

**Mechanical
face drivers with
vibration damping
system**

SM

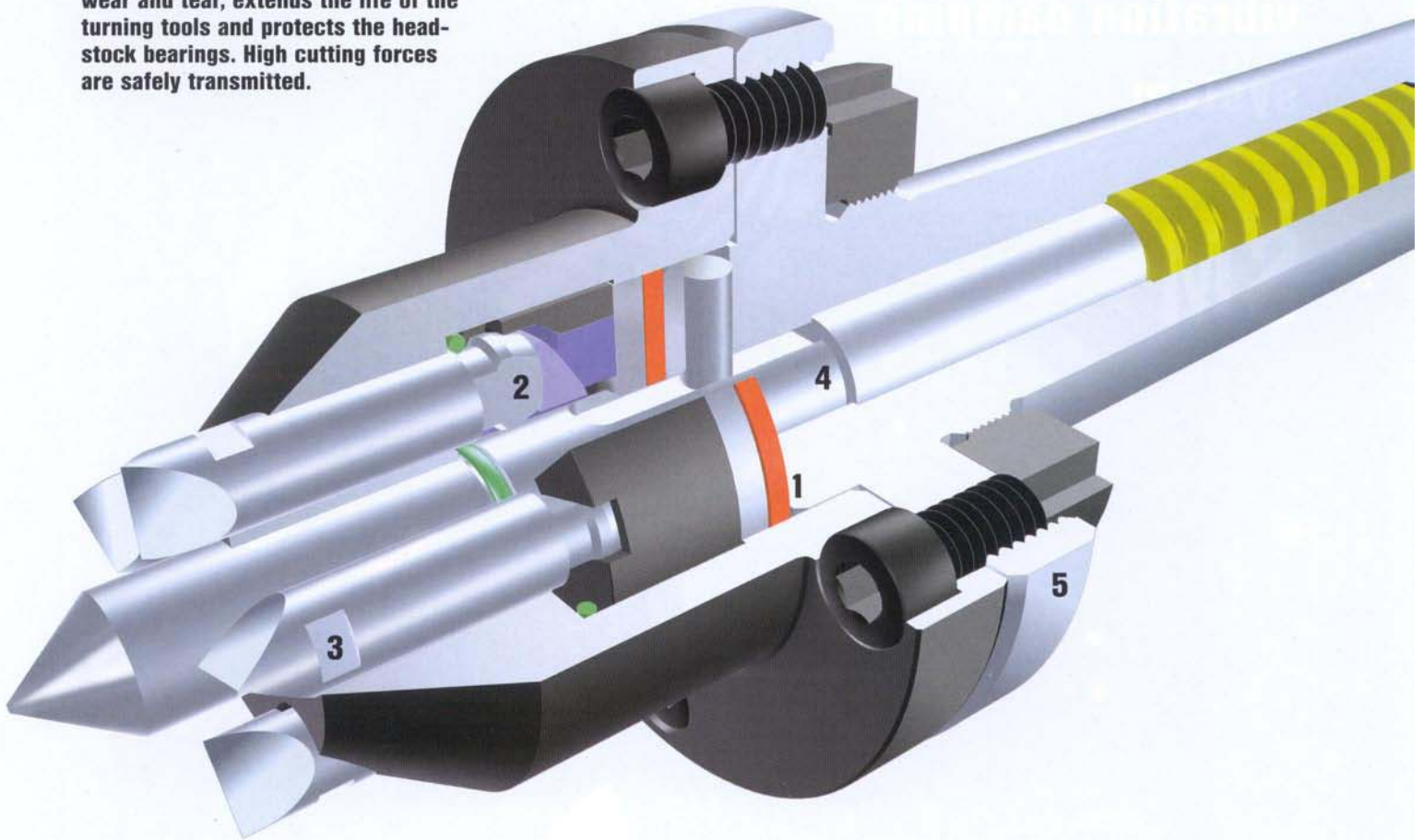


Constant reference point + vibration damping

BRUCKNER[®]

In the BRUCKNER-face driver the advantages of mechanical compensation are combined with the vibration damping of hydraulics. **VDS - the vibration damping system - prevents the driving pins from undue wear and tear, extends the life of the turning tools and protects the head-stock bearings. High cutting forces are safely transmitted.**

VDS
Vibration damping system
(Europ. Patent)



The design

In conceiving the BRUCKNER-face driver we aimed for minimum overhang and constrictions in the working area.

