

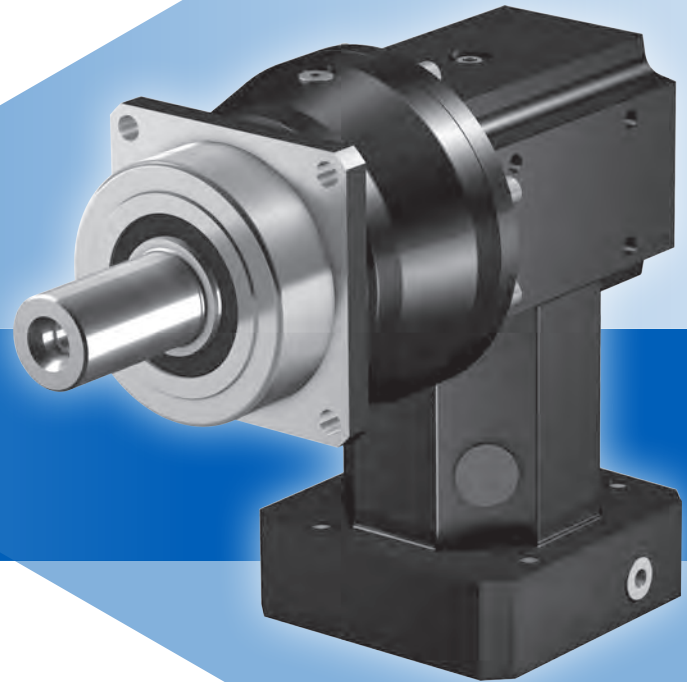
PKX Series: RIGHT ANGLE – Shaft Output

PKX Features

- 3:1 to 300:1 ratios (higher ratios available. Contact STÖBER.)
- Quiet running (<64dB(A))
- Bearing options to suit your application needs, extending gearbox life and avoiding oversizing, (see page 189).
- Error free motor mounting and quick changeover with toleranced pilot on motor plate
- Low no load running torque, giving you more torque for your application
- Magnetic oil filtration to remove contaminants to prevent breakdowns
- Build and ship in one day
- Assembled in the USA

STÖBER PKX provides a right angle option with planetary gearing. Every gearbox is made to order. STÖBER will custom whatever you need to fit your application.

Contact us today to learn more.



**SHIPS in
1 DAY!**
NO EXPEDITE FEE FOR 24
HOUR SERVICE

General Specifications

| | |
|------------------------------|--|
| Ambient Temperature | 0°C to +40°C (104°F) [Unit temperature <90°C Max] |
| Backlash | PKX ≤4 arcmins (see performance overview chart, page 186) |
| Coating | Standard Black (RAL-9005), Food option |
| Degree of Protection | IP65 |
| Direction of Rotation | See page 188 |
| Efficiency | PKX 1 stage 96%, 2 stage 94%; PK 94% |
| Input RPM | Up to 6,000 RPM |
| Installation | Requires 12.9 fasteners. See page 306, for more information |
| Lubrication | Lubricated for life – standard Mobil SHC629; option food grade Mobil SHC CIBUS 150 |
| Mounting Position | Must be specified, see page 188 |
| Warranty | 5 Year Limited (2 Years on normal wear items: bearings, seals, etc.) |

Overview






Selection Options At-a-Glance

Using the **Selection Data** table later in this section, select the PKX Series Gearhead with the appropriate performance and design options tailored to your motor choice and exact application requirements. Use the part number guide below as a reference to build a part number for the complete gearhead assembly.

Part Number Examples:

PKX 1 2 3 4 5 6 7 8 9 0 ! @ # EL1*

| Design Option | Part Number Code | Description |
|-------------------------------|--|--|
| 1 Series | P | Planetary |
| 2 Size | 2 3 4 5 7 8 9 | 7 sizes of gearhead |
| 3 Generation | 3 | Version of gearhead |
| 4 # of Stages | 1 2 | One stage for ratios of ≤ 10:1 Two stage for ratios >10:1 |
| 5 Housing | S | Standard mounting style |
| 6 Output Shaft | P G | Shaft with key Plain shaft (no key) |
| 7 Bearing Options |  S | Ball bearing |
| |  D | Double row angular contact bearing (except size P2) |
| |  Z | Cylindrical roller bearing (except size P2) ("Z" cylindrical roller bearing not allowed with reduced backlash option.) |
| 8 Backlash | S R | Standard Backlash Reduced Backlash |
| 9 Ratio | 0030 | Ratios range from 4:1 to 100:1 f(0040=4:1; 0160=16:1; 1000=100:1, ect.) |
| 0 Secondary Unit | KX301VF | KX Series right angle unit: 5 sizes, 1 stage, with output shaft (V) & flange (F) |
| ! Secondary Unit Ratio | 0010 | KX Series: Ratios from 1:1 to 3:1; K Series: Ratios from 4:1 to 69:1 (0010=1:1; 0020=2:1; 0030=3:1) |
| @ Motor Adapter | MF | Motor Adapter with FlexiAdapt coupling |
| # Special Options | F | Food Duty (Size P3 thru P5) |
| * Mounting Position | EL1 EL2 EL3 EL4 EL5 EL6 | Required special instruction for all units, see page 188 |

PKX Series: RIGHT ANGLE – Shaft Output

Options

ME Adapter Option

- MSS1 Seal – special input seal for longer life (For sizes P5-9). Contact factory for this option.

Coating Option

- Standard:** For dry areas and normal conditions. All units standard coating, unless ordered with Food Duty.
- Food Duty:** Able to withstand severe wet areas and washdown application (PKX size P3 thru P5).
- Available with multi-layer, industrial 316 stainless steel epoxy coating. Contact factory for this option.

ATEX

- ATmosphere EXplosible – rated for explosive environments. Contact factory for this option and allow additional time for delivery.

PKX Series: RIGHT ANGLE – Shaft Output

PKX Series Performance Overview

PKX Series performance is dependent on several factors including duty cycle, bearing design, gearhead size and stage configuration, among others. Use the chart below for preliminary evaluation, then use the following performance chart and selection information on the following pages for specific performance sizing and selection.

| Size/Generation/# of Stages | P231 | P232 | P331 | P332 | P431 | P432 | P531 | P532 | P731 | P732 | P831 | P832 | P932 |
|--|----------------------|------|------------|------|------------|------------|------------|------------|------------|------------|------------|------|------------|
| Secondary Unit | KX3 | | KX3 | | KX4 | KX3 | KX5 | KX4 | KX7 | KX5 | KX7 | | KX7 |
| Acceleration Torque M_{2BMAX} | N | 25 | 75 | | 135 | | 355 | | 805 | | 1840 | | 3300 |
| Output Torque Nom. ¹⁾ M_{2N} | N | 18 | 53 | | 102 | | 2270 | | 584 | | 1415 | | 2387 |
| Torsional Stiffness C_2 | Nm/arcmin | 1.8 | 5 | | 12 | | 32 | | 62 | | 173 | | 393 |
| Torsional Backlash ²⁾ | $\Delta\phi$ arcmin | 7 | 5 | | 5 | | 4 | | 4 | | 4 | | 4 |
| | $\Delta\phi$ Reduced | – | 3 | | 3 | | 2 | | 2 | | 2 | | – |
| Input Speed Max. | Continuous | 3500 | | 3500 | | 3000 | 3500 | 3000 | 3000 | 2100 | 3000 | 2100 | 2100 |
| n_{1MAX} | Cyclic | 6000 | | 6000 | | 5500 | 6000 | 5000 | 5500 | 4000 | 5000 | 4000 | 4000 |
| Efficiency (@ nom torque) | % | 96 | 94 | 96 | 94 | 96 | 94 | 96 | 94 | 96 | 94 | 96 | 94 |
| Weight | kg | 3.0 | 3.5 | 3.8 | 4.1 | 7.4 | 6.1 | 13.1 | 11.5 | 26.6 | 22.2 | 42.1 | 46.8 |
| | lbs | 6.6 | 7.7 | 8.4 | 9.0 | 16.3 | 13.4 | 28.8 | 25.3 | 58.5 | 48.8 | 92.6 | 103 |
| Noise ³⁾ | dB(A) | ≤64 | | ≤64 | | ≤66 | ≤64 | ≤68 | ≤66 | ≤70 | ≤68 | ≤70 | ≤70 |

Performance by Bearing Design Option ⁴⁾

S = Ball bearing D = Double row angular contact bearing Z = Cylindrical roller bearing ⁵⁾

| | | P2 | P3 | P4 | P5 | P7 | P8 | P9 |
|--|---|------|------|------|------|--------|--------|--------|
| Axial Load F_{2ax100} | S | 500 | 1000 | 1500 | 2300 | 2900 | 4700 | 6000 |
| | D | – | 2500 | 4000 | 6000 | 10,000 | 15,500 | 25,000 |
| | Z | – | 600 | 1000 | 1600 | 2000 | 3600 | 5000 |
| Radial Load Max $F_{2rad100}$ | S | 1200 | 2500 | 4000 | 6500 | 8500 | 13,000 | 18,000 |
| | D | – | 2750 | 4500 | 7000 | 9500 | 15,000 | 20,000 |
| | Z | – | 3000 | 5000 | 8000 | 10,000 | 18,000 | 27,000 |
| Tilting Moment Max M_{2K100} | S | 34 | 79 | 146 | 315 | 544 | 852 | 1539 |
| | D | – | 94 | 182 | 382 | 665 | 1095 | 1930 |
| | Z | – | 95 | 183 | 388 | 640 | 1179 | 2309 |

¹⁾ Ratings based on input speed (n_1) of 1500 RPM.

For torque at higher input speeds (M_{2NX}) solve the formula:
where n_1 = Actual Input Speed.

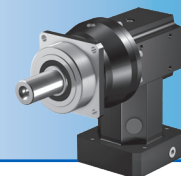
$$M_{2NX} = \frac{M_{2N}}{\sqrt[3]{\frac{n_1}{1500}}}$$

²⁾ Tested at 1.5% of nominal torque and recorded on the output side of the gearhead.

³⁾ Measurement at one (1) meter distance with input speed (n_1) of 1500 RPM.

⁴⁾ Options S and Z are available with P Series only. See page 189 for output bearing options. Rating based on output speed (n_2) of 100 RPM. For values at other speeds see page 190.

⁵⁾ "Z" cylindrical roller bearing not allowed with reduced backlash option.



