



MA3001 CA2 - ca2

Machine Element Design (Nanyang Technological University)



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MA3001 CA2

Individual Assignment

Belt Pulley Selection

Objective: to familiarise students with using catalogue to select pulleys and to present dimensioned drawings (scaled drawings are not required).

Task: You are to select the appropriate pulleys for the belt drive in Example 1 of the Lecture Notes on Belt Drives. To determine the shaft diameters, it is assumed that all other forces are negligible except for the torque acting on the shafts. The allowable shear stress in the shafts carrying the pulleys is assumed to be 40 MPa. In reality, a shaft can be subjected to a combination of torques, bending moments, lateral forces and axial forces. The accompanying course pulley catalogue allows for selection of taper lock bushes for the shaft.

You are to:

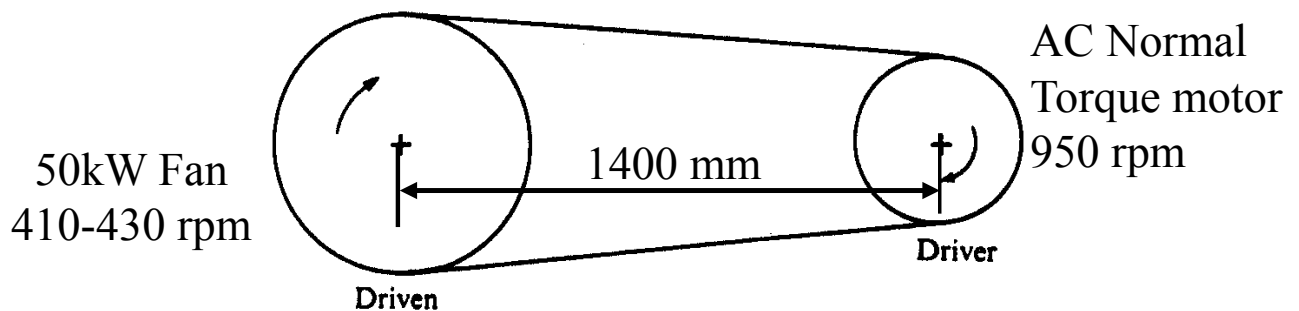
1. show the full analysis and the selection of the taper lock pulleys and taper lock bushes using the course catalogue (taper lock pulleys).
2. make a dimensioned sketch (not necessary to scale) of the two sheaves with the assembled bushes.

Note: in reality and for the design project, you can also select pulleys from other commercial catalogues that do not use detachable bushes or pre-manufactured bores and keyways. You can specify your customized bore diameters and keyways.

Requirements: Individual submission at the end of the session.

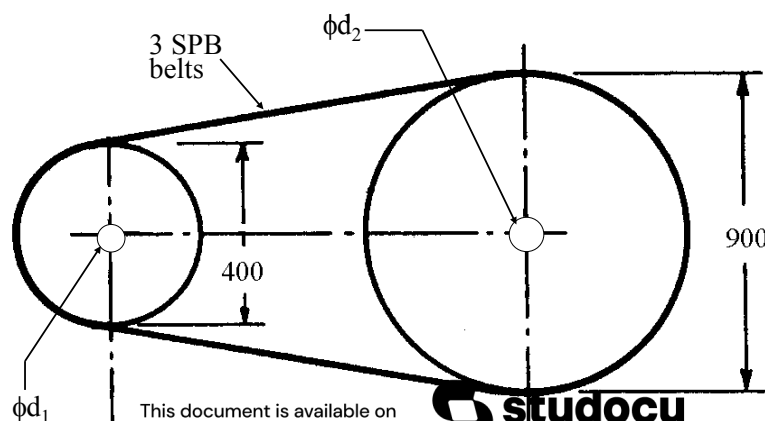
EXAMPLE 1 (covered in lecture)

Design a V-belt drive to transmit 50 kW. Driver sheave speed is 950 rpm and driven sheave speed is 410-430 rpm. Power will be supplied by an AC normal torque motor; the driven unit is a fan which will be operated about 12 hours per day. The centre distance is approximately 1400 mm.



Solution: 3 SPB belt, $L = 5000$ mm, $D_1 = 400$ mm, $D_2 = 900$ mm

d_1 & d_2 are bore diameters (same diameters as shafts)



PULLEY 1

$$P = 50 \text{ kW}$$

$$T_i = \frac{P}{\omega_i} = \frac{50 \times 10^3}{\frac{2\pi(950)}{60}} = 502.595 \text{ Nm}$$

$$\tau_{\text{allowable}} = 40 \text{ MPa}$$

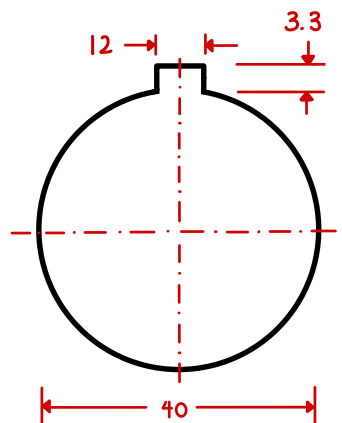
$$\tau_{\text{allowable}} = \frac{T_i}{J} r_{\text{max}}$$

$$40 \times 10^6 = \frac{502.595}{\frac{\pi}{32} d_1^4} \cdot \frac{d_1}{2}$$

$$40 \times 10^6 = \frac{502.595}{\frac{\pi}{16} d_1^3}$$

$$\frac{\pi}{16} (40 \times 10^6) d_1^3 = 502.595$$

$$d_1 \geq 39.9 \text{ mm}$$



Bore Profile
Bush No 3535

Taper Lock Pulleys Catalogue

SPB : $D_1 = 400 \text{ mm}$, 3 Grooves

Bore : 40 mm

Keyway width : 12 mm

Keyway depth : 3.3 mm

Bush No. : 3535

Max. Bore : 90 mm

F : 63 mm

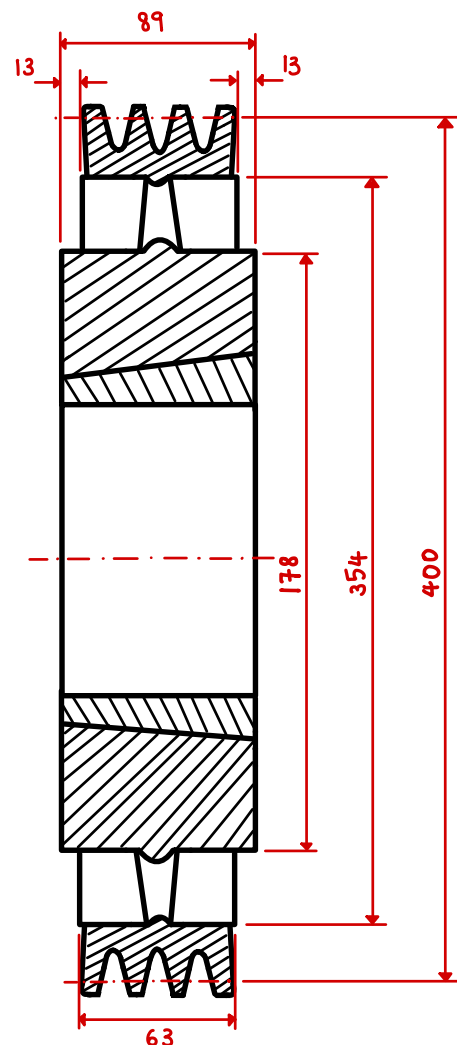
J : 354 mm

K : 13 mm

L : 89 mm

M : 13 mm

N : 178 mm



Driving Pulley

Not to scale

PULLEY 2

$$P = 50 \text{ kW}$$

$$\eta_2 = \frac{D_1 \eta_1}{D_2}$$

$$= \frac{0.4(950)}{0.9}$$

$$= 422 \text{ rpm}$$

$$T_2 = \frac{P}{\omega_2} = \frac{50 \times 10^3}{\frac{2\pi}{60}(422)}$$

$$= 1131.43 \text{ Nm}$$

$$\tau_{\text{allowable}} = 40 \text{ MPa}$$

$$\tau_{\text{allowable}} = \frac{T_2}{J} r_{\text{max}}$$

$$40 \times 10^6 = \frac{1131.43}{\frac{\pi}{32} d_2^4} \cdot \frac{d_2}{2}$$

$$40 \times 10^6 = \frac{1131.43}{\frac{\pi}{16} d_2^3}$$

$$\frac{\pi}{16} (40 \times 10^6) d_2^3 = 1131.43$$

$$d_2 \geq 52.4 \text{ mm}$$

Taper Lock Pulleys Catalogue

SPB : $D_2 = 900 \text{ mm}$, 3 Grooves

Bore : 55 mm

Keyway width : 16 mm

Keyway depth : 4.3 mm

Bush No. : 3535

Max. Bore : 90 mm

F : 63 mm

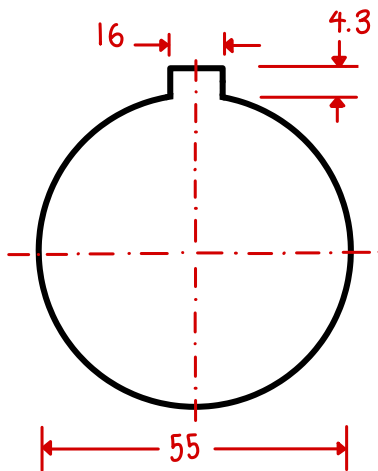
J : 858 mm

K : 13 mm

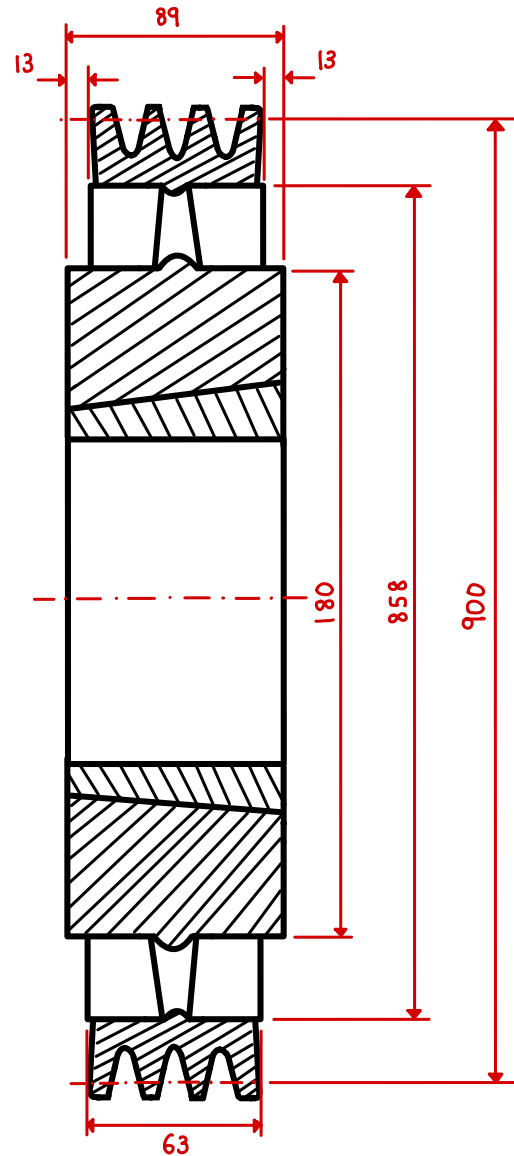
L : 89 mm

M : 13 mm

N : 180 mm



Bore Profile
Bush No 3535



Driven Pulley

CATALOGUE

(to be used for Compulsory Assignment)

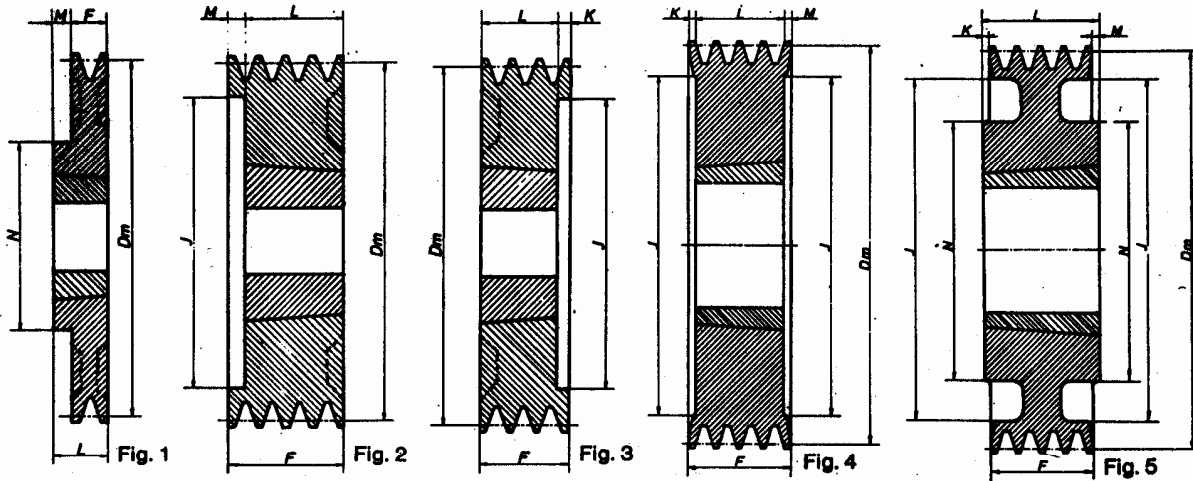
TAPER LOCK PULLEYS

TABLES:

Pulley/Sheave Dimensions - SPZ, SPA, SPB and SPC
Taper Lock Bushes

Source: Uni-Drive Transmission Equipment – Roulunds Roflex V-belts

TAPER LOCK PULLEYS



Pitch Dm.	Groove	Bush nr.	Max. Bore	Figure	F.	J.	K.	L.	M.	N.	Weight
50	1	1008	25	9	16	26	15	37	-	60	0,3
	2	1008	25	9	28	26	27	49	-	60	0,4
56	1	1008	25	9	16	30	15	37	-	60	0,4
	2	1108	28	9	28	30	27	49	-	60	0,5
60	1	1008	25	1	16	30	22	22	6	55	0,2
	2	1108	28	9	28	34	27	49	-	64	0,6
63	1	1108	28	1	16	-	-	22	6	60	0,2
	2	1108	28	3	28	37	6	22	-	-	0,3
	3	1108	28	3	40	37	18	22	-	-	0,4
67	1	1108	28	1	16	-	-	22	6	60	0,25
	2	1108	28	3	28	38	6	22	-	-	0,35
	3	1108	28	3	40	38	18	22	-	-	0,5
71	1	1108	28	1	16	-	-	22	6	60	0,3
	2	1108	28	3	28	42	6	22	-	-	0,4
	3	1108	28	3	40	42	18	22	-	-	0,6
75	1	1108	28	1	16	-	-	22	6	60	0,4
	2	1210	32	3	28	-	3	25	-	-	0,4
	3	1210	32	3	40	46	15	25	-	-	0,5
80	1	1210	32	1	16	-	-	26,5	10,5	75	0,5
	2	1210	32	3	28	-	3	25	9	-	0,6
	3	1210	32	3	40	51	15	25	-	-	0,7
	4	1210	32	3	52	51	27	25	-	-	0,8
85	1	1210	32	1	16	-	-	25	9	83	0,6
	2	1610	42	3	28	-	3	25	-	-	0,5
	3	1610	42	3	40	56	15	25	-	-	0,6
	4	1610	42	3	52	56	27	25	-	-	0,9
	5	1610	42	3	64	56	39	25	-	-	1,0
90	1	1210	32	1	16	-	-	26,5	10,5	83	0,7
	2	1610	42	3	28	-	3	25	9	-	0,7
	3	1610	42	3	40	61	15	25	-	-	0,8
	4	1610	42	3	52	61	27	25	-	-	1,0
	5	1610	42	3	64	61	39	25	-	-	1,2
95	1	1210	32	1	16	-	-	26,5	10,5	83	0,7
	2	1610	42	3	28	-	3	25	9	-	0,8
	3	1610	42	3	40	66	15	25	-	-	0,9
	4	1610	42	3	52	66	27	25	-	-	1,1
	5	1610	42	3	64	66	39	25	-	-	1,3
100	1	1210	32	1	16	-	-	25	9	83	0,8
	2	1610	42	3	28	71	3	25	-	-	0,9
	3	1610	42	3	40	71	15	25	-	-	1,1
	4	1610	42	3	52	71	27	25	-	-	1,1
	5	2012	50	3	64	71	32	32	-	-	1,3
	6	2012	50	3	76	71	44	32	-	-	1,4

Pitch Dm.	Groove	Bush nr.	Max. Bore	Figure	F.	J.	K.	L.	M.	N.	Weight
106	1	1610	42	1	16	-	-	25	9	83	0,9
	2	1610	42	3	28	77	-	28	-	-	1,1
	3	1610	42	3	40	77	15	25	-	-	1,3
	4	1610	42	3	52	77	27	25	-	-	1,3
	5	2012	50	3	64	77	32	32	-	-	1,5
	6	2012	50	3	76	77	44	32	-	-	1,6
112	1	1610	42	1	16	-	-	25	9	92	1,0
	2	1610	42	3	28	83	3	25	-	-	1,3
	3	2012	50	3	40	83	8	32	-	-	1,3
	4	2012	50	3	52	83	20	32	-	-	1,5
	5	2012	50	3	64	83	32	32	-	-	1,8
	6	2012	50	3	76	83	44	32	-	-	1,9
118	1	1610	42	1	16	-	-	25	9	92	0,9
	2	1610	42	3	28	89	-	28	-	-	1,3
	3	2012	50	3	40	89	8	32	-	-	1,6
	4	2012	50	3	52	89	20	32	-	-	1,8
	5	2012	50	3	64	89	32	32	-	-	1,8
	6	2517	65	3	76	89	31	45	-	-	2,0
125	1	1610	42	1	16	-	-	25	9	92	1,0
	2	1610	42	3	28	96	3	25	-	-	1,4
	3	2012	50	2	40	96	-	32	8	-	1,8
	4	2012	50	2	52	96	-	32	20	-	2,2
	5	2012	50	3	64	96	32	32	-	-	2,3
	6	2517	65	3	76	96	31	45	-	-	2,5
132	1	1610	42	1	16	-	-	25	9	92	1,1
	2	1610	42	3	28	111	-	28	-	-	1,5
	3	2012	50	2	40	111	-	32	8	-	2,3
	4	2012	50	2	52	111	-	32	20	-	2,5
	5	2517	65	3	64	111	19	45	-	-	2,7
	6	2517	65	3	76	111	31	45	-	-	2,9
140	1	1610	42	1	16	-	-	25	9	92	1,2
	2	1610	42	2	28	111	-	25	3	-	1,7
	3	2012	50	2	40	111	-	32	8	-	2,6
	4	2012	50	2	52	111	-	32	20	-	2,9
	5	2517	65	2	64	111	-	45	19	-	3,2
	6	2517	65	2	76	111	-	45	31	-	3,5
	8	2517	65	4	100	111	27,5	45	27,5	-	4,0
150	1	1610	42	1	16	-	-	25	9	92	1,2
	2	2012	50	1	28	-	-	33,5	5,5	112	2,0
	3	2012	50	2	40	121	-	32	8	-	3,1
	4	2517	65	2	52	121	-	45	7	-	3,7
	5	2517	65	2	64	121	-	45	19	-	4,0
	6	2517	65	2	76	121	-	45	31	-	4,4
	8	2517	65	4	100	121	27,5	45	27,5	-	5,1

Pulley diameters given are in millimeters.

TAPER LOCK PULLEYS

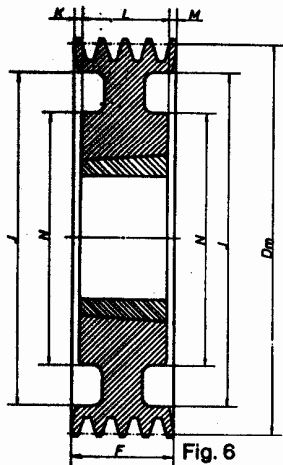


Fig. 6

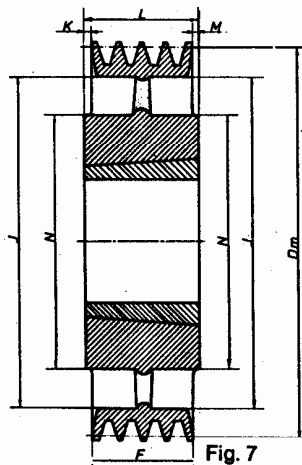


Fig. 7

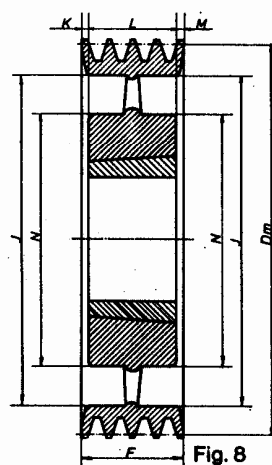


Fig. 8

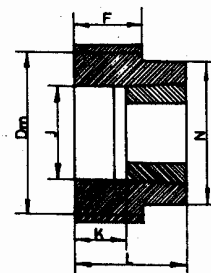


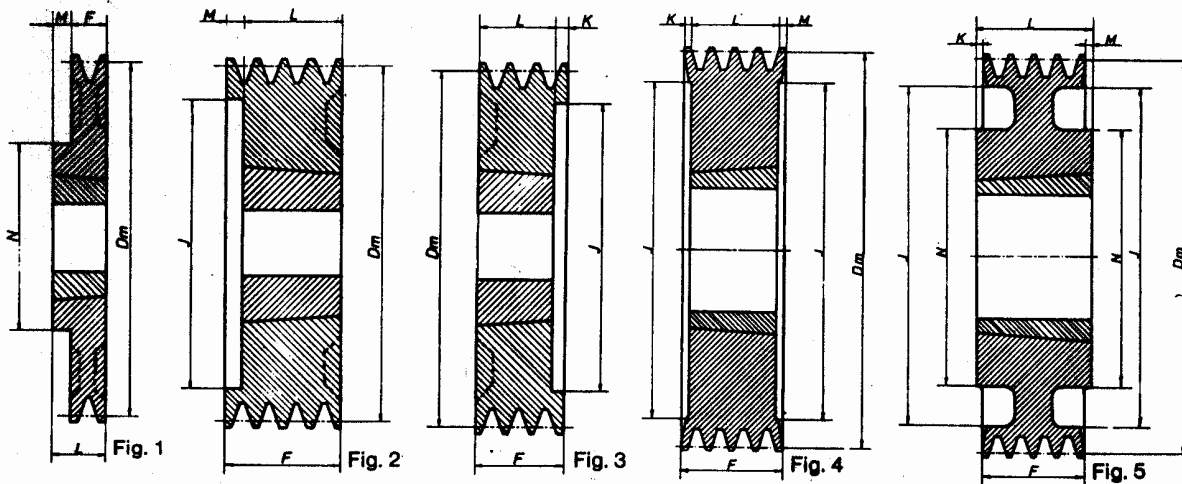
Fig. 9

Pitch Dm.	Groove	Bush nr.	Max. Bore	Figure	F.	J.	K.	L.	M.	N.	Weight
160	1	1610	42	1	16	-	-	25	9	92	1.3
	2	2012	50	1	28	-	-	32	4	112	2.5
	3	2012	50	2	40	131	-	32	8	-	3.6
	4	2517	65	2	52	131	-	45	7	-	4.4
	5	2517	65	2	64	131	-	45	19	-	4.8
	6	2517	65	2	78	131	-	45	31	-	5.2
	8	2517	65	4	100	131	27.5	45	27.5	-	5.8
	8	2517	65	4	100	131	27.5	45	27.5	-	5.8
170	1	1610	42	1	16	141	-	25	9	92	1.5
	2	2012	50	1	28	141	-	32	4	112	2.5
	3	2012	50	2	40	141	-	32	8	-	4.2
	4	2517	65	2	52	141	-	45	7	-	5.3
	5	2517	65	2	64	141	-	45	19	-	5.9
	6	2517	65	2	78	141	-	45	31	-	6.5
	8	2517	65	4	100	141	27.5	45	27.5	-	6.8
	8	2517	65	4	100	141	27.5	45	27.5	-	6.8
180	1	1610	42	1	16	-	-	25	9	92	1.6
	2	2012	50	1	28	-	-	32	4	112	2.5
	3	2012	50	6	40	151	-	32	8	-	4.8
	4	2517	65	6	52	151	-	45	7	-	6.1
	5	2517	65	6	64	151	-	45	19	-	6.3
	6	2517	65	6	78	151	-	45	31	-	6.8
	8	3020	75	4	100	151	24.5	51	24.5	-	7.1
	8	3020	75	4	100	151	24.5	51	24.5	-	7.1
190	1	1610	42	1	16	161	-	25	9	92	1.8
	2	2012	50	1	28	161	-	32	4	112	2.6
	3	2012	50	6	40	161	-	32	8	-	4.9
	4	2517	65	6	52	161	-	45	7	-	5.3
	5	2517	65	6	64	161	-	45	19	-	6.3
	6	2517	65	6	78	161	-	45	31	-	6.9
	8	3020	75	4	100	161	24.5	51	24.5	-	8.2
	8	3020	75	4	100	161	24.5	51	24.5	-	8.2
200	1	2012	50	1	16	-	-	32	16	112	2.3
	2	2012	50	1	28	-	-	32	4	112	2.8
	3	2012	50	6	40	171	-	32	8	-	3.5
	4	2517	65	4	52	171	3.5	45	3.5	124	4.7
	5	2517	65	4	64	171	9.5	45	9.5	124	5.5
	6	2517	65	4	78	171	15.5	45	15.5	124	6.1
	8	3020	75	4	100	171	24.5	51	24.5	-	9.3
	8	3020	75	4	100	171	24.5	51	24.5	-	9.3
224	1	2012	50	5	16	195	8	32	8	112	2.5
	2	2012	50	5	28	195	2	32	2	112	3.2
	3	2012	50	6	40	195	4	32	4	112	3.9
	4	2517	65	6	52	195	3.5	45	3.5	124	5.2
	5	2517	65	6	64	195	9.5	45	9.5	124	6.0
	6	2517	65	6	78	195	15.5	45	15.5	124	6.6
	8	3020	75	4	100	195	24.5	51	24.5	-	11.8
	8	3020	75	4	100	195	24.5	51	24.5	-	11.8
250	1	2012	50	7	16	221	8	32	8	112	2.8
	2	2012	50	7	28	221	2	32	2	112	3.5
	3	2012	50	8	40	221	4	32	4	112	4.3
	4	2517	65	8	52	221	3.5	45	3.5	124	5.7
	5	2517	65	8	64	221	9.5	45	9.5	124	6.4
	6	2517	65	8	78	221	15.5	45	15.5	124	7.0
	8	3020	75	8	100	221	24.5	51	24.5	145	10.5
	8	3020	75	8	100	221	24.5	51	24.5	145	10.5

Pitch Dm.	Groove	Bush nr.	Max. Bore	Figure	F.	J.	K.	L.	M.	N.	Weight
280	1	2012	50	7	16	251	8	32	8	112	2.9
	2	2012	50	7	28	251	2	32	2	112	4.0
	3	2517	65	7	40	251	2.5	45	2.5	124	5.3
	4	2517	65	8	52	251	3.5	45	3.5	124	6.4
	5	2517	65	8	64	251	9.5	45	9.5	124	7.1
	6	2517	65	8	78	251	15.5	45	15.5	124	7.8
	8	3020	75	8	100	251	24.5	51	24.5	145	10.8
	8	3020	75	8	100	251	24.5	51	24.5	145	10.8
315	1	2012	50	7	16	286	8	32	8	112	3.1
	2	2012	50	7	28	286	2	32	2	112	4.2
	3	2517	65	7	40	286	2.5	45	2.5	124	6.1
	4	2517	65	8	52	286	3.5	45	3.5	124	7.6
	5	2517	65	8	64	286	9.5	45	9.5	124	8.6
	6	2517	65	8	78	286	15.5	45	15.5	124	9.3
	8	3020	75	8	100	286	24.5	51	24.5	145	12.9
	8	3020	75	8	100	286	24.5	51	24.5	145	12.9
355	1	2012	50	7	16	326	8	32	8	112	3.5
	2	2012	50	7	28	326	2	32	2	112	5.1
	3	2517	65	7	40	326	2.5	45	2.5	124	7.3
	4	2517	65	8	52	326	3.5	45	3.5	124	8.9
	5	2517	65	8	64	326	9.5	45	9.5	124	10.0
	6	2517	65	8	78	326	15.5	45	15.5	124	10.7
	8	3030	75	8	100	326	24.5	78	24.5	145	18.0
	8	3030	75	8	100	326	24.5	78	24.5	145	18.0
400	1	2012	50	7	16	371	8	32	8	112	6.0
	2	2517	65	7	28	371	8.5	45	8.5	124	6.3
	3	2517	65	7	40	371	2.5	45	2.5	124	8.0
	4	2517	65	8	52	371	3.5	45	3.5	124	10.1
	5	3020	75	8	64	371	6.5	51	6.5	159	11.7
	6	3030	75	7	78	371	-	78	-	146	14.5
	8	3030	75	8	100	371	12.0	78	12.0	145	18.2
	8	3030	75	8	100	371	12.0	78	12.0	145	18.2
450	1	2517	65	7	16	424	14.5	45	14.5	120	6.1
	2	2517	65	7	28	424	8.5	45	8.5	120	8.2
	3	2517	65	7	40	424	2.5	45	2.5	120	9.8
	4	3020	75	8	52	424	0.5	51	0.5	145	11.8
	5	3020	75	8	64	424	6.5	51	6.5	145	13.9
	6	3030	75	8	78	424	-	78	-	145	16.9
	8	3535	90	8	100	424	5.5	89	5.5	178	24.0
	8	3535	90	8	100	424	5.5	89	5.5	178	24.0
500	1	2517	65	7	16	471	14.5	45	14.5	124	6.7
	2	2517	65	7	28	471	8.5	45	8.5	124	9.1
	3	2517	65	7	40	471	2.5	45	2.5	124	11.4
	4	3020	75	8	52	471	0.5	51	0.5	159	14.3
	5	3030	75	7	64	471	6	78	6	146	17.6
	6	3030	75	7	78	471	-	78	-	146	19.9
	8	3535	90	8	100	471	5.5	89	5.5	178	26.0
	8	3535	90	8	100	471	5.5	89	5.5	178	26.0
630	2	2517	65	7	28	601	8.5	45	8.5	124	11.7
	3	2517	65	7	40	601	2.5	45	2.5	124	15.9
	4	3030	75	7	52	601	12	78	12	146	20.0
	5	3030	75	7	64	601	6	78	6	146	22.7
	6	3535	90	7	78	601	6.5	89	6.5	178	33.6
	8	3535	90	8	100	601	5.5	89	5.5	178	35.8
	8	3535	90	8	100	601	5.5	89	5.5	178	35.8
	8	3535	90	8	100	601	5.5	89	5.5	178	35.8

