

SP+ 100 MF 1-stage

				1-stage						
Ratio ^{a)}		<i>i</i>		3	4	5	7	8	10	
cymex [®] -optimized acceleration torque (please contact us regarding the design)	T_{2Bcym}	Nm		–	370	400	330	260	260	
			in.lb	–	3275	3540	2921	2301	2301	
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm		235	315	315	315	235	235	
			in.lb	2080	2788	2788	2788	2080	2080	
Nominal output torque (with n_m)	T_{2N}	Nm		120	180	175	170	120	120	
			in.lb	1062	1593	1549	1505	1062	1062	
Emergency stop torque (permitted 1000 times during the service life of the gearhead)	T_{2Not}	Nm		500	625	625	625	500	500	
			in.lb	4425	5531	5531	5531	4425	4425	
Nominal input speed (with T_{2N} and 20°C ambient temperature) ^{b)}	n_{1N}	rpm		2500	2500	2500	2800	2800	2800	
Max. input speed	n_{1Max}	rpm		4500	4500	4500	4500	4500	4500	
Mean no load running torque (with $n_1 = 3000$ rpm and 20°C gearhead temperature) ^{c)}	T_{012}	Nm		3.5	2.7	2.4	1.6	1.4	1.4	
			in.lb	31.0	23.9	21.2	14.2	12.4	12.4	
Max. torsional backlash	j_t	arcmin		Standard ≤ 3 / Reduced ≤ 1						
Torsional rigidity	C_{t21}	Nm/arcmin		31						
		in.lb/arcmin		274						
Max. axial force ^{d)}	F_{2AMax}	N		5650						
		lb _f		1271						
Max. radial force ^{d)}	F_{2RMax}	N		6600						
		lb _f		1485						
Max. tilting moment	M_{2KMax}	Nm		487						
		in.lb		4310						
Efficiency at full load	η	%		97						
Service life (For calculation, see the Chapter "Information")	L_h	h		> 20000						
Weight incl. standard adapter plate	m	kg		7.7						
		lb _m		17.0						
Operating noise (with $i=10$ and $n_1=3000$ rpm no 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 65						
Moment of inertia (relates to the drive)	E	19	J_1	kgcm ²	3.29	2.35	1.92	1.60	1.38	1.38
				10 ⁻² in.lb.s ²	2.91	2.08	1.70	1.42	1.22	1.22
Clamping hub diameter [mm]	G	24	J_1	kgcm ²	3.99	3.04	2.61	2.29	2.07	2.07
				10 ⁻² in.lb.s ²	3.53	2.69	2.31	2.03	1.83	1.83
	H	28	J_1	kgcm ²	3.59	2.65	2.22	1.90	1.68	1.68
				10 ⁻² in.lb.s ²	3.18	2.35	1.97	1.68	1.49	1.49
K	38	J_1	kgcm ²	11.1	10.1	9.68	9.36	9.14	9.14	
			10 ⁻² in.lb.s ²	9.78	8.95	8.57	8.28	8.09	8.09	

Reduced mass moments of inertia available on request.

^{a)} Other ratios available on request

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

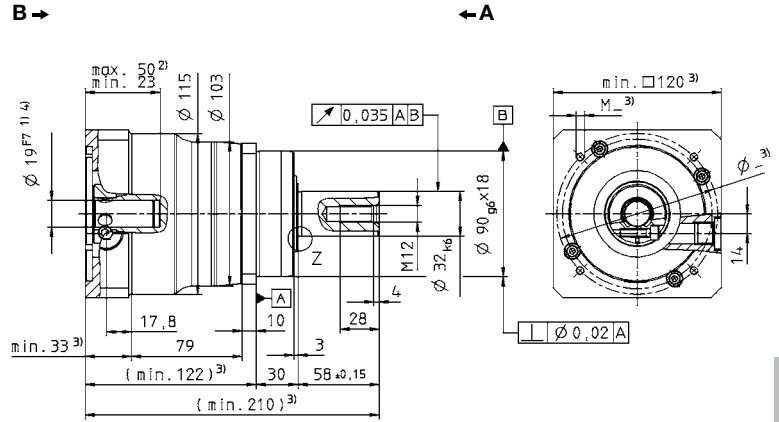
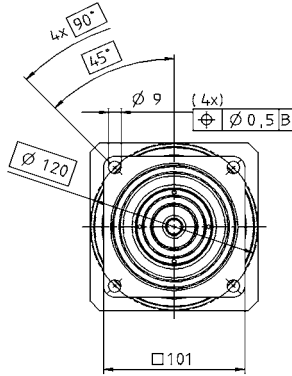
^{c)} Valid for clamping hub diameter of 24 mm

