

## FRIGID-X™ TOOL COOLING SYSTEM

**Produce cold air from compressed air to cool machine tools and other applications to replace messy misting systems, improve product quality and increase production speeds**

### WHAT ARE THEY - REASONS TO USE

Frigid-X™ Tool Cooling System for dry machining applications - replaces polluting and often toxic mist systems to improve dry machining operations. No mess, no residue and low in cost. It is efficient and can improve dry machining operations and assist in spot cooling applications for a variety of industrial machining processes by increasing machining rates and extending tool life. Produces cold air at approximately 50° F (28° C) below supply air temperature. The unit is muffled for quiet operation. No moving parts assures long life, maintenance free operation while extending tool life and improving production rates. It can prevent smearing of metal or plastics and eliminates wheel loading. Factory set for optimum cooling effect and to prevent freeze up. Can often replace costly mist coolants and certainly improves the quality and output of all types of dry machining operations from metals to plastics. Unit is low cost, no electricity with no moving parts and is essentially maintenance free.

### FRIGID-X™ TOOL COOLER APPLICATIONS:

- ▶ Sharpening Tools
- ▶ Routing
- ▶ Machining Plastics
- ▶ Drill and cutter grinding
- ▶ Milling, Drilling, Routing and Surface Grinding
- ▶ Plunge & Form Grinding
- ▶ Setting Hot Melt Adhesives
- ▶ Laser Cutting
- ▶ Tire and Rubber Grinding
- ▶ Band Saw Blade Cooling
- ▶ Chill Roll Nip Cooling

### FRIGID-X™ TOOL COOLER SYSTEM - HOW IT WORKS

Compressed air enters at point (A) into the vortex tube component of the tool cooling. The vortex tube splits the compressed air into a cold (B) and hot (C) stream of air. The hot air from the vortex tube is vented to the atmosphere at point (D) after being muffled to reduce noise. Cold air enters into the muffler (E) and then distributed through the hose distribution kit (F) and onto the tool being cooled. A strong magnet (G) holds the tool cooler onto the machine

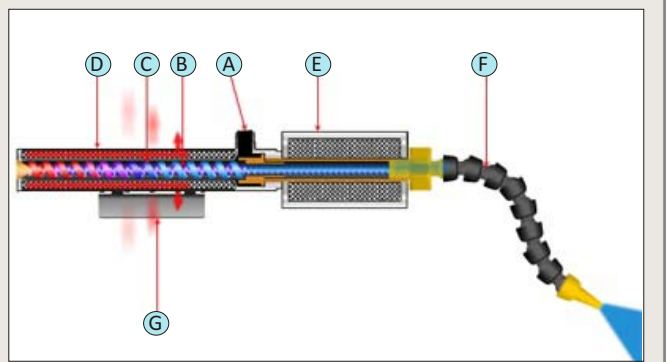


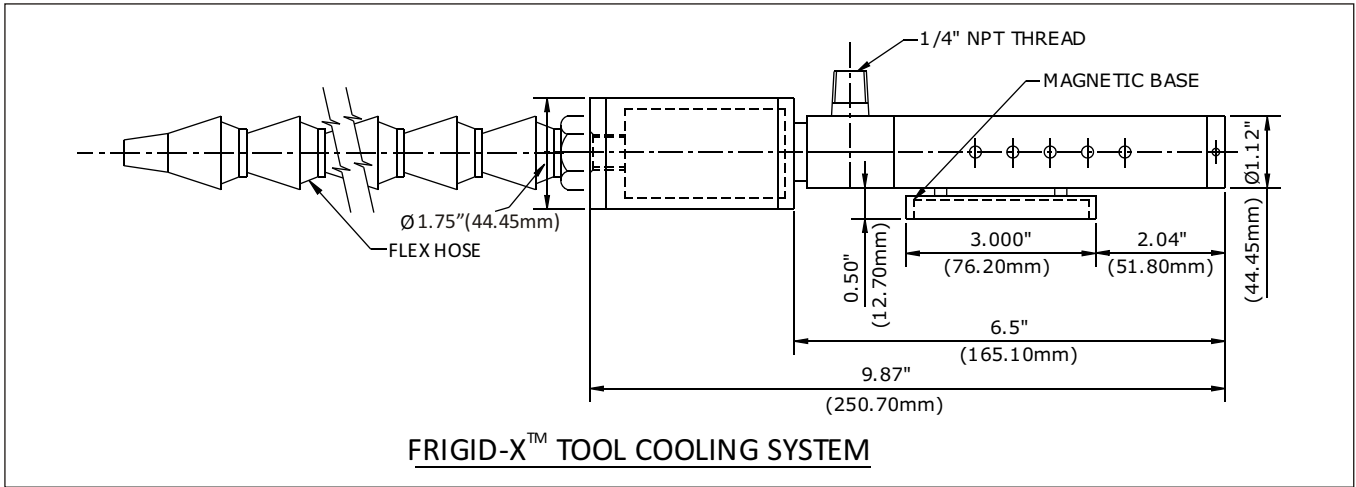
### WHY THE FRIGID-X™ TOOL COOLER OVER OTHERS:

