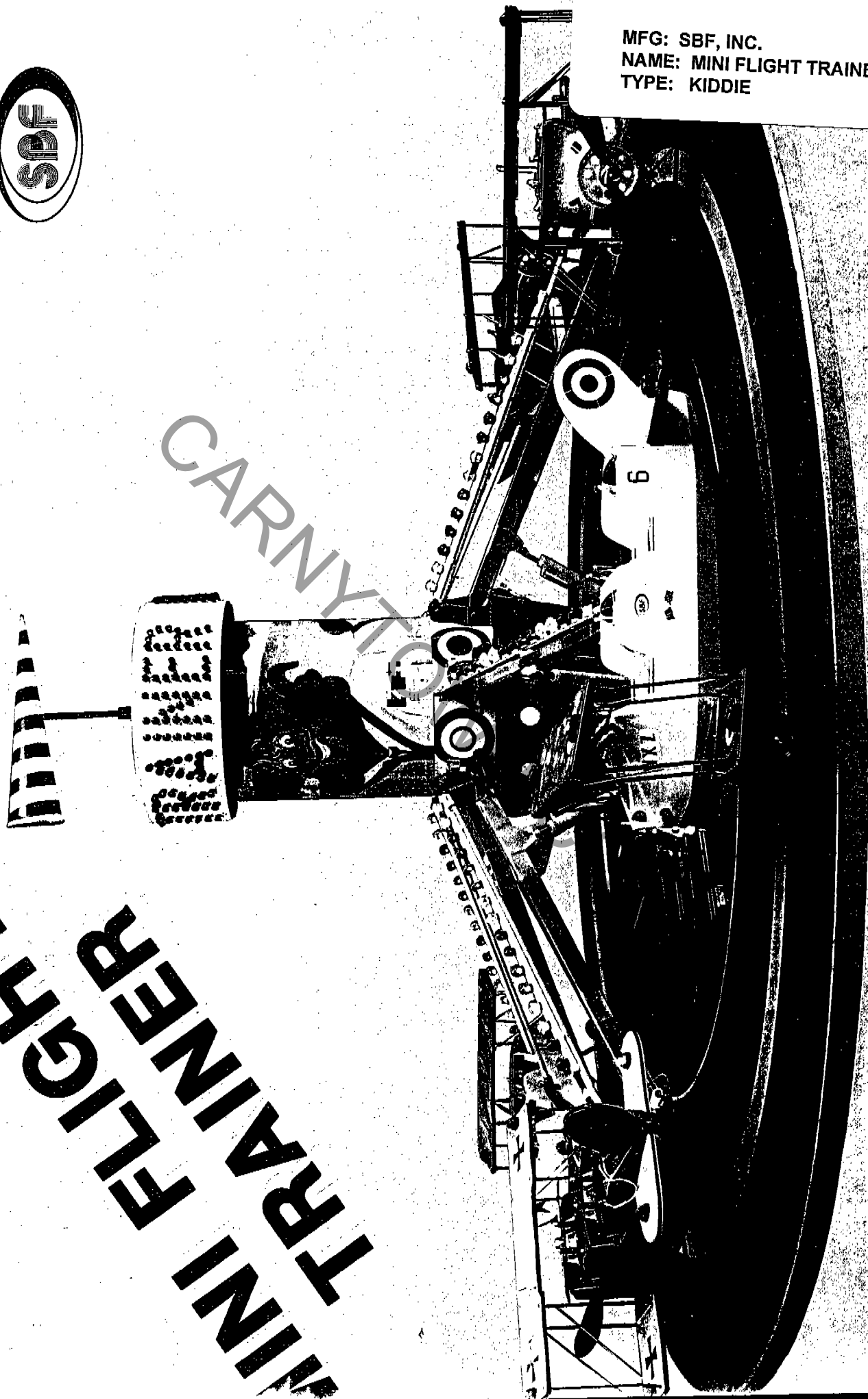




MFG: SBF, INC.
NAME: MINI FLIGHT TRAINER
TYPE: KIDDIE

CARNYKIT

MINI FLIGHT TRAINER



M I N I

F L I G H T

T R A I N E R

M O D 027

O P E R A T I O N

A N D

M A I N T E N A N C E

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G E N E R A L I N D E X

- 1) **TECHNICAL DATA**
- 2) **TECHNICAL DIAGRAM**
- 3) **ORDINARY MAINTENANCE**
- 4) **OPERATION**
- 5) **WHAT TO DO IN CASE OF **
- 6) **SAFETY NOTES**

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TECNICAL DATA

- | | |
|-----------------------------|-------------------------------|
| 1) MOVING POWER | 6 KW |
| 2) LIGHTING | 2 KW |
| 3) VOLTAGE | 380/220/110/24 |
| 4) CYCLES | 50-60 |
| 5) NR OF VEHICLES | 6 |
| 6) NR OF SEATS | 12 |
| 7) OCCUPIED AREA | MT 7 (23 FEET) |
| 8) ROTATION SPEED | ADJUSTABLE |
| 9) SUGGESTED ROTATION SPEED | 4.5 RPM |
| 10) OPERATION | ELECTROMECHANICAL / HYDRAULIC |

