

# **Installation manual**

## **Washer extractor**

**ESD-6135**  
**Compass Pro**  
Type EXSM.X.



**Electrolux**  
PROFESSIONAL



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

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

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

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

**IMPORTANT SAFETY INSTRUCTIONS****WARNING -**

To reduce the risk of fire, electric shock, or injury to persons when using your appliance, including the following:

1. Read all instructions before using the appliance.
2. This machine must be securely bolted to an uncovered concrete floor.
3. This machine **MUST** be serviced and operated in compliance with manufacturers instructions.  
**CHECK DOOR LOCKS EVERY DAY FOR PROPER OPERATION TO PREVENT INJURY OR DAMAGE. IF THE DOOR LOCK FAILS TO OPERATE PROPERLY, PLACE THE MACHINE OUT OF ORDER UNTIL THE PROBLEM IS CORRECTED.**
4. Do not wash articles that have been previously cleaned in, washed in, soaked in, or spotted with gasoline, drycleaning solvents, or other flammable or explosive substances, as they give off vapors that could ignite or explode.
5. Do not add gasoline, dry-cleaning solvents, or other flammable or explosive substances to the wash water. These substances give off vapours that could ignite or explode.
6. Under certain conditions, hydrogen gas may be produced in a hot-water system that has not been used for weeks or more. **HYDROGEN GAS IS EXPLOSIVE.** If the hot-water system has not been used for such a period, before using a washing machine, turn on all hot-water faucets and let the water flow from each for several minutes. This will release any accumulated hydrogen gas. As the gas is flammable, do not smoke or use an open flame during the time.
7. Do not allow children to play on or in the appliance. Close supervision of children is necessary when the appliance is used near children.
8. Before the appliance is removed from service or discarded, remove the door.
9. Do not reach into the appliance if the tub is moving.
10. Do not install or store this appliance where it will be exposed to the weather.
11. Do not tamper with controls.
12. Do not repair or replace any part of the appliance or attempt any servicing unless specifically recommended in the user-maintenance instructions or in published user-repair instructions that you understand and have the skills to carry out.
13. Changing of fuses inside the washing machine may only be carried out by authorized personnel.
14. This machine **MUST** be connected to a dedicated electrical circuit to which no other lighting unit or general purpose receptacle is connected. Use copper conductor only.

**NOTICE TO: OWNERS, OPERATORS AND DEALERS**

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

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

**THE MACHINE(S) MUST NOT START !**

- b. CLOSE THE DOOR to start machine operation and, while it is operating, attempt to open the door without exerting extreme force on the door handle. The door should remain locked!  
If the machine can start with the door open, or can continue to operate with the door unlocked, the door interlock is no longer operating properly. The machine **must** be placed **out of order** and the interlock immediately replaced.
3. DO NOT UNDER ANY CIRCUMSTANCES ATTEMPT TO BYPASS OR REWIRE ANY OF THE MACHINE SAFETY DEVICES AS THIS CAN RESULT IN SERIOUS ACCIDENTS.
4. **Be sure to keep the machine(s) in proper working order:** Follow **all** maintenance and safety procedures. Further information regarding machine safety, service and parts can be obtained from your dealer.  
All requests for assistance must include the model, serial number and electrical characteristics as they appear on the machine identification plate. Insert this information in the space provided on the previous page of this manual.
5. **WARNING:** DO NOT OPERATE MACHINE(S) WITH SAFETY DEVICES BYPASSED, REWIRED OR INOPERATIVE! DO NOT OPEN MACHINE DOOR UNTIL DRUM HAS STOPPED ROTATING!

## NOTICE TO INSTALLER

Improper installation of this machine:

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

Improper fastening of this machine to its foundation, inferior foundation materials, an undersized foundation, the use of fabricated steel bases not provided by Electrolux Professional or its approved supplier(s), the use of an improper type, number, or size of mounting bolts, or failure to use proper hardware on mounting bolts may result in damage to the machine that will not be covered by the manufacturer's warranty.

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

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

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

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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: 60 kg / 135 lbs.
- A-weighted emission sound pressure level at working stations:
  - Wash: 70 dB(A).
  - Extraction: <70 dB(A).
- Maximum inlet water pressure: 1000 kPa / 145 psi
- Minimum inlet water pressure: 50 kPa / 8 psi

### 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 company.

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

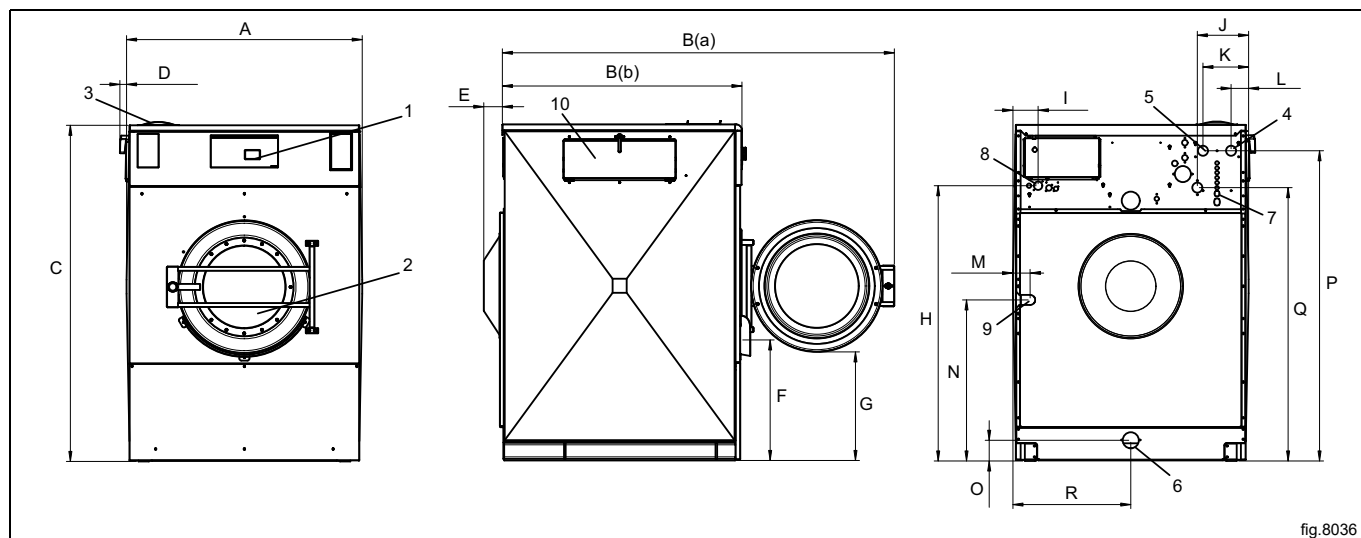


fig.8036

1	Operating panel
2	Door opening, $\varnothing$ 535 mm / $\varnothing$ 21 1/16 inch
3	Detergent container
4	Cold water
5	Hot water
6	Drain valve
7	Liquid detergent supply connections, 6 x $\varnothing$ 10 mm / 5/8 inch, 1 x $\varnothing$ 16 mm / 5/8 inch and 1 x $\varnothing$ 20 mm / 13/16 inch
8	Electrical connection
9	Steam connection
10	Detergent supply injector, powder, right or left side (option)

	A	B(a)	B(b)	C	D	E	F
mm	1173	1951	1193	1673	33	93	600
inch	46 3/16	76 13/16	46 15/16	65 7/8	1 5/16	3 11/16	23 5/8

	G	H	I	J	K	L
mm	540	1370	125	255	227	87
inch	21 1/4	53 15/16	4 15/16	10 1/16	8 15/16	3 7/16

	M	N	O	P	Q	R
mm	85	802	103	1544	1361	587
inch	3 3/8	31 9/16	4 1/16	60 13/16	53 9/16	23 1/8

### 3.2 Technical data

Weight, net	kg lbs	775 1709
Drum volume	litres ft <sup>3</sup>	600 21.2
Drum diameter	mm inch	980 38 9/16
Drum speed during wash	rpm	38
Drum speed during extraction	rpm	630
G-factor, max.		220
Heating: Electricity	kW	35
Heating: Steam		x
Heating: Hot water		x
Frequency of the dynamic force	Hz	10.5
Floor load at max extraction	kN lbs force	10±15.6 2248±3507
Sound power/pressure level at extraction*	dB(A)	83/66
Sound power/pressure level at wash*	dB(A)	69/52
Heat emission of installed power, max	%	5

\* Sound power levels measured according to ISO 60704.

### 3.3 Connections

Water valves	DN BSP	25 1"
Recommended water pressure	kPa psi	200–600 30–90
Continuous operating pressure	kPa psi	50–800 8–116
Capacity at 300 kPa	l/min gallon/min	110 29
Drain valve	ø outer mm ø outer inch	75 3
Draining capacity	l/min gallon/min	170 45
Steam valve connection	DN BSP	20 3/4"
Recommended steam pressure	kPa psi	300–600 40–90
Functioning limits for steam valve	kPa psi	50–800 8–115

## 4 Setup

### 4.1 Unpacking

**Note!**

Two persons are recommended for the unpacking.

Remove the bolts between the machine and pallet. There are two bolts in the front of the machine and two bolts in the back of the machine.

