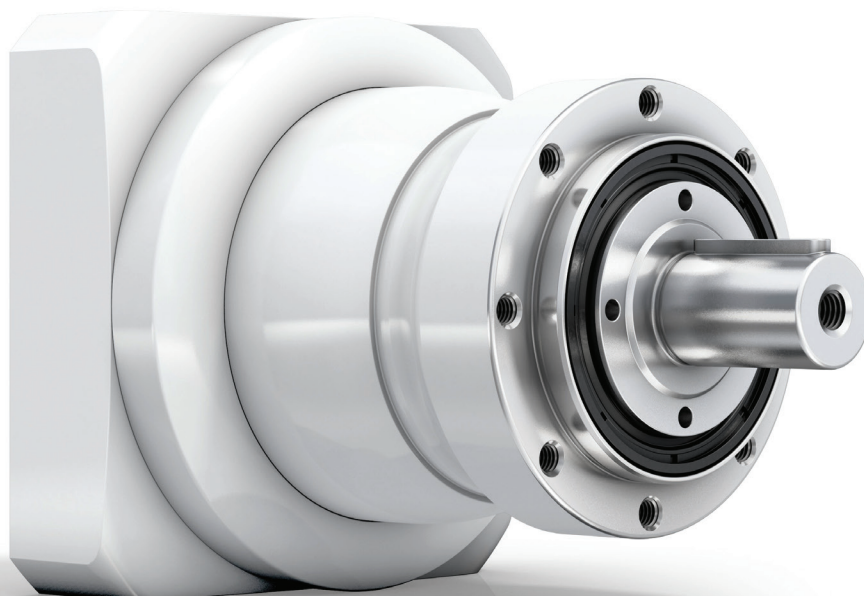
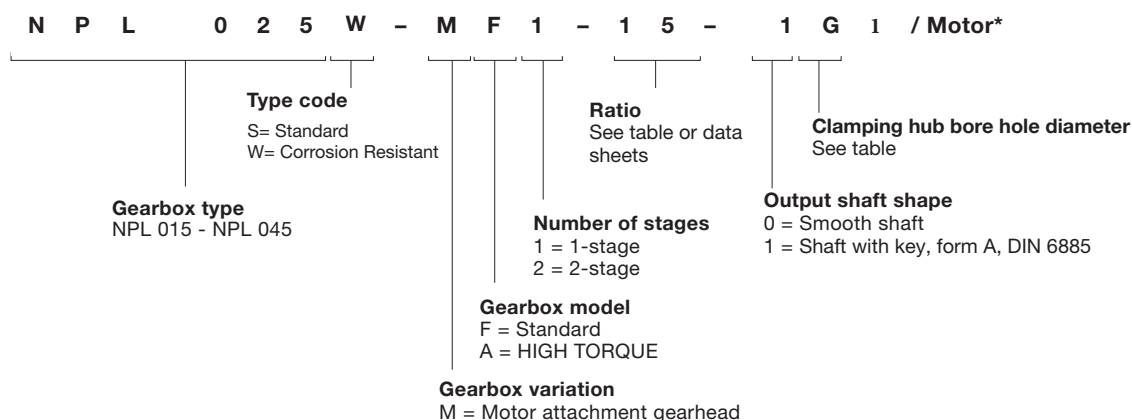


alpha Value Line – NPL Corrosion
Resistant Gearbox
Sizing and Technical Data

Efficient
Economical
Locally Produced



Order codes for the alpha Value Line – NPL Corrosion Resistant Gearbox

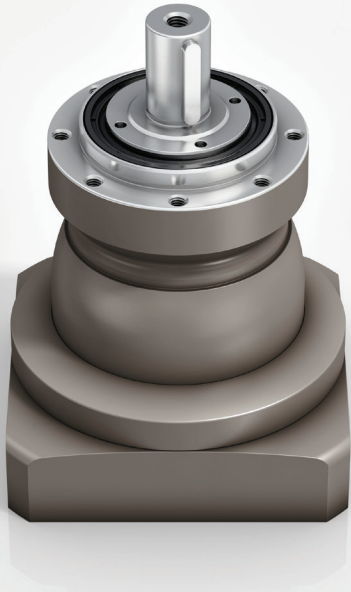


*Full motor designation only required for determining attached gearbox components!

Ratio and clamping hub diameter table

Size	Stages	Ratios	Clamping hub diameters* [mm]
015	1 stage	3, 4, 5, 7, 8, 10	14 (C), 19 (E)
	2 stage	12, 15, 16, 20, 25, 28, 30, 32, 35, 40, 50, 64, 70, 100	14 (C)
025	1 stage	3, 4, 5, 7, 8, 10	19 (E), 28 (H)
	2 stage	9, 12, 15, 16, 20, 25, 28, 30, 32, 35, 40, 50, 64, 70, 100	19 (E)
035	1 stage	3, 4, 5, 7, 8, 10	28 (H), 38 (K)
	2 stage	9, 12, 15, 16, 20, 25, 28, 30, 32, 35, 40, 50, 64, 70, 100	28 (H)
045	1 stage	5, 8, 10	38 (K)
	2 stage	25, 32, 50, 64, 100	38 (K)

*Intermediate diameters are possible in combination with a bushing with a minimum thickness of 1 mm.



