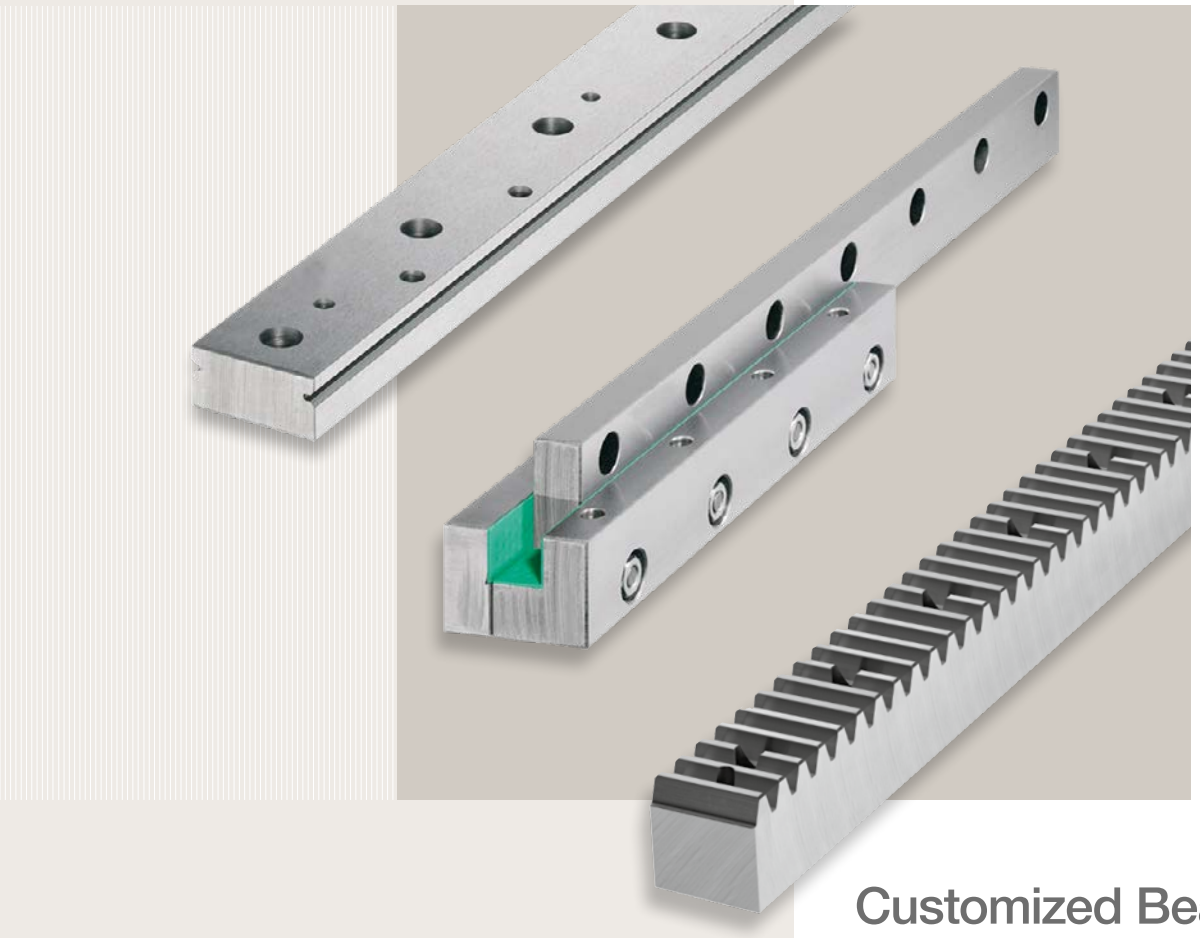
SCHNEEBERGER
LINEAR TECHNOLOGY



Customized Bearings

and Racks

Product catalog 2017

Latest version of the catalogs
You can always find the latest version of our catalogs in the Download area of our website.

