C.M.L. S.R.L.

Model J 350 R

Multi blade wood cutting machine

INSTRUCTION MANUAL

List of contents:

MACHINE IDENTIFICATION

MANUFACTURER: CML Srl COSTRUZIONI MACCHINE LEGNO
Via Monza, 146
20046 GESSATE MI ITALIA
Tel. 02 95384207
Fax. 02 95384223

CE (standard marking)

DENOMINATION: J350 R

SERIAL NUMBER: 7906

HOMOLOGATION NUMBER: N° 0476 13 155020o

HOMOLOGATING BODY: CERMET
Via Aldo Moro 22
40068 S. Lazzaro di Savena (BO) Italy

CONSTRUCTION YEAR: 2006

TOTAL INSTALLED KW: 40 Kw

OPERATING RATED VOLTAGE: 400 V 50 Hz

MAIN MOTOR POWER: KW 37 TYPE EUROM

FEEDING CARPET MOTOR POWER: KW 1,5 TYPE EUROM

PRESSING GROUP MOTOR POWER: KW 0,75 TYPE EUROM

CARPET SPEED REDUCER: HYDROMEC

PRESSING GROUP REDICER TYPE: SSM

- technical and/or dimensional modifications without notice -

WARRANTY

The machine is covered by a six-month warranty, starting from the date of delivery. All parts that show defects in materials or in workmanship during this period will be repaired or replaced free of charge.
This warranty does not cover breakdowns due to transportation, or caused by electrical miswiring, breakage of blades, breakdowns due to operator's misusage or resulting from repairs performed by unauthorized personnel.
Forwarding charges of parts replaced during the warranty period are to be charged to the client.

TECHNICAL SPECIFICATIONS J350

Max cutting thickness	130mm
Distance between external blades	320mm
Blades max diameter	370mm
Blades min diameter	250mm
Blades bore hole size	60mm
Blade shaft R.P.M.	3500rpm
Feeding carpet width	350mm
Working pieces min. length	600mm
Feeding carpet speed	0÷40m/min
Maximumpassage board width	650mm
Work surface height from ground	780mm
Blades motor power	22,30,37,44 kW
Feeding track motor power	1.5 kW
Lifting pressing group reducer power	0,75kW
Suction bore size mouth	250mm
Dimensions	191x146x155
Net weight	1800 kg

Available on request:
- blade position laser indicator
- quill for saw blades (max cutting thichness 115 mm)

Please contact our offices for availability, delivery terms, etc.

Phonometric survey

The phonometric survey was performed on a machine equipped with sound-proofing materials in respect ISO 7960.
For survey data, see attached.

- Acoustic equivalent pondered pressure PA 95 db (A)
- Instant sound power 100 db (A)
- Instant sound pressure >130 db
- Ambient correction factor K 1,9 db

NOTE: the noise values shown must be regarded as edmission levels; therefore, they do not necessariy represent safe operating levels.

Individual safety measures

Safety measures needed during the installation, the use and/or maintenance of the machine:

- gloves for handling pieces and during the substitution of sawblades
- anticrush shoe
- safety leather vest
- sound earproofing

Correct use of the machine and unrecommended operations

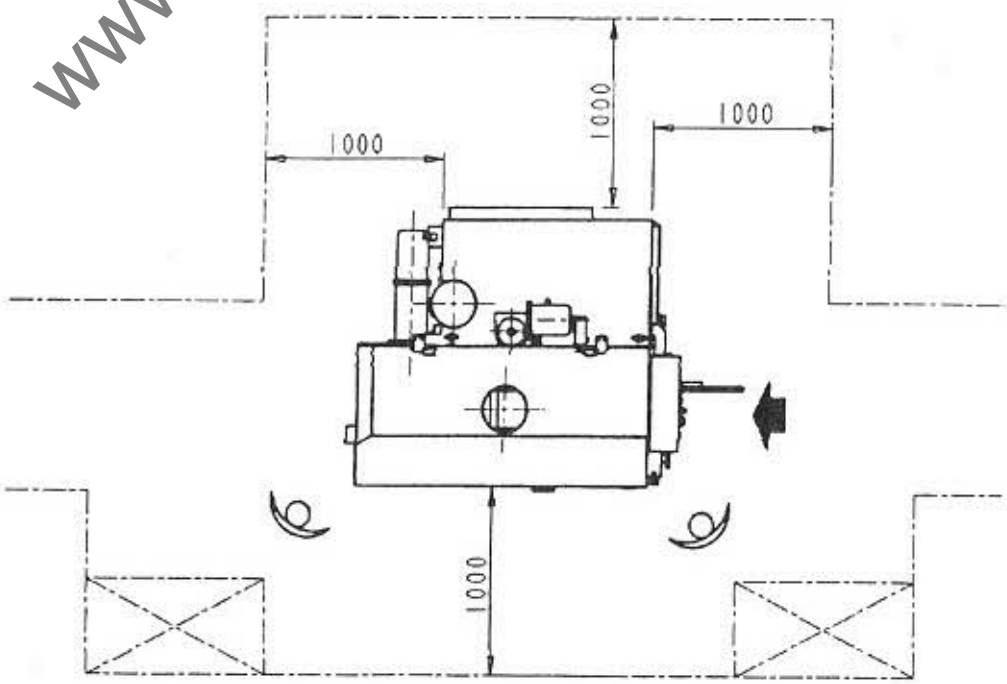
The machine is been planned for longitudinal massive wood cutting having two sides parallel with 1 or more sawblades (in the technical specifications you will see maximum and minimum width).

It's forbidden using the machine for working different and/or cutting material which aren't conformed of what specified, because the security measures have been taken in function of the proper use, so it's not allowed to make modifications with-out the manufacturer's agreement. The user should make a specific training to use the machine.

Residual risks

Kind of:

- electrical: main switch should always be in condition "0" (anyway it's only allowed to authorised persons into the electrical box)
- machine's entrance and exit
- sawblades handling: must be done always wearing gloves
- blades assembly mistake: having assembled the blades check that the configuration corrisponds to the label near them
- the laser beam device (optional)
- the positioning of laser done by the manufacturer shouldn't be changed or in any case must not cause sread radiation or reflection damages.

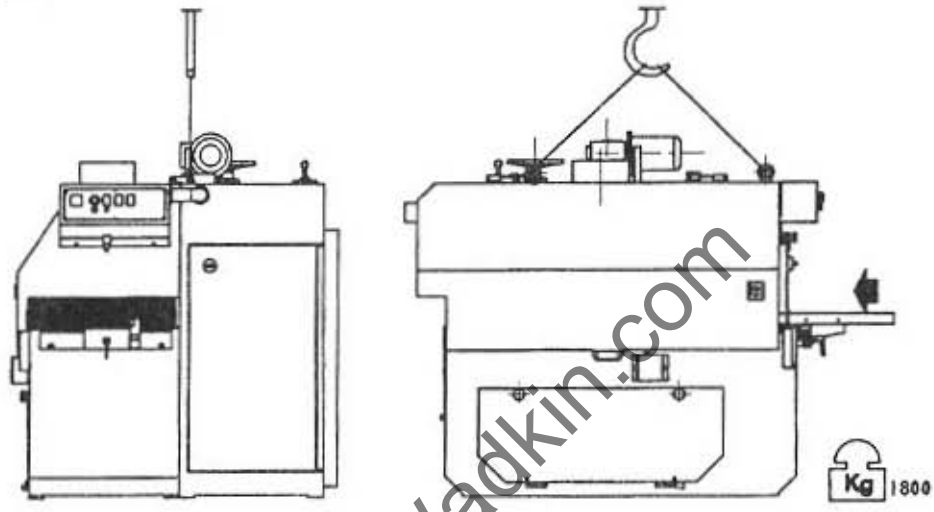


INSTALLATION

Lifting

The machine body is provided with hooks that must be used for hoisting. Care must be taken to avoid bumps to the machine during this operation.

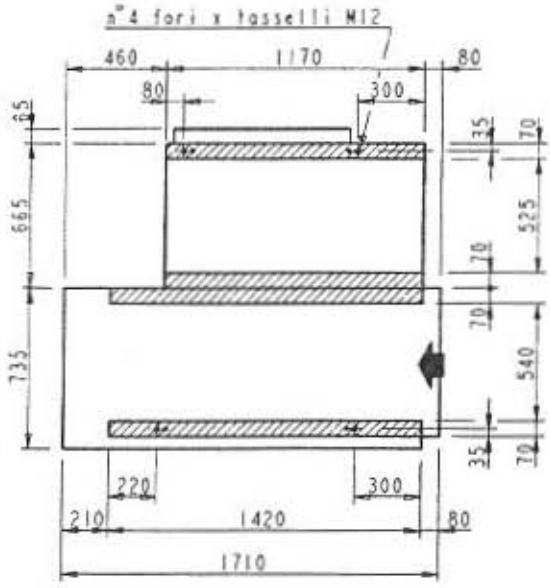
Fig. 1



Positioning

The machine must be positioned on a solid cement base, adequatelly levelled and capable of handling the weight.
Thus, proceed with the levelling of the machine by means of a precision level tool, layed on the working surface.
Clamping the machine is not necessary, as the weight of the machine itself is enough to hold the machine perfectly steady without clamping.
For a better working condition the machine needs antivibrating supports placed between the floor surface and machine's basement.

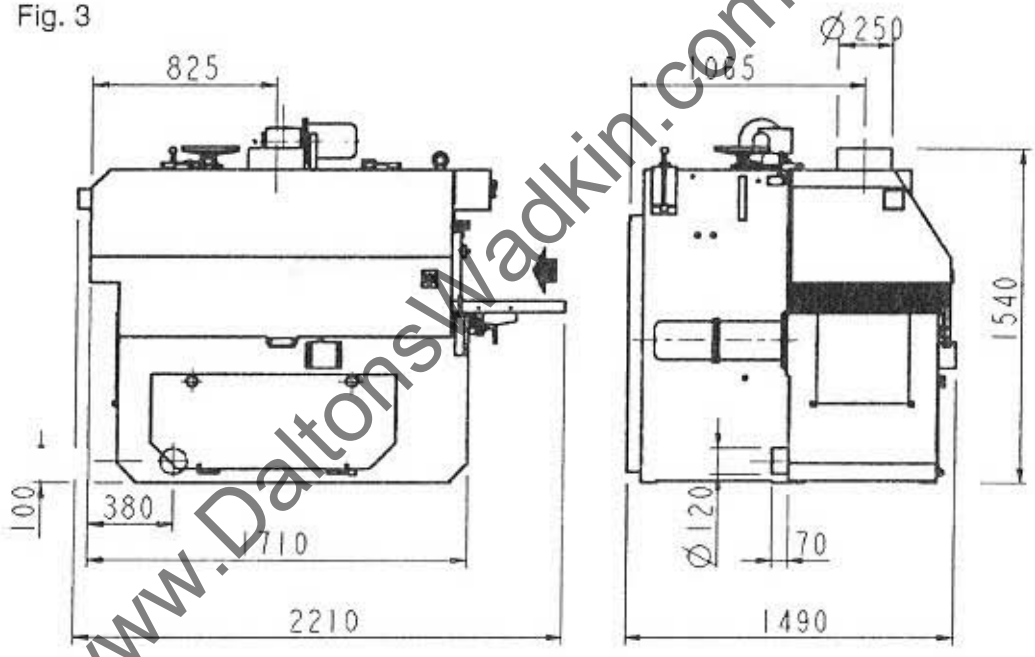
Fig. 2



Vacuum system

The machine must be connected to an efficient suction system by means of the proper suction mouth (Ø250 and 120mm), respectively located on the front part of the machine and in the lower part of the pedestal.
The 250mm suction mouth must always be used during the normal operation of the machine, while the 120mm mouth must be closed.
The 120mm suction mouth must only be used during the cleaning operation.
The required suction flow is of about 5,300m³/hour, at a flow speed of 30m/s.
The end of the tube which connects the suction aspirating mouth must be flexible about 1,5 Mt. to allow to open properly the blades head cover.

Fig. 3



Electrical wiring

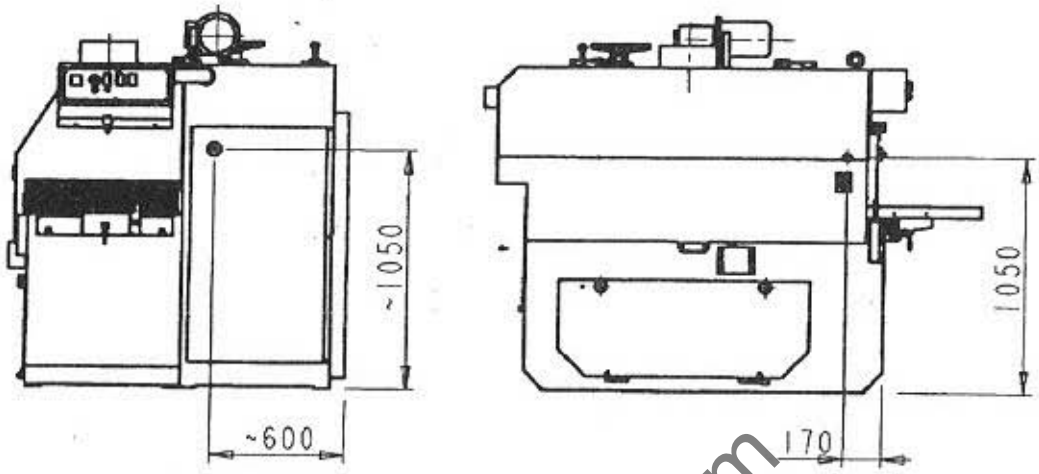
The electrical wiring should be done by professionals:
all the needed plans for electrical wiring are attached to the present manual.
Before connection to a power line make sure that the line voltage is the same for the motors equipped on the machine (see plate attached to the machine body).
R-S-T connecting terminals and the GND connecting terminal are located in the panel N. 17010 (see page 14).
The power supply wire must be properly fixed by hold fast for hooking the electrical sets, and protected by means of a strong wiring cable.
The electrical connection can be made by means of aerial or underground wires: in both cases make sure that the wires are properly fixed.
The body of the machine must be connected to the ground.
The wires section must be able to handle the installed power; see the following table:

Blades motor power (Kw)	380V-50Hz			220V-50Hz		
	Blades motor current (A)	Motor supply wires section (mm^2)	Autoswitch setting (A)	Blades motor current (A)	Motor supply wires section (mm^2)	Autoswitch setting (A)
30	39.5	6x6+T	45	68.4	6x10	79
40	54	6x6+T	63	93.5	6x16	108
50	67	6x10+T	77	116	6x25	134
60	81.5	6x16+T	94	141	6x25	163

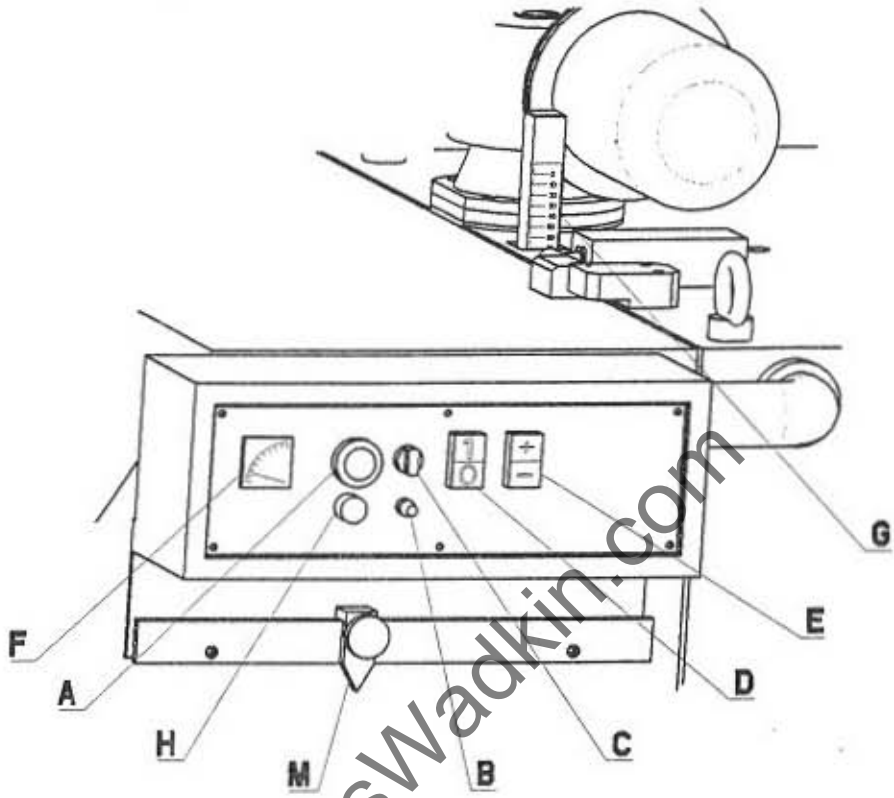
The ammeter shows the motor power consumption; the above table shows the maximum values according to the supply voltage and to the total installed power.
The consumption values should not be exceeded while the machine is working: in that case the feeding track speed must be reduced.
After the electrical connection control that the rotation direction of all motors is correct, pressing the E button (see attached "Control panel") adjustment pressure group.

when pressing the + button the mechanical indicator "G" moves upward, then the connection has been made correctly.
If it moves downwards, set the main switch in 0 position, cut off the electrical power of the line connected to the machine and change the position of the power supply wires.

Electrical connection position



Control panel



A) **EMERGENCY STOP** button
B) Feeding speed setting button
C) Feeding carpet ON-OFF button: the carpet will not start if the blades shaft is stopped
D) Blades shaft ON-OFF button
E) Pressing group height setting button
F) Ammeter
G) Pressing group height millimitered scale
H) Blades door timer blinking indicator

WARNING:
The machine will not start under one of the following conditions:
- **EMERGENCY STOP button pressed**
- **Blades access door or feeding carpet access door opened**

INSTRUCTIONS

When the operations explained in the 'Installation' chapter have been made, the machine is ready for working.
Following are listed - in the right order - all the operations that must be made to operate the machine.

Select the needed blade diameter. The following table shows the maximum cutting thicknesses according to the blade diameter:

Blade diameter	Max cutting thickness with fixed blades	Quill for sawblades
Ø250mm	70mm	55
Ø300mm	95mm	80
Ø350mm	120mm	105
Ø370mm	130mm	115

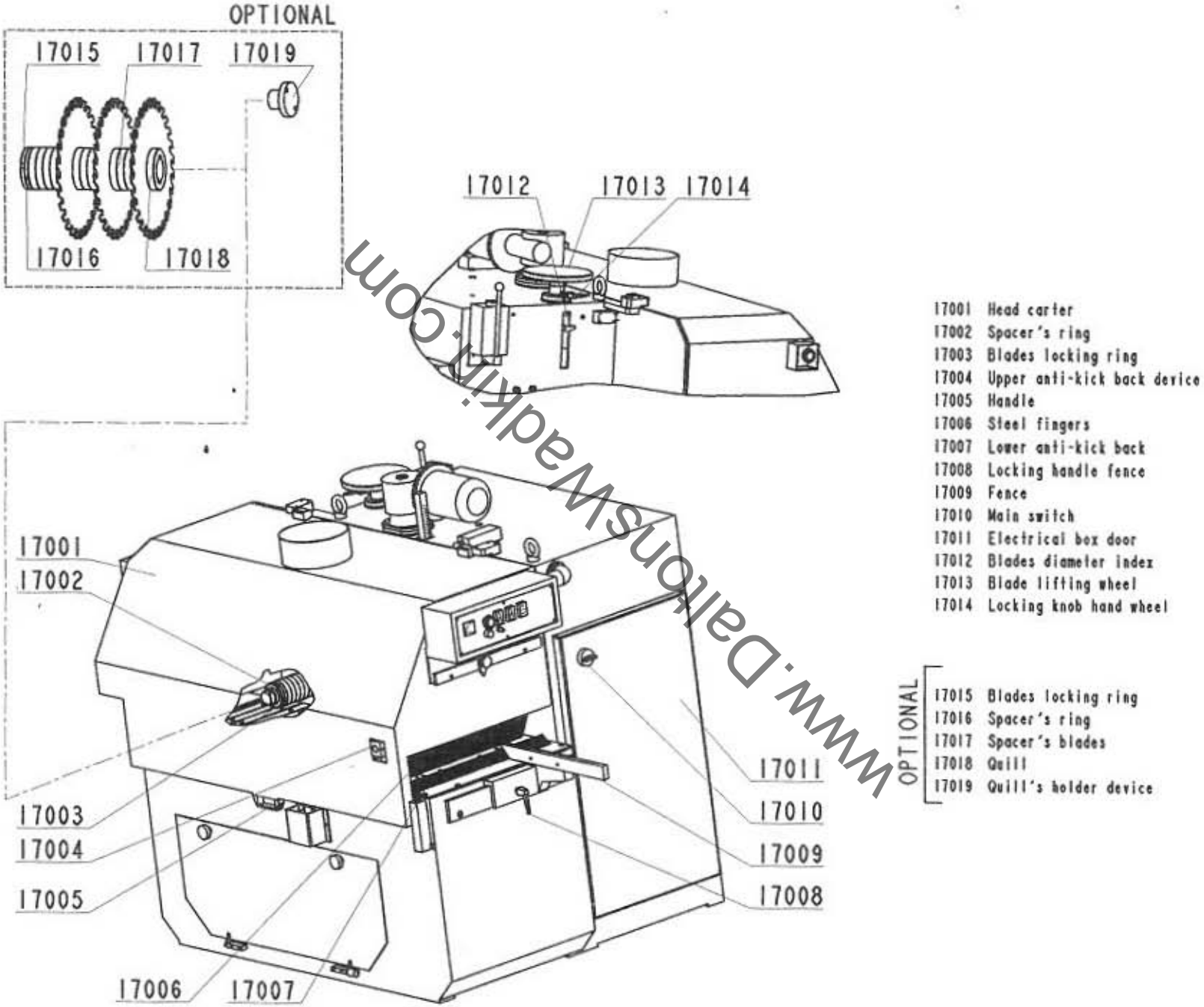
With the main switch N. 17010 set on the position 1 push the EMERGENCY STOP button and wait until the blades access door timer unlocks the blades access door itself (the blinking indicator shows that the door is unlocked).
• Open the blades access door N. 17001
• Make sure that the wood boards are locked in their places, and lined up with the pressing group. It is important that the wood boards are made according to the attached drawing (see attached: 'Wood boards'), and made of undeformable wood.
According blades' diameter, lift the sawblade quill set with the hand wheel N. 17013 high enough so that you can insert the blades to the appropriate arbour.
• Assemble the blades ass'y and its spacers direct on the shaft of the machine, after having carefully cleaned the blades and spacer with a dry cloth.
Once you have assembled the sawblades block the spacer N. 17003 with the ring N. 17002 only by using the wrench supplied with tool-kit.
If the machine is supplied with the quill, keep to the following instructions:
- Take off the sawblades quill from the machine and assemble it with the appropriate quill's holder device.
- Assemble the sawblades with spacers N. 17017 and N. 17016 after having well cleaned either the blades and the spacers with rags - only and exclusively on quill's holder device.
• When the blades ass'y is assembled, lock the threaded locking ring N. 17015 only by means of the specific tool supplied with the machine.
• According to the diameter of the mounted blades, lift the main shaft operating on the manual wheel N. 17013 to allow the assembly of the saw quill on its shaft.
This operation must be done very carefully, as the saw quill and the shaft are provided with joints that must match together. Then gently rotate the saw quill keeping it with both hands until it will match the shaft.
Warning: never use hammers or similar tools to facilitate this operation, as it is supposed to be performed as gently as possible.
Furthermore, the saw quill and its shaft must be carefully cleaned using rags: avoid blowing them with compressed air that would raise dust that anyway falls back. When the saw quill has been positioned on the shaft, lock it by means of the special ring nut which has been previously cleaned.

Check, operating on the disposal N. 17004 by means of the 55mm wrench supplied with the machine, the correct functioning of the splinter proof security disposals N. 17006, that - due to their own weight - should always fall perpendicularly to the feeding track.
Furthermore, check that the splinter proofs N. 17007, located on the working surface can easily slide according to their function.
Close the blades access door N. 17001 locking the handle N. 17005.
• Set the reference guide N. 17009 at the feeding side of the machine, operating on the handle N. 17008 and referring to the specific millimitered ruler.
• Re-press the EMERGENCY STOP button.
• Start blades rotation pressing the button D (see attached 'Control panel').
• Set the pressing rollers height operating the button N. 14011 (see E on the attached 'Control panel) according to the nominal thickness of the boards to be worked: the specific G scale shows the height position of the rollers.
It is important that the working boards are not supposed to exceed the nominal thickness for more than ±10mm, both in thickness and difformity. On the contrary, the machine can get damaged, and unsafety for the operator.
• Unlock the handle N. 17014, then start lowering the blades shaft, operating on the wheel N. 17013, controlling at the same time the scale shown by the arrow indicator N. 17012 located near the wheel, until the corresponding size diameter of the blades assembled into the machine is reached.
Then lock again the handle N. 17014.
• Start the feeding carpet pressing the button C (see attached 'Control panel'); the feeding speed will be set by means of the B button according to the thickness of the working board and to the number of blades, starting from the minimum speed and gradually increasing it until you find the ideal working speed.
• Start the cutting, setting the boards into the machine, paying attention to the linearity with the reference guide, because once they are cought by the feeding truck, they cannot be set differently.
Never feed boards laid one on top the other, and never exceed the blades operating limits: not observating these rules drastically reduces the working quality, and may cause damages to the machine.

The ammeter is specifically provided on the 'Control panel' to constantly display the power consumption of the motor that operates blades.
The maximum estimate values are shown in the table on page 8.The feeding speed reducer for the track is provided with inverter and with a magnetothermal switch for automatic stop in case of overloading.

The limiting width device located at the feeding side of the machine is provided with a microswitch Fc5 (see attached 'Position microswitches and emergencies') that stops the machine when put into action.

NOTE: In case the machine is working with others it's necessary to contact our technical office.

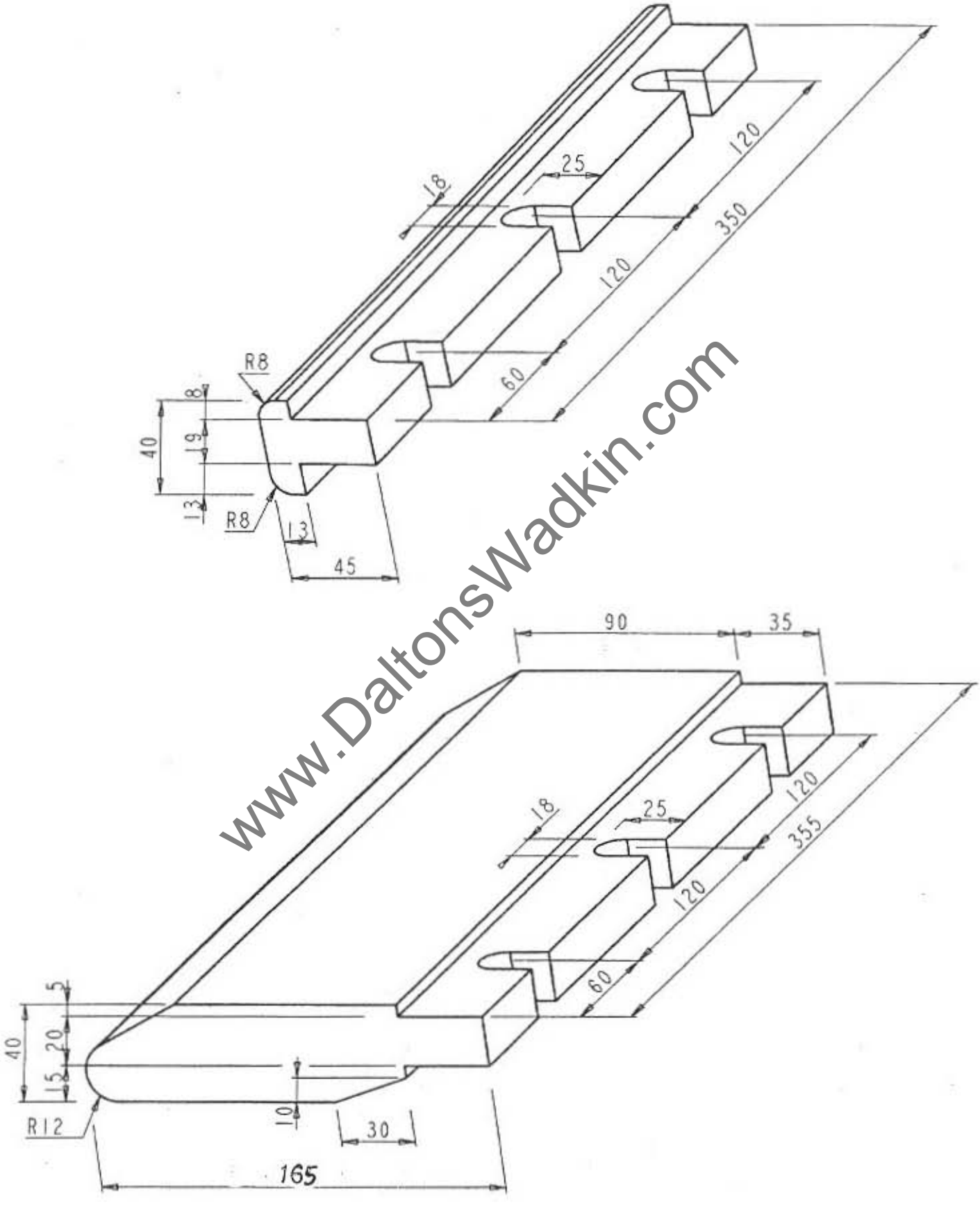


17001 Head carter
17002 Spacer's ring
17003 Blades locking ring
17004 Upper anti-kick back device
17005 Handle
17006 Steel fingers
17007 Lower anti-kick back
17008 Locking handle fence
17009 Fence
17010 Main switch
17011 Electrical box door
17012 Blades diameter index
17013 Blade lifting wheel
17014 Locking knob hand wheel

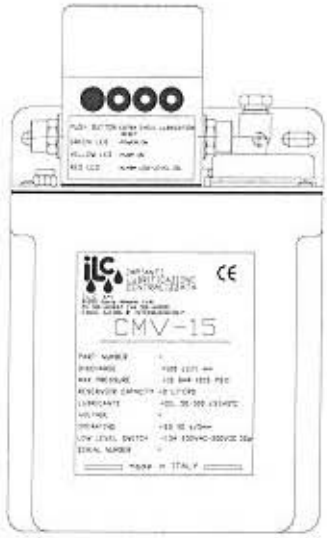
OPTIONAL

17015 Blades locking ring
17016 Spacer's ring
17017 Spacer's blades
17018 Quill
17019 Quill's holder device

Wooden boards



ELETTROPOMPE CMV-15
CMV-15 ELECTRIC PUMPS



DESCRIZIONE

LE ELETTROPOMPE **CMV** SONO DESTINATE ALL'ALIMENTAZIONE DI IMPIANTI DI LUBRIFICAZIONE CENTRALIZZATA FUNZIONANTI AD OLIO DOTATI DI VALVOLE DOSATRICI DPT. IL GRUPPO POMPA È COSTITUITO DA UN ELETTROMAGNETE CHE COMANDA, MEDIANTE L'ATTRAZIONE CICLICA, UNA POMPA A PISTONE POSIZIONATA ALL'INTERNO DEL SERBATOIO.

NELLA PARTE SUPERIORE È ALLOGGIATA LA SCATOLA DI PROTEZIONE AL CUI INTERNO È APPLICATA, NELLE VERSIONI COMPLETE DI TIMER, UNA SCHEDA ELETTRONICA PROGRAMMABILE CHE PROVVEDE ALLA TEMPORIZZAZIONE DEL TEMPO DI PAUSA E DEL TEMPO DI LAVORO. L'APPARECCHIATURA È INOLTRE DOTATA DI PULSANTE MANUALE PER LUBRIFICAZIONI EXTRA CICLO, LED VERDE DI PRESENZA TENSIONE - LED GIALLO DI FUNZIONAMENTO E LED ROSSO DI ALLARME MANCANZA OLIO CON POSSIBILITÀ DI SEGNALAZIONE ESTERNA. MEDIANTE I DUE SELETTORI È POSSIBILE PROGRAMMARE IL TEMPO DI PAUSA DA 2.5 A 137.5 MINUTI - IL TEMPO DI LAVORO DA 2.5 A 37.5 SECONDI. INOLTRE È POSSIBILE INSERIRE O DISINSERIRE LA FUNZIONE DI PRELUBRIFICAZIONE CHE PERMETTE DI EFFETTUARE UN CICLO COMPLETO AD OGNI INSERIMENTO DI TENSIONE. IL COLLEGAMENTO ELETTRICO È EFFETTUATO MEDIANTE DUE CONNETTORI (UNO PER L'ALIMENTAZIONE ED UNO PER LA SEGNALAZIONE DI ALLARME) A 3 POLI IP-65.

NELLE VERSIONI SPROVVISTE DI TIMER IL SEGNALE DI PARTENZA E DI ARRESTO DOVRÀ ESSERE INVIATO DAL QUADRO DI COMANDO DELLA MACCHINA PONENDO ATTENZIONE A NON SUPERARE I TEMPI DI LAVORO MASSIMI PRESTABILITI (40 SEC.). TUTTE LE ELETTROPOMPE **CMV** SONO DOTATE DI LIVELLO ELETTRICO, FILTRO DI ASPIRAZIONE E FILTRO DI CARICO. LA SCHEDA ELETTRONICA ED I COLLEGAMENTI ELETTRICI INTERNI ED ESTERNI SONO REALIZZATI IN OSSERVANZA ALLE VIGENTI NORMATIVE DI SICUREZZA EUROPEE.

DESCRIPTION

*THE ELECTRIC PUMPS OF THE **CMV-15** SERIES ARE SUPPLIED FOR CENTRALISED LUBRICATION SYSTEM UTILISING OIL WITH THE SINGLE LINE RESTRICTOR SYSTEMS USING THE **DPT** SERIES METER UNITS. THE MOTOR/PUMP ASSEMBLY IS COMPOSED OF A MAGNET CONTROLLED PISTON PUMP, THE CYCLIC ATTRACTION OF THE MAGNET HAVING THE SAME FREQUENCY AS THE ELECTRIC CURRENT, CREATES AN ALTERNATING MOVEMENT OF THE PISTON TO PRODUCE AN OUTPUT OF 120 CC/MINUTE.*

IT IS POSSIBLE TO PROVIDE THIS LUBRICATOR WITH TIMER OR WITHOUT TIMER INSIDE THE PROTECTION BOX AND THE ELECTRICAL CONNECTION CAN BE MADE BY TWO 3 POLES IP-65 CONNECTORS (ONE FOR THE POWER SUPPLY AND THE OTHER FOR THE LOW LEVEL SWITCH).

*THE TIMER CONTROL THE **CMV-15** AND HAS THE POSSIBILITY TO ADJUST THE PAUSE TIME (FROM 2.5 MINUTES TO 137,5 MINUTES) AND THE WORKING TIME (FROM 2.5 SECONDS TO 37.5 SECONDS), TO SELECT IF IS REQUIRED OR NOT THE PRE-LUBRICATION FUNCTION, TO HAVE INTERMEDIATE LUBRICATION BY MEAN OF THE PUSH BUTTON, TO MONITOR THE LUBRICANT LEVEL IN THE RESERVOIR AND TO HAVE THE REMOTE ALARM SIGNAL.*

*THE SYSTEM CONTROL FOR THE **CMV-15** WITHOUT TIMER IS PROVIDED VIA THE PARENT MACHINE MAKING ATTENTION THAT THE WORKING TIME HAS NOT TO BE MORE THAN 40 SECONDS.*

THE PUMP UNIT IS SUPPLIED WITH A LOW LEVEL SWITCH AS STANDARD, FILLER CUP, SUCTION STRAINER, FILLING STRAINER AND A RESERVOIR OF SEMI-TRANSPARENT PLASTIC MATERIAL WITH A CAPACITY OF 1,2 OR 2 LITRES.

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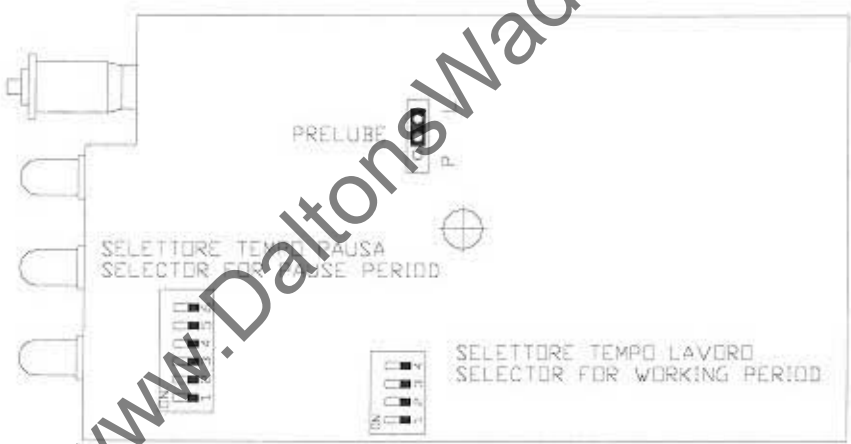
CODICI DI ORDINAZIONE - *CODES FOR ORDER*

CODICE *CODE*	SIGLA *TYPE*	TENSIONE *SUPPLY VOLTAGE*	SERBATOIO *RESERVOIR*	FUNZIONI *FUNCTION*
00.431.0	CMV-15 C.E.	24 V AC	1,2 L	SENZA TIMER *WITHOUT TIMER*
00.431.1	CMV-15 C.E.	115 V AC	1,2 L	SENZA TIMER *WITHOUT TIMER*
00.431.2	CMV-15 C.E.	230 V AC	1,2 L	SENZA TIMER *WITHOUT TIMER*
00.432.0	CMV-15 S.C.	24 V AC	1,2 L	CON TIMER *WITH TIMER*
00.432.1	CMV-15 S.C.	115 V AC	1,2 L	CON TIMER *WITH TIMER*
00.432.2	CMV-15 S.C.	230 V AC	1,2 L	CON TIMER *WITH TIMER*
00.440.3	CMV-15 C.E.	24 V AC	2 L	SENZA TIMER *WITHOUT TIMER*
00.440.4	CMV-15 C.E.	115 V AC	2 L	SENZA TIMER *WITHOUT TIMER*
00.440.5	CMV-15 C.E.	230 V AC	2 L	SENZA TIMER *WITHOUT TIMER*
00.441.3	CMV-15 S.C.	24 V AC	2 L	CON TIMER *WITH TIMER*
00.441.4	CMV-15 S.C.	115 V AC	2 L	CON TIMER *WITH TIMER*
00.441.5	CMV-15 S.C.	230 V AC	2 L	CON TIMER *WITH TIMER*
00.454.1	CMV-15 C.E.	24 V AC	3 L	SENZA TIMER *WITHOUT TIMER*
00.454.2	CMV-15 C.E.	115 V AC	3 L	SENZA TIMER *WITHOUT TIMER*
00.454.3	CMV-15 C.E.	230 V AC	3 L	SENZA TIMER *WITHOUT TIMER*
00.454.4	CMV-15 S.C.	24 V AC	3 L	CON TIMER *WITH TIMER*
00.454.5	CMV-15 S.C.	115 V AC	3 L	CON TIMER *WITH TIMER*
00.454.6	CMV-15 S.C.	230 V AC	3 L	CON TIMER *WITH TIMER*



FUNZIONI DEL TIMER — *ELECTRONIC CARD FUNCTION*

REGOLAZIONE TEMPO PAUSA	MEDIANTE LA REGOLAZIONE DEL SELETTORE DA 2.5 A 157 MINUTI	*ADJUSTMENT PAUSE PERIOD*	*BY MEAN OF THE SELECTOR IS POSSIBLE TO ADJUSTED FROM 2.5 MINUTES TO 157 MINUTES*
REGOLAZIONE TEMPO LAVORO	MEDIANTE LA REGOLAZIONE DEL SELETTORE DA 2.5 A 37.5 SECONDI	*ADJUSTMENT WORKING PERIOD*	*BY MEAN OF THE SELECTOR IS POSSIBLE TO ADJUSTED FROM 2.5 SECOND TO 37.5 SECONDS*
PULSANTE MANUALE	LUBRIFICAZIONI EXTRA-CICLO - RESET IN CASO DI ALLARME MINIMO LIVELLO OLIO	*PUSH BOTTOM*	*TO RESET WHEN THERE IS A FAULT FOR LACK OF LUBRICANT OR TO HAVE AN EXTRA-CYCLE*
LED VERDE	ACCENSIONE AD INSERIMENTO DI TENSIONE	*GREEN LED*	*TURN ON MEANS IS THE TENSION IN THE TIMER*
LED GIALLO	ACCENSIONE CON POMPA IN FUNZIONE	*YELLOW LED*	*TURN ON WHEN THE PUMP START TO WORK*
LED ROSSO	ALLARME MINIMO LIVELLO OLIO NEL SERBATOIO	*RED LED*	*TURN ON WHEN THERE IS THE LOW LEVEL OF LUBRICANT IN THE RESERVOIRS*

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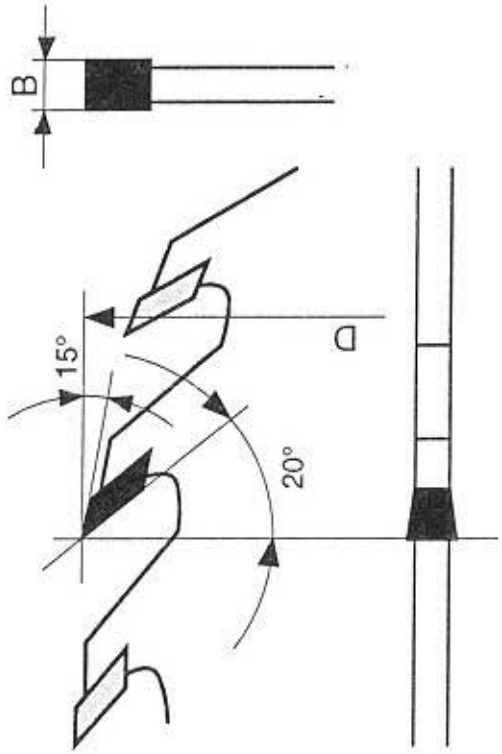
Blade



The choise for diameter sawblades depends of the maximum cutting thickness and minimum length piece which the user wants to work (in chapter 'Instructions for use' is reported a table with on different diameters corrisponding maximum cutting thickness). Beside the choise blades' diameter follows the type of material, the number of teeth typical for the cutting material, according to manufacturer's indications.

Some notice for sawblades'use and maintenance:

a) check the machine's positioning level, somehow to avoid some vibrations

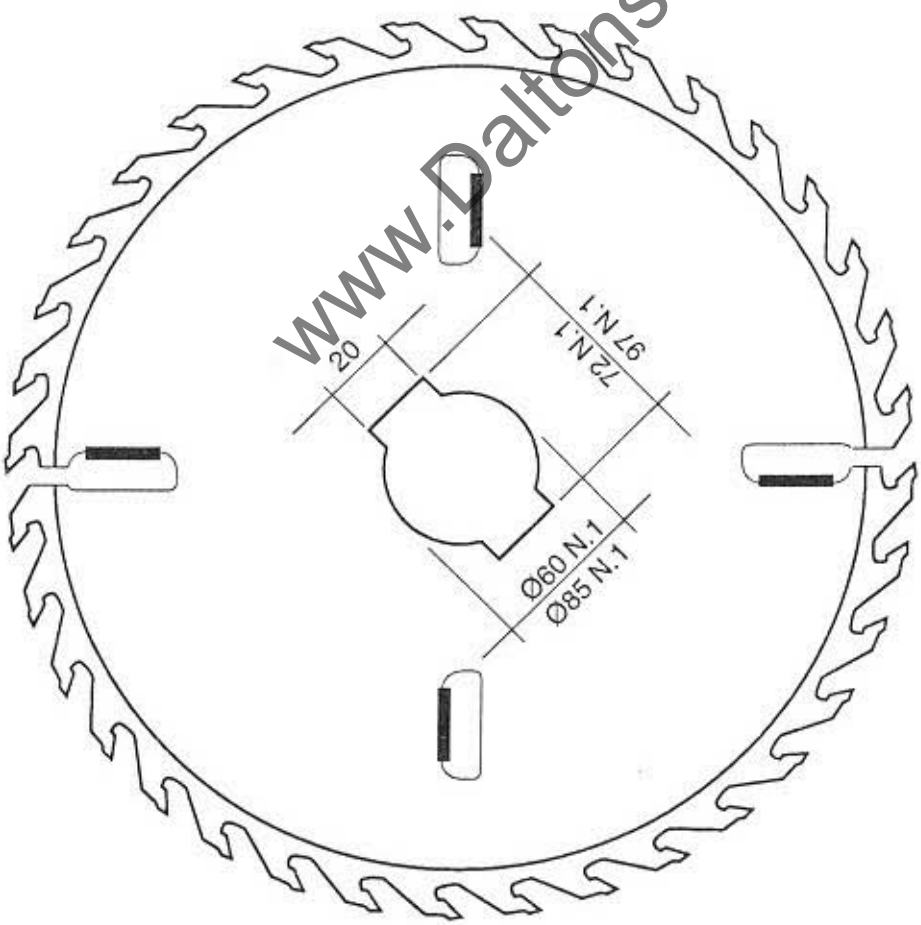
b) if the teeth are worn out or crashed change immediately the sawblades

c) sharpen the sawblades with accurate machine, respecting the typical angles

d) often clean the sawblade taking away the dirt using special products

e) put sawblades in their boxes, to avoid crashes between them

NOTE The sizes inside the brackets are for the blades to assemble on the optional quill.



SAFETY MEASURES

The machine is provided with a specific terminal for ground connection.
A pre-set timer prevents the opening of the blades access door, but when the blades have come to a complete stop.
The timer is pre-set on 60 seconds, and this time cannot be changed.
Other security sensors are foreseen as follows:

a) closed door confirming sensor Fc1 (see " Microswitches and emergency")
b) positive sensor that prevents the machine starting if the blades access door is opened Fc2 (see" Microswitches and emergency")
c) microswitch confirming that the basement access carter is closed Fc3 (see "Microswitches and emergency")

The feeding track can be exclusively started after the automatic switching "star-delta" of the motor that moves the blades shaft.

Groupe pressure cannot be adjusted during work, only when the saw blades aren't running.
The cutting of wooden pressure shoe can be done turning selector on control panel board.
In this way you can start main motor and adjusting groupe pressure, but the feeding track doesn't work.

In case of electric overload, a relay stops the machine: it is not recommended to increase the "thermic" in order to avoid blades blocking inside wood.

After a black-out due to any possible cause, or after an emergency stop caused by one of the security sensors, the machine can only be re-started with an intentional action of the user.

The electrical panel door can only be opened when the main switch is set on the position O.

USER SECURITY AND RESIDUAL RISKS

- never set overlap boards
- steady supports (like trestles or similar) should be used at the feeding and at the output side of the machine in case of working of very long planks.
- never exceed the ±10mm tolerance on the nominal thickness shown by the G indicator.
- never use unbalance or worn-out blades.
- frequently check that the anti-kick back fall in their proper position.
- while operating the machine always wear safety shoes and a leather vest.

Always use safety gloves and proper protection while assembling or changing blades.

- during any kind of preparation work or maintenance the main switch must be set on the position O.

If the machine is not being used, or if it is stopped due to a breakdown or for maintenance , it is advisable to lock it and to provide a sign indicating the reason for which the machine cannot be started.

POSSIBLE ANOMALIES: IDENTIFICATION AND ADVICES

Anomaly	Possible cause	Advices
The machine doesn't start	A door could be not properly closed	Check all doors and close them. Check all emergency buttons on the control panel and on the back of the machine
The machine has stopped	Excessive power consumption	Check all the magnetothermic switches on the electric board: they must be all set on the position 1. Reset ON any eventual switch set OFF
	Check the In and OUT voltages on the transformator (380VAC and 110VAC)	If new, the transformator could be defective
Partial stop of the machine (blades and feeding truck work, while all the rest doesn't)	Emergency-stop actuated, or security sensor opened	Check all emergency buttons and security sensors, then eliminate the eventual cause
Pressing rollers ass'y blocked	Excessive power consumption	Check all the magnetothermic switches on the electric board: they must be all set on the position 1. Reset ON any eventual switch set OFF.
Feeding track regulation blocked	Excessive power consumption	Check all the magnetothermic switches on the electric board: they must be all set on the position 1. Reset ON any eventual switch set OFF.

IN CASE OF BLADES BLOCKED INSIDE WOOD

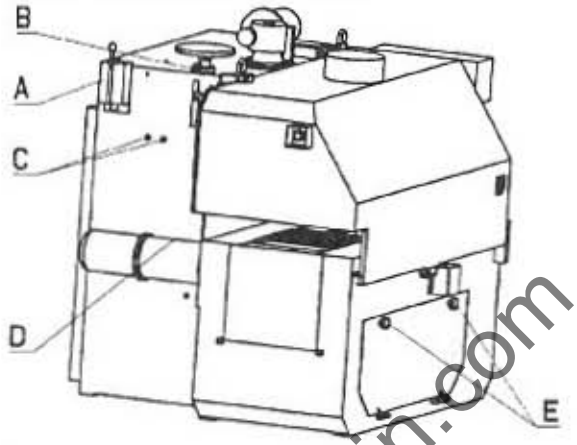
Should blades block inside wood follow these instructions:

a) lift the blades shaft until blades are unhooked
b) lift the pressing rollers group
c) press the Emergency stop button
d) wait until it is possible to open the blades access door
e) lift the anti-kick back disposal by means of the proper tool supplied with the machine: at the same time slip the board out of the machine, pulling it backwards
f) press the Emergency stop button
g) reset the machine as required, but reduce the feeding speed

For breakdowns not foreseen by the present manual contact the supplier. Professional Assistance personnel will provide to evaluate the anomaly and for proper solutions.

MAINTENANCE

- every week: general cleaning, check oil level in the lubrication pump.
- every two weeks: apply grease on the shaft bearings through the C lubrication points.
- every month: check the correct function of every lubrication point.
- every year: substitute oil in the variator box.



Periodically check the suction disposal: its correct function is a necessary for the machine to work properly.

LUBRICATION

- use low viscosity oil
- every 40 hours of work the blades holder bearings must be lubricated rotating for half a turn the two 'stauffer' C.

Use grease type:

AGIP - F4 GR PP0
ESSO BEACON EP300
SHELL - ALVANIA EP GREASE I

- every 80 hours of work apply standard grease at the B location.
- periodically check the oil level of the feeding truck variator box, adding oil at the D location when necessary.

Use oil type:

AGIP - BLASIA 220
ESSO SPARTALI EP 220
BP ENERGOL GR-XP 220
MOBIL MOBIL GEAR 630
SHELL OHALA 220 or corresponding

Motors and all feeding truck supports do not require lubrification, as they are provided with bearings made of self-lubricating materials.
The lubrication of the truck, gearing chains, screws, feeding guides is automatic and pre-timed.

Periodically check oil level of the cup A and add oil when necessary.

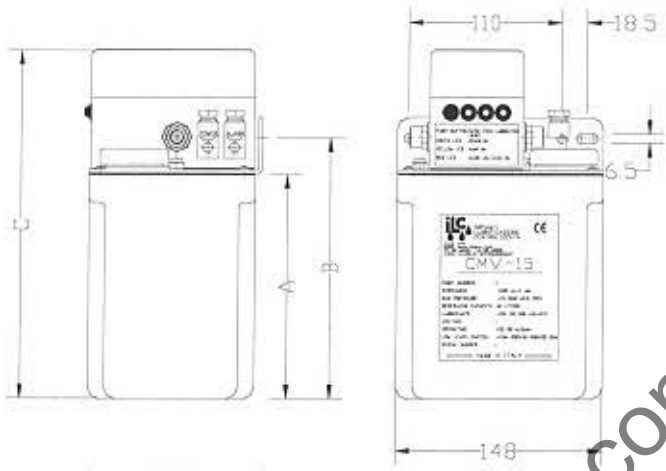
SPARE PARTS LIST

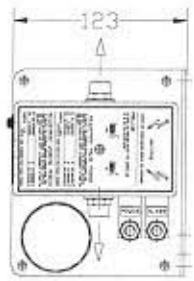
Blades shaft	Pos. 5, see attached blades shaft
Amperometer	Pos. F, see control panel board
Reference guide	Pos. 1, see attached drawing
Door block V.110	Pos. Fc 8, see attached stroke-end and sensors location
Blade holder key	Pos. 7, see attached drawing -1
Motor key	Pos. 8, see attached drawing -1
Cast iron shaft quill	Pos. 6, see attached blades shaft
Track chain (one pair)	Pos. 11, see attached drawing
Lifting winding head	Pos. 1, see attached pressure group screw
Belts 3V630 (one set)	Pos. 9, see attached drawing-1
Belts 3V670 (one set)	Pos. 49, see attached drawing-1
Shaft bearing	3213, Pos.12, see attached blades shaft drawing
Free wheel bearing	6207-2RS, Pos. 5, see attached free axe
Sprocket bearing	6210-2RS Pos. 8, see attached
Pulley bearing	NU408 Pos. 13, see attached blades shaft
Pressing rollers bearing	6204-2RS, Pos. 8 see attached pressing group
Blade screw bearing	51106 NAZ., Pos. 5, see attached blades screw
Head screw bearing	51107 NAZ. Pos. 4, see attached pressing group screw
Quill bearing spacer	Pos. 3, see attached blades shaft
Blade locking threaded ring	Pos. 10, see attached blades shaft
Coupling	Pos. 5, see attached axe sprocket
Tempered steel guide (one pair)	Pos. 2, see attached drawing
Blade diameter index	Pos. 1, see attached drawing
First blade index	H, see control panel boards
Cutting thickness index	G, see control panel boards
Main switch	Pos. 12, see attached drawing
Inverter	
Iaccard handle	Pos. 13, see attached drawing
Iaccard handle	Pos. 6, see attached blades screw
Knob	Pos. 15, see attached drawing
Handle	Pos. 14, see attached drawing
Microswitch	Pos. Fc1, Fc2, Fc3, see attached stroke-end and sensor location
Gas spring	Pos. 16, see attached drawing
Spring for wooden board and rollers	Pos. 3-4-5, see attached pressing group
Track motor HP. 2	M2, see attached motors location
Head motor	M3, see attached motors location
Complete control panel board	Pos. 8, see attached drawing
Pad mat	Pos. 17, see attached drawing
Free axe wheel	Pos. 1, see attached free axe
Sprocket axe	Pos. 3, see attached sproket axe
Chain guide feeding side plate(one pair)	Pos. 3-4, see attached drawing
Chain guide outlet side plate, (one pair)	Pos. 5-6, see attached drawing
Chain guide central plate, 2 pcs(one pair)	Pos. 9, see attached drawing

Sprockets (2 pcs)	Pos. 6, see attached sprocket axe
Free wheel (2 pcs)	Pos. 4, see attached free axe
Manual oil pump	Pos. 3, see attached drawing-1
Quill pulley for belts 3V	Pos. 5, see attached drawing-1
Motor pulley for belts 3V	Pos. 6, see attached drawing-1
Emergency button A	A, see control panel board
Slow/Fast B button	B, see control panel board
Blades ON/OFF D button	D, see control panel board
Track ON/OFF button	C, see control panel board
Electrical box	Pos. 7, see attached drawing
Track speed reducer	Pos. 4, see attached drawing-1
Head speed reducer	Pos. 6, see attached pressure group screw
Multiblade roller	Pos. 2-7, see attached pressing group
Lower row anti-kick back (72 pcs)	Pos. 18, see attached drawing
Seeger I 72	Pos. 6, see attached free axe
Wrenches set (11 pcs)	
Guide holder	Pos. 10, see attached drawing
Sprocket support	Pos. 7, see attached sprocket axe
Track complete of chain pads, chains, guides, central plate	
Short wooden tablet	Pos. 1, see attached pressing group
Transformer 110V	
Head lifting screw	Pos. 33, see attached
Blades' hand wheel	Pos. 1, see attached blades screw
Microswitch	Fc5, see attached stroke-end and sensors location
Microswitch	Pos. 2, see attached drawing-1

DIMENSIONI DI INGOMBRO - *OVERALL DIMENSION*

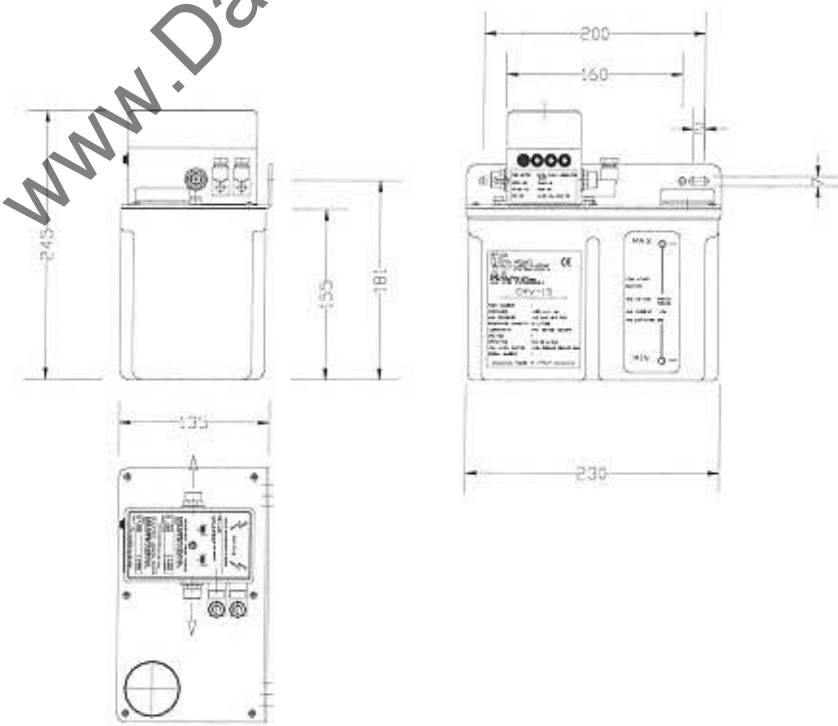
SERBATOIO 1 L O 2 L - *1 L OR 2 L RESERVOIR*



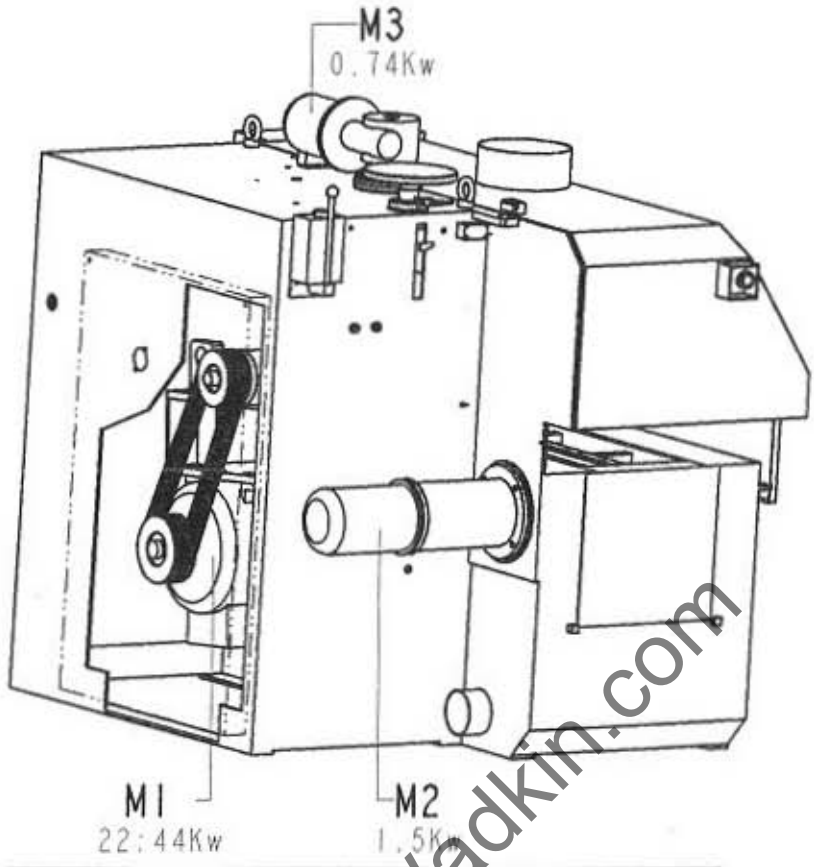


POMPA *PUMP*	A	B	C
CMV-15 1L	108	134	198
CMV-15 2L	160	186	250

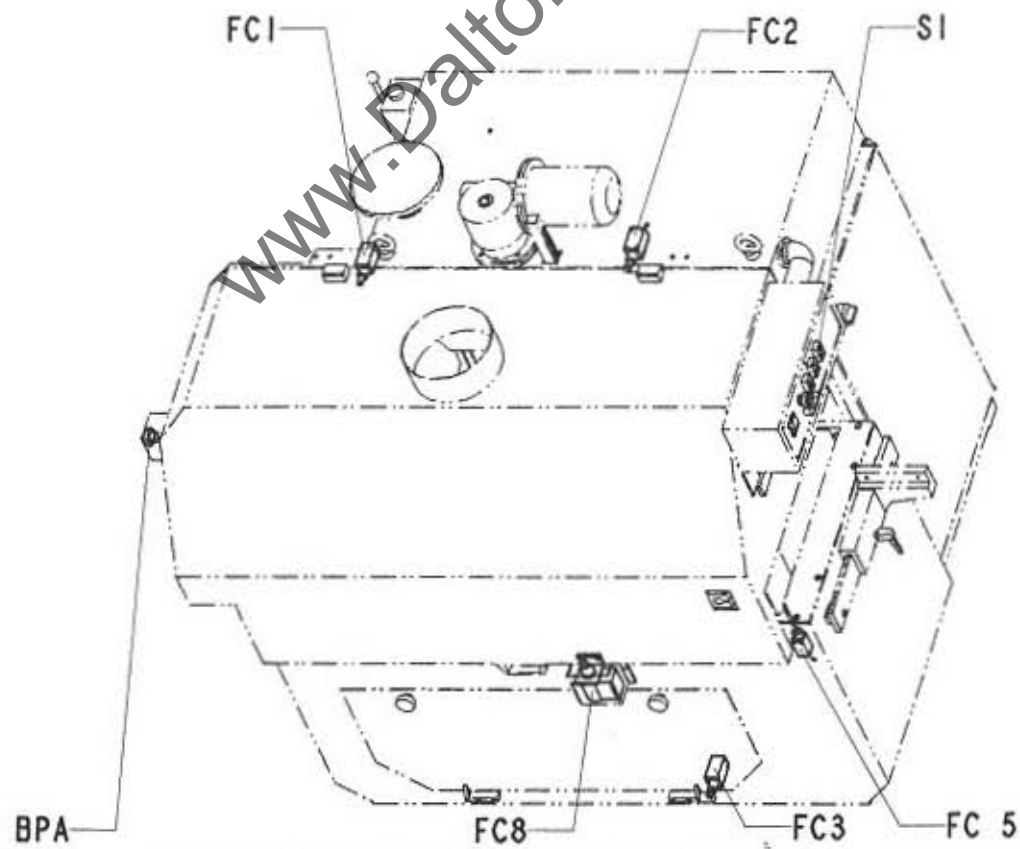
SERBATOIO 3 L - *3 L RESERVOIR*



Ilc Srl - Via Garibaldi, 149 - 21055 Gorla Minore (VA) - Italy
Phone ++39/0331/601697 Fax ++39/0331/365149 E-mail : ilc.srl@interbusiness.it



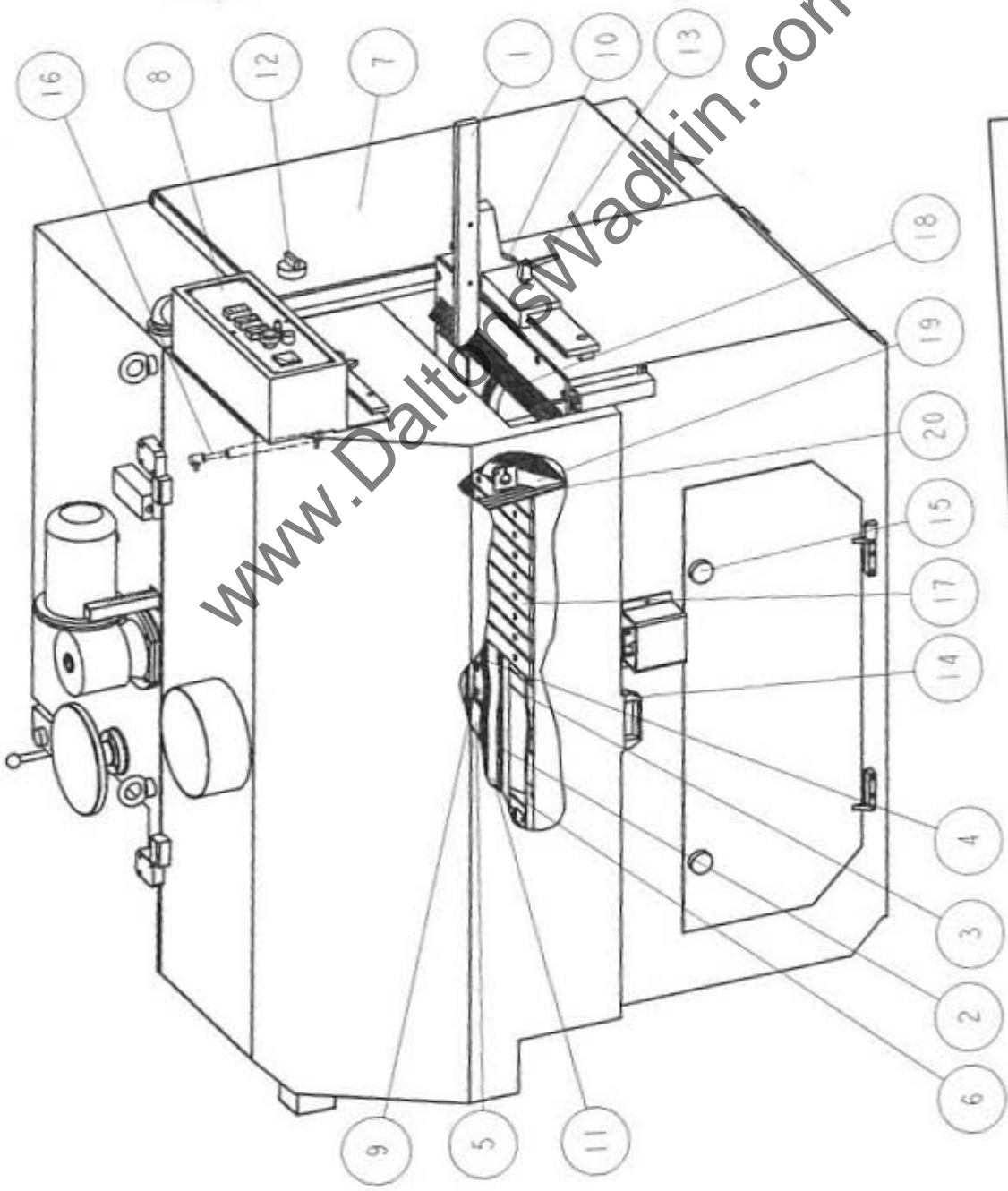
MOTOR POSITIONING DIAGRAM



SAFETY'S POSITIONING DIAGRAM

COMPONENTS LIST

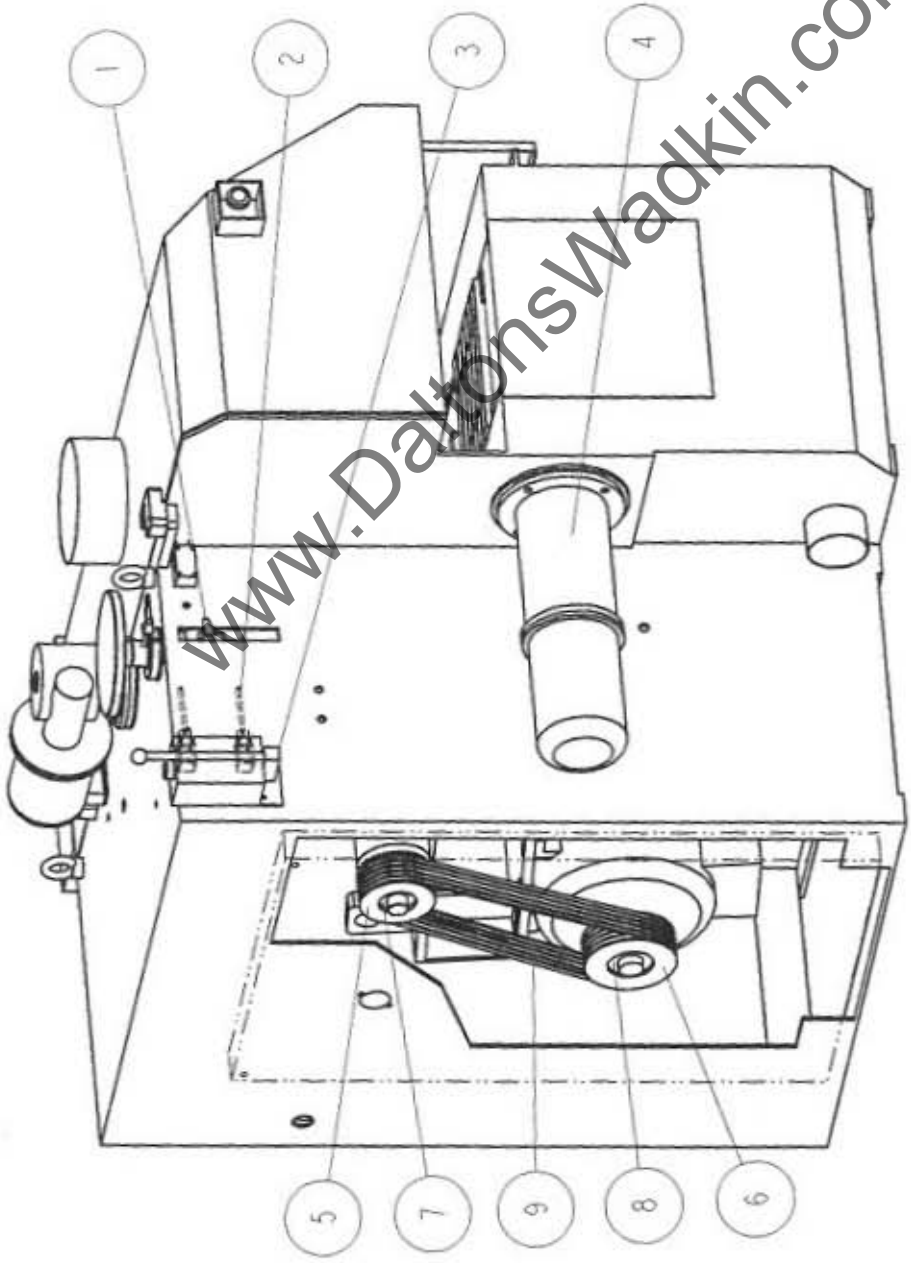
QTY	N. DRW - DESCRIPTION	POS.
1	14-1-08 FENCE	1
1	17-0-21 CHAIN GUIDE	2
2	17-0-22 CHAIN PLATE	3
1	17-0-22 CHAIN PLATE	4
1	17-0-23 CHAIN PLATE	5
1	17-0-23 CHAIN PLATE	6
1	17-0-26 ELECTRICAL BOX DOOR	7
1	17-AS-005 CONTROL PANEL	8
1	8-0-03 CHAIN PLATE	9
2	8-0-09 FENCE	10
2	CHAIN -116PITCH-PT-ATTACHMENTS ONE SIDE	11
2	MAIN SWITCH	12
1	HANDLE-MRX80-P-M12X30	13
1	HANDLE-443-140	14
1	HW08-050-VC192-SO	15
2	GAS PISTON-115ON	16
3	3-1-07 PAD MAT	17
68	8-0-09 ANTI-KICK BACK	18
15	8-0-52A STEEL FINGERS	19
80	8-0-52A ANTI-SPLINTERS DEVICE	20
40	17-0-18	



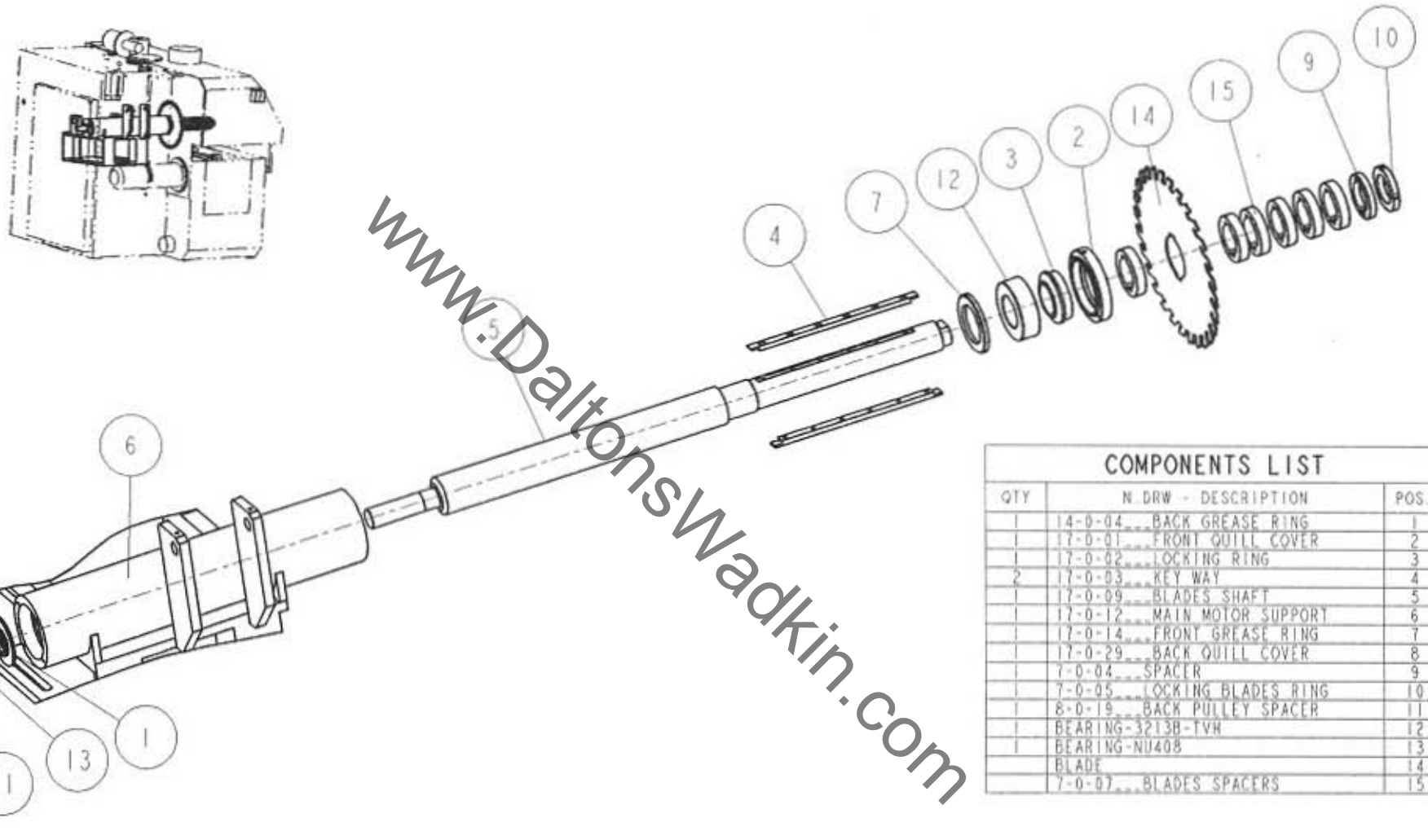
DRAWING

COMPONENTS LIST

POS.	QTY	N. DRW - DESCRIPTION
1	1	8-0-178 --- INDEX
2	1	MICRO-SWITCH FE525
3	2	PIMP PRO-13
4	1	SPEED REDUCER-RP243F-R37-PAM200-24
5	1	QUILL PULLEY X 3V BELTS
6	1	MOTOR PULLEY X 3V BELTS
7	1	BLADE HOLDER LOCKING DEVICE
8	1	MOTOR LOCKING DEVICE
9	1	3V BELTS

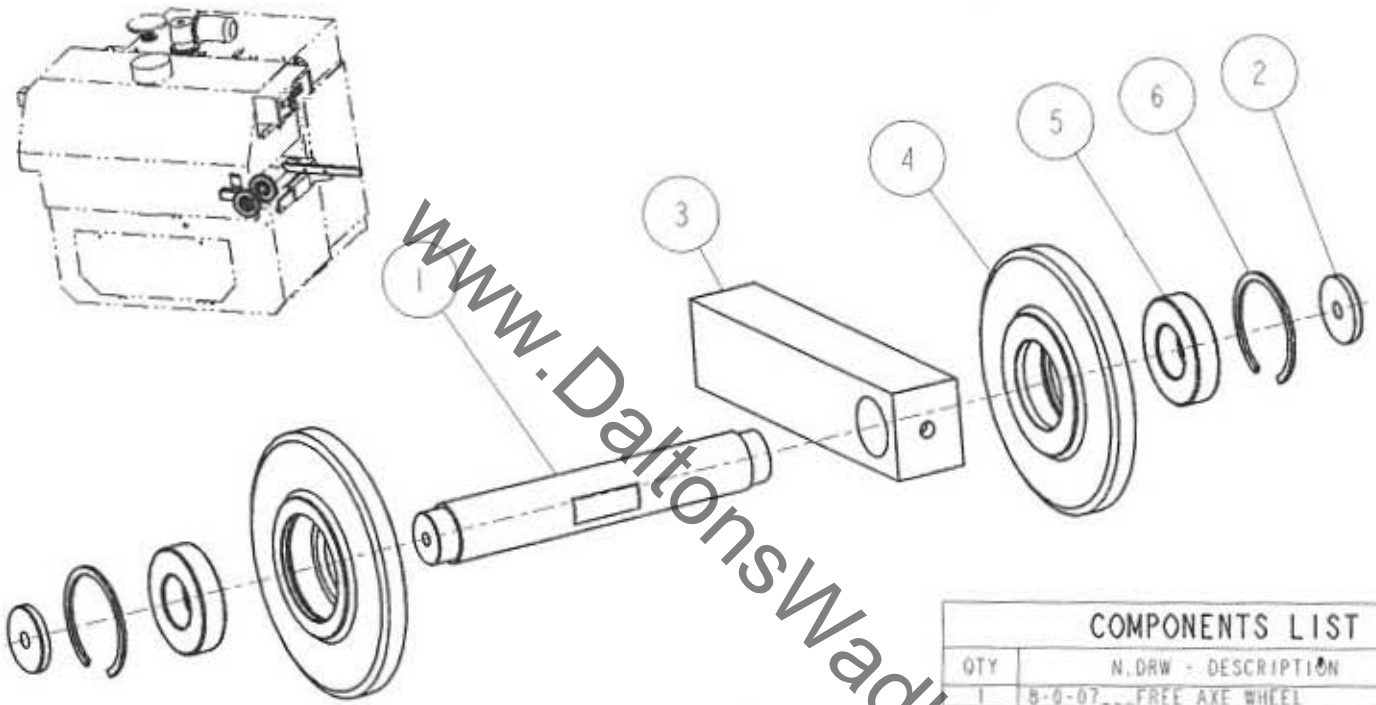


DRAWING-1



COMPONENTS LIST		
QTY	N. DRW - DESCRIPTION	POS.
1	14-0-04...BACK GREASE RING	1
1	17-0-01...FRONT QUILL COVER	2
1	17-0-02...LOCKING RING	3
2	17-0-03...KEY WAY	4
1	17-0-09...BLADES SHAFT	5
1	17-0-12...MAIN MOTOR SUPPORT	6
1	17-0-14...FRONT GREASE RING	7
1	17-0-29...BACK QUILL COVER	8
1	7-0-04...SPACER	9
1	7-0-05...LOCKING BLADES RING	10
1	8-0-19...BACK PULLEY SPACER	11
1	BEARING-3213B-TVH	12
1	BEARING-NU408	13
	BLADE	14
	7-0-07...BLADES SPACERS	15

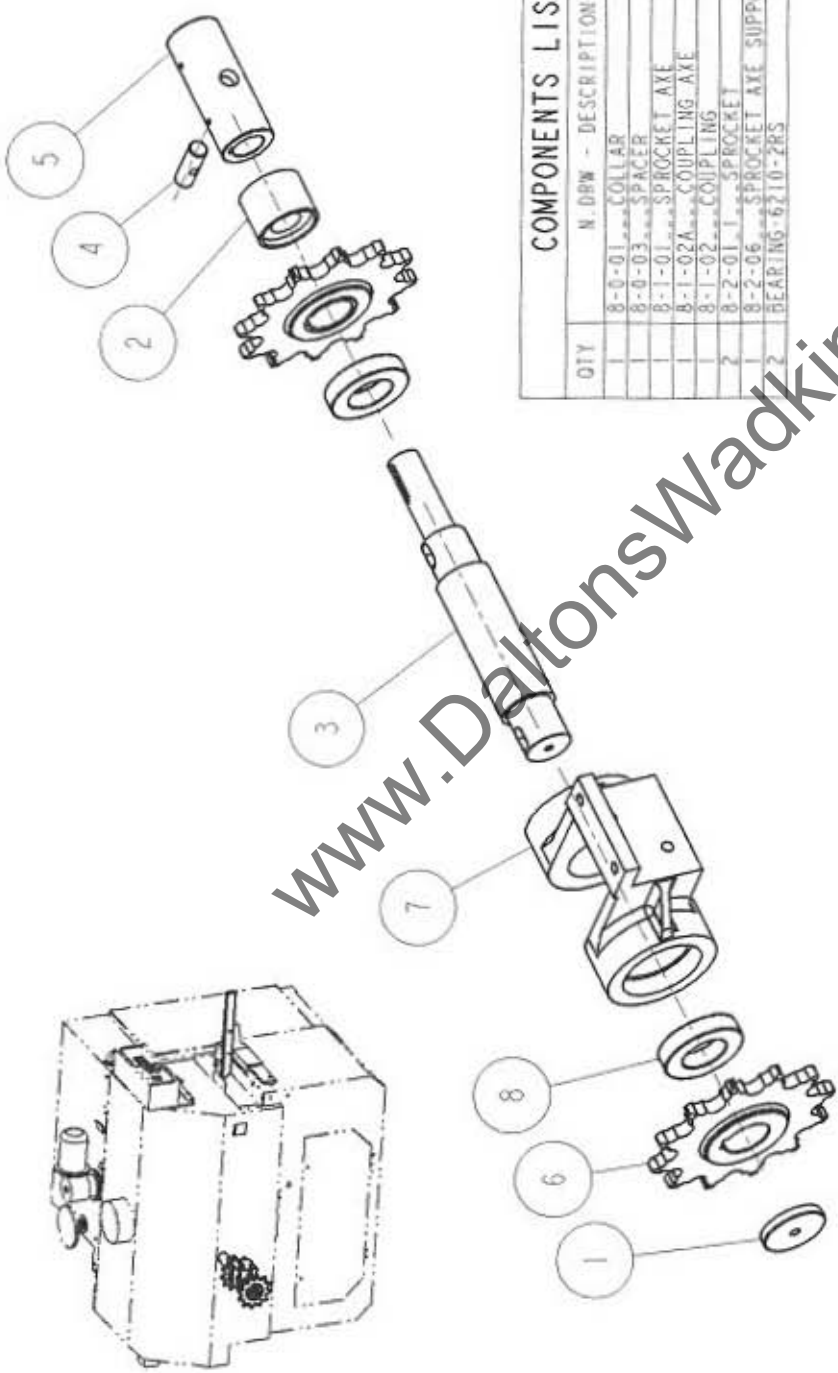
BLADES SHAFT



COMPONENTS LIST		
QTY	N.DRW - DESCRIPTION	POS.
1	8-0-07___FREE AXE WHEEL	1
2	8-0-08___COLLAR	2
1	8-1-03___FREE AXE SUPPORT	3
2	8-2-01_2___FREE WHEEL	4
2	BEARING-6201-2RS	5
2	SEEGER-I-72	6

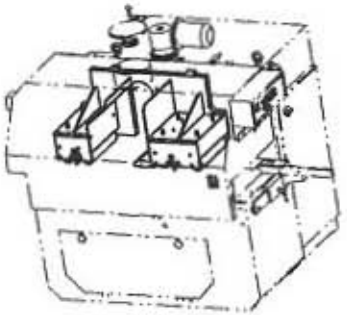
FREE AXE

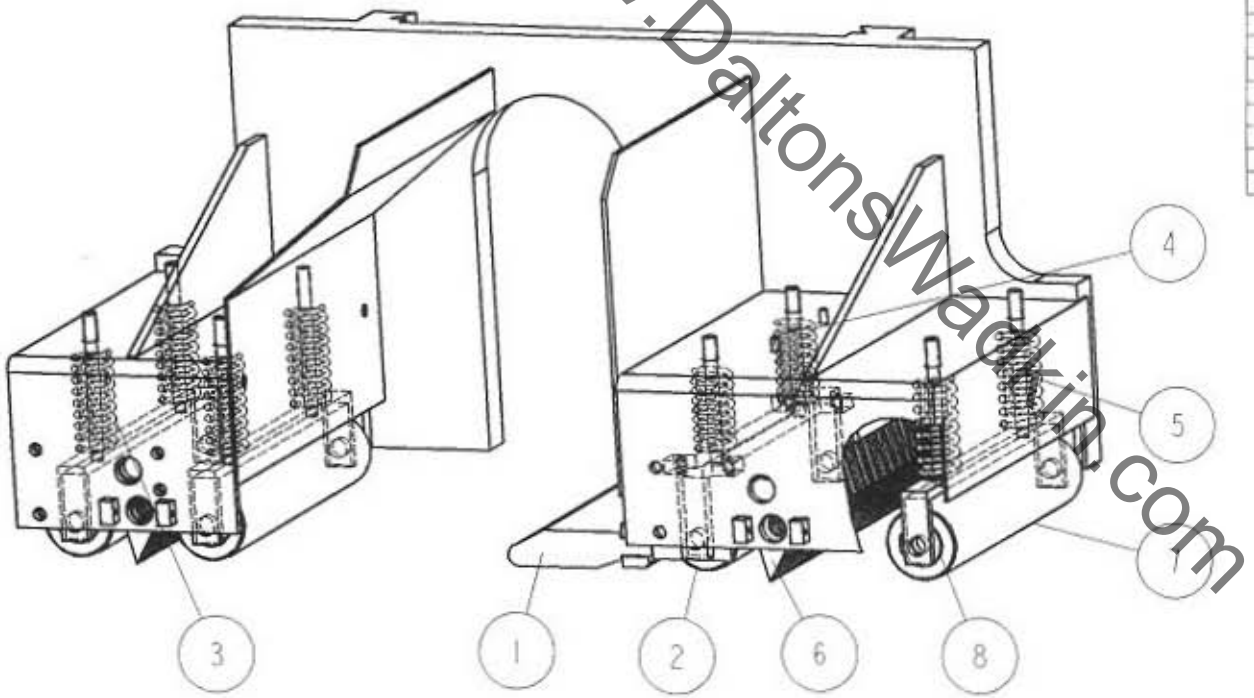
SPROCKET AXE



COMPONENTS LIST

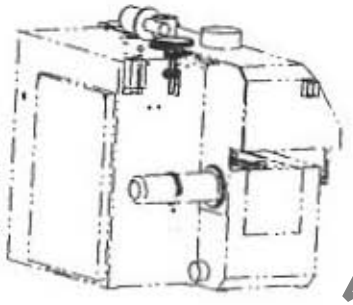
QTY	N. DRW - DESCRIPTION	POS.
1	8-0-01 ... COLLAR	1
1	8-0-03 ... SPACER	2
1	8-1-01 ... SPROCKET AXE	3
1	8-1-02A ... COUPLING AXE	4
1	8-1-02 ... COUPLING	5
2	8-2-01 ... SPROCKET	6
1	8-2-06 ... SPROCKET AXE SUPPORT	7
2	BEARING-6210-2RS	8

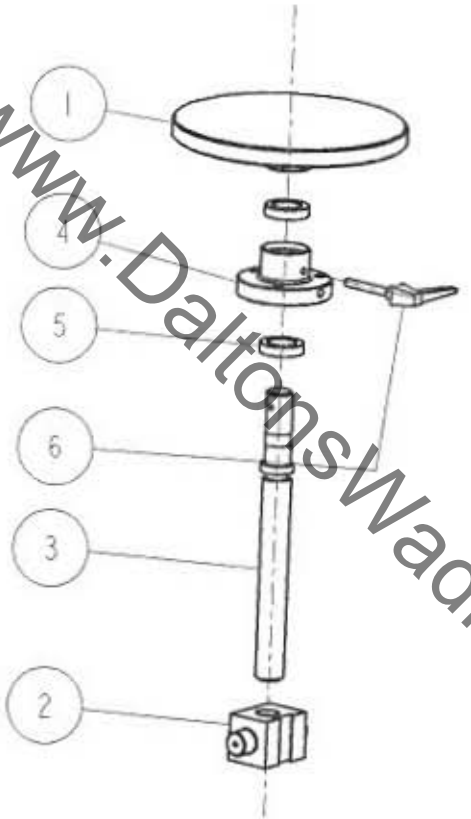




COMPONENTS LIST		
QTY	N.DRW - DESCRIPTION	POS.
1	8-0-00...WOODEN TABLET	1
1	8-0-21I...TABLET ROLLER	2
4	8-0-40A...SPRING	3
2	8-0-40D...SPRING	4
2	8-0-40...SPRING	5
98	8-0-68...ANTI-KICK BACK	6
3	8-1-11...PRESSING ROLLER	7
8	BEARING-6204-2RS	8

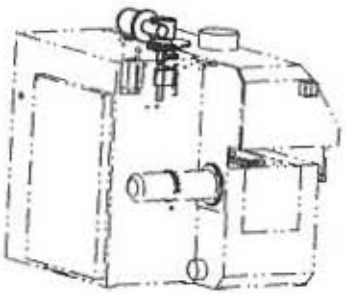
PRESSING GROUP





COMPONENTS LIST		
QTY	N. DRW - DESCRIPTION	POS.
1	8-0-20A___BLADES HANWHEEL	1
1	8-0-28A___BLADES WINDING	2
1	8-0-30___BLADES SCREW	3
1	8-0-34___BLADES SCREW SUPPORT	4
2	BEARING-51106	5
1	HANDLE-MRX63-P-M8X60	6

BLADES SCREW

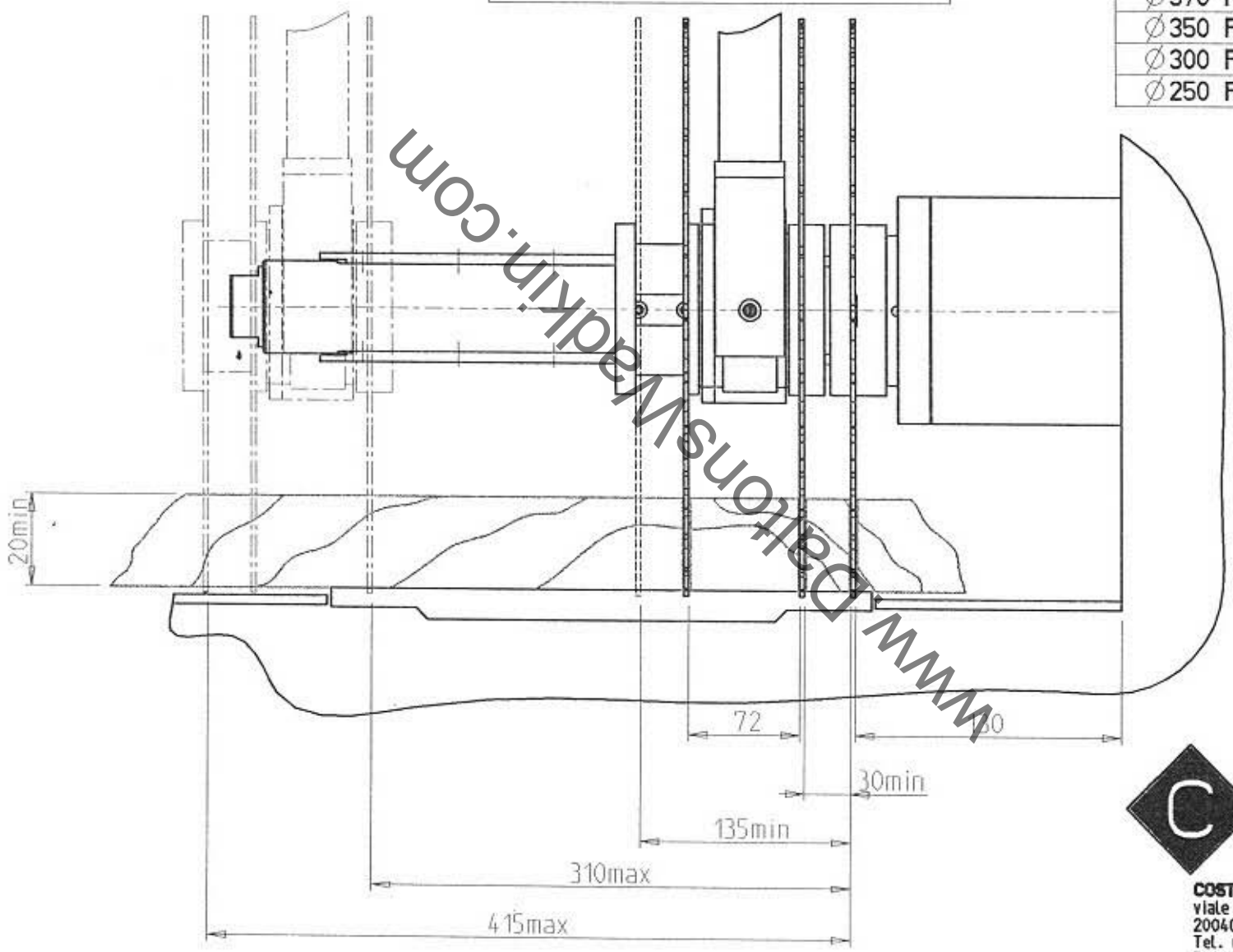


COMPONENTS LIST		
QTY	N. DRW - DESCRIPTION	POS.
1	8-0-53___WINDING PRESSURE GROUP	1
1	8-1-24___REDUCER MOTOR RING	2
1	8-1-25___PRESSURE GROUP SCREW	3
1	BEARING-51107	4
1	MOTOR-HPI-4POLI-B5	5
1	SPEED REDUCER-160FR-R50-B5-19.200	6

PRESSURE GROUP SCREW

MULTILAME J350R

∅ LAMA	SPESSORE MAX
∅370 F.85	120
∅350 F.85	110
∅300 F.85	85
∅250 F.85	60



COSTRUZIONI MACCHINE LEGNO
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COSTRUZIONI MACCHINE LEGNO

SCHEMA ELETTRICO

ELECTRIC DIAGRAM

Macchina tipo : J350R

Cliente: HUDEK-FIERA - N. 59

PROGETTO
BANCA DIS.
TIPICO

REV.	MODIFICA	DATA	FIRMA		
				DATA	22/08/2006
				DISEGN.	V.I.
				VISTO	
				APPR.	

HUDEK–FIERA
J350R CON S7–200
50HP – 400V – 50Hz

SOST. IL : | SOST. DA :

C.M.L.
V.I.

COPERTINA SCHEMA ELETTRICO
ELECTRIC DIAGRAM

MACCHINA N.
59

FG. 1
F.S. 2

LISTA FOGLI \ INDEX

Foglio / Sheet	Descrizione / Description	Revisione \ Revision 0 1 2 3 4 5 6 7 8 9	Foglio / Sheet	Descrizione / Description	Revisione \ Revision 0 1 2 3 4 5 6 7 8 9
1	COPERTINA SCHEMA ELETTRICO		13	AUSILIARI REFILATORI	
	ELECTRIC DIAGRAM			EDGER AUXILIARIES	
2	LISTA FOGLI		14	AUSILIARI REFILATORE	
	INDEX OF ELECTRIC DIAGRAM			EDGER AUXILIARIES	
2A	LISTA FOGLI		15	CONFIGURAZIONE LOGICA S7-200	
	INDEX OF ELECTRIC DIAGRAM			S7-200 PLC CONFIGURATION	
3	DATI DI INSTALLAZIONE		16	INGRESSI/USCITE S7-200	
	INSTALLATION DATAS			ENTRANCES AND OUTGOING PLC S7-200	
4	INTERRUTTORE GENERALE		17	INGRESSI/USCITE S7-200	
	GENERAL ALIMENTATION			ENTRANCES AND OUTGOING PLC S7-200	
5	POTENZA LAME		18	INGRESSI/USCITE S7-200	
	BLADES ENGINE			ENTRANCES AND OUTGOING PLC S7-200	
6	POTENZA TAPPETO E PRESSORE		19	COLLEGAMENTO RELE' USCITE PLC	
	POWER GROUPE PRESSURE AND TRACK			OUTGOING PLC CONNECTION	
7	POTENZA REFILATORE		20	A DISPOSIZIONE	
	POWER EDGER			AT DISPOSAL	
8	DISTRIBUZIONE LINEA 110Vca		21	MORSETTIERA QUADRO GENERALE	
	AUXILIARY FEEDING 110Vca			TERMINAL BOARD	
9	ALIMENTAZIONE LASER		22	DISPOSIZIONE MATERIALI IN ARMADIO MULTILAMA	
	LASER ALIMENTATION			MATERIAL DISPOSITION OF THE ELECTRIC CUBICLE	
10	SICUREZZE		23	ELENCO MATERIALI IN ARMADIO MULTILAMA	
	SAFETY			MATERIAL LIST OF THE ELECTRIC CUBICLE	
11	AUSILIARI LAME		24	ELENCO MATERIALI IN ARMADIO MULTILAMA	
	BLADES AUXILIARIES			MATERIAL LIST OF THE ELECTRIC CUBICLE	
12	AUSILIARI TAPPETO E PRESSORE		25	LISTA MATERIALI PANNELLO DI COMANDO	
	TRACK AND GROUPE PRESSURE AUX.			MATERIALS LIST ON THE CONTROL BOARD	

Note :

REV.	MODIFICA	DATA	FIRMA	APPR.

DATA 22/08/2006
DISEGN. V.I.
VISTO

HUDEK–FIERA
J350R CON S7-200
50HP – 400V – 50Hz

SOST. IL : SOST. DA :

C.M.L.
V.I.

LISTA FOGLI
INDEX OF ELECTRIC DIAGRAM

MACCHINA N.
59

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FG. 2
FS. 2A

LISTA FOGLI \ INDEX

Foglio Sheet	Descrizione Description	Revisione \ Revision 0 1 2 3 4 5 6 7 8 9	Foglio Sheet	Descrizione Description	Revisione \ Revision 0 1 2 3 4 5 6 7 8 9
26	LISTA MATERIALI PANNELLO DI COMANDO				
	MATERIALS LIST ON THE CONTROL BOARD				
27	LISTA MATERIALI BORDO MACCHINA				
	MATERIAL LIST OF THE MULTI-BLADES				
28	PANNELLO COMANDI MULTILAMA				
	CONTROL BOARD MULTI-BLADES				
29	DIMENSIONI PULPITO COMANDO REFILATORE				
30	PANNELLO COMANDO REFILATORE				

Note :

REV.	MODIFICA	DATA	FIRMA	APPR.		SOST. IL :	SOST. DA :
				DATA	22/08/2006		
				DISEGN.	V.I.		
				VISTO			

HUDEK–FIERA
J350R CON S7–200
50HP – 400V – 50Hz

C.M.L.
V.I.

LISTA FOGLI
INDEX OF ELECTRIC DIAGRAM

MACCHINA N.
59

FG. 2A
F.S. 3

DATI DI INSTALLAZIONE
INSTALLATION DATAS

TENSIONE DI ESERCIZIO SUPPLY VOLTAGE	400V (+/−10%)
FREQUENZA FREQUENCY	50 Hz (+/−2%)
TIPO DI ALIMENTAZIONE TYPE OF ALIMENTATION	CORRENTE ALTERNATA TRIFASE THREE−PHASE ALTERNATING CURRENT
TEMPERATURA AMBIENTE AMBIENT TEMPERATURE	30°
CORRENTE NOMINALE NOMINAL CURRENT	75 A
POTENZA POWER	40 KW
SEZIONE MINIMA RACCOMANDATA MINIMUM RECOMMENDED SECTION	3x25mm2+1G16mm2
TIPO DI CAVO CABLE TYPE	FR20R 0,6/1KV CEI20−14,20−22 II
PROTEZIONE RACCOMANDATA RECOMMENDED PROTECTION	FUSIBILE FUSE 80A gl

REV.	MODIFICA	DATA	FIRMA		
				DATA	22/08/2006
				DISEGN.	V.L.
				VISTO	
				APPR.	

HUDEK−FIERA
J350R CON S7−200
50HP − 400V − 50Hz
SOST. IL : SOST. DA :

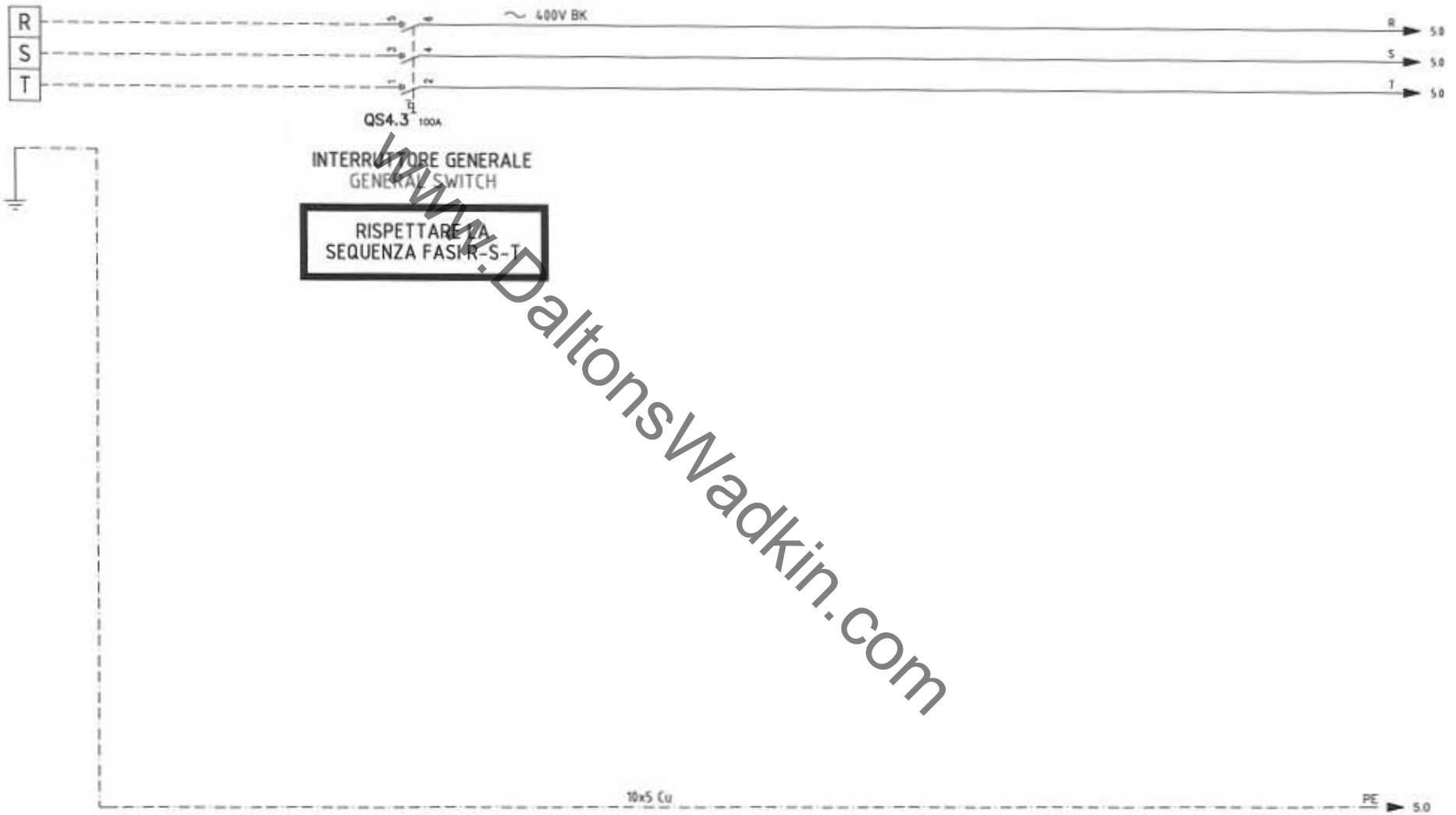
C.M.L.
V.L.

DATI DI INSTALLAZIONE
INSTALLATION DATAS

MACCHINA N.
59

FG. 3
F.S. 4

ALIMENTAZIONE GENERALE 400Vca-50Hz	GENERAL ALIMENTATION 400Vca-50Hz



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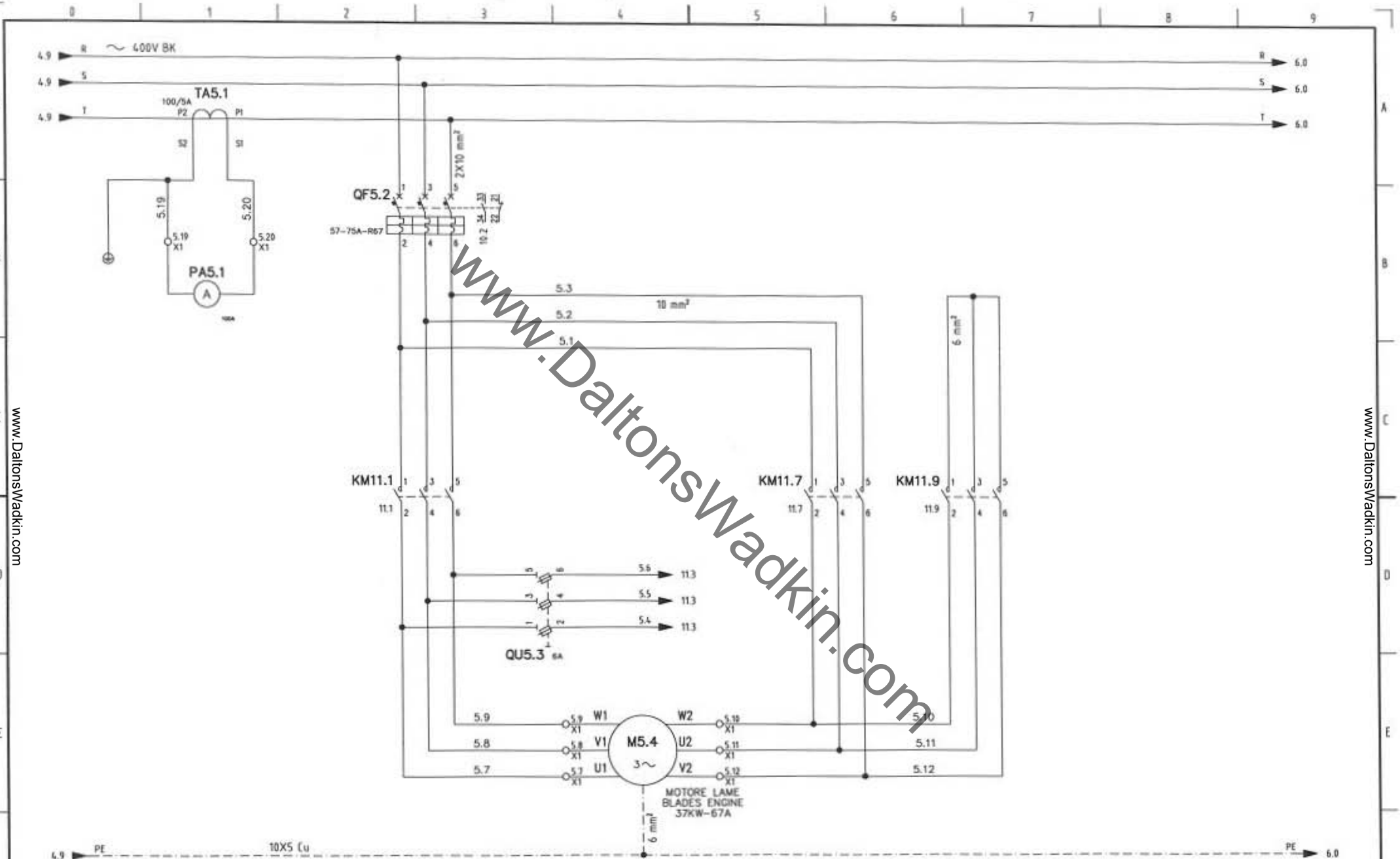
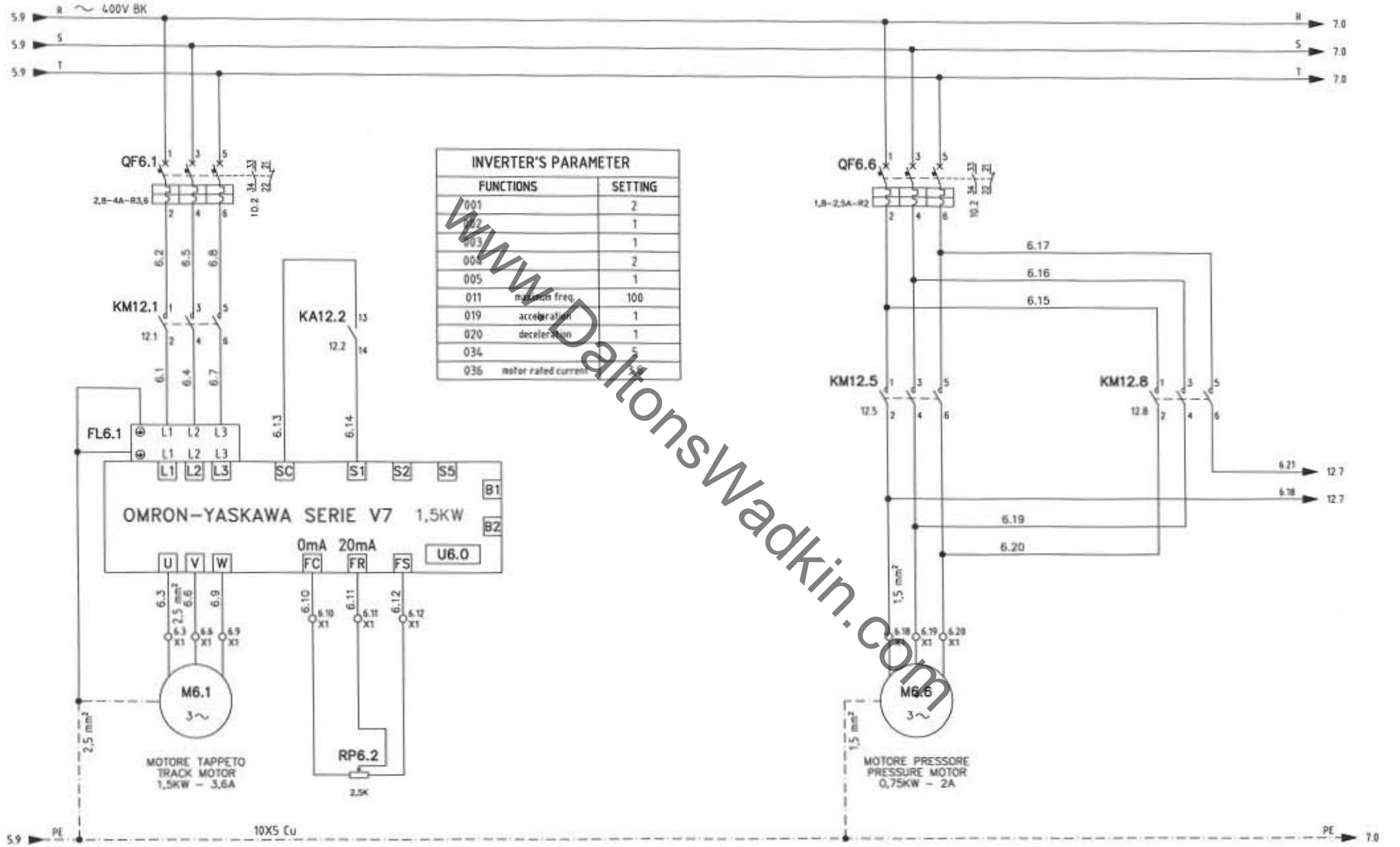
REV.	MODIFICA	DATA	FIRMA	APPR.
				DATA 22/08/2006
				DISEGN. V.I.
				VISTO