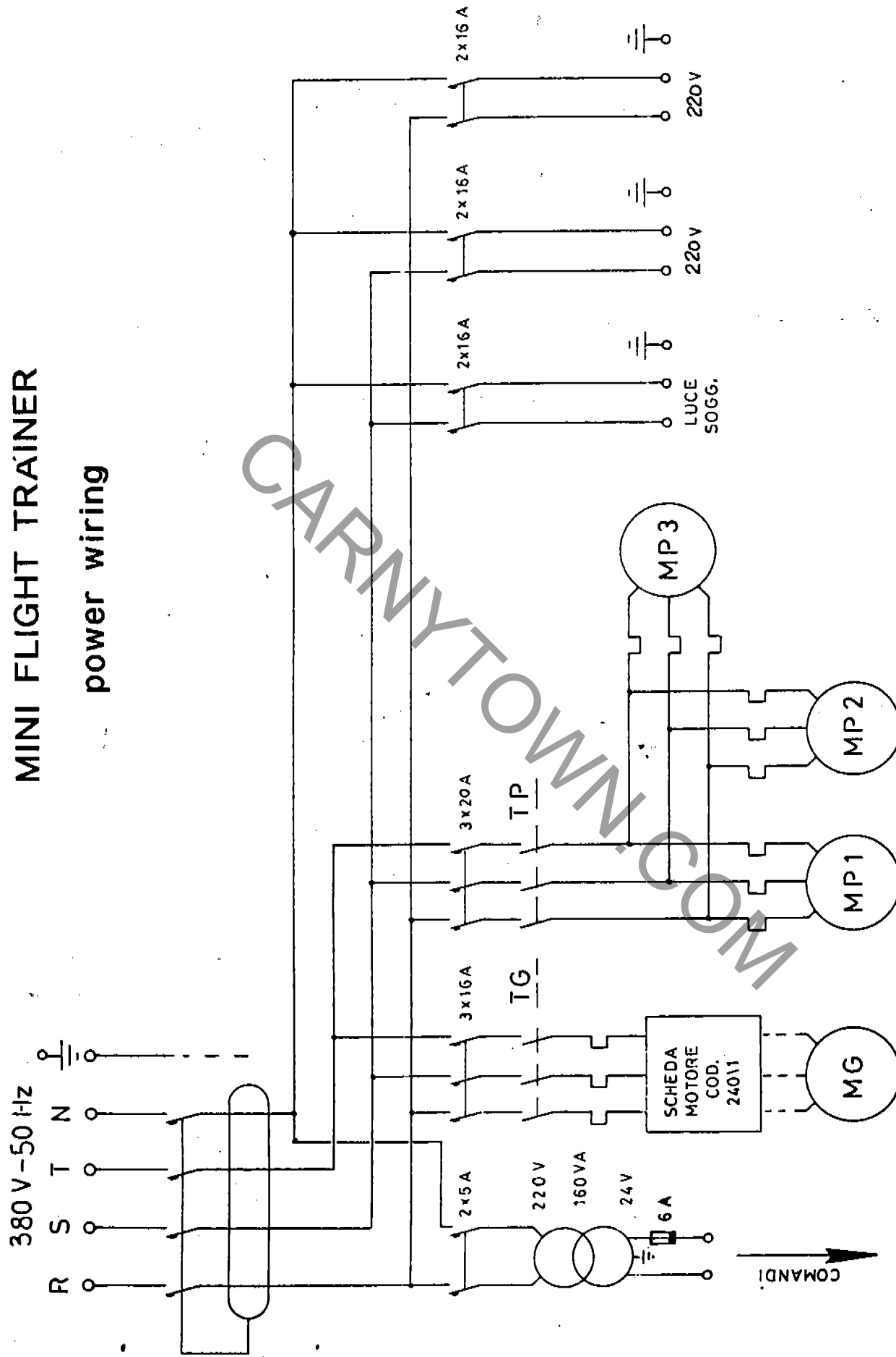
TECHNICAL DIAGRAM

- A) ELECTRIC PLAN
- B) LIST OF ELECTRIC COMPONENTS
- C) HYDRAULIC PLAN
- E) LIST OF HYDRAULIC COMPONENTS

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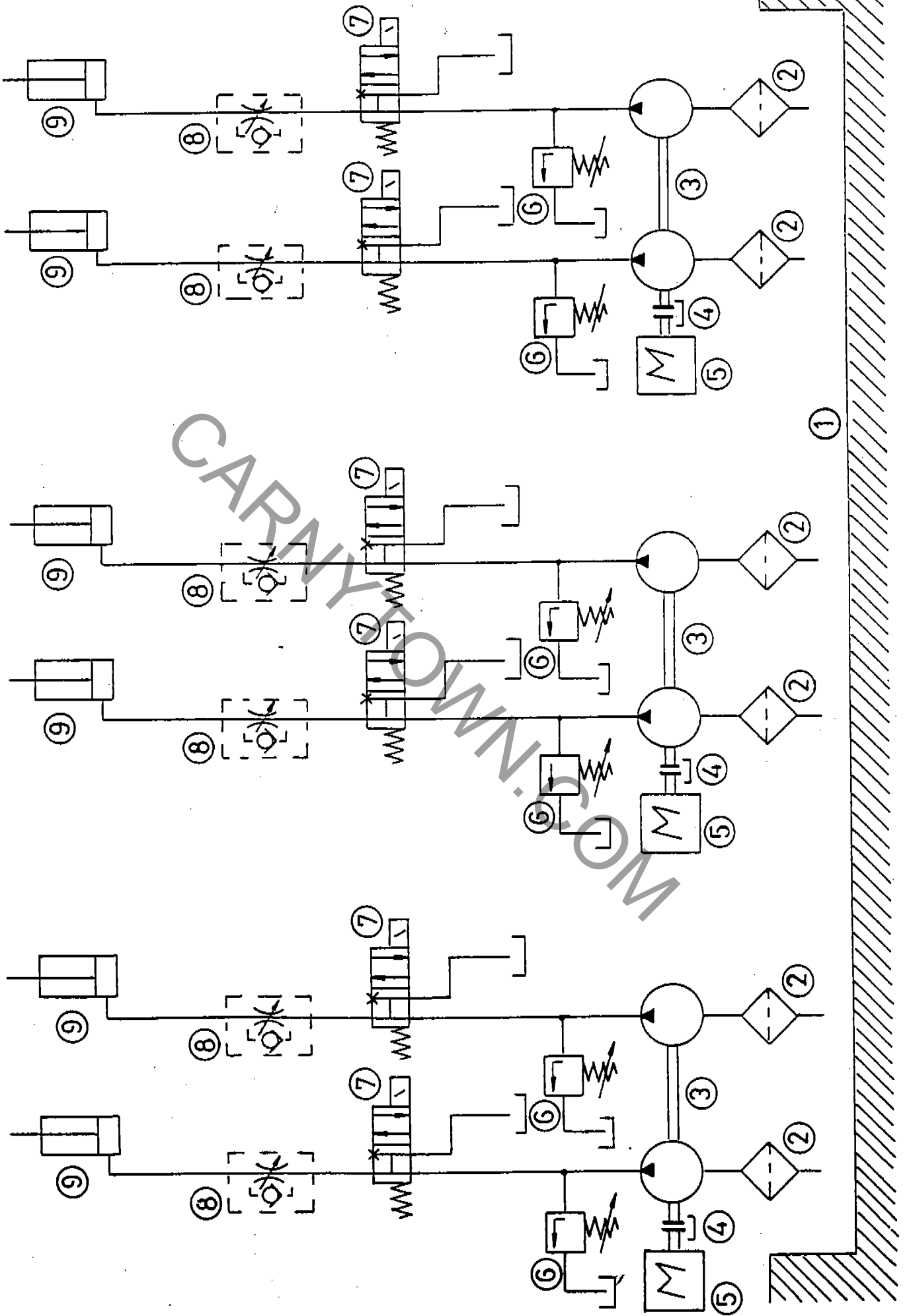
MINI FLIGHT TRAINER

