# **Installation manual**

# Washer extractors W465H, W475H/N/S, W485N/S, W4105H/N/S, W4130H/N/S, W4180H/N/S, W4240H, W4250N/S, W4300H, W4330N/S Type W3...

# **Compass Control**

# From machine No.

W475N/S, W485N/S, W4105N/S, W4130N/S	00521/402183-
W4180N/S	00650/107384-
W4250N/S	00725/105494-
W4330N/S	00795/102510-

Thinking of you

B Electrolux

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# **Contents**

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

# **Safety Precautions**



# **Safety Precautions**



The machine is only intended for water-wash use.

Do not allow minors to use the machine.

Do not hose down the machine with water.

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.

The machine is not intended to be used by people (including minors) with reduced physical or mental capacity or lack of experience and knowledge. Such people must be instructed in the use of the machine by a person who has responsibility for their safety. Minors must be supervised to ensure that they do not play with the machine.





All external equipment which is connected to the machine must be CE/EMC-approved and connected using an approved shielded cable.





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.

## **Technical data**

		W465H	W475H	W4105H	W4130H	W4180H	W4240H	W4300H
Innerdrum volume	litres	65	75	105	130	180	240	300
diameter	mm	520	520	595	650	725	795	795
Drum speed wash extraction		49	49	49	49	44	42	42
	rpm	1100	1100	1025	980	930	890	820
Heating								
electricity	kW	5.4/7.5	5.4/7.5	7.5/10	13	18	23	23
steam		Χ	х	Х	Х	Х	Х	х
hot water		Х	х	х	х	Х	х	х
G-factor		350	350	350	350	350	350	300
Weight, net	kg	144	159	201	267	350	400	509
Sound pressure le	evel dB (A)	64	65	69	70	75	78	76

#### **Connections**

		W40511	14/47511	W4405U	W440011	W4400H	34/40/4011	14/400011
		W465H	W475H	W4105H	W4130H	W4180H	W4240H	W4300H
Water valves								
connection		DN20	DN20	DN20	DN20	DN20	DN20	DN20
	BSP	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Rec. water pressur	е							
	kPa	200-600	200-600	200-600	200-600	200-600	200-600	200-600
Functioning limits								
for water valve								
	kPa	50-1000	50-1000	50-1000	50-1000	50-1000	50-1000	50-1000
Capacity								
at 300 kPa								
	l/min	20	20	20	20	30	60	60
Drain valve								
outer	Ø mm	50/75	50/75	50/75	75	75	75	75
Draining capacity								
	l/min	170	170	170	170	170	170	170
Steam valve								
connection		DN15	DN15	DN15	DN15	DN15	DN15	DN15
	BSP	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Rec. steam pressu	re							
	kPa	300-600	300-600	300-600	300-600	300-600	300-600	300-600
Functioning limits f	or							
steam valve								
	kPa	50-800	50-800	50-800	50-800	50-800	50-800	50-800

## **Technical data**

		W475N/S	W485N/S	W4105N/S	W4130N/S	W4180N/S	W4250N/S	W4330N/S
Innerdrum volume diameter	litres mm	75 520	85 520	105 595	130 595	180 650	250 725	330 795
Drum speed wash extraction		49	49	49	49	44	44	42
	rpm	587/830	587/830	548/776	548/776	525/742	497/702	474/671
Heating		2.0/3.0/	2.0/3.0/5.6	3.0/6.5/	3.0/	4.8/9.3		
electricity	kW	5.4/5.6/7.5	5.4/7.5	7.5/10	7.5/10	13	18	23
steam		Х	Х	Х	Х	Х	Х	х
hot water		Х	Х	Х	Х	Х	Х	X
G-factor		100/200	100/200	100/200	100/200	100/200	100/200	100/200
Weight, net	kg	129	135	145	175	228	287	330
Sound pressure le	evel dB (A)	63/59	63/59	63/64	70/64	64/70	68/73	70

#### **Connections**

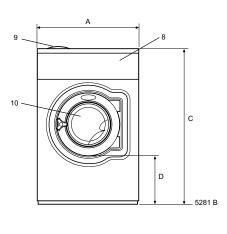
		W475N/S	W485N/S	W4105N/S	W4130N/S	W4180N/S	W4250N/S	W4330N/S	
Water valves									
connection		DN20	DN20	DN20	DN20	DN20	DN20	DN20	
	BSP	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Rec. water pressure	е								
	kPa	200-600	200-600	200-600	200-600	200-600	200-600	200-600	
Functioning limits for water valve									
	kPa	50-1000	50-1000	50-1000	50-1000	50-1000	50-1000	50-1000	
Capacity at 300 kPa									
	l/min	20	20	20	20	30	60	60	
Drain valve									
outer	Ø mm	75	75	75	75	75	75	75	
Draining capacity									
	l/min	170	170	170	170	170	170	170	
Steam valve									
connection		DN15	DN15	DN15	DN15	DN15	DN15	DN15	
	BSP	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	
Rec. steam pressur									
	kPa	300-600	300-600	300-600	300-600	300-600	300-600	300-600	
Functioning limits for steam valve	or								
	kPa	50-800	50-800	50-800	50-800	50-800	50-800	50-800	

1	Electrical	connection
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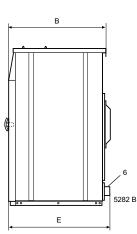
- 2 Cold water
- 3 Hot water
- 4 Hard water
- 5 Steam connection
- 6 Drain
- 7 Liquid detergent supply
- 8 Control panel
- 9 Soap box
- **10** Door opening, W465H, W475H: Ø 310, W4105H: Ø 365, W4130H: Ø 395, W4180H, W4240H, W4300H: Ø 435

	Α	В	С	D	E	F	G	Н	ı	K	L	М	N	0	Р	R	S
W465H	720	690	1115	355	720	825	45	1030	220	1010	135	910	830	360	100	240	_
W475H	720	690	1115	355	720	825	45	1030	220	1010	135	910	830	360	100	240	_
W4105H	830	705	1200	365	740	945	45	1115	220	1095	135	995	910	415	100	295	_
W4130H	910	785	1325	435	825	1035	125	1245	215	1225	300	1125	ı	_	100	305	455
W4180H	970	870	1410	470	910	1120	115	1330	230	1290	315	1205	370	410	100	335	485
W4240H	1020	915	1445	500	955	1155	100	1360	215	1320	300	1240	350	360	100	360	510
W4300H	1020	1060	1445	500	1135	1155	100	1360	215	1320	300	380	1	_	100	360	330

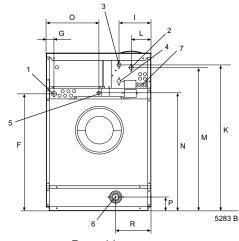
#### W465H, W475H, W4105H, W4130H





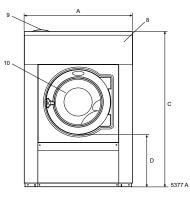


Right side

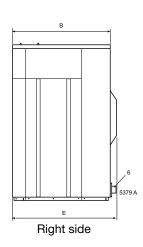


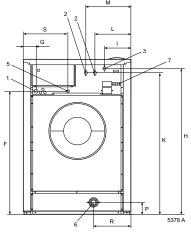
Rear side

#### W4180H, W4240H, W4300H



Front

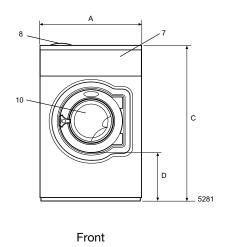


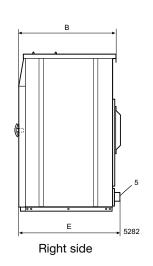


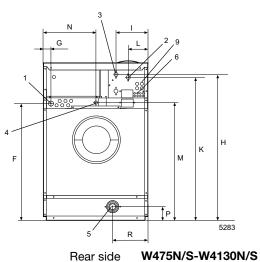
Rear side

- 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
- Door opening, W475N/S, W485N/S: ø310, W4105N/S, W4130N/S: ø365, W4180N/S: ø395, W4250N/S, W4330N/S: ø435

