INSTRUCTION MANUAL

Model J350

Multi blade wood cutting machine

List of contents:

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 VEH

FEEDING CARPET MOTOR POWER: KW 1.5 TYPE VEH

PRESSING GROUP MOTOR POWER: KW 0.75 TYPE EUROM

CARPET SPEED REDUCER: HYDROMEC

PRESSING GROUP REDICER TYPE: STH

- 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

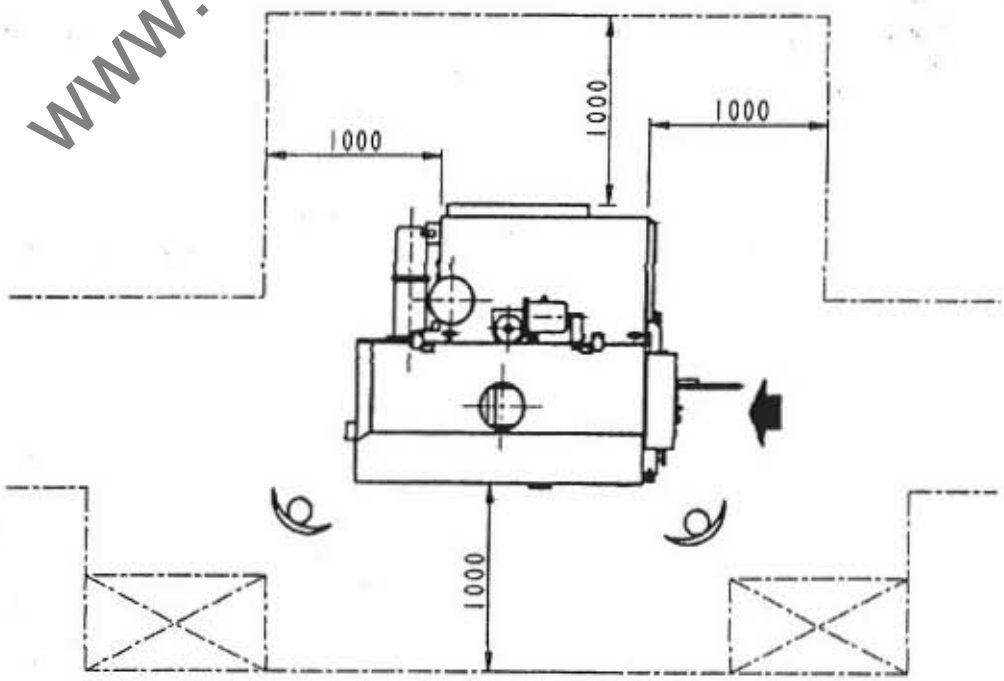
The machine is been planned for longitudinal massive wood cutting having two sides parallel with 1 or more sawblades (in the technical specifications you will see maximum and minimum width).

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.

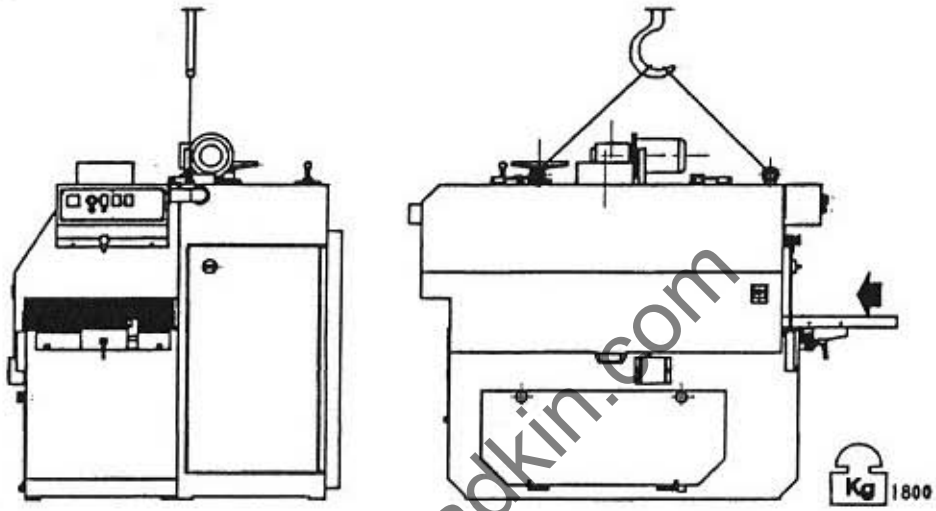


INSTALLATION

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.

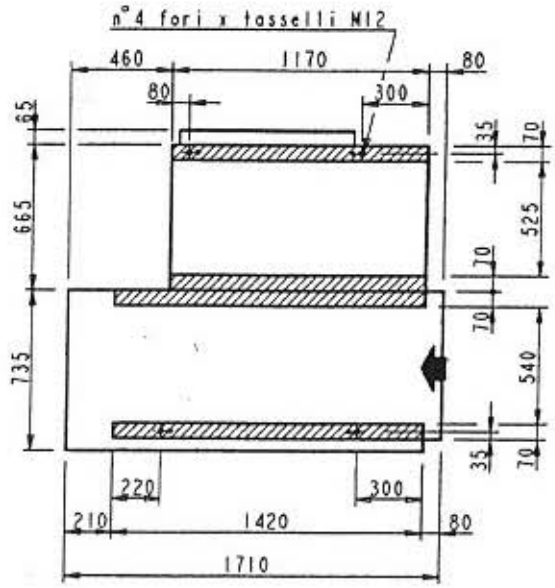
Fig. 1



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.

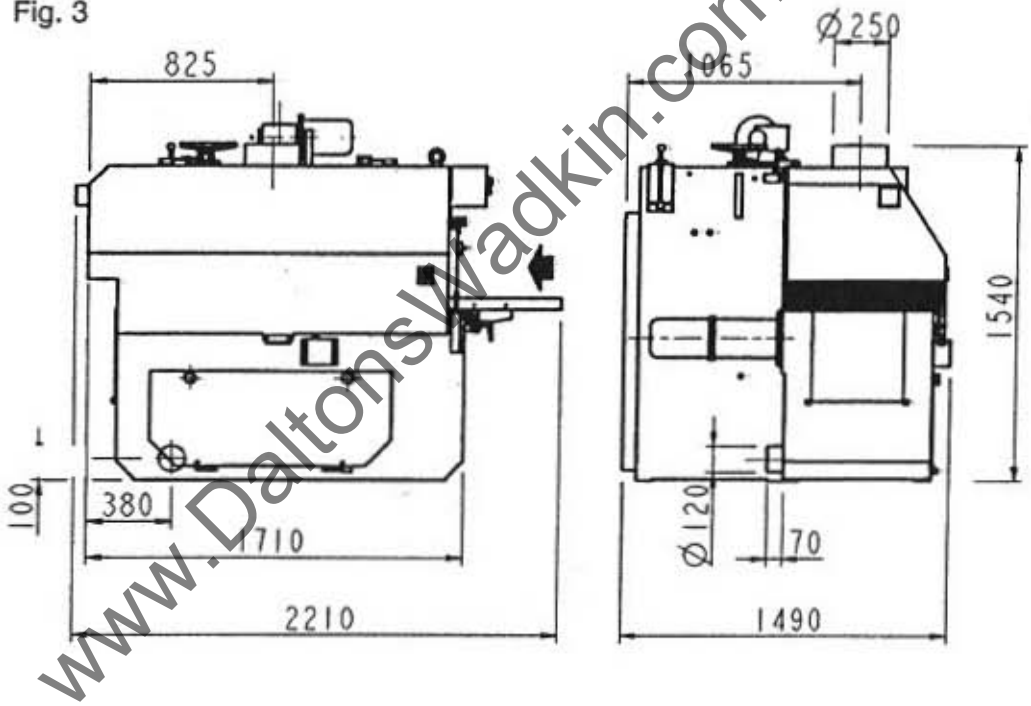
Fig. 2



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

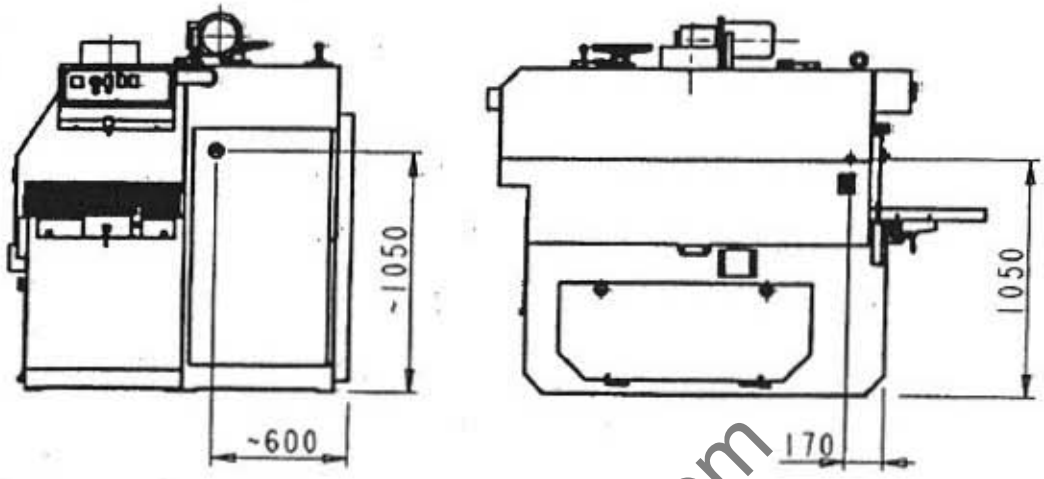
The electrical wiring should be done by professionals:
all the needed plans for electrical wiring are attached to the present manual.
Before connection to a power line make sure that the line voltage is the same for the motors equipped on the machine (see plate attached to the machine body).
R-S-T connecting 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

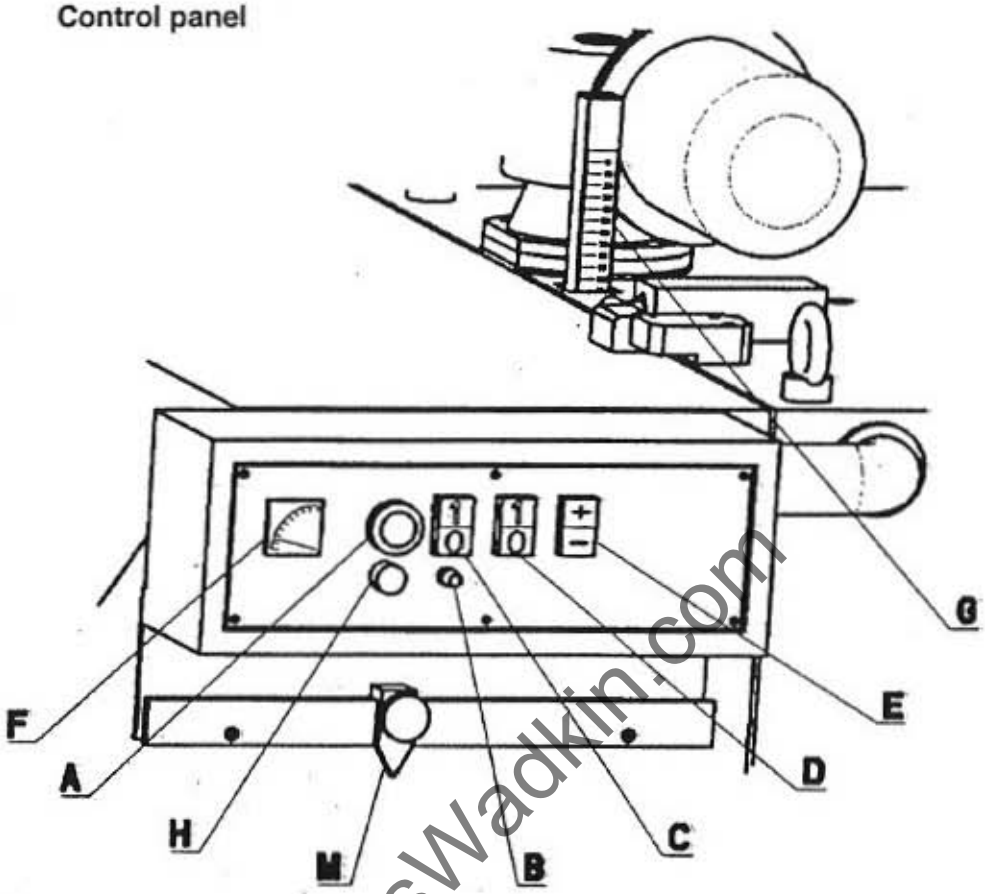
The ammeter shows the motor power consumption; the above table shows the maximum values according to the supply voltage and to the total installed power.
The consumption values should not be exceeded while the machine is working: in that case the feeding track speed must be reduced.
After the electrical 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

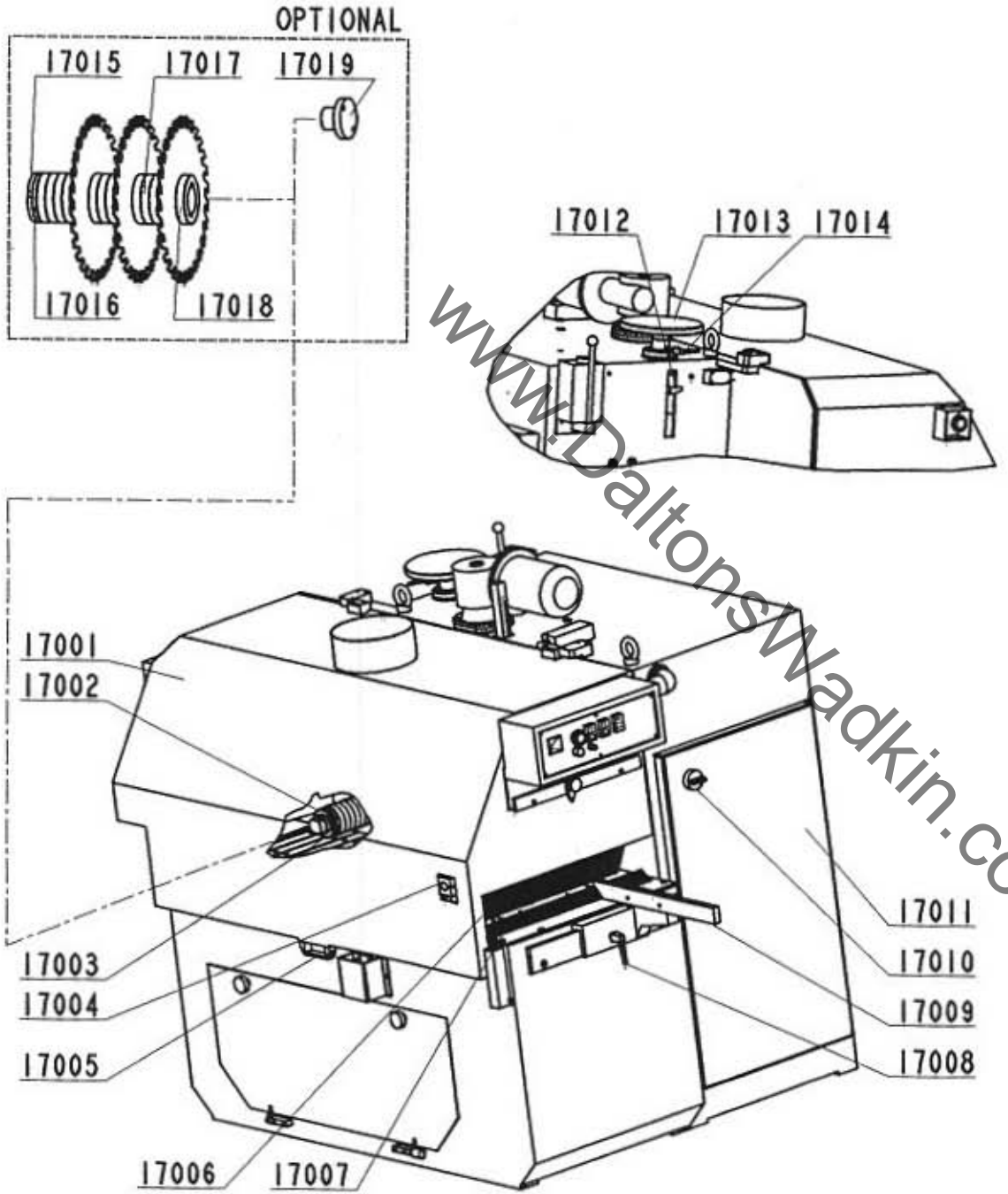
With the main switch N. 17010 set on the position 1 push the EMERGENCY STOP button and wait until the blades access door timer unlocks the blades access door itself (the blinking indicator shows that the door is unlocked).
• Open the blades access door N. 17001
• Make sure that the wood boards are locked 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.

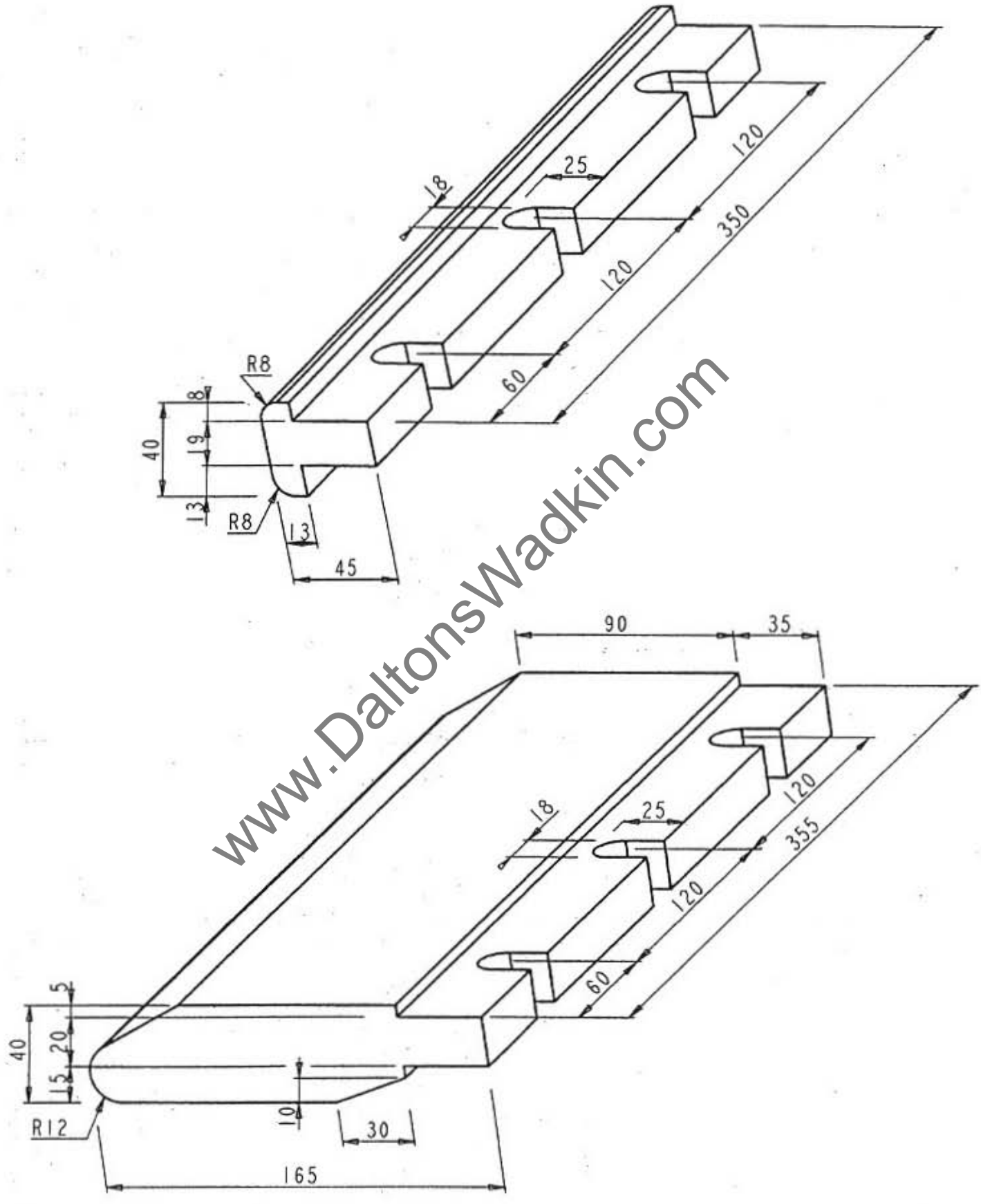


17001 Head carter
17002 Spacer's ring
17003 Blades locking ring
17004 Upper anti-kick back device
17005 Handle
17006 Steel fingers
17007 Lower anti-kick back
17008 Locking handle fence
17009 Fence
17010 Main switch
17011 Electrical box door
17012 Blades diameter index
17013 Blade lifting wheel
17014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

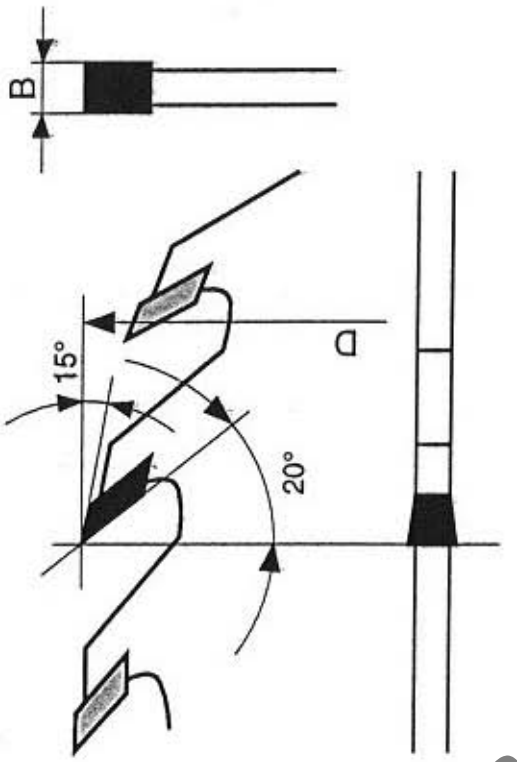
OPTIONAL

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

Wooden boards



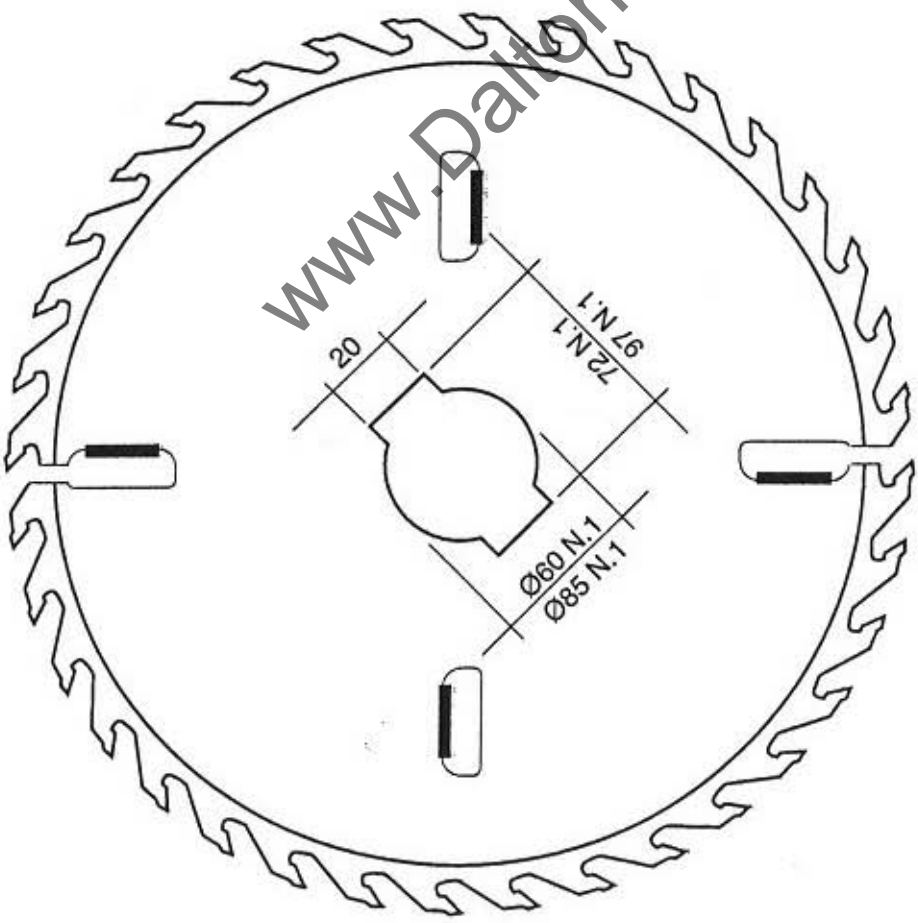
Blade



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.
The height setting of pressing rollers while working should be avoided.

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

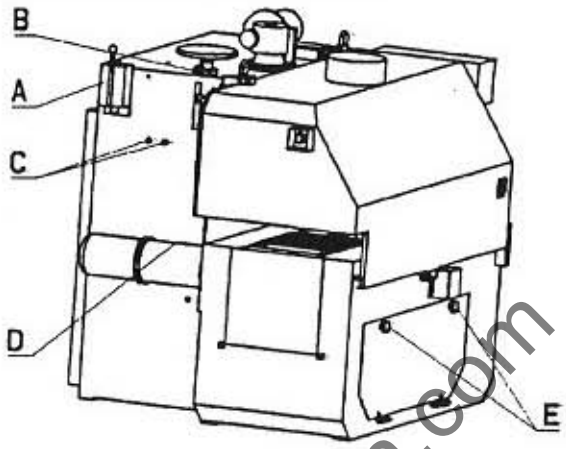
Should blades block inside wood follow these instructions:

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.

List of components
20HP 380V 50Hz multiblade E. S.

QTY.	DESCRIPTION	CODE	SETTING	REF.	MANUFACTURER
1	DISCONN. SWITCH + BP	3KA5330-1EEOO	3 x 160 A	Q1	SIEMENS
1	AUTOSWITCH	3VF 1231-1DK11	45 : 63A	Q5	SIEMENS
1	COUNT. AUX	3VF9122-1GD40	1L+1R	Q5	SIEMENS
1	AMMETER TRANSF.	T 30	100/5A	TA1	SIPIE
1	TRANSFORMER	0-220-380/0-110-132-220 V	200 VA	T1	ELCA
1	AUTOSWITCH	5SQ2270-0KA01	2X1 A	Q2	SIEMENS
1	AUTOSWITCH	5SQ2170-0KA02	1X2 A	Q3	SIEMENS
1	AUTOSWITCH	5SQ2170-0KA05	1X0.5 A	Q4	SIEMENS
1	AUTOSWITCH 1R+1L	3VU1300-1MK00	4 : 6A	Q6	SIEMENS
1	AUTOSWITCH 1R+1L	3VU1300-1MH00	1.6:2.4 A	Q7	SIEMENS
1	AUTOSWITCH 1R+1L	3VU1300-1MD00	0.24:0.4 A	Q8	SIEMENS
1	TIMER	7PU6020-7NJ20	"2:20""	t1	SIEMENS
1	RELAY SWITCH (L)	3TF 4422-0AFO	15KW	K1	SIEMENS
1	RELAY SWITCH (D)	3TF 4422-0AFO	15KW	K2	SIEMENS
1	RELAY SWITCH (Y)	3TF 4211-0AFO	7,5KW	K3	SIEMENS
1	RELAY SWITCH	3TF3010-0AFO	4 KW	K4	SIEMENS
1	RELAY SWITCH	3TF3001-0AFO	4 KW	K5	SIEMENS
1	RELAY SWITCH	3TF3001-0AFO	4 KW	K6	SIEMENS
1	RELAY SWITCH	3TF3001-0AFO	4 KW	K7	SIEMENS
1	RELAY SWITCH	3TF3001-0AFO	4 KW	K8	SIEMENS
1	RELAY AUX	3TH30 22-0AFO	2L+2R	d1	SIEMENS
1	RELAY AUX	3TH30 22-0AFO	2L+2R	dx	SIEMENS
1	RELAY AUX	3TH30 22-0AFO	2L+2R	dy	SIEMENS
1	RELAY AUX	3TH30 22-0AFO	2L+2R	dz	SIEMENS
1	TIMER	7PU40 20-3AJ20	"0:100"""	t2	SIEMENS
1	TIMER	7PU40 20-3AJ20	"0:100"""	t3	SIEMENS
1	TIMER	7PU40 20-3AJ20	"0:100"""	t4	SIEMENS
1	AMMETER	4960	100/5A	P1	SIPIE
2	ON/OFF BUTTON	P2/V O-I	D=22	S2-3/S4-5	ERSCE
2	SLOW/FAST BUTTON	P2/V + -	D=22	S6-7/S8-9	ERSCE
1	BLINKER	RM600 + L91	110V D=22	h1	BRETER
1	EMERGENCY BUTTON	PFB2V	D=22	S1	ERSCE

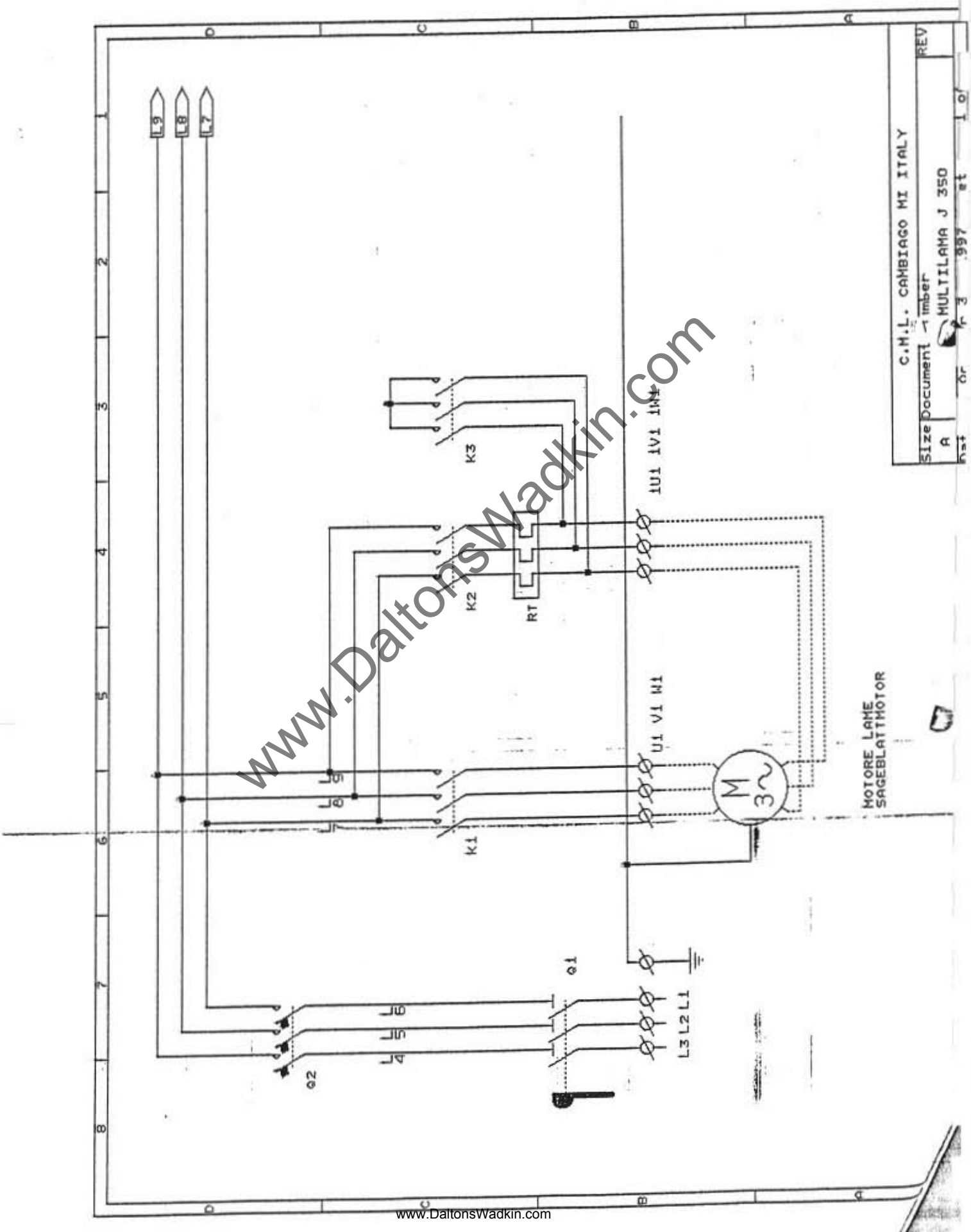
List of components
25HP 380V 50Hz multiblade E. S.

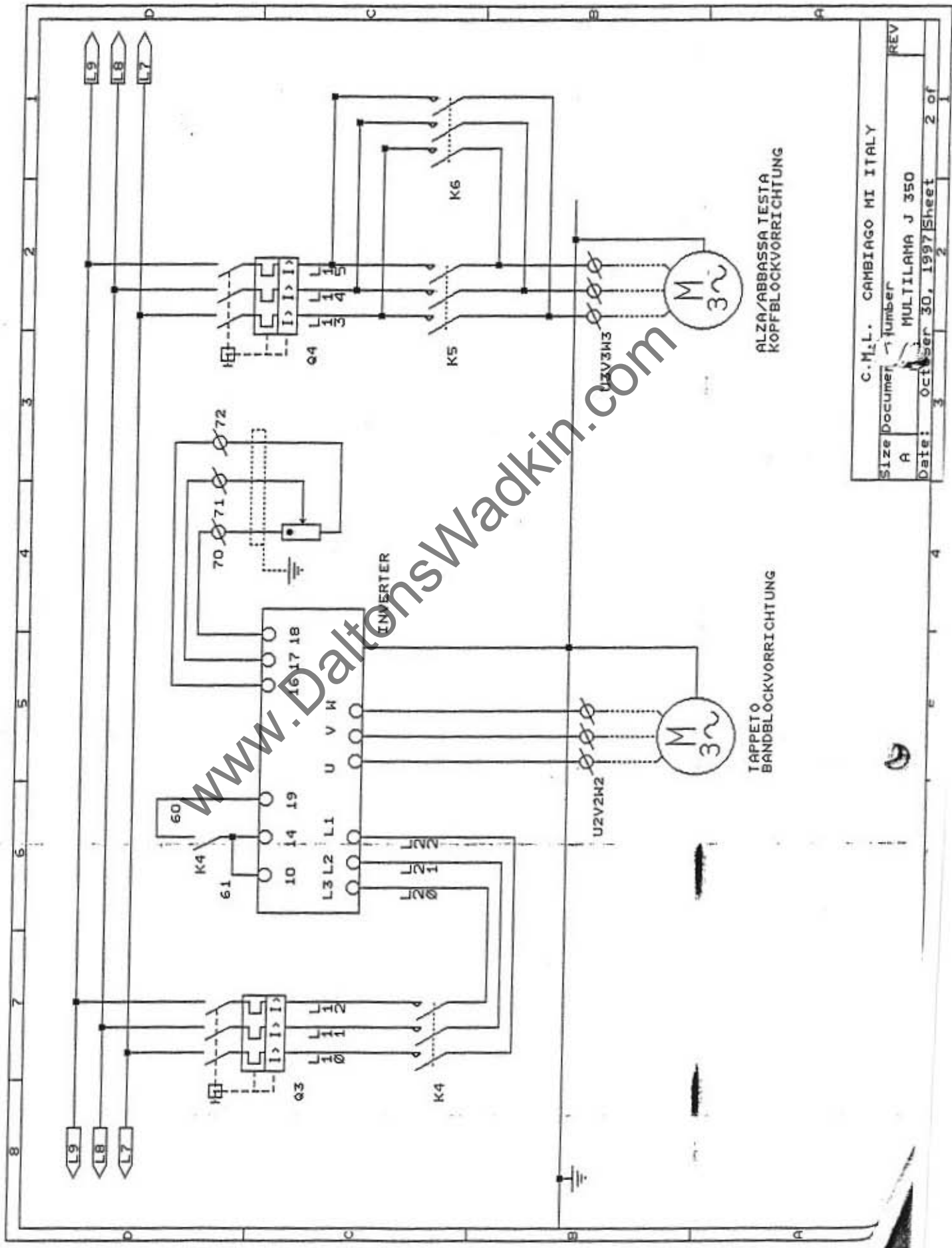
QTY.	DESCRIPTION	CODE	SETTING	REF.	MANUFACTURER
1	DISCONN. SWITCH + BP	3KA5330-1EEOO	3 x 160 A	Q1	SIEMENS
1	AUTOSWITCH	3VF 3111-1BQ41	63 : 80A	Q5	SIEMENS
1	COUNT. AUX	3VF9322-1GB20	1L + 1R	Q5	SIEMENS
1	AMMETER TRANSF.	T 30	150/5A	TA1	SIPIE
1	TRANSFORMER	0-220-380/0-110-132-220 V	200 VA	T1	ELCA
1	AUTOSWITCH	5SQ2270-0KA01	2X1 A	Q2	SIEMENS
1	AUTOSWITCH	5SQ2170-0KA02	1X2 A	Q3	SIEMENS
1	AUTOSWITCH	5SQ2170-0KA05	1X0.5 A	Q4	SIEMENS
1	AUTOSWITCH 1R+1L	3VU1300-1MK00	4 : 6A	Q6	SIEMENS
1	AUTOSWITCH 1R+1L	3VU1300-1MH00	1.6:2.4 A	Q7	SIEMENS
1	AUTOSWITCH 1R+1L	3VU1300-1MD00	0.24:0.4 A	Q8	SIEMENS
1	TIMER	7PU6020-7NJ20	"2:20""	t1	SIEMENS
1	RELAY SWITCH (L)	3TF 4622-0AFO	22KW	K1	SIEMENS
1	RELAY SWITCH (D)	3TF 4622-0AFO	22KW	K2	SIEMENS
1	RELAY SWITCH (Y)	3TF 4422-0AFO	15KW	K3	SIEMENS
1	RELAY SWITCH	3TF3010-0AFO	4 KW	K4	SIEMENS
1	RELAY SWITCH	3TF3001-0AFO	4 KW	K5	SIEMENS
1	RELAY SWITCH	3TF3001-0AFO	4 KW	K6	SIEMENS
1	RELAY SWITCH	3TF3001-0AFO	4 KW	K7	SIEMENS
1	RELAY SWITCH	3TF3001-0AFO	4 KW	K8	SIEMENS
1	RELAY AUX	3TH30 22-0AFO	2L+2R	d1	SIEMENS
1	RELAY AUX	3TH30 22-0AFO	2L+2R	dx	SIEMENS
1	RELAY AUX	3TH30 22-0AFO	2L+2R	dy	SIEMENS
1	RELAY AUX	3TH30 22-0AFO	2L+2R	dz	SIEMENS
1	TIMER	7PU40 20-3AJ20	"0:100""	t2	SIEMENS
1	TIMER	7PU40 20-3AJ20	"0:100""	t3	SIEMENS
1	TIMER	7PU40 20-3AJ20	"0:100""	t4	SIEMENS
1	AMMETER	4960	150/5A	P1	SIPIE
2	ON/OFF BUTTON	P2/V O-I	D=22	S2-3/S4-5	ERSCE
2	SLOW/FAST BUTTON	P2/V + -	D=22	S6-7/S8-9	ERSCE
1	BLINKER	RM600 + L91	110V D=22	h1	BRETER
1	EMERGENCY BUTTON	PFB2V	D=22	S1	ERSCE

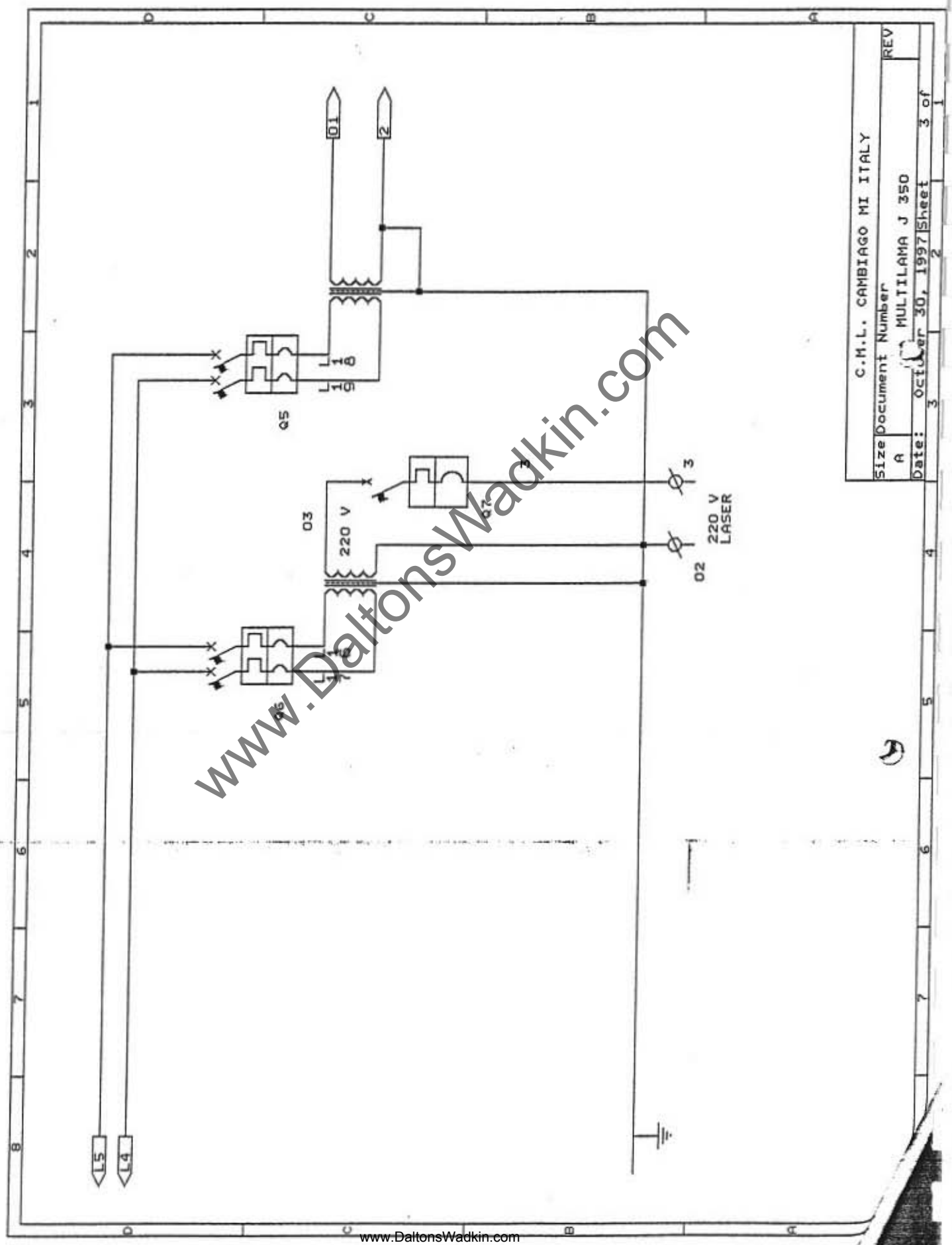
SPARE PARTS LIST

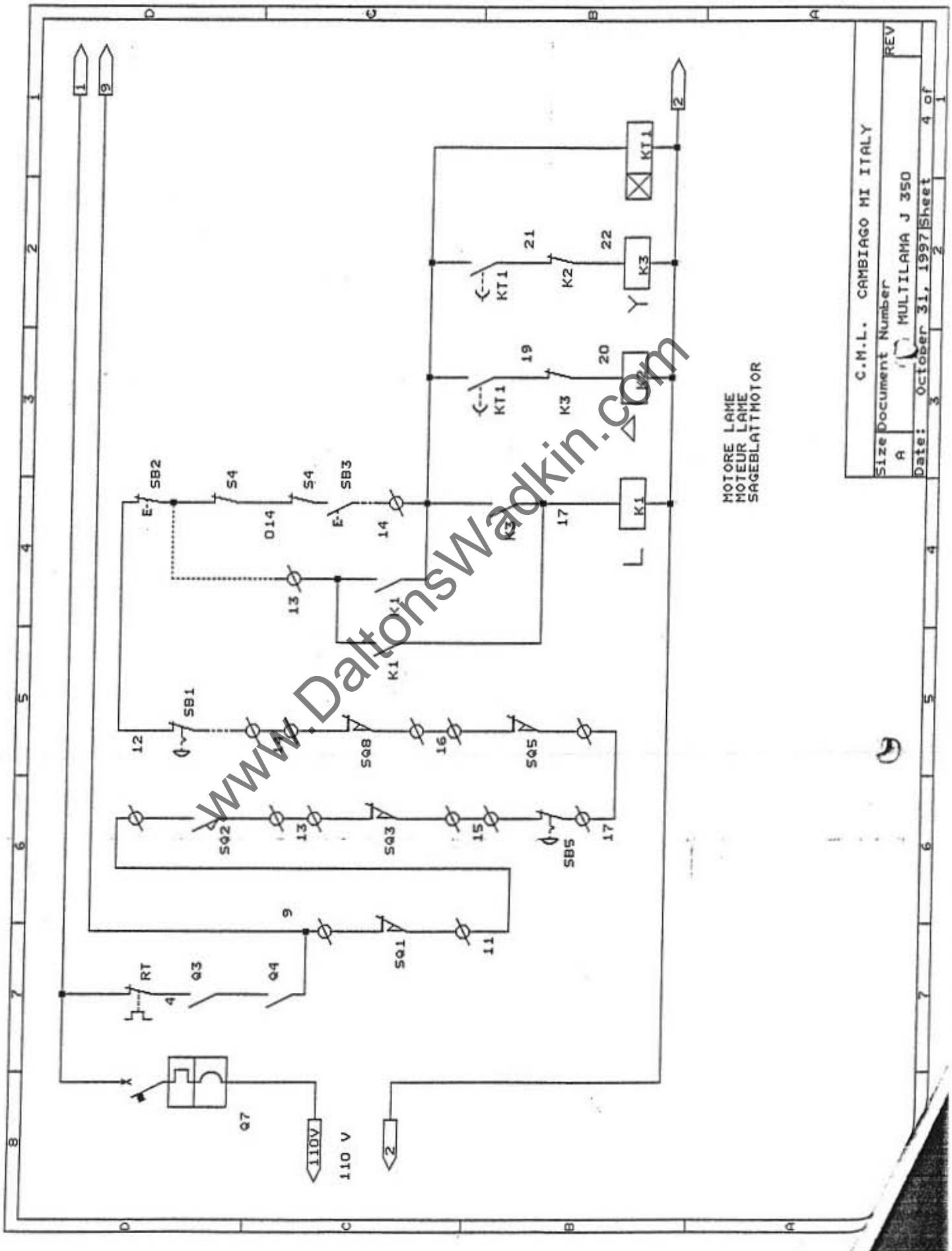
Blades shaft	Pos. 5, see attached blades shaft
Amperometer	Pos. F, see control panel board
Reference guide	Pos. 1, see attached drawing
Door block V.110	Pos. Fc 8, see attached stroke-end and sensors location
Blade holder key	Pos. 7, see attached drawing -1
Motor key	Pos. 8, see attached drawing -1
Cast 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	
laccard handle	Pos. 13, see attached drawing
laccard 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

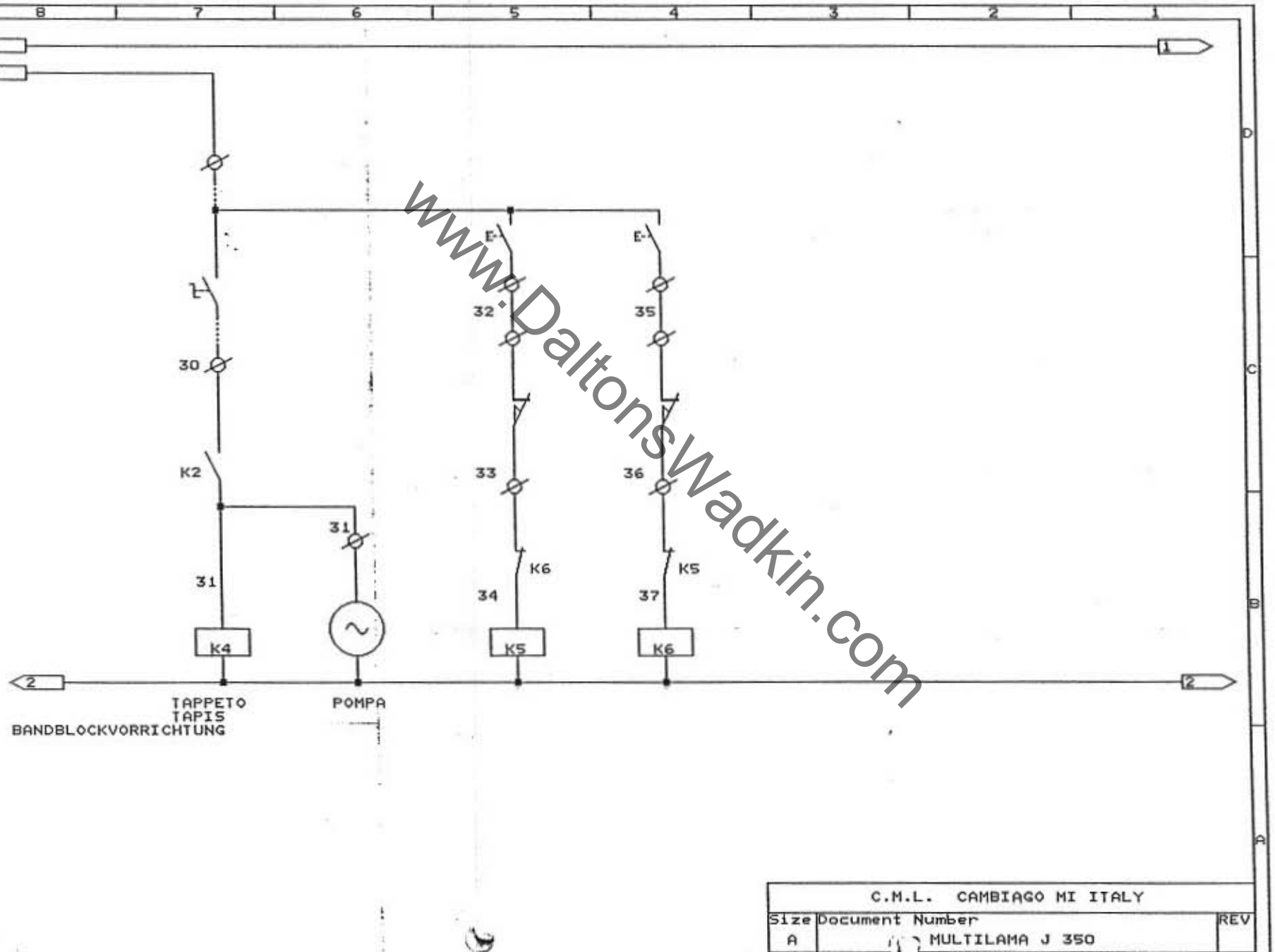
Sprockets (2 pcs)	Pos. 6, see attached sprocket axe
Free wheel (2 pcs)	Pos. 4, see attached free axe
Manual oil pump	Pos. 3, see attached drawing-1
Quill pulley for belts 3V	Pos. 5, see attached drawing-1
Motor pulley for belts 3V	Pos. 6, see attached drawing-1
Emergency button A	A, see control panel 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











C.M.L. CAMBIAGO MI ITALY		
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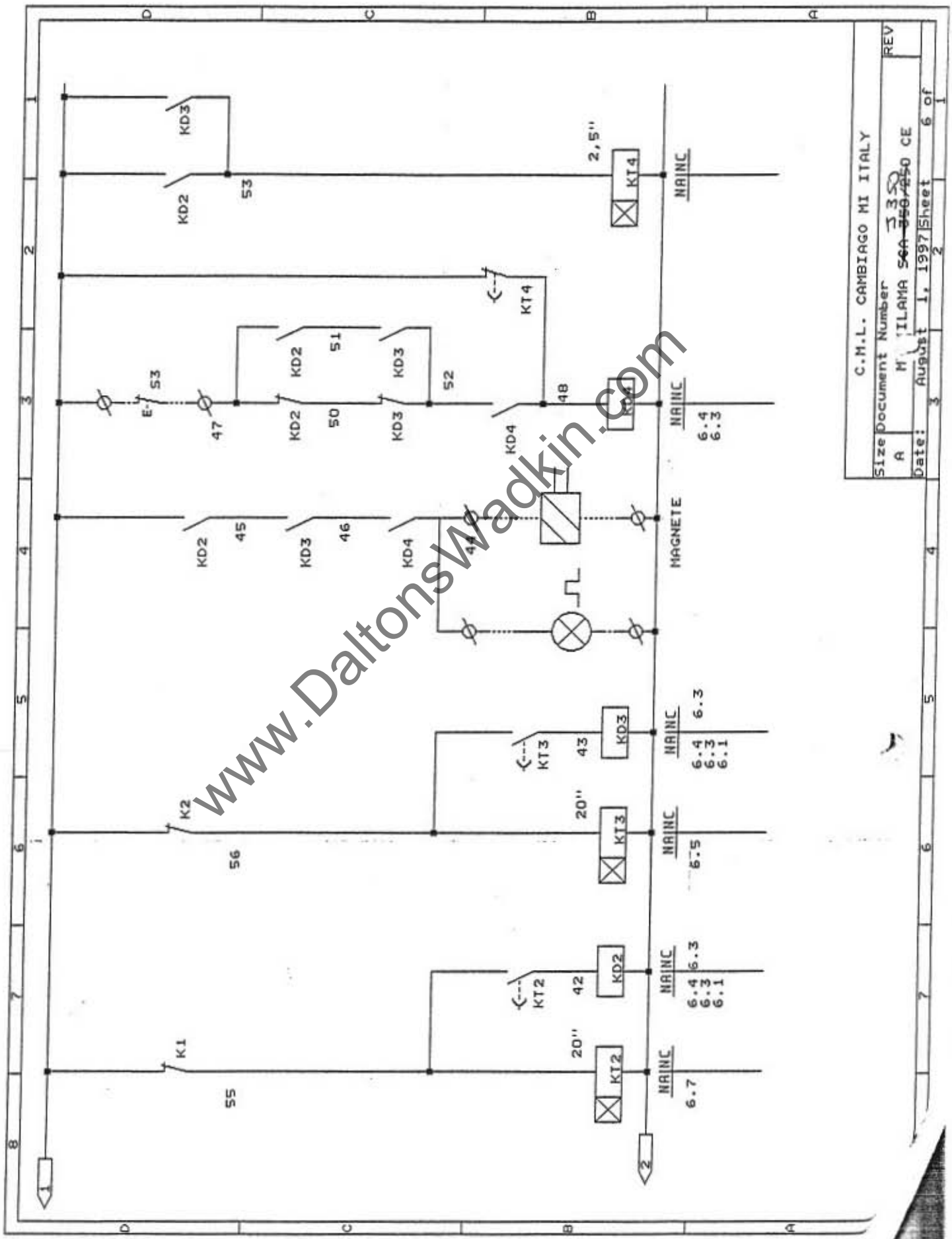
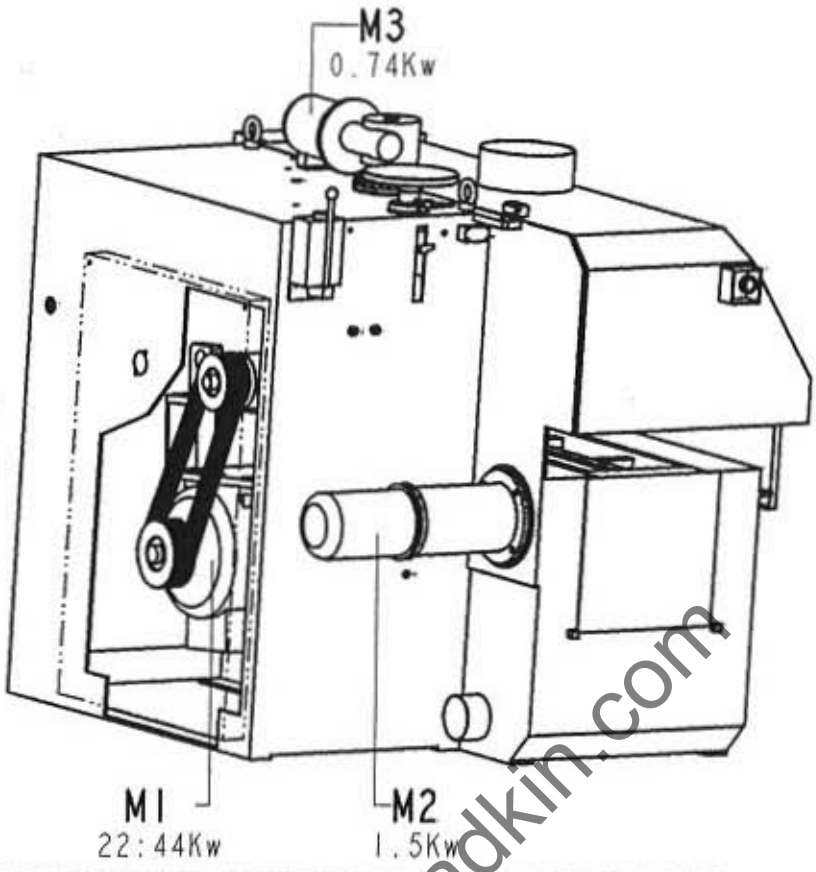
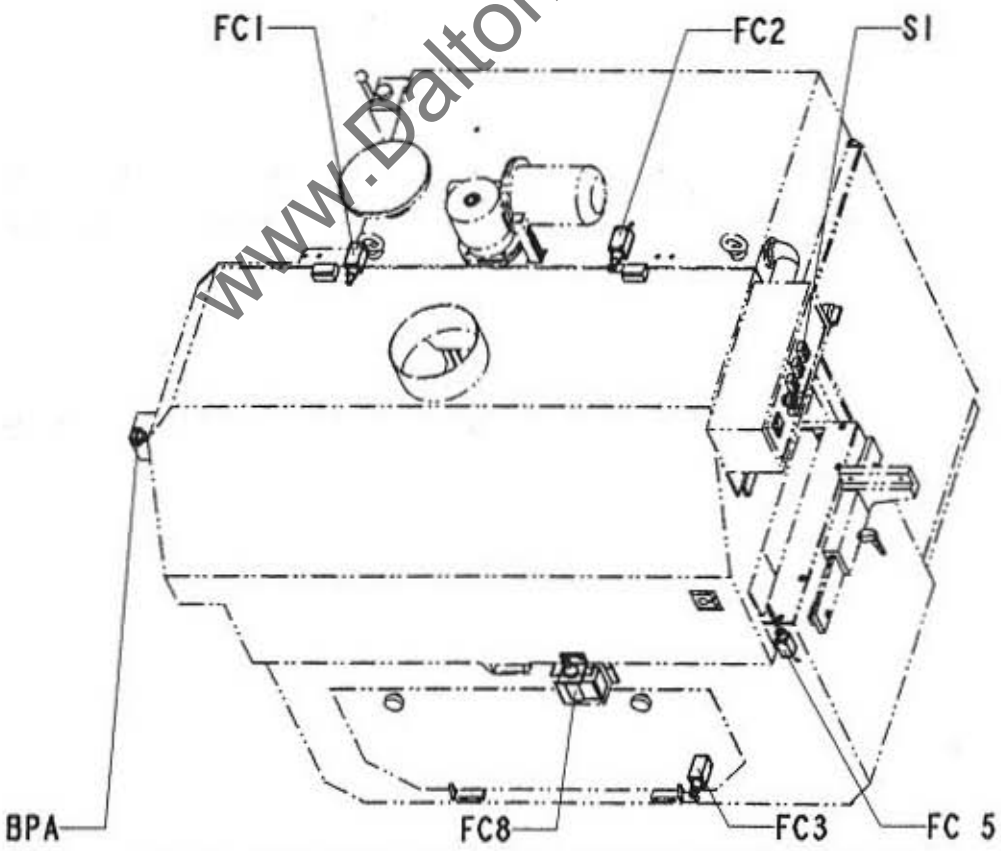


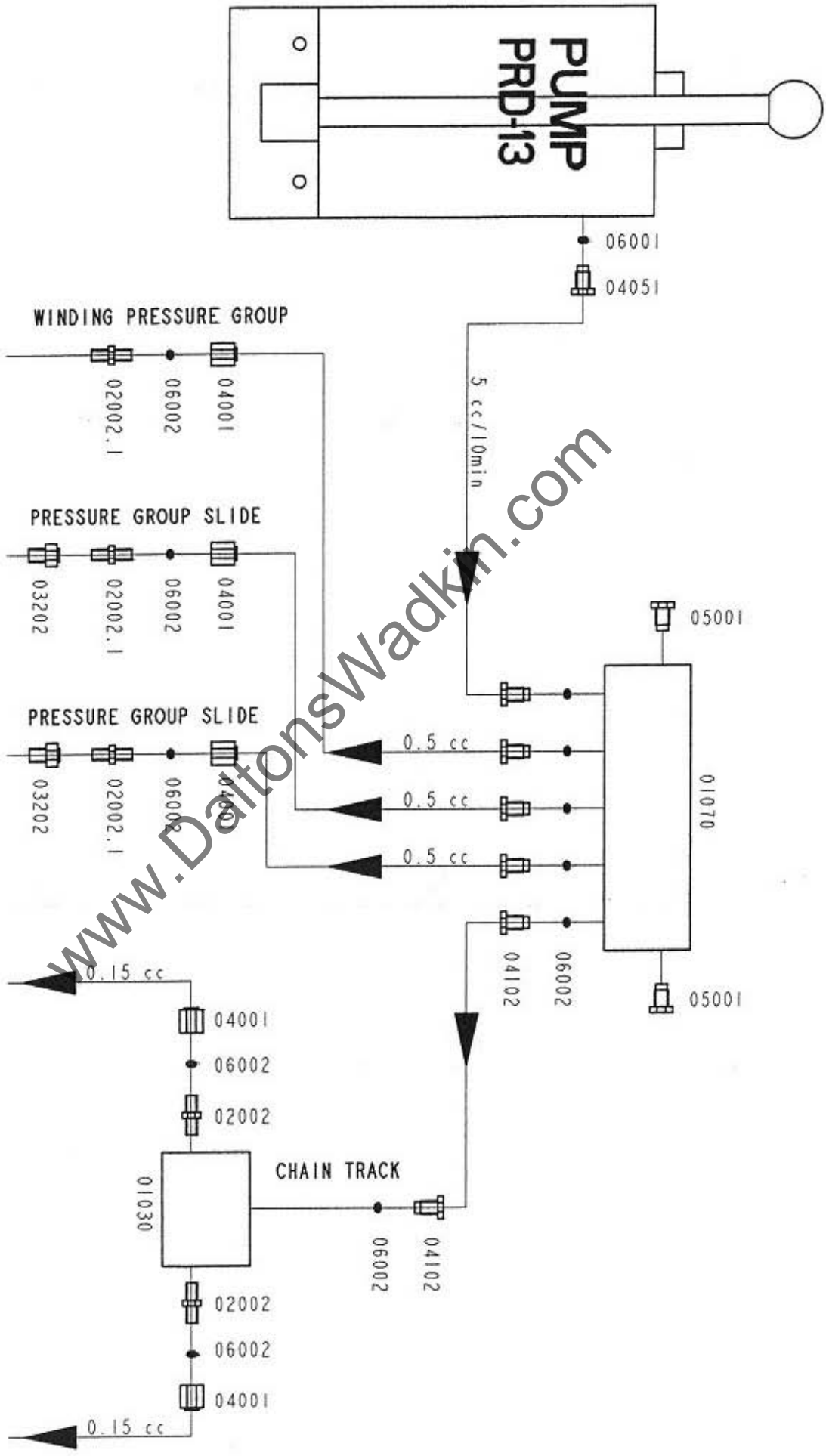


MOTOR POSITIONING DIAGRAM



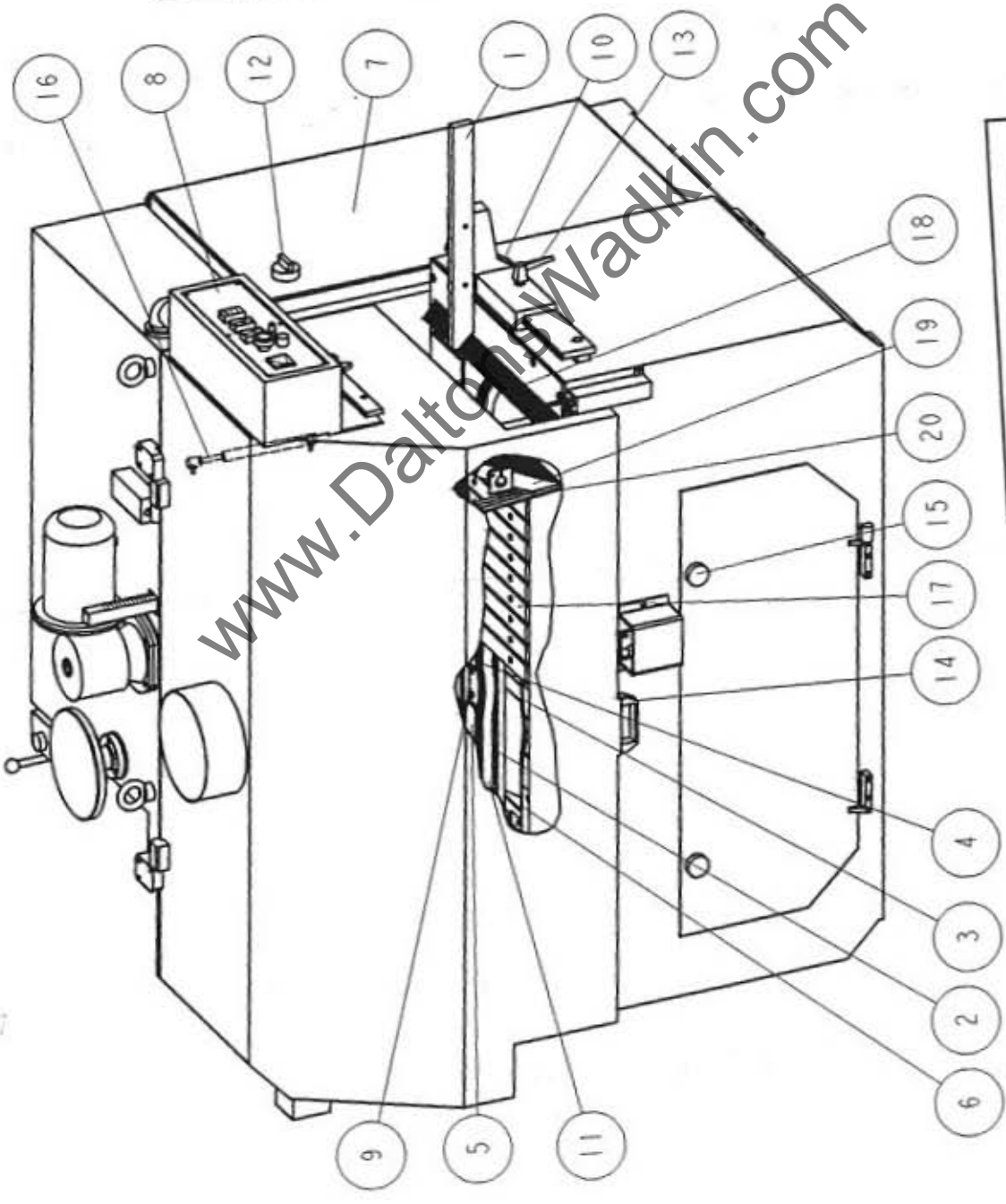
SAFETY'S POSITIONING DIAGRAM

LUBRIFICATION DIAGRAM



COMPONENTS LIST

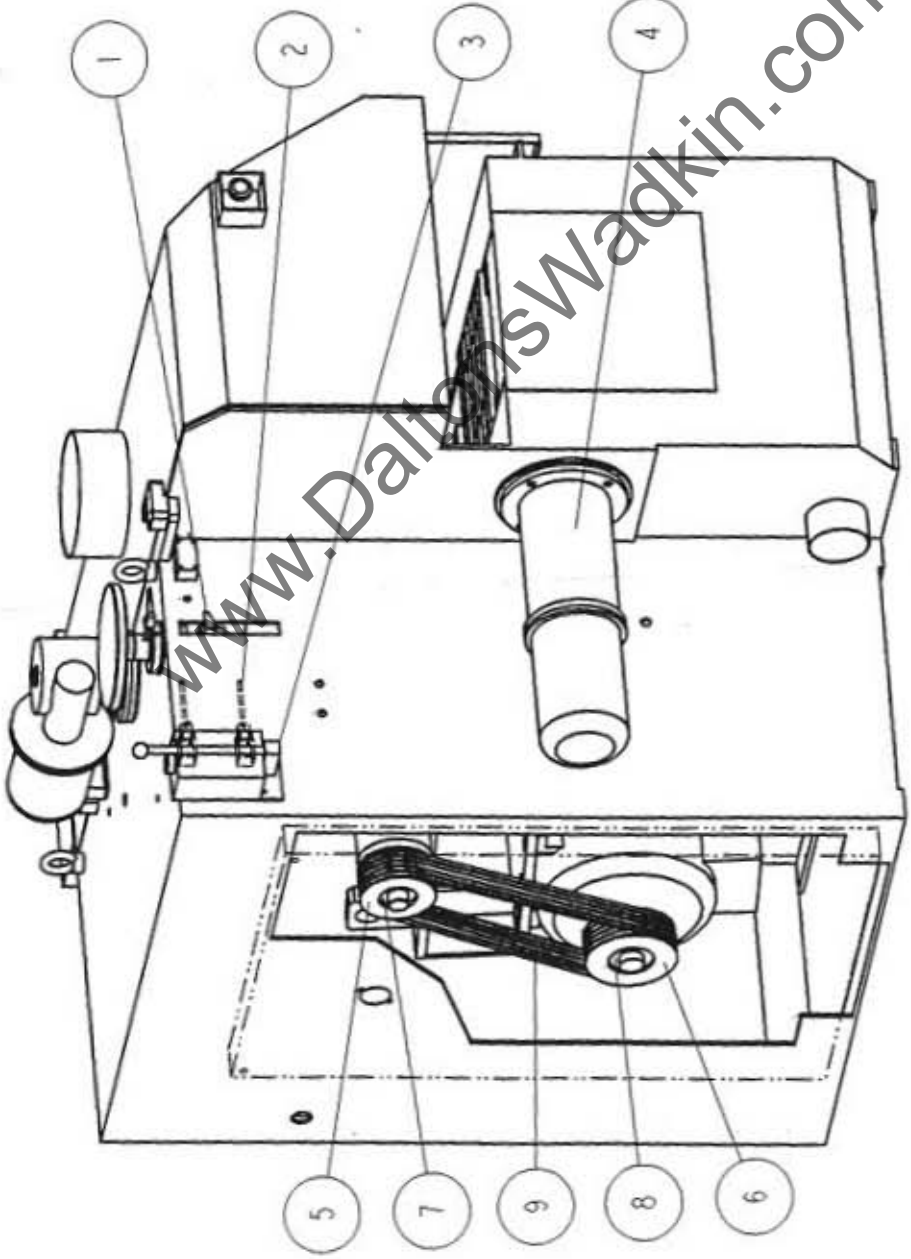
QTY	N.DRW - DESCRIPTION	POS.
1	14-1-08 FENCE	1
1	17-0-21 CHAIN GUIDE	2
2	17-0-22-1 CHAIN PLATE	3
1	17-0-22 CHAIN PLATE	4
1	17-0-23-1 CHAIN PLATE	5
1	17-0-23 CHAIN PLATE	6
1	17-0-26 ELECTRICAL BOX DOOR	7
1	11-AS-005 CONTROL PANEL	8
1	8-0-05 CHAIN PLATE	9
2	8-0-09 FENCE	10
1	CHAIN - 116PITCHS-PI-ATTACHMENTS ONE SID	11
2	MAIN SWITCH	12
1	HANDLE-MRX80-P-M12X30	13
1	HANDLE-443-140	14
1	KNOB-050-VC192-50	15
2	GAS PISTON-150N	16
3	3-1-07 PAD MAT	17
58	8-0-09 ANTI-KICK HACK	18
75	8-0-52A STEEL FINGERS	19
80	11-0-18 ANTI-SPLINTERS DEVICE	20
40		



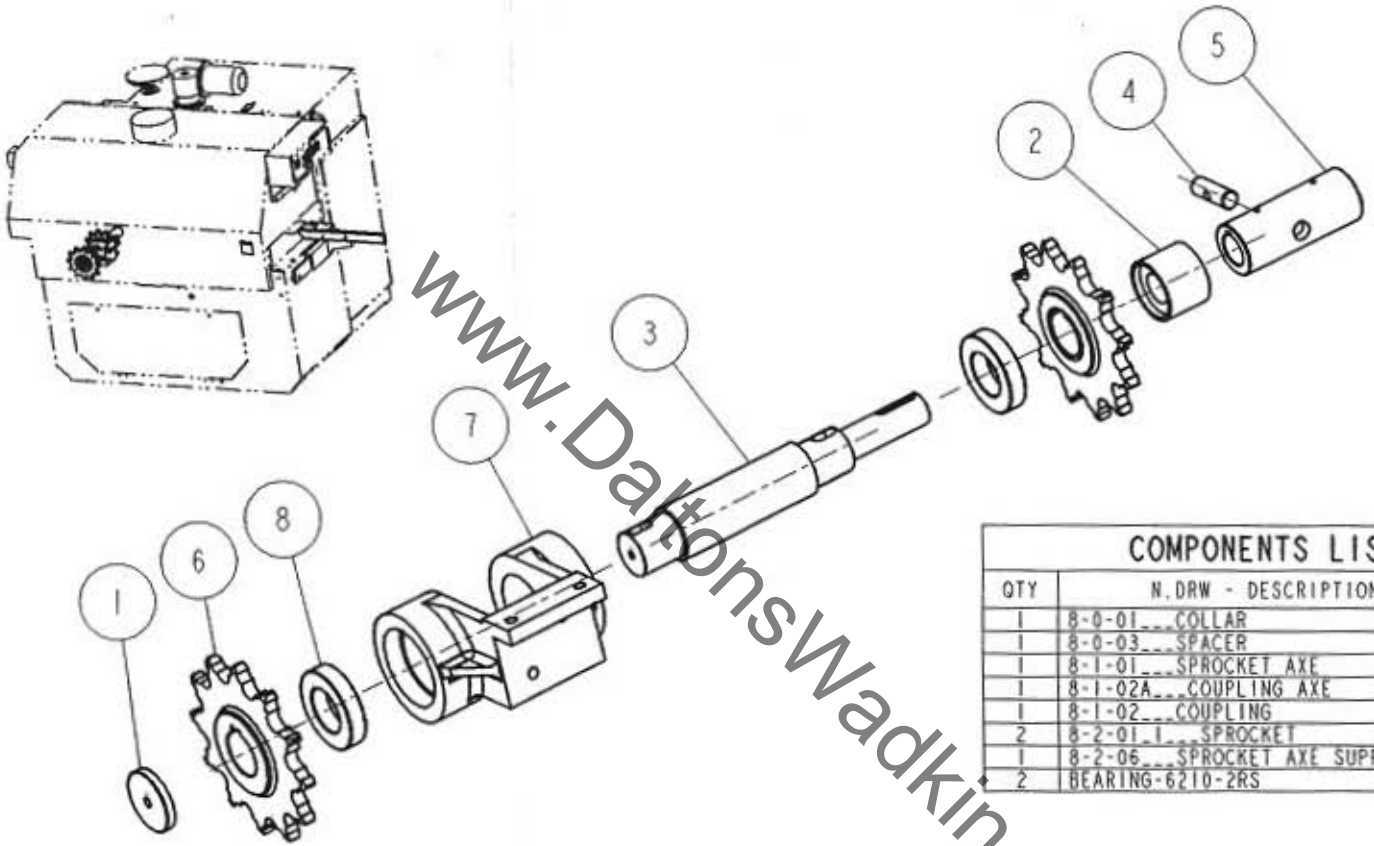
DRAWING

COMPONENTS LIST

QTY	N. DRW - DESCRIPTION	POS.
1	8-0-178 INDEX	1
2	MICRO-SWITCH FE525	2
1	PUMP PRD-13	3
1	SPEED REDUCER-RP243F-R57-PAM200-24	4
1	QUILL PULLEY X 3V BELTS	5
1	MOTOR PULLEY X 3V BELTS	6
1	BLADE HOLDER LOCKING DEVICE	7
1	MOTOR LOCKING DEVICE	8
	3V BELTS	9

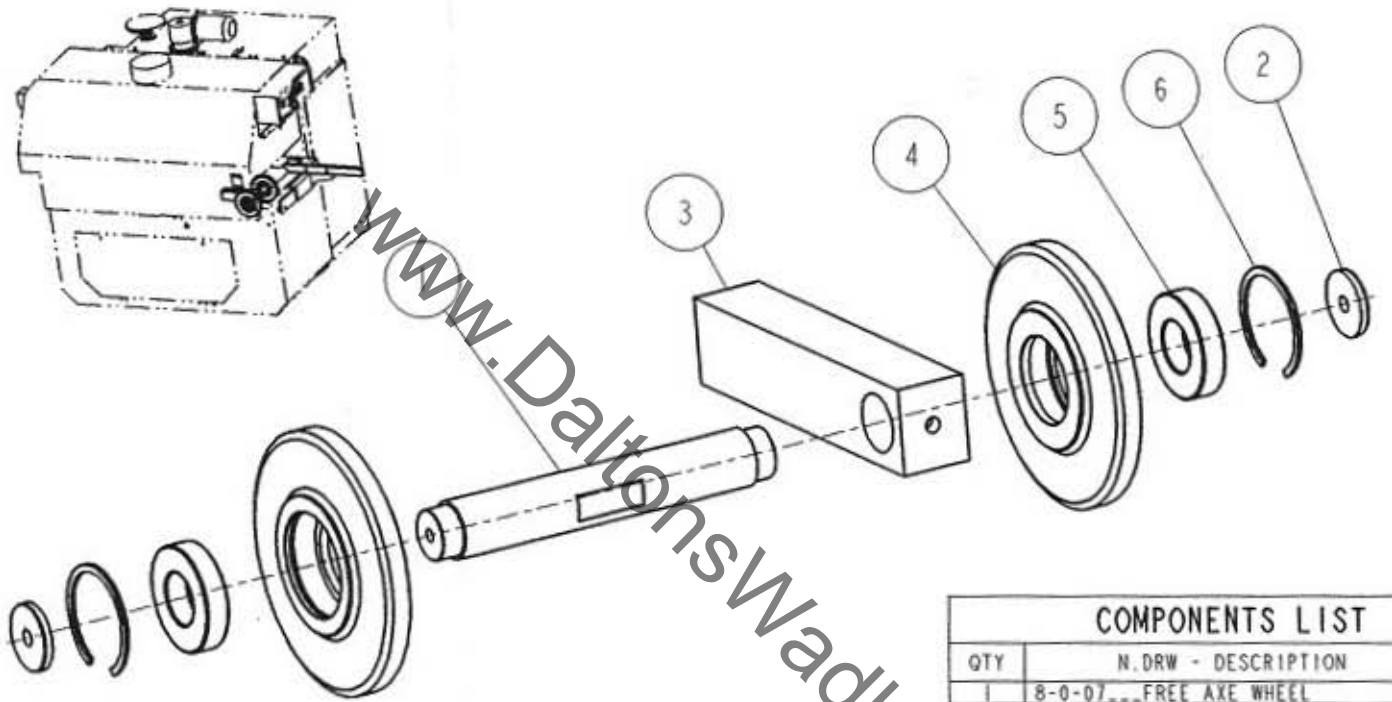


DRAWING-1



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	8-2-01.1___SPROCKET	6
1	8-2-06___SPROCKET AXE SUPPORT	7
2	BEARING-6210-2RS	8

SPROCKET AXE



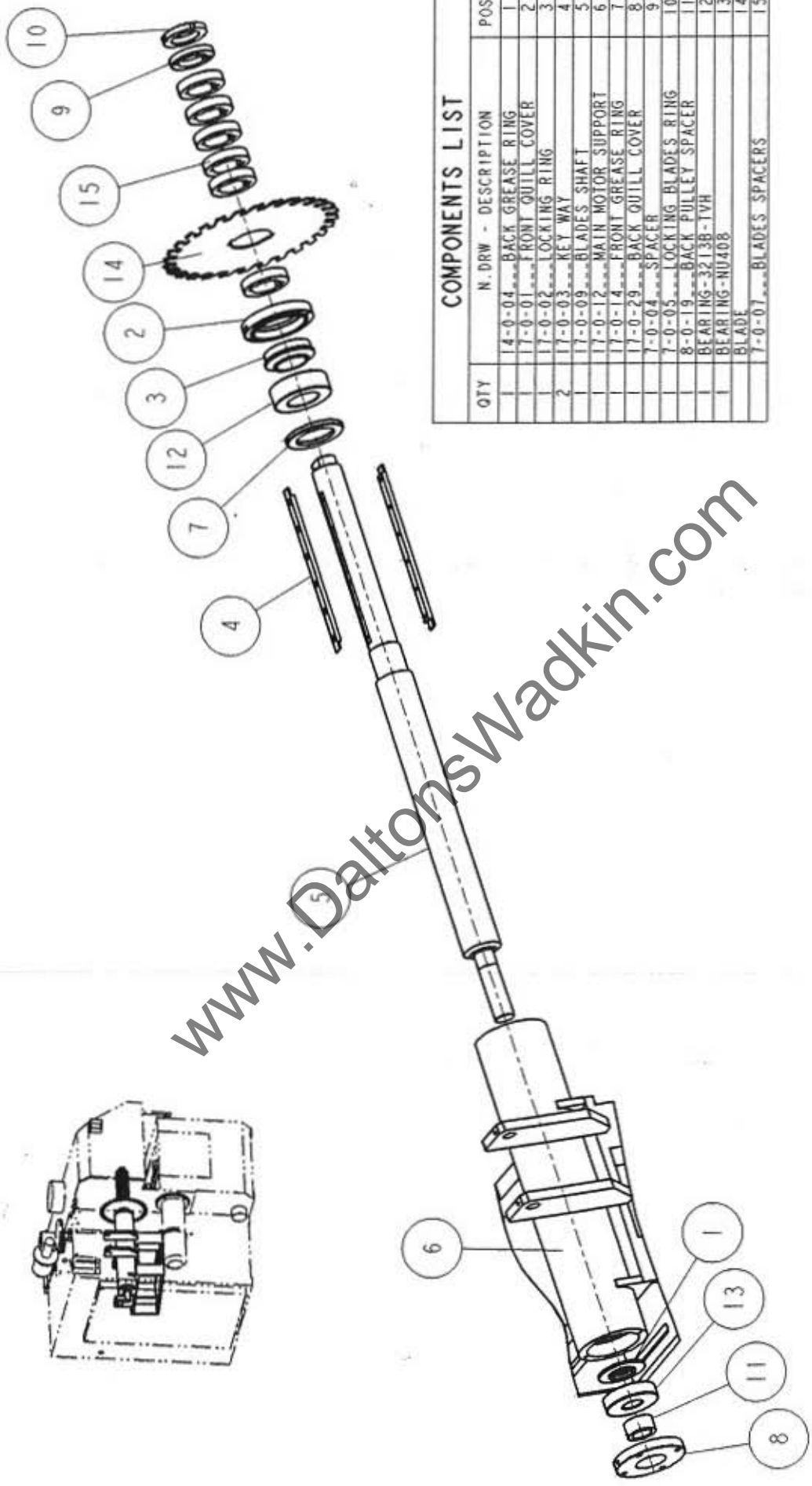
COMPONENTS LIST		
QTY	N.DRW - DESCRIPTION	POS.
1	8-0-07___FREE AXE WHEEL	1
2	8-0-08___COLLAR	2
1	8-1-03___FREE AXE SUPPORT	3
2	8-2-01_2___FREE WHEEL	4
2	BEARING-6201-2RS	5
2	SEEGER-1-72	6

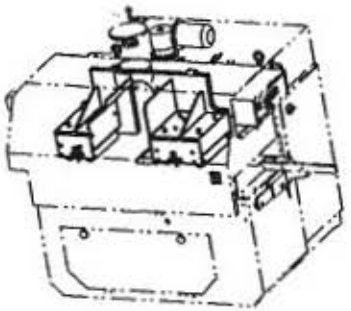
FREE AXE

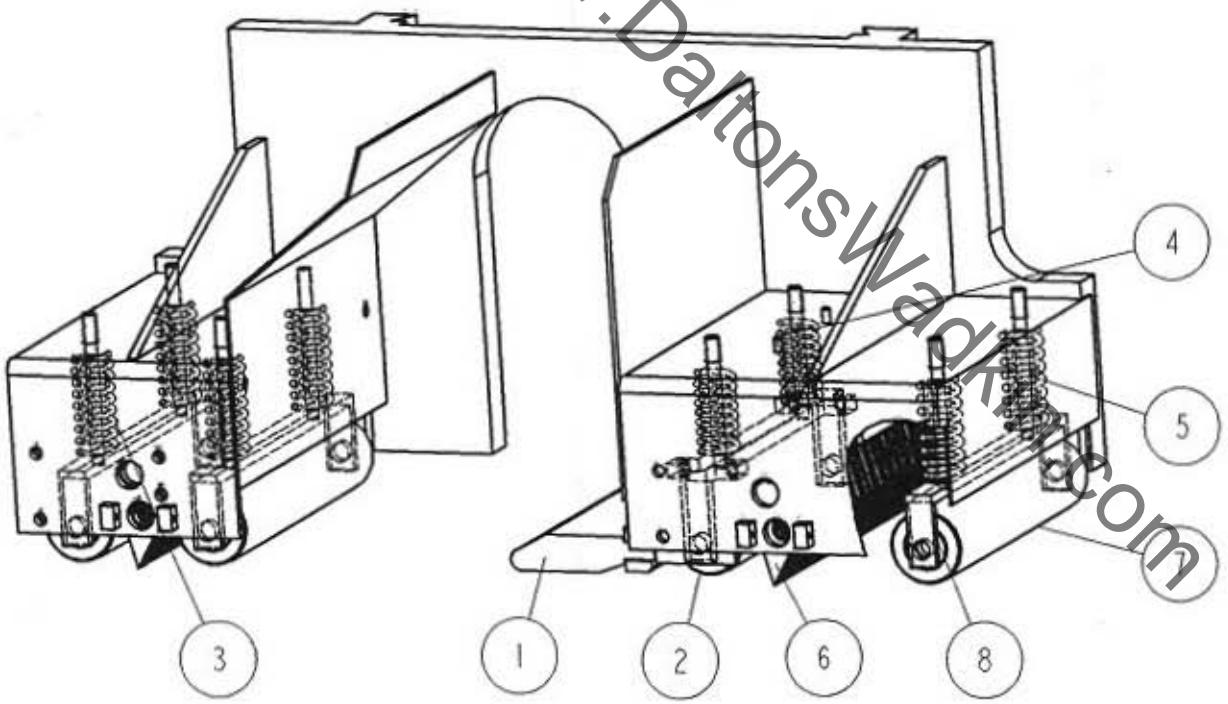
BLADES SHAFT

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-32138-1VH	12
1	BEARING-NU408	13
	BLADE	14
	7-0-07 ___ BLADES SPACERS	15





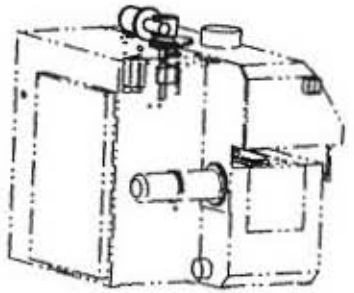


COMPONENTS LIST		
QTY	N.DRW - DESCRIPTION	POS.
1	8-0-00...WOODEN TABLET	1
1	8-0-21I...TABLET ROLLER	2
4	8-0-40A...SPRING	3
2	8-0-40D...SPRING	4
2	8-0-40...SPRING	5
98	8-0-68...ANTI-KICK BACK	6
3	8-1-11...PRESSING ROLLER	7
8	BEARING-6204-2RS	8

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