Washer Extractors

HF150, HF185, HF234, HF304

for corresponding “CHF” and “IHF” models, see page 5 for complete model list

Technical specifications
Installation instructions
Maintenance

Instruction manual

Alliance Laundry Systems

Part No. D0289R10
Code: 249/00390/10
March 2012

Contents

Model Numbers

Build-up

HF150
HF185
HF234
HF304
HX55
HX75
xHF150yyHyyyyyy
xHF185yyHyyyyyy
xHF234yyHyyyyyy
xHF304yyHyyyyyy
xHF033yyHyyyyyy
xHF045yyHyyyyyy
xHF055yyHyyyyyy
xHF075yyHyyyyyy

Model numbers

CHF033
CHF045
CHF055
CHF055ANHX1
CHF055MNHX1
CHF075
CHF075ANHP1
CHF075ANHQ1
CHF150
CHF185
CHF234
CHF304
IHF033
IHF033ANHX1
IHF045
IHF045ANHX1
IHF055
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IHF075ANHN1
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IHF304
IHF304ANHP1
IHF304MNHP1
IHF304ZNHP1

Safety

CAUTION LABELS

Please familiarize yourself with the following standard warning symbols. They are used throughout this manual and on the equipment to alert you to possible hazards. Anyone operating or servicing this equipment must understand these symbols and must follow all safety rules in this manual.

ELECTRICAL HAZARD

This symbol alerts you to the presence of a dangerous voltage, which could cause a serious shock resulting in personal injury or death.


CONSULT MANUAL

This symbol warns you to consult the manual for important instructions concerning the machine and possible hazards.

MOVING PARTS HAZARD

This symbol alerts you to the presence of possible dangerous moving parts within the machine. Guards should always be in place when the machine is in operation. Be very careful when servicing the drive system.

PINCHING HAZARD

This warning symbol indicates the presence of a pinch point on the machine. This is a place where your hand might be pinched or crushed, resulting in a severe injury. Make sure you understand these hazards and keep all body parts clear of them.

HOT SURFACE HAZARD

This symbol indicates the presence of a potentially hot surface. Some machine surfaces and parts may become extremely hot during normal operation and should not be touched.

ATTENTION

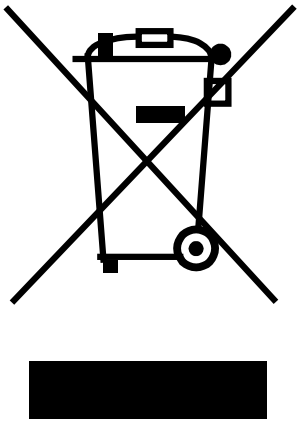
This symbol identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss.

Environmental

Disposal of Unit

This appliance is marked according to the European directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. Ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local distributor resources.



Explanation of Safety Messages

Throughout this manual and on machine decals, you will find precautionary statements (“DANGER”, “WARNING” and “CAUTION”) followed by specific instructions. These precautions are intended for the personal safety of the operator, user, servicer, and those maintaining the machine.

	**DANGER**
Indicates an imminently hazardous situation that, if not avoided, will cause severe personal injury or death.	

	**WARNING**
Indicates a hazardous situation that, if not avoided, could cause severe personal injury or death.	

	**CAUTION**
Indicates a hazardous situation that, if not avoided, may cause minor or moderate personal injury or property damage.	

Safety Decals

Safety decals appear at crucial locations on the machine. Failure to maintain legible safety decals could result in injury to the operator or service technician.

To provide personal safety and keep the machine in proper working order, follow all maintenance and safety procedures presented in this manual. If questions regarding safety arise, contact the manufacturer immediately.

Use manufacturer-authorized spare parts to avoid safety hazards.

Additional precautionary statements (“IMPORTANT” and “NOTE”) are followed by specific instructions.

IMPORTANT: The word “IMPORTANT” is used to inform the reader of specific procedures where minor machine damage will occur if the procedure is not followed.

NOTE: The word “NOTE” is used to communicate installation, operation, maintenance or servicing information that is important but not hazard related.

Important Safety Instructions

	**WARNING**
To reduce the risk of fire, electric shock, serious injury or death to persons when using your washer, follow these basic precautions:	

1. Read all instructions before using the washer.
2. Refer to the GROUNDING INSTRUCTIONS in the installation Manual for the proper grounding of the washer.
3. Do not wash textiles that have been previously cleaned, washed, soaked, or spotted with gasoline, dry-cleaning solvents, or other flammable or explosive substances as they give off vapors that could ignite or explode.
4. Do not add gasoline, dry-cleaning solvents, or other flammable or explosive substances to the wash water. These substances give off vapors that could ignite or explode.
5. Under certain conditions, hydrogen gas may be produced in a hot water system that has not been used for two weeks or more. HYDROGEN GAS IS EXPLOSIVE. If the hot water system has not been used for such a period, before using a washing machine or combination washer-dryer, turn on all hot water faucets and let the water flow from each for several minutes. This will release any accumulated hydrogen gas. The gas is flammable, do not smoke or use an open flame during this time.
6. Do not allow children to play on or in the washer. This appliance is not intended for use by young children or infirm persons without supervision. Young children should be supervised to ensure that they do not play with the appliance.
7. Before the washer is removed from service or discarded, remove the door to the washing compartment.
8. Do not reach into the washer if the wash drum is moving. This is an imminently hazardous situation that, if not avoided, will cause severe personal injury or death.
9. Do not install or store the washer where it will be exposed to water and/or weather.
10. Do not tamper with the controls.
11. Do not repair or replace any part of the washer, or attempt any servicing unless specifically recommended in the user-maintenance instructions or in published user-repair instructions that the user understands and has the skills to carry out.
12. To reduce the risk of an electric shock or fire, DO NOT use an extension cord or an adapter to connect the washer to an electrical power source.
13. Use a washer only for its intended purpose, washing textiles.
14. ALWAYS disconnect the washer from the electrical supply before attempting any service. Disconnect the power cord by grasping the plug, not the cord.
15. Install the washer according to the INSTALLATION INSTRUCTIONS. All connections for water, drain, electrical power and grounding must comply with local codes and be made by licensed personnel when required.
16. To reduce the risk of fire, textiles which have traces of any flammable substances such as vegetable oil, cooking oil, machine oil, flammable chemicals, thinner, etc., or anything containing wax or chemicals such as in mops and cleaning cloths, must not be put into the washer. These flammable substances may cause the fabric to catch on fire.
17. Do not use fabric softeners or products to eliminate static unless recommended by the manufacturer of the fabric softener or product.
18. Keep washer in good condition. Bumping or dropping the washer can damage safety features. If this occurs, have washer checked by a qualified service person.
19. Replace worn power cords and/or loose plugs.
20. Be sure water connections have a shut-off valve and that fill hose connections are tight. CLOSE the shut-off valves at the end of each wash day.

21. Loading door MUST BE CLOSED any time the washer is to fill, tumble, or spin. DO NOT bypass the loading door switch by permitting the washer to operate with the loading door open.
22. Always read and follow manufacturer's instructions on packages of laundry and cleaning aids. Heed all warnings or precautions. To reduce the risk of poisoning or chemical burns, keep them out of the reach of children at all times (preferably in a locked cabinet).
23. Always follow the fabric care instructions supplied by the textile manufacturer.
24. Never operate the washer with any guards and/or panels removed.
25. DO NOT operate the washer with missing or broken parts.
26. DO NOT bypass any safety devices.
27. Failure to install, maintain, and/or operate this washer according to the manufacturer's instructions may result in conditions which can produce bodily injury and/or property damage.
28. It is recommended that the machine be installed by qualified technicians.
29. Before starting repairs or maintenance, shut off all power and water supplies.
30. To prevent fire and explosion:
    Keep the area around the machine free from inflammable or combustible products.

NOTE: The WARNINGS and IMPORTANT SAFETY INSTRUCTIONS appearing in this manual are not meant to cover all possible conditions and situations that may occur. Common sense, caution, and care must be exercised when installing, maintaining, or operating the washer.

Any problems or conditions not understood should be reported to the dealer, distributor, service agent, or the manufacturer.

SAVE THESE INSTRUCTIONS

Operator Safety

	**WARNING**
NEVER insert hands or objects into basket until it has completely stopped. Doing so could result in serious injury.	

To ensure the safety of machine operators, the following maintenance checks must be performed daily:

1. Prior to operating the machine, verify that all warning signs are present and legible. Missing or illegible signs must be replaced immediately. Make certain that spares are available.
2. Check door interlock before starting operation of the machine:
   a. Attempt to start the machine with the door open. The machine should not start with the door open.
   b. Close the door without locking it and attempt to start the machine. The machine should not start with the door unlocked.
   c. Close and lock the door and start a cycle. Attempt to open the door while the cycle is in progress. The door should not open.

If the door lock and interlock are not functioning properly, call a service technician.

3. Do not attempt to operate the machine if any of the following conditions are present:
   a. The door does not remain securely locked during the entire cycle.
   b. Excessively high water level is evident.
   c. Machine is not connected to a properly grounded circuit.

Do not bypass any safety devices in the machine.

	**WARNING**
Never operate the machine with a bypassed or disconnected balance system. Operating the machine with severe out-of-balance loads could result in personal injury and serious equipment damage.	

SAVE THESE INSTRUCTIONS

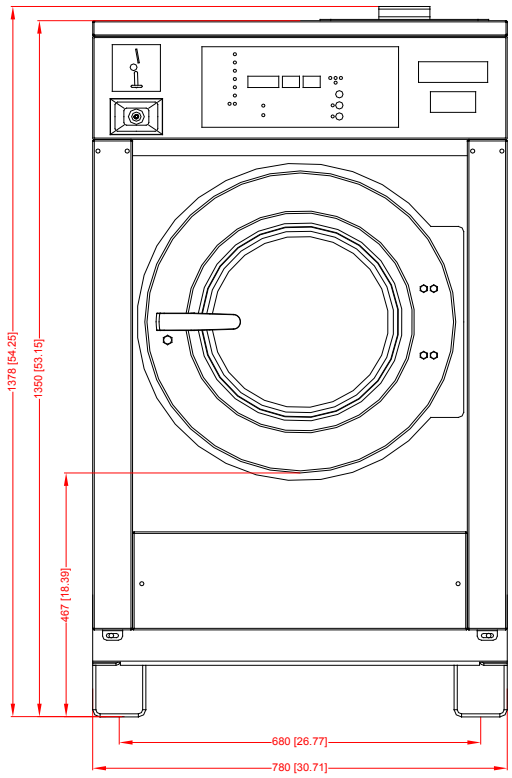
Technical data and dimensions

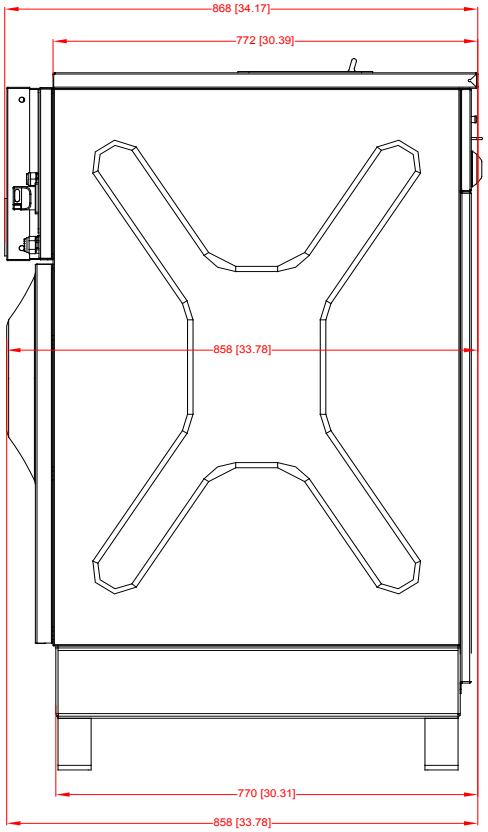
Technical data HF150, IHF150, IHF033, CHF150, CHF033

		METRIC	US
Capacity (dry weight) Ratio [kg/Lit]			
	1:11	13,2 kg	29.10 lb.
	1:10	14,5 kg	31.97 lb.
	1:9	16,1 kg	35.49 lb.
Cylinder			
	Diameter	680 mm	26.77 inch
	Depth	400 mm	15.75 inch
	Volume	145 Lit	5.12 ft³
Cabinet			
	Height	1378 mm	54.25 inch
	Width	780 mm	30.71 inch
	Depth	868 mm	34.17 inch
Front loading			
	Diameter door opening	400 mm	15.75 inch
	Height under door	467 mm	18.39 inch
	Height to doorhandle	757 mm	29.80 inch
Speed			
	Wash	10 - 50 tr/min - RPM	
	Distribution	85 tr/min - RPM	
	Spin	250 - 1000 tr/min - RPM	
G-factor			
	High spin	380	
Dynamic bottom load (N/Hz)			
		1010/16	
Motor (3-phase)			
	4p. 1470 tr/min	2,2 kW / 2,95 HP	
Drain valve			
		2"	
Water supply			
	Hard, soft, warm water	3/4"	
Steam connection			
	Steam connection	3/8"	
Heating			
	Electrical 230/400 V	12 kW - 15 kW - 18 kW	
	Electrical 400V	21 kW - 24 kW	
	Steam	6 bar	
	Warm water (without additional heating)	X	
	Warm water (with additional heating)	X	
Packing dimensions			
	(H x W x D) mm - inch	1500x850x950 mm - 59.06x33.46x37.40 inch	
Weight			
	Net	368 kg	811.30 lb.
	Gross	383 kg	844.37 lb.

