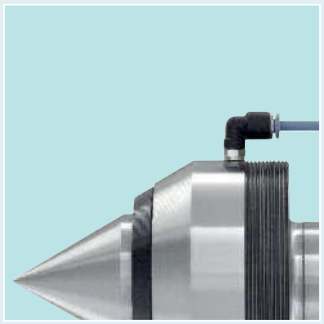
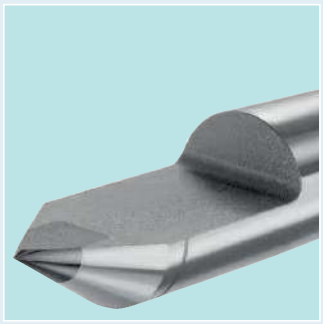
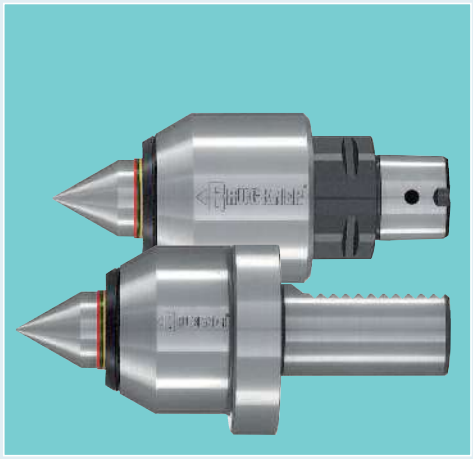
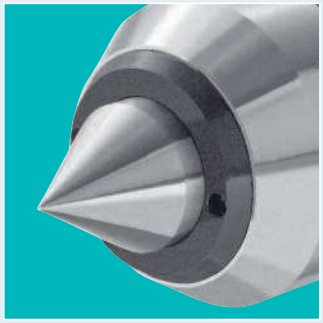
BRUCKNER®
Precision and reliability first

