PARACAÍDAS INSTANTÁNEO DYNATECH/

DYNATECH INSTANTANEOUS SAFETY GEAR/

PARACHUTE INSTANTANE DYNATECH/

SPERRFANGVORRICHTUNG DYNATECH/

IN-3000

INSTRUCCIONES DE USO Y MANUTENCIÓN/

INSTRUCTIONS FOR USE AND MAINTENANCE/

INSTRUCTIONS D'USAGE ET ENTRETIEN/

GEBRAUCHS- UND WARTUNGSANLEITUNG/

REVISION	06	DATE	20/10/2020	PRODUCED BY / APPROVED BY	J.A.Torrubia/O. Lacámara
SECTION	DESCRIPTION				EFFECTIVE DATE OF CHANGE
4.3	Explanatory note is added				Not applicable
6	Annex section is added				Not applicable
REVISION	05	DATE	18/04/2016	PRODUCED BY / APPROVED BY	J. Marco/O. Lacamara
SECTION	DESCRIPTION				EFFECTIVE DATE OF CHANGE
-	The certificate number according to the UNE-EN 81-20, UNE-EN 81-50 and 2014/33/EU Directive is included				20/04/2016
-	The entire manual was reviewed				Not applicable
-	A new guide rail thickness of 10mm (IN-3000 G10) has been added.				Not applicable
5	The general plan is updated				Not applicable
REVISION	04	DATE	16/01/2014	PRODUCED BY / APPROVED BY	O. Lacámara
SECTION	DESCRIPTION				EFFECTIVE DATE OF CHANGE
1.1	Text in the first paragraph has been modified to be better understood.				Not applicable

CERTIFICADO DE EXAMEN U.E. DE TIPO

EU TYPE-EXAMINATION CERTIFICATE

Según el anexo IV parte A de la Directiva 2014/33/UE / According to annex IV part A of Directive 2014/33/EU

ATISAE, Organismo de Control Autorizado acreditado por ENAC con acreditación nº OC-I/025

Número de certificado. / Certificate number	**ATI / PI / 001** **rev: 1**
Organismo Notificado. Notified Body	**TÜV SÜD ATISAE S.A.U.** Avda. de los Artesanos, 20 E 28760 Tres Cantos MADRID (ESPAÑA) Nº de identificación / ID number **0053.**
Clase. Tipo. Product. Type	**Paracaídas de acción instantánea (PI)** Instantaneous safety gear
Modelo / Model	**IN-3000 / IN-3000 G10;**
Fabricante. Manufacturer	**DYNATECH. DYNAMICS AND TECHNOLOGY S.L.U.** **P.I. PINA DE EBRO, SECTOR C PARCELA 9** **50750 ZARAGOZA.**
Propietario del certificado. Certificate Holder	**DYNATECH. DYNAMICS AND TECHNOLOGY S.L.U.** **P.I. PINA DE EBRO, SECTOR C PARCELA 9** **50750 ZARAGOZA.**
Fecha de presentación. Date of submission	**18/06/2015**
Fecha del examen de tipo. Date of type examination.	**17/06/2016**
Laboratorio de ensayo. Test laboratory	**(véase en el anexo técnico sección 2.7).** (Please refer to technical annex section 2.7)
Informe de ensayo Test report	**(véase en el anexo técnico sección 2.7).** (Please refer to technical annex section 2.7)
Directiva / Directive.	**Directiva 2014/33/UE de 26 de febrero de 2014** Directive 2014/33/EU of 26 February 2014
Norma de referencia. Standard of reference	**EN 81-1:1998+A3:2009; EN 81-2:1998+A3:2009** **EN 81-20:2014; EN 81-50:2014;**
Informe de ATISAE. / ATISAE report **MD_DEU_123195 (24.09.2012)**	**MD_DEU_153457 (14.09.2015)** **MD_DEU_070745 (02.08.2017)** **ED_050097 (11.01.2005)**
Plazo de validez / Expiry date	**Indefinido / (véase en el anexo técnico sección 2.9).** Indefinite / (Please refer to technical annex section 2.9)

Declaración: El componente de seguridad permite al ascensor sobre el que se instale satisfacer los Requisitos de Seguridad y Salud de la citada Directiva usándose dentro del alcance que queda establecido en el anexo técnico de este certificado, así como con las condiciones de instalación indicadas.

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.

ORGANISMO NOTIFICADO ATISAE 0053

José Manuel Flórez González
Director Técnico Elevación

Procedimiento EC.12.04. Anexo 4 Rev.: 7

Este certificado consta de esta portada, un anexo técnico de 3 hojas y 2 planos / documentos. Su reproducción carece de validez si no se realiza totalmente.
This certificate consists of this main page, a technical annex with 3 pages and 2 drawings / documents. It shall be reproduced with all its pages to be considered valid.

ANEXO TECNICO AL CERTIFICADO DE EXAMEN UE DE TIPO ATI / PI / 001 rev 1
TECHNICAL ANNEX TO THE EU TYPE EXAMINATION CERTIFICATE ATI / PI / 001 rev 1

1. Campo de aplicación:
Scope.

1.1. Masa total admisible de cabina y su carga y/o contrapeso empleando dos dispositivos de paracaídas en relación con la velocidad de disparo del limitador de velocidad y características de las guías (espesor):
Permissible mass of the car and its rated load and/or counterweight or balancing weight, using a set of two safety gear devices versus the overspeed governor tripping speed and guide rails features (thickness).

	Masa total admisible (P+Q)(Kg) Permisible mass			
Vd (m/s)	T65/A (8)	T70-1/A (9)	T82/B (9)	T75/A (10)
0.5	3145	3597	2352	4265
0.6	3026	3461	2263	4104
0.7	2897	3313	2166	3928
0.8	2760	3157	2064	3744
0.9	2621	2997	1960	3554
1.0	2480	2837	1855	3364
1.1 *	2342	2678	1751	3176
1.2 *	2207	2524	1650	2993
1.32 *	2051	2346	1534	2782
1.50 *	1833	2097	1371	2486

Vd = Velocidad de disparo del limitador (m/s) o medio equivalente. / Governor's tripping speed (m/s) or that of equivalent means;
*** Para estos valores de velocidad de disparo, véase nota 2.4. /** For these tripping speeds please see remark 2.4)

Estos valores de masa admisible son válidos para guías de similares características según indica el tercer párrafo de [5.3.2.1] de la norma EN 81-50.
These values of permissible mass are acceptable for guide rails of similar characteristics according the third sentence of clause [5.3.2.1] of EN 81-50

Otros valores de masa admisible pueden obtenerse mediante la aplicación de la fórmula:
Other values of permissible mass can be obtained with the following formulae:

$$P + Q(Vd) = \frac{2 \cdot K_2}{3{,}5 \cdot 9{,}82 \cdot \left(\frac{Vd^2}{2 \cdot 9{,}82} + 0{,}1 + 0{,}03 \right)};$$

Con K_2 dado por:
With K_2 given by:

Tipo de guía Guide type	K_2 (Julios) (Joule)
T65/A	7700
T70-1/A	8807
T82/B	5758
T75/A	10443

A = estirada - calibrada: / drawn
B = cepillada – mecanizada / planed

1.2. Velocidad nominal máxima:
Maximum rated speed.

Cabina / Car: 0,63 m/s
Contrapeso / Counterweight: 1,00 m/s

1.3. Velocidad máxima de disparo del limitador de velocidad o medio equivalente:
Maximum governor's or equivalent means tripping speed.

