• ROTATING NUT TR20/60 GROUP WITH COGWHEEL

– The **R/DXR/AB+LXR/RD ... (R)(L)** Group is a manoeuvring element fundamental for linear movements using a trapezoidal screw where there is a necessity for drive transmission directly on the mobile body or machine carriage, with the trapezoidal screw constrained at both ends and unable to turn upon itself. Drive transmission via Cogwheel is normally used in cases in which a coaxial gearmotor is used, as with the pinion and chain system, a system that does not allow the use of paired bevel gears with a common worm gearmotor.

The Group is composed of trapezoidal screw with fixed supports and mobile support LXR/RD having a bronze rotating nut and a steel Cogwheel that is screwed and pinned in place. The flange nut rotates inside the steel support by means of two axial bearings regulated by rings with locking rosette to sustain the push of the load. Housed in the support the nut is guided by bronze/steel contact and as it is well lubricated it guarantees precise radial rotation around the screw over time (see exploded diagram on page 252).

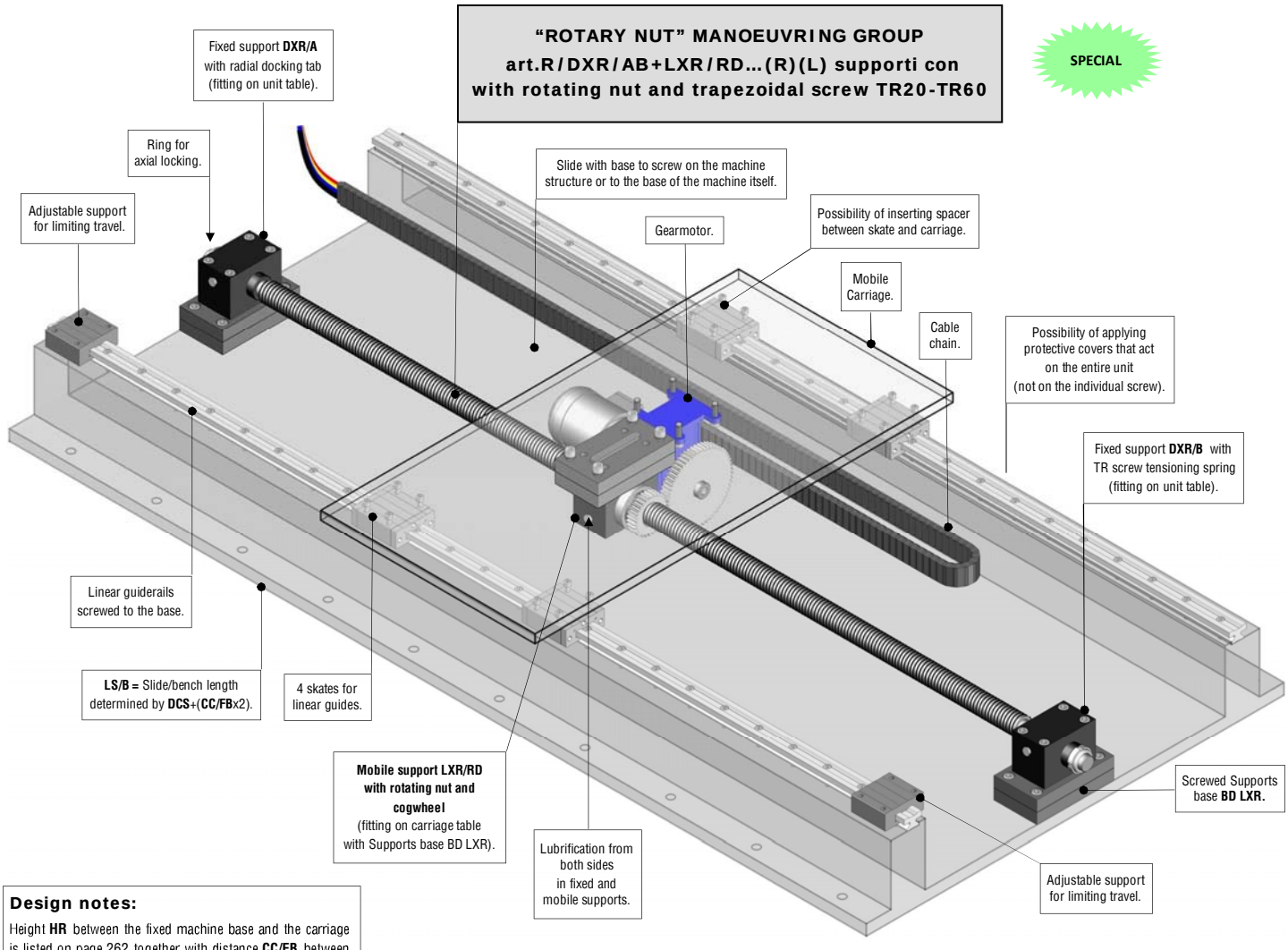
The internal trapezoidal profile of the nut, made with ISO tolerance as is the screw, allows perfect scrolling of the nut in that the rotating parts, including those in contact with the screw profile, are lubricated by a single central lubricator that can be positioned on either side of the support (see lubricants on pages 306-309). The trapezoidal screw, fixed and without any rotation, is constrained at the two ends by **supports DXR/A** and **DXR/B** where the first has the load bearing function and the second allows the tensioning of the screw itself.

