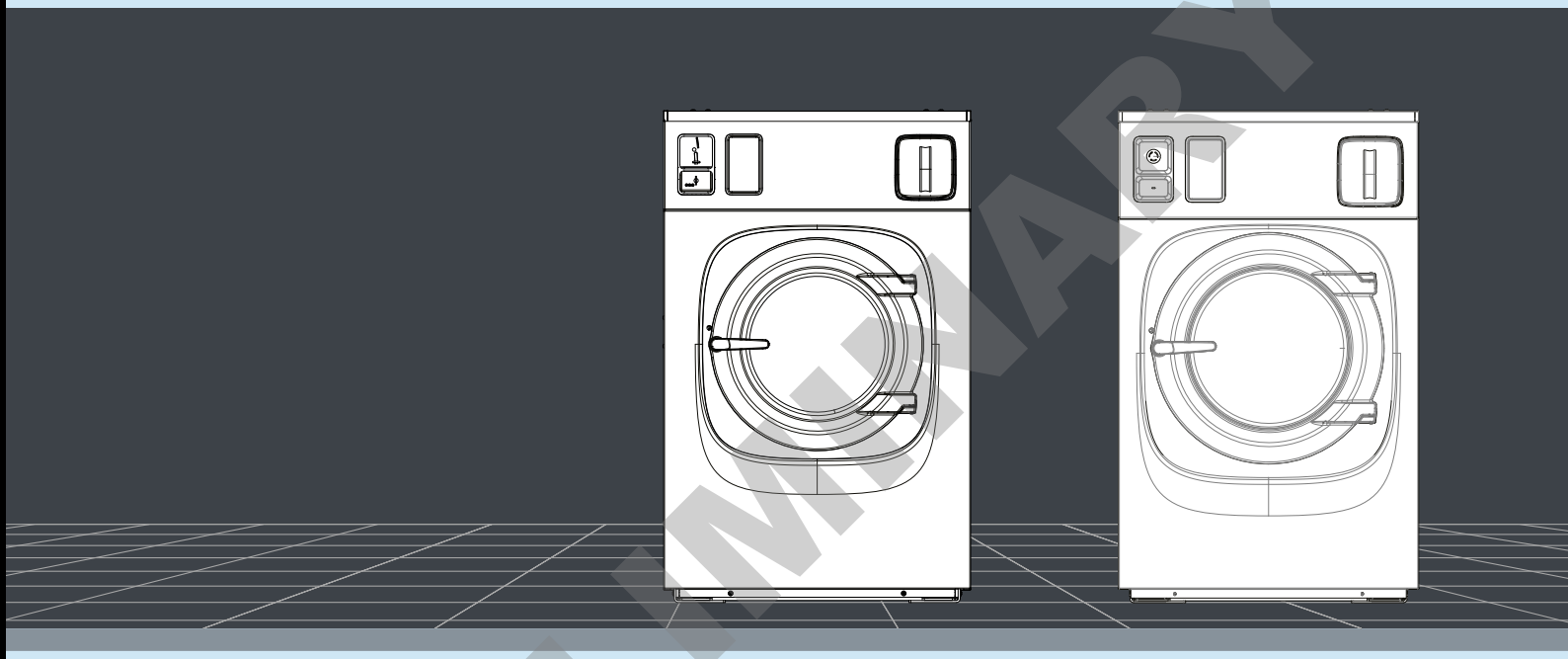
MAYTAG®
COMMERCIAL

Installation-Operating Manual



MWR25 | MWR35
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WASHER SAFETY INFORMATIONS

Precautionary statements (*"Danger", "Warning", and "Caution"*), followed by specific instructions are found in this manual and on machine decals. These precautions are intended for the personal safety of the operator, user, servicer and those maintaining the machine.

DANGER

Danger indicates the **presence of a hazard that will cause severe** personal injury, death, or substantial property damage if the danger is ignored.

WARNING

Warning indicates the **presence of a hazard that can cause severe** personal injury, death, or substantial property damage if the warning is ignored.

CAUTION

Caution indicates the **presence of a hazard that will or can cause minor** personal injury or property damage if the caution is ignored.

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.

Table 1.1 Precautionary Statement Icons and Explanations

IMPORTANT SAFETY INSTRUCTIONS

This manual contains important instructions that should be followed during installation, operation, and maintenance of the appliance.

It is critically important to comply with the all safety measures stated in this document.

Unauthorized personnel should not interfere with the machine.

This operation manual must be read thoroughly by the operators and persons in charge before operation.

Warnings are present on the machine, on its package and in its manual against unclear potential risks and other kinds of risks.

It must be ensured that the operators of this machine **know the warning signs on the machine** and are qualified to use this machine.

The washer extractor is designed for fabrics washing only, other objects can damage the washer and can cause damage or injuries. The product must only be used for the intended purpose.

Failure to install and operate this machine according to the instruction handbooks or to work safety and hygiene standards and common sense, may result in conditions which can produce bodily injury or loss of life.

This appliance must be grounded. In the event of malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. See **4.6.** "ELECTRICAL CONNECTIONS" on page 41. for grounding instructions.

The danger, warning, caution and important instructions appearing in the instruction handbooks are not meant to cover all possible conditions and situations that may occur. It must be understood that common sense, caution and carefulness are factors which cannot be built into this machine. These factors must be supplied by the person(s) transporting, installing, maintaining or operating the machine. Any problems or conditions not understood should be reported to the dealer, distributor, service agent or the manufacturer.

SAVE THESE INSTRUCTIONS

WARNING

To reduce the risk of fire or electric shock, do not use an extension cord.

DANGER

Risk of electric shock. Disconnect power before servicing.

IMPORTANT

Installation must be performed by qualified service personnel only. Failure to follow installation instructions may result in serious injury, fire, or death.

NOTE

Always put safety first when using the machine.

Some models and features depicted in this manual may not be available in your region or country.

MANUFACTURER INFORMATION

MANUFACTURER

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1. MACHINE DATASHEETS

1.1. MACHINE DATASHEET MWR25 / MWR35 / MWR45

	Unit	MWR25	MWR35	MWR45	
Capacity					
Dry Load	kg	10	15	18	
	lb	22	33	39,6	
Performance	kg/h	15	22.5	27	
	lb/h	33	49.5	59.4	
Cycle Duration	min	30-45	30-45	30-45	
Drum					
Drum Diameter	mm	630	630	630	
	in	24.8	24.8	24.8	
Drum Depth	mm	330	490	580	
	in	13	19.3	22.8	
Drum Volume	l	103	153	181	
	gal	27.2	40.41	47.81	
	ft^3	3.6	5.4	6.4	
Wash Speed	rpm	43	43	43	
Extraction Speed M Model	rpm	750	750	750	
Extraction Force M Model	g	200	200	200	
Max. Out Of Balance Of Load	%	20	20	20	
Max. Dynamic Bottom Load At Spin M Model	N/Hz	3924/12,6	5886/12,6	7065/12,6	
Door					
Door opening Φ	mm	455	455	455	
	in	18	18	18	
Electric Heating					
Heating Element	kW	9	15	18	
Steam Heating					
Steam	bar	4-6	4-6	4-6	
	psi	58-87	58-87	58-87	
Electric					
Electric Consumption (Electric Heating)	kW/h	2.34	3.1	3.66	
Electric Consumption (Steam Heating)	kW/h	0.71	0.86	0.57	
Motor Power	kW	1.1	1.5	1.5	
	hp	1.47	2.01	2.01	
Steam					
Steam Valve Connection Φ	DN	15	15	15	
	BSP	½"	½"	½"	
Steam Pressure (Min-Max)	kPa	400-600	400-600	400-600	
	psi	58-87	58-87	58-87	

Steam Consumption	kg/cycle	5	7.5	9	
	lb/cycle	11	16.5	19.8	
Air (Optional - for pneumatic valve)					
Air Connection Φ	mm	8	8	8	
	in	0,314	0,314	0,314	
Air Consumption	l/min	30	30	30	
	gal/min	8	8	8	
Air Pressure	bar	4 - 6	4 - 6	4 - 6	
	psi	58-87	58-87	58-87	
Water					
Inlet Valve Connection Φ	DN	2 x 20	2 x 20	2 x 20	
	BSP	2 x ¾"	2 x ¾"	2 x ¾"	
Water Pressure (Min-Max)	kPa	200-400	200-400	200-400	
	psi	29-58	29-58	29-58	
Water Flow (Low Flow Valve)	l/min	60	60	60	
	gal/min	15.85	15.85	15.85	
Water Flow (High Flow Valve)	l/min	140	140	140	
	gal/min	36.98	36.98	36.98	
Water Flow (Pneumatic Valve)	l/min	140	140	140	
	gal/min	36.98	36.98	36.98	
Water Consumption Cold	l/cycle	39	58	68	
	gal/cycle	10.3	15.32	17.96	
Water Consumption Hot	l/cycle	42	62	73	
	gal/cycle	11.09	16.37	19.28	
Drain Valve Connection Φ	mm	76	76	76	
	in	3	3	3	
Drain Flow Rate	l/min	230	230	230	
	gal/min	60.8	60.8	60.8	
Dimensions					
Standard WxDxH	mm	785 x 890 x 1285	785 x 1050 x 1285	785 x 1140 x 1285	
	in	30,9 x 35 x 50,6	30,9 x 41,3 x 50,6	30,9 x 44,9 x 50,6	
Packing WxDxH	mm	820 x 970 x 1425	820 x 1130 x 1425	820 x 1220 x 1425	
	in	32,3 x 38,2 x 56,1	32,3 x 44,5 x 56,1	32,3 x 48 x 56,1	
Weight					
Net Weight	kg	290	300	310	
	lb	639	661	683	
Gross Weight	kg				
	lb				
Sound Pressure					
Sound Level	db(A)	55-65	55-65	55-65	
Environmental Conditions					
Ambient Temperature	°C	4 to 54			
	°F	39.2 to 129.2			
Relative Humidity	%	30% to 90% without condensation			
Height Above Sea Level	m	up to 1000			
	ft	up to 3280			

1.2. MACHINE DATASHEET MWR55 / MWR65

	Unit	MWR55	MWR65		
Capacity					
Dry Load	kg	24	28		
	lb	52,9	61,73		
Performance	kg/h	36	42		
	lb/h	79.37	92.59		
Cycle Duration	min	30-45	30-45		
Drum					
Drum Diameter	mm	700	700		
	in	27.6	27.6		
Drum Depth	mm	630	720		
	in	24.8	28.3		
Drum Volume	l	242	277		
	gal	63.8	73.1		
	ft^3	8.5	9.8		
Wash Speed	rpm	37	37		
Extraction Speed M Model	rpm	710	710		
Extraction Force M Model	g	200	200		
Max. Out Of Balance Of Load	%	15	15		
Max. Dynamic Bottom Load At Spin M Model	N/Hz	7065/11,9	8240/11,9		
Door					
Door opening Φ	mm	455	455		
	in	18	18		
Electric Heating					
Heating Element	kW	21	24		
Steam Heating					
Steam	bar	4-6	4-6		
	psi	58-87	58-87		
Electric					
Electric Consumption (Electric Heating)	kW/h	4.9	5.6		
Electric Consumption (Steam Heating)	kW/h	0.91	0.91		
Motor Power Heating	kW	2.2	2.2		
	hp	2.95	2.95		
Steam					
Steam Valve Connection Φ	DN	15	15		
	BSP	½"	½"		
Steam Pressure (Min-Max)	kPa	400-600	400-600		
	psi	58-87	58-87		
Steam Consumption	kg/cycle	12	14		
	lb/cycle	26.46	30.86		

