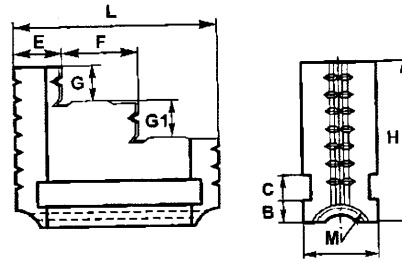


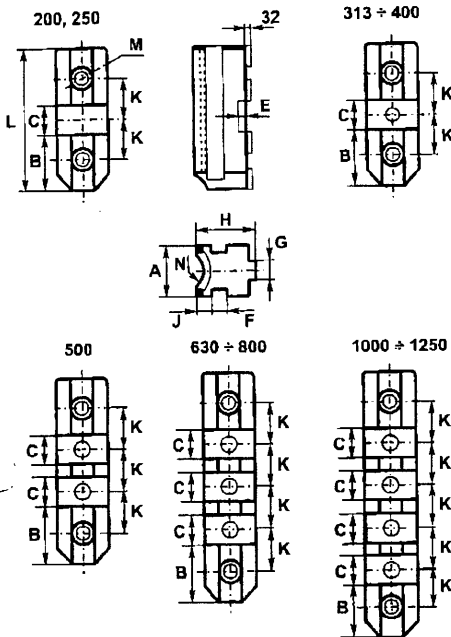
FOUR JAW INDEPENDENT CHUCKS

REVERSIBLE HARD SOLID JAWS



JAWS DIM	mm	85	100	125	160	200	250	315	350	400	500	630	800
	In	3.3/8	4	5	6	8	10	12	14	16	20	25	32
A		13	13	16	16	32	32	40	40	40	11.7	11.7	15.7
B		4.5	4.5	6	6	8.7	8.7	9.7	9.7	9.7	15	15	20
C		5	5	5	5	10	10	12	12	12	19.5	19.5	25
H		30	30	34.5	34.5	63	63	76.5	76.5	76.5	93.5	93.5	114.5
M*		Tr 16x2	Tr 16x2	Tr 18x4	Tr 18x4	Tr 28x5	Tr 28x5	Tr 32x6	Tr 32x6	Tr 32x6	Tr 36x6	Tr 40x6	Tr 44x8
L		34	34	51	51	81	96.5	111	111	129	152.5	177	202
E		9	9	13	13	19	24	27	27	34	36	45	46
F		10	10	19	19	31	36	40	40	46	58	66	78
G		7	7	8	8	14	14	18	18	18	22	22	25
G1		7	7	8	8	15	15	19	19	19	23	23	25

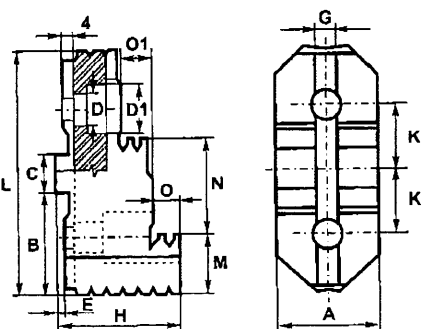
HARD MASTER JAWS



JAWS DIM	mm	200	250	315	350	400	500	630	800	1000	1250
	In	8	10	12	14	16	20	25	32	40	50
A		32	32	40	40	40	52	52	70	70	70
B		33.2	37.5	45.4	45.4	54.9	55.5	55.5	55.5	55.5	55.5
C		12.69	19.04	19.04	19.04	19.04	19.04	19.04	19.04	19.04	19.04
E		4	4	4	4	7.2	7.2	7.2	7.2	7.2	7.2
F		10	10	12	12	12	15	15	20	20	20
G		7.94	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7
H		32	38	39	39	44	59	59	59	59	59
J		8.7	8.7	9.7	9.7	9.7	11.7	11.7	15.7	15.7	15.7
K		22.25	27	31.75	31.75	38.1	38.1	38.1	38.1	38.1	38.1
L		79	94	110	110	129	168	206	206	244	244
M		M10	M12	M12	M12	M16	M20	M20	M20	M20	M20
N*		3/8"-16	1/2"-13	1/2"-13	1/2"-13	5/8"-11	3/4"-10	3/4"-10	3/4"-10	3/4"-10	3/4"-10
N*		Tr 28x5	Tr 28x5	Tr 32x6	Tr 32x6	Tr 32x6	Tr 36x6	Tr 40x6	Tr 44x8	Tr 44x8	Tr 44x8

