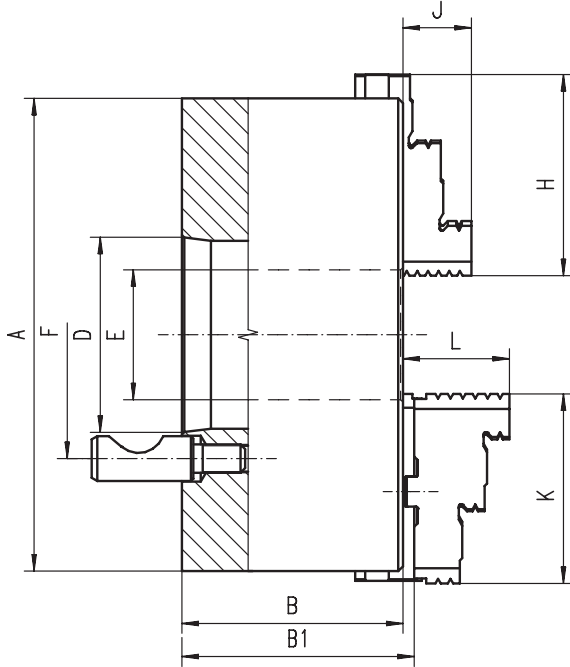


Type 3544-I, 3545-I

3 JAWS, STEEL BODY (DIN 55029)



Features:

- 3 jaw, self-centering scroll chuck with manual gripping
- Steel body extends machine life while providing higher rigidity and greater wear resistance, enabling the chuck to withstand higher machining forces
- Hardened and ground working surfaces ensure longer life with maintained accuracy and repeatability

- Balanced scroll plate allows higher rotation speeds without excess vibration
- Mounted directly to CAMLOCK type machine-tool spindles

Application:

- This precision chuck, with increased gripping accuracy, is made for very high precision machining on conventional lathes

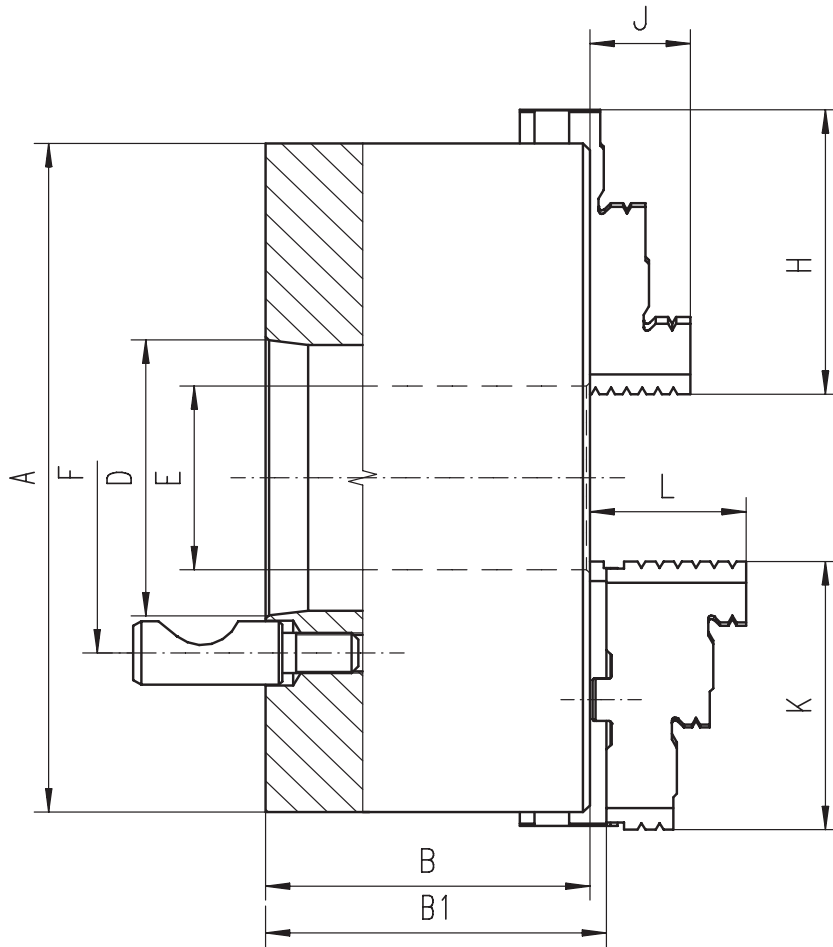
Options:

- Hard solid jaws (type 3544-I) or hard two-piece jaws (type 3545-I)
- Chuck size: can be greater than 630 mm, but not exceeding 1000 mm
- Chuck design: our engineers can work with you to implement any product design changes you may require

Chuck size A	100	125			160			200			250	
Short taper 1:4	3	3	4	3	4	5	4	5	6	6	8	
B	76	59,5			68			78			89	
B1	-	64,8			72,8			82,8			92,8	
D	min.	53,975	53,975	63,513	53,975	63,513	82,563	63,513	82,563	106,375	106,375	139,719
	max.	53,988	53,988	63,526	53,988	63,526	82,578	63,526	82,578	106,390	106,390	139,734
E	20	32			42			55			76	
F	70,6	70,6	82,6	70,6	82,6	104,8	82,6	104,8	133,4	133,4	171,4	
Qty. of mounting screws	3	3	3	3	3	6	3	6	6	6	6	
H	70	51	51	70	70	70	85	85	85	105	105	
J	32	20	20	32	32	32	29	29	29	34	34	
K	67	56	56	67	67	67	80	80	80	95	95	
L	43	40	40	43	43	43	45	45	45	53	53	
Approx. weight [kg]	3,0	5,0			9,0			19,0			32,0	

Chuck size A	315			400		500		630			
Short taper 1:4	6	8	11	8	11	8	11	8	11	15	
B	96,2		111,7	108		119		129			
B1	101,3		116,8	116,8		129,8		140,3			
D	min.	106,375	139,719	196,869	139,719	196,869	139,719	196,869	139,719	196,869	285,775
	max.	106,390	139,734	196,887	139,734	196,887	139,734	196,887	139,734	196,887	285,795
E	103		136		136		190		136		252
F	133,4	171,4	235	171,4	235	171,4	235	171,4	235	330,2	
Qty. of mounting screws	6	6	6	6	6	6	6	6	6	6	
H	125	125	125	145	145	180	180	225	225	225	
J	43	43	43	55	55	60	60	70	70	70	
K	-	110	110	127	127	127	127	127	127	127	
L	-	57	57	67	67	79	79	87	87	87	
Approx. weight [kg]	51,0			101,0		150,0		274,0			

Type	Standard accessories	Optional accessories
Type 3544-I	1 set of outside hard solid jaws 1 set of inside hard solid jaws 1 wrench	1 set of soft solid jaws
Type 3545-I	1 set of hard top jaws 1 set of hard master jaws 1 wrench	1 set of soft top jaws

