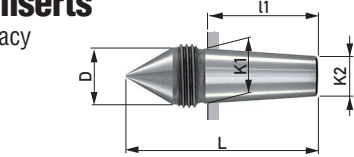


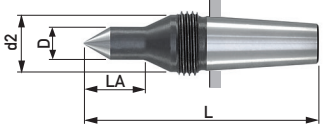


Interchangeable inserts
taper 1:7.5, in gauge accuracy

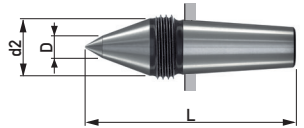
Form A0, 60°
with draw-off nut



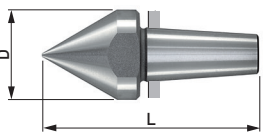
Form ASL, 60°
slim, extended
with draw-off nut



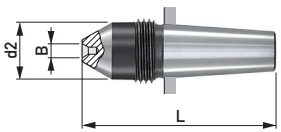
Form AKOP, 60°/40°
extended
with draw-off nut



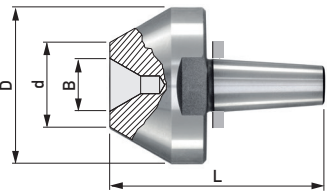
Form A, 60°
for hollow parts
spanner flat (SW)



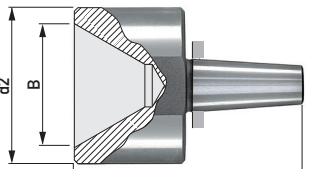
Form B, centre 60°
for centreless workpieces,
with draw-off nut



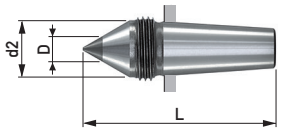
Form C, centre 60°
for centreless workpieces,
external angle 60° for hollow
parts, spanner flat (SW)



Form D, centre 60°
for centreless workpieces,
spanner flat (SW)



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



Basic centre Types: CEM/CEMG	Interchangeable inserts	Radial load max. daN	Insert dimensions						Thread SW	Taper dimensions taper 1:7.5		
			D	d2	B	d	L	LA		K1	K2	I1
650E 032002A 651E 032002A	482AO	90	11.7				45		M14x1.5	11	8	23
	482ASL	30	6	11.7			55	15	M14x1.5			
	482AKOP	90	5	11.7			50		M14x1.5			
	482A	90	17				45		SW14			
	482B	90		11.7	4x2		45		M14x1.5			
650E 035003A 651E 035003A	482C	90	28		8x3	12	45		SW24	15	11	30
	482D	90		28	20x6		45		SW24			
	482AOHM	60	7	11.7			45		M14x1.5			
	484AO	160	15.7				53		M18x1.5			
	484ASL	100	9	15.7			65	17	M18x1.5			
650E 046004A 651E 046004A	484AKOP	160	6	15.7			58		M18x1.5	15	11	30
	484A	160	25				60		SW22			
	484B	110		15.7	4x2		53		M18x1.5			
	484C	160	44		15x5	24	60		SW41			
	484D	160		44	35x12		64		SW41			
	484AOHM	60	7	15.7			53		M18x1.5			

ID.No	Content	Installation paste
P 10	100 g	Makes insert change easier. Apply thinly and evenly to the insert taper.

Changing of inserts
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



Karl Bruckner GmbH
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71384 WEINSTADT
GERMANY

