Installation manual Ironers

IC6 48xx Basic/LF/FLF/R



Original language





10102059/EN

Contents

1	1 General instructions :				
	1.1	Environmental information	5		
	1.2	Ergonomics certification			
	1.3	Disposal information	7		
		1.3.1 Disposal of appliance at end of life	7		
		1.3.2 Disposal of packing			
	1.4	Preliminary instructions			
		1.4.1 Precautions for use			
		1.4.2 Symbols			
		1.4.3 Personal protection equipment	11		
		1.4.4 Emergency stop	11		
	1.5	Note about the A.C. power	12		
	1.6	Locking and tagging procedure	13		
	1.7	Working place lighting			
2	Hand	ling	15		
	2.1	Unpacking	15		
	2.2	Lifting with a fork-lift truck			
	2.3	Lifting with handlings straps			
	2.4	Moving along the ground			
3	Instal	lation :			
	3.1	Feeding boxes installation for Model IC6 48xx basic or LF	17		
	-	3.1.1 Replace Low feeding box :			
		3.1.2 Replace feeding box :			
	3.2	Installation			
		3.2.1 How to remove the pallet :			
		3.2.2 Levelling the machine :			
		3.2.3 Machine with optional suction feeding table			
	3.3	Remove of the transport locks fitted	27		
		3.3.1 Transport locks fitted inside the casing of the feeder for Model IC6 48xx FLF:	27		
		3.3.2 Transport angles :	28		
	3.4	Electrical connection			
		3.4.1 Connection diagrams for the control circuit power supply (T2)			
		3.4.2 Operating inspection			
	3.5	Connection of the ironer evacuation system :			
		3.5.1 Fresh air inlet			
		3.5.2 Evacuation duct			
		3.5.3 Specifications :			
		3.5.4 Exhaust pipes pressure control :	39		
		3.5.5 Evacuation system if several dryers are connected to a common evacuaton duct (except			
		gas heating machines):	40		
	3.6	Steam and condensate connections :			
		3.6.1 Steam connection DN 20 (3/4" BSP) :	42		
		3.6.2 Condensate connection DN 10 (3/8" BSP):			
	2 7	3.6.3 D.E.S.P. approval			
	3.7	Gas connection :	44		
		3.7.2 Determinate the gas type :3.7.3 Gas valve setting			
		3.7.4 Injectors setting			
	3.8	Check before use			
	5.0	3.8.1 Positioning roller rotation check	47 47		
4	Anne	ndices			
Ŧ	4.1	Packaging-Weight			
	4.1	4.1.1 Model : IC6 48xx basic :			
		4.1.1 Model : IC6 48xx basic :	40 70		
		4.1.2 Model : IC6 48xx LF Length Folding:	49 70		
		4.1.3 Model : IC6 48xx R Rear load removal:	79 50		
	4.2	Technical characteristics.			
	7.4	4.2.1 Model : IC6 48xx Basic			
		4.2.1 Model : IC6 48xx LF Length Folding			
		4.2.3 Model : IC6 48xx FLF Feeder Length Folding			
		4.2.4 Model : IC6 48xx R with Rear load removal			

4.3	Supplies	62
4.4	Sound level	62
4.5	Electric power supply :	
	4.5.1 TABLE 1 (in accordance with EN standard 60204–1)	
	4.5.2 TABLE 2 correction factors for different ambient temperatures :	
	4.5.3 TABLE 3 correction factors for different cable insulating materials :	
	4.5.4 TABLE 4 B2, C and E correction factors for cable grouping :	64
	4.5.5 Calculation	65
	4.5.6 Electrical Standard characteristics for IC6 48xx :	65
4.6	Gas setting characteristics IC6 48xx FFS :	66
	4.6.1 Legend of symbols used :	
	4.6.2 Testing pressure :	68
	4.6.3 Setting gas adjustment :	69
	4.6.4 Adjustment and checking of the outlet pressure	71
	4.6.5 Tables of Correspondences :	73
4.7	Explanation of washing symbols	75
	4.7.1 Washing	
	4.7.2 Bleaching	76
	4.7.3 Drying	76
	4.7.4 Ironing	76
	4.7.5 Dry or water cleaning	77
4.8	Conversion of measurement units	78

The manufacturer reserves the right to make changes to design and component specifications.

1 General instructions :



Caution

All the illustrations in this manual do not necessarily represent your machine, but the action shown is always compatible with your product!

1.1 Environmental information

Concerned by providing the end user with useful and necessary environmental information, we wish to precise:

- Data about energetic consumptions, wastes (atmospheric and liquid) and sound level are indicated in the paragraph «Technical characteristics».
- Foreseeing its recycling, this machine is fully dismantable.
- This machine is free from any asbestos.
- In conformity with French regulations.
- In the other countries, we recommend that you comply with the legislation in force in the country where the machine is installed.
- In France, all owners of packing waste producing a weekly volume below 1100 litres can forward these to the local
 collection and treatment department. If exceeding this volume, the owners of packing waste will ensure their valuation by reuse, recycling or, any other action aiming at producing reusable materials or energy... or provide them
 contractually to a certified intermediate authorised to transport, trade or broke waste.
 - Therefore, this forbid:
 - land filling raw waste;
 - open air burning or incineration without energy collection.
- Packaging of our machines are according with the french legislation related to environment requirements.

For additional information, do not hesitate to consult with our environmental department.



Scrapping of machine

When the machine is no longer to be used, it must be submitted to a recycling facility for destruction. The majority of the components in the machine can be reused, but it also contains other materials that must be taken care of in the correct way.

Therefore, never mix the machine or its parts with domestic wa&ste as this may lead to health hazards or damage to the environment.

1.2 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 our 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 applied.

The product that you use is specifically studied and tested in order to minimise any physical problems associated to the interactions with the product.

We would like to point out some operating procedures we suggest to adopt:

- Handle the linen in a balanced way, trying not to arch your back during the loading/unloading.
- Take in/out the laundry in small quantities.
- In order to avoid the entanglement of laundry including large dishes, add more rotation time in each direction.

- If possible, flex your legs and don't bend forward your back during the placement of the linen in the lower box and during the achievement of any lower maintenance actions or items.

- If possible, push the tray cart and pull it in order to reduce the distances.

- Keep the viewing distance in order to understand properly the information displayed in the interface or to view you interest in the ironer, reducing as much as possible the time spent with the eyes up (neck extensions).

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.

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

- Make sure there are suitable trolleys or baskets for loading, unloading and transportation.
- We advise you to use a mobile bottom trolley with a maximum height of 850mm.
- Organize job rotation in the working place in the case several machines are managed by the same operator.

1.3 Disposal information

1.3.1 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.

1.3.2 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.

PE	Polyethylene: Outer wrapping Instructions bag
PP	Polypropylene: • Straps
PS	Polystyrene foam: Corner protectors

1.4 Preliminary instructions

Before any use, it is compulsory to read the instruction handbook.

Users must have learnt how the machine operates.

In order to prevent any risk of fire or explosion, flammable products should never be used to clean the machine.

This machine should be installed in conformance to the health and safety regulations, and only used in a sufficiently aerated area. Check the instructions before installing or using the machine.



Caution

The mechanical and electrical installation of the machine should only be done by qualified personnel.



This device must not be installed in places accessible to the public.



Warning

Make sure the machine is disconnected from the mains before repairing or servicing.



Important

Any repairing or maintenance operation should be carried out by a specialist.



Important

The machine is delivered with a wall instructions paper to be clearly fixed near the machine.



Important

After the installation, Send back the commissioning form ,signed document, to Electrolux to validate the warranty of the product.



Caution

Disconnect all sources of energy and let the ironing cylinder cool down before any intervention on the machine. The high temperature of the ironing cylinder may cause serious burns ; avoid touching the hot surfaces.



Danger



Never iron if the finger protection does not function.



Important

The machines comply with the European Directive EMC (ElectroMagnetic Compatibility). They have been tested in laboratory and approved as such. It is so prohibited to add wires or non shielded electric cables in the cabinets, strands or cables' troughs.













Important

It is specially advised not to install the machine on a synthetic floor covering. The frictional electricity may hinder the good working of the machine

Under no circumstances should a gas-heating machine be installed in a building which includes a drycleaning machine.

This is particularly important for your safety and that of others. The consequence is an immediate cancellation of the warranty.

Â

Important

When using the machine in automatic folding mode, you could catch your fingers when the sheet removal actuator ascends/descends with the anti-static device and in folding arm movements. Do not operate on the machine without powering down beforehand.

Â

Caution



For your own safety, it is prohibited and dangerous to solder the ironing cylinder. If a leak occurs, never try to repair it yourself. Ask our technical departments for advice.



The machine can work without the protective casing when the electric supply is not cut off. Interlock the main isolating switch with a padlock. Close the steam inlet valves. If you detect gas smells, turn off the gas, open the windows, do not activate any switch and warn the maintenance service. The warranty might be cancelled if these instructions are not complied with.

1.4.1 Precautions for use

- The machine should not be used by children.
- This ironer must be used exclusively for textiles appropriate for machine ironing, which have been ^reviously and exclusively washed in water.
- This machine is for professional use and must be used exclusively by qualified personnel.
- Blankets should not be ironed.
- Do not iron linen coated with solvent, paint, wax, grease or any easily inflammable products.
- In case of gas heated machine, do not assemble the machine on premises containing a dry cleaning machines or other similar machines.