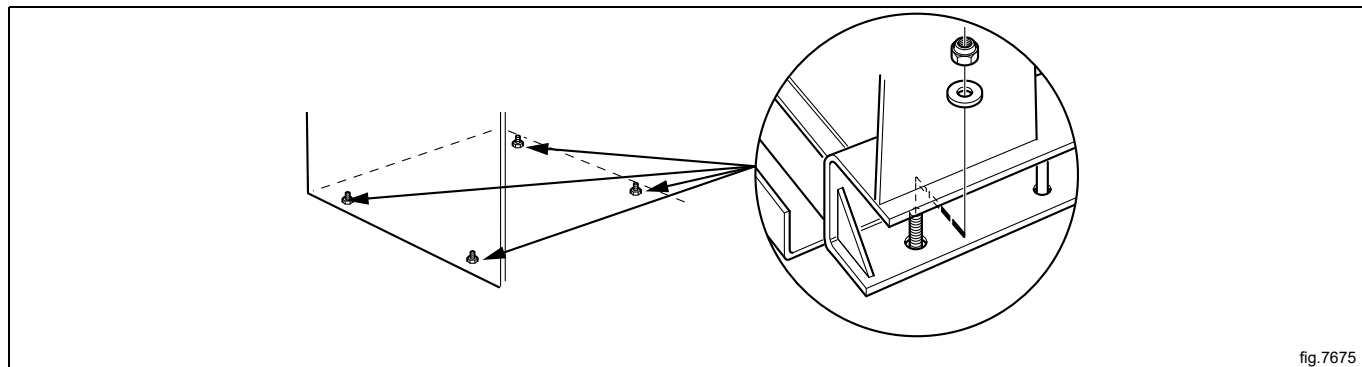


fig.7675

Remove the machine from the pallet.

**Note!**

When moving the machine, handle it with care.

Place the machine on its final position.

## 4.2 Recycling instruction for packaging

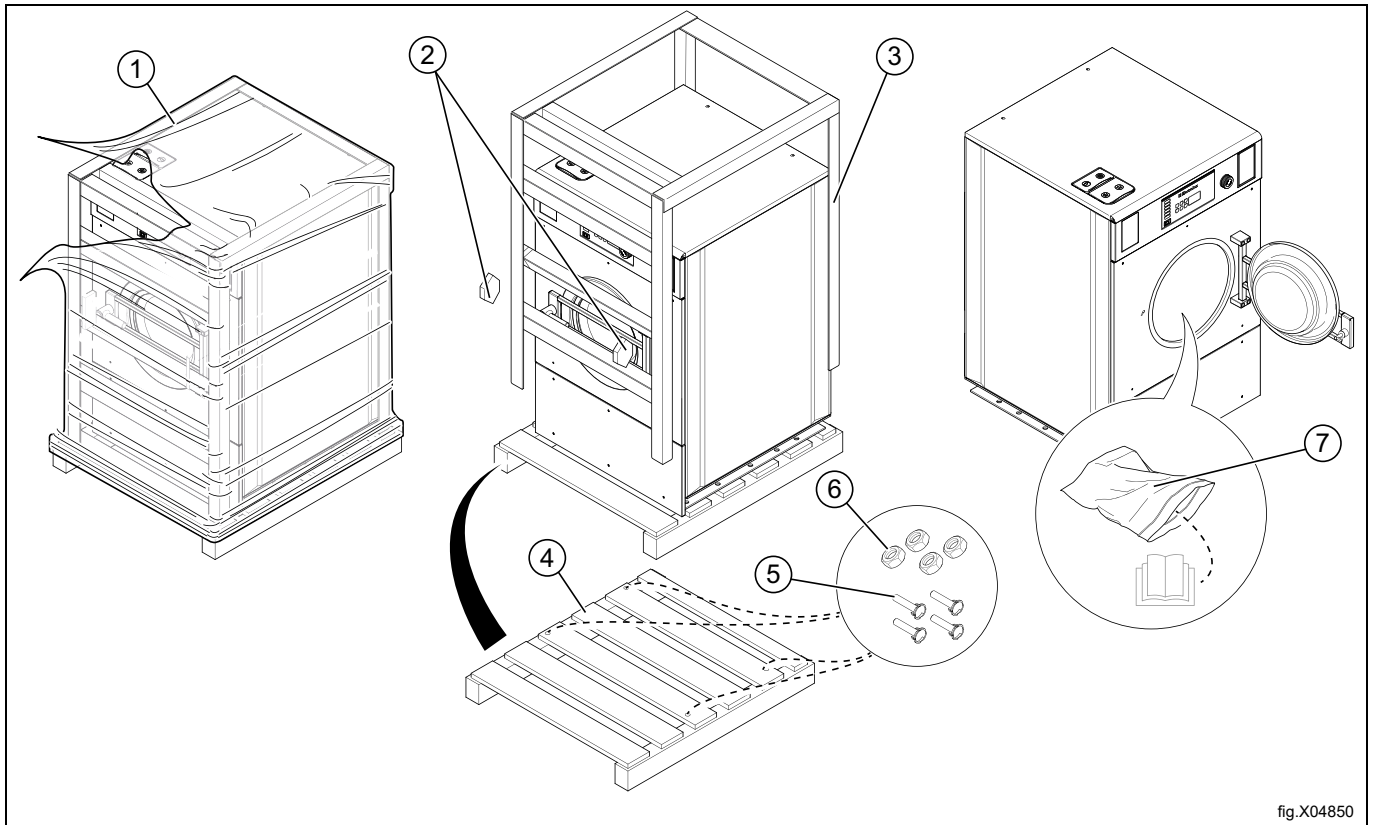
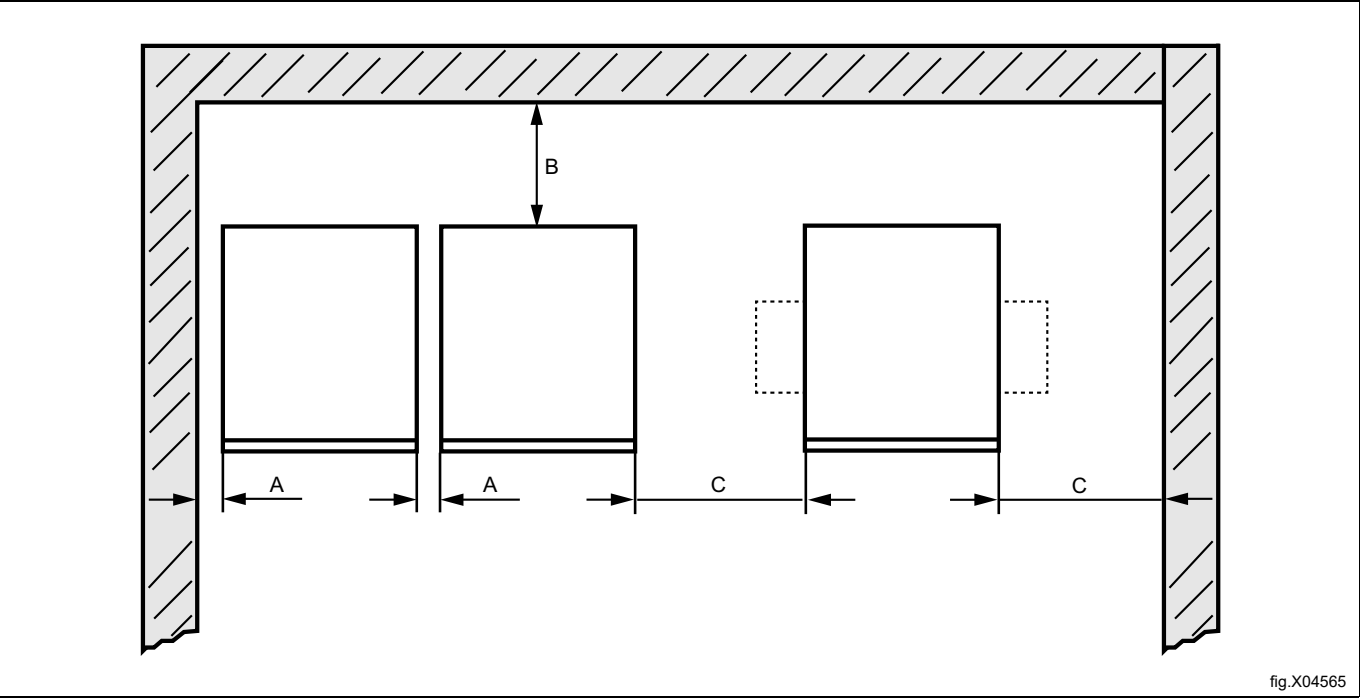


Fig.	Description	Code	Type
1	Wrapping film	LDPE 4	Plastics
2	Corner protection	PS 6	Plastics
3	Cardboard packaging	PAP 20	Paper
4	Pallet	FOR 50	Wood
5	Screw	FE 40	Steel
6	Nut	FE 40	Steel
7	Plastic bag	PET 1	Plastics

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.



A	50 mm / 1 15/16 inch Machine with top loaded detergent dispenser
B	400 mm / 15 3/4 inch
C	500 mm / 19 11/16 inch Machine with detergent supply injector, powder, right or left side (option)



## 4.4 Mechanical installation

### 4.4.1 Foundation requirement

In this type of machine, the drum is attached directly to the frame. As a result the floor under the machine must be stable enough to absorb the dynamic forces generated during spin cycles. For that reason, the mounting bolts must be cast into the floor material itself.

When securing the machine to an existing concrete floor, it must be at least 200 mm / 7 7/8 inch thick, with a minimum concrete strength of 20.7 MPa / 3000 psi. The floor must be free of seams and cracks.

If the floor is less than 200 mm / 7 7/8 inch, an alternative might be to cast a plinth. The floor must be able to withstand the loads indicated in the table in the Technical data section.

If an existing concrete floor (of 200 mm / 7 7/8 inch minimum thickness) is to serve as the foundation, but it is not possible to cast "J" bolts into the concrete, an alternative is to use so called chemical anchor bolts.

The machine must be securely fastened to a suitable foundation using 12-M16 (5/8 inch) threaded rod, heavy duty flat washers and lock nuts or lock washers.