Overview

PKX Series Motor Mounting Plate Option (Motor information required with MF Motor Adapter Option)

STÖBER Servo Gearheads fit the motor of your choice with the appropriate motor mounting plate assembled between the motor and the gearhead.

NOTE: When ordering a gearhead:

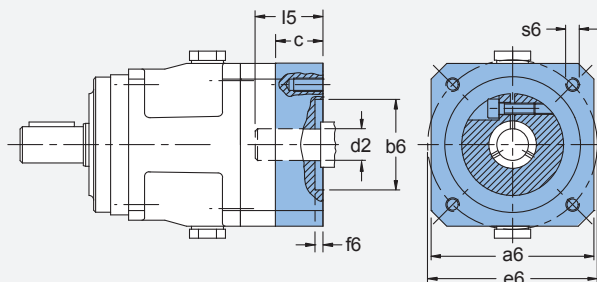
- Specify the motor manufacturer and part number
- Provide the motor drawing with dimensions, or specify the motor mounting dimensions (per the list shown at right)

For a precise dimension on a specific motor, or for general assistance, we recommend you contact STÖBER Technical Support.

Maximum 10 working days for custom motor mounting plates.

Customer Required Dimensions for Properly Sized Motor Mounting Plate

- d2 Motor Shaft Diameter (If an adapter bushing is required it will be supplied with the motor plate.)
- b6 Pilot Diameter
- e6 Bolt Circle Diameter
- s6 Bolt Diameter
- I5 Motor Shaft Length
- f6 Pilot Length
- a6 Square Flange (Optional – motor plate will typically be made to match this dimension.)



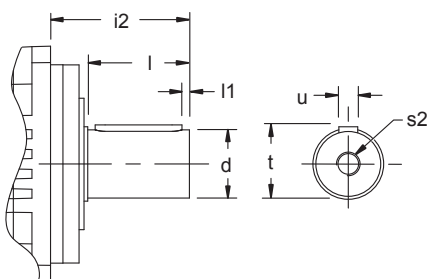
Motor Mounting Plate Dimensions — mm (Gearhead Part Number Specific)

| | P231KX3 P232KX3 P331KX3 P332KX3 P432KX3 | P431KX4 P532KX4 | P531KX5 P732KX5 | P731KX7 P832KX7 P831KX7 P932KX7 |
|--|---|--------------------|--------------------|--|
| Maximum Allowed Motor Shaft Dia. d2 | 19 | 24 | 32 | 38 |
| Minimum Allowed Motor Plate Thickness c* | 18 | 21 | 24 | 25 |

* Note that c motor plate thickness is determined by the motor shaft length. The minimum motor plate thickness is the value listed.

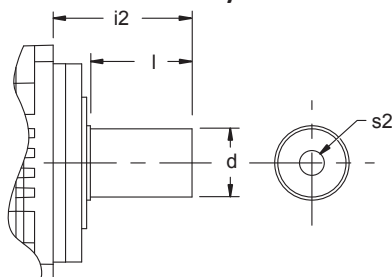
PKX Series Output Shaft Options (“P” or “G” designated in part number, for example: P431P_0160 MF)

P Shaft with Key



| Unit | d k6 | l1 | l | i2 | s2 ⁽¹⁾ | t | u ⁽²⁾ |
|------|------|----|-----|-----|-------------------|------|------------------|
| | mm | mm | mm | mm | | mm | W x H x L |
| P2 | 12 | 2 | 22 | 36 | M4 | 13.5 | A4X4X18 |
| P3 | 16 | 2 | 28 | 48 | M5 | 18 | A5X5X22 |
| P4 | 22 | 3 | 36 | 56 | M8 | 24.5 | A6X6X28 |
| P5 | 32 | 3 | 58 | 88 | M12 | 35 | A10X8X50 |
| P7 | 40 | 4 | 82 | 112 | M16 | 43 | A12X8X70 |
| P8 | 55 | 6 | 82 | 112 | M20 | 59 | A16X10X70 |
| P9 | 75 | 7 | 105 | 143 | M20 | 79.5 | A20X12X90 |

G Shaft without Key



| Unit | d k6 | l | i2 | s2 ⁽¹⁾ |
|------|------|-----|-----|-------------------|
| | mm | mm | mm | |
| P2 | 12 | 22 | 36 | M4 |
| P3 | 16 | 28 | 48 | M5 |
| P4 | 22 | 36 | 56 | M8 |
| P5 | 32 | 58 | 88 | M12 |
| P7 | 40 | 82 | 112 | M16 |
| P8 | 55 | 82 | 112 | M20 |
| P9 | 75 | 105 | 143 | M20 |

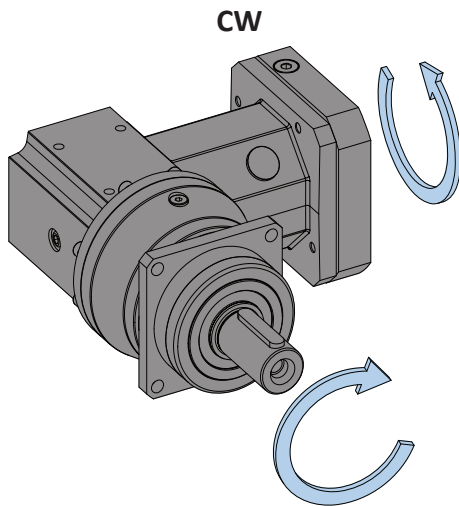
⁽¹⁾ The center hole in shafts with keys (Option “P”) are machined to DIN 332 T2 shape DR.

⁽²⁾ Feather keys are toleranced according to standard DIN 6885.

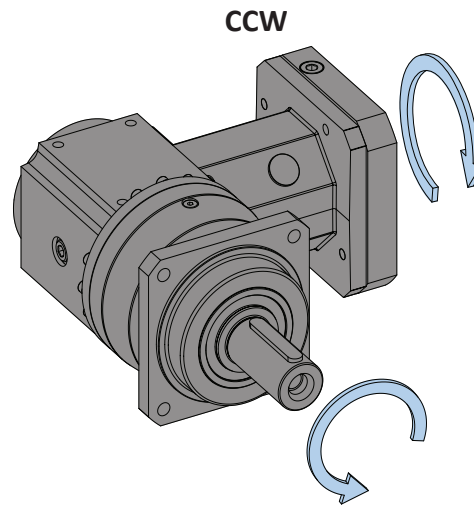
PKX Series: RIGHT ANGLE – Shaft Output

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PKX Series Direction of Rotation



1 Stage Units (P2 - P5)
2 Stage Units (P2 - P7)

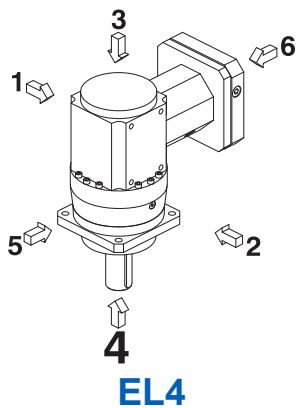
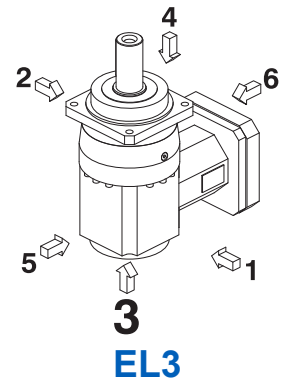
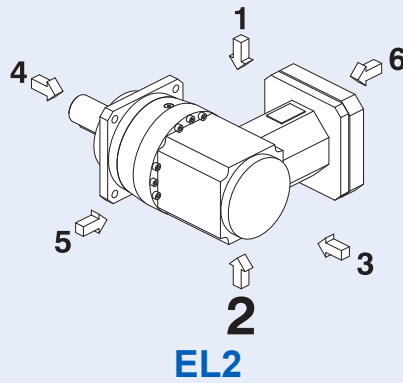
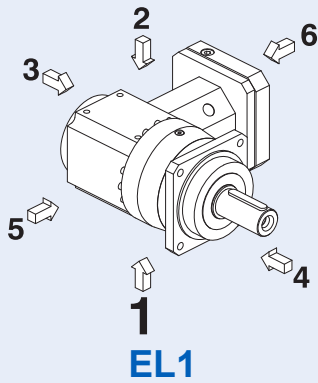


1 Stage Units (P7 & P8)
2 Stage Units (P8 & P9)

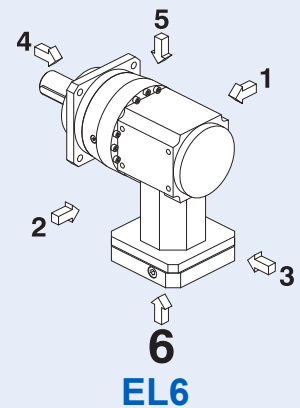
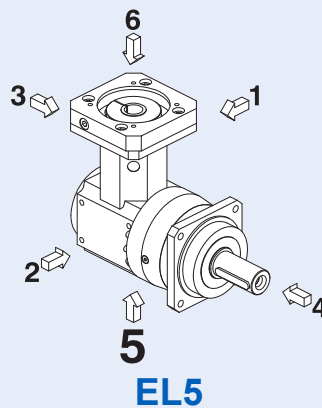
PKX Mounting Position Options

Horizontal Positions (EL1, EL2, EL5, EL6) are interchangeable;

Vertical Positions (EL3 and EL4) **MUST BE SPECIFIED**



IMPORTANT: Mounting PKX is either vertical mounting position (EL3 or EL4) must be specified when ordering.



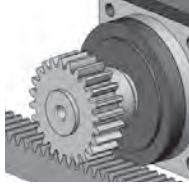
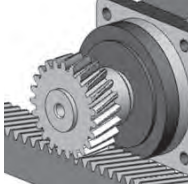

IMPORTANT: Mounting PKX is either vertical mounting position (EL3 or EL4) must be specified when ordering.