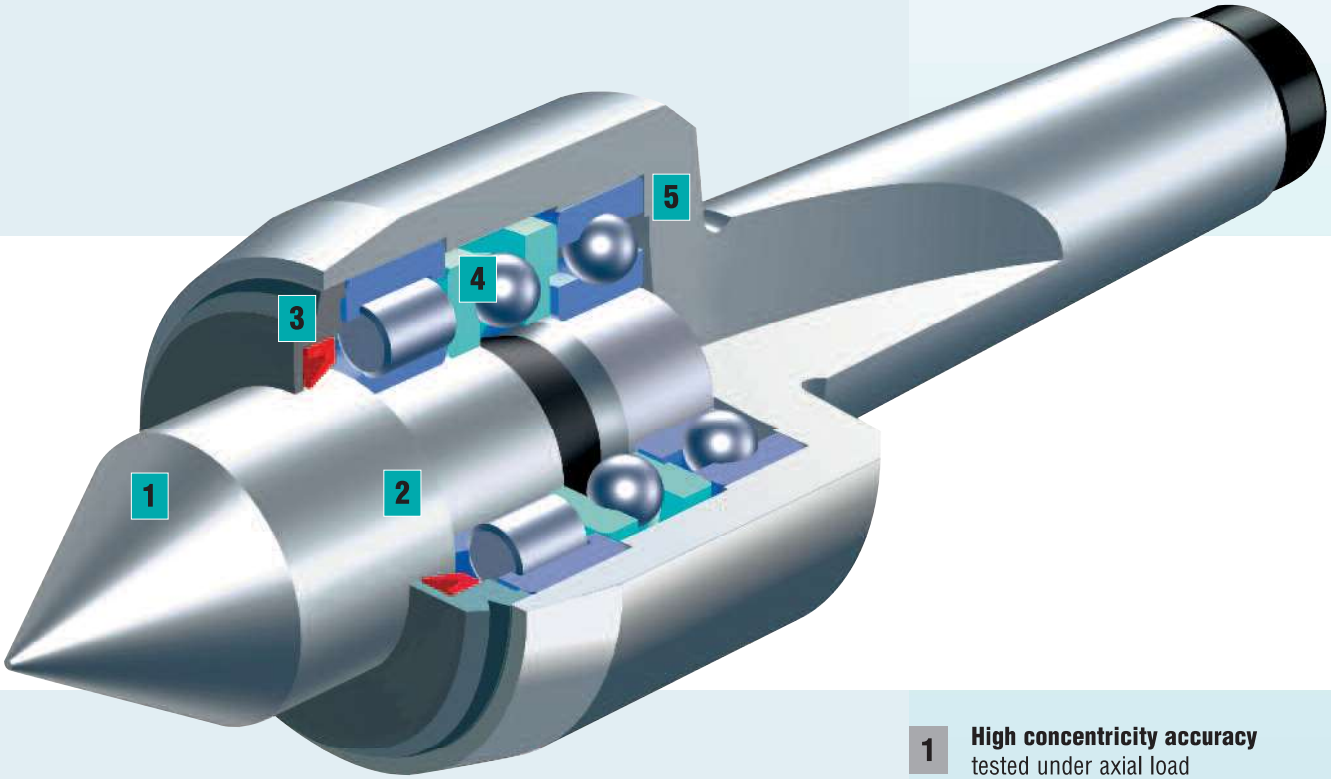




High Performance Centres

for Turning and Grinding



S Series – the classic design with head bearings
The all-rounder of our high performance live centres. The centres from our S series offer the user an economic solution for almost every standard workholding situation. From turning and cylindrical grinding to measuring and inspection, centres of the S series fulfil the high requirements of performance, precision and tool life.

Two types:
- Slim design for light-duty work
- With stronger bearings for normal to high-duty service

1 **High concentricity accuracy**
tested under axial load
guaranteed with test report

2 **Centrepoint**
of through-hardened alloy tool steel

3 **Seal ring**
protects the bearings from dirt and coolant. Optionally available with supplementary seal (page 10)

4 **Large-dimensioned precision roller bearings**
for supporting the radial and axial forces.
Maintenance-free due to permanent lubrication

5 **Housing**
of high tensile alloy tool steel
housing and shank are case-hardened to protect from damage

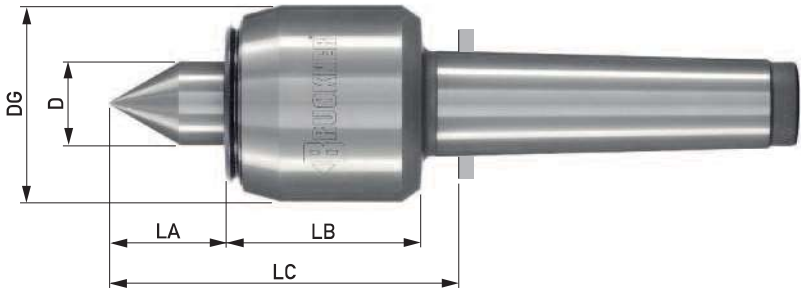
Types S, SG

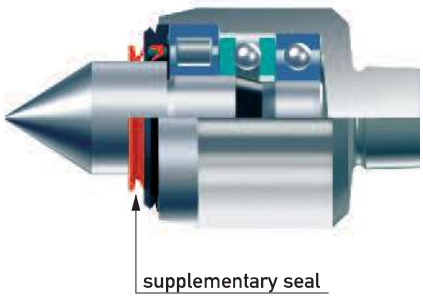
Centrepoint 60°

Runout
Type S max. 0.005 mm
Type SG max. 0.003 mm
with test report

Application
Type S – conventional turning, CNC turning, roughing, finishing
Type SG – for turning and grinding operations demanding high accuracy, measuring

Supplementary seal
For operations involving heavy flows of coolant or large quantities of dust and dirt (e. g. cylindrical grinding), a supplementary seal can be fitted onto the centrepoint. The seal turns together with the centrepoint, seals the protection cap and additionally works as a splash ring.





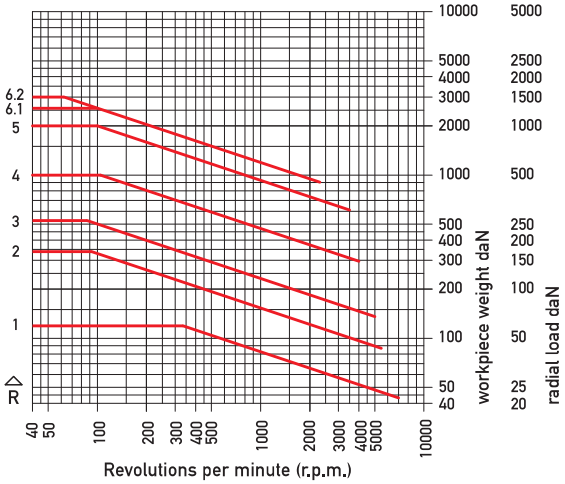
Type S	ID.No.	5001	5001-2	5001-3	5002	5003	5006	5004	5007	5005	5008	5009
Type SG	ID.No.	5121	5121-2	5121-3	5122	5123	5126	5124	5127	5125	5128	5129
Morse taper		1	2	3	2	3	3	4	4	5	5	6
D		13	13	13	20	20	25	25	35	45	58	58
DG		32	32	32	45	45	58	58	76	95	120	120
LA		19	19	19	24	24	34	34	43	59	63	63
LB		38	38	38	52	52	58	58	68	89	102	102
LC		63	63	64	82	83	99	101	120	159	178	178
Workpiece weight max. daN*		120	120	120	340	340	525	525	1000	2000	2500	3000
r.p.m. max.*		7000	7000	7000	5500	5500	5000	5000	4000	3500	2300	2300
radial/axial load graph		R1/A1	R1/A1	R1/A1	R2/A2	R2/A2	R3/A3	R3/A3	R4/A4	R5/A5	R6.1/A6	R6.2/A6
supplementary seal	ID.No.	V13	V13	V13	V20	V20	V25	V25	V35	V45	V58	V58

