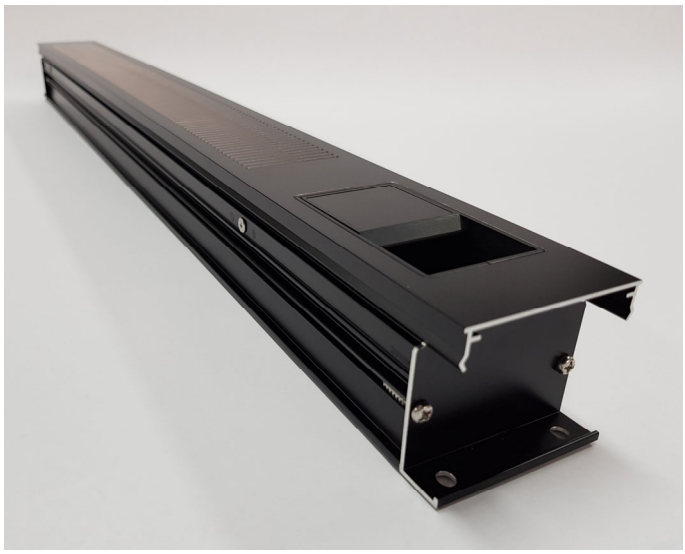
# PROCTOR VENTIENT trickle ventilation system SCW-SH Trickle Vent

*with wind dampening and passive temperature sensing flow control*


## Product Description

The Ventient SCW-SH is precision manufactured aluminium trickle vent that can be accommodated into a wide range of curtain wall and window frames.

The Ventient passive shape memory technology, without electric power, sensors or human intervention, automatically controls ventilation flow dependent on ambient temperatures, optimising the benefits of passive ventilation. Ventient SCW-SH also incorporates a passive wind dampener to manage water ingress and drafts normally associated with high wind gusts.



## Applications

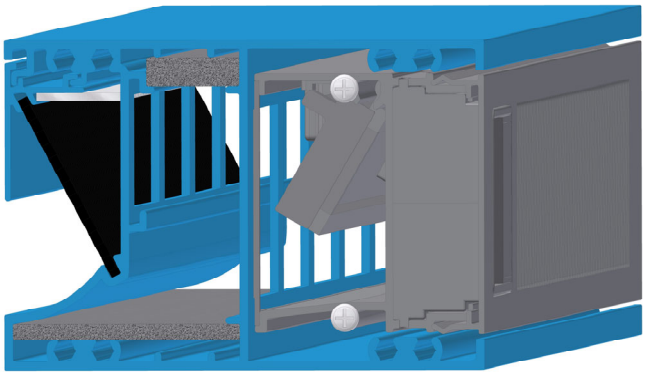
Improvements in construction create buildings that are more airtight than previously, with the result that infiltration or leakiness is no longer providing a pathway for make-up air for exhaust systems.

Although many building are complying with building code requirements by having sufficient openable windows, changing lifestyle patters, concerns about noise and security and generational differences mean that ventilation from open windows tends to be infrequent.

Unlike conventional systems such as operable windows or louvres, Proctor Ventient SCW-SH can get on with the job of providing fresh air circulation regardless of occupancy.

As part of the total ventilation system Proctor Ventient can provide continuous ventilation to spaces even if they are unoccupied and is perfect for student accommodation, hotels, age care, healthcare and educational facilities.

Ventient is an ideal solution for residential buildings such as modern air tight homes and medium or high rise developments, as modern lifestyles mean that occupants are unable to mange purge ventilation and often return home to a stuffy environment.



## Installation

The Ventient SCW-SH is installed into the Ventient SH head, transom or sill in accordance with the install guide. Installation is also possible into curtain wall or other custom designed window frames. The vent should be completely serviceable from the interior.

## Exhaust Make-up in Lieu of Supply

Where it is not possible to meet the code requirements for natural ventilation, or where the design preference is for a specific air change rate and 24 hour provision of fresh outside air without leaving windows open, Ventient, in conjunction with low energy, mechanical extract ventilation can provide or contribute to supply ventilation as required when calculated in accordance with AS1668.2.

