

LPB+ 070 MF 1/2-stage

			1-stage					2-stage									
Ratio ^{d)}	<i>i</i>		3	4	5	7	10	9	12	16	20	25	30	40	50	70	100
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	55	42	40	40	37	55	55	42	42	40	55	42	40	40	37
		in.lb	490	370	350	350	330	490	490	370	370	350	490	370	350	350	350
Nominal output torque (with n_m)	T_{2N}	Nm	29	22	21	21	19	29	29	22	22	21	29	22	21	21	19
		in.lb	260	190	190	190	170	260	260	190	190	190	260	190	190	190	170
Emergency stop torque (permitted 1000 times during the service life of the gearhead)	T_{2Not}	Nm	65	75	75	75	75	75	75	75	75	75	75	75	75	75	75
		in.lb	580	660	660	660	660	660	660	660	660	660	660	660	660	660	660
Nominal input speed (with T_{2N} and 20°C ambient temperature) ^{a)}	n_{1N} rpm		3700	3700	3700	3700	3700	3700	3700	3700	3700	3700	3700	3700	3700	3700	3700
Max. input speed	n_{1Max} rpm		6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000
Mean no load running torque (with $n_1=3000$ rpm and 20°C gearhead temperature)	T_{012}	Nm	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		in.lb	2.7	2.2	1.8	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Max. torsional backlash	j_t arcmin	≤ 8					≤ 10										
Torsional rigidity	C_{d21}	Nm/arcmin	6.4	6.4	4.8	4.8	3.8	6.4	6.4	6.4	6.4	4.8	6.4	6.4	4.8	4.8	4.8
		in.lb/arcmin	55	55	40	40	35	55	55	55	55	40	55	55	40	40	35
Max. axial force ^{b)}	F_{2AMax}	N	1550					1550									
		lb _f	350					350									
Max. radial force ^{c)}	F_{2RMax}	N	3000					3000									
		lb _f	680					680									
Efficiency at full load	η %	97					95										
Service life (For calculation, see the Chapter "Information")	L_n h		> 20000					> 20000									
Weight incl. standard adapter plate	<i>m</i>	kg	1.6					2									
		lb _m	3.5					4.4									
Operating noise for $i=10$ and $n_1=3000$ rpm without load	L_{PA} dB(A)		≤64														
Max. permitted housing temperature	°C		+90														
	F		194														
Ambient temperature	°C		-15 to +40														
	F		5 to 104														
Lubrication	Lubricated for life																
Paint	Blue RAL 5002																
Direction of rotation	Motor and gearhead same direction																
Protection class	IP 64																
Moment of inertia (relates to the drive)	D	16	J_I	kgcm ²	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
				10 ⁻³ in.lb.s ²	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Clamping hub diameter (mm)	E	19	J_I	kgcm ²	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
				10 ⁻³ in.lb.s ²	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4

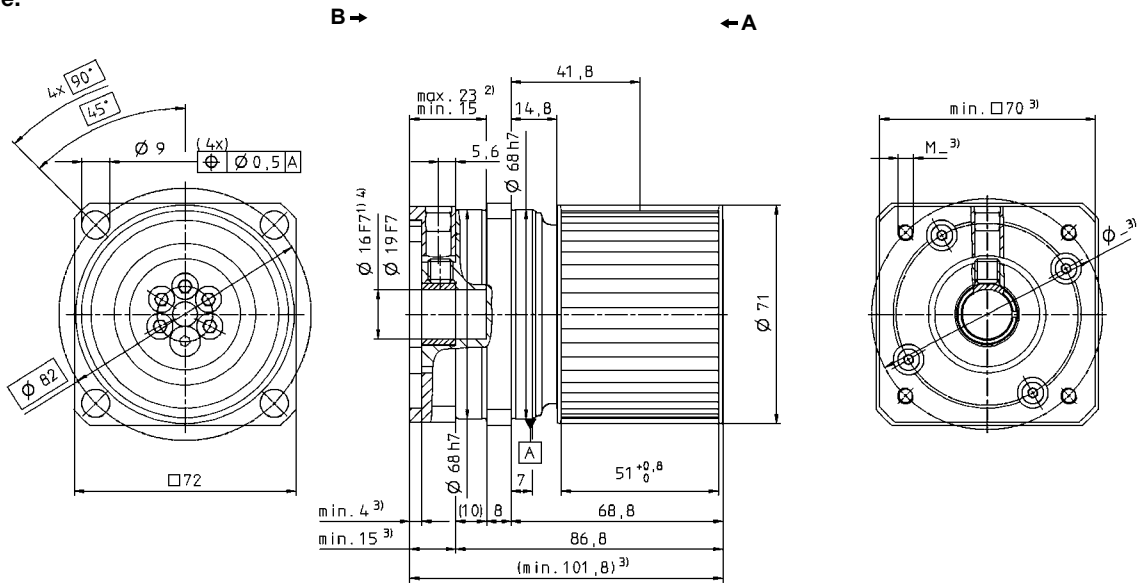
^{a)} For higher ambient temperatures, please reduce input speed

