

Product data sheet

XP+

Low backlash planetary gearbox



Gearbox data	
Designation:	XP020S-MF1-3-1E1-2S
Gearbox type	XP+
Gearbox size	020
Design keyword	Standard
Gearbox variation	Motor attachment gearbox
Gearbox stages	1
Gearbox ratio i	3
Output design	Key
Clamping hub diameter	19 mm
Gearbox backlash	Standard

Motor mounting parts (included in delivery)	
Incl. mounting parts for servo motor	TBD
Adapter plate	Configure with provided cymex® 5 file

Order designation
XP020S-MF1-3-1E1-2S / Specify your motor P/N here

Technical specifications		
Max. output torque (Depending on the specific boundary conditions of the application)	T _{2α}	270 Nm
Max. acceleration torque (max. 1000 cycles per hour)	T _{2B}	225 Nm
Nominal output torque (with n _{IN})	T _{2N}	63 Nm
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T _{2Not}	330 Nm
Nominal input speed (with T _{2N} and 20°C ambient temperature ^{a)})	n _{1N}	2900 min ⁻¹
Max. input speed	n _{1Max}	7500 min ⁻¹
Mean no load running torque (with n ₁ =3000 min ⁻¹ and 20°C gearbox temp.) ^{b)}	T ₀₁₂	1.5 Nm
Max. torsional backlash	j _t	≤ 3 arcmin
Torsional rigidity ^{b)}	C _{t21}	13.5 Nm/arcmin
Tilting rigidity	C _{2K}	200 Nm/arcmin
Max. axial force ^{c)}	F _{2AMax}	4840 N
Max. radial force ^{c)}	F _{2RMax}	6000 N
Max. tilting moment	M _{2KMax}	675 Nm
Efficiency at full load	η	97 %
Service life (for calculation, see the Chapter "Information" in our product catalogue)	L _h	> 20000 h
Weight incl. standard adapter plate	m	3.9 kg
Operating noise (with n ₁ =3000 min ⁻¹ no load)	L _{PA}	≤ 63 dB(A)
Max. permitted housing temperature		90 °C
Ambient temperature		-15 °C to 40 °C
Lubrication		lubricated for life
Paint		Innovation blue
Protection class		IP 65
Inertia (relates to the drive)	J ₁	1.14 kgcm ²

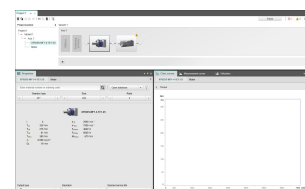
Confirm motor compatibility with cymex® 5. Download your pre-configured file and base 3D model here!^{d)}