1.4.2 Symbols

	Caution. An exclamation mark inside an equilateral triangle offers the user important advice about usage, servicing, and hazard- ous conditions
<u>A</u>	Caution, presence of dangerous current. A flash lightning with an arrow at its end inside an equilateral triangle , warns the user about the presence of uninsu- lated "dangerous current" sufficient in intensity to cause electrocution.
	Caution, hot surface. This symbols warns the user of the presence of high temperatures which could cause severe burns. Some surfaces can reach close to 200°C (392°F).
	Read the instructions before using the machine.
	Warning, do not operate with casing removed. This symbol warns the user that there are mechanisms inside the machine which can be dangerous. The protective housing must be in place during use.

1.4.3 Personal protection equipment

Given below is a summary table of the Personal Protection Equipment (PPE) to be used during the various phases of the machine's service life.

Phase	Protection garments	Safety footwear	Gloves	Glasses	Ear protectors	Mask	Safety helmet
				00	\bigcirc		\bigcirc
Transport		Х	0				
Handling		х	0				
Unpacking		х	0				
Installation		х	0				
Normal use	X	X	X	X			
Adjustments	0	х					
Routine cleaning	0	x	x	0			
Extraordinary cleaning	0	x	х	0			
Maintenance	0	Х	0				
Dismantling	0	х	0				
Scrapping	0	х	0				

Legend : X : PPE required ; O : PPE available or to be used if necessary.

Normal use : Safety footwear must be defined for a use on a wet floor. And use glasses and gloves to manipulate chemical products.

1.4.4 Emergency stop

The emergency stop must be unblocked, if not the machine will not work (tu unblock, turn the red button to the right). If the machine for some reason has to be stopped, abnormal or dangerous running, press the emergency sop button.



Release the emergency stop, by turning it clockwise only after checking what motivated this stop.



1.5 Note about the A.C. power

According to the EN 60204-1:1997 standard, the machine is provided for A.C. supplies corresponding to the extracted characteristics below :

4.3.2 A.C. supplies

Voltage:

Steady state voltage: from 0.9 to 1.1 of nominal voltage.

Frequency:

from 0.99 to 1.01 of nominal frequency continuously.

from 0.98 to 1.02 short time.

Harmonics:

Harmonic distortion not to exceed 10 % of the total r.m.s. voltage between live conductors for the sum of the second through to the fifth harmonic. An additional 2 % of the total r.m.s. voltage between live conductors for the sum of the sixth through to the 30th harmonic is permissible.

Voltage unbalance:

Neither the voltage of the negative sequence component nor the voltage of the zero sequence component in threephase supplies shall exceed 2 % of the positive sequence component.

Voltage interruption:

Supply interrupted or at zero voltage for not more than 3 ms at any random time in the supply cycle. There shall be more than 1 second between successive interruptions.

Voltage dips:

Voltage dips shall not exceed 20 % of the peak voltage of the supply for more than one cycle. There shall be more than 1 second between successive dips.

1.6 Locking and tagging procedure

A red insert at the beginning of this instruction handbook schematically shows the locking and tagging procedure described below. If you wish, you can detach this insert and display it close to the machine to remind maintenance personnel of the safety instructions.

	Always respect items 2, 3 a the machine.	nd 4 carefully before doing any rep	pair or maintenance work on
2	Put the main switch to Off and lock the handle with a padlock in one of the three holes provided for this purpose.		Close the stop valves for the other supplies (steam, gas, thermal fluid, com- pressed air) to stop and lock their handle with a padlock.
3	Open the fixed protectors (casings, doors) with the key provided or a special tool.		Do the maintenance.
4	Close and carefully lock the	e fixed protectors.	



1.7 Working place lighting

The lighting should be designed so as to avoid eye strain for the operator ; it should be uniform without any glare, and should be sufficient to detect any hazards.

The average lighting value on the working place recommended by the clothing industry for inspecting linen is **500 lux**. Whenever possible, the working place should be illuminated by daylight.

2 Handling

Important

It is obligatory that all these operations are undertaken by handling specialists.

2.1 Unpacking

You should have found an instruction handbook and keys to open the machine casings, in the machine.

Depending on its destination, the ironer is delivered bare or may be placed on a transport pallet and/or packed with plastic film.

In some cases, it may be delivered in a crate, or in maritime packing (wood box). Take off the plastic film or remove the wood with a spanner.



Caution

Check that no damage has been caused during transport.

2.2 Lifting with a fork-lift truck



Warning

You should never handle the machine in its longitudinal side (any other than shown on the drawing below) with a fork-lift truck. Important risk of parts deterioration for those fixed under the machine.

This can be carried out from the front or back, and at the centre of the machine using forks with minimum length of 1.50 m (59") and **only with the pallet.**



Installation manual



2.3 Lifting with handlings straps

Lifting in that case can only be done with handling straps (C : minimum capacity 2500 daN / L : minimum length 4m) which bear weight of the machine.

Caution

Make sure to place the straps correctly to avoid any bending of parts of the machine.

Caution

In order to avoid any bending of casings, you should never climb and stand on top of the machine.



2.4 Moving along the ground

The machine frame is made up of two parallel spars, making ground moving possible by means of rollers, grinding tracks or a trolley.

The two handling angles (B) can be used to lift the machine using hydraulic jacks or poles, so that rollers can be slipped under the girder.

Ĭ





3 Installation :

3.1 Feeding boxes installation for Model IC6 48xx basic or LF

Before putting the machine into service, it is compulsory to replace the feeding boxes in their functioning place.

Important



Caution

To do so, it is recommended to handle the part for two people for very long machines (IC64825, IC64828 or IC64832)

Caution

3.1.1 Replace Low feeding box :



- 1. To do so, unscrew the lag bolts using a 13 mm open-end wrench from the transport pallet.
- 2. Keep the transport locks fitted with their screws and bolts to be able to assemble them again in case you would need to lift the machine
- 3. Rotate the pit towards you, it is recommended to handle the part for 2 people for very long machines.
- 4. Pivot the receiving tray for more ease and put the pit in place on the supports of the boxes.
- 5. Tighten the 2 screws of the pit by applying Loctite 243 or equivalent thread locker.



3.1.2 Replace feeding box :



- 1. Unscrew the 4 screws of the engagement tank
- 2. Remove the pan, being careful of collisions with the pan supports and other parts. It is recommended to handle the part to 2 people.
- 3. Rotate the tray and put it in position
- 4. Tighten the 4 screws of the tank by replacing the Loctite 243 or equivalent thread locker.

3.2 Installation

The ironer must be transported to its final position in the laundry before the pallet is removed.

The installation must be done by competent technicians in accordance with local codes and regulations. When there are not local codes and regulations, the installation **must be comply** with European standards applicable.

The machine must be installed on a perfectly even surface, strong and horizontal, capable resisting to the efforts shown in the technical characteristics.

Degrease carefully the ground and the soles of the machine.

If there is a carpet, it is recommended that it should be removed from the part of the floor on which the machine is to be supported.

- Control the horizontal level using a water level placed on the machine's sole.
- Leave a minimum space of **5 mm** between the floor and the cases , The ironer must be on its four adjustable feet.
- Place the ironer so that it is easy for the user and the service technician to do their work.
- Leave at least 1 meter (40") (according to the recommendation in standard EN 60204) between the machine, a
 wall or any other machine at the sides.



However, note that if you can, it is recommended that you should leave sufficient space for maintenance of the heating box to avoid having to move the machine (minimum length A on the left side).

Ironers are provided with four leveling screws to facilitate leveling (one on each corner of the sole plate). To avoid damaging the floor surface, place 10 cm (4") square metal shims, or shims made of another appropriate material, under the ironer stands.

3.2.1 How to remove the pallet :



When the pallet is putting in its right place, you can remove it by following these points depending of your enable tools :

Remove the fixation (A) of red handling brackets from the pallet on each side of the machine.



3.2.1.1 Remove the pallet with a two-wheel forklift load :

Once the machine is placed on the ground with the pallet, it is advisable to use a two-wheel forklift load as below to facilitate the removal of the pallet and any movement of the machine.



If this type of tool is unavailable, follow the procedure in the next chapter to remove the pallet from the machine.

3.2.1.2 Remove the pallet without a two-wheel forklift load :

Equipment :

- 01 x hydraulic cylinder
- 24 x piece of wood (400x70x60)
- 08 piece of wood (400x150x25)
- 1 side new support / 1 side old support
- 1 new pallet that does not exceed the machine.

STEP 1 :

- Check that all the nails of the pallet are well in the wood so as not to come up against the wooden wedges when removing the pallet.
- Lift the right of the machine (facing the machine) with the hydraulic cylinder. Attention to the location of the hydraulic cylinder, put it a little on the left of the axis of the cylinder (1) to remain stable and not lean.



- Wedge with 3 pieces of wood (400x70x60)
 2 on thickness70 mm and 1 on the thickness 60mm.
 2 (400x70x60) + 1 (400x70x60) = 2x70mm + 60 mm = 200 mm
- · Lower the right side of the machine on the wedges



STEP 2 :

• Repeat STEP 1 on the left side of the machine.

STEP 3:

• Remove the pallet. The same size as the machine, the pallet has to pass between the wedges without any problem.



Warning



Remove the pallet in a straight line so as not to come into contact with the wedges holding the machine in suspension.

STEP 4 :

- For safety, wedge under the 2 box spar (Front / Rear) as close as possible to the casing with same thickness of wedging as on the side of the machine :
 - 3 pieces of wood (400x70x60)
 - 2 on the thickness 70 mm and 1 on the thickness 60 mm..