Pulley diameters given are in millimetres

TAPER LOCK PULLEYS



Pitch Dm.	Groove	Bush nr.	Max. Bore	Figure	F	J	K	L	M	N	Weight
63	1	1108	28	9	20	31	18	40	-	68,5	0,6
	2	1108	28	9	35	31	33	55	-	68,5	0,8
67	1	1108	28	1	20	-	-	22	2	60	0,3
	2	1108	28	3	35	35	13	22	-	-	0,5
71	1	1108	28	1	20	-	-	22	2	60	0,3
	2	1108	28	3	35	39	13	22	-	-	0,5
	3	1108	28	3	50	39	28	22	-	-	0,7
75	1	1108	28	1	20	-	-	22	2	60	0,4
	2	1108	28	3	35	43	13	22	-	-	0,6
	3	1108	28	3	50	43	28	22	-	-	0,8
80	1	1210	32	1	20	-	-	25	2	60	0,5
	2	1210	32	3	35	50	13	25	-	-	0,6
	3	1210	32	3	50	50	25	25	-	-	0,9
85	1	1210	32	1	20	-	-	25	2	60	0,6
	2	1210	32	3	35	55	13	22	-	-	0,7
	3	1210	32	3	50	55	28	25	-	-	1,0
90	1	1210	32	1	20	-	-	25	5	60	0,7
	2	1610	42	3	35	60	10	25	-	-	0,7
	3	1610	42	3	50	60	23,5	26,5	-	-	1,0
	4	1615	42	3	65	60	25,5	39,5	-	-	1,2
95	1	1210	32	1	20	-	-	25	5	60	0,8
	2	1610	42	3	35	65	8,5	26,5	-	-	0,9
	3	1610	42	3	50	65	23,5	26,5	-	-	1,1
	4	1615	42	3	65	65	25,5	39,5	-	-	1,4
100	1	1610	42	1	20	-	-	26,5	3,5	92	0,8
	2	1610	42	3	35	65	10	25	-	-	0,9
	3	1610	42	2	50	65	-	26	25	-	1,2
	4	1615	42	2	65	65	-	38	27	-	1,7
	5	1615	42	3	80	65	42	38	-	-	1,9
106	1	1610	42	1	20	-	-	26,5	3,5	92	0,9
	2	1610	42	3	35	70	10	25	-	-	1,1
	3	1610	42	2	50	70	-	25	25	-	1,4
	4	2012	50	3	65	70	27	32	-	-	2,0
	5	2012	50	3	80	70	48	32	-	-	2,0

Pitch Dm.	Groove	Bush nr.	Max. Bore	Figure	F	J	K	L	M	N	Weight
112	1	1610	42	1	20	-	-	25	5	92	1,0
	2	1610	42	3	35	77	10	25	-	-	1,2
	3	2012	50	3	50	77	18	32	-	-	1,3
	4	2012	50	3	65	77	33	32	-	-	1,9
	5	2012	50	3	80	77	48	32	-	-	2,1
118	1	1610	42	1	20	-	-	26,5	6,5	85	1,2
	2	1610	42	3	35	84	10	25	-	-	1,4
	3	2012	50	2	50	84	-	32	18	-	1,8
	4	2012	50	2	65	84	-	32	33	-	2,0
	5	2012	50	2	80	84	-	32	48	-	2,4
125	1	1610	42	1	20	-	-	26,5	6,5	92	1,4
	2	1610	42	2	35	90	-	25	10	-	1,7
	3	2012	50	2	50	90	-	32	18	-	2,0
	4	2012	50	2	65	90	-	32	33	-	2,5
	5	2012	50	2	80	90	-	32	48	-	2,7
132	1	1610	42	1	20	-	-	26,5	6,5	92	1,6
	2	2012	50	2	35	98	-	32	10	-	1,8
	3	2012	50	2	50	98	-	32	18	-	2,3
	4	2517	65	2	65	98	-	45	20	-	2,6
	5	2517	65	2	80	98	-	45	35	-	2,9
140	1	1610	42	1	20	-	-	25	5	92	1,8
	2	2012	50	2	35	105	-	32	3	-	2,0
	3	2517	65	2	50	105	-	45	5	-	2,8
	4	2517	65	2	65	105	-	45	20	-	3,1
	5	2517	65	2	80	105	-	45	35	-	3,4
150	1	1610	42	1	20	-	-	25	5	92	1,4
	2	2012	50	2	35	115	-	32	3	-	2,4
	3	2517	65	2	50	115	-	45	5	-	3,5
	4	2517	65	2	65	115	-	45	20	-	3,8
	5	2517	65	2	80	115	-	45	35	-	4,2
160	1	1610	42	5	20	125	-	25	5	92	1,9
	2	2012	50	2	35	-	-	32	3	-	2,9
	3	2517	65	2	50	125	-	45	5	-	3,9
	4	2517	65	2	65	125	-	45	20	-	4,4
	5	2517	65	2	80	125	-	45	35	-	5,1
170	1	1610	42	5	20	135	-	25	5	92	2,0
	2	2012	50	2	35	135	-	32	3	-	3,1
	3	2517	65	2	50	135	-	45	5	-	4,6
	4	2517	65	2	65	135	-	45	20	-	5,5
	5	3020	75	2	80	135	-	51	29	-	5,9

Pulley diameters given are in millimeters.

