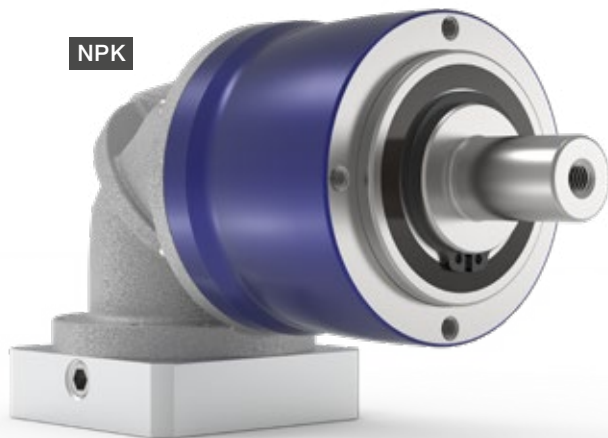
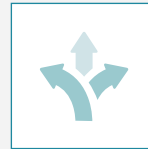


# NPK / NPLK / NPSK / NPTK / NPRK

## – Individual Talents



### PRODUCT HIGHLIGHTS



#### High flexibility

Various output versions offer design freedom tailored to individual requirements.



#### High economy

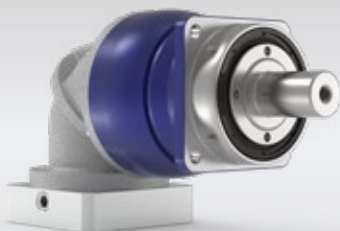
The gearboxes of the alpha Value Line are very economical to purchase, unbeatably efficient in operation, and maintenance free over their entire service life.



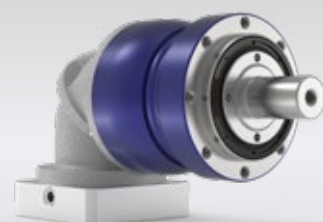
#### Fast sizing

Efficient and innovative online sizing within seconds in cymex® select based on technical and economic suitability.

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.



NPSK – bevel gearbox with SP+ output geometry

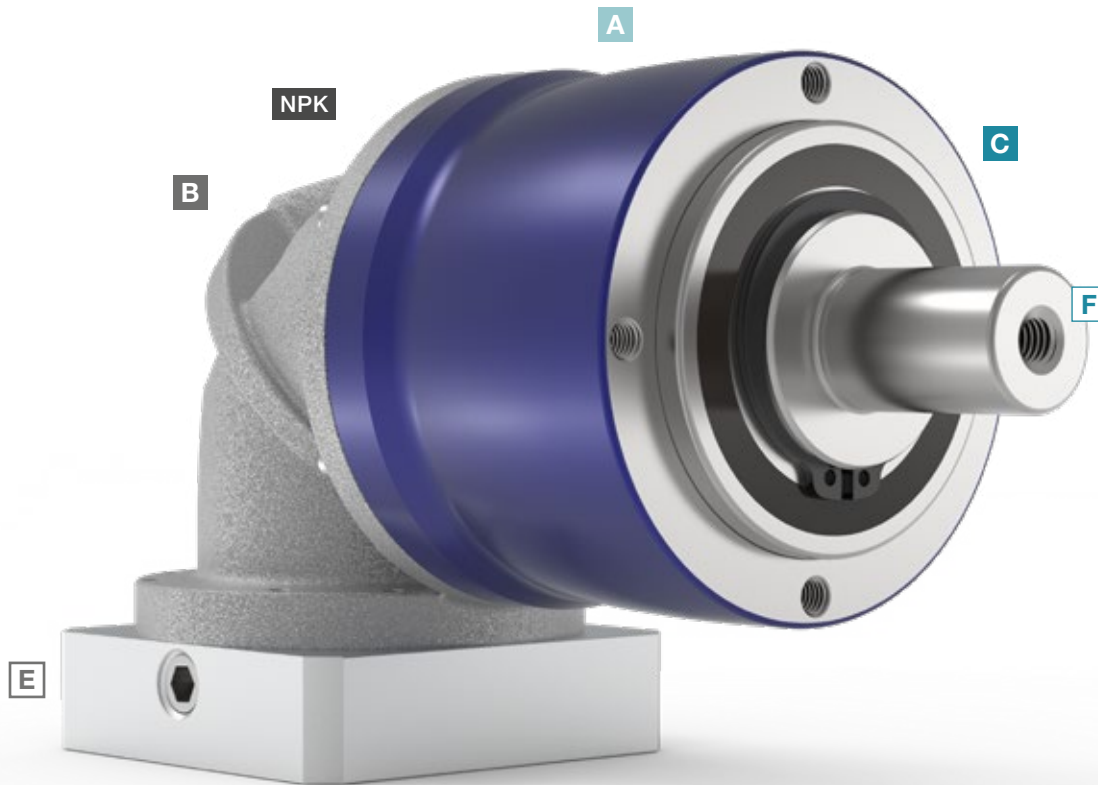


NPLK – bevel gearbox with reinforced bearings and B14 output geometry



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

[alpha.wittenstein.de/en-en/alpha-value-line](http://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**

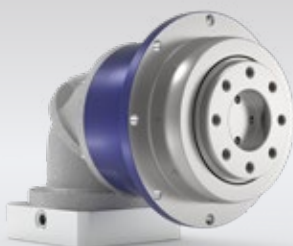
#### Flexible motor connection

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

**F**

#### Multiple output configurations for greater flexibility

- Smooth shaft
- Shaft with key
- Splined shaft (DIN 5480)
- Flange



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 <sup>a) b) e)</sup>	T <sub>2a</sub>		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	159	195	186
Max. acceleration torque <sup>e)</sup> (max. 1000 cycles per hour)	T <sub>2B</sub>		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	97	115	115
Emergency stop torque <sup>a) b) e)</sup> (permitted 1000 times during the service life of the gearbox)	T <sub>2Not</sub>		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 <sup>d)</sup> (at T <sub>2n</sub> and 20 °C ambient temperature)	n <sub>1N</sub>		rpm	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800
Max. input speed	n <sub>1Max</sub>		rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Mean no load running torque <sup>b)</sup> (at n <sub>1</sub> =3000 rpm and 20 °C gearbox temperature)	T <sub>012</sub>		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 <sub>t</sub>		arcmin	≤ 15					≤ 15									
Torsional rigidity <sup>b)</sup>	C <sub>t21</sub>		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 <sup>c)</sup>	F <sub>2AMax</sub>		N	700					700									
			lb <sub>f</sub>	158					158									
Max. lateral force <sup>c)</sup>	F <sub>2QMax</sub>		N	800					800									
			lb <sub>f</sub>	180					180									
Max. tilting moment	M <sub>2KMax</sub>		Nm	23					23									
			in.lb	204					204									
Efficiency at full load	η		%	95					94									
Service life	L <sub>h</sub>		h	> 20000					> 20000									
Weight (incl. standard adapter plate)	m		kg	1.1					1.3									
			lb <sub>m</sub>	2.4					2.9									
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	L <sub>PA</sub>		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				X = 004.000 - 012.700														
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	B	11	J <sub>1</sub>	kgcm <sup>2</sup>	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	0.11
				10 <sup>-3</sup> in.lb.s <sup>2</sup>	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	0.1

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

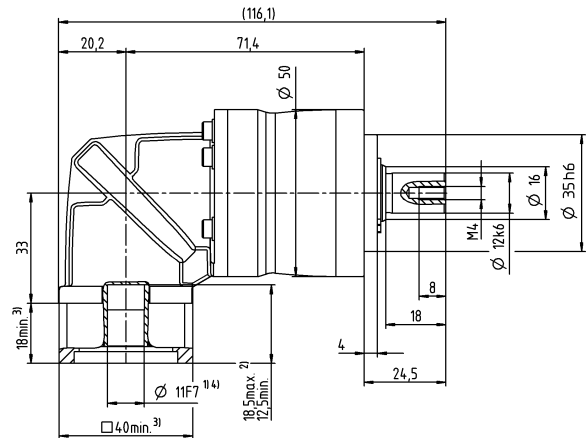
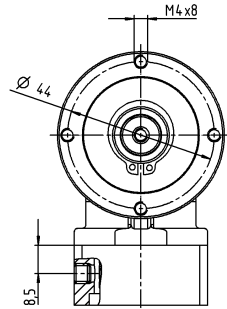
<sup>c)</sup> Refers to center of the output shaft or flange

<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

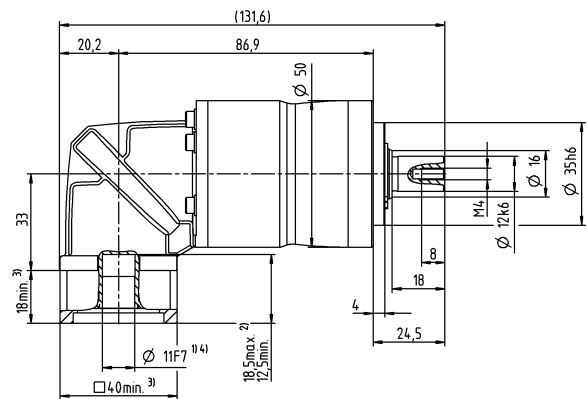
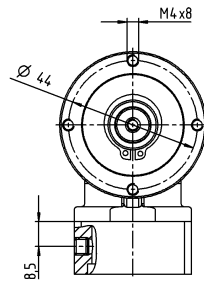
## 2-stage

up to 11<sup>4)</sup> (B)<sup>5)</sup>  
clamping hub  
diameter



## 3-stage

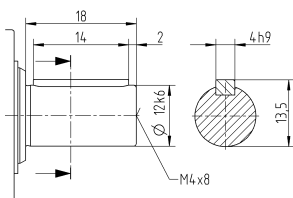
up to 11<sup>4)</sup> (B)<sup>5)</sup>  
clamping hub  
diameter



Motor shaft diameter [mm]

### Other output variants

Shaft with key



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> Standard clamping hub diameter

# NPK 015 MF 2-stage

			2-stage					
Ratio	i		3	4	5	7	8	10
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	33	44	55	64	56	56
		in.lb	292	389	487	566	496	496
Max. acceleration torque <sup>b)</sup> (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 <sup>a) b) e)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	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 <sup>c)</sup>	$F_{2AMax}$	N	1550					
		lb <sub>f</sub>	349					
Max. lateral force <sup>c)</sup>	$F_{2QMMax}$	N	1700					
		lb <sub>f</sub>	383					
Max. tilting moment	$M_{2KMax}$	Nm	72					
		in.lb	637					
Efficiency at full load	$\eta$	%	95					
Service life	$L_h$	h	> 20000					
Weight (incl. standard adapter plate)	$m$	kg	2.3					
		lb <sub>m</sub>	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 <sup>2</sup>	0.31	0.31	0.31	0.31	0.31
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	0.27	0.27	0.27	0.27	0.27

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

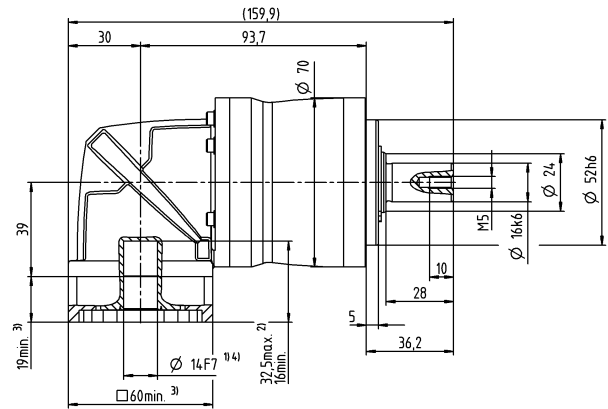
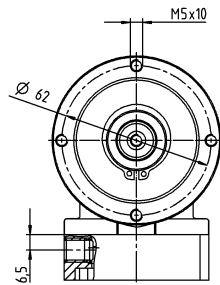
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

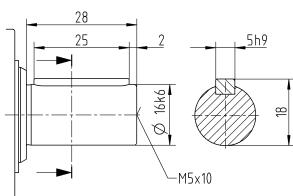
2-stage

up to 14<sup>4)</sup> (C)<sup>5)</sup>  
clamping hub  
diameter



## Other output variants

Shaft with key



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> 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 <sup>a) b) e)</sup>	$T_{2a}$	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 <sup>e)</sup> (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 <sup>a) b) e)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	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 <sup>c)</sup>	$F_{2AMax}$	N	1550													
		lb <sub>f</sub>	349													
Max. lateral force <sup>c)</sup>	$F_{2QMMax}$	N	1700													
		lb <sub>f</sub>	383													
Max. tilting moment	$M_{2KMax}$	Nm	72													
		in.lb	637													
Efficiency at full load	$\eta$	%	94													
Service life	$L_h$	h	> 20000													
Weight (incl. standard adapter plate)	$m$	kg	2.3													
		lb <sub>m</sub>	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	$J_t$	kgcm <sup>2</sup>	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 <sup>-3</sup> in.lb.s <sup>2</sup>	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

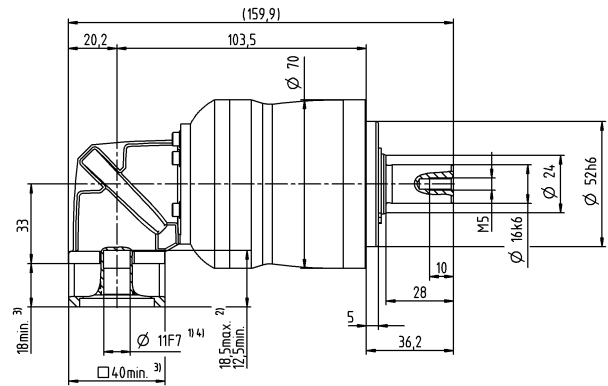
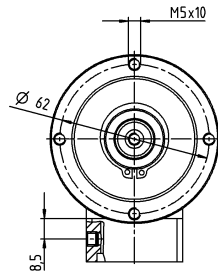
Please use our sizing software cymex® for a detailed sizing – [www.wittenstein-cymex.com](http://www.wittenstein-cymex.com)  
Please consider the maximal tilting moment caused by the motor  $M_{1KMot}$  – see sizing

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

Motor shaft diameter [mm]

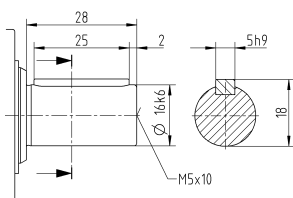
3-stage

up to 11<sup>4)</sup> (B)<sup>5)</sup>  
clamping hub  
diameter



## Other output variants

Shaft with key



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> Standard clamping hub diameter