Dimensions HF150, IHF150, IHF033, CHF150, CHF033

Legend: metric mm [inches]





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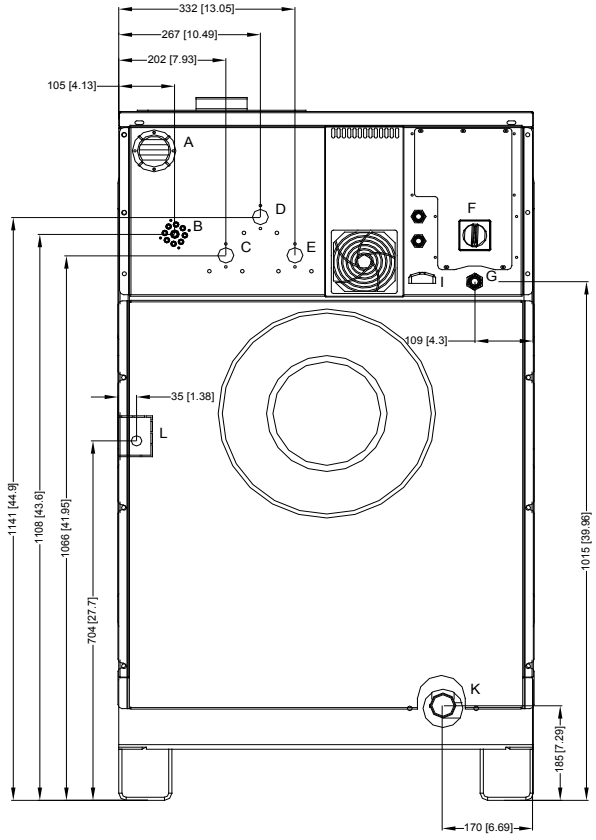


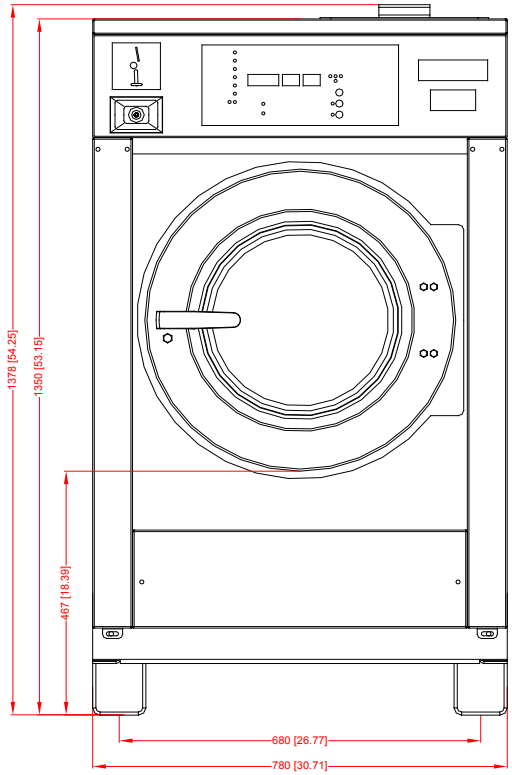
- ❑ A. Ventilation soap dispenser
- ❑ B. Liquid soap connections
- ❑ C. Hard water connections 3/4"
- ❑ D. Warm water connections 3/4"
- ❑ E. Soft water connections 3/4"
- ❑ F. Connection clamps
- ❑ G. Electrical connections
- ❑ I. Ventilation tub
- ❑ K. Drain valve
- ❑ L. Steam connections

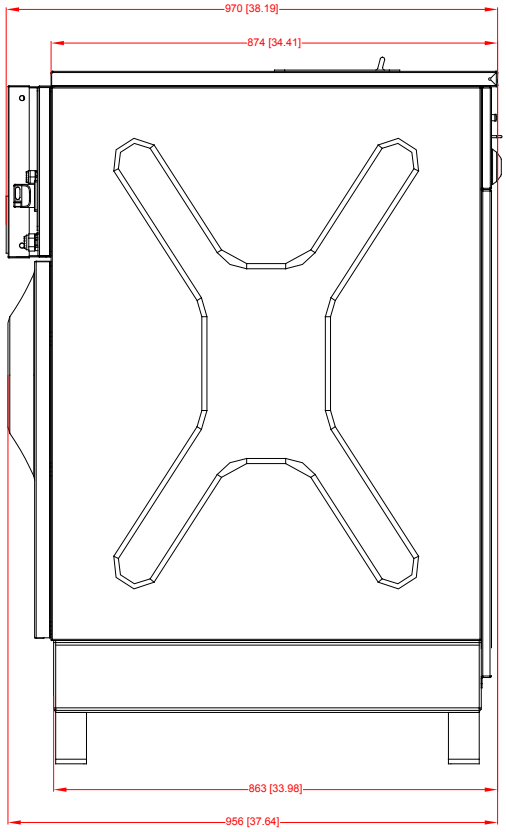
Technical data HF185, IHF185, IHF045, CHF185, CHF045

		METRIC	US
Capacity (dry weight) Ratio [kg/Lit]			
	1:11	16,5 kg	36.38 lb.
	1:10	18,1 kg	39.90 lb.
	1:9	20,1 kg	44.31 lb.
Cylinder			
	Diameter	680 mm	26.77 inch
	Depth	500 mm	19.69 inch
	Volume	181 Lit	6.39 ft³
Cabinet			
	Height	1378 mm	54.25 inch
	Width	780 mm	30.71 inch
	Depth	970 mm	38.19 inch
Front loading			
	Diameter door opening	400 mm	15.75 inch
	Height under door	467 mm	18.39 inch
	Height to doorhandle	757 mm	29.80 inch
Speed			
	Wash	10 - 50 tr/min - RPM	
	Distribution	85 tr/min - RPM	
	Spin	250 - 1000 tr/min - RPM	
G-factor			
	High spin	380	
Dynamic bottom load (N/Hz)			
		1090/16	
Motor (3-phase)			
	4p. 1470 tr/min	2,2 kW / 2,95 HP	
Drain valve			
		2"	
Water supply			
	Hard, soft, warm water	3/4"	
Steam connection			
	Steam connection	3/8"	
Heating			
	Electrical 230/400 V	12 kW - 15 kW - 18 kW	
	Electrical 400V	21 - 24 kW	
	Steam	6 bar	
	Warm water (without additional heating)	X	
	Warm water (with additional heating)	X	
Packing dimensions			
	(H x W x D) mm - inch	1500x850x1020 mm - 59.06x33.46x40.16 inch	
Weight			
	Net	391 kg	862.01 lb.
	Gross	418 kg	921.53 lb.

Dimensions HF185, IHF185, IHF045, CHF185, CHF045

Legend: metric mm [inches]





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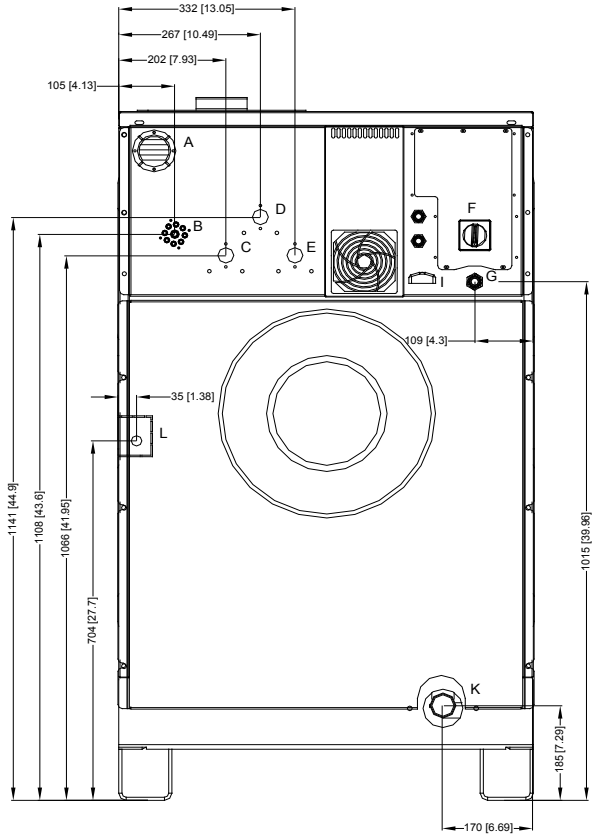


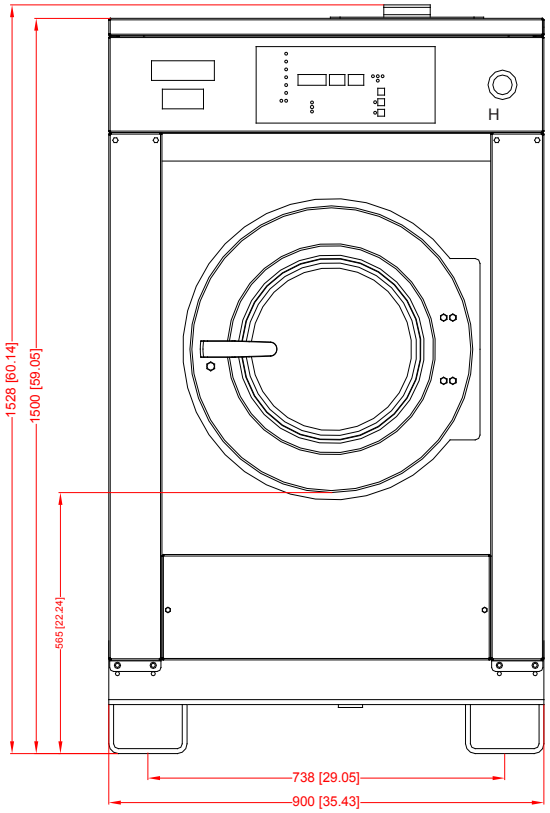
- ❑ A. Ventilation soap dispenser
- ❑ B. Liquid soap connections
- ❑ C. Hard water connections 3/4"
- ❑ D. Warm water connections 3/4"
- ❑ E. Soft water connections 3/4"
- ❑ F. Connection clamps
- ❑ G. Electrical connections
- ❑ I. Ventilation tub
- ❑ K. Drain valve
- ❑ L. Steam connections

