KANIA
ANTRIEBSSYSTEME

XF und XH Planetengetriebe

XF und XH Winkelplanetengetriebe

Technische Daten

Serie XF1: glatte Stahlwelle

Serie XF2: Stahlwelle mit Passfeder

Serie XF3: Stahlwelle mit Keilverzahnung

Serie XF4: Stahlhohlwelle

Serie XH: Abgangsflansch

Einfache Montage

Geringes Laufgeräusch

Kompakte Bauweise

Ausgangs- und Motorwelle drehen in die gleiche Richtung

Schutzklasse IP65

Nenn-Abtriebsdrehmoment

T2N: 18 – 1600 Nm

Untersetzungen

1-stufig: 3 / 4 / 5 / 7 / 10

Geringes Verdrehspiel

1-stufig:≤ 3 Winkelminuten

Hoher Wirkungsgrad

1-stufig:≥ 96%

Baugrößen XF

XF 064 / XF 090 / XF 110 / XF 140 / XF 200 / XF 255 / XF 285

Baugrößen XH

XH 064 / XH 090 / XH 110 / XH 140 / XH 200 / XH 255 / XH 285

Die neue X-Serie ist komplett überarbeitet und unterscheidet sich in wesentlichen Merkmalen von Wettbewerbsprodukten. Das Design wurde überarbeitet und geschützt. Wesentlicher technischer Unterschied:
Die Getriebe der X-Serie sind wie alle anderen Apex Getriebe „gleichdrehend“ Eingangs- und Ausgangsseitig und können daher NICHT 1:1 gegen Wettbewerbsgetriebe ausgetauscht werden da diese „gegensinnig drehend“ sind.

XH Spezifikationen

Model No.		Stages	Ratio(1)	KH 064	KH 090	KH 110	KH 140	KH 200	KH 255	KH 285
Nominal Output Torque T_{2N}	Nm	1	3	25	50	110	210	420	820	1,600
			4	25	60	110	210	420	820	1,600
			5	25	60	110	210	420	820	1,600
			7	23	50	100	200	390	750	1,400
			10	18	40	85	170	360	600	1,100
		2	12	25	60	110	210	420	820	1,600
			16	25	60	110	210	420	820	1,600
			20	25	60	110	210	420	820	1,600
			25	25	60	110	210	420	820	1,600
			28	25	60	110	210	420	820	1,600
			35	25	60	110	210	420	820	1,600
			40	25	60	110	210	420	820	1,600
			50	25	60	110	210	420	820	1,600
			70	23	50	100	200	390	750	1,400
			100	18	40	85	170	360	600	1,100
Emergency Stop Torque T_{2NOT}	Nm	1,2	3~100	2 times T_{2N}						
Max. Acceleration Torque T_{2B}	Nm	1,2	3~100	1,5 times T_{2N}						
No Load Running Torque(4)	Nm	1	3~10	0.9	1.6	3.2	4.2	9.6	16.5	26.4
		2	12~100	0.1	0.1	0.2	0.4	1.1	1.9	3
Backlash(2)	arcmin	1	3~10	≦ 3	≦ 3	≦ 3	≦ 3	≦ 3	≦ 3	≦ 3
		2	12~100	≦ 3	≦ 3	≦ 3	≦ 3	≦ 3	≦ 3	≦ 3
Torsional Rigidity	Nm/arcmin	1,2	3~100	1.1	4.5	10	23	54	90	170
Nominal Input Speed n_{1N}	rpm	1	3~10	3,000	2,800	2,700	2,000	2,000	2,000	1,500
		2	12~100	5,500	4,600	4,600	4,000	3,700	3,400	3,100
Max. Input Speed n_{1B}	rpm	1	3~10	6,000	6,000	4,500	4,500	4,000	3,000	2,500
		2	12~100	7,000	7,000	7,000	6,000	5,500	5,000	4,500
Max. Radial Load F_{2rB}(3)	N	1,2	3~100	2,400	4,500	5,100	13,000	28,700	36,200	58,300
Max. Axial Load F_{2aB}(3)	N	1,2	3~100	1,200	2,250	2,550	6,500	14,350	18,100	29,150
Service Life(5)	hr	1,2	3~100	20,000						
Operating Temp	° C	1,2	3~100	0° C~ +90° C						
Degree of Gearbox Protection		1,2	3~100	IP65						
Lubrication		1,2	3~100	Synthetic lubrication grease						
Mounting Position		1,2	3~100	All directions						
Running Noise(4)	dB(A)	1,2	3~100	≦ 64	≦ 66	≦ 66	≦ 68	≦ 68	≦ 70	≦ 72
Efficiency η	%	1	3~10	≧ 96%						
		2	12~100	≧ 94%						