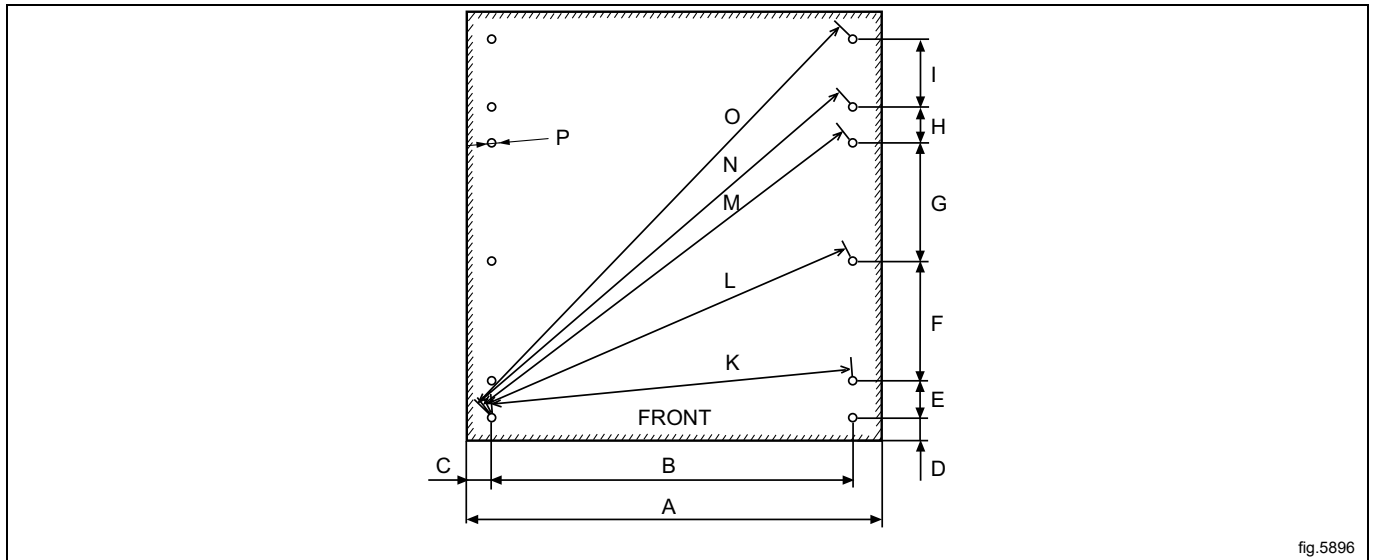
#### Note!

Failure to closely follow the instructions provided in this manual may result in severe damage to the machine, and the risk of personal injury. The manufacturer is not responsible for damage or injury resulting from improper installation.

#### Note!

The use of chemical anchors and/or the use of a fabricated steel mounting base DOES NOT reduce the thickness requirement for the underlying concrete floor. The floor MUST BE AT LEAST 200 MM / 8 INCH THICK, or a new concrete foundation MUST be poured.

### 4.4.2 Measurements for foundation



Measurement	mm	inch
A	1138	44 7/8
B	998	39 3/8
C	70	2 3/4
D	66	2 5/8
E	100	3 15/16
F	327	12 7/8
G	327	12 7/8
H	100	3 15/16
I	185	7 5/16
K	1003	39 1/2
L	1086	42 3/4
M	1251	49 1/4
N	1314	51 3/4
O	1441	56 3/4
P	18 (diameter)	11/16 (diameter)

#### 4.4.3 Casting a plinth

A plinth should be used where the existing floor is less than 200 mm / 7 7/8 inch thick or in order to ensure that the machine is above the level of any water leakages.

The plinth should be approximately 150 - 200 mm / 5 7/8 — 7 7/8 inch in height.

Proceed as follows:

- Break up the existing floor to a depth of approx. 75 mm / 2 15/16 inch and check that the sides of the hole are tapered outward so that the longest side at the bottom measures 120 mm / 4 3/4 inch more than at the top. (See A and B from previous table).
- Make the mould for the plinth.
- 12 bolts must be set into the concrete of the machine base. The bolts need to project 40 mm / 1 9/16 inch out of the base. Pour the concrete into the prepared base mould and make sure that the surface is level. Check the previous table for the correct position of the bolts.
- Moisten the hole well and apply concrete to the sides and bottom. Required minimum concrete strength at least 20.7 MPa / 3000 psi. Recommend the rebars (C) shall be used around the base. The rebars shall be placed between the bolts and the edge of the foundation. The bolts shall have the fish plate at the bottom or equivalent (blended at the bottom).
- The concrete must be set and strength at least 20.7 MPa / 3000 psi before mounting the machine on the plinth.

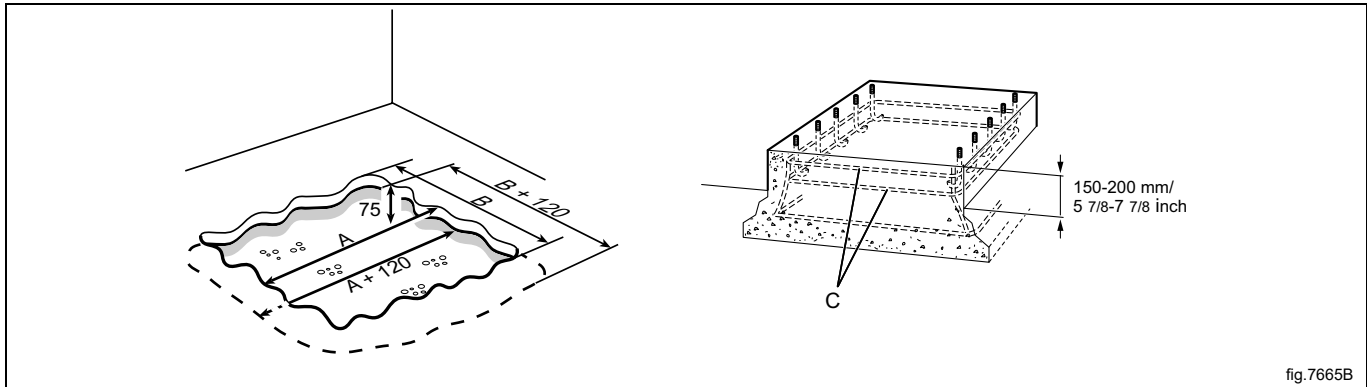


fig.7665B

#### 4.4.4 Chemical bolts / chemical anchors

An alternative to breaking up the existing floor or foundation is to use chemical bolts M16.

1. Mark and drill 12 holes ( $\varnothing$  18 mm / 11/16 inch) 125 mm / 5 inch deep for the chemical bolts.  
Check the previous table for the correct position of the holes.
2. Clean the drilled holes with a vacuum cleaner. (Insert the small pipe into the hole and shake it).
3. Put down the chemical ampule in the hole.
4. Rotate the bolt into the hole with a drilling machine, so that the glass ampule is broken and its contents mixed.
5. Rotate the bolt to correct depth.

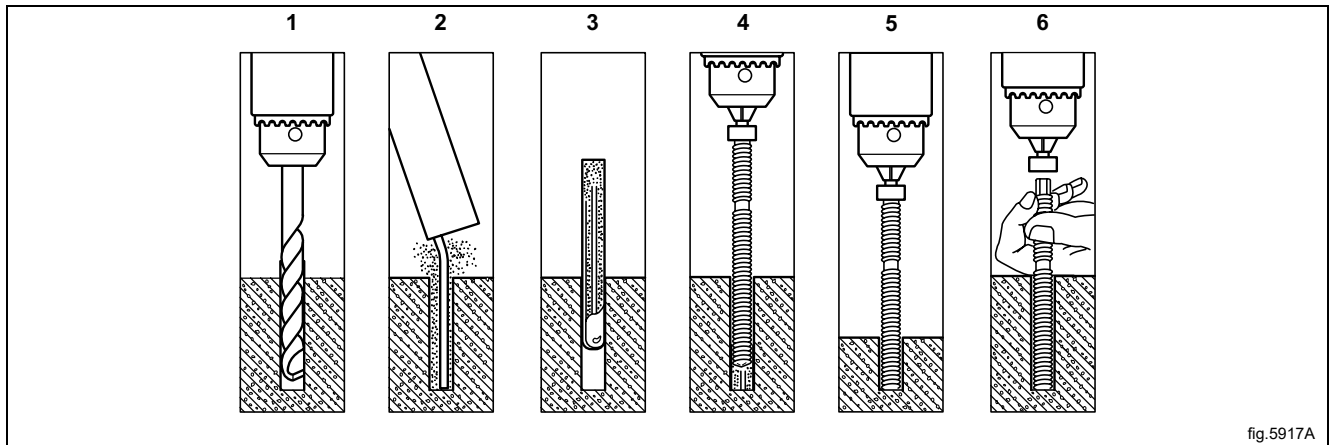
**Note!**

**Do not rotate the bolt against the concrete bottom. Check that the chemicals have filled the hole completely.**

6. Remove the drilling machine with the mounting tool. Hold the bolt with one hand. Let the bolt harden before the machine is mounted.

Time for hardening, due to different concrete temperatures:

- 10°C: 6 hours
- 5°C: 2.5 hours
- ± 0°C: 1 hour
- 5°C: 30 minutes
- 10°C: 20 minutes
- 15°C: 15 minutes
- 20°C: 10 minutes

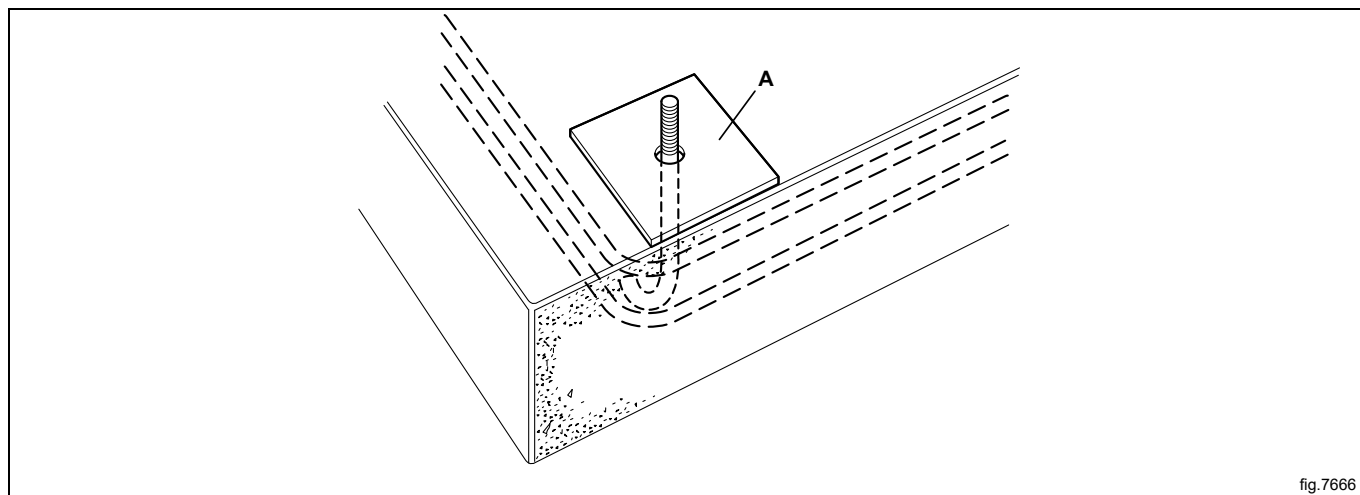


**Note!**

The use of chemical anchors and/or the use of a fabricated steel mounting base DOES NOT reduce the thickness requirement for the underlying concrete floor. The floor MUST BE AT LEAST 200 MM / 8 INCH THICK with a minimum concrete strength of 20.7 MPa / 3000 psi, or a new concrete foundation MUST be poured.

