KOLLMORGEN GEARMOTORS

Performance Specification

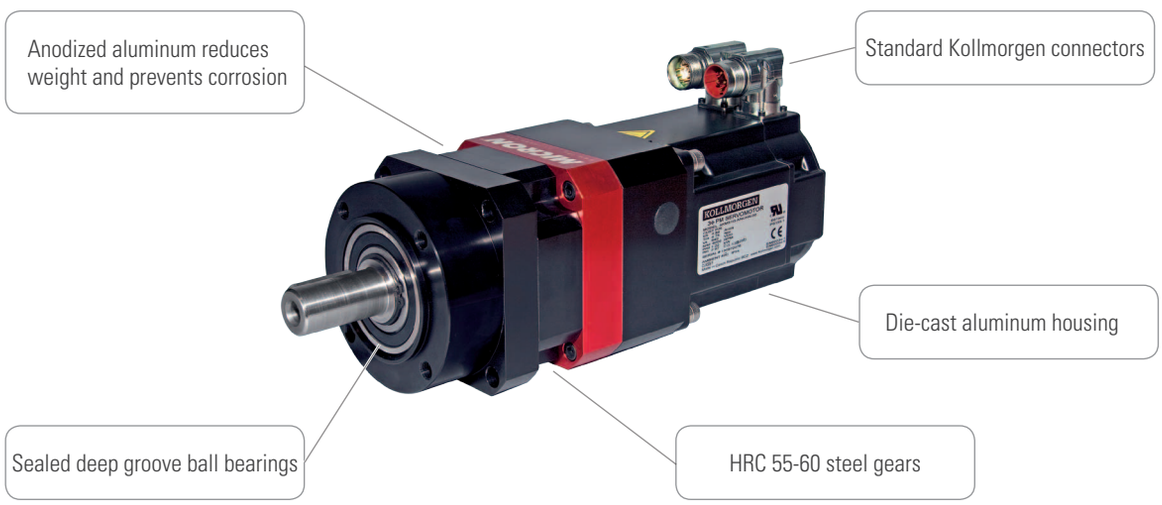
KOLLMORGEN®

Because Motion Matters™

Gearmotors GM-P / GM-H

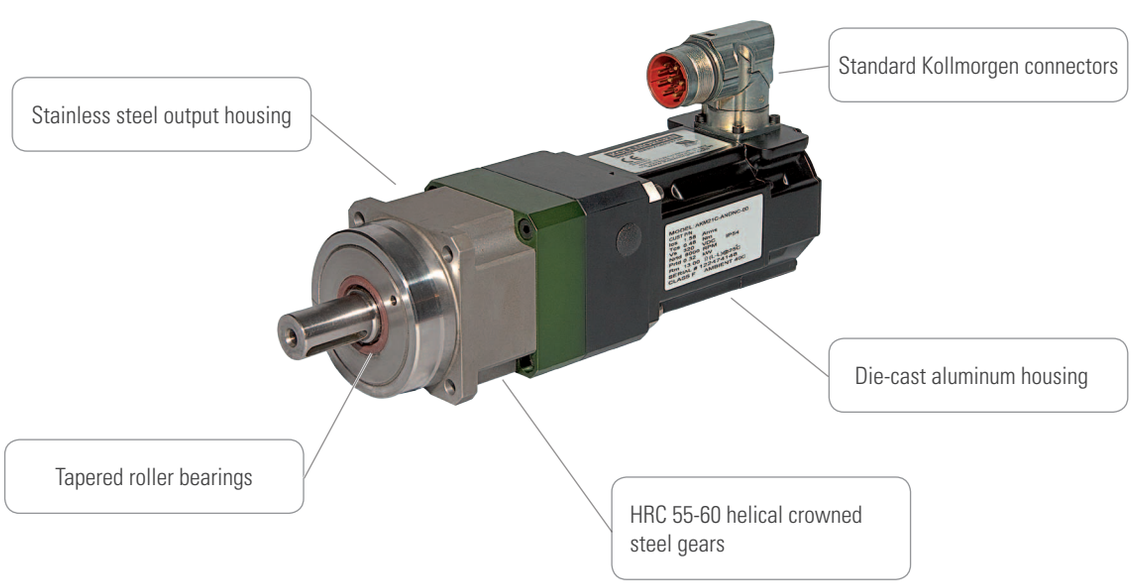
GM-P Precision Gearmotors

Feedback: SFD
Accuracy: ≤ 15 arcmin
Optional brake

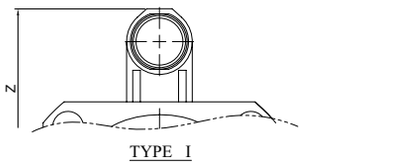


GM-H High Precision Gearmotors

