OVER 60 YEARS of success

OUTSTANDING QUALITY, SUPPORTED BY EXPERTISE AND CERTIFIED STANDARDS

With all research, development, engineering, production and assembly conducted entirely in-house, we maintain full control over every step of the development and manufacturing process.This ensures unmatched quality and precision.

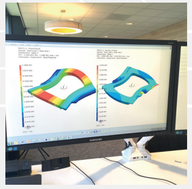
Our expertise lies in developing and manufacturing high-precision linear bearings and advanced customised motion systems. We also specialise in delivering complex mechatronic assemblies. Equipped with machining capabilities from extremely tiny up to large structural components, we are able to provide flexibility for various applications.

As manufacturing and assembly is done in climate-controlled facilities, we ensure accuracy and consistency in every product. This commitment is supported by over 60 years of expertise and a certified and robust quality management system.

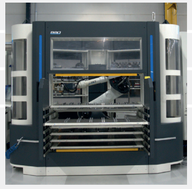
EXPERT ADVICE AND CONSULTING



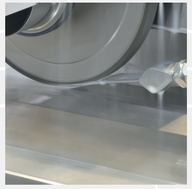
DESIGN TO CLIENT SPECIFICATION



STATE-OF-THE-ART MILLING



HIGH PRECISION GRINDING



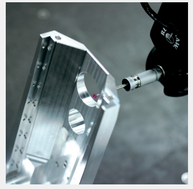
CLEANROOM ASSEMBLY



ASSEMBLY TO THE HIGHEST STANDARD OF PRECISION



QUALITY CONTROL



RESEARCH & DEVELOPMENT





PM RESEARCH AND PRODUCTION FACILITIES

HIGH PRECISION LINEAR BEARINGS AND SLIDES

- World class in crossed rollers, needle rollers, ball bearings
- Over 60 years' experience in precision
- Flat organisation structure with short communication lines
- Both catalogue and customised products

R&D AND ENGINEERING DRIVEN COMPANY

- Close collaboration with customers
- Teams of mechanical, electrical, mechatronical, and physical engineers
- Customer and market driven development roadmap

FROM DEVELOPMENT TO DELIVERY, ALL FROM A SINGLE SOURCE

- Full process control all under one roof
- Engineering and manufacturing work closely together
- High precision manufacturing with continuous quality monitoring
- Fully climate and temperature controlled machine shop

FOCUS ON CUSTOMER-SPECIFIC (MOTION) NEEDS

- Optimised for customer application (fit and forget)
- Flexibility in manufacturing to rapidly meet demands
- Exceptional craftsmanship in combination with automation

CUSTOM MECHATRONICAL ASSEMBLIES AND MOTION SYSTEMS

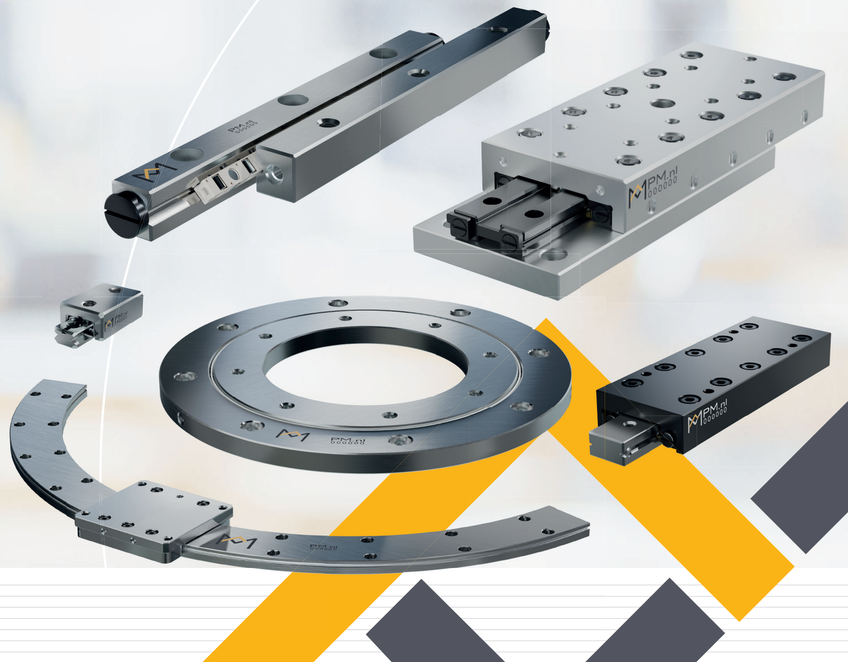
- Accuracies of (sub)micrometre level
- Cleanrooms up to ISO 6 (ISO-14644-1) > 2.500 m^2 / 27,000 ft^2
- Bake-out, RGA and vacuum knowledge
- Including (large)frames, vacuum chambers, structure parts and more

PM B.V.
Galileistraat 2
7701 SK Dedemsvaart
The Netherlands
Phone: +31 523 61 22 58
Email: info@PM.nl
www.PM.nl

PM.nl DISCOVER PRECISION

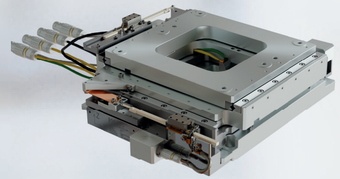
OVER 60 YEARS of success

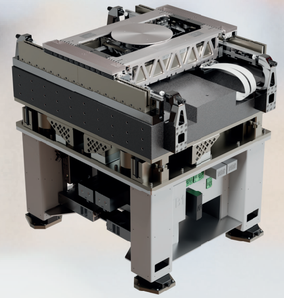
PRODUCT OVERVIEW



OVER 60 YEARS of success







PM IS AN INDEPENDENT, FAMILY-RUN DUTCH COMPANY WITH OVER 60 YEARS OF EXPERIENCE IN THE DESIGN AND MANUFACTURING OF PRECISION LINEAR BEARINGS, FRICTIONLESS SLIDES AND ENGINEERED-TO-SPEC MOTION SYSTEMS.

