INSTRUCTIONS: PR-2500-UD (V.50)

Date: 12-09-2002 Check: 01

DYNATECH PROGRESSIVE SAFETY GEAR PR-2500-UD (V.50)

INSTRUCTIONS FOR USE AND MAINTENANCE

ATISAE
ASISTENCIA TÉCNICA INDUSTRIAL, S.A.E.

ENAC
Entidad Nacional de Acreditación
INSPECCIÓN
Nº 05 / EI / 011 / 97

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 speed reducing overspeed protection mean.

Número de certificado. /Certificate number.	ATI / LD – VA / M065A-2 / 00
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. PR-2500 UD.
Nombre y dirección del fabricante: Manufacturer´s name and address.	DYNATECH DYNAMICS AND TECHNOLOGY S.L. C/ María de Luna, 11. Nave 7 50015 ZARAGOZA (ESPAÑA).
Nombre y dirección del propietario del certificado: Name and address of Certificate holder.	DYNATECH DYNAMICS AND TECHNOLOGY S.L. C/ María de Luna, 11. Nave 7 50015 ZARAGOZA (ESPAÑA).
Fecha de presentación: Date of submission.	ENERO. 1999 MARZO. 2000 (AMPLIACION 1) JULIO. 2000 (AMPLIACION 2)
Fecha del examen de tipo: Date of EC type examination.	MAYO. 1999 ABRIL. 2000 (AMPLIACION 1) JULIO. 2000 (AMPLIACION 2)
Laboratorio de ensayo: Test laboratory.	AIMME – Instituto Tecnológico Metalmecánico. València Parc Tecnòlogic, calle 2, s/n. Paterna 46980. VALENCIA (ESPAÑA)
Nº y fecha de protocolo de ensayo: Number and date of laboratory report.	1333/98 DE ABRIL 1998 1334/98 DE ABRIL 1998 S00-00135 DE MARZO 2000 S00-00016 DE MARZO 2000 S00-00017 DE MARZO 2000
Directiva CE aplicada EC- Directive.	Directiva 95/16/CE de 29 de Junio de 1995. EC- Directive 95/16/EC of 29.06.1995.
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

Establecido en Madrid, **JULIO DE 2000**

Juan A. Cano Hernández
Director Técnico

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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ANEXO AL CERTIFICADO CE DE EXAMEN DE TIPO ATI/LD-VA/M065A-2/00
ANNEX TO THE EC TYPE EXAMINATION CERTIFICATE (ABOVE)

1. **Campo de aplicación:**
Scope.

El presente certificado amplia el certificado ATI/LD-VA/M065A-1/00 a la utilización de guía de 8 mm de espesor con 20 mm de anchura de frenado, para una sola masa total, reglaje en un punto, con el valor expresado más adelante.
The present document enhances the former certificate ATI/LD-VA/M065A-1/00, in order to allow the use of 8 mm thickness guide rails with 20 mm of gripping width, for single mass, and adjustment in one point, considering the values stated below.

El paracaídas progresivo/dispositivo de frenado PR-2500 UD está certificado para actuar tanto en bajada como en subida, para diferentes masas totales con reglaje continuo.
The progressive safety gear PR-2500 UD is certified to operate in downward and upward direction, for different permissible masses and continuous adjustment.

El alcance queda expresado de la siguiente manera para los dos casos considerados:
The scope is so stated in the following manner for both cases considered.

A. **Reglaje continuo para distintas masas admisibles.**
Continuous adjustment for different permissible masses.

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

1.2. **Masa total admisible 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. thickness, guide rail.

Masa total admisible. (Kg.) Permissible mass	Reglaje (valor de regulación.) (mm) Adjustment (Adjustment value)
Máxima/ Maximun 1955	30
Mínima/ Minimum 613	9

Otros valores intermedios de reglaje se encuentran especificados en el expediente técnico de este certificado.
Other intermediate adjustment values are specified into the technical dossier of this certificate.

1.3. **Fuerza de frenado admisible como dispositivo de frenado en dirección ascendente:**
Permissible braking force as speed reducing element in upward direction.