Feedback: SFD
Accuracy: ≤ 5 arcmin
Optional brake



GM-P Precision Gearmotors Outline Drawing



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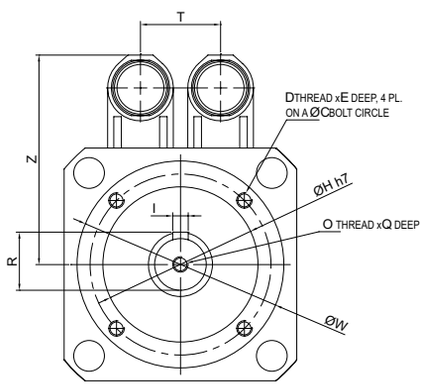

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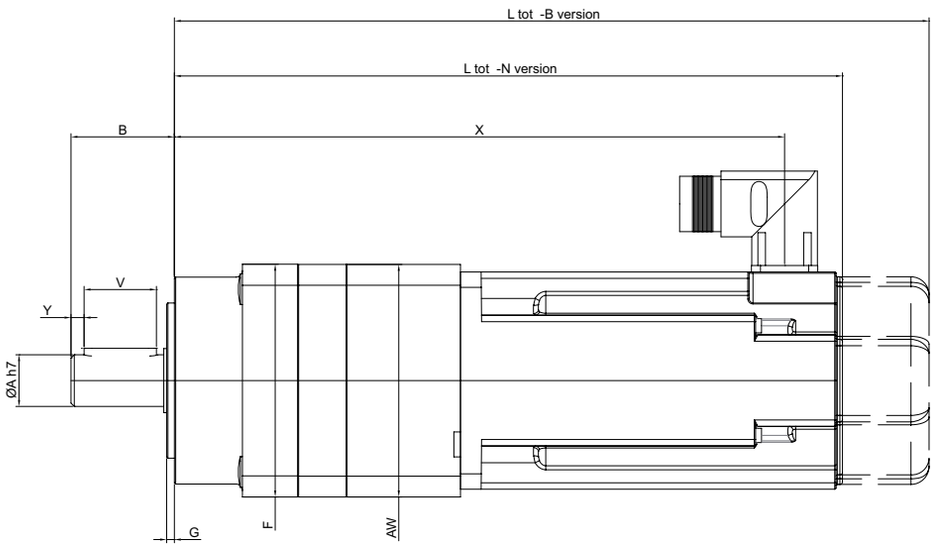
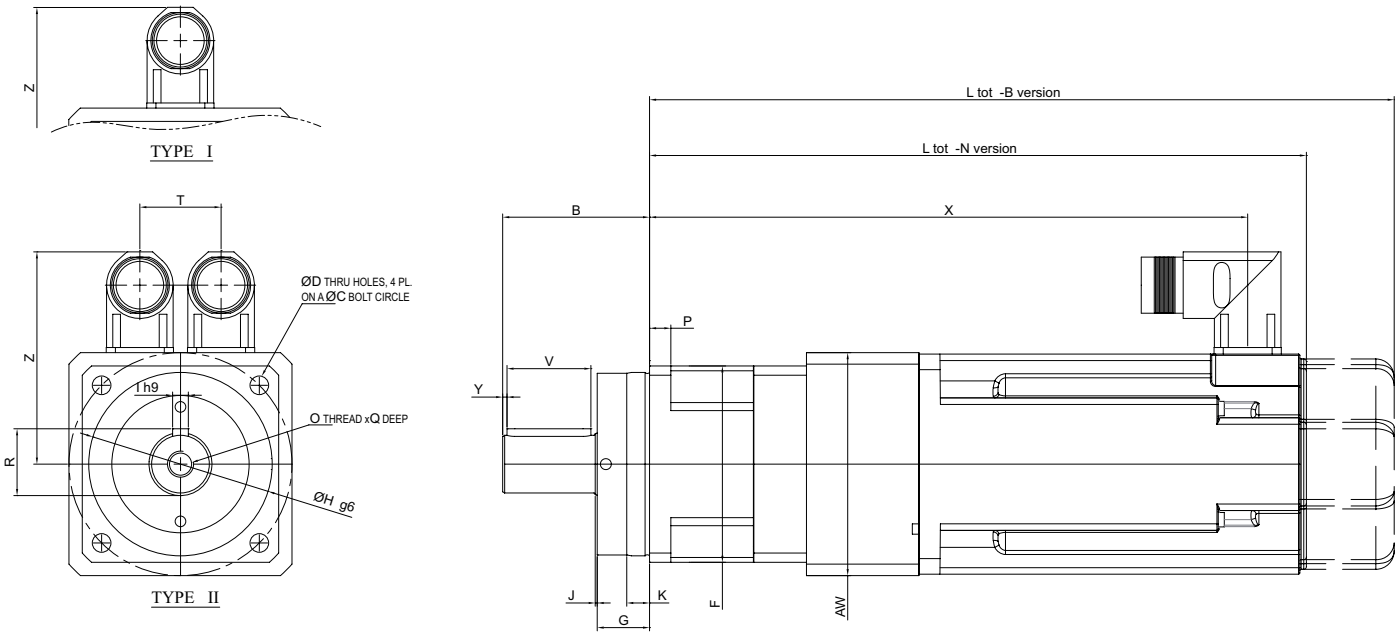