power wiring



C = BELL
S = BELL BUTTON
T = TIMER
TG = ROTATION CONTACTOR
M = START BUTTON
A = STOP BUTTON
E = EMERGENCY BUTTON
R1 = AUXILIARY RELAIS
TP = PUMPS CONTACTOR
R2 = AUXILIARY RELAIN ENDSWITCH
PA = LIFTING BUTTON
PB = DESCENT BUTTON
R3 = AUXILIARY RELAIS PA
R4 = AUXILIARY RELAIS PB
EV = ELECTROVALVE
FC = ENDSWITCH
P = LIFTING BUTTON (ON VEHICLE)
O = CONTROL PANEL
□ = CONNECTOR
△ = COLLECTOR
MA = MANUAL/AUTOMATIC SELECTOR
MP = PUMP MOTOR
TP = PUMP CONTACTOR
TG = TURN CONTACTOR

HYDRAULIC PLAN



NR	QUANTITY	DESCRIPTION
1	1	OIL TANK LT 150
2	6	FILTER MPAM 15/90
3	3	TANDEM PUMP IISP ND+ IISP ND
4	3	CONNECTIONS BL SL COUPLING HE 41
5	3	ELECTRIC MOTOR HP 2.5 BS 2-3-60 4P
6	6	BASE PLATE PBME 6-B-60
7	6	ELECTROVALVE 4WE 6-HB 24 DC
8	6	ADJUSTER DRV 8-1/4"
9	6	CILYNDER S.E. 50-35-400

ORDINARY MAINTENANCE

A) DAILY MAINTENANCE

- Check that all safety pins are on proper place
- Check all electric connections
- Check all operation buttons/switches before starting operation with passengers.

B) 15-DAY MAINTENANCE

- Grease the main central bearing placed on the base of the central structure through the proper greaser. Grease also the inner teeth through the proper pocket.
- Grease mobile connection of cylinder through the proper greaser (ref. 1 pic. 1).

C) MONTHLY MAINTENANCE

Check the wearing out of contact brushes of the electric connector (ref. 2 pic. 2) and if necessary replace them after unscrewing the bolt (ref. 3 pic. 2).

Note: please use grease type as per table 2.

D) GEAR-BOX MAINTENANCE

It is necessary to replace the oil on gear-box after the first 150/200 hours of operation, and then every 2500 hours or 12 months.

In order to facilitate the elimination of impurities, it is suggested to replace the oil when the gear-box is warm. It is advisable also to check the oil level at least once a month, adding some if necessary.

Note: please use grease type as per table 2.

To replace the oil:

- unscrew the oil filling plug (ref. 4) and the vent plug (ref. 5).
- unscrew the oil drain plug (ref. 6) and let the oil flow down completely.
- clean the oil drain plug (ref. 6) and then screw it.
- Pour the oil through the plug (ref. 4) until it will begin to come out from the vent plug (ref. 5), and then screw the plugs again. (pic. 3)

E) 1500-HOUR MAINTENANCE

Every 1500 operation hours change the oil of the tank completely. In order to do this, empty the tank through the drain plug. Then, fill the tank through the filling plug using the oil suggested on table 3. Check monthly the oil level using the stick of the filling plug.

F) EXTRA MAINTENANCE

After the first 30 working hours, check and fix all the bolts of the ride.

NOTE

All maintenance operations must be carried out by skilled personnel and disconnecting the ride from the electric power. .

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	-20°C / +5°C IV 95 mln	+5°C / +40°C IV 95 mln	+40°C / +65°C IV 95 mln	-30°C / +65°C IV 95 mln
ISO 3448	VG 100	VG 150	VG 320	VG 150-220
AGIP	Blaelo 100	Blaelo 150	Blaelo 320	Blaelo S 220
ARAL	Degol 80 100	Degol 80 150	Degol 80 320	Degol GS 220
BP MACH	GR XP 100	GR XP 150	GR XP 320	GR XP 220
CASTROL	Alpha SP 100	Alpha SP 150	Alpha 320	Alpha SN 8
CHEVRON	non leaded gear compound 100	non leaded gear compound 150	non leaded gear compound 320	
ESSO	Spartan EP 100	Spartan EP 150	Spartan EP 320	Compressor oil LG 150
GULF		EP lubricant 110150	EP lubricant 110 320	
I.P.	Mellana 100	Mellana 150	Mellana 320	Telesis OR 150
MOBIL		Mobilgear 829	Mobilgear 832	Glygoyle 22 Glygoyle 30 SHC 830
SHELL	Omala oil 100	Omala oil 150	Omala oil 320	
TOTAL	Carter EP 100	Carter EP 150	Carter EP 320 N	
XLUEBER	Lamora 100	Lamora 150	Lamora 320	Syntheso D220 EP
ELF	Reductelf SP 100	Reductelf SP 150	Reductelf SP 320	Elf ORTIS 125 MS Elf Synthema P 30

Table II

AGIP	• GR MU EP2
	▲ FIN 360EP/F
ARAL	• ARALUB HLP 2
	▲ ARALUB LFZ 1
BP	• ENERGREASE LS-EP 2
	▲ ENERGOL WRL
CASTROL	• SPHEROL EPL 2
	▲ GRIPPA 33 S
ELF	• EPEXA 2
	▲ CARDREXA DC 1
ESSO	• BEACON EP 2
	▲ SERETT FLUID 4 K
MOBIL	• MOBILUX EP 2
	▲ MOBILTAC 81
SHELL	• CALITHIA EP Fett T 2
	▲ CARDIUM Fluid C
TEXACO	• MULTIFAK EP 2
	▲ CRATER 2 X Fluid