	Α	В	С	D	E	F	G	Н	ı	K	L	М	N	0	Р	R
W475N/S	660	690	1115	355	725	825	45	1030	215	1010	130	830	385	-	100	225
W485N/S	660	730	1115	355	765	825	45	1030	215	1010	130	830	385	-	100	225
W4105N/S	720	705	1200	365	740	910	45	1115	215	1095	130	910	420	-	100	235
W4130N/S	720	790	1200	365	825	910	45	1115	215	1095	130	910	420	-	100	235
W4180N/S	750	880	1333	435	915	1035	45	1245	130	1225	210	1040	325	295	100	225
W4250N/S	830	955	1410	470	990	1120	45	1330	160	1290	245	1125	325	325	100	265
W4330N/S	910	1040	1445	500	1075	1155	45	1365	160	1325	245	1155	280	325	100	210







N L 3 2 9 6 6 6 1 1 1 2 9 5 6 6 7 5 5 4 5 9 5 5 4 5 9

Rear side W4180N/S-W4330N/S

		W465H	W475H	W4105H	W4130H	W4180H	W4240H	W4300H
Frequency of the dynamic force	11-	10.0	10.0	171	16.0	15 5	14.0	10.7
	Hz	18.3	18.3	17.1	16.3	15.5	14.8	13.7
Max floor load at 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 ± 1.2

		W475N/S	W485N/S	W4105N/S	W4130N/S	W4180N/S	W4250N/S	W4330N/S
Frequency of the dynamic force								
	Hz	9.3	9.3/13.8	8.7/12.9	8.7/12.9	8.3/12.3	7.9/11.7	7.5/11.2
Max floor load at extraction		1.6 ± 2.8/	1.7 ± 3.1/	2.1 ± 3.6/	2.3 ± 4.1/	2.9 ± 4.7/	3.7 ± 5.3/	4.5 ± 5.8/
	kN		l	$2.1 \pm 3.0$		$2.9 \pm 4.6$	$3.7 \pm 5.8$	$4.5 \pm 6.8$

#### **Installation H-model**

# Transportation and unpacking, W465H, W475H, W4105H

The machine is delivered complete with expansion bolts etc. packed inside the machine in the drum.

The machine is delivered bolted onto the transport pallet and packed in a crate or box.

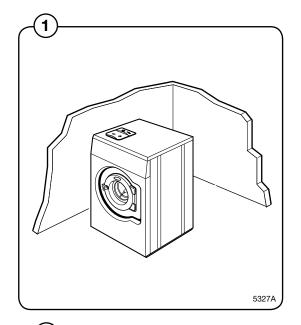
- Remove packing from the machine.
- Remove front panel. Remove the bolts between the machine and pallet.
- Mount front panel.

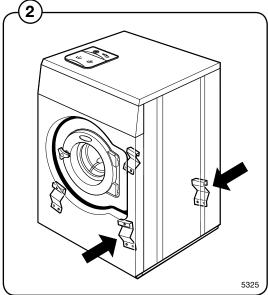
When the machine is lifted off the pallet: Make sure that the machine does not come down on the floor with either of the rear corners first. The side panel of the machine can be damaged.

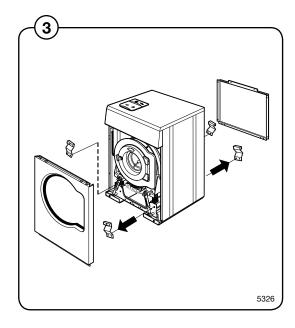
- · Mount the feet.
- Place the machine on its final position.
  - Level the machine with the feet of the machine.
- The machine also comes with transport safety devices (four plate angles between the support and the drum).

In order to remove the safety devices:

- Remove front and rear panel.
- Remove both front metal angels.
  - Remove both rear metal angels.
  - The machine may not be moved with the transport securities removed. Save the transport securities for future use.







# Transportation and unpacking, W4130H, W4180H, W4240H, W4300H

The machine is delivered complete with expansion bolts etc. packed inside the machine in the drum.

The machine is delivered bolted onto the transport pallet and packed in a crate or box.

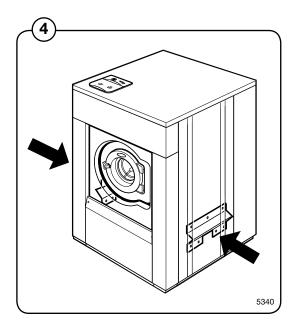
- · Remove packing from the machine.
- Remove front and rear panel. Remove the bolts between the machine and pallet.
- Mount front and rear panel.
- Mount the feet.

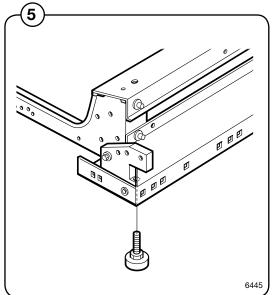
#### NOTE!

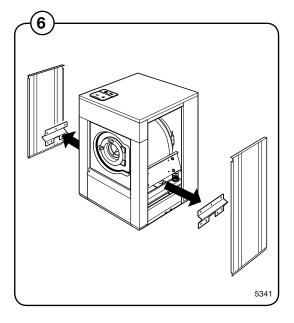
- Regarding W4300H note the positioning of the two front feet.
- Place the machine on its final position.
  - Level the machine with the feet of the machine.
- The machine also comes with transport safety devices (two plate angles between the support and the drum).

In order to remove the safety devices:

- Remove the two side panels.
  - Remove the two transport securities.
  - The machine may not be moved with the transport securities removed. Save the transport securities for future use.



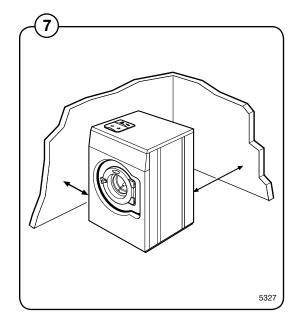




#### Siting and floor

Install the machine close to a floor drain or open drain

- In order to make installation and servicing the machine easier the following clearances are recommended:
  - At least 500 mm between the machine and the wall behind
  - and min. 50 mm on both sides of the machine whether installed next to the wall or other machines.

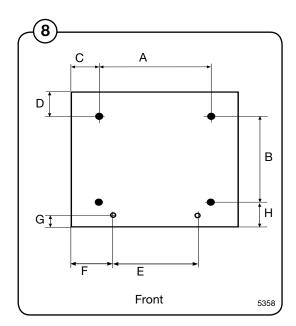


#### Mechanical installation

8

 Mark and drill 2 holes (ø 8 mm) about 40 mm deep (W465-W4105) and ø 10 mm and 50 mm deep (W4130-W4240) in the positions shown.

	Α	В	С	D	Е	F	G	Н
W465H	495	460	110	130	375	170	40	100
W475H	495	460	110	130	375	170	40	100
W4105H	575	465	130	140	455	185	35	95
W4130H	635	490	135	175	515	195	60	110
W4180H	715	545	125	205	595	185	60	115
W4240H	790	615	115	180	670	175	60	115
W4300H	790	755	60	180	670	175	60	75



- = position of feet
- O = drilling points for expander bolts
- The machine shall be lifted in the bottom frame.
- Place the machine over the two drilled holes.
- Check that the machine is placed in level.
   Adjust with the feet.





It is of utmost importance that the machine is placed in level, from side to side as well as front to rear. If the machine is not properly leveled, it may result in out-of-balance without a real out of balance in the drum.

 Insert the expansion bolts supplied in the holes drilled in the floor. Fit the washers and nuts, and tighten well.

#### Installation S- and N-model

Leave the machine on the transport pallet until it can be placed in the final, prepared position.

#### Siting

Install the machine close to a floor drain or open drain. In order to make installation and servicing the machine easier the following clearances are recommended:

- 9
- At least 500 mm between the machine and the wall behind.
- Minimum 25 mm to next machine if more than one machine are installed on a foundation.

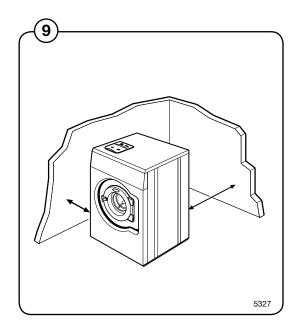
#### **Floor**

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 fixing the machine to an existing cement floor, it must be and at least 100 mm thick.

The floor must be able to withstand the loads indicated in the table.

If it isn't possible to cast the bolts into the floor, an alternative might be to use so-called chemical anchors. Your local dealer can provide the information you need.



