

Installation manual

Washer extractor

**WH6–7, WH6–8, WH6–11, WH6–14,
WH6–20, WH6–27, WH6–33**

Compass Pro

Type W3....



Electrolux
PROFESSIONAL

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Contents

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

1 Safety Precautions

- Servicing shall be carried out only by authorized personnel.
- Only authorized spare parts, accessories and consumables shall be used.
- Only use detergent intended for water-wash of textiles. Never use dry cleaning agents.
- The machine shall be connected with new water hoses. Re-used water hoses must not be used.
- The machine's door lock must under no circumstances be bypassed.
- If the machine develops a fault, this must be reported to the person in charge as soon as possible. This is important both for your safety and that of others.
- 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.
- 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: WH6–7: 7.5 kg, WH6–8: 8.5 kg, WH6–11: 11.5 kg, WH6–14: 14.5 kg, WH6–20: 21 kg, WH6–27: 27.5 kg, WH6–33: 36.5 kg.
- A-weighted emission sound pressure level at working stations:
 - Wash: WH6–7: <70 dB(A), WH6–8: <70 dB(A), WH6–11: <70 dB(A), WH6–14: <70 dB(A), WH6–20: <70 dB(A), WH6–27: <70 dB(A), WH6–33: <70 dB(A).
 - Extraction: WH6–7: <70 dB(A), WH6–8: <70 dB(A), WH6–11: <70 dB(A), WH6–14: <70 dB(A), WH6–20: <70 dB(A), WH6–27: <70 dB(A), WH6–33: <70 dB(A).
- Maximum inlet water pressure: 1000 kPa
- Minimum inlet water pressure: 50 kPa
- Additional requirements for the following countries; AT, BE, BG, HR, CY, CZ, DK, EE, FI, FR, DE, GR, HU, IS, IE, IT, LV, LT, LU, MT, NL, NO, PL, PT, RO, SK, SI, ES, SE, CH, TR, UK:
 - The appliance can be used in an area open to the public if equipped with any of the following programs from factory: 6A01, 6A08, 6L01, 6L02, 6G05, 6G06, 6R01, 6C01, 6L31, 6L33 and 6L12.
 - This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not

play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

- Children of less than 3 years should be kept away unless continuously supervised.
- Additional requirements for other countries:
 - This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
 - This appliance is not intended for use in household applications but is intended for use in similar applications such as: staff kitchen areas in shops, offices and other working environments, farm houses, by clients in hotels, motels and other residential type environments, bed and breakfast type environments, areas for communal use in blocks of flats or in launderettes.

1.1 General safety information

The machine is only intended for water-wash use.

Do not hose down the machine with water.

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.

1.2 Commercial use only

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

1.3 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.

1.4 Symbols

	Caution
	Caution, high voltage
	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 AB user and maintenance documentation made available in paper or electronic format.

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

The Electrolux Professional AB 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 AB.

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 AB website the list of authorized customer care.

3 Technical data

3.1 Drawing

3.1.1 WH6-7, WH6-8, WH6-11

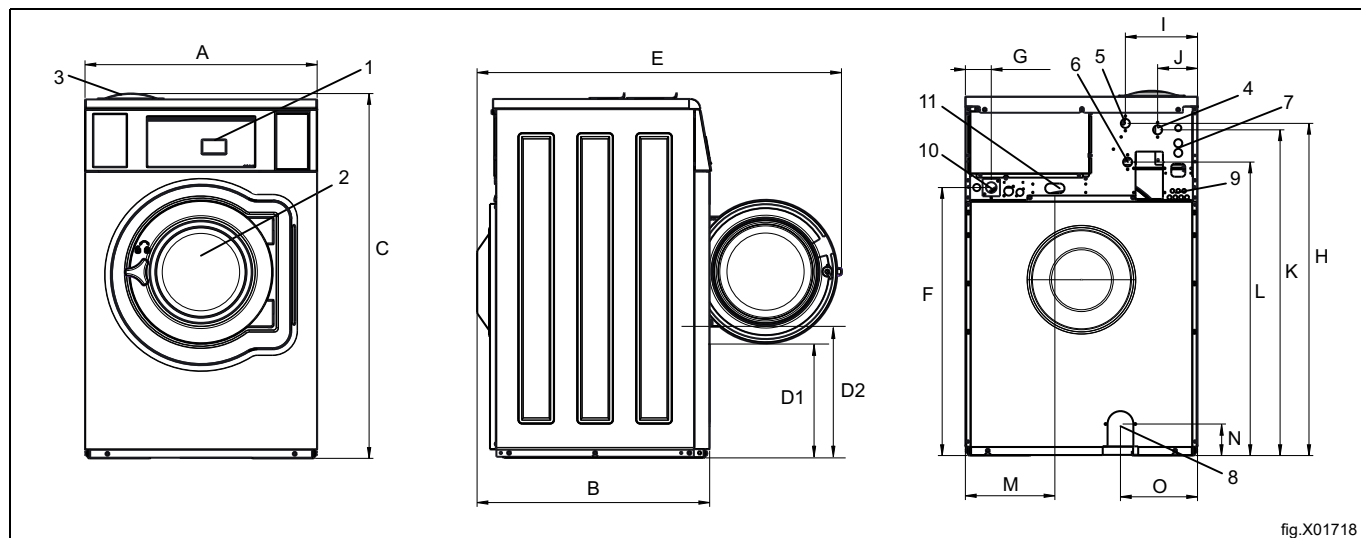


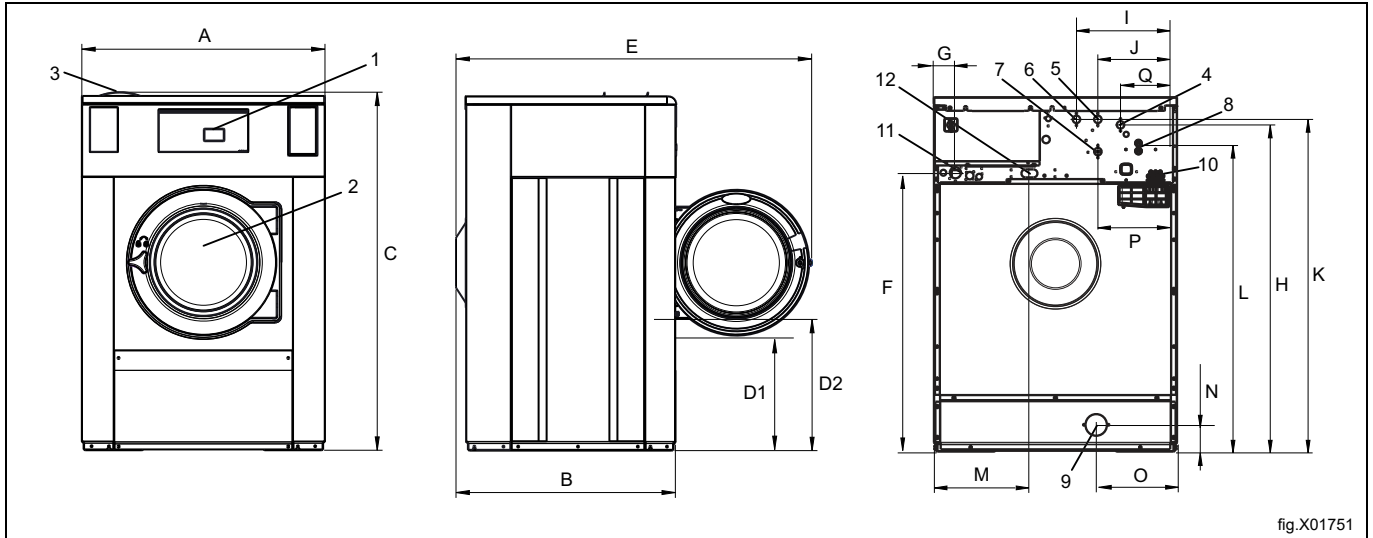
fig.X01718

1	Operating panel
2	Door opening, WH6-7, WH6-8: $\varnothing$ 310 mm, WH6-11: $\varnothing$ 365 mm
3	Detergent container
4	Cold water
5	Hot water
6	Cold/Hot water or Re-used water with network pressure (option)
7	Re-used water from tank/pump or Liquid detergent supply
8	Drain
9	Liquid detergent supply
10	Electrical connection
11	Steam connection

mm	A	B	C	D1	D2	E	F	G
WH6-7	720	720	1135	360	425	1135	835	80
WH6-8	720	720	1135	360	425	1135	835	80
WH6-11	830	770	1215	365	435	1240	920	80

mm	H	I	J	K	L	M	N	O
WH6-7	1035	215	125	1015	915	280	100	240
WH6-8	1035	215	125	1015	915	280	100	240
WH6-11	1120	215	125	1100	1000	280	105	295

3.1.2 WH6-14



1	Operating panel
2	Door opening, WH6-14: $\varnothing$ 395 mm
3	Detergent container
4	Cold/Hot water (Detergent container)
5	Cold water
6	Hot water
7	Cold/Hot water or Re-used water with network pressure (option)
8	Re-used water from tank/pump or Liquid detergent supply
9	Drain
10	Liquid detergent supply
11	Electrical connection
12	Steam connection

mm	A	B	C	D1	D2	E	F	G
WH6-14	910	820	1345	440	515	1310	1050	80

mm	H	I	J	K	L	M	N	O
WH6-14	1245	375	295	1225	1125	360	105	305

mm	P	Q
WH6-14	295	210

3.1.3 WH6-20, WH6-27, WH6-33

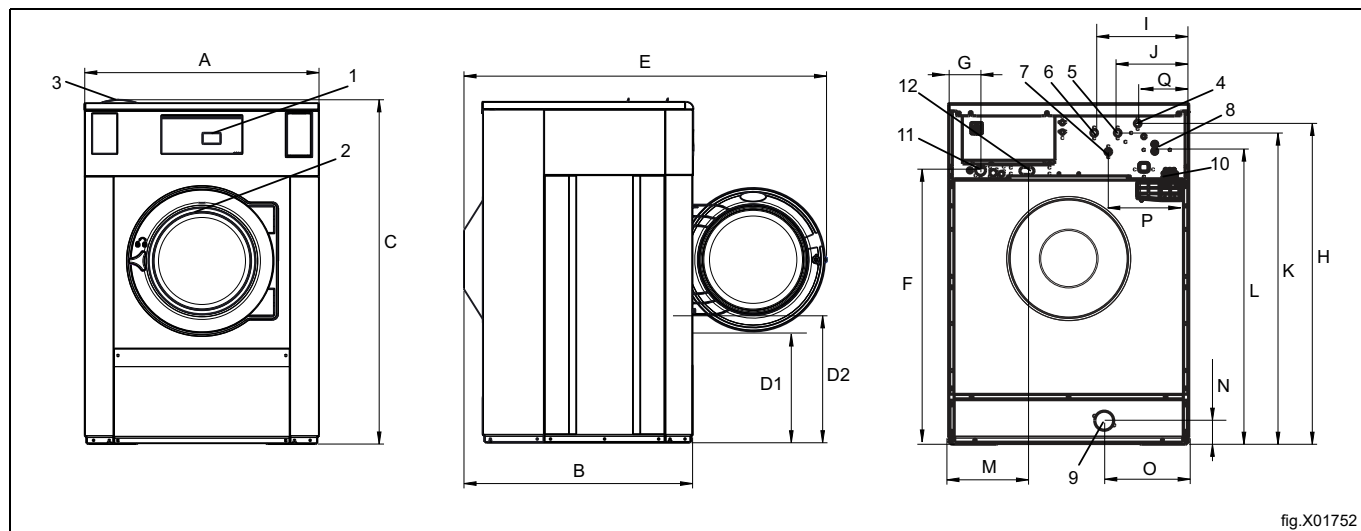


fig.X01752

1	Operating panel
2	Door opening, WH6-20, WH6-27, WH6-33: $\varnothing$ 435 mm
3	Detergent container
4	Cold/Hot water (Detergent container)
5	Cold water
6	Hot water
7	Cold/Hot water or Re-used water with network pressure (option)
8	Re-used water from tank/pump or Liquid detergent supply
9	Drain
10	Liquid detergent supply
11	Electrical connection
12	Steam connection

mm	A	B	C	D1	D2	E	F	G
WH6-20	970	945	1430	470	555	1480	1135	150
WH6-27	1020	990	1465	500	580	1525	1170	135
WH6-33	1020	1135	1465	500	580	1665	1170	135

mm	H	I	J	K	L	M	N	O
WH6-20	1330	400	300	1290	1210	350	105	335
WH6-27	1365	400	300	1325	1245	335	105	360
WH6-33	1365	400	300	1325	1245	335	105	360

mm	P	Q
WH6-20	330	215
WH6-27	340	215
WH6-33	340	215

3.2 Technical data

		WH6-7	WH6-8	WH6-11	WH6-14	WH6-20	WH6-27	WH6-33
Weight, net	kg	145	158	202	263	354	425	560
Drum volume	litres	65	75	105	130	180	240	300
Drum diameter	mm	520	520	595	650	725	795	795
Drum speed during wash	rpm	49	49	46	44	42	40	40
Drum speed during extraction	rpm	1245	1245	1165	1113	1054	1007	1007
G-factor, max.		450	450	450	450	450	450	450
Heating: Electricity	kW	3.0	3.0	5.2	13	18	23	23
	kW	5.2	5.2	7.5				
	kW	5.4	5.4	10				
	kW	7.5	7.5					
Heating: Steam		x	x	x	x	x	x	x
Heating: Hot water		x	x	x	x	x	x	x
Frequency of the dynamic force	Hz	20.8	20.8	19.4	18.6	17.6	16.8	15.8
Floor load at max extraction	kN	1.8 ± 0.5	1.9 ± 0.5	2.5 ± 0.5	3.1 ± 0.5	4.2 ± 1.0	5.2 ± 1.0	6.2 ± 1.3
Sound power/pressure level at extraction*	dB(A)	73/58	73/59	76/62	78/62	84/68	83/68	82/66
Sound power/pressure level at wash*	dB(A)	57/43	61/47	61/46	63/48	66/50	64/48	66/50
Heat emission of installed power, max	%	5	5	5	5	5	5	5

* Sound power levels measured according to ISO 60704.

3.3 Connections

[illegible]

4 Setup

4.1 Unpacking

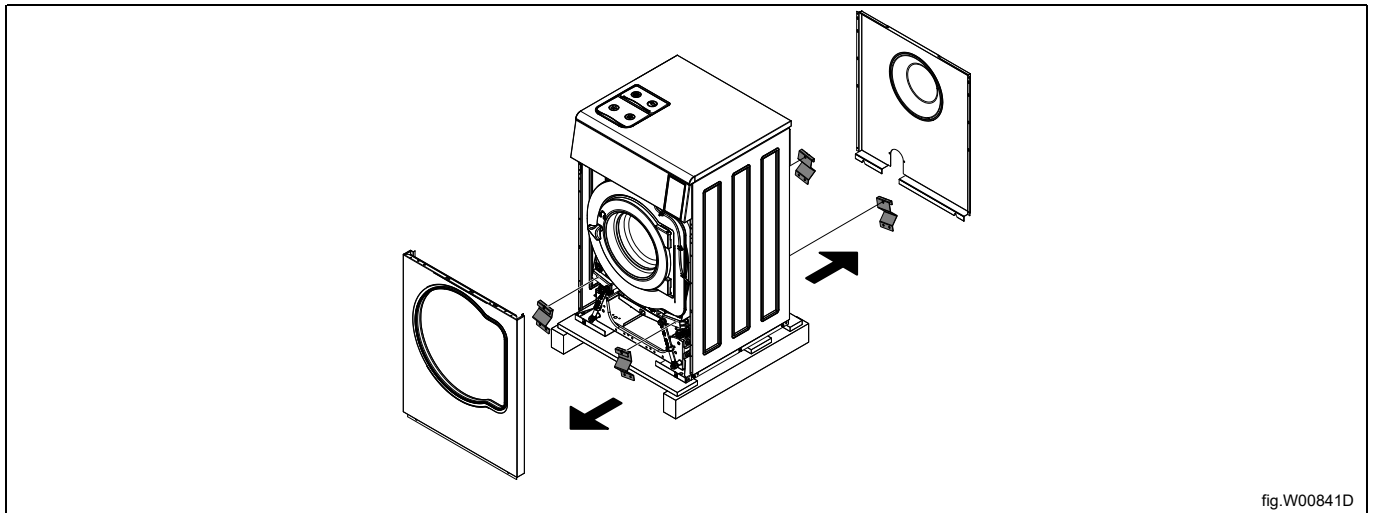
4.1.1 WH6-7, WH6-8, WH6-11

Remove the front and rear panel.

