DYNATECH PROGRESSIVE SAFETY GEAR PQ-3400-UD

INSTRUCTIONS FOR USE AND MAINTENANCE

ATISAE
ASISTENCIA TÉCNICA INDUSTRIAL, S.A.E.

ENAC
Entidad Nacional de Acreditación
INSPECCIÓN
Nº 05 / EI 011

CERTIFICADO DE EXAMEN C.E. DE TIPO

EC TYPE-EXAMINATION CERTIFICATE

De un paracaídas progresivo y dispositivo de frenado contra embalamiento en subida.
Progressive safety gear and upward speed reducing overspeed protection mean.

Número de certificado. /Certificate number.	ATI / LD – VA / M126 / 02
Organismo Notificado./ Notified Body.	**Asistencia Técnica Industrial S.A.E. (ATISAE)** Avda. de la Industria, 51 bis E 28760 Tres Cantos MADRID (ESPAÑA) Nº de identificación 0053.
Clase. Tipo. Product. Type.	**Paracaídas progresivo/Dispositivo de frenado.** Progressive safety gear./ Overspeed protection mean PQ-3400 UD
Nombre y dirección del fabricante: Manufacturer´s name and address.	DYNATECH, DYNAMICS & TECHNOLOGY S.L. C/ María de Luna, 11 nave 2 y 7 50015 ZARAGOZA (ESPAÑA).
Nombre y dirección del propietario del certificado: Name and address of Certificate holder.	DYNATECH, DYNAMICS & TECHNOLOGY S.L. C/ María de Luna, 11 nave 2 y 7 50015 ZARAGOZA (ESPAÑA).
Fecha de presentación: Date of submission.	JUNIO. 2002
Fecha del examen de tipo: Date of EC type examination.	JUNIO. 2002
Laboratorio de ensayo: Test laboratory.	AIMME – Instituto Tecnológico Metalmecánico Parque Tecnológico Avda. Leonardo Da Vinci, 38 46980 Paterna VALENCIA (ESPAÑA).
Nº y fecha de protocolo de ensayo: Number and date of laboratory report.	S02-00599 DE MAYO 2002 S01-01468 DE MAYO 2002
Directiva CE aplicada EC- Directive.	**Directiva 95/16/CE de 29 de Junio de 1995.** EC- Directive 95/16/EC of 29.06.1995.
Norma de referencia: Reference standard	**EN 81-1 : Agosto** / August 1998
Declaración: Statement.	**El campo de aplicación de este componente de seguridad queda establecido en el anexo a este certificado** The scope of application of this safety component is stated in the annex to this certificate.

ORGANISMO NOTIFICADO ATISAE 0053

Juan A. Cano Hernández
Director Técnico

Establecido en Madrid, **JUNIO DE 2002**

Este certificado consta de esta portada, un anexo técnico de 2hojas y 2 planos.
This certificate consist of this main page, a technical annex with 2 pages and 2 drawings.

Asistencia Técnica Industrial S.A.E. (ATISAE)
Organismo Notificado Nº 0053 para la aplicación de la Directiva 95/16/CE
Avda. de la Industria, 51 bis. E28760 Tres Cantos MADRID
Tel: 91 806 17 30

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ASISTENCIA TÉCNICA INDUSTRIAL, S.A.E.

ANEXO AL CERTIFICADO CE DE EXAMEN DE TIPO ATI/LD-VA/M126/02
ANNEX TO THE EC TYPE EXAMINATION CERTIFICATE (ABOVE)

1. **Campo de aplicación:**
Scope.

El paracaídas progresivo/dispositivo de frenado PQ-3400 UD está certificado para actuar tanto en bajada como en subida, para diferentes masas totales con reglaje continuo.
The progressive safety gear PQ-3400 UD is certified to operate in downward and upward direction, for different permissible masses and continuous adjustment.

1.1. Tipo de reglaje: **Reglaje continuo.**
Adjustment. Continuous adjustment

1.2. Masa total admisible (P + Q) como dispositivo de frenado en dirección descendente:
Permissible mass as speed reducing element in downward direction.