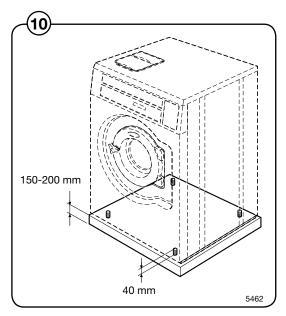
#### Casting a plinth

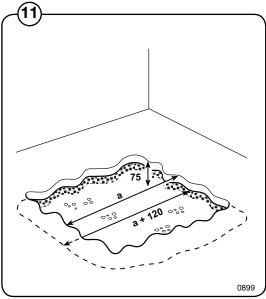
A plinth should be used where the existing floor is less than 100 mm thick or in order to ensure that the machine is above the level of any water leakages.

The plinth should be approximately 150 - 200 mm in height.

#### Proceed as follows:

- 11
- Break up the existing floor to a depth of approx. 75 mm and check that the sides of the hole are tapered outward so that the longest side at the bottom measures 120 mm more than at the top.
- Make the mould for the plinth.
- Moisten the hole well and apply cement to the sides and bottom.
- (12)
- 4 bolts must be set into the concrete of the machine base. The bolts need to project 40 mm out of the base. Pour the concrete into the prepared base mould and make sure that the surface is level.
- The concrete should be left to set for at least two days before mounting the machine on the plinth.



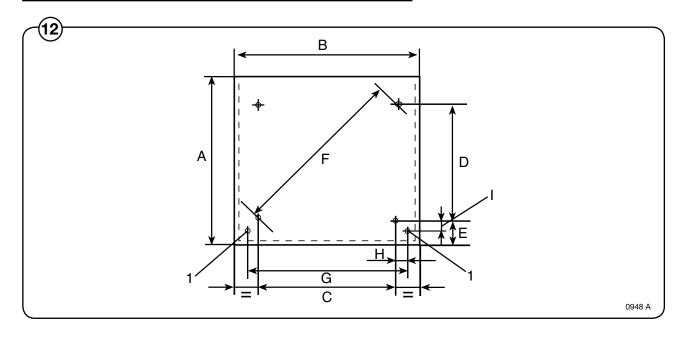


#### Models S and W4330N

In these models, two expander bolts must also be fitted to the front section of the machine.

- Drill two holes (1) ø10 mm and 40 mm deep.
- After the machine has been placed over the other four bolts, place the two spacer washers over the two holes. They shall be placed between the machine and foundation.
- Mount the expenderbolts in the drilled holes and fasten the machine. Don't forget the washers.

	Α	В	С	D	Е	F	G	Н	I
W475N	685	660	495	395	115	635	-	-	-
W485N	725	660	495	445	115	665	-	-	1
W4105N	700	720	575	385	120	695	-	-	-
W4130N	785	720	575	495	120	760	-	-	-
W4180N	875	750	635	570	120	855	-	-	-
W4250N	950	830	715	635	125	955	-	1	-
W4330N	1035	910	790	695	135	1050	810	10	95
W475S	685	660	495	395	115	635	495	0	75
W485S	725	660	495	445	115	665	495	0	75
W4105S	700	720	575	385	120	695	595	10	80
W4130S	785	720	575	495	120	760	595	10	80
W4180S	875	750	635	570	120	855	655	10	85
W4250S	950	830	715	635	125	955	735	10	85
W4330S	1035	910	790	695	135	1050	810	10	95



#### Installation on an excisting floor or foundation

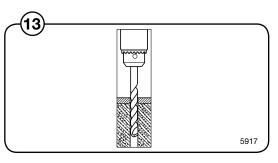
Instead of braking up the excisting floor or foundation, chemical bolts M16 can be used.

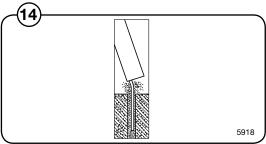
#### Mounting instruction

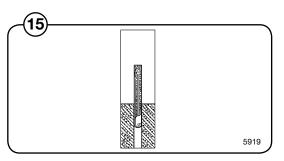
- Drill ø 18 mm (11/16") to a depth of 125 mm (5"). Do not make the hole too deep.
- Clean the drilled holes.
- Put down the chemical ampule in the hole.
- Rotate the bolt into the hole, so that the glass ampule is broken and its contents mixed.
- Rotate the bolt to correct depth. **NOTE!** Do not rotate the bolt against the concrete bottom. Check that the chemicals have filled the hole completely.
- Remove the drilling machine with the mounting tool. Hold the bolt with one hand. Let the bolt harden before the machine is mounted.

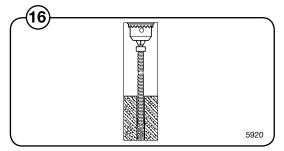
Time for hardening, due to different concrete temperatures.

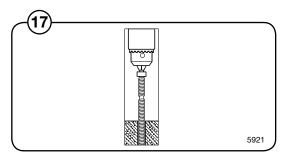
– 10°C	6 hours
– 5°C	2.5 hours
± 0°C	1 hour
5°C	30 minutes
10°C	20 minutes
15°C	15 minutes
20°C	10 minutes

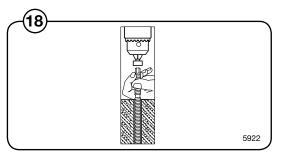












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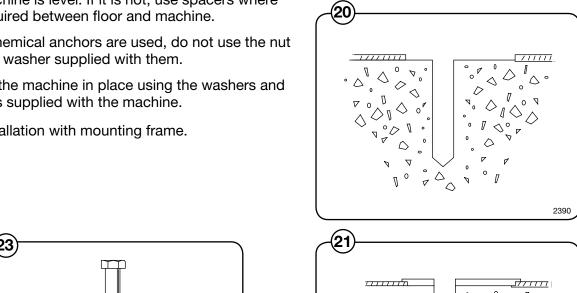
#### Installation on vinyl floor coverings

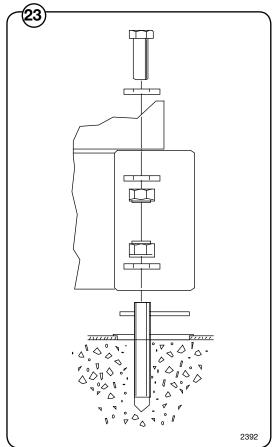
- If chemical anchors are to be used, drill holes for (19) the mounting points.
- Cut the flooring material around the washers (20) (washers and sealant are supplied in installation kit).
- Apply sealant to the hole cut in the vinyl floor (21) covering. Insert the washer. Use sealant to seal around the washer between the vinyl and the washer.
- Put the machine into place. Check that the (22) machine is level. If it is not, use spacers where required between floor and machine.

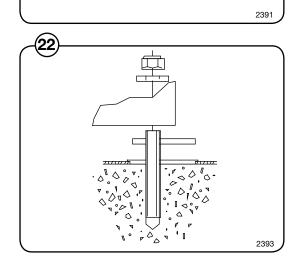
If chemical anchors are used, do not use the nut and washer supplied with them.

Fix the machine in place using the washers and nuts supplied with the machine.

Installation with mounting frame. (23)







 $\Diamond$ 

#### Installation, ships, oil-rigs, etc

Leave the machine on the transport pallet until it can be placed in the final, prepared position.

#### Siting

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

#### Floor

In this type of machine, the drum is attached directly to the frame. As a result the deck under the machine must be stable enough to absorb the dynamic forces generated during spin cycles.

The combination deck and foundation must be able to withstand the loads indicated in the table.

Some marine installations have very thin decks. Special attention to be taken. Reinforcing deck plus increased size of foundation may be necessary.

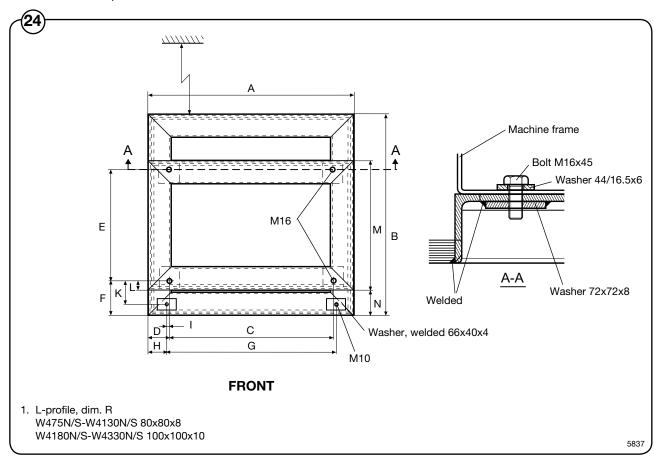
#### Welding a foundation

24

A welded foundation shall be made where concrete foundation can not be made.

