

STEAMOSORB MULTI-RAMPS



Installation and Operation Manual

Please read and save this manual

Introduction

Foreword

Thank you for purchasing this **SOS/SOE** from steamOvap.

If you have questions or comments please contact us:

www.steamOvap.com

info@steamOvap.com

1-844-357-4477

Intended use

SOS/SOE steamOsorb multi-ramps steam distributor is intended exclusively to distribute steam at atmospheric pressure from steam humidifier into ventilation air duct.

Operating conditions are specified in this Installation and Operation Manual (IOM).

Operation of this steamOsorb multi-ramps in the intended use scope requires that all directions and information contained in this IOM are observed.

Any other use or operation outside the above design scope without written authorization from steamOvap may lead to trouble and hazardous conditions and will void warranty.

No alteration or modification to the **SOS/SOE** must be done without written authorization from steamOvap.

Replacement of any defective components must be done with original component and spare parts from steamOvap representative.

Installation and Operation Manual Limitation

This IOM is intended for trained and qualified personnel and must be applied along with the applicable local codes and regulations.

Any work related to installation or service for this humidifier must comply with local code and regulation regarding safety and prevention of accidents.

End of life disposition

Ensure that **SOS/SOE** is empty from water, if not proceed to a complete drain of its content.

Disconnect **SOS/SOE** from steam supply and condensate drain. **SOS/SOE** can then be removed from the installation.

SOS/SOE is made of stainless steel and rubber that can be recycled.

This product can be returned to the closest steamOvap authorized representative for proper dismantling, recycling and disposition of components according to local regulations.

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Model SOS is steamOsorb multi-ramps steam distributor without thermal insulation.

Model SOE is the same with thermal insulation.

Safety warnings

General



Any work related to installation and service of this product must comply with local code and regulation regarding safety and prevention of accidents.

Water safety warning



Any work related to steam supply, drain connection as well as condensate returns lines installation or service of this product must comply with local code and regulation regarding safety and prevention of accidents.

Risk of flooding. Condensate and drain lines should not have any restriction or blockage that may cause flooding.



Risk of freezing. Plan an anti-freeze system in case of installation in a location that would be exposed to outside conditions and susceptible of freezing.

Before to proceed to Installation

Please read this Installation and Operation manual before to proceed to the Installation

Receiving and Unpacking

1. Upon receipt verify that packaging is complete and not damaged.
In case of damage, and/or missing boxes advise immediately the carrier by writing a note on the waybill.
2. Verify that model of the product matches the purchase order and that all accessories are included.
3. Any missing item should be reported as soon as possible to steamOvap or its representative and within 5 business days after receipt.
steamOvap will not assume any responsibility for missing item after this delay.
4. Proceed carefully to unpacking, and check that the **SOS/SOE** and its accessories are not damaged. in case of damage please proceed as for point 3

SOS/SOE Overview

steamOsorb multi-ramps

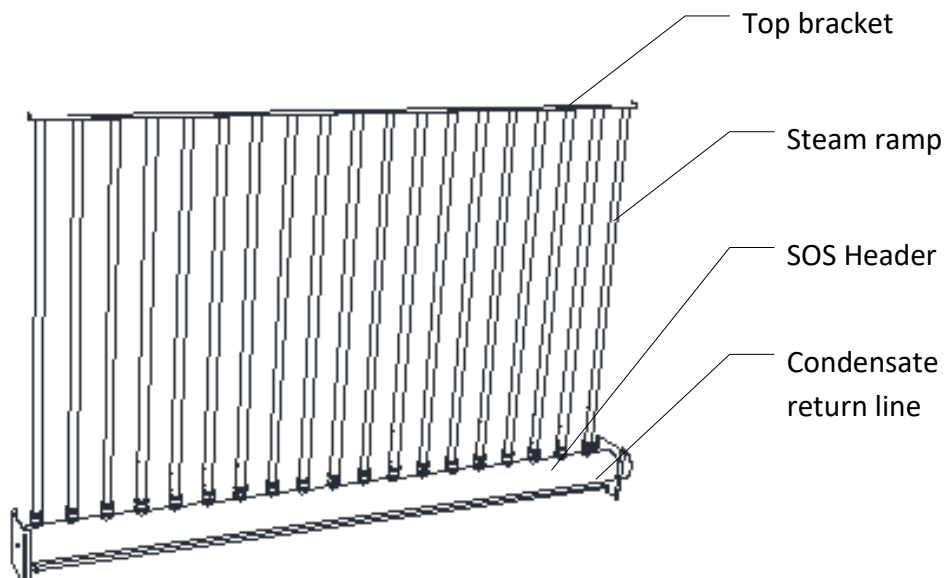


Figure 1 – SOS/SOE Overview

Principle of operation

Model SOS is steamOsorb multi-ramps steam distributor without thermal insulation.

Model SOE is the same with thermal insulation.

SOS/SOE is composed of 3 main elements:

- **SOS/SOE** Header that is connected to the steam supply and distribute the collected steam to the vertical ramps.
- **SOS/SOE** ramps which are vertical tubes with 2 rows of steam outlets distributing the steam in the ventilation air duct
- Top bracket, the vertical ramps are attached this top bracket that is also serving as a mean of attachment to the air duct walls.

Condensate should be collected through the condensate port and directed to the main building drain.

OVERVIEW

SOS/SOE Dimensions

SOS/SOE multi-ramps dimensions are adapted for each project and Air duct dimensions; please refer to the project's detailed drawing for exact dimension of your SOS/SOE.

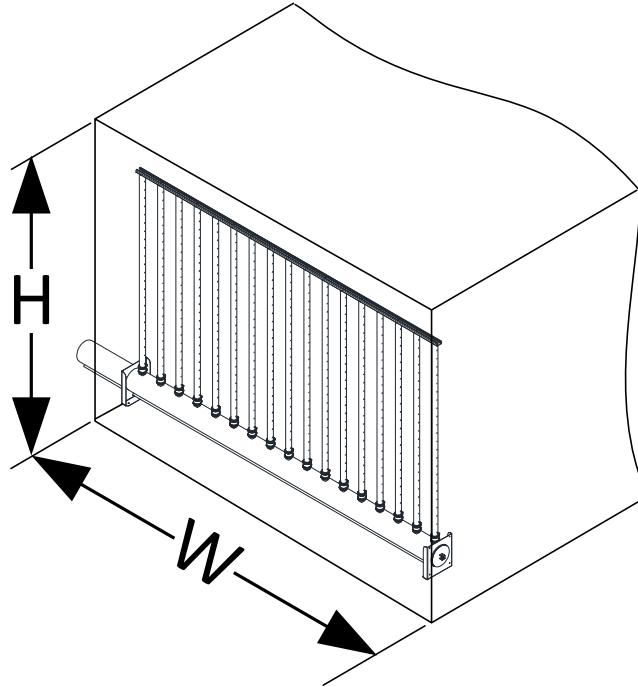


Figure 2 – SOS/SOE Dimensions

General rules for dimensions

Duct Width conditions	SOS/SOE Width
$W \text{ Duct} \leq 24\text{in [600mm]}$	$W \text{ SOS/SOE} = W \text{ Duct} - 2 \times 3\text{in [76mm]}$
$24\text{in [60mm]} \leq W \text{ Duct} \leq 48\text{in [1200mm]}$	$W \text{ SOS/SOE} = W \text{ Duct} - 2 \times 5\text{in [125mm]}$
$W \text{ Duct} > 48\text{in [1200mm]}$	$W \text{ SOS/SOE} = W \text{ Duct} - 2 \times 6\text{in [150mm]}$

$$H \text{ SOS/SOE} = H \text{ Duct} - 2\text{in [50mm]}$$

Installation

General

1. Installation of this **SOS/SOE** should be carried out by trained and qualified personnel.
2. Any work related to installation of this **SOS/SOE** must comply with local code and regulation regarding safety and prevention of accidents.
3. SOS/SOE for duct dimensions smaller than 36in by 36in are factory assembled and do not need assembly on site.

Horizontal duct

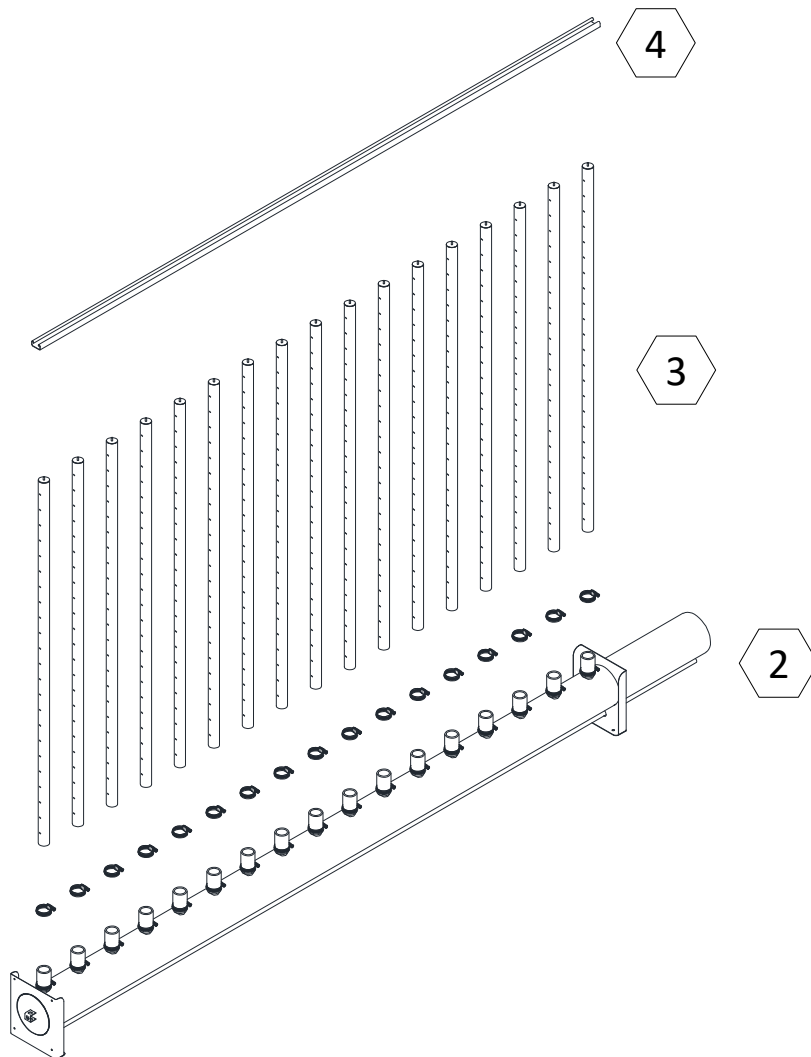


Figure 3 – SOS/SOE installation

Installation steps

1. Plan for the positioning of the **SOS/SOE** in the air duct.
Make sure there will be sufficient space downstream for the full absorption of the steam.
Prepare 1 or 2 openings in the air duct for the steam connection and for the condensate line. Condensate line can be located below the **SOS/SOE** header or a line can be returned below end next to the steam inlet.
2. Install the **SOS/SOE** Header into the air duct.
in a horizontal duct the Header should be installed on the air duct floor.
If Header diameter is greater than 3in [DN80] and longer than 48in [1.2m] header is supplied with 2 feet to allow for easy installation.
Attach the header to the air duct
3. Install the vertical ramps onto the muffs connexion already attached to the **SOS/SOE** Header.
Make sure that the steam outlets are positioned perpendicular to the air flow.

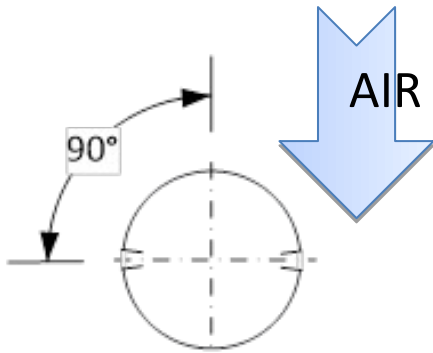


Fig. 4 – steam outlets should be perpendicular to air flow

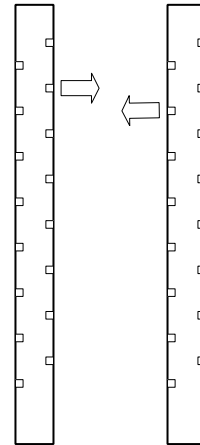


Fig. 5 – steam outlets should be staggered

Ensure that the steam outlets are staggered to each other's in between ramps. Once properly positioned, prepare the clamps on the muffs connexions; do not tighten the clamps yet.

4. Install the top bracket onto the vertical ramps, and secure it with the provided nuts.
At this point you can verify proper position of the vertical steam ramps and tighten all the muffs clamps.
5. Attach the top bracket to the air duct walls.
6. Connect the steam supply line to the steam inlet of **SOS/SOE** Header.
It is a good practice to install a piece interconnection hose in between steam supply rigid line and the steam inlet of the **SOS/SOE** Header.

S E R V I C E

7. Connect the condensate line.

Make sure that the condensate line is equipped with a P-trap of sufficient height. Condensate P-trap height should be 2in +air duct static pressure measured in inch of water column [mm of water column].

Ensure that the condensate line is made of material compatible to hot water (212°F [100°C]).

Condensate drained specification:

Drained water temperature: 212°F [100°C]

Service

SOS/SOE is maintenance free

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Information contain in this manual are subject to change without notice.
To obtain the latest technical information visit our website at www.steamOvap.com