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30 Years



**USB
Data Logger
for the
Digital
Flowmeter**



26 CATALOG



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Terms and Conditions 2

EXAIR Optimization 3

Electronic Flow Control 4
 Digital Sound Level Meter 6
 Ultrasonic Leak Detector 7
 Digital Flowmeter 9

Air Knives 11

Super Air Knife 11
 PVDF Super Air Knife 17
 Universal Air Knife Mounting System 20
 Long Super Air Knife 22
 Standard Air Knife 24
 Full-Flow Air Knife 27

Air Wipes 29

Super Air Wipes 29
 Standard Air Wipes 33

Air Amplifiers 35

Super Air Amplifiers 37
 Adjustable Air Amplifiers 41

Air Nozzles and Jets 43

Air Nozzles 43
 Super Air Nozzles 46
 Air Jets 50
 High Force Air Nozzles 52
 Large Super Air Nozzles 53
 Super Air Nozzle Clusters 56
 Stay Set Hoses 56

Atomizing Nozzles 59

Internal Mix Narrow Angle Round Atomizing Nozzles 60
 Internal Mix Wide Angle Round Atomizing Nozzles 61
 Internal Mix Flat Fan Atomizing Nozzles 62
 External Mix Round Atomizing Nozzles 63
 External Mix Narrow Angle Flat Fan Atomizing Nozzles 64
 External Mix Wide Angle Flat Fan Nozzles 65
 Siphon Fed Round Atomizing Nozzles 66
 Siphon Fed Flat Fan Atomizing Nozzles 67

No Drip Internal Mix Narrow Angle Round Atomizing Nozzles 68

No Drip Internal Mix Wide Angle Round Atomizing Nozzles 68

No Drip Internal Mix Flat Fan Atomizing Nozzles 68

No Drip External Mix Round Atomizing Nozzles 68

No Drip External Mix Narrow Angle Flat Fan Atomizing Nozzles 68

No Drip External Mix Wide Angle Flat Fan Atomizing Nozzles 68

No Drip Siphon Fed Round Atomizing Nozzles 68

No Drip Siphon Fed Flat Fan Atomizing Nozzles 68

No Drip Siphon Fed Flat Fan Atomizing Nozzles 68

Safety Air Guns 70

Chip Shields 71
 Precision Safety Air Guns 72
 Soft Grip Safety Air Guns 72
 Heavy Duty Safety Air Guns 74
 Super Blast Safety Air Guns 75

Static Eliminators 77

Super Ion Air Knife 79
 Power Supplies 81
 Standard Ion Air Knife 85
 Ionizing Bars 87
 Super Ion Air Wipes 89
 Ion Air Cannon 91
 Ion Air Gun 93
 Ion Air Jet 95
 Stay Set Ion Air Jet 95
 Ionizing Point 97
 Static Meter, AC Sensor 98

E-Vac® Vacuum Generators ... 99

How to Build an E-Vac System 100
 In-Line 103
 Modular 103
 Adjustable 105
 Vacuum Cups 107

Air Operated Conveyors 111

Line Vac 111
 Threaded Line Vac 117
 Heavy Duty Line Vac 119
 Light Duty Line Vac 121

Industrial Housekeeping ... 123

Reversible Drum Vac 123
 Chip Trapper 125
 Chip Vac 127
 Heavy Duty Dry Vac 129
 Heavy Duty HEPA Vac 131
 Vac-u-Gun 133
 Deep Hole Vac-u-Gun 135

Vortex Tubes & Spot Cooling 137

Vortex Tubes 137
 Adjustable Spot Cooler 145
 Mini Cooler 148

Cold Gun Aircoolant Systems 149

Cabinet Cooler® Systems ... 153

NEMA 12, 4 and 4X 155
 Electronic Temperature Control 158

Accessories 162

Silencing Mufflers 162
 Filters 164
 Regulators 165
 Valves, Swivels, Thermostats 166
 Magnetic Bases, Stay Sets, Hoses 167
 Receiver Tank, Fittings 168

