

## Table of contents

- **AB-Series**
- **AD-Series**
- **AE-Series**
- **AF-Series**
- **AH-Series**
- **PAII-Series**
- **PEII-Series**
- **PGII-Series**
- **PSII-Series**
- **PL-Series**
- **PD-Series**
- **ABR-Series**
- **ADR-Series**
- **AER-Series**
- **AFR-Series**
- **PAIIR-Series**
- **PEIIR-Series**
- **PGIIR-Series**
- **PSIIR-Series**
- **PDR-Series**
- **PLR-Series**

## AB-Series

Inline planetary high-end serie.

Powerful, precise, robust, quiet and fast.

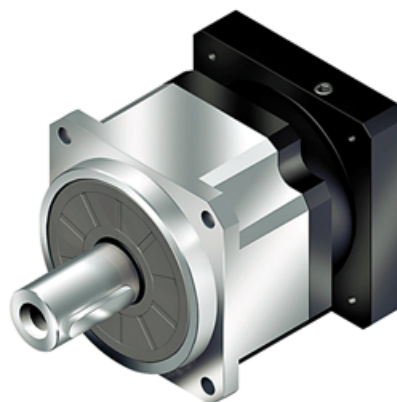
Suitable for all servo applications every single stage ratio 3-10.

Straddle mounted high precision bearings allow for high radial and axial loads.

Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** -10 ~ +90

**Protection Class:** IP65



## General Data

Designation	Remark
<b>AB042</b>	Measurements and other technical data depending on configuration of gear. Read more in Technical information.
<b>AB060</b>	Measurements and other technical data depending on configuration of gear. Read more in Technical information.
<b>AB060A</b>	Measurements and other technical data depending on configuration of gear. Read more in Technical information.
<b>AB090</b>	Measurements and other technical data depending on configuration of gear. Read more in Technical information.
<b>AB090A</b>	Measurements and other technical data depending on configuration of gear. Read more in Technical information.
<b>AB115</b>	Measurements and other technical data depending on configuration of gear. Read more in Technical information.
<b>AB142</b>	Measurements and other technical data depending on configuration of gear. Read more in Technical information.
<b>AB180</b>	Measurements and other technical data depending on configuration of gear. Read more in Technical information.
<b>AB220</b>	Measurements and other technical data depending on configuration of gear. Read more in Technical information.

## AD-Series

Inline planetary high-end serie.

High precision rotary flange, high torsional rigidity and high output moment load capacity.

Superior accuracy of less than 1 arc min and as short as 70 mm (flange to flange), the Apex AD fits into the smallest spaces.

Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** -10 ~ +90

**Protection Class:** IP65



## General Data

Designation	Remark
<b>AD047</b>	Measurements and other technical data depending on configuration of gear. Read more in Technical information.
<b>AD064</b>	Measurements and other technical data depending on configuration of gear. Read more in Technical information.
<b>AD090</b>	Measurements and other technical data depending on configuration of gear. Read more in Technical information.
<b>AD110</b>	Measurements and other technical data depending on configuration of gear. Read more in Technical information.
<b>AD140</b>	Measurements and other technical data depending on configuration of gear. Read more in Technical information.
<b>AD200</b>	Measurements and other technical data depending on configuration of gear. Read more in Technical information.
<b>AD255</b>	Measurements and other technical data depending on configuration of gear. Read more in Technical information.

## AE-Series

Inline planetary high-end serie.

Powerful, precise, robust, quiet and fast.

Suitable for all servo applications, every single stage ratio 3-10.

Straddle mounted high precision bearings allow for high radial and axial loads.

Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** -10 ~ +90

**Protection Class:** IP65



## General Data

Designation	Remark
AE050	Measurements and other technical data depending on configuration of gear. See more info. in Technical information.
AE070	Measurements and other technical data depending on configuration of gear. See more info. in Technical information.
AE090	Measurements and other technical data depending on configuration of gear. See more info. in Technical information.
AE120	Measurements and other technical data depending on configuration of gear. See more info. in Technical information.
AE155	Measurements and other technical data depending on configuration of gear. See more info. in Technical information.
AE205	Measurements and other technical data depending on configuration of gear. See more info. in Technical information.
AE235	Measurements and other technical data depending on configuration of gear. See more info. in Technical information.