^{b)} Based on the center of the output flange at $n_2 = 100$ rpm

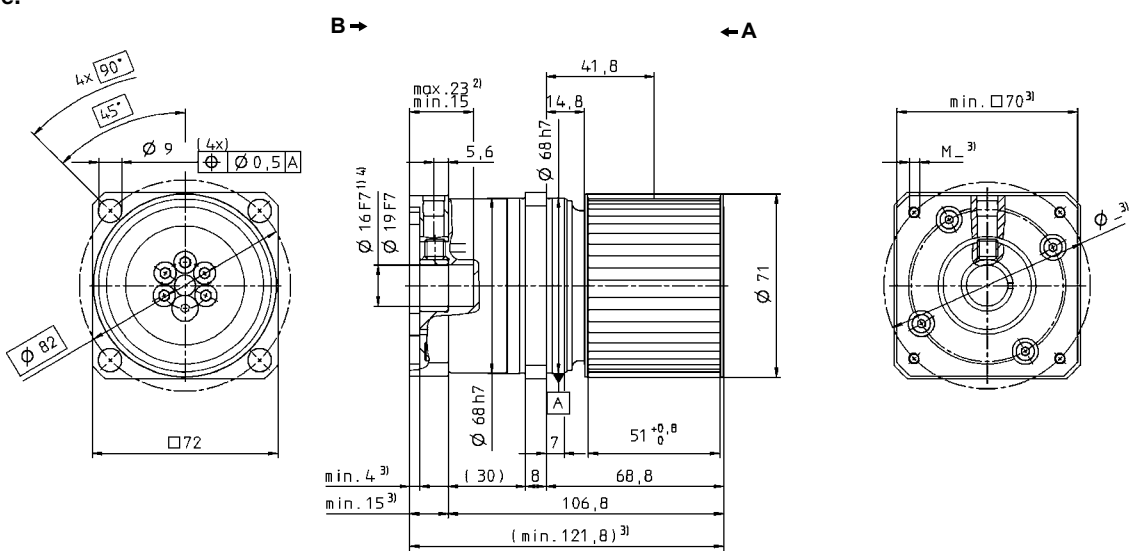
^{c)} With mounted PLPB+ belt pulley and 100 rpm

^{d)} Other ratios are available on request: $i = 15, 21, 28$ and 35 .

LPB+ 1-stage:

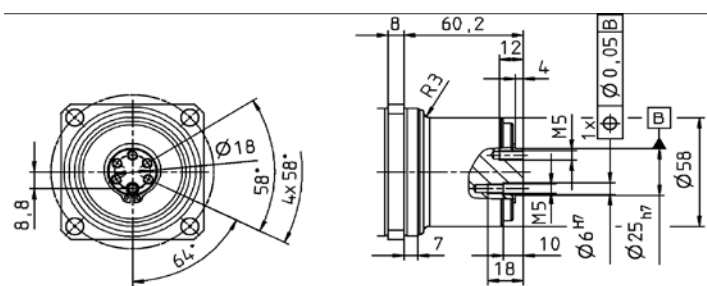


LPB+ 2-stage:



Supplement: Belt pulley PLPB+ (not included in the scope of delivery – please order separately)

Illustration: Output flange without belt pulley



Belt Pulley PLPB+ 070 Profile AT5-0			
Pitch	p	mm	5
Number of teeth	z		43
Circumference	$z * p$	mm/rotation	215
Inertia	J	kgcm ²	3.86
Mass	m	kg	0.48

- Non-tolerated dimensions ±1mm
- 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 diameter is compensated by a bushing. Motor shaft diameters up to 19mm available – please contact WITTENSTEIN alpha

