

PERFORMANCE NOTES FOR SUPPLY GRILLES AND REGISTERS

Throw, Spread and Drop

The isovel diagrams shown below, illustrate in plan view, the relationship of horizontal spread to throw for three standard vertical blade deflections and represent a typical high side-wall supply outlet. The isovels (throw values) are for the cataloged terminal velocities of 150, 100 and 50 fpm.

Cataloged data, in accordance with the test code, is with the grille mounted 9" (229) below the ceiling and benefiting from the ceiling coanda effect under isothermal conditions. Throw values without ceiling effect (greater than 24" (610) from a surface parallel to the air flow) may be approximated by multiplying the cataloged throw by x 0.70.

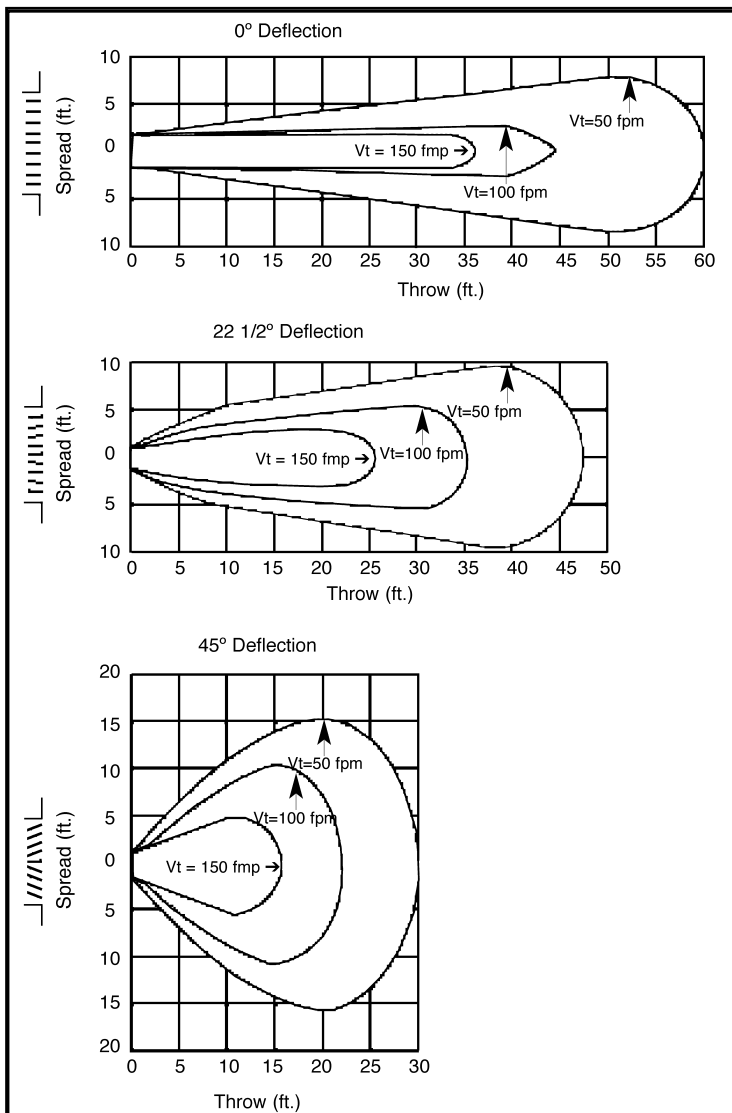
In order to offset potential draft problems caused by premature drop, it is recommended to set the blades with an upward deflection setting of 15 - 20° in free space conditions.

the angle of spread and temperature differential between the supply air and room air (T) also effects the drop of the airstream.

Under constant conditions of temperature, volume and core velocity, the wider the spread, the smaller the drop. Typical cold supply air (20°F T) reduces horizontal throw by approximately 30%. Warm air will increase throw by approximately 30% and reduce drop.

For a full explanation of the effects of spread, throw, temperature and drop, refer to the engineering guide at the back of the catalog.

Spread Characteristics With Three Deflection Settings



NC Corrections for Blade Deflection (add)

Model Type	Damper	Blade Deflection		
		0°	22 1/2°	45°
Double Deflection	With	0	+2	+7
	Without	-4	-2	+3
Single Deflection	With	-4	-1	+4
	Without	-8	-6	+1

TP Correction Factors for Grilles Without Damper (multiply)

Blade deflection	0°	22 1/2°	45°
Double Defl. Factor	x .80	x .83	x .89
Single Defl. Factor	x .73	x .76	x .85

NC Corrections for Throttling Damper (add)

Additional Pressure Drop (in. w.g.)	.05"	.15"	.25"
Approx. Damper Opening	75%	67%	50%
NC add	+6	+11	+18