All Metal Parts, Stainless Steel Body. Tests Show Frigid-X™ consistently quieter than competition!

### FRIGID-X™ ADJUSTABLE SPOT COOLER ADVANTAGES:

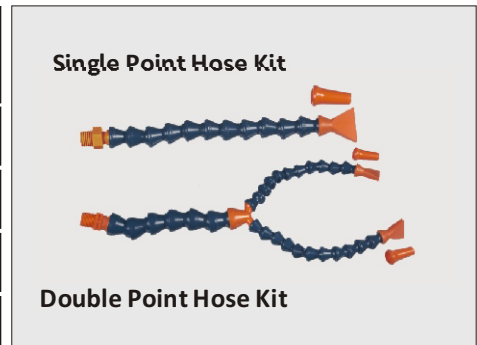
- ▶ No moving parts.
- ▶ Quiet
- ▶ Driven by air not electricity.
- ▶ Small and lightweight - portable.
- ▶ Low in cost compared to most others
- ▶ Superior design and performance
- ▶ Maintenance free operation
- ▶ Made of durable stainless steel and metal parts –no cheap plastic parts
- ▶ Improves production rates and finished part remains dry
- ▶ Prevents burning
- ▶ Improves tolerance control
- ▶ Eliminates coolant costs
- ▶ System uses strong magnetic base



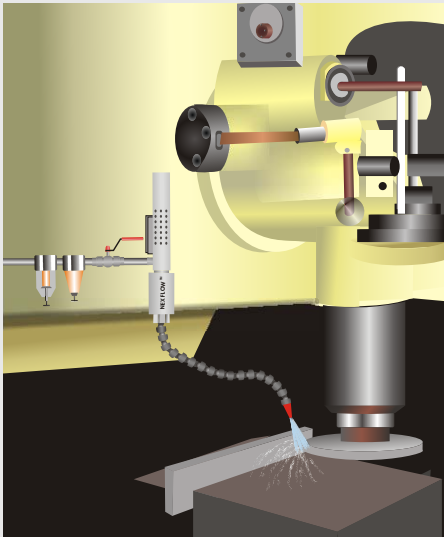


**SPECIFICATIONS**

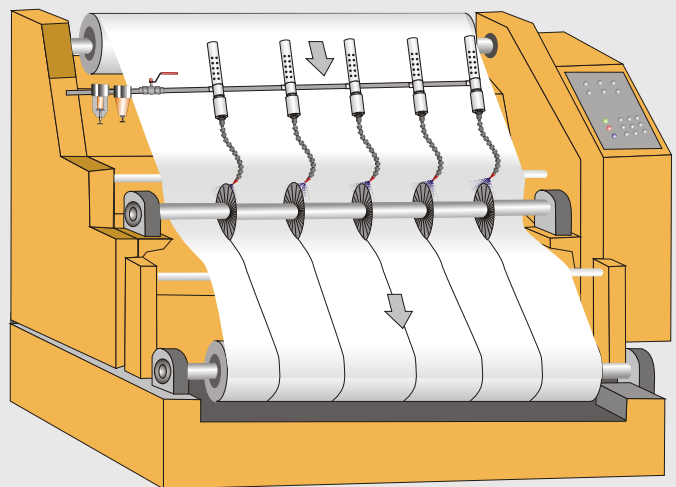
MODEL NO.	INLET PRESSURE PSIG (Bar)	AIR CONSUMPTION SCFM (SLPM)	SOUND LEVEL dBA
57015FS, 57015FD	100 (6.9)	15 (425)	70
57025FS, 57025FD	100 (6.9)	25 (708)	78
57030FS, 57030FD	100 (6.9)	30 (850)	82
57040FS, 57040FD	100 (6.9)	40 (1133)	83



A Model 57025FS Frigid-X™ Tool Cooler is used on a grinding application to reduce the heat and extend wheel life.



