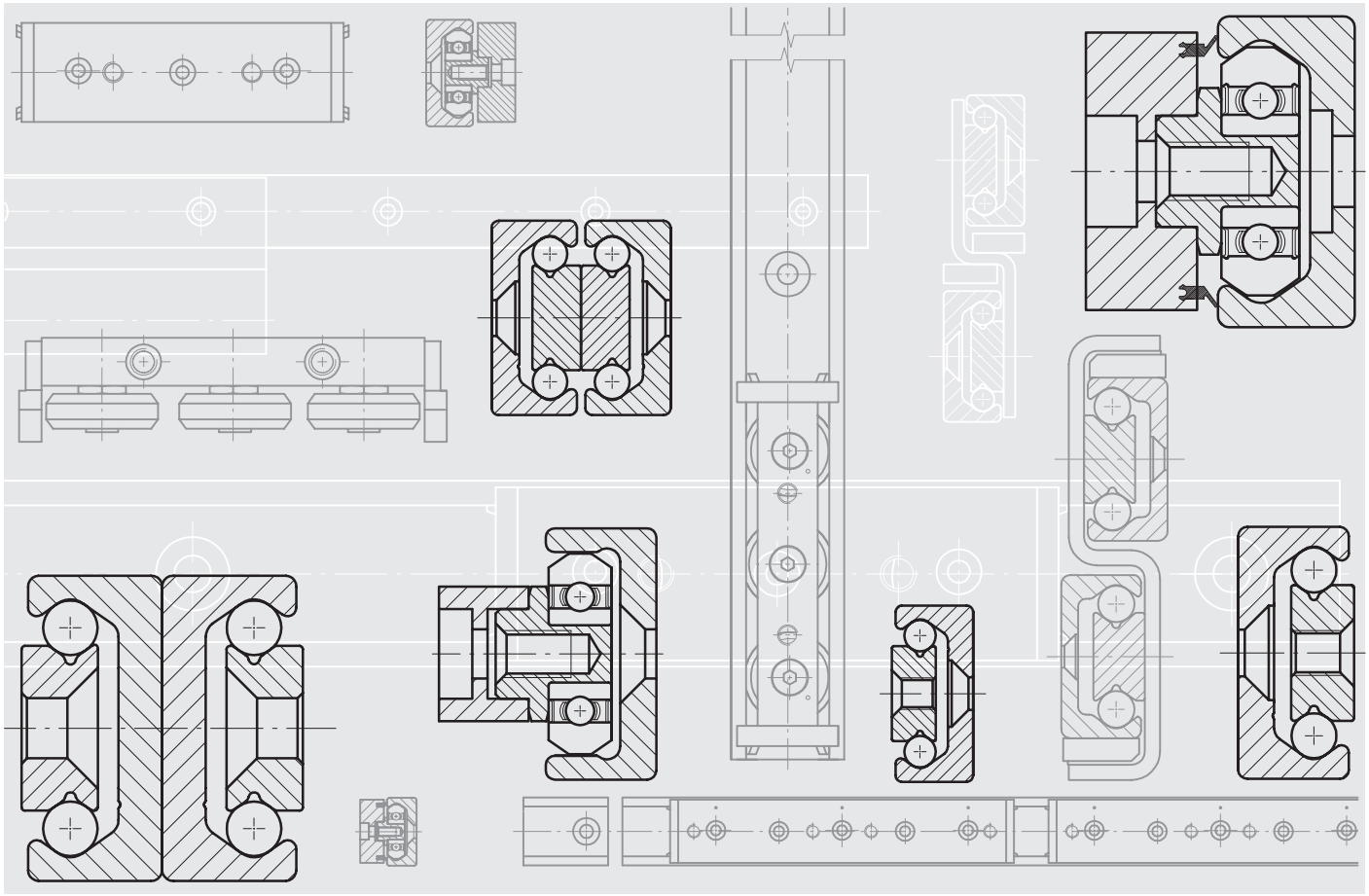
IBC



Linear Motion Bearings

TI-I-7010.0 / E

Headquarter of the IBC Wälzlager GmbH at the industrial area of Solms-Oberbiel

Location with Tradition

The headquarters in Solms-Oberbiel is centrally located in Germany close to the North/South and East/West highways which also provides for a central location in Europe. The international Airport Frankfurt approx. 80 km away serves as a worldwide link.