Para guía: de 8 a 16 mm de espesor.
Applied from: 8 to 16 mm. blade widths guide rail.

Tipo de guía: Guide rail surface condition	Masa total admisible (kg). (min – max) Permissible mass
cepillada machined	686 ÷ 3430

1.3. Fuerza de frenado admisible como dispositivo de frenado en dirección ascendente:
Permissible braking force as car speed braking element acting upwards.

Para guía: de 8 a 16 mm de espesor.
Applied from: 8 to 16 mm. thickness, guide rail.

Tipo de guía: Guide rail surface condition	Fuerza de frenado (N). (min – max) Braking force
cepillada machined	5829 ÷ 26897

1.4. Velocidad nominal máxima.
Maximum rated speed.

Cabina / Car: 2,0 m/s

Contrapeso / Counterweight: 2,0 m/s

1.5. Velocidad máxima de disparo del limitador de velocidad.
Maximum overspeed governor tripping speed.

Cabina / Car: 2,5 m/s

Contrapeso / Counterweight: 2,5 m/s

1.6. Guías:
Guide rails.

Espesores de guía: 8 ÷ 16 mm
Guide rails blade widths.
Estado superficie de guía: cepillada
Surface condition of the guide rails. machined

Se permite la utilización de guías de espesor de 8 a 16 mm. para lo cual se comprueba que existen las medidas adecuadas que garantizan la equivalencia de las características de frenado mostradas en el ensayo.
Guide rails from 8, to 16 mm. of blade width are allowed due to the adequate measures taken to assure the gripping characteristics equivalence, as shown in the test.

1.7.Anchura mínima de frenado: 25 mm
Minimum running surface width.

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1.8. Estado de lubricación de las guías, clase y características del lubricante:
The state of lubrication of the guide rails, category and specifications.

Guía cepillada
Machined guide rail

sin lubricar
no lubricated

2. Notas.
Remarks.

2.1. Sobre el dispositivo del paracaídas debe colocarse una placa con los datos indicados a continuación:
It shall be placed an identifiable plate on the safety gear with the following items.

Nombre del fabricante
Manufacturer's name

Masa admisible actuación en bajada
Permissible mass for free fall protection

Signo del examen de tipo y sus referencias
CE type-examination mark and its references

Espesor de guía para el que está regulado
Guide rail thickness.

2.2. La masa total declarada puede diferir de la masa total admisible en ± 7,5 %.
The mass stated may differ from the permissible mass by 7.5 %.

2.3. La masa admisible en la actuación del paracaídas en sentido descendente, y la fuerza de frenado media para el dispositivo de frenado en sentido ascendente, están relacionados de una forma fija debido a que para ambos casos se utiliza la misma regulación en un único elemento elástico y no pueden ajustarse de forma separada.
The permissible mass, when acting in downward direction, and the mean braking force, when acting in upward direction are related, because of the device uses the same adjustment value for both in one single elastic element so they cannot be adjusted separately.

2.4. Las fuerzas de frenado admisibles del dispositivo de frenado deberán utilizarse en la instalación del ascensor de modo que no se produzca una deceleración superior a 1gn con la cabina vacía en movimiento ascendente, responsabilidad que recae en el instalador del ascensor. El dispositivo de control de la sobrevelocidad en este caso será un limitador de velocidad.
The permissible braking forces shall be used in a particular lift installation in such a way that the top retardation do not achieve 1 gn with empty car moving in upward direction. The responsibility to fulfil this premise is under the installer of the lift. Speed monitoring element this time shall be an overspeed governor

2.5. La certificación afecta a los elementos de frenado y no incluye a los elementos de conexión, palanquería, 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 electrical safety device.

2.6. La utilización en contrapeso, solo actuando en bajada (1.4 y 1.5 de este anexo).
Counterweight application only in downwards (1.4 and 1.5 in this annex).

2.7. Se permiten dos configuraciones de bloques que se diferencian en el ancho del mismo habida cuenta que las dimensiones relevantes de regulación se mantienen.
It is possible to use two different blocks which difference is the block's width, considering relevant adjustment dimensions remains the same.