NPL-W in standard finish

Contents

NPL-W 015	3
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NPL-W 045	9
Order Codes	11

The latest addition to the popular Value Line series gearboxes, the NPL-W offers the performance, value and delivery of the value line with added corrosion-resistant protection.

With IP65 rated protection this gearbox is ideal for applications calling for a wet environment, such as:

- Food & Beverage
- Clean Room
- Washdown Environments
- Medical & Pharmaceutical
- And many other Clean in Place applications

Trust WITTENSTEIN for the Highest Quality Protection

We designed the world's first Hygienic Design Gearbox to meet FDA, 3-A and EHEDG standards, and today offer the most comprehensive portfolio of hygienic design and corrosion resistant gearboxes in the full range of protection classes:

- Basic protection: Epoxy coated
- Medium protection: Stainless steel and nickel-plated options
- Maximum protection: Stainless steel, IP69 rating

WITTENSTEIN offers the most complete line of washdown solutions for planetary servo gearboxes.

Food & Beverage
Clean Room
Washdown Environments
Medical
Pharmaceutical



To see our entire line of Hygienic and Corrosion Resistant products visit www.wittenstein-us.com or scan the QR code above.

NPL 015 W

			1-stage								2-stage											
Ratio ^{a)}	i		3	4	5	7	8	10	12	15	16	20	25	28	30	32	35	40	50	64	70	100
Maximum torque	MF	T _{2u}	Nm	40.8	44.8	51.2	51.2	44.8	44.8	40.8	40.8	44.8	51.2	44.8	40.8	44.8	44.8	44.8	51.2	44.8	51.2	44.8
		in.lb	360	400	456	570	400	400	360	360	400	400	456	400	360	400	400	40.0	456	400	456	400
Maximum torque	HIGH TORQUE – MA	T _{2u}	Nm	70.4	53.6	-	-	-	-	49.6	53.6	53.6	-	53.6	49.6	-	-	53.6	-	-	-	-
		in.lb	624	472	-	-	-	-	440	472	472	472	-	472	440	-	-	472	-	-	-	-
Emergency stop torque ^{b)}		T _{2Not}	Nm	75																		
		in.lb	660																			
Nominal input speed ^{c)}		n _{1N}	min ⁻¹	2900			3600			3800				4300								
Max. input speed		n _{1Max}	min ⁻¹	8000					10000													
Max. torsional backlash		j _t	arcmin	Standard ≤ 8					Standard ≤ 10													
Max. axial force ^{d)}		F _{2AMax}	N	2400																		
		lb _f	540																			
Max. radial force ^{d)}		F _{2RMax}	N	2800																		
		lb _f	630																			
Weight incl. standard adapter plate ^{e)}		m	kg	3					2.9													
		lb _m	6.6					6.4														
Operating noise ^{f)}		L _{PA}	dB(A)	≤ 59					≤ 58													
Max. permitted housing temperature			°C	+90																		
			F	+194																		
Ambient temperature			°C	-15 to +40																		
			F	5 to 104																		
Lubrication				Lubricated for life																		
Paint				2K Epoxy																		
Direction of rotation				Motor and gearbox same direction																		
Type of protection				IP 65																		
Moment of interia (related to the drive)			kgcm ²	0.13 to 0.55					0.55													
			10 ⁻³ in.lb.s ²	0.12 to 0.49					0.49													
Clamping hub diameter	Standard		mm	14(C) 19(E)					19(E)													

^{a)} Other ratios available on request.

^{b)} Permitted 1000 times during the service life of the gearbox. If $T_{2u} > T_{2Not}$, then T_{2Not} is the maximum permitted value.

^{c)} At T_{1N} and 20°C ambient temperature. Higher speeds possible if calculated using cymex®.

^{d)} Refers to the center of the output shaft at $n_2 = 150$ rpm.

^{e)} Depending on the clamping hub diameter and the selected adapter plate.

^{f)} At $i=10$ and $n_1=3000$ rpm at no load.

You can select a suitable adapter plate using the online configurator on www.wittenstein-alpha.com

Quick gearbox selection based on the motor characteristic*:

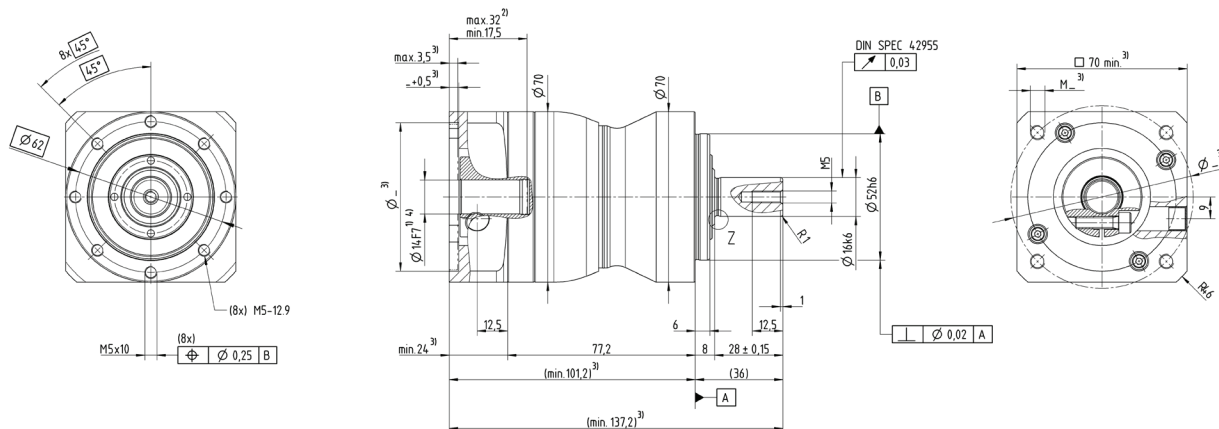
Max. torque $T_{2u} \geq T_{max\ motor} \cdot i$

*Please refer to catalog pages 4 and 5 for detailed information on manual selection based on the application.

