<u>Z15009</u>



TECHNICAL AND USER MANUAL MANUEL D'UTILISATION & TECHNIQUE

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Cassese Communication



AUTOMATIC MEASURING STOPS

CASSESE SMARTSTOP: DIGITAL AUTOMATIC MEASURING STOP



The Cassese Smart Stop is an option which is available for the CS939, CS 939 MA & CS999 Saws. The special «Smart Stop» Saw will have all of the features of the CS939 or CS999 Saw, but with a computerised automatic stop measuring system, available in Metric or in Inches. The Smart Stop is designed for the high volume contract or chop-service framer, who likes to maximize productivity and minimize operator errors.

FEATURES OF THE **C**ASSESE **S**MART **S**TOP :

- User-friendly touch screen tells the operator all information required to store or retrieve any moulding profile and/or frame size, minimising mistakes and wastage.
- Fast setup time The Smart Stop can be easily programmed to cut either a small photo frame or a large mirror frame in a few seconds.
- Memorize your mouldings The Smart Stop can be programmed to memorize the cutting process for up to 800 different moulding profiles. Just enter the profile number, and the frame size, and the Smart Stop instantly adjusts its measuring stop to the exact dimension, ready to cut.
- Memorize your frame sizes The Smart Stop can also be programmed to memorize the dimensions of up to 80 different frame sizes. You can set this up for all your standard frame sizes.
- Automatic width measurer This instantly measures the rebate width of the moulding about to be cut, so that the cutting stop can adjust itself automatically to the correct dimension required. It avoids any mistake of measurement and is much quicker than any manual adjustment. Ideal for Chop Service.
- Odometer / chop counter shows the total cuts made, and can be reset for use as a chop counter for big production jobs.
- Flexible the operator can change between short and long sizes accurately, at any time, at the touch of a button.
- Minimise operator mistakes Because of its memory and clear information readout on the touchscreen, operator error is reduced to nil, saving waste, time and money.
- ✓ Multi-Lingual The Smart Stop can operate in 4 different languages English, French, German & Spanish.

OPTIONS:

- Bar code scanning system, including barcode editing software for managing your moulding profile database.
- Connection to PC
- ∽ Bigger measure capacity on request

Cassese QuickStop : same features than SmartStop but without the Automatic Width Measurer

TECHNICAL DATA				
Power Supply	'ower Supply : 380 – 220 V single or three phased connected directly to the double mitre saw.			
Measuring capacity	 : Outside dimension : Minimum : 100mm (3" 9/10) Maximum : 1966mm (77" 4/10) Inside dimension : Minimum : depends on moulding's width (from 0mm to 100mm) Maximum : 1800mm (with a 83mm wide moulding) 			
Options	: <i>to be chosen from the start</i> : Metric or in inches / Extra longer construction for bigger measure capacity / bar code scanner & wand / Connection to PC			





A

TECHNICAL SPECIFICATIONS

PRODUCT NAME	CS 999
Year of build 2004/2005	
Cutting dimensions	
Max. width	83 mm
Max. height	100 mm
Blade dimensions	ø 350 mm
Bore	Ø 30 mm
Rotation speed 3400 rpm/mn at 60 Hz	and 2800 rpm/mn at 50 Hz
Maximum cutting length	1500 mm
Electrical power supply	220/380 3-phase, 50-60 Hz
Power supply cable, standard, cross-section	4 x 2.5, H07 RNF, 4G1.5
2 power motors (compliant with standard EN 60204)	1.5 kW
Extraction air inlets, outer Ø	2 x 100 mm
Type of extraction compliant with standards	28 m ³ /s at 4 m for Ø 100
Pneumatic power supply	6 bar
Max. power consumption 700 c	cuts/hour 60 NL/mn at 6 bar
Weight	770 kg
Noise (wearing of earmuffs compulsory)	90 dB

Options: Right extension arm:

- Z14836: 2 metres

- Z14835: 0.78 metres

Numeric measurement stop* (on request / factory adaptation):

- Z14432: Smart Stop - Z14431: Quick Stop



Contents

DE	SCRIPTION OF CS 999	А
TE	CHNICAL SPECIFICATIONS	В
I	- INTRODUCTION	1
-		-
Π	- CS 999 OVERALL DIMENSIONS	2
III	- UNPACKING AND HANDLING	3, 4
IV	- SETTING UP THE MACHINE	5
	- Setting up the left and right tables	5
	- Electrical connections	6
	- Pneumatic connections	6
	- Extraction	6
V	- STARTING UP	7
	- Control panel	7
	- Two-hand control	7
VI	- SAWING	8
	- Adjusting the blade height	8
	- Adjusting the clamps and cutting	8
	- First cut on left	8
	- Measuring the first piece	9
	- Retractable stop	10
	- Cutting the first piece	11
VII	- MAINTENANCE AND SERVICING	12
	- Opening the main case	12
	- Opening the electrical cabinet block	12
	- Removing / refitting the blades	13
	- Replacing the martyr cube	14
	- Replacing the offcut support bar	15
	- Replacing the table edges	16
	- Maintenance / troubleshooting	17, 18
LIS	T OF WEARING PARTS	18
TE	CHNICAL DRAWINGS AND PARTS LISTS	19

I - INTRODUCTION

Saw CS 999 is a machine used to cut 45° mitres on all mouldings with solid or reconstituted wood base, and with or without coating (paint, varnish, plastic coating, paper, metal leaf such as gold, bronze, aluminium, etc.). It cannot be used for:

- . Moulding profiles that do not have a 90° heel greater than 5 mm in height,
- . Any metal profiles,
- . Thin extruded plastic profiles:
 - (plastic cords, trimmings, etc.)

Its two circular blades are driven by two electric motors.

The moulding is held automatically by vertical and horizontal pneumatic cylinders.

A two-hand control, actuating both clamping and cutting, ensures operator safety by keeping hands out of range of the blades.

The electrical control equipment is placed in a cabinet in front of the machine. The pneumatic equipment is secured in the base of the machine behind the electrical cabinet.

This machine was built to meet safety and hygiene requirements. It is therefore forbidden to modify the electrical and pneumatic equipment, remove protective equipment installed on delivery or modify the machine safety devices.

Saw CS 999 cannot be used by more than one operator at a time.

Residual risks

Hands must never be inserted inside the beyond the plastic screens of the top protection cover as this section contains the pressure cylinders and rotating saw blades in their high idle position.

STANDARD CS 999 OVERALL DIMENSIONS



III - UNPACKING AND HANDLING

This machine is packaged in a crate containing

1 right extension arm with Slot base measuring systemEXCEPT FOR NUMERIC+ Fixed stop + Retractable stop (Option: CS 999> S/N 68).STOP OPTION

- 1 left extension arm
- 1 box containing
 - one 10-mm Allen key (to remove blades)
 - one 6-mm Allen key (to assembly tables)
 - one 3-mm Allen key
 - 1 triangular key
 - 1 quick-fit coupling (fitted on the machine) / 1 barbed connector / 1 USA connector / 1 quick-fit coupling (see page 6)
- 1 blade steadying handle
- Fuses: 1.25 Amp aM (2 Amp aM 4 Amp aM with numeric stop option)





Using a screwdriver open the fasteners on the crate then remove the cover and its 4 sides.



Remove: 1) The left and right - hand arms (to the right of the machine) 2) Accessories box (to the rear of the machine) 3) The trimmings case (to the left of the machine).



Remove the <u>suction tip</u>. Using a cross-head screwdriver remove the <u>wedges</u> from the 4 legs of the machine.

Handling: Use a fork-lift truck fitted with forks at least 115 cm long, taking care to position them correctly below the frame: see below. Gross weight of machine: 770 kg.

CAUTION: TO MOVE THE MACHINE FROM THE PALLET TO THE GROUND SET THE FORKS 330 MM APART. FOR THE OTHER HANDLING OPERATIONS SET THE FORKS 550 MM APART.



Once the machine is installed, remove protection.

SETTING UP THE MACHINE **IV** -

There must be sufficient clearance around the machine to allow free movement and access for maintenance. It must be placed on a stable and generally flat floor. Before making any electrical or pneumatic connections, level the machine by means of the adjustable feet. Use a 24-mm open-end spanner for locking nut CE and a 12-mm open-end spanner for base B. Tighten locking nut CE firmly after adjustment and levelling. As the work surface is 900 mm from the floor, it may be necessary to install a platform for operators of short stature.



Assembling the left and right tables





open-end spanner.



Slide stop B1 into screws V3 and V4 and against the martyr cube CM. Retighten screws V3 and V4 (10-mm open-end spanner)



Retighten screws V1 and V2 below the table.

Loosen screws V1, V2, V3, V4 with a 10-mm Bring the grooves of table stops B1 and B2 to screws V1 and V2.





Remove screw V5 (4-mm Allen key) from the cylinder of set square E. Move set square E below the table and screw the assembly in place with screw V5.



Provide a supply pipe with an

inside Ø of 8 that will withstand the maximum pressure of the source, which must not be less than 6 bar

> Source characteristics: dry air, no lubrication

Fitting the offcut outlet case

Fit the offcut outlet case using screws C1 and C2 (5-mm Allen key).





Electrical connection

The user must connect the power supply cable to a source complying with the regulations in force and protect the machine by fitting fuses: 10 Amp aM for 380 Volt 3-phase and 16 Amp aM for 220 Volt 3-phase.

Air line fittings



Extraction

To conform to hygiene standards the machine must be connected to an extraction air intake producing a maximum flow rate of 28 m³/second over a diameter of 100 mm. The circuit comprises three intake ports 100 mm in diameter: one on each side (only one plug must be connected) and one at the rear of the machine. This installation guarantees effective extraction and must never by dismantled or modified.



MAIN ON/OFF SWITCH

V- STARTING UP

- Open the compressed air source and adjust the machine pressure regulator to obtain compressed air pressure of 6 bar.

- Switch on the machine: main isolating switch at bottom right of the machine (see drawing on Page A). Indicator lamp V (Fig. 3, Page 6) lights up. This indicator lamp only lights if the CS 999 is energised.



PRESSURE REGULATOR

Press button 2 (Fig. 3, Page 6) and check the rotation direction of one of the blades, i.e.:

- clockwise for the left blade,

- anti-clockwise for the right blade.

If the direction is not correct, press button 3 (Fig. 3, Page 6), disconnect the machine and reverse the two phases on the power supply cable.



CONTROL PANEL

Buttons D and D' activate a two-hand control. The time between pressing the two buttons must not exceed 0.5 seconds. This prevents any accidental triggering if one of these 2 buttons is locked. Note that when D or D' is released during cutting, the blades lift immediately. To restart the cycle, both buttons must be released and pressed again.

VI - SAWING

A- Adjusting the height of the blades

Set key A to "blade setting". -

Press D and D' (Fig. 4, Page 6) to bring the blades to low position. Place the moulding to be cut on the cutting table. Holding rule R by its loop, release handle **M** located on top of the cover. Set the blade height using rule R or according to the height of the moulding. The rule indicates the maximum clearance height for the moulding. Relock handle M. Check that the moulding passes correctly below the blade protection screen E.

Turn key A back to "normal operation".

<u>Note</u> : The blade protection screen (E) is set automatically according to the blade height setting. The measurement on rule R is the height of the moulding to be cut plus approximately 1 centimetre.



B- Setting the clamps and cut

First the position of the vertical clamps must be set: Place the moulding with the slot side facing the saw blades on the work table, feeding it from the left side of the machine. Release the handle (M), set the vertical clamp positioning arms (BP) according to the profile and width of the moulding. Start up the right clamp (for example) via button D (Fig. 4, Page 6) and check that the clamp pressor does not tilt the moulding.



The back of the moulding must be pressed firmly against the stops and the bottom against the work table. To be sure of obtaining good cutting quality and the essential safety conditions, the moulding must be immobilised and completely stable. **Repeat the test under the same conditions for the left** clamp using button D'.

C-First cut on the left: The right clamps (vertical and horizontal) must be cancelled by pressing button 4 on the control panel (Fig. 3, Page 6). After the first cut, these clamps will be reactivated. If this precaution is not taken, the clamps may push the moulding against the blade

instead of immobilising it. Place the moulding with the slot side facing the saw blades on the work table, feeding it from the left side of the machine. Slide the



moulding against the moulding guide and towards the cutting table, keeping the offcut minimising knob MC pressed. When the moulding comes to stop position against the offcut minimiser (MC') it will be in the best position for cutting with minimum offcut.







Start up the blade motors via button 2 of the control panel (Fig. 3, Page 6), then use buttons D and D' (Fig. 4, Page 6) to actuate clamping followed by blade lowering. The first cut is then produced.

Buttons D and D' (Fig. 4, Page 6) activate a two-hand control. The time between pressing the two buttons must not exceed 0.5 seconds. This prevents any accidental triggering if one of these 2 buttons is locked. Note that when D or D' is released during cutting, the blades lift immediately. To restart the cycle, both buttons must be released and pressed again.

D- Measuring the first piece (mobile stop) MEASURING THE SLOT BASE (INTERNAL)



Slide the CURSOR along the rule and lock it at the required dimension by tightening the locking screw. Bring the moulding to the cursor so that the edge of the slot base coincides with the 45° angle.



Keeping the moulding in position, bring the MOBILE STOP into contact with the moulding and lock it. Remove the cursor below the moulding. Slot base measurement is now complete.





EXTERNAL MEASUREMENT

Release the MOBILE STOP locking handle. Slide it on the rule until it reaches the required measurement.

Be sure to measure using the external rule in relation to the punch mark on the mobile stop

block. The external measurement is complete.



RETRACTABLE STOP

(Storing a second cutting point in the memory)

FOR THE SLOT BASE MEASUREMENT, USE THE SAME PROCEDURE AS FOR THE MOBILE STOP (PAGE 9).

FOR THE EXTERNAL MEASUREMENT, USE THE SAME PROCEDURE AS FOR THE MOBILE STOP (PAGE 9) BUT USE THE INTERNAL RULE.

Allows the measuring and cutting of two dimensions of the frame, at any time.



The Cassese removable stop is a positive stop, easy to retract, by a simple action on lever L. It remains stable and without play both in engaged and retracted positions.

Measuring Scale

Each measuring stop is indexed (red mark Il 8c I2) which indicate which one of the two scales (rules) is to be used with this stop. These scales are for direct read-off of <u>outside</u> measurements of the frame. Sliding Removable Stop: R1 with I1 // Sliding Fixed Stop: R2 with I2. Figure A.





The special design of the removable stop makes all mouldings to be placed in the best way against the measuring system of the machine, even if the moulding is twisted.





10

E- Cutting the first piece

The moulding is in contact with either the mobile stop or the retractable stop. Press buttons D and D' (Fig. 4, Page 6) for left and right clamping followed by blade lowering.

END OF MOULDING

Clamping and cutting are visible to the operator. He must therefore check that the horizontal clamp on the left is properly engaged in the moulding slot and does not create pressure on the end of the moulding.

If it does, the operator can only continue with clamping on the right once the left clamp has been cancelled via button 5 on the control panel (Fig. 3, Page 6).

Note: The left clamp will be automatically reactivated at the next cycle.

If the two-hand control buttons are kept pressed after cutting, the corresponding clamps will not be released and the moulding ends or offcut can be retrieved without being extracted to the offcut case.

If the offcut or piece of moulding does not drop under gravity after a cut, and cannot be retrieved from outside the cover, it must be cleared by pushing with the next moulding or a stick.

It is strictly forbidden to cut several lengths of moulding at the same time by lining them up one in front of the other.

\bigwedge

The operator must never put his hands inside the case

When the machine is in use, there must be no more than one person at the workstation. This person is responsible for the controls.

The sawing operation (blade lowering) is only possible with the horizontal and vertical pneumatic clamps engaged and the saw blades rotating.

If one of the buttons is released during cutting, the blades are withdrawn but the clamps remain engaged. The cycle can be restarted by pressing buttons D and D' (Fig. 4, Page 6) or the cycle can be reset via key 6 of the control panel (Fig. 3, Page 6).

If the electrical circuit is accidentally broken, the blades are withdrawn immediately. When power is restored, the motors will only start up when button 2 is pressed on the control panel (Fig. 3, Page 6).

In the event of an operating problem, immediately press button 3 STOP BLADES (red thrust button) on the control panel (Fig. 3, Page 6) and before taking any further action, switch off the power supply at the main isolating switch (Fig. 1, Page 6).

VII - MAINTENANCE AND SERVICING

When the cover is open, motor start-up and blade lowering are disabled by the safety unit

PROCEDURE FOR ACCESS INSIDE THE MACHINE

Opening the main case

- Press button 3 on the control panel (Fig. 3, Page 6) if necessary.
- Position the control panel key to "unlock cover". -
- Wait during the 20 second time-out until green lamp V1 (Fig. 3, Page 6) goes out, indicating that the blades have stopped completely.
- Lift the locking levers of the 3 spring clips S1, S2 and S3 and release the hooking mechanism.
- Using handle P, pivot the cover upwards and let it rest on the flexible stud at the top of the machine.

For all maintenance, adjustment or repair operations, prevent unintentional operation of electrical and pneumatic circuits on the machine by padlocking the main isolating switch.





Opening the electrical cabinet block



Open the door of the electrical cabinet using the key provided and remove screws A and B. Tilt the cabinet by pulling it towards you.





A

REMOVING THE BLADES

IMPORTANT

Switch off the machine at the main isolating switch (Page 6) located on the right of the machine and lock the switch by padlocking the tab.

During this operation gloves should be worn to handle the blades and to avoid getting yours hands caught.

Use the steadying handle provided to immobilise the shaft, loosen the nut (when loosening the blade securing nuts always pull the key towards you), and remove the flange and blade.



REFITTING THE BLADES

Clean the blades and flanges.

Fit the blade (teeth pointing in cutting direction). Check the cutting direction carefully: it is marked on the support.

Refit the flange and screw then tighten the screw while holding the steadying handle to immobilise the shaft.

Close the main case. Hook up the 3 spring clips and close their locking levers, then switch on the main isolating switch.

Lock the cover by setting the key to **Normal operation position.**



REPLACING THE MARTYR CUBE

Open the main case (Page 11).

Loosen screw V1 using a 5-mm Allen key and remove the worn martyr cube by sliding it towards the inside of the machine.

Refit the martyr cube so that a sound side is facing the blades and secure it with screw V1.

Close the main case. Hook up the 3 spring clips and close their locking levers, then switch on the main isolating switch.

Lock the cover by setting the key to NORMAL OPERATION POSITION. -

Start up the blades by pressing button 2 on the control panel (Fig. 3, Page 6).

Reduce the blade lowering speed using button 7 on the control panel.

Press simultaneously buttons 4 and 5 on the control panel (Fig. 3, Page 6), causing the two cancellation lamps V2 and V3 to light up on the control panel (Fig. 3, Page 6) for 3 seconds. During this time, press buttons D and D' of the two-hand control (Fig. 4, Page 6). The rotating blades drop to low position in order to machine the martyr cube. When the two-hand control is released, the blades lift and the indicator lamps go out.

MARTYR CUBE





THE MARTYR CUBE AND OFFCUT SUPPORT BAR CAN BE FITTED AND MACHINED AT THE SAME TIME

REPLACING THE OFFCUT SUPPORT BAR

Open the main case (see Page 11).

Open the door of the electrical cabinet using the key provided and remove screws A and B. Tilt the cabinet by pulling it towards you. (Page 11).

Next remove screw VTR (5-mm Allen key) and lower the setting rod of the offcut support bar.

Remove screws C and D (4-mm Allen key) and remove the worn offcut support bar (AS).

Refit a new bar on the setting rod and then reinstall the assembly (bar pressing below the martyr cube). Lock the setting rod via screw VTR. Close the main case.

Hook up the 3 spring clips and close their locking levers, then switch on the main isolating switch.

Start up the blades by pressing button 2 on the control panel (Fig. 3, Page 6).

Reduce the blade lowering speed using button 7 on the control panel.

Press simultaneously buttons 4 and 5 on the control panel (Fig. 3, Page 6), causing the two clamp cancellation lamps V2 and V3 to light up on the control panel (Fig. 3, Page 6) for 3 seconds. During this time, press buttons D and D' of the two-hand control (Fig. 4, Page 6). The rotating blades drop to low position in order to machine the offcut support bar. When the two-hand control is released, the blades lift and the clamp indicator lamps go out.

THE MARTYR CUBE AND OFFCUT SUPPORT BAR CAN BE FITTED AND MACHINED AT THE SAME TIME









LIf the cut has defects such as tears of the paper coating (covered mouldings) or splintering of the base (below the moulding) you must REPLACE THE TABLE EDGES

Open the main case (see procedure on Page 11).

Switch off the machine at the main isolating switch located on the right side of the machine and lock the switch by padlocking the tab.

Open the door of the electrical cabinet using the key provided and remove screws A and B (see Page 11).

Tilt the cabinet.

Remove screws Vb1, Vb2 and Vb3 from worn table edges using a 4-mm Allen key.

Fit the new table edges on the cutting table. Close the main case (Page 13).

MACHINING THE TABLE EDGES

Start up the blades by pressing button 2 on the control panel (Fig. 3, Page 6).

Reduce the blade lowering speed using the knurled screw.

Press simultaneously buttons 4 and 5 of the control panel (Fig. 3, Page 6). This causes lamps V2 and V3 to light up on the control panel (Fig. 3, Page 6) for 3 seconds. During this time, press buttons D and D' of the two-hand control. The rotating blades drop to low position in order to machine the table edges. When the two-hand control is released, the blades lift and the indicator lamps go out.



REPLACING THE FILTERS ON THE ELECTRICAL CABINET



Internal ventilation of the electrical cabinet is required for the electronic cards and PLC to operate correctly. The filters (ref. Z11258) placed each side of the cabinet must be replaced at regular intervals.

MAINTENANCE

Depending on the frequency of use. On the basis of 8 hours work a day:

: clean the plexiglass screen with a soft cloth

Belt inspection : every 3 months

Cleaning

Blade sharpening : good cutting is the result of good sharpening We recommend contacting your dealer for this service.

Type of blade recommended for multi-purpose cutting			
	Teeth	Number of teeth	Body thickness
Dia. 350	3° positive LR	108	2.7 mm

FAULT	POSSIBLE CAUSES		
Indicator lamp V on control panel (Fig. 3, Page 6) is off.	Check the electrical power supply.Main isolating switch not engaged.Fuses need to be changed.		
	- The blades have not been started up.		
The clamps operate but the blades	- Buttons D and D' not pressed simultaneously		
do not lower.	(Fig. 4, Page 6)		
	- Blades turning in wrong direction.		
Poor quality cut	- Blades need to be sharpened.		
	- Moulding in unstable position and moves		
	during cutting.		
	- Blade lowering speed not suitable for the type		
	of wood being cut.		
	- An offcut may be preventing the blades from		
Right clamp cancellation lamp V3	lifting fully.		
flashes on the control panel (Fig.	- Check the condition of the high position sensor		
3, Page 6).	and its distance from the blade block (BL).		



FAULT

Indicator lamp V1 is off.

Safety chain broken. Open the electrical cabinet and check on the electronic card to see which item in the chain is faulty (LED red lit).

<u>COVER SAFETY DEVICE</u> Check that the main cover is closed correctly. THERMAL CIRCUIT BREAKER 2 Reset the thermal safety device. If it trips again, call the After-Sales service. THERMAL CIRCUIT BREAKER 1 Reset the thermal safety device. If it

trips again, call the After-Sales service.

STOP BLADES Check the red STOP BLADES button.

<u>COMPRESSED AIR</u> Check the air supply.

> THERMAL CIRCUIT BREAKERS

LIST OF WEARING PARTS

QTY	ZCODE	PARTNAME	QTY	ZCODE	PARTNAME
2	Z843	FLEXIBLE STOP Ø20x8.5 - M6x15	1	Z14376	OFFCUT SUPPORT ROD
1	Z14070	SHAFT	2	Z11257	VENTILATION FILTER + GRILL
1	Z14830	CUTTING SQUARE	1	Z555	FUSE, 2A 10x38 aM
1	Z14831	RIGHT TABLE EDGE	1	Z1415	FUSE, 4A 10x38 aM
1	Z14832	LEFT TABLE EDGE	3	Z1688	RULE 0-500mm
2	Z1570	BLADE Ø350 - 108 TEETH LR	3	Z1676	RULE 0-1000mm
2	Z11476	BELT XPZ 710	3	Z9542	RULE 1000-2000mm
			1	Z674	GLASS FUSE, 1.5A 5x20