When choosing the dimensions of the Group with rotating nut and relative trapezoidal screw, with maximum speeds and vertical dynamic loads, together with type of gearmotor, the same data calculated for the system with rotating screw applies as shown in tables **RN3** and **RN4** on pages 259-261 on which are also described the feasible comparisons between dynamic load in vertical use and dynamic load in horizontal translation. . A special version can be made on request, for horizontal movements when there is a need for **axial play adjustment** and where we can produce a special rotary nut that is longer and on which we fit a mechanical system that allows for extremely easy adjustment. For the rotating nut system lifting vertically/obliquely, again made specially on request, **solution "Safety" with safety nut** is foreseen, and therefore in cases of possible risk of injury or damage caused by the thread profile breaking it is important that during the equipment, or machinery, design stage that these risks are considered and accident prevention solutions be applied to the "standard" system or alternatively use the above mentioned "Safety" nut. Please find on page 233 the technical description of the "Safety" application together with the possibility of using the special nut, above mentioned above, for **axial play adjustment for horizontal use**. Il Our technical office is available for evaluating, advising and carrying out solutions for every individual technical application.

– **The guarantees of functionality and safety are determined by the proper use of the group together with perfect fitting on the machinery with the tabs inserted and the engraved arrows facing the same direction and, if used for vertical/oblique movements, they must face downwards.**

All the Rotary Nut Groups can be purchased pre-assembled, with the Supports inserted on the trapezoidal screw, in such that for mounting on the Manoeuvring Unit no dismantling is required.

• Indicative diagram of Manoeuvring Unit using "Rotary nut" Group with rotating nut and cogwheel.



Design notes:

Height **HR** between the fixed machine base and the carriage is listed on page 262 together with distance **CC/FB** between the centre of the support slot and the edge of the slide/bench.

Group with right threaded components available from stock; with left threaded components made to order.

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- **TRAPEZOIDAL SCREW MANOEUVRING GROUP mod. "ROTARY NUT"- art.R/DXR/AB+LXR/RD ... (R)(L) series 20/60**
- **Trapezoidal screw with maximum length of 100 times its diameter, with predisposition for Rotary nut supports and accessories.**

COMPOSITION OF GROUP WITH THE RELATIVE SUPPORTS:

