

# Product data sheet

**XP<sup>+</sup>**

Low backlash planetary gearbox



Gearbox data	
Designation:	XP050S-MF2-20-1M1-2S
Gearbox type	XP <sup>+</sup>
Gearbox size	050
Design keyword	Standard
Gearbox variation	Motor attachment gearbox
Gearbox stages	2
Gearbox ratio i	20
Output design	Key
Clamping hub diameter	48 mm
Gearbox backlash	Standard

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

Order designation
XP050S-MF2-20-1M1-2S / Specify your motor P/N here

Technical specifications		
Max. output torque (Depending on the specific boundary conditions of the application)	T <sub>2α</sub>	3696 Nm
Max. acceleration torque (max. 1000 cycles per hour)	T <sub>2B</sub>	3080 Nm
Nominal output torque (with n <sub>IN</sub> )	T <sub>2N</sub>	1212 Nm
Emergency stop torque (permitted 1000 times during the service life of the gearbox)	T <sub>2Not</sub>	5000 Nm
Nominal input speed (with T <sub>2N</sub> and 20°C ambient temperature) <sup>a)</sup>	n <sub>1N</sub>	2700 min <sup>-1</sup>
Max. input speed	n <sub>1Max</sub>	5000 min <sup>-1</sup>
Mean no load running torque (with n <sub>1</sub> =3000 min <sup>-1</sup> and 20°C gearbox temp.) <sup>b)</sup>	T <sub>012</sub>	4.1 Nm
Max. torsional backlash	j <sub>t</sub>	≤ 4 arcmin
Torsional rigidity <sup>b)</sup>	C <sub>t21</sub>	290 Nm/arcmin
Tilting rigidity	C <sub>2K</sub>	1900 Nm/arcmin
Max. axial force <sup>c)</sup>	F <sub>2AMax</sub>	17725 N
Max. radial force <sup>c)</sup>	F <sub>2RMax</sub>	18000 N
Max. tilting moment	M <sub>2KMax</sub>	3256 Nm
Efficiency at full load	η	94 %
Service life (for calculation, see the Chapter "Information" in our product catalogue)	L <sub>h</sub>	> 20000 h
Weight incl. standard adapter plate	m	36 kg
Operating noise (with n <sub>1</sub> =3000 min <sup>-1</sup> no load)	L <sub>PA</sub>	≤ 64 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 <sub>1</sub>	27.05 kgcm <sup>2</sup>

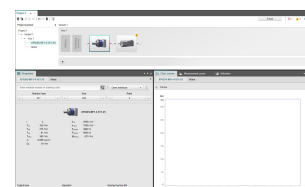
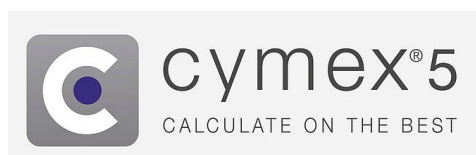
Confirm motor compatibility with cymex<sup>®</sup> 5. Download your pre-configured file and base 3D model here!<sup>d)</sup>



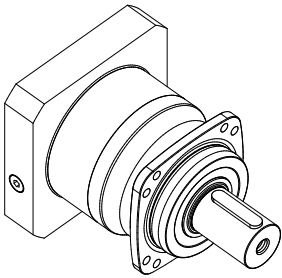
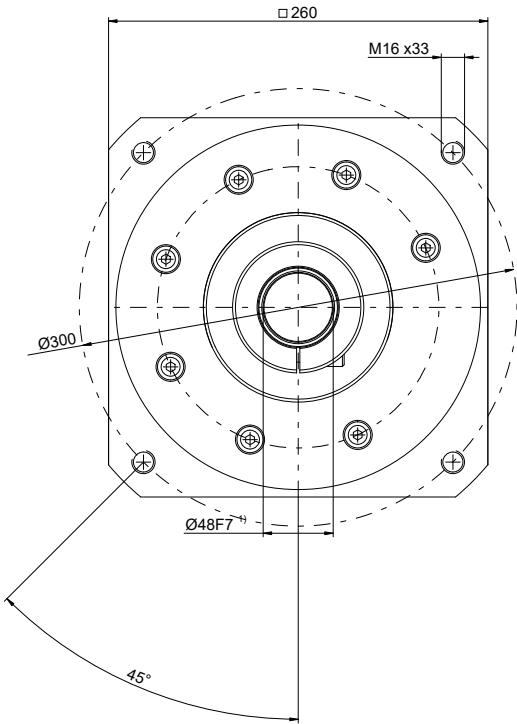
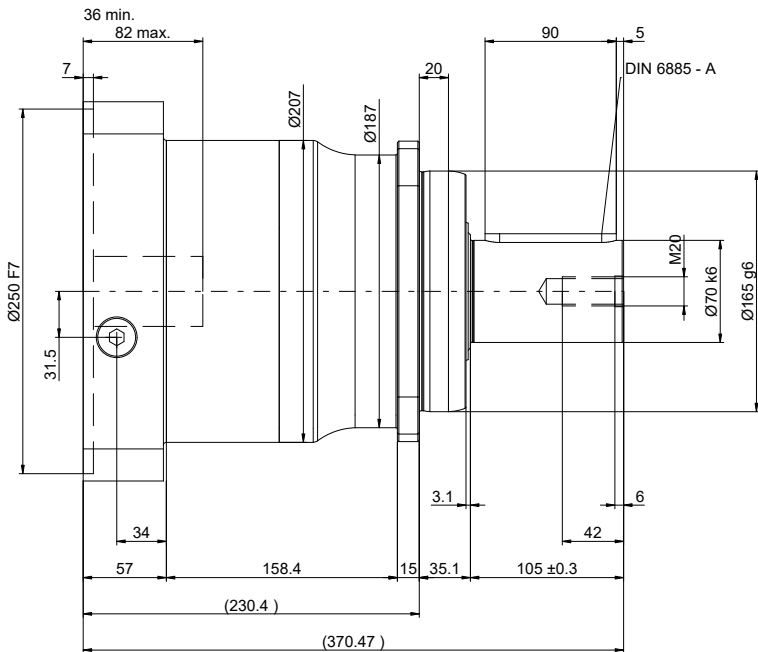
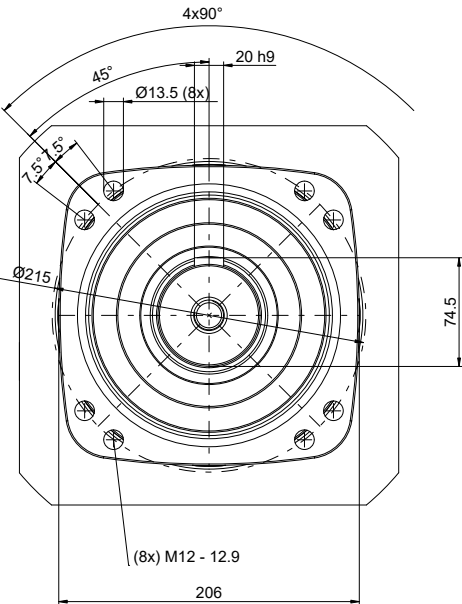
a) For higher ambient temperatures, please reduce input speed  
b) Depends on clamping hub diameter  
c) Refers to center of the output shaft or flange  
d) Use cymex<sup>®</sup> 5 to confirm adapter plate dimensions and motor compatibility

Don't have cymex<sup>®</sup> 5? Get your Premium license here!

New to cymex<sup>®</sup> 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](http://www.wittenstein-alpha.de) / Operating manual on [www.wittenstein-alpha.de](http://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 050S-MF2- 20-1M1-2S		
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	