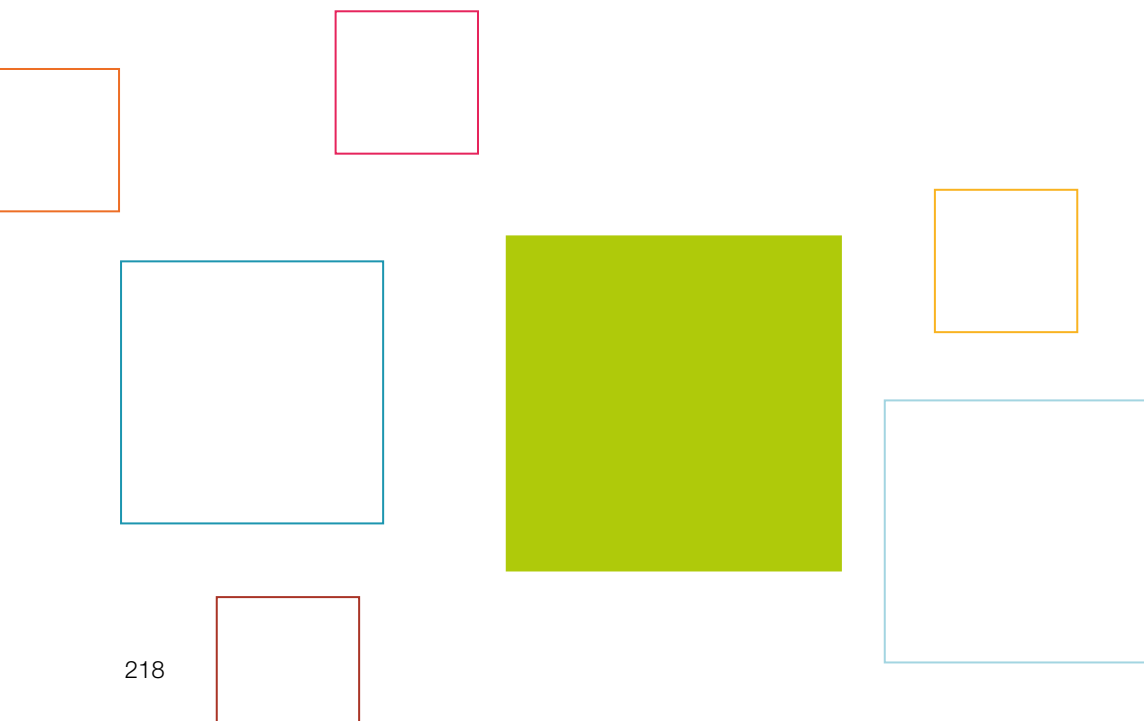


alpha Value Line

BEVEL GEARBOXES

NPK / NPLK / NPSK / NPTK / NPRK

The bevel gears of the alpha Value Line are the fitting solution for situations with limited mounting space. The flexible output shapes and gear ratios in combination with the extremely compact angle section offer comprehensive design freedom.



NPK



NPLK



NPTK



NPSK



NPRK



Bevel Gearboxes
Value Line

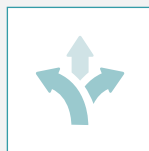
NPK / NPLK / NPSK / NPTK / NPRK

– Individual Talents



Total flexibility, even in limited space. The bevel gearboxes of the alpha Value Line combine the variety of the NP series with a compact and powerful bevel gear stage. This permits maximum flexibility through the configuration of five different output versions.

PRODUCT HIGHLIGHTS



High flexibility

Various output versions offer design freedom tailored to individual requirements.



High economy

The gearboxes of the alpha Value Line are very economical to purchase, unbeatably efficient in operation, and maintenance free over their entire service life.



Fast sizing

Efficient online sizing within seconds in the SIZING ASSISTANT on the basis of the application data or the motor.



NPSK – bevel gearbox with SP⁺ output geometry



NPLK – bevel gearbox with reinforced bearings and B14 output geometry



More information about the alpha Value Line: simply scan the QR code using your smartphone.

<https://alpha.wittenstein.de/en-en/alpha-value-line/>



A Design

- The elegant design underlines the dynamics of the gearbox and sets new standards on the market

B Compactness

- The extremely compact design of the angle section enables use in very confined installation spaces

C Various output shapes

- Five output variants of the NPK series available: including B5 flange mounting, output flange, etc.
- Higher external forces possible with NPLK, NPSK, and NPRK

D High ratio variation

- Large number of ratios ($i=3$ to $i=100$)
- Available in the common binary ratios

E Flexible motor connection

- Mounting of all common servo motors by means of a flexible and screw-fastened adapter plate
- Large number of motor shaft diameters connectable



NPTK – bevel gearbox with TP+ output geometry



NPRK – bevel gearbox with slot holes for optimal rack and pinion mounting

NPK 005 MF 2-/3-stage

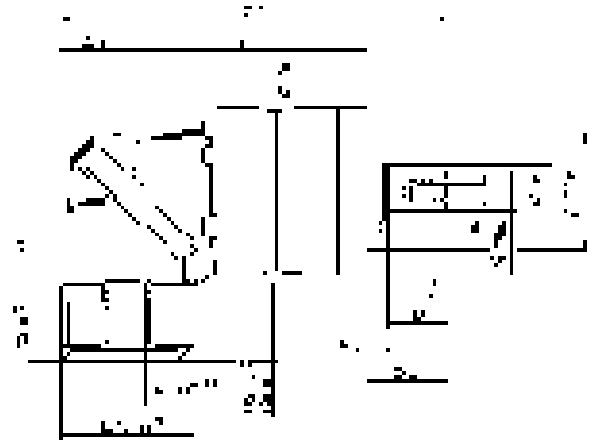
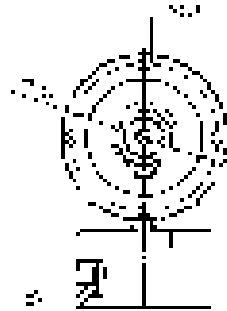
			2-stage					3-stage									
Ratio	i		4	5	7	8	10	16	20	25	28	35	40	50	64	70	100
Max. torque ^{a) b) e)}	T_{2a}	Nm	14	17	22	21	21	18	18	22	18	22	18	22	21	22	21
		in.lb	124	150	195	186	186	159	159	195	159	195	159	195	186	195	186
Max. acceleration torque ^{e)} (max. 1000 cycles per hour)	T_{2B}	Nm	6.8	8.5	12	13	13	11	11	13	11	13	11	13	13	13	13
		in.lb	60	75	106	115	115	97	97	115	97	115	97	115	115	115	115
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	17	21	26	26	26	26	26	26	26	26	26	26	26	26	26
		in.lb	150	186	230	230	230	230	230	230	230	230	230	230	230	230	230
Permitted average input speed ^{d)} (at T_{2N} and 20 °C ambient temperature)	n_{1N}	rpm	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	0.28	0.28	0.28	0.28	0.28	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
		in.lb	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Max. backlash	j_1	arcmin	≤ 15					≤ 15									
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	0.9	0.9	0.9	0.9	0.9	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
		in.lb/arcmin	8	8	8	8	8	11	11	11	11	11	11	11	11	11	11
Max. axial force ^{c)}	F_{2AMax}	N	700					700									
		lb _f	158					158									
Max. lateral force ^{c)}	F_{2QMax}	N	800					800									
		lb _f	180					180									
Max. tilting moment	M_{2KMMax}	Nm	23					23									
		in.lb	204					204									
Efficiency at full load	η	%	95					94									
Service life	L_n	h	> 20000					> 20000									
Weight (incl. standard adapter plate)	m	kg	1.1					1.3									
		lb _m	2.4					2.9									
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 68					≤ 68									
Max. permitted housing temperature		°C	+90					+90									
		°F	+194					+194									
Ambient temperature		°C	0 to +40					0 to +40									
		°F	+32 to +104					+32 to +104									
Lubrication			Lubricated for life														
Direction of rotation			In- and output same direction														
Protection class			IP 64														
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0005BA012.000-X														
Bore diameter of coupling on the application side		mm	X = 004.000 - 012.700														
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	B	11	J_1	kgcm ²	0.1	0.1	0.1	0.1	0.1	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
				10 ⁻³ in.lb.s ²	0.09	0.09	0.09	0.09	0.09	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

- ^{a)} Valid for torque transmission only
- ^{b)} Valid for standard clamping hub diameter
- ^{c)} Refers to center of the output shaft or flange
- ^{d)} Please reduce input speed at higher ambient temperatures
- ^{e)} Valid for: Smooth shaft

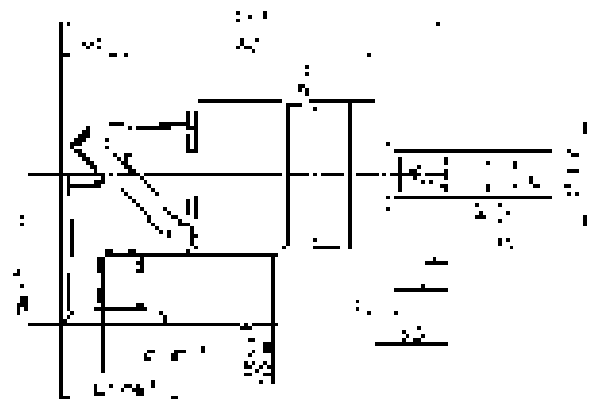
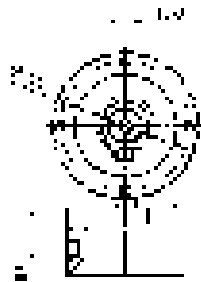
2-stage

up to 11⁴⁾ (B)⁵⁾
clamping hub
diameter



3-stage

up to 11⁴⁾ (B)⁵⁾
clamping hub
diameter



Motor shaft diameter [mm]

Other output variants

Shaft with key



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPK 015 MF 2-stage

			2-stage							
Ratio	i		3	4	5	7	8	10		
Max. torque ^{a) b) e)}	T_{2a}	Nm	33	44	55	64	56	56		
		in.lb	292	389	487	566	496	496		
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	16	21	27	37	35	35		
		in.lb	142	186	239	327	310	310		
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	41	55	69	80	80	80		
		in.lb	363	487	611	708	708	708		
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	3300	3300	3300	3300	3300	3300		
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000		
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	0.54	0.54	0.54	0.54	0.54	0.54		
		in.lb	4.8	4.8	4.8	4.8	4.8	4.8		
Max. backlash	j_t	arcmin	≤ 15							
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	2.4	2.4	2.4	2.4	2.4	2.4		
		in.lb/arcmin	21	21	21	21	21	21		
Max. axial force ^{c)}	F_{2AMax}	N	1550							
		lb _f	349							
Max. lateral force ^{c)}	F_{2OMax}	N	1700							
		lb _f	383							
Max. tilting moment	M_{2KMMax}	Nm	72							
		in.lb	637							
Efficiency at full load	η	%	95							
Service life	L_h	h	> 20000							
Weight (incl. standard adapter plate)	m	kg	2.3							
		lb _m	5.1							
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 70							
Max. permitted housing temperature		°C	+90							
		°F	+194							
Ambient temperature		°C	0 to +40							
		°F	+32 to +104							
Lubrication			Lubricated for life							
Direction of rotation			In- and output same direction							
Protection class			IP 64							
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0060BA016.000-X							
Bore diameter of coupling on the application side		mm	X = 012.000 - 032.000							
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	C	14	J_1	kgcm ²	0.31	0.31	0.31	0.31	0.31	0.31
				10 ⁻³ in.lb.s ²	0.27	0.27	0.27	0.27	0.27	0.27

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

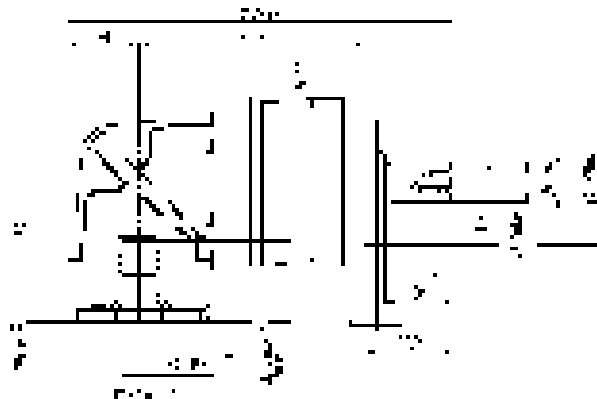
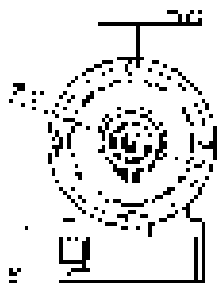
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

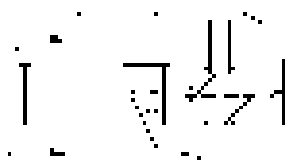
2-stage

up to 14⁴⁾ (C)⁵⁾
clamping hub diameter



Other output variants

Shaft with key



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPK 015 MF 3-stage

			3-stage														
Ratio	i		12	15	16	20	25	28	30	32	35	40	50	64	70	100	
Max. torque ^{a) b) e)}	T_{2a}	Nm	42	51	56	56	64	56	51	56	64	56	64	56	64	56	
		in.lb	372	451	496	496	566	496	451	496	566	496	566	496	566	496	496
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	20	25	27	34	40	35	31	35	40	35	40	35	40	35	
		in.lb	177	221	239	301	354	310	274	310	354	310	354	310	354	310	
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	52	65	70	80	80	80	80	80	80	80	80	80	80	80	
		in.lb	460	575	620	708	708	708	708	708	708	708	708	708	708	708	
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	
Mean no load running torque ^{b)} (at $n_1 = 3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	
		in.lb	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	
Max. backlash	j_t	arcmin	≤ 12														
Torsional rigidity ^{b)}	C_{121}	Nm/arcmin	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
		in.lb/arcmin	27	27	27	27	27	27	27	27	27	27	27	27	27	27	
Max. axial force ^{c)}	F_{2AMax}	N	1550														
		lb _f	349														
Max. lateral force ^{c)}	F_{2QMMax}	N	1700														
		lb _f	383														
Max. tilting moment	M_{2KMMax}	Nm	72														
		in.lb	637														
Efficiency at full load	η	%	94														
Service life	L_h	h	> 20000														
Weight (incl. standard adapter plate)	m	kg	2.3														
		lb _m	5.1														
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 68														
Max. permitted housing temperature		°C	+90														
		°F	+194														
Ambient temperature		°C	0 to +40														
		°F	+32 to +104														
Lubrication			Lubricated for life														
Direction of rotation			In- and output same direction														
Protection class			IP 64														
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0060BA016.000-X														
Bore diameter of coupling on the application side		mm	X = 012.000 - 032.000														
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	B	11	J_1	kgcm ²	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
				10 ⁻³ in.lb.s ²	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

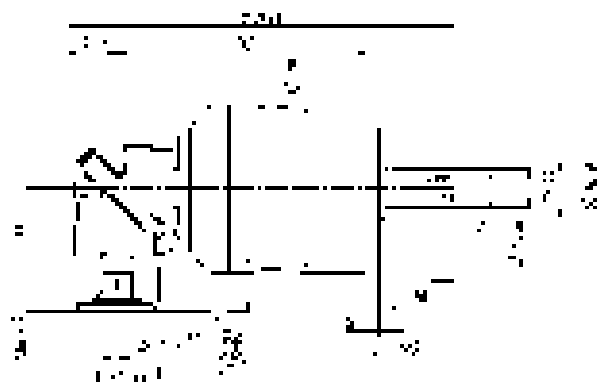
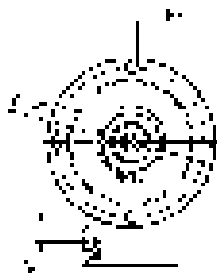
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

3-stage

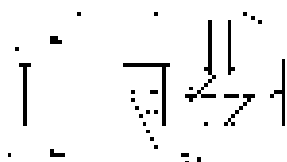
up to 11⁴⁾ (B)⁵⁾
clamping hub diameter



Bevel Gearboxes
Value Line

Other output variants

Shaft with key



Non-tolerated dimensions are nominal dimensions

- ¹⁾ Check motor shaft fit
- ²⁾ Min. / Max. permissible motor shaft length
Longer motor shafts are possible, please contact alpha
- ³⁾ The dimensions depend on the motor
- ⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm
- ⁵⁾ Standard clamping hub diameter

