

# INSTALLATION MANUAL

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## **EXSM665, EXSM680 Emerald, Selecta & Clarus Control**



# Installation manual

## EXSM665, EXSM680

### Emerald, Selecta & Clarus Control

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

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

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

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



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## SAFETY AND WARNINGS SIGNS

Replace If Missing Or Illegible

One or more of these signs must be affixed on each machine as indicated, when not included as part of the front instruction panel.

### LOCATED ON THE OPERATING INSTRUCTION SIGN OF THE MACHINE:

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#### CAUTION

1. Do not attempt to open door until "Door unlocked" indicator is lit.
2. Machine must not be used by children.
3. Do not use flammable liquids in this machine.

**MACHINE MUST NOT BE USED BY CHILDREN**

#### PRECAUCION

1. No intente abrir la puerta hasta que la luz indicadora este encendida.
2. La maquina no debe ser operado por ninos.
3. No use liquidos inflamable en la lavadora.

**LAS MÁQUINAS NO DEBEN SER USADAS POR NIÑOS**

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**IMPORTANT SAFETY INSTRUCTIONS**  
**IMPORTANTES MESURES DE SECURITE**  
**WARNING -**

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

**AVERTISSEMENT -**

*Pour réduire les risques d'incendie, de choc électrique ou de blessure quand, l'appareil est utilisé:*

1. Read all instructions before using the appliance.  
*Lire toutes les instructions avant d'utiliser l'appareil.*
2. This machine must be securely bolted to the floor according to the installation instructions.  
*Ce machine doit être vissé sur le plancher selon les instructions d'installation.*
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.  
*IL FAUT QUE cette appareil soit entretenue et actionnée conformément aux instructions du fabricant. CONTROLEZ LA SERRURE DE PORTE TOUS LES JOURS AFIN DE EVITER DES DOMMAGES OU DES RISQUES PERSONNELLES. SI LA SERRURE DE PORTE NE FONCTIONNE PAS, IL FAUT METTRE LA MACHINE HORS SERVICE JUSQU'À LE PROBLEME SOIT CORRIGÉ.*
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.  
*Ne pas laver des articles qui ont été nettoyés ou lavés avec de l'essence, des solvants pour nettoyage à sec ou d'autres substances inflammables ou explosives, ou que l'on a fait tremper dans ces produits. Ces substances dégagent des vapeurs qui peuvent s'enflammer ou exploser.*
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.  
*Ne pas ajouter d'essence, de solvants pour nettoyage à sec ou d'autres substances inflammables ou explosives à l'eau de lavage. Ces substances dégagent des vapeurs qui peuvent s'enflammer ou exploser.*
6. Under certain conditions, hydrogen gas may be produced in a hot-water system that has not been used for 2 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 this time.  
*De l'hydrogène peut être produit dans un système à eau chaude qui n'a pas été utilisé depuis deux semaines ou plus. L'HYDROGÈNE EST EXPLOSIF. Si le système à eau chaude n'a pas été utilisé depuis un certain temps, ouvrir tous les robinets d'eau chaude et laisser l'eau couler pendant plusieurs minutes avant d'utiliser une laveuse, l'hydrogène accumulé, le cas échéant, s'échappera. L'hydrogène étant inflammable, ne pas fumer ou utiliser un appareil à flamme nue pendant que l'eau coule.*
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.  
*Ne pas permettre aux enfants de jouer sur ou dans l'appareil. Surveiller étroitement les enfants lorsqu'ils se trouvent près de l'appareil qui fonctionne.*
8. Before the appliance is removed from service or discarded, remove the door.  
*Avant de mettre l'appareil hors service ou de jeter, retirer la porte.*
9. Do not reach into the appliance if the tube is moving.  
*Ne pas mettre la main dans l'appareil lorsque la cuve bougent.*
10. Do not install or store this appliance where it will be exposed to the weather.  
*Ne pas installer ou placer cet appareil dans un endroit où il sera exposé aux intempéries.*
11. Do not tamper with controls.  
*Ne pas trafiquer les commandes.*
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.  
*Ne pas réparer ou remplacer les pièces de l'appareil ou procéder à l'entretien de celui-ci sauf si les instructions visant l'entretien et les réparations qui doivent être effectués par l'utilisateur le spécifient, si vous comprenez bien ces instructions et si vous possédez les connaissances nécessaires.*

**MANUFACTURED BY WASCATOR**  
**DISTRIBUTED BY WASCOMAT INWOOD, NEW YORK, USA**



## **NOTICE TO: OWNERS, OPERATORS AND DEALERS OF WASCOMAT MACHINES**

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.

## **NOTICE À L'ATTENTION DES PROPRIÉTAIRES, UTILISATEURS ET REVENDEURS DE MACHINES WASCOMAT**

UNE INSTALLATION INCORRECTE ET UN ENTRETIEN INADÉQUAT, DE MÊME QUE LA NÉGLIGENCE OU LA NEUTRALISATION DÉLIBÉRÉES DES DISPOSITIFS DE SÉCURITÉ, PEUVENT ÊTRE CAUSES DE BLESSURES OU D'ACCIDENTS SÉRIEUX. POUR ASSURER LA SÉCURITÉ DES CLIENTS ET/OU DES UTILISATEURS DE VOTRE MACHINE, IL EST INDISPENSABLE DE PROCÉDER CHAQUE JOUR AUX CONTRÔLES DE ROUTINE CI-APRÈS.

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. (See the following page of this manual for description and location of the signs.) 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 or Wascomat.
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.  
 (See the door interlock section of the manual.)
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 or from Wascomat through its Teletech Service Hotline - 516/371-0700.

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!

**AVERTISSEMENT:** NE PAS FAIRE FONCTIONNER LA (LES) MACHINE(S) AVEC UN DISPOSITIF DE SÉCURITÉ NEUTRALISÉ, RECÂBLÉ OU NON OPÉRATIONNEL! NE PAS OUVRIR LA MACHINE TANT QUE LE TAMBOUR NE S'EST PAS IMMOBILISÉ!

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The manufacturer reserves the right to make changes to design, material and/or specifications without notice.

### Safety instructions

- The machine is designed for water washing only.
- The machine must not be used by children.
- All installation operations are to be carried out by qualified personnel. Licensed personnel are necessary for all electric power wiring and plumbing.
- The door interlock must be checked daily for proper operation and must not be bypassed.
- All seepage in the system, due to faulty gaskets etc., must be repaired immediately.
- All service personnel must be fully familiar with the operating manual before attempting any repair or maintenance of the machine.
- The machine must not be sprayed with water.
- Do not add flammable or explosive substances to the wash water. There may give off vapors that could ignite or explode.

### Consignes de sécurité

- La machine est conçue pour le lavage à l'eau exclusivement.
- La machine ne peut être utilisée par des enfants.
- Tous les travaux d'installation doivent être effectués par une personne qualifiée. Tous les câblages électriques doivent être réalisés par un électricien diplômé.
- Le verrouillage du hublot doit être vérifié chaque jour et ne peut être neutralisé.
- Toute fuite du système, due à des joints défectueux etc., doit être réparée sans délai.
- Tous les membres du personnel d'entretien doivent être parfaitement familiarisés avec le manuel d'entretien avant d'entreprendre une réparation ou un entretien de la machine.
- Ne jamais asperger d'eau la machine sous peine de risquer un court-circuit.
- Ne pas utiliser dans la machine des adoucissants textiles contenant des liquides volatils ou inflammables.