In order to make installation and servicing the machine easier the following clearances are recommended:

• There must be a gap of at least 1000 mm between the machine and the wall behind, and at least 50 mm between machines or walls.



	Α	В	С	D	E	F	G	Н	I	K	L	М	N
W475N/S	660	685	495	80	395	115	_	-	0	-	30	455	85
W485N/S	660	725	495	80	445	115	495*	80*	0	75*	30	505	85
W4105N/S	720	700	575	75	385	120	595*	65*	10	80*	30	445	85
W4130N/S	720	785	575	75	495	120	595*	65*	10	80*	30	555	85
W4180N/S	750	875	635	55	570	120	655*	45*	10	85*	30	630	90
W4250N/S	830	950	715	55	635	125	740*	45*	10	85*	30	695	95
W4330N/S	910	1035	790	60	695	135	810*	50*	10	95*	30	755	105

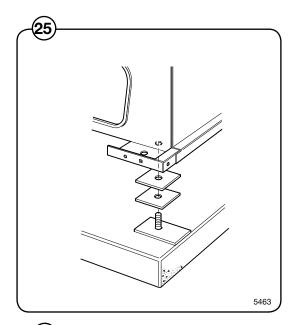
<sup>\*</sup> Not N model.

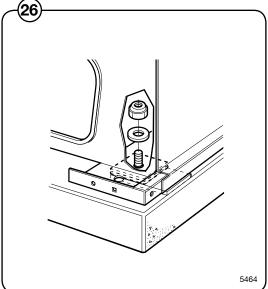
#### Installing the machine

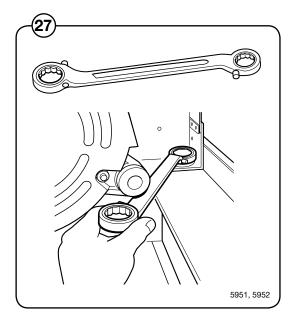
To install the machine:

- · Remove the transport packaging
- Remove the front panel.
- Remove the machine from the transport pallet and locate it on the bolts. When the machine is lifted off the pallet: 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. Always lift the machine by the chassis, never by the door or door handle.
- Check that the machine is level and steady in all four corners mounting points. Adjust the level by using stainless or galvanized steel washers between the machine and the floor. The washers must be of a size to cover the support surface.
- Fit the washers and self-locking nuts supplied with the machine and tighten well.
- To tighten the nuts we recommend to use a rachet wrench, especially in the right rear corner.

After the machine has been in use for a while, check and re-tighten the nuts if necessary.







#### **Water connections**

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

Water pipes and hoses should be flushed clean before installation. After installation hoses should hang in gentle arcs.

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 and comply with IEC 61770.

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

The water pressure data is as follows:

min: 50 kPa (0,4 kp/cm²)
 max: 1 MPa (10 kp/cm²)

recommended: 200-600 kPa (2-6 kp/cm²)

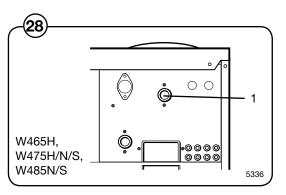


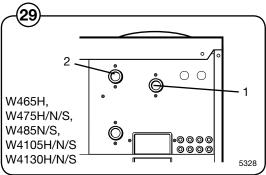


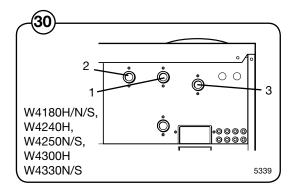
If the water pressure is below the min. value, the wash result can not be guaranteed for certain program.

	Water type	Water connection				
		1	2	3		
28	cold	cold				
29	cold and hot	cold	hot			
30	cold and hot	cold	hot	cold*/ hot		

For detergent container



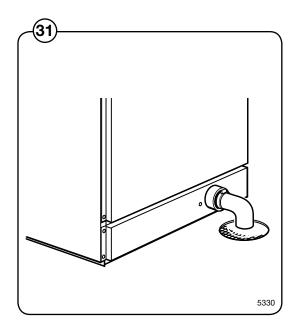




#### **Drain connection**

Connect a 75 mm (3") (alt. 50 mm, 2" and only W465-W4105) 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.

The drainage pipe should be located over a floor drain, drainage channel or the like so that the distance between the outlet and the drain is at least 25 mm (1").



#### 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").

Steam pressure required:

minimum: 50 kPa (0.5 kp/cm²)

• maximum: 800 kPa (8 kp/cm²)

rec. pressure: 600 kPa (6 kp/cm²)

- (32) Remove top cover (A).
  - Remove casing (B).
- Mount the articulated 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.

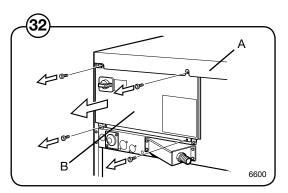
Check that there are no sharp angles or bends on the connected steam hose.

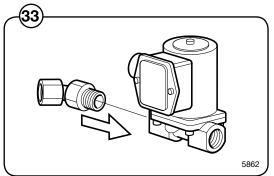
• Mount the hose with wires between steam valve and machine.

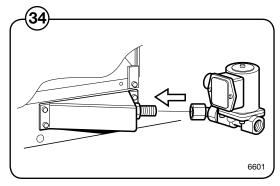
Connect wires in the steam valve.

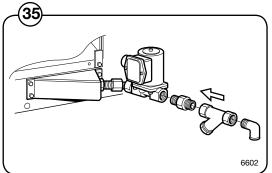
Connect ground cable to the terminal ground connection.

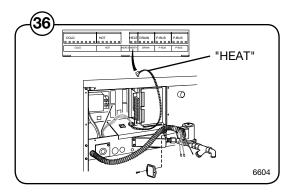
Connect the "HEAT" cable connector to the "HEAT" terminal on the I/O board.











#### Connection of external liquid supplies





The external dosing equipment power supply must never be connected to the machine's incoming terminal block.

#### Machines fitted with connectors



 Connect the pump equipment to connections A and B on the washing machine.
 Connect the signal cable to B and the power supply to A.

#### Machines without connectors

- Connect the external pump equipment for liquid washing detergent to the I/O board, which is located to the right of the incoming power supply.
  - The I/O card has edge connectors for connecting external pumps.



• Edge connectors on the I/O board can be loosened for connecting cables.

11 = N

18 = Program run

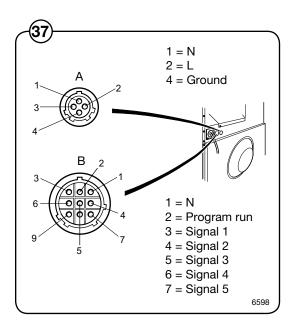
12 = Signal 1

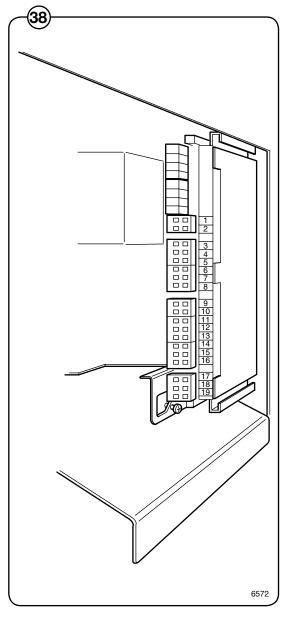
13 = Signal 2

14 = Signal 3

15 = Signal 4

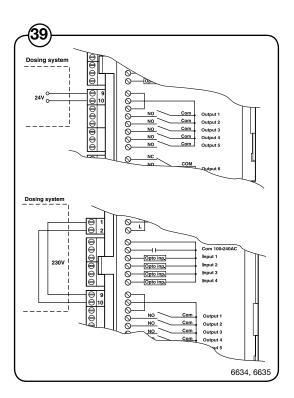
16 = Signal 5





#### Outputs

- (39)
- Connect external power supply (e.g. 24V DC) for pumps to 9 and 10. If an internal power supply (from the washing 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.
- 40
- Signals for pumps 1-5 are connected to 12-16 where connector
  - 12 Washing detergent signal 1
  - 13 Washing detergent signal 2
  - 14 Washing detergent signal 3
  - 15 Washing detergent signal 4
  - 16 Washing detergent signal 5
- The programs on the machine can be found on the machine's data plate.

