



# EU TYPE-EXAMINATION CERTIFICATE

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

Certificate number:	ATI / LV / 009	rev: 1
Notified Body:	TÜV SÜD ATISAE S.A.U. Ronda de Poniente, 4 ES 28760 Tres Cantos MADRID ID number: 0053.	
Product:	Safety Component Overspeed Governor (LV)	
Type:	STAR	
Manufacturer:	DYNATECH. DYNAMICS AND TECHNOLOGY S.L. P.I. PINA DE EBRO, SECTOR C PARCELA 9 ES 50750 ZARAGOZA	
Certificate Holder:	DYNATECH. DYNAMICS AND TECHNOLOGY S.L. P.I. PINA DE EBRO, SECTOR C PARCELA 9 ES 50750 ZARAGOZA	
Date of submission:	09.06.2022	
Date of type examination:	09.20.2022	
Test laboratory & report:	Please refer to tech. annex section 2.14	
Directive:	Directive 2014/33/EU of 26 February 2014	
Standards of reference:	EN 81-20:2020; EN 81-50:2020;	
Report number: <sup>(1)</sup>	8103622447 (09.20.2022)	
Expiry date:	Indefinite. (Please refer to tech. annex section 2.16)	
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 has a technical annex with reference ATI / LV / 009 R1. This certificate is digitally signed. Only the document issued in format 'pdf' with its signature is legally valid	

<sup>(1)</sup> other applicable reports in section 2.18 of the technical annex



DAS / 000262-1

Jordi Olivera  
LCC Technical Director

TÜV SÜD ATISAE S.A. (Unipersonal). Organismo de Control acreditado por ENAC con acreditación nº 05 / EI 730  
EC12.04F4-EN v.2019-01-31

Sede Técnica: Ronda de Poniente, 4 – P.E. EURONOVA – 28760 Tres Cantos (Madrid) – España

## GENERAL CONDITIONS – INFORMATION TO THE CERTIFICATE HOLDER

- This certificate is the means to ensure the compliance with the procedure for assessing the design phase for the safety component according to clause 15.1.a) or b) of the European Lift Directive 2014/33/EU.
- In order to place the component into the market, the manufacturer shall comply with any of the assessment procedures mentioned in that clause to assess the production phase.
- The holder and the manufacturer of the component shall follow the obligations described in clause 8 of the Lift Directive.
- The CE marking of the component shall follow the rules described by clauses 18 and 19 of the Directive and must be accompanied by the number of the Notified Body intervening in the assessment of the production phase (clause 19.4).
- This certificate is issued in order to make it publicly available, so the holder may be required to deliver a copy to check the technical specifications. In such a case it shall be delivered or reproduced completely with all its pages and drawings.
- If the certificate is extended the certificate number will remain, being modified only the revision number.
- In the event of end of production for the component, the holder shall inform to this Body the effective date when the component is not available to place it into the market.

These conditions are for information only and are not part of the certificate body.

