

The spiral ring chuck - a proven and universal suitable clamping system - finds its application wherever high clamping force, high runout accuracy and very high repeatability is required (i.e. lathes, turntables, circular indexing tables etc.).

The radial and axial runout precision correspond to DIN 6368 part 1 precision class 1 (high precision chucks). Particularly, a flat design with direct mounting.

Clamping force transmitting system

The jaws can be moved across the entire clamping range by turning a key. This advantage allows the quick clamping of different workpiece diameters without changing or shifting the jaws.

Mechanism

The radially positioned Pinion (4) transmits the power via a bevel gearing to the spiral ring (3), then the spiral transmits it to the Jaws (6). steel or cast iron body (1), cover (2).

Lubrication

The chuck has to be lubricated at regular intervals with our special grease F 80 to maintain its practical value as long as possible.

ZG-ZS

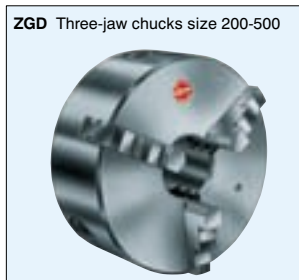
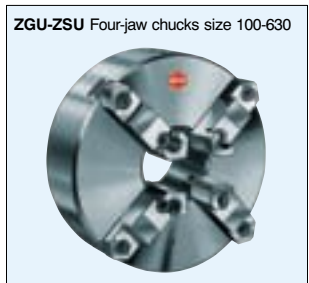
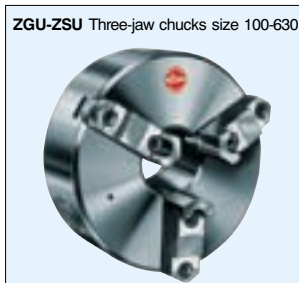
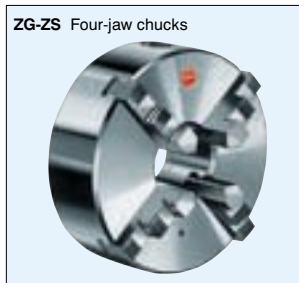
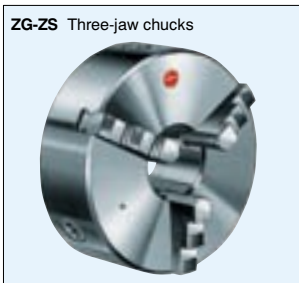
Three- and four-jaw chucks with one-piece-jaws, cast iron or steel body

ZGU-ZSU

Three- and four-jaw chucks with reversible top jaws, cast iron or steel body

ZGD

Three-jaw chucks with double jaw guides, cast iron body





Lathe chucks ZG – ZS

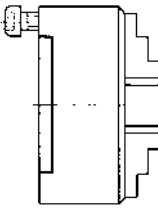
with one-piece-jaws, with scroll, DIN 6350, self-centering, three- and four-jaw chucks, cast iron or steel body – for use on lathes, rotary tables, dividing heads, etc.



Delivery includes:
 1 set of outward stepped jaws (BB) mounted in the chuck,
 1 set of inward stepped jaws (DB),
 1 operating key, mounting bolts

US-design with inch threads

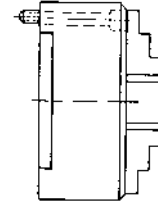
DIN 6350
 cylindrical center mount, Form A



Size	inch	through-hole	3-jaw-chuck cast iron body		3-jaw-chuck steel body		4-jaw-chuck cast iron body		4-jaw-chuck steel body	
			Id.-No.		Id.-No.		Id.-No.		Id.-No.	
			Type 300		Type 600		Type 400		Type 800	
80	3 1/4	15	102510		–		–		–	
100	4	20	101789		–		102137		102138	
125	5	32	101629		101673		106082		106083	
160	6 1/4	42	100311		100719		100330		101165	
200	8	55	100016		100190		105000		105004	
250	10	76	100210		100535		100835		101031	
315	12 1/2	103	101249		101345		101568		101902	
400	15 3/4	136	102069		102070		102337		102338	
500	20	190	106754		102556		102955		103341	
630	25	240	102727		–		102863		102864	
			Type 300		Type 600		Type 400		Type 800	
125	5	32	116304		120155		103053		124447	
160	6 1/4	42	115566		115568		115570		125802	
200	8	55	109127		113158		111339		113160	
250	10	76	114301		114304		127916		114306	
315	12 1/2	103	109128		120270		120743		129946	
400	15 3/4	136	123474		123475		146263		134401	
500	20	190	117327		127616		129858		123465	
630	25	240	111346		128545		137545		135061	