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

DESIGNACIÓN	FECHA	LEYENDA
PLANO COD 0	04/04/02	PQ-3400-UD VISTA DE CONJUNTO
PLANO COD 0	04/04/02	PQ-3400-UD/G VISTA DE CONJUNTO

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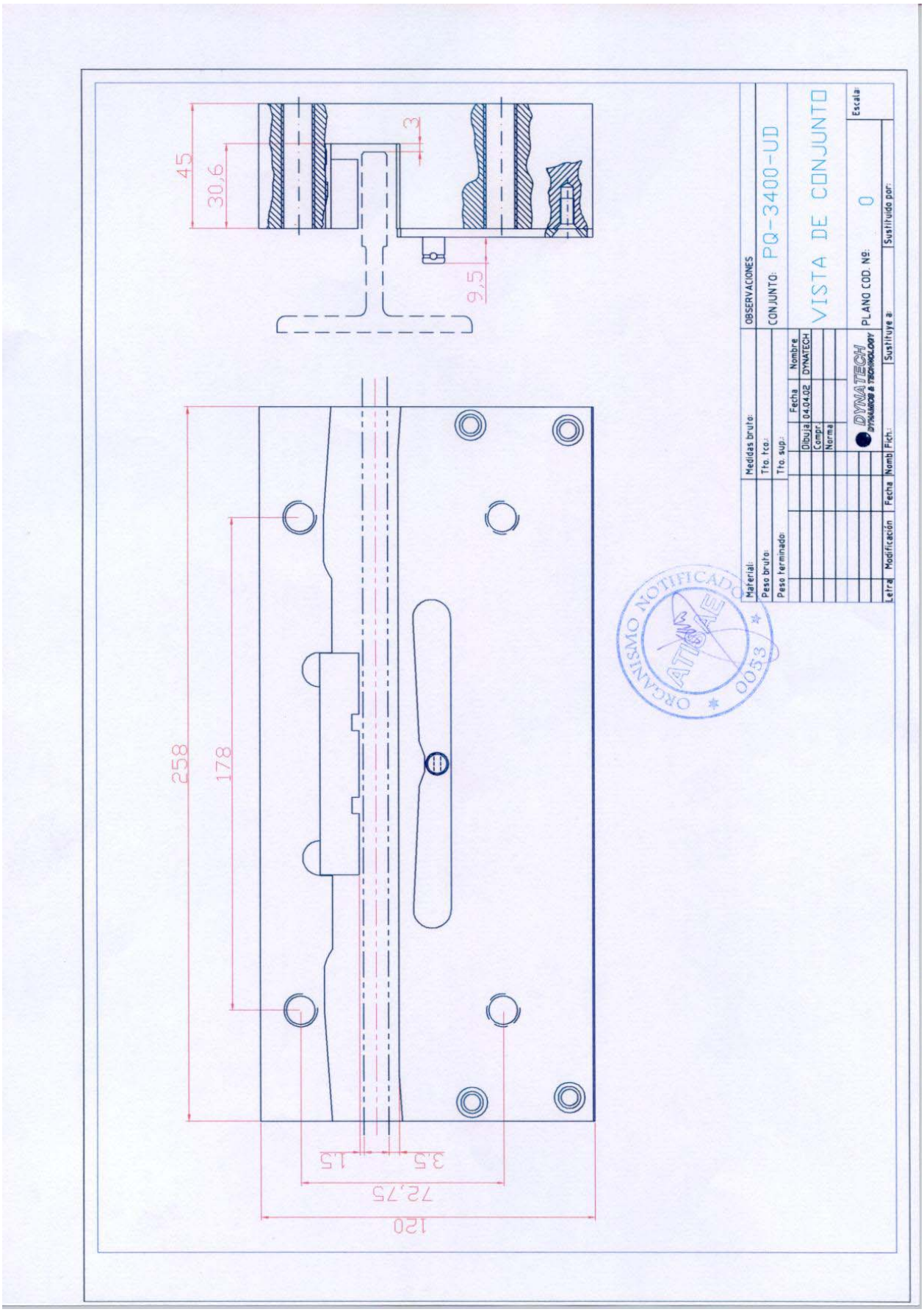

