

**Oggi anche lei può scoprire
un nuovo mondo.
E' molto semplice!**

**Nowadays you can also discover
a new world.
It is really easy!**



ARGANO
CERTIFICATO
DALLA RINA
E COSTRUITO
SECONDO
LE NORME
UNI EN81.1

ELEVATOR
TRACTION
MACHINE
CERTIFIED
BY RINA AND MADE
ACCORDING
TO EN81.1



CERTIFICATO DI CONFORMITÀ
CERTIFICATE OF COMPLIANCE

N. CPC/FCN00001

Pratica RINA N.
RINA file No.

Certificaz

Ditta costruttrice
ADSUR SA

Indirizzo:

VIA DEAN FUNES N° 415 - 121

Modelli di

M137

M194

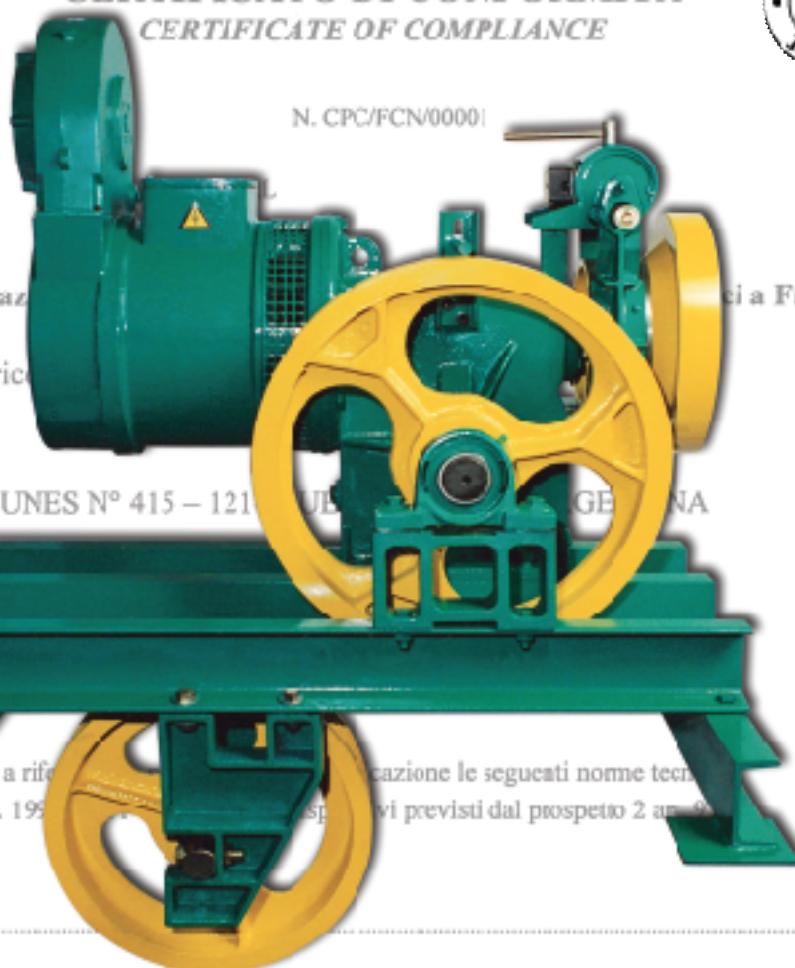
M202

Sono s

UNI

UNI

UNI EN 12016



Allegati:

Escluso:

Fascicolo caratteristiche tecniche argani mod. M137 - M194 - M202

Dichiarazione
Dichiarazione

A

D

S

**Non tutto è stato
detto nel mondo
degli argani.**

**Not everything has been said
in the world of the elevator
traction machine.**

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Informazioni Tecniche • Technical Information: www.adsur.com.ar

CERTIFICATO DI CONFORMITÀ CERTIFICATE OF COMPLIANCE



N. CPC/FCN/00001

Pratica RINA N.
RINA file No.