CAD data is available under www.wittenstein-alpha.com

Motor mounting according to operating manual

Planetary gearheads
General

LPB+
Generation 3

LPB+ 090 MF 1/2-stage

			1-stage					2-stage										
Ratio ^{d)}	<i>i</i>		3	4	5	7	10	9	12	16	20	25	30	40	50	70	100	
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	125	115	100	100	90	125	125	115	115	100	125	115	100	100	90	
		in.lb	1110	1020	890	890	800	1110	1110	1020	1020	890	1110	1020	890	890	800	
Nominal output torque (with n_m)	T_{2N}	Nm	63	58	50	50	45	63	63	58	58	50	63	58	50	50	45	
		in.lb	560	510	440	440	400	560	560	510	510	440	560	510	440	440	400	
Emergency stop torque (permitted 1000 times during the service life of the gearhead)	T_{2Not}	Nm	185	190	190	190	190	190	190	190	190	190	190	190	190	190	190	
		in.lb	1640	1680	1680	1680	1680	1680	1680	1680	1680	1680	1680	1680	1680	1680	1680	
Nominal input speed (with T_{2N} and 20°C ambient temperature) ^{a)}	n_{1N} rpm		3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	
Max. input speed	n_{1Max} rpm		6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	
Mean no load running torque (with $n_1=3000$ rpm and 20°C gearhead temperature)	T_{012}	Nm	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
		in.lb	5.3	4.9	4.4	3.5	3.4	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.2	2.2	
Max. torsional backlash	j_t arcmin		≤ 8					≤ 10										
Torsional rigidity	C_{d21}	Nm/arcmin	20	20	14	14	12	20	20	20	20	14	20	20	14	14	12	
		in.lb/arcmin	180	180	120	120	110	180	180	180	180	120	180	180	120	120	110	
Max. axial force ^{b)}	F_{2AMax}	N	1900					1900										
		lb _f	430					430										
Max. radial force ^{c)}	F_{2RMax}	N	4300					4300										
		lb _f	970					970										
Efficiency at full load	η %	97					95											
Service life (For calculation, see the Chapter "Information")	L_n h		> 20000					> 20000										
Weight incl. standard adapter plate	m	kg	3.3					4.3										
		lb _m	7.3					10										
Operating noise for $i=10$ and $n_1=3000$ rpm without load	L_{PA} dB(A)		≤ 66															
Max. permitted housing temperature	°C		+90															
	F		194															
Ambient temperature	°C		-15 to +40															
	F		5 to 104															
Lubrication	Lubricated for life																	
Paint	Blue RAL 5002																	
Direction of rotation	Motor and gearhead same direction																	
Protection class	IP 64																	
Moment of inertia (relates to the drive)	G	24	J_I	kgcm ²	1.8	1.6	1.5	1.5	1.4	1.5	1.5	1.6	1.6	1.5	1.5	1.4	1.4	1.4
				10 ⁻³ in.lb.s ²	1.6	1.4	1.4	1.3	1.3	1.3	1.3	1.4	1.4	1.3	1.3	1.3	1.3	1.3
Clamping hub diameter (mm)	H	28	J_I	kgcm ²	2	1.9	1.8	1.8	1.7	1.8	1.8	1.9	1.9	1.8	1.8	1.7	1.7	1.7
				10 ⁻³ in.lb.s ²	1.9	1.7	1.6	1.6	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5

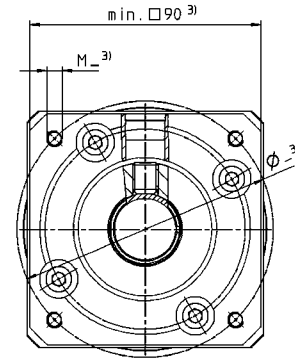
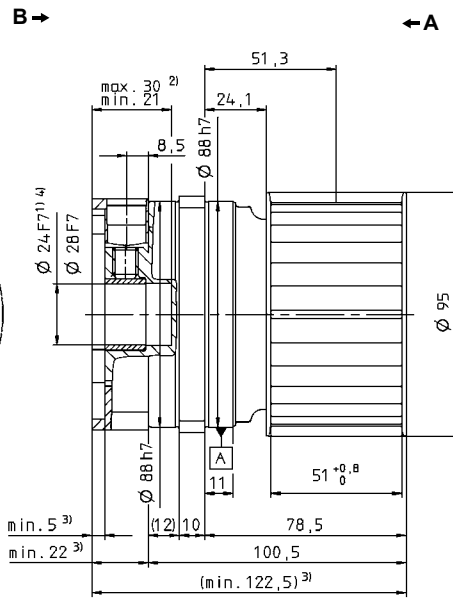
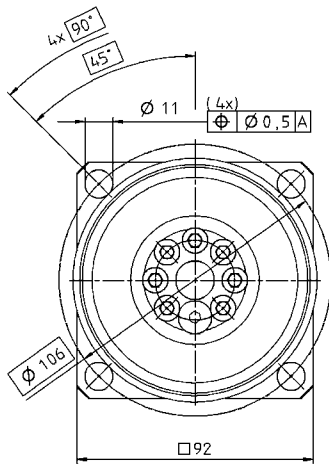
^{a)} For higher ambient temperatures, please reduce input speed