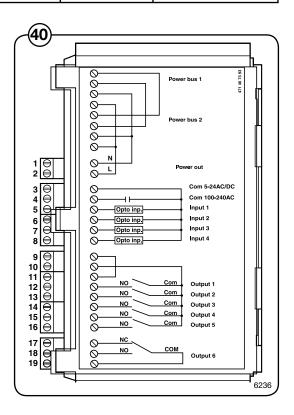


	3M14*	3F01*	3R01*	3F02*	Other programs
Signal 1	_	Prewash	Prewash	Prewash	Prewash
Signal 2	Mainwash	Mainwash	Mainwash	Mainwash	Mainwash
Signal 3	Softener	Softener	Softener	Softener	Softener
Signal 4	Mop last rinse	Desinfection	Pr 1 last rinse	Mainwash	-
Signal 5	Bleach	Bleach	Bleach	Bleach	Bleach

<sup>\*</sup> M= Mop, F = Farm, R = Restaurant

#### Inputs

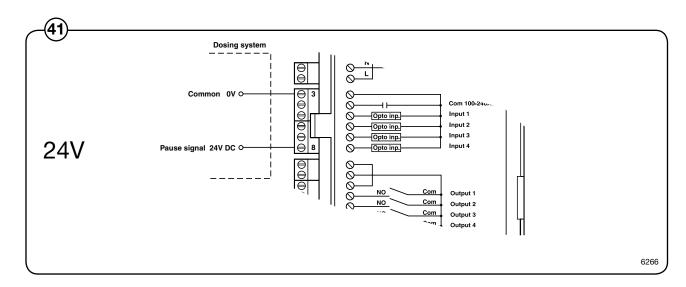
 The signal level can be 5-24V DC/AC or 100-240V AC. For 5-24V, the signal reference is connected to 3 and for 100-240V to 4. Potentials on the inputs cannot be mixed.
 NB! The I/O board will be damaged if the voltage on connection 3 is too high, >24V.

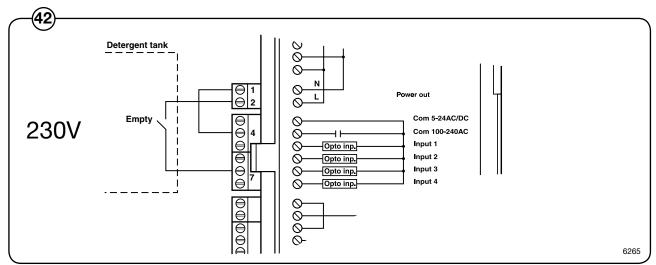


Connection 8 may be connected if the washing program is to pause, e.g. while washing detergent is being dosed.

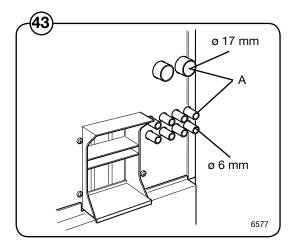
The figure shows an example of engaging a 24V pause signal.

The washing program will pause for as long as the pause signal remains activated (high).



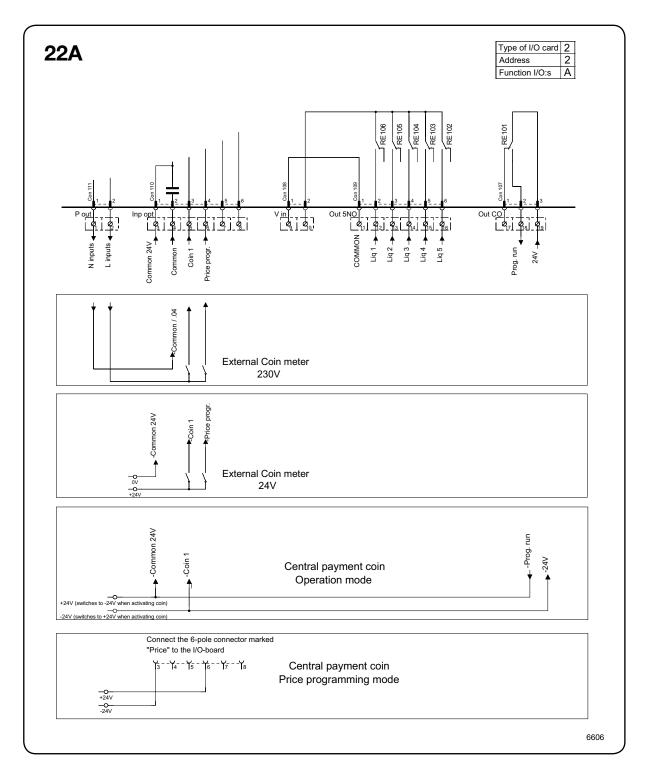


- Connection 7. If this is connected, an error message will be displayed indicating that one of the chemical tanks is empty. The washing program will continue, however.
   The figure shows an example of engaging a normal open contact.
- Connect the liquid dosing hoses to any of the connections marked A.
   Open the liquid connections by drilling (ø 6 mm alt. ø 17 mm) where hoses shall be connected.

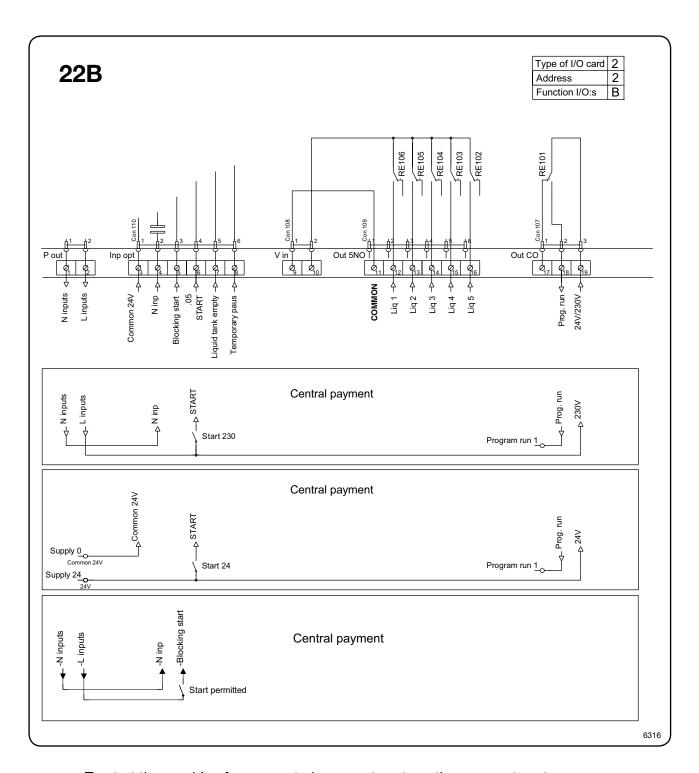


#### Functions for I/O -cards

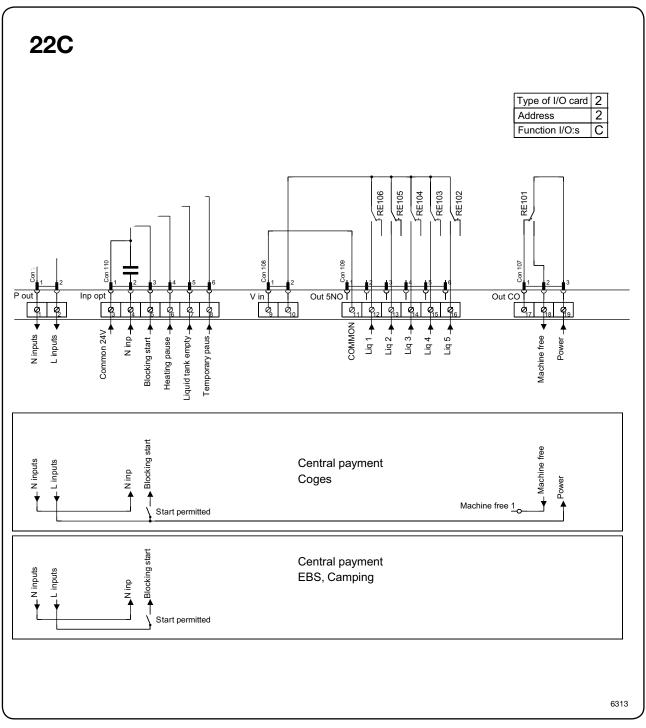
The electrical schematic can have one of the following: 22A, 22B, 22C, 22D, 22E, 22F or 22G.