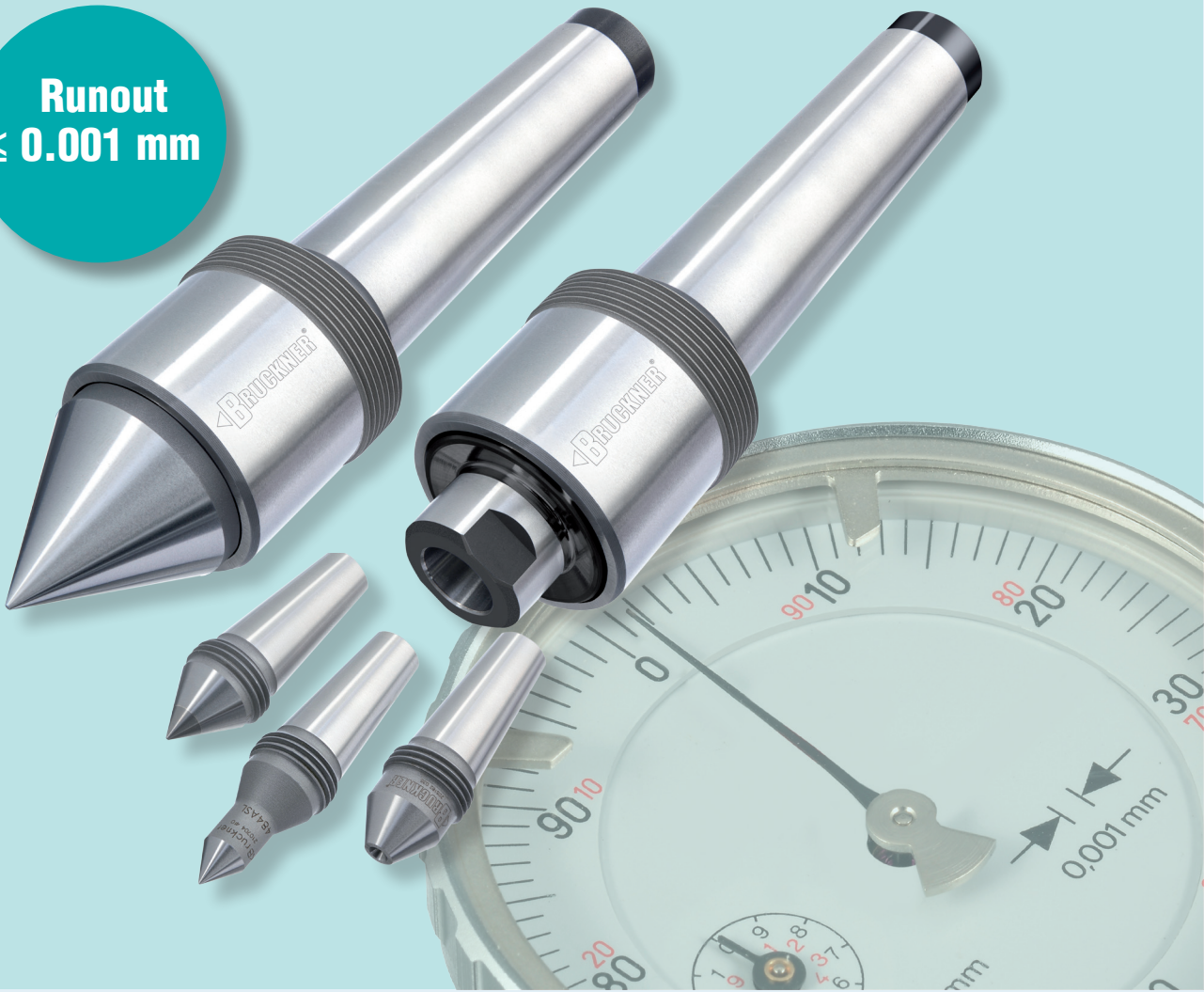
Phone +49 (0) 7151 9671-0
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info@karlbruckner.de
www.karlbruckner.de