► With draw-off thread see pages 16/17

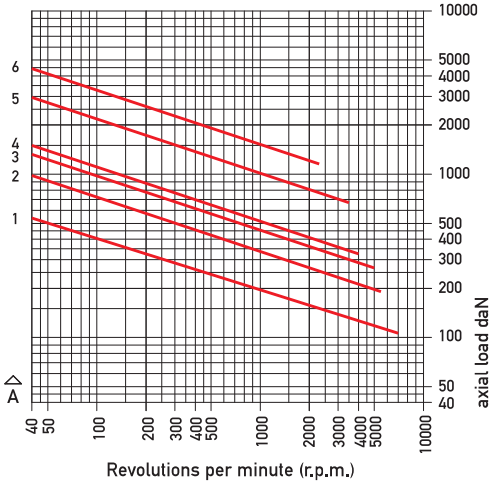
*observe the load graphs

Radial and axial loads for a bearing life of 2.000 operating hours (calculation example on page 11)

Radial – Types S, SG

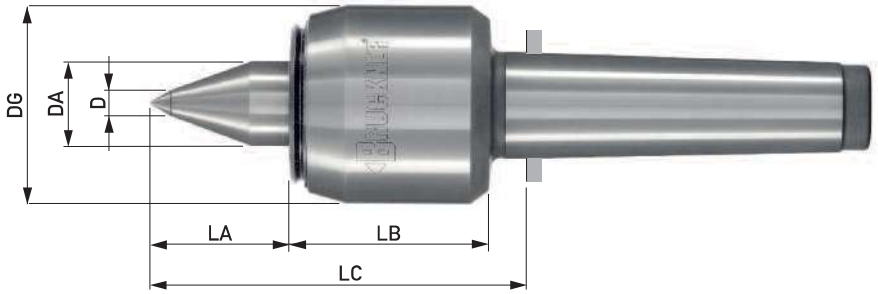


Axial – Types S, SG



Types SKOP, SKOPG

Centrepoint 60°/40° extended



Runout
Type SKOP max. 0.005 mm
Type SKOPG max. 0.003 mm
with test report

Application
Whenever the working distance between centre and workpiece is confined.
The extended, slim centrepoint can enlarge this space.

Type SKOP – conventional turning, CNC turning, roughing, finishing
Type SKOPG – for turning operations demanding high accuracy

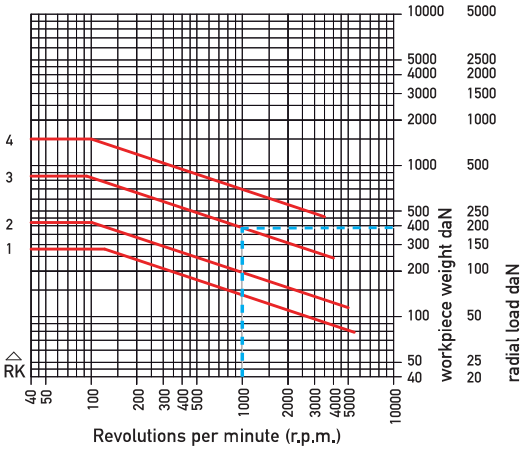
Type SKOP	ID.No.	5362	5363	5366	5364	5367	5365
Type SKOPG	ID.No.	5362G	5363G	5366G	5364G	5367G	5365G
Morse taper		2	3	3	4	4	5
DA		20	20	25	25	35	45
D		6	6	8	8	10	12
DG		45	45	58	58	76	95
LA		30	30	42	42	54	70
LB		51	51	58	58	68	89
LC		87	89	106	108	132	169
Workpiece weight max. daN*		280	280	420	420	850	1500
r.p.m. max.*		5500	5500	5000	5000	4000	3500
radial/axial load graph		RK1/AK1	RK1/AK1	RK2/AK2	RK2/AK2	RK3/AK3	RK4/AK4
supplementary seal	ID.No.	V20	V20	V25	V25	V35	V45

