

TECNOMAGNETE"

Safety through power



The most intelligent way to move ferrous loads

Magnetism is the smartest way of handling ferrous loads. Technomagnete has continuously researched and developed permanent-electro magnets for 30 years, the only technology that combines safety, streng ht, convenience and power savings.

Tecnolift systems can handle loads with extreme easiness in the minimum area.
They are efficient because they always operate from the top without compressing or deforming the load.
The floor space is optimized as no empty areas are required around or in between the loads to get access for their pick up.

No other solution can grant the same level of performances and practical use.

TECNO-LIFT is the ideal solution for steel structural works, distribution and storage, service centers, metalworkings, shipbuildings, surface treatment and for all modern industries interested in increasing the efficiency of production process.





Quadsystem technology. Power and safety to square.

Quadsystem permanentelectro circuit: the power of an electromagnet joined to the independance of the permanent magnet.

The technology of the double magnet uses electrical power only for few seconds in activation "MAG" and deactivation "DEMAG" cycles.

Tecnomagnete designed and patented this unique and totally innovative technology, where the clamping surface is composed by square poles in chess-board disposition, able to generate great power exactly and only where it is needed: into the load.

The patented "neutral crown" guarantees a perfect insulation of the permanent magnets, avoiding any power losses and interferences with other metallic objects nearby.

Permanent safety

A permanent electro system is intrinsically safe. being not affected by any electrical power failure. No battery back up system is required. The high energy coming from the permanent magnets keeps the load safely clamped with constant force for indefinite period of time and it can be released only on the ground. The maximum safety level for the operator and for the machinery is granted, always!



Easy to use and convenient

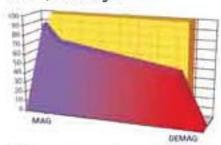
One single operator with a remote control can perform all picking-up, lifting, handling and releasing operations always staying at safe distance from the load.

No other manpower is required near the load. No other safety tools, belts, chains need to be managed and maintained.

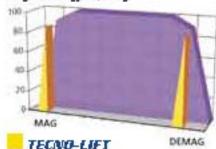


Advantages versus the traditional electromagnetic technology

Constant strength



High energy saving



Bectro magnet Heating effect with electro magnet

Technolift permanent electro technology is a great leap ahead compared to the traditional electro magnetic lifters:

In performance: TECNO-UFT is a cold system due to the absence of heat generation inside the magnets. The clamping force remains constant unlike the traditional electromagnets that are affected by the overheating of the coils in constant use.

In energy saving: TECNO-UFT needs electrical supply only for few seconds, during the MAG and DEMAG phases. The electrical consumption is 95% less compared to a traditional electromagnet.

In operational costs:
The robust solid block
construction of Tecnolift
magnetic modules with
no moving parts inside, no stress
and no overheat in the magnet
coils can grant a long reliability
without specific maintenance.
The expensive back up
maintenance is also avoided.

In the production process:
TECNO-LIFT doesn't leave
residual magnetism in the load.
All problems caused normally
by the residual magnetism on
welding or precision machining
operations are eliminated.

Flux concentration for a precise lifting

The Quadsystem technology allows to short circuit the magnetic flux within a very small depth making possible to lift

one steel plate only even when limited thickness are involved.



Load stability
and compactness.
The traditional wooden spacers
between loads are nomore
necessary. The load condition
is more compact, less overall
size and, with no deformation
it is more stable during the
transportation.

Tailored Solutions

Tecnolift systems
are designed
and built to be
compact, light
weight, powerful
and reliable.
The vast array of standard
models provides various
characteristics of polar geometry
and magnetic strength to
achieve the correct performance

profiles, coils, etc...)

All standard Tecnolift systems grant a safety factor of 1:3 between the weight of the load at its operative air-gap and the relevant magnetic force of the lifter.

with relation to the load type to

be handled (plates, blocks, slabs,

Certified Quality

The Tecnolift systems
respect the most
common international norms.
(UNFEN 13155:2004).
Manufacturing
quality control,
operating safety
and constant
performances are tested and
certified.



The TM series beams pick up the load uniformly from above, without deformations or damage to the load.

Specific selection of the thickness is possible even via radiocontrol to pick up single plate.

The Telescopic Movement



The ability to lengthen or shorten the center distance between cross beams and select the modules to magnetize, make the TM beams extremely flexible to use. The telescopic movement is actuated by a dedicated hydraulic pump; the movement of the telescopic arms allows the handling of a complete range of big plates.