02 BU 00022 AL

Certificazione su base volontaria Argano per Ascensori Elettrici a Frizione

Ditta costruttrice

ADSUR SA

Indirizzo:

VIA DEAN FUNES N° 415 - 1214 BUENOS AIRES. - ARGENTINA

Modelli di Argano Certificati:

M137

M194

M202

Sono state prese a riferimento per la presente certificazione le seguenti norme tecniche:

UNI EN 81.1 ed. 1999, con l'eccezione dei dispositivi previsti dal prospetto 2 art. 9.7.1

UNI EN 12015

UNI EN 12016

Allegati: Fascicolo caratteristiche tecniche argani mod. M137 - M194 - M202

Enclosures

Dichiarazione di conformità componenti elettrici

Dichiarazione di conformità Compatibilità Elettromagnetica EMC

Rilasciato a: Genova
Issued at: Genova

il 11/12/2002
on 11/12/2002



RINA - REGISTRO ITALIANO NAVALE

RINA espone le sue missioni a mezzo di funzionari o altre persone che giudica merite di ogni requisito di idoneità e competenza per i compiti loro affidati. Nella sua qualità di perito RINA espone esclusivamente opinioni e valutazioni di conformità alle proprie norme regolamentari e non assume in alcun caso (ovve pure i suoi pareri fossero richiesti in materia non espressamente regolamentata) le responsabilità facenti capo ai progettisti, agli armatori, ai costruttori, ai collaudatori, ai cantieri e ad ogni persona od Ente tenuto per legge o per contratto a fornire garanzie, soggetti tutti che mantengono inalterate le rispettive responsabilità anche nel caso di interventi consultivi del RINA. Per quanto attiene ai compiti direttamente assunti e svolti al di fuori di quelli delegati di cui al punto successivo, il RINA risponde a termini di legge nell'ambito dei compiti che al RINA, fanno capo in qualità di delegato del Ministero dei Trasporti e della Navigazione eventuali responsabilità possono essere ravviate solo in caso di dolo o colpa grave dei funzionari o dei soggetti incaricati. In nessun caso la responsabilità - quale che sia l'entità del danno lamentato - potrà eccedere un valore pari a 5 volte la misura dei compensi percepiti dal RINA come corrispettivo dei servizi prestati o prestazioni rese, dei quali o dalle quali sia derivato il danno lamentato.
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In these lines are described the general characteristics of the materials, design and information to get a correct maintenance of our lift machines.

Technical information can be modified without previous notice.

LIFT GEARED MACHINE: Series "M"



Main Technical Characteristics:

- According to **EN81-1** (and MERCOSUR NM207).
- The machine support doesn't have mechanical fixing at the floor.
- Diverting pulley incorporated to the machine support, avoiding the installation of this pulley inside of the hoistway.
- Additional pedestal bearing in the traction sheave shaft.
- Ground worm.
- Thermal protection.
- Electric motor winding insulation: class F.
- One person can make the emergency operation, without additional tool.
- Independent brake shoes.
- Visible oil level indicator for M-137 and M-194, by dip stick for M-202.
- Standard installation for encoder.
- Standard installation for cooling fan.
- 2-year guarantee.

TECHNICAL INFORMATION INDEX

1. Traction sheave shaft
2. Worm shaft
3. Worm wheel
4. Traction sheave
5. Electric Motor
6. Brake system
7. Brake shoes
8. Bearings
9. Lubrication
10. Data plate type
11. Main measurements
12. Gear box weights
13. Information for quotation
14. Installation type
15. Emergency operation
16. Machine schedule
17. Electro Magnetic Compatibility
18. Electric components
19. Regulation of the brake system
20. Electrical connections

1. TRACTION SHEAVE SHAFT

Material: **SAE 4140**, with thermal treatment.
Tensile grade: more than 95Kg/mm²

Our design considers the effect of static and dynamic forces into consideration, and all practical procedures to reduce to a minimum - based on ASTM recommendations - the faults that could eventually be the result of alternative stress. To increase the dead load there is a pedestal bearing in the extreme of the traction wheel shaft.

Two eccentric sheave shaft-bearing housings allow compensating the gear wear.

2. WORM SHAFT

Material: **SAE 4140**, with thermal treatment.
Tensile grade: more than 95Kg/mm²

One worm shaft thrust bearing (double ball), one central bushed bearing and an additional bearing in the back cover of the motor assure a perfect alignment of the armature (placed in the same worm shaft), besides the dynamic balancing of the entire shaft eliminates the possibility of gear vibrations. Ground worms are used in every one of the machines.

