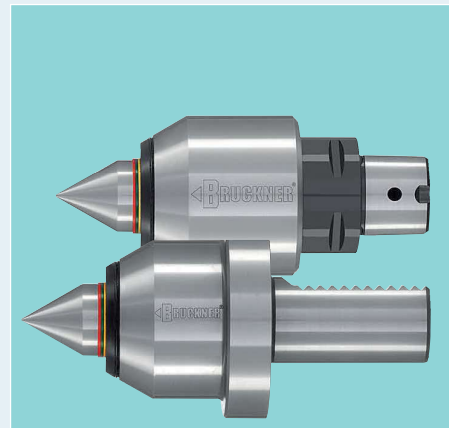
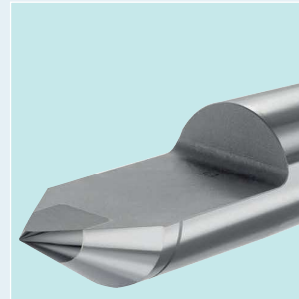
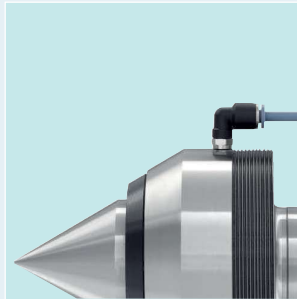
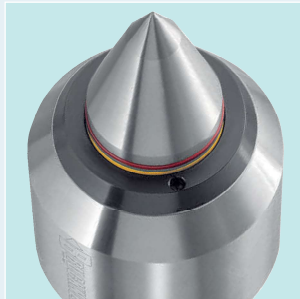


High Performance Centres for Turning and Grinding

BRUCKNER WORKS STANDARD

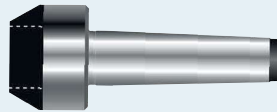
Our high performance live centres – standard as well as special designs – are produced and tested according to our works standard. Materials, production and testing are subject to strict quality guidelines guaranteeing function and performance.

Regrinding line

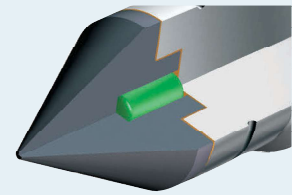
As a rule, BRUCKNER centres feature a regrinding line showing the useful end of the carbide. Forms R and GR do not have this line. Here the useful limit is marked by the braze line.



Regrinding line



Braze line (form R/GR)

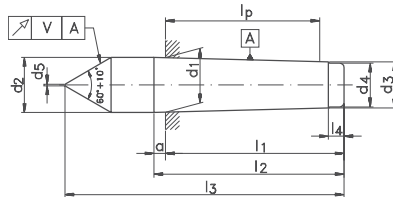


sa•co®

safety core from BRUCKNER

In BRUCKNER solid carbide dead centres (forms V, GV, Z, GZ and HZ) with a carbide diameter of 20 to 45 mm the **safety core sa•co®** is integrated. If there is a fissure in the joint between carbide and base material, e.g. caused by operating or handling errors, **sa•co®** prevents the carbide point with the mounted workpiece from slipping. Thus high consequential costs are avoided.

Extract from DIN 806, DIN 228 and BRUCKNER WORKS STANDARD



V = permissible eccentricity

Z = maximum taper error taper increasing towards the large diameter along the tested length l_p

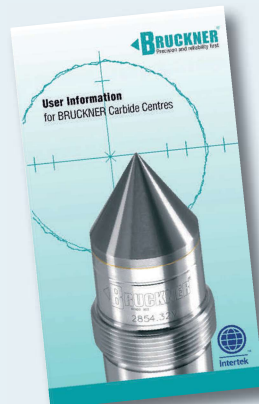
Taper size		DIN										DIN	BRUCKNER WORKS STANDARD	
		d ₁	d ₂	d ₃	d ₄	d ₅	l ₁	l ₂	l ₃	l ₄	a	V	V	Z
Morse taper	0	9.045	9.2	6.4	6	0.5	50	53	70	4	3	0.01	0.003	0.002
	1	12.065	12.2	9.4	9	0.5	53.5	57	80	5	3.5	0.01	0.003	0.003
	2	17.78	18.0	14.6	14	0.8	64	69	100	5	5	0.01	0.003	0.003
	3	23.825	24.1	19.8	19	0.8	81	86	125	7	5	0.01	0.004	0.004
	4	31.267	31.6	25.9	25	1	102.5	109	160	9	6.5	0.01	0.004	0.005
	5	44.399	44.7	37.6	36	1.6	129.5	136	200	10	6.5	0.01	0.004	0.006
	6	63.348	63.8	53.9	51	2	182	190	270	16	8	0.01	0.004	0.006
Metric taper	80	80	80.4	70.2	67	*	196	204	*	24	8	*	0.005	0.006
	100	100	100.5	88.4	85	*	232	242	*	30	10	*	0.005	0.007
	120	120	120.6	106.6	102	*	268	280	*	36	12	*	0.005	0.008