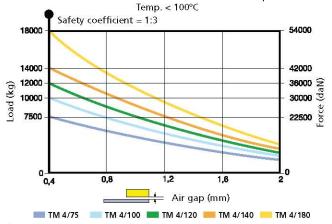
** ROOMET

- medium plates: activate all the cross beams with the side modules in the closed position
- long plates: activate all the cross beams and extend the arms to the maximum opening
- narrow plates: activate only the left or right side modules

			Lo	ad Cha	racte	ristic	5
Model	beam	thickness.	len	gth	wic	lth	rated lift
TM 4/N	weight kg	min. mm	min. mm	max mm	min. mm	max mm	capacity max kg
TM 4/75 N	3000	5	3000	12000	500	2500	7500
TM 4/100 N	3000	5	3000	12000	500	3500	10000
TM 4/120 N	3000	5	3000	12000	500	3500	12000
TM 4/140 N	3000	8	3000	12000	500	3500	14000
TM 4/180 N	3000	8	3000	12000	500	3500	18000

Air Gap Curve

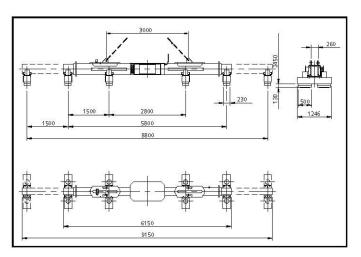
on flat surface in "Fe" minimum thickness 30mm with all poles covered.



Modules Selection

It is possible to lift loads of various lengths, by simply selecting the magnetic modules necessary:

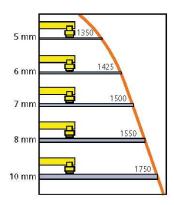
 shorter plates: activate only the center cross beams, excluding the others





Whip Chart

The TECNO-LIFT lifting systems are designed with rigid structural characteristics and with a specific magnetomotive force coefficient (MMF) to guarantee handling even with significant values on the whip chart.



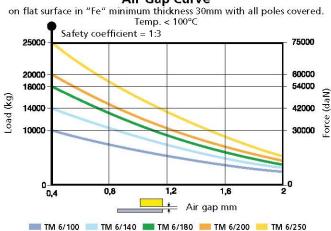
Allowed whip chart values: the relationship between the end of the load ("wing") and the thickness of the same piece.



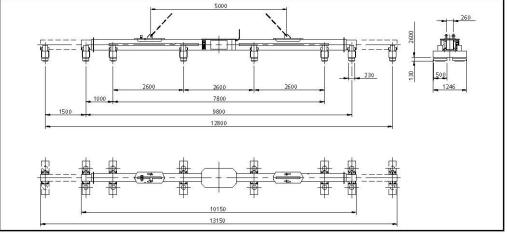
With the TECNO-LIFT systems it will be always possible to obtain the utmost performance in terms of load capacity and size, as specified in the technical specifics of these tables and performance tags on the lifters.

TM beams are available in TG version (6 or 8 cross beams) to handle sheets with thickness from 4 mm and capacity up to 10.000 kg.

Air Gap Curve



			Lo	ad Ch	aracte	eristic	s
Model	beam	thickness	. leng	gth	wi	dth	rated lift
TM 6/N	weight	min.	min.	max	min.	max	capacity max
	kg	mm	mm	mm	mm	mm	kg
TM 6/100 N	4000	5	2800	16000	500	2500	10000
TM 6/140 N	4000	5	2800	16000	500	3500	14000
TM 6/180 N	4000	5	2800	16000	500	3500	18000
TM 6/200 N	4000	8	2800	16000	500	3500	20000
TM 6/250 N	4000	8	2800	16000	500	3500	25000





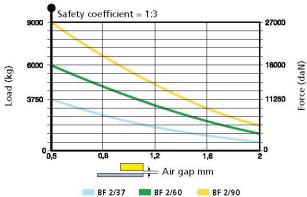
2 cross beams with 2 magnetic modules each

They have the same characteristics as the TM series, but the 2 cross-beams are at fixed distance.

This system is used when the plates come in constant sizes and do not require the telescopic device.