*Left hand thread

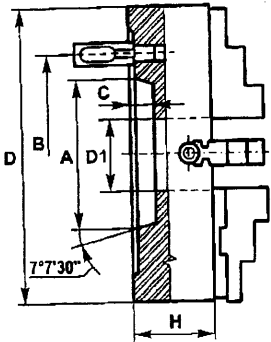
HARD TOP JAWS



JAWS DIM	200	250	300-350	400	500	630	800	1000	1250
	8	10	12-14	16	20	25	32	40	50
A	34	34	42	42	54	54	72	72	72
B	35.2	40	47.9	57.4	58	58	58	58	58
C	12.69	19.04	19.04	19.04	19.04	19.04	19.04	19.04	19.04
D	11	14	14	18	22	22	22	22	22
D1	18	20	20	26	33	33	33	33	33
E	3.2	3.2	3.2	6.3	6.3	6.3	6.3	6.3	6.3
G	7.95	12.71	12.71	12.71	12.71	12.71	12.71	12.71	12.71
H	43.5	51.5	55	64.5	74.5	82	88	97	97
K	22.25	27	31.75	38.1	38.1	38.1	38.1	38.1	38.1
L	82	96.5	112.5	129	136	136	136	160	160
M	20	26	30	36	36	36	36	36	36
N	32	37	43	50	50	50	50	50	50
O	9.5	12	13	13.5	18	21	24	50	50
O1	10.5	13	14	14.5	18	21	24	29	29

FOUR JAW INDEPENDENT CHUCKS

D - TYPE MOUNTING (CAMLOCK, DIN 55029, ASA B5.9)

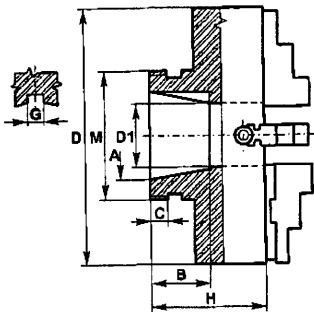


CHUCK SIZE	125mm 5in		160mm 6in		200mm 8in			250mm 10in			315mm 12.1/2in		
	TAPER SIZE	3	4	3	4	3	4	5	4	5	6	6	8
A	53.975	63.513	53.975	63.513	53.975	63.513	82.563	63.513	82.563	106.375	106.375	139.719	
B	70.6	82.6	70.6	82.6	70.6	82.6	104.8	82.6	104.8	133.4	133.4	171.4	
C	13	13	13	13	13	13	15	13	15	16	16	18	
D1	26	26	42	42	50			60	65		80		
H	52	55	54	56	80			85			95		

CHUCK SIZE	350mm 14in		400mm 16in			500mm 20in			630mm 25in			800mm 31.1/2in			
	TAPER SIZE	6	8	6	8	11	8	11	15	8	11	15	8	11	15
A	106.375	139.795	106.375	139.715	196.869	139.715	196.869	285.775	139.719	196.869	285.775	139.719	196.869	285.775	
B	133.4	171.4	133.4	171.4	235	171.4	235	330.2	171.4	235	330.2	171.4	235	330.2	
C	16	18	16	18	20	18	20	21	18	20	21	18	20	21	
D1	80	80	100			125			125	160		125	180	200	
H	98	98	105			120			140			160			

*Jaw height as for plain mounting chucks

L - TYPE MOUNTING (ASA B5.9)

