

This chuck is used for aligning irregularly shaped workpieces.

**Principle of operation**

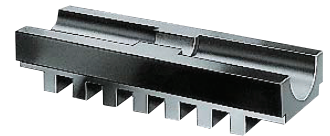
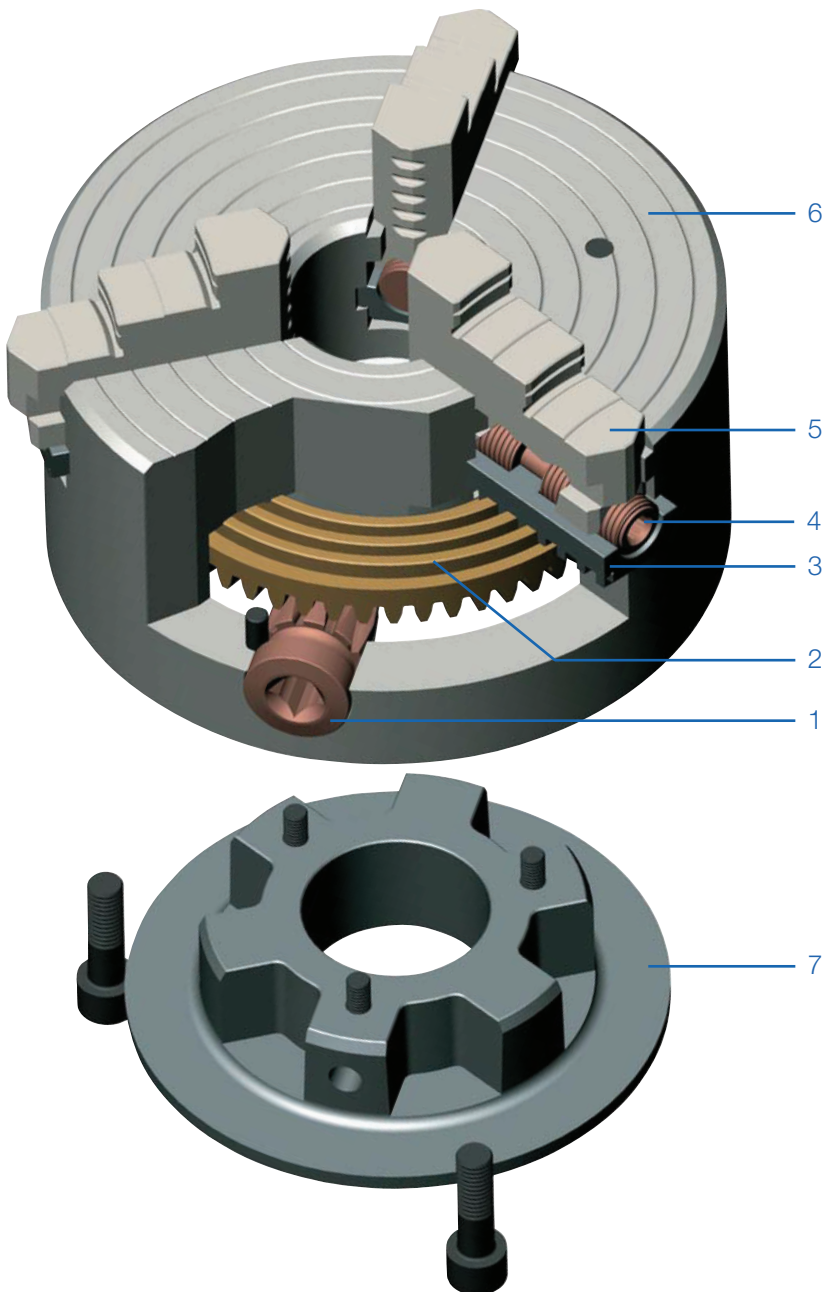
Through a radially arranged drive (1, hardened), the force is transferred via a bevel gearing to a hardened spiral ring (2) and further conducted via the spiral to the base jaws (3, hardened and ground), spindle (4, hardened) and reversible jaws (5, hardened and ground). The position of the workpiece can be adjusted by turning the spindle. Steel body (6), cover (7).