Available with Morse taper or for flange-mounting for flanges to DIN (German Industrial Standard) or special flanges.

Turning range starting at 6 mm.

Max. concentricity runout 0.02 mm.

Utilization: on lathes and NC lathes.

Cylindrical grinding applications must be examined in each case.

1 VDS

The vibration-damping element reduces vibrations occurring during operation.

Result:

- Longer life of driving pins and turning tools.
- Improved workpiece surfaces due to

2 Constant point of reference

The high-speed steel driving pins are supported by a hardened sphere segment within the basic body. Advantage: Exact lengthwise turning. Out-of-square workpiece faces are compensated for. High operating safety.

3 Easy pin changing

The driving pins and the centrepoint can be taken out from the front. The flats on the sides of the pins enable the user to easily extract them with a screwdriver.

4 Spring-loaded centrepoint

Compensates for varying depth of centrebores.

5 Clamping in chuck jaws

using the external diameter provided.

Direction of rotation of the machine spindle

right-hand right- and left-hand left-hand

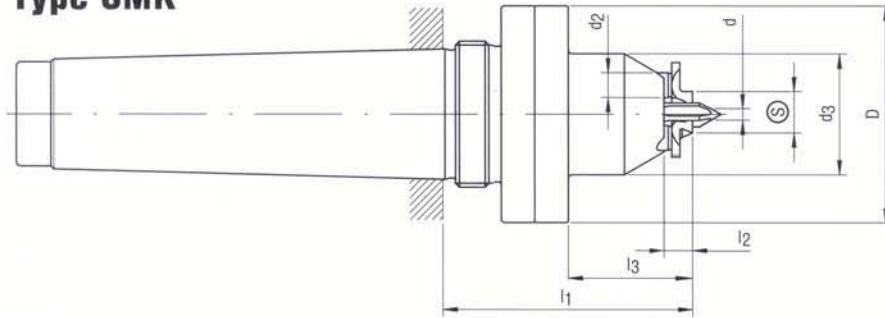
AR	AS	AL
BR	BS,BS1,BS2	BL
C	CS	C



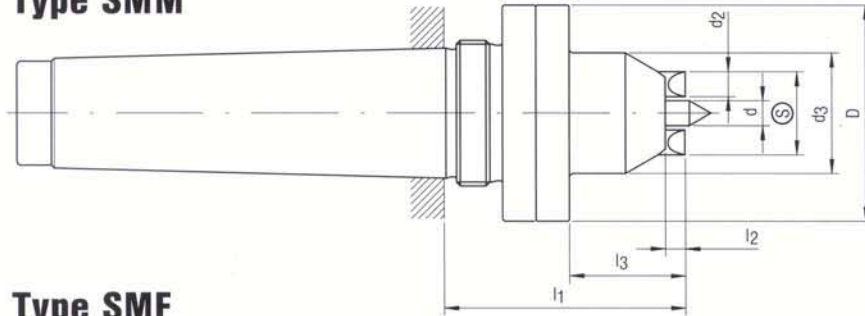
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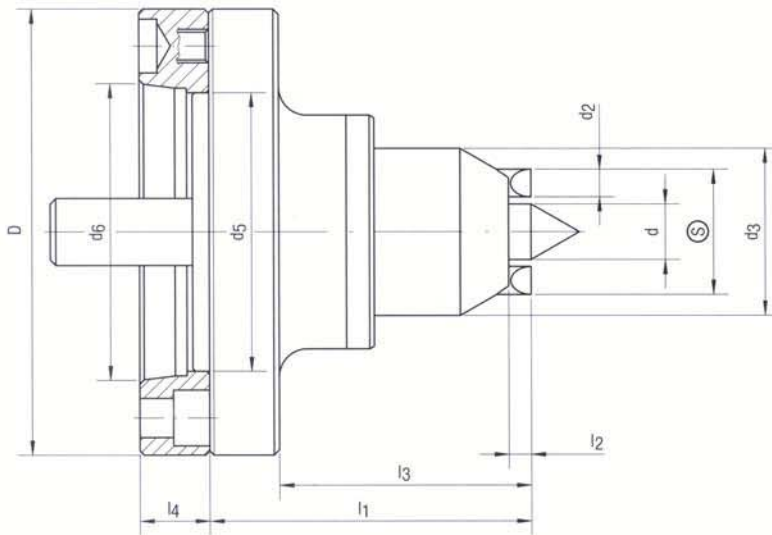
Type SMK