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## Technical data

		EXSM665	EXSM680
Innerdrum			
volume	litres/ft <sup>3</sup>	280/9.9	350/12.4
diameter	mm/inch	830/32 11/16	920/36 1/4
Drum speed			
wash	rpm	41	40
extraction, max	rpm	805	650
Heating			
electricity	kW	—	24
steam		x	x
hot water		x	x
G-factor, max		300	220
Weight, net	kg/lbs	380/838	560/1234

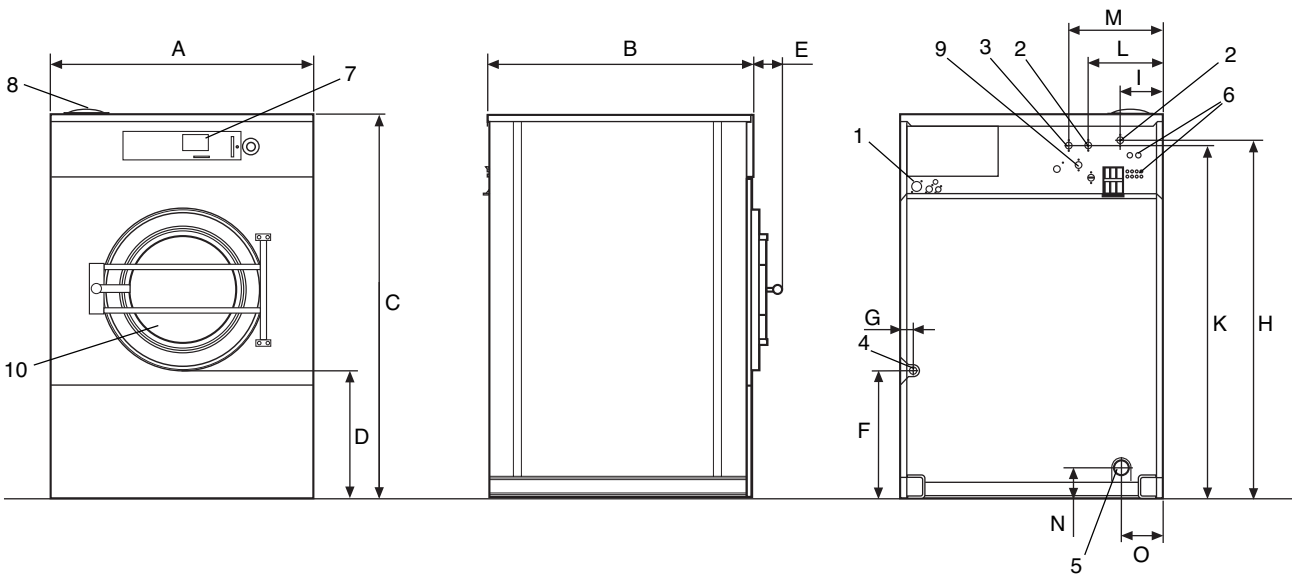
## Connections

		EXSM665	EXSM680
Water valves			
connection		DN20 3/4"	DN20 3/4"
Rec. water pressure	psi kPa	30-90 200-600	30-90 200-600
Functioning limits	psi kPa	8-145 50-1000	8-145 50-1000
Capacity at 45 psi (300 kPa)	gallon/min l/min	15 60	15 60
Drain valve	inch outer Ø mm	3 75	3 75
Draining	gallon/min l/min	45 170	45 170
capacity			
Steam valve			
connection		DN15 1/2"	DN15 1/2"
Rec. steam pressure	psi kPa	45-90 300-600	45-90 300-600
Functioning limits for	psi kPa	8-115 50-800	8-115 50-800
steam valve			

# Technical data

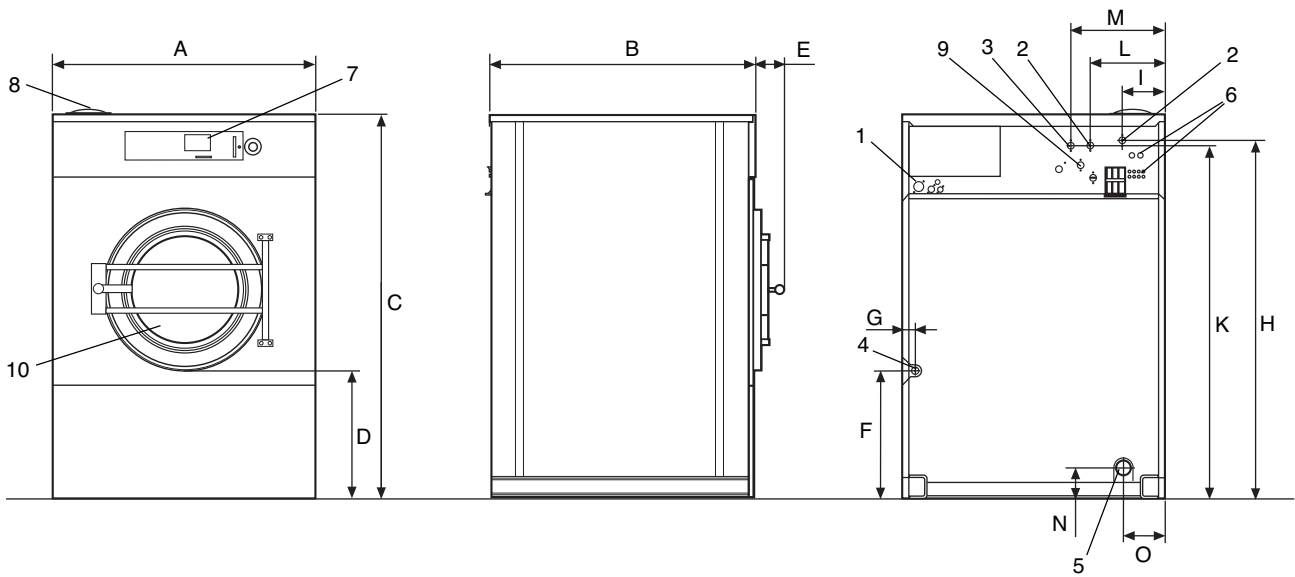
1	Electrical connection
2	Cold water
3	Hot water
4	Steam connection
5	Drain
6	Liquid detergent supply
7	Control panel
8	Soap box
9	Water reuse
10	Door opening

in mm	A	B	C	D	E	F	G	H	I	K	L	M	N	O
EXSM665	935	970	1455	515	120	400	55	1365	230	1325	315	395	120	170
EXSM680	1085	1105	1570	530	120	525	55	1465	185	1445	315	395	120	190



in inch	A	B	C	D	E	F	G	H	I	K
EXSM665	36 13/16	38 3/16	57 5/16	20 1/4	4 3/4	15 3/4	2 3/16	53 3/4	9 1/16	53 3/4
EXSM680	42 11/16	43 1/2	61 13/16	20 7/8	4 3/4	20 11/16	2 3/16	57 11/16	7 5/16	56 7/8

in inch	L	M	N	O
EXSM665	12 3/8	15 9/16	4 3/4	11 11/16
EXSM680	12 3/8	15 9/16	4 3/4	7 1/2



Technical data

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		665	680
Frequency of the dynamic force	Hz	13	10.8
Max floor load at extraction	lbs force	1124±2585	1461±3147
	kN	5±11.5	6.5±14

## Installation

### Machine foundation

The machines are designed to be bolted in position to a concrete floor or specially prepared concrete foundation. A template showing the size of the foundation and positioning of the foundation bolts is available.