*not standardized

User information

In our „User information“ you will find hints and tips for the use of our carbide centres, e. g. on work safety, causes and removal of roundness errors on the workpiece etc.

Please advise us if you would like copies.

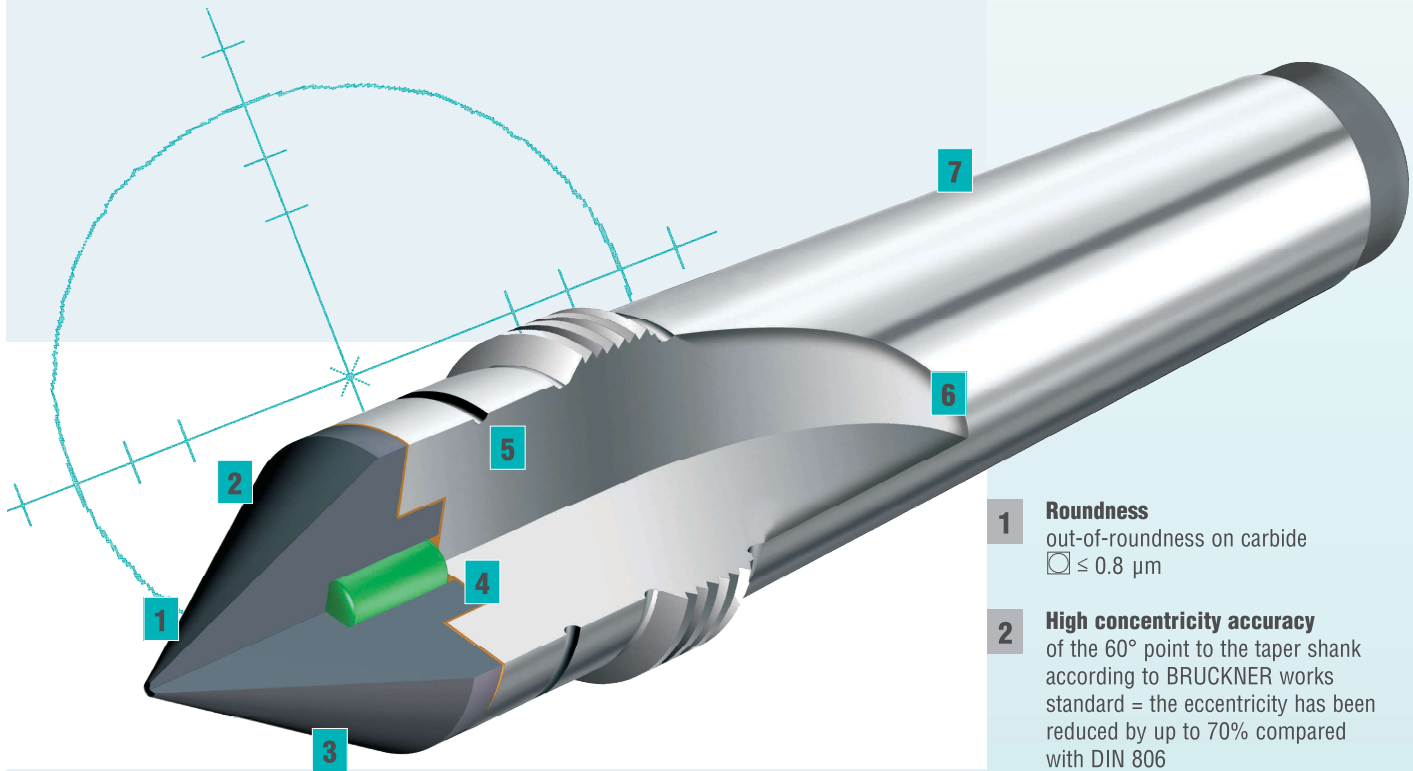


Repair service

We check the dead centre (also other makes) for:

- Damage/cracks in the carbide
- Sufficient fixing of the carbide in the base material
- Damaged taper shank

We inform you about the extent of the necessary repair/regrinding work with a cost estimate.