Page 3 **EXAIR Optimization**
 Minimize Compressed Air Use and Detect Wasteful Leaks

Page 11 **Air Knives**
 Blowoff, Clean, Dry and Cool with Less Noise and Air Consumption

Page 29 **Air Wipes**
 Blowoff, Dry, Clean and Cool Pipe, Cable, Extruded Shapes and Hose

Page 35 **Air Amplifiers**
 Vent, Exhaust, Cool, Dry and Clean - with No Moving Parts

Page 43 **Air Nozzles and Jets**
 Reduce Noise Levels and Air Costs on Blowoff Operations

Page 59 **Atomizing Nozzles**
 All Stainless Steel Construction for Durability and Corrosion Resistance!

Page 70 **Safety Air Guns**
 Safety Air Guns Use Engineered Air Nozzles for High Performance

Page 77 **Static Eliminators**
 Eliminate Static Electricity, Dust and Shock Hazard

Page 99 **E-Vac® Vacuum Generators**
 Vacuums for Lifting, Clamping, Mounting and Placement

Page 111 **Air Operated Conveyors**
 Convey Parts, Materials and Waste - with No Moving Parts

Page 123 **Industrial Housekeeping**
 Reliable Vacuums for Chip Removal, Liquid Transfer and Cleaning

Page 137 **Vortex Tubes and Spot Cooling**
 Cold Air for Industrial Spot Cooling Problems

Page 149 **Cold Gun Aircoolant Systems**
 Cool Machining Operations with Clean, Cold Air

Page 153 **Cabinet Cooler® Systems**
 Cool and Purge NEMA 12, 4 and 4X Electrical Control Panels

Page 162 **Accessories**
 Mufflers, Filters, Regulators, Valves, Swivel Fittings and More

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Per Title II, Article 7, paragraph 1, articles (products) must be registered when a substance is intended to be released under normal or reasonably foreseeable conditions of use and it is present in those articles in quantities totaling over 1 metric ton per producer or importer per year. Registration of EXAIR products is not required since they do not contain substances that are intentionally released.

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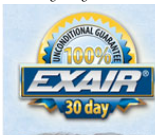
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*5 Year Warranty applies to compressed air products only.
A 1 Year Warranty applies to all accessories and electrically powered products.

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If you are not satisfied for any reason within that time, you may return the product for full credit with no restocking charge.

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Cold Gun Aircoolant System

An INTELLIGENT COMPRESSED AIR® Product

Cold Gun Aircoolant System™



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

What Is The Cold Gun Aircoolant System?



Watch the video!

www.exair.com/cgvideo.htm

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.

Applications

- Tool sharpening
- Drill and 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 5215 Cold Gun keeps the part cool to the touch and prevents discoloration.



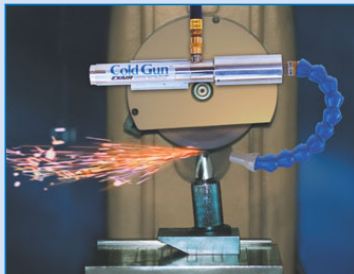
Cold air eliminates heat cracking of the carbide tool during sharpening.



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

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

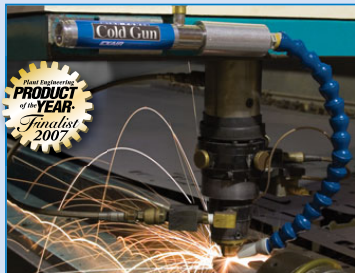
Fly cutters up to 460mm in diameter have been cooled with the Cold Gun. Dissipating heat with cold air extends tool life, increases speeds and feeds, and improves finishes.



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.

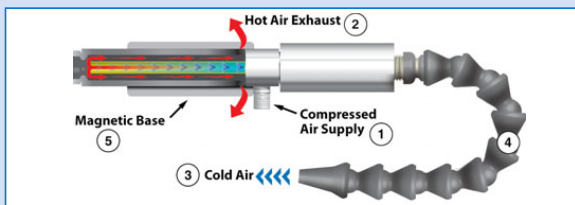


Model 5230 High Power Cold Gun System

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.

