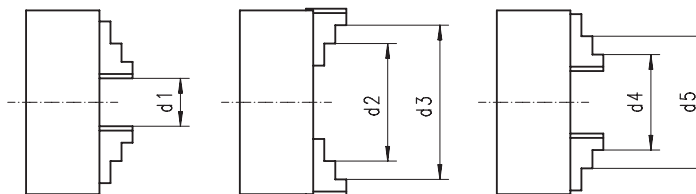


GRIPPING RANGES

■ Do not exceed maximum gripping ranges!



FOR CHUCKS 32, 35**, 36**, 37****

Chuck size [mm]	Hard solid jaws					Hard 2-piece jaws					Max. swing diameter
	d1	d2	d3	d4	d5	d1	d2	d3	d4	d5	
80	2-27	25-50	48-71	22-46	45-69	-	-	-	-	-	90
100	3-33	32-62	62-93	25-56	56-87	-	-	-	-	-	117
125	3-50	39-83	80-125	34-74	72-115	3-50	52-96	95-125	34-76	75-118	151
160	3-64	50-107	98-160	42-100	94-154	3-64	62-121	115-160	42-97	88-146	204
200	4-90	60-145	130-200	52-135	120-202	4-90	72-156	133-200	50-130	105-190	246
250	5-118	77-188	160-250	62-174	145-256	5-118	86-197	160-250	58-165	125-235	306
315	10-131	90-215	190-315	78-200	172-299	10-131	103-226	190-315	65-182	145-265	384
400	10-180	103-272	230-400	85-252	210-380	10-180	127-294	230-400	72-228	165-329	472
500	20-235	140-357	276-500	120-335	245-476	20-235	110-400	190-500	120-410	200-485	600
630	30-335	180-487	345-630	160-465	325-630	30-335	120-570	200-630	140-590	210-665	770
800	150-482	302-634	468-800	282-614	448-780	150-482	240-724	316-800	252-736	328-812	940
915	-	-	-	-	-	200 - 550	300 - 950	380 - 1025	350 - 1000	450 - 1025	-
1000	-	-	-	-	-	100 - 600	350 - 1080	430 - 1150	425 - 1070	500 - 1150	-

FOR CHUCKS 3864, 3865

Chuck size [mm]	Hard solid jaws					Hard 2-piece jaws					Max. swing diameter
	d1	d2	d3	d4	d5	d1	d2	d3	d4	d5	
125	6-43	42-78	83-120	34-68	74-110	6-43	50-87	94-125	33-70	76-119	151
160	8-64	52-107	102-160	47-100	98-154	8-64	67-121	118-160	45-97	92-146	204
200	8-90	64-145	132-200	55-135	121-202	8-90	74-156	134-200	52-130	109-190	246
250	12-118	82-188	165-250	68-174	150-256	12-118	82-188	164-250	68-174	150-256	306
315	12-131	95-215	192-315	82-200	178-299	12-131	108-226	153-315	68-182	150-265	384
400	15-202	140-308	232-400	95-280	213-400	15-202	132-296	236-400	73-252	169-352	472
500	30-235	152-361	291-500	132-335	270-474	30-235	121-402	197-478	135-413	210-489	600
630	40-335	192-487	358-630	175-467	340-630	40-335	132-555	210-630	150-585	220-661	770

FOR CHUCKS 43**

Chuck size [mm]	Hard solid jaws		Max. swing diameter
	d1 min	d3 max	
85	3	85	101
100	3	100	116
125	8	125	150
160	8	160	185
200	10	200	235
250	10	250	296
315	15	315	369
350	15	350	404
400	20	400	465
500	45	500	570
630	50	630	720
800	50	800	888
915	120	915	1.003
1000	170	1000	1.088
1250	170	1250	1.338

FOR CHUCKS 3404

Chuck size [mm]	d1	d2	d3	d4	d5	Max. swing diameter
125	4-29	38-63	100-125	28-53	100-125	151
160	4-90	61-150	90-160	34-120	90-160	212
200	5-105	70-170	100-200	49-149	100-200	264
250	8-130	81-170	120-250	66-188	128-250	322
315	10-155	95-189	152-315	74-200	142-315	393

FOR CHUCKS 4505, 4605, 4705, 4805

Chuck size [mm]	d1 min	d3 max
200	4	200
250	5	250
315	10	315
400	15	400
500	20	500
630	30	630