	Unit	MWR55	MWR65		
Air (Optional - for pneumatic valve)					
Air Connection Φ	mm	8	8		
	in	0,314	0,314		
Air Consumption	l/min	30	30		
	gal/min	8	8		
Air Pressure	bar	4 - 6	4 - 6		
	psi	58-87	58-87		
Water					
Inlet Valve Connection Φ	DN	2 x 20	2 x 20		
	BSP	2 x ¾"	2 x ¾"		
Water Pressure (Min-Max)	kPa	200-400	200-400		
	psi	29-58	29-58		
Water Flow (Low Flow Valve)	l/min	60	60		
	gal/min	15.85	15.85		
Water Flow (High Flow Valve)	l/min	140	140		
	gal/min	36.98	36.98		
Water Flow (Pneumatic Valve)	l/min	140	140		
	gal/min	36.98	36.98		
Water Consumption Cold	l/cycle	78	89		
	gal/cycle	20.6	23.51		
Water Consumption Hot	l/cycle	86	99		
	gal/cycle	22.71	26.15		
Drain Valve Connection Φ	mm	76	76		
	in	3	3		
Drain Flow Rate	l/min	230	230		
	gal/min	60.8	60.8		
Dimensions					
Standard WxDxH	mm	869 x 1230 x 1390	869 x 1320 x 1390		
	in	34,2 x 48,4 x 54,7	34,2 x 52 x 54,7		
Packing WxDxH	mm	910 x 1310 x 1535	910 x 1400 x 1535		
	in	35,8 x 51,6 x 60,4	35,8 x 55,1 x 60,4		
Weight					
Net Weight	kg	440	450		
	lb	970	992		
Gross Weight	kg				
	lb				
Sound Pressure					
Sound Level	db(A)	55-65	55-65		
Environmental Conditions					
Ambient Temperature	°C	4 to 54			
	°F	39.2 to 129.2			
Relative Humidity	%	30% to 90% without condensation			
Height Above Sea Level	m	up to 1000			
	ft	up to 3280			

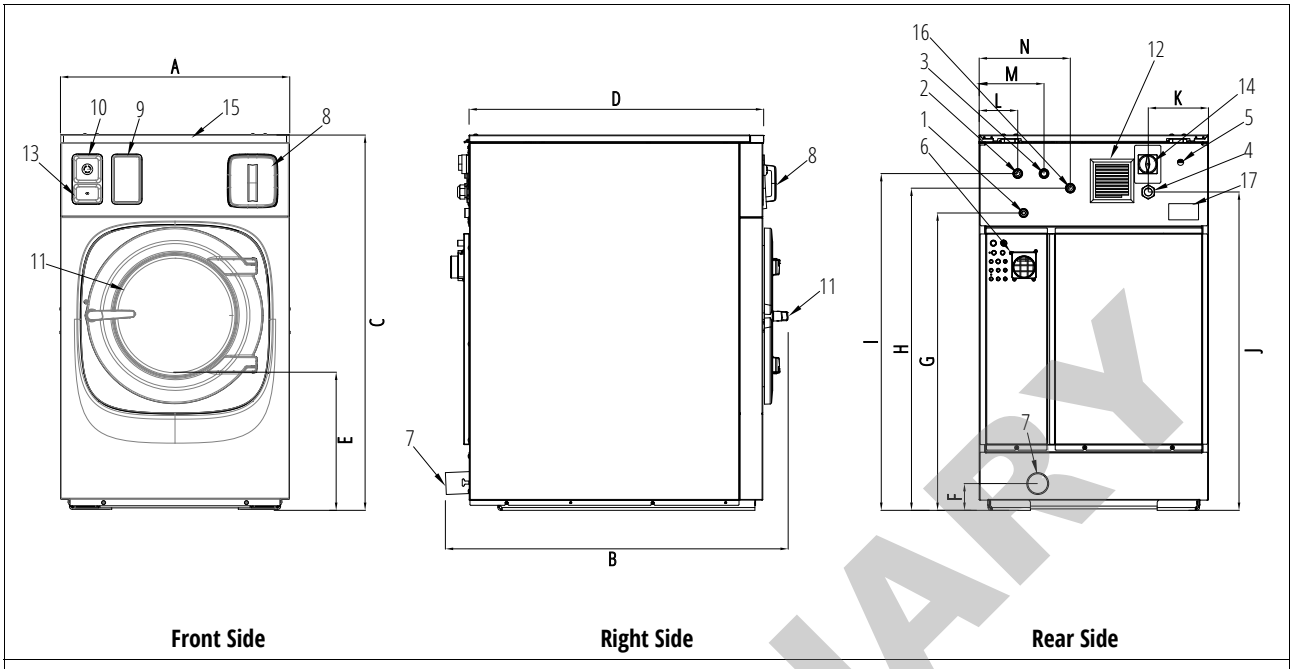
1.3. MACHINE DATASHEET MWR85

	Unit	MWR85			
Capacity					
Dry Load	kg	40			
	lb	88			
Performance	kg/h	60			
	lb/h	132			
Cycle Duration	min	30-45			
Drum					
Drum Diameter	mm	900			
	in	35,4			
Drum Depth	mm	575			
	in	22,6			
Drum Volume	l	365			
	gal	96,4			
	ft^3	12,9			
Wash Speed	rpm	35			
Extraction Speed M Model	rpm	540			
Extraction Force M Model	g	150			
Max. Out Of Balance Of Load	%	15			
Max. Dynamic Bottom Load At Spin M Model	N/Hz	11772/9,1			
Door					
Door opening Φ	mm	560			
	in	22			
Electric Heating					
Heating Element	kW	30			
Steam Heating					
Steam	bar	4-6			
	psi	58-87			
Electric					
Electric Consumption (Electric Heating)	kW/h	8,93			
Electric Consumption (Steam Heating)	kW/h	1,31			
Motor Power Heating	kW	3			
	hp	4,02			
Steam					
Steam Valve Connection Φ	DN	20			
	BSP	¾"			
Steam Pressure (Min-Max)	kPa	400-600			
	psi	58-87			
Steam Consumption	kg/cycle	20			
	lb/cycle	44			

	Unit	MWR85			
Air (Optional - for pneumatic valve)					
Air Connection Φ	mm	8			
	in	0,314			
Air Consumption	l/min	30			
	gal/min	8			
Air Pressure	bar	4 - 6			
	psi	58-87			
Water					
Inlet Valve Connection Φ	DN	2 x 20			
	BSP	2 x ¾"			
Water Pressure (Min-Max)	kPa	200-400			
	psi	29-58			
Water Flow (Low Flow Valve)	l/min	60			
	gal/min	15,85			
Water Flow (High Flow Valve)	l/min	140			
	gal/min	36,98			
Water Flow (Pneumatic Valve)	l/min	140			
	gal/min	36,98			
Water Consumption Cold	l/cycle	110			
	gal/cycle	29,1			
Water Consumption Hot	l/cycle	147			
	gal/cycle	38,8			
Drain Valve Connection Φ	mm	76			
	in	3			
Drain Flow Rate	l/min	230			
	gal/min	60,8			
Dimensions					
Standard WxDxH	mm	1070 x 1290 x 1715			
	in	42.1 x 50.8 x 67.5			
Packing WxDxH	mm	1110 x 1370 x 1865			
	in	43.3 x 53.9 x 73.4			
Weight					
Net Weight	kg	600			
	lb	1322			
Gross Weight	kg				
	lb				
Sound Pressure					
Sound Level	db(A)	55-65			
Environmental Conditions					
Ambient Temperature	°C	4 to 54			
	°F	39.2 to 129.2			
Relative Humidity	%	30% to 90% without condensation			
Height Above Sea Level	m	up to 1000			
	ft	up to 3280			

2. EXTERIOR COMPONENTS AND DIMENSIONS DIAGRAMS

2.1. MWR25 / MWR35 / MWR45 Standard



Front Side **Right Side** **Rear Side**

Fig. 2.1 Front, right and rear side view diagrams of MWR25, MWR35 and MWR45 models in standard configuration

1 Steam Inlet	**6** Liquid Detergent Connection	**10 -2** Coin Box	**14** Power Switch
2 Cold Water	**7** Drain	**11** Door Handle	**15** Progress Bar
3 Hot Water	**8** Detergent Dispenser	**12** Electric Cabinet	**16** 3rd Water Inlet
4 Electrical Connection	**9** Control Panel	**13 -1** USB Type C Port	**17** Serial Plate
5 Grounding Connection	**10 -1** Emergency Stop Button	**13 -2** Coin Collection Box	

Table 2.1 Components of the front, right and rear side view diagrams of MWR25, MWR35 and MWR45 models in standard configuration

Dimensions MWR25

Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N
mm	785	890	1285	779	473	92	1018	1103	1153	1090	206	132	222	312
in	30,9	35	50,59	30,67	18,62	3,62	40,08	43,43	45,39	42,91	8,11	5,2	8,74	12,28

Dimensions MWR35

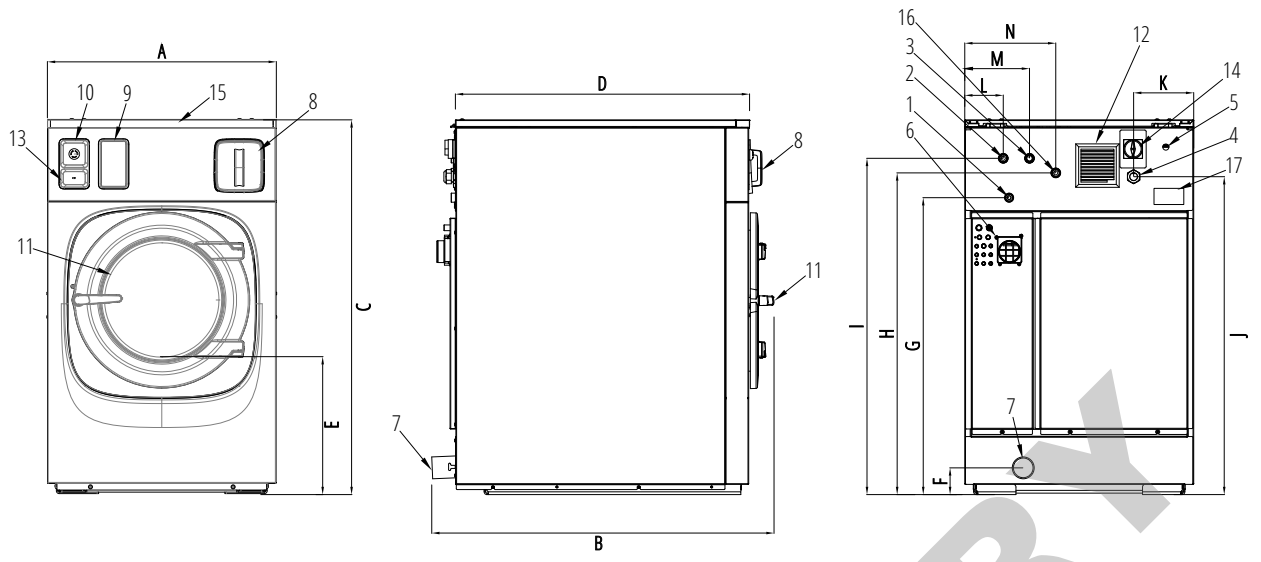
Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N
mm	785	1050	1285	939	473	92	1018	1103	1153	1090	206	132	222	312
in	30,9	41,3	50,59	36,97	18,62	3,62	40,08	43,43	45,39	42,91	8,11	5,2	8,74	12,28