Air Gap Curve

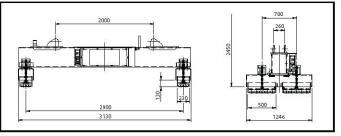
on flat surface in "Fe" minimum thickness 30mm with all poles covered. Temp. < 100°C



		Load Characteristics										
Model	beam	thickness.	leng	r th	wie	dth	rated lift					
BF 2/N	weight kg	min. mm	min. mm	max mm	min. mm	max mm	capacity max k g					
BF 2/37	1300	5	3200	6000	500	2500	3700					
BF 2/60	1300	5	3200	6000	500	3500	6000					
BF 2/90	1300	8	3200	6000	500	3500	9000					

BF /TG version available for loads with ticknesses from 1,5 mm





GTR Magnetic Cross-beams

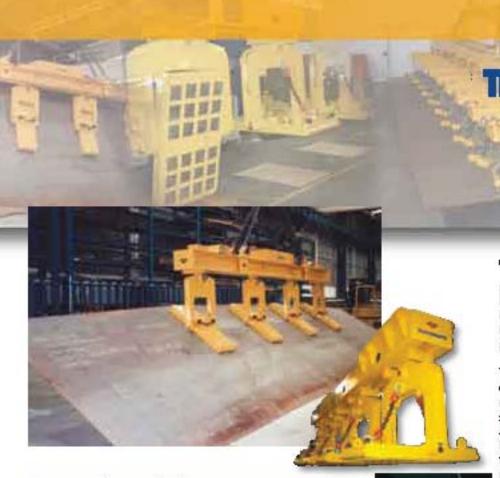
The magnetic cross-beams come separate without beams in sets of 4 or 6 (respectively GTR 4/N and GTR 6/N) complete with controller and accessories, ready to be installed on existing beams.

Magnetically equivalent to TM 4/N and TM 6/N

Model	weight	thickness.	Load length	rated lift		
GTR 4/N	kg	min. mm	max mm	min. mm	max mm	capacity max k g
GTR 4/75 N	1040	5	12000	500	2500	7500
GTR 4/100 N	1040	5	12000	500	3500	10000
GTR 4/120 N	1040	5	12000	500	3500	12000
GTR 4/140 N	1040	8	12000	500	3500	14000
GTR 4/180 N	1040	8	12000	500	3500	18000



Model	weight	thickness.	Load length	Chara o	teristics tth	rated lift
GTR 6/N		min.	max	min.	max	capacity max
	kg	mm	mm	mm	mm	kg
GTR 6/100 N	1560	5	16000	500	2500	10000
GTR 6/140 N	1560	5	16000	500	3500	14000
GTR 6/180 N	1560	5	16000	500	3500	18000
GTR 6/200 N	1560	8	16000	500	3500	20000
GTR 6/250 N	1560	8	16000	500	3500	25000



Load Characteristics Model thickness length rated lift TB min min max capacity max mm mm mm kg TB 4/35 4 2500 5000 3500 TB 6/35 4 2500 12000 10000 TB 6/35 4 2500 12000 3500



TB Tilting beams

For handling single plates up to 12 m. long in vertical or horizontal position.

The fix beam with the simple and effective tilting system of the magnetic modules is the perfect solution for operations where vertical axis plates need to be placed in a horizontal axis or vice versa (typically from storage to a cutting table, laser, plasma, etc...)

Supplied with a special radio remote control feelt usef RC/B.



		Load Characteristics											
Model TT /O	weight kg	plece min mm	fildmess min - max mm	length max mm	width max mm	ransd lift capacitymas kg							
TTO /045	1850	90000	4.25	1500	9000	1000							
TTO /060	Z200	900x900	4-25	1500	4000	1200							
TTO /080	2900	900x900	4-25	2000	4000	2000							
TTO /100	9400	900000	4-25	1900	6600	2000							
TTO /120	9800	900x900	4 - 25	2900	5000	3000							
TTO /150	4600	90000	4 - 25	2900	6000	3000							

Fix beams for cutting systems

For handling single plates and skeletons after the cutting operation is completed.

IT modular systems are tailor made by designing them to the size of the plate and the cut pieces.

They allow easy and fast loading & unloading operations on any type of cutting machines (plasma, oxyacetylene, laser, high definition). In particular they free the bench from cut plate and skeleton in a single move to make the machine immediately available.

Other versions:

TT/L for laser cutting systems; minimum piece size 70x70 mm, min thickness 2 mm.