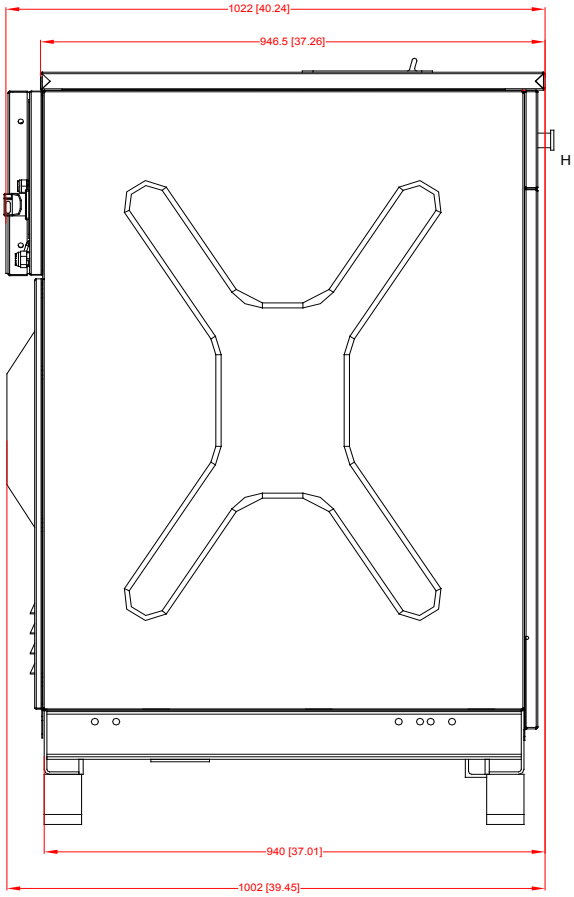
Technical data HF234, IHF234, IHF055, CHF234, CHF055

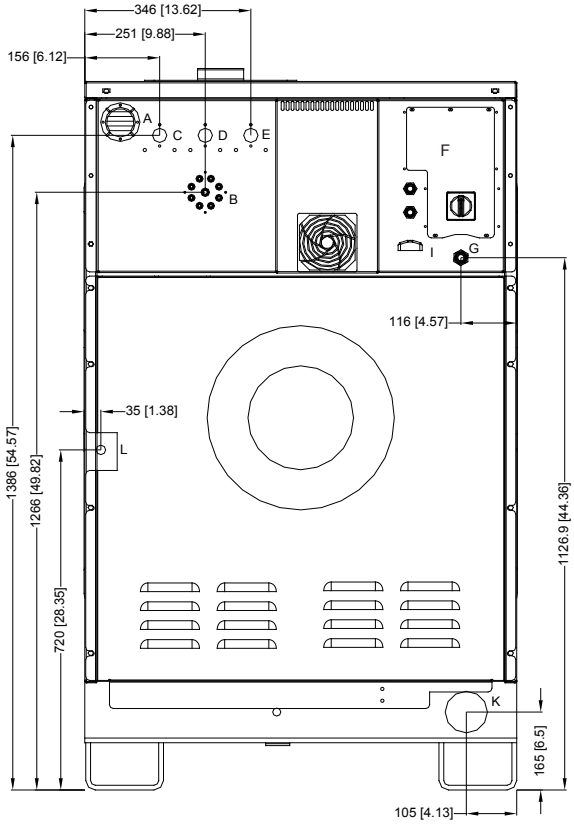
		METRIC	US
Capacity (dry weight) Ratio [kg/Lit]			
	1:11	21,3 kg	46.96 lb.
	1:10	23,4 kg	51.59 lb.
	1:9	26 kg	57.32 lb.
Cylinder			
	Diameter	750 mm	29.53 inch
	Depth	530 mm	20.87 inch
	Volume	234 Lit	8.26 ft³
Cabinet			
	Height	1528 mm	60.14 inch
	Width	900 mm	35.43 inch
	Depth	1022 mm	40.24 inch
Front loading			
	Diameter door opening	400 mm	15.75 inch
	Height under door	565 mm	22.24 inch
	Height to doorhandle	855 mm	33.66 inch
Speed			
	Wash	10 - 50 tr/min - RPM	
	Distribution	85 tr/min - RPM	
	Spin	250 - 1000 tr/min - RPM	
G-factor			
	High spin	419	
Dynamic bottom load (N/Hz)			
		2300/15	
Motor (3-phase)			
	4p. 1470 tr/min	3 kW / 4,02 HP	
Drain valve			
		3"	
Water supply			
	Hard, soft, warm water	3/4"	
Steam connection			
	Steam connection	1/2"	
Heating			
	Electrical 230/400 V	12 kW - 15 kW - 18 kW	
	Electrical 400V	21 kW - 24 kW	
	Steam	6 bar	
	Warm water (without additional heating)	X	
	Warm water (with additional heating)	X	
Packing dimensions			
	(H x W x D) mm - inch	1700x970x1100 mm - 66.93x38.19x43.31 inch	
Weight			
	Net	534 kg	1177.27 lb.
	Gross	584 kg	1287.50 lb.

Dimensions HF234, IHF234, IHF055, CHF234, CHF055

Legend: metric mm [inches]







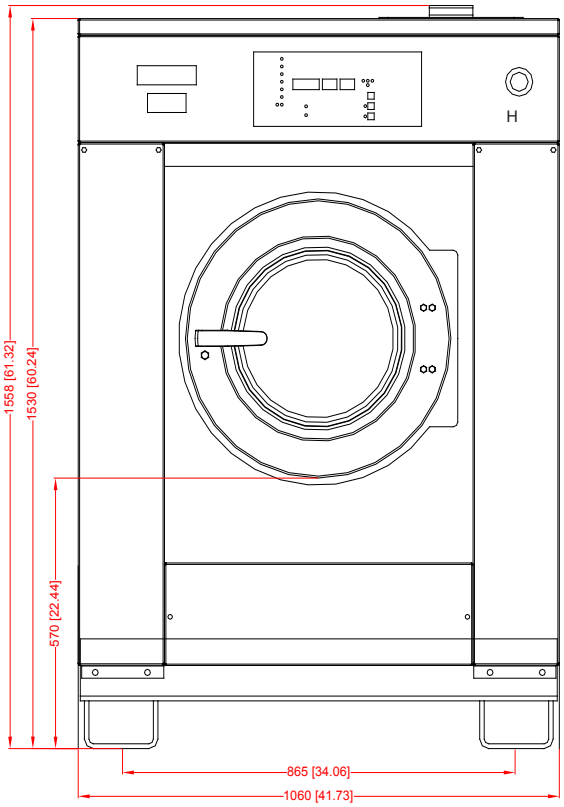
- ❑ A. Ventilation soap dispenser
- ❑ B. Liquid soap connections
- ❑ C. Hard water connections 3/4"
- ❑ D. Warm water connections 3/4"
- ❑ E. Soft water connections 3/4"
- ❑ F. Connection clamps
- ❑ G. Electrical connections
- ❑ H. Emergency button
- ❑ I. Ventilation tub
- ❑ K. Drain valve
- ❑ L. Steam connections

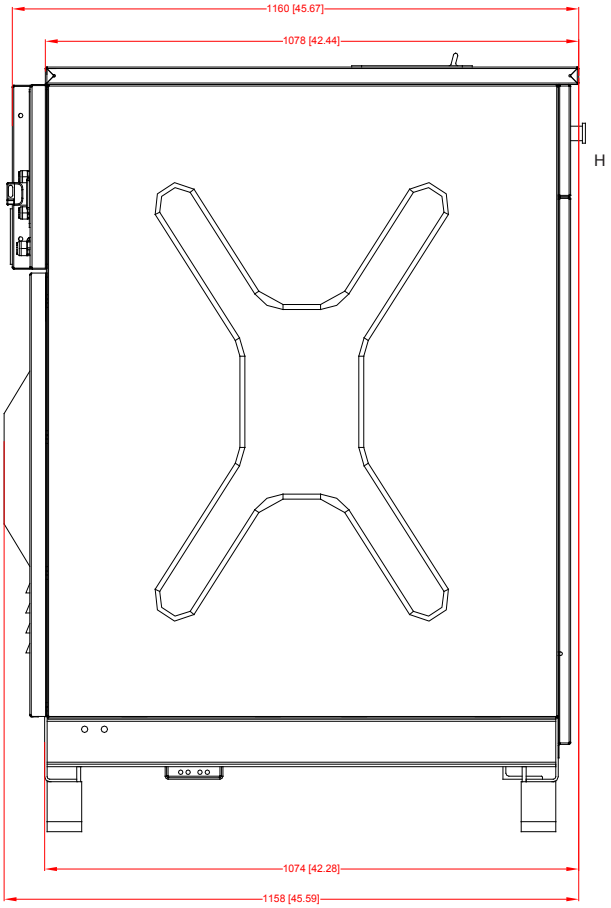
Technical data HF304, IHF304, IHF075, CHF304, CHF075

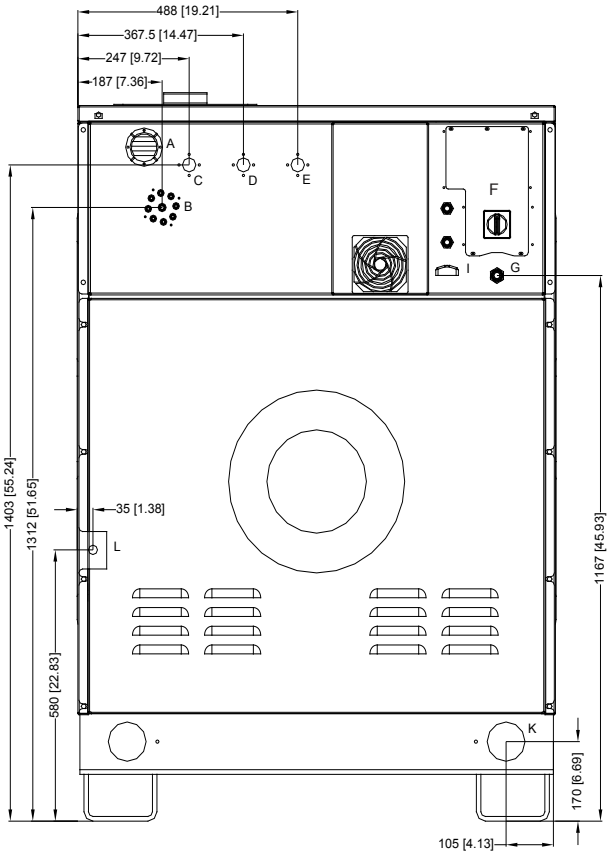
		METRIC	US
Capacity (dry weight) Ratio [kg/Lit]			
	1:11	27,6 kg	60.85 lb.
	1:10	30,4 kg	67.02 lb.
	1:9	33,8 kg	74.52 lb.
Cylinder			
	Diameter	850 mm	33.46 inch
	Depth	537 mm	21.14 inch
	Volume	304 Lit	10.74 ft³
Cabinet			
	Height	1558 mm	61.32 inch
	Width	1060 mm	41.73 inch
	Depth	1160 mm	45.67 inch
Front loading			
	Diameter door opening	400 mm	15.75 inch
	Height under door	570 mm	22.44 inch
	Height to doorhandle	860 mm	33.86 inch
Speed			
	Wash	10 - 50 tr/min - RPM	
	Distribution	85 tr/min - RPM	
	Spin	250 - 1000 tr/min - RPM	
G-factor			
	High spin	475	
Dynamic bottom load (N/Hz)			
		2340/15	
Motor (3-phase)			
	4p. 1470 tr/min	4 kW / 5,36 HP	
Drain valve			
		3"	
Water supply			
	Hard, soft, warm water	3/4"	
Steam connection			
	Steam connection	1/2"	
Heating			
	Electrical 230/400 V	18 kW	
	Electrical 400V	21 kW - 24 kW	
	Steam	6 bar	
	Warm water (without additional heating)	X	
	Warm water (with additional heating)	X	
Packing dimensions			
	(H x W x D) mm - inch	1740x1120x1260 mm - 68.50x44.09x49.61inch	
Weight			
	Net	731 kg	1611.58 lb.
	Gross	781 kg	1721.81 lb.