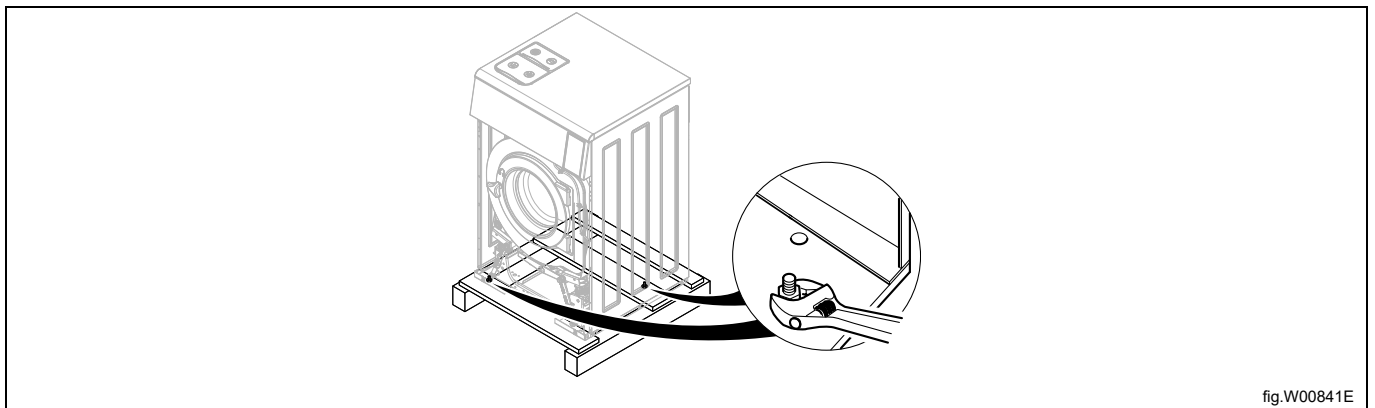
Remove the four transport supports. Save the transport supports if the machine needs to be moved in the future.

Note!

Once the transport supports have been removed, handle the machine carefully to avoid damage to the suspension components.



Remove the bolts between the machine and pallet. There is one to the right in the front of the machine and another diagonally opposed to it, at the back of the machine.



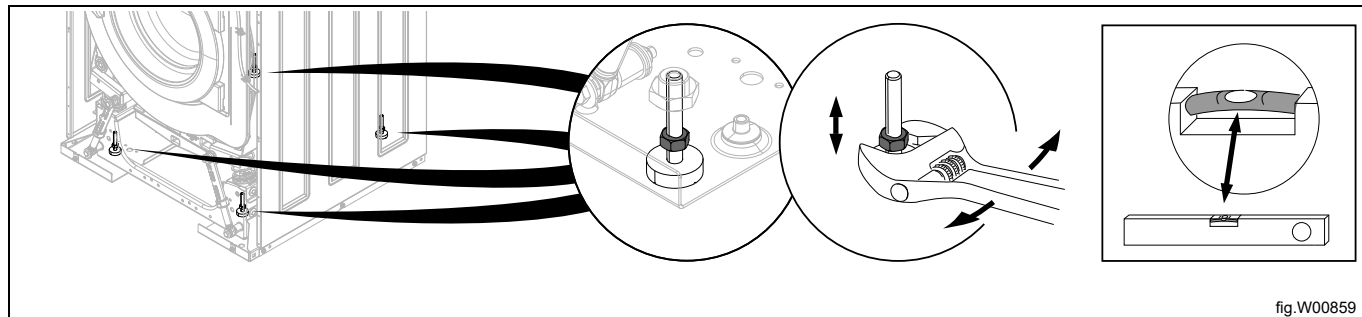
Remove the machine from the pallet.

Note!

When moving the machine, handle it with care. Make sure that the machine does not come down on the floor with either of the rear corners first. The side panel of the machine can be damaged.

Place the machine on its final position.

Mount the supporting feet.



Remount the panels.

4.1.2 WH6-14, WH6-20, WH6-27, WH6-33

Note!

Two persons are recommended for the unpacking.

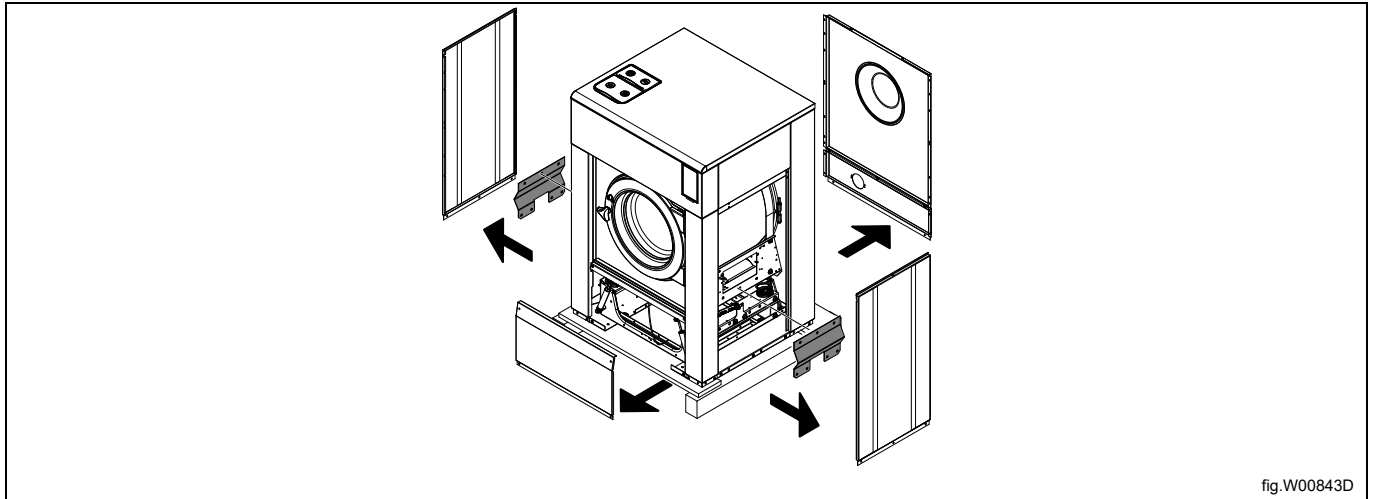
Remove the side panels.

Remove the front and rear panel.

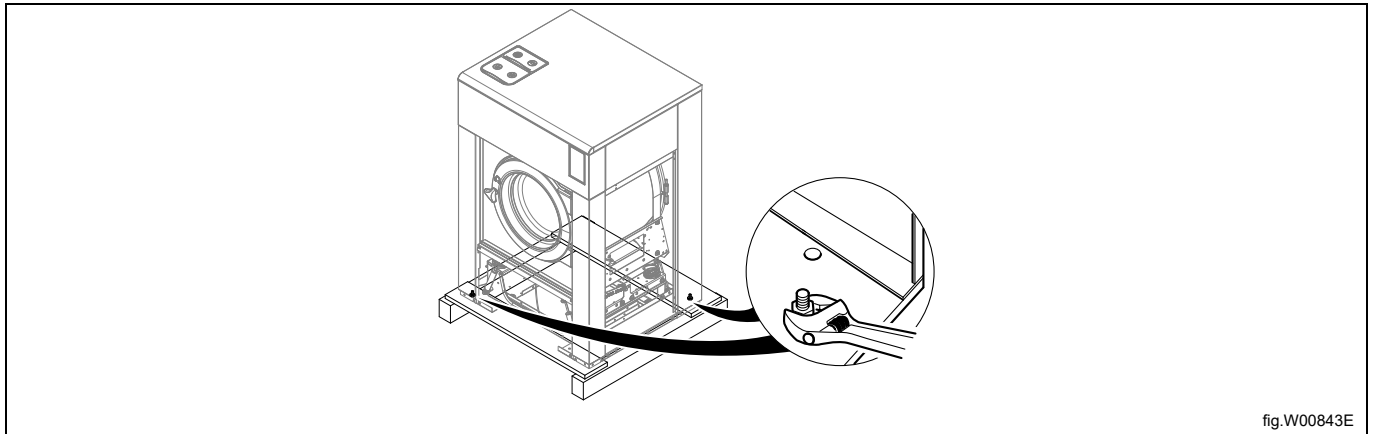
Remove the transport securities. Save the transport securities if the machine needs to be moved in the future.

Note!

Once the transport securities have been removed, handle the machine carefully to avoid damage to the suspension components.



Remove the bolts between the machine and pallet. There is one to the right in the front of the machine and another diagonally opposed to it, at the back of the machine.



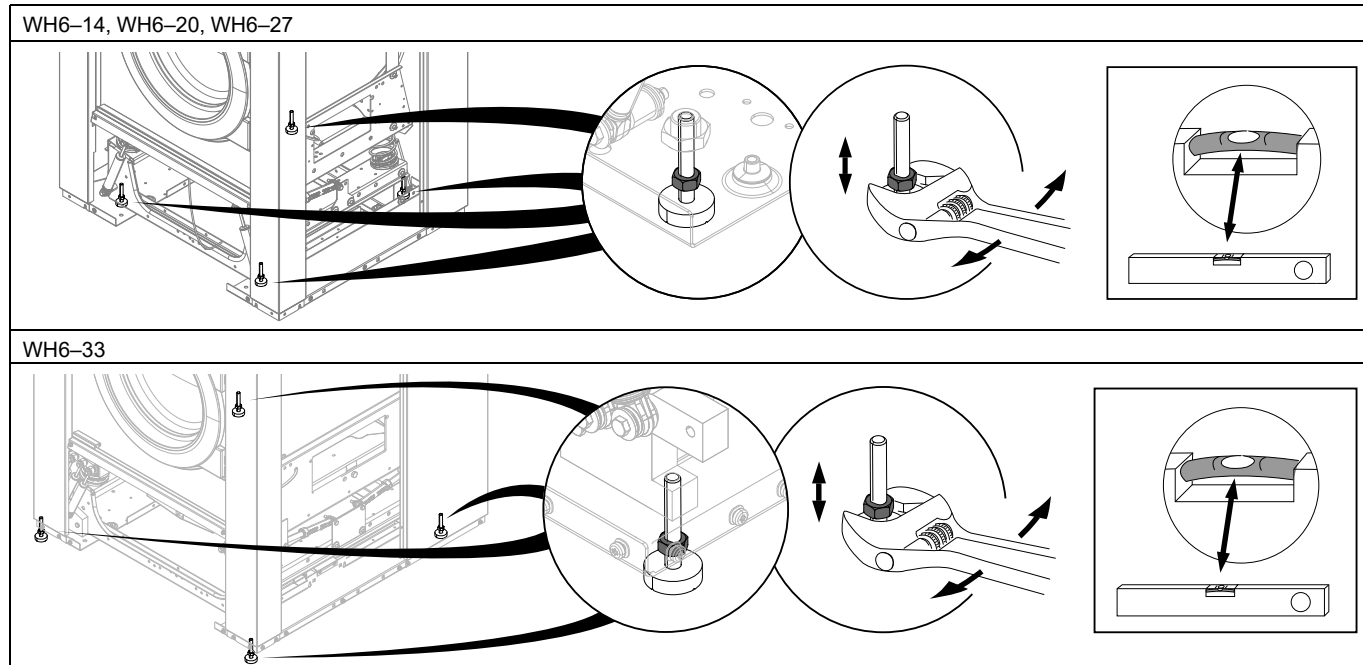
Remove the machine from the pallet.

Note!

When moving the machine, handle it with care.

Place the machine on its final position.

Mount the supporting feet.



Remount the panels.