Table III

OLIO IDRAULICO HYDRAULIC OIL	SCELTA DELL'OLIO IDRAULICO IN FUNZIONE DELLA TEMPERATURA AMBIENTE HYDRAULIC OIL SELECTION ACCORDING TO ENVIROMENTAL TEMPERATURE	
	TEMPERATURA TEMPERATURE	-15° C / +30° C
VISCOSITA' ISO VISCOSITY ISO	VG 46 (DIN 51519)	VG 68 (DIN 51519)
AGIP	OSO 46	OSO 68
BP MACH	ENERGOL HLP 46	ENERGOL HLP 68
CHEVRON	RPM EP HYDRAULIC OIL 46	RPM EP HYDRAULIC OIL 68
ESSO	NUTO H 46	NUTO H 68
IP	IP HYDRUS 46	IP HYDRUS 68
MOBIL	MOBIL D.T.E. 25	MOBIL D.T.E. 26
TOTAL	AZOLLA ZS 46	AZOLLA ZS 68

O P E R A T I O N

In order to make your ride function:

- lift the general switch up (ref. 7 pic. 4)
 - lift the switch (ref. 8 pic. 4)
 - lift pump switch (ref. 9 pic. 4)
 - lift bipolar switch (ref. 10 pic. 4)
 - lift bipolar switch (ref. 11 pic. 4)
- of the control board.

Then, to start the ride, push the start button (ref. 12 pic. 5).

To stop the ride, push the stop button (ref. 13 pic. 5).

This ride is provided with timer for automatic stop (ref. 14 pic. 5). You can select the running time from 0 to 6 minutes using the outer ring (ref. 15 pic. 5).

Timer can be excluded by switch selector (ref. 16 pic. 5). This ride is also provided with emergency switch (ref. 17 pic. 5) which, once pressed in case of danger, causes the immediate stop of the ride and of the electric power. To restart the ride, just rotate the emergency switch anti-clockwise.

A sound signal informing about the starting/ending of the run is activated whenever you push the button (ref. 18 pic. 5) to start and stop the run.

To lift up all the cars, push button (ref. 19 pic. 5). To let the vehicles down, push button (ref. 20 pic. 5).

Rotation speed can be adjusted through the regulator (ref. 21 pic. 6) of the electronic box situated on the centre of the ride. For passenger security we suggest you to keep the rotation speed at 4.5 RPM.

For a better use of this ride, we recommend you not to exceed in the use of the aforesaid regulator and to make slow adjustments.

To stop this ride:

- pull down the bipolar switch (ref. 11 pic. 4)
- pull down the bipolar switch (ref. 10 pic. 4)
- pull down switch (ref. 8 pic. 4)
- pull down pump switch (ref. 9 pic. 4)
- pull down general switch (ref. 7 pic. 4)

Close carefully the control board.

W H A T T O D O I F

- 1) THE RIDE DOES NOT REACT TO THE GIVEN ORDERS (START, STOP, ETC.)
Check the fuses situated inside the main control board. (ref. 22 pic. 4).
- 2) VEHICLES DO NOT LIFT UP PROPERLY. ESPECIALLY FOR OVER-WEIGHT.
It is necessary to increase the power of each vehicle adjusting the valves (ref. 23 pic. 7). after having unscrewed the bolt (ref. 24 pic. 7).
- 3) THE UP-DOWN OF VEHICLES IS TOO FAST OR TOO SLOW
It is necessary to adjust the up-down valve (ref. 25 pic. 8) situated on the hydraulic cylinder of every vehicle.
- 4) LIGHTS AND HORN OF A VEHICLE DO NOT WORK.
Check the fuses in the fuses box of the vehicle (ref. 26 pic. 9).
- 5) FLIP-FLOP LIGHTS DO NOT FUNCTION PROPERLY OR DO NOT FUNCTION AT ALL.
Check the fuses of the control board (ref; 27) situated at the centre of the ride. If some light bulb does not work check if it is burnt and, if so, replace it. (pic.10)

NOTE

For a good running of your ride we suggest you not to use the regulation devices described in point 2 and 3 improperly. Anyway, always make slow adjustments followed by working tests until you get a good result.

Should any problems arise and you are not able to solve it using this manual, please contact our Company immediately giving the most possible details.
Our technicians will be at your complete disposal.

S A F E T Y N O T E S

- A) SET UP / DISMANTLING
must be carried out exclusively by skilled personnel.
- B) ELECTRIC SYSTEM
Any connection / disconnection on electric system must be made after the general switch has been disconnected and only by authorized personnel.
- C) MECHANICAL PARTS
All the specifications for the use and maintenance of the ride (listed in this manual) must be strictly observed.
- D) OPERATION
Before starting operation with passengers, it is always advisable to let the ride operate for few minutes empty in order to check the proper function of all parts and to allow the oil to warm up.

This ride has been designed for kids from 4 to 10 years old. This ride is not suggested for handicapped kids.

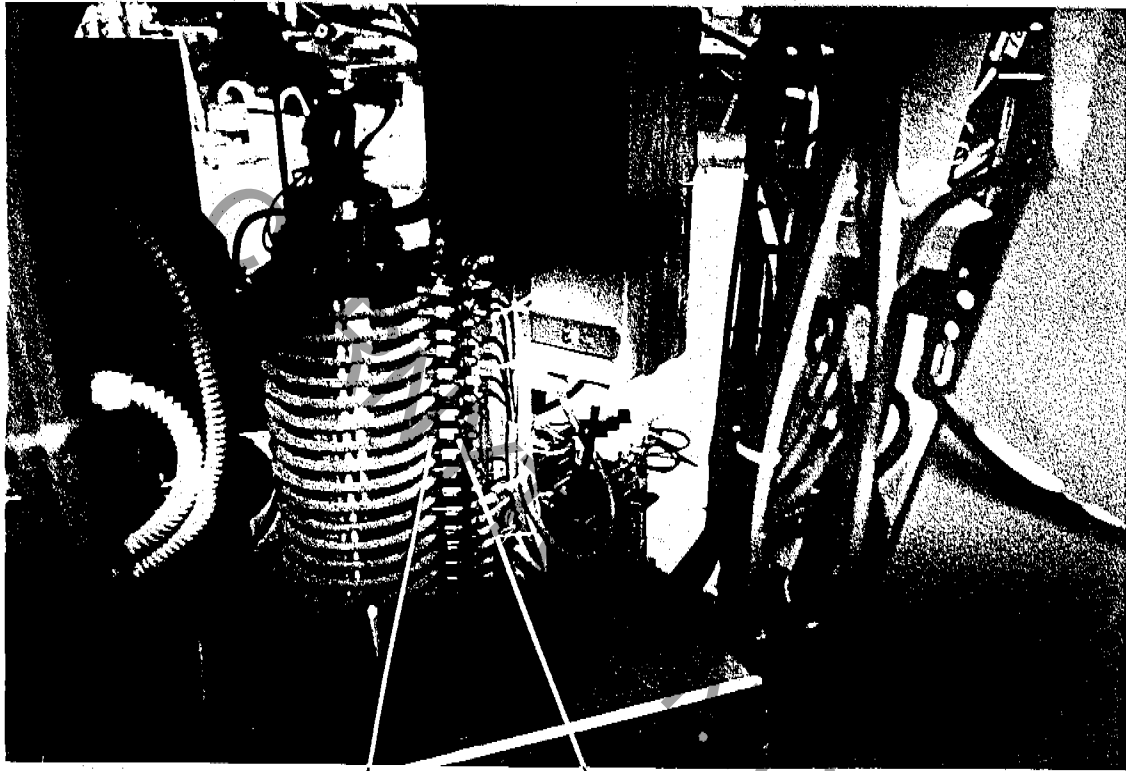
Before starting the ride, be sure that all passengers are securely fasten and that nobody is standing inside the safety fences.