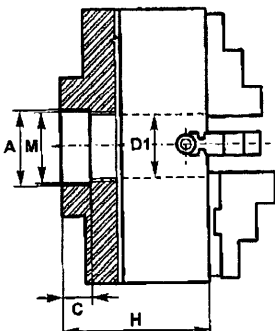


CHUCK SIZE	200mm 8in		250mm 10in		315mm 12.1/2in			350mm 14in					
	TAPER SIZE	70 L00	82 L0	70 L00	82 L0	105 L1	82 L0	105 L1	133 L2	82 L0	105 L1	133 L2	
A	69.85	82.55	69.85	82.55	104.775	82.55	104.775	133.35	82.55	104.775	133.35		
B	54	63.5	54	63.5	76	63.5	76	89	63.5	76	89		
C	14	15	14	15	16	15	16	22	15	16	22		
D1	50		65		80			80			80		
G	J)	9.75	9.75	9.75	9.75	16.15	9.75	16.15	19.3	9.75	16.15	19.3	
		10.2	10.2	10.2	10.2	16.15	10.2	16.15	20.2	10.2	16.15	20.2	
H	103	113	103	113	126	120	132	145	122	134	147		
M		M95x4	M115x4	M95x4	M115x4	M150x4	M115x4	M150x4	M220	M115x4	M105x4	M220	
		3.3/4"-6	4.1/2"-6	3.3/4"-6	4.1/2"-6	6"-6	4 1/2"-6	6"-6	7.3/4"-5	4.1/2"-6	6"-6	7.3/4"-5	

CHUCK SIZE	400mm 15.3/4in				500mm 20in			630mm 25in			800mm 31.1/2in	
	TAPER SIZE	82 L0	105 L1	133 L2	165 L3	105 L1	133 L2	165 L3	133 L2	165 L3	133 L2	165 L3
A	82.55	104.775	133.35	165.10	104.775	133.35	165.10	133.35	165.10	133.35	165.10	
B	63.5	76	89	102	76	89	102	89	102	89	102	
C	15	16	22	24	16	22	24	22	24	22	24	
D1	100				125			160			200	
G	J)	9.75	16.15	19.3	25.65	16.15	19.3	25.65	19.3	25.65	19.3	25.65
		10.2	16.15	20.2	24.2	16.15	20.2	24.2	20.2	24.2	20.2	24.2
H	120	132	145	158	140	154	167	158	171	178	185	
M		M115x4	M105x4	M200	M260	M150x4	M200	M260	M200	M260	M200	M260
		4.1/2"-6	6"-6	7.3/4"-5	10.3/8"-4	6"-6	7.3/4"-5	10.3/8"-4	7.3/4"-5	10.3/8"-4	7.3/4"-5	10.3/8"-4

1) These sizes concern tapers with inch thread
*Jaw height as for plain mounting chucks

THREAD - TYPE MOUNTING (B5.9)