BRUCKNER carbide dead centres – the benchmark

Due to their superior roundness and high product quality BRUCKNER dead centres set the benchmark in terms of economic efficiency and productivity. Our know-how, our experience and our background in the high precision manufacture of our centres guarantee the features of our own products at the highest level.

The BRUCKNER guarantee for standard dead centres

Out-of-roundness $\square \leq 0.8 \mu\text{m}$.

We supply standard dead centres and special designs with **out-of-roundness** $\square \leq 0.3 \mu\text{m}$. Test report on request.

- 1 Roundness**
out-of-roundness on carbide
 $\square \leq 0.8 \mu\text{m}$
- 2 High concentricity accuracy**
of the 60° point to the taper shank
according to BRUCKNER works
standard = the eccentricity has been
reduced by up to 70% compared
with DIN 806
- 3 Top-quality carbides**
safely fixed in the base material
- 4 sa•co® – the safety core**
maximum safety through the
integrated safety core (forms V, GV,
Z, GZ and HZ with carbide diameter
20-45 mm)
- 5 Regrinding line**
marking the useful end of the
centre
- 6 Hardened taper shank**
the taper is case hardened for
protection from damage
- 7 Taper shank tolerance**
deviation of taper AT4 to DIN 228
(gauge accuracy)

Carbide Dead Centres, Full Centre 60° without Draw-Off Thread

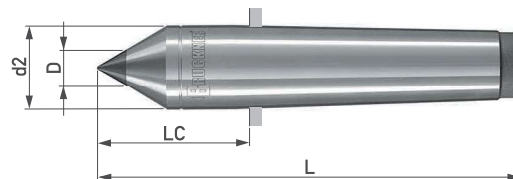


Form E – L – V

Out-of-roundness $\square \leq 0.8 \mu\text{m}$. Morse taper hardened for protection from damage. Quality features see page 54/55.

Form	Morse taper	ID.No.	D	d2	LC	L
E	1	2801H	7	12.2	26.5	80
	2	2802H	7	18	36	100
	3	2803H	11	24.1	44	125
	4	2804H	14	31.6	57.5	160
	5	2805H	18	44.7	70.5	200
	6	2806H	18	63.8	88	270

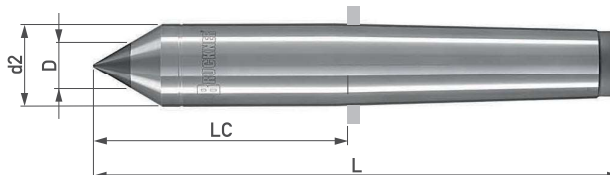
Form E
DIN 806 E



Form	Morse taper	ID.No.	D	d2	LC	L
L	2	2802.11-135	11	18	71	135
	2	2802.14	14	18	36	100
	3	2803.14	14	24.1	44	125
	3	2803.14-150	14	24.1	69	150
	4	2804.18	18	31.6	57.5	160
	4	2804.18-180	18	31.6	77.5	180
	4	2804.18-200	18	31.6	97.5	200
	5	2805.18-250	18	44.7	120.5	250
	6	2806.35	35	63.8	88	270

Form L

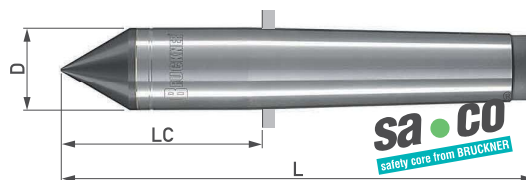
larger carbide diameter,
length to DIN and extended



Form	Morse taper	ID.No.	D	LC	L
V	*1	2801.12V-080	12	26.5	80
	*2	2802.18V-110	18	46	110
	2	2802.24V-110	24	46	110
	3	2803.24V-125	24.1	44	125
	3	2803.24V-150	24.1	69	150
	4	2804.32V-160	31.6	57.5	160
	4	2804.32V-180	31.6	77.5	180
	4	2804.32V-200	31.6	97.5	200
	5	2805.45V-200	44.7	70.5	200
	5	2805.45V-250	44.7	120.5	250
	**6	2806.64V-270	63.8	88	270