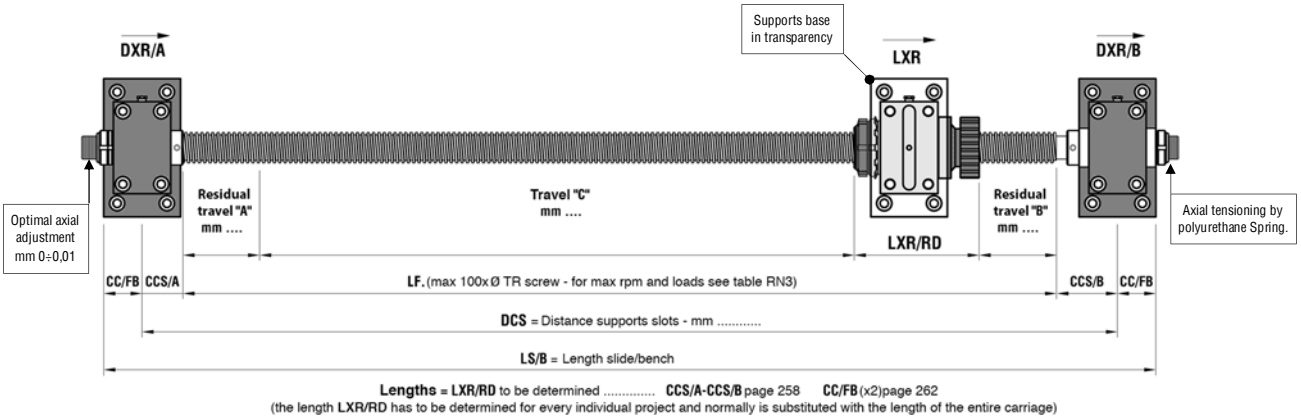
- **Trapezoidal screw** (type and length to be defined)
- **art.DXR/A** Fixed steel support with radial coking tab.
- **art.DXR/B** Fixed steel support with tensioning spring.

Mobile support **art.LXR/RD** assembled with:

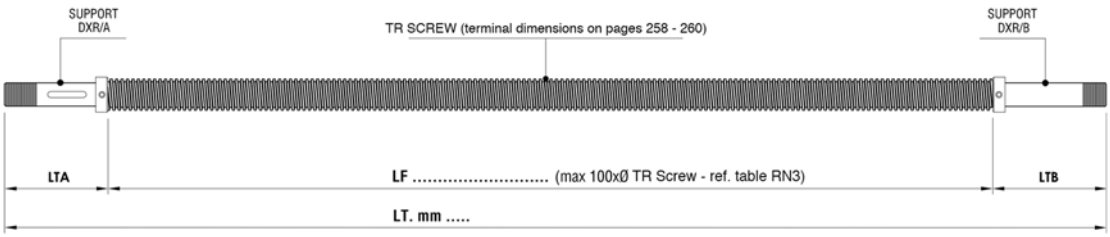
- **CFB/HR** Rotating nut with cogwheel.
- **BD LXR** Supports base.

Fitting diagram of the Group on the slide "Rotary nut Application RN/S" see page 264.

SPECIALE



- **TRAPEZOIDAL SCREW DESIGN made from our IF threaded bar and predisposed for Rotary Nut supports.**



- **For sizing the Manoeuvring Group screw and consequent gearmotor, consult our tables TRN3/RN4 on pages 258 -261 with subsequent compilation of this page quoting the Group in the points indicating "Travel A – Travel B – Travel C" together with the Questionnaire found on pages 64-65.**
- **Please send everything to our technical department for optimizing. For the dimensions of single supports and spare parts please see the following pages.**

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• ROTATING NUT TR20/60 GROUP WITH SIMPLE PINION

– The **R/DXR/AB+LXR/PS ... (R)(L)** Group is a manoeuvring element fundamental for linear movements using a trapezoidal screw where there is a necessity for drive transmission directly on the mobile body or machine carriage, with the trapezoidal screw constrained at both ends and unable to turn upon itself. Drive transmission via Pinion and chain is normally used in cases in which a coaxial gearmotor is used and where the distance between the gearmotor and the rotating nut is notable and does not consent the use of paired bevel gears and a worm gearmotor.

The Group is composed of trapezoidal screw with fixed supports and mobile support a having a bronze rotating nut and a simple steel Pinion that is screwed and pinned in place. The flange nut rotates inside the steel support by means of two axial bearings regulated by rings with locking rosette to sustain the push of the load. Housed in the support the nut is guided by bronze/steel contact and as it is well lubricated it guarantees precise radial rotation around the screw over time (see exploded diagram on page 250).