# NPK 025 MF 2-stage

			2-stage					
Ratio	i		3	4	5	7	8	10
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	60	80	100	140	144	144
		in.lb	531	708	885	1239	1275	1275
Max. acceleration torque <sup>b)</sup> (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 <sup>a) b) e)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	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 <sup>c)</sup>	$F_{2AMax}$	N	1900					
		lb <sub>f</sub>	428					
Max. lateral force <sup>c)</sup>	$F_{2QMMax}$	N	2800					
		lb <sub>f</sub>	630					
Max. tilting moment	$M_{2KMMax}$	Nm	137					
		in.lb	1213					
Efficiency at full load	$\eta$	%	95					
Service life	$L_h$	h	> 20000					
Weight (incl. standard adapter plate)	$m$	kg	4.9					
		lb <sub>m</sub>	11					
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	$L_{PA}$	dB(A)	≤ 73					
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 <sup>2</sup>	1.2	1.2	1.2	1.2	1.2
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	1.1	1.1	1.1	1.1	1.1

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

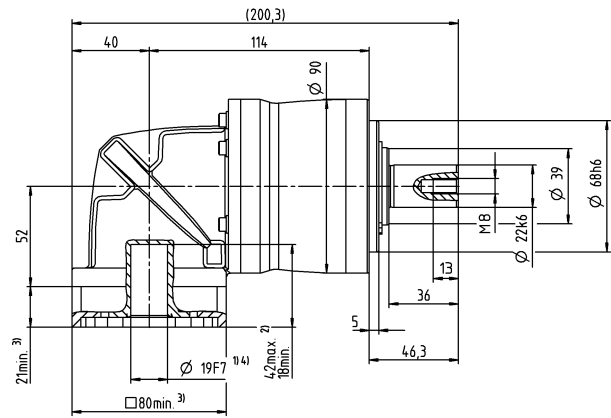
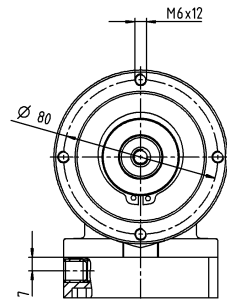
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

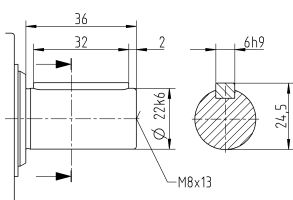
## 2-stage

up to 19<sup>4)</sup> (E)<sup>5)</sup>  
clamping hub  
diameter



### Other output variants

Shaft with key



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> 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 <sup>a) b) e)</sup>		$T_{2a}$	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 <sup>e)</sup> (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 <sup>a) b) e)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>		$C_{t21}$	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 <sup>c)</sup>		$F_{2AMax}$	N	1900														
			lb <sub>f</sub>	428														
Max. lateral force <sup>c)</sup>		$F_{2QMMax}$	N	2800														
			lb <sub>f</sub>	630														
Max. tilting moment		$M_{2KMMax}$	Nm	137														
			in.lb	1213														
Efficiency at full load		$\eta$	%	94														
Service life		$L_h$	h	> 20000														
Weight (incl. standard adapter plate)		$m$	kg	4.5														
			lb <sub>m</sub>	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 <sup>2</sup>	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	0.45
				10 <sup>-3</sup> in.lb.s <sup>2</sup>	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](http://www.wittenstein-cymex.com)  
Please consider the maximal tilting moment caused by the motor  $M_{1KMot}$  – see sizing

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

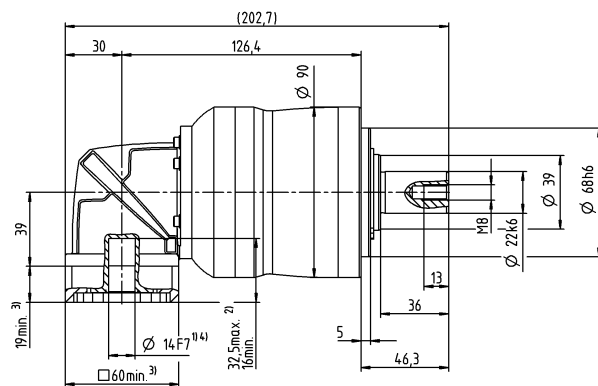
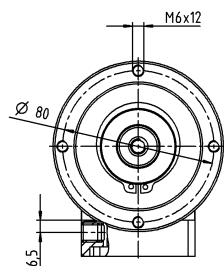
<sup>c)</sup> Refers to center of the output shaft or flange

<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

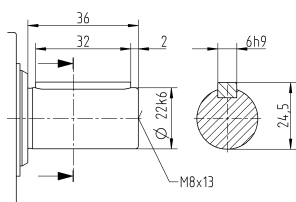
## 3-stage

up to 14 <sup>4)</sup> (C) <sup>5)</sup>  
clamping hub  
diameter



## Other output variants

Shaft with key



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

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

<sup>5)</sup> Standard clamping hub diameter

# NPK 035 MF 2-stage

			2-stage					
Ratio	i		3	4	5	7	8	10
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	150	200	250	350	352	352
		in.lb	1328	1770	2213	3098	3115	3115
Max. acceleration torque <sup>b)</sup> (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 <sup>a) b) e)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	Nm/arcmin	16	16	16	16	16	16
		in.lb/arcmin	142	142	142	142	142	142
Max. axial force <sup>c)</sup>	$F_{2AMax}$	N	4000					
		lb <sub>f</sub>	900					
Max. lateral force <sup>c)</sup>	$F_{2QMax}$	N	5000					
		lb <sub>f</sub>	1125					
Max. tilting moment	$M_{2KMax}$	Nm	345					
		in.lb	3054					
Efficiency at full load	$\eta$	%	95					
Service life	$L_h$	h	> 20000					
Weight (incl. standard adapter plate)	$m$	kg	11					
		lb <sub>m</sub>	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 <sup>2</sup>	5.3	5.3	5.3	5.3	5.3
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	4.7	4.7	4.7	4.7	4.7

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

<sup>a)</sup> Valid for torque transmission only

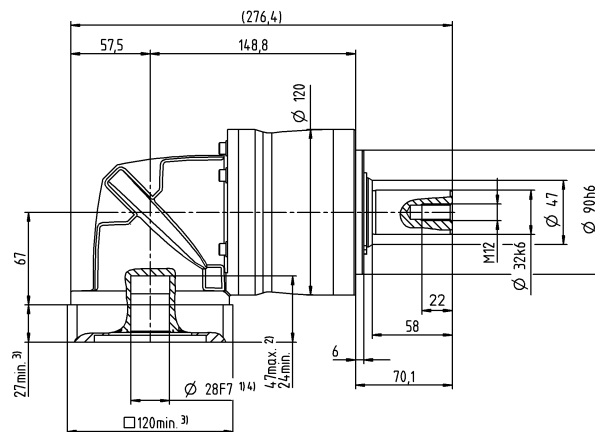
<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

## 2-stage

<sup>5)</sup> 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 <sup>a) b) e)</sup>		$T_{2a}$	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 <sup>e)</sup> (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 <sup>a) b) e)</sup> (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	4425
Permitted average input speed <sup>d)</sup> (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 <sup>b)</sup> (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	8.9
Max. backlash		$j_t$	arcmin	≤ 13															
Torsional rigidity <sup>b)</sup>		$C_{t21}$	Nm/arcmin	19	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	168
Max. axial force <sup>c)</sup>		$F_{2AMax}$	N	4000															
			lb <sub>f</sub>	900															
Max. lateral force <sup>c)</sup>		$F_{2QMMax}$	N	5000															
			lb <sub>f</sub>	1125															
Max. tilting moment		$M_{2KMMax}$	Nm	345															
			in.lb	3054															
Efficiency at full load		$\eta$	%	94															
Service life		$L_h$	h	> 20000															
Weight (incl. standard adapter plate)		$m$	kg	11															
			lb <sub>m</sub>	24															
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)		$L_{PA}$	dB(A)	≤ 73															
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 <sup>2</sup>	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	1.7	
				10 <sup>-3</sup> in.lb.s <sup>2</sup>	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	1.5	1.5

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

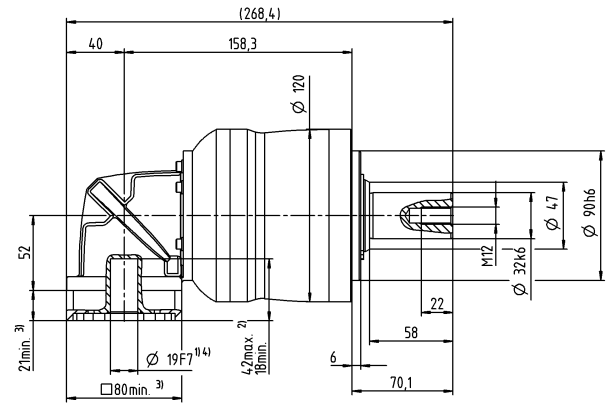
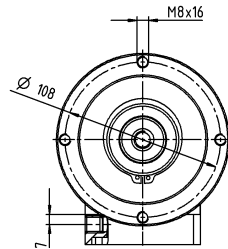
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

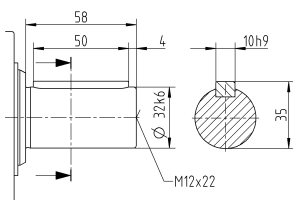
## 3-stage

up to 19 <sup>4)</sup> (E) <sup>5)</sup>  
clamping hub  
diameter



## Other output variants

Shaft with key



Non-tolerated dimensions are nominal dimensions

- 1) Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

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

<sup>5)</sup> Standard clamping hub diameter



# NPK 045 MF 3-stage

			3-stage				
Ratio	i		25	32	50	64	100
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	700	640	700	640	640
		in.lb	6196	5665	6196	5665	5665
Max. acceleration torque <sup>e)</sup> (max. 1000 cycles per hour)	$T_{2B}$	Nm	500	400	500	400	400
		in.lb	4425	3540	4425	3540	3540
Emergency stop torque <sup>a) b) e)</sup> (permitted 1000 times during the service life of the gearbox)	$T_{2Not}$	Nm	1000	1000	1000	1000	1000
		in.lb	8851	8851	8851	8851	8851
Permitted average input speed <sup>d)</sup> (at $T_{2N}$ and 20 °C ambient temperature)	$n_{1N}$	rpm	2000	2000	2000	2000	2000
Max. input speed	$n_{1Max}$	rpm	4500	4500	4500	4500	4500
Mean no load running torque <sup>b)</sup> (at $n_1 = 3000$ rpm and 20 °C gearbox temperature)	$T_{012}$	Nm	3.6	3.6	3.6	3.6	3.6
		in.lb	32	32	32	32	32
Max. backlash	$j_l$	arcmin	$\leq 11$				
Torsional rigidity <sup>b)</sup>	$C_{t21}$	Nm/arcmin	54	54	54	54	54
		in.lb/arcmin	478	478	478	478	478
Max. axial force <sup>c)</sup>	$F_{2AMax}$	N	6000				
		lb <sub>f</sub>	1350				
Max. lateral force <sup>c)</sup>	$F_{2QMax}$	N	8000				
		lb <sub>f</sub>	1800				
Max. tilting moment	$M_{2KMax}$	Nm	704				
		in.lb	6231				
Efficiency at full load	$\eta$	%	94				
Service life	$L_h$	h	> 20000				
Weight (incl. standard adapter plate)	$m$	kg	21				
		lb <sub>m</sub>	46				
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	$L_{PA}$	dB(A)	$\leq 74$				
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-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 <sup>2</sup>	6.8	6.8	6.8	6.8	6.8
		10 <sup>-3</sup> in.lb.s <sup>2</sup>	6	6	6	6	6

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

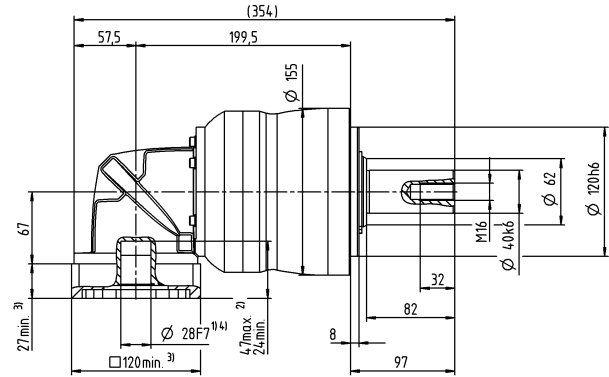
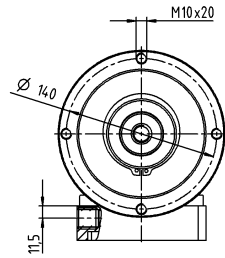
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

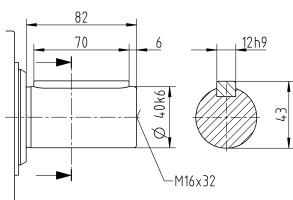
3-stage

up to 28<sup>4)</sup> (H)<sup>5)</sup>  
clamping hub  
diameter



## Other output variants

Shaft with key



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> Standard clamping hub diameter

# NPLK 015 MF 2-stage

			2-stage					
Ratio	i		3	4	5	7	8	10
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	33	44	55	64	56	56
		in.lb	292	389	487	566	496	496
Max. acceleration torque <sup>b)</sup> (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 <sup>a) b) e)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	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 <sup>c)</sup>	$F_{2AMax}$	N	2400					
		lb <sub>f</sub>	540					
Max. lateral force <sup>c)</sup>	$F_{2QMMax}$	N	2800					
		lb <sub>f</sub>	630					
Max. tilting moment	$M_{2KMax}$	Nm	160					
		in.lb	1416					
Efficiency at full load	$\eta$	%	95					
Service life	$L_h$	h	> 20000					
Weight (incl. standard adapter plate)	$m$	kg	2.3					
		lb <sub>m</sub>	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 <sup>2</sup>	0.32	0.32	0.32	0.32	0.32
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	0.28	0.28	0.28	0.28	0.28

Please use our sizing software cymex® for a detailed sizing – [www.wittenstein-cymex.com](http://www.wittenstein-cymex.com)  
Please consider the maximal tilting moment caused by the motor M<sub>1KMot</sub> – see sizing

