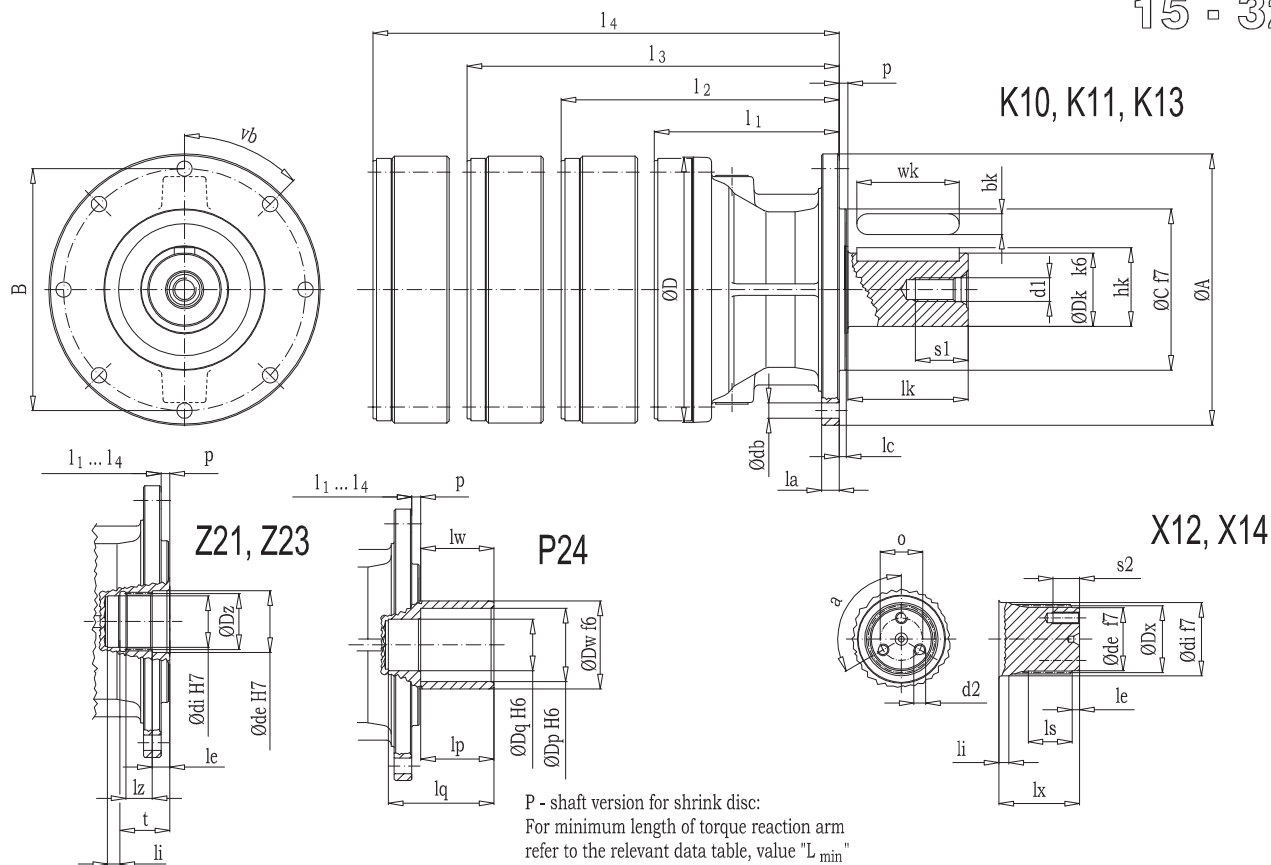




US Versions

X32, X34

K30, K33

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

Dimensions METRIC, solid shafts														Keyed										DIN Splined									
Model	A	la	B	db	vb	C	lc	D	p	l ₁	l ₂	l ₃	l ₄	Dk	lk	bk	hk	wk	d1	s1	code	Dx	lx	ls	de	le	di	li	d2	s2	a	o	code
15	185	12	165	10.5	8x45°	110	5	185	6	113	163	213	263	38	58	10	41	50	M12	32	K 10	40x36	55	30	35	5	42	7	M6	13	3x120°	24	X 12
18	185	12	165	10.5	8x45°	110	5	185	6	113	163	213	263	42	82	12	45	70	M16	36	K 11	40x36	55	30	35	5	42	7	M6	13	3x120°	24	X 12
22	185	12	165	10.5	8x45°	110	5	185	6	113	163	213	263	50	82	14	53.5	70	M16	36	K 13	48x44	55	30	43	5	50	7	M8	18	3x120°	29	X 14
28	185	12	165	10.5	8x45°	110	5	185	6	126	176	226	276	50	82	14	53.5	70	M16	36	K 13	48x44	55	30	43	5	50	7	M8	18	3x120°	29	X 14
32	185	12	165	10.5	8x45°	110	5	185	6	126	176	226	276	50	82	14	53.5	70	M16	36	K 13	48x44	55	30	43	5	50	7	M8	18	3x120°	29	X 14

Dimensions METRIC, hollow shafts														Hollow for Shrink Disc										Hollow Splined									
Model	A	la	B	db	vb	C	lc	D	p	l ₁	l ₂	l ₃	l ₄	Dp	lp	Dq	lq	Dw	lw	L min. of torque arm	code	Dz	lz	de	le	di	li	t	code				
15	185	12	165	10.5	8x45°	110	5	185	6	113	163	213	263	50	50	35	72	60	50	200	P 24	40x36	18	42	12	35	8.5	34	Z 21				
18	185	12	165	10.5	8x45°	110	5	185	6	113	163	213	263	50	50	35	72	60	50	200	P 24	40x36	18	42	12	35	8.5	34	Z 21				
22	185	12	165	10.5	8x45°	110	5	185	6	113	163	213	263	50	50	35	72	60	50	250	P 24	45x41	25	47	5	35	8.5	34	Z 23				
28	185	12	165	10.5	8x45°	110	5	185	6	126	176	226	276	50	50	35	72	60	50	250	P 24	45x41	25	47	5	35	8.5	34	Z 23				
32	185	12	165	10.5	8x45°	110	5	185	6	126	176	226	276	50	50	35	72	60	50	250	P 24	45x41	25	47	5	35	8.5	34	Z 23				

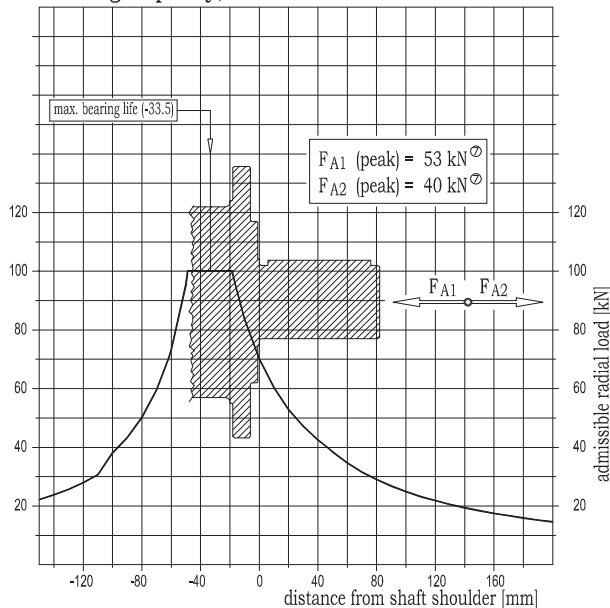
Dimensions US version, solid shafts														Cylindrical										ANSI Splined									
Model	Q	la	B	db	vb	C	lc	D	p	l ₁	l ₂	l ₃	l ₄	Dk	lk	bk	hk	wk	d1	s1	code	Dx	lx	ls	do	d2	s2	code					
15	150	15	162	15	4x90°	127	6.5	185	15	104	154	204	254	38.1 h6	61	9.525	42.4	57.15	1/2"-13	32	K 30	12/24-17T	61	40.5	37.6 h11	3/8"-16	22.5	X 32					
18	150	15	162	15	4x90°	127	6.5	185	15	104	154	204	254	38.1 h6	61	9.525	42.4	57.15	1/2"-13	32	K 30	12/24-17T	61	40.5	37.6 h11	3/8"-16	22.5	X 32					
22	150	15	162	15	4x90°	127	6.5	185	15	104	154	204	254	57.15 h7	96.5	12.7	62.9	88.9	3/4"-10	44.5	K 33	8/16-16T	76.5	52	53.975 h6	3/4"-10	44.5	X 34					
28	150	15	162	15	4x90°	127	6.5	185	15	117	167	217	267	57.15 h7	96.5	12.7	62.9	88.9	3/4"-10	44.5	K 33	8/16-16T	76.5	52	53.975 h6	3/4"-10	44.5	X 34					
32	150	15	162	15	4x90°	127	6.5	185	15	117	167	217	267	57.15 h7	96.5	12.7	62.9	88.9	3/4"-10	44.5	K 33	8/16-16T	76.5	52	53.975 h6	3/4"-10	44.5	X 34					

DIMENSIONS IN MM UNLESS OTHERWISE SPECIFIED

Model	15	18	22	28	32
Torque Rating ^①	1500 Nm	1800 Nm	2200 Nm	2800 Nm	3200 Nm
L1	RATIO (ACT. RATING) 3.3 (B) 5.0 (B) 6.9 (C) 3.8 (A) 6.1 (B)	RATIO (ACT. RATING) 3.3 (B) 5.1 (B) 4.3 (A)	RATIO (ACT. RATING) 3.7 (A) 4.4 (A)	RATIO (ACT. RATING) 3.7 (A) 5.8 (C) 5.0 (B) 6.9 (D)	RATIO (ACT. RATING) 4.3 (A) 5.1 (B)
n ₁ nom./max.	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm
P th. ^② /max.	8.5/25 kW	8.5/26.5 kW	8.5/28 kW	9/30 kW	9/33 kW
L2	NOM. RATIO ^③ (ACT. RATING) 11 (B) 22 (A) 42 (B) 12 (A) 26 (A) 48 (C) 14 (A) 30 (B) 16 (B) 35 (B) 19 (A) 38 (B)	NOM. RATIO ^③ (ACT. RATING) 11 (B) 22 (A) 12 (B) 26 (A) 14 (A) 30 (A) 16 (A) 35 (B) 19 (B)	NOM. RATIO ^③ (ACT. RATING) 12 (A) 26 (A) 14 (A) 30 (A) 16 (A) 30 (A) 19 (A) 22 (A)	NOM. RATIO ^③ (ACT. RATING) 12 (A) 26 (A) 48 (D) 14 (A) 30 (B) 16 (B) 35 (B) 19 (A) 40 (C) 22 (A) 42 (D)	NOM. RATIO ^③ (ACT. RATING) 14 (A) 30 (A) 16 (A) 35 (B) 19 (B) 22 (A) 26 (A)
n ₁ nom./max.	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm
P th. ^② /max.	5/15 kW	5/15.5 kW	5/16 kW	5.5/17 kW	5.5/19 kW
L3	NOM. RATIO ^③ (ACT. RATING) 42 (A) 120 (A) 300 (B) 48 (A) 130 (A) 340 (C) 53 (A) 160 (A) 63 (A) 180 (A) 71 (A) 210 (B) 85 (A) 240 (B) 100 (A) 260 (B)	NOM. RATIO ^③ (ACT. RATING) 48 (A) 130 (A) 53 (A) 150 (A) 60 (A) 160 (A) 71 (A) 180 (A) 85 (A) 210 (A) 100 (A) 240 (B) 110 (A)	NOM. RATIO ^③ (ACT. RATING) 42 (A) 110 (A) 48 (A) 130 (A) 53 (A) 150 (A) 60 (A) 160 (A) 71 (A) 180 (A) 85 (A) 210 (A) 100 (A)	NOM. RATIO ^③ (ACT. RATING) 42 (A) 120 (A) 300 (D) 48 (A) 140 (A) 340 (D) 53 (A) 160 (A) 63 (A) 180 (A) 71 (A) 210 (B) 85 (A) 240 (B) 100 (A) 280 (C)	NOM. RATIO ^③ (ACT. RATING) 48 (A) 130 (A) 53 (A) 150 (A) 60 (A) 160 (A) 75 (A) 180 (A) 85 (A) 210 (A) 100 (A) 240 (B) 110 (A)
n ₁ nom./max.	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm
P th. ^② /max.	4/7 kW	4/7.5 kW	4/8 kW	4.5/10 kW	4.5/11 kW
L4	NOM. RATIO ^③ (ACT. RATING) 200 (A) 500 (A) 1250 (A) 240 (A) 600 (A) 1500 (B) 260 (A) 670 (A) 1700 (B) 280 (A) 710 (A) 1800 (B) 320 (A) 800 (A) 2000 (B) 360 (A) 900 (A) 2300 (C) 400 (A) 1000 (A) 450 (A) 1100 (A)	NOM. RATIO ^③ (ACT. RATING) 220 (A) 750 (A) 280 (A) 950 (A) 320 (A) 1050 (A) 380 (A) 1100 (A) 420 (A) 1250 (A) 500 (A) 1400 (A) 560 (A) 1500 (B) 670 (A) 1700 (B)	NOM. RATIO ^③ (ACT. RATING) 240 (A) 750 (A) 280 (A) 900 (A) 320 (A) 1050 (A) 360 (A) 1100 (A) 420 (A) 1250 (A) 500 (A) 1400 (A) 560 (A) 670 (A)	NOM. RATIO ^③ (ACT. RATING) 200 (A) 500 (A) 1250 (A) 240 (A) 600 (A) 1500 (B) 260 (A) 670 (A) 1700 (B) 280 (A) 710 (A) 1900 (C) 320 (A) 800 (A) 2000 (D) 360 (A) 900 (A) 2300 (D) 400 (A) 1000 (A) 450 (A) 1100 (A)	NOM. RATIO ^③ (ACT. RATING) 240 (A) 750 (A) 280 (A) 800 (A) 320 (A) 900 (B) 380 (A) 1050 (A) 420 (A) 1250 (A) 500 (A) 1400 (A) 560 (A) 1700 (B) 670 (B)
n ₁ nom./max.	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm
P th. ^② /max.	3.5/2 kW	3.5/2.3 kW	3.5/2.5 kW	3.7/3 kW	3.7/3.5 kW
Actual Torque [Nm] ^④	(A) 1700 (B) 1500 (C) 1300	(A) 2050 (B) 1800	(A) 2400	(A) 3200 (B) 2800 (C) 2600 (D) 2400	(A) 3700 (B) 3350
Peak Torque ^⑤	2000 Nm	2400 Nm	2800 Nm	3700 Nm	4100 Nm

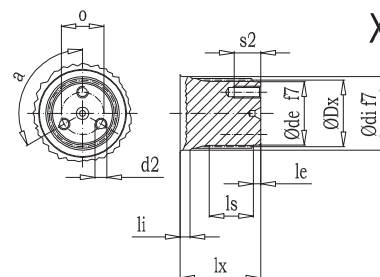
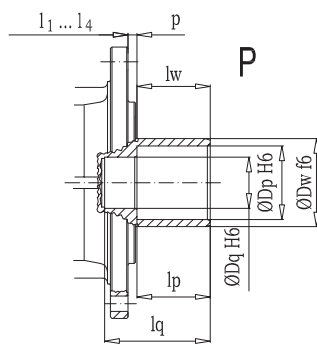
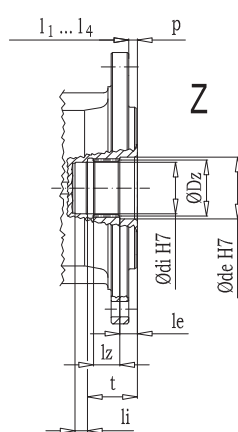
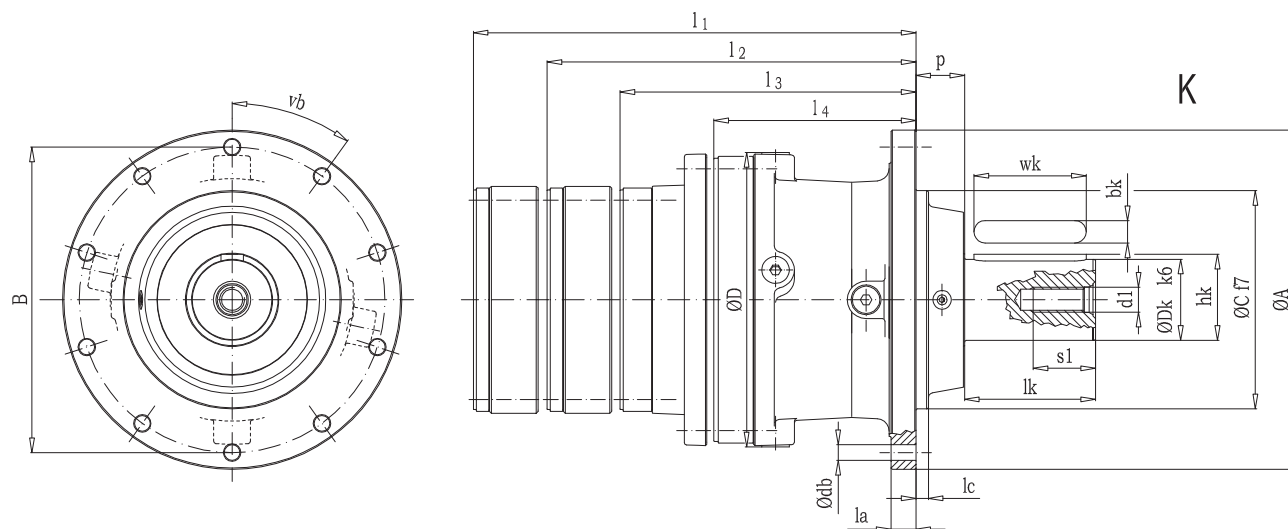
Data and dimensions are not binding and may be modified without prior notice

Bearing Capacity, solid shafts^{⑥⑦}



- ① Harmonized nominal value referring to Preferred Numbers R'40. Actual transmissible torque may vary depending on ratio, speed, application.
- ② Harmonized nominal value referring to Preferred Numbers R'40. For actual ratios see Annex C.
- ③ Thermal power limit. For actual figures based on speed, temperature and duty see Section B4, Specifications, Paragraph 8.
- ④ Mean value at rated conditions. For actual figures based on speed, service life and application/duty see Section B4, Specifications, Paragraph 6.
- ⑤ Restrictions may apply for hollow shaft for shrink disc, see Section G, Output Accessories. Customer to verify the mating shaft is capable of loads actually transmitted.
- ⑥ Mean values at rated conditions. For actual admissible loads based on speed, service life and application/duty see Section B4, Specifications, Paragraph 9.
- ⑦ Max. peak values, which must never be exceeded. Combined thrust and radial shaft loads might reduce bearing life. Please contact Plan-Star Engineering for accurate life calculation of your specific application.
- ⑧ Combination of high torque and heavy radial shaft load might require verification of the output shaft. If the following condition is not fulfilled, contact Plan-Star Engineering for accurate verification of your specific application:

$$\frac{\text{Radial Load (applied)}}{\text{Radial Load (admissible)}} \times \frac{\text{Torque (applied)}}{\text{Torque (nominal)}} < 0.5$$



P - shaft version for shrink disc:
For minimum length of torque reaction arm
refer to the relevant data table, value "L_{min}"

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

Dimensions METRIC, standard, solid shafts														Keyed										DIN Splined									
Model	A	la	B	db	vb	C	lc	D	p	l ₁	l ₂	l ₃	l ₄	Dk	lk	bk	hk	wk	d1	s1	code	Dx	lx	ls	de	le	di	li	d2	s2	a	o	code
36	220	18	195	12.5	10x36°	150	14	242	15	140	194	244	294	60	105	18	64	90	M20	50	K 11	58x53	68	38	50	8	60	7	M10	20	3x120°	32	X 12
42	220	18	195	12.5	10x36°	150	14	242	15	140	194	244	294	60	105	18	64	90	M20	50	K 11	58x53	68	38	50	8	60	7	M10	20	3x120°	32	X 12
50	220	18	195	12.5	10x36°	150	14	242	15	140	194	244	294	65	105	18	69	90	M20	50	K 13	58x53	68	38	50	8	60	7	M10	20	3x120°	32	X 12
60	220	18	195	12.5	10x36°	150	14	242	15	155	222	272	322	65	105	18	69	90	M20	50	K 13	58x53	68	38	50	8	60	7	M10	20	3x120°	32	X 12
67	220	18	195	12.5	10x36°	150	14	242	15	155	222	272	322	65	105	18	69	90	M20	50	K 13	58x53	68	38	50	8	60	7	M10	20	3x120°	32	X 12

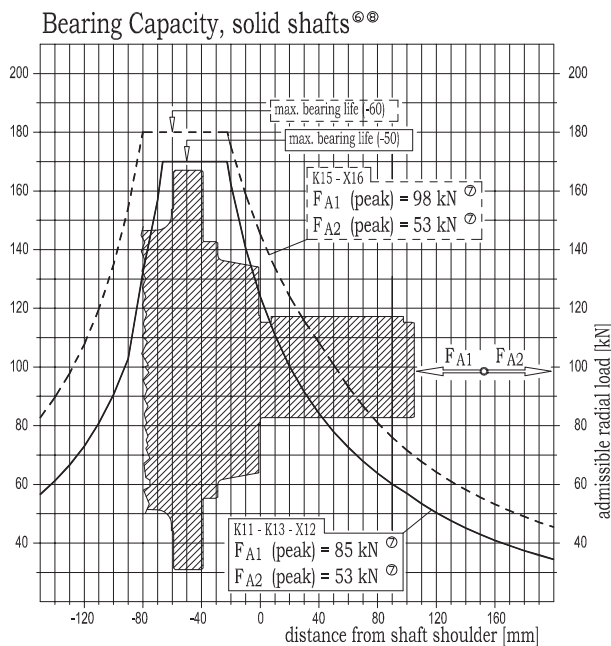
Dimensions METRIC, reinforced, solid shafts														Keyed										DIN Splined									
Model	A	la	B	db	vb	C	lc	D	p	l ₁	l ₂	l ₃	l ₄	Dk	lk	bk	hk	wk	d1	s1	code	Dx	lx	ls	de	le	di	li	d2	s2	a	o	code
36	272	20	245	12.5	10x36°	175	10	242	39	148.5	198.5	248.5	298.5	65	105	18	69	90	M20	50	K 15	58x53	80	50	50	8	60	7	M10	20	3x120°	32	X 16
42	272	20	245	12.5	10x36°	175	10	242	39	148.5	198.5	248.5	298.5	65	105	18	69	90	M20	50	K 15	58x53	80	50	50	8	60	7	M10	20	3x120°	32	X 16
50	272	20	245	12.5	10x36°	175	10	242	39	148.5	198.5	248.5	298.5	65	105	18	69	90	M20	50	K 15	58x53	80	50	50	8	60	7	M10	20	3x120°	32	X 16
60	272	20	245	12.5	10x36°	175	10	242	39	163.5	230.5	280.5	330.5	65	105	18	69	90	M20	50	K 15	58x53	80	50	50	8	60	7	M10	20	3x120°	32	X 16
67	272	20	245	12.5	10x36°	175	10	242	39	163.5	230.5	280.5	330.5	65	105	18	69	90	M20	50	K 15	58x53	80	50	50	8	60	7	M10	20	3x120°	32	X 16

Dimensions METRIC, hollow shafts														Hollow for Shrink Disc										Hollow Splined							
Model	A	la	B	db	vb	C	lc	D	p	l ₁	l ₂	l ₃	l ₄	Dp	lp	Dq	lq	Dw	lw	code	L min. of torque arm	Dz	lz	de	le	di	li	t	code		
36	220	18	195	12.5	10x36°	150	14	242	15	140	194	244	294	75	70	50	100	90	50	P 24	250	58x53	24	60	15	50	10	44	Z 21		
42	220	18	195	12.5	10x36°	150	14	242	15	140	194	244	294	75	70	50	100	90	50	P 24	250	58x53	24	60	15	50	10	44	Z 21		
50	220	18	195	12.5	10x36°	150	14	242	15	140	194	244	294	75	70	50	100	90	50	P 24	300	58x53	24	60	15	50	10	44	Z 21		
60	220	18	195	12.5	10x36°	150	14	242	15	155	222	272	322	75	70	50	100	90	50	P 24	300	58x53	24	60	15	50	10	44	Z 21		
67	220	18	195	12.5	10x36°	150	14	242	15	155	222	272	322	75	70	50	100	90	50	P 24	300	58x53	24	60	15	50	10	44	Z 21		