TT/H for heavy weight pieces

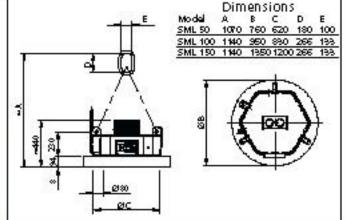


	tidenes length			aracti wid	eristics th	rated lift	
SML	weight kg	min. mm	min. mm	max mm	min. mm	max mm	capacity max
SML 50	900	8	1000	5000	1000	2900	5000
SML 100	700	8	1000	9000	1000	2900	10000
SML 150			1000	9000	1000	2900	15000

SML 50

Air gap mm

SML 100 SML 150





SMH single modules

For handling single thick slabs and forged blocks.

SMH permanent electro-magnetic modules are designed for lifting loads with big operational air gaps.

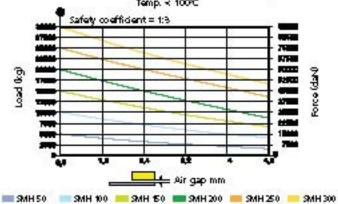
- · 4-pole circuit for high force concentration.
 • High magnet strength.

TECHTIMOSPICIE



Air Gap Curve on flat surface in 'Fe' minimum thickness 100 mm with all poles covered.

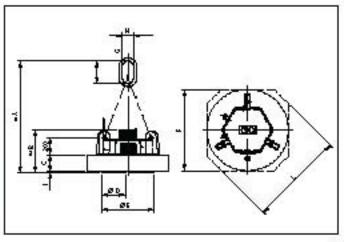
Temp. < 100°C



		Y.	Load Characteristics											
Model SMH	module weight kg		min.	max mm	min.	max mm	rated lift capa ditymax kg							
SMH 50	610	90	1000	6000	1000	2500	5000							
SMH 100	950	90	1000	6000	1000	2500	10000							
SMH 150	1300	40	1000	6000	1000	2500	15000							
SMH 200	1790	49	1000	6000	1000	2500	20000							
SMH 250	2190	80	1000	6000	1000	2500	25000							
SMH 300	2700	80	1000	6000	1000	2500	90000							

Dimensions mm

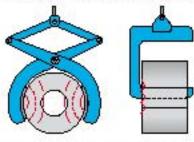
Model	A	В	C	D	E	FØ	G	H	1.	L
SM H 50	1285	505	155	198	462	800	180	100	15	556
SM H 100	1545	531	181	242	560	880	266	188	15	
SMH 150	1575	563	213	280	626	860	266	188	15	997
SM H 200	1760	577	227	320	706	980	304	152	15	1117
SM H 250	1790	637	280	350	770	1100	355	177	18	70.193
SM H 300	1790	625	272	374	814	1147	355	177	18	1311





The TECNO-LIFT line provides a vast array of solutions dedicated for the handling of compact coils of various morphology and dimensions, without weight limitations.

TECNO-LIFT always comes in contact with the material surface gently from the top, without compression or deformations.



TECNO-LIFT avoids all the problems associated with conventional methods of lifting represented by clamps and C-hooks which require constant pressure on the load.



Modules for handling cold-rolled coils with a horizontal eye. Complete with automatic load-centering system.

CV/T

Modules for handling cut coils, vertical eye (slitting lines).



CV

Modules for handling cold-rolled coils, vertical eye.



CO

Modules for handling open coils, vertical eye (annealing process).



		L	Load Characteristics									
Model CV7T	weight kg	Ext Ø min-max mm	int Ø mæx mm	Height min- max mm	rated lift capad tymax kg							
CV /T 10	500	560-1000	460	140-300	1000							
CV /T 15	565	800-1300	610	50-250	1500							
CV /T 30	610	600-1150	508	20-500	3000							
CV /T 40	1200	800-1450	508	30-500	4000							
CV /T 50	1500	800-1800	508	30.500	5000							





BL

Permanent-electro magnetic modules for handling layers of billets up to 600° C – in the core.

Versions:

BL/S single module for billets up to 6,000 mm length BL/D double modules for billets up to 12,600 mm length



BR

Modules for handling slabs Typical application: on harbour cranes, to load/unload ships.

Versions:

BR /S single module for slabs with length 1.000 - 8.000 mm BR /D double modules for slabs with length 6.000 - 12.000 mm BR /W `twin` module with mechanical auto-levelling system for loads 6.000 - 12.000 mm length



BAT GRIP

3 Ton capacity permanent-electrol lifters with battery.

Equipped with a remote control, this lifter is capable to be used for a long period independent of the power supply (est 7 days), because the energy is only used for a fraction of a second during the MAG/DEMAG phase.