TAPER LOCK PULLEYS

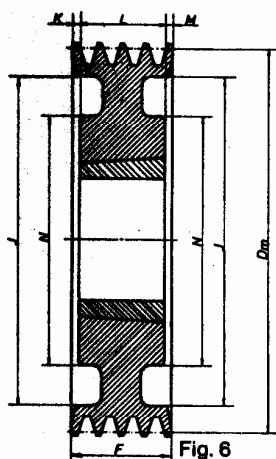


Fig. 6

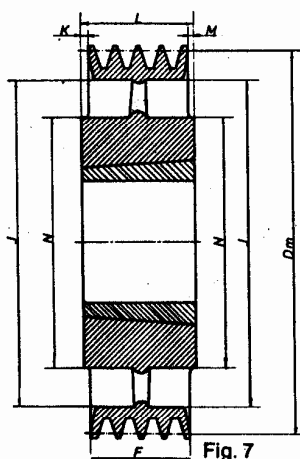


Fig. 7

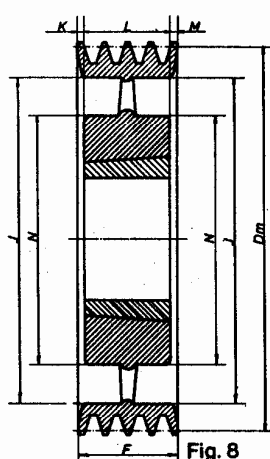


Fig. 8

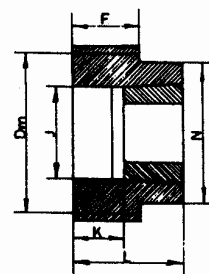


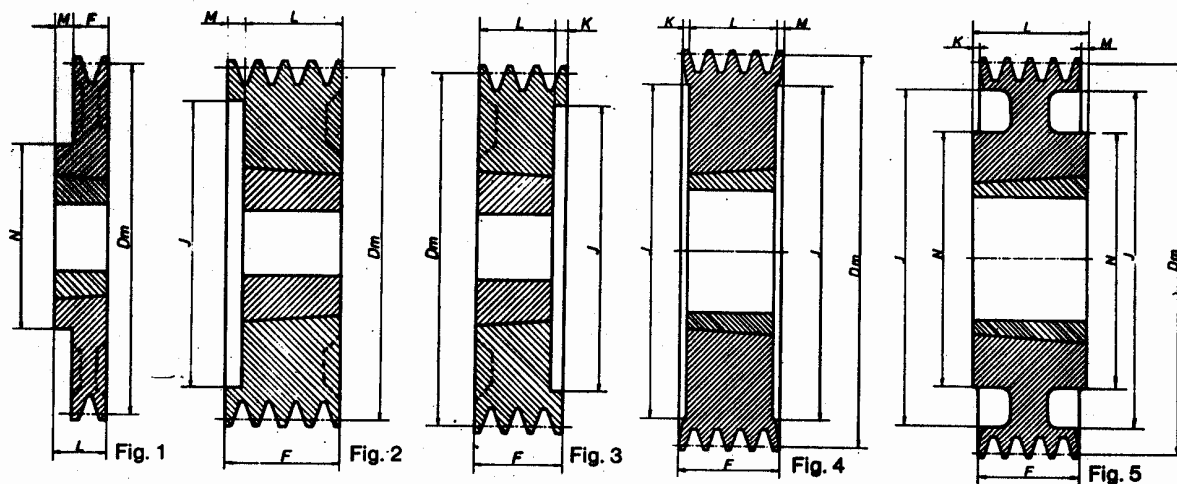
Fig. 9

Pitch Dm	Groove	Bush nr.	Max. Bore	Figure	F	J	K	L	M	N	Weight
180	1	1610	42	5	20	145	-	25	5	92	2.1
	2	2012	50	5	35	145	-	32	3	110	3.4
	3	2517	65	2	50	145	-	45	5	-	5.1
	4	2517	85	2	65	145	-	45	20	-	5.9
	5	3020	75	2	80	145	-	51	29	-	6.2
190	1	1610	42	5	20	155	-	25	5	92	2.3
	2	2012	55	5	35	155	-	32	3	110	3.8
	3	2517	65	2	50	155	-	45	5	-	5.4
	4	2517	65	2	65	155	-	45	20	-	6.8
	5	3020	75	2	80	155	-	51	29	-	7.4
200	1	2012	50	5	20	165	-	32	12	112	2.6
	2	2517	65	5	35	165	-	45	10	124	4.1
	3	2517	65	6	50	165	-	45	5	124	4.9
	4	3020	75	2	65	165	-	51	14	-	7.4
	5	3020	75	4	80	165	14.5	51	14.5	-	8.4
212	1	2012	50	5	20	177	-	32	12	112	2.7
	2	2517	65	5	35	177	-	45	10	124	4.3
	3	2517	65	6	50	177	-	45	5	124	5.2
	4	3020	75	2	65	177	-	51	14	-	7.3
	5	3020	75	2	80	177	-	51	29	-	8.2
224	1	2012	50	5	20	189	-	32	12	112	2.7
	2	2517	65	5	35	189	-	45	10	124	4.4
	3	2517	65	6	50	189	2.5	45	2.5	124	5.5
	4	3020	75	2	65	189	-	52.5	12.5	-	7.4
	5	3020	75	2	80	189	-	52.5	27.5	-	8.3
236	1	2012	50	5	20	201	-	32	12	112	2.8
	2	2517	65	5	35	201	-	45	10	124	4.6
	3	2517	65	6	50	201	2.5	45	2.5	124	5.7
	4	3020	75	2	65	201	-	52.5	12.5	-	7.8
	5	3020	75	2	80	201	-	52.5	27.5	-	8.7
250	1	2012	50	7	20	215	-	32	12	112	2.9
	2	2517	65	7	35	215	-	45	10	124	4.8
	3	2517	65	6	50	215	2.5	45	2.5	124	5.9
	4	3020	75	6	65	215	7	51	7	159	8.0
	5	3020	75	6	80	215	14.5	51	14.5	159	9.0
265	1	2012	50	7	20	230	-	32	12	112	3.1
	2	2517	65	7	35	230	-	45	10	124	5.1
	3	2517	65	6	50	230	2.5	45	2.5	159	6.3
	4	3020	75	6	65	230	7	51	7	159	8.4
	5	3020	75	6	80	230	14.5	51	14.5	159	9.5

Pitch Dm	Groove	Bush nr.	Max. Bore	Figure	F	J	K	L	M	N	Weight
280	1	2012	50	7	20	248	-	32	12	112	3.3
	2	2517	65	7	35	248	-	45	10	124	5.4
	3	2517	65	6	50	248	2.5	45	2.5	159	6.7
	4	3020	75	6	65	248	7	51	7	159	8.8
	5	3535	90	8	80	248	4.5	89	4.5	178	15.5
300	1	2012	50	7	20	265	-	32	12	112	3.5
	2	2517	65	7	35	265	-	45	10	124	5.8
	3	3020	75	5	50	265	0.5	51	0.5	159	7.4
	4	3020	75	6	65	265	7	51	7	159	9.3
	5	3535	90	5	80	265	4.5	89	4.5	178	16.2
315	1	2012	50	7	20	280	-	32	12	112	3.6
	2	2517	65	7	35	280	-	45	10	124	6.0
	3	3020	75	5	50	280	0.5	51	0.5	159	8.3
	4	3020	75	6	65	280	7	51	7	159	9.7
	5	3535	90	5	80	280	4.5	89	4.5	178	17.0
355	1	2012	50	7	20	320	-	32	12	112	4.2
	2	2517	65	7	35	320	-	45	10	124	6.7
	3	3020	75	7	50	320	0.5	51	0.5	159	9.2
	4	3020	75	8	65	320	7	51	7	159	11.0
	5	3535	90	7	80	320	4.5	89	4.5	178	18.6
400	1	2012	50	7	20	365	-	32	12	112	4.9
	2	2517	65	7	35	365	-	45	10	124	8.1
	3	3020	75	7	50	365	0.5	51	0.5	159	11.0
	4	3020	75	8	65	365	7	51	7	159	12.8
	5	3535	90	7	80	365	4.5	89	4.5	178	21.0
450	1	2012	50	7	20	418	-	32	12.5	112	7.0
	2	2517	65	7	35	418	5	45	5	124	10.3
	3	3020	75	7	50	418	0.5	51	0.5	159	14.1
	4	3020	75	8	65	418	7	51	7	159	15.5
	5	3535	90	7	80	418	4.5	89	4.5	178	24.3
500	1	2517	65	7	20	465	-	45	25	124	8.0
	2	2517	65	7	35	465	-	45	10	124	11.8
	3	3020	75	7	50	465	0.5	51	0.5	159	16.0
	4	3020	75	8	65	465	7	51	7	159	18.2
	5	3535	90	7	80	465	4.5	89	4.5	178	27.3
630	1	2517	65	7	20	595	-	45	25	124	10.1
	2	3020	75	7	35	595	-	51	16	159	16.0
	3	3020	75	7	50	595	0.5	51	0.5	159	22.0
	4	3535	90	7	65	595	12	89	12	178	30.8
	5	3535	90	7	80	595	4.5	89	4.5	178	33.7

Pulley diameters given are in millimetres

TAPER LOCK PULLEYS



Pitch Dm.	Groove	Bush nr.	Max. Bore	Figure	F	J	K	L	M	N	Weight
100	1	1610	42	1	25	-	-	25	-	-	0.9
	2	1610	42	3	44	62	19	25	-	-	1.2
	3	1610	42	3	63	82	38	25	-	-	1.7
112	1	1610	42	1	25	-	-	25	-	92	1.1
	2	1610	42	3	44	75	19	25	-	-	1.5
	3	1610	42	3	63	75	38	25	-	-	2.0
118	1	1610	42	1	25	-	-	25	-	92	1.3
	2	1610	42	3	44	81	19	25	-	-	1.7
	3	1610	42	3	63	81	38	25	-	-	2.3
125	1	1610	42	1	25	-	-	25	-	92	1.5
	2	2012	50	2	44	85	-	32	12	-	1.9
	3	2012	50	2	63	85	-	32	31	-	2.4
	4	2012	50	4	82	85	25	32	25	-	3.0
	5	2012	50	3	101	85	69	32	-	-	3.5
132	1	1610	42	1	25	-	-	25	-	92	1.8
	2	2012	50	2	44	92	-	32	12	-	2.2
	3	2012	50	2	63	92	-	32	31	-	2.8
	4	2012	50	3	82	92	25	32	25	-	3.4
	5	2012	50	4	101	92	34.5	32	34.5	-	3.7
140	1	1610	42	1	25	-	-	25	-	92	2.3
	2	2012	50	2	44	100	-	32	12	-	2.7
	3	2012	50	2	63	100	-	32	31	-	3.3
	4	2517	65	2	82	100	-	45	37	-	3.7
	5	2517	65	2	101	100	-	45	56	-	4.5
	6	2517	65	4	120	100	37.5	45	37.5	-	4.6
150	1	1610	42	1	25	-	-	25	-	92	2.7
	2	2012	50	2	44	110	-	32	12	-	3.1
	3	2517	60	2	63	110	-	45	18	-	3.9
	4	2517	60	2	82	110	-	45	37	-	4.4
	5	2517	60	4	101	110	28	45	28	-	5.2
	6	2517	60	4	120	110	37.5	45	37.5	-	5.6
160	1	1610	42	1	25	-	-	25	-	92	2.5
	2	2012	50	2	44	114	-	32	12	-	2.9
	3	2517	65	2	63	114	-	45	18	-	4.2
	4	2517	65	4	82	114	18.5	45	18.5	-	4.9
	5	2517	65	4	101	114	28	45	28	-	6.0
	6	3020	75	4	120	114	34.5	51	34.5	-	5.4
170	1	1610	42	1	25	-	-	25	-	92	2.9
	2	2012	50	2	44	124	-	32	12	-	3.3
	3	2517	65	2	63	124	-	45	18	-	4.9
	4	2517	65	4	82	124	18.5	45	18.5	-	5.7
	5	3020	75	4	101	124	25	51	25	-	6.1
	6	3020	75	4	120	124	34.5	51	34.5	-	6.5
	8	3030	75	4	158	129	41	76	41	-	9.5