## General Exhaust Make-Up Air

AS1668.2 draws to the attention of designers that increased air-tightness of modern buildings requires consideration of sources of make-up air. Make-up air drawn through gaps and service penetrations does not meet the requirements of Clause 2.3 within the standard and can lead to the loss of amenity in the enclosure.

Ventient SCW-SH could be an acceptable permanent natural ventilation opening as required in Clause 2.3.

## Sample Specification

Install Proctor Ventient SCW-SH Trickle Vent wth shape memory alloy thermal actuator in accordance with the user guide.

Device Length: _____mm (L1 from figure 1)
Cover length: L2 _____mm & L3 ____mm (see figure 1)
Optional features: (from table 2)
Product Code: VENTIENT SCW-SH
Ventilation volume at ⊿P12Pa: (from PQ data)
Colour: (from table 1)
SMA Minimum Temperature: 12°C (other temperatures available)



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| Table 1 Performance | |
|---|---|
| Open area (A) | 65cm² - 280cm² |
| Effective open area (αA) | 18.9cm² - 88.3cm² |
| Air Tightness (when closed)[1] | 1.58 m³/hr.m² at 100Pa |
| Water tightness (when closed)[2] | 700Pa |
| Water tightness (when open with damper activation)[2] | 700Pa |
| Damper activation[3] | 200Pa |
| Acoustic Ratings[4] | Please contact for details |
| **Standard Sizes and colours** | |
| Length (L1) | 500 mm ~ 1,500mm |
| Dimensional tolerance (L1) | ± 1 mm |
| Standard available colours for main unit in gloss or matt anodized finish. Removable interior face cover also available in mill finish. | |

Silver Black

| Table 2 Optional Features | |
|---|---|
| Shape Memory Alloy (SMA) Thermal Actuator<br>- Fully Open<br>- Minimum Open (typically 33%)<br>Other set point are available | <br>>18°C<br><12°C<br>Other set point are available |
| Mesh to resist vermin, insects and windblown material. | Available with max. 2mm aperture.[5] |
| Air filter (average arrestance) | Type B (18%) |
| Manual Operation<br>- Closable<br>- Openable<br>Left side and right side lever options available. | <br>Standard<br>Standard (Auto mode) |
| Intumescent fire barrier | Available option |
| Acoustic attenuation | Available option[4] |
| Maintenance | Interior face cover can be removed from the interior to clean the device and filter. |
| Constant air flow dampening | Available as standard. |