NPK 025 MF 2-stage

			2-stage						
Ratio	i		3	4	5	7	8	10	
Max. torque ^{a) b) e)}	T_{2a}	Nm	60	80	100	140	144	144	
		in.lb	531	708	885	1239	1275	1275	
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	35	47	58	82	90	90	
		in.lb	310	416	513	726	797	797	
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	90	120	150	190	190	190	
		in.lb	797	1062	1328	1682	1682	1682	
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	3000	3000	3000	3000	3000	3000	
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	0.98	0.98	0.98	0.98	0.98	0.98	
		in.lb	8.7	8.7	8.7	8.7	8.7	8.7	
Max. backlash	j_t	arcmin	≤ 15						
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	6.2	6.2	6.2	6.2	6.2	6.2	
		in.lb/arcmin	55	55	55	55	55	55	
Max. axial force ^{c)}	F_{2AMax}	N	1900						
		lb _f	428						
Max. lateral force ^{c)}	F_{2OMax}	N	2800						
		lb _f	630						
Max. tilting moment	M_{2KMMax}	Nm	137						
		in.lb	1213						
Efficiency at full load	η	%	95						
Service life	L_h	h	> 20000						
Weight (incl. standard adapter plate)	m	kg	4.9						
		lb _m	11						
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 70						
Max. permitted housing temperature		°C	+90						
		°F	+194						
Ambient temperature		°C	0 to +40						
		°F	+32 to +104						
Lubrication			Lubricated for life						
Direction of rotation			In- and output same direction						
Protection class			IP 64						
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0060BA022.000-X						
Bore diameter of coupling on the application side		mm	X = 012.000 - 032.000						
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	E 19	J_1	kgcm ²	1.2	1.2	1.2	1.2	1.2	1.2
			10 ⁻³ in.lb.s ²	1.1	1.1	1.1	1.1	1.1	1.1

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

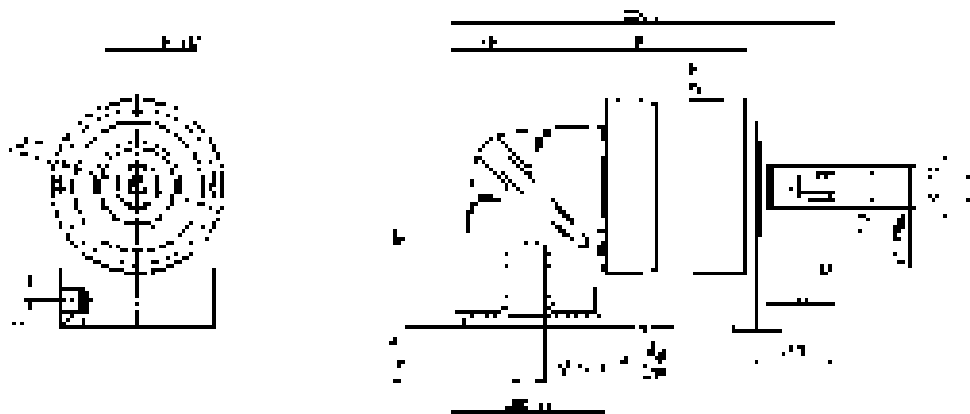
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

2-stage

up to 19⁴⁾ (E)⁵⁾
clamping hub diameter



Other output variants

Shaft with key



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPK 025 MF 3-stage

			3-stage															
Ratio	i		9	12	15	16	20	25	28	30	32	35	40	50	64	70	100	
Max. torque ^{a) b) e)}	T_{2a}	Nm	99	128	128	152	152	160	152	128	152	160	152	160	144	160	144	
		in.lb	876	1133	1133	1345	1345	1416	1345	1133	1345	1416	1345	1416	1275	1416	1275	
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	48	65	80	86	95	100	95	80	95	100	95	100	90	100	90	90
		in.lb	425	575	708	761	841	885	841	708	841	885	841	885	797	885	797	
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	124	166	190	190	190	190	190	190	190	190	190	190	190	190	190	190
		in.lb	1097	1469	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	
Mean no load running torque ^{b)} (at $n_1 = 3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	
		in.lb	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	
Max. backlash	j_t	arcmin	≤ 13															
Torsional rigidity ^{b)}	C_{121}	Nm/arcmin	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	
		in.lb/arcmin	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	
Max. axial force ^{c)}	F_{2AMax}	N	1900															
		lb _f	428															
Max. lateral force ^{c)}	F_{2QMax}	N	2800															
		lb _f	630															
Max. tilting moment	M_{2KMMax}	Nm	137															
		in.lb	1213															
Efficiency at full load	η	%	94															
Service life	L_h	h	> 20000															
Weight (incl. standard adapter plate)	m	kg	4.5															
		lb _m	9.9															
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 70															
Max. permitted housing temperature		°C	+90															
		°F	+194															
Ambient temperature		°C	0 to +40															
		°F	+32 to +104															
Lubrication			Lubricated for life															
Direction of rotation			In- and output same direction															
Protection class			IP 64															
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0060BA022.000-X															
Bore diameter of coupling on the application side		mm	X = 012.000 - 032.000															
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	C	14	J_1	kgcm ²	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	
				10 ⁻³ in.lb.s ²	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

3-stage

up to 14⁴⁾ (C)⁵⁾
clamping hub diameter



Bevel Gearboxes
Value Line

Other output variants

Shaft with key



- Non-tolerated dimensions are nominal dimensions
- ¹⁾ Check motor shaft fit
- ²⁾ Min. / Max. permissible motor shaft length
Longer motor shafts are possible, please contact alpha
- ³⁾ The dimensions depend on the motor
- ⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm
- ⁵⁾ Standard clamping hub diameter

NPK 035 MF 2-stage

			2-stage						
Ratio	i		3	4	5	7	8	10	
Max. torque ^{a) b) e)}	T_{2a}	Nm	150	200	250	350	352	352	
		in.lb	1328	1770	2213	3098	3115	3115	
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	93	124	155	217	220	220	
		in.lb	823	1097	1372	1921	1947	1947	
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	238	318	397	500	500	500	
		in.lb	2106	2815	3514	4425	4425	4425	
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	2000	2000	2000	2000	2000	2000	
Max. input speed	n_{1Max}	rpm	4500	4500	4500	4500	4500	4500	
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	3.5	3.5	3.5	3.5	3.5	3.5	
		in.lb	31	31	31	31	31	31	
Max. backlash	j_t	arcmin	≤ 13						
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	16	16	16	16	16	16	
		in.lb/arcmin	142	142	142	142	142	142	
Max. axial force ^{c)}	F_{2AMax}	N	4000						
		lb _f	900						
Max. lateral force ^{c)}	F_{2OMax}	N	5000						
		lb _f	1125						
Max. tilting moment	M_{2KMMax}	Nm	345						
		in.lb	3054						
Efficiency at full load	η	%	95						
Service life	L_h	h	> 20000						
Weight (incl. standard adapter plate)	m	kg	11						
		lb _m	24						
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 74						
Max. permitted housing temperature		°C	+90						
		°F	+194						
Ambient temperature		°C	0 to +40						
		°F	+32 to +104						
Lubrication			Lubricated for life						
Direction of rotation			In- and output same direction						
Protection class			IP 64						
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0150BA032.000-X						
Bore diameter of coupling on the application side		mm	X = 019.000 - 036.000						
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	H 28	J_1	kgcm ²	5.3	5.3	5.3	5.3	5.3	5.3
			10 ⁻³ in.lb.s ²	4.7	4.7	4.7	4.7	4.7	4.7

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

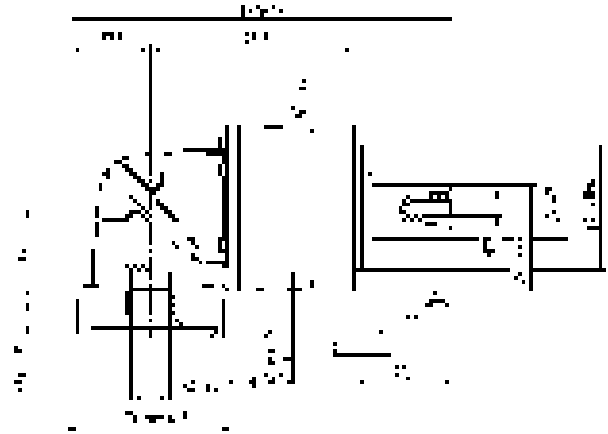
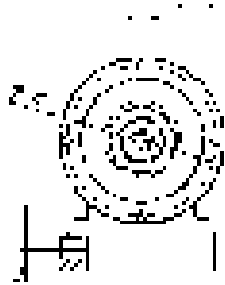
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

2-stage

up to 28⁴⁾ (H)⁵⁾
clamping hub diameter



Other output variants

Shaft with key



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPK 035 MF 3-stage

			3-stage														
Ratio	i		9	12	15	16	20	25	28	30	32	35	40	50	64	70	100
Max. torque ^{a) b) e)}	T_{2a}	Nm	180	240	300	320	400	400	408	320	408	400	408	400	352	400	352
		in.lb	1593	2124	2655	2832	3540	3540	3611	2832	3611	3540	3611	3540	3115	3540	3115
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	105	141	176	188	235	250	255	200	255	250	255	250	220	250	220
		in.lb	929	1248	1558	1664	2080	2213	2257	1770	2257	2213	2257	2213	1947	2213	1947
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	270	361	451	481	500	500	500	500	500	500	500	500	500	500	500
		in.lb	2390	3195	3992	4257	4425	4425	4425	4425	4425	4425	4425	4425	4425	4425	4425
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		in.lb	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
Max. backlash	j_t	arcmin	≤ 13														
Torsional rigidity ^{b)}	C_{121}	Nm/arcmin	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
		in.lb/arcmin	168	168	168	168	168	168	168	168	168	168	168	168	168	168	168
Max. axial force ^{c)}	F_{2AMax}	N	4000														
		lb _f	900														
Max. lateral force ^{c)}	F_{2QMMax}	N	5000														
		lb _f	1125														
Max. tilting moment	M_{2KMMax}	Nm	345														
		in.lb	3054														
Efficiency at full load	η	%	94														
Service life	L_h	h	> 20000														
Weight (incl. standard adapter plate)	m	kg	11														
		lb _m	24														
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 70														
Max. permitted housing temperature		°C	+90														
		°F	+194														
Ambient temperature		°C	0 to +40														
		°F	+32 to +104														
Lubrication			Lubricated for life														
Direction of rotation			In- and output same direction														
Protection class			IP 64														
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0150BA032.000-X														
Bore diameter of coupling on the application side		mm	X = 019.000 - 036.000														
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	E	19	J_1	kgcm ²	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
				10 ⁻³ in.lb.s ²	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

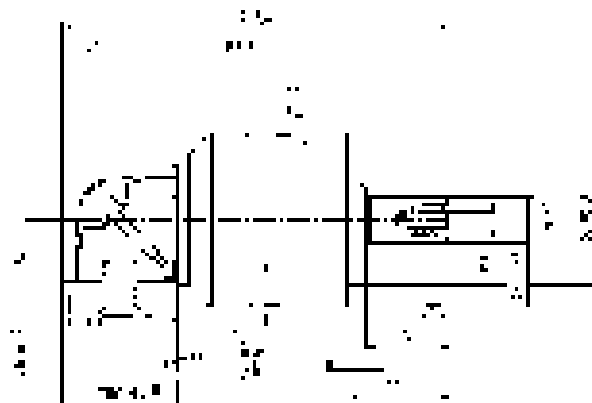
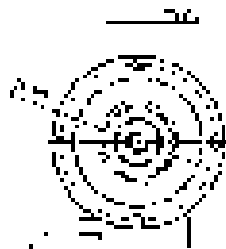
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

3-stage

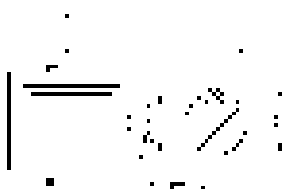
up to 19⁴⁾ (E)⁵⁾
clamping hub diameter



Bevel Gearboxes
Value Line

Other output variants

Shaft with key



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated

by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPK 045 MF 2-/3-stage

			2-stage			3-stage						
Ratio	i		5	8	10	25	32	50	64	100		
Max. torque ^{a) b) e)}	T_{2a}	Nm	500	640	640	700	640	700	640	640		
		in.lb	4425	5665	5665	6196	5665	6196	5665	5665		
Max. acceleration torque ^{e)} (max. 1000 cycles per hour)	T_{2B}	Nm	399	400	400	500	400	500	400	400		
		in.lb	3531	3540	3540	4425	3540	4425	3540	3540		
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	1000	1000	1000	1000	1000	1000	1000	1000		
		in.lb	8851	8851	8851	8851	8851	8851	8851	8851		
Permitted average input speed ^{d)} (at T_{2N} and 20 °C ambient temperature)	n_{1N}	rpm	1600	1600	1600	2000	2000	2000	2000	2000		
Max. input speed	n_{1Max}	rpm	4000	4000	4000	4500	4500	4500	4500	4500		
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	6.9	6.9	6.9	3.6	3.6	3.6	3.6	3.6		
		in.lb	61	61	61	32	32	32	32	32		
Max. backlash	j_i	arcmin	≤ 11			≤ 11						
Torsional rigidity ^{b)}	C_{121}	Nm/arcmin	48	48	48	54	54	54	54	54		
		in.lb/arcmin	425	425	425	478	478	478	478	478		
Max. axial force ^{c)}	F_{2AMax}	N	6000			6000						
		lb _f	1350			1350						
Max. lateral force ^{c)}	F_{2QMMax}	N	8000			8000						
		lb _f	1800			1800						
Max. tilting moment	M_{2KMMax}	Nm	704			704						
		in.lb	6231			6231						
Efficiency at full load	η	%	95			94						
Service life	L_n	h	> 20000			> 20000						
Weight (incl. standard adapter plate)	m	kg	24			21						
		lb _m	53			46						
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 78			≤ 74						
Max. permitted housing temperature		°C	+90			+90						
		°F	+194			+194						
Ambient temperature		°C	0 to +40			0 to +40						
		°F	+32 to +104			+32 to +104						
Lubrication			Lubricated for life									
Direction of rotation			In- and output same direction									
Protection class			IP 64									
Elastomer coupling (recommended product type – validate sizing with cymex®) Bore diameter of coupling on the application side			ELC-0300BA040.000-X X = 020.000 - 045.000									
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	H	28	J_1	kgcm ²	–	–	–	6.8	6.8	6.8	6.8	6.8
				10 ⁻³ in.lb.s ²	–	–	–	6	6	6	6	6
	K	38	J_1	kgcm ²	18	18	18	–	–	–	–	–
				10 ⁻³ in.lb.s ²	16	16	16	–	–	–	–	–

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

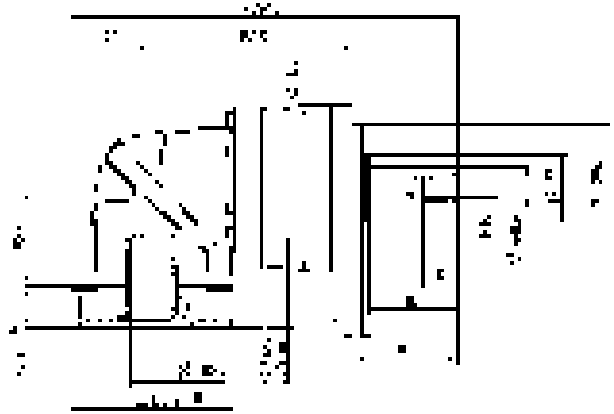
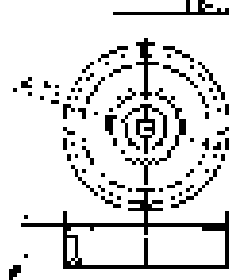
^{c)} Refers to center of the output shaft or flange

^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

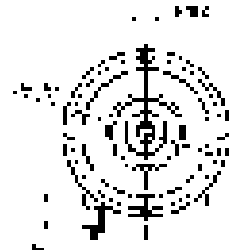
2-stage

up to 38⁴⁾ (K)⁵⁾
clamping hub
diameter



3-stage

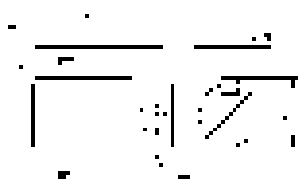
up to 28⁴⁾ (H)⁵⁾
clamping hub
diameter



Motor shaft diameter [mm]

Other output variants

Shaft with key



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPLK 015 MF 2-stage

			2-stage							
Ratio	i		3	4	5	7	8	10		
Max. torque ^{a) b) e)}	T_{2a}	Nm	33	44	55	64	56	56		
		in.lb	292	389	487	566	496	496		
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	16	21	27	37	35	35		
		in.lb	142	186	239	327	310	310		
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	41	55	69	80	80	80		
		in.lb	363	487	611	708	708	708		
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	2900	3100	3300	3300	3300	3300		
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000		
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	1.2	1.2	1.2	1.2	1.2	1.2		
		in.lb	11	11	11	11	11	11		
Max. backlash	j_t	arcmin	≤ 15							
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	2.4	2.4	2.4	2.4	2.4	2.4		
		in.lb/arcmin	21	21	21	21	21	21		
Max. axial force ^{c)}	F_{2AMax}	N	2400							
		lb _f	540							
Max. lateral force ^{c)}	F_{2OMax}	N	2800							
		lb _f	630							
Max. tilting moment	M_{2KMMax}	Nm	152							
		in.lb	1345							
Efficiency at full load	η	%	95							
Service life	L_h	h	> 20000							
Weight (incl. standard adapter plate)	m	kg	2.3							
		lb _m	5.1							
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 70							
Max. permitted housing temperature		°C	+90							
		°F	+194							
Ambient temperature		°C	0 to +40							
		°F	+32 to +104							
Lubrication			Lubricated for life							
Direction of rotation			In- and output same direction							
Protection class			IP 64							
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0060BA016.000-X							
Bore diameter of coupling on the application side		mm	X = 012.000 - 032.000							
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	C	14	J_1	kgcm ²	0.32	0.32	0.32	0.32	0.32	0.32
				10 ⁻³ in.lb.s ²	0.28	0.28	0.28	0.28	0.28	0.28