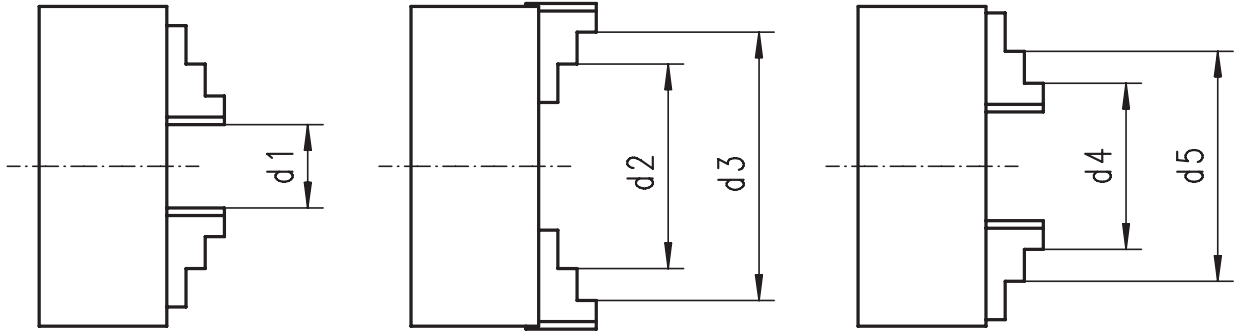


Chuck size A	100			125			160			200			250	
Short taper 1:4	3	3	4	3	4	5	4	5	6	6	8	6	8	
B	76	59,5		68			78			89				
B1	-	64,8		72,8			82,8			92,8				
D	min.	53,975	53,975	63,513	53,975	63,513	82,563	63,513	82,563	106,375	106,375	139,719	139,719	
	max.	53,988	53,988	63,526	53,988	63,526	82,578	63,526	82,578	106,390	106,390	139,734	139,734	
E	20	32		42			55			76				
F	70,6	70,6	82,6	70,6	82,6	104,8	82,6	104,8	133,4	133,4	171,4	133,4	171,4	
Qty. of mounting screws	3	3	3	3	3	6	3	6	6	6	6	6	6	
H	70	51	51	70	70	70	85	85	85	105	105	105	105	
J	32	20	20	32	32	32	29	29	29	34	34	34	34	
K	67	56	56	67	67	67	80	80	80	95	95	95	95	
L	43	40	40	43	43	43	45	45	45	53	53	53	53	
Approx. weight [kg]	3,0		5,0		9,0			19,0			32,0			

Chuck size A	315			400			500			630			
Short taper 1:4	6	8	11	8	11	8	11	8	11	8	11	15	
B	96,2		111,7	108		119			129				
B1	101,3		116,8	116,8		129,8			140,3				
D	min.	106,375	139,719	196,869	139,719	196,869	139,719	196,869	139,719	196,869	139,719	285,775	285,775
	max.	106,390	139,734	196,887	139,734	196,887	139,734	196,887	139,734	196,887	139,734	285,795	285,795
E	103		136			136		190		136		190	
F	133,4	171,4	235	171,4	235	171,4	235	171,4	235	171,4	235	330,2	330,2
Qty. of mounting screws	6	6	6	6	6	6	6	6	6	6	6	6	6
H	125	125	125	145	145	180	180	225	225	225	225	225	225
J	43	43	43	55	55	60	60	70	70	70	70	70	70
K	-	110	110	127	127	127	127	127	127	127	127	127	127
L	-	57	57	67	67	79	79	87	87	87	87	87	87
Approx. weight [kg]	51,0			101,0			150,0			274,0			



ENGINEERING DATA FOR SELF-CENTERING SCROLL CHUCKS



GRIPPING RANGES FOR CHUCKS TYPE 3200, 3500, 3600, 3700

Chuck size		80	100	125	160	200
Hard solid jaws	d1	2-27	3-33	3-50	3-64	4-90
	d2	25-50	32-62	39-83	50-107	60-145
	d3	48-71	62-93	80-125	98-160	130-200
	d4	22-46	25-56	34-74	42-100	52-135
	d5	45-69	56-87	72-115	94-154	120-202
Hard two-piece jaws	d1	-	-	3-50	3-64	4-90
	d2	-	-	52-96	62-121	72-156
	d3	-	-	95-125	115-160	133-200
	d4	-	-	34-76	42-97	50-130
	d5	-	-	75-118	88-146	105-190
max. swing diameter		90	117	151	204	246