Pitch Dm.	Groove	Bush nr.	Max. Bore	Figure	F	J	K	L	M	N	Weight
180	1	1610	42	1	25	-	-	25	-	92	4.1
	2	2517	65	1	44	134	-	45	1	-	4.5
	3	2517	65	2	63	134	-	45	18	-	5.5
	4	2517	65	4	82	134	18.5	45	18.5	-	6.9
	5	3020	75	4	101	134	25	51	25	-	7.1
	6	3020	75	4	120	134	34.5	51	34.5	-	7.7
	8	3030	75	4	158	139	41	76	41	-	11.2
190	1	2012	50	1	25	-	-	32	7	112	4.6
	2	2517	65	1	44	-	-	45	1	124	5.0
	3	2517	65	2	63	144	-	45	18	-	6.3
	4	2517	65	4	82	144	18.5	45	18.5	-	7.6
	5	3020	75	4	101	144	25	51	25	-	8.1
	6	3020	75	4	120	144	34.5	51	34.5	-	9.2
	8	3030	75	4	158	149	41	76	41	-	12.4
200	1	2012	50	1	25	-	-	32	7	95	5.0
	2	2517	65	1	44	-	-	45	1	124	5.4
	3	2517	65	2	63	154	-	45	18.5	-	6.5
	4	3020	75	2	82	154	-	51	31	-	8.8
	5	3020	75	2	101	154	-	51	50	-	9.1
	6	3020	75	4	120	154	34.5	51	34.5	-	10.3
	8	3535	90	4	158	159	34.5	89	34.5	-	13.5
212	1	2012	50	1	25	-	-	32	7	95	4.2
	2	2517	65	1	44	-	-	45	1	124	4.9
	3	2517	65	2	63	166.5	-	45	18	-	6.0
	4	3020	75	2	82	166.5	-	51	31	-	9.8
	5	3020	75	2	101	166.5	-	51	50	-	11.0
	6	3535	90	4	120	166.5	15.5	89	15.5	-	14.3
	8	3535	90	4	158	171	34.5	89	34.5	-	16.6
224	1	2012	50	1	25	-	-	32	7	95	4.7
	2	2517	65	1	44	-	-	45	1	124	5.3
	3	2517	65	2	63	178	-	45	18	-	6.3
	4	3020	75	2	82	178	-	51	31	-	11.3
	5	3020	75	2	101	178	-	51	50	-	12.7
	6	3535	90	4	120	178	15.5	89	15.5	-	17.0
	8	3535	90	4	158	184	34.5	89	34.5	-	19.3
236	1	2012	50	1	25	198	-	32	7	95	5.0
	2	2517	65	1	44	198	-	45	1	-	5.5
	3	2517	65	8	63	198	-	45	18	-	7.0
	4	3020	75	8	82	198	15.5	51	15.5	-	14.5
	5	3535	90	3	101	198	-	89	12	-	16.9
	6	3535	90	4	120	198	15.5	89	15.5	-	20.0
	8	3535	90	4	158	198	34.5	89	34.5	-	22.3

Pulley diameters given are in millimetres

TAPER LOCK PULLEYS

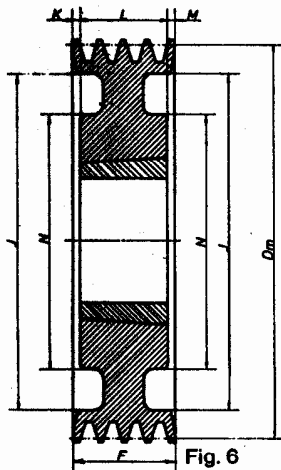


Fig. 6

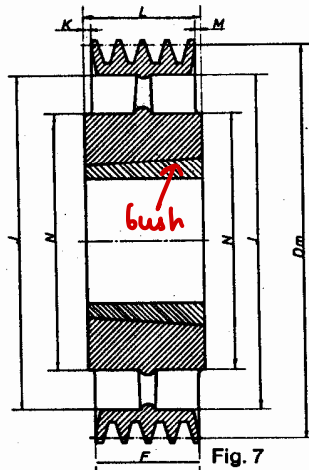


Fig. 7

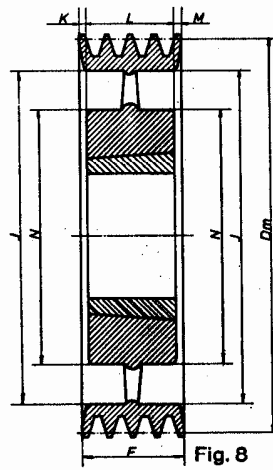


Fig. 8

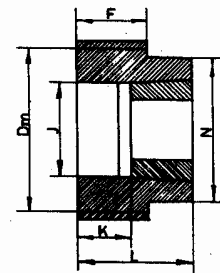


Fig. 9

Pitch Dm.	Groove	Bush nr.	Max. Bore	Figure	F.	J.	K.	L.	M.	N.	Weight
250	1	2012	50	1	25	212	-	32	7	-	5.4
	2	2517	65	7	44	-	-	45	1	124	5.5
	3	3020	75	2	63	204	-	51	12	-	7.7
	4	3020	75	2	82	204	-	51	31	-	19.6
	5	3535	90	2	101	204	-	89	12	-	21.7
	6	3535	90	4	120	204	15.5	89	15.5	-	23.3
	8	3535	90	4	158	204	34.5	89	34.5	-	27.5
	8	3535	90	4	196	204	46.0	89	61.0	-	29.3
	10	3535	90	4	196	204	46.0	89	61.0	-	29.3
	10	3535	90	6	196	239	46.0	89	61.0	-	30.5
280	1	2012	50	7	25	242	-	32	7	95	6.1
	2	2517	65	7	44	242	0.5	45	0.5	124	6.8
	3	3020	75	8	63	242	6	51	6	159	8.6
	4	3020	75	6	82	242	15.5	51	15.5	159	10.1
	5	3535	90	6	101	239	6	89	6	178	17.8
	6	3535	90	6	120	239	15.5	89	15.5	178	19.6
	8	3535	90	6	158	239	34.5	89	34.5	-	26.7
	8	3535	90	6	196	239	46.0	89	61.0	-	29.3
	10	3535	90	6	196	239	46.0	89	61.0	-	29.3
	10	3535	90	6	196	239	46.0	89	61.0	-	29.3
300	1	2012	50	7	25	262	-	32	7	95	6.8
	2	2517	65	7	44	262	0.5	45	0.5	124	7.3
	3	3020	75	8	63	262	6	51	6	159	9.2
	4	3020	75	6	82	262	15.5	51	15.5	159	14.3
	5	3535	90	6	101	259	6	89	6	178	18.2
	6	3535	90	6	120	259	15.5	89	15.5	178	21.9
	8	3535	90	6	158	259	34.5	89	34.5	180	26.2
	8	3535	90	6	196	259	46.0	89	61.0	180	26.2
	10	3535	90	6	196	259	46.0	89	61.0	180	26.2
	10	3535	90	6	196	259	46.0	89	61.0	180	26.2
315	1	2012	50	7	25	277	-	32	7	95	7.2
	2	2517	65	7	44	269	0.5	45	0.5	124	7.8
	3	3020	75	8	63	269	6	51	6	159	9.6
	4	3535	90	5	82	269	3.5	89	3.5	178	17.1
	5	3535	90	6	101	269	6	89	6	178	18.8
	6	3535	90	6	120	269	15.5	89	15.5	178	23.0
	8	3535	90	6	158	274	34.5	89	34.5	180	26.0
	8	3535	90	6	196	274	53.5	89	63.5	180	31.5
	10	3535	90	6	196	274	53.5	89	63.5	180	31.5
	10	3535	90	6	196	274	53.5	89	63.5	180	31.5
335	2	2517	65	7	44	297	-	45	1.0	120	7.8
	3	3020	75	8	63	297	6.0	51	6.0	145	10.5
	4	3535	90	7	82	297	3.5	89	3.5	178	18.3
	5	3535	90	8	101	297	6.0	89	6.0	178	19.5
	6	3535	90	8	120	297	15.5	89	15.5	178	22.0
	8	3535	90	8	158	294	34.5	89	34.5	180	28.2
	8	3535	90	8	196	294	47.0	102	47.0	216	36.0
	10	4040	100	8	196	294	47.0	102	47.0	216	36.0
	10	4040	100	8	196	294	47.0	102	47.0	216	36.0
	10	4040	100	8	196	294	47.0	102	47.0	216	36.0
355	2	3020	75	7	44	309	3.5	51	3.5	159	8.7
	3	3020	75	8	63	309	6	51	6	159	10.8
	4	3535	90	7	82	309	3.5	89	3.5	178	18.6
	5	3535	90	8	101	309	6	89	6	178	20.8
	6	3535	90	6	120	309	15.5	89	15.5	179	22.8
	8	3535	90	8	158	317	34.5	89	34.5	180	27.0
	8	3535	90	8	196	317	47.0	102	47.0	216	36.0
	10	4040	100	8	196	317	47.0	102	47.0	216	36.0
	10	4040	100	8	196	317	47.0	102	47.0	216	36.0
	10	4040	100	8	196	317	47.0	102	47.0	216	36.0
400	2	3020	75	7	44	354	3.5	51	3.5	159	10.0
	3	3535	90	7	83	354	13	89	13	178	18.3
	4	3535	90	7	82	354	3.5	89	3.5	178	20.5
	5	3535	90	8	101	354	6	89	6	178	23.4
	6	3535	90	8	120	354	15.5	89	15.5	179	25.1
	8	4040	100	8	158	362	28	102	28	216	36.5
	8	4040	100	8	196	362	47	102	47	216	41.0
	10	4040	100	8	196	362	47	102	47	216	41.0
	10	4040	100	8	196	362	47	102	47	216	41.0
	10	4040	100	8	196	362	47	102	47	216	41.0

