LANCER
GETINGE GROUP

ULTIMA series 1800 LXA
INSTALLATION MANUAL

CONTENTS

GENERAL INFORMATION

INTRODUCTION TO THE INSTALLATION INSTRUCTIONS

These instructions are provided to help you with your electrical wiring and plumbing installation prior to receiving your washer. Follow them closely, they have been written with your best interests in mind.

This document also indicates the dimensions of the washer so that you can check the access to the area where the machine will be installed.

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GETINGE LANCER pays close attention to all technical developments and continuously seeks to improve its products and services in order to provide an adequate response to the needs of its clients. GETINGE LANCER therefore reserves the right to modify its documentation without prior notice.

PRODUCT LIABILITY

This washer must be used under normal operating conditions as indicated in the GETINGE LANCER user manual supplied with the machine.

Failure to follow these recommendations may result in material damage or personal injury and will render null and void any warranty or liability on GETINGE LANCER part.

Liability will not be accepted in the event of incorrect use or modification of the washer without the prior agreement of GETINGE LANCER.

SYMBOLS

This manual contains some extremely important warnings, instructions and notices, so the following symbols have been used to draw your attention to them.

SAFETY WARNING FOR PERSONS AND EQUIPMENT

ELECTRICAL DANGER

SHIPPING PACKAGE AND HANDLING

PACKING

Applicable only to washers delivered in GETINGE LANCER supplied packaging.

Packing of a washer-dryer consists of a cardboard box and a wooden pallet.
The washer is wrapped with a plastic film, bolted to the pallet, and covered with a cardboard box.

TRANSPORT

Transport indicators :

- Label « FRAGILE »
- Label « HAUT AND BAS » - « UP AND DOWN »

For machines transported by air or by sea, packaging has a tilt indicator (« TIP AND TELL ») that provides a visual indication if the machine has not remained upright during transit.

HANDLING

DO NOT USE A FORKLIFT TO PUSH THE PACKAGE

USE A FORK LIFT OR PALLET JACK TO MOVE THE WASHER

BEFORE MOVING THE WASHER, CHECK THAT THE FORK LIFT AND/OR PALLET JACK ARE CAPABLE OF RAISING THE LOAD (THE WEIGHT IS WRITTEN ON THE PACKAGE OR THE SHIPPING DOCUMENTATION).

STORAGE

The washer-dryer must be stocked in a dry, sheltered area whose room temperature will not be lower than 0°C (32°F) and not exceed 50°C (122°F).

IF THE WASHER-DRYER IS NOT USED FOR A PERIOD OF 3 WEEKS OR MORE, IT IS RECOMMENDED TO REMOVE THE CHEMICAL CONTAINERS AND FLUSH THE CHEMICAL LINES WITH WATER. CONTACT GETINGE LANCER FOR ASSISTANCE.

CONDITIONS OF USE / ENVIRONMENT

OPERATING ENVIRONMENT

The washer is designed to be used in the following operating environment:

- an indoor environment.
- at a maximum elevation of 2,000 meters (6,562 ft).
- at temperatures between 5°C and 40°C (41°F and 104°F).
- at a maximum of relative humidity of 80% up to 31°C (88°F) with a linear drop of 50% at 40°C (104°F).
- mains voltage fluctuations must not be greater than ±10% of the rated voltage.
- normal level of transient overvoltages in the mains supply: category II of IEC 60364-4-443.

AFTER INSTALLATION, MAKE SURE :

- all parts have been installed as per the installation instructions
- all screws have been fully tightened.
- the parts have no sharp edges that could injure users.
- all hoses, pipes, and connections are complete and fault-free.
- all of the device's features are operating correctly. Adjust them as required.

SAFETY SYMBOLS

Mandatory use of safety glasses or goggles

Mandatory use of safety gloves

UNPACKAGING AND SETTING IN PLACE

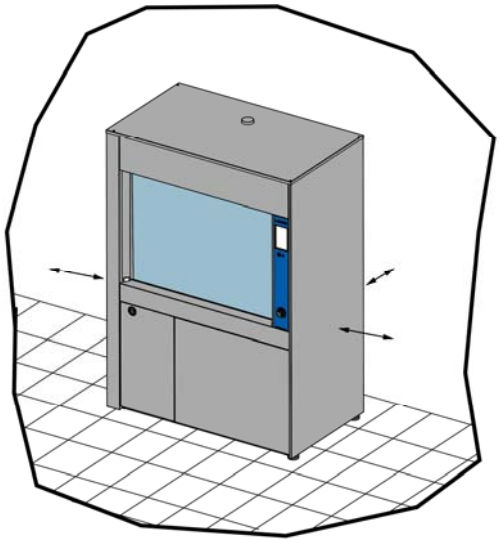
THIS MACHINE MUST BE INSTALLED AND USED ACCORDING TO THE INSTRUCTIONS CONTAINED WITHIN THIS DOCUMENT. INCORRECT INSTALLATION OR USAGE MAY CAUSE THE PROTECTION PROVIDED BY THIS EQUIPMENT TO BE IMPAIRED.

A TRAINED GETINGE LANCER SERVICE TECHNICIAN SHOULD PERFORM THE FIRST TIME START-UP.

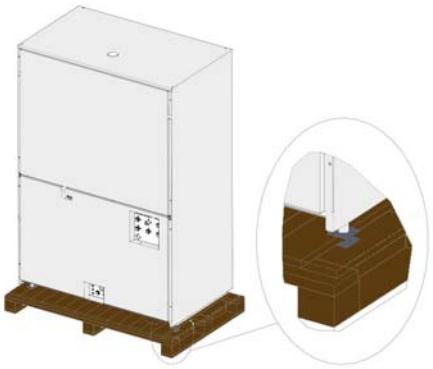
Installation area

The washer-dryer must be installed in the room allow sufficient space for easy replacement and periodic inspections

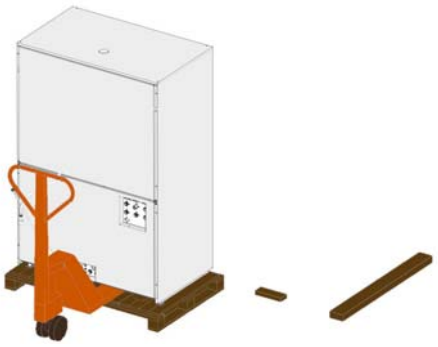
Minimum distance of 460mm (18.11”)



- Remove the box and the plastic film from around the washer.
- Remove the bolts that secure the washer to the pallet (bolts are located on the underside of the pallet).



- Position a fork lift under the washer from the back side, ensure that the forks are fully inserted.
- Carefully raise the washer off of the pallet.
- Remove the pallet and wooden beams (save the wooden beams as they may be required in a later step).



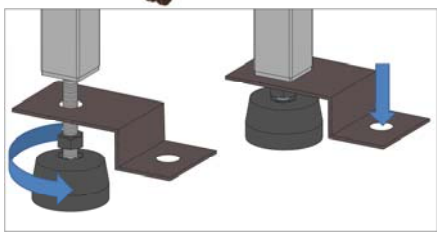
Moving washer to the final location when door opening and pathway are wider than the width of the washer

- Move the washer to dedicated area.
- Remove the leveling feet, hoses and manuals in the chemical drawer.
- Install the levelling feet on the bottom of the washer and adjust them so that they extend about 82mm (3.23") from the bottom of the washer.

<u>To secure the washer to the floor (kit 90010271)</u>

The rear feet should be mounted with plate and screwed to the ground (according to the drawing aside).

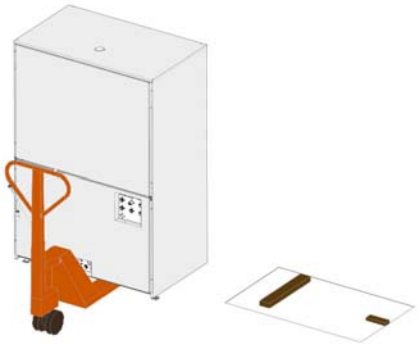
(For seismic solution, it is necessary to follow local legislation, we advise you to contact certified organization to validate such device)



- Slowly lower the washer onto the floor and remove the fork lift.
- Remove the back panel and pull out the drain and overflow tubings.
- Position the fork lift under the washer from the front (loading) side and move the washer to the nearest point of its final location. Connect to electrical supply and to compressed air supply points. Keep enough space behind to enable reassembling of back panel after removal of door foam protections.

Moving washer to final location when the door opening and pathway are narrower than the width of the washer

- With the washer removed from the pallet, locate the wooden beams on the floor as indicated on the drawing.
- Carefully lower the washer on the wooden beams and remove the fork lift.
- Remove the leveling feet, hoses and manuals in the chemical drawer.



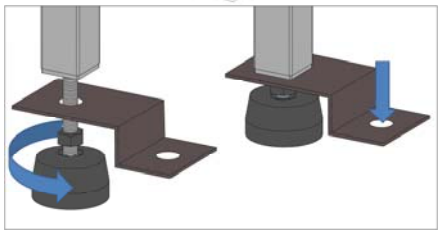
- Position a pallet jack under the washer from the side as shown on the drawing. Ensure that the forks do not touch the wooden beams.
- Move the washer to the dedicated area.

- Install the leveling feet onto the bottom of the washer (opposite side of the fork lift) and adjust them so that they extend about 82mm (3.23") from the bottom of the washer.
- Place the small wooden beam on the floor (same side as pallet jack) as indicated on the drawing.
- Slowly lower the washer until the leveling feet contact the floor and the washer contacts the wooden beam. Remove the pallet jack.

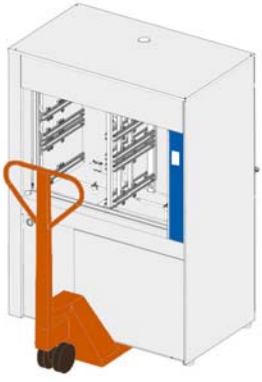
<u>To secure the washer to the floor (kit 90010271)</u>

The rear feet should be mounted with plate and screwed to the ground (according to the drawing aside).

(For seismic solution, it is necessary to follow local legislation, we advise you to contact certified organization to validate such device)

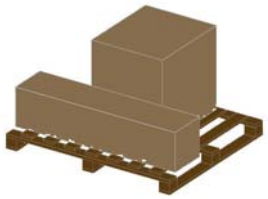


- Position the pallet jack under the washer from the front (loading) side and raise the washer. Install the remaining leveling feet and adjust them so that they extend about 82mm (3.23") from the bottom of the washer.
- Remove the back panel and pull out the drain and overflow tubings.
- Position the fork lift under the washer from the front (loading) side and move the washer to the nearest point of its final location. Connect to electrical supply and to compressed air supply points.

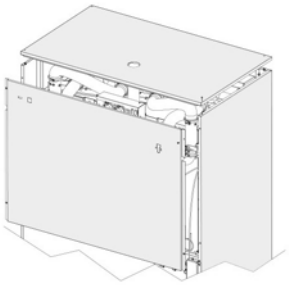


INSTALLATION OF THE CONDENSER ON TOP OF WASHER

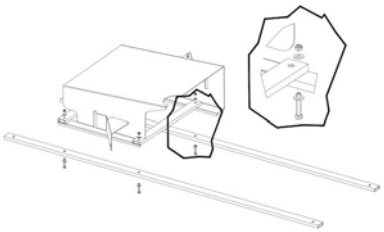
- Remove condenser components from boxes.



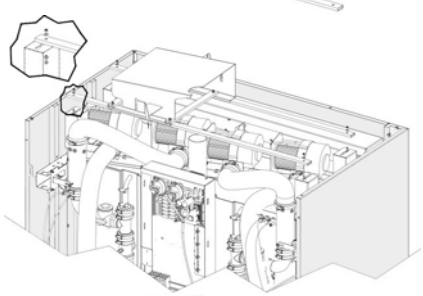
- Remove washer's top panel and upper back panel



- Secure condenser support to rectangular tubes using provided screws, washers and nuts



- Place condenser support assembly on the top of the washer's chamber support tubes and secure with provided screws, washers and nuts.