#### 4.4.5 Fastening the machine

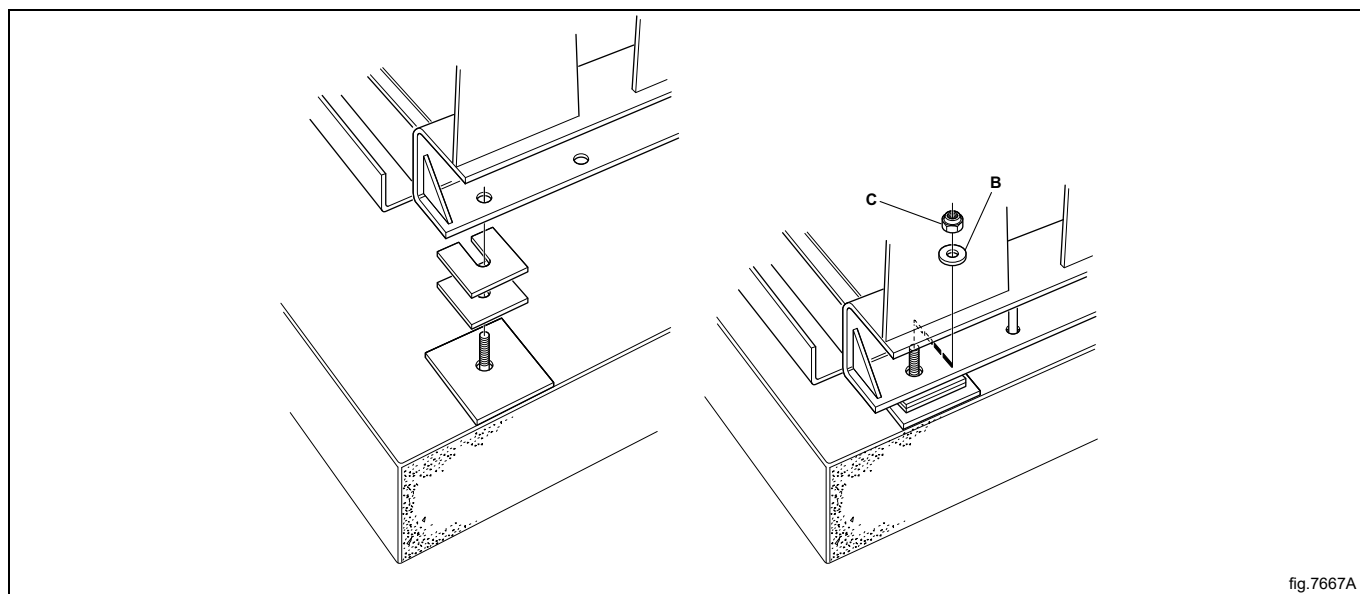
Place wide steel shims (A) on the concrete foundation over the bolts.



Position the machine on the foundation.

Check that the machine is in level and stand firmly on all supporting points. Spacing washers must be mounted if one or more of these points is not resting against the foundation.

Place flat washers (B) over the foundation bolts and secure the machine in position by tightening the self-locking nuts (C).



Tighten the 12 nuts. Check and tighten the nuts every week for the first month.

Final tightening torque as recommended spec is M16 (5/8 inch) = 150 Nm / 110.6 lb-ft.

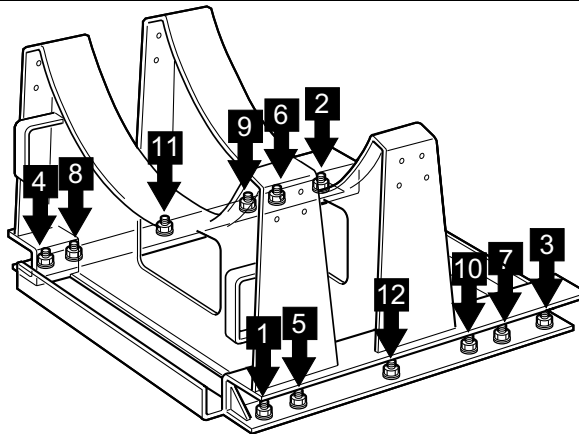


fig.5902



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



Check that the machine is in level and tighten all nuts every week for the first month. (M16 (5/8 inch) = 150 Nm / 110.6 lb-ft.).

Check that the machine is in level and tighten all nuts every year. (M16 (5/8 inch) = 150 Nm / 110.6 lb-ft.).

5 Water connection

All water intake connections to the machine should be fitted with manual shut-off valves and filters, to facilitate installation and servicing. In certain cases non-return valves will need to be fitted before the machine to comply with local plumbing regulations.

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.

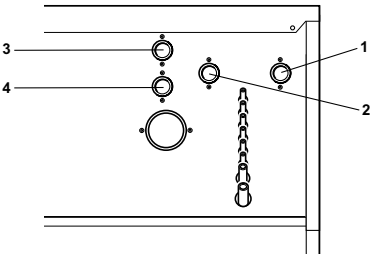
Hoses are to be of an approved type and grade and comply with national regulations.

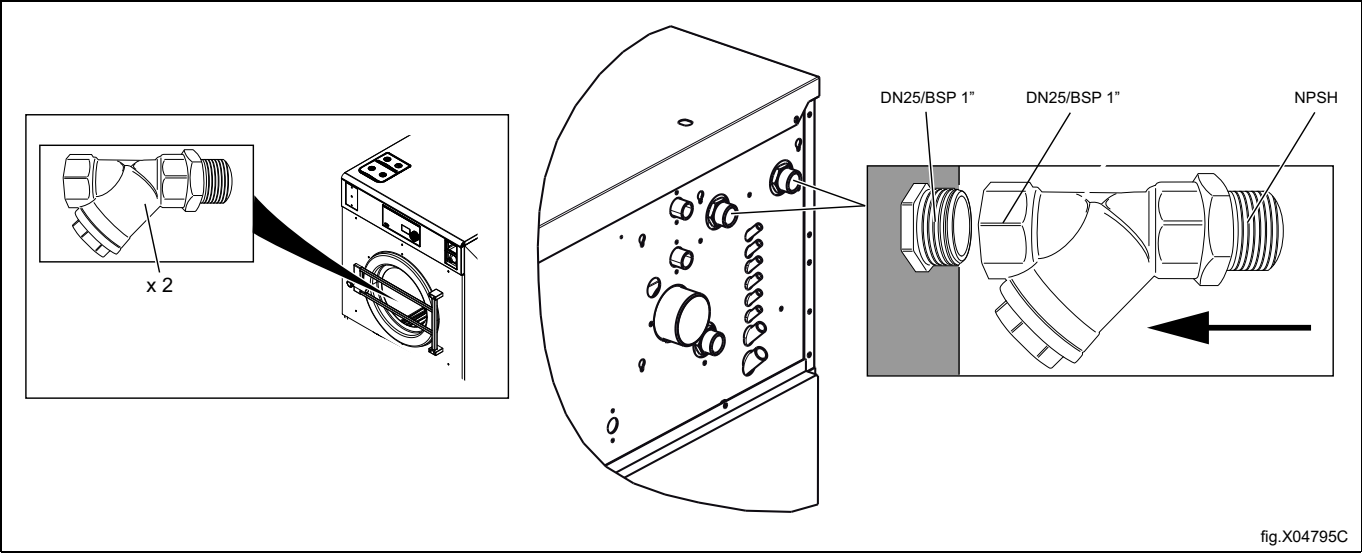
After installation hoses must hang in gentle arcs.

**All connectors present on the machine must be connected to the water supply or the machine may not function properly.** 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.

Note!

The water supply should be within the recommended hardness range of 3 grains or less per gallon. Higher hardness may cause excessive formation of limescale. Chlorides must not exceed 30 ppm. The buildup of limescale will negatively affect operation, performance and warranty approval.

	Water type	Water connection
	<ul style="list-style-type: none"><li>Cold and hot</li></ul>	<ol style="list-style-type: none"><li>Cold (DN 25 / 1")</li><li>Hot (DN 25 / 1")</li><li>Cold or hot for detergent supply (DN 20 / 3/4") (Not used)</li><li>Cold or hot for detergent supply (DN 20 / 3/4")</li></ol>



Water pressure:

Continuous operating pressure: 50–800 kPa / 8–116 psi (0.5-80 kp/cm²)

Maximum: 1000 kPa / 145 psi (10 kp/cm²)

Recommended: 200–600 kPa / 30–90 psi (2–6 kp/cm²)

Recommended water hardness: 3 grains per gallon

Recommended pH-range: 7.0–8.0

Acceptable range for chloride concentration: 0–30 ppm

Note!