Serving a global client base on the cutting edge of high-tech industries, our products are an integral part of the market's constant push to develop the most innovative solutions. We are proud of our continued success in attaining our position as a trusted partner and architect of high performance linear bearing systems, positioning stages and integrated motion solutions.

We are experts in solving complex technical problems. Deep mechatronic expertise combined with manufacturing know-how is applied to clients' specific industry challenges.

PM developed solutions find their way into various highly specialised markets. These include, but are not limited to:

- **SEMICONDUCTOR INDUSTRY**
- **NON-DESTRUCTIVE ANALYSIS TECHNIQUES**
- **MEDICAL SCIENCE**
- **PRECISION OPTICAL LENSES**
- **TECHNICAL AND INDUSTRIAL METROLOGY**

View our positioning system competences
www.PM.nl/products/motion-systems

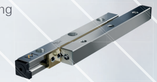
LINEAR BEARINGS

PM's linear bearings are suitable for applications where high precision, compact design and repetitive motion are required. Mounted as a preloaded set, these bearings offer high stiffness in any constrained direction and a virtually friction-free motion. Available in a wide range of sizes, the engineer is offered maximum design latitude and flexibility. Our Anti-Cage Creep (ACC) option is available for high-acceleration applications.

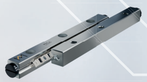
OPTIONS:

- Accuracy grade Q8 (standard), Q4 and Q2
- All linear bearings can be supplied in stainless steel
- Special raceway finishing with SF-class, surface roughness < 0.05 Ra
- Customised designs
- Anti-Cage Creep technology ACC and ACCI

The standard crossed roller bearing (**RSD**) is available with either cylindrical rollers or balls, with sizes ranging from 1.5 to 24 mm.



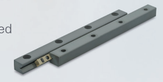
The standard crossed roller bearing with increased contact surface (**RSDE** or **RNG**) is equipped with cylindrical rollers and POM or PEEK cages and has a load rating three times that of standard **RSD** bearings. Available in roller diameter sizes 3, 4, 6 and 9 mm. Anti-Cage creep technology (ACC) is available as an option.



The **N/O** and **M/V** type needle roller bearings offer maximum stiffness and a significantly increased load rating when compared to crossed roller bearings.



Fully ceramic linear bearing (**CR**) for applications requiring absence of magnetism, absence of lubrication or low mass combined with high stiffness. Commonly used materials are Si_3N_4, ZrO_2 or Al_2O_3. Typical fields of use include electron microscopy, semiconductor industry and medical applications.



FRICTIONLESS PRECISION SLIDES

PM frictionless slides are ready-to-install single-axis components for precise limited linear movements. The crossed roller slides are factory preloaded to ensure high accuracy, an extremely low uniform friction coefficient friction and long operational lifetime.

Each slide comes with mounting holes pre-drilled in a standardised pattern to aid easy assembly. The mounting surfaces are precision ground to achieve a superior degree of flatness in motion.

This steel crossed roller slide (**RT**) is also available in lightweight aluminium (**RTA**). Available with stroke ranges of 10 – 950 mm and a maximum load rating of 71.550 N.



The **RTNG** crossed roller slide offers protection against environmental contamination due to its narrow gap between table and base. Available with stroke ranges of 10 – 250 mm and a maximum load rating of 35.100 N.



The **RTS** slide is a low-profile steel crossed roller slide. Available with stroke ranges of 12 – 130 mm and a maximum load rating of 3.672 N.



PMM (ball slide) and **PMMR** (crossed-roller slide) are stainless steel miniature slides with equal dimensions.
Three sizes are available: 05, 1 and 2 with stroke ranges of 5 - 70 mm. Weight specifications range from 2 to 80 grams.



Miniature slide **MSR** offers crossed-roller bearings and Anti-Cage Creep technology. It is the smallest linear slide in the industry available. There are 7 sizes, and all are made from stainless steel. Stroke range 5 - 112 mm.

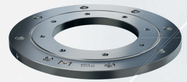


ROTATION BEARINGS

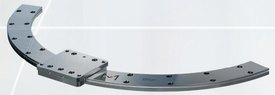
The gonio bearing (**RGB**) is available with either cylindrical rollers or balls. These bearings allow the user to perform extremely accurate radial movement combined with friction-free motion. Suitable for rotations up to ± 5°.



The flat mounted table bearing (**FMB**) is currently available in diameters up to 500 mm. This type of bearing combines high accuracy, repeatability and rigidity with a small footprint.



These stainless steel bearings allow virtually frictionless radial positioning and come as a factory-preloaded set. **RPM** bearings are available as an arc segment or full circular segment with 360° rotational freedom. The rail can be equipped with one or more preloaded carriages.



RECIRCULATING BEARINGS

Recirculating linear bearings can be used for applications that require a extended travel distance. The complete bearing assembly consists of a base plate (**UT**), double-sided rail (**DS**) and **US** type slide for recirculating units of type **UK** (balls) and type **UR** (rollers).



CUSTOMISED SLIDES

Every application has its unique requirements, and industry developments are continuously pushing the limits of performance. In case that standard linear slides are not matching with your application, we are able to design special versions that meet specific needs. This can be a simple modification to a fully customised design.

Some examples:

- Alternative lubricant
- Specified pushing force
- Specific table part design
- Customised holes
- Alternative materials
- Weight saving design
- Cleanroom or vacuum compatible