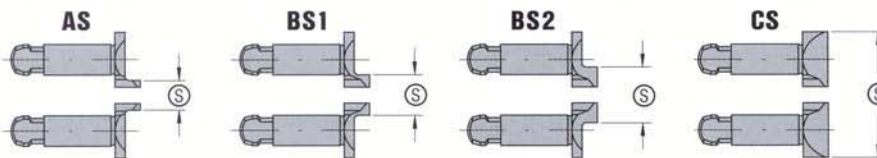
Type SMM



Type SMF



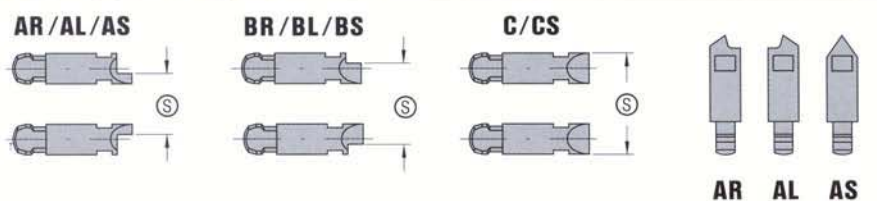
Driving pins for type SMK



● **Symmetrical form**

Form AS, form BS 1, form BS 2, form CS for right- and left-hand rotation during the same turning operation.

Driving pins for types SMM and SMF



● **Saw-tooth form**

Form C for right- or left-hand rotation (by turning the cutting edge by 180°). Forms AR and BR for right-hand rotation, Forms AL and BL for left-hand rotation.

● **Symmetrical form**

Form AS, form BS, form CS for right- and

**Mechanical face driver
with vibration damping system**



Basic body incl. draw-off nut, without driving pins									
Type	ID.No.	Morse taper	d mm	d2 mm	d3 mm	D mm	l1 mm	l2 mm	l3 mm
SMK	6712	2	3	6	29	52	66	8	34
	6713	3	3	6	29	52	66	8	34
	6714	4	3	6	29	52	66	8	34
	6715	5	3	6	29	52	66	8	34

Driving pins		
ID.No.	Turning range mm	Clamping-Ø \varnothing /mm
671AS	6 - 10	5,8
671BS1	9 - 13	8
671BS2	12 - 16	11
671CS		*

*to be ground to suit specific diameters

SMM	6722	2	6	6	29	52	64	6	32
	6723	3	6	6	29	52	64	6	32
	6724	4	6	6	29	52	64	6	32
	6725	5	6	6	29	52	64	6	32

672 AL/AR/AS	13 - 20	12
672 BL/BR/BS	17 - 40	16
672 C/CS	21 - 50	20

SMM	6733	3	12	8	43	70	78	7	46
	6734	4	12	8	43	70	79	7	46
	6735	5	12	8	43	70	81	7	46

673 AL/AR/AS	22 - 38	21
673 BL/BR/BS	27 - 62	25
673 C/CS	32 - 77	31

SMM	6744	4	20	10	60	86	89	8	56
	6745	5	20	10	60	86	91	8	56

674 AL/AR/AS	33 - 58	31
674 BL/BR/BS	40 - 92	37
674 C/CS	46 - 112	45

SMM	6755	5	25	18	90	110	126	13	78
	6756	6	25	18	90	110	131	13	78

675 AL/AR/AS	42 - 90	41
675 BL/BR/BS	54 - 132	53
675 C/CS	66 - 162	65

Version for flange-mounting without driving pins									
Type	ID.No.	d mm	d2 mm	d3 mm	D mm	d5 mm	l1 mm	l2 mm	l3 mm
SMF	6710	3	6	29	160	100	117	8	92
	6720	6	6	29	160	100	115	6	90
	6730	12	8	43	160	100	115	7	90
	6740	20	10	60	160	100	115	8	90
	6750	25	18	90	160	100	119	13	99