Sections - Rails - Profiles - Rounds - Pipes - Tanks



Modules for lifting rounds.

For the movement of round loads only. The modules "V" groove design adapts to the morphology of the load allowing the centering of the module on the load during clamping phase.

Modd RD	weight kg	Diameter min - max mm	racteristics length min-max mm	ratedlift opadtymax kg
RD20	300	280-400	800-2000	2000
RD30	770	100-950	1000-6000	9800
RD60	970	350-810	1000-2000	6000
RD80	1450	900-700	1000-5000	8000
RD 100	2400	310-1000	1500-7000	10000
RD 150	2700	310-1200	1500-7000	19000





R DP version available for polygonal and irregular shape loads

C5

Modules for lifting tanks.

For the movement of round loads of oversized dimensions and thin wall thickness. Tailor made solutions for the movement of tanks, containers, in total safety without

deformation of the load.



TU

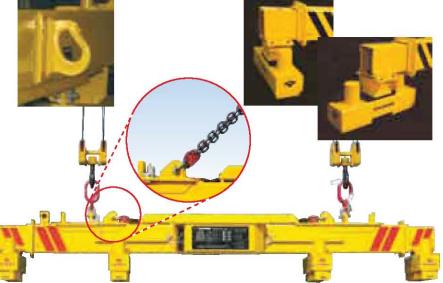
Modules for lifting tubes - round and square.

For the lifting of layers of tube without welding and round loads of various types









Dedicated solution

The TECNO-LIFT can be equipped with accessories for various applications:

• MRS - Fifth wheel

to rotate the load according to the application.

4HV - Supplementary hooks

Allow the use of the beam in a traditional manner, with chains and rope, without dismantling the TECNO-LIFT system. Useful when the load is non ferrous or has non-standard geometry.

SRM

Manual 90° rotation system for the cross-beams. Useful for profiles and narrow loads.

• DPV - Ring to the hook combination

Allows the use of the beam alternately with single and double crane hoists.
Chains and ring housing built-in.

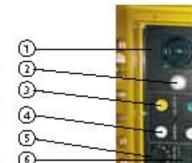


When it comes to safety and trust, no detail can be overlooked or left to chance: thousands of TECNO-LIFT systems installed all over the world are our main credentials.

Every system represents a study in optimizing the function of real time productivity.

Special attention is dedicated to to the safety: various electromechanical systems check for accurate magnetism on the load and detect any problems that may occur during the magnetization, clamping of load, moving the load and the accidental demagnetization during the material handling.

with 75% of the total possible magnetization strength, only once the load is lifted from the ground the second MAG cycle is executed allowing 100% of the total magnetization power (FULL MAG). This provides a definite minimum safety margin to the load that can be handled in complete safety.



- 4- Safe button: The user is obligated to press 2 buttons at the same time (SAFE and DEMAG) to release the load, this reduces the chances of an accidental load release.
- 5- Cross Beam Selections*.
 Allows the magnetization
 pattern of the modules: only the
 center ones, all the cross beams,
 only one side (narrow loads) left
 or right.
- 6- The push button remote includes the APC Power adjustment control. This is a 4 level selector that can reduce the magnetic depth to pick up the load from stack.
- 7- For the TM4 and TM6 systems, the remote control also includes the OPEN and CLOSE buttons for the telescopic portions of the beams.

nonly available for specific TBCNOLIFT models – see chart)





All the magnetic modules are made from a solid piece of steel; this creates a greater protection against accidental impacts with

Elastic suspension system are used since the application requires it to equally distribute the weight of the load among the different pick up points avoiding dangerous overloading.

higher reliability.

- Control Unit In a compact IP54 cabinet to allow fast activation and deactivation cycles (max 7 sec)
- 1- Push button panel
 Is integrated in the body of the
 lifter and contains the basic
 functions (ON/OFF, PICK-UP, FULL
 MAG, DEMAG, SAFE)
- 2- The electronic UCS saturation control system controls the correct value of the current absorbed to ensure that the modules reached the full magnetic saturation.
- 3- PICK-UP, FULL MAG*
 The TECNO-LIFT system uses a
 double magnetization cycle test
 the load according to its weight
 and airgap condition.
 Pick-up cycle is executed first



DAUTANA C
is the safety contact that
allows the magnetization /
demagnetization only when
the chains are slack. This
contact prevents the accidental
demagnetization when the load is
suspended.