P/N -N: No brake -B: Braked	A Output Shaft Ø [mm]	B Output Shaft Length [mm]	Y Shaft End Distance [mm]	V Key Length [mm]	R Key Height [mm]	I Key Width [mm]	H Pilot Ø [mm]	W Body Diameter [mm]	G Pilot Length [mm]	D	E Thread Depth [mm]	O Output Shaft Thread [mm]	Q Thread Depth [mm]
GM-P060-800-9Nm-N/-B	14	35	2,5	25	16	5	40	60	3	M5	8	M5	12
GM-P060-160-12Nm-N/-B	14	35	2,5	25	16	5	40	60	3	M5	8	M5	12
GM-P060-80-13Nm-N/-B	14	35	2,5	25	16	5	40	60	3	M5	8	M5	12
GM-P080-800-27Nm-N/-B	20	40	4	28	22,5	6	60	80	3	M6	10	M6	16
GM-P080-160-43Nm-N/-B	20	40	4	28	22,5	6	60	80	3	M6	10	M6	16
GM-P080-80-45Nm-N/-B	20	40	4	28	22,5	6	60	80	3	M6	10	M6	16
GM-P120-700-49Nm-N/-B	25	55	5	40	28	8	80	115	4	M10	16	M10	22
GM-P120-160-80Nm-N/-B	25	55	5	40	28	8	80	115	4	M10	16	M10	22
GM-P120-70-89Nm-N/-B	25	55	5	40	28	8	80	115	4	M10	16	M10	22
GM-P160-600-175Nm-N/-B	40	87	8	65	43	12	130	160	5	M12	20	M16	36
GM-P160-140-246Nm-N/-B	40	87	8	65	43	12	130	160	5	M12	20	M16	36
GM-P160-70-257Nm-N/-B	40	87	8	65	43	12	130	160	5	M12	20	M16	36

P/N -N: No brake -B: Braked	F Flange Square [mm]	C Bolt Circle [mm]	AW Adapter Square [mm]	X Connector Position [mm]	T Connectors Distance -N version [mm]	T Connectors Distance -B version [mm]	Z Connector Height [mm]	Type -N Version	Type -B Version	Weight -N Version [kg]	Weight -B Version [kg]	L tot -N Version [mm]	L tot -B Version [mm]
GM-P060-800-9Nm-N/-B	61	52	70	200,9	-	28	74	I	II	3,2	3,6	222,8	254,3
GM-P060-160-12Nm-N/-B	61	52	70	217,9	-	28	74	I	II	3,4	3,8	239,8	271,3
GM-P060-80-13Nm-N/-B	61	52	70	217,9	-	28	74	I	II	3,4	3,8	239,8	271,3
GM-P080-800-27Nm-N/-B	90	70	90	294,5	-	31	81	I	II	8,3	8,9	316,9	350,4
GM-P080-160-43Nm-N/-B	90	70	90	253	-	28	74	I	II	5,9	6,3	274,9	306,4
GM-P080-80-45Nm-N/-B	90	70	90	253	-	28	74	I	II	5,9	6,3	274,9	306,4
GM-P120-700-49Nm-N/-B	119	100	115	332,5	31	31	93	II	II	14,7	15,8	356,7	401,7
GM-P120-160-80Nm-N/-B	119	100	115	350,9	-	31	81	I	II	12,6	13,2	373,3	406,8
GM-P120-70-89Nm-N/-B	119	100	115	293	-	31	81	I	II	10,7	11,3	315,3	348,8
GM-P160-600-175Nm-N/-B	142	145	190	403,1	45	45	133	II	II	39,5	41,6	431,1	473,1
GM-P160-140-246Nm-N/-B	142	145	142	434,8	31	31	93	II	II	26,2	27,3	459	504
GM-P160-70-257Nm-N/-B	142	145	142	374,8	31	31	93	II	II	23	24,1	397	442

