

DURO-NC



APPLICATION

Standard power chuck with through-hole for flexible use thanks to quick-action jaw change system.

TYPE

Power chuck available with cylindrical center mount. 3-jaw version.

CUSTOMER BENEFITS

- ④ Universal: Jaws can be offset, exchanged or turned
- ④ For high speeds thanks to lightweight jaws
- ④ High clamping precision and clamping force thanks to proven wedge hook system
- ④ Possible to use jaw units of the DURO manual clamping chuck

TECHNICAL FEATURES

- Central locking of the quick-action jaw change system
- Power transmission by means of wedge hook system
- Base jaws angle-serrated

Note:

- 1) Included in the scope of delivery: Chuck, chuck and jaw mounting screws, base jaws, safety wrench, mounting wrench.
- 2) The safety key can only be pulled out once the jaws are locked. This setup in combination with the key switch integrated in the machine also prevents the machine spindle from starting up unintentionally when the jaws are unlocked.

Gripping force / speed diagrams

The loss of gripping force was determined experimentally on a chuck with matched UB top jaws. It is largely independent of the initial gripping force at zero speed.

Upper curve: min. centrifugal force of top jaw

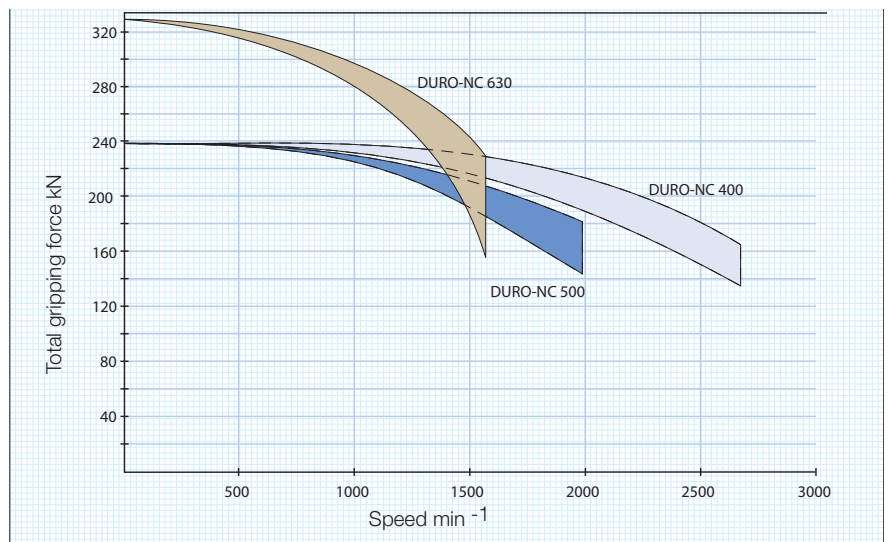
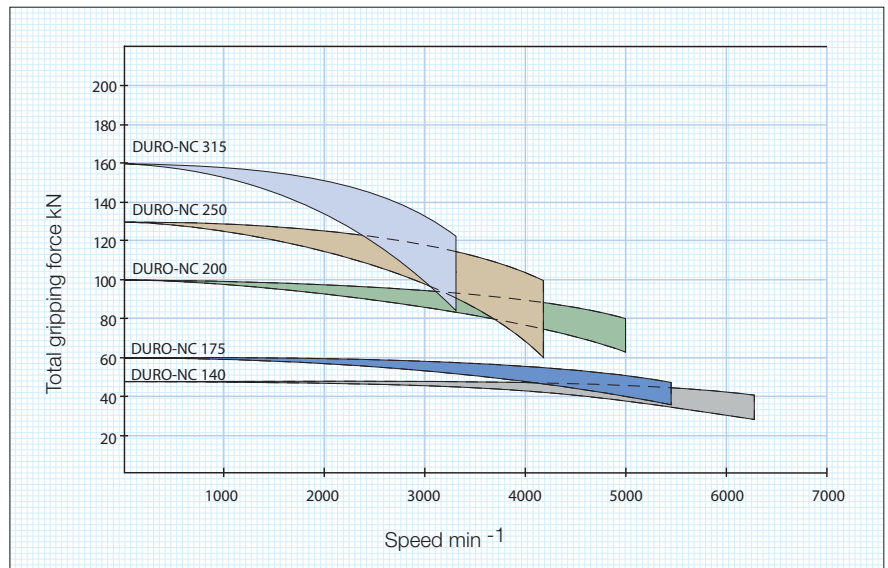