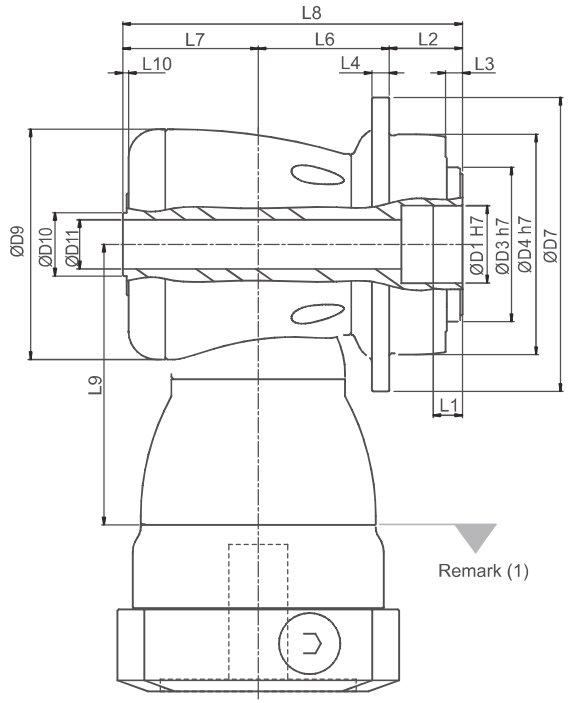
(1) Ratio (i= N_{in} / N_{out}).
(2) Backlash is measured at 2% of Nominal Output Torque T_{2N}.
(3) Applied to the output shaft center at 100 rpm.
(4) These values are measured by gearbox with ratio = 10 (1-stage) and 100 (2-stage) without loading at 3,000 rpm, or at the Nominal Input Speed n_{1N}, By ratio smaller than 10, the noise value would be 3-5dB higher.
(5) For continuous operation, the service life time is less than 10,000 hrs.

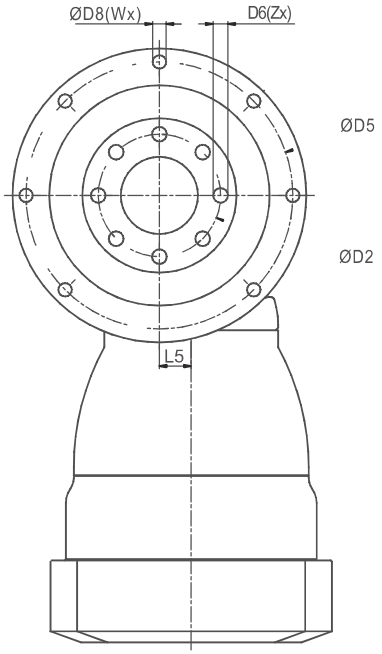
Massenträgheitsmoment XH

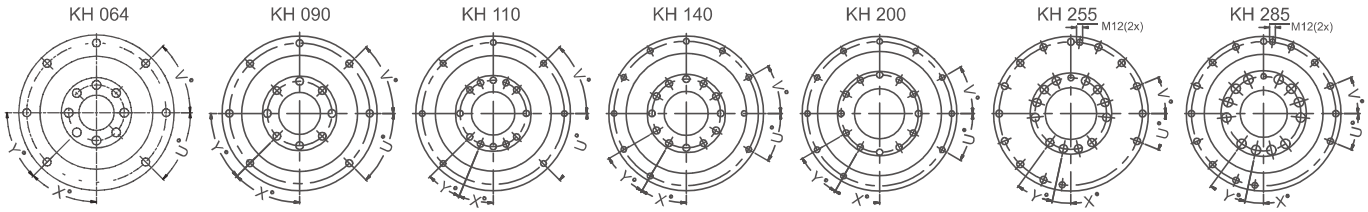
Model No.		KH 064		KH 090		KH 110		KH 140		KH 200		KH 255		KH 285	
Ø(A) (C3)		1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage
8	kg.cm²	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-
11		0.17	0.16	0.18	0.17	-	-	-	-	-	-	-	-	-	-
14		0.21	0.2	0.5	0.21	-	0.53	-	-	-	-	-	-	-	-
19		0.62	-	0.65	0.63	1.69	0.68	-	1.83	-	-	-	-	-	-
24		-	-	4.49	-	4.89	4.52	5.05	5.04	-	5.63	-	-	-	-
28		-	-	-	-	6.14	-	6.55	6.33	-	7.18	-	-	-	-
32		-	-	-	-	8.54	-	9.47	8.73	10.18	10.1	-	12.63	-	-
35		-	-	-	-	13.86	-	14.91	14.04	15.21	15.54	15.68	17.75	23.46	20.8
38		-	-	-	-	18.87	-	20.69	19.05	20.7	21.32	21.69	23.26	23.46	27.05
42		-	-	-	-	-	-	22.58	-	22.83	23.2	23.59	25.4	25.28	28.95
48		-	-	-	-	-	-	55.45	-	58.45	56.07	59.3	61.02	61.61	64.66
55		-	-	-	-	-	-	-	-	-	-	86.95	-	89.67	-
60		-	-	-	-	-	-	-	-	-	-	-	-	112.49	-