In case of danger immediately push the emergency button.

While operating this ride, you have to conform to all safety regulations in force in the country where this machine will be used.



Fig. 1



2

3

Fig. 2

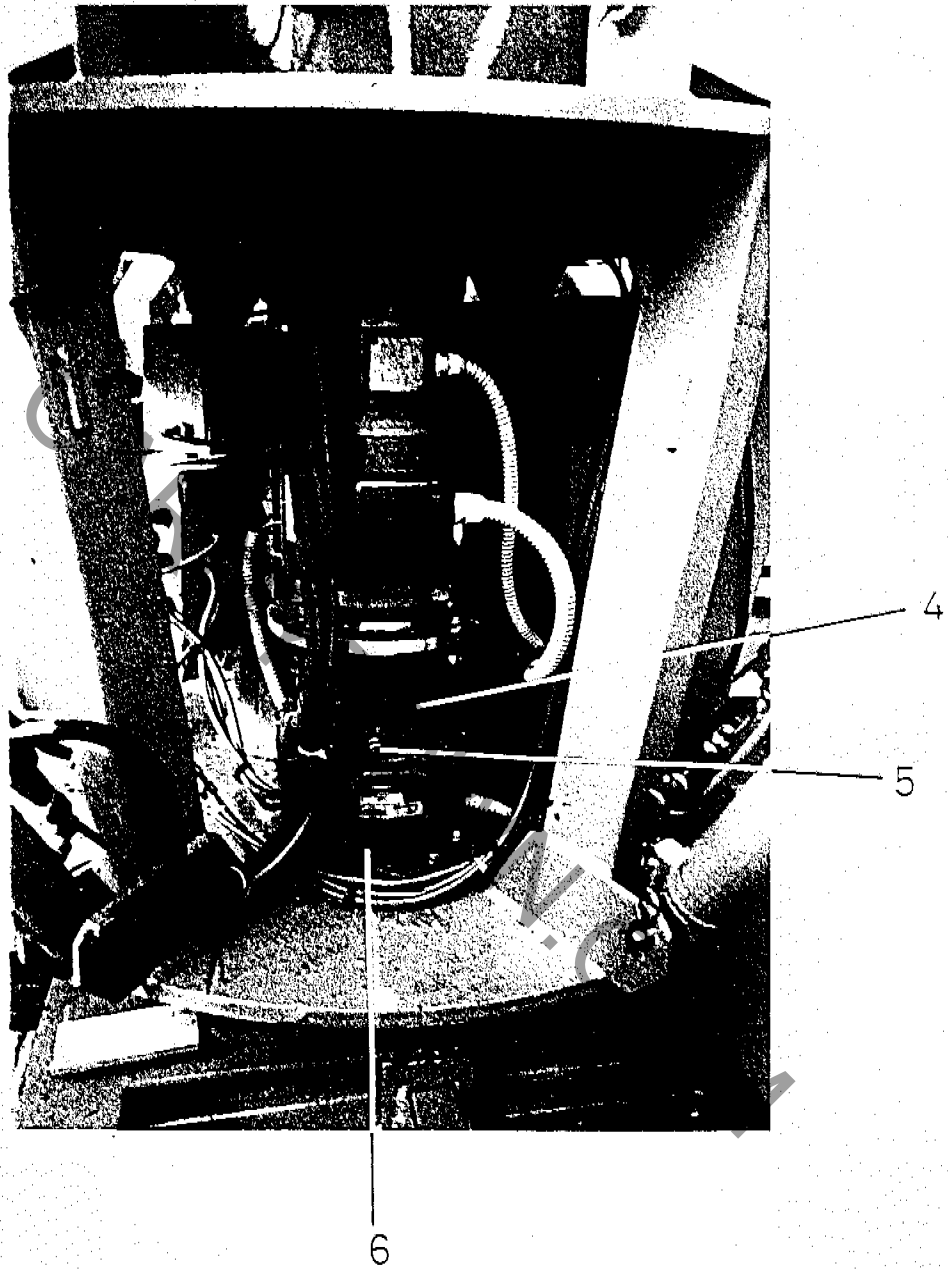


Fig. 3

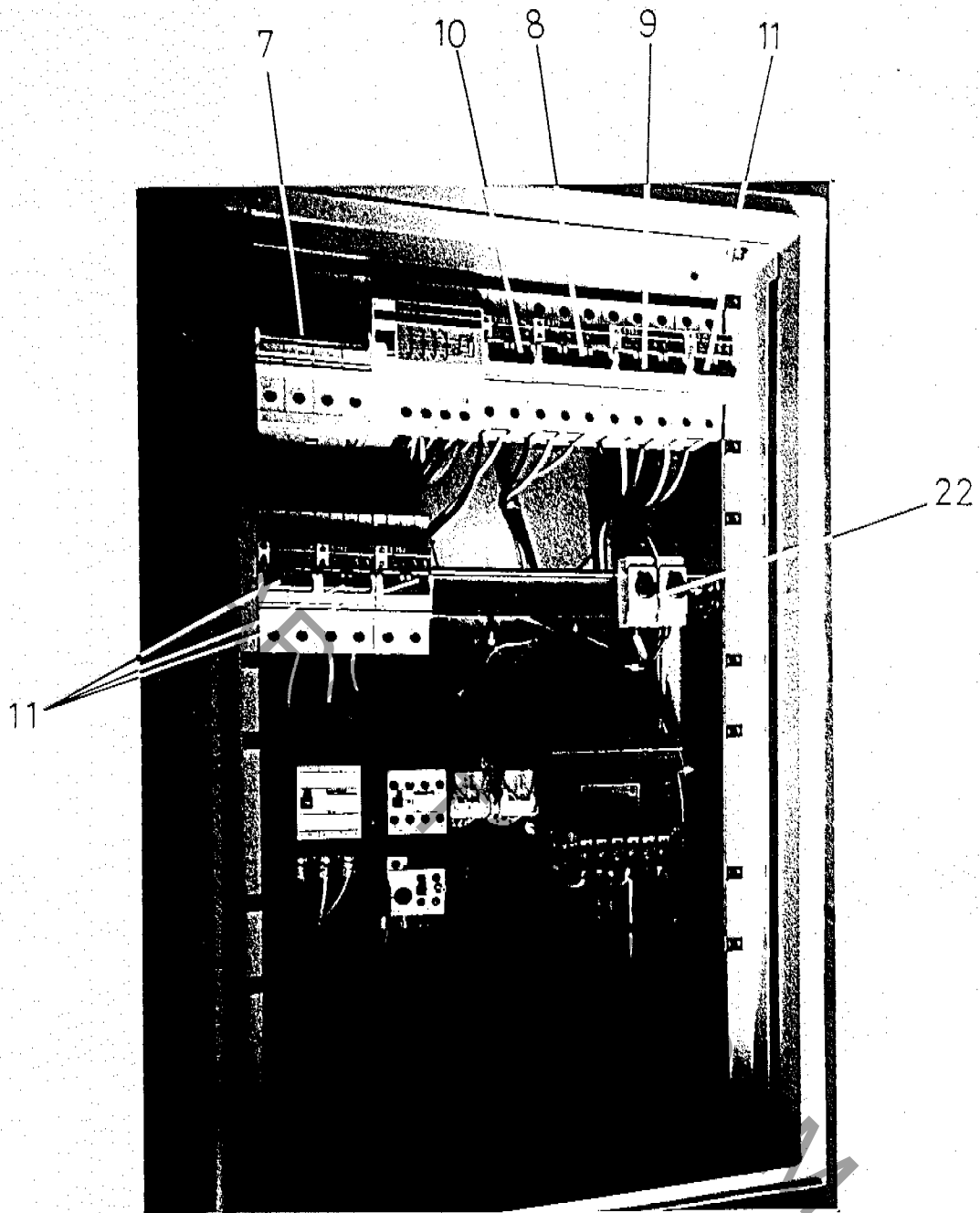


Fig. 4

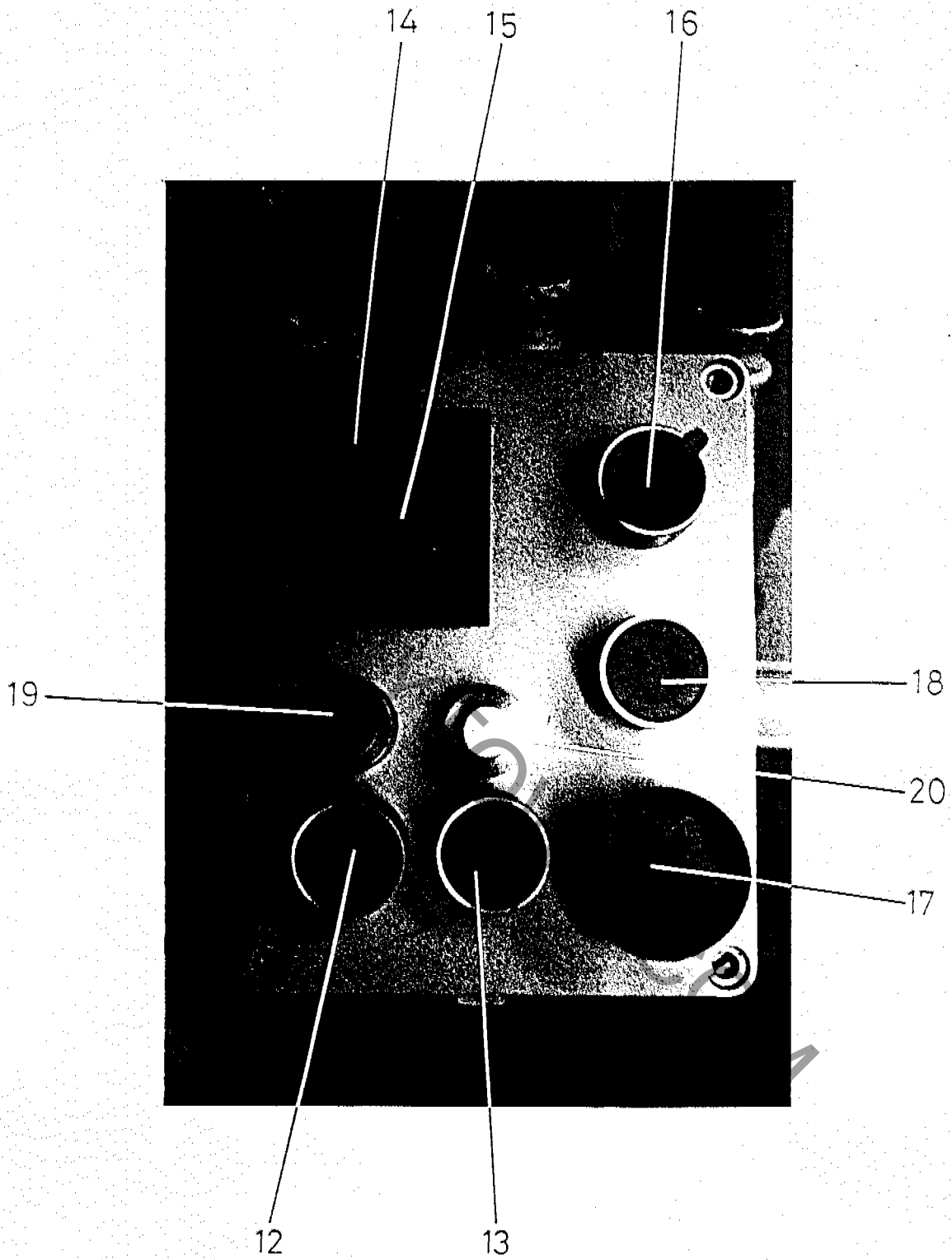
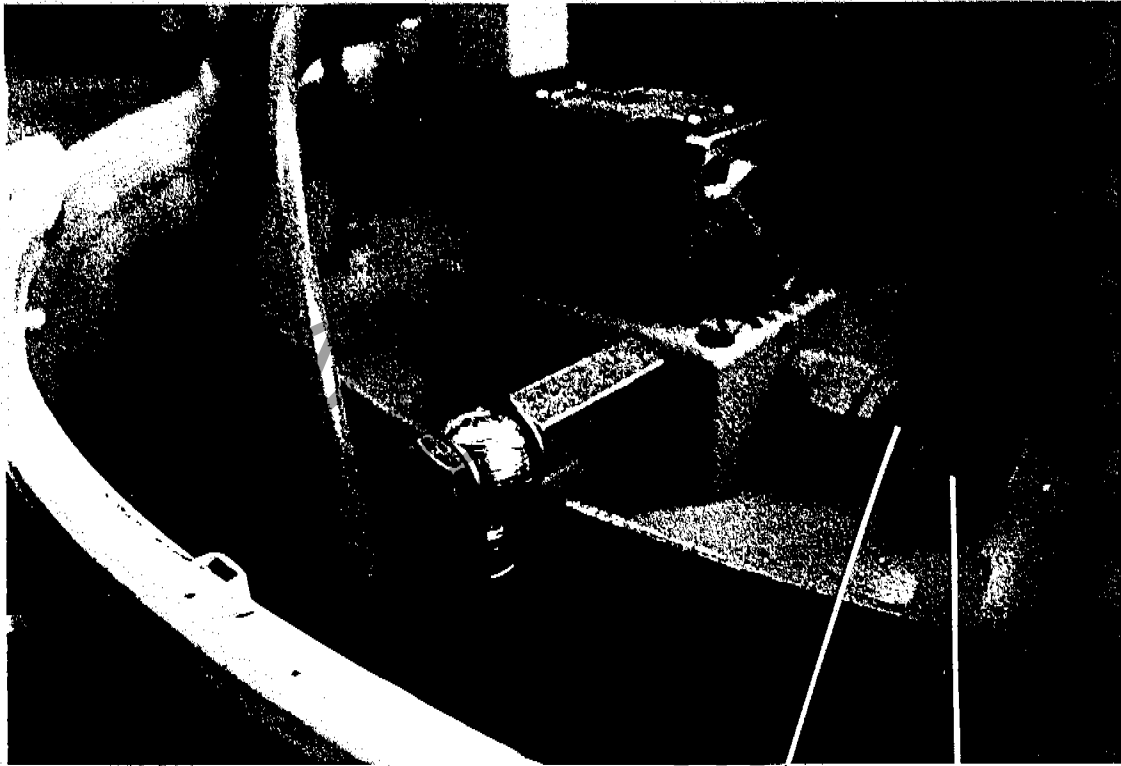