Cabina / Car: 1,00 m/s
Contrapeso / Counterweight: (nota 2.4/ see remark 2.4)

1.4. Tipo de guía:
Type of the guide rail.

Tipo: Type	T65/A	T70-1/A	T82/B	T75/A
Superficie: Surface condition	A	A	B	A
Espesor de guía: Guide rail thickness	8 (1)	9	9	10
Ancho de guía: Width	20	34	34	30
Ancho mínimo de frenado: mínimum braking width (2)	-	27	27	27

Todos los valores en mm / Every distance in mm.
(1) El espesor nominal es 7.9 mm / rated thickness is 7.9 mm
(2) Mínimo ancho que tiene que tener otra guía para usar los valores de P+Q de la tabla (1.1.)
Minimum width that another guide rail shall have in order to use the permissible mass table (1.1)

ORGANISMO NOTIFICADO ATISAE 0053

2. Notas.
Remarks.

2.1. **Utilización del dispositivo.** El dispositivo paracaídas puede utilizarse como medio contra la caída libre y la sobrevelocidad en bajada [5.6.2.1] y como dispositivo de frenado para los medios contra sobrevelocidad en subida de la cabina cuando se instala en un contrapeso [5.6.6.4.b)]. Para [5.6.2.1] y [5.6.6] un limitador de velocidad como establece [5.6.2.2.1] y [5.6.6.10.a)] u otro medio equivalente debe utilizarse para controlar el valor de velocidad.
Intended use of the device. The safety gear device can be used as means against the free fall and descending overspeed [5.6.2.1] and as braking device for the ascending car overspeed protection means when installed on a counterweight [5.6.6.4.b)]. For [5.6.2.1] and [5.6.6], an overspeed governor as set forth [5.6.2.2.1] and [5.6.6.10.a)], or equivalent means, shall be used to control the speed of the car.

2.2. **Sub-tipos:** Dos subtipos. El de caja IN-3000, válida para espesores de 8 y 9 mm e IN-3000 G10, válida para espesor de 10 mm, debido a que las dimensiones son diferentes y afectan al comportamiento del paracaídas respecto de la masa máxima admisible.
Sub-types: Two sub-types. Safety gear block's type IN-3000 for guide rail thicknesses of 8 and 9 mm, and IN-3000 G10 for 10 mm of thickness, due the dimensions are different and they affect the performance of the safety gear on permissible mass.

2.3. La certificación afecta a los elementos de frenado y no incluye a los elementos de conexión, timonería, ni a la actuación del dispositivo eléctrico.
The certificate affects to the gripping elements and does not include either the connection elements, safety gear rods, or the actuation of the electric safety device.

2.4. La utilización del dispositivo se realizará según las condiciones dadas en la norma EN 81-20. Si el dispositivo de actuación del paracaídas de contrapeso fuera diferente del limitador de velocidad (rotura de medios de suspensión, cable de seguridad), se aplicará el valor equivalente de velocidad de disparo. WG1 de CEN TC10 ha acordado que en las condiciones de la norma la velocidad máxima de disparo con limitador de velocidad para este tipo de paracaídas es de 1.0 m/s y que para otros medios dará una respuesta en la próxima revisión de EN 81-20 (doc. Questions / Answers to EN 81-20:2014 & EN 81-50:2014 Revision 4).
This device must be used according the conditions given in EN 81-20. When the counterweight's safety gear engaging device is other than an overspeed governor (breakage of suspension means, safety rope) an equivalent value of tripping speed must be set.
CEN TC-10 WG1 has agreed that under the current conditions of the standard the maximum tripping speed using an overspeed governor for this kind of safety gear shall be 1.0 m/s and for other means will provide an answer in the next revision of EN 81-20 (doc. Questions / Answers to EN 81-20:2014 & EN 81-50:2014 Revision 4).

2.5. La guía T82/A con ancho de guía de 25.4 mm puede ser utilizada con los valores de P+Q obtenidos por la guía T70-1/A [complemento MD_DEU_070745 (02/08/2007)].
The guide rail type T82/A of 25.4 mm of width, may be used in connection with the permissible mass obtained for guide rail type T70-1/A [complement MD_DEU_070745 (02/08/2007)].

2.6. Sobre el dispositivo debe colocarse una placa con los datos indicados a continuación:
It shall be placed an identifiable plate on the device with the following items.

Nombre del fabricante
Manufacturer's name

Nº del certificado de examen de tipo (1)
Type-examination certificate number

Sub-tipo (véase nota 2.2) o tipo de guía
Safety gears sub-type (see remark 2.2) or guide rail type

(1) El marcado del dispositivo se realiza como parte del sistema de protección al que pertenece (véase 2.1). El marcado CE corresponde a los medios de protección contra caída libre [5.6.2.1] y medios de protección contra sobre-velocidad en subida [5.6.6] como dispositivo de frenado.
The marking of the device is done as part of the protection system to which it belongs (please see 2.1). The CE marking shall be taken into account for the means of protection against free fall [5.6.2.1] and against ascending car over-speed [5.6.6] (braking device).

ORGANISMO NOTIFICADO ATISAE 0053

2.7. Laboratorio de ensayo
Test laboratory
Laboratorio de Ensayo de Componentes de Ascensores (L.E.C.A).
E.T.S. Ingenieros Industriales. UPM
C/ José Gutiérrez Abascal, 2
28006 MADRID

Informe de ensayo
Test report
2015-014 (03.09.2015)
2007-025 (26.11.2007)
2004-015 (15.07.2004) (1)
2004-014 (15.07.2004) (1)

(1) En este ensayo el laboratorio aún constaba como Laboratorio de ensayo de materiales (L.E.M.)
For this test report the laboratory's name still was 'Laboratorio de ensayo de materiales' (L.E.M.)

2.8. Se adjunta a la presente certificación los siguientes documentos:
The following documents are enclosed to this certificate.

NÚMERO Number	FECHA Date	TÍTULO Title
DYN 26.C02.00	10.12.2004	IN-3000-POSICIÓN
DYN 26/3.C02.00	30.06.2015	IN-3000 G10-CONJUNTO - POSICIÓN

Estos documentos se adjuntan con objeto de proporcionar identificación e información sobre el diseño básico del componente de seguridad.
These documents are enclosed in order to provide identification and information about the basic design of the safety component.

2.9. Este certificado no tiene fecha límite de validez salvo que se produzcan: cambios de diseño, que el fabricante debe comunicar a este Organismo Notificado antes de que sean efectivas; cambios en la legislación o cambios técnicos en las normas de referencia, para los cuales la fecha límite será la fecha de entrada en vigor indicada en la ley o la fecha cuando la norma de referencia deja de proporcionar presunción de conformidad.
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.