^{b)} Based on the center of the output flange at $n_2 = 100$ rpm

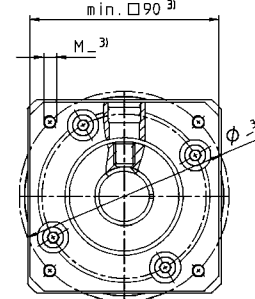
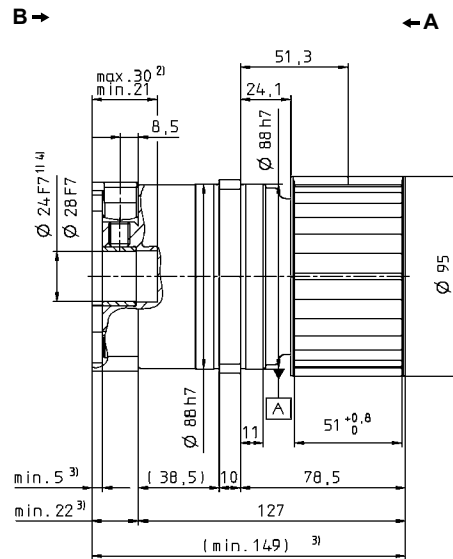
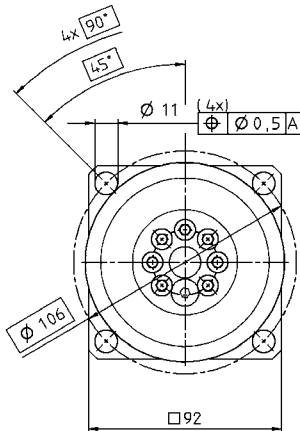
^{c)} With mounted PLPB+ belt pulley and 100 rpm

^{d)} Other ratios are available on request: $i = 15, 21, 28$ and 35 .

LPB+ 1-stage:

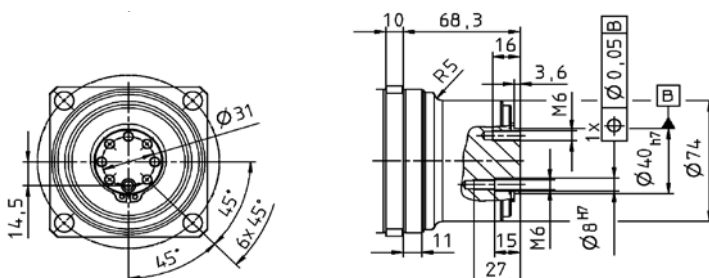


LPB+ 2-stage:



Supplement: Belt pulley PLPB+ (not included in the scope of delivery – please order separately)

Illustration: Output flange without belt pulley



Belt Pulley PLPB+ 090 Profile AT10-0			
Pitch	p	mm	10
Number of teeth	z		28
Circumference	$z * p$	mm/rotation	280
Inertia	J	kgcm ²	10.95
Mass	m	kg	0.82

Non-tolerated dimensions ±1mm

- 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 diameter is compensated by a bushing. Motor shaft diameters up to 28mm available – please contact WITTENSTEIN alpha