HUDEK–FIERA J350R CON S7-200 50HP – 400V – 50Hz	C.M.L. V.I.	INTERRUTTORE GENERALE *GENERAL ALIMENTATION*	MACCHINA N. 59	FG. 4 F.S. 5
SOST. IL :	SOST. DA :			



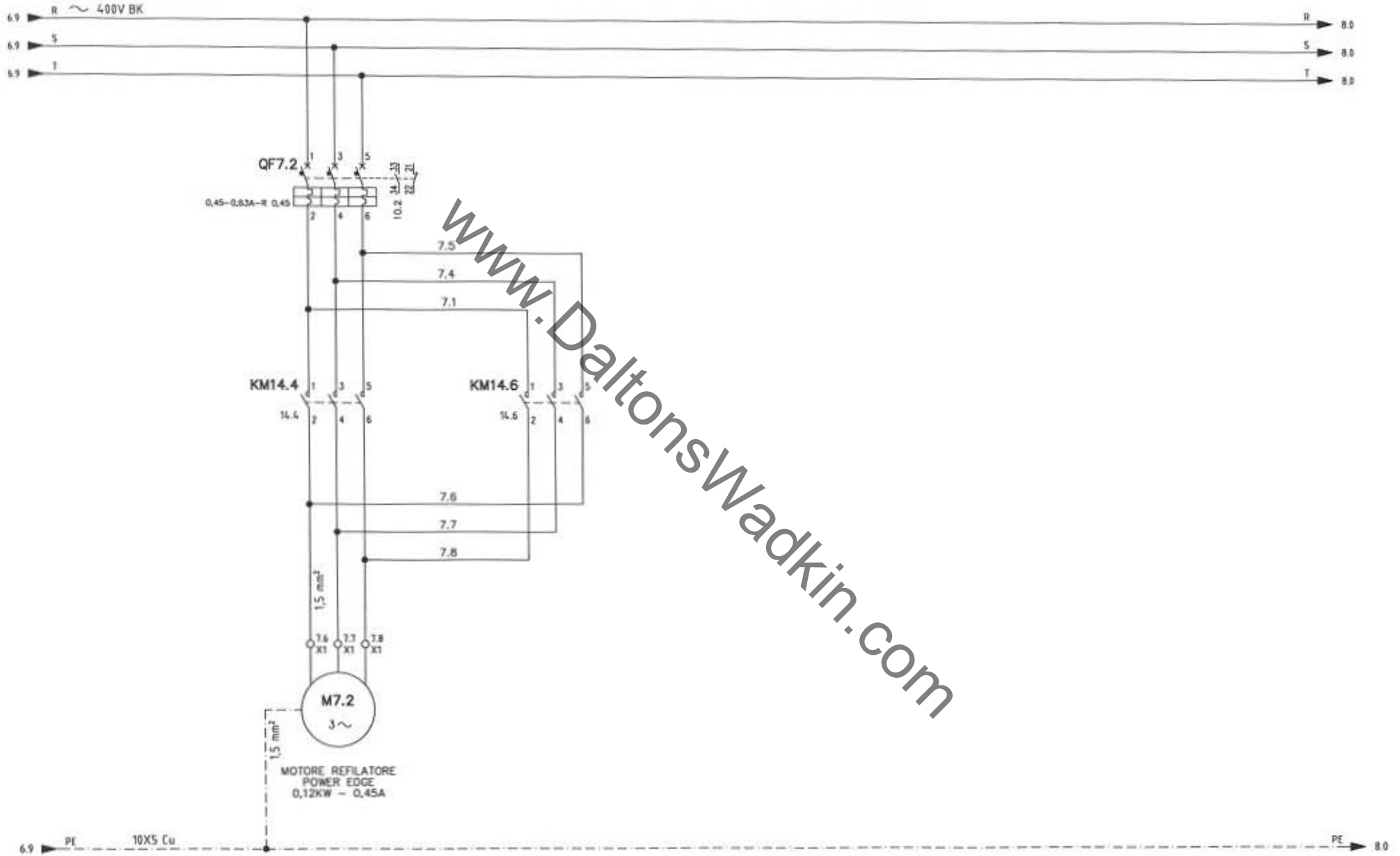
REV.	MODIFICA	DATA	FIRMA	APPR.	DATA 22/08/2006 DISEGN. V.I. VISTO
SOST. IL :	SOST. DA :	HUDEK-FIERA J350R CON S7-200 50HP – 400V – 50Hz	C.M.L. V.I.	POTENZA LAME / BLADES ENGINE	MACCHINA N. 59

FG. 5
F.S. 6



INVERTER'S PARAMETER		
FUNCTIONS		SETTING
001		2
002		1
003		1
004		2
005		1
011	maximum freq.	100
019	acceleration	1
020	deceleration	1
034		5
036	motor rated current	3,6

				DATA	22/08/2006	HUDEK-FIERA J350R CON S7-200 50HP - 400V - 50Hz	C.M.L. V.I.	POTENZA TAPPETO E PRESSORE / POWER GROUPE PRESSURE AND TRACK	MACCHINA N. 59
				DISEGN.	V.I.				
				VISTO					
REV.	MODIFICA	DATA	FIRMA	APPR.		SOST. IL :	SOST. DA :		FG. 6 / FS. 7



REV.	MODIFICA	DATA	FIRMA	APPR.		SOST. IL :	SOST. DA :
				DATA	22/08/2006		
				DISEGN.	V.I.		
				VISTO			

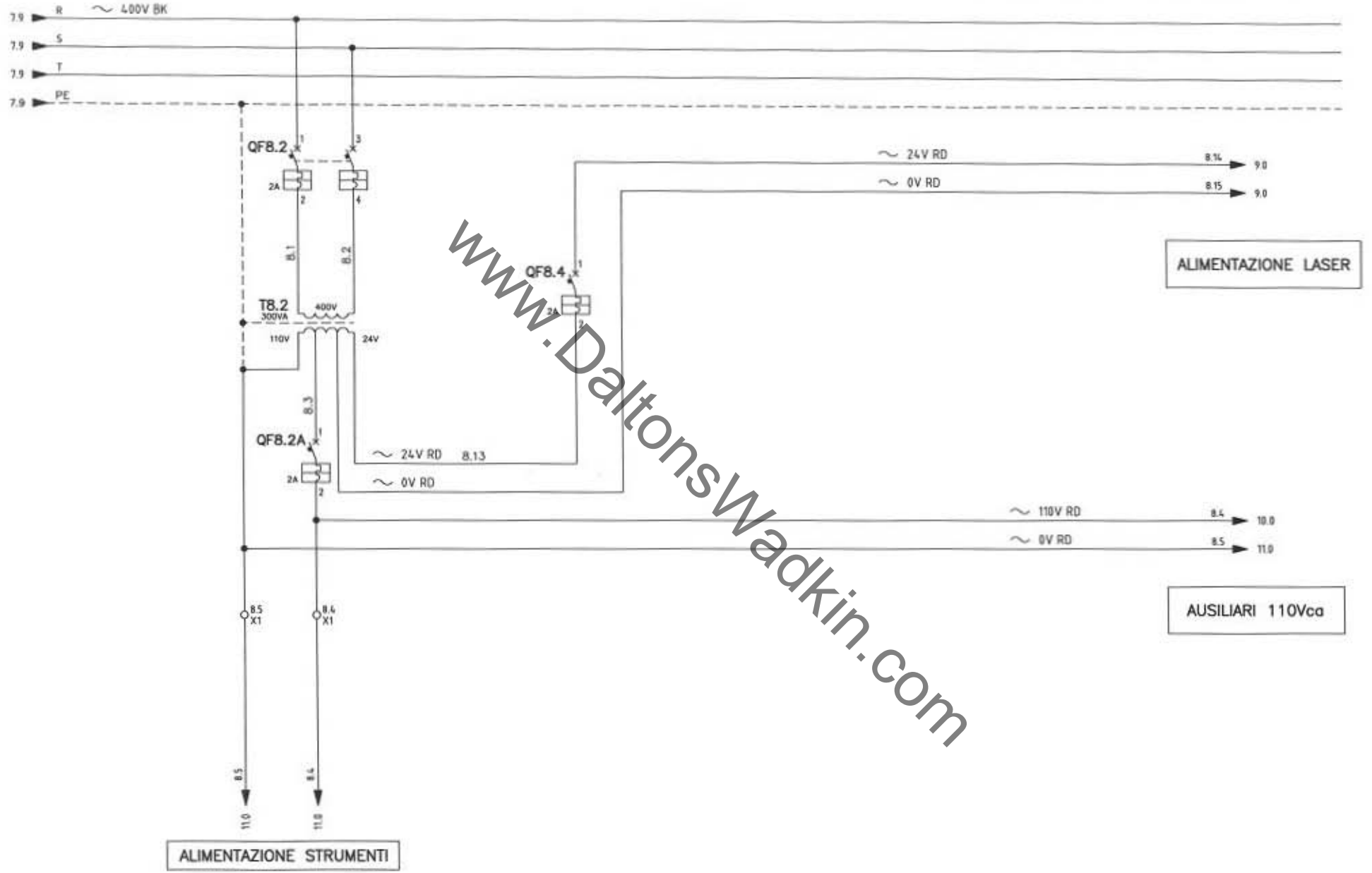
HUDEK–FIERA
J350R CON S7-200
50HP – 400V – 50Hz

C.M.L.
V.I.

POTENZA REFILATORE
POWER EDGER

MACCHINA N.
59

FG. 7
F.S. 8



REV.	MODIFICA	DATA	FIRMA	APPR.
				DATA 22/08/2006
				DISEGN. V.I.
				VISTO

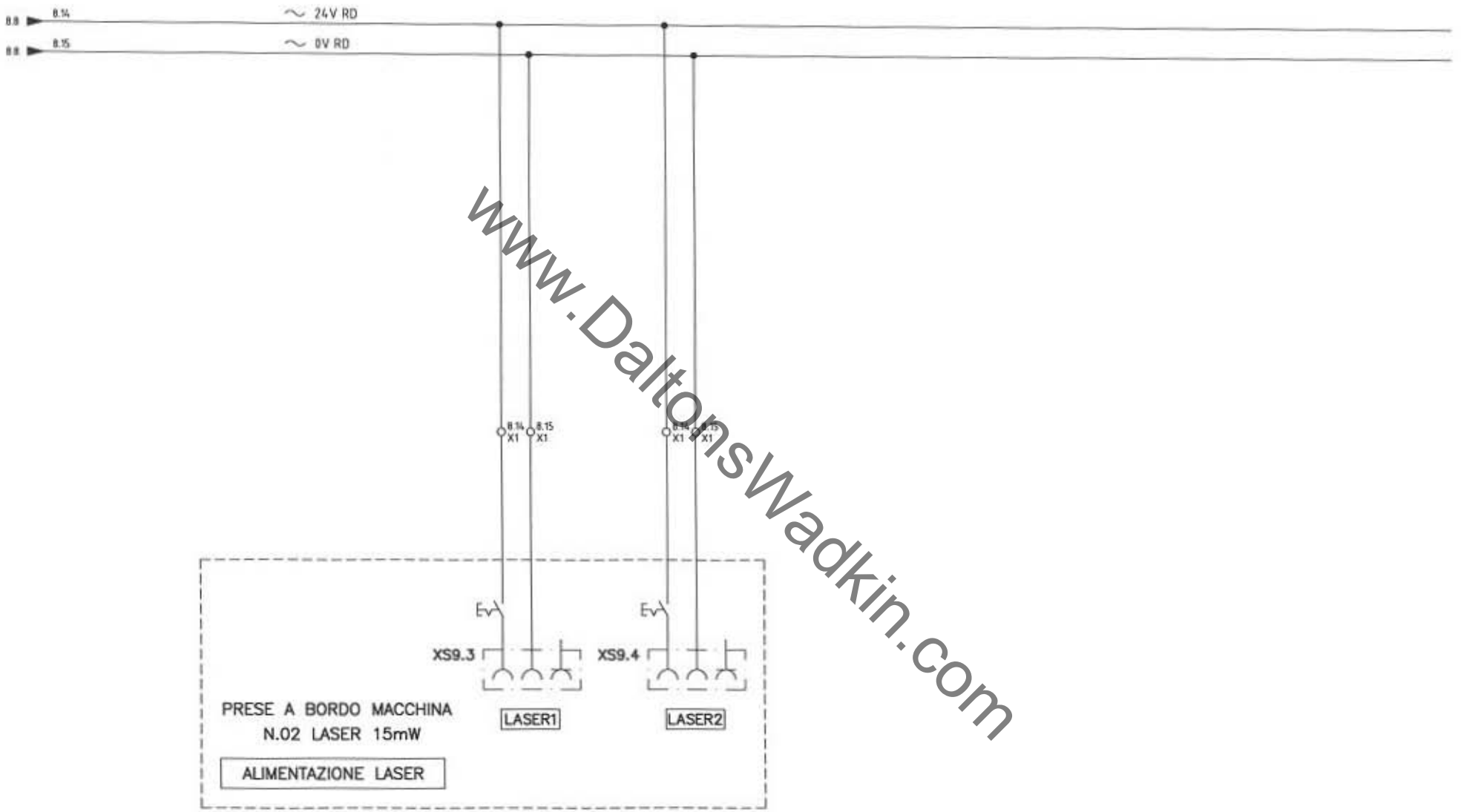
HUDEK–FIERA
J350R CON S7–200
50HP – 400V – 50Hz
SOST. IL : SOST. DA :

C.M.L.
V.I.

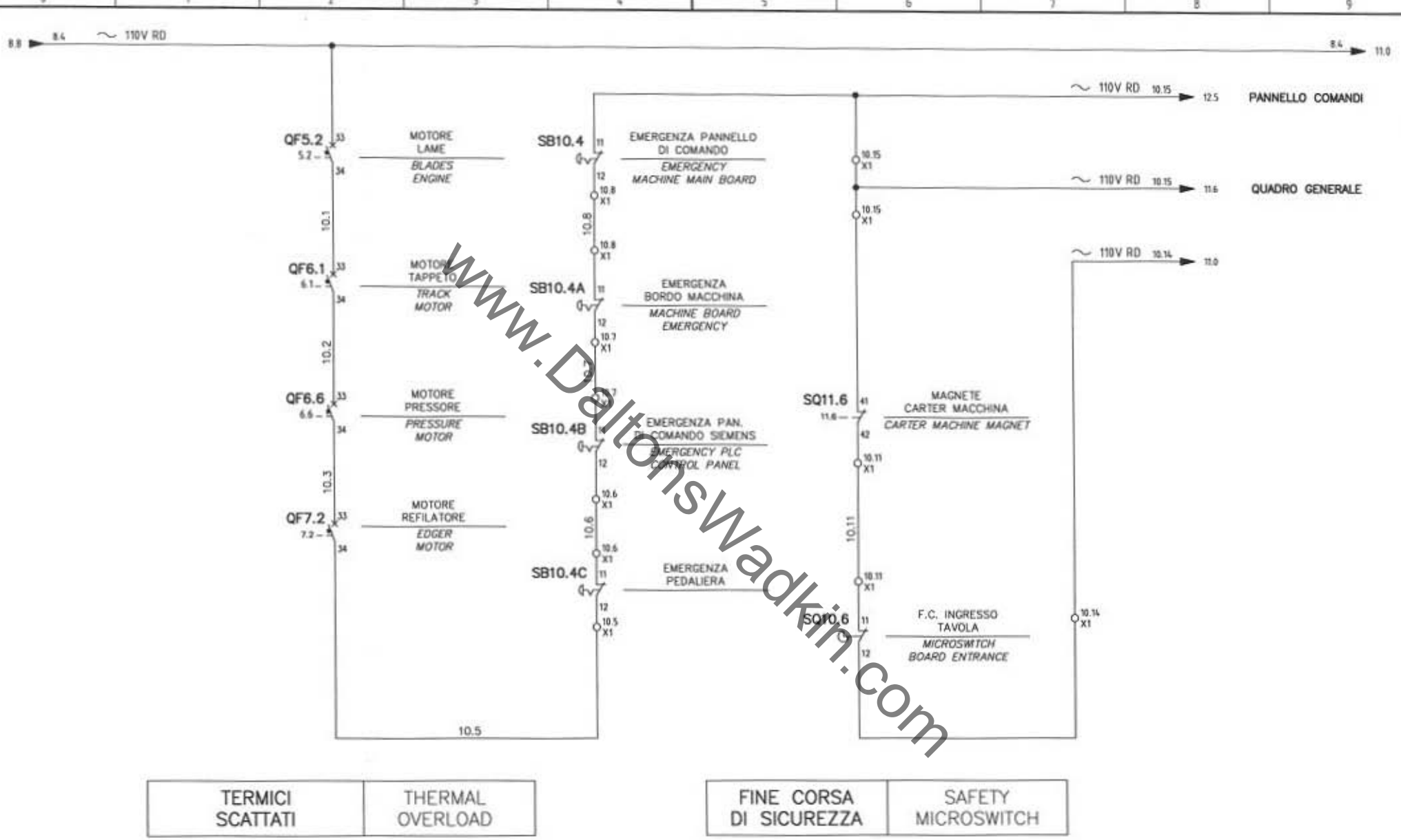
DISTRIBUZIONE LINEA 110Vca
AUXILIARY FEEDING 110Vca

MACCHINA N. 59

FG. 8
F.S. 9



				DATA	22/08/2006	HUDEK–FIERA J350R CON S7-200 50HP – 400V – 50Hz	C.M.L. V.I.	ALIMENTAZIONE LASER *LASER ALIMENTATION*	MACCHINA N. 59	= + FG. 9 FS. 10
				DISEGN.	V.I.					
				VISTO						
REV.	MODIFICA	DATA	FIRMA	APPR.		SOST. IL :	SOST. DA :			



TERMICI SCATTATI	THERMAL OVERLOAD

FINE CORSA DI SICUREZZA	SAFETY MICROSWITCH

REV.	MODIFICA	DATA	FIRMA	APPR.
				DATA 22/08/2006
				DISEGN. V.I.
				VISTO

HUDEK–FIERA
J350R CON S7–200
50HP – 400V – 50Hz

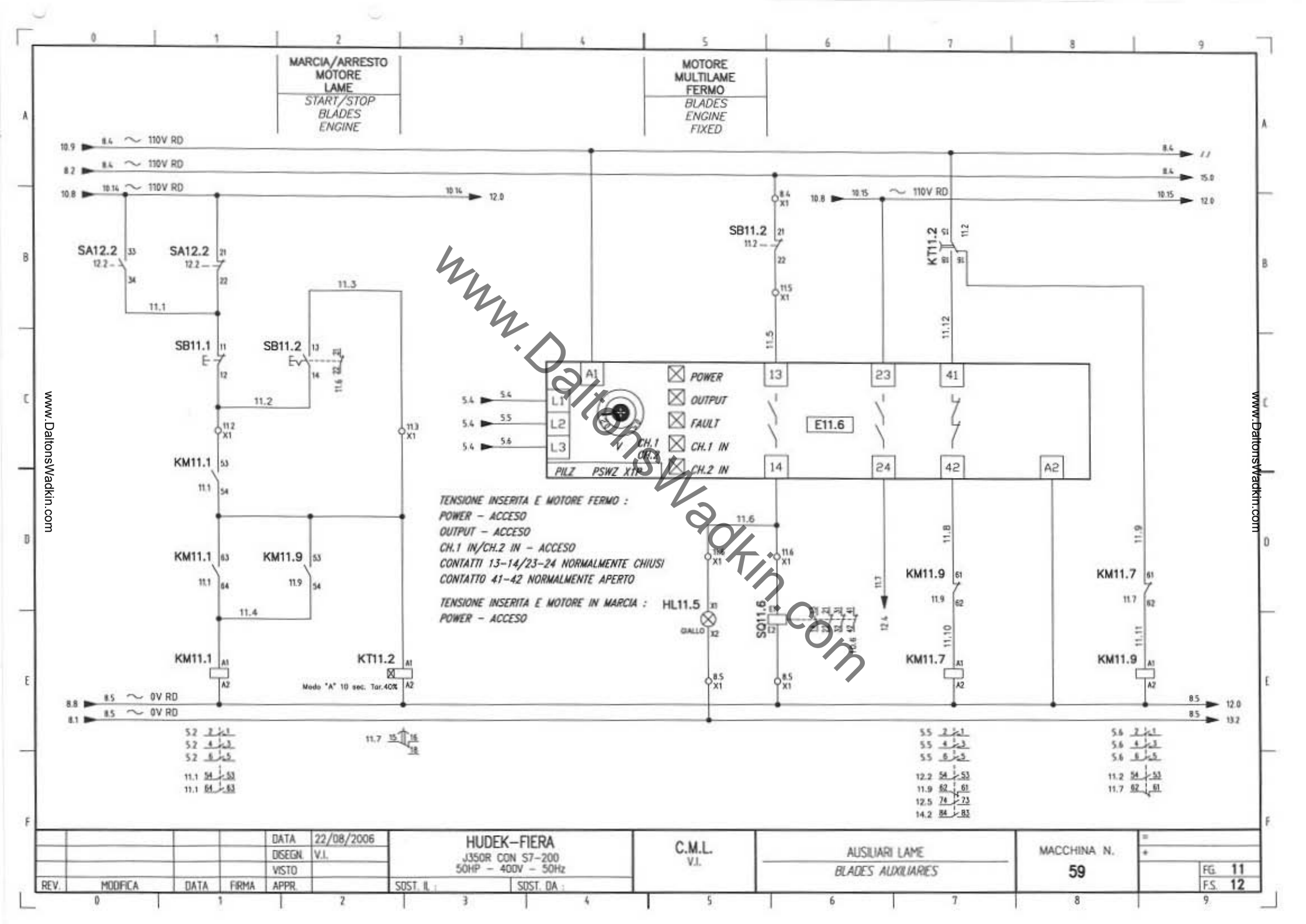
SOST. IL : | SOST. DA :

C.M.L.
V.I.

SICUREZZE
SAFETY

MACCHINA N.
59

FG. 10
FS. 11



REV.	MODIFICA	DATA	FIRMA	APPR.
				DATA 22/08/2006
				DISEGN. V.I.
				VISTO

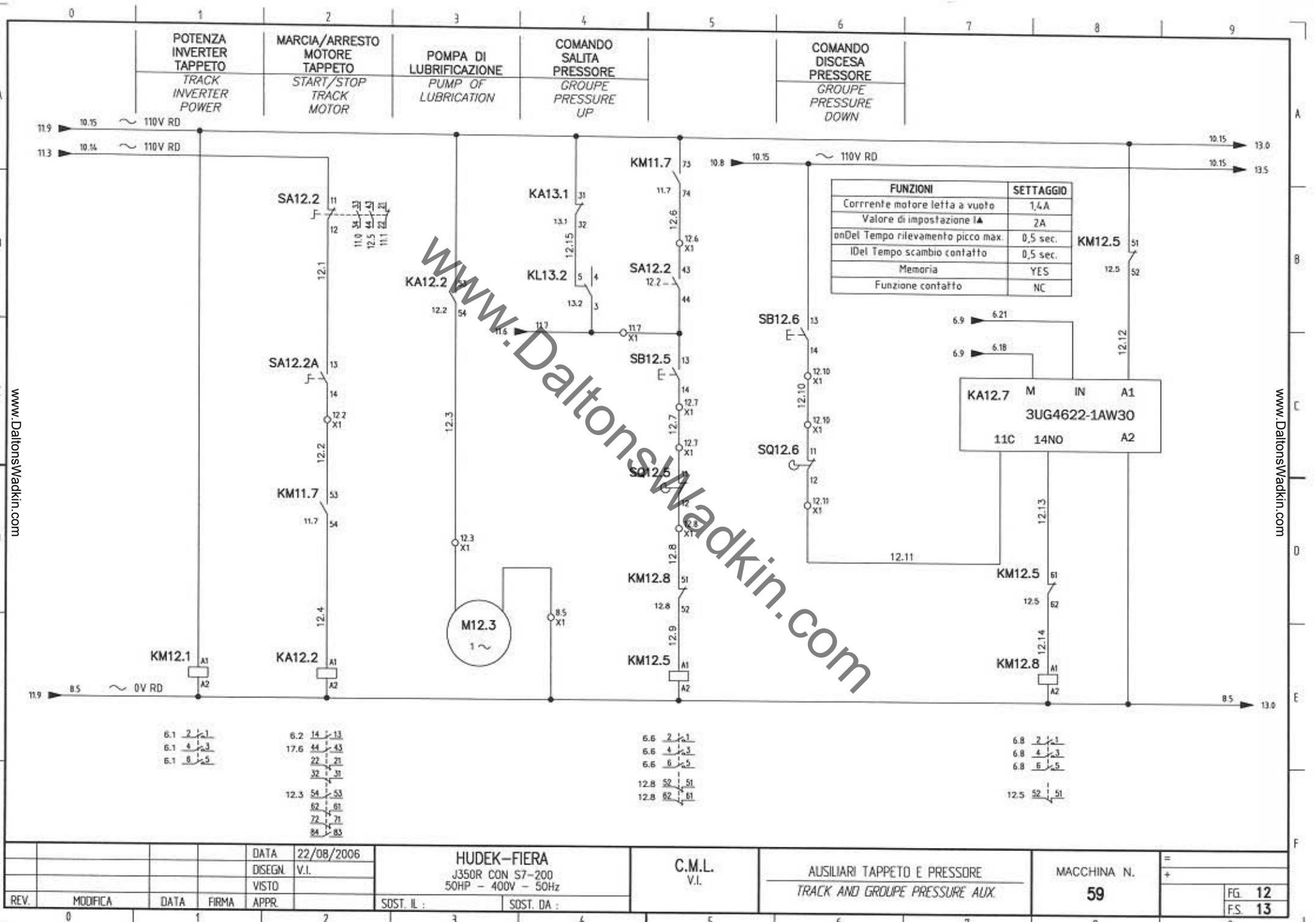
HUDEK–FIERA
J350R CON S7–200
50HP – 400V – 50Hz
SOST. IL : SOST. DA :

C.M.L.
V.I.

AUSILIARI LAME
BLADES AUXILIARIES

MACCHINA N.
59

FG. 11
F.S. 12



REV.	MODIFICA	DATA	FIRMA	APPR.
				DATA 22/08/2006
				DISEGN. V.I.
				VISTO

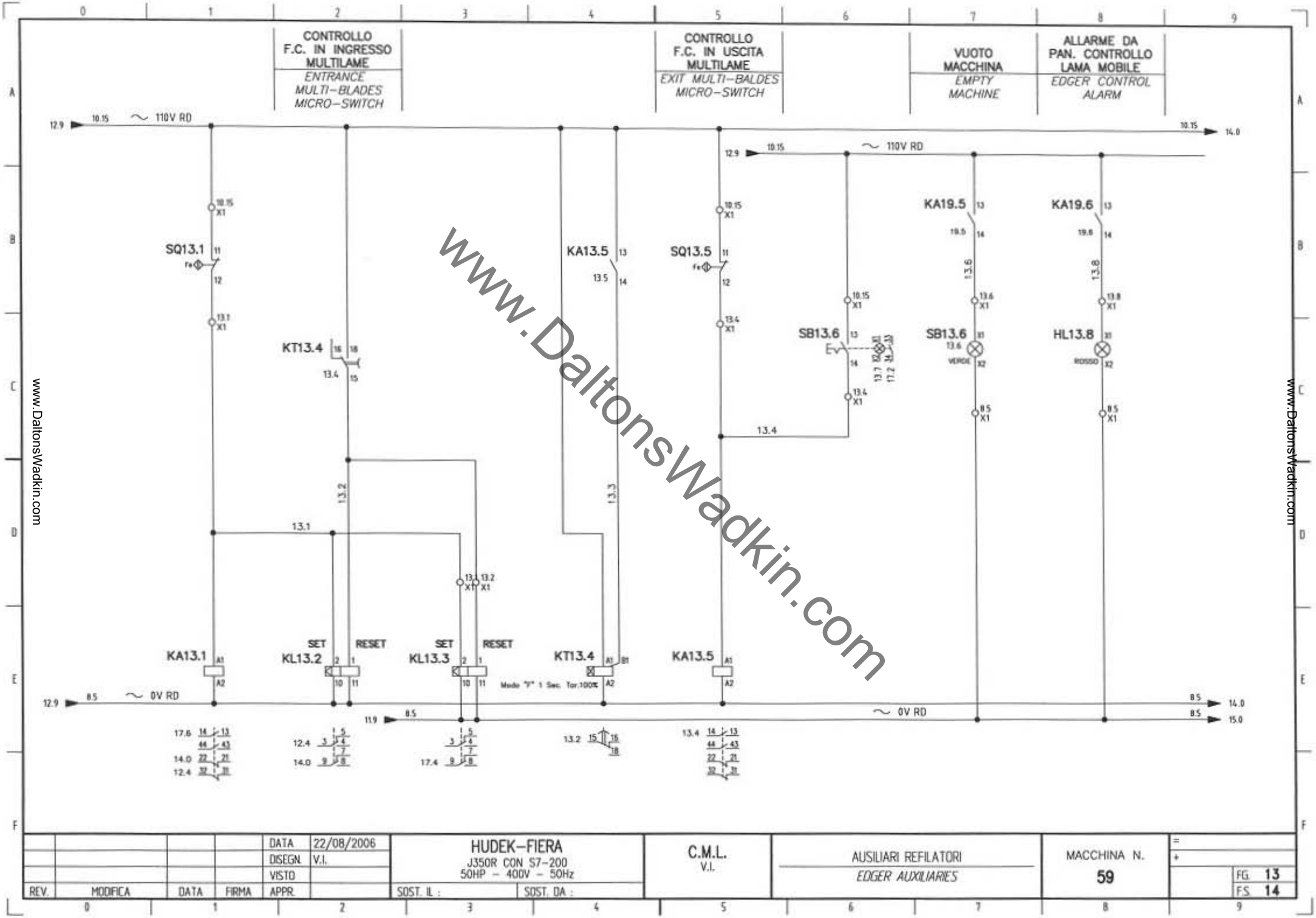
HUDEK–FIERA
J350R CON S7–200
50HP – 400V – 50Hz
SOST. IL : SOST. DA :

C.M.L.
V.I.

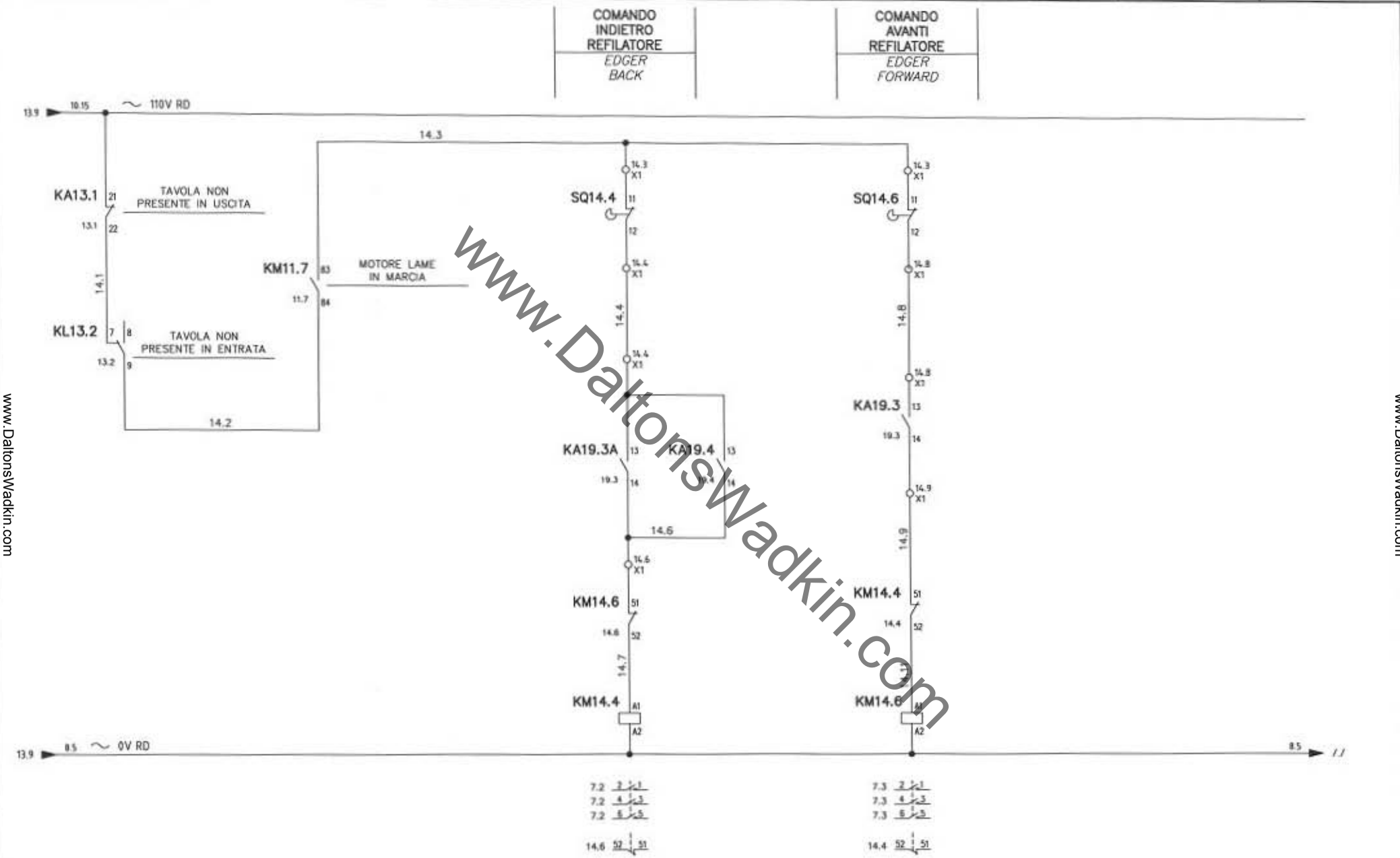
AUSILIARI TAPPETO E PRESSORE
TRACK AND GROUPE PRESSURE AUX.

MACCHINA N. 59

FG. 12
F.S. 13



				DATA	22/08/2006	HUDEK-FIERA J350R CON S7-200 50HP - 400V - 50Hz	C.M.L. V.I.	AUSILIARI REFILATORI / EDGER AUXILIARIES	MACCHINA N. 59	=	
				DISEGN.	V.I.					+	
				VISTO							FG. 13
REV.	MODIFICA	DATA	FIRMA	APPR.		SOST. IL :	SOST. DA :				FS. 14



REV.	MODIFICA	DATA	FIRMA	APPR.
				DATA 22/08/2006
				DISEGN. V.I.
				VISTO

HUDEK–FIERA
J350R CON S7-200
50HP – 400V – 50Hz

SOST. IL : SOST. DA :

C.M.L.
V.I.

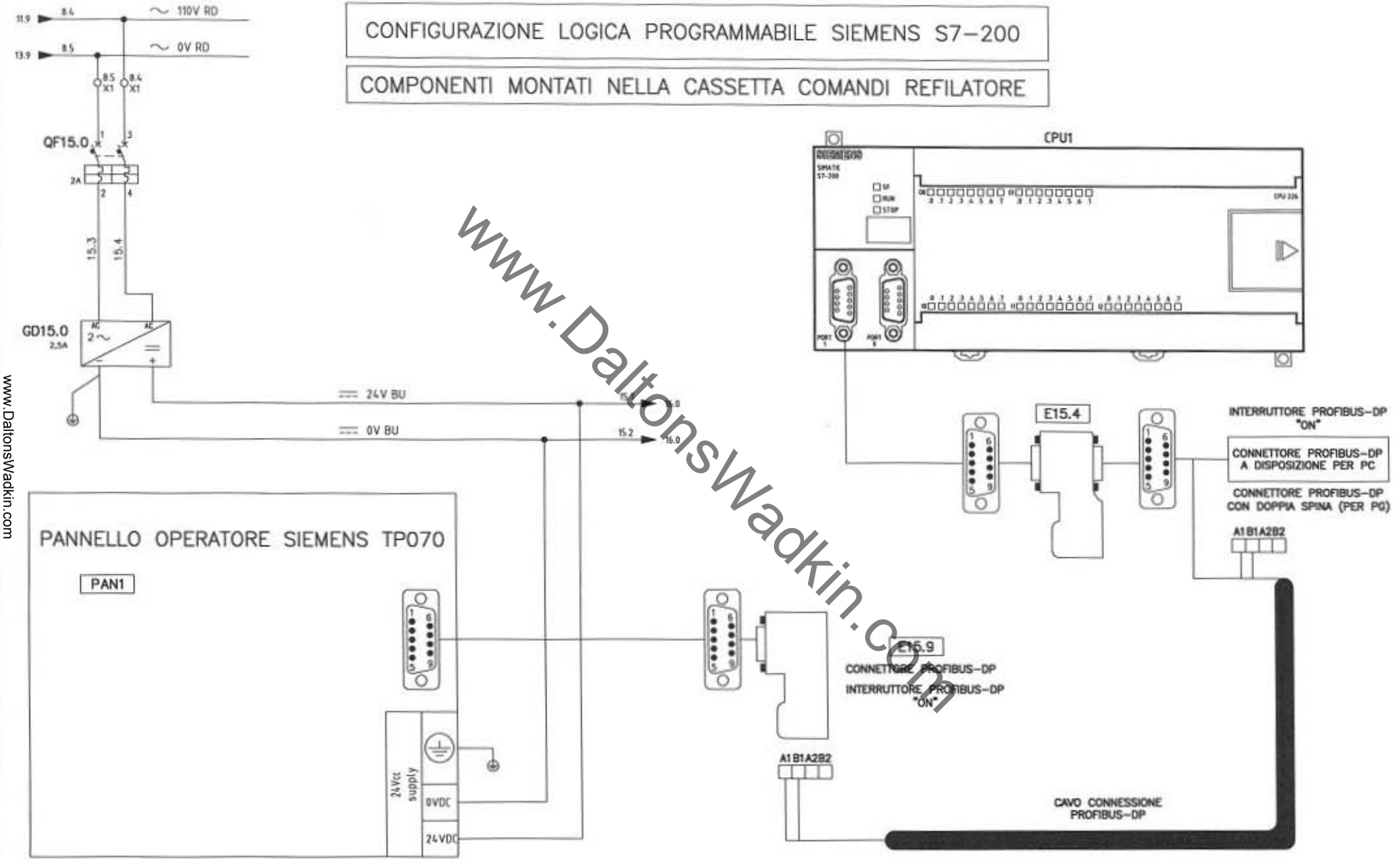
AUSILIARI REFILATORE
EDGER AUXILIARIES

MACCHINA N. 59

FG. 14
FS. 15

CONFIGURAZIONE LOGICA PROGRAMMABILE SIEMENS S7-200

COMPONENTI MONTATI NELLA CASSETTA COMANDI REFILATORE



REV.	MODIFICA	DATA	FIRMA	APPR.
				DATA 22/08/2006
				DISEGN. V.I.
				VISTO

SOST. IL :	SOST. DA :

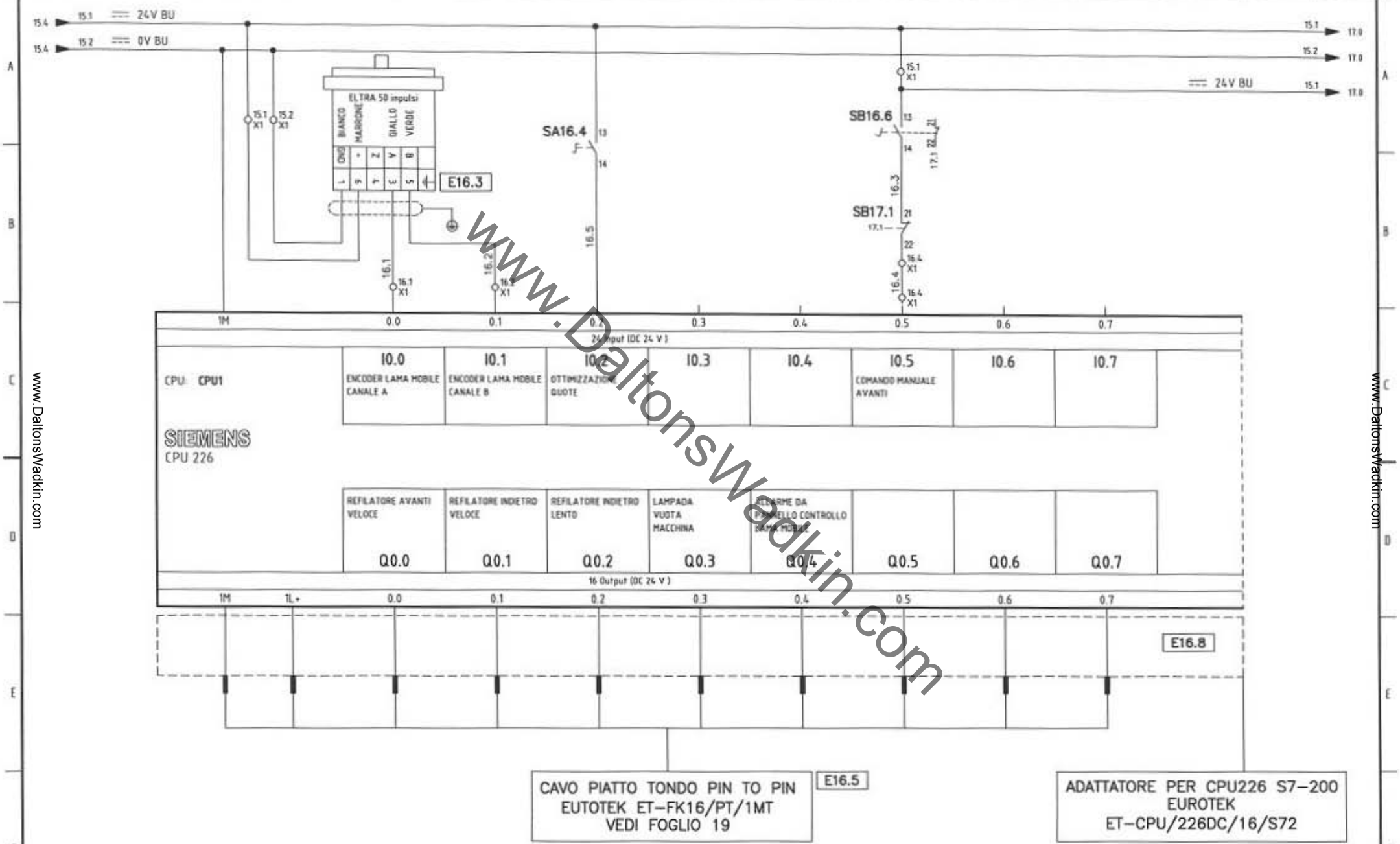
HUDEK-FIERA
J350R CON S7-200
50HP - 400V - 50Hz

C.M.L.
V.I.

CONFIGURAZIONE LOGICA S7-200
S7-200 PLC CONFIGURATION

MACCHINA N.
59

FG. 15
FS. 16



REV.	MODIFICA	DATA	FIRMA	APPR.
				DATA 22/08/2006
				DISEGN. V.I.
				VISTO

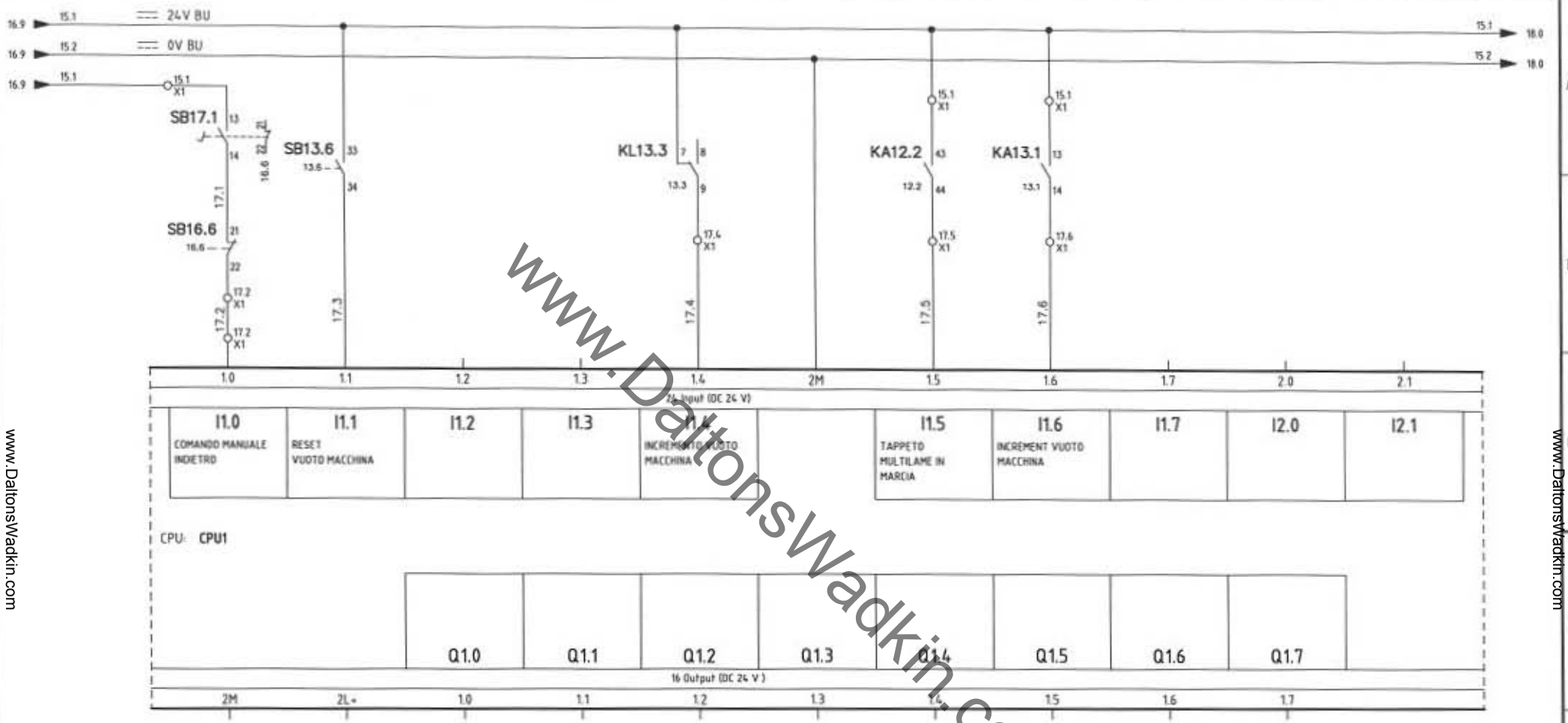
HUDEK-FIERA
J350R CON S7-200
50HP - 400V - 50Hz
SOST. IL : SOST. DA :

C.M.L.
V.I.

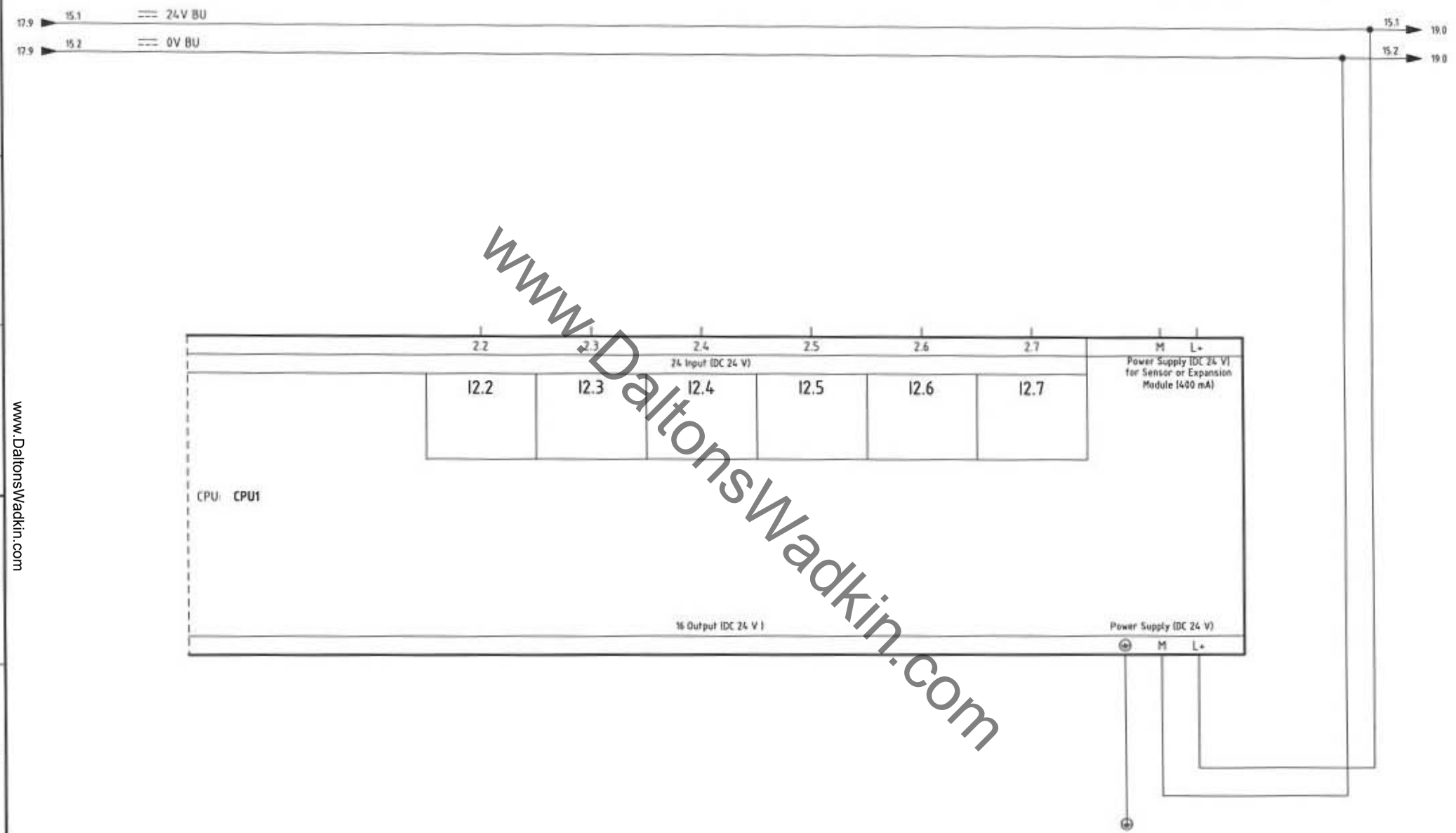
INGRESSI/USCITE S7-200
ENTRANCES AND OUTGOING PLC S7-200

MACCHINA N. 59

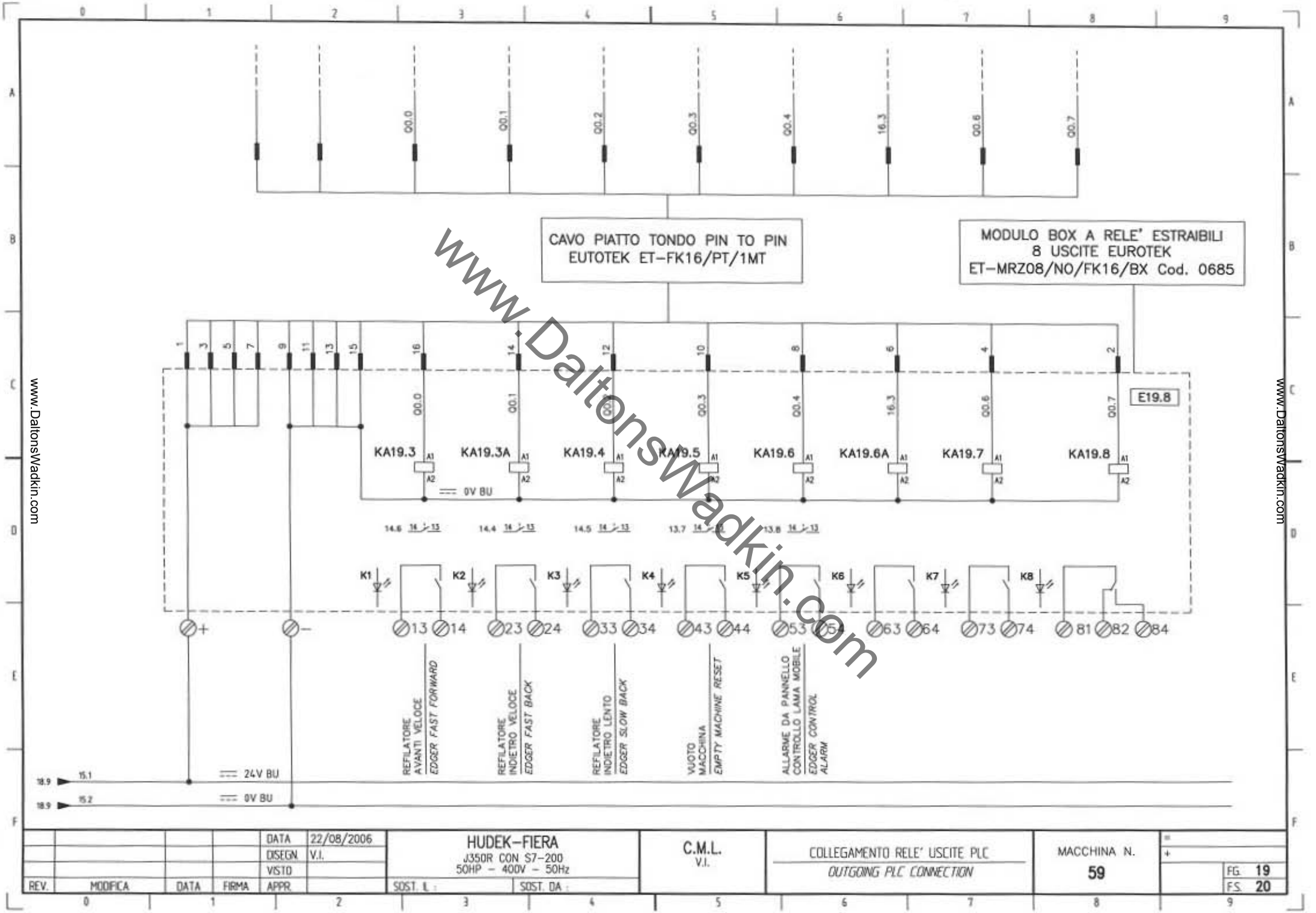
FG. 16
F.S. 17



REV.	MODIFICA	DATA	FIRMA	APPR.	DATA 22/08/2006 DISEGN. V.I. VISTO	HUDEK–FIERA J350R CON S7-200 50HP – 400V – 50Hz SOST. IL : SOST. DA :	C.M.L. V.I.	INGRESSI/USCITE S7-200 ENTRANCES AND OUTGOING PLC S7-200	MACCHINA N. 59	FG. 17 FS. 18



				DATA	22/08/2006	HUDEK–FIERA J350R CON S7–200 50HP – 400V – 50Hz	C.M.L. V.I.	INGRESSI/USCITE S7-200 *ENTRANCES AND OUTGOING PLC S7-200*	MACCHINA N. 59
				DISEGN.	V.I.				
				VISTO					
REV.	MODIFICA	DATA	FIRMA	APPR.		SOST. IL :	SOST. DA :		FG. 18 FS. 19



REV.	MODIFICA	DATA	FIRMA	APPR.
				DATA 22/08/2006
				DISEGN. V.I.
				VISTO

HUDEK-FIERA
J350R CON S7-200
50HP - 400V - 50Hz

SOST. IL : SOST. DA :

C.M.L.
V.I.

COLLEGAMENTO RELE' USCITE PLC
OUTGOING PLC CONNECTION

MACCHINA N.
59

FG. 19
FS. 20

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REV.	MODIFICA	DATA	FIRMA	APPR.		SOST. IL :	SOST. DA :
				DATA	22/08/2006	HUDEK–FIERA J350R CON S7–200 50HP – 400V – 50Hz	
				DISEGN.	V.I.		
				VISTO			

C.M.L. V.I.	A DISPOSIZIONE *AT DISPOSAL*	MACCHINA N. **59**	FG. **20** FS. **21**

QG - X1
MORSETTIERA QUADRO GENERALE

5.10	
5.11	
5.12	
5.19	
5.20	
5.7	
5.8	
5.9	
6.10	
6.11	
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10.11	
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10.8	
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11.6	
11.6	
11.7	
12.10	
12.10	
12.11	
12.2	
12.3	
12.6	
12.7	
12.7	
12.8	
13.1	
13.1	
13.2	
13.4	
13.4	
13.6	
13.8	
14.3	
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14.4	
14.4	
14.6	
14.8	
14.8	
14.9	
15.1	

15.1	
15.1	
15.1	
15.1	
15.2	
16.1	
16.2	
16.4	
16.4	
17.2	
17.2	
17.4	
17.5	
17.6	

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REV.	MODIFICA	DATA	FIRMA	APPR.
				DATA 22/08/2006
				DISEGN. V.I.
				VISTO

HUDEK–FIERA
J350R CON S7–200
50HP – 400V – 50Hz

SOST. IL : | SOST. DA :

C.M.L.
V.I.

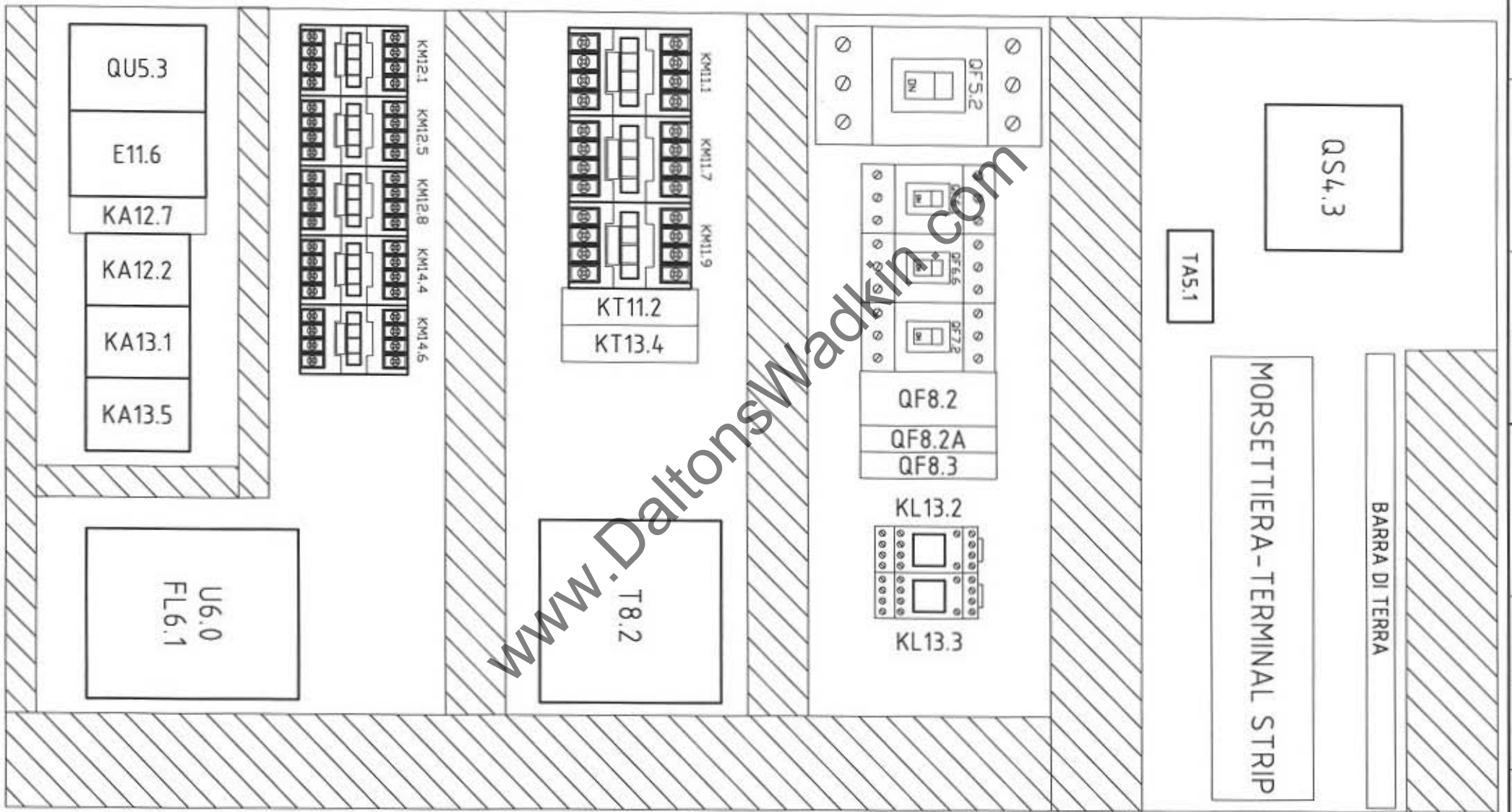
MORSETTIERA QUADRO GENERALE
TERMINAL BOARD

MACCHINA N.
59

=
+

FG. 21
F.S. 22

DISPOSIZIONE MATERIALE ARMADIO GENERALE | MATERIAL DISPOSITION OF THE ELECTRIC CUBICLE



REV.	MODIFICA	DATA	FIRMA	APPR.
				DATA 22/08/2006
				DISEGN. V.I.
				VISTO

HUDEK-FIERA
J350R CON S7-200
50HP - 400V - 50Hz

SOST. IL : | SOST. DA :

C.M.L.
V.I.

DISPOSIZIONE MATERIALI IN ARMADIO MULTILAMA
MATERIAL DISPOSITION OF THE ELECTRIC CUBICLE

MACCHINA N. 59

FG. 22
FS. 23

LISTA MATERIALI IN ARMADIO ELETTRICO | MATERIAL LIST OF THE ELECTRIC CUBICLE

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Marke	Quadro/Board	Fg/Sh	Q.ta/Q.ty
E11.6	PSWZ X1P	Dispositivo di sicurezza controllo motore fermo	PILZ	QG	11	1
FL6.1	RS3020-V7	Filtro di rete	EUROTECK	QG	6	1
GD15.0	DR 60-24	Alimentatore stabiliz. monof.	EUROTEK	QG	15	1
KA12.2	3RH1122-1AF00	Bobina rele' Ausiliario	SIEMENS	QG	12	1
	3RH1911-1FA40	Contatti aggiuntivi	SIEMENS			1
KA12.7	3UG4622-1AW30	Bobina rele' Ausiliario	SIEMENS	QG	12	1
KA13.1	3RH1122-1AF00	Bobina rele' Ausiliario	SIEMENS	QG	13	1
KA13.5	3RH1122-1AF00	Bobina rele' Ausiliario	SIEMENS	QG	13	1
KL13.2	MK2KP	Bobina ad aggancio rele'	OMRON	QG	13	1
KL13.3	MK2KP	Bobina ad aggancio rele'	OMRON	QG	13	1
KM11.1	3RT1036-1AG20 (22KW)	Bobina rele' Contattore	SIEMENS	QG	11	1
	3RH1921-1CA10	Contatto aggiuntivo N.O.	SIEMENS			1
	3RH1921-1CA10	Contatto aggiuntivo N.O.	SIEMENS			1
KM11.7	3RT1036-1AG20 (22KW)	Bobina rele' Contattore	SIEMENS	QG	11	1
	3RH1921-1CA10	Contatto aggiuntivo N.O.	SIEMENS			1
	3RH1921-1CA10	Contatto aggiuntivo N.O.	SIEMENS			1
	3RH1921-1CA10	Contatto aggiuntivo N.O.	SIEMENS			1
	3RH1921-1CA01	Contatto aggiuntivo N.C.	SIEMENS			1
KM11.9	3RT1034-1AG20 (14KW)	Bobina rele' Contattore	SIEMENS	QG	11	1
	3RH1921-1CA10	Contatto aggiuntivo N.O.	SIEMENS			1
	3RH1921-1CA01	Contatto aggiuntivo N.C.	SIEMENS			1
KM12.1	3RT1023-1AG20(4KW)	Bobina rele' Contattore	SIEMENS	QG	12	1
KM12.5	3RT1023-1AG20(4KW)	Bobina rele' Contattore	SIEMENS	QG	12	1
	3RH1921-1CA01	Contatti aggiuntivi N.C.	SIEMENS			1
	3RH1921-1CA01	Contatti aggiuntivi N.C.	SIEMENS			1
KM12.8	3RT1023-1AG20(4KW)	Bobina rele' Contattore	SIEMENS	QG	12	1
	3RH1921-1CA01	Contatti aggiuntivi N.C.	SIEMENS			1
KM14.4	3RT1023-1AG20 (4KW)	Bobina rele' Contattore	SIEMENS	QG	14	1
	3RH1921-1CA01	Contatto aggiuntivo N.C.	SIEMENS			1
KM14.6	3RT1023-1AG20 (4KW)	Bobina rele' Contattore	SIEMENS	QG	14	1
	3RH1921-1CA01	Contatto aggiuntivo N.C.	SIEMENS			1
KT11.2	3RP1505-1AQ30	Timer multifunzione	SIEMENS	QG	11	1
KT13.4	3RP1505-1AQ30	Timer multifunzione	SIEMENS	QG	13	1
QF5.2	3RV1041-4KA10	Int. autom. magnet. tripol.	SIEMENS	QG	5	1
	3RV1901-1E	Contatti aggiuntivi	SIEMENS			1
QF6.1	3RV1011-1EA10	Int. autom. magnet. tripol.	SIEMENS	QG	6	1
	3RV1901-1E	Contatti aggiuntivi	SIEMENS			1
QF6.6	3RV1011-1CA10	Int. autom. magnet. tripol.	SIEMENS	QG	6	1
	3RV1901-1E	Contatti aggiuntivi	SIEMENS			1
QF7.2	3RV1011-0GA10	Int. autom. magnet. tripol.	SIEMENS	QG	7	1
	3RV1901-1E	Contatti aggiuntivi	SIEMENS			1
QF8.2	5SY42 D2	Int. autom. magnet. bipol.	SIEMENS	QG	8	1
QF8.4	5SY41 D2	Int. autom. magnet. unipol.	SIEMENS	QG	8	1

REV.	MODIFICA	DATA	FIRMA	APPR.
				DATA 22/08/2006
				DISEGN. V.I.
				VISTO

HUDEK–FIERA
J350R CON S7–200
50HP – 400V – 50Hz
SOST. IL : SOST. DA :

C.M.L.
V.I.

ELENCO MATERIALI IN ARMADIO MULTILAMA
MATERIAL LIST OF THE ELECTRIC CUBICLE

MACCHINA N.
59

FG. 23
FS. 24

LISTA MATERIALI IN ARMADIO ELETTRICO | MATERIAL LIST OF THE ELECTRIC CUBICLE

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Marke	Quadro/Board	Fg/Sh	Q.ta/Q.ty
QF15.0	5SY42 D2	Int. autom. magnet. bipol.	SIEMENS	QG	15	1
QF8.2A	5SY41 D2	Int. autom. magnet. unipol.	SIEMENS	QG	8	1
QS4.3	BTD100	Sezionatore tripolare 100A	COET	QG	4	1
QU5.3	3NW7031 10,3x38	Sezionatore con fusibile manu. trip.	SIEMENS	QG	5	1
T8.2	TLCML 300A	Trasf. monofase con schermo	BERTOSSI	QG	8	1
TA5.1	MAC 62/30 100/5A	Trasformatore amperometrico (5In)	ESAM	QG	5	1
U6.0	CIMR-V7AZ41P5	Inverter trifase 400V	OMRON-YASKAWA	QG	6	1

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REV.	MODIFICA	DATA	FIRMA	APPR.
				DATA 22/08/2006
				DISEGN. V.I.
				VISTO

HUDEK–FIERA
J350R CON S7–200
50HP – 400V – 50Hz
SOST. IL : SOST. DA :

C.M.L.
V.I.

ELENCO MATERIALI IN ARMADIO MULTILAMA
MATERIAL LIST OF THE ELECTRIC CUBICLE

MACCHINA N.
59

FG. 24
FS. 25

LISTA MATERIALI PANNELLO DI COMANDO | MATERIALS LIST ON THE CONTROL BOARD

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Marke	Funzione/Function [1]	Q.ta/Q.ty	Fg/Sh
CPU1	6ES7 216-2AD23-0XB0	CPU S7-200	SIEMENS	CPU COMANDO E CONTROLLO REFILATORE	1	15
	6es7-291-8ba20-0xa0	Batteria tampone	SIEMENS		1	
E15.4	6ES7 972-0BB50-0XA0	Connettore per profibus DP con presa per PG	Siemens		1	15
E15.9	6ES7 972-0BB50-0XA0	Connettore per profibus DP	SIEMENS		1	15
E16.5	ET-FK16/PT/1MT	Cavo piatto tonto pin to pin	EUROTECK		1	16
E16.8	ET-CPU-226DC/16/S72	Adattatore per CPU226 S7-200	EUROTECK		1	16
E19.8	ET-MRZ08/NO/FK16/BX Code 0685	Modulo box a relè estraibili 8 uscite	EUROTECK	SCHEDA A RELE' COMANDO E CONTROLLO REFILATORE	1	19
HL11.5	233E	Supporto porta-bloccaggio 3 moduli	Baco	LMAPADA MOTORE LAME FERMO	1	11
	23EA	Elemento portalampada ad alimentazione diretta	Baco		1	
	C20SA40	Indicatore luminoso giallo	Baco		1	
HL13.8	233E	Supporto porta-bloccaggio 3 moduli	Baco	LAMPADA ALLARME DA CONTROLLO NUMERICO REFILATORE	1	13
	23EA	Elemento portalampada ad alimentazione diretta	Baco		1	
	C20SA10	Indicatore luminoso rosso	Baco		1	
PA5.1	MI 48 100A	Amperometro 48x48 100A Sin	ESAM	AMPEROMETRO CORRENTE MOTORE LAME	1	5
PAN1	TP070 6AV6 545-0AA15-2AX0	Pannello di comando	SIEMENS	PANNELLO OPERATORE COMANDO REFIALTORE	1	15
RP6.2	C21RP03	Porta potenziometro	Baco	POTENZIOMETRO REGOLAZIONE VELOCITA' TAPPETO	1	6
	POT 2,5K	Potenziometro 2,5K	Baco		1	
SA12.2	234E	Supporto porta-bloccaggio 3 moduli per blocco contatti N.O.+N.C.	Baco	SELETTORE TAGLIO TAVOLETTA	1	12
	23E11	Elemento di contatto N.C.+N.O.	Baco		1	
	23E11	Elemento di contatto N.C.+N.O.	Baco		1	
	C21KA03	Selettore 2 pos. 0-1 leva corta	Baco		1	
SA16.4	233E	Supporto porta-bloccaggio 3 moduli	Baco	SELETTORE OTILIZZATORE	1	16
	23E10	Elemento di contatto N.O.	Baco		1	
	C21KA03	Selettore 2 pos. 0-1 leva corta	Baco		1	
SA12.2A	233E	Supporto porta-bloccaggio 3 moduli	Baco	SELETTORE START/STOP MOTORE TAPPETO	1	12
	23E10	Elemento di contatto N.O.	Baco		1	
	C21KA03	Selettore 2 pos. 0-1 leva corta	Baco		1	
SB10.4	ZB4-BS844	TESTA PULSANTE A FUNGO ROSSO DI SICUREZZA	Telemecanique	PULSANTE D'EMERGENZA PANNELLO DI COMANDO	1	10
	ZB4-BZ102	CORPO CONTATTI In.01 CONTATTO N.C.)	Telemecanique		1	
SB11.1	233E	Supporto porta-bloccaggio 3 moduli	Baco	PULSANTE STOP MOTORE LAME	1	11
	23E01	Elemento di contatto N.C.	Baco		1	
	23E10	Elemento di contatto N.O.	Baco		1	
	V62QA02	Pulsante doppio tasto I-0 a filo ghiera	Baco		1	
SB11.2		Vedi SB11.1		PULSNATE MARCIA MOTORE LAME	1	11
SB12.5	233E	Supporto porta-bloccaggio 3 moduli	Baco	PULSANTE SALITA PRESSORE	1	12
	23E01	Elemento di contatto N.C.	Baco		1	
	23E10	Elemento di contatto N.O.	Baco		1	
	V62QA22B	Pulsante doppio tasto con freccie bianche a filo ghiera	Baco		1	
SB12.6		Vedi SB12.5		PULSANTE DISCESA PRESSORE	1	12
SB13.6	233E	Supporto porta-bloccaggio 3 moduli	Baco	PULSANTE RESET VUOTO MACCHINA	1	13
	23E10	Elemento di contatto N.O.	Baco		1	
	23EA	Elemento portalampada ad alimentazione diretta	Baco		1	
	C21AH20	Pulsante ad impulso luminoso verde filo ghiera senza siglatura	Baco		1	

REV.	MODIFICA	DATA	FIRMA	APPR.
				VISTO
				DISEGN. V.I.
				DATA 22/08/2006

HUDEK–FIERA
J350R CON S7-200
50HP – 400V – 50Hz
SOST. IL : SOST. DA :

C.M.L.
V.I.

LISTA MATERIALI PANNELLO DI COMANDO
MATERIALS LIST ON THE CONTROL BOARD

MACCHINA N.
59

=
+
FG. 25
F.S. 26

LISTA MATERIALI PANNELLO DI COMANDO | MATERIALS LIST ON THE CONTROL BOARD

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Marke	Funzione/Function [1]	Q.ta/Q.ty	Fg/Sh
SB16.6	XPE-M510	Pedaliera 1NO+1NC	TELEMECANIQUE	PEDALE COMANDO AVANTI REFILATORE	1	16
SB17.1	XPE-M510	Pedaliera 1NO+1NC	TELEMECANIQUE	PEDALE COMANDO INDIETRO REFILATORE	1	17
SB10.4B	ZB4-BS844	TESTA PULSANTE A FUNGO ROSSO DI SICUREZZA	Telemecanique	PULSANTE D'EMERGENZA PANNELLO DI COMANDO	1	10
	ZB4-BZ102	CORPO CONTATTI (n.01 CONTATTO N.C.)	Telemecanique		1	
SB10.4C	XPE-R810	Pulsante di emergenza stabile pedaliera	TELEMECANIQUE	PEDALE EMERGENZA	1	10

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REV.	MODIFICA	DATA	FIRMA	APPR.		SOST. IL :	SOST. DA :
				DATA	22/08/2006	HUDEK–FIERA J350R CON S7-200 50HP – 400V – 50Hz	
				DISEGN.	V.I.		
				VISTO			

C.M.L. V.I.

LISTA MATERIALI PANNELLO DI COMANDO / *MATERIALS LIST ON THE CONTROL BOARD*

MACCHINA N. **59**

FG. **26**
FS. **27**

LISTA MATERIALI BORDO MACCHINA | MATERIAL LIST OF THE MULTI-BLADES

Nome/Item	Tipo/Type	Descrizione/Description	Costruttore/Marke	Funzione/Function (1)	Q.ta/Q.ty	Fg/Sh
E16.3	EL63050 50 i/giro	Encoder	ELTRA	ENCODER REFILATORE	1	16
LASER1	IDT363515/24/LG	Laser	ID&T	LASER SEGNATAGLIO	1	9
LASER2	IDT363515/24/LG	Laser	ID&T	LASER SEGNATAGLIO	1	9
M5.4		Motore trifase		MOTORE LAME	1	5
M6.1		Motore trifase		MOTORE TAPPETO	1	6
M6.6		Motore trifase		MOTORE PRESSORE	1	6
M7.2		Motore trifase		MOTORE REFILATORE	1	7
M12.3		Motore monofase		MOTORE POMPA DI LUBRIFICAZIONE	1	12
SB10.4A	XAL-K178E	PULSANTE A FUNGO ROSSO IN SCATOLA COMPLETA DI N°1 CONTATTO N.O. E N.01 CONTATTO N.C.	Telemecanique	PULSANTE D'EMERGENZA BORDO MACCHINA (CASSETTA)	1	10
SQ10.6	FM525	FINECORSA METALLO A MOLLA	PIZZATO	F.C.C CONTROLLO LARGHEZZA MAX. INGRESSO TAVOLA	1	10
SQ11.6	3SE-2842-0XX01+3SE3203	Elettroserratura+Attuatore (C	SIEMENS	ELETTROMAGNETE CONTROLLO CARTER LAME CHIUSO	1	11
SQ12.5	FM525	FINECORSA METALLO A MOLLA	PIZZATO	F.C. CONTROLLO PRESSORE TUTTO ALTO	1	12
SQ12.6	FM525	FINECORSA METALLO A MOLLA	PIZZATO	F.C. CONTROLLO PRESSORE TUTTO BASSO	1	12
SQ13.1	3RG4013-3KA00	Sensore induttivo D=18mm 1NC dist=5mm	SIEMENS	F.C. CONTROLLO PEZZO INGRESSO MULTILAME	1	13
SQ13.5	3RG4013-3KA00	Sensore induttivo D=18mm 1NC dist=5mm	SIEMENS	F.C. CONTROLLO PEZZO USCITA MULTILAME	1	13
SQ14.4	FA4115	FINECORSA PRECABLATO A ROTELLA	PIZZATO	F.C. CONTROLLO REFILATORE TUTTO INDIETRO	1	14
SQ14.6	FA4115	FINECORSA PRECABLATO A ROTELLA	PIZZATO	F.C. CONTROLLO REFILATORE TUTTO AVANTI	1	14

REV.	MODIFICA	DATA	FIRMA	APPR.		SOST. IL :	SOST. DA :
				DATA	22/08/2006	HUDEK–FIERA J350R CON S7–200 50HP – 400V – 50Hz	C.M.L. V.I.
				DISEGN.	V.I.		
				VISTO			

LISTA MATERIALI BORDO MACCHINA
MATERIAL LIST OF THE MULTI-BLADES

MACCHINA N. **59**

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F.S. 28

PANNELLO COMANDI MACCHINA

COSTRUZIONI MACCHINE LEGNO

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REV.	MODIFICA	DATA	FIRMA	APPR.
				DATA 22/08/2006
				DISEGN. V.I.
				VISTO

HUDEK–FIERA
J350R CON S7-200
50HP – 400V – 50Hz

SOST. IL : SOST. DA :

C.M.L.
V.I.

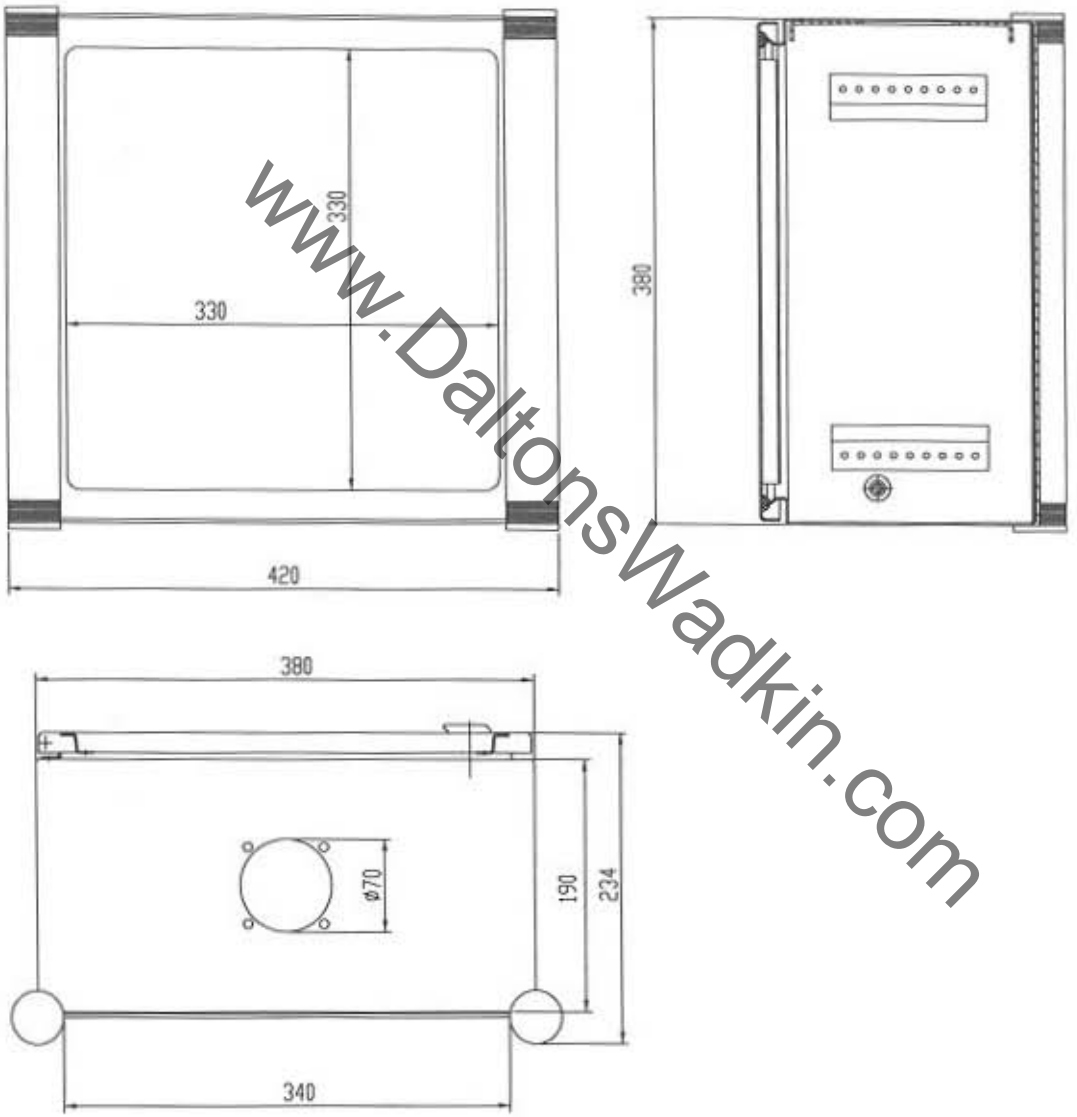
PANNELLO COMANDI MULTILAMA
CONTROL BOARD MULTI-BLADES

MACCHINA N.
59

FG. 28
F.S. 29

DIMENSIONI PULPITO COMANDO REFILATORE

CP6530.200 RITTAL



REV.	MODIFICA	DATA	FIRMA	APPR.
				DATA 22/08/2006
				DISEGN. V.I.
				VISTO

HUDEK–FIERA
J350R CON S7-200
50HP – 400V – 50Hz

SOST. IL : SOST. DA :

C.M.L.
V.I.

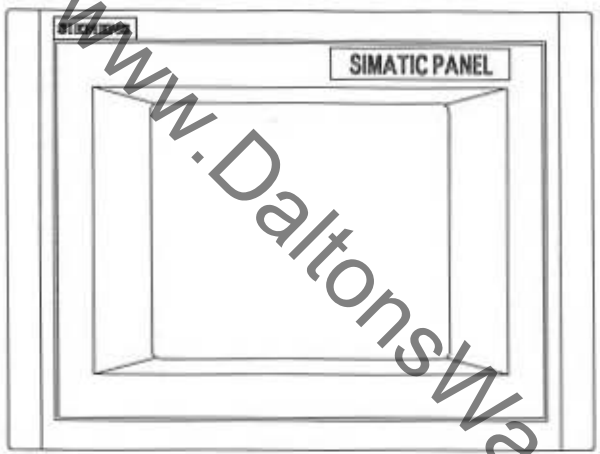
DIMENSIONI PULPITO COMANDO REFILATORE

MACCHINA N.
59

FG. 29
FS. 30

PANNELLO COMANDI REFILATORE

PANNELLO SIEMENS TP070



				DATA	22/08/2006	HUDEK-FIERA J350R CON S7-200 50HP - 400V - 50Hz	C.M.L. V.I.	PANNELLO COMANDO REFILATORE	MACCHINA N. 59
				DISEGN.	V.I.				
				VISTO					
REV.	MODIFICA	DATA	FIRMA	APPR.		SOST. IL :	SOST. DA :		

FG. 30
F.S. 1

COSTRUZIONI MACCHINE LEGNO

TOUCH SCREEN ONE MOBILE BLADE CONTROL

MANUAL INSTRUCTIONS

www.DaltonsWadkin.com

COSTRUZIONI MACCHINE LEGNO

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20060 Gessate (MI) - Italy
Tel. 0039-02/95384207
Fax 0039-02/95384223
E-mail cml-srl@cml-srl.it

INTRODUCTION

The touch-screen system is combined to an order plc, a positioning control of one or more motorized axles.

The inner memory holds all the necessary instructions for the working, the possibility to memorize up to 99 working levels and the calibration data carried out by the operator.

The 99 levels can be subdivided into working programs which the operator can manage for any type of necessary working.

The levels are pointed out by the encoders.

The necessary procedures for a correct use and the equipment programming will be described after.

SUMMARY

1 WORK CYCLES

The equipment working provides for three different cycles of work which are:

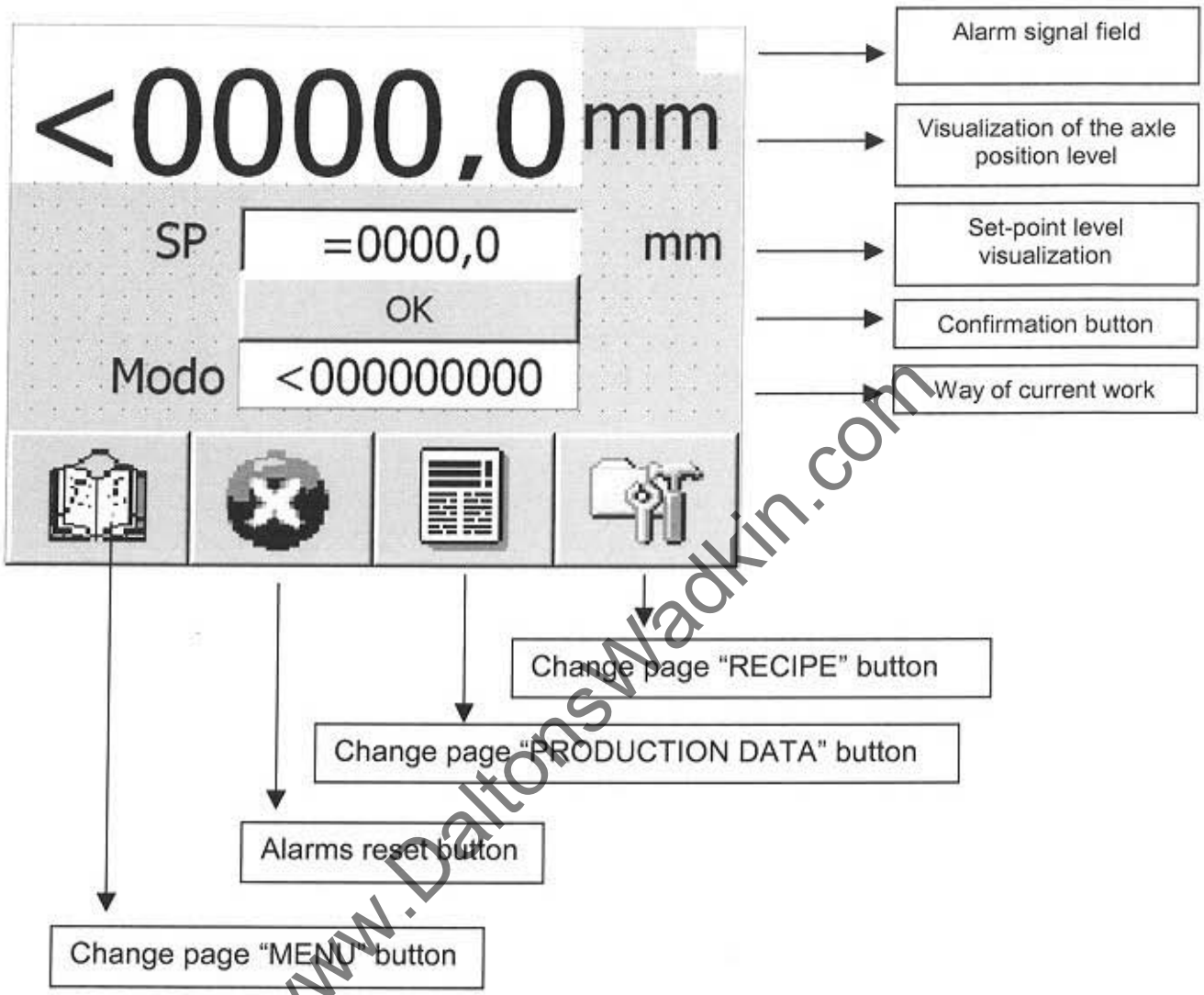
- **SEMI-AUTOMATIC CYCLE**
- **AUTOMATIC/MANUAL CYCLE**
- **OPTIMIZER CYCLE**

At the equipment ignition, after about 10 sec. (when the touch-screen loads on the display the necessary data for the working) the page relating to the last work cycle used before having turned off the equipment, will be visualized.

Normally the axle can be moved also manually by the external controls (ex: foot pedal when you are controlling a mobile blade).

1.1 SEMI-AUTOMATIC CYCLE

The order and control page of the semi-automatic cycle looks like this:

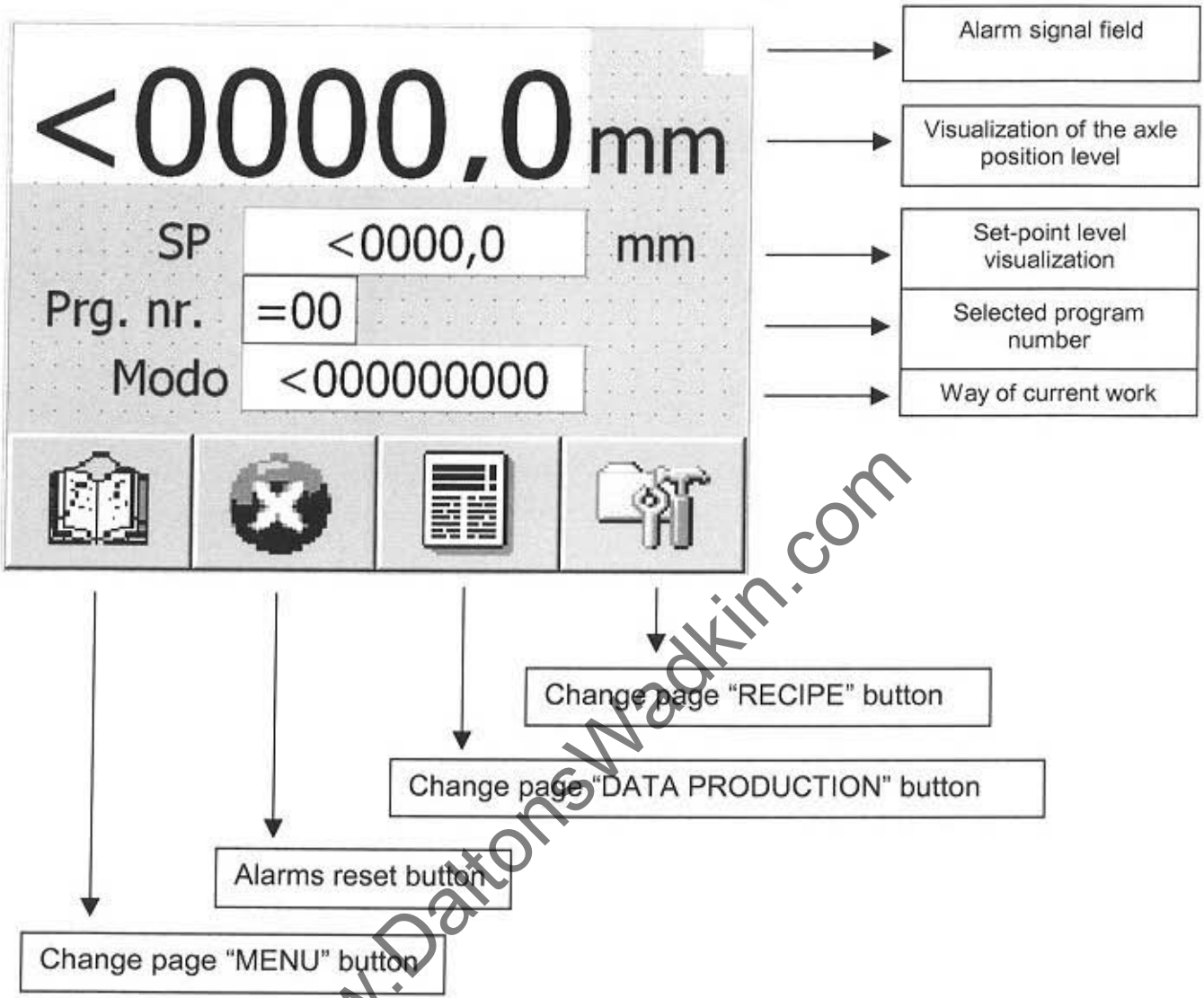


In the SEMI-AUTOMATIC work cycle you can order an axle moving in any position.
Push the field "SP" (set point) to carry out the operation, a mask where you can put the wanted value and confirm it will appear on the dispaly (button →).

In this way the selected level will be brought back to the field"SP" (set point). Push the confirmation "OK" button, consequently the axle will move to reach the wanted value.
Repeat the operations showed above to change the axle position again.
If there is an error, a number which identifies the type of the alarm will appear on the "alarm signal" field. (See chap.3).

1.2 AUTOMATIC/MANUAL CYCLE

The order and control page of the AUTOMATIC/MANUAL cycle looks like this:

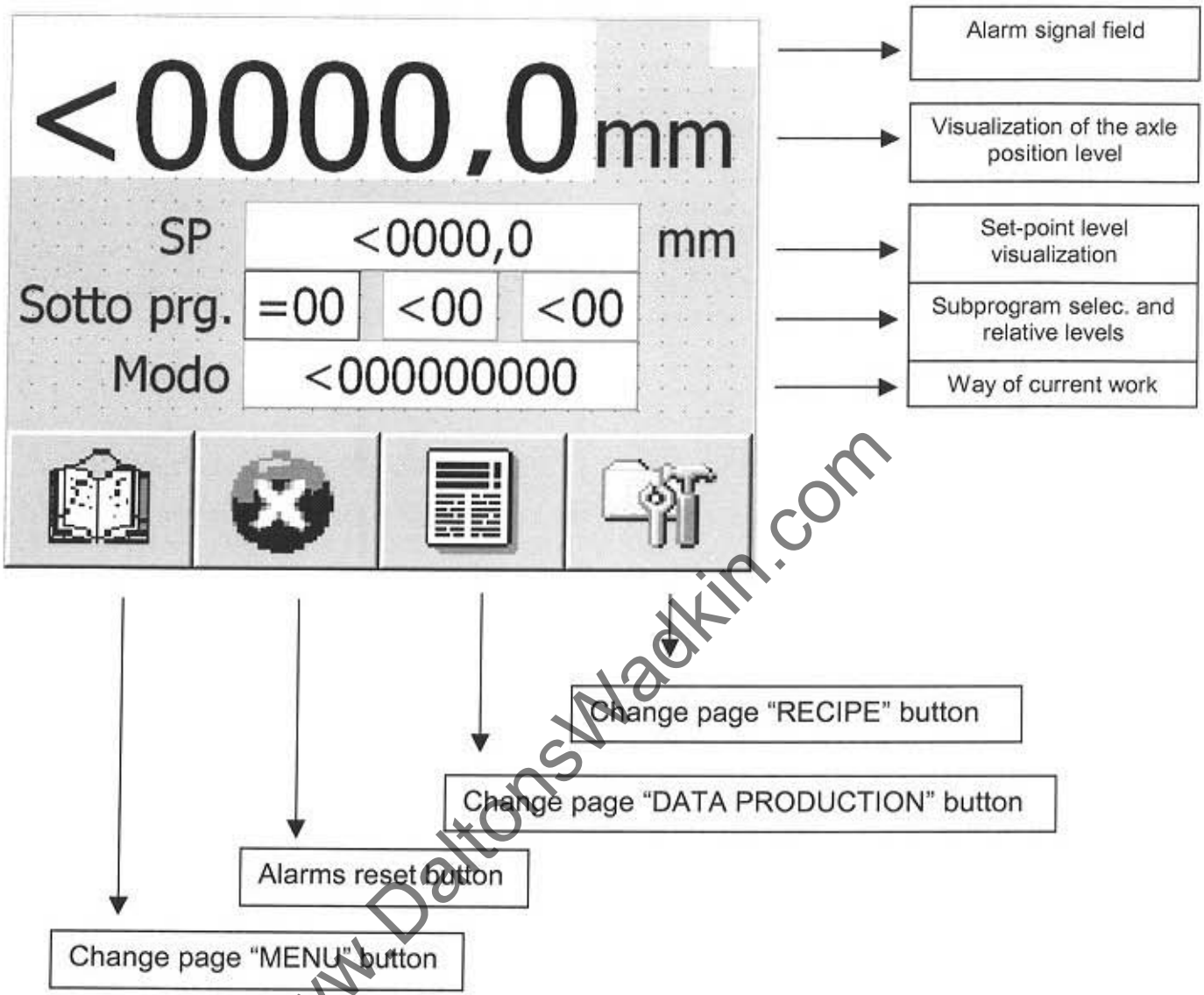


In the MANUAL/AUTOMATIC work cycle you can order an axle moving retrieving the program level among the ones which are in the levels file.
Push the"PRG.NR." field (Programma Number) to carry out the operation, a mask where you can put the wanted value (a number from 1 to 99) and confirm it , will appear on the display (button)

In this way, the loaded program number "PRG.NR." field and, consequently, the axle will move to reach the programmed value.
Repeat the operations showed above to change the axle position again.
If there is an error, a number which identifies the type of the alarm will appear in the "Alarm Signal" field. (See chap.3).

1.3 OPTIMIZER CYCLE

The order and control page of the optimizer cycle looks like this:



In the optimized work cycle you can order an axle moving acting on the external entrances (ex: foot pedals when you are controlling a mobile blade).
When you leave the controls in an indefinite position the program level nearest to the present position in the selected subprograms field is elaborated.
When the level is individuated, the axle moves to reach it.

To make a faster search, the operator can build some sub-programs including the different levels you can program, for example subprogram 1, from level 1 to level 7, so in the "Subprg" field we find the subprogram number (ex. 1) in the first field, the first program level (ex. 1) in the central field and the last program level (ex. 7) in the last field.

The level search can take place in three ways:
-MINIMUM : the searched level is always lower than the position of the orders release.
-MAXIMUM : the searched level is always greater than the position of the orders release.
-OPTIMIZEA : the searched level is the nearest to the position of the orders release.

If there is an error, a number which identifies the type of the alarm will appear in the "alarm Signal" field (see chap.3).

N.B. The way of the optimizer working can be changed only by the C.M.L. technicians.

N.B. To control the optimizer cycle,it is also necessary to train the relative entrance of the present order on the plc. Otherwise, the cycle will never be trained.

2 ORDER AND CONTROL PAGES

Here below, we report the order, control and programming pages of the touch-screen with the relative explanations for a correct use of the equipment.

2.1 "MENU" PAGES

The page looks like this:

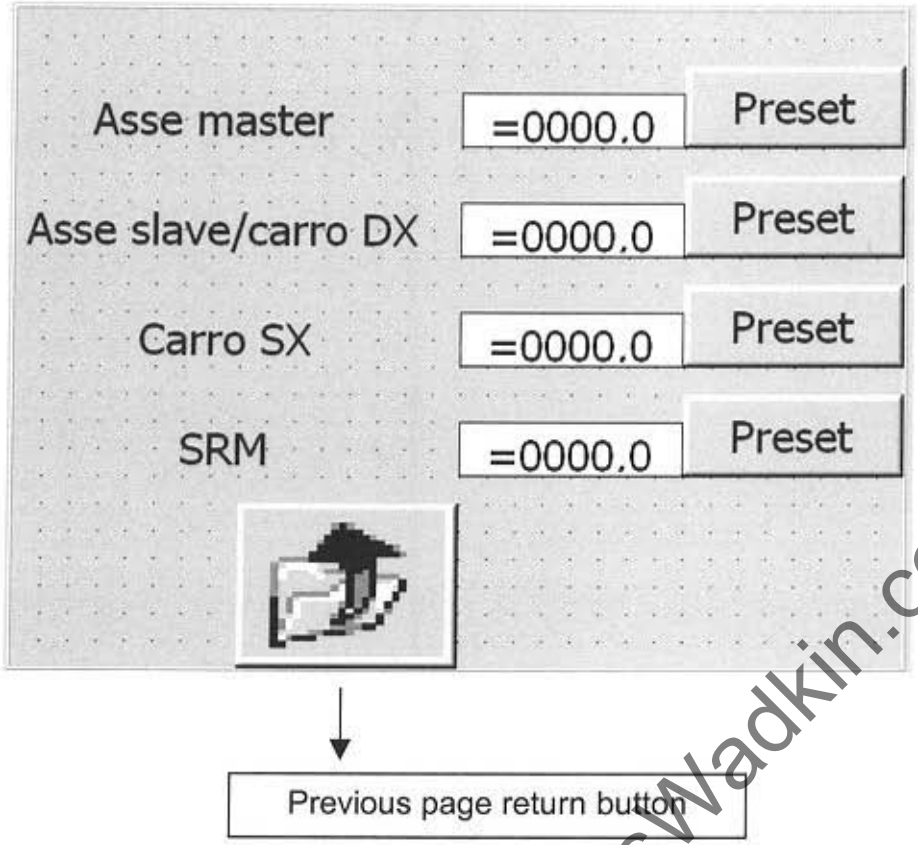
You can enter this mask by each page of the control cycle, the mask allows to visualize all the other order and control masks of the touch-screen.

Push the button  relating to the page you want to enter it.

Pushing the button  you return to the previous mask to the present one.

2.2 "ZERO SETTING" PAGE

The page looks like this :



By the "Zero Setting" page you can zero each controlled axle by the control.

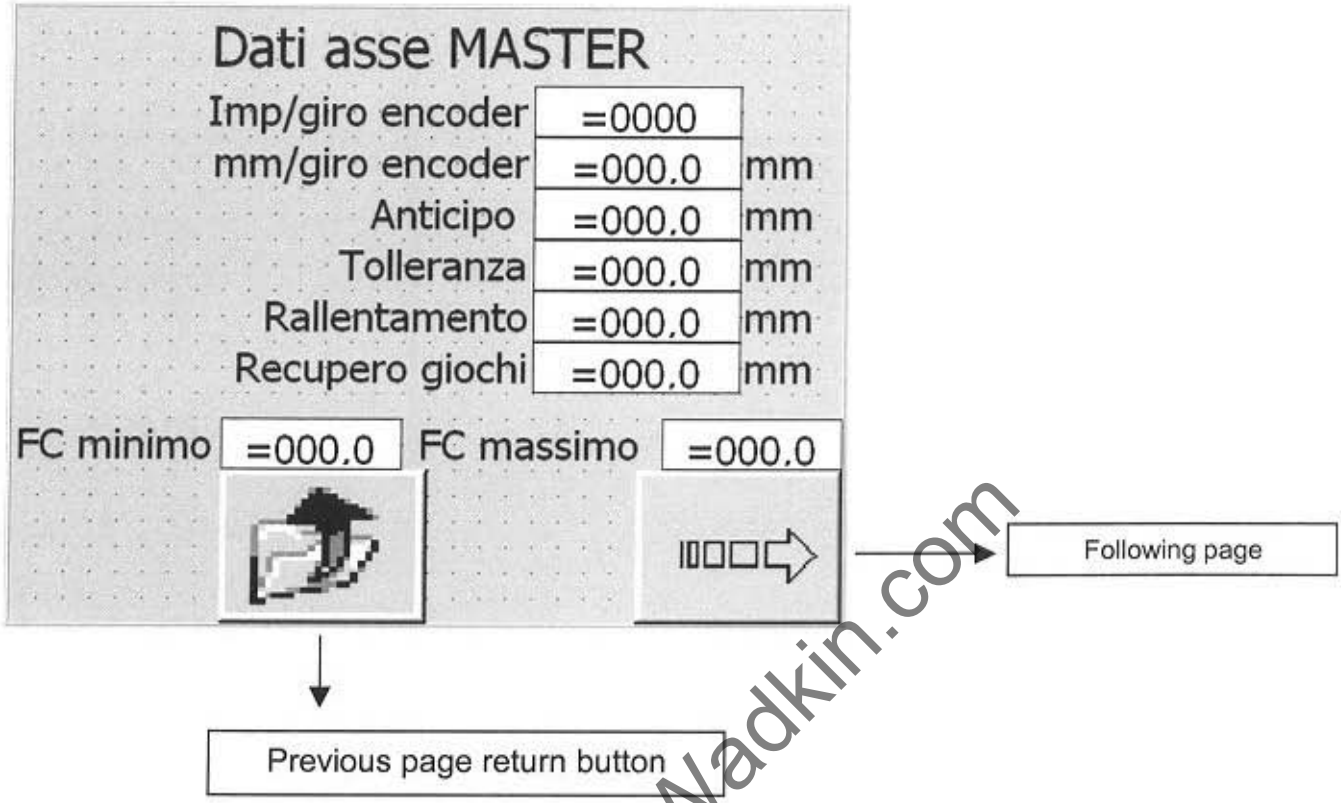
After having measured the real axle opening bring back the pointed out level to the numerical field relating to the measured axle and push the button "Preset".

In this way, the written value expressed in millimetres will be brought back to the fields of the present level visualizations of the cycle pages (see chap. 1.1,1.2,1.3).

Pushing the button  you can return to the previous mask to the present one.

2.3 "MACHINE DATA" PAGE

The page looks like this :



By the "MACHINE DATA" page, you can program the data relating to each axle which the control can order. The data are necessary for the correct working of the equipment, so they have to be programmed.

Pushing the button  you flow all the pages relating to the machine data of each programmable axle: MASTER AXLE, SLAVE AXLE (left wagon), RIGHT WAGON AXLE and PRESSURE AXLE. Obviously, only the pages of each axle will be visualized if the C.M.L. technicians train it.

Pushing the button  you return to the previous mask to the present one.

Here we report a short description for each field of laying:

1. **Laying/Encoder turn :**

In this field the number of the impulses for each encoder turn is specified. This value is deduced by the technical characteristics of the encoder.

2. **Mm/ Encoder turn :**

In this field the number of millimetres travelled for each encoder turn is specified. This value is deduced by the data of the mechanical planning of the machine.

3. **Advance :**

It's the level difference between the point to reach and the point where you order the engine stop of the axle control (it is used to compensate the inertia of the group in motion).

4. **Tolerance :**

This value represents the data of the tolerance of the axle positioning in that visualized moment. At a start moment the axles leave for the data assigned to them (program levels). When the axle stops the system checks tha the axle is really in the space determined by the data of the positioning tolerance.

5. **Slowing down :**

In case of the axle has got two work speeds, the slowing down is the level difference between the point to reach and the point where the axle gets a slow speed for a correct positioning.

6. **Games restarting :**

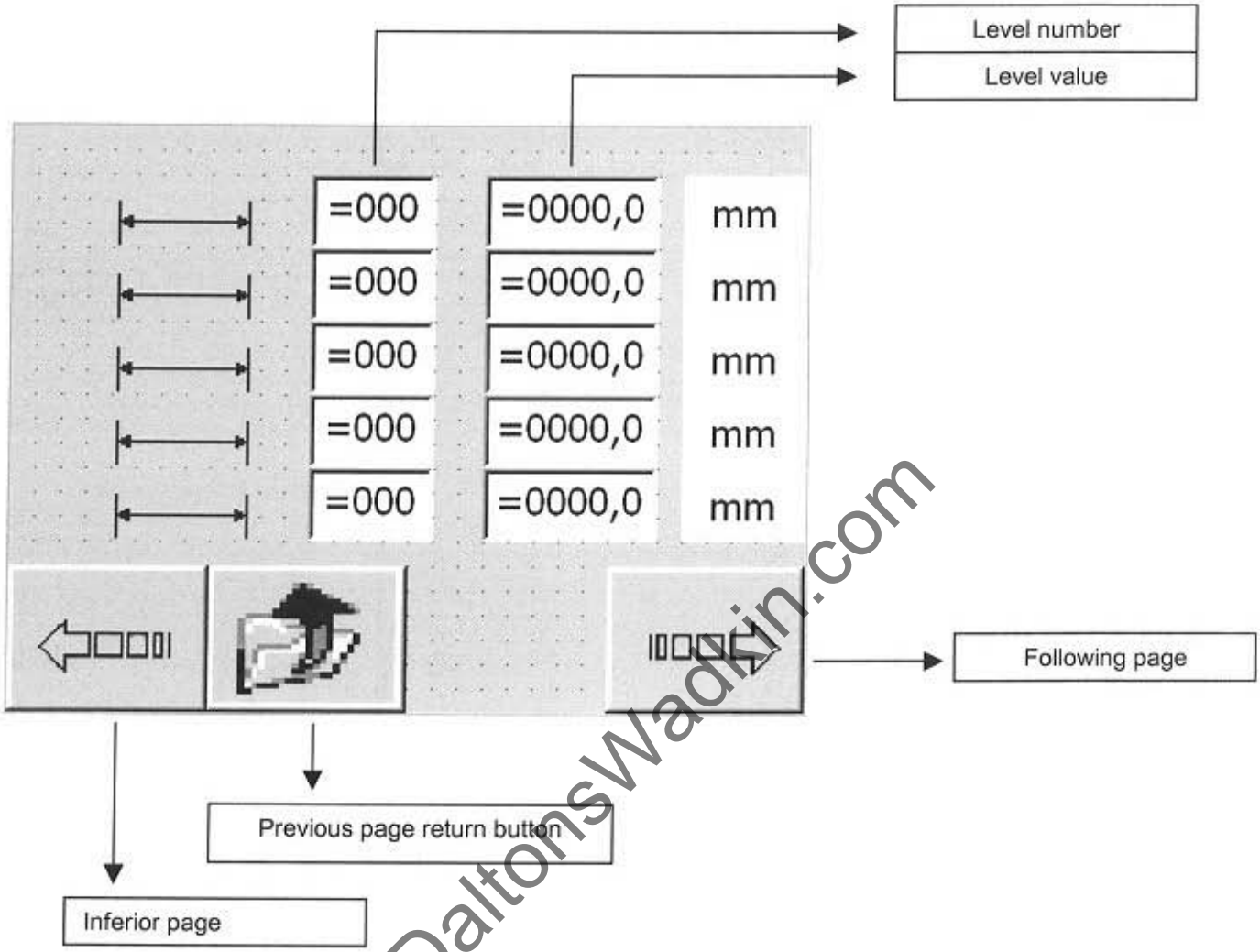
It is the level of which the axle exceeds the fixed level, to position always in the same direction, starting again eventual mechanical games.
For example, if the axle is at level 10 and we start a new level at 100, the axle will surpass 100 of a value like the games restarting to come down then till 100. Vice versa, if the axle is at 150 and we start a new level at 100, the axle will move and reach 100 without surpassing it.

7. **FC minimum/ FC maximum :**

They are the limits of the superior and the inferior level.
Starting these two levels, you establish an action field where the axle can move. However, there are always two mechanical ends of stroke to control the maximum action field of the axle.

2.4 "LEVELS FILE" PAGE

The page looks like this :



Pushing the button  you flow all the pages relating to the levels file till the level 99, in a growing way.

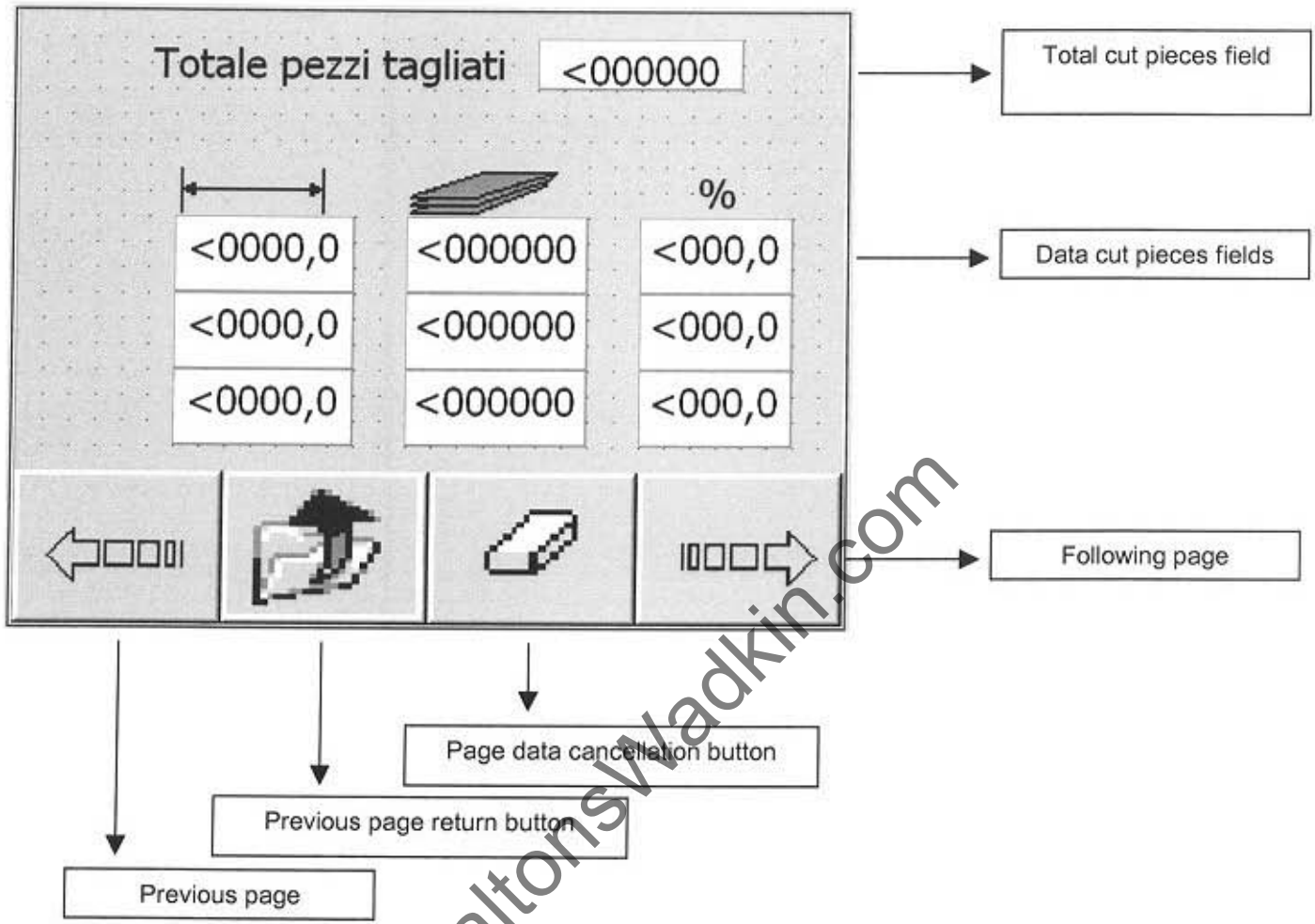
Pushing the button  you flow all the pages relating to the levels file tilol the level 01, in a decreasing way.

Pushing the button  you return to the previous mask to the present one.

On this page you can write all the program levels which are necessary to the working. In the field "Level number", a number assigned to the level, from 1 to 99, in the field "Level value", the operator introduces the value in mm. assigned to that level.
In the field you don't use, write the value "0".

2.5 "PRODUCTION DATA" PAGE

The page looks like this:



On these pages you can visualize some parameters of the different workings.
In the "Data cut pieces field" there are three different data:

- the first (on the left) indicates the positioning level in the optimizator cycle, the level is deduced by the pages of the levels file;
- the central field indicates the number of the works carried out for that level
- the third field indicates the work percentage, for that level, referring to the total of the cut pieces that you can see in the superior side of the page.

For example, if the axle to control is a mobile blade, the counting of the pieces occures by two ends of stroke, one of them is at the entrance and the other is at the exit of the multiblades.

Pushing the button  it is always possible to remove all the page data.

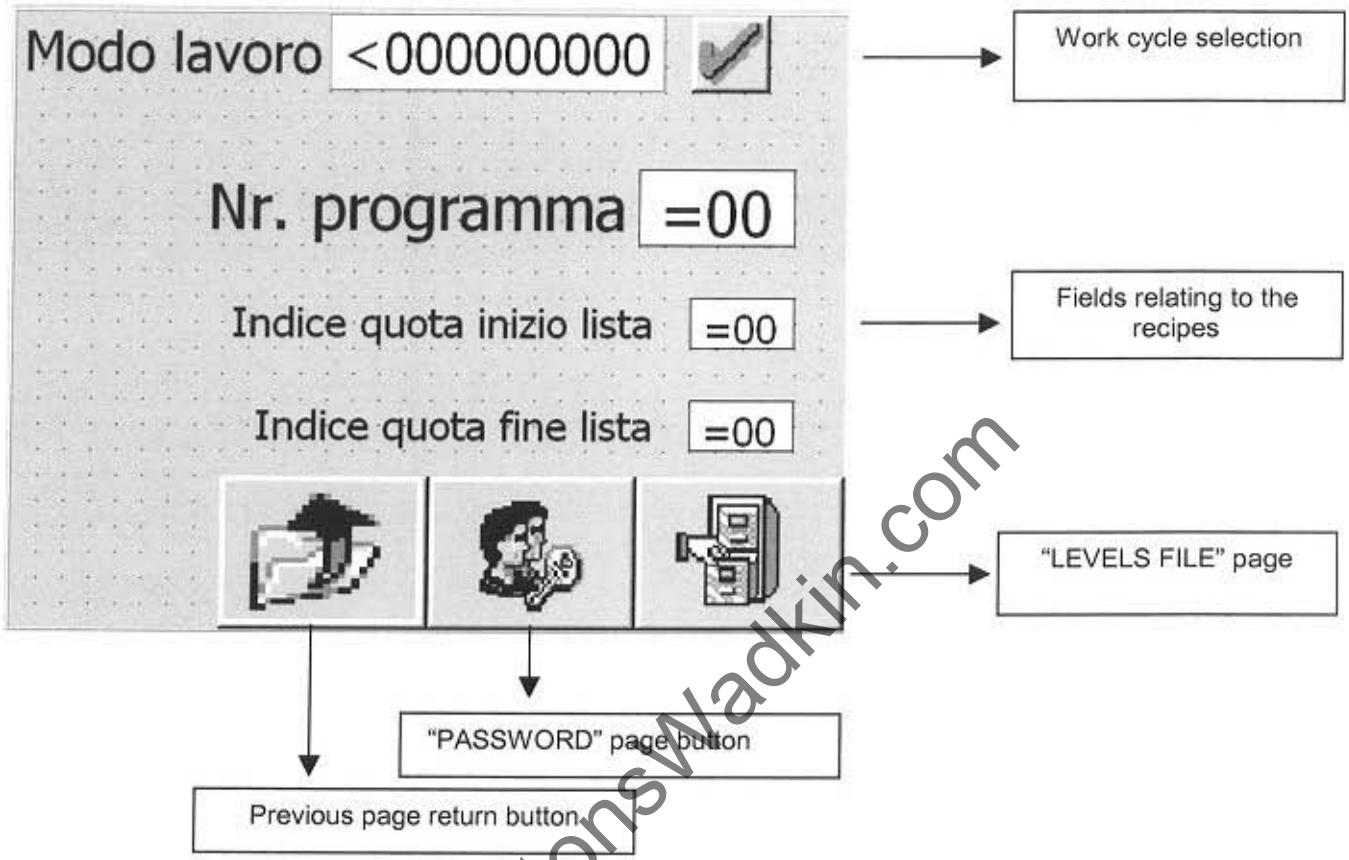
Pushing the button  you flow all the pages relating to the production data in a growing way.si scorrono.

Pushing the button  you flow all the pages relating to the production data, in a decreasing way.

Pushing the button  you return to the previous mask to the present one.

2.6 "RECIPE" PAGE

The page looks like this :



On this page you can select the cycle of the wanted work, then pushing the button in the field "work way2 you will visualize the work cycles. When you have selected the cycle, pushing the button , you can visualize the page relating to that cycle (see chap. 1.1,1.2,1.3).

In the fields relating to the recipes, you can make the programs including the several programmable levels, for example: "Nr. program" like 1, level index start list like 1 and level index end list like7.
With this selection on page "OPTIMIZATOR", the system will load the program nr. 1 and the search will include the levels from 1 to 7.

With the button you can enter the page "PASSWORD" which, consequently, trains the page "MACHINE CONFIGURATION" which only the C.M.L. technicians can use.

3 ALARMS AND DIAGNOSTICS

The system can produce several errors for different reasons. The error signal occures by a red light near the touch-screen and by the appearance of a growing number relating to each alarm.

The field with the number relating to the type of the alarm is on the three control pages of each different cycle (See chap. 1.1,1.2,1.3).

Here we report the alarms list and a short description about how to solve them.

ALARM N.01 – DATA LAID OVER AT THE SOFTWARE END OF STROKE

The programmed data (work level) is over the superior or the inferior software end of stroke. In this case the search stops when it reaches the relative software end of stroke (forward-superior end of stroke, back-inferior end of stroke).

ALARM N.02 – AXLE POSITION OVER THE SOFTWARE END OF TROKE

The axle is over the superior or the inferior software end of stroke. To unblock the axle movement you have to move it manually in the opposite direction.

ALARM N.03 – AXLE OUT OF TOLERANCE

The axle is out of the positioning tolerance (See the parameter laid on the "MACHINE DATA" page)

ALARM N.04 – ENCODER ANOMALY

The encoder doesn't work correctly. A start is ordered but the encoder doesn't change its position. In this case check the connection and the functionality of the encoder.

N.B. The alarms don't stop the working of the equipment that is, if there is an alarm, the movements of the axle order aren't forbidden.

To set to zero whatever alarm, push the button  which is on the page of the work cycle control.

INSTRUCTION MANUAL

Model J350

Multi blade wood cutting machine

List of contents: Page

MACHINE IDENTIFICATION

MANUFACTURER:	CML Srl Viale delle Industrie, 28/B I - 20040 CAMBIAGO (MI) Tel.: ##39 2 95 30 80 16 Fax: ##39 2 95 30 80 03 CE (standard marking)
DENOMINATION:	**J350**
SERIAL NUMBER:	111097
HOMOLOGATION NUMBER:	N° 0476 13 078 11 97
HOMOLOGATING BODY:	CERMET Via Aldo Moro 22 40068 S. Lazzaro di Savena (BO) Italy
CONSTRUCTION YEAR:	19 97
TOTAL INSTALLED KW:	40
OPERATING RATED VOLTAGE:	415 V 50Hz
MAIN MOTOR POWER:	KW 37 TYPE VEM
FEEDING CARPET MOTOR POWER:	KW 1,5 TYPE VEM
PRESSING GROUP MOTOR POWER:	KW 0,75 TYPE ELEKTRON
CARPET SPEED REDUCER:	HYDROMEC
PRESSING GROUP REDICER TYPE:	STM

- technical and/or dimensional modifications without notice -

WARRANTY

The machine is covered by a six-month warranty, starting from the date of delivery. All parts that show defects in materials or in workmanship during this period will be repaired or replaced free of charge.
This warranty does not cover breakdowns due to transportation, or caused by electrical miswiring, breakage of blades, breakdowns due to operator's misusage or resulting from repairs performed by unauthorized personnel.
Forwarding charges of parts replaced during the warranty period are to be charged to the client.

TECHNICAL SPECIFICATIONS J350

Max cutting thickness	130mm
Distance between external blades	320mm
Blades max diameter	370mm
Blades min diameter	250mm
Blades bore hole size	60mm
Blade shaft R.P.M.	3500rpm
Feeding carpet width	350mm
Working pieces min. length	600mm
Feeding carpet speed	0÷40m/min
Maximumpassage board width	650mm
Work surface height from ground	780mm
Blades motor power	22,30,37,44 kW
Feeding track motor power	1.5 kW
Lifting pressing group reducer power	0,75kW
Suction bore size mouth	250mm
Dimensions	191x146x155
Net weight	1800 kg

Available on request:
- blade position laser indicator
- quill for saw blades (max cutting thichness 115 mm)

Please contact our offices for availability, delivery terms, etc.

Phonometric survey

The phonometric survey was performed on a machine equipped with sound-proofing materials in respect ISO 7960.
For survey data, see attached.

- Acoustic equivalent pondered pressure PA 95 db (A)
- Instant sound power 100 db (A)
- Instant sound pressure >130 db
- Ambient correction factor K 1,9 db

NOTE: the noise values shown must be regarded as edmission levels; therefore, they do not necessariy represent safe operating levels.

Individual safety measures

Safety measures needed during the installation, the use and/or maintenance of the machine:

- gloves for handling pieces and during the substitution of sawblades
- anticrush shoe
- safety leather vest
- sound earproofing

Correct use of the machine and unrecommended operations

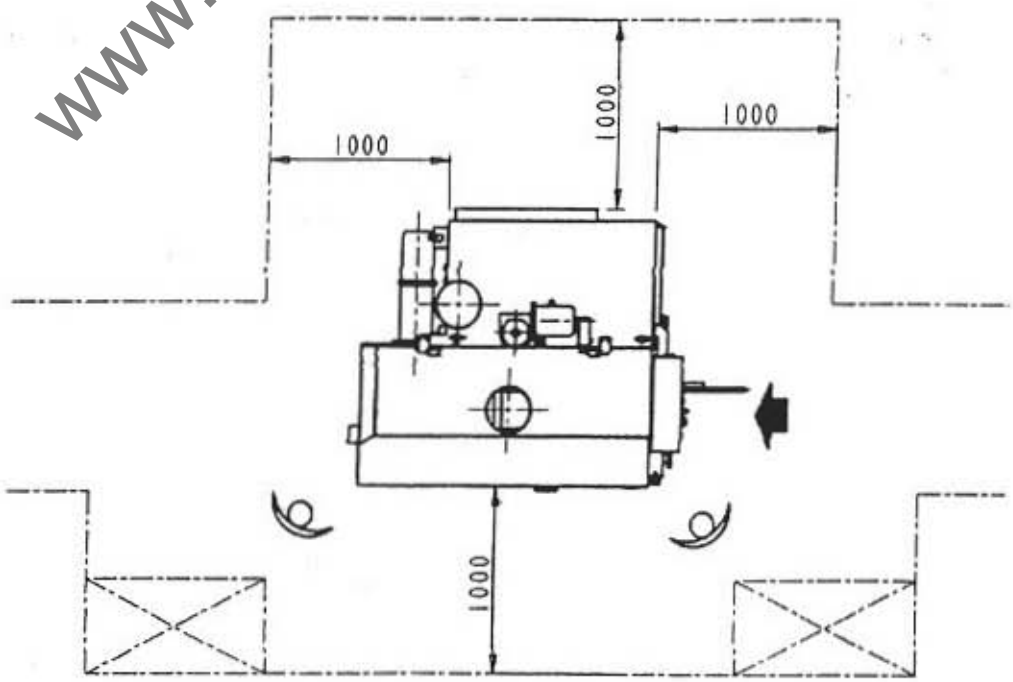
The machine is been planned for longitudinal massive wood cutting having two sides parallel with 1 or more sawblades (in the technical specifications you will see maximum and minimum width).

It's forbidden using the machine for working different and/or cutting material which aren't conformed of what specified, because the security measures have been taken in function of the proper use, so it's not allowed to make modifications with-out the manufacturer's agreement. The user should make a specific training to use the machine.

Residual risks

Kind of:

- electrical: main switch should always be in condition "0" (anyway it's only allowed to authorised persons into the electrical box)
- machine's entrance and exit
- sawblades handling: must be done always wearing gloves
- blades assembly mistake: having assembled the blades check that the configuration corrisponds to the label near them
- the laser beam device (optional)
- the positioning of laser done by the manufacturer shouldn't be changed or in any case must not cause sread radiation or reflection damages.



INSTRUCTION MANUAL

Model J350

Multi blade wood cutting machine

List of contents: Page

MACHINE IDENTIFICATION

MANUFACTURER:	CML Srl Viale delle Industrie, 28/B I - 20040 CAMBIAGO (MI) Tel.: ##39 2 95 30 80 16 Fax: ##39 2 95 30 80 03 CE (standard marking)
DENOMINATION:	J350
SERIAL NUMBER:	111097
HOMOLOGATION NUMBER:	N° 0476 13 078 11 97
HOMOLOGATING BODY:	CERMET Via Aldo Moro 22 40068 S. Lazzaro di Savena (BO) Italy
CONSTRUCTION YEAR:	19 97
TOTAL INSTALLED KW:	40
OPERATING RATED VOLTAGE:	415 V 50Hz
MAIN MOTOR POWER:	KW 37 TYPE VEM
FEEDING CARPET MOTOR POWER:	KW 1,5 TYPE VEM
PRESSING GROUP MOTOR POWER:	KW 0,75 TYPE ELTOM
CARPET SPEED REDUCER:	HYDROMEC
PRESSING GROUP REDICER TYPE:	STM

- technical and/or dimensional modifications without notice -

WARRANTY

The machine is covered by a six-month warranty, starting from the date of delivery. All parts that show defects in materials or in workmanship during this period will be repaired or replaced free of charge.
This warranty does not cover breakdowns due to transportation, or caused by electrical miswiring, breakage of blades, breakdowns due to operator's misusage or resulting from repairs performed by unauthorized personnel.
Forwarding charges of parts replaced during the warranty period are to be charged to the client.

TECHNICAL SPECIFICATIONS J350

Max cutting thickness	130mm
Distance between external blades	320mm
Blades max diameter	370mm
Blades min diameter	250mm
Blades bore hole size	60mm
Blade shaft R.P.M.	3500rpm
Feeding carpet width	350mm
Working pieces min. length	600mm
Feeding carpet speed	0÷40m/min
Maximumpassage board width	650mm
Work surface height from ground	780mm
Blades motor power	22,30,37,44 kW
Feeding track motor power	1.5 kW
Lifting pressing group reducer power	0,75kW
Suction bore size mouth	250mm
Dimensions	191x146x155
Net weight	1800 kg

Available on request:
- blade position laser indicator
- quill for saw blades (max cutting thichness 115 mm)

Please contact our offices for availability, delivery terms, etc.

Phonometric survey

The phonometric survey was performed on a machine equipped with sound-proofing materials in respect ISO 7960.
For survey data, see attached.

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The machine is been planned for longitudinal massive wood cutting having two sides parallel with 1 or more sawblades (in the technical specifications you will see maximum and minimum width).

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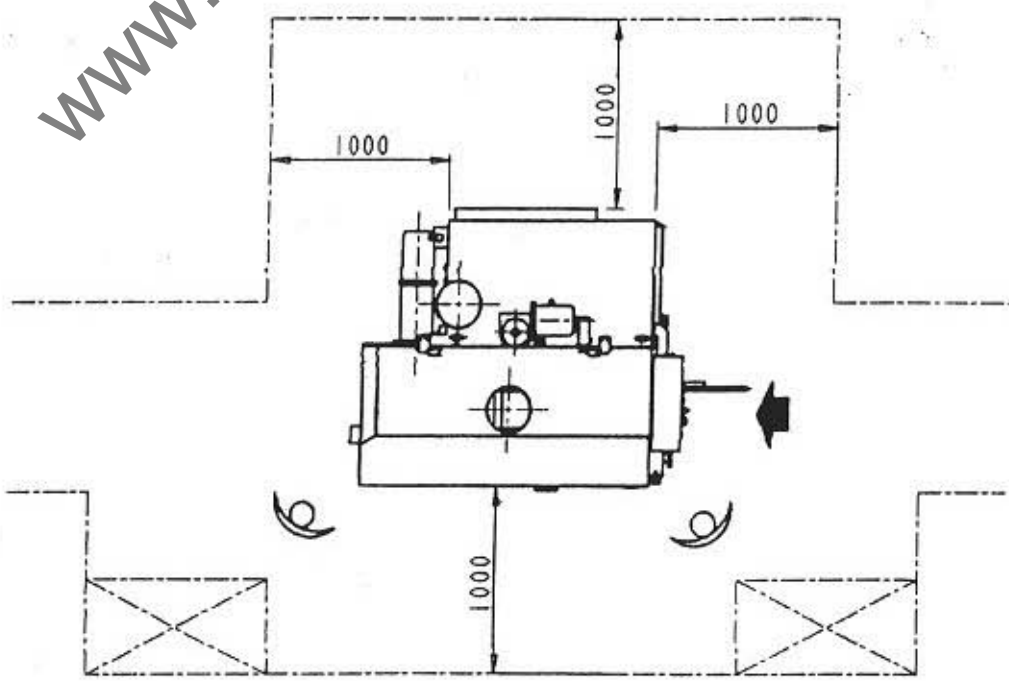
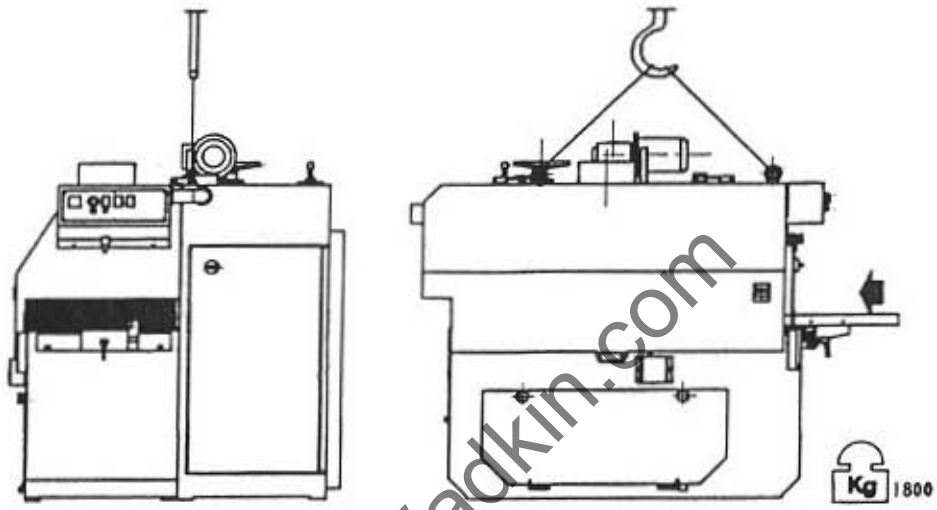


INSTALLATION

Lifting

The machine body is provided with hooks that must be used for hoisting. Care must be taken to avoid bumps to the machine during this operation.

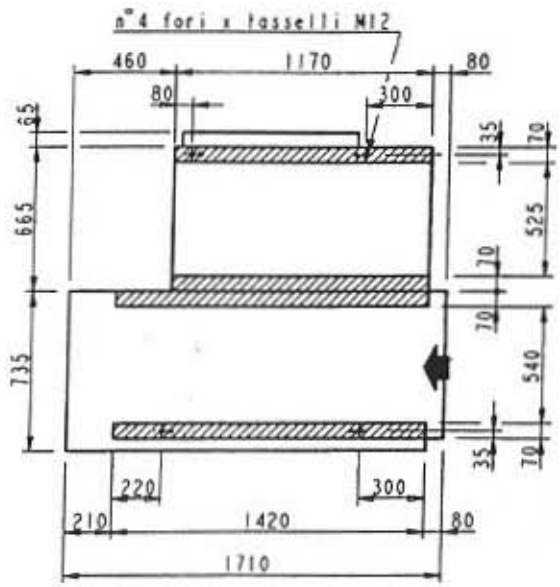
Fig. 1



Positioning

The machine must be positioned on a solid cement base, adequatelly levelled and capable of handling the weight.
Thus, proceed with the levelling of the machine by means of a precision level tool, layed on the working surface.
Clamping the machine is not necessary, as the weight of the machine itself is enough to hold the machine perfectly steady without clamping.
For a better working condition the machine needs antivibrating supports placed between the floor surface and machine's basement.

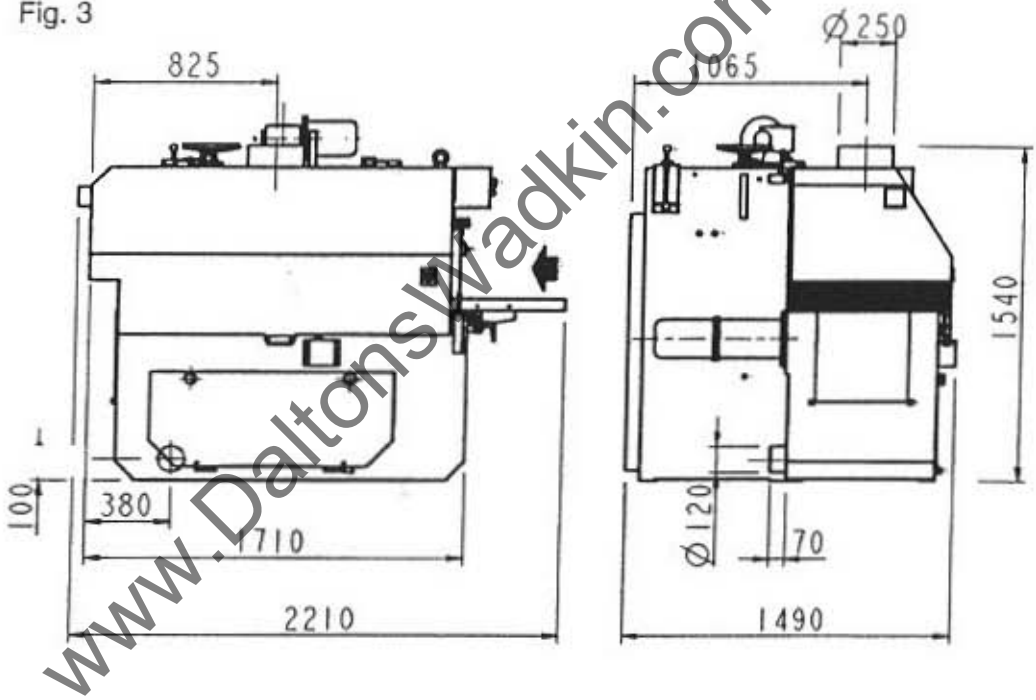
Fig. 2



Vacuum system

The machine must be connected to an efficient suction system by means of the proper suction mouth (Ø250 and 120mm), respectively located on the front part of the machine and in the lower part of the pedestal.
The 250mm suction mouth must always be used during the normal operation of the machine, while the 120mm mouth must be closed.
The 120mm suction mouth must only be used during the cleaning operation.
The required suction flow is of about 5,300m³/hour, at a flow speed of 30m/s.
The end of the tube which connects the suction aspirating mouth must be flexible about 1,5 Mt. to allow to open properly the blades head cover.

Fig. 3



Electrical wiring

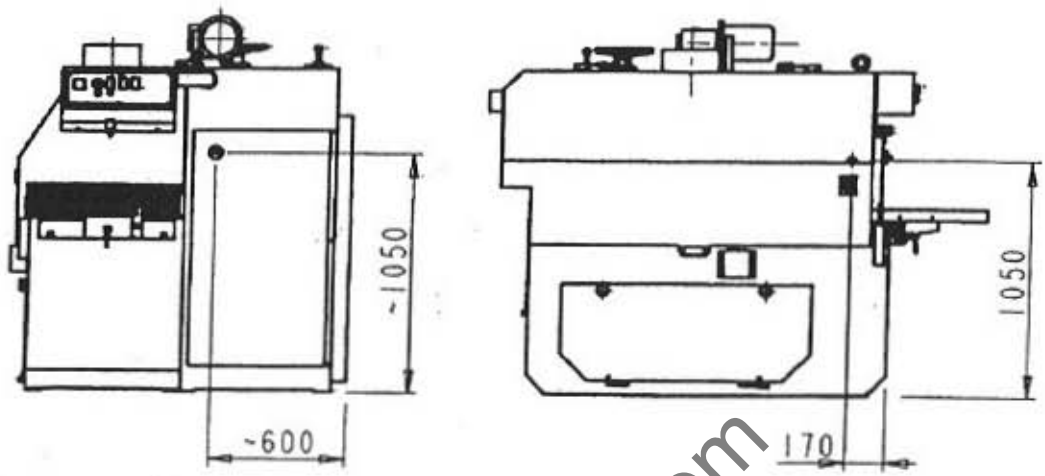
The electrical wiring should be done by professionals:
all the needed plans for electrical wiring are attached to the present manual.
Before connection to a power line make sure that the line voltage is the same for the motors equipped on the machine (see plate attached to the machine body).
R-S-T connecting terminals and the GND connecting terminal are located in the panel N. 17010 (see page 14).
The power supply wire must be properly fixed by hold fast for hooking the electrical sets, and protected by means of a strong wiring cable.
The electrical connection can be made by means of aerial or underground wires: in both cases make sure that the wires are properly fixed.
The body of the machine must be connected to the ground.
The wires section must be able to handle the installed power; see the following table:

Blades motor power (Kw)	380V-50Hz			220V-50Hz		
	Blades motor current (A)	Motor supply wires section (mm^2)	Autoswitch setting (A)	Blades motor current (A)	Motor supply wires section (mm^2)	Autoswitch setting (A)
30	39.5	6x6+T	45	68.4	6x10	79
40	54	6x6+T	63	93.5	6x16	108
50	67	6x10+T	77	116	6x25	134
60	81.5	6x16+T	94	141	6x25	163

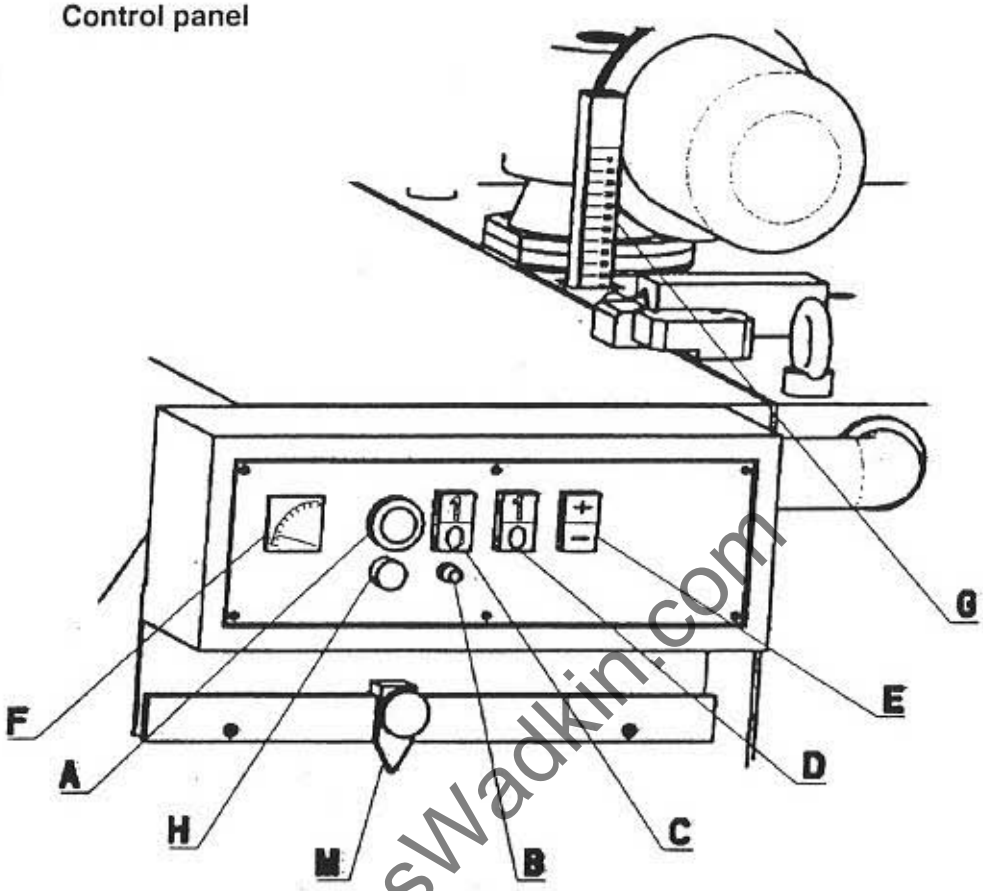
The ammeter shows the motor power consumption; the above table shows the maximum values according to the supply voltage and to the total installed power.
The consumption values should not be exceeded while the machine is working: in that case the feeding track speed must be reduced.
After the electrical connection control that the rotation direction of all motors is correct, pressing the E button (see attached "Control panel") adjustment pressure group.

when pressing the + button the mechanical indicator "G" moves upward, then the connection has been made correctly.
If it moves downwards, set the main switch in 0 position, cut off the electrical power of the line connected to the machine and change the position of the power supply wires.

Electrical connection position



Control panel



A) **EMERGENCY STOP** button
B) Feeding speed setting button
C) Feeding carpet ON-OFF button: the carpet will not start if the blades shaft is stopped
D) Blades shaft ON-OFF button
E) Pressing group height setting button
F) Ammeter
G) Pressing group height millimitered scale
H) Blades door timer blinking indicator

WARNING:
The machine will not start under one of the following conditions:
- **EMERGENCY STOP button pressed**
- **Blades access door or feeding carpet access door opened**

INSTRUCTIONS

When the operations explained in the 'Installation' chapter have been made, the machine is ready for working.
Following are listed - in the right order - all the operations that must be made to operate the machine.

Select the needed blade diameter. The following table shows the maximum cutting thicknesses according to the blade diameter:

Blade diameter	Max cutting thickness with fixed blades	Quill for sawblades
Ø250mm	70mm	55
Ø300mm	95mm	80
Ø350mm	120mm	105
Ø370mm	130mm	115

With the main switch N. 17010 set on the position 1 push the EMERGENCY STOP button and wait until the blades access door timer unlocks the blades access door itself (the blinking indicator shows that the door is unlocked).
• Open the blades access door N. 17001
• Make sure that the wood boards are locked in their places, and lined up with the pressing group. It is important that the wood boards are made according to the attached drawing (see attached: 'Wood boards'), and made of undeformable wood.
According blades' diameter, lift the sawblade quill set with the hand wheel N. 17013 high enough so that you can insert the blades to the appropriate arbour.
• Assemble the blades ass'y and its spacers direct on the shaft of the machine, after having carefully cleaned the blades and spacer with a dry cloth.
Once you have assembled the sawblades block the spacer N. 17003 with the ring N. 17002 only by using the wrench supplied with tool-kit.
If the machine is supplied with the quill, keep to the following instructions:
- Take off the sawblades quill from the machine and assemble it with the appropriate quill's holder device.
- Assemble the sawblades with spacers N. 17017 and N. 17016 after having well cleaned either the blades and the spacers with rags - only and exclusively on quill's holder device.
• When the blades ass'y is assembled, lock the threaded locking ring N. 17015 only by means of the specific tool supplied with the machine.
• According to the diameter of the mounted blades, lift the main shaft operating on the manual wheel N. 17013 to allow the assembly of the saw quill on its shaft.
This operation must be done very carefully, as the saw quill and the shaft are provided with joints that must match together. Then gently rotate the saw quill keeping it with both hands until it will match the shaft.
Warning: never use hammers or similar tools to facilitate this operation, as it is supposed to be performed as gently as possible.
Furthermore, the saw quill and its shaft must be carefully cleaned using rags: avoid blowing them with compressed air that would raise dust that anyway falls back. When the saw quill has been positioned on the shaft, lock it by means of the special ring nut which has been previously cleaned.

Check, operating on the disposal N. 17004 by means of the 55mm wrench supplied with the machine, the correct functioning of the splinter proof security disposals N. 17006, that - due to their own weight - should always fall perpendicularly to the feeding track.
Furthermore, check that the splinter proofs N. 17007, located on the working surface can easily slide according to their function.
Close the blades access door N. 17001 locking the handle N. 17005.
• Set the reference guide N. 17009 at the feeding side of the machine, operating on the handle N. 17008 and referring to the specific millimitered ruler.
• Re-press the EMERGENCY STOP button.
• Start blades rotation pressing the button D (see attached 'Control panel').
• Set the pressing rollers height operating the button N. 14011 (see E on the attached 'Control panel) according to the nominal thickness of the boards to be worked: the specific G scale shows the height position of the rollers.
It is important that the working boards are not supposed to exceed the nominal thickness for more than ±10mm, both in thickness and difformity. On the contrary, the machine can get damaged, and unsafety for the operator.
• Unlock the handle N. 17014, then start lowering the blades shaft, operating on the wheel N. 17013, controlling at the same time the scale shown by the arrow indicator N. 17012 located near the wheel, until the corresponding size diameter of the blades assembled into the machine is reached.
Then lock again the handle N. 17014.
• Start the feeding carpet pressing the button C (see attached 'Control panel'); the feeding speed will be set by means of the B button according to the thickness of the working board and to the number of blades, starting from the minimum speed and gradually increasing it until you find the ideal working speed.
• Start the cutting, setting the boards into the machine, paying attention to the linearity with the reference guide, because once they are cought by the feeding truck, they cannot be set differently.
Never feed boards laid one on top the other, and never exceed the blades operating limits: not observating these rules drastically reduces the working quality, and may cause damages to the machine.

The ammeter is specifically provided on the 'Control panel' to constantly display the power consumption of the motor that operates blades.
The maximum estimate values are shown in the table on page 8.The feeding speed reducer for the track is provided with inverter and with a magnetothermal switch for automatic stop in case of overloading.

The limiting width device located at the feeding side of the machine is provided with a microswitch Fc5 (see attached 'Position microswitches and emergencies') that stops the machine when put into action.

NOTE: In case the machine is working with others it's necessary to contact our technical office.

COSTRUZIONI MACCHINE LEGNO

TOUCH SCREEN
ONE MOBILE BLADE
CONTROL

MANUAL INSTRUCTIONS

COSTRUZIONI MACCHINE LEGNO

Via Monza,146
20060 Gessate (MI) - Italy
Tel. 0039-02/95384207
Fax 0039-02/95384223
E-mail cml-srl@cml-srl.it

INTRODUCTION

The touch-screen system is combined to an order plc, a positioning control of one or more motorized axles.

The inner memory holds all the necessary instructions for the working, the possibility to memorize up to 99 working levels and the calibration data carried out by the operator.

The 99 levels can be subdivided into working programs which the operator can manage for any type of necessary working.

The levels are pointed out by the encoders.

The necessary procedures for a correct use and the equipment programming will be described after.

SUMMARY

1 WORK CYCLES

The equipment working provides for three different cycles of work which are:

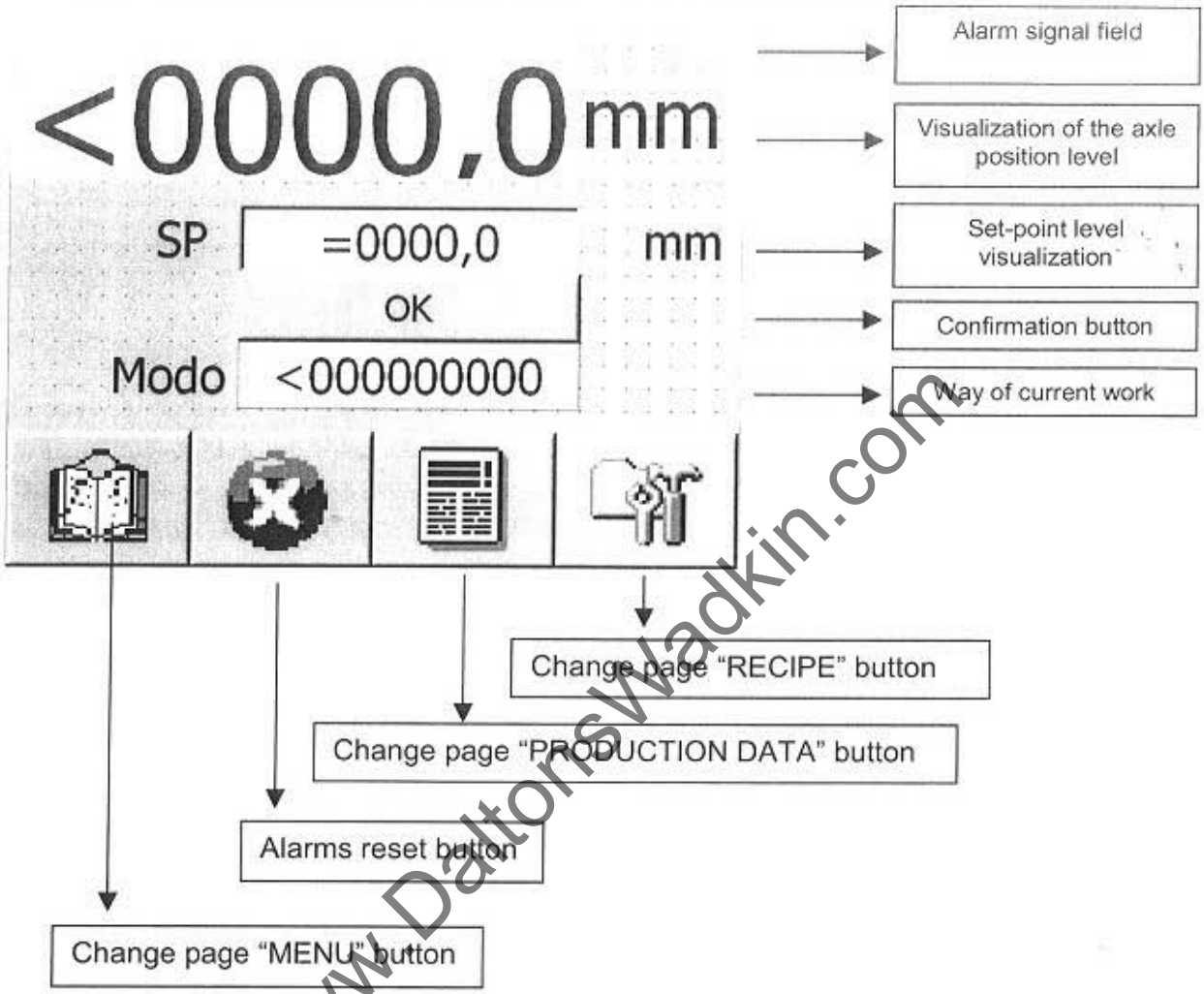
- **SEMI-AUTOMATIC CYCLE**
- **AUTOMATIC/MANUAL CYCLE**
- **OPTIMIZER CYCLE**

At the equipment ignition, after about 10 sec. (when the touch-screen loads on the display the necessary data for the working) the page relating to the last work cycle used before having turned off the equipment, will be visualized.

Normally the axle can be moved also manually by the external controls (ex: foot pedal when you are controlling a mobile blade).

1.1 SEMI-AUTOMATIC CYCLE

The order and control page of the semi-automatic cycle looks like this:

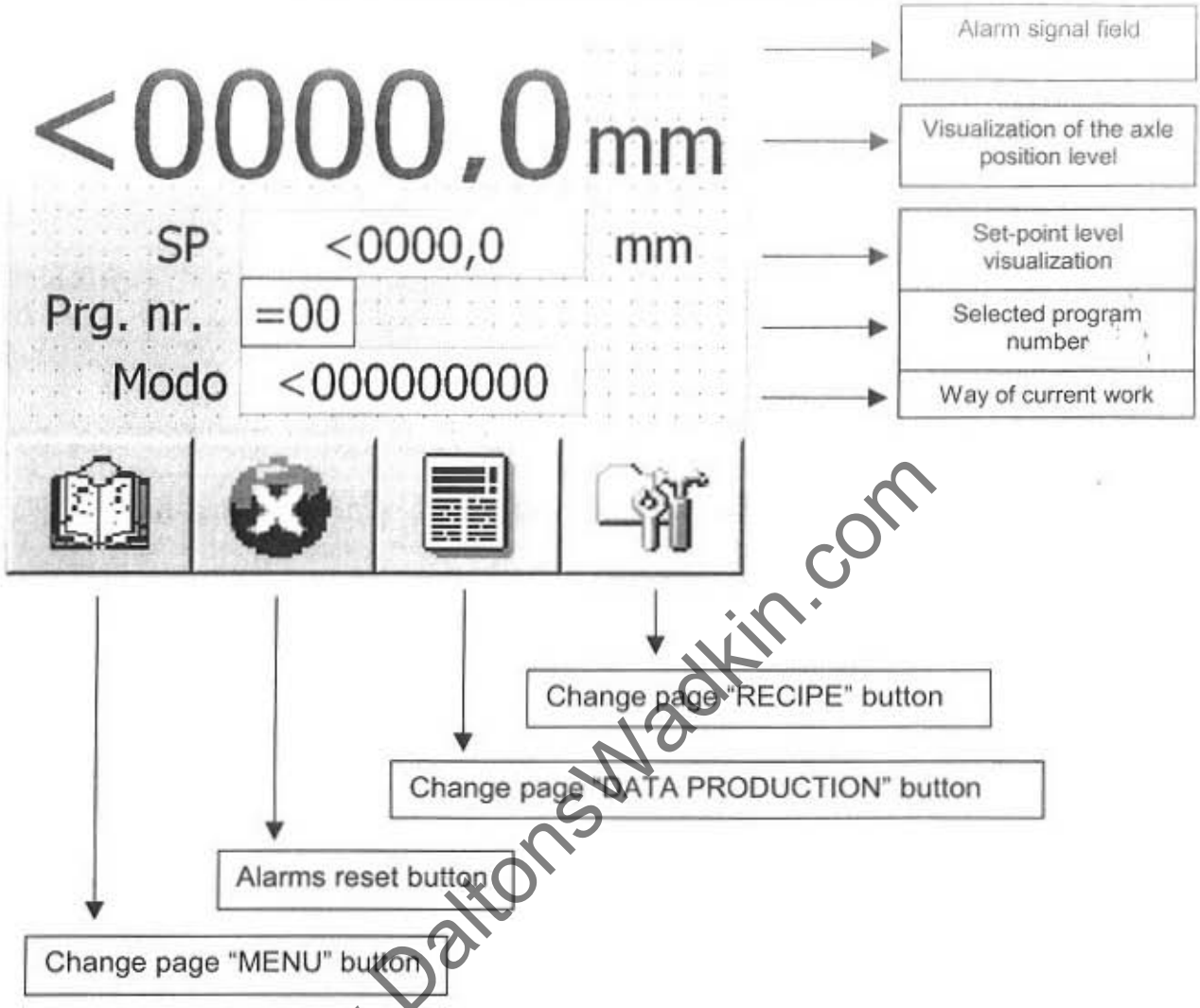


In the SEMI-AUTOMATIC work cycle you can order an axle moving in any position.
Push the field "SP" (set point) to carry out the operation, a mask where you can put the wanted value and confirm it will appear on the dispaly (button →).

In this way the selected level will be brought back to the field"SP" (set point). Push the confirmation "OK" button, consequently the axle will move to reach the wanted value.
Repeat the operations showed above to change the axle position again.
If there is an error, a number which identifies the type of the alarm will appear on the "alarm signal" field. (See chap.3).

1.2 AUTOMATIC/MANUAL CYCLE

The order and control page of the AUTOMATIC/MANUAL cycle looks like this:

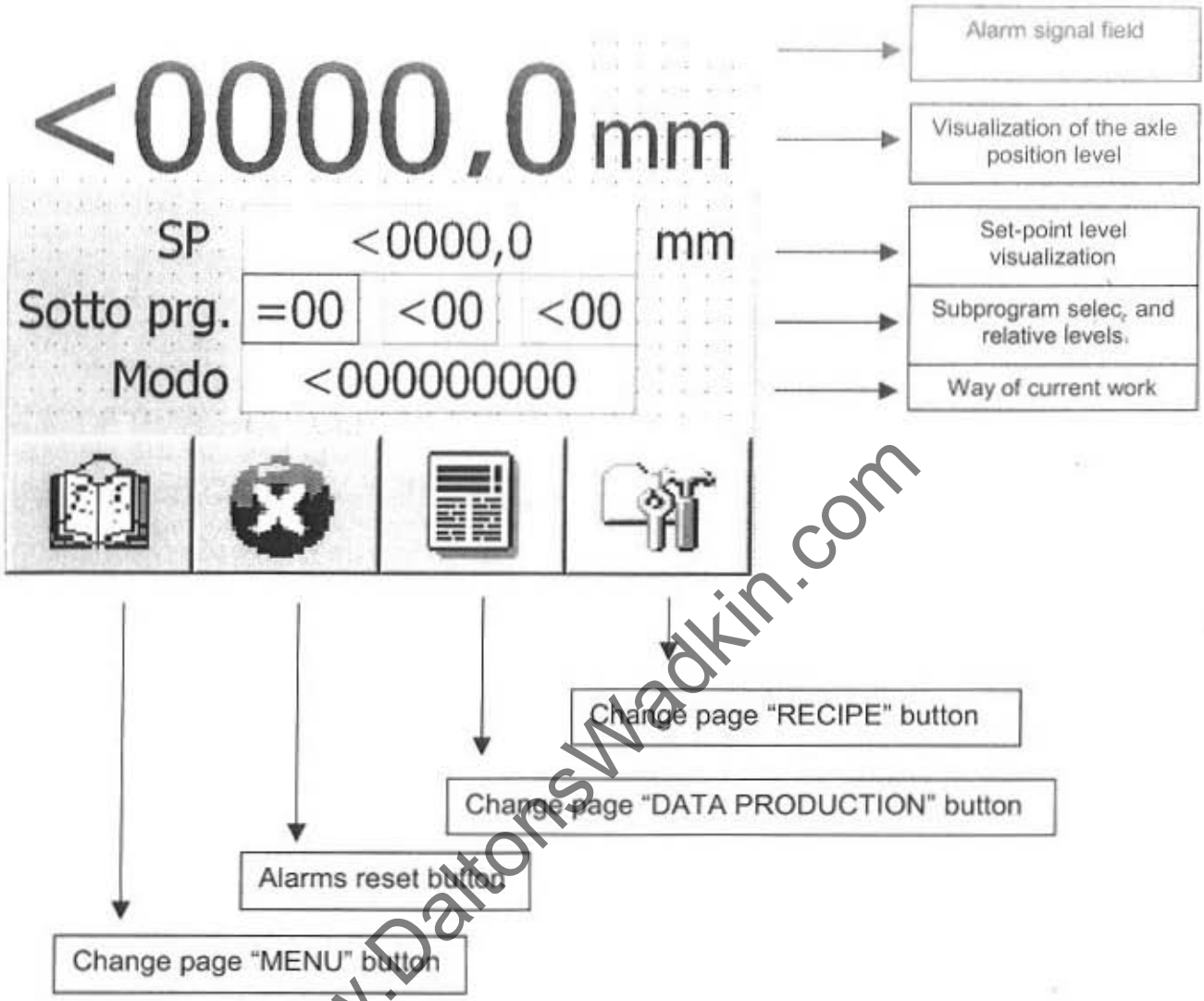


In the MANUAL/AUTOMATIC work cycle you can order an axle moving retrieving the program level among the ones which are in the levels file.
Push the"PRG.NR." field (Programma Number) to carry out the operation, a mask where you can put the wanted value (a number from 1 to 99) and confirm it , will appear on the display (button)

In this way, the loaded program number "PRG.NR." field and, consequently, the axle will move to reach the programmed value.
Repeat the operations showed above to change the axle position again.
If there is an error, a number which identifies the type of the alarm will appear in the "Alarm Signal" field. (See chap.3).

1.3 OPTIMIZER CYCLE

The order and control page of the optimizer cycle looks like this:



In the optimized work cycle you can order an axle moving acting on the external entrances (ex: foot pedals when you are controlling a mobile blade).
When you leave the controls in an indefinite position the program level nearest to the present position in the selected subprograms field is elaborated.
When the level is individuated, the axle moves to reach it.

To make a faster search, the operator can build some sub-programs including the different levels you can program, for example subprogram 1, from level 1 to level 7, so in the "Subprg" field we find the subprogram number (ex. 1) in the first field, the first program level (ex. 1) in the central field and the last program level (ex. 7) in the last field.

The level search can take place in three ways:
-MINIMUM : the searched level is always lower than the position of the orders release.
-MAXIMUM : the searched level is always greater than the position of the orders release.
-OPTIMIZEA : the searched level is the nearest to the position of the orders release.

If there is an error, a number which identifies the type of the alarm will appear in the "alarm Signal" field (see chap.3).

N.B. The way of the optimizer working can be changed only by the C.M.L. technicians.

N.B. To control the optimizer cycle,it is also necessary to train the relative entrance of the present order on the plc. Otherwise, the cycle will never be trained.

2 ORDER AND CONTROL PAGES

Here below, we report the order, control and programming pages of the touch-screen with the relative explanations for a correct use of the equipment.

2.1 "MENU" PAGES

The page looks like this:

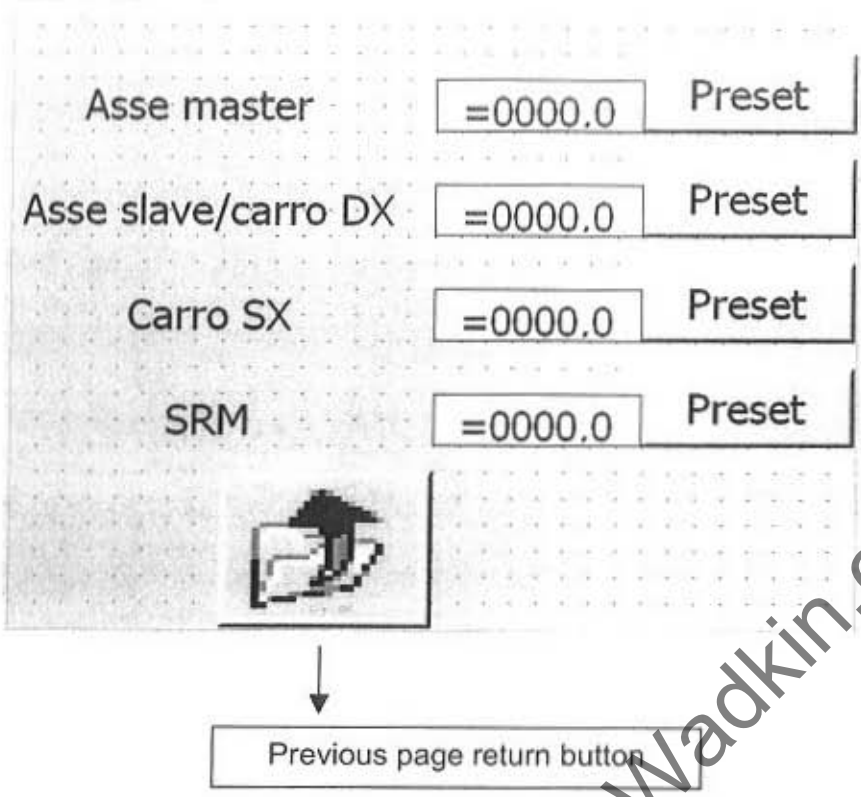
You can enter this mask by each page of the control cycle, the mask allows to visualize all the other order and control masks of the touch-screen.

Push the button  relating to the page you want to enter it.

Pushing the button  you return to the previous mask to the present one.

2.2 "ZERO SETTING" PAGE

The page looks like this :



By the "Zero Setting" page you can zero each controlled axle by the control.

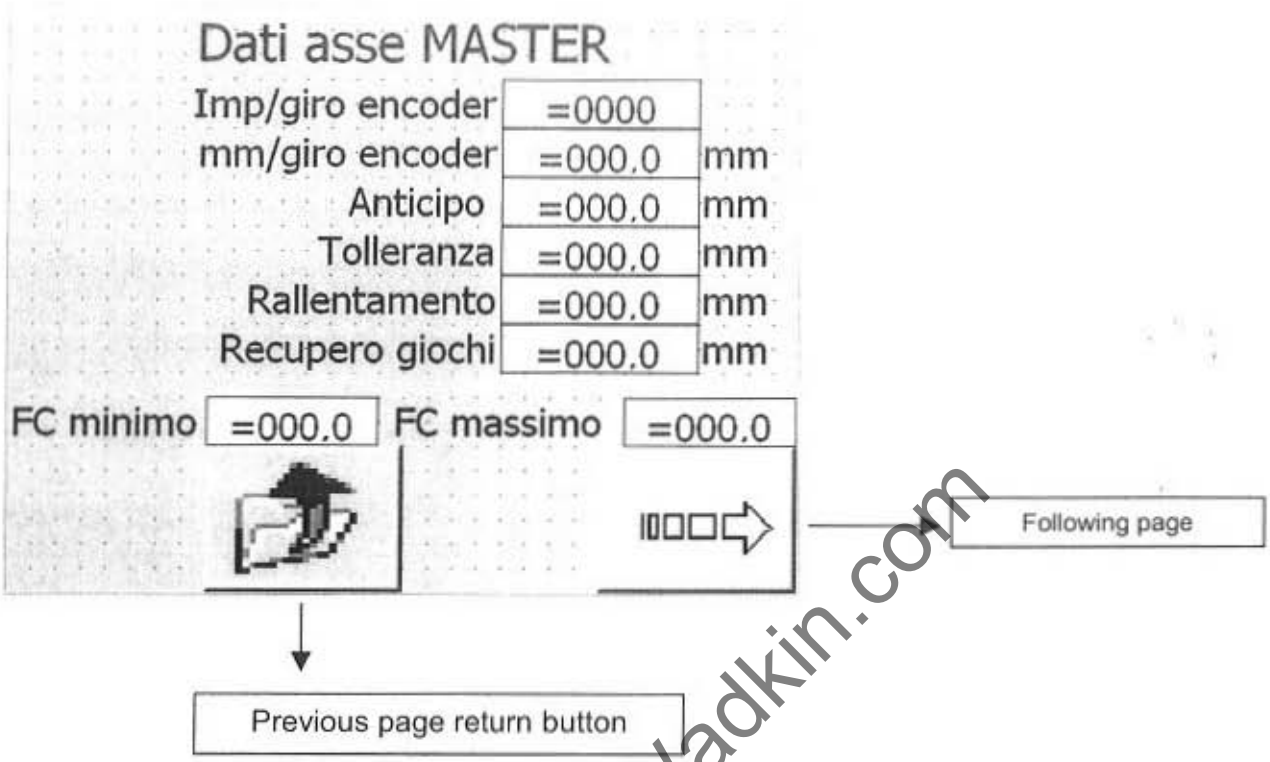
After having measured the real axle opening bring back the pointed out level to the numerical field relating to the measured axle and push the button "Preset".

In this way, the written value expressed in millimetres will be brought back to the fields of the present level visualizations of the cycle pages (see chap. 1.1,1.2,1.3).

Pushing the button  you can return to the previous mask to the present one.

2.3 "MACHINE DATA" PAGE

The page looks like this :



By the "MACHINE DATA" page, you can program the data relating to each axle which the control can order. The data are necessary for the correct working of the equipment, so they have to be programmed.

Pushing the button  you flow all the pages relating to the machine data of each programmable axle: MASTER AXLE, SLAVE AXLE (left wagon), RIGHT WAGON AXLE and PRESSURE AXLE. Obviously, only the pages of each axle will be visualized if the C.M.L. technicians train it.

Pushing the button  you return to the previous mask to the present one.

Here we report a short description for each field of laying:

1. Laying/Encoder turn :

In this field the number of the impulses for each encoder turn is specified. This value is deduced by the technical characteristics of the encoder.

2. **Mm/ Encoder turn :**

In this field the number of millimetres travelled for each encoder turn is specified. This value is deduced by the data of the mechanical planning of the machine.

3. **Advance :**

It's the level difference between the point to reach and the point where you order the engine stop of the axle control (it is used to compensate the inertia of the group in motion).

4. **Tolerance :**

This value represents the data of the tolerance of the axle positioning in that visualized moment. At a start moment the axles leave for the data assigned to them (program levels). When the axle stops the system checks tha the axle is really in the space determined by the data of the positioning tolerance.

5. **Slowing down :**

In case of the axle has got two work speeds, the slowing down is the level difference between the point to reach and the point where the axle gets a slow speed for a correct positioning.

6. **Games restarting :**

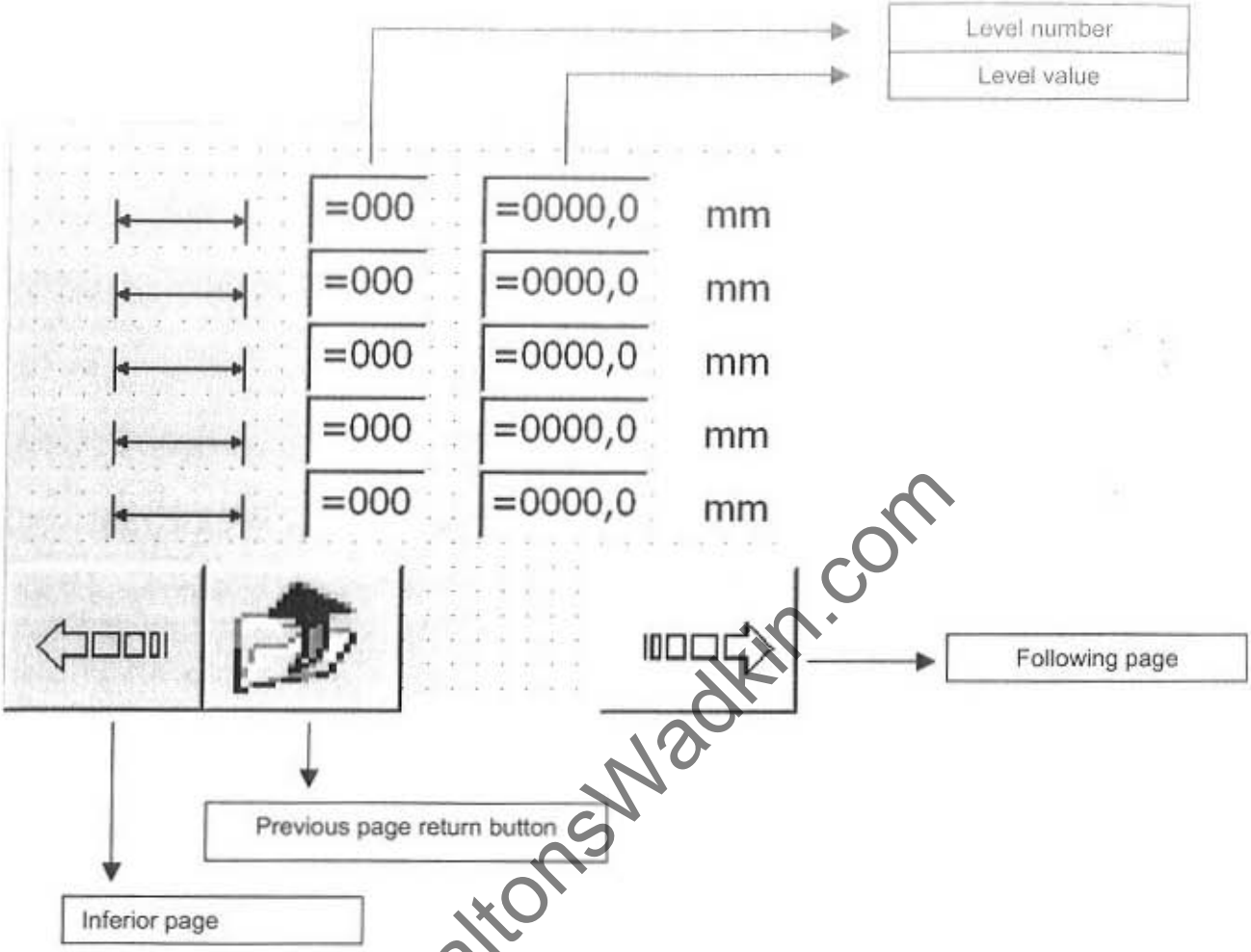
It is the level of which the axle exceeds the fixed level, to position always in the same direction, starting again eventual mechanical games.
For example, if the axle is at level 10 and we start a new level at 100, the axle will surpass 100 of a value like the games restarting to come down then till 100. Vice versa, if the axle is at 150 and we start a new level at 100, the axle will move and reach 100 without surpassing it.

7. **FC minimum/ FC maximum :**

They are the limits of the superior and the inferior level.
Starting these two levels, you establish an action field where the axle can move. However, there are always two mechanical ends of stroke to control the maximum action field of the axle.

2.4 "LEVELS FILE" PAGE

The page looks like this :



Pushing the button  you flow all the pages relating to the levels file till the level 99, in a growing way.

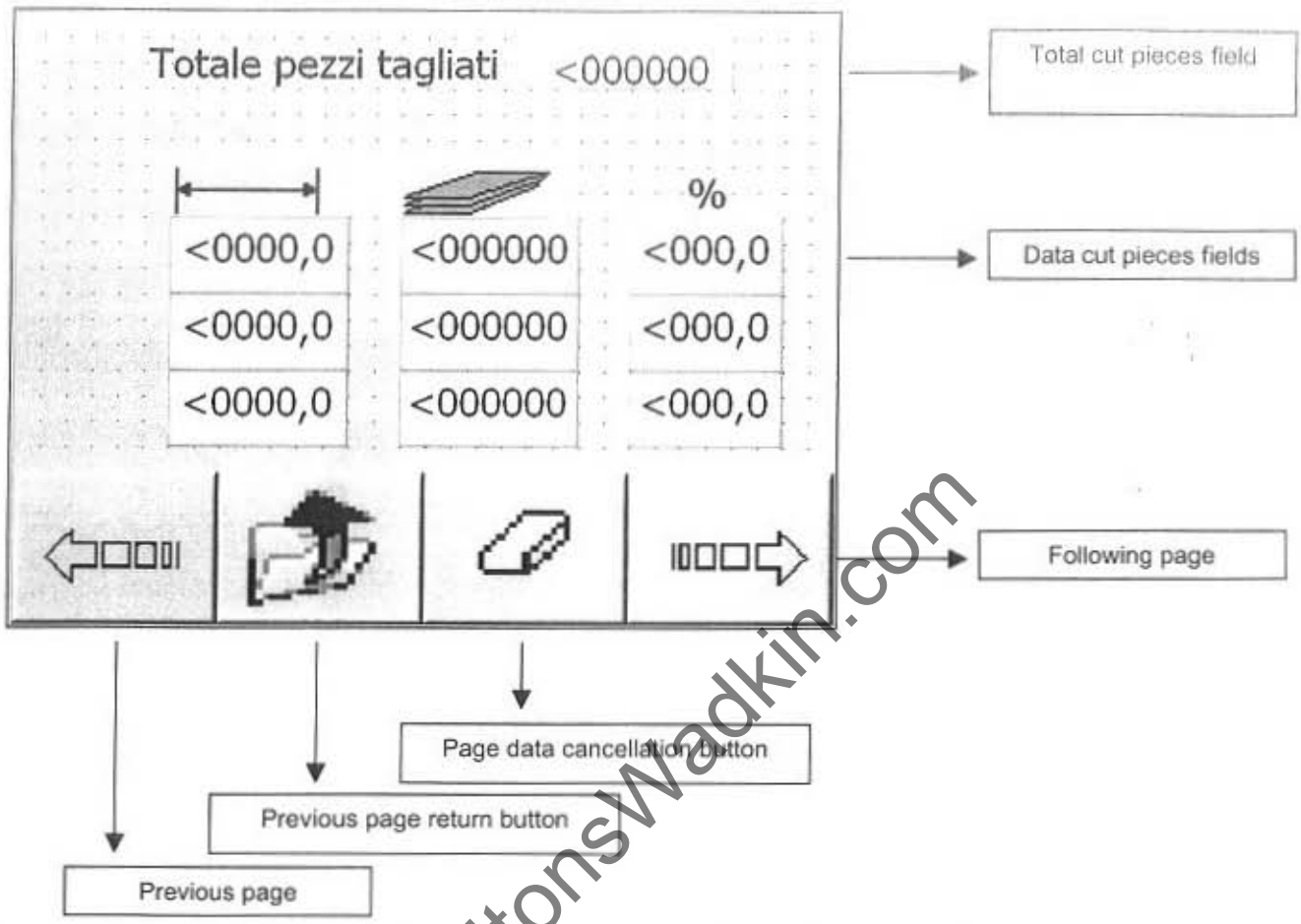
Pushing the button  you flow all the pages relating to the levels file tilol the level 01, in a decreasing way.

Pushing the button  you return to the previous mask to the present one.

On this page you can write all the program levels which are necessary to the working. In the field "Level number", a number assigned to the level, from 1 to 99, in the field "Level value", the operator introduces the value in mm. assigned to that level.
In the field you don't use, write the value "0".

2.5 "PRODUCTION DATA" PAGE

The page looks like this:



On these pages you can visualize some parameters of the different workings.
In the "Data cut pieces field" there are three different data:

- the first (on the left) indicates the positioning level in the optimizator cycle, the level is deduced by the pages of the levels file;
- the central field indicates the number of the works carried out for that level
- the third field indicates the work percentage, for that level, referring to the total of the cut pieces that you can see in the superior side of the page.

For example, if the axle to control is a mobile blade, the counting of the pieces occures by two ends of stroke, one of them is at the entrance and the other is at the exit of the multiblades.

Pushing the button  it is always possible to remove all the page data.

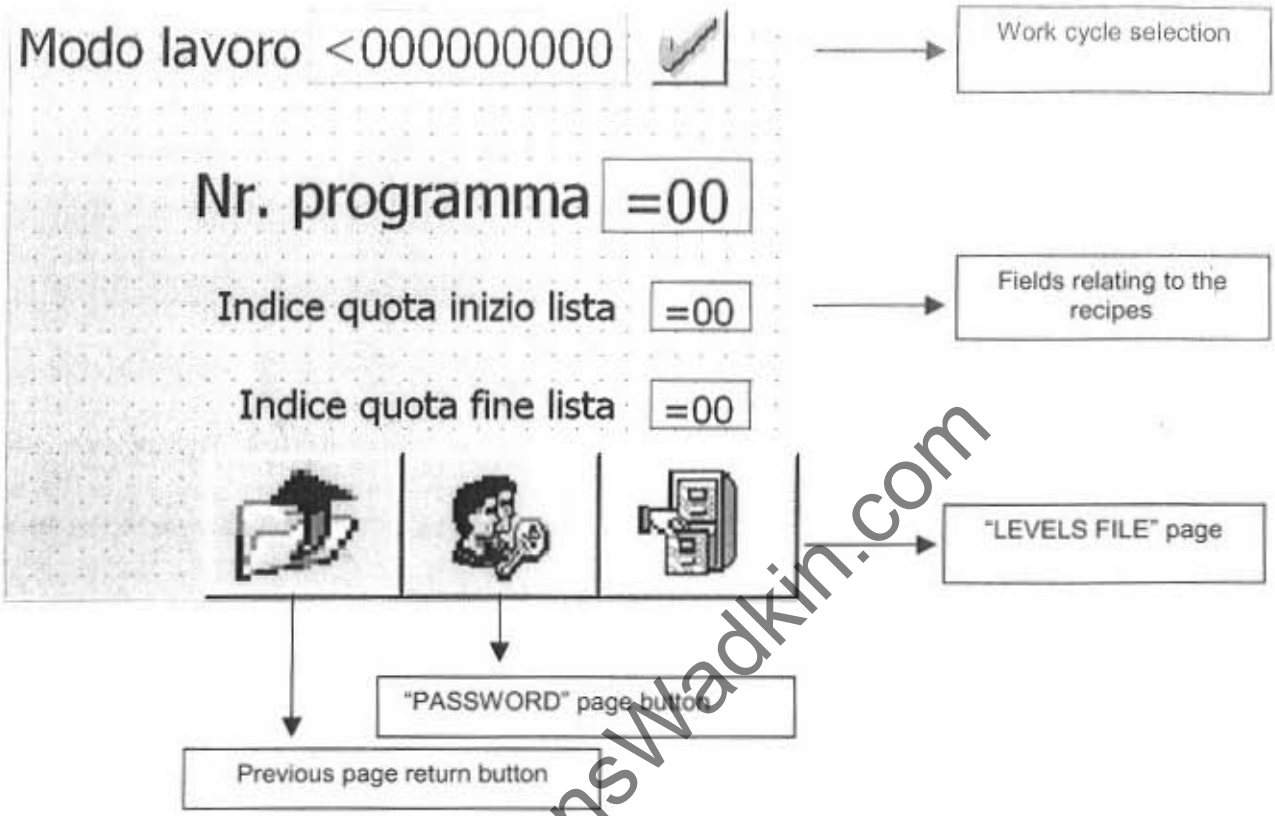
Pushing the button  you flow all the pages relating to the production data in a growing way.si scorrono.

Pushing the button  you flow all the pages relating to the production data, in a decreasing way.

Pushing the button  you return to the previous mask to the present one.

2.6 "RECIPE" PAGE

The page looks like this :



On this page you can select the cycle of the wanted work, then pushing the button in the field "work way2 you will visualize the work cycles. When you have selected the cycle, pushing the button you can visualize the page relating to that cycle (see chap. 1.1,1.2,1.3).

In the fields relating to the recipes, you can make the programs including the several programmable levels, for example: "Nr. program" like 1, level index start list like 1 and level index end list like7.
With this selection on page "OPTIMIZATOR", the system will load the program nr. 1 and the search will include the levels from 1 to 7.

With the button you can enter the page "PASSWORD" which, consequently, trains the page "MACHINE CONFIGURATION" which only the C.M.L. technicians can use.

3 ALARMS AND DIAGNOSTICS

The system can produce several errors for different reasons. The error signal occures by a red light near the touch-screen and by the appearance of a growing number relating to each alarm.

The field with the number relating to the type of the alarm is on the three control pages of each different cycle (See chap. 1.1,1.2,1.3).

Here we report the alarms list and a short description about how to solve them.

ALARM N.01 – DATA LAID OVER AT THE SOFTWARE END OF STROKE

The programmed data (work level) is over the superior or the inferior software end of stroke. In this case the search stops when it reaches the relative software end of stroke (forward-superior end of stroke, back-inferior end of stroke).

ALARM N.02 – AXLE POSITION OVER THE SOFTWARE END OF TROKE

The axle is over the superior or the inferior software end of stroke. To unblock the axle movement you have to move it manually in the opposite direction.

ALARM N.03 – AXLE OUT OF TOLERANCE

The axle is out of the positioning tolerance (See the parameter laid on the "MACHINE DATA" page)

ALARM N.04 – ENCODER ANOMALY

The encoder doesn't work correctly. A start is ordered but the encoder doesn't change its position. In this case check the connection and the functionality of the encoder.

N.B. The alarms don't stop the working of the equipment that is, if there is an alarm, the movements of the axle order aren't forbidden.

To set to zero whatever alarm, push the button  which is on the page of the work cycle control.

Industrial Safety Inspections

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Report of Thorough examination of Lifting Equipment as required by The Lifting Operations and Lifting Equipment Regulations 1998, Regulation 9 section 3a(ii).

Contract No
124898

Provision and Use of Work Equipment Regulations 1998.

NAME: A L Dalton Ltd

ADDRESS: Crossgate Drive, Queens Drive Industrial Estate, Nottingham. NG2 1LW

Inspection No. & Description	Report of Examination. Including defects affecting the safe working load and steps which should be taken to remedy such defects	Safe Working Load. Subject to repairs, renewals, alterations or conditions specified in report	Inspection Frequency Code
1. Miscellaneous lifting tackle continued			All items H
Eyebolts:			
5/16" BSW S/N° M1	No defects.	3 cwt	
5/16" BSW S/N° M1	To individually identify.	3 cwt	
5/8" BSW No identity.	To individually identify.	0.63 Ton	
5/8" BSW No identity.	Identity and safe working load to mark.	None marked	
¾" BSW. S/No: W1286	Safe working load to mark.	None marked.	
M8 A7 (x 7)	To individually identify.	0.15 Ton	
M10 (x7)	To individually identify.	0.23 Ton	
M12 (x12)	To individually identify	0.32 Ton	
M16 S/N° C2	No defects.	0.63 Ton	
M20 S/N° 8	No defects.	1.2 Ton	
M20 S/N° 4	No defects.	1.2 Ton	
M20 S/N° 2	No defects.	1.25 Ton	
M20 S/N° H	No defects.	1.2 Ton	
M20 S/N° ET981	No defects.	1200 kg	

Inspection frequency: 1 = 1 per annum; H = 2 per annum

H	Last inspection	18/01/07	Next inspection	18/07/07
1	Last inspection	N/A	Next inspection	N/A

Signed: R A Shore, Engineer Surveyor Date: 26/01/07

Please see over for Notes on Requirements of Lifting Operations and Lifting Equipment Regulations 1998 and Provision and Use of Work Equipment Regulations 1998 and other notes.

Form L1