SWIRL X FLOW CONDITIONER
FOR TSI MODEL 8380 ACCUBALANCE® AIR CAPTURE HOOD

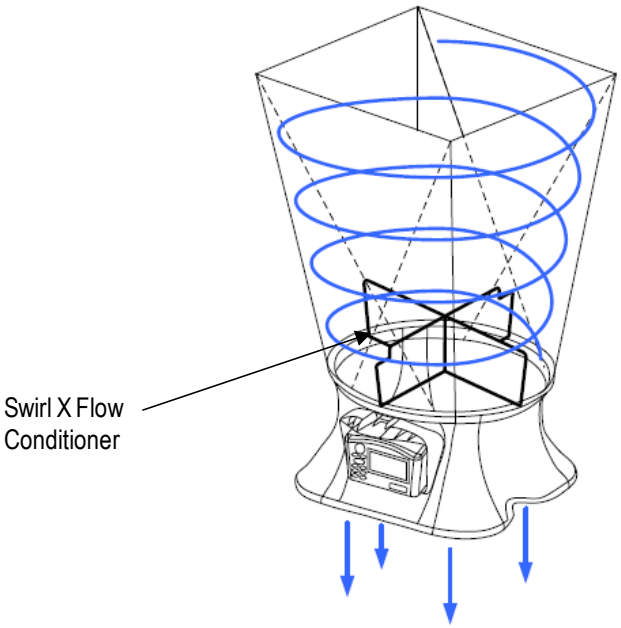
APPLICATION NOTE TSI-153

Description

The Swirl X Flow Conditioner significantly reduces the negative effects turbulent airflows have on the measurement accuracy of pressure-based capture hoods. The Swirl X Flow Conditioner creates a more uniform flow pattern within the hood and is ideally suited for Swirl or Twist-type supply air diffusers.

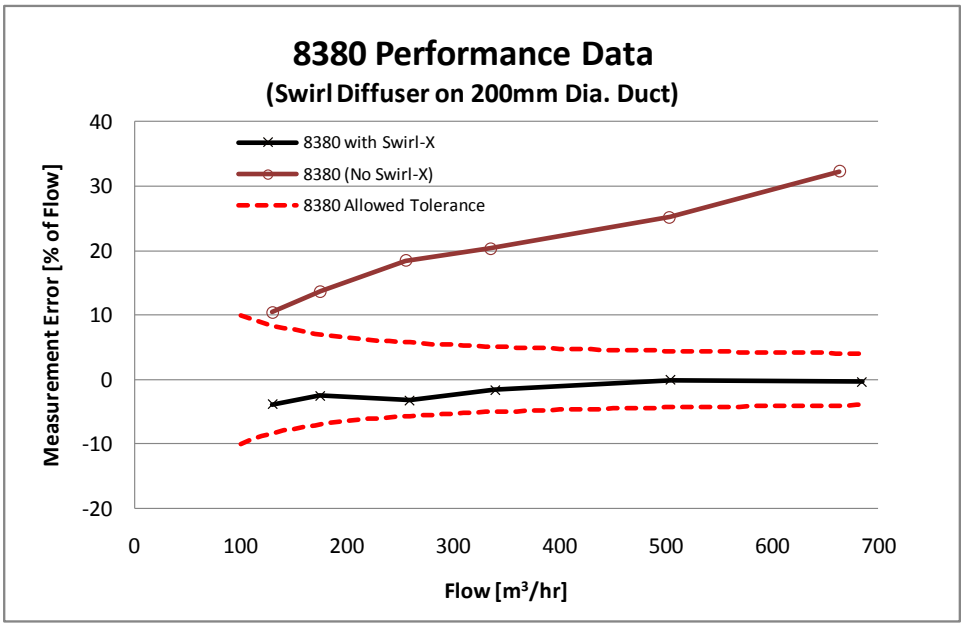
Swirl or Twist diffusers, their associated ductwork and HVAC components are designed to deliver a volume of air to the targeted space with movement that entrains or mixes with the room air and increases optimal temperature uniformity and minimal sensible draft within the so-called “occupied zone”.