Overview



PKX Series: RIGHT ANGLE – Shaft Output

PKX Series Output Bearing Options

| | S Ball Bearing | D Double Row Angular Contact Bearing | Z Cylindrical Roller Bearing (“Z” cylindrical roller bearing not allowed with reduced backlash option.) |
|-------------------------|---|--|---|
| |  |  |  |
| Characteristics: | <ul style="list-style-type: none"> Minimal frictional torque Good radial load capacity Axial load approx. 35% of radial load | <ul style="list-style-type: none"> Low frictional torque Good radial bearing capacity Axial load approx. 50% of radial load | <ul style="list-style-type: none"> Very good radial load capacity Axial load approx. 20% of radial load |
| Applications: | <ul style="list-style-type: none"> Spur geared rack/pinion Couplings Belt with or without light tension | <ul style="list-style-type: none"> Helical geared rack/pinion Couplings with high axial load Belt with or without light tension | <ul style="list-style-type: none"> Prestressed belt drive Prestressed spur rack drive Applications with high radial loads and/or high service requirements |

Permissible Output Shaft Load and Tilting Moments*

| Unit | Z ₂ Distance of Shaft Shoulder to Center of Output Bearing mm | F _{2ax100} Permitted Axial Force N | F _{2rad100} Permitted Radial Force ≤100RPM N | F _{2rad,acc} Radial Acceleration Force N | M _{2K100} Permitted Tilting Torque ≤100RPM Nm | M _{2k,acc} Permitted Acceleration Tilting Torque Nm |
|---|--|---|---|---|--|--|
| S Ball Bearing | | | | | | |
| P2 | 17 | 500 | 1200 | 1300 | 34 | 36 |
| P3 | 17.5 | 1000 | 2500 | 2500 | 79 | 79 |
| P4 | 18.5 | 1500 | 4000 | 4500 | 146 | 164 |
| P5 | 19.5 | 2300 | 6500 | 7000 | 315 | 340 |
| P7 | 23 | 2900 | 8000 | 9000 | 544 | 576 |
| P8 | 24.5 | 4700 | 13,000 | 18,000 | 852 | 1179 |
| P9 | 33 | 6000 | 18,000 | 27,000 | 1539 | 2309 |
| D Double Row Angular Contact Bearing | | | | | | |
| P3 | 20 | 2500 | 2750 | 2750 | 94 | 94 |
| P4 | 22.5 | 4000 | 4500 | 5000 | 182 | 203 |
| P5 | 25.5 | 6000 | 7000 | 8000 | 382 | 436 |
| P7 | 29 | 10,000 | 9000 | 10,000 | 665 | 700 |
| P8 | 32 | 15,500 | 15,000 | 18,000 | 1095 | 1314 |
| P9 | 44 | 25,000 | 20,000 | 30,000 | 1930 | 2895 |
| Z Cylindrical Roller Bearing | | | | | | |
| P3 | 17.5 | 600 | 3000 | 3000 | 95 | 95 |
| P4 | 18.5 | 1000 | 5000 | 5000 | 183 | 183 |
| P5 | 19.5 | 1600 | 8000 | 8000 | 388 | 388 |
| P7 | 23 | 2000 | 10,000 | 10,000 | 640 | 640 |
| P8 | 24.5 | 3600 | 18,000 | 18,000 | 1179 | 1179 |
| P9 | 33 | 5000 | 27,000 | 35,000 | 2309 | 2993 |

* Refer to illustration and load/life/speed definitions on page 190

During EMERGENCY OFF operation (maximum stops per gearhead = 1000) the permissible values in the table for F_{2A}, F_{2R}, and M_{2K} can be multiplied by a factor of 2. The permissible load values given are valid with the load applied to the center of the output shaft (x₂).

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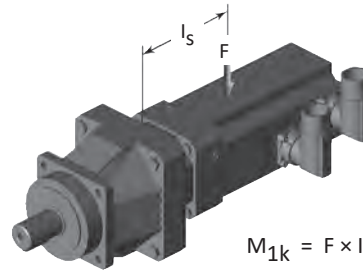
PKX No Load Running Torque*

| Unit | | Input Ratio T_R | | | | | | | | | | | | | | | | | | |
|------|----|-------------------|------|------|------|------|------|------|------|-----------|------|------|------|------|------|------|------|------|------|------|
| | | One Stage | | | | | | | | Two Stage | | | | | | | | | | |
| | | 3 | 4 | 5 | 7 | 8 | 10 | 12 | 16 | 20 | 25 | 28 | 32 | 35 | 40 | 50 | 56 | 70 | 80 | 100 |
| P2 | Nm | – | 0.16 | 0.13 | 0.13 | 0.13 | 0.10 | – | 0.13 | 0.13 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| P3 | Nm | 0.26 | 0.21 | .016 | 0.16 | 0.16 | .016 | 0.13 | 0.13 | 0.13 | 0.08 | 0.08 | 0.13 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| P4 | Nm | 0.33 | 0.23 | 0.23 | 0.18 | 0.18 | 0.18 | 0.14 | 0.14 | 0.14 | 0.11 | 0.11 | 0.14 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| P5 | Nm | 0.60 | 0.45 | 0.40 | 0.30 | 0.20 | 0.20 | 0.23 | 0.23 | 0.23 | 0.18 | 0.18 | 0.23 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| P7 | Nm | 0.83 | 0.53 | 0.43 | 0.33 | 0.23 | 0.23 | 0.30 | 0.30 | 0.30 | 0.20 | 0.20 | 0.30 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P8 | Nm | 1.05 | 0.75 | 0.65 | 0.45 | 0.35 | 0.35 | 0.48 | 0.43 | 0.43 | 0.33 | 0.33 | 0.43 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| P9 | Nm | – | 0.92 | 0.72 | 0.52 | – | 0.42 | – | 0.55 | 0.55 | 0.45 | 0.45 | – | 0.35 | 0.35 | 0.35 | – | 0.35 | – | 0.35 |

* Torque is measured with the input at 2000 RPM and an ambient temperature of 20° C.

Permissible Motor Tilting Torque

The permissible tilting torque of the motor attached to the gear unit is a result of the static and dynamic load “F” from the motor weight, mass acceleration, and vibration multiplied by the distance from the center of gravity “ l_s ” of the motor.



$$M_{1k} = F \times l_s \leq M_{1K}$$

| M1K | KX301_MF | KX401_MF | KX501_MF | KX701_MF |
|-----|----------|----------|----------|----------|
| Nm | 12 | 24 | 50 | 100 |

PKX Series Load/Life/Speed Calculations

The permissible load and tilting moment values are based on an output speed of 100 RPM. For higher speeds the following applies, where n_2 is the desired speed:

$$F_{2ax} = \frac{F_{2ax100}}{\sqrt[3]{\frac{n_2}{100}}}, \quad F_{2rx} = \frac{F_{2rx100}}{\sqrt[3]{\frac{n_2}{100}}}, \quad M_{2kx} = \frac{M_{2kx100}}{\sqrt[3]{\frac{n_2}{100}}}$$

The application output tilting moment should be determined by the following formula:

$$M_{2k,acc*} = \frac{2 \cdot F_{2ax100} \cdot y_2 + F_{2rad,acc} \cdot (x_2 + z_2)}{1000} \leq M_{2k,acc}$$

$$M_{2k,eq*} = \sqrt[3]{\frac{n_{2b1} \cdot t_{b1} \cdot M_{2kb1}^3 + \dots + n_{2bn} \cdot t_{bn} \cdot M_{2kbn}^3}{n_{2b1} \cdot t_{b1} + \dots + n_{2bn} \cdot t_{bn}}} \leq M_{2kN}$$

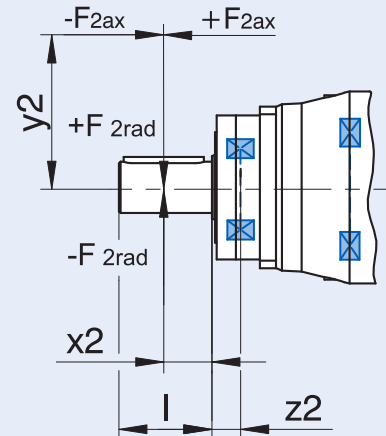
$$F_{2rad,eq*} = \sqrt[3]{\frac{n_{2b1} \cdot t_{b1} \cdot F_{2rb1}^3 + \dots + n_{2bn} \cdot t_{bn} \cdot F_{2rbn}^3}{n_{2b1} \cdot t_{b1} + \dots + n_{2bn} \cdot t_{bn}}} \leq F_{2radN}$$

Where:

| | | | |
|---------------|---|-----------------|---|
| Z_2 | Distance of Shaft Shoulder to Center of Output Bearing | $F_{2rad,acc}$ | Radial Acceleration Force |
| n_2 | Actual Average Output Speed | $F_{2rad,acc*}$ | Radial Acceleration Force at Gear Unit Output |
| x_2 | Distance of the Shaft Shoulder to the Force Application Point | M_{2K100} | Permitted Tilting Torque ≤100RPM |
| y_2 | Distance of the Shaft Axis to the Axial Force Application Point | $M_{2K,acc}$ | Permitted Acceleration Tilting Torque |
| F_{2ax*} | Actual Axial Force at Gear Unit Output | $M_{2k,acc*}$ | Permitted Acceleration Tilting Torque at Gear Unit Output |
| F_{2ax100} | Permitted Axial Force | C_{2K} | Tilting Stiffness |
| $F_{2rad100}$ | Permitted Radial Force ≤100RPM | | |

All formulas shown are based on METRIC values

Upper case letters are permissible values. Lower case letters are for existing values.