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

2-stage

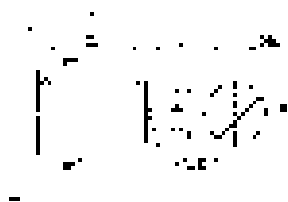
up to 14⁴⁾ (C)⁵⁾
clamping hub
diameter



Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPLK 015 MF 3-stage

			3-stage													
Ratio	i		12	15	16	20	25	28	30	32	35	40	50	64	70	100
Max. torque ^{a) b) e)}	T_{2a}	Nm	42	51	56	56	64	56	51	56	64	56	64	56	64	56
		in.lb	372	451	496	496	566	496	451	496	566	496	566	496	566	496
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	20	25	27	34	40	35	31	35	40	35	40	35	40	35
		in.lb	177	221	239	301	354	310	274	310	354	310	354	310	354	310
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	52	65	70	80	80	80	80	80	80	80	80	80	80	80
		in.lb	460	575	620	708	708	708	708	708	708	708	708	708	708	708
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Mean no load running torque ^{b)} (at $n_1 = 3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
		in.lb	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max. backlash	j_t	arcmin	≤ 12													
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		in.lb/arcmin	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Max. axial force ^{c)}	F_{2AMax}	N	2400													
		lb _f	540													
Max. lateral force ^{c)}	F_{2QMMax}	N	2800													
		lb _f	630													
Max. tilting moment	M_{2KMMax}	Nm	152													
		in.lb	1345													
Efficiency at full load	η	%	94													
Service life	L_h	h	> 20000													
Weight (incl. standard adapter plate)	m	kg	2.4													
		lb _m	5.3													
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 68													
Max. permitted housing temperature		°C	+90													
		°F	+194													
Ambient temperature		°C	0 to +40													
		°F	+32 to +104													
Lubrication			Lubricated for life													
Direction of rotation			In- and output same direction													
Protection class			IP 64													
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0060BA016.000-X													
Bore diameter of coupling on the application side		mm	X = 012.000 - 032.000													
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	B	11	J_1	kgcm ²	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
				10 ⁻³ in.lb.s ²	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

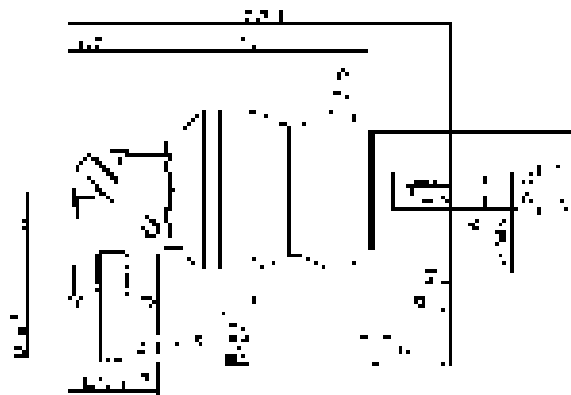
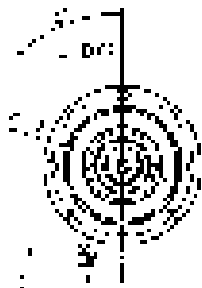
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

3-stage

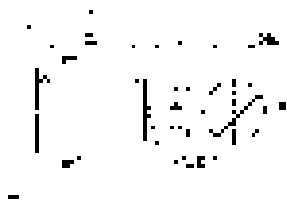
up to 11⁴⁾ (B)⁵⁾
clamping hub diameter



Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated

by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPLK 025 MF 2-stage

			2-stage						
Ratio	i		3	4	5	7	8	10	
Max. torque ^{a) b) e)}	T_{2a}	Nm	60	80	100	140	144	144	
		in.lb	531	708	885	1239	1275	1275	
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	35	47	58	82	90	90	
		in.lb	310	416	513	726	797	797	
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	90	120	150	190	190	190	
		in.lb	797	1062	1328	1682	1682	1682	
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	2700	2900	3000	3000	3000	3000	
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	2.4	2.4	2.4	2.4	2.4	2.4	
		in.lb	21	21	21	21	21	21	
Max. backlash	j_t	arcmin	≤ 15						
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	6.2	6.2	6.2	6.2	6.2	6.2	
		in.lb/arcmin	55	55	55	55	55	55	
Max. axial force ^{c)}	F_{2AMax}	N	3350						
		lb _f	754						
Max. lateral force ^{c)}	F_{2OMax}	N	4200						
		lb _f	945						
Max. tilting moment	M_{2KMMax}	Nm	236						
		in.lb	2089						
Efficiency at full load	η	%	95						
Service life	L_h	h	> 20000						
Weight (incl. standard adapter plate)	m	kg	5						
		lb _m	11						
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 70						
Max. permitted housing temperature		°C	+90						
		°F	+194						
Ambient temperature		°C	0 to +40						
		°F	+32 to +104						
Lubrication			Lubricated for life						
Direction of rotation			In- and output same direction						
Protection class			IP 64						
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0060BA022.000-X						
Bore diameter of coupling on the application side		mm	X = 012.000 - 032.000						
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	E 19	J_1	kgcm ²	1.2	1.2	1.2	1.2	1.2	1.2
			10 ⁻³ in.lb.s ²	1.1	1.1	1.1	1.1	1.1	1.1

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

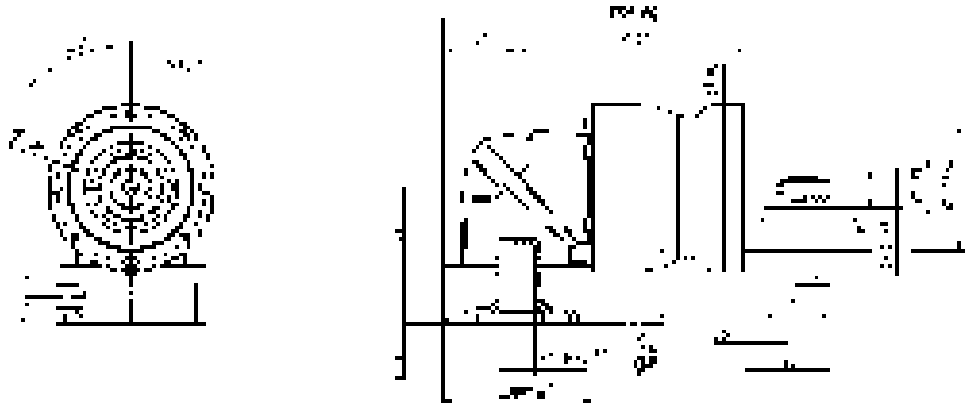
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

2-stage

up to 19⁴⁾ (E)⁵⁾
clamping hub diameter

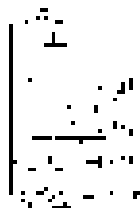


Bevel Gearboxes
Value Line

Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated

by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPLK 025 MF 3-stage

			3-stage														
Ratio	i		9	12	15	16	20	25	28	30	32	35	40	50	64	70	100
Max. torque ^{a) b) e)}	T_{2a}	Nm	99	128	128	152	152	160	152	128	152	160	152	160	144	160	144
		in.lb	876	1133	1133	1345	1345	1416	1345	1133	1345	1416	1345	1416	1275	1416	1275
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	48	65	80	86	95	100	95	80	95	100	95	100	90	100	90
		in.lb	425	575	708	761	841	885	841	708	841	885	841	885	797	885	797
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	124	166	190	190	190	190	190	190	190	190	190	190	190	190	190
		in.lb	1097	1469	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	2900	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
		in.lb	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	
Max. backlash	j_t	arcmin	≤ 13														
Torsional rigidity ^{b)}	C_{121}	Nm/arcmin	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	
		in.lb/arcmin	74	74	74	74	74	74	74	74	74	74	74	74	74	74	
Max. axial force ^{c)}	F_{2AMax}	N	3350														
		lb _f	754														
Max. lateral force ^{c)}	F_{2OMax}	N	4200														
		lb _f	945														
Max. tilting moment	M_{2KMMax}	Nm	236														
		in.lb	2089														
Efficiency at full load	η	%	94														
Service life	L_h	h	> 20000														
Weight (incl. standard adapter plate)	m	kg	4.6														
		lb _m	10														
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 70														
Max. permitted housing temperature		°C	+90														
		°F	+194														
Ambient temperature		°C	0 to +40														
		°F	+32 to +104														
Lubrication			Lubricated for life														
Direction of rotation			In- and output same direction														
Protection class			IP 64														
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0060BA022.000-X														
Bore diameter of coupling on the application side		mm	X = 012.000 - 032.000														
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	C	14	J_1	kgcm ²	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
				10 ⁻³ in.lb.s ²	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

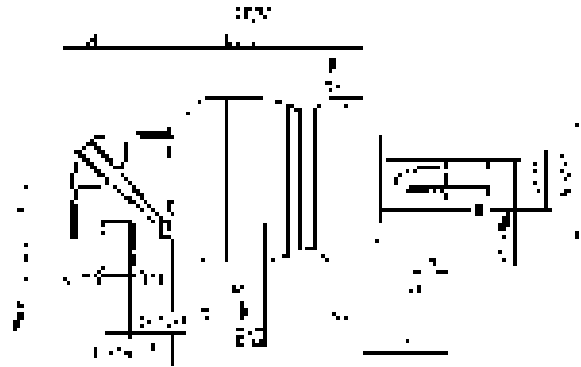
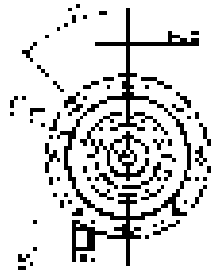
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

3-stage

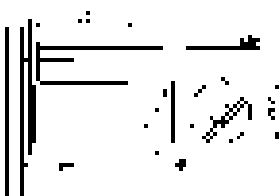
up to 14⁴⁾ (C)⁵⁾
clamping hub
diameter



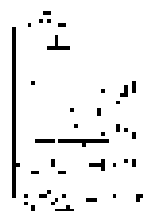
Bevel Gearboxes
Value Line

Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated

by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPLK 035 MF 2-stage

			2-stage						
Ratio	i		3	4	5	7	8	10	
Max. torque ^{a) b) e)}	T_{2a}	Nm	150	200	250	350	352	352	
		in.lb	1328	1770	2213	3098	3115	3115	
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	93	124	155	217	220	220	
		in.lb	823	1097	1372	1921	1947	1947	
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	238	318	397	500	500	500	
		in.lb	2106	2815	3514	4425	4425	4425	
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	2000	2000	2000	2000	2000	2000	
Max. input speed	n_{1Max}	rpm	4500	4500	4500	4500	4500	4500	
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	5.8	5.8	5.8	5.8	5.8	5.8	
		in.lb	51	51	51	51	51	51	
Max. backlash	j_t	arcmin	≤ 13						
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	16	16	16	16	16	16	
		in.lb/arcmin	142	142	142	142	142	142	
Max. axial force ^{c)}	F_{2AMax}	N	5650						
		lb _f	1271						
Max. lateral force ^{c)}	F_{2OMax}	N	6600						
		lb _f	1485						
Max. tilting moment	M_{2KMMax}	Nm	487						
		in.lb	4310						
Efficiency at full load	η	%	95						
Service life	L_h	h	> 20000						
Weight (incl. standard adapter plate)	m	kg	11						
		lb _m	24						
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 74						
Max. permitted housing temperature		°C	+90						
		°F	+194						
Ambient temperature		°C	0 to +40						
		°F	+32 to +104						
Lubrication			Lubricated for life						
Direction of rotation			In- and output same direction						
Protection class			IP 64						
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0150BA032.000-X						
Bore diameter of coupling on the application side		mm	X = 019.000 - 036.000						
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	H 28	J_1	kgcm ²	5.2	5.2	5.2	5.2	5.2	5.2
			10 ⁻³ in.lb.s ²	4.6	4.6	4.6	4.6	4.6	4.6

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

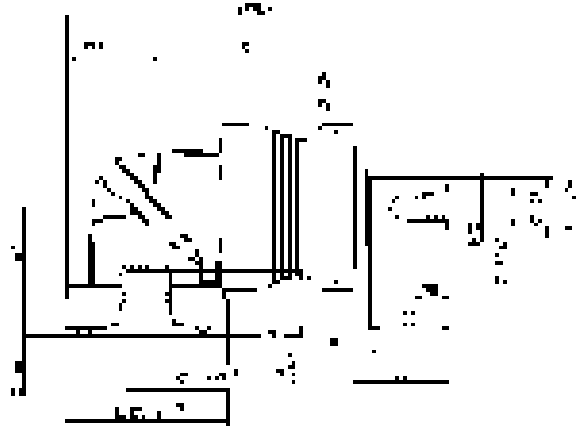
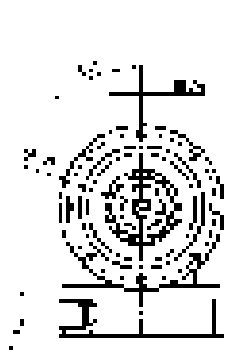
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

2-stage

up to 28⁴⁾ (H)⁵⁾
clamping hub diameter

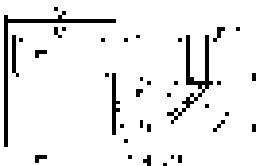


Bevel Gearboxes
Value Line

Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated

by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPLK 035 MF 3-stage

			3-stage														
Ratio	i		9	12	15	16	20	25	28	30	32	35	40	50	64	70	100
Max. torque ^{a) b) e)}	T_{2a}	Nm	180	240	300	320	400	400	408	320	408	400	408	400	352	400	352
		in.lb	1593	2124	2655	2832	3540	3540	3611	2832	3611	3540	3611	3540	3115	3540	3115
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	105	141	176	188	235	250	255	200	255	250	255	250	220	250	220
		in.lb	929	1248	1558	1664	2080	2213	2257	1770	2257	2213	2257	2213	1947	2213	1947
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	270	361	451	481	500	500	500	500	500	500	500	500	500	500	500
		in.lb	2390	3195	3992	4257	4425	4425	4425	4425	4425	4425	4425	4425	4425	4425	4425
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	2700	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
		in.lb	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Max. backlash	j_t	arcmin	≤ 13														
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
		in.lb/arcmin	168	168	168	168	168	168	168	168	168	168	168	168	168	168	168
Max. axial force ^{c)}	F_{2AMax}	N	5650														
		lb _f	1271														
Max. lateral force ^{c)}	F_{2QMMax}	N	6600														
		lb _f	1485														
Max. tilting moment	M_{2KMMax}	Nm	487														
		in.lb	4310														
Efficiency at full load	η	%	94														
Service life	L_h	h	> 20000														
Weight (incl. standard adapter plate)	m	kg	11														
		lb _m	24														
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 70														
Max. permitted housing temperature		°C	+90														
		°F	+194														
Ambient temperature		°C	0 to +40														
		°F	+32 to +104														
Lubrication			Lubricated for life														
Direction of rotation			In- and output same direction														
Protection class			IP 64														
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0150BA032.000-X														
Bore diameter of coupling on the application side		mm	X = 019.000 - 036.000														
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	E	19	J_1	kgcm ²	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
				10 ⁻³ in.lb.s ²	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

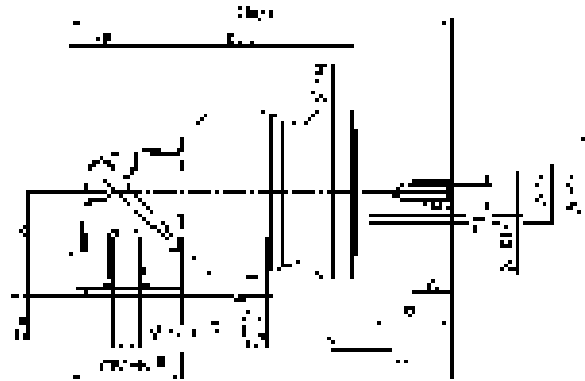
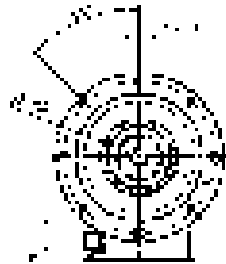
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

