Installation manual Tumble dryer

TD6-7LAC Type N1...









FIRE OR EXPLOSION HAZARD

Failure to follow safety warnings exactly could result in serious injury, death or property damage.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS:

- Do not try to light any appliance.
- · Do not touch any electrical switch; do not use any phone in your building.
- · Clear the room, building or area of all occupants.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

The above information; "What to do if you smell gas", shall be posted in a prominent location. The information to be posted shall be obtained by consulting with the local gas supplier.

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

The above information; "For your safety", shall be posted in a prominent location.

MAKE CERTAIN TO KEEP THIS MANUAL IN A SECURE PLACE FOR FUTURE REFERENCE.





This conversion kit shall be installed by a qualified service agency in accordance with the manufacturer's instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly, a fire, explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. The qualified service agency is responsible for the proper installation of this kit. The installation is not proper and complete until the operation of the converted appliance is checked as specified in the manufacturer's instructions supplied with the kit.

WARNING: The dryer is intended for use only with fabrics that have been washed with water.

WARNING: To avoid fire hazard, do not dry articles containing foam rubber or similarly textured

rubberlike materials.

WARNING: ALL OPERATING AND MAINTENANCE PROCEDURES SHOWN ON THE NEXT PAGE OF THIS MANUAL MUST BE FOLLOWED DAILY FOR PROPER OPERATION OF YOUR MACHINE.

Keep the dryer area clear and free from combustible materials, gasoline, and other flammable vapors and liquids.

The dryer must not be installed or stored in an area where it will be exposed to water and/or weather.

PLEASE ENTER THE FOLLOWING INFORMATION AS IT APPEARS ON THE MACHINE(S) DATA PLATE(S).

MACHINE TYPE OR MODEL	
MACHINE SERIAL NUMBER(S)	
ELECTRICAL CHARACTERISTICS:VOLTS,	PHASE,HZ.

Warning: For your safety the information in this manual must be followed to minimize the risk of fire or explosion or to prevent property damage, personnel injury or death.

NOTICE TO: OWNERS, OPERATORS AND DEALERS

IMPROPER INSTALLATION AND INADEQUATE MAINTENANCE, POOR HOUSEKEEPING AND WILLFUL NEGLECT OR BYPASSING OF SAFETY DEVICES MAY RESULT IN SERIOUS ACCIDENTS OR INJURY. TO ASSURE THE SAFETY OF CUSTOMERS AND/OR OPERATORS OF YOUR MACHINE, THE FOLLOWING MAINTENANCE CHECKS MUST BE PERFORMED ON A DAILY BASIS.

- 1. Prior to operation of the machine, check to make certain that all operating instructions and warning signs are affixed to the machine and legible. Missing or illegible ones must be replaced immediately. Be sure you have spare signs and labels available at all times. These can be obtained from your dealer.
- 2. Check the door safety interlock, as follows:
 - a. OPEN THE DOOR of the machine and attempt to start in the normal manner:
 - For coin-operated models, insert the proper coins to start the machine.
 - For manually operated models, place the ON-OFF switch in the ON position and press the Start switch.

THE MACHINE(S) MUST NOT START!

- 3. DO NOT UNDER ANY CIRCUMSTANCES ATTEMPT TO BYPASS OR REWIRE ANY OF THE MACHINE SAFETY DEVICES AS THIS CAN RESULT IN SERIOUS ACCIDENTS.
- 4. **Be sure to keep the machine(s) in proper working order:** Follow <u>all</u> maintenance and safety procedures. Further information regarding machine safety, service and parts can be obtained from your dealer.
 - All requests for assistance must include the model, serial number and electrical characteristics as they appear on the machine identification plate. Insert this information in the space provided on the previous page of this manual.
- 5. **WARNING:** DO NOT OPERATE MACHINE(S) WITH SAFETY DEVICES BYPASSED, REWIRED OR INOPERATIVE! DO NOT OPEN MACHINE DOOR UNTIL DRUM HAS STOPPED ROTATING!

NOTICE TO INSTALLER

Improper installation of this machine:

- May cause serious damage to the machine.
- · May result in other property damage.
- · May cause personal injury.
- · Will void the manufacturer's warranty.

Connection to line Voltage or over-current protection devices other than those specified on the data plate may result in severe damage to machine components, and will void the manufacturer's warranty.

Refer to complete installation instructions provided in manuals accompanying the machine.

Contact Electrolux Professional Technical Support with any questions BEFORE installing this machine. Damage resulting from inadequate installation materials or improper installation techniques will void the manufacturer's warranty.

Electrical Information

It is your responsibility to have **ALL** electrical connections (including grounding) made by a properly licensed and competent electrician to assure that the electrical installation is adequate and conforms with local and state regulations or codes.

In the absence of such codes, ALL electrical connections, material, and workmanship must **conform** to the applicable requirements of the NATIONAL ELECTRIC CODE ANSI/NFPA NO. 70 or the CANADIAN ELECTRICAL CODE, CSA C22.1 - both the latest edition.

IMPORTANT: Failure to comply with these codes or ordinances and/or the requirements stipulated in

this manual can result in personal injury or component failure.

NOTE: Component failure due to improper installation will **VOID THE WARRANTY**.

IMPORTANT: A separate circuit serving each dryer must be provided. The dryer must be connected to

copper wire only. **DO NOT** use aluminum wire which could cause a fire hazard.

NOTE: The use of aluminum wire will **VOID THE WARRANTY**

CAUTION: Label all wires prior to disconnection when servicing controls. Wiring errors can cause

improper operation or component failure.

Electrical Service

Steam and gas dryers ONLY

IMPORTANT: The dryer must be connected to the electrical supply shown on the data label affixed to

the dryer. In the case of 208 VAC or 240 VAC, the supply voltage **must match** the electric service specifications of the data label **exactly.** Wire **must be** properly sized to

handle the rated current.

WARNING: 120 VAC, 208 VAC and 240 VAC ARE NOT THE SAME. Any damage done to dryer

components due to improper voltage connections will VOID THE WARRANTY.

Electric dryers ONLY

IMPORTANT: ALL electrically heated dryers must be connected to the electric supply service shown

on the dryers data label which is affixed to the back side of the control (service) door.

The connecting wires must be properly sized to handle the rated current.

NOTE: Component failure due to improper voltage application will **VOID THE WARRANTY**.

Gas Information

It is your responsibility to have **ALL** plumbing connections made by a qualified professional to insure that the installation is adequate and conforms with local and state regulations or codes. In the absence of such codes, **ALL** plumbing connections, material, and workmanship must conform to the applicable requirements of **National Fuel Gas Code, ANSI Z223.1/NFPA 54**, or the **Natural Gas and Propane Installation Code, CSA B149.1** - both the latest edition.

On dryers not equipped with a gas union in the dryer manifold, the instructions shall specify that a listed connector in compliance with the **Standard for Connectors for Gas Appliances ANSI Z21.24 CSA 6.10**, be used to connect the dryer to the supply piping.

IMPORTANT: Failure to comply with these codes or ordinances, and/ or the requirements stipulated in this manual, can result in personal injury and improper operation of the dryer.

The dryer **must be** isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or greater than 1/2 psig (3.5 kPa).

IMPORTANT: Failure to isolate or disconnect the dryer from the gas supply as noted can cause

irreparable damage to the gas valve and will VOID THE WARRANTY.

WARNING: FIRES or EXPLOSION COULD RESULT.



Gas Supply

NOTE: Undersized gas piping will result in ignition problems, slow drying, increased use of

energy, and can create a safety hazard.

The dryer **must be** connected to the type of heat/ gas indicated on the dryer data label. If this information does not agree with the type of gas available, **do not** operate the dryer, contact your local dealer.

IMPORTANT: Any burner changes or conversions must be made by a qualified licensed professional.

The input ratings shown on the dryer data label are for elevations of up to 1,999 feet. The adjustment or conversion of the dryer(s) in the field for elevations over 2,000 feet are made by changing each burner orifice. If these conversions are necessary, contact your local dealer.

Natural Gas

If the pressure is too low, ignition failure and/or slow drying times may result. Excessively high supply pressure will result in erratic operation of the gas valves internal pressure regulator. Further information in section: Gas connection.

Propane Gas

Dryers made for use with propane gas have the gas valve pressure regulator blocked open, so that the gas pressure **must be** regulated upstream of the dryer. In accordance with American Gas Association (AGA) standards, a gas pressure regulator, when installed indoors, must be equipped with a vent limiter or a vent line must be installed from the gas pressure regulator vent to the outdoors. The water column pressure **must be** regulated at the source (propane tank), or an external regulator must be added to each dryer. Further information in section: Gas connection.

Piping/Connections

The dryer is provided with a 1/2" or a 3/4" N.P.T. inlet pipe connection extending out the rear area or through the top of the dryer. For ease of servicing, the gas supply line of each dryer should have its own shut-off valve.

The size of the gas supply line (header) will vary depending on the distance this supply line travels from the gas meter or, in the case of propane gas, the supply tank, the number of tees, other gas-operated appliances, etc. Specific information regarding supply line size should be determined by the gas supplier.

NOTE: Undersized gas supply piping can create a low or inconsistent gas pressure which will result in erratic operation of the burner ignition system.

Consistent gas pressure is essential at **ALL** gas connections. It is recommended that a 3/4- inch pipe gas loop be installed in the supply line serving the bank of dryers. An in-line pressure regulator **must be** installed in the gas supply line (header) if (natural) gas line pressure exceeds 12-inches water column pressure.

IMPORTANT: The information regarding the settings of the water column pressure for Natural gas dryers and Propane gas dryers is found in section: Gas connection. The pressure is required at the gas valve pressure tap of each dryer for proper and safe operation.

A 1/8" N.P,T. plugged tap, accessible for test gauge connection, **must be** installed in the main gas supply line immediately upstream of each dryer.

IMPORTANT: Pipe joint compounds that resist the action of natural gas and propane gas **MUST BE**

used.