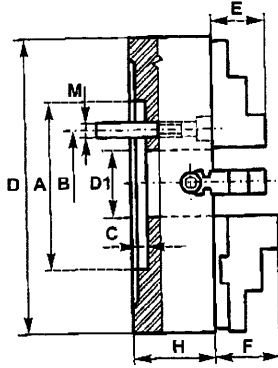


CHUCK mm SIZE in	125 5	160 6
	A	31.750
C	15.08	15.08
D1	32	40
H	72	81
M	1.1/8"-12 BSW	

FOUR JAW INDEPENDENT LATHE CHUCKS

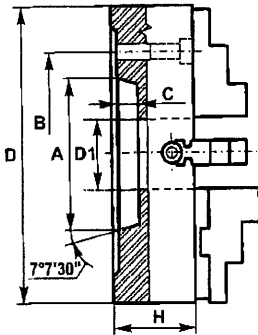
MAIN DIMENSIONS

PLAIN BACK



D	mm	85	100	125	160	200	250	315	350	400	500	630	800
in		3.3/8	4	5	6	8	10	12.1/2	14	16	20	25	32
A		62	79.4	69.85	82.55	110	150	175	175	200	270	270	380
B		72	54	54	69.85	82.6	104.8	133.4	133.4	171.4	235	235	330.2
C		5	2.5	2.5	2.5	5	7	7	7	10	12	12	12
D1		25	25	26	42	50	65	80	80	100	125	160	200
E		17	17	20	20	40.3	40.3	49.8	49.8	49.8	59.8	59.8	70.8
F		-	-	-	-	46.4	60.4	60.9	60.9	72.3	90.3	97.8	93.8
H		40	40	43	43	80	85	95	95	105	120	140	160
M		M6	M8	M8	M10	M10	M12	M16	M16	M16	M20	M20	M24
		-	-	5/16-18	3/8-16	7/16-14	1/2-13	5/8-11	-	5/8-11	3/4-10	3/4-10	7/8-9

A - TYPE MOUNTING ASA B5.9, DIN 55021, DIN 55026

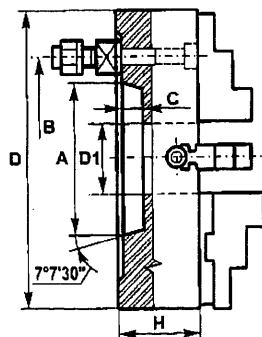


CHUCK SIZE	125mm 5in		160mm 6in		200mm 8in			250mm 10in				315mm 12in	
TAPER SIZE	3	4	3	4	4	5	6	4	5	6	8	6	8
A	53.975	63.513	53.975	63.513	63.513	82.563	106.375	63.513	82.563	106.375	139.719	106.375	139.719
B	70.6	82.6	70.6	82.6	82.6	104.8	133.4	82.6	104.5	133.4	171.4	133.4	171.4
C	13	13	13	13	13	16	17	13	16	17	19	17	19
D1	26	26	42	42	50			65				80	
H	46	46	46	46	80			85				95	

CHUCK SIZE	350mm 14in		400mm 15.3/4in			500mm 20in			630mm 25in			800mm 31.1/2in		
TAPER SIZE	6	8	6	8	11	8	11	15	8	11	15	11	15	20
A	106.375	139.719	106.375	139.719	196.869	139.719	196.869	285.775	139.719	196.869	285.775	196.869	285.775	412.775
B	133.4	171.4	133.4	171.4	235	171.4	235	330.2	171.4	235	330.2	235	330.2	463.6
C	17	19	17	19	21	19	21	22	19	21	22	21	22	24
D1	80	80	100			125			125	160		180	200	200
H	98	98	105			120			140			160		

*Jaw height as for plain back chucks

C - TYPE MOUNTING DIN 55027 (DIN 55022)



CHUCK SIZE	125mm 5in		160mm 6in		200mm 8in		250mm 10in			315mm 12.1/2in	
TAPER SIZE	3	4	3	4	5	6	5	6	8	6	8
A	53.975	63.513	53.975	63.513	82.563	106.375	82.563	106.375	139.719	106.375	139.719
B	75	85	75	85	104.8	133.4	104.8	133.4	171.4	133.4	171.4
C	13	13	13	13	15	16	15	16	18	16	18
D1	26	26	42	42	50		65			80	
H	46	46	46	46	80		85			95	

CHUCK SIZE	350mm 14in		400mm 15.3/4in			500mm 20in			630mm 25in			800mm 31.1/2in		
TAPER SIZE	6	8	6	8	11	8	11	15	8	11	15	8	11	15
A	106.375	139.719	106.375	139.719	196.869	139.719	196.869	285.775	139.719	196.869	285.775	139.719	196.869	285.775
B	133.4	171.4	133.4	171.4	235	171.4	235	330.2	171.4	235	330.2	171.4	235	330.2
C	16	18	16	18	20	18	20	21	18	20	21	18	20	21
D1	80	80	100			125			125	160		125	180	200
H	98	98	105			120			140			160		

*Jaw height as for plain back chucks

FOUR JAW INDEPENDENT CHUCKS

RECOMMENDED SPEEDS

Max. speeds given in following tables refer to certain conditions only. (e.g. to all chucks with no eccentric component) and these are guidelines only for finding proper max. operating speeds for given application.