GM-H High Precision Gearmotors Outline Drawing



P/N -N: No brake -B: Braked	A Output Shaft Ø [mm]	B Output Shaft length [mm]	Y Shaft end Distance [mm]	V Key Length [mm]	R Key Height [mm]	I Key Width [mm]	J Shoulder Length [mm]	H Pilot Ø [mm]	G Pilot Length [mm]	P Flange Thick-ness [mm]	K Effective Pilot Length [mm]	D Bolt Hole [mm]	C Bolt Circle [mm]	
GM-H060-1000-9Nm-N/-B	16	48	1	25	18	5	1	60	18	7	7	5,6	68	
GM-H060-200-22Nm-N/-B	16	48	1	25	18	5	1	60	18	7	7	5,6	68	
GM-H060-100-23Nm-N/-B	16	48	1	25	18	5	1	60	18	7	7	5,6	68	
GM-H075-800-27Nm-N/-B	22	56	1,5	32	24,5	6	1	70	20	8	7	7	85	
GM-H075-200-41Nm-N/-B	22	56	1,5	32	24,5	6	1	70	20	8	7	7	85	
GM-H075-100-42Nm-N/-B	22	56	1,5	32	24,5	6	1	70	20	8	7	7	85	
GM-H100-700-68Nm-N/-B	32	88	3	50	35	10	2	90	28	10	12	9	120	
GM-H100-160-120Nm-N/-B	32	88	3	50	35	10	2	90	28	10	12	9	120	
GM-H100-70-125Nm-N/-B	32	88	3	50	35	10	2	90	28	10	12	9	120	
GM-H140-600-197Nm-N/-B	40	112	5	70	43	12	3	130	27	13	14	11	165	
GM-H140-140-283Nm-N/-B	40	112	5	70	43	12	3	130	27	13	14	11	165	
GM-H140-70-254Nm-N/-B	40	112	5	70	43	12	3	130	27	13	14	11	165	

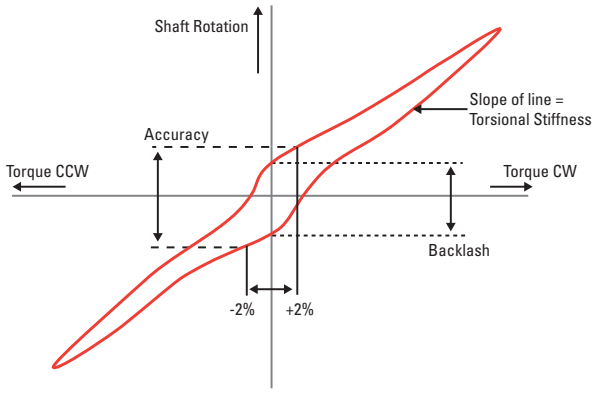
P/N -N: No brake -B: Braked	O Output Shaft Thread [mm]	Q Thread Depth [mm]	F Flange Square [mm]	AW Adapter Square [mm]	X Connector position [mm]	T Connectors Distance -N Version [mm]	T Connectors Distance -B Version [mm]	Z Con-nector height [mm]	Type -N Version	Type -B Version	Weight -N Version [kg]	Weight -B Version [kg]	L tot -N version [mm]	L tot -B version [mm]
GM-H060-1000-9Nm-N/-B	M5	19	61	70	206,9	-	28	74	I	II	4,2	4,6	228,8	260,3
GM-H060-200-22Nm-N/-B	M5	19	61	70	255,3	-	28	74	I	II	4,7	5,1	277,2	308,7
GM-H060-100-23Nm-N/-B	M5	19	61	70	255,3	-	28	74	I	II	4,7	5,1	277,2	308,7
GM-H075-800-27Nm-N/-B	M8	19	75	85	286,3	-	31	81	I	II	7,8	8,4	308,7	342,2
GM-H075-200-41Nm-N/-B	M8	19	75	75	278,8	-	28	74	I	II	5,2	5,6	300,7	332,2
GM-H075-100-42Nm-N/-B	M8	19	75	75	278,8	-	28	74	I	II	5,2	5,6	300,7	332,2
GM-H100-700-68Nm-N/-B	M12	20	101	115	318	31	31	93	II	II	15	16,1	342,2	387,2
GM-H100-160-120Nm-N/-B	M12	20	101	101	373,1	-	31	81	I	II	13,3	13,9	395,5	429
GM-H100-70-125Nm-N/-B	M12	20	101	101	315,2	-	31	81	I	II	11,4	12	337,5	371
GM-H140-600-197Nm-N/-B	M12	20	141	190	394	45	45	133	II	II	40,7	42,8	422	464
GM-H140-140-283Nm-N/-B	M12	20	141	142	460,9	31	31	93	II	II	27	28,1	485,1	530,1
GM-H140-70-254Nm-N/-B	M12	20	141	142	400,9	31	31	93	II	II	23,8	24,9	423,1	468,1

