pneumatic Chucks

These safety chucks are opened and closed pneumatically.

In operation, it offers all known advantages of the mechanical Boschert safety chuck, such as safety, quick change of the winding shaft with the possibility of automation or remote control. These additional possibilities offer the user a great step forward in respect to safety and productivity.

Boschert A-Chuck

pneumatic chuck for automatic opening and closing, for automatic handling of the reel, or for remote control if the chuck can't be easily accessed.

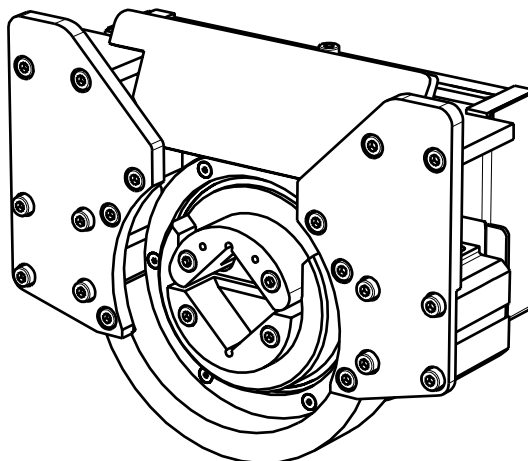
Proximity Sensors can register:

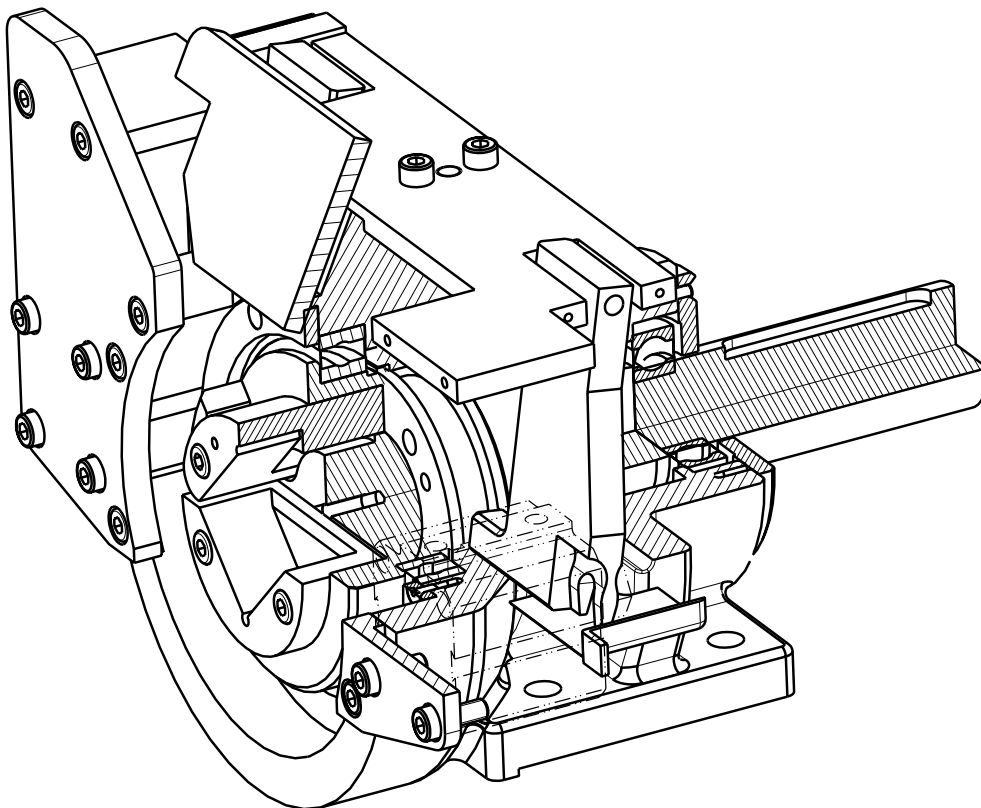
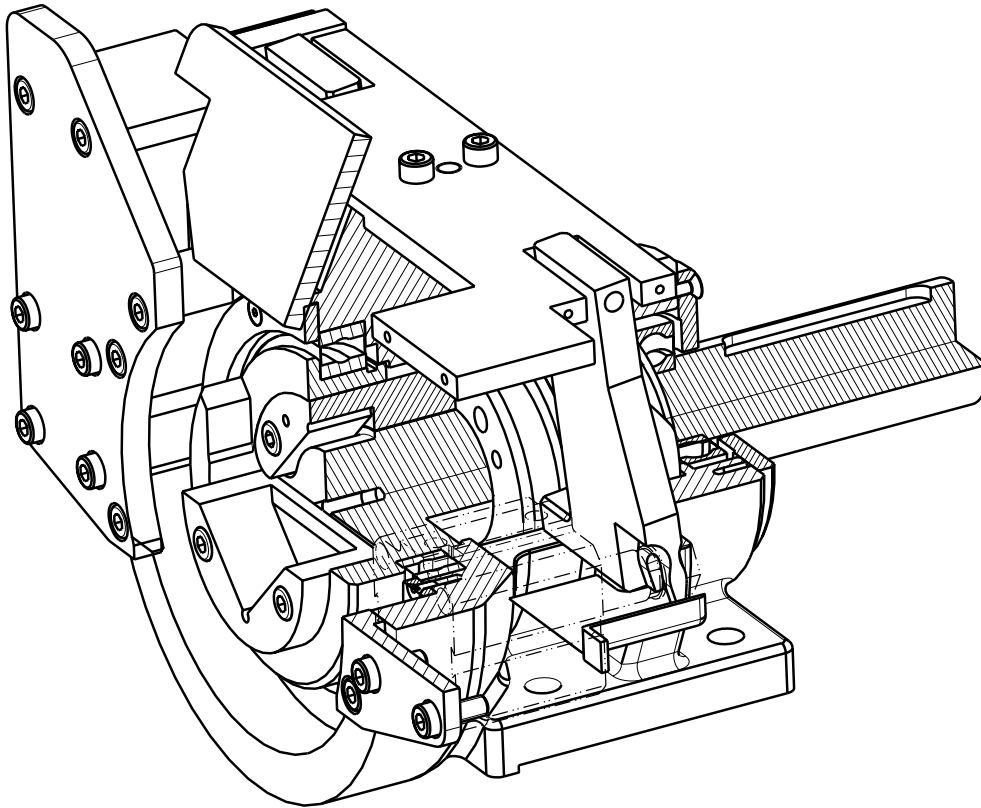
- loading position
- chuck opened
- chuck closed