The hours of life (L_h) of the unit can be determined by the following formula:

bearing life for duty cycle ≤ 40%

$$L_h > 10,000 \text{ hours if } M_{2K100}/M_{2A} < 1.25 \text{ and } > 1$$

$$L_h > 20,000 \text{ hours if } M_{2K100}/M_{2A} > 1.25 \text{ and } > 1.5$$

$$L_h > 30,000 \text{ hours if } M_{2K100}/M_{2A} < 1.5$$

bearing life for duty cycle ≥ 40%

$$L_{hA} = L_h \left(\frac{40\%}{\text{Duty Cycle}} \right)$$

Selection Data



| Exact Ratio (i) | Output Torque | | | | | | Part Number* (Gearhead + Input) | Max. Input Speed RPM (n1) | | | Motor Shaft ³⁾ Max Ø d _{MW} mm | Input Inertia J ₁ kgcm ² | Tors. Stiffness C ₂ Nm/ arcmin | Oper. Noise L _{PA} dB(A) |
|-----------------|---------------------------------------|-----------------------------|---|---|-----------------------------|-------------------------------------|------------------------------------|---------------------------|-----------|--------|---|--|--|---|
| | Nom. ¹⁾ M _{2N} | Accel. M _{2acc} | Accel. Torque for Reduced Backlash M _{2accHT} | Peak ²⁾ M _{2NOT} | Backlash Δφ ₂ | Red. Backlash Δφ _{2red} | | Continuous | | Cyclic | | | | |
| | | | | | | | | EL 1,2,5,6 | EL 3,4 | | | | | |
| | Nm | Nm | Nm | Nm | arcmin | arcmin | | | | | | | | |

P2KX

| | | | | | | | | | | | | | | |
|-------|----|----|---|----|-----|---|------------------------|------|------|------|-----|------|-----|----|
| 4.000 | 15 | 25 | – | 51 | 8.5 | – | P231_0040KX301_0010 MF | 3000 | 2500 | 4500 | ≤19 | 1.1 | 1.5 | 70 |
| 5.000 | 15 | 25 | – | 51 | 8.0 | – | P231_0050KX301_0010 MF | 3000 | 2500 | 4500 | ≤19 | 1.0 | 1.6 | 70 |
| 7.000 | 15 | 23 | – | 46 | 7.5 | – | P231_0070KX301_0010 MF | 3000 | 2500 | 4500 | ≤19 | 1.0 | 1.7 | 70 |
| 8.000 | 16 | 25 | – | 51 | 8.5 | – | P231_0040KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 1.5 | 66 |
| 10.00 | 16 | 25 | – | 51 | 8.0 | – | P231_0050KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 1.6 | 66 |
| 12.00 | 16 | 25 | – | 51 | 8.5 | – | P231_0040KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 1.5 | 64 |
| 15.00 | 16 | 25 | – | 51 | 8.0 | – | P231_0050KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 1.6 | 64 |
| 20.00 | 12 | 21 | – | 41 | 7.0 | – | P231_0100KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.80 | 1.6 | 66 |
| 21.00 | 16 | 23 | – | 46 | 7.5 | – | P231_0070KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 1.7 | 64 |
| 24.00 | 14 | 21 | – | 41 | 7.5 | – | P231_0080KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 1.6 | 64 |
| 30.00 | 12 | 21 | – | 41 | 7.0 | – | P231_0100KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 1.6 | 64 |
| 35.00 | 18 | 25 | – | 51 | 8.5 | – | P232_0350KX301_0010 MF | 3000 | 2500 | 4500 | ≤19 | 1.0 | 1.8 | 70 |
| 40.00 | 16 | 25 | – | 51 | 8.5 | – | P232_0200KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 1.8 | 66 |
| 50.00 | 16 | 25 | – | 51 | 8.5 | – | P232_0250KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 1.8 | 66 |
| 56.00 | 16 | 24 | – | 48 | 8.5 | – | P232_0280KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 1.8 | 66 |
| 60.00 | 16 | 25 | – | 51 | 8.5 | – | P232_0200KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 1.8 | 64 |
| 70.00 | 18 | 25 | – | 51 | 8.5 | – | P232_0350KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 1.8 | 66 |
| 75.00 | 16 | 25 | – | 51 | 8.5 | – | P232_0250KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 1.8 | 64 |
| 80.00 | 16 | 24 | – | 48 | 8.5 | – | P232_0400KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.80 | 1.8 | 66 |
| 84.00 | 16 | 24 | – | 48 | 8.5 | – | P232_0280KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 1.8 | 64 |
| 100.0 | 19 | 25 | – | 51 | 8.0 | – | P232_0500KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.80 | 1.8 | 66 |
| 105.0 | 18 | 25 | – | 51 | 8.5 | – | P232_0350KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 1.8 | 64 |
| 120.0 | 16 | 24 | – | 48 | 8.5 | – | P232_0400KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 1.8 | 64 |
| 140.0 | 18 | 23 | – | 46 | 8.0 | – | P232_0700KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 1.8 | 66 |
| 150.0 | 19 | 25 | – | 51 | 8.0 | – | P232_0500KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 1.8 | 64 |
| 200.0 | 16 | 21 | – | 41 | 8.0 | – | P232_1000KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.80 | 1.6 | 66 |
| 210.0 | 18 | 23 | – | 46 | 8.0 | – | P232_0700KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 1.8 | 64 |
| 300.0 | 16 | 21 | – | 41 | 8.0 | – | P232_1000KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 1.6 | 64 |

PKX Series: RIGHT ANGLE – Shaft Output

¹⁾ Based on input speed of 1500 RPM. See page 186 for details on torque calculations.

²⁾ Maximum momentary torque for emergency stops or heavy shock load. (Admissible stops per life of gearhead = 1,000 stops maximum.)

* MF = Motor adapter with FlexiAdapt® coupling

PKX Series: RIGHT ANGLE – Shaft Output

| Exact Ratio (i) | Output Torque | | | | | | Part Number* (Gearhead + Input) | Max. Input Speed RPM (n1) | | | Motor Shaft ³⁾ Max Ø d _{MW} | Input Inertia J ₁ | Tors. Stiffness C ₂ | Oper. Noise L _{PA} | |
|-----------------|---------------------------------------|-----------------------------|---|---|-----------------------------|-------------------------------------|------------------------------------|---------------------------|-----------|------------|---|---------------------------------|-----------------------------------|--------------------------------|--------|
| | Nom. ¹⁾ M _{2N} | Accel. M _{2acc} | Accel. Torque for Reduced Backlash M _{2accHT} | Peak ²⁾ M _{2NOT} | Backlash Δφ ₂ | Red. Backlash Δφ _{2red} | | | | Continuous | | | | | Cyclic |
| | Nm | Nm | Nm | Nm | arcmin | arcmin | | EL 1,2,5,6 | EL 3,4 | All | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

P3KX

| | | | | | | | | | | | | | | |
|-------|----|----|----|-----|-----|-----|------------------------|------|------|------|-----|------|-----|----|
| 3.000 | 29 | 38 | 38 | 68 | 7.5 | 5.5 | P331_0030KX301_0010 MF | 3000 | 2500 | 4500 | ≤19 | 1.3 | 2.4 | 70 |
| 4.000 | 39 | 50 | 50 | 91 | 6.5 | 4.5 | P331_0040KX301_0010 MF | 3000 | 2500 | 4500 | ≤19 | 1.1 | 3.3 | 70 |
| 5.000 | 45 | 63 | 63 | 113 | 6.0 | 4.0 | P331_0050KX301_0010 MF | 3000 | 2500 | 4500 | ≤19 | 1.1 | 3.8 | 70 |
| 6.000 | 29 | 38 | 38 | 77 | 7.5 | 5.5 | P331_0030KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.87 | 2.4 | 66 |
| 7.000 | 45 | 69 | 75 | 138 | 5.5 | 3.5 | P331_0070KX301_0010 MF | 3000 | 2500 | 4500 | ≤19 | 1.0 | 4.2 | 70 |
| 8.000 | 39 | 50 | 50 | 103 | 6.5 | 4.5 | P331_0040KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.83 | 3.3 | 66 |
| 10.00 | 45 | 63 | 63 | 129 | 6.0 | 4.0 | P331_0050KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.82 | 3.8 | 66 |
| 12.00 | 39 | 50 | 50 | 103 | 6.5 | 4.5 | P331_0040KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.76 | 3.3 | 64 |
| 14.00 | 45 | 69 | 75 | 138 | 5.5 | 3.5 | P331_0070KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 4.2 | 66 |
| 15.00 | 45 | 63 | 63 | 129 | 6.0 | 4.0 | P331_0050KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 3.8 | 64 |
| 16.00 | 40 | 63 | 65 | 126 | 5.5 | 3.5 | P331_0080KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 4.1 | 66 |
| 20.00 | 36 | 60 | 60 | 120 | 5.0 | 3.0 | P331_0100KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 4.0 | 66 |
| 21.00 | 45 | 69 | 75 | 138 | 5.5 | 3.5 | P331_0070KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 4.2 | 64 |
| 24.00 | 40 | 63 | 65 | 126 | 5.5 | 3.5 | P331_0080KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 4.1 | 64 |
| 30.00 | 36 | 60 | 60 | 120 | 5.0 | 3.0 | P331_0100KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 4.0 | 64 |
| 32.00 | 45 | 65 | 65 | 130 | 5.5 | 3.5 | P332_0160KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 5.0 | 66 |
| 35.00 | 50 | 75 | 75 | 150 | 5.5 | 3.5 | P332_0350KX301_0010 MF | 3000 | 2500 | 4500 | ≤19 | 1.0 | 5.2 | 70 |
| 40.00 | 50 | 75 | 75 | 150 | 5.5 | 3.5 | P332_0200KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 5.1 | 66 |
| 50.00 | 50 | 75 | 75 | 150 | 5.5 | 3.5 | P332_0250KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 5.1 | 66 |
| 56.00 | 45 | 65 | 70 | 130 | 5.5 | 3.5 | P332_0280KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 5.1 | 66 |
| 60.00 | 50 | 75 | 75 | 150 | 5.5 | 3.5 | P332_0200KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 5.1 | 64 |
| 64.00 | 48 | 63 | 65 | 126 | 5.5 | 3.5 | P332_0320KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 4.5 | 66 |
| 70.00 | 50 | 75 | 75 | 150 | 5.5 | 3.5 | P332_0350KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 5.2 | 66 |
| 75.00 | 50 | 75 | 75 | 150 | 5.5 | 3.5 | P332_0250KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 5.1 | 64 |
| 80.00 | 45 | 65 | 65 | 130 | 5.5 | 3.5 | P332_0400KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.80 | 4.8 | 66 |
| 84.00 | 45 | 65 | 70 | 130 | 5.5 | 3.5 | P332_0280KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 5.1 | 64 |
| 100.0 | 50 | 75 | 75 | 150 | 5.0 | 3.0 | P332_0500KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.80 | 5.0 | 66 |
| 105.0 | 50 | 75 | 75 | 150 | 5.5 | 3.5 | P332_0350KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 5.2 | 64 |
| 120.0 | 45 | 65 | 65 | 130 | 5.5 | 3.5 | P332_0400KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 4.8 | 64 |
| 140.0 | 53 | 69 | 69 | 138 | 5.0 | 3.0 | P332_0700KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.80 | 4.9 | 66 |
| 150.0 | 50 | 75 | 75 | 150 | 5.0 | 3.0 | P332_0500KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 5.0 | 64 |
| 200.0 | 46 | 60 | 60 | 120 | 5.0 | 3.0 | P332_1000KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.80 | 4.3 | 66 |
| 210.0 | 53 | 69 | 69 | 138 | 5.0 | 3.0 | P332_0700KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 4.9 | 64 |
| 300.0 | 46 | 60 | 60 | 120 | 5.0 | 3.0 | P332_1000KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 4.3 | 64 |

¹⁾ Based on input speed of 1500 RPM. See page 186 for details on torque calculations.

