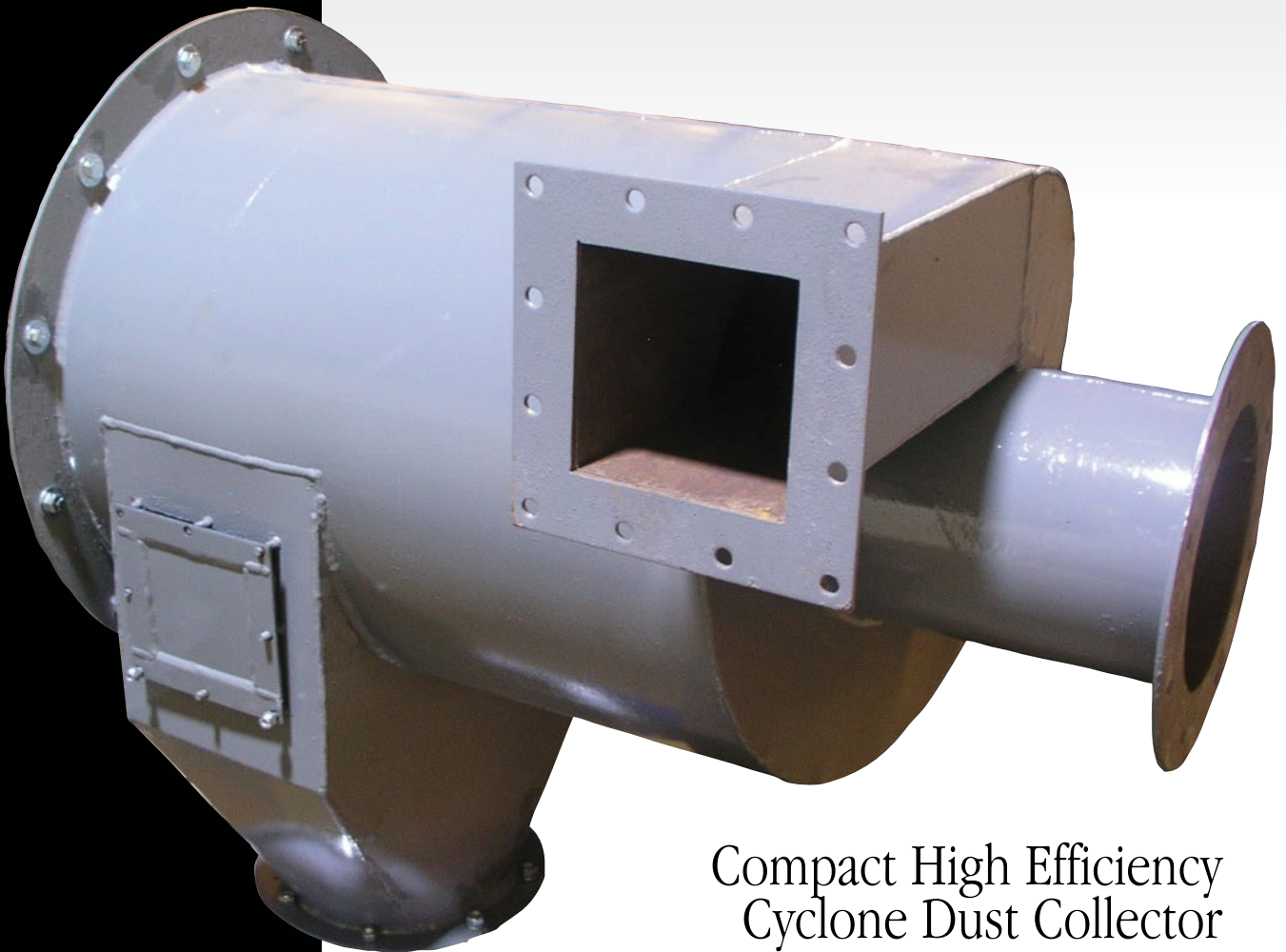


Aerodyne®

# GPC Dust Collector



Compact High Efficiency  
Cyclone Dust Collector



Aerodyne®

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**ABANAKI**  
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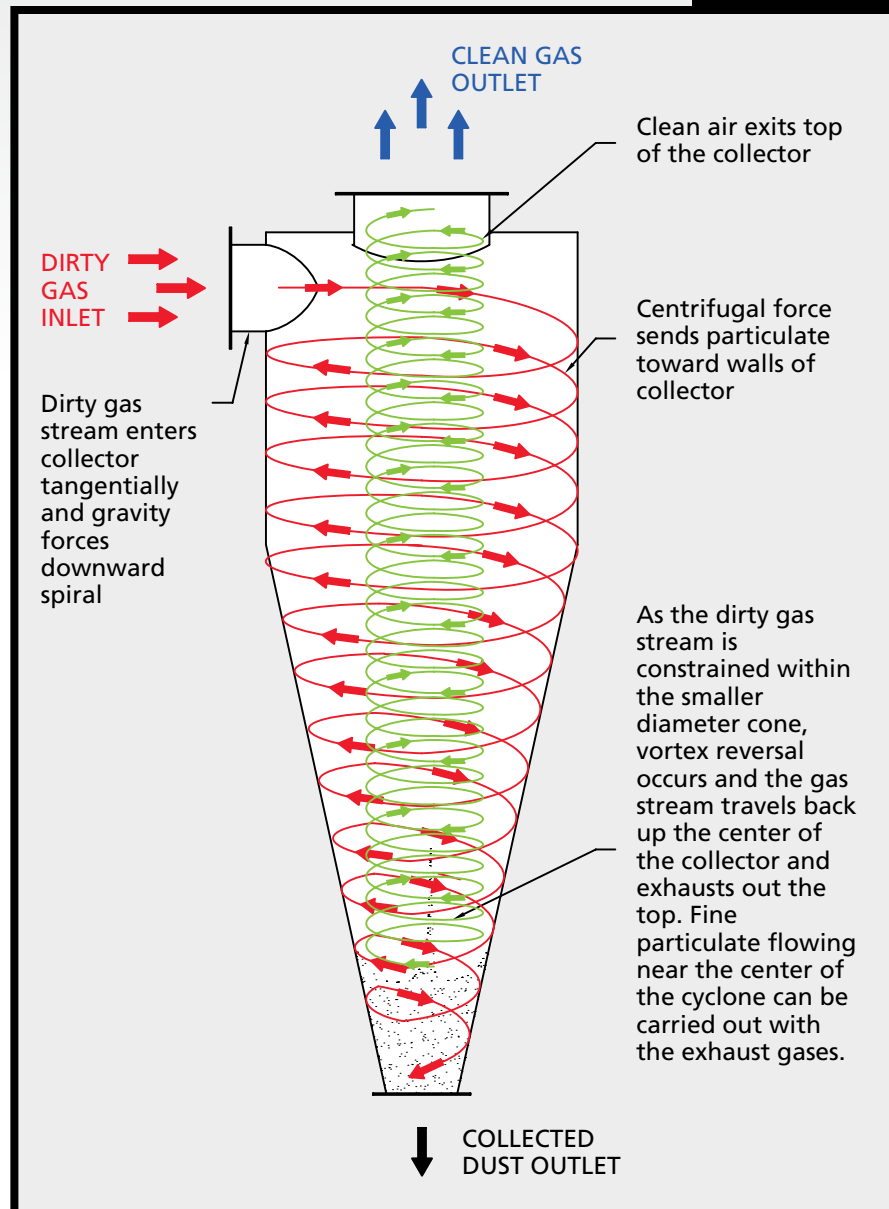
[www.DustCollectorHQ.com](http://www.DustCollectorHQ.com)

  
direct separation solutions

The typical cyclone design consists of a tangential inlet and a long tapered body. This design relies on gravitational forces to direct the dirty gas stream downward toward the narrowing body. As the gas stream becomes constrained in the narrow end of the cyclone body, a phenomenon known as "vortex-reversal" occurs in which a secondary inner-vortex is generated and moves upward through the center of the primary vortex where it is exhausted from the collector.

