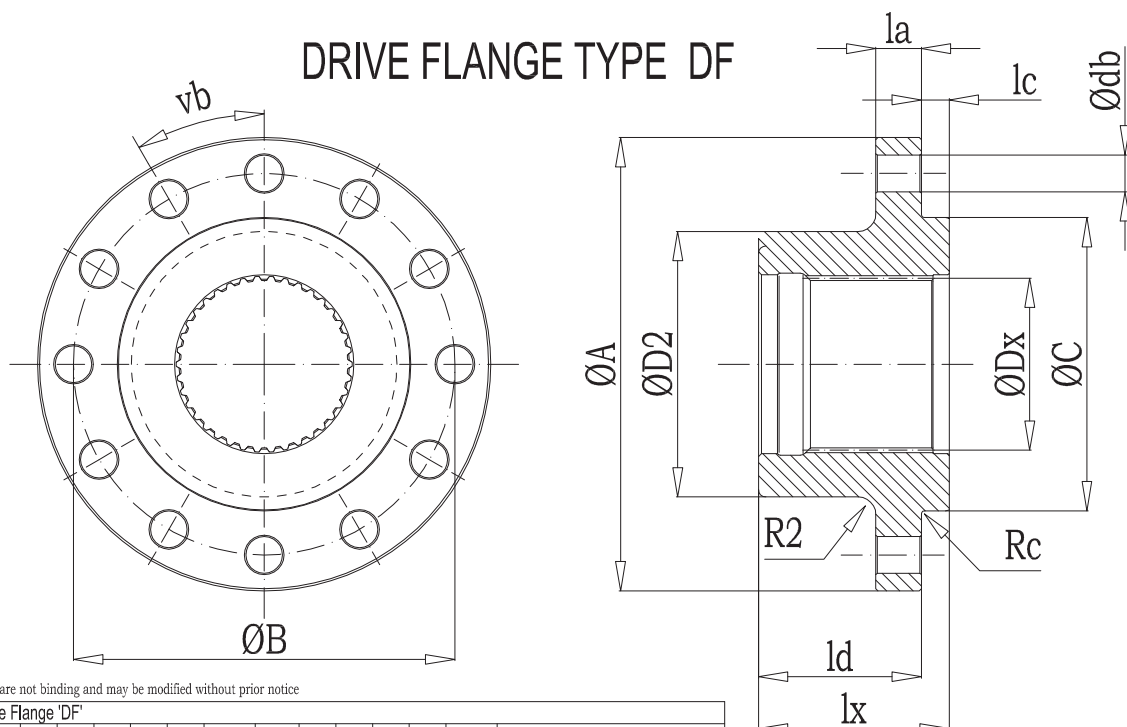


Accessories

DRIVE FLANGE TYPE DF



Data and dimensions are not binding and may be modified without prior notice

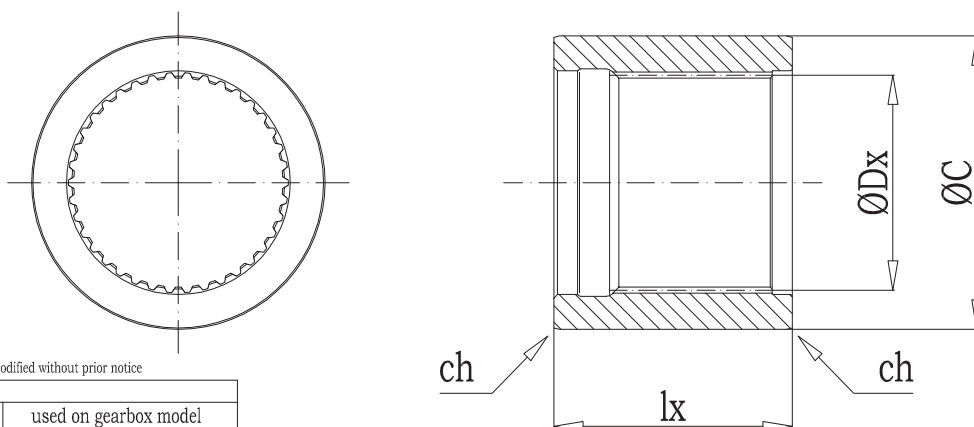
Dimensions, Drive Flange 'DF'															
Type	Dx	lx	ld	A	la	B	db	vb	C	lc	Rc	D2	R2	m[kg]	used on gearbox model
DF 40	40x36	55	47	147	12	125	10.5	6x60°	60 f7	8	1	70	6	2.2	15, 18 - X12
DF 48	48x44	55	47	147	12	125	10.5	12x30°	60 f7	8	1	70	6	2.0	22, 28, 32 - X14
DF 58	58x53	68	58	166	14	145	12.5	12x30°	95 f7	10	1	88	8	3.5	36, 42, 50, 60, 67 - X12
DF 5R	58x53	80	70	166	14	145	12.5	12x30°	95 f7	10	1	88	8	3.9	36, 42, 50, 60, 67 - X16
DF 70	70x64	90	76	208	20	175	19	12x30°	125 f7	14	1.5	120	10	8.5	75, 85, 100, 110, 130 - X12
DF 80	80x74	90	76	208	20	175	19	12x30°	125 f7	14	1.5	120	10	7.6	140, 170 - X12
DF 10	100x94	110	90	254	24	212	21	12x30°	170 f7	20	2	145	11	14.1	200, 220, 260 - X14 300, 360 - X12
DF 12	120x3	130	111	309	31	260	25	12x30°	200 f7	19	2	181	12	26.4	420, 480, 560 - X14
DF 13	130x3	130	111	309	31	260	25	12x30°	200 f7	19	2	181	12	24.2	630 - X12
DF 15	150x5	150	131	384	31	320	32	12x30°	220 f7	19	3	220	16	41.6	750, 900 - X12
DF 17	170x5	170	151	404	36	340	32	16x22.5°	240 f7	19	3	240	16	51.1	1100, 1300 - X14
DF 20	200x5	200	160	512	50	440	38	18x20°	300 f7	40	4	300	20	108.4	1700, 2100 - X12
DF 22	220x5	220	160	542	50	470	38	20x18°	320 f7	60	4	320	20	125.5	2500 - X14