45
30,6
3
9,5
258
178
3,5
1,5
72,75
120
OBSERVACIONES
Material:
Medidas bruto:
Peso bruto:
Tto. tco.:
Peso terminado:
Tto. sup.:
CONJUNTO: PQ-3400-UD
VISTA DE CONJUNTO
Fecha
Nombre
Dibuja 04.04.02 DYNATECH
Compr.
Norma
PLANO COD. NE: 0
Escala:
Letra Modificación Fecha Nomb. Fich.
Sustituye a:
Sustituido por:
ORGANISMO NOTIFICADO 0053 AENOR

INSTRUCTIONS FOR USE AND MAINTENANCE

1.-GENERAL INDICATIONS.

Each supplied set of safety gears has been regulated at the factory according to the required use characteristics: Total weight (P+Q) and the guide rail thickness. These characteristics, the EC type examination number and the serial number are shown on the protection plates attached to the safety gear boxes.

It is absolutely forbidden:

a) To combine and install safety gear boxes with different serial numbers.

b) To use a set of safety gears for installations with different characteristics to the ones shown on the protection plates of their safety gear sets.

c) To intervene on any safety gear component.

DYNATECH DYNAMICS & TECHNOLOGY, S.L. will not be responsible of any damages caused by the unobservance of any point of these general indications.

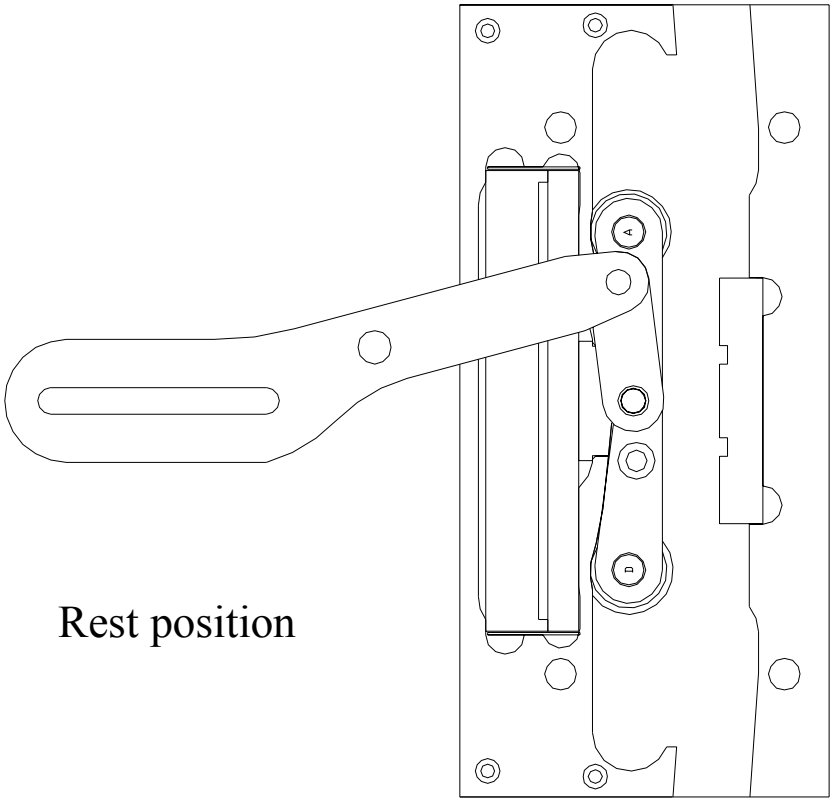
2.-SAFETY GEAR INSTALLATION.

The Standard requires that the safety gear installation must be done including a security contact of type AC - 15 or DC - 13 according to EN 60947 - 5 - 1.

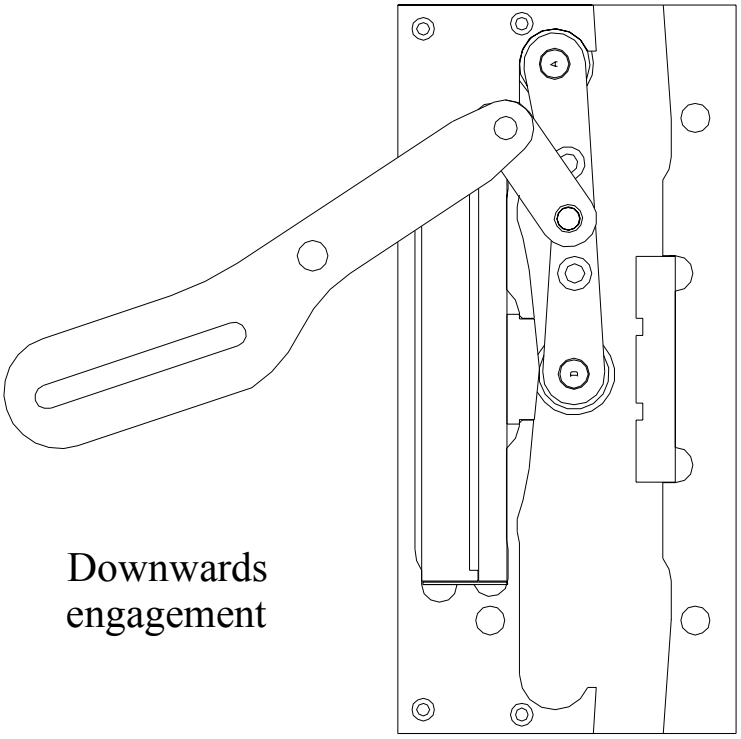
2.1- TO THE SLING MAKER:

The fixing holes for the safety gear must be made in the sling sides according to the dimensions and positions shown in the enclosed safety gear drawings, making sure the guide rail axis center to the sling beams.

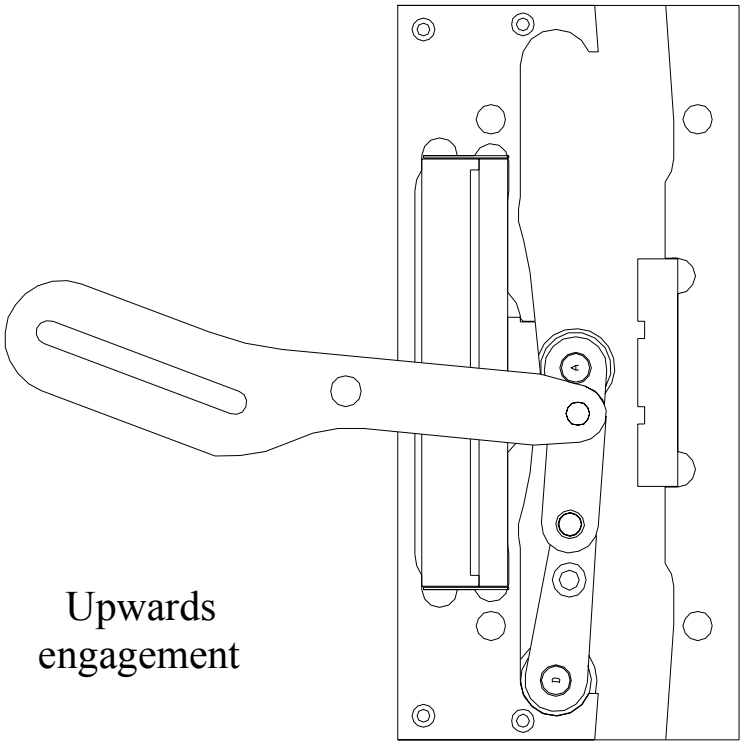
Once the safety gear is well placed and its roller trains are attached to the driving bars, it should be checked that both trains act synchronized in accordance to the driving bar commands. The sling maker is responsible for the proper location of the safety gear on the sling as well as the adjustment checking and synchronized working of the driving bar. The pin of the train, in its rest position, must be at the central point of the protection plates.



