Operating and installation manual

Tumble dryer TT200 / TT270

El, Steam
(RMC)

487 14 49 51

Electrolux
Wascator

Tumble Dryer, drum volume 200/270 litres

Contents:

Instructions for use:

General aspects 1
Explanation 2
Operation, manual residual moisture control 3
Maintenance 4

Installation:

Positioning 5
Dimension sketch, electric heating 6
Dimension sketch, hot water/steam heating 7
Wiring 8
Evacuation system 9
Examples of evacuation system 10
Technical data, electric heating 11
Technical data, hot water/steam 12
Left-/right-hung door 13
Function controls 14
PCB (printed circuit board), setting 15
Quick-view parameter listing 16
Parameter programming, residual moisture control 17
Parameter programming, changing parameters 18-19
Error codes 20

Safety Instructions

This machine is intended for drying water-washed garments alone.

The machine is not to be used for drying foam rubber or materials similar to rubber.

The machine is not be used by minors.

The machine is not to be washed down with water.

Mechanical and electrical installation work are only to be performed by authorized personnel.

In the case of machine fault, this is to be reported to the person in charge as soon as possible. This is important for your own safety and for the safety of other users.

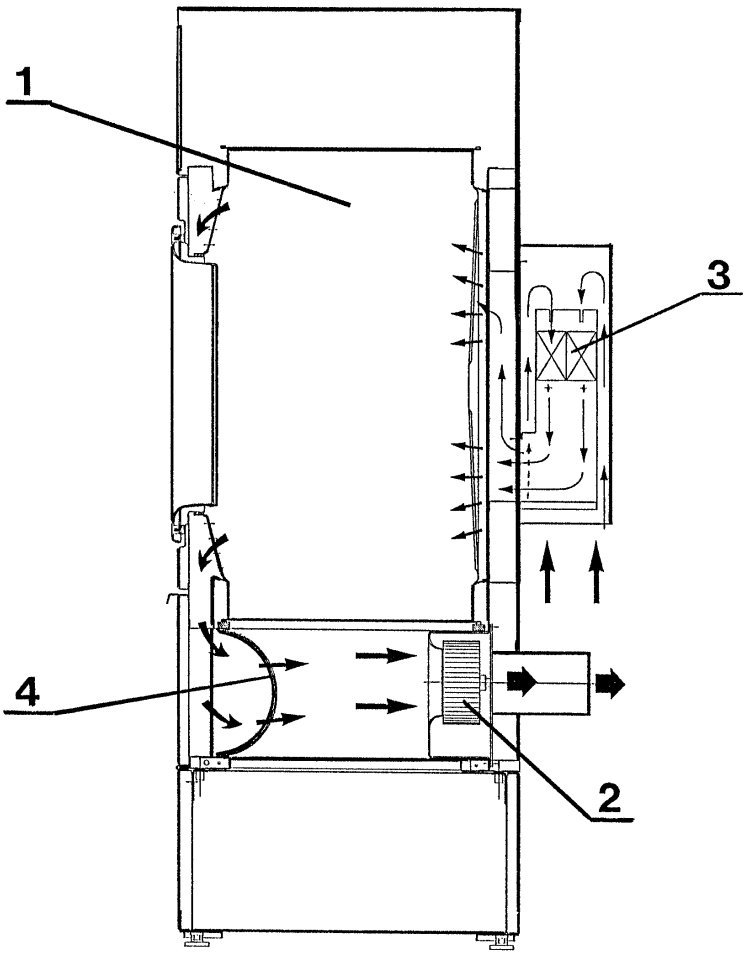
Remember that such textiles as silk and wool are not to be dried in the tumbler.

The manufacturer reserves the right to alter design and material specifications.

General Aspects

Drying is effected as follows:

- The tumbling drum (1) rotates at constant speed in order to keep the garments in movement all the time.
- An inbuilt fan (2) carries fresh air through the machine.
- The air first passes the heating unit (3), where it is heated.
- The air is then sucked into the drum via the perforation at the back wall. It absorbs the humidity in the garments and leaves the drum via the perforation at the front of the drum.
- Next the air passes a filter (4) which collects lint and dust. The air is conducted out of the room via the fan and the vent pipe system.

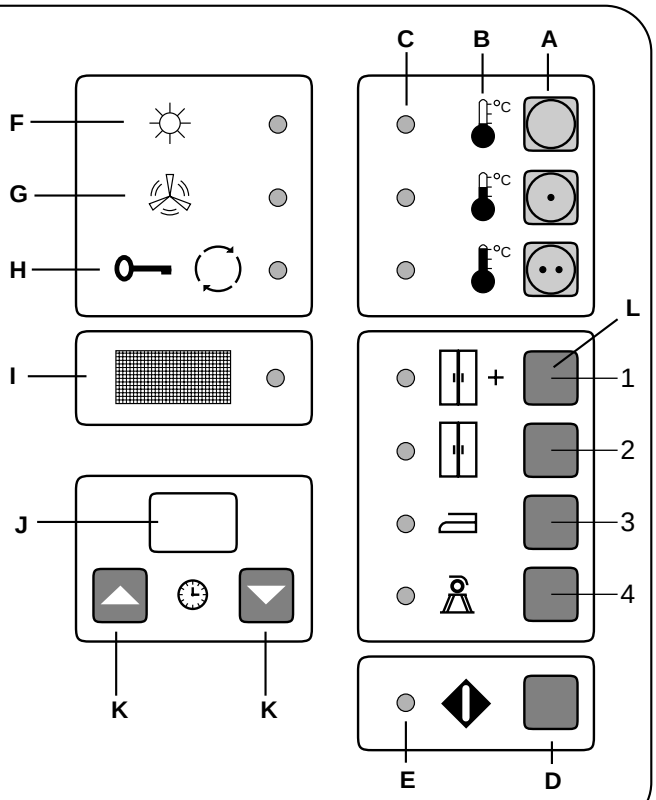


Instructions for Use

Explanation

Manual residual moisture control

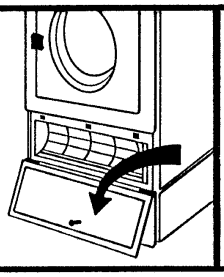
A. Program selector
B. Temperature symbols
C. Lamp is lit for selected program
D. Start button
E. Lamp flashes / ready to start
F. Drying / lamp is lit
G. Cooling / lamp is lit
H. Drying time completed / lamp is lit
I. Filter / lamp is lit: Clean filter
J. Display indicates drying time when time controlled is selected.
K. Timer buttons for desired drying time, one press = one minut
L. Select residual moisture program by pressing one of the following buttons:
    1. Extra dry
    2. Storage dry
    3. Iron dry for iron
    4. Iron dry for ironing machine



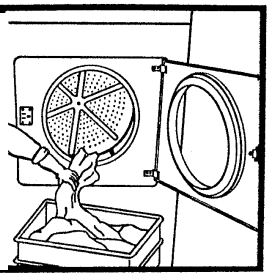
Manual operation with residual moisture control

1

Open filter door.
Clean filter.
Close filter door ➡.

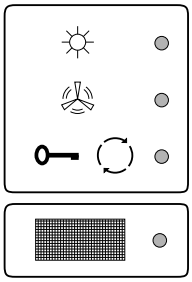


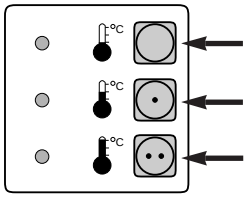
Open filling door.
Fill garments into drum.
Close door ➡.



2

Select drying program.
Press program button. Lamp is lit for selected program .





Airing.
without heat.

Mild wash.
Low heat.

PP / normal wash.
Normal heat.

