

# Cam Roller Linear Guide Rail Systems

Structure

Cam roller linear guide rail systems allow a reliable and economical linear movement of hardware modules. They are characterized by low-maintenance operation, long service life as well as dynamic and quiet running. These are attributes which make cam roller linear guide rail systems indispensable components for efficient and safe devices and systems with low energy requirements.

The product range includes all components necessary for constructing cam roller linear guide rail systems that are compact and easy to assemble. All cam roller linear guide rail systems consist of one outer cam roller linear guide rail with cam rollers or cam roller carriages moving inside the rail.

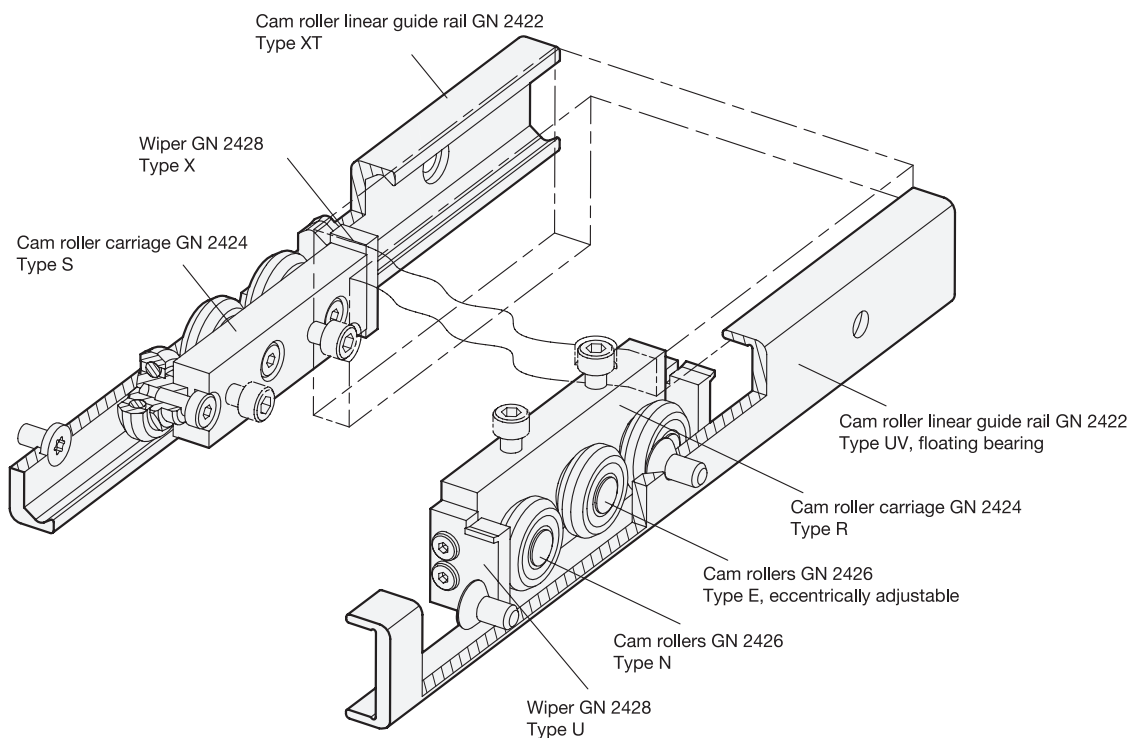
Cam roller linear guide rails are the basis for cam roller linear guide rail systems. They can be designed as fixed or floating bearing versions, with the fixed bearing version guiding the rollers running inside the rail on two levels, while the floating bearing version does so only on one level. By combining both versions, any misalignments or parallelism errors in the connected construction can be compensated. Complex preliminary work due to the precise machining of surrounding parts can thus be kept to a minimum. Both rail versions can be mounted in two ways: cylindrical countersunk holes with flat head screws or 90° conical holes for self-centering mounting.