Mounting bolts in metric

Mounting from front
 cylindrical center mount



Short taper direct spindle mountings are available upon request

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Lathe Chucks

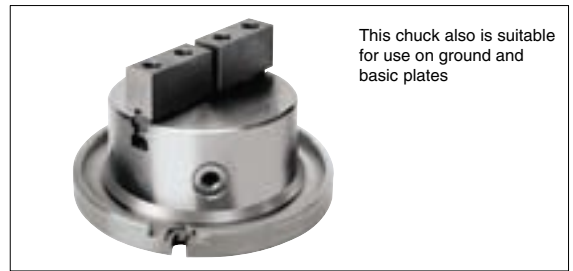


Two-jaw lathe chucks ZGF

with scroll, DIN 6350, unstepped top jaws, cast iron body



Delivery includes:
 1 set of base jaws (GB)
 1 set of top jaws, soft (AB)
 1 operating key, mounting bolts

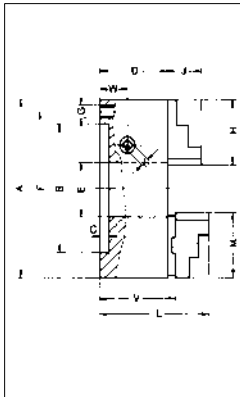


This chuck also is suitable for use on ground and basic plates

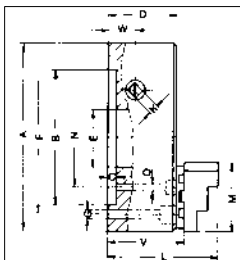
US-design with inch threads

DIN 6350
 cylindrical center mount, Form A

Size A	inch	bore E	2-jaw cast iron body				
			Id.-No.				
Type 152 ZGF, cylindrical centre mount, unstepped top jaws							
100	4	20	105942				
125	5	32	105943				
160	6 1/4	42	105945				
200	8	55	105946				
250	10	76	105947				
315	12 1/2	103	105948				
400	15 3/4	136	105949				
With short taper upon request – Base plates see page 91							

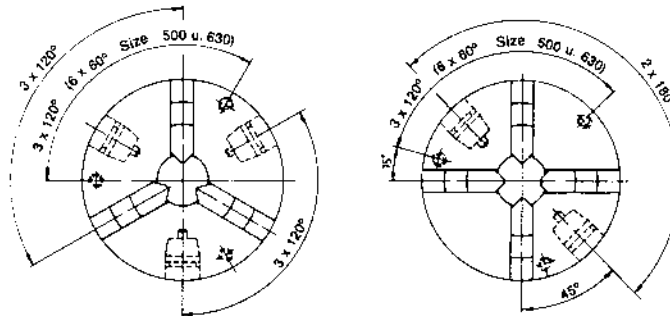


A Size		B ^{H6}	C	D	E	F	G		H	J	K	L	M	V	W	weight appr. kg
mm	inch	mm	mm	mm	mm	mm	inch		mm	mm	mm	mm	mm	mm	mm	
With flatback mounting DIN 6350 cylindrical center mount form A																
80	3 1/4	56	3	39,5	19	67	3x1/4-20		37	14	6	–	–	–	14,5	1,3
100	4	70	3	50	20	83	3x5/16-18		48	18	8	80,5	47	53,6	18	2,9
125	5	95	4	56	32	108	3x5/16-18		52	22,5	9	95,5	56	61	20	4,5
160	6 1/4	125	4	65	42	140	3x7/16-14		61	26	10	108	66,7	69,7	22,45	8,2
200	8	160	4	73,5	55	176	3x7/16-14		69	32,5	11	119,6	79,5	80,2	25,7	14,6
250	10	200	5	82	76	224	3x1/2-13		90	40	12	139,3	95	89,9	26,5	25,7
315	12 1/2	260	5	95	103	286	3x5/8-11		130	46	14	155	109,5	100,4	30	44,2
400	15 3/4	330	5	105	136	362	3x5/8-11		130	43	17	171,5	127	113,4	35	80
500	20	420	5	120	190	458	6x5/8-11		190	54,5	19	201,5	127	128,4	38	126
630	25	545	7	135	240	586	6x5/8-11		190	54,5	19	216,5	127	143,3	48	208

