THOMAS REGOUT
INTERNATIONAL B.V.

Installation Manual

Installation Manual
Supreme

solutions in movement

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We produce heavy duty slides to be used in fields where high load capacities, reliability, low deflection and smoothness of movements are important. This allows the design engineers an opportunity to creatively use our slides for best solutions in various applications. They can be used in a multitude of applications fields and in many different configurations.

TECHNICAL DESCRIPTION; OPTIONS AVAILABLE; SURFACE TREATMENT; MOUNTING RECOMMENDATIONS; MAINTENANCE;

Heavy duty slides adjusted to your need

Wide varieties of slides (more than 70 types) are available with load capacity from few kilos to more than 3.000 kilograms. The performance characteristics given in this catalogue correspond to standard manufacture.

We can offer optional lengths, drillings, diameters and hole centers, as wel as various fixing options.

Big variety of dimensions

Standard slides are produced in different lengths from 150 mm to 2600 mm depending on the type of the slide and the size of the main profile.

Material

Our steel slides are processed with milling, from cold drawn material in quality C45E+C in accordance with EN 10277.

Standard ball cages are manufactured from zinc plated sheet metal.

Standard balls used are carbon steel C85, G100 in accordance with DIN 5401.

Large choice of extensions

We produce large selection of sliding rails:

- **Full extension**
  (The extension length “T” is equal to the installation length “L”)

- **Over extension**
  (The extension length “T” is bigger than the installation length ”L” depending on the type, given in a separate table for each type of slides)

Selection can be made among various assemblies, some of them are compatible with double extension (“two way movement”- an extension towards the front or the back of the fixed profile).

The length of extension can be adjusted to the conditions of use or customers requirements and is made in relation to the length of the ball cages. It can be reduced or increased up to 110% of the extensions given in this catalogue.

Tolerances

General manufacturing tolerances of our slides conform to js 13 standard for drillings and the lengths, while the straightness is 1 mm / m and the twisting effect is 1° / m

Surface treatment

Slides are plated with electrolytic zinc with Cr III passivation, as per ISO 2081 confirming to RoHS. Layer thickness average 12 µm (minimum 10 µm). No appearance of white corrosion products after 120 hours or base metal corrosion (red rust) after 240 hours testing in according to ISO9227.

On request we can deliver yellow zinc plating.

Temperature

Standard working temperatures are from -30 to + 110 °C. Beyond this temperature range, special adaptations should be made to obtain smooth performance like the use of specific grease for high or low temperatures.

Load capacity

We offer high load capacity slides with compact dimensions.

The maximum safe load capacity is given for a fully extended pair of slides, mounted on the major axis, with a load spread uniformly along the inner beams.
The working loads given in this catalogue include a high safety margin enabling the slides to operate in most applications.
The safe working load depends on the extension, the type of slide and mounting type as well as the frequency of use. This means that increased extension limits the safe load, whereas a reduced extension enables it to increase its performances.
In case of mounting the slides on the minor axis, it is advisable to reduce the safe working load by around 40% depending on the slide. Mind that deflection will increase substantially.

The load capacities are based on a 1% deflection test based on a simulation model (Finite Element Analysis) .

Load capacity in practice always depends on mounting use and other external factors that can influence this.

Stops

Internal stops are provided to stop sections and ball cages. Please use external stops for a system under full load.

Ball cage migration

Slides can have ball cage migration, depending on operating speeds, stroke etc. Always fully extract and retract the slides and/or make sure the automated system has enough power to do so under load. Alternative: plan additional max stroke to prevent ball cage migration.

Deflection

Deflection is a non permanent deformation measured in mm's when the slides are uniformly loaded, fully extended and mounted on the major axis. With a mounting on the minor axis, the deflection will be increased.

Maximum deflection of our slides is 1% of the closed length.

Opening and closing force

The required actuation forces of a telescopic rail depend on the acting load and the deflection in the extended state. The force required for opening is principally determined by the coefficient of friction of the linear bearing. With correct assembly and lubrication this is 0,01. During the extension, the force is reduced with the elastic deflection of the loaded telescopic rail. A higher force is required to close a telescopic extension, since, based on the elastic deflection, even if it is minimal, the movable rail must move against an inclined plane.

Recommended speed

The limits of maximum speed are determined by the mass of the intermediate member which must be pulled by the moving member. The speed diminishes with the increasing length of the slide.

Recommended speed of use of the slides is 0.3 m/s.

Mounting

Our slides are robust and reliable, manufactured for standard use and should be mounted on the major axis, per pair with a uniformly distributed load.

This is the rule for good mounting:

1. Make sure that the slides are parallel and mounted on the major axis
2. Use all the fixings provided
3. Make sure that mounting surfaces are flat and even
4. Apply uniformly distributed load
5. Align fronts of the slides

Following the mounting rules will guarantee smooth and steady running of the slides as well as an optimum lifespan.

Notice!!!

When mounting on the minor axis, the load capacity is reduced by 40% compared to the basic load.
Standard slides can not be used for vertical mounting (up and down) overhanging, excessive heat, corrosive environment or dust.

Simple and efficient installation

Within our production program you will be able to find comprehensive data which will allow you efficient and simple installation: lengths, drilling schemes, loading capacity.

Easy maintenance

The design of our slides enables minimum maintenance operation in most environments. Only under extreme conditions of use they will require some complementary maintenance.

Mounting in a polluted environment

Our slides are delivered without a protection device or system against dust, particles, etc.
There is a risk that the presence of impurities in the tracks may rapidly cause jamming, ceasing or premature wear of slides. Therefore it is important to allow slides to be installed in a protected area or to implement the necessary protection measures at the time of the system design.

Maintenance, lubrication of slides

All slides are delivered with a slight lubrication. If necessary, complementary grease can be added to enable an optimal lifespan.

In normal working conditions, it is recommended to lubricate the slides at least every 20.000 cycles although this depends heavily upon the actual conditions and atmosphere of the application.

For critical working conditions, the slides must be lubricated more often.

Before lubricating, the raceways must be cleaned free of any dirt and debris. With the slide in open position, distribute a sufficient quantity of lithium-based medium consistency grease on the races between the inner and outer beam and then in the space between the ball bearings.

In case of use in aggressive conditions (humidity, dust, abrasive materials…) ensure a systematic and regular maintenance with complete cleaning of the slide and lubrication.

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