DIMENSIONS IN MM UNLESS OTHERWISE SPECIFIED

Material:
Alloy Steel 42CrMo4 +QT
(4140 Quenched and Tempered)

Custom versions available

SPLINE BUSH TYPE XB



Data and dimensions are not binding and may be modified without prior notice

Dimensions, Splined Bushing 'XB'						
Type	Dx	lx	C	ch	m[kg]	used on gearbox model
XB 40	40x36	55	60 f7	2x15°	0.7	15, 18 - X12
XB 48	48x44	55	68 f7	2x15°	0.8	22, 28, 32 - X14
XB 58	58x53	68	78 f7	2x15°	1.2	36, 42, 50, 60, 67 - X12
XB 5R	58x53	80	78 f7	2x15°	1.4	36, 42, 50, 60, 67 - X16
XB 70	70x64	90	95 f7	3x15°	2.3	75, 85, 100, 110, 130 - X12
XB 80	80x74	90	108 f7	3x15°	2.9	140, 170 - X12
XB 10	100x94	110	136 f7	3x15°	5.7	200, 220, 260 - X14 300, 360 - X12
XB 12	120x3	130	160 f7	3x15°	9.1	420, 480, 560 - X14
XB 13	130x3	130	195 f7	3x15°	16.4	630 - X12
XB 15	150x5	150	200 f7	3x15°	17.1	750, 900 - X12
XB 17	170x5	170	220 f7	3x15°	21.4	1100, 1300 - X14
XB 20	200x5	200	280 f7	4x15°	48.5	1700, 2100 - X12
XB 22	220x5	220	290 f7	4x15°	50	2500 - X14

DIMENSIONS IN MM UNLESS OTHERWISE SPECIFIED

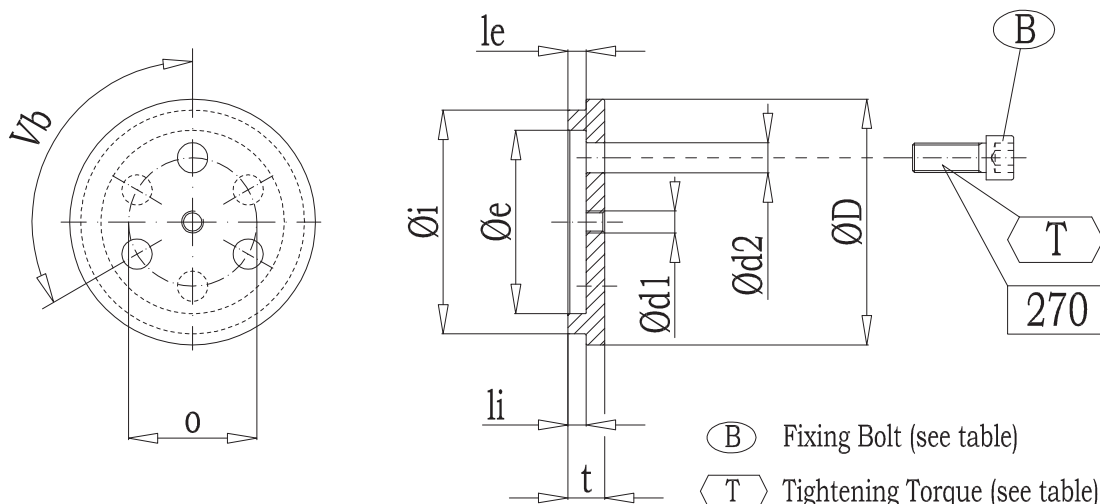
Material:
Weldable Steel St 52 (E 355, Gr.65)