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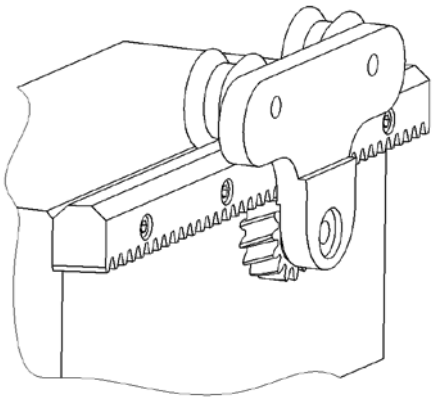
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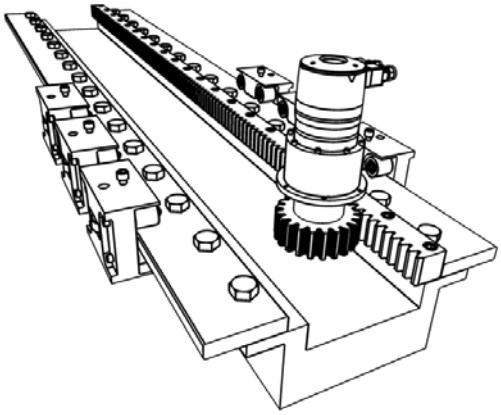
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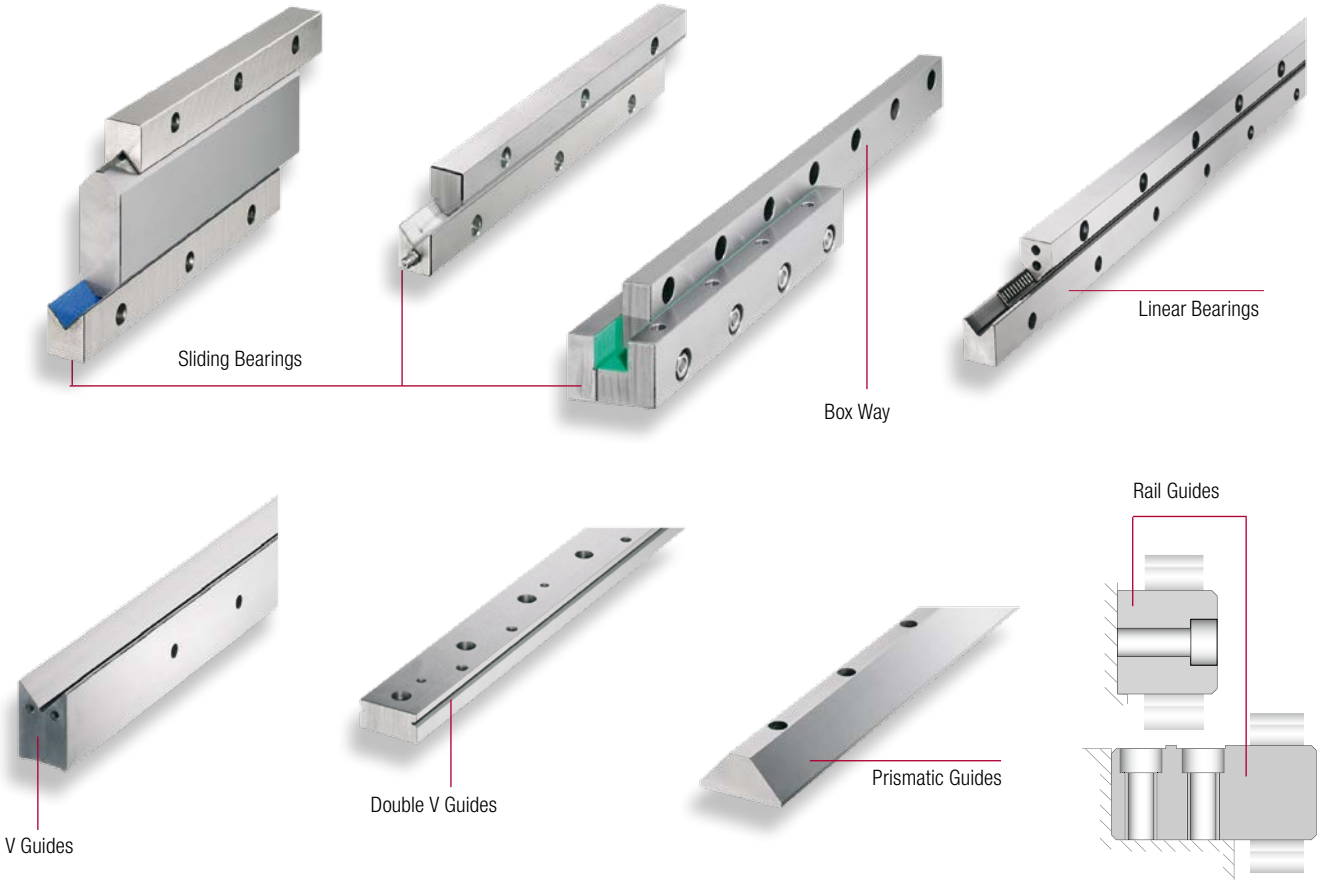




