Desenhos em 31) OT

Livro de instruções

Máq. MF 4

Língua INGLÊS

Obs.

MÁQUINAS PINHEIRO, L.DA

TROFA

PORTUGAL

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Mod. 31 — 500 — 6-78 — Grf.

PREFACE

This manual contains a great number of elements with which we expect to give you a valuable help in the treatment and utilization of the machine acquired. The constant observation of these rules gives it a longer life and a greater output. Please give them your attention and for any problem our technical services are at your entire service.

Much success and increase of production are the best wishes of

MAQUINAS PINHEIRO

TROFA-PORTUGAL

Machine type .....

Series number .....

Manufacturing year ....

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1 - TECHNICAL DATA

Width as thicknesser	mm	500
Width between vertical spindles	mm	440
Minimum width between cutting sides		
with cutters of 130 mm ø	mm	15
with cutters of 180 mm ø	mm	inferior cut
Thicknessing height	mm	180
Standard milling height	mm	120
Milling height on request and by aditional payment	mm	150
Depth of grooving with the thicknessing cutterblock	mm	20
Depth of grooving for vertical spindles of 130 mm ø	mm	25
Diameter of the cutting cutterblocks	mm	125
Speed of the horizontal cutterblocks	rpm	5.300
Number of blades of the horizontal cutterblocks		4
Cutting diameter of the vertical spindles with cutters	mm	180
Diameter of the cutting line of the vertical spindles with the cutterblock	mm	130
Speed of the vertical spindle with cutter-block	rpm	4.800
Speed of the vertical spindles with cutters (on request)	rpm	6.000
Advance speed, continuous variation	m/min.	from 3 to 20
Motor power for the planer cutterblock	H.P.	5.5
Motor power for the thicknessing cutter block	H.P.	7.5
Motor power for the vertical spindles (each one)	H.P.	4 or 5.5
Feeding motor power	H.P.	2
Net weight of machine	Kgs.	
Weight with seaworthy packing	kgs.	
Cubic contents	m3	
Space occupied by machine	mm	

2 - STANDARD AND EXTRA ACCESSORIES

2.1 - STANDARD ACCESSORIES

1- Set of blades by cutterblock, already mounted
2- Cutterheads in the respective spindles
1- Blades gauge of 400 mm
Spanner-wrench 14/15; 17/19; 20/22; 27/32
Hexagonal spanners M3, M4, M5, M6, M8, M10, M12
1- Pipe wrench for the vertical movement of the vertical spindles
1- Spanner for the transversal movement of the spindles
1- Small oil can
1- Lubricating pump
1- Operating instructions book

2.2- EXTRA ACCESSORIES

On request when ordering, the machine can be fitted with the following extra accessories:

2.2.1 -Mechanical raising of table - obtained by independent electric motor and coupled reduction-gear.

2.2.2 -Presser and feeding rollers, fractionated, allow the simultaneous feeding of woods with different thicknesses (maximum difference 3 mm); it avoids oblique feedings.

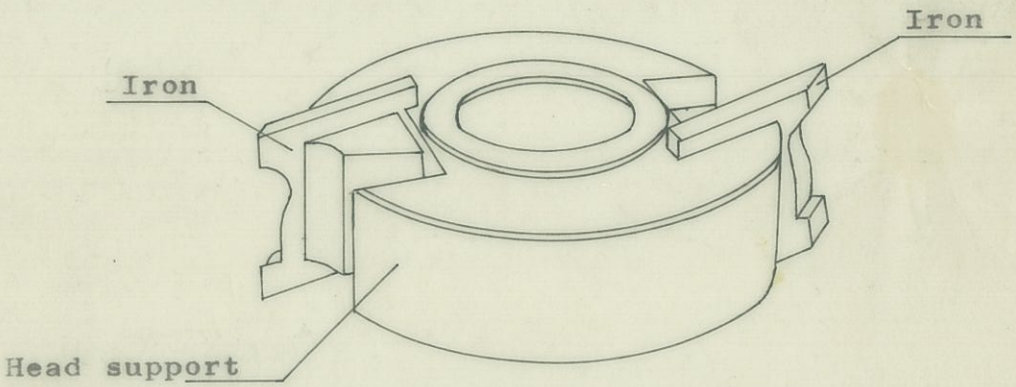
2.2.3 -Machine prepared for coupling to an individual or collective system of shreds or dust suction - great advantage for a better working.

2.2.4 -Milling vertical spindles allowing a maximum cutting height of 150 mm.

2.2.5 -Milling vertical spindles with greater number of per minute rotations (6.000) in order to allow better works with cutters.

2.2.6 -Sets of universal cutterheads for moulding knives of 120x40, two adjusting knives of which are adjustable by millimetric screws (Pict.1).

IRONS CUTTERBLOCK



Pict. 1

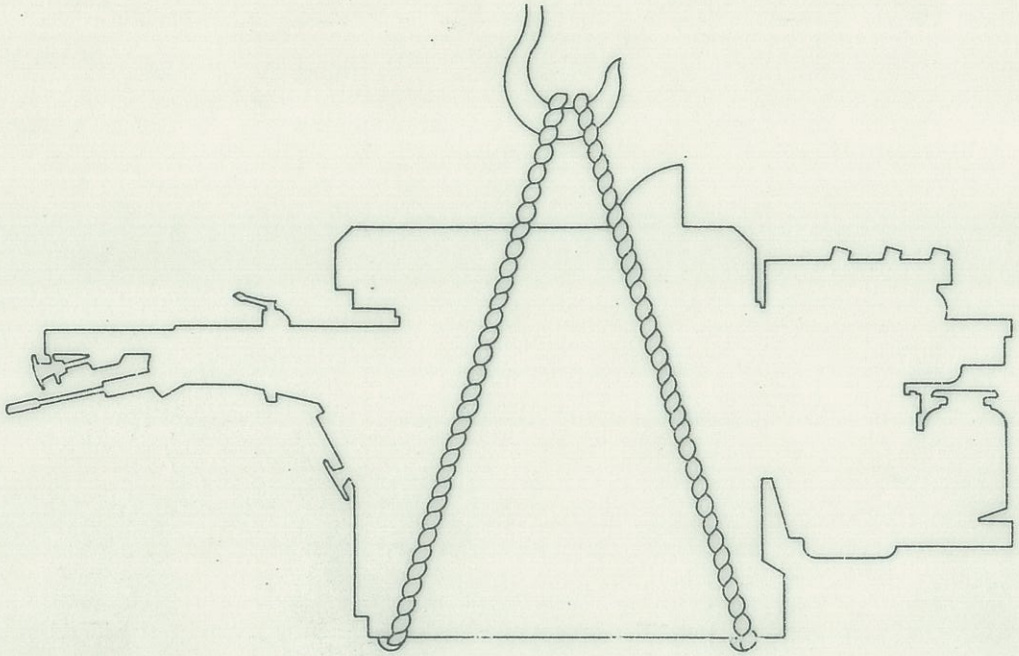
3 - MACHINE INSTALLATION

3.1 - Transport (Pict.2)

The placement of the machine in the desired place is made with an adequate crane. For the suspension follow the plane of the picture 2 .

It must be only used ropes (never chains) which must be fixed to the most steady parts of the machine.

METHOD OF LIFTING



PICT. 2

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So that the paint is not damaged, if possible, old clothes sack-clothes or bits of felt must be placed on the places where the ropes may be in contact with the paint.

If there is not a crane at our disposal, the machine can be transported over rollers.

3.2 - SETTING (Pict.3)

It is advised setting on an apropriate cavity as per indications by drawing 3-200.068 in order to allow a better access to the interior of the machine for cleaning, lubricating and making little adjustments when necessary.

3.3 - CLEANING

The worked surfaces of the machine are protected with lubricating grease to prevent oxidations. If it is verified that during the transport there was an accumulation of dust, those surfaces must be cleaned and when necessary, the lubricating grease replaced.

The machines with seaworthy packings are protected with anticorrosive varnish. That varnish must be cleaned with petroleum or any other diluent. When cleaning do in such a way that the diluent does not reach the paint as it can be danified.

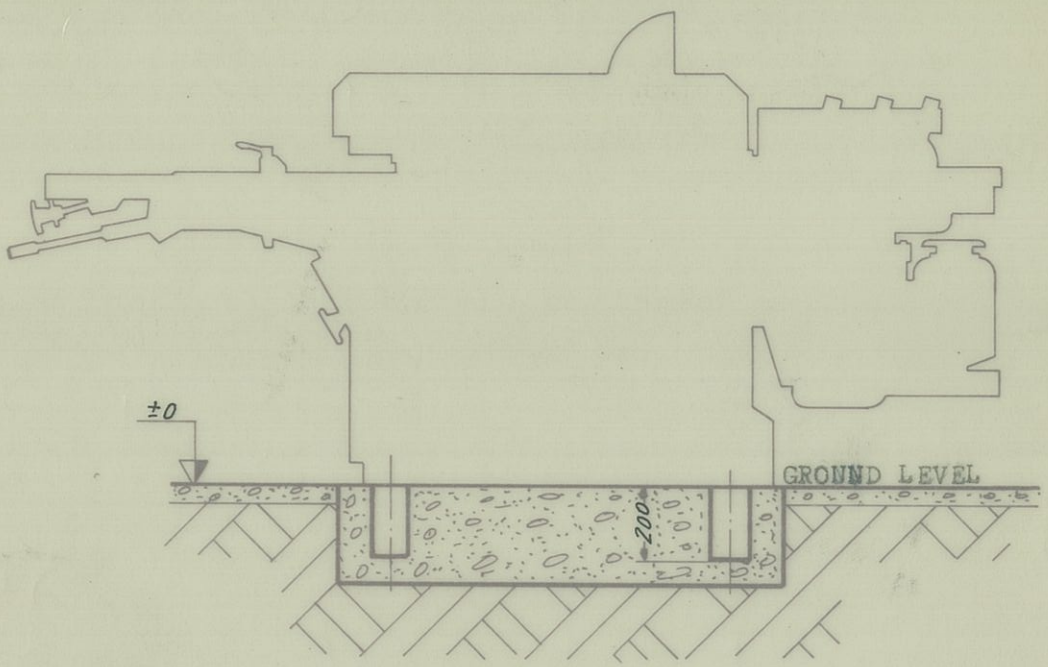
3.4 - ELECTRIC CONNECTION Pict.4

The machine has two types of electric connections, the client having the possibility of choosing any of them.

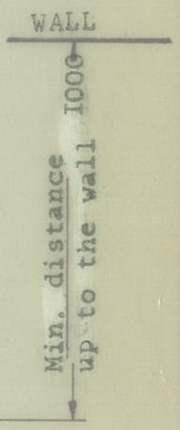
3.4.1- WITH THE DEVICES OF ELECTRIC CONTROL PLACED IN THE VERY BODY OF THE MACHINE

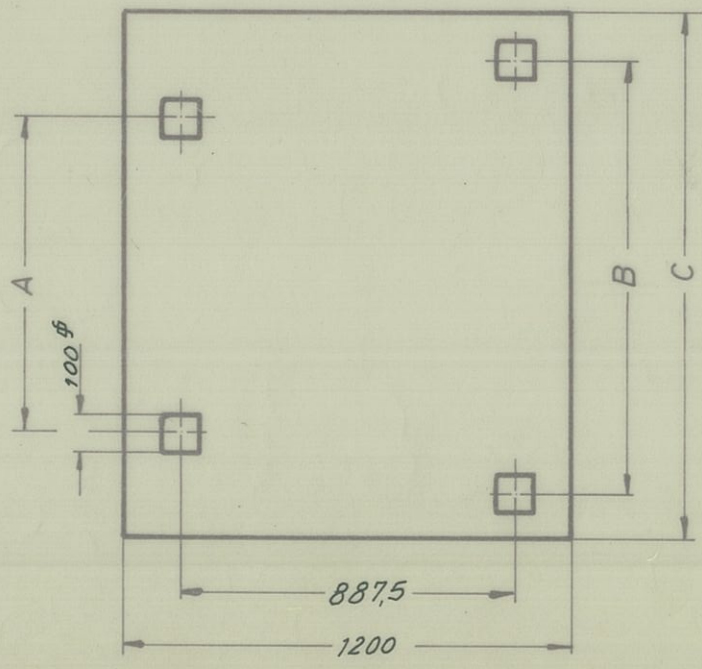
In this case it is only necessary to effecte the connection of the terminal box to the power supply system according the scheme of pict.4 included in this instructions book. We advise this connection to be made by a competent electrician and that fuses are mounted in the wiring for protection of the installation and of the motors against short-circuits as well as the connection of the machine to the earth for protection of the workers.

FOUNDATION PLAN (MACHINE WITHOUT OUTFEED DEVICE)



	Foundation	concrete + iron
	Ballaste and wall	concrete
	Ground	





	MF4 510	MF4 630
A	720	840
B	1020	1140
C	1300	1400

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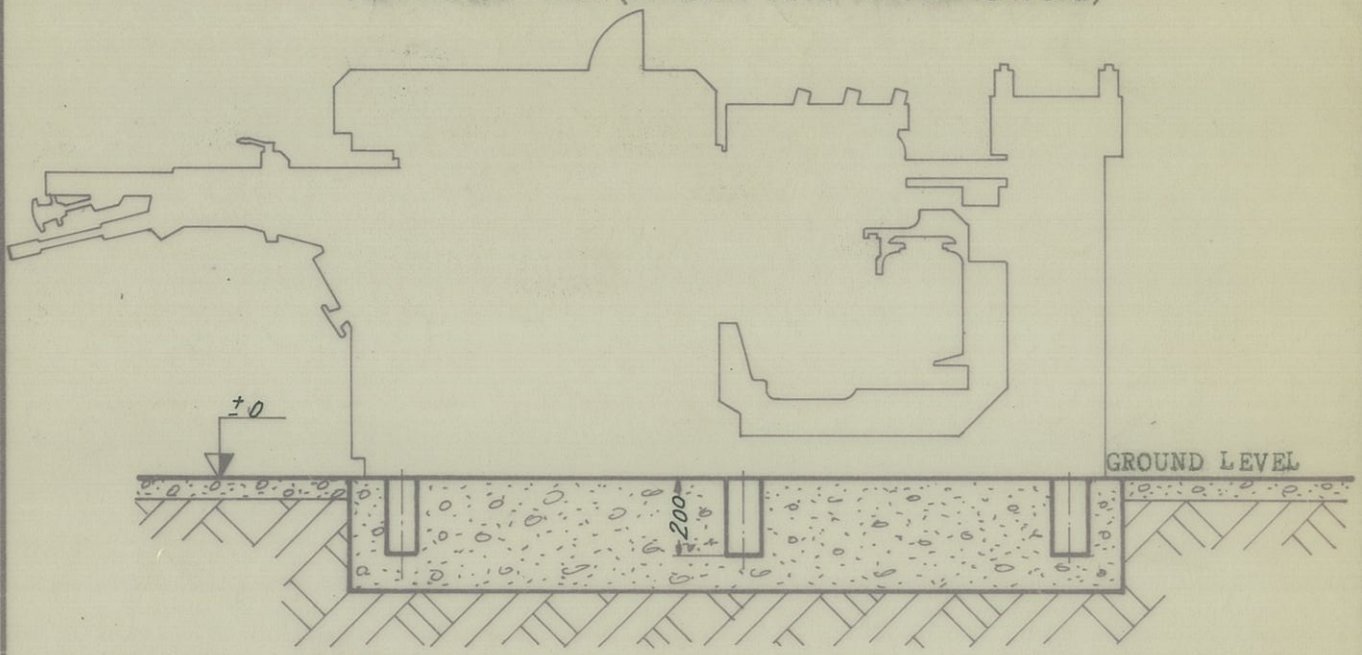
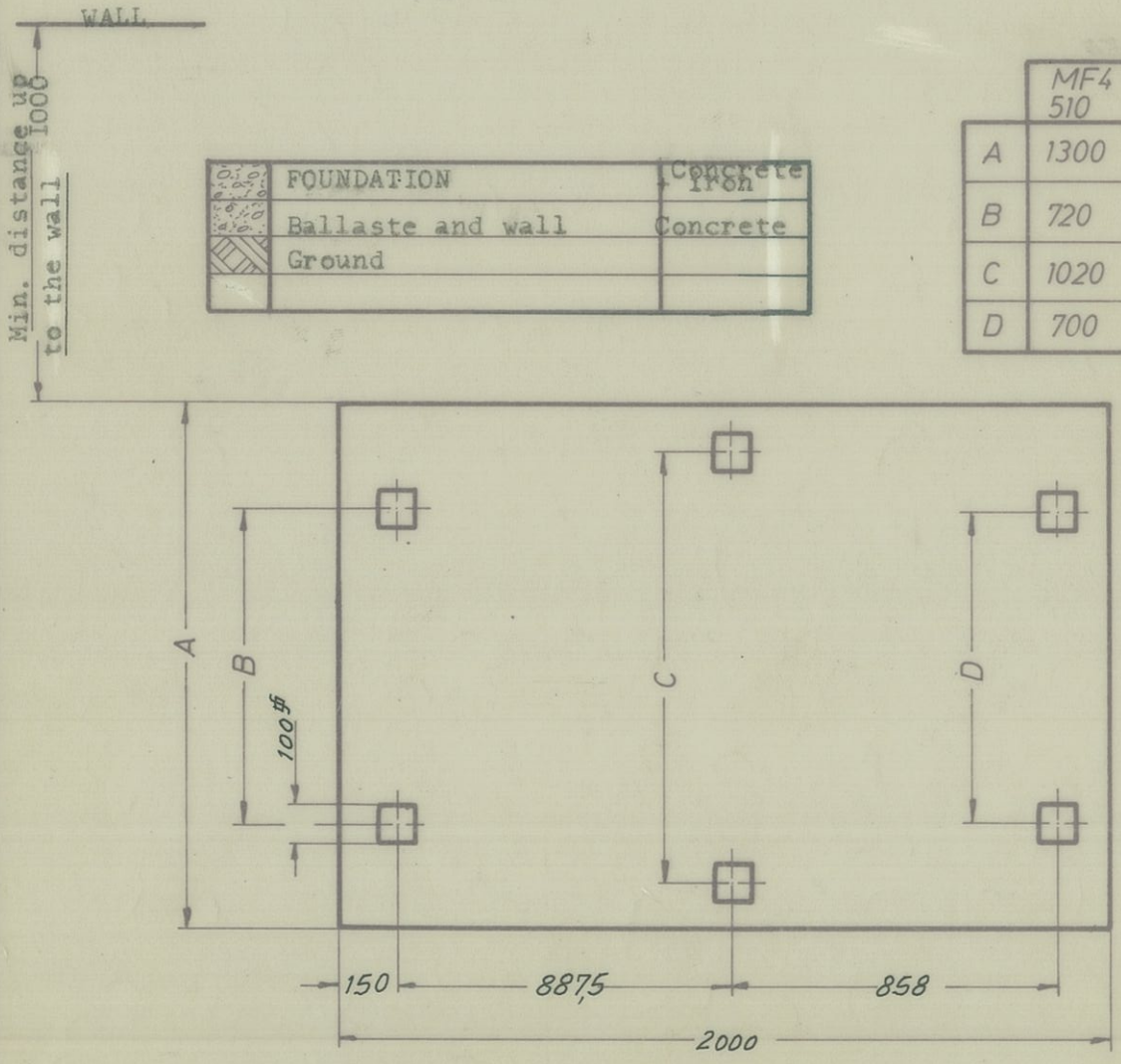
FOUNDATION PLAN (MACHINE WITH OUTFEED DEVICE)





	FOUNDATION	Concrete Iron
	Ballaste and wall	Concrete
	Ground	

	MF4 510	MF4 630
A	1300	1400
B	720	840
C	1020	1140
D	700	820

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3.4.2 - WITH THE DEVICES OF ELECTRIC CONTROL INSTALLED IN A SPECIAL CABINET, INDEPENDENT OF THE MACHINE

In this case it is necessary to make first the connections of the terminal box of the machine to the cabinet and then are made the connections of this to the power supply system as per scheme of Pict.4 and following the same indications of the last paragraph.

The regulation of the protection relays of the motors against overcharges is made at our factories for the nominal intensity of the motors and must not be modified under any pretext.

As information, we present afterwards, a map with the wiring to be used, according the motor power and voltage of utilization.

Wiring [mm2 of copper]

Power [KW / HP]	Tension [V] 220	380	500
1.5 / 2	2.5	2.5	2.5
3 / 4	2.5	2.5	2.5
5.5 / 7.5	6	2.5	2.5
7.5 / 10	10	4	2.5
11 / 15	16	6	4
15 /20	16	10	6

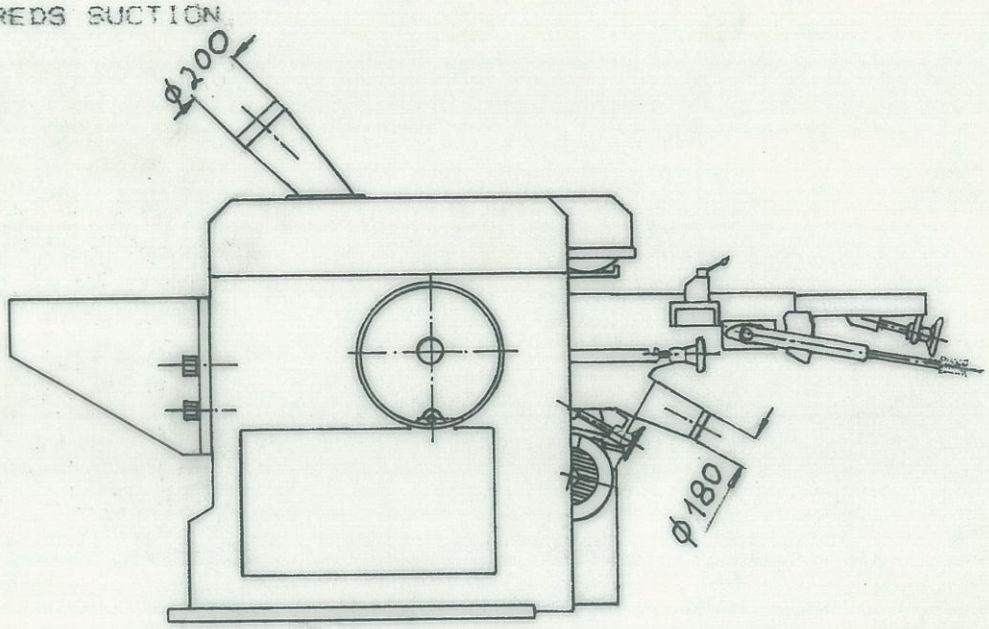
3.5 - CHIP EXHAUST (only on request) Pict.5

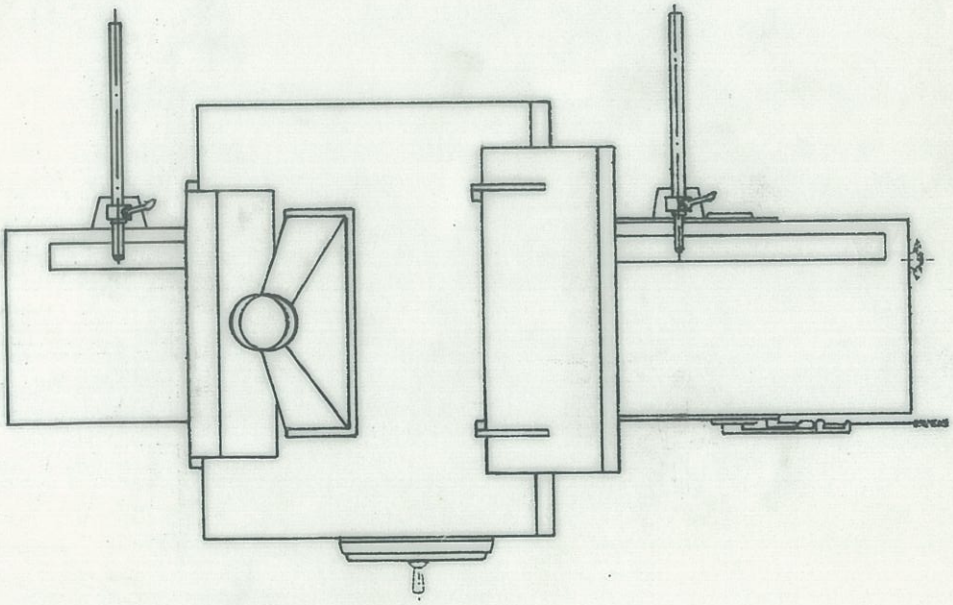
A good and quick exhaust of the shreds makes easier the work and the cleaning of the machine and of the workshop. For connection to a system of chips exhaust eventually existing, the machine can be fitted on request with a funnel for shreds suction.

Between this funnel and the suction piping existing, must be placed a flexible pipe of such a length that it does not interfere with the opening of the covers or the driving of the machine.

6

PUTTING INTO POSITION AND DIMENSIONS OF THE OUTLET FOR THE SYSTEM OF SHREDS SUCTION





EXHAUST REQUIREMENTE

6000 M^3/H

30 M/S

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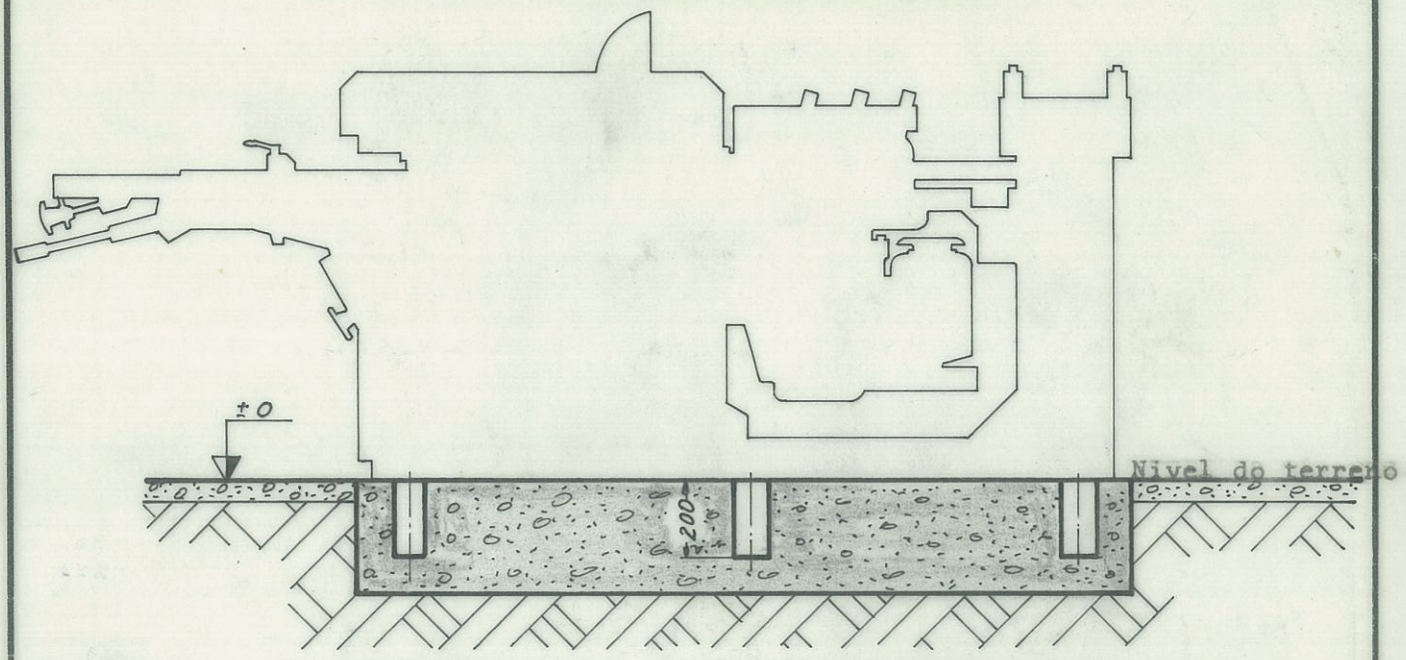
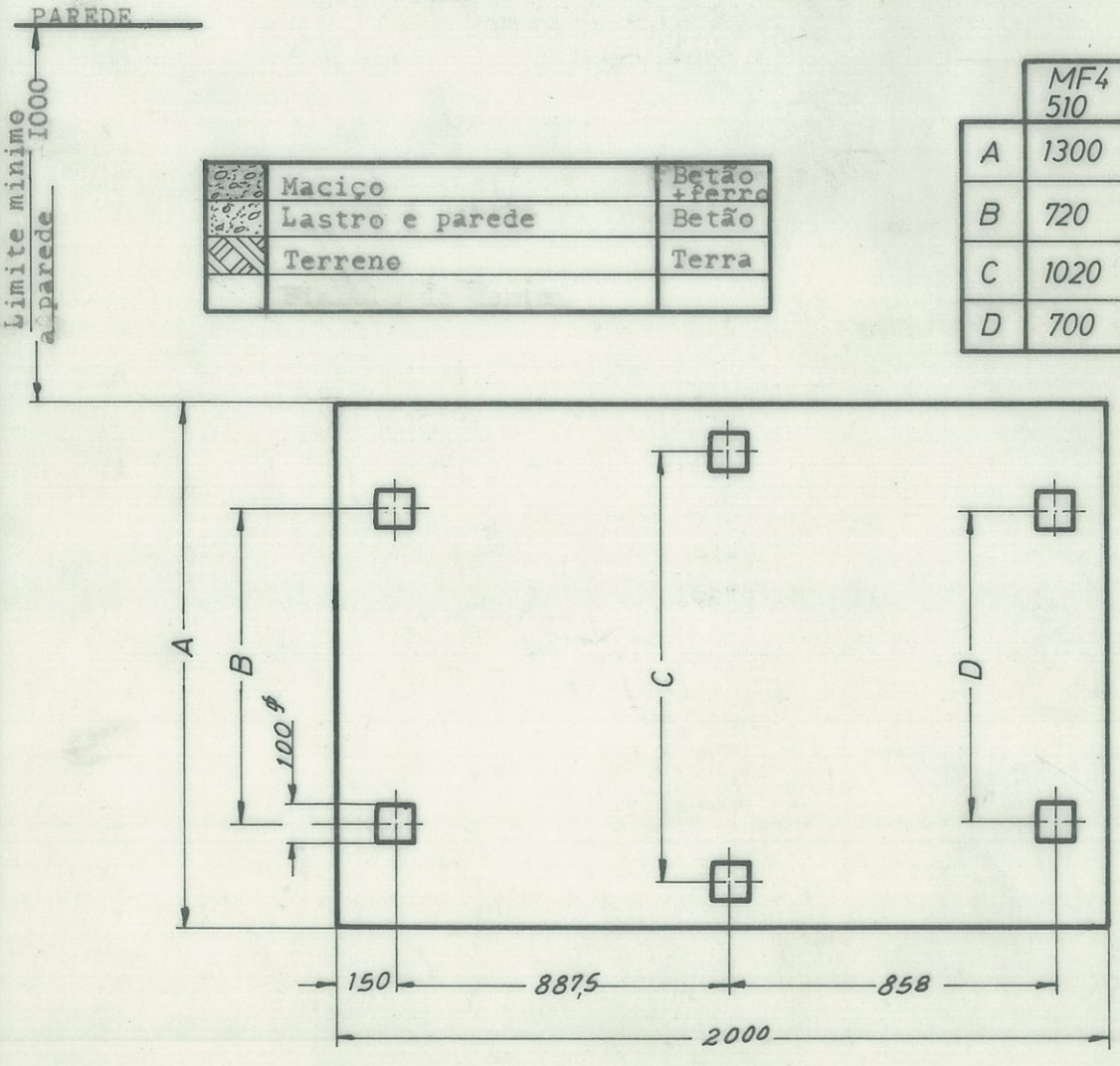
PLANO DE FUNDAÇÕES (máquina c/ extração)





Maciço	Betão + ferro
Lastro e parede	Betão
Terreno	Terra

	MF4 510	MF4 630
A	1300	1400
B	720	840
C	1020	1140
D	700	820

Fig 4

This intercalar must be made of a soft material to prevent transmission of noises.

4 - DRIVING (Pict.6)

4.1 - Starting and operation

Since the electric connection is carried out, the machine is ready to start working. For this it is enough to switch on the general switch and afterwards take the starters to the first position (Y), await 8 to 10 seconds and afterwards take them to the working position ( ).

In machines with authomatic installation it is enough to press the starter push button. Neverthless never put wood on, without the cutterblock has attained the maximum of rotation.

