

Cold Gun Aircoolant System™



Replace messy mist systems - improve dry machining with clean, cold air!

What Is The Cold Gun Aircoolant System?

A new solution to an old problem. Heat build up on dry machining operations reduces tool life and machining rates. The Cold Gun Aircoolant System produces a stream of **clean cold air at 50°F (28°C) below supply air temperature.**

Operation is now a quiet 72 dBA and there are no moving parts to wear out. It will remove heat to prolong tool life and increase productivity on machining operations when liquid coolants cannot be used.

The Cold Gun is also an alternative to expensive mist systems. It eliminates the costs associated with the purchase and disposal of cutting fluids and worker related health problems from breathing airborne coolants or slipping on wet shop floors.

EXAIR's Cold Gun is non-adjustable to prevent freeze-up during use. Cold airflow and temperature drop are factory set to optimize the gun's cooling capability.



Cold Gun Aircoolant System

Applications

- Tool sharpening
- Drill & cutter grinding
- Routing
- Plunge and form grinding
- Milling
- Surface grinding
- Drilling
- Tire grinding
- Band sawing
- Plastic machining

Advantages

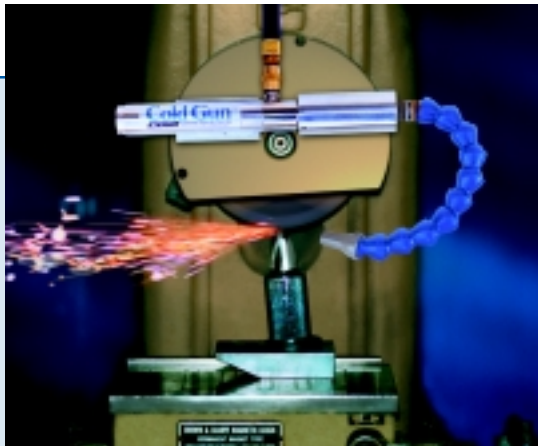
- Improves production rates
- Prevents burning
- Extends tool life - reduces breakage
- Improves tolerance control
- Prevents smearing of metal or plastics
- Finished part is dry
- Eliminates wheel loading
- Low cost
- Compact
- Lightweight
- No moving parts
- Maintenance free
- Portable
- Quiet (now only 72 dBA!)
- No coolant cost
- No electricity

Cold Gun Aircoolant System

Applications

Tool Grinding

Cold air eliminates heat cracking of carbide and tool edge burning during grinding and sharpening operations. Increased tool life between regrinds is the result.



Model 5215 Cold Gun System



Model 5215 Cold Gun System

Milling & Drilling

Fly cutters up to 460mm in diameter have been cooled with the Cold Gun. Dissipating heat with cold air extends tool life, increases speeds and feeds, and improves finishes.

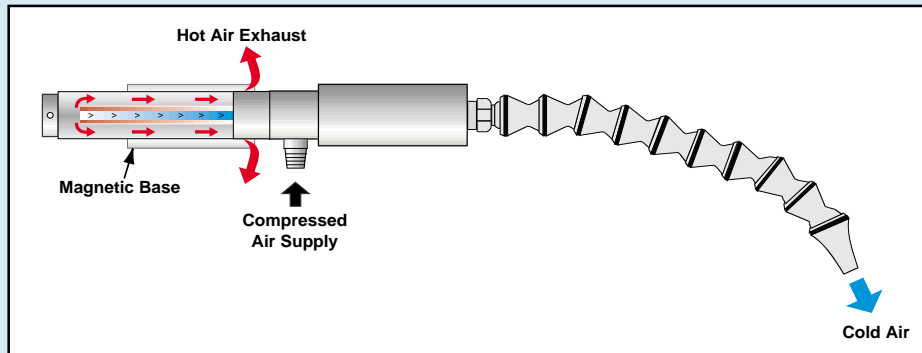
Chill Roll

Cooling a roll with 20°F (-7°C) air keeps the material on the surface from bunching up, jamming or tearing. The metal surface transfers the cold temperature to the product.



Model 5315 Cold Gun System

How The Cold Gun Works



The Cold Gun incorporates a vortex tube to convert an ordinary supply of compressed air into two low pressure streams, one hot and one cold. (For complete information on

vortex tube operation, see the "Vortex Tubes and Spot Cooling Products" section of this catalog.) The hot airstream is muffled and discharged through the **hot air exhaust**.

The cold air is muffled and discharged through the **flexible hose**, which directs it to the point of use. The **magnetic base** provides easy mounting and portability.

