SHEARFLOW

S15 W

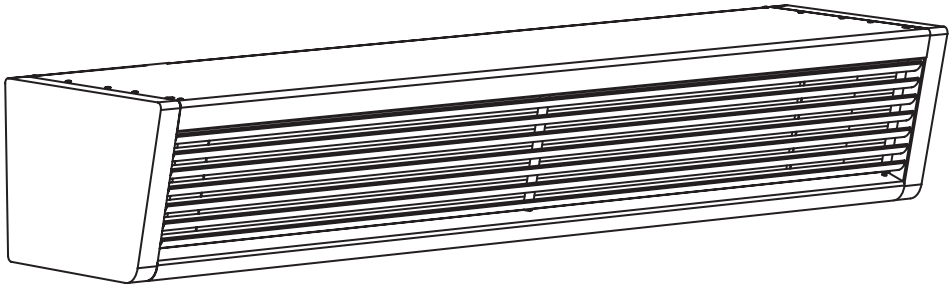


Figure 1

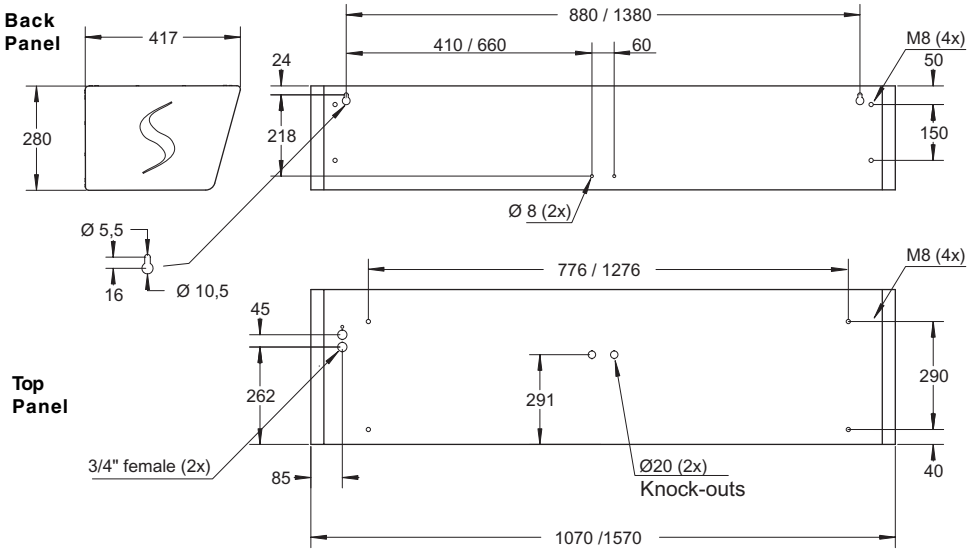


Figure 2

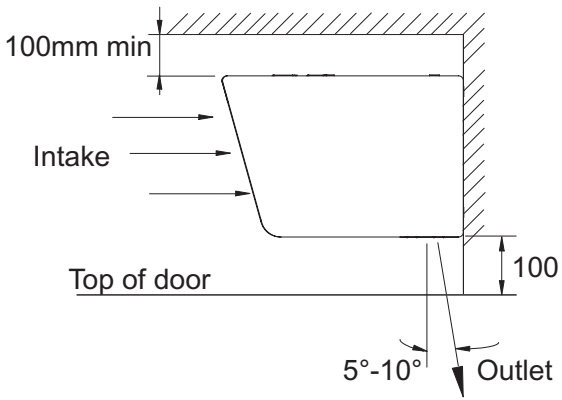


Figure 3

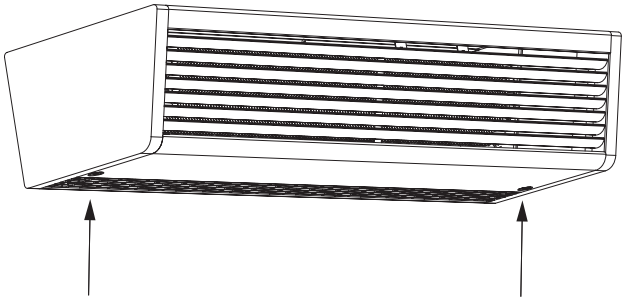


Figure 4

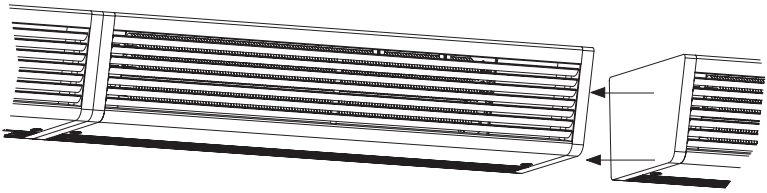
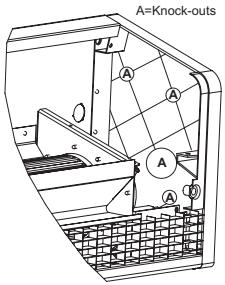