DIMENSIONS IN MM UNLESS OTHERWISE SPECIFIED

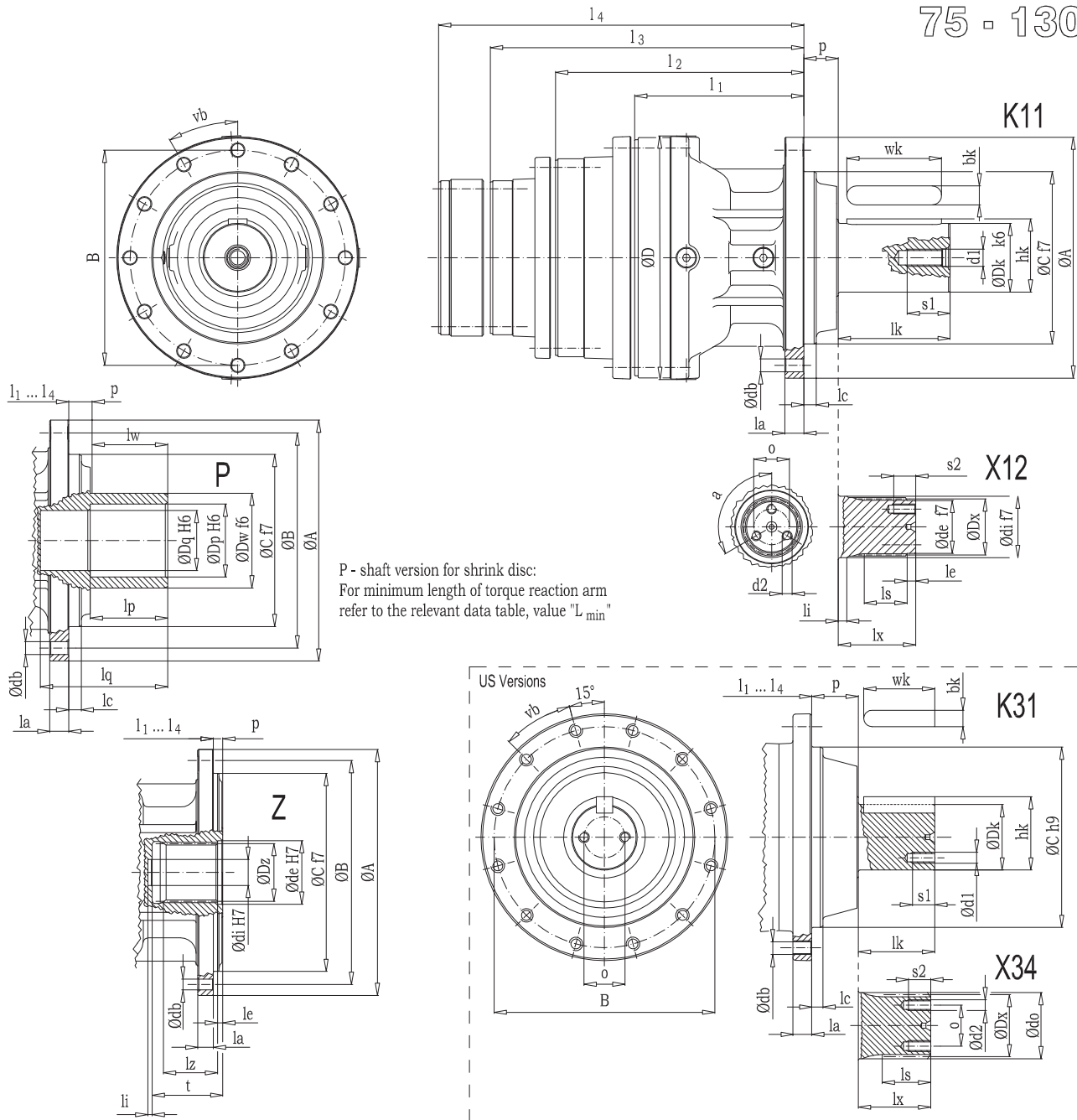
Model	36	42	50	60	67
Torque Rating ^①	3600 Nm	4200 Nm	5000 Nm	6000 Nm	6700 Nm
L1	RATIO (ACT. RATING) 3.3 (B) 5.0 (B) 6.9 (C) 3.8 (A) 6.1 (B)	RATIO (ACT. RATING) 3.3 (B) 5.1 (B) 4.3 (A)	RATIO (ACT. RATING) 3.7 (A) 4.4 (A)	RATIO (ACT. RATING) 3.7 (A) 5.8 (C) 5.0 (B) 6.9 (D)	RATIO (ACT. RATING) 4.3 (A) 5.1 (B)
n ₁ nom./max.	2800/3800 rpm	2800/3800 rpm	2800/3800 rpm	2800/3800 rpm	2800/3800 rpm
P th. ^② /max.	13/60 kW	13/63 kW	13/67 kW	15/90 kW	15/100 kW
L2	NOM. RATIO ^③ (ACT. RATING) 11 (B) 22 (A) 42 (B) 12 (A) 26 (A) 48 (C) 14 (A) 30 (B) 16 (B) 35 (B) 19 (A) 38 (B)	NOM. RATIO ^③ (ACT. RATING) 11 (B) 22 (A) 12 (B) 26 (A) 14 (A) 30 (A) 16 (A) 35 (B) 19 (B)	NOM. RATIO ^③ (ACT. RATING) 12 (A) 26 (A) 14 (A) 16 (A) 19 (A) 22 (A)	NOM. RATIO ^③ (ACT. RATING) 14 (A) 34 (C) 19 (A) 36 (B) 22 (A) 40 (C) 26 (A) 48 (D) 30 (B)	NOM. RATIO ^③ (ACT. RATING) 16 (A) 36 (B) 19 (B) 22 (A) 25 (A) 30 (A)
n ₁ nom./max.	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm
P th. ^② /max.	7.5/25 kW	7.5/26 kW	7.5/27 kW	8/30 kW	8/33 kW
L3	NOM. RATIO ^③ (ACT. RATING) 42 (A) 120 (A) 300 (B) 48 (A) 130 (A) 340 (C) 53 (A) 160 (A) 63 (A) 180 (A) 71 (A) 210 (B) 85 (A) 240 (B) 100 (A) 260 (B)	NOM. RATIO ^③ (ACT. RATING) 48 (A) 130 (A) 53 (A) 150 (A) 60 (A) 160 (A) 71 (A) 180 (A) 85 (A) 210 (A) 100 (A) 240 (B) 110 (A)	NOM. RATIO ^③ (ACT. RATING) 42 (A) 110 (A) 48 (A) 120 (A) 53 (A) 130 (A) 60 (A) 150 (A) 71 (A) 160 (A) 85 (A) 180 (A) 100 (A)	NOM. RATIO ^③ (ACT. RATING) 48 (A) 130 (A) 300 (C) 53 (A) 150 (A) 340 (D) 63 (A) 160 (A) 71 (A) 180 (A) 80 (A) 210 (B) 95 (A) 240 (B) 110 (A) 280 (C)	NOM. RATIO ^③ (ACT. RATING) 53 (A) 150 (A) 60 (A) 170 (A) 71 (B) 180 (A) 80 (A) 210 (A) 95 (A) 240 (B) 110 (A) 130 (A)
n ₁ nom./max.	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm
P th. ^② /max.	5.5/15 kW	5.5/16 kW	5.5/17 kW	6/25 kW	6/28 kW
L4	NOM. RATIO ^③ (ACT. RATING) 200 (A) 500 (A) 1250 (A) 240 (A) 600 (A) 1500 (B) 260 (A) 670 (A) 1700 (B) 280 (A) 710 (A) 1800 (B) 320 (A) 800 (A) 2000 (B) 360 (A) 900 (A) 2300 (C) 400 (A) 1000 (A) 450 (A) 1100 (A)	NOM. RATIO ^③ (ACT. RATING) 220 (A) 750 (A) 280 (A) 950 (A) 320 (A) 1050 (A) 380 (A) 1100 (A) 420 (A) 1250 (A) 500 (A) 1400 (A) 560 (A) 1500 (B) 670 (A) 1700 (B)	NOM. RATIO ^③ (ACT. RATING) 200 (A) 600 (A) 240 (A) 670 (A) 280 (A) 750 (A) 360 (A) 800 (A) 420 (A) 900 (A) 480 (A) 1100 (A) 500 (A) 1300 (A) 560 (A)	NOM. RATIO ^③ (ACT. RATING) 200 (A) 560 (A) 1400 (B) 240 (A) 600 (A) 1500 (B) 260 (A) 670 (A) 1700 (B) 300 (A) 750 (A) 1900 (C) 360 (A) 800 (A) 2000 (D) 420 (A) 900 (A) 2300 (D) 480 (A) 1050 (A) 530 (A) 1250 (A)	NOM. RATIO ^③ (ACT. RATING) 220 (A) 630 (A) 280 (A) 670 (A) 300 (A) 750 (A) 360 (A) 900 (A) 380 (A) 1050 (A) 420 (A) 1200 (A) 480 (A) 1400 (A) 560 (A) 1700 (B)
n ₁ nom./max.	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm	3000/4000 rpm
P th. ^② /max.	4.5/5 kW	4.5/5.5 kW	4.5/6 kW	5/8 kW	5/9 kW
Actual Torque [Nm] ^④ Rating	(A) 4100 (B) 3600 (C) 3150	(A) 4900 (B) 4300	(A) 5700	(A) 7000 (B) 6200 (C) 5500 (D) 5100	(A) 8250 (B) 7200
Peak Torque ^⑤	4500 Nm	5500 Nm	6700 Nm	8000 Nm	9000 Nm

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



- ① Harmonized nominal value referring to Preferred Numbers R'40. Actual transmissible torque may vary depending on ratio, speed, application.
- ② Harmonized nominal value referring to Preferred Numbers R'40. For actual ratios see Annex C.
- ③ Thermal power limit. For actual figures based on speed, temperature and duty see Section B4, Specifications, Paragraph 8.
- ④ Mean value at rated conditions. For actual figures based on speed, service life and application/duty see Section B4, Specifications, Paragraph 6.
- ⑤ Restrictions may apply for hollow shaft for shrink disc, see Section G, Output Accessories. Customer to verify the mating shaft is capable of loads actually transmitted.
- ⑥ Mean values at rated conditions. For actual admissible loads based on speed, service life and application/duty see Section B4, Specifications, Paragraph 9.
- ⑦ Max. peak values, which must never be exceeded. Combined thrust and radial shaft loads might reduce bearing life. Please contact Plan-Star Engineering for accurate life calculation of your specific application.
- ⑧ Combination of high torque and heavy radial shaft load might require verification of the output shaft. If the following condition is not fulfilled, contact Plan-Star Engineering for accurate verification of your specific application:

$$\frac{\text{Radial Load (applied)}}{\text{Radial Load (admissible)}} \times \frac{\text{Torque (applied)}}{\text{Torque (nominal)}} < 0.5$$



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

Dimensions METRIC, solid shafts														Keyed								DIN Splined													
Model	A	la	B	db	vb	C	lc	D	p	l ₁	l ₂	l ₃	l ₄	Dk	lk	bk	hk	wk	d1	s1	code	Dx	lx	ls	de	le	di	li	d2	s2	a	o	code		
75	280	22	250	15	12x30°	200	14.5	285	40	181.5	250.5	304.5	354.5	80	130	22	85	110	M20	50	K 11	70x64	90	50	62	10	72	10	M10	20	3x120°	40	X 12		
85	280	22	250	15	12x30°	200	14.5	285	40	181.5	250.5	304.5	354.5	80	130	22	85	110	M20	50	K 11	70x64	90	50	62	10	72	10	M10	20	3x120°	40	X 12		
100	280	22	250	15	12x30°	200	14.5	285	40	181.5	250.5	304.5	354.5	80	130	22	85	110	M20	50	K 11	70x64	90	50	62	10	72	10	M10	20	3x120°	40	X 12		
110	280	22	250	15	12x30°	200	14.5	285	40	196.5	265.5	319.5	369.5	80	130	22	85	110	M20	50	K 11	70x64	90	50	62	10	72	10	M10	20	3x120°	40	X 12		
130	280	22	250	15	12x30°	200	14.5	285	40	196.5	280.5	334.5	384.5	80	130	22	85	110	M20	50	K 11	70x64	90	50	62	10	72	10	M10	20	3x120°	40	X 12		

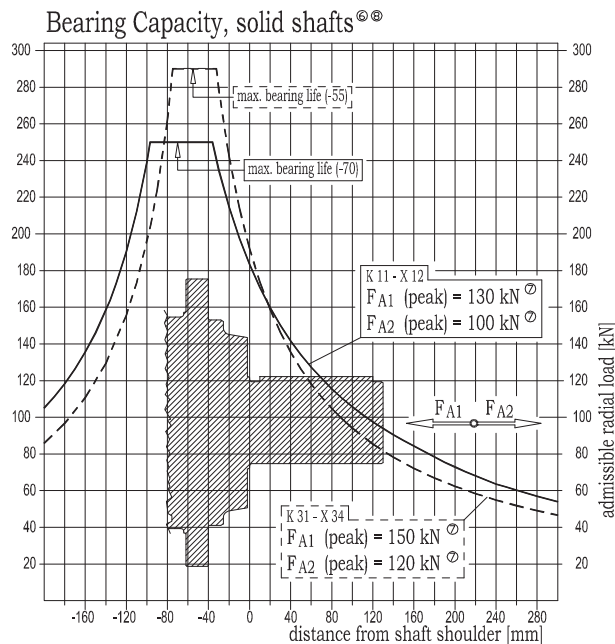
Dimensions METRIC, hollow shafts							Hollow for Shrink Disc															Hollow Splined														
Model	A	D	l ₁	l ₂	l ₃	l ₄	la	B	db	vb	C	lc	p	Dp	lp	Dq	lq	Dw	lw	L _{min}	code	la	B	db	vb	C	lc	p	Dz	lz	de	le	di	li	t	code
75	280	285	181.5	250.5	304.5	354.5	22	250	15	12x30°	200	14.5	27	85	90	70	148	110	88	300	P 24	18	260	12.5	10x36°	230	7	11	70x64	65	74	6	30	5	82	Z 21
85	280	285	181.5	250.5	304.5	354.5	22	250	15	12x30°	200	14.5	27	85	90	70	148	110	88	300	P 24	18	260	12.5	10x36°	230	7	11	70x64	65	74	6	30	5	82	Z 21
100	280	285	181.5	250.5	304.5	354.5	22	250	15	12x30°	200	14.5	27	85	90	70	148	110	88	400	P 24	18	260	12.5	10x36°	230	7	11	70x64	65	74	6	30	5	82	Z 21
110	280	285	196.5	265.5	319.5	369.5	22	250	15	12x30°	200	14.5	27	85	90	70	148	110	88	400	P 24	18	260	12.5	10x36°	230	7	11	70x64	65	74	6	30	5	82	Z 21
130	280	285	196.5	280.5	334.5	384.5	22	250	15	12x30°	200	14.5	27	85	90	70	148	110	88	400	P 24	18	260	12.5	10x36°	230	7	11	70x64	65	74	6	30	5	82	Z 21

Dimensions US version, solid shafts														Cylindrical										ANSI Splined									
Model	A	la	B	db	vb	C	lc	D	p	l ₁	l ₂	l ₃	l ₄	Dk	lk	bk	hk	wk	d1	s1	a	o	code	Dx	lx	ls	do	d2	s2	a	o	code	
75	287	22	256.5	5/8"-11	12x30°	209.55	13	285	54.5	130.5	199.5	253.5	303.5	76.2 h7	88.9	19.05	85.1	82.5	1/2" - 20	25	2x180°	47.6	K 31	8/16-23T	84.3	56.5	75.7 h12	1/2" - 20	25	2x180°	47.6	X 34	
85	287	22	256.5	5/8"-11	12x30°	209.55	13	285	54.5	130.5	199.5	253.5	303.5	76.2 h7	88.9	19.05	85.1	82.5	1/2" - 20	25	2x180°	47.6	K 31	8/16-23T	84.3	56.5	75.7 h12	1/2" - 20	25	2x180°	47.6	X 34	
100	287	22	256.5	5/8"-11	12x30°	209.55	13	285	54.5	130.5	199.5	253.5	303.5	76.2 h7	88.9	19.05	85.1	82.5	1/2" - 20	25	2x180°	47.6	K 31	8/16-23T	84.3	56.5	75.7 h12	1/2" - 20	25	2x180°	47.6	X 34	
110	287	22	256.5	5/8"-11	12x30°	209.55	13	285	54.5	145.5	214.5	268.5	318.5	76.2 h7	88.9	19.05	85.1	82.5	1/2" - 20	25	2x180°	47.6	K 31	8/16-23T	84.3	56.5	75.7 h12	1/2" - 20	25	2x180°	47.6	X 34	
130	287	22	256.5	5/8"-11	12x30°	209.55	13	285	54.5	145.5	229.5	283.5	333.5	76.2 h7	88.9	19.05	85.1	82.5	1/2" - 20	25	2x180°	47.6	K 31	8/16-23T	84.3	56.5	75.7 h12	1/2" - 20	25	2x180°	47.6	X 34	

