



LIMITADOR DE VELOCIDAD/
OVERSPEED GOVERNOR/
LIMITEUR DE VITESSE/
GESCHWINDIGKEITSBEGRENZER/

QUASAR-T25

INSTRUCCIONES DE USO Y MANUTENCIÓN/
INSTRUCTIONS FOR USE AND MAINTENANCE/
INSTRUCTIONS D'USAGE ET ENTRETIEN/
GEBRAUCHS- UND WARTUNGSANLEITUNG/



EU TYPE-EXAMINATION CERTIFICATE

According to annex IV part A of Directive 2014/33/EU

Certificate number:	ATI / LV / 007	rev: 1
Notified Body:	TÜV SÜD ATISAE S.A.U. Avda. de los Artesanos, 20 E 28760 Tres Cantos MADRID (ESPAÑA) ID number: 0053.	
Product:	Safety Component Overspeed Governor (LV)	
Type:	QUASAR (onboard)	
Manufacturer:	DYNATECHS DYNAMICS & TECHNOLOGY, S.L.U. P.I. PINA DE EBRO, SECTOR C, PARCELA 9 E 50750 PINA DE EBRO (ZARAGOZA)	
Certificate Holder:	DYNATECHS DYNAMICS & TECHNOLOGY, S.L.U. P.I. PINA DE EBRO, SECTOR C, PARCELA 9 E 50750 PINA DE EBRO (ZARAGOZA)	
Date of submission:	11.03.2021	
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Test laboratory & report:	Please refer to tech. annex section 2.17.	
Directive:	Directive 2014/33/EU of 26 February 2014	
Standards of reference:	EN 81-20:2020; EN 81-50:2020;	
Report number ¹ :	8102221623 (04.05.2021)	
Expiry date:	Indefinite. (Please refer to tech. annex section 2.19)	
Statement:	The safety component allows the lift on which it is installed to satisfy the health and safety requirements of the Lifts Directive when it is used within the scope, as well as under the installation conditions that are set up in the technical annex to this certificate. This certificate consists of this cover, a technical annex with 3 pages and 1 enclosed document. It shall be reproduced with all its pages and documents to be considered valid.	

¹ other applicable reports in section 2.21 of the technical annex



DAS / 000092-1

Bruno Cano Hernández
Director Técnico de Elevación

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INSTRUCTIONS FOR USE AND MAINTENANCE

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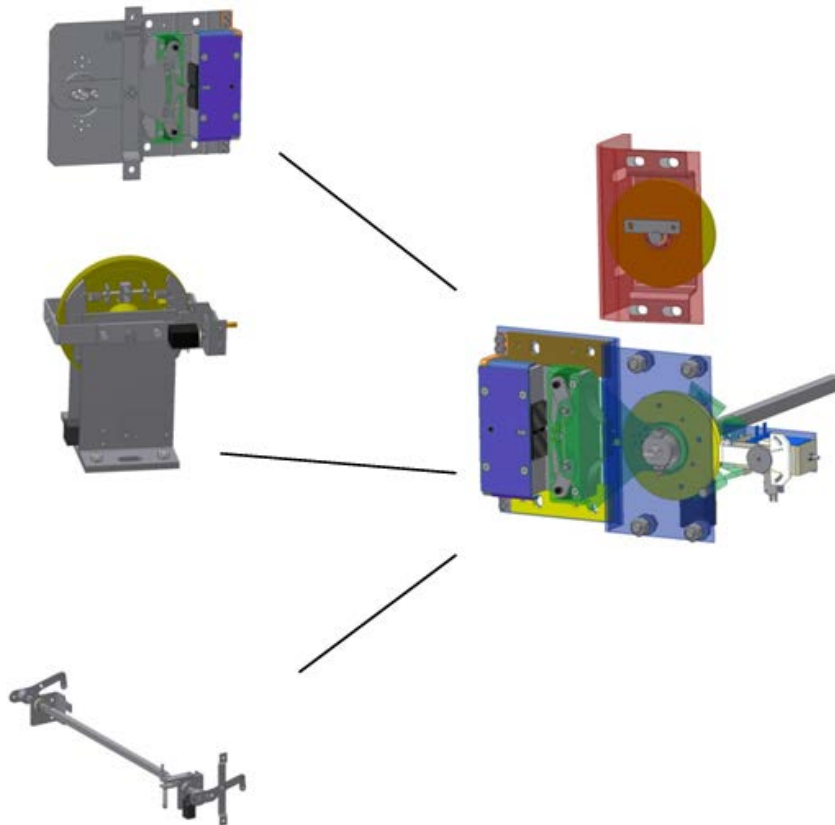
1 GENERAL INSTRUCTIONS

Quasar T25 emerges from the combination of three Dynatech's products: Quasar governor, ASG safety gear and its T-25 steering mechanism.

Quasar governor is a small governor (120 mm of diameter for a 4-mm rope). It was designed so as to save space.

Quasar-T25 is an easy to install Governor-Safety Gear hybrid since its anchoring holes are the same as ASG-T25's ones.

This way, the installation of safety equipment is made easier for customers since they have three components in one.