► With draw-off thread see pages 16/17

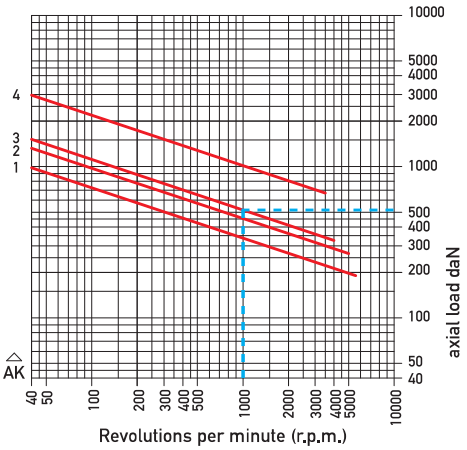
*observe the load graphs

Radial and axial loads for a bearing life of 2.000 operating hours

Radial – Types SKOP, SKOPG



Axial – Types SKOP, SKOPG



Determination of admissible load

Example: Type SKOP 5367, MK 4

Load graph: radial RK3/axial AK3
Permissible load at 1000 r.p.m.
Radial load F_R = 190 daN
Workpiece weight F_W = 380 daN
Axial load F_A = 510 daN
The radial load F_R determines the radial load capacity of a centre.

$F_R = \frac{F_W}{2}$ ± radial cutting forces + centrifugal force**

**for unbalanced workpieces
(1 daN = 1,02 kp)

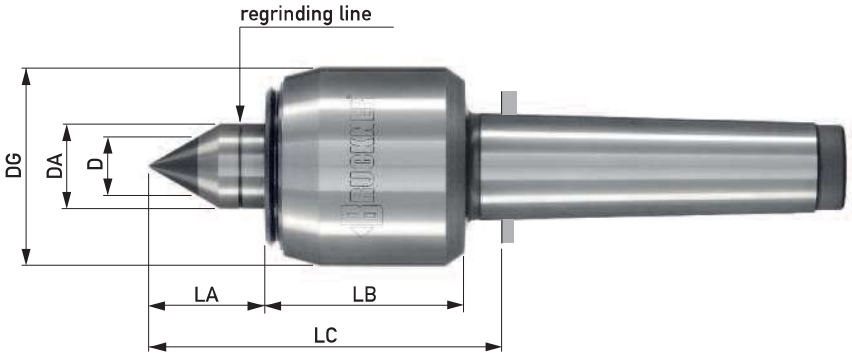
Types SH, SHG

Centrepoint 60° carbide-tipped
Regrindable to the regrinding line

Runout
Type SH max. 0.005 mm
Type SHG max. 0.003 mm
with test report

Application
For cylindrical grinding and turning operations during which additional stress is put on the centrepoint (e. g. large series, change of workpiece when spindle is turning, hard workpieces, extremely small workpiece centres).

For cylindrical grinding operations we recommend the use of our **supplementary seal** (fig. on page 10)

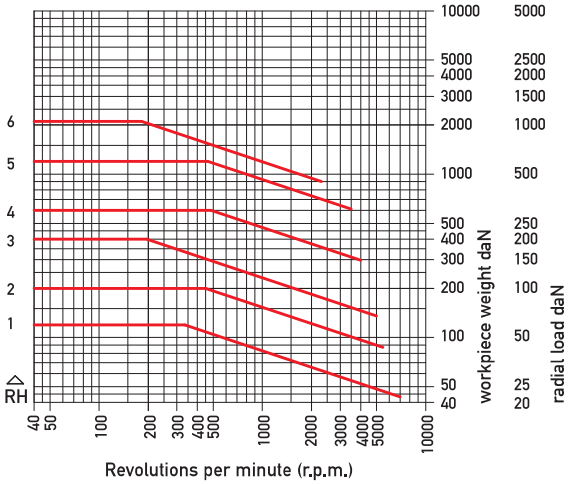


Type SH	ID.No.	5241-2	5241-3	5242	5243	5246	5244	5247	5245	5249
Type SHG	ID.No.	5251-2	5251-3	5252	5253	5256	5254	5257	5255	5259
Morse taper		2	3	2	3	3	4	4	5	6
DA		13	13	20	20	25	25	35	45	58
D		7	7	11	11	18	18	18	18	30
DG		32	32	45	45	58	58	76	95	120
LA		19	19	24	24	34	34	43	59	63
LB		38	38	52	52	58	58	68	89	102
LC		63	64	82	83	99	101	120	159	178
Workpiece weight max. daN*		120	120	200	200	400	400	600	1200	2100
r.p.m. max.*		7000	7000	5500	5500	5000	5000	4000	3500	2300
radial/axial load graph		RH1/AH1	RH1/AH1	RH2/AH2	RH2/AH2	RH3/AH3	RH3/AH3	RH4/AH4	RH5/AH5	RH6/AH6
supplementary seal	ID.NO.	V13	V13	V20	V20	V25	V25	V35	V45	V58