,65,sfx)="graphics:graphicFA4999528A29DF007AD6A1071D4DA3EF"

STEP 5:

Lift the machine and remove from the right side the wedge (400x70x60) 60 mm thick and replace it with a wedge (400x150x25) 25 mm thick.
Right side : 1 (400x150x25) + 2 (400x70x60) = 25 mm + 2x70 mm = 165 mm.
Left side : 2 (400x70x60) + 1 (400x70x60) = 2x70 mm + 60 mm = 200 mm.
A delta of 35 mm is obtained between the two sides of the machine.



STEP 6:

 Lift the machine and remove from the left side the wedge (400x70x60) 60 mm thick Right side : 1 (400x150x25) + 2 (400x70x60) = 25 mm + 2x70 mm = 165 mm. Left side : 2 (400x70x60) = 2x70 mm = 140 mm. A delta of 25 mm is obtained between the two sides of the machine.

STEP 7 :

 Lift the machine and remove from the right side the wedge (400x70x60) 70 mm thick Right side : 1 (400x150x25) + 1 (400x70x60) = 25 mm + 70 mm = 95 mm. Left side : 2 (400x70x60) = 2x70 mm = 140 mm. A delta of 45 mm is obtained between the two sides of the machine.

STEP 8 :

 Lift the machine and remove from the left side the wedge (400x70x60) 70 mm thick Right side : 1 (400x150x25) + 1 (400x70x60) = 25 mm + 70 mm = 95 mm. Left side : 1 (400x70x60) = 70 mm. A delta of 25 mm is obtained between the two sides of the machine.

STEP 9 :

 Lift the machine and remove from the right side the wedge (400x70x60) 70 mm thick Right side : 1 (400x150x25) = 25 mm. Left side : 1 (400x70x60) = 70 mm. A delta of 45 mm is obtained between the two sides of the machine.

STEP 10 :

 Lift the machine and remove from the left side the wedge (400x70x60) 70 mm thick Right side : 1 (400x150x25) = 25 mm.
 Left side : machine on the ground.
 A delta of 25 mm is obtained between the two sides of the machine.

STEP 11 :

 Lift the machine and remove from the right side the wedge (400x150x25) 25 mm thick The machine is on the ground.
 Note : with older transport brackets this works too and there is no need to disassemble them. The new ones go lower than the cranckcase and it is imperative to dismount them to put the machine on the ground.

3.2.2 Levelling the machine :

Adjust the nuts with a spanner and adjust the dryer ironer so that it is horizontal and that its four stands are perfectly vertical.

Check with a spirit level placed on the sole plate for the longitudinal direction and the machine top cover for the transverse direction (see below)

The maximum stand height adjustment is 80 mm (3")

Tighten the lock nuts after adjustment for each pads.



Leave a minimum space of 5 mm between the floor and the cases , The ironer must be on its four adjustable feet.

3.2.3 Machine with optional suction feeding table

The machine can be equipped with a suction engagement table to allow better guidance of the sheet at the engagement

. It operates with 2 fans located under the dryer, attached to the front or the rear spar (depending of your model). Use a wrench to adjust the nuts (2) and adjust the feet (1) of the suction fan brackets located under the dryer. After adjustment, lock the locknuts.



3.3 Remove of the transport locks fitted.



Before putting the machine into service, it is compulsory to remove the different transport locks fitted. The machine should be in its right place before removing these transport locks.

3.3.1 Transport locks fitted inside the casing of the feeder for Model IC6 48xx FLF:

To do so, remove the fixing screws of the red transportation bridles.

Keep the transport locks fitted with their screws and bolts to be able to assemble them again in case you would need to lift the machine.



Important



Never handling the machine without the transportation bridles.

3.3.2 Transport angles :

Screw off the screws to remove the 2 red transport angles (B) with a key.



Keep this angles to eventually lift the machine. Block the screws which maintained this angles.

3.4 Electrical connection

Prior to use, the machine should be plugged into a correctly earthed power socket complying with the standard in force.



Important



The mechanical and electrical installation of the machine should only be done by qualified personnel.



Important

Make sure that both the power voltage is correct and the power supply of your installation is sufficient before connecting the machine. Use only a cable to supply the machine.



The use of power electronics (variator or filter for example) may lead to unexperted release of breakers with 30mA differential current device.

To avoid these untimely activations, you ought to use differential protecting systems with residual current only, having a high level of immunity as regards leakage transient current.

This type of breaker should thus be avoided, or a value of 300mA maximum should be observed according to standard NFC 15100.

For operation that will take place with power supply or/and machine power on, technicians who will operate must have approval to work Low-voltage (1000V Ac max or 1500V DC) and use suitable safety equipment and tools.

To be in accordance with the Low-voltage authorization if the machine have the option electrostatics bar, this one must be disconnect during technician operation, unless the technicians has a High-voltage authorization.

Pass The power supply cable of the machine through the stuffing box (A) on the top of the left casing.

In order to know all machines technical characteristics concerning electricity (connection, wiring,...) referes to chapter in appendices

For each machine, install a fixed multipole circuit breaker (or fuses protector) in the laundry main caninet.

Connect the power supply cable on the machine main switch.

Connect the 3 phases on the main switch (see marks L1,L2,L3) and connect the earth wire on the earth terminal (PE) of this main switch.

NOTE : you must respect the fan rotation direction.

Check operation (see chapter operating inspection below)



Mains transformer connection diagrams according to the customer's various mains voltage (machines provided with a transformer only).

400 Volts supply

Measure the mains voltage at the primary with a voltmeter (V) between 0 and 400 volts of the transformer.

If the voltage is equal to 400 volts, do not touch the transformer connection which should be as indicated in the margin.



If the voltage is > 400 volts (example: 420/230 volts), connect threads to the transformer as indicated in the margin.

Note!

We recommend that you should adopt this solution even it the voltage is normally equal to 400 Volts, but may be subject to time variations; so that you do not apply an overvoltage to the electrical equipment in your machine.

If the voltage is far < 400 volts (example: 370/380 volts), connect threads to the transformer as indicated in the margin.



Important

Once connected, make sure to check the correct order of phase connections. (see chapter operating inspection below)

Ŷ

3.4.1 Connection diagrams for the control circuit power supply (T2)

The tension of the control circuit delivered by the power supply must be 24 volts dc. The supply tension for your machine is normally 230/400 volts between phases, this tension can however be different. The potentiometer (A) allows to adjust the tension.



3.4.2 Operating inspection

Before putting the machine into service, carry out the working tests. The operating inspection must be done by an approved and qualified technician.

Caution

Check in the "MACHINE CONFIGURATION" sub-menu of the "ADVANCED SETTINGS" menu that the Mains frequency parameter is correctly set to the value that corresponds to the frequency of your electricity network (default setting is 50Hz)



Warning



Always make sure that the fan is rotating in the right direction. The fan must rotate in the direction shown on the arrow glued inside the right compartment (see illustration below)



Before starting the machine, do not push the circuit breakers Q5 and Q701 in the electrical cabinet before checking the fan's rotation direction.

For few seconds, manually activate the breaker that drive the fan motor :

Check on the electrical drawing for the breaker name. Then visually check the rotation way of the turbine. A sticker indicate the correct rotation way. If the chminey (B) is already connected, it is possible to check for the pipe (A).

On FFS ironer it is also necessary to check the correct way of belt into cross folding. To do so, it is possible to activate few seconds the breaker that drive the cross motor. The belt must move in the correct direction. Check on the electrical drawing for the breaker name. Then visually check the rotation way of the turbine.

If it is rotating in the wrong direction, invert two of the three phases on the power supply isolating switch to reverse the direction of the rotation of the fan.



Check again the direction of the rotation of the fan then replace the hose and its collar.





Warning



The control geared unit for the ejection has a keyed transmission shaft and it is important that the direction of rotation is correct, otherwise there is a danger that certain mechanical parts might suffer damage. The verification of direction of rotation of the fan allows to eliminante this risk.

If the tests carried out on the various points mentioned above are satisfactory, the dryer ironer is ready for use.

3.5 Connection of the ironer evacuation system :

You should have found an instruction handbook and keys to open the machine casings, in the machine.

Depending o,n its destination, the ironer is delivered bare or may be placed on a transport pallet and/or packed with plastic film.

In some cases, it may be delivered in a crate, or in maritime packing (wood box).

Take off the plastic film or remove the wood with a spanner.



Caution



Check that no damage has been caused during transport.
3.5.1 Fresh air inlet

To allow the dryer ironer to work at its best, it is important that the laundry air inlet passes through an opening from the outside.

The fresh air arrival must be equivalent to the volume of evacuated air (please refer to the output of the fans at zero pressure in the technical characteristics)





Important



In the case of several machines, these values should be added together.

In order to prevent drafts in the room, the best solution is to place the air inlet behind the machine. In the case of a machine with gas heating, it is essential that the rooms should be ventilated. The free section of the air inlet must be 5 times greater than the section of the evacuation pipe.



Do not forget to allow for the fact that grills often occupy half the total area of the free air opening.

3.5.2 Evacuation duct

It is recommended that a separate smooth-walled evacuation duct should be connected to each dryer, providing the least possible resistance to air.

Danger

Check that the shaft flow is at least twice the capacity of the ironer exhaust fan.