Lower curve: max. centrifugal force of top jaw

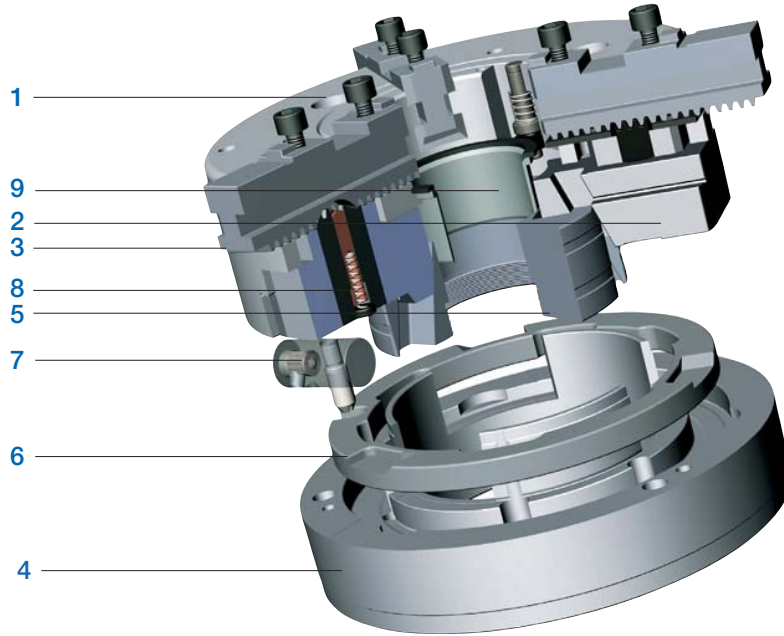


To obtain the specified gripping forces, the chuck must be in a perfect condition and lubricated with F 80 lubricant recommended by RÖHM. Measuring point near chuck face.

