



PARACAÍDAS PROGRESIVO DYNATECH/  
DYNATECH PROGRESSIVE SAFETY GEAR/  
PARACHUTE À PRISE AMORTIE DYNATECH/  
BREMSFANGVORRICHTUNG DYNATECH/

**PQ-3400-UD**

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

**CERTIFICADO DE EXAMEN C.E. DE TIPO**  
**EC TYPE-EXAMINATION CERTIFICATE**

Según el anexo V parte A de la Directiva 95/16/CE / According annex V part A of Directive 95/16/EC

Número de certificado. / Certificate number	ATI / PP / 009	rev: 0
Organismo Notificado. Notified Body	Asistencia Técnica Industrial S.A.E. (ATISAE) Avda. de los Artesanos, 20 E 28760 Tres Cantos MADRID (ESPAÑA) Nº de identificación / ID number 0053.	
Clase. Tipo. Product. Type	Paracaídas de acción progresiva (PP) Progressive safety gear	
Modelo / Model	PQ 3400 UD	
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 EC type examination.	21/07/2015	
Laboratorio de ensayo. Test laboratory	(véase en el anexo técnico sección 2.10). (Please refer to technical annex section 2.10)	
Informe de ensayo Test report	(véase en el anexo técnico sección 2.10). (Please refer to technical annex section 2.10)	
Directiva CE aplicada. / EC- Directive.	Directiva 95/16/CE de 29 de Junio de 1995	
Norma de referencia. Standard of reference	EN 81-20:2014; EN 81-50:2014;	
Informe de ATISAE. / ATISAE report	MD_EVN_110058 (30.05.2011) MD_DEU_111243.005 (30.05.2011)	
Plazo de validez / Expiry date	Indefinido / (véase en el anexo técnico sección 2.12). Indefinite / (Please refer to technical annex section 2.12)	

**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.



José Manuel Flórez González  
Director Técnico Elevación

## INSTRUCTIONS FOR USE AND MAINTENANCE

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<b>1. GENERAL INSTRUCTIONS .....</b>	<b>2</b>
<b>2. SAFETY GEAR IDENTIFICATION AND CHARACTERISATION.....</b>	<b>2</b>
2.1. IDENTIFICATION.....	2
2.2. SAFETY GEAR'S FEATURES AND USE.....	2
<b>3. INSTALLATION AND ADJUSTMENT .....</b>	<b>3</b>
3.1. ASSEMBLY ON THE FRAME.....	3
3.2. SAFETY GEAR ADJUSTMENT.....	5
3.3. COUPLING THE DRIVING BAR .....	5
3.3.1. USING DYNATECH'S T-3 DRIVING BAR .....	5
<b>4. INSPECTIONS AND MAINTENANCE.....</b>	<b>6</b>
4.4. STORAGE AND SERVICE LIFE.....	6
<b>5. UCM .....</b>	<b>6</b>
5.1. UCM SYSTEM'S PRELIMINARY DESIGN.....	6
<b>6. GENERAL DRAWING .....</b>	<b>7</b>

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## 1 GENERAL INSTRUCTIONS

Each pair of safety gears supplied is factory tared according to the required conditions of use: Total mass ( $P+Q$ ) and guide rails' thickness. These features are indelibly displayed, along with the standardisation password and serial number; on the protection plates on top of the safety gear boxes (see section 2.1).