2.10. Registro de revisiones.
Revision log

REV	Fecha / Date	Modificación / Modification
0	20.04.2016	Emisión inicial / Initial issue
1	17.06.2016	Velocidad máxima de disparo cuando se instala en contrapeso indefinido cuando se utilizan medios distintos de limitador de velocidad (según respuesta CEN WG1). Con limitador de velocidad máxima velocidad 1.0 m/s; Maximum tripping speed when installed in a counterweight undefined when means different to an overspeed governor is used (according answer of CEN WG1).With governor maximum tripping speed 1.0 m/s.

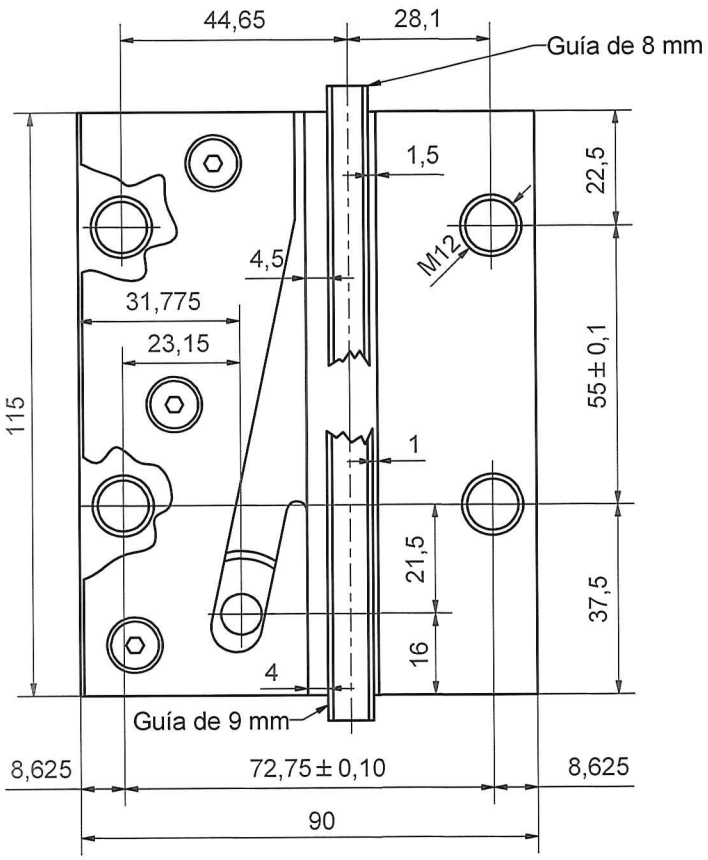
Nota: Este componente también fue certificado bajo la directiva 95/16/CE con certificado:
Remark: This component was also certified under 95/16/EC directive with the certificate reference:
ATI/LD-VA/M141A-2/15 (14.09.2015)

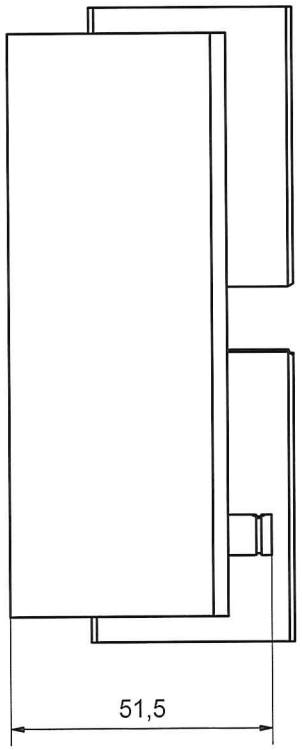
- o -

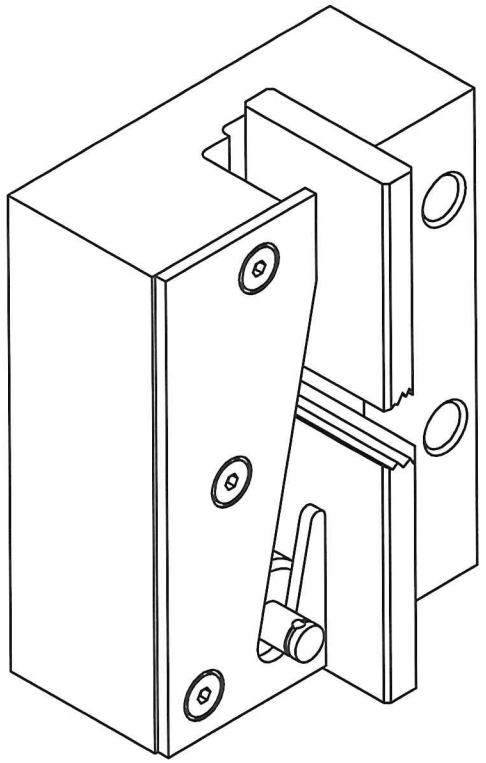
Nota general. Todos los artículos mencionados con referencia a EN 81-20, salvo que se indique lo contrario.
General remark. All clauses mentioned with reference to EN 81-20, unless otherwise indicated.