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

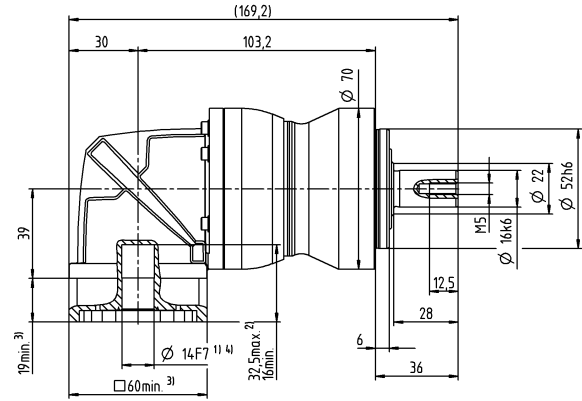
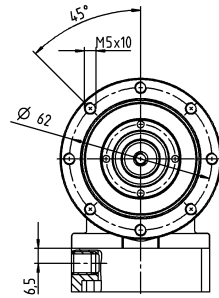
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

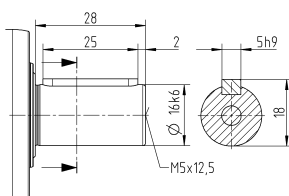
2-stage

up to 14<sup>4)</sup> (C)<sup>5)</sup>  
clamping hub  
diameter

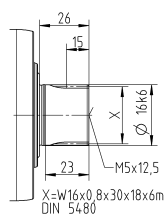


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> Standard clamping hub diameter

# NPLK 015 MF 3-stage

			3-stage												
Ratio	i		12	15	16	20	25	28	30	32	35	40	50	70	100
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	42	51	56	56	64	56	51	56	64	56	64	64	56
		in.lb	372	451	496	496	566	496	451	496	566	496	566	566	496
Max. acceleration torque <sup>e)</sup> (max. 1000 cycles per hour)	$T_{2B}$	Nm	20	25	27	34	40	35	31	35	40	35	40	40	35
		in.lb	177	221	239	301	354	310	274	310	354	310	354	354	310
Emergency stop torque <sup>a) b) e)</sup> (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
		in.lb	460	575	620	708	708	708	708	708	708	708	708	708	708
Permitted average input speed <sup>d)</sup> (at $T_{2a}$ and 20 °C ambient temperature)	$n_{1N}$	rpm	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
Mean no load running torque <sup>b)</sup> (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
		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
Max. backlash	$j_t$	arcmin	≤ 12												
Torsional rigidity <sup>b)</sup>	$C_{t21}$	Nm/arcmin	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
Max. axial force <sup>c)</sup>	$F_{2AMax}$	N	2400												
		lb <sub>f</sub>	540												
Max. lateral force <sup>c)</sup>	$F_{2QMMax}$	N	2800												
		lb <sub>f</sub>	630												
Max. tilting moment	$M_{2KMMax}$	Nm	160												
		in.lb	1416												
Efficiency at full load	$\eta$	%	94												
Service life	$L_h$	h	> 20000												
Weight (incl. standard adapter plate)	$m$	kg	2.4												
		lb <sub>m</sub>	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	$J_t$	kgcm <sup>2</sup>	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 <sup>-3</sup> in.lb.s <sup>2</sup>	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](http://www.wittenstein-cymex.com)  
Please consider the maximal tilting moment caused by the motor M<sub>1KMot</sub> – see sizing

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

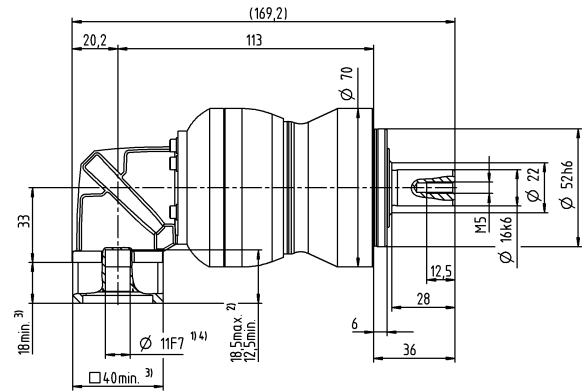
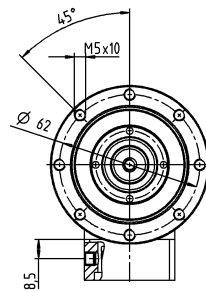
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

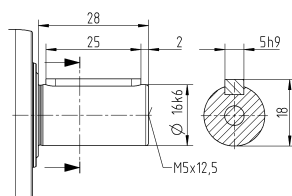
3-stage

up to 11<sup>4)</sup> (B)<sup>5)</sup>  
clamping hub  
diameter

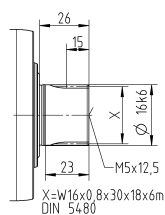


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> Standard clamping hub diameter

# NPLK 025 MF 2-stage

			2-stage					
Ratio	i		3	4	5	7	8	10
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	60	80	100	140	144	144
		in.lb	531	708	885	1239	1275	1275
Max. acceleration torque <sup>b)</sup> (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 <sup>a) b) e)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	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 <sup>c)</sup>	$F_{2AMax}$	N	3350					
		lb <sub>f</sub>	754					
Max. lateral force <sup>c)</sup>	$F_{2QMMax}$	N	4200					
		lb <sub>f</sub>	945					
Max. tilting moment	$M_{2KMax}$	Nm	260					
		in.lb	2301					
Efficiency at full load	$\eta$	%	95					
Service life	$L_h$	h	> 20000					
Weight (incl. standard adapter plate)	$m$	kg	5					
		lb <sub>m</sub>	11					
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	$L_{PA}$	dB(A)	≤ 73					
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 <sup>2</sup>	1.2	1.2	1.2	1.2	1.2
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	1.1	1.1	1.1	1.1	1.1

Please use our sizing software cymex® for a detailed sizing – [www.wittenstein-cymex.com](http://www.wittenstein-cymex.com)  
Please consider the maximal tilting moment caused by the motor M<sub>1KMot</sub> – see sizing

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

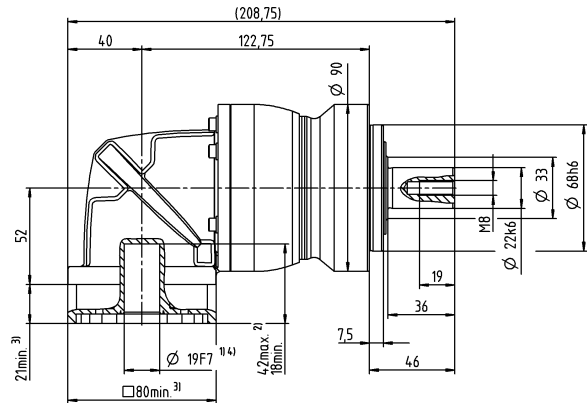
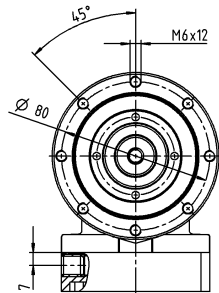
<sup>c)</sup> Refers to center of the output shaft or flange

<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

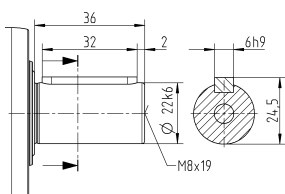
2-stage

up to 19 <sup>4)</sup> (E) <sup>5)</sup>  
clamping hub  
diameter

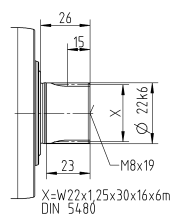


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

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

<sup>5)</sup> 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	70	100
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	99	128	128	152	152	160	152	128	152	160	152	160	160	144
		in.lb	876	1133	1133	1345	1345	1416	1345	1133	1345	1416	1345	1416	1416	1275
Max. acceleration torque <sup>a)</sup> (max. 1000 cycles per hour)	$T_{2B}$	Nm	48	65	80	86	95	100	95	80	95	100	95	100	100	90
		in.lb	425	575	708	761	841	885	841	708	841	885	841	885	885	797
Emergency stop torque <sup>a) b) e)</sup> (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
		in.lb	1097	1469	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
Permitted average input speed <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	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
		in.lb/arcmin	74	74	74	74	74	74	74	74	74	74	74	74	74	74
Max. axial force <sup>c)</sup>	$F_{2AMax}$	N	3350													
		lb <sub>f</sub>	754													
Max. lateral force <sup>c)</sup>	$F_{2QMMax}$	N	4200													
		lb <sub>f</sub>	945													
Max. tilting moment	$M_{2KMax}$	Nm	260													
		in.lb	2301													
Efficiency at full load	$\eta$	%	94													
Service life	$L_h$	h	> 20000													
Weight (incl. standard adapter plate)	$m$	kg	4.6													
		lb <sub>m</sub>	10													
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	$L_{PA}$	dB(A)	≤ 73													
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	$J_t$	kgcm <sup>2</sup>	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 <sup>-3</sup> in.lb.s <sup>2</sup>	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](http://www.wittenstein-cymex.com)  
Please consider the maximal tilting moment caused by the motor  $M_{1KMot}$  – see sizing

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

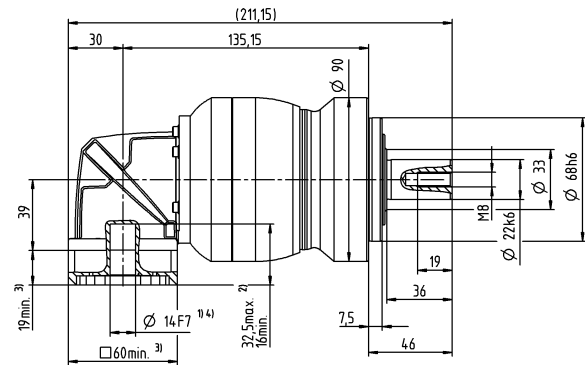
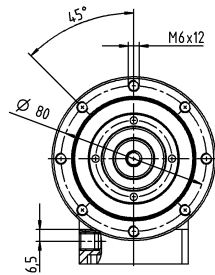
<sup>c)</sup> Refers to center of the output shaft or flange

<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

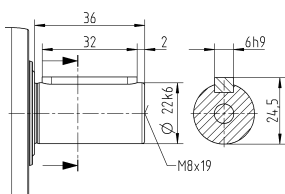
## 3-stage

up to 14 <sup>4)</sup> (C) <sup>5)</sup>  
clamping hub  
diameter

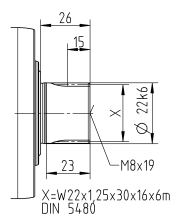


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

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

<sup>5)</sup> Standard clamping hub diameter

# NPLK 035 MF 2-stage

			2-stage					
Ratio	i		3	4	5	7	8	10
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	150	200	250	350	352	352
		in.lb	1328	1770	2213	3098	3115	3115
Max. acceleration torque <sup>b)</sup> (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 <sup>a) b) e)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	Nm/arcmin	16	16	16	16	16	16
		in.lb/arcmin	142	142	142	142	142	142
Max. axial force <sup>c)</sup>	$F_{2AMax}$	N	5650					
		lb <sub>f</sub>	1271					
Max. lateral force <sup>c)</sup>	$F_{2QMax}$	N	6300					
		lb <sub>f</sub>	1418					
Max. tilting moment	$M_{2KMax}$	Nm	500					
		in.lb	4425					
Efficiency at full load	$\eta$	%	95					
Service life	$L_h$	h	> 20000					
Weight (incl. standard adapter plate)	$m$	kg	11					
		lb <sub>m</sub>	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 <sup>2</sup>	5.2	5.2	5.2	5.2	5.2
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	4.6	4.6	4.6	4.6	4.6

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

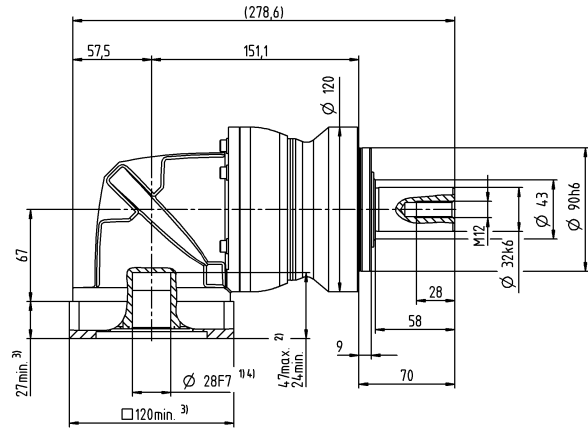
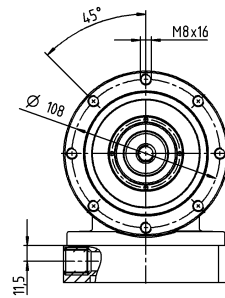
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

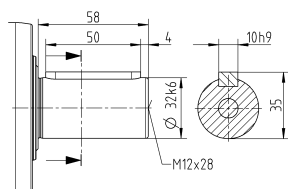
2-stage

up to 28<sup>4)</sup> (H)<sup>5)</sup>  
clamping hub  
diameter

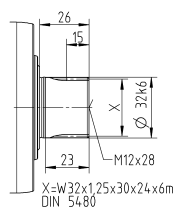


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> 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	70	100
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	180	240	300	320	400	400	408	320	408	400	408	400	400	352
		in.lb	1593	2124	2655	2832	3540	3540	3611	2832	3611	3540	3611	3540	3540	3115
Max. acceleration torque <sup>a)</sup> (max. 1000 cycles per hour)	$T_{2B}$	Nm	105	141	176	188	235	250	255	200	255	250	255	250	250	220
		in.lb	929	1248	1558	1664	2080	2213	2257	1770	2257	2213	2257	2213	2213	1947
Emergency stop torque <sup>a) b) e)</sup> (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
		in.lb	2390	3195	3992	4257	4425	4425	4425	4425	4425	4425	4425	4425	4425	4425
Permitted average input speed <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	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 <sup>c)</sup>	$F_{2AMax}$	N	5650													
		lb <sub>f</sub>	1271													
Max. lateral force <sup>c)</sup>	$F_{2QMMax}$	N	6300													
		lb <sub>f</sub>	1418													
Max. tilting moment	$M_{2KMax}$	Nm	500													
		in.lb	4425													
Efficiency at full load	$\eta$	%	94													
Service life	$L_h$	h	> 20000													
Weight (incl. standard adapter plate)	$m$	kg	11													
		lb <sub>m</sub>	24													
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	$L_{PA}$	dB(A)	≤ 73													
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 $J_t$	kgcm <sup>2</sup>	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	1.7
		10 <sup>-3</sup> in.lb.s <sup>2</sup>	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	1.5

