

## Cold Gun Aircoolant System™



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



The Model 5215 Cold Gun keeps the part cool to the touch and prevents discoloration.

### 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 quiet 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 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.**



See page 2 for complete details.



Cold air eliminates heat cracking of the carbide tool during sharpening.

### Applications

- Tool sharpening
- Drill & cutter grinding
- Routing
- Plunge and form grinding
- Milling
- Surface grinding
- Drilling
- Tire grinding
- Band sawing
- Plastic machining
- Laser cutting
- Chill rolls
- Setting hot melt adhesives

### 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, portable
- No moving parts - maintenance free
- Quiet
- No coolant cost
- No electricity



The Model 5315 Cold Gun cools a two flute 3/8" carbide cutter on a CNC, increasing tool life by 50%.

Cold Gun Air  
Coolant System

# Cold Gun Aircoolant System

## Applications



Model 5215 Cold Gun System

### 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

### 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.



Model 5315 Cold Gun System

### 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.



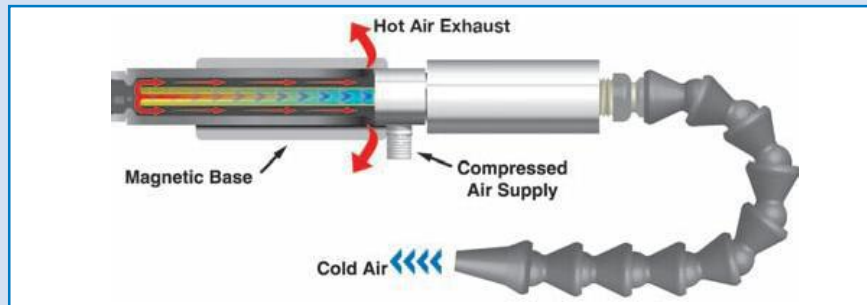
Model 5230 High Power Cold Gun System

### Laser Cutting

Cold air cools a laser cut part so it can be handled seconds later. The High Power Cold Gun has twice the cooling capacity of the standard Cold Gun, cooling the part in less time.

# Cold Gun Aircoolant System **EXAIR**®

## How The Cold Gun Works

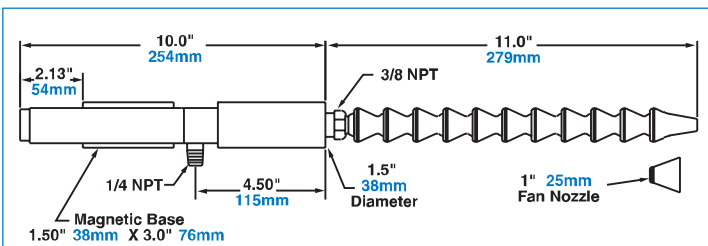


The standard Cold Gun and High Power Cold Gun incorporate a vortex tube to convert an ordinary supply of compressed air into two low pressure streams, one hot and one cold. (For complete information on vortex tube operation, see page 114 of this catalog.) The Cold Gun's hot airstream is muffled and discharged through the **hot air exhaust**. The cold air is muffled and discharged through the **flexible hose**, which directs it to the point of use. Easy mounting and portability is provided through the use of an attached **magnetic base**.

## Specifications

Model #	Pressure Supply		Air Consumption		Sound Level
	PSIG	BAR	SCFM	SLPM	dBA
<b>Cold Gun 5215, 5315</b>	100	6.9	15	425	70
<b>High Power Cold Gun 5230, 5330</b>	100	6.9	30	850	82

## Cold Gun Dimensions



## 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 filter separator that removes moisture, dirt and other particulates from the compressed air is included with each Cold Gun System. An optional Oil Removal Filter is also available.

## Need More Cooling?

EXAIR's High Power Cold Gun produces twice the airflow of the standard Cold Gun, doubling the cooling capability. It produces cold air at 50°F (28°C) below the supply air temperature so the air is as cold as possible without freezing up. Two systems are available: the Model 5230 High Power Cold Gun with Single Point Hose Kit and Model 5330 High Power Cold Gun with Dual Point Hose Kit.

## Selecting The Right Model

Cold Gun Aircoolant Systems are available with either a Single Point or Dual Point Hose Kit.



**The Single Point Hose Kit** (included with the Model 5215 Cold Gun and Model 5230 High Power Cold Gun) is recommended for applications where a concentrated airflow is needed such as drilling and grinding operations.

**The Dual Point Hose Kit** (included with the Model 5315 Cold Gun and Model 5330 High Power Cold Gun) is recommended for applications where the heat is generated over a larger surface area such as band sawing, milling, chill rolls and hot melt adhesives.

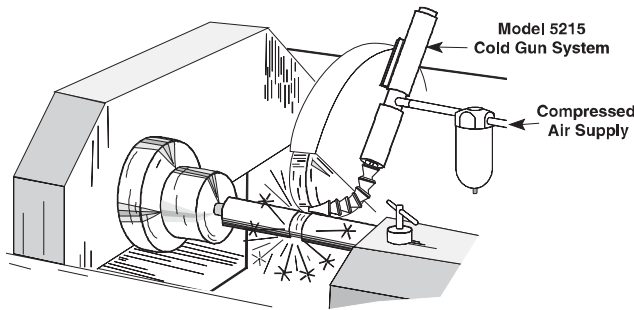
A Cold Gun System with the Single Point Hose Kit can be easily converted to a "dual point" system with the purchase of the Model 5902 Dual Point Hose Kit.



Cold Gun Air Coolant System

# 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 chamfering. 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, Manual Drain 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, Manual Drain Filter Separator.

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



**Model 5230 High Power Cold Gun System**  
(one cold outlet)

includes High Power Cold Gun, Single Point Hose Kit, 3/8" (10mm) Cone Nozzle, 1-1/4" (32mm) Fan Nozzle, Automatic Drain Filter Separator.



**Model 5330 High Power Cold Gun System**  
(two cold outlets)

includes High Power Cold Gun, Dual Point Hose Kit, (2) 1/4" (6mm) Cone Nozzles, (2) 1" (25mm) Fan Nozzles, Automatic Drain Filter Separator.

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

## Accessories and Components

Model #	Description
5015	Cold Gun Only
5030	High Power Cold Gun
5901	Single Point Hose Kit (Included with 5215 and 5230)
5902	Dual Point Hose Kit (Included with 5315 and 5330)
9003	Manual Drain Filter Separator, 1/4 NPT, 27 SCFM (765 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)
9031	Solenoid Valve, (24VDC, 50/60 Hz), 1/4 NPT, 40 SCFM (1133 SLPM)

## Need A Control?



EXAIR's EFC is an electronic flow control that limits compressed air use. See page 3 for details.