Carbonitriding necessary to achieve
full performance of spline profile

Custom versions available

Accessories

FIXING FLANGE TYPE FF



(B) Fixing Bolt (see table)

(T) Tightening Torque (see table)

270 Use Locking Agent, 270 or equivalent

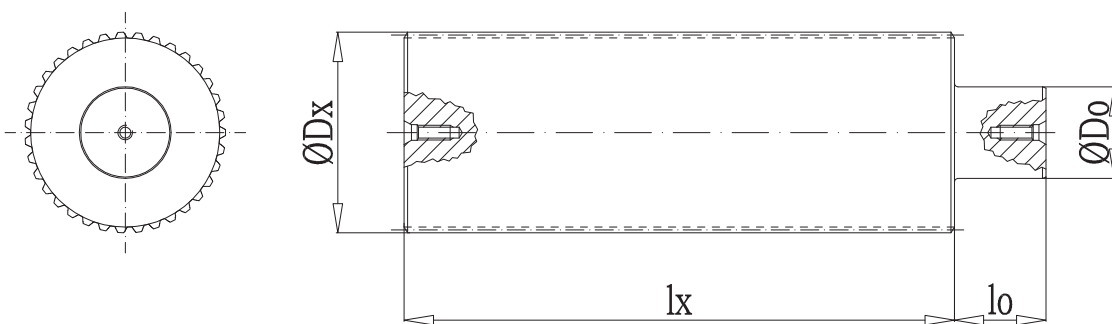
Data and dimensions are not binding and may be modified without prior notice

Dimensions, Fixing Flange 'FF'																
Type	D	d1	d2	Vb	e	le	i	li	o	t	B	DIN 912	T[Nm]	T[lb-ft]	m[kg]	used on gearbox model
FF 40	49	M6	6.5	3x120°	35 K7	5	42 f7	5	24	9	M6x16-12.9	14	10	0.07	15, 18 - X12	
FF 48	58	M8	8.5	3x120°	43 K7	5	50 f7	5	29	10	M8x20-12.9	35	26	0.12	22, 28, 32 - X14	
FF 58	69	M8	10.5	3x120°	50 K7	7.5	60 f7	7.5	32	13	M10x25-12.9	69	51	0.20	36, 42, 50, 60, 67 - X12, X16	
FF 70	79	M10	10.5	3x120°	62 K7	9	72 f7	9	40	17	M10x25-12.9	69	51	0.36	75, 85, 100, 110, 130 - X12	
FF 80	92	M10	12.5	3x120°	70 K7	9	82 f7	9	45	17	M12x30-12.9	120	89	0.49	140, 170 - X12	
FF 10	114	M10	14.5	3x120°	85 K7	11	105 f7	11	65	21	M14x35-12.9	190	140	1.01	200, 220, 260 - X14	300, 360 - X12
FF 12	134	M12	16.5	3x120°	100 K7	10	122 f7	10	70	20	M16x40-12.9	295	218	1.35	420, 480, 560 - X14	
FF 13	144	M12	16.5	3x120°	110 K7	10	132 f7	10	70	20	M16x40-12.9	295	218	1.53	630 - X12	
FF 15	164	M12	16.5	3x120°	125 K7	12	151 f7	12	70	22	M16x40-12.9	295	218	2.13	750, 900 - X12	
FF 17	184	M12	16.5	3x120°	145 K7	11.5	171 f7	11.5	90	23.5	M16x40-12.9	295	218	2.13	1100, 1300 - X14	
FF 20	226	M16	16.5	6x60°	170 K7	19	202 f7	19	140	44	M16x60-12.9	295	218	9.0	1700, 2100 - X12	
FF 22	246	M16	16.5	6x60°	190 K7	19	222 f7	19	160	44	M16x60-12.9	295	218	10.6	2500 - X14	