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

## 6 Connection of external dosing systems

### 6.1 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 hose 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 =  $\varnothing$  10 mm / 3/8 inch, drill =  $\varnothing$  5 mm / 3/16 inch (used for external dosing systems).

Use the enclosed template by putting it over the connection and drill in the hole.

B =  $\varnothing$  16 mm / 5/8 inch, drill =  $\varnothing$  11 mm / 7/16 inch (used for external dosing systems).

C =  $\varnothing$  20 mm / 13/16 inch, drill =  $\varnothing$  15 mm / 9/16 inch (used for external dosing systems).

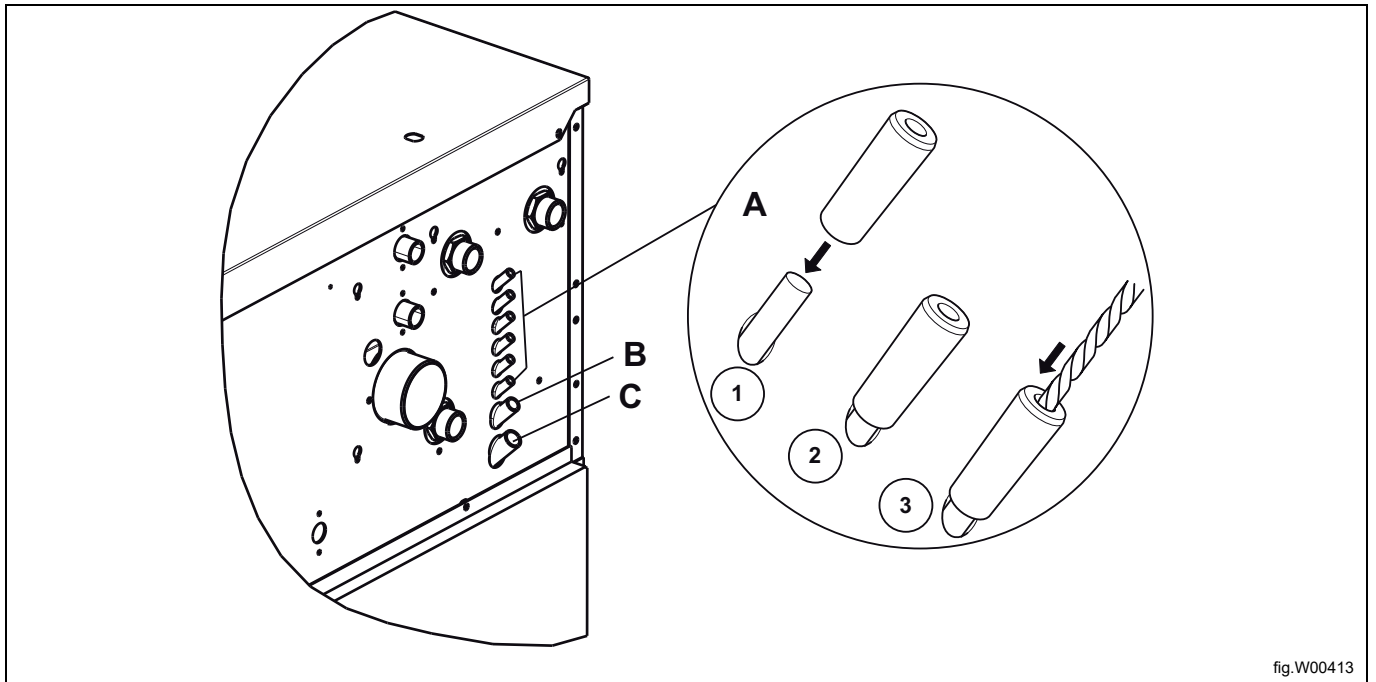


fig.W00413

Always connect hoses on connections A with a hose clamp.

For connections B and C; 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.**