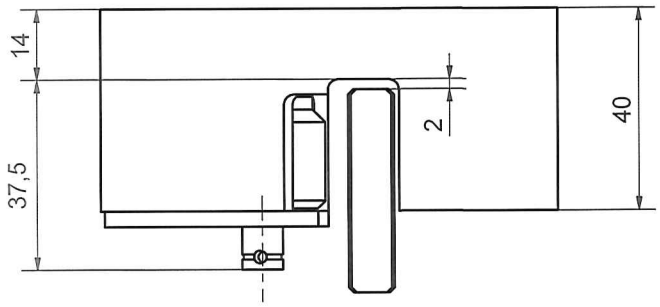
ORGANISMO NOTIFICADO ATISAE 0053

ATI / PI / 001 R1





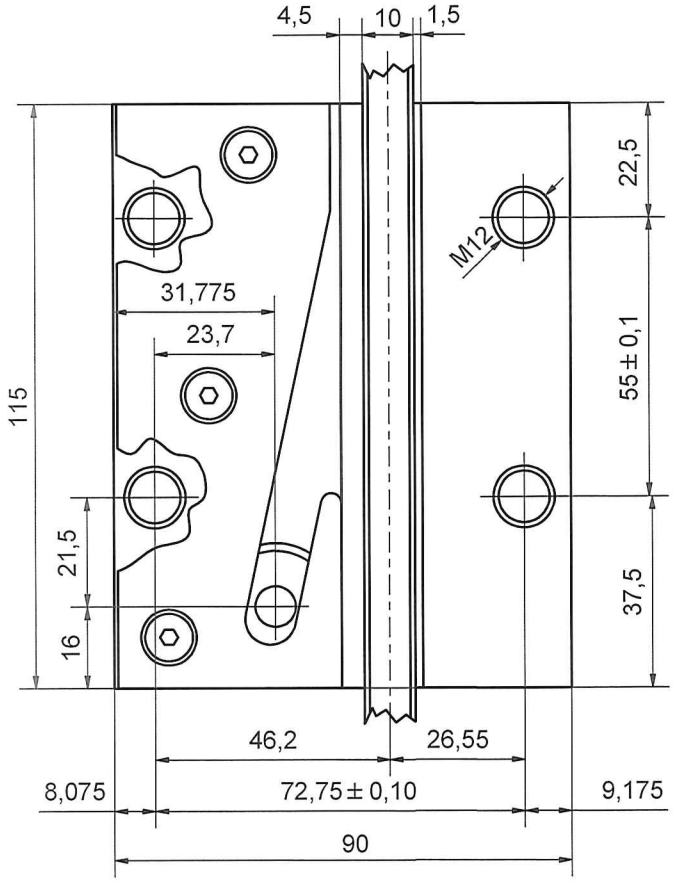


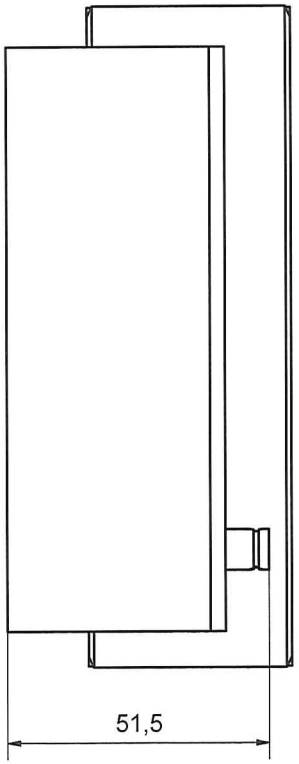


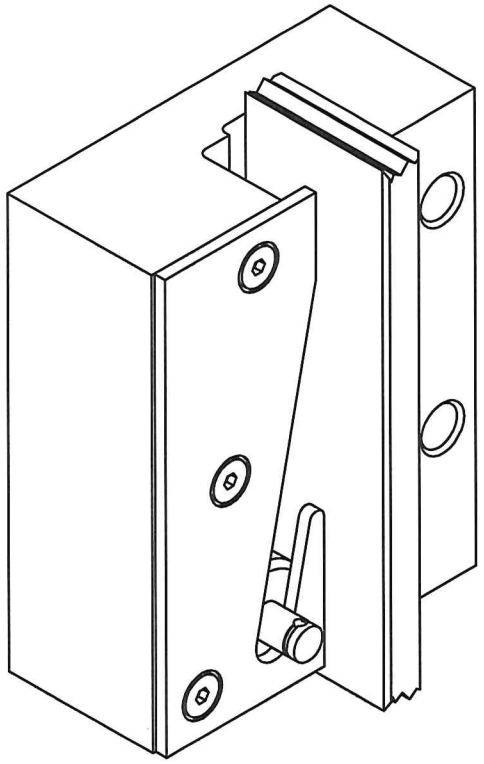
ORGANISMO NOTIFICADO ATISAE 0053

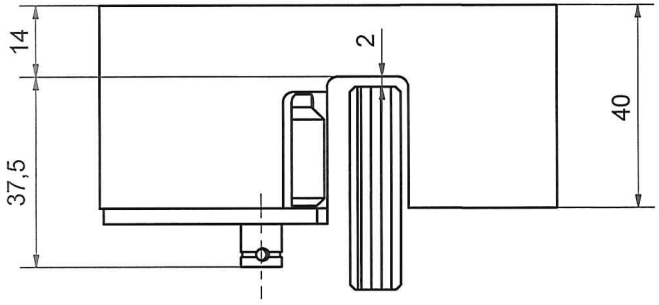
CANTIDAD POR CONJUNTO:			DYNATECH
Material:			
Peso terminado:			CONJUNTO: IN-3000
Tto. tco:			
Tto. sup:			
	Fecha	Nombre	POSICIÓN
Dibujado	10/12/04	DYNATECH	
Norma			
OBSERVACIONES: MEDIDAS SIN TOLERANCIA SEGÚN DIN-7168 GM			PLANO COD. Nº: DYN 26.C02.00
Fichero:			Escala:
			Sustituye a: / Sustituido por:

ATI / PI / 001 R1









ORGANISMO NOTIFICADO ATISAE 0053

CANTIDAD POR CONJUNTO:			
Material:			
Peso terminado:			CONJUNTO: IN-3000 G10
Tto. tco:			
Tto. sup:			
	Fecha	Nombre	POSICIÓN
Dibujado	30/06/2015	DYNATECH	
Norma			
OBSERVACIONES: MEDIDAS SIN TOLERANCIA SEGÚN DIN-7168 GM			PLANO COD. Nº: DYN 26/3.C02.00 — Escala:
Fichero:			Sustituye a: — Sustituido por:

INSTRUCTIONS FOR USE AND MAINTENANCE

1 GENERAL INSTRUCTIONS

Instantaneous safety gear are not regulated. The maximum P+Q depends on the lift tripping speed.

Their features are indelibly shown next to the approval password and serial number on the identification stickers attached to the safety gear (see section 2.1).

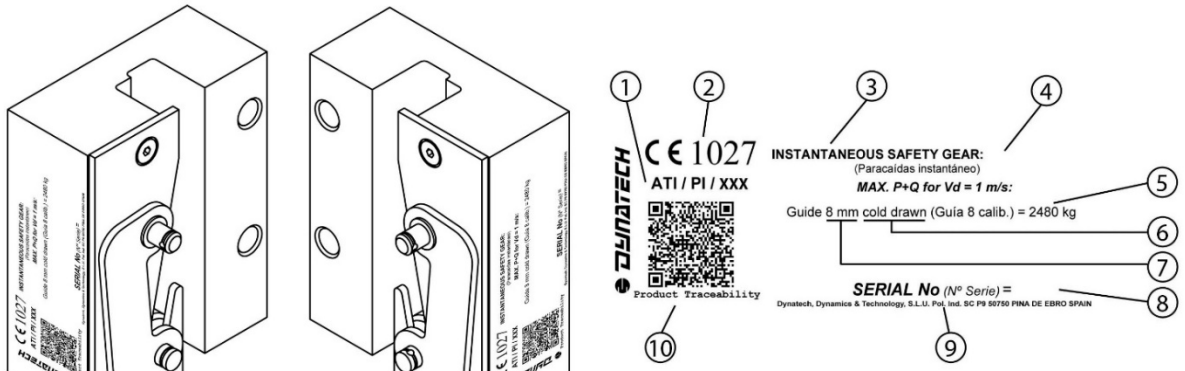
It is strictly forbidden:

a) To combine and assemble safety gear boxes with different serial numbers.
b) To use a pair of safety gears for installations with characteristics different from those indicated on that pair of safety gears' protection plates.
c) To handle any of the safety gear's components.

DYNATECH DYNAMICS & TECHNOLOGY, S.L. cannot be held responsible for the damage caused due to the non-observance of any of these general instructions.

2 SAFETY GEAR IDENTIFICATION AND CHARACTERISATION

2.1 IDENTIFICATION



SAFETY GEAR IDENTIFICATION LABEL			
1	EU type examination certificate number	**6**	Guide rail type
2	Quality assurance CE marking and notified body number	**7**	Guide rail thickness (mm)
3	Safety gear type	**8**	Serial number
4	Safety gear model	**9**	Dynatech address
5	Total load (P+Q)/kg for an actuation speed of 1 m/s	**10**	QR product traceability code

Figure 1: Safety gear identification

2.2 SAFETY GEAR'S FEATURES AND USE

a) Guide rail models to use with this safety:

Type:	T65/A	T70-1/A	T82/B	T75/A
Surface	Cold Drawn	Cold Drawn	Machined	Cold Drawn
Guide rail thickness	8	9	9	10
Guide rail width	20	34	34	30
Minimum braking width	-	27	27	27

* Allowable tolerances for guide rail thickness should be within the limits set by the standard: ISO 7495:197.

b) The maximum tripping speed for this safety gear is strictly stipulated in the regulation requirements.