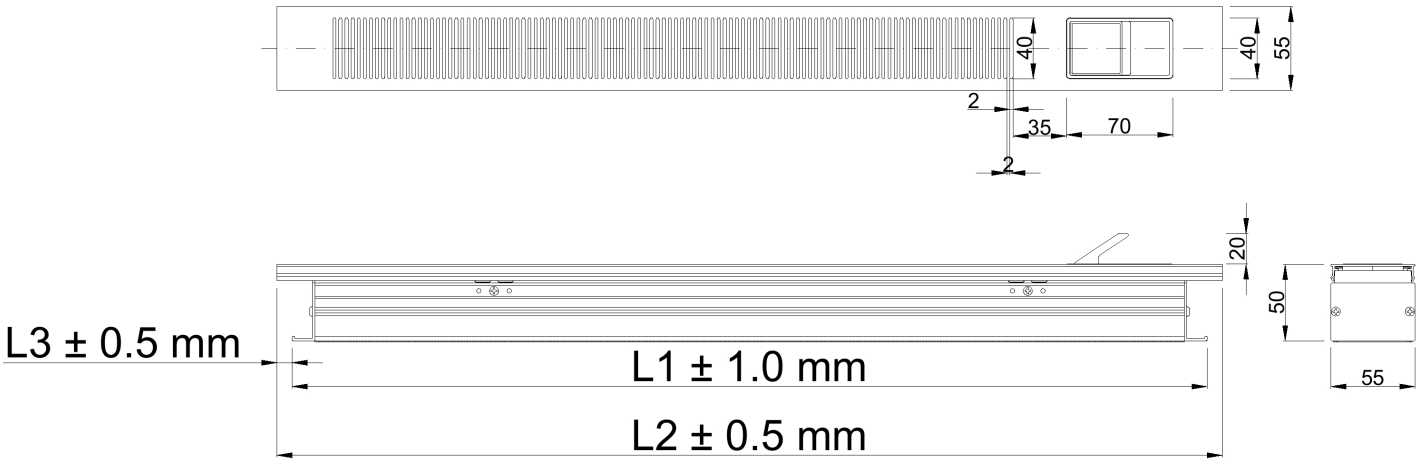


Figure 1: Ventient SCW-SH dimensions

Notes
[1] Internal testing.
[2] Internal testing. No leakage when tested at a constant 700Pa for 15 minutes.
[3] Dampener pressure activation can be custom set
[4] Acoustic attenuation options are available with the Ventient SH extrusion and optional internal covers.
[5] Incorporated into Ventient SH extrusion. Otherwise the location of mesh depends on installation but is usually toward the external face of the fixing frame.

*Note that the degree of opening may not always reflect the exterior temperature, as this will periodically differ from the ambient temperature where the SMA actuator is located closer to the interior. There is also a lag in adjustment to sharp changes in temperature.

The details supplied here are based upon good practice and currently available information. Advice regarding this product should be taken as a guide only. We reserve the right to change product specification without notice so please refer to our website for the latest version of this document. Please contact us to discuss your project and any technical enquires.

# PROCTOR VENTIENT SCW-SH

trickle ventilation system

*Trickle Vent with wind dampening and passive thermal actuator*

PQ Data

Proctor Ventient SCW-SH

| Length (mm) | Ventilation Open Area cm² | Fully Open (with Type B filter) | | | | |
|---|---|---|---|---|---|---|
| | | Effective Open Area (αA) cm² | Ventilation Volume (Q) m³/hr | | Ventilation Volume (Q) l/s | |
| | | | ⊿P = 12Pa | | ⊿P = 12Pa | |
| 500 | 65.0 | 18.9 | 31.3 | 27.8 (⊿P/9.8) $^{0.59}$ | 8.7 | 7.7 (⊿P/9.8) $^{0.59}$ |
| 600 | 86.0 | 25.6 | 42.0 | 37.5 (⊿P/9.8) $^{0.56}$ | 11.7 | 10.4 (⊿P/9.8) $^{0.56}$ |
| 700 | 108.0 | 32.2 | 53.0 | 47.3 (⊿P/9.8) $^{0.56}$ | 14.7 | 13.1 (⊿P/9.8) $^{0.56}$ |
| 800 | 130.0 | 38.8 | 63.8 | 57.0 (⊿P/9.8) $^{0.56}$ | 17.7 | 15.8 (⊿P/9.8) $^{0.56}$ |
| 900 | 151.0 | 45.5 | 74.8 | 66.8 (⊿P/9.8) $^{0.56}$ | 20.8 | 18.6 (⊿P/9.8) $^{0.56}$ |
| 1,000 | 173.0 | 52.1 | 85.7 | 76.5 (⊿P/9.8) $^{0.56}$ | 23.8 | 21.3 (⊿P/9.8) $^{0.56}$ |
| 1,100 | 194.0 | 58.7 | 96.0 | 86.2 (⊿P/9.8) $^{0.53}$ | 26.7 | 23.9 (⊿P/9.8) $^{0.53}$ |
| 1,200 | 216.0 | 65.4 | 106.9 | 96.0 (⊿P/9.8) $^{0.53}$ | 29.7 | 26.7 (⊿P/9.8) $^{0.53}$ |
| 1,300 | 238.0 | 72.0 | 117.7 | 105.7 (⊿P/9.8) $^{0.53}$ | 32.7 | 29.4 (⊿P/9.8) $^{0.53}$ |
| 1,400 | 259.0 | 78.6 | 128.6 | 115.5 (⊿P/9.8) $^{0.53}$ | 35.7 | 32.1 (⊿P/9.8) $^{0.53}$ |
| 1,500 | 280.0 | 85.3 | 139.4 | 125.2 (⊿P/9.8) $^{0.53}$ | 38.7 | 34.8 (⊿P/9.8) $^{0.53}$ |