3. WORM WHEEL

Material: Bronze **SAE 65**
Tensile grade: more than 280N/mm²
Brinell hardness: less than 120HB

The worm gear design takes into account the admissible forces and worn for superficial pressure. Both limits have been checked suitably for the tangential strength, moment and power maxims.

An accurate worm-gear size assures an useful life more than 50.000 hours without problems of transmission. This duration is equivalent around 17 years.
 The efficiency of the gear is between 0, 7 and 0, 85.

4. TRACTION SHEAVE

Material: Cast Iron
 Tensile grade: 20 to 30Kg/mm²
 Brinell hardness: 200 /220 HB

Geometrically designed to endure the deflective and torsion stresses, and also prepared with the necessary surface hardness in the grooves to provide an adequate adherence for the suspension ropes to keep a safe elevator function.

The groove is normally "V" type (32°). "Undercut" groove can be made only by requirement of the customer.

5. ELECTRIC MOTOR

The elevator machines have the possibility to fix a cooling fan in all the models. For an effective thermal protection is present one thermal protector to verify the temperature on the motor windings. The alert temperature is 105 °C.

The normal ventilation system allows the use of the elevator machine for 120 starts/h.

Protection degree: IP 21

Isolation class: F

Standard voltage: 3 x 380 V - 50 Hz / 3 x 220 – 60 Hz (other voltage by special requirement).

Technical information above is based on 3 x 380 V – 50 Hz

2 SPEED ELECTRIC MOTOR

POWER (HP)	5,5	7	10	12	15	20	25	30
POLES	4 16	4 16	4 16	4 16	4 16	4 16	4 16	4 16
SYNCRONIC SPEED (rpm)	1500 375	1500 375	1500 375	1500 375	1500 375	1500 375	1500 375	1500 375
ELECTRIC CURRENT (A)	9	13	18	21	27	36	45	54

1 SPEED OR VVVF ELECTRIC MOTOR

POWER (HP)	5.5	7.5	10	13.5	15	20	25	30	40
POLE	4	4	4	4	4	4	4	4	4
SYNCRONIC SPEED (rpm)	1500	1500	1500	1500	1500	1500	1500	1500	1500
ELECTRIC CURRENT (A)	9.7	12.5	15.8	21.5	23	31.5	38	45	60

6. BRAKE SYSTEM

Double construction according to EN81.1, fixed to the gear box. Easy maintenance and regulation (see chapter 19).

The brake system fulfills the requirements of an efficient braking action up to 125% rated load inside the car, according to EN81.1 and NM207.

Rated Voltage: 110 Vcc (other voltage by special requirement).

7. BRAKE SHOES

The brake shoe material is fire resistant and without asbestos or another harmful material. Under normal conditions, the esteemed life is near 3 years.

In the case to check a non homogeneous surface of the brake material or the drum of the brake, it is necessary to proceed to the immediate regulation of the brake system or to replace the brake material.

8. BEARINGS

In the gear box shafts are used first quality bearings.

The bearing lubrication is obtained by a bath of oil producing an excellent performance for high revolution.

The bearings used for the different models are:

TYPE	BEARINGS					
	WORM SHAFT			DRIVE SHAFT		
	Brake side	Motor Side	Motor Cover	Wheel Side	Opposit Side	Support
M-137	SKF 3307	SKF 6212	SKF 6008ZZ	BOCCOLA	BOCCOLA	YAR 210
M-194	SKF 3309	SKF 6016	SKF 6008ZZ	BRONZINA	BRONZINA	YAR 212
M-202	SKF 3312	BRONZINA	SKF 6008ZZ	NUP 219	SKF 6214	YAR 212

9. LUBRICATION

Method: Natural Flow

Recommended Mineral oils*:

OLI MINERALI RACCOMANDATI*

	M-137	M-194	M-202
CAPACITY (L)	3.5	4	5
REPSOL YPF	EP320	EP320	EP320
AGIP	Blasia 320	Blasia 320	Blasia 320
SHELL	Omala 320	Omala 320	Omala 320
MOBIL	Mobilgear 635	Mobilgear 635	Mobilgear 635
ESSO	Spartan EP 320	Spartan EP 320	Spartan EP320

* Synthetic oil equivalent is admissible.