Gear rack integrated into linear guideway (guide racks)

1 Competence in Rolling Element and Sliding Guideways

1.1 Product overview



1.2 Process operation: from raw materials to quality control



Raw Material Stocks
To minimise leadtimes, an extensive range of material profiles is held on stock supported by various specialist steel suppliers.

Drilling
We drill the rails with pitch error compensation for the hardening process. As a result multi-piece rails can be easily mounted.



Through hardening
Is one of our core competencies. Cross-sections with a thickness of up to 55mm can be through hardened.

Hardening and quenching up to 3m
Through hardening results in more stable and good straight rails. Through hardened rails can also be reground.



Induction hardening
is of particular interest for very large cross sections, as well as very long components. Only the required surface areas of the cross-section are hardened.

Induction hardening and quenching up to 6m
Longer single piece rail lengths means the number of butt joints can be reduced. A close tolerance is kept on the hole pitches.

2 From standard precision to measuring machine accuracy classes

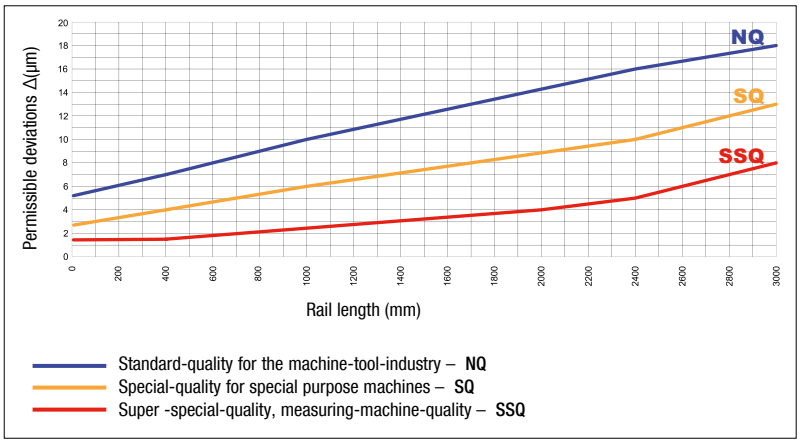
2.1 SCHNEEBERGER special components

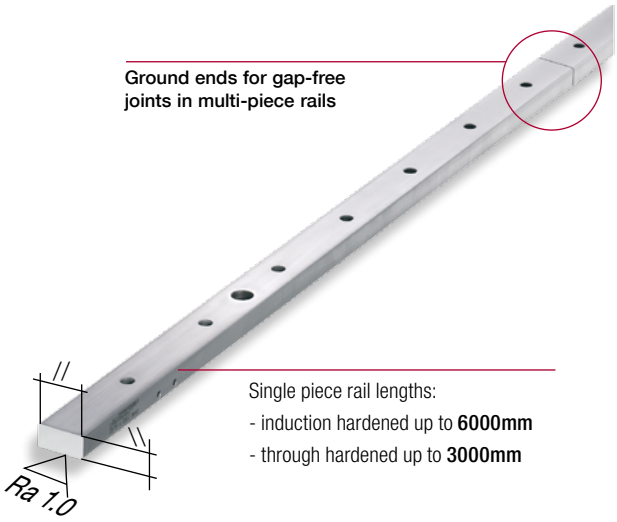
A flexible, stand alone production facility specializing in the production in the manufacture of guideways and gear racks:

- For the metalworking, automation, wood processing, electronics and measuring equipment industries.
- In various standard designs as single pieces or series volumes.
- As replacement parts for machine retrofits where spares are no longer available from the manufacturer.