(A) Ø = Input shaft diameter.

XH Abmessungen







Dimension	KH 064	KH 090	KH 110	KH 140	KH 200	KH 255	KH 285
	1~2-stage	1~2-stage	1~2-stage	1~2-stage	1~2-stage	1~2-stage	1~2-stage
D1 H7	20	31.5	40	50	80	100	100
D2	31.5	50	63	80	125	140	160
D3 h7	40	63	80	100	160	180	200
D4 h7	64	90	110	140	200	255	285
D5	79	109	135	168	233	280	310
D6	M5x0.8Px8	M6x1Px10	M6x1Px12	M8x1.25Px15	M10x1.5Px20	M16x2Px25	M20x2.5Px31
D7	88	120	147	180	249.5	302	332
D8	4.5	5.5	5.5	6.6	9	13.5	13.5
D9	73	94	116	163	210	255	300
D10	18.5	25.8	36.8	55.2	69.2	82.2	92.2
D11	10	20	28	40	55	62	70
L1	8	12	12	12	16	20	20
L2	19.5	30	29	38	50	66	75
L3	4	7	7	7.5	8.5	13.5	16.5
L4	5	7	8	10	12	18	20
L5	10	13	17	25	31	36	43
L6	43	53.5	67	81	117	132	160.5
L7	46	55.3	71.3	91.8	118	134	168
L8	108.5	138.8	167.3	210.8	285	332	403.5
L9	94	114.5	129	173.5	228	265.5	294.5
L10	1.5	2.3	3	2.8	3	3	3
X in Degree	45°	45°	22.5°	30°	30°	12°	12°
Y in Degree	45°	45°	22.5°	30°	30°	24°	24°
Z	8	8	12	12	12	12	12
U in Degree	45°	45°	45°	30°	30°	22.5°	22.5°
V in Degree	45°	45°	45°	30°	30°	22.5°	22.5°
W	7	7	7	10	10	13	13

(1) Dimensions are related to motor interface.