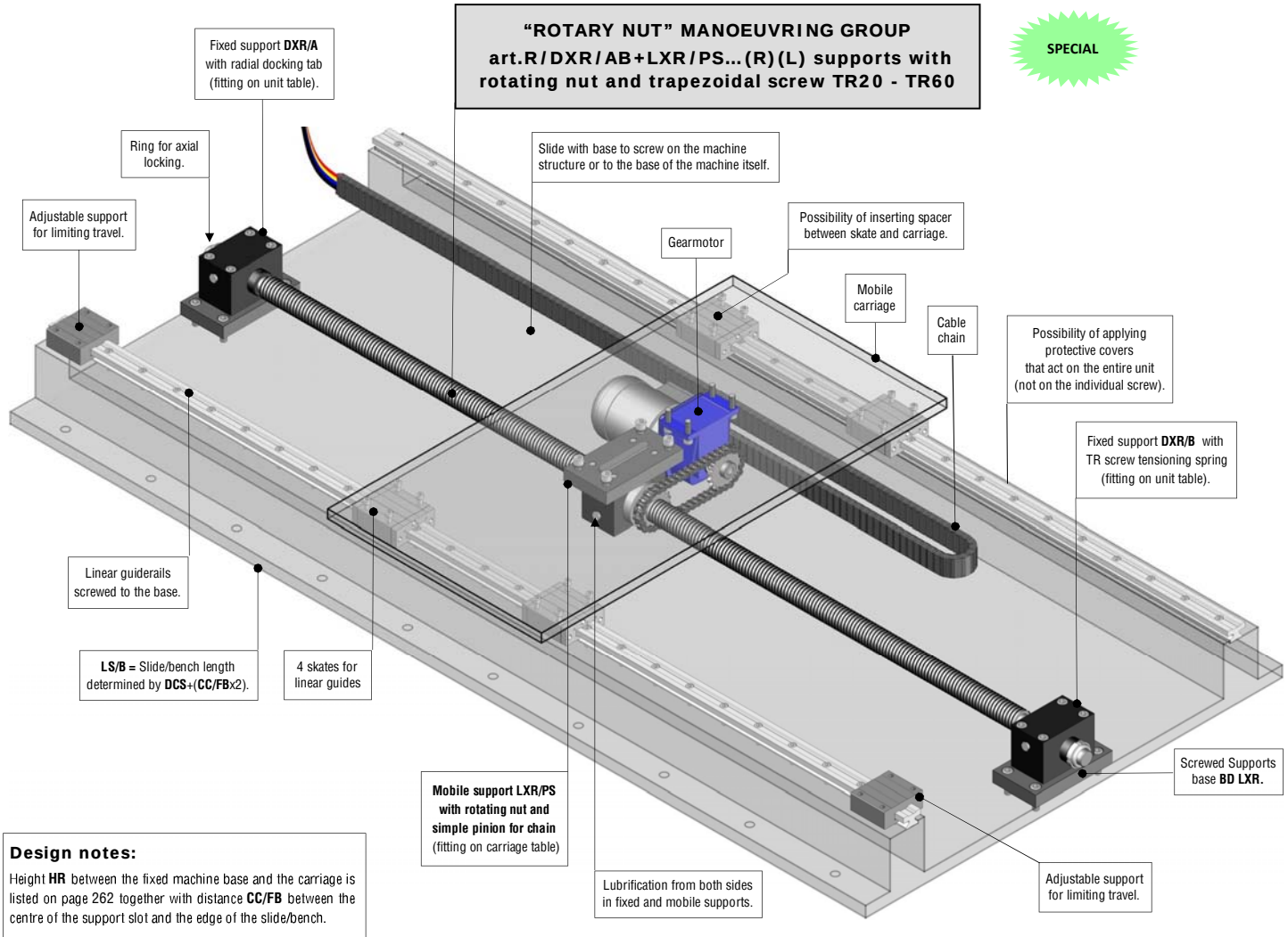
The internal trapezoidal profile of the nut, made with ISO tolerance as is the screw, allows perfect scrolling of the nut in that the rotating parts, including those in contact with the screw profile, are lubricated by a single central lubricator that can be positioned on either side of the support (see lubricants on pages 306-309). The trapezoidal screw, fixed and without any rotation, is constrained at the two ends by **supports DXR/A** and **DXR/B** where the first has the load bearing function and the second allows the tensioning of the screw itself.