The speeds given in the table cannot be used for every application because:

- they apply only to chucks in sound conditions
- they apply only to chucks used in correct circumstances
- they are based on the maximum input torque given in the table
- they apply only to concentric components

When the proper operating speeds are being established the following factors must be considered:-

- state of unbalance (of workpiece and chuck)
- weight of workpiece
- size of workpiece
- cutting parameters (eg. magnitude of the cutting forces involved)
- type of operation (intermittent or continuous cutting)
- actual gripping power used because it should be noted that due to the influence of centrifugal force on jaws, gripping force becomes smaller as rotational speed rises.
- method of fixing (whether the workpiece is gripped externally or internally).
- other specific conditions at the time of cutting

Careful attention must be paid to these factors as they vary with each particular application.

4 JAW INDEPENDENT CHUCKS

TYPE	CHUCK SIZE mm	MAX INPUT TORQUE (Nm)	STATIC GRIP PER JAW (DaN)	MAX SPEED (r.p.m.)
4304, 4344 4314, 4334 4384	85*	35	700	4000
	100*	35	700	3800
	125*	50	900	3500
	160*	55	1000	3200
	200	60	1200	1800
	250	80	1400	1500
	315	100	1800	1200
	350	100	1800	1200
	400	100	2000	800
	500	140	2400	500
	630	200	2700	400
	800	250	2800	300

*Steel body

ADMISSIBLE WEIGHT OF WORKPIECES

As in the case of self-centring chucks admissible loading of a chuck with a workpiece weight depends on many factors especially on cutting conditions.

To simplify the approach to this problem the following guide should help to determine the maximum admissible weight.

a) with the workpiece unsupported in jaws with all its teeth in mesh with the scroll plate

D	85	100	125	160	200	250	315	350	400	500	630	800
l (mm)	4xh											
WEIGHT (kg)	1.5	2.5	4	7	15	25	40	40	70	130	240	400

Where: l = max. length of a workpiece projection outside the jaws
h = height of jaw step

b) with the workpiece supported by means of centre or clamped in two chucks

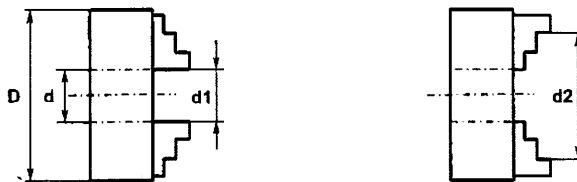
D	85	100	125	160	200	250	315	350	400	500	630	800
N (kg)	15	50	150	250	600	1000	1500	1500	3000	4500	6500	8500

where N = load per chuck

The presented admissible weights of workpieces should be regarded as reference data only.
The variety of chucking and machining methods makes the explicit

stating of such values impossible. This is because during machining a lot of special cases occur for which the presented data has to be suitably corrected.

CLAMPING RANGES



CHUCK SIZE D	85	100	125	160	200	250	315	350	400	500	630	800
d1 min	3	3	8	8	10	10	15	15	20	45	50	50
d2 max	85	100	125	160	200	250	315	350	400	500	630	800
d	25	25	26	42	50	65	80	80	100	125	160	200

WEIGHT (APPROX.)

CHUCK SIZE mm In	85 3.3/8	100 4	125 5	160 6	200 8	250 10	315 12.1/2	350 14	400 16	500 20	600 25	800 32
WEIGHT kg	1.9	2.4	3.8	4.3	14	25	39	47.5	61	105	163.0	319