3-stage

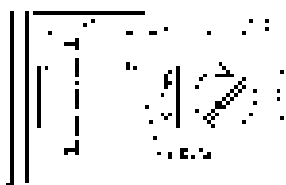
up to 19⁴⁾ (E)⁵⁾
clamping hub diameter



Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated

by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPLK 045 MF 2- / 3-stage

			2-stage			3-stage						
Ratio	i		5	8	10	25	32	50	64	100		
Max. torque ^{a) b) e)}	T_{2a}	Nm	500	640	640	700	640	700	640	640		
		in.lb	4425	5665	5665	6196	5665	6196	5665	5665		
Max. acceleration torque ^{e)} (max. 1000 cycles per hour)	T_{2B}	Nm	399	400	400	500	400	500	400	400		
		in.lb	3531	3540	3540	4425	3540	4425	3540	3540		
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	1000	1000	1000	1000	1000	1000	1000	1000		
		in.lb	8851	8851	8851	8851	8851	8851	8851	8851		
Permitted average input speed ^{d)} (at T_{2N} and 20 °C ambient temperature)	n_{1N}	rpm	1600	1600	1600	2000	2000	2000	2000	2000		
Max. input speed	n_{1Max}	rpm	4000	4000	4000	4500	4500	4500	4500	4500		
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	8.7	8.7	8.7	4.7	4.7	4.7	4.7	4.7		
		in.lb	77	77	77	42	42	42	42	42		
Max. backlash	j_l	arcmin	≤ 11			≤ 11						
Torsional rigidity ^{b)}	C_{121}	Nm/arcmin	48	48	48	54	54	54	54	54		
		in.lb/arcmin	425	425	425	478	478	478	478	478		
Max. axial force ^{c)}	F_{2AMax}	N	9870			9870						
		lb _f	2221			2221						
Max. lateral force ^{c)}	F_{2QMMax}	N	9900			9900						
		lb _f	2228			2228						
Max. tilting moment	M_{2KMMax}	Nm	952			952						
		in.lb	8426			8426						
Efficiency at full load	η	%	95			94						
Service life	L_n	h	> 20000			> 20000						
Weight (incl. standard adapter plate)	m	kg	24			22						
		lb _m	53			49						
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 78			≤ 74						
Max. permitted housing temperature		°C	+90			+90						
		°F	+194			+194						
Ambient temperature		°C	0 to +40			0 to +40						
		°F	+32 to +104			+32 to +104						
Lubrication			Lubricated for life									
Direction of rotation			In- and output same direction									
Protection class			IP 64									
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0300BA040.000-X									
Bore diameter of coupling on the application side		mm	X = 020.000 - 045.000									
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	H	28	J_1	kgcm ²	–	–	–	6.7	6.7	6.7	6.7	6.7
				10 ⁻³ in.lb.s ²	–	–	–	5.9	5.9	5.9	5.9	5.9
	K	38	J_1	kgcm ²	18	18	18	–	–	–	–	–
				10 ⁻³ in.lb.s ²	16	16	16	–	–	–	–	–

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

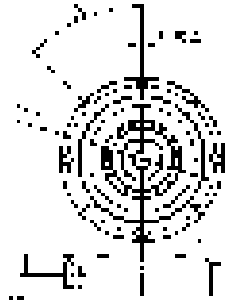
^{c)} Refers to center of the output shaft or flange

^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

2-stage

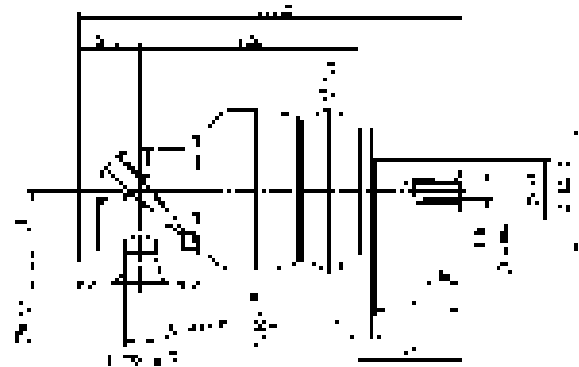
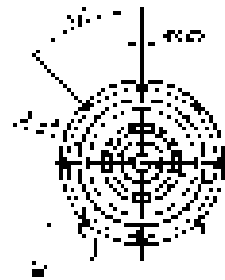
up to 38⁴⁾ (K)⁵⁾
clamping hub
diameter



Motor shaft diameter [mm]

3-stage

up to 28⁴⁾ (H)⁵⁾
clamping hub
diameter

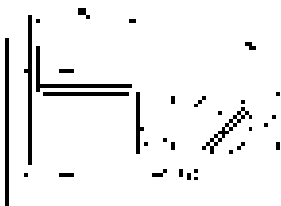


Bevel Gearboxes
Value Line

Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated

by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPSK 015 MF 2-stage

			2-stage							
Ratio	i		3	4	5	7	8	10		
Max. torque ^{a) b) e)}	T_{2a}	Nm	33	44	55	64	56	56		
		in.lb	292	389	487	566	496	496		
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	16	21	27	37	35	35		
		in.lb	142	186	239	327	310	310		
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	41	55	69	80	80	80		
		in.lb	363	487	611	708	708	708		
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	2900	3100	3300	3300	3300	3300		
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000		
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	1.2	1.2	1.2	1.2	1.2	1.2		
		in.lb	11	11	11	11	11	11		
Max. backlash	j_t	arcmin	≤ 15							
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	2.4	2.4	2.4	2.4	2.4	2.4		
		in.lb/arcmin	21	21	21	21	21	21		
Max. axial force ^{c)}	F_{2AMax}	N	2400							
		lb _f	540							
Max. lateral force ^{c)}	F_{2OMax}	N	2800							
		lb _f	630							
Max. tilting moment	M_{2KMMax}	Nm	152							
		in.lb	1345							
Efficiency at full load	η	%	95							
Service life	L_h	h	> 20000							
Weight (incl. standard adapter plate)	m	kg	2.2							
		lb _m	4.9							
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 70							
Max. permitted housing temperature		°C	+90							
		°F	+194							
Ambient temperature		°C	0 to +40							
		°F	+32 to +104							
Lubrication			Lubricated for life							
Direction of rotation			In- and output same direction							
Protection class			IP 64							
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0060BA016.000-X							
Bore diameter of coupling on the application side		mm	X = 012.000 - 032.000							
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	C	14	J_1	kgcm ²	0.32	0.32	0.32	0.32	0.32	0.32
				10 ⁻³ in.lb.s ²	0.28	0.28	0.28	0.28	0.28	0.28

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

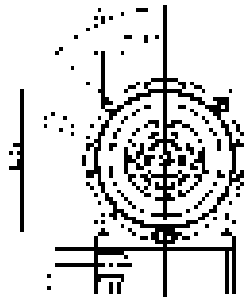
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

2-stage

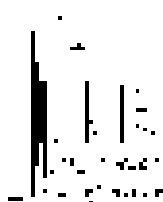
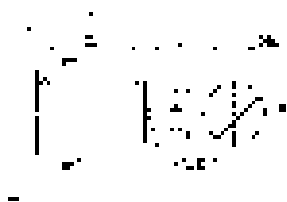
up to 14⁴⁾ (C)⁵⁾
clamping hub diameter



Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPSK 015 MF 3-stage

			3-stage													
Ratio	i		12	15	16	20	25	28	30	32	35	40	50	64	70	100
Max. torque ^{a) b) e)}	T_{2a}	Nm	42	51	56	56	64	56	51	56	64	56	64	56	64	56
		in.lb	372	451	496	496	566	496	451	496	566	496	566	496	566	496
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	20	25	27	34	40	35	31	35	40	35	40	35	40	35
		in.lb	177	221	239	301	354	310	274	310	354	310	354	310	354	310
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	52	65	70	80	80	80	80	80	80	80	80	80	80	80
		in.lb	460	575	620	708	708	708	708	708	708	708	708	708	708	708
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Mean no load running torque ^{b)} (at $n_1 = 3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
		in.lb	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max. backlash	j_t	arcmin	≤ 12													
Torsional rigidity ^{b)}	C_{121}	Nm/arcmin	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		in.lb/arcmin	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Max. axial force ^{c)}	F_{2AMax}	N	2400													
		lb _f	540													
Max. lateral force ^{c)}	F_{2QMMax}	N	2800													
		lb _f	630													
Max. tilting moment	M_{2KMMax}	Nm	152													
		in.lb	1345													
Efficiency at full load	η	%	94													
Service life	L_h	h	> 20000													
Weight (incl. standard adapter plate)	m	kg	2.3													
		lb _m	5.1													
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 68													
Max. permitted housing temperature		°C	+90													
		°F	+194													
Ambient temperature		°C	0 to +40													
		°F	+32 to +104													
Lubrication			Lubricated for life													
Direction of rotation			In- and output same direction													
Protection class			IP 64													
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0060BA016.000-X													
Bore diameter of coupling on the application side		mm	X = 012.000 - 032.000													
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	B	11	J_1	kgcm ²	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
				10 ⁻³ in.lb.s ²	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

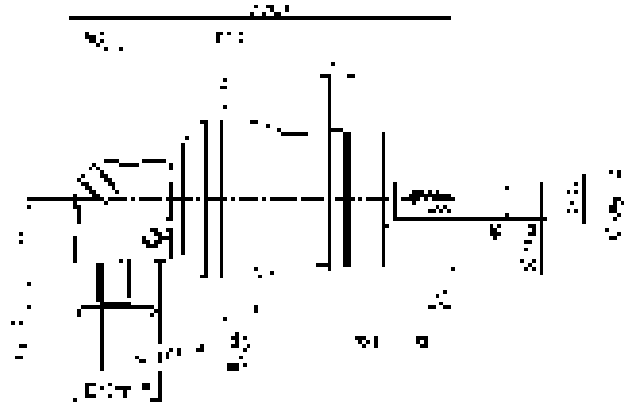
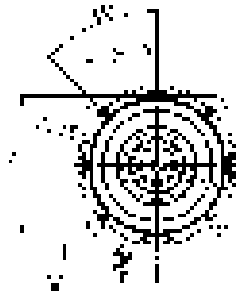
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

3-stage

up to 11⁴⁾ (B)⁵⁾
clamping hub diameter

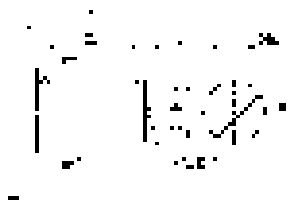


Bevel Gearboxes
Value Line

Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated

by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPSK 025 MF 2-stage

			2-stage						
Ratio	i		3	4	5	7	8	10	
Max. torque ^{a) b) e)}	T_{2a}	Nm	60	80	100	140	144	144	
		in.lb	531	708	885	1239	1275	1275	
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	35	47	58	82	90	90	
		in.lb	310	416	513	726	797	797	
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	90	120	150	190	190	190	
		in.lb	797	1062	1328	1682	1682	1682	
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	2700	2900	3000	3000	3000	3000	
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	2.4	2.4	2.4	2.4	2.4	2.4	
		in.lb	21	21	21	21	21	21	
Max. backlash	j_t	arcmin	≤ 15						
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	6.2	6.2	6.2	6.2	6.2	6.2	
		in.lb/arcmin	55	55	55	55	55	55	
Max. axial force ^{c)}	F_{2AMax}	N	3350						
		lb _f	754						
Max. lateral force ^{c)}	F_{2OMax}	N	4200						
		lb _f	945						
Max. tilting moment	M_{2KMMax}	Nm	236						
		in.lb	2089						
Efficiency at full load	η	%	95						
Service life	L_h	h	> 20000						
Weight (incl. standard adapter plate)	m	kg	4.7						
		lb _m	10						
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 70						
Max. permitted housing temperature		°C	+90						
		°F	+194						
Ambient temperature		°C	0 to +40						
		°F	+32 to +104						
Lubrication			Lubricated for life						
Direction of rotation			In- and output same direction						
Protection class			IP 64						
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0060BA022.000-X						
Bore diameter of coupling on the application side		mm	X = 012.000 - 032.000						
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	E 19	J_1	kgcm ²	1.2	1.2	1.2	1.2	1.2	1.2
			10 ⁻³ in.lb.s ²	1.1	1.1	1.1	1.1	1.1	1.1

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

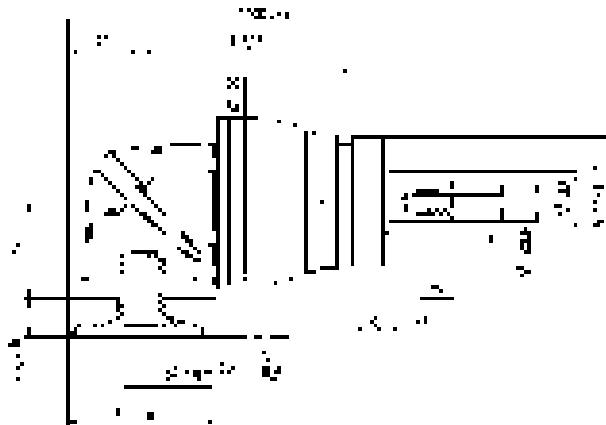
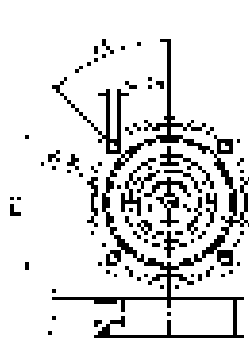
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

2-stage

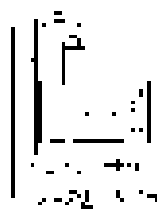
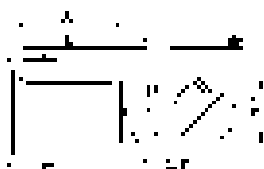
up to 19⁴⁾ (E)⁵⁾
clamping hub diameter



Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated

by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPSK 025 MF 3-stage

			3-stage														
Ratio	i		9	12	15	16	20	25	28	30	32	35	40	50	64	70	100
Max. torque ^{a) b) e)}	T_{2a}	Nm	99	128	128	152	152	160	152	128	152	160	152	160	144	160	144
		in.lb	876	1133	1133	1345	1345	1416	1345	1133	1345	1416	1345	1416	1275	1416	1275
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	48	65	80	86	95	100	95	80	95	100	95	100	90	100	90
		in.lb	425	575	708	761	841	885	841	708	841	885	841	885	797	885	797
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	124	166	190	190	190	190	190	190	190	190	190	190	190	190	190
		in.lb	1097	1469	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	2900	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
		in.lb	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
Max. backlash	j_t	arcmin	≤ 13														
Torsional rigidity ^{b)}	C_{121}	Nm/arcmin	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
		in.lb/arcmin	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
Max. axial force ^{c)}	F_{2AMax}	N	3350														
		lb _f	754														
Max. lateral force ^{c)}	F_{2OMax}	N	4200														
		lb _f	945														
Max. tilting moment	M_{2KMMax}	Nm	236														
		in.lb	2089														
Efficiency at full load	η	%	94														
Service life	L_h	h	> 20000														
Weight (incl. standard adapter plate)	m	kg	4.3														
		lb _m	9.5														
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 70														
Max. permitted housing temperature		°C	+90														
		°F	+194														
Ambient temperature		°C	0 to +40														
		°F	+32 to +104														
Lubrication			Lubricated for life														
Direction of rotation			In- and output same direction														
Protection class			IP 64														
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0060BA022.000-X														
Bore diameter of coupling on the application side		mm	X = 012.000 - 032.000														
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	C	14	J_1	kgcm ²	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
				10 ⁻³ in.lb.s ²	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

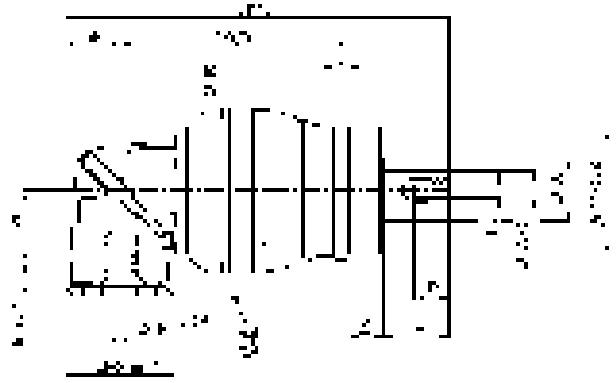
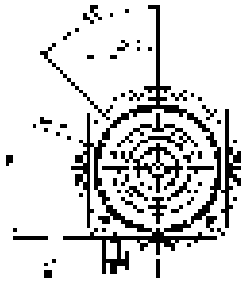
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