	Maximum rated speed (m/s)	**Maximum tripping speed (m/s)**
Car	0,63	1
Counterweight	1	1,5

2.3 RANGE OF USE

The below table shows the total permissible mass for the car and its load and/or counterweight in relation to the actuation speed and guide rail features.

	Total permissible mass (P+Q)/kg			
Tripping speed (m/s)	T65/A (8)	T70-1/A (9)	T82/B (9)	T75/A (10)
0,1	3437	3931	2570	4661
0,2	3397	3885	2540	4607
0,3	3333	3812	2492	4520
0,4	3247	3713	2428	4403
0,5	3145	3597	2352	4265
0,6	3026	3461	2263	4104
0,7	2897	3313	2166	3928
0,8	2760	3157	2064	3744
0,9	2621	2997	1960	3554
1,0	2480	2837	1855	3364
1,1	2342	2678	1751	3176
1,2	2207	2524	1650	2993
1,32	2051	2346	1534	2782
1,50	1833	2097	1371	2486

3 INSTALLATION AND ADJUSTMENT

3.1 ASSEMBLY ON THE FRAME

The holes should be made on the frame's uprights to secure the safety gear, according to the dimensions and position displayed in the safety gear drawings attached, ensuring that the guide rail's axis is centred with the frame.

To secure the safety gear onto the frame, we recommend a 79.09 Nm tightening torque for grade 8.8 M12 bolts, and of 111 Nm for grade 10.9 bolts.

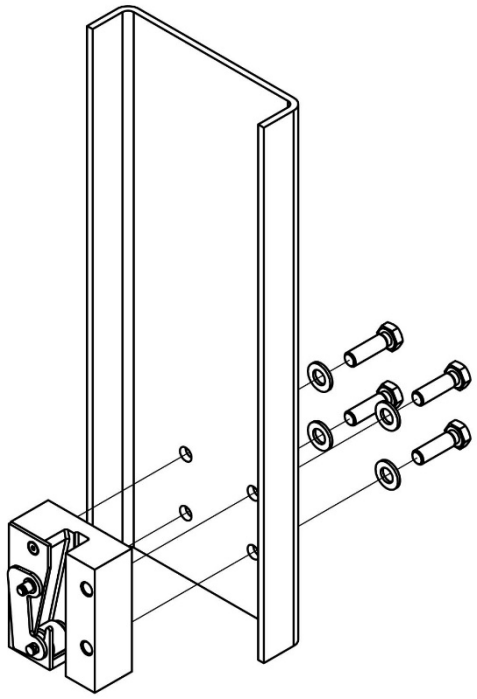


Figure 2 Assembling the safety gear onto the frame

a) ⚠ Safety gear position: The safety gears should be assembled in the position displayed in Figure 3

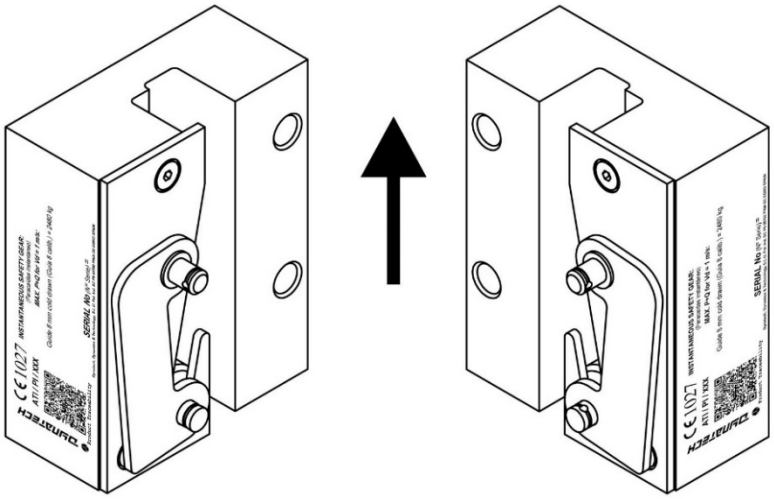


Figure 3: Direction of assembly

During assembly, the safety gear should be perfectly aligned with the guide rails, both vertically and horizontally. Improper assembly may cause the safety gear to function incorrectly.

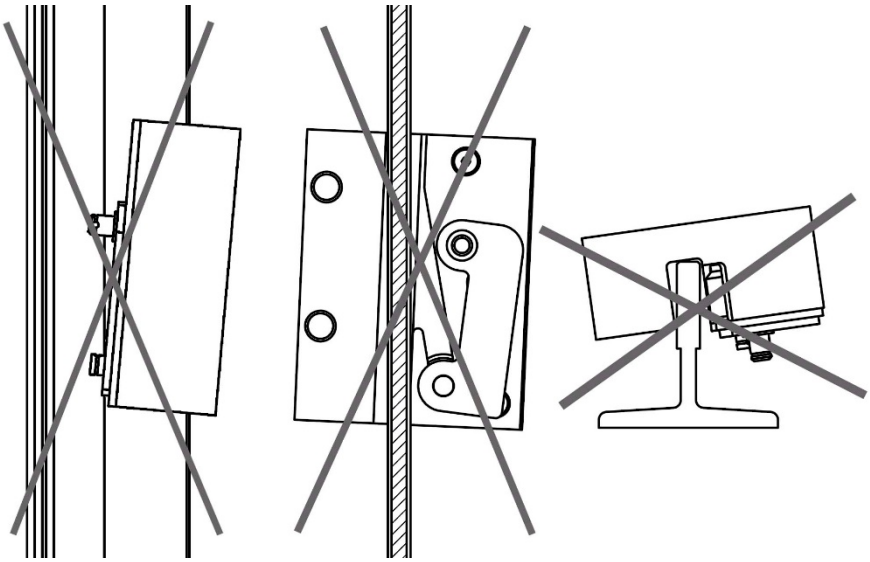


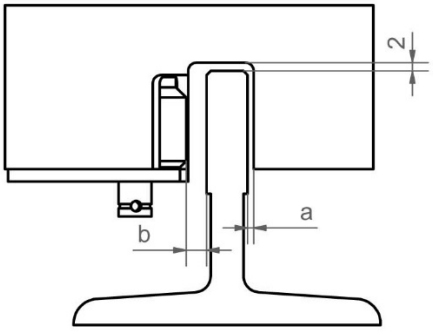
Figure 4: Improper assembly

3.2 SAFETY GEAR ADJUSTMENT

⚠ In order to avoid problems with the installation's normal operation, it is very important that the person carrying out the installation rigorously observes the distances mentioned in this item.

3.2.1 IN-3000 MODEL FOR 8mm and 9mm THICKNESS GUIDE RAILS

The guide rail's position in the block should be adjusted as follows. (see drawing DYN 26.C02.00).