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

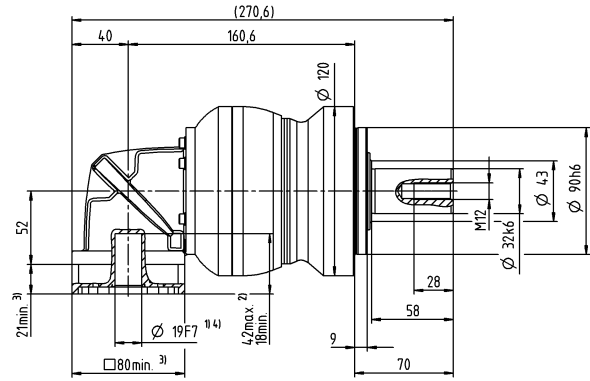
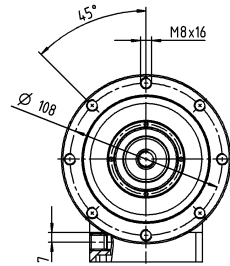
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

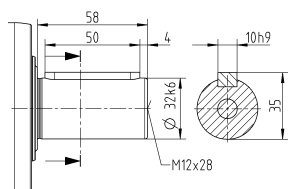
3-stage

up to 19<sup>4)</sup> (E)<sup>5)</sup>  
clamping hub  
diameter

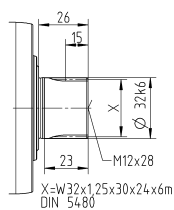


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> Standard clamping hub diameter

# NPLK 045 MF 3-stage

			3-stage		
Ratio	i		25	50	100
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	700	700	640
		in.lb	6196	6196	5665
Max. acceleration torque <sup>e)</sup> (max. 1000 cycles per hour)	$T_{2B}$	Nm	500	500	400
		in.lb	4425	4425	3540
Emergency stop torque <sup>a) b) e)</sup> (permitted 1000 times during the service life of the gearbox)	$T_{2Not}$	Nm	1000	1000	1000
		in.lb	8851	8851	8851
Permitted average input speed <sup>d)</sup> (at $T_{2N}$ and 20 °C ambient temperature)	$n_{1N}$	rpm	2000	2000	2000
Max. input speed	$n_{1Max}$	rpm	4500	4500	4500
Mean no load running torque <sup>b)</sup> (at $n_1 = 3000$ rpm and 20 °C gearbox temperature)	$T_{012}$	Nm	4.7	4.7	4.7
		in.lb	42	42	42
Max. backlash	$j_l$	arcmin	$\leq 11$		
Torsional rigidity <sup>b)</sup>	$C_{t21}$	Nm/arcmin	54	54	54
		in.lb/arcmin	478	478	478
Max. axial force <sup>c)</sup>	$F_{2AMax}$	N	9870		
		lb <sub>f</sub>	2221		
Max. lateral force <sup>c)</sup>	$F_{2QMax}$	N	9600		
		lb <sub>f</sub>	2160		
Max. tilting moment	$M_{2KMax}$	Nm	1000		
		in.lb	8851		
Efficiency at full load	$\eta$	%	94		
Service life	$L_h$	h	> 20000		
Weight (incl. standard adapter plate)	$m$	kg	22		
		lb <sub>m</sub>	49		
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	$L_{PA}$	dB(A)	$\leq 74$		
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-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 <sup>2</sup>	6.7	6.7
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	5.9	5.9

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

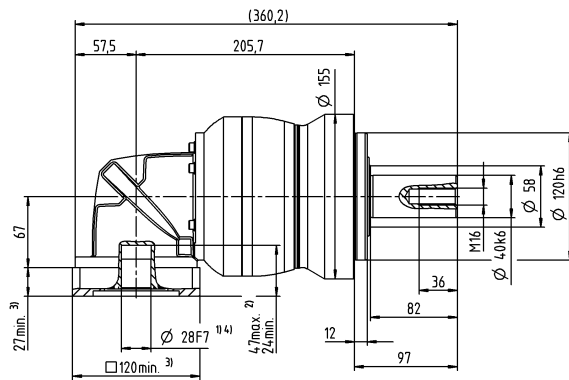
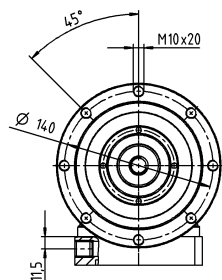
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

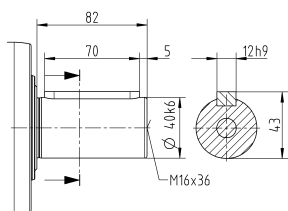
## 3-stage

up to 28 <sup>4)</sup> (H) <sup>5)</sup>  
clamping hub  
diameter

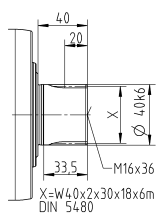


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

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

<sup>5)</sup> Standard clamping hub diameter



# NPSK 015 MF 2-stage

			2-stage					
Ratio	i		3	4	5	7	8	10
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	33	44	55	64	56	56
		in.lb	292	389	487	566	496	496
Max. acceleration torque <sup>b)</sup> (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 <sup>a) b) e)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	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 <sup>c)</sup>	$F_{2AMax}$	N	2400					
		lb <sub>f</sub>	540					
Max. lateral force <sup>c)</sup>	$F_{2QMMax}$	N	2800					
		lb <sub>f</sub>	630					
Max. tilting moment	$M_{2KMax}$	Nm	160					
		in.lb	1416					
Efficiency at full load	$\eta$	%	95					
Service life	$L_h$	h	> 20000					
Weight (incl. standard adapter plate)	$m$	kg	2.2					
		lb <sub>m</sub>	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 <sup>2</sup>	0.32	0.32	0.32	0.32	0.32
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	0.28	0.28	0.28	0.28	0.28

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

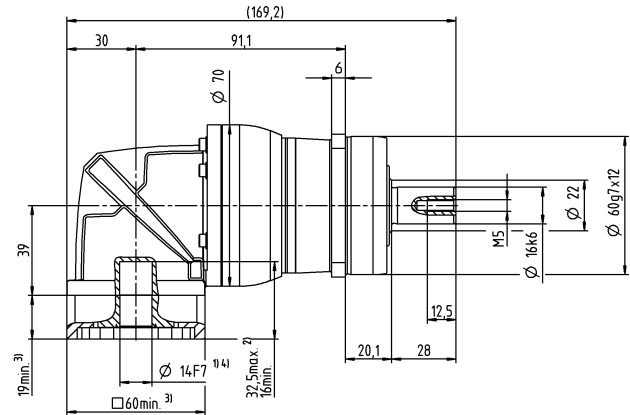
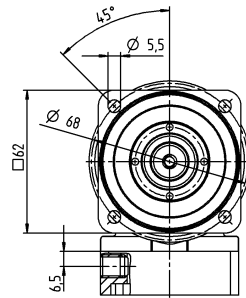
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

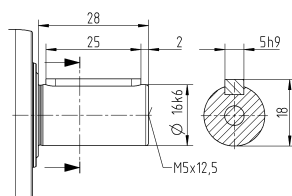
2-stage

up to 14<sup>4)</sup> (C)<sup>5)</sup>  
clamping hub  
diameter

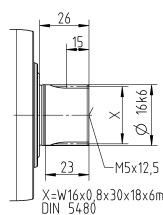


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> 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 <sup>a) b) e)</sup>	$T_{2a}$	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 <sup>e)</sup> (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 <sup>a) b) e)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	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 <sup>c)</sup>	$F_{2AMax}$	N	2400													
		lb <sub>f</sub>	540													
Max. lateral force <sup>c)</sup>	$F_{2QMMax}$	N	2800													
		lb <sub>f</sub>	630													
Max. tilting moment	$M_{2KMax}$	Nm	160													
		in.lb	1416													
Efficiency at full load	$\eta$	%	94													
Service life	$L_h$	h	> 20000													
Weight (incl. standard adapter plate)	$m$	kg	2.3													
		lb <sub>m</sub>	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	$J_t$	kgcm <sup>2</sup>	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
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	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

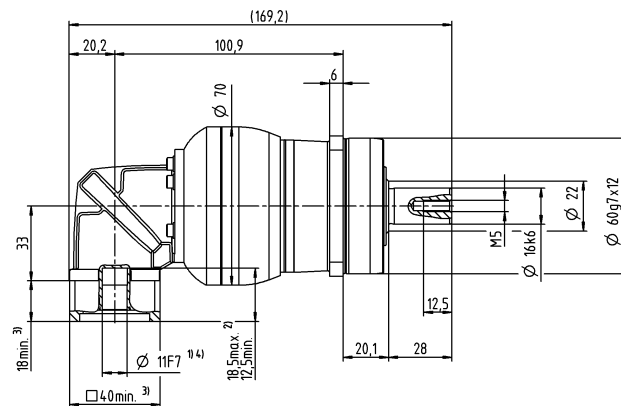
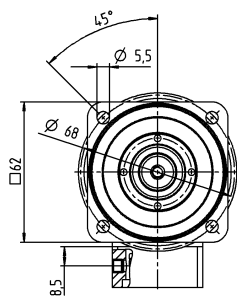
Please use our sizing software cymex® for a detailed sizing – [www.wittenstein-cymex.com](http://www.wittenstein-cymex.com)  
Please consider the maximal tilting moment caused by the motor  $M_{1KMot}$  – see sizing

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

Motor shaft diameter [mm]

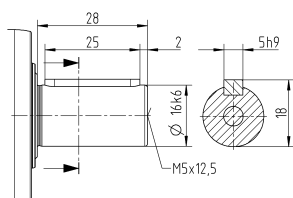
## 3-stage

up to 11 <sup>4)</sup> (B) <sup>5)</sup>  
clamping hub  
diameter

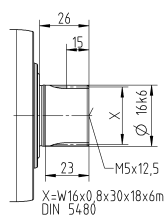


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> Standard clamping hub diameter

# NPSK 025 MF 2-stage

			2-stage					
Ratio	i		3	4	5	7	8	10
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	60	80	100	140	144	144
		in.lb	531	708	885	1239	1275	1275
Max. acceleration torque <sup>b)</sup> (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 <sup>a) b) e)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	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 <sup>c)</sup>	$F_{2AMax}$	N	3350					
		lb <sub>f</sub>	754					
Max. lateral force <sup>c)</sup>	$F_{2QMMax}$	N	4200					
		lb <sub>f</sub>	945					
Max. tilting moment	$M_{2KMMax}$	Nm	260					
		in.lb	2301					
Efficiency at full load	$\eta$	%	95					
Service life	$L_h$	h	> 20000					
Weight (incl. standard adapter plate)	$m$	kg	4.7					
		lb <sub>m</sub>	10					
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	$L_{PA}$	dB(A)	≤ 73					
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	$J_t$	kgcm <sup>2</sup>	1.2	1.2	1.2	1.2	1.2
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	1.1	1.1	1.1	1.1	1.1

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

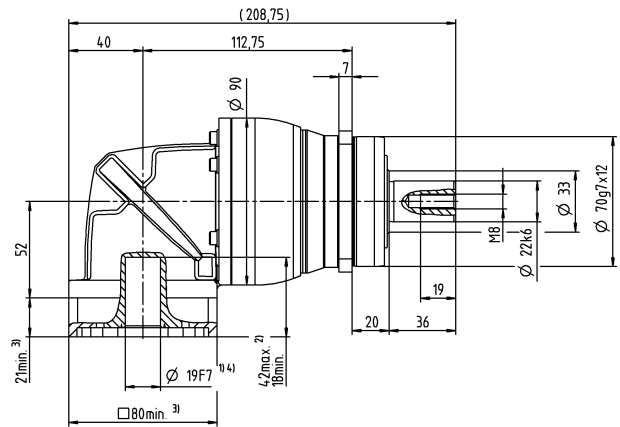
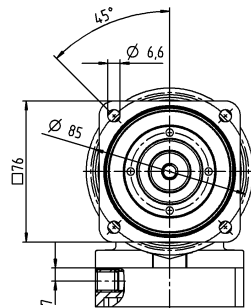
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

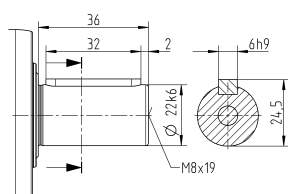
2-stage

up to 19<sup>4)</sup> (E)<sup>5)</sup>  
clamping hub  
diameter

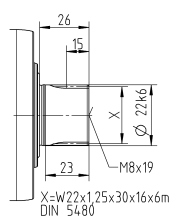


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> 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 <sup>a) b) e)</sup>		T <sub>2a</sub>	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 <sup>a)</sup> (max. 1000 cycles per hour)		T <sub>2B</sub>	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 <sup>a) b) e)</sup> (permitted 1000 times during the service life of the gearbox)		T <sub>2Not</sub>	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 <sup>d)</sup> (at T <sub>2a</sub> and 20 °C ambient temperature)		n <sub>1N</sub>	rpm	2900	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300
Max. input speed		n <sub>1Max</sub>	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Mean no load running torque <sup>b)</sup> (at n <sub>1</sub> =3000 rpm and 20 °C gearbox temperature)		T <sub>012</sub>	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 <sub>t</sub>	arcmin	≤ 13														
Torsional rigidity <sup>b)</sup>		C <sub>t21</sub>	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 <sup>c)</sup>		F <sub>2AMax</sub>	N	3350														
			lb <sub>f</sub>	754														
Max. lateral force <sup>c)</sup>		F <sub>2QMMax</sub>	N	4200														
			lb <sub>f</sub>	945														
Max. tilting moment		M <sub>2KMax</sub>	Nm	260														
			in.lb	2301														
Efficiency at full load		η	%	94														
Service life		L <sub>h</sub>	h	> 20000														
Weight (incl. standard adapter plate)		m	kg	4.3														
			lb <sub>m</sub>	9.5														
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)		L <sub>PA</sub>	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 <sub>1</sub>	kgcm <sup>2</sup>	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	0.45
				10 <sup>-3</sup> in.lb.s <sup>2</sup>	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](http://www.wittenstein-cymex.com)  
Please consider the maximal tilting moment caused by the motor M<sub>1KMot</sub> – see sizing

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

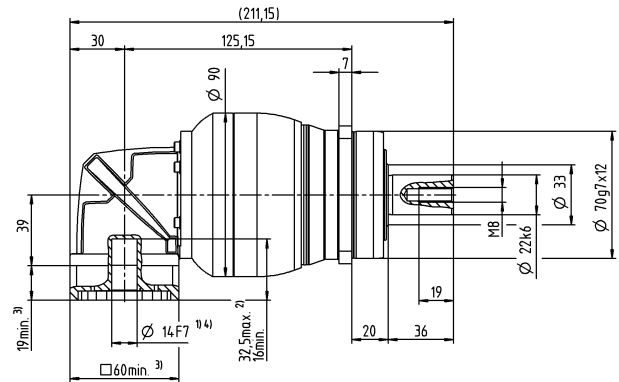
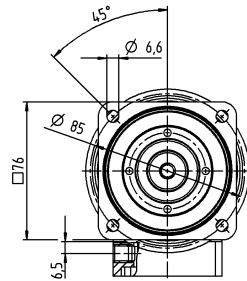
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