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

Fuerza de frenado admisible. (N.) Permissible braking force	Reglaje (valor de regulación.) (mm) Adjustment (Adjustment value)
Máxima/ Maximun 9761	30
Mínima/ Minimum 2889	9

Otros valores intermedios de reglaje se encuentran especificados en el expediente técnico de este certificado.
Other intermediate adjustment values are specified into the technical dossier of this certificate.

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1.4. Velocidad nominal máxima.
Maximum rated speed.

Cabina / Car:	2	m/s
Contrapeso / Counterweight:	2	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. Tipo de guía: Type of the guide rail.

Designación: Designation.	T 70/9	
Espesor de guía: Guide rails thickness.	9	mm
Ancho: Width.	34	mm
Estado superficie de guía: Surface condition of the guide rails.	Estirada (1)	

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

(1) El estado de superficie puede ser también mecanizada, conforme a los resultados obtenidos en el informe S00-00135 con guía T82/B, dado que se demuestra en ensayos realizados que la diferencia obtenida es sensiblemente inferior al 5%.
(1) The surface condition can be also milled, in conformity of the results shown in S00-00135 report using T82/B guide rail, granted that the test made shows differences in these values are noticeably under 5%.

1.7.Anchura mínima de frenado: 25 mm
Gripping width.

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

Especificaciones del lubricante: ISO VG 150
Lubricant specifications.

B. Reglaje para una sola masa admisible.
Adjustment for one single permissible mass.

1.1. Tipo de reglaje: Adjustment. **Reglaje puntual.** Adjustment in one single point

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

Para guía: de 8, mm de espesor.
Applied for 8 mm. thickness, guide rail.

Masa total admisible. Permissible mass	(Kg.)	Reglaje (valor de regulación.) (mm) Adjustment (Adjustment value)
Valor / value	671	15

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1.3. Fuerza de frenado admisible como dispositivo de frenado en dirección ascendente:
Permissible braking force as speed reducing element in upward direction.

Para guía: de 8, mm de espesor.
Applied for 8 mm. thickness, guide rail.

Fuerza de frenado admisible. (N.) Permissible braking force		Reglaje (valor de regulación.) (mm) Adjustment (Adjustment value)
Valor/ value	4168	15

1.4. Velocidad nominal máxima.
Maximum rated speed.

Cabina / Car:	1	m/s
Contrapeso / Counterweight:	1	m/s

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

Cabina / Car:	1,5	m/s
Contrapeso / Counterweight:	1,5	m/s

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

Designación: Designation.	T 65/A	
Espesor de guía: Guide rails thickness.	8	mm
Ancho: Width.	20	mm
Estado superficie de guía: Surface condition of the guide rails.	Estirada	

1.7. Anchura mínima de frenado: 20 mm
Gripping width.

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

Especificaciones del lubricante: ISO VG 150
Lubricant specifications.

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

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

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 %.

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Anexo al certificado ATI/LD-VA/M065A-2/00
Annex to the certificate

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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.
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.