Warning

It is essential that the diameter of the evacuation pipe should be selected as a function of each installation so that the pressure loss never exceed 200 Pa (0.029 Psi) (Value measured at ambient temperature with a manometer connected to the vrtical air outlet (dia 6 or 8 mm), located minimum 1 m after the elbow of the machine exit).

Important

These conditions are **ABSOLUTELY ESSENTIAL** for correct working of the ironer.

3.5.3 Specifications :

3.5.3.1 Electric, steam heating :

Fan maximum flow rate with no pressure : 880 Pa. Average temperature of exhaust at the machine outlet : electric heating : 65 °C (149 °F) Steam heating : 65 °C (149 °F)

3.5.3.2 Gas heating :

Fan maximum flow rate with no pressure : 880 Pa. Average temperature of exhaust at the machine outlet : 110 °C (212 °F) For the gas heating, the required combustion fresh air supply should be not less than 2 M3/h (1.17cfm) per kW : machine 4819 : 78 m3/h (46 cfm) machine 4825 : 104 m3/h (61 cfm) machine 4832 : 130 m3/h (77 cfm)



Important



NOTE : If the flow is insufficient due to an excessive head loss, a safety pressure switch will automatically switch the heating off.

3.5.3.3 Values of adjustment of safety pressure switch :

machine 4819 : 147 Pa (15 mmH2O) machine 4825 : 88 Pa (9 mmH2O) machine 4832 : 49 Pa (5 mmH2O)





3.5.4 Exhaust pipes pressure control :

In order to achieve proper operation, this exhaust pipes must always be kept as short as possible and must have as few bends as possible.

If an outlet channel joins a main channel, the angle of incidence must not exceed 45°.

If the distance from the outlet channel is bigger than xx meters, a series fans must be installed further down the outlet channel or the section of the pipe must be increased.

example 2x0 mm instead of 150 mm.

Insulate both the outlet pipes for user safety.

The duct must lead to the outside and must be fitted with protection against the weather and foreign bodies.





3.5.5 Evacuation system if several dryers are connected to a common evacuaton duct (except gas heating machines):

If several ironers are installed with a common evacuation duct, the cross section of the evacuation duct must increase as a function of the number of installed machines so that each of them operates at the same value of air resistance..

Use elbows (and not Tees) to allow the air to pass forwards.

The simplified figure below shows the principle on which the evacuation duct shape is designed.





The indicated evacuation diameter is the dryer outlet diameter.

Cross-sectons of ducts between dryers and the outside of the building must be designed taking account of the flow and the allowable head loss on each machine and the routing of ducts (elbows and lengths).

Please call us if you are in any doubt about the layout of your exhaust device if you are modifying an existing installation.

3.6 Steam and condensate connections :

There is always a risk that a certain amount of water will be carried in steam.

Water is carried in the lower parts of the supply tubes, and steam in the upper parts.

Make a swan neck branch-T on the main tube to prevent this water damaging the machine heating system. This will ensure that only steam is retrieved without any condensed water.



3.6.1 Steam connection DN 20 (3/4" BSP) :

The customer must install a line purge, a manually closing valve with handwheel lockable in off position (do not use a 1/4 turn valve) and a filter on the supply side of the ironer.

The customer must install a safety valve if the boiler used operates at a pressure over the acceptable vapour of **1000 kPa maxi (10 bar).**

Caution

The connection of a safety valve is compulsory in order to conform to the pressurised equipment directive (DESP)

The valve must be CE certified in category IV.

Its size must vary according to the characteristics of the boiler, to the volume of the pipes upstream of the valve and the volume of the appliance to be protected.

The drainage connector of the safety valve must absolutely be connected to the outside of the building and out of reach human interference (on the roof for example).

Caution

3.6.2 Condensate connection DN 10 (3/8" BSP) :

The customer must install a steam trap with float closed and incondensibles drainage device (example : SARCO ref. FT10C — G3/4" PN 25 or GESTRA ref. UNA15 h — G3/4" PN 25), a by-pass, a non-return valve and a manual closing valve lockable in off position.

After around 10 meters, the pressure loss in the condensate return pipes is too great. It is therefore necessary to calculate its diameter according to the length of the pipes from the bleeders up to the receiver tank, compared to the admissible pressure = 300 kPa maxi (3 bar).

Caution







3.6.3 D.E.S.P. approval

This technical form for pressure concerns an assembly constituted of :

- a cylinder classified in category of risk IV according to article 4 and Annex II of Directive 2014/68 / UE,
- pipings (DN20) responding to the article 4 point 3 of Directive 2014/68 /UE.

Manufacturer :

Electrolux Laundry System France SNC

52, Rue Pasteur

BP6

10430 Rosières-Près-Troyes

Technical data of the cylinder :

Maximum service pressure	1000 kPa (10 bar)
Running temperature mini/maxi :	15 °C / 184°C
Volume of the equipment under pressure :	see following table
Pressure of test :	1500 kPa (15 bar) at 20°C
Pressure releasing of the device security	1000 kPa (10 bar)
Anticipated usage :	Steam heating

Flatwork ironer	4819	4821	4825	4828	4832
Volume of the equi- pement under pres- sure (in dm3)	300	335	398	431	497

3.7 Gas connection :



Caution

ĺ,

The installation, connection and gas arrival adjustments for the machine must be done by qualified personnel only.

3.7.1 Gas supply DN 20 (3/4" BSP) :

The customer must install a filter and a manual stop valve on the supply side of the machine if natural gas is used. For butane or propane, the customer must install a filter, a manual closing valve and a pressure reducer. Connect the installation at the back of the machine.



- A : Air filter
- B : Gas burner
- G : Gas inlet
- I : Injectors
- S : Service tank
- V : Venturis

If the machine is connected to gas mains of 300 mbar or directly behind a gas bottle, it is compulsory that a pressure reducing valve be added as close as possible to the machine.



If the gas inlet pressure (P1) is identical to the nominal pressure of the machine (P2), it is possible to insert a reservoir as close as possible to the machine in order to protect against any falls in pressure when the machine starts up. And increase the diameter of gas pipe supply to allow the flow rate.



3.7.2 Determinate the gas type :

Check with the customer the gas type that will be used to supply the machine. According this gas type the machine must be set to corresponding ths gas type. For different gas that can be use with this ironer refer to appendices chapter "Gas settings characteristics"

The gas pressure will be determinate by the gas type supply to the machine. According this pressure and gas type the gas valve and injectors must be set in accordance to machine size.

Check appendices chapter "Gas settings characteristics" for complete information.

3.7.3 Gas valve setting

Machine was tested at the factory in natural gas.

If you are running natural gas check the valve is still in natural gas setting.

In case of other gas type the gas valve must be set.

Refers to appendices "Gas settings characteristics" for gas valve setting.

3.7.4 Injectors setting

Machine was tested at the factory in natural gas.

If you are running natural gas check the injectors are still in natural gas setting.

In case of other gas type the injectors must be set.

Refers to appendices "Gas settings characteristics" for injectors setting.

3.8 Check before use

3.8.1 Positioning roller rotation check

The rollers located between the drive disk and the cylinder in the right hand unit must not rotate continuously while the machine is operating.





4 Appendices

4.1 Packaging-Weight

The ironing machine is secured to a transport pallet.



1 : Identification plate

2 : Adjustment label (for gas machine only)

4.1.1 Model : IC6 48xx basic :

Ironing width	Units	1.9 m	2.1 m	2.5 m	2.8 m	3.2 m
Packaging dimensions (pallet or crate)						
Length (A)	mm	2720	2930	3350	3550	3980
Width (B)	mm	1200	1200	1200	1200	1200
Height (C) pallet	mm	1480	1480	1480	1480	1480
Height (C) crate	mm	1600	1600	1600	1600	1600
Weight in kg (machine + crate)						
Weight gas heating	kg	855	945	1045	1150	1240
Weight electric heating	kg	855	945	1045	1150	1240
Weight steam heating	kg	900	990	1120	1190	1295

4.1.2 Model : IC6 48xx LF Length Folding:

Ironing width	Units	1.9 m	2.1 m	2.5 m	2.8 m	3.2 m
Packaging dimensions (pallet or crate)						
Length (A)	mm	2720	2930	3350	3550	3980
Width (B)	mm	1200	1200	1200	1200	1200
Height (C) pallet	mm	1480	1480	1480	1480	1480
Height (C) crate	mm	1600	1600	1600	1600	1600
Weight in kg (machine + crate)						
Weight gas heating	kg	950	1045	1145	1245	1345
weight gas heating	ĸy	950	1045	1145	1245	1040
Weight electric heating	kg	950	1045	1145	1245	1345
Weight steam heating	kg	970	1080	1190	1295	1390

4.1.3 Model : IC6 48xx FLF Feeder Length Folding:

Ironing width	Units	1.9 m	2.1 m	2.5 m	2.8 m	3.2 m
Packaging dimensions (pallet or crate)						
Length (A)	mm	2720	2930	3350	3550	3980
Width (B)	mm	1350	1350	1350	1350	1350
Height (C) pallet	mm	1670	1670	1670	1670	1670
Height (C) crate	mm	1780	1780	1780	1780	1780
Weight in kg (machine + crate)						
Weight gas heating	kg	1285	1390	1485	1590	1700
Weight electric heating	kg	1285	1390	1485	1590	1700
Weight steam heating	kg	1325	1425	1530	1630	1735

