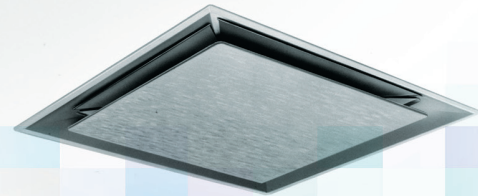


Variable Air Volume Systems Optimized



Square Therma-Fuser™



Sustainability

Unlike conventional building controls, Therma-Fuser™ thermally-powered diffusers have no complicated electronics or pneumatics, and as a result require no maintenance. We are so confident of their reliability that we warrant them for 10 years.

Comfort

With each Therma-Fuser™ diffuser acting as an individual VAV zone of control, every area of a building can have separate, optimized temperature settings. No over cooling or over heating of the occupied space will occur. Therma-Fuser™ diffusers also provide a constant discharge velocity with comfort benefits of higher throws, no dumping, better room air movement and uniform temperature distribution.

Energy Savings

Therma-Fuser™ diffusers allow for all low-pressure system designs. No energy is required to operate the diffuser's controls. As Green Building Council members and Energy Star partners, Acutherm is proud to produce energy efficient VAV diffusers that prevent over cooling and over heating — producing 15%-47% energy savings when compared to traditional VAV Box Systems.

**PROVEN
VERIFIABLE
ENERGY SAVINGS OF 15%-47%
OVER TRADITIONAL HVAC SYSTEMS**

Square VAV Diffusers

TF 2x2 Diffuser

(24" x 24" / 600 x 600 mm)

The TF Therma-Fuser™ Diffuser is the most widely specified thermally powered VAV diffuser in the world with more than one million installed. Four blade dampers provide, superior throw with 66 linear in. of variable discharge area.

types available¹ TF -HC / -CW / -C / -D / -RA

inlet diameter 150 / 200 / 250 / 300 mm

pressure ranges 12 to 62 Pa

air volumes 45 to 340 l/s

throw² 1.7/1.2/0.9 to 5.1/4.2/3.6 m

noise³ <15 to 34 NC



HOW IT WORKS

Acutherm's Therma-Fuser™ diffusers are ceiling diffusers with built in room thermostats and dampers for varying the air volume. The dampers are continuously adjusted by thermostat/actuators that are both room temperature sensors and damper motors. Non electric thermostat/actuators are brass cylinders containing a petroleum distillate wax that melts when heated and expands at precise temperatures, like those in the aerospace industry, positioning the damper in a proportional manner. Thermostat/actuators open and close the dampers to vary the volume of air flow (warm or cold) into the room in response to room temperature. Room temperature is measured by inducing a sample of air from the room across the thermostat. When supply air is warm, the Therma-Fuser diffuser operates in the heating mode and the dampers open on a drop in room temperature. When the supply air is cold, the diffuser operates in the cooling mode and the dampers open on a rise in room temperature. Separate room temperature set points for heating and cooling are adjusted by aligning the indicators along °F or °C temperature scales.

LT 2x2 Diffuser

(24" x 24" / 600 x 600 mm)

Designed specifically for low temperature applications (supply air temperature as low as 40°F/4°C).

types available¹ LT -HC / -CW / -C

inlet diameter 150 / 200 mm

pressure ranges 25 to 62 Pa

air volumes 65 to 170 l/s

throw² 2.5/1.6/1.3 to 4.0/3.0/2.4 m

noise³ <15 to 34 NC



ST 2x2 Diffuser

(24" x 24" / 600 x 600 mm)

Easy adjustment minimum flow dial. One stop lever for balancing.

types available¹ ST -HC / -C

inlet diameter 6 / 8 / 10 / 12 in 150 / 200 / 250 / 300 mm

pressure ranges 0.05 to 0.25 in wg 12 to 62 Pa

air volumes 105 to 740 CFM 50 to 350 l/s

throw² 3/1/<1 to 13/11/9 ft 0.9/0.3/<0.3 to 4.0/3.4/2.7 m

noise³ <15 to 38 NC <15 to 38 NC



VA 2x2 Diffuser

(24" x 24" / 600 x 600 mm)

For systems with decoupled ventilation (DOAS), ASHRAE 62 compliant, the VA diffuser separately introduces the required outside air (OA) and primary air to each space through each diffuser.

types available¹ VA -HC / -CW / -C

inlet diameter 150 / 200 / 250 / 300 mm

pressure ranges 12 to 62 Pa

air volumes 45 to 275 l/s

throw² 1.7/1.2/0.9 to 4.6/3.6/3.0 m

noise³ <15 to 40 NC



STR ROUND 2' Diffuser

(24" x 24" / 600 x 600 mm)