3

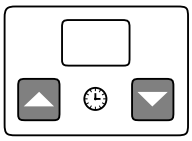
Select

either

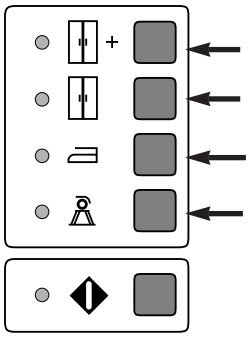
Time controlled

or

Residual moisture



Time control
one press = one minut



Residual moisture
Extra dryt

Storage dry

Iron dry (iron)

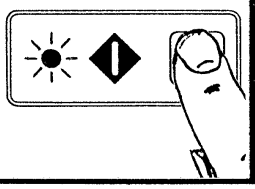
Iron dry (machine)

4

Drying program:	**Drying time:**	**Residual moisture:**
	Set timer to:	Automatic program with the following options:
Airing without heat	c. 10 min.	*Extra dry*
Mild wash, low heat	c. 25 min.	*Storage dry*
PP / normal wash, normal heat	c. 25 min.	*Iron dry (for iron)*
		Iron dry (for machine)

5

Start:
Press start button.



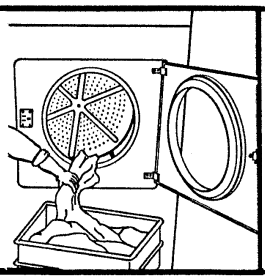
Stop:
The tumbler can always be stopped by opening the door.
Re-start:
Close door and press start button.

The tumbler stops automatically:
Time controlling:
- when the drying time has expired

Residual moisture:
- When the selected has been obtained.

6

In order to **prevent garments from creasing:**
Empty tumbler immediately. ➡.



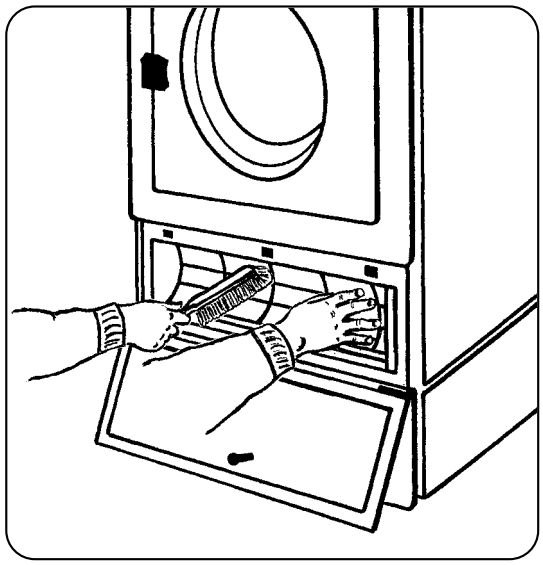
Anti-crease program ➡.

After the drying time has ended, the drum rotates at short intervals until door is opened.
Max. 1 hour.

Maintenance

Maintenance

The following work should be carried out at regular intervals at a rate depending on the frequency of use.



Daily

- Check that the drum stops when the door is opened.
- Check that the lint screen has been cleaned. The lint screen is to not be removed for cleaning; just clean it with a soft brush or your hand.
- Check that the lint screen is unbroken.
- Check that the machine will not start until the start button has been activated.
- Check that the door glass is unbroken.

Every quarter / half year

- Check that the fresh-air intake at the back of the tumbler is not clogged by lint or in any other way.
- Check that the vent system is tight and not clogged by lint/dust or in any other way.
- On machines with residual moisture automatic, the lifters in the drum should be cleaned with a sponge at least once every three months.

Annually

- Check that the fresh-air intake to the room and the vent ducts/pipes in and from the room are not clogged by lint/dust or in any other way.
  Clean as required - depending on the frequency of use. Minimum once a year.
- At least once a year the inside parts of the machine should be checked by a competent, skilled person and cleaned for lint.

Installation

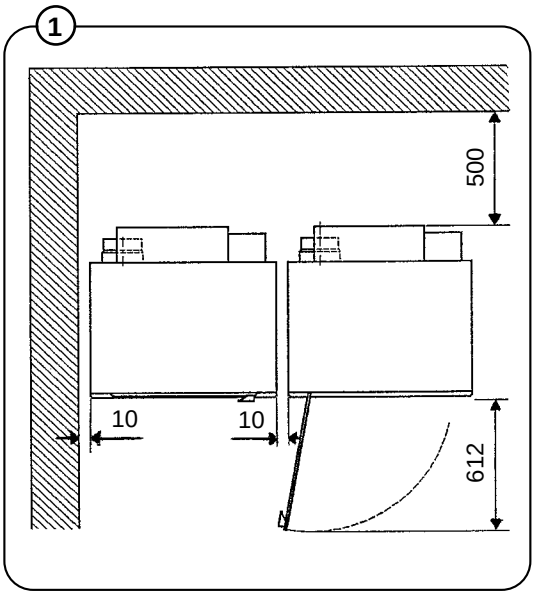
Unpacking

Unpack the machine from its packaging.
There are no transport fittings.

Positioning

Place the tumble dryer in such a manner that the work of both user and service technician becomes as easy as possible. The door is reversible (page 13).

Fig. 1 The distance from the wall or other equipment behind the machine should be at least 500 mm; distance on the sides at least 10 mm. Please note that for the purpose of servicing there should be access to the back of the machine.

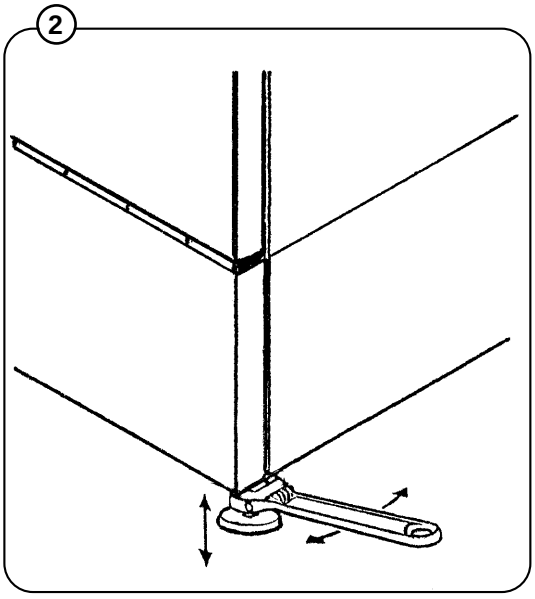


Mechanical installation

Fig. 2 Adjust the machine to make it horisontal - and stable on all four feet.

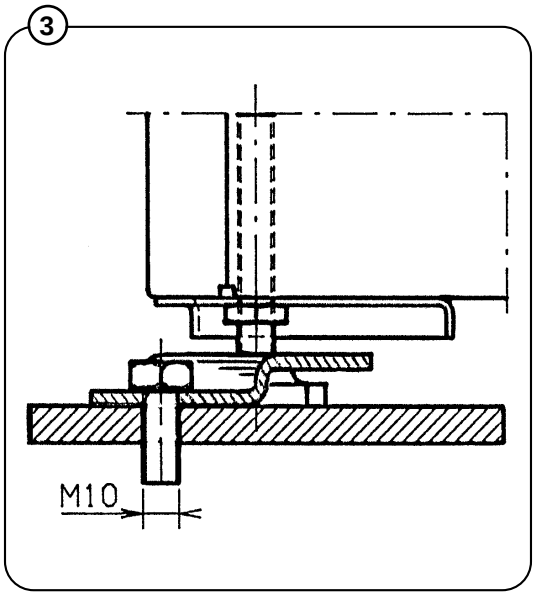
The max. height adjustment of the feet is 50 mm.

When adjustment has been completed, lock the feet with the lock nuts.



Installation onboard ship

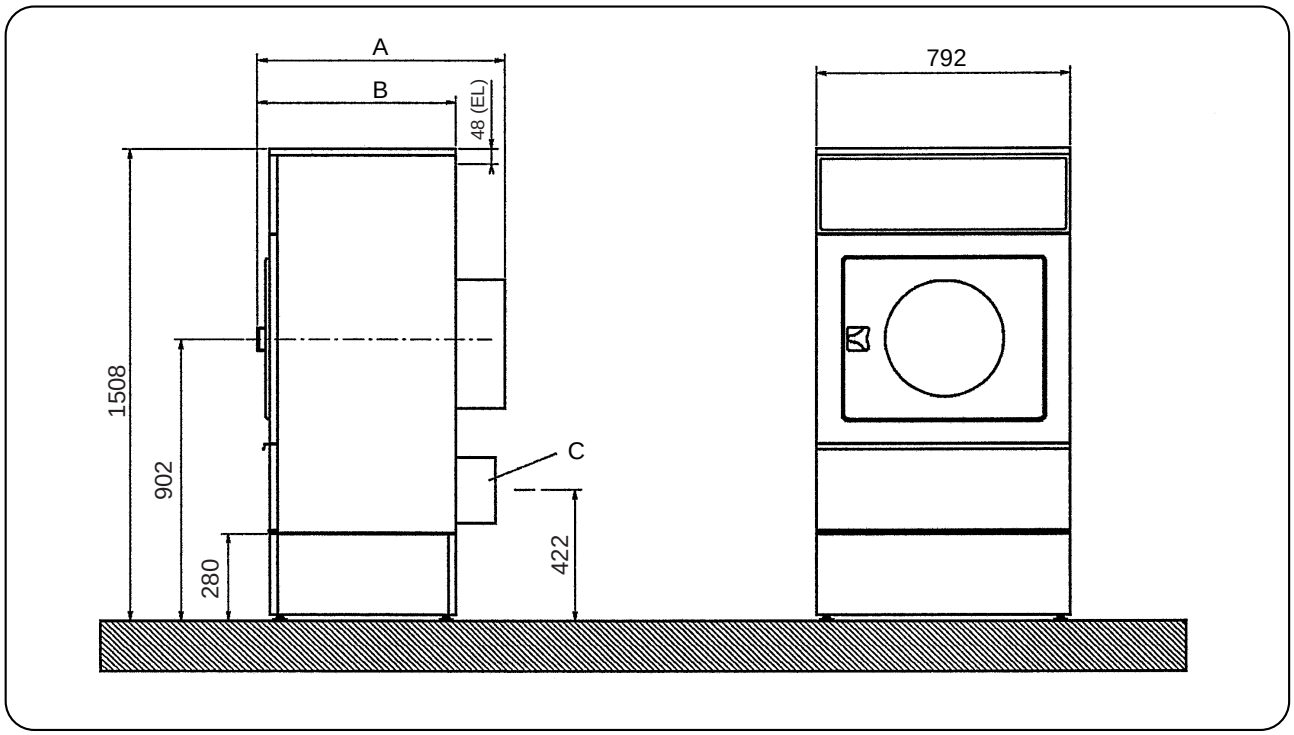
Fig. 3 The 4 accompanying fittings can be used to secure the machine.
Secure the fittings to the base with four M10 set screws.

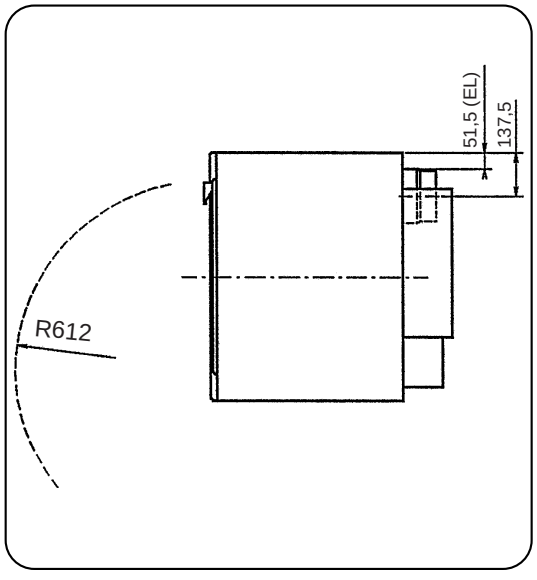


Installation 200/270 litres

Dimension sketch

Electric heating



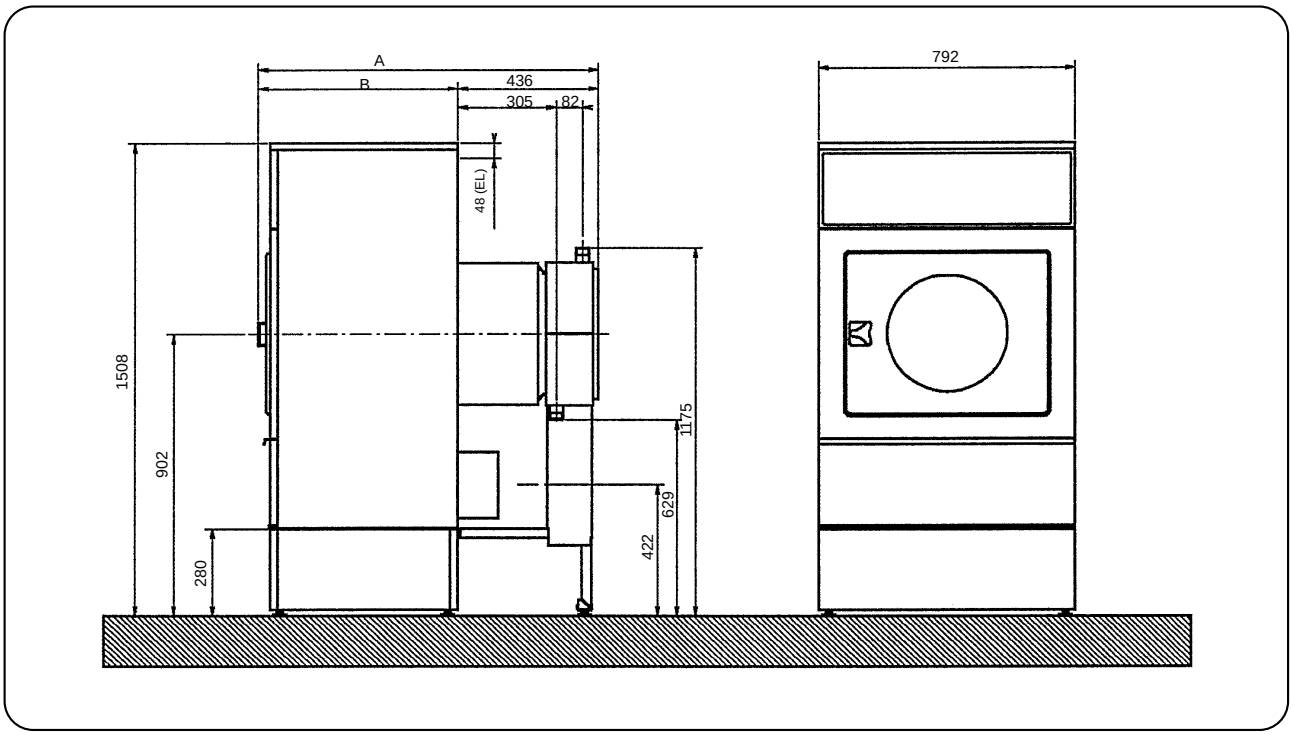


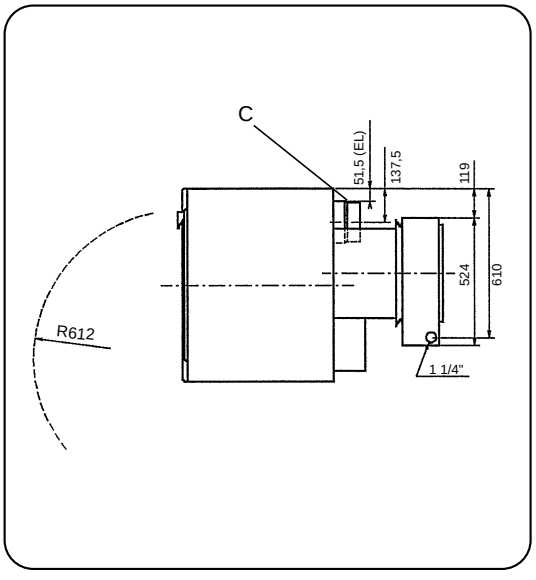
Drum volumen litres	A mm	B mm	C Exhaust
200	769	614	∅ 160
270	995	769	∅ 200

Installation 200/270 litres

Dimension sketch

Hot water/steam heating
HW/IS





Drum volumen litres	Heating	A mm	B mm	C Exhaust
200	HW/hot water	1050	614	∅ 160
270	IS/steam	1205	769	∅ 200

Installation 200/270 litres

Electrical installation

To be carried out by a skilled, competent person. The tumble dryer requires its own fuse group.

Fig. ④ For each tumbler, place a multi-pole fixed switch in the fixed installation. Place it in such a way that it is easily accessible but will not be mistaken for the tumbler main switch.

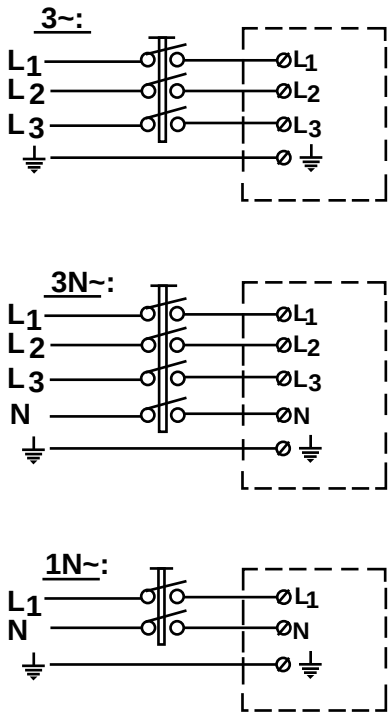
The motor has an inbuilt thermo-fuse, which is why motor protection is not required in the installation.

Fig. ⑤ Remove the top cover from the tumbler in order to connect the cable. Set up the tumbler as a fixed installation. See dimensions in the table below.

Before remounting the top cover: Check the direction of rotation. See function checks, page 14. If the drum rotates in the wrong direction, switch 2 phases.

The tumble dryer must be provided with extra protection in accordance with relevant regulations.

④



⑤

Cable dimensioning table

Drum volumen	Voltage	Power input	Heating lead	Connecting Dimension	Fuse
200 liter	400-440V 3N/3 50/60 Hz	9.5 kW	El 9.0 kW	5/4 × 2.5 mm²	16A
200 liter	400-440V 3N/3 50/60 Hz	12.5 kW	El 12.0 kW	5/4 × 4.0 mm²	20A
270 liter	400-440V 3N/3 50/60 Hz	14.0 kW	El 13.5 kW	5/4 × 4.0 mm²	25A
200 liter	200-208V 3 50/60 Hz	9.5 kW	El 9.0 kW	4 × 10.0 mm²	35A
200 liter	230-240V 3 50/60 Hz	9.5 kW	El 9.0 kW	4 × 6.0 mm²	25A
200 liter	208-240V 3 50/60 Hz	12.5 kW	El 12.0 kW	4 × 10.0 mm²	35A
270 liter	230-240V 3 50/60 Hz	14.0 kW	El 13.5 kW	4 × 16.0 mm²	63A (50A)
200/270 liter	400-440V 3N/3 50/60 Hz	0.5 kW	Hot water/Steam	5/4 × 1.5 mm²	10A
200 liter	230-240V 1N 50 Hz	6.6 kW	El 6.0 kW	3 × 10.0 mm²	35A

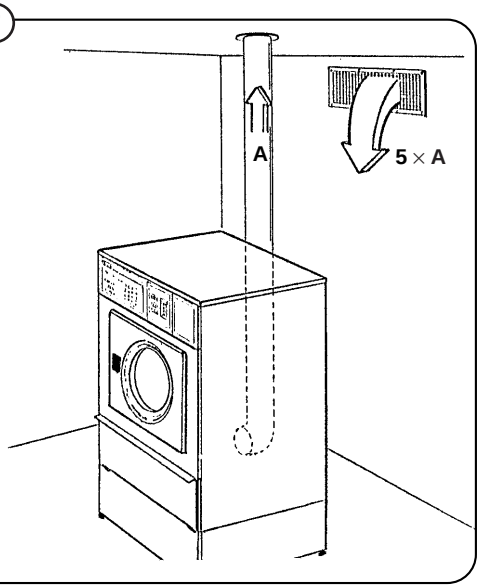
Machines marked 230V or 400V (new European voltage as per IEC 38) can be connected to 220V or 380V mains plugs without any problems.

Evacuation system

Fresh air intake

Fig. (7) In order for the machine to work optimally, with the shortest possible drying time, it is **important** for the air intake to the room to come from the open air and for the same amount of air as enters the room to be evacuated. In order to avoid draught in the room, it is best to place the air intake behind the machine. See example on Fig. 7. The area of the air intake opening must be 5 times the area of the evacuation pipe. The resistance in the damper / slatted shutter must not exceed 10 Pa (0.1 mbar). The air consumption is shown in the table. (Fig. 9).

7



Evacuation pipe / duct

It is recommended to connect each machine to a separate, smooth-faced evacuation pipe with as low air resistance as possible.

The pipe must lead to the outside and be protected against rain and impurities. The length of the evacuation pipe is given in metres.
For each 90° bend - add 2 metres.
For each 45° bend - add 1 metre.

Fig. (8) Set the damper in accordance with the table, ensuring that the optimal efficiency is obtained.

8

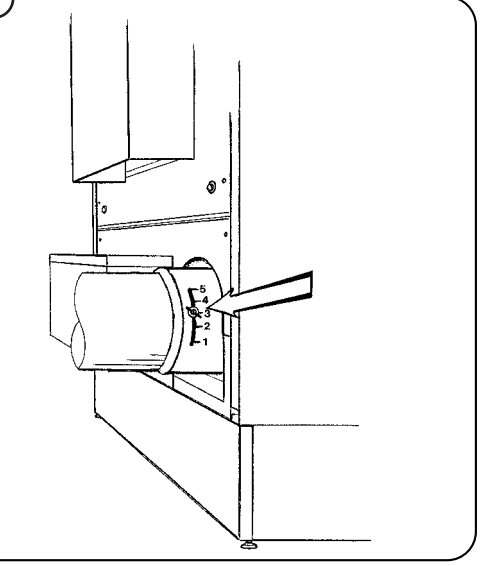


Fig. (9) Lengths and dimensions can be seen from the table.

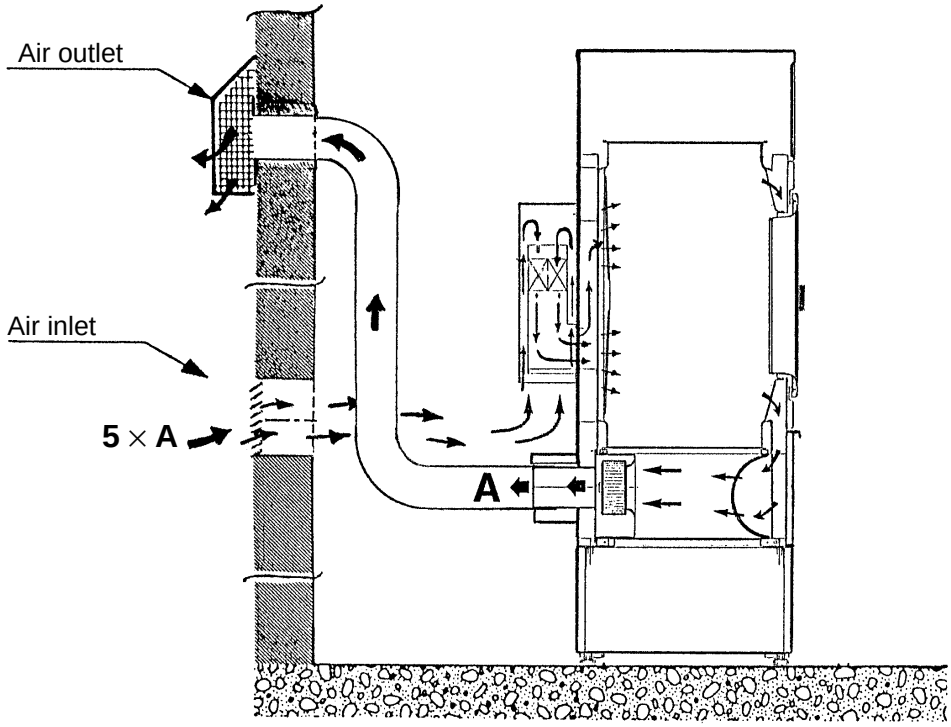
If in doubt with regard to the design of an evacuation system, please do not hesitate to contact our service organisation / dealer.

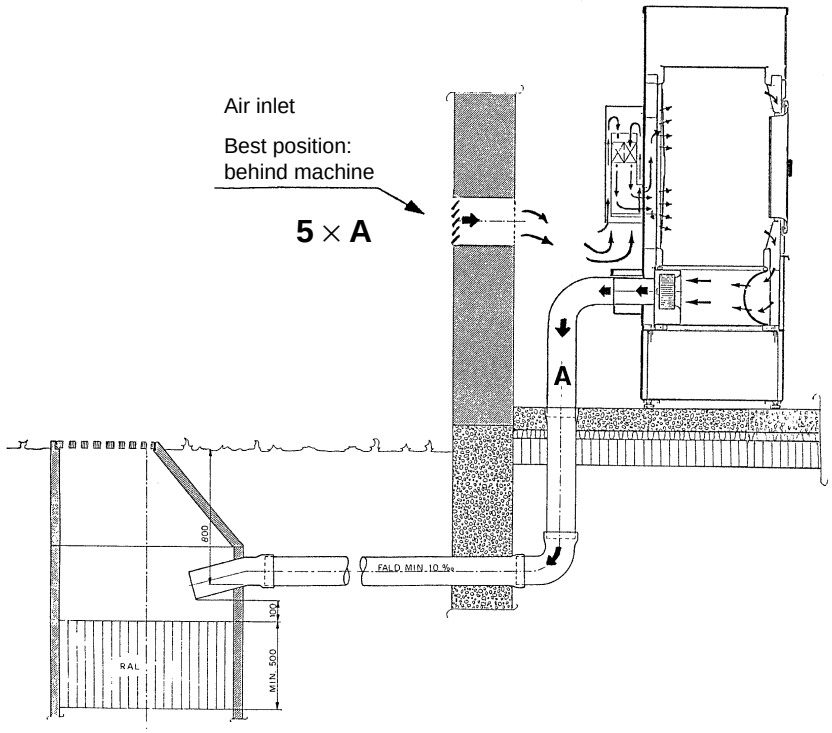
9

Hz	Type in litres	Heating	Air consumpt.	Static pressure	Diameter of evacuation pipe	Setting of damper scale to match different pipe lengths			
						0-15 m	15-30 m	30-60 m	60-100 m
50	200	6,0 kW	300 m³/h	190 Pa	160 mm	1	1	1-2	2-3
	200	9,0 kW	360 m³/h	200 Pa	160 mm	1	1	1-2	2-3
	200	12,0 kW	525 m³/h	150 Pa	160 mm	2	3	3-4	5
	270	13,5 kW	620 m³/h	120 Pa	200 mm	3	3-4	4-5	5
60	200	9,0 kW	360 m³/h	400 Pa	160 mm	1	1-2	2-3	3-5
	200	12,0 kW	525 m³/h	250 Pa	160 mm	1	1-2	2-3	4-5
	270	13,5 kW	620 m³/h	200 Pa	200 mm	2	2	2-3	3-5

Installation 200/270 litres

Examples of evacuation system





Technical data

Electric heating

Drum volume			200 liter	270 liter
Dimensions:	Width		792 mm	792 mm
	Depth		769 mm	995 mm
	Height		1508 mm	1508 mm
Weight:	Net		115 kg	130 kg
Drum:	Diameter		760 mm	760 mm
	Depth		440 mm	595 mm
	Drum rotation		42 rpm	42 rpm
	G-factor		0.75	0.75
Capacity:	Factor 1:25		8.0 kg	10.8 kg
	Factor 1:33		6.0 kg	8.2 kg
Motor:	Power 3 phases		2×0.20 kW	2×0.20 kW
	1 phase		2×0.25 kW	2×0.25 kW
	Rotation 50 Hz		2800 rpm	2800 rpm
	60 Hz		3360 rpm	3360 rpm
Heat generation:			6/9/12 kW	13.5 kW
Air consumption:	6.0 kW		300 m³/h	
	9.0 kW		360 m³/h	
	12.0 kW		525 m³/h	
	13.5 kW			620 m³/h
Pipe connection:	Evacuation	6.0 kW	Ø 160	
		9.0 kW	Ø 160	
		12.0 kW	Ø 160	
		13.5 kW		Ø 200
Pressure drop:	Evacuation 50 Hz	6.0 kW max.	190 Pa	
		9.0 kW max.	200 Pa	
		12.0 kW max.	150 Pa	
		13.5 kW max.		120 Pa
	Evacuation 60 Hz	9.0 kW max.	400 Pa	
		12.0 kW max.	250 Pa	
		13.5 kW max.		200 Pa
Sound pressure level :			< 70 dB (A)	< 70 dB (A)

Technical data

Hot water/steam heating			Hot water	Steam
Drum volume			**200 liter**	**270 liter**
Dimensions:	Width		792 mm	792 mm
	Depth		769 mm	995 mm
	Height		1508 mm	1508 mm
Weight:	Net		133 kg	147 kg
Drum:	Diameter		760 mm	760 mm
	Depth		440 mm	595 mm
	Drum rotation		42 rpm	42 rpm
	G-factor		0.75	0.75
Capacity:	Factor 1:25		8,0 kg	10,8 kg
	Factor 1:33		6,0 kg	8,2 kg
Motor:	Power 3 phases		2×0.20 kW	2×0.20 kW
	1 phase		2×0.25 kW	2×0.25 kW
	Rotation 50 Hz		2800 rpm	2800 rpm
	60 Hz		3360 rpm	3360 rpm
Heat generation:			Variabel	Variabel
Air consumption:			360-525 m³/h	620-720 m³/h
Pipe connection	Evacuation		Ø 160	Ø 200
Pressure drop:	Evacuation pipe at 50 Hz	Max.	200-150 Pa	120-25 Pa
	Evacuation pipe at 60 Hz	Max.	400-250 Pa	200-25 Pa
Steam connection:				DN 32 BSP ¼"
	Rec. steam pressure:			300-800
	Max. steam pressure:			1000
	Min. pipe diameter:	100-1000 kPa		DN 20 BSP ¾"
		-100 kPa		DN 25 BSP 1"
Condensate outlet:				DN 32 BSP ¼"
Rec. diam. of steam trap:		100-1000 kPa		DN 15 BSP ½"
		-100 kPa		DN 20 BSP ¾"
Hot water connection:			DN 32 BSP 1¼"	
	Max. water pressure	kPa	1000	
	Min. pipe diam.		DN 20 BSP ¾"	
Sound pressure level :			< 70 dB (A)	< 70 dB (A)

Left-/right-hung door

Reverse the door as follows:

1. Disconnect the power to the machine.

Fig. 10

2. Remove the top cover.
3. Remove the operating panel with the PCB by removing the 2 multi-plugs, G1 and G2.
4. Remove the lock system, A.

Fig. 11

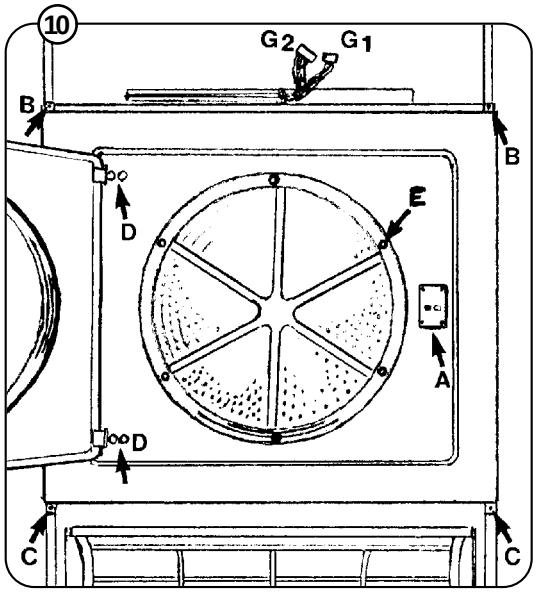
Remove the 2 leads on the door switch.