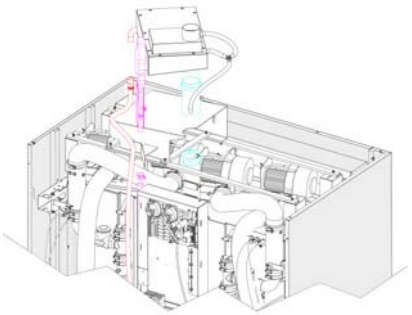
Position and secure the condenser on its support :

1 – connect chimney flexible pipe (drawn in blue)

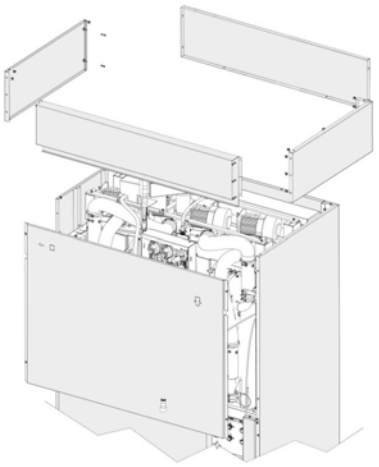
2- connect flexible drain hose (drawn in red)

3- connect blower outlet pipe (drawn in pink)

(do not forget to tighten the hose clamps)

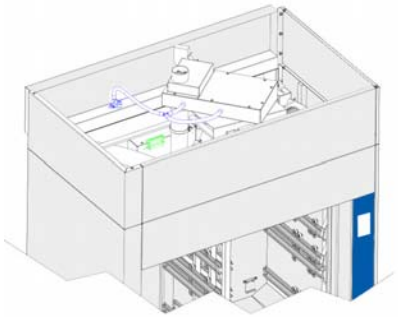


- Assemble condenser bodywork panels on the top of the washer

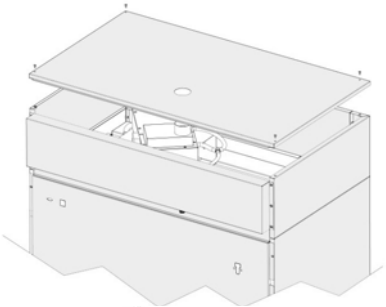


- Re-assemble back panel to washer

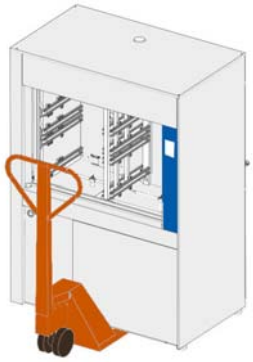
- Connect condenser's water inlet on the electro-valve located on the back panel of the condenser bodywork (drawn in blue)
- Connect the condenser's electro-valve and blower power connection to the washer (drawn in green)



- Re-assemble the washer's top cover



- Position the fork lift under the washer from the front (loading) side and move the washer to the nearest point of its final location.
- Connect to electrical supply and to compressed air supply points. Keep enough space behind to enable reassembling of back panel after removal of door foam protections



CHARACTERISTICS

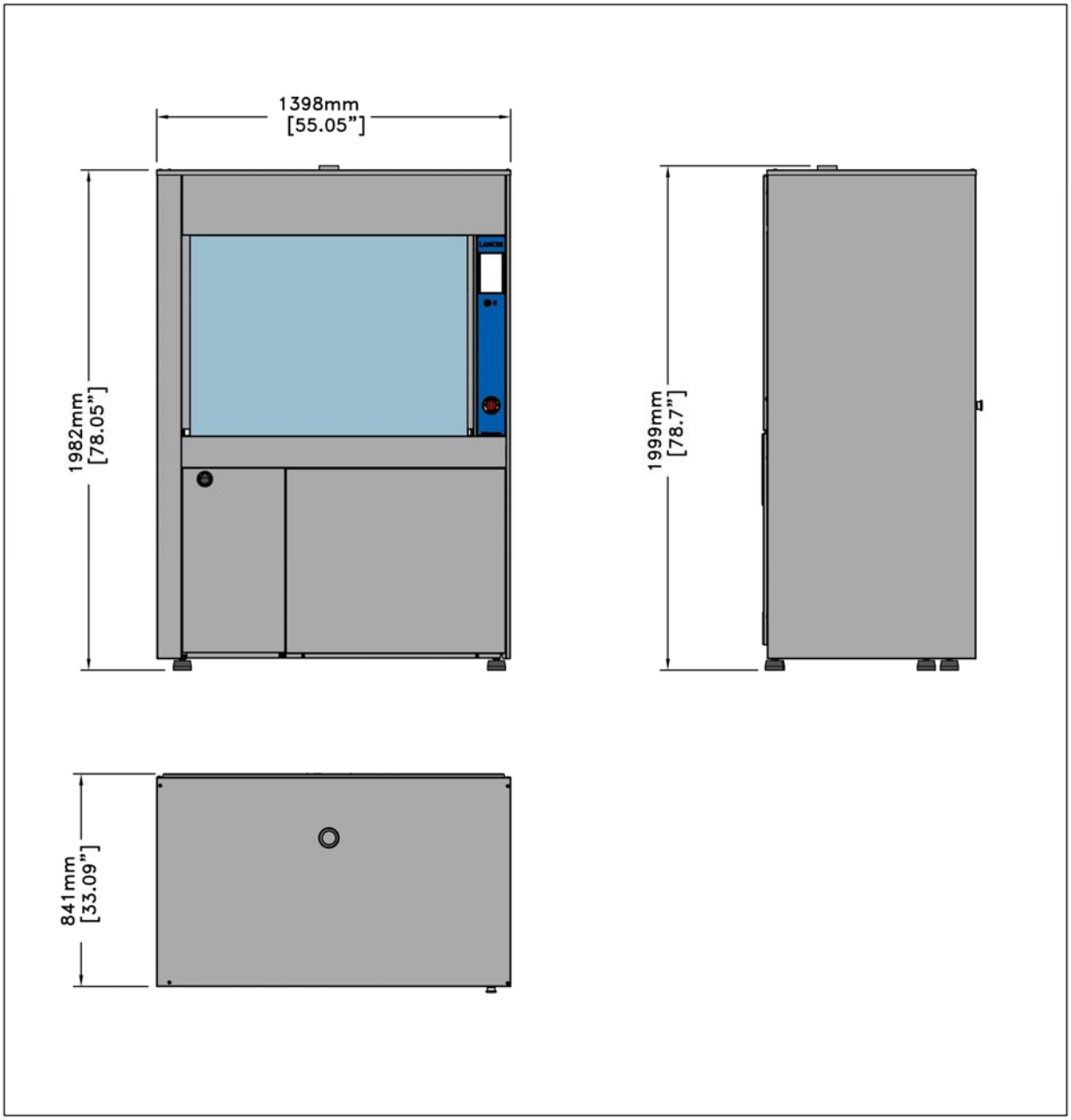
Heat loss : 5950 Kcal/h (1500 BTU/h)
Noise level : 69 dBA according to Machinery Directive 2006/42/EC

WASHER DIMENSIONS STD

Overall dimensions	
Height	1999 mm (78.7 ")
Width	1398 mm (55.04")
Depth	841 mm (33.11")
Weight	365kg (805 lbs)

Chamber dimensions	
Height	793 mm (31.22")
Width	1100 mm (43.3")
Depth	526 mm (200.7")

Dimensions tolerances : +/- 5mm (+/- 0.2")



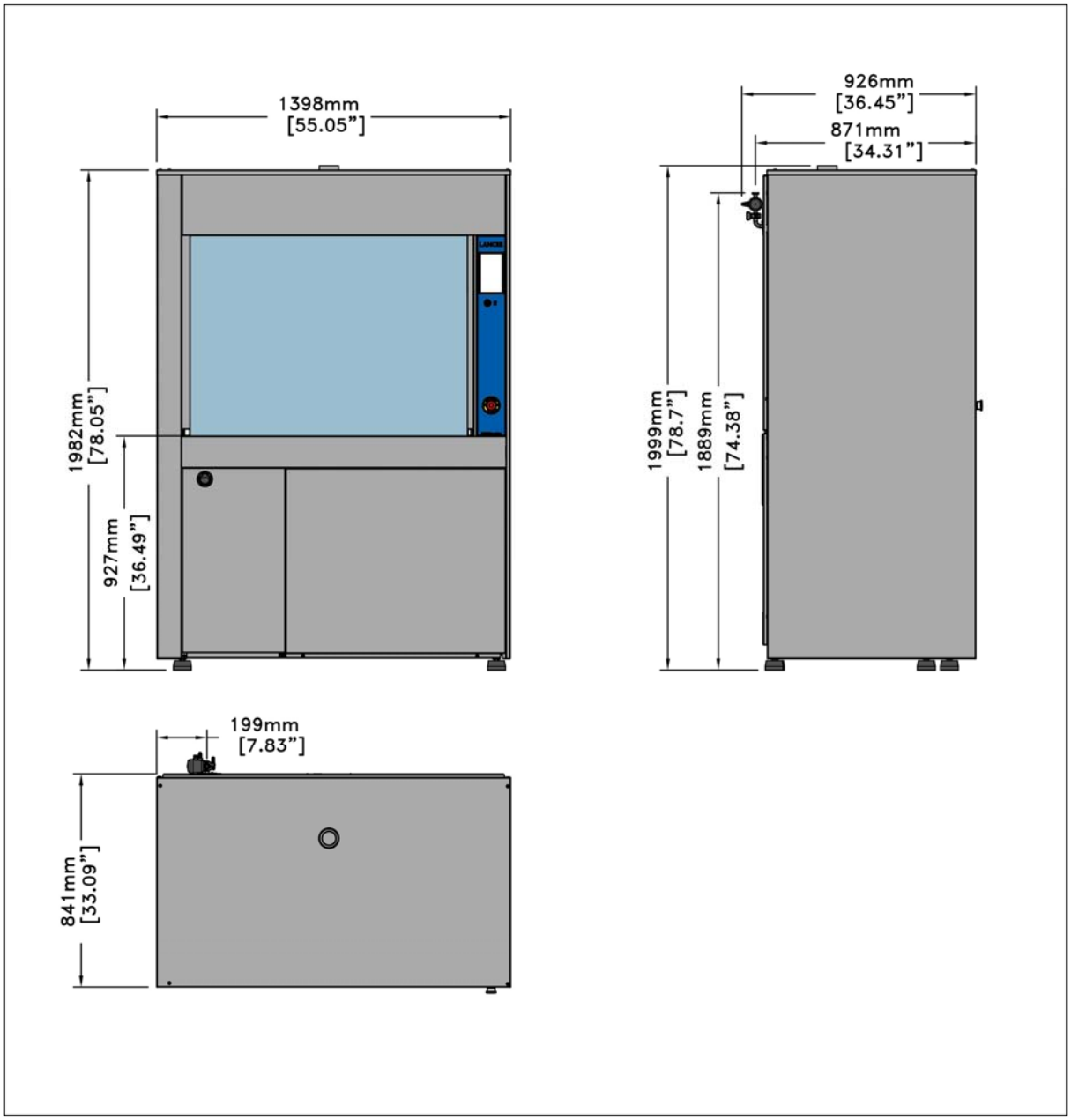
WASHER DIMENSIONS WATER INLET WITH VALVE OPTION

(90010533)

Overall dimensions	
Height	1999 mm (78.7 ")
Width	1398 mm (55.04")
Depth	926 mm (36.45")
Weight	365kg (805 lbs)