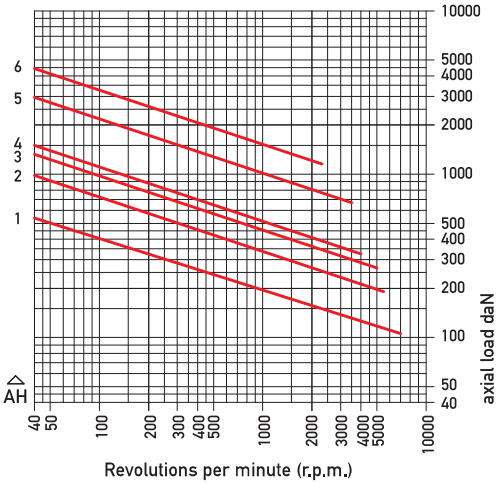
MT1 5241/5251 on request
*observe the load graphs
► With draw-off thread see pages 16/17

Radial and axial loads for a bearing life of 2.000 operating hours (calculation example on page 11)

Radial – Types SH, SHG



Axial – Types SH, SHG



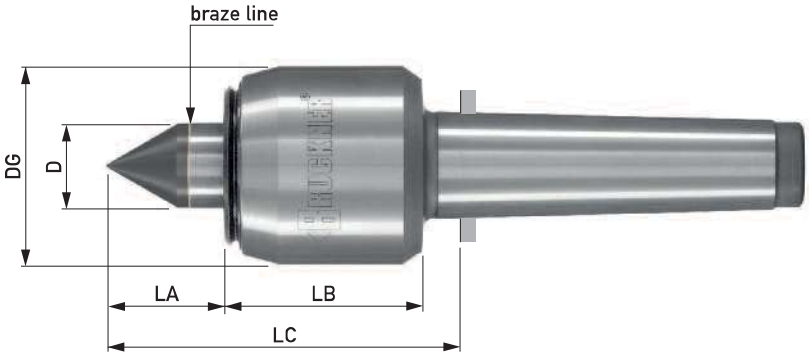
Types SV, SVG

Centrepoint 60° full carbide with safety core sa•co®
Regrindable to the braze line

Runout
Type SV max. 0.005 mm
Type SVG max. 0.003 mm
with test report

Application
Same as type SH, SHG.
The point angle of 60° up to the large diameter can be utilised for loading workpieces.

For cylindrical grinding operations we recommend the use of our **supplementary seal** (fig. on page 10)



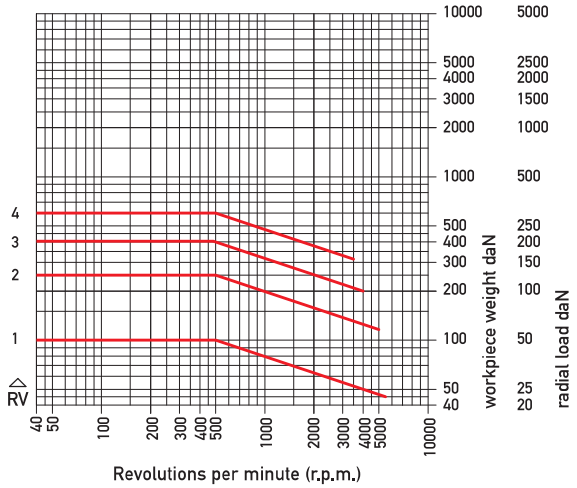
A safety core is integrated in the carbide point of type SV, SVG.
If the interface of carbide and basic material becomes overstressed, e.g. through operating error or mishandling, the safety core prevents the carbide with the loaded component from slipping. Thus high consequential damage is avoided.

Type SV	ID.No.	5242ZV20	5243ZV20	5246ZV25	5244ZV25	5247ZV35	5245ZV45
Type SVG	ID.No.	5252ZV20	5253ZV20	5256ZV25	5254ZV25	5257ZV35	5255ZV45
Morse taper		2	3	3	4	4	5
D		20	20	25	25	35	45
DG		45	45	58	58	76	95
LA		24	24	34	34	43	59
LB		52	52	58	58	68	89
LC		82	83	99	101	120	159
Workpiece weight max. daN*		100	100	250	250	400	600
r.p.m. max.*		5500	5500	5000	5000	4000	3500
radial/axial load graph		RV1/AV1	RV1/AV1	RV2/AV2	RV2/AV2	RV3/AV3	RV4/AV4
supplementary seal	ID.No.	V20	V20	V25	V25	V35	V45

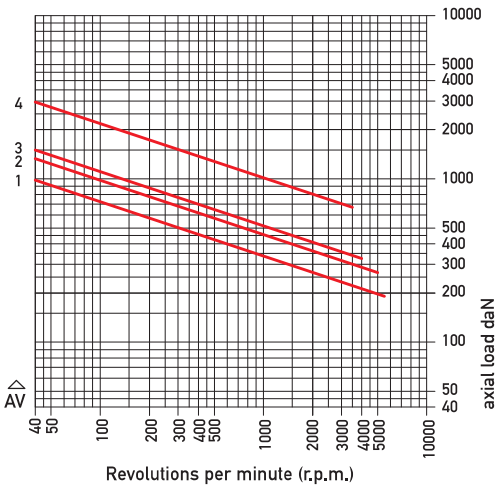
*observe the load graphs

Radial and axial loads for a bearing life of 2.000 operating hours (reading example on page 11)