High performance Live Centres and Face Drivers



Runout
≤ 0.001 mm

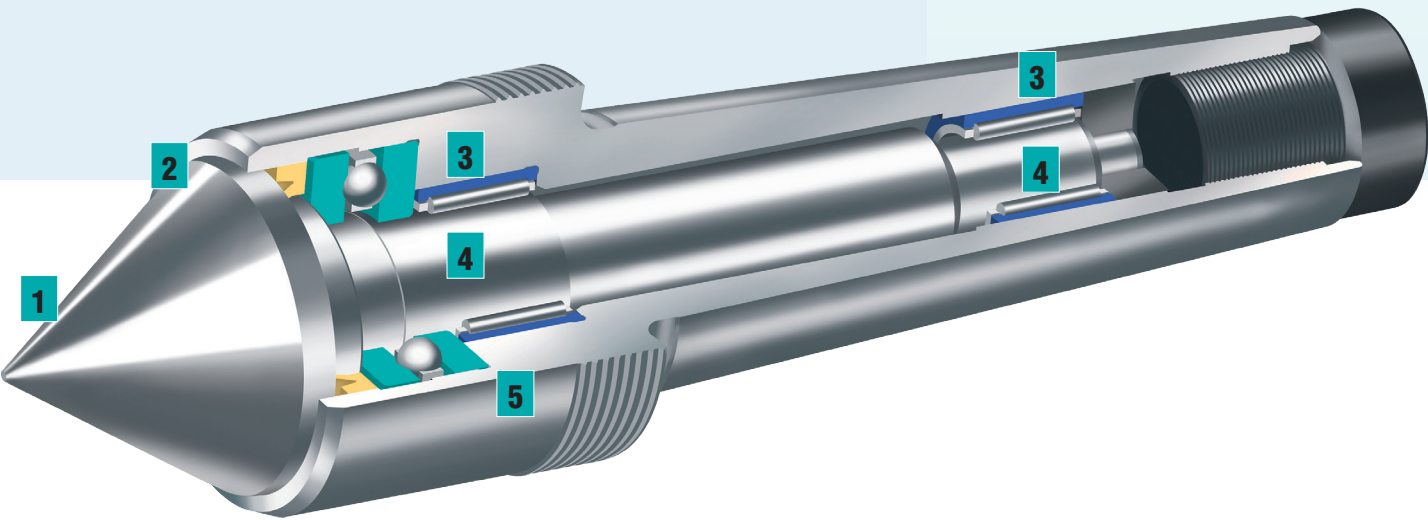


High Performance Live Centres C Series
Types CSM/CEM – Types CSMG/CEMG
Short design with small housing diameter

For measuring, inspection and testing

CSM/CEM – CSMG/CEMG 0218e

Subject to technical modifications © Karl Bruckner GmbH



Types CSM/CEM – Types CSMG/CEMG
Compact precision design for measuring, inspection and testing

With its short anti-vibration design, maximum runout within 0.002 mm and anti-friction precision bearings our types CSM and CEM are ideal for all between centres measuring and testing work.

The types CSMG/CEMG with max. runout of 0.001 mm can be supplied for especially challenging measuring and testing processes.

- 1 **High concentricity accuracy**
tested under axial load, guaranteed by test report
- 2 **Extended clamping range**
through larger centre spindle diameter
- 3 **Needle bearing with outer ring**
in case of needle bearing wear the housing is not damaged and can be re-used for repair
- 4 **Precision bearings**
bearing seats of housing and centre spindle are precision ground and matched to the bearings
- 5 **Housing**
of high tensile alloy tool steel. Housing head and shank are case-hardened for protection against damage

small housing diameter, short design

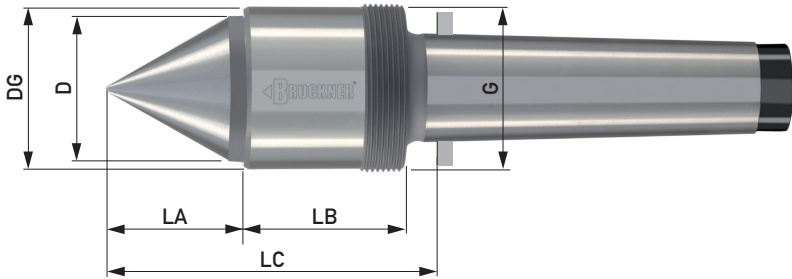
Types CSM, CSMG

Centre spindle 60°
Low-friction running

Runout
Type CSM max. 0.002 mm
Type CSMG max. 0.001 mm
with test report

Application
for measuring and testing

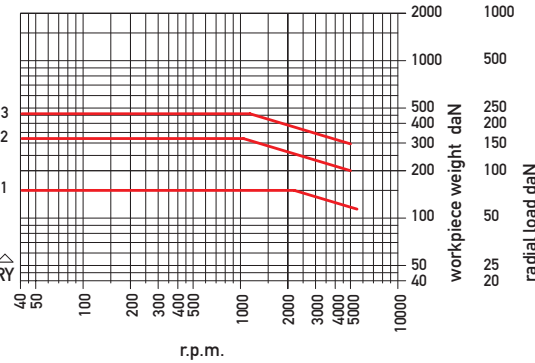
Note: only for coolant, dust and dirt free operations