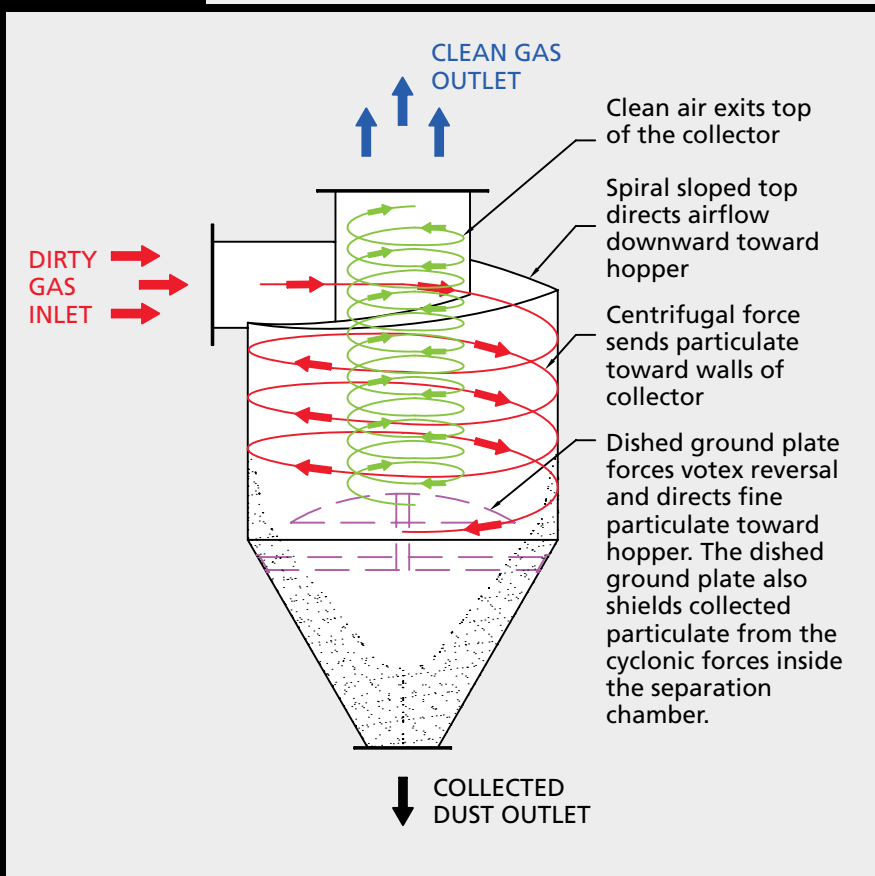
Vortex-reversal is one of the primary causes for inefficiencies in cyclonic dust collectors. As the inner vortex travels up through the cyclone, it takes with it any fine dust particulate that did not have the inertia to be forced tight to the collector walls.

The long tapered body of a high-efficiency cyclone is intended to give the fine particulate more time to make it safely to the walls of the collector. While this added length may boost collection efficiencies, it creates problems with installation space requirements as well as high material costs.



**Standard Cyclone**

# GPC Dust Collector



Aerodyne GPC

## The GPC Dust Collector handles:

- Sawdust
- Sand
- Plastics
- Cereal/grain
- and many more

## The Aerodyne Advantage

The combination of a sloped spiral inlet and fixed ground plate gives the GPC Collector several distinct advantages over common high-efficiency cyclone dust collectors.