A Series of Model 57015FS Frigid-X™ Tool Coolers are used to cool the slitting cutters in a continuously moving paper roll slitting machine.



**USE AND SELECTION OF FRIGID-X™ TOOL COOLER**

Always use clean, dry compressed air. A manual filter is supplied with every 15 SCFM system and a filter with automatic drain with larger sizes to insure dry air. If oil is a major problem in the compressed air line, an oil removal filter is also recommended. The temperature of the air can be controlled by reducing the pressure using either a regulator or manual shut-off valve. A solenoid valve may also be connected into the machine operation to turn the air supply to the cooling unit on-off as it is needed, thereby conserving compressed air usage.

The tool cooler is available in several capacities - 15, 25, 30, and 40 SCFM in addition, there are two versions - a single point outlet and dual point outlet system.

The Single Point versions are used where a concentrated airflow is needed such as in drilling or grinding. The Dual point versions are used for applications where the heat to be removed is generated over larger surface areas such as in band sawing, milling, application of hot melt adhesives or on chill rolls. One system can be converted to the other by changing hose kits. For most applications the 15 SCFM units are satisfactory but for harder materials such as titanium, or faster machining speeds, the capacities used should be higher. The size depends on the application and an application engineer can assist you in choosing the right model.

**MODEL 57015FS**

Includes Tool Cooler Single, Point Hose Kit, 3/8" (10mm)  
Cone Nozzle, 1-1/4" (32mm)  
Fan Nozzle, Filter with Manual Drain



**MODEL 57015FD**

Includes Tool Cooler, Dual Point Hose Kit,  
Two (2) 1/4" (6mm) Cone Nozzle, 1" (25.4mm)  
Fan Nozzle, Filter with Manual Drain



**MODEL 57025FS, 57030FS, 57040FS**

Includes Tool Cooler, Single Point Hose Kit, 3/8" (10mm)  
Cone Nozzle, 1-1/4" (32mm)  
Fan Nozzle, Filter with Automatic Drain



**MODEL 57025FD, 57030FD, 57040FD**

Includes Tool Cooler, Dual Point Hose Kit,  
Two (2) 1/4" (6mm) Cone Nozzle, 1" (25.4mm)  
Fan Nozzle, Filter with Automatic Drain



**FRIGID-X™ TOOL COOLING SYSTEM**

PART NO.	DESCRIPTION
56015F	Tool Cooler only - 15 SCFM Capacity - Standard Cooling Use
56025F	Tool Cooler only - 25 SCFM Capacity - Higher Cooling Use
56030F	Tool Cooler only - 30 SCFM Capacity - Very High Cooling Use
56040F	Tool Cooler only - 40 SCFM Capacity - Highest Cooling Use
57015FS	Tool Cooling System includes 15 SCFM Tool Cooler plus filter with manual drain and single point hose kit.
57015FD	Tool Cooling System includes 15 SCFM Tool Cooler plus filter with manual drain and dual point hose kit.
57025FS	Tool Cooling System includes 25 SCFM Tool Cooler plus filter with automatic drain and single point hose kit.
57025FD	Tool Cooling System includes 25 SCFM Tool Cooler plus filter with automatic drain and dual point hose kit.
57030FS	Tool Cooling System includes 30 SCFM Tool Cooler plus filter with automatic drain and single point hose kit.
57030FD	Tool Cooling System includes 30 SCFM Tool Cooler plus filter with automatic drain and dual point hose kit.
57040FS	Tool Cooling System includes 40 SCFM Tool Cooler plus filter with automatic drain and single point hose kit.
57040DS	Tool Cooling System includes 40 SCFM Tool Cooler plus filter with automatic drain and dual point hose kit.