## TECHNICAL ANNEX TO THE EU TYPE-EXAMINATION CERTIFICATE ATI / LV / 009 R1

### 1. Scope:

#### 1.1. Type: STAR

#### 1.2. Brief description:

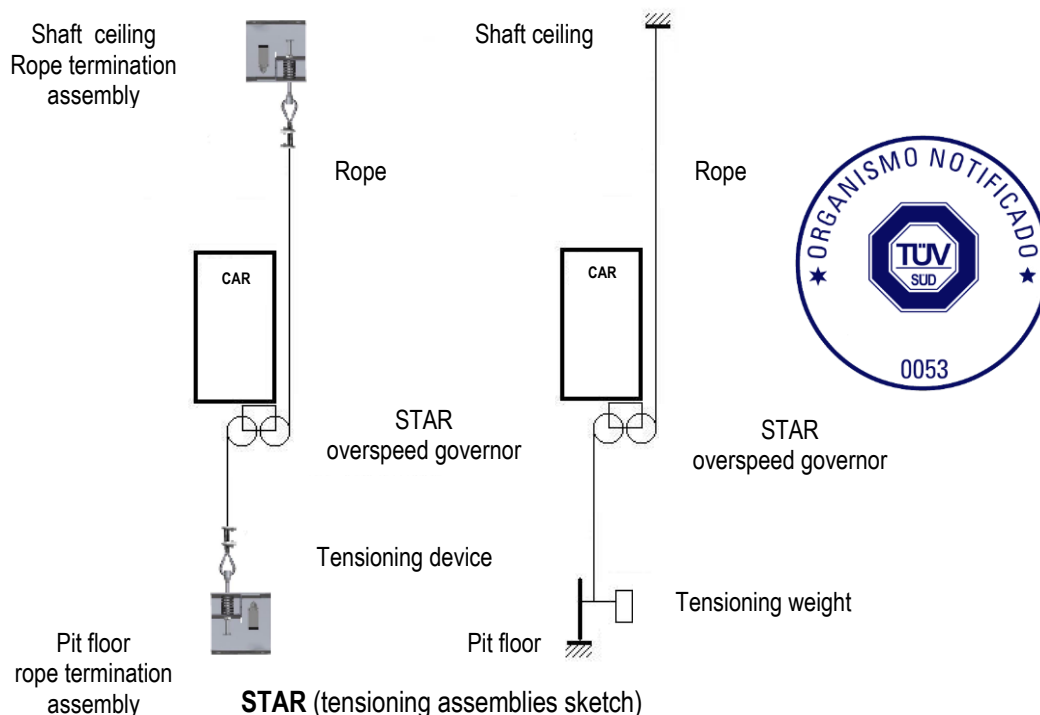
The overspeed governor type STAR is a governor with its pulley and a diverter pulley assembled to the own car frame, so it can travel with the car along the shaft. The governor uses a wire rope with an initial tensioning force in "open circuit" layout with the rope terminations fixed beyond the travelling run ends (deviates from [5.6.2.2.1.3.d])).

The governor has two possible arrangements depending on the terminations of the rope assembly:

- using compressed springs tensioning devices at both terminations, of the rope,
- using a mass tensioning device in the termination at the pit and a termination without spring at the top of the shaft,

The tripping of the safety gear is not provided by the rope itself but with rigid pieces fixed to the governor element dubbed 'star' which rotates when the governor is tripped.

The governor assembly may be located at the upper or lower side of the car.



#### 1.3. Permissible tripping speed <sup>(1)</sup>

only downwards <sup>(2)</sup> 0.35 ÷ 0.93 m/s  
upwards & downwards 0.66 ÷ 2.72 m/s

<sup>(1)</sup> There are three arrangements for several speed range

<sup>(2)</sup> Sub-type STAR LS

#### 1.4. Permissible rated speed

≤ 2.30 m/s

#### 1.5. Pitch diameter of the governor pulley

(Ø6.0) 190.6 mm;

## 1.6. Driving rope:

### 1.6.1. Rated diameter and art:

6.0 mm (6x19)

## 1.7. Minimum tensioning force (Tt/2)

Tensioning system	Tripping direction	Tt/2 <sub>min</sub> [N]	Tt/2 <sub>max</sub> [N]
Tensioning weight	Up & Down	490	-
Spring assembly	Up & Down	450	883

Remark: Maximum tensioning force when using the tensioning system with two springs is also detailed.

## 1.8. Tensile force transmitted to the braking gear at minimum tensioning force:

≥300 N

Remark: Minimum tensile force that the governor's component dubbed 'star' is able to push or pull through a rigid element attached to it at an equivalent distance of the pitch radius of the governor's pulley.

## 2. Remarks.

All clauses mentioned with reference to EN 81-20, unless otherwise indicated.