Dimensions HF304, IHF304, IHF075, CHF304, CHF075

Legend: metric mm [inches]







- ❑ A. Ventilation soap dispenser
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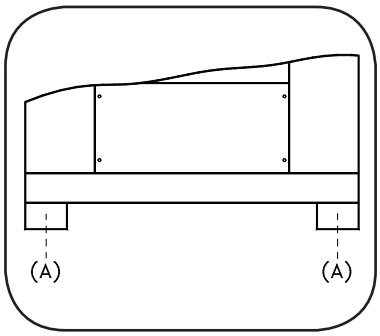
- ❑ F. Connection clamps
- ❑ G. Electrical connections
- ❑ H. Emergency button
- ❑ I. Ventilation tub
- ❑ K. Drain valve
- ❑ L. Steam connections

CAUTION

Ensure that the machine is installed on a level floor of sufficient strength and that the recommended clearances for inspection and maintenance are provided. Never allow the inspection and maintenance space to be blocked.



Label 1

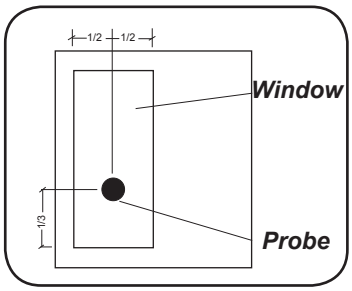
Surface

The machine must be placed on a flat, solid surface (metal base, concrete or solid ground). When using a metal base or with machines with steam heating, ***the machine must be anchored*** on the 4 provided locations (A) (See Label 1) in the base. (See Mounting Bolt Hole Locations). The height of the pad should not exceed 203 mm - 8 inch.

The machine must be placed entirely level. For easy maintenance it is recommended to keep a minimal distance of 600 mm - 23.62 inch between the wall and the back of the machine.

If several machines are placed next to each another, there should be a minimal distance of 30 mm - 1.18 inch between each machine.

Out of balance switch



Label 2

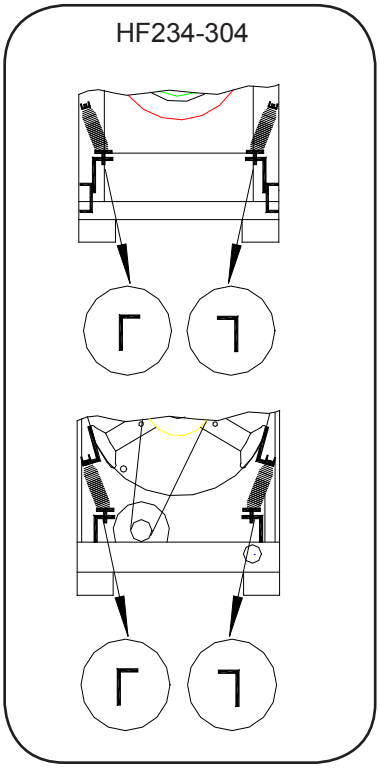
The out of balance switch is mounted on the solid part of the machine. There is a window around the probe of the out of balance switch that is mounted on the movable part of the machine.

When the machine goes out of balance by overloading or uneven distribution of the linen, the out of balance switch will interrupt this action to prevent damage to the machine.

Important

To guarantee good functioning, the probe should be centered horizontally and vertically at 1/3 from the bottom of the out of balance window (when machine drum is empty). (See Label 2)

Removal of the transport safety

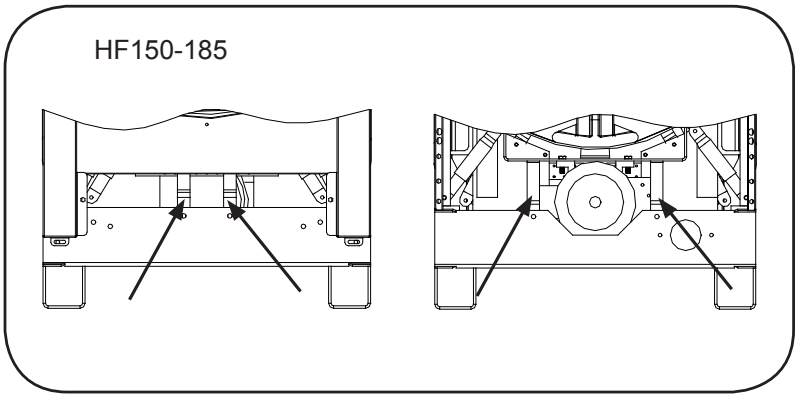


Label 3

To prevent damage during transportation, the machine has been equipped with four red transport brackets to eliminate every possible movement of the tub.
After the machine has been placed level, take off the service panel and back panel to remove these transport brackets. (See Labels 3 and 4)

Important

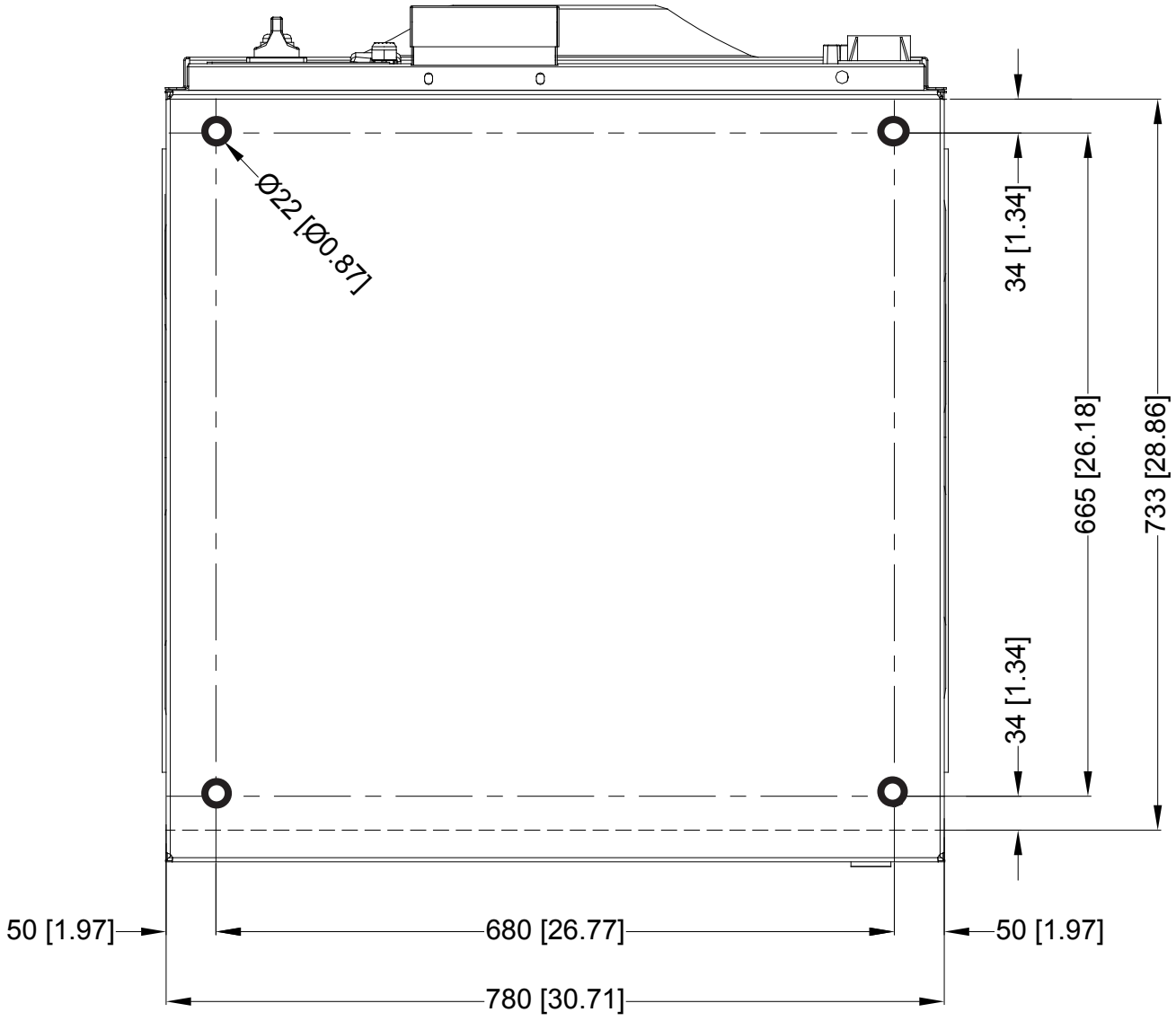
The machine must never be activated ***before removing these transport brackets.***



Label 4

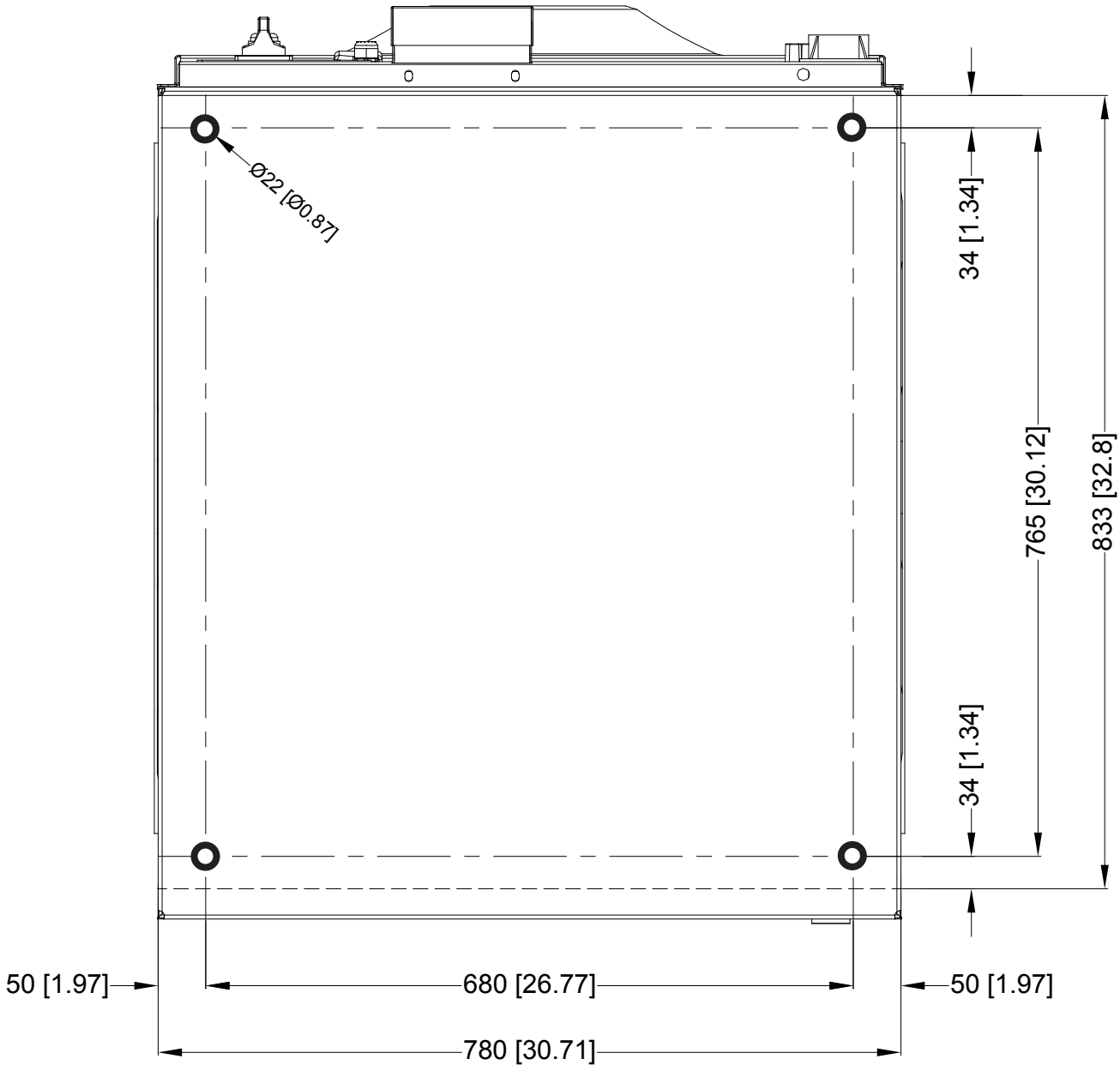
Mounting Bolt Hole Locations for machines, HF150, IHF150, IHF033, CHF150, CHF033