Chamber dimensions	
Height	793 mm (31.22")
Width	1100 mm (43.3")
Depth	526 mm (200.7")

Dimensions tolerances : +/- 5mm (+/- 0.2")



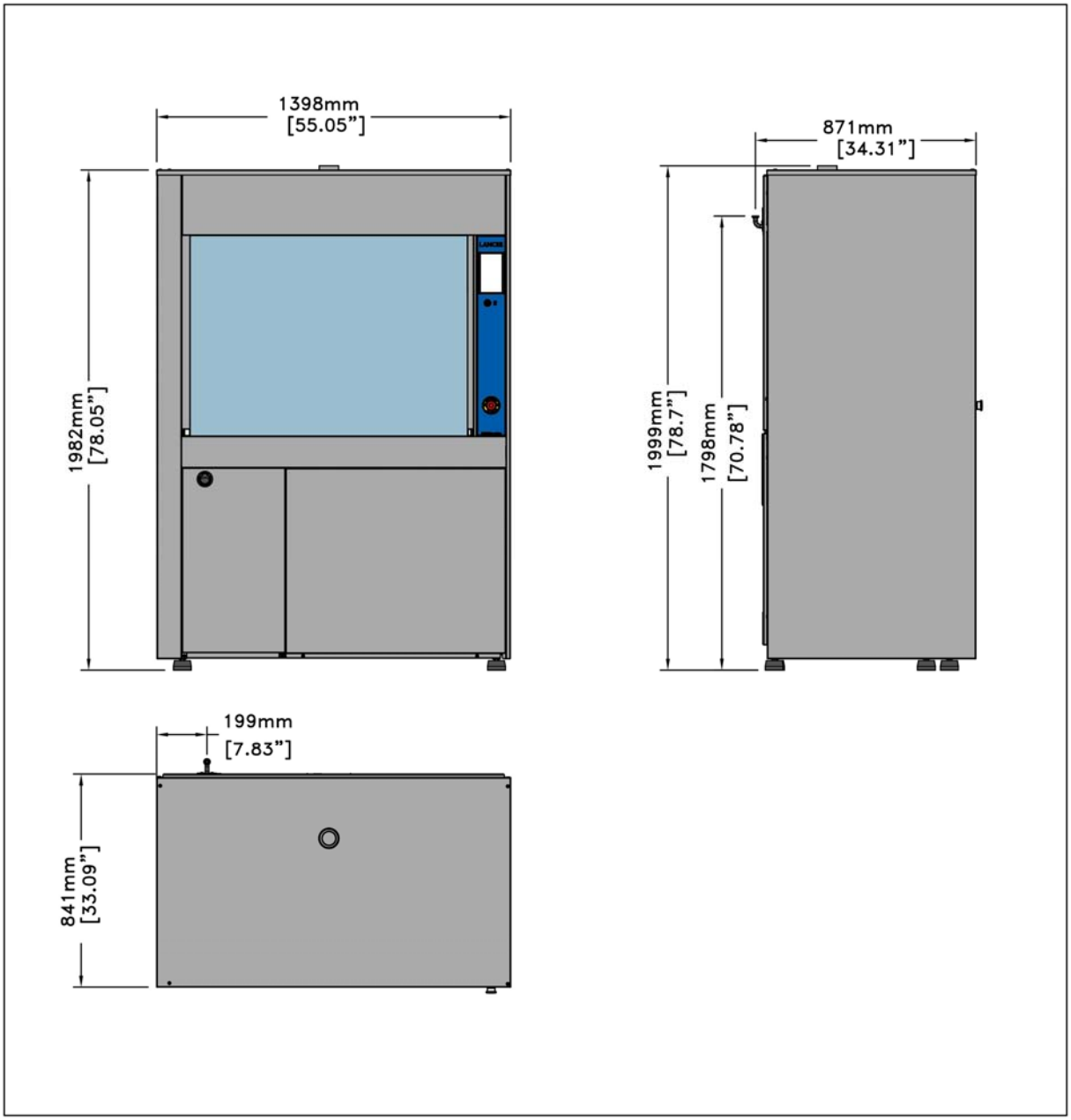
WASHER DIMENSIONS WATER INLET WITHOUT VALVE OPTION

(90010531)

Overall dimensions	
Height	1999 mm (78.7 ")
Width	1398 mm (55.04")
Depth	871 mm (34.29")
Weight	365kg (805 lbs)

Chamber dimensions	
Height	793 mm (31.22")
Width	1100 mm (43.3")
Depth	526 mm (200.7")

Dimensions tolerances : +/- 5mm (+/- 0.2")

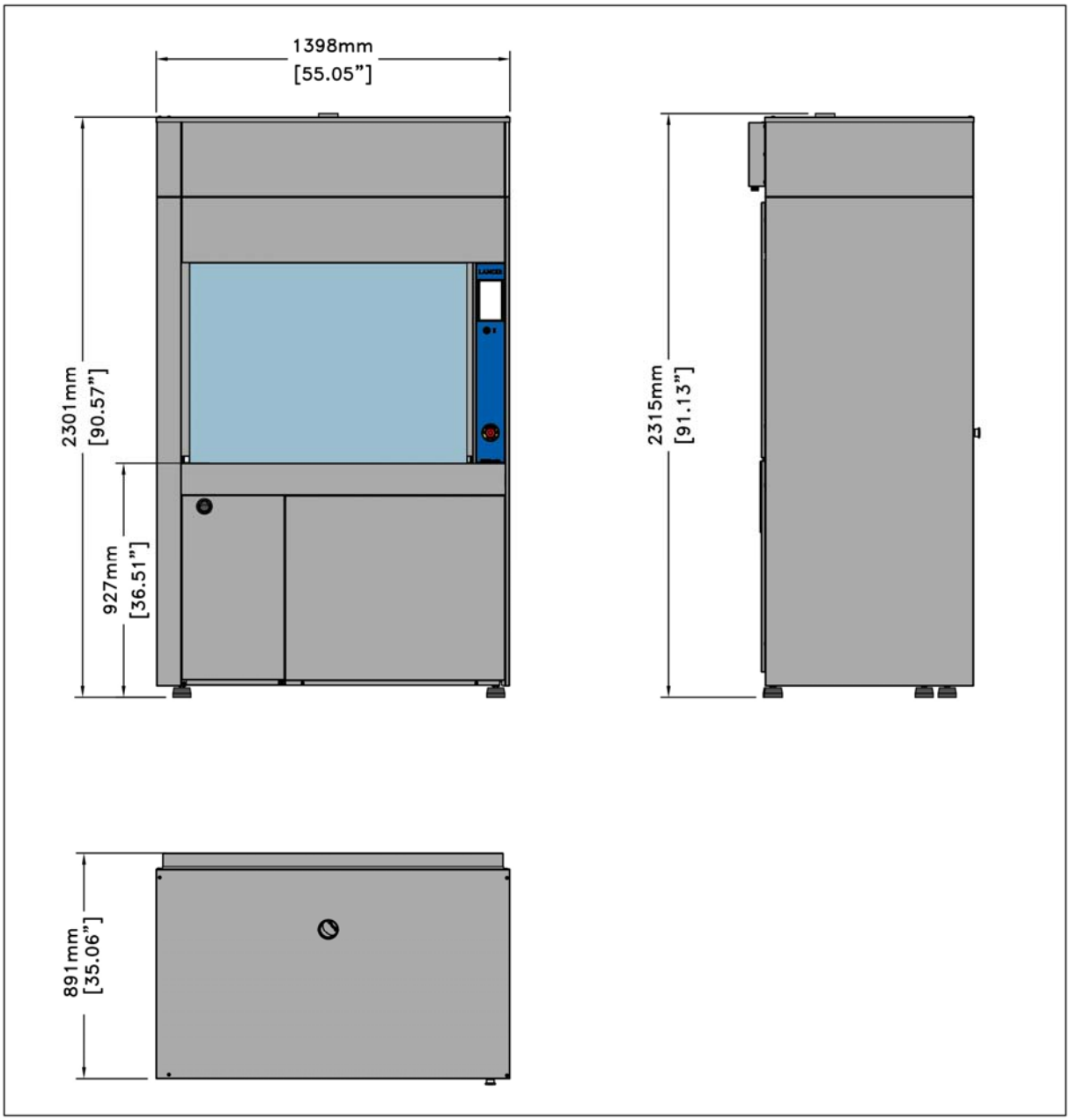


WASHER DIMENSIONS CONDENSER OPTION *(90010510)*

Overall dimensions	
Height	2315 mm (91.14 ")
Width	1398 mm (55.04")
Depth	891 mm (35.07")
Weight	415kg (915 lbs)

Chamber dimensions	
Height	793 mm (31.22")
Width	1100 mm (43.3")
Depth	526 mm (200.7")

Dimensions tolerances : +/- 5mm (+/- 0.2")

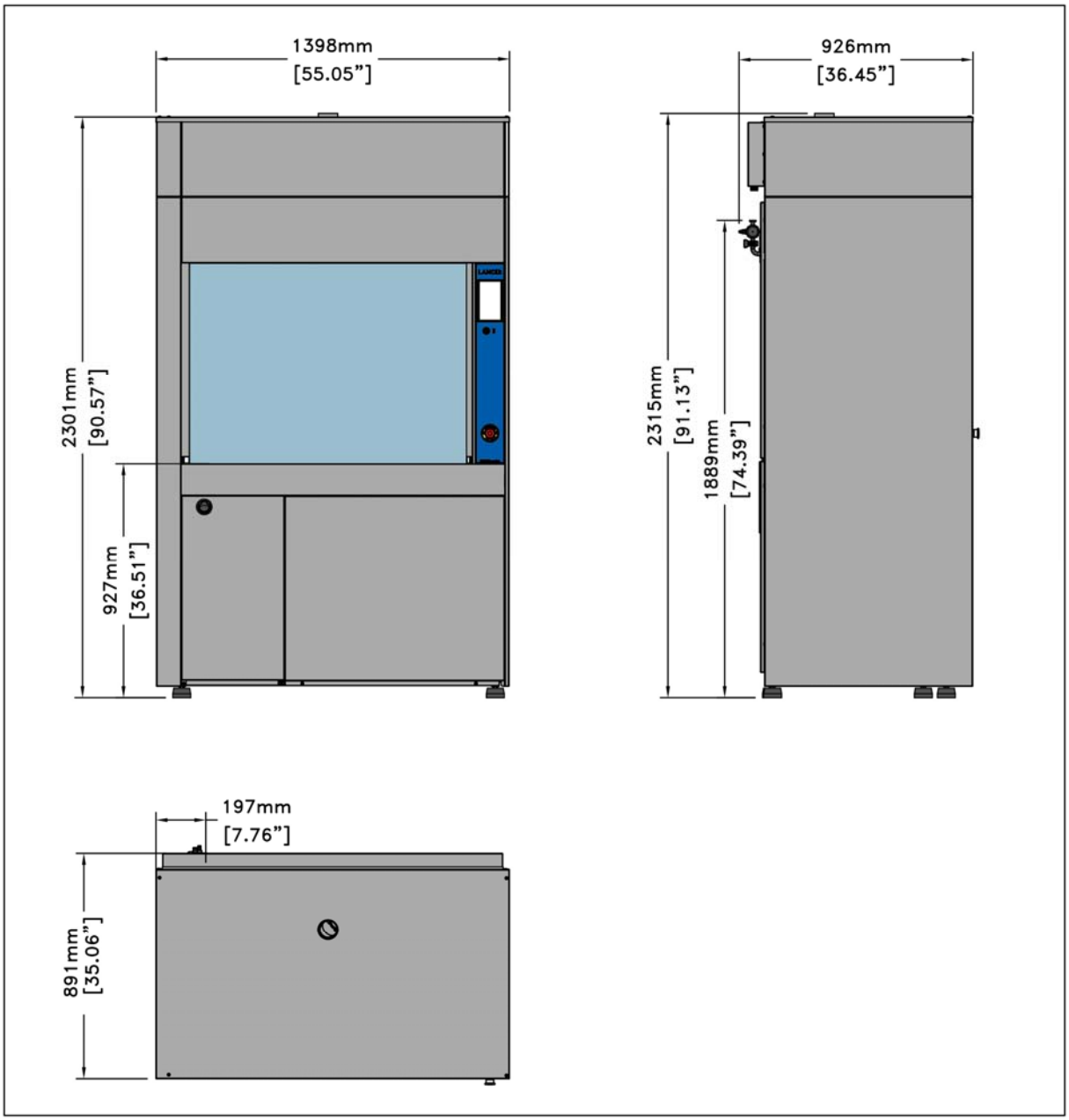


WASHER DIMENSIONS CONDENSER + WATER INLET WITH VALVE OPTION *(90010510+90010533)*

Overall dimensions	
Height	2315 mm (91.14 ")
Width	1398 mm (55.04")
Depth	926 mm (36.45")
Weight	415kg (915 lbs)