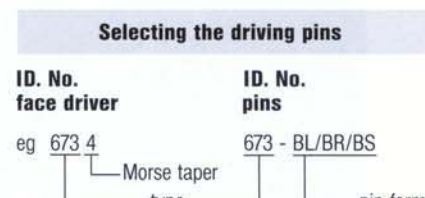
Driving pins	
671	AS/BS1/BS2/CS
672	
673	AL/AR/AS/BL/BR/BS/C/CS
674	
675	

Intermediate flanges						
DIN*	ID.No.	size	D mm	d5 mm	d6 mm	l4 mm
55026-A	6705.26	5	160	100	82.563	25
55026-A	6706.26	6	160	100	106.375	25
55026-A	6708.26	8	210	100	139.719	30
55026-A	6711.26	11	280	100	196.869	35
55027	6705.27	5	160	100	82.563	25
55027	6706.27	6	160	100	106.375	25
55027	6708.27	8	210	100	139.719	30
55027	6711.27	11	280	100	196.869	35

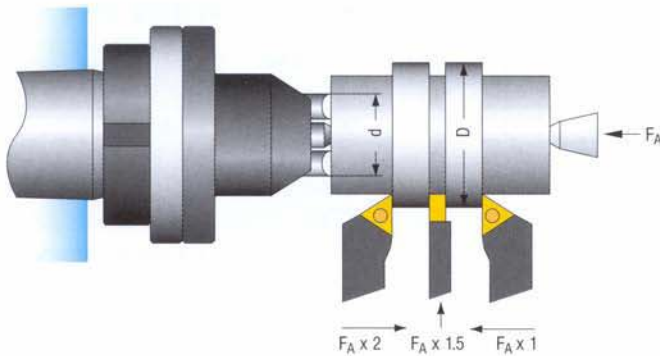
Workpiece weight max.	
ID.No.	max. daN (1daN = 1,02 kp)
6712 to 6715, 6710	20
6722 to 6725, 6720	25
6733 to 6735, 6730	40
6744, 6745, 6740	70
6755, 6756, 6750	120

*German Industrial Standard Other flange versions on request

Spare centrepoints			
Version	ID.No.	Ø (mm)	length (mm)
671..	671ZS	6	50
672..	672ZS	6	50
673..	673ZS	12	70
674..	674ZS	20	90
675..	675ZS	25	127



Determination of tailstock force



Criteria for the determination of the tailstock force F_A

Tensile strength of material

The diagram is valid for a material with a tensile strength of up to 700 N/mm². The tailstock force must be increased by 10% for every additional 100 N/mm².

Number of cutting tools

When using several cutting tools the cutting diameters have to be added up.

Mode of operation

Depending on the method of working, the tailstock force F_A is to be multiplied with the following factors:

Mode of operation	factor
feed against headstock	1.0
feed against tailstock	2.0
recessing	1.5

Calculation example

cutting depth $a = 5 \text{ mm}$
 feed per revolution $s = 0.3 \text{ mm}$

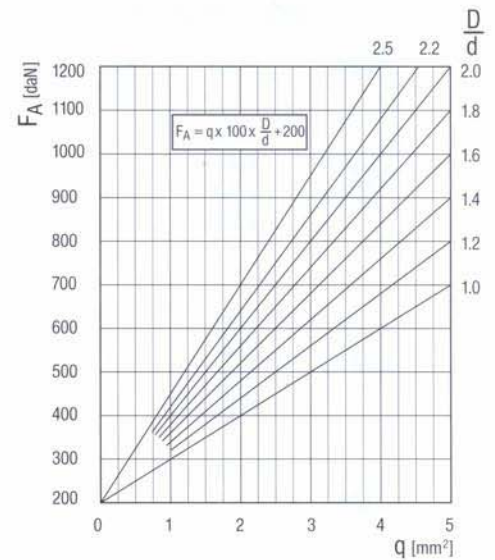
chip section $q = a \times s$
 $= 5 \text{ mm} \times 0.3 \text{ mm}$
 $= 1.5 \text{ mm}^2$

turning diameter $D = 100 \text{ mm}$
 clamping diameter $d = 45 \text{ mm}$

clamping ratio $S = \frac{D}{d} = \frac{100 \text{ mm}}{45 \text{ mm}} = 2.2$

Tailstock force $F_A = 530 \text{ daN}$

When using symmetrical driving pins the tailstock force must be increased by approx. 20%.



BRUCKNER face driver HS system Bokö with hydraulic compensation, with a working range of up to 500 mm.

Please ask for our detailed information brochures.