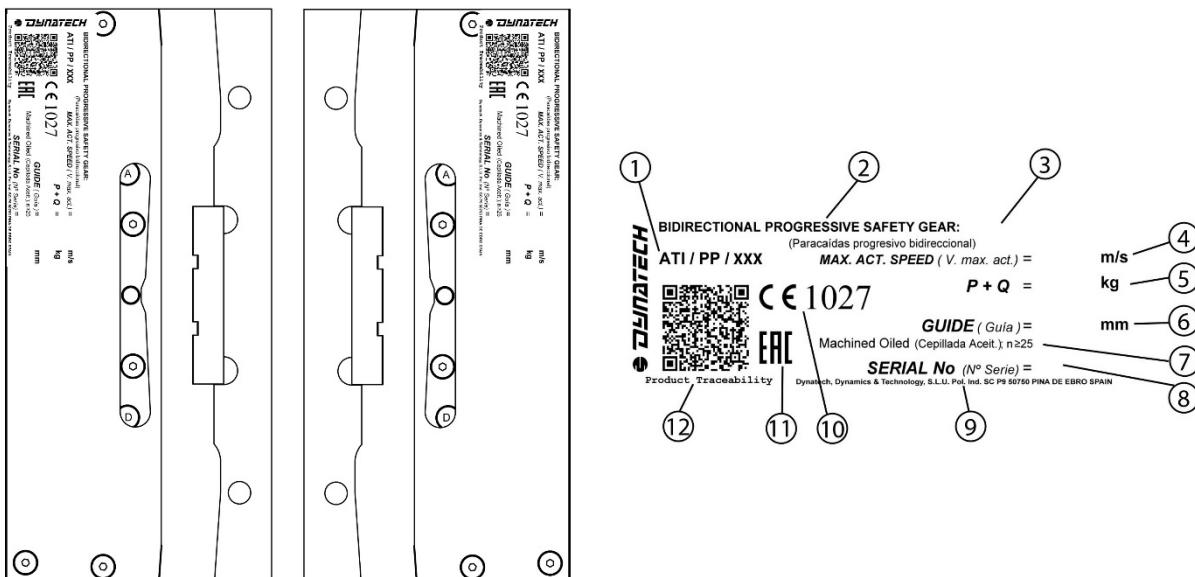
*It is strictly forbidden:*

- To combine and assemble safety gear boxes with different serial numbers.
- To use a pair of safety gears for installations with characteristics different from those indicated on that pair of safety gears' protection plates.
- 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	7	Guide rail type	8	Safety gear serial number	9	Dynatech address	10	Quality assurance CE marking and notified body number	11	Marking for market access to member states of the Customs Union
2	Safety gear type	12	QR product traceability code								
3	Safety gear model										
4	Safety gears' maximum tripping speed (m/s)										
5	Total load (Kg)										
6	Guide rail thickness (mm)										

Figure 1: Safety gear identification

### 2.2 SAFETY GEAR'S FEATURES AND USE

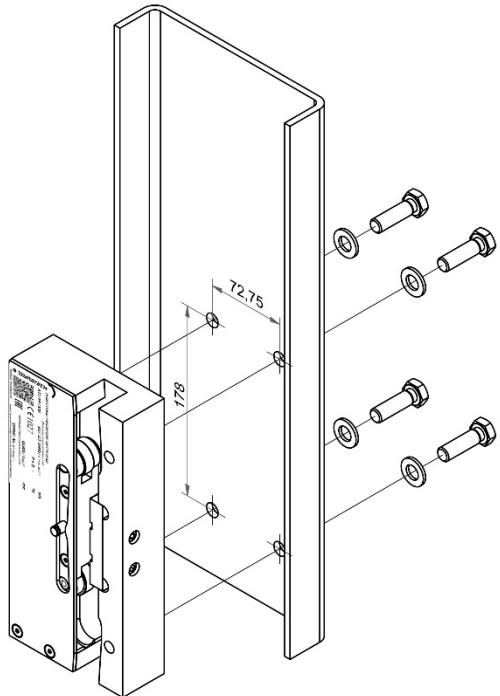
- The guide rails to be used should be machined. Allowable tolerances for guide rail thickness should be within the limits set by the standard: ISO 7465:2007.
- This safety gear should only be used for dry guide rails, that is to say, without any type of lubrication.
- This safety gear can be used up to a maximum tripping speed of 2.5 m/s.
- Allowable guide rail thicknesses: 7 – 16 mm.
- Guide rail's braking surface equal to or more than 25mm.