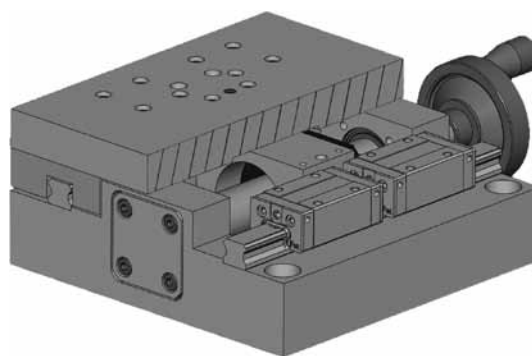
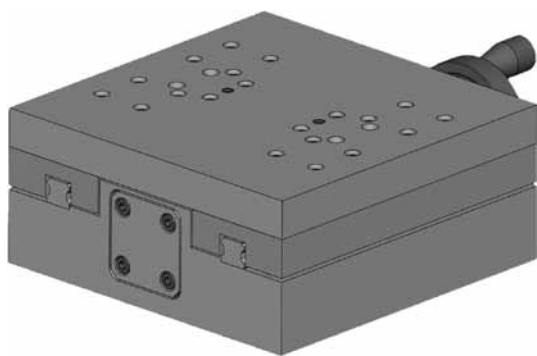
This can be checked by and integrated into the logic of the machine controls.

The seat is a VT-part and can be changed as required.

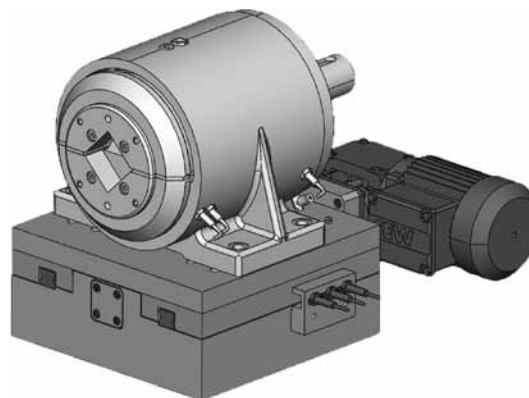
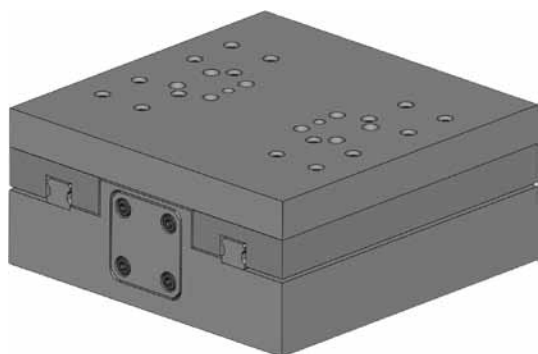
All important dimensions are identical with the mechanical Boschert chucks, except for the lifting stroke, so Automatic chucks and mechanical Boschert Chucks can be interchangeable.