### 6.2 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.

### 6.2.1 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.

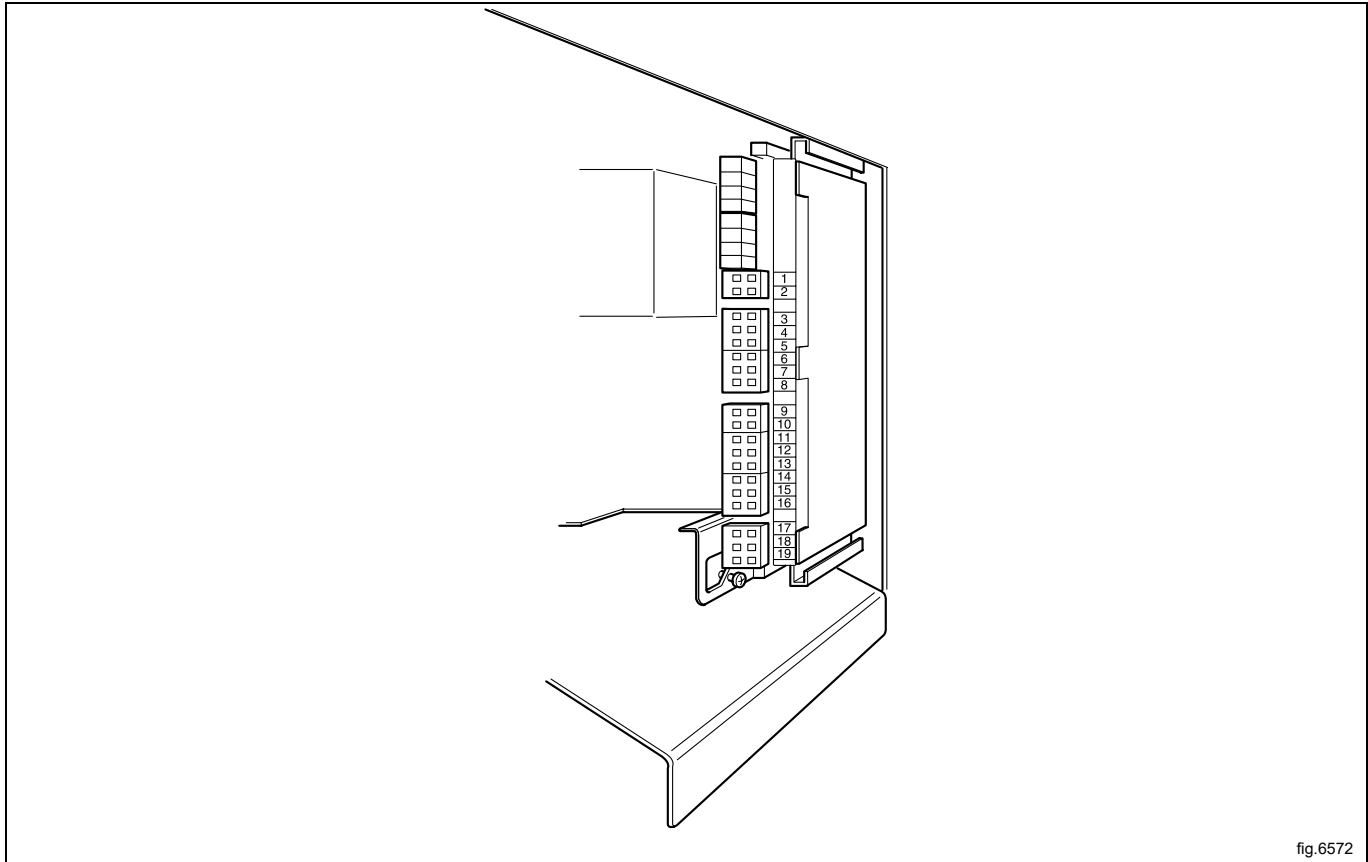


fig.6572

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

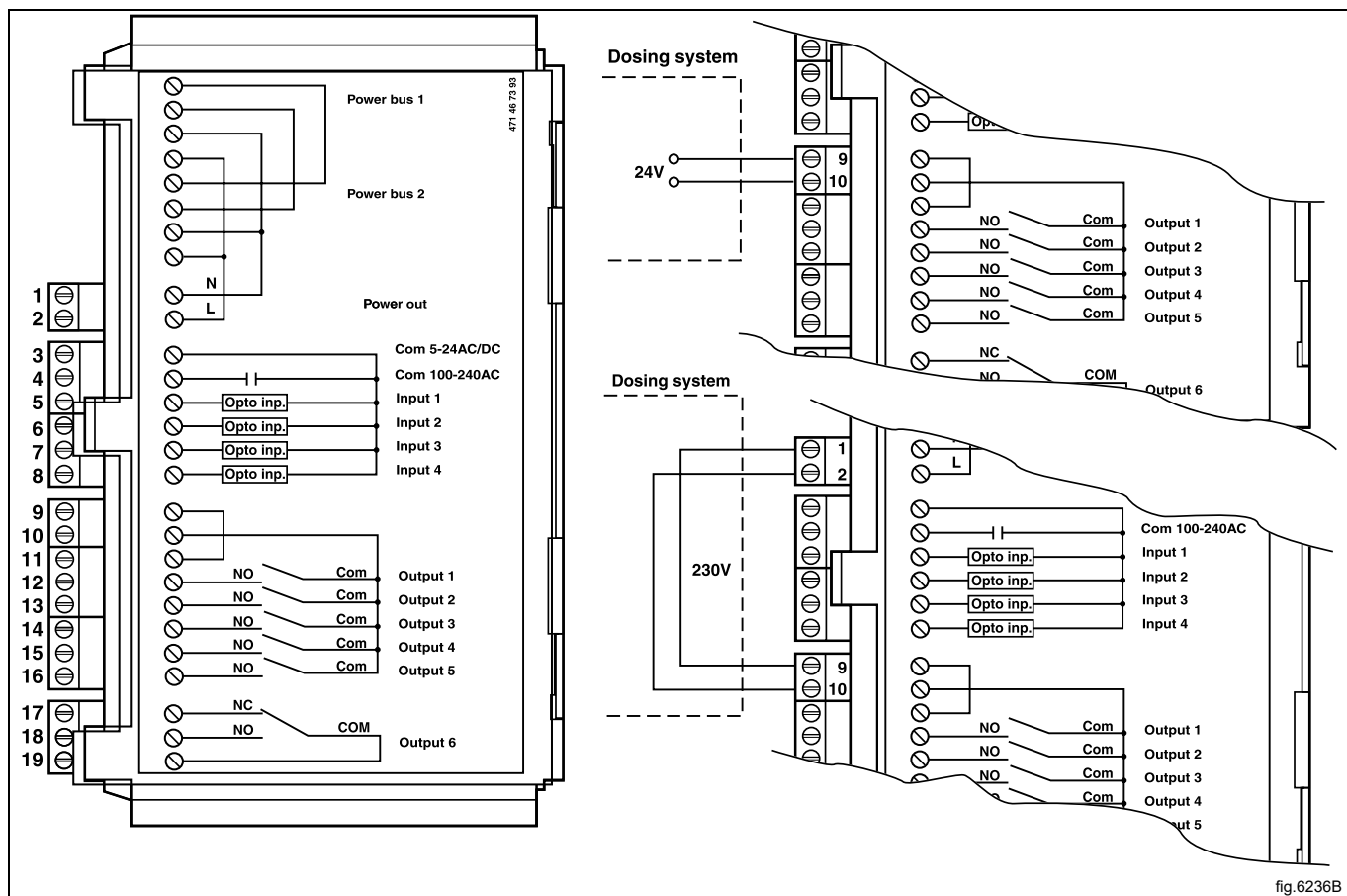


## 6.2.2 Outputs

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

### 6.2.3 Inputs

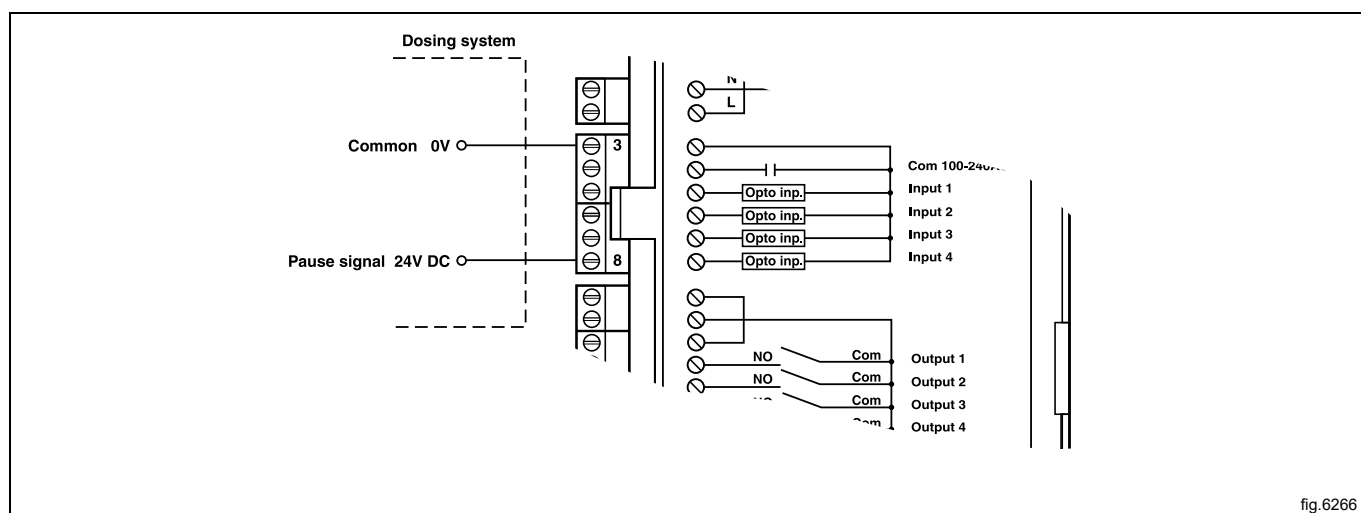
The signal level can be 5-24V DC/AC or 100- 240V AC. For 5-24V, the signal reference is connected to 3 and for 100-240V to 4. Potentials on the inputs cannot be mixed.

#### Note!

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

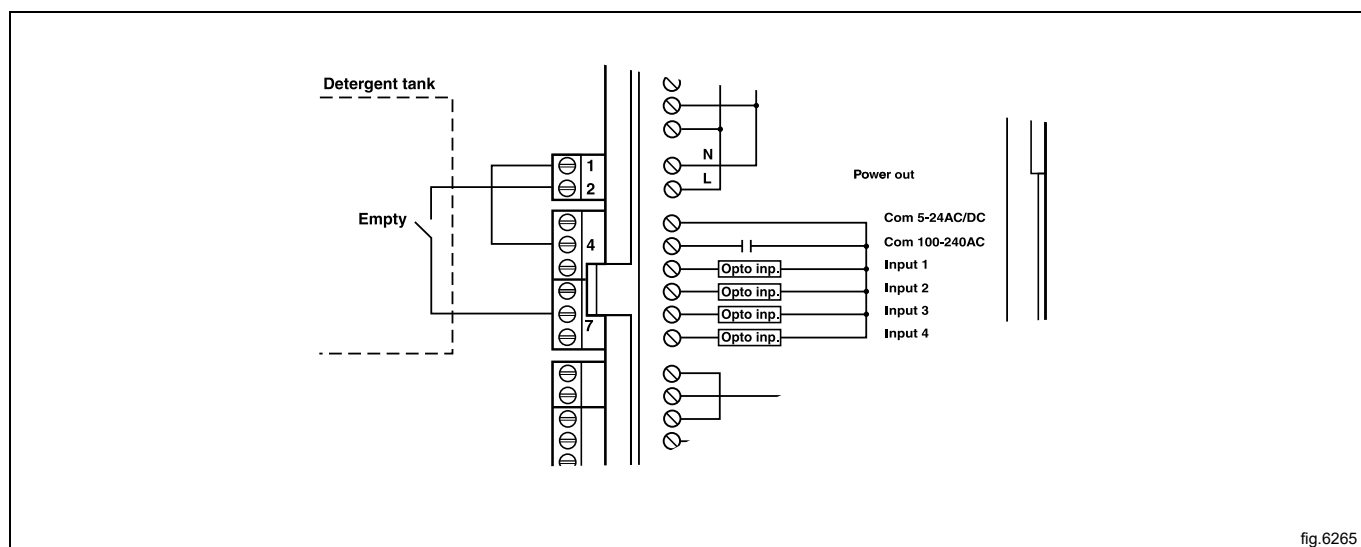
Connection 8 may be connected if the program is to pause, e.g. while detergent is being dosed.

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).



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.



## 7 Drain connection

Connect a 75 mm / 3 inch flexible hose to the drain outlet of the machine. The drain hose must not have any sharp bends and must slope from the machine to assure proper drainage. The outlet must open freely to the main drains.

### Note!

**Do not reduce the size of the drain connection from the machine to the main drain.**

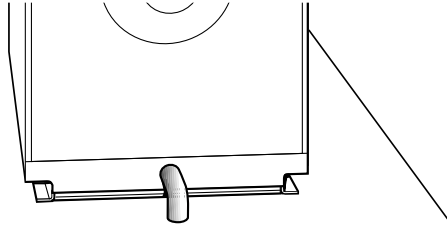


fig.5903

## 8 Detergent supply injector

If only non-liquid detergents are to be used in the detergent supply injector, the following adaptation is recommended:

Drill two  $\varnothing$  5 mm / 3/16 inch holes in the bottom of each cup to allow any water left to drain off.

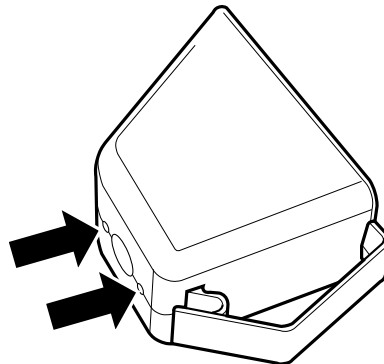


fig.0355

## 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.

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 / 3/8–7/16 inch. The cable area must be at least 0.5 mm<sup>2</sup> / 1/32 inch<sup>2</sup> and no more than 4 mm<sup>2</sup> / 3/16 inch<sup>2</sup> (AWG12/AWG20). The terminal block used is a spring loaded cage clamp.

### 9.2 Electrical connections

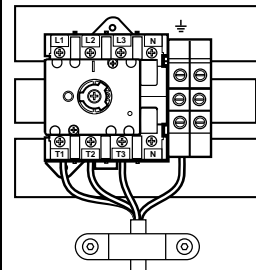
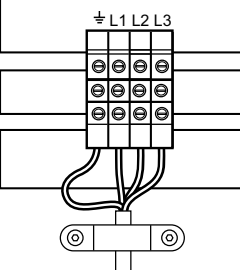
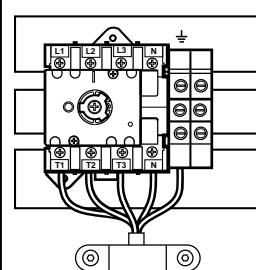
Electrical connections					
Heating alternative	Main voltage	Hz	Heating power kW	Total power kW	Recommended fuse ITCB A
Electric heated	208-240V 3~	60	29-38	30-39	125
	440/480V 3~	60	38/54	40/56	70/100
Non heated or steam heated	208-240V 3~	60	<sup>1</sup>	2.6	15
	440-480V 3~	60	<sup>1</sup>	2.8	15

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

## 9.3 Machine connection

### 9.3.1 Three-phase connection

Connect the earth, neutral and phase wires as shown.

3AC	
3AC	
3N AC	

#### Note!

Check that the motor controller is energized. If not; the machine is connected with wrong phase sequence. If so; swap two phases according to the illustration. Depending on different machine model, the connection terminal can be one of the examples.