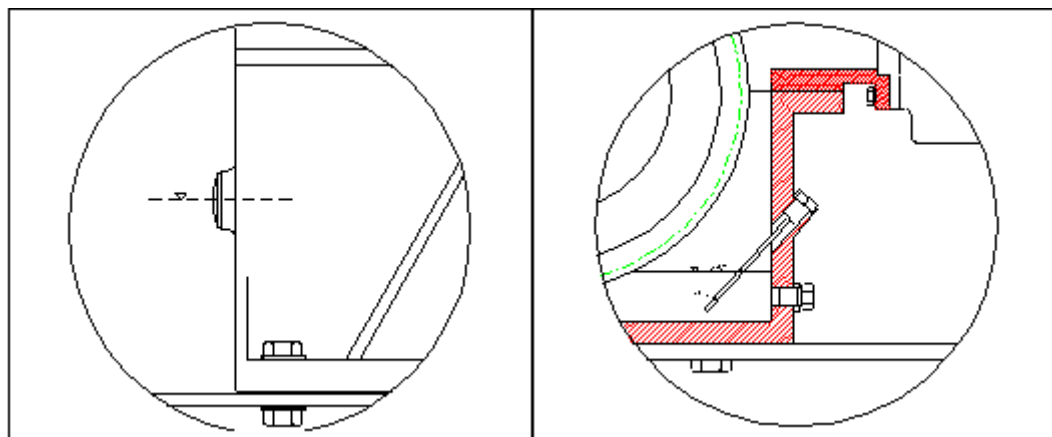
First Change Of oil:

- After 400 h of service.

Following replacements:

- Between 12 to 18 months depending of duty service.

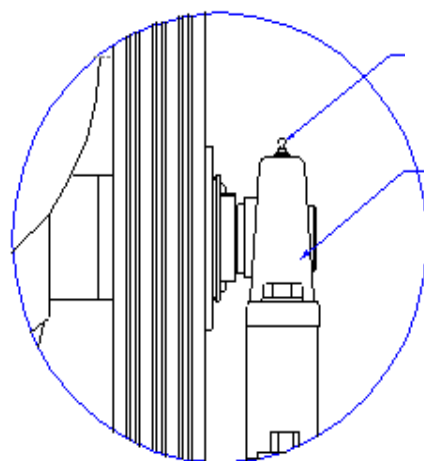
Oil level indicator:



M-137/M-194

M-202

Support



lubricator: lubricate each 6 month (62EP grease)

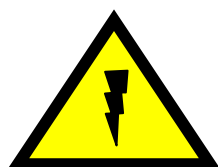
Support

M -137/194/202

10. DATA PLATE TYPE

Machine ADSUR ^R			
Electric Motor		Machine	
Type	VVVF	Type	M-137
Rated Voltage	3x380 V-50 Hz	Rated Speed	1m/s
Frequency	7 HP/5,5 KW	Rated Load	450 Kg
Rated Current	12 A	Static Load	3000 Kg
Speed	1500 rpm	Sheave	480 mm
Service	S5 - 50 %	Rope Diameter	1/2 " x 4
Protection	IP 21	Number of Ropes	
Insulation	F	Ratio	37/1
Winding	stella	Type of Oil	OMALA 320
Brake			
Rated Voltage	110 V CC	Rated Current	2 A CC
According to EN81.1		Date:	
		Machine N° :	