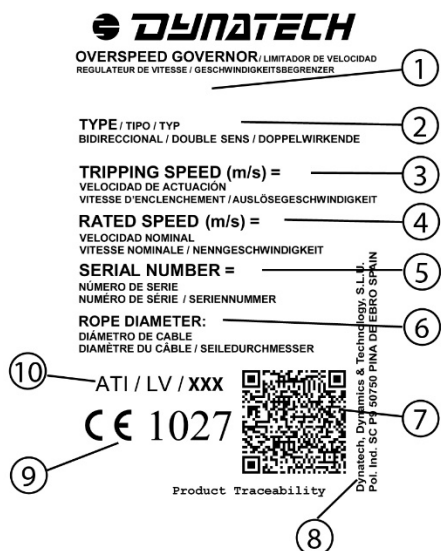
Quasar-T25 houses the governor and steering mechanism along with some tensioning devices.

It is strictly forbidden:

- a) To modify or replace the overspeed governor adjustment spring.
- b) Use an overspeed governor in a lift for which it is not intended, or whose features do not correspond to those marked on the lift (e.g. nominal speed or rope type).
- c) To adjust any component of the overspeed governor, except for those parts specified in the manual.

DYNATECH DYNAMICS & TECHNOLOGY, SL will not be liable for any damage caused by failure to observe any of these general conditions.

2 OVERSPEED GOVERNOR IDENTIFICATION



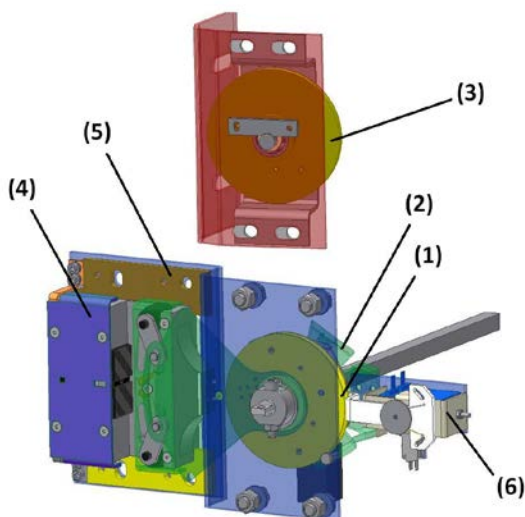
OVERSPEED GOVERNOR IDENTIFICATION LABEL			
1	Governor model	6	Rope diameter (mm)
2	Governor type	7	QR product traceability code
3	Performance speed (m/s)	8	Dynatech address
4	Rated speed (m/s)	9	Quality assurance CE marking and notified body number
5	Serial number	10	EU type examination certificate number

3 MAIN COMPONENTS.

A diagram including Quasar-T25's main components is displayed below.

Where:

- (1) Main Pulley.
- (2) Locking system
- (3) Diverter pulley.
- (4) Safety gear
- (5) Steering mechanism and attachment
- (6) Anti-creep system / Remote tripping



4 WORKING PRINCIPLES.

4.1 LOCATION AND INSTALLATION

Quasar governor is of a centrifugal type and may operate both moving **downwards** and **upwards**.

In the Quasar – T25 configuration, the governor is incorporated along with the steering mechanism and the safety gear. The governor's locking part is mechanically coupled to the steering mechanism's shaft, therefore, when the governor interlocks, the locking part rotate the steering mechanism's shaft and the latter operates the safety gear.

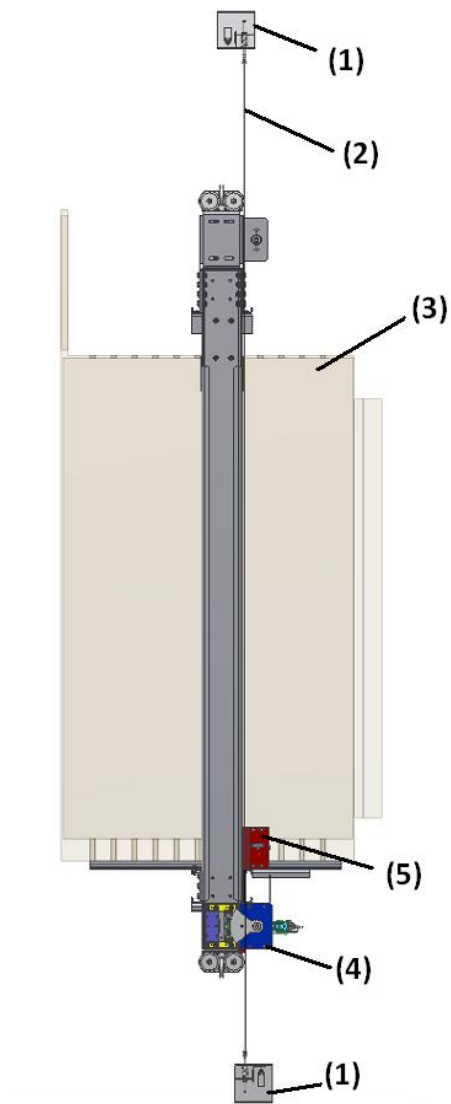
The governor in the Quasar-T25 assembly is of the "on-board" type. This means that the governor travels along with the car and the rope remains static (unlike a conventional governor).

The rope is in an open circuit, both ends being tensed by spring-tensioning devices.

