

Cold Air Guns

Contents

1	Cold Air Guns	2
1.1	Overview	2
1.2	Features	2
1.3	Benefits	3
1.4	Applications	3
1.5	Uses	3
2	Models	4
2.1	Cold Air Gun Spot Cooling Systems	4
3	Technical data	7

1 Cold Air Guns

Versatile Spot Cooling for Machining, Repair Shops and More

1.1 Overview

Cold Air Guns use vortex tube technology and filtered compressed air to produce sub-freezing air as low as -30 deg F for numerous industrial spot cooling applications. With no moving parts to wear out, Cold Air Guns require no electricity at the target, just a compressed air source.

The effective cooling from a Cold Air Gun can eliminate heat-related parts growth while improving parts tolerance and surface finish quality. Cold Air Guns have adjustable temperature and flow settings; and some models have a frost free nozzle to eliminate mess from frost and condensation.



1.2 Features

- Creates cold air up to 100 F deg below the inlet compressed air temperature
- Quiet operation; meets OSHA noise specifications
- Adjustable temperature and flow rate
- Highly reliable with no moving parts

- Low pressure outlet air
- Uses only compressed air - no Freon
- System includes a magnetic base and a 5 micron auto-drain compressed air filter
- Magnetic base allows for easy, close in positioning and easy portability
- Ergonomic trigger mechanism on the Cold Air Pistol
- Frost free nozzle eliminates mess from frost and condensation

1.3 Benefits

- Increase dry machining speeds up to 36%
- Extend tool life by 50%
- Eliminates the mess, expense and safety concerns of using mist coolants
- Reduce waiting or normalization time by cooling parts faster
- Eliminate the potential for burning and scorching
- Avoid secondary parts cleaning after machining
- Reduce grinding wheel loading caused by overheating
- Airflow clears sawdust, chips, shavings and dirt away from surface

1.4 Applications

Cold Air Guns are most often used for cooling of metal parts, in the machining and repair of metals, plastics, wood, ceramics and other materials. Cold air machining outperforms mist coolants and substantially increases tool life and feed rates on dry machining operations.

1.5 Uses

- Milling, drilling, turning and other metalworking operations
- Machining of plastics, composites, wood and other materials
- Bearing installation and replacement
- Surface grinding, drill and tool sharpening
- Cooling of molds and molded pieces
- Cooling of hot metal parts
- CNC Routers, blades and band saws
- Spot cooling of parts and assemblies
- Industrial sewing and textiles
- Setting hot melts and adhesives
- Thermal testing of sensors
- Cooling welds and solders

2 Models

2.1 Cold Air Gun Spot Cooling Systems

Incredible Spot Cooling for Machining Operations, cooling capacities ranging from 900 - 2500 BTU/hour

610: Adjustable Cold Air Gun System (900 BTU/h)

Model	610
Compressed air pressure (psig)	80 - 100
Inlet size (NPT pipe thread, inches)	1/4
Cooling Capacity (BTU/hr)	900
Weight, System (kg)	1.4
Weight, Gun only (kg)	0.5
Air Consumption @ 100 psig (scfm)	15
Air Consumption @ 100 psig (l/min)	425
Outlet flow rate (scfm)	2 to 15
Outlet flow rate (l/min)	57 to 425
Minimum Outlet Temperature, deg F (at 70 deg F inlet air)	-10
Minimum Outlet Temperature, deg C (at 20 deg C inlet air)	-23



620: Adjustable Cold Air Gun System (1500 BTU/h)

Model	620
Compressed air pressure (psig)	80 - 100
Inlet size (NPT pipe thread, inches)	1/4
Cooling Capacity (BTU/hr)	1500
Weight, System (kg)	1.4
Weight, Gun only (kg)	0.5
Air Consumption @ 100 psig (scfm)	25
Air Consumption @ 100 psig (l/min)	708
Outlet flow rate (scfm)	8 to 25
Outlet flow rate (l/min)	227 to 708
Minimum Outlet Temperature, deg F (at 70 deg F inlet air)	10
Minimum Outlet Temperature, deg C (at 20 deg C inlet air)	-12



630: Adjustable Cold Air Gun System (2500 BTU/h)

Model	630
Compressed air pressure (psig)	80 - 100
Inlet size (NPT pipe thread, inches)	1/4
Cooling Capacity (BTU/hr)	2500
Weight, System (kg)	1.4
Weight, Gun only (kg)	0.5
Air Consumption @ 100 psig (scfm)	35
Air Consumption @ 100 psig (l/min)	990
Outlet flow rate (scfm)	18 to 35
Outlet flow rate (l/min)	510 to 990
Minimum Outlet Temperature, deg F (at 70 deg F inlet air)	30
Minimum Outlet Temperature, deg C (at 20 deg C inlet air)	-1



3 Technical data

Cold Air Gun Spot Cooling Systems

Model	Compressed air pres- sure (psig)	Inlet size (NPT pipe thread, inches)	Cooling Ca- pacity (BTU/hr)	Weight, Sys- tem (kg)	Weight, Gun only (kg)	Air Con- sump- tion @ 100 psig (scfm)	Air Con- sump- tion @ 100 psig (l/min)	Outlet flow rate (scfm)	Outlet flow rate (l/min)	Minimum Outlet Tem- pera- ture, deg F (at 70 deg F inlet air)	Minimum Outlet Tem- pera- ture, deg F (at 70 deg F inlet air)
610	80 - 100	1/4	900	1.4	0.5	15	425	2 to 15	57 to 425	-10	-23
620	80 - 100	1/4	1500	1.4	0.5	25	708	8 to 25	227 to 708	10	-12
630	80 - 100	1/4	2500	1.4	0.5	35	990	18 to 35	510 to 990	30	-1