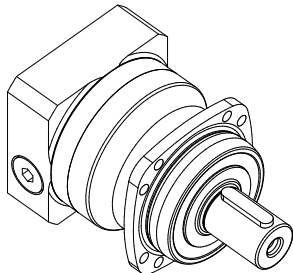
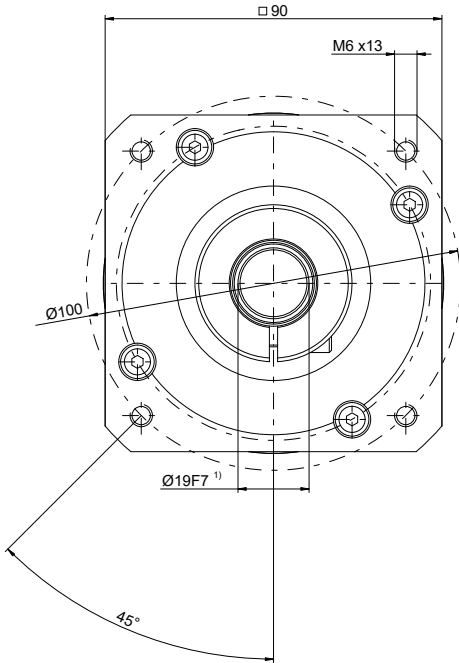
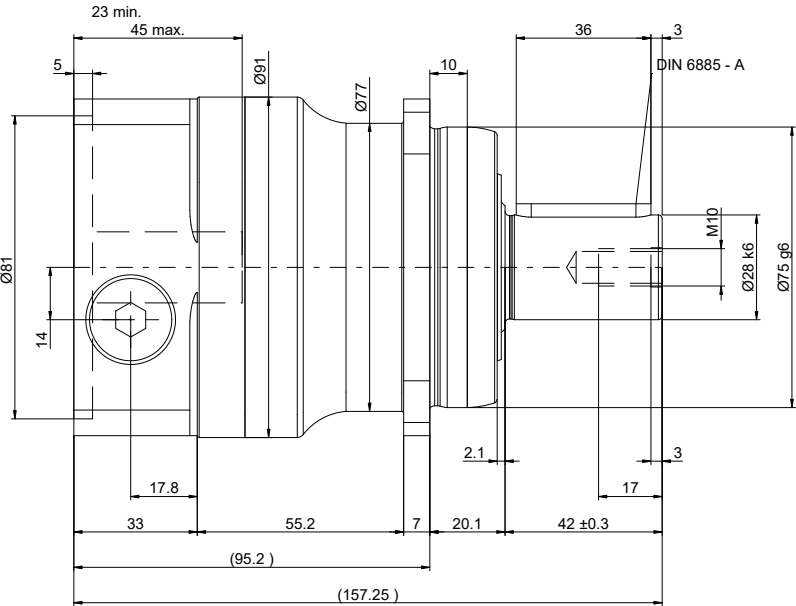
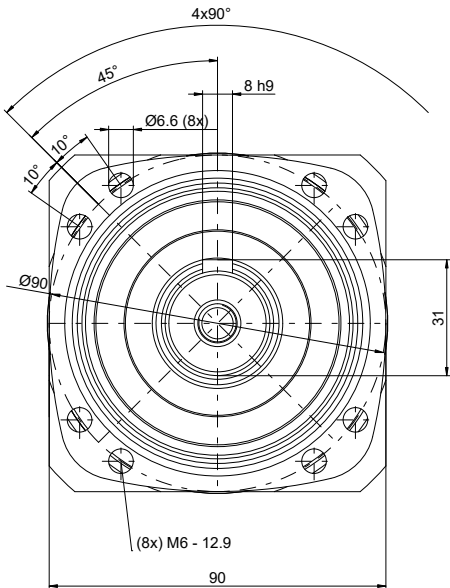
- a) For higher ambient temperatures, please reduce input speed
b) Depends on clamping hub diameter
c) Refers to center of the output shaft or flange
d) Use cymex® 5 to confirm adapter plate dimensions and motor compatibility

Don't have cymex® 5? Get your Premium license here!

New to cymex® 5? Learn how to check motor compatibility quickly with a simple tutorial.



Please note: adapter plate dimensions may vary based on specified motor



1) Motorwellenpassung pruefen / Check motor shaft fit

Technische Aenderungen vorbehalten / Technical modifications reserved

Betriebsanleitung unter www.wittenstein-alpha.de / Operating manual on www.wittenstein-alpha.de

Nicht tolerierte Masse sind Nennmasse / Non-toleranced dimensions are nominal dimensions

gez/draft		Masstab Scale	
Datum/date		auto	
Eigentumsvorbehalt nach DIN 34 beachten !	Observe copyright note according to DIN 34 !		
Benenn. Descr.	XP 020S-MF1- 3-1E1-2S		
Kommentar Note	Motor specified by user - compatibility check required		
MN	DIN A3	Urspr./Ref-Drwg:	CAD-Generator V2.0
			Blatt/Sheet: 1



nicht vertraulich

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Anbauteile / mounting parts		
Adapterplatte adapter plate	MN	TBD
Distanzhülse bushing	MN	