Cam roller carriages are available in 3 different types of designs, differing by their radial or axial mounting option, their material, and their degree of sealing. All cam roller carriages are equipped with 3 cam rollers, with the middle one always supplied with an eccentrically adjustable bearing pivot for determining the clearance or initial tension inside the rail. Depending on the rail version, a wiper is mounted on either end of the cam roller carriage.

Cam rollers are similar in structure to deep-groove ball bearings, with a non-detachable bearing pivot used as mounting point.

For special applications, cam rollers and wipers can also be supplied separately from the cam roller carriages under separate series numbers.

All design variants are available in the nominal rail dimensions  $h_1 = 18, 28, 35$  and  $43$  mm. Beyond the standard range, they can also be supplied in lengths of up to 3600 mm in one piece, or above that as combined rails for individual requirements.

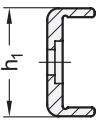
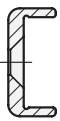
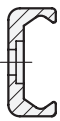
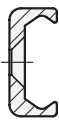
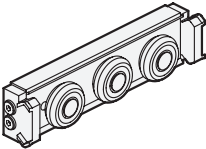
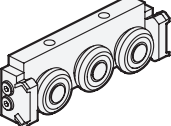
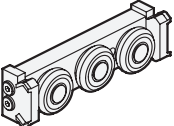

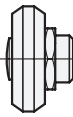
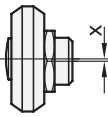
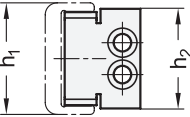
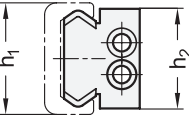


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Components and Accessories

To ensure maximum flexibility, cam roller linear guide rail systems are constructed from the components listed below. Depending on the requirements, the appropriate components can be supplied in the desired quantity. Because the cam roller linear guide rails and the cam roller carriages must be assembled separately in many applications, these items will be supplied unassembled and packed separately.

Upon request, fully pre-assembled cam roller linear guide rail systems consisting of GN 2422 cam roller linear guide rails and GN 2424 cam roller carriages are available.

<p><b>Cam roller linear guide rails</b> GN 2422 → page 1925</p>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Type <b>UT</b></p>  <p>h<sub>r</sub></p> </div> <div style="text-align: center;"> <p>Type <b>UV</b></p>  </div> <div style="text-align: center;"> <p>Type <b>XT</b></p>  </div> <div style="text-align: center;"> <p>Type <b>XV</b></p>  </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <p>Floating bearing rails</p> <p>Fixed bearing rails</p> </div>
<p><b>Cam roller carriages</b> for cam roller linear guide rails GN 2424 → page 1926</p>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Type <b>N</b></p>  <p>Normal cam roller carriages</p> </div> <div style="text-align: center;"> <p>Type <b>R</b></p>  <p>Radial cam roller carriages</p> </div> <div style="text-align: center;"> <p>Type <b>S</b></p>  <p>Narrow cam roller carriages</p> </div> </div>
<p><b>Cam rollers</b> for cam roller linear guide rails GN 2426 → page 1928</p>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Type <b>B</b></p>  <p>Cam roller with bore</p> </div> <div style="text-align: center;"> <p>Type <b>N</b></p>  <p>Normal cam roller with centered bearing pivot</p> </div> <div style="text-align: center;"> <p>Type <b>E</b></p>  <p>x</p> <p>Eccentric cam roller with eccentric bearing pivot</p> </div> </div>
<p><b>Wipers</b> for cam roller linear guide rails GN 2428 → page 1929</p>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Type <b>U</b></p>  <p>h<sub>1</sub> h<sub>2</sub></p> <p>For floating bearing rails</p> </div> <div style="text-align: center;"> <p>Type <b>X</b></p>  <p>h<sub>1</sub> h<sub>2</sub></p> <p>For fixed bearing rails</p> </div> </div>

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Assembly Examples