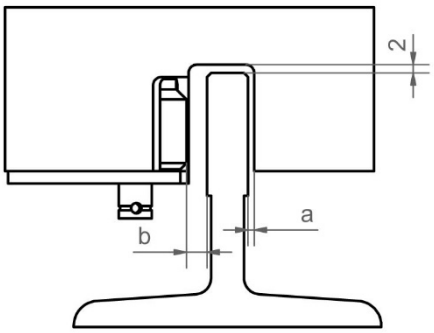


	T65/A (8)	T70-1/A (9	T82/B (9)
a (mm)	1,5	1	1
b (mm)	4,5	4	4

Figure 5: Safety gear adjustment in relation to the guide rail (IN-3000)

3.2.2 IN-3000 MODEL FOR 10mm THICKNESS GUIDE RAILS

The guide rail's position in the block should be adjusted as follows. (see drawing DYN 26/3.C02.00)



	T75/A (10)
a (mm)	1,5
b (mm)	4,5

Figure 6: Safety gear adjustment in relation to the guide rail (IN-3000 G10)

3.3 COUPLING THE DRIVING BAR

It is the responsibility of the person who installs the safety gear to properly position the driving bar in relation to the safety gear, as well as to properly synchronise the safety gears controlled by that driving bar. The correct position is when the safety gear roller is on the bottom of the block.

Once it has been fitted, and the safety gear's rollers have been attached to the driving bar's tripping bars, it should be checked that both rollers operate simultaneously, controlled by the driving bar.

The minimum force required for tripping the safety gear is 300N.

⚠ The Standard demands that the installation incorporate an AC-15 or DC-13 safety contact as defined in EN 60947-5-1.

3.3.1 USING DYNATECH'S T-1 DRIVING BAR

Both safety gears may be synchronised by assembling Dynatech's T-1 driving bar. For more information concerning T-1 driving bar assembly, please consult its manual: DYN04 – Instructions T-1.

⚠ It is not recommended to exceed a maximum force of 1900 N is not recommended with the governor.

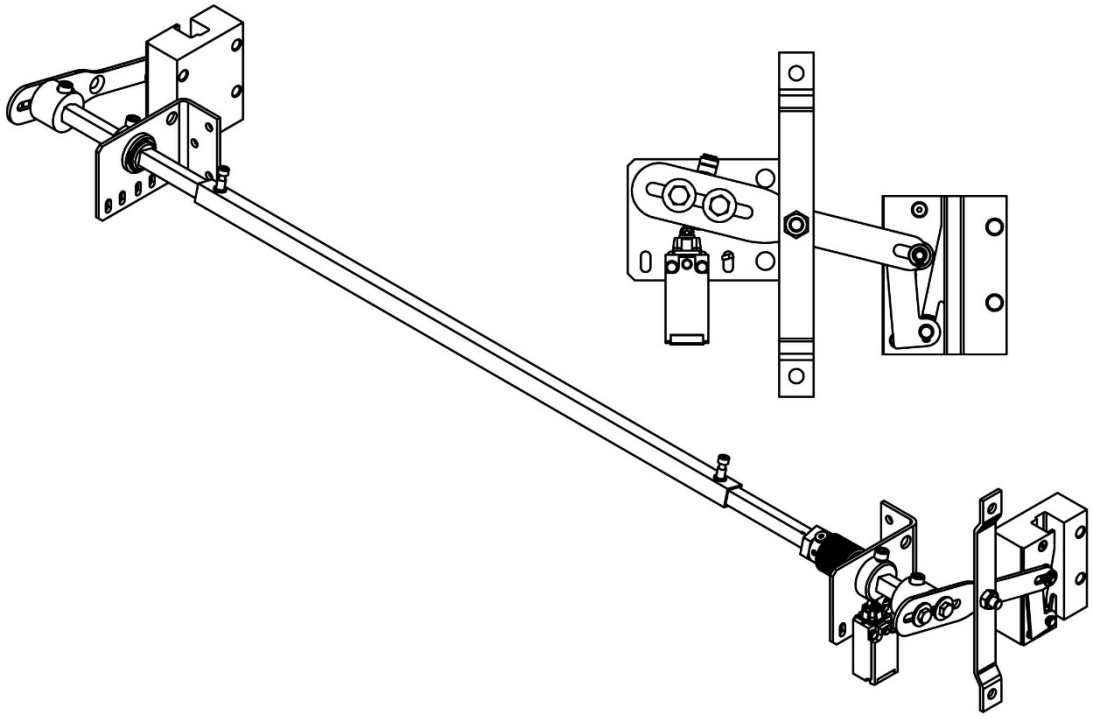


Figure 7: Safety gear synchronisation using the T-1 driving bar

4 INSPECTIONS AND MAINTENANCE

4.1 CHECKING THE SAFETY GEARS

For the safety gears to function correctly, their proper assembly and adjustment must be verified as well as the sturdiness of the unit's connection to the car and the guide rails, as is stated in the standard EN 81:20 and EN 81:50.

It is recommended to follow the standard's provisions for inspections and tests, both for commissioning and regular testing.

The proper synchronisation of the safety gears may be checked by verifying that the roller's track is marked on both guide rails and that they have a similar length, with the difference between the two sections not being more than 4 cm.

4.2 PRECAUTIONS

It is recommended to keep in mind the following items:

- The factory protective covering should be removed from the guide rails. In addition, it should be checked that there are no other objects, such as screws, brackets, etc. that may interfere with the safety gear or its driving bar.
- It should be visually checked that the safety gears are in working order, that they are not dirty or greasy inside.
- After any inspection or test where the safety gears were tripped, it should be checked that the safety gears have not been damaged.
- It is recommended to perform the tests near the car door to unload the car in order to facilitate unjamming the safety gears.
- The authorised personnel should always take the necessary precautions when tripping any of the previously installed safety gears.

4.3 MAINTENANCE

Both for maintenance and inspection, the following maintenance operations should be performed after tripping the safety gears.

4.3.1 LIST OF MAINTENANCE OPERATIONS

Safety gears:

- Check that there is no interference between the rollers and the guide rail.
- Check the brackets and the clearance between the safety gears and the frame, readjust it if necessary.
- Clean any remaining grease, shavings or dust inside the safety gear's housing.
- Check that there is no external element inside the safety gear's housing.
- Check that the rollers spin freely and are not damaged or worn.
- Check that the connection between the rollers and the driving bar has not been damaged and spins freely without being blocked.
- Visually check that the safety gears are not damaged in general.
- Check that the driving bar is in good condition and that the safety gears are correctly synchronised.
- Check that the car's floor does not have more than a 5% slope in comparison with its normal position.
- Check that the governor's attachment moves correctly and is in good condition.
- Check that the safety electrical contact has been correctly assembled and is functioning properly.

Guide rails:

- Clean and remove any type of dirt or dust from the guide rails.
- If necessary, apply a thin, even layer to the guide rails

⚠ The list of provisions that Dynatech establishes for the maintenance of its installed equipment is added to the Annexes.

4.3.2 CORROSION

All DYNATECH safety gears have anti-corrosion protection. However, it should be regularly checked that the safety gear's mobile elements are in perfect working condition; a jamming test will not be required, just a simple

verification that all the parts are moving freely, as well as a visual inspection of the general condition of the surfaces.

These verifications should be done more regularly, as the maintenance worker considers necessary, when the installation is in an especially corrosive environment.