XF Spezifikationen

Model No.		Stages	Ratio[1]	KF 060	KF 075	KF 100	KF 140	KF 180	KF 210	KF 240
Nominal Output Torque T_{2N}	Nm	1	3	25	50	110	210	420	820	1,600
			4	25	60	110	210	420	820	1,600
			5	25	60	110	210	420	820	1,600
			7	23	50	100	200	390	750	1,400
			10	18	40	85	170	360	600	1,100
		2	12	25	60	110	210	420	820	1,600
			16	25	60	110	210	420	820	1,600
			20	25	60	110	210	420	820	1,600
			25	25	60	110	210	420	820	1,600
			28	25	60	110	210	420	820	1,600
			35	25	60	110	210	420	820	1,600
			40	25	60	110	210	420	820	1,600
			50	25	60	110	210	420	820	1,600
			70	23	50	100	200	390	750	1,400
			100	18	40	85	170	360	600	1,100
Emergency Stop Torque T_{2NOT}	Nm	1,2	3~100	2 times T_{2N}						
Max. Acceleration Torque T_{2B}	Nm	1,2	3~100	1,5 times T_{2N}						
No Load Running Torque[4]	Nm	1	3~10	0.8	1.3	2.6	3.5	8	11	17.6
		2	12~100	0.1	0.1	0.2	0.3	0.9	1.2	1.9
Backlash[2]	arcmin	1	3~10	≦ 3	≦ 3	≦ 3	≦ 3	≦ 3	≦ 3	≦ 3
		2	12~100	≦ 3	≦ 3	≦ 3	≦ 3	≦ 3	≦ 3	≦ 3
Torsional Rigidity	Nm/arcmin	1,2	3~100	0.8	3.5	9	20.5	44	80	168
Nominal Input Speed n_{1N}	rpm	1	3~10	3,000	2,800	2,700	2,000	2,000	2,000	1,500
		2	12~100	5,500	4,500	4,200	3,900	3,400	2,800	2,200
Max. Input Speed n_{1B}	rpm	1	3~10	6,000	6,000	4,500	4,500	4,000	3,000	2,500
		2	12~100	7,000	7,000	7,000	6,000	5,500	5,000	4,500
Max. Radial Load F_{2rB}[3]	N	1,2	3~100	5,700	8,200	12,200	20,100	30,700	40,900	51,900
Max. Axial Load F_{2aB}[3]	N	1,2	3~100	2,850	4,100	6,100	10,050	15,350	20,450	20,950
Service Life[5]	hr	1,2	3~100	20,000						
Operating Temp	° C	1,2	3~100	0° C~ +90° C						
Degree of Gearbox Protection		1,2	3~100	IP65						
Lubrication		1,2	3~100	Synthetic lubrication grease						
Mounting Position		1,2	3~100	All directions						
Running Noise[4]	dB(A)	1,2	3~100	≦ 64	≦ 66	≦ 66	≦ 68	≦ 68	≦ 70	≦ 72
Efficiency η	%	1	3~10	≧ 96%						
		2	12~100	≧ 94%						

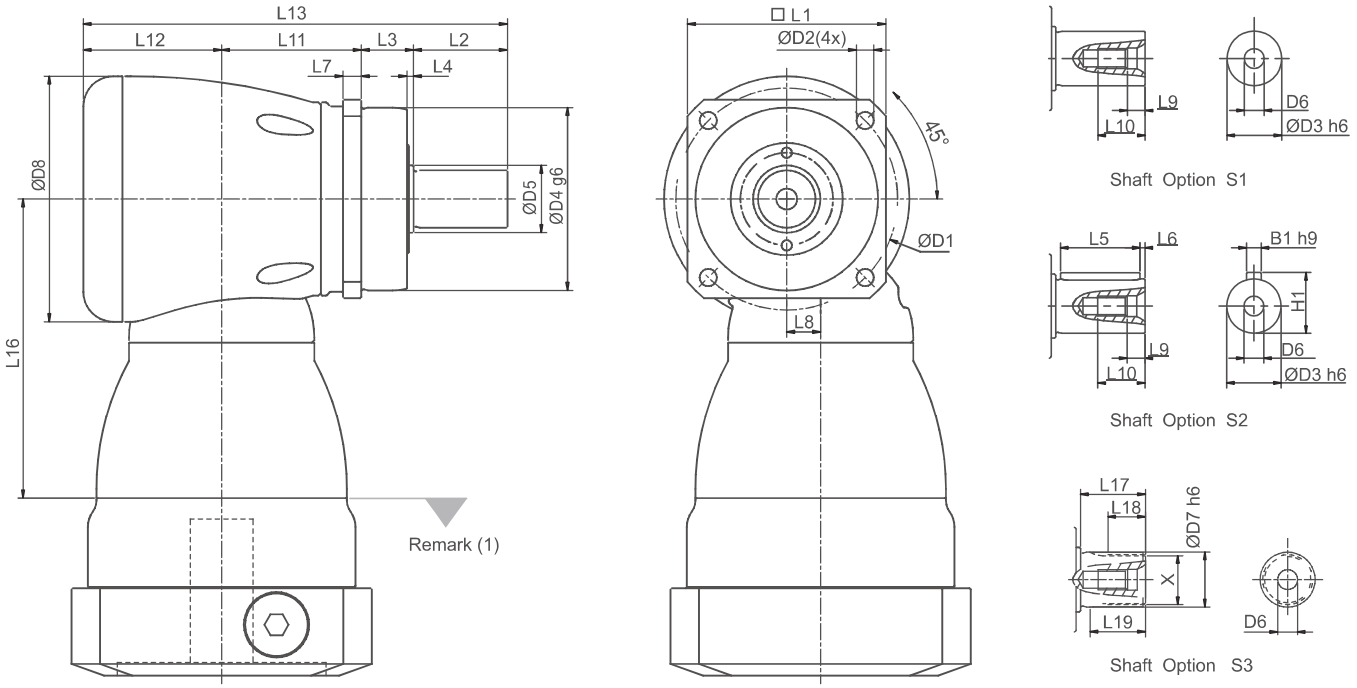
(1) Ratio (i= N_{in} / N_{out}) .
(2) Backlash is measured at 2% of Nominal Output Torque T_{2N}.
(3) Applied to the output shaft center at 100 rpm.
(4) These values are measured by gearbox with ratio = 10 (1-stage) and 100 (2-stage) without loading at 3,000 rpm, or at the Nominal Input Speed n_{1N}, By ratio smaller than 10, the noise value would be 3-5dB higher.
(5) For continuous operation, the service life time is less than 10,000 hrs.