Dimensions MWR45

Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N
mm	785	1140	1285	1009	473	92	1018	1103	1153	1090	206	132	222	312
in	30,9	44,9	50,59	39,72	18,62	3,62	40,08	43,43	45,39	42,91	8,11	5,2	8,74	12,28

Table 2.2 Length values for MWR25, MWR35 and MWR45models in standard configuration diagrams

2.2. MWR55/ MWR65 Standard



Front Side **Right Side** **Rear Side**

Fig. 2.2 Front, right and rear side view diagrams of MWR55 and MWR65 models in standard configuration

1 Steam Inlet	**6** Liquid Detergent Connection	**10 -2** Coin Box	**14** Power Switch
2 Cold Water	**7** Drain	**11** Door Handle	**15** Progress Bar
3 Hot Water	**8** Detergent Dispenser	**12** Electric Cabinet	**16** 3rd Water Inlet
4 Electrical Connection	**9** Control Panel	**13 -1** USB Type C Port	**17** Serial Plate
5 Grounding Connection	**10 -1** Emergency Stop Button	**13 -2** Coin Collection Box	

Table 2.3 Components of the front, right and rear side view diagrams of MWR55and MWR65 models in standard configuration

Dimensions MWR55 Standard

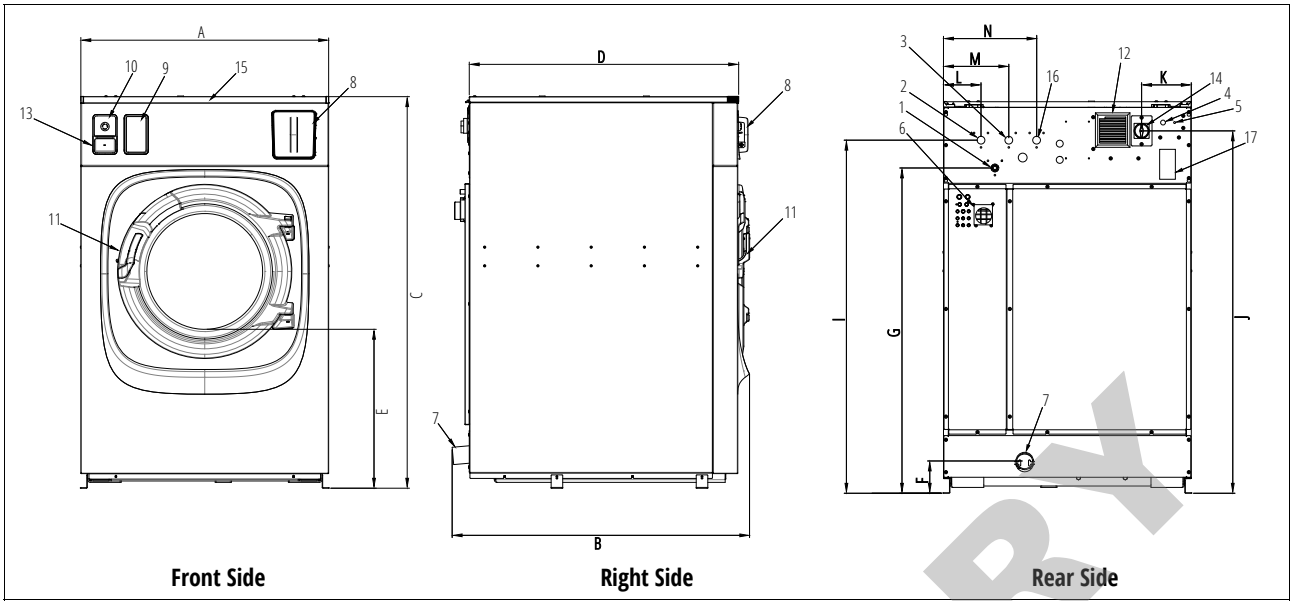
Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N
mm	869	1230	1390	1100	505	98	1125	1210	1260	1190	218	72	212	352
in	34,21	48,4	54,7	43,31	19,88	3,85	44,29	47,64	49,60	46,85	8,58	2,83	8,34	13,86

Dimensions MWR65 Standard

Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N
mm	869	1320	1390	1190	505	98	1125	1210	1260	1190	218	72	212	352
in	34,21	52	54,7	46,85	19,88	3,85	44,29	47,64	49,60	46,85	8,58	2,83	8,34	13,86

Table 2.4 Length values for MWR55 and MWR65 models in standard configuration diagrams

2.3. MWR85 Standard



Front Side **Right Side** **Rear Side**

Fig. 2.3 Front, right and rear side view diagrams of MWR85 models in standard configuration

1 Steam Inlet	**6** Liquid Detergent Connection	**10 -2** Coin Box	**14** Power Switch
2 Cold Water	**7** Drain	**11** Door Handle	**15** Progress Bar
3 Hot Water	**8** Detergent Dispenser	**12** Electric Cabinet	**16** 3rd Water Inlet
4 Electrical Connection	**9** Control Panel	**13 -1** USB Type C Port	**17** Serial Plate
5 Grounding Connection	**10 -1** Emergency Stop Button	**13 -2** Coin Collection Box	

Table 2.5 Components of the front, right and rear side view diagrams of MWR85 models in standard configuration

Dimensions MWR85 Standard

Unit	A	B	C	D	E	F	G	I	J	K	L	M	N
mm	1070	1260	1691	1163	686	139	1405	1525	1565	215	162	282	402
in	42,13	49,6	66,57	45,79	27	5,47	55,31	60,04	61,61	8,46	6,38	11,1	15,83

Table 2.6 Length values for MWR85 models in standard configuration diagrams

3. GENERAL SAFETY INFORMATION

3.1. EMERGENCY STOP BUTTON

The machine is installed with an emergency stop button located on the front panel to be used in emergency situations. This button provides that all the moving parts within the machine come to a sudden halt. All personnel in the company must know the working process of the emergency stop button and should be able to use it.

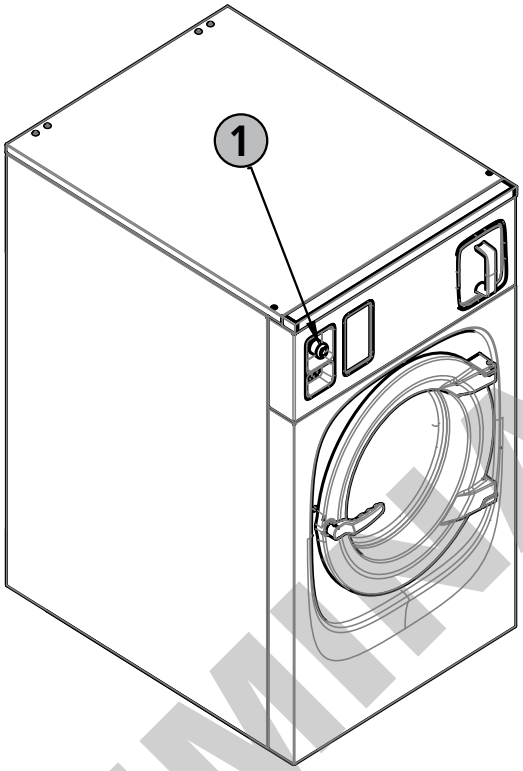


Fig. 3.1 Emergency Stop Button Location on MWR25/MWR35/MWR45/MWR55/MWR65/MWR85 models

No	Description
1	Emergency Stop Button

Table 3.1 Emergency Stop Button Location Diagram Components

The procedure to operate the emergency stop button

- Push the red colored mushroom head of the emergency stop button to break the circuit of the machinery and remove the power supply from moving parts of the machine.
- Rotate the red colored mushroom head of the emergency stop button in the clockwise direction to release it and to restart the machine after resolving the emergency situation.

NOTE

Activation of the emergency stop button stops all machine control functions, but does not remove all electrical power from the machine.

3.2. BASIC PRECAUTIONS

To reduce the risk of **fire, electric shock, serious injury or death** to persons when using the machine, these basic precautions should be followed:

DANGER

Safety devices should not be bypassed.

The machine should never be started or used in the absence, incorrect position or malfunction of covers, safety guards, safety devices, and control devices

It should not be attempted to operate the machine if any of the following conditions are present:

- The door does not remain securely locked during the entire cycle.
- Excessively high water level is evident.
- The machine is not connected to a proper grounded circuit.
- The machine is running with an open loading door.

WARNING

The emergency system's ability to operate must be checked weekly.

Hands or objects should never be inserted into the drum until it has completely stopped. Doing so could result in serious injury.

CAUTION

Electric or mechanic modifications or manipulations are not accepted by the manufacturer. Foreign components should not be installed into the machine.

No part of the machine should be modified, repaired or replaced or servicing should not be attempted, unless specifically recommended in the user instructions or in published user repair instructions that the user understands and has the skills to carry out.

The machine should not be operated if it is suspected to be faulty, either visually, by noise or smell, or with missing or broken parts.

DANGER

The door of the washer should not be opened if the drum is moving.

Loading door must be closed any time the machine is to fill, tumble, or spin. The loading door switch should not be bypassed by permitting the machine to operate with the loading door open.

IMPORTANT

It is not recommended to wash the linen inside bags. Should it be necessary, the machine should be loaded up to its nominal value.

The machine should never be operated with a bypassed or disconnected balance system. Operating the machine with severe out of balance loads could result in personal injury and equipment damage.

Carpeting, canvas, or waterproof fabrics should not be spinned in the machine.

Underloading as well as overloading is not recommended. Always endeavour to meet the capacity of the machine.

DANGER / FLAMMABLE / EXPLOSIVE

Gasoline, dry cleaning solvents, or other flammable or explosive substances should not be added to the wash water. These substances give off vapors that could ignite or explode.

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 the washing machine, turn on all hot water faucets and let the water flow from each for several minutes. These will release any accumulated hydrogen gas. As the gas is flammable, do not smoke or use an open flame during this time.

The machine must not be run without a proper grounding (*earth*) connection.

The machine should always be disconnected from electrical supply before attempting any service.

WARNING / FLAMMABLE

The product should never be worked on with flammable materials and the product should not be cleaned with such materials.

The user must inquire the detergent product supplier about the risk of detergents and their combinations. The user is responsible to ensure that products are compatible and will not produce machine oxidation or damage either to people or to the washer. It should be noticed that the hypochloride (*bleach*), in certain conditions of use generates chlorine gas. Chlorine is a corrosive and oxidizing substance that, in high concentration and temperature, deteriorates the stainless steel and elastomers. There are other highly oxidizing agents, such as the ozone, that can have the same effect.

Water connections must be checked to be sure that they have shut-off valves and that the fill hose connections are tight. At the end of each wash day the shut-off valves must be closed.

CAUTION

The machine should be installed according to the installation instructions. All connections for water, electrical power, and grounding must comply with local codes and be made by licensed personnel when required.

IMPORTANT

The fabric care instructions supplied by the textile manufacturer should always be followed.