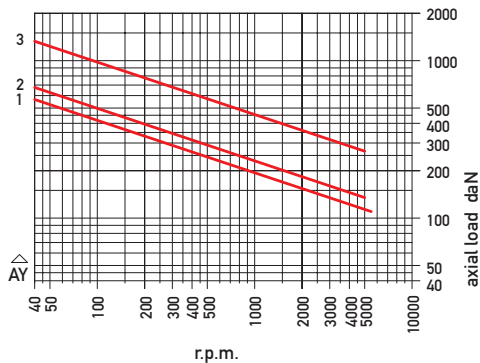
Type CSM	ID.No.	650S 032002A	650S 035003A	650S 046004A
Type CSMG	ID.No.	651S 032002A	651S 035003A	651S 046004A
Morse taper		2	3	4
D		27.6	29.6	39.6
DG		32	35	46
LA		27	29	37.5
LB		34	42.5	45
LC		66	76	88.5
G		M35x1.5	M38x1.5	M48x1.5
Workpiece weight max. daN*		150	325	460
r.p.m. max.*		5500	5000	5000
Radial/axial load graph		RY1/AY1	RY2/AY2	RY3/AY3
Draw-off nut (page 4)		M35DIN1804	M38DIN1804	M48DIN1804

*observe the load graphs

Radial and axial loads for a bearing life of 2000 operating hours
Radial – Types CSM/CSMG



Axial – Types CSM/CSMG



small housing diameter, short design

Types CEM, CEMG

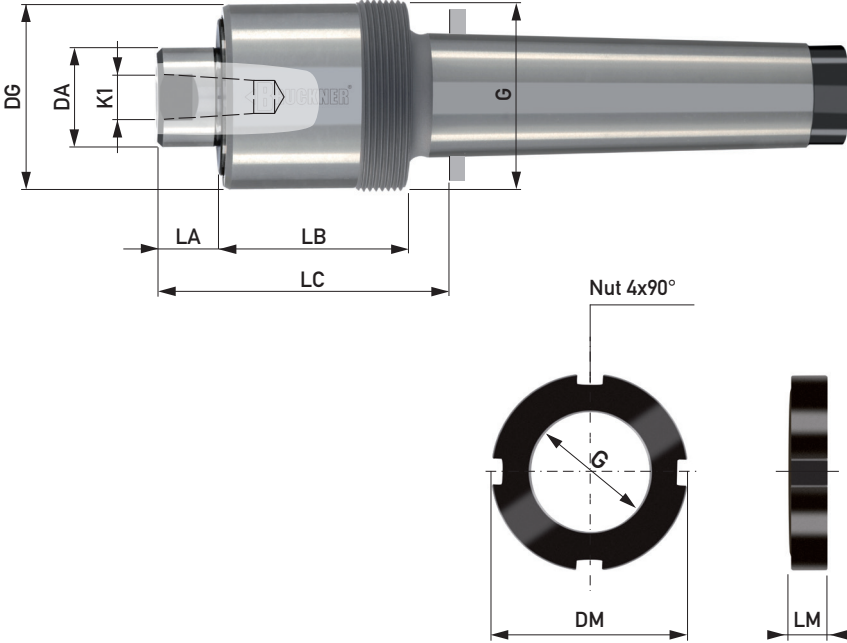
Centre spindle with internal taper 1:7.5
for interchangeable inserts
low-friction running

Runout inside the internal taper
Type CEM max. 0.002 mm
Type CEMG max. 0.001 mm
with test report

Runout of the system can be minimized by twisting the insert in the internal taper

Application
for measuring, inspection and testing.
Multiple options through 8 interchangeable inserts (page 5)

Note: only for coolant, dust and dirt free operations



Draw-off nut			
ID. No.	G	LM	DM
M35DIN1804	M35x1.5	11	55
M38DIN1804	M38x1.5	11	58
M48DIN1804	M48x1.5	13	75

Type CEM	ID.No.	650E 032002A	650E 035003A	650E 046004A
Type CEMG	ID.No.	651E 032002A	651E 035003A	651E 046004A
Morse taper		2	3	4
DA		20	22	25
DG		32	35	46
K1		11	11	15
LA		12	13	15
LB		35.5	43.5	46
LC		52.5	61	67
G		M35x1.5	M38x1.5	M48x1.5
SW		16	16	22
r.p.m. max.		5500	5000	5000
Load	The radial load of types CEM/CEMG is restricted by the interchangeable inserts (page 5)			
Draw-off nut		M35DIN1804	M38DIN1804	M48DIN1804
Suitable inserts (page 5)		482	482	484