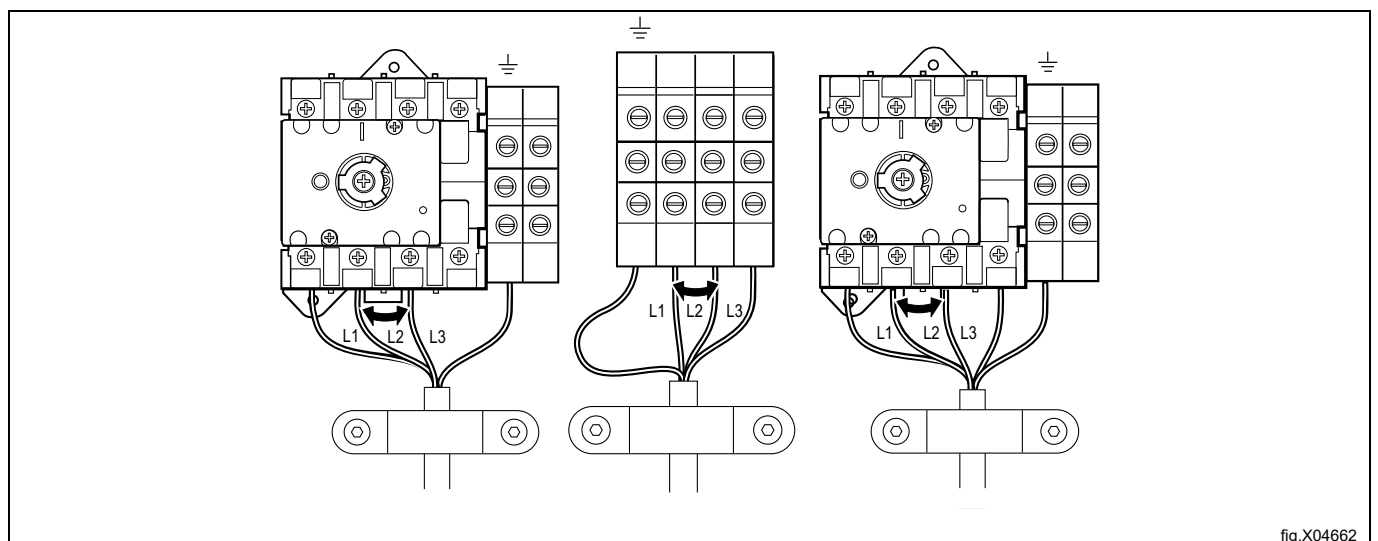


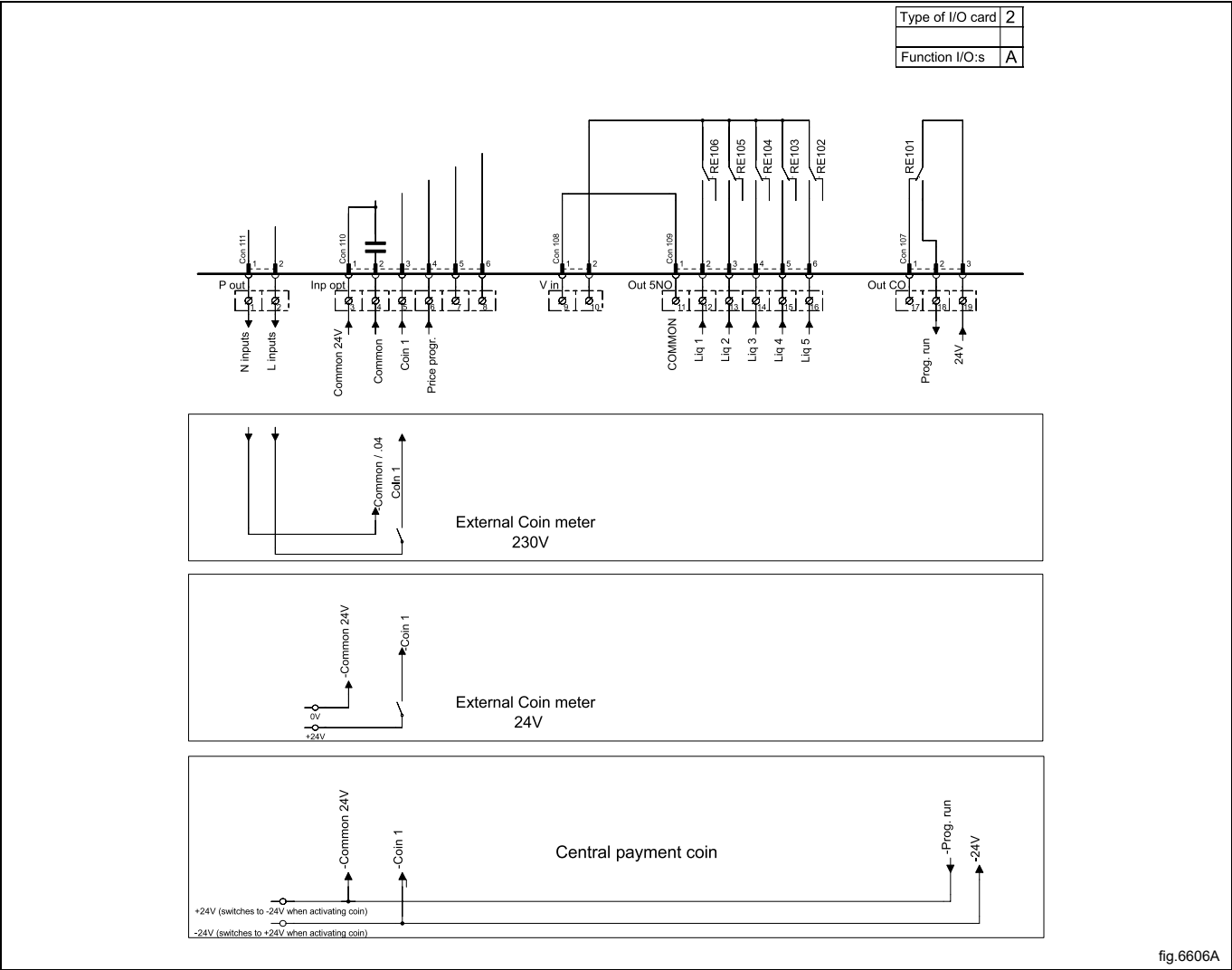
fig.X04662

9.4 Functions for I/O-cards

The electrical schematic can be one of the following:

9.4.1 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.



## 9.4.2 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.

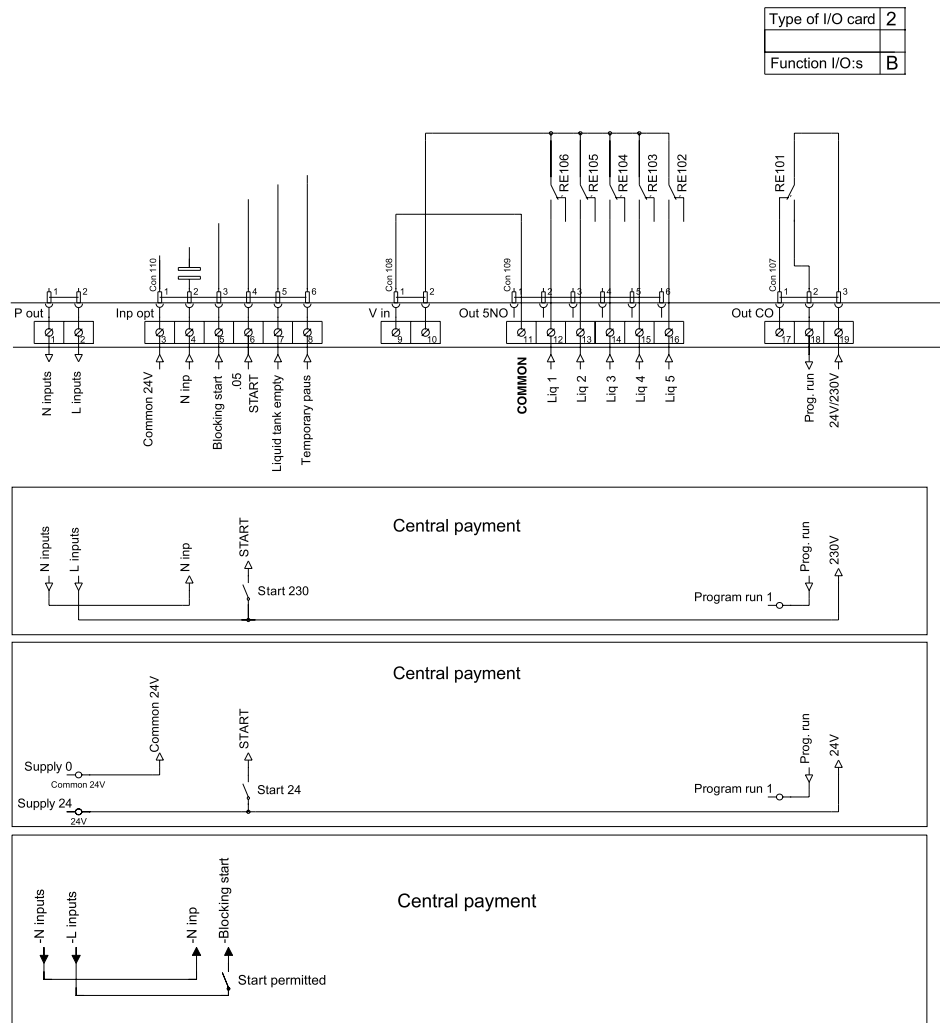


fig.6316A

9.4.3 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.