Precise Logistics provide an unequaled worldwide reliability

Flexible and Reliable

In the middle of 1996 we opened the central computer controlled high shelf warehouse with more than 2.000 pallet places. It is used for finsihed and semi-finished products as well as for large bearings. This is in addition to our existing two-storage computer controlled service warehouse also with more than 2.500 storage places.

Both warehouse systems provide together with our distribution centre and communication network precise logistics and a worldwide unequaled reliability.

Central Computer Controlled
High Shelf Warehouse – Middle 1996

New plant in Asslar

Precision with Future…

We are future orientated.
We have the creativity and vision to perform and provide.
This is our exact presentation to solutions with precision.

IBC Linear Motion Bearings

Besides the well known and proven product range of rotative bearings, IBC also offers linear motion bearings as a C shaped profile that has tracks on its inner side. This results in a very compact and space-saving system which can still be used when outside-leading systems require too much space. In general, there are following two designs: Telescope linear motion bearings and linear motion bearing-run carriage systems.
IBC linear motion bearings are not only used in machine tools and in robots, but are also found more and more in the automotive area and carriage building area as well as in medical technology, in X-ray machines and in the electrical industry. Requirements on linear motion bearings are just as various as the different kinds of application are within these sectors. When it comes to handling and automation or with transport systems the most important aspect is speed, which also means productiveness and at the same time low power demand. In the machine tool sector the most important aspects are stiffness and easy running. The choice of the correct type of guidance depends on conditions like load, speed, lift and acceleration as well as on factors of influence such as temperature, lubrication, vibration, servicing and installation.

Constant quality controls, which are integrated within the manufacturing process, ensure a consistently high level of quality of all our products. Our efficient quality management system is implemented and certificated for the design, development, manufacturing and distribution of bearings and linear guides according to DIN EN ISO 9001:2000.
Detailed information on different bearing designs as well as on the choice of the correct bearing type and its safe integration into individual constructions are listed in our corresponding product catalogues. For a complete overview of these catalogues, review the last page of this brochure.
Due to our extensive product range and to the worldwide support of our customers on site by our service and technical departments we are able to create specific and economic bearing solutions, in cooperation with our customers, for their bearing situations.

Areas of application:

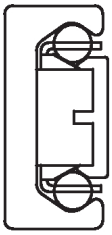
- Machine tool industry
- Printing machine industry
- Automotive suppliers
- Mechanical machine engineering and plant construction
- Packaging machine industry
- Aerospace machine industry
- Paper machine industry
- Medical technology
- Railway supply industry

IBC Telescope Linear Motion Bearings

The guiding consists of a profile rail on the outer side in which a ball-guided inner profile rail runs. The balls roll in linear raceways, thus enabling movement of the inner profile within the outer profile and therefore an extraction. Both inner profiles as well as outer profile is equipped with running grooves. The rolling elements ensure a steady transmission of forces that is low in friction and has a high degree of stiffness. The profiles can be customised for clearance, zero backlash or for preload.
As the track is integrated inside the profile rail, it is protected from dirt as well as from vibration, therefore preserving easy running features. The compact design of IBC telescope linear motion bearings favour their application in narrow construction spaces.
The inductive hardening process of the running surfaces enables high loading capacities without reducing the fatigue life. Nevertheless, the inductive hardening process ensures that the toughness of the material core remains. Another advantage lies in the noiseless run, even under high loads and high operating speeds. This reduces the noise pollution within the workplace.
Furthermore, the assembly-friendly design of IBC telescope linear motion bearings clearly reduces maintenance times as well as dead times and therefore leads to cost savings. Beside application within the machine tool sector, typical ranges of application are in engineering and in apparatus engineering, in metal processing, in transportation and storage as well as in handling systems.
IBC telescope linear motion bearings are available as partial extract as well as full extract designs and in different guidance lengths, reaching from 130 mm to 1970 mm to meet individual requirements. On account of wide ranged standardisation, these telescope linear motion bearings are available from stock or at short notice.