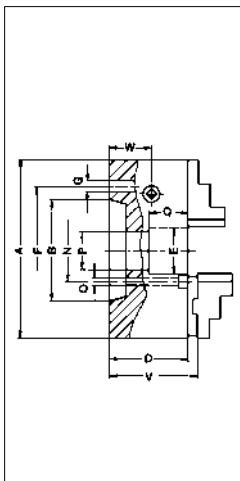


A Size		B	C ²⁾	D	E	F	G		K	L	M	N	O		V	W	weight appr. kg
mm	inch	mm	mm	mm	mm	mm	3 mm	4 mm	mm	mm	mm	mm	3 mm	4 mm	mm	mm	
With flatback mounting cylindrical center mount																	
700	28	610	7 ^{+0,03}	147	310	660	6xØ22	8xØ22	19	240,6	210	360	6xØ18	4xØ18	158	48	280
800	31 1/2	710	7 ^{+0,03}	147	380	760	6xØ22	8xØ22	19	240,6	210	460	6xØ18	4xØ18	158	48	350
1000	39 1/2	910	7 ^{+0,03}	157	460	950	6xØ26	8xØ26	24	269,6	210	610	6xØ18	4xØ18	166	53	590
1250	49 1/4	910	7 ^{+0,03}	157	550	950	6xØ26	8xØ26	24	269,6	210	610	6xØ18	4xØ22	166	53	850

2) adaptor plate dimension 7_{-0,003}



Position of fixing screws and pinions on lathe chucks with cylindrical center mount Size 80–630

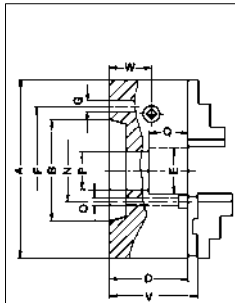


A Size		taper Size	B	D	E	F ²⁾	G	N ²⁾	O	V	W	mounting holes		weight appr. kg
mm	inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	3 jaw	4 jaw	
With short taper DIN 55026 form A/B, ASA B5.9 A1/A2 metr., ISO 702/1 A1/A2 tap. 5, 6, 8														
160*	6 1/4	5	82,5	66	42	–	–	61,9	11 ¹⁾	70,7	23,45	3	4	8
200*	8	5	82,5	74,5	42	–	–	61,9	11 ¹⁾	81,2	26,7	3	4	14,5
200*	8	6	106,4	74,5	55	–	–	82,6	14	81,2	26,7	6	4	14,5
250	10	5	82,5	83	76	104,8	11 ¹⁾	–	–	90,9	27,5	3	4	25
250*	10	6	106,4	83	55	–	–	82,6	14	90,9	27,5	6	4	25
250*	10	8	139,7	83	76	–	–	111,1	18	90,9	27,5	6	4	25
315	12 1/2	6	106,4	96	103	133,4	14	–	–	101,4	31	6	4	44,5
315*	12 1/2	8	139,7	96	76	–	–	111,1	18	101,4	31	6	4	44,5
400	15 3/4	8	139,7	106	136	171,4	18	–	–	114,4	36	6	4	82
400*	15 3/4	11	196,9	106	125	–	–	165,1	22	114,4	36	6	4	82
500*	20	8	139,7	122	136	–	–	171,4	18	130,4	40	6	8	139
500	20	11	196,9	122	190	235	22	–	–	130,4	40	6	8	139
630	25	11	196,9	137	190	235	22	–	–	145,3	50	6	8	220

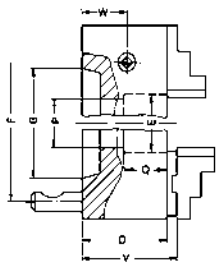
RÖHM Chuck Dimensions for ZG – ZS, ZGU – ZSU and ZGF