FOR CHUCKS 3105, 32**, 35**, 36**, 37**, 38**

Chuck size [mm]	Max. rpm			
	Type 3105 ¹⁾ , 32**, 36**	Type 35**, 37**	Type 3564, 3565	Type 3864, 3865
80	5.000	7.000	-	-
100	4.500	6.300	6.300	-
125	4.000	5.500	5.500	3.800
160	3.600	4.600	4.600	3.200
200	3.000	4.000	4.000	2.800
250	2.500	3.500	3.500	2.400
315	2.000	2.800	2.800	2.400
400	1.600	2.000	2.000	1.400
500	1.000	1.300	1.300	900
630	800	1.000	1.000	700
800	600	800	800	400
1000	400	600	500	300

¹⁾ The specified permissible speeds are only applicable for work-pieces not exceeding a specific unbalance of 25 gmm/kg

FOR CHUCKS 43**

Chuck size [mm]	Max. rpm	
	Steel body	Cast iron body
85	4.000	-
100	3.800	-
125	3.500	-
160	3.200	-
200	2.500	1.800
250	2.000	1.500
315	1.500	1.200
350	1.500	1.200
400	1.100	800
500	700	500
630	550	400
800	450	300
915	200	150
1000	200	150
1250	150	100

* The specified permissible speeds are only applicable for work-pieces not exceeding a specific unbalance of 25 gmm/kg

FOR CHUCKS 3404

Chuck size [mm]	Max. rpm
125	6.000
160	5.400
200	4.600
250	4.200
315	3.300

MAXIMUM PERMISSIBLE ROTATION SPEEDS (RPM)

FOR CHUCKS 4505, 4605, 4705, 4805

Chuck size [mm]	Max. rpm			
	Type 4505*	Type 4605*	Type 4705*	Type 4805*
200	2.500	2.000	3.000	2.500
250	2.000	1.800	2.500	2.000
315	1.500	1.500	2.000	1.700
400	1.000	1.000	1.500	1.300
500	700	600	1.000	800
630	540	480	750	660

* The specified permissible speeds are only applicable for work-pieces not exceeding a specific unbalance of 25 gmm/kg

BALANCE VALUE

FOR CHUCKS 35**, 37**

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

FOR CHUCKS 3404

Chuck size [mm]	gcm
125	16
160	32
200	63
250	125
315	250

FOR CHUCKS 3105, 32**, 35**, 36**, 37**, 38**

Chuck size [mm]	Torque on wrench [Nm]	Total gripping force [daN]
80	35	1.000
100	50	1.700
125	75	2.400
160	120	3.100 (2.400*)
200	160	3.700 (2.900*)
250	180	4.600 (3.600*)
315	200	5.500 (4.400*)
400	280	6.500 (4.900*)
500	360	7.200
630	460	8.000
800	500	9.000
915	500	9.000
1000	500	9.000
1000	200	-
1250	150	-

* for 3105

TOTAL GRIPPING FORCE

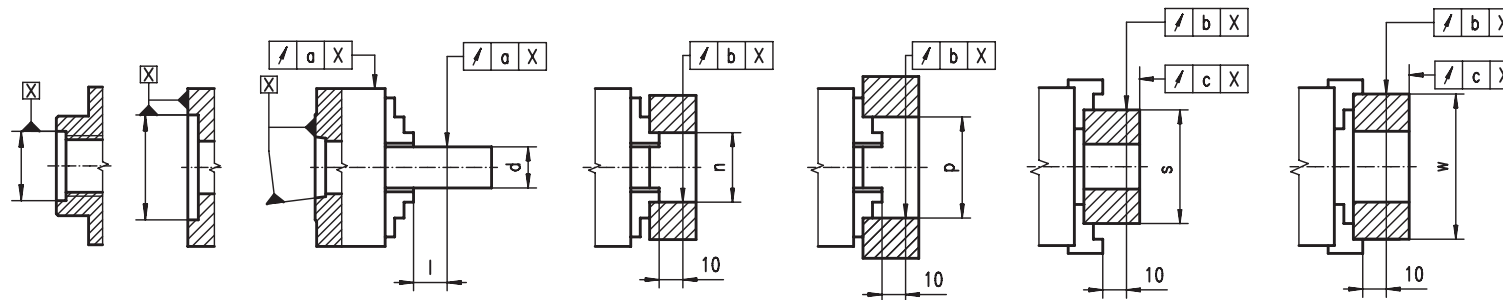
- The total gripping force is the sum of all jaw forces acting radially on the stationary workpiece. The specified gripping forces are approximate values.
- They apply to chucks in perfect condition which have been lubricated with greases recommended in the chuck operations manual.