4.2 Recycling instruction for packaging

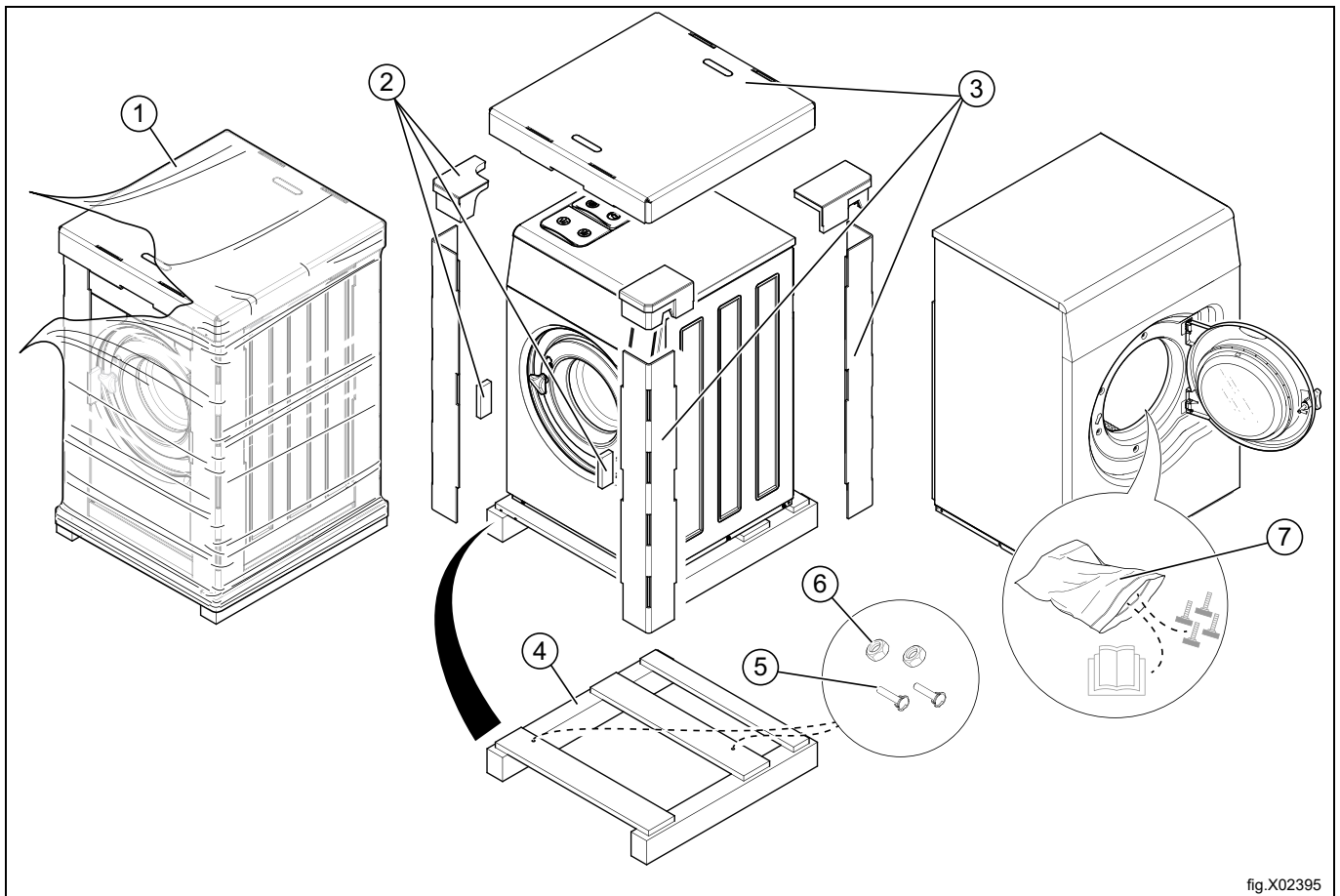


fig.X02395

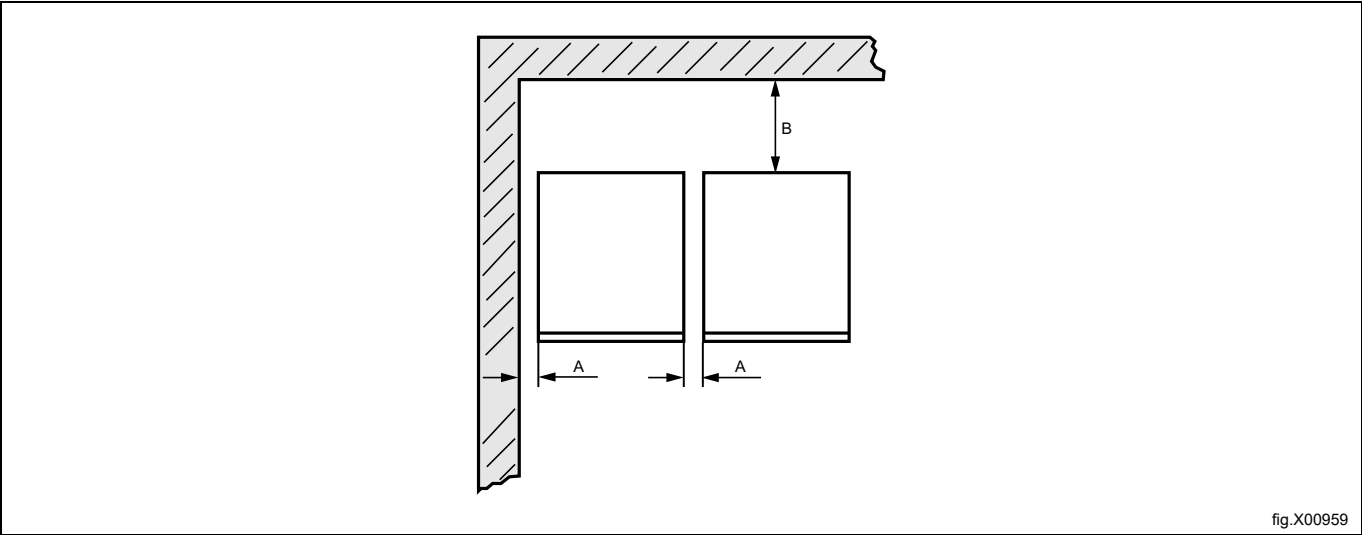
Fig.	Description	Code	Type
1	Wrapping film	LDPE 4	Plastics
2	Corner protection	PS 6	Plastics
3	Cardboard packaging	PAP 20	Paper
4	Pallet	FOR 50	Wood
5	Screw	FE 40	Steel
6	Nut	FE 40	Steel
7	Plastic bag	PET 1	Plastics

4.3 Siting

Install the machine close to a floor drain or open drain.

The machine should be positioned so that there is plenty of room for working, both for the user and service personnel.

The figure shows minimum distance to a wall and/or other machines. Failure to respect the prescribed distances will prevent easy access for maintenance and service operations.



A	50 mm
B	500 mm

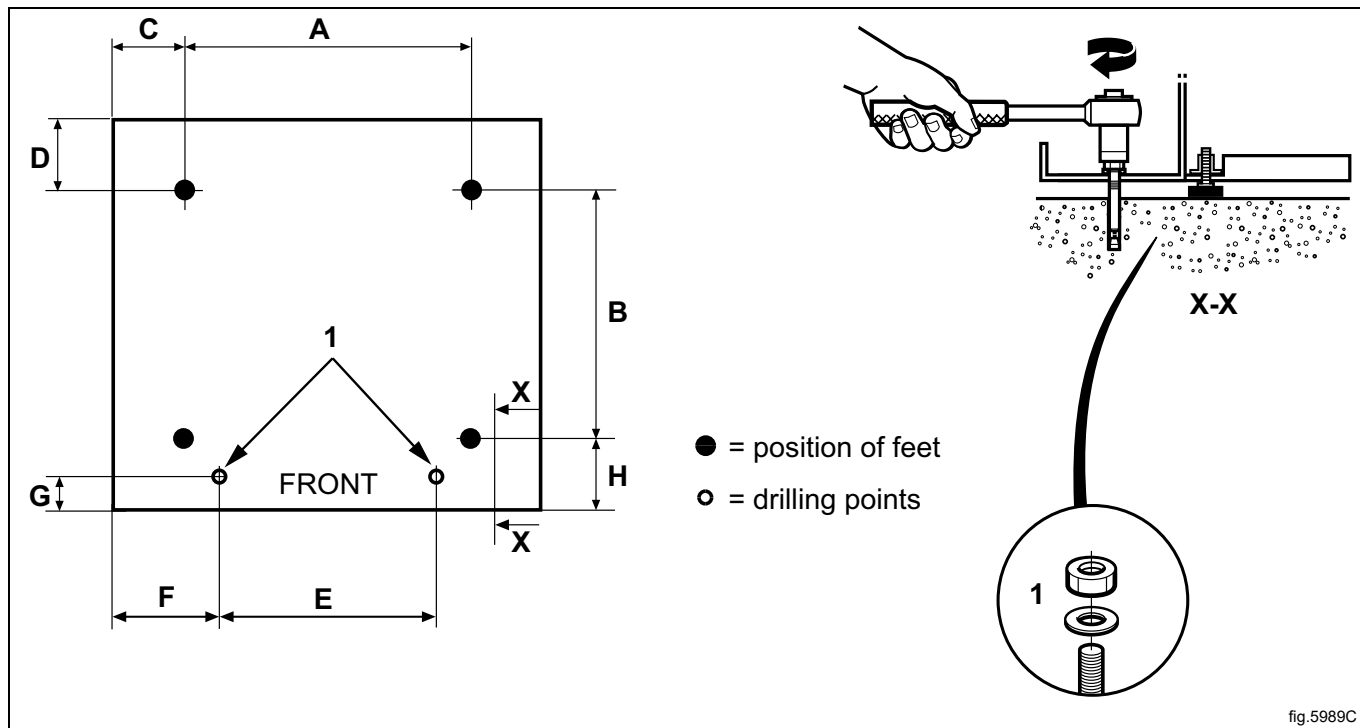
4.4 Mechanical installation

If the machine is not to be mounted on a base the machine must be fastened to the floor with the enclosed expansion bolts.

The table shows the correct position of feet and drilling points.

WH6-7-WH6-11: Mark and drill two holes ($\varnothing$ 8 mm) about 40 mm deep in position (1).

WH6-14-WH6-33: Mark and drill two holes ($\varnothing$ 10 mm) about 50 mm deep in position (1).



mm	A	B	C	D	E	F	G	H
WH6-7	495	460	110	125	375	170	40	100
WH6-8	495	460	110	125	375	170	40	100
WH6-11	575	465	130	140	455	185	35	95
WH6-14	635	490	135	175	515	195	65	125
WH6-20	715	545	125	205	595	185	65	125
WH6-27	790	615	115	180	670	175	65	125
WH6-33	900	835	60	140	670	175	60	80

Place the machine over the two drilled holes. The holes are at the front of the machine.

Level the machine with the feet of the machine. Screw in the feet as much as possible before starting to level the machine. This will make the machine stand steadier.

The maximum height adjustment of the feet is 30 mm for WH6-7-WH6-11 and 50 mm for WH6-14-WH6-33.

Insert the expansion bolts (1) into the holes drilled in the floor. Fit the washers and nuts and tighten with tightening torque 5 Nm.



It is of the utmost importance that the machine is placed in level, from side to side as well as front to rear. Remount the panels when ready.

5 Marine installation



The maximum inclination allowed in any direction is 4°.



To ensure steadiness of the machine; the machine must be fastened to the floor.

6 Water connection

All water intake connections to the machine should be fitted with manual shut-off valves and filters, to facilitate installation and servicing.

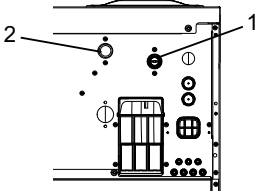
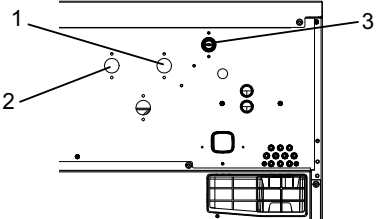
Water pipes and hoses should be flushed clean before installation.

The machine shall be connected with new water hoses. Re-used water hoses must not be used.

Hoses are to be of an approved type and grade and comply with IEC 61770 and any applicable local regulations.

After installation hoses must hang in gentle arcs.

All connectors present on the machine must be connected. The table shows the possible connection options, which will depend on the water types to be connected to the machine. Information is also available on the panel above the connections.

	Water type	Water connection
	WH6-7, WH6-8 • Cold and hot	WH6-7, WH6-8 1. Cold 2. Hot
	WH6-14, WH6-20, WH6-27, WH6-33 • Cold and hot	WH6-14, WH6-20, WH6-27, WH6-33 1. Cold 2. Hot 3. Cold (for detergent container) / Hot

EU countries: A double check valve compliant with EN 13959 and an inlet hose compliant with EN 61770 shall be installed for each inlet (A).

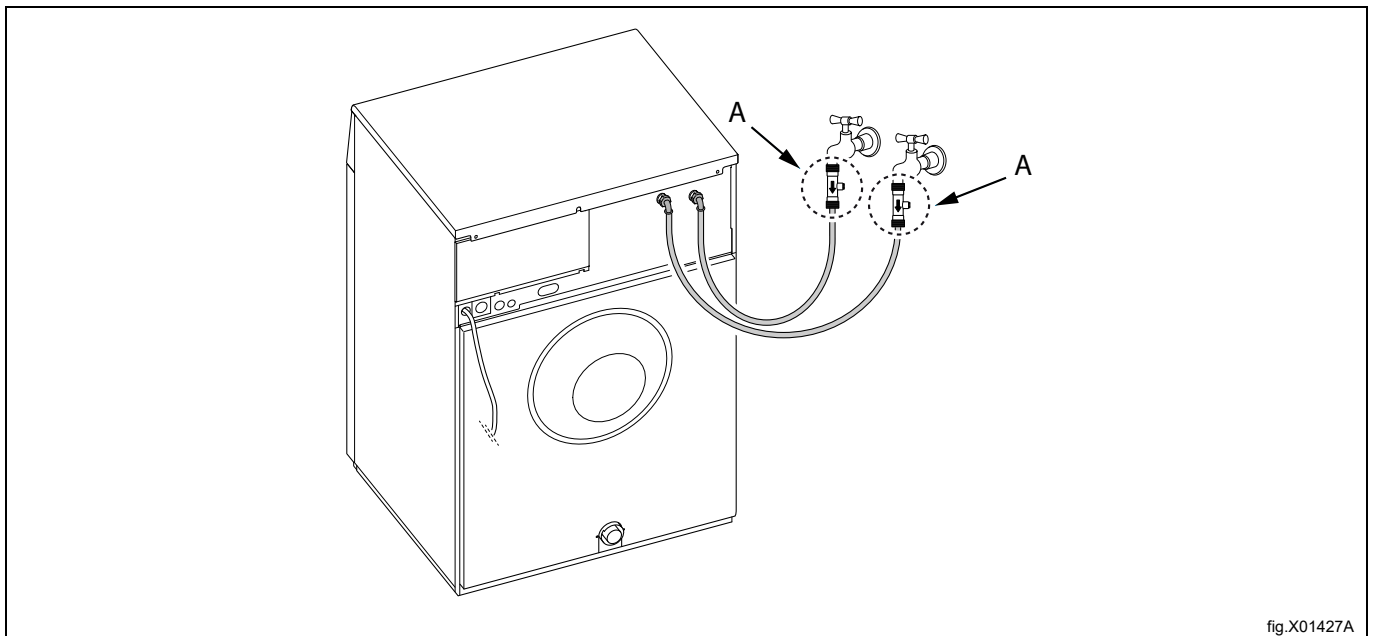


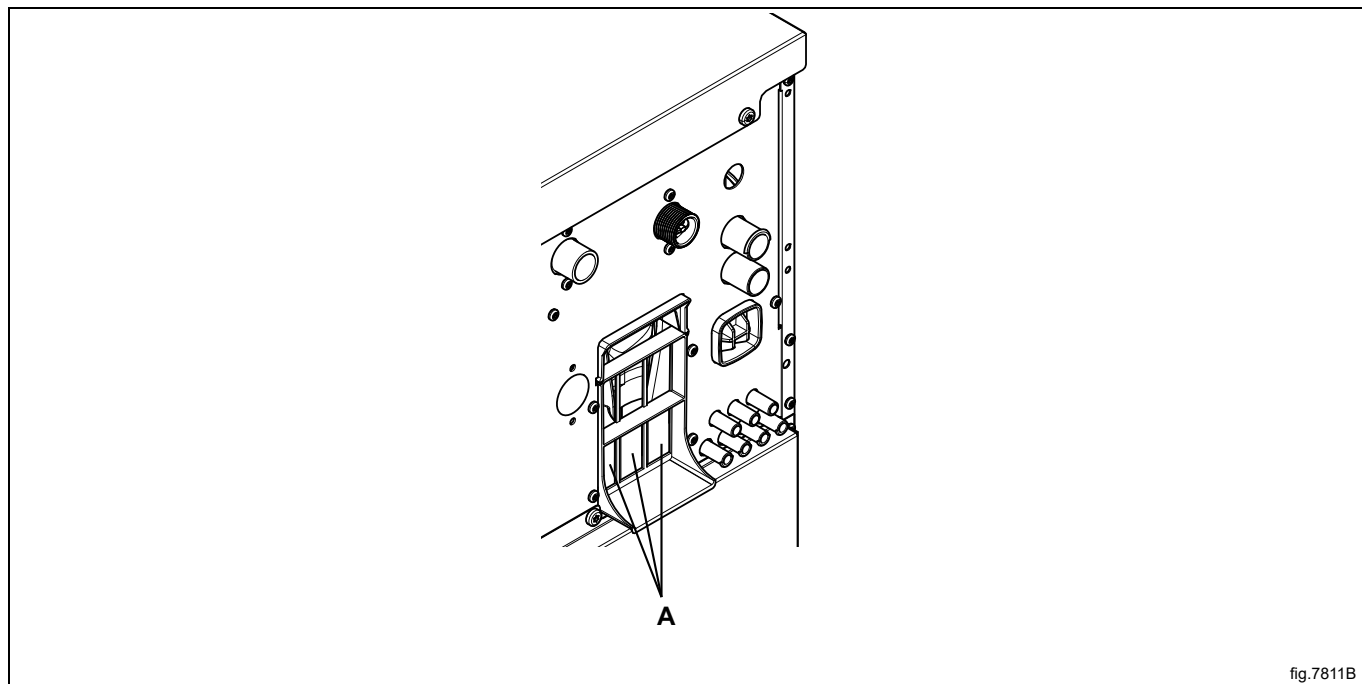
fig.X01427A

There is also an extra water valve which can be used for hard water if soft water is connected to 1.

This valve can also be used for water re-use from tank.

If pump is used, it is only a water connection without valve.

For WRAS-approved machines: Remove the three plastic covers (A).



Water pressure:

Continuous operating pressure: 50–800 kPa (0.5-8 kp/cm²)

Maximum: 1000 kPa (10 kp/cm²)

Recommended: 200–600 kPa (2–6 kp/cm²)

Note!

If the water pressure is below the minimum value, the wash result can not be guaranteed for certain program.

For WRAS-approved machines; always check connection requirements on WRAS website.