Power chuck with quick-acting jaw change system



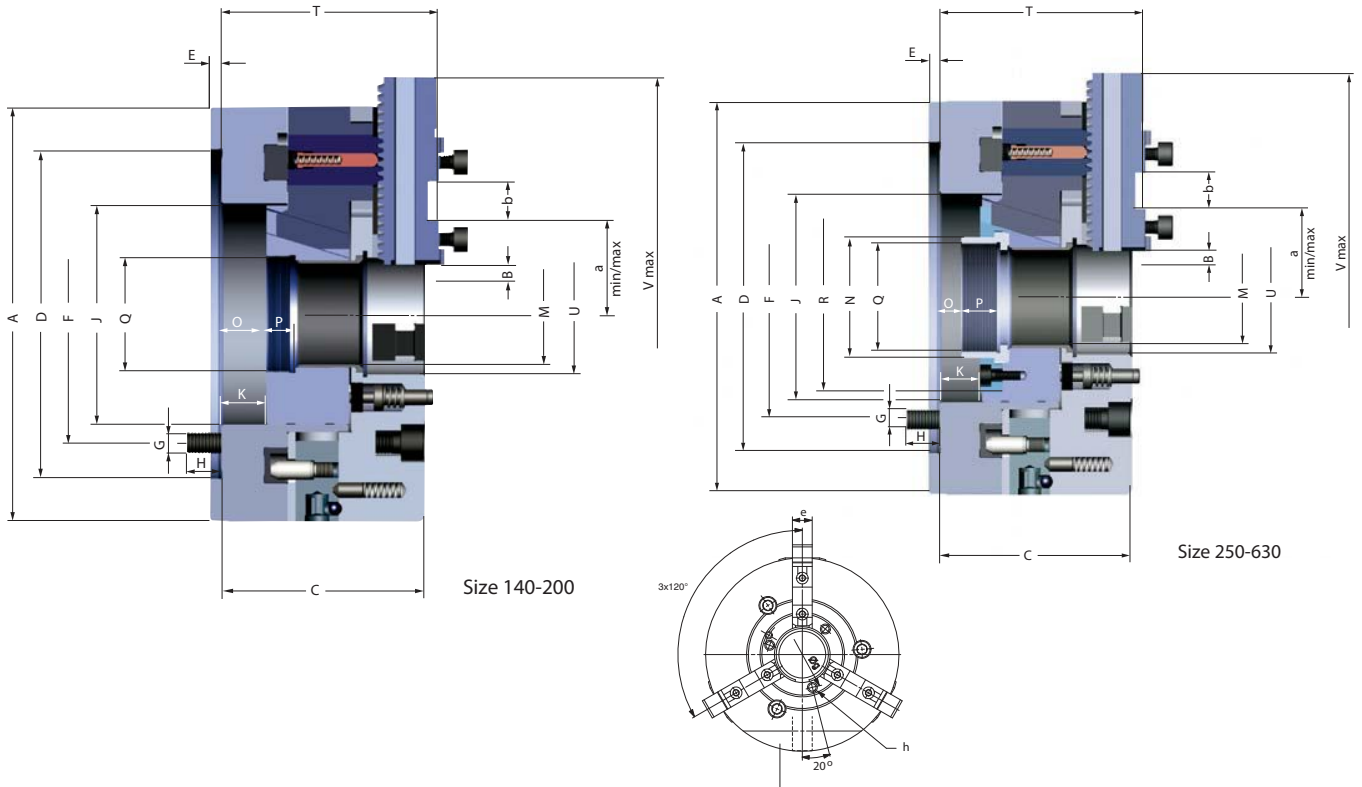
Structure DURO-NC



Components:

1. Body
2. Guide jaw
3. Base jaw
4. Adaptor plate
5. Piston
6. Adjusting ring
7. Turnable bolt
8. Rack
9. Protective bush

DURO-NC 3-jaw, central jaw unlocking, angle-serrated



C 15
3-jaws power chuck DURO-NC, with quick jaw change systems, central jaw unlocking, angle-serrated
 Adaptor recess, mounting dimensions to DIN 6353

Item no.	159455	159456	159457	159458	159459	159460	159461 ▲	159462 ▲
Size	140	175	200	250	315	400	500	630
A mm	145	175	215	260	320	400	500	630
Jaw travel B mm	4,9	6,7	7	8,25	10,1	11,5	11,5	11,5
C mm	83	99	105	126	152	149	149	169
Mount DH6	120	140	170	220	300	380	380	380
E mm	6	6	6	6	6	6	6	6
F mm	104,8	104,8	133,4	171,4	235	330,2	330,2	330,2
G mm	3 x M 10	3 x M 10	3 x M 12	3 x M 16	3 x M 20	3 x M 24	3 x M 24	6 x M 24
H mm	18	15	18	21	29	35	35	36
J mm	80	88	114	147	173	210	210	286
Wedge stroke K mm	16	22	23	27	33	46	46	46
M mm	35	43	52	72	91	108	108	140
N mm	-	-	-	-	-	124	124	160
O min.	0,5	0	0	0	0	-61	-61	-41
O max.	16,5	22	23	27	33	-15	-15	5
P mm	9	10	15	15	19	35	35	25
Q mm	M 45 x 1,5	M 50 x 1,5	M 60 x 1,5	M 80 x 1,5	M 100 x 2	M 115 x 2	M 115 x 2	M 148 x 2
R mm	-	-	-	130	160	169	169	219
T mm	89	105	112	134	160,6	158,6	158,6	185
U mm	40	50	62	81	103	120	120	192
V max. mm	181	236	294	351	423	523	570	771
a min.	31,4	33,2	35,5	42,8	52,3	67,1	73,5	86,8
a max.	53,2	62,3	79,5	91,1	115,7	135,5	159	206,1
b mm	18	18	20	20	26	30	30	40
e mm	18	20	22	26	32	45	45	65
Ø g	54	64	76	93	120	140	140	210
h	M 5 x 8	M 6 x 10	M 6 x 10	M 6 x 10	M 6 x 10	M 8 x 12	M 8 x 12	M 8 x 12
Maximum draw bar pull kN	25	30	50	65	80	110	110	150
Max. total clamping force approx. kN	49	60	100	130	160	240	240	330
Max. admissible speed min ⁻¹	6300	5300	5000	4300	3200	2700	2000	1500
Moment of inertia J kgm ²	0,029	0,068	0,162	0,39	1,08	2,5	5	15,4
Weight without jaws approx. kg	11	18	28	46	85	126	185	310
Actuating cylinders (recommended)	OVS-105 / SZS-37/70	OVS-105 / SZS-46/103	OVS-130 / SZS-52/130	OVS-150 / SZS-67/150	OVS-150 / SZS-92/225	OVS-200 / SZS-110/230	OVS-200 / SZS-110/250	OVS-200 / SZS-127/325