Legend: metric mm [inches]



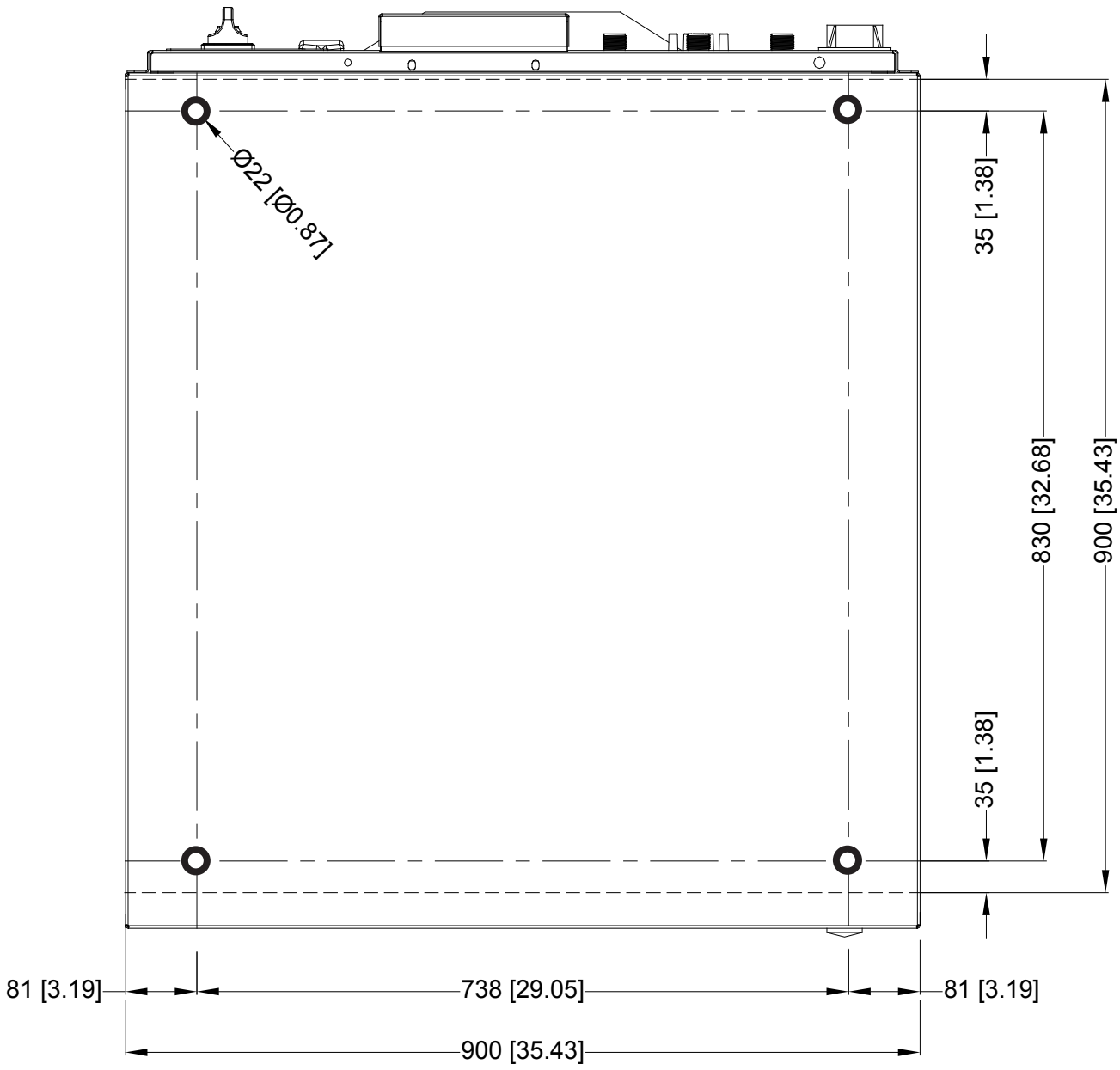
Mounting Bolt Hole Locations for machines, HF185, IHF185, IHF045, CHF185, CHF045

Legend: metric mm [inches]



Mounting Bolt Hole Locations for machines, HF234, IHF234, IHF055, CHF234, CHF055

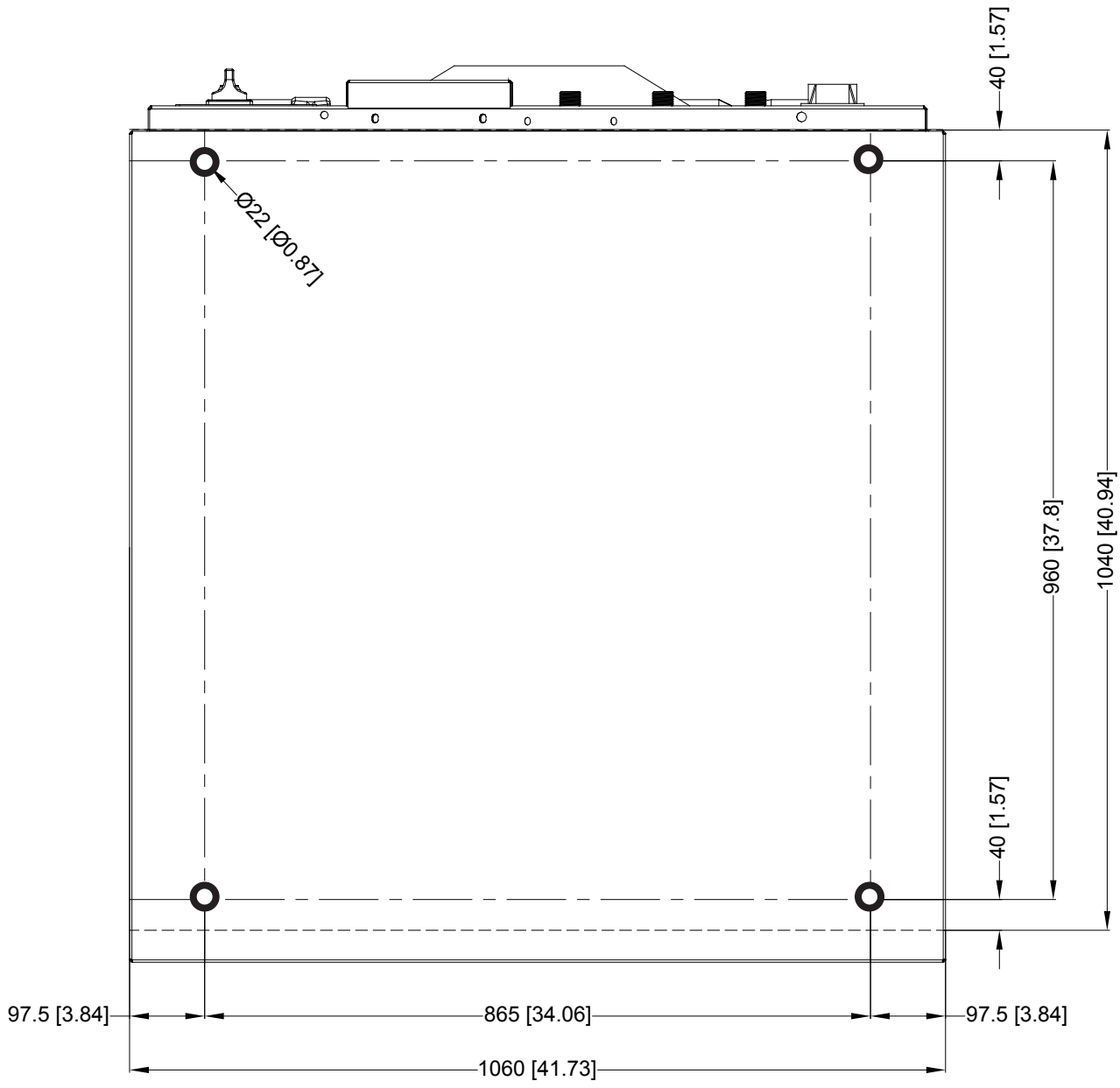
Legend: metric mm [inches]



Mounting Bolt Hole Locations for machines, HF304, IHF304, IHF075, CHF304, CHF075

Legend: metric mm [inches]

:



Water connection

The machine is delivered with hoses with 3/4" connections. These hoses fit the water inlet valves of the machine and the main water inlet taps. All the inlet valves have to be connected. To ensure the optimal functioning of the water inlet valves, the water pressure on the inlet should be between 3 and 5 bar (40 and 80 psi). If the pressure is too low, the cycle time will increase considerably.

In case of boiler fed machines, a minimum of hot water of 90°C - 194°F should be available per unit. (See Table 1)

MODEL	Min Contents Boiler	
	METRIC	US
For the HF150, IHF150, IHF033, CHF150, CHF033	110 l.	3.88 ft³
For the HF185, IHF185, IHF045, CHF185, CHF045	130 l.	4.59 ft³
For the HF234, IHF234, IHF055, CHF234, CHF055	150 l.	5.30 ft³
For the HF304, IHF304, IHF075, CHF304, CHF075	180 l.	6.36 ft³

Table 1

MODEL	Inlet flow capacity per minute (Gallons / Liters)	
	INTERNATIONAL	US
For the HF150, 185	4.23 / 16	5.28 / 20
For the HF234, 304	7.93 + 13.2 / 30 + 50	7.93 + 13.2 / 30 + 50

Table 2

To comply with the WRAS water regulations: an 'approved' single check valve or some other no less effective backflow prevention device shall be fitted at the point of connection(s) between the supply and the fitting (IRN R150).

WRAS APPROVED PRODUCT

Water drain

The machine is equipped with a drain valve with 2" outer diameter (50 mm) for HF150-185 and with 3" outer diameter (80 mm) for HF234-304. This drain valve should be connected to the drain by means of the drain elbow which is delivered with the machine.

- ❏ The diameter of the main drain should be adapted to the water flow and the number of machines. It should be sufficient to handle at least 80 l/min - 21.13 gal./min (HF150-185) and 160 l/min - 42.26 gal./min (HF234-304) per machine.
- ❏ It is necessary to connect the main drain at least on one side to an open air-brake to allow ventilation.

Electrical installation

Important

Electrical ratings are subject to changes. Refer to serial plate decal for electrical ratings information specific to your machine.

	**WARNING**
Hazardous Voltage. Can cause shock, burn or cause death. Allow machine power to remain off for two minutes prior to working in and around AC inverter drive.	

	**WARNING**
Hazardous Voltage. Can cause shock, burn or death. Verify that a ground wire from a proven earth ground is connected to the lug near the input power block on this machine.	

The AC inverter drive requires a clean power supply free from voltage spikes and surges. A voltage monitor should be used to check incoming power. The customer's local power company may provide such a monitor.

If input voltage measures above 240V for a 220V drive or above 480V for a 400V drive, ask the power company to lower the voltage. As an alternative, a step-down transformer kit is available from the distributor.

The AC drive provides overload protection for the drive motor. However, a separate single or three-phase circuit breaker must be installed for complete electrical overload protection. This prevents damage to the motor by disconnecting all legs if one should be lost accidentally. Check the data plate on the back of the washer-extractor or consult Table 3 through 6 for circuit breaker requirements.

IMPORTANT: Do NOT use fuses in place of a circuit breaker.