For application-specific sizing with cymex®, see www.cymex.com

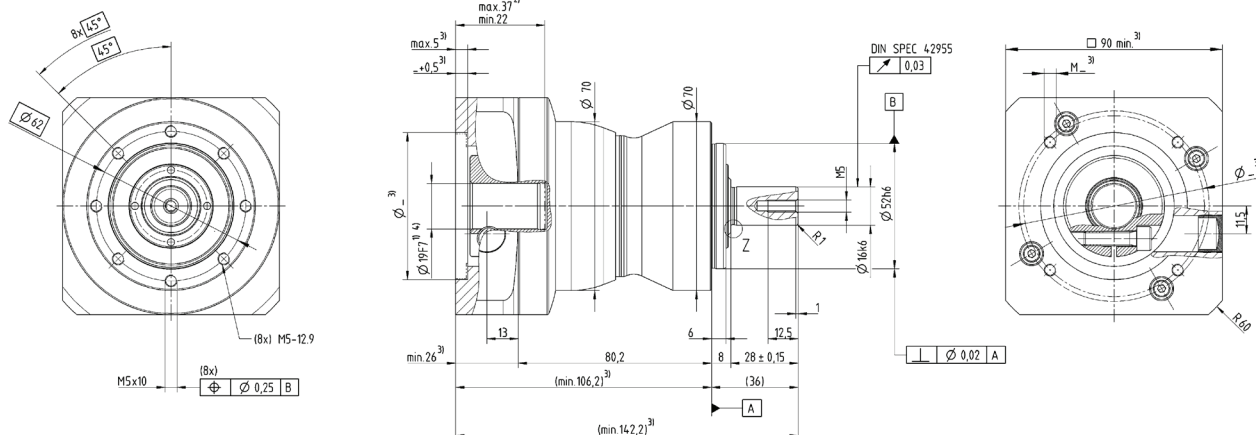
1-stage

Up to 14 ⁴⁾ (C)
clamping hub
diameter



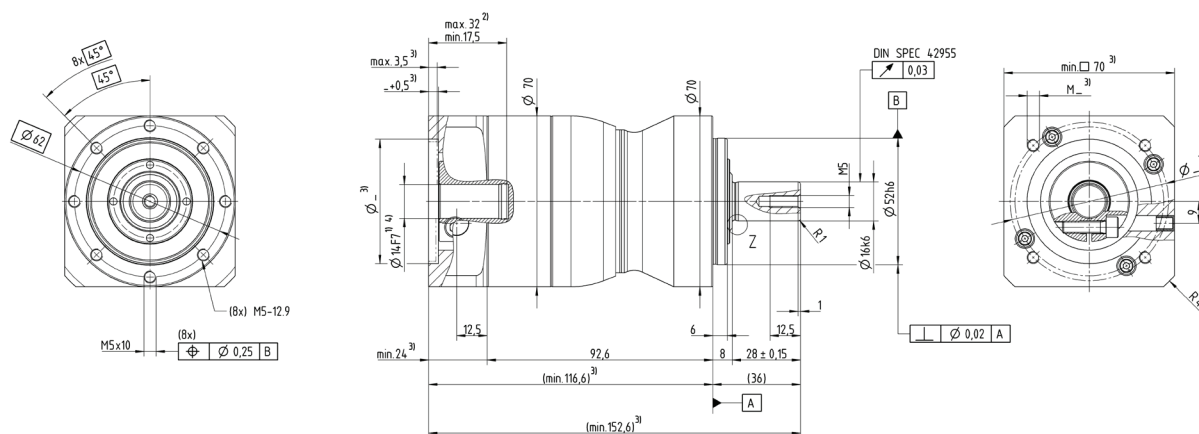
1-stage

Up to 19 ⁴⁾ (E)
clamping hub
diameter



2-stage

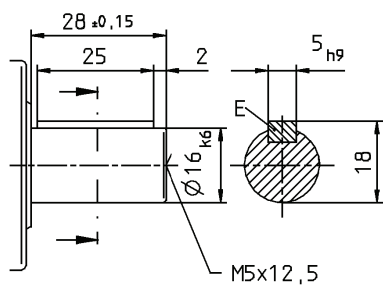
Up to 14 ⁴⁾ (C)
clamping hub
diameter



Alternatives: Output shaft variants

Output shaft with key

E = key as per DIN 6885, sheet 1, form A



Non-tolerated dimensions ± 1 mm

- 1) Check motor shaft fit.
- 2) Min. / max. permissible motor shaft length.
Longer motor shafts are adaptable; please contact us.
- 3) The dimensions depend on the motor.
- 4) Smaller motor shaft diameters are compensated
by a bushing with a minimum thickness of 1 mm.

 Motor mounting according to operating manual

NPL 025 W

					1-stage							2-stage													
Ratio ^{a)}		i		3	4	5	7	8	10	9	12	15	16	20	25	28	30	32	35	40	50	64	70	100	
Maximum torque		MF	T _{2α}	Nm	102.4	121.6	128	128	115.2	115.2	102.4	102.4	121.6	121.6	128	121.6	102.4	121.6	128	121.6	128	115.2	128	115.2	
				in.lb	904	1080	1136	1136	1016	1016	904	904	904	1080	1080	1136	1080	904	1080	1136	1080	1136	1016	1136	1016
Maximum torque		HIGH TORQUE – MA	T _{2α}	Nm	160	147.2	-	-	-	-	160	160	153.6	147.2	147.2	-	147.2	134.4	-	-	147.2	-	-	-	-
				in.lb	1416	1304	-	-	-	-	1416	1416	1360	1304	1304	-	1304	1192	-	-	1304	-	-	-	-
Emergency stop torque ^{b)}			T _{2Not}	Nm	190																				
				in.lb	1700																				
Nominal input speed ^{c)}			n _{1N}	min ⁻¹	2700			2900			3300					4000									
Max. input speed			n _{1Max}	min ⁻¹	7000						8000														
Max. torsional backlash			j _t	arcmin	Standard ≤ 8						Standard ≤ 10														
Max. axial force ^{d)}			F _{2AMax}	N	3350																				
				lb _f	750																				
Max. radial force ^{d)}			F _{2RMMax}	N	4200																				
				lb _f	950																				
Weight incl. standard adapter plate ^{e)}			m	kg	5.9						5.9														
				lb _m	13.1						13.1														
Operating noise ^{f)}			L _{PA}	dB(A)	≤ 61						≤ 59														
Max. permitted housing temperature			°C		+90																				
			F		+194																				
Ambient temperature			°C		-15 to +40																				
			F		5 to 104																				
Lubrication					Lubricated for life																				
Paint					2K Epoxy																				
Direction of rotation					Motor and gearbox same direction																				
Type of protection					IP 65																				
Moment of inertia <small>(related to the drive)</small>			kgcm ²		0.55 to 1.8						1.8														
			10 ⁻³ in.lb.s ²		0.49 to 1.6						1.6														
Clamping hub diameter	Standard	mm	19(E) 28(H)						28(H)																

^{a)} Other ratios available on request.

^{b)} Permitted 1000 times during the service life of the gearbox. If $T_{2\alpha} > T_{2Not}$ then T_{2Not} is the maximum permitted value.

^{c)} At T_{1N} and 20°C ambient temperature. Higher speeds possible if calculated using cymex®.

^{d)} Refers to the center of the output shaft at $n_2 = 150$ rpm.

^{e)} Depending on the clamping hub diameter and the selected adapter plate.

^{f)} At $i = 10$ and $n_1 = 3000$ rpm at no load.

You can select a suitable adapter plate using the online configurator on www.wittenstein-alpha.com

Quick gearbox selection based on the motor characteristic*:

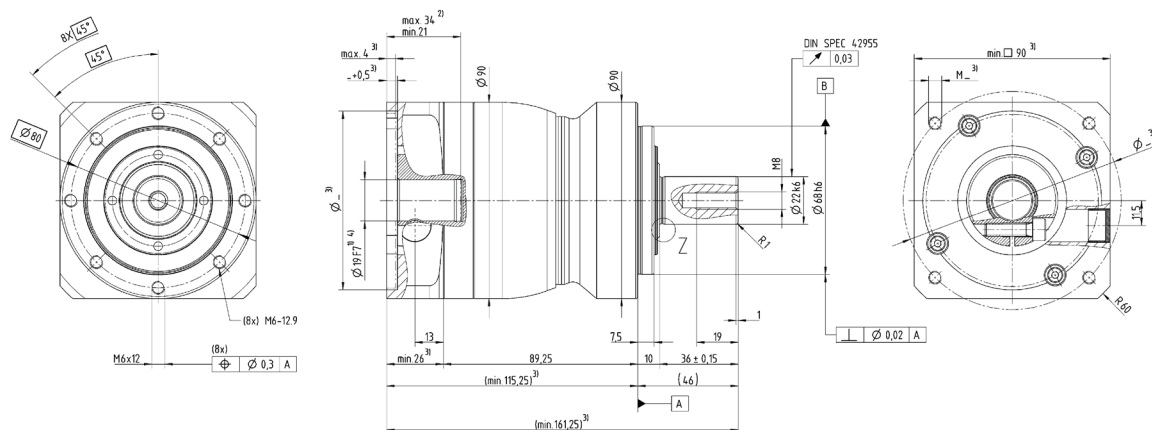
Max. torque $T_{2\alpha} \geq T_{max \text{ motor}} \cdot i$

*Please refer to catalog pages 4 and 5 for detailed information on manual selection based on the application.