**ACCESSORIES**

59001	Single Point Hose Kit - includes 3/8" (10 mm) cone nozzle and 1-1/4" (32 mm) fan nozzle
59002	Dual Point Hose Kit - includes two 1/4" (6 mm) cone nozzles and two 1" (25 mm) fan nozzles
90003	Manual filter -1/4" NPT, 27 SCFM (765 SLPM)
90004	Filter with automatic drain - 1/4" NPT, 43 SCFM (1359 SLPM)
90005	Oil Removal filter with automatic drain, 3/8" NPT, 15 to 37 SCFM (425 to 1048 SLPM)

**FRIGID-X™ ADJUSTABLE SPOT COOLER**

**Produce cold air as low as minus 30° F (minus 34° C) from compressed air to spot cool with easy adjustability**

**WHAT ARE THEY - REASONS TO USE**

The Frigid-X™ Adjustable Spot Cooler is a low cost and maintenance free system which utilizes a vortex tube to produce cold air at one end.

The Frigid-X™ Adjustable Spot Cooler temperature can be adjusted using a knob at the hot end to set the temperature precisely to your requirements. Temperatures range from approximately minus 30°F to room temperature and can be easily set with a thermometer.

The Frigid-X™ Adjustable Spot Cooler System comes with three brass generators for flow rate adjustment - 15 SCFM (425 SLPM), 25 SCFM (708 SLPM) and 30 SCFM (850 SLPM) providing refrigeration up to 2100 BTU/hr (615 Watts).

Cold air is directed using the flexible tubing. A magnetic base is standard for portability and easy mounting of the adjustable spot cooler.

Units are available with either a single point hose kit for small surface area or a dual point hose kit when heat is generated over a larger surface area. Adjustable spot cooler produces a wide range of airflow and temperature by adjusting the knob at the hot end and changing the various generators supplied.

The generators control the air consumption and are easily interchangeable. Adjustable spot cooler has a 25 SCFM (708 SLPM) generator installed that will produce up to 1,800 Btu/hr. of cooling. If less is required, the 15 SCFM (425 SLPM) generator can deliver 1,100 BTU/Hr. If more cooling is needed Nex Flow™ can supply you with the 30 SCFM (850 SLPM) generator for up to 2,100 BTU/Hr. of cooling.

**WHY THE FRIGID-X™ ADJUSTABLE SPOT COOLER OVER OTHERS:**

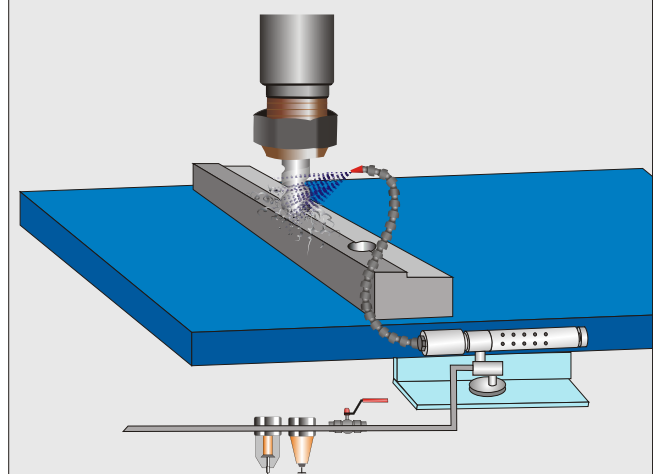
All Metal Parts, Stainless Steel Body, Quiet - Tests Show Frigid-X™ Adjustable Spot Cooler is consistently more quiet than the competition.