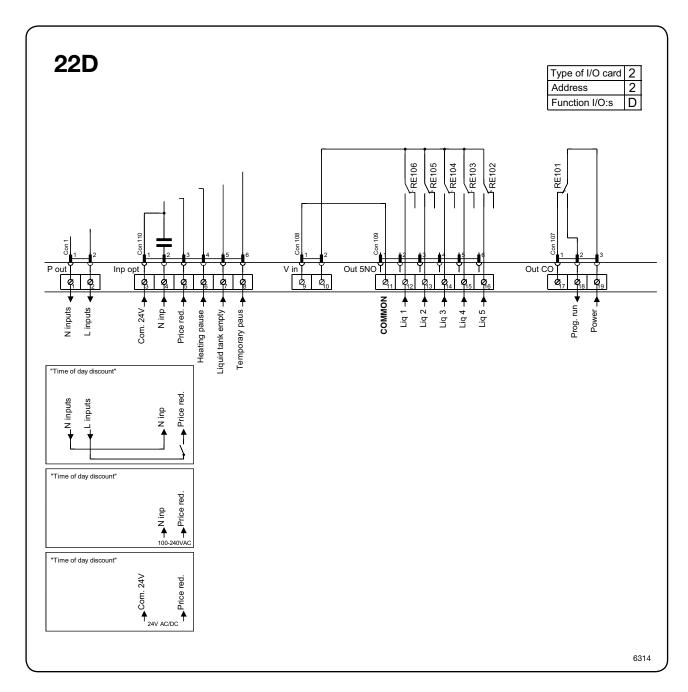
• The signal received from external slot meters must be a pulse. In order to count down prices, the signal initiating the programming procedure must be active (high).



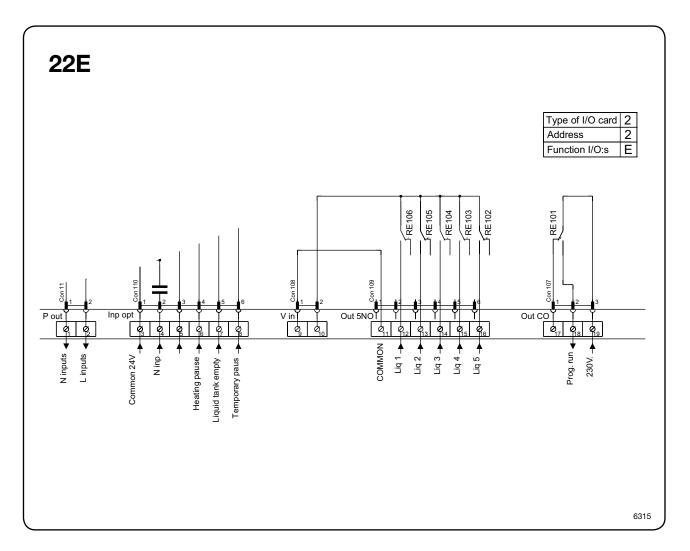
To start the machine from a central payment system, the payment system
must transmit a start pulse to the machine. Door lock activates on positive
flank and program starts on negative flank of start pulse. The start pulse can
be either 230V or 24V. In order to receive a feedback signal once the machine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



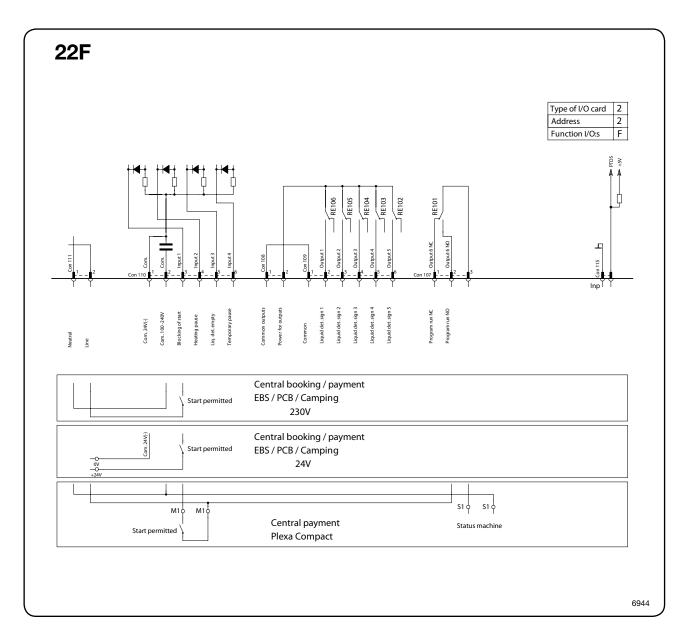
 The central payment or booking system shall transmit an active (high) signal to the washing machine once permission has been granted to start the machine. The signal must remain active (high) until the machine starts. A feedback signal will be present on connection 18 and remain active (high) whilst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



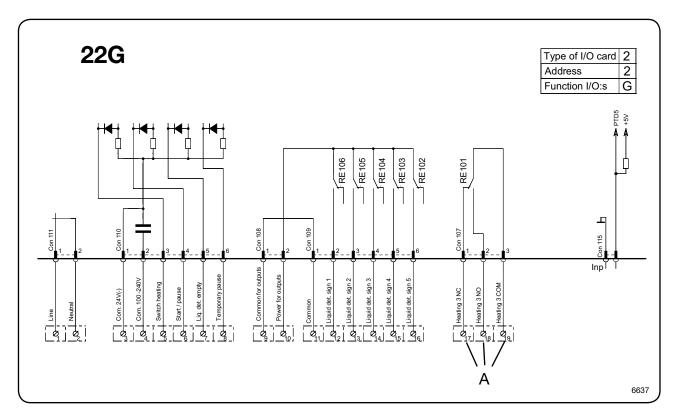
- The figure shows standard function addressing for machines with the 3L41 program package.
- By maintaining an activated (high) signal on connection 5 ("Price red"), the price of the wash program can be reduced. This function has a number of uses, including providing reductions during a specific period of the day. Whilst the signal remains active (high), the price of the wash program is reduced by the percentage entered in the price programming menu.



• Heating pause: By connecting a signal to connection 6, you can pause operation of the machine whilst it heats up. The machine will pause for as long as the pause signal remains active (high).

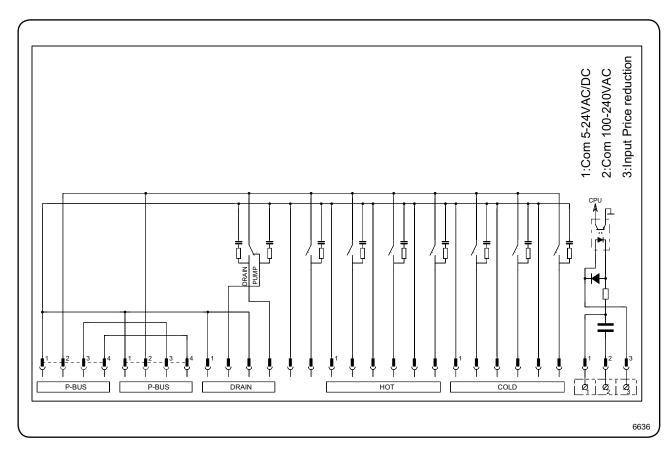


 The central payment or booking system shall transmit an active (high) signal to the washing machine once permission has been granted to start the machine. The signal must remain active (high) until the machine starts. A feedback signal will be present on connection 18 and remain active (high) whilst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



• Gas heating unit must be connected to connections 17, 18 and 19.

### Machines with type 3 I/O



 By maintaining an activated (high) signal on connection 3 ("Price red"), the price of the wash 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 activated (high), the price of the wash program is reduced by the percentage entered in the price programming menu.

#### **Electrical installation**





Electrical installation must be carried out by an authorized 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. 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, including to the earth leakage circuit breaker.

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.