Power chuck with quick-acting jaw change system

Jaws DURO-NC

A28

Base jaw GB, 3-jaw set diagonally toothing, with mounting bolts



Item no.	Chuck Size	Number of jaws	Contents of delivery	Jaw length mm	Jaw width mm
140636	140	3	set	56	18
094004	175	3	set	74	20
094005	200	3	set	90	22
094006	250	3	set	110	26
094007	315	3	set	125	32
094044	400/500	3	set	160	45
140194	630	3	set	230	65

A28

Unstepped top jaw AB, 3-jaw set standard design, soft, material 16MnCr5



Item no.	Chuck Size	Number of jaws	Contents of delivery	Jaw length mm	Jaw height mm	Jaw width mm
094008	140/175	3	set	85	36,5	20,3
094009	200	3	set	105	40	22
094010	250	3	set	125	50	30,4
094011	315	3	set	145	50	34,3
094046	400/500	3	set	180	73	50,5
140716	630	3	set	260	102	68

A28

Reversible top jaw UB, 3-jaw set hardened



Item no.	Chuck Size	Number of jaws	Contents of delivery	Jaw length mm	Jaw height mm	Jaw width mm
094012	140/175	3	set	61,5	32,5	20,4
094013	200	3	set	70,5	38	24,4
094014	250	3	set	92	50	34,4
094015	315	3	set	107	56	35,7
094045	400/500	3	set	130	72	50,4
140715	630	3	set	185	102	68

Additionally or later applied, hardened jaws must be ground out in the chuck.
For jaws which are applied later, send in the chuck.

A28

Unstepped Jaw BL, 3-jaw set diagonally toothing, unstepped, soft, material 16MnCr5



Item no.	Chuck Size	Number of jaws	Contents of delivery	Jaw length mm	Jaw height mm	Jaw width mm
626158	140	3	set	70,5	41,5	18
241699	175	3	set	84,4	45	20
249678	200	3	set	98,4	60	22
249679	250	3	set	118,7	70	26
249680	315	3	set	136,6	79	32
249681	400/500	3	set	173,6	93	45

A28

One-piece jaw EB, 3-jaw set diagonally toothing, hardened



Item no.	Chuck Size	Number of jaws	Contents of delivery	Jaw length mm	Jaw height mm	Jaw width mm
140764	140	3	set	62	49,5	18
094000	175	3	set	77,7	45	20
094001	200	3	set	94,7	60	22
094002	250	3	set	114	70	26
094003	315	3	set	130	79	32
094043	400/500	3	set	167	93	45

Additionally or later applied, hardened stepped jaws must be ground out in the chuck.
For jaws which are applied later, send in the chuck.

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Jaws DURO-NC

C 21

Reversible claw-type top jaws, standard design tongue and groove, large clamping range, 1 piece, hardened



Item no.	Chuck Size	Jaw length mm	Jaw height mm	Jaw width mm
137060	140/175	66	37,5	24
137119	400/500	124	62	50
151289	630	144	78	70

C 21

Reversible claw-type top jaws, standard design tongue and groove, small clamping range, 1 piece, hardened



Item no.	Chuck Size	Jaw length mm	Jaw height mm	Jaw width mm
137061	140/175	66	37,5	20
137064	200	81	43	24
137108	250	90	55	34
137114	315	100	62	34
137120	400/500	124	62	50

C 21

Reversible claw-type top jaws, standard design tongue and groove, medium clamping range, 1 piece, hardened