WARNING: Test **ALL** connections for leaks by brushing on a soapy water solution (liquid detergent

also works well). NEVER TEST FOR GAS LEAKS WITH AN OPEN FLAME.

ALL components / materials **must conform** to NATIONAL FUEL GAS CODE specifications. It is important that gas pressure regulators meet applicable pressure requirements and that gas meters are rated for the total amount of appliance BTU's being supplied.

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1 Safety Precautions

- Servicing shall be carried out only by authorized personnel.
- Only authorized spare parts, accessories and consumables shall be used.
- The machine is not to be used if industrial chemicals have been used for cleaning.
- Do not dry unwashed items in the machine.
- Items that have been soiled with substances such as cooking oil, acetone, alcohol, petrol, kerosene, spot removers, turpentine, waxes and wax removers should be washed in hot water with an extra amount of detergent before being dried in the machine.
- Items such as foam rubber (latex foam), shower caps, waterproof textiles, rubber backed articles and clothes or pillows fitted with foam rubber pads should not be dried in the machine.
- Fabric softeners or similar products should be used as specified by the fabric softener instructions.
- The final part of a drying cycle occurs without heat (cool down cycle) to ensure that the items are left at a temperature that ensures that the items will not be damaged.
- Remove all objects from pockets such as lighters and matches.
- WARNING. Never stop the machine before the end of the drying cycle unless all items are quickly removed and spread out so that the heat is dissipated.
- Adequate ventilation has to be provided to avoid the back flow of gases into the room for appliances burning other fuels, including open fires.
- Exhaust air must not be discharged into a flue which is used for exhausting fumes from appliances burning gas or other fuels.
- The machine must not be installed behind a lockable door, a sliding door or a door with a hinge on the opposite side to that of the machine in such a way that a full opening of the machine is restricted.
- If the machine has a lint trap this has to be cleaned frequently.
- The lint must not be accumulated around the machine.
- DO NOT MODIFY THIS APPLIANCE.
- When performing service or replacing parts, the power must be disconnected.
- When the power is disconnected, the operator must see that the machine is disconnected (that the plug is removed and remains removed) from any point to which he has access. If this is not possible, due to the construction or installation of the machine, a disconnection with a locking system in the isolated position shall be provided.
- In accordance with the wiring rules: mount a multi-pole switch prior to the machine to facilitate installation and service operations.
- WARNING: The appliance must not be supplied through an external switching device, such as a timer, or connected to a circuit that is regularly switched on and off by a utility.
- If different rated voltages or different rated frequencies (separated by a /) are stated at the machine data plate, instructions for adjusting the appliance for operation at the required rated voltage or rated frequency are stated in the installation manual.
- Stationary appliances not fitted with means for disconnection from the supply mains
 having a contact separation in all poles that provide full disconnection under overvoltage category III, means for disconnection must be incorporated in the fixed wiring in
 accordance with the wiring rules.
- The openings in the base, shall not be obstructed by a carpet.
- Maximum mass of dry cloth: 8.0 kg / 17.6 lbs (for gas heated tumble dryers).

- Maximum mass of dry cloth: 9.0 kg / 19.8 lbs (for heat pump and electric heated tumble dryers).
- A-weighted emission sound pressure level at working stations: 70 dB(A).

1.1 Additional safety precautions for gas heated tumble dryer

- Before installation, check that the local distribution conditions, nature of gas and pressure and the adjustment of the appliance are compatible.
- The machine is not to be installed in rooms containing cleaning machines with perchloroethylene, TRICHLOROETHYLENE or CHLOROFLUOROCONTAINING HY-DROCARBONS as cleaning agents.
- NOTE: it is pointed out that the connection and commissioning of appliances complying
 with this standard are subject to observance of the installation regulations in force in
 the countries where these appliances are marketed.
- Connection to the appliance shall be made with a flexible hose suitable for the appliance category in accordance with national installation regulations of the country of destination and that in case of doubt the installer shall contact the supplier.
- The appliance should be installed on non-flammable materials for the floor, worktop and/or wall close to the appliance if required.
- If you can smell gas:
 - Do not switch on any equipment
 - Do not use electrical switches
 - Do not use telephones in the building
 - Evacuate the room, building or area
 - Contact the person responsible for the machine

1.2 General information

Conditions for storage and transportation of the appliance should fulfil a temperature between -20 $^{\circ}$ C / + 70 $^{\circ}$ C and max Humidity of 95 $^{\circ}$ RH.

In order to prevent damage to the electronics (and other parts) that may occur as the result of condensation, the machine should be placed in room temperature for 24 hours before being used for the first time.

Electric power supply should follow:

- Max range for each country rated voltage: -15% / +10%.
- Max range for each country rated frequency: ± 3 Hz.
- Dips/Interruption: 5 Dips/day (100% voltage lost, with 3-4 minutes duration).

A stable power supply is always the best. Fluctuations gives stress and additional load on all electric and electronic components.

1.3 Commercial use only

The machine/machines covered by this manual is/are made for commercial and industrial use only.

1.4 Copyright

This manual is intended solely for consultation by the operator and can only be given to third parties with the permission of Electrolux Professional AB company.

1.5 Ergonomics certification

The human body is designed for movement and activity but physical stress injuries as a result of static and repetitive movements or unfavorable working postures may occur.

The ergonomic features of your product, the ones which may influence your physical and cognitive interaction with it, have been assessed and certified.

A product which exhibits ergonomic features, in fact, shall fulfil specific ergonomic requirements, belonging to three different areas: Polytechnic, Biomedical and Psychosocial (usability and satisfaction).

For each of these areas, specific tests with real users have been performed. The product was therefore compliant with the ergonomic acceptability criteria requested by the standards.

In case several machines are managed by the same operator the repetitive movements will increase and as a consequence of this the related biomechanical risk will increase exponentially.

The possible postural risks are the interaction with the door handle both in case the machine is placed directly on the floor without a base and in case the machine is placed on top of a washing machine.

Follow the below recommendations to avoid, as much as possible, operators acquiring bodily injury.

- Place the machine on a base instead of directly on the floor so that the operator does not need to bend his/her back unnecessarily when loading and unloading.
 - Minimum suggested height of bases is 300 mm.
- Move the control panel to the lower position in case the machine is placed on top of a washing machine.
- Make sure there are suitable trolleys or baskets for loading, unloading and transportation.
- Organize job rotation in the working place in the case several machines are managed by the same operator.

1.6 Symbols

<u></u>	Caution
	Caution, hot surface
4	Caution, high voltage
	Warning, risk of fire / flammable material
	Danger, crush hazard
	Read the instructions before using the machine

2 Warranty terms and exclusions

If the purchase of this product includes warranty coverage, warranty is provided in line with local regulations and subject to the product being installed and used for the purposes as designed, and as described within the appropriate equipment documentation.

Warranty will be applicable where the customer has used only genuine spare parts and has performed maintenance in accordance with Electrolux Professional user and maintenance documentation made available in paper or electronic format.

Electrolux Professional strongly recommends using Electrolux Professional approved cleaning, rinse and descaling agents to obtain optimal results and maintain product efficiency over time.

The Electrolux Professional warranty does not cover:

- service trips cost to deliver and pick up the product;
- installation;
- training on how to use/operate;
- replacement (and/or supply) of wear and tear parts unless resulting from defects in materials or workmanship reported within one (1) week from the failure;
- · correction of external wiring;
- correction of unauthorized repairs as well as any damages, failures and inefficiencies caused by and/or resulting from:
 - insufficient and/or abnormal capacity of the electrical systems (current/voltage/frequency, including spikes and/or outages);
 - inadequate or interrupted water supply, steam, air, gas (including impurities and/or other that does not comply with the technical requirements for each appliance);
 - plumbing parts, components or consumable cleaning products that are not approved by the manufacturer;
 - customer's negligence, misuse, abuse and/or non-compliance with the use and care instructions detailed within the appropriate equipment documentation;
 - improper or poor: installation, repair, maintenance (including tampering, modifications and repairs carried out by third parties not authorized third parties) and modification of safety systems;
 - Use of non-original components (e.g.: consumables, wear and tear, or spare parts);
 - environment conditions provoking thermal (e.g. overheating/freezing) or chemical (e.g. corrosion/oxidation) stress;
 - foreign objects placed in- or connected to- the product;
 - accidents or force majeure;
 - transportation and handling, including scratches, dents, chips, and/or other damage to the finish of the product, unless such damage results from defects in materials or workmanship and is reported within one (1) week of delivery unless otherwise agreed;
- product with original serial numbers that have been removed, altered or cannot be readily determined;
- replacement of light bulbs, filters or any consumable parts;
- any accessories and software not approved or specified by Electrolux Professional.

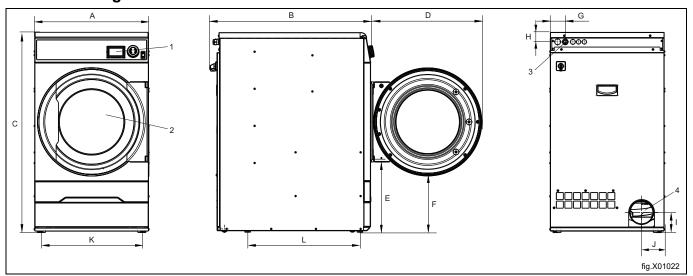
Warranty does not include scheduled maintenance activities (including the parts required for it) or the supply of cleaning agents unless specifically covered within any local agreement, subject to local terms and conditions.

Check on Electrolux Professional website the list of authorized customer care.