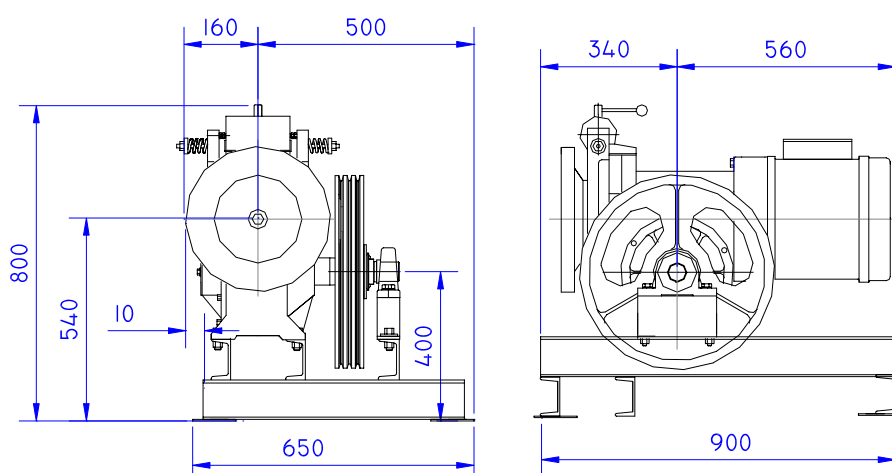
INDICATORS



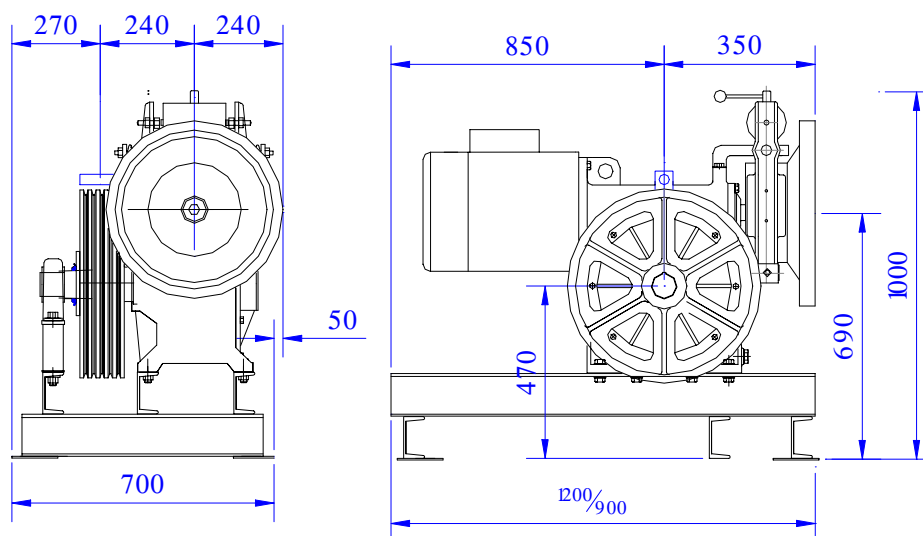
Down and up direction of the car
(on brake coil)

11. MAIN MEASUREMENTS

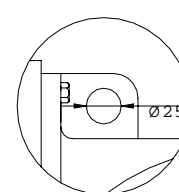
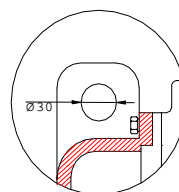
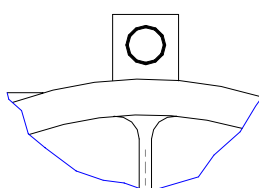
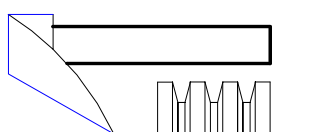
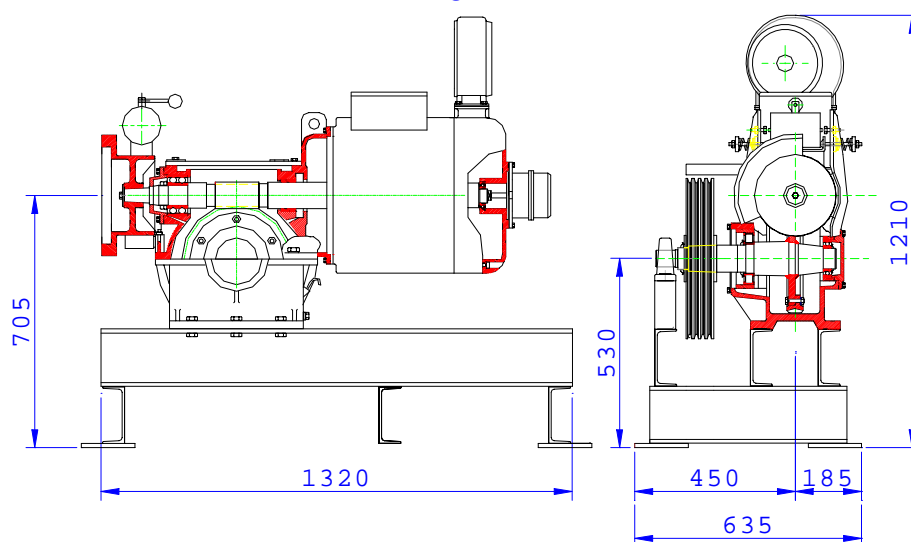
M-137