The machine must be securely fastened to a suitable foundation using M16 (5/8 inch) threaded rod, flat washers and lock nuts or lock washers. Failure to properly secure the machine to its foundation, or securing the machine to an inadequate foundation, will result in severe vibration, damage to the machine, and will void the manufacturer's warranty.

For installation on an existing concrete floor, the floor must be at least 8" thick and of good quality. If the floor does not meet these requirements, then a 6-8" high concrete foundation should be made.

Refer to "Technical data" for static and dynamic floor loading.

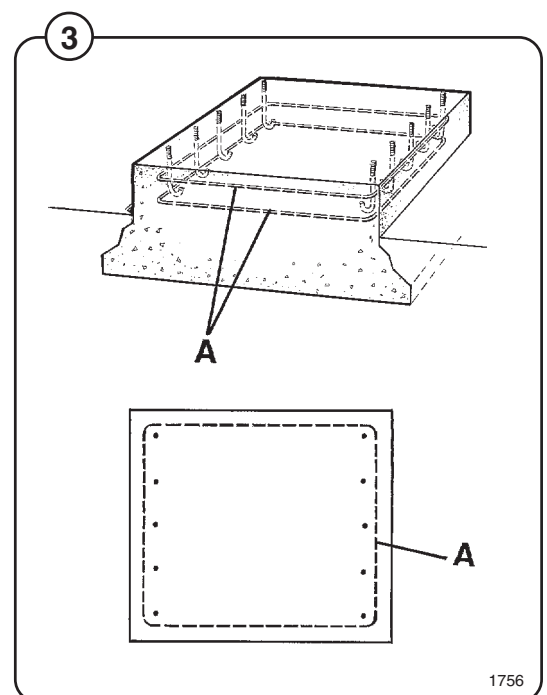
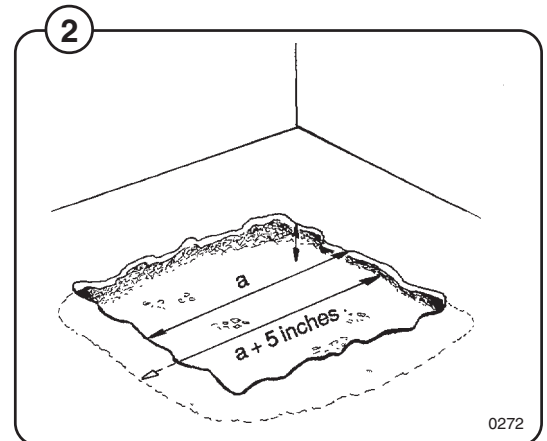
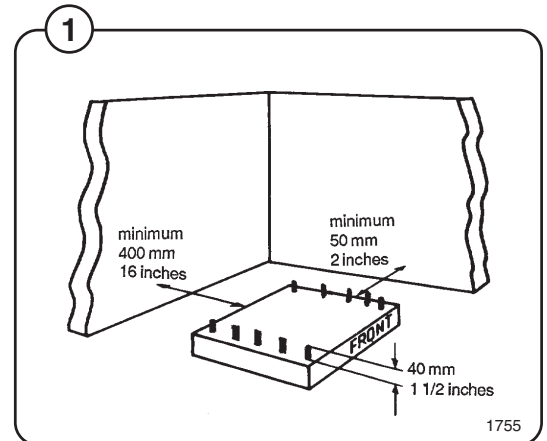
Follow the instructions below when making a concrete foundation:

- Fig. 1
1. Decide where to place the machine and consider maintenance requirements, i.e. determine a suitable distance from the rear of the foundation to the wall, and the distance from the foundation to the nearest side wall. The distance should be at least 16 and 2 inches, respectively.

- Fig. 2
2. Break up the floor to a depth of at least 3 inches, making sure that the sides of the hole slope inwards - the bottom of the hole should be 5 inches longer than the upper length.
  3. Wet the hole well. Brush the bottom and sides with cement grout.
  4. Prepare a casing and fill with concrete to form foundation. Make sure the foundation is level.

- Fig. 3
5. Use the template to position the foundation bolts correctly - bolts are to extend 1 1/2" above concrete.

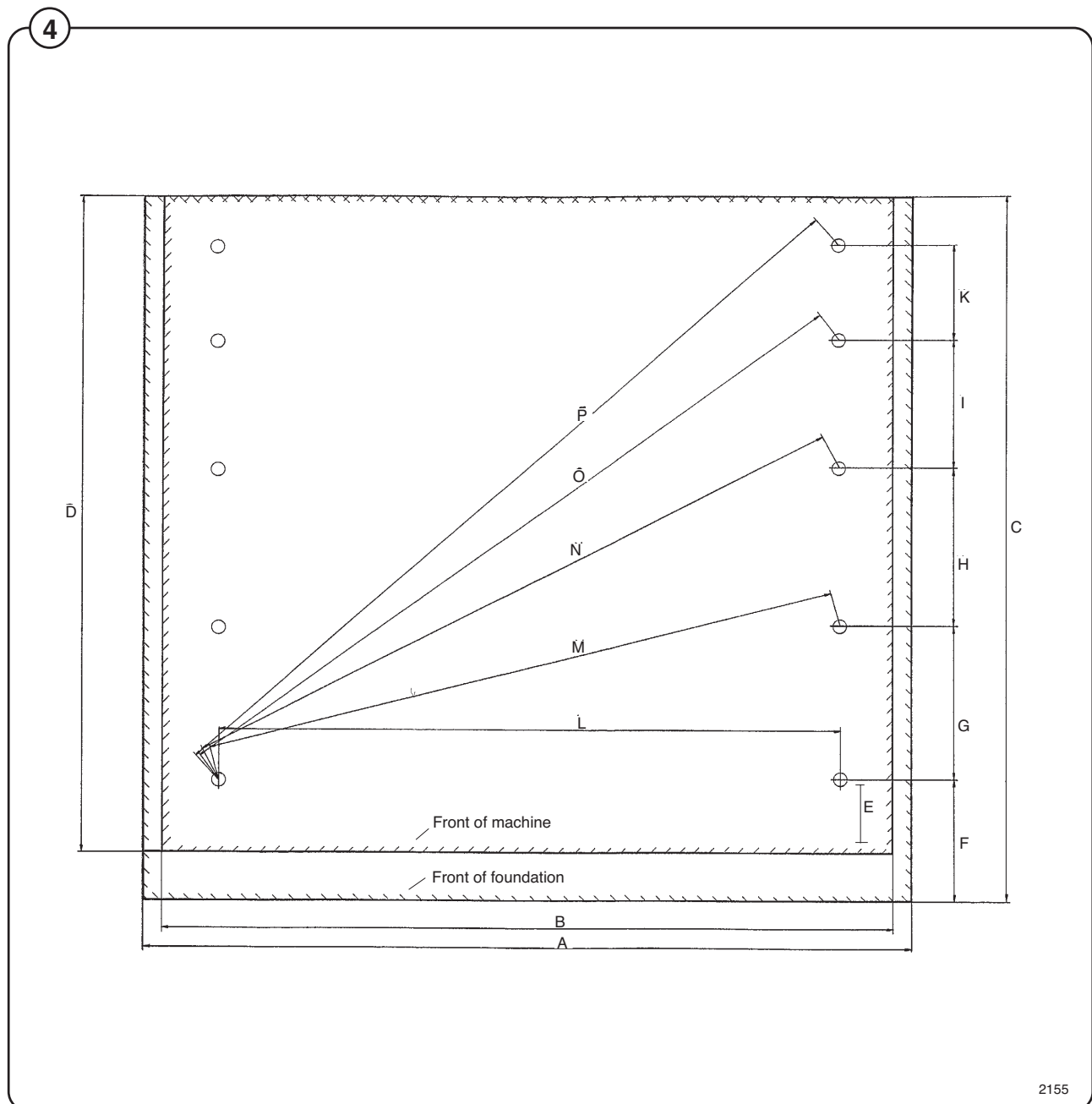
Reinforcing ironrods A shall be used around the base. The ironrods shall be placed between the bolts and the edge of the foundation.