Chamber dimensions	
Height	793 mm (31.22")
Width	1100 mm (43.3")
Depth	526 mm (200.7")

Dimensions tolerances : +/- 5mm (+/- 0.2")

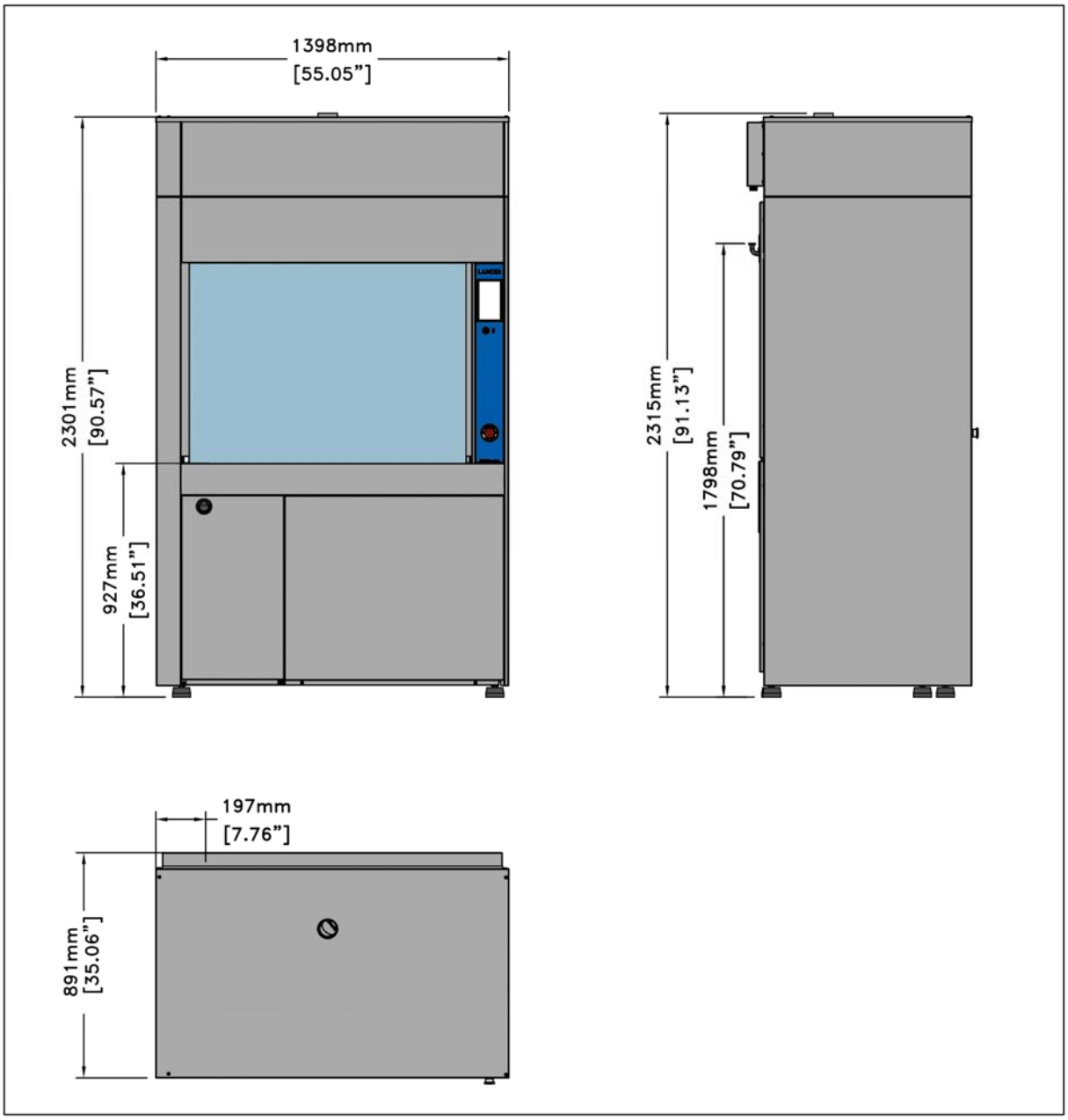


WASHER DIMENSIONS CONDENSER + WATER INLET WITHOUT VALVE OPTION *(90010510+90010531)*

Overall dimensions	
Height	2315 mm (91.14 ")
Width	1398 mm (55.04")
Depth	891 mm (35.07")
Weight	415kg

Chamber dimensions	
Height	793 mm (31.22")
Width	1100 mm (43.3")
Depth	526 mm (200.7")

Dimensions tolerances : +/- 5mm (+/- 0.2")



HYDRAULIC CONNECTIONS

WATER CONNECTIONS

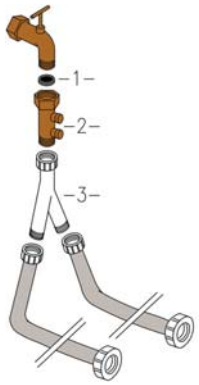
Flush water supply lines prior to connecting to the washer. Turn off water supply valves and drain the water supply hoses.

The water supply hoses required to connect the washer to the various water inlets are provided with the machine.

The maximum length of all connecting lines is 2,000mm (78.73”) and a color-code identification label is attached to each water supply hose.

WASHER WITH CE MARKING

The cold and hot water inlets are equipped with backflow prevention devices which must be connected to the water supply.



Make the connections by fitting the strainer filters between the backflow prevention device and the threaded connection at the water supply hose.

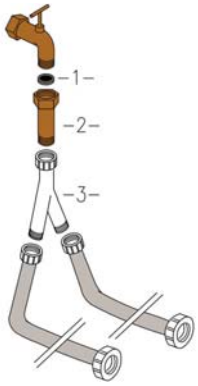
-1- STRAINER FILTER

-2- BACKFLOW PREVENTION DEVICE

- 3- CONNECTING Y

WASHER WITH UL MARKING

The cold and hot water inlets are equipped with thread size adapters which must be connected to the water supply.



Make the connections by fitting the strainer filters between the thread size adapter and the threaded connection at the water supply hose.

-1- STRAINER FILTER

-2- THREAD SIZE ADAPTER (*IF NECESSARY*)

- 3- CONNECTING Y

All connection are made on the back of the washer and are marked with identification labels.

In order to help you during the hydraulic connections of your washer/dryer, you will find in sections hereafter, the different colors of labels present on different connecting hoses and connecting fittings located on the bodywork of the washer/dryer.

The water supply valves must be located within the area shown on the drawing on page 24.

COLD WATER :

STANDARD

A valve with a male threaded nozzle, 20/27 diameter, (3/4" hose thread) is required.

Flow rate :	40 l/mn (10.6GPM) mini.
Pressure :	200 kPa (2 bars or 29 PSI) mini. and 600 kPa (6 bars or 87 PSI) maxi.
Temperature :	10°C - 25°C (50 °F - 77°F)
pH :	6.5 - 9
Hardness :	25 °f maxi.
	14 °d maxi.
	14 gpg maxi
	250 ppm maxi

COOLING DRAINING OPTION (90010508)

Cold water source temperature should be less than 25°C (77°F).

A valve with a threaded male nozzle, 20/27 diameter (3/4" hose thread) is required.

Flow rate :	20 l/mn (5.3GPM) mini.
Pressure :	200 kPa (2 bars or 29 PSI) mini. and 600 kPa (6 bars or 87 PSI) maxi.
Temperature :	10°C - 25°C (50 °F - 77°F)
pH :	6.5 - 9
Hardness :	25 °f maxi.
	14 °d maxi.
	14 gpg maxi
	250 ppm maxi

CONDENSOR OPTION (90010510)

Cold water source temperature should be less than 25°C (77°F).

A valve with a threaded male nozzle, 20/27 diameter (3/4" hose thread) is required.

Flow rate :	20 l/mn (5.3GPM) mini.
Pressure :	200 kPa (2 bars or 29 PSI) mini. and 600 kPa (6 bars or 87 PSI) maxi.
Temperature :	10°C - 25°C (50 °F - 77°F)
pH :	6.5 - 9
Hardness :	25 °f maxi.
	14 °d maxi.
	14 gpg maxi
	250 ppm maxi

HOT WATER :

STANDARD

A valve with a male threaded nozzle, 20/27 diameter, (3/4" hose thread) is required.

If there is no hot water supply, provide an additional cold water valve.

Flow rate :	40 l/mn (10.6GPM) mini.
Pressure :	200 kPa (2 bars or 29 PSI) mini. and 600 kPa (6 bars or 87 PSI) maxi.
Temperature :	10°C -50°C (50 °F - 122°F)
pH :	6.5 - 9
Hardness :	25 °f maxi.
	14 °d maxi.
	14 gpg maxi
	250 ppm maxi

HOT WATER KIT OPTION (01060131)

A valve with a male threaded nozzle, 20/27 diameter, (3/4" hose thread) is required.

A higher temperature water (up to 80°C) may be used with this option. Please follow your facilities safety rules concerning the potential of burn risks when exposed to hot water supply hoses.

Flow rate :	40 l/mn (10.6GPM) mini.
Pressure :	200 kPa (2 bars or 29 PSI) mini. and 600 kPa (6 bars or 87 PSI) maxi.
Temperature :	80°C (176°F) maxi.
pH :	6.5 - 9
Hardness :	25 °f maxi.
	14 °d maxi.
	14 gpg maxi
	250 ppm maxi

PURIFIED WATER :

STANDARD

A valve with a threaded male nozzle, 20/27 diameter (3/4" hose thread) is required.

Flow rate :	40 l/mn (10.6GPM) mini.	
Pressure :	200 kPa (2 bars or 29 PSI) mini. and 600 kPa (6 bars or 87 PSI) maxi.	
Temperature :	10°C - 25°C (50 °F - 77°F)	
pH :	5 – 7.5	
Hardness :	4 °f < softened water < 8 °f	Purified water < 4 °f
	2 °d < softened water <4 °d	Purified water < 2 °d
	14 gpg < softened w. < 28 gpg	Purified water < 14 gpg
	40 ppm < softened w. < 80 ppm	Purified water < 40 ppm

INTERMEDIATE PRESSURE PURIFIED SUPPLY OPTION (01060206)

A valve with a threaded male nozzle, 20/27 diameter (3/4" hose thread) is required.

Flow rate :	40 l/mn (10.6GPM) mini.	
Pressure :	200 kPa (2 bars ou 29 PSI) maxi.	
Temperature :	10°C - 25°C (50 °F - 77°F)	
pH :	5 – 7.5	
Hardness :	4 °f < softened water < 8 °f	Purified water < 4 °f
	2 °d < softened water <4 °d	Purified water < 2 °d
	14 gpg < softened w. < 28 gpg	Purified water < 14 gpg
	40 ppm < softened w. < 80 ppm	Purified water < 40 ppm

DIRECT PURIFIED WATER INLET WITH VALVE OPTION (90010533)

Located on washer, tri-clamp connection ISO.