3 Technical data

3.1 Electric heated machines

3.1.1 Drawing



1	Operating panel
2	Door opening, ø 392 mm / 15 7/16 inch
3	Electrical connection
4	Exhaust connection

	Α	В	С	D	E
mm	600	845	1050	580	385
inch	23 5/8	33 1/4	41 5/16	22 13/16	15 3/16
	F	G	Н	I	J
mm	295	80	50	100	120
inch	11 5/8	3 1/8	1 15/16	3 15/16	4 3/4

3.1.2 Technical data

Weight, net	kg	97
	lbs	213.8
Drum volume	liters	135
	ft ³	4.8
Drum diameter	mm	575
	inch	22 5/8
Drum depth	mm	500
	inch	19 11/16
Drum speed, medium load	rpm	53
Rated capacity, filling factor 1:15 (Max. load)	kg	9.0
	Ibs	19.8
Rated capacity, filling factor 1:18 (Max. load)	kg	7.5
, ,	lbs	16.5
Rated capacity, filling factor 1:22 (Recommended load)	kg	6.1
	lbs	13.2
Heating: Electricity	kW	3.0
	kW	4.5
	kW	6.0
Optimum air flow, 3.0/4.5 kW	m³/h	130
	ft³/h	4591
Optimum air flow, 6.0 kW	m³/h	155
	ft³/h	5474
Optimum static back pressure, 3.0/4.5 kW	Pa	350
	Psi	0.050
Maximum static back pressure, 3.0/4.5 kW	Pa	355
	Psi	0.051
Optimum static back pressure, 6.0 kW	Pa	300
	Psi	0.044
Maximum static back pressure, 6.0 kW	Pa	310
	Psi	0.045
Sound power/pressure level at drying*	dB(A)	63/48
Heat emission of installed power, max	%	15

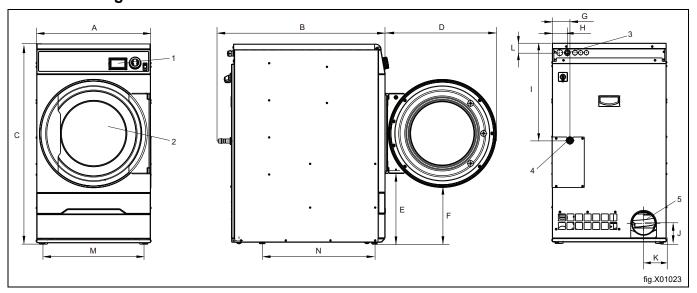
^{*} Sound power levels measured according to ISO 60704.

Connections

Air outlet	ø mm	125
	ø inch	4 15/16

3.2 Gas heated machines

3.2.1 Drawing



1	Operating panel
2	Door opening, Ø 392 mm / 15 7/16 inch
3	Electrical connection
4	Gas connection
5	Exhaust connection

	Α	В	С	D	E
mm	600	875	1050	580	385
inch	23 5/8	34 7/16	41 5/16	22 13/16	15 3/16
	F	G	Н	ı	J
mm	F 295	G 90	H 80	I 520	J

	K	L
mm	120	50
inch	4 3/4	1 15/16

3.2.2 Technical data

Weight, net	kg	97
	lbs	213.8
Drum volume	liters	135
	ft ³	4.8
Drum diameter	mm	575
	inch	22 5/8
Drum depth	mm	500
	inch	19 11/16
Drum speed, medium load	rpm	53
Rated capacity, filling factor 1:18 (Max. load)	kg	7.5
	Ibs	16.5
Rated capacity, filling factor 1:22 (Recommended load)	kg	6.1
	lbs	13.2
Heating: Gas	kW	7.0
Optimum air flow	m³/h	280
	ft³/h	9888
Optimum static back pressure	Pa	200
	Psi	0.029
Maximum static back pressure	Pa	255
	Psi	0.037
Sound power/pressure level at drying*	dB(A)	63/48
Heat emission of installed power, max	%	15

^{*} Sound power levels measured according to ISO 60704.

Note!

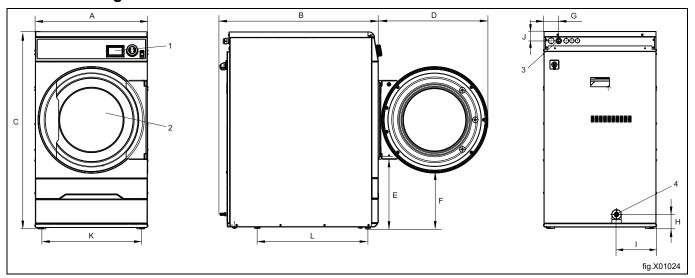
The default gas appliances are built to run on either GNH or LPG gas where shall be installed at not over than 610 m (2001 ft) high altitude otherwise a kit for high altitude must be installed to the machine. For the kit No. please refer to the spare parts list.

Connections

Air outlet	ø mm	125
	∅ inch	4 15/16
Gas connection	1/2"	ISO 7/1-R1/2

3.3 Machines with heat pump

3.3.1 Drawing



1	Operating panel
2	Door opening, ø 392 mm / 15 7/16 inch
3	Electrical connection
4	Drain for condense water

	Α	В	С	D	Е
mm	600	845	1050	580	385
inch	23 5/8	33 1/4	41 5/16	22 13/16	15 3/16
	_	_			

	F	G	Н	I	J
mm	295	80	75	210	50
inch	11 5/8	3 1/8	2 15/16	8 1/4	1 15/16

3.3.2 Technical data

Weight, net	kg	119
	lbs	262.3
Drum volume	liters	135
	ft ³	4.8
Drum diameter	mm	575
	inch	22 5/8
Drum depth	mm	500
	inch	19 11/16
Drum speed, medium load	rpm	53
Rated capacity, filling factor 1:15 (Max. load)	kg	9.0
	lbs	19.8
Rated capacity, filling factor 1:18	kg	7.5
	lbs	16.5
Rated capacity, filling factor 1:22 (Recommended load)	kg	6.1
	lbs	13.2
Sound power/pressure level at drying*	dB(A)	63/48
Average heat emission per drying cycle used to assess ventilation need**	kW	0.7
Ambient operating temperature	°C	+10 – +45

^{*} Sound power levels measured according to ISO 60704.

Connections

Pipe connection, condensed water	ø mm	15
	ø inch	9/16

Heat pump

Type of refrigerant		R134a
Amount of refrigerant	kg	0.68
	lbs	1.5

Fluorinated greenhouse gases

This product contains fluorinated greenhouse gases:

R134a: 0.680 kg GWP 1430

CO₂ equivalent 0.9724 t Hermetically sealed

^{**} For assistance with dimensioning necessary ventilation needs, contact authorized ventilation technician. For sufficient ventilation all sources introducing heat need to be taken into account plus all other parameters effecting the ventilation need. Climate zone, building parameters, room size, etc.

4 Setup

4.1 General

The principle work flow to setup or install this machine can be simply described below.

Gas-, Electric-, Steam heating:

- 1. Unpacking
- 2. Positioning/siting, levelling or/and securing the machine.
- 3. Correcting the fresh air/air intake's size, exhaust duct's size and pipe(s) connections in considering a stand-alone machine or sharing exhaust duct.
- 4. Electric connections, connect the power supply to the machine.
- 5. Air flow or static back pressure adjustments in a cold empty machine in considering a stand-alone machine or sharing exhaust duct.
- 6. Gas connection, gas converting, high altitude kit installation. (For gas heated machine).
- 7. Function check.
- 8. Option functions check.

More details are described in each part of this installation manual.

Heat pump heating:

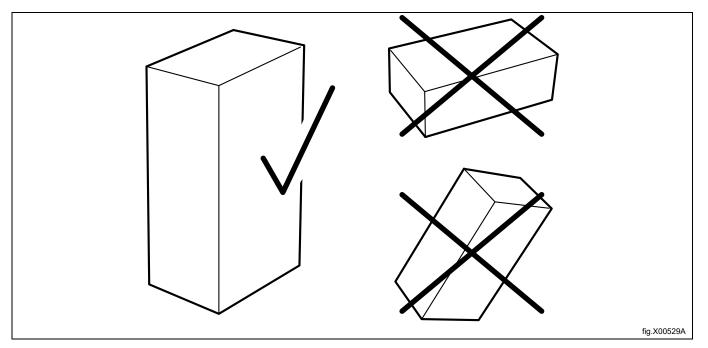
- 1. Unpacking
- 2. Positioning/siting, levelling or/and securing the machine.
- 3. Correcting the fresh air to compensate the heat emission of machine(s) and connect the drain(s).
- 4. Electric connections, connect the power supply to the machine.
- 5. Function check.
- 6. Option functions check.

More details are described in each part of this installation manual.

4.2 Unpacking

Note!

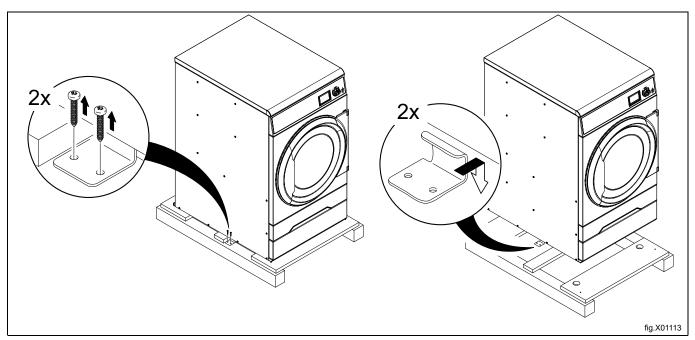
For machines with heat pump; the machine must not be laid down or tilted more than 45°. If so, this might damage the heat pump.



Remove the screws and the transportation bracket on each side of the machine. Remove the machine from the pallet.

Note!

When moving the machine, handle it with care. The drum has no transport clamps.



Place the machine on its final position.