3

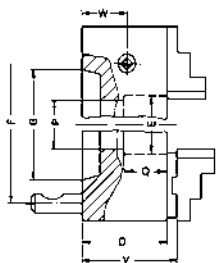
Lathe Chucks



A Size		taper Size	B	D	E	F ²	G	P	Q	Y	W	mounting holes		weight appr. kg
mm	inch		mm	mm	mm	mm	mm	mm	mm	mm	mm	3 jaw	4 jaw	
With short taper DIN 55026 form A/B, ASA B5.9 A1/A2, ISO 702/I A1/A2 tap. 5, 6, 8 – mounting from front														
700	28	11	196,9	149	310	235	22	193	76	159,9	50	6	8	295
700	28	15	285,8	149	285	330,2	26	281,2	76	159,9	50	6	8	295
800	31 1/2	15	285,8	149	380	330,2	26	281,2	76	159,9	50	6	8	350
800	31 1/2	20	412,8	149	380	463,6	26	–	–	159,9	50	6	8	350
1000	39 1/2	15	285,8	159	460	330,2	26	281,2	85	168	55	8	8	590
1000	39 1/2	20	412,8	159	505	463,6	26	407,5	85	168	55	8	8	590
1250	49 1/4	15	285,8	159	550	330,2	26	281,2	85	168	55	8	8	850
1250	49 1/4	20	412,8	159	550	463,6	26	407,5	85	168	55	8	8	850



A Size		taper Size	B	D	E	F Caml.	P	Q	V	W	mount. holes Caml.	weight appr. kg
mm	inch		mm	mm	mm	mm	mm	mm	mm	mm		
With Camlock, DIN 55029, ASA B5.9 type D1 and ISO 702/II – with studs for Camlock												
125	5	3	53,9	69	32	70,6	–	–	73,7	33	3	5,5
125	5	4	63,5	69	32	82,5	–	–	73,7	33	3	5,5
160	6 1/4	3	53,9	66	42	70,6	–	–	70,7	23,45	3	8,5
160	6 1/4	4	63,5	66	42	82,5	–	–	70,7	23,45	3	8,5
160	6 1/4	5	82,5	66	42	104,8	–	–	70,7	23,45	6	8,5
200	8	3	53,9	74,5	55	70,6	51,2	33	81,2	26,7	3	15,5
200	8	4	63,5	74,5	55	82,5	–	–	81,2	26,7	3	15,5
200	8	5	82,5	74,5	55	104,8	–	–	81,2	26,7	6	15,5
200	8	6	106,4	74,5	55	133,4	–	–	81,2	26,7	6	15,5
250	10	4	63,5	83	76	82,5	60,7	40,5	90,9	27,5	3	30
250	10	5	82,5	83	76	104,8	–	–	90,9	27,5	6	30
250	10	6	106,4	83	76	133,4	–	–	90,9	27,5	6	30
250	10	8	139,7	83	76	171,4	–	–	90,9	27,5	6	30
315	12 1/2	6	106,4	96	103	133,4	–	–	101,4	31	6	50
315	12 1/2	8	139,7	96	103	171,4	–	–	101,4	31	6	50
315	12 1/2	11	196,9	104	103	235	–	–	109,4	39	6	50
400	15 3/4	6	106,4	106	136	133,4	103	54	114,4	36	6	84
400	15 3/4	8	139,7	106	136	171,4	–	–	114,4	36	6	84
400	15 3/4	11	196,6	106	136	235	–	–	114,4	36	6	84
500	20	8	139,7	122	190	171,4	136	61	130,4	40	6	150
500	20	11	196,9	122	190	235	–	–	130,4	40	6	150
500	20	15	285,8	122	190	330,2	–	–	130,4	40	6	150
630	25	11	196,9	137	240	235	192,7	63	145,3	50	6	225



