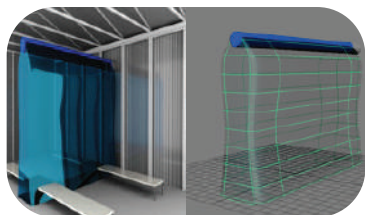


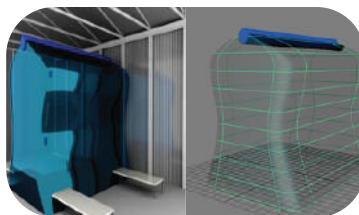


Medium Range

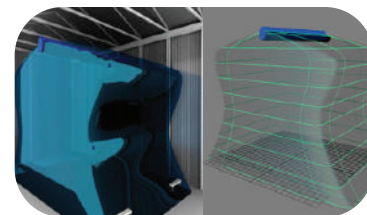
Air dispersion is accomplished by strategically placed orifices made with a precise CO2 laser which cauterizes and eliminates any loose threads. Design is based on required air throw depending on factors like total airflow to diffuse, length of the duct, number of diffusing lines, height above floor, desired distributions of velocities and temperatures, among others. Any pattern and direction are achievable in order to meet desired airflow requirements. This range is recommended for heights of 9ft to 30ft.



Duct represented in warehouse



Duct represented in warehouse

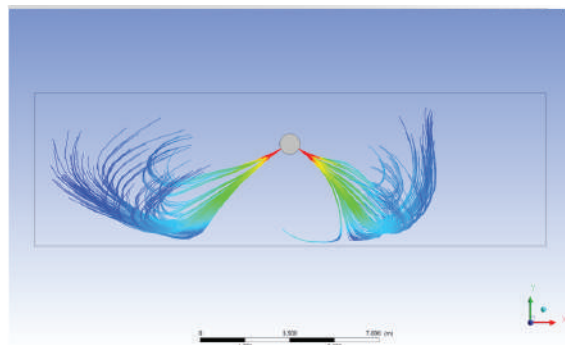


Duct represented in warehouse

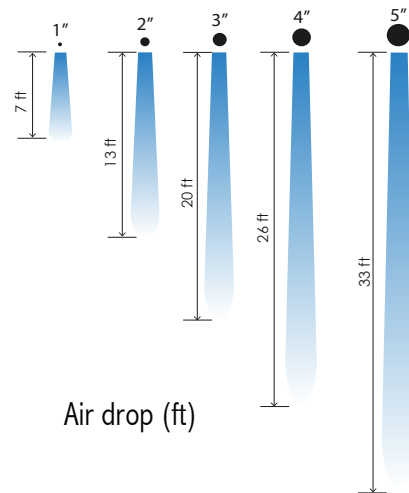
This application is based on mixing ventilation and is distinguished by delivering air at a high velocity. During the first air flow rotation the air velocity will be high, but as the quantity of room air that becomes mixed increases, the air velocity will decrease. The delivered air volume will be fully mixed with the room air before it reaches the occupation zone. The supply air is distributed with high initial energy in the form of velocity through orifices with the effect that the air is released into the area instead of being distributed through a permeable surface at low velocity.

Multi flow Standard design pressure of 1/2 inch wc	
Diameter orifices in	Throw ft
1	7
2	13
3	20
4	26
5	33

Standard design pressure



Simulation



Air drop (ft)



Medium Range

Orifice 1" (2.54 cm)

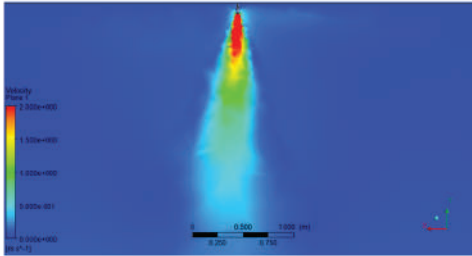
Outlet Velocity: 12 m/s (2300 fpm)

Area: 0.000506 m² (0.005 sqft)

Unitary air flow: 21.88 m³/hr = 12.87 cfm

Velocity analysis:

Velocity	Throw	Cone diameter
0.25 m/s (50 fpm)	2.13 m (6.98 ft)	1.5 m (4.92 ft)
0.5 m/s (100 fpm)	1.48 m (4.85 ft)	0.96 m (3.14 ft)
0.75 m/s (150 fpm)	0.98 m (3.21 ft)	0.6 m (1.96 ft)



Simulation Orifice 1"

Orifice 2" (5 cm)