When choosing the dimensions of the Group with rotating nut and relative trapezoidal screw, with maximum speeds and vertical dynamic loads, together with type of gearmotor, the same data calculated for the system with rotating screw applies as shown in tables **RN3** and **RN4** on pages 259-261 on which are also described the feasible comparisons between dynamic load in vertical use and dynamic load in horizontal translation. . A special version can be made on request, for horizontal movements when there is a need for **axial play adjustment** and where we can produce a special rotary nut that is longer and on which we fit a mechanical system that allows for extremely easy adjustment. For the rotating nut system lifting vertically/obliquely, again made specially on request, **solution "Safety" with safety nut** is foreseen, and therefore in cases of possible risk of injury or damage caused by the thread profile breaking it is important that during the equipment, or machinery, design stage that these risks are considered and accident prevention solutions be applied to the "standard" system or alternatively use the above mentioned "Safety" nut. Please find on page 233 the technical description of the "Safety" application together with the possibility of using the special nut, above mentioned above, for **axial play adjustment for horizontal use**. Il Our technical office is available for evaluating, advising and carrying out solutions for every individual technical application.

– **The guarantees of functionality and safety are determined by the proper use of the group together with perfect fitting on the machinery with the tabs inserted and the engraved arrows facing the same direction and, if used for vertical/oblique movements, they must face downwards.**

All the Rotary Nut Groups can be purchased pre-assembled, with the Supports inserted on the trapezoidal screw, in such that for mounting on the Manoeuvring Unit no dismantling is required.

• Indicative diagram of Manoeuvring Unit using "Rotary nut" Group with simple Pinion for chain.



Design notes:

Height **HR** between the fixed machine base and the carriage is listed on page 262 together with distance **CC/FB** between the centre of the support slot and the edge of the slide/bench.

For others uses see examples on the following pages.

Group with right threaded components available from stock; with left threaded components made to order.

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- **TRAPEZOIDAL SCREW MANOEUVRING GROUP mod. "ROTARY NUT"- art.R/DXR/AB+LXR/PS ... (R)(L) series 20/60**
- **Trapezoidal screw with maximum length of 100 times its diameter, with predisposition for Rotary nut supports and accessories.**

COMPOSITION OF GROUP WITH THE RELATIVE SUPPORTS:

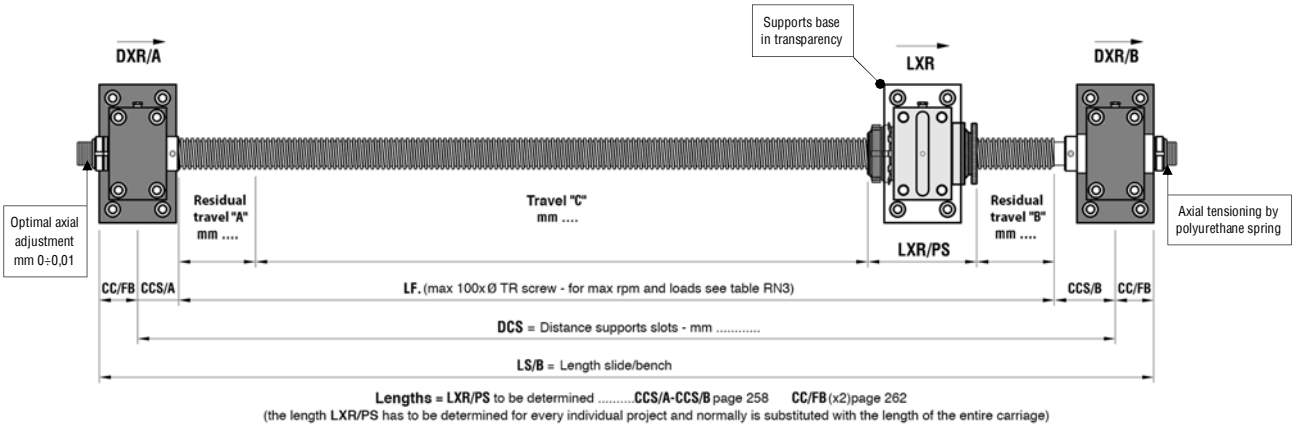
- **Trapezoidal screw** (type and length to be defined)
- **art.DXR/A** Fixed steel support with radial coking tab.
- **art.DXR/B** Fixed steel support with tensioning spring.

