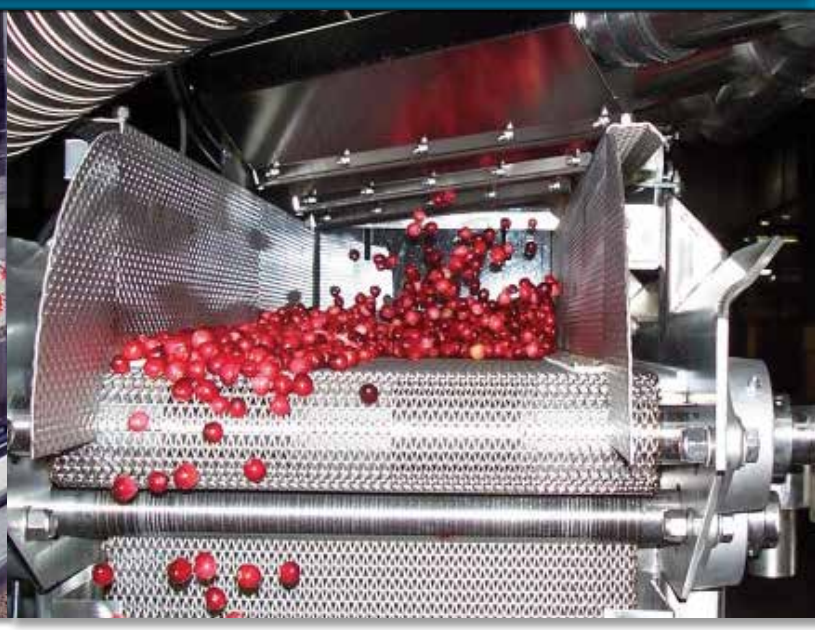
SONIC®

Engineered Blowers
& Air Knife Solutions
2019

Serving the Food, Beverage & Dairy Industries Worldwide since 1963

920-921-4760



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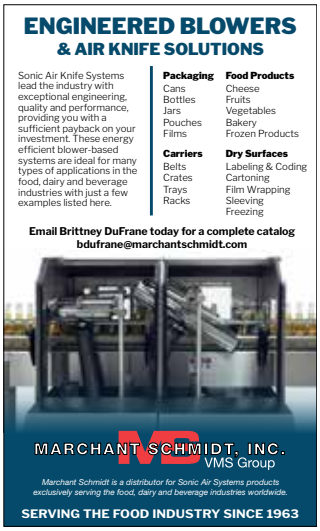


SNAPSHOT OF SONIC DRYING SYSTEMS

AIR KNIFE BOTTLE, CAN & CONTAINER DRYING

SMART AIR KNIFE TUNNELS

HEPA FILTER FOR COOL AIR

Y-VERTER

HEPA FILTER FOR UNPACKAGED SANITARY DRYING

SANITARY TANK DRYING

STANDARD PATENTED AIR KNIFE CHOICES

STAINLESS STEEL & CUSTOM ENCLOSURES

Fond du Lac, Wisconsin
920-921-4760

MARCHANT SCHMIDT, INC.
VMS Group

Serving food processors
since 1963

Drying Systems

Marchant Schmidt established a partnership with Sonic Air Systems shortly after Sonic's inception. Since 2001, MSI has worked closely with Sonic in providing solutions for a wide range of moisture removal, debris removal, product cooling and FDA-HEPA filtered air applications.

Sonic is the recognized leader in engineered "blower-powered" air knife solutions. Sonic's vast experience with thousands of customers worldwide provides the assurance that there will be no moisture or debris related problems outside or inside a product container impacting lid, pop top and crown drying, labeling, inkjet coding, shrink wrapping or cardboard packaging.

Setting Sonic apart from air knife systems that use compressed air is a 75% savings in energy costs when comparing Sonic centrifugal blowers to air compressors. For example, a 3 HP Sonic XE blower/ air knife system can replace a similar 10 HP compressed air/air knife system and produce significantly better blow-off/drying performance **(See the Operating Cost Comparison for various nozzle configurations on the next page).** As an added bonus, Sonic systems are "stand-alone" and, as a result, don't tax the capacity of a plant's existing shop air system.

Sonic and MSI's engineering departments work together to create effective solutions.

In "sanitary" situations, Sonic's HEPA 0.3 micron in-line filters combined with Cool-Air drying ensure that product surfaces are cleaned, cooled and dried with air that won't compromise the process's cleanliness requirements.

Where noise containment is a concern, Sonic has enclosures for blower units and SMART Tunnels for air knife configurations that reduce noise levels to as low as 75 dB for both blowers and air knives. The Sonic SMART Tunnel (with liquid drains) completely encloses the air knives for both liquid and noise control.

When product blending is part of the process and quick-turnaround change outs are the norm, the Sonic solution is their Variable-Temp Tank Dryer that reduces CIP (Clean-in-Place) time from hours to minutes. The cart-mounted blower delivers heated air at temperatures up to 200° F and air changes up to 10 changes per minute. The Sonic VT can also be used for drying blenders, augers, totes and other CIP components.

Manufactured in the USA

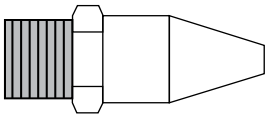
Marchant Schmidt is the specialty distributor for Sonic Air, exclusively serving the food, beverage and dairy industries worldwide.

Sonic Air Knife Annual Operating Cost Comparison

	Single Shift	Two Shifts	Three Shifts
	$5,893	$11,787	$17,680
	$3,630	$7,260	$10,890
	$1,494 (see note below)	$2,988	$4,482

Based on
5-Day Work Week

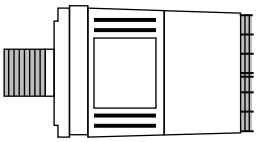
$418	$838	$1,256



Blow-Off Nozzles to Cover Two 6" Wide Areas

Eight (8) nozzles @ 75 PSIG and 24 CFM each consumed a total of 192 CFM

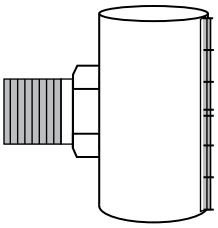
42.2 HP required



Flat Jets or Air Comb Nozzles to Cover Two 6" Wide Areas

Six (6) flat jets @ 75 PSIG and 20 CFM each consumed a total of 120 CFM

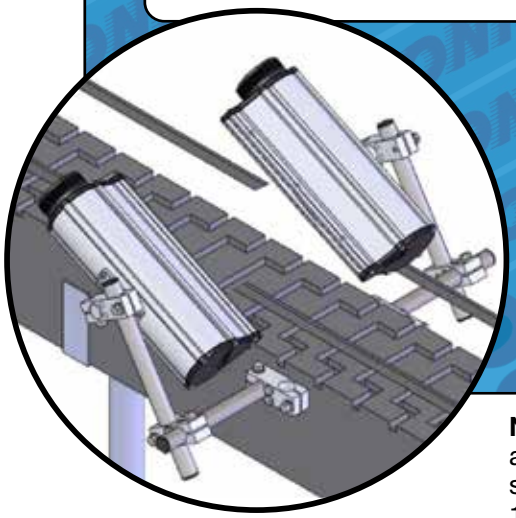
26 HP required



Air Knives to Cover Two 6" Wide Areas

Two (2) six inch wide air knives @75 PSIG and 24 CFM each consumed a total of 48 CFM

10.7 HP required **(see note below)**



Sonic Air Knives
To Cover Two 6" Wide Areas

High Velocity, Low-Pressure Sonic XE Air Knife System

Two (2) six inch wide Sonic XE Air Knives @ 1.5 PSIG and 72 CFM each consumed a total of 144 CFM and delivered blow-off air to the product at a velocity of 26,700 FPM

3 HP required (Sonic 70 Centrifugal Blower/Motor Combo)

Note: On average, a conventional air compressor is able to produce 4.5 CFM at 100 PSI/Horsepower (without line losses). For two 6" conventional air knives supplied by compressed air to supply 48 CFM, the motor horsepower needed is 10.7 HP. Single-shift annual operating cost for a unit this size would be $1,494.

Calculations: Horsepower Required: 48 CFM / 4.5 CFM/HP = 10.7 HP
Single Shift Annual Operating Cost: 10.7 HP x 0.746 KW/HP x 2080 HRS x $0.09/KW= $1,494

The most common application of Sonic blower-powered air knife systems is bottle and can drying in the food, dairy and beverage industries. Challenges come in the form of container cleanliness, moisture removal/disposal and noise containment.

Container cleanliness is very important. To ensure that every bottle and can is free of debris that may have gotten into the container from the beginning of the line, specially designed comb type air knives with an optional Sonic Ionizer Bar are tailor made to handle this task. This is accomplished by directing ionized "dust and debris releasing" air at high velocity into the unfilled container.

Air Knife with optional debris releasing Ionizer Bar.