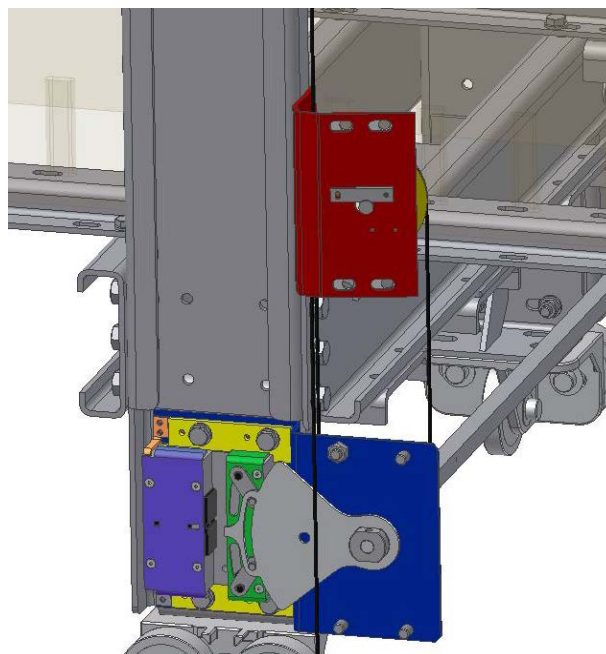
The assembly is anchored to the frame's upright by four screws. The return part will be anchored to the upright at the height determined by the installer.

A diagram of the unit assembly is displayed below.

- (1) Spring tensioners
- (2) Governor's rope
- (3) Lift's car
- (4) Quasar-T25
- (5) Diverter pulley



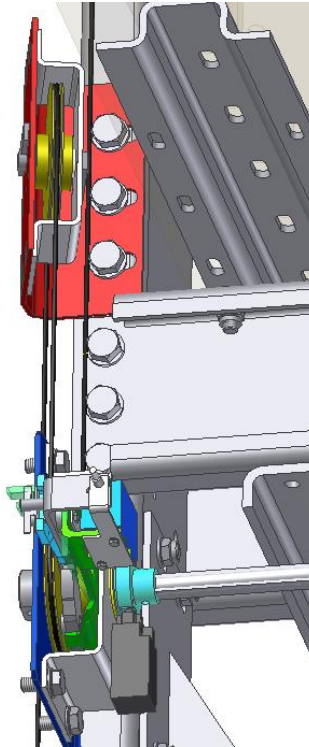
The following picture displays a close-up of the assembly anchored to the frame.



As can be seen in the figure, the Quasar-25 assembly is anchored by using four M12 8.8 screws (the length of the screw will depend on the frame's upright thickness).

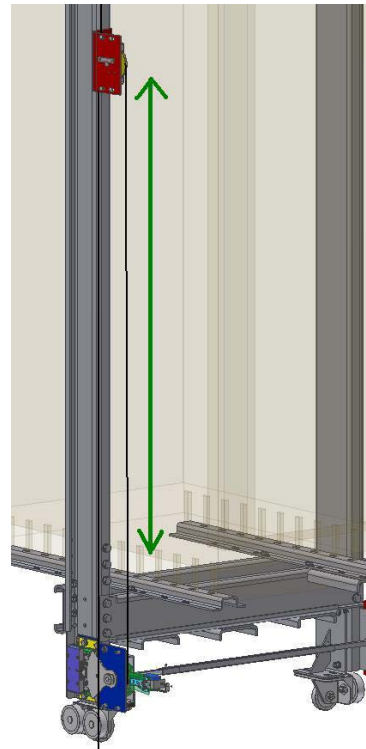
The picture displays a close-up of the return part's fixing.

Three M14 8.8 screws are used for anchoring. Their length will depend on the upright's plate thickness.



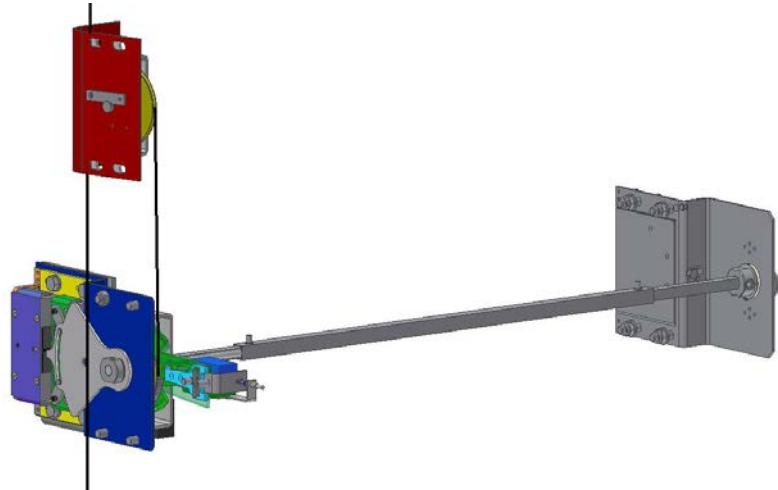
This return part is independent from the main part; therefore, it may be fitted at the height you wish.

It should also be noted that the return part may either be fitted above or below the Quasar-T25 assembly. (See section 4.1.1 in this manual).