4.3 Recycling instruction for packaging

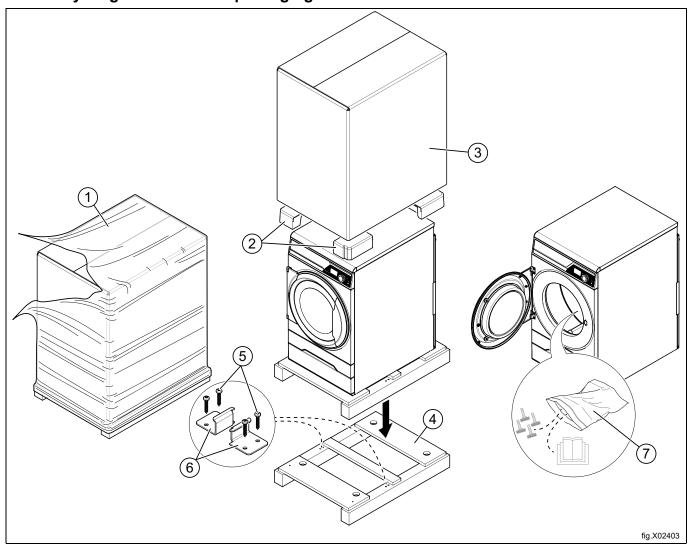


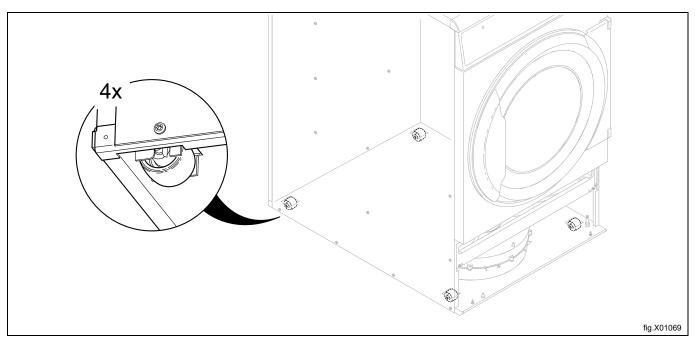
Fig.	Description	Code	Туре
1	Wrapping film	LDPE 4	Plastics
2	Corner protection	PS 6	Plastics
3	Cardboard packaging	PAP 20	Paper
4	Pallet	FOR 50	Wood
5	Screw	FE 40	Steel
6	Steel Bracket	FE 40	Steel
7	Plastic bag	PET 1	Plastics

4.4 Wheels

For ergonomic reasons the machine is equipped with wheels.

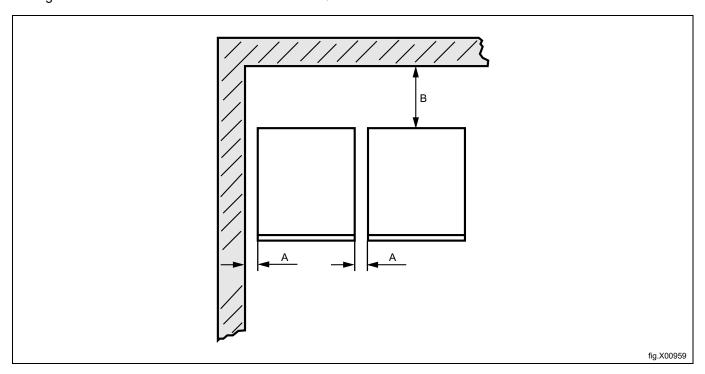
The wheels makes it easy to move the machine without lifting it.

The wheels can only be used as long as the feet of the machine is not lowered.



4.5 Siting

The figure shows recommended distance to walls and/or other machines.



Α	5–500 mm / 3/16–20 inch (Min. 5 mm / 3/16 inch)
В	500 mm / 19 11/16 inch (Min. 200 mm / 7 7/8 inch)

Note!

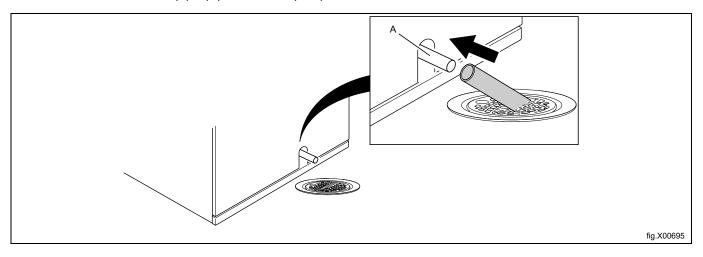
The machine should be positioned so that there will be enough space for working, both for the user and service personnel.

Respecting the given recommendations will provide easy access for maintenance and service operations.

In case of space limitations, it is possible to install machines without respecting to the given recommendations. If so, keep in mind that it might be necessary to disconnect and move other machines to be able to reach and perform service on affected machine.

4.6 Drain connection (only for machines with heat pump)

Connect a drain hose to the pipe (A) on the heat pump unit.



Note!

The drain hose (A) must be positioned over the water level in the floor drain.

The drain must be lower than the drain outlet from the heat pump unit. If not the water will flow back into the machine. Adjust with the feet.

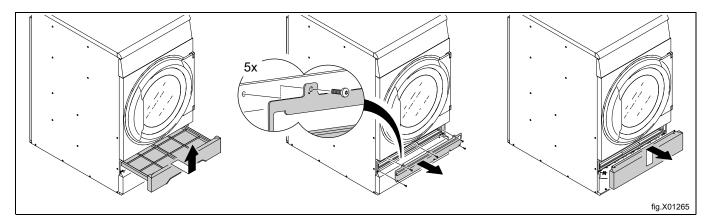
The hose shall hang in a gentle arc.

4.7 Mechanical installation

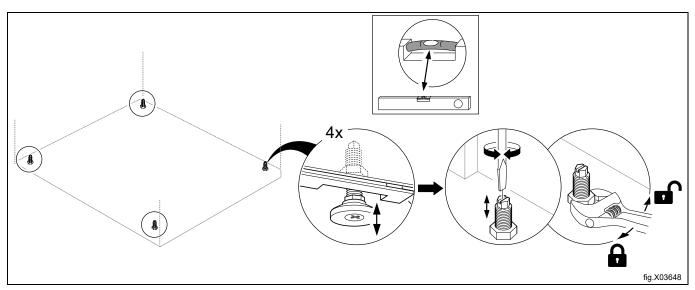
Remove the filter drawer.

Loosen the five screws and demount the bracket.

Remove the lower front panel.



Level the machine with the feet of the machine. The maximum height adjustment of the feet is 14 mm / 9/16 inch.



Remount the panels.

5 Evacuation system

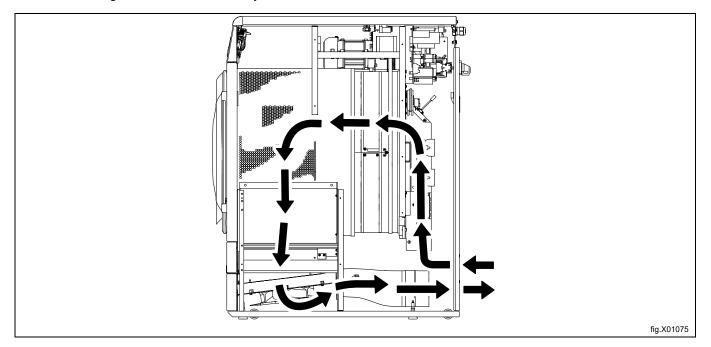
5.1 Air principle

Note!

It is very important that the machine gets enough fresh air in order to get the best drying result.

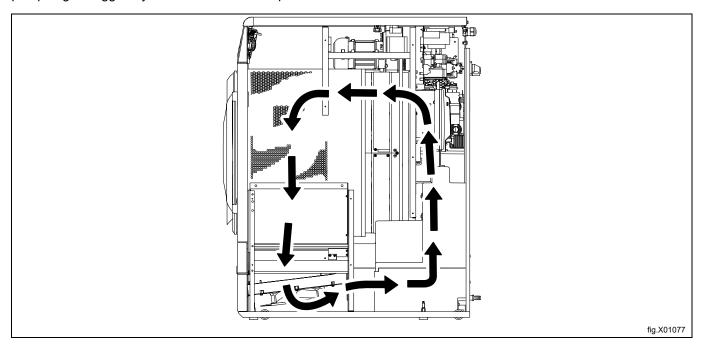
5.1.1 Electric- and Gas heated machines

The fan creates low pressure in the machine, drawing air into the drum via the heating unit. The heated air passes through the garments and the drum holes and flows out through the filter positioned below the drum. The air is then evacuated through the fan and exhaust system.



5.1.2 Machines with heat pump

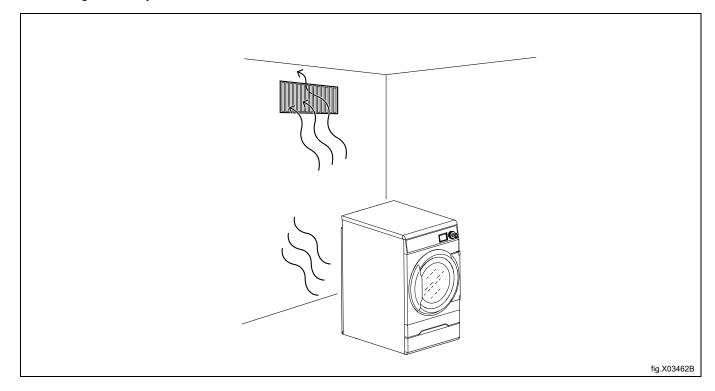
The fan creates air flow in the machine, drawing air into the drum via the heating unit. The heated air passes through the garments and the drum holes and flows out through the first filter drawer and continues through the second special filter just underneath. The special filter is necessary in machines with heat pump in order to protect the heat pump to get clogged by lint. When the air has passed the two filters it recirculates back into the drum.



Ventilating the room

When the machine is in operation, the room temperature increases. Due to this, the room must have sufficient ventilation.

All sources introducing heat into the same room requires to be considered when dimensioning the ventilation. Heat sources could for example be: more tumble dryers, drying cabinets, washers, ironers, radiators, etc. The combination of several sources for heat introduction leads to an increased need for ventilation flow. Other factors may also influence the needed ventilation flow, such as climate zone, building parameters, room size, etc. For assistance with dimensioning necessary ventilation needs, contact authorized ventilation technician.