The machine should be periodically cleaned. Cleaning will prevent the corrosion of the metallic parts, produce a higher output and provides a longer life for the machine. To clean the machine, water and chemical should be used, and it should be rinsed with a damped cloth and then be dried. The machine should not be cleaned with water jets or pressurized water.

DANGER

Children should be supervised if they are in the vicinity of the equipment in operation.

Before the washer is removed from service or is discarded, the door to the washing compartment should be removed. This practice is employed to prevent the explosion of the accumulated hydrogen gas which can build up because of the residual chemicals left in the machine during its entire life cycle. Another reason for this practice is preventing the risk of someone (*especially children*) or an animal being caught in the drum.

IMPORTANT

The drum is directly mounted onto the cabinet. Balance speed control is managed by the drive software based on the amplitude of torque variation.

3.3. SAFETY LABELS

Precautionary statements are found on machine decals. These precautions are intended for the personal safety of the operator, user, servicer, and those maintaining the machine.

WARNING

Always follow the warnings instructed on the safety labels. Otherwise, danger resulting in personal injury, death, or property damage may arise.

Do not smear, cover, or peel off the safety labels.

If the safety labels are damaged or missing, purchase and affix new labels to their proper positions.

NOTE

Inform our service center of the product name and safety label part number when placing a purchase order for safety labels.

The following list explains the types of the safety labels affixed on the machine.

3.3.1. Safety Critical Signs

These signs communicate an action which is safety critical, and/or important and therefore should be executed. These signs are in a circular shape with a blue background and white colored pictograms. Refer to the **Fig. 3.2** *"Safety Critical Signs"* on page 24.

3.3.2. Hazard Signs

These signs communicate a zone which can become hazardous for a person and therefore should be paid attention to. These signs are in a triangular shape with a black border and a yellow background. Refer to the **Fig. 3.3** *"Hazard Signs"* on page 24.

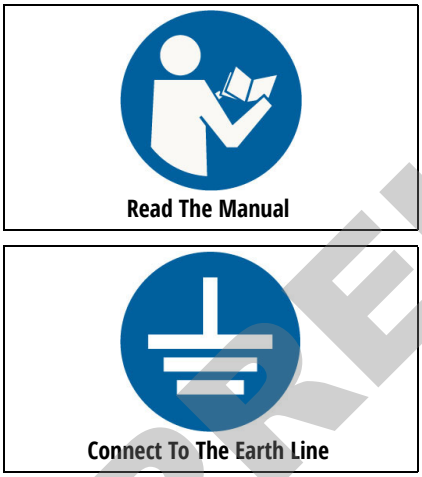


Fig. 3.2 Safety Critical Signs

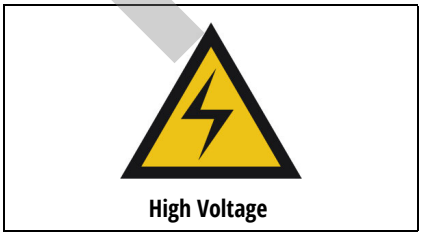


Fig. 3.3 Hazard Signs

3.3.3. Location of The Labels on The Machine

Labels are affixed onto designated locations on the machine to inform the operators and technicians on certain topics. These locations are designated in **Fig. 3.4** *"MWR25, MWR35, MWR45, MWR55, MWR65 and MWR85 Front Panel Label Locations"* on page 25. In case of a label alteration the new labels must be affixed onto their correct locations.

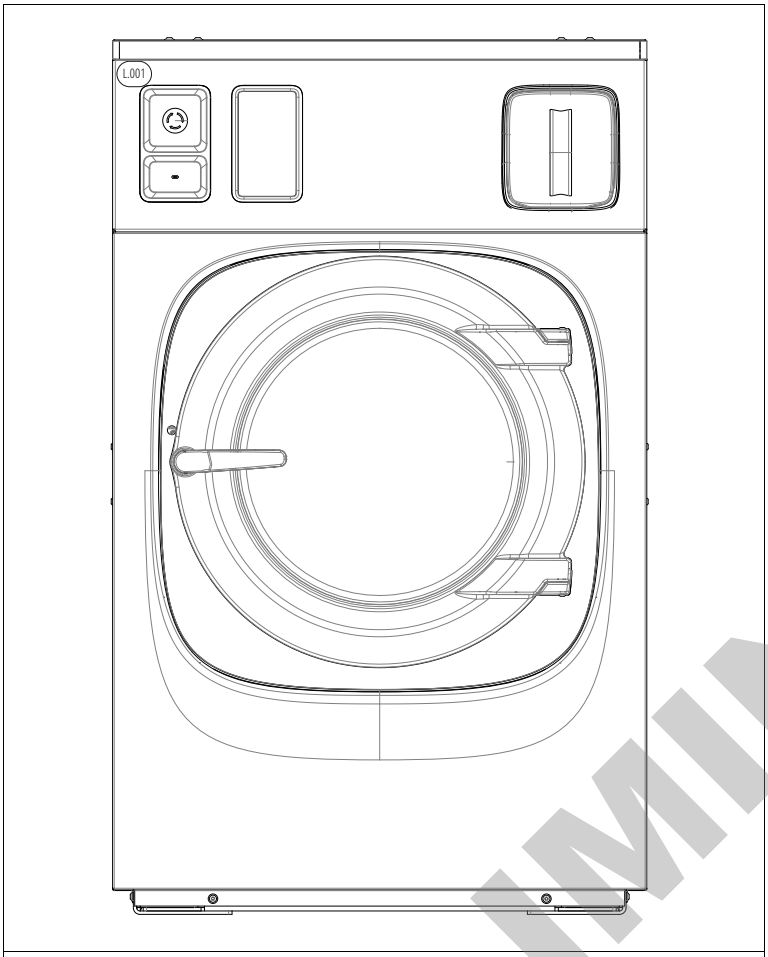


Fig. 3.4 MWR25, MWR35, MWR45, MWR55, MWR65 and MWR85 Front Panel Label Locations

Label No	Label Content
L.001	Read the manual / Operating Instructions / All maintenance and repair must be done only by authorized personnel

Table 3.2 Label Codes and Names

3.3.4. Handling and Transportation Labels

There are labels on the packaging which inform the operators on handling and transportation details of the products.

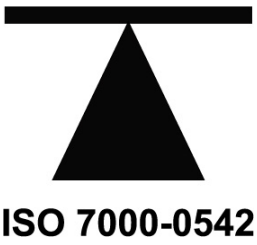
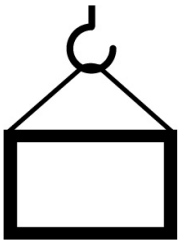
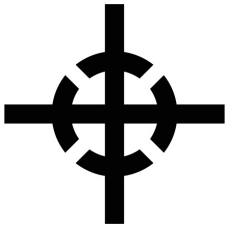
	**LIFT POINT FROM ABOVE** Indicates the lifting point with a crane or from above.
	**LIFT POINT FROM BELOW** Indicates the lifting point with a forklift or from below.
	**WEIGHT** Indicates the weight of an object that may be lifted or is being lifted.
	**CENTER OF GRAVITY** Indicates the center of gravity of the transport package which will be handled as a single unit.
	**KEEP DRY** Cargoes bearing this symbol must be protected from excessive humidity and must accordingly be stored under cover.

Table 3.3 Handling and Transportation Labels

3.4. HANDLING AND TRANSPORTATION

IMPORTANT

Faults and damages arising from failing to comply to the warnings and instructions in the operating manual and on the machine, not minding the signs, or ignoring the warnings of the authorized service will leave the product with irreversible damage and **OUT OF THE SCOPE OF WARRANTY**.

It is recommended to transport the machine with a specialist company and personnel.

DANGER

There is a danger of the machine to fall down or topple on to people while carrying.

The machinery should be lifted with appropriate workforce and equipment according to the weight stated on its package. The capacity and balance settings of the carrier and loader vehicles should be considered.

The handling operations and transporting the product to the working place must be monitored by an authorized service.

The machine should not be carried on inclined or rough surfaces.

3.4.1. Moving with a Forklift

The machine should be lifted and carried from the marked lifting points.

All of the models can be lifted with a forklift. The machines should be lifted by following specific rules when lifting with a forklift. These rules are stated below.

- Approach and lift from behind the machine. Refer to the **Fig. 3.5** *"Forklift to Machine Approach Direction"* on page 27.
- Consider the center of gravity when lifting. Refer to the **Fig. 3.6** *"Forklift Center of Gravity Warning"* on page 28.
- Do not lift from the sides. Refer to the **Fig. 3.7** *"Forklift Lift from Sides Warning"* on page 28.

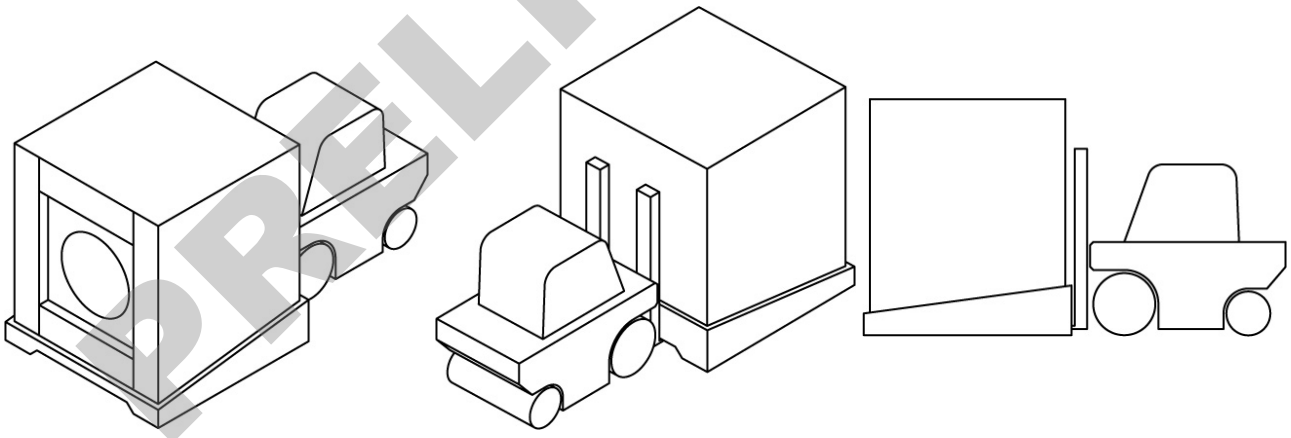


Fig. 3.5 Forklift to Machine Approach Direction

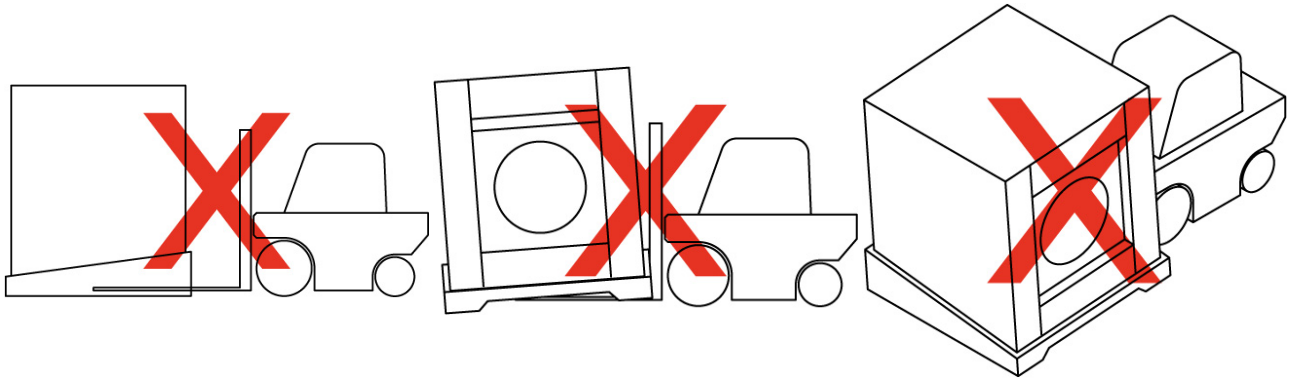


Fig. 3.6 Forklift Center of Gravity Warning

Fig. 3.7 Forklift Lift from Sides Warning

4. INSTALLATION AND START UP

4.1. UNPACKING

Remove the bolts between the machine and the pallet. There are two on the right side of the machine and another on the left side, opposite them.