Item no.	Chuck Size	Jaw length mm	Jaw height mm	Jaw width mm
137062	140/175	56	37,5	20
137065	200	66	43	24
137109	250	72	55	34
137115	315	86	62	34
137121	400/500	100	62	50

C 21

Reversible claw-type top jaws, wide version tongue and groove, small clamping range, 1 piece, hardened



Item no.	Chuck Size	Jaw length mm	Jaw height mm	Jaw width mm
137066	200	79	43	34
137110	250	80	55	50
137116	315	93	62	50

C 21

Reversible claw-type top jaws, wide version tongue and groove, large clamping range, 1 piece, hardened



Item no.	Chuck Size	Jaw length mm	Jaw height mm	Jaw width mm
137067	200	81	43	34
137111	250	90	55	50
137117	315	106	62	50

C 21

Reversible claw-type top jaws, wide version tongue and groove, medium clamping range, 1 piece, hardened



Item no.	Chuck Size	Jaw length mm	Jaw height mm	Jaw width mm
137068	200	66	43	34
137112	250	72	55	50
137118	315	86	62	50

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Jaws DURO-NC

C 21

Draw-down jaws, without clamping inserts diagonally toothing, 1 piece, without clamping inserts



Item no.	Chuck Size	Jaw length mm	Jaw height mm	Jaw width mm
151030 ▲	140	63	41,5	18
141037	175	84,4	43,5	20
141039	200	98,4	47,5	22
141041	250	118,7	58,5	26
141043	315	136,4	63,9	32
141045	400/500	173,6	73,4	45

C 21

Draw-down jaws, additional clamping range, for interchangeable clamping inserts diagonally toothing, 1 piece, without clamping inserts



Item no.	Chuck Size	Jaw length mm	Jaw height mm	Jaw width mm
151031 ▲	140	63	41,5	18
141038	175	84,4	43,5	20
141040	200	98,4	47,5	22
141042	250	118,7	58,5	26
141044	315	136,4	63,9	32
141046	400	173,6	73,4	45
141048	500	173,6	73,4	45

C 15

Interchangeable clamping inserts, 1 piece with claws



Item no.	Chuck Size
151029	140
141049	180/215
141052	260/315/400
141055	500

C 15

Interchangeable clamping inserts, 1 piece with serrated toothing



Item no.	Chuck Size
151039	140
141050	180/215
141053	260/315/400
141056	500

C 15

Interchangeable clamping inserts, 1 piece with heat treatable surface



Item no.	Chuck Size
151040	140
141051	180/215
141054	260/315/400
141057	500

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Accessories DURO-NC

C 15

Mounting screws



Item no.	Size	Contents of delivery	Thread
200182	140/175/200	piece	M8x1x22
200183	250	piece	M12x1,5x30
202402	315	piece	M12x1,5x35
227618	400/500	piece	M16x1,5x40
249388	630	piece	M20x50

Socket head cap screw to DIN 912, 12.9

C 15

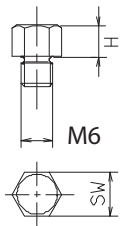
Special grease F80 for lathe chucks for lubrication and conservation of clamping force



Item no.	Design	Contents
308555	Cartridge	0,5 kg
028975	Tin	1 kg

C 15

Changeable workpiece rests (in different lengths)

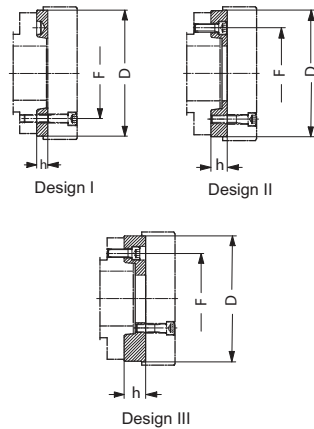


Item no.	H mm	M	Key-width SW
289188	5	M6	9
138950	10	M6	9
725581	15	M6	9

C 15

Intermediate adaptor plates with cylindrical centre mount DIN 6353 for three-jaw chucks

Mounting from front to ISO 702-1 (DIN 55026/55021) and ASA B 5.9 A1/A2 with metric mounting bolts