Radial – Types SV, SVG



Axial – Types SV, SVG



Types SE, SEG

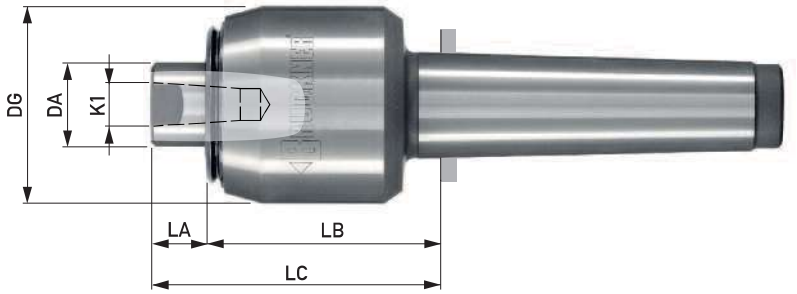
Centrepoint with 1:7.5 internal taper for interchangeable inserts

Runout
Type SE max. 0.005 mm
Type SEG max. 0.003 mm
with test report

Application
For one off, small and large batch production, measuring.

Advantages
As the centrepoint wears only the insert has to be changed and once again the high performance centre is ready for use. Flexibility in application is made possible by a choice of eight different insert styles (page 15).

Depending on the style the insert can be removed by its draw-off thread and draw-off nut or with spanners applied to the spanner flats.

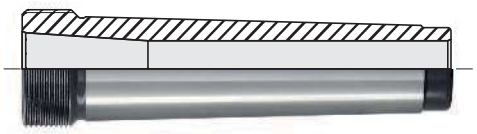


For cylindrical grinding operations we recommend the use of our **supplementary seal** (fig. on page 10)

Type SE	ID.No.	5482	5483	5486	5484	5487	5485
Type SEG	ID.No.	5482G	5483G	5486G	5484G	5487G	5485G
Morse taper		2	3	3	4	4	5
DA		20	20	25	25	35	45
DG		45	45	58	58	76	95
K1		11	11	15	15	22	28
LA		14	14	17	17	18	21
LB		52	52	58	58	68	89
LC		71	72	81	83	95	121
SW		16	16	22	22	30	41
r.p.m. max.*		5500	5500	5000	5000	4000	3500
suitable insert		482..	482..	484..	484..	487..	485..
supplementary seal	ID.No.	V20	V20	V25	V25	V35	V45
load		The load of types SE, SEG is limited by the interchangeable inserts (page 15)					

► With draw-off thread see pages 16/17

Regrinding sleeve type KE

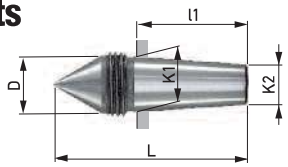


(figure and table: see page 66)
For regrinding interchangeable inserts. Combined with the interchangeable inserts, can be used as a dead centre in head- and tailstocks for special operations.

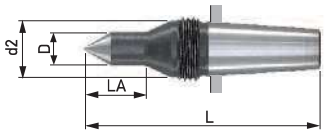
Interchangeable inserts

taper 1:7.5, in gauge accuracy

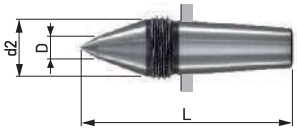
Form AO, 60°
draw-off thread



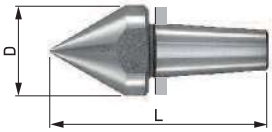
Form ASL, 60°
slim, extended
draw-off thread



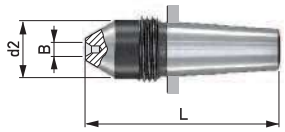
Form AKOP, 60°/40°
extended
draw-off thread



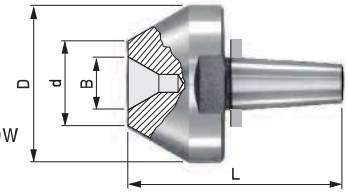
Form A, 60°
for hollow parts
spanner flat



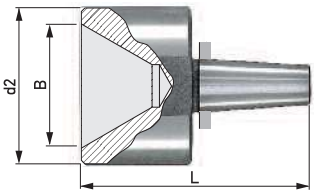
Form B, centre 60°
for centreless workpieces,
draw-off thread