DIMENSIONS IN MM UNLESS OTHERWISE SPECIFIED

Material:
Steel C40 (1040)
Custom versions available

SPLINE ROD TYPE ZR



Data and dimensions are not binding and may be modified without prior notice

Dimensions, Splined Rod 'ZR'						
Type	Dx	lx	Do	lo	m[kg]	used on gearbox model
ZR 40	40x36	230	—	—	2	15, 18 - Z21
ZR 45	45x41	230	—	—	2.6	22, 28, 32 - Z23
ZR 58	58x53	230	—	—	4.3	36, 42, 50, 60, 67 - Z21
ZR 70	70x64	250	30 h9	30	7	75, 85, 100, 110, 130 - Z21
ZR 80	80x74	250	30 h9	30	9.2	140, 170 - Z21
ZR 90	90x74	250	30 h9	30	11.7	200, 220, 260 - Z23
ZR 10	100x94	300	50 h9	50	18	300, 360, 420 - Z21
ZR 11	110x3	300	50 h9	50	21.7	480, 560 - Z23
ZR 13	130x3	300	50 h9	50	30.2	630 - Z21
ZR 15	150x5	300	50 h9	50	39.1	750, 900 - Z21
ZR 16	160x5	300	50 h9	50	44.6	1100, 1300 - Z23
ZR 20	200x5	400	70 h9	70	95	1700, 2100 - Z21
ZR 21	210x5	400	70 h9	70	105	2500 - Z23

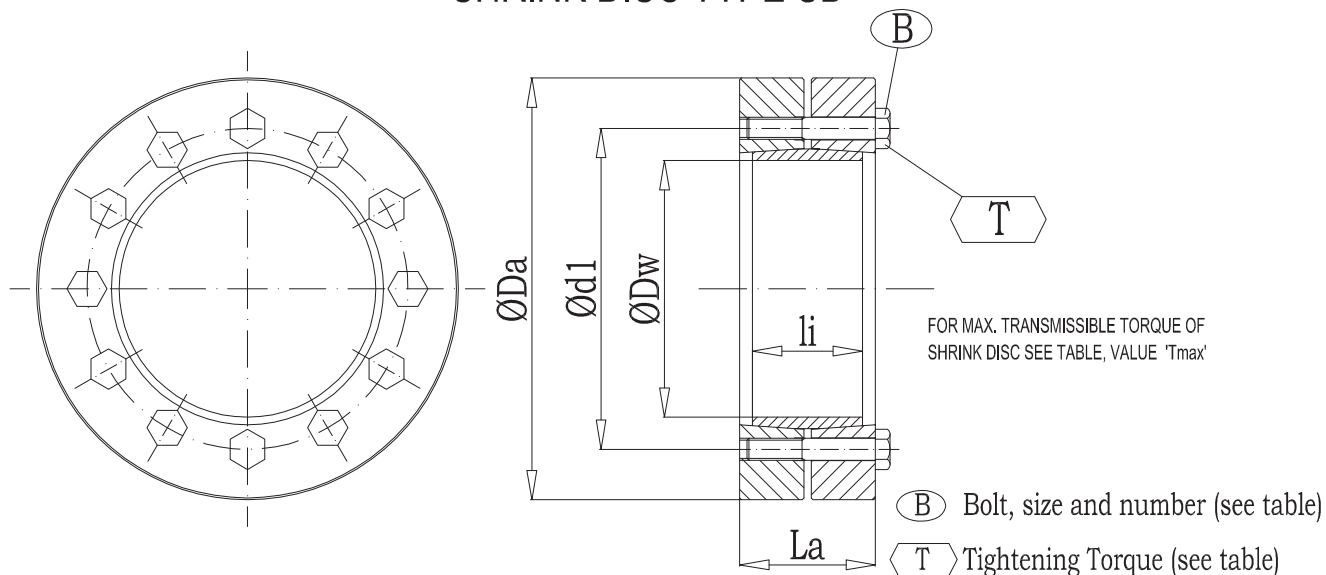
DIMENSIONS IN MM UNLESS OTHERWISE SPECIFIED

Material:
Alloy Steel 42CrMo4 +QT
(4140 Quenched and Tempered)

Custom versions available

Accessories

SHRINK DISC TYPE SD



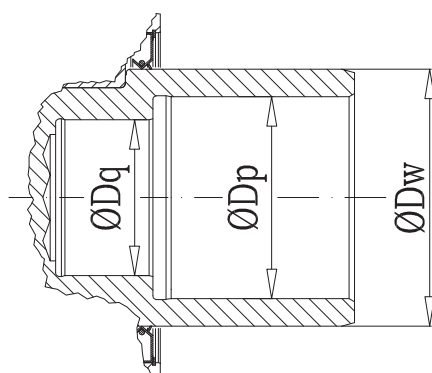
Data and dimensions are not binding and may be modified without prior notice

