# XPK+/RPK+ – Power and precision in a compact design

XPK+

## New standard now also available as a hypoid version

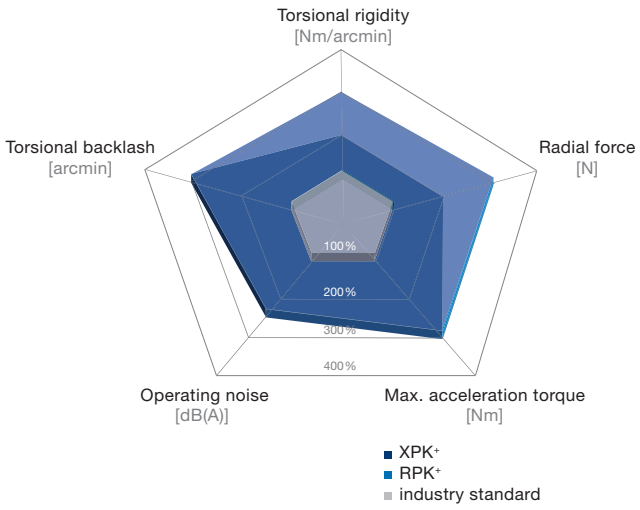
Both the XP+ and RP+ Premium planetary gearboxes are now available in a right-angle version with hypoid gearing. The axis offset of hypoid gearboxes allows both higher ratios in one section (ratio i = 3 – 10) as well as higher torques compared to bevel gearboxes. The high torque density allows for an extremely compact, space-saving design. The mesh frequency and high torsional rigidity of the gearbox are also extremely impressive since they ensure a higher degree of positioning accuracy and extremely smooth operation.

## Product highlights

**XPK+: Max. torsional backlash** [arcmin] ≤ 2
**RPK+: Max. torsional backlash** [arcmin] ≤ 1.8

**XPK+ and RPK+:**
**Range of transmission ratios:** i = 12 – 5,500
**High axial and radial forces**
**High torsional rigidity**
**Maximum performance in small installation space**
**Optimized for rack and pinion applications**

## XPK+ and RPK+ compared to industry standard



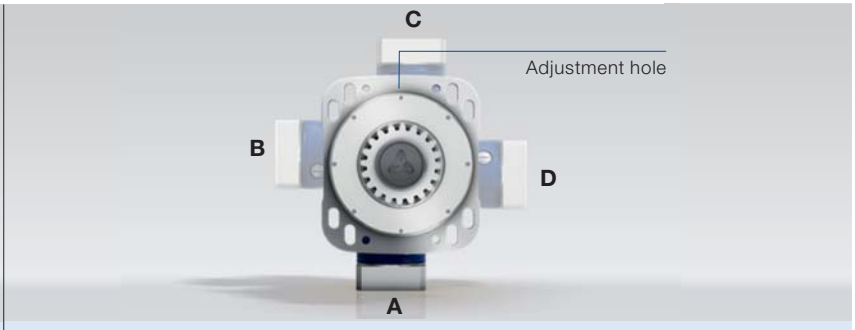

XPK+ with pinion and slots

XPK+ with pinion, slots and rack

## The ideal partnership

High-performance linear systems with the XPK+ or RPK+ are used in all applications where the individual requirements far exceed what has previously been possible. Compared to the industry standard, the values of the RPK+ have been improved by 150 % on average.


RPK+ with rack and pinion




Flexibility during installation

# XPK+ – Product features

## Your benefits

| | XPK+ MF-Version |
|---|---|
| **Features** | |
| Power density | ++++ |
| Positioning accuracy (e.g. clamped drives) | ++++ |
| Highly dynamic applications | +++ |
| Torsional rigidity | ++++ |
| Space-saving design | ++++ |
| Easy assembly | ++++ |

## Options

| | XPK+ MF-Version |
|---|---|
| **Output type** | |
| Smooth shaft | ✓ |
| Shaft with key | ✓ |
| Splined shaft (DIN 5480) | ✓ |
| Blind hollow shaft | ✓ |
| System output with pinion | ✓ |
| **Input type** | |
| Motor-mounted version | ✓ |
| **Design** | |
| Food-grade lubrication a) b) | ✓ |
| **Accessories** | |
| Coupling | ✓ |
| Rack | ✓ |
| Pinion | ✓ |
| Shrink disc | ✓ |

a) Power reduction: Technical data available on request
b) Please contact WITTENSTEIN alpha

## Technical data

| | | XPK+ MF-Version |
|---|---|---|
| Ratio | $i$ | 12 – 1000 |
| Number of sizes | | 4 |
| Max. torsional backlash | $j_t$ [Nm/arcmin] | Standard ≤ 4 |
| | | Reduced ≤ 2 |
| Max. torque | $T_{2\alpha}$ [Nm] | 80 – 2520 |
| Max. input speed | $n_{1Max}$ [rpm] | 7500 |
| Max. tilting moment | $M_{2KMax}$ [Nm] | 3256 |
| Torsional rigidity | $C_{t21K}$ [Nm/armin] | 11 – 226 |

# RPK+ – Product features

## Your benefits

| | RPK+ MA-Version |
|---|---|
| **Features** | |
| Power density | ++++ |
| Positioning accuracy (e.g. clamped drives) | ++++ |
| Highly dynamic applications | +++ |
| Torsional rigidity | ++++ |
| Space-saving design | ++++ |
| Easy assembly | ++++ |

## Options

| | RPK+ MA-Version |
|---|---|
| **Output type** | |
| Flange | ✓ |
| System output with pinion | ✓ |
| **Input type** | |
| Motor-mounted version | ✓ |
| **Design** | |
| Food-grade lubrication [a) b)] | ✓ |
| **Accessories** | |
| Rack | ✓ |
| Pinion | ✓ |

a) Power reduction: Technical data available on request
b) Please contact WITTENSTEIN alpha

## Technical data

| | | RPK+ MA-Version |
|---|---|---|
| Ratio | $i$ | 48 – 5500 |
| Number of sizes | | 4 |
| Max. torsional backlash | $j_t$ [Nm/arcmin] | Standard ≤ 1,3 |
| | | Reduced ≤ 1,8 |
| Max. torque | $T_{2\alpha}$ [Nm] | 1100 – 10540 |
| Max. input speed | $n_{1Max}$ [rpm] | 7500 |
| Max. tilting moment | $M_{2KMax}$ [Nm] | 34000 |
| Torsional rigidity | $C_{t21}$[Nm/armin] | 202 – 1901 |