Rest position



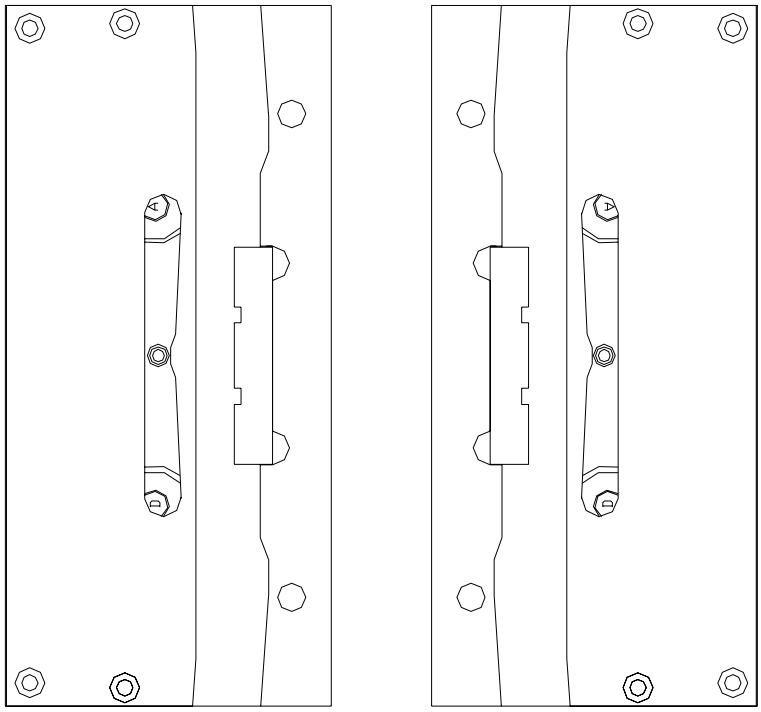
Downwards engagement



Upwards engagement

As a suggestion for the safety gear fixing to the sling, the tightening torque of 8.8 M12 screws is 79.09 Nm and 111 Nm for those of 10.9.

Remark: The rollers for the downwards engagement marked with a “D” letter, must remain always at the lower part of the safety gear. The letters which rollers are distinguished with can be appreciated at first view trough the long hole of the protection plates.



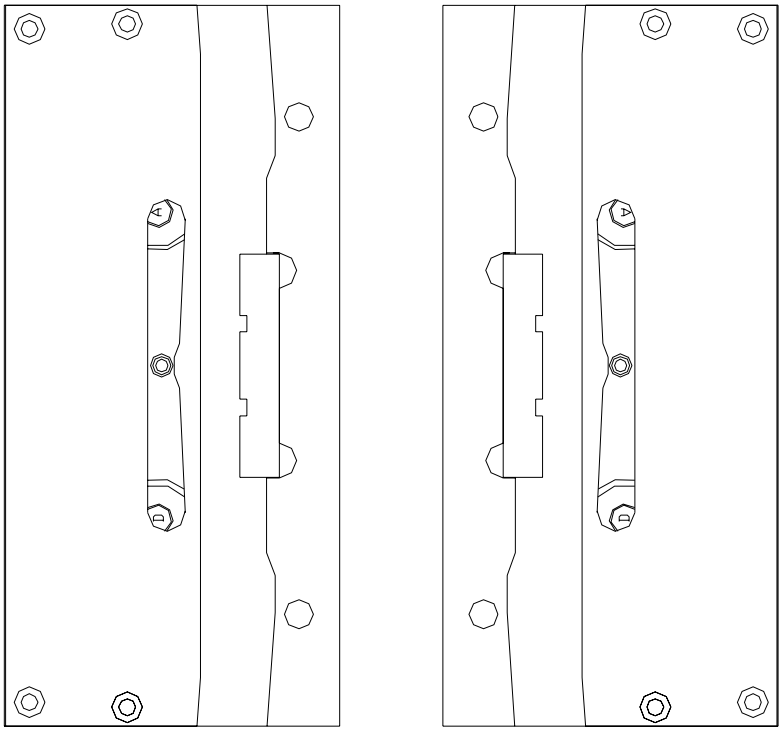
2.2- TO THE INSTALLER:

During the installation at the well, first of all, the guide rails must be introduced in the grooves of the safety gear housings. Then the position of the guide rail in the housing is adjusted as follows: the side of the guide rail, 1.5 mm from the brake block, the guide head, 3mm from the bottom of the groove (see drawings). For these adjustments the sliders will be handled without modifying the position of the safety gear in the sling because the sling maker

must have properly fixed the safety gear in its final position. For the correct safety gear acting, the distances mentioned here above must be strictly respected by the installer.