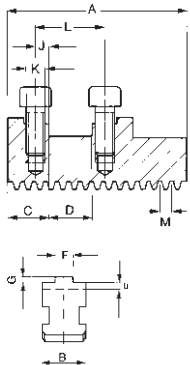


Item no.	Spindle nose size	Size	Design	h mm	F mm	D mm
159878	5	140	I	15	104,8	120
145153	5	175	I	15	104,8	140
145297	6	175	III	35	133,4	140
145155	6	200	I	16	133,4	170
145131	6	250	II	27	133,4	220
145135	8	200	III	39	171,4	170
145157	8	250	I	18	171,4	220
145139	8	315	II	38	171,4	300
145143	11	250	III	48	235	220
145159	11	315	I	19	235	300
145147	11	400	II	40	235	380
145161	15	400/500/630	I	21	330,2	380

All fastening parts are included

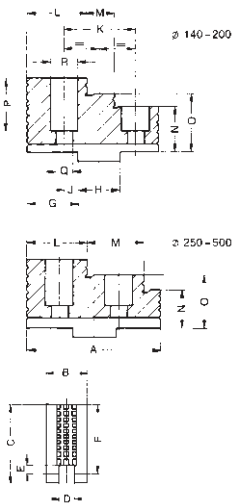
Jaw dimensions DURO-NC

Base jaw GB with screws



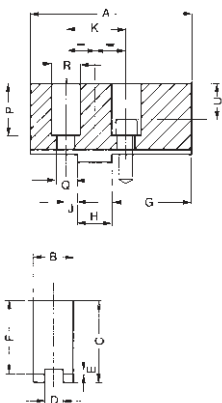
Chuck size	140	175	200	250	315	400/500	630
Type	503-80	002-20	002-25	002-30	002-35	002-40	002-50
Item no. 3-jaw	140636	094004	094005	094006	094007	094044	140194
A	56	74	90	110	125	160	230
B	18	20	22	26	32	45	65
C	19	19	23	26	30	35	52
DH6	18	18	20	20	26	30	40
E	5	5	5,5	5,5	6,5	7,5	9
F	8	8	10	12	12	18	24
G	2,5	2,5	3	3	3	4	4
J	7	7	10	10	14	15	21
K	M8x1	M8x1	M8x1	M12x1,5	M12x1,5	M16x1,5	M20
L	32	32	40	40	54	60	82
M	3,63	4,84	4,89	6,03	7,05	8,55	8,53
Weight/set kg	0,43	0,8	1,1	2,1	3,2	7	17

Reversible top jaws UB, hardened



Chuck size	140/175	200	250	315	400/500	630
Type	003-20	003-25	003-30	003-35	003-40	003-50
Item no. 3-jaw	094012	094013	094014	094015	094045	140715
A	61,5	70,35	92	107	130	185
B	20,4	24,4	34,4	37,5	50,4	68
C	37	43	55	62	79	110
D	8	10	12	12	18	24
E	3	3,5	3,5	3,5	4,5	4,5
F	32,5	38	50	56	72	102
G	22,5	25,5	30	35,5	41,4	59
H	18	20	20	26	30	40
J	7	10	10	14	15	21
K	32	40	40	54	60	82
L	26,5	28,5	41	40	51	80
M	13	14	40,5	54	71	80
N	17,5	18	22	26	32	42
O	25	28	36	41	52	72
P	23,5	29	39	40	57	82
Q	9	9	14	14	18	22
R	15	15	20	20	26	33
Weight/set kg	0,6	1,0	2,4	3,4	7,6	19

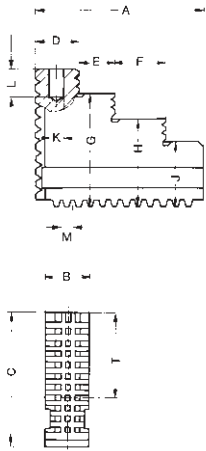
Soft top jaws AB, material 16MnCr5



Chuck size	140/175	200	250	315	400/500	630
Type	002-20	002-25	002-30	002-35	002-40	002-50
Item no. 3-jaw	094008	094009	094010	094011	094046	140716
A	85	105	125	145	180	260
B	20,3	22	30,4	34,3	50,5	68
C	41	45	55	56	80	110
D	8	10	12	12	18	24
E	3	3,5	3,5	3,5	4,5	4,5
F	36,5	40	50	50	73	102
G	42	50	70	74	100	150
H	18	20	20	26	30	40
J	7	10	10	14	15	21
K	32	40	40	54	60	82
P	27,5	31	39	34	58	83
Q	9	9	14	14	18	22
R	15	15	20	20	26	33
U	19,5	23	27	22	42	63
Weight/set kg	1,3	2,2	4,5	6,8	13,5	40