4.1.4 Model : IC6 48xx R Rear load removal:

oning width	Units	1.9 m	2.1 m	2.5 m	2.8 m	3.2 m
Packaging dimensions (pallet or crate)						
Length (A)	mm	2780	2980	3410	3620	4040
Width (B)	mm	1775	1775	1775	1775	1775
Height (C) pallet	mm	1480	1480	1480	1480	1480
Height (C) crate	mm	1600	1600	1600	1600	1600
Weight in kg (machine + crate)						
Weight gas heating	kg	1130	1235	1340	1440	1555
Weight electric heating	kg	1130	1235	1340	1440	1555
Weight steam heating	kg	1170	1275	1375	1480	1595

4.2 Technical characteristics

4.2.1 Model : IC6 48xx Basic

First level : Front View

Second level : Back view and Left View Third level : Top View



Installation manual

nara	cteristics / type machine	Units	4819	4821	4825	4828	4832
	Overall width	mm	2575	2785	3205	3415	3835
	Ironer width	mm	1910	2120	2540	2750	3170
	Width between feet	mm	2300	2510	2930	3140	3560
	Cylinder diameter Gas / Electric heating	mm	479	479	479	479	479
	Cylinder diameter Steam heating	mm	457	457	457	457	457
	Effective working width	mm	1910	2120	2540	2750	3170
	Ironer Floor area	m²	2.5	2.7	3.1	3.3	3.7
	Ironer net weight Gas heating / Dubixium cylinder	kg	675	740	815	875	950
	Ironer net weight Electric heating / Du- bixium cylinder	kg	675	740	815	875	950
	Ironer net weight Steam heating	kg	705	775	845	915	995
	Ironing speed mini	m/min	1.5	1.5	1.5	1.5	1.5
	Ironing speed maxi	m/min	9	9	9	9	9
	Heating surface Gas / Electric heating	m²	2.2	2.4	2.9	3.15	3.6
	Heating surface Steam heating	m²	2.1	2.3	2.7	3.0	3.4
Conne	ections			-			
:	Main switch to connect electric main cable						
3	Inlet for electric main cable						
1	Steam inlet	mm(")	20 (3/4")	20 (3/4")	20 (3/4")	20 (3/4")	20 (3/4")
	Maximum supply pressure	kPa	1000	1000	1000	1000	1000
	Condensate return	mm(")	10 (3/8")	10 (3/8")	10 (3/8")	10 (3/8")	10 (3/8")
I	Gas Inlet	mm(")	20 (3/4")	20 (3/4")	20 (3/4")	20 (3/4")	20 (3/4")
(Drain of vapour or burnt gas	Ø mm	150	150	150	150	150
	Exhaust air max. with no pressure at 15° C Gas heating	m3 /h	800	830	950	980	1010
	Exhaust air max. with no pressure at 15° C Electrical & Steam heating	m3 /h	740	740	880	920	960
	Total pressure with no flow	Ра	880	880	880	880	880
	Admissible pressure drop on evacuation	Ра	200	200	200	200	200
Consu	– Imptions						
Gas h	eating / Dubixium cylinder						
	Installed electric power	kW	1	1	1	1	1
	Installed heating power	kW	39	44	52	56	65
	Maximum electrical consumption	kWh	0.8	44 0.8	0.8	0.8	0.8
	Maximum electrical consumption Max. water evaporation capacity With 50 % residual moisture content and 100 % cylinder utilization (according to ISO 93.98 standard).	kg/h	35	37	46	51	59
Electri	c heating / Dubixium cylinder						
	Installed electric power	kW	34	37.7	44.5	48	54.8
	Installed heating power	kW	33.5	37.2	44	47.5	54.3
	Maximum electrical consumption	kWh	32.85	36.45	44	46.8	53.55
	Maximum electrical consumption Max. water evaporation capacity With 50 % residual moisture content and 100 % cylinder utilization (according to ISO 93.98 standard).	kg/h	38	40	43.2 48	40.8 51	59
Steam	heating						
	Installed electric power	kW	1	1	1	1	1

Installation manual

Maximum electrical consumption	kWh	0.8	0.8	0.8	0.8	0.8
Maximum steam consumption at 900 kPa	kg/h	83	92	110	123	141
Inner volume steam cylinder	dm3	300	335	398	431	497
Max. water evaporation capacity With 50 % residual moisture content and 100 % cylinder utilization (according to ISO 93.98 standard).	kg/h	57	63	75	81	93

4.2.2 Model : IC6 48xx LF Length Folding

First level : Front View

Second level : Back view and Left View Third level : Top View



Installation manual

Chara	cteristics / type machine	Units	4819	4821	4825	4828	4832
4	Overall width	mm	2575	2785	3205	3415	3835
в	Ironer width	mm	1910	2120	2540	2750	3170
0	Width between feet	mm	2300	2510	2930	3140	3560
	Cylinder diameter Gas / Electric heating	mm	479	479	479	479	479
	Cylinder diameter Steam heating	mm	457	457	457	457	457
	Effective working width	mm	1910	2120	2540	2750	3170
	Ironer Floor area	m²	2.5	2.7	3.1	3.3	3.7
	Ironer net weight Gas heating / Dubixium cylinder	kg	770	810	875	940	1015
	Ironer net weight Electric heating / Du- bixium cylinder	kg	770	810	875	940	1015
	Ironer net weight Steam heating	kg	805	845	905	975	1035
	Ironing speed mini	m/min	1.5	1.5	1.5	1.5	1.5
	Ironing speed maxi	m/min	9	9	9	9	9
	Heating surface Gas / Electric heating	m²	2.2	2.4	2.9	3.15	3.6
	Heating surface Steam heating	m²	2.1	2.3	2.7	3.0	3.4
Conne	ections						
F	Main switch to connect electric main cable						
G	Inlet for electric main cable						
Н	Steam inlet	mm(")	20 (3/4")	20 (3/4")	20 (3/4")	20 (3/4")	20 (3/4")
	Maximum supply pressure	kPa	1000	1000	1000	1000	1000
	Condensate return	mm(")	10 (3/8")	10 (3/8")	10 (3/8")	10 (3/8")	10 (3/8")
J	Gas Inlet	mm(")	20 (3/4")	20 (3/4")	20 (3/4")	20 (3/4")	20 (3/4")
K	Drain of vapour or burnt gas	Ø mm	150	150	150	150	150
	Exhaust air max. with no pressure at 15° C Gas heating	m3 /h	800	830	950	980	1010
	Exhaust air max. with no pressure at 15° C Electrical & Steam heating	m3 /h	740	740	880	920	960
	Total pressure with no flow	Ра	880	880	880	880	880
	Admissible pressure drop on evacuation	Pa	200	200	200	200	200
Consı	 Imptions						
Gas h	eating / Dubixium cylinder						
	Installed electric power	kW	1.4	1.4	1.4	1.4	1.4
	Installed heating power	kW	39	44	52	56	65
	Maximum electrical consumption	kWh	1.2	1.2	1.2	1.2	1.2
	Max. water evaporation capacity With 50 % residual moisture content and 100 % cylinder utilization (according to ISO 93.98 standard).	kg/h	35	37	46	51	59
Electr	ic heating / Dubixium cylinder						
	Installed electric power	kW	34.3	37.8	44.6	48.2	55
	Installed heating power	kW	33.8	37.3	43.9	47.7	54.6
	Maximum electrical consumption	kWh	32.85	36.45	43.2	46.8	53.55
	Max. water evaporation capacity With 50 % residual moisture content and 100 % cylinder utilization (according to ISO 93.98 standard).	kg/h	38	40	48	51	59
Steam	heating						
	Installed electric power	kW	1.4	1.4	1.4	1.4	1.4

Installation manual

Maximum electrical consumption	kWh	1.2	1.2	1.2	1.2	1.2
Maximum steam consumption at 900 kPa	kg/h	83	92	110	123	141
Inner volume steam cylinder	dm3	300	335	398	431	497
Max. water evaporation capacity With 50 % residual moisture content and 100 % cylinder utilization (according to ISO 93.98 standard).	kg/h	57	63	75	81	93