^{d)} Refers to centre of the output shaft or flange

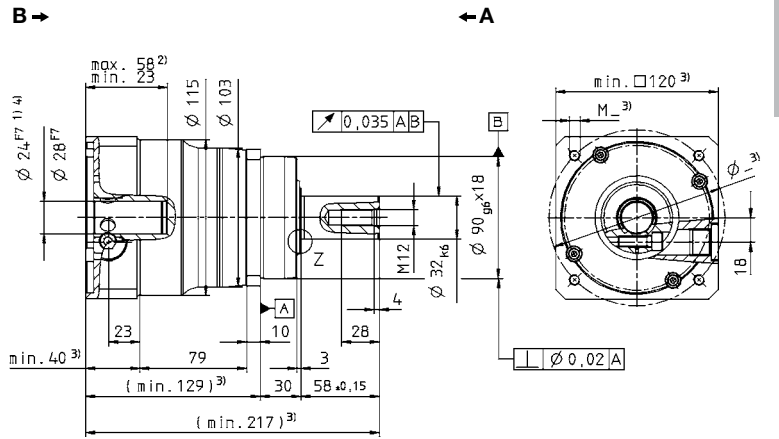
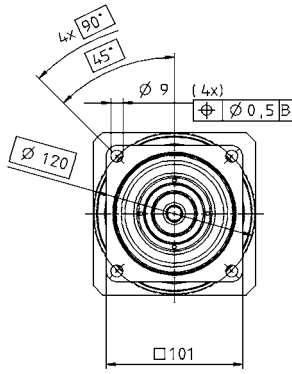
View A

View B

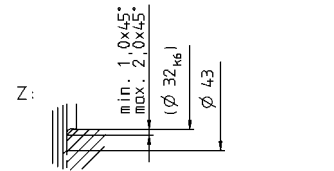
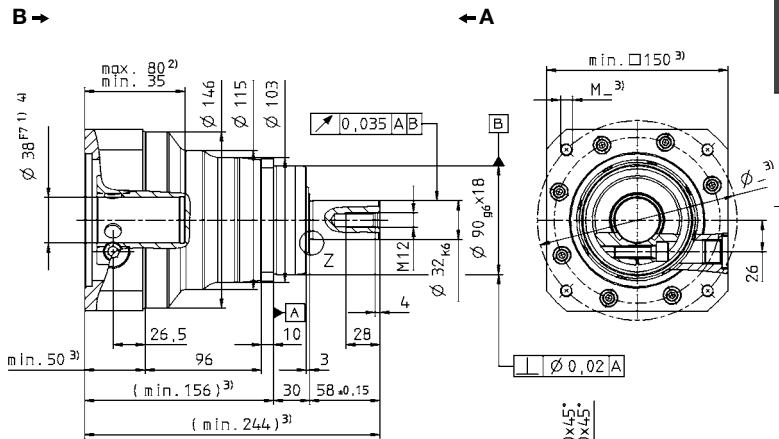
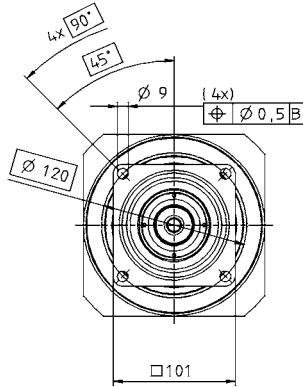
up to 19⁴⁾ (E)
clamping hub diameter



up to 24/28⁴⁾ (G/H)
clamping hub diameter



up to 38⁴⁾ (K)
clamping hub diameter

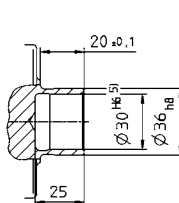
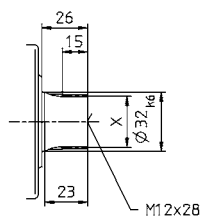
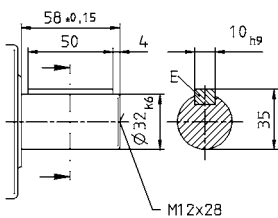


Alternatives: Output shaft variants

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

Involute gearing DIN 5480 in mm
X = W 32 x 1.25 x 30 x 24 x 6m, DIN 5480

Shaft mounted
Mounted via shrink disc



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 diameter is compensated by a bushing with a minimum thickness of 1 mm.
- 5) Tolerance h6 for mounted shaft.