Form V

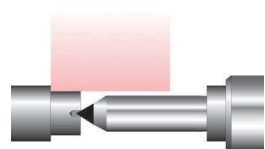
solid carbide point with safety core **sa•co**®,
length to DIN and extended



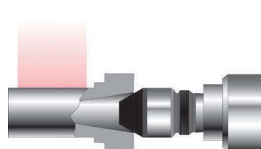
* without safety core, carbide brazed in tapered seating

** without safety core, carbide outer shell with base material core

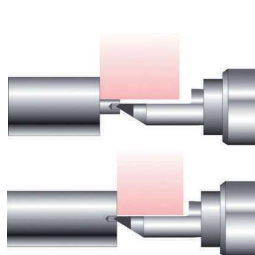
Your Grinding Task – Our Carbide-Tipped Centres



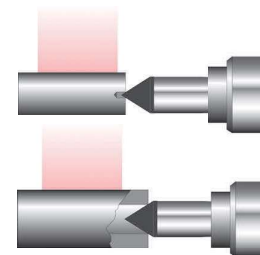
Short grinding length, wide
grinding wheel, extended
carbide centre
Form L



Larger centrebore, carbide
centre with large truncated
carbide body
Form Z, R, GR



Small diameter or short
grinding length or face
grinding. Extended carbide half
centre with extra small flat
height
Form HS, GHS, HV, GHV



Small to large centres.
Carbide centre with solid
carbide 60° point
Form V, GV

Carbide Dead Centres, Full Centre 60°

without Draw-Off Thread

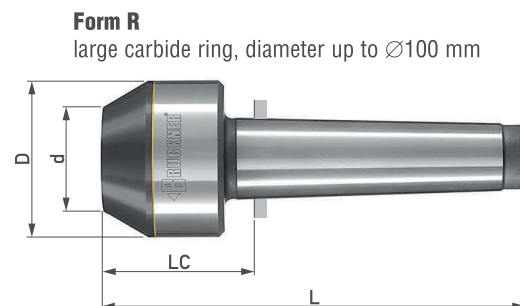
Form Z – R – B* – HB*

Out-of-roundness $\square \leq 0.8 \mu\text{m}$. Morse taper hardened for protection from damage. Quality features see page 54/55.

Form	Morse taper	ID.No.	D	d	d2	LC	L
Z	2	2802.32x10	32	10	38	46	110
	3	2803.32x10	32	10	38	50	131
	4	2804.24	24	1	31.6	57.5	160
	4	2804.32x10	32	10	38	57.5	160
	5	2805.32x10	32	10	44.7	70.5	200

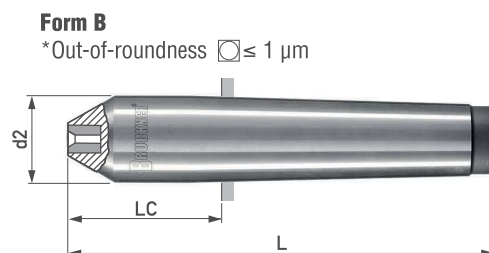


Form	Morse taper	ID.No.	D	d	d2	LC
R	2	2802.40x20	40	20	41	105
	2	2802.50x30	50	30	41	105
	2	2802.60x40	60	40	41	105
	2	2802.70x50	70	50	41	105
	3	2803.40x20	40	20	44	125
	3	2803.50x30	50	30	44	125
	3	2803.60x40	60	40	44	125
	3	2803.70x50	70	50	44	125
	4	2804.40x20	40	20	57.5	160
	4	2804.50x30	50	30	57.5	160
	4	2804.60x40	60	40	57.5	160
	4	2804.70x50	70	50	57.5	160
	4	2804.80x60	80	60	57.5	160
	4	2804.100x75	100	75	57.5	160
	5	2805.40x20	40	20	70.5	200
	5	2805.60x40	60	40	70.5	200
	5	2805.70x50	70	50	70.5	200
	5	2805.80x60	80	60	70.5	200
	5	2805.100x75	100	75	70.5	200