To make easy the adjustment at work of the distances between the faces of the guide rails and the parts of the safety gears which are opposite the guide rail, it will be possible to use plates which will allow the emplacement of the guide rail in its correct position in the grooves of the safety gear. The plates must be removed once the adjustment operation has finished.

Remark: The installer must be sure that the sling maker has situated the rollers for the downwards engagement, marked with a “D” letter, at the lower part of the safety gear.



3.-USE AND MAINTENANCE.

The non-fulfilment of the following prescriptions may produce deceleration values and breaking distances which could not be in accordance with the Standard.

3.1-GUIDE RAILS:

a) The guide rails used must be **planed (machined)**. The admissible tolerances for the guide rails thickness are between –0 and +0.10 mm.

b) This safety gear must only be used with **dry guide rails**, that is without any oil.

c) The progressive safety gear PQ-3400-UD can be used with this type of guide rails until a nominal speed of 2m/s and the governor response maximum speed is 2.5 m/s.

d) If after the safety gear performance you find scratched guide zones placed within a distance of less than 1 meter between them, it is recommended to substitute the affected guide parts.

e) The gripping width of the guide rails must be 25 mm or greater.

f) The admissible widths of guide rails are 8 – 16 mm.

3.2-SPEED GOVERNOR:

The speed governor rope tension has to be big enough to warrant, during the governor performance, a traction of 300 N at least in the connection point of the safety gear driving bar.

3.3-RANGE OF USE:

Here below the standard P+Q board is shown. The nominal values are those of the central line.

Lower value	1024	1171	1326	1454	1599	1735	1904	2108	2323	2635	2816	3057
P+Q	**1107**	**1266**	**1433**	**1571**	**1728**	**1875**	**2058**	**2278**	**2511**	**2848**	**3044**	**3304**
Upper value	1190	1361	1540	1688	1857	2015	2212	2448	2699	3061	3272	3430

Remark: There is the possibility of supplying the PQ-3400-UD safety gear for lower values of P+Q (until 635 Kg). In that case you should ask directly Dynatech about the matter.

3.4-FRICTION PARTS REPLACEMENT:

The friction parts, brake shoes and rollers, can support three free fall upwards performances and three downwards performances, as it is exposed in the Standard EC type-examination criteria.

Anyway, after having intervene in a real situation it is recommended to replace the friction parts. In that case, contact Dynatech or its nearest distributor, in order to know the procedure to be followed.

In order to obtain a better control, the maintenance person may have a register of the safety gear performances. The safety gear serial number should be written in its register as well as each and every acting.

It is not necessary the braking parts replacement, caused by normal inspection tests, unless the braking distance surpass the double of the one obtained at the very first test of the installation.

3.5-MAINTENANCE:

3.5.1.-CLEANING.