FOR CHUCKS 3404

Chuck size [mm]	Torque on wrench [Nm]	Total gripping force [daN]
125	40	3.000
160	100	6.000
200	160	8.500
250	200	11.000
315	250	13.000

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CENTERING ACCURACY



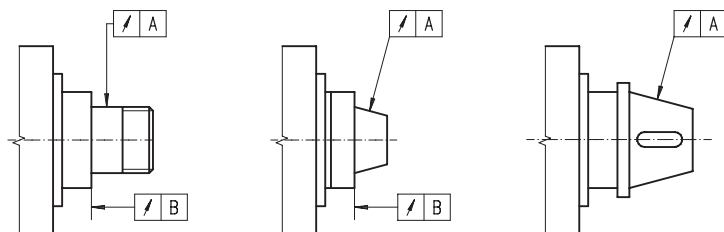
For chucks
32**, 35**, 36**, 37**, 38**

Chuck size [mm]	d	i	n	p	s	w		Centering accuracy [mm]													
						Hard solid jaws	Hard 2-piece jaws	Type 35** PREMIUM			Type 35**, 37**, 38**			Type 32**, 36**			Type 3284, 3285				
								a	b	c	a	b	c	a	b	c	a	b	c		
80	10	-	14	40	40	60	35	63	-	0,010	0,013	0,008	0,020	0,025	0,015	0,020	0,025	0,015	0,050	0,075	0,040
100	10	14	18	40	40	75	50	80	-	0,010	0,013	0,008	0,020	0,025	0,015	0,020	0,025	0,015	0,050	0,075	0,040
125	18	25	30	60	50	100	62	100	120	0,015	0,018	0,010	0,030	0,035	0,020	0,030	0,035	0,020	0,050	0,075	0,040
160	18	30	40	60	50	135	88	100	150	0,015	0,018	0,010	0,030	0,035	0,020	0,030	0,035	0,020	0,050	0,075	0,040
200	30	40	53	80	80	162	96	160	185	0,020	0,023	0,013	0,040	0,045	0,025	0,040	0,045	0,025	0,050	0,075	0,040
250	30	53	75	80	80	200	150	160	225	0,020	0,023	0,013	0,040	0,045	0,025	0,040	0,045	0,025	0,080	0,075	0,070
315	53	75	100	120	125	252	210	250	300	0,025	0,028	0,015	0,050	0,055	0,030	0,050	0,055	0,030	0,080	0,075	0,070
400	53	100	125	120	125	282	250	250	350	0,030	0,033	0,015	0,060	0,065	0,030	0,060	0,065	0,030	-	-	-
500	75	100	125	160	200	282	300	400	400	0,050	0,055	0,030	0,100	0,075	0,050	0,100	0,100	0,050	-	-	-
630	75	125	160	160	200	325	400	400	400	0,070	0,075	0,050	0,100	0,100	0,050	0,100	0,100	0,050	-	-	-
800	160	200	250	160	325	500	400	500	500	0,100	0,100	0,050	0,150	0,150	0,060	0,150	0,150	0,060	-	-	-
915	250	315	400	160	500	630	500	-	630	-	-	-	-	-	-	0,150	0,150	0,060	-	-	-
1000	250	315	400	160	500	630	500	-	630	0,120	0,120	0,060	0,150	0,150	0,080	0,150	0,150	0,060	-	-	-

SPINDLE NOSE CENTERING ACCURACY

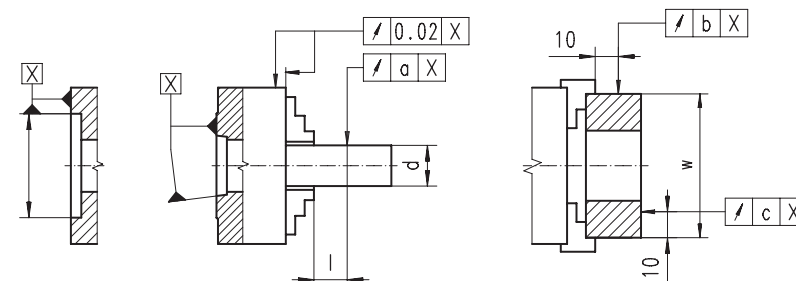
To obtain the specified centering accuracy of a chuck mounted on a machine tool it is necessary:

- 1) to ensure the machine spindle nose run-out 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 operations manual.



Type 35**		Type 32**, 36**, 37**	
Ø 80 - 400	0,003 mm	Ø 80 - 160	0,003 mm
Ø 500 - 630	0,005 mm	Ø 200 - 800	0,005 mm

UNBALANCE CHUCK 3404



Chuck size [mm]	d	i	w		Centering accuracy [mm]				
			Hard solid jaws	Hard 2-piece jaws	Type 3404				
					a	b	c		
125	14	20	29	60	95	125	0,015	0,010	0,015
160	14	20	39	60	95	160	0,015	0,010	0,015
200	14	22	50	80	125	200	0,015	0,010	0,015
250	15	32	64	80	180	245	0,015	0,010	0,015
315	20	64	89	120	189	290	0,020	0,010	0,020