3-stage

up to 14⁴⁾ (C)⁵⁾
clamping hub diameter

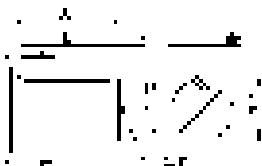


Bevel Gearboxes
Value Line

Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated

by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPSK 035 MF 2-stage

			2-stage						
Ratio	i		3	4	5	7	8	10	
Max. torque ^{a) b) e)}	T_{2a}	Nm	150	200	250	350	352	352	
		in.lb	1328	1770	2213	3098	3115	3115	
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	93	124	155	217	220	220	
		in.lb	823	1097	1372	1921	1947	1947	
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	238	318	397	500	500	500	
		in.lb	2106	2815	3514	4425	4425	4425	
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	2000	2000	2000	2000	2000	2000	
Max. input speed	n_{1Max}	rpm	4500	4500	4500	4500	4500	4500	
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	5.8	5.8	5.8	5.8	5.8	5.8	
		in.lb	51	51	51	51	51	51	
Max. backlash	j_t	arcmin	≤ 13						
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	16	16	16	16	16	16	
		in.lb/arcmin	142	142	142	142	142	142	
Max. axial force ^{c)}	F_{2AMax}	N	5650						
		lb _f	1271						
Max. lateral force ^{c)}	F_{2OMax}	N	6600						
		lb _f	1485						
Max. tilting moment	M_{2KMMax}	Nm	487						
		in.lb	4310						
Efficiency at full load	η	%	95						
Service life	L_h	h	> 20000						
Weight (incl. standard adapter plate)	m	kg	10						
		lb _m	22						
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 74						
Max. permitted housing temperature		°C	+90						
		°F	+194						
Ambient temperature		°C	0 to +40						
		°F	+32 to +104						
Lubrication			Lubricated for life						
Direction of rotation			In- and output same direction						
Protection class			IP 64						
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0150BA032.000-X						
Bore diameter of coupling on the application side		mm	X = 019.000 - 036.000						
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	H 28	J_1	kgcm ²	5.2	5.2	5.2	5.2	5.2	5.2
			10 ⁻³ in.lb.s ²	4.6	4.6	4.6	4.6	4.6	4.6

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

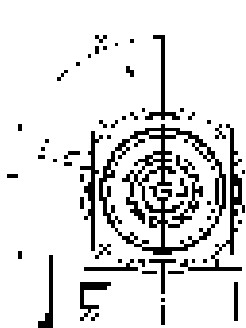
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

2-stage

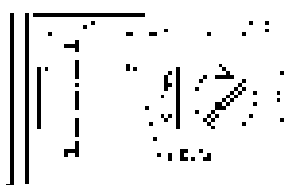
up to 28⁴⁾ (H)⁵⁾
clamping hub
diameter



Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated

by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPSK 035 MF 3-stage

			3-stage														
Ratio	i		9	12	15	16	20	25	28	30	32	35	40	50	64	70	100
Max. torque ^{a) b) e)}	T_{2a}	Nm	180	240	300	320	400	400	408	320	408	400	408	400	352	400	352
		in.lb	1593	2124	2655	2832	3540	3540	3611	2832	3611	3540	3611	3540	3115	3540	3115
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	105	141	176	188	235	250	255	200	255	250	255	250	220	250	220
		in.lb	929	1248	1558	1664	2080	2213	2257	1770	2257	2213	2257	2213	1947	2213	1947
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	270	361	451	481	500	500	500	500	500	500	500	500	500	500	500
		in.lb	2390	3195	3992	4257	4425	4425	4425	4425	4425	4425	4425	4425	4425	4425	4425
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	2700	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	
		in.lb	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
Max. backlash	j_t	arcmin	≤ 13														
Torsional rigidity ^{b)}	C_{21}	Nm/arcmin	19	19	19	19	19	19	19	19	19	19	19	19	19	19	
		in.lb/arcmin	168	168	168	168	168	168	168	168	168	168	168	168	168	168	
Max. axial force ^{c)}	F_{2AMax}	N	5650														
		lb _f	1271														
Max. lateral force ^{c)}	F_{2QMMax}	N	6600														
		lb _f	1485														
Max. tilting moment	M_{2KMMax}	Nm	487														
		in.lb	4310														
Efficiency at full load	η	%	94														
Service life	L_h	h	> 20000														
Weight (incl. standard adapter plate)	m	kg	10														
		lb _m	22														
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 70														
Max. permitted housing temperature		°C	+90														
		°F	+194														
Ambient temperature		°C	0 to +40														
		°F	+32 to +104														
Lubrication			Lubricated for life														
Direction of rotation			In- and output same direction														
Protection class			IP 64														
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0150BA032.000-X														
Bore diameter of coupling on the application side		mm	X = 019.000 - 036.000														
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	E	19	J_1	kgcm ²	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
				10 ⁻³ in.lb.s ²	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

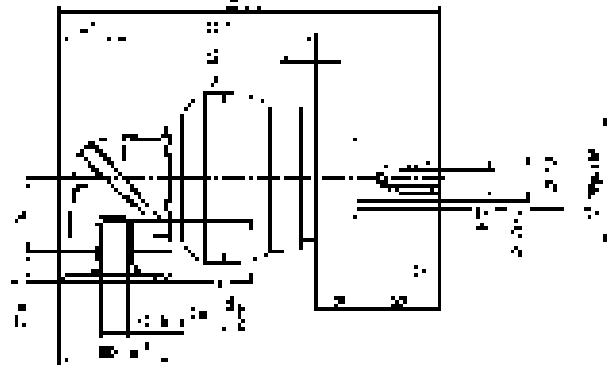
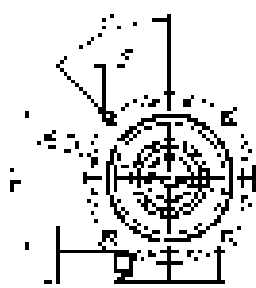
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

3-stage

up to 19⁴⁾ (E)⁵⁾
clamping hub diameter

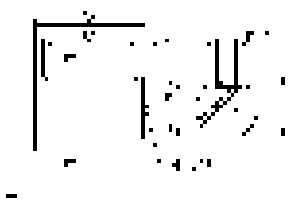


Bevel Gearboxes
Value Line

Other output variants

Shaft with key

Splined shaft (DIN 5480)



- Non-tolerated dimensions are nominal dimensions
- ¹⁾ Check motor shaft fit
- ²⁾ Min. / Max. permissible motor shaft length
Longer motor shafts are possible, please contact alpha
- ³⁾ The dimensions depend on the motor
- ⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm
- ⁵⁾ Standard clamping hub diameter

NPSK 045 MF 2- / 3-stage

			2-stage			3-stage						
Ratio	i		5	8	10	25	32	50	64	100		
Max. torque ^{a) b) e)}	T_{2a}	Nm	500	640	640	700	640	700	640	640		
		in.lb	4425	5665	5665	6196	5665	6196	5665	5665		
Max. acceleration torque ^{e)} (max. 1000 cycles per hour)	T_{2B}	Nm	399	400	400	500	400	500	400	400		
		in.lb	3531	3540	3540	4425	3540	4425	3540	3540		
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	1000	1000	1000	1000	1000	1000	1000	1000		
		in.lb	8851	8851	8851	8851	8851	8851	8851	8851		
Permitted average input speed ^{d)} (at T_{2N} and 20 °C ambient temperature)	n_{1N}	rpm	1600	1600	1600	2000	2000	2000	2000	2000		
Max. input speed	n_{1Max}	rpm	4000	4000	4000	4500	4500	4500	4500	4500		
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	8.7	8.7	8.7	4.7	4.7	4.7	4.7	4.7		
		in.lb	77	77	77	42	42	42	42	42		
Max. backlash	j_l	arcmin	≤ 11			≤ 11						
Torsional rigidity ^{b)}	C_{121}	Nm/arcmin	48	48	48	54	54	54	54	54		
		in.lb/arcmin	425	425	425	478	478	478	478	478		
Max. axial force ^{c)}	F_{2AMax}	N	9870			9870						
		lb _f	2221			2221						
Max. lateral force ^{c)}	F_{2QMMax}	N	9900			9900						
		lb _f	2228			2228						
Max. tilting moment	M_{2KMMax}	Nm	952			952						
		in.lb	8426			8426						
Efficiency at full load	η	%	95			94						
Service life	L_n	h	> 20000			> 20000						
Weight (incl. standard adapter plate)	m	kg	23			21						
		lb _m	51			46						
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 78			≤ 74						
Max. permitted housing temperature		°C	+90			+90						
		°F	+194			+194						
Ambient temperature		°C	0 to +40			0 to +40						
		°F	+32 to +104			+32 to +104						
Lubrication			Lubricated for life									
Direction of rotation			In- and output same direction									
Protection class			IP 64									
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0300BA040.000-X									
Bore diameter of coupling on the application side		mm	X = 020.000 - 045.000									
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	H	28	J_1	kgcm ²	–	–	–	6.7	6.7	6.7	6.7	6.7
				10 ⁻³ in.lb.s ²	–	–	–	5.9	5.9	5.9	5.9	5.9
	K	38	J_1	kgcm ²	18	18	18	–	–	–	–	–
				10 ⁻³ in.lb.s ²	16	16	16	–	–	–	–	–

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

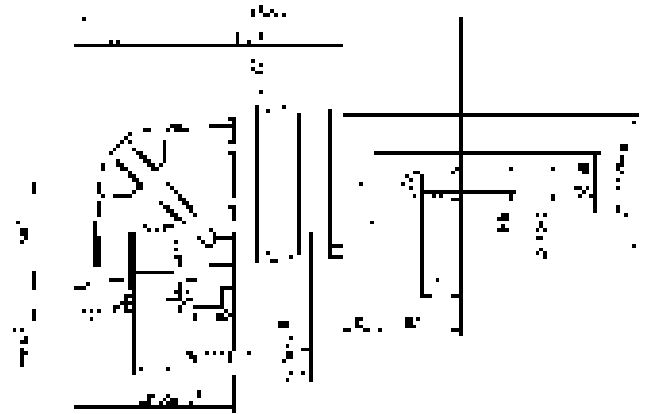
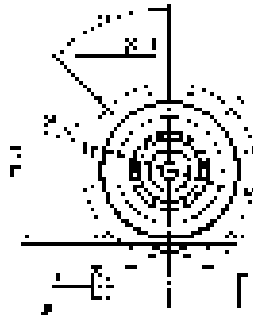
^{c)} Refers to center of the output shaft or flange

^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

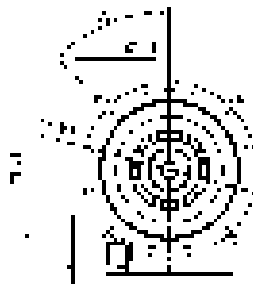
2-stage

up to 38⁴⁾ (K)⁵⁾
clamping hub
diameter



3-stage

up to 28⁴⁾ (H)⁵⁾
clamping hub
diameter

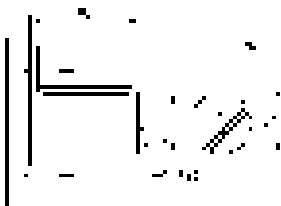


Motor shaft diameter [mm]

Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated

by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPTK 005 MF 2- / 3-stage

			2-stage					3-stage									
Ratio	i		4	5	7	8	10	16	20	25	28	35	40	50	64	70	100
Max. torque ^{a) b)}	T_{2a}	Nm	14	17	22	21	21	18	18	22	18	22	18	22	21	22	21
		in.lb	124	150	195	186	186	159	159	195	159	195	159	195	186	195	186
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	6.8	8.5	12	13	13	11	11	13	11	13	11	13	13	13	13
		in.lb	60	75	106	115	115	97	97	115	97	115	97	115	115	115	115
Emergency stop torque ^{a) b)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	17	21	26	26	26	26	26	26	26	26	26	26	26	26	26
		in.lb	150	186	230	230	230	230	230	230	230	230	230	230	230	230	230
Permitted average input speed ^{d)} (at T_{2N} and 20 °C ambient temperature)	n_{1N}	rpm	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Mean no load running torque ^{b)} (at $n_1 = 3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	0.26	0.26	0.26	0.26	0.26	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
		in.lb	2.3	2.3	2.3	2.3	2.3	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Max. backlash	j_i	arcmin	≤ 15					≤ 15									
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	0.9	0.9	0.9	0.9	0.9	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
		in.lb/arcmin	8	8	8	8	8	11	11	11	11	11	11	11	11	11	11
Max. axial force ^{c)}	F_{2AMax}	N	600					600									
		lb _f	135					135									
Max. tilting moment	M_{2KMax}	Nm	17					17									
		in.lb	150					150									
Efficiency at full load	η	%	95					94									
Service life	L_h	h	> 20000					> 20000									
Weight (incl. standard adapter plate)	m	kg	1.3					1.7									
		lb _m	2.9					3.8									
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{pA}	dB(A)	≤ 68					≤ 68									
Max. permitted housing temperature		°C	+90					+90									
		°F	+194					+194									
Ambient temperature		°C	0 to +40					0 to +40									
		°F	+32 to +104					+32 to +104									
Lubrication			Lubricated for life														
Direction of rotation			In- and output same direction														
Protection class			IP 64														
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	B	11	J_i	kgcm ²	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
				10 ⁻³ in.lb.s ²	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

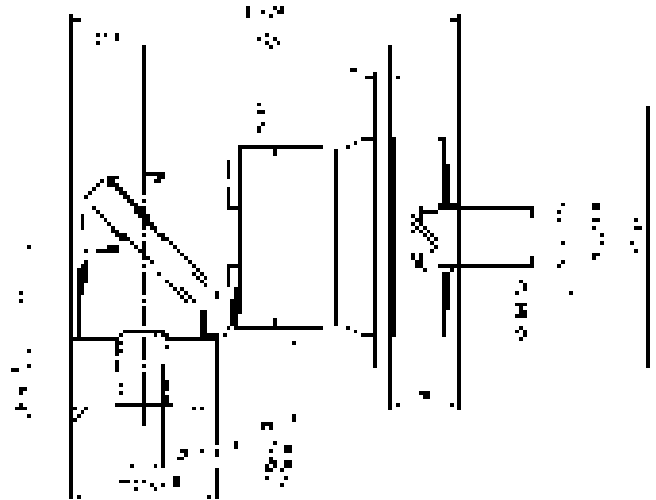
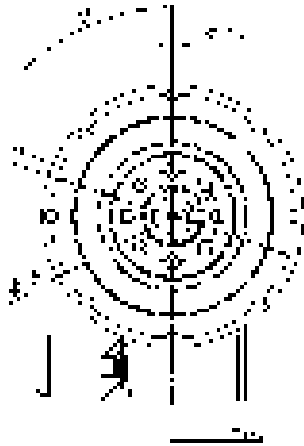
^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

^{d)} Please reduce input speed at higher ambient temperatures

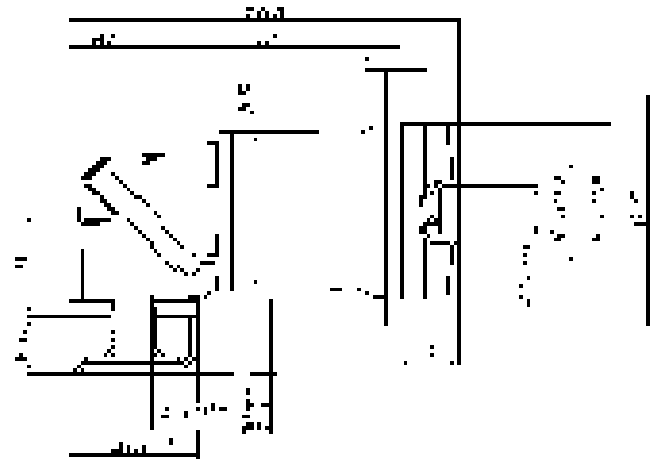
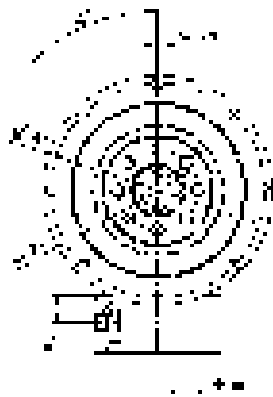
2-stage

up to 11⁴⁾ (B)⁵⁾
clamping hub
diameter



3-stage

up to 11⁴⁾ (B)⁵⁾
clamping hub
diameter



Motor shaft diameter [mm]

Bevel Gearboxes
Value Line

Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPTK 015 MF 2-stage

			2-stage							
Ratio	i		3	4	5	7	8	10		
Max. torque ^{a) b)}	T_{2a}	Nm	33	44	55	60	56	56		
		in.lb	292	389	487	531	496	496		
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	16	21	27	37	35	35		
		in.lb	142	186	239	327	310	310		
Emergency stop torque ^{a) b)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	41	55	69	75	75	75		
		in.lb	363	487	611	664	664	664		
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	3300	3300	3300	3300	3300	3300		
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000		
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	0.55	0.55	0.55	0.55	0.55	0.55		
		in.lb	4.9	4.9	4.9	4.9	4.9	4.9		
Max. backlash	j_t	arcmin	≤ 15							
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	2.4	2.4	2.4	2.4	2.4	2.4		
		in.lb/arcmin	21	21	21	21	21	21		
Max. axial force ^{c)}	F_{2AMax}	N	1380							
		lb _f	311							
Max. tilting moment	M_{2KMax}	Nm	42							
		in.lb	372							
Efficiency at full load	η	%	95							
Service life	L_n	h	> 20000							
Weight (incl. standard adapter plate)	m	kg	2.4							
		lb _m	5.3							
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex [®])	L_{PA}	dB(A)	≤ 70							
Max. permitted housing temperature		°C	+90							
		°F	+194							
Ambient temperature		°C	0 to +40							
		°F	+32 to +104							
Lubrication			Lubricated for life							
Direction of rotation			In- and output same direction							
Protection class			IP 64							
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	C	14	J_t	kgcm ²	0.34	0.34	0.34	0.34	0.34	0.34
				10 ⁻³ in.lb.s ²	0.3	0.3	0.3	0.3	0.3	0.3