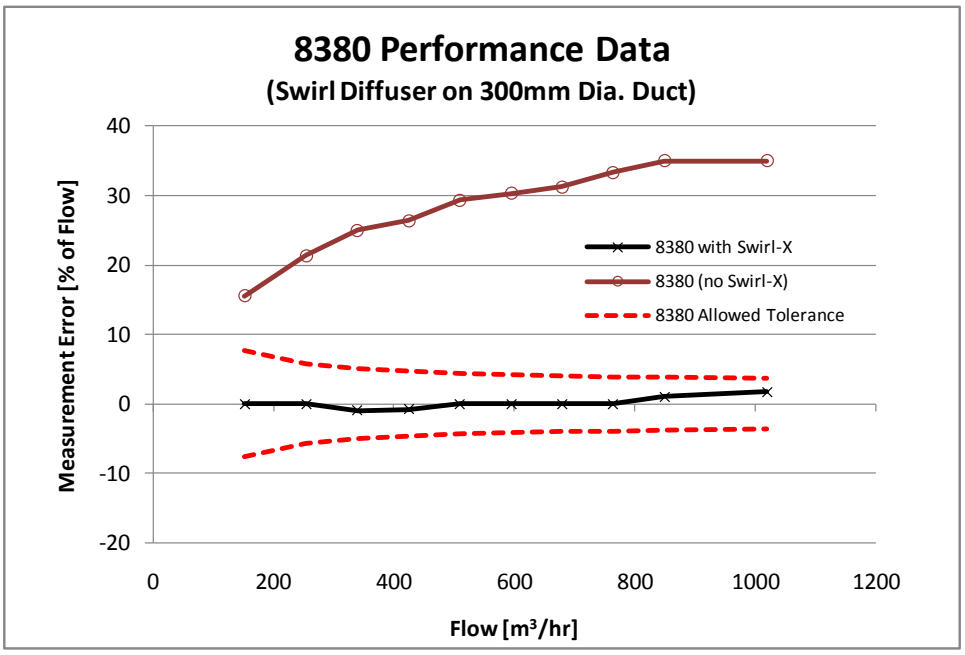
Air flowing through Swirl or Twist type diffusers has traditionally caused significant measurement errors in capture hoods. This is a remnant of the air flow pattern, which swirls around the hood and emerges in a highly uneven distribution across the sensing manifold of a capture hood. Measurement errors up to and exceeding 40% of flow can result, *unless a flow conditioner is used inside the capture hood*.



Performance Data

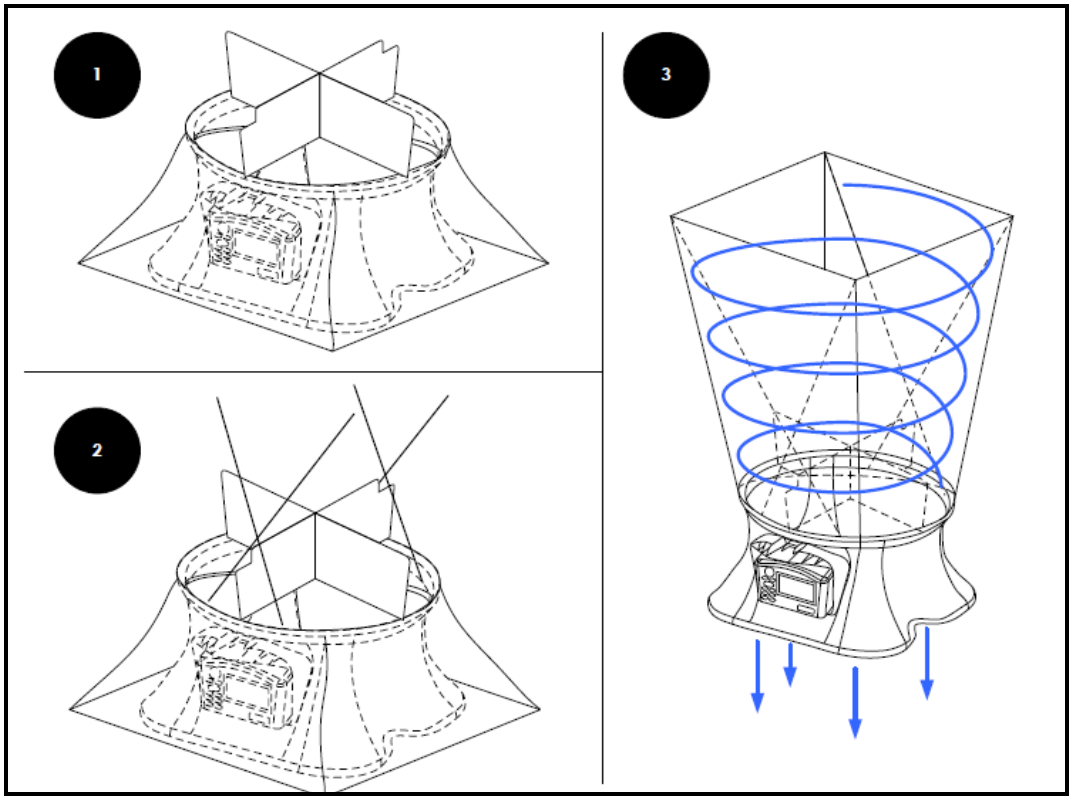
Performance data obtained in HVAC test laboratory using two high-accuracy flow stations as flow measurement standards. The flow stations were mounted in sealed ductwork upstream of the tested Swirl Diffusers.





Installation and Usage

1. Put the two pieces together and place it in the base as shown below (it will sit on top of the flange of the base).
2. Install the support rods and 2’ x 2’ (610 mm x 610 mm) frame/fabric.
3. When set up, use hood as normal. There is no need to change K-factors or access any special menus for use.



UNDERSTANDING, ACCELERATED

TSI Incorporated – Visit our website **www.tsi.com** for more information.

USA	**Tel:** +1 800 874 2811	**India**	**Tel:** +91 80 67877200
UK	**Tel:** +44 149 4 459200	**China**	**Tel:** +86 10 8251 6588
France	**Tel:** +33 4 91 11 87 64	**Singapore**	**Tel:** +65 6595 6388
Germany	**Tel:** +49 241 523030		

kenelec scientific
measuring up

Distributed by:
Kenelec Scientific Pty Ltd
1300 73 22 33
sales@kenelec.com.au
www.kenelec.com.au

TSI-153 Rev. C

Printed in U.S.A.