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

Motor mounting according to operating manual

Planetary gearheads
High End

SP+

MF

SP+ 100 MF 2-stage

				2-stage										
Ratio ^{a)}	<i>i</i>		16	20	25	28	32	35	40	50	70	100		
cymex [®] -optimized acceleration torque (please contact us regarding the design)	T_{2Bcym}	Nm	370	370	400	370	260	400	370	400	330	260		
		in.lb	3275	3275	3540	3275	2301	3540	3275	3540	2921	2301		
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B}	Nm	315	315	315	315	235	315	315	315	315	235		
		in.lb	2788	2788	2788	2788	2080	2788	2788	2788	2788	2080		
Nominal output torque (with n_{1N})	T_{2N}	Nm	180	180	175	180	180	175	180	175	170	120		
		in.lb	1593	1593	1549	1593	1593	1549	1593	1549	1505	1062		
Emergency stop torque (permitted 1000 times during the service life of the gearhead)	T_{2Not}	Nm	625	625	625	625	625	625	625	625	625	500		
		in.lb	5531	5531	5531	5531	5531	5531	5531	5531	5531	4425		
Nominal input speed (with T_{2N} and 20°C ambient temperature) ^{b)}	n_{1N}	rpm	3100	3100	3100	3100	3100	3100	3100	3500	4200	4200		
Max. input speed	n_{1Max}	rpm	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) ^{c)}	T_{012}	Nm	1.5	1.2	1.1	0.9	0.9	0.8	0.7	0.6	0.5	0.5		
		in.lb	13.3	10.6	9.7	8.8	8.8	7.1	6.2	5.3	4.4	4.4		
Max. torsional backlash	j_t	arcmin	Standard ≤ 5 / Reduced ≤ 3											
Torsional rigidity	C_{t21}	Nm/arcmin	31											
		in.lb/arcmin	274											
Max. axial force ^{d)}	F_{2AMax}	N	5650											
		lb _r	1271											
Max. radial force ^{d)}	F_{2RMax}	N	6600											
		lb _r	1485											
Max. tilting moment	M_{2KMax}	Nm	487											
		in.lb	4310											
Efficiency at full load	η	%	94											
Service life (For calculation, see the Chapter "Information")	L_h	h	> 20000											
Weight incl. standard adapter plate	m	kg	7.9											
		lb _m	17.5											
Operating noise (with $i=100$ and $n_1 = 3000$ rpm no load)	L_{PA}	dB(A)	≤ 60											
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 65													
Moment of inertia (relates to the drive)	C	14	J_1	kgcm ²	0.64	0.54	0.52	0.43	0.63	0.43	0.38	0.38	0.37	0.37
				10 ⁻² in.lb.s ²	0.57	0.47	0.46	0.38	0.56	0.38	0.34	0.33	0.33	0.33
Clamping hub diameter [mm]	E	19	J_1	kgcm ²	0.81	0.70	0.69	0.60	0.80	0.59	0.55	0.54	0.54	0.54
				10 ⁻² in.lb.s ²	0.72	0.62	0.61	0.53	0.71	0.52	0.48	0.48	0.48	0.47
	G	24	J_1	kgcm ²	2.18	2.07	2.05	1.97	2.23	1.96	1.92	1.91	1.91	1.91
				10 ⁻² in.lb.s ²	1.93	1.83	1.82	1.74	1.97	1.74	1.70	1.69	1.69	1.69
H	28	J_1	kgcm ²	1.98	1.90	1.88	1.81	2.06	1.80	1.76	1.75	1.75	1.75	
			10 ⁻² in.lb.s ²	1.75	1.68	1.66	1.60	1.82	1.59	1.56	1.55	1.55	1.55	

Reduced mass moments of inertia available on request.

^{a)} Other ratios available on request

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

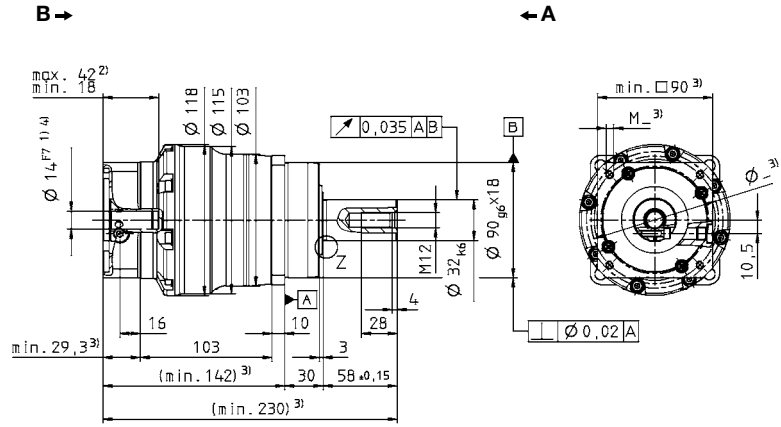
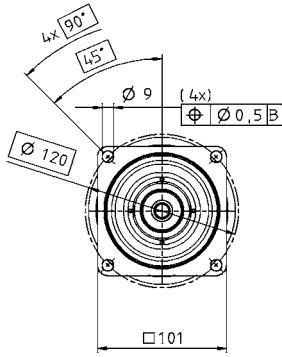
^{c)} Valid for clamping hub diameter of 19 mm