Easy adjustment minimum flow dial. One stop lever for balancing.

types available STR -HC / -C

inlet diameter 150 / 200 / 250 / 300 mm

pressure ranges 12 to 62 Pa

air volumes 45 to 340 l/s

throw 0.9 / 0.3 / <0.3 to 3.3 / 2.4 / 1.8 m

noise 22 to 45 NC



TK 1x1 Diffuser

(12 5/8" x 12 5/8" / 320 x 320 mm)

Specially designed for small task conditioning. Four-blade damper provides superior throw.

types available¹ TK -HC / -C / -D / -RA

inlet diameter 150 mm

pressure ranges 12 to 62 Pa

air volumes 55 to 125 l/s

throw² 2.5/1.7/1.2 to 4.0/3.0/2.5 m

noise³ <15 to 37 NC



TN 1x1 Diffuser

(12 5/8" x 12 5/8" / 320 x 320 mm)

Lower first cost of equipment and installation. VAV cooling with warm-up option.

types available¹ TN -CW / -C / -D

inlet diameter 150 mm

pressure ranges 12 to 62 Pa

air volumes 55 to 145 l/s

throw² 1.7/1.6/1.2 to 4.6/3.6/3.0 m

noise³ <15 to 39 NC

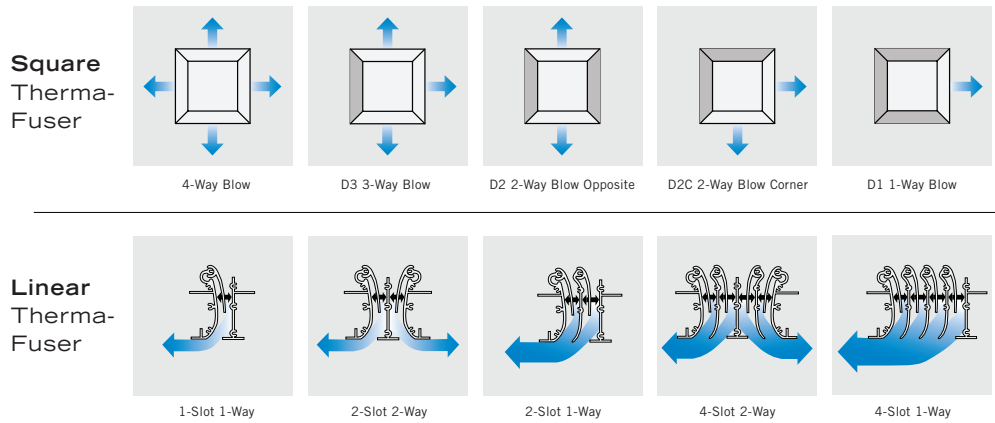


BENEFITS:

- Superior air distribution
- Lowest cost per zone of control
- Lowest energy VAV terminal
- Low to no maintenance
- No electrical connection required
- 10-year warranty
- Easily adapts to office changes
- Blow patterns

VAV Diffuser Blow Patterns

Custom air blow patterns are available for most models. Contact the factory for additional information.



TL Linear VAV Diffuser

Elegant linear design. VAV Cooling with Warm-up option.

types available ¹	TL -CW / -C / -D / -RAP / -RAD
lengths	600 / 900 / 1200 / 1500 mm
slots	multiple slots available
pressure ranges	12 to 62 Pa
air volumes	20 to 455 l/s
throw ²	1.2/0.9/0.6 to 12.2/10.0/7.6 m
noise ³	<15 to 42 NC



TLC Linear VAV Diffuser

Continuous linear slot VAV diffusers with streamlined aluminum extrusions that can be joined and mounted to provide a slim, continuous architectural shape.

types available ¹	TLC -CW / -C / -D / -RAP / -RAD
lengths	600 / 900 / 1200 / 1500 mm
slots	multiple slots available
pressure ranges	12 to 62 Pa
air volumes	20 to 455 l/s
throw ²	1.2/0.9/0.6 to 12.2/10.0/7.6 m
noise ³	<15 to 42 NC



TLW Linear VAV Diffuser

Sidewall linear slot VAV diffuser. Specially designed for installation just below the ceiling in a narrow soffit, the sidewall Therma-Fuser™ diffuser is the solution when there is little or no space above the ceiling.

types available ¹	TLW -CW / -C / -D / -RAP / -RAD
lengths	600 / 900 / 1200 / 1500 mm
slots	multiple slots available
pressure ranges	12 to 62 Pa
air volumes	20 to 425 l/s
throw ²	1.2/0.9/0.6 to 5.1/4.6/3.6 m
noise ³	<15 to 39 NC

