

ALUMINIUM SAWING MACHINES

TL-302

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ALUMINIUM SAWING MACHINE TL 302

1. GENERAL SAFETY RULES FOR ALL MACHINES

N.B.: Read the instructions carefully in order to avoid any problems.

As with all machinery there are certain hazards involved with operation and use of this machine. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may occur. Observe these rules insofar as they are applicable to this particular machine.

This machine was designed for certain applications only. We strongly recommend that this machine NOT be modified in any way and/or used for any application other than for which it was designed.

If you have any questions relative to its application DO NOT use the machine until you have contacted your dealer.

1. For your own safety read the instruction manual before operating the tool.
2. Keep all guards in place and in working order.
3. Ground all tools.
4. Remove adjusting keys and wrenches. Make a habit of checking the machine before turning it on.
5. Keep the work area clean. Cluttered areas and benches invite accidents.
6. Do not use in a dangerous environment, such as damp or wet locations or expose to rain. Always keep the work area well-lit.
7. Keep children and visitors away. They must be kept at a safe distance from the machine at all times.
8. Make sure that the work area is not accessible to unauthorised persons. Use padlocks, master switches, remove starter keys etc.
9. Never overload the machine. The capacity of the machine is at its largest when properly loaded.
10. Do not force the machine or attachment to do a job for which it was not designed.
11. Wear proper apparel. No loose clothing, gloves, neckties, rings, necklaces, bracelets or jewellery: they may get caught in moving parts. No slip footwear is recommended. Wear a hairnet to contain long hair.
12. Always wear safety glasses and work according to safety regulations. Use a face or dust mask if operation is dusty.
13. Always secure workpiece tightly using a vise or clamping device. This will keep both hands free to operate the machine.
14. Do not overreach. Keep your proper footing and balance at all times.
15. Maintain tools in top condition. Keep them sharp and clean. Read the instructions carefully and follow the instructions for cleaning, lubrication and tool replacement.
16. Lubricate the machine and fill all oil reservoirs before operation.
17. Disconnect tools before servicing and when changing accessories such as blades, bits, cutters etc.
18. Use only recommended accessories. Consult the owner's manual for recommended accessories. The use of improper accessories may cause hazards.
19. Avoid accidental starting. Make sure the on/off switch is in the "OFF" position before plugging in the power cord.
20. Never stand on the machine or tools. Serious injury could occur if the machine is tipped or if the cutting tool is accidentally touched.
21. Check damaged parts. Replace or repair damaged parts immediately. Check machine for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation.
22. Direction of feed. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
23. Never leave tool running unattended. Do not turn power off until it has come to a complete stop.
24. Alcohol, medication, drugs. Never use the machine while under the influence of alcohol, medication or drugs.
25. Make sure the tool is disconnected from the power supply, before servicing, repairing etc.
26. Keep the original packaging for future transport or relocation of the machine.

ADDITIONAL SAFETY RULES

Always keep in mind that:

- the machine must be switched off and disconnected from the power supply during maintenance and repairs,
- clamped workpieces may only be measured when the machine is switched off.

Never lean over the machine, mind loose clothing, ties, jewellery etc. and wear a cap.

Do not remove safety devices or guards. Never use the machine while a guard is open.

Always use safety glasses for machining rough materials.

Burrs and chips should only be removed using a sweeper or other aid, never with your bare hands!

Never leave the machine running unattended.



Always wear safety glasses!

2. TECHNICAL DATA

Saw blade dimensions	300 x 32 mm
Sawing capacity 45° rectangular	75 x 45 mm
Sawing capacity 45° round	80 mm
Sawing capacity 45° square	60 mm
Sawing capacity 90° rectangular	120 x 50 mm
Sawing capacity 90° round	100 mm
Sawing capacity 90° square	85 mm
Speed	3000 omw/min
Motor power	1,5 kW
Dimensions	600 x 450 x 550 mm
Weight	80 kg
Voltage	230V / 400V
Noise level no load / load	60 dB (A) / 96 dB (A)

Technical changes reserved.

3. INDICATIONS REGARDING TRANSPORT AND STORAGE.

Due to the reduced weight and the size of the machine the transport does not represents no problem.

Store in the vertical position do not stack.

If the machine remains stored for a long period of time, periodically lubricate.

Do not expose to the elements.

The packaging is made of properly designed and sized wood, and it is also supplied wrapped in plastic.



CAUTION

Do not improperly dispose of the packaging. Send this material to be recycled or disposed of in accordance with all legislation in force.

4. INSTRUCTIONS FOR ANCHORING AND SERVICE START-UP.

4.1. Anchoring instructions.

Ensure that the machine has not suffered any damage during transport by making an initial visual inspection. If damage is observed, advise the manufacturer immediately.

The machine must be installed on a firm and level surface in order to thus reduce vibrations during operation and so that the machine operates within the parameters established by the manufacturer.

4.2. Power supply connection.

Verify that the power supply voltage corresponds to the voltage indicated on the specifications plate of the machine. Connect the cable to the power supply using a plug that is appropriate for the characteristics of the same, thereby respecting the colour codes.

Once the machine is connected, verify that the motor rotation agrees with the direction of the saw blade teeth (rotation to the right). If the motor rotation were not correct, change the two phases of the motor. Then check the rotation again.

4.3. Instructions regarding blade installation.

In order to install the blade, disconnect the power to the machine (deactivate the main switch). Access the machine shaft through the front door.

Lock the shaft using the 12 Ø rod that is provided with the tools, and loosen the blade nut.



ATTENTION

The blade nut is reverse threaded.



DANGER

After changing the blade, put the sheet metal front back on.

4.4. Cutting coolant.

In order to fill the machine with cutting coolant, open the reservoir and fill with **PURE, NON-EMULSIFIABLE CUTTING OIL (VISCOSITY ISO VG 16-32 cST 40°C)**

5. INSTRUCTIONS FOR USE.

5.1. Proper and improper use.

This is a manual cut-off machine especially designed for cutting aluminium profiles.

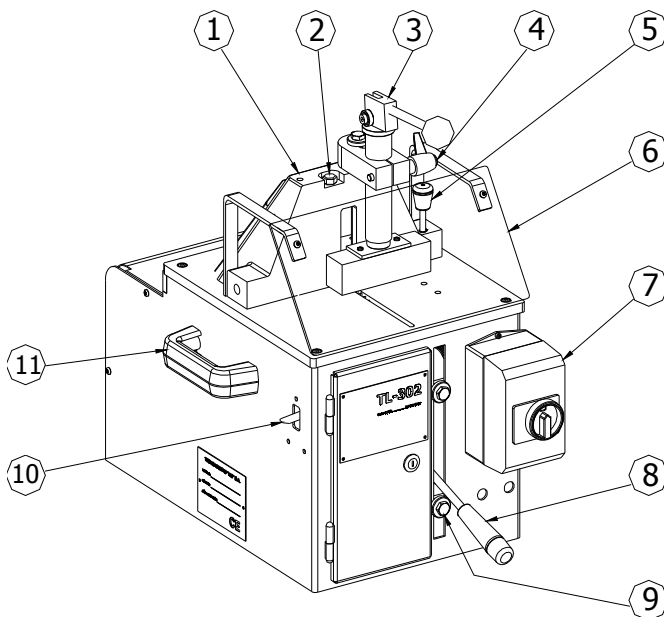
The use of the machine for cutting other materials is hereby prohibited. Such use may cause damage to the machine and put the health and safety of the worker at risk.



DANGER

We are not responsible for any possible accident caused by the failure to comply with the aforementioned.

5.2. Function of the operating mechanisms.



The saw is raised by operating lever number 8, which is located on the front of the machine. This lever should be moved by applying constant, easy pressure (Avoid abrupt changes in speed when raising the saw).

- In order to adjust the up and down movement of the saw, adjust the stops (number 9– raise stop and lower stop). In order to adjust these stops, turn the hex bolts.

In order to dispense the cutting oil, press lever number 10. It is advisable to do so once for each cut. This will provide a higher quality cut and help the circular saw to last longer.

Hold-down clamp: Position the hold-down clamp over the piece by operating tightening lever number 3. Then operate the “down” lever of the hold-down clamp (number 2).

For angle cuts from 0° to 45°, use angle lock number 4. Put it in the position shown in the figure or in position number 5.

In order to select the cutting angle, loosen shaft screw number 1 and turn the turret to the desired degrees, guided by the indicator on the base plate. Then retighten shaft screw number 1.

The machine is delivered perfectly squared.



DANGER

**ALWAYS WORK WITH THE PROTECTIVE SHIELD LOWERED.
DO NOT DISCONNECT ANY SAFETY DEVICES.**

5.3. General rules and safety checks.

- Before using the machine, check the efficiency and perfect operation of all safety devices, and check that the moving parts of the machine are not blocked, that there are no damaged parts and that all machine components are positioned and work correctly.
- It is entirely prohibited to manipulate the safety devices.
- It is entirely prohibited to work without the protective shield in position.
- It is mandatory to use gloves and protective eyewear.
- It is mandatory to use regulation work clothing (it must be worn fastened).
- Before starting work, the operator must ensure that all tools and wrenches used for maintenance or adjustment have been removed.
- In the event of a fire, use powder extinguishers and disconnect the machine from the electric system.

6. RECOMMENDATIONS AND MAINTENANCE.

6.1. Type and frequency of inspections.

The operator's knowledge of the machine is one of the best ways of daily control of any possible problem. If any failure is detected, work must be stopped and qualified personnel must be informed immediately.



NOTE

Always clean the machine and the work area at the end of the workday.

MAINTENANCE TABLE

LUBRICATION POINTS	TYPE OF GREASE/OIL	FREQUENCY
Angle lock	SAE 30 LUBRICATING OIL	WEEKLY
ROCKER ROTATION SHAFT	SAE 30 LUBRICATING OIL	WEEKLY
Rocker bearings Fig 7.3	ROLLER BEARINGS GREASE	ANNUALLY
CHECK POINTS		FREQUENCY
Machine cleaning		WEEKLY
Condition of the transmission belt		ANNUALLY

6.2 Qualified personnel for maintenance and repair work.

- All repairs shall be made exclusively by qualified personnel, thereby always using original replacement parts. If not, the machine may be damaged or the user may be injured.
- The maintenance and cleaning of the machine must not be neglected. The life of the machine and its optimal operation depend on it considerably.

6.3. Manufacturer recommendations.

⇒ In the event that the machine is broken down or the saw blades must be replaced, place a padlock on the protection switch and place the keys under the care of qualified personnel.

⇒ Before working on any electrical devices, disconnect the plug from the power supply.

⇒ If extension cords are used, ensure that the cable has the appropriate cross-section for the power of the machine.

⇒ Whenever any part has to be replaced, use an original replacement part and endeavour to use the oil recommended by the manufacturer.



NOTE

In case of any doubt or problem, do not hesitate to consult the manufacturer.



ATTENTION

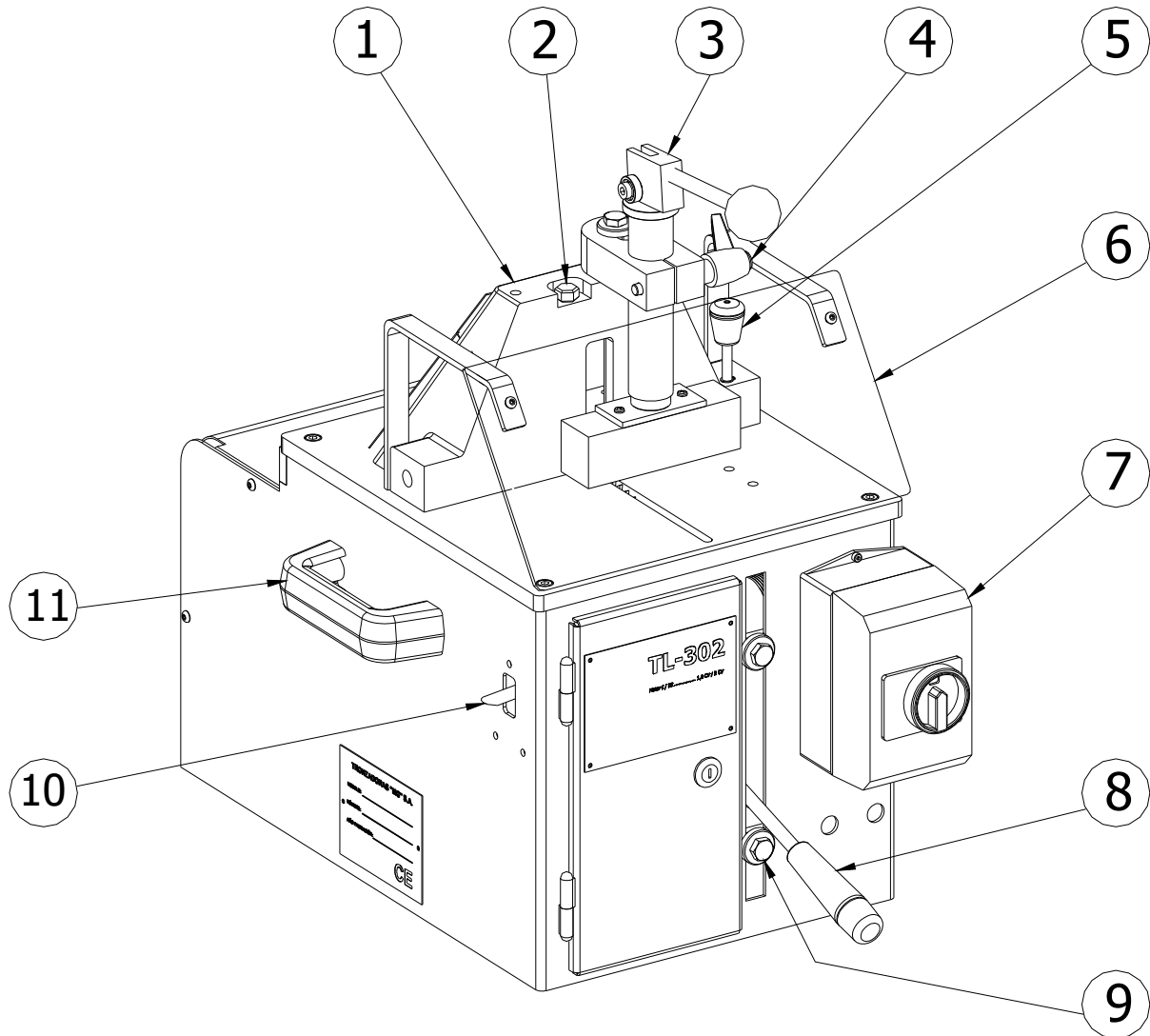
The manufacturer hereby guaranties the supply of each one of the parts or components for at least 3 years as from the manufacturing date of the machine.



ATTENTION

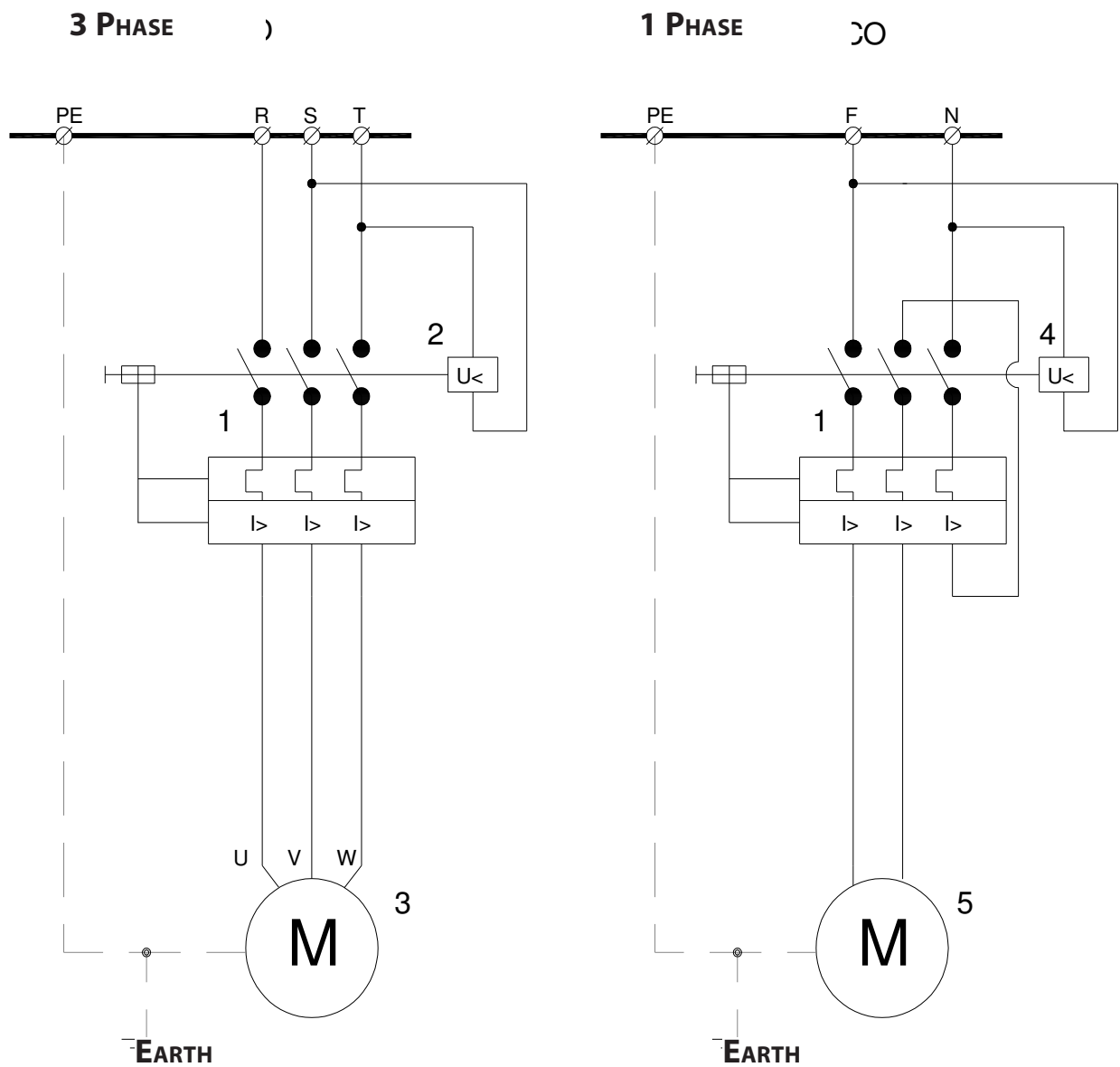
The manufacturer is not responsible for breakdowns caused due to the improper use of the machine.

7. DRAWINGS AND SCHEMATICS.



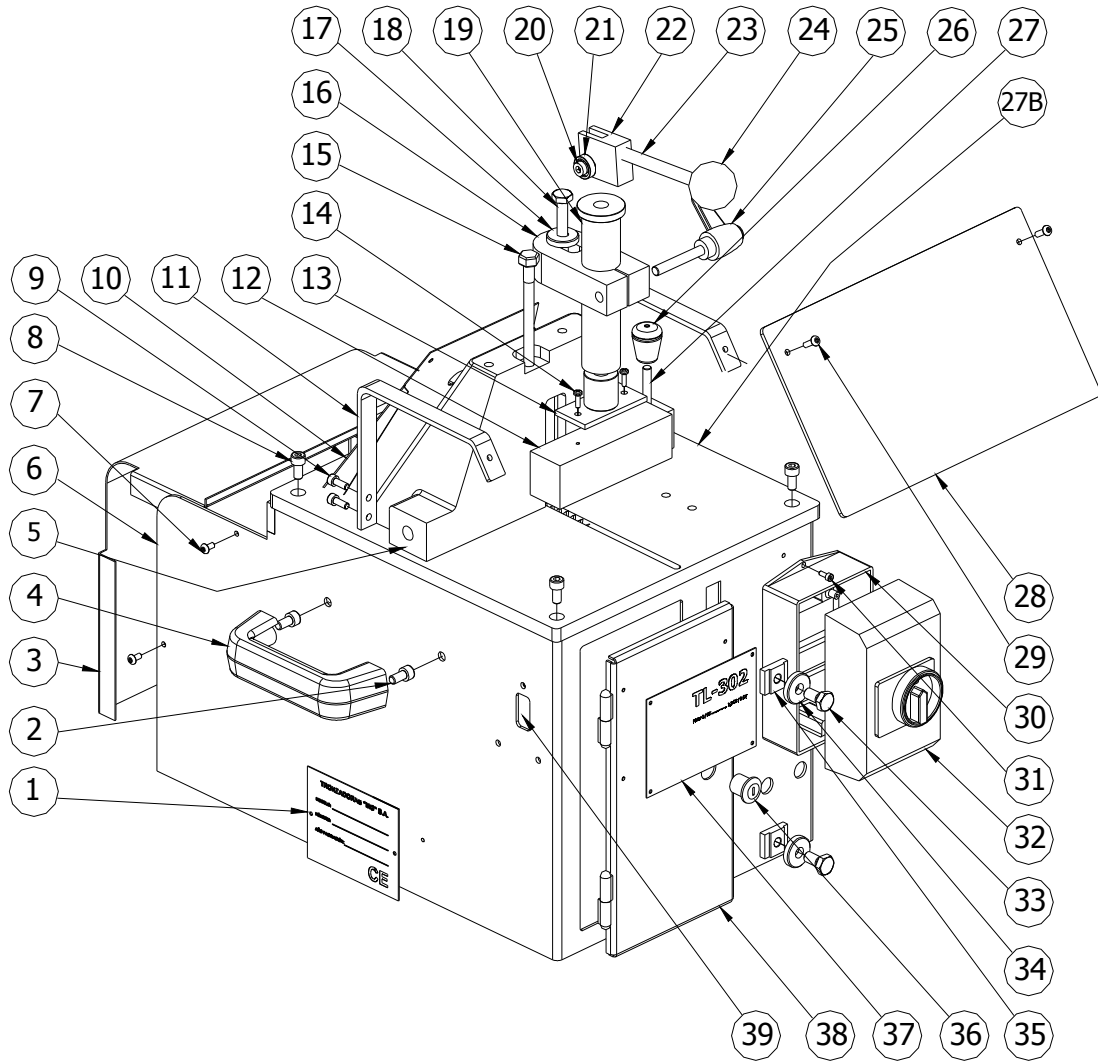
NR	DESIGNATION	CODE	NR	DESIGNATION	CODE
1	TURRET	2020000301	7	MAIN SWITCH 6-10A	E000000003 / 4
2	TURRET SCREW 17x176	2020000291	8	SAW RAISE LEVER	2020000461
3	MANUAL CLAMP Ø36	2020000331	9	END-OF-TRAVEL	2020000371
4	M 10x50 LEVER	B0000P1050	10	COOLING REFRIG. PUMP	2350000431
5	ANGLE LOCK	2020000051	11	MOTOR PROTECTION	2020000PT1
6	PROTECTIVE SHIELD	2020000341			

7.1. Power circuit .



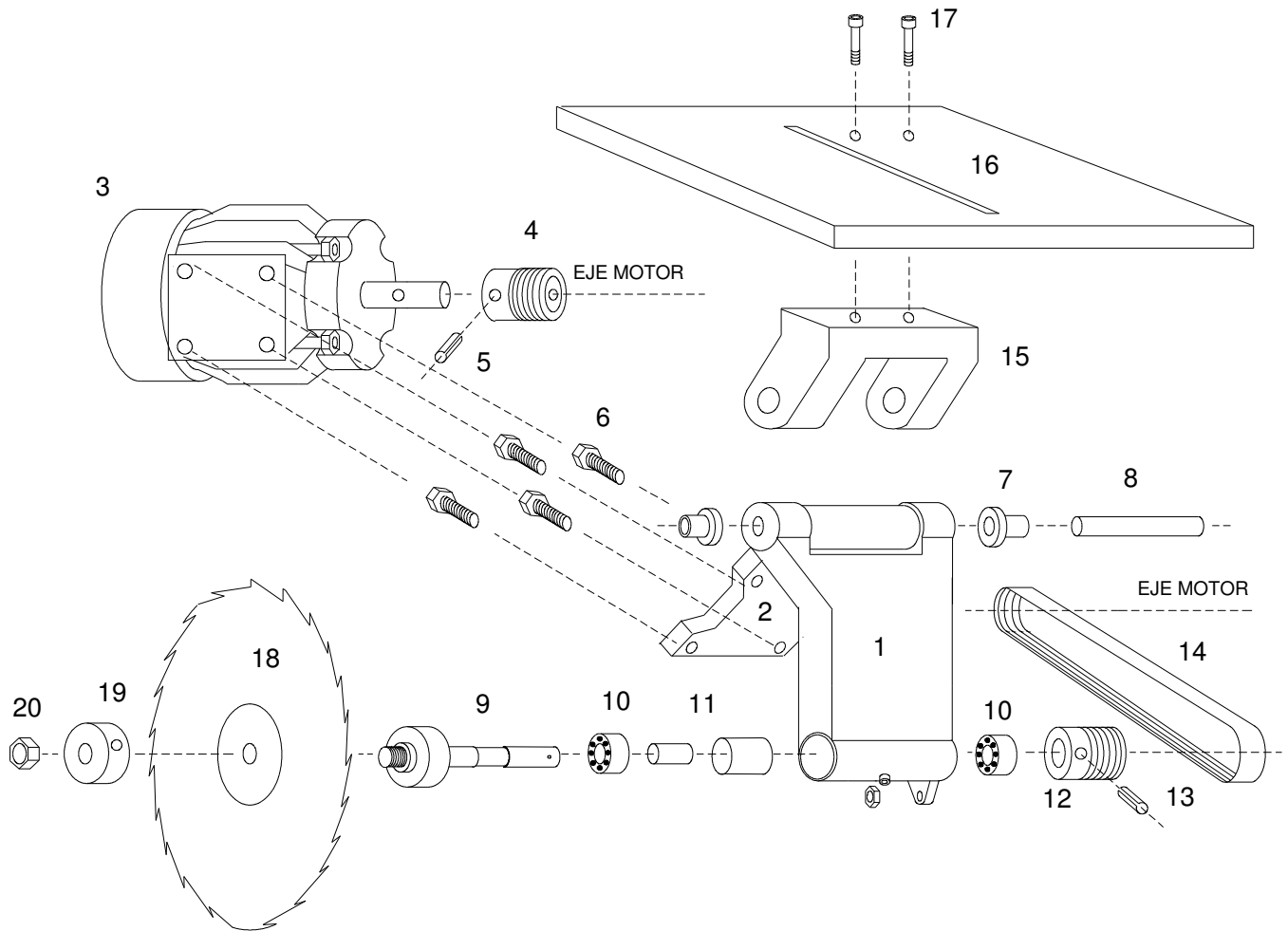
NR	DESCRIPTION	CODE	NR	DESCRIPTION	CODE
1	MAIN SWITCH 10 A	E000000004	4	220 V BOBBIN	E000000008
2	380 V BOBBIN	E0000400V8	5	1,5 HP MONOPHASE MOTOR	2350000081
3	2 HP THREE PHASE MOTOR	2350000241	6		

7.2. Exploded view of clamp jaws



Nº	DESIGNACIÓN	CÓDIGO	Nº	DESIGNACIÓN	CÓDIGO
1	CE IDENTIFICATION	-----	21	608 BEARING	2020000151
2	DIN 912 M8x16	TD91208016	22	ECCENTRIC BOX	2350000531
3	PROTECTOR MOTOR	2020000PM1	23	HOLD-DOWN CLAMP LEVER	B0000P1060
4	M8 HANDLE	B000000015	24	M12 ROLLER	B000000004
5	TURRET TL-302	2020000301	25	M10x60 LEVER	B0000P1060
6	WORKBENCH SHEET METAL		26	M8 KNOB	B000000011
7	ISO 7380 M5x10	T173800510	27	ANGLE ANCHOR	2020000051
8	DIN 912 M8x16	TD91208016	27B	WORKING PLATE	2020000141
9	DIN 912 M6x16	TD91206016	28	PROTECTIVE SHIELD	2020000451
10	TURRET PROTECTOR	2020000PT1	29	ISO 7380 M5x16	T173800516
11	SHIELD SUPPORT	2020000501	30	INSULATING BOX	E000000041
12	WOOD CLEAT	2020000161	31	DIN 912 M4x10	TD91204010
13	MANUAL CLAMP	2020000331	32	PADLOCK DEVICE	E000000020
14	LATÓN M4x30	-----	33	DIN 933 M10x20	TD93310020
15	TURRET SCREW	2020000291	34	REGULACIÓN WASHER.	2020000431
16	Ø36 SHORT ROD	2020000071	35	TOPE DE SUBID. / BAJ.	2020000371
17	M10 WASHER	-----	36	LOCK WITH KEY	2020000421
18	DIN 931 M10x45	TD93110045	37	CHARACTERISTICS	2020000PC1
19	Ø36 TUBE	-----	38	DOOR TL-302	-----
20	DIN 6912 M8x12	TD91208012	39	COOLING PUMP	2060000571

7.3. Rocker assembly exploded view.



N.	DESCRIPTION	CODE	N.	DESCRIPTION	CODE
1	ALUMINIUM ROCKER	2030000051	11	SEPARATORS	-----
2	MOTOR SUPPORT N. 13	2350000251	12	ROCKER PULLEY	2020000241
3	2-HP III / 1.5 HP I MOTOR	2020000391 2350000081	13	DIN1481 Ø6x40 PIN	2020000241
4	MOTOR PULLEY	2020000251	14	660 J8 POLY V-BELT	2020000021
5	DIN1481 Ø6x40 PIN	TD14810640	15	ALUMINIUM YOKE	2020323691
6	DIN912 M8x20 SCREW	TD91208020	16	WORKING PLATE	2020000141
7	B 20 30 35 4 BUSHING	2020000101	17	DIN912 M8x40 SCREW	TD91208040
8	ROCKER ROTATION SHAFT	2350000301	18	Ø300 BLADE	202DW30025
9	60x185 RECTIFIED SHAFT	2020000121	19	BLADE WASHER	2020000061
10	3204 BEARING	2020000271	20	DIN934 M20 NUT	TD93400020

Our products are frequently updated and improved. Minor changes may not yet be incorporated in this manual. Always state the year of build, type and serial number of the machine in correspondence.

Manufacturer and importer assume no responsibility for defects which result from not reading the manual carefully or wrong use of the machine. No rights can be derived from this manual.

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CE DECLARATION OF CONFORMITY

(in accordance with supplement II A of the Machinery Directive)

Huvema, trade name of Industrie & Handelsonderneming Huberts bv, Kennedylaan 14, 5466 AA Veghel, the Netherlands,

person responsible for compiling the technical file:

L. Verberkt
Kennedylaan 14, 5466 AA Veghel, Nederland,

is to be held responsible for declaring that the Huvema machine

Aluminium sawing machine TL 302

which this declaration relates to, conforms to all applicable provisions of the following norm(s):

- Machinery Directive 2006/42/EC
- Electromagnetic Compatibility Directive 2004/108/EC

and, where applicable, conforms to the following harmonised norm(s) or, parts thereof:

NEN-EN-ISO 12100:2010, NEN-EN-ISO 13857:2008, NEN-EN-IEC 60204-1:2006/C11:2010, NEN-EN-ISO 13850 : 2008

Veghel, the Netherlands, July 2015



Lex Verberkt
Managing director