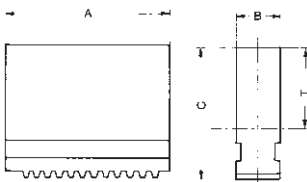
Jaw dimensions DURO-NC

One-piece reversible jaws EB



Chuck size	140	175	200	250	315	400/500
Type	503-80	000-20	000-25	000-30	000-35	000-40
Item no. 3-jaw	140764	094000	094001	094002	094003	0940043
A	62	77,7	94,7	114	130	167
B	18	20	22	26	32	45
C	49,5	45	60	70	79	93
D	16,6	20,6	23	41,5	40,2	50,6
E	15,9	18,9	19,5	40,3	54	71
F	18	22	28	-	-	-
G	42	37,5	50	56	64	73
H	34,5	30	40	-	-	-
J	27	22,5	30	42	49	53
K	7	8	10	13	13	20
L	16	16	15	19,5	19,5	30
M	3,63	4,84	4,89	6,03	7,05	8,55
T	29	24	35	41	44,5	54
Weight/set kg	1,2	1,5	1,9	3,4	5,5	11

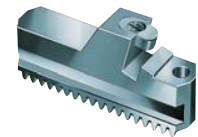
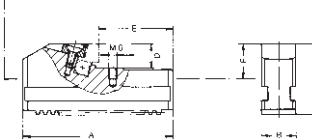
Soft one-piece jaws BL, material 16MnCr5



Chuck size	140	175	200	250	315	400/500
Type	503-80	000-20	000-25	000-30	000-35	000-40
Item no. 3-jaw	626158	241699	249678	249679	249680	249681
A	70,5	84,5	98,4	118,7	136,6	173,6
B	18	20	22	26	32	45
C	41,5	45	60	70	79	93
T	21	24	35	41	44,5	54
Weight/set kg	1,3	1,5	2,7	4,4	7,2	15

Draw-down jaws NB for interchangeable clamping inserts (jaw without insert)

Chuck front side



Chuck size	140	175	200	250	315	400	500
Type	545-00	545-00	545-00	545-00	545-00	545-00	545-00
Item no. Piece	151030	141037	141039	141041	141043	141045	141045
A	63	84,4	98,4	118,7	136,4	173,6	173,6
B	18	20	22	26	32	45	45
C	41,5	43,5	47,5	58,5	63,9	73,4	73,4
D	15	15	15	20	20	25	25
E	10,5	11	12	12	12	12	12
F	22,5	22,5	22,5	29,5	29,5	34,3	34,3
Capacities external	40-85	29-80	34-112	38-133	43-170	48-185	48-250
Capacities internal	124-168	162-205	190-263	235-325	275-398	360-490	354-556

Draw-down jaws NB for interchangeable clamping inserts (jaw without insert)

Jaws for further clamping ranges

Accessories: Changeable workpiece rests (in different lengths)

		2		
Item no.	289188	138950	725581	
M	M6			
H	5	10	15	
SW	9			

Chuck size	140	175	200	250	315	400	500
Type	545-00	545-00	545-00	545-00	545-00	545-00	545-00
Item no. Piece	151031	141038	141040	141042	141044	141046	141048
E	31,5	32	48	58	72	77	110
Capacities external	80-125	70-120	104-185	128-225	160-290	175-316	240-450
Capacities internal	85-126	120-164	120-192	145-236	158-278	230-362	162-360

Jaw dimensions DURO-NC

Reversible claw-type top jaws KB, Standard design

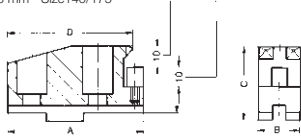
Workpiece stop, can be changed and adjusted