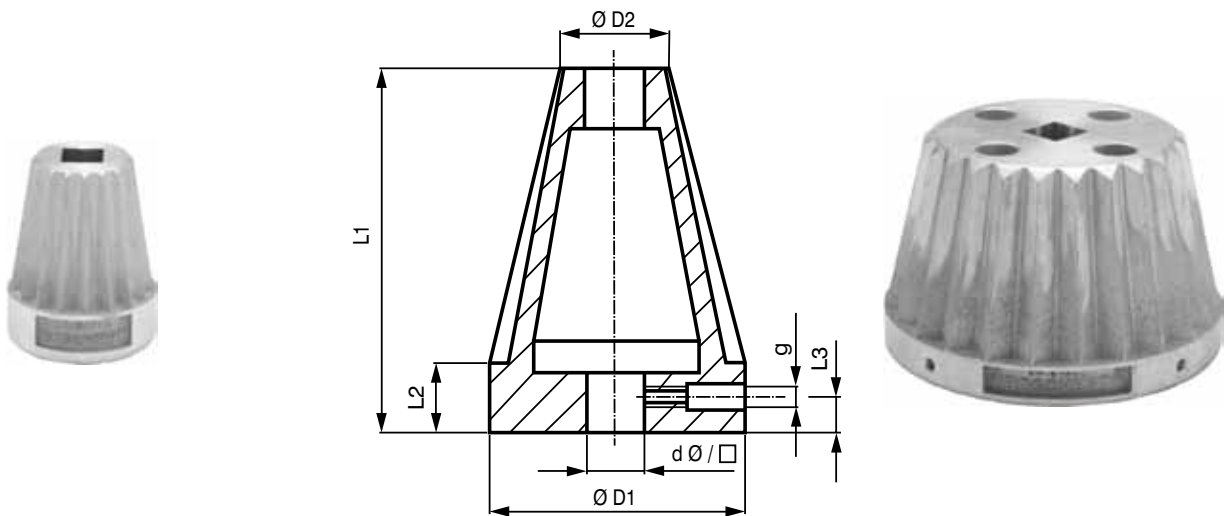




Slide								
	Axial						Radial	
	small			large			small	large
	active	with motorized adjustment	passive	active	with motorized adjustment	passive	active	passive
22-30	x	x	x				x	
30-40	x	x	x				x	
40-50				x	x	x		x
50-80				x	x	x		x
Sliding-chuck								
22-30							x	
30-40							x	
40-50								x
Series A								
A40	x	x	x				x	
A50				x	x	x		x
A80				x	x	x		x
Series P								
P40				x	x	x		x
P50				x	x	x		x