4.2.3 Model : IC6 48xx FLF Feeder Length Folding

First level : Front View Second level : Back view andLeft View

Third level : Top View



Installation manual

Indracte	eristics / type machine	Units	4819	4821	4825	4828	4832
	Overall width	mm	2575	2785	3205	3415	3835
	Ironer width	mm	1910	2120	2540	2750	3170
	Width between feet	mm	2300	2510	2930	3140	3560
	Cylinder diameter Gas / Electric heating	mm	479	479	479	479	479
	Cylinder diameter Steam heating	mm	457	457	457	457	457
	Effective working width	mm	1910	2120	2540	2750	3170
	Ironer Floor area	m²	3	3.25	3.72	4	4.45
	Ironer net weight Gas heating / Dubixium cylinder	kg	1030	1100	1185	1260	1330
	Ironer net weight Electric heating / Du- bixium cylinder	kg	1030	1100	1185	1260	1330
	Ironer net weight Steam heating	kg	1100	1135	1215	1295	1365
	Ironing speed mini	m/min	1.5	1.5	1.5	1.5	1.5
	Ironing speed maxi	m/min	9	9	9	9	9
	Heating surface Gas / Electric heating	m²	2.2	2.4	2.9	3.15	3.6
	Heating surface Steam heating	m²	2.1	2.3	2.7	3.0	3.4
onnect							
	Main switch to connect electric main cable						
	Inlet for electric main cable						
	Steam inlet	mm(")	20 (3/4")	20 (3/4")	20 (3/4")	20 (3/4")	20 (3/4")
	Maximum supply pressure	kPa	1000	1000	1000	1000	1000
	Condensate return	mm(")	10 (3/8")	10 (3/8")	10 (3/8")	10 (3/8")	10 (3/8")
	Gas Inlet	mm(")	20 (3/4")	20 (3/4")	20 (3/4")	20 (3/4")	20 (3/4")
	Drain of vapour or burnt gas	\varnothing mm	150	150	150	150	150
	Exhaust air max. with no pressure at 15° C Gas heating	m3 /h	800	830	950	980	1010
	Exhaust air max. with no pressure at 15° C Electrical & Steam heating	m3 /h	740	740	880	920	960
	Total pressure with no flow	Ра	880	880	880	880	880
	Admissible pressure drop on evacuation	Pa	200	200	200	200	200
onsum	ptions						
as heat	ting / Dubixium cylinder						
	Installed electric power	kW	1.75	1.75	1.75	1.75	1.75
	Installed heating power	kW	39	44	52	56	65
	Maximum electrical consumption	kWh	1.5	1.5	1.5	1.5	1.5
	Maximum electrical consumption Max. water evaporation capacity With 50 % residual moisture content and 100 % cylinder utilization (according to ISO 93.98 standard).	kg/h	35	37	46	51	59
lectric l	heating / Dubixium cylinder						
	Installed electric power	kW	34.6	38.2	45	48.5	55.3
	Installed heating power	kW	34.3	37.9	44.7	48.2	55
	Maximum electrical consumption	kWh	32.85	36.45	43.2	46.8	53.55
	Max. water evaporation capacity With 50 % residual moisture content and 100 % cylinder utilization (according to ISO 93.98 standard).	kg/h	38	40	48	51	59
team he	eating						
	Installed electric power	kW	1.75	1.75	1.75	1.75	1.75

Installation manual

Maximum electrical consumption	kWh	1.5	1.5	1.5	1.5	1.5
Maximum steam consumption at 900 kPa	kg/h	83	92	110	123	141
Inner volume steam cylinder	dm3	300	335	398	431	497
Max. water evaporation capacity With 50 % residual moisture content and 100 % cylinder utilization (according to ISO 93.98 standard).	kg/h	57	63	75	81	93

4.2.4 Model : IC6 48xx R with Rear load removal

First level : Front View Second level : Left View

Third level : Back view and Top View



Installation manual

Characte	eristics / type machine	Units	4819	4821	4825	4828	4832
4	Overall width	mm	2575	2785	3205	3415	3835
В	Ironer width	mm	1910	2120	2540	2750	3170
2	Width between feet	mm	2300	2510	2930	3140	3560
	Cylinder diameter Gas / Electric heating	mm	479	479	479	479	479
	Cylinder diameter Steam heating	mm	457	457	457	457	457
	Effective working width	mm	1910	2120	2540	2750	3170
	Ironer Floor area	m²	4.2	4.55	5.20	5.55	6.25
	Ironer net weight Gas heating / Dubixium cylinder	kg	855	940	1025	1100	1180
	Ironer net weight Electric heating / Du- bixium cylinder	kg	855	940	1025	1100	1180
	Ironer net weight Steam heating	kg	895	980	1065	1140	1220
	Ironing speed mini	m/min	1.5	1.5	1.5	1.5	1.5
	Ironing speed maxi	m/min	9	9	9	9	9
	Heating surface Gas / Electric heating	m²	2.2	2.4	2.9	3.15	3.6
	Heating surface Steam heating	m²	2.1	2.3	2.7	3.0	3.4
Connect							
	Main switch to connect electric main cable						
G	Inlet for electric main cable						
н	Steam inlet	mm(")	20 (3/4")	20 (3/4")	20 (3/4")	20 (3/4")	20 (3/4"
	Maximum supply pressure	kPa	1000	1000	1000	1000	1000
	Condensate return	mm(")	10 (3/8")	10 (3/8")	10 (3/8")	10 (3/8")	10 (3/8"
J	Gas Inlet	mm(")	20 (3/4")	20 (3/4")	20 (3/4")	20 (3/4")	20 (3/4"
ĸ	Drain of vapour or burnt gas	Ø mm	150	150	150	150	150
	Exhaust air max. with no pressure at 15° C Gas heating	m3 /h	800	830	950	980	1010
	Exhaust air max. with no pressure at 15° C Electrical & Steam heating	m3 /h	740	740	880	920	960
	Total pressure with no flow	Ра	880	880	880	880	880
	Admissible pressure drop on evacuation	Ра	200	200	200	200	200
Consum	ptions						
Gas heat	ting / Dubixium cylinder						
	Installed electric power	kW	1.2	1.2	1.2	1.2	1.2
	Installed heating power	kW	39	44	52	56	65
	Maximum electrical consumption	kWh	1	1	1	1	1
	Max. water evaporation capacity With 50 % residual moisture content and 100 % cylinder utilization (according to ISO 93.98 standard).	kg/h	35	37	46	51	59
	heating / Dubixium cylinder						
	Installed electric power	kW	34	37.7	44.4	48	54.8
	Installed heating power	kW	33.8	37.5	44.2	47.8	54.6
	Maximum electrical consumption	kWh	32.85	36.45	43.2	46.8	53.55
	Max. water evaporation capacity With 50	kg/h	38	40	48		59
	% residual moisture content and 100 % cylinder utilization (according to ISO 93.98 standard).	Kg/II	30	40	40	51	59
Steam h	eating						
	Installed electric power	kW	1.2	1.2	1.2	1.2	1.2

Maximum electrical consumption	kWh	1	1	1	1	1
Maximum steam consumption at 900 kPa	kg/h	83	92	110	123	141
Inner volume steam cylinder	dm3	300	335	398	431	497
Max. water evaporation capacity With 50 % residual moisture content and 100 % cylinder utilization (according to ISO 93.98 standard).	kg/h	57	63	75	81	93
t loss (3% of installed heating power)						

4.3 Supplies

You can take the box placed inside of the casing.

- 1. Accessories delivered with each machine
 - 1 Installation handbook.
 - 1 Operating handbook.
 - 2 Electrical schematics.
 - 1 Commissioning form to be completed to validate the warranty.
 - 1 Maintenance poster to put on the wall near the machine.
 - 3 keys for casings
 - 2 screws to maintain the cylinder in high position to do the maintenance of bearing support cylinder.
 - 2 locking system for flap linen collector (see chapter remove of the transport locks fitted (part 3))
- 2. Accessories delivered with each gas heating machine
 - 1 draught accelerator to extract the exhaust of burn gas, to be connected at the chimney (in 3 parts)

4.4 Sound level

Airborne noise emitted by the machine (values established as from measurements made on the machine at points A, B, C, D).



Weighted acoustic pressure level (A) in dB(A)	Ironing width	1.9 m	2.1 m	2.5 m	2.8 m	3.2 m
	Point A	65	65	65	65	65
Flatwork ironer (basic)	Point B	64	64	64	64	64
Flatwork librier (basic)	Point C	69	69	69	69	69
	Point D	68	68	68	68	68

Heat

	Point A	65	65	65	65	65
Flatwork ironar folder (LE)	Point B	64	64	64	64	64
Flatwork ironer folder (LF)	Point C	69	69	69	69	69
	Point D	68	68	68	68	68
	Point A			73	73	73
Feeder flatwork ironer folder (FLF)	Point B			73	73	73
reeder hatwork honer loider (FLF)	Point C			72	72	72
	Point D			72	72	72
	Point A	65	65	65	65	65
Flatwork ironer with rear load re-	Point B	64	64	64	64	64
moval (R)	Point C	69	69	69	69	69
	Point D	68	68	68	68	68
	Point A					73
Flatwork ironer folder with rear load	Point B					73
removal (R-LF)	Point C					72
	Point D					72



Important

This ironing machine should only be used for previously washed and pre-dried, machine-ironable textiles.



Important



In the opposite case, the exhaust duct must be connected to the open air, by the shortest way, and with as few bents as possible.

Incline the flexi-hose downwards, as compared to the machine.

Protect the end of the exhaust duct from the bad weather.

Do not connect the exhaust duct to a gas, coal, fuel oil furnaces chimney. Separate it also from any other ducting (tumble dryer, finishing cabinet).

4.5 Electric power supply :

The feeder cable sections mentioned in our literature are given only as a guide .

To obtain a value perfectly suited to your own application and which takes account of the different correction factors in respect of your plant, refer to the tables below.



4.5.1 TABLE 1 (in accordance with EN standard 60204–1)

Values given for :

Cable with copper conductors.

Cable with PVC insulation (for other insulants see TABLE 3).

Ambient temperature 40°C max. (for others see TABLE 2)

Three-phase cable under load without including starting currents.

BT / C / E cable layout.