For KIWA-approved machines; always check connection requirements on KIWA website.

For NSF-approved machines; always check connection requirements on NSF website.

Plumbing

This machine is approved for all UK applications as suitable for category 5.

The product is listed in the WRAS regulations advisory scheme directory and is suitable for direct connection to mains drinking water. No special plumbing arrangements e.g. break tanks are required.

Water Council approved double check valves should be fitted in between the stopcocks and the water inlet hoses.

FOR AUSTRALIA:

The appliance shall be installed in accordance with the Plumbing Code of Australia (the PCA).

The appliance need to be installed using dual check valves.

Contact details for after sales service: service.au@electroluxprofessional.com

7 Connection of external dosing systems

7.1 Connection of the hoses

The machine is prepared for connection of external dosing systems or water re-use systems etc.

The connections are closed at delivery. Open any of the connections that shall be used by drilling a hole where the hoses shall be connected.

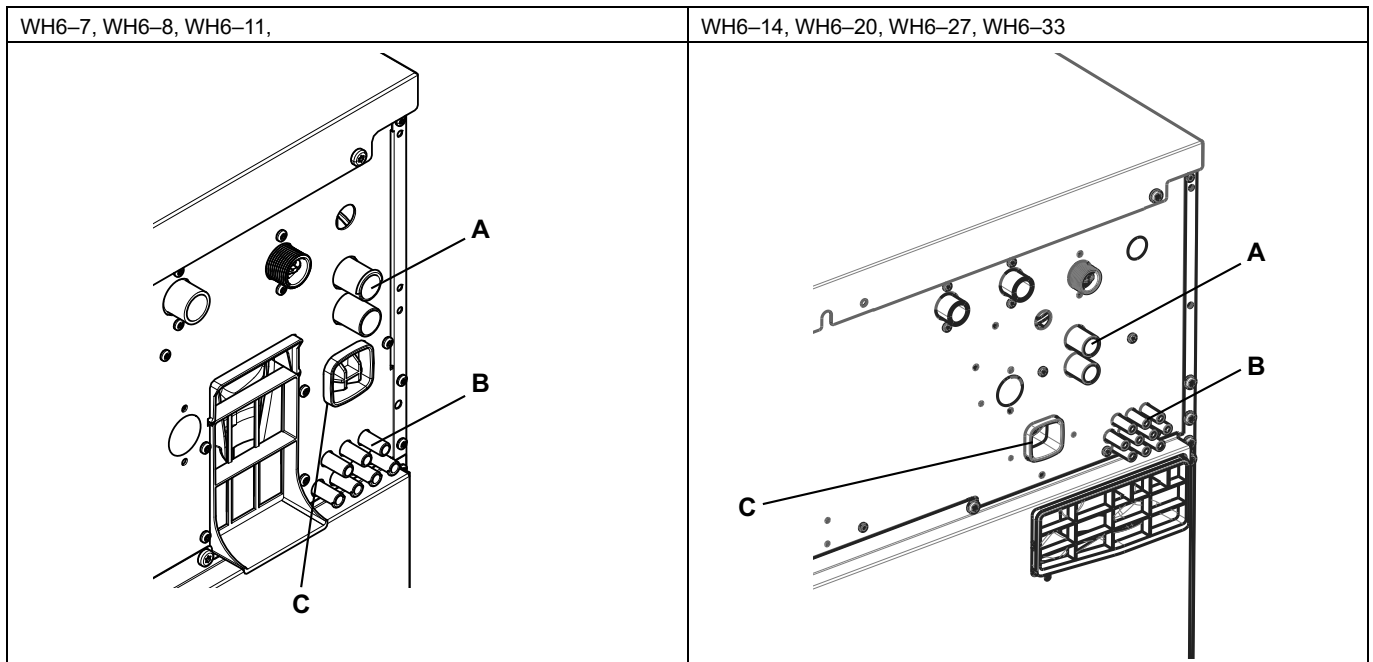
Note!

Make sure there is no burrs left after drilling. When removing burrs make sure burrs does not fall into the siphon breaker.

A = $\varnothing$ 17 mm (used for external dosing systems or systems for re-use of water).

B = $\varnothing$ 6 mm (used for external dosing systems only).

C = Only used for external liquid manifold. (Separate instructions enclosed when ordering).



Always connect hoses on connections (A) with a hose clamp.

For connections (B); if the hoses are made of a soft material such as silicone or similar, use a cable tie to fasten the hose on the connection. If the hoses are made of a hard material, it is not recommended to make the connection tighter by using a cable tie.

Note!

Equipment for external dosing must only be connected to work on pump pressure and not on network pressure.

7.2 Electrical connection of external dosing system



The power supply to the external dosing system must never be connected to the machine's incoming terminal block or to the edge connectors on the I/O-board.



7.2.1 Machine with connectors

Connect the external dosing system to connections A and B on the machine.

Connect the signal cable to B and the power supply to A.

For Efficient dosing system the cables are delivered with the machine.

Connect the power supply cable to the machine A and the other end of the cable together with the cable from Efficient Dosing in a connection box or with plug and receptacle.

Connect one end of the cable to the Efficient Dosing Controller J2 and the other end to the machine B.

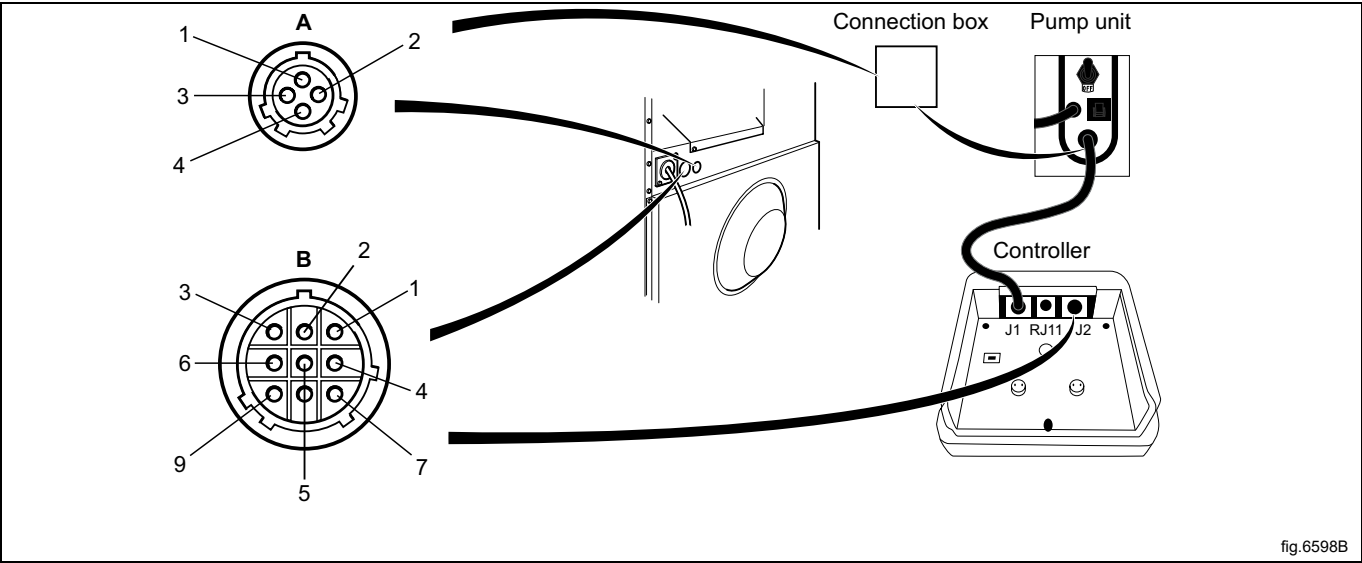


fig.6598B

	A
1	Line
2	Neutral
3	
4	Ground

	B
1	Neutral
2	Program run
3	Gnd
4	Signal 2
5	Signal 3
6	Signal 4
7	Signal 5
8	Rx
9	Tx

7.2.2 Machine without connectors

Connect the external dosing system to the I/O board, which is located to the right of the incoming power supply. The I/O board has edge connectors for connecting external dosing systems. Edge connectors on the I/O board can be loosened for connecting cables.

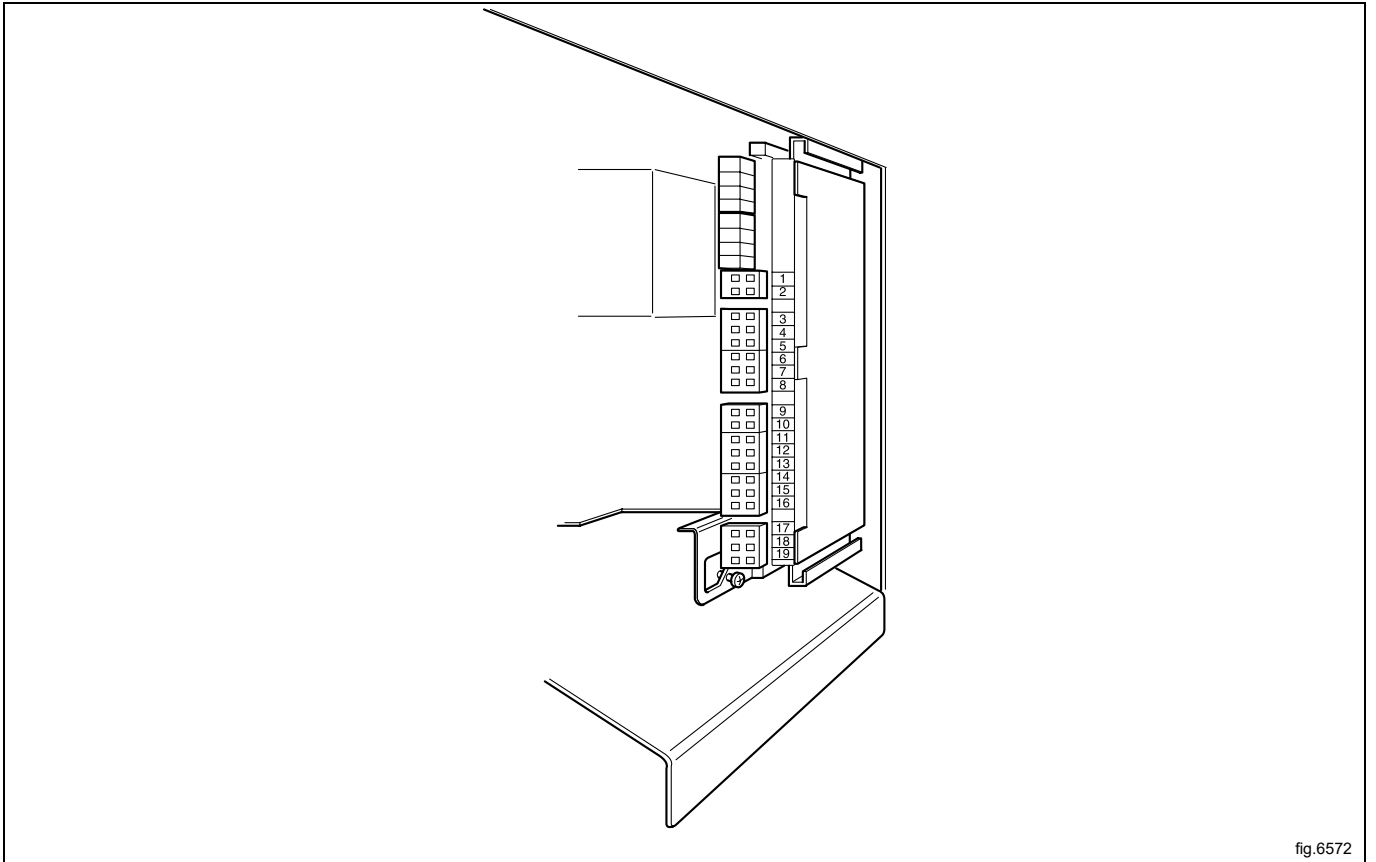


fig.6572

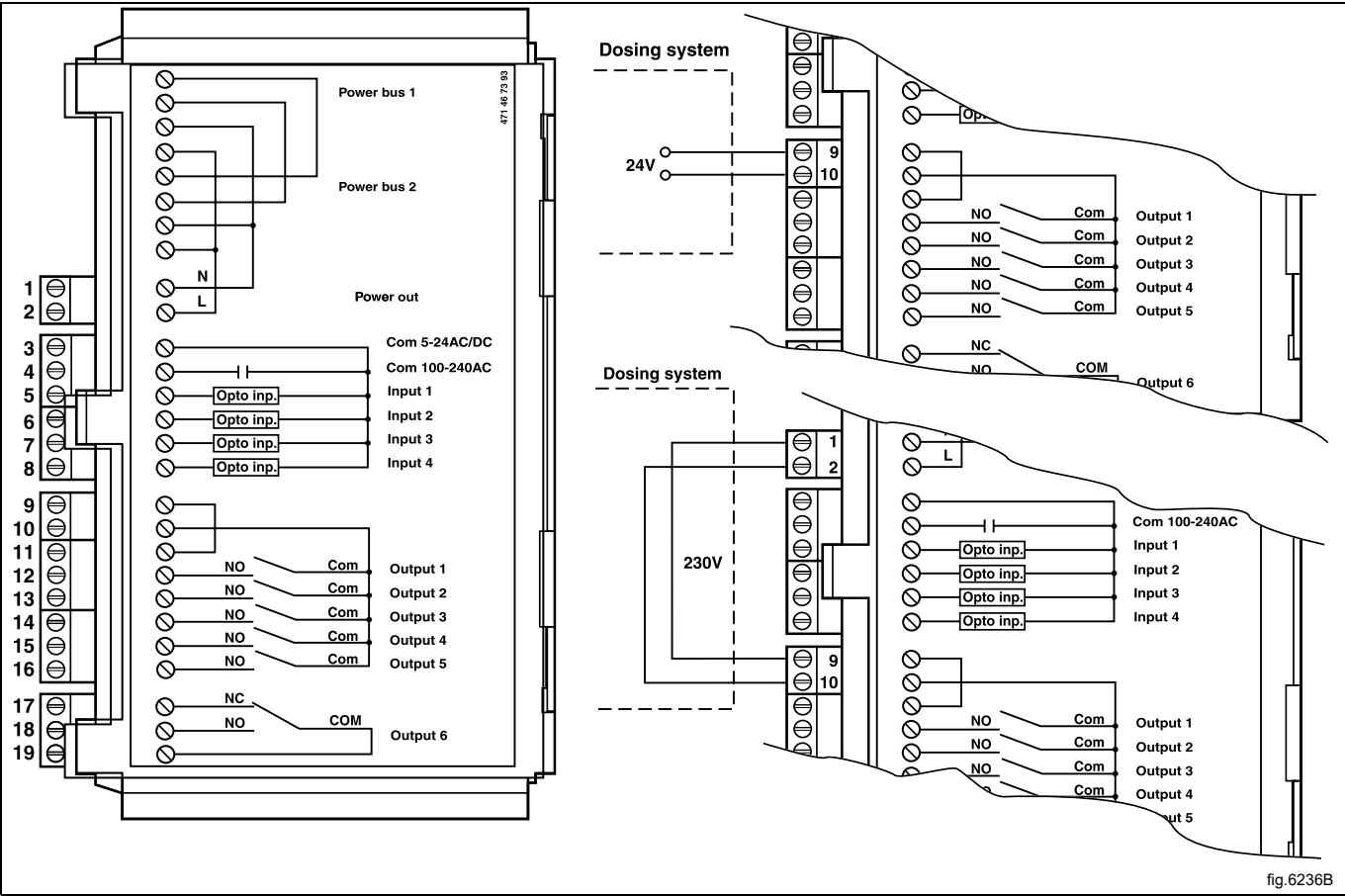
- 11 = N
- 18 = Program run
- 12 = Signal 1
- 13 = Signal 2
- 14 = Signal 3
- 15 = Signal 4
- 16 = Signal 5

7.2.3 Outputs

Connect the power supply (e.g. 24V DC) for the external liquid supplies to 9 and 10. If an internal power supply (from the machine) is being used, it can be taken from 1 (N) and connected to 9 and from 2 (L) and connected to 10. Max load on the outputs 0.5 A.

Signals for external liquid supplies 1-5 are connected to 12-16 where connector:

- 12 = Signal 1
- 13 = Signal 2
- 14 = Signal 3
- 15 = Signal 4
- 16 = Signal 5



	6M14	6F01	6R01	6F02	Other programs
Signal 1	-	Pre-wash	Pre-wash	Pre-wash	Pre-wash
Signal 2	Main wash	Main wash	Main wash	Main wash	Main wash
Signal 3	Softener	Softener	Softener	Softener	Softener
Signal 4	Mop last rinse	Desinfection	Pr 1 last rinse	Mainwash	-
Signal 5	Bleach	Bleach	Bleach	Bleach	Bleach

7.2.4 Inputs

The signal level can be 5-24V DC/AC or 100- 240V AC. For 5-24V, the signal reference is connected to 3 and for 100-240V to 4. Potentials on the inputs cannot be mixed.

Note!

The I/O board will be damaged if the voltage on connection 3 is too high > 24V.

Connection 8 may be connected if the program is to pause, e.g. while detergent is being dosed.

The figure shows an example of engaging a 24V pause signal. The program will pause for as long as the pause signal remains activated (high).

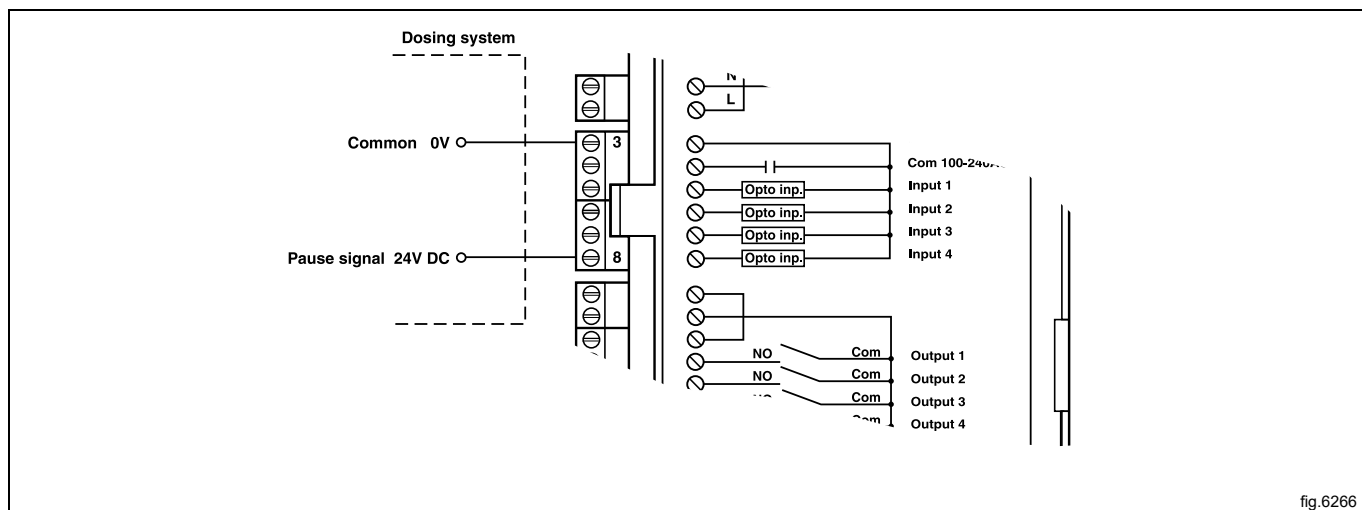


fig.6266

Connection 7. If this is connected, an error message will be displayed if any of the chemical tanks are empty. The program will continue, however.

The figure shows an example of engaging a normal open contact.

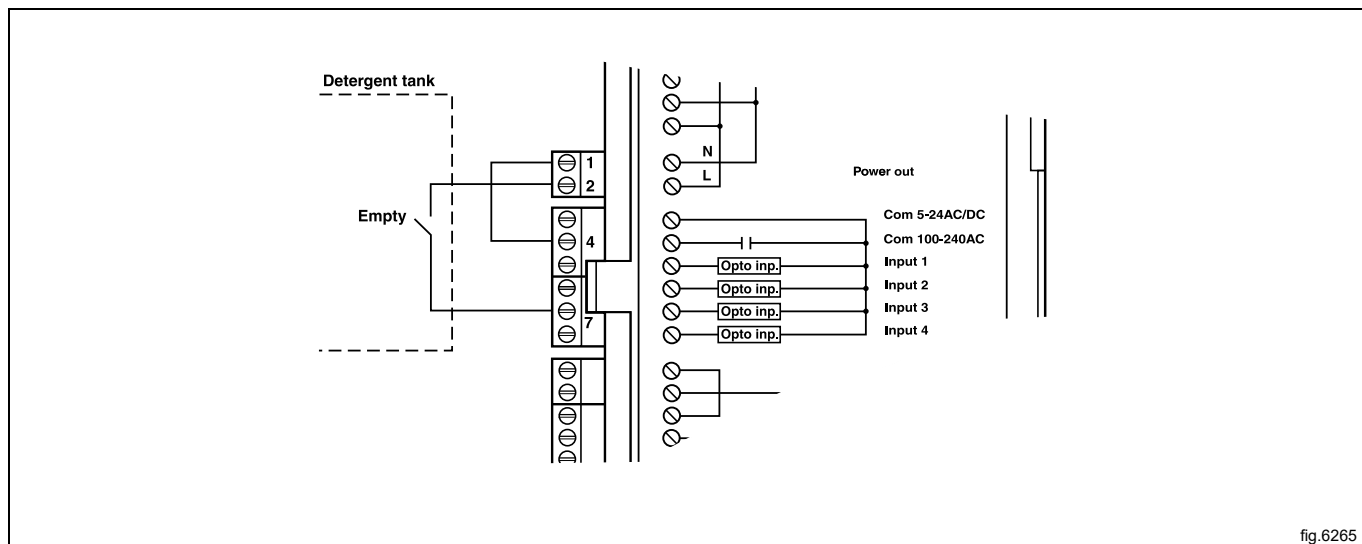


fig.6265

8 Drain connection

Connect a 75 mm (50 mm for models WH6–7, WH6–8, WH6–11) pipe or rubber hose to the machine's drain pipe, ensuring a downward flow from the machine. Avoid sharp bends which may prevent proper draining.

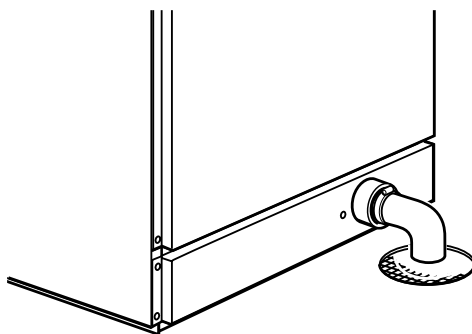


fig.5330

Drain pump (for models WH6–7, WH6–8, WH6–11)

The drainage pipe should be located over a floor drain, drainage channel or the like.

The highest part of the drain hose shall be positioned according to the figure.

Make sure there is no kinks in the hose.

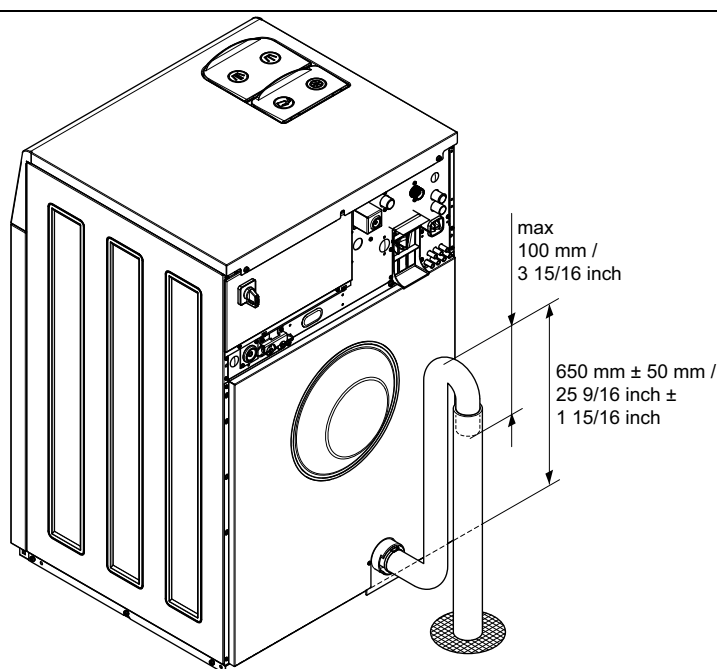


fig.X02458

9 Electrical connection

9.1 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.

When connecting to a terminal block, the connection cable shell must be stripped 10-11 mm. The cable area must be at least 0.5 mm² and no more than 4 mm² (AWG12/AWG20). The terminal block used is a spring loaded cage clamp.

For AU/NZ: Fixed wiring is in accordance with AS/NZS 3000.

9.2 Electrical connections

WH6-7

Electrical connections					
Heating alternative	Main voltage	Hz	Heating power kW	Total power kW	Recommended fuse A
Electric heated	220-240V 1/1N~	50/60	3.0	3.4	16
	220-240V 1/1N~	50/60	5.4/7.5	5.7/7.8	25/32
	220-240V 3~	50/60	3.0	3.4	10
	220-240V 3~	50/60	5.4/7.5	5.7/7.8	16/25
	380-415V 3N/3~	50/60	3.0	3.4	10
	380-415V 3N/3~	50/60	5.4/7.5	5.7/7.8	10/16
	440V 3~	50/60	5.4/7.5	5.7/7.8	10/16
	480V 3~	60	5.4/7.5	5.7/7.8	10/16
Non heated/Steam heated	208-240V 1/1N~	50/60	¹	1.0	10
	380-480V 1~ ²	50/60	¹	1.0	10

1. Total power and recommended fuse does not depend on the heating power in those cases.

2. Prepared for 3~

WH6-8

Electrical connections					
Heating alternative	Main voltage	Hz	Heating power kW	Total power kW	Recommended fuse A
Electric heated	220-240V 1/1N~	50/60	3.0	3.4	16
	220-240V 1/1N'~	50/60	5.4/7.5	5.7/7.8	25/32
	220-240V 3~	50/60	3.0	3.4	10
	220-240V 3~	50/60	5.4/7.5	5.7/7.8	16/25
	380-415V 3N/3~	50/60	3.0	3.4	10
	380-415V 3N/3~	50/60	5.4/7.5	5.7/7.8	10/16
	440V 3~	50/60	5.4/7.5	5.7/7.8	10/16
	480V 3~	60	5.4/7.5	5.7/7.8	10/16
Non heated/Steam heated	208-240V 1/1N~	50/60	¹	1.0	10
	380-480V 1~ ²	50/60	¹	1.0	10

1. Total power and recommended fuse does not depend on the heating power in those cases.

2. Prepared for 3~

WH6-11

Electrical connections					
Heating alternative	Main voltage	Hz	Heating power kW	Total power kW	Recommended fuse A
Electric heated	220-240V 1/1N~	50/60	3.0/7.5/10.0	3.1/7.6/10.1	16/32/50
	220-240V 3~	50/60	3.0/7.5/10.0	3.1/7.6/10.1	10/20/25
	380-415V 3/3N~	50/60	3.0/7.5/10.0	3.1/7.6/10.1	10/16/16
	440V 3~	50/60	7.5/10.0	7.6/10.1	16
	480V 3~	60	10.0	10.1	16
Non heated/Steam heated	208-240V 1/1N~	50/60	¹	1.1	10
	380-480V 1~ ²	50/60	¹	1.1	10

1. Total power and recommended fuse does not depend on the heating power in those cases.

2. Prepared for 3~

WH6-14

Electrical connections					
Heating alternative	Main voltage	Hz	Heating power kW	Total power kW	Recommended fuse A
Electric heated	220-240V 1/1N~	50/60	4.8/13.0	5.2/13.4	25/63
	220-240V 3~	50/60	4.8/13.0	5.2/13.4	16/35
	380-415V 3N/3~	50/60	4.8/13.0	5.2/13.4	10/20
	440V 3~	50/60	13.0	13.4	20
	480V 3~	60	13.0	13.4	20
Non heated/Steam heated	208-240V 1/1N~	50/60	¹	1.2	10
	380-480V 1~ ²	50/60	¹	1.2	10

1. Total power and recommended fuse does not depend on the heating power in those cases.
2. Prepared for 3~

WH6-20

Electrical connections					
Heating alternative	Main voltage	Hz	Heating power kW	Total power kW	Recommended fuse A
Electric heated	220-240V 3~	50/60	18.0	18.5	50
	380-415V 3N/3~	50/60	18.0	18.5	32
	440V 3~	50/60	18.0	18.5	25
	480V 3~	60	18.0	18.5	25
Non heated/Steam heated	208-240V 1/1N~	50/60	¹	2.5	10
	380-480V 1~ ²	50/60	¹	2.5	10

1. Total power and recommended fuse does not depend on the heating power in those cases.
2. Prepared for 3~

WH6-27

Electrical connections					
Heating alternative	Main voltage	Hz	Heating power kW	Total power kW	Recommended fuse A
Electric heated	220-230V 3~	50/60	19.1	19.8	63
	220-240V 3~	50/60	19.8/23.0	20.5/23.7	63/63
	380-400V 3N/3~	50/60	19.1	19.8	32
	380-415V 3N/3~	50/60	19.8/23.0	20.5/23.7	32/35
	440V 3~	50/60	21.0/23.0	21.7/23.7	32/32
	480V 3~	60	22.8/23.0	23.5/23.7	32/32
Non heated/Steam heated	208-240V 1/1N~	50/60	¹	2.6	16
	380-480V 1~ ²	50/60	¹	2.6	10

1. Total power and recommended fuse does not depend on the heating power in those cases.
2. Prepared for 3~

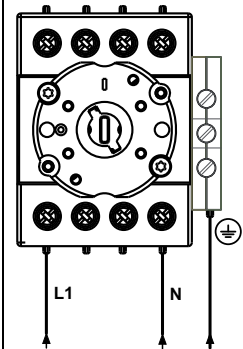
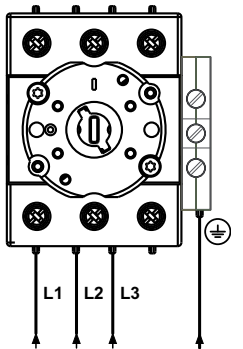
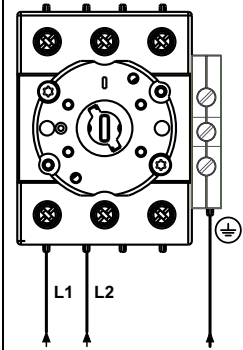
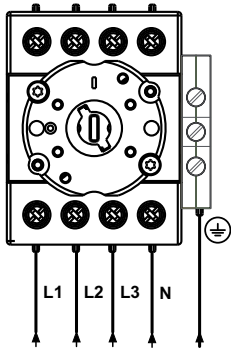
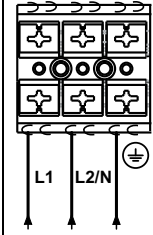
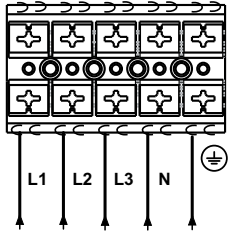
WH6-33

Electrical connections					
Heating alternative	Main voltage	Hz	Heating power kW	Total power kW	Recommended fuse A
Electric heated	220-230V 3~	50/60	19.1	19.4	50
	220-240V 3~	50/60	19.8/23.0	20.2/23.3	50/63
	380-400V 3N/3~	50/60	19.1	19.6	32
	380-415V 3N/3~	50/60	19.8/23.0	20.1/23.3	32/35
	380V 3N~	50	9.5	9.9	16
	440V 3~	50/60	21.0/23.0	21.4/23.3	32/32
	480V 3~	60	22.8/23.0	23.2/23.4	32/32
Non heated/Steam heated	208-240V 1/1N~	50/60	¹	3.5	16
	380-480V 1~ ²	50/60	¹	3.5	10

1. Total power and recommended fuse does not depend on the heating power in those cases.
2. Prepared for 3~

9.3 Machine connection

Connect the earth and other wires as shown.