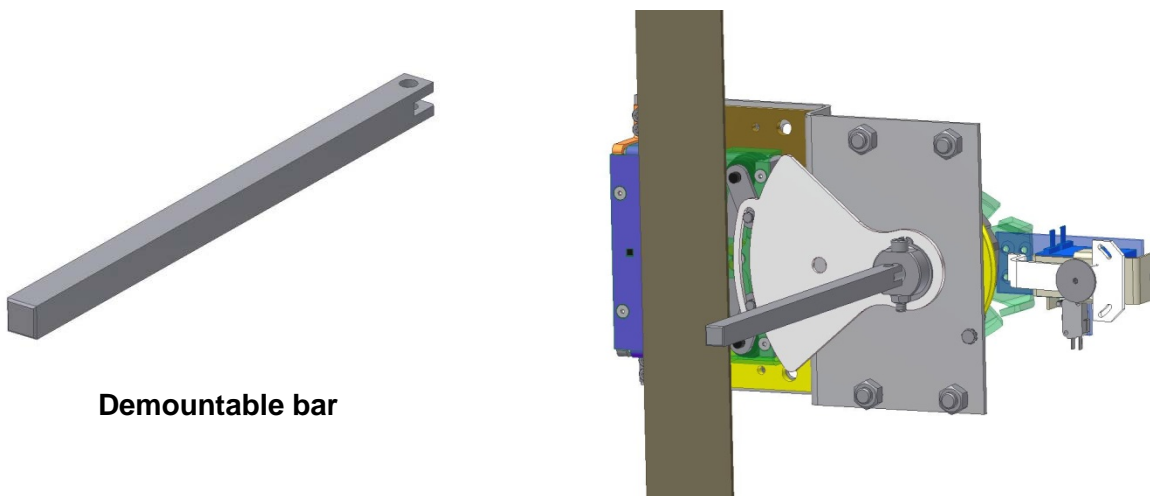


The drawing on the right displays the entire Quasar-T25 assembly attached to the other ASG-T25 via a coupling bar.

Quasar-T25 is on the left.



It should be underlined that the assembly is also valid to be fitted onto inverted guide rails; just fit the steering mechanism's shaft onto the other side (See the following figure).



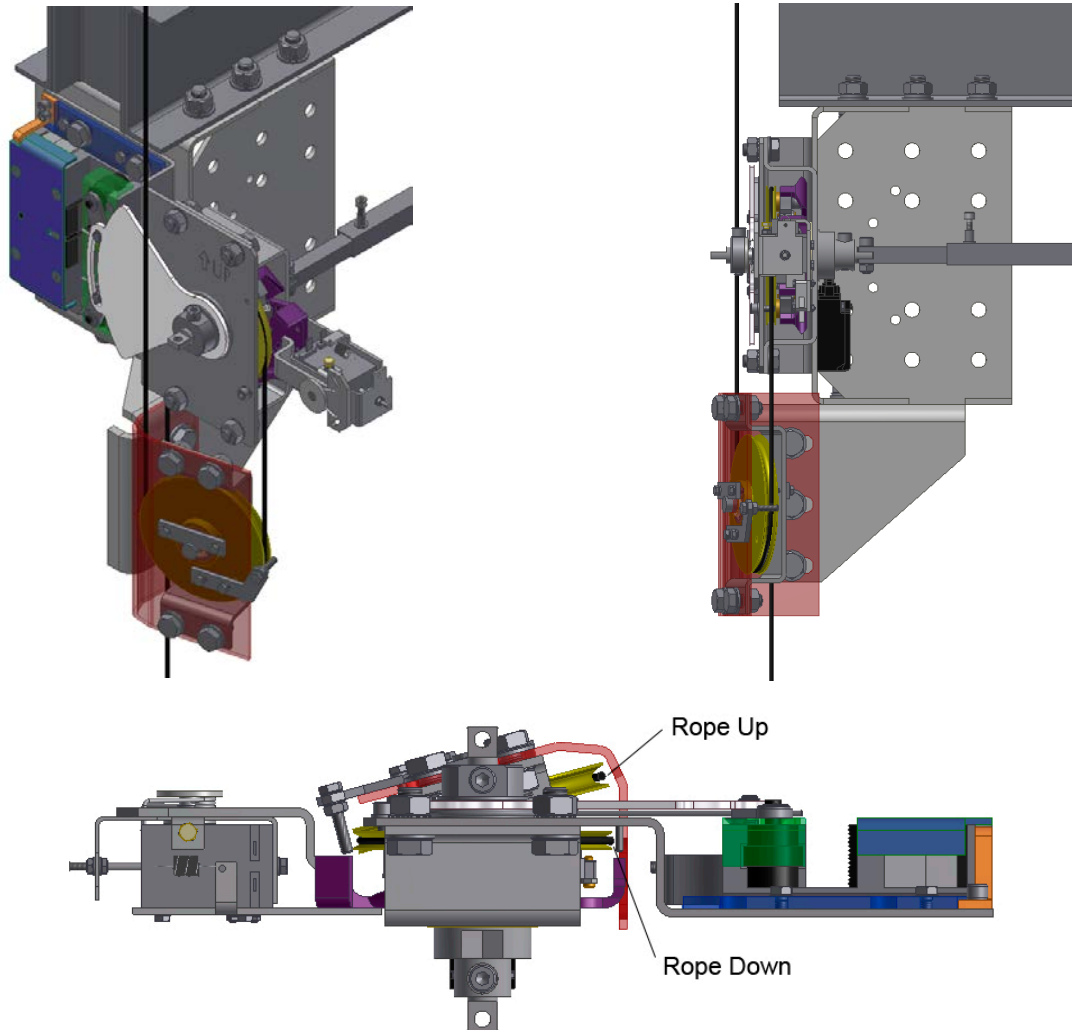
Demountable bar

The range of interlocking rails covered by the Quasar-T25 is from 600 to 3000 mm.

Note: If required, the client may ask for the right-hand Q-T25+ASG unit. If the side is not specified in the order, Dynatech will supply the left-hand speed governor by default.