- 2.1. **Intended use of the device.** The overspeed governor can be used as means of detection for overspeed downwards [5.6.2.2.1], as well as means of detection for overspeed upwards [5.6.6.10.a)]. The governor may be used as UCM tripping device for a stopping element in a protection system against unintended car movement [5.6.7] (up & down operation) [for this purpose the governor may use the so called 'parking system device' as per certificate **ATI/CA005**].
- 2.2. **Sub-types:** There are two subtypes depending on the means providing initial tension to the rope: compressed springs of tensioning mass. Furthermore, there are three sub-models depending on the tripping speed range available with different construction elements: standard (0.77 – 2.72 m/s); Star BV (0.66 – 1.15 m/s) and Star LS (0.35 – 0.93 m/s), the latter only used for downwards operation. Every centrifugal element has a protruding edge at the rear, except for the LS arrangement.
- 2.3. The tripping speed of the governor must be adjusted within the limits of speed required by [5.6.2.2.1.1] depending on the rated speed and the type of safety gear in use.
- 2.4. **Polyamide idler pulley.** When using an idler pulley made out of polyamide, the room temperature in the shaft shall not be above 50° Celsius. In case the foreseeable room temperature reaches that temperature, the pulley shall be periodically inspected in order to control possible deformations.
- 2.5. The Factor of Safety (FoS) shall be calculated following the conditions stated in clause [5.6.2.2.1.3.b)], adapted to the design of operation of the governor, taking into account that it depends on the tensioning force on the rope and the effect of the rope's mass on the tensioning system. The manufacturer is in possession of means able to calculate the Factor of Safety depending on the rope's characteristics.
- 2.6. The governor must have an auxiliary tripping device with remote control in order to carry out the safety gear test.
- 2.7. The electric monitoring [5.6.2.2.1.6] is carried out by an electric safety switch which is reset automatically with the releasing of the safety gears. It must be checked the compatibility of the rated voltage and current for categories AC15/DC13 according to EN 60947-5-1 related to the rated voltage and current of the safety chain. The features of electric safety devices are not assessed for this certification.

The tension of the rope is also monitored. The monitoring switches in the spring-tensioning system are located at both terminations of the rope. These switches are connected in parallel since for the slackening detection function it is necessary that both sides of the rope being slack.



- 2.8. The means transmitting the force to the safety gears linked to the governor's 'Star' is not assessed in this certificate. The installer must ensure an adequate strength of the connection elements between the governor and the safety gear, according to the mechanical requirements of such elements: safety gear and connection elements. The installer shall also ensure, by measuring the required force needed to trip a particular safety gear assembly with its lever and connection to the governor, that the available force of the governor is able to provide at least two times the required according to [5.6.2.2.1.1.d)] and that the stopping of the car is effective with the means provided. The piece dubbed 'star' has a rotation angle when the governor is tripped of 40°. The designer of the safety gear tripping elements shall take into account the distance this rotation is able to provide for the tripping assembly as a maximum. The tripping means shall be able to oscillate in order to follow the rotation.
- 2.9. The pit assembly for the springs tensioning device shall be protected against unintentional hitting. The installer must ensure suitable corroding protection of metallic elements in the pit rope termination due to a foreseeable water leak in the pit and check it periodically. The rope attachments to the hoistway shall be placed in a way such the fleet angle shall not be greater than 5° with the governor located at any height of the travel.
- 2.10. The installer shall respect the initial tensioning limits shown in section 1.7 (springs tensioning assembly). The tensioning system shall be tested in order to check that at least the minimum tensioning force is reached according to the manufacturer's instructions and check it periodically.
- 2.11. The ONLY DOWN tripping governor cannot be used as speed monitoring device for ascending car overspeed protection means. This is because the switch opening is effective when the component called "star" is displaced by the component called "centrifugal". There is an additional rotation angle of the 'star' that allows complying with [5.6.2.2.1.6]. When using this governor sub-type, the safety gears shall be also for ONLY DOWN operation.
- 2.12. When the governor has some of its elements accessible to maintenance personnel located on the car roof, adequate protections against bodily injuries shall be provided. Such protections are not part of this certification. Furthermore, the governor shall be such located that it can be inspected from the car roof or the pit.
- 2.13. It shall be placed an identifiable plate on the overspeed governor with the following items.
- Manufacturer's name,
  - Type-examination mark and its references,
  - The actual tripping speed for which it has been adjusted,

The manufacturer shall also report if the governor is prepared to only downwards operation or for upwards-downwards operation. The plate shall be easily visible from the car roof or from the pit.