| Length (mm) | Ventilation Open Area cm² | Fully Open (without filter) | | | | |
|---|---|---|---|---|---|---|
| | | Effective Open Area (αA) cm² | Ventilation Volume (Q) m³/hr | | Ventilation Volume (Q) l/s | |
| | | | ⊿P = 12Pa | | ⊿P = 12Pa | |
| 500 | 65.0 | 20.6 | 33.8 | 30.2 (⊿P/9.8) $^{0.56}$ | 9.4 | 8.4 (⊿P/9.8) $^{0.56}$ |
| 600 | 86.0 | 27.3 | 44.9 | 40.1 (⊿P/9.8) $^{0.56}$ | 12.5 | 11.1 (⊿P/9.8) $^{0.56}$ |
| 700 | 34.1 | 34.9 | 55.7 | 50.0 (⊿P/9.8) $^{0.53}$ | 15.5 | 13.9 (⊿P/9.8) $^{0.53}$ |
| 800 | 130.0 | 40.9 | 66.7 | 59.9 (⊿P/9.8) $^{0.53}$ | 18.5 | 16.6 (⊿P/9.8) $^{0.53}$ |
| 900 | 151.0 | 47.7 | 77.8 | 69.9 (⊿P/9.8) $^{0.53}$ | 21.6 | 19.4 (⊿P/9.8) $^{0.53}$ |
| 1,000 | 173.0 | 54.4 | 88.8 | 79.8 (⊿P/9.8) $^{0.53}$ | 24.7 | 22.2 (⊿P/9.8) $^{0.53}$ |
| 1,100 | 194.0 | 61.2 | 99.9 | 89.7 (⊿P/9.8) $^{0.53}$ | 27.7 | 24.9 (⊿P/9.8) $^{0.53}$ |
| 1,200 | 216.0 | 68.0 | 111.0 | 99.7 (⊿P/9.8) $^{0.53}$ | 30.8 | 27.7 (⊿P/9.8) $^{0.53}$ |
| 1,300 | 238.0 | 74.7 | 122.0 | 109.6 (⊿P/9.8) $^{0.53}$ | 33.9 | 30.4 (⊿P/9.8) $^{0.53}$ |
| 1,400 | 259.0 | 81.5 | 133.0 | 119.5 (⊿P/9.8) $^{0.53}$ | 37.0 | 33.2 (⊿P/9.8) $^{0.53}$ |
| 1,500 | 280.0 | 88.3 | 144.2 | 129.5 (⊿P/9.8) $^{0.53}$ | 40.0 | 36.0 (⊿P/9.8) $^{0.53}$ |

**NOTES**

1. The integration into the curtain wall or window extrusions will impact on air flow performance depending on shape and dimension of the air flow pathway, the inclusion of acoustic materials,, intumescent fire barrier materials and exterior ember and insect screens. Please contact PGA for air flow data when the Ventient SCW-NS is in the 33% open position or if another configuration is required.
2. Effective open area (αA) is calculated in-house in Japan using apparatus conforming to JISC 9603.
3. The use of local air cleaning devices in a room can reduce minimum outdoor air requirements (as per AS1668.2 Appendix D) thus reducing required outdoor air quantities via the trickle vent.
4. Seek advice from gas appliance suppliers regarding use of open flued appliances in any enclosures subject to negative pressures.
5. Advice relating specifically to health care circumstances should be sought for applications intended for health care facilities.
6. Please consult the user guide for instructions on filter access and maintenance.
7. Where there are specific noise and vibration isolation requirements, seek advice from an acoustic and vibration consultant. Further data is available.
8. The designer must consider the position of the openings with respect to contamination, wind effects and uniformity of distribution as outlined in AS1668.2