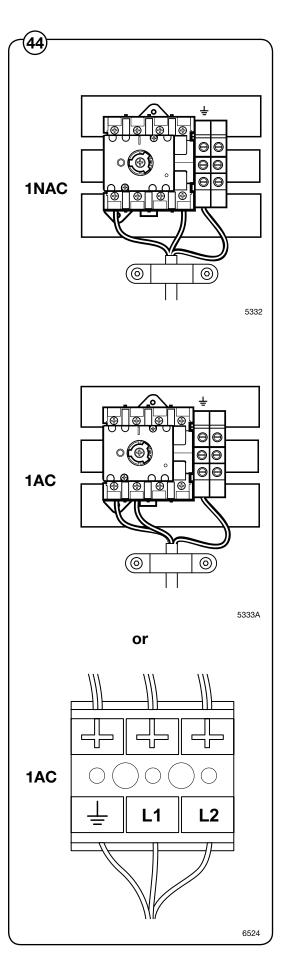
The connecting cable should hang in a gentle curve.

Fuse size, see table.

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.

#### Single-phase connection:

Connect the earth and other two wires as shown in example in the figure.

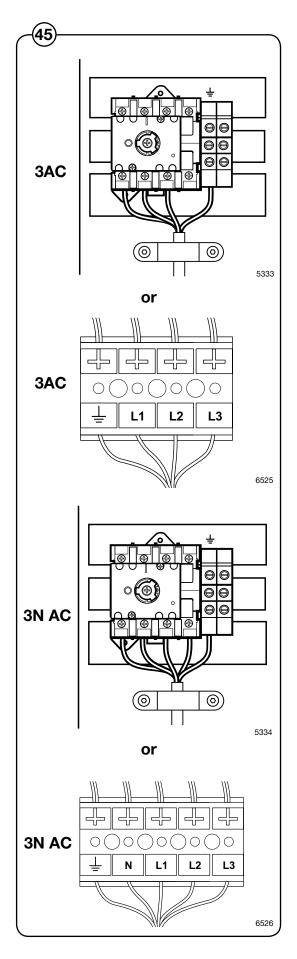


### Three-phase connection:

Connect the earth, neutral and phase wires as shown in example "3AC" and "3N AC" 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).



### W465H

Total kW 1 1 5.6	Fuse A 10 10
1 1 5.6	10
1 5.6	10
5.6	
	20
2.2	16
3.2	16
4.4	20
7.3	35
3.2	10
7.3	20
5.4	25
4.4	16
5.8	16
3.2	10
4.4	10
AC 5.8	10
7.3	16
7.9	16
/3N AC 7.3	16/20
7.9/5.4	16/25
	2.2 3.2 4.4 7.3 3.2 7.3 5.4 4.4 5.8 3.2 4.4 AC 5.8 7.3 7.9 /3N AC 7.3

# W475H

Heating	Voltage	Total	Fuse
alternative	alternative	kW	Α
No heating	100-120 V 1 AC	1.1	16
or Steam	200 V 3 AC	1.1	10
heating	208-240 V 1 AC	1.1	10
El heating	200 V 3 AC	5.6	20
	220-240 V 1 AC	2.3	16
	220-240 V 1 AC	3.2	16
	230/240 V 1 AC	4.4	20
	240 V 1 AC	5.4	25
	220-240 V 1 AC	5.4	25
	220-240 V 1 AC	7.4	35
	220-240 V 3 AC	3.2	10
	230/240 V 3 AC	4.4	16
	220-240 V 3 AC	5.4	16
	220-230 V 3 AC	7.0	20
	220-240 V 3 AC	7.4	25
	380-415 V 3/3N AC	3.2	10
	400/415 V 3/3N AC	4.4	10
	380-415 V 3/3N AC	5.4	10
	380-415 V 3/3N AC	7.4	16
	440/480 V 3 AC	7.9	16
	380-415/220-240 V 3/3N	AC 7.4	16/25
	415/240 V 3/3N/1 AC	7.9/5.4	16/25

## W4105H

<b>VV T</b> 10311			
Heating	Voltage	Total	Fuse
alternative	alternative	kW	Α
No heating	200 V 3 AC	1.3	10
or Steam	208-240 V 1 AC	1.3	10
heating			
El heating	200 V 3 AC	5.6	20
	220-240 V 3 AC	3.2	16
	240 V 1 AC	7	35
	220-240 V 1 AC	7.4	35
	220-240 V 1 AC	9.7	50
	220-240 V 3 AC	3.2	10
	220-240 V 3 AC	7.4	25
	208-240 V 3 AC	9.2	35
	220-240 V 3 AC	9.7	35
	380-415 V 3/3N AC	3.2	10
	380-415 V 3/3N AC	7.4	16
	380-415 V 3/3N AC	9.7	16
	440/480 V 3 AC	7.9	16
	440/480 V 3 AC	10.5	16
	380-415/220-240 V 3/3N	I AC 7.4	16/25
	380-415/220-240 V 3/3N	I AC 9.7	16/35
	415/240 V 3/3N AC	7.9/5.5	16/25
	415/240 V 3/3N AC	10.5/5.7	16/35

## W4130H

Heating	Voltage	Total	Fuse
alternative	alternative	kW	Α
No heating or Steam	200 V 3 AC	1.3	10
heating	208-240 V 1 AC	1.6	10
El heating	200 V 3 AC	9.5	35
	220-240 V 1 AC	12.5	63
	208-240 V 3 AC	11.8	35
	220-240 V 3 AC	12.5	35
	380-415 V 3N/3 AC	12.5	20
	415 V 3N AC	12.5	25
	440/480 V 3 AC	13.5	20
	380-415/220-240 V 3N/3	12.5	20/35

### W4180H

Heating	Voltage	Total	Fuse
alternative	alternative	kW	Α
No heating or Steam heating	200 V 3 AC 208-240 V 1 AC	2.3 2.3	16 16
El heating	240 V 1 AC 200 V 3 AC 220-240 V 3 AC 220-240 V 3 AC 380-415 V 3N/3 AC 440/480 V 3 AC 380-415/220-240 V 3N/3 AC 380-415/220-240 V 3N/3 AC 415/240 V 3N/3/1		63 50 50 50 35 35 35/50 35/50 35/63

### W4240H

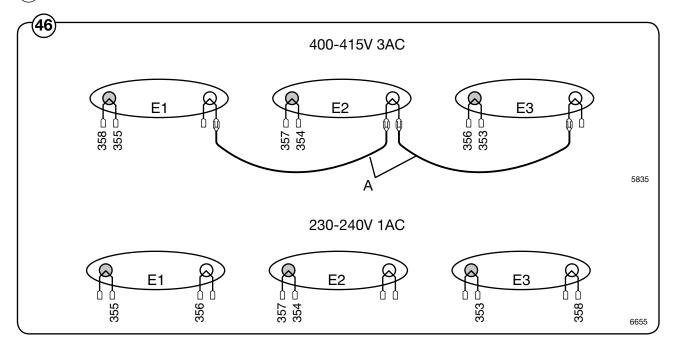
** 12 1011			
Heating	Voltage	Total	Fuse
alternative	alternative	kW	Α
No heating	200 V 3 AC	2.6	16
or Steam	208-240 V 1 AC	2.6	16
heating	480 V 3 AC	2.6	10
El heating	200 V 3 AC	15.5	50
	240 V 1 AC	14.3	63
	220-230 V 3 AC	13.3	50
	240 V 3 AC	14.3	50
	208-240 V 3 AC	18.3	63
	240 V 3 AC	20.9	63
	380-400 V 3N/3 AC	13.3	35
	380-400 V 3N/3 AC	19.4	35
	415 V 3/3N AC	14.3	35
	415 V 3N AC	20.9	35
	440 V 3 AC	22.1	35
	480 V 3 AC	23.9	35
	380-400/220-230 V 3N/3	19.4	35/63
	415/240 V 3N/3	20.9	35/63
	415/240 V 3N/3/1	20.9/14.3	35/63

## W4300H

Heating alternative	Voltage	Total	Fuse
	alternative	kW	A
No heating or Steam heating	200 V 3 AC	2.1	16
	208-240 V 1 AC	2.1	10
El heating	240 V 1 AC 200 V 3 AC 220-230 V 3 AC 220-230 V 3 AC 240 V 3 AC 240 V 3 AC 380-400 V 3N AC 380-400 V 3/3N AC 415 V 3N AC 440 V 3 AC	14.3 15.6 19.4 13.3 14.3 20.9 13.3 19.4 14.3 20.9 22.2	63 50 63 50 63 35 35 35 35
	480 V 3 AC	24	35
	380-400/220-230 V 3N/	/3 AC 19.4	35/63
	415/240 V 3N/3	20.9	35/63
	415/240 V 3N/1	20.9/14.3	35/63

# How to convert heating elements from 3AC to 1 AC with reduced effect (400-415V 3AC to 230-240V 1AC) on W465H, W475H and W4105H.