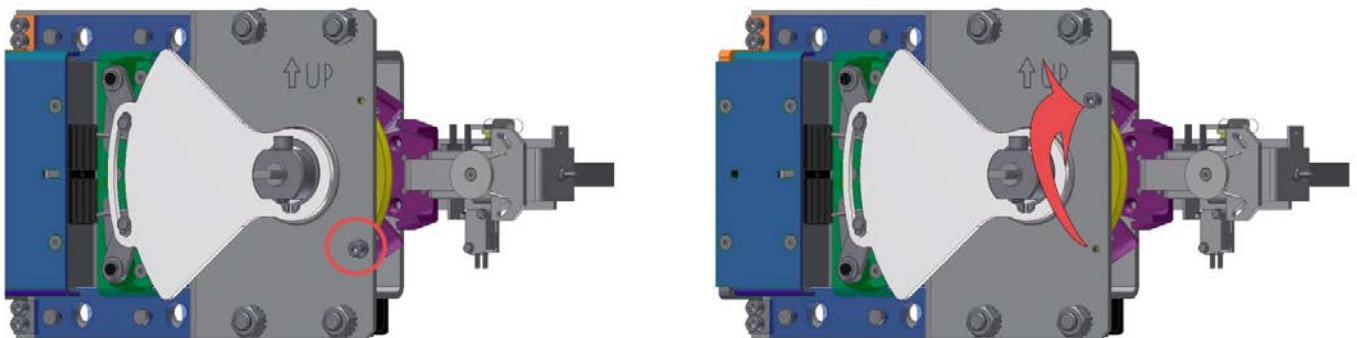
4.1.1 PLACING A RETURN PULLEY UNDER THE QUASAR-T25

As mentioned above, the return pulley can be placed below the main body of the Quasar T-25. The position of the pulley should be as shown in the images below.



Once the overspeed governor rope is assembled on the Quasar T-25 unit with this configuration, check that the main pulley rotates properly to ensure the safety gear operates in both the upward and downward direction.

In general, the Quasar T-25 overspeed governor is factory assembled with a DIN 912 M6x16 screw threaded at the bottom of the Quasar T-25 support (see image on the left). The function of this screw is to ensure the overspeed rope stays within the pulley. When the return pulley is assembled below the main assembly of the Quasar T-25, the screw position must be changed to the hole provided for this at the top of the support, as shown in the right-hand figure of the image.

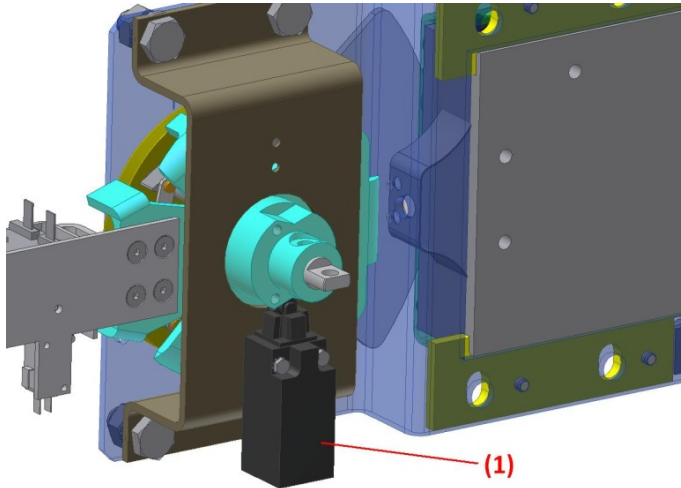


4.2 ROPE AND TENSIONING SYSTEM

For further information on the Quasar T-25's tensioning devices, please refer to the Quasar-T25's Tensioners manual.

4.3 OVERSPEED CONTACT.

The governor incorporates an overspeed contact. Bearing in mind that the governor will be fitted in the car, this is an automatic reset contact. In any case, after an interlocking, the lift must be started by a qualified person without having to directly access the governor.



An image of the overspeed contact's location is displayed below; where (1) the automatic reset contact is located.

Once the governor and, therefore, the safety gear have been interlocked, when unjamming the safety gears, the return spring will return to its initial resting position and, therefore, the overspeed contact will reset on its own.

4.4 REMOTE TRIPPING

The governor incorporates a remote jamming system to check for the correct interlocking of the governor and the subsequent jamming of the safety gear.

It is basically made up of a remote electromagnetic interlocking system that may be operated from the machine room. There are three versions available for the installer to choose at his/her convenience.

- **24 V** DC (Direct current) coil. A **0.47 A** current must be guaranteed.
- **48 V** DC (Direct current) coil. A **0.23 A** current must be guaranteed.
- **190 V** DC (Direct current) coil. A **0.1 A** current must be guaranteed.

4.5 QUASAR LS GOVERNOR

There is a low speed QUASAR governor called QUASAR LS.

Its minimum tripping speed is 0.3 m/s.

This is a UNIDIRECTIONAL governor and its tripping speed range is: 0.3 – 0.65 m/s

It is essential to bear in mind that the governor for these tripping speeds is unidirectional.

4.6 UCM UNCONTROLLED MOVEMENT DEVICE

4.6.2 UCM WARNINGS.

The anti-creep system requires the lift controller to be able to manage the functions that the anti-creep system uses, such as the coil power, control sensor monitoring and manual rescue. If the controller is unable to manage these functions, Dynatech offers the possibility of installing an electronic module, D-Box. For more information, see the website.