²⁾ Maximum momentary torque for emergency stops or heavy shock load. (Admissible stops per life of gearhead = 1,000 stops maximum.)

* MF = Motor adapter with FlexiAdapt® coupling

Selection Data



| Exact Ratio (i) | Output Torque | | | | | | Part Number* (Gearhead + Input) | Max. Input Speed RPM (n1) | | | Motor Shaft ³⁾ Max Ø d _{MW} mm | Input Inertia J ₁ kgcm ² | Tors. Stiffness C ₂ Nm/ arcmin | Oper. Noise L _{PA} dB(A) |
|-----------------|---|-----------------------------------|---|---|---------------------------------------|---|------------------------------------|---------------------------|-----------|--------|---|--|--|---|
| | Nom. ¹⁾ M _{2N} Nm | Accel. M _{2acc} Nm | Accel. Torque for Reduced Backlash M _{2accHT} Nm | Peak ²⁾ M _{2NOT} Nm | Backlash Δφ ₂ arcmin | Red. Backlash Δφ _{2red} arcmin | | Continuous | | Cyclic | | | | |
| | | | | | | | | EL 1,2,5,6 | EL 3,4 | | | | | |
| | | | | | | | | EL 1,2,5,6 | EL 3,4 | All | | | | |

P4KX (continued next page)

| | | | | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|------------------------|------|------|------|-----|------|-----|----|
| 3.000 | 50 | 73 | 73 | 155 | 7.5 | 5.5 | P431_0030KX401_0010 MF | 2500 | 2000 | 4000 | ≤24 | 3.1 | 5.3 | 72 |
| 4.000 | 78 | 97 | 97 | 206 | 6.5 | 4.5 | P431_0040KX401_0010 MF | 2500 | 2000 | 4000 | ≤24 | 2.7 | 7.3 | 72 |
| 5.000 | 85 | 121 | 121 | 258 | 6.0 | 4.0 | P431_0050KX401_0010 MF | 2500 | 2000 | 4000 | ≤24 | 2.6 | 8.6 | 72 |
| 6.000 | 50 | 73 | 73 | 155 | 7.5 | 5.5 | P431_0030KX401_0020 MF | 2500 | 2500 | 5000 | ≤24 | 1.8 | 5.3 | 68 |
| 7.000 | 85 | 135 | 143 | 271 | 5.5 | 3.5 | P431_0070KX401_0010 MF | 2500 | 2000 | 4000 | ≤24 | 2.4 | 9.2 | 72 |
| 8.000 | 78 | 97 | 97 | 206 | 6.5 | 4.5 | P431_0040KX401_0020 MF | 2500 | 2500 | 5000 | ≤24 | 1.7 | 7.3 | 68 |
| 10.00 | 90 | 121 | 121 | 258 | 6.0 | 4.0 | P431_0050KX401_0020 MF | 2500 | 2500 | 5000 | ≤24 | 1.7 | 8.6 | 68 |
| 12.00 | 78 | 97 | 97 | 206 | 6.5 | 4.5 | P431_0040KX401_0030 MF | 3000 | 3000 | 5500 | ≤24 | 1.5 | 7.3 | 66 |
| 14.00 | 90 | 135 | 143 | 271 | 5.5 | 3.5 | P431_0070KX401_0020 MF | 2500 | 2500 | 5000 | ≤24 | 1.6 | 9.2 | 68 |
| 15.00 | 90 | 121 | 121 | 258 | 6.0 | 4.0 | P431_0050KX401_0030 MF | 3000 | 3000 | 5500 | ≤24 | 1.5 | 8.6 | 66 |
| 16.00 | 80 | 120 | 125 | 239 | 5.5 | 3.5 | P431_0080KX401_0020 MF | 2500 | 2500 | 5000 | ≤24 | 1.6 | 8.5 | 68 |
| 20.00 | 75 | 115 | 115 | 230 | 5.0 | 3.0 | P431_0100KX401_0020 MF | 2500 | 2500 | 5000 | ≤24 | 1.6 | 8.4 | 68 |
| 21.00 | 90 | 135 | 143 | 271 | 5.5 | 3.5 | P431_0070KX401_0030 MF | 3000 | 3000 | 5500 | ≤24 | 1.4 | 9.2 | 66 |
| 24.00 | 80 | 120 | 125 | 239 | 5.5 | 3.5 | P431_0080KX401_0030 MF | 3000 | 3000 | 5500 | ≤24 | 1.4 | 8.5 | 66 |
| 30.00 | 75 | 115 | 115 | 230 | 5.0 | 3.0 | P431_0100KX401_0030 MF | 3000 | 3000 | 5500 | ≤24 | 1.4 | 8.4 | 66 |
| 32.00 | 89 | 130 | 130 | 260 | 5.5 | 3.5 | P432_0160KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.83 | 11 | 66 |
| 35.00 | 102 | 133 | 138 | 266 | 5.5 | 3.5 | P432_0350KX301_0010 MF | 3000 | 2500 | 4500 | ≤19 | 1.0 | 12 | 70 |
| 40.00 | 95 | 134 | 139 | 268 | 5.5 | 3.5 | P432_0200KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.83 | 12 | 66 |
| 50.00 | 100 | 134 | 139 | 268 | 5.5 | 3.5 | P432_0250KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.82 | 12 | 66 |
| 56.00 | 95 | 130 | 130 | 260 | 5.5 | 3.5 | P432_0280KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 12 | 66 |
| 60.00 | 95 | 134 | 139 | 268 | 5.5 | 3.5 | P432_0200KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.76 | 12 | 64 |
| 64.00 | 90 | 126 | 131 | 253 | 5.5 | 3.5 | P432_0320KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.83 | 9.4 | 66 |
| 70.00 | 102 | 133 | 138 | 266 | 5.5 | 3.5 | P432_0350KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 12 | 66 |
| 75.00 | 100 | 134 | 139 | 268 | 5.5 | 3.5 | P432_0250KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 12 | 64 |
| 80.00 | 87 | 130 | 130 | 260 | 5.5 | 3.5 | P432_0400KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 12 | 66 |
| 84.00 | 95 | 130 | 130 | 260 | 5.5 | 3.5 | P432_0280KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 12 | 64 |
| 100.0 | 102 | 132 | 138 | 264 | 5.0 | 3.0 | P432_0500KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 12 | 66 |
| 105.0 | 102 | 133 | 138 | 266 | 5.5 | 3.5 | P432_0350KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 12 | 64 |

PKX Series: RIGHT ANGLE – Shaft Output

¹⁾ Based on input speed of 1500 RPM. See page 186 for details on torque calculations.

²⁾ Maximum momentary torque for emergency stops or heavy shock load. (Admissible stops per life of gearhead = 1,000 stops maximum.)

* MF = Motor adapter with FlexiAdapt® coupling

PKX Series: RIGHT ANGLE – Shaft Output

| Exact Ratio (i) | Output Torque | | | | | | Max. Input Speed RPM (n1) | | | Motor Shaft ³⁾ Max Ø d _{MW} | Input Inertia J ₁ | Tors. Stiffness C ₂ | Oper. Noise L _{pA} |
|-----------------|------------------------------------|--------------------------|--|--------------------------------------|--------------------------|----------------------------------|---------------------------|---------------|-----|---|------------------------------|--------------------------------|-----------------------------|
| | Nom. ¹⁾ M _{2N} | Accel. M _{2acc} | Accel. Torque for Reduced Backlash M _{2accHT} | Peak ²⁾ M _{2NOT} | Backlash Δφ ₂ | Red. Backlash Δφ _{2red} | | | | | | | |
| | Nm | Nm | Nm | Nm | arcmin | arcmin | Continuous EL 1,2,5,6 | Cyclic EL 3,4 | All | | | | |
| | Part Number* (Gearhead + Input) | | | | | | | | | | | | |

P4KX (continued from previous page)

| | | | | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|--|------|------|------|-----|------|-----|----|
| 120.0 | 87 | 130 | 130 | 260 | 5.5 | 3.5 | P432_0400KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 12 | 64 |
| 140.0 | 97 | 127 | 127 | 253 | 5.0 | 3.0 | P432_0700KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 11 | 66 |
| 150.0 | 102 | 132 | 138 | 264 | 5.0 | 3.0 | P432_0500KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 12 | 64 |
| 200.0 | 85 | 110 | 110 | 220 | 5.0 | 3.0 | P432_1000KX301_0020 MF | 3500 | 3000 | 5500 | ≤19 | 0.81 | 9.0 | 66 |
| 210.0 | 97 | 127 | 127 | 253 | 5.0 | 3.0 | P432_0700KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 11 | 64 |
| 300.0 | 85 | 110 | 110 | 220 | 5.0 | 3.0 | P432_1000KX301_0030 MF | 3500 | 3500 | 6000 | ≤19 | 0.75 | 9.0 | 64 |

¹⁾ Based on input speed of 1500 RPM. See page 186 for details on torque calculations.

²⁾ Maximum momentary torque for emergency stops or heavy shock load. (Admissible stops per life of gearhead = 1,000 stops maximum.)