For installation in the United States or Canada, branch circuit protection must be provided according to National and Local Codes. The branch circuit breaker must be of the inverse time or instantaneous trip type at the values given in the technical specifications for each machine. Use a circuit breaker of the minimal type of 10kA interrupt current.

CAUTION
Do not use a voltage or phase converter on any variable speed machine.

The washer-extractor should be connected to an individual branch circuit not shared with lighting or another electrical device.

The connection should be shielded in a liquid tight or approved flexible conduit with proper conductors of correct size installed in accordance with the National Electric Code or other applicable codes. The connection must be made by a qualified electrician using the wiring diagram provided with the washer-extractor, or according to accepted European standards for CE-approved equipment.

Use wire sizes indicated in Table 3 through 6 for runs up to 50 feet.

Use next larger size for runs of 50 to 100 feet. Use two sizes larger for runs greater than 100 feet.

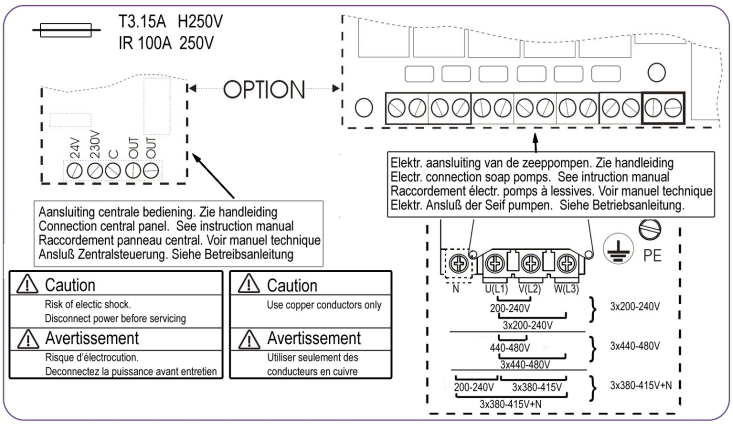
For personal safety and proper operation, the washer-extractor must be grounded in accordance with state and local standards. If such standards are not available, grounding must conform to the National Electric Code, article 250. The ground connection must be made to a proven earth ground, not to a water pipe, gas pipe, or another metal pipe. Provide the necessary equipotential connections according to the local electrical prescriptions.

GROUNDING INSTRUCTIONS

This appliance must be connected to a grounded metal, permanent wiring system; or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment-grounding terminal or lead on the appliance.

IMPORTANT: Alliance Laundry Systems Warranty does not cover components that fail as a result of improper input voltage.

Main power connection



Label 5

Connection label:

Machine power connections are made at the back of the machine. Three or four conductor power cable is the recommended method (See chapter electrical specs for minimum cable requirements, if local electrical codes exceed these requirements, follow local codes). The number of conductors in this cable and the proper connection points for the cable wires shall be determined by the machine and power requirements. All machines must have a ground wire and be properly grounded. The ground wire must be insulated with a green/yellow color. This wire is normally within the power cable but can also be a separate wire run along side the power cable if properly sized.

Never run a machine that does not have a ground wire. This ground wire must be connected to the machine grounding lug found near the main switch. This lug is identified with the international “protective earth” symbol and the letters “PE”. Failure to connect this ground wire can lead to an unsafe machine condition leading to machine damage and/or operator injury or death. This wire must be connected to earth ground at far end.

Machine Power Cable Connections:

Remove main switch cover plate at back of machine (see chapter dimensions part (F)). Run power cable through the cabinet knock-out located directly below the cover plate. Before installing, obtain and install a cord-grip to hold the cable in place. Never rely upon the electrical connections to hold cable in place. Allow some slack in this cable outside of the machine to form a drip-loop between the supply power circuit breaker and the machine knock-out. Connect power cable wires as directed below. Always connect the ground wire first and remove last.

Wiring based on the supply power and machine design (voltage/frequency):

440-480 Volts, 3-Phase, 3-wire or 4-wire + PE, 50 or 60 Hertz Configuration (Named: N-Voltage):

With supply power of: 440-480 Volts, 3-phase, 3-wire, after connecting the green/yellow PE ground wire, connect one wire to each of the bottom terminals of the power contactor switch marked: “L1,L2,L3”. When this supply power has four wires, connect this 4th wire, identified as a neutral wire, to the bottom terminal of the auxiliary contactor on the power contactor switch marked: “N”. Connect the remaining power wires as first noted.

380-415 Volts, 3-Phase, 4-wire + PE, 50 or 60 Hertz Configuration (Named: P-Voltage):

With supply power of: 380-415 Volts, 3-phase, 4-wire, after connecting the green/yellow PE ground wire, follow the directions of the four wire system for 440-480 Volt configuration.

200-240 Volts, 3-Phase, 3-wire + PE, 50 or 60 Hertz Configuration (Named: Q-Voltage or 3-phase X-Voltage):

With supply power of: 200-240 Volts, 3-phase, 3-wire, after connecting the green/yellow PE ground wire, connect one power wire to each of the terminals at the bottom of the power contactor switch marked: “L1,L2,L3”.

200-240 volts, 1-Phase, 2-wire + PE, 50 Hertz (called 1-phase, 50 Hz X-voltage):

With supply power of: 200-240 Volts, 1-phase, 2-wire, 50Hz, after connecting the green/yellow PE ground wire, connect the power wire to the “L1” bottom terminal of the power contactor switch and the other wire, identified as the neutral wire, to the bottom terminal of the auxiliary contactor on the power contactor switch marked: “N”.

200-240 volts, 1-Phase, 2-wire + PE, 60 Hertz (called 1-phase, 60 Hz X-voltage):

With supply power of: 200-240 Volts, 1-phase, 2-wire, 60Hz, after connecting the green/yellow PE ground wire, connect one power wire to the “L1” and power wire to the “L2” of the bottom terminals of the power contactor switch.

❑ After connection, check the ***spin direction***. The cylinder must spin in the ***clockwise direction***.
A wrong spin direction can damage the motor and can also cause water to spurt from the soap dispenser.

❑ In case of ***wrong spin direction:*** switch the terminal clamps of the motor circuit “R” and “S” of the connecting cable or change the connection at the terminal block switching the L1 and L2 wires.

WARNING

The washer-extractor should be connected to an individual branch circuit not shared with lighting or other equipment.

Electrical Specifications HF150, IHF150, IHF033, CHF150, CHF033

150 liters / 33 pounds													
					Boiler Fed/Steam Heat				Electric Heat				
Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Recommended Circuit Breaker (US-market)		AWG/mm2	kW Standard Heating Elements	Full Load Amps	Recommended Circuit Breaker (US-market)		AWG/mm2
						US	NON-US				US	NON-US	
N	440-480	50/60	3	3+PE	4,9	10	10	14/2.5	6x3 kW	29,6	40	32	12/4
P	380-415	50/60	3	3+N+PE	4,9	10	10	14/2.5		34,1	40	40	12/4
Q	200-240	50/60	3	3+PE	N/A	N/A	N/A	N/A		52,8	50	63	10/6
X	200-240	50/60	1/3	2/3+PE	12	15	16	14/2.5		N/A	N/A	N/A	N/A
									Alternative Electric Heat Options				
N	440-480	50/60	3	3+PE					6x2 kW	20,2	25	20	14/2.5
P	380-415	50/60	3	3+N+PE						23,2	30	25	14/2.5
Q	200-240	50/60	3	3+PE						36,3	40	40	12/4
X	200-240	50/60	1/3	2/3+PE						N/A	N/A	N/A	N/A
N	440-480	50/60	3	3+PE					3x3 kW + 3x2 kW	24,9	30	25	14/2.5
P	380-415	50/60	3	3+N+PE						28,6	40	32	12/2.5
Q	200-240	50/60	3	3+PE						44,5	40	50	12/4
X	200-240	50/60	1/3	2/3+PE						N/A	N/A	N/A	N/A
N	440-480	50/60	3	3+PE					3x3 kW + 3x4 kW	34,3	40	40	12/4
P	380-415	50/60	3	3+N+PE						39,5	50	40	12/4
Q	200-240	50/60	3	3+PE						N/A	N/A	N/A	N/A
X	200-240	50/60	1/3	2/3+PE						N/A	N/A	N/A	N/A
N	440-480	50/60	3	3+PE					6x4 kW	39	50	40	12/4
P	380-415	50/60	3	3+N+PE						47	60	50	10/6
Q	200-240	50/60	3	3+PE						N/A	N/A	N/A	N/A
X	200-240	50/60	1/3	2/3+PE						N/A	N/A	N/A	N/A

Table 3

WARNING

The washer-extractor should be connected to an individual branch circuit not shared with lighting or other equipment.

Electrical Specifications HF185, IHF185, IHF045, CHF185, CHF045

185 liters / 45 pounds													
					Boiler Fed/Steam Heat				Electric Heat				
Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Recommended Circuit Breaker (US-market)		AWG/mm2	kW Standard Heating Elements	Full Load Amps	Recommended Circuit Breaker (US-market)		AWG/mm2
						US	NON-US				US	NON-US	
N	440-480	50/60	3	3+PE	4,9	10	10	14/2.5	6x3 kW	29,6	40	32	12/4
P	380-415	50/60	3	3+N+PE	4,9	10	10	14/2.5		34,1	40	40	12/4
Q	200-240	50/60	3	3+PE	N/A	N/A	N/A	N/A		52,8	50	63	10/6
X	200-240	50/60	1/3	2/3+PE	12	15	16	14/2.5		N/A	N/A	N/A	N/A
									Alternative Electric Heat Options				
N	440-480	50/60	3	3+PE					6x2 kW	20,2	25	20	14/2.5
P	380-415	50/60	3	3+N+PE						23,2	30	25	14/2.5
Q	200-240	50/60	3	3+PE						36,3	40	40	12/4
X	200-240	50/60	1/3	2/3+PE						N/A	N/A	N/A	N/A
N	440-480	50/60	3	3+PE					3x3 kW + 3x2 kW	24,9	30	25	14/2.5
P	380-415	50/60	3	3+N+PE						28,6	40	32	12/2.5
Q	200-240	50/60	3	3+PE						44,5	40	50	12/4
X	200-240	50/60	1/3	2/3+PE						N/A	N/A	N/A	N/A
N	440-480	50/60	3	3+PE					3x3 kW + 3x4 kW	34,3	40	40	12/4
P	380-415	50/60	3	3+N+PE						39,5	50	40	12/4
Q	200-240	50/60	3	3+PE						N/A	N/A	N/A	N/A
X	200-240	50/60	1/3	2/3+PE						N/A	N/A	N/A	N/A
N	440-480	50/60	3	3+PE					6x4 kW	39	50	40	12/4
P	380-415	50/60	3	3+N+PE						47	60	50	10/6
Q	200-240	50/60	3	3+PE						N/A	N/A	N/A	N/A
X	200-240	50/60	1/3	2/3+PE						N/A	N/A	N/A	N/A

Table 4

WARNING

The washer-extractor should be connected to an individual branch circuit not shared with lighting or other equipment.