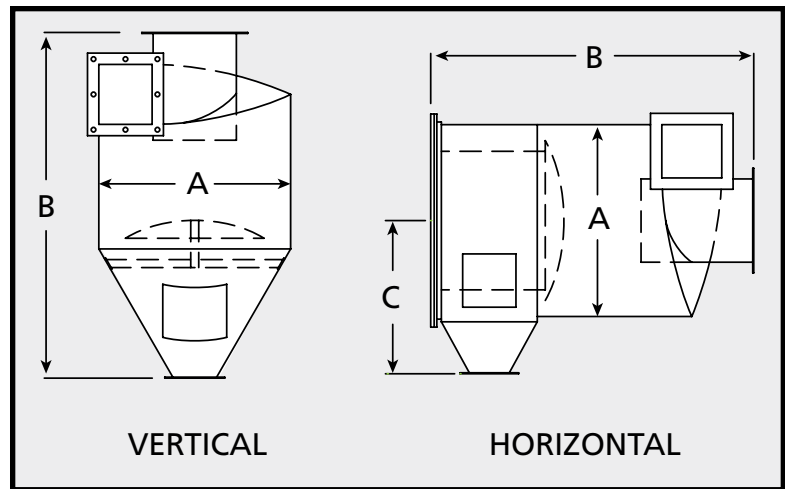
The spiral inlet of the GPC directs the dirty gas stream toward the ground plate and hopper of the collector. Coupled with the compact size of the collector, this gives the GPC the ability to be installed horizontally with virtually no effect on collection efficiency.

The fixed ground plate utilized by the GPC works to force the occurrence of vortex-reversal in a much shorter space, effectively eliminating the need for a long tapered body necessary with standard cyclones. As the dirty gas stream strikes the convex ground plate; fine particulate, which has not completely made it to the collector walls, is deflected into the hopper. The ground plate also shields collected particulate from the forces of the vortex-reversal, acting as a barrier between the separation chamber and the collection hopper.

## Applications

- Product Reclamation
- Air cleaning
- Pre-cleaner for baghouses

Unlike conventional high-efficiency cyclones, the GPC does not require a long tapered body for effective dust separation. This compact cyclone dust collector is ideal for plants and workshops with limited floor space or limited overhead clearance.



Vertical GPC Collectors					Horizontal GPC Collectors					
Collector Model	Airflow (CFM) @ 3" ΔP	Approx. Dimensions (inches)		Weight (lbs.)	Collector Model	Airflow (CFM) @ 3" ΔP	Approx. Dimensions (Inches)			Weight (lbs.)
		A	B				A	B	C	
8	200	9-1/4	19-1/2	25	8	200	9-1/4	24-5/8	6-3/4	31
12	350	12-3/4	22	45	12	350	12-3/4	25-7/8	7-5/8	52
15	600	15-1/2	27-1/4	75	15	600	15-1/2	30-3/4	8-1/4	85
18	800	18	31-1/2	90	18	800	18	32-3/4	10-3/4	100
20	1100	20	36-1/2	135	20	1100	20	40	12-3/4	150
24	1500	24	42-3/8	180	24	1500	24	42-1/2	16-3/4	210
27	2000	27	48-1/2	220	27	2000	27	46	19-3/4	250
30	2500	30	54-3/8	300	30	2500	30	49-1/4	22-3/4	330
36	3500	36	64-7/8	385	36	3500	36	60-5/8	28-3/4	440
40	4500	40	72	465	40	4500	40	64-1/4	32-3/4	530
42	5000	42	76-7/8	510	42	5000	42	67-3/8	34-3/4	575
48	6800	48	89-1/2	650	48	6800	48	74-7/8	40-3/4	740
54	8500	54	103-3/4	810	54	8500	54	89	47-3/4	950
60	10500	60	115-9/16	1425	60	10500	60	98-3/16	49-3/8	1580
66	13000	66	123	1650	66	13000	66	100-1/2	55-1/4	1815
72	16500	72	136-5/8	2000	72	16500	72	114-7/8	61-1/8	2230
84	21000	84	153	2550	84	21000	84	121	73-1/8	2810
96	26000	96	167-3/4	3325	96	26000	96	130-1/2	85-1/8	3620



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