^{d)} Refers to centre of the output shaft or flange

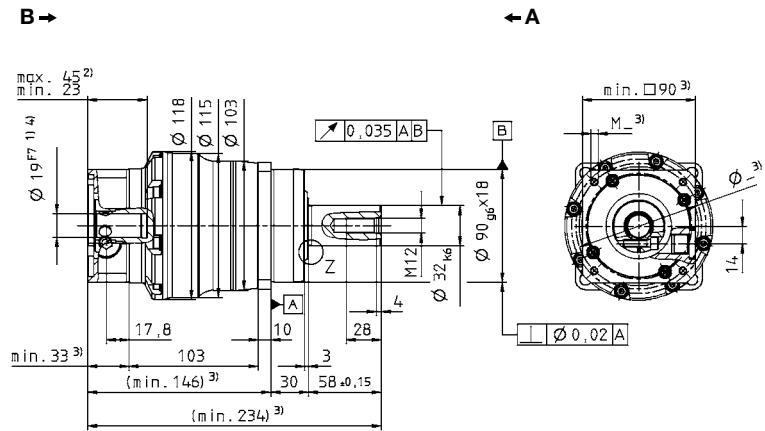
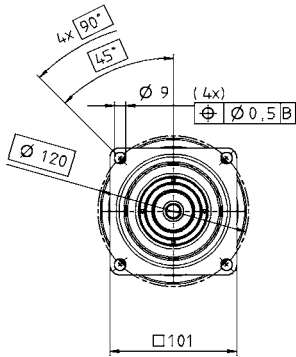
View A

View B

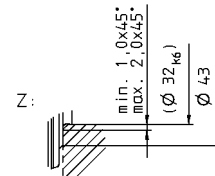
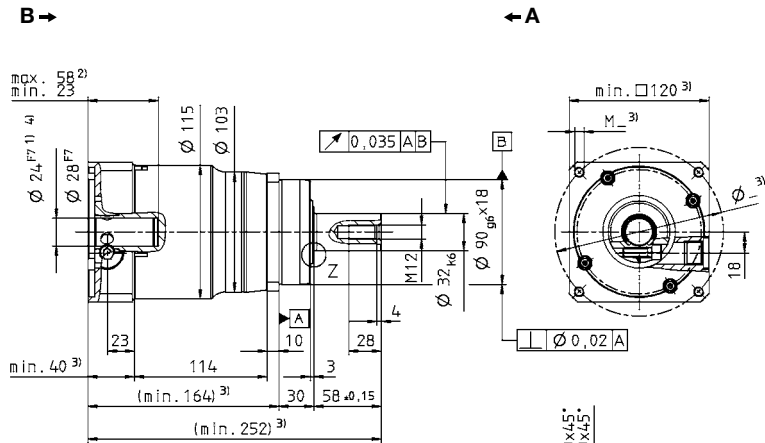
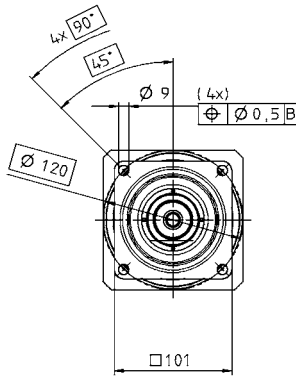
up to 14⁴⁾ (C)
clamping hub diameter



up to 19⁴⁾ (E)
clamping hub diameter

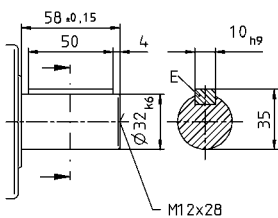


up to 24/28⁴⁾ (G/H)
clamping hub diameter

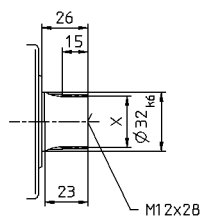


Alternatives: Output shaft variants

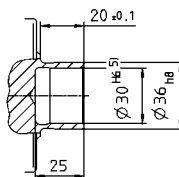
Output shaft with key in mm
E = key as per DIN 6885, sheet 1, form A



Involute gearing DIN 5480 in mm
X = W 32 x 1.25 x 30 x 24 x 6m, DIN 5480



Shaft mounted
Mounted via shrink disc



Non-tolerated dimensions ± 1 mm

- 1) Check motor shaft fit.
- 2) Min./Max. permissible motor shaft length.
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- 3) The dimensions depend on the motor.
- 4) Smaller motor shaft diameter is compensated by a bushing with a minimum thickness of 1 mm.
- 5) Tolerance h6 for mounted shaft.

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Motor mounting according to operating manual

Planetary gearheads
High End

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