### 3 INSTALLATION AND ADJUSTMENT

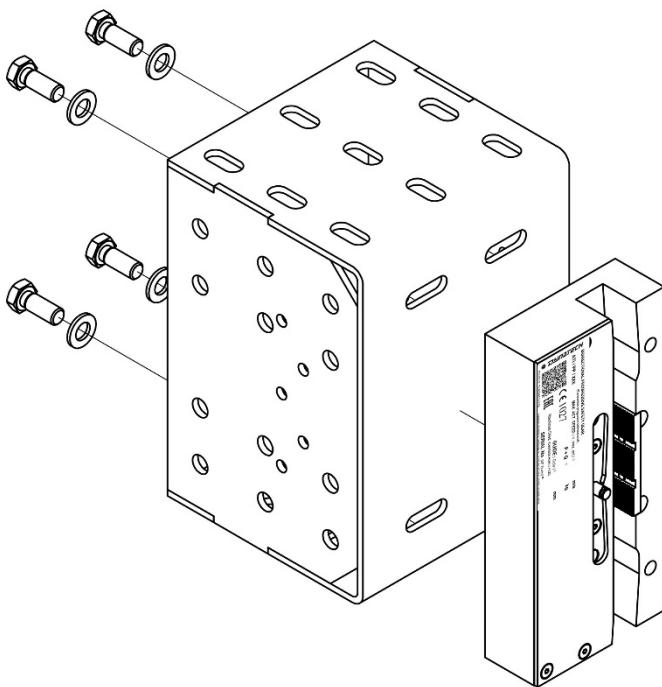
#### 3.1 ASSEMBLY ON THE FRAME

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 (DYN 16.C001.02), 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 (1)**



**Figure 3: Assembling the safety gear onto the frame (2)**

##### Safety gear position:

- The safety gears should be assembled in the position displayed in Figure 4
- The roller for upwards jamming is indicated with letter "A". That is to say, roller "A" should be on the upper part of the safety gear.
- The roller for downwards jamming is indicated with letter "D". That is to say, roller "D" should be on the lower part of the safety gear.