For application-specific sizing with cymex®, see www.cymex.com

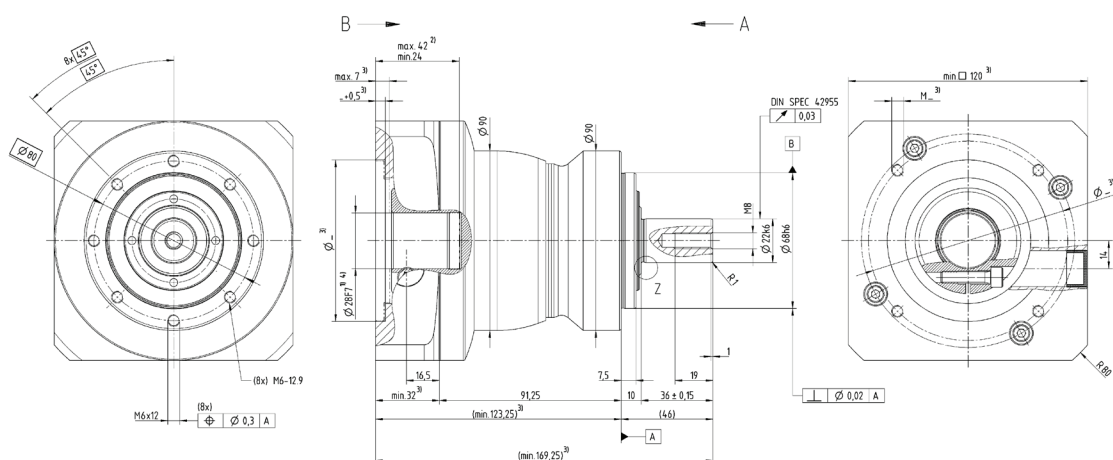
1-stage

Up to 19 ⁴⁾ (E)
clamping hub
diameter



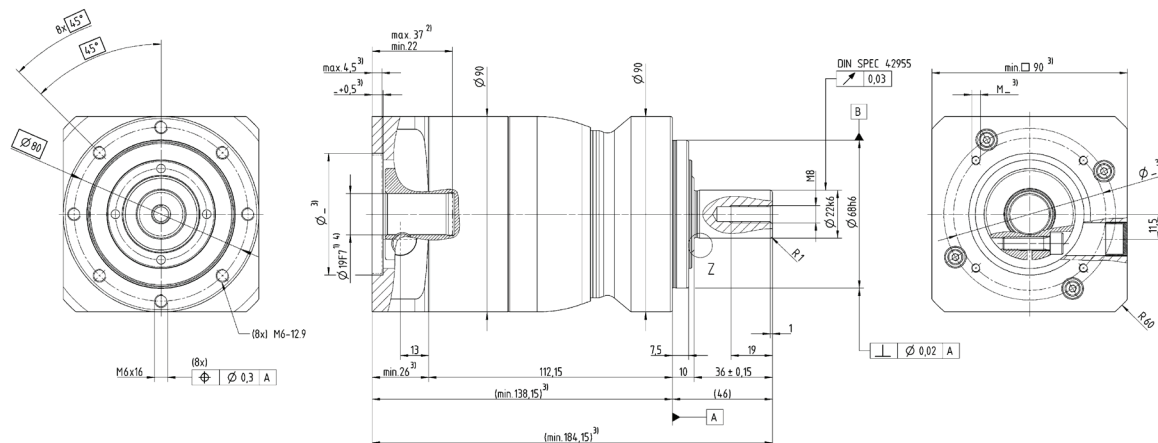
1-stage

Up to 28 ⁴⁾ (H)
clamping hub
diameter



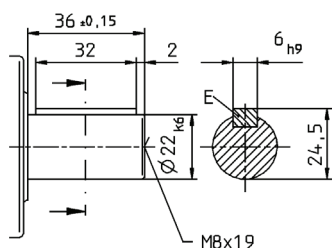
2-stage

Up to 19 ⁴⁾ (E)
clamping hub
diameter



Alternatives: Output shaft variants

Output shaft with key
E = key as per DIN 6885, sheet 1, form A



Non-tolerated dimensions ± 1 mm

- 1) Check motor shaft fit.
- 2) Min. / max. permissible motor shaft length.
Longer motor shafts are adaptable; please contact us.
- 3) The dimensions depend on the motor.
- 4) Smaller motor shaft diameters are compensated by a bushing with a minimum thickness of 1 mm.