Massenträgheitsmoment XF

Model No.		KF 060		KF 075		KF 100		KF 140		KF 180		KF 210		KF 240	
Ø(A) (C3)		1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage
8	kg.cm²	0.1	0.1	-		-	-	-	-	-	-	-	-	-	-
11		0.17	0.16	0.18	0.17	-	-	-	-	-	-	-	-	-	-
14		0.21	0.2	0.5	0.21	-	0.53	-	-	-	-	-	-	-	-
19		0.62	-	0.65	0.63	1.69	0.68	-	1.83	-	-	-	-	-	-
24		-	-	4.49	-	4.89	4.52	5.05	5.04	-	5.63	-	-	-	-
28		-	-	-	-	6.14	-	6.55	6.33	-	7.18	-	-	-	-
32		-	-	-	-	8.54	-	9.47	8.73	10.18	10.1	-	12.63	-	-
35		-	-	-	-	13.86	-	14.91	14.04	15.21	15.54	15.68	17.75	23.46	20.8
38		-	-	-	-	18.87	-	20.69	19.05	20.7	21.32	21.69	23.26	23.46	27.05
42		-	-	-	-	-	-	22.58	-	22.83	23.2	23.59	25.4	25.28	28.95
48		-	-	-	-	-	-	55.45	-	58.45	56.07	59.3	61.02	61.61	64.66
55		-	-	-	-	-	-	-	-	-	-	86.95	-	89.67	-
60		-	-	-	-	-	-	-	-	-	-	-	-	112.49	-

(A) Ø = Input shaft diameter.

XF Abmessungen, Serie 1,2,3



Dimension	KF 060	KF 075	KF 100	KF 140	KF 180	KF 210	KF 240
	1~2-stage	1~2-stage	1~2-stage	1~2-stage	1~2-stage	1~2-stage	1~2-stage
D1	68	85	120	165	215	250	290
D2	5.5	6.6	9	11	13.5	17	17
D3 h6	16	22	32	40	55	75	85
D4 g6	60	70	90	130	160	180	200
D5	18.5	25.8	36.8	55.2	69.2	82.2	92.2
D6	M5X0.8P	M8X1.25P	M12X1.75P	M16X2P	M20X2.5P	M20X2.5P	M20X2.5P
D7 h6	16	22	32	40	55	75	85
D8	73	94	116	163	210	255	300
L1	62	76	101	141	182	215	245
L2	28	36	58	82	82	105	130
L3	20	20	30	30	30	38	40
L4	2	2.5	3	3	3	3	3
L5	25	32	50	63	70	90	125
L6	2	2	4	5	6	7	3
L7	6	7	10	12	15	17	20
L8	10	13	17	25	31	36	43
L9	4.8	7.2	10	12	15	15	15
L10	12.5	19	28	36	42	42	42
L11	43	53.5	67	90	119	141	176
L12	44.5	53	68.3	89	115	131	165
L13	135.5	162.5	223.3	291	346	415	511
L16	94	114.5	129	173.5	228	265.5	294.5
L17	26	26	26	40	41.5	52	60
L18	15	15	15	20	21.5	28	36
L19	21	22.5	23	33.5	33.5	45	53
B1 h9	5	6	10	12	16	20	22
H1	18	24.5	35	43	59	79.5	90
X DIN 5480	W16x0.8x30x18x6m	W22x1.25x30x16x6m	W32x1.25x30x24x6m	W40x2x30x18x6m	W55x2x30x26x6m	W70x2x30x34x6m	W80x2x30x38x6m

(1) Dimensions are related to motor interface.