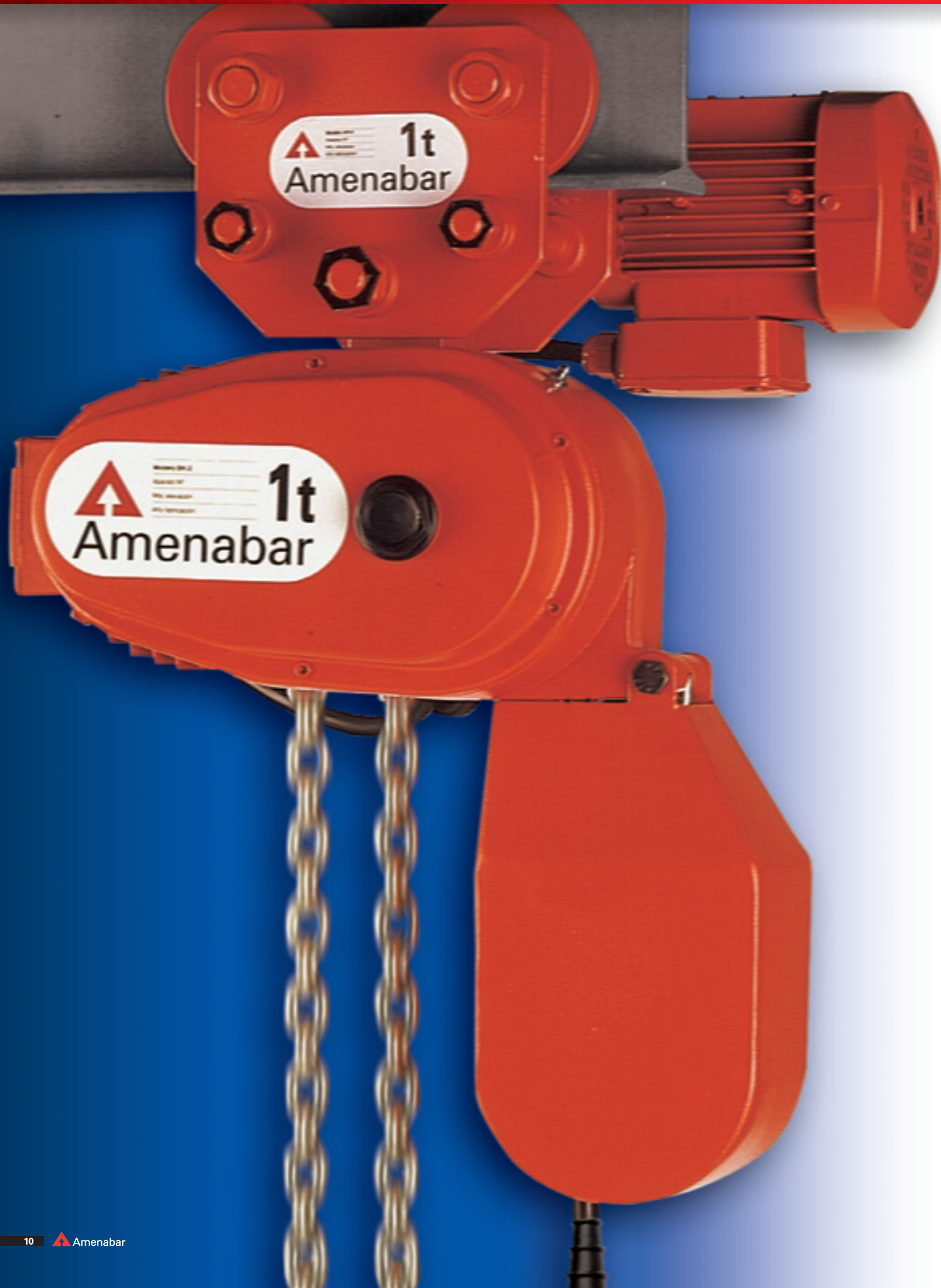


# Amenabar Powered Chain Hoist



## Amenabar Powered Chain Hoist

The new range of **Amenabar** Series Powered Chain Hoists is the result of the company's broad experience blended with the advanced technology built into its machines and manufacturing processes under the continuous improvement policy implemented in line with the company's Quality Assurance System.

**Amenabar** Powered Chain Hoists are the **only ones on the market with permanent load chain guide** in the shape of two central bodies which completely surround the sheave, thus ensuring that the load chain is permanently guided all along its travel on the plane of rotation of the sheave.

**Amenabar** Powered Chain Hoists have the qualities most sought- after by customers: safety, reliability and guaranteed operation at competitive prices.

To judge the cost-effectiveness of powered hoists their nominal capacity and FEM Group must be known.

**Amenabar recommends FEM group 2m** powered chain hoists, as their useful lifetime are twice as long as those in group 1Am. FEM Group 2m gives greater safety, longer life and clear savings for the customer.

### ■ Maximum Safety.



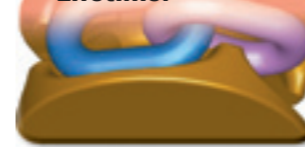
The load chain can not jam or break because its PERMANENT GUIDE.

### ■ Maximum Reliability.



Perfect operation and immediate braking action.

### ■ Maximum Useful Lifetime.



Built to work at full load (Heavy duty) in the harshest conditions for many years. (FEM Group 2 mi).

### ■ Minimal Maintenance.



We recommend simply greasing the chain.

### ■ Standardised.



Exceeds the requirements of European Standards.

### ■ Multi-Purpose.



Capable of working in horizontal, vertical and reverse positions.

