



THE COMPLETE DUCT SOURCE

Quality—Delivery—Service—Design—Price

Spark Trap-Spark Arrestor-Spark Cooler

Call them what you will, these units from US Duct are effective in reducing sparks and affordably price. The principle is simple, a finned cone diverts and spins the air/spark to the outside of the chamber and past the outlet. As shown below, the outlet extends into the extinguishing chamber.

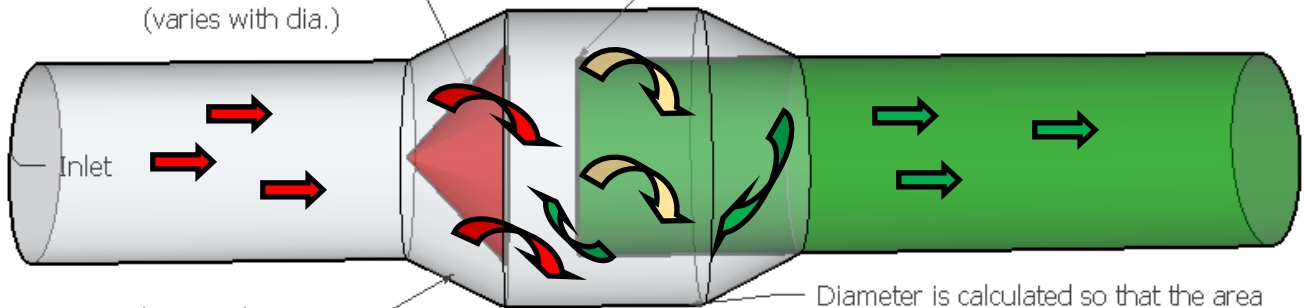
(Recommended velocity is 3200 FPM— Pressure drop .8". The unit can be applied to higher velocities but the pressure will jump exponentially to ~2.8" if run at 4500FPM.)



Radially Finned Cone
Dia = In x ~1.2
(varies with dia.)



Outlet Duct Dia extends into the expansion chamber.



Reducing Inlet Cone
Length* = 1/2 inlet dia
(*only the taper)

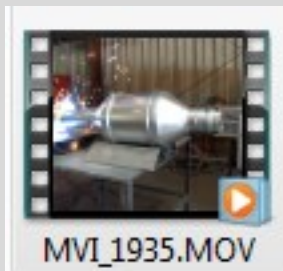
Diameter is calculated so that the area between the finned cone and the outer duct is equal to the area of the inlet.
Area of Outer Duct - Area of Cone = Area of Inlet

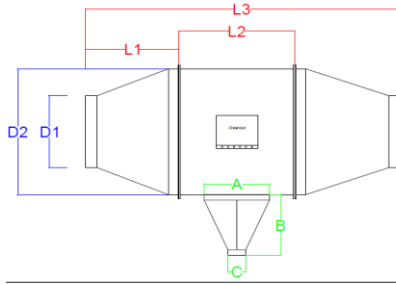


Also available with drop out (boot tap) for application with dust. Must be connected to sealed container.

Check out the video on YouTube at

<http://www.youtube.com/c/Us-duct>





US Duct Spark Trap Dimensions*

9/30/2015

Inlet	D1	4	5	6	7	8	9	10	12	14	16	18	20	22	24
Inner Cone Top Dia		5.75	6.75	8	9	10.25	11.5	12.75	15	17	19.25	21.5	24	26.25	28.5
Blade width															
Length of cones	L1	8.5	9.5	10.5	11.5	12.5	13.5	14.5	16.5	18.5	20.5	22.5	24.5	26.5	28.5
OD of mid section	D2	8	9	11	12	14	16	18	22	25	29	33	36	40	44
Length of mid section	L2	11	11	11	11	12	13.5	15	18	21	24	27	30	33	36
Over all Length	L3	28	30	32	34	37	40.5	44	51	58	65	72	79	86	93
Outlet Dist to Cone		1.4	1.75	2.1	2.45	2.8	3.15	3.5	4.2	4.9	5.6	6.3	7	7.7	8.4

Inlet	D1	26	28	30	32	34	36	38	40	42	44	46	48	50	
Inner Cone Top Dia		30.75	33	35.5	37.75	40	42.5	44.75	47	49.25	51.5	53.75	56	58.25	
Blade width															
Length of cone	L1	30.5	32.5	34.5	36.5	38.5	40.5	42.5	44.5	46.5	48.5	50.5	52.5	54.5	
OD of mid section	D2	46	50	54	58	62	66	70	72	76	80	84	88	92	
Length of mid section	L2	39	42	45	48	51	54	57	60	63	66	69	72	75	
Over all Length	L3	100	107	114	121	128	135	142	149	156	163	170	177	184	
Outlet Dist to Cone		9.1	9.8	10.5	11.2	11.9	12.6	13.3	14	14.7	15.4	16.1	16.8	17.5	

*Dimensions are subject to change as testing or fabrication dictates.

IMPORTANT NOTICE! Refer to <http://www.us-duct.com/special-duct-fabrications/spark-trap> for a full disclaimer notification.

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