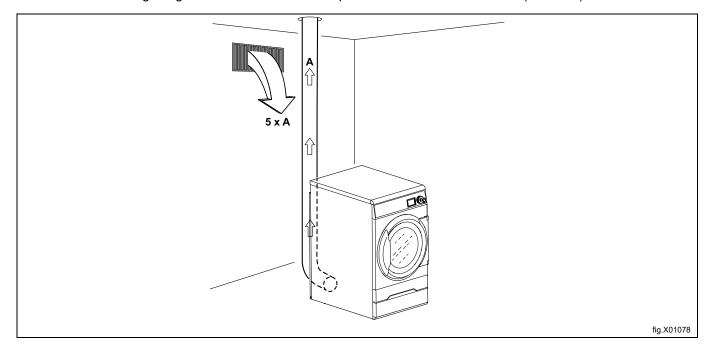
5.2 Fresh air

For maximum efficiency and the shortest possible drying time, it is important to ensure that fresh air is able to enter the room from the outside in the same volume as that is blown out of the room

To avoid draught in the room it is important to place the air inlet behind the machine.

Provisions for adequate air supply: The area of the air inlet opening should be five times the size of the exhaust pipe area. The area of the inlet opening is the area through which the air can flow without resistance from the grating/slatted cover.

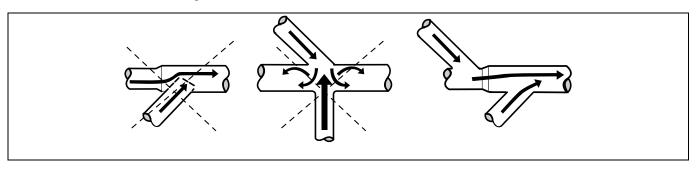
The resistance in the grating/slats on the air inlet cover panel should not exceed 10 Pa (0.1 mbar).



Note! Gratings/slatted covers often block half of the total fresh air vent area. Remember to take this into account.

5.3 Exhaust duct

- · Only rigid or flexible metal duct should be used for exhausting.
- · Plastic ducting is not to be used.
- · Recommended material for exhaust is galvanized steel.
- The duct is not to be assembled with screws or other fastening means that extend into the duct and catch lint.
- The exhaust air should not be vented into a wall, a ceiling, or a concealed space of building.
- The exhaust duct must lead clear of the building as condensation may cause frost damage to the building.
- · The exhaust duct must lead to the outdoors.
- The exhaust duct must be placed in such a way that it is protected on the outside.
- The exhaust duct must be smooth on the inside (low air resistance).
- · The exhaust duct must have gentle bends.



5.4 Shared exhaust duct





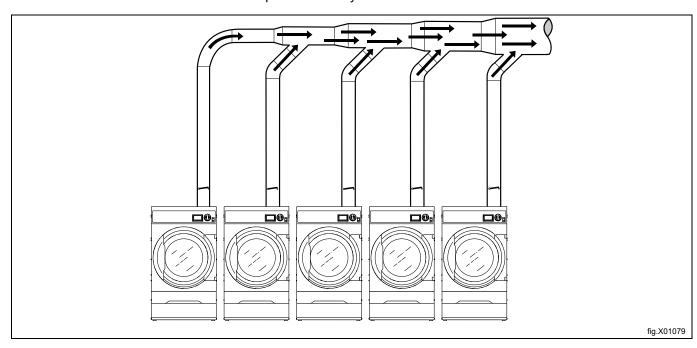
It is recommended that each machine is connected to a separate exhaust duct.

When several machines shall use the same exhaust duct the exhaust duct must increase after each machine. The recommended diameter increase progression is the one in the table.

If several machines are installed on the same exhaust pipe, it is recommended to adjust the airflow on the machines when all machines are started and running a program with no heat.

Please consider that unnecessarily large ducts create issues with the draught.

The exhaust duct must have a nonreturn flap after each dryer.



Number of machines		1	2	3	4	5	6	7	8	9	10
Exhaust duct	ø mm	125	200	250	250	315	315	400	400	400	400
	ø inch	5	7	9	10	11	12	14	14	16	16
Recommended area	m²	0.06	0.16	0.25	0.25	0.39	0.39	0.63	0.63	0.63	0.63
of fresh air intake	ft ²	0.65	1.29	2.26	2.69	3.34	3.88	5.38	5.38	7	7
Minimum area of	m²	0.05	0.10	0.15	0.19	0.24	0.29	0.34	0.39	0.44	0.49
fresh air intake	ft ²	0.54	1.08	1.61	2.05	2.58	3.12	3.66	4.20	4.74	5.27





The exhaust duct diameter must not be reduced.

5.5 Exhaust dimensioning

It is important that the machine has correct air volume compared to each machines power.

If the air flow is smaller or larger this will result in a longer drying period.

If the outlet pipe is long or the ventilation is not properly designed we recommend to clean the outlet pipes periodically. Usually, longer ducts need more frequent cleaning.

The exhaust pipes shall be short in order for the machine to work in the best way.

All cover panels must be mounted in order for the machine to work in the best way.

5.6 Adjusting the air flow (not valid for tumble dryers with heat pump)





Adjusting the air flow may only be carried out by authorized personnel.

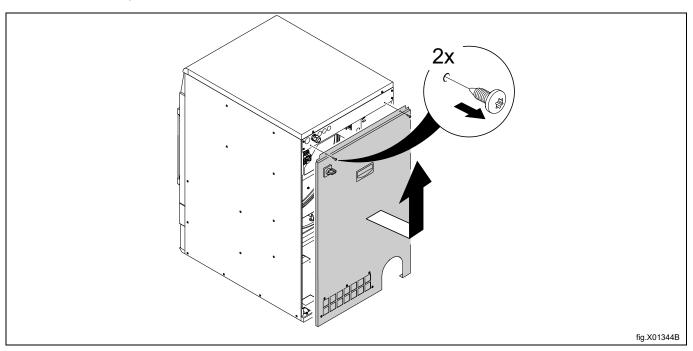
Note!

For airflow adjustment ability, a damper need to be incorporated into the exhaust piping system.

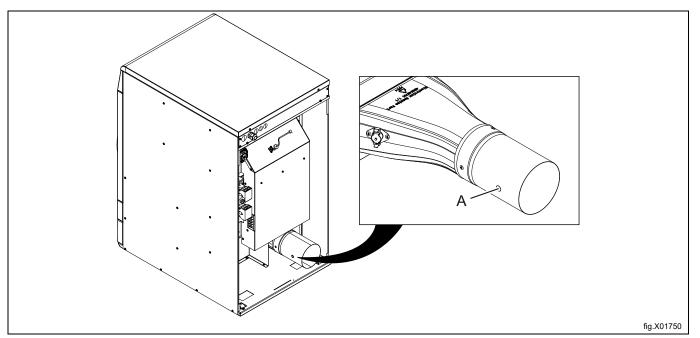
It is important that the machine has the correct air flow compared to each machines heat input. If the air flow is below the minimum, the machine will be forced to switch the heating off which will result in longer drying time.

An air flow above needed is unnecessary and can result in a cold laundry room and noise from the piping and outlet. In extreme causes this can result in longer drying time.

· Demount the rear panel.



Insert the measuring instrument (manometer) in the hole (A). Make sure the connection is tight to prevent air leakage.



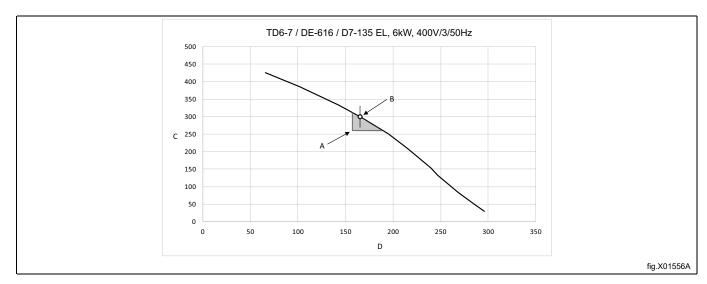
Measure when the machine is running with a program without heat and with an empty drum.

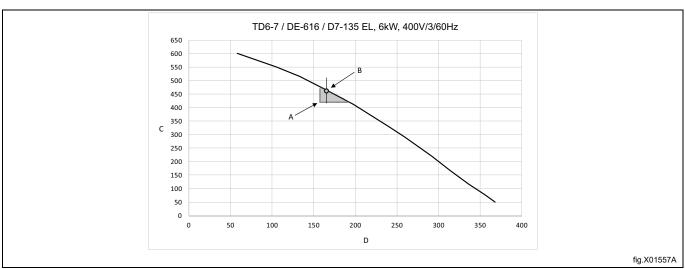
To be able to adjust the air flow for an optimal drying process it is recommended to install a damper in the ducting system. By opening and closing the damper the pressure in the hole (A) is either lowered or raised, thus the flow is raised or lowered.

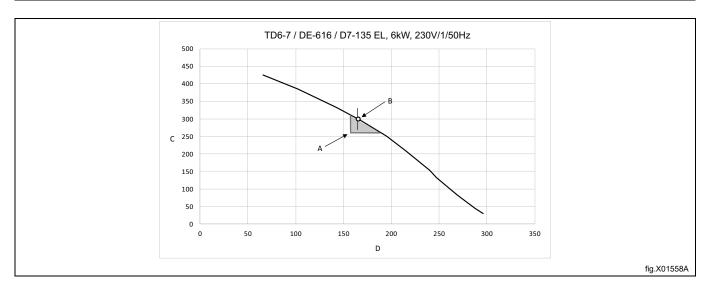
Diagram with pressure drop curve

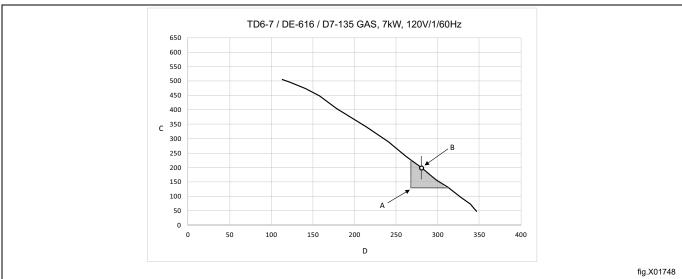
The grey area (A) illustrates the optimal working area.

