

Product data sheet

XP⁺

Low backlash planetary gearbox



Gearbox data	
Designation:	XP020S-MF1-4-1E1-2S
Gearbox type	XP ⁺
Gearbox size	020
Design keyword	Standard
Gearbox variation	Motor attachment gearbox
Gearbox stages	1
Gearbox ratio i	4
Output design	Key
Clamping hub diameter	19 mm
Gearbox backlash	Standard
Gearbox material number	20026790

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

Order designation	
XP020S-MF1-4-1E1-2S / Specify your motor P/N here	

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



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



Technical specifications		
Max. output torque (Depending on the specific boundary conditions of the application)	T _{2α}	330 Nm
Max. acceleration torque (max. 1000 cycles per hour)	T _{2B}	275 Nm
Nominal output torque (with n _{IN})	T _{2N}	81 Nm
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T _{2Not}	390 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	1.2 Nm
Max. torsional backlash	j _t	≤ 3 arcmin
Torsional rigidity ^{b)}	C _{t21}	17 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}	≤ 59 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	0.86 kgcm ²

a) For higher ambient temperatures, please reduce input speed

b) Depends on clamping hub diameter

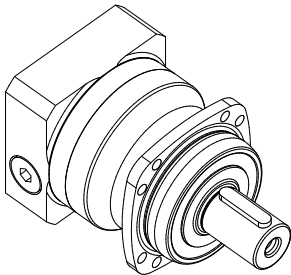
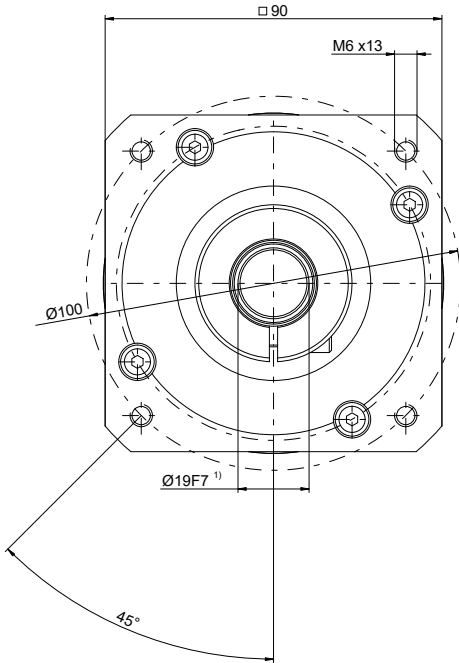
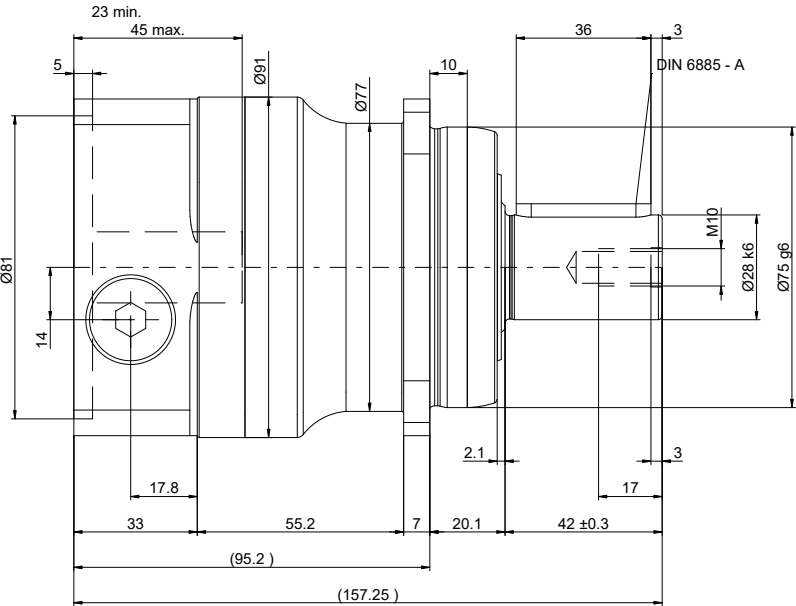
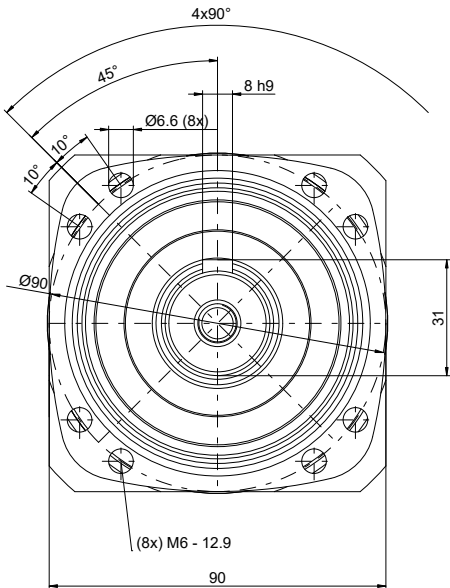
c) Refers to center of the output shaft or flange

d) Use cymex[®] 5 to confirm adapter plate dimensions and motor compatibility

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		 Massstab Scale auto	 WITTENSTEIN alpha	
Datum/date				
Eigentumsvorbehalt nach DIN 34 beachten !	Observe copyright note according to DIN 34 !			
Benenn. Descr.	XP 020S-MF1- 4-1E1-2S			
Kommentar Note	Motor specified by user - compatibility check required			
MN	20026790	DIN A3	Urspr./Ref-Drwg: CAD-Generator V2.0	Blatt/Sheet: 1

nicht vertraulich

This drawing is our intellectual property and is only issued for exclusively personal and confidential use. It may not be copied, reproduced, disclosed or made available to third parties in any form whatsoever without our written permission.

Diese Zeichnung ist unser geistiges Eigentum und wird nur zum ausschliesslich persönlichen, vertraulichen Gebrauch ausgehändigt. Sie darf ohne unsere schriftliche Genehmigung weder kopiert, noch vervielfältigt, noch in irgend einer Form Dritten Personen mitgeteilt oder zugänglich gemacht werden.

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