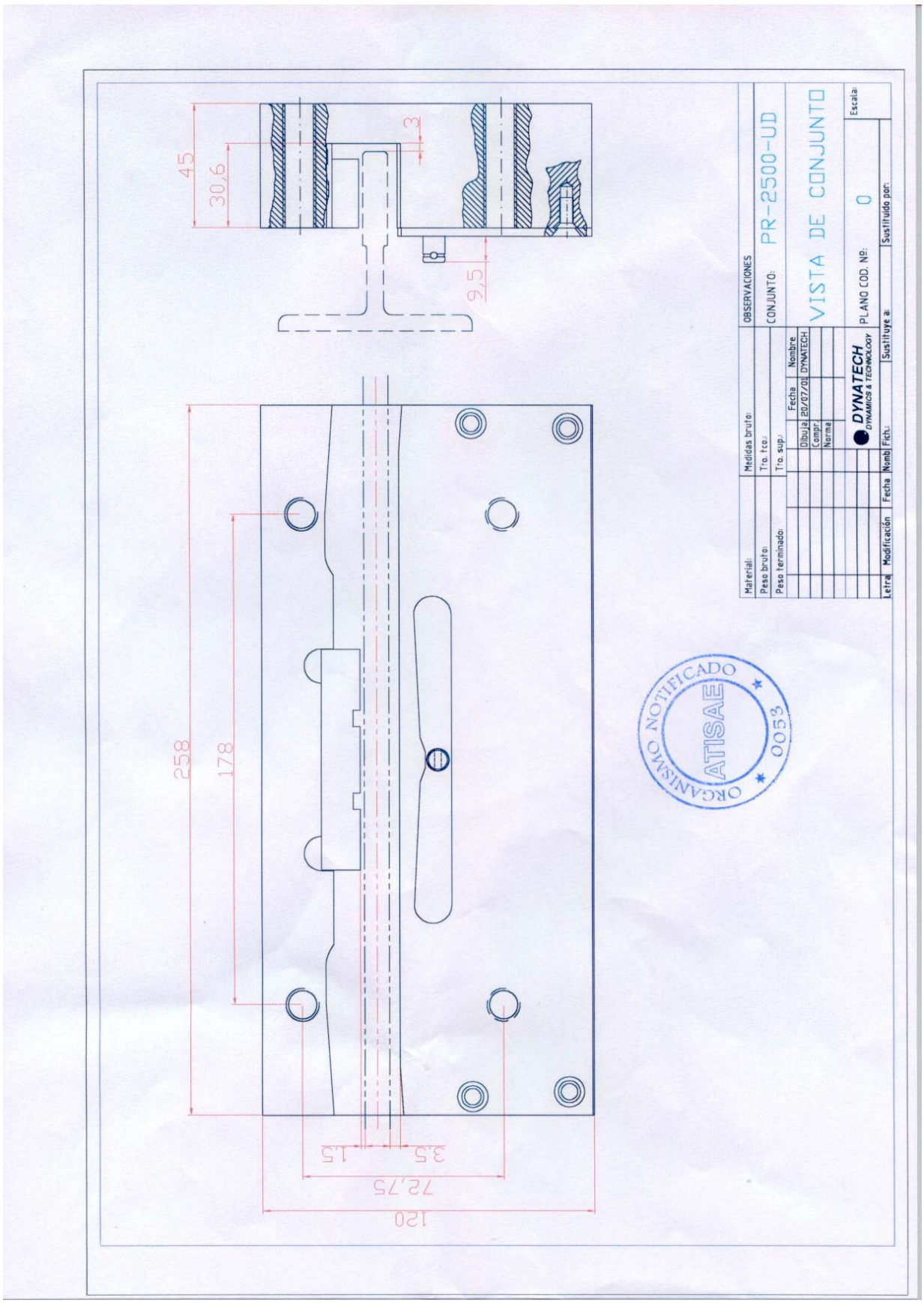
2.5. La guía que aparece en el apartado 1.6 (casos A / B) de este anexo corresponde a las guía utilizada en el ensayo de homologación. Otros tipos de guías pueden ser utilizados siempre que espesor y estado superficial sean iguales, y su ancho no sea inferior a la anchura mínima de frenado.
The guide rails in the paragraph 1.6 (cases A / B) of this annex are the guide rails of the certification test. Other guide rails can be used if thickness and surface state are the same, while its width shall be not less than the stated gripping width.

2.6. 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 electric safety device.

2.7. Se adjunta a la presente certificación los siguientes documentos, que llevan el número de homologación CE/examen CE de tipo arriba indicado:
The following documents, bearing the EC type-examination number shown above are annexed to this certificate.