Please use our sizing software cymex[®] for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

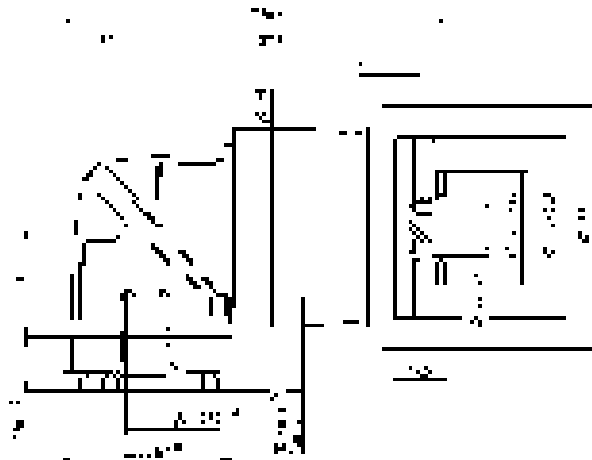
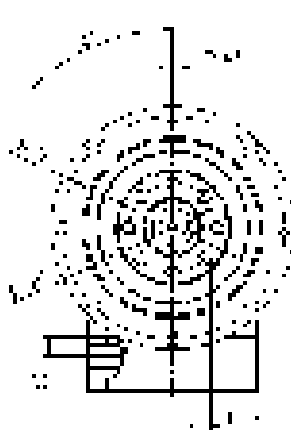
^{c)} Refers to center of the output shaft or flange

^{d)} Please reduce input speed at higher ambient temperatures

Motor shaft diameter [mm]

2-stage

up to 14⁴⁾ (C)⁵⁾
clamping hub
diameter



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPTK 015 MF 3-stage

			3-stage														
Ratio	i		12	15	16	20	25	28	30	32	35	40	50	64	70	100	
Max. torque ^{a) b)}	T_{2a}	Nm	42	51	56	56	60	56	51	56	60	56	60	56	60	56	
		in.lb	372	451	496	496	531	496	451	496	531	496	531	496	531	496	496
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	20	25	27	34	40	35	31	35	40	35	40	35	40	35	
		in.lb	177	221	239	301	354	310	274	310	354	310	354	310	354	310	310
Emergency stop torque ^{a) b)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	52	65	70	75	75	75	75	75	75	75	75	75	75	75	
		in.lb	460	575	620	664	664	664	664	664	664	664	664	664	664	664	664
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	
		in.lb	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Max. backlash	j_t	arcmin	≤ 12														
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
		in.lb/arcmin	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Max. axial force ^{c)}	F_{2AMax}	N	1380														
		lb _f	311														
Max. tilting moment	M_{2KMax}	Nm	42														
		in.lb	372														
Efficiency at full load	η	%	94														
Service life	L_n	h	> 20000														
Weight (incl. standard adapter plate)	m	kg	2.5														
		lb _m	5.5														
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex [®])	L_{PA}	dB(A)	≤ 68														
Max. permitted housing temperature		°C	+90														
		°F	+194														
Ambient temperature		°C	0 to +40														
		°F	+32 to +104														
Lubrication			Lubricated for life														
Direction of rotation			In- and output same direction														
Protection class			IP 64														
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	B	11	J_1	kgcm ²	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
				10 ⁻³ in.lb.s ²	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14

Please use our sizing software cymex[®] for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

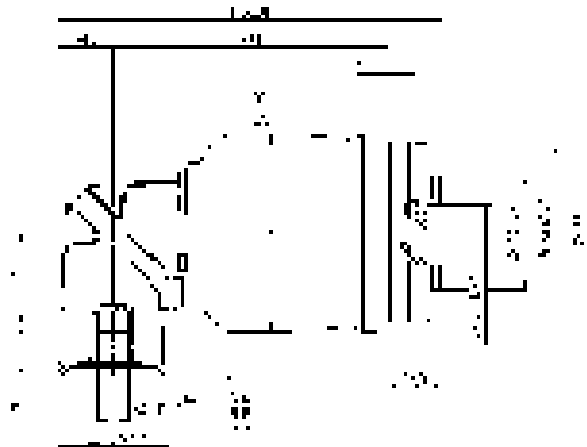
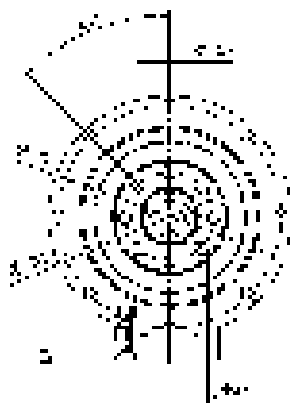
^{c)} Refers to center of the output shaft or flange

^{d)} Please reduce input speed at higher ambient temperatures

Motor shaft diameter [mm]

3-stage

up to 11⁴⁾ (B)⁵⁾
clamping hub diameter



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPTK 025 MF 2-stage

			2-stage							
Ratio	i		3	4	5	7	8	10		
Max. torque ^{a) b)}	T_{2a}	Nm	60	80	100	140	144	144		
		in.lb	531	708	885	1239	1275	1275		
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	35	47	58	82	90	90		
		in.lb	310	416	513	726	797	797		
Emergency stop torque ^{a) b)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	90	120	150	190	190	190		
		in.lb	797	1062	1328	1682	1682	1682		
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	3000	3000	3000	3000	3000	3000		
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000		
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	1	1	1	1	1	1		
		in.lb	8.9	8.9	8.9	8.9	8.9	8.9		
Max. backlash	j_t	arcmin	≤ 15							
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	6.2	6.2	6.2	6.2	6.2	6.2		
		in.lb/arcmin	55	55	55	55	55	55		
Max. axial force ^{c)}	F_{2AMax}	N	1900							
		lb _f	428							
Max. tilting moment	M_{2KMax}	Nm	79							
		in.lb	699							
Efficiency at full load	η	%	95							
Service life	L_n	h	> 20000							
Weight (incl. standard adapter plate)	m	kg	5.5							
		lb _m	12							
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex [®])	L_{PA}	dB(A)	≤ 70							
Max. permitted housing temperature		°C	+90							
		°F	+194							
Ambient temperature		°C	0 to +40							
		°F	+32 to +104							
Lubrication			Lubricated for life							
Direction of rotation			In- and output same direction							
Protection class			IP 64							
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	E	19	J_t	kgcm ²	1.3	1.3	1.3	1.3	1.3	1.3
				10 ⁻³ in.lb.s ²	1.2	1.2	1.2	1.2	1.2	1.2

Please use our sizing software cymex[®] for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

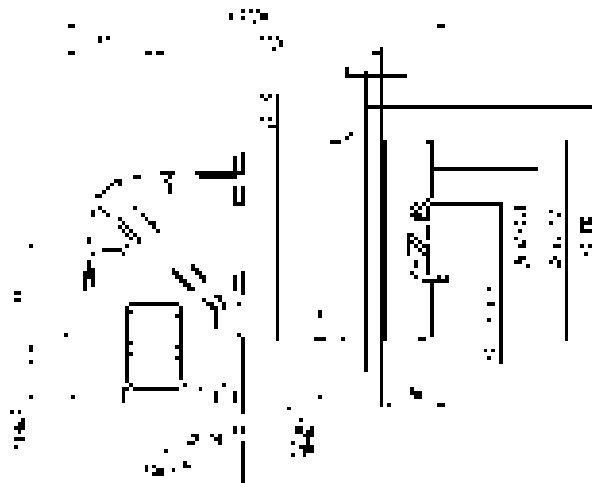
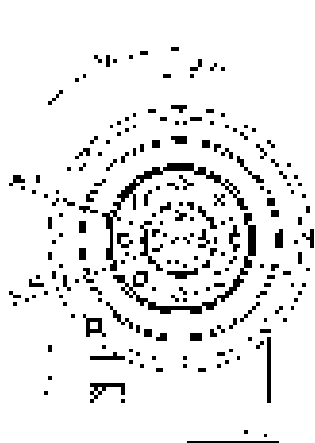
^{c)} Refers to center of the output shaft or flange

^{d)} Please reduce input speed at higher ambient temperatures

Motor shaft diameter [mm]

2-stage

up to 19⁴⁾ (E)⁵⁾
clamping hub
diameter



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPTK 025 MF 3-stage

			3-stage														
Ratio	i		9	12	15	16	20	25	28	30	32	35	40	50	64	70	100
Max. torque ^{a) b)}	T_{2a}	Nm	99	128	128	152	152	160	152	128	152	160	152	160	144	160	144
		in.lb	876	1133	1133	1345	1345	1416	1345	1133	1345	1416	1345	1416	1275	1416	1275
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	48	65	80	86	95	100	95	80	95	100	95	100	90	100	90
		in.lb	425	575	708	761	841	885	841	708	841	885	841	885	797	885	797
Emergency stop torque ^{a) b)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	124	166	190	190	190	190	190	190	190	190	190	190	190	190	190
		in.lb	1097	1469	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
		in.lb	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max. backlash	j_t	arcmin	≤ 13														
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
		in.lb/arcmin	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
Max. axial force ^{c)}	F_{2AMax}	N	1900														
		lb _f	428														
Max. tilting moment	M_{2KMax}	Nm	79														
		in.lb	699														
Efficiency at full load	η	%	94														
Service life	L_n	h	> 20000														
Weight (incl. standard adapter plate)	m	kg	5.1														
		lb _m	11														
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex [®])	L_{PA}	dB(A)	≤ 70														
Max. permitted housing temperature		°C	+90														
		°F	+194														
Ambient temperature		°C	0 to +40														
		°F	+32 to +104														
Lubrication			Lubricated for life														
Direction of rotation			In- and output same direction														
Protection class			IP 64														
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	C	14	J_1	kgcm ²	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
				10 ⁻³ in.lb.s ²	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46

Please use our sizing software cymex[®] for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

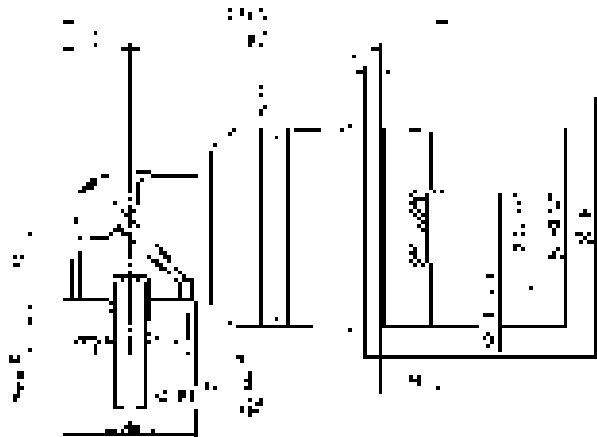
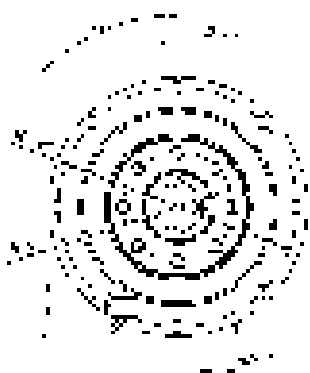
^{c)} Refers to center of the output shaft or flange

^{d)} Please reduce input speed at higher ambient temperatures

Motor shaft diameter [mm]

3-stage

up to 14⁴⁾ (C)⁵⁾
clamping hub
diameter



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPTK 035 MF 2-stage

			2-stage							
Ratio	i		3	4	5	7	8	10		
Max. torque ^{a) b)}	T_{2a}	Nm	150	200	250	350	352	352		
		in.lb	1328	1770	2213	3098	3115	3115		
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	93	124	155	217	220	220		
		in.lb	823	1097	1372	1921	1947	1947		
Emergency stop torque ^{a) b)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	238	318	397	480	480	480		
		in.lb	2106	2815	3514	4248	4248	4248		
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	2000	2000	2000	2000	2000	2000		
Max. input speed	n_{1Max}	rpm	4500	4500	4500	4500	4500	4500		
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	4.2	4.2	4.2	4.2	4.2	4.2		
		in.lb	37	37	37	37	37	37		
Max. backlash	j_t	arcmin	≤ 13							
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	16	16	16	16	16	16		
		in.lb/arcmin	142	142	142	142	142	142		
Max. axial force ^{c)}	F_{2AMax}	N	3500							
		lb _f	788							
Max. tilting moment	M_{2KMax}	Nm	134							
		in.lb	1186							
Efficiency at full load	η	%	95							
Service life	L_n	h	> 20000							
Weight (incl. standard adapter plate)	m	kg	11							
		lb _m	24							
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex [®])	L_{PA}	dB(A)	≤ 74							
Max. permitted housing temperature		°C	+90							
		°F	+194							
Ambient temperature		°C	0 to +40							
		°F	+32 to +104							
Lubrication			Lubricated for life							
Direction of rotation			In- and output same direction							
Protection class			IP 64							
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	H	28	J_t	kgcm ²	5.5	5.5	5.5	5.5	5.5	5.5
				10 ⁻³ in.lb.s ²	4.9	4.9	4.9	4.9	4.9	4.9

Please use our sizing software cymex[®] for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

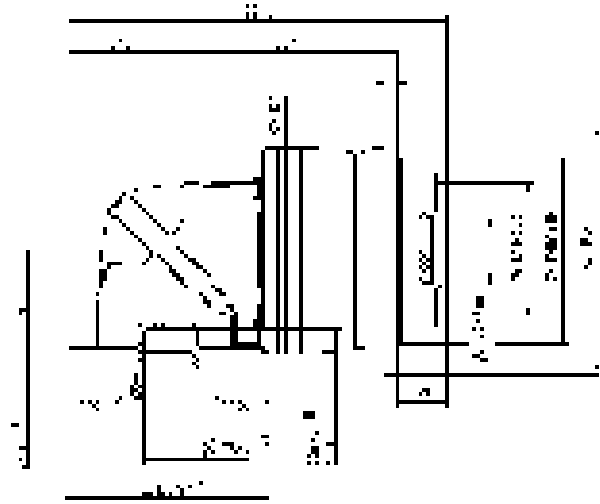
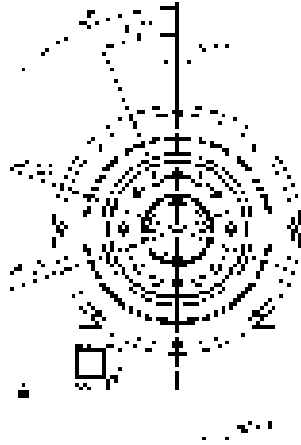
^{c)} Refers to center of the output shaft or flange

^{d)} Please reduce input speed at higher ambient temperatures

Motor shaft diameter [mm]

2-stage

up to 28⁴⁾ (H)⁵⁾
clamping hub diameter



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPTK 035 MF 3-stage

			3-stage														
Ratio	i		9	12	15	16	20	25	28	30	32	35	40	50	64	70	100
Max. torque ^{a) b)}	T_{2a}	Nm	180	240	300	320	365	365	365	320	365	365	365	365	352	365	352
		in.lb	1593	2124	2655	2832	3231	3231	3231	2832	3231	3231	3231	3231	3115	3231	3115
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	105	141	176	188	235	250	255	200	255	250	255	250	220	250	220
		in.lb	929	1248	1558	1664	2080	2213	2257	1770	2257	2213	2257	2213	1947	2213	1947
Emergency stop torque ^{a) b)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	270	361	451	480	480	480	480	480	480	480	480	480	480	480	480
		in.lb	2390	3195	3992	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
		in.lb	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Max. backlash	j_t	arcmin	≤ 13														
Torsional rigidity ^{b)}	C_{21}	Nm/arcmin	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
		in.lb/arcmin	168	168	168	168	168	168	168	168	168	168	168	168	168	168	168
Max. axial force ^{c)}	F_{2AMax}	N	3500														
		lb _f	788														
Max. tilting moment	M_{2KMax}	Nm	134														
		in.lb	1186														
Efficiency at full load	η	%	94														
Service life	L_n	h	> 20000														
Weight (incl. standard adapter plate)	m	kg	11														
		lb _m	24														
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex [®])	L_{PA}	dB(A)	≤ 70														
Max. permitted housing temperature		°C	+90														
		°F	+194														
Ambient temperature		°C	0 to +40														
		°F	+32 to +104														
Lubrication			Lubricated for life														
Direction of rotation			In- and output same direction														
Protection class			IP 64														
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	E	19	J_1	kgcm ²	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
				10 ⁻³ in.lb.s ²	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7

