

Press release: Schneebberger gear racks

Limitless linear movement

Gear racks allow linear movements to be carried out along almost limitless stretches. In this regard, they are well-suited for use in large machines and systems in which enormous axial forces must be transferred. Even dirty working environments do not present a problem. Schneebberger provides cost-efficient solutions for all applications.

Gear racks are, on average, among the more inexpensive linear drive elements which are frequently utilised when rail stretches cover a distance of more than two metres. A specific advantage in using them is their high level of rigidity, which remains consistent across the entire length. Thanks to this, an almost unlimited amount of axial force can be transferred with gear racks. For clarification purposes, even module 12 has been proven to accommodate 480,000 N; Schneebberger, however, is able to grind up to module size 20.

In order to meet the multifaceted requirements of the user, the company, which operates on an international level, provides both straight and helical-toothed products which are available with metric or module/pitch in various sizes and rail lengths (one-piece lengths of up to three metres) as standard products.

Furthermore, the Swiss linear technology innovation leader produces customised gear racks which are coordinated to the respective application. As a result, the user can choose whether they require a milled or ground model.

The quality of the product varies accordingly; surface quality of up to $R_a=0.3 \mu\text{m}$ is possible, and in terms of tooth quality, Schneebberger produces gear racks from Q 11 to Q 4. The latter corresponds to an individual pitch deviation of $3 \mu\text{m}$ from tooth to tooth. With regard to surface hardness, the user can also choose between soft, tempered, nitrided, fully hardened, inductive-hardened or case-hardened.

The uses for Schneebberger gear racks in practice are just as multifaceted as the product range. Their use in standard machine tools operating in dirty working environments, for example, is equally as common as their application in precision measuring machines.



B01: Gear racks by Schneeburger can be linked together as required by the user. As a relatively inexpensive linear drive element, they are used in various industries and applications.

SCHNEEBERGER group

SCHNEEBERGER® serves original equipment manufacturers operating (OEM) in various industries worldwide – from **machine tool**, **solar technology** and **semiconductor technology** to **electrical engineering** and **medical engineering** and others. Linear bearings, profiled linear guideways, **measuring systems**, **gear racks**, **slides**, **positioning systems** and **mineral casting** are all part of SCHNEEBERGER's product and manufacturing range. **A.MANNESMANN** has been part of the SCHNEEBERGER Group since October 2017. A.MANNESMANN is a leading supplier for the production of ballscrew drives, telescopic actuators and drill spindles. A further expansion of the SCHNEEBERGER Group, an additional site was founded in Poland. The new company SCHNEEBERGER Components Poland (SPO) officially started on November 19, 2020 and has already commenced operations, producing precision parts for the entire Group. The core competence lies in the production of rolling bearing rollers. Also as part of its strategic development, the Business Unit Systems has established the company "SCHNEEBERGER Precision Motion Systems (Shenzhen)". With the establishment of the new technology center for systems in Shenzhen with development, production, sales and service, SCHNEEBERGER will be closer to its Asian customers and thus be able to serve them even better with high-precision single and multi-axis systems.

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