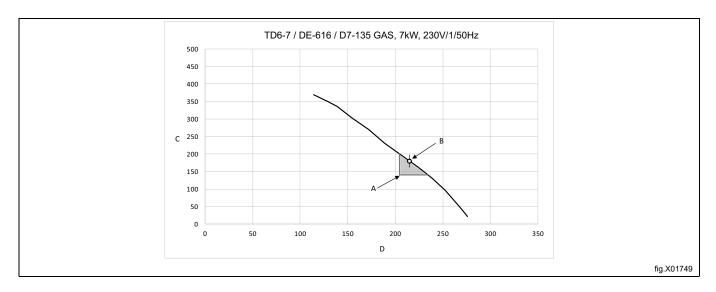
Α	Working area
В	Optimum airflow cold empty machine
С	Static back pressure, Pa
D	Air flow m ³ /h











Alternative measuring method

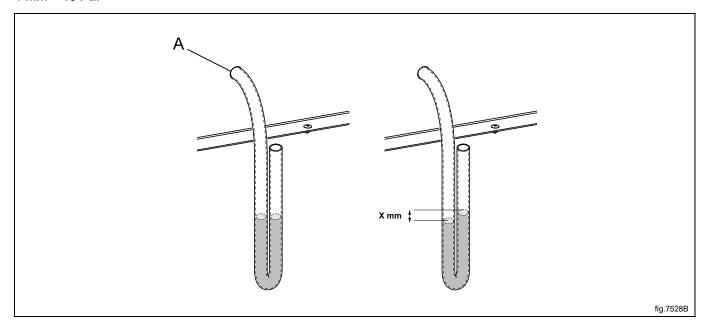




Adjusting the air flow may only be carried out by authorized personnel.

Use a home made U tube manometer, a hose (max. outer \emptyset 10 mm and min. outer \emptyset 5 mm), with water. Insert one end of the hose in the hole (A) (after the plug has been removed), hold the hose according to the picture so that the water is in level.

Start the machine and measure the difference between the water in one of the hose ends with the other. 1 mm = 10 Pa.



Note!

When the air flow is adjusted remount the plug in the hole (A) and lock the damper in the new position. Remount the rear panel.

6 Electrical connection

6.1 Electrical installation





The electrical installation may only be carried out by qualified personnel.





Machines with frequency-controlled motors can be incompatible with certain types of earth leakage circuit breaker. It is important to know that the machines are designed to provide a high level of personal safety, which is why items of external equipment such as earth leakage circuit breakers are not necessary but is recommended. If you still want to connect your machine across an earth leakage circuit breaker, please remember the following:

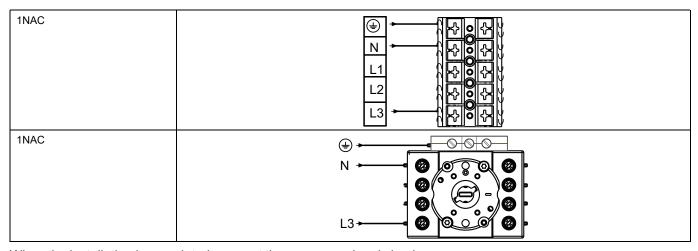
- contact a skilled, authorised installation company to ensure that the appropriate type of breaker is chosen and that the dimensioning is correct
- for maximum reliability, connect only one machine per earth leakage circuit breaker
- it is important that the earth wire is properly connected.

In instances where the machine is not equipped with an omni-polar switch, one must be installed beforehand. In accordance with the wiring rules: mount a multi-pole switch prior to the machine to facilitate installation and service operations.

The connecting cable shall hang in a gentle curve.

6.2 Single-phase connection

Demount the cover panel from the supply unit. Connect the earth and other wires as shown.

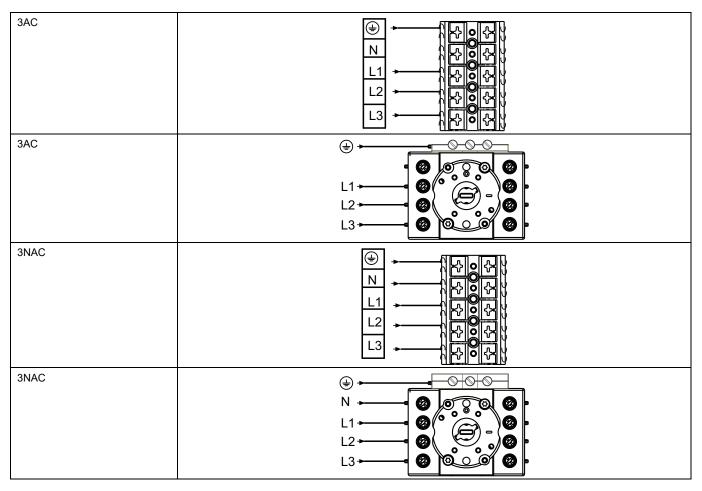


When the installation is completed remount the cover panel and check:

- That the drum is empty.
- That the machine operates by connecting the power to the machine and start a program with heat.

6.3 Three-phase connection

Demount the cover panel from the supply unit. Connect the earth and other wires as shown.



6.4 Electrical connections

Heating alternative	Main voltage	Hz	Heating power kW	Total power kW	Recommended fuse ITCB A
Electric heated	208–240V 1~	60	6.0	6.3	35
	208-240V 3~	60	6.0	6.3	20
Gas heated machines	208–240V 1/3~	60	*	0.3	15
Machines with heat pump	220-240V 1/1N 3~	60	*	2.3	10
	380-415V 3N~	60	*	2.3	10

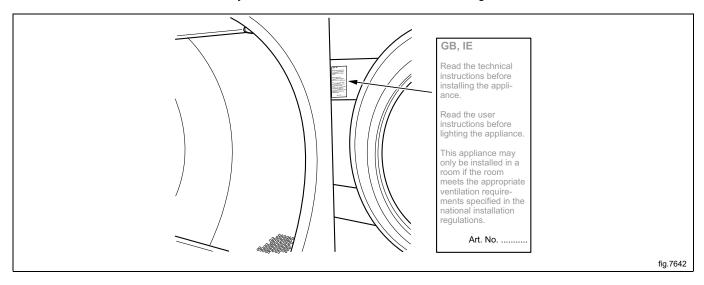
^{*} Total power and recommended fuse does not depend on the heating power in those cases.

7 Gas connection

7.1 Fasten the label

Before installing the machine fasten the label "Read the user instructions" on the inside of the door in a suitable place and at the front panel.

The label must have the correct country code, choose the correct label from the gas kit.



7.2 General



Caution



It is your responsibility to have all plumbing connections made by a qualified professional to insure that the gas plumbing installation is adequate and conforms with local and state regulations or codes. In the absence of such codes, ALL plumbing connections, material, and workmanship must conform to the applicable requirements of the National Fuel Gas Code ANSI Z223.1 LATEST EDITION or the CAN/CGA—B149, INSTALLATION CODES, both the latest edition.

Mount a shut-off valve upstream from the machine.

The gas connection to the machine should be dimensioned to an output depending upon the kW-rating of the machine.

The factory nozzle pressure setting must correspond to the fuel value given on the data label.

Check that the nozzle pressure and fuel value correspond with the values in the gas tables on the following pages. If not, contact the supplier.

Bleed the pipe system before connecting the machine.

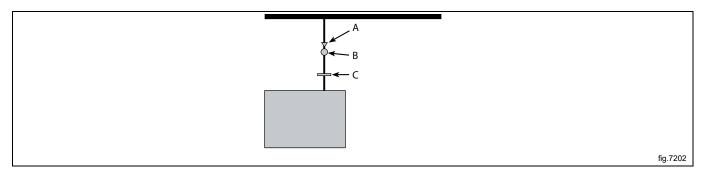
Note!

After connection all joints must be checked. There must not be any leaks.

The machine and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of the system at test pressures in excess of 1/2 psi (3.5 kPa).

The machine must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or greater than 1/2 psi (3.5 kPa).

A minimum 1/8 inch N.P.T plugged tap, accessible for test gage connection, must be installed immediately upstream from the gas supply connections to the machine.



A = Pressure regulator (option) propane only

B = Gas shut-off valve

C = 1/8 inch N.P.T plugged tap

7.3 Gas installation

This machine has been built to run on natural gas. If the machine is to be converted to another type of gas, the gas nozzle must be replaced.

Conversion kit for propane gas is enclosed in secondary packing. Please contact your dealer if the current gas type is not propane/natural gas.

7.4 Table of pressure and adjustment

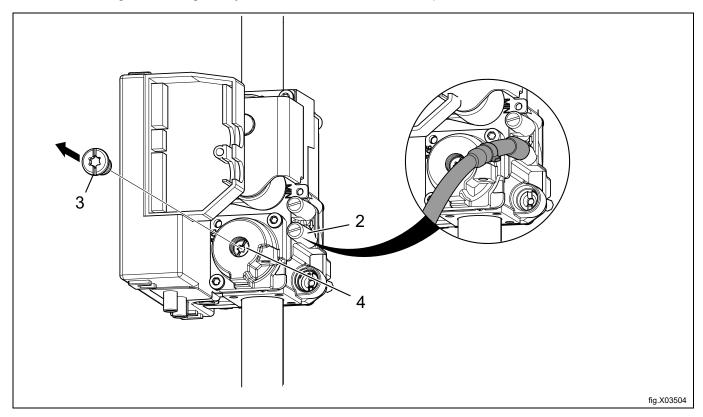
Gas category	Heating power (BTH/h)	Inlet pressure (WC")	Nozzle pressure (WC")	Nozzle size (ø mm)	Air reducing/re- striction plate (mm)	Label number
Natural	23900	7	3.2	2.53	No	Default
Propane	23900	11	11	1.45	No	490375723

7.5 Test run

Note!