Aluminium cones Model I - VII

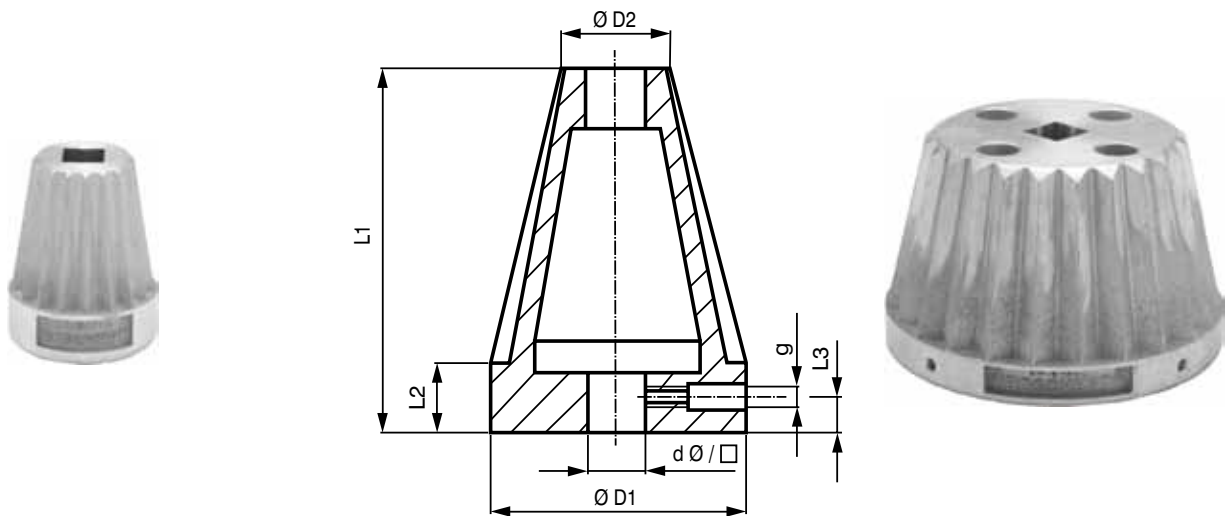


		Model				
		I	II	III	IV	
					⌀ 30	⌀ 40
Tube diameters Ø		80 - 95	70 - 80	70 - 80	55 - 120	70 - 120
d	Ø	30 - 50	30 - 50	30 - 50	30 - 35	>35 - 50
	⌀	30, 40	30, 40	30, 40	30	40
D1		110	90	95	130	
D2		75	65	65	50	65
L1		145	95	145	95	83
L2		40	35	35	40	
L3		20	18	18	20	
g		M10				

		Model		
		V	VI	VII
Tube diameters Ø		50 - 70	145 - 160	125 - 150
d	Ø	30 - 40	30 - 80	30 - 60
	30	30	30, 40, 50	30, 40, 50
D1		90	170	160
D2		45	140	120
L1		145	150	145
L2		35	35	35
L3		18	18	18
g		M10		

Special designs on request

Aluminium cones Model VIII - XIII



		Model			
		VIII		IX	X
		⌀ 30	⌀ 40		
Tube diameters Ø		60 - 120	68 - 120	120 - 180	225 - 280
d	Ø	30 - 40	>40 - 50	30 - 70	30 - 80
	⌀	30	40	40, 50	40, 50
D1		130		190	290
D2		55	63	115	220
L1		185	168	185	185
L2		35			
L3		18			
g		M10			

		Model		
		XI	XII	XIII
Tube diameters Ø		275 - 330	75 - 180	165 - 215
d	Ø	40 - 100	30 - 50	30 - 60
	⌀	40, 50	30, 40	30, 40
D1		340	190	225
D2		270	70	160
L1		185	155	185
L2		35		
L3		18		
g		M10		

Special designs on request

Brake schedule



	ESB	DSB	Multi 500	Multi 1500	Multi 3000
VT-/C-Chuck	Nm* / (Nm**) / ft/lb* / (ft/b**)	Nm* / (Nm**) / ft/lb* / (ft/b**)	Nm pro Sattel / (Nm***) / ft/lb* / (ft/b**)	Nm pro Sattel / (Nm***) / ft/lb* / (ft/b**)	Nm pro Sattel / (Nm***) / ft/lb* / (ft/b**)
Mini	30 / 22				
19-25	40/(90) / 29/(65)				
22-30	40/(90) / 29/(65)		50/(300) / 36/(220)	80/(640) / 58/(460)	120/(1200) / 87/(870)
30-40	40/(90) / 29/(65)	200/(440) / 140/(320)	50/(300) / 36/(220)	80/(640) / 58/(460)	120/(1200) / 87/(870)
40-50	50/(110) / 36/(80)	200/(440) / 140/(320)	50/(300) / 36/(220)	80/(640) / 58/(460)	120/(1200) / 87/(870)
50-80		200/(440) / 140/(320)	50/(300) / 36/(220)	80/(640) / 58/(460)	120/(1200) / 87/(870)
Sliding-chuck					
22-30	40/(90) / 29/(65)		50/(300) / 36/(220)	80/(640) / 58/(460)	120/(1200) / 87/(870)
30-40	40/(90) / 29/(65)	200/(440) / 140/(320)	50/(300) / 36/(220)	80/(640) / 58/(460)	120/(1200) / 87/(870)
40-50	50/(110) / 36/(80)	200/(440) / 140/(320)	50/(300) / 36/(220)	80/(640) / 58/(460)	120/(1200) / 87/(870)
Series A					
A40	40/(90) / 29/(65)	200/(440) / 140/(320)	50/(300) / 36/(220)	80/(640) / 58/(460)	120/(1200) / 87/(870)
A50	50/(110) / 36/(80)	200/(440) / 140/(320)	50/(300) / 36/(220)	80/(640) / 58/(460)	120/(1200) / 87/(870)
A80		200/(440) / 140/(320)	50/(300) / 36/(220)	80/(640) / 58/(460)	120/(1200) / 87/(870)
Series P					
P40		200/(440) / 140/(320)	50/(300) / 36/(220)	80/(640) / 58/(460)	120/(1200) / 87/(870)
P50		200/(440) / 140/(320)	50/(300) / 36/(220)	80/(640) / 58/(460)	120/(1200) / 87/(870)

