

K-Vortex Air Blaster



Vortex Air Blaster is a revolutionary and reliable air cannon system which is a cost-effective solution for removing material build up and blockages occurring in silos, hoppers, kilns preheater, cyclones, kilns and other industrial machinery.

Vortex Air Blaster systems are available for use in the most demanding high and low temperature applications and environments in the cement, steel, power stations, chemical, incinerators, fertilizer, and any other industries with powdery and granular storage with potential material flow problem.

Vortex Air Blaster is a patent pending air blaster / air cannon currently available in three (3) models: DN 50 (V2), DN 100 (V4) and DN 150 (V6) respectively, for both high temperature and low temperature applications.

Features and Benefits:

- > External T-shape Valve for easy inspection
- > Can retrofit any existing air blaster / air cannon
- > Metal to metal construction for added durability
- > More powerful thanks to a unique "venturi effect" exhaust design
- > Robust cast iron design for reliability and durability
- > Can operate at a minimum 4 bar operating pressure (Recommended operating pressure of 5 to 7 bar or 75 to 100 PSI)
- > Galvanized tank (inside and outside) with polyurethane black paint
- > Provision for isolation valve, drainage valve, and/or pressure gauge for even safer operation
- > Wide range and availability of parts and accessories



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Why Use Air Cannons?

The Vortex Blastair is a de-clogging equipment used in High temperature environment (kiln inlet, cyclones, riser duct, cooler..etc) and is permanently installed on silos, bins and hopper walls for all powdery forms of materials, thus preventing caking and allowing maximization of storage capacity.

The Vortex Blastair does not require any specific air supply, available plant air is sufficient with a minimum 4 bars air pressure (5 to 6 bars for better results) with moderate air consumption.

The compressed air contained in the pressure vessel is instantly released, and the achieved blast, called the "impact force" evacuates material sticking to the walls (rat holing), as well as breaking potential bridging thanks to the shock wave obtained. Blasts are usually organized by using an automatic sequencer.

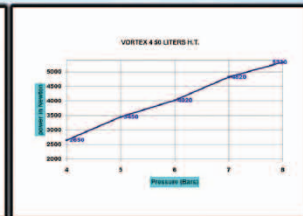
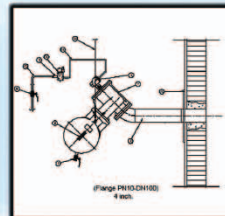
We guarantee the VORTEX BLASTAIR for TWO (2) YEARS covering not only the moving parts but also any part of the unit showing manufacturing defect. The remainder accessories are guaranteed for one year.

The vessels are protected by galvanization inside and outside, plus two coats of black paint on the outside.

HIGH TEMPERATURE APPLICATION

Pneumatic build-up removal for high temperature applications occurring in:

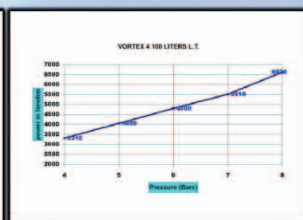
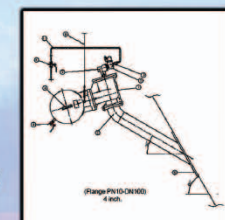
- Kiln inlets
- Riser ducts
- Cyclones
- Feeding chutes
- Coolers, etc.



LOW TEMPERATURE APPLICATION

Pneumatic build-up removal for low temperature applications occurring in:

- Silos
- Hoppers
- Any storage facility with powdery and granular material, etc.



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OPERATIONS MODULE

Sequencer Panel

The sequencer panel, automatically organizes the blasting sequence of multiple Vortex Blastair units.

Its friendly design and usage allows for easy sequence changes and allow manual blasting.



Safety Suspension Unit

The Safety Suspension Unit supports the Vortex Blastair tank weight and contains vibrations when blasting.



Blowing Pipes

For easy connection and bolting, the blowing pipes with PN standard flanges comes in DN50 (2"), DN100 (4") and DN150 (6") as according to the Vortex Blastair size. These 600 mm length blowing pipes are designed for:

Low temperature application in steel tube protected by epoxy paint for rust protection;
High temperature application in 500 mm steel tube, 300 mm refractory stainless steel tip.

Both designs are equipped with a 30 degree bend to deflect and avoid dust and material entering the Vortex Blastair mechanism.



Safety Control Unit

The Safety Control Unit allows technical operators to safely control the Vortex Blastair at anytime:

- 1) Isolate it pneumatically from its network
- 2) Safely purge its pressure vessel if required
- and 3) Control and check operating air pressure at all times.



Air FL Group Unit

The air FL group unit (1') facilitates the continuous internal lubrication of all-metal parts of the Vortex Blastair. An average number of ten (10) Vortex Blastairs, located on the same network level, can be fitted with one (1) air FRL group unit.

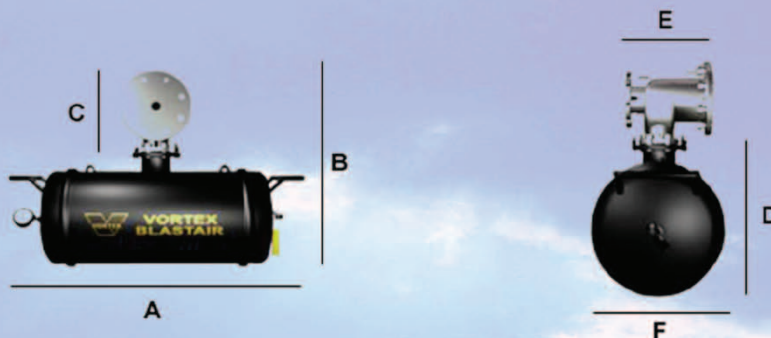
Requires low viscosity compressor oil, VG32 type, to be used at all times.

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RANGE OF PRODUCTS

DN	High Temperature	Low Temperature
50	none	Vortex 2 LT 2 inch / 20 liters
100	Vortex 4 HT 4 inch / 50 liters 4 inch / 100 liters	Vortex 4 LT 4 inch / 50 liters 4 inch / 100 liters
150	Vortex 6 HT 6 inch / 100 liters	Vortex 6 LT 6 inch / 100 liters

Vortex Blastair Dimensions



MODEL	Liters	OUTLET	DIMENSIONS						WEIGHT	
		INCH	A	B	C	D	E	F	KG.	LBS.
Vortex 2	20	2"	390	680	240	435	265	310	25	56
Vortex 4	50	4"	720	720	280	435	310	310	55	123
Vortex 4	100	4"	1084	765	280	481	310	310	70	157
Vortex 6	100	6"	1084	880	385	481	465	355	95	213

Notes: References not contractual and subject to modifications without prior notice. Dimensions in millimeters (mm.)

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ACCESSORIES

- **Nozzles:** Refractory stainless steel nozzles that are up to 1200 degrees Celsius resistant available in DN 100 (4 inches) or DN 150 (6 inches) to equip the Vortex Blaster for specific applications such as in riser duct corners, kiln inlet side walls, etc.

Available in 0-, 45-, and 90-degree tip angles.



- **Heat Shield:** Available in DN 100 (4 inches) and DN 150 (6 inches).



- **Retrofit Head:** We can retro-fit any existing brand of air cannon; either in high or low temperature applications.



For High Temperature



For Low Temperature

Installation Examples



Kiln Inlet



Entrance Cyclone



Nozzle Preparation



Cyclone



Cooler