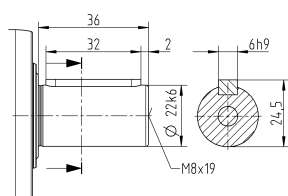
3-stage

up to 14<sup>4)</sup> (C)<sup>5)</sup>  
clamping hub  
diameter

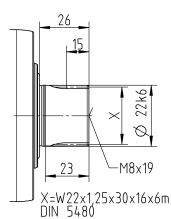


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> Standard clamping hub diameter



# NPSK 035 MF 2-stage

			2-stage					
Ratio	i		3	4	5	7	8	10
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	150	200	250	350	352	352
		in.lb	1328	1770	2213	3098	3115	3115
Max. acceleration torque <sup>b)</sup> (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 <sup>a) b) e)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	Nm/arcmin	16	16	16	16	16	16
		in.lb/arcmin	142	142	142	142	142	142
Max. axial force <sup>c)</sup>	$F_{2AMax}$	N	5650					
		lb <sub>f</sub>	1271					
Max. lateral force <sup>c)</sup>	$F_{2QMax}$	N	6300					
		lb <sub>f</sub>	1418					
Max. tilting moment	$M_{2KMax}$	Nm	500					
		in.lb	4425					
Efficiency at full load	$\eta$	%	95					
Service life	$L_h$	h	> 20000					
Weight (incl. standard adapter plate)	$m$	kg	10					
		lb <sub>m</sub>	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 <sup>2</sup>	5.2	5.2	5.2	5.2	5.2
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	4.6	4.6	4.6	4.6	4.6

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

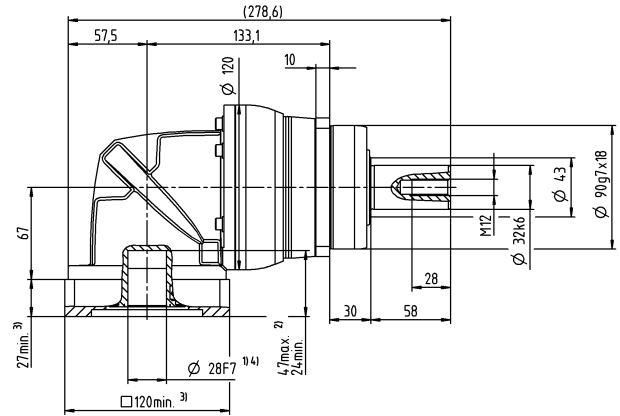
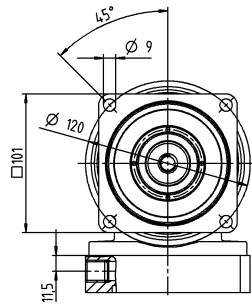
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

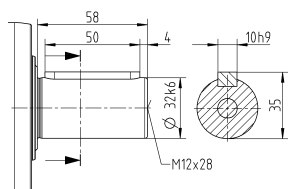
2-stage

up to 28<sup>4)</sup> (H)<sup>5)</sup>  
clamping hub  
diameter

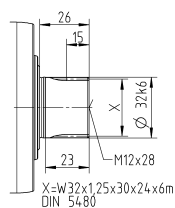


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> 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 <sup>a) b) e)</sup>	$T_{2a}$	$Nm$		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 <sup>a)</sup> (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 <sup>a) b) e)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	$Nm/arcmin$		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 <sup>c)</sup>	$F_{2AMax}$	$N$		5650														
		$lb_f$		1271														
Max. lateral force <sup>c)</sup>	$F_{2QMax}$	$N$		6300														
		$lb_f$		1418														
Max. tilting moment	$M_{2KMax}$	$Nm$		500														
		$in.lb$		4425														
Efficiency at full load	$\eta$	%		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®)	$L_{PA}$	$dB(A)$		≤ 73														
Max. permitted housing temperature		°C		+90														
		°F		+194														
Ambient temperature (relates to the drive)		°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	$J_i$	$kgcm^2$	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	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	1.5	1.5

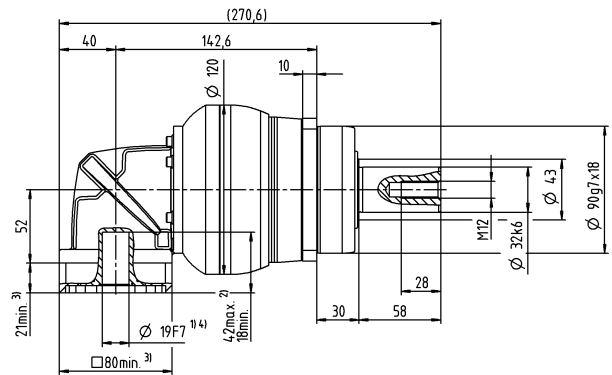
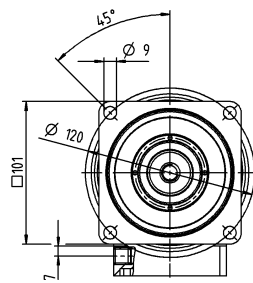
Please use our sizing software cymex® for a detailed sizing – [www.wittenstein-cymex.com](http://www.wittenstein-cymex.com)  
Please consider the maximal tilting moment caused by the motor  $M_{1KMot}$  – see sizing

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

Motor shaft diameter [mm]

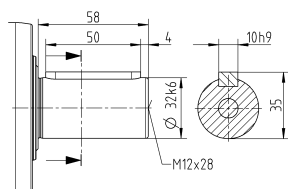
3-stage

up to 19<sup>4)</sup> (E)<sup>5)</sup>  
clamping hub  
diameter

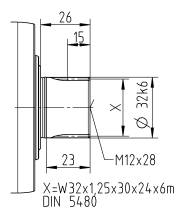


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> Standard clamping hub diameter

# NPSK 045 MF 3-stage

			3-stage				
Ratio	i		25	32	50	64	100
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	700	640	700	640	640
		in.lb	6196	5665	6196	5665	5665
Max. acceleration torque <sup>e)</sup> (max. 1000 cycles per hour)	$T_{2B}$	Nm	500	400	500	400	400
		in.lb	4425	3540	4425	3540	3540
Emergency stop torque <sup>a) b) e)</sup> (permitted 1000 times during the service life of the gearbox)	$T_{2Not}$	Nm	1000	1000	1000	1000	1000
		in.lb	8851	8851	8851	8851	8851
Permitted average input speed <sup>d)</sup> (at $T_{2N}$ and 20 °C ambient temperature)	$n_{1N}$	rpm	2000	2000	2000	2000	2000
Max. input speed	$n_{1Max}$	rpm	4500	4500	4500	4500	4500
Mean no load running torque <sup>b)</sup> (at $n_1 = 3000$ rpm and 20 °C gearbox temperature)	$T_{012}$	Nm	4.7	4.7	4.7	4.7	4.7
		in.lb	42	42	42	42	42
Max. backlash	$j_l$	arcmin	$\leq 11$				
Torsional rigidity <sup>b)</sup>	$C_{t21}$	Nm/arcmin	54	54	54	54	54
		in.lb/arcmin	478	478	478	478	478
Max. axial force <sup>c)</sup>	$F_{2AMax}$	N	9870				
		lb <sub>f</sub>	2221				
Max. lateral force <sup>c)</sup>	$F_{2QMax}$	N	9600				
		lb <sub>f</sub>	2160				
Max. tilting moment	$M_{2KMMax}$	Nm	1000				
		in.lb	8851				
Efficiency at full load	$\eta$	%	94				
Service life	$L_h$	h	> 20000				
Weight (incl. standard adapter plate)	$m$	kg	21				
		lb <sub>m</sub>	46				
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	$L_{PA}$	dB(A)	$\leq 74$				
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-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 <sup>2</sup>	6.7	6.7	6.7	6.7	6.7
		10 <sup>-3</sup> in.lb.s <sup>2</sup>	5.9	5.9	5.9	5.9	5.9

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

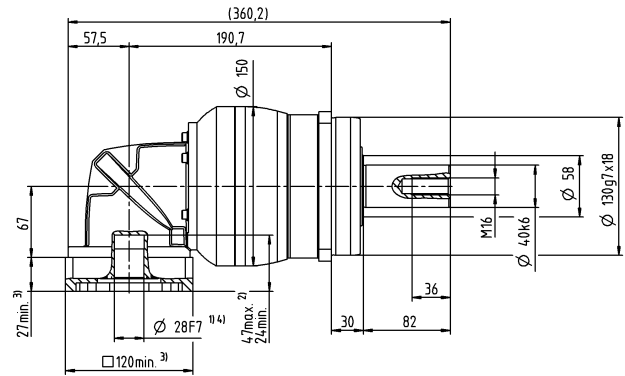
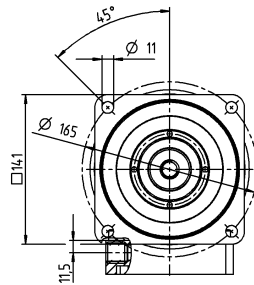
<sup>c)</sup> Refers to center of the output shaft or flange

<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

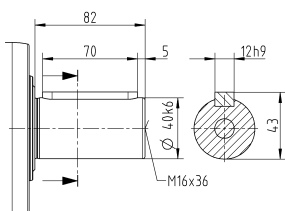
## 3-stage

up to 28 <sup>4)</sup> (H) <sup>5)</sup>  
clamping hub  
diameter

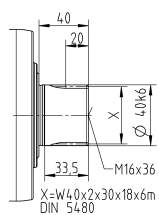


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

- 1) Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> 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	70	100
Max. torque <sup>a) b)</sup>			$T_{2a}$	Nm	14	17	22	21	21	18	18	22	18	22	18	22	22	21
				in.lb	124	150	195	186	186	159	159	195	159	195	159	195	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
				in.lb	60	75	106	115	115	97	97	115	97	115	97	115	115	115
Emergency stop torque <sup>a) b)</sup> (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
				in.lb	150	186	230	230	230	230	230	230	230	230	230	230	230	230
Permitted average input speed <sup>d)</sup> (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
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 <sup>b)</sup> (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
				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
Max. backlash			$j_t$	arcmin	≤ 15					≤ 15								
Torsional rigidity <sup>b)</sup>			$C_{t21}$	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
				in.lb/arcmin	8	8	8	8	8	11	11	11	11	11	11	11	11	11
Max. axial force <sup>c)</sup>			$F_{2AMax}$	N	600					600								
				lb <sub>f</sub>	135					135								
Max. tilting moment			$M_{2KMax}$	Nm	17					17								
				in.lb	150					150								
Efficiency at full load			$\eta$	%	95					94								
Service life			$L_h$	h	> 20000					> 20000								
Weight (incl. standard adapter plate)			$m$	kg	1.3					1.7								
				lb <sub>m</sub>	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													
Elastomer coupling (recommended product type – validate sizing with cymex®)					ELT-00020BAX-025.00													
Bore diameter of coupling on the application side					X = 008.000 - 025.000													
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	B	11	$J_1$	kgcm <sup>2</sup>	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	0.11
				10 <sup>-3</sup> in.lb.s <sup>2</sup>	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	0.1

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

<sup>a)</sup> Valid for torque transmission only

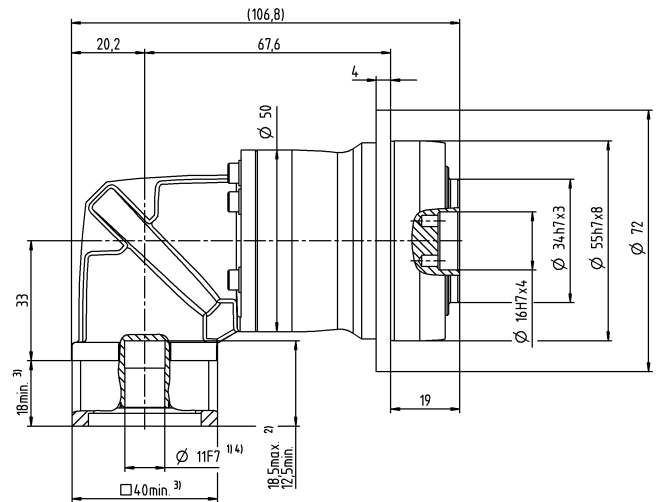
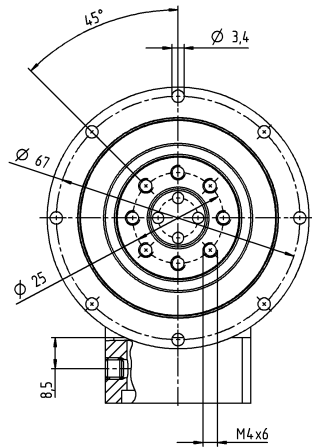
<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

<sup>d)</sup> Please reduce input speed at higher ambient temperatures

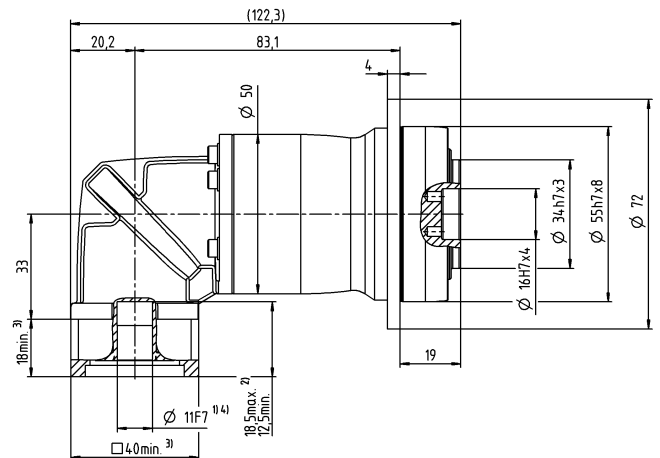
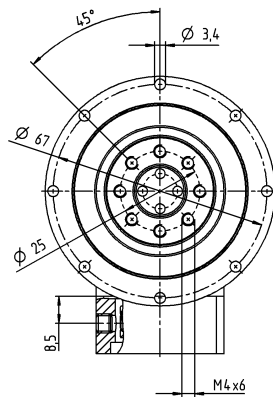
## 2-stage

up to 11<sup>4)</sup> (B)<sup>5)</sup>  
clamping hub  
diameter



## 3-stage

up to 11<sup>4)</sup> (B)<sup>5)</sup>  
clamping hub  
diameter



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> Standard clamping hub diameter



