

VORTEX TUBES

VORTEX TUBE



What is a General Imsubs Vortex Tube ?

The General Imsubs Vortex Tube is an effective, low cost solution to a wide variety of industrial spot cooling and process cooling needs. Compressed air is injected into the vortex tube, flows at a rate of up to 1,000,000 RPM towards the 'hot' end of the tube. Once this hot air reaches the end, a small amount is exhausted through a control valve. The rest of the air is forced backwards towards the other end and exits as 'cold' air. The Vortex Tube can decrease temperatures by ~115°F (46°C) and raise temperatures up by ~200°F (93°C) from the initial inlet air temperature. Vortex tubes are available in three sizes, Small, Medium & Large depending upon compressed air consumption.

Advantage of Vortex tube

- Instantaneous cold stream of air.
- No RF interference.
- Low cost of ownership
- Very low space requirement.
- Stainless Steel construction.
- Available in two sizes – Small, Medium & Large
- Enhances reliability and durability of equipment
- Adjustable flow rate.
- Maintenance free as there is no moving parts.

Applications or Vortex Tube

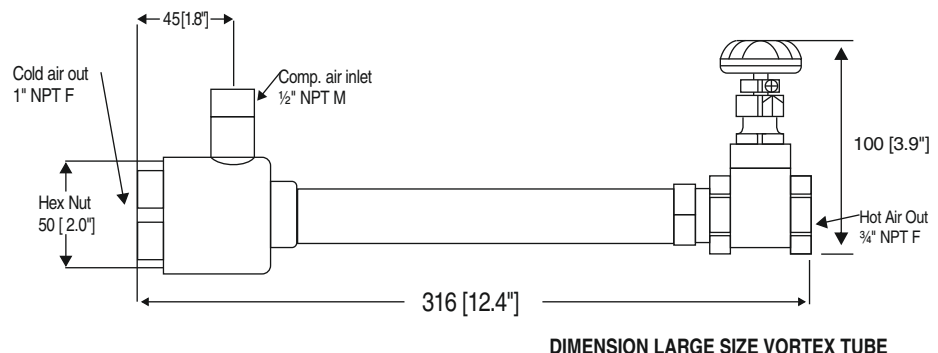
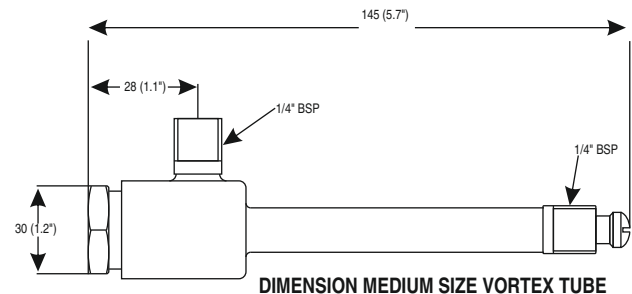
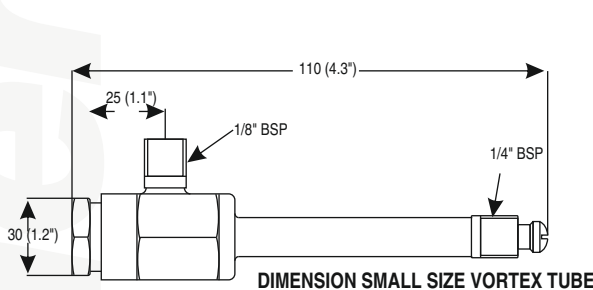
- Heat sealing machines
- Sewing machine needle cooling
- Tools and plastic grinding and machining
- Molded component cooling
- Laboratory instrument / chambers cooling.
- Ultrasonic welding horn cooling
- Dry machining
- Camera cooling in spray drier, induction furnaces and such applications.

PERFORMANCE :

Performance mentioned here is at tube being set to maximum refrigeration. Air flow is at 7 bar (100 PSI) pressure.

MODEL	RHL-002	RHL-004	RHL-008	RHL-010	RHL-015	RHL-025	RHL-030	RHL-040	RHL-050	RHL-075	RHL-100
CFM	2	4	8	10	15	25	30	40	50	75	100
LPM	57	113	226	285	425	710	850	1135	1415	2123	2830
BTU/Hr	120	215	500	600	900	1500	2000	2800	3000	4500	6000
Kcal/Hr	30	55	125	150	225	380	500	700	755	1125	1500
SMALL VORTEX TUBE				MEDIUM VORTEX TUBE				LARGE VORTEX TUBE			

Vortex tubes are factory set at maximum refrigeration. Depending on operating conditions, temperature drop of compressed air is around 30° C



CABINET COOLERS



CABINET COOLER

PERFORMANCE :

Performance mentioned here is at cabinet cooler being set to maximum refrigeration.
Air flow is at 7 bar (100 PSI) pressure.