Gearmotors GM-P / GM-H

Performance Data

	Gearmotor Designation -N: No brake -B: Braked	Maximum Output Speed (rpm)	Nominal Output Torque (Nm)	Acceleration Output Torque (Nm)	Maximum allowed Load Inertia (Kgm^2)	Maximum radial Load on Output Shaft Center (N)	Accuracy	Drive
Precision	GM-P060-800-9Nm-N/-B	800	9	18	0,017	350	P	AKD-P00307
	GM-P060-160-12Nm-N/-B	160	13	25	0,414	650	P	AKD-P00307
	GM-P060-80-13Nm-N/-B	80	13	26	1,660	800	P	AKD-P00307
	GM-P080-800-27Nm-N/-B	800	27	65	0,077	600	P	AKD-P00607
	GM-P080-160-43Nm-N/-B	160	44	87	0,336	1000	P	AKD-P00307
	GM-P080-80-45Nm-N/-B	80	45	90	1,370	1200	P	AKD-P00307
	GM-P120-700-49Nm-N/-B	700	50	99	0,350	1200	P	AKD-P01207
	GM-P120-160-80Nm-N/-B	160	81	161	1,866	1800	P	AKD-P00607
	GM-P120-70-89Nm-N/-B	70	90	179	3,725	2200	P	AKD-P00307
	GM-P160-600-175Nm-N/-B	600	175	350	2,728	2200	P	AKD-P02407
	GM-P160-140-246Nm-N/-B	140	246	492	8,003	3900	P	AKD-P01207
	GM-P160-70-257Nm-N/-B	70	258	515	15,660	4500	P	AKD-P00607
High Precision	GM-H060-1000-9Nm-N/-B	1000	10	41	0,017	1500	H	AKD-P00307
	GM-H060-200-22Nm-N/-B	200	23	45	0,433	2600	H	AKD-P00307
	GM-H060-100-23Nm-N/-B	100	24	47	1,745	3400	H	AKD-P00307
	GM-H075-800-27Nm-N/-B	800	28	74	0,081	2400	H	AKD-P00607
	GM-H075-200-41Nm-N/-B	200	41	82	0,423	4200	H	AKD-P00307
	GM-H075-100-42Nm-N/-B	100	43	85	1,730	4900	H	AKD-P00307
	GM-H100-700-68Nm-N/-B	700	68	216	0,354	4200	H	AKD-P01207
	GM-H100-160-120Nm-N/-B	160	121	241	1,979	6600	H	AKD-P00607
	GM-H100-70-125Nm-N/-B	70	125	250	4,155	8700	H	AKD-P00307
	GM-H140-600-197Nm-N/-B	600	198	504	2,750	8000	H	AKD-P02407
	GM-H140-140-283Nm-N/-B	140	284	567	8,686	12000	H	AKD-P01207
	GM-H140-70-254Nm-N/-B	70	255	509	17,948	17000	H	AKD-P00607

Accuracy



Precision is measured at 2% of the rated output torque and is a maximum value at every point on the output shaft for the life of the gearhead.