**EXSM 665**

Fig. Measurements for foundation in inches and (mm).

④ A 39 (990)	I 6 5/8 (168)
B 37 (940)	K 4 29/32 (125)
C 40 3/16 (1020)	L 31 1/2 (800)
D 37 5/8 (955)	M 32 1/2 (825)
E 3 3/4 (95)	N 35 11/32 (898)
F 6 5/16 (160)	O 38 3/4 (985)
G 7 7/8 (200)	P 41 27/32 (1063)
H 8 5/32 (207)	

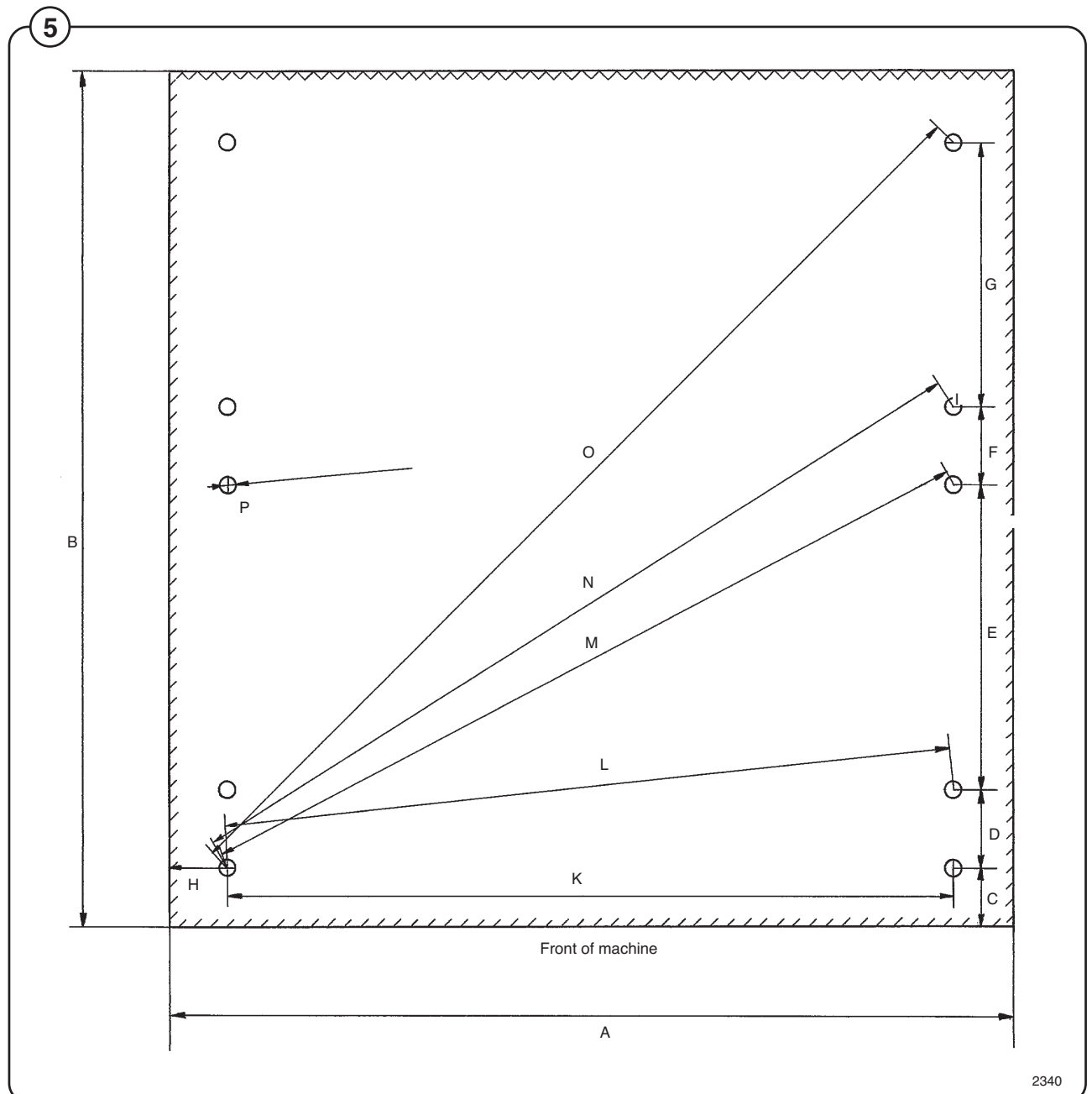




## EXSM 680

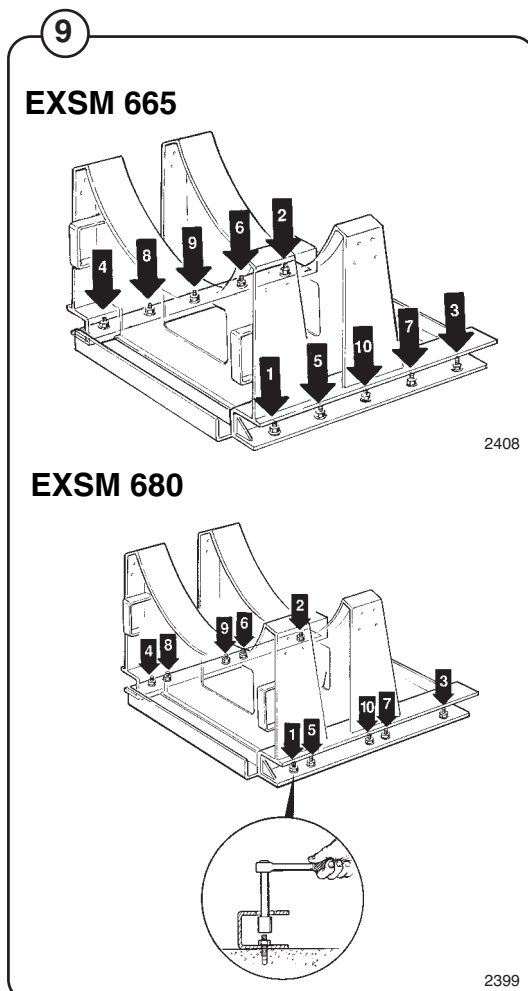
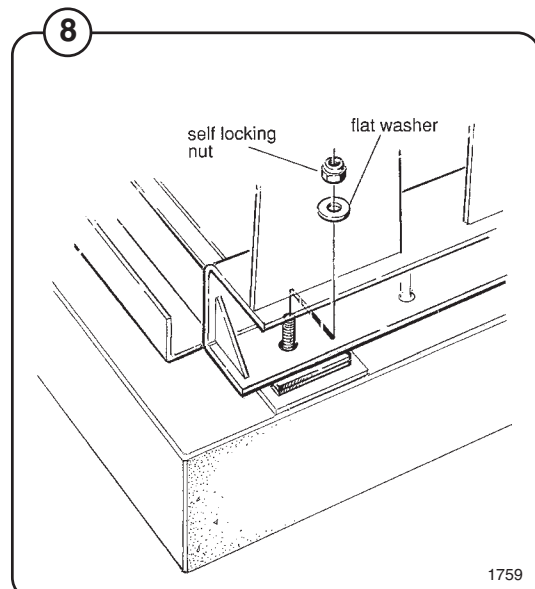
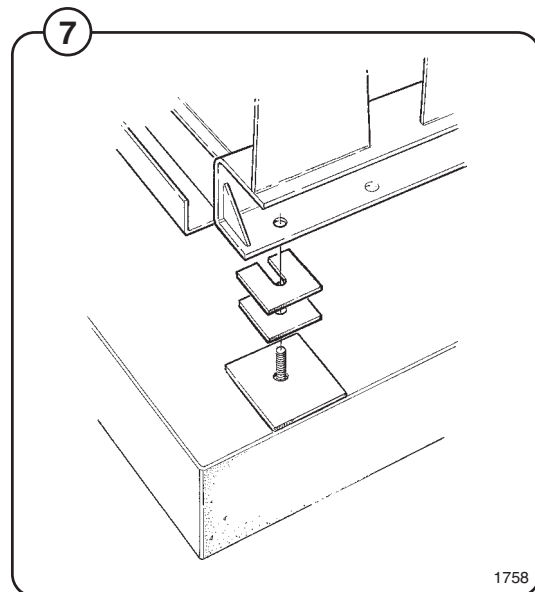
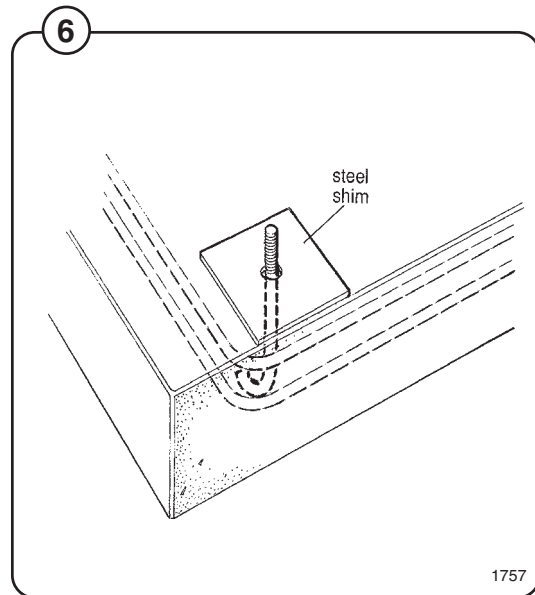
Fig. Measurements for foundation in inches and (mm).

⑤	A 42 29/32" (1090)	H 3" (77)
	B 43 15/64" (1100)	K 36 13/16" (935)
	C 3" (75)	L 37 1/64" (940)
	D 3 15/16" (100)	M 41 9/16" (1056)
	E 15 23/64" (390)	N 43 17/32" (1106)
	F 3 15/16" (100)	O 51 59/64" (1319)
	G 13 25/64" (340)	P 7/8" (22)



### Mechanical installation

- Fig. 6
- Place wide steel shims on the concrete foundation over the bolts.
- Fig. 7
- Lift the machine and lower it in position. Never use the door or the door handle to lift or lower the machine.
  - Check that the machine is level front-to-rear and side-to-side and standing firmly on the ten supporting points. Spacing washers must be mounted if one or more of these points is not resting against the floor/foundation.
- Fig. 8
- Place flat washers over the foundation bolts and secure the machine in position by tightening the self-locking nuts. See illustration below.
- Fig. 9