# NPTK 015 MF 2-stage

			2-stage					
Ratio	i		3	4	5	7	8	10
Max. torque <sup>a) b)</sup>	$T_{2a}$	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 <sup>a) b)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	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 <sup>c)</sup>	$F_{2AMax}$	N	1380					
		lb <sub>f</sub>	311					
Max. tilting moment	$M_{2KMax}$	Nm	42					
		in.lb	372					
Efficiency at full load	$\eta$	%	95					
Service life	$L_h$	h	> 20000					
Weight (incl. standard adapter plate)	$m$	kg	2.4					
		lb <sub>m</sub>	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					
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELT-00060BAX-031.50					
Bore diameter of coupling on the application side		mm	X = 018.000 - 032.000					
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	C 14	$J_1$	kgcm <sup>2</sup>	0.34	0.34	0.34	0.34	0.34
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	0.3	0.3	0.3	0.3	0.3

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

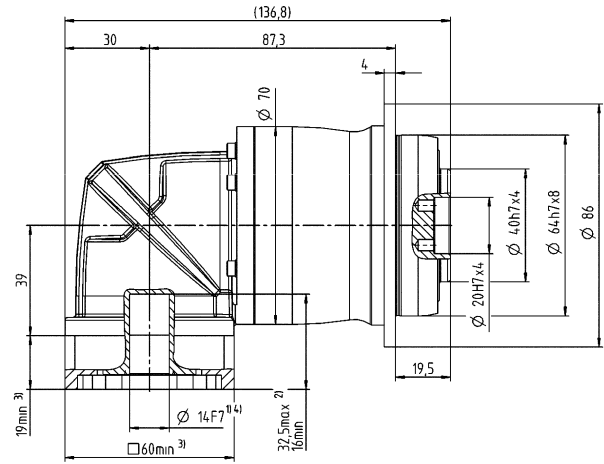
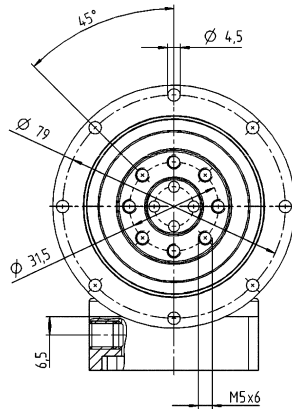
<sup>c)</sup> Refers to center of the output shaft or flange

<sup>d)</sup> Please reduce input speed at higher ambient temperatures

Motor shaft diameter [mm]

2-stage

up to 14<sup>4)</sup> (C)<sup>5)</sup>  
clamping hub  
diameter



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> Standard clamping hub diameter

# NPTK 015 MF 3-stage

			3-stage												
Ratio	i		12	15	16	20	25	28	30	32	35	40	50	70	100
Max. torque <sup>a) b)</sup>	$T_{2a}$	Nm	42	51	56	56	60	56	51	56	60	56	60	60	56
		in.lb	372	451	496	496	531	496	451	496	531	496	531	531	496
Max. acceleration torque (max. 1000 cycles per hour)	$T_{2B}$	Nm	20	25	27	34	40	35	31	35	40	35	40	40	35
		in.lb	177	221	239	301	354	310	274	310	354	310	354	354	310
Emergency stop torque <sup>a) b)</sup> (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
		in.lb	460	575	620	664	664	664	664	664	664	664	664	664	664
Permitted average input speed <sup>d)</sup> (at $T_{2a}$ and 20 °C ambient temperature)	$n_{1N}$	rpm	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
Mean no load running torque <sup>b)</sup> (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
		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
Max. backlash	$j_t$	arcmin	≤ 12												
Torsional rigidity <sup>b)</sup>	$C_{t21}$	Nm/arcmin	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
Max. axial force <sup>c)</sup>	$F_{2AMax}$	N	1380												
		lb <sub>f</sub>	311												
Max. tilting moment	$M_{2KMax}$	Nm	42												
		in.lb	372												
Efficiency at full load	$\eta$	%	94												
Service life	$L_h$	h	> 20000												
Weight (incl. standard adapter plate)	$m$	kg	2.5												
		lb <sub>m</sub>	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												
Elastomer coupling (recommended product type – validate sizing with cymex®)			ELT-00060BAX-031.50												
Bore diameter of coupling on the application side		mm	X = 018.000 - 032.000												
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	B 11	$J_1$	kgcm <sup>2</sup>	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 <sup>-3</sup> in.lb.s <sup>2</sup>	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](http://www.wittenstein-cymex.com)  
Please consider the maximal tilting moment caused by the motor  $M_{1KMot}$  – see sizing

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

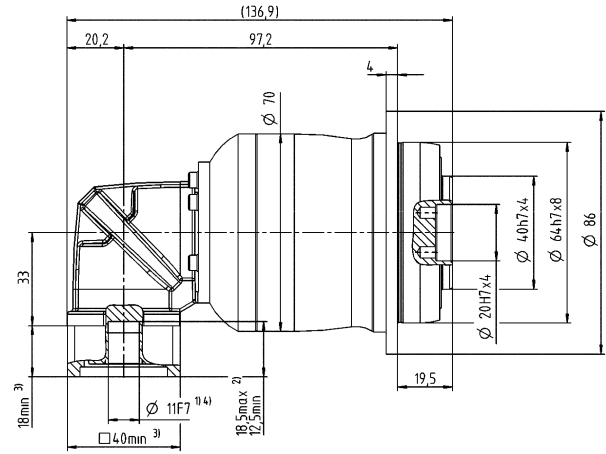
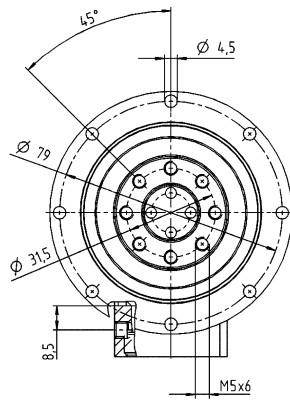
<sup>c)</sup> Refers to center of the output shaft or flange

<sup>d)</sup> Please reduce input speed at higher ambient temperatures

Motor shaft diameter [mm]

3-stage

up to 11<sup>4)</sup> (B)<sup>5)</sup>  
clamping hub  
diameter



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> Standard clamping hub diameter

# NPTK 025 MF 2-stage

			2-stage					
Ratio	i		3	4	5	7	8	10
Max. torque <sup>a) b)</sup>	$T_{2a}$	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 <sup>a) b)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	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 <sup>c)</sup>	$F_{2AMax}$	N	1900					
		lb <sub>f</sub>	428					
Max. tilting moment	$M_{2KMax}$	Nm	79					
		in.lb	699					
Efficiency at full load	$\eta$	%	95					
Service life	$L_h$	h	> 20000					
Weight (incl. standard adapter plate)	$m$	kg	5.5					
		lb <sub>m</sub>	12					
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex <sup>®</sup> )	$L_{PA}$	dB(A)	≤ 73					
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 <sup>®</sup> )			ELT-00150BAX-050.00					
Bore diameter of coupling on the application side		mm	X = 024.000 - 036.000					
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	E 19	$J_1$	kgcm <sup>2</sup>	1.3	1.3	1.3	1.3	1.3
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	1.2	1.2	1.2	1.2	1.2

Please use our sizing software cymex<sup>®</sup> for a detailed sizing – [www.wittenstein-cymex.com](http://www.wittenstein-cymex.com)  
Please consider the maximal tilting moment caused by the motor  $M_{1KMot}$  – see sizing

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

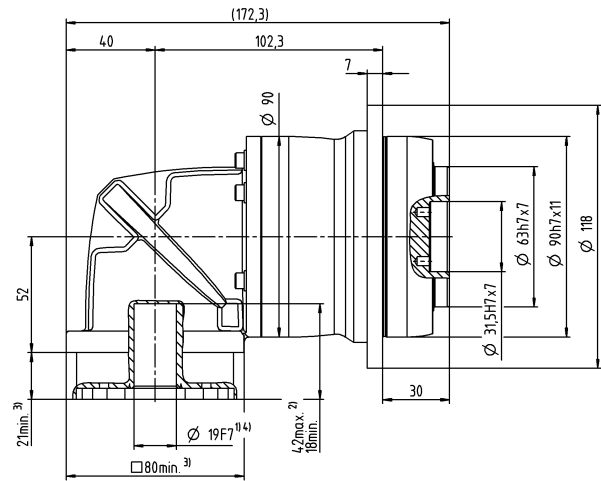
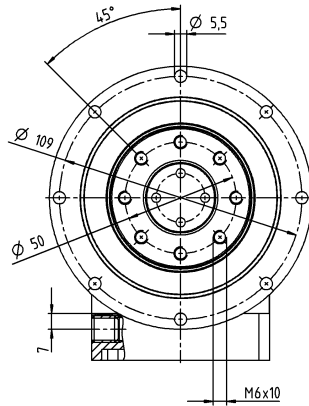
<sup>c)</sup> Refers to center of the output shaft or flange

<sup>d)</sup> Please reduce input speed at higher ambient temperatures

Motor shaft diameter [mm]

## 2-stage

up to 19<sup>4)</sup> (E)<sup>5)</sup>  
clamping hub  
diameter



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> 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	70	100
Max. torque <sup>a) b)</sup>	$T_{2a}$	Nm	99	128	128	152	152	160	152	128	152	160	152	160	160	144
		in.lb	876	1133	1133	1345	1345	1416	1345	1133	1345	1416	1345	1416	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	100	90
		in.lb	425	575	708	761	841	885	841	708	841	885	841	885	885	797
Emergency stop torque <sup>a) b)</sup> (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
		in.lb	1097	1469	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
Permitted average input speed <sup>d)</sup> (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
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 <sup>b)</sup> (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
		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
Max. backlash	$j_t$	arcmin	≤ 13													
Torsional rigidity <sup>b)</sup>	$C_{t21}$	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
		in.lb/arcmin	74	74	74	74	74	74	74	74	74	74	74	74	74	74
Max. axial force <sup>c)</sup>	$F_{2AMax}$	N	1900													
		lb <sub>f</sub>	428													
Max. tilting moment	$M_{2KMax}$	Nm	79													
		in.lb	699													
Efficiency at full load	$\eta$	%	94													
Service life	$L_h$	h	> 20000													
Weight (incl. standard adapter plate)	$m$	kg	5.1													
		lb <sub>m</sub>	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®)			ELT-00150BAX-050.00													
Bore diameter of coupling on the application side		mm	X = 024.000 - 036.000													
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	C 14	$J_1$	kgcm <sup>2</sup>	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 <sup>-3</sup> in.lb.s <sup>2</sup>	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](http://www.wittenstein-cymex.com)  
Please consider the maximal tilting moment caused by the motor  $M_{1KMot}$  – see sizing

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

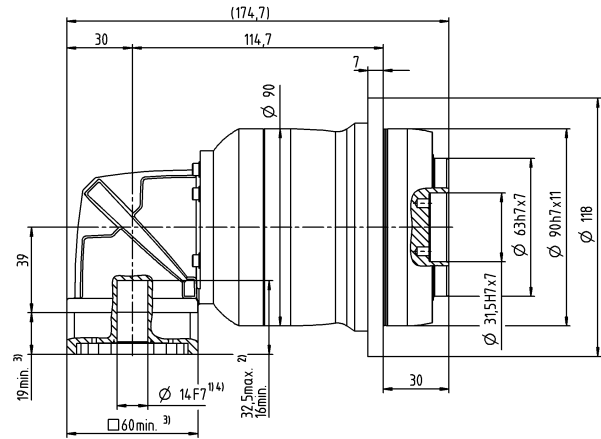
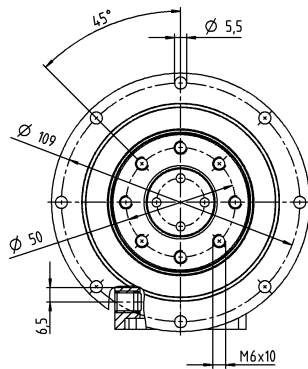
<sup>c)</sup> Refers to center of the output shaft or flange

<sup>d)</sup> Please reduce input speed at higher ambient temperatures

Motor shaft diameter [mm]

3-stage

up to 14<sup>4)</sup> (C)<sup>5)</sup>  
clamping hub  
diameter



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> Standard clamping hub diameter



# NPTK 035 MF 2-stage

			2-stage					
Ratio	i		3	4	5	7	8	10
Max. torque <sup>a) b)</sup>	$T_{2a}$	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 <sup>a) b)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	Nm/arcmin	16	16	16	16	16	16
		in.lb/arcmin	142	142	142	142	142	142
Max. axial force <sup>c)</sup>	$F_{2AMax}$	N	3500					
		lb <sub>f</sub>	788					
Max. tilting moment	$M_{2KMax}$	Nm	134					
		in.lb	1186					
Efficiency at full load	$\eta$	%	95					
Service life	$L_h$	h	> 20000					
Weight (incl. standard adapter plate)	$m$	kg	11					
		lb <sub>m</sub>	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®)			ELT-00300BAX-063.00					
Bore diameter of coupling on the application side		mm	X = 035.000 - 045.000					
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	H 28	$J_1$	kgcm <sup>2</sup>	5.5	5.5	5.5	5.5	5.5
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	4.9	4.9	4.9	4.9	4.9

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

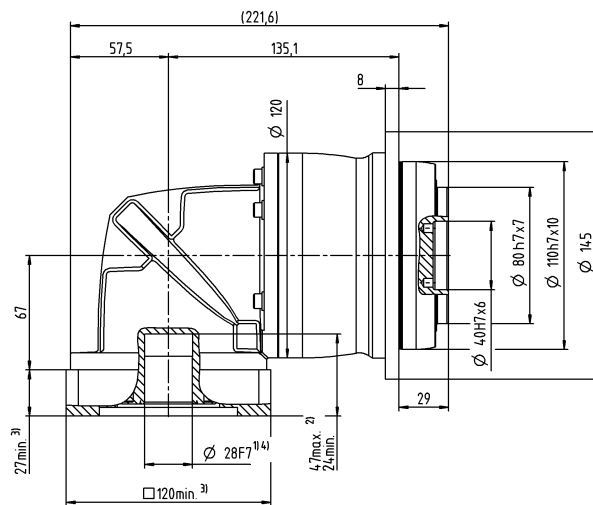
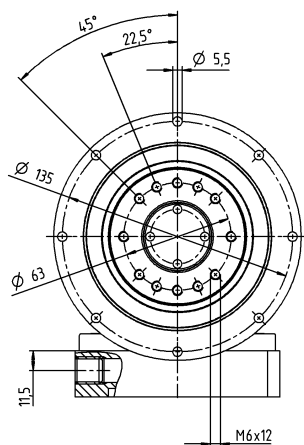
<sup>c)</sup> Refers to center of the output shaft or flange

<sup>d)</sup> Please reduce input speed at higher ambient temperatures

Motor shaft diameter [mm]