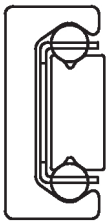
LCE 28H LCE 43

The movement of the slide takes place within the rail. The slide is shorter than the guiding rail and is not extendable. More than 100 possible combinations and solutions can be achieved due to a large variety of different standard lengths of rail and runner.



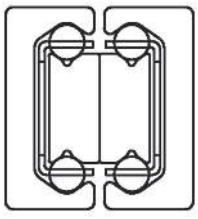
LCAE 28H LCAE 43

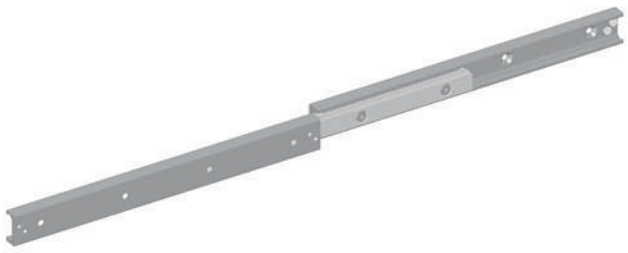
The slide length of this design is identical with the length of the guide rail. Movement of the slide achieves a stroke that is larger than half of the rail's installation length. The dismantling of the locking screw enables mutual extraction.



LCAD 28H LCAD 43

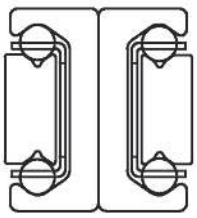
This design consists of two rails from the series LCAE. The stroke, however, is slightly longer than the actual installation length.





LCAH 28H LCAH 43

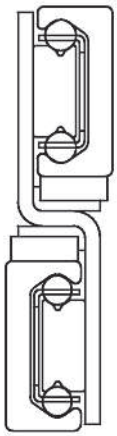
This design is reached by joining the basic profiles which leads to a double T-profile. Great stiffness as well as excellent radial load ratings marks these series. Apart from this, the achievable stroke of the movable rail is larger than the length of the closed telescope. For convenient mounting, the slides are delivered with threaded holes, with countersunk drill holes or combined.



IBC Telescope Linear Motion Bearings

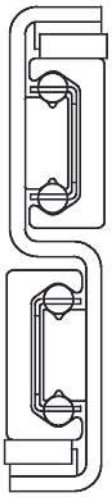
LCAZ 28H.E LCAZ 28H.D
LCAZ 43.E LCAZ 43.D

The interprofile of this series is formed by a Z profile. Within this design there is either the variation E with a single-sided stroke or C with a double-sided stroke. Small installation dimensions with high load ratings are typical for these series.