- Tighten the nuts in sequence as shown.
  - Check and tighten the nuts every week for the first month.



## Water connections



**All plumbing must conform to national and local plumbing codes.**

All intake connections to the machine are to 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. After installation hoses should hang in gentle arcs.

The machine may have between two and four DN 20 (R 3/4") water connectors. All connectors present on the machine must be connected up. The table shows the possible connection options, which will depend on the water types to be connected to the machine. Check the machine plates too.

All water connectors must be connected up, otherwise the wash program will not function correctly.

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

The water pressure data is as follows:

- min: 40 kPa (0,4 kp/cm<sup>2</sup>)
- max: 1 MPa (10 kp/cm<sup>2</sup>)
- recommended: 200-600 kPa (2-6 kp/cm<sup>2</sup>)

Water type	Water connection		
	1	2	3
cold and hot	cold	hot	cold or hot

Fig.

10

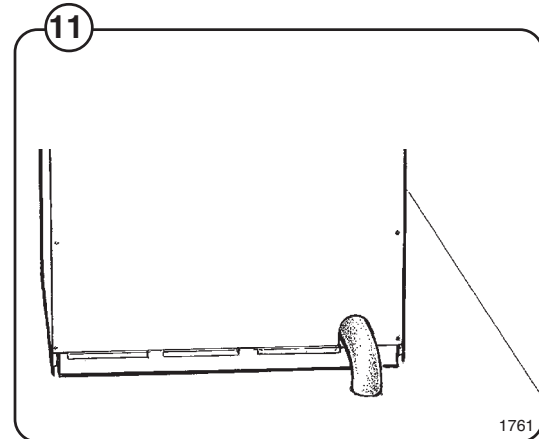
10

## Drain connection

Fig. 11 Connect a 3" (75 mm) 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.

Do not reduce the size of the drain connection from the machine to the waste line.



## Steam connection

**Fig. 12** The steam inlet pipe must be fitted with a manual cut-off valve in order to facilitate installation and service operations.