Fig. 5



21

Fig. 6



24

23

Fig. 7



25

Fig. 8

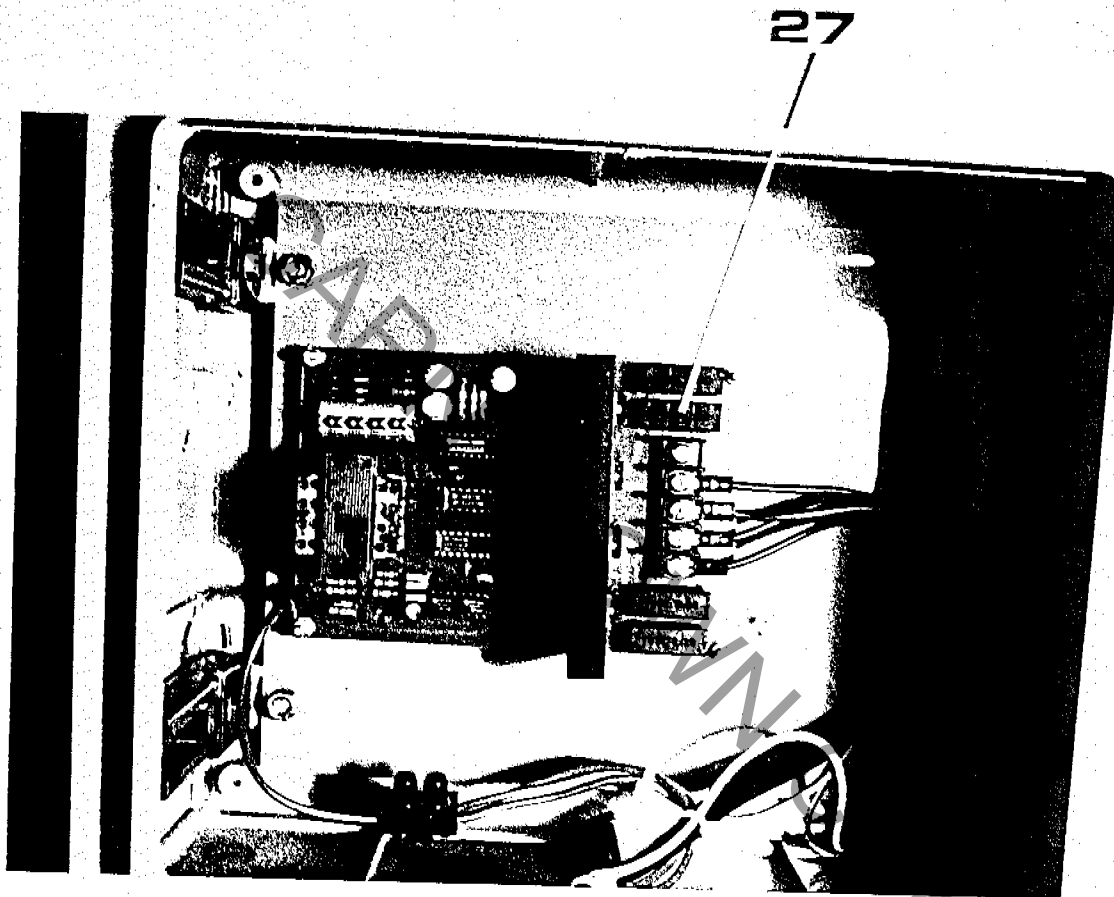
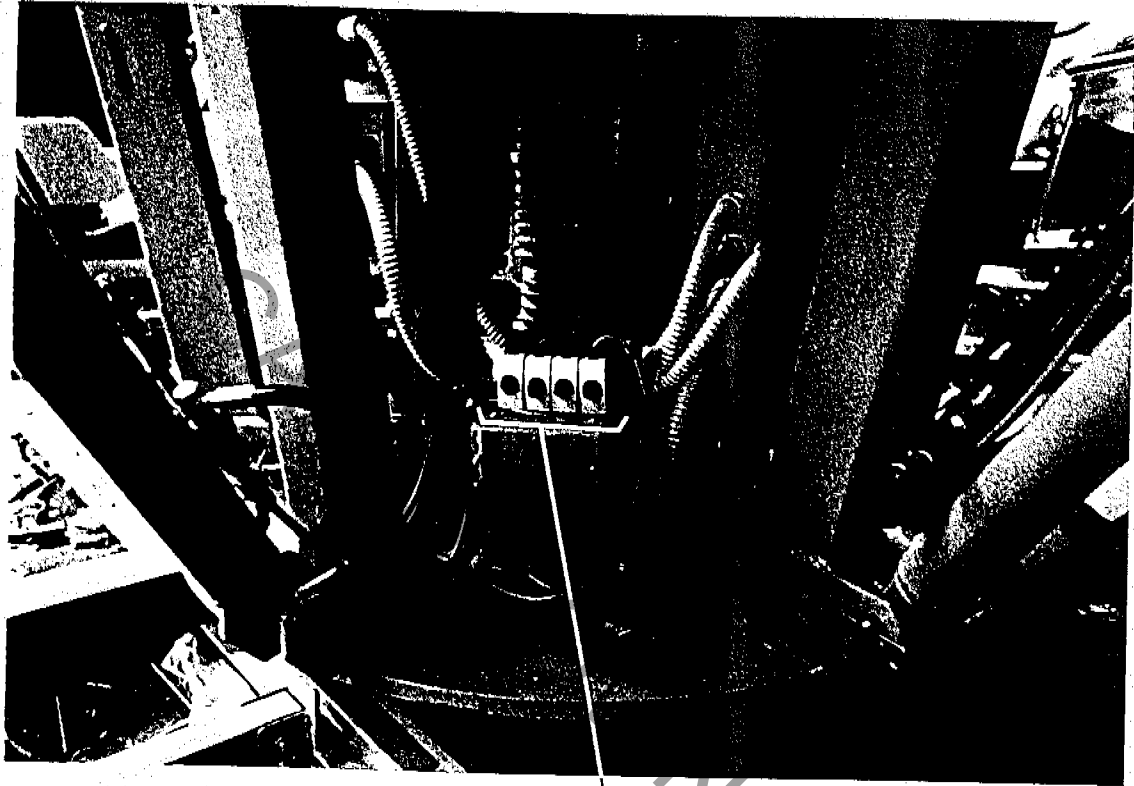


Fig. 10



26

Fig. 9

Mod. 027 "MINI FLIGHT TRAINER"

Diametro base
Base diameter
Diametre base

mt. 7
feet 23

Veicoli
Vehicles

6

Posti
Seating
Places

12

Imbarco
Loading
Chargement

simultaneo
simultaneously
simultane

Capacità oraria
Hourly capacity
Capacite horaire

300 pers.

Comando
Operation
Fonctionnement