### ■ Load Test Certificate.



Each chain hoist is tested at 125 % of its nominal load.

### ■ Máxima Garantíatee.



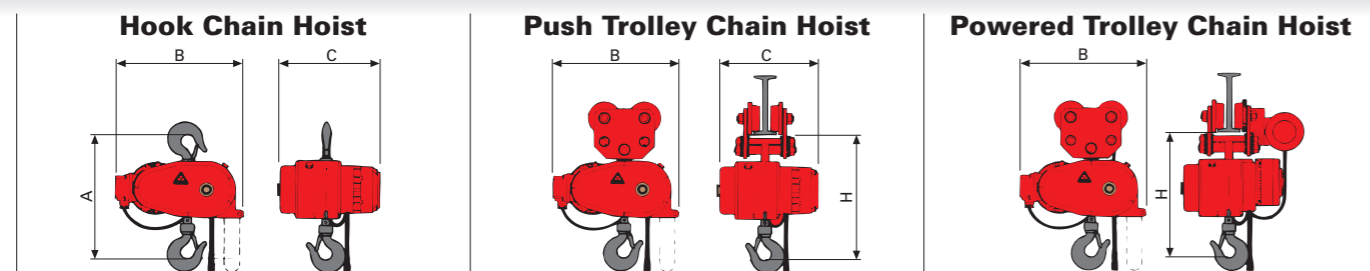
3YEAR basic guarantee (1 year for the chain and permanent guide).

### ■ Competitive Prices.



Amenabar chain hoists mean Guaranteed Cost-Effectiveness.

# Characteristics and Dimensions of Amenabar Series Powered Chain Hoists



## 1-Speed Powered Chain Hoists - Three-phase

Load Capacity Kg.	Model	References			N° of Chain falls	Lifting Speed in m./min.	Motor Power in Kw.	Chain Ø x pitch mm.	Approx. weight with 3 m.				Motor Power traslation Kw.	Speed traslation Approx. m./min.	Dimensions				Beam	
		Hook Chain Hoist	Push Trolley Chain Hoist	Electric Trolley Chain Hoist					FEM Group	Hook Kg.	Push Trolley Kg.	Electric Trolley Kg.			A mm.	B mm.	C mm.	H mm.	Track Width in mm.	Radius of curvature minimum
150	AK-1	E11101	E12101	E14101	1	12	0,37	5x15	2m	24	33	42	0,25	20	340	300	310	360	66-98	1,50
250	AK-1	E11102	E12102	E14102	1	8	0,37	5x15	2m	24	33	42	0,25	20	340	300	310	360	66-98	1,50
350	AK-1	E11103	E12103	E14103	1	6	0,37	5x15	1Am	24	33	42	0,25	20	340	300	310	360	66-98	1,50
500	AK-1	E11105	E12105	E14105	1	4	0,37	5x15	1Bm	24	33	42	0,25	20	340	300	310	360	66-98	1,50
500	AK-2	E11205	E12205	E14205	2	4	0,37	5x15	2m	26	35	44	0,25	20	380	300	310	400	66-98	1,50
500	BK-1	E21105	E22105	E24105	1	8	0,75	7x21	2m	39	49	57	0,25	20	400	360	320	410	66-98	1,50
750	BK-1	E21107	E22107	E24107	1	6	0,75	7x21	1Am	39	49	57	0,25	20	400	360	320	410	66-98	1,50
1.000	BK-1	E21110	E22110	E24110	1	4	0,75	7x21	1Bm	39	49	57	0,25	20	400	360	320	410	66-98	1,50
1.000	BK-2	E21210	E22210	E24210	2	4	0,75	7x21	2m	43	55	61	0,25	20	470	360	320	490	66-98	1,50
1.000	CK-1	E31110	E32110	E34110	1	8	1,50	10x28	2m	60	78	85	0,25	20	500	440	360	520	82-113	1,80
1.500	BK-2	E21215	E22215	E24215	2	3	0,75	7x21	1Am	43	55	61	0,25	20	470	360	320	490	66-98	1,50
1.500	CK-1	E31115	E32115	E34115	1	6	1,50	10x28	1Am	60	78	85	0,25	20	500	440	360	520	82-113	1,80
2.000	CK-1	E31120	E32120	E34120	1	4	1,50	10x28	1Bm	60	78	85	0,25	20	500	440	360	520	82-113	1,80
2.000	CK-2	E31220	E32220	E34220	2	4	1,50	10x28	2m	73	90	98	0,25	20	590	440	360	610	82-113	1,80
2.500	CK-2	E31225	E32225	E34225	2	4	1,50	10x28	2m	76	93	112	0,25	10	590	440	360	610	98-125	1,80
3.200	CK-2	E31232	E32232	E34232	2	3	1,50	10x28	1Am	76	93	112	0,25	10	620	440	360	650	98-125	1,80
4.000	CK-2	E31240	-	E34240	2	2	1,50	10x28	1Bm	76	93	112	0,25	10	620	440	360	650	98-125	1,80
5.000	EK-2	E41250	-	E44250	2	2	1,80	13x36	2m	110	-	165	0,25	10	750	540	400	780	113-137	2,20
6.300	EK-2	E41263	-	E44263	2	2	1,80	13x36	1Am	110	-	165	0,25	10	750	540	400	780	113-137	2,20