A Size		taper Size	B	D	E	F	P	Q	V	W	mount. holes	weight appr. kg
mm	inch		mm	mm	mm	mm	mm	mm	mm	mm		
With Camlock, DIN 55029, ASA B5.9 type D1 and ISO 702/II – with studs for Camlock												
700	28	11	196,9	149	310	235	192,7	76	160	50	6	280
700	28	15	285,8	149	310	330,2	281,2	76	160	50	6	280
800	31 1/2	15	285,8	149	380	330,2	281,2	76	160	50	6	350
800	31 1/2	20	412,8	149	380	463,6	–	–	160	50	6	350
1000	39 1/2	15	285,8	159	460	330,2	281,2	85	168	55	6	590
1000	39 1/2	20	412,8	159	460	463,6	407,5	85	168	55	6	590
1250	49 1/4	15	285,8	159	550	330,2	281,2	85	168	55	6	850
1250	49 1/4	20	412,8	159	550	463,6	407,5	85	168	55	6	850

Chucking capacities of jaw steps

for ZG – ZS, ZGU – ZSU (approximate values)

external chucking	Size		A1 (BB)	A2 (DB)	A3 (DB)	A4 (DB)	max. swing dia. mm	jaw movement mm	J1	J2	J3
	mm	inch	mm	mm	mm	mm			mm	mm	mm
	External clamping										
	Internal clamping										
	80	3 1/4	2–30	2–30	27–55	52–80	104	14	25–53	50–78	–
	100	4	3–38	3–38	38–71	70–100	128	15	33–66	65–94	–
	125	5	3–53	3–53	39–89	75–125	157	25	37–87	73–123	–
	160	6 1/4	3–72	3–72	47–116	91–160	194	34	39–107	83–152	–
	200	8	4–100	4–100	56–152	104–200	238	48	44–140	92–186	–
	250	10	5–122	5–122	73–190	131–250	302	58	59–165	119–236	–
	315	12 1/2	6–135	6–135	96–225	186–315	395	64	96–224	186–305	–
	400	15 3/4	20–200	20–200	110–300	200–400	480	100	100–300	190–390	–
	500	20	35–260	35–260	140–360	280–500	600	110	135–355	275–460	–
	630	25	50–350	50–350	190–490	330–630	730	150	150–450	290–590	–
	700	28	110–350	280–672	356–748	–	1000	120	212–648	290–758	526–922
	800	31 1/2	150–450	325–853	400–928	–	1170	150	251–855	326–930	566–1094
	1000	39 1/2	250–600	425–1070	500–1150	–	1390	175	356–1080	430–1150	660–1314
	1250	49 1/4	320–600	490–1150	564–1224	–	1476	140	426–1162	500–1236	740–1400

Clamping ranges for lathe chucks with individual adjustable jaws are in approximate conformity with the above values. They are valid for 3 and 4-jaw chucks and lathe chucks with reversible jaws. Do not exceed maximum chucking ranges!

Max. permissible speeds – Gripping force

for ZG – ZS, ZGU – ZSU chucks to DIN 6350

Max. permissible speeds:

The maximum permissible speed has been determined so that 1/3 of the gripping force is still available as residual gripping force if the maximum gripping force is applied and the chuck is fitted with its heaviest jaws. The jaws may not project beyond the outside diameter of the chuck. The chuck must be in perfect condition. The speed limit for chucks with cast iron bodies is based on the permissible peripheral speed for cast iron. The specifications of DIN 6386 part 1 shall be observed.

Gripping force:

The gripping force is the total of all jaw forces acting radially on the stationary workpiece. The specified gripping forces are approximate values. They apply to chucks in perfect condition which have been lubricated with ROHM F 80 grease

Size		Max. permissible speeds 3 and 4 jaws		Gripping force			
mm	inch	cast iron body R.P.M.	steel body R.P.M.	torque on key		total gripping force	
				ftlbs	daNm	lbs	daN
80	3 1/4	5000	7000	22	3	2,919	1300
100	4	4500	6300	44	6	6,062	2700
125	5	4000	5500	59	8	6,960	3100
160	6 1/4	3600	4600	81	11	10,552	4700
200	8	3000	4000	103	14	12,348	5500
250	10	2500	3000	111	15	14,144	6300
315	12 1/2	2000	2300	133	18	15,491	6900
400	15 3/4	1600	1800	175	24	20,654	9200
500	20	1000	1300	192	26	22,450	10000
630	25	800	850	206	28	23,573	10500
700	28	650	800	206	28	23,573	10500
800	31 1/2	600	700	221	30	24,695	11000
1000	39 1/2	480	560	258	35	25,818	11500
1250	49 1/4	–	–	258	35	25,818	11500