All data is on a basis of 5 bar (15 psi) pressure.

- * max. brake torque
- ** with membrane cylinder II
- *** with max. no. of callipers



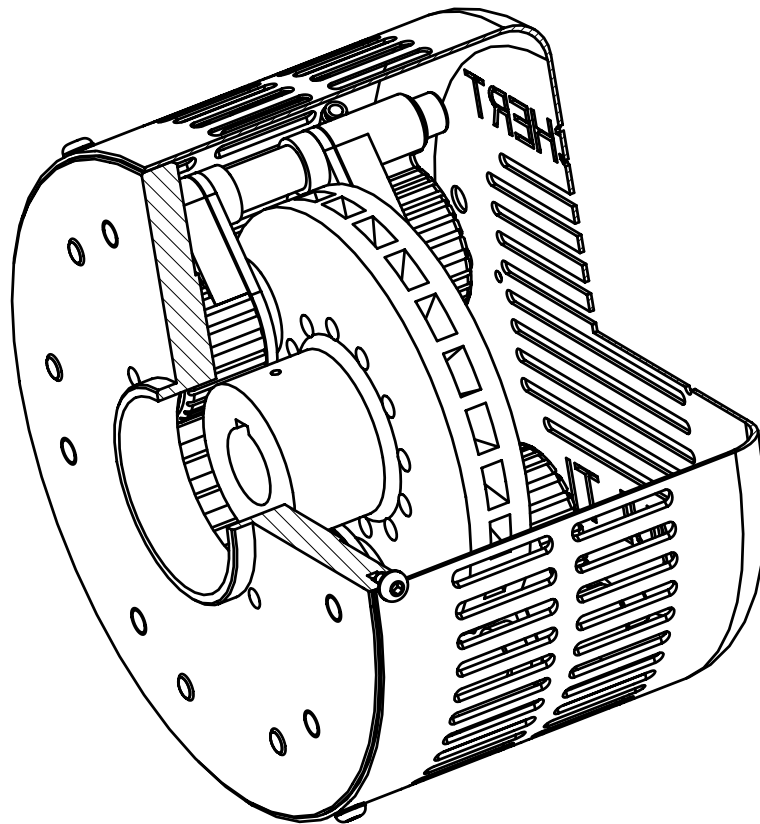
Function:

The basic set contains a mounting plate, brake disc and cover. This basic set can be equipped to handle various torque requirements as shown in the chart below.

The Multi 500 has 6 callipers. This brake system can accommodate as much as 1200 Nm or 25 ft/lb of torque. With its adaptable mounting system this brake can be used in nearly every application.

Advantages of the system:

- easily adaptable to different torque ranges and power requirements
- quick and easy change out of brake linings
- ventilated brake rotor
- adaptable to many different mounting arrangements
- wide range of torque and performance requirements
- our huge inventory of these standard parts makes maintenance easy and less expensive
- brake pad dampeners reduce noise and vibration



Easy Wind Tension Control



Easy Wind:
Standard solution for one roll

Technical data	
Control box (W x H x D):	300 x 300 x 120 mm
Sensor:	300 x 300 x 120 mm
Electricity:	230 V / 50 Hz / 30 W
Compressed air:	max. 7 bar (105 psi) filtered 0,3 µm
Output pressure:	max. 5 bar
Roll / lap / reel Ø:	max. 1600 mm
Enclosure:	IP54

Options:

Easy Wind Twin: The solution for two rolls (two sensors, one control unit)

Easy Wind Sensitive: Each brake caliper can be shut on or off

Weiter Ausführungen auf Anfrage.