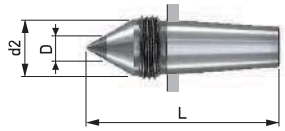
Form C, centre 60°
for centreless workpieces,
external angle 60° for hollow
parts, spanner flat



Form D, centre 60°
for centreless workpieces,
spanner flat



Form AOHM, 60°
with carbide insert
draw-off thread



Basic centre Types: SE, SEG, ASE KE (page 66)	Interchangeable inserts	radial load max. daN	inserts dimensions						thread SW	taper dimensions taper 1:7.5		
ID.No.	ID.No.		D	d2	B	d	L	LA		K1	K2	l1
5482 5482G 5483 5483G 2952A	482AO	90	11.7				45		M 14x1.5	11	8	23
	482ASL	30	6	11.7			55	15	M 14x1.5			
	482AKOP	90	5	11.7			50		M 14x1.5			
	482A	90	17				45		SW14			
	482B	90	11.7		4x2		45		M 14x1.5			
	482C	90	28		8x3	12	45		SW24			
	482D	90	28		20x6		45		SW24			
	482AOHM	60	7	11.7			45		M 14x1.5			
5484 5484G 5486 5486G 5484A 5486A 2953A	484AO	160	15.7				53		M 18x1.5	15	11	30
	484ASL	100	9	15.7			65	17	M 18x1.5			
	484AKOP	160	6	15.7			58		M 18x1.5			
	484A	160	25				60		SW22			
	484B	110	15.7		4x2		53		M 18x1.5			
	484C	160	44		15x5	24	60		SW41			
	484D	160	44		35x12		64		SW41			
	484AOHM	60	7	15.7			53		M 18x1.5			
5487 5487G 5487A 2954A	487AO	300	21.6				74		M 24x1.5	22	16.4	42
	487ASL	100	9	21.6			86	17	M 24x1.5			
	487AKOP	300	8	21.6			80		M 24x1.5			
	487A	300	32				82		SW27			
	487B	240	21.6		5x2,5		74		M 24x1.5			
	487C	300	55		20x6	30	82		SW50			
	487D	300	55		45x15		85		SW50			
	487AOHM	200	11	21.6			74		M 24x1.5			
5485 5485G 5485A 2955A	485AO	500	27.7				93		M 30x1.5	28	21	52.5
	485ASL	180	13	27.7			110	27	M 30x1.5			
	485AKOP	500	8	27.7			105		M 30x1.5			
	485A	500	45				105		SW41			
	485B	500	27.7		7x3		93		M 30x1.5			
	485C	500	65		25x6	35	105		SW55			
	485D	500	65		55x20		105		SW55			
	485AOHM	500	18	27.7			93		M 30x1.5			

ID.No.	content
P 10	100 g

Installation paste
Makes insert change easier.
Apply thinly and evenly to the insert taper.

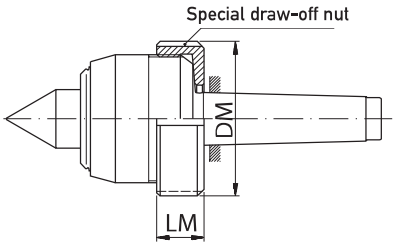
Version A

with draw-off thread

Application
With blind tailstock sleeve (without the possibility to remove the centre via a through hole) or for high precision machine tools to protect the spindle bearings or the tailstock sleeve.

For cylindrical grinding operations we recommend the use of our **supplementary seal** (as shown on page 10).

Special draw-off nut
This nut assures centre removal from the tailstock even if the sleeve diameter is smaller than the centres housing diameter.



Types A, ASG

60° centrepoint

Runout
Type AS max. 0.005 mm
Type ASG max. 0.003 mm
with test report

Technical data: see types S, SG (page 10)

Type ASKOP

60°/ 40° centrepoint
extended

Runout
max. 0.005 mm
with test report

Technical data: see type SKOP (page 11)

Type ASHG

60° centrepoint
with carbide insert

Runoutt
max. 0.003 mm
with test report

Technical data: see type SHG (page 12)
Type ASVG on request

Type ASE

Centrepoint with 1:7.5 internal taper
for interchangeable inserts

Runout
max. 0.005 mm
with test report

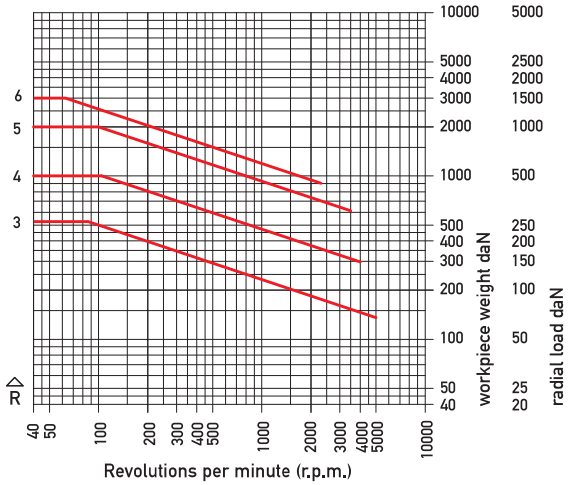
Technical data: see type SE (page 14), inserts (page 15)