**2.14. Test Laboratory.**

Asistencia Técnica Industrial S.A.E. (ATISAE)  
Avda. de los Artesanos, 20  
28760. Tres Cantos MADRID

Lab. de ensayo de componentes de ascensores (LECA)  
Escuela Técnica Superior de Ingenieros Industriales  
Universidad Politécnica de Madrid  
C/ José Gutiérrez Abascal, 2.  
28006 MADRID

**Test report**

MD\_ELV\_070739 (12.11.2007)

2015-031 (12.02.2016)  
2007-004 (18.06.2007)  
2001-013 (08.10.2001)  
2000-014/1 (26.10.2000)





2.15. The following document is enclosed to this certificate.

NUMBER	DATE	TITLE
DYN 09.C01.01	03.05.16	GENERAL DRAWING

This document is enclosed in order to provide identification and information about the basic design of the safety component.

2.16. This certificate has not an expiry date except in case of design modifications, that the manufacturer must communicate to this Notified Body previously to the modifications be effective; changes in the applicable legislation or technical changes in the standards of reference for which the expiry date shall be the deadline provided by the regulation or the date when the standard of reference ceases to provide presumption of conformity.

2.17. **Replacements and modifications.** This component was certified under Directive 95/16/CE with the following certificates and complement reference:

ATI/LD-VA/M109A-3/11 (09.06.2011)