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

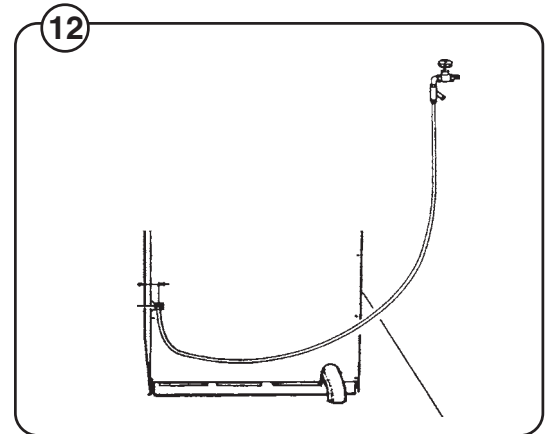
Connection hoses should be of the quality required according to regulations in the country of use.

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

Steam pressure required:

- minimum: 50 kPa (0.5 kp/cm<sup>2</sup>) (7 psi)
- maximum: 800 kPa (8 kp/cm<sup>2</sup>) (113 psi)

Check there are no sharp angles or bends in the connection hose.



## Connection of external liquid supplies

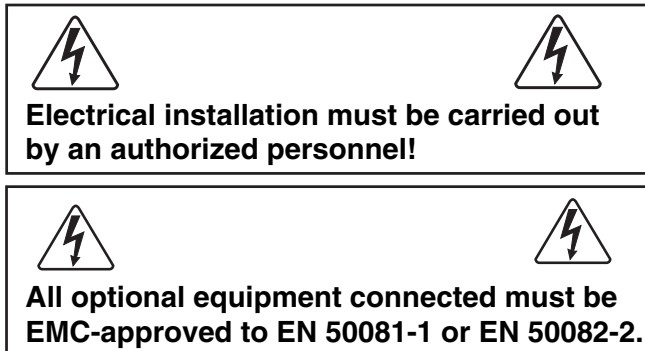


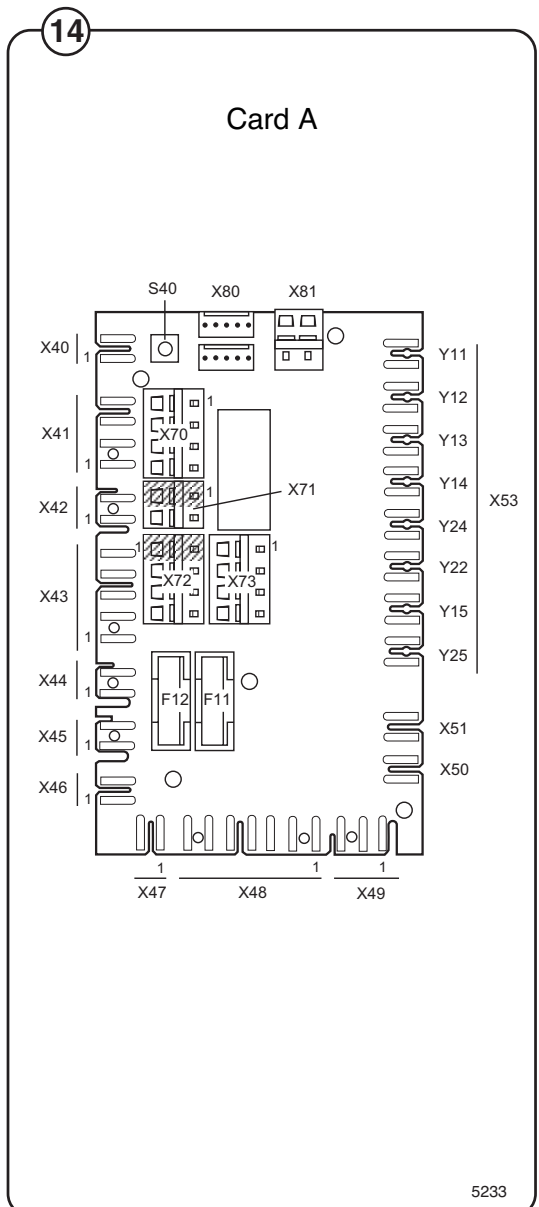
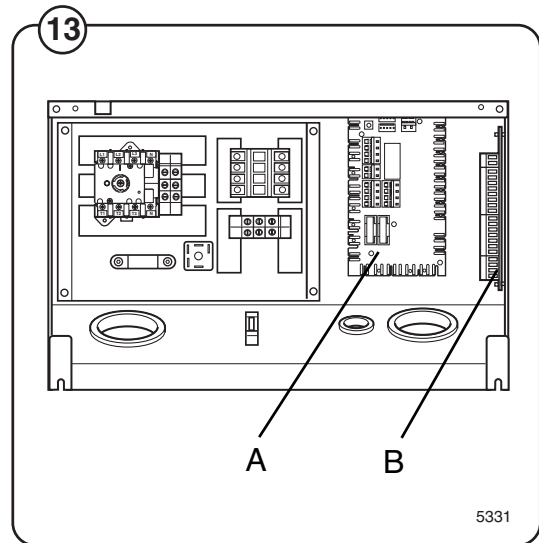
Fig. 13 Distribution card A can be used to control machine functions, output and input signals.

Fig. 14 **Outputs (200-240V AC):**  
**Only Clarus Control**

X71:1,2	Signal "Door locked, program on"
X72:1	0 V (common)
X72:2	Liquid supply 1
X72:3	Liquid supply 2
X72:4	Liquid supply 3
X72:5	Liquid supply 4
X73:1	Detergent box 1 (Y11)
X73:2	Detergent box 2 (Y12)
X73:3	Detergent box 3 (Y13)
X73:4	Detergent box 4 (Y14)
X73:5	Detergent box 2 (Y22)

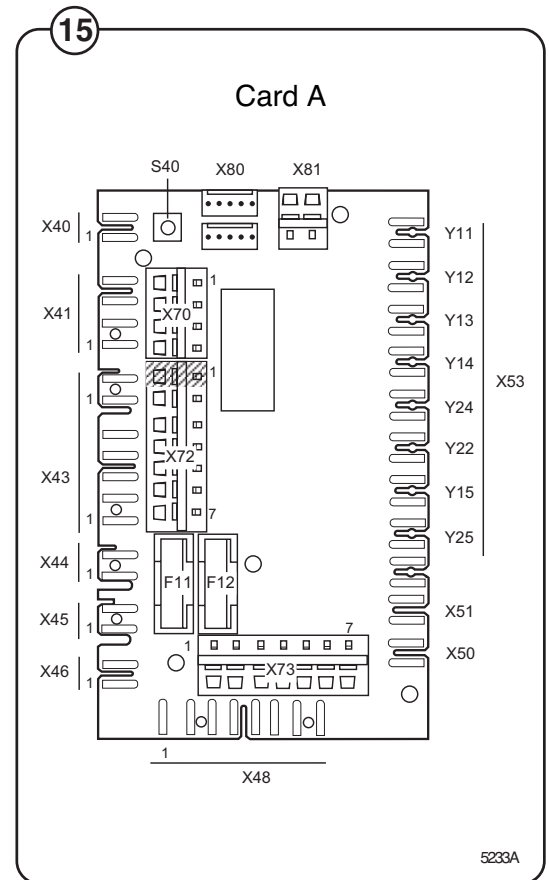
### Inputs:

X70:1,2	Paus/PC5
X70:3,4	Start/Stop



**Fig. 15** **Outputs (200-240V AC):**  
**Only Emerald and Selecta Control**

X70	See Payment system
X72:1	0 V (common) (Door locked)
X72:2	L1 (Door locked)
X72:3	Liquid supply 1 (Prewash, Emerald), (Detergent, Selecta)
X72:4	Liquid supply 2 (Main wash, Emerald), (Sour, Selecta)
X72:5	Liquid supply 3
X72:6	Liquid supply 4 (Bleach, Selecta)
X73:7	Liquid supply 5 (Bleach, Emerald), (Starch, Selecta)
X73:1	Heating
X73:2	Detergent box 2 (Y12)
X73:3	Cold water (Y15)
X73:4	Detergent box (Y22)
X73:5	Hot water (Y25)
X73:6	Inverted drain
X73:7	Drain



**Payment system****Price reduction**

Fig.