4.4 STORAGE AND SERVICE LIFE

The safety gear should be stored in a cool, dry place. It should be protected from excessive lighting. It should never be exposed to severe weather conditions.

Storage temperature: 5 - 40ºC

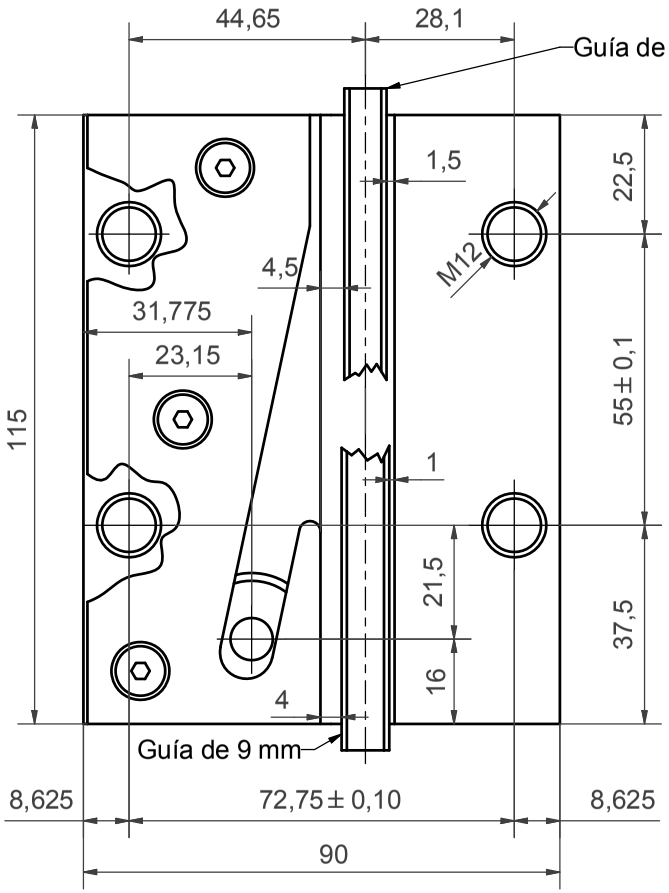
Storage humidity: 15 - 85% without condensation.

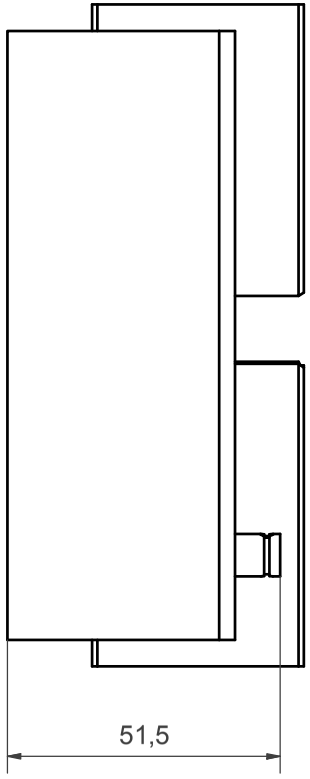
The safety gears' packaging should be clean and dry, so that they can be clearly identified.

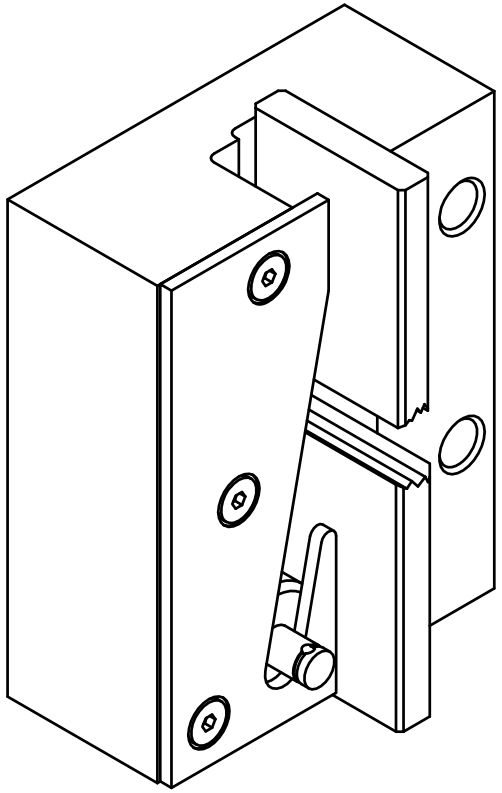
It is not permitted to place constant or unbalanced loads on a package, which may cause the package to be bent, or to allow products to be stacked one on top of the other. When stacking products or packages, the storage height should take into account their load and stability.

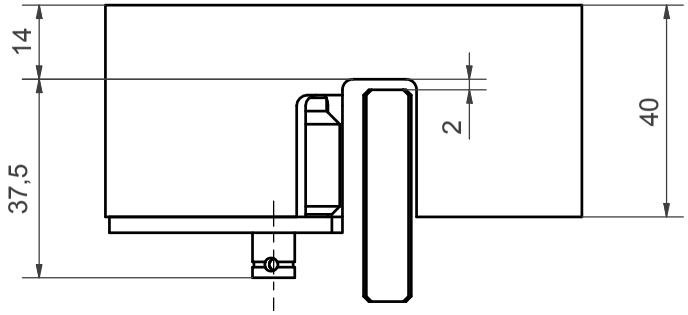
If the criteria established for proper maintenance are observed, the safety gears may have the same service life as the rest of the installation's fixed elements provided that their proper functioning is ensured and controlled. The element's service life is not affected by grease, dust or dirt due to the shaft's condition or to environmental conditions differing from those stated in this manual.

5 GENERAL DRAWING

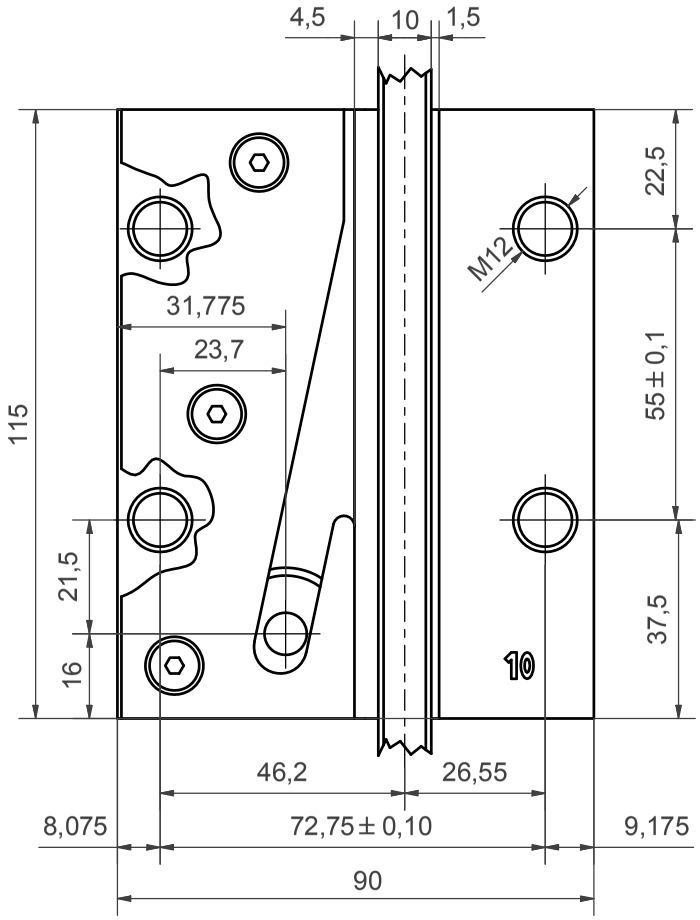


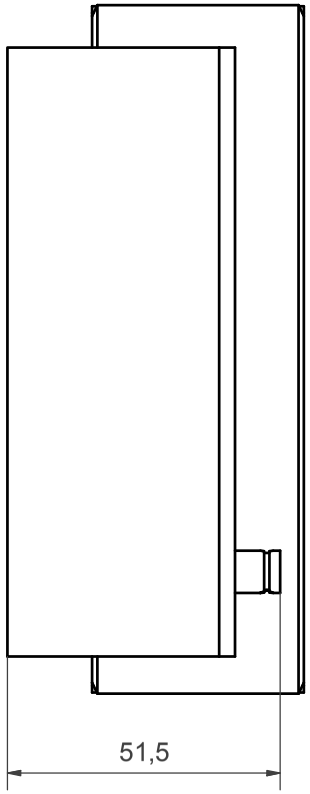


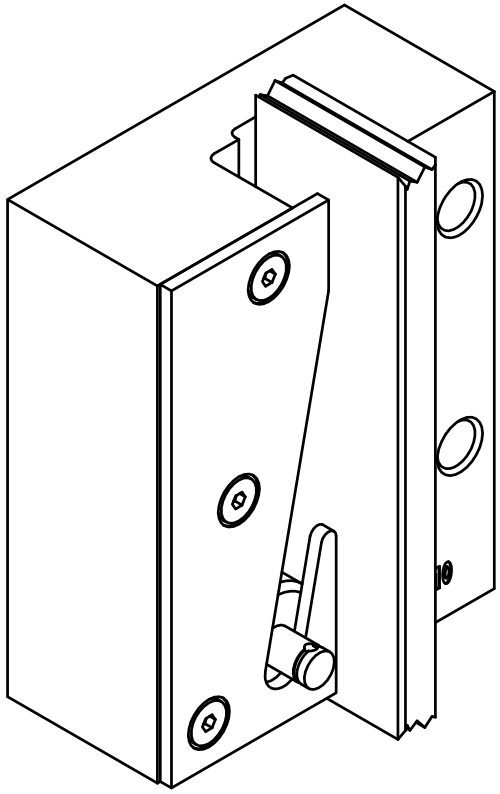


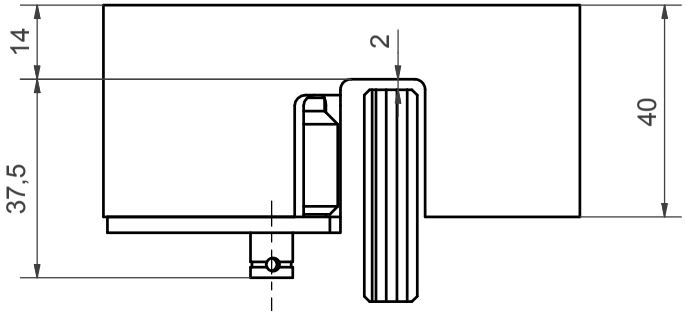


CANTIDAD POR CONJUNTO:		DYNATECH
Material:		
Peso terminado:		CONJUNTO: IN-3000
Tto. tco:		
Tto. sup:		
	Fecha / Nombre	POSICIÓN
Dibujado	10/12/04 / DYNATECH	
Norma		
OBSERVACIONES: MEDIDAS SIN TOLERANCIA SEGÚN DIN-7168 GM	PLANO COD. Nº: DYN 26.C02.00	Escala:
Fichero:	Sustituye a:	Sustituido por:









CANTIDAD POR CONJUNTO:			DYNATECH
Material:			
Peso terminado:			CONJUNTO: IN-3000 G10
Tto. tco:			
Tto. sup:			
	Fecha	Nombre	POSICIÓN
Dibujado	30/06/2015	DYNATECH	
Norma			
OBSERVACIONES: MEDIDAS SIN TOLERANCIA SEGÚN DIN-7168 GM			PLANO COD. Nº: DYN 26/3.C02.00 — Escala:
Fichero:			Sustituye a: — Sustituido por:

6 ANNEXES

DATE 15/10/2020
REV 0

Maintenance company		**Date:**
Model / Serial No.		
Reference of installation		

1. GENERAL PROVISIONS APPLICABLE TO DYNATECH SAFETY GEAR

1	PUTTING INTO SERVICE	FREQUENCY	OK	NO OK	DYNATECH INSTRUCTIONS	OBSERVATIONS
1.1	Check the proper assembly of the car safety gear	First time before putting into service	☐	☐		6.3.4 of EN 81:20
1.1.1	Visual check of general conditions (1)					
1.1.2	Check of the guide rail state				4.2	
1.1.3	Length of marks on the guide rail				4.1	
1.2	Check the proper assembly of the counterweight safety gear	First time before putting into service	☐	☐		6.3.5 of EN 81:20
1.2.1	Visual check of general conditions (1)					
1.2.2	Check of the guide rail state				4.2	
1.2.3	Length of marks on the guide rail				4.1	

(1)	Check for wear or damage in the safety gear					

2	MAINTENANCE	FREQUENCY	OK	NO OK	DYNATECH INSTRUCTIONS	OBSERVATIONS
2.1	Visual inspection and visual check	6 month	☐	☐	4.2	
2.2	Clean, absence of strange elements	6 month			4.2	
2.3	Controlled engagement of car	12 months	☐	☐	4.2	6.3.4 of EN 81:20
2.4	Visual inspections of wears	12 months			4.1	

3	MAINTENANCE CHECKLIST	OK	NO OK	DYNATECH INSTRUCTIONS	OBSERVATIONS
3.1	Check that there is no interference between shoe and guide rail.	☐	☐	4.3.1	adjust only if required
3.2	Check that there is no interference between rollers and guide rail	☐	☐	4.3.1	adjust only if required
3.3	Check the fixings and clearance between safety gear and frame	☐	☐	4.3.1	adjust only if required
3.4	Clean grease, chips or dust inside safety gear.	☐	☐	4.3.1	
3.5	Check rollers movement	☐	☐	4.3.1	
3.6	Visual check governor linkage	☐	☐	4.3.1	
3.7	Visual check for damage and defects	☐	☐	4.3.1	
3.8	Check driving bar state	☐	☐	4.3.1	
3.9	Check car inclination	☐	☐	4.3.1	
3.10	Check safety switch	☐	☐	4.3.1	
3.11	Clean guide rail	☐	☐	4.3.1	
3.12	Remove marks and chips from the guide rail	☐	☐	4.3.1	
3.13	Apply lubricant on the guide rail	☐	☐	4.3.1	only if required
3.14	Length of marks on the guide rail	☐	☐	4.1	have a register list
3.15	Begining of marks on the guide rail	☐	☐	4.1	
3.16	Visual check for wear	☐	☐		