DIMENSIONS IN MM UNLESS OTHERWISE SPECIFIED

Model	75		85		100		110		130	
Torque Rating ^①	7500 Nm		8500 Nm		10000 Nm		11000 Nm		13000 Nm	
L1	RATIO (ACT. RATING) 3.3 (B) 5.0 (B) 6.9 (C) 3.8 (A) 6.1 (B)		RATIO (ACT. RATING) 3.3 (B) 5.1 (B) 4.3 (A)		RATIO (ACT. RATING) 3.7 (A) 4.4 (A)		RATIO (ACT. RATING) 3.7 (A) 5.8 (C) 5.0 (B) 6.9 (D)		RATIO (ACT. RATING) 4.3 (A) 5.1 (B)	
n ₁ nom./max.	2800 rpm	3800 rpm	2500 rpm	3500 rpm	2500 rpm	3500 rpm	2000 rpm	3000 rpm	2000 rpm	3000 rpm
P th./ P mech.	22 kW	120 kW	22 kW	125 kW	22 kW	132 kW	24 kW	145 kW	24 kW	158 kW
L2	NOM. RATIO ^② (ACT. RATING) 11 (B) 22 (A) 42 (B) 12 (A) 26 (A) 48 (C) 14 (A) 30 (B) 16 (B) 35 (B) 19 (A) 38 (B)		NOM. RATIO ^② (ACT. RATING) 11 (B) 22 (A) 12 (B) 26 (A) 14 (A) 30 (A) 16 (A) 35 (B) 19 (B)		NOM. RATIO ^② (ACT. RATING) 12 (A) 26 (A) 14 (A) 30 (A) 16 (A) 19 (A) 22 (A)		NOM. RATIO ^② (ACT. RATING) 12 (A) 30 (B) 16 (A) 36 (C) 19 (A) 42 (D) 22 (B) 26 (B)		NOM. RATIO ^② (ACT. RATING) 16 (A) 35 (B) 19 (B) 22 (A) 25 (A) 30 (A)	
n ₁ nom./max.	2800 rpm	3800 rpm	2800 rpm	3800 rpm	2800 rpm	3800 rpm	2800 rpm	3800 rpm	2800 rpm	3800 rpm
P th./ P mech.	13.5 kW	54 kW	13.5 kW	57 kW	13.5 kW	60 kW	15 kW	66 kW	15 kW	72 kW
L3	NOM. RATIO ^② (ACT. RATING) 42 (A) 120 (A) 260 (B) 48 (A) 130 (A) 300 (B) 53 (A) 140 (A) 340 (C) 63 (A) 160 (A) 71 (A) 180 (A) 85 (A) 210 (B) 100 (A) 240 (B)		NOM. RATIO ^② (ACT. RATING) 48 (A) 110 (A) 53 (A) 130 (A) 60 (A) 150 (A) 71 (A) 160 (A) 80 (A) 180 (A) 90 (A) 210 (A) 100 (A) 240 (B)		NOM. RATIO ^② (ACT. RATING) 42 (A) 110 (A) 48 (A) 130 (A) 53 (A) 140 (A) 60 (A) 150 (A) 71 (A) 160 (A) 80 (A) 180 (A) 95 (A) 210 (A)		NOM. RATIO ^② (ACT. RATING) 42 (A) 110 (A) 48 (A) 130 (A) 53 (A) 150 (B) 60 (A) 180 (B) 71 (A) 210 (B) 80 (A) 250 (C) 95 (A) 300 (D)		NOM. RATIO ^② (ACT. RATING) 53 (A) 150 (A) 60 (A) 170 (A) 71 (B) 180 (A) 80 (A) 210 (A) 95 (A) 240 (B) 110 (A) 130 (A)	
n ₁ nom./max.	3000 rpm	4000 rpm	3000 rpm	4000 rpm	3000 rpm	4000 rpm	3000 rpm	4000 rpm	3000 rpm	4000 rpm
P th./ P mech.	9.5 kW	22 kW	9.5 kW	23.5 kW	9.5 kW	25 kW	10.5 kW	28 kW	10.5 kW	31 kW
L4	NOM. RATIO ^② (ACT. RATING) 200 (A) 500 (A) 1250 (A) 240 (A) 600 (A) 1500 (B) 260 (A) 670 (A) 1700 (B) 280 (A) 710 (A) 1800 (B) 320 (A) 800 (A) 2000 (B) 360 (A) 900 (A) 2300 (C) 400 (A) 1000 (A) 450 (A) 1100 (A)		NOM. RATIO ^② (ACT. RATING) 220 (A) 750 (A) 1700 (B) 280 (A) 850 (A) 320 (A) 950 (A) 380 (A) 1050 (A) 420 (A) 1100 (A) 500 (A) 1250 (A) 560 (A) 1400 (A) 670 (A) 1500 (B)		NOM. RATIO ^② (ACT. RATING) 220 (A) 670 (A) 260 (A) 710 (A) 300 (A) 800 (A) 360 (A) 900 (A) 420 (A) 1050 (A) 480 (A) 1250 (A) 560 (A) 1400 (A) 600 (A)		NOM. RATIO ^② (ACT. RATING) 180 (A) 600 (A) 1500 (B) 220 (A) 670 (A) 1700 (C) 260 (A) 710 (A) 2000 (D) 300 (A) 800 (A) 360 (A) 900 (A) 420 (A) 1050 (B) 480 (A) 1200 (B) 560 (A) 1300 (B)		NOM. RATIO ^② (ACT. RATING) 220 (A) 670 (A) 1400 (A) 260 (B) 750 (A) 1500 (B) 300 (A) 850 (A) 1700 (B) 360 (A) 900 (A) 420 (A) 950 (A) 480 (A) 1050 (A) 560 (A) 1200 (A) 600 (A) 1300 (A)	
n ₁ nom./max.	3000 rpm	4000 rpm	3000 rpm	4000 rpm	3000 rpm	4000 rpm	3000 rpm	4000 rpm	3000 rpm	4000 rpm
P th./ P mech.	7.5 kW	11 kW	7.5 kW	11.5 kW	7.5 kW	12 kW	8.5 kW	13.5 kW	8.5 kW	15 kW
Actual Torque [Nm] ^④	(A) 8700 (B) 7800 (C) 6600		(A) 10400 (B) 9400		(A) 12000		(A) 13000 (B) 11700 (C) 10800 (D) 9900		(A) 15000 (B) 13000	
Peak Torque ^⑤	10500 Nm		12000 Nm		13500 Nm		15000 Nm		16000 Nm	

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

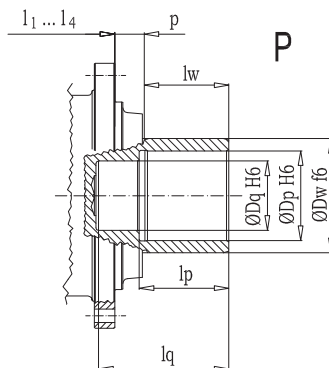
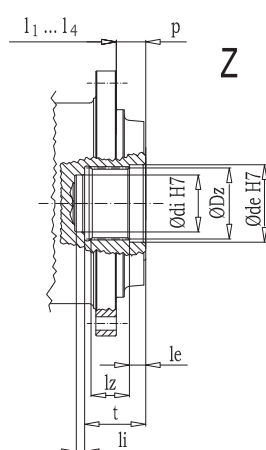
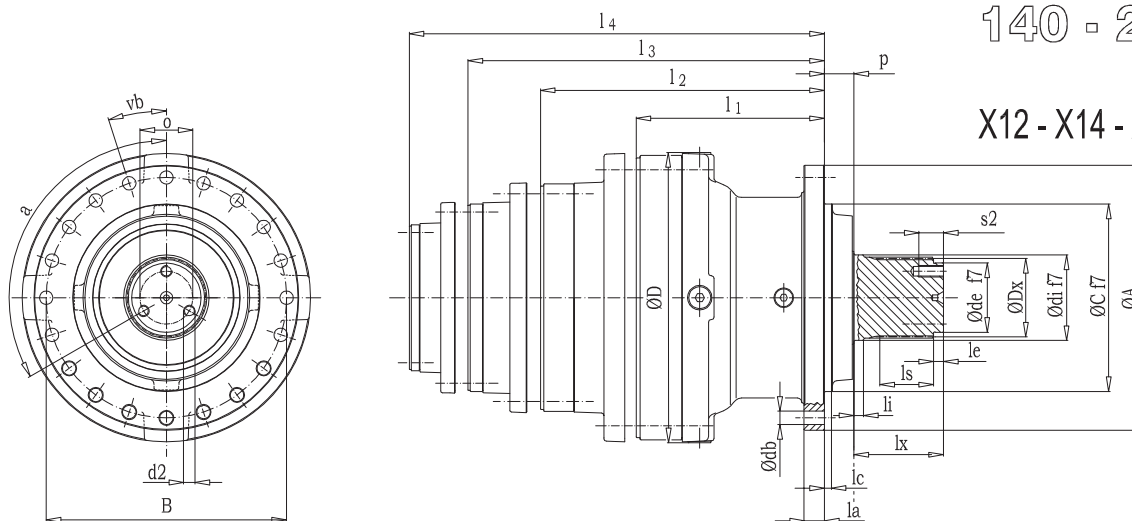


- ① Harmonized nominal value referring to Preferred Numbers R'40. Actual transmissible torque may vary depending on ratio, speed, application.
- ② Harmonized nominal value referring to Preferred Numbers R'40. For actual ratios see Annex C.
- ③ Thermal power limit. For actual figures based on speed, temperature and duty see Section B4, Specifications, Paragraph 8.
- ④ Mean value at rated conditions. For actual figures based on speed, service life and application/duty see Section B4, Specifications, Paragraph 6.
- ⑤ Restrictions may apply for hollow shaft for shrink disc, see Section G, Output Accessories. Customer to verify the mating shaft is capable of loads actually transmitted.
- ⑥ Mean values at rated conditions. For actual admissible loads based on speed, service life and application/duty see Section B4, Specifications, Paragraph 9.
- ⑦ Max. peak values, which must never be exceeded. Combined thrust and radial shaft loads might reduce bearing life. Please contact Plan-Star Engineering for accurate life calculation of your specific application.
- ⑧ Combination of high torque and heavy radial shaft load might require verification of the output shaft. If the following condition is not fulfilled, contact Plan-Star Engineering for accurate verification of your specific application:

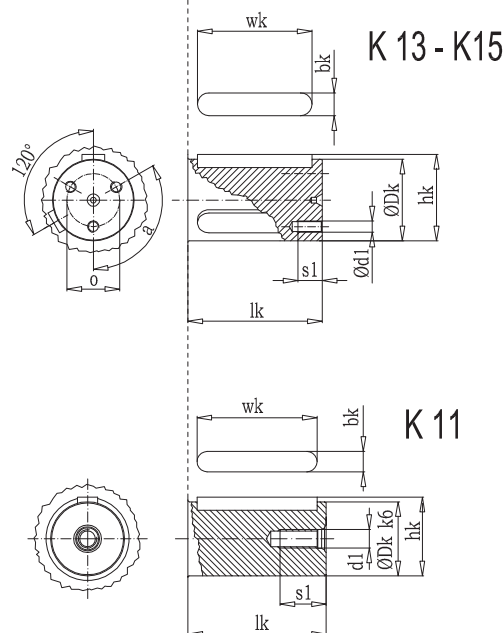
$$\frac{\text{Radial Load (applied)}}{\text{Radial Load (admissible)}} \times \frac{\text{Torque (applied)}}{\text{Torque (nominal)}} < 0.5$$

140 - 260

X12 - X14 - X16



P - shaft version for shrink disc:
For minimum length of torque reaction arm
refer to the relevant data table, value "L min"



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

Dimensions, solid shafts														Keyed										DIN Splined									
Model	A	la	B	db	vb	C	lc	D	p	l1	l2	l3	l4	Dk	lk	bk	hk	wk	d1	s1	code	Dx	lx	ls	di	li	de	le	d2	s2	a	o	code
140	325	25	295	16.5	20x18°	230	10	360	36	206	291	345	395	90	170	25	95	150	M20	50	K 11	80x74	90	50	85	10	70	10	M12	25	3x120°	45	X 12
170	325	25	295	16.5	20x18°	230	10	360	36	206	291	345	395	90	170	25	95	150	M20	50	K 11	80x74	90	50	85	10	70	10	M12	25	3x120°	45	X 12
200	325	25	295	16.5	20x18°	230	10	360	36	206	290	359	413	100	165	28	106	140	M14 (3)	30	K 13	100x94	110	66	105	12	85	12	M14	30	3x120°	65	X 14
220	325	25	295	16.5	20x18°	230	10	360	36	226	310	379	433	100	165	28	106	140	M14 (3)	30	K 13	100x94	110	66	105	12	85	12	M14	30	3x120°	65	X 14
260	325	25	295	16.5	20x18°	230	10	360	36	226	325	394	448	100	165	28	106	140	M14 (3)	30	K 13	100x94	110	66	105	12	85	12	M14	30	3x120°	65	X 14