Before test run the machine, ensure that the air flow/static back pressure has been adjusted accorded to the "Evacuation system" section. Adjust the air flow if necessary.

- Loosen the measuring branch screw (2) 1/4 turn; connect a manometer to the measuring branch and make sure the connection is tight to prevent air leakage.
- · Connect the power to the machine and select a program with heat.
- Start the machine.
- Check that the nozzle pressure is correct according to the gas type, see "Table of pressure and adjustment".
- · If the nozzle pressure should be adjusted:
 - Demount the cover screw (3).
 - Turn the screw (4). Clockwise: increasing nozzle pressure.
 - Turn the screw (4). Counter Clockwise: decreasing nozzle pressure.
- Check that the gas is burning evenly. The blue flame on the burner is preferred.



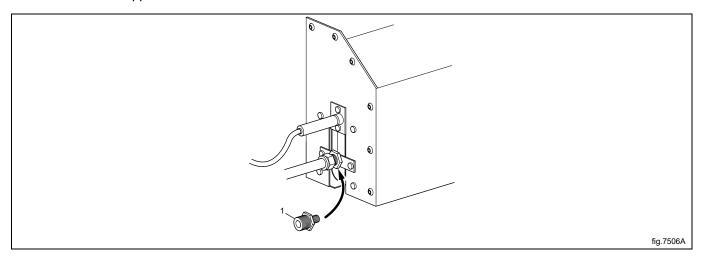
- Remount the cover screw (3).
- Remove the manometer and tighten the screw (2) when the adjustments are done.

Note!

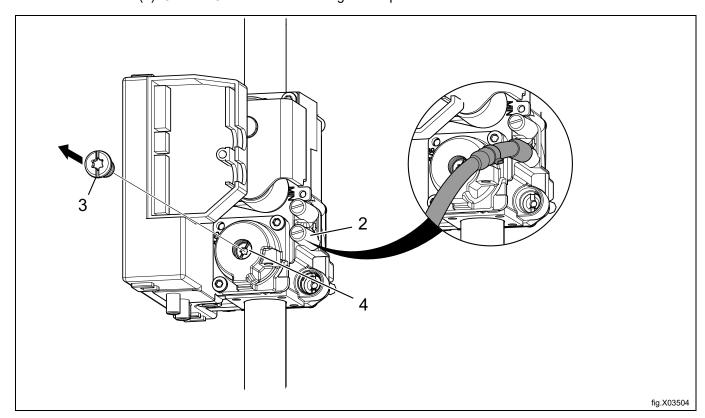
After connection all joints must be checked. There must not be any leaks.

7.6 Converting instructions

- · Disconnect the power to the machine.
- Demount the back panel.
- Remove the nozzle (1).
- · Mount the new supplied nozzle.



- Loosen the measuring branch screw (2) 1/4 turn; connect a manometer to the measuring branch and make sure the connection is tight to prevent air leakage.
- Ensure that the air flow/static back pressure has been adjusted accorded to the "Evacuation system" section. Adjust the air flow if necessary.
- Connect the power to the machine and select a program with heat.
- Start the machine.
- Check that the nozzle pressure is correct according to the gas type, see "Table of pressure and adjustment".
- If the nozzle pressure should be adjusted:
 - Demount the cover screw (3).
 - Turn the screw (4). Clockwise: increasing nozzle pressure.
 - Turn the screw (4). Counter Clockwise: decreasing nozzle pressure.



- Check that the gas flame burns evenly.
- Mount the cover screw (3).
- Remove the manometer and tighten the screw (2) when the adjustments are done.
- · Remount the rear panel.
- Put the correct gas label on the data plate, see "Data label" section.

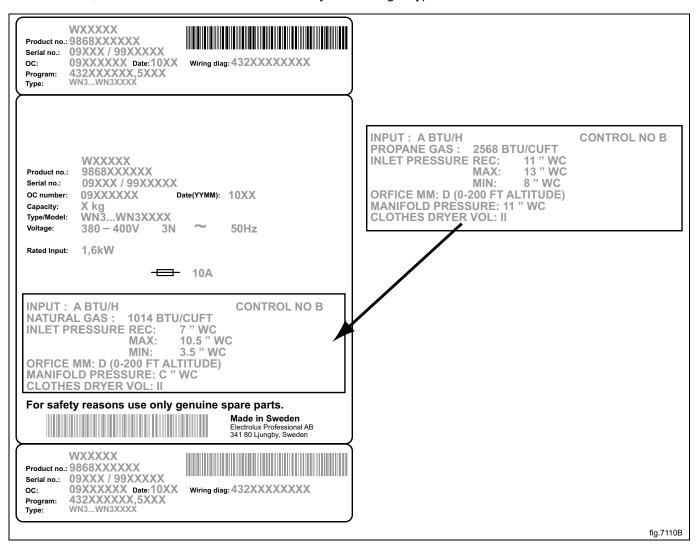
Note!

After connection all joints must be checked. There must not be any leaks.

7.7 Data label

When the machine is to be converted to another gas type, the data label at the rear of the machine must be updated in order for the data to be correct.

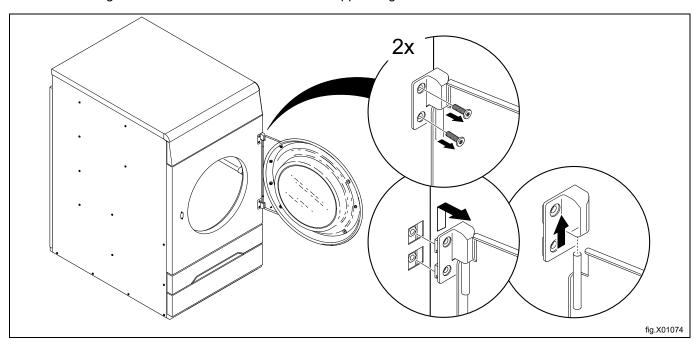
Place the data label enclosed in the conversion kit on top of the data label as shown below. If there are more than one data label, select the label with the correct country code and gas type.



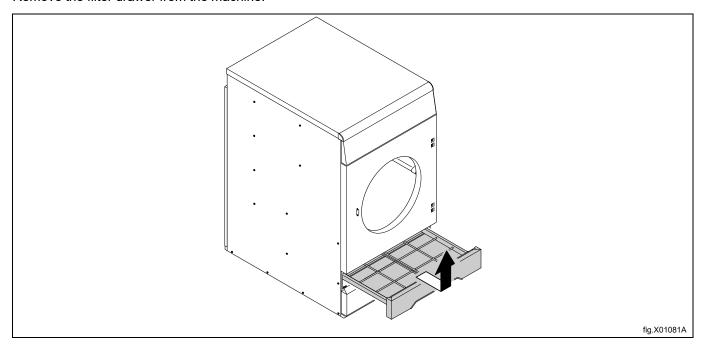
8 Reversing the door

Disconnect the power to the machine.

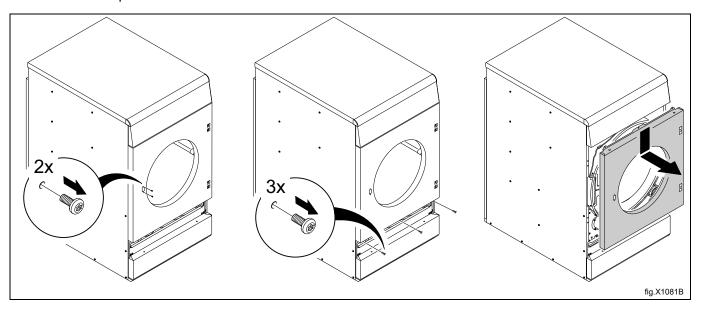
Demount the hinges and remove the door. Remove the upper hinge first.



Remove the filter drawer from the machine.



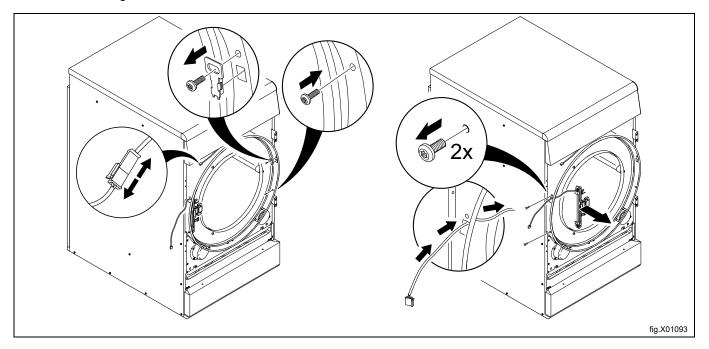
Demount the front panel.



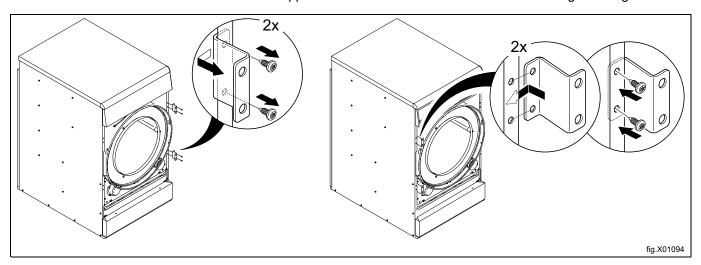
Disconnect the door switch cable.

Remove the upper screw, the cover and the lower screw on the right side.