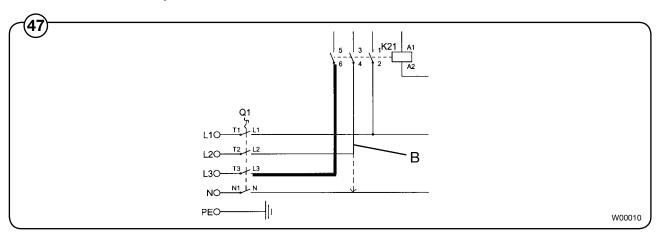
- Take off isolator cover plate and front panel to expose heating elements.
- Remove the cables A.



- **(47)**
- Take off wire (B) from terminal L2 on isolator Q1 and reconnect it to terminal N (neutral) instead.
- The heating elements have coloured insulators on the tips, ine is red, the other is white.
  - Connect cable 356 from heating relay K21 connection 1 on the white connection on E1. Connect cable 358 from heating relay K21 connection 3 on the white connection on E3.
- Check that all your terminals and wires are secure, then test the machine on a short wash 60°C to ensure that it does heat up.
- Fasten isolator cover front panel to the machine.

#### Note!

The wires from terminal 5 on contactor K21 to the redundant heating element can be safely left on.



# W475S/N, W485S/N

Heating alternative	Voltage alternative	Total kW	Fuse A
No heating	200 V 3 AC	0.6	10
or Steam heating	208-240 V 1 AC	0.6	10
El heating	220-240 V 1 AC	3.4	16
•	230/240 V 1 AC	4.4	20
	220-240 V 1 AC	5.4	25
	220-240 V 1 AC	7.3	35
	200 V 3 AC	5.6	20
	220-240 3 AC	3.2	10
	230/240 V 3 AC	4.4	16
	220-240 V 3 AC	5.4	16
	220-230 V 3 AC	7.3	20
	220-240 V 3 AC	7.3	25
	380-415 V 3/3N AC	3.2	10
	400/415 V 3/3N AC	4.1	10
	380-415 V 3/3N AC	5.4	10
	380-415 V 3/3N AC	7.4	16
	440/480 V 3 AC	7.9	16
	380-415/220-240 V 3/3N AC	7.3	16/25

# W4105S/N

Voltage	Total	Fuse
alternative	kW	Α
200 V 3 AC	0.8	10
208-240 V 1 AC	8.0	10
220-240 V 1 AC	3.2	16
220-240 V 1 AC	7.4	35
220-240 V 1 AC	9.6	50
200 V 3 AC	5.7	20
200 V 3 AC	7.4	25
208-240 V 3 AC	9.2	35
220-240 V 3 AC	3.2	10
220-240 V 3 AC	7.4	25
220-240 V 3 AC	9.6	35
380-415 V 3/3N AC	3.2	10
380-415 V 3/3N AC	7.4	16
380-415 V 3/3N AC	9.6	16
440/480 V 3 AC	8	16
440/480 V 3 AC	10.5	16
380-415/220-240 V 3/3N AC	7.4	16/25
380-415/220-240 V 3/3N AC	9.6	16/35
	Voltage alternative  200 V 3 AC 208-240 V 1 AC  220-240 V 1 AC 220-240 V 1 AC 220-240 V 1 AC 220-240 V 1 AC 200 V 3 AC 200 V 3 AC 208-240 V 3 AC 208-240 V 3 AC 220-240 V 3 AC 220-240 V 3 AC 220-240 V 3 AC 380-415 V 3/3N AC 380-415 V 3/3N AC 380-415 V 3/3N AC 440/480 V 3 AC 440/480 V 3 AC 440/480 V 3 AC 380-415/220-240 V 3/3N AC	Voltage alternative kW  200 V 3 AC 0.8 208-240 V 1 AC 0.8  220-240 V 1 AC 3.2 220-240 V 1 AC 7.4 220-240 V 1 AC 9.6 200 V 3 AC 5.7 200 V 3 AC 5.7 200 V 3 AC 5.7 200 V 3 AC 7.4 208-240 V 3 AC 9.2 220-240 V 3 AC 3.2 380-415 V 3/3N AC 3.2 380-415 V 3/3N AC 7.4 380-415 V 3/3N AC 7.4 380-415 V 3/3N AC 9.6 440/480 V 3 AC 8 440/480 V 3 AC 10.5 380-415/220-240 V 3/3N AC 7.4

# W4130S/N

Heating	Voltage	Total	Fuse
alternative	alternative	kW	Α
No heating	200 V 3 AC	0.7	10
or Steam heating	208-240 V 1 AC	0.8	10
El heating	220-240 V 1 AC	3.2	16
	220-240 V 1 AC	7.4	35
	220-240 V 1 AC	9.6	50
	230/240 V 1 AC	5.4	25
	208-240 V 1 AC	9.2	50
	200 V 3 AC	5.8	20
	200 V 3 AC	7.5	25
	208-240 V 3 AC	9.3	35
	220-240 V 3 AC	3.3	16
	220-240 V 3 AC	7.5	25
	220-240 V 3 AC	9.7	35
	230/240 V 3 AC	5.4	16
	380-415 V 3/3N AC	3.3	10
	380-415 V 3/3N AC	5.4	10
	380-415 V 3/3N AC	7.5	16
	380-415 V 3/3N AC	9.7	20
	440/480 V 3 AC	8	16
	440/480 V 3 AC	10.6	16
	380-415/220-240 V 3/3N	AC 7.5	16/25
	380-415/220-240 V 3/3N	AC 9.7	20/35

# W4180S/N

Heating	Voltage	Total	Fuse
alternative	alternative	kW	Α
No heating	200 V 3 AC	0.9	10
or Steam heating	208-240 V 1 AC	0.9	10
El heating	220-240 V 1 AC	12.7	63
	200 V 3 AC	10	35
	220-240 V 3 AC	12.7	50
	380-415 V 3/3N AC	12.7	25
	440/480 V 3 AC	13.8	25
	380-415/220-240 V 3/3N AC	12.7	25/50

### W4250S/N

Heating alternative	Voltage	Total	Fuse
	alternative	kW	A
No heating or Steam heating	208-240 V 1 AC	1.2	10
	200 V 3 AC	1.2	10
El heating	200 V 3 AC 220-240 V 3 AC 220-240 V 3 AC 380-415 3N AC 440/480 V 3 AC 380-415/220-240 V 3/3N AG 380-415/220-240 V 3/3N AG	•	50 63 50 35 35 35/63 35/50

## W4330S/N

Heating alternative	Voltage alternative	Total kW	Fuse A
No heating	208-240 V 1 AC	1.5	10
or Steam heating	200 V 3 AC	1.5	10
El heating	240 V 1 AC	14.7	80
-	200 V 3 AC	15.8	50
	220-230 V 3 AC	13.5	50
	220-230 V 3 AC	19.7	63
	240 V 3 AC	14.6	50
	240 V 3 AC	21.2	63
	380-400 V 3N AC	13.6	35
	380-400 V 3/3N AC	19.7	35
	415 V 3N AC	14.5	35
	415 V 3/3N AC	21.2	35
	440 V 3 AC	22.4	35
	480 V 3 AC	24.2	35
	380-400/220-230 V 3N/3 A	AC 19.7	63
	415/240 V 3N/3 AC	21.2	35/63
	380-400/220-230 V 3N/3 A	AC 13.6	35/50
	415/240 V 3N/3 AC	14.5	35/50

### **Function checks**

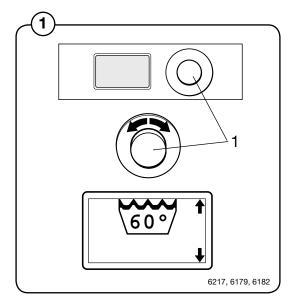
### **Compass Control**

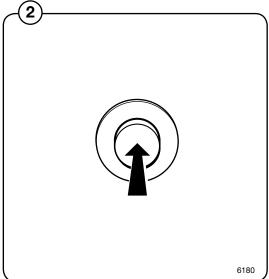
Perform the following checks once the machine is installed:

- Open the manual water valves.
- Turn on the power to the machine.
- Put detergent into compartment 2 (Main wash).
- Select a 60° program with the control knob (1).
- Press the knob.

#### 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 compartment.
- that the door cannot be opened during a program.







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