 Motor mounting according to operating manual

NPL 035 W

					1-stage							2-stage													
Ratio ^{a)}		i	3	4	5	7	8	10	9	12	15	16	20	25	28	30	32	35	40	50	64	70	100		
Maximum torque		MF	T _{2u}	Nm	256	326.4	320	320	281.6	281.6	256	256	256	326.4	326.4	320	326.4	256	326.4	320	326.4	320	281.6	320	281.6
				in.lb	2264	2888	2832	2832	2496	2496	2264	2265	2264	3888	2888	2832	2888	2264	2888	2832	2888	2832	2496	2832	2496
Maximum torque		HIGH TORQUE – MA	T _{2u}	Nm	390.4	390.4	-	-	-	-	390.4	390.4	384	390.4	390.4	-	390.4	345.6	-	-	390.4	-	-	-	-
				in.lb	3456	3456	-	-	-	-	3456	3456	3400	3456	3456	-	3456	3056	-	-	3456	-	-	-	-
Emergency stop torque ^{b)}			T _{2Not}	Nm	480																				
				in.lb	4200																				
Nominal input speed ^{c)}			n _{1N}	min ⁻¹	2000			2500			2700					3600									
Max. input speed			n _{1Max}	min ⁻¹	6000						7000														
Max. torsional backlash			j _t	arcmin	Standard ≤ 8						Standard ≤ 10														
Max. axial force ^{d)}			F _{2AMax}	N	5650																				
				lb _f	1270																				
Max. radial force ^{d)}			F _{2RMax}	N	6600																				
				lb _f	1490																				
Weight incl. standard adapter plate ^{e)}			m	kg	14.3						13.9														
				lb _m	31.6						30.7														
Operating noise ^{f)}			L _{PA}	dB(A)	≤ 65						≤ 61														
Max. permitted housing temperature			°C		+90																				
			F		+194																				
Ambient temperature			°C		-15 to +40																				
			F		5 to +104																				
Lubrication					Lubricated for life																				
Paint					2K Epoxy																				
Direction of rotation					Motor and gearbox same direction																				
Type of protection					IP 65																				
Moment of inertia <small>(related to the drive)</small>			kgcm ²		1.8 to 8.3						8.3														
			10 ⁻³ in.lb.s ²		1.6 to 7.4						7.4														
Clamping hub diameter	Standard	mm	28(H) to 38(K)						38(K)																

^{a)} Other ratios available on request.

^{b)} Permitted 1000 times during the service life of the gearbox. If $T_{2u} > T_{2Not}$, then T_{2Not} is the maximum permitted value.

^{c)} At T_{1N} and 20°C ambient temperature. Higher speeds possible if calculated using cymex®.

^{d)} Refers to the center of the output shaft at $n_2 = 150$ rpm.

^{e)} Depending on the clamping hub diameter and the selected adapter plate.

^{f)} At $i = 10$ and $n_1 = 3000$ rpm at no load.

You can select a suitable adapter plate using the online configurator on www.wittenstein-alpha.com

Quick gearbox selection based on the motor characteristic*:

Max. torque $T_{2u} \geq T_{max\ motor} \cdot i$

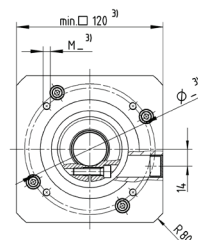
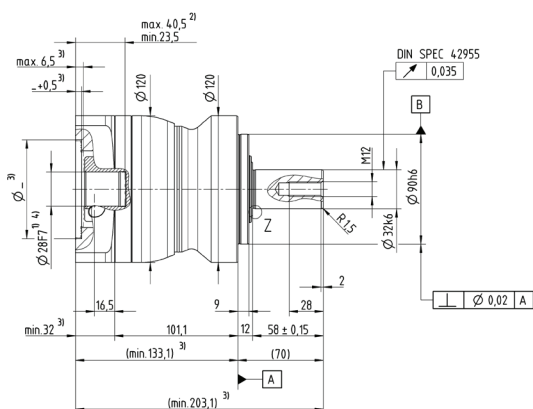
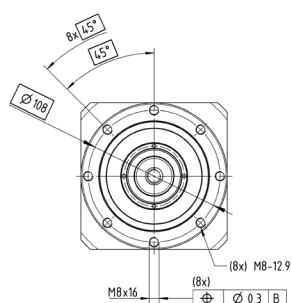
*Please refer to catalog pages 4 and 5 for detailed information on manual selection based on the application.