2.18. Other inspection reports issued by TÜV SÜD ATISAE that are applicable to this certificate are:

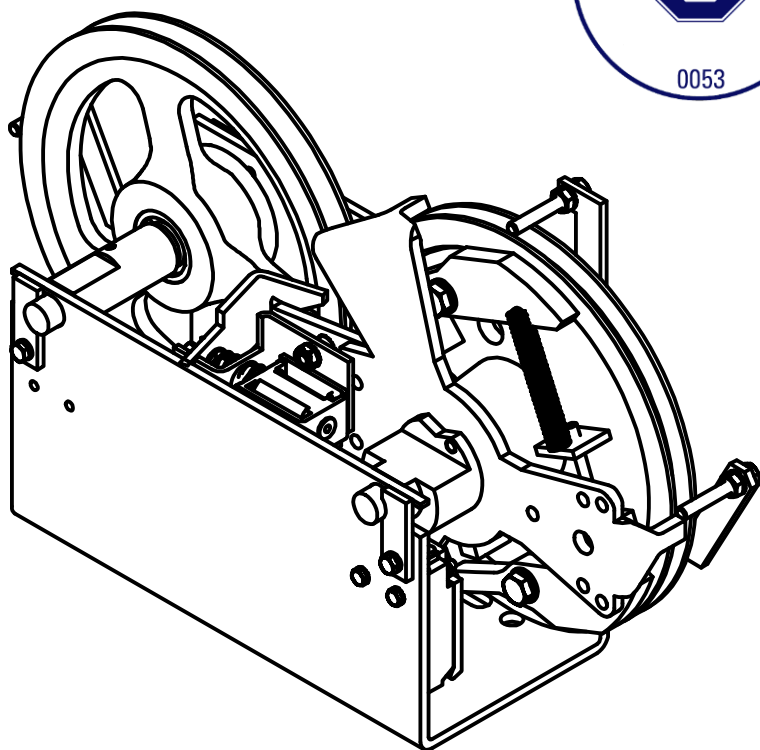
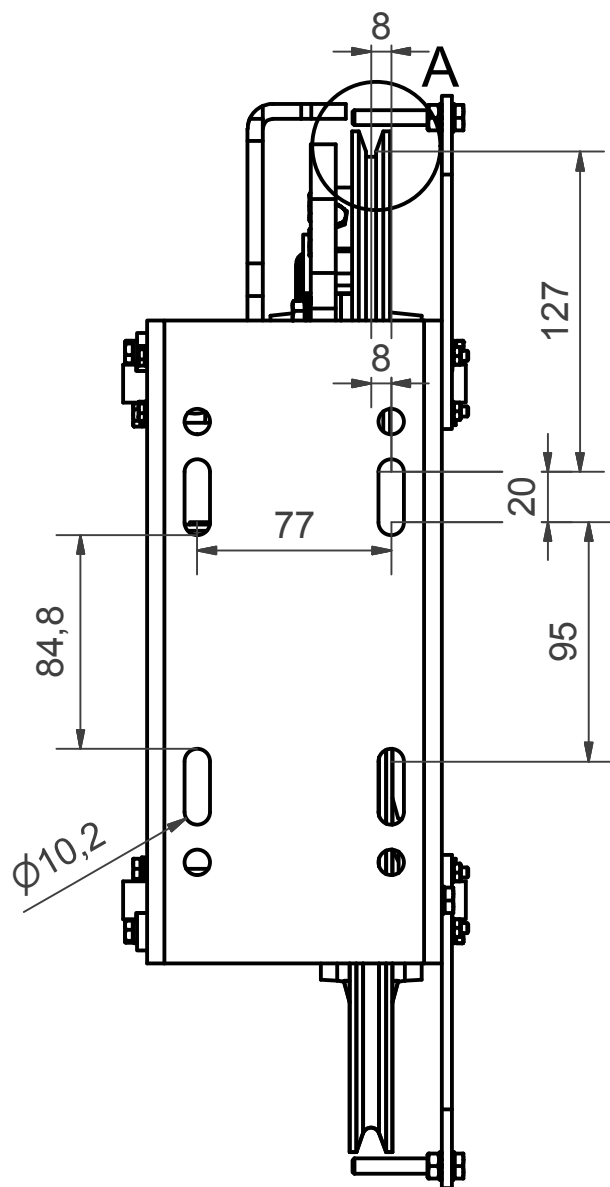
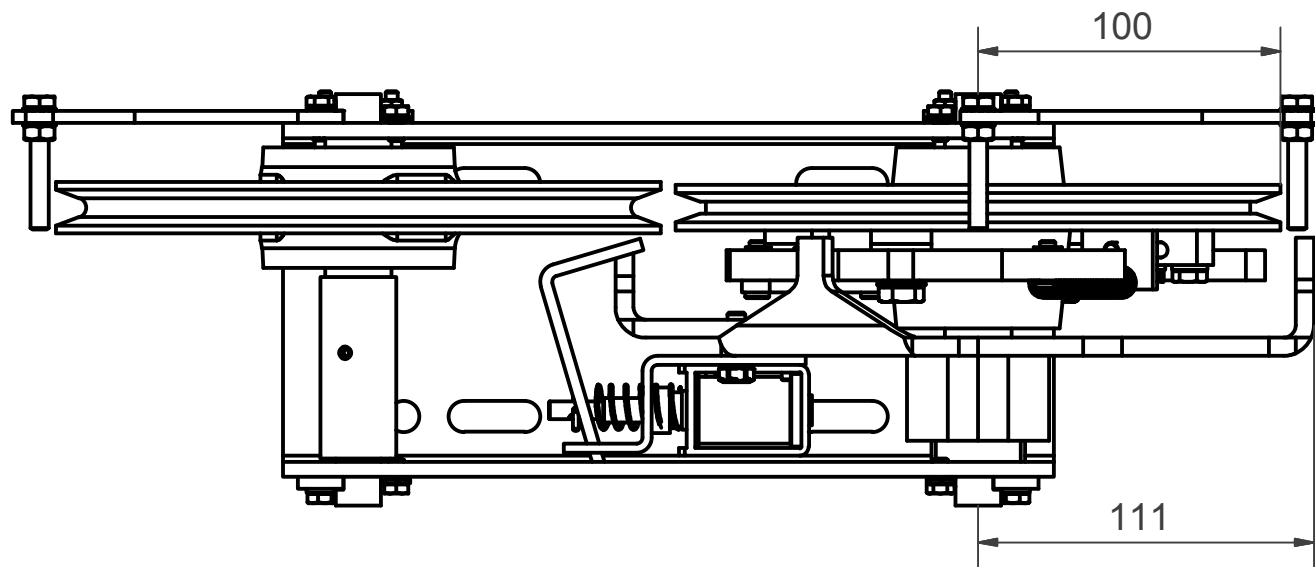
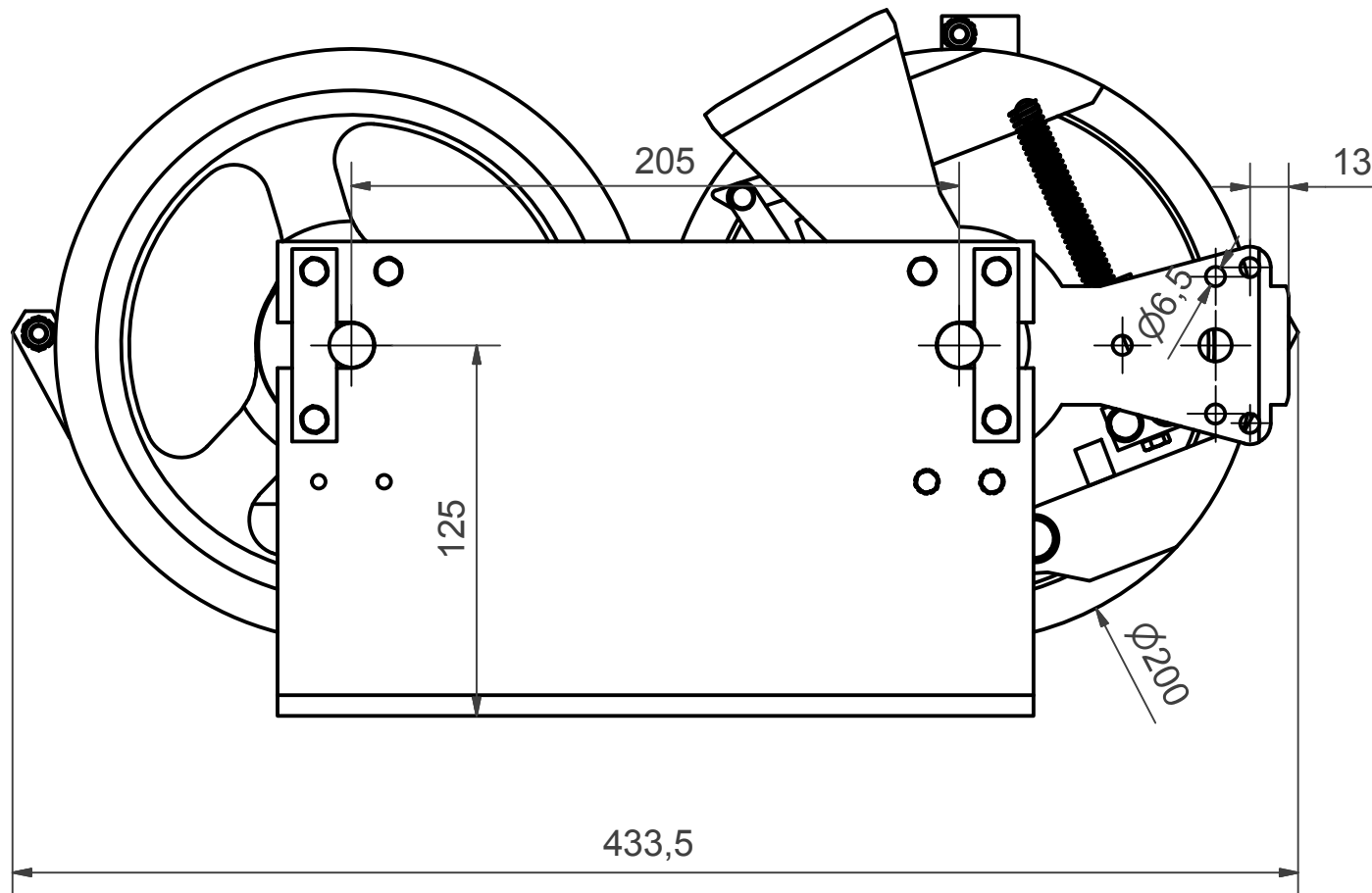
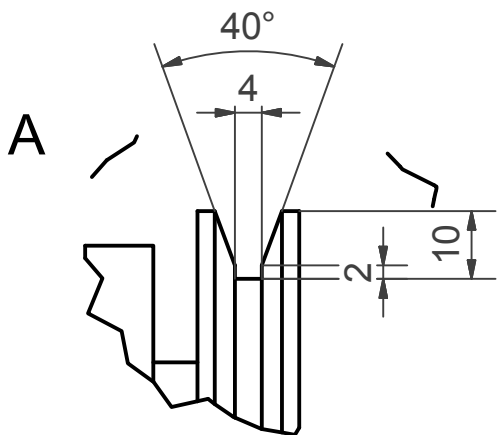