	Tube diameter	Clamp diameter
TRI CLAMP	13.5 mm (0.53”)	25 mm (0.98”)

Water inlet hose with 13.5 mm ISO triclamp fitting to be provided by Others.

Flow rate :	40 l/mn (10.6GPM) mini.	
Pressure :	200 kPa (2 bars or 29 PSI) mini. and 600 kPa (6 bars or 87 PSI) maxi.	
Temperature :	10°C - 25°C (50 °F - 77°F)	
pH :	5 – 7.5	
Hardness :	4 °f < softened water < 8 °f	Purified water < 4 °f
	2 °d < softened water <4 °d	Purified water < 2 °d
	14 gpg < softened w. < 28 gpg	Purified water < 14 gpg
	40 ppm < softened w. < 80 ppm	Purified water < 40 ppm

DIRECT PURIFIED WATER INLET WITHOUT VALVE / OPTION (90010533)

Located on washer, tri-clamp connection ISO + dry contact to control valve loop

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	Tube diameter	Clamp diameter
TRI CLAMP	13.5 mm (0.53”)	25 mm (0.98”)

Provide, by Others, a stop valve close to the washer.

Water inlet hose to be provided by Others

The time of opening and closing the valve must be less than one second, for proper operation of the washer.

Water inlet hose with 13.5 mm ISO triclamp fitting to be provided by Others.

Flow rate : 20 l/min (5.3 GPM) under minimum pressure of 200 kPa (2 bar or 29 PSI) and maximum 600 kPa (6 bar or 87 PSI).

Flow rate :	40 l/mn (10.6GPM) mini.	
Pressure :	200 kPa (2 bars or 29 PSI) mini. and 600 kPa (6 bars or 87 PSI) maxi.	
Temperature :	10°C - 25°C (50 °F - 77°F)	
pH :	5 – 7.5	
Hardness :	4 °f < softened water < 8 °f	Purified water < 4 °f
	2 °d < softened water <4 °d	Purified water < 2 °d
	14 gpg < softened w. < 28 gpg	Purified water < 14 gpg
	40 ppm < softened w. < 80 ppm	Purified water < 40 ppm

HOT PURIFIED WATER OPTION (01060120)

The hot demineralized water must not exceed a maximum temperature of 80°C (176°F).

A valve with a threaded male nozzle, 20/27 diameter (3/4" hose thread) is required.

Flow rate :	40 l/mn (10.6GPM) mini.	
Pressure :	200 kPa (2 bars or 29 PSI) mini. and 600 kPa (6 bars or 87 PSI) maxi.	
Temperature :	Max 80°C (176°F).	
pH :	5 – 7.5	
Hardness :	4 °f < softened water < 8 °f	Purified water < 4 °f
	2 °d < softened water <4 °d	Purified water < 2 °d
	14 gpg < softened w. < 28 gpg	Purified water < 14 gpg
	40 ppm < softened w. < 80 ppm	Purified water < 40 ppm

COMPRESSED AIR CONNECTION

A disconnecting device to remove the pressure in the hoses is required. This device must be clearly identify and lockable to guaranty the disconnection to any technician during the maintenance.

WASHER WITH CE MARKING

The machine is fitted with a 10mm (3/8") ID compressed air hose, length ~ 1.50m (59").
A valve with a 10mm (3/8") hose barb fitting is required.
A minimum pressure of 400 kPa (4 bar or 58 PSI) and maximum 600 kPa (6 bar or 87 PSI).
This compressed air allows the piloting of door jack. The consumption is minimal.

CHEMICAL STOP VALVES OPTION (90010230)

KIT RINCAGE FINAL OPTION (90010515)

The machine is fitted with a 10mm (3/8") ID compressed air hose, length ~ 1.50m (59").
A valve with a 10mm (3/8") hose barb fitting is required.
A minimum pressure of 500 kPa (5 bar or 72 PSI) and maximum 700 kPa (7 bar or 101 PSI).
The consumption is minimal.

WASHER WITH UL MARKING

The machine is fitted with a 10mm (3/8") ID compressed air hose, length ~ 1.50m (59").
A valve with a 10mm (3/8") hose barb fitting is required.
A minimum pressure of 400 kPa (4 bar or 58 PSI) and maximum 600 kPa (6 bar or 87 PSI).
This compressed air allows the piloting of door jack. The consumption is minimal.

CHEMICAL STOP VALVES OPTION (90010230)

KIT RINCAGE FINAL OPTION (90010515)

The machine is fitted with a 10mm (3/8") ID compressed air hose, length ~ 1.50m (59").
A valve with a 10mm (3/8") hose barb fitting is required.
A minimum pressure of 500 kPa (5 bar or 72 PSI) and maximum 700 kPa (7 bar or 101 PSI).
The consumption is minimal.

STEAM CONNECTION

CHAUFFAGE VAPEUR OPTION (90010503 OU 90010504)

The washer is fitted with two male threaded fittings (steam supply – steam return), Ø 15/21 (1/2").

Provided by others:

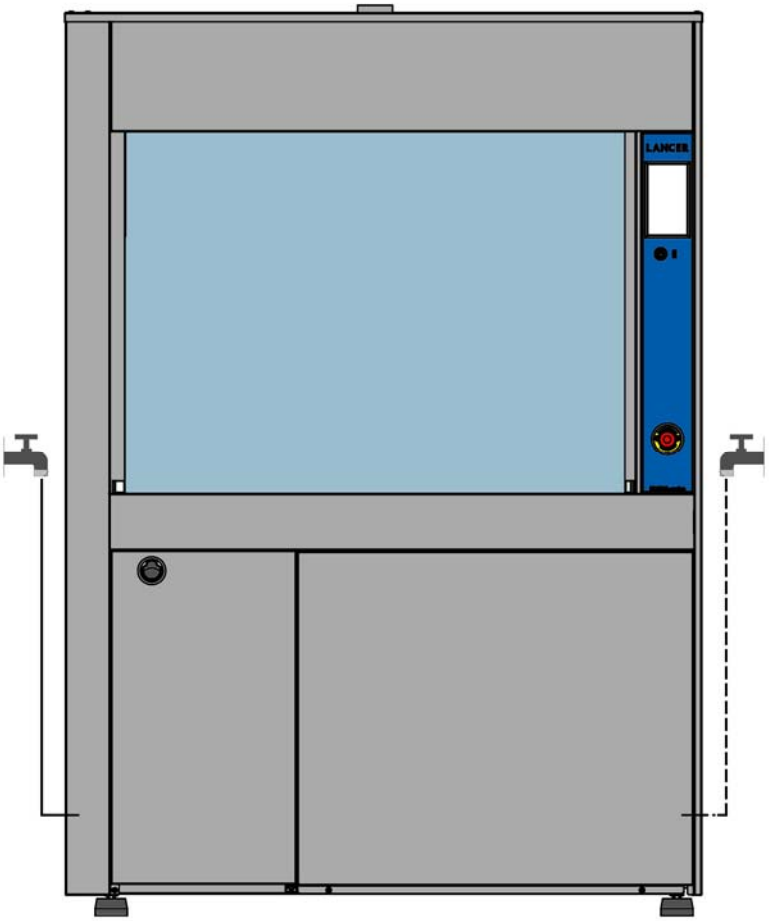
- a hand-operated steam supply valve, Ø 15/21 (1/2"),
- a hand-operated steam return valve, Ø 15/21 (1/2"),
- one condensate purge valve (steam trap),
- two hoses for connection to the machine with female threaded fitting Ø 15/21 - 1/2".

A minimum pressure of 200kPa (2 bars or 29 PSI) and maximum 600kPa (6 bars or 87 PSI) maximum is required.
Do not exceed 700kPa (7bars or 100 PSI).

The steam must be filtered (1µ).

Flow rate : 120 kg/hour (265 lb/h) - Consumption for each cycle : around 30 kg (66 lb).

WATERS LOCATION



Maximal distance available
1070 mm (42.16”)

WATERS

Maximal distance available
120mm (4.72”)

WATERS MUST BE LOCATED IN THIS AREA.

Services can be installed to the left, to the right or behind the machine

Only one connection point is required

DO NOT BEND OR CONSTRICT THE TUBE AS THIS COULD STOP OR SLOW DOWN THE FLOW OF WATER.

CHECK THAT THE SCREWS AT BOTH ENDS OF THE TUBE ARE TIGHTENED CORRECTLY TO PREVENT WATER LEAKAGE.

ENSURE THAT THE MINIMUM CLEARANCE REQUIREMENT IS MAINTAINED BETWEEN THE WASHER AND UTILITY CONNECTION POINT.

ELECTRICAL CONNECTION

BEFORE CARRYING OUT ANY WORK ON THE WASHER, MAKE SURE IT IS SWITCHED OFF AT THE ELECTRICAL DISCONNECT SWITCH.

ELECTRICAL SUPPLY :

CHECK FOR CORRECT VOLTAGE SUPPLY AT THE ELECTRICAL PANEL BEFORE MAKING ANY ELECTRICAL CONNECTIONS.

BEFORE ANY TEST, CHECK THE ROTATION DIRECTION OF THE RECYCLING PUMP.

WASHER WITH CE MARKING

ELECTRICAL DISCONNECT SWITCH :

THE FOLLOWING EQUIPMENT MUST BE EASILY AND QUICKLY ACCESSIBLE NEAR THE WASHER : A DISCONNECTING SWITCH LOCKABLE IN THE OPEN (OFF) POSITION AND A DIFFERENTIAL MAGNETIC-THERMAL CIRCUIT-BREAKER WITH TYPE D TRIPPING CURVE.

STANDARD

Total power to be supplied	Supply voltage	Consumption	Overcurrent protective device size
21 kW	400V Tri+N+T / 50Hz	31 A / phase	40 A / phase
21 Kw	400V Tri +T / 50Hz	31 A / phase	40 A / phase
21 kW	220-240V Tri +T / 50Hz	53 A / phase	63 A / phase
21 kW	200-208V Tri +T / 50Hz	61A / phase	80 A / phase

STEAM HEATING OPTION (90010503 OR 90010504)

Total power to be supplied	Supply voltage	Consumption	Overcurrent protective device size
4.2 kW	400V Tri+N+T / 50Hz	11 A / phase	15 A / phase
4.2 Kw	400V Tri +T / 50Hz	11 A / phase	15 A / phase
4.2 kW	220-240V Tri +T / 50Hz	19 A / phase	30 A / phase
4.2 kW	200-208V Tri +T / 50Hz	21 A / phase	30 A / phase

WASHER WITH UL MARKING

ELECTRICAL SUPPLY CABLE CONNECTION AND ROUTING :

THE ELECTRICAL CONNECTION IS MADE AT THE SCREW-TYPE TERMINAL BLOCK LOCATED BEHIND THE LOWER BACK PANEL OF THE MACHINE USING WIRE SUITABLE FOR AT LEAST 75°C. THE TERMINALS MUST BE SECURELY TIGHTENED TO THE POWER SUPPLY WIRES.

THE POWER SUPPLY CABLE SHOULD ENTER THROUGH THE COMPRESSION GLAND ON LEFT-HAND SIDE OF THE WASHER.

CARE MUST BE TAKEN TO PREVENT THE WIRE FROM CONTACTING ANY MOVING COMPONENTS WITHIN THE MACHINE.