Electrical Specifications HF234, IHF234, IHF055, CHF234, CHF055

234 liters / 55 pounds												
					Boiler Fed/Steam Heat				Electric Heat			
Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Recommended Circuit Breaker (US-market)		AWG/mm2	kW Standard Heating Elements	Full Load Amps	Recommended Circuit Breaker (US-market)	AWG/mm2
						US	NON-US				US	NON-US	
N	440-480	50/60	3	3+PE	6,5	15	16	14/2.5	6x3 kW	29,8	40	32	12/4
P	380-415	50/60	3	3+N+PE	6,5	15	16	14/2.5		34,2	40	40	12/4
Q	200-240	50/60	3	3+PE	N/A	N/A	N/A	N/A		53,3	50	63	10/6
X	200-240	50/60	1/3	2/3+PE	16	20	20	14/2.5		N/A	N/A	N/A	N/A
									Alternative Electric Heat Options				
N	440-480	50/60	3	3+PE					6x2 kW	20,4	25	20	14/2.5
P	380-415	50/60	3	3+N+PE						23,4	30	25	14/2.5
Q	200-240	50/60	3	3+PE						36,8	40	40	12/4
X	200-240	50/60	1/3	2/3+PE						N/A	N/A	N/A	N/A
N	440-480	50/60	3	3+PE					3x3 kW + 3x2 kW	25,1	30	25	14/2.5
P	380-415	50/60	3	3+N+PE						28,8	40	32	12/2.5
Q	200-240	50/60	3	3+PE						45	40	50	12/4
X	200-240	50/60	1/3	2/3+PE						N/A	N/A	N/A	N/A
N	440-480	50/60	3	3+PE					3x3 kW + 3x4 kW	34,5	50	50	12/4
P	380-415	50/60	3	3+N+PE						39,7	50	40	12/4
Q	200-240	50/60	3	3+PE						N/A	N/A	N/A	N/A
X	200-240	50/60	1/3	2/3+PE						N/A	N/A	N/A	N/A
N	440-480	50/60	3	3+PE					6x4 kW	39,2	50	40	12/4
P	380-415	50/60	3	3+N+PE						47,5	60	63	10/6
Q	200-240	50/60	3	3+PE						N/A	N/A	N/A	N/A
X	200-240	50/60	1/3	2/3+PE						N/A	N/A	N/A	N/A

Table 5

WARNING

The washer-extractor should be connected to an individual branch circuit not shared with lighting or other equipment.

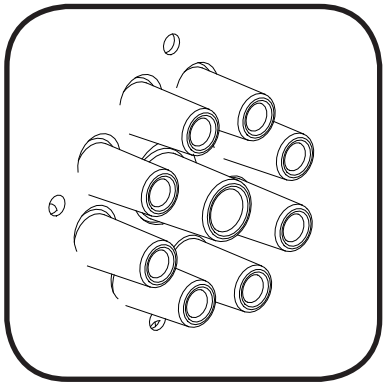
Electrical Specifications HF304, IHF304, IHF075, CHF304, CHF075

304 liters / 75 pounds													
					Boiler Fed/Steam Heat				Electric Heat				
Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Recommended Circuit Breaker (US-market)		AWG/mm2	kW Standard Heating Elements	Full Load Amps	Recommended Circuit Breaker (US-market)		AWG/mm2
						US	NON-US				US	NON-US	
N	440-480	50/60	3	3+PE	5,2	15	16	12/4.0	6x3 kW	29,8	40	32	12/4
P	380-415	50/60	3	3+N+PE	5,2	15	16	12/4.0		34,2	40	40	12/4
Q	200-240	50/60	3	3+PE	15	20	20	12/4.0		53,3	50	63	10/6
X	200-240	50/60	1/3	2/3+PE	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A
									Alternative Electric Heat Options				
N	440-480	50/60	3	3+PE					3x3 kW + 3x4 kW	34,5	40	40	12/4
P	380-415	50/60	3	3+N+PE						39,7	50	40	12/4
Q	200-240	50/60	3	3+PE						N/A	N/A	N/A	N/A
X	200-240	50/60	1/3	2/3+PE						N/A	N/A	N/A	N/A
N	440-480	50/60	3	3+PE					6x4 kW	39,2	50	40	12/4
P	380-415	50/60	3	3+N+PE						48,7	60	63	10/6
Q	200-240	50/60	3	3+PE						N/A	N/A	N/A	N/A
X	200-240	50/60	1/3	2/3+PE						N/A	N/A	N/A	N/A

Table 6

Liquid soap connection (option)

Connection of the liquid soap hoses



Label 6

The liquid soap connection consists of ***8 connections for liquid soap*** (See Label 6).

The central opening is used for ventilation.

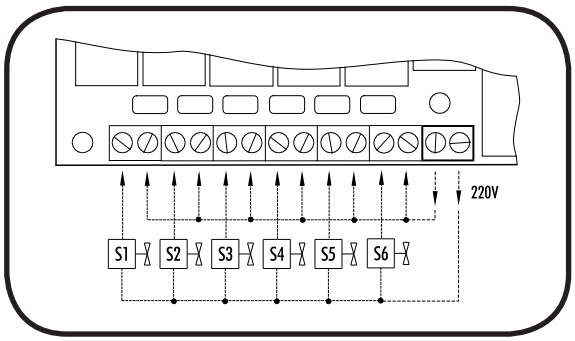
	WARNING
	Dangerous Chemicals. May damage eyes and skin. Wear eye and hand protection when handling chemicals; always avoid direct contact with raw chemicals. Read the manufacturer's directions for accidental contact before handling chemicals. Ensure an eye-rinse facility and an emergency shower are within easy reach. Check at regular intervals for chemical leaks.

CAUTION
Drill out plugs and nipples before making supply hose connection. Failure to do so can cause buildup of pressure and risk a tubing rupture.

Electrical connection of the liquid soap pumps

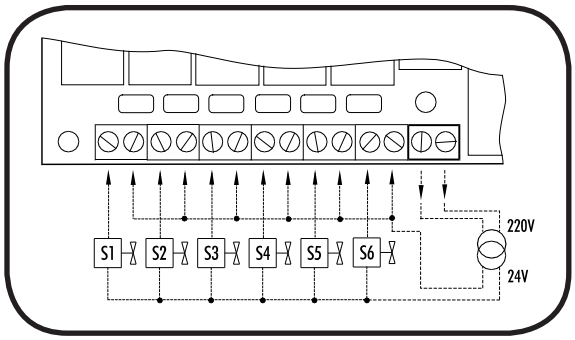
On machines equipped with a liquid soap connection, connect the wires ***directly on the print board*** next to the ground wire connection (option). Connect as indicated on the wiring diagram.

The two connectors on the right give a tension of 220V ~ (max. 4A) which can be applied to drive 220V ~ soap pumps. If more than ***4A*** is required, ***an external tension*** will have to be used. ***6*** connections have been provided, of which one (***S6***) can be used to drive a waterproofing pump (e.g. for rain coats, etc.). (See Label 7)



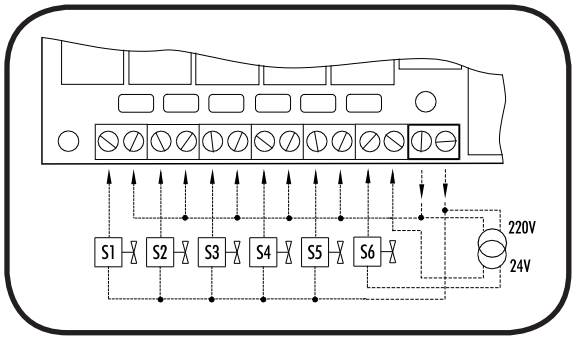
Label 7

The 220V can be transformed to other values to drive other type soap pumps.
Example: pumps 24V ~. (See Label 8)



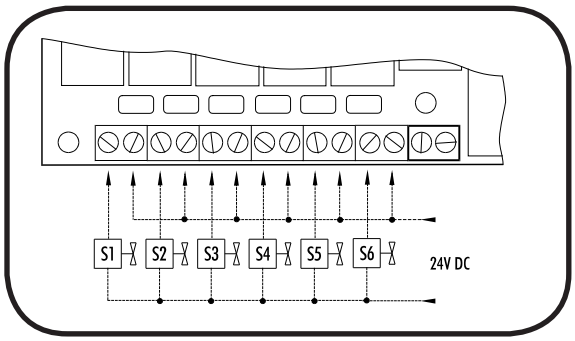
Label 8

Also, pumps with different operating tension can be combined.
Example: 5 pumps 220V ~ and 1 pump 24V ~. (See Label 9)



Label 9

With an external tension 24V DC (See Label 10)



Label 10

Connection of a central operating panel for coin machines (option)

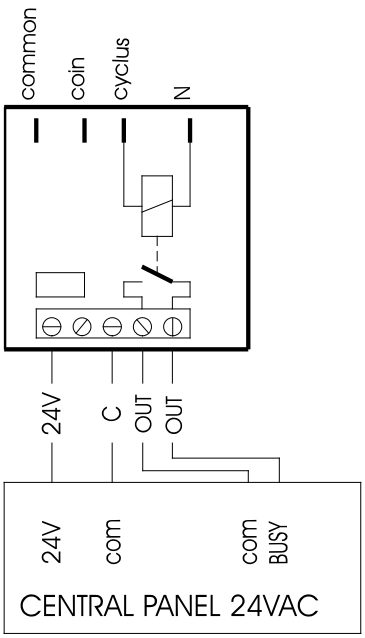
	WARNING
	To reduce the risk of electric shock, disconnect this appliance from the power supply before attempting any user maintenance. Turning the controls to the OFF position does not disconnect this appliance from the power supply.

At the backside above the main connectors, you find a printboard, to which the central operating panel for coin machines can be connected.

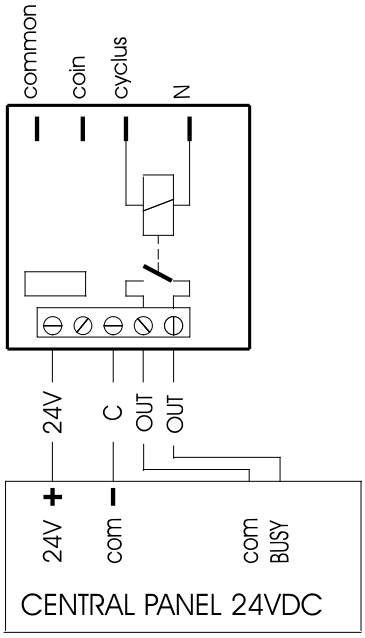
The right connectors form a potential free output contact as a result of which the operating panel detects when the machine is activated or not.

The left connectors receive the signal, by means of which a machine is chosen through the operating panel.

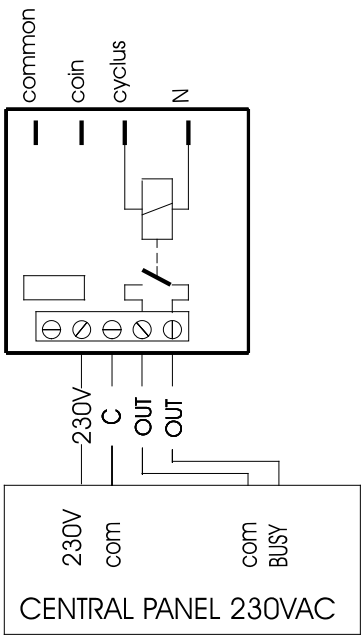
There are 3 different variations possible according to the output voltage of the operating panel. (See Labels 11, 12 and 13)



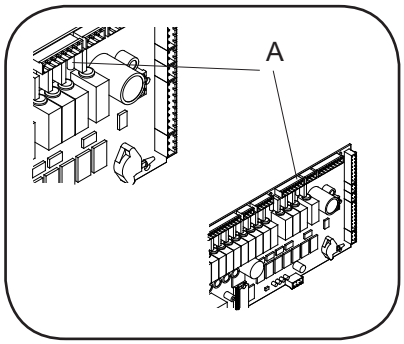
Label 11



Label 12



Label 13



Label 14

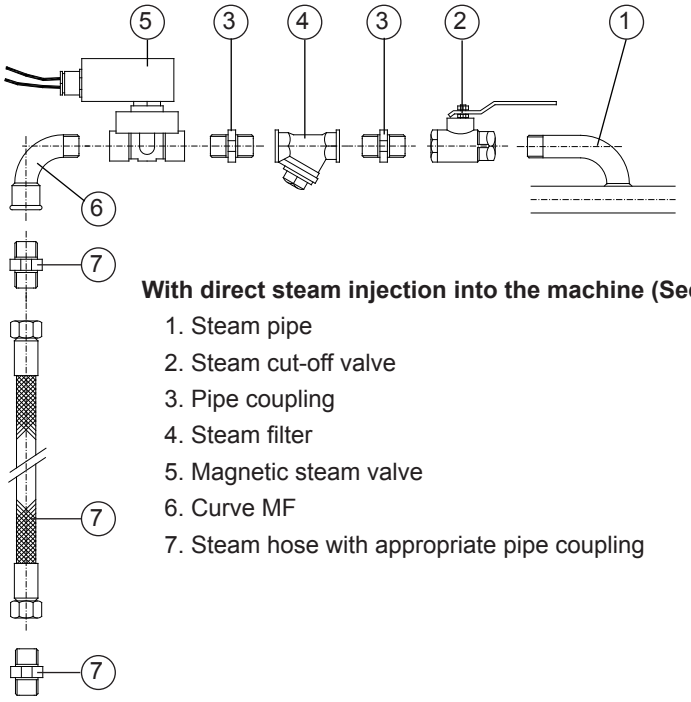
IMPORTANT:

If a machine is equipped with this kind of printboard or if a printboard has been built in, the ***resistance of the cycle contact (A) may no longer be present*** on the main printboard. (See Label 14)

When this resistance is present, it has to be cut out of the main printboard.