M-194



M-202



M-202

M-137/194

anti - derailment system

hook to lift elevator traction machine

12. GEAR BOX WEIGHTS

	M-137	M-194	M-202
HEIGHT (Kg)	270	380	650

13. BASIC INFORMATION FOR A QUOTATION

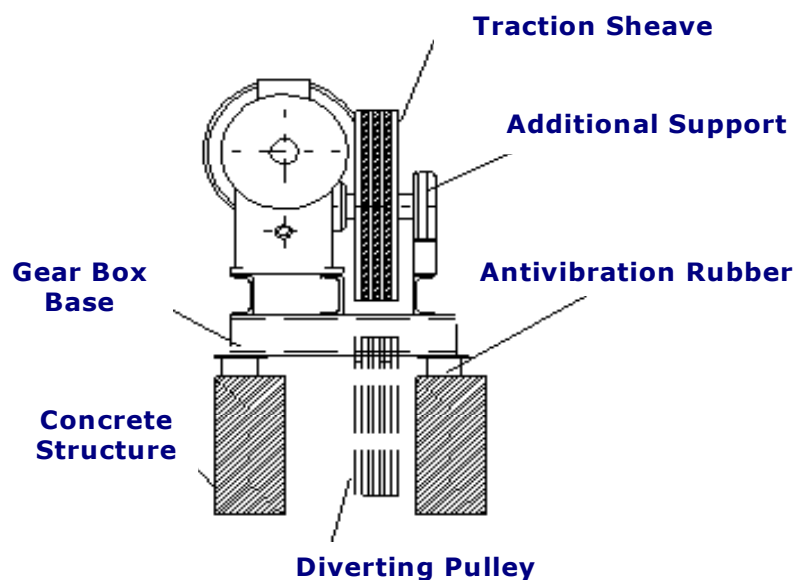
ADSUR [®] ELEVATOR TRACTION MACHINE																			
CUSTOMER / CONTACT:	Mr./Mrs. _____																		
REFERENCE:	_____																		
REQUIREMENTS OF:	<table style="width: 100%;"> <tr> <td style="width: 50%; text-align: right;">quotation <input type="checkbox"/></td> <td style="width: 50%;">DATE _____</td> </tr> <tr> <td style="text-align: right;">order <input type="checkbox"/></td> <td></td> </tr> <tr> <td style="text-align: right;">quantity <input type="checkbox"/></td> <td></td> </tr> </table>	quotation <input type="checkbox"/>	DATE _____	order <input type="checkbox"/>		quantity <input type="checkbox"/>													
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TECHNICAL CHARACTERISTICS (for customer)																			
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ONLY TO BE FILLED BY ADSUR																			
TYPE OF GEAR	_____																		
SERIAL NUMBER	_____																		
DELIVERY DATE	_____																		
ADDITIONAL INFORMATION:																			

14. INSTALLATION TYPE

The elevator gear box is fixed on a base calculated according to the static load. According to the underlying scheme, no anchorages are necessary. No coupling system for the electric motor shaft avoids vibrations.

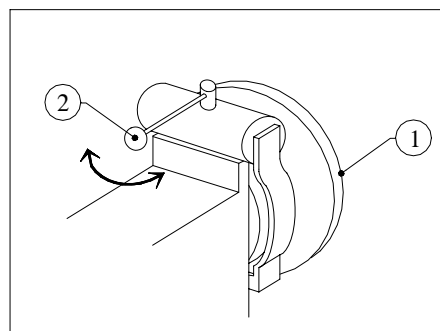
ELEVATOR TRACTION MACHINE



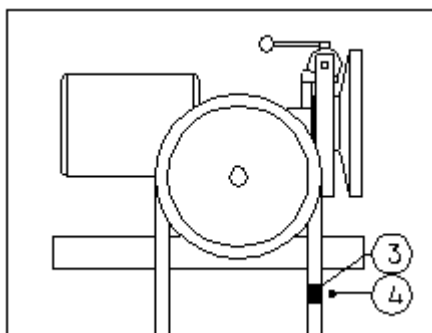
15. EMERGENCY OPERATION

1) MANUAL OPERATION: M-137 / M-194

- A. Disconnect the power supply of the elevator. Confirm the landing doors are closed.
- B. The operator should be located in the opposite side to the traction sheave. With one hand move the brake lever (2) in any sense in order to unlock the brake. Maintain this position to make the operation C.