Dimensions, Shrink Disc 'SD'												
Type	Dw	Da	d1	li	La	B	T[Nm]	T[lb-ft]	m[kg]	Tmax[Nm]	Tmax[ft-lb]	Gearbox Model
SD 60	60	110	86	23	31	8 x M6	12	9	1.3	2300	1700	15, 18, 22, 28, 32 - P24
SD 90	90	155	114	30	39	10 x M8	30	22	3.3	7250	5350	36, 42, 50, 60, 67 - P24
SD 110	110	185	136	39	50	9 x M10	59	44	5.9	10800	7950	75, 85, 100, 110, 130 - P24
SD 125	125	215	160	55	65	10 x M12	100	74	11	20000	14750	140, 170, 200, 220, 260 - P20
SD 125	125	215	160	55	65	10 x M12	100	74	11	22500	16600	140, 170, 200, 220, 260 - P22
SD 140	140	230	175	60	74	12 x M12	100	74	13	29500	21750	140, 170, 200, 220, 260 - P24
SD 165	165	290	210	72	88	10 x M16	250	185	26	55000	40550	300, 360, 420, 480, 560 - P24
SD 185	185	330	236	92	112	14 x M16	250	185	47	78000	57550	630 - P22
SD 200	200	350	246	92	112	15 x M16	250	185	50	108000	79650	750, 900 - P22
SD 220	220	370	270	114	134	20 x M16	250	185	65	147000	108400	1100, 1300 - P24
SD 260	260	430	321	136	160	18 x M20	490	360	100	240000	177000	1700, 2100, 2500 - P22

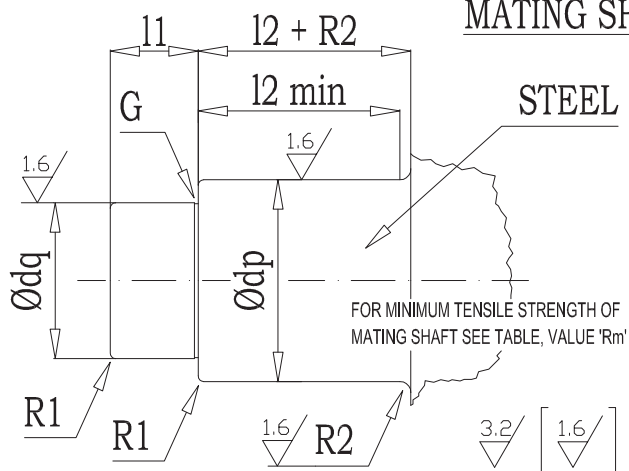
DIMENSIONS IN MM UNLESS OTHERWISE SPECIFIED

RECOMMENDED DIMENSIONS OF MATING SHAFT

GEARBOX SHAFT



MATING SHAFT



Data and dimensions are not binding and may be modified without prior notice

Recommended Dimensions of Mating Shaft									
Type	dq	l1	R1	dp	l2 min	R2 min	G (DIN509)	Rm (of mating shaft)	Gearbox Model
SD 60	35 g6	21	2	50 h6	50	3	F1.0x0.2	600 MPa min.	15, 18, 22, 28, 32 - P24
SD 90	50 g6	25	3	75 g6	70	4	F1.0x0.2	600 MPa min.	36, 42, 50, 60, 67 - P24
SD 110	70 g6	52	4	85 g6	90	5	F1.6x0.3	600 MPa min.	75, 85, 100, 110, 130 - P24
SD 125	80 g6	38	4	95 g6	100	5	F1.6x0.3	700 MPa min.	140, 170, 200, 220, 260 - P20
SD 125	85 g6	38	4	100 g6	100	5	F2.5x0.4	700 MPa min.	140, 170, 200, 220, 260 - P22
SD 140	85 g6	48	5	110 g6	110	6	F2.5x0.4	700 MPa min.	140, 170, 200, 220, 260 - P24
SD 165	100 g6	57	5	130 g6	115	6	F2.5x0.4	750 MPa min.	300, 360, 420, 480, 560 - P24
SD 185	110 g6	57	5	140 g6	145	6	F2.5x0.4	750 MPa min.	630 - P22
SD 200	130 g6	62	5	160 g6	160	8	F4.0x0.5	750 MPa min.	750, 900 - P22
SD 220	130 g6	72	5	170 g6	170	8	F4.0x0.5	800 MPa min.	1100, 1300 - P24
SD 260	170 g6	95	5	200 g6	210	8	F4.0x0.5	800 MPa min.	1700, 2100, 2500 - P22

DIMENSIONS IN MM UNLESS OTHERWISE SPECIFIED