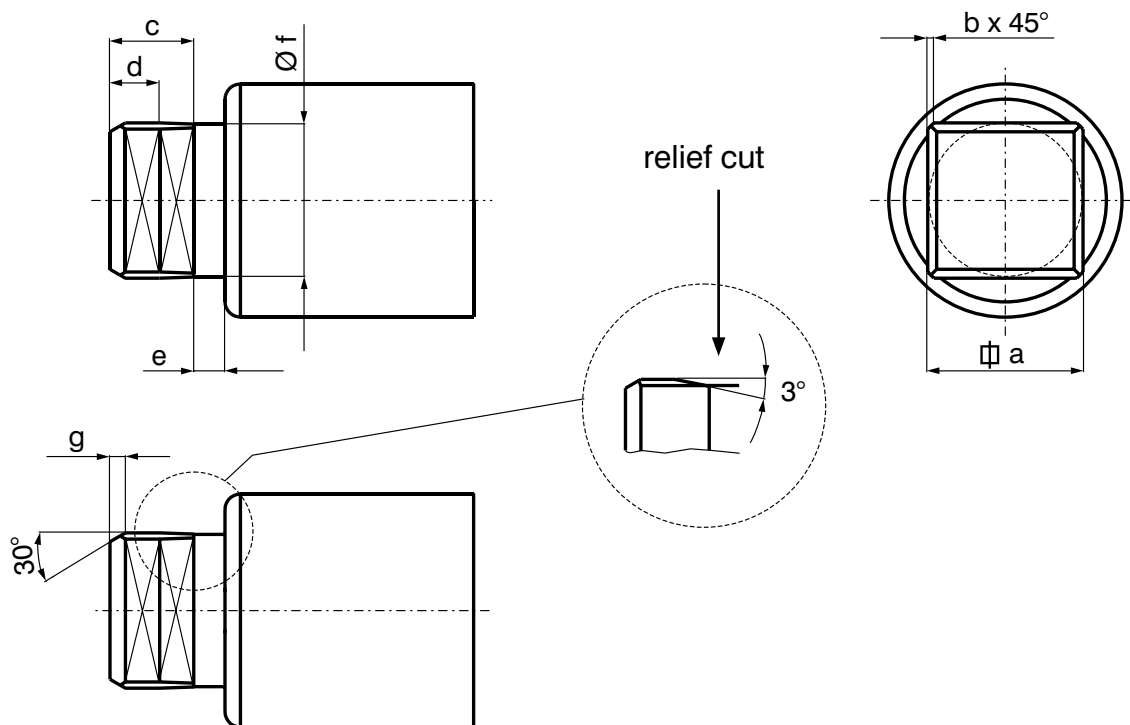
Error description	Possible faults
It is difficult to open and close the hand wheel	- The journal was not made to specification as shown on catalogue page 2.10 - The journal tolerance is incorrect - There is no chamfer on the ends of the roll shaft - The Safety Chucks are not in alignment - The roll shaft 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	- 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	- 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.	- 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	- 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	- 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)
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 Warning: This is a dangerous situation	- 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