**FRIGID-X™ ADJUSTABLE SPOT COOLER ADVANTAGES:**

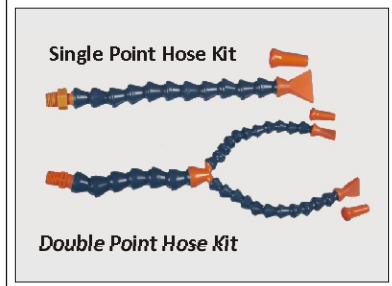
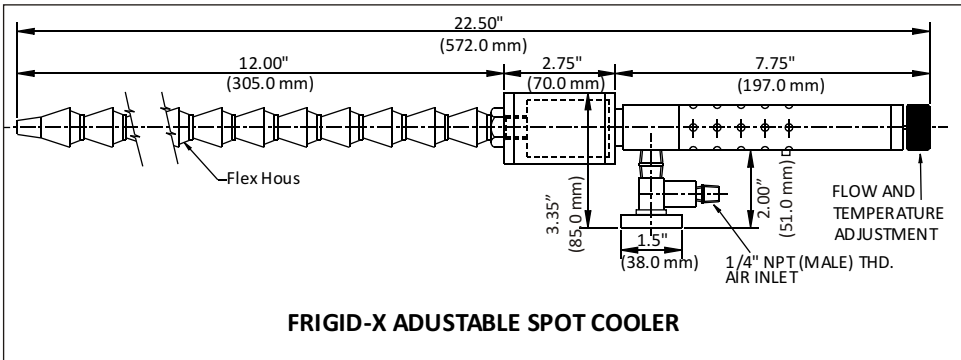
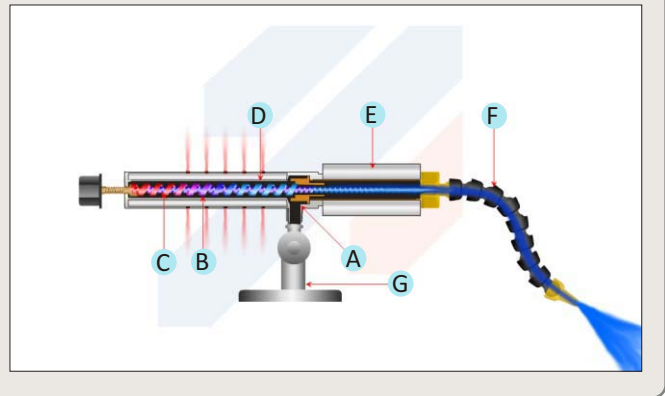
- ▶ No moving parts.
- ▶ Quiet
- ▶ Driven by air not electricity.
- ▶ Small and lightweight - portable.
- ▶ Low in cost compared to most others
- ▶ Superior design and performance
- ▶ Maintenance free operation
- ▶ Made of durable stainless steel and metal parts, no cheap plastic parts
- ▶ Adjustable temperature range
- ▶ Generators are interchangeable
- ▶ System uses strong magnetic base

**A Model 57025AS is used to cool a milling operation of a special ceramic material where the temperature had to be tightly controlled.**



**FRIGID-X™ ADJUSTABLE SPOT COOLER – HOW IT WORKS**

Frigid-X™ - Adjustable Spot Cooler - Compressed air enters at point (A) into the vortex tube component of the spot cooler. The vortex tube splits the compressed air into a hot (B) and cold (C) stream of air. The hot air from the vortex tube is vented to the atmosphere at point (D) after being muffled to reduce noise. Cold air enters into the muffler (E) and then distributed through the hose distribution kit (F) and onto the item being cooled. A strong magnet (G) holds the spot cooler in place. The temperature of the cold air is controlled by an adjustable knob.

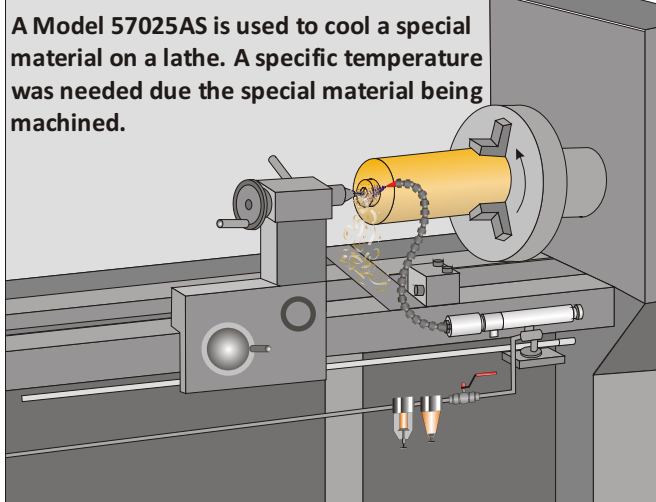


**FRIGID-X ADJUSTABLE SPOT COOLER**

**FRIGID-X™ ADJUSTABLE SPOT COOLER APPLICATIONS:**

- ▶ Solder Cooling
- ▶ Adjusting thermostats
- ▶ Cool plastic machined parts
- ▶ Set hot melt adhesives
- ▶ Cool welding horns on ultrasonic
- ▶ Cool molded plastics
- ▶ Cool Electronic components
- ▶ Cool heat shrink tubing

INLET PRESSURE PSIG (Bar)	AIR CONSUMPTION SCFM (SLPM)	SOUND LEVEL dBA
100 (6.9)	15 (425)	70
100 (6.9)	25 (708)	71
100 (6.9)	30 (850)	72



A Model 57025AS is used to cool a special material on a lathe. A specific temperature was needed due the special material being machined.