General Imsubs, Vortex based cabinet coolers are compact, quick install and maintenance free solution to heating problem often faced in control panels. General Imsubs cabinet coolers are made from Stainless steel and they do not affect safety of panel cabinets. General Imsubs cabinet coolers are available with thermostat control or continuous operation type.

General Imsubs Cabinet coolers are provided with pressure relief valves so that safety of panel cabinet is not affected. Cabinet coolers are available in various cooling capacity from 55 to 700 Kcal/Hr (215 to 2800 Btu/H). Multiple cabinet coolers can be coupled to achieve higher cooling capacities. General Imsubs cabinet coolers are IP65 certified.

MODEL	CC-004	CC-008	CC-010	CC-015	CC-025	CC-030	C-040
CFM	4	8	10	15	25	30	40
LPM	113	226	285	425	710	850	1135
BTU/Hr	215	500	600	900	1500	2000	2800
Kcal/Hr	55	125	150	225	380	500	700

Cabinet coolers are advised to be used with appropriate drier, where compressed air due point temperature is lower than -25° C to ensure safety of control panel.

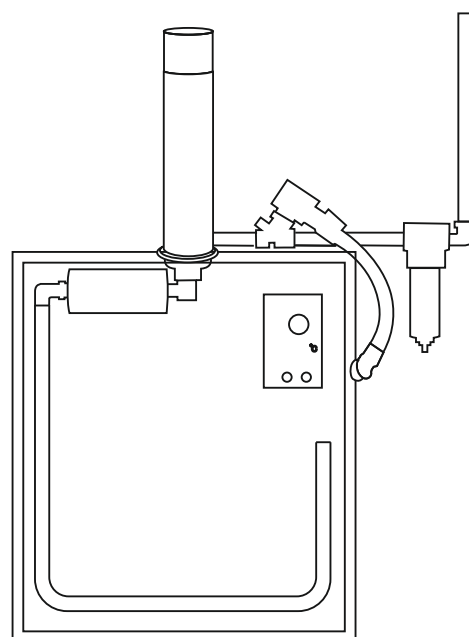
Cabinet coolers are supplied with air distribution kit and customer can optionally order suitable air filters.

Available options:

Selection of Cabinet coolers depends on application and customer requirements. We supply cabinet coolers with following options.

Additional Options / Accessories

1. Air filter
2. Side mounting kits.
3. Temperature control kit with solenoid valve
(Requires AC power supply)



Schematic representation

COLD AIR GUNS

COLD AIR GUN



Cold air gun utilized vortex tube to provide dry cool air for spot cooling dry machining and many other such application.

Cold air guns utilizes available compressed air on shop floor and gives stream of cold air which could have temperature 40 ° C lower than input compressed air temperature.

Cold air guns has no moving parts hence practically zero maintenance. Its magnetic base allows quick and easy installation

Cold air guns are known to increase tool life and machining speed while machining plastics, brass, wood and other material which must be machined dry.

Features:

- ♦ Instant installation and portable, can be shifted to machine instantly.
- ♦ Adjustable cold fraction / company set cold fraction.
- ♦ Flexible, stay put hose for precise targeting of cold air.
- ♦ Two outlet hose available against specific orders.
- ♦ Dramatically increases tool life and improves tolerances.
- ♦ Cold air stream blows off chips hence post cleaning may not be required.
- ♦ Powerful magnetic base to hold cold air gun at desired location.

Application:

- ♦ Dry Machining of plastic, brass and composite materials.
- ♦ Grinding, drilling and sharpening operations.
- ♦ Mold, dies cutting edge cooling.
- ♦ Cooling of adhesive, solders and weld seams.
- ♦ Spot cooling requirements.

PERFORMANCE :

Performance mentioned here is at cold air gun being set to maximum refrigeration. Air flow is at 7 bar (100 PSI) pressure.

MODEL	CAG-004	CAG-008	CAG-010	CAG-015	CAG-025	CAG-030	CAG-040
CFM	4	8	10	15	25	30	40
LPM	113	226	285	425	710	850	1135
BTU/Hr	215	500	600	900	1500	2000	2800
Kcal/Hr	55	125	150	225	380	500	700



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