Mobile support **art.LXR/PS** assembled with:

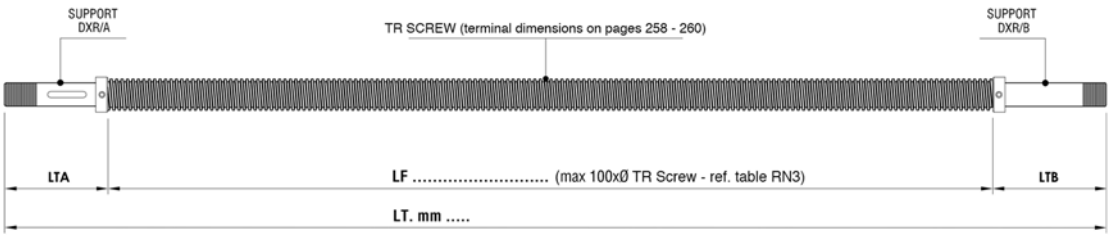
- **CFB/HR** Rotating nut with simple pinion.
- **BD LXR** Supports base.

Fitting diagram of the Group on the slide "Rotary nut Application RN/S" see page 264.

SPECIALE



- **TRAPEZOIDAL SCREW DESIGN made from our IF threaded bar and predisposed for Rotary Nut supports.**



- **For sizing the Manoeuvring Group screw and consequent gearmotor, consult our tables TRN3/RN4 on pages 258 -261 with subsequent compilation of this page quoting the Group in the points indicating "Travel A – Travel B – Travel C" together with the Questionnaire found on pages 64-65.**
- **Please send everything to our technical department for optimizing. For the dimensions of single supports and spare parts please see the following pages.**

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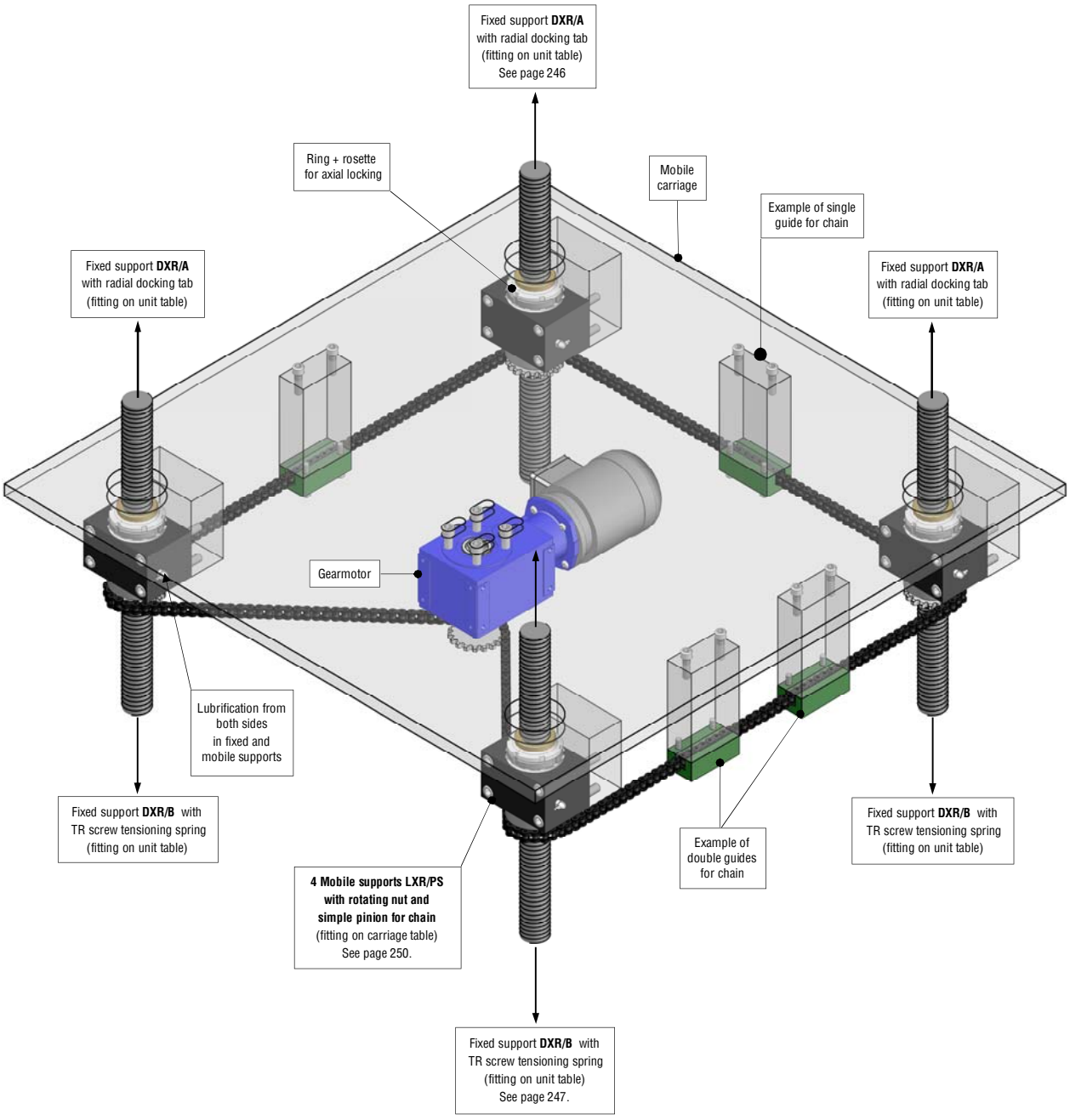
- **Indicative diagram of Manoeuvring Unit for "vertical use" of R/DXR/AB+LXR/PS4 ... (R)(L) Groups with trapezoidal screws, rotating nuts and simple pinions for roller chain.**

