

# Product data sheet

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

Low backlash planetary gearbox



| Gearbox data            |                          |
|-------------------------|--------------------------|
| Designation:            | XP050S-MF2-28-1K1-2S     |
| Gearbox type            | XP <sup>+</sup>          |
| Gearbox size            | 050                      |
| Design keyword          | Standard                 |
| Gearbox variation       | Motor attachment gearbox |
| Gearbox stages          | 2                        |
| Gearbox ratio i         | 28                       |
| Output design           | Key                      |
| Clamping hub diameter   | 38 mm                    |
| Gearbox backlash        | Standard                 |
| Gearbox material number | 20025837                 |

| 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-MF2-28-1K1-2S / Specify your motor P/N here |

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



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



| Technical specifications  |                    |                         |
|---|--------------------|-------------------------|
| Max. output torque<br>(Depending on the specific boundary conditions of the application)                          | T <sub>2α</sub>    | 3474 Nm                 |
| Max. acceleration torque<br>(max. 1000 cycles per hour)   | T <sub>2B</sub>    | 3080 Nm                 |
| Nominal output torque<br>(with n <sub>IN</sub> )  | T <sub>2N</sub>    | 1228 Nm                 |
| Emergency stop torque (permitted 1000 times during the service life of the gearbox)                               | T <sub>2Not</sub>  | 5000 Nm                 |
| Nominal input speed<br>(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<br>(with n <sub>1</sub> =3000 min <sup>-1</sup> and 20°C gearbox temp.) <sup>b)</sup> | T <sub>012</sub>   | 3.3 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<br>(with n <sub>1</sub> =3000 min <sup>-1</sup> no load)  | L <sub>PA</sub>    | ≤ 60 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<br>(relates to the drive)   | J <sub>1</sub>     | 10.78 kgcm <sup>2</sup> |

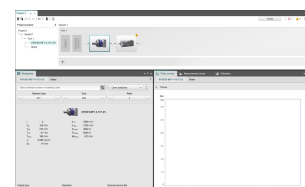
a) For higher ambient temperatures, please reduce input speed

b) Depends on clamping hub diameter

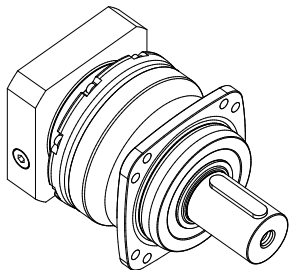
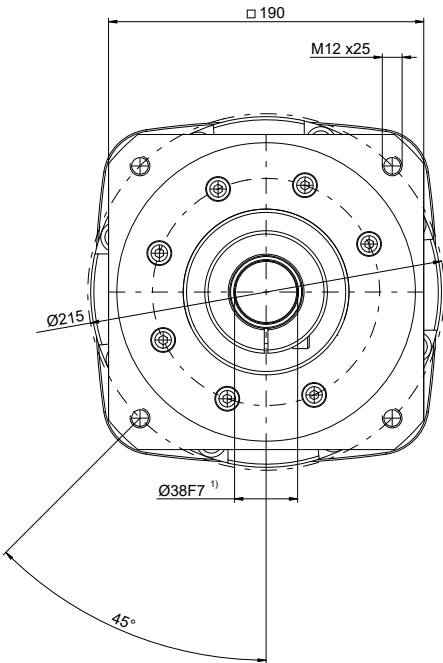
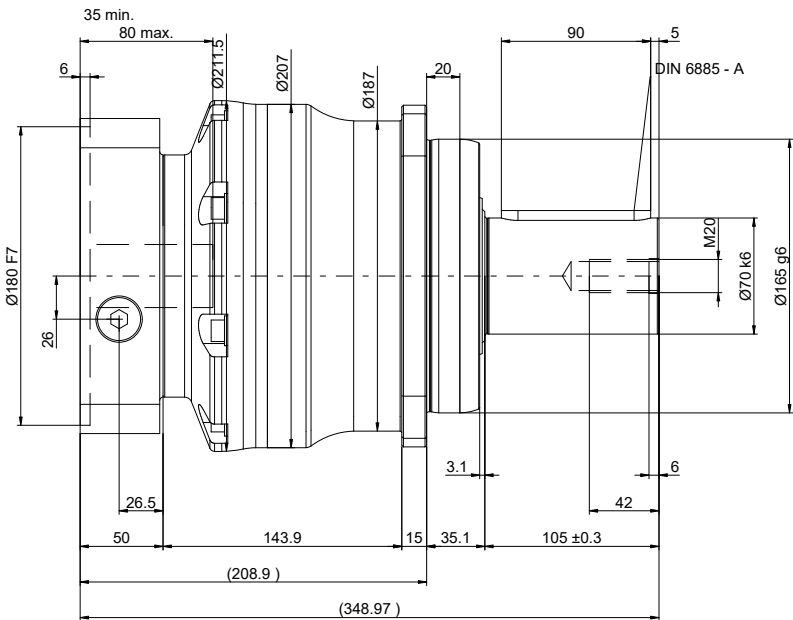
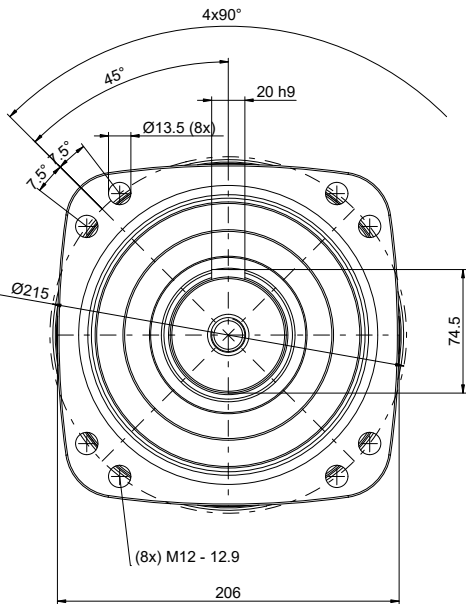
c) Refers to center of the output shaft or flange

d) Use cymex<sup>®</sup> 5 to confirm adapter plate dimensions and motor compatibility

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<br>Scale |  |
| Datum/date                                   |  | auto             |  |
| Eigentumsvorbehalt nach<br>DIN 34 beachten ! | Observe copyright note<br>according to DIN 34 !        |                  |  |
| Benenn.<br>Descr.                            | XP 050S-MF2- 28-1K1-2S                                 |                  |  |
| Kommentar<br>Note                            | Motor specified by user - compatibility check required |                  |  |
| MN   | 20025837   | DIN A3           | Urspr./Ref-Drwg: CAD-Generator V2.0 Blatt/Sheet: 1 |



nicht vertraulich