Automatico e manuale a velocità regolabile
Automatic and manual with adjustable speed
Automatique et manuel a vitesse variable

Illuminazione
Lighting
Lumiere

Kw 2 - 110/220 Volts - 50/60 Hz

Forza motrice
Motive power
Force motrice

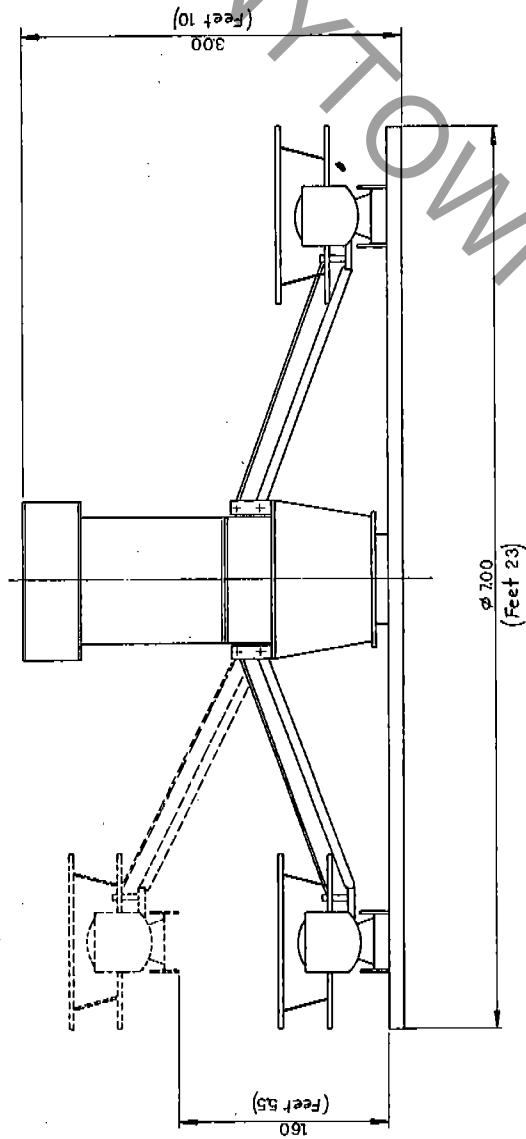
Kw 6 - 220/380/415 Volts - 50/60 Hz

Peso
Weight
Poids

Kg. 2350

Cubaggio
Cubage

1 x 20' container



S.B.F. di FRISON ITALO s.a.s.

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