ELECTRICAL PROTECTION DEVICE :

A CIRCUIT BREAKER OR FUSES MUST PROVIDE PROTECTION FROM OVERCURRENT ELECTRICAL CONDITIONS. THE CIRCUIT BREAKER OR FUSES MUST BE LABELLED AS THE PROTECTION DEVICE FOR THE GETINGE LANCER WASHER. THE OVERCURRENT PROTECTIVE DEVICE SIZE REQUIRED FOR THIS MACHINE IS SPECIFIED BELOW OR MUST MEET LOCAL ELECTRICAL CODES.

STANDARD

Total power to be supplied	Supply voltage	Consumption	Overcurrent protective device size
21 kW	480V Tri +T / 60Hz	25 A / phase	40 A / phase
21 Kw	400V Tri +T / 60Hz	31 A / phase	40 A / phase
21 kW	220-240V Tri +T / 60Hz	53 A / phase	80 A / phase
21 kW	200-208V Tri +T / 60Hz	59 A / phase	80 A / phase

STEAM HEATING OPTION (90010503 OR 90010504)

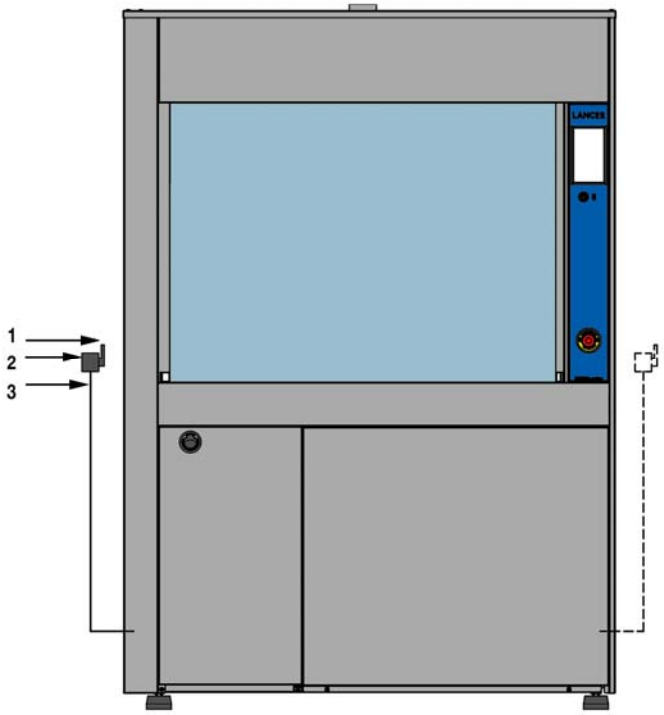
Total power to be supplied	Supply voltage	Consumption	Overcurrent protective device size
4.2 kW	480V Tri +T / 60Hz	9 A / phase	15 A / phase
4.2 Kw	400V Tri +T / 60Hz	11 A / phase	15 A / phase
4.2 kW	220-240V Tri +T / 60Hz	19 A / phase	30 A / phase
4.2 kW	200-208V Tri +T / 60Hz	20A / phase	30 A / phase

DISCONNECT SWITCH LOCATION

WASHER WITH CE MARKING

ELECTRICAL DISCONNECT SWITCH :

THE FOLLOWING EQUIPMENT MUST BE EASILY AND QUICKLY ACCESSIBLE NEAR THE WASHER : A DISCONNECTING SWITCH LOCKABLE IN THE OPEN (OFF) POSITION AND A DIFFERENTIAL MAGNETIC-THERMAL CIRCUIT-BREAKER WITH TYPE D TRIPPING CURVE.



-1- ELECTRICAL DISCONNECT SWITCH (*PROVIDED BY OTHERS*)
-2- CIRCUIT BREAKER OR FUSES (*PROVIDED BY OTHERS*)
-3- ELECTRICAL CABLE (PRESTATION GETINGE LANCER)

Maximal distance available
1270 mm (49.99")

Maximal distance available
1310mm (51.57")

DISCONNECT SWITCH MUST BE LOCATED IN THE AREA.

Disconnect switch can be installed to the left, to the right or behind the machine

Only one connection point is required

Note : A plug connection is preferred for ease of servicing.

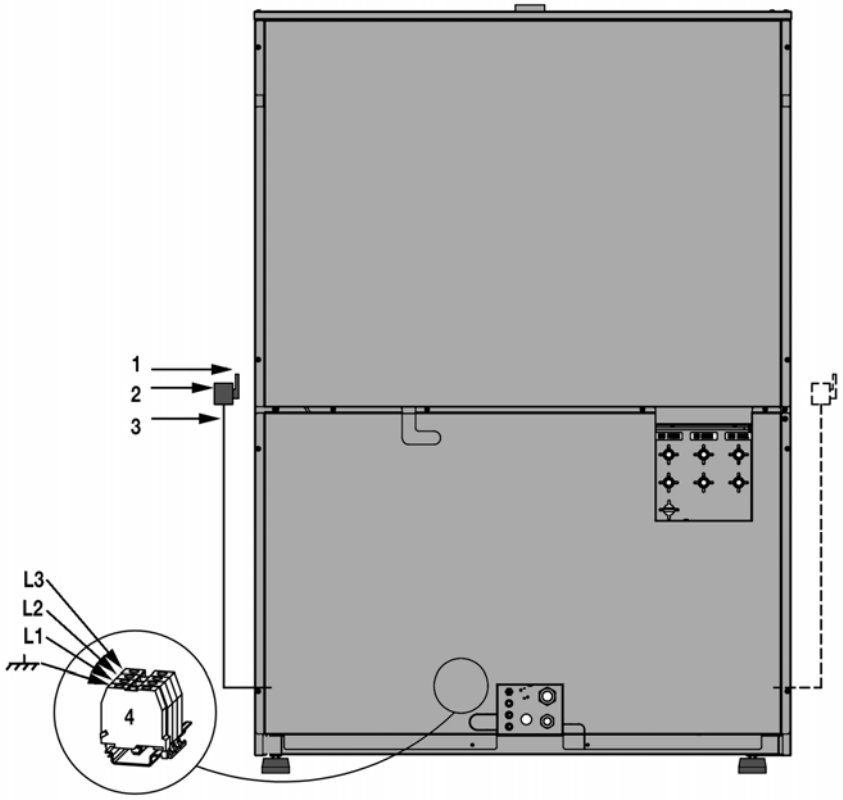
ENSURE THAT THE MINIMUM CLEARANCE REQUIREMENT IS MAINTAINED BETWEEN THE WASHER AND UTILITY CONNECTION POINT.

WASHER WITH UL MARKING

ELECTRICAL DISCONNECT SWITCH :

THE FOLLOWING EQUIPMENT MUST BE EASILY AND QUICKLY ACCESSIBLE NEAR THE WASHER : A DISCONNECTING SWITCH LOCKABLE IN THE OPEN (OFF) POSITION.

DURING THE INSTALLATION, YOU WILL SEE BLUE WIRES IN THE ELECTRICAL HARNESS. THESES WIRES ARE NOT APPROPRIATE TO THE UL / CSA STANDARDS AND CANNOT BE USED UNDER THESE LABELS.



1	ELECTRICAL DISCONNECT SWITCH (*PROVIDED BY OTHERS*)
2	CIRCUIT BREAKER OR FUSES (*PROVIDED BY OTHERS*)
3	ELECTRICAL CABLE (*PROVIDED BY OTHERS*)
4	TERMINAL BLOCK (L3 ONLY ON THREE PHASE MACHINE)

ENSURE THAT THE MINIMUM CLEARANCE REQUIREMENT IS MAINTAINED BETWEEN THE WASHER AND UTILITY CONNECTION POINT.

DISCHARGE OF WASTE WATERS

STANDARD

DRAINING

Provide a rigid standpipe and plumbing trap with :

- Height above floor level : from 1200 mm (47”) minimum to 1300 mm (51”) maximum.
- Temperature up to 95°C (203°F).
- With inner tube Ø 40mm (1.6”) and capable of accepting a flow of 40 l/min (10.6 GPM).

OVERFLOW

Provide a rigid standpipe and plumbing trap with :

- Height above floor level : 500 mm (20”) maximum.
- Temperature up to 95°C (203°F).
- With outside tube Ø 32mm (1.25”) and capable of accepting a flow of 20 l/min (5.3 GPM).

COOLING DRAINING OPTION (90010508)

DRAINING

Provide a rigid standpipe and plumbing trap with :

- Height above floor level : from 1200 mm (47”) minimum to 1300 mm (51”) maximum.
- Temperature up to 60°C (140°F).
- With inner tube Ø 40mm (1.6”) and capable of accepting a flow of 40 l/min (10.6 GPM).

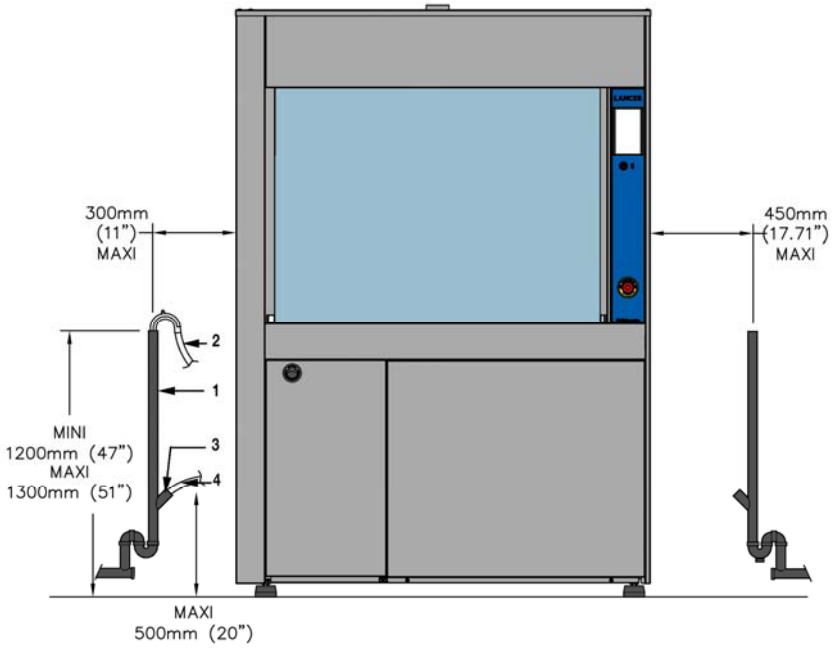
OVERFLOW

Provide a rigid standpipe and plumbing trap with :

- Height above floor level : 500 mm (20”) maximum.
- Temperature up to 60°C (140°F).
- With outside tube Ø 32mm (1.25”) and capable of accepting a flow of 20 l/min (5.3 GPM).

DO NOT BEND OR CONSTRICT THE TUBE AS THIS COULD STOP OR SLOW DOWN THE FLOW OF WATER.

ENSURE THAT THE MINIMUM CLEARANCE REQUIREMENT IS MAINTAINED BETWEEN THE WASHER AND UTILITY CONNECTION POINT.



1	waste water standpipe (*provided by others*)
2	waste water flexible emptying hose
3	overflow (*provided by others*)
4	flexible overflow hose

Maximal distance available
600 mm (23")

Maximal distance available
255 mm (10")

THE DISCHARGE TUBE MUST BE LOACATED IN THIS AREA.