CAD data is available under www.wittenstein-alpha.com

Motor mounting according to operating manual

LPB+ 120 MF 1/2-stage

			1-stage					2-stage										
Ratio ^{d)}	<i>i</i>		3	4	5	7	10	9	12	16	20	25	30	40	50	70	100	
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	305	305	250	250	220	305	305	305	305	250	305	305	250	250	220	
		in.lb	2700	2700	2210	2210	1950	2700	2700	2700	2700	2210	2700	2700	2210	2210	1950	
Nominal output torque (with n_m)	T_{2N}	Nm	155	155	125	125	110	155	155	155	155	125	155	155	125	125	110	
		in.lb	1370	1370	1110	1110	970	1370	1370	1370	1370	1110	1370	1370	1110	1110	970	
Emergency stop torque (permitted 1000 times during the service life of the gearhead)	T_{2Not}	Nm	400	480	480	480	480	480	480	480	480	480	480	480	480	480	480	
		in.lb	3540	4250	4250	4250	4250	4250	4250	4250	4250	4250	4250	4250	4250	4250	4250	
Nominal input speed (with T_{2N} and 20°C ambient temperature) ^{a)}	n_{1N}	rpm	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	
Max. input speed	n_{1Max}	rpm	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	
Mean no load running torque (with $n_1=3000$ rpm and 20°C gearhead temperature)	T_{012}	Nm	1.1	1.0	0.9	0.8	0.8	0.6	0.6	0.6	0.5	0.5	0.4	0.5	0.4	0.4	0.4	
		in.lb	9.7	8.9	8.0	7.1	7.1	5.3	5.3	4.9	4.4	4.4	3.5	4.4	3.5	3.5	3.5	
Max. torsional backlash	j_t	arcmin	≤ 8					≤ 10										
Torsional rigidity	C_{d21}	Nm/arcmin	47	47	36	36	30	47	47	47	47	36	47	47	36	36	30	
		in.lb/arcmin	420	420	320	320	270	420	420	420	420	320	420	420	320	320	270	
Max. axial force ^{b)}	F_{2AMax}	N	4000					4000										
		lb _f	900					900										
Max. radial force ^{c)}	F_{2RMax}	N	9500					9500										
		lb _f	2140					2140										
Efficiency at full load	η	%	97					95										
Service life (For calculation, see the Chapter "Information")	L_n	h	> 20000					> 20000										
Weight incl. standard adapter plate	<i>m</i>	kg	7.3					9.7										
		lb _m	16					21										
Operating noise for $i=10$ and $n_1=3000$ rpm without load	L_{PA}	dB(A)	≤ 68															
Max. permitted housing temperature	°C		+90															
	F		194															
Ambient temperature	°C		-15 to +40															
	F		5 to 104															
Lubrication	Lubricated for life																	
Paint	Blue RAL 5002																	
Direction of rotation	Motor and gearhead same direction																	
Protection class	IP 64																	
Moment of inertia (relates to the drive)	<i>I</i>	32	J_I	kgcm ²	6.8	5.9	5.6	5.2	5.1	5.4	5.4	5.5	5.5	5.3	5.3	5.0	5.0	5.0
				10 ⁻³ in.lb.s ²	6.1	5.2	4.9	4.6	4.5	4.7	4.7	4.9	4.9	4.7	4.7	4.4	4.4	4.4
Clamping hub diameter (mm)	<i>K</i>	38	J_I	kgcm ²	7.7	6.8	6.4	6.1	5.9	6.2	6.2	6.4	6.4	6.2	6.2	5.9	5.9	5.9
				10 ⁻³ in.lb.s ²	6.8	6.0	5.7	5.4	5.2	5.5	5.5	5.7	5.7	5.5	5.5	5.2	5.2	5.2

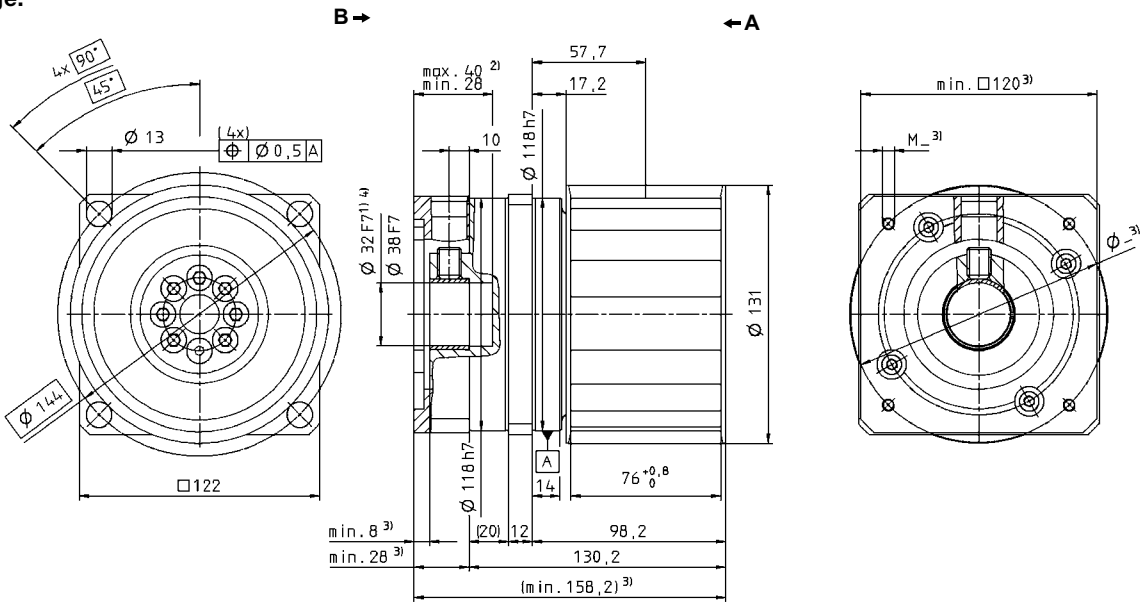
^{a)} For higher ambient temperatures, please reduce input speed