* MF = Motor adapter with FlexiAdapt® coupling



| Exact Ratio (i) | Output Torque | | | | | | Part Number* (Gearhead + Input) | Max. Input Speed RPM (n1) | | | Motor Shaft ³⁾ Max Ø d _{MW} mm | Input Inertia J ₁ kgcm ² | Tors. Stiffness C ₂ Nm/ arcmin | Oper. Noise L _{PA} dB(A) |
|-----------------|---------------------------------------|-----------------------------|---|---|-----------------------------|-------------------------------------|------------------------------------|---------------------------|-----------|--------|---|--|--|---|
| | Nom. ¹⁾ M _{2N} | Accel. M _{2acc} | Accel. Torque for Reduced Backlash M _{2accHT} | Peak ²⁾ M _{2NOT} | Backlash Δφ ₂ | Red. Backlash Δφ _{2red} | | Continuous | | Cyclic | | | | |
| | | | | | | | | EL 1,2,5,6 | EL 3,4 | | | | | |
| | Nm | Nm | Nm | Nm | arcmin | arcmin | | | | | | | | |

P5KX (continued next page)

| | | | | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|------------------------|------|------|------|-----|-----|----|----|
| 3.000 | 120 | 183 | 183 | 387 | 6.5 | 4.5 | P531_0030KX501_0010 MF | 2500 | 2000 | 3500 | ≤32 | 10 | 13 | 74 |
| 4.000 | 194 | 244 | 244 | 515 | 5.5 | 3.5 | P531_0040KX501_0010 MF | 2500 | 2000 | 3500 | ≤32 | 8.6 | 18 | 74 |
| 5.000 | 210 | 306 | 306 | 644 | 5.0 | 3.0 | P531_0050KX501_0010 MF | 2500 | 2000 | 3500 | ≤32 | 8.2 | 22 | 74 |
| 6.000 | 120 | 183 | 183 | 387 | 6.5 | 4.5 | P531_0030KX501_0020 MF | 2500 | 2500 | 4500 | ≤32 | 6.0 | 13 | 70 |
| 7.000 | 210 | 333 | 380 | 667 | 4.5 | 2.5 | P531_0070KX501_0010 MF | 2500 | 2000 | 3500 | ≤32 | 7.8 | 25 | 74 |
| 8.000 | 194 | 244 | 244 | 515 | 5.5 | 3.5 | P531_0040KX501_0020 MF | 2500 | 2500 | 4500 | ≤32 | 5.6 | 18 | 70 |
| 10.00 | 220 | 306 | 306 | 644 | 5.0 | 3.0 | P531_0050KX501_0020 MF | 2500 | 2500 | 4500 | ≤32 | 5.5 | 22 | 70 |
| 12.00 | 194 | 244 | 244 | 515 | 5.5 | 3.5 | P531_0040KX501_0030 MF | 3000 | 3000 | 5000 | ≤32 | 4.9 | 18 | 68 |
| 14.00 | 210 | 333 | 380 | 667 | 4.5 | 2.5 | P531_0070KX501_0020 MF | 2500 | 2500 | 4500 | ≤32 | 5.4 | 25 | 70 |
| 15.00 | 220 | 306 | 306 | 644 | 5.0 | 3.0 | P531_0050KX501_0030 MF | 3000 | 3000 | 5000 | ≤32 | 4.9 | 22 | 68 |
| 16.00 | 200 | 296 | 300 | 592 | 4.5 | 2.5 | P531_0080KX501_0020 MF | 2500 | 2500 | 4500 | ≤32 | 5.3 | 21 | 70 |
| 20.00 | 180 | 288 | 288 | 575 | 4.0 | 2.0 | P531_0100KX501_0020 MF | 2500 | 2500 | 4500 | ≤32 | 5.3 | 24 | 70 |
| 21.00 | 210 | 333 | 380 | 667 | 4.5 | 2.5 | P531_0070KX501_0030 MF | 3000 | 3000 | 5000 | ≤32 | 4.8 | 25 | 68 |
| 24.00 | 200 | 296 | 300 | 592 | 4.5 | 2.5 | P531_0080KX501_0030 MF | 3000 | 3000 | 5000 | ≤32 | 4.8 | 21 | 68 |
| 30.00 | 180 | 288 | 288 | 575 | 4.0 | 2.0 | P531_0100KX501_0030 MF | 3000 | 3000 | 5000 | ≤32 | 4.8 | 24 | 68 |
| 32.00 | 220 | 300 | 300 | 600 | 4.5 | 2.5 | P532_0160KX401_0020 MF | 2500 | 2500 | 5000 | ≤24 | 1.7 | 29 | 68 |
| 35.00 | 270 | 352 | 352 | 704 | 4.5 | 2.5 | P532_0350KX401_0010 MF | 2500 | 2000 | 4000 | ≤24 | 2.5 | 32 | 72 |
| 40.00 | 250 | 355 | 364 | 710 | 4.5 | 2.5 | P532_0200KX401_0020 MF | 2500 | 2500 | 5000 | ≤24 | 1.7 | 31 | 68 |
| 50.00 | 260 | 355 | 357 | 710 | 4.5 | 2.5 | P532_0250KX401_0020 MF | 2500 | 2500 | 5000 | ≤24 | 1.7 | 31 | 68 |
| 56.00 | 231 | 300 | 300 | 600 | 4.5 | 2.5 | P532_0280KX401_0020 MF | 2500 | 2500 | 5000 | ≤24 | 1.7 | 31 | 68 |
| 60.00 | 250 | 355 | 364 | 710 | 4.5 | 2.5 | P532_0200KX401_0030 MF | 3000 | 3000 | 5500 | ≤24 | 1.5 | 31 | 66 |
| 64.00 | 240 | 312 | 363 | 624 | 4.5 | 2.5 | P532_0320KX401_0020 MF | 2500 | 2500 | 5000 | ≤24 | 1.7 | 25 | 68 |
| 70.00 | 270 | 352 | 352 | 704 | 4.5 | 2.5 | P532_0350KX401_0020 MF | 2500 | 2500 | 5000 | ≤24 | 1.6 | 32 | 68 |
| 75.00 | 260 | 355 | 357 | 710 | 4.5 | 2.5 | P532_0250KX401_0030 MF | 3000 | 3000 | 5500 | ≤24 | 1.5 | 31 | 66 |
| 80.00 | 214 | 300 | 300 | 600 | 4.5 | 2.5 | P532_0400KX401_0020 MF | 2500 | 2500 | 5000 | ≤24 | 1.6 | 31 | 68 |
| 84.00 | 231 | 300 | 300 | 600 | 4.5 | 2.5 | P532_0280KX401_0030 MF | 3000 | 3000 | 5500 | ≤24 | 1.4 | 31 | 66 |
| 100.0 | 269 | 352 | 352 | 704 | 4.0 | 2.0 | P532_0500KX401_0020 MF | 2500 | 2500 | 5000 | ≤24 | 1.6 | 32 | 68 |
| 105.0 | 270 | 352 | 352 | 704 | 4.5 | 2.5 | P532_0350KX401_0030 MF | 3000 | 3000 | 5500 | ≤24 | 1.4 | 32 | 66 |

¹⁾ Based on input speed of 1500 RPM. See page 186 for details on torque calculations.

²⁾ Maximum momentary torque for emergency stops or heavy shock load. (Admissible stops per life of gearhead = 1,000 stops maximum.)

* MF = Motor adapter with FlexiAdapt® coupling

PKX Series: RIGHT ANGLE – Shaft Output

| Exact Ratio (i) | Output Torque | | | | | | Max. Input Speed RPM (n1) | | | Motor Shaft ³⁾ Max Ø d _{MW} | Input Inertia J ₁ | Tors. Stiffness C ₂ | Oper. Noise L _{PA} | |
|-----------------|------------------------------------|--------------------------|--|--------------------------------------|--------------------------|----------------------------------|---------------------------|--------|------------|---|------------------------------|--------------------------------|-----------------------------|-----------|
| | Nom. ¹⁾ M _{2N} | Accel. M _{2acc} | Accel. Torque for Reduced Backlash M _{2accHT} | Peak ²⁾ M _{2NOT} | Backlash Δφ ₂ | Red. Backlash Δφ _{2red} | | | Continuous | | | | | Cyclic |
| | Nm | Nm | Nm | Nm | arcmin | arcmin | EL 1,2,5,6 | EL 3,4 | All | | | | | Nm/arcmin |
| | Part Number* (Gearhead + Input) | | | | | | | | | | | | | |

P5KX (continued from previous page)

| | | | | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|------------------------|------|------|------|-----|-----|----|----|
| 120.0 | 214 | 300 | 300 | 600 | 4.5 | 2.5 | P532_0400KX401_0030 MF | 3000 | 3000 | 5500 | ≤24 | 1.4 | 31 | 66 |
| 140.0 | 263 | 345 | 357 | 690 | 4.0 | 2.0 | P532_0700KX401_0020 MF | 2500 | 2500 | 5000 | ≤24 | 1.6 | 30 | 68 |
| 150.0 | 269 | 352 | 352 | 704 | 4.0 | 2.0 | P532_0500KX401_0030 MF | 3000 | 3000 | 5500 | ≤24 | 1.4 | 32 | 66 |
| 200.0 | 221 | 288 | 288 | 575 | 4.0 | 2.0 | P532_1000KX401_0020 MF | 2500 | 2500 | 5000 | ≤24 | 1.6 | 26 | 68 |
| 210.0 | 263 | 345 | 357 | 690 | 4.0 | 2.0 | P532_0700KX401_0030 MF | 3000 | 3000 | 5500 | ≤24 | 1.4 | 30 | 66 |
| 300.0 | 221 | 288 | 288 | 575 | 4.0 | 2.0 | P532_1000KX401_0030 MF | 3000 | 3000 | 5500 | ≤24 | 1.4 | 26 | 66 |

¹⁾ Based on input speed of 1500 RPM. See page 186 for details on torque calculations.

²⁾ Maximum momentary torque for emergency stops or heavy shock load. (Admissible stops per life of gearhead = 1,000 stops maximum.)