**Clamping force transfer system**

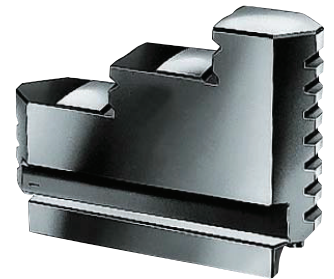
The jaws can be adjusted over the entire clamping range by turning the key.

**Lubrication**

To maintain the clamping force, geared scroll chucks must be lubricated regularly. You will find corresponding information in the operating instructions which are enclosed with every chuck. All geared scroll chucks are provided with grease nipples for easy maintenance.



Base jaw GB, hardened and ground



Reversible top jaw UB, hardened and ground



Unstepped jaw BL, unstepped, soft, material 16MnCr5

# ES - independently adjustable jaws



## APPLICATION

Optimized for the machining of irregularly shaped workpieces.

## TYPE

Geared scroll chuck in steel design with which irregularly shaped workpieces can be aligned via adjusting spindles.  
3-jaw and 4-jaw version.

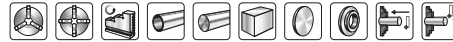
## CUSTOMER BENEFITS

- ⊕ Exact alignment of irregularly shaped workpieces
- ⊕ Jaws centrally clamping and individually adjustable
- ⊕ Die-forged spiral ring, series-balanced and hardened
- ⊕ Jaws in chuck ground out for concentricity

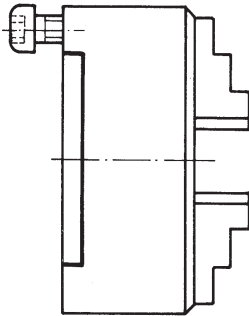
## TECHNICAL FEATURES

- With one set each of base and reversible jaws
- Clamping wrench
- Dimensions and mountings to DIN 6351
- Hardened spiral ring
- Die-forged steel body

ES = independently adjustable jaws, steel



A09  
DIN 6351, cylindrical centre mount, form A



Size	ZA	Through-hole mm	3-jaw chuck steel	4-jaw chuck steel	Torque Nm	Total clamping force kN
160	125	42	111360 ▲	111789 ▲	110	47
200	160	55	111365	111793	140	55
250	200	76	111370	111797	150	63
315	260	103	111375 ▲	111801	180	69
400	330	136	111380 ▲	111805 ▲	240	92
500	420	190	111385 ▲	111809 ▲	260	100
630	545	240	111390 ▲	111813 ▲	280	105

Further sizes and mountings available on request

# Jaws ES

A09

**Reversible jaw UB, hardened, tongue and groove for external and internal clamping, material 16 MnCr5**


Chuck Size	3-jaw set	4-jaw set	Jaw length mm	Jaw height mm	Jaw width mm
160	110118	110124	69	50	20
200	139666	139670	85	57,5	24
250	139667	139671	90	67,5	24
315/400	139668	139672	130	79,5	34
500/630	139669	139673	190	95	42

A09

**Unstepped jaw BL, unstepped, soft**


Chuck Size	3-jaw set	4-jaw set	Jaw length mm	Jaw height mm	Jaw width mm
160	107669	107675	69	50	20
200	139674	139678	85	57,5	24
250	139675	139679	90	67,5	24
315/400	139676	139680	130	79,5	34
500/630	139677	139681	190	95	42

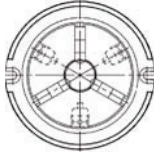
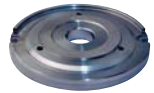
A09

**Base jaw GB, hardened, tongue and groove for external and internal clamping, material 16 MnCr5**


Chuck Size	3-jaw set	4-jaw set	Jaw length mm	Jaw height mm	Jaw width mm
160	107654	107662	62	15,3	26
200	139682	139686	78	17,8	30
250	139683	139687	86	17,8	30
315	139684	139688	118	22,7	44
400	139685	139689	118	22,7	44
500/630	107659	107667	176	25	54