Please use our sizing software cymex[®] for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

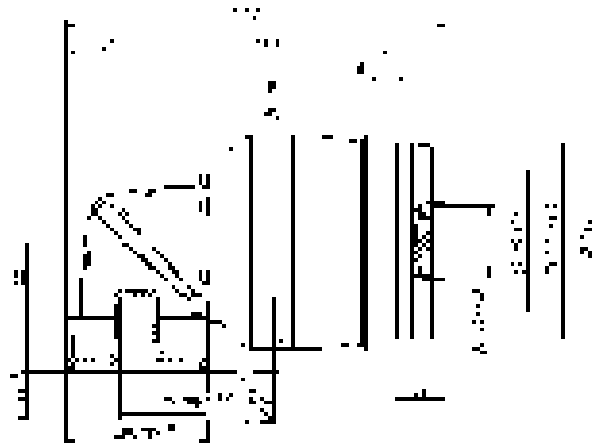
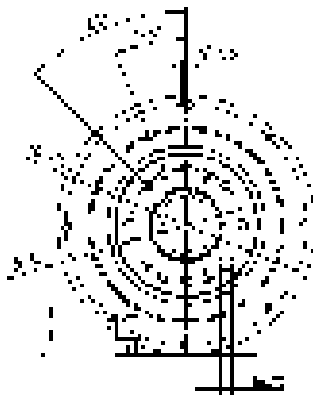
^{c)} Refers to center of the output shaft or flange

^{d)} Please reduce input speed at higher ambient temperatures

Motor shaft diameter [mm]

3-stage

up to 19⁴⁾ (E)⁵⁾
clamping hub
diameter



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPTK 045 MF 2- /3-stage

			2-stage			3-stage						
Ratio	i		5	8	10	25	32	50	64	100		
Max. torque ^{a) b)}	T_{2a}	Nm	500	640	640	700	640	700	640	640		
		in.lb	4425	5665	5665	6196	5665	6196	5665	5665		
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	399	400	400	500	400	500	400	400		
		in.lb	3531	3540	3540	4425	3540	4425	3540	3540		
Emergency stop torque ^{a) b)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	1000	1000	1000	1000	1000	1000	1000	1000		
		in.lb	8851	8851	8851	8851	8851	8851	8851	8851		
Permitted average input speed ^{d)} (at n_{2N} and 20 °C ambient temperature)	n_{1N}	rpm	1600	1600	1600	2000	2000	2000	2000	2000		
Max. input speed	n_{1Max}	rpm	4000	4000	4000	4500	4500	4500	4500	4500		
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	6	6	6	3.1	3.1	3.1	3.1	3.1		
		in.lb	53	53	53	27	27	27	27	27		
Max. backlash	j_i	arcmin	≤ 11			≤ 11						
Torsional rigidity ^{b)}	C_{i21}	Nm/arcmin	48	48	48	54	54	54	54	54		
		in.lb/arcmin	425	425	425	478	478	478	478	478		
Max. axial force ^{c)}	F_{2AMax}	N	3800			3800						
		lb _f	855			855						
Max. tilting moment	M_{2KMMax}	Nm	256			256						
		in.lb	2266			2266						
Efficiency at full load	η	%	95			94						
Service life	L_h	h	> 20000			> 20000						
Weight (incl. standard adapter plate)	m	kg	24			21						
		lb _m	53			46						
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{pA}	dB(A)	≤ 78			≤ 74						
Max. permitted housing temperature		°C	+90			+90						
		°F	+194			+194						
Ambient temperature		°C	0 to +40			0 to +40						
		°F	+32 to +104			+32 to +104						
Lubrication			Lubricated for life									
Direction of rotation			In- and output same direction									
Protection class			IP 64									
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	H	28	J_1	kgcm ²	–	–	–	7.8	7.8	7.8	7.8	7.8
				10 ⁻³ in.lb.s ²	–	–	–	6.9	6.9	6.9	6.9	6.9
	K	38	J_1	kgcm ²	19	19	19	–	–	–	–	–
				10 ⁻³ in.lb.s ²	17	17	17	–	–	–	–	–

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

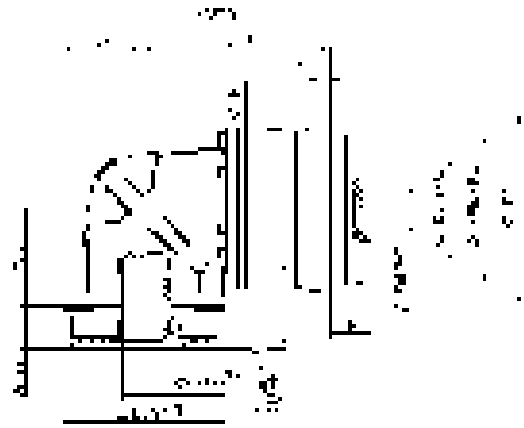
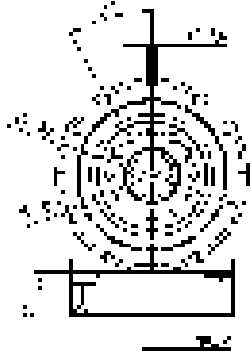
^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

^{d)} Please reduce input speed at higher ambient temperatures

2-stage

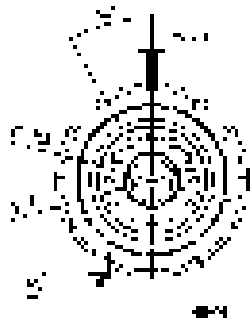
up to 38⁴⁾ (K)⁵⁾
clamping hub
diameter



Motor shaft diameter [mm]

3-stage

up to 28⁴⁾ (H)⁵⁾
clamping hub
diameter



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPRK 015 MF 2-stage

			2-stage							
Ratio	i		3	4	5	7	8	10		
Max. torque ^{a) b) e)}	T_{2a}	Nm	33	44	55	64	56	56		
		in.lb	292	389	487	566	496	496		
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	16	21	27	37	35	35		
		in.lb	142	186	239	327	310	310		
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	41	55	69	80	80	80		
		in.lb	363	487	611	708	708	708		
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	2600	2800	2900	3300	3300	3300		
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000		
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	1.2	1.2	1.2	1.2	1.2	1.2		
		in.lb	11	11	11	11	11	11		
Max. backlash	j_t	arcmin	≤ 15							
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	2.4	2.4	2.4	2.4	2.4	2.4		
		in.lb/arcmin	21	21	21	21	21	21		
Max. axial force ^{c)}	F_{2AMax}	N	2400							
		lb _f	540							
Max. lateral force ^{c)}	F_{2OMax}	N	2800							
		lb _f	630							
Max. tilting moment	M_{2KMMax}	Nm	152							
		in.lb	1345							
Efficiency at full load	η	%	95							
Service life	L_h	h	> 20000							
Weight (incl. standard adapter plate)	m	kg	2.3							
		lb _m	5.1							
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 70							
Max. permitted housing temperature		°C	+90							
		°F	+194							
Ambient temperature		°C	0 to +40							
		°F	+32 to +104							
Lubrication			Lubricated for life							
Direction of rotation			In- and output same direction							
Protection class			IP 64							
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0060BA016.000-X							
Bore diameter of coupling on the application side		mm	X = 012.000 - 032.000							
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	C	14	J_1	kgcm ²	0.32	0.32	0.32	0.32	0.32	0.32
				10 ⁻³ in.lb.s ²	0.28	0.28	0.28	0.28	0.28	0.28

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

2-stage

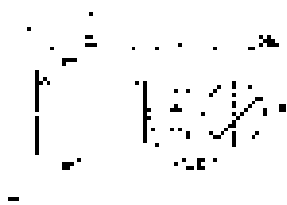
up to 14⁴⁾ (C)⁵⁾
clamping hub
diameter



Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated

by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPRK 015 MF 3-stage

			3-stage													
Ratio	i		12	15	16	20	25	28	30	32	35	40	50	64	70	100
Max. torque ^{a) b) e)}	T_{2a}	Nm	42	51	56	56	64	56	51	56	64	56	64	56	64	56
		in.lb	372	451	496	496	566	496	451	496	566	496	566	496	566	496
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	20	25	27	34	40	35	31	35	40	35	40	35	40	35
		in.lb	177	221	239	301	354	310	274	310	354	310	354	310	354	310
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	52	65	70	80	80	80	80	80	80	80	80	80	80	80
		in.lb	460	575	620	708	708	708	708	708	708	708	708	708	708	708
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Mean no load running torque ^{b)} (at $n_1 = 3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
		in.lb	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max. backlash	j_t	arcmin	≤ 12													
Torsional rigidity ^{b)}	C_{121}	Nm/arcmin	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		in.lb/arcmin	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Max. axial force ^{c)}	F_{2AMax}	N	2400													
		lb _f	540													
Max. lateral force ^{c)}	F_{2QMMax}	N	2800													
		lb _f	630													
Max. tilting moment	M_{2KMMax}	Nm	152													
		in.lb	1345													
Efficiency at full load	η	%	94													
Service life	L_h	h	> 20000													
Weight (incl. standard adapter plate)	m	kg	2.4													
		lb _m	5.3													
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 68													
Max. permitted housing temperature		°C	+90													
		°F	+194													
Ambient temperature		°C	0 to +40													
		°F	+32 to +104													
Lubrication			Lubricated for life													
Direction of rotation			In- and output same direction													
Protection class			IP 64													
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0060BA016.000-X													
Bore diameter of coupling on the application side		mm	X = 012.000 - 032.000													
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	B	11	J_1	kgcm ²	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
				10 ⁻³ in.lb.s ²	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

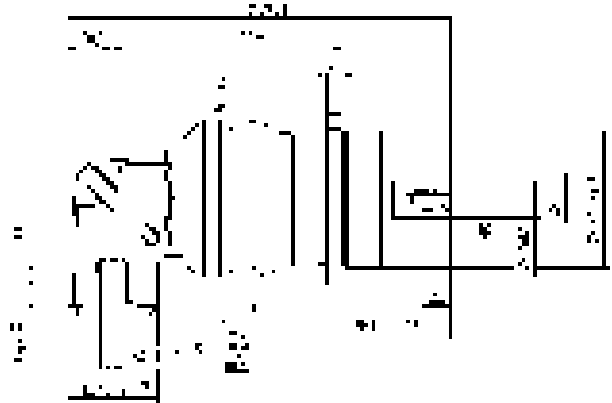
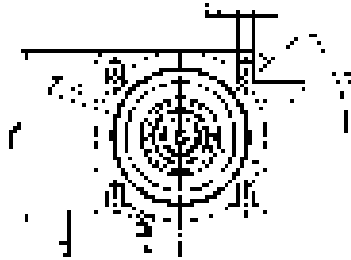
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

3-stage

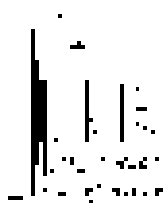
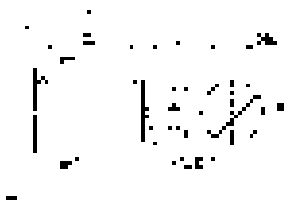
up to 11⁴⁾ (B)⁵⁾
clamping hub diameter



Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated

by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPRK 025 MF 2-stage

			2-stage						
Ratio	i		3	4	5	7	8	10	
Max. torque ^{a) b) e)}	T_{2a}	Nm	60	80	100	140	144	144	
		in.lb	531	708	885	1239	1275	1275	
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	35	47	58	82	90	90	
		in.lb	310	416	513	726	797	797	
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	90	120	150	190	190	190	
		in.lb	797	1062	1328	1682	1682	1682	
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	2400	2600	2700	3000	3000	3000	
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	2.4	2.4	2.4	2.4	2.4	2.4	
		in.lb	21	21	21	21	21	21	
Max. backlash	j_t	arcmin	≤ 15						
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	6.2	6.2	6.2	6.2	6.2	6.2	
		in.lb/arcmin	55	55	55	55	55	55	
Max. axial force ^{c)}	F_{2AMax}	N	3350						
		lb _f	754						
Max. lateral force ^{c)}	F_{2OMax}	N	4200						
		lb _f	945						
Max. tilting moment	M_{2KMMax}	Nm	236						
		in.lb	2089						
Efficiency at full load	η	%	95						
Service life	L_h	h	> 20000						
Weight (incl. standard adapter plate)	m	kg	4.8						
		lb _m	11						
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 70						
Max. permitted housing temperature		°C	+90						
		°F	+194						
Ambient temperature		°C	0 to +40						
		°F	+32 to +104						
Lubrication			Lubricated for life						
Direction of rotation			In- and output same direction						
Protection class			IP 64						
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0060BA022.000-X						
Bore diameter of coupling on the application side		mm	X = 012.000 - 032.000						
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	E 19	J_1	kgcm ²	1.2	1.2	1.2	1.2	1.2	1.2
			10 ⁻³ in.lb.s ²	1.1	1.1	1.1	1.1	1.1	1.1

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

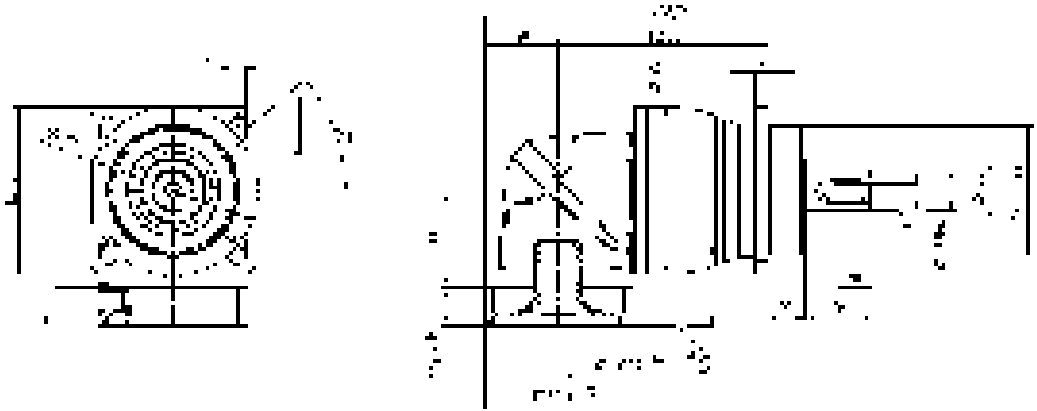
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

2-stage

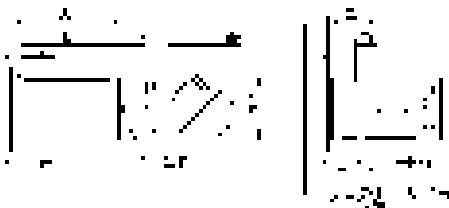
up to 19⁴⁾ (E)⁵⁾
clamping hub diameter



Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated

by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPRK 025 MF 3-stage

			3-stage														
Ratio	i		9	12	15	16	20	25	28	30	32	35	40	50	64	70	100
Max. torque ^{a) b) e)}	T_{2a}	Nm	99	128	128	152	152	160	152	128	152	160	152	160	144	160	144
		in.lb	876	1133	1133	1345	1345	1416	1345	1133	1345	1416	1345	1416	1275	1416	1275
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	48	65	80	86	95	100	95	80	95	100	95	100	90	100	90
		in.lb	425	575	708	761	841	885	841	708	841	885	841	885	797	885	797
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	124	166	190	190	190	190	190	190	190	190	190	190	190	190	190
		in.lb	1097	1469	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	2800	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Mean no load running torque ^{b)} (at $n_1 = 3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
		in.lb	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
Max. backlash	j_t	arcmin	≤ 13														
Torsional rigidity ^{b)}	C_{121}	Nm/arcmin	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
		in.lb/arcmin	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
Max. axial force ^{c)}	F_{2AMax}	N	3350														
		lb _f	754														
Max. lateral force ^{c)}	F_{2OMax}	N	4200														
		lb _f	945														
Max. tilting moment	M_{2KMMax}	Nm	236														
		in.lb	2089														
Efficiency at full load	η	%	94														
Service life	L_h	h	> 20000														
Weight (incl. standard adapter plate)	m	kg	4.4														
		lb _m	9.7														
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 70														
Max. permitted housing temperature		°C	+90														
		°F	+194														
Ambient temperature		°C	0 to +40														
		°F	+32 to +104														
Lubrication			Lubricated for life														
Direction of rotation			In- and output same direction														
Protection class			IP 64														
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0060BA022.000-X														
Bore diameter of coupling on the application side		mm	X = 012.000 - 032.000														
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	C	14	J_1	kgcm ²	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
				10 ⁻³ in.lb.s ²	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