Chuck size	140	175	400	500	630
Jaw design	Type 544-00 Standard design				
Item no. Piece	137060		137119		151289
A	66		124		144
B	24		50		70
C	37,5		62		78
D	17		39		61
Capacities external	115-158	115-209	-	-	230-655
Capacities internal	50-84	50-136	100-350	100-410	185-610

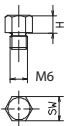
Jaws for further clamping ranges

8 mm - Size140/175



Chuck size	140	175	200	250	315	400	500
Jaw design	Type 544-00 Standard design						
Item no. Piece	137061		137064	137108	137114	137120	
A	66		81	90	100	124	
B	20		24	34	34	50	
C	37,5		43	55	62	62	
D	61		71	78	90	112	
Capacities external	24-60	24-110	40-130	50-185	50-222	50-270	50-335
Capacities internal	142-182	142-236	166-288	180-350	212-410	280-515	280-580

Accessories: Changeable workpiece rests (in different lengths)

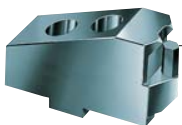


Item no.	289188	138950	725581
M	M6		
H	5	10	15
SW	9		

Chuck size	140	175	200	250	315	400	500
Jaw design	Type 544-00 Standard design						
Item no. Piece	137062		137065	137109	137115	137121	
A	56		66	72	86	100	
B	20		24	34	34	50	
C	37,5		43	55	62	62	
D	29		38,5	38	42	48	
Capacities external	74-118	47-170	76-200	94-260	120-320	165-400	165-465
Capacities internal	80-130	80-176	98-224	104-272	116-315	155-395	155-455

Reversible claw-type top jaws KB, large design

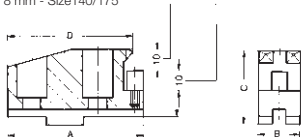
Workpiece stop, can be changed and adjusted



Chuck size	200	250	315
Jaw design	Type 544-05 Large design		
Item no. Piece	137066		137110
A	79		80
B	34		50
C	43		55
D	29,5		29
Capacities external	121-226	-	-
Capacities internal	74-172	70-235	80-275

Jaws for further clamping ranges

8 mm - Size140/175

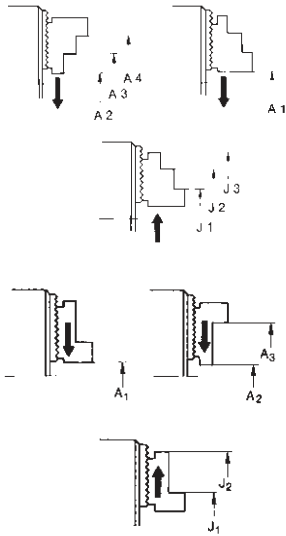


Chuck size	200	250	315
Jaw design	Type 544-05 Large design		
Item no. Piece	137067		137111
A	81		90
B	34		50
C	43		55
D	71		78
Capacities external	44-124	50-185	50-222
Capacities internal	160-274	180-350	212-410

Chuck size	200	250	315
Jaw design	Type 544-05 Large design		
Item no. Piece	137068		137112
A	66		72
B	34		50
C	43		55
D	38,5		38
Capacities external	79-188	94-260	120-320
Capacities internal	105-210	104-272	116-315

Chucking capacities DURO-NC

Chucking capacities with reversible top jaws UB



Chuck size		140	160	175	200	250	315	400	500	630
with reversible jaws	Type	003-20	003-20	003-20	003-25	003-30	003-35	003-40	003-40	003-50
	Jaw position									
External chucking	A1	10-58	5-51	5-60	5-65	8-93	30-125	55-156	45-230	42-468
	A2	14-62	45-94	45-103	58-118	-	-	-	-	-
	A3	57-105	89-138	89-147	114-174	82-168	93-210	119-260	122-326	112-487
	A4	89-131	115-164	115-173	142-202	163-249	201-317	260-401	264-470	275-650
Internal chucking	J1	65-112	67-108	67-117	71-126	99-178	120-207	155-260	155-460	195-615
	J2	91-138	93-135	93-144	99-154	178-257	207-313	260-400	265-600	355-780
	J3	133-182	135-177	135-186	154-209	-	-	-	-	-