2-stage

up to 28<sup>4)</sup> (H)<sup>5)</sup>  
clamping hub  
diameter



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> 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	70	100
Max. torque <sup>a) b)</sup>	$T_{2a}$	Nm	180	240	300	320	365	365	365	320	365	365	365	365	365	352
		in.lb	1593	2124	2655	2832	3231	3231	3231	2832	3231	3231	3231	3231	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	250	220
		in.lb	929	1248	1558	1664	2080	2213	2257	1770	2257	2213	2257	2213	2213	1947
Emergency stop torque <sup>a) b)</sup> (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
		in.lb	2390	3195	3992	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248	4248
Permitted average input speed <sup>d)</sup> (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
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 <sup>b)</sup> (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
		in.lb	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Max. backlash	$j_t$	arcmin	≤ 13													
Torsional rigidity <sup>b)</sup>	$C_{t21}$	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 <sup>c)</sup>	$F_{2AMax}$	N	3500													
		lb <sub>f</sub>	788													
Max. tilting moment	$M_{2KMax}$	Nm	134													
		in.lb	1186													
Efficiency at full load	$\eta$	%	94													
Service life	$L_h$	h	> 20000													
Weight (incl. standard adapter plate)	$m$	kg	11													
		lb <sub>m</sub>	24													
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	$L_{PA}$	dB(A)	≤ 73													
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®)			ELT-00300BAX-063.00													
Bore diameter of coupling on the application side		mm	X = 035.000 - 045.000													
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	E 19	$J_1$	kgcm <sup>2</sup>	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 <sup>-3</sup> in.lb.s <sup>2</sup>	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](http://www.wittenstein-cymex.com)  
Please consider the maximal tilting moment caused by the motor  $M_{1KMot}$  – see sizing

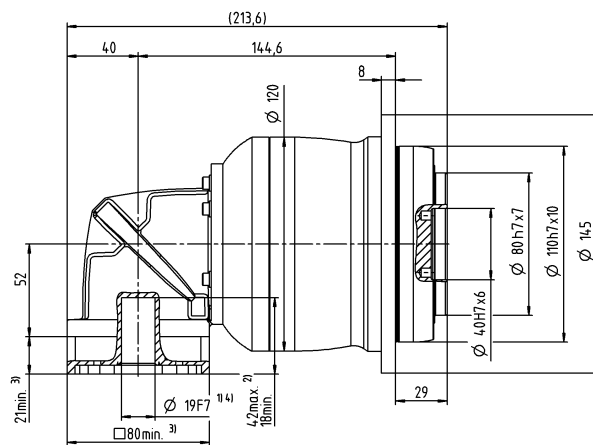
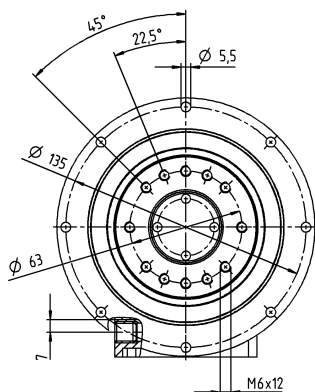
<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

<sup>d)</sup> Please reduce input speed at higher ambient temperatures

up to 19 <sup>4)</sup> (E) <sup>5)</sup>  
clamping hub  
diameter



### Bevel Gearboxes Value Line

<sup>5)</sup> Standard clamping hub diameter

# NPTK 045 MF 3-stage

			3-stage		
Ratio	i		25	50	100
Max. torque <sup>a) b)</sup>	$T_{2a}$	Nm	700	700	640
		in.lb	6196	6196	5665
Max. acceleration torque (max. 1000 cycles per hour)	$T_{2B}$	Nm	500	500	400
		in.lb	4425	4425	3540
Emergency stop torque <sup>a) b)</sup> (permitted 1000 times during the service life of the gearbox)	$T_{2Not}$	Nm	1000	1000	1000
		in.lb	8851	8851	8851
Permitted average input speed <sup>d)</sup> (at $T_{2N}$ and 20 °C ambient temperature)	$n_{1N}$	rpm	2000	2000	2000
Max. input speed	$n_{1Max}$	rpm	4500	4500	4500
Mean no load running torque <sup>b)</sup> (at $n_1 = 3000$ rpm and 20 °C gearbox temperature)	$T_{012}$	Nm	3.1	3.1	3.1
		in.lb	27	27	27
Max. backlash	$j_l$	arcmin	$\leq 11$		
Torsional rigidity <sup>b)</sup>	$C_{t21}$	Nm/arcmin	54	54	54
		in.lb/arcmin	478	478	478
Max. axial force <sup>c)</sup>	$F_{2AMax}$	N	3800		
		lb <sub>f</sub>	855		
Max. tilting moment	$M_{2KMax}$	Nm	256		
		in.lb	2266		
Efficiency at full load	$\eta$	%	94		
Service life	$L_h$	h	> 20000		
Weight (incl. standard adapter plate)	$m$	kg	21		
		lb <sub>m</sub>	46		
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	$L_{PA}$	dB(A)	$\leq 74$		
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®)			ELT-00450BAX-080.00		
Bore diameter of coupling on the application side		mm	X = 042.000 - 060.000		
Mass moment of inertia (relates to the drive) Clamping hub diameter [mm]	H 28 $J_1$	kgcm <sup>2</sup>	7.8	7.8	7.8
		10 <sup>-3</sup> in.lb.s <sup>2</sup>	6.9	6.9	6.9

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

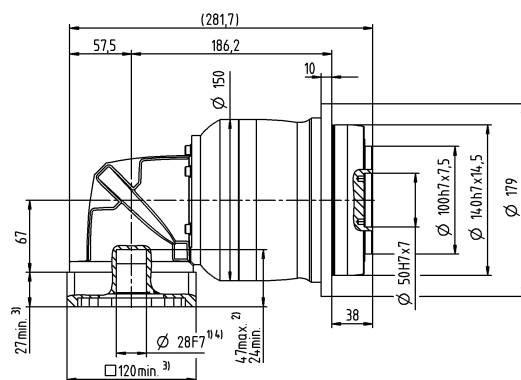
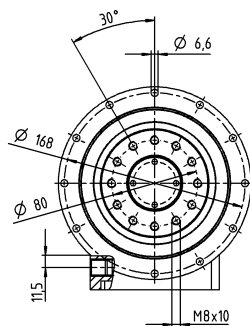
<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

<sup>d)</sup> Please reduce input speed at higher ambient temperatures

up to 28 <sup>4)</sup> (H) <sup>5)</sup>  
clamping hub  
diameter

<sup>5)</sup> Standard clamping hub diameter

# NPRK 015 MF 2-stage

			2-stage					
Ratio	i		3	4	5	7	8	10
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	33	44	55	64	56	56
		in.lb	292	389	487	566	496	496
Max. acceleration torque <sup>b)</sup> (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 <sup>a) b) e)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	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 <sup>c)</sup>	$F_{2AMax}$	N	2400					
		lb <sub>f</sub>	540					
Max. lateral force <sup>c)</sup>	$F_{2QMax}$	N	2800					
		lb <sub>f</sub>	630					
Max. tilting moment	$M_{2KMax}$	Nm	160					
		in.lb	1416					
Efficiency at full load	$\eta$	%	95					
Service life	$L_h$	h	> 20000					
Weight (incl. standard adapter plate)	$m$	kg	2.3					
		lb <sub>m</sub>	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 <sup>2</sup>	0.32	0.32	0.32	0.32	0.32
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	0.28	0.28	0.28	0.28	0.28

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

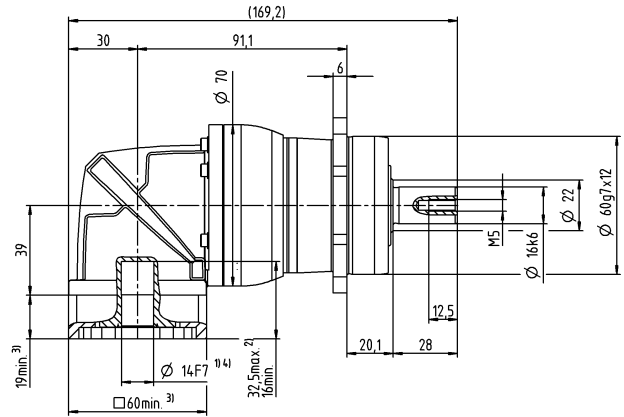
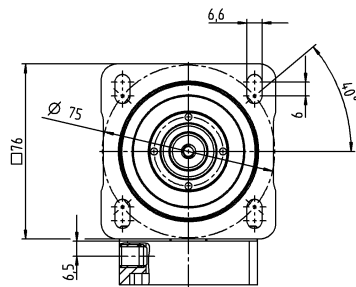
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

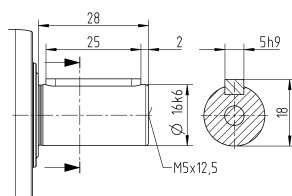
2-stage

up to 14<sup>4)</sup> (C)<sup>5)</sup>  
clamping hub  
diameter

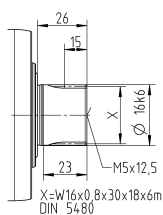


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> Standard clamping hub diameter



# NPRK 015 MF 3-stage

			3-stage												
Ratio	i		12	15	16	20	25	28	30	32	35	40	50	70	100
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	42	51	56	56	64	56	51	56	64	56	64	64	56
		in.lb	372	451	496	496	566	496	451	496	566	496	566	566	496
Max. acceleration torque <sup>e)</sup> (max. 1000 cycles per hour)	$T_{2B}$	Nm	20	25	27	34	40	35	31	35	40	35	40	40	35
		in.lb	177	221	239	301	354	310	274	310	354	310	354	354	310
Emergency stop torque <sup>a) b) e)</sup> (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
		in.lb	460	575	620	708	708	708	708	708	708	708	708	708	708
Permitted average input speed <sup>d)</sup> (at $T_{2a}$ and 20 °C ambient temperature)	$n_{1N}$	rpm	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
Mean no load running torque <sup>b)</sup> (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
		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
Max. backlash	$j_t$	arcmin	≤ 12												
Torsional rigidity <sup>b)</sup>	$C_{t21}$	Nm/arcmin	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
Max. axial force <sup>c)</sup>	$F_{2AMax}$	N	2400												
		lb <sub>f</sub>	540												
Max. lateral force <sup>c)</sup>	$F_{2QMMax}$	N	2800												
		lb <sub>f</sub>	630												
Max. tilting moment	$M_{2KMMax}$	Nm	160												
		in.lb	1416												
Efficiency at full load	$\eta$	%	94												
Service life	$L_h$	h	> 20000												
Weight (incl. standard adapter plate)	$m$	kg	2.4												
		lb <sub>m</sub>	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	$J_t$	kgcm <sup>2</sup>	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 <sup>-3</sup> in.lb.s <sup>2</sup>	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](http://www.wittenstein-cymex.com)  
Please consider the maximal tilting moment caused by the motor M<sub>1KMot</sub> – see sizing

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

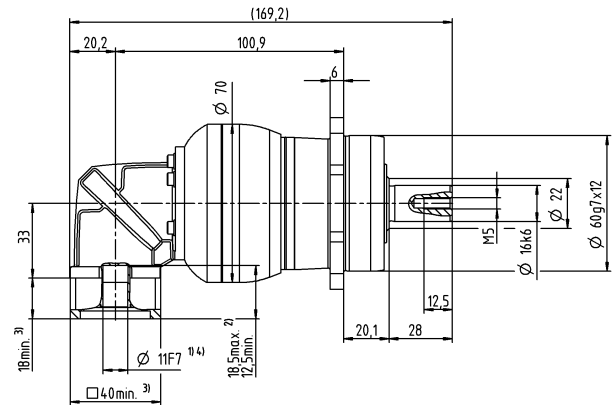
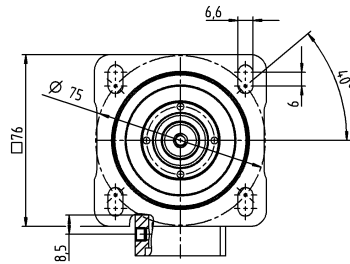
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

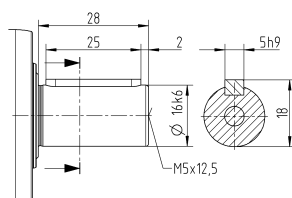
3-stage

up to 11<sup>4)</sup> (B)<sup>5)</sup>  
clamping hub  
diameter

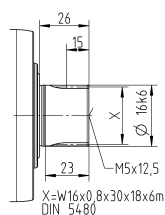


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> Standard clamping hub diameter

# NPRK 025 MF 2-stage

			2-stage					
Ratio	i		3	4	5	7	8	10
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	60	80	100	140	144	144
		in.lb	531	708	885	1239	1275	1275
Max. acceleration torque <sup>b)</sup> (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 <sup>a) b) e)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	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 <sup>c)</sup>	$F_{2AMax}$	N	3350					
		lb <sub>f</sub>	754					
Max. lateral force <sup>c)</sup>	$F_{2QMMax}$	N	4200					
		lb <sub>f</sub>	945					
Max. tilting moment	$M_{2KMax}$	Nm	260					
		in.lb	2301					
Efficiency at full load	$\eta$	%	95					
Service life	$L_h$	h	> 20000					
Weight (incl. standard adapter plate)	$m$	kg	4.8					
		lb <sub>m</sub>	11					
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	$L_{PA}$	dB(A)	≤ 73					
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 <sup>2</sup>	1.2	1.2	1.2	1.2	1.2
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	1.1	1.1	1.1	1.1	1.1

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

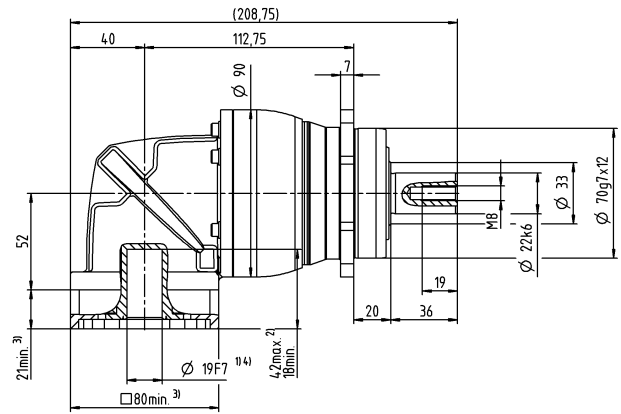
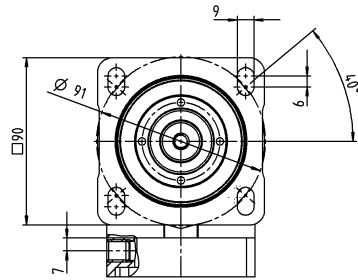
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