The diagram below is an example of a mechanical construction of a platform uniformly moveable in height by means of four supports with rotating nuts and simple chain pinions by which the drive is transmitted from the gearmotor (or manually). The four trapezoidal screws, fixed and tensioned at both ends, using supports **DXR/A** above and **DXR/B** below, allow the creation of a mechanism where the screws themselves have the double function of supporting the load and guide it during vertical movement. At the machine design stage you need to evaluate the relationships between the load to be moved, the length of the screws in relation to the distance to be travelled and the dimensions of the mobile carriage that determine the distance between the screws. With this information you can consult our technical office to determine the size of the screws and the rotating nuts required.

SPECIAL (INDICATIVE)

"ROTARY NUT" MANOEUVRING GROUP art. R/DXR/AB+LXR/PS4...(R)(L) supports with rotating nut and trapezoidal screw TR20 - TR60.

EXAMPLE OF LIFTING AND LOWERING GUIDED BY FOUR TRAPEZOIDAL SCREWS



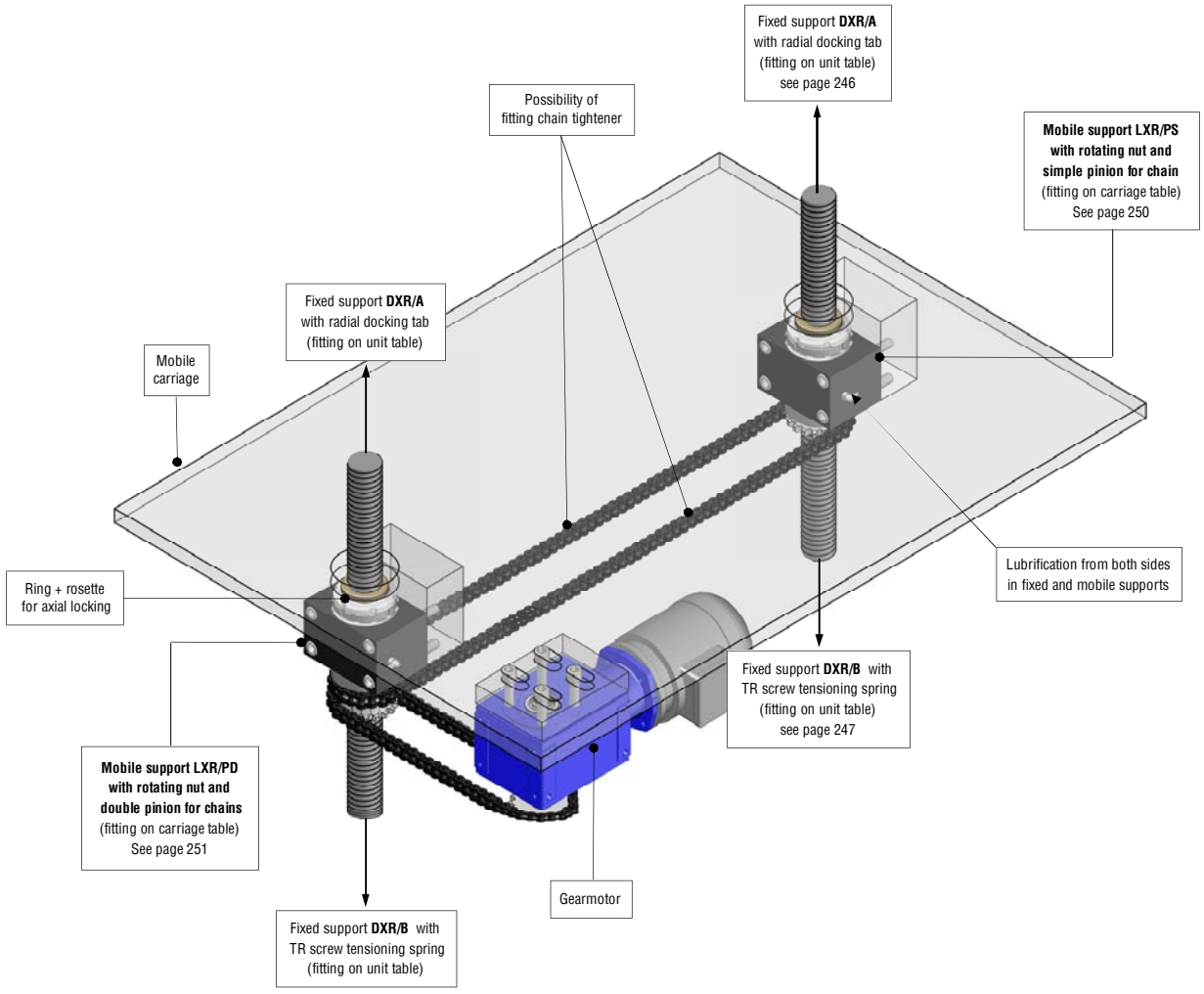
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- **Indicative diagram of Manoeuvring Unit for "vertical use" of R/DXR/AB+LXR/PS+PD ... (R)(L) Groups with trapezoidal screws, rotating nuts and simple pinions for roller chain**

The diagram below is an example of a mechanical construction of a platform uniformly moveable in height by means of two supports with rotating nuts and simple chain pinions by which the drive is transmitted from the gearmotor (or manually). The two trapezoidal screws, fixed and tensioned at both ends, using supports **DXR/A** above and **DXR/B** below, allow the creation of a mechanism where the screws themselves have the double function of supporting the load and guide it during vertical movement. Whenever the platform has to support uneven loads it is evident that the mechanism will require additional guides. At the machine design stage you need to evaluate the relationships between the load to be moved, the length of the screws in relation to the distance to be travelled and the dimensions of the mobile carriage that determine the distance between the screws. With this information you can consult our technical office to determine the size of the screws and the rotating nuts required.

SPECIAL (INDICATIVE)

"ROTARY NUT" MANOEUVRING GROUP art. R/DXR/AB+LXR/PS+PD...(R)(L) supports with rotating nut and trapezoidal screw TR20 - TR60.



EXAMPLE OF LIFTING AND LOWERING GUIDED BY TWO TRAPEZOIDAL SCREWS

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