Single-phase connection		Three-phase connection	
1NAC		3AC	
1AC		3N AC	
1N/1		3N AC	

Single phase machines may be powered either by connection between a phase and neutral or by connecting between two phases.

Example:

Machines for 220-240V single phase may be powered from 380V or 400V or 415V system by connection between a phase and neutral or from 220V or 230V or 240V system by connection between two phases.

9.4 Machine connection with ferrite

9.4.1 WH6-14, WH6-20, WH6-27, WH6-33

To obtain approved level of EMC, it is mandatory to use the ferrite which is enclosed with above listed models. (Note that this is only valid for those models).

Before connecting to the machine, the protective earth (PE) wire shall be wrapped around the ferrite.

Prepare the power cord by making sure the protective earth (PE) wire is longer than the other wires according to the table.

Wire size	L	x times through
AWG14 or 2.5 mm ²	230 mm	x 4
AWG12 or 4 mm ²	250 mm	x 4
AWG10 or 6 mm ²	270 mm	x 4
AWG8 or 10 mm ²	290 mm	x 4
AWG6 or 16 mm ²	330 mm	x 4
AWG4 or 25 mm ²	490 mm	x 4

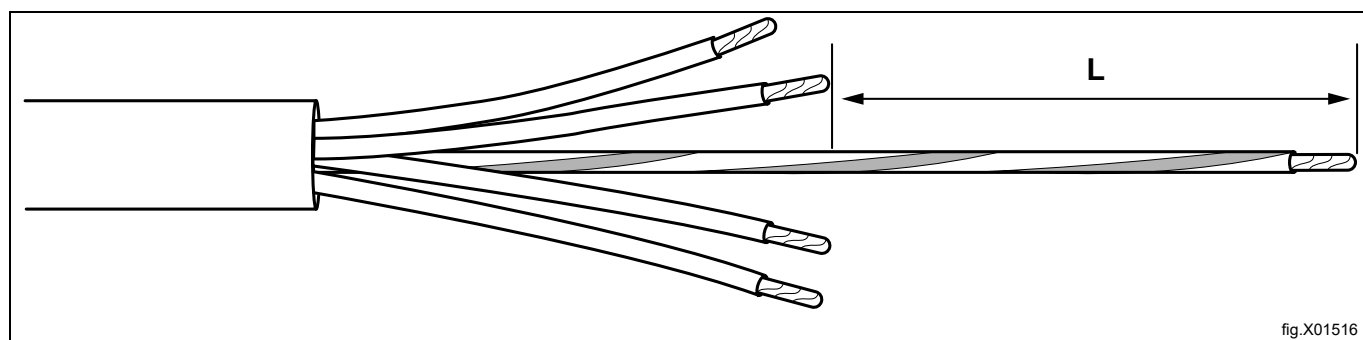


fig.X01516

When the power cord has been prepared according to the table, wrap the protective earth (PE) wire through the ferrite and then connect all wires according to the “Machine connection” section.

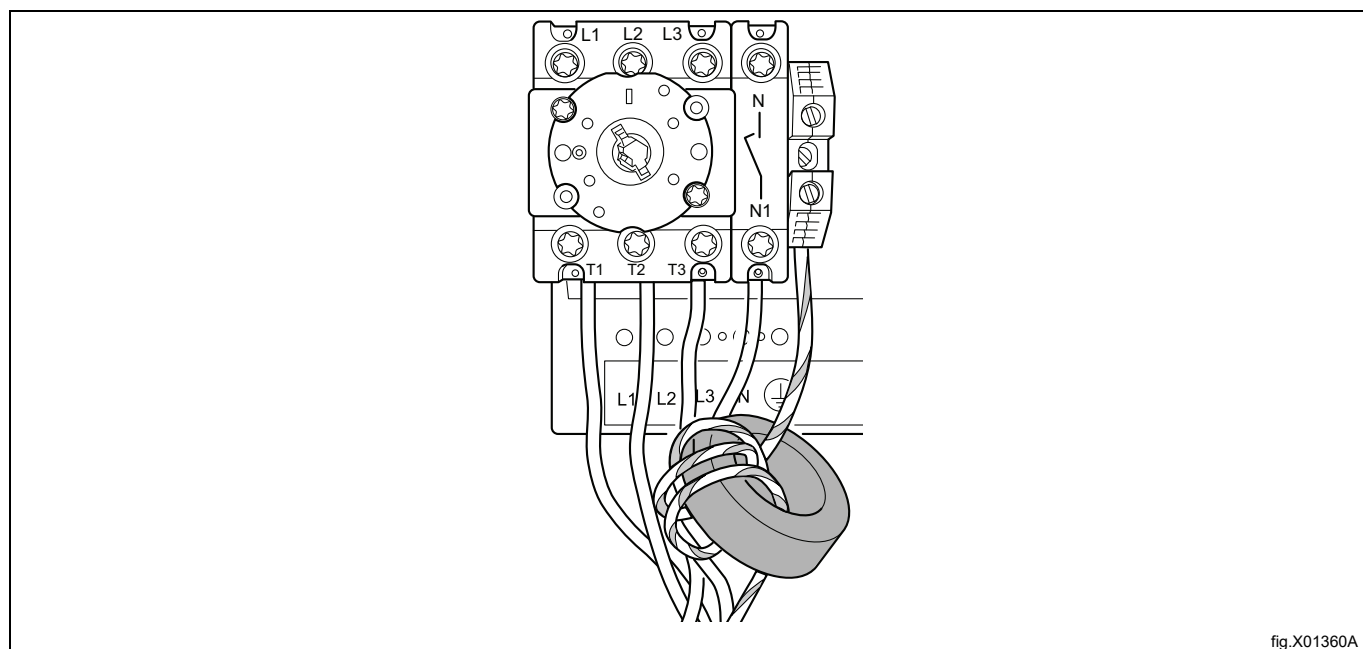


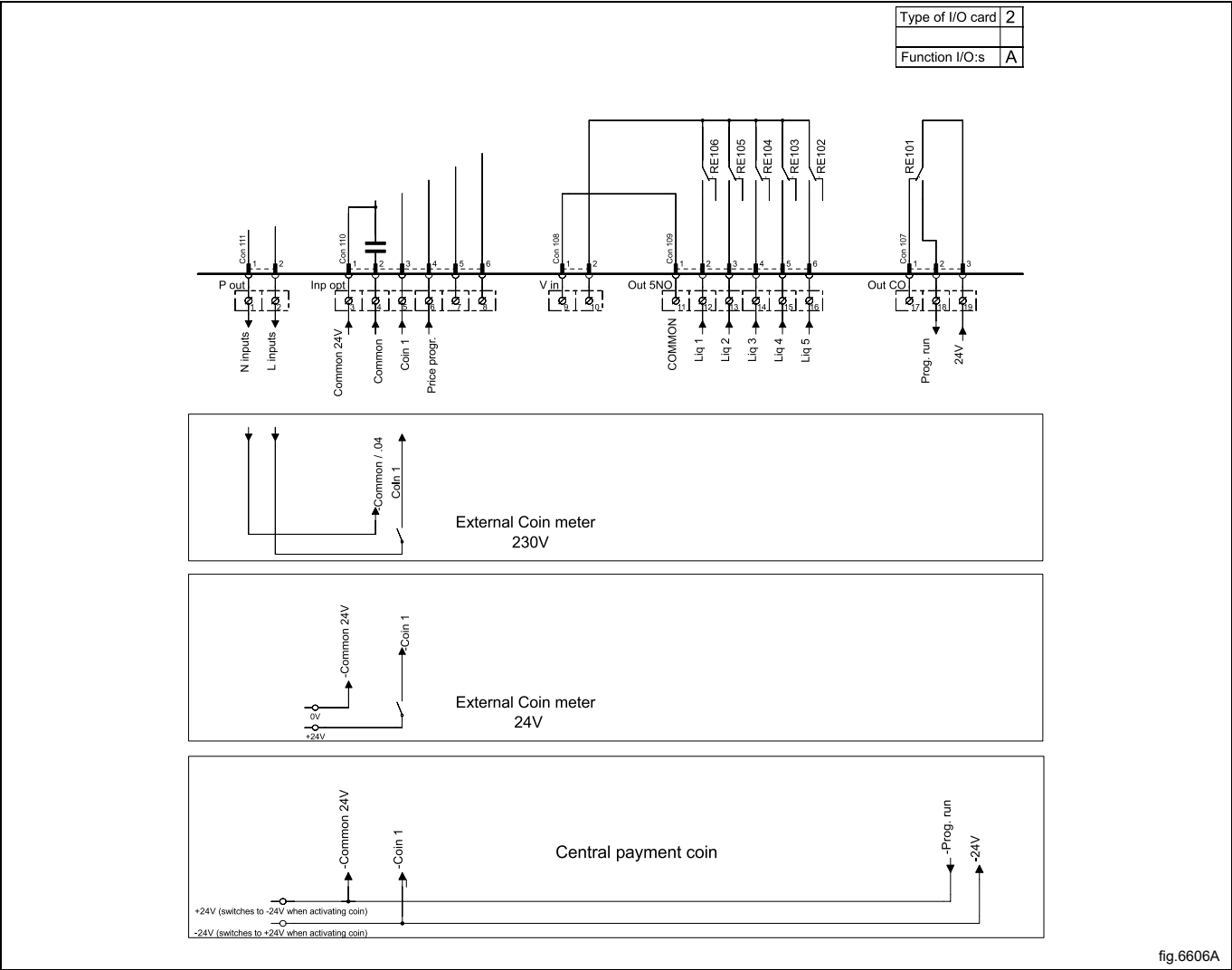
fig.X01360A

9.5 Functions for I/O-cards

The electrical schematic can be one of the following:

9.5.1 External coin meter/Central payment (2A)

The signal received from external coin meters must be a pulse between 300–3000 ms (500 ms is recommended) with a minimum pause of 300 ms (500 ms is recommended) between two pulses.



9.5.2 Central payment (2B)

To start the machine from a central payment system, the payment system must transmit a start pulse to the machine. The start pulse can be either 230V or 24V. In order to receive a feedback signal once the machine has started, 230V or 24V must be connected to connection 19. The feedback signal on connection 18 remains active (high) during the entire program.

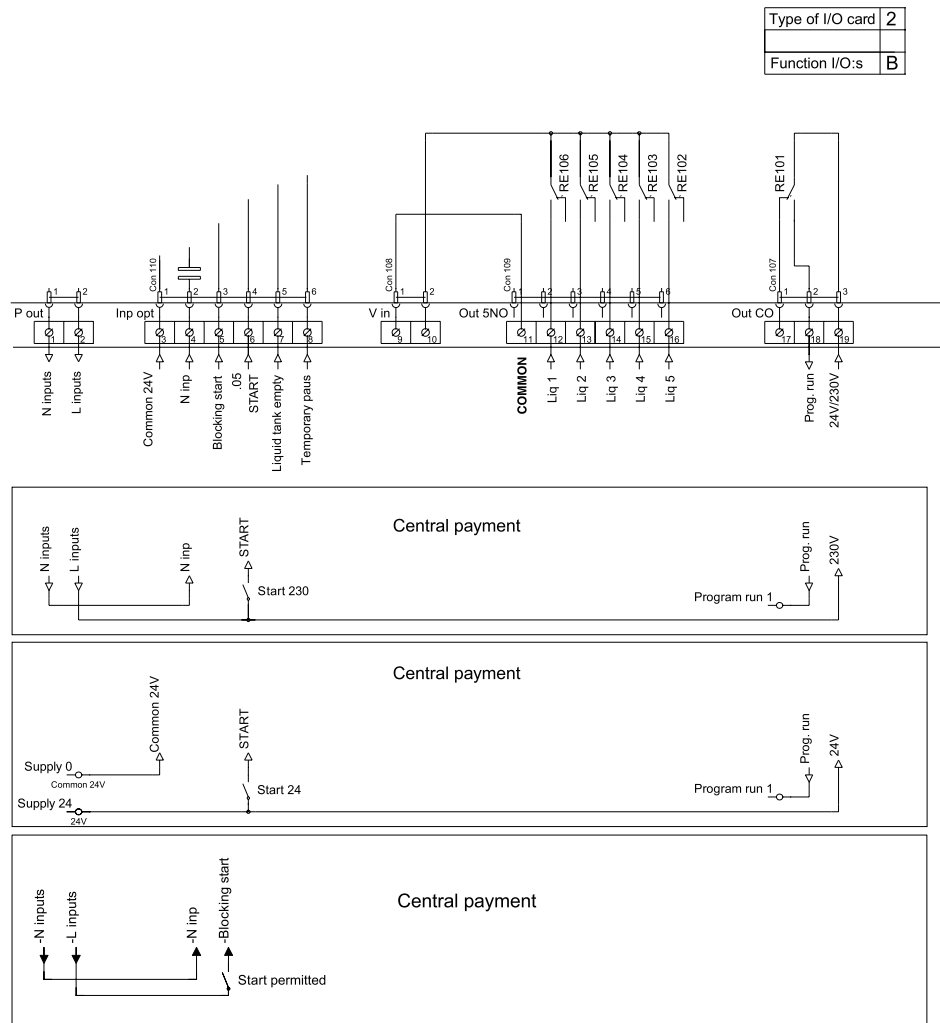


fig.6316A

9.5.3 Central payment (2C)

The central payment or booking system shall transmit an active (high) signal to the machine once permission has been granted to start the machine. The signal must remain active (high) until the machine starts. A feedback signal will be present on connection 18 and remain active (high) whilst the machine door is closed but the program has not started. The feedback signal is powered by 230V or 24V from connection 19.