^{b)} Based on the center of the output flange at $n_2 = 100$ rpm

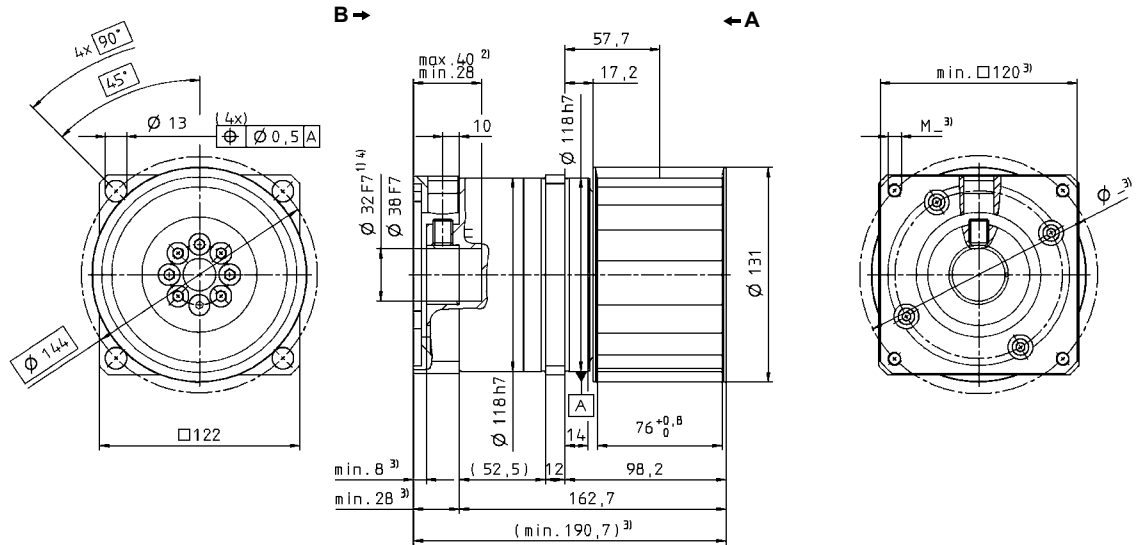
^{c)} With mounted PLPB+ belt pulley and 100 rpm

^{d)} Other ratios are available on request: $i = 28$.

LPB⁺ 1-stage:

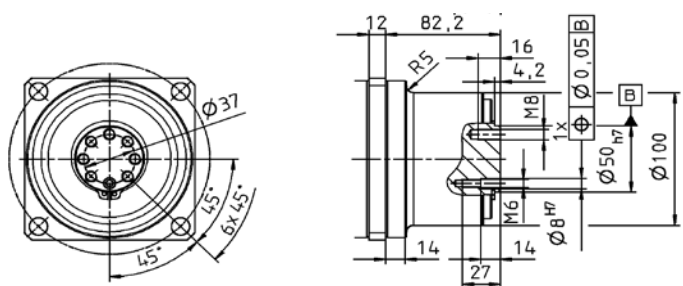


LPB⁺ 2-stage:



Supplement: Belt pulley PLPB⁺ (not included in the scope of delivery – please order separately)

Illustration: Output flange without belt pulley



Belt Pulley PLPB ⁺ 120 Profile AT20-0			
Pitch	<i>p</i>	mm	20
Number of teeth	<i>z</i>		19
Circumference	<i>z * p</i>	mm/rotation	380
Inertia	<i>J</i>	kgcm ²	50.62
Mass	<i>m</i>	kg	2.61

- Non-tolerated dimensions ±1mm
- 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 diameter is compensated by a bushing. Motor shaft diameters up to 38mm available – please contact WITTENSTEIN alpha

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Motor mounting according to operating manual

Planetary gearheads
General

LPB⁺
Generation 3