## AF-Series

Inline planetary high-end serie.

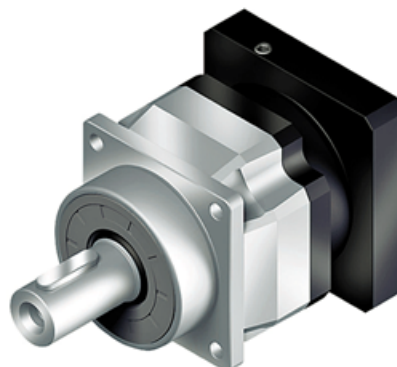
High precision and torque with a taper roller bearing output for higher radial loads, every single stage ratio 3-10.

The AF series is the next generation in planetary technology. Highest precision, highest torque and quiet operation are provided by 100% optimized helical gearing. High axial and radial loads provided by high precision taper roller bearings.

Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** -10 ~ +90

**Protection Class:** IP65





## General Data

Designation	Remark
<b>AF042</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AF060</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AF060A</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AF075</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AF075A</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AF100</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AF140</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AF180</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AF220</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.

## AH-Series

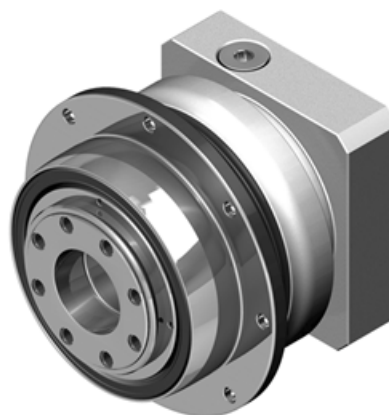
Inline planetary high-end serie.

Highest precision, high wear resistance. Suited for high cycle rate/short move applications.

Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** -10 ~ +90

**Protection Class:** IP65



## General Data

Designation	Remark
AH064	Measurements and other technical data depending on configuration of gear. See more information in pdf.
AH090	Measurements and other technical data depending on configuration of gear. See more information in pdf.
AH110	Measurements and other technical data depending on configuration of gear. See more information in pdf.
AH140	Measurements and other technical data depending on configuration of gear. See more information in pdf.
AH200	Measurements and other technical data depending on configuration of gear. See more information in pdf.
AH255	Measurements and other technical data depending on configuration of gear. See more information in pdf.
AH285	Measurements and other technical data depending on configuration of gear. See more information in pdf.
AH355	Measurements and other technical data depending on configuration of gear. See more information in pdf.
AH450	Measurements and other technical data depending on configuration of gear. See more information in pdf.

## PAII-Series

Inline planetary medium-end ECO serie.

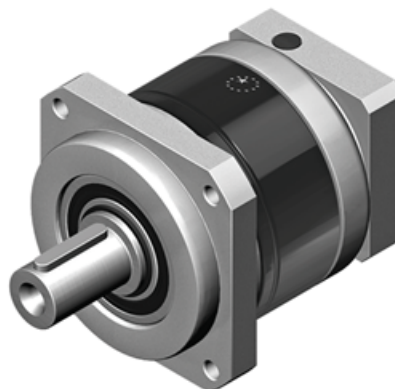
Metric flange output.

The PAII series is an economy flanged output precision planetary gearbox with accuracy down to less than 6 arc minutes. The PII series features lower inertia, lower size and weight, quieter operation, reduced backlash, increased efficiency and greater mounting versatility.

Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** 0 ~ +90

**Protection Class:** IP65



## General Data

Designation	Remark
<b>PAII 042</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PAII 060</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PAII 090</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PAII 115</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PAII 142</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.

## PEII-Series

Inline planetary medium-end ECO serie.

Metric tap face output.