For application-specific sizing with cymex®, see www.cymex.com

Motor shaft diameter [mm]

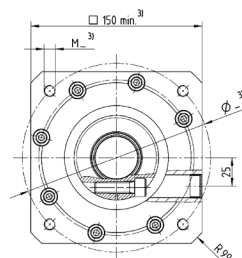
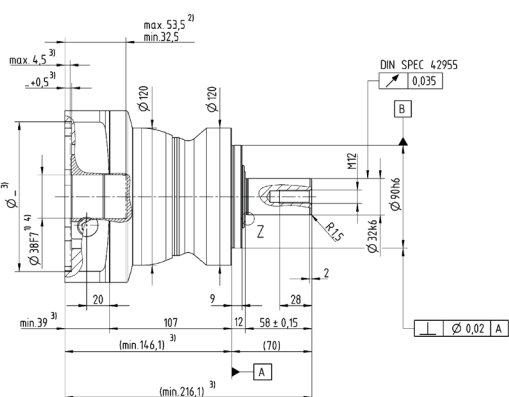
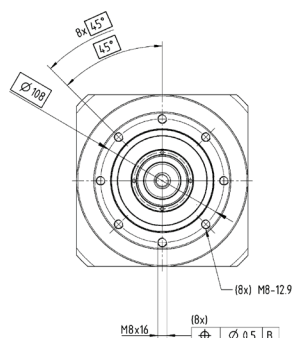
1-stage

Up to 28⁴⁾ (H)
clamping hub
diameter



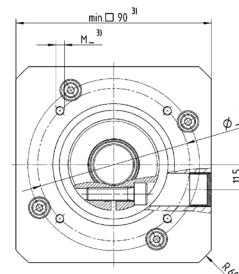
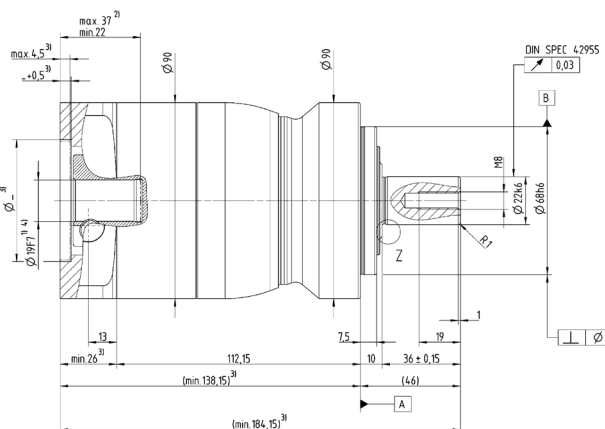
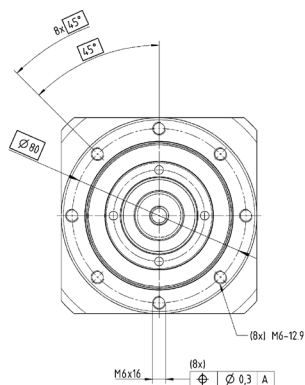
1-stage

Up to 38⁴⁾ (K)
clamping hub
diameter



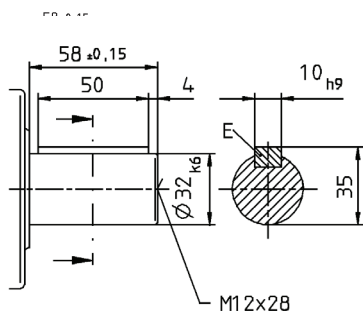
2-stage

Up to 28⁴⁾ (H)
clamping hub
diameter



Alternatives: Output shaft variants

Output shaft with key
E = key as per DIN 6885, sheet 1, form A



Non-tolerated dimensions ± 1 mm

- 1) Check motor shaft fit.
- 2) Min. / max. permissible motor shaft length.
Longer motor shafts are adaptable; please contact us.
- 3) The dimensions depend on the motor.
- 4) Smaller motor shaft diameters are compensated
by a bushing with a minimum thickness of 1 mm.

 Motor mounting according to operating manual

NPL 045 W

				1-stage			2-stage					
Ratio ^{a)}		i		5	8	10	25	32	50	64	100	
Maximum torque		MF	T _{2u}	Nm	640	512	512	640	512	640	512	640
				in.lb	5664	4528	4528	5664	4528	5664	4528	4528
Emergency stop torque ^{b)}			T _{2Not}	Nm	1000							
				in.lb	8900							
Nominal input speed ^{c)}		n _{1N}	min ⁻¹	1800	2000			2600				
Max. input speed		n _{1Max}	min ⁻¹	4000				6000				
Max. torsional backlash		j _t	arcmin	Standard ≤ 8				Standard ≤ 10				
Max. axial force ^{d)}		F _{2AMax}	N	9870								
			lb _f	2200								
Max. radial force ^{d)}		F _{2RMMax}	N	9900								
			lb _f	2200								
Weight incl. standard adapter plate ^{e)}		m	kg	25				29				
			lb _m	55				64				
Operating noise ^{f)}		L _{PA}	dB(A)	≤ 68				≤ 65				
Max. permitted housing temperature		°C		+90								
		F		+194								
Ambient temperature		°C		-15 to +40								
		F		5 to +104								
Lubrication				Lubricated for life								
Paint				2K Epoxy								
Direction of rotation				Motor and gearbox same direction								
Type of protection				IP 65								
Moment of inertia <small>(related to the drive)</small>		kgcm ²		8.7				7.5				
		10 ⁻³ in.lb.s ²		7.7				6.6				
Clamping hub diameter	Standard	mm		38(K)				38(K)				

^{a)} Other ratios available on request.