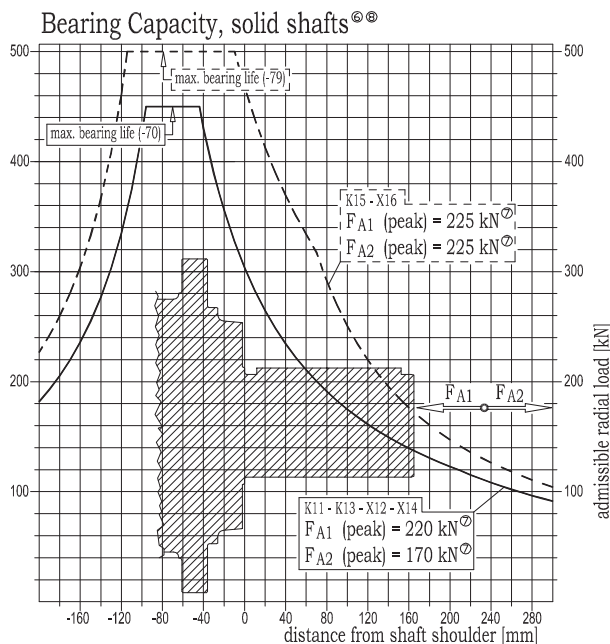
Dimensions, reinforced, solid shafts														Keyed										DIN Splined									
Model	A	la	B	db	vb	C	lc	D	p	l1	l2	l3	l4	Dk	lk	bk	hk	wk	d1	s1	code	Dx	lx	ls	di	li	de	le	d2	s2	a	o	code
140	325	25	295	16.5	20x18°	250	20	360	57	206	291	345	395	100	165	28	106	140	M14 (3)	30	K15	100x94	110	66	105	12	85	12	M14	30	3x120°	65	X16
170	325	25	295	16.5	20x18°	250	20	360	57	206	291	345	395	100	165	28	106	140	M14 (3)	30	K15	100x94	110	66	105	12	85	12	M14	30	3x120°	65	X16
200	325	25	295	16.5	20x18°	250	20	360	57	206	290	359	413	100	165	28	106	140	M14 (3)	30	K15	100x94	110	66	105	12	85	12	M14	30	3x120°	65	X16
220	325	25	295	16.5	20x18°	250	20	360	57	226	310	379	433	100	165	28	106	140	M14 (3)	30	K15	100x94	110	66	105	12	85	12	M14	30	3x120°	65	X16
260	325	25	295	16.5	20x18°	250	20	360	57	226	325	394	448	100	165	28	106	140	M14 (3)	30	K15	100x94	110	66	105	12	85	12	M14	30	3x120°	65	X16

Dimensions, hollow shafts														Hollow for Shrink Disc										Hollow Splined							
Model	A	la	B	db	vb	C	lc	D	p	l ₁	l ₂	l ₃	l ₄	Dp	lp	Dq	lq	Dw	lw	code	L min. of torque arm	Dz	lz	de	le	di	li	t	code		
140	325	25	295	16.5	20x18°	230	10	360	36	206	291	345	395	110	110	85	160	140	104	P 24	400	80x74	47	85	20	70	10	75	Z 21		
170	325	25	295	16.5	20x18°	230	10	360	36	206	291	345	395	110	110	85	160	140	104	P 24	400	80x74	47	85	20	70	10	75	Z 21		
200	325	25	295	16.5	20x18°	230	10	360	36	206	290	359	413	110	110	85	160	140	104	P 24	500	90x84	48	95	20	70	10	75	Z 23		
220	325	25	295	16.5	20x18°	230	10	360	36	226	310	379	433	110	110	85	160	140	104	P 24	500	90x84	48	95	20	70	10	75	Z 23		
260	325	25	295	16.5	20x18°	230	10	360	36	226	325	394	448	110	110	85	160	140	104	P 24	500	90x84	48	95	20	70	10	75	Z 23		

DIMENSIONS IN MM UNLESS OTHERWISE SPECIFIED

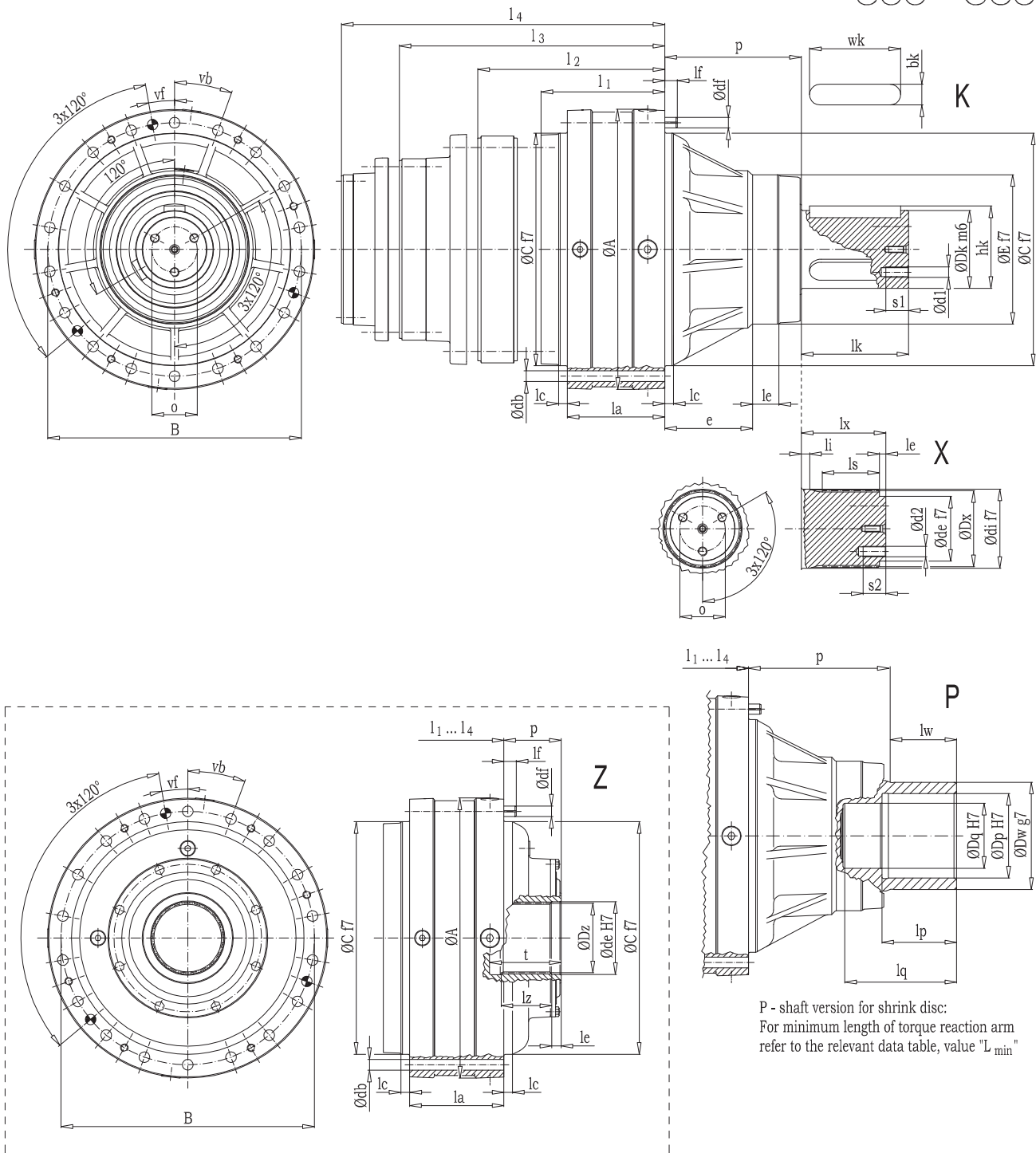
Model	140		170		200		220		260	
Torque Rating ^①	14000 Nm		17000 Nm		20000 Nm		22000 Nm		26000 Nm	
L1	RATIO (ACT. RATING) 3.3 (B)* 5.0 (B) 6.9 (C) 3.8 (A) 6.1 (B) * on request		RATIO (ACT. RATING) 3.3 (B)* 5.1 (B) 4.3 (A) * on request		RATIO (ACT. RATING) 3.7 (A) 4.4 (A)		RATIO (ACT. RATING) 3.7 (A) 5.8 (C) 5.0 (B) 6.9 (D)		RATIO (ACT. RATING) 4.3 (A) 5.1 (B)	
n ₁ nom./max.	2000 rpm	3000 rpm	2000 rpm	3000 rpm	2000 rpm	3000 rpm	1800 rpm	2500 rpm	1800 rpm	2500 rpm
P th./ P mech.	30 kW	200 kW	30 kW	210 kW	30 kW	220 kW	37 kW	240 kW	37 kW	265 kW
L2	NOM. RATIO ^② (ACT. RATING) 12 (B)* 30 (B) 14 (A) 36 (B) 19 (A) 42 (B) 22 (A) 48 (C) 26 (A) * on request		NOM. RATIO ^② (ACT. RATING) 12 (B)* 30 (A) 16 (A) 35 (B) 19 (B) 22 (A) 25 (A) * on request		NOM. RATIO ^② (ACT. RATING) 12 (A) 26 (A) 14 (A) 30 (A) 16 (A) 19 (A) 22 (A)		NOM. RATIO ^② (ACT. RATING) 12 (A) 26 (A) 48 (D) 14 (A) 30 (B) 16 (B) 35 (B) 19 (A) 40 (C) 22 (A) 42 (D)		NOM. RATIO ^② (ACT. RATING) 16 (A) 35 (B) 19 (B) 22 (A) 25 (A) 30 (A)	
n ₁ nom./max.	2800 rpm	3800 rpm	2800 rpm	3800 rpm	2800 rpm	3800 rpm	2800 rpm	3800 rpm	2000 rpm	3000 rpm
P th./ P mech.	18.5 kW	90 kW	18.5 kW	95 kW	18.5 kW	100 kW	22 kW	132 kW	22 kW	150 kW
L3	NOM. RATIO ^② (ACT. RATING) 48 (A) 130 (A) 260 (B) 53 (A) 150 (A) 300 (B) 63 (A) 160 (A) 340 (C) 71 (A) 180 (A) 80 (A) 200 (B) 95 (A) 220 (B) 110 (A) 240 (B)		NOM. RATIO ^② (ACT. RATING) 53 (A) 110 (A) 60 (A) 130 (A) 71 (B) 150 (A) 75 (A) 170 (A) 85 (A) 180 (A) 95 (A) 210 (A) 100 (A) 240 (B)		NOM. RATIO ^② (ACT. RATING) 42 (A) 110 (A) 48 (A) 130 (A) 53 (A) 140 (A) 60 (A) 150 (A) 71 (A) 160 (A) 80 (A) 180 (A) 95 (A) 210 (A)		NOM. RATIO ^② (ACT. RATING) 42 (A) 120 (A) 300 (D) 48 (A) 140 (A) 340 (D) 53 (A) 160 (A) 63 (A) 180 (A) 71 (A) 210 (B) 85 (A) 240 (B) 100 (A) 280 (C)		NOM. RATIO ^② (ACT. RATING) 53 (A) 150 (A) 60 (A) 170 (A) 71 (B) 180 (A) 80 (A) 210 (A) 95 (A) 240 (B) 110 (A) 130 (A)	
n ₁ nom./max.	3000 rpm	4000 rpm	3000 rpm	4000 rpm	2800 rpm	3800 rpm	2800 rpm	3800 rpm	2800 rpm	3800 rpm
P th./ P mech.	11.5 kW	30 kW	11.5 kW	32 kW	11.5 kW	35 kW	15 kW	60 kW	15 kW	65 kW
L4	NOM. RATIO ^② (ACT. RATING) 200 (A) 560 (A) 1100 (A) 240 (A) 600 (A) 1250 (A) 260 (A) 670 (A) 1400 (B) 300 (A) 710 (A) 1500 (B) 320 (A) 750 (A) 1700 (B) 360 (A) 800 (A) 1800 (B) 420 (A) 900 (A) 2000 (B) 480 (A) 1050 (A) 2300 (C)		NOM. RATIO ^② (ACT. RATING) 220 (A) 710 (A) 1400 (A) 260 (B) 750 (A) 1500 (B) 300 (A) 800 (A) 1700 (B) 360 (A) 900 (A) 420 (A) 950 (A) 480 (A) 1050 (A) 560 (A) 1200 (A) 630 (A) 1300 (A)		NOM. RATIO ^② (ACT. RATING) 220 (A) 670 (A) 260 (A) 710 (A) 300 (A) 800 (A) 360 (A) 900 (A) 420 (A) 1050 (A) 480 (A) 1250 (A) 560 (A) 1400 (A) 600 (A)		NOM. RATIO ^② (ACT. RATING) 200 (A) 500 (A) 1250 (A) 240 (A) 600 (A) 1500 (B) 260 (A) 670 (A) 1700 (B) 280 (A) 710 (A) 1900 (C) 320 (A) 800 (A) 2000 (D) 360 (A) 900 (A) 2300 (D) 400 (A) 1000 (A) 450 (A) 1100 (A)		NOM. RATIO ^② (ACT. RATING) 220 (A) 670 (A) 1400 (A) 260 (B) 750 (A) 1500 (B) 300 (A) 850 (A) 1700 (B) 360 (A) 900 (A) 420 (A) 950 (A) 480 (A) 1050 (A) 560 (A) 1200 (A) 600 (A) 1300 (A)	
n ₁ nom./max.	3000 rpm	4000 rpm	3000 rpm	4000 rpm	3000 rpm	4000 rpm	3000 rpm	4000 rpm	3000 rpm	4000 rpm
P th./ P mech.	9 kW	22 kW	9 kW	23 kW	9 kW	24 kW	10 kW	25 kW	10 kW	26.5 kW
Actual Torque [Nm] ^④ Rating	(A) 18000 (B) 15000 (C) 13000		(A) 20500 (B) 18000		(A) 24000		(A) 29000 (B) 23000 (C) 21000 (D) 19000		(A) 32000 (B) 29000	
Peak Torque ^⑤	22000 Nm		26000 Nm		30000 Nm		33000 Nm		35000 Nm	