- ①⑥ X70:1 Timer, opto- input (120-230V)  
 X70:2 Timer, opto- input

**External coin-meter**

Fig.

- ①⑦ X70:1 0 V (common), output  
 X70:2 Coin 2  
 X70:3 Coin 1  
 X70:4 Price programming

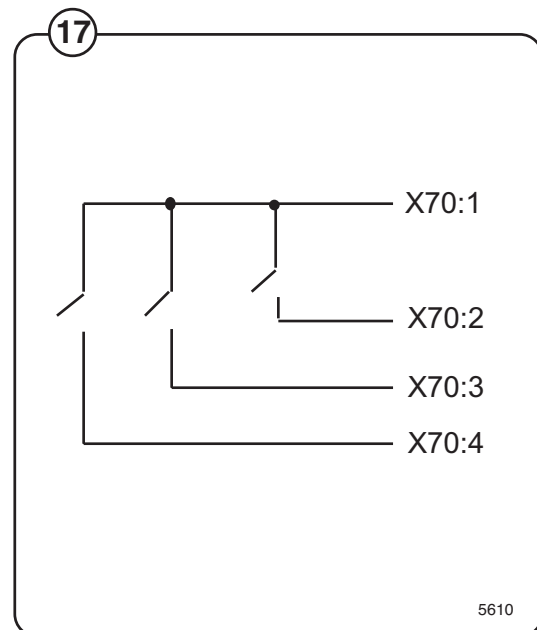
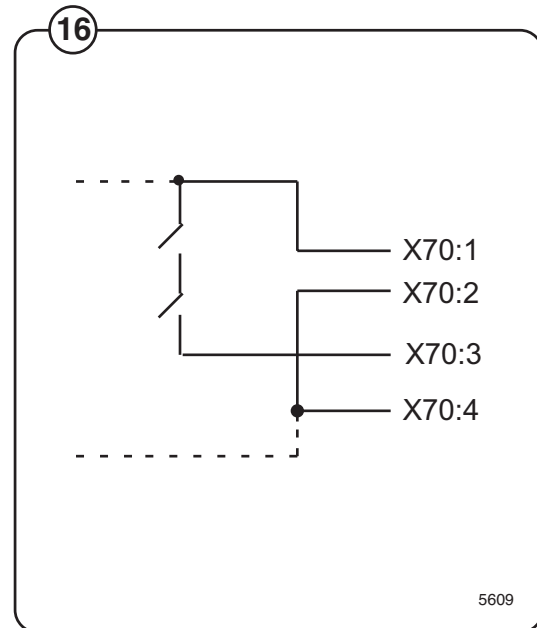




Fig. 18. If more signals are required the machine can be equipped with a second distribution card B (**only Clarus Control**).

## Outputs (200-240V AC):

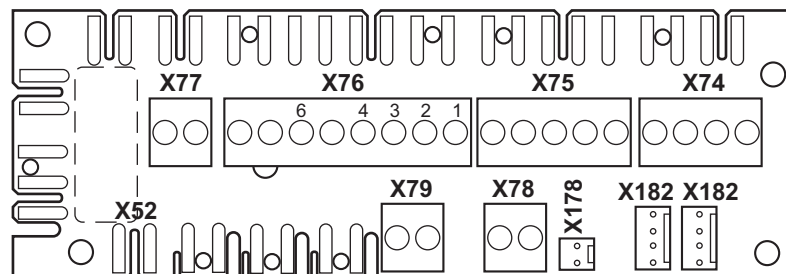
X75:1	0 V (common)
X75:2	Liquid supply 5
X75:3	Liquid supply 6
X75:4	Liquid supply 7
X75:5	Liquid supply 8
X76:1	0 V (common)
X76:2	Drain lock
X76:3	Drain A
X76:4	Drain B
X76:5	Drain C
X76:6	Inlet A
X76:7	Inlet B
X76:8	Inlet C
X77:1	Buzzer (N)
X77:2	Buzzer (L1)

## Inputs:

X74:1,2	Switch between heating 1/heating 2
X74:3,4	No function

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Card B



## Electrical installation



**Electrical installation must be carried out by licensed, qualified personnel!**



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

- **contact a licensed, qualified electrician to ensure that the appropriate type of breaker is chosen and that the breaker rating is correct**
- **for maximum reliability, connect only one machine per circuit breaker**
- **it is important that the earth wire is properly connected, including to the ground fault circuit breaker.**

An individual electrical disconnect must be provided in proximity to each machine.

The connecting cable should hang in a gentle curve.

For proper circuit breaker sizes, see table on the next page.

Single-phase connection:

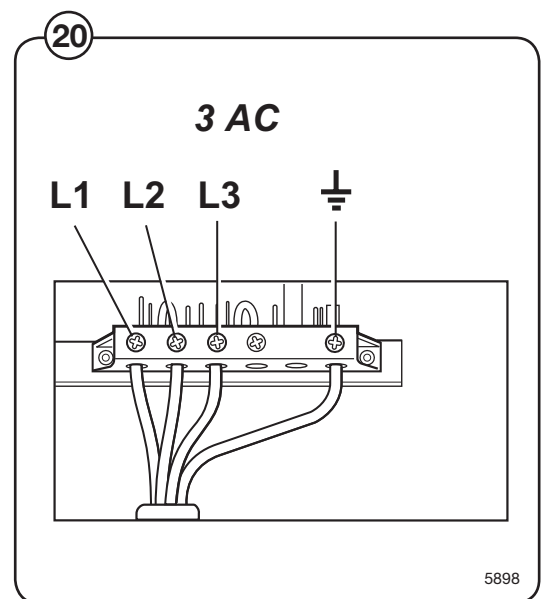
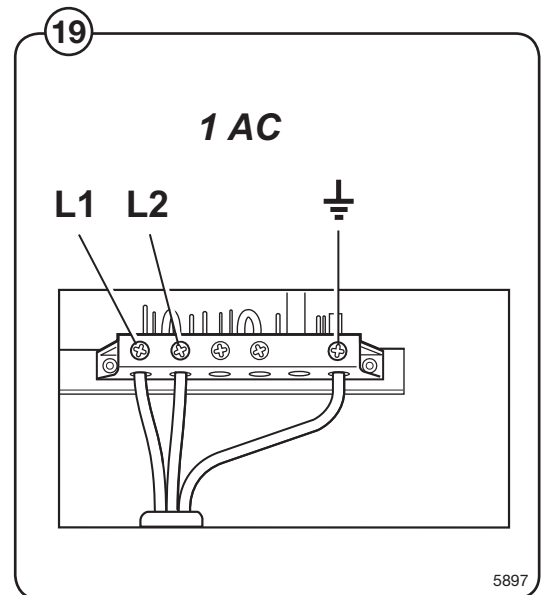
**Fig. 19** Connect the earth and other two wires as shown in example "1AC" in the figure.