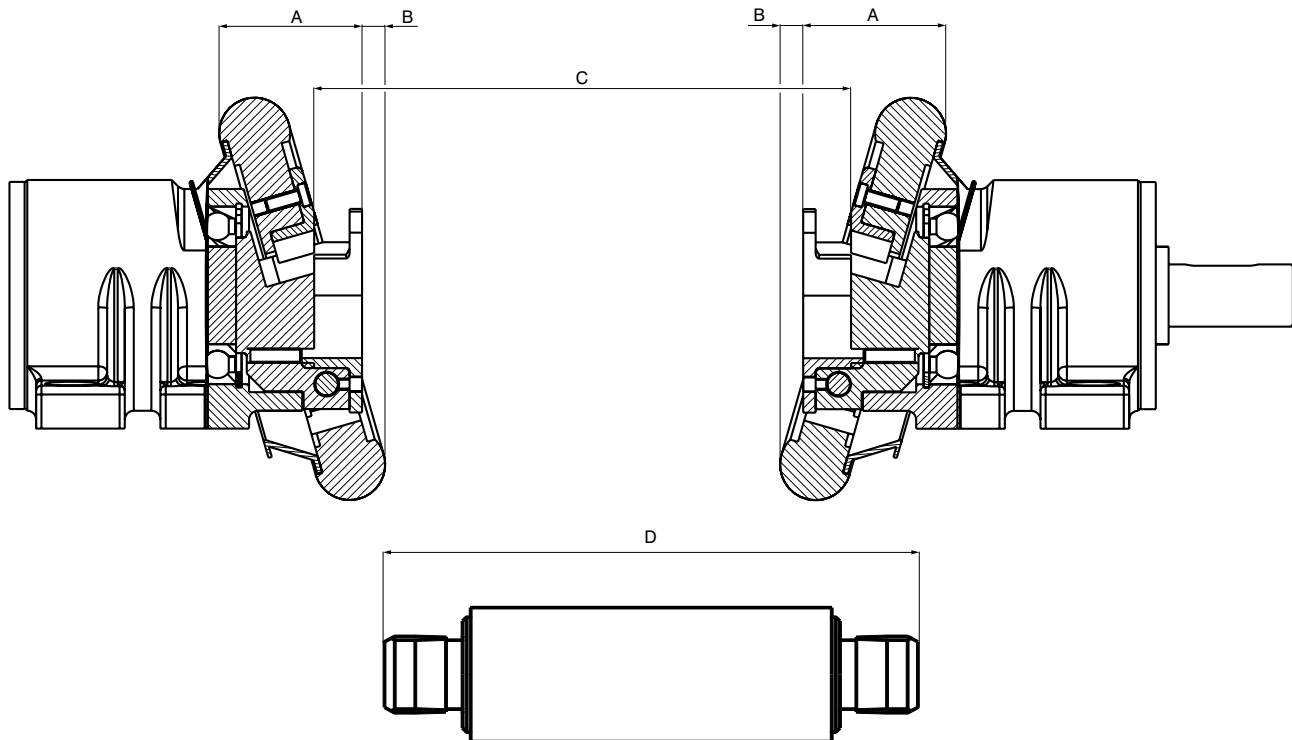


Mögliche Fehlerursachen

1. The shaft journal is not manufactured per our specifications (catalog page 5.10 – 5.22). Very often, the relief cut on the journal does not exist



2. Too large axial play of the winding shaft. (max. 1mm)



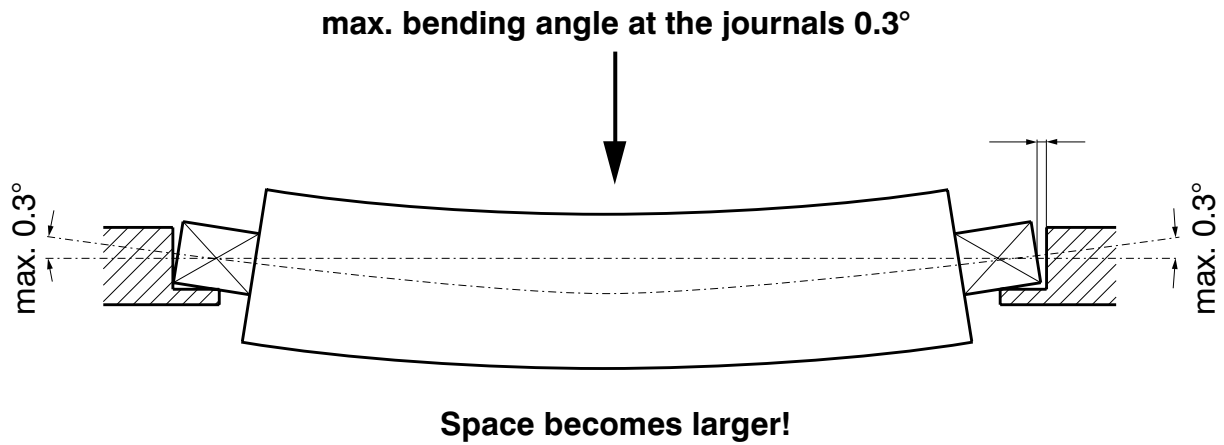
	A	B	$x=(C-D)$	$y=(C-D)$
Mini	38	8	0,5	1
19-25	54	9	0,5	1
22-30	61	8	0,5	1
30-40	73	13	0,5	1
40-50	81	13	0,5	1
50-80	106	16	0,5	1
80-120	145	18	0,5	1
120-180	175	24	1	2
170-200	216	24	1	2
170-230	230	18	1	2