Chuck size		250	315	400	500	630	800	915	1000
Hard solid jaws	d1	5-118	10-131	10-180	20-235	30-335	150-482	-	-
	d2	77-188	90-215	103-272	140-357	180-487	302-634	-	-
	d3	160-250	190-315	230-400	276-500	345-630	468-800	-	-
	d4	62-174	78-200	85-252	120-335	160-465	282-614	-	-
	d5	145-256	172-299	210-380	245-476	325-630	448-780	-	-
Hard two-piece jaws	d1	5-118	10-131	10-180	20-235	30-335	150-482	200 - 550	250 - 600
	d2	86-197	103-226	127-294	110-400	120-570	240-724	300 - 950	350 - 1080
	d3	160-250	190-315	230-400	190-500	200-630	316-800	380 - 1025	430 - 1150
	d4	58-165	65-182	72-228	120-410	140-590	252-736	350 - 1000	425 - 1070
	d5	125-235	145-265	165-329	200-485	210-665	328-812	450 - 1025	500 - 1150
max. swing diameter		306	384	472	600	770	940	-	-

GRIPPING RANGES FOR CHUCKS TYPE 3864, 3865

Chuck size		125	160	200	250	315	400	500	630
Hard solid jaws	d1	6-43	8-64	8-90	12-118	12-131	15-202	30-235	40-335
	d2	42-78	52-107	64-145	82-188	95-215	140-308	152-361	192-487
	d3	83-120	102-160	132-200	165-250	192-315	232-400	291-500	358-630
	d4	34-68	47-100	55-135	68-174	82-200	95-280	132-335	175-467
	d5	74-110	98-154	121-202	150-256	178-299	213-400	270-474	340-630
Hard two-piece jaws	d1	6-43	8-64	8-90	12-118	12-131	15-202	30-235	40-335
	d2	50-87	67-121	74-156	82-188	108-226	132-296	121-402	132-555
	d3	94-125	118-160	134-200	164-250	153-315	236-400	197-478	210-630
	d4	33-70	45-97	52-130	68-174	68-182	73-252	135-413	150-585
	d5	76-119	92-146	109-190	150-256	150-265	169-352	210-489	220-661
max. swing diameter		151	204	246	306	384	472	600	770

Do not exceed maximum gripping ranges!

MAXIMUM PERMISSIBLE ROTATION SPEEDS (rpm)

Chuck size	80	100	125	160	200	250	315	400	500	630	800	915	1000
3100*, 3200, 3600	5000	4500	4000	3600	3000	2500	2000	1600	1000	800	600	400	400
3500, 3700	7000	6300	5500	4600	4000	3500	2800	2000	1300	1000	800	700	600
3564, 3565		6300	5500	4600	4000	3500	2800	2000	1300	1000			
3864, 3865			3800	3200	2800	2400	2400	1400	900	700			
4505*					2500	2000	1500	1000	700	540			
4605*					2000	1800	1500	1000	600	480			
4705*					3000	2500	2000	1500	1000	750			
4805*					2500	2000	1700	1300	800	660			

* For lathe chucks type 3100, 4505, 4605, 4705 and 4805 the specified permissible speeds are only applicable for work-pieces not exceeding a specific unbalance of 25 gmm/kg.

TOTAL GRIPPING FORCE FOR CHUCKS TYPE 3100, 3200, 3500, 3600, 3700, 3800

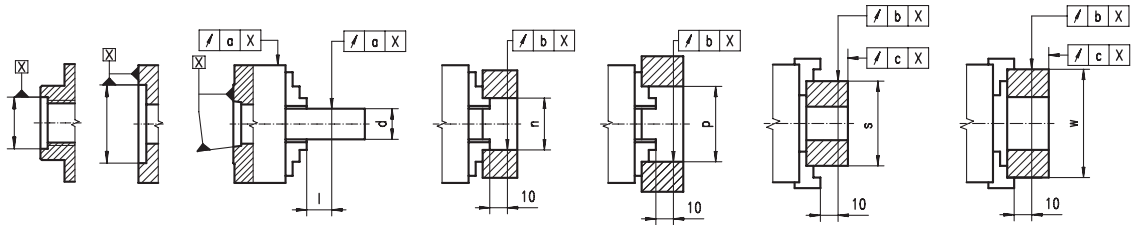
Chuck size	80	100	125	160	200	250	315	400	500	630	800	915	1000
Torque on wrench [Nm]	35	50	75	120	160	180	200	280	360	460	500	500	500
Total gripping force [daN]	1000	1700	2400	3100 2400*	3700 2900*	4600 3600*	5500 4400*	6500 4900*	7200	8000	9000	9000	9000
* for 3100													