- C. Move, with the another hand, the fly-wheel (1) in the sense of the smaller effort until arriving to the marks (3) on the traction ropes (4) in order to reach the car at the level of the floor.



- D. Release the brake lever at the normal position.

2) ELECTRIC OPERATION: M-202

For the following rated load and speed, it is necessary an electric emergency operation:

RATED LOAD	Speed	Power	Sheave Diameter	Ratio
KG	m / s	HP	mm	
900	2,50	40	680	45/2
1200	1,50	30	620	53/2
	2,00	40		
	2,50	50	680	45/2
1500	1,25	30	480	55/2
	1,50	40	620	

- A. Disconnect the power supply of the elevator. Confirm the landing doors are closed.
 B. Push the appropriate push-button to up or down the car up to the next floor.
 C. Release the push-button.

16. MACHINE SCHEDULE (50HZ)

RATED LOAD	Rated Speed	Power	Motor Type	Model	Sheave Diameter	Speed Motor	Ratio
KG	m / s	HP			mm	GIRI / MIN	
300	0.63	5	1V	M - 137	510	1000	37/1
	0.75	5	1V - VVVF			1500	45/1
	1.00	5	2V			37/1	
	1.25	5.5	VVVF			63/2	
450	0.50	5	1V	M - 137	510	1000	45/1
	0.63	5.5	1V				
	0.75	5	2V			1500	37/1
	1.00	5.5	1V - VVVF				
	1.25	7	2V	M - 194	620	1500	53/2
	1.50	7.5	VVVF				
	2.00	10	VVVF				
		12.5	VVVF				
600	0.50	5.5	1V	M - 137	510	1000	45/1
	0.63	7.5	1V				
	0.75	7	2V			1500	37/1
	1.00	7.5	1V - VVVF				
	1.25	10	VVVF	M - 194	620	1500	53/2
	1.50	10	VVVF				
	2.00	12.5	VVVF				
		15	VVVF				
750	0.75	10	2V	M - 194	510	1500	46/1
	1.00	10	VVVF		620		
	1.25	12	2V		510		53/2
	1.50	12.5	VVVF	M - 194	620	1500	46/1
	2.00	15	VVVF		620		
	2.50	20	VVVF		680		
900	0.75	12	2V	M - 194	510	1500	46/1
	1.00	12.5	VVVF		620		
	1.25	15	VVVF		510		55/2
	1.50	20	VVVF	M - 202	620	1500	53/2
	2.00	25	VVVF		680		45/2
	2.50	30	VVVF				
1200	0.50	12.5	1V - VVVF	M - 202	510	1000	48/1
	0.75	15	2V				
	1.00	15	VVVF			620	
	1.25	20	2V			510	
	1.50	20	VVVF		620	1500	45/2
	2.00	30	VVVF		680		
	2.50	30	VVVF				
		40	VVVF				
1500	0.50	12.5	1V - VVVF	M - 202	510	1000	48/1
	0.75	15	2V				
	1.00	15	VVVF			620	
	1.25	25	2V		510	1500	55/2
	1.50	25	VVVF		620		
		30	VVVF				

RATED STATIC (Kg)