	WARNING
Never touch internal or external steam pipes, connections, or components. These surfaces can be extremely hot and will cause severe burns. The steam must be turned off and the pipe, connections, and components allowed to cool before the pipe can be touched.	

Machines with steam heating must have a steam valve between the steam installation and the machine.



With direct steam injection into the machine (See Table 7)

1. Steam pipe
2. Steam cut-off valve
3. Pipe coupling
4. Steam filter
5. Magnetic steam valve
6. Curve MF
7. Steam hose with appropriate pipe coupling

Steam Supply Information						
MODEL	Steam inlet connection, inch	Number of steam inlets	Recommended pressure, bar	Recommended pressure, psi	Maximum pressure, bar	Maximum pressure, psi
For the HF150, IHF150, IHF033, CHF150, CHF033	3/8	1	2.0 - 5.5	30 - 80	5.5	80
For the HF185, IHF185, IHF045, CHF185, CHF045	3/8	1	2.0 - 5.5	30 - 80	5.5	80
For the HF234, IHF234, IHF055, CHF234, CHF055	1/2	1	2.0 - 5.5	30 - 80	5.5	80
For the HF304, IHF304, IHF075, CHF304, CHF075	1/2	1	2.0 - 5.5	30 - 80	5.5	80

Table 7

Technical remarks

Internal connections of the electrical heating

1 AC

Heating	R5
3kw	LC1D0901

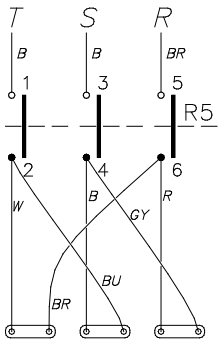
Table 8

3 AC

Heating		3x230V	R5	3x400V	R5
4,2kw	3x1,4kw	See Label 15	LC1D0901	See Label 16	LC1D0901
6kw	3x2kw	See Label 15	LC1D0901	See Label 16	LC1D0901
9kw	3x3kw	See Label 15	LC1D1810	See Label 16	LC1D0901
12kw	3x4kw	--------	--------	See Label 15	LC1D0901
12kw	3x2kw 3x2kw	See Label 15 See Label 15	LC1D1810 LC1D1810	See Label 16	LC1D1810
15kw	3x2kw 3x3kw	See Label 15 See Label 15	LC1D1810 LC1D1810	See Label 16	LC1D1810
18kw	3x3kw 3x3kw	See Label 15 See Label 15	LC1D1810 LC1D1810	See Label 16	LC1D1810
21kw	3x3kw 3x4kw	--------	--------	See Label 16 See Label 15	LC1D1810 LC1D1810
24kw	3x4kw 3x4kw	--------	--------	See Label 15 See Label 15	LC1D1810 LC1D1810

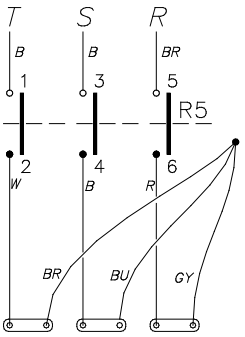
Table 9

B = Black Br = Brown
Gy = Grey Bu = Blue
R = Red W = White



Label 15

"Delta" configuration



Label 16

"WYE" configuration

NOTE:

Other executions are available as options.

Maintenance instruction of the machine

	**WARNING**
To reduce the risk of electric shock, disconnect this appliance from the power supply before attempting any user maintenance. Turning the controls to the OFF position does not disconnect this appliance from the power supply. **Before starting wiring or inspection, power must be switched OFF, check to make sure that the operation panel indicator is off.** **Any person who is involved in wiring or inspection shall wait for at least 10 minutes after the power supply has been switched OFF and check that there is no residual voltage using a tester or the like. The capacitor of the inverter or the EMC filter is charged with a high voltage for some time after power OFF, and it is dangerous.**	

End of day

❑ Clean AC drive filter:

a. Snap off external plastic cover which contains filter.

b. Remove foam filter from cover.

c. Wash filter with warm water and allow to air dry. Filter can be vacuumed clean.

General maintenance

❑ Clean the entire cabinet of the machine regularly and remove all traces of soap, etc....

❑ Remove all detergent residue in the soap dispenser with hot water.

❑ Clean the door gasket and remove all detergents and other products.

❑ Shut off the main water, steam, and power connections at the end of each day. Do not change the setting of the water inlet taps on boiler fed machines once these have been installed.

❑ It is recommended to leave the door and soap dispenser open after use, to ventilate the machine.

❑ Check for proper door lock operation on a daily basis.

Periodical maintenance

❑ The V-belts of the motors should be retightened after two to three months when first used. This is necessary because these belts are subject to a one-time stretching when first used. ***If this is not done,*** the belt starts to slip after a few months and will break shortly afterwards.

❑ Check the water inlet filters to make sure they are not blocked by calcification.

❑ Check the drain valve for obstructions.

❑ If a machine frequently skips the final spin, check whether the probe of the out of balance switch is still in the appropriate position, that is horizontally centered and vertically 1/3 from the bottom inside the window. (When the drum is empty).

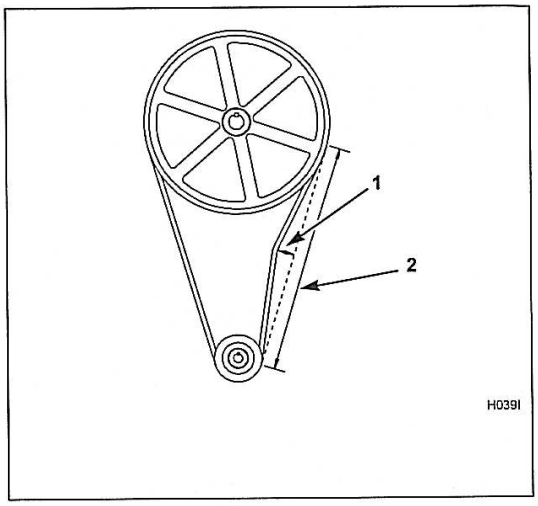
❑ Lubricate the bearings after every 200 hours of operation or replace the automatic lubricator annually.

Annual maintenance

Belt tension:

- ❑ Verify that the belts are running in the middle of the basket pulley.
- ❑ Verify the belt tension according to the table below. Belt tension measurements should be taken as close as possible to the center of the belt span (see figure).

Belt tension testing table								
Model	**Belt**	**Frequency (Hz)**		**Tension force (N)**		**Deflection (mm)**		**Deflection force**
		MIN	MAX	MIN	MAX	at MIN tension	at MAX tension	MAX
HF150	10J 1549	91	111	708	1050	7,3	5,3	50
HF185	10J 1549	91	111	708	1050	7,3	5,3	50
HF234	10J 1663	87	92	821	1050	7,4	6,6	50
HF304	10PK 2120	62	67	1067	1182	10,6	5,6	75



1 Deflection
2 Span length

Nameplate

Nameplate Location

The nameplate is located at the rear of the machine. Always provide the machine's serial number and model number when ordering parts or when seeking technical assistance. See Labels 17 and 18.

Type:	HF 304C	Nr:	07100300313
Spanning:	3 ~ 400V 50Hz	Gewicht:	731 kg
Motor:	4 kW 10 A	Capaciteit:	304 L
Verwarming:	24 kW 40 A	Dry load:	30 Kg
Totaal:	28.00 kW	Trommel:	850 mm
Kinetische energie:	12404N/M	Snelheid:	1000 rpm
Fabrikatiedatum:	2007		
Water pressure:	min. 2,07 max. 5,86 Kg/cm² min. 20,7 max. 58,6 N/cm²		IPX4

sfc: 741362

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IPSO

CE

Label 17

Model No: IHF055ANHX10U02		Serial No: 0802230140	
Volts|Hertz:	200-240 | 50/60	Type:	HF234C
Phase:	1/3		
Amps:	25 amps	Capacity:	55/23,4 lbs/kg
Recommended Circuit Breaker:	30 amps	Water Pressure:	30-85 psi 2.07-5.86 bar
Interrupt Current:	10 kA	Max Speed:	1000 rpm
Motor:	4 hp 3 kW	Net Weight:	1177 lbs 534 kg
Elec Heat:	N/A kW		IPX4
Steam heat:	N/A psi N/A bar		

sfc: 746193

Alliance International BVBA
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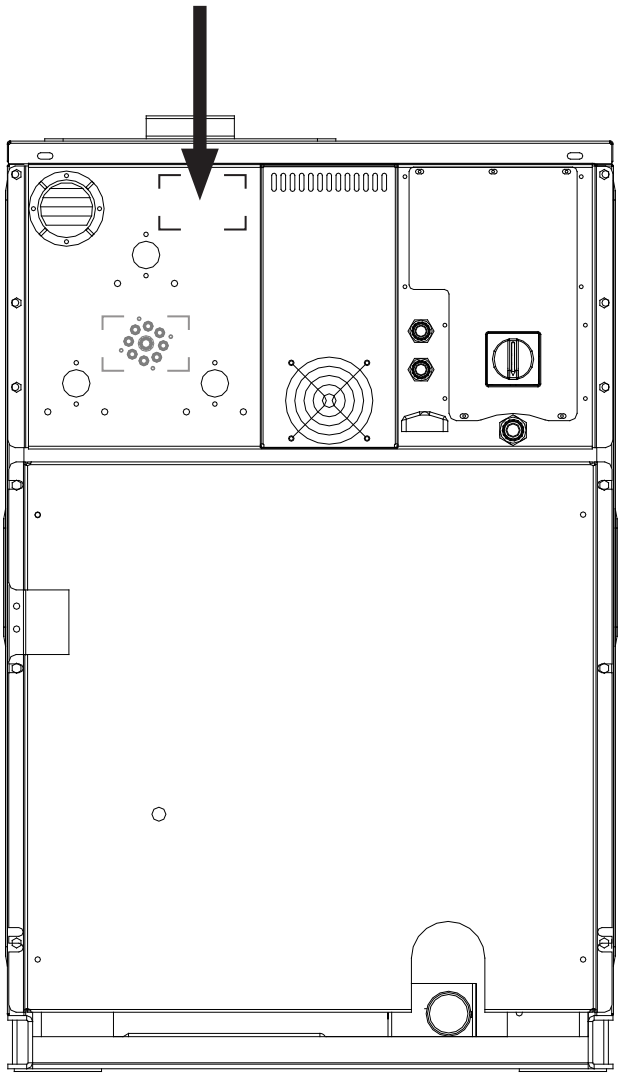
Label 18

Position of the Serial plate



Replacement Parts

If literature or replacement parts are required, contact the source from which the machine was purchased or contact the phone numbers or websites shown on the nameplate.

Repair and after-sales service

❑ In case of important malfunctions and deficiencies, which you cannot resolve yourself, contact your distributor.

Distributor : Name: .....
Address: .....
Tel.: .....

Machine : Type: .....
Program: .....
Date of installation: .....
Installed by: .....
Serial number: .....
Operation voltage and frequency: .....

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