^{b)} Permitted 1000 times during the service life of the gearbox. If $T_{2u} > T_{2Not}$, then T_{2Not} is the maximum permitted value.

^{c)} At T_{1N} and 20°C ambient temperature. Higher speeds possible if calculated using cymex®.

^{d)} Refers to the center of the output shaft at $n_2 = 150$ rpm.

^{e)} Depending on the clamping hub diameter and the selected adapter plate.

^{f)} At $i = 10$ and $n_1 = 3000$ rpm at no load.

You can select a suitable adapter plate using the online configurator on www.wittenstein-alpha.com

Quick gearbox selection based on the motor characteristic*:

Max. torque $T_{2u} \geq T_{max\ motor} \cdot i$

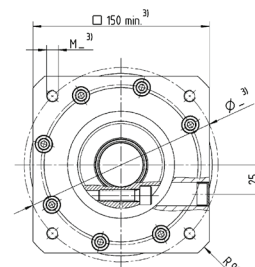
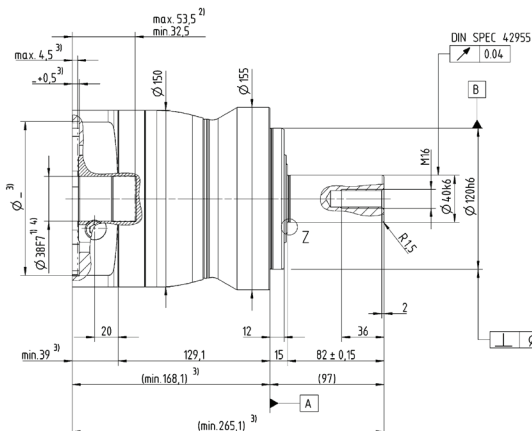
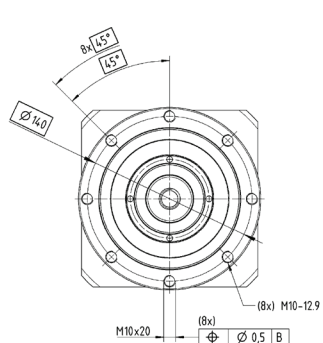
*Please refer to catalog pages 4 and 5 for detailed information on manual selection based on the application.

For application-specific sizing with cymex®, see www.cymex.com

Motor shaft diameter [mm]

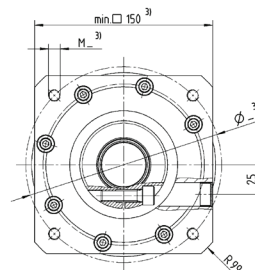
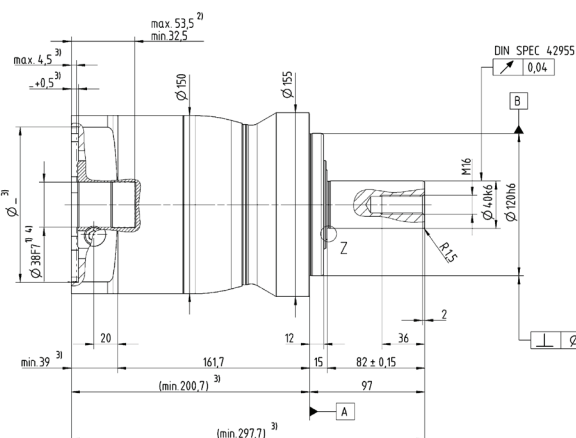
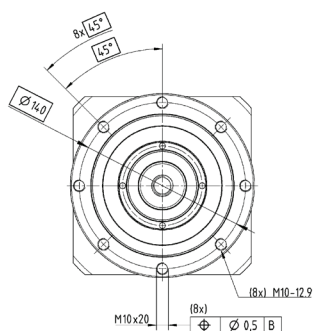
1-stage

Up to 38⁴⁾ (K)
clamping hub
diameter



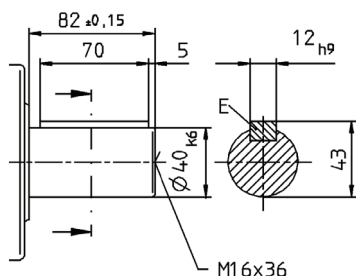
2-stage

Up to 38⁴⁾ (K)
clamping hub
diameter



Alternatives: Output shaft variants

Output shaft with key
E = key as per DIN 6885, sheet 1, form A



Non-tolerated dimensions ± 1 mm

- 1) Check motor shaft fit.
- 2) Min. / max. permissible motor shaft length.
Longer motor shafts are adaptable; please contact us.
- 3) The dimensions depend on the motor.
- 4) Smaller motor shaft diameters are compensated
by a bushing with a minimum thickness of 1 mm.

⚠ Motor mounting according to operating manual



alpha

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**Scan to see our complete selection of hygienic
and corrosion resistant products.**