How The Cold Gun Works

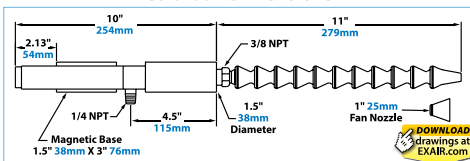


The standard Cold Gun and High Power Cold Gun incorporate a vortex tube to convert an ordinary supply of compressed air (1) into two low pressure streams, one hot and one cold. (For complete information on vortex tube operation, see page 138 of this catalog.) The Cold Gun's hot airstream is muffled and discharged through the **hot air exhaust** (2). The cold air (3) is muffled and discharged through the **flexible hose** (4), which directs it to the point of use. Easy mounting and portability are provided through the use of an attached **magnetic base** (5).

Specifications

Model #	Pressure Supply		Air Consumption		Sound Level
	PSIG	BAR	SCFM	SLPM	dBA
Cold Gun 5215, 5315	100	6.9	15	425	70
High Power Cold Gun 5230, 5330	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. (See page 164 for details.)

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 Model 5901 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 Aircoolant System

Purdue University Study Confirms Benefits Of The EXAIR Cold Gun

Tooling costs a lot of money to replace. That's only part of the problem. As the tools wear out, you can expect:

- Slowed production and downtime to change out the tooling
- Poor tolerances and dimensional accuracy due to increased temperature
- Increased cutting force is required (generates more heat and uses more electricity)

If you could just make the tooling last longer, you'd not only cut the tool cost but could increase profits by reducing scrapped parts and downtime.

A long term study on the effect of re-frigerated air on tool wear in wood machining was conducted at the Forestry Products Department of Purdue University by Ms. Judith Gisip. The project was under the direction of Dr. Rado Gazo (department professor) and Harold Stewart



Purdue's CNC router turns (22) 4'x8' sheets into sawdust.



EXAIR's Cold Gun is mounted under the protective guard.



Cold air from EXAIR's Model 5315 Cold Gun System keeps the tooling cool.

(professor at North Carolina State University with 35 years in wood machining research). Wood is brutal on tooling. In metalworking, most of the heat goes away with the machined chip. Wood is an excellent insulator and doesn't conduct the heat away, which keeps it all there at the tool. Temperatures can exceed 800°C!

The extensive tests at Purdue were conducted in a 70°F climate controlled room. They tested (4) 1/2" (12.7mm) two-flute cutters on a CNC router at 16,000 rpm. (22) sheets of 3/4" thick MDF (medium density fiberboard) were fed one at a time, cutting away 1/4" (6mm) depth of cut on each pass. Power consumption of the CNC was recorded (current draw increases as the tool starts to dull). When finished, the surface of the tools was examined using a scanning electron microscope. Machining with the Cold Gun's 20°F air reduced tool wear by over 21% compared to the results with no cooling.

For complete details of the Purdue study, visit our web site at www.exair.com/purdue.htm.

How Much Can You Save?

- A 1/2" two flute router bit for wood is approximately \$67.
- The 21% reduction in tool wear when using a Cold Gun is \$67 x 0.21 = **\$14.07 savings per bit.**
- If you use (1) router bit per working day, the savings is \$14.07 x 5 working days = **\$70.35 per week / \$3,658 per year For One Bit!**

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.



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.

Dual Point Hose Kit is recommended when heat is generated over a larger surface area.