The total gripping force is the sum 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 greases recommended in operating instructions.

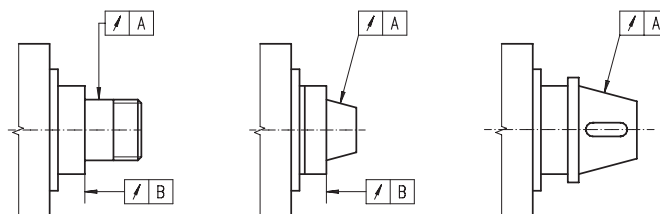
BALANCE VALUE FOR SELF-CENTERING CHUCKS TYPE 3500, 3700

Chuck size	80	100	125	160	200	250	315	400	500	630
gcm	11	16	23	32	45	63	90	140	300	640

CENTERING ACCURACY FOR SELF-CENTERING CHUCKS TYPE 3200, 3500, 3600, 3700, 3800



Chuck size	mm	80	100	125	160	200	250	315	400	500	630	800	915	1000
d	10	10	18	18	30	30	53	53	75	75	160	250	250	
	-	14	25	30	40	53	75	100	100	125	200	315	315	
	14	18	30	40	53	75	100	125	125	160	250	400	400	
l	40	40	60	60	80	80	120	120	160	160	160	160	160	
n	40	40	50	50	80	80	125	125	200	200	325	500	500	
p	60	75	100	135	162	200	252	282	282	325	500	630	630	
s	35	50	62	88	96	150	210	250	300	400	400	500	500	
w	Hard solid jaws	63	80	100	100	160	160	250	250	400	400	500	-	-
	Hard two-piece jaws	-	-	120	150	185	225	300	350	400	400	500	630	630
Centering accuracy (mm)														
3500-l	a	0,010	0,015	0,020	0,025	0,030	0,050	0,070						
	b	0,013	0,018	0,023	0,028	0,033	0,055	0,075						
	c	0,008	0,010	0,013	0,015	0,015	0,030	0,050						
3500 3700 3800	a	0,020	0,030	0,040	0,050	0,060	0,10	0,10						
	b	0,025	0,035	0,045	0,055	0,065	0,10	0,10						
	c	0,015	0,020	0,025	0,030	0,030	0,05	0,05						
3200 3600	a	0,020	0,030	0,040	0,050	0,060	0,10	0,10	0,15	0,15	0,15			
	b	0,025	0,035	0,045	0,055	0,065	0,10	0,10	0,15	0,15	0,15			
	c	0,015	0,020	0,025	0,030	0,030	0,05	0,05	0,06	0,06	0,06			
3284 3285	a		0,05		0,08									
	b		0,075		0,075									
	c		0,04		0,07									



SPINDLE NOSE CENTERING ACCURACY

3500	A, B	Ø 80 - 400	Ø 500 - 630	To obtain the specified centering accuracy of a chuck mounted on a machine tool it is necessary: 1) to ensure the machine spindle nose runout does not exceed the values specified, 2) to meet the basic requirements for correct mounting of the chuck on the spindle nose, according to the chuck installation instructions.
		0,003 mm	0,005 mm	
3200, 3600, 3700	A, B	Ø 80 - 160	Ø 200 - 800	
		0,003 mm	0,005 mm	