MAXIMUM ADMISSIBLE CURRENT

Cable section	Seated in Cable Duct	Wall Fixing	Cable Tray			
	or Cable Trough					
	B2	с	Е			
3 x 1.5 mm²	12.2 A	15.2 A	16.1 A			
3 x 2.5 mm²	16.5 A	21 A	22 A			
3 X 4 mm²	23 A	28 A	30 A			
3 x 6 mm²	29 A	36 A	37 A			
3 x 10 mm²	40 A	50 A	52 A			
3 x 16 mm²	53 A	66 A	70 A			
3 x 25 mm²	67 A	84 A	88 A			
3x 35 mm²	83 A	104 A	114 A			
3 x 50 mm²	-	123 A	123 A			
3 x 70 mm²	-	155 A	155 A			

4.5.2 TABLE 2 correction factors for different ambient temperatures :

Ambient temperature	Correction factor
30 ° C (86° F)	1.15
35 ° C (95° F)	1.08
40 ° C (104° F)	1
45 ° C (113° F)	0.91
50 ° C (122° F)	0.82
55 ° C (131° F)	0.71
60 ° C (140° F)	0.58

4.5.3 TABLE 3 correction factors for different cable insulating materials :

Insulating material	Maximum working temperature range	Correction factor
PVC	70 ° C (158° F)	1
Natural or Synthetic Rubber	60° C (140° F)	0.92
Silicone Rubber	120° C (248° F)	1.60

4.5.4 TABLE 4 B2, C and E correction factors for cable grouping :

	B2	С	E
Number of cables	Seated in Cable Duct	Wall fixing or Cable Trough	Cable Tray
1	1.00	1.00	1.00
2	0.80	0.85	0.87
4	0.65	0.75	0.78
6	0.57	0.72	0.75
9	0.50	0.70	0.73

4.5.5 Calculation

The total current included for usint Table 1 should be the maximum rated current for the machine divided by the product of the different correction factors. Other correction factors may also be applied ; consult cable manufacturers.

Calculation : example

The machine has a rated current of 60 A

The ambient temperature is 45° C ; Table 2 gives a correction factor of 0.91.

Rubber cable insuant : Table 3 gives a correction factor of 0.92.

The cable is fixed directly to the wall (Column C), with 2 cables side by side. The Table 4 gives a correction factor of 0.85.

Total current : _____60A____=84A

.....0.91x0.92x0.85.....

Taking Column C in Table 1 (wall fixing), we obtain a minimum cable section of : 3x 25 mm²

4.5.6 Electrical Standard characteristics for IC6 48xx :

Machine Type	Heating	Supply Voltage	Installed Power	Rated Intensity	Connection Cable Section	Main Circuit Breaker or Fuse
4819	Steam / Gas	380/415V 3+E 50– 60Hz	1.75 kW	5 A	4 X 2.5 mm²	3 x 16 A
4819	Electric	380/415V 3+E 50– 60Hz	34.6 kW	45 A	4 x 10 mm²	3 x 63 A
4821	Steam / Gas	380/415V 3+E 50– 60Hz	1.75 kW	5 A	4 X 2.5 mm²	3 x 16 A
4821	Electric	380/415V 3+E 50– 60Hz	38.2 kW	45 A	4 x 10 mm²	3 x 63 A
4825	Steam / Gas	380/415V 3+E 50– 60Hz	1.75 kW	5 A	4 X 2.5 mm²	3 x 16 A
4825	Electric	380/415V 3+E 50– 60Hz	44.5 kW	58 A	4 x 16 mm²	3 x 80 A
4828	Steam / Gas	380/415V 3+E 50– 60Hz	1.75 kW	5 A	4 X 2.5 mm²	3 x 16 A
4828	Electric	380/415V 3+E 50– 60Hz	48.5 kW	63 A	4 x 16 mm²	3 x 80 A
4832	Steam / Gas	380/415V 3+E 50– 60Hz	1.75 kW	5 A	4 X 2.5 mm²	3 x 16 A
4832	Electric	380/415V 3+E 50– 60Hz	55.3 kW	80 A	4 x 25 mm²	3 x 100 A

4.6 Gas setting characteristics IC6 48xx FFS :



Caution

ĺ,

The installation, connection and gas arrival adjustments for the machine must be done by qualified personnel only.

4.6.1 Legend of symbols used :

- I : Machine working with only one gas family
- II : Machine working with two gas families
- 1 : 1st family : caol gas or town gas (for information : not used here)
- 2 : 2nd family : Natural gas
- 3 : 3rd family : liquefied petroleum gas (LPG)
- H : Natural gas with high calorific value (type G20)
- L : Natural gas with low calorific value (type G25)
- E : Natural gas with high and low calorific value (type G20)
- LL : Natural gas with low calorific value (type G25)
- Esi : Natural gas with high and low calorific value with adjustment (type G20)
- B : Butane gas (type G30)
- P : Propane gas (type G31)
- B/P : Butane and propane gas (type G30 and G31)
- 3+ : Butane/Propane gas with couple of pressure 30/37 (type G30 and G31)

AT : Austria	FR : France	MT : Malta
BE : Belgium	GB : Great Britain	NL : Netherlands
BG : Bulgaria	GR : Greece	NO : Norway
CH : Switzerland	HU : Hungary	PL : Poland
CY : Cyprus	HR : Croatia	PT: Portugal
CZ : Czech Republic	IE : Irland	RO : Romania
DE : Germany	IS : Iceland	SE : Sweden
DK : Denmark	IT : Italy	SI : Slovenia
EE : Estonia	LT : Lithuania	SK : Slovakia
Es : Spain	LU : Luxemburg	TR : Turkey
FI : Finland	LV : Latvia	

Qn (Hi) : Nominal heat emission express in relation to the net calorific value.

Mn : Nominal mass (for butane/propane gas).

Vn : Nominal volume (for natural gas)

	Country	Category	Gas	Pres- sure
				(mb- ar)
	AT	II2H3B/P	G20	20
For safety reasons use only original		1121 13D/F	G31	50
spare parts.	DE — LU	II2E3B/P	G20	20
TYPE:		IIZE3B/F	G31	50
SERIAL N° :	BE	I2E(R)B;I3+	G20/ G25	20/25
PROD. N° :			G31	37
CAPACITY : I ;, kg Mn/Vn :/	BG – DK – EE – FI – HR – HU – SE – RO	II2H3B/P	G20	20
P. MAX. :W Type : (M) kW ISOL. CLAS :	TR	112H3B/P	G31	37
₩ <u>25</u> <u>G25</u> <u>mbar</u> G30 <u>mbar</u>	FR	ll2Esi3P	G20/ G25	20/25
$ - V_{-} \sim Hz \qquad $			G31	37/50
	CH - CY - CZ - ES - GB - GR - IE - IT		G20	20
P. max. : kPa	-LT - PL - PT - SI - SK	II2H3+	G31	37
CE IP 24 D Date: _/_/	CH-ES-LV	II2H3P	G20	20
ELECTROLUX LAUNDRY SYSTEMS FRANCE		IIZHOP	G31	50
10430 Rosières-près-Troyes FRANCE	NL	II2L3P	G25	25
32101642 Made in FRANCE			G31	50
	NO	I3B/P	G31	50
	DE — MT	I3P	G31	50

4.6.2 Testing pressure :

According to the EN 437 standard, the values of the testing pressures mentionned in our various documents are values for static pressures taken at the gas inlet connection of the machine ; heating of the machine being on.

4.6.3 Setting gas adjustment :

The machine is adjusted at the plant to be suitable for the kind of gas specified on the order. If you have to supply your machine with gas in a familly different from the gas for which your machine was adjusted, proceed as follows: Check that the diameter of the injectors is adequate for the kind of gas of your installation (see Table of injectors below). The machine is delivered with extra injectors in a plastic envelope.

4.6.3.1 Changing to a gas in the same family (Type H or L):

Adjust the gas outlet pressure (see correspondence in the tables below)

4.6.3.2 Changing to a gas in a different family (from type H or L to butane or propane)



Change the 3 injectors with joints (see correspondence in the tables)

Unscrew the fixing screws (V) and remove the adjusting head (J) as weel as its cork (T), keep these parts in case a change would be necessary.

Replace it by the cork (L) and the plate (P).

Screw the 2 screws and block.

4.6.3.3 Changing to a gas in a different family (from butane or propane to type H or L)

Change the 3 injectors with joints (see correspondence in the tables)

Unscrew the fixing screws (V) and remove the plate (P) as weel as its cork (L), keep these parts in case a change would be necessary.

Replace it by the cork (T) and the adjustment head (J).

Screw the 2 screws (V) and block.



Important

Adjustments should be made by qualified personnel only.



4.6.4 Adjustment and checking of the outlet pressure

The gas outlet pressure of the solenoid valve is adjusted at the factory. If you have to make another adjustment, proceed as follows :



- A : Inlet
- **B** : Outlet
- **D** : Outlet pressure regulator

Adjustment screw plug

- E : Inlet pressure tapping
- **F** : Outlet pressure tapping
- T: Head regulation

1 : Close the gas inlet and remove the binding screw from the pressure tapping (F) and connect the manometer tube.

 $2: \mbox{The electricity supply must be energized otherwise gas will not be supplied to the burner.$

3: Open and check the gas inlet main burner using the manometer on the pressure tapping (F)

4 : Remove pressure regulator cap (D)

5 : Using a screwdriver , slowly turn the adjustment screw until the required pressure (P) is indicated on manometer (see tables on following pages).

Turn the adjustment screw clockwise to increase and counter-clockwise to decrease gas pressure.

6 : Reset the pressure regulator cap, close off the gas inlet, remove the manometer tube and put the binding screw back in (F).