The PEII features an industry standard metric c-face output flange, carbon steel and aluminum construction, precision bonded housings for greater accuracy and faster, more precise assembly, and laser welded pinions for the highest concentricity two part assemblies.

Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** 0 ~ +90

**Protection Class:** IP65



## General Data

Designation	Remark
<b>PEII 050</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PEII 070</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PEII 090</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PEII 120</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PEII 155</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.

## PGII-Series

Inline planetary medium-end ECO serie.  
Metric tap face output, with smaller output face features.  
Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** 0 ~ +90

**Protection Class:** IP65





## General Data

Designation	Remark
<b>PGII 040</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PGII 060</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PGII 080</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PGII 120</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PGII 160</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.

## PSII-Series

Right-angle planetary high-end serie.

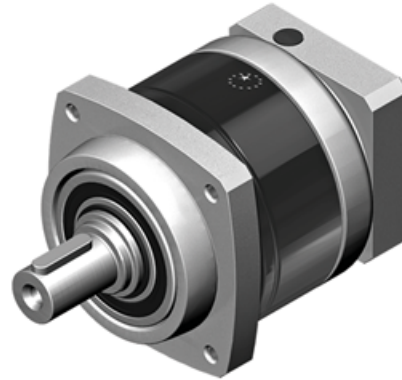
Metric flange output.

The PII series design has been optimized for higher accuracy, lower weight and length, and greater motor mounting versatility. The PSII features an industry standard metric output flange, carbon steel and aluminum construction, precision bonded housings for greater accuracy and faster, more precise assembly, and laser welded pinions for the highest concentricity two part assemblies.

Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** 0 ~ +90

**Protection Class:** IP65



## General Data

Designation	Remark
<b>PSII A</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PSII B</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PSII C</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PSII D</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PSII E</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.

## PL-Series

Inline planetary medium-end ECO serie.

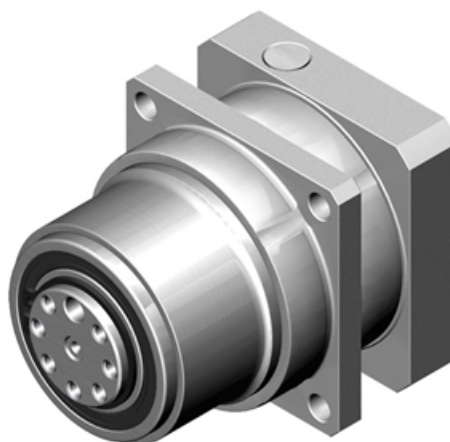
Rotary flange output, with integral belt drive, pulley.

The PL series is an economy rotary flange pulley drive output precision planetary gearbox. Standard profile pulleys are available for all sizes. Accuracy is down to less than 6 arc minutes. The PL series features lower inertia, lower size and weight, quieter operation, reduced backlash, increased efficiency and greater mounting versatility.

Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** -10 ~ +90

**Protection Class:** IP65



## General Data

Designation	Remark
PL 070	Measurements and other technical data depending on configuration of gear. See more information in pdf.
PL 090	Measurements and other technical data depending on configuration of gear. See more information in pdf.
PL 120	Measurements and other technical data depending on configuration of gear. See more information in pdf.

## PD-Series

Inline planetary medium-end ECO serie.

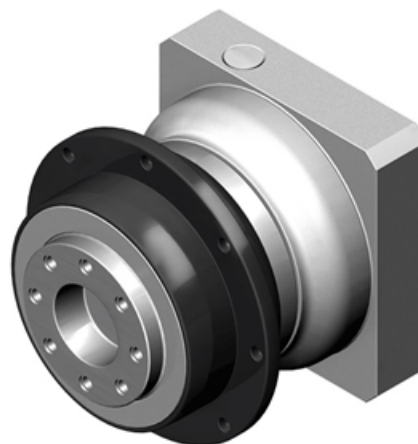
Rotary flange output.

The PD series is an economy rotary flange output precision planetary gearbox with accuracy down to less than 6 arc minutes. The PD series features lower inertia, lower size and weight, quieter operation, reduced backlash, increased efficiency and greater mounting versatility.

Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** 0 ~ +90

**Protection Class:** IP65



## General Data

Designation	Remark
PD 053	Measurements and other technical data depending on configuration of gear. See more information in pdf.
PD 064	Measurements and other technical data depending on configuration of gear. See more information in pdf.
PD 090	Measurements and other technical data depending on configuration of gear. See more information in pdf.
PD 110	Measurements and other technical data depending on configuration of gear. See more information in pdf.

## ABR-Series

Right-angle planetary high-end serie.

Powerful, precise, robust, quiet and fast, suitable for all servo applications.

The Apex ABR series has a 90° input via helical bevel gear. It features an extremely short, light yet rigid housing and full compatibility with standard motor adapters. Highest precision, highest torque and quiet operation are provided by 100% optimized helical gearing. Straddle mounted high precision bearings allow for high radial and axial loads. Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** -10 ~ +90

**Protection Class:** IP65





## General Data

Designation	Remark
<b>ABR042</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>ABR060</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>ABR090</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>ABR115</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>ABR142</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>ABR180</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>ABR220</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.

## ADR-Series

Right-angle planetary high-end serie.

High precision rotary flange, high torsional rigidity and high output moment load capacity.

The Apex ADR series has a 90° input via spiral bevel gear.

It features an extremely short, rigid housing and full compatibility to any motor. A high torque, low backlash COMPACT helical, one piece planetary cage design provides the stiffest and most accurate rotating flange design on the market today. Superior accuracy, torsion rigidity, moment load capacity.

Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** -10 ~ +90

**Protection Class:** IP65



## General Data

Designation	Remark
<b>ADR047</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>ADR064</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>ADR090</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>ADR110</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>ADR140</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>ADR200</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>ADR255</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.

## AER-Series

Right-angle planetary high-end serie.

Helical economy gearbox with high torque capacity.

The Apex AER series has a 90° input via helical bevel gear. Features an extremely short, light yet rigid housing and full compatibility with standard motor adapters. Apex is the only manufacturer that produces a cylindrical helical stainless steel gearbox world wide. High precision, high torque and quiet operation are provided by 100% optimized helical gearing. Straddle mounted high precision bearings allow for high radial and axial loads.

Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** -10 ~ +90

**Protection Class:** IP65



## General Data

Designation	Remark
<b>AER050</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AER070</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AER090</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AER120</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AER155</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AER205</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AER235</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.

## AFR-Series

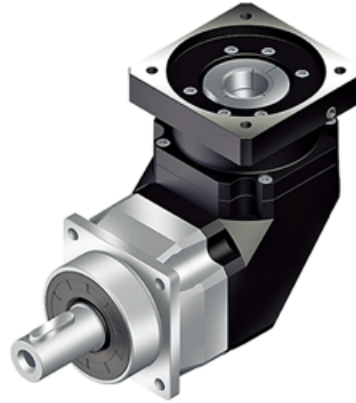
Right-angle planetary high-end serie.

High precision and torque with a taper roller bearing output for higher radial loads.

The Apex AFR series has a 90° input via helical bevel gear. It features an extremely short, light yet rigid housing and full compatibility with standard motor adapters. Highest precision, highest torque and quiet operation are provided by 100% optimized helical gearing. High axial and radial loads provided by high precision taper roller bearings. Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** -10 ~ +90

**Protection Class:** IP65



## General Data

Designation	Remark
<b>AFR042</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AFR060</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AFR075</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AFR100</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AFR140</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AFR180</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>AFR220</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.

## PAIR-Series

Right-angle planetary medium-end ECO serie.

Metric flange output.

The Apex PAIR series is a high precision economy right angle planetary gearhead. The PAIR series design has been optimized for higher accuracy, lower weight and length, and greater motor mounting versatility. The PAIR features an industry standard metric square through holed bolt circle flange output, carbon steel and aluminum construction, precision bonded housings for greater accuracy and faster, more precise assembly, and laser welded pinions for the highest concentricity two part assemblies. Low profile planetary gearing and precision ground spiral bevel right angle gears provide smooth, quiet operation and accuracy.

Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** 0 ~ +90

**Protection Class:** IP65





## General Data

Designation	Remark
<b>PAIIR 042</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PAIIR 060</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PAIIR090</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PAIIR 115</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PAIIR 142</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.

## PEIIR-Series

Right-angle planetary medium-end ECO serie.

Metric tap face output .

The Apex PEIIR series is a high precision economy right angle planetary gearhead. The PIIR series design has been optimized for higher accuracy, lower weight and length, and greater motor mounting versatility. The PEIIR features an industry standard metric tapped face output, carbon steel and aluminum construction, precision bonded housings for greater accuracy and faster, more precise assembly, and laser welded pinions for the highest concentricity two part assemblies. Low profile planetary gearing and precision ground spiral bevel right angle gears provide smooth, quiet operation and accuracy. Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** 0 ~ +90

**Protection Class:** IP65



## General Data

Designation	Remark
<b>PEIIR 050</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PEIIR 070</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PEIIR 090</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PEIIR 120</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PEIIR 155</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.

## PGIIR-Series

Right-angle planetary medium-end ECO serie.  
Metric tap face output, with smaller output face features.  
The Apex PGIIR series is a high precision economy right angle planetary gearhead. The PIIR series design has been optimized for higher accuracy, lower weight and length, and greater motor mounting versatility. The PGIIR features an industry standard metric tapped face output, carbon steel and aluminum construction, precision bonded housings for greater accuracy and faster, more precise assembly, and laser welded pinions for the highest concentricity two part assemblies. Low profile planetary gearing and precision ground spiral bevel right angle gears provide smooth, quiet operation and accuracy. Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** 0 ~ +90

**Protection Class:** IP65



## General Data

Designation	Remark
<b>PGIIR 040</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PGIIR 060</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PGIIR 080</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PGIIR 120</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PGIIR 160</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.

## PSIIR-Series

Right-angle planetary medium-end ECO serie.

Metric tapped flange output.

The Apex PSIIR series is a high precision economy right angle planetary gearhead. The PIIR series design has been optimized for higher accuracy, lower weight and length, and greater motor mounting versatility. The PSIIR features an industry standard metric output flange, carbon steel and aluminum construction, precision bonded housings for greater accuracy and faster, more precise assembly, and laser welded pinions for the highest concentricity two part assemblies. Low profile planetary gearing and precision ground spiral bevel right angle gears provide smooth, quiet operation and accuracy. Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** 0 ~ +90

**Protection Class:** IP65



## General Data

Designation	Remark
<b>PSIIR A</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PSIIR B</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PSIIR C</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PSIIR D</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PSIIR E</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.

## PDR-Series

Right-angle planetary medium-end ECO serie.

Rotary flange output.

The PDR series is an economy right angle rotary flange output precision planetary gearbox with accuracy down to less than 6 arc minutes. The PD series features lower inertia, lower size and weight, quieter operation, reduced backlash, increased efficiency and greater mounting versatility.

Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** 0 ~ +90

**Protection Class:** IP65





## General Data

Designation	Remark
<b>PDR 053</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PDR 064</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PDR090</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PDR 110</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.

## PLR-Series

Right-angle planetary medium-end ECO serie.  
 Rotary flange output with integral belt drive pulley.  
 The PLR series is an economy rotary flange pulley drive output precision planetary gearbox. Standard profile pulleys are available for all sizes. Accuracy is down to less than 10 arc minutes. The PL series features lower inertia, lower size and weight, quieter operation, reduced backlash, increased efficiency and greater mounting versatility.  
 Design your APEX Gear with the Calculation Tool.

**Operating Temperature (°C):** 0 ~ +90

**Protection Class:** IP65



## General Data

Designation	Remark
<b>PLR 070</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PLR 090</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.
<b>PLR 120</b>	Measurements and other technical data depending on configuration of gear. See more information in pdf.