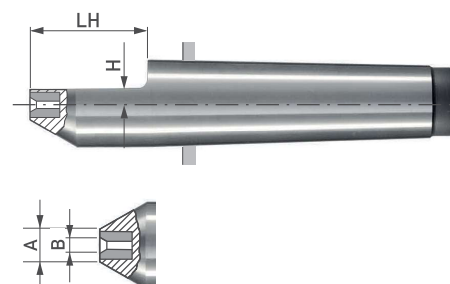
Carbide Dead Centres with 60° Ground Centrebore

Form	Morse taper	ID.No.	B	A	d2	LC	L
B	1	2821	2.8x1.5	6	12.2	23.5	77
	2	2822	4.0x2.0	9	18.0	32	96
	3	2823	5.0x2.5	9	24.1	38	119
	4	2824	6.0x3.0	12	31.6	49.5	152



Form	Morse taper	ID.No.	B	A	d2	H	LH	LC	L
HB	1	2831	2.8x1.5	6	12.2	3	19	23.5	77
	2	2832	4.0x2.0	9	18.0	4	26	32	96
	3	2833	5.0x2.5	9	24.1	5	32	38	119
	4	2834	6.0x3.0	12	31.6	5.5	42	49.5	152

Form HB, with flat
*Out-of-roundness $\square \leq 1 \mu\text{m}$



Carbide Dead Centres, Half Centre 60° without Draw-Off Thread

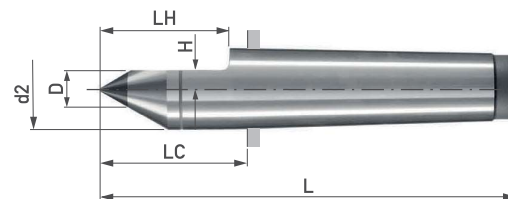
Form HE – HL – HS – HV

Out-of-roundness $\square \leq 0.8\mu\text{m}$. Morse taper hardened for protection from damage. Quality features see page 54/55.

Form	Morse taper	ID.No.	D	d2	H	LH	LC	L
HE	1	2811H	7	12.2	4	22	26.5	80
	2	2812H	7	18	4	30	36	100
	3	2813H	11	24.1	6	38	44	125
	4	2814H	14	31.6	7.5	50	57.5	160
	5	2815H	18	44.7	9.5	63	70.5	200

Form HE

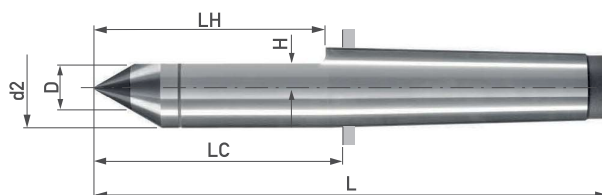
similar to DIN 806 HE



Form	Morse taper	ID.No.	D	d2	H	LH	LC	L
HL	2	2812.11-135	11	18	6	65	71	135
	2	2812.14	14	18	7.5	30	36	100
	3	2813.14	14	24.1	7.5	38	44	125
	3	2813.14-150	14	24.1	7.5	63	69	150
	3	2813.18	18	28	9.5	40	47	128
	4	2814.18	18	31.6	9.5	50	57.5	160
	4	2814.18-180	18	31.6	9.5	70	77.5	180
	4	2814.18-200	18	31.6	9.5	90	97.5	200
	5	2815.18-250	18	44.7	9.5	113	120.5	250

Form HL

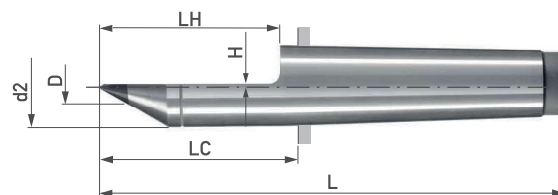
larger carbide diameter,
length to DIN and extended



Form	Morse taper	ID.No.	D	d2	H	LH	LC	L
HS	2	2812H/1,5	7	18	1.5	40	46	110
	2	2812H/2,5	7	18	2.5	40	46	110
	3	2813H/1,5	11	24.1	1.5	63	69	150
	3	2813H/2,5	11	24.1	2.5	63	69	150
	3	2813H/4,0	11	24.1	4.0	63	69	150
	4	2814H/1,5	14	31.6	1.5	70	77.5	180
	4	2814H/2,5	14	31.6	2.5	70	77.5	180
	4	2814H/4,0	14	31.6	4.0	70	77.5	180