CAUTION

When moving the machine, handle it with care.

Remove the machine from the pallet.

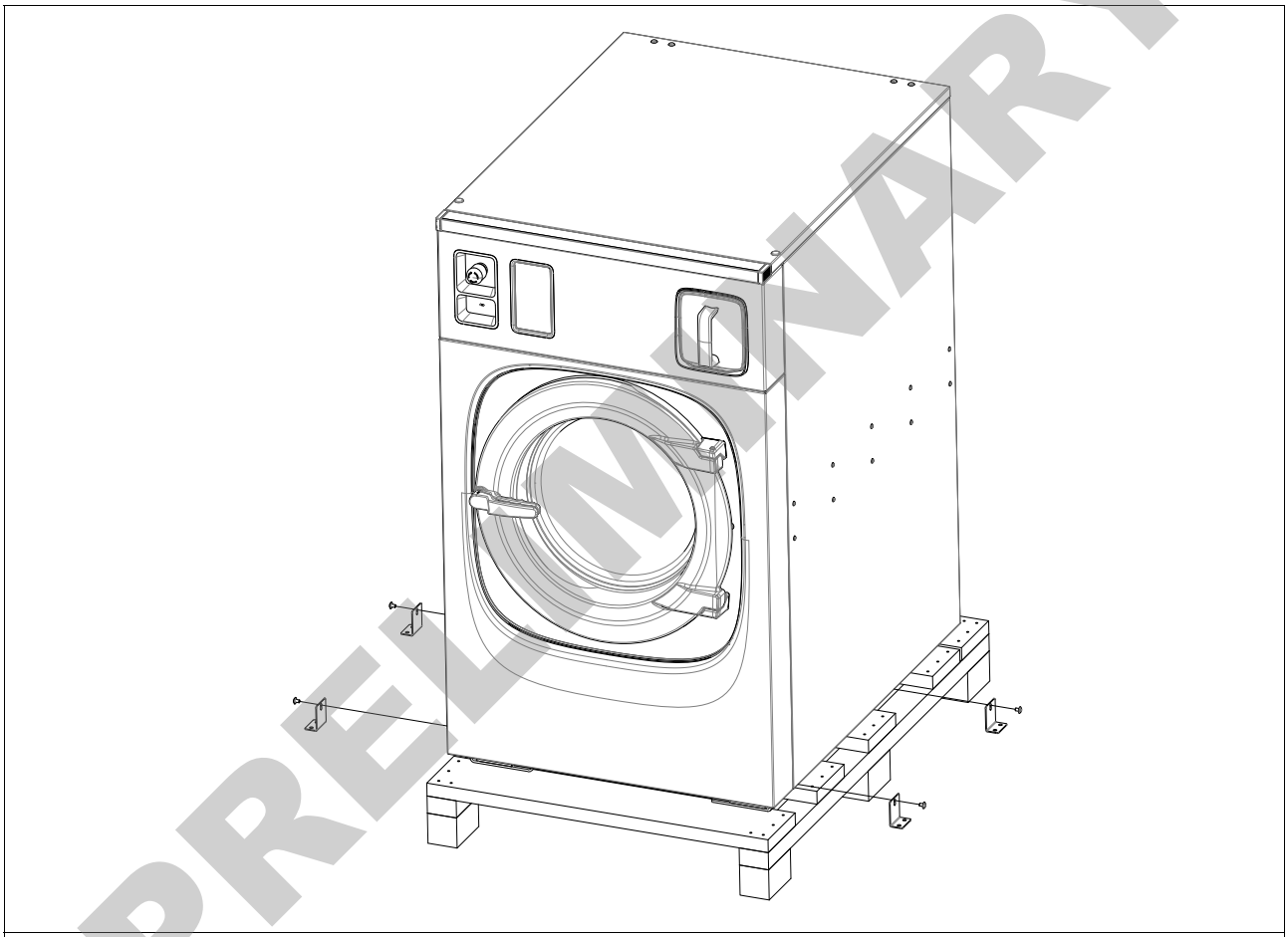


Fig. 4.1 Unpacking of the Machine

Set the machine in its designated spot.

4.2. INSTALLATION OF THE PRODUCT

IMPORTANT

The selected area for the installation must be easy to ventilate because the laundry environments are corrosive and must have proper energy resources and adequate space for the service to work.

IMPORTANT

The blueprint references and recommendations given by the manufacturer are essential during product installations. In case of project work absence it's recommended that space for approaching, maintenance, repair and service around the product is reserved as shown in **Fig. 4.2** *"Top View for Installation Clearances"* on page 32.

Place the machine near a floor drain or open drain.

Ensure there is ample space around the machine for both the operator and service personnel to work comfortably.

The diagram indicates the minimum required distance from walls and other machines. Not adhering to these specified distances can hinder maintenance and service access.

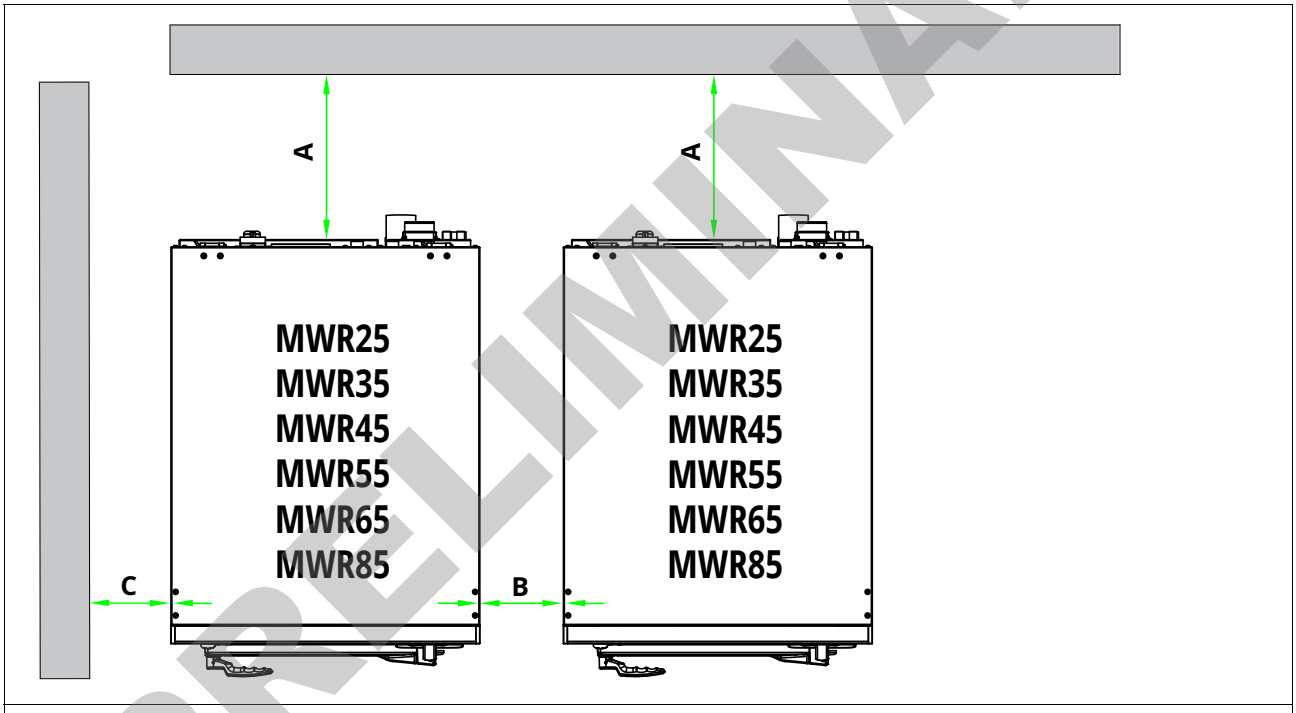


Fig. 4.2 Top View for Installation Clearances

Distances Between Machines And Walls, mm (in.)

	Description	MWR25*	MWR35*	MWR45*	MWR55*	MWR65*	MWR85*
A	Wall To Back Of Machine	600 (23.6)	600 (23.6)	600 (23.6)	600 (23.6)	600 (23.6)	600 (23.6)
B	Between Machine	20 (0.79)	20 (0.79)	20 (0.79)	20 (0.79)	20 (0.79)	20 (0.79)
C	Wall To Side Of Machine	20 (0.79)	20 (0.79)	20 (0.79)	20 (0.79)	20 (0.79)	20 (0.79)

Table 4.1 Distances Between Machines And Walls

4.3. FOUNDATION REQUIREMENTS

In this type of machine, the drum is directly attached to the frame. Consequently, the floor beneath the machine must be stable enough to absorb the dynamic forces generated during spin cycles. Therefore, the mounting bolts must be embedded into the floor material itself.

A solid and stable foundation is essential to ensure proper operation and to prevent vibrations. Ensure the surface is clean, level, and capable of supporting the machine's weight and operational forces.

IMPORTANT

Ensure the machine is installed on a clean, level, flat surface. Machine must be installed on ground level, first floor or higher are not allowed. Ground level also means no basement or garage can be under the machine.

4.3.1. Installing On Existing Ground Level

When securing the machine to an existing concrete floor, ensure it is at least 150mm thick, with a minimum concrete strength of 24.8 MPa. The floor must be free of seams and cracks.

A. Thickness of Existing Floor

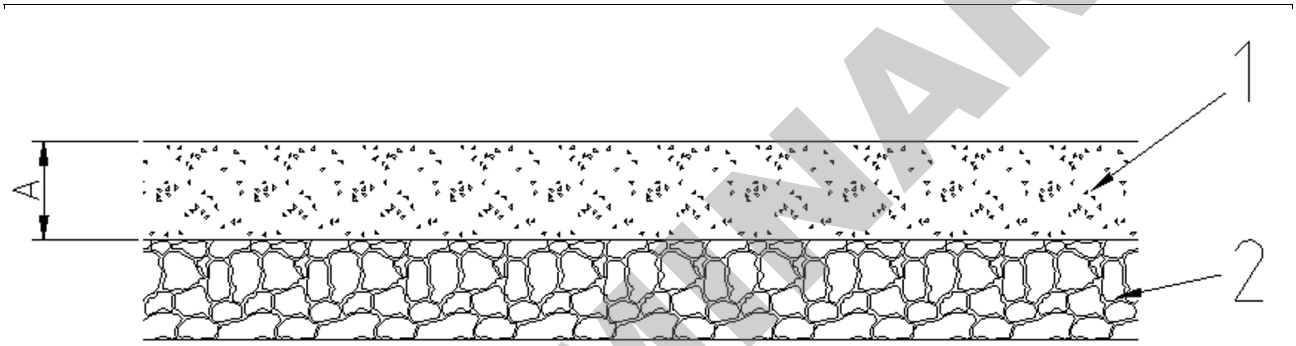


Fig. 4.3 Existing Floor

1. Existing floor of minimum concrete grade of G25 (3600 PSI)

2. Compact fill of a minimum of 150 mm (6 in.)

Existing Floor Minimum Thickness, mm (in.)

	Description	MWR25*	MWR35*	MWR45*	MWR55*	MWR65*	MWR85*
A	M models	200(7,87")	200(7,87")	200(7,87")	300(11,81")	300(11,81")	300(11,81")
*** M, M = 200G models - MWR85M model 150G**							

Table 4.2 Existing Floor Minimum Thickness

IMPORTANT

M models operate at 200G—except for the **MWR85M** model, which runs at 150G instead.

If the foundation thickness does not comply with the figures in the **Table 4.2 "Existing Floor Minimum Thickness" on page 33.**, an alternative solution such as new concrete on ground level should be considered.

1. Cut a hole in the existing floor that has minimum dimensions as in **Table 4.3 "Cutting Dimensions For Concrete Base" on page 34.** The floor must be free of seams and cracks.

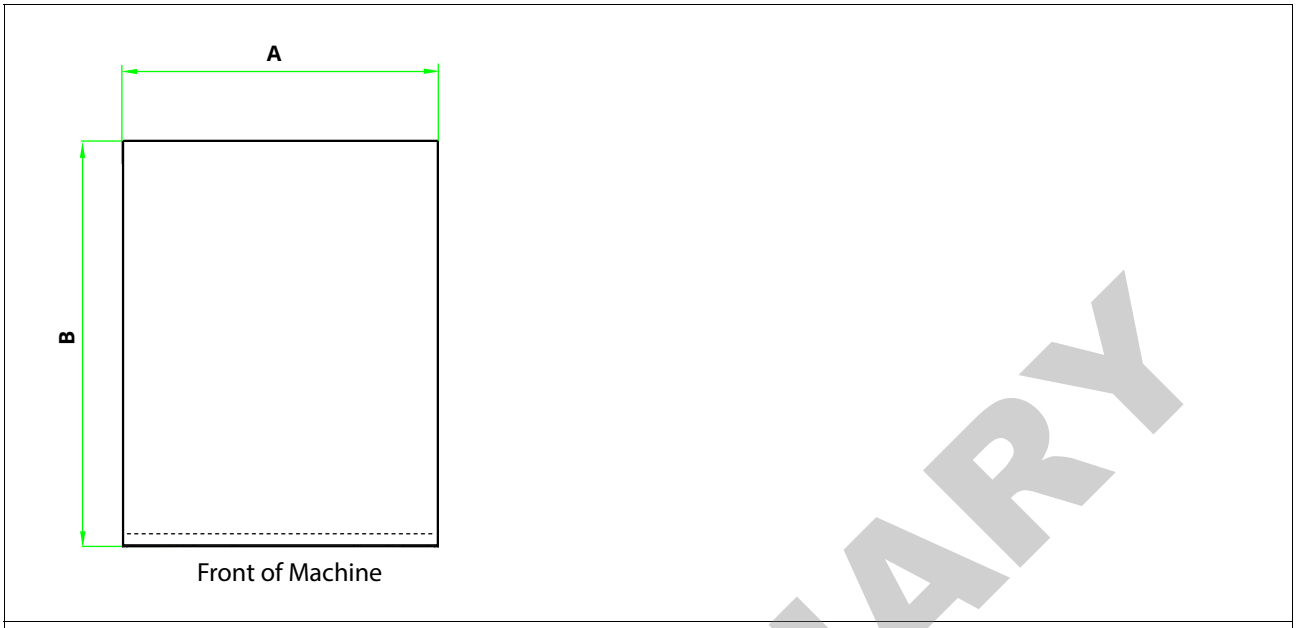


Fig. 4.4 Top View of the Cutting Dimensions For Concrete Base

Cutting Dimensions For Concrete Base, mm (in.)

	MWR25*	MWR35*	MWR45*	MWR55*	MWR65*	MWR85*
A	785(30,9”)	785(30,9”)	785(30,9”)	870(34,25”)	870(34,25”)	1130(44,49”)
B	800(31,5”)	960(37,8”)	1050(41,34”)	1100(43,31”)	1190(46,85”)	1240(48,82”)

Table 4.3 Cutting Dimensions For Concrete Base

2. Excavate to a depth with a minimum of 150mm + **A** from **Table 4.2 "Existing Floor Minimum Thickness" on page 33.**

3. Put connection bars into the existing floor to fix the new concrete base to the current floor.

New Concrete Installation on Ground Level

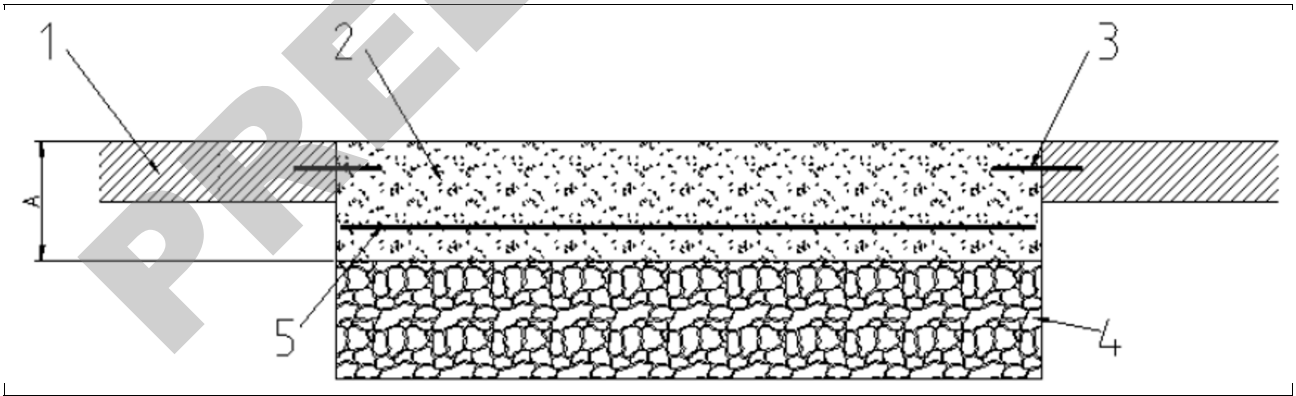


Fig. 4.5 New Concrete Installation on Ground Level

1. Existing floor

2. Concrete grade with a minimum of G25 (3600 PSI).

3. Connection bar between existing floor and new concrete.

4. Compact fill of a minimum of 150 mm (6 in.)

5. Reinforcement mesh

A. See Table 4.2 "Existing Floor Minimum Thickness" on page 33.

Table 4.4 Explanation of New Concrete Installation on Ground Level

4.3.2. Installing Elevated Pad

A concrete pad may be required to elevate the machine for proper installation. Ensure that the pad and the foundation are constructed and connected as a single, seamless unit.

IMPORTANT

Do NOT place the pad on top of the existing floor. The foundation and pad must be constructed and tied together as one piece.

Elevated Pad Installation on Ground Level

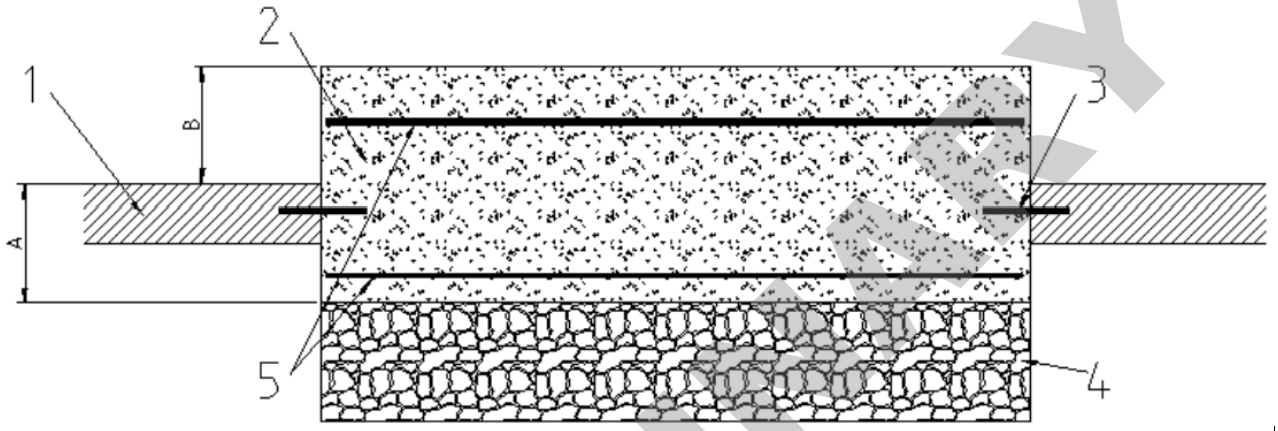


Fig. 4.6 Elevated Pad Installation on Ground Level

1. Existing floor.
2. Concrete grade with a minimum of G25 (3600 PSI).
3. Connection bar between existing floor and new concrete.
4. Compact fill of a minimum of 150 mm (6 in.)
5. Reinforcement mesh.
A. **See Table 4.2** "Existing Floor Minimum Thickness" on page 33.
B. Max 200mm (8 inch).

Table 4.5 Explanation of Elevated Pad Installation on Ground Level

4.4. BOLTING THE MACHINE TO THE FOUNDATION

1. Mark the Drilling Holes: Identify and mark the spots where the machine will be bolted down to the concrete.

2. Drill the Holes: After the concrete has completely cured, drill the holes at the marked locations to mount the machine securely.

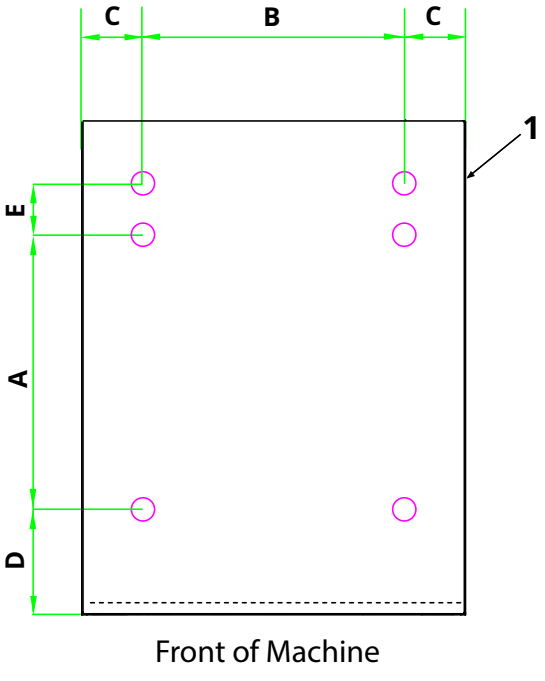


Fig. 4.7 Bolt Hole Locations on Concrete MWR25, MWR35, MWR45 MWR55, MWR65

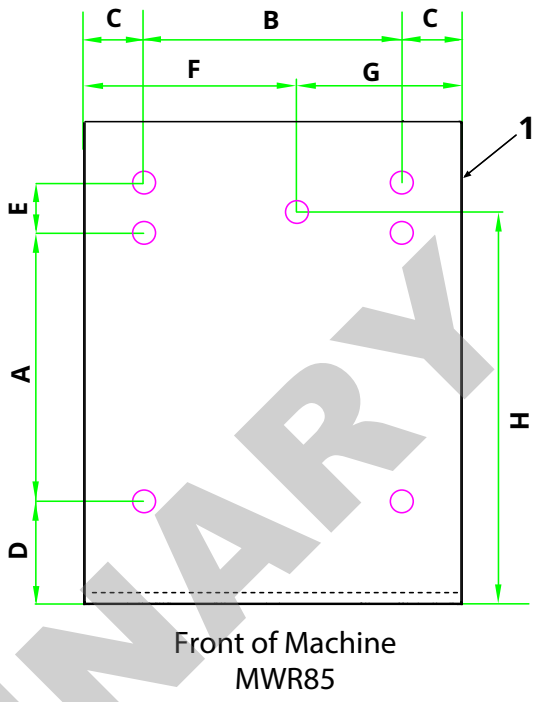


Fig. 4.8 Bolt Hole Locations on Concrete MWR85

1. Elevated pad or new floor concrete.

Mounting Bolt Hole Locations, mm (in.)

	MWR25*	MWR35*	MWR45*	MWR55*	MWR65*	MWR85*
A	460(18,11")	620(24,41")	710(27,95")	771(30,35")	861(33,9")	698(27,48")
B	604(23,78")	604(23,78")	604(23,78")	686(27")	686(27")	888(34,96")
C	90,5(3,56")	90,5(3,56")	90,5(3,56")	90,5(3,56")	90,5(3,56")	91(3,58")
D	90,5(3,56")	90,5(3,56")	90,5(3,56")	87(3,43")	87(3,43")	106,5(4,19")
E	90(3,54")	90(3,54")	90(3,54")	94(3,7")	94(3,7")	209(8,23")
F	N/A	N/A	N/A	N/A	N/A	615(24,21")
G	N/A	N/A	N/A	N/A	N/A	455(17,91")
H	N/A	N/A	N/A	N/A	N/A	884(34,8")

Table 4.6 Bolt Hole Locations on Foundation

Securing the Machine

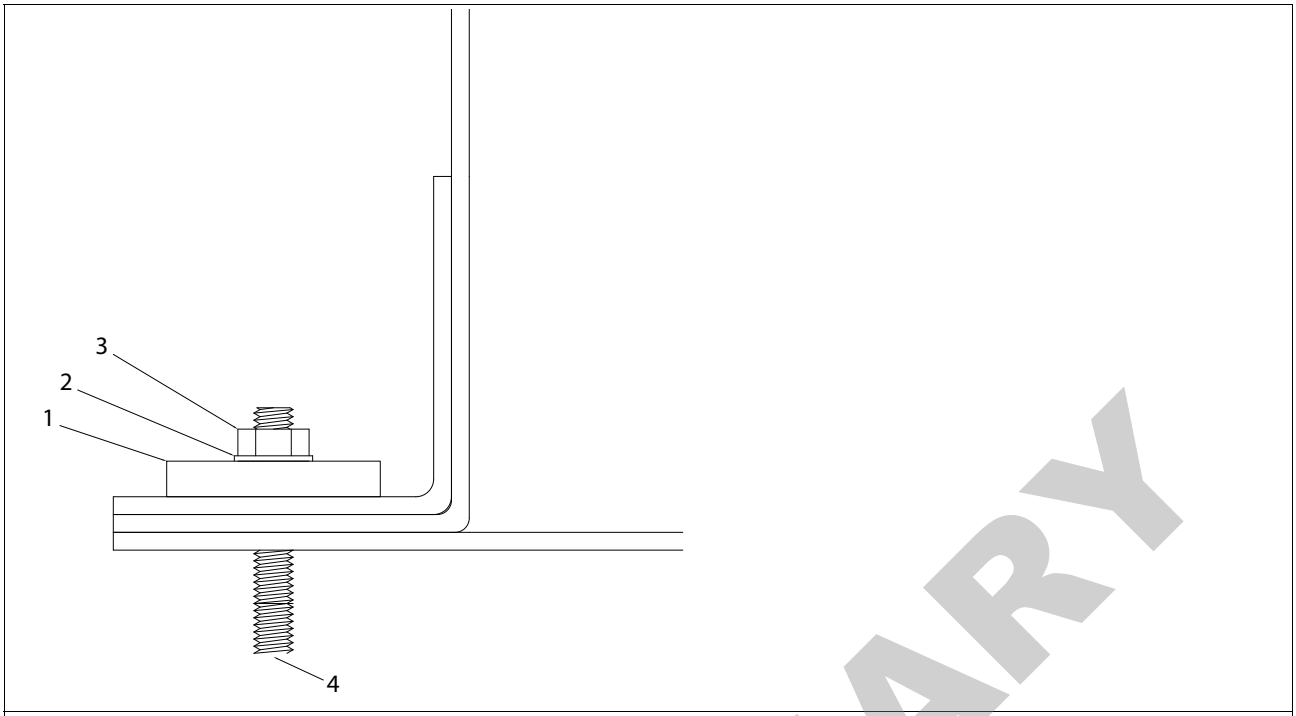


Fig. 4.9 Securing the Machine to Concrete

1. Thick washer delivered with machine (*Part number:* **'T00004970'**)

2. Security washer

3. Nut

4. Anchor Bolt

For nut and bolt size refer to **Table 4.8 "Drill Depth And Diameter + Bolt Diameter And Length" on page 38.**

Table 4.7 Explanation of Securing the Machine to Concrete

Buy locally bolt diameter and length as specified in **Table 4.8 "Drill Depth And Diameter + Bolt Diameter And Length" on page 38.** + Chemical Anchor. Hole diameter should be according to specifications of chemical anchor manufacturer.

1. Drill the hole to depth as mentioned in **Table 4.8 "Drill Depth And Diameter + Bolt Diameter And Length" on page 38.**

2. Clean out debris from each hole by using compressed air or squeeze bulb.

3. Fill the hole with the chemical anchor according to the specifications of the manufacturer.

4. Insert anchor bolt until it reaches the bottom.

5. Remove all adhesive surrounding the bolt.

6. Let the chemical anchor adhesive dry to manufacturer specifications.

7. Place the machine carefully over the bolts.

NOTE

Always insert a pry bar or other lifting device under the bottom of the frame of the machine to move it. Don't try to lift the machine by the door handle or by pushing on the cover panels.

IMPORTANT

Check the specifications of the Chemical anchor to dry out before bolting down the machine.

Drill Depth And Diameter + Bolt Diameter And Length, Mm (Inch)

M Models	MWR25M	MWR35M	MWR45M	MWR55M	MWR65M	MWR85M
Drill Depth	150 (6")	150 (6")	150 (6")	250 (9,8")	250 (9,8")	250 (9,8")
Drill Diameter	Refer to manufacture specifications of bolt and chemical anker					
Bolt Diameter	M20 (9/16")	M20 (9/16")	M20 (9/16")	M20 (9/16")	M20 (9/16")	M20 (9/16")
Bolt Length	220 (9")	220 (9")	220 (9")	320 (13,1")	320 (13,1")	320 (13,1")

Table 4.8 Drill Depth And Diameter + Bolt Diameter And Length

If the chemical anchor has cured completely, tighten the nut to the torque specified in **Table 4.9 "Bolting down torque, Nm (ft.-lbs)" on page 38.**

Bolting down torque, Nm (ft.-lbs)

	MWR25*	MWR35*	MWR45*	MWR55*	MWR65*	MWR85*
Torque	450 (330)	450 (330)	450 (330)	450 (330)	450 (330)	450 (330)

Table 4.9 Bolting down torque, Nm (ft.-lbs)

NOTE

Check and retighten the locknuts after five to ten days of operation and then monthly after that.

4.5. DRAINAGE CONNECTION

A drain system of adequate capacity is essential for the performance of the machine.

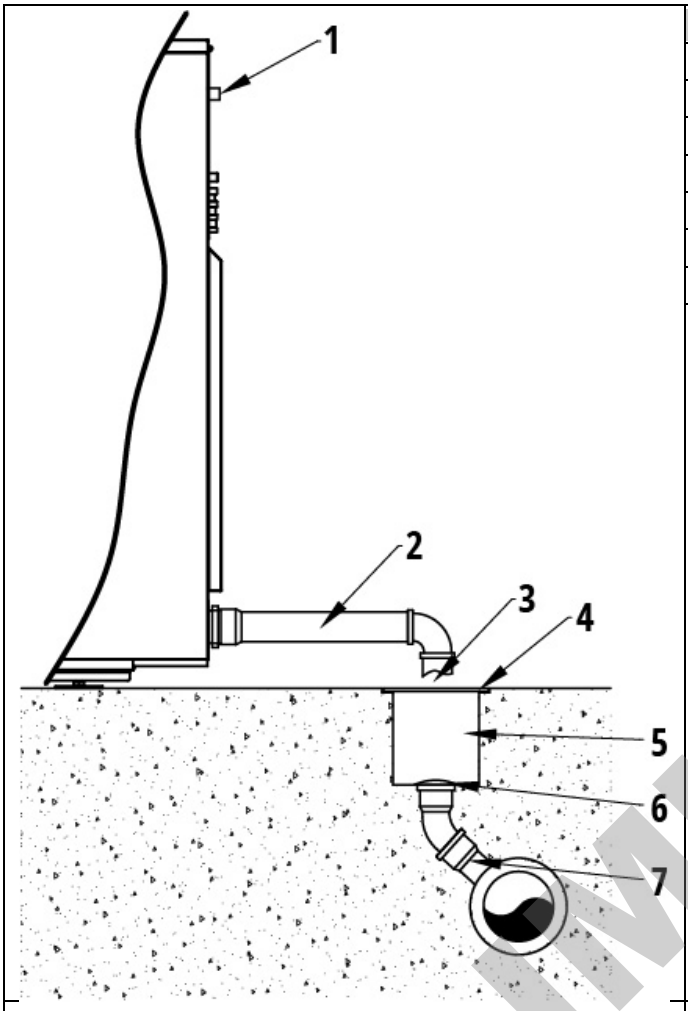


Fig. 4.10 Drainage Connection Diagram

No	Description
1	Water Inlet
2	Drain Pipe
3	1-Inch Minimum Waste Line Air Gap (*Per local code*)
4	Steel Grate
5	Drain Trough
6	Strainer
7	Waste Line

Table 4.10 Drainage Connection Diagram Components

Model	Drain Connection Size		Drain Flow Capacity	
	mm	in	l/min	gal/min
MWR25	76	3	230	61
MWR35	76	3	230	61
MWR45	76	3	230	61
MWR55	76	3	230	61
MWR65	76	3	230	61
MWR85	76	3	230	61

Table 4.11 Drain Connection Size and Flow Capacity

Model		Machine Quantity						
		1	2	3	4	5	6	7
MWR25	mm	76	102	131	152	170	186	203
	in	3	4	5	6	6.7	7.3	8
MWR35	mm	76	102	131	152	170	186	203
	in	3	4	5	6	6.7	7.3	8
MWR45	mm	76	102	131	152	170	186	203
	in	3	4	5	6	6.7	7.3	8
MWR55	mm	76	102	131	152	170	186	203
	in	3	4	5	6	6.7	7.3	8
MWR65	mm	76	102	131	152	170	186	203
	in	3	4	5	6	6.7	7.3	8
MWR85	mm	76	102	131	152	170	186	203
	in	3	4	5	6	6.7	7.3	8

Table 4.12 Drain Line Sizing

CAUTION

The water should drain through a vented pipe directly into a sump or floor drain.