* MF = Motor adapter with FlexiAdapt® coupling



| Exact Ratio (i) | Output Torque | | | | | | Part Number* (Gearhead + Input) | Max. Input Speed RPM (n1) | | | Motor Shaft ³⁾ Max Ø d _{MW} mm | Input Inertia J ₁ kgcm ² | Tors. Stiffness C ₂ Nm/ arcmin | Oper. Noise L _{PA} dB(A) |
|-----------------|---------------------------------------|-----------------------------|---|---|---------------------------------------|---|------------------------------------|---------------------------|-----------|--------|---|--|--|---|
| | Nom. ¹⁾ M _{2N} | Accel. M _{2acc} | Accel. Torque for Reduced Backlash M _{2accHT} | Peak ²⁾ M _{2NOT} | Backlash Δφ ₂ arcmin | Red. Backlash Δφ _{2red} arcmin | | Continuous | | Cyclic | | | | |
| | | | | | | | | EL 1,2,5,6 | EL 3,4 | | | | | |
| | Nm | Nm | Nm | Nm | arcmin | arcmin | | | | | | | | |

P7KX (continued next page)

| | | | | | | | | | | | | | | |
|-------|-----|-----|-----|------|-----|-----|------------------------|------|------|------|-----|-----|----|----|
| 3.000 | 280 | 364 | 364 | 680 | 6.5 | 4.5 | P731_0030KX701_0010 MF | 1800 | 1600 | 3000 | ≤38 | 34 | 38 | 76 |
| 4.000 | 388 | 485 | 485 | 907 | 5.5 | 3.5 | P731_0040KX701_0010 MF | 1800 | 1600 | 3000 | ≤38 | 29 | 47 | 76 |
| 5.000 | 440 | 606 | 606 | 1134 | 5.0 | 3.0 | P731_0050KX701_0010 MF | 1800 | 1600 | 3000 | ≤38 | 27 | 52 | 76 |
| 6.000 | 291 | 364 | 364 | 773 | 6.5 | 4.5 | P731_0030KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 17 | 38 | 72 |
| 7.000 | 440 | 805 | 840 | 1588 | 4.5 | 2.5 | P731_0070KX701_0010 MF | 1800 | 1600 | 3000 | ≤38 | 26 | 54 | 76 |
| 8.000 | 388 | 485 | 485 | 1031 | 5.5 | 3.5 | P731_0040KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 16 | 47 | 72 |
| 10.00 | 440 | 606 | 606 | 1289 | 5.0 | 3.0 | P731_0050KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 15 | 52 | 72 |
| 12.00 | 388 | 485 | 485 | 1031 | 5.5 | 3.5 | P731_0040KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 47 | 70 |
| 14.00 | 440 | 805 | 840 | 1610 | 4.5 | 2.5 | P731_0070KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 15 | 54 | 72 |
| 15.00 | 440 | 606 | 606 | 1289 | 5.0 | 3.0 | P731_0050KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 52 | 70 |
| 16.00 | 400 | 668 | 700 | 1336 | 4.5 | 2.5 | P731_0080KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 15 | 53 | 72 |
| 20.00 | 350 | 575 | 575 | 1150 | 4.0 | 2.0 | P731_0100KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 15 | 52 | 72 |
| 21.00 | 440 | 805 | 840 | 1610 | 4.5 | 2.5 | P731_0070KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 54 | 70 |
| 24.00 | 400 | 668 | 700 | 1336 | 4.5 | 2.5 | P731_0080KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 53 | 70 |
| 30.00 | 350 | 575 | 575 | 1150 | 4.0 | 2.0 | P731_0100KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 12 | 52 | 70 |
| 32.00 | 450 | 700 | 700 | 1400 | 4.5 | 2.5 | P732_0160KX501_0020 MF | 2500 | 2500 | 4500 | ≤32 | 5.6 | 59 | 70 |
| 35.00 | 540 | 770 | 805 | 1540 | 4.5 | 2.5 | P732_0350KX501_0010 MF | 2500 | 2000 | 3500 | ≤32 | 7.9 | 62 | 74 |
| 40.00 | 460 | 805 | 805 | 1610 | 4.5 | 2.5 | P732_0200KX501_0020 MF | 2500 | 2500 | 4500 | ≤32 | 5.5 | 60 | 70 |
| 50.00 | 500 | 805 | 805 | 1610 | 4.5 | 2.5 | P732_0250KX501_0020 MF | 2500 | 2500 | 4500 | ≤32 | 5.5 | 62 | 70 |
| 56.00 | 538 | 700 | 700 | 1400 | 4.5 | 2.5 | P732_0280KX501_0020 MF | 2500 | 2500 | 4500 | ≤32 | 5.4 | 62 | 70 |
| 60.00 | 460 | 805 | 805 | 1610 | 4.5 | 2.5 | P732_0200KX501_0030 MF | 3000 | 3000 | 5000 | ≤32 | 4.9 | 60 | 68 |
| 64.00 | 470 | 730 | 730 | 1460 | 4.5 | 2.5 | P732_0320KX501_0020 MF | 2500 | 2500 | 4500 | ≤32 | 5.5 | 56 | 70 |
| 70.00 | 540 | 770 | 805 | 1540 | 4.5 | 2.5 | P732_0350KX501_0020 MF | 2500 | 2500 | 4500 | ≤32 | 5.4 | 62 | 70 |
| 75.00 | 500 | 805 | 805 | 1610 | 4.5 | 2.5 | P732_0250KX501_0030 MF | 3000 | 3000 | 5000 | ≤32 | 4.9 | 62 | 68 |
| 80.00 | 454 | 700 | 700 | 1400 | 4.5 | 2.5 | P732_0400KX501_0020 MF | 2500 | 2500 | 4500 | ≤32 | 5.3 | 62 | 70 |
| 84.00 | 538 | 700 | 700 | 1400 | 4.5 | 2.5 | P732_0280KX501_0030 MF | 3000 | 3000 | 5000 | ≤32 | 4.8 | 62 | 68 |
| 100.0 | 565 | 770 | 805 | 1540 | 4.0 | 2.0 | P732_0500KX501_0020 MF | 2500 | 2500 | 4500 | ≤32 | 5.3 | 62 | 70 |
| 105.0 | 540 | 770 | 805 | 1540 | 4.5 | 2.5 | P732_0350KX501_0030 MF | 3000 | 3000 | 5000 | ≤32 | 4.8 | 62 | 68 |

¹⁾ Based on input speed of 1500 RPM. See page 186 for details on torque calculations.

²⁾ Maximum momentary torque for emergency stops or heavy shock load. (Admissible stops per life of gearhead = 1,000 stops maximum.)

* MF = Motor adapter with FlexiAdapt® coupling

PKX Series: RIGHT ANGLE – Shaft Output

| Exact Ratio (i) | Output Torque | | | | | | Max. Input Speed RPM (n1) | | | Motor Shaft ³⁾ Max Ø d _{MW} | Input Inertia J ₁ | Tors. Stiffness C ₂ | Oper. Noise L _{pA} |
|-----------------|------------------------------------|--------------------------|--|--------------------------------------|--------------------------|----------------------------------|---------------------------|---------------|-----|---|------------------------------|--------------------------------|-----------------------------|
| | Nom. ¹⁾ M _{2N} | Accel. M _{2acc} | Accel. Torque for Reduced Backlash M _{2accHT} | Peak ²⁾ M _{2NOT} | Backlash Δφ ₂ | Red. Backlash Δφ _{2red} | | | | | | | |
| | Nm | Nm | Nm | Nm | arcmin | arcmin | Continuous EL 1,2,5,6 | Cyclic EL 3,4 | All | | | | |
| | Part Number* (Gearhead + Input) | | | | | | | | | | | | |

P7KX (continued from previous page)

| | | | | | | | | | | | | | | |
|-------|-----|-----|-----|------|-----|-----|--|------|------|------|-----|-----|----|----|
| 120.0 | 454 | 700 | 700 | 1400 | 4.5 | 2.5 | P732_0400KX501_0030 MF | 3000 | 3000 | 5000 | ≤32 | 4.8 | 62 | 68 |
| 140.0 | 584 | 762 | 799 | 1525 | 4.0 | 2.0 | P732_0700KX501_0020 MF | 2500 | 2500 | 4500 | ≤32 | 5.3 | 59 | 70 |
| 150.0 | 565 | 770 | 805 | 1540 | 4.0 | 2.0 | P732_0500KX501_0030 MF | 3000 | 3000 | 5000 | ≤32 | 4.8 | 62 | 68 |
| 200.0 | 423 | 550 | 550 | 1100 | 4.0 | 2.0 | P732_1000KX501_0020 MF | 2500 | 2500 | 4500 | ≤32 | 5.3 | 54 | 70 |
| 210.0 | 584 | 762 | 799 | 1525 | 4.0 | 2.0 | P732_0700KX501_0030 MF | 3000 | 3000 | 5000 | ≤32 | 4.8 | 59 | 68 |
| 300.0 | 423 | 550 | 550 | 1100 | 4.0 | 2.0 | P732_1000KX501_0030 MF | 3000 | 3000 | 5000 | ≤32 | 4.8 | 54 | 68 |

¹⁾ Based on input speed of 1500 RPM. See page 186 for details on torque calculations.

²⁾ Maximum momentary torque for emergency stops or heavy shock load. (Admissible stops per life of gearhead = 1,000 stops maximum.)

* MF = Motor adapter with FlexiAdapt® coupling



| Exact Ratio (i) | Output Torque | | | | | | Part Number* (Gearhead + Input) | Max. Input Speed RPM (n1) | | | Motor Shaft ³⁾ Max Ø d _{MW} mm | Input Inertia J ₁ kgcm ² | Tors. Stiffness C ₂ Nm/ arcmin | Oper. Noise L _{PA} dB(A) |
|-----------------|---|-----------------------------------|---|---|---------------------------------------|---|------------------------------------|---------------------------|-----------|--------|---|--|--|---|
| | Nom. ¹⁾ M _{2N} Nm | Accel. M _{2acc} Nm | Accel. Torque for Reduced Backlash M _{2accHT} Nm | Peak ²⁾ M _{2NOT} Nm | Backlash Δφ ₂ arcmin | Red. Backlash Δφ _{2red} arcmin | | Continuous | | Cyclic | | | | |
| | | | | | | | | EL 1,2,5,6 | EL 3,4 | All | | | | |
| | | | | | | | | EL 1,2,5,6 | EL 3,4 | All | | | | |