GM-P accuracy: ≤15 arcmin
GM-H accuracy: ≤5 arcmin

Radial Load Calculation

$$F_r = \frac{2000 \times T \times f_z}{d}$$

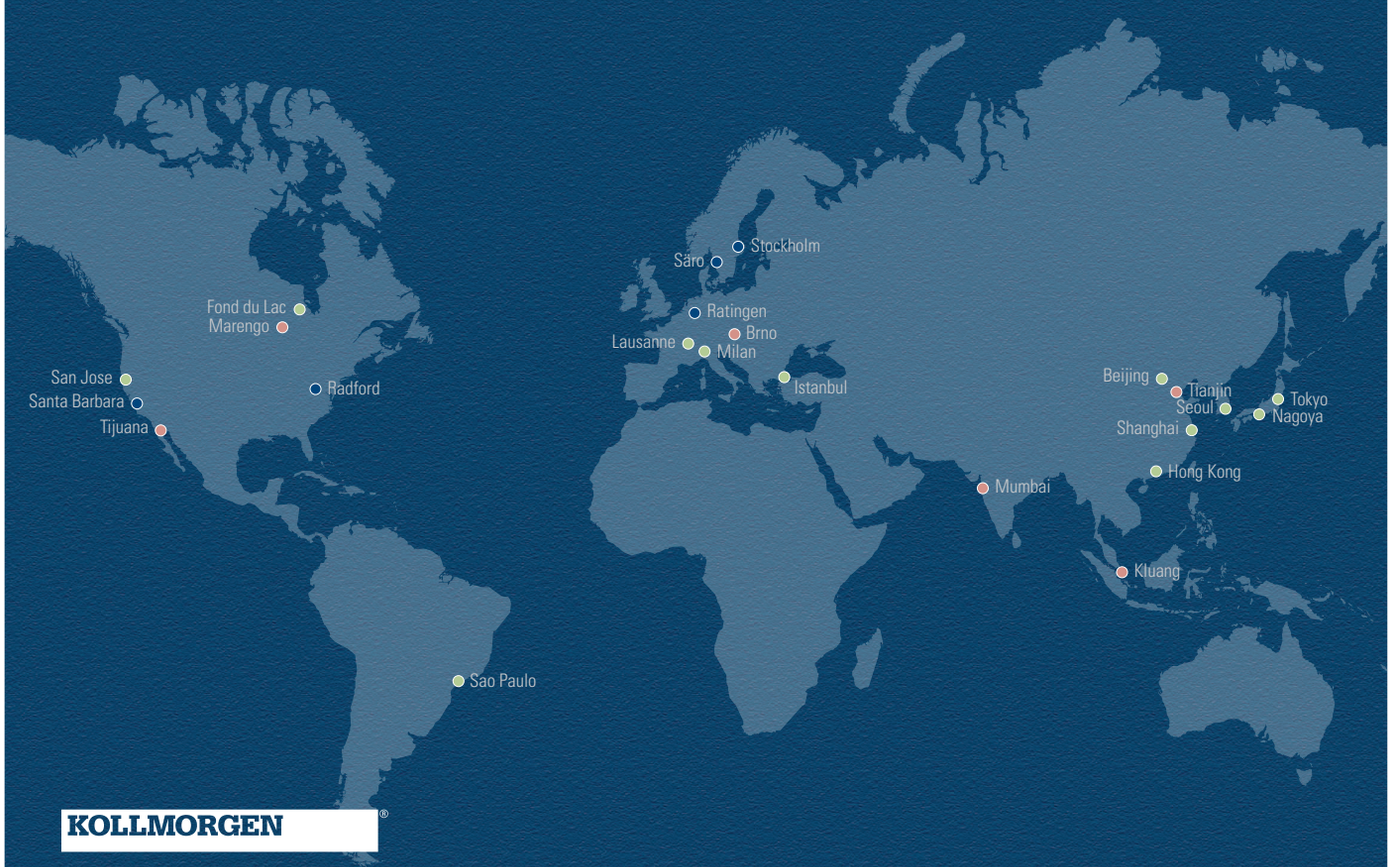
F_r	Radial force
T	Gearmotor output torque [Nm]
f_z	Transmission factor (see below)
d	Pitch circle diameter of the drive element [mm]

Transmission factor	f_z
Chain	1
Pinion	1,25
Belt	2

About Kollmorgen

Kollmorgen is a leading provider of motion systems and components for machine builders. Through world-class knowledge in motion, industry-leading quality and deep expertise in linking and integrating standard and custom products, Kollmorgen delivers breakthrough solutions that are unmatched in performance, reliability and ease-of-use, giving machine builders an irrefutable marketplace advantage.

For assistance with your application needs visit www.kollmorgen.com for a global contact list.



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