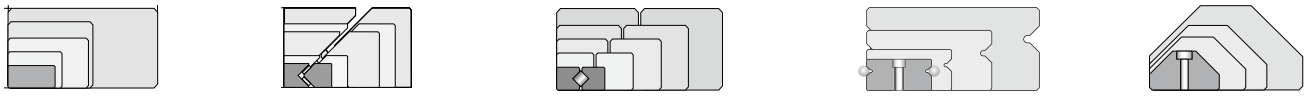
Our employees have extensive experience, a flexible manufacturing facility and have the know-how from the research and development departments within the SCHNEEBERGER-Group at their disposal.

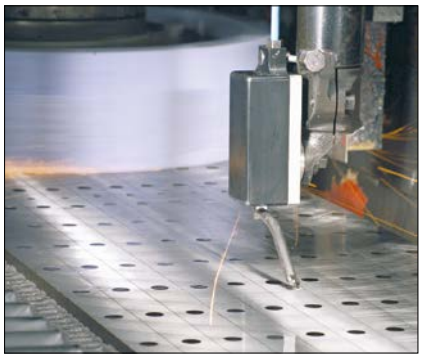
2.2 Parallelism tolerances





2.3 Any cross-section





Tempering and straightening
The hardening process induces internal stresses. A careful tempering eliminates such stresses without affect on the hardness.

End grinding
For straight or angled butt joints for gap-free multi-piece rails. This is done in efficient multiple settings.



Precision finish grinding
Precision grinding is where SCHNEEBERGER is recognized for quality. Extensive skills and 30 years of experience, gives us the competence to achieve extremely high levels of precision. Trackway to Ra = 0.3µm.

Coatings and sliding materials
Coatings for hardness, corrosion resistance or aesthetics are available. Slideways with various ground plastic or metal frictionless wear strips.