## 2-Speed Powered Chain Hoists - Three-phase 400V.

Load Capacity Kg.	Model	References			N° of Chain falls	Lifting Speed in m./min.	Motor Power in Kw.	Chain Ø x pitch mm.	Approx. weight with 3 m.				Motor Power traslation Kw.	Speed traslation Approx. m./min.	Dimensions				Beam	
		Hook Chain Hoist	Push Trolley Chain Hoist	Electric Trolley Chain Hoist					FEM Group	Hook Kg.	Push Trolley Kg.	Electric Trolley Kg.			A mm.	B mm.	C mm.	H mm.	Track Width in mm.	Radius of curvature minimum
150	AK-1-VF	E11101VF	E12101VF	E14101VF	1	12 / 3	0,45/0,11	5x15	2m	25	34	43	0,25	20	340	300	310	360	66-98	1,5
250	AK-1-VF	E11102VF	E12102VF	E14102VF	1	8 / 2	0,45/0,11	5x15	2m	25	34	43	0,25	20	340	300	310	360	66-98	1,5
500	AK-2-VF	E11205VF	E12205VF	E14205VF	2	4 / 1	0,45/0,11	5x15	2m	27	36	45	0,25	20	380	300	310	400	66-98	1,5
500	BK-1-VF	E21105VF	E22105VF	E24105VF	1	8 / 2	0,9/0,22	7x21	2m	41	52	60	0,25	20	400	360	320	410	66-98	1,5
1000	BK-2-VF	E21210VF	E22210VF	E24210VF	2	4 / 1	0,9/0,22	7x21	2m	45	58	64	0,25	20	470	360	320	490	66-98	1,5
1000	CK-1-VF	E31110VF	E32110VF	E34110VF	1	8 / 2	1,80/0,45	10x28	2m	63	81	88	0,25	10	500	440	360	520	82-113	1,8
1500	CK-1-VF	E31115VF	E32115VF	E34115VF	1	6 / 1,5	1,80/0,45	10x28	1Am	63	81	88	0,25	10	500	440	360	520	82-113	1,8
2000	CK-2-VF	E31220VF	E32220VF	E34220VF	2	4 / 1	1,80/0,45	10x28	2m	76	93	101	0,25	10	590	440	360	610	82-113	1,8
3200	CK-2-VF	E31232VF	E32232VF	E34232VF	2	3 / 0,75	1,80/0,45	10x28	1Am	76	93	101	0,25	10	590	440	360	610	82-113	1,8

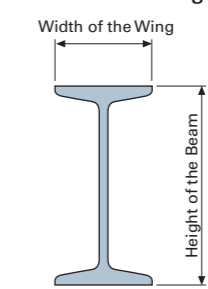
## Singel-phase Chain Hoists

Load Capacity Kg.	Model	References			N° of Chain falls	Lifting Speed in m./min.	Motor Power in Kw.	Chain Ø x pitch mm.	Approx. weight with 3 m.				Motor Power traslation Kw.	Speed traslation Approx. m./min.	Dimensions				Beam	
		Hook Chain Hoist	Push Trolley Chain Hoist	Electric Trolley Chain Hoist					FEM Group	Hook Kg.	Push Trolley Kg.	Electric Trolley Kg.			A mm.	B mm.	C mm.	H mm.	Track Width in mm.	Radius of curvature minimum
150	AK-1-M	E11101M	E12101M	E14101M	1	8	0,37	5x15	2m	25	34	43	0,25	20	340	300	310	360	66-98	1,5
250	AK-1-M	E11102M	E12102M	E14102M	1	6	0,37	5x15	2m	25	34	43	0,25	20	340	300	310	360	66-98	1,5
350	AK-1-M	E11103M	E12103M	E14103M	1	4	0,37	5x15	1Am	25	34	43	0,25	20	340	300	310	360	66-98	1,5
500	AK-2-M	E11205M	E12205M	E14205M	2	3	0,37	5x15	2m	27	36	45	0,25	20	380	300	310	400	66-98	1,5
500	BK-1-M	E21105M	E22105M	E24105M	1	6	0,75	7x21	2m	40	51	59	0,25	20	400	360	320	410	66-98	1,5
750	BK-1-M	E21107M	E22107M	E24107M	1	4	0,75	7x21	1Am	40	51	59	0,25	20	400	360	320	410	66-98	1,5
1000	BK-1-M	E21110M	E22110M	E24110M	1	3	0,75	7x21	1Bm	40	51	59	0,25	20	400	360	320	410	66-98	1,5
1000	BK-2-M	E21210M	E22210M	E24210M	2	3	0,75	7x21	2m	45	57	63	0,25	20	470	360	320	490	66-98	1,5
1000	CK-1-M	E31110M	E32110M	E34110M	1	6	1,5	10x28	2m	62	80	88	0,25	20	500	440	360	520	82-113	1,8
1500	CK-1-M	E31115M	E32115M	E34115M	1	4	1,5	10x28	1Am	62	80	88	0,25	20	500	440	360	520	82-113	1,8
2000	CK-2-M	E31220M	E32220M	E34220M	2	3	1,5	10x28	2m	75	92	100	0,25	20	590	440	360	610	82-113	1,8

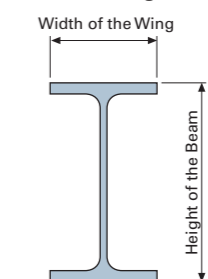
### Principle Characteristics of a Beam:

- In general, a beam is defined by its height in mm (120, 270, 300, etc) and in function of this and its type (IPN; IPE, HEB, HEA), the width of the wing is determined.
- The height of the beam is also the parameter considered in order to determine its load resistance: the higher the beam, the greater the resistance.
- In function of the shape of the wing, the following beams are differentiated:

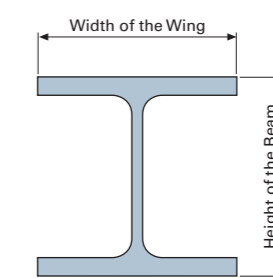
IPN --> Inclined Wing.