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



- ① Harmonized nominal value referring to Preferred Numbers R'40. Actual transmissible torque may vary depending on ratio, speed, application.
- ② Harmonized nominal value referring to Preferred Numbers R'40. For actual ratios see Annex C.
- ③ Thermal power limit. For actual figures based on speed, temperature and duty see Section B4, Specifications, Paragraph 8.
- ④ Mean value at rated conditions. For actual figures based on speed, service life and application/duty see Section B4, Specifications, Paragraph 6.
- ⑤ Restrictions may apply for hollow shaft for shrink disc, see Section G, Output Accessories. Customer to verify the mating shaft is capable of loads actually transmitted.
- ⑥ Mean values at rated conditions. For actual admissible loads based on speed, service life and application/duty see Section B4, Specifications, Paragraph 9.
- ⑦ Max. peak values, which must never be exceeded. Combined thrust and radial shaft loads might reduce bearing life. Please contact Plan-Star Engineering for accurate life calculation of your specific application.
- ⑧ Combination of high torque and heavy radial shaft load might require verification of the output shaft. If the following condition is not fulfilled, contact Plan-Star Engineering for accurate verification of your specific application:

$$\frac{\text{Radial Load (applied)}}{\text{Radial Load (admissible)}} \times \frac{\text{Torque (applied)}}{\text{Torque (nominal)}} < 0.5$$



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

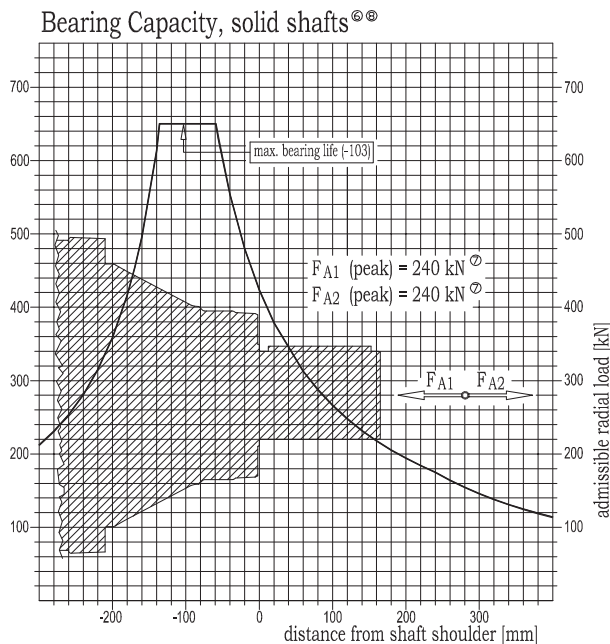
Dimensions, solid shafts															Keyed										DIN Spined													
Model	A	B	db	vb	C	lc	E	le	e	df	lf	vf	p	l ₁	l ₂	l ₃	l ₄	Dk	lk	bk	hk	wk	d1	s1	o	code	Dx	lx	ls	di	li	de	le	d2	s2	o	code	
300	432	122	390	16.5	18x20°	358	13.5	230	40	135	16	19	10°	210	154.5	196	265	319	100	165	28	106	140	M14	30	65	K 11	100x94	110	66	105	12	85	12	M14	30	65	X 12
360	432	125	390	16.5	18x20°	358	13.5	230	40	135	16	19	10°	210	165.5	197	267	321	100	165	28	106	140	M14	30	65	K 11	100x94	110	66	105	12	85	12	M14	30	65	X 12
420	432	125	390	16.5	18x20°	358	13.5	230	40	135	16	19	10°	210	165.5	197	282	336	120	165	32	127	140	M16	35	70	K 13	120x3	130	88	122	15	100	10	M16	35	70	X 14
480	432	150	390	16.5	18x20°	358	13.5	230	40	135	16	19	10°	210	190.5	222	307	361	120	165	32	127	140	M16	35	70	K 13	120x3	130	88	122	15	100	10	M16	35	70	X 14
560	432	150	390	16.5	18x20°	358	13.5	230	40	135	16	19	10°	210	190.5	242	326	395	120	165	32	127	140	M16	35	70	K 13	120x3	130	88	122	15	100	10	M16	35	70	X 14

Dimensions, hollow shafts															Hollow for Shrink Disc										Hollow Spined													
Model	A	B	db	vb	C	lc	df	lf	vf	E	le	e	p	l ₁	l ₂	l ₃	l ₄	Dp	lp	Dq	lq	Dw	lw	code	L _{min}	la	p	l ₁	l ₂	l ₃	l ₄	Dz	lz	de	le	t	code	
300	432	390	16.5	18x20°	358	13.5	16	19	10°	122	230	40	135	220	154.5	196	265	319	130	115	100	175	165	100	P 24	800	117	88	149.5	191	260	314	100x94	78	102	15	110	Z 21
360	432	390	16.5	18x20°	358	13.5	16	19	10°	125	230	40	135	220	165.5	197	267	321	130	115	100	175	165	100	P 24	800	120	88	160.5	192	262	316	100x94	78	102	15	110	Z 21
420	432	390	16.5	18x20°	358	13.5	16	19	10°	125	230	40	135	220	165.5	197	282	336	130	115	100	175	165	100	P 24	800	120	88	160.5	192	277	331	100x94	78	102	15	110	Z 21
480	432	390	16.5	18x20°	358	13.5	16	19	10°	150	230	40	135	220	190.5	222	307	361	130	115	100	175	165	100	P 24	800	145	88	185.5	217	302	356	110x3	78	112	15	110	Z 23
560	432	390	16.5	18x20°	358	13.5	16	19	10°	150	230	40	135	220	190.5	242	326	395	130	115	100	175	165	100	P 24	800	145	88	185.5	237	321	390	110x3	78	112	15	110	Z 23

DIMENSIONS IN MM UNLESS OTHERWISE SPECIFIED

Model	300		360		420		480		560	
Torque Rating ^①	30000 Nm		36000 Nm		42000 Nm		48000 Nm		56000 Nm	
L1	RATIO (ACT. RATING) 3.7 (A) 6.1 (B) 5.0 (B) 6.9 (C)		RATIO (ACT. RATING) 4.3 (A) 5.1 (B)		RATIO (ACT. RATING) 3.7 (A) 4.4 (A)		RATIO (ACT. RATING) 3.7 (A) 5.8 (C) 5.0 (B) 6.9 (D)		RATIO (ACT. RATING) 4.3 (A) 5.1 (B)	
n ₁ nom./max.	1800 rpm	2500 rpm	1800 rpm	2500 rpm	1800 rpm	2500 rpm	1500 rpm	2000 rpm	1500 rpm	2000 rpm
P th. ^② / P mech.	40 kW	280 kW	40 kW	290 kW	40 kW	300 kW	45 kW	330 kW	45 kW	360 kW
L2	NOM. RATIO ^③ (ACT. RATING) 14 (A) 36 (B) 19 (A) 42 (B) 22 (A) 48 (C) 26 (A) 30 (B)		NOM. RATIO ^③ (ACT. RATING) 14 (A)* 30 (A) 16 (A) 35 (B) 19 (B) 22 (A) 26 (A) * on request		NOM. RATIO ^③ (ACT. RATING) 12 (A)* 26 (A) 14 (A) 30 (A) 16 (A) 19 (A) 22 (A) * on request		NOM. RATIO ^③ (ACT. RATING) 12 (A)* 30 (B) 16 (A) 36 (C) 19 (A) 42 (D) 22 (A) 26 (B) * on request		NOM. RATIO ^③ (ACT. RATING) 16 (A) 35 (B) 19 (B) 22 (A) 25 (A) 30 (A)	
n ₁ nom./max.	2000 rpm	3000 rpm	2000 rpm	3000 rpm	2000 rpm	3000 rpm	2000 rpm	3000 rpm	1800 rpm	2500 rpm
P th. ^② / P mech.	25 kW	150 kW	25 kW	160 kW	25 kW	170 kW	30 kW	200 kW	30 kW	220 kW
L3	NOM. RATIO ^③ (ACT. RATING) 48 (A) 130 (A) 260 (B) 53 (A) 150 (A) 300 (B) 63 (A) 160 (A) 340 (C) 71 (A) 180 (A) 80 (A) 200 (B) 95 (A) 220 (B) 110 (A) 240 (B)		NOM. RATIO ^③ (ACT. RATING) 53 (A) 150 (A) 63 (B) 160 (A) 71 (A) 180 (A) 80 (A) 210 (B) 95 (A) 110 (A) 130 (A)		NOM. RATIO ^③ (ACT. RATING) 53 (A) 130 (A) 60 (A) 150 (A) 71 (A) 160 (A) 80 (A) 180 (A) 85 (A) 210 (A) 95 (A) 110 (A)		NOM. RATIO ^③ (ACT. RATING) 60 (A) 160 (A) 71 (A) 180 (B) 80 (A) 210 (B) 85 (A) 250 (C) 95 (A) 300 (D) 110 (A) 130 (A)		NOM. RATIO ^③ (ACT. RATING) 53 (A) 150 (A) 60 (A) 170 (A) 71 (B) 180 (A) 80 (A) 210 (A) 95 (A) 240 (B) 110 (A) 130 (A)	
n ₁ nom./max.	2800 rpm	3800 rpm	2800 rpm	3800 rpm	2800 rpm	3800 rpm	2800 rpm	3800 rpm	2800 rpm	3800 rpm
P th. ^② / P mech.	16 kW	70 kW	16 kW	75 kW	16 kW	80 kW	18.5 kW	90 kW	18.5 kW	100 kW
L4	NOM. RATIO ^③ (ACT. RATING) 200 (A) 560 (A) 1100 (A) 240 (A) 600 (A) 1250 (A) 260 (A) 670 (A) 1400 (B) 300 (A) 710 (A) 1500 (B) 320 (A) 750 (A) 1700 (B) 360 (A) 800 (A) 1800 (B) 420 (A) 900 (A) 2000 (B) 480 (A) 1050 (A) 2300 (C)		NOM. RATIO ^③ (ACT. RATING) 200 (A) 560 (A) 1500 (B) 240 (A) 670 (A) 260 (A) 750 (A) 300 (A) 800 (B) 360 (A) 900 (A) 380 (A) 1050 (A) 420 (A) 1200 (B) 480 (A) 1300 (A)		NOM. RATIO ^③ (ACT. RATING) 220 (A) 600 (A) 260 (A) 670 (A) 300 (A) 750 (A) 320 (A) 800 (A) 360 (A) 900 (A) 420 (A) 1050 (A) 480 (A) 1250 (A) 560 (A) 1400 (A)		NOM. RATIO ^③ (ACT. RATING) 200 (A) 500 (A) 900 (A) 220 (A) 530 (A) 1000 (A) 260 (A) 560 (A) 1100 (A) 300 (A) 600 (A) 1200 (B) 320 (A) 670 (A) 1300 (B) 360 (A) 710 (A) 1500 (B) 420 (A) 750 (A) 1700 (C) 480 (A) 800 (A) 2000 (D)		NOM. RATIO ^③ (ACT. RATING) 220 (A) 670 (A) 1400 (A) 260 (B) 750 (A) 1500 (B) 300 (A) 850 (A) 1700 (B) 360 (A) 900 (A) 420 (A) 950 (A) 480 (A) 1050 (A) 560 (A) 1200 (A) 600 (A) 1300 (A)	
n ₁ nom./max.	3000 rpm	4000 rpm	3000 rpm	4000 rpm	3000 rpm	4000 rpm	3000 rpm	4000 rpm	2800 rpm	3800 rpm
P th. ^② / P mech.	12 kW	28 kW	12 kW	29 kW	12 kW	30 kW	14 kW	31 kW	14 kW	33 kW
Actual Torque [Nm] ^④	(A) 37000 (B) 33000 (C) 28000		(A) 44000 (B) 39000		(A) 51000		(A) 56000 (B) 51000 (C) 47000 (D) 42500		(A) 65000 (B) 58000	
Peak Torque ^⑤	45000 Nm		52000 Nm		58000 Nm		65000 Nm		75000 Nm	