IMPORTANT

Increasing the drain hose length, installing elbows, or causing bends will impair the performance of the machine.

4.5.1. BREATHER PIPE FOR COMMON DRAINAGE

A breather pipe should be installed at the pipeline starting point which rises above the drum top level to balance back pressure in the drainage system during drainage water flow if more than one washer is connected into a common drainage.

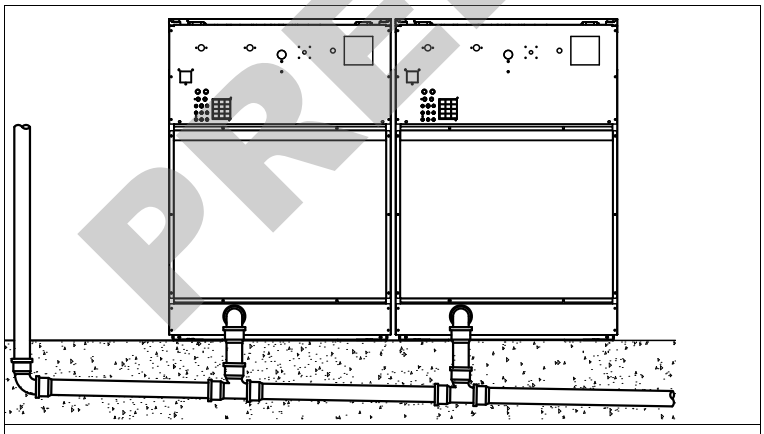


Fig. 4.11 Breather Pipe for Common Drainage

4.6. ELECTRICAL CONNECTIONS

DANGER

The power must be completely cut off during installation and servicing.

It is necessary to equip the electrical installation with proper cables and fuse systems. Refer to the Table 4.13 "Cable and Fuse Values for 200V-240V Single-Phase Voltage" on page 42. The values in these tables are calculated based on copper wiring and overhead cables. It is not recommended to use aluminum cables. The values change in case of conduit or buried cable usage.

The cross section of the cables must be determined by qualified experts by calculating the power and the capacity of the machine and the distance of the cables to the energy source.

It's recommended to use cable terminals to connect the grounding cable to the grounding connection. The grounding connection is marked with the “Earth Connection” label. The location of the grounding connection is specified in the **2.** *"EXTERIOR COMPONENTS AND DIMENSIONS DIAGRAMS"* chapter on page 19 for different models.

NOTE

Operating the machine without proper grounding will void the warranty.

Fig. 4.12 Earth Connection Label

DANGER / ELECTRIC SHOCK / GROUNDING

The product must be connected to a grounding line for the sake of work and personnel safety.

IMPORTANT

For personal safety, the dryer must be electrically grounded in accordance with local codes.

Separate electrical boxes should be installed for each laundry division (eg. washer extractors, dryers) and in those boxes, separate fuses and circuit breakers should be installed for each individual machine (for maintenance and service purposes).

IMPORTANT

Take counter measures in physical wiring to prevent the activation of the electric heater elements if only steam heating is going to be used for dual heating machines. Make physical wiring changes if the power supply cables are specifically selected for steam heating to make sure that the electrical heating elements do not activate.

NOTE

- Wire size according current is according IEC 60364-5-52.
- Electrical heat **NOT** available in North Amerika and Canada.

CABLE AND FUSE VALUES FOR 200V-240V SINGLE-PHASE VOLTAGE							
	Unit	**MWR25**	**MWR35**	**MWR45**	**MWR55**	**MWR65**	**MWR85**
All Heating Types							
Wiring		2+PE					
Steam Heated Models							
Circuit Breaker (non US)	Ampere	16	16	16	25	25	16
Circuit Breaker (US)		15	15	15	25	25	15
Cable Quantity and Section Area	qty x mm^2	2,5	2,5	2,5	2,5	2,5	2,5
	qty x AWG	14	14	14	14	14	14
Full Load Current Draw	Ampere	7	10	10	12	12	12

Table 4.13 Cable and Fuse Values for 200V-240V Single-Phase Voltage

CABLE AND FUSE VALUES FOR 380V-415V THREE-PHASE VOLTAGE							
	Unit	**MWR25**	**MWR35**	**MWR45**	**MWR55**	**MWR65**	**MWR85**
All Heating Types							
Wiring		3+N+PE					
Electric Heated Models							
Circuit Breaker (non US)	Ampere	20	32	40	40	50	63
Circuit Breaker (US)		N/A	N/A	N/A	N/A	N/A	N/A
Cable Quantity and Section Area	qty x mm^2	2,5	6	10	10	10	16
	qty x AWG	N/A	N/A	N/A	N/A	N/A	N/A
Full Load Current Draw 380V	Ampere	15,8	27,8	32,3	37,9	42,5	55,5
Full Load Current Draw 400V		16,5	28,9	33,8	39,6	44,4	58
Full Load Current Draw 415V		16,9	29,8	34,8	40,8	45,8	60
Heating Power 380V	kW	9	15	18	21	24	30
Heating Power 400V		9,9	16,6	19,9	23,2	26,6	33,2
Heating Power 415V		10,6	17,8	21,5	25	28,6	36

Table 4.14 Cable and Fuse Values for 380V-415V Three-Phase Voltage

4.7. WATER CONNECTIONS

Refer to the **1.** *"MACHINE DATASHEETS"* chapter on page 9 for working pressure values of different models.

Appropriate valves should be used for water and steam inlets. All connectors on the machine must be properly connected. The table outlines the available connection options, which vary depending on the types of water being connected to the machine. Additional information can be found on the panel above the connectors.

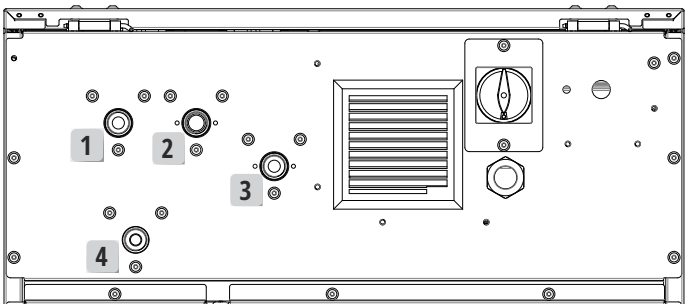


Fig. 4.13 Water and Steam Inlets

No	Description
1	Cold Water
2	Hot Water
3	3rd Water Inlet
4	Steam Inlet

Table 4.15 Water and Steam Inlets Diagram Components

IMPORTANT

The recommended water hardness for laundry washing is between 4 and 6 German degrees (°dH). Water hardness values more than 6° dH will cause limescale formation on all parts of the machine which do contain or contact water (*The heaters, pipes and hoses, bearing parts which may come in touch with water because of malfunctions in the seals, water valves, drain valves etc*). Parts which fail because of limescale formation are not covered by the warranty. High water hardness also causes the laundry to wear out and increases power and detergent consumption.

WARNING

Hot water inlet temperature must not exceed 85°C (185°F).

Flexible hoses with junctions compatible to the operating pressure must be used to prevent the transmission of the vibrations to the system which occurs at operation.

CAUTION

All water and steam inlets must be equipped with strainers.

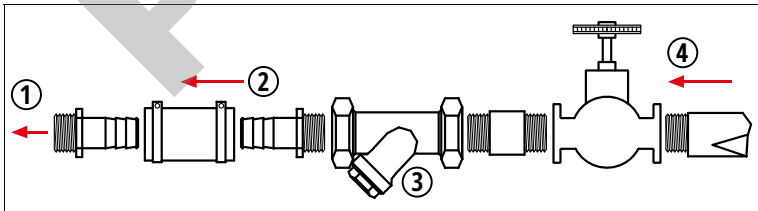


Fig. 4.14 Strainer and Hose Location on the Water and Steam Inlets

No	Description
1	To the Machine
2	Flexible Hose
3	Strainer
4	From Installation

Table 4.16 Strainer and Hose Location Diagram Components

4.8. STEAM CONNECTIONS (ONLY STEAM HEATED MACHINES)

Refer to the **1.** *"MACHINE DATASHEETS"* chapter on page 9 for working pressure values of different models.

The pipes must be aligned with 1% incline in the direction of the steam flow for steam piping installations.

The pipes must have a condenser every 30-50 meters. The pipe must be elevated about 30-40 cm and the condensed steam must be discharged from below at the condenser points.

The most effective points for steam discharge are the points where the pipes change direction.

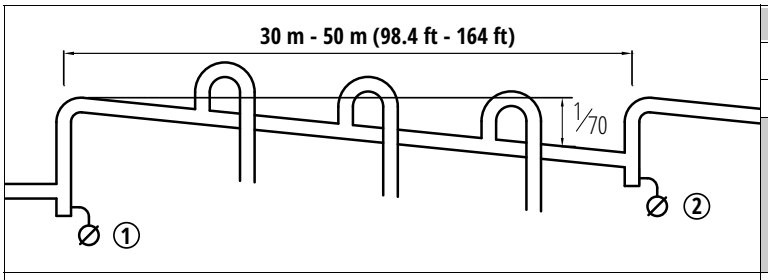


Fig. 4.15 Main Steam Line Condense Point and Elevation Diagram

No	Description
1	Steam Trap
2	Steam Trap

Table 4.17 Main Steam Line Diagram Components

CAUTION

Only use approved steam valves.

4.9. START UP

NOTE

The first operation of the product must be done by authorized service personnel.

In order to comply with the warranty conditions, the “Startup Checklist” must be signed by authorized service personnel and sent to the manufacturer after the first operation. Refer to the *"WASHER SAFETY INFORMATIONS"* section on page 5. The items of this list are laid out below.

For The First Run:

1. Make sure that the product is levelled properly.

2. Make sure that electricity is connected and the supply voltage is compatible with the requirements.

3. Ensure that the electric, water, and steam connections are sealed with the correct materials and that there are no leaks.

4. Ensure that the “Emergency Stop” button isn’t in the pressed state.

5. Start the machine.

4.9.1. 7 DAYS AFTER FIRST START UP

- Bolts, nuts, screws, grounding connections, cooling fan impellers, belts, along with the motor and drive belts should be examined and replaced if necessary.
- Tighten loose belts when necessary.
- Complete operational check of controls and valves.
- Complete operational check of all safety devices (*ie. Door switches, vibration switch, and sensors*)
- Check the level of the machine again. Tighten ground fixing nuts.

4.9.2. STARTUP CHECKLIST ITEMS

- There is no damage caused by transportation.
- Ensure the chemical anchor is fully cured and secure.
- The machine is level on a flat surface.
- There is adequate space around the machine as specified in the manual.
- The electrical connections, circuit breakers, and cables are installed as specified.
- A functional grounding line is installed as specified.
- Water and steam connections are made as specified.
- Filters are installed in all water inlets.
- The steam infrastructure is compliant with the specifications in the manual.
- The steam connections are made according to the manual.
- The waste water disposal is compliant with the specifications in the manual.
- The emergency stop system is operational.
- The operators know how the emergency stop system is operated.
- The operators have received the required training as specified in the manual.