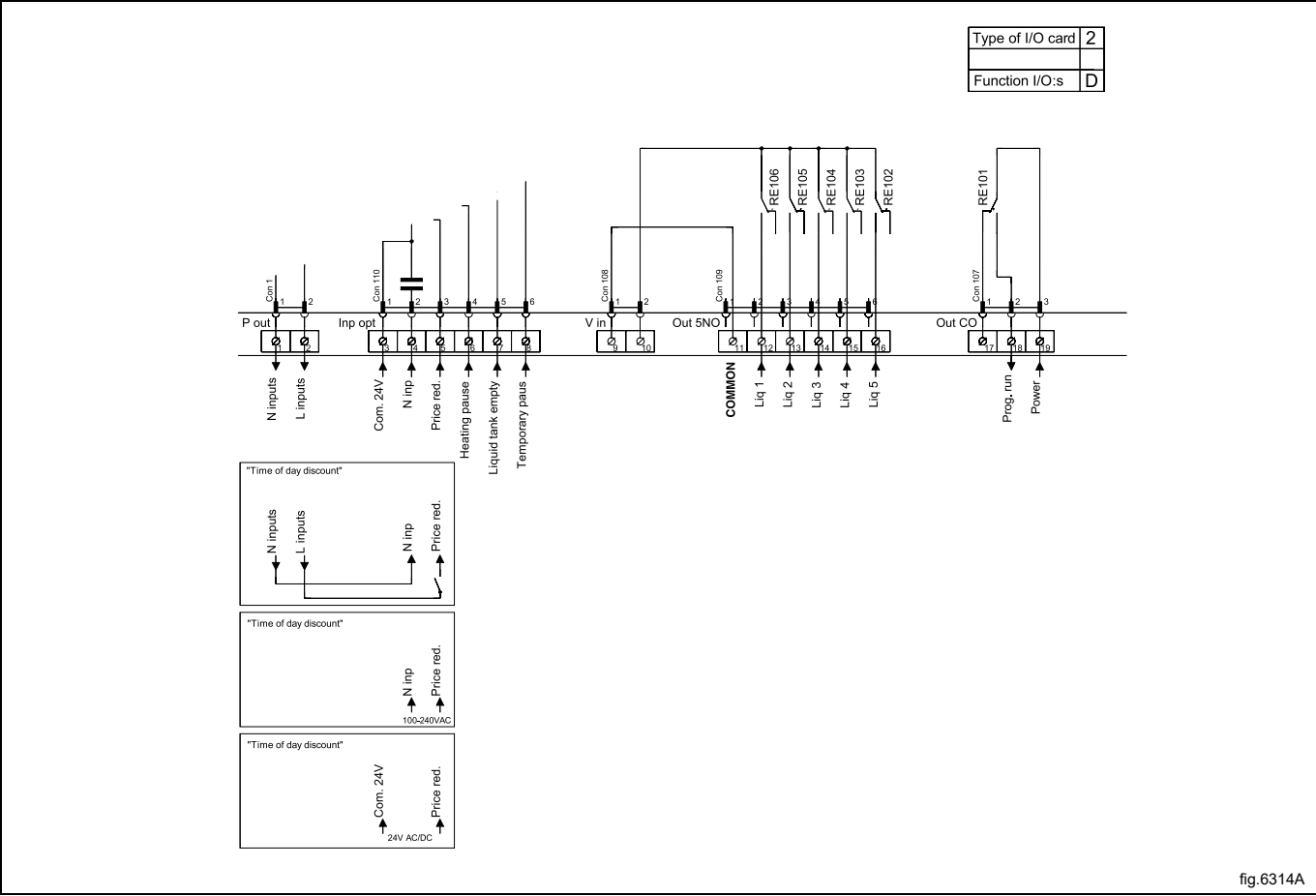
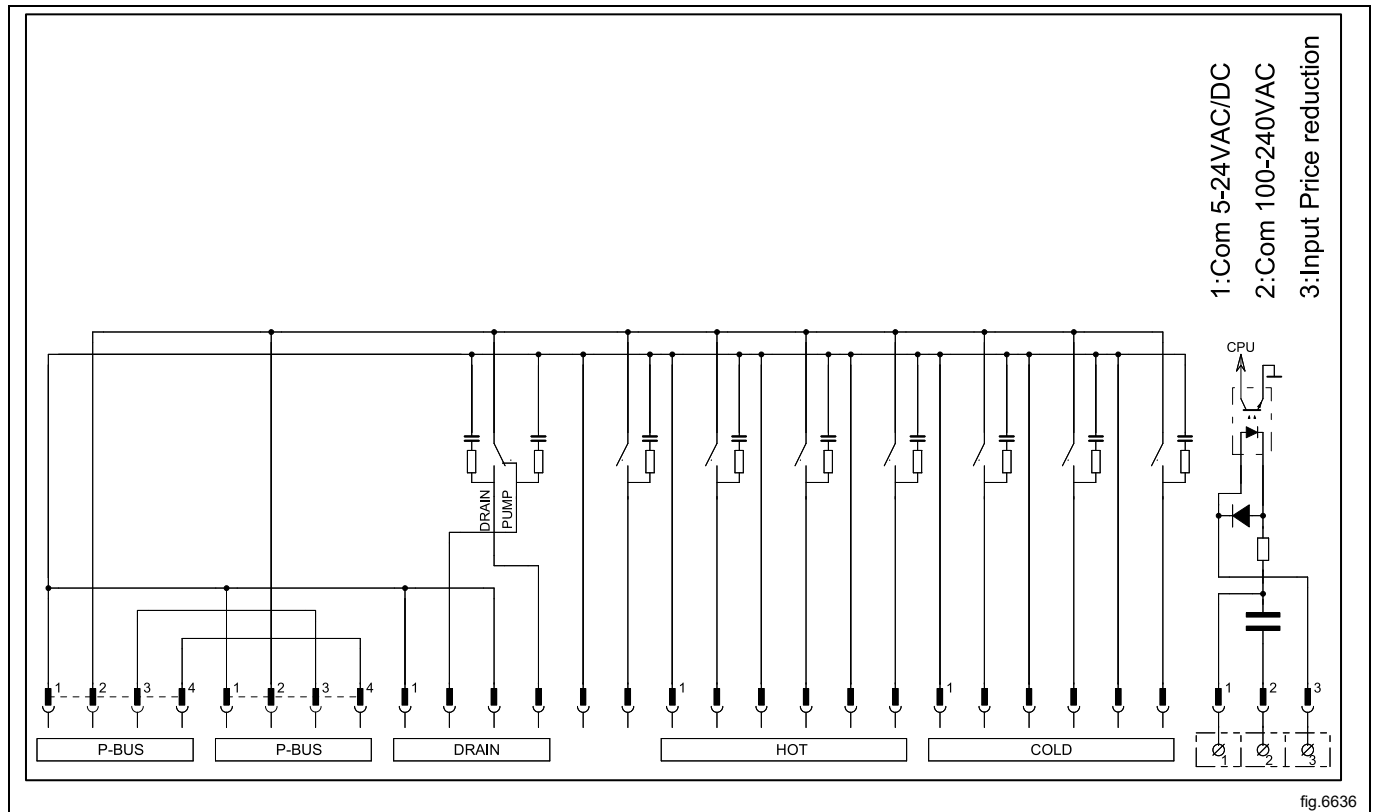


fig.6314A



### 9.4.4 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.



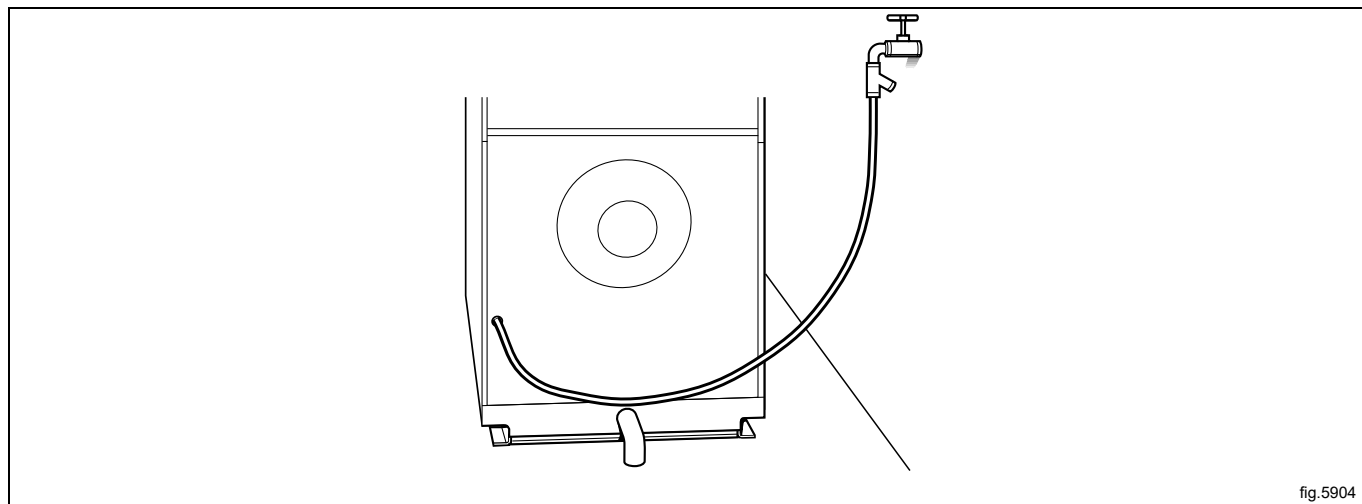
## 10 Steam connection

Inlet pipes connected to the machine must be equipped with a manual shut-off valve to facilitate installation and servicing.

Attach the filter supplied with the machine to the manual shut-off valve.

Connection hoses should be of the quality required according to regulations in the country of use.

Connection size at filter: DN 20 (BSP 3/4").



Steam pressure required:

- minimum: 50 kPa / 7 psi (0.5 kp/cm<sup>2</sup>)
- maximum: 800 kPa / 115 psi (8 kp/cm<sup>2</sup>)

Check that there are no sharp angles or bends on the connected steam hose.

### **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.

	Polyethylene: <ul style="list-style-type: none"> <li>• Outer wrapping</li> <li>• Instructions bag</li> </ul>
	Polypropylene: <ul style="list-style-type: none"> <li>• Straps</li> </ul>
	Polystyrene foam: <ul style="list-style-type: none"> <li>• Corner protectors</li> </ul>







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