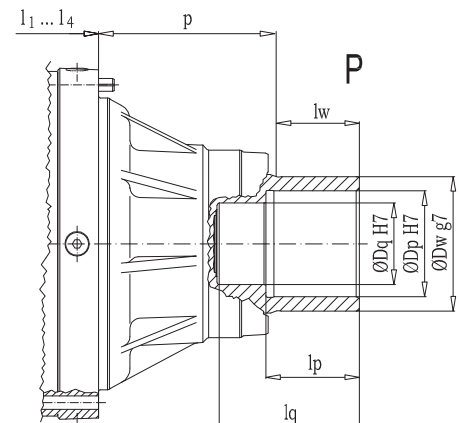
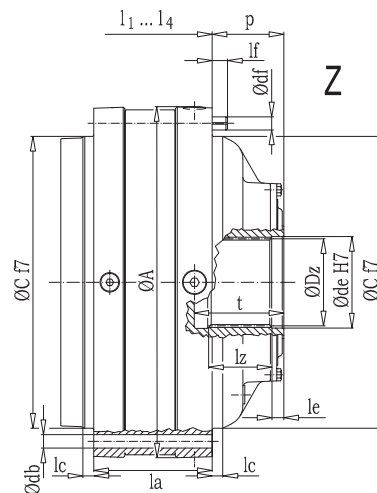
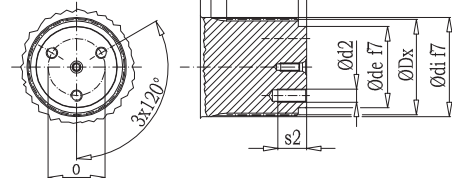
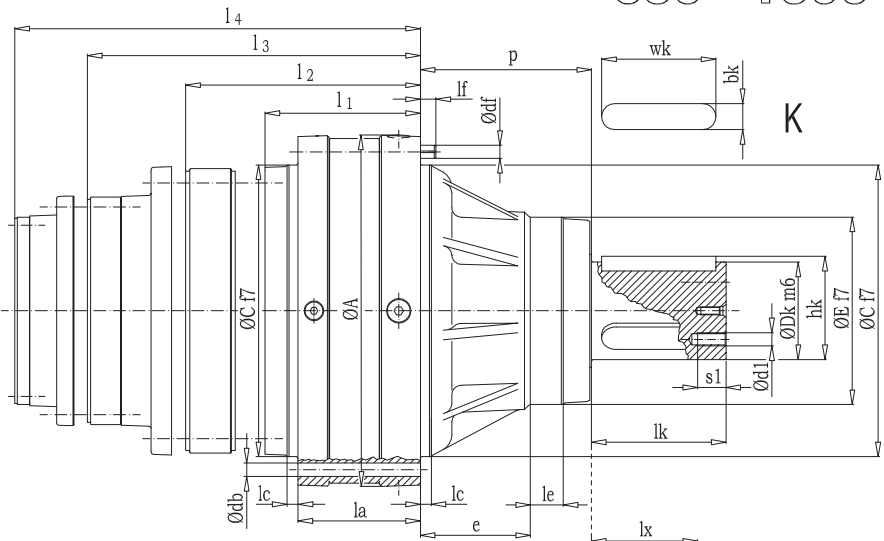
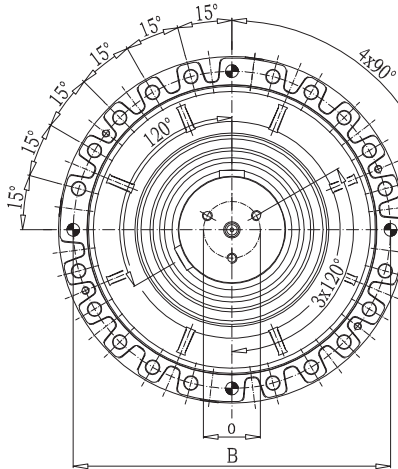
Data and dimensions are not binding and may be modified without prior notice



- ① Harmonized nominal value referring to Preferred Numbers R'40. Actual transmissible torque may vary depending on ratio, speed, application.
- ② Harmonized nominal value referring to Preferred Numbers R'40. For actual ratios see Annex C.
- ③ Thermal power limit. For actual figures based on speed, temperature and duty see Section B4, Specifications, Paragraph 8.
- ④ Mean value at rated conditions. For actual figures based on speed, service life and application/duty see Section B4, Specifications, Paragraph 6.
- ⑤ Restrictions may apply for hollow shaft for shrink disc, see Section G, Output Accessories. Customer to verify the mating shaft is capable of loads actually transmitted.
- ⑥ Mean values at rated conditions. For actual admissible loads based on speed, service life and application/duty see Section B4, Specifications, Paragraph 9.
- ⑦ Max. peak values, which must never be exceeded. Combined thrust and radial shaft loads might reduce bearing life. Please contact Plan-Star Engineering for accurate life calculation of your specific application.
- ⑧ Combination of high torque and heavy radial shaft load might require verification of the output shaft. If the following condition is not fulfilled, contact Plan-Star Engineering for accurate verification of your specific application:

$$\frac{\text{Radial Load (applied)}}{\text{Radial Load (admissible)}} \times \frac{\text{Torque (applied)}}{\text{Torque (nominal)}} < 0.5$$

750, 900, 1100, 1300



P - shaft version for shrink disc:
For minimum length of torque reaction arm
refer to the relevant data table, value "L_{min}"

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

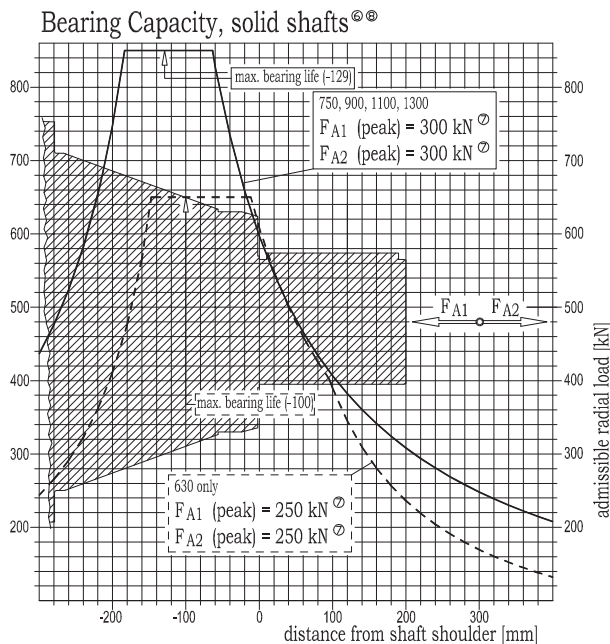
Dimensions, solid shafts																Keyed										DIN Splined										
Model	A	la	B	db	C	lc	E	le	e	df	lf	p	l ₁	l ₂	l ₃	l ₄	Dk	lk	bk	hk	wk	d1	s1	o	code	Dx	lx	ls	di	li	de	le	d2	s2	o	code
630	460	152	415	19	385	13	260	38	152	16	20	227	190.5	242	326	395	130	170	32	137	160	M16	35	70	K 11	130x3	130	88	132	15	110	10	M16	35	70	X 12
750	550	154	503	21	460	13.5	300	30	224	20	25	279	216	320.5	362	431	150	200	36	158	180	M16	35	70	K 11	150x5	150	107	151	15	125	12	M16	35	70	X 12
900	550	154	503	21	460	13.5	300	30	224	20	25	279	216	320.5	362	431	150	200	36	158	180	M16	35	70	K 11	150x5	150	107	151	15	125	12	M16	35	70	X 12
1100	550	184	503	21	460	13.5	300	30	224	20	25	279	246	386.5	418	488	170	200	40	179	180	M16	35	90	K 13	170x5	170	120	171	15	145	12	M16	35	90	X 14
1300	550	184	503	21	460	13.5	300	30	224	20	25	279	246	386.5	418	488	170	200	40	179	180	M16	35	90	K 13	170x5	170	120	171	15	145	12	M16	35	90	X 14

Dimensions, hollow shafts								Hollow for Shrink Disc																Hollow Splined															
Model	A	B	db	C	lc	df	lf	la	E	le	e	p	l ₁	l ₂	l ₃	l ₄	Dp	lp	Dq	lq	Dw	lw	code	L _{min}	la	p	l ₁	l ₂	l ₃	l ₄	Dz	lz	de	le	t	code			
630	460	415	19	385	13	16	20	152	260	38	152	237	190.5	242	326	395	140	145	130	202	185	125	P 22	900	152	81	190.5	242	326	395	130x3	70	132	30	110	Z 21			
750	550	503	21	460	13.5	20	25	154	300	30	224	287	216	320.5	362	431	160	160	130	227	200	140	P 22	1100	154	98	216	320.5	362	431	150x5	90	152	20	120	Z 21			
900	550	503	21	460	13.5	20	25	154	300	30	224	287	216	320.5	362	431	160	160	130	227	200	140	P 22	1100	154	98	216	320.5	362	431	150x5	90	152	20	120	Z 21			
1100	550	503	21	460	13.5	20	25	184	300	30	224	287	246	386.5	418	488	170	170	130	247	220	150	P 24	1100	184	98	246	386.5	418	488	160x5	93	162	20	120	Z 23			
1300	550	503	21	460	13.5	20	25	184	300	30	224	287	246	386.5	418	488	170	170	130	247	220	150	P 24	1100	184	98	246	386.5	418	488	160x5	93	162	20	120	Z 23			

DIMENSIONS IN MM UNLESS OTHERWISE SPECIFIED

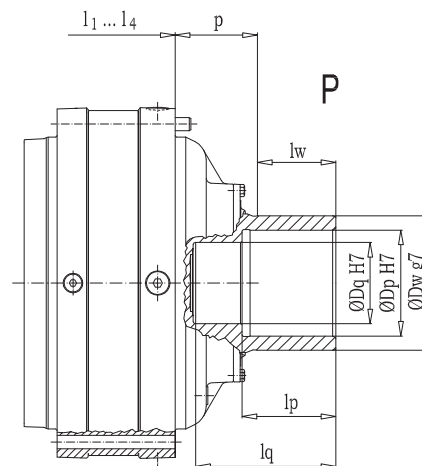
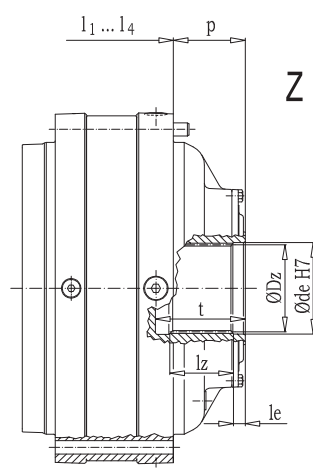
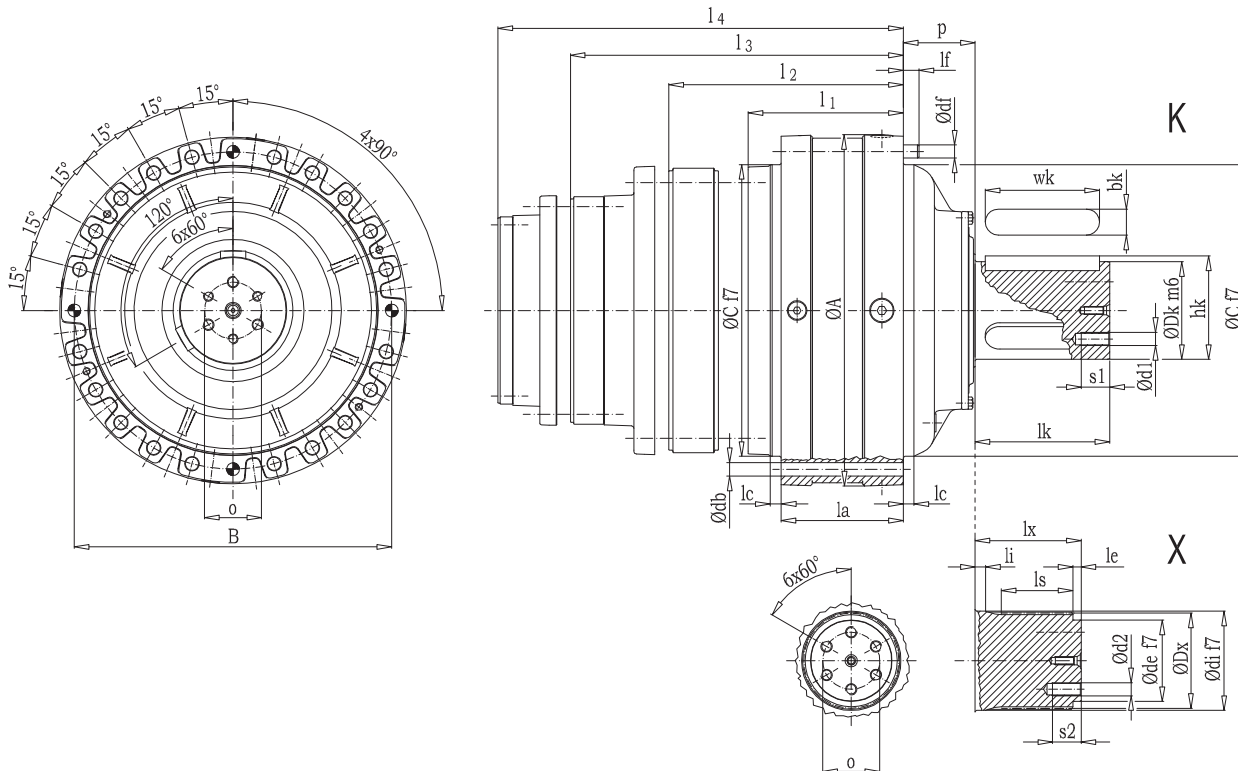
Model	630		750		900		1100		1300	
Torque Rating ^①	63000 Nm		75000 Nm		90000 Nm		110000 Nm		130000 Nm	
L1	RATIO (ACT. RATING) 4.5 (A)		RATIO (ACT. RATING) 3.4 (B) 5.3 (B) 4.1 (A)		RATIO (ACT. RATING) 3.4 (B) 5.3 (B) 4.1 (A)		RATIO (ACT. RATING) 3.4 (B) 5.3 (B) 4.1 (A)		RATIO (ACT. RATING) 3.4 (B) 5.3 (B) 4.1 (A)	
n ₁ nom./max.	1200 rpm	1700 rpm	900 rpm	1200 rpm	850 rpm	1200 rpm	800 rpm	1000 rpm	750 rpm	1000 rpm
P _{th} °/ P mech.	50 kW	370 kW	64 kW	390 kW	70 kW	440 kW	80 kW	515 kW	88 kW	620 kW
L2	NOM. RATIO ^② (ACT. RATING) 17 (A) 22 (A) 26 (A) 32 (A)		NOM. RATIO ^② (ACT. RATING) 13 (B) 28 (A) 15 (A) 32 (B) 17 (B) 36 (B) 21 (A) 25 (A)		NOM. RATIO ^② (ACT. RATING) 13 (B) 28 (A) 15 (A) 32 (B) 17 (B) 36 (B) 21 (A) 25 (A)		NOM. RATIO ^② (ACT. RATING) 13 (B) 28 (A) 15 (A) 30 (B) 17 (B) 36 (B) 21 (A) 24 (A)		NOM. RATIO ^② (ACT. RATING) 13 (B) 28 (A) 15 (A) 30 (B) 17 (B) 36 (B) 21 (A) 24 (A)	
n ₁ nom./max.	1800 rpm	2500 rpm	1800 rpm	2500 rpm	1800 rpm	2500 rpm	1500 rpm	2000 rpm	1500 rpm	2000 rpm
P _{th} °/ P mech.	33 kW	230 kW	44 kW	280 kW	48 kW	290 kW	55 kW	330 kW	60 kW	360 kW
L3	NOM. RATIO ^② (ACT. RATING) 56 (A) 140 (A) 63 (A) 160 (A) 75 (A) 180 (A) 85 (A) 190 (A) 100 (A) 220 (A) 120 (A) 130 (A)		NOM. RATIO ^② (ACT. RATING) 48 (B) 130 (A) 56 (A) 140 (A) 63 (B) 160 (A) 80 (A) 170 (A) 95 (A) 200 (A) 105 (A) 220 (B) 120 (A) 250 (B)		NOM. RATIO ^② (ACT. RATING) 48 (B) 130 (A) 56 (A) 140 (A) 63 (B) 160 (A) 80 (A) 170 (A) 95 (A) 200 (A) 105 (A) 220 (B) 120 (A) 250 (B)		NOM. RATIO ^② (ACT. RATING) 42 (B)* 120 (A) 48 (B) 140 (A) 56 (A) 170 (A) 67 (B) 200 (A) 80 (A) 220 (B) 90 (A) 250 (B) 105 (A) * on request		NOM. RATIO ^② (ACT. RATING) 42 (B)* 120 (A) 48 (B) 140 (A) 56 (A) 170 (A) 67 (B) 200 (A) 80 (A) 220 (B) 90 (A) 250 (B) 105 (A) * on request	
n ₁ nom./max.	2800 rpm	3800 rpm	2000 rpm	3000 rpm	2000 rpm	3000 rpm	2000 rpm	3000 rpm	2000 rpm	3000 rpm
P _{th} °/ P mech.	20 kW	110 kW	28 kW	150 kW	32 kW	160 kW	35 kW	200 kW	39 kW	220 kW
L4	NOM. RATIO ^② (ACT. RATING) 240 (A) 710 (A) 280 (A) 800 (A) 320 (A) 900 (A) 360 (A) 1000 (A) 420 (A) 1100 (A) 480 (A) 1250 (A) 530 (A) 1500 (A) 600 (A)		NOM. RATIO ^② (ACT. RATING) 220 (A) 600 (A) 1200 (A) 260 (A) 670 (A) 1400 (A) 300 (A) 710 (A) 1500 (B) 340 (A) 800 (A) 1700 (B) 400 (A) 850 (A) 450 (A) 900 (A) 480 (A) 1000 (A) 530 (A) 1100 (A)		NOM. RATIO ^② (ACT. RATING) 220 (A) 600 (A) 1200 (A) 260 (A) 670 (A) 1400 (A) 300 (A) 710 (A) 1500 (B) 340 (A) 800 (A) 1700 (B) 400 (A) 850 (A) 450 (A) 900 (A) 480 (A) 1000 (A) 530 (A) 1100 (A)		NOM. RATIO ^② (ACT. RATING) 220 (A) 600 (A) 1200 (A) 260 (A) 670 (A) 1400 (A) 300 (A) 710 (A) 1500 (B) 340 (A) 800 (A) 1700 (B) 400 (A) 850 (A) 450 (A) 900 (A) 480 (A) 1000 (A) 530 (A) 1100 (A)		NOM. RATIO ^② (ACT. RATING) 250 (A) 670 (A) 1300 (B) 300 (A) 710 (A) 1500 (B) 340 (A) 800 (A) 400 (A) 850 (A) 450 (A) 900 (A) 480 (A) 1000 (A) 530 (A) 1050 (A) 600 (A) 1200 (A)	
n ₁ nom./max.	2800 rpm	3800 rpm	2800 rpm	3800 rpm	2800 rpm	3800 rpm	2800 rpm	3800 rpm	2800 rpm	3800 rpm
P _{th} °/ P mech.	16 kW	37 kW	22 kW	63 kW	24 kW	70 kW	27 kW	90 kW	30 kW	100 kW
Actual Torque [Nm] ^④	(A) 73000		(A) 94000 (B) 79000		(A) 110000 (B) 95000		(A) 133000 (B) 112000		(A) 160000 (B) 135000	
Peak Torque ^⑤	100000 Nm		140000 Nm		160000 Nm		190000 Nm		215000 Nm	