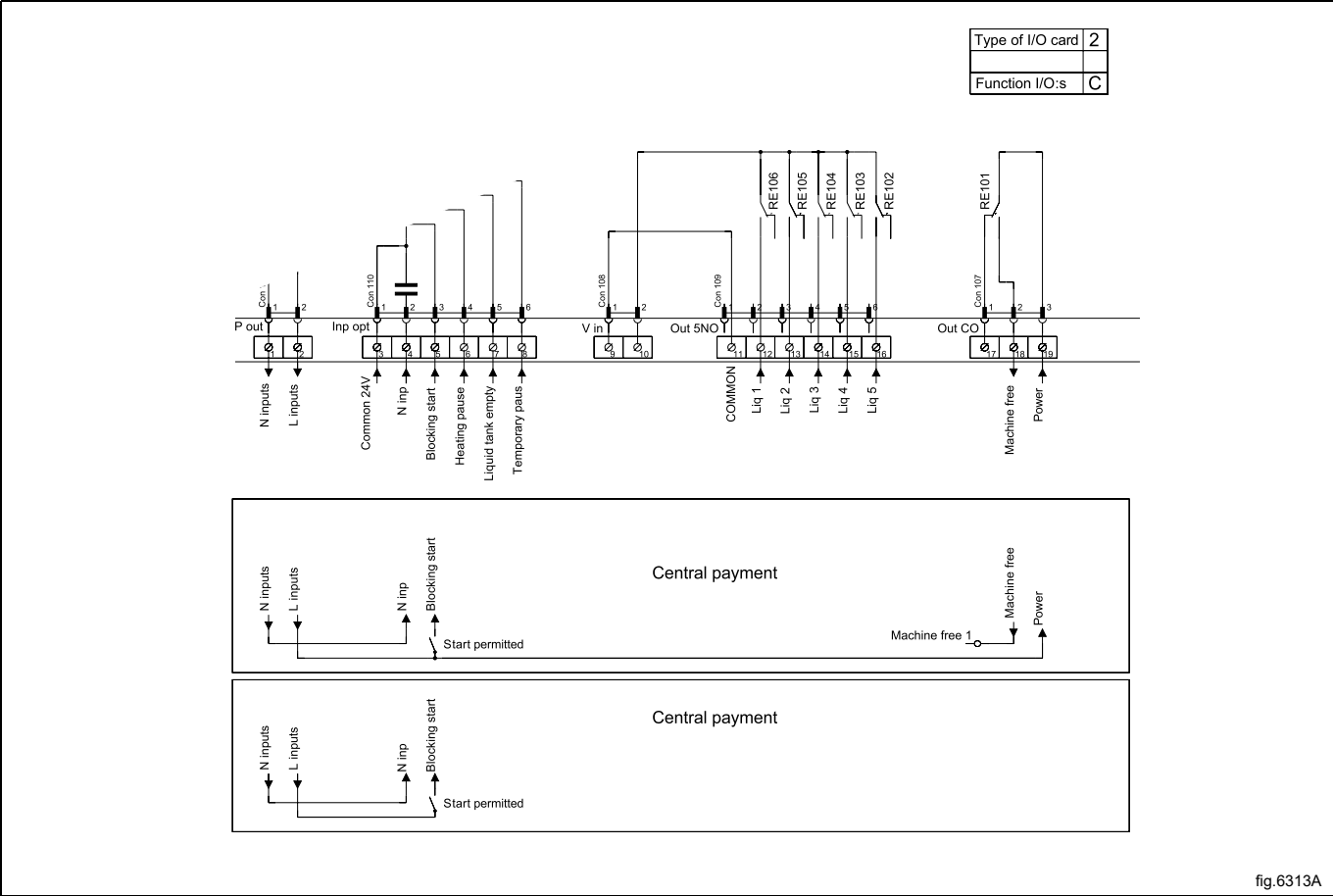


fig.6313A

9.5.4 Outputs for detergent signals and inputs for pause signals, "empty" signal and price reduction (2D)

The figure shows standard function addressing for machines with the coin program package.

By maintaining an active (high) signal on connection 5 ("Price red"), the price of the program can be reduced. This function has a number of uses, including providing reductions during a specific period of the day. Whilst the signal remains active (high), the price of the program is reduced by the percentage entered in the price programming menu.

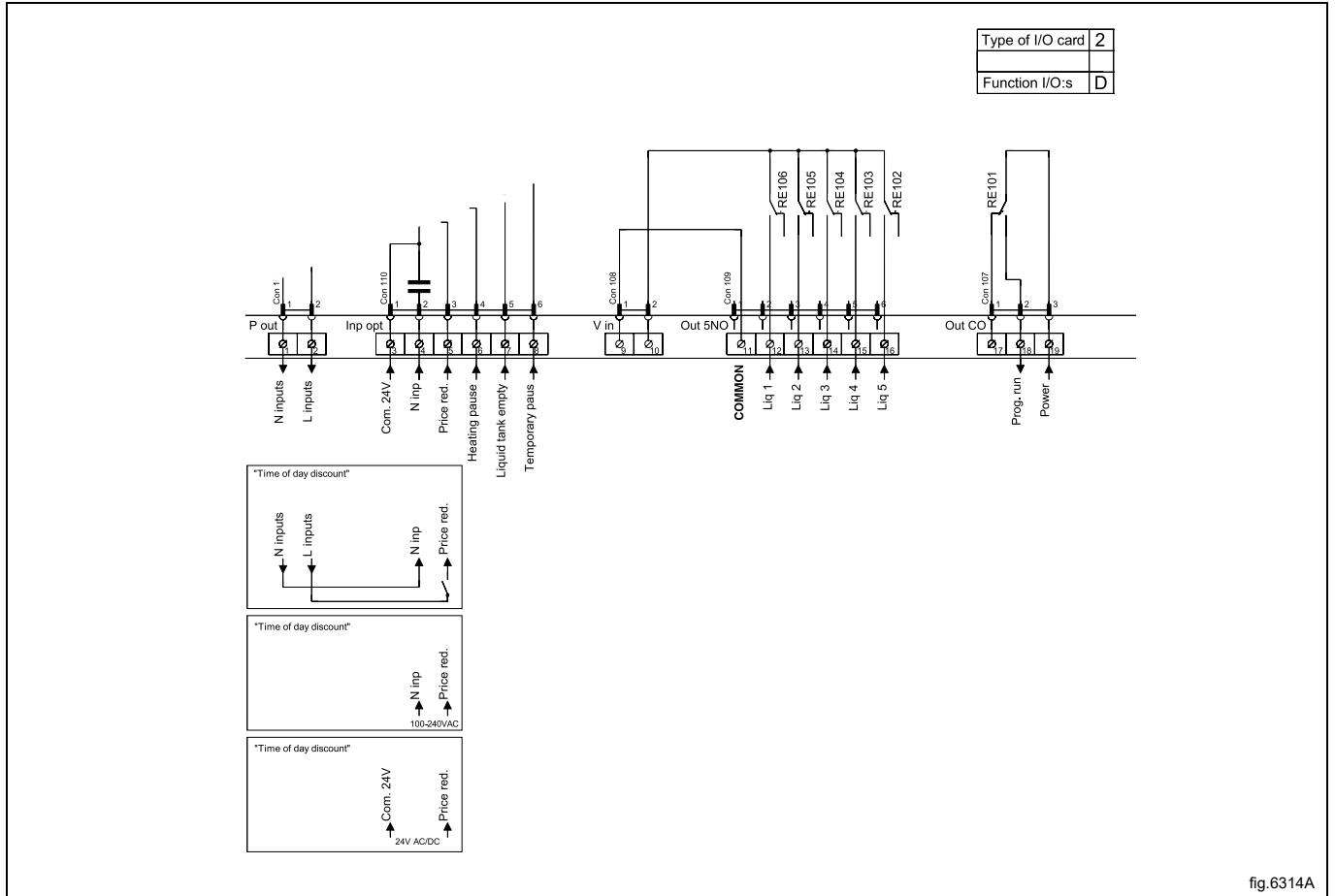


fig.6314A

9.5.5 Central booking/payment (2F)

The central payment or booking system shall provide an active (high) signal to the machine once permission has been granted to start the machine. The signal must remain active (high) until the machine starts. A feedback signal will be present on connection 18 and remain active (high) whilst the program is running. The feedback signal is powered by 230V from connection 19 or external 24V.

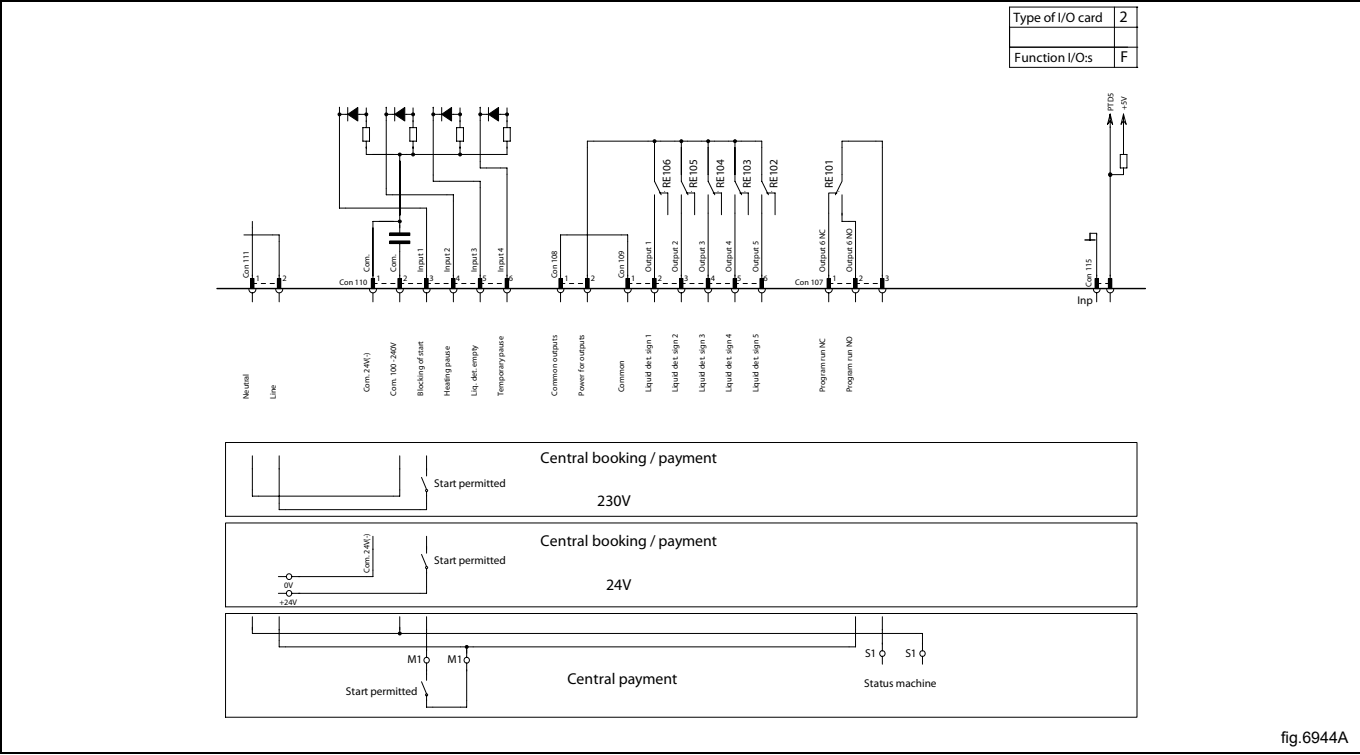
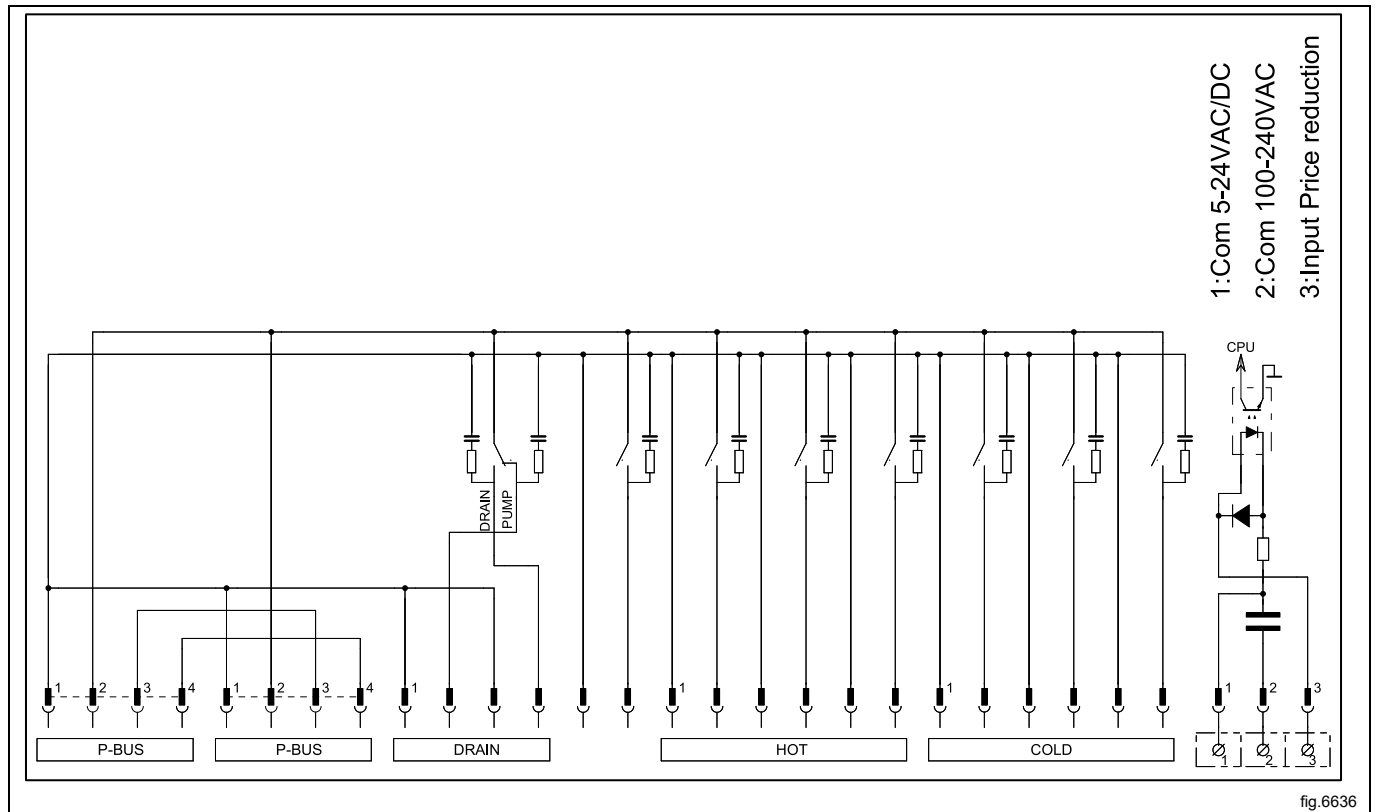


fig.6944A

9.5.6 Machines with I/O module type 3

By maintaining an active (high) signal on connection 3 "Price reduction", the price of the program can be reduced. This function has a number of uses, including providing reductions during a specific period of the day. Whilst the signal remains active (high), the price of the program is reduced by the percentage entered in the price programming menu.



9.6 Converting heating elements

9.6.1 WH6-7, WH6-8 and WH6-11 can be converted from 400-415V 3AC to 230-240V 1AC with reduced power

Disconnect the power to the machine.

Demount the front panel and remove the cover to the heating elements.

Remove the blue cables.

Move cables 357/BN on E1 and 358/GY on E3 from the red to the white terminals on each element according to the figure.

Remount the cover to the heating elements and remount the cover panel.

Demount the cover panel to the contactors. Shift position on cables 357/BN and 358/GY on heating contactor K21 according to the figure.

Move cables L3 to N according to the figure.

Remount the cover panel to the contactors.

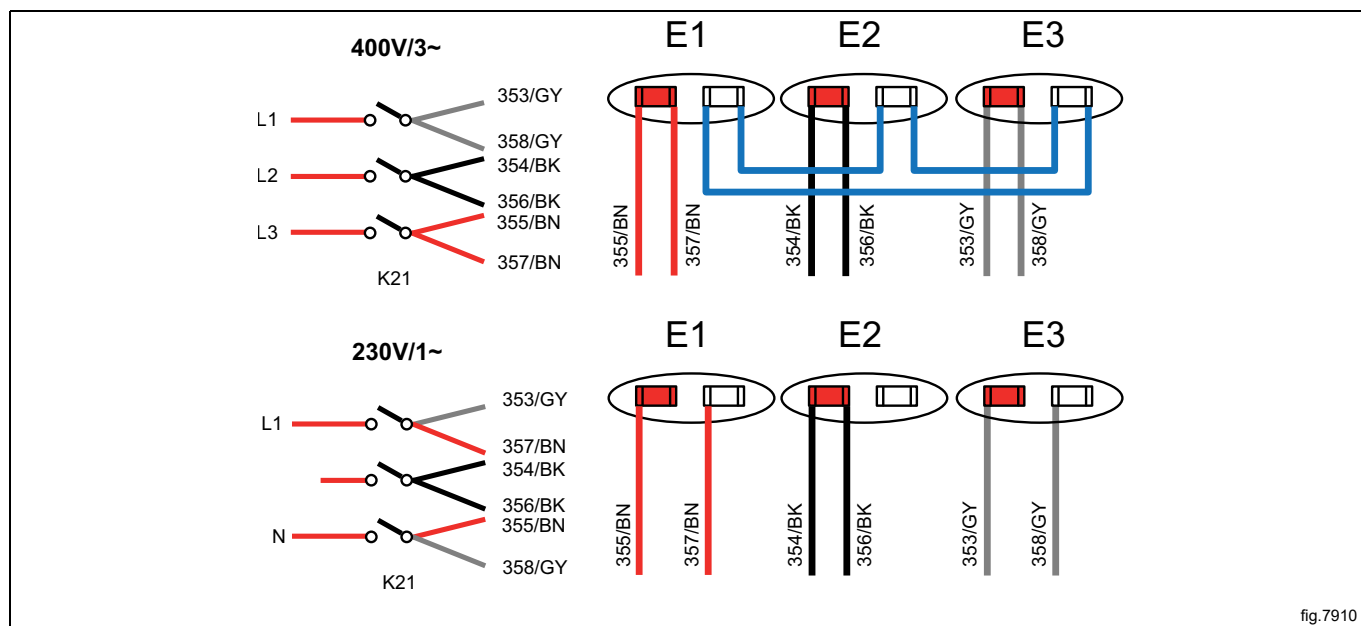


fig.7910

Connect the power to the machine.