IPE --> Flat Wing.



HEB --> Flat wing with the same width as the height of the beam.



When selecting a trolley, the most important information, independent of the load and type of beam, is the width of the wing.

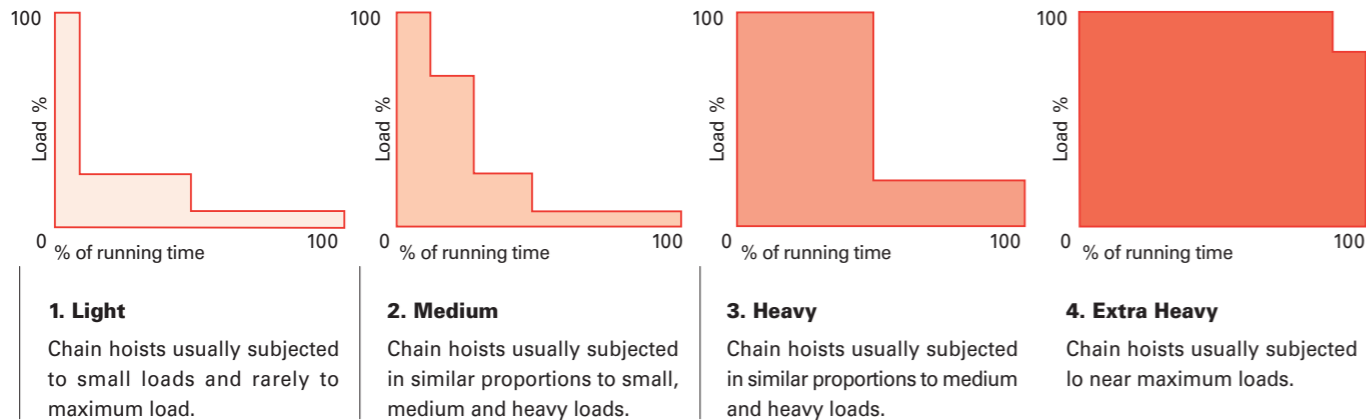
### Curvature Radius:

- It is the minimum radius that a curved beam should have for the trolley to be able to slide along it.
- The greater the curvature radius, the better the sliding of the trolley along the beam.
- The minimum curvature of a beam so that each chain hoist hooked up to the trolley slides correctly is indicated in the table of characteristics
- If the curvature radius is less than that indicated, the trolley may have problems sliding along the beam or it may even fail to do so.
- At **Amenabar**, there is an option, on request, to adapt our trolleys to a pre-determined curvature radius.



## Aspects to be considered when choosing:

- 1.- Maximum load to be lifted (kg.).
- 2.- Lifting speed (m/min).
- 3.- Type of operation:



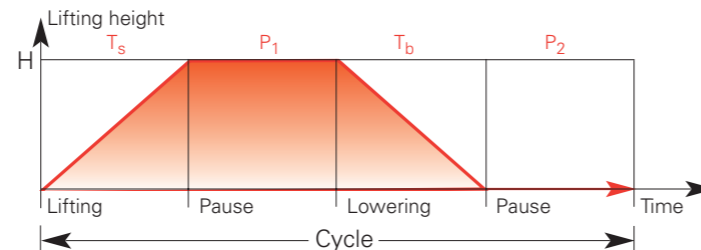
- 4.- Average working time per day:

$$T_m = \frac{2 \times \text{lifting height} \times n^\circ \text{ cycles/h.} \times \text{working hours}}{60 \times \text{lifting speed}}$$

## Cycle:

This means each complete load lifting and lowering operation, including pauses.

$$F_m (\%) = \frac{T_s + T_b}{T_s + P_1 + T_b + P_2}$$



## Chain Hoist Order Data:

- Chain Hoist application: Light – médium – heavy – extra heavy
- Maximum load to be lifted
- Daily average running time
- Lifting speed
- Model
- N° of load chain falls
- Group
- Lifting height
- Type: hook, push trolley, chain/electric trolley
- Voltage and frequency
- Options: low-voltage 48 v control, Caín container, Upper limit switch / bottom limit switch, ...

For a correct use of the Chain Hoist we recommend you to fill the "Fax Service" form (at page 35).

**Fax Service (34 - 945 450 304)**

**Request Details:**

Company: \_\_\_\_\_ Department: \_\_\_\_\_  
 Contact Name: \_\_\_\_\_  
 Street: \_\_\_\_\_ Postal Code: \_\_\_\_\_ Area: \_\_\_\_\_  
 Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

**We wish to receive information about:**

Details of expected use: \_\_\_\_\_

Model: \_\_\_\_\_ Number of load lines: \_\_\_\_\_ Required Capacity: \_\_\_\_\_  
 Elevation Height: \_\_\_\_\_ Elevation Speed: \_\_\_\_\_

**Additional Devices:**

Lowering control  Collection Box  Beam End  
 Load Restrictor  Maximum Speed  Minimum Speed  Space limitations: Long \_\_\_\_\_ High \_\_\_\_\_ Wide \_\_\_\_\_

**Environmental Conditions:**

Normal  Relative Humidity: \_\_\_\_\_ %  Dust  Dirt  
 Maximum Temperature: \_\_\_\_\_  Minimum Temperature: \_\_\_\_\_ Other Characteristics: \_\_\_\_\_

**Operation time of the chain hoist:**

Loading cycle per hour: \_\_\_\_\_ Hours per Day: \_\_\_\_\_ Days per Week: \_\_\_\_\_ Distance covered for each cycle: \_\_\_\_\_

Unusual conditions which may affect the selection and use of the powered chain hoist:

**Type of Use (see page 16):**

Light  Medium  Heavy  Very Heavy

**Fixing:**

Hook  Manual Trolley  Chain Trolley  Power driven Trolley  Beam/Wing/Width for Trolley: \_\_\_\_\_

**Voltage:**

Tri-phase  Mono-phase  230 V  400 V  Other: \_\_\_\_\_ **Frequency:**  50 Hz  60 Hz

**Protection:**

IP 55  Other: \_\_\_\_\_

Amenabar

**Table of Selecting Amenabar Chain Hoists**

TYPE OF LOAD	DAILY RUNNING TIME- THEORETICAL USE TIME (hours)		
	Until 2	2 - 4	4 - 8
1. Light	Until 2	2 - 4	4 - 8
2. Médium	Until 1	1 - 2	2 - 4
3. Heavy	Until 0,5	0,5 - 1	1 - 2
4. Extra heavy	Until 0,25	0,25 - 0,5	0,5 - 1
<b>FEM GROUP (ISO4301-1)</b>	<b>1Bm (M3)</b>	<b>1Am (M4)</b>	<b>2m (M5)</b>
CHAIN FALLS	1 / 2	1 / 2	1 / 2
LOAD CAPACITY (Kg)	CHAIN HOIST MODEL		
150			AK
250			AK
350		AK	
500	AK		BK
750		BK	
1.000	BK		CK
1.500		CK	BK
2.000	CK		
2.500			CK
3.200			CK
4.000		CK	
5.000			EK
6.300			EK
TYPE OF LOAD	THEORETICAL MACHINE LIFE (hours)		
1. Light	3.200	6.300	12.500
2. Médium	1.600	3.200	6.300
3. Heavy	800	1.600	3.200
4. Extra heavy	400	800	1600

## Notes:

- Green zones**, this zone needs are covered by the chain hoist with the same load but with a group of the same or higher level.
- Orange zones**, there is not any machine that covers this zone. In this case, **Amenabar** recommends to choose a higher level load and the same level group.

## Example of Model Selection:

Known data:

- Max. Load to be lifted:..... 1.000 Kg.
- Type of operation:..... Heavy
- Daily running time:..... 2 hours
- Number of load chain fallls:..... 1 ó 2

The table shows that the most suitable **Amenabar** chain hoist for this application is the Group 2m, 2 load chain falls, 1000 kg model BK-2.

**Our recommendation:** Select the highest level chain hoist. In this example, "CK-1".

TYPE OF LOAD	DAILY RUNNING TIME- THEORETICAL USE TIME (hours)		
	Until 2	2 - 4	4 - 8
1. Light	Until 2	2 - 4	4 - 8
2. Médium	Until 1	1 - 2	2 - 4
3. Heavy	Until 0,5	0,5 - 1	1 - 2
4. Extra heavy	Until 0,25	0,25 - 0,5	0,5 - 1
<b>FEM GROUP (ISO4301-1)</b>	<b>1Bm (M3)</b>	<b>1Am (M4)</b>	<b>2m (M5)</b>
CHAIN FALLS	1 / 2	1 / 2	1 / 2
LOAD CAPACITY (Kg)	CHAIN HOIST MODEL		
150			AK
250			AK
350		AK	
500	AK		BK
750		BK	
1.000	BK		CK
1.500		CK	BK
2.000	CK		
2.500			CK
3.200		CK	
4.000	CK		
5.000			EK
6.300			EK
TYPE OF LOAD	THEORETICAL MACHINE LIFE (hours)		
1. Light	3.200	6.300	12.500
2. Médium	1.600	3.200	6.300
3. Heavy	800	1.600	3.200
4. Extra heavy	400	800	1600

**Hoisting motor:**

Motor-brake system with a high starting torque and instant braking. Equipped with IP-55 protection and guaranteed for one million operations.

**Optional:**

- with 2 speeds.
- weather protection.
- single phase.
- continuous service for very long height

**Reducer:**

With planetary gears, made of cemented and hardened steel with a 120 Kg/mm<sup>2</sup> minimum breakage load, ground in automatic machines and mounted on bearings with permanent lubrication, making them very silent and long-lasting.

**Overload, Hoisting and Lowering Governor:**

Using flat plate friction coupling, mounted in a life-long grease bath to avoid overheating and the use of electric limit switch devices.