Pitch Dm.	Groove	Bush nr.	Max. Bore	Figure	F.	J.	K.	L.	M.	N.	Weight
450	2	3020	75	7	44	410	3,5	51	3,5	159	12,1
	3	3535	90	7	63	410	13	89	13	178	21,9
	4	3535	90	7	82	410	3,5	89	3,5	178	24,5
	5	3535	90	8	101	410	6	89	6	178	27,3
	6	4040	100	8	120	410	9	102	9	216	35,5
	8	4040	100	8	158	410	28	102	28	216	40,9
	10	4545	110	8	196	410	40,5	115	40,5	242	53,5
500	2	3020	75	7	44	454	3,5	51	3,5	159	13,2
	3	3535	90	7	63	454	13	89	13	178	23,1
	4	3535	90	7	82	454	3,5	89	3,5	178	26,6
	5	3535	90	8	101	454	6	89	6	178	29,9
	6	4040	100	8	120	454	9	102	9	216	38,9
	8	4040	100	8	158	460	28	102	28	216	45,5
	10	4545	110	8	196	480	40,5	115	40,5	242	61,0
560	2	3030	75	7	44	525	16	78	16	159	17,1
	3	3535	90	7	63	525	-	89	26	178	25,9
	4	3535	90	7	82	525	-	89	7	178	29,0
	5	4040	100	7	101	525	0,5	102	0,5	216	35,3
	6	4040	100	8	120	525	9	102	9	216	43,1
	8	4545	110	8	158	525	21,5	115	21,5	242	49,0
	8	4545	110	8	158	525	21,5	115	21,5	242	49,0
630	2	3030	75	7	44	584	16	78	16	146	19,3
	3	3535	90	7	63	584	13	89	13	178	28,9
	4	3535	90	7	82	584	3,5	89	3,5	178	33,3
	5	4040	100	7	101	584	0,5	102	0,5	216	43,1
	6	4040	100	8	120	584	9	102	9	216	49,2
	8	4545	110	8	158	590	21,5	115	21,5	242	62,0
	10	4545	110	8	196	590	40,5	115	40,5	242	72,0
710	2	3030	75	7	44	670	16	78	16	146	23,0
	3	3535	90	7	63	670	13	89	13	180	33,2
	4	3535	90	7	82	670	3,5	89	3,5	180	39,1
	5	4040	100	7	101	670	0,5	102	0,5	215	50,2
	6	4545	110	8	120	670	2,5	115	2,5	242	62,3
	8	4545	110	8	158	670	21,5	115	21,5	242	71,0
	10	4545	110	8	196	670	40,5	115	40,5	242	80,0
800	2	3535	90	7	44	760	22,5	89	22,5	180	29,8
	3	3535	90	7	63	760	13	89	13	180	36,7
	4	4040	100	7	82	760	10	102	10	215	48,8
	5	4040	100	7	101	760	0,5	102	0,5	216	56,1
	6	4545	110	8	120	760	2,5	115	2,5	242	71,4
	8	4545	110	8	158	760	21,5	115	21,5	242	90,9
	8	4545	110	8	158	760	21,5	115	21,5	242	90,9
900	3	3535	90	7	63	858	13	89	13	180	48,8
	4	4040	100	7	82	858	10	102	10	216	60,0
	5	4545	110	7	101	858	7	115	7	242	74,8
	6	4545	110	8	120	858	2,5	115	2,5	242	81,5
	8	4545	110	8	158	858	21,5	115	21,5	242	110,0

TAPER LOCK PULLEYS

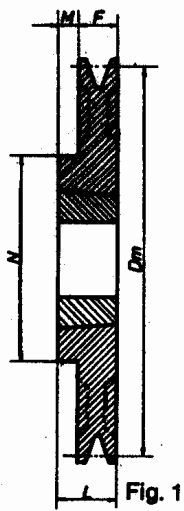


Fig. 1

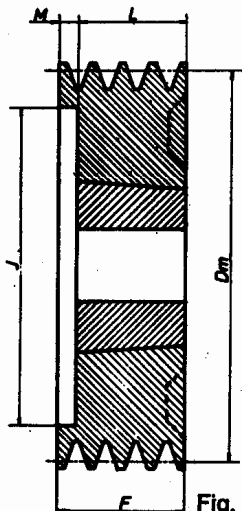


Fig. 2

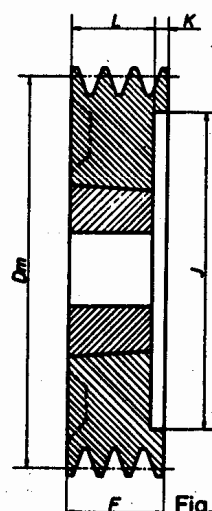


Fig. 3

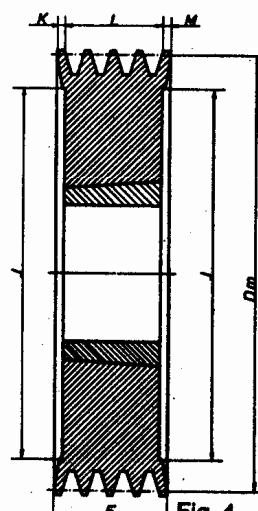


Fig. 4

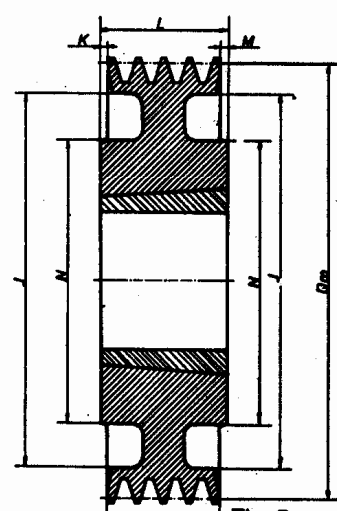


Fig. 5

Pitch Dm.	Groove	Bush nr.	Max. Bore	Figure	F.	J.	K.	L.	M.	N.	Weight
200	3	2517	16-85	4	85	151	20	45	20	-	9,0
	4	3020	25-75	4	111	151	30	51	30	-	10,5
	5	3535	28-90	4	136	151	16	89	31	-	14,0
	6	3535	28-90	4	162	151	16	89	57	-	17,0
	8	3535	28-90	4	213	151	46	89	78	-	23,0
212	3	3020	25-75	4	85	163	17	51	17	-	10,0
	4	3020	25-75	4	111	163	30	51	30	-	12,5
	5	3535	28-90	4	136	163	16	89	31	-	15,0
	6	3535	28-90	4	162	163	36,5	89	36,5	-	18,0
	8	3535	28-90	4	213	163	46	89	78	-	24,0
224	2	3020	25-75	4	60	170	4,5	51	4,5	-	8,1
	3	3020	25-75	4	85	170	17	51	17	-	11,0
	4	3535	28-90	4	111	170	11	89	11	-	14,0
	5	3535	28-90	4	136	170	23,5	89	23,5	-	16,2
	6	3535	28-90	4	162	170	36,5	89	36,5	-	19,0
236	3	3020	25-75	4	85	182	17	51	17	-	12,0
	4	3535	28-90	4	111	182	11	89	11	-	17,2
	5	3535	28-90	4	136	182	23,5	89	23,5	-	19,1
	6	3535	28-90	4	162	182	36,5	89	36,5	-	20,8
	8	3535	28-90	4	212	182	46	89	78	-	25,5
250	2	3020	25-75	4	60	170	4,1	51	4,5	-	9,8
	3	3020	25-75	4	85	200	17	51	17	-	14,5
	4	3535	28-90	4	111	200	11	89	11	-	20,7
	5	3535	28-90	4	136	200	23,5	89	23,5	-	22,8
	6	3535	28-90	4	162	200	36,5	89	36,5	-	26,0
	8	3535	28-90	4	212	200	61,75	89	61,75	-	29,7

Pitch Dm.	Groove	Bush nr.	Max. Bore	Figure	F.	J.	K.	L.	M.	N.	Weight
265	3	3535	28-90	1	85	215	-	89	4	178	21,2
	4	3535	28-90	6	111	215	11	89	11	178	24,0
	5	3535	28-90	6	136	215	23,5	89	23,5	178	26,2
	6	3535	28-90	6	162	215	36,5	89	36,5	178	29,0
	8	3535	28-90	6	212	215	61,75	89	61,75	178	33,3
280	3	3535	28-90	1	85	230	-	89	4	178	24,0
	4	3535	28-90	6	111	230	11	89	11	178	29,0
	5	3535	28-90	6	136	230	23,5	89	23,5	178	31,0
	6	3535	28-90	6	162	230	36,5	89	36,5	178	33,8
	8	3535	28-90	6	212	230	61,75	89	61,75	178	37,5
300	3	3535	28-90	5	85	250	2	89	2	178	21,0
	4	3535	28-90	6	111	250	11	89	11	178	25,0
	5	3535	28-90	6	136	250	23,5	89	23,5	178	28,5
	6	3535	28-90	6	162	250	36,5	89	36,5	178	29,0
	8	4040	40-100	4	212	250	55,25	102	55,25	-	46,5
315	3	3535	28-90	5	85	265	2	89	2	178	21,6
	4	3535	28-90	6	111	265	11	89	11	178	24,6
	5	3535	28-90	6	136	265	23,5	89	23,5	178	29,0
	6	3535	28-90	6	162	265	36,5	89	36,5	178	31,4
	8	4040	40-100	4	212	265	55,25	102	55,25	200	50,0
335	3	3535	28-90	5	85	282	2	89	2	178	22,5
	4	3535	28-90	6	111	282	11	89	11	178	26,5
	5	3535	28-90	6	136	282	23,5	89	23,5	178	30,0
	6	3535	28-90	6	162	282	36,5	89	36,5	178	35,0
	8	4040	40-100	6	212	282	55,25	102	55,25	200	58,0