The discharge tube can be installed to the left, to the right or behind the machine

Only one connection point is required

GRAVITY DROP DRAIN OPTION (01060177)

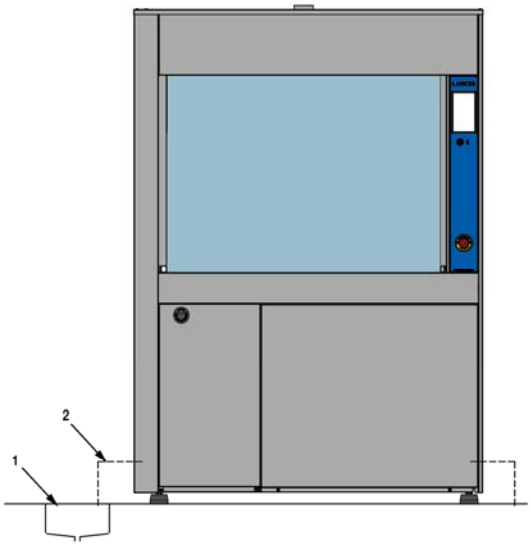
The machine is fitted, with a draining tube external Ø 33.7mm

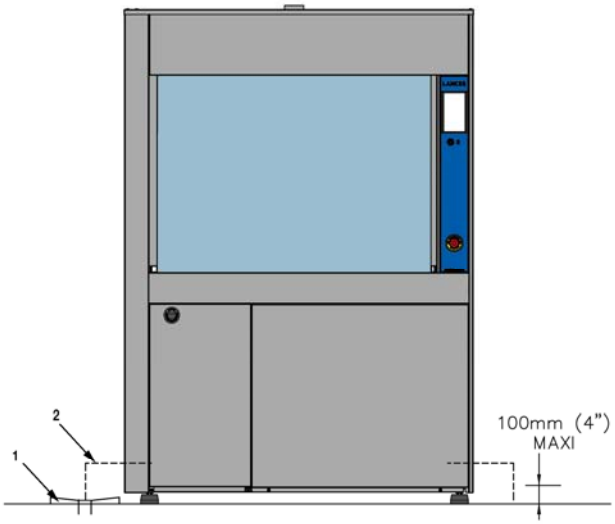
Emptying is by gravity to a floor sink or floor drain tube with the following characteristics:
- At floor level minimum and 100 mm (3.93”) high maximum
- Temperature up to 95°C (203°F).
- With minimum internal tube Ø 40mm (1.6”) and capable of accepting a flow of 40 l/min (11GPM).

GRAVITY DROP DRAIN OPTION (01060177)+ COOLING DRAINING OPTION (90010508)

The machine is fitted, with a draining tube external Ø 33.7mm

Emptying is by gravity to a floor sink or floor drain tube with the following characteristics:
- At floor level minimum and 100 mm (3.93”) high maximum
- Temperature up to 60°C (140°F).
- With minimum internal tube Ø 40mm (1.6”) and capable of accepting a flow of 40 l/min (11GPM).





-1- FLOOR SINK *(PROVIDED BY OTHERS)*

-2- DISCHARGE TUBE *(PROVIDED BY OTHERS)*

FLOOR DRAIN *(PROVIDED BY OTHERS)*

AN AIR GAP IS NECESSARY TO ISOLATE THE WASHER FROM THE DRAINING NETWORK (OPEN CONNECTION).

ENSURE THAT THE MINIMUM CLEARANCE REQUIREMENT IS MAINTAINED BETWEEN THE WASHER AND UTILITY CONNECTION POINT.

DISCHARGE OF EXHAUST VAPOR

The machine discharges hot moist air, causing condensation in the exhaust. Horizontal sections of exhaust ducting will require drains at the lowest points.

The machine is equipped with an exhaust fan.

TO AVOID PRESSURE PROBLEMS IN THE CHAMBER, DO NOT BLOCK THE HOT MOIST AIR EXHAUST TUBE.

A DIRECT (HARD PIPE) CONNECTION BETWEEN THE WASHER'S EXHAUST TUBE AND BUILDING EXHAUST SYSTEM IS NOT ALLOWED FOR SAFETY REASONS.

STANDARD

Characteristics:

- Air flow : 160 m^3/H (70 CFM).
- Maximum temperature : 95°C (203°F)
- Maximum relative humidity : 95%

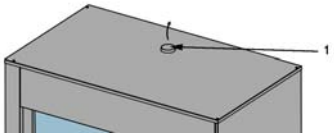
CONDENSOR OPTION (90010510)

Characteristics:

- Air flow : 160 m^3/H (70 CFM).
- Maximum temperature : 60°C (140°F)
- Maximum relative humidity : 70%

Two solutions are available to extract hot moist air:

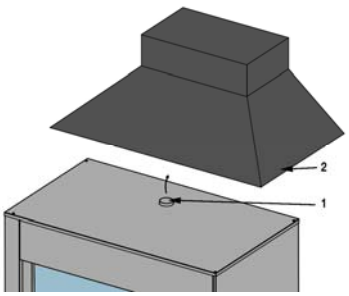
EXTRACTION DIRECTLY INTO THE ROOM



The room must be well ventilated.

-1- hot moist air exhaust tube

EXTRACTION WITH AN EXHAUST HOOD



Provide, by others, an exhaust hood placed between 300mm (12 “) minimum and 1000mm (40”) maximum above the washer exhaust tube.

-1- hot moist air exhaust tube

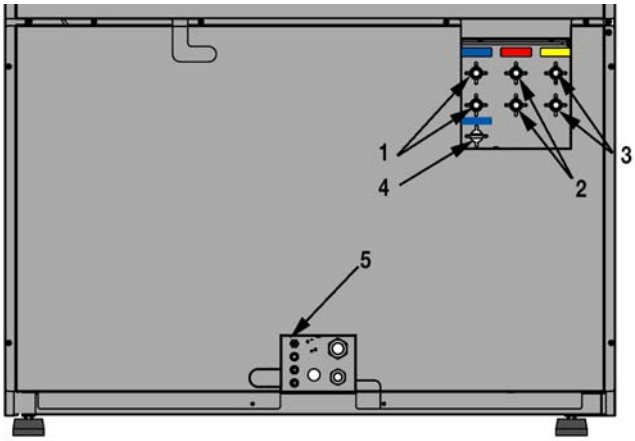
-2- exhaust hood

CONNECTIONS ON THE WASHER

WATERS

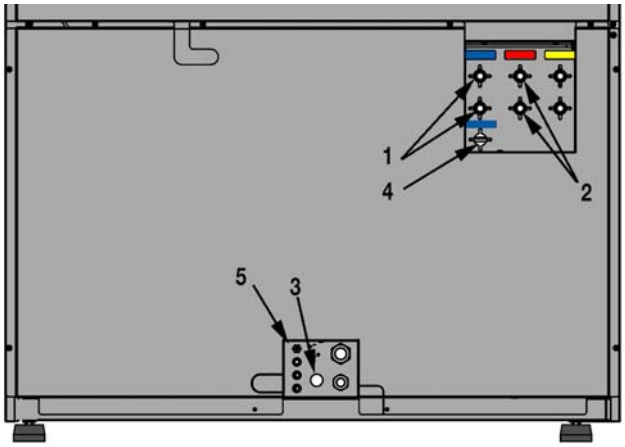
STANDARD

1 COLD WATER
2 HOT WATER
3 PURIFIED WATER
4 COLD WATER FOR COOLING DRAINING OPTION (90010508)
5 COMPRESSED AIR



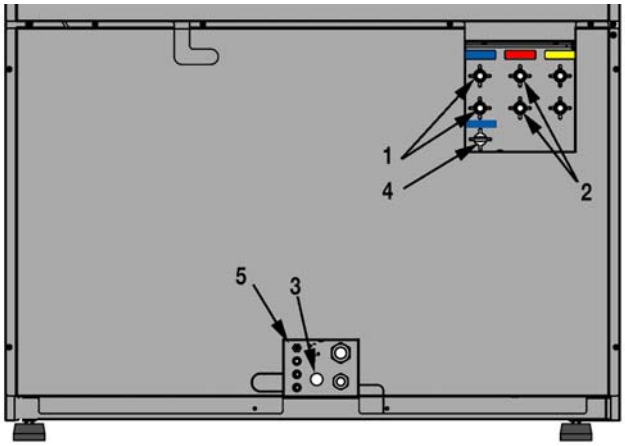
LOW PRESSURE VALVE + PUMP *(01060206*

1 COLD WATER
2 HOT WATER
3 PURIFIED WATER
4 COLD WATER FOR COOLING DRAINING OPTION (90010508)
5 COMPRESSED AIR



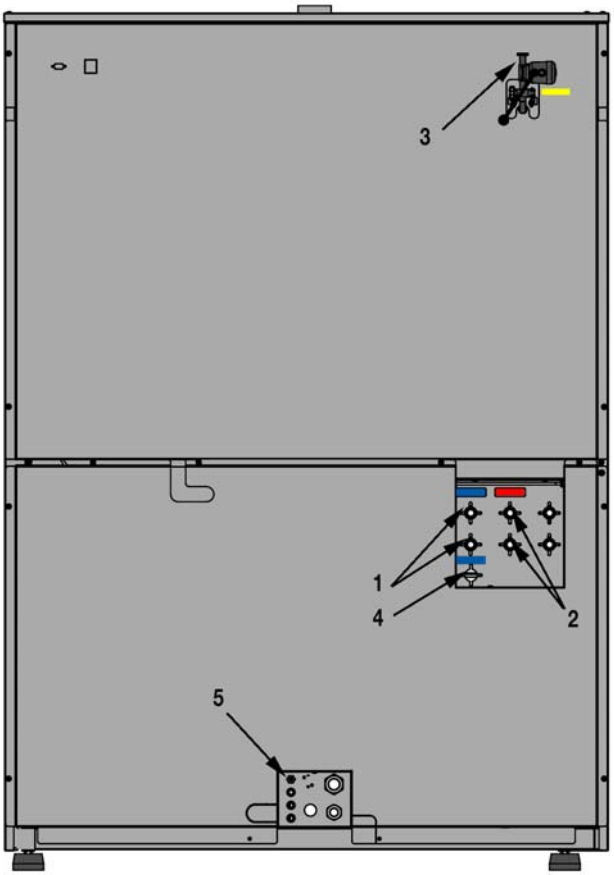
CONDENSER OPTION *(90010510)*

1 COLD WATER CONDENSER OPTION



DIRECT PURIFIED WATER INLET WITH VALVE *(90010533)*

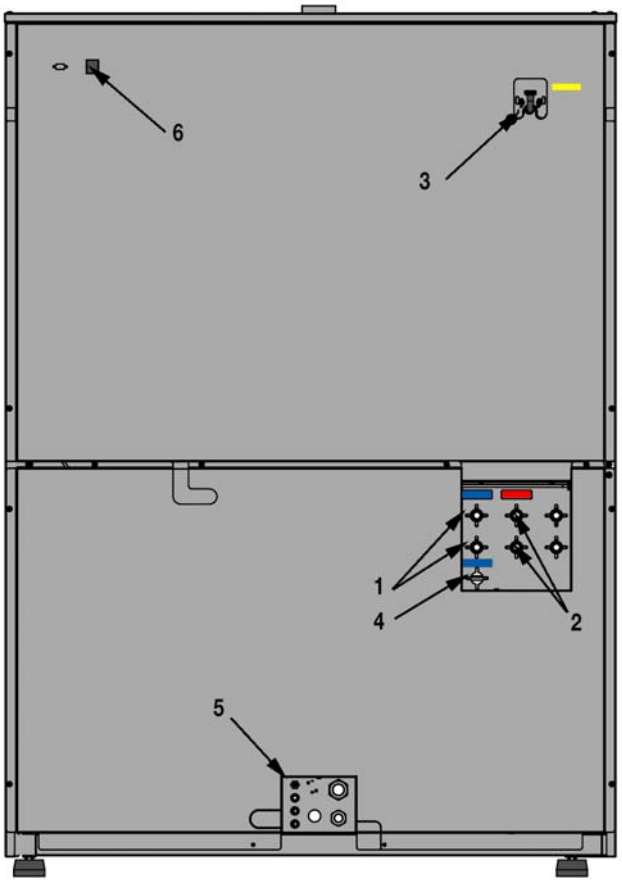
1 COLD WATER
2 HOT WATER
3 PURIFIED WATER
4 COLD WATER FOR COOLING DRAINING OPTION (90010508)
5 COMPRESSED AIR



DIRECT PURIFIED WATER INLET WITHOUT VALVE *(90010531)*

1 COLD WATER
2 HOT WATER
3 PURIFIED WATER
4 COLD WATER FOR COOLING DRAINING OPTION (90010508)
5 COMPRESSED AIR
6 DRY CONTACT

It is not allowed to connect at this plug any electrical supply.