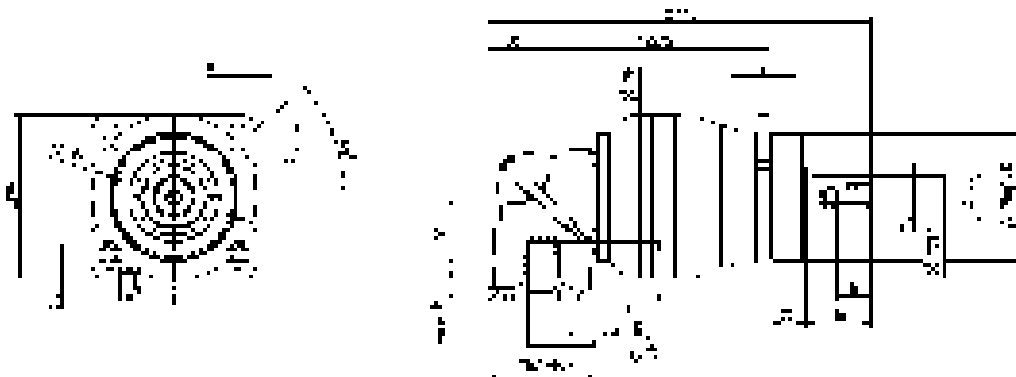
Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

- ^{a)} Valid for torque transmission only
- ^{b)} Valid for standard clamping hub diameter
- ^{c)} Refers to center of the output shaft or flange
- ^{d)} Please reduce input speed at higher ambient temperatures
- ^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

3-stage

up to 14⁴⁾ (C)⁵⁾
clamping hub diameter

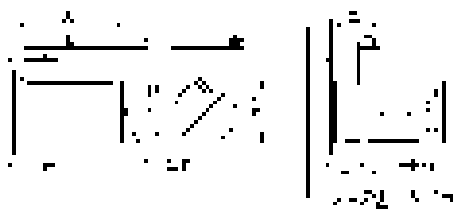


Bevel Gearboxes
Value Line

Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

- ¹⁾ Check motor shaft fit
- ²⁾ Min. / Max. permissible motor shaft length
Longer motor shafts are possible, please contact alpha
- ³⁾ The dimensions depend on the motor
- ⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm
- ⁵⁾ Standard clamping hub diameter

NPRK 035 MF 2-stage

			2-stage						
Ratio	i		3	4	5	7	8	10	
Max. torque ^{a) b) e)}	T_{2a}	Nm	150	200	250	350	352	352	
		in.lb	1328	1770	2213	3098	3115	3115	
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	93	124	155	217	220	220	
		in.lb	823	1097	1372	1921	1947	1947	
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	238	318	397	500	500	500	
		in.lb	2106	2815	3514	4425	4425	4425	
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	1800	2000	2000	2000	2000	2000	
Max. input speed	n_{1Max}	rpm	4500	4500	4500	4500	4500	4500	
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	5.8	5.8	5.8	5.8	5.8	5.8	
		in.lb	51	51	51	51	51	51	
Max. backlash	j_t	arcmin	≤ 13						
Torsional rigidity ^{b)}	C_{t21}	Nm/arcmin	16	16	16	16	16	16	
		in.lb/arcmin	142	142	142	142	142	142	
Max. axial force ^{c)}	F_{2AMax}	N	5650						
		lb _f	1271						
Max. lateral force ^{c)}	F_{2OMax}	N	6600						
		lb _f	1485						
Max. tilting moment	M_{2KMMax}	Nm	487						
		in.lb	4310						
Efficiency at full load	η	%	95						
Service life	L_h	h	> 20000						
Weight (incl. standard adapter plate)	m	kg	10						
		lb _m	22						
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 74						
Max. permitted housing temperature		°C	+90						
		°F	+194						
Ambient temperature		°C	0 to +40						
		°F	+32 to +104						
Lubrication			Lubricated for life						
Direction of rotation			In- and output same direction						
Protection class			IP 64						
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0150BA032.000-X						
Bore diameter of coupling on the application side		mm	X = 019.000 - 036.000						
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	H 28	J_1	kgcm ²	5.2	5.2	5.2	5.2	5.2	5.2
			10 ⁻³ in.lb.s ²	4.6	4.6	4.6	4.6	4.6	4.6

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

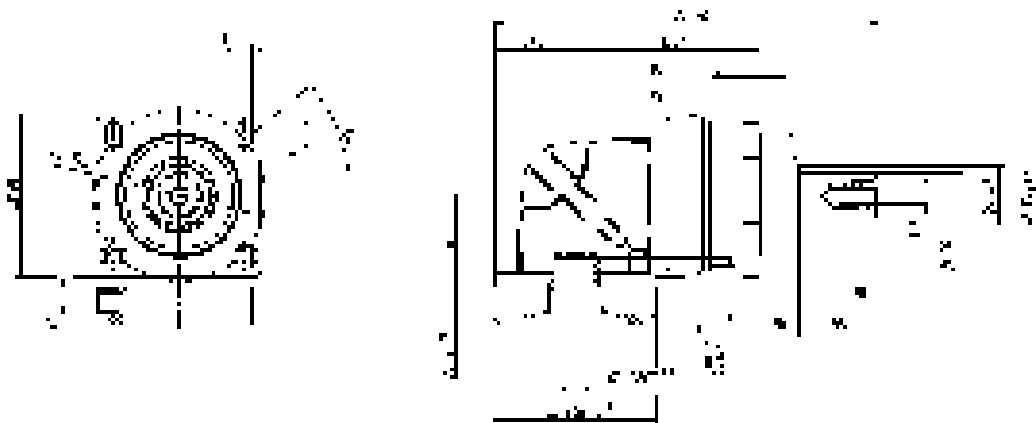
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

2-stage

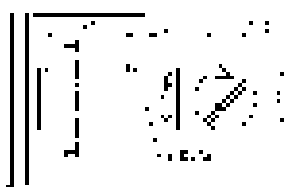
up to 28⁴⁾ (H)⁵⁾
clamping hub
diameter



Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter

NPRK 035 MF 3-stage

			3-stage														
Ratio	i		9	12	15	16	20	25	28	30	32	35	40	50	64	70	100
Max. torque ^{a) b) e)}	T_{2a}	Nm	180	240	300	320	400	400	408	320	408	400	408	400	352	400	352
		in.lb	1593	2124	2655	2832	3540	3540	3611	2832	3611	3540	3611	3540	3115	3540	3115
Max. acceleration torque ^{b)} (max. 1000 cycles per hour)	T_{2B}	Nm	105	141	176	188	235	250	255	200	255	250	255	250	220	250	220
		in.lb	929	1248	1558	1664	2080	2213	2257	1770	2257	2213	2257	2213	1947	2213	1947
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	270	361	451	481	500	500	500	500	500	500	500	500	500	500	500
		in.lb	2390	3195	3992	4257	4425	4425	4425	4425	4425	4425	4425	4425	4425	4425	4425
Permitted average input speed ^{d)} (at T_{2a} and 20 °C ambient temperature)	n_{1N}	rpm	2600	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
Max. input speed	n_{1Max}	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	
		in.lb	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
Max. backlash	j_t	arcmin	≤ 13														
Torsional rigidity ^{b)}	C_{21}	Nm/arcmin	19	19	19	19	19	19	19	19	19	19	19	19	19	19	
		in.lb/arcmin	168	168	168	168	168	168	168	168	168	168	168	168	168	168	
Max. axial force ^{c)}	F_{2AMax}	N	5650														
		lb _f	1271														
Max. lateral force ^{c)}	F_{2QMMax}	N	6600														
		lb _f	1485														
Max. tilting moment	M_{2KMMax}	Nm	487														
		in.lb	4310														
Efficiency at full load	η	%	94														
Service life	L_h	h	> 20000														
Weight (incl. standard adapter plate)	m	kg	10														
		lb _m	22														
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 70														
Max. permitted housing temperature		°C	+90														
		°F	+194														
Ambient temperature		°C	0 to +40														
		°F	+32 to +104														
Lubrication			Lubricated for life														
Direction of rotation			In- and output same direction														
Protection class			IP 64														
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0150BA032.000-X														
Bore diameter of coupling on the application side		mm	X = 019.000 - 036.000														
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	E	19	J_1	kgcm ²	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	
				10 ⁻³ in.lb.s ²	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

^{c)} Refers to center of the output shaft or flange

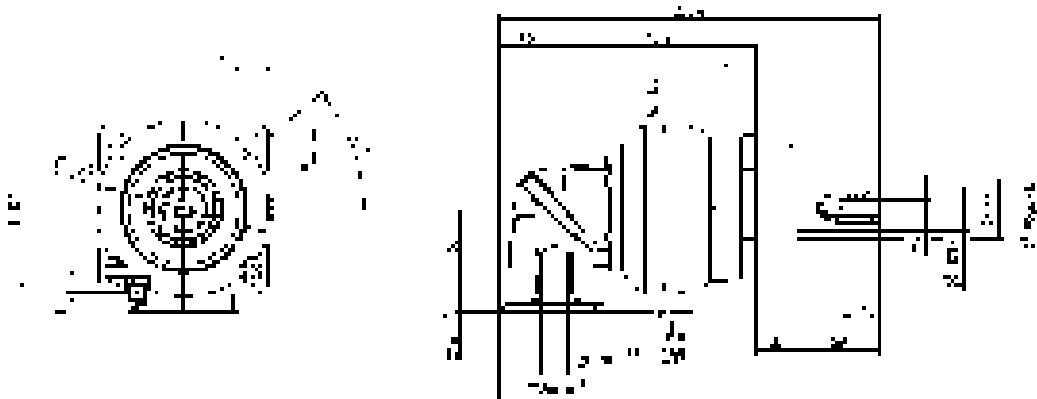
^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

Motor shaft diameter [mm]

3-stage

up to 19⁴⁾ (E)⁵⁾
clamping hub diameter

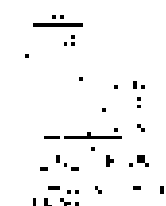
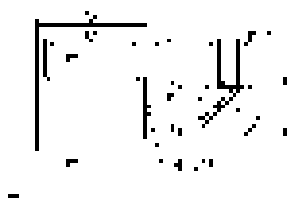


Bevel Gearboxes
Value Line

Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

- ¹⁾ Check motor shaft fit
- ²⁾ Min. / Max. permissible motor shaft length
Longer motor shafts are possible, please contact alpha
- ³⁾ The dimensions depend on the motor
- ⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm
- ⁵⁾ Standard clamping hub diameter

NPRK 045 MF 2- /3-stage

			2-stage			3-stage						
Ratio	i		5	8	10	25	32	50	64	100		
Max. torque ^{a) b) e)}	T_{2a}	Nm	500	640	640	700	640	700	640	640		
		in.lb	4425	5665	5665	6196	5665	6196	5665	5665		
Max. acceleration torque ^{e)} (max. 1000 cycles per hour)	T_{2B}	Nm	399	400	400	500	400	500	400	400		
		in.lb	3531	3540	3540	4425	3540	4425	3540	3540		
Emergency stop torque ^{a) b) e)} (permitted 1000 times during the service life of the gearbox)	T_{2Not}	Nm	1000	1000	1000	1000	1000	1000	1000	1000		
		in.lb	8851	8851	8851	8851	8851	8851	8851	8851		
Permitted average input speed ^{d)} (at T_{2N} and 20 °C ambient temperature)	n_{1N}	rpm	1600	1600	1600	2000	2000	2000	2000	2000		
Max. input speed	n_{1Max}	rpm	4000	4000	4000	4500	4500	4500	4500	4500		
Mean no load running torque ^{b)} (at $n_1=3000$ rpm and 20 °C gearbox temperature)	T_{012}	Nm	8.7	8.7	8.7	4.7	4.7	4.7	4.7	4.7		
		in.lb	77	77	77	42	42	42	42	42		
Max. backlash	j_l	arcmin	≤ 11			≤ 11						
Torsional rigidity ^{b)}	C_{121}	Nm/arcmin	48	48	48	54	54	54	54	54		
		in.lb/arcmin	425	425	425	478	478	478	478	478		
Max. axial force ^{c)}	F_{2AMax}	N	9870			9870						
		lb _f	2221			2221						
Max. lateral force ^{c)}	F_{2QMMax}	N	9900			9900						
		lb _f	2228			2228						
Max. tilting moment	M_{2KMMax}	Nm	952			952						
		in.lb	8426			8426						
Efficiency at full load	η	%	95			94						
Service life	L_n	h	> 20000			> 20000						
Weight (incl. standard adapter plate)	m	kg	24			21						
		lb _m	53			46						
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L_{PA}	dB(A)	≤ 78			≤ 74						
Max. permitted housing temperature		°C	+90			+90						
		°F	+194			+194						
Ambient temperature		°C	0 to +40			0 to +40						
		°F	+32 to +104			+32 to +104						
Lubrication			Lubricated for life									
Direction of rotation			In- and output same direction									
Protection class			IP 64									
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELC-0300BA040.000-X									
Bore diameter of coupling on the application side		mm	X = 020.000 - 045.000									
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	H	28	J_1	kgcm ²	–	–	–	6.7	6.7	6.7	6.7	6.7
				10 ⁻³ in.lb.s ²	–	–	–	5.9	5.9	5.9	5.9	5.9
	K	38	J_1	kgcm ²	18	18	18	–	–	–	–	–
				10 ⁻³ in.lb.s ²	16	16	16	–	–	–	–	–

Please use our sizing software cymex® for a detailed sizing – www.wittenstein-cymex.com
Please consider the maximal tilting moment caused by the motor M_{1KMot} – see sizing

^{a)} Valid for torque transmission only

^{b)} Valid for standard clamping hub diameter

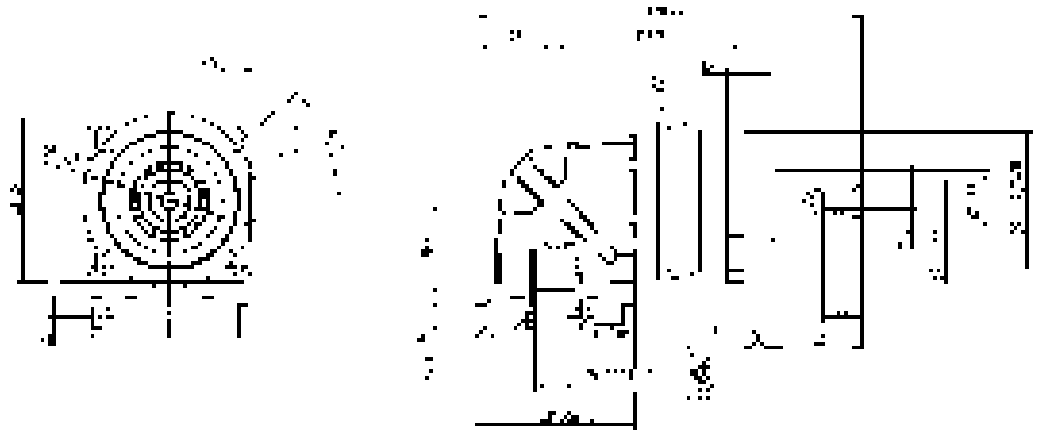
^{c)} Refers to center of the output shaft or flange

^{d)} Please reduce input speed at higher ambient temperatures

^{e)} Valid for: Smooth shaft

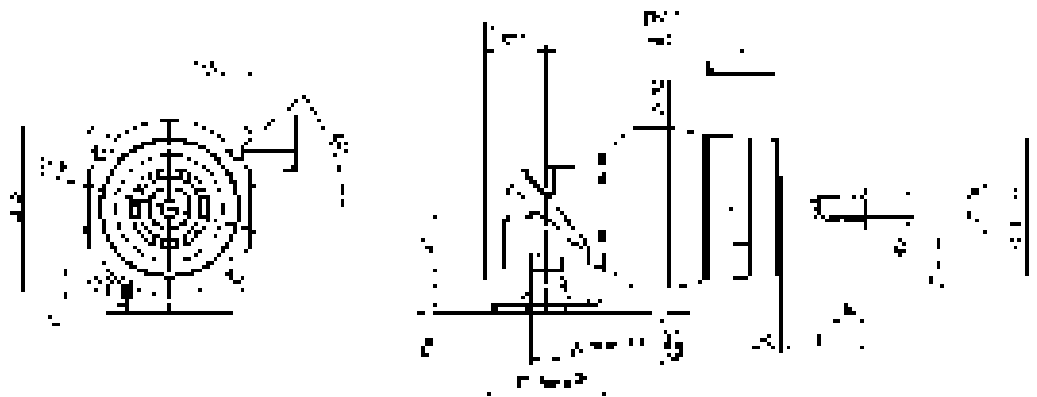
2-stage

up to 38⁴⁾ (K)⁵⁾
clamping hub
diameter



3-stage

up to 28⁴⁾ (H)⁵⁾
clamping hub
diameter

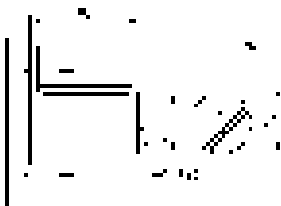


Motor shaft diameter [mm]

Other output variants

Shaft with key

Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

¹⁾ Check motor shaft fit

²⁾ Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

³⁾ The dimensions depend on the motor

⁴⁾ Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm

⁵⁾ Standard clamping hub diameter