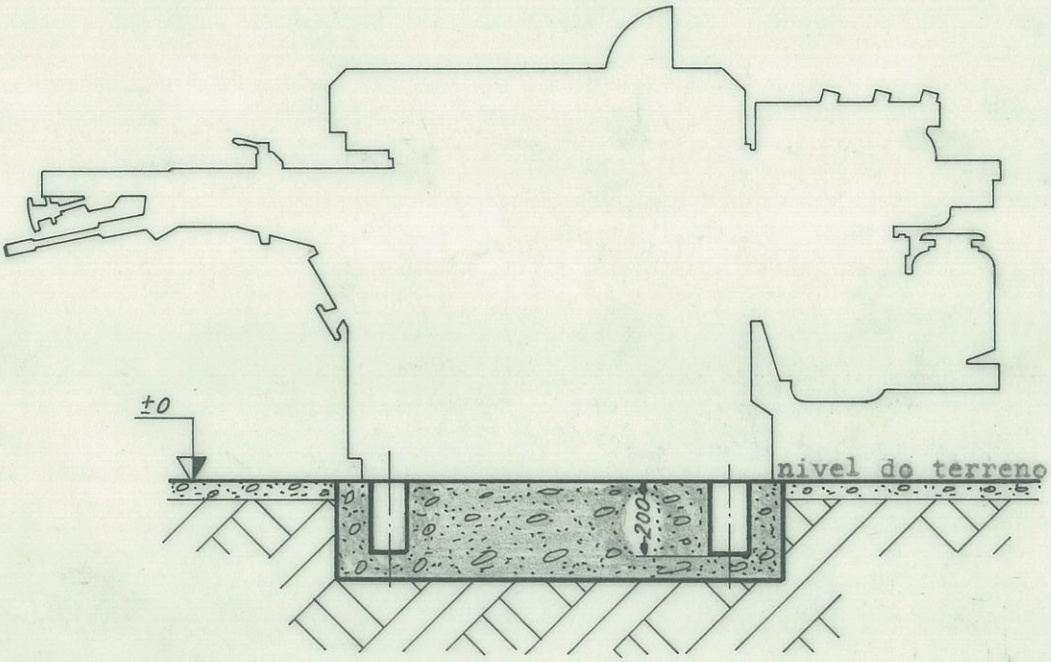
Before beginning the first work it is convenient to make the machine work without charge during a few minutes and lubricate all the points of manual lubrication with oil. All the bearings have been lubricated at our factories on account of which they have lubricator for the period indicated in the lubricating map.

The machine leaves our factory ready to enter in operation. The position of the pressing bars and of the superior feeding rollers is such that it is necessary a new adjustment. The smooth rollers of the table are $\pm$ 0.3 mm above it. This position is ensured by means of pressing screws and lock nuts. If it is necessary to place the rollers a little above (green and twisted woods) it is enough to turn on the manual flywheel 1 in the case of the rollers of the planer and in the manual flywheel (39) in the case of the thicknesser.

4.2 - WOOD FEEDING

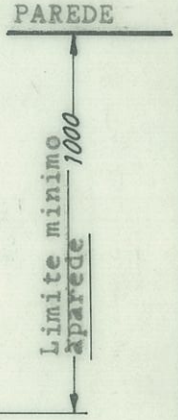
The authomatic feed of the wood is driven by the levers (36) and (37). The first is used to switch on or off the feed as well as to place each one of the 2 speeds. The second is used to choose the different advances of the wood within each speed.

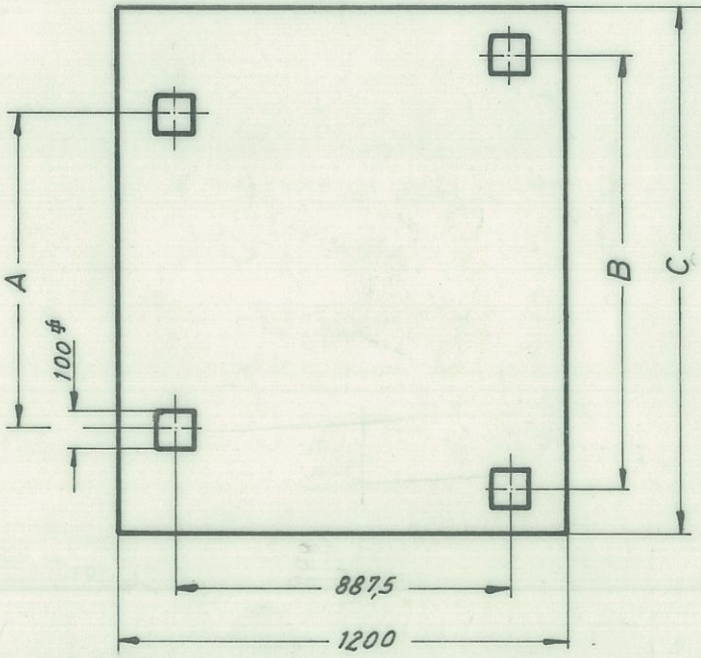
PLANO DE FUNDAÇÕES (Máquina s/ extração)



	MACIÇO	Betao +ferro
	LASTRO E PAREDE	Betao
	TERRENO	TERRA

Fig 3





	MF4 510	MF4 630
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B	1020	1140
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