M - 137	3000
M - 194	4000
M - 202	8000

17. ELECTRO MAGNETIC COMPATIBILITY

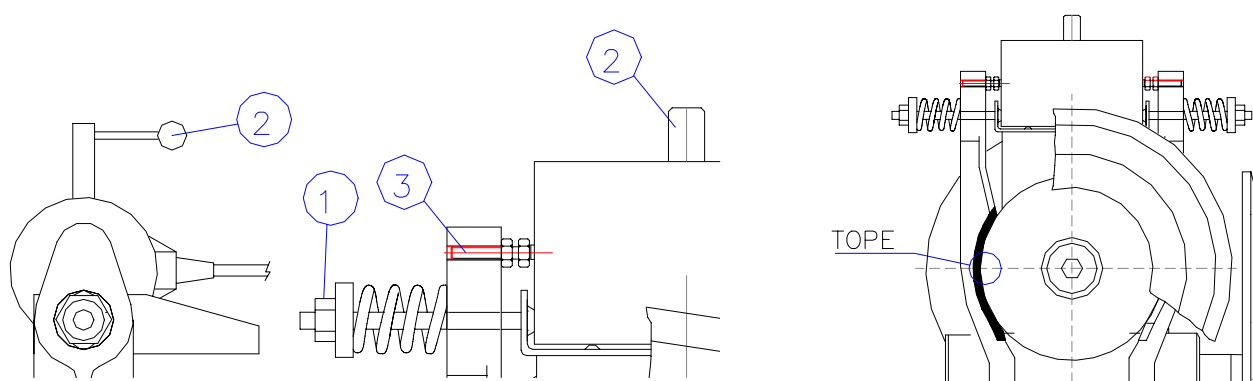
Normative EMC has been considered in the series "M" elevator traction machine construction.

18. ELECTRICAL COMPONENTS

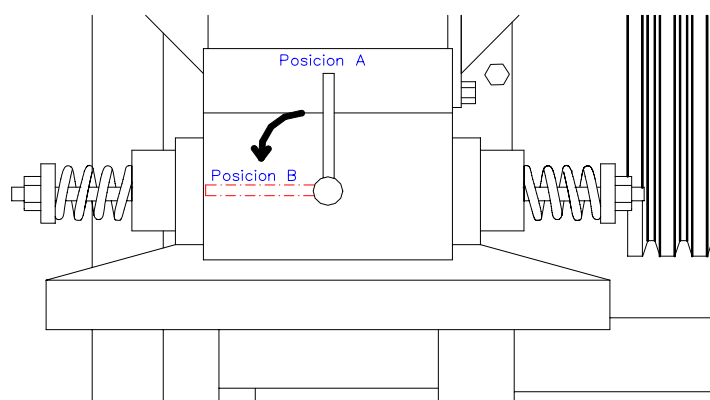
The electrical components are installed and made according to IEC standards.

19. BRAKE SYSTEM ADJUSTMENTS

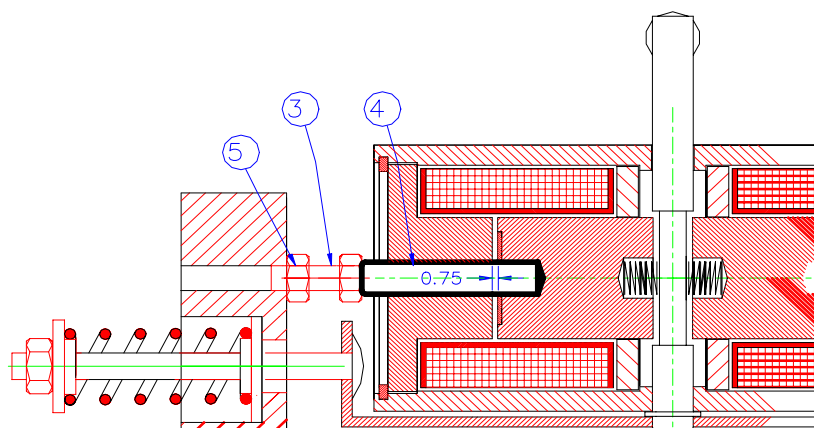
- 1- Disconnect the power supply.
- 2- Resting the counterweight on the pit.



- 3- Screw the nut (1) as far as the shoe brake rests on the brake drum.
- 4- Screw the nut (1) 5 turns.
- 5- Move the brake lever (2) manually from A to B and maintain it there.



- 6- Screw the bolt (3) as far as it rests on the mobile core (4).
- 7- Return the brake lever (2) to the position A.
- 8- Unscrew the bolt (3) 1/2 turn. Screw the locknut (5) in order to fix the bolt (3).



- 9- Verify the gap. It shall be 0.75 mm.
- 10- Repeat, on the opposite side, the points 3 to 9.
- 11- Verify manually the brake operation.
- 12- Restore the counterweight to the correct position.
- 13- Connect the power supply.

20. ELECTRICAL CONNECTIONS