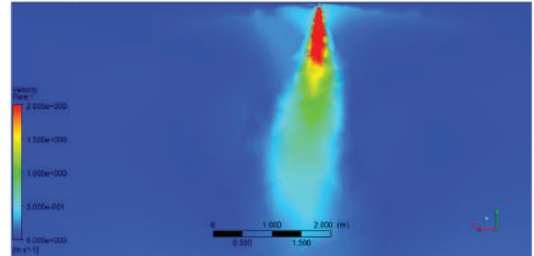
Outlet Velocity: 13 m/s (2500 fpm)

Area: 0.00202 m² (0.02 sqft)

Unitary air flow: 94.85 m³/hr = 55.82 cfm

Velocity analysis:

velocity	Throw	Cone diameter
0.25 m/s (50 fpm)	4.13 m (13.54 ft)	2.2 m (7.21 ft)
0.5 m/s (100 fpm)	2.90 m (9.51 ft)	1.8 m (5.9 ft)
0.75 m/s (150 fpm)	2.12 m (6.95 ft)	1.4 m (4.59 ft)



Simulation Orifice 2"

Orifice 4" (10 cm)

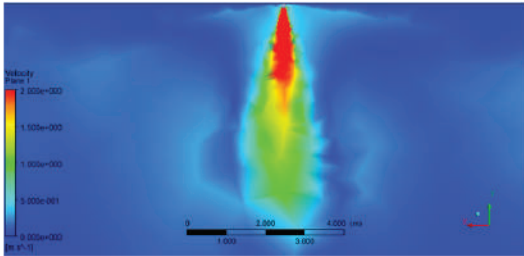
Outlet Velocity: 13.5 m/s

Area: 0.0081 m² (0.08 sqft)

Unitary air flow: 394.01 m³/hr = 231.90 cfm

Velocity analysis:

velocity	Throw	Cone diameter
0.25 m/s (50 fpm)	6.05 m (19.84 ft)	3.2 m (10.49 ft)
0.5 m/s (100 fpm)	5.3 m (17.38 ft)	2.4 m (7.87 ft)
0.75 m/s (150 fpm)	4.9 m (16.07 ft)	2 m (6.56 ft)



Simulation Orifice 4"

Orifice 3" (7.6 cm)

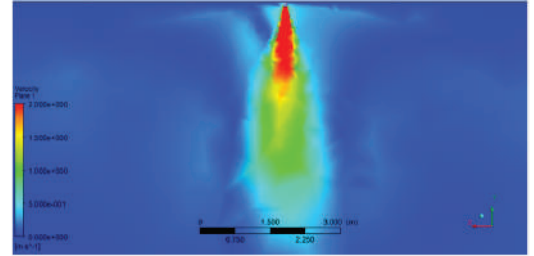
Outlet Velocity: 13.5 m/s (2600 fpm)

Area: 0.00145m² (0.014 sqft)

Unitary air flow: 221.6 m³/hr = 130.42 cfm

Velocity analysis:

velocity	Throw	Cone diameter
0.25 m/s (50 fpm)	5.2 m (17.06 ft)	2.6 m (8.53 ft)
0.5 m/s (100 fpm)	4.6 m (15.09 ft)	2 m (6.56 ft)
0.75 m/s (150 fpm)	3.72 m (12.2 ft)	1.8 m (5.9 ft)



Simulation Orifice 3"

Orifice 5" (12.7 cm)

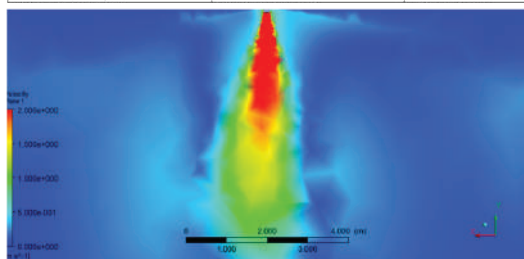
Outlet Velocity: 14 m/s (2700 fpm)

Area: 0.012 m² (0.12 sqft)

Unitary air flow: 638.45 m³/hr =375.77 cfm

Velocity analysis:

velocity	Throw	Cone diameter
0.25 m/s (50 fpm)	7.15 m (23.45 ft)	3.85 m (12.63 ft)
0.5 m/s (100 fpm)	6.31 m (20.7 ft)	3.2 m (10.49 ft)
0.75 m/s (150 fpm)	5.76 m (18.89 ft)	2.6 m (8.53 ft)



Simulation Orifice 5"