

## Specifications

• Case material	Polypropylene
• Case colour	Grey
• Tank Capacity, max. (L)	150
• Weight (kg)	47
• Voltage (V)	110-120
• Mains frequency (Hz)	50
• Supply (no. of phases)	1
• Power, input, max. (W)	750
• Current, nominal (A)	7
• Isolation on/off switch	✓
• Electrical Protection	16A MCB
• Noise level, max. (dBA)	40
<i>Measured at 1m distance</i>	
• Standard flow rate, (mL/min) ±10% <i>Per needle</i>	33
• Half flow rate, (mL/min) ±10% <i>Per needle</i>	16.5
• Time to empty full tank (min)	<i>Std. Half</i>
<i>50 needles</i>	90 180
<i>25 needles</i>	180 360
<i>10 needles</i>	450 900
• Temperature max. liquid (°C)	77
• Filter bottles	1
• Microfibre filter cartridges	1x 25µm
• Unit length, A (mm)	1054
• Unit width, B (mm)	514
• Unit height, C (mm)	770

## Certification

- Far exceeds the requirement of BS EN 8520-1:2009 Equipment used in the controlled removal of asbestos containing materials - controlled wetting equipment.
- All appliances comply with BS EN 60335-2-69 Household and similar appliances;
- The units are manufactured at an ISO 9001 quality assured site.

## Model Variants

- WSM 150 230V

## SMH Products Ltd.

**Registered office:**  
SMH House  
29-33 Maxwell Street  
South Shields  
NE33 4PU  
United Kingdom  
0191 456 6000  
enquiries@smhproducts.com

### Branches:

Leeds  
01132 799003  
leeds@smhproducts.com

London  
01277 810035  
london@smhproducts.com

Bristol  
0117 403 5830  
bristol@smhproducts.com

Glasgow  
0141 556 6600  
glasgow@smhproducts.com

Romsey  
01794 52 4000  
romsey@smhproducts.com

St Helens  
01744 26660  
sthelens@smhproducts.com

Washington  
0191 456 6002  
washington@smhproducts.com

Birmingham  
0121 328 6000  
birmingham@smhproducts.com



# WSM 150 Operating Instructions Wet Strip Machine

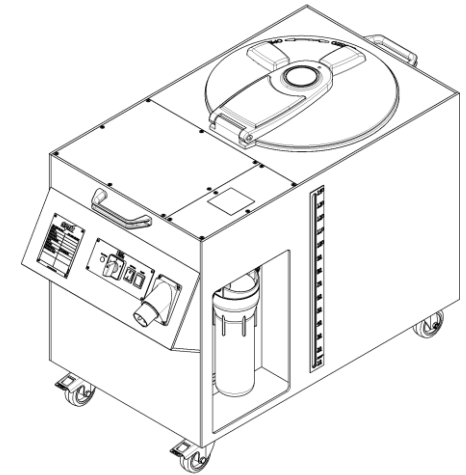
Thank you for purchasing this product. Please read these operating instructions carefully before using the product and follow it for correct use. Please keep these operating instructions for future reference. **Please read the "Safety Precautions" section before use.**

The WSM 150 is suitable for large scale wetting jobs, where there is a need for direct injection of sprayed coatings, insulating board, thermal insulation and coatings on pipes, tanks and vessels, the system will automatically provide the correct flow rate of wetting fluid in which ACM's can absorb through capillary absorption.

The machine is provided with a separate control manifold with 4 outputs, which allows for various needle configurations and spray gun setups. The machine can provide sufficient pressure to deliver surfactant evenly across up to 200 needles.

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## Safety Precautions

Precautions to be observed are categorised using the following symbols:



**WARNING** Failure to follow these instructions properly may result in personal injury or loss of life.



**CAUTION** Failure to follow these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances.



**Never attempt.**



**Make sure to follow the instruction.**



**WARNING** User's must refer to local safety regulations applicable to the materials you are working with - in the U.K. if you are working with material containing asbestos observe the requirements of the Control of Asbestos Regulations 2012, its supporting guidance ACOP L143 Work with Materials containing Asbestos, and HSG 247 The licensed contractors' guide.



**WARNING** Observe in order to prevent fire, electric shock or severe injury.

### □ Concerning the power supply plug and chord



- **Do not unplug while the unit is in operation.** (Fire due to overheating or electric shock may result)
- **Do not plug in or unplug with wet hands.** (An electric shock may result)
- **Do not use in such a way that the ratings of the power socket or wiring appliances are exceeded or use a voltage outside of the range AC 110-120V.** (Fire may result from overheating if the ratings of the multi-socket power adapters, etc., are exceeded)
- **Do not pull on the power supply cord when unplugging.** (Overheating or fire may result from wire breakage)
- **Do not perform actions that might break the power supply plug and cord.**
- Such actions including damaging, modifying, forcibly bending, pulling, twisting, bundling up, placing heavy objects on the power supply plug or cord.
- If the power supply plug is damaged, it must be replaced by our company (the manufacturer), a service centre authorised by us, or a similar qualified person in order to avoid a hazard. (An electric shock, short circuiting, or fire may result from use while damaged)



- **Insert the power supply plug firmly all the way in.**
- Do not use a damaged power supply plug or a loosely fitted power socket. (Electric shock, short circuiting or fire due to overheating may result if the power supply plug is not firmly inserted)
- **Periodically wipe dust off the power supply plug with a dry cloth.**
- If the unit is not to be used for a prolonged period, unplug the power supply. (Fire may be caused by defective insulation resulting from dust build-up with moisture, etc.)
- **When moving the unit, make sure to turn off and unplug the unit.** (An electric shock or injury may result)

### □ Do not use in the following places



- **Places where oil or flammable gases are used or may leak.** (Fire or smoke may result from ignition or suction into the unit, or injury may result from degradation or cracking of plastic)
- **Places where temperature and humidity levels are high or water may scatter, such as a bathroom.** (Fire or an electric shock may result from electrical leakage)
- **Places accessible to small children.** (An electrical shock or injury may occur)

### □ During use



- **Do not exceed mix time.** Make sure the mix setting is used for no longer than 10min.
- **Do not leave machine unattended.** Due to the environmental locations, these machines must be always monitored by a competent trained person (Fire, an electric shock or injury may result)
- **Do not attempt to disassemble, reconstruct or repair the unit yourself.** (Fire, an electric shock or injury may result) For repairs, please contact the place of purchase.
- **Do not run less than a 10-needle string.** (Fire may result from overheating)
- **Do not use with 3<sup>rd</sup> party equipment.** Only use accessories and equipment supplied by the manufacturer (Fire, an electric shock or injury may result)
- **Do not use recycled or soiled water.** Clean water must be always used (Fire may result from overheating)



**CAUTION** Using these Units for other purposes is considered contrary to their intended use. The manufacturer accepts no liability for any damage or injury resulting from such use.



**WARNING** Observe in order to prevent fire, electric shock or severe injury.

### □ Immediately turn off and unplug the unit if there are any signs of abnormality and malfunction



- **Examples of abnormality and malfunction.** (Contact the place of purchase.)
- The unit does not operate even if the switch is turned on.
- Current passes through the cord or fails to pass through if the cord is moved.
- There are abnormal sounds or vibrations during operation.
- The frame of the unit has become deformed or is abnormally hot.
- There is a burnt smell. (Malfunction, an electric shock, smoke, fire, etc., may result if the abnormality is not addressed and the unit continues to be used).



**CAUTION** Observe in order to prevent electrical leakage, injury or property damage.



- **If the unit is placed within reach of a pet, be careful that the pet does not urinate on the unit or chew on the power supply cord.** (Fire, an electric shock or injury may result)

### □ Concerning the unit body



- **Do not store or use to transport any other items of equipment on the unit.** (Overheating or fire may result)
- **Do not climb, sit or lean on the unit.** (Injury may result from falling or toppling)

### □ When moving the unit



- **When picking up the unit to move it, handle the unit with caution. Ensure any remaining water has been removed.**
- Be sure to always hold the unit using the correct handle location.

### □ When handling the needles



- **When removing the needles from the storage box, handle with caution. Follow these guidelines when you are working with needles.**
- Do not uncover or unwrap the needles until it is time to use them.
- Keep the needle always pointed away from yourself and other people.
- Never bend the needles.
- Keep your fingers away from the tip of the needle.
- During transportation keep all needles in the provided secure, closed container.
- Wear correct PPE when handling needles such as eye protection and gloves.
- Follow all safe systems of work and local procedures for the correct use and disposal of contaminated equipment.

### □ When shutting down the unit



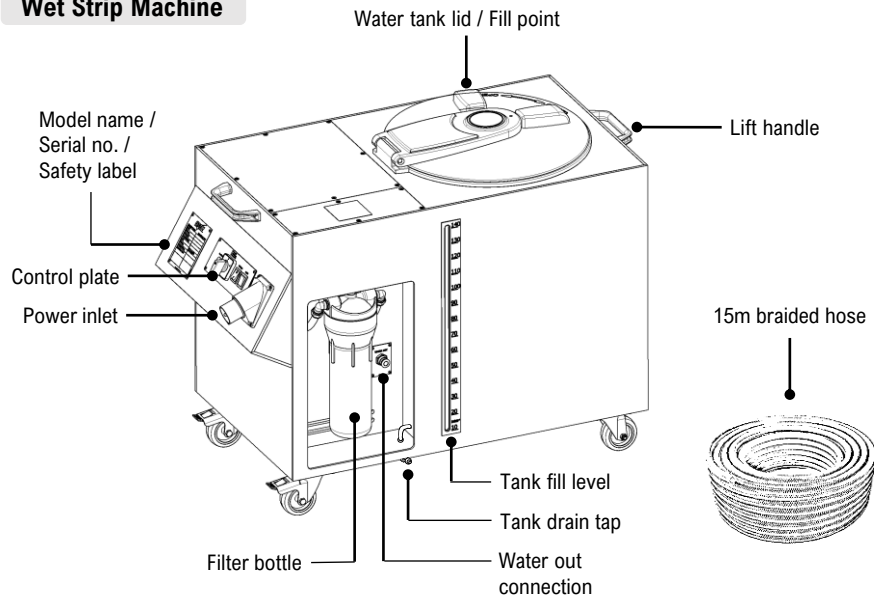
- **Ensure that the water tank is fully drained before leaving the unit overnight.**
- If the water tank is not fully drained, freezing may occur and cause damage to the pump system and/or pipes.



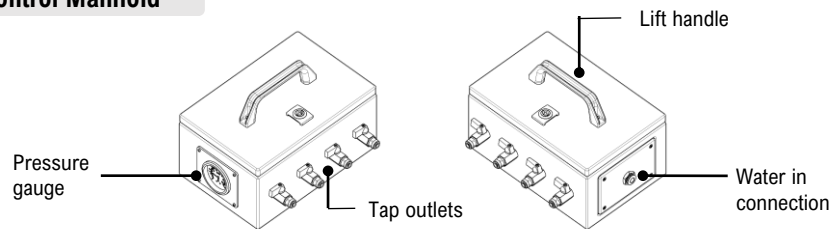
**WARNING** It is the responsibility of the user to carry out their own risk assessment for the use and transport of the unit.

## Product Overview

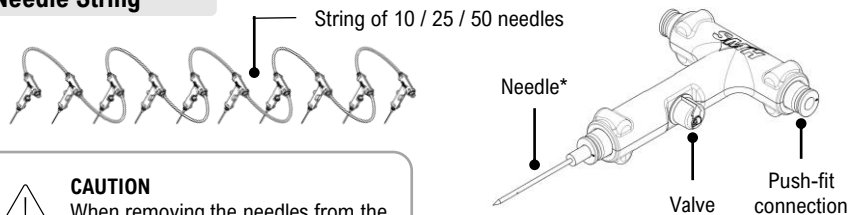
### Wet Strip Machine



### Control Manifold



### Needle String



#### CAUTION

When removing the needles from the storage box, handle with caution.

\*Straight or angled in various lengths available

## Functional Components

### Control Plate

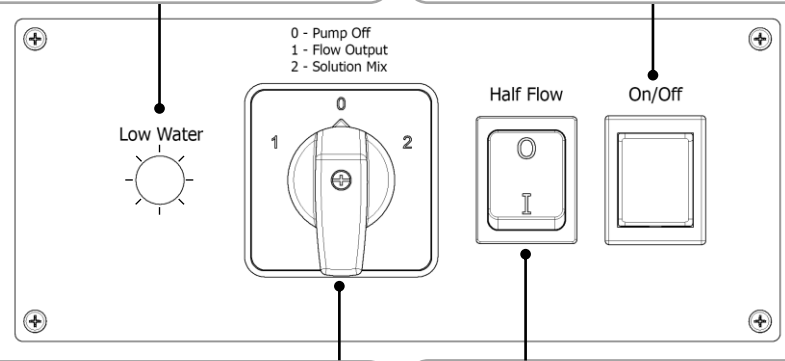
#### LOW WATER INDICATOR

If this yellow LED is illuminated, there is low water in the tank. An audible alarm will also sound.



#### POWER SWITCH

Instantly turns on or cuts power to the unit. Illuminates red when the unit has power.



#### STEP SWITCH

Select the running mode of the unit:

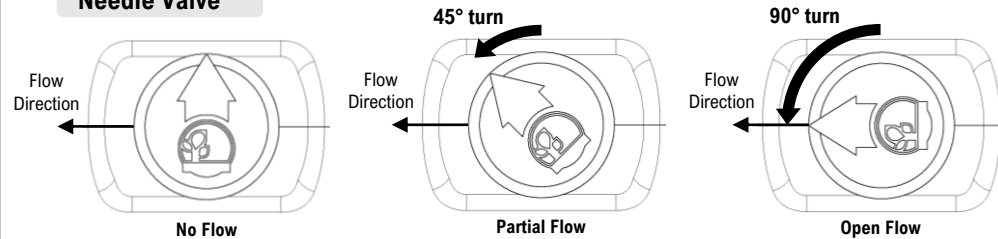
0 - Pump Off	Set to this mode when powering on/off the unit.
1 - Flow Output	Runs the injection cycle, outputting the flow to the manifold.
2 - Solution Mix	Runs the mixing cycle for the water tank.

#### HALF FLOW SWITCH

The unit can be run in timed intervals to half the flow rate. When the half flow switch is turned on, the flow will start - stop, running for 5 minutes on, then 5 minutes off.

Half Flow OFF (Normal)	Avg. flow rate of 33 mL/min per needle
Half Flow ON	Avg. flow rate of 16.5 mL/min per needle

### Needle Valve



#### INDIVIDUAL NEEDLE FLOW CONTROL

Each needle comes equipped with a flow control valve, that can be closed entirely (arrow perpendicular to flow direction), set to partially open (45° turn), or fully open (90° turn, i.e. arrow parallel to flow direction).

## Using the Unit

### 1 POSITION THE UNIT

- Place the unit on a stable surface. If the unit is placed on an unstable surface, vibrations from the unit may be amplified.
- Ensure the area is clear of obstructions that could damage the power cable or hose.

### 2 FILLING THE TANK

- Grip the tank lid and turn anticlockwise then lift the lid.
- The unit is equipped with a **Fill Level Indicator** marked in litres, add surfactant at a 10:1 ratio. *Note: use only surfactant recommended by the manufacturer (Evergard wetting agent).*
- Manually fill the tank or insert a hose and fill until the desired water capacity is reached.

### 3 HOSE CONNECTION AND MANIFOLD

- Connect the included 30 metre braided hose to the wet strip machine **Water Out** connector that is located to the right side of the water filter bottle (uses a 10mm push in connector)
- Connect the other end of the hose to the portable manifold (uses a 10mm push in connector).
- The manifold has 4 tap outlets, ensure that they are in the closed position.

### 4 CONNECTING THE NEEDLES

- The manifold has 4 push fit tap outlets capable of supplying up to 200 needles. Choose the desired needle string option (10, 25, 50 string) and securely push the free end of the needle string into one of the 6mm ports on the manifold, the free end will be provided with 5 metres of tubing.
- The needle strings can be setup in various configurations but you must never use less than 10 needles during operation. *Note: this machine is not suitable to operate 3<sup>rd</sup> party equipment, only use needles provided by the manufacturer*

### 5 NEEDLE OPERATION

- Insert the needles into the ACM at a distance of 100-150mm between each needle.
- When the material is sufficiently saturated, individual needles can be shut off without effecting the flow to the other needles.

### 6 POWERING THE UNIT

- Insert the power supply plug into the 110v appliance inlet.
- Ensure the Step Switch is in the **0** position and then press the Power Switch to the **On** position to switch on the unit.

### 7 MIXING MODE

- Turn the Step Switch from **0** to the **2 position** to start the mixing cycle.
- The mixing cycle must be run for around 5-10 mins to ensure a homogeneous mix has been achieved.

### 8 OPERATING THE MACHINE

- Turn the Step Switch to from **0** position to the **1 position** to start the injection function.
- The machine will now operate at a flow injection rate average of 33 ml/min constant flow per needle.
- To half the flow rate, switch the **timed cycle** switch to the **On** position. This will start - stop the flow cycle allowing a run time of 5 minutes on and 5 minutes off.

### 9 SHUTTING DOWN THE UNIT

- Press the Power Switch to the **Off** position and turn the Step Switch to the **0** position.
- Remove the power supply plug from the 110v appliance inlet.
- Ensure that the water tank is fully drained before leaving the unit overnight to prevent freezing issues.