DESIGNACIÓN	FECHA	LEYENDA
PLANO COD Nº: 0	sin fecha	VISTA DE CONJUNTO

ORGANISMO NOTIFICADO 0053 ATISAE


45
30,6
3
9,5
258
178
3,5
1,5
72,75
120
Material:
Peso bruto:
Peso terminado:
Medidas bruto:
Tra. tco.:
Tra. sup.:
OBSERVACIONES
CONJUNTO: PR-2500-UD
VISTA DE CONJUNTO
Fecha
Nombre
Dibujó 20/07/01 DYNATECH
Compr.
Norma
DYNATECH
DYNAMICS & TECHNOLOGY
PLANO COD. Nº: 0
Escala:
Letra
Modificación
Fecha
Nomb.
Fich.:
Sustituye a:
Sustituido por:
ORGANISMO NOTIFICADO
ATISAE
0053

INSTRUCTIONS FOR USE AND MAINTENANCE

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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.

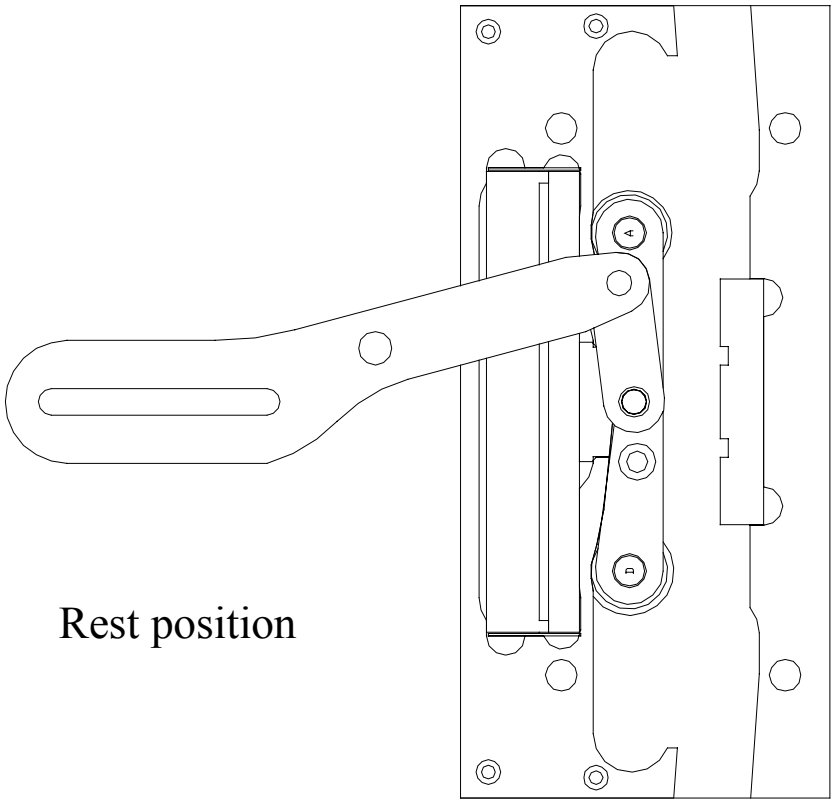
2.-SAFETY GEAR INSTALLATION.

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.

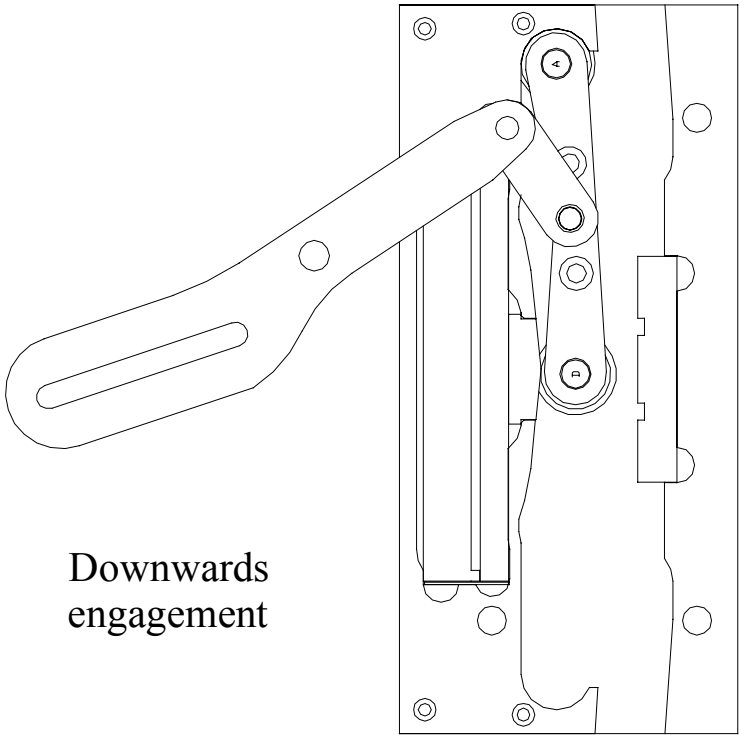
2.1- TO THE SLING MAKER:

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.

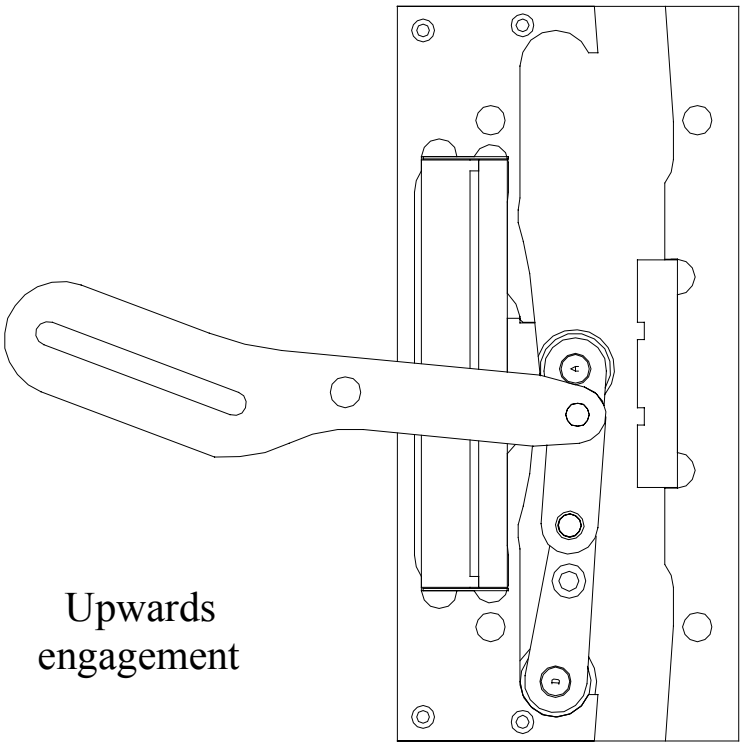
Once the safety gear is well placed and its roller trains are attached to the driving bars, it should be checked that both trains act synchronized in accordance to the driving bar commands. The sling maker is responsible for the proper location of the safety gear on the sling as well as the adjustment 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



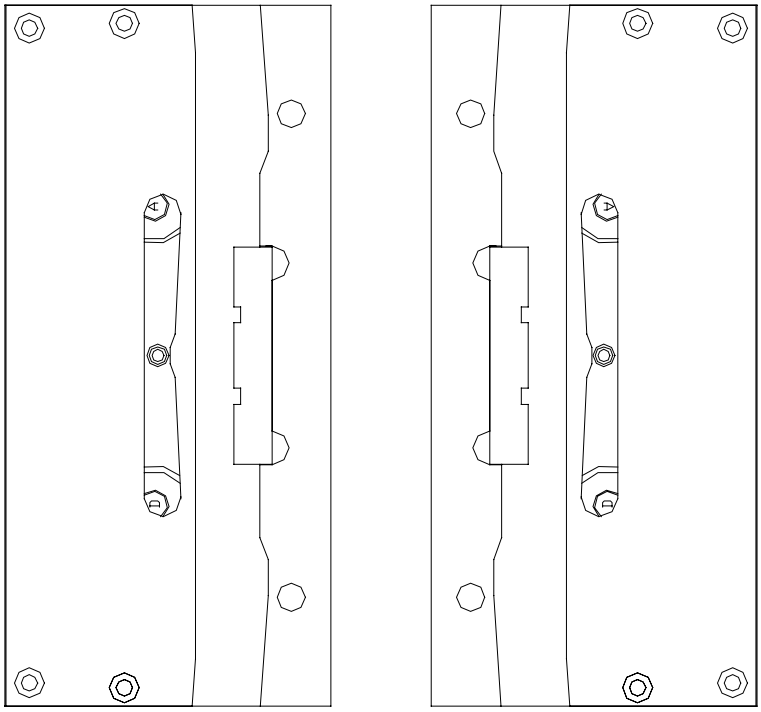
Downwards engagement



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.