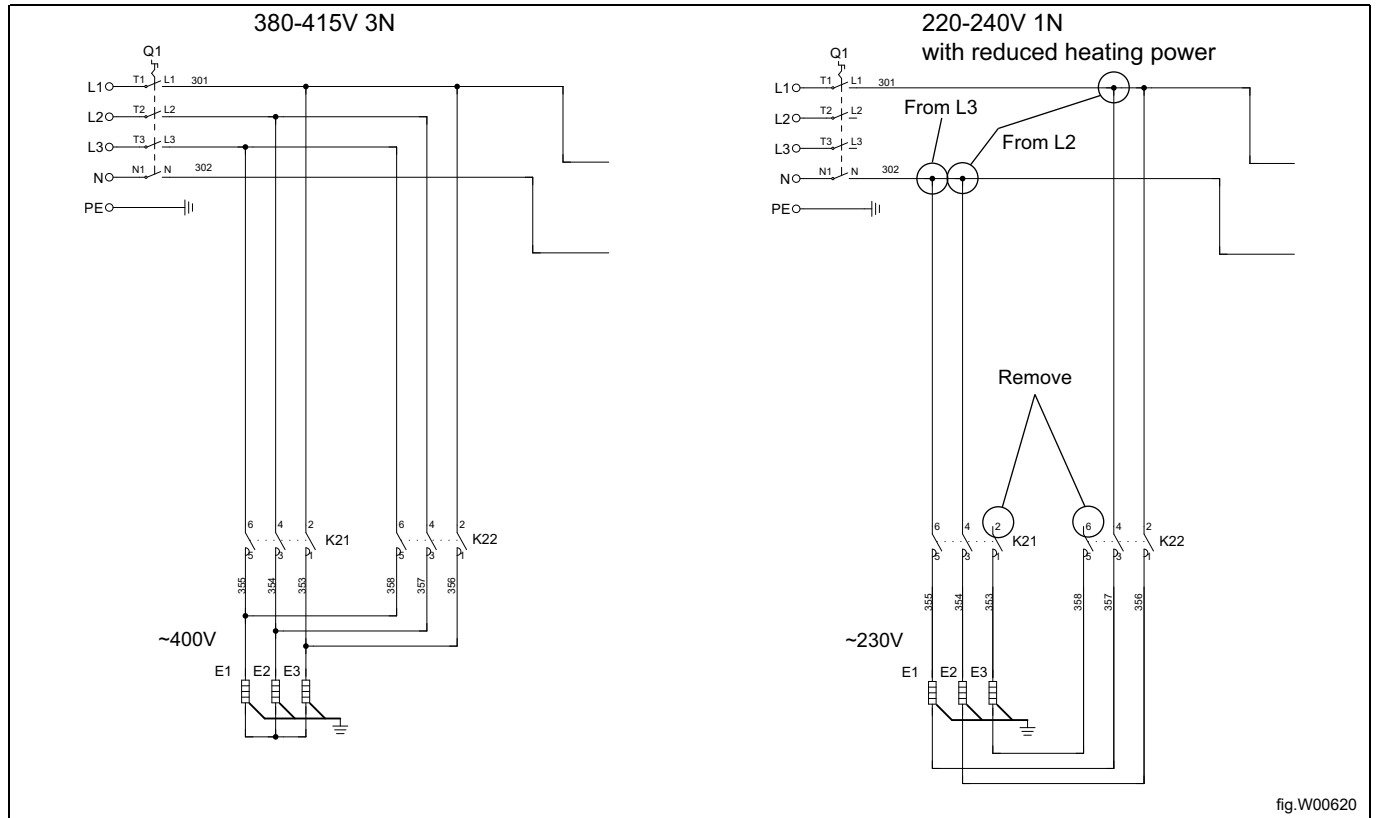
Check that all terminals and wires are secure and test run the machine on a short program with 60°C to ensure that it does heat up.

9.6.2 WH6-14 can be converted from 380-415V 3N AC to 220-240V 1N AC with reduced power

Disconnect the power to the machine.

Demount the cover panel to the electrical connections.

Remove the cables that are connected to K21:2 and K22:6. Move the remaining cables from L2 and L3 to L1 or N according to the figure.



Remount the cover panel to the electrical connections.

Connect the power to the machine.

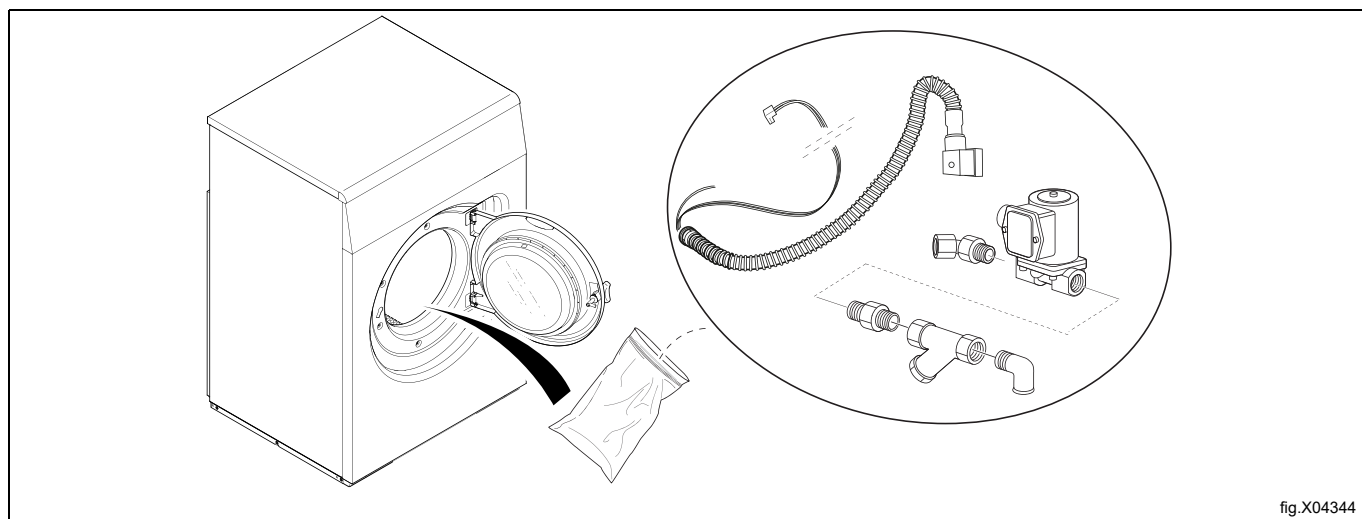
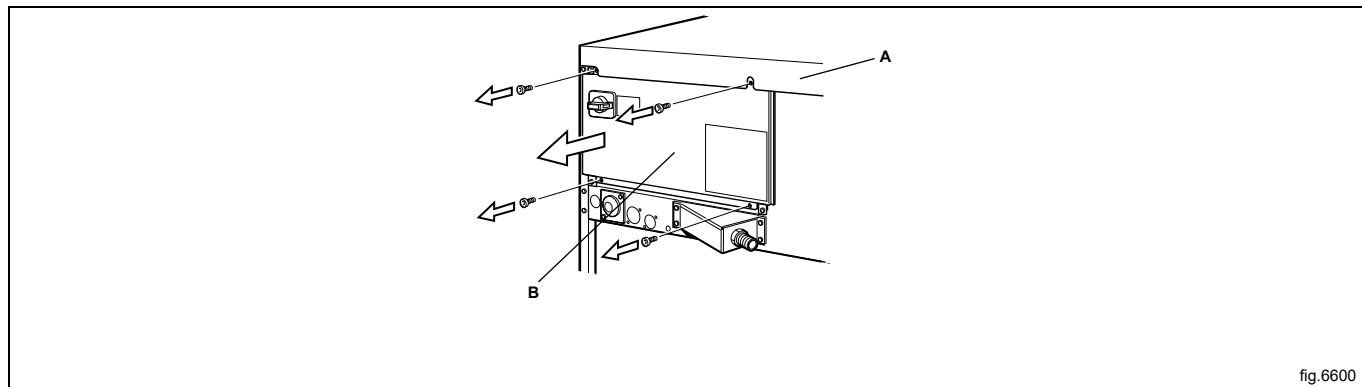
Check that all terminals and wires are secure and test run the machine on a short program with 60°C to ensure that it does heat up.

10 Steam connection

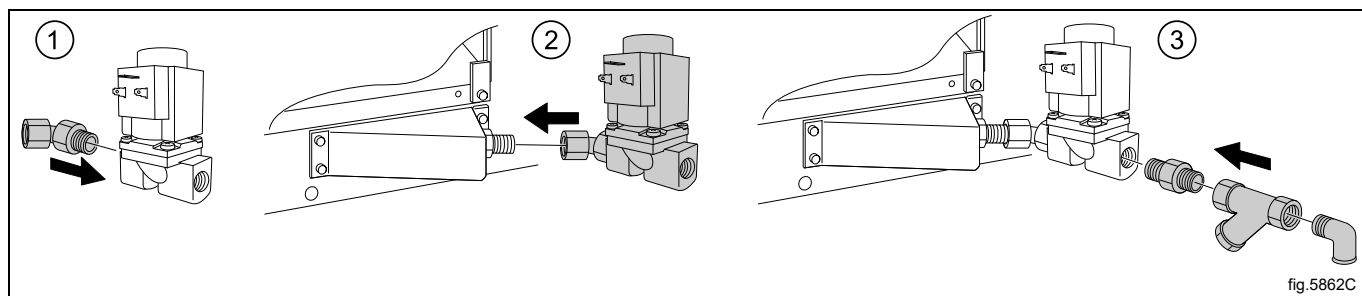
Inlet pipes connected to the machine must be equipped with a manual shut-off valve to facilitate installation and servicing. The connection hose must be of type ISO/1307- 1983 or equivalent.

Connection size at filter: DN 15 (BSP 1/2").

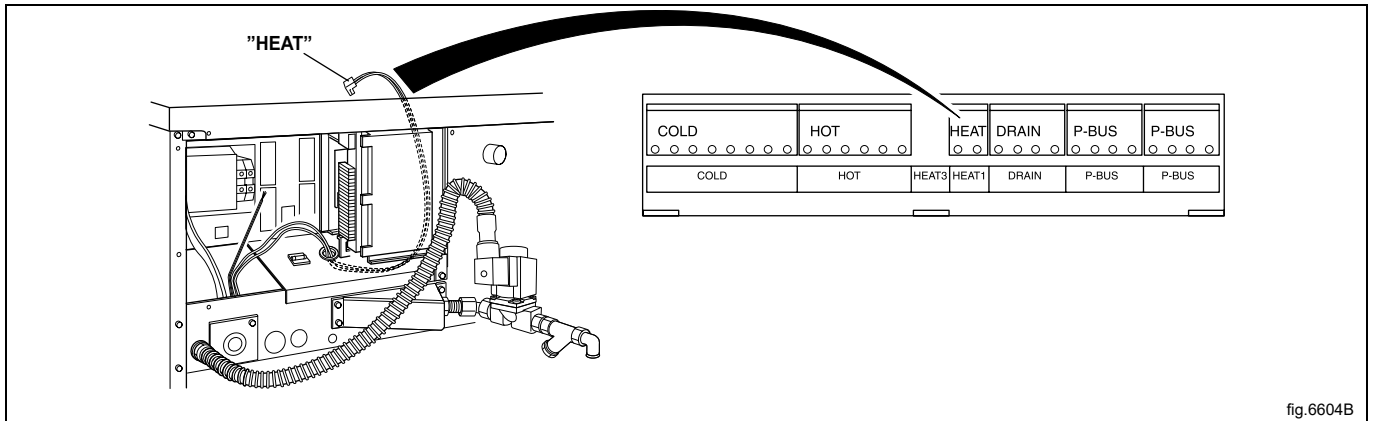
Demount the top panel (A). Demount the casing (B).



Mount the nipple to the steam valve. Mount the steam valve on the machine. Mount nipple, strainer and elbow. Note the direction of the strainer. Mount steam hose to the elbow. Check that there are no sharp angles or bends on the connected steam hose.



Mount the hose with wires between steam valve and machine. Connect the wires to the steam valve. Connect ground cable to the terminal ground connection. Connect the "HEAT" cable connector to the "HEAT" terminal on the I/O board.



Steam pressure required:

- minimum: 50 kPa (0.5 kp/cm²)
- maximum: 800 kPa (8 kp/cm²)
- recommended: 600 kPa (6 kp/cm²)

Note!

A steam heated machine is only intended to use clean steam.

11 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.

11.1 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.

11.2 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.

12 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.

Open the manual water valves.

Start a program.

- Check that the drum rotates normally and that there are no unusual noises.
- Check that there are no leaks in water supply/drain connections.
- Check that water passes through the detergent container.
- Check that the door cannot be opened during a program.

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.

13 Disposal information

13.1 Appliance recyclability and disposal

13.1.1 Recyclability

Our appliances are manufactured using a significant percentage of recyclable metals (such as stainless steel, iron, aluminium, galvanized sheet, copper, etc.), which can be recovered through the local recycling systems, in compliance with the regulations in force in the country of use.

National regulations regarding waste disposal may vary. Disposal of the appliance must therefore be carried out in accordance with the applicable legislation and the directives issued by the competent authorities in the country where the appliance is decommissioned.

The components of the appliance must be separated and disposed of in accordance with their material composition (e.g. metals, oils, greases, plastics, rubber, refrigerant gases, insulating boards and other insulating material, glass wool, LEDs, etc.) and in full compliance with applicable local and international waste management regulations.

Compressors may contain oils and refrigerants fluids - are special waste and has to be recycled on local bases regulations.

13.1.2 Procedure regarding appliance disposal and component / material recovery

This product should not simply be disposed of in the environment at the end of its life cycle; it is imperative instead either to dispose of it in accordance with local environmental regulations, or, preferably, to deliver it whole to an authorized recycling center.

All removed components, including doors and other structural parts, must be delivered together with the appliance to an authorized recycling or dismantling facility.

The dismantling/recycling center will apply state of the art technologies and methods available to them to effectively disassemble the products for best recyclability.

Note that printed circuit boards, electrical motors or other components identified in European Union legislation to be of high critical raw materials recovery potential need to be addressed specifically.

In case of doubts or questions, always refer to your reference customer care service.

Before disposing of the appliance, carefully inspect its physical condition and preservation state, checking for potential leaks of liquids or gases, as well as for broken parts that may pose hazards during handling and subsequent dismantling.



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 dismantling the appliance, any marking, this manual and other documents concerning the appliance must be destroyed.

13.2 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



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