After the bottle or can is filled and has gone through a wash station, the task at hand is to remove excess moisture from the outside of the container prior to labelling and packaging. It's also important to accomplish this without introducing excessive moisture and noise to the workplace. Sonic products that address these tasks include the air knives (both continuous slot and comb type), flex line nozzles and modular air knife tunnels.

Air Knives are sized and positioned to suit the application

Sonic Air Knives can be sized and positioned at almost any angle to remove all of the moisture from the bottle or can. The comb type air knife discharge opening can be designed to emphasize one area of the container over another. This provides more complete drying because of the higher air velocities associated with smaller comb type openings.

Moisture removal using air knives and high velocity air can result in unwanted moisture on floor areas in the vicinity of the air knives as well as excessive noise from the high velocity air. Sonic and MSI highly recommend, for foot traffic safety and hearing protection, that you enclose your air knives in Sonic SMART Air Knife Tunnels.

Noise and moisture containing SMART Tunnel

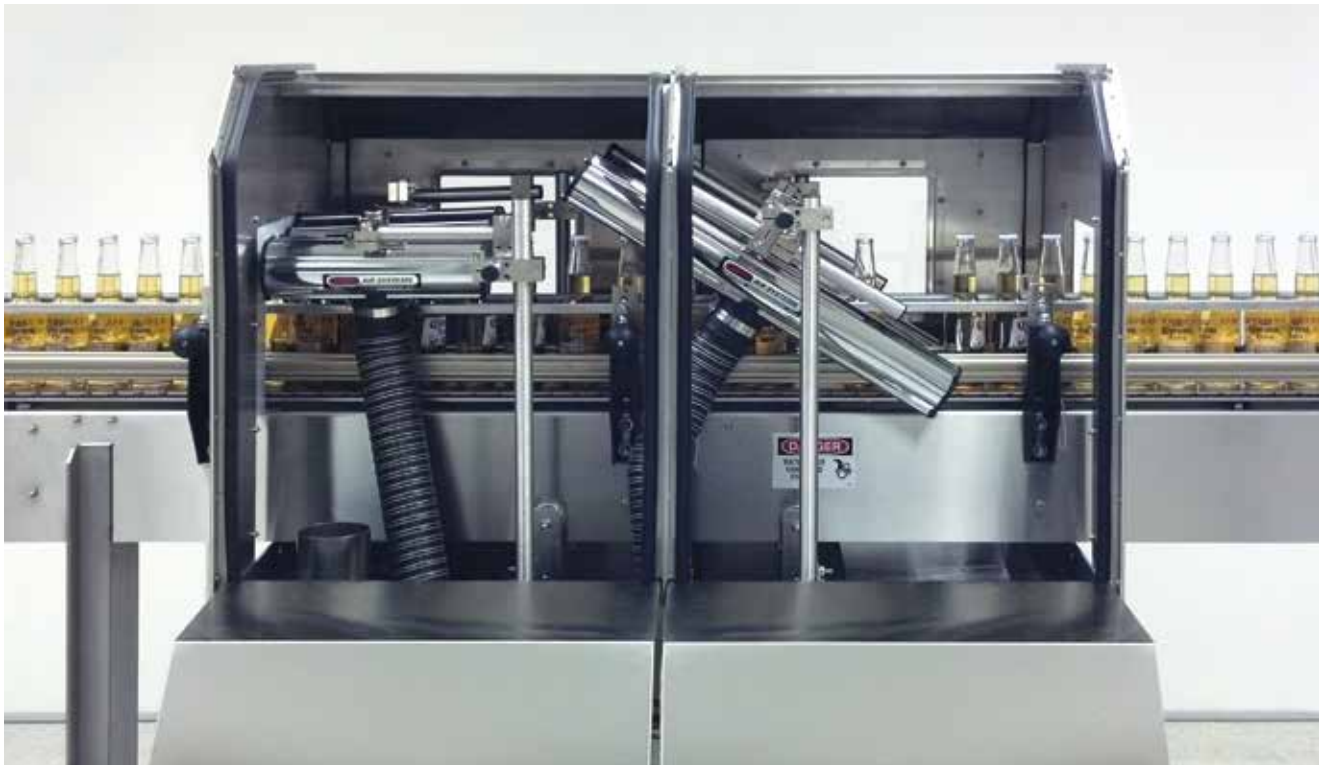
For both moisture and noise containment, Sonic Air Knife Tunnels are specifically designed with interchangeable panels to fit your container shape at tunnel entrance and exit along with catch pans and drain lines to dispose of the blown off liquid.

For those very hard to get spots around twist-on lids and “easy open” pop tops, a Flex Nozzle can be added to either end of any air knife to direct high velocity air to any specific spot on the container.

Stainless steel or polypropylene enclosures protect the heart of the Sonic Air Knife System by protecting the blower and motor from hostile environments, providing 10 microns of first level filtering to the blower and air knife air stream and quieting the whole unit down to a whisper quiet 75 dB.

Air Knife with optional Flex Nozzle for those hard to reach spots

Blower/Motor Enclosures reduce noise levels to 75 dB. 10 micron pre-filters protect the system from airborne contaminants

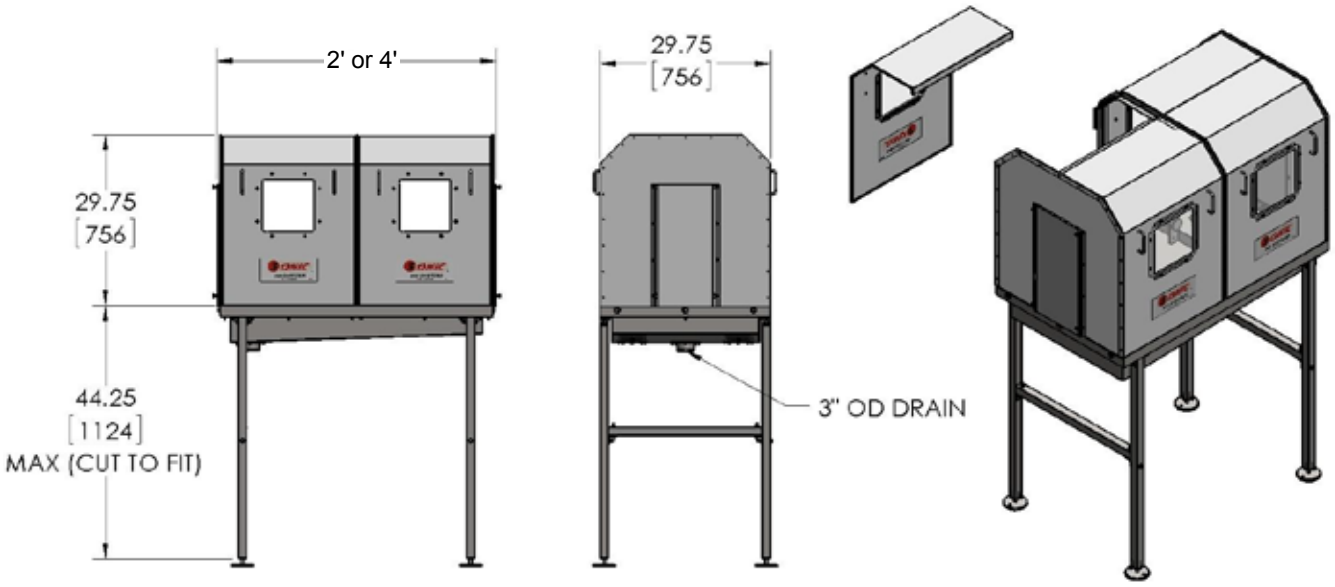


Covers removed to show Air Knife orientation in tunnel interior

Sonic's SMART Air Knife Tunnels for moisture and noise containment are available in 24" long modular sections. Using the modular sections, a tunnel system can be expanded to any length needed.

Interchangeable panels matching container shape and size are available for entrance and exit openings. These easy-to-remove panels ensure that moisture and noise are contained when container shape on the line changes.

With covers and container shape entrance/exit panels in place, air knife noise can be reduced to as low as 75 dB, well below the OSHA level requiring hearing protection. Sonic SMART Tunnels are also designed with catch pans and drain lines to dispose of blown off liquid.



Product Cooling/Drying Prior to Packaging

Fresh Cut produce along with the bakery and confectionary industries have their own set of challenges when it comes to drying or cooling the product prior to freezing or packaging. All varieties of leafy vegetables that have been pre-washed need to be dried before being sealed in their store-ready packaging. To avoid heat damage to the product, such as wilting and discoloration, that drying operation should be done with controlled, below ambient, "low temp" air.

Likewise, in the bakery and confectionary industries, bakery products, snack bars, candy bars and bite size candies need to have their low melting point toppings and coatings cooled to a package-friendly temperature prior to packaging.

Sonic has addressed all of these challenges with the Sonic Cool-Air product cooling system. The Sonic Cool-Air system cools the ambient air supplied to the air knife using customer supplied closed-loop recirculating water from an on-site chilled water source through the Cool-Air heat exchanger. The temperature of the air delivered to the product is controlled by adjusting supply water temperature along with air volume through the system.

Where air knife discharge air has to be "HEPA Clean", a Sonic 0.3 micron HEPA filter can easily be added in line with the Cool-Air system.

Stainless Sanitary Air Knife
(easy disassembly for sanitizing)

Blower Motor
(with filter enclosure)

Cool-Air Heat Exchanger
(Sectional cutaway view showing cooling coils)

Sonic has developed a revolutionary way to cool-dry (or just cool) conveyer product prior to packaging. This feature is particularly important in the fresh-cut produce, bakery and confectionery industries where “heat is the enemy” and processing must be done with cool-air rather than heated air.

Sonic Air Knife Systems has been the leader in “high temp” drying of customer products on conveyors after they are washed, rinsed or cooled with water. However, there are a variety of applications where product cannot be dried at high temperature because of potential spoilage or cooled using water because of the nature of the product.

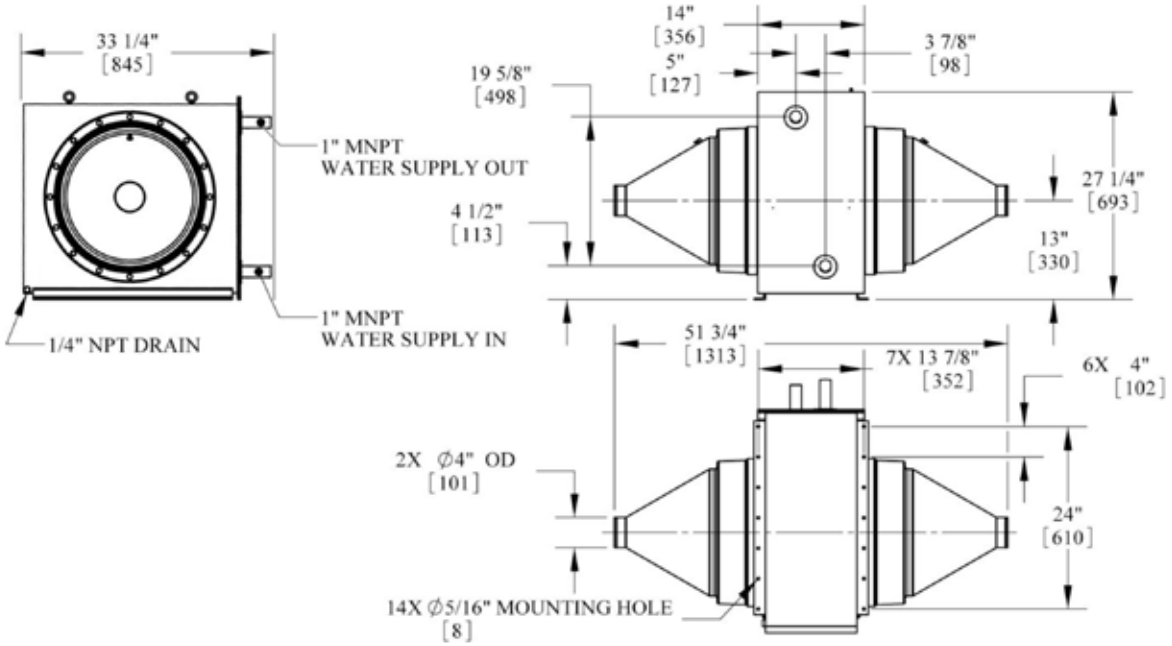
The solution … introduction of the Sonic “low temp” Cool-Air System.

Sonic can now deliver below ambient “low temp” air to the product on the conveyor by applying standard air knife air directly against the surface of the product at the right volume, temperature and velocity to accomplish one of two application-based outcomes.

- Dry the in-process product prior to packaging without adversely affecting product quality (sliced fruits, leafy vegetables, pizza toppings, packaged entrees, fish, meat, poultry)
- Cool the in-process product by breaking the boundary layer of heat to speed up cooling prior to packaging (candy bars, snack bars, bakery products with low melting point toppings)

Sonic does this by cooling the ambient air supplied to the air knife using a customer supplied closed-loop re-circulating water circuit from their chilled water source through the Cool-Air heat exchanger. The multi-row, fin-tube heat exchanger is installed between the Sonic blower and the air knife and eliminates all of the heat normally sent to the air knife for the drying process. This makes it possible for the air knife discharge temperature to be almost as low as the temperature of the water from the chiller.