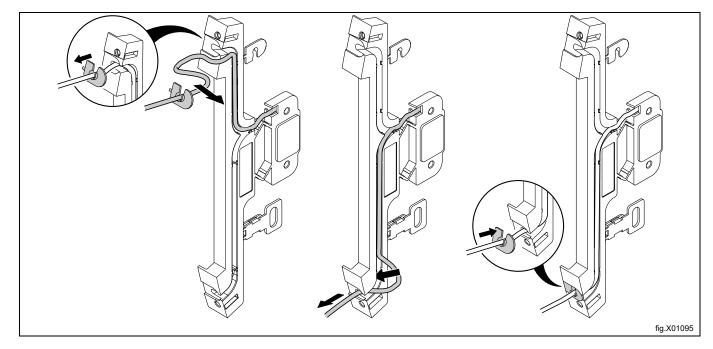
Remove the screws on the left side to release the reed switch bracket holding the door switch cable. Pull the door switch cable through the hole to release it.



Demount the brackets and fasten them on the opposite side. Make sure to fasten them according to the figure.



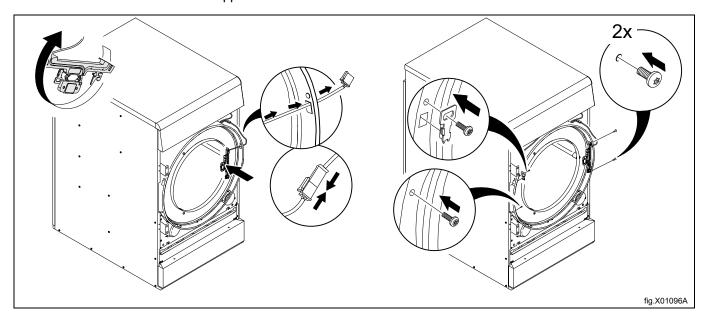
On the reed switch bracket, pull out and move the door switch cable from the upper to the lower position according to the figure. Make sure that the cable and the end piece are in position.



Turn the reed switch bracket up side down and mount it on the right side. Pull the door switch cable out through the hole and connect it.

Fasten the reed switch bracket with the screws on the right side.

Remount the cover and fasten the upper and lower screw on the left side.

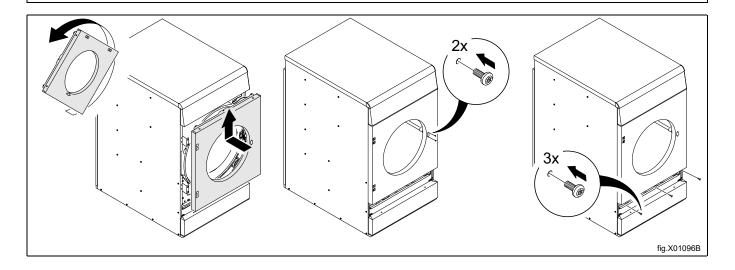


Turn the front panel up side down and remount it on the machine.

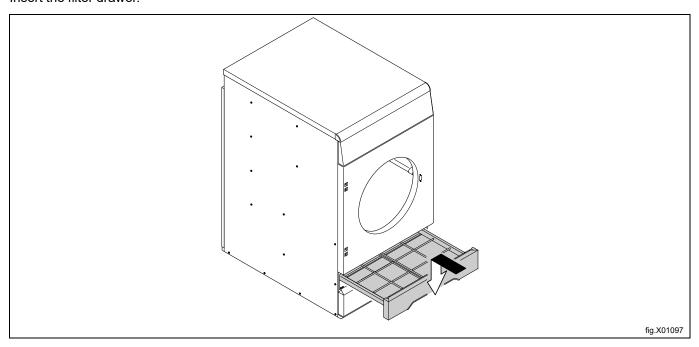




Ensure that the door switch cable does not get damaged when remounting the front panel.



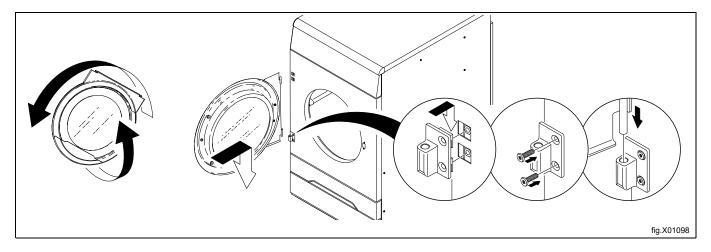
Insert the filter drawer.



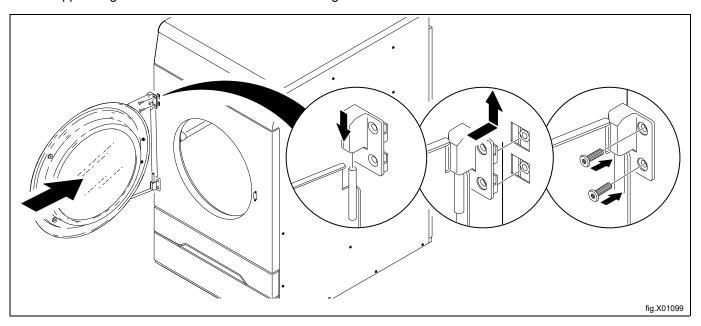
Turn the door up side down with the inside facing towards you.

Remount the lower hinge first.

Position the door on the lower hinge.



Put the upper hinge on the door and then fasten the hinge while it is on the door.



Connect the power to the machine.

Test run the machine.

9 At first power up

When the installation is complete and the power is connected for the first time you will be forced to make the following settings. When one setting is ready you will automatically enter the next one.

- · Select language
- · Set time and date
- · Activate/deactivate the service alarm

For more information about the following settings please refer to the Programming and configuration manual.

9.1 Select language

Select language from the list on the display.

This will be the language that all display messages, program names etc will be presented in.

9.2 Set time and date

Select YES and press the control knob to get to the menu TIME/DATE.

Activate the SET TIME menu and set the correct time.

Save the settings.

Activate the SET DATE menu and set the correct date. Start by setting the year.

- Set the year. Exit to continue with a long press on the control knob.
- · Set the month. Exit to continue with a long press on the control knob.
- Set the day. Exit with a long press on the control knob and then save with a long press on the control knob.

Exit the menu when ready.

10 Function check





May only be carried out by qualified personnel.

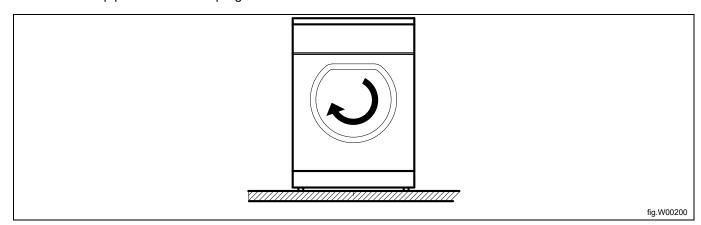
A function check must be made when the installation is finished and before the machine can be ready to be used. Whenever a repair has been made, a function check must be performed before the machine can be used again.

Check the automatic stop of the machine

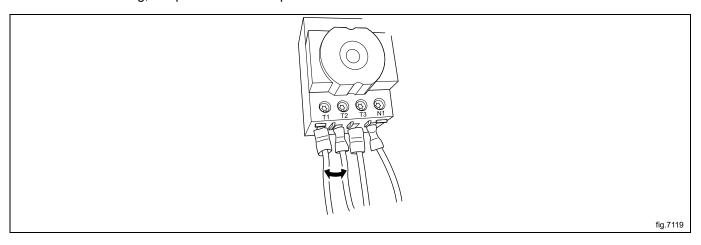
- · Start the machine.
- Check if the micro switches are working properly:
 The machine must stop if the door is opened.

Check the direction of rotation (only on machines with 3-phase power supply, marine installation)

Demount the top panel and start a program. Check that the drum rotation is clockwise.



If the direction is wrong, swap two of the three phases to the left on the connection terminal.



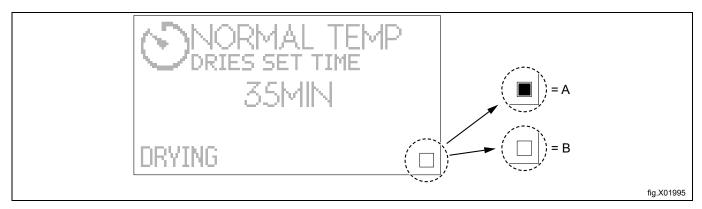
Check the heat

- Let the machine work for five minutes on a program with heat.
- · Check that the heating is working by opening the door and feel if there is heat in the drum.

During a drying cycle, when the square in the lower right corner is fully ticked, it indicates that the heating unit is active / ON. The heating unit can be gas, electric, steam or heat pump type.

If the square box is not ticked, it doesn't mean the heating unit is abnormal. This box is just monitoring the status of the heating unit and shows if it is Active / ON or Inactive / OFF.

- A = Active / ON
- B = Inactive / OFF



Ready to use

If all tests are OK the machine is now ready to be used.

If some of the tests failed, or deficiencies or errors are detected, please contact your local service organisation or dealer.

11 Disposal information

11.1 Disposal of appliance at end of life

Before disposing of the machine, make sure to carefully check its physical condition, and in particular any parts of the structure that can give or break during scrapping.

The machine's parts must be disposed of in a differentiated way, according to their different characteristics (e.g. metals, oils, greases, plastic, rubber, etc.).

Different regulations are in force in the various countries, therefore comply with the provisions of the laws and competent bodies in the country where scrapping takes place.

In general, the appliance must be taken to a specialised collection/scrapping centre.

Dismantle the appliance, grouping the components according to their chemical characteristics, remembering that the compressor contains lubricant oil and refrigerant fluid which can be recycled, and that the refrigerator and heat pump components are special waste assimilable with urban waste.



The symbol on the product indicates that this product should not be treated as domestic waste, but must be correctly disposed of in order to prevent any negative consequences for the environment and human health. For further information on the recycling of this product, contact the local dealer or agent, the Customer Care service or the local body responsible for waste disposal.

Note!

When scrapping the machine, any marking, this manual and other documents concerning the appliance must be destroyed.

11.2 Disposal of packing

The packing must be disposed of in compliance with the current regulations in the country where the appliance is used. All the packing materials are environmentally friendly.

They can be safely kept, recycled or burned in an appropriate waste incineration plant. Recyclable plastic parts are marked as following examples.