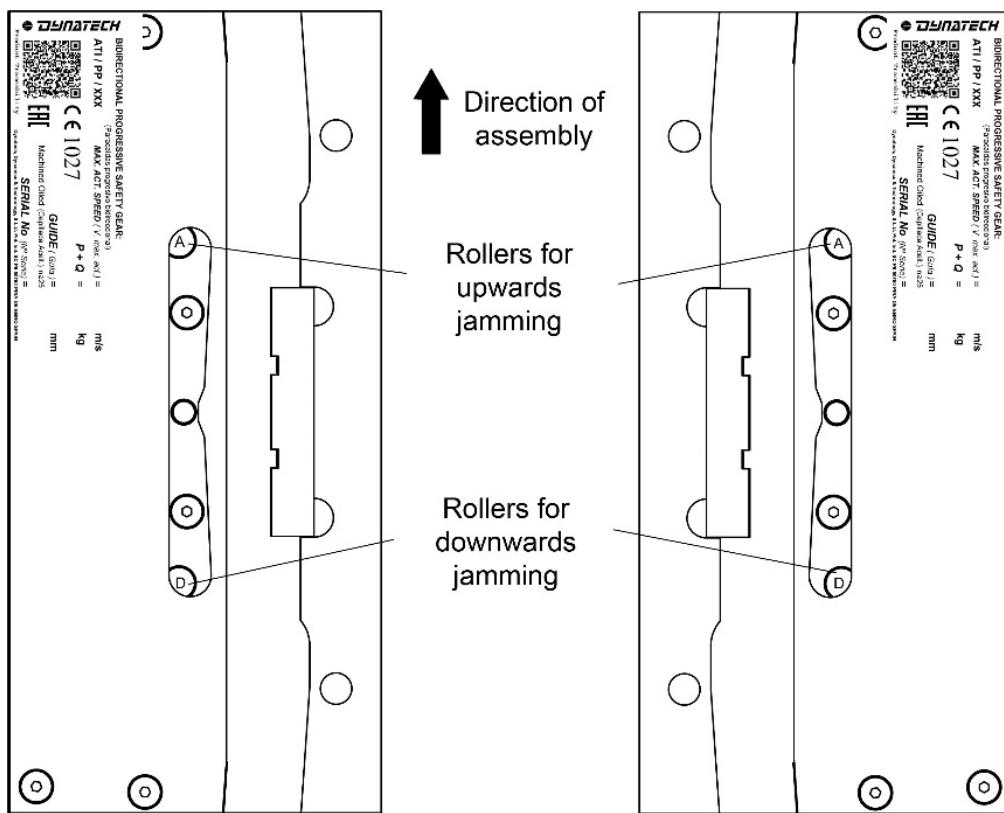


Figure 4: Direction of assembly

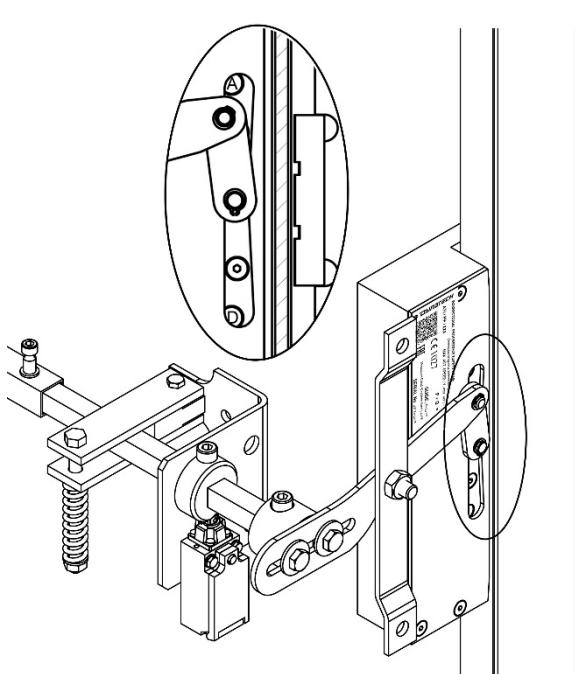


Figure 5: Roller position

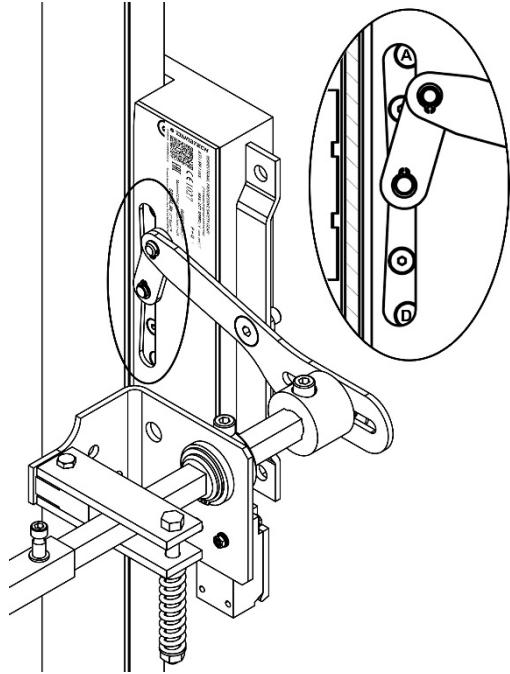


Figure 6: Roller position on inverted guide rails

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.