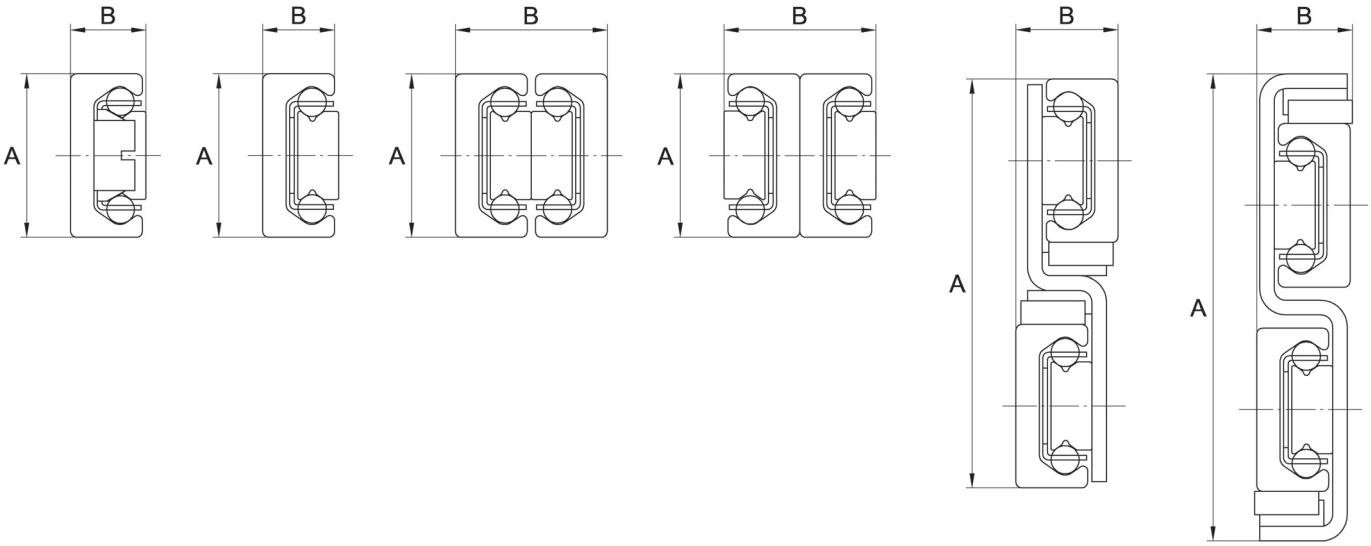
LCAS 28H.E LCAS 28H.D
LCAS 43.E LCAS 43.D

In comparison to the Z profile, it was possible to increase load ratings and stiffness by improving the interprofile, which is designed as an S shaped profile. In this case, we also offer variations with single-sided or with dual-sided stroke.



Technical data:

Dimensions: from 28 x 13 to 43 x 117 mm
Load ratings: from 244 N to 17585 N
Shifting speed: up to 0.8 m/sec
Guidance lengths: Guidance lengths are available from 130 mm to 1970 mm.



LCE LCAE LCAD LCAH LCAZ LCAS

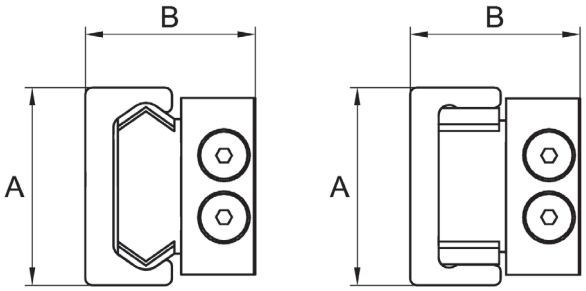
IBC Linear Motion Bearing-run Carriage System

IBC linear motion bearing-run carriage systems allow a reliable and economic linear movement of machine parts. Their specific characteristics are long-term and maintenance-free operation, long service life, dynamic running behaviour as well as noiseless running behaviour, resulting in a low noise level at the workplace. These qualities make IBC linear guides an essential component for highly efficient, maintenance-free and safe machines with low power demand.
IBC produces compact linear guides, which are easy to assemble on roller basis in an expanded construction kit system in two different overall sizes and in several designs.
Two different ways of attaching the rail systems are available. Cylindrical countersinks enable precise positioning of the track system. Conical countersinks are used where there are low precision requirements and where a quick assembly is of greater importance.

Guides with fixed bearings and with floating bearings need no preparation and are able to compensate available parallelism faults within connection constructions.
The profile rails of linear guides are made of high-quality quenched and tempered steel and are protected against corrosion. The track rollers are manufactured out of bearing steel 100Cr6.
The tracks of the series 28H and 43 are hardened inductively, which leads to a high fatigue life, even with heavy loads. The inductive hardening process preserves the toughness of the material core. The profile 28H shows advancement towards the previous profile 28; the stiffness has been improved and an increase of load ratings has been achieved by reinforcement of the bars. On customer request, the tracks can also be delivered with a ground finish.
All these issues are indicators for an economic, reliable and productive product.