If the D-Box is not used, please observe the following warnings and follow the recommendations below for proper controller design.

Note. It is highly recommended that the **controller designer** contacts Dynatech before designing the circuit to manage the anti-creep system, to clarify any doubts regarding connections and to be recommended a specific solution for their installation

- **Locking the overspeed governor** after UCM can be done by either of the following 2 methods: 1) Detecting the UCM or 2) Letting the anti-creep system act.
 - 1) To detect the UCM, either a sensor needs to be placed on each floor or, as is the case with the D-Box, a levelling signal needs to be used. Therefore, if the car creeps with the doors open, the sensor detects it and cuts off the current to the anti-creep system coil, thus locking the overspeed governor.
 - 2) In this case, the anti-creep system clamping device is locked at each floor in the installation. When the lift moves, the anti-creep system coil is excited and releases the overspeed governor. Then, once the car reaches one of the floors, the current to the coil is cut, leaving the anti-creep system in the locked position.
- The D-Box has a feature whereby, when the elevator reaches a floor, **current continues through the coil for a set time**, usually 10 minutes, if the lift does not receive another call. After this time, the anti-creep system locking device is activated. This correction is due to the VDI 4707 Part 1 (German lift energy efficiency standard) which establishes a period of 5 minutes before stand-by.

Thus, the anti-creep system performs fewer on-off cycles, thereby increasing its useful life.

This is helpful in periods when there is heavy traffic, as it prevents the anti-creep system from repeatedly locking and unlocking the overspeed governor.

It must be remembered that a UCM sensor will need to be installed if the anti-creep system works this way.

- **It is recommended to over-excite the coil** with a voltage slightly above nominal for less than one second to ensure the anti-creep system unlocks. Once it is unlocked and the lift begins to move, the supply voltage should be reduced during the journey to lessen the coil heating.

Also, if the choice of keeping the coil excited while the lift is at a floor is taken, the voltage to the solenoid can also be lowered. This saves energy and improves the energy efficiency of the lift.

Below is a table of recommended voltages.

	Over-excitation	Voltage during travel	Voltage at floor
24	30	20	12
48	60	40	30
190	215-205*	150	104

* This is the voltage at the rectifier output, which can vary between the values shown.

- To ensure proper operation of the device, it is advisable to design a circuit such that, if the inductive sensor does not detect the anti-creep system unlocking, the controller **will try more than once to supply current to the coil** (the Dynatech D-Box makes 7 attempts before the error message appears that no reading for the control sensor is detected).

Thus, if there is any mechanical fault preventing the sensor from being read, the same attempts to solve the problem will be made before an error message appears on the controller.

- To prevent the car from stopping due to the loss of the control sensor signal while travelling, it makes a reading only at the floors.
- **In the event of a cut in the electricity supply** to the electric magnet coil when the car is moving, the speed governor will lock and the safety gear subsequently engaged.
The installation of an autonomous power system is recommended to avoid undesired engagement in the event of a cut in the mains electricity supply.
- Open the pin to enable the speed governor to turn for **automatic rescue**. If the pin is not released, the governor will lock and the safety gear will engage during the rescue movement.
- **Use in installations with re-levelling over 20 mm**: in installations with re-levelling over 20 mm, certified switching must be used to activate the electric magnet during the re-levelling process because if it re-levels by more than 20 mm then the governor could lock and the safety gear engage. In this case, the switching must discriminate between re-levelling and an uncontrolled movement.
- Use in installations with door pre-opening: in **installations with door pre-opening**, certified switching must be used to ensure the electric magnet remains activated during the pre-opening process because if the electric magnet does not remain activated then the governor could lock and the safety gear engage. In this case, the switching must discriminate between pre-opening and an uncontrolled movement.

4.6.3 THE PARKING SYSTEM AS REMOTE CONTROL

The parking system can be used as remote control.

Operations are the opposite to those of the parking system, as it unlocks the governor when the lift is running under normal conditions.

The purpose of the remote control system is to lock the governor when the lift is moving. This takes place during engagement tests. On locking the governor, the safety gear is forced to operate.

To do so, a button must be installed on the control panel that disconnects the current to the parking system coil.

As indicated above, the parking system unlocks the governor by powering the solenoid valve in this system. If the governor is to be locked while the car is operating normally, this solenoid valve must be disconnected so that the parking system locks the governor.

There are two options available:

- To install a pushbutton on the controller to disconnect the parking system.
- To install the D-Box. Apart from managing signals for UCM, it also allows using the parking system as a remote tripping device

4.6.4 ANTI-CREEP SYSTEM MAINTENANCE

It is very important that the anti-creep system is in the best possible condition. As it is a mechanism that will perform many cycles over its lifetime, it is advisable to check its condition and operation during lift maintenance.

The anti-creep system should be kept as free of dust and dirt as possible, to ensure the moving parts are not obstructed. It should be checked and cleaned of dirt if necessary. After cleaning, a lubricant should be applied to increase the mechanism life.

The parking system has a translation movement. This movement should be as smooth as possible. For this purpose, the nylon screw (1) rests on the solenoid edge.

Manually check that the system slides smoothly. If necessary, re-tighten the nylon screw so that it rests on the metallic edge of the solenoid.