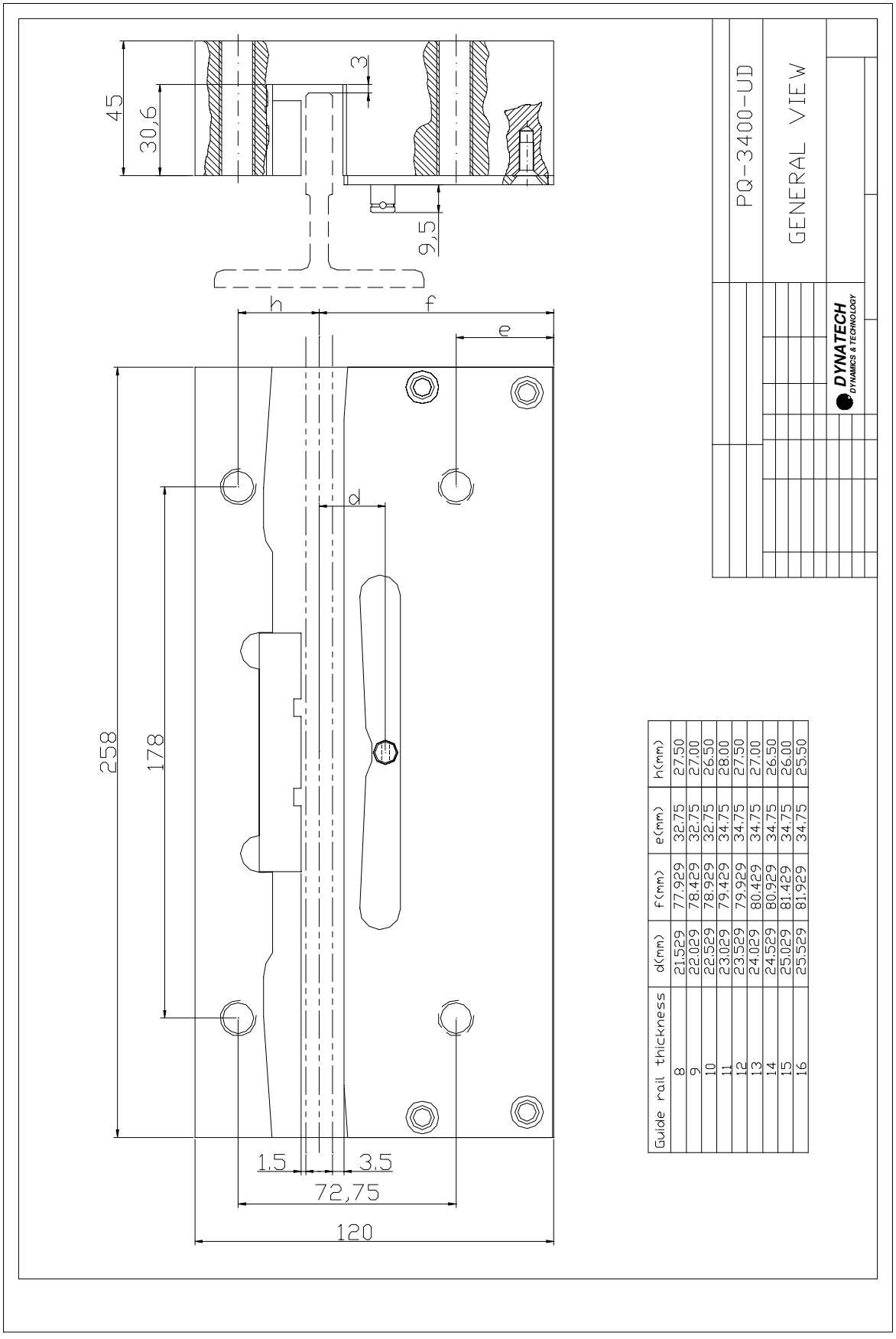
It is very important to make sure that there is not any alien element inside the safety gear housing in order to guarantee the proper work of the moving parts.

3.5.2.-CORROSION.

Dynatech safety gears have anticorrosive protection in all cases. However, a periodical checking must be done to make sure that all the moving elements of the safety gear are still in perfect work conditions. A wedging test is not necessary, but a simple check of its free movements and a visual checking of the surfaces general condition.

These verifications must be done more often when the installation is placed inside a specially corrosive atmosphere.

4.-GENERAL DRAWING.



Guide rail thickness	d(mm)	f(mm)	e(mm)	h(mm)
8	21.529	77.929	32.75	27.50
9	22.029	78.429	32.75	27.00
10	22.529	78.929	32.75	26.50
11	23.029	79.429	34.75	28.00
12	23.529	79.929	34.75	27.50
13	24.029	80.429	34.75	27.00
14	24.529	80.929	34.75	26.50
15	25.029	81.429	34.75	26.00
16	25.529	81.929	34.75	25.50