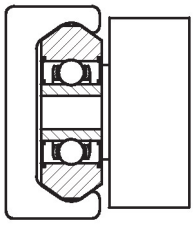
Technical data:

Dimensions: from 28 x 24.1 to 43 x 37.5 mm
Load ratings: from 1815 N to 6480 N
Shifting speed: up to 7 m/sec
Guidance lengths: Guidance lengths are available from 240 mm to 3600 mm.



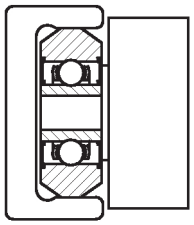
Fixed bearing system

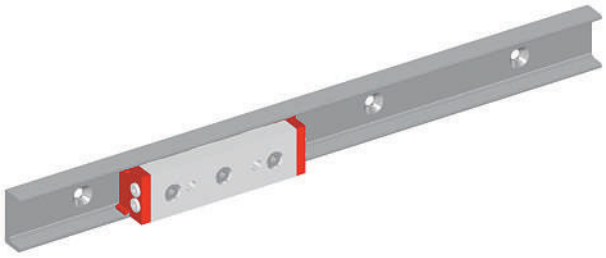
LCX28H-1120.V/1/CN-21.2RS.AX



Floating bearing system

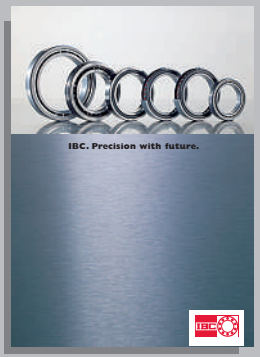
LCU28H-1120.V/1/CN-21.2RS.AU





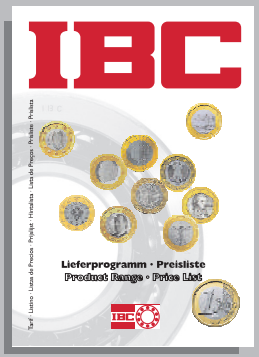
Linear guides of the size 28H.
Rail length 1120 mm.
Sealed version CN has 1 slider type CN with seals.
Rollers have service life lubrication with 2RS sealing.
A wiper system protects the track from dirt.

More of IBC …

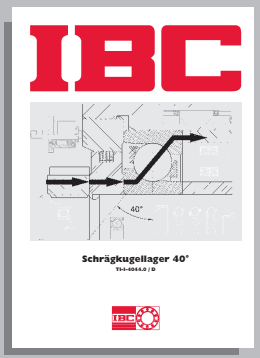


Company Profile
(German)
(English)

Product Range
Super Precision Bearings
T1-I-5000.0 / D (German)
T1-I-5000.0 / E (English)
T1-I-5000.0 / I (Italian)



Product Range
Price List



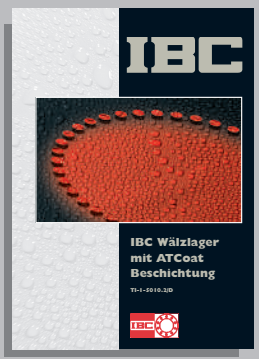
Angular Contact Ball
Bearings 40°
T1-1-4044.0 / D (German)
T1-1-4044.0 / E (English)

Precision Locknuts
T1-I-5020.0 / D (Deutsch)
T1-I-5020.0 / E (English)

Telescopic Rails
T1-1-7005.1 / D (German)

Ball Screw Support Bearings
TI-I-5010.2 / D (German)
TI-I-5010.2 / E (English)

Super Precision Bearings
Service Catalog
T1-1-5003.1 / D (German)
T1-1-5003.1 / E (English)



ATCoated Bearings
TI-1-5010.2 / D (German)

IBC WÄLZLAGER GMBH

INDUSTRIAL BEARINGS AND COMPONENTS

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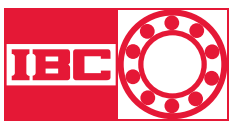

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