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



- ① Harmonized nominal value referring to Preferred Numbers R'40. Actual transmissible torque may vary depending on ratio, speed, application.
- ② Harmonized nominal value referring to Preferred Numbers R'40. For actual ratios see Annex C.
- ③ Thermal power limit. For actual figures based on speed, temperature and duty see Section B4, Specifications, Paragraph 8.
- ④ Mean value at rated conditions. For actual figures based on speed, service life and application/duty see Section B4, Specifications, Paragraph 6.
- ⑤ Restrictions may apply for hollow shaft for shrink disc, see Section G, Output Accessories. Customer to verify the mating shaft is capable of loads actually transmitted.
- ⑥ Mean values at rated conditions. For actual admissible loads based on speed, service life and application/duty see Section B4, Specifications, Paragraph 9.
- ⑦ Max. peak values, which must never be exceeded. Combined thrust and radial shaft loads might reduce bearing life. Please contact Plan-Star Engineering for accurate life calculation of your specific application.
- ⑧ Combination of high torque and heavy radial shaft load might require verification of the output shaft. If the following condition is not fulfilled, contact Plan-Star Engineering for accurate verification of your specific application:

$$\frac{\text{Radial Load (applied)}}{\text{Radial Load (admissible)}} \times \frac{\text{Torque (applied)}}{\text{Torque (nominal)}} < 0.5$$



P - shaft version for shrink disc:
For minimum length of torque reaction arm
refer to the relevant data table, value " $L_{\min}$ "

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

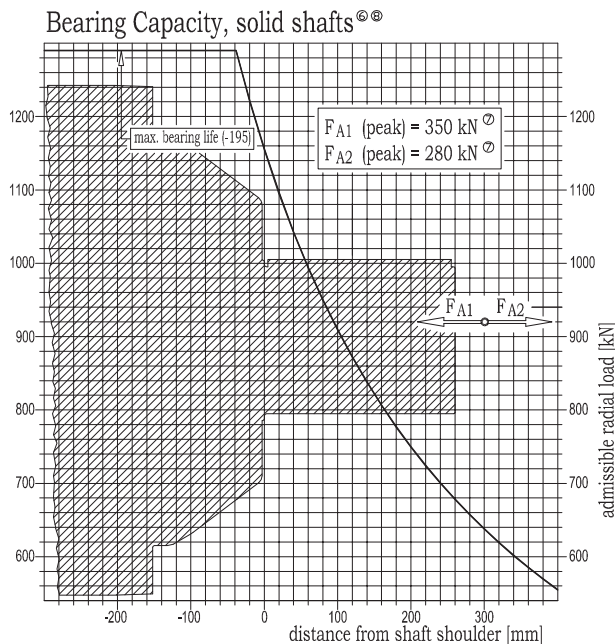
Dimensions, solid shafts														Keyed										DIN Splined									
Model	A	la	B	db	C	lc	df	lf	p	l ₁	l ₂	l ₃	l ₄	Dk	lk	bk	hk	wk	d1	s1	o	code	Dx	lx	ls	di	li	de	le	d2	s2	o	code
1700	700	195	635	32	560	20	25	35	152	266	407.5	459	543	200	260	45	210	250	M16	36	140	K 11	200x5	200	130	200	30	170	20	M16	36	140	X 12
2100	700	220	635	32	560	20	25	35	152	315.5	484	588.5	615	200	260	45	210	250	M16	36	140	K 11	200x5	200	130	200	30	170	20	M16	36	140	X 12
2500	700	220	635	32	560	20	25	35	152	315.5	484	588.5	615	220	300	50	231	280	M16	36	160	K 13	220x5	220	150	220	30	190	20	M16	36	160	X 14

Dimensions, hollow shafts										Hollow for Shrink Disc										Hollow Spined													
Model	A	B	db	C	lc	df	lf	la	p	l ₁	l ₂	l ₃	l ₄	Dp	lp	Dq	lq	Dw	lw	code	L _{min}	la	p	l ₁	l ₂	l ₃	l ₄	Dz	lz	de	le	t	code
1700	700	635	32	560	20	25	35	195	153	266	407.5	459	543	200	210	170	305	260	180	P 22	1500	195	152	266	407.5	459	543	200x5	115	210	17	140	Z 21
2100	700	635	32	560	20	25	35	220	153	315.5	484	588.5	615	200	210	170	305	260	180	P 22	1500	220	152	315.5	484	588.5	615	200x5	115	210	17	140	Z 21
2500	700	635	32	560	20	25	35	220	153	315.5	484	588.5	615	200	210	170	305	260	180	P 22	1500	220	152	315.5	484	588.5	615	210x5	115	220	17	140	Z 23

DIMENSIONS IN MM UNLESS OTHERWISE SPECIFIED

Model	1700		2100		2500	
Torque Rating ^①	170000 Nm		210000 Nm		250000 Nm	
L1	RATIO (ACT. RATING) 3.5 (B)* 5.3 (B) 4.2 (A) * on request		RATIO (ACT. RATING) 3.5 (B)* 5.3 (B) 4.2 (A) * on request		RATIO (ACT. RATING) 3.5 (B)* 5.3 (B) 4.2 (A) * on request	
n ₁ nom./max.	750 rpm	1000 rpm	750 rpm	1000 rpm	750 rpm	1000 rpm
P th. ^② / P mech.	100 kW	750 kW	110 kW	850 kW	110 kW	900 kW
L2	NOM. RATIO ^③ (ACT. RATING) 13 (B)* 21 (A) 15 (B)* 24 (B) 18 (A) 28 (B) * on request		NOM. RATIO ^③ (ACT. RATING) 12 (B)* 18 (B) 14 (A) 22 (A) 17 (A) 28 (B)		NOM. RATIO ^③ (ACT. RATING) 12 (B)* 18 (B) 14 (A) 22 (A) 17 (A) 28 (B)	
n ₁ nom./max.	1500 rpm	2000 rpm	900 rpm	1200 rpm	900 rpm	1200 rpm
P th. ^② / P mech.	63 kW	360 kW	70 kW	390 kW	70 kW	440 kW
L3	NOM. RATIO ^③ (ACT. RATING) 56 (B)* 120 (A) 67 (A) 140 (B) 80 (A) 150 (A) 90 (A) 160 (B) 105 (A) 190 (B) * on request		NOM. RATIO ^③ (ACT. RATING) 45 (B)* 110 (A) 53 (A) 120 (A) 63 (A) 130 (A) 71 (A) 150 (A) 80 (A) 170 (B) 90 (A) 190 (B) 100 (A) * on request		NOM. RATIO ^③ (ACT. RATING) 45 (B)* 110 (A) 53 (A) 120 (A) 63 (A) 130 (A) 71 (A) 150 (A) 80 (A) 170 (B) 90 (A) 190 (B) 100 (A) * on request	
n ₁ nom./max.	1800 rpm	2500 rpm	1800 rpm	2500 rpm	1800 rpm	2500 rpm
P th. ^② / P mech.	45 kW	240 kW	50 kW	280 kW	50 kW	280 kW
L4	NOM. RATIO ^③ (ACT. RATING) 220 (A) 530 (A) 1000 (A) 260 (A) 560 (A) 1100 (B) 300 (A) 630 (A) 1300 (B) 340 (A) 710 (A) 400 (A) 750 (A) 450 (A) 850 (A) 480 (A) 900 (A)		NOM. RATIO ^③ (ACT. RATING) 180 (A) 400 (A) 850 (B) 200 (A) 450 (A) 950 (A) 210 (A) 500 (A) 1050 (A) 240 (A) 560 (A) 1200 (B) 280 (A) 630 (A) 1300 (B) 320 (A) 710 (A) 360 (A) 800 (A)		NOM. RATIO ^③ (ACT. RATING) 180 (A) 400 (A) 850 (B) 200 (A) 450 (A) 950 (A) 210 (A) 500 (A) 1050 (A) 240 (A) 560 (A) 1200 (B) 280 (A) 630 (A) 1300 (B) 320 (A) 710 (A) 360 (A) 800 (A)	
n ₁ nom./max.	2800 rpm	3800 rpm	2800 rpm	3800 rpm	2800 rpm	3800 rpm
P th. ^② / P mech.	33 kW	120 kW	37 kW	120 kW	37 kW	120 kW
Actual Torque [Nm] ^④	(A) 215000 (B) 175000		(A) 260000 (B) 220000		(A) 310000 (B) 260000	
Peak Torque ^⑤	300000 Nm		350000 Nm		400000 Nm	

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



- ① Harmonized nominal value referring to Preferred Numbers R'40. Actual transmissible torque may vary depending on ratio, speed, application.
- ② Harmonized nominal value referring to Preferred Numbers R'40. For actual ratios see Annex C.
- ③ Thermal power limit. For actual figures based on speed, temperature and duty see Section B4, Specifications, Paragraph 8.
- ④ Mean value at rated conditions. For actual figures based on speed, service life and application/duty see Section B4, Specifications, Paragraph 6.
- ⑤ Restrictions may apply for hollow shaft for shrink disc, see Section G, Output Accessories. Customer to verify the mating shaft is capable of loads actually transmitted.
- ⑥ Mean values at rated conditions. For actual admissible loads based on speed, service life and application/duty see Section B4, Specifications, Paragraph 9.
- ⑦ Max. peak values, which must never be exceeded. Combined thrust and radial shaft loads might reduce bearing life. Please contact Plan-Star Engineering for accurate life calculation of your specific application.
- ⑧ Combination of high torque and heavy radial shaft load might require verification of the output shaft. If the following condition is not fulfilled, contact Plan-Star Engineering for accurate verification of your specific application:

$$\frac{\text{Radial Load (applied)}}{\text{Radial Load (admissible)}} \times \frac{\text{Torque (applied)}}{\text{Torque (nominal)}} < 0.5$$