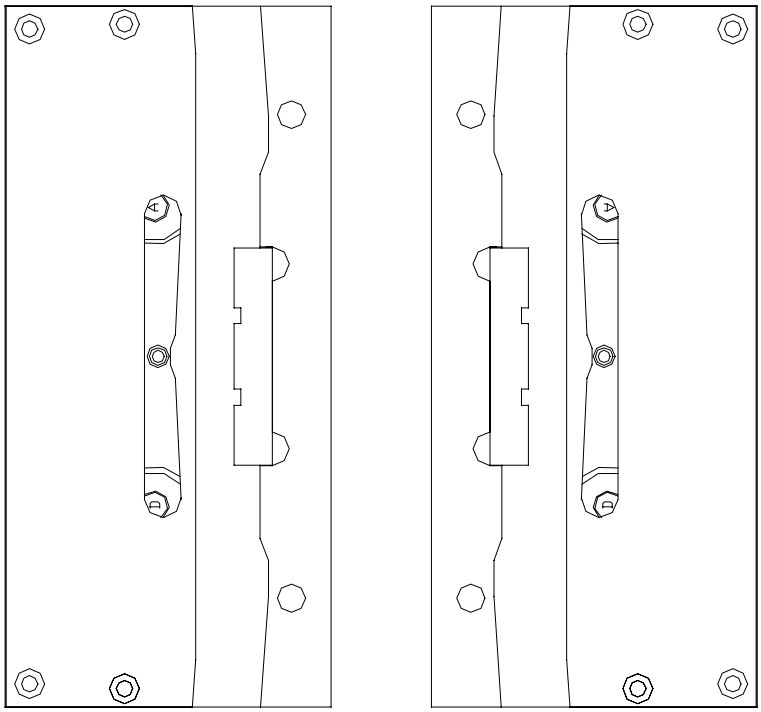
2.2- TO THE INSTALLER:

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:

3.1.1.-GUIDE RAILS WITH A GRIPPING WIDTH OF 25mm OR GREATER.

a) The guide rails used can be either the **cold-drawn** or the **planed** type. The admissible tolerances for the guide rails thickness are between –0 and +0.10 mm.

b) The progressive safety gear PR-2500-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.

c) 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.

d) The guide rails must be lubricated with ISO VG 150 oil lubricant.

3.1.2.-GUIDE RAILS WITH A GRIPPING WIDTH OF 20mm.(for example T 65/A)

a) The guide rails used can be either the cold-drawn or the planed type. The admissible tolerances for the guide rails thickness are between –0 and +0.10 mm.

b) The progressive safety gear PR-2500-UD can be used with this type of guide rails until a nominal speed of 1m/s and the governor response maximum speed is 1.5 m/s.

c) 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.

d) The guide rails must be lubricated with ISO VG 150 oil lubricant.

3.2-SPEED GOVERNOR:

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

3.3-RANGE OF USE:

3.1.1.-GUIDE RAILS WITH A GRIPPING WIDTH OF 25mm OR GREATER.

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

-7'5%	567	658	764	859	963	1060	1178	1317	1454	1627	1808
P+Q	**613**	**711**	**826**	**929**	**1041**	**1146**	**1274**	**1424**	**1572**	**1759**	**1955**
+7'5%	659	764	888	999	1119	1232	1370	1531	1690	1891	2102

3.1.2.-GUIDE RAILS WITH A GRIPPING WIDTH OF 20mm.(for example T 65/A)

-7'5%	621
P+Q	**671**
+7'5%	721

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.