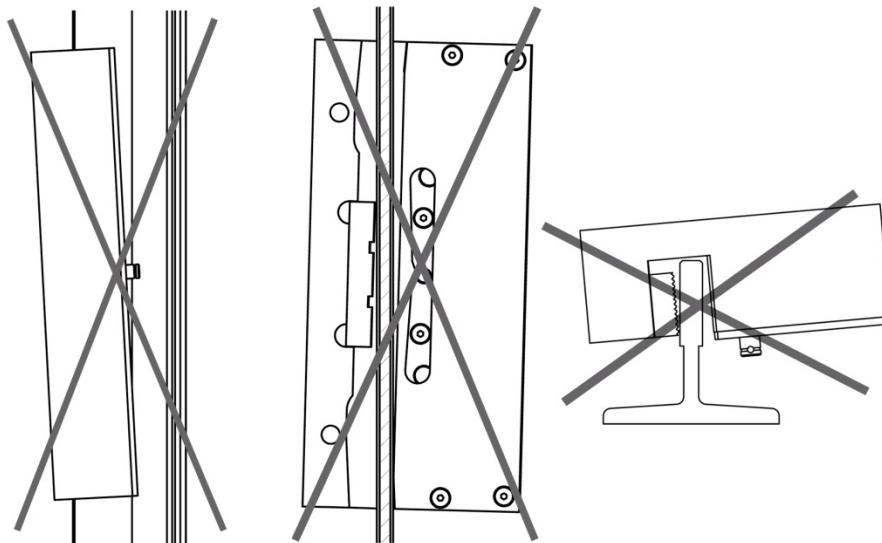


Figure 7: Improper assembly

### 3.2 SAFETY GEAR ADJUSTMENT

The guide rail's position in the block should be adjusted as follows: The side of the guide rail 1.5 mm from the brake shoe; the head of the guide rail 3 mm from the back of the groove (see drawing DYN 16.C001.02).

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.

It should be checked that the safety gear is placed so that the rollers for downwards jamming, marked with the letter "D", are on the bottom part of the safety gear, as is shown in item 3.1.

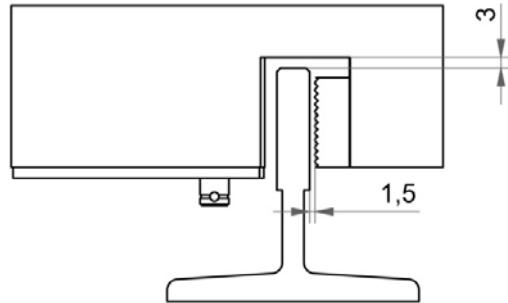


Figure 8 Safety gear adjustment in relation to the guide rail

### 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 driving bar is properly positioned when the trolley's pivot is in the protection plate's central position.

Once it has been fitted and the safety gear's roller's trolleys have been attached to the driving bar's tripping bars, it should be checked that both trolleys operate simultaneously, controlled by the driving bar. This should be checked in both directions, ascending and descending.

The minimum force to be generated by the overspeed governor is double the force that ensures that the performance of the safety gears is synchronised

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-3 DRIVING BAR

Both safety gears may be synchronised by assembling Dynatech's T-3 driving bar. For more information concerning T-3 driving bar assembly, please consult its manual: DYN08 – Instructions T-3.