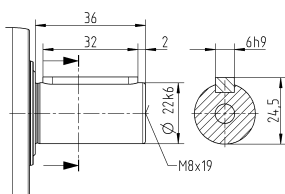
## 2-stage

up to 19 <sup>4)</sup> (E) <sup>5)</sup>  
clamping hub  
diameter

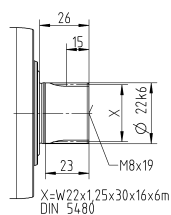


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

- 1) Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

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

<sup>5)</sup> 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	70	100
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	99	128	128	152	152	160	152	128	152	160	152	160	160	144
		in.lb	876	1133	1133	1345	1345	1416	1345	1133	1345	1416	1345	1416	1416	1275
Max. acceleration torque <sup>a)</sup> (max. 1000 cycles per hour)	$T_{2B}$	Nm	48	65	80	86	95	100	95	80	95	100	95	100	100	90
		in.lb	425	575	708	761	841	885	841	708	841	885	841	885	885	797
Emergency stop torque <sup>a) b) e)</sup> (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
		in.lb	1097	1469	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682	1682
Permitted average input speed <sup>d)</sup> (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
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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	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
		in.lb/arcmin	74	74	74	74	74	74	74	74	74	74	74	74	74	74
Max. axial force <sup>c)</sup>	$F_{2AMax}$	N	3350													
		lb <sub>f</sub>	754													
Max. lateral force <sup>c)</sup>	$F_{2QMMax}$	N	4200													
		lb <sub>f</sub>	945													
Max. tilting moment	$M_{2KMax}$	Nm	260													
		in.lb	2301													
Efficiency at full load	$\eta$	%	94													
Service life	$L_h$	h	> 20000													
Weight (incl. standard adapter plate)	$m$	kg	4.4													
		lb <sub>m</sub>	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	$J_t$	kgcm <sup>2</sup>	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 <sup>-3</sup> in.lb.s <sup>2</sup>	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](http://www.wittenstein-cymex.com)  
Please consider the maximal tilting moment caused by the motor  $M_{1KMot}$  – see sizing

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

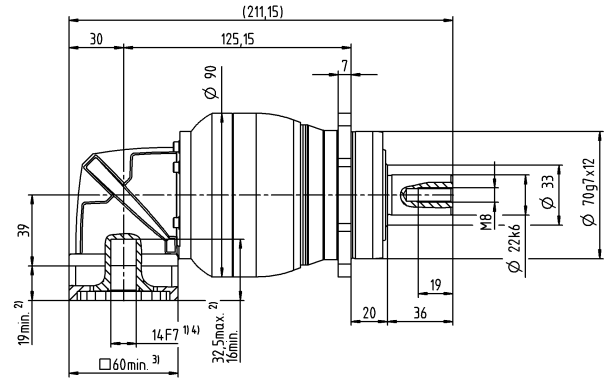
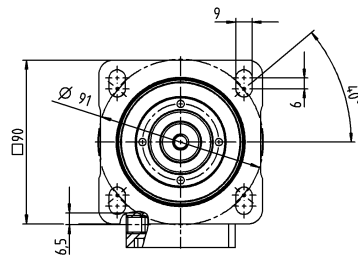
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

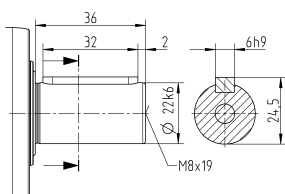
## 3-stage

up to 14 <sup>4)</sup> (C) <sup>5)</sup>  
clamping hub  
diameter

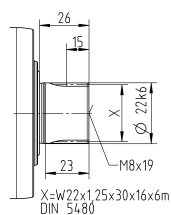


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

- 1) Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

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

<sup>5)</sup> Standard clamping hub diameter

# NPRK 035 MF 2-stage

			2-stage					
Ratio	i		3	4	5	7	8	10
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	150	200	250	350	352	352
		in.lb	1328	1770	2213	3098	3115	3115
Max. acceleration torque <sup>b)</sup> (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 <sup>a) b) e)</sup> (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 <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	Nm/arcmin	16	16	16	16	16	16
		in.lb/arcmin	142	142	142	142	142	142
Max. axial force <sup>c)</sup>	$F_{2AMax}$	N	5650					
		lb <sub>f</sub>	1271					
Max. lateral force <sup>c)</sup>	$F_{2QMax}$	N	6300					
		lb <sub>f</sub>	1418					
Max. tilting moment	$M_{2KMax}$	Nm	500					
		in.lb	4425					
Efficiency at full load	$\eta$	%	95					
Service life	$L_h$	h	> 20000					
Weight (incl. standard adapter plate)	$m$	kg	10					
		lb <sub>m</sub>	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 <sup>2</sup>	5.2	5.2	5.2	5.2	5.2
			10 <sup>-3</sup> in.lb.s <sup>2</sup>	4.6	4.6	4.6	4.6	4.6

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

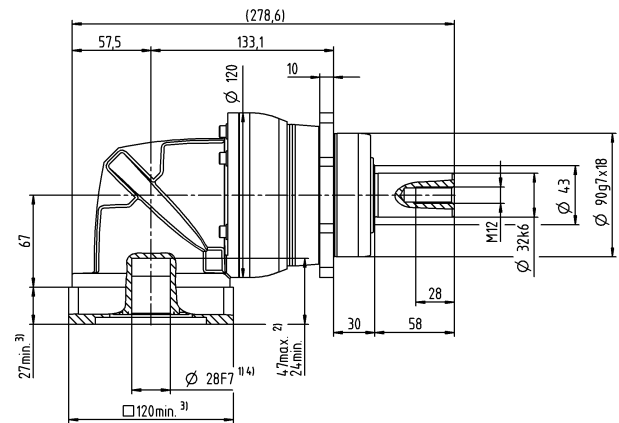
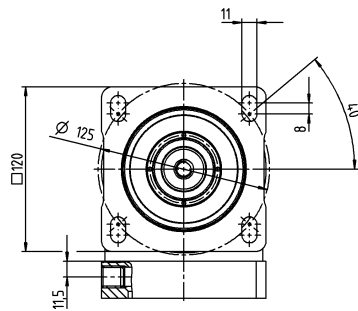
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

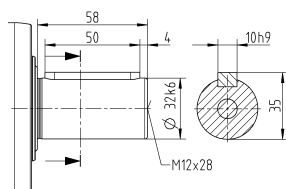
2-stage

up to 28 <sup>4)</sup> (H) <sup>5)</sup>  
clamping hub  
diameter

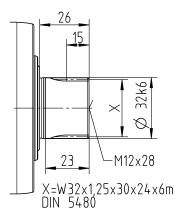


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> 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	70	100
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	180	240	300	320	400	400	408	320	408	400	408	400	400	352
		in.lb	1593	2124	2655	2832	3540	3540	3611	2832	3611	3540	3611	3540	3540	3115
Max. acceleration torque <sup>a)</sup> (max. 1000 cycles per hour)	$T_{2B}$	Nm	105	141	176	188	235	250	255	200	255	250	255	250	250	220
		in.lb	929	1248	1558	1664	2080	2213	2257	1770	2257	2213	2257	2213	2213	1947
Emergency stop torque <sup>a) b) e)</sup> (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
		in.lb	2390	3195	3992	4257	4425	4425	4425	4425	4425	4425	4425	4425	4425	4425
Permitted average input speed <sup>d)</sup> (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 <sup>b)</sup> (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 <sup>b)</sup>	$C_{t21}$	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 <sup>c)</sup>	$F_{2AMax}$	N	5650													
		lb <sub>f</sub>	1271													
Max. lateral force <sup>c)</sup>	$F_{2QMMax}$	N	6300													
		lb <sub>f</sub>	1418													
Max. tilting moment	$M_{2KMMax}$	Nm	500													
		in.lb	4425													
Efficiency at full load	$\eta$	%	94													
Service life	$L_h$	h	> 20000													
Weight (incl. standard adapter plate)	$m$	kg	10													
		lb <sub>m</sub>	22													
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	$L_{PA}$	dB(A)	≤ 73													
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	$J_t$	kgcm <sup>2</sup>	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 <sup>-3</sup> in.lb.s <sup>2</sup>	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](http://www.wittenstein-cymex.com)  
Please consider the maximal tilting moment caused by the motor  $M_{1KMot}$  – see sizing

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

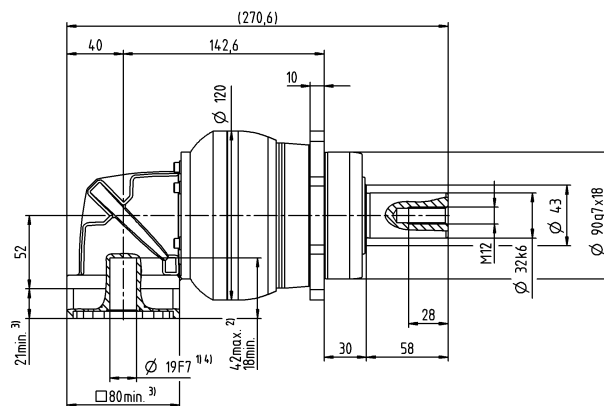
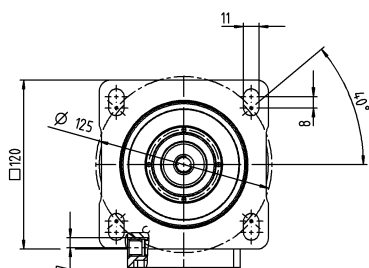
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

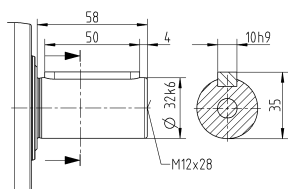
## 3-stage

up to 19 <sup>4)</sup> (E) <sup>5)</sup>  
clamping hub  
diameter

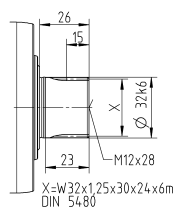


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

- 1) Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

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

<sup>5)</sup> Standard clamping hub diameter

# NPRK 045 MF 3-stage

			3-stage		
Ratio	i		25	50	100
Max. torque <sup>a) b) e)</sup>	$T_{2a}$	Nm	700	700	640
		in.lb	6196	6196	5665
Max. acceleration torque <sup>e)</sup> (max. 1000 cycles per hour)	$T_{2B}$	Nm	500	500	400
		in.lb	4425	4425	3540
Emergency stop torque <sup>a) b) e)</sup> (permitted 1000 times during the service life of the gearbox)	$T_{2Not}$	Nm	1000	1000	1000
		in.lb	8851	8851	8851
Permitted average input speed <sup>d)</sup> (at $T_{2N}$ and 20 °C ambient temperature)	$n_{1N}$	rpm	2000	2000	2000
Max. input speed	$n_{1Max}$	rpm	4500	4500	4500
Mean no load running torque <sup>b)</sup> (at $n_1 = 3000$ rpm and 20 °C gearbox temperature)	$T_{012}$	Nm	4.7	4.7	4.7
		in.lb	42	42	42
Max. backlash	$j_l$	arcmin	$\leq 11$		
Torsional rigidity <sup>b)</sup>	$C_{t21}$	Nm/arcmin	54	54	54
		in.lb/arcmin	478	478	478
Max. axial force <sup>c)</sup>	$F_{2AMax}$	N	9870		
		lb <sub>f</sub>	2221		
Max. lateral force <sup>c)</sup>	$F_{2QMax}$	N	9600		
		lb <sub>f</sub>	2160		
Max. tilting moment	$M_{2KMax}$	Nm	1000		
		in.lb	8851		
Efficiency at full load	$\eta$	%	94		
Service life	$L_h$	h	> 20000		
Weight (incl. standard adapter plate)	$m$	kg	21		
		lb <sub>m</sub>	46		
Operating noise (at reference ratio and reference speed – ratio-specific values available in cymex®)	$L_{PA}$	dB(A)	$\leq 74$		
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-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 <sup>2</sup>	6.7	6.7	6.7
		10 <sup>-3</sup> in.lb.s <sup>2</sup>	5.9	5.9	5.9

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

<sup>a)</sup> Valid for torque transmission only

<sup>b)</sup> Valid for standard clamping hub diameter

<sup>c)</sup> Refers to center of the output shaft or flange

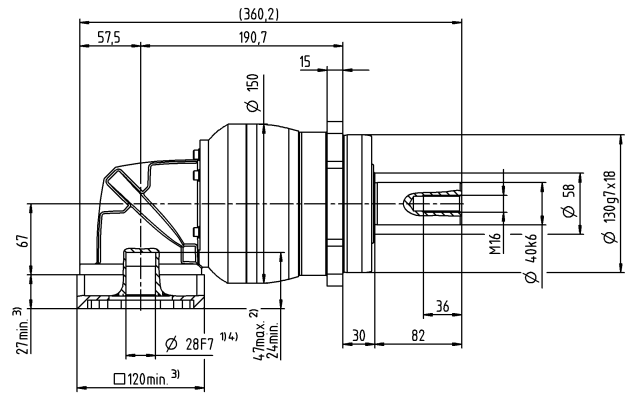
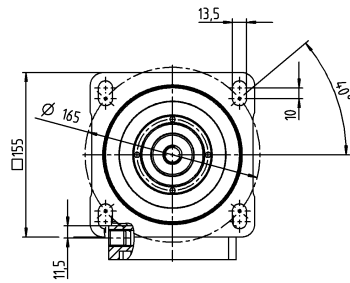
<sup>d)</sup> Please reduce input speed at higher ambient temperatures

<sup>e)</sup> Valid for: Smooth shaft

Motor shaft diameter [mm]

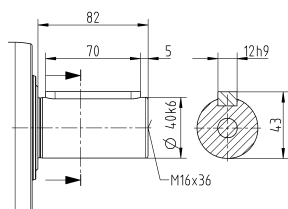
3-stage

up to 28<sup>4)</sup> (H)<sup>5)</sup>  
clamping hub  
diameter

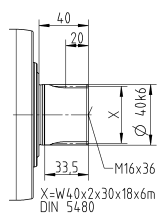


## Other output variants

Shaft with key



Splined shaft (DIN 5480)



Non-tolerated dimensions are nominal dimensions

<sup>1)</sup> Check motor shaft fit

<sup>2)</sup> Min. / Max. permissible motor shaft length

Longer motor shafts are possible, please contact alpha

<sup>3)</sup> The dimensions depend on the motor

<sup>4)</sup> Smaller motor shaft diameter is compensated by a bushing with a minimum wall thickness of 1 mm

<sup>5)</sup> Standard clamping hub diameter