P8KX (continued next page)

| | | | | | | | | | | | | | | |
|-------|------|------|------|------|-----|-----|------------------------|------|------|------|-----|----|-----|----|
| 3.000 | 291 | 364 | 364 | 680 | 6.5 | 4.5 | P831_0030KX701_0010 MF | 1800 | 1600 | 3000 | ≤38 | 67 | 59 | 76 |
| 4.000 | 388 | 485 | 485 | 907 | 5.5 | 3.5 | P831_0040KX701_0010 MF | 1800 | 1600 | 3000 | ≤38 | 43 | 84 | 76 |
| 5.000 | 485 | 606 | 606 | 1134 | 5.0 | 3.0 | P831_0050KX701_0010 MF | 1800 | 1600 | 3000 | ≤38 | 36 | 104 | 76 |
| 6.000 | 291 | 364 | 364 | 773 | 6.5 | 4.5 | P831_0030KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 25 | 59 | 72 |
| 7.000 | 679 | 849 | 849 | 1588 | 4.5 | 2.5 | P831_0070KX701_0010 MF | 1800 | 1600 | 3000 | ≤38 | 31 | 125 | 76 |
| 8.000 | 388 | 485 | 485 | 1031 | 5.5 | 3.5 | P831_0040KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 19 | 84 | 72 |
| 10.00 | 485 | 606 | 606 | 1289 | 5.0 | 3.0 | P831_0050KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 17 | 104 | 72 |
| 12.00 | 388 | 485 | 485 | 1031 | 5.5 | 3.5 | P831_0040KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 14 | 84 | 70 |
| 14.00 | 679 | 849 | 849 | 1804 | 4.5 | 2.5 | P831_0070KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 16 | 125 | 72 |
| 15.00 | 485 | 606 | 606 | 1289 | 5.0 | 3.0 | P831_0050KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 14 | 104 | 70 |
| 16.00 | 776 | 970 | 970 | 2062 | 4.5 | 2.5 | P831_0080KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 16 | 128 | 72 |
| 20.00 | 850 | 1213 | 1213 | 2577 | 4.0 | 2.0 | P831_0100KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 15 | 130 | 72 |
| 21.00 | 679 | 849 | 849 | 1804 | 4.5 | 2.5 | P831_0070KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 125 | 70 |
| 24.00 | 776 | 970 | 970 | 2062 | 4.5 | 2.5 | P831_0080KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 128 | 70 |
| 30.00 | 850 | 1213 | 1213 | 2577 | 4.0 | 2.0 | P831_0100KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 130 | 70 |
| 32.00 | 1100 | 1600 | 1600 | 3200 | 4.5 | 2.5 | P832_0160KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 16 | 163 | 72 |
| 35.00 | 1415 | 1840 | 2000 | 3230 | 4.5 | 2.5 | P832_0350KX701_0010 MF | 1800 | 1600 | 3000 | ≤38 | 26 | 173 | 76 |
| 40.00 | 1250 | 1840 | 2000 | 3230 | 4.5 | 2.5 | P832_0200KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 16 | 169 | 72 |
| 50.00 | 1300 | 1840 | 2000 | 3230 | 4.5 | 2.5 | P832_0250KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 15 | 172 | 72 |
| 56.00 | 1100 | 1600 | 1600 | 3200 | 4.5 | 2.5 | P832_0280KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 15 | 168 | 72 |
| 60.00 | 1250 | 1840 | 2000 | 3230 | 4.5 | 2.5 | P832_0200KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 169 | 70 |
| 64.00 | 1173 | 1525 | 1595 | 3049 | 4.5 | 2.5 | P832_0320KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 16 | 157 | 72 |
| 70.00 | 1415 | 1840 | 2000 | 3230 | 4.5 | 2.5 | P832_0350KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 15 | 173 | 72 |
| 75.00 | 1300 | 1840 | 2000 | 3230 | 4.5 | 2.5 | P832_0250KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 172 | 70 |
| 80.00 | 1097 | 1600 | 1600 | 3200 | 4.5 | 2.5 | P832_0400KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 15 | 166 | 72 |
| 84.00 | 1100 | 1600 | 1600 | 3200 | 4.5 | 2.5 | P832_0280KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 168 | 70 |
| 100.0 | 1415 | 1840 | 2000 | 3230 | 4.0 | 2.0 | P832_0500KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 15 | 172 | 72 |
| 105.0 | 1415 | 1840 | 2000 | 3230 | 4.5 | 2.5 | P832_0350KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 173 | 70 |

¹⁾ Based on input speed of 1500 RPM. See page 186 for details on torque calculations.

²⁾ Maximum momentary torque for emergency stops or heavy shock load. (Admissible stops per life of gearhead = 1,000 stops maximum.)

* MF = Motor adapter with FlexiAdapt® coupling

PKX Series: RIGHT ANGLE – Shaft Output

| Exact Ratio (i) | Output Torque | | | | | | Part Number* (Gearhead + Input) | Max. Input Speed RPM (n1) | | | Motor Shaft ³⁾ Max Ø d _{MW} | Input Inertia J ₁ | Tors. Stiffness C ₂ | Oper. Noise L _{PA} |
|-----------------|---------------------------------------|-----------------------------|---|---|-----------------------------|-------------------------------------|------------------------------------|---------------------------|-----------|-----|---|---------------------------------|-----------------------------------|--------------------------------|
| | Nom. ¹⁾ M _{2N} | Accel. M _{2acc} | Accel. Torque for Reduced Backlash M _{2accHT} | Peak ²⁾ M _{2NOT} | Backlash Δφ ₂ | Red. Backlash Δφ _{2red} | | Continuous | Cyclic | | | | | |
| | Nm | Nm | Nm | Nm | arcmin | arcmin | | EL 1,2,5,6 | EL 3,4 | All | | | | |

P8KX (continued from previous page)

| | | | | | | | | | | | | | | |
|-------|------|------|------|------|-----|-----|--|------|------|------|-----|----|-----|----|
| 120.0 | 1097 | 1600 | 1600 | 3200 | 4.5 | 2.5 | P832_0400KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 166 | 70 |
| 140.0 | 1238 | 1610 | 1610 | 3220 | 4.0 | 2.0 | P832_0700KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 15 | 163 | 72 |
| 150.0 | 1415 | 1840 | 2000 | 3230 | 4.0 | 2.0 | P832_0500KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 12 | 172 | 70 |
| 200.0 | 1015 | 1320 | 1320 | 2640 | 4.0 | 2.0 | P832_1000KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 15 | 148 | 72 |
| 210.0 | 1238 | 1610 | 1610 | 3220 | 4.0 | 2.0 | P832_0700KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 12 | 163 | 70 |
| 300.0 | 1015 | 1320 | 1320 | 2640 | 4.0 | 2.0 | P832_1000KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 12 | 148 | 70 |

¹⁾ Based on input speed of 1500 RPM. See page 186 for details on torque calculations.

²⁾ Maximum momentary torque for emergency stops or heavy shock load. (Admissible stops per life of gearhead = 1,000 stops maximum.)

* MF = Motor adapter with FlexiAdapt® coupling



PKX Series: RIGHT ANGLE – Shaft Output

| Exact Ratio (i) | Output Torque | | | | | | Part Number* (Gearhead + Input) | Max. Input Speed RPM (n1) | | | Motor Shaft ³⁾ Max Ø d _{MW} mm | Input Inertia J ₁ kgcm ² | Tors. Stiffness C ₂ Nm/arcmin | Oper. Noise L _{PA} dB(A) |
|-----------------|------------------------------------|--------------------------|--|--------------------------------------|---------------------------------|---|---------------------------------|---------------------------|--------|--------|--|--|--|-----------------------------------|
| | Nom. ¹⁾ M _{2N} | Accel. M _{2acc} | Accel. Torque for Reduced Backlash M _{2accHT} | Peak ²⁾ M _{2NOT} | Backlash Δφ ₂ arcmin | Red. Backlash Δφ _{2red} arcmin | | Continuous | | Cyclic | | | | |
| | | | | | | | | EL 1,2,5,6 | EL 3,4 | | | | | |
| | Nm | Nm | Nm | Nm | arcmin | arcmin | | All | | | | | | |

P9KX

| | | | | | | | | | | | | | | |
|-------|------|------|---|------|-----|---|------------------------|------|------|------|-----|----|-----|----|
| 16.00 | 1520 | 1900 | – | 3705 | 4.5 | – | P932_0160KX701_0010 MF | 1800 | 1600 | 3000 | ≤38 | 44 | 348 | 76 |
| 20.00 | 1900 | 2375 | – | 4632 | 4.5 | – | P932_0200KX701_0010 MF | 1800 | 1600 | 3000 | ≤38 | 43 | 368 | 76 |
| 25.00 | 2375 | 2969 | – | 5789 | 4.5 | – | P932_0250KX701_0010 MF | 1800 | 1600 | 3000 | ≤38 | 36 | 381 | 76 |
| 28.00 | 2280 | 3000 | – | 6000 | 4.5 | – | P932_0280KX701_0010 MF | 1800 | 1600 | 3000 | ≤38 | 31 | 381 | 76 |
| 32.00 | 1520 | 1900 | – | 4211 | 4.5 | – | P932_0160KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 20 | 348 | 72 |
| 35.00 | 2376 | 3300 | – | 6600 | 4.5 | – | P932_0350KX701_0010 MF | 1800 | 1600 | 3000 | ≤38 | 30 | 391 | 76 |
| 40.00 | 1900 | 2375 | – | 5263 | 4.5 | – | P932_0200KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 19 | 368 | 72 |
| 50.00 | 2375 | 2969 | – | 6579 | 4.5 | – | P932_0250KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 17 | 381 | 72 |
| 56.00 | 2280 | 3000 | – | 6000 | 4.5 | – | P932_0280KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 16 | 381 | 72 |
| 60.00 | 1900 | 2375 | – | 5263 | 4.5 | – | P932_0200KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 14 | 368 | 70 |
| 70.00 | 2376 | 3300 | – | 6600 | 4.5 | – | P932_0350KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 16 | 391 | 72 |
| 75.00 | 2375 | 2969 | – | 6579 | 4.5 | – | P932_0250KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 14 | 381 | 70 |
| 80.00 | 2000 | 3000 | – | 6000 | 4.5 | – | P932_0400KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 15 | 384 | 72 |
| 84.00 | 2280 | 3000 | – | 6000 | 4.5 | – | P932_0280KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 381 | 70 |
| 100.0 | 2295 | 3200 | – | 6400 | 4.0 | – | P932_0500KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 15 | 393 | 72 |
| 105.0 | 2376 | 3300 | – | 6600 | 4.5 | – | P932_0350KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 391 | 70 |
| 120.0 | 2000 | 3000 | – | 6000 | 4.5 | – | P932_0400KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 384 | 70 |
| 140.0 | 2387 | 3156 | – | 6312 | 4.0 | – | P932_0700KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 15 | 369 | 72 |
| 150.0 | 2295 | 3200 | – | 6400 | 4.0 | – | P932_0500KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 393 | 70 |
| 200.0 | 1692 | 2200 | – | 4400 | 4.0 | – | P932_1000KX701_0020 MF | 1800 | 1800 | 3500 | ≤38 | 15 | 320 | 72 |
| 210.0 | 2387 | 3156 | – | 6312 | 4.0 | – | P932_0700KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 369 | 70 |
| 300.0 | 1692 | 2200 | – | 4400 | 4.0 | – | P932_1000KX701_0030 MF | 2100 | 2100 | 4000 | ≤38 | 13 | 320 | 70 |

¹⁾ Based on input speed of 1500 RPM. See page 186 for details on torque calculations.

²⁾ Maximum momentary torque for emergency stops or heavy shock load. (Admissible stops per life of gearhead = 1,000 stops maximum.)

* MF = Motor adapter with FlexiAdapt® coupling