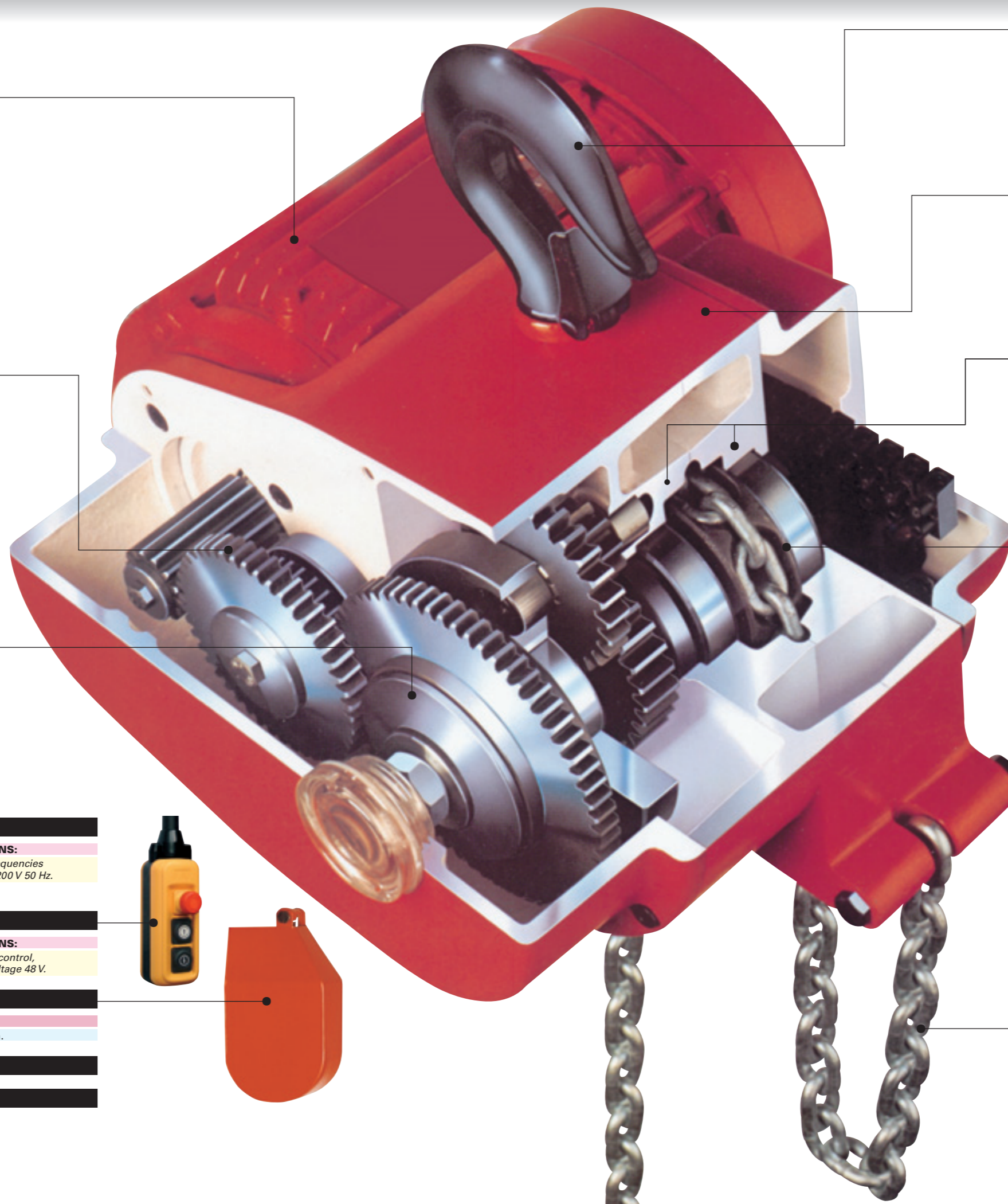
Power	
<b>STANDARD:</b>	<b>OPTIONS:</b>
Three-phase 220/380 V. 50 Hz.	For 60 Hz frequencies
Three-phase 230/400 V. 50 Hz.	Single-phase 200 V 50 Hz.
Three-phase 240/415 V. 50 Hz.	

Keypad Control	
<b>STANDARD:</b>	<b>OPTIONS:</b>
Directo a 220/380V.	Contacto control, operating voltage 48 V.

Chain Container
<b>STANDARD:</b>
Made of plate to house the length of free chain.

**Wireless remote control**

**Synchronised movement**



**Hooks:**

Forged anti-ageing steel, free turning with security trigger.

**Main Body:**

Completely closed, strong construction to prevent dust and dampness from penetrating it, produced in a small size and a totally balanced assembly.

**Permanent Load Chain Guide:**

Made up of two central bodies which completely surround the sheave and provide permanent guide for the load chain throughout its travel over the plane of rotation of the sheave.

**Load Chain Sheave:**

Made of alloy steel, milled in a CNC machine for perfect chain adaptation and heat-treated with an anti-wear layer.

**Load Chain:**

Calibrated, made of alloy steel and heat treated and hardened under standards EN 818/7. With zinc treatment against rusting. Optional with stainless steel chain.



Close-up of the load chain permanent steering.



Hook Chain Hoist



Push Trolley Chain Hoist



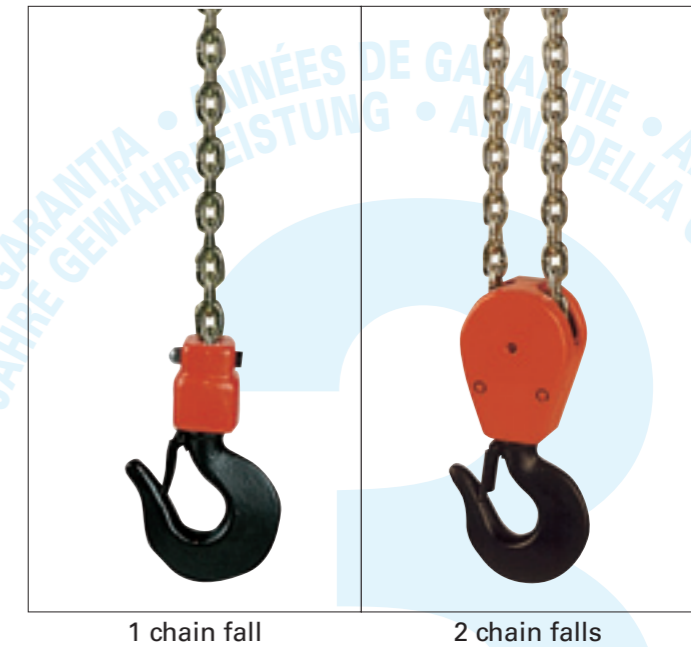
Electric Trolley Chain Hoist



Invertid Chain Hoist



Nº of load chain falls



1 chain fall

2 chain falls

Each **Amenabar** electric chain hoist is supplied with a **TEST CERTIFICATE** proving that it has been subjected to and has passed a dynamic load test at 125 % its nominal load, in compliance with EC Directive on Machinery 89/392/CEE and Standards FEM-9811 and UNE - 58-915-92/7.