Three-phase connection:

**Fig. 20** Connect the earth and the three phases as shown in example "3AC" in the figure.

When the installation is completed, check:

- that the drum is empty.
- that the machine operates by turning on the mains switch, starting the machine and using RAPID ADVANCE to reach the spin cycle (see operations manual).



## EXSM665

Heating alternative	Voltage alternative	Total kW	Circuit breaker A
Steam heating	208-240V 1AC 50/60 Hz	1.5	15

## EXSM680

Heating alternative	Voltage alternative	Total kW	Circuit breaker A
El. heating	230V 3AC 50/60 Hz	25	70
	400-415V 3NAC 50 Hz	25	50
Steam heating	208-240V 1AC 50/60 Hz	2.5	15

## Function checks, Emerald/Selecta

Perform the following checks once the machine is installed:

- Open the manual water valves.
- Turn on the power at the external switch.
- Check that the drum is empty, and close the loading door.
- Put detergent into compartment 2.
- Choose a high-temperature program.
- Insert requested amount of coin(-s) then press the **START** button. If the machine is coin-operated insert the amount of coins or tokens shown on the display.

Fig.

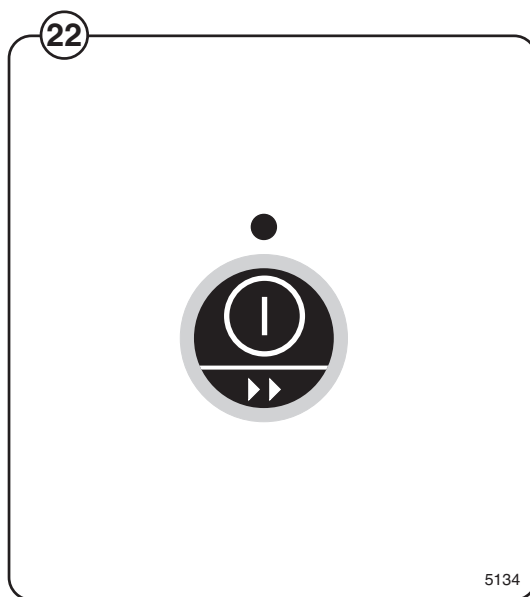
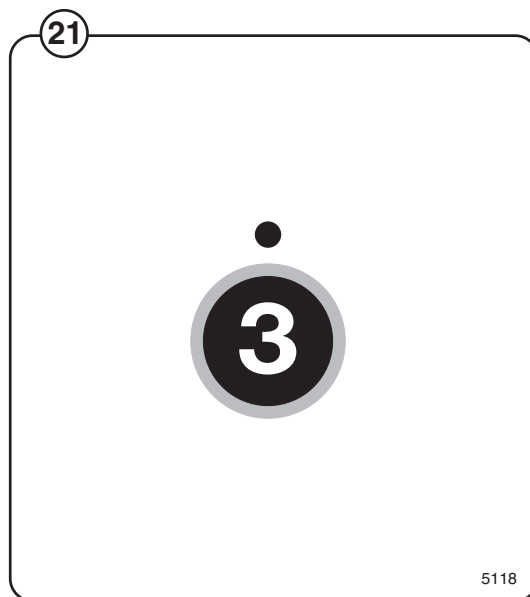
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Fig.

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Check:

- that the drum rotates normally and that there are no unusual noises.
- that there are no leaks in water supply/drain connections.
- that water passes through the detergent compartment and fabric conditioner compartments.
- that the door cannot be opened during a program.
- that the machine is heating (if the machine is equipped with heating)



### Function checks, Clarus Control

#### Manual operation

- Switch on the machine's main switch.
- Open the manual valves for water and for steam if the machine has steam heating.

In the operating manual, chapter "Manual operation", one can find how to operate the machine manually.

- Check that the drum is empty and close the door.
- Close the drain valve.
- Operate the machine manually to fill with cold water, then hot water. Check that these water supplies are connected as they should be.
- Start the motor on wash action, and check that the motor is revolving clockwise and anticlockwise alternately, as normal for wash action.
- Start heating by entering a final temperature and then pressing **START**. Check that the steam valve opens or the heating element relay reacts, as appropriate.
- Check that all sources of detergent supply are working as they should, including the built-in detergent supply compartments, where present.
- Check the water and steam connections and the drain valve for signs of any leakages.
- Empty the water from the machine and open its door.

To keep your machine in proper working order, follow the preventive maintenance recommendations provided below.

The maintenance interval should be adjusted according to machine usage. The suggested schedule assumes an 8 hour work day, and a 5 day work week..

### Daily

- Check the door and door lock:
  - Open the door and try starting the machine. The machine **MUST NOT START**.
  - Close the door, start the machine and try opening the door. It **MUST NOT BE POSSIBLE TO OPEN THE DOOR WHILE THE MACHINE IS OPERATING!**
  - Check that the door does not leak.
  - Clean the door seal, removing any detergent and fluff.
- Check that the drain valve does not leak during the wash cycle.
- Clean out any detergent remaining in the detergent compartment. Rapid advance through a program and let the water rinse the compartment.
- Inspect liquid chemical tubing and connections for leaks. Repair as necessary.

### Every third month (refer this service to qualified personnel)



- Check that the door does not leak.
- Check the drain valve and remove any lint.
- Inspect the interior of the machine (during an actual wash cycle to ensure that no leaks are noticed) by:
  - Turning of the main power switch of the machine.
  - Remove the top cover and the protective front and rear plates.
  - Cover the detergent dispenser to prevent water from splashing inside the machine.
  - Start a wash program.
  - **KEEP CLEAR OF MOVING PARTS WHILE MACHINE IS OPERATING!!**

- Inspect all internal hoses, seals and gaskets for signs of leakage. Repair as necessary.
- Check that water inlet screens are clean of debris. Dirty screens result in longer fill times, which reduce productivity.
- Inspect the drive belt. Adjust the tension or replace if necessary (see section 30. Motor).
- Check that there are no signs of leakage on the floor beneath the machine. Locate and repair any leak.
- On heated machines, if the heating time is unusually long, check the heating elements (see section 40. Heating). If the water is very hard, check whether there are lime deposits on the heating elements. Decalcify the elements if necessary. Adapt the amount of deliming agent to the manufacturer's guidelines.
- Never switch on the heating elements when there is no water in the machine. This will cause the slow-blow fuse to trigger.
- Inspect the shock absorbers and coil springs. (Only EX- and H-model).