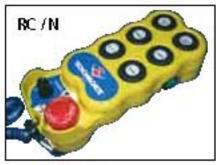
Chains: are high strength steel 80.



To display the status of the system: Normal operation / Pick Up phase / Alarms



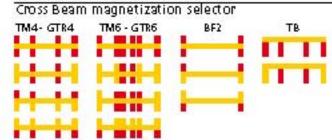
Drum Reel
Enables an easy installation of
the system on any type of crane.
The cable length is 12 meters
and it comes with the
appropriate mounting plate.



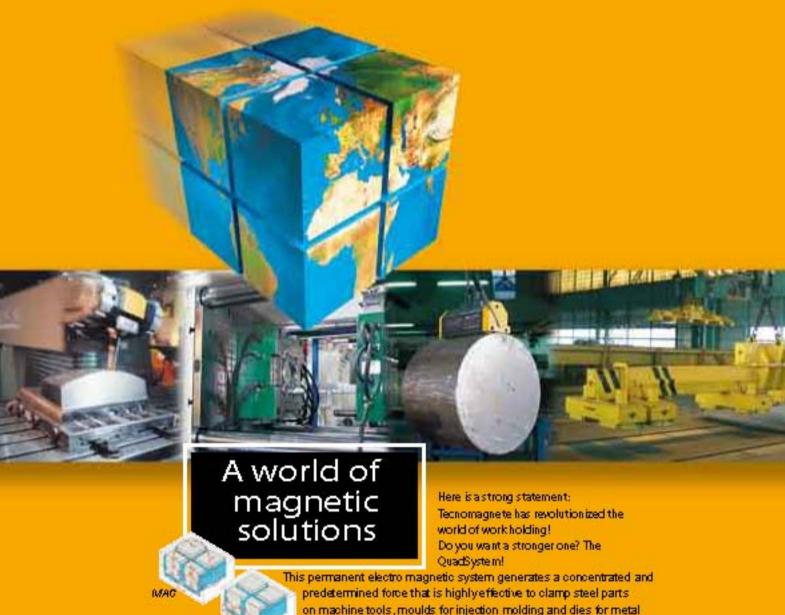
Remote Control
Enables the operation of the
system (pickup/full mag/safe/
open/close) from outside the
working area and away form the
load.

The new model is ergonomic, with emergency stop button and APC power adjustment knob. Supplied with frequency regulator, two re-chargeable batteries and charger (110V or 220V) for the transmitter.

RC / S. dm ple remote control RC / B: "belt use" remote control



Standard supply table												S	tend	ad 🖷	١		ob	1ora	
16.74.54	TM4	TM6	BF2	GTR4	GTR6	TB	π	SML	SMH	cv	co	CH	BL	BR	BAT	TP	RD	TU	CS
Structure - High strength tubular steel			•					12				38						•	
Bastic suspension system for modules	•	•	•				6283	G# (3)		+01	401	-0	***	2040	00.00				
Integrated control Unit	•	•	•		- 12		٠		٠	+	+	- 30					٠		
Stand alone controller	- 8	83		•			25			•			•						
Double cycle magnetization RCK-UPYFULL MAG			•	•				•		•	•		-				្	•	
Hydraulic telescoping system	•	•		32	- 20.00	-		- 200	- 20	1	. 10		- 20			-	12		1
Remote control RC/*	N	N	N	N	N	В	N	N	N	200		- 55	- 3	3	s	N	3		
Remote control for grane cabine	- 25	- 12			1000		-												
APC power adjustment		•		•	•			•	Ď				4.						
Safe Button				•															
DAUTANAC				•			1918					-				1918		33.50	
UCS Saturation control unit	•	•					٠		•	•			•		•				•
Lamp Block	•			•					•										
Chains									•	•									•
Drum Reel																			
Installation kit																			
SRM - Module rotation device							100	3377	- 23			30				-	-	3.57	



on machine tools, moulds for injection molding and dies for metal. stamping machines, and the handling of ferrous loads.

We've believed in the force of our Quad System patent and many companies have believed in this powerful innovative technology. The large variety of applications of over 100,000 systems sold world wide gave all our oustomers a sharp competitive edge with safety and fexbility.

Nowadays, with the global network of our subsidiaries and commercial partners we are at your disposal to show you state of the art technical solutions for all applications and increase your success. Techomagnete: all the magnetism of the leader.



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