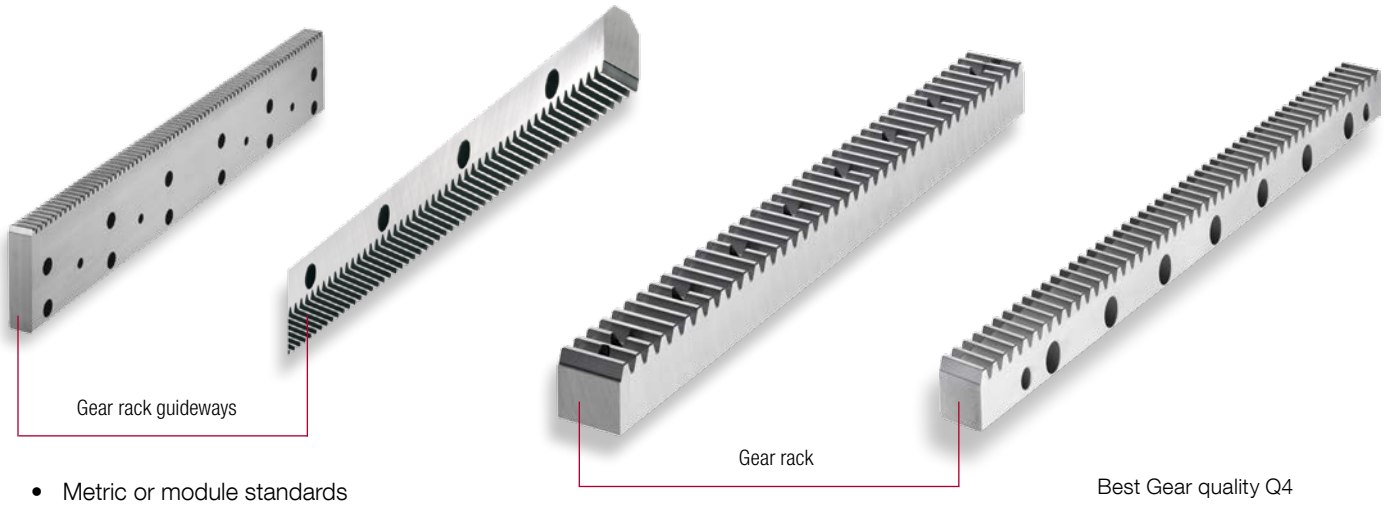


Marking
For traceability or stock control the guideways are marked by laser. Butt joint ends are marked with identification numbers.

Quality Control
To ensure the high quality standards of SCHNEEBERGER, all products go through a comprehensive and stringent quality check before shipment.

3 Gear racks and gear rack guideways to customer specification

3.1 Gear racks and gear rack guideways



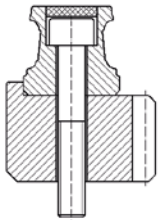
- Metric or module standards
- Up to module 20
- Helical or straight gears
- Hardened and tempered, nitrided, case-hardened, induction or through hardened
- Milled or ground
- Max. single piece length: 3000mm
- Multi-piece butt jointed rails for longer lengths

Best Gear quality Q4

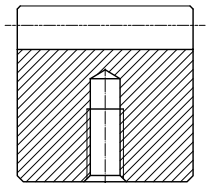
Individual adjacent pitch error
f_p = 0.003mm

Cumulative pitch error
F_p = 0,015mm/1000mm

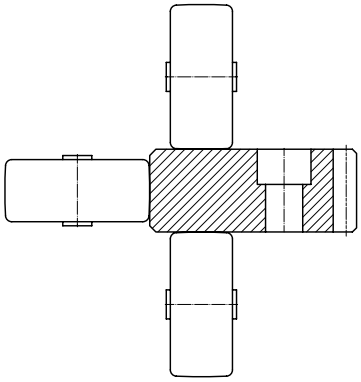
3.2 Special version



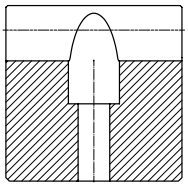
Combination with profiled linear guideway



Screw connection from below

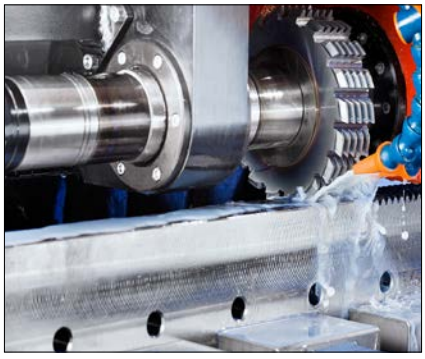


Box way with integrated tooth rack

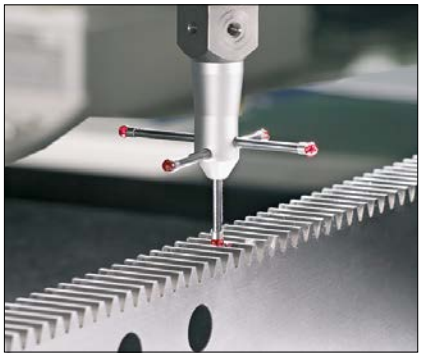


Screw connection through the tooth rack

3.3 Gear rack process operation







Gear racks
Depending on the loading, gear racks are either thoroughly hardened, case-hardened or induction hardened, nitrided or hardened and tempered. The material varies depending on the process.

Milling and/or grinding
The required accuracy and surface finish determine whether the gears also need to be ground after milling. Best quality: Q4.

Standard gear racks
From modules 2 to 12, gear racks can be delivered in typical industry dimensions.

Customized gear racks
Alongside the standard parts, we also manufacture customized gear racks and guide racks up to a maximum length of 3 m and a unit weight of 500 kg.

Marking
For traceability or stock control the guideways are marked by laser.

Quality Control
To ensure the high quality standards of SCHNEEBERGER, all products go through a comprehensive and stringent quality check before shipment.

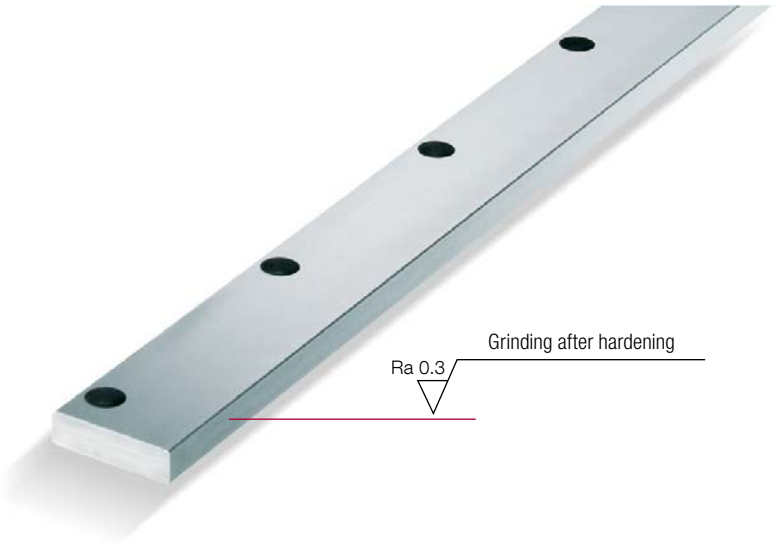
4 Technical and engineering know-how for special applications

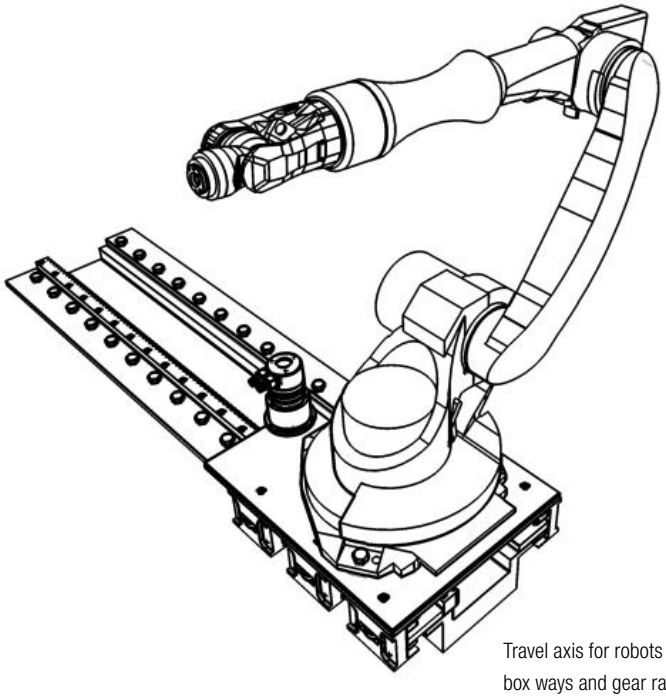


Customer specific guideways and gear racks
are standard for us. Our qualified sales engineers will be pleased to visit your facility to discuss the optimum solution for your new application.

Delivery Commitments
We guarantee short leadtimes for protoype products and fixed production schedules for production volumes.

Spares for machine refurbishments
When you require a replacement rail or set of rails – we manufacture to the original accuracy or better.





Travel axis for robots fitted with SCHNEEBERGER box ways and gear racks

SCHNEEBERGER®

PROSPECTUSES

- COMPANY BROCHURE
- CUSTOMIZED BEARINGS
- GEAR RACKS
- LINEAR BEARINGS and RECIRCULATING UNITS
- MINERAL CASTING SCHNEEBERGER
- MINISLIDE MSQscale
- MINI-X MINIRAIL / MINISCALE PLUS / MINISLIDE
- MONORAIL and AMS profiled linear guideways with integrated measuring system
- MONORAIL and AMS application catalog
- POSITIONING SYSTEMS
- SLIDES



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