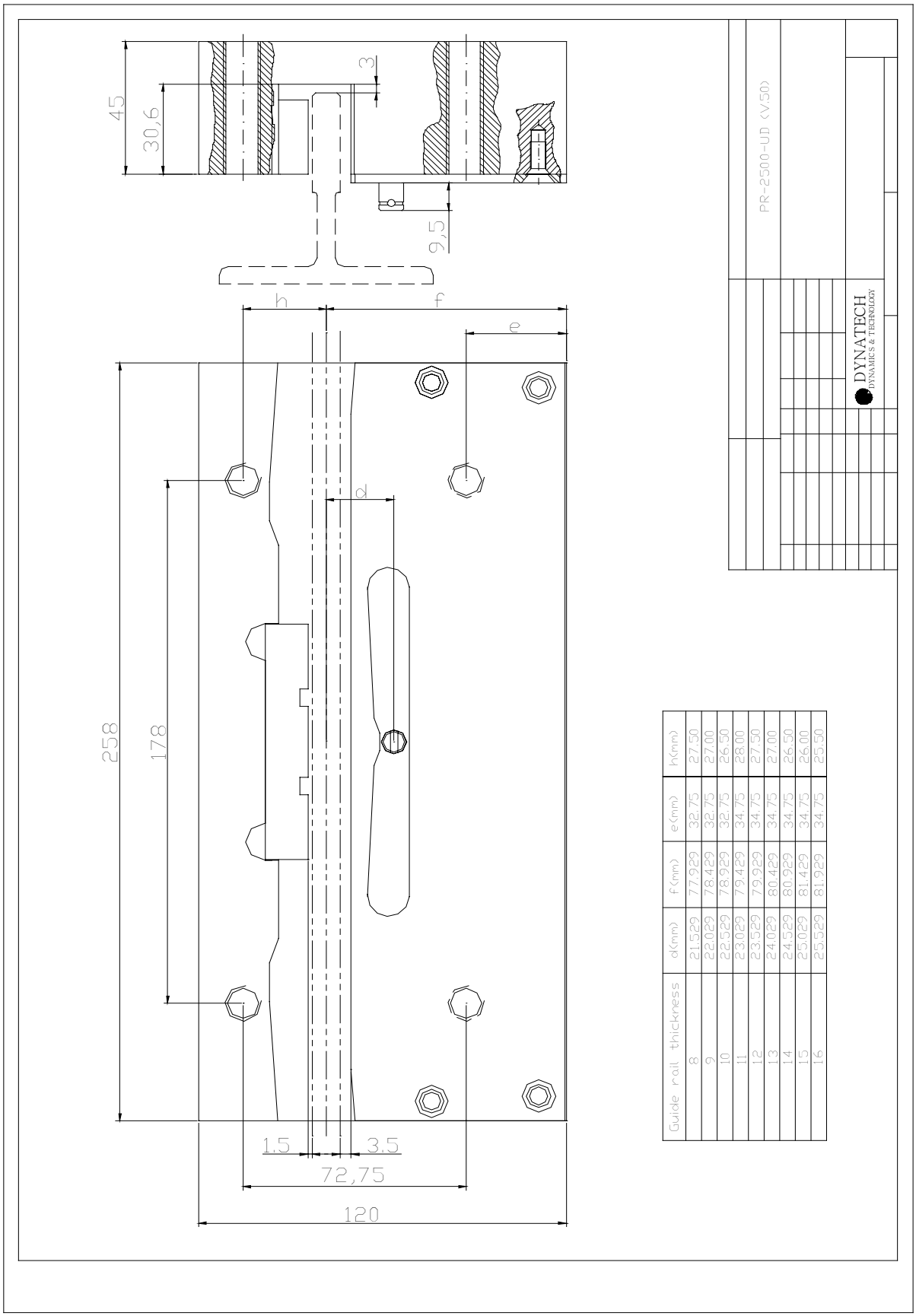
It is very important to make sure that there is not any alien element inside the safety gear housing in order to guarantee the proper work of the moving parts.

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