x = min. clearance

y = max. clearance

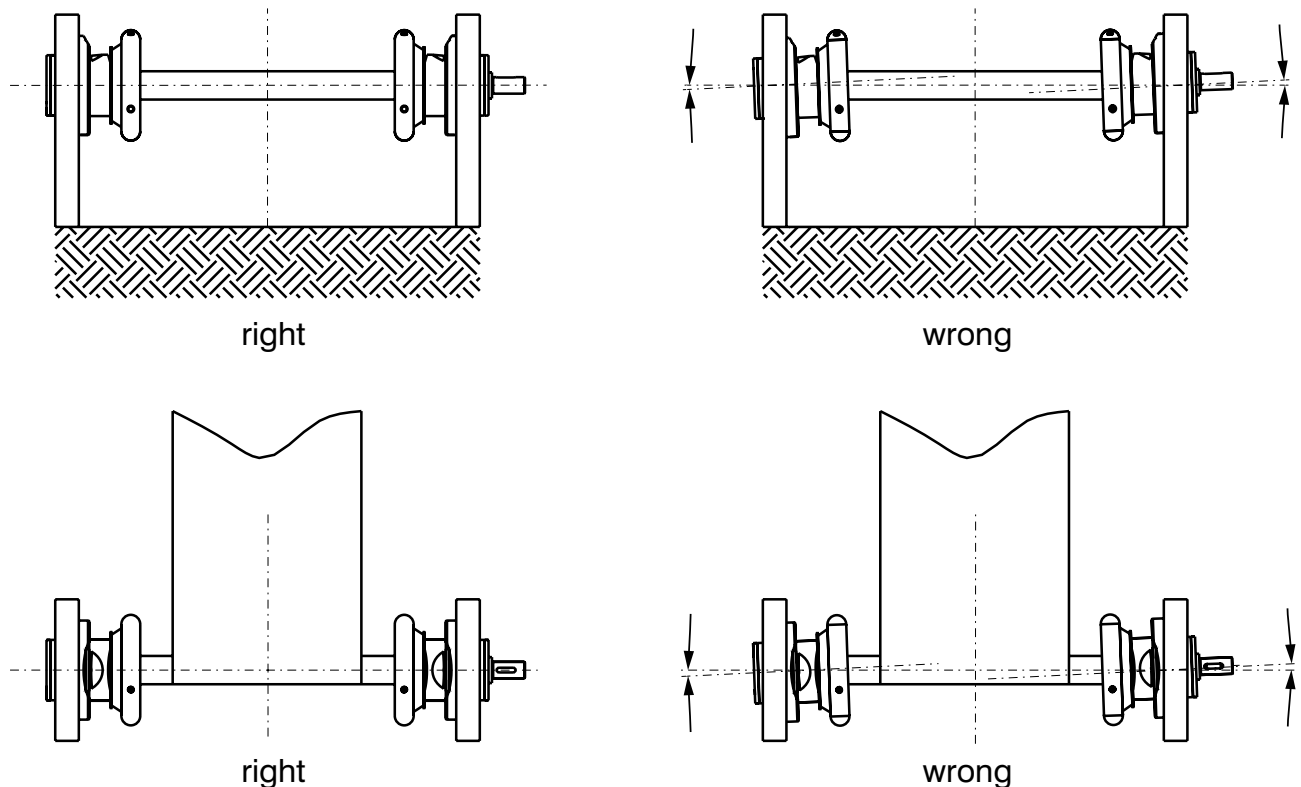
On flange chucks you have the possibility to lay spacers between flange and machineframe. On foot mounted chucks you can loosen the fixing screws and adjust the distance between the chucks.

3. Deflection of the winding shaft is bigger than our specifications. (max. 0.3°).



4. Weight and / or torque are out of the max. value.

5. The axial alignment of the chucks are not exactly enough.



Reasons can be imprecise assembly and deformation of the machine frame during operation.

Reasons for wear on the housing

1. The chuck is not closed manually (by hand). The result is, that the chuck will be closed automatically with help of the chamfer on the housing
2. The shaft journal is not manufactured per our specifications (catalog page 5.10 – 5.22). Very often, the relief cut on the journal does not exist.
3. Too large clearance on the winding shaft (max. 1 mm). On flange chucks you have the possibility to lay spacers between flange and machineframe.
On foot mounted chucks you can loosen the fixing screws and adjust the distance between the chucks.
4. Deflection of the winding shaft is bigger than our specifications (max. 0,3).
Please see catalog page 5.02 + 5.03
5. Weight and / or torque are out of the max. value
6. The axial alignment of the chucks are not exactly enough. Reasons are imprecise assembly and deformation of the machine frame during operation.