Accessories and Components

Model #	Description	Model #	Description
5015	Cold Gun Only	9005	Oil Removal Filter, 3/8 NPT, 15 - 37 SCFM (425 - 1,048 SLPM)
5030	High Power Cold Gun	9012	Manual Shutoff Valve, 1/4 NPT
5901	Single Point Hose Kit (Included with 5215 and 5230)	9020	Solenoid Valve (120V, 50/60Hz), 1/4 NPT, 40 SCFM (1,133 SLPM)
5902	Dual Point Hose Kit (Included with 5315 and 5330)	9021	Solenoid Valve (200-240V, 50/60Hz), 1/4 NPT, 40 SCFM (1,133 SLPM)
9003	Manual Drain Filter Separator, 1/4 NPT, 27 SCFM (765 SLPM)	9031	Solenoid Valve (24VDC), 1/4 NPT, 40 SCFM (1,133 SLPM)

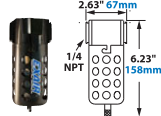
Accessories

Filter Separators

Model 9003



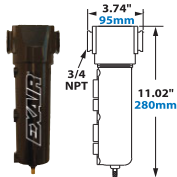
Model 9004



Model 9001 & 9032



Model 9002



Model 9066



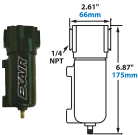
EXAIR's Filter Separators remove water, dirt and rust from your compressed air system. They prevent these contaminants from plugging or damaging the compressed air products. A Filter Separator should be installed prior to an oil removal filter, pressure regulator or valve.

The Model 9003 Manual Drain Filter has a polycarbonate bowl and a 20 micron filter element. A manual drain is used to empty the filter. Model 9001, 9002, 9004, 9032, and 9066 Automatic Drain Filter Separators have a metal bowl and a 5 micron filter element (Model 9004 has a polycarbonate bowl with a metal guard). An internal float automatically activates the drain when the bowl becomes full.

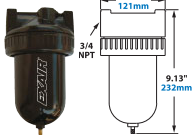
Model #	Description
9003	Manual Drain Filter Separator, 1/4 NPT, 27 SCFM (765 SLPM)
9004	Automatic Drain Filter Separator, 1/4 NPT, 43 SCFM (1,218 SLPM)
9001	Automatic Drain Filter Separator, 3/8 NPT, 65 SCFM (1,841 SLPM)
9032	Automatic Drain Filter Separator, 1/2 NPT, 90 SCFM (2,548 SLPM)
9002	Automatic Drain Filter Separator, 3/4 NPT, 220 SCFM (6,230 SLPM)
9066	Automatic Drain Filter Separator, 1-1/4 NPT, 400 SCFM (11,327 SLPM)

Oil Removal Filters

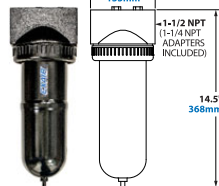
Model 9027



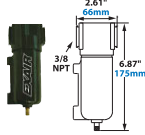
Model 9006



Model 9010



Model 9005



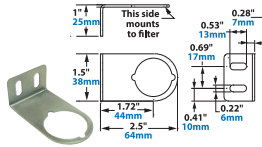
EXAIR's Model 9027, 9005, 9006, and 9010 Oil Removal Filters remove oil particulate that is typical of many compressed air systems.

A 0.03 micron element is used to trap submicron particles. An internal float automatically activates the drain when full.

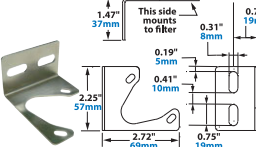
Model #	Description
9027	Oil Removal Filter, 1/4 NPT, 24 SCFM (680 SLPM)
9005	Oil Removal Filter, 3/8 NPT, 15 - 37 SCFM (425-1,048 SLPM)
9006	Oil Removal Filter, 3/4 NPT, 50 - 150 SCFM (1,415-4,248 SLPM)
9010	Oil Removal Filter, 1-1/2 NPT, 130-310 SCFM (3,679-8,773 SLPM)

Filter Mounting Brackets

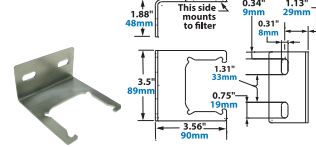
Model 900395



Model 900396



Model 900397



Model #	Description
900395	Mounting Bracket for Model 9003
900396	Mounting Bracket for Model 9001, 9004, 9005, 9027, and 9032
900397	Mounting Bracket for Model 9002