**FRIGID-X™ ADJUSTABLE SPOT COOLER**

PART NO.	DESCRIPTION
57025AS	Frigid-X™ Adjustable Spot Cooler System c/w cooler, magnetic base, single point hose kit, 25H generator (Installed), 15H generator (loose), 30H generator (loose)
57025AD	Frigid-X™ Adjustable Spot Cooler System c/w cooler, magnetic base, dual point hose kit, 25H generator (installed), 15H generator (loose), 30H generator (loose)
56025A	FRIGID-X™ Adjustable Spot Cooler only
OPTIONS	
90001	Filter with automatic drain, 3/8" NPT, 65 SCFM (1841 SLPM)
90005	Oil Removal Filter, 3/8" NPT, 15-37 SCFM (425 to 1048 SLPM)

## FRIGID-X™ MINI SPOT COOLER

Cool small parts and tooling with a compact spot cooler with no moving parts.

### WHAT ARE THEY - REASONS TO USE

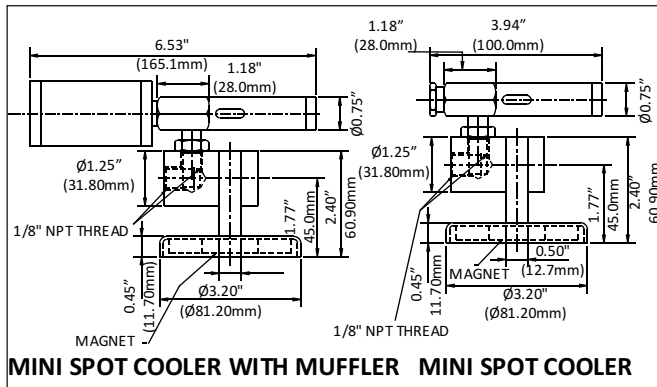
The Frigid-X™ Mini Spot Cooler is a low cost and maintenance free system which utilizes a vortex tube to produce cold air at one end. It is quiet and compact.

Designed for small parts, the Frigid-X™ Mini Spot Cooler produces a stream of 15 to 20 degree F (minus 9.5 to 7 degree C) of cold air to prevent heat buildup depending in inlet air temperature. It can improve tolerances in machining of small critical parts and increase production rates.

Cold air is directed using the flexible tubing. A magnetic base is standard for portability and easy mounting of the mini spot cooler

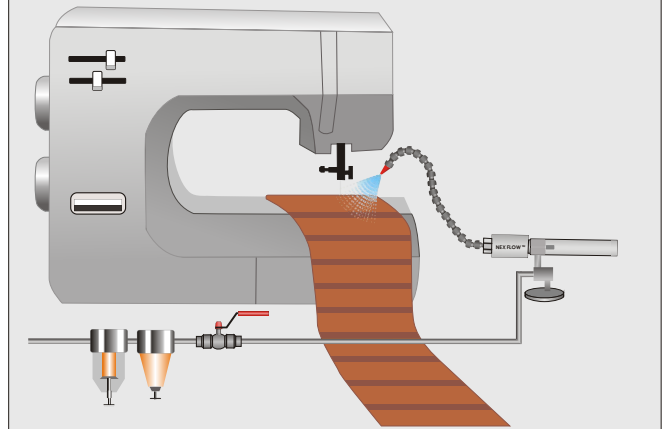
### APPLICATIONS:

- ▶ Needle cooling on sewing machines
- ▶ Cooling small blades
- ▶ Grinding lenses and small parts
- ▶ Cooling small tools



The Mini Spot Cooler utilizes a vortex tube to create one hot stream and one cold stream (see page 9). The cold air produced at the cold end is directed to the surface to be cooled using a flexible hose.

The Mini Spot Cooler is used in the cooling of needles on a sewing machine used to produce heavy materials for carpeting.



### FRIGID-X™ MINI SPOT COOLER

PART NO.	DESCRIPTION
56008F	Mini Frigid-X™ Cooler only (no muffler)
56108F	Mini Frigid-X™ Cooler only (with muffler)
57008F	Frigid-X™ Mini Spot Cooler System c/w cooler, magnetic base, single point hose kit
57108F	Frigi -X™ Mini Spot Cooler only options
90003	Flter with Manual Drain ¼ " NPT