Amenabar

**The Hoist Company**

CERTIFICADO DE PRUEBA TEST CERTIFICATE		* Nº Serie Serial No.		Cadena de Carga Load Chain	
		25.416			
POLIPASTO ELECTRICO ELECTRIC HOIST		Modelo Model		Lote Nº Lot No.	
		BK-2R-1000		6/03	
		Tipo Type		Norma Dimensional Standard	
		Gancho		UNE-EN 818/7	
		* Carga Nominal Nominal Load		Ø x paso Ø x pitch	
		1.000 Kg		7 x 21	
		Grupo FEM FEM Group		Clase Class	
		2 m		DAT	
		Nº Ramales Branches No.		Carga de Rotura Breaking Load	
		2		6.100 Kg	
		Altura de Elevación Lifting Height		Carga de Prueba Proof Test	
		3 m		3.700 Kg	
		* Carga de Prueba Proof Test		Fecha de Prueba Test Date	
		1.250 Kg		1 de Septiembre 2.0 03	



Ctra. de Ochandiano, s/n.  
01165 OLAETA (Alava) SPAIN  
P.O. Box 752  
01080 VITORIA (SPAIN)  
Tfn. 34 - 945 45 00 50  
Fax 34 - 945 45 03 04

(\* Ensayos realizados de acuerdo con las Normas FEM-9811 y UNE-58-915/92/7. Tests made according to the FEM-9811 and UNE-58-915/92/7 Standards.

Dirección de Calidad  
Quality Dept.



Associate member of the CNE of the FEDERACION EUROPEA DE MANUTENCION (FEM).

Member of AENOR Technical Standards Committee 58 for Lifting and Transport Machinery.



Notes: **Amenabar** reserves the right to make any changes to this catalogue without prior warning for product modification or compliance with the prevailing legislation.

- The pieces to be lifted shall be of good construction, solid and resistant material.
- Do not pull on the taught chains under the load or rotate loads around them.
- The maximum permitted useful load should be visibly indicated.
- Loads should be lifted, lowered and moved slowly.
- The use of a sign on the chain indicating the maximum descent point of the load is practical.
- A signal code should exist, which is known by all operators intervening in work related to the hoisting and hauling of the loads.
- All hooks should be fitted with an effective safety bolt.
- The chains should be of wrought iron or steel as well as other accessories: rings, hooks, hoops.

## Maintenance and Upkeep

- All the gears, shafts and mechanisms in general of the different units should be kept oiled and clean.
- The correct operation of the safety bolt of the hooks should be continuously checked.
- All pieces subject to deterioration should be regularly checked.
- The units should be in perfect condition and working order.
- The units should be inspected in their work position, at least once a week by the operator or other competent person.
- The chains, hooks etc., should be examined each day that they are used by the operator or designated personnel. A thorough inspection is recommended every three months and a certificate should be issued.
- The chains should be withdrawn when:
  - They are not safe due to overloads or defective or inappropriate irregularities.
  - They have stretched by more than 5% of their length.
  - The deterioration of the internal face of the links exceeds one quarter of the original thickness of the link..

- Chains should be oiled at frequent and regular intervals when rolled in drums or passing over hoists, except when they can retain or pick up sand or gravel and when they are used as slings
- Chains should be stored hanging from hooks in such a way that employees do not suffer strains and in conditions that reduce oxidation to a minimum.
- Chains which have been exposed to extremely low temperatures for hours shall be warmed.

## Ergonomic Attitudes

- The arms of the worker shall be alternately extended to the maximum possible when pulling the traction element.
- The traction element shall not be wrapped around the hand but shall be tightly held.
- Feet shall be supported on a solid base. According to the case: separated or one in front of the other.
- The back shall always remain straight.
- It is strictly forbidden to stand below a suspended load.

We advise that these recommendations are clearly visible near to the work station for the correct and safe use of the units.

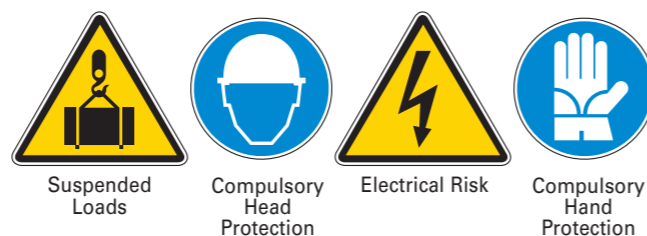
## Personal Protection

Operators involved in the handling and manipulation of these units should have personal protection equipment consisting of a minimum of:

- Gloves.
- Safety boot with reinforced toecaps.
- Protective helmets.

The use of safety harnesses is reserved for those positions involving a risk of fall from a height.

When the work position is uncomfortable and the back is subjected to abnormal strains, the employee shall be provided with an anti-lumbago belt.



## RISKS

**Breakage of chains:**

**Cuts, grazes or jamming:**

**Dropping to another level:**

**Load Dropping:**

## PREVENTATIVE MEASURES

- Chains shall be made of wrought iron or steel. The safety factor shall be at least five for the maximum nominal load.
- All chains shall be checked before being put into operation.
- The chain shall always be rolled around the rolling lathe a minimum of three times.
- When not in use, chains should be stored in clean, dry, well ventilated and closed spaces in order to protect them against corrosion or other damage.

- Pull prudently on the chain and in a coordinated way.
- Do not touch moving parts.
- Chains should not be wrapped around the hand but held tightly with both hands.

- If a risk exists, the area shall be protected with rigid hand rails around its perimeter, only leaving the area for unloading materials free, which will be protected by a detachable hand rail.

- Do not stand under suspended loads.
- All hooks should be equipped with a safety latch.
- When the shaft signal prevents the hoisting or stoppage signal from being heard, an auxiliary rope will be fitted with a n audible element or other signal on the upper extreme, in such a way that when manipulated by the operator located at the bottom can advise his colleague of the moment the load is lifted or stopped.
- Another extremely practical system is to introduce a signal on the chain indicating the maximum descent point of the load and particularly in the lathe, i.e. a depth indicator.
- Do not lower the load quickly.
- Always check the proper operation of the braking system.
- Regularly check the deterioration produced by the essential elements of the chain units: cogs, shafts, slings etc.

- UNE 58915/1992 Series Elevation Units.
- UNE 58919/1995 Series Elevation Units. Measures to be taken to determine the operating periods of the power driven units.
- UNE 58920/1999 Elevation Force Restrictors for the control of power-driven elevating mechanisms. Chain Hoist.
- UNE-EN 818/7: 2002 Elevation Chains with short links. Safety. Part 7: Calibrated Chain for Chain Hoists. Class T (Types T, DAT and DT).
- UNE 58-234/1994, On-going Maintenance Equipment. Suspended Monorails with electric trolley. Definition and Safety Rules.
- UNE 18-024/1953, Jagged hoists for calibrated chains.
- UNE 58-509/1979 Elevation Hooks. General Characteristics.
- UNE 58-515/1982 Elevation Hooks. Nomenclature
- UNE-EN 1677-2/2001, Sling Accessories. Safety. Part 5: Wrought Elevation Hooks with safety pointer, class 8.
- General Decree for Safety and Hygiene in the Workplace In Chapter X, dedicated to "Elevation and Transport", we find the following Acts:

- Act 100: Construction of equipment and mechanisms.
- Act 101: Maximum Load.
- Act 102: Load Handling.
- Act 103: Service and Maintenance.
- Act 104: Brakes.
- Act 107: General Rules.
- Act 111: Rigging for Chain Hoists. Chains.

- Labour Decree for Construction, Glass and Ceramics. In Sub-section 4: Elevation Units, Transport and Similar", we find the following Acts:

- Act 277: On general conditions.
- Act 278: Maximum Load.
- Act 279: On stationing under loads.
- Act 280: Maximum Manual Overload.
- Act 285: On mechanism verification.
- Act 286: On chain, rope, cable quality.
- Act 287: On Hooks.

## REVIEWS OF REGULATIONS

- ROYAL DECREE 2291/1985. Regulation for Lifting Equipment (MINISTRY OF INDUSTRY AND ENERGY, Official Journal number 296, 11th December 1985 ). Affected by: 1. Transposed except, Acts. 10, 11, 12, 13, 14, 15, 19 and 23, for ROYAL DECREE 1314/1997, Single Repealing Provision).
- ROYAL DECREE 1215/1997, 18th July, setting out the minimum health and safety provisions for the use of work equipment by employees
- Directive 89/655/EEC, 30th November 1989, amended by the Directive 95/63/CE, 5th December 1995, establishes the minimum health and safety provisions for the use of work equipment by employees
- AGREEMENT 119 OF OIT, relating to machinery protection
- ROYAL DECREE 1435/1992, 27th November, in which the application stipulations of the Council Directive 89/392/CEE, relating to the approximation of the legislation of member states on machinery. (Includes the subsequent modification made by R.D. 56/1995)
- Directive 89/392/EEC, relating to the approximation of the legislation of member states on machinery (published in the "Official Journal of European Communities", number L 183, 29th June, 1989), later modified by the Council Directive 91/368/EEC, 20th June ("Official Journal of European Communities", number L 198, 22nd July, 1991).
- Council Directive 93/68/EEC, 22nd July (DOCE number L220/1, 30th August, 1993), modified at the same time several Directives among which, the Directive 89/392/CEE
- ROYAL DECREE 56/1995, 20th January, in which ROYAL DECREE 1435/1992, 27th November was modified, relating to the application stipulations of the Council Directive 89/392/CEE, on machinery.



**Amenabar**

**The Hoist Company**

Notes:

1. **Amenabar** reserves the right to make any changes to this catalogue without prior warning for product modification or in compliance with the prevailing legislation.
2. For some information in this catalogue, the source is MTAS.

## Request Details:

Company  Department  
 Contact Name  
 Street  Postal Code  Area  
 Telephone  Fax  E-mail

## We wish to receive information about:

Details of expected use  
 Model  Number of feeder lines  Required Capacity  
 Elevation Height  Elevation Speed

### Additional Devices:

Lowering control  Collection Box  Beam End  
 Load Restrictor  Maximum Speed  Minimum Speed  Space limitations: Long  High  Wide

### Environmental Conditions:

Normal  Relative Humidity  %  Dust  Dirt  
 Maximum Temperature  Minimum Temperature  Other Characteristics

### Operation time of the chain hoist:

Loading cycle per hour  Hours per Day  Days per Week  Distance covered for each cycle

Unusual conditions which may affect the selection and use of the powered chain hoist:

### Type of Use (see page 16):

Light  Medium  Heavy  \_Very Heavy

### Fixing:

Hook  Manual Trolley  Chain Trolley  Power driven Trolley  Beam Wing Width for Trolley

### Voltage:

Tri-phase  Mono-phase  230 V  400 V  Other

### Frequency:

50 Hz  60 Hz

### Protection:

IP 55  Other

09/2005