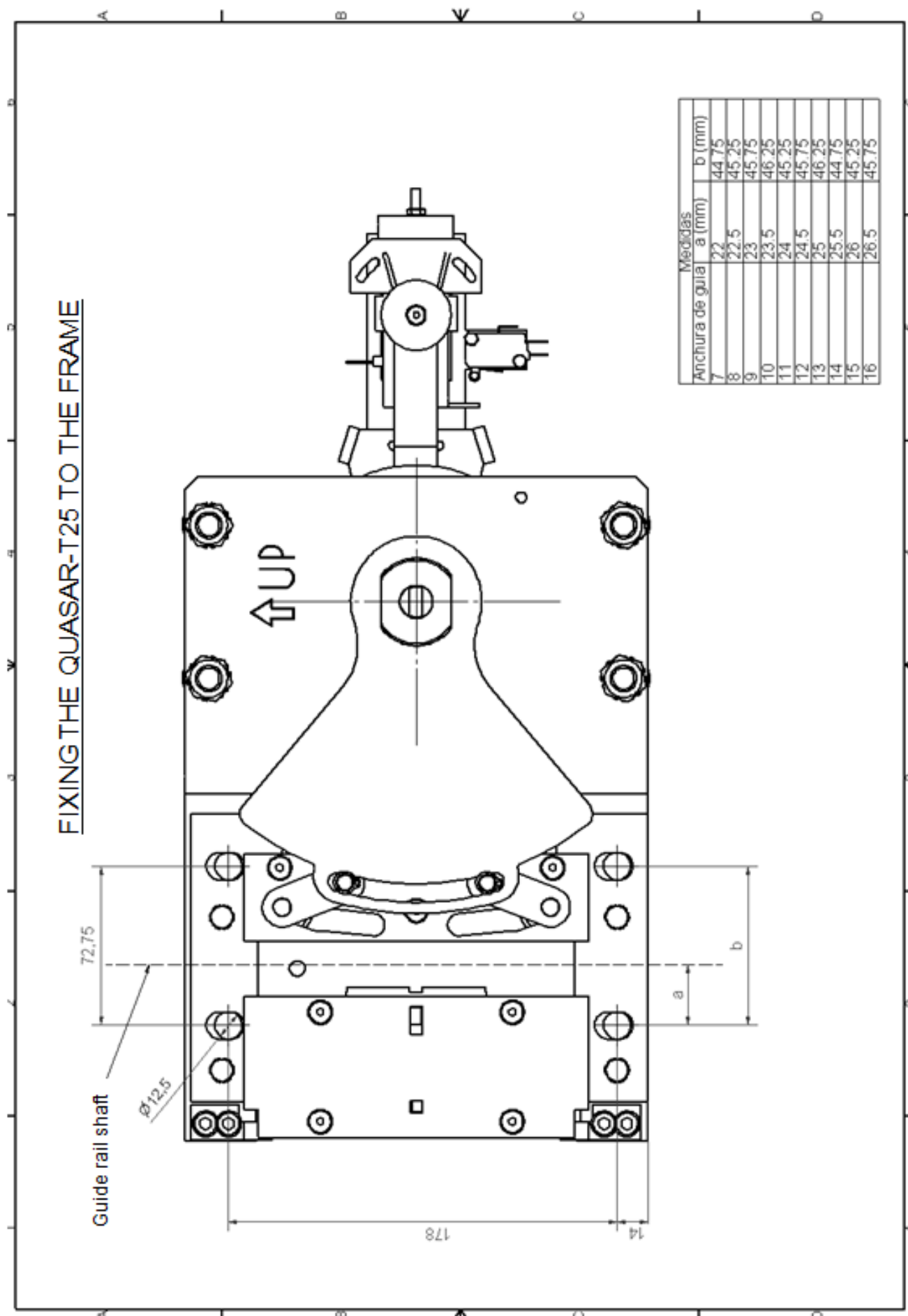
If required, a few drops of lubricant may also be added at this point.

5 FIXING TO THE FRAME

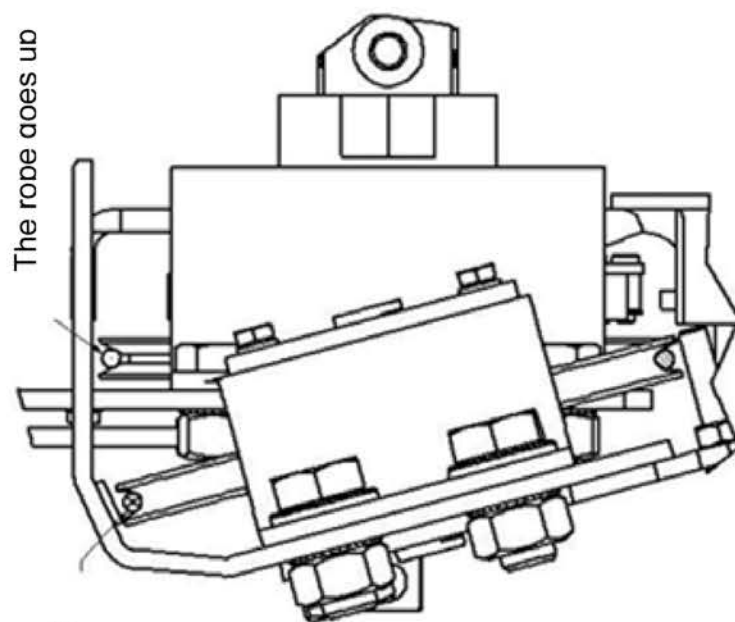
Please find below some pictures and sketches to install the Quasar T-25 unit.