Form HS

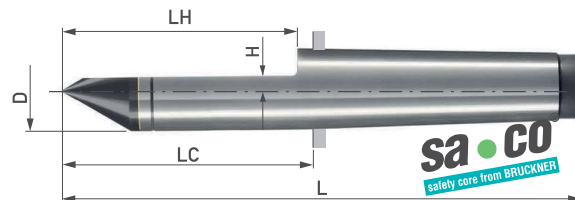
extra flat height, extended



Form	Morse taper	ID.No.	D	H	LH	LC	L
HV	3	2813.24V/H5-150	24.1	5	63	69	150
	3	2813.24V/H7.5-150	24.1	7.5	63	69	150
	4	2814.32V/H5-200	31.6	5	90	97.5	200
	4	2814.32V/H9-200	31.6	9	90	97.5	200

Form HV

extra flat height, solid carbide point with
safety core **sa•co®**



Carbide Dead Centres, Full Centre 60°

with Draw-Off Thread



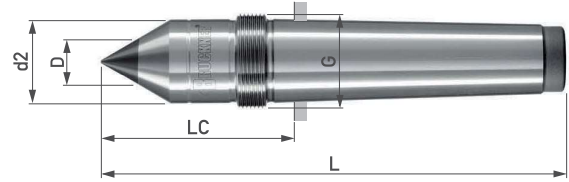
Form GE – GV – GZ – GR

Out-of-roundness $\square \leq 0.8\mu\text{m}$. Morse taper hardened for protection from damage. Quality features see page 54/55.

Form	Morse taper	ID.No.	D	d2	LC	L	G
GE	2	2852	7	18	48	112	M22x1.5
	3	2853	11	24.1	57	138	M27x1.5
	3	2853.18	18	24.1	57	138	M27x1.5
	4	2854	14	31.6	72.5	175	M36x1.5
	4	2854.18	18	31.6	72.5	175	M36x1.5
	4	2854.18-200	18	31.6	97.5	200	M36x1.5
	5	2855	18	44.7	87.5	217	M48x1.5
	5	2855.18-250	18	44.7	120.5	250	M48x1.5
	6	2856	18	63.8	108	290	M68x1.5
	6	2856.35	35	63.8	108	290	M68x1.5

Form GE

length to DIN and extended



Form	Morse taper	ID.No.	D	LC	L	G
GV	*2	2852.18V	18	48	112	M22x1.5
	3	2853.24V	24.1	57	138	M27x1.5
	4	2854.32V	31.6	72.5	175	M36x1.5
	4	2854.32V-200	31.6	97.5	200	M36x1.5
	5	2855.45V	44.7	87.5	217	M48x1.5
	5	2855.45V-250	44.7	120.5	250	M48x1.5
	**6	2856.64V	63.8	108	290	M68x1.5

Form GV

solid carbide point
with safety core **sa•co**®



* without safety core, carbide brazed in tapered seating

** without safety core, carbide outer shell with base material core

Form	Morse taper	ID.No.	D	d	d2	LC	L	G
GZ	3	2853.32x10	32	10	38	57	138	M27x1.5

Form GZ

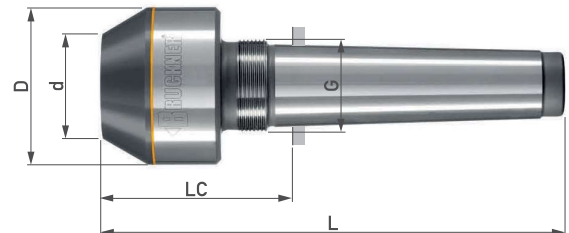
large carbide insert
with safety core **sa•co**®



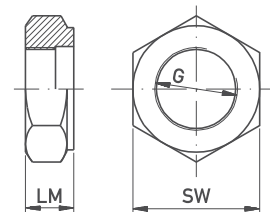
Form	Morse taper	ID.No.	D	d	LC	L	G
GR	3	2853.45x25	45	25	57	138	M27x1.5
	4	2854.45x25	45	25	72.5	175	M36x1.5
	4	2854.60x40	60	40	72.5	175	M36x1.5
	5	2855.45x25	45	25	87.5	217	M48x1.5
	5	2855.60x40	60	40	87.5	217	M48x1.5

Form GR

large carbide ring



Draw-off nut DIN 807			
ID.No.	G	LM	SW
M252	M22x1.5	15.5	32
M253	M27x1.5	17.5	41
M254	M36x1.5	21	55
M255	M48x1.5	23	75
M256	M68x1.5	25.5	100



Carbide Dead Centres, Half Centre 60° with Draw-Off Thread

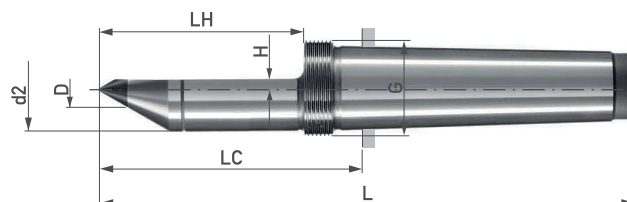
Form GHS – GHV

Out-of-roundness $\square \leq 0.8 \mu\text{m}$. Morse taper hardened for protection from damage. Quality features see page 54/55.

Form	Morse taper	ID.No.	D	d2	H	LH	LC	L	G
GHS	3	2853/4.0-138	14	24.1	4.0	39.5	57.0	138	M27x1.5
	4	2854/4.0-175	14	31.6	4.0	51.5	72.5	175	M36x1.5
	4	2854/4.0-200	14	31.6	4.0	76.5	97.5	200	M36x1.5
	5	2855/6.0-217	18	44.7	6.0	64.5	87.5	217	M48x1.5
	5	2855/6.0-250	18	44.7	6.0	97.5	120.5	250	M48x1.5

Form GHS

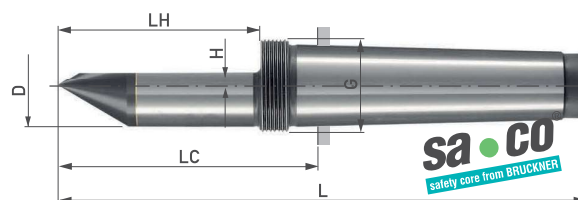
extra flat height, length to DIN and extended



Form	Morse taper	ID.No.	D	H	LH	LC	L	G
GHV	3	2853.24V/H5-150	24.1	5	51.5	69	150	M27x1.5
	4	2854.32V/H5-200	31.6	5	76.5	97.5	200	M36x1.5
	4	2854.32V/H9-200	31.6	9	76.5	97.5	200	M36x1.5

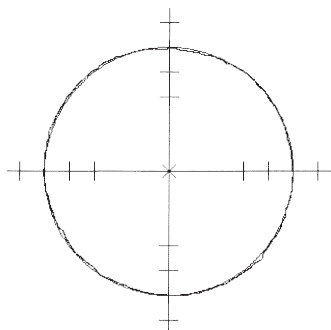
Form GHV

extra flat height, solid carbide point with safety core **sa•co®**

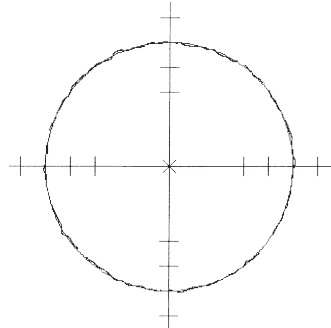


„Roundness achieves roundness“ – Grinding test with standard centres from BRUCKNER

BRUCKNER 2804H in the headstock
Out-of-roundness $\square 0.42 \mu\text{m}$



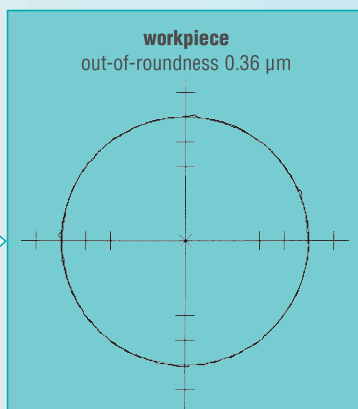
BRUCKNER 2814H in the tailstock
Out-of-roundness $\square 0.48 \mu\text{m}$



test conditions

cylindrical grinding machine STUDER S33

workpiece 100Cr6, 62 HRC, $\varnothing 35 \text{ mm}$,
un-ground centre DIN 332A



Result:
Out-of-roundness achieved
with standard centres from
BRUCKNER $\square 0.36 \mu\text{m}$.

flange mounted centres, flat and full



flange mounted carbide centres with flat and full carbide



12° driving ring



Ø 52

carbide ball



Ø 20



steep taper with full carbide



HSK with full carbide



open centre bore