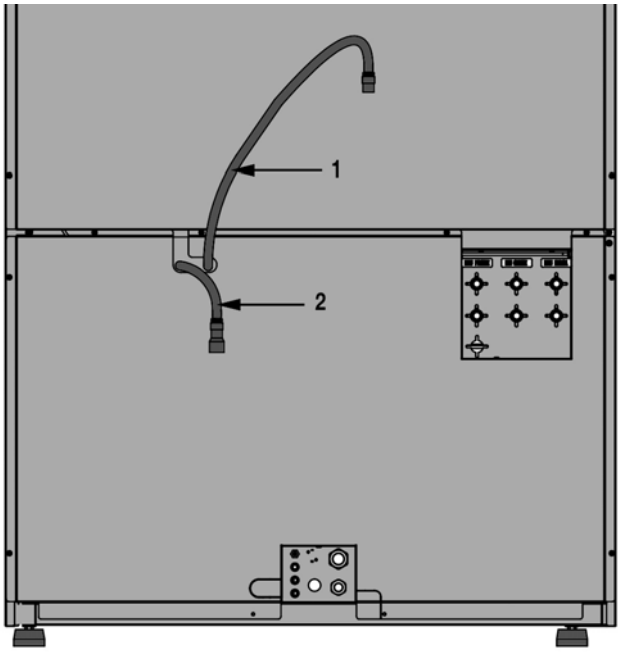


DRAIN

STANDARD / DRAIN LIFTING PUMP

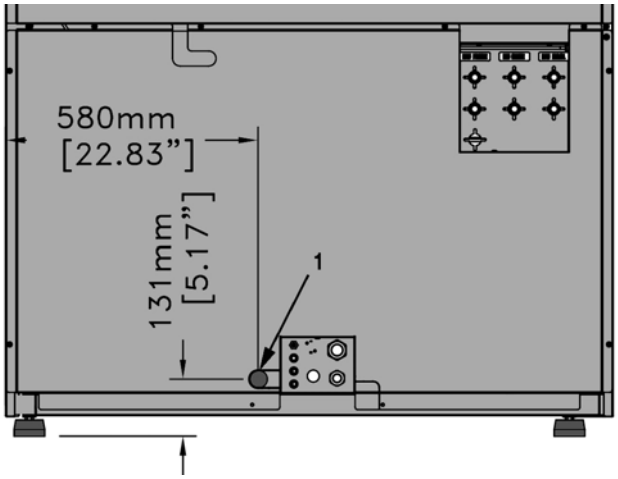
1 WASTE WATER FLEXIBLE EMPTYING HOSE

2 FLEXIBLE OVERFLOW HOSE



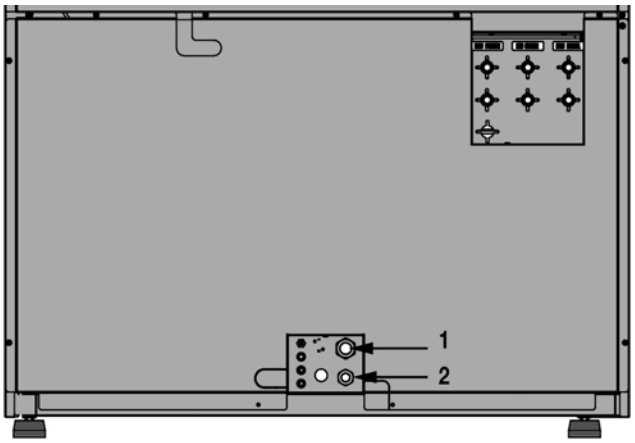
GRAVITY DROP DRAIN OPTION *(01060177)*

1 WASTE WATER DRAINING ∅ 33.7MM (1.3")



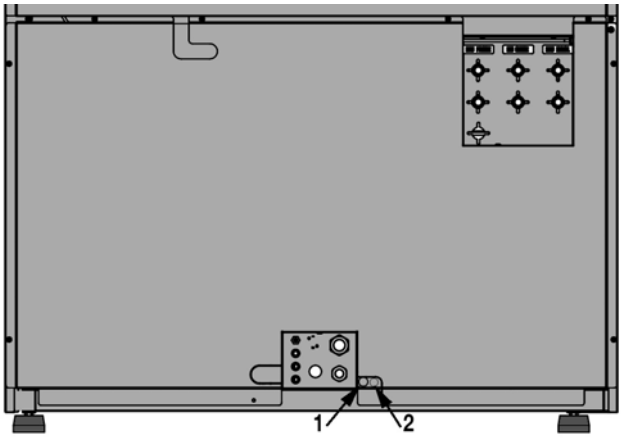
ELECTRICAL

1 50HZ ELECTRICAL CABLE
2 OUTPUT FOR ELECTRICAL CABLE 60 HZ



STEAM HEATING OPTION *(90010503 or 90010504)*

1 STEAM FEED
2 STEAM RETURN

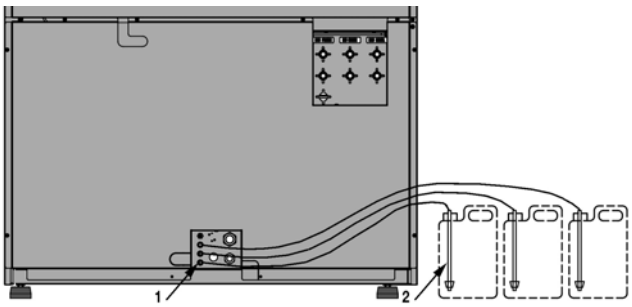


ADDITIVE

ADDITIONAL DOSING PUMP *(01060220)*

OPTION (MAXIMUM 3)

1 PRODUCT SUCTION TUBE + LEVEL SWITCH
2 ADDTIVE TANK (BY OTHERS)



WASHING PRODUCTS

The washing and operational performance of the washer has been validated with the GETINGE LANCER line of cleaning chemicals. The use of GETINGE LANCER cleaning chemicals guarantees good results and long life of your machine.

WASHER WITH CE MARKING

LANCER L.L.L DETERGENT

LANCER LLL DETERGENT is particularly adapted to the washing of laboratory glass-ware

- Use in machine Specially formulated for use in all disciplines within laboratories
- Producing high quality and analytically clean results
- Phosphate free and fully biodegradable
- Without risk over the aluminium, the plastic and the rubber
- Available in container of 10 liters
- Ref: L.L.L.
- Dose of 6-10 ml per liter (water hardness values between 200 and 400 ppm)

LANCER N.L.L. NEUTRALISANT

LANCER NLL NEUTRALISANT is particularly adapted to the final rinse of laboratory glass-ware.

- Use in machine. For the final rinse of the glass-ware
- Mostly used with laboratory washers
- Acetic acid based
- Available in container of 10 liters
- Ref: NLL
- Dose of 5 ml per liter

WASHER WITH UL MARKING

LANCER LCD DETERGENT

LANCERCLEAN Detergents are available in three solutions:

LCD-P:
Our most popular detergent, LCD-P is a potassium hydroxide based solution. LCD-P provides excellent cleaning results for all types of contaminants and standard laboratory soils and is recommended for use in all glassware washers.

LCD-S:
A sodium hydroxide based solution; LCD-S is specifically formulated to provide exceptional cleaning for the most difficult types of contaminants. LCD-S is used for petroleum applications, "baked-on" organic residues and other hard to clean soils that require a more powerful cleaning agent. LCD-S is recommended for use in all glassware washers.

LCD-H:
A low pH detergent; LCD-H is comprised of a sodium silicate solution. LCD-H is best used for surgical instruments, metals and soils that require a low pH detergent. LCD-H is recommended for use in all glassware washers.

LANCER LCA NEUTRALISANT

LANCERACID Rinses are available in three solutions:

LCA-A:
Our most commonly used rinsing agent; LCA-A is used in the rinse cycle subsequent to our LANCERCLEAN Detergents. This acetic acid based neutralizer provides an excellent rinse on all standard laboratory soils and contaminants. LCA-A is recommended for use in all glassware washers.

LCA-C:
An excellent rinsing agent; LCA-C is used in the rinse cycle subsequently to our LANCERCLEAN Detergents. This citric acid based neutralizer provides an excellent rinse for organics and pharmaceutical based contaminants. LCA-C is recommended for use in all glassware washers.

LCA-P:
An exceptional rinsing agent; LCA-P is used in the rinse cycle subsequently to our LANCERCLEAN Detergents. This phosphoric acid based solution works excellently for dealing with petroleum and other difficult soils. LCA-P is recommended for use in all glassware washers.

Please do not hesitate to consult GETINGE LANCER for application specific solutions.

INSTALLATION OF THE WASHING PRODUCTS

The chemical suction diptubes are identified by the following labels :

NON-FOAMING DETERGENT

Place a container of NON-FOAMING LIQUID DETERGENT inside the drawer. Remove the cap from the detergent container and insert the detergent suction tube into the detergent container. Tighten the cap.

IT IS STRICTLY PROHIBITED TO USE SOLVENTS AS DETERGENT.

PLEASE REFER TO SUPPLIERS MATERIAL SAFETY DATA SHEET FOR SPECIFIC INFORMATION REGARDING THE DETERGENT TO BE USED IN THIS MACHINE.

NEUTRALIZING ACID

Place a container of NEUTRALIZING ACID inside the drawer. Remove the cap from the acid container and insert the acid suction tube into the acid container. Tighten the cap.

THE USE OF NITRIC AND CHLORHYDRIC ACID IS PROHIBITED. ONLY DILUTE PHOSPHORIC, ACETIC AND CITRIC ACIDS CAN BE USED.

PLEASE REFER TO SUPPLIERS MATERIAL SAFETY DATA SHEET FOR SPECIFIC INFORMATION REGARDING THE ACID TO BE USED IN THIS MACHINE.

ADDITIONAL PRODUCTS

Place a container of the additional product next to the washer at a maximum height of 150 mm (6”) above floor level. Remove the cap from the container and insert the suction tube into the container. Tighten the cap.

WASHER WITH CE MARKING

GETINGE LANCER supply,

LIQUID DETERGENT reference "L.L.L." in container of 10 liters.

LIQUID NEUTRALISANT reference "N.L.L." in container of 10 liters.

Dimensions of 10 liters containers : 200 x 230 x 320 mm.

WASHER WITH UL MARKING

Dimensions of 2.5 gal. containers : 14.5 x 6.5 x 9 in.

BEFORE CARRYING OUT ANY WORK ON THE WASHER, MAKE SURE IT IS SWITCHED OFF AT THE DISCONNECTING SWITCH.

PRECAUTIONS BEFORE USING YOUR WASHER

NEVER USE YOU WASHER WITHOUT PRIOR TRAINING.

Your washer is now properly positioned and installed.

You must read user manual in order to learn how the washer operates.

All personnel using the washer (users and technicians) must have received complete training on use and maintenance.

This training must be carried out on a regular basis and always before the washer is used for the first time.

A record of this training must be stored as evidence that the users attended and understood the contents of the course.

Training should include:

- How the washer functions
- How to load items on the baskets
- The use of the different processing programs
- Review of alarms and the procedure to follow in case of alarm
- Everyday maintenance of the washer (cleaning of external parts, filters…)
- Knowledge of the chemical products utilized
- Management of consumables (change of paper, product containers…)
- The different levels of traceability (if applicable)

LANCER
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