Morse taper		3	4	4	5	6
Type AS	ID.No.	5006A	5004A	5007A	5005A	5009A
	radial/axial load graph	R3/A3	R3/A3	R4/A4	R5/A5	R6/A6
Type ASG	ID.No.	5126A	5124A	5127A	5125A	5129A
	radial/axial load graph	R3/A3	R3/A3	R4/A4	R5/A5	R6/A6
Type ASKOP	ID.No.	5366A	5364A	5367A	5365A	
	radial/axial load graph	RK3/A3	RK3/A3	RK4/A4	RK5/A5	
Type ASHG	ID.No.	5256A	5254A	5257A	5255A	
	radial/axial load graph	RH3/A3	RH3/A3	RH4/A4	RH5/A5	
Type ASE	ID.No.	5486A	5484A	5487A	5485A	
	load	The load of type ASE is limited by the interchangeable inserts (page 15)				
supplementary seal	ID.No.	V25	V25	V35	V45	V58

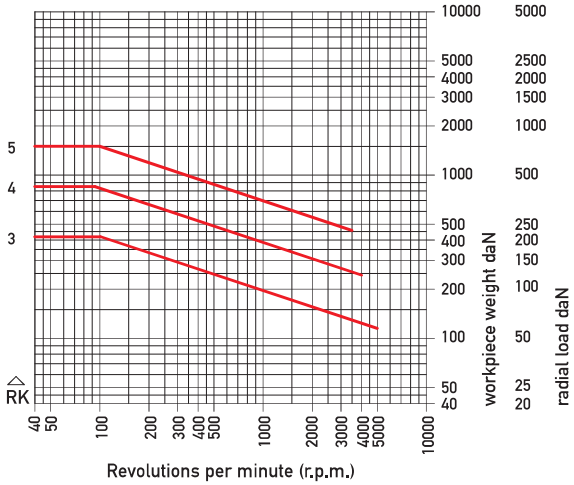
Special nut for Type A					
ID.No.	M58A	M58A	M76A	M95A	M120A
DM	70	70	92	115	138
LM	24	24	28	39	45

Radial and axial loads for a bearing life of 2.000 operating hours (reading example on page 11)

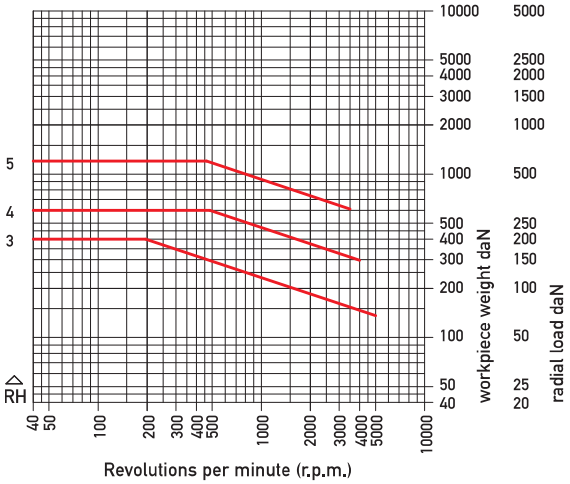
Radial – Types AS, ASG



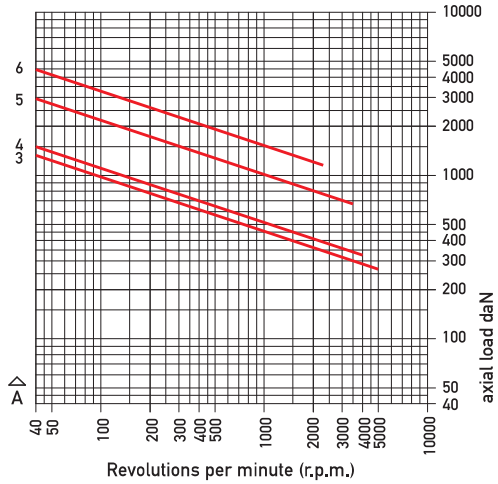
Radial – Types ASKOP



Radial – Type ASHG



Axial – all A Types



for hard turning

for vertical turning machines

with internal taper 1:7.5
for interchangeable inserts

with spring and coloured pressure indication

High Performance Bullnose Live Centres Special Designs

for mounting chucks

pointed design

with carbide cap and flange mounting

with carbide triple contact pads

from small to large

with sealing air connection

HSK40

Capto4

ABS50

large centrepoint

live collet chuck

carbide spherical centre

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