On the one hand, there is the Quasar governor and ASG safety gear assembly and, on the other hand, there is the governor rope return assembly.

FIXING THE QUASAR-T25 TO THE FRAME



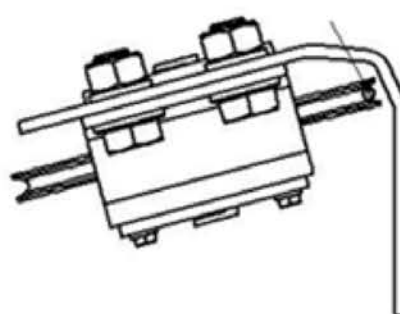
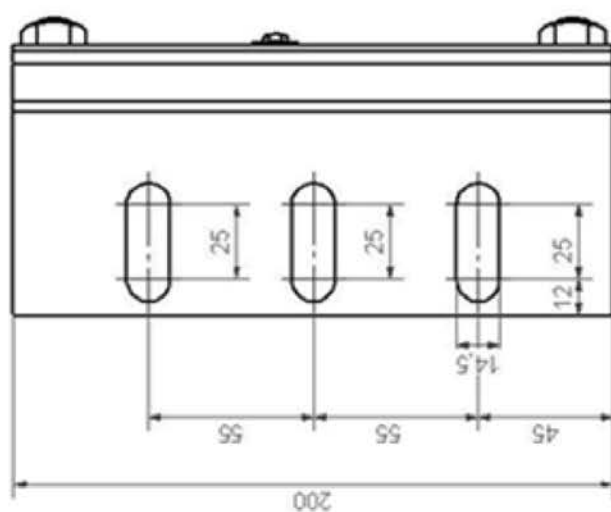
RETURN PART



The rope goes
down

The rope goes up

The return pulley groove coincides
with the main pulley groove



6 TECHNICAL FEATURES

- **Machine:** Overspeed governor + Safety gear hybrid
- **Model:** Quasar-T25
- **Manufacturing company:**
DYNATECH, DYNAMICS & TECHNOLOGY, S.L.
- **Range of use:**
Maximum rated speed: 2.00 m/s
Maximum tripping speed: 2.33 m/s
Minimum rated speed: 0.1 m/s
Minimum tripping speed: 0.3 m/s
From 0.3 a 0.69 m/s, the Governor is UNIDIRECTIONAL
From 0.7 a 2.33 m/s, the Governor is BIDIRECTIONAL or UNIDIRECTIONAL
- **Rope:** DRAKO STX
Diameter: 4 mm,
- **Rope pre-tensioning:**
Via the spring tensioner devices, the following are obtained:
Minimum tension: 491N (below this tension, the contact cuts the safety line).
Maximum tension: 745 N. (The tensioner plate's position determines this tension.)
- **Pulley diameter:** 120 mm
- **Overspeed contact.**
- **Remote unlocking by default:**
- **Anti-creep system to comply with UCM:**
It is recommended to use the D-Box when using this device.
- **Diverter pulley:** To be fitted onto the frame by the customer.
- **Safety gears that may be incorporated into the Quasar-T25 assembly**
ASG-100 / 120 / 121 Series
ASG-100UD / 120UD / 121 UD Series

8 INSTRUCTIONS FOR USE AND MAINTENANCE

Tripping speed in the installation can be checked by operating on the motor's frequency converter; progressively increasing the motor's speed until interlocking occurs.

To prevent unnecessary risks that may cause the incorrect operation of the governor, two essential criteria must be considered: Cleaning and monitoring against corrosion. There are mobile elements in any governor that will perform the interlocking operation. Dirt accumulation in these elements may cause malfunctioning. It is essential that both the installer and maintenance make sure that these components are perfectly clean.

On the other hand, Dynatech governors have anti-corrosion protection in all the cases; however, it is important that maintenance checks if there is a corrosion process that may affect any mobile part of the component and may prevent its natural movement. This will be checked via visual inspection of the surfaces' condition and acting consequently. The frequency of these check-ups is left up to maintenance's criterion; however, they must be more frequent in case the installation is in an especially corrosive environment.

Dynatech cannot be held responsible for any problem or accident arising from the non-compliance of the orders and recommendations mentioned both in these instructions and in the documents concerning the EC type examination certificates.

Please refer to the ASG safety gear series' manual for use and maintenance, for further information on the maintenance and installation of the safety gear.

8.1 STORAGE AND SERVICE LIFE

The overspeed governor must be stored in a cool, dry place. It must be protected from excessive light and never be exposed to the open air.

Storage temperature: 5 - 40°C.

Storage Humidity: 15 - 85% without condensation

Overspeed governor packages should be clean and dry so that they can be clearly identified.

Constantly leaning an unbalanced load on packages, which may cause bending, or the accumulation of products stacked on top of each other is not allowed. When placing products or product packages on top of each other, the storage height should correspond to the packages' load and stability.

If the established criteria of this manual are observed, the overspeed governor's service life is set by the wear of his main pulley groove, which depends on the installation duty cycle. When estimating the element's service life, the effects of grease, dust or dirt due to the shaft's condition or to environmental conditions differing from those stated in this manual, were not taken into consideration.

9 INSTALLATION DRAWINGS.

The following drawings may be useful when adjusting and installing the Quasar-T25 overspeed governor:

- DYN 61.C001.01
- DYN 61.C002.01