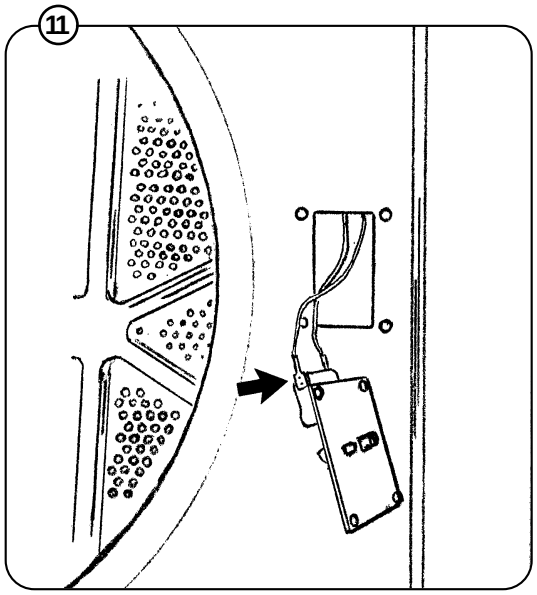
Remove screws B with gaskets and screws C and E (fig.10).

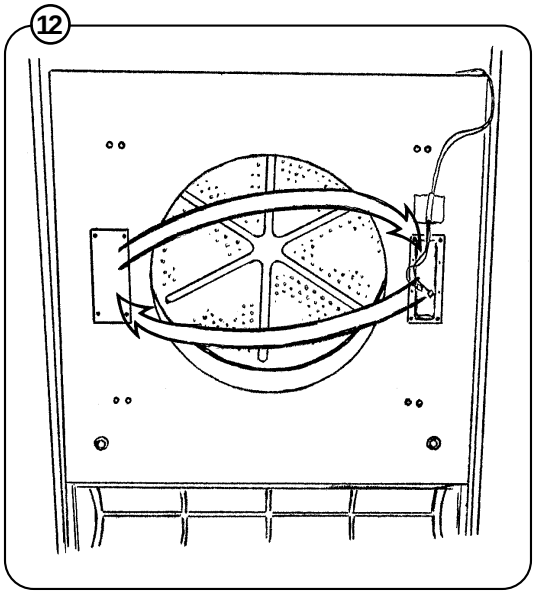
Remove screws D, taking care because the door is now hanging loosely on the front panel (fig. 10).

Fig. 12

5. Switch cover plate and dust hood.
6. Move the leads to the opposite side. Be careful with the leads, so that they will not get caught by the drum or when mounting the front panel.
7. Mount the front panel with door in such a way that the hinges are on the opposite side.
8. Mount the lock system, A (must be reversed).
9. Mount the operating panel and the PCB. Insert multi-plugs G1 and G2.
10. Mount the top cover.
11. Connect the machine to the power source and test the machine.







Function checks, manual

Must be carried out by a skilled, competent person.
Check that the drum is empty and the door closed.

Fig. (13)

Before start-up
Check the direction of rotation by pressing down switch K3. If the drum rotates the wrong way, switch 2 phases.

Fig. (14)

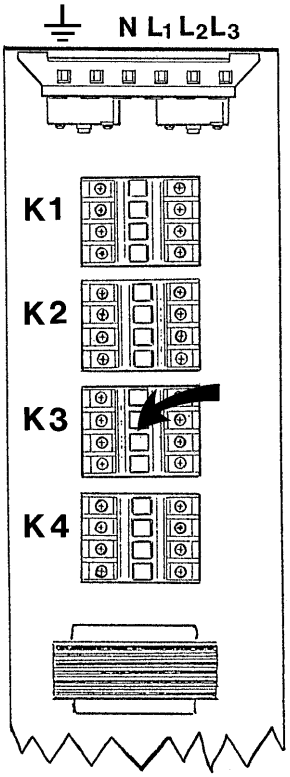
The direction of rotation can be seen from fig. 14.

After start-up
Check that the safety lock works. The drum must stop when the front door or filter door is opened.

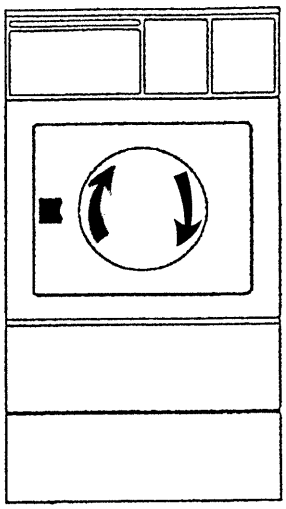
Let the machine run a program with heating for 5 minutes. Check the heating by opening the front door and checking that there is heat in the drum.

If the above check-points are found to be in order, the tumbler is ready for use.
If faults or deficiencies are found, please contact your nearest service organisation / dealer.

13



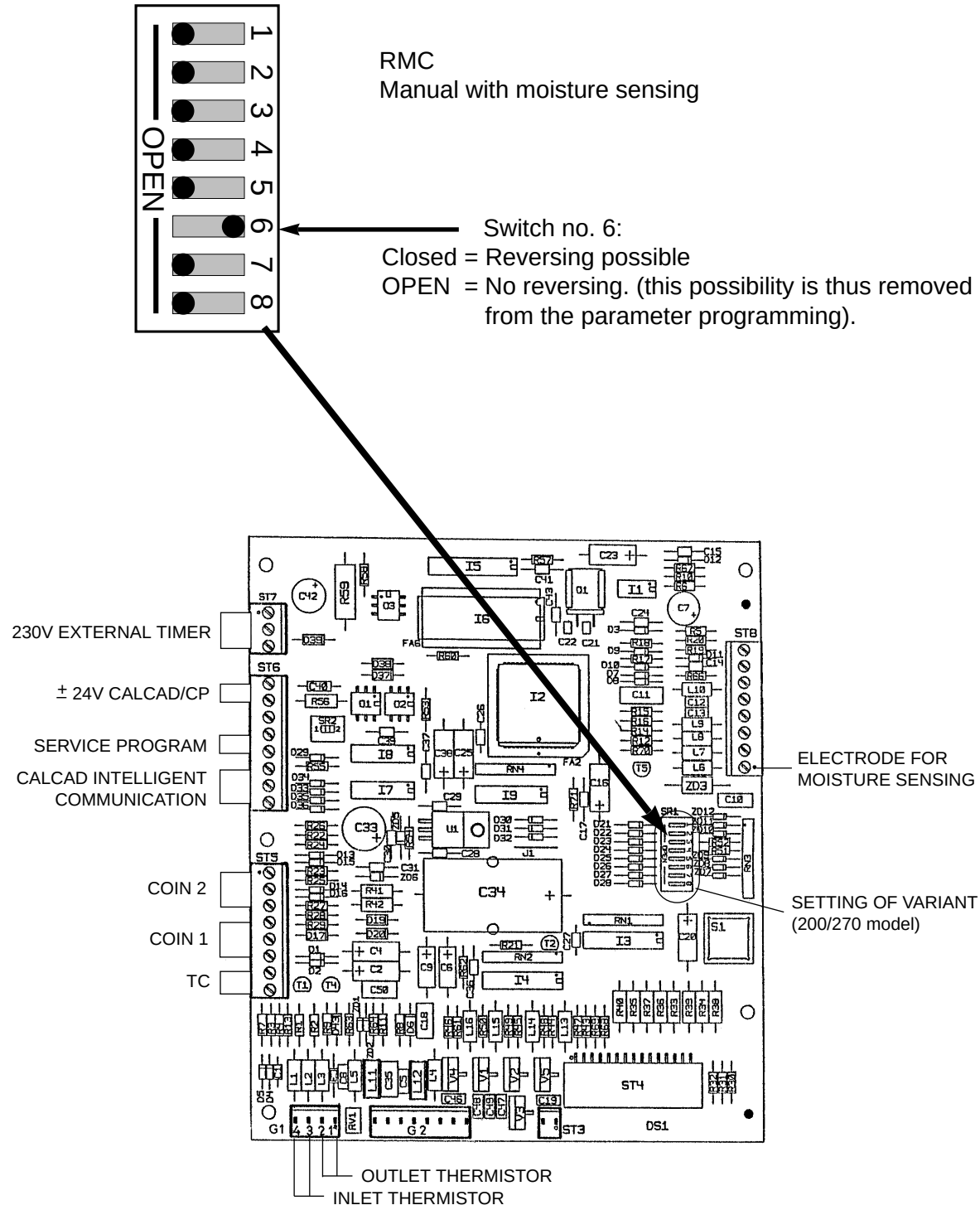
14



PCB (printed circuit board), setting of 200/270 -litre machine

The switch setting (variant setting) for the 200/270-litre model.
The PCB has been preset at the works to match this model.

Only if the PCB is replaced is it necessary to reset.



Quick-view parameter listing

The following values have been pre-programmed:

Parameter No.	Value / setting	Parameter
01	3.0	Cooling time
02	50	Program with low temperature: 50°C
03	70	Program with high temperature: 70°C
04	90	Maximum running time
05	1	With reversing
06	2.3	Reversing time
07	3	Reversing, pausing time
16	n6	Program: Extra dry
17	0	Program: Dry
18	13	Program: Iron dry (iron)
19	21	Program: Iron dry (flatbed ironer)

A more detailed explanation of the parameter programming can be found on the following pages.

Applies only to machines with RMC

At the works, the tumbler has been set at a specific value, such as: length of running time per coin, temperature, cooling, reversing, etc.

These different parameters (number of parameters can vary from type to type) can be changed by turning the key switch at the front of the machine (cannot be engaged when the machine is in operation or the door closed).

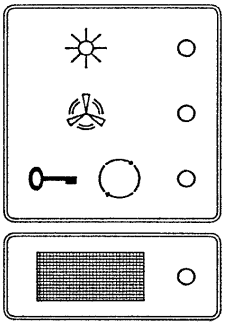
When engaging the program, always start with parameter 01.
Press the start button (Enter) repeatedly to reach the parameter number to be changed.
When the parameter programming is engaged, the LEDs indicate the current parameter:

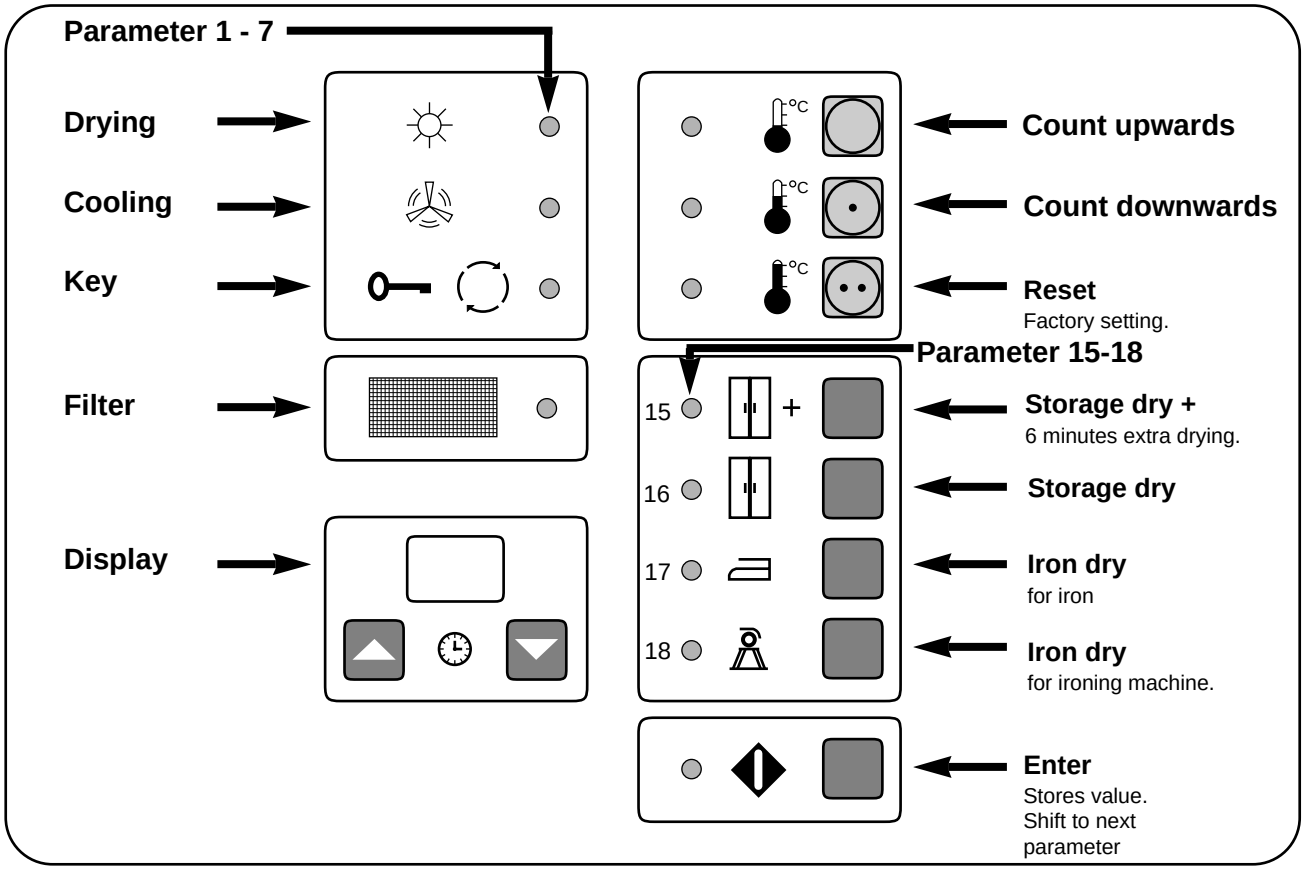
LED **Drying** =

LED **Cooling** =

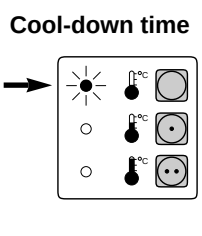
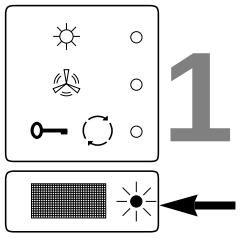
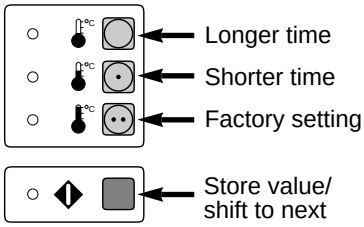
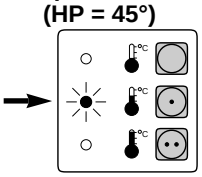
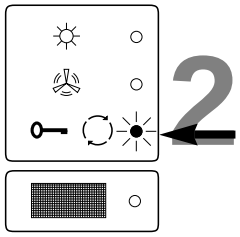
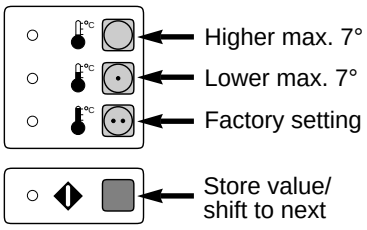
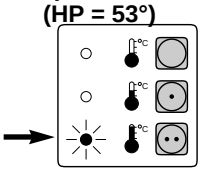
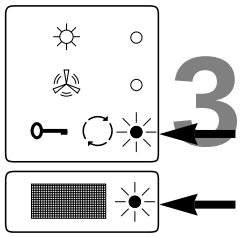
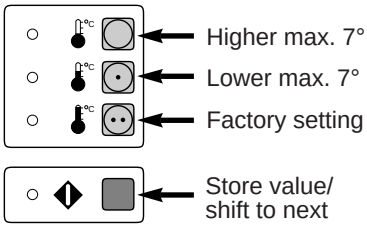
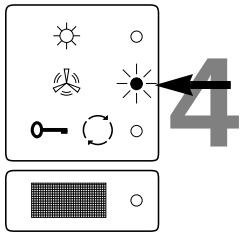
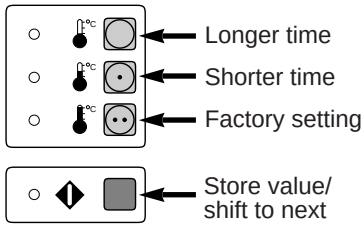
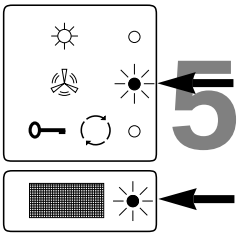
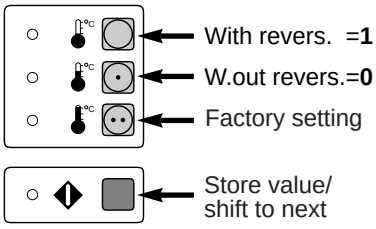
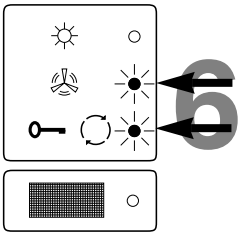
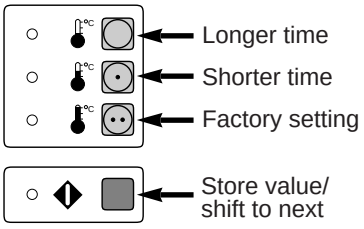
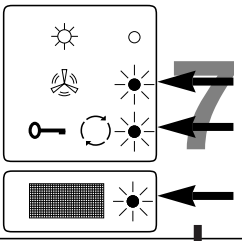
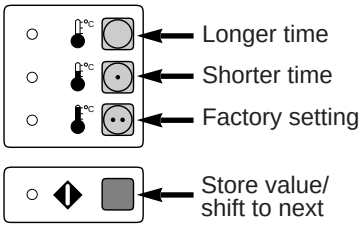
LED **Key** =

LED **Filter** =





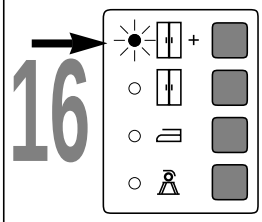
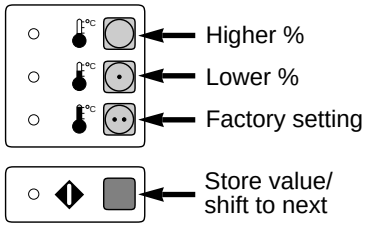
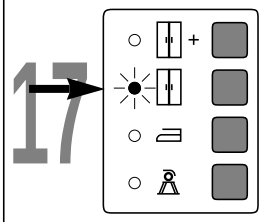
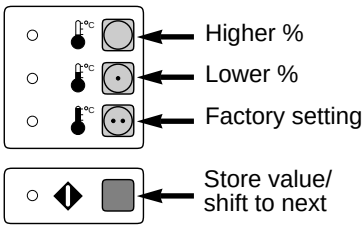
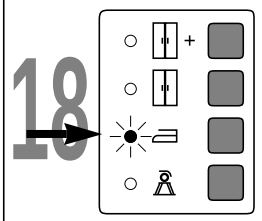
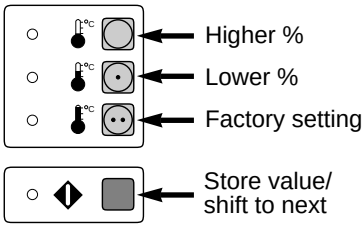
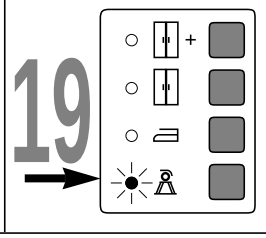
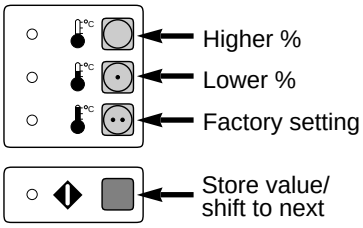
Parameter programming 200/270 litres

Parameters 1-7	LED: On = ☼ Off = ○	Value, factory setting	To change : *Press button for:*
Cool-down time	  **1**	Value = Min. sec. **0,0 - 9,6** Factory setting: 3,0	 Longer time Shorter time Factory setting Store value/ shift to next
Temperature 50° (HP = 45°)	  **2**	Value = Degrees C. ± 7°C Factory setting: 50°C **Special** factory setting for machine with heat pump (HP) Value : min. 40°C, max. 50°C Factory setting: 45°C	 Higher max. 7° Lower max. 7° Factory setting Store value/ shift to next
Temperature 70° (HP = 53°)	  **3**	Value = Degrees C. ± 7°C Factory setting: 70°C **Special** factory setting for machine with heat pump (HP) Value : min. 50°C, max. 60°C Factory setting: 53°C	 Higher max. 7° Lower max. 7° Factory setting Store value/ shift to next
Maximum running time per start	 **4**	Value = Minutes **15 - 90** Factory setting: 40	 Longer time Shorter time Factory setting Store value/ shift to next
Reversing	 **5**	Value = **1 / 0** With/without reversing Factory setting: 1 med	 With revers. =**1** W.out revers.=**0** Factory setting Store value/ shift to next
Reversing time	 **6**	Value = Min. sec. **0,2 - 9,6** Factory setting: 2,3	 Longer time Shorter time Factory setting Store value/ shift to next
Reversing pause time	 **7**	Value = Sec. **3 - 20** Factory setting: 3	 Longer time Shorter time Factory setting Store value/ shift to next

Concerning machines with ***Residual moisture control program:***
Go to parameter 16 (page 19).

Parameter programming 200/270 litres

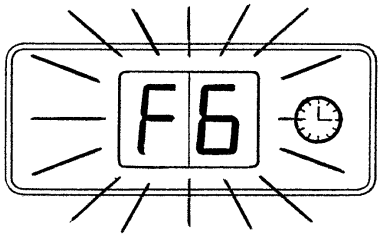
Only on machines with residual moisture control

Parameter 16-19	LED: On = ☼ Off = ○	Value, factory setting	To change : *Press button for:*
Residual moisture control Extra dry		Value = Residual moisture **n9 - 30%** Factory setting: **n6** n6 = 0% + 6 minutes' extra drying (n1 - n9 = 1-9 minutes)	
Residual moisture control Dry		Value = Humidity **0 - 30 %** Factory setting: **0 %**	
Residual moisture control Iron dry		Value = Humidity **0 - 30 %** Factory setting: **13 %**	
Residual moisture control Iron dry for ironing machine		Value = Humidity **0 - 30 %** Factory setting: **21 %**	

Note! Parameters 8 - 15 are not used (with residual moisture control).

Error codes

The machine features automatic error reporting, shown in the form of flashing error codes.



Error code	Error	What is wrong/what needs doing?
F1	Brown-out	20% reduction of the voltage from the power station: Can be restarted when current returns to normal.
F3	Heating error	Fault on inlet sensor or heating element. Disconnect current for a moment. If the fault repeats itself, call in service.
F4	Outlet sensor	Outlet sensor faulty. Disconnect voltage for a moment. If the fault repeats itself, call in service.
F5	Wrong variant	Wrong combination of switches on the PCB. All lamps go out. Call in service.
F6	Electronic error	Micro-processor error: Call in service.
F7	Service program	Service program illegally engaged: Must only be used with the door open.
F9	Vacuum switch	Vacuum switch fault: Call in service.

Number of error codes can vary from type to type.