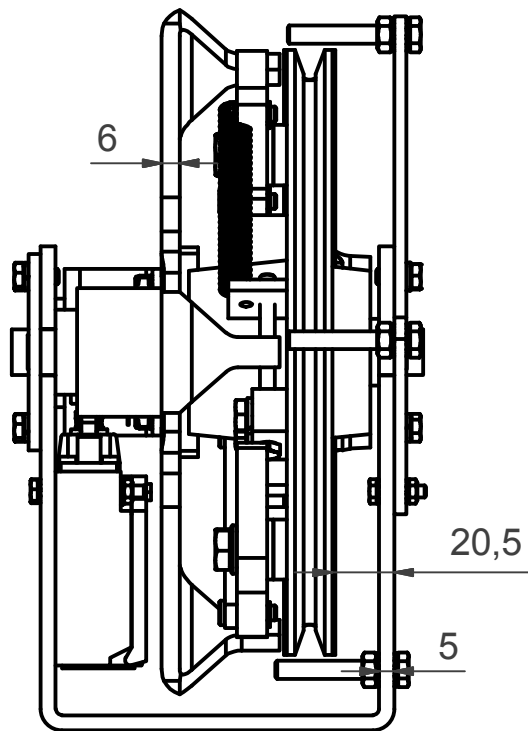
MD\_DEU\_161258.003 (05.03.2016) MD\_DEU\_111244.001 (09.06.2011)


MD\_DEU\_070739 (11.12.2007) ED\_051047 (01.31.2005)

2.19. **Revision log.**

REV	Date	Modification
0	05.03.2016	First issuance
1	09.20.2022	Updating to the 2020 edition of the harmonized standards. Clarification on rope slackening switches interconnection (see remark 2.7)





CANTIDAD POR CONJUNTO:			 <b>DYNATECH</b>	
Material:				
Peso terminado:				
Tto. tco:				
Tto. sup:			STAR	
	Fecha	Nombre	General Drawing	
Dibujado	03/05/16	J. Remacha		
Norma				
OBSERVACIONES:			PLANO COD. N°: DYN 09.C01.01	
Fichero:			Sustituye a:	Escala:
			Sustituido por:	