

Explosion Protection Worksheet Cyclone Separator

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Company	Contact	
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Project #	e-mail	

Description: As dust-laden gas enters the cyclone the internal shape causes the gas stream to spin which causes the dust particles to move outward to the walls and fall to the discharge. The gas stream then turns upward and exits the exhaust. The quantity of dust within the exhaust stream is dependent on the efficiency of the cyclone. Designs outside this description should be noted in comments and/or illustrated in the provided sketch.

Process	
Maximum positive pressure	
Maximum vacuum	
Inlet temperature	
Exhaust temperature	
Ambient temperature	
P _{es} – enclosure strength	
Enclosure location	□indoors □outdoors
If indoors - distance to exterior wall	

Combustible material (advise if hybrid)			
Name			
K _{St}	bar*m/sec		
Pmax	barg		

Enclosure		
Tag/I.D. Number		
Manufacturer		
Мо	del Number	
а	Hat / Vortex diameter	
b	Hat height	
С	Major diameter	
d	Straight wall	
e	Conical height	
f	Product discharge diameter	
g	Inlet diameter	
h	Exhaust diameter	
i	Free straight wall	



Explosion Venting - Control the Explosion Pressure

Relieves explosion overpressure within process enclosure before destructive levels of pressure are reached **Explosion Isolation** - Control the Explosion Propagation

Mechanical or chemical barriers to prevent the spread of explosions through interconnected pipe or ducts **Explosion Suppression** - Control the Explosion Pressure and Flame

Detects and extinguishes the deflagration in its very early stages before destructive levels of pressure are reached

Comments: