

# ZS Hi-Tru



Lathe and grinding chucks ZS Hi-Tru

### APPLICATION

Optimized for machining workpieces which must be produced with **maximum concentricity**. Can be universally used, but is especially advantageous on turning and grinding machines as well as dividing units.

### TYPE

Face spiral chuck in steel design, with which the workpiece can be adjusted very sensitively to the desired concentricity via 3 tangentially arranged adjusting spindles.

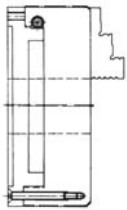
### CUSTOMER BENEFITS

- ⊕ Radial fine adjustment for maximum concentricity
- ⊕ Repeatability 0.015 mm
- ⊕ Adjusting accuracy within 0.005 mm
- ⊕ Precision adjustment without opening the mounting screws
- ⊕ Jaws in chuck ground out for concentricity

### TECHNICAL FEATURES

- With one set each of turning and drilling jaws
- Hardened adjusting spindles, as well as their support surfaces
- Hardened spiral ring
- Steel take-up flange

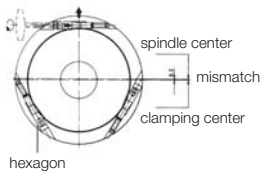
A09  
ZS Hi-Tru, with one set outward stepped jaws and one set inward stepped jaws DIN 6350, cylindrical centre mount, Form A



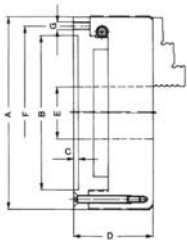
Item no.	Size	Cylindrical centre mount	Through-hole mm	Speed max. min <sup>-1</sup>	Torque Nm	Total clamping force kN
180259	80	56	19	7000	30	13
180261	100	70	20	6300	60	27
180263	125	95	32	5500	80	31
180265	160	125	42	4600	110	47
180267	200	160	55	4000	140	55
180269	250	200	76	3000	150	63
180271	315	260	103	2300	180	69

On request from size 125 with 6 jaws or with short-taper mount to ISO 702-3 (DIN 55027) or ISO 702-2 (DIN 55029) Camlock  
Further sizes and mountings available on request

DIN 6350  
Dimensions ZS Hi-Tru  
Cylindrical centre mount,  
Form A



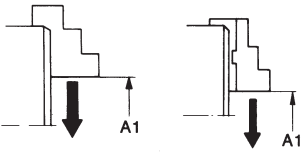
Size A	Zoll	B <sup>+0,02</sup>	C	D	F	G	Hexagon	Weight
<b>ZS Hi-Tru, with one set outward stepped jaws and one set inward stepped jaws</b>								
80	3 <sup>1/4</sup>	56	3	50,5	67	3xM6	4	1,7
100	4	70	3	63	83	3xM8	5	3,6
125	5	95	4	72	108	3xM8	5	5,6
160	6 <sup>1/4</sup>	125	4	81	140	3xM10	6	10
200	8	160	4	89,5	176	3xM10	6	17,2
250	10	200	5	102	224	3xM12	8	34,5
315	12 <sup>1/2</sup>	260	5	122	286	3xM16	8	57,5



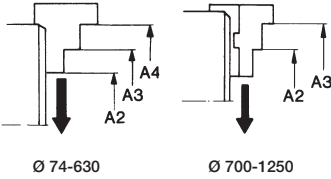
# Chuck dimensions ZS - ZSU and Orange Line

Chucking capacities of jaw steps (standard values)

External chucking

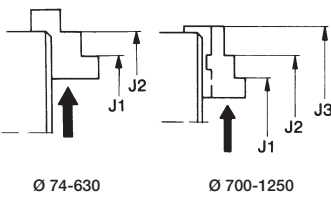


Size	74	80	85	100	110	125	140	160	200	250
A1 (BB)	2-24	2-30	2-30	3-38	3-42	3-53	3-53	4-72	4-100	5-122
A2 (DB)	2-24	2-30	2-30	3-38	3-42	3-53	3-53	3-72	4-100	5-122
A3 (DB)	23-46	27-55	27-55	38-71	39-77	39-89	47-97	47-116	56-152	73-190
A4 (DB)	45-68	52-80	52-80	70-100	70-100	75-125	91-140	91-160	104-200	131-250
max. swing dia.	88	104	104	128	138	157	174	194	238	302
Jaw movement	11	14	14	15	19	25	25	34	48	58



Size	315	350	400	500	630	700	800	1000	1250
A1	6-135	20-180	20-200	35-260	50-350	110-350	150-450	250-600	320-600
A2	6-135	20-180	20-200	35-260	50-350	280-672	325-853	425-1070	490-1150
A3	96-225	110-270	110-300	140-360	190-490	356-748	400-928	500-1150	564-1224
A4	186-315	200-350	200-400	280-500	330-630	-	-	-	-
max. swing dia.	395	440	480	600	730	1000	1170	1390	1476
Jaw movement	64	80	100	110	150	120	150	175	140

Internal chucking



Size	74	80	85	100	110	125	140	160	200	250
J1	23-46	25-53	26-53	33-66	33-71	37-87	39-89	39-107	44-140	59-165
J2	45-68	50-78	50-78	65-94	65-104	73-123	83-132	83-152	92-186	119-236

Size	315	350	400	500	630	700	800	1000	1250
J1	96-224	100-260	100-300	135-355	150-450	212-648	251-855	356-1080	426-1162
J2	186-305	190-350	190-390	275-460	290-590	290-758	326-930	430-1150	500-1236
J3	-	-	-	-	-	526-922	566-1094	660-1314	740-1400

Clamping ranges for lathe chucks with individual adjustable jaws (EG-ES) 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 for ZG-ZS, ZGU-ZSU, ZG Hi-Tru chucks to DIN 6350

The maximum permissible speed has been fixed so that 1/3 of the gripping force is still available as residual gripping force if the maximum gripping 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 specification DIN 6386 Part 1 shall be observed.

Size	3 and 4 jaws	
	Cast iron body	Steel body
74	5000	-
80	5000	7000
100	4500	6300
125	4000	5500
140	3700	5000
160	3600	4600
200	3000	4000
250	2500	3000
315	2000	2300
350	1700	1900
400	1600	1800
500	1000	1300
630	800	850
700	650	800
800	600	700
1000	480	560
1250	380	450

### Clamping force 3 jaw chuck ZS - ZSU, Orange Line, ZS Hi-Tru to DIN 6350

The clamping force is sum total of all jaw forces acting radially on the stationary workpiece. The clamping forces are approximate values. To obtain the specified clamping forces, the chuck must be in a perfect condition and lubricated with F 80 lubricant recommended by RÖHM.

Size	Torque key	Total clamping force
74	30	11
80	30	13
100	60	27
125	80	31
140	90	40
160	11	47
200	140	55
250	150	63
315	180	69
350	210	74
400	240	92
500	260	100
630	280	105
700	280	105
800	300	110
1000	450	115
1250	450	115