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

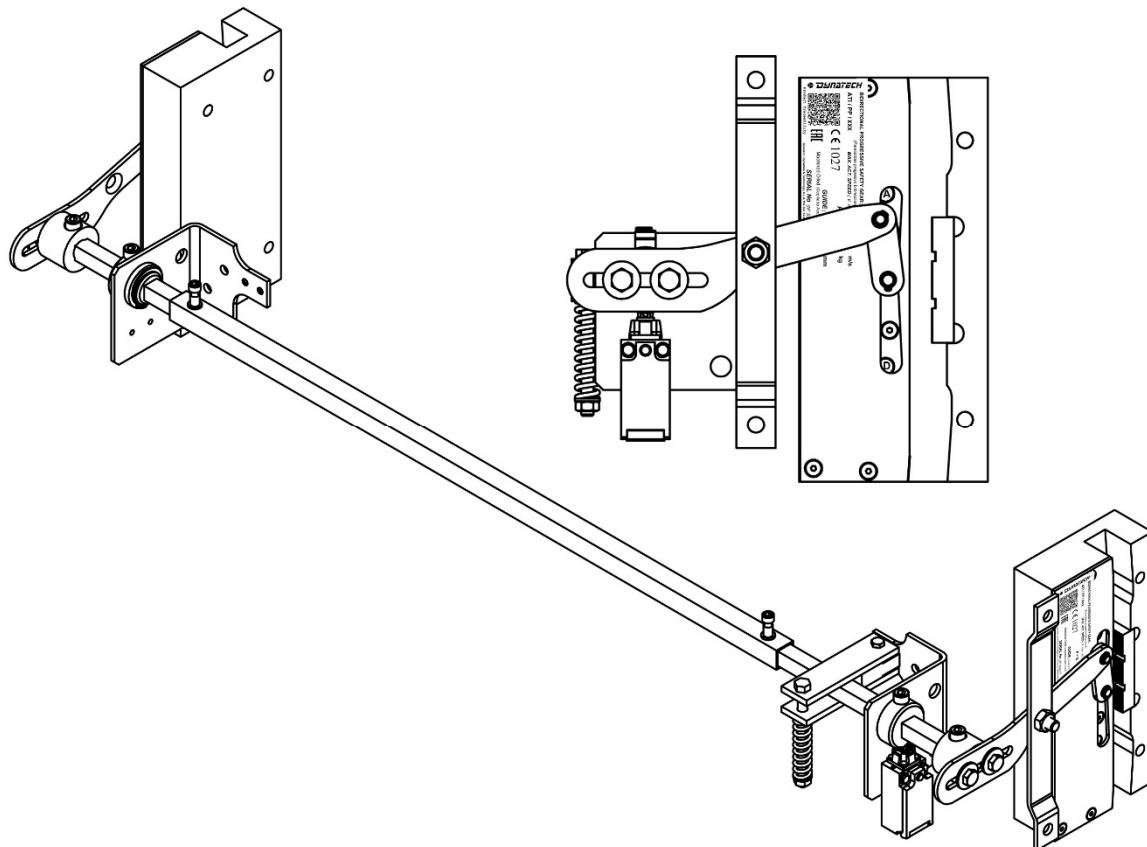


Figure 9: Safety gear synchronisation using the T-3 driving bar

## 4 INSPECTIONS AND MAINTENANCE

### 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 - 40°C

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 UCM

### 5.1 UCM SYSTEM'S PRELIMINARY DESIGN.

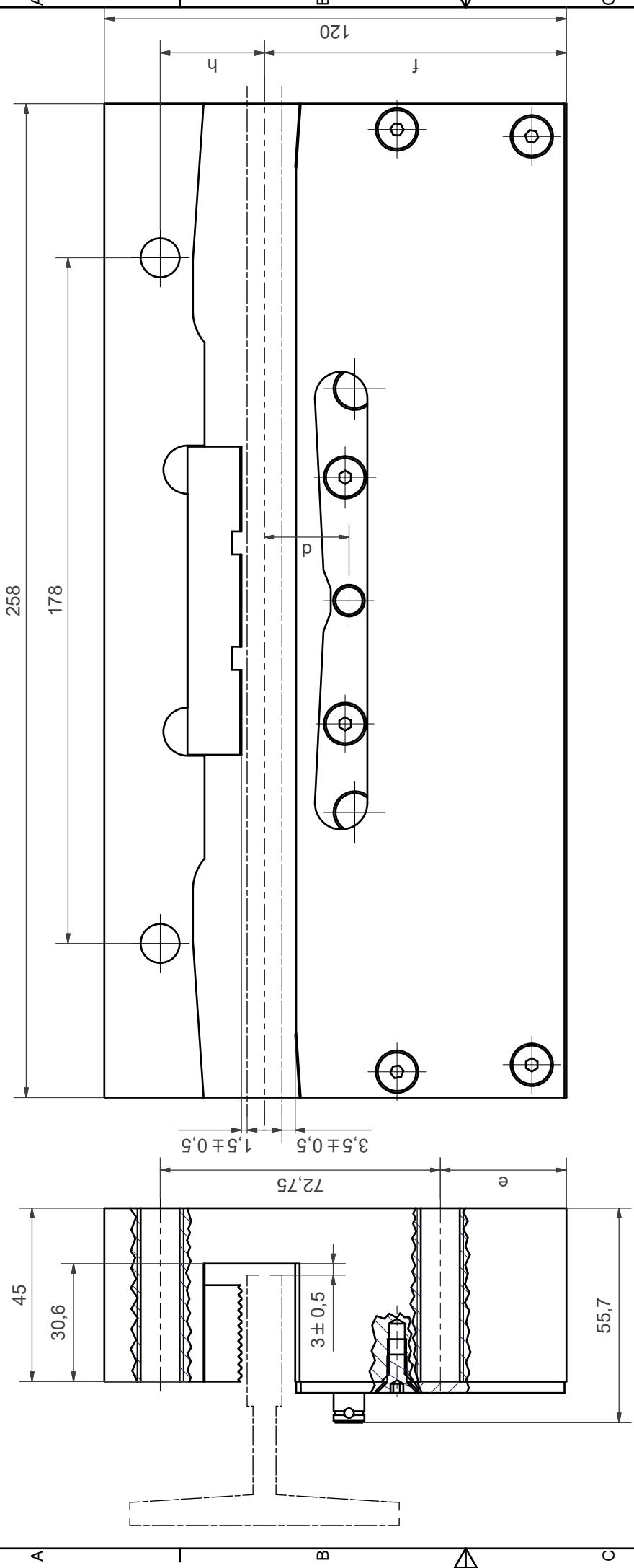
According to EN 81:20 and EN 81:50, lifts should be equipped with means for stopping uncontrolled car movement (UCM). These means should detect UCM and stop the car. This stop must occur at a maximum distance below 1 m (among other requirements).

The safety gears may be used as a braking device for stopping the uncontrolled movement.

The values for the safety gear's braking distance may be calculated beforehand, but several installation parameters must be taken into account. The more information that is known about the physical elements that make up the system, the closer the theoretical value will be to the actual value.