4.6.5 Tables of Correspondences :

	TABLE OF CORRESPONDENCES : IRONER 4819								
Category Index	Type of Gas	Working supply pressure in mbar	Hi	Diameter of injectors in mm	Pressure at injectors in mm H2O	Heat emission Qn in kW (Hi)	Consumption Mn in kg/h	Consumption Vn in M3/h	
*2E, 2H , 2ESI	G20	20	34.02 MJ/M3	3.30	97	39	-	4.13	
2L, 2ESI	G25	25	29.25 MJ/M3	3.30	133	39	-	4.80	
3+	G30 G31	28–30 37	45.65 MJ/kg 46.34 MJ/kg	1.85 1.85		39 39	3.07 3.03	-	
3 P	G31	50	46.34 MJ/kg	1.70	-	39	3.03	-	
	* For Belgium, no work is allowed between G20 and G25								

	TABLE OF CORRESPONDENCES : IRONER 4821							
Category Index	Type of Gas	Working supply pressure in mbar	Hi	Diameter of injectors in mm	Pressure at injectors in mm H2O	Heat emission Qn in kW (Hi)	Consumption Mn in kg/h	Consumption Vn in M3/h
*2E, 2H , 2ESI	G20	20	34.02 MJ/M3	3.40	102	44	-	4.65
2L, 2ESI	G25	25	29.25 MJ/M3	3.40	143	44	-	5.41
3+	G30 G31	28–30 37	45.65 MJ/kg 46.34 MJ/kg	1.95 1.95	- -	44 44	3.46 3.41	-
3 P	G31	50	46.34 MJ/kg	1.80	-	44	3.41	-
			* For Belo	nium no work is al	lowed between G2	and G25		

* For Belgium, no work is allowed between G20 and G25

	TABLE OF CORRESPONDENCES : IRONER 4825							
Category Index	Type of Gas	Working supply pressure in mbar	Hi	Diameter of injectors in mm	Pressure at injectors in mm H2O	Heat emission Qn in kW (Hi)	Consumption Mn in kg/h	Consumption Vn in M3/h
*2E, 2H , 2ESI	G20	20	34.02 MJ/M3	3.70	100	52	-	5.50
2L, 2ESI	G25	25	29.25 MJ/M3	3.70	135	52	-	6.40
3+	G30 G31	28–30 37	45.65 MJ/kg 46.34 MJ/kg	2.10 2.10		52 52	4.10 4.04	-
3 P	G31	50	46.34 MJ/kg	2.00	-	52	4.04	-
			* For Belo	gium, no work is al	lowed between G20) and G25		

	TABLE OF CORRESPONDENCES : IRONER 4828							
Category Index	Type of Gas	Working supply pressure in mbar	Hi	Diameter of injectors in mm	Pressure at injectors in mm H2O	Heat emission Qn in kW (Hi)	Consumption Mn in kg/h	Consumption Vn in M3/h
*2E, 2H , 2ESI	G20	20	34.02 MJ/M3	3.80	105	56	-	5.92
2L, 2ESI	G25	25	29.25 MJ/M3	3.80	150	56	-	6.90
3+	G30 G31	28–30 37	45.65 MJ/kg 46.34 MJ/kg	2.20 2.20		56 56	4.41 4.35	-
3 P	G31	50	46.34 MJ/kg	2.05	-	56	4.35	-
			* For Belo	nium no work is al	lowed between G20) and G25		

* For Belgium, no work is allowed between G20 and G25

	TABLE OF CORRESPONDENCES : IRONER 4832							
Catego- ry Index	Type of Gas	Working supply pressure in mbar	Hi	Diameter of injectors in mm	Pressure at injectors in mm H2O	Heat emission Qn in kW (Hi)	Consumption Mn in kg/h	Consumption Vn in M3/h
*2E, 2H , 2ESI	G20	20	34.02 MJ/M3	4.00	114	65	-	6.87
2L, 2ESI	G25	25	29.25 MJ/M3	4.00	160	65	-	7.99
3+	G30 G31	28–30 37	45.65 MJ/kg 46.34 MJ/kg	2.30 2.30		65 65	5.12 5.05	-

Installation manual

	Important							Â	
* For Belgium, no work is allowed between G20 and G25									
	3 P	G31	50	46.34 MJ/kg	2.10	-	65	5.05	-

G20 (H) = natural gas , Lacq Type (20 mbar)G25 (L) = natural gas , Groningue Type (20 or 25 mbar)G30 (H) = Butane gas (28/30, 50 mbar)G31 = Propane gas (28/30, 37 , 50 mbar)

Important Important Tightness test after installationThe gas leak test is performed as follows :1/ Paint pipe joints, pilot gas tubing connections and inspect outlets with rch soap and water solution ; do not use an aggressive soap.2/ Put the machine into service. Bubbles indicate a gas leak. 3/ Eliminate this leak.

Check-outBefore leaving, put the appliance into operation and allow to run a complete cycle. Watch to ensure that all burner system components function correctly.

4.7 Explanation of washing symbols

(ISO 3758:2005 standard)

To overcome language barriers, the following are symbols used internationally to give you guidance and recommendations when washing different textiles.

4.7.1 Washing

The tub symbolizes washing.

Symbols	Max. washing tem- perature in °C	Mechanical action
95	95	normal
95	95	mild
70	70	normal
60	60	normal
60	60	mild
50	50	normal
50	50	mild
40	40	normal
40	40	mild
40	40	very mild
30	30	normal
30	30	mild
30	30	very mild
	40	wash by hand
X	-	do not wash

4.7.2 Bleaching

The triangle symbolizes bleaching.

Symbols	Explanation		
\triangle	Bleaching allowed (chlorine or oxygen).		
\triangle	Bleaching allowed (only oxygen).		
	Do not bleach.		

4.7.3 Drying

The circle in a square symbolizes tumble drying.

Symbols	Explanation		
$\overline{\mathbf{\cdot}}$	Can be put in a tumble dryer. Normal temperature.		
\odot	Can be put in a tumble dryer. Lower temperature.		
\boxtimes	Do not put in a tumble dryer.		

4.7.4 Ironing

The iron symbolizes the domestic ironing and pressing process.

Symbols	Explanation
	Max. temperature 200 °C.
$\overline{\cdots}$	Max. temperature 150 °C.
Ŀ	Max. temperature 110 °C. The steam can cause irreversible damages.
X	Do not iron.

4.7.5 Dry or water cleaning

The circle symbolizes dry or water cleaning.

Symbols	Explanation		
\mathbb{P}	Normal dry cleaning with perchloroethyl, solvent of hydrocarb.		
$\underline{\mathbb{P}}$	Mild dry cleaning with perchloroethyl, sol- vent of hydrocarb.		
Œ	Normal dry cleaning with solvent of hydrocarbon.		
Ē	Mild dry cleaning with solvent of hydrocarbon.		
\bigotimes	Do not dry clean.		
W	Normal water cleaning.		
W	Mild water cleaning.		
	Very mild water cleaning.		

4.8 Conversion of measurement units

This following is a list of correspondences of the main frequency used units, to avoid the need to use measurement unit conversion table.

bar	1 bar = 100 000 Pa 1 bar = 1.019 7 kg/cm² 1 bar = 750.06 mm Hg 1 bar = 10 197 mm H2O 1 bar = 14.504 psi	British thermal unit	1 Btu = 1 055.06 J 1 Btu = 0.2521 kcal
calorie	1 cal = 4.185 5 J 1 cal = 10–6 th 1 kcal = 3.967 Btu 1 cal/h = 0.001 163 W 1 kcal/h = 1.163 W	Continental horse power	1 ch = 0.735 5 kW 1 ch = 0.987 0 HP
cubic foot	1 cu ft = 28 316 8 dm³ 1 cu ft = 1 728 cu in	cubic inch	1 cu in = 16.387 1 dm³
foot	1 ft = 304.8 mm 1 ft = 12 in	gallon (U.K.)	1 gal = 4.545 96 dm³ or l 1 gal = 277.41 cu in
gallon (U.S.A.)	1 gal = 3.785 33 dm³ or l 1 gal = 231 cu in	horse power	1 HP = 0.745 7 kW 1 HP = 1.013 9 ch
inch	1 in = 25.4 mm	joule	1 J = 0.000 277 8 Wh 1 J = 0.238 92 cal
kilogramme	1 kg = 2.205 62 lb	kg/cm²	1 kg/cm² = 98 066.5 Pa 1 kg/cm² = 0.980 665 bar 1 kg/cm² = 10 000 mm H2O 1 kg/cm² = 735.557 6 mm Hg
pound	1 lb = 453.592 37 g	meter	1 m = 1.093 61 yd 1 m = 3.280 83 ft 1 m = 39.37 in
cubic meter	1 m ³ = 1 000 dm ³ 1 m ³ = 35.214 7 cu ft 1 dm ³ = 61.024 cu in 1 dm ³ = 0.035 3 cu ft	pascal	1 Pa = 1 N/m ² 1 Pa = 0.007 500 6 mm Hg 1 Pa = 0.101 97 mm H2O 1 Pa = 0.010 197 g/cm ² 1 Pa = 0.000 145 psi 1 MPa = 10 bar
psi	1 psi = 0.068947 6 bar	thermie	1 th = 1 000 kcal 1 th = 10+6 cal 1 th = 4.185 5 x 10+6 J 1 th = 1.162 6 kWh 1 th = 3 967 Btu
watt	1 W = 1 J/s 1 W = 0.860 11 kcal/h	watt-hour	1 Wh = 3 600 J 1 kWh = 860 kcal
yard	1 yd = 0.914 4 m 1 yd = 3 ft 1 yd = 36 in	temperature degrees	0 °K =273.16 °C 0 °C = 273.16 °K t °C = 5/9 (t °F-32) t °F = 1.8 t °C + 32



Electrolux Professional AB 341 80 Ljungby, Sweden www.electroluxprofessional.com