Pulley diameters given are in millimetres

TAPER LOCK PULLEYS

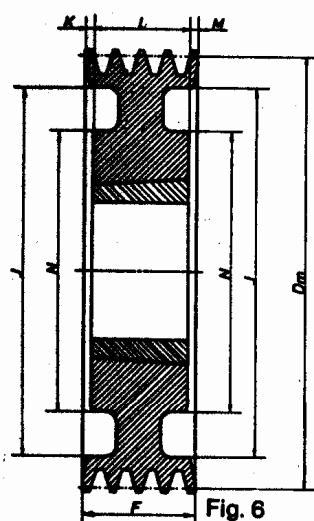


Fig. 6

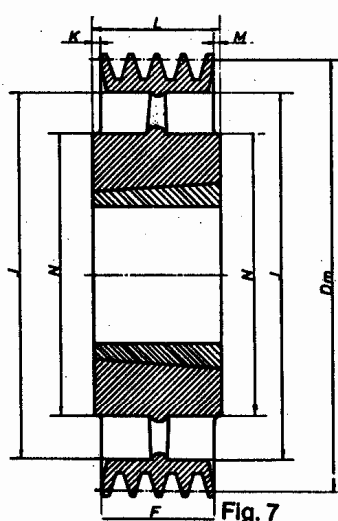


Fig. 7

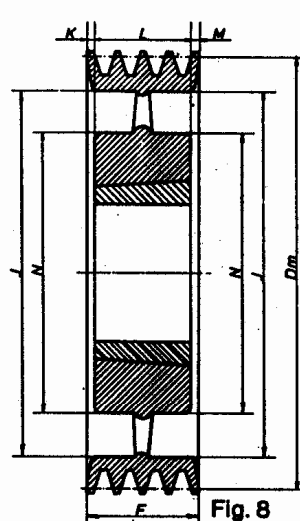


Fig. 8

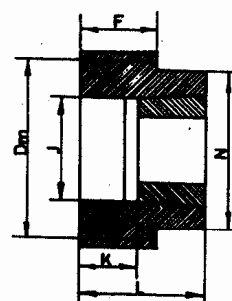


Fig. 9

Pitch Dm	Groove	Bush nr.	Max. Bore	Figure	F.	J.	K.	L.	M.	N.	Weight
355	3	3535	28-90	5	85	305	2	89	2	178	22,9
	4	3535	28-90	6	111	305	11	89	11	178	28,3
	5	3535	28-90	6	136	305	23,5	89	23,5	178	32,5
	6	3535	28-90	6	162	305	36,5	89	36,5	178	36,0
	8	4040	40-100	6	212	305	55,25	102	55,25	200	67,5
375	3	3535	28-90	5	85	322	2	89	2	178	23,8
	4	3535	28-90	6	111	322	11	89	11	178	30,0
	5	3535	28-90	6	136	322	23,5	89	23,5	178	33,0
	6	4040	40-100	6	162	322	30	102	30	216	45,5
	8	4545	55-110	6	212	322	49,5	115	49,5	225	68,0
400	3	3535	28-90	7	85	350	2	89	2	178	24,1
	4	3535	28-90	8	111	350	11	89	11	178	28,0
	5	3535	28-90	8	136	350	23,5	89	23,5	178	34,0
	6	4040	40-100	6	162	350	30	89	30	216	48,0
	8	4545	55-110	6	212	350	48,75	115	48,75	240	65,0
425	3	3535	28-90	7	85	372	2	89	2	178	26,0
	4	3535	28-90	8	111	372	11	89	11	178	31,0
	5	4040	40-100	6	136	372	17	102	17	216	45,0
	6	4545	55-110	6	162	372	24	115	24	242	58,0
	8	5050	70-125	6	212	372	43	127	43	265	74,0
450	3	3535	28-90	7	85	400	2	89	2	178	28,6
	4	3535	28-90	8	111	400	11	89	11	178	33,5
	5	4040	40-100	8	136	400	17	102	17	216	45,0
	6	4545	55-110	6	162	400	24	115	24	242	61,1
	8	5050	70-125	6	212	400	42,75	127	42,75	265	78,7

Pitch Dm.	Groove	Bush nr.	Max. Bore	Figure	F.	J.	K.	L.	M.	N.	Weight
475	3	3535	28-90	7	85	422	2	89	2	178	40,0
	4	3535	28-90	8	111	422	11	89	11	178	47,0
	5	4040	40-100	8	136	422	17	102	17	216	47,2
	6	4545	55-110	6	162	422	24	115	24	242	62,8
	8	5050	70-125	6	212	422	43	127	43	265	81,5
500	3	3535	28-90	7	85	450	2	89	2	178	30,9
	4	3535	28-90	8	111	450	11	89	11	178	39,0
	5	4040	40-100	8	136	450	17	102	17	216	48,7
	6	4545	55-110	8	162	450	24	115	24	242	60,2
	8	5050	70-125	6	212	450	42,75	127	42,75	265	87,4
530	3	3535	28-90	7	85	480	2	89	2	178	35,0
	4	4040	40-100	8	111	480	4,5	102	4,5	216	40,0
	5	4545	55-110	8	136	480	11	115	11	242	60,0
	6	5050	70-125	8	162	480	17,5	127	17,5	265	73,0
	8	5050	70-125	6	212	480	43	127	43	265	94,0
560	3	3535	28-90	7	85	510	2	89	2	178	38,0
	4	4040	40-100	8	111	510	4,5	102	4,5	216	50,0
	5	4545	55-110	8	136	510	11	115	11	242	63,0
	6	5050	70-125	8	162	510	17,5	127	17,5	265	77,0
	8	5050	70-125	8	212	510	43	127	43	265	94,0
630	3	4040	40-100	7	85	580	8,5	102	8,5	216	48,5
	4	4545	55-110	7	111	580	2	115	2	242	61,0
	5	5050	70-125	8	136	580	4,5	127	4,5	267	77,0
	6	5050	70-125	8	162	580	17,5	127	17,5	267	86,0
	8	5050	70-125	8	212	580	42,75	127	42,75	265	105,5

Pulley diameters given are in millimetres

TAPER LOCK BUSHES

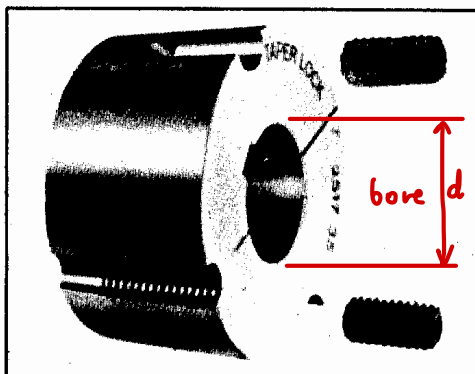
UNI In the past it had been necessary to employ skilled labour for fitting components to shafts. Using UNI Taper Lock Bushes it is possible now for unskilled labour to achieve 'shrink fit' of pulleys, coupling, etc, onto shafts using only a hexagon wrench.

The arrangement of threaded half holes and longitudinal split in the tapered bush is designed to ensure maximum grip and fast, easy fixing. Tightening of the screws into the threaded holes in the hub forces the bush into the taper bored component, thereby effectively contracting the bore of the Taper Lock Bush until the equivalent of a shrink fit is obtained.

Taper Lock Bushes are equally suitable for metric and imperial shafts.

ADVANTAGES

- No reboring and keywaying costs.
- Saves time and cost in fitting keys.
- Eliminates precision taper fitting keys.
- Over 500 bush size/bore combinations are available with both metric and imperial bores. (BS & ANSI)
- Interchangeable between many products.
- Taper bored components can be transferred to other diameter shafts by fitting alternative bore bushes.
- Convenience in dismantling for maintenance and component replacement.
- Accommodates shaft limits of + 0.050mm, - 0.125mm



Keyways are to BS4235 (metric bores) or BS46 (Inch bores) except for those marked* which are shallower than standard.

METRIC Bores and Keyways (mm)

Bush No.	Bore	Keyway		Dia at large end of taper
		Width	Depth at Centre	
1008	9 10	3	1.4	35.0
	11 12	4	1.8	
	14 16	5	2.3	
	18 19 20 22	6	2.8	
	24 25	8	1.3*	
1108	9 10	3	1.4	38.0
	11 12	4	1.8	
	14 15 16	5	2.3	
	18 19 20 22	6	2.8	
	24 25	8	3.3	
1210 1215	11 12	4	1.8	47.5
	14 16	5	2.3	
	18 19 20 22	6	2.8	
	24 25 28 30	8	3.3	
	32	10	3.3	
1610 1615	14 15 16	5	2.3	57.0
	18 19 20 22	6	2.8	
	24 25 28 30	8	3.3	
	32 35 38	10	3.3	
	40 42	12	3.3	
2012 2017	14 16	5	2.3	70.0
	18 19 20 22	6	2.8	
	24 25 28 30	8	3.3	
	32 35 38	10	3.3	
	40 42	12	3.3	
2517 2525	45 48	14	3.8	85.5
	50	14	3.8	
	16	5	2.3	
	18 19 20 22	6	2.8	
	24 25 28 30	8	3.3	
3020 3030	32 35 38	10	3.3	108.0
	40 42	12	3.3	
	45 48 50	14	3.8	
	55	16	4.3	
	60	18	4.4	
3525 3535	25 28 30	8	3.3	127.0
	32 35 38	10	3.3	
	40 42	12	3.3	
	45 48 50	14	3.8	
	55	16	4.3	
4030 4040	60 65	18	4.4	146.0
	70 75	20	4.9	
	80 85	22	5.4	
	90 95	25	5.4	
	100 105 110	28	6.4	
4535 4545	115	32	5.4*	162.0
	55	16	4.3	
	60 65	18	4.4	
	70 75	20	4.9	
	80 85	22	5.4	
5040 5050	90 95	25	5.4	177.5
	100 105 110	28	6.4	
	115 120 125	32	7.4	
	70 75	20	4.9	
	80 85	22	5.4	

min. shaft $\phi \geq 39.1\text{mm}$
 $\therefore$ select bore = 40mm
 Shaft ϕ same basic size (40mm) as bore