Cold Gun Specifications

Pressure Supply		Air Consumption		INLET
PSIG	BAR	SCFM	SLPM	
100	6.9	15	425	1/4 NPT

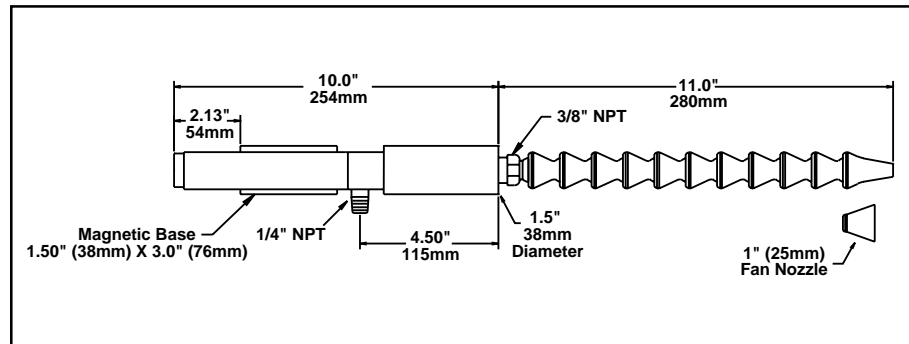
Controlling the Cold Air

The EXAIR Cold Gun gives **instant cold air** when filtered compressed air is supplied to it. Cycling on and off is a good way to save air. **For on and off control**, use a Model 9012 Manual Shutoff Valve. To turn the Cold Gun on with the machine, the Model 9020 Solenoid Valve may be used and wired through the machine control switch. This method is ideal for hand grinders and drill sharpeners.

The Compressed Air Supply

The Cold Gun is designed to use full line pressure of 80-100 PSIG (5.5-6.9 BAR). Temperature drop and flow are reduced when lower input pressures are applied. The use of clean, filtered air is essential to the operation of the Cold Gun. A manual drain filter that removes moisture, dirt and other particulates from the compressed air is included with each Cold Gun System.

Cold Gun Dimensions

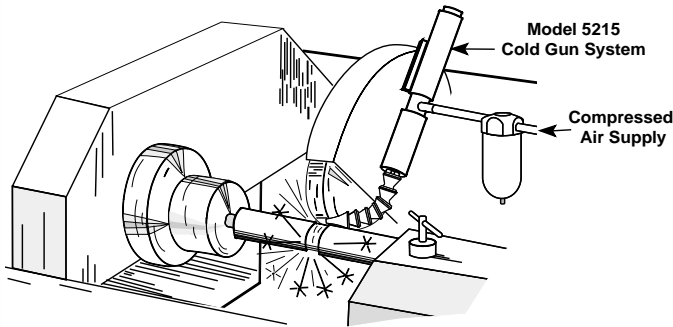


Selecting The Right Model

Cold Gun Aircoolant Systems are available with either a single point or dual point hose kit, as illustrated in the photographs on the following page. The single point system (Model 5215) is recommended for most drilling and grinding operations. Milling, band sawing or other operations where the heat is generated over a larger surface area, are generally best served by the dual point system (Model 5315). A single point system can be easily converted to dual point with the purchase of a dual point hose kit (Model 5902).

Cold Gun Aircoolant System

Cylindrical Grinding of Steel Bar



The Problem: A military tank manufacturer grinds the O.D. of a 1-1/4" (32mm) low carbon steel, cold rolled bar. Length of cut is 5" (127mm). Depth of cut is .001" (.03mm) per pass (rough grind) using a 100 grit wheel. The need to machine the part dry caused

three problems—part burning due to heat build-up; frequent wheel dressing every .050" (1.3mm) of cut, and excessive wheel loading.

The Solution: A Model 5215 Cold Gun System was installed on the grinder. **Depth of cut was increased to .008" (.20mm), with no part burning. Wheel loading was eliminated,** due to lower surface temperatures and the Cold Gun's ability to clear the wheel of dry residue. **No wheel dressing was required during the entire operation.**

Comment: Tool room operations such as this one benefit greatly from cold air cooling. Successful applications include tool and cutter grinding, carbide grinding and rechamfering. The Cold Gun's low cost justified purchase of ten units in this case, one for each machinist's tool box.

Cold Gun Aircoolant Systems



Model 5215 Cold Gun System (one cold outlet) includes Cold Gun, Single Point Hose Kit, 3/8" (10mm) Cone Nozzle, 1-1/4" (32mm) Fan Nozzle, Filter Separator.



Model 5315 Cold Gun System (two cold outlets) includes Cold Gun, Dual Point Hose Kit, (2) 1/4" (6mm) Cone Nozzles, (2) 1" (25mm) Fan Nozzles, Filter Separator.

Accessories and Components

Model #	Description
5015	Cold Gun Only
5901	Single Point Hose Kit (Included with 5215)
5902	Dual Point Hose Kit (Included with 5315)
9003	Manual Drain Filter Separator, 1/4 NPT, 27 SCFM (1359 SLPM)
9005	Oil Removal Filter, 3/8 NPT, 15 - 37 SCFM (425 - 1048 SLPM)
9012	Manual Shutoff Valve, 1/4 NPT
9020	Solenoid Valve, (120V, 50/60 Hz), 1/4 NPT, 40 SCFM (1133 SLPM)

(Cold Gun with dual point hose kit is recommended when heat is generated over a larger surface area.)



See page 2 for complete details.