# Accessories ES

## A09 Base plates for lathe chucks with cylindrical centre mount, DIN 6350



Item no.	Size	Thread
162793	160	6xM10
162401	200	6xM10
163036	250	
133705	315	

## A09 Special grease F80 for lathe chucks

For lubrication and conservation of chucking power



Item no.	Design	Contents
308555	Cartridge (DIN 1284) Ø 53.5x235mm	0,5 kg
028975	Tin	1 kg

## A09 Adjusting spindle



Item no.	For chuck size
104251 ▲	125
104271 ▲	160
137735 ▲	200
137643 ▲	250
137701 ▲	400/315
137716	500

## A09 Adjusting key



Item no.	For chuck size	Square	Hexagon
107444 ▲	125/160	5,5	-
139695 ▲	200/250/315/400	-	8
139696 ▲	500/630	-	12

## A09 Scroll



Item no.	Size
101721	125
100303	160
100003	200
100203	250
101552	315
102497	400
162973	500
162964	630

## A09 Driving pinion



Item no.	Size	Square
100304	160	10
100005	200	11
100204	250	12
112267	270	12
101553	315	14
105229	350	14
102498	400	17
162974	500	19
162965	630	19

## A09 Pinion holder screw



Item no.	Size
100305	160
100006	270
101554	315
102499	400
103300	630

## A09 Standard key



Item no.	Size	Square	Length mm
107427	100/110	8	75
107428	125/140	9	80
107429	160	10	90
107430	200/230	11	100
107431	250/270	12	100
107432	315	14	110
107433	350	14	140
107434	400	17	140
107435	500/630	19	150

## C15 Grease gun DIN1283



Item no.	Connec-tion	Contents of delivery
329093	M10x1	150 mm nozzle tube bent, needlepoint mouthpiece, top mouthpiece, 300 mm high pressure hose with 4 jaw hydraulics cross mouthpiece

# Accessories ES

## A09 Safety key with ejector



Item no.	Size	Square	Length mm
154371	100/110	8	130
154372	125/140	9	130
154373	160	10	160
154374	200/230	11	160
154375	250/270	12	160
154376	315	14	200
154377	350	14	200
154378	400	17	250
154379▲	500/630	19	250

## A09 Safety adapter with ejector

For actuating the chuck with torque (defined torque introduction)



Item no.	Size	Square	Inch
178566▲	80/85	6	3/8
178567▲	100/110	8	1/2
178568▲	125/140	9	1/2
178569▲	160	10	1/2
178570	200/230	11	1/2
178571▲	250/270	12	1/2
178572	315/350	14	1/2

## C15 Mounting screws

For lathe chucks with direct short-taper, for front mounting



Item no.	Size	Thread	Contents of delivery	Chuck Size	Taper size
233059	74	M10x70	piece	160	5
308436	80	M10x85	piece	200	5
200186	85	M12x85	piece	200	6
234615	100	M10x110	piece	250	5
302215	110	M12x90	piece	250	6
202439	125	M16x90	piece	250	8
316244	140	M12x120	piece	315	6
308439	160	M16x105	piece	315	8
342701	315	M16x130	piece	400	8
698878	350	M20x115	piece	400	11
011528	400	M20x155	piece	500	11
358815	500	M20x170	piece	630	11
202509	630	M24x150	piece	630	15

## A09 Stud and locknut ISO 702-3 (DIN 55027)



Item no.	Thread	Contents of delivery	For taper	Quantity
107447	M10x34	piece	3	3
107448	M10x39	piece	4	3
107449	M10x43	piece	5	4
107450	M12x50	piece	6	4
107451	M16x60	piece	8	4
107452	M20x75	piece	11	6
125650	M24x90	piece	15	6

## A09 Elongated safety key with ejector



Item no.	Size	Square	Length mm
154683	125/140	9	170
154685	160	10	180
154687	200/230	11	200
154689	250/270	12	200
154695	315	14	250

## A09 Torque wrench



Item no.	Torque Nm	Length mm	Output	Working accuracy
10004116	20-120	435	12,7=1/2"	3%
10004117	60-320	659	12,7=1/2"	3%

## C15 Set screw with nut, DIN 55021



Item no.	Thread	For taper	Quantity
107453	M10x30	4	3
107455▲	M10x35	5	4
107456▲	M12x40	6	4
107457▲	M16x45	8	4
107458▲	M20x55	11	6
127618▲	M24x65	15	6

## A09 Stud for Camlock ASA B 5.9 (DIN 55029) and cylindrical studs



Item no.	Thread	For taper	Quantity
107465▲	7/16-20x35	3	3
107466	7/16-20x37	4	3
107467	1/2-20x43	5	6
107468	5/8-18x49	6	6
107469	3/4-16x55,5	8	6
107470	7/8-14x67	11	6
127621▲	1-14x76	15	6

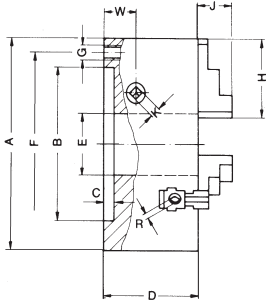
## A09 Stud for Camlock ISO 702-2 (DIN 55029) and cylindrical studs



Item no.	Thread	For taper	Quantity
178364▲	M10x1	3	3
178365	M10x1	4	3
178366▲	M12x1	5	6
178367	M16x1,5	6	6
178368▲	M20x1,5	8	6
178369▲	M22x1,5	11	6
178370▲	M24x1,5	15	6
178371	M27x2	20	6

# Chuck dimensions ES

## Cylindrical centre mount DIN 6351



The bore (measure E) could be enlarged (at surcharge)

  Enlarged bore max.

Size A	100	125	160	200	250	315	400	500	630
BH6	70	95	125	160	200	260	330	420	545
C	3	4	4	4	5	5	5	5	7
D	67	71	80	95,5	100	117	123	145	160
E	20	32	42	55	76	103	136	190	240
E <sub>max.</sub>	21	33	50	70	92	114	150	210	253
F	83	108	140	176	224	286	362	458	586
G	3xM8	3xM8	3xM10	3xM10	3xM12	3xM16	3xM16	6xM16	6xM16
H	56	56	69	85	90	130	130	190	190
J	22	21	28	32,5	40,6	46,5	47	55	55
K	8	9	10	11	12	14	17	19	19
R*	5,5	5,5	5,5	8	8	8	8	12	12
W	20	20	22,45	25,7	26,5	30	35	38	48
approx. kg	4	6	10	18	29	54	88	145	240

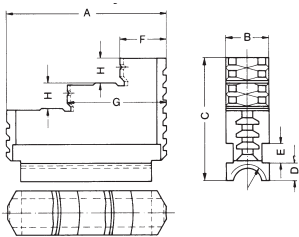
\* from Ø 200 hexagon

## Max. permissible speeds for chucks ES to DIN 6351

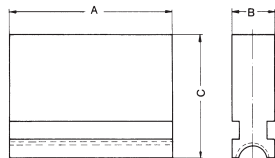
The specified values are only applicable for workpieces not exceeding a specific unbalance of 25 gmm/kg.

Size	3-Jaw	4-Jaw
	Steel body	Steel body
100	-	-
125	-	-
160	3200	2850
200	2650	2350
250	2200	1900
315	1400	1220
400	1400	1220
500	880	770
630	750	660

## Reversible jaw UB



Left-hand thread



Size	100	125	160	200	250	315	400	500	630
A	56	56	69	85	90	130	130	190	190
B	18	18	20	24	24	34	34	42	42
C	41,5	41,5	50	57,5	67,5	79,5	79,5	95	95
D	8,7	8,7	9,7	9,7	9,7	11,15	11,15	15	15
E	7	7	8	10	10	15	15	15	15
F	17	17	19	25	26	40	40	50	50
G	35	35	43	54	56	85	85	120	120
H	8	8	10	12	14	15	15	20	20
Thread	Tr14x3	Tr14x3	Tr16x4	Tr18x2	Tr18x2	Tr20x2	Tr20x2	Tr26x3	Tr26x3
approx. kg	0,18	0,18	0,3	0,53	0,7	1,7	1,7	3,7	3,7