Figure 5



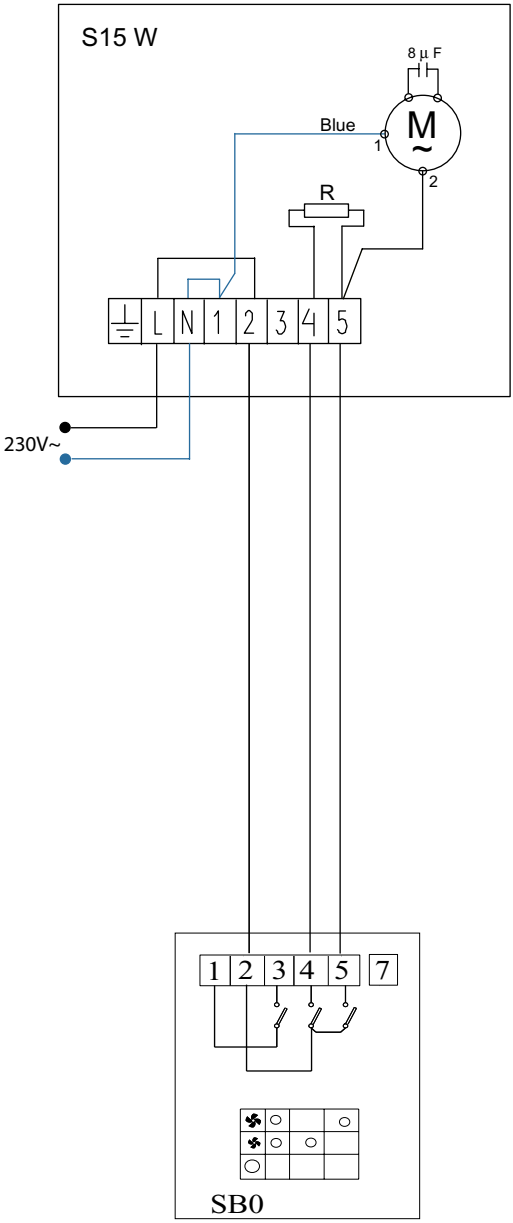
S15 W

Data

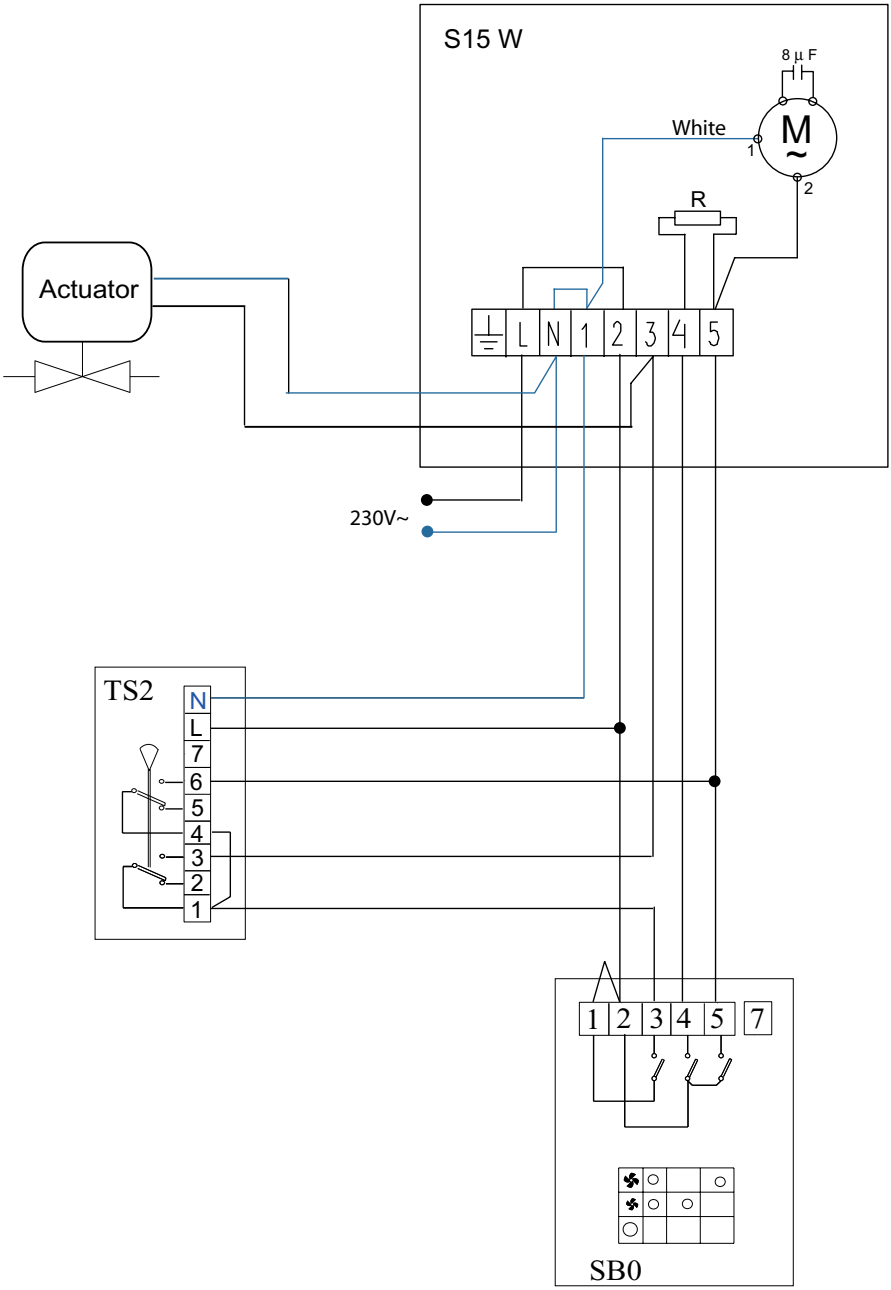
Type		S15-100W	S15-150W
Output 82 / 71°C	[kW]	18,6	27,8
Voltage, motor	[V]	230V~	230V~
Current, motor	[A]	2,3	2,9
Airflow	[m³/h]	1520/2200	1870/3300
Sound level*[1)]	[dB(A)]	54 / 62	58 / 64
Weight	[kg]	29	38
Length	[mm]	1070	1570
Protection class		IP 21	IP 21

*1) Conditions: Distance to the unit 5 metres. Directional factor: 2. Equivalent absorption area: 200m².

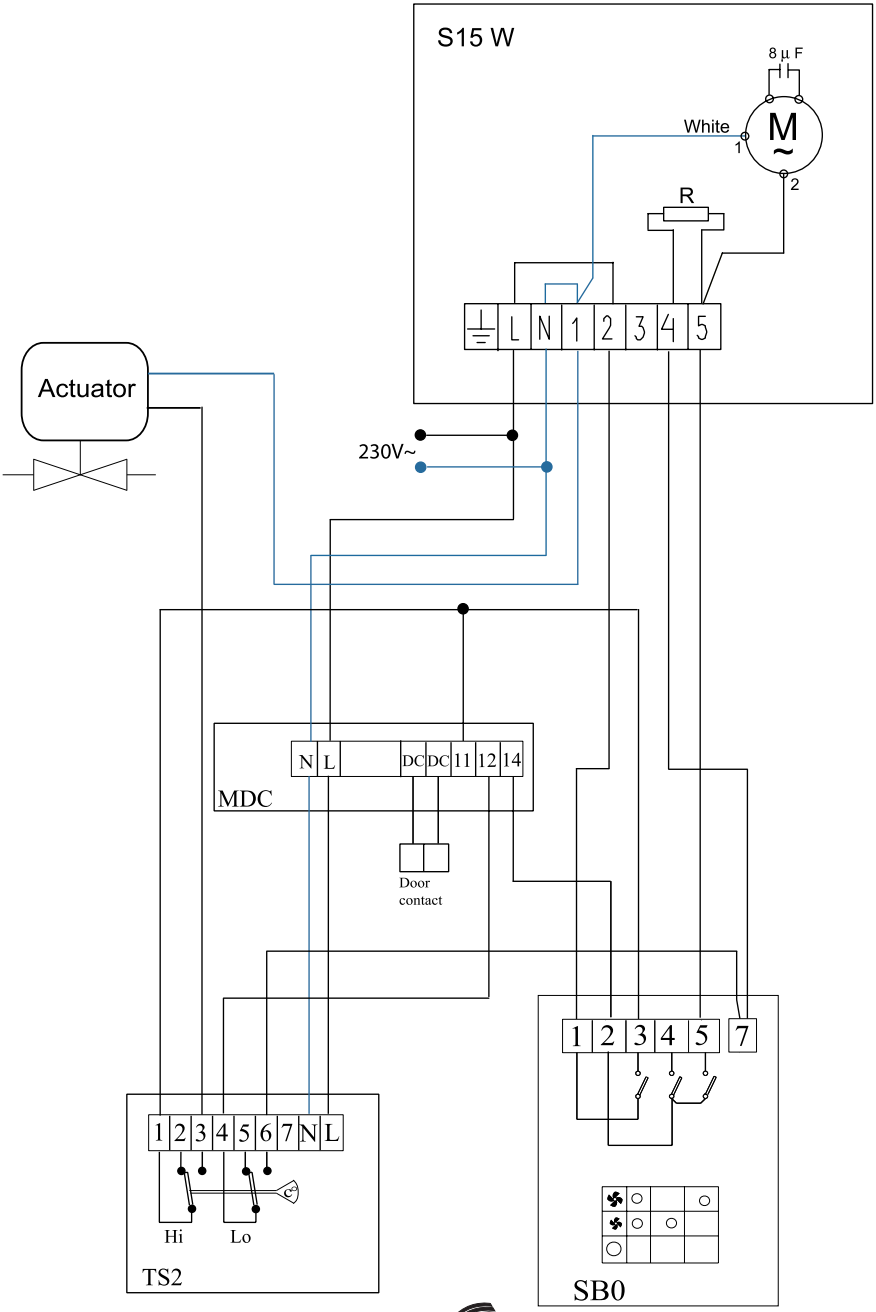
S15 W



S15 W


S15 W
8 µ F
White
M
1
2
R
Actuator
L
N
1
2
3
4
5
230V~
TS2
N
L
7
6
5
4
3
2
1
1
2
3
4
5
7
SB0

S15 W


S15 W
8 µ F
White
M
1
2
R
L N 1 2 3 4 5
Actuator
230V~
N L DC DC 11 12 14
MDC
Door
contact
1 2 3 4 5 6 7 N L
Hi
Lo
C
TS2
1 2 3 4 5 7
SB0

S15 W

Water 130/65°C

			Air in = +15°C			Air in = +20°C		
Typ	**Fan-speed**	**Air-flow [m³/h]**	**Power [kW]**	**Air out [°C]**	**Water flow [l/s]**	**Power [kW]**	**Air out [°C]**	**Water flow [l/s]**
S15-100W	max	2200	20,6	42	0,07	18,9	45	0,06
	min	1520	16,7	47	0,06	15,4	50	0,05
S15-150W	max	3300	31,5	44	0,11	29,0	47	0,10
	min	1870	23,6	52	0,08	21,8	54	0,08

Water 90/70°C

			Air in = +15°C			Air in = +20°C		
Typ	**Fan-speed**	**Air flow [m³/h]**	**Power [kW]**	**Air out [°C]**	**Water flow [l/s]**	**Power [kW]**	**Air out [°C]**	**Water-flow [l/s]**
S15-100W	max	2200	18,9	40	0,22	17,3	43	0,20
	min	1520	15,5	44	0,18	13,9	47	0,16
S15-150W	max	3300	28,4	41	0,33	26,0	44	0,31
	min	1870	20,9	48	0,24	19,2	50	0,22

Water 82/71°C

			Air in = +15°C			Air in = +20°C		
Typ	**Fan-speed**	**Air flow [m³/h]**	**Power [kW]**	**Air out [°C]**	**Water flow [l/s]**	**Power [kW]**	**Air out [°C]**	**Water flow [l/s]**
S15-100W	max	2200	18,6	39	0,40	17,0	42	0,36
	min	1520	14,8	44	0,32	13,6	46	0,29
S15-150W	max	3300	27,8	41	0,60	25,4	44	0,55
	min	1870	20,3	47	0,44	18,6	49	0,40

Water 80/70°C

			Air in = +15°C			Air in = +20°C		
Typ	**Fan-speed**	**Air flow [m³/h]**	**Power [kW]**	**Air out [°C]**	**Water flow [l/s]**	**Power [kW]**	**Air out [°C]**	**Water-flow [l/s]**
S15-100W	max	2200	18,2	39	0,43	16,6	42	0,39
	min	1520	14,5	43	0,34	13,2	46	0,31
S15-150W	max	3300	27,2	40	0,64	24,8	43	0,59
	min	1870	19,9	46	0,47	18,1	49	0,43

Water 80/60°C

			Air in = +15°C			Air in = +20°C		
Typ	**Fan-speed**	**Air flow [m³/h]**	**Power [kW]**	**Air out [°C]**	**Water flow [l/s]**	**Power [kW]**	**Air out [°C]**	**Water-flow [l/s]**
S15-100W	max	2200	15,5	35	0,18	13,9	38	0,16
	min	1520	12,5	39	0,14	11,2	42	0,13
S15-150W	max	3300	23,4	37	0,27	21,0	40	0,25
	min	1870	17,3	42	0,20	15,5	45	0,18

S15 W

Water 70/40°C

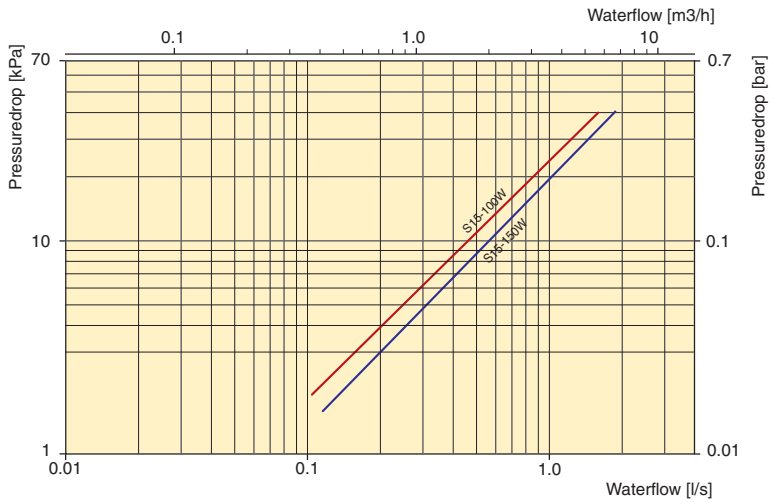
			Air in = +15°C			Air in = +20°C		
Typ	**Fan-speed**	**Air-flow [m³/h]**	**Power [kW]**	**Air out [°C]**	**Water flow [l/s]**	**Power [kW]**	**Air out [°C]**	**Water flow [l/s]**
S15-100W	max	2200	9,2	27	0,07	7,6	30	0,06
	min	1520	7,5	30	0,05	6,2	32	0,04
S15-150W	max	3300	14,2	28	0,11	11,8	31	0,09
	min	1870	10,7	32	0,08	8,9	34	0,07

Water 60/40°C

			Air in = +15°C			Air in = +20°C		
Typ	**Fan-speed**	**Air flow [m³/h]**	**Power [kW]**	**Air out [°C]**	**Water flow [l/s]**	**Power [kW]**	**Air out [°C]**	**Water-flow [l/s]**
S15-100W	max	2200	8,7	26	0,10	7,1	29	0,08
	min	1520	7,1	29	0,08	5,8	31	0,06
S15-150W	max	3300	13,3	27	0,15	10,9	30	0,13
	min	1870	10,0	31	0,11	8,2	33	0,09

Water 55/35°C

			Air in = +15°C			Air in = +20°C		
Typ	**Fan-speed**	**Air flow [m³/h]**	**Power [kW]**	**Air out [°C]**	**Water flow [l/s]**	**Power [kW]**	**Air out [°C]**	**Water flow [l/s]**
S15-100W	max	2200	7,0	24	0,08	5,4	27	0,06
	min	1520	5,7	26	0,06	4,4	29	0,05
S15-150W	max	3300	10,8	25	0,12	4,4	28	0,05
	min	1870	8,1	28	0,09	6,4	30	0,07



The pressure drop is refering to the water temperature 70°C, (PVV 80/60).
Correction factor K for other temperatures.

Mean water temp. °C	40	50	60	70	80	90
K	1,10	1,06	1,03	1,00	0,97	0,93

SHEARFLOW

Assembly and operating instructions

General recommendations
Carefully read this instruction manual before installation and use of the S15 unit. Keep these instructions in a safe place for future reference.

Application area
The S15 air curtains are intended for stationary/ permanent installation above entrances and smaller doors with a height from 2 up to 4.5 metres, but can also be used for industrial heating and drying. The S15 has been designed for connection to a low-pressure hot water supply. The unit can be mounted above a doorway or recessed into a ceiling.
Protection class: IP21

Operation
The air is drawn in at the front of the unit and blown out at high velocity across the doorway, providing a protective air shield. The air shield minimises cold draughts and reduces heat loss through open doorways. For best efficiency, the air curtain(s) should cover the whole width of the opening.
The air director/grille is adjustable and is normally angled outwards (5-10°) to achieve the best protection.
The airflow can be regulated by use of the fan speed selector (See accessories)
The efficiency of the air curtain(s) depends on the air temperature and pressure differences across the doorway and any wind pressure.
NOTE! Negative pressure in the building considerably reduces the efficiency of the air curtain. Ventilation should therefore be balanced.

Mounting
The units may only be installed horizontally over a doorway with the air-stream directed downwards.
For the protection of wider doorways, several units can be mounted next to each other.
For optimal performance it is recommended that a minimum gap of 100mm is maintained above the air-curtain. Regarding other dimensions and minimum assembly distances, please see page 2.

The air curtains should be installed as close as posible to the top of the door for maximum effectiveness (see Figure 2).
Intake and outlet grilles must be completely free from obstruction.
If multiple modules are to be used in one application (Figure 4) the knock-outs shown in Figure 5 must be removed to secure the interlocking faces. Refer to instructions in the linking kit for further details on mounting and wiring.

Fitted on the wall or beam

1 Remove the air intake grille by releasing locking screws accessible through holes in top panel, see Figure 3, arrow C and pushing vanes in the direction of arrow A. Lift the grille forward out of the casing. Unscrew the lower panel fasteners B and remove the lower panel from the air curtain.

2 Hold the air curtain in position and mark the wall through the holes in the casing detailed in Figure 1. Drill and fix suitable wall plugs. Insert the top two mounting screws leaving a 3mm gap between the screw head and the wall. Hang the module on these screws and fasten the central fixing screws to secure.

3 The S15 can be bolted direct to the wall/beam. For this application, there are 4 M8 threads on the rear of the unit, see Figure 1.

Suspended from the ceiling
For suspended fixing there are 4 M8 threads on the top of the unit, see Figure 1.

Electrical installation
The air curtain(s) should only be wired by a competent electrician, and in accordance with the latest edition of IEE wiring regulations.
1. Unscrew the lower panel fasteners and remove the lower panel from the air curtain (Figure 3).

2. The switch cable should be wired to the control terminal in the air curtain through one of the knock-outs in the top case.
If considering a multiple module installation, connect the control to one of the end modules using cross-over wiring. Further details can be found in the linking kit.

Wiring diagram for installation of the air curtain with accessories, see page 5-7.
NOTE: The cable-glands used must guarantee the protection class requirements!

Water connection
The air curtain has an aluminium finned heating coil (fin distance 2 mm) with copper tubes suitable for connection to a closed water heating system.
The heating coil must not be connected to a mains pressure water system or an open water system.
The water pipes (DN20 - 3/4", inside thread) are connected are at the left hand side
(when facing the air curtain) on top of the unit, see Figure 1. The installation should be carried out by a competent installer.
NOTE! Be careful while connecting the pipes to prevent pipe damage and water leakage.
Prior to use, the pipe system should be vented. An air release valve should be connected on a high point in the pipe system.
It is also recomended that a drain valve is fitted in the supply pipe-work. This should be mounted on the outside of the S15 unit. *Air release and drain valves are not included in the heating coil.*

Overheating
All motors are equipped with an integral thermal safety cut-out. If the motor temperature rises too high this will stop the air curtain.
The cut-out will automatically reset when the motor temperature has returned to within the motor's operating limits.

Maintenance
To ensure performance and reliability of the air curtain, inspection and cleaning should be carried out regularly.
Before removing any panels, the power supply must first be disconnected.

Safety
Do not cover surfaces of the air curtain or obstruct air intake grille, as this can cause excessive temperatures that can be hazardous and may cause safety cut-outs to operate.

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