These are theoretical values and may only be used in the system's preliminary design. The installation's compliance with the standard requirements is pending.

## 6 GENERAL DRAWING



Historial de revisiones	
Rev.	Descripción
02	Se actualiza tabla de Medidas
03	Se añaden tolerancias a las cotas de las guías
04	Se actualiza tabla de medidas, estaba erronea
CANTIDAD POR CONJUNTO:	1
Material:	
Peso terminado:	
Tto. Ico:	
Tto. sup:	
Dibujado	Fecha
15,88	04/04/2002
16	Nombre
	DYNATECH
	Nomina

*	$d$ (mm)	$f$ (mm)	$e$ (mm)	$h$ (mm)
7	21,029	77,4	32,75	28,1
8	21,529	77,9	32,75	27,6
9	22,029	78,4	32,75	27,1
10	22,529	78,9	32,75	26,6
11	23,029	79,4	34,75	28,1
12	23,529	79,9	34,75	27,6
13	24,029	80,4	34,75	27,1
14	24,529	80,9	34,75	26,6
15	25,029	81,4	34,75	26,1
15,88	25,469	81,84	34,75	25,66
16	25,529	81,9	34,75	25,6

\* Anchura de guía/  
Guide rail thickness/  
Épaisseur de guide/  
Führungsschienen

D	DYNATECH	CONJUNTO/ Assembly/ Ensemble/ Baugruppe	PLANO COD. N°: DYN 16.C001.04	Escala: 6
D	Fichero:	Sustituido por:	5	