Where air knife discharge air has to be “HEPA Clean”, a Sonic 0.3 HEPA filter can be added to the Cool-Air System.



Sanitary Drying Prior-To-Packaging

Raw products benefitting from filtered sanitary drying include everything from leafy vegetables, sliced fruits and berries to a wide variety of fish, meat and poultry products.

In this instance, the standard Sonic blower-powered air knife system is upgraded to “sanitary” with the inclusion of an in-line Sonic HEPA Filter System to remove contaminants as small as 0.3 microns. This is combined with stainless steel air knives that are easy to disassemble for sanitizing purposes.

When sanitary drying must be done with cool air rather than hot to prevent wilting of cut leafy vegetables and other heat related product quality issues, the addition of an in-line Sonic “low temp” Cool- Air System will get the job done.

Blower Motor
(with filter enclosure)

HEPA Filter Unit
(with 0.3 micron filtering)

Stainless Sanitary Air Knife
(easy disassembly for sanitizing)

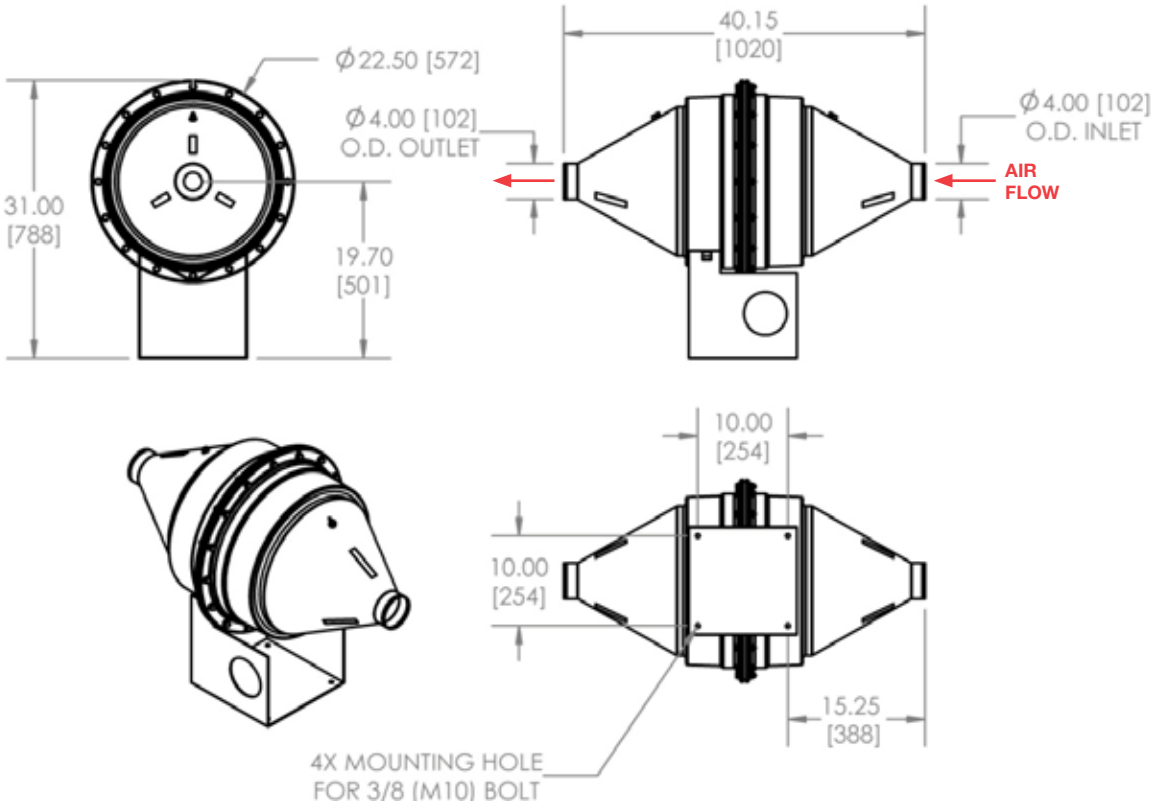
Sonic Air System's In-Line HEPA Filter is the perfect option for processing plants that have exposed food product. It's critical to have an air filtration system that keeps the product safe from contamination.

- With the 0.3 micron HEPA filter you can be sure your raw product will be safe on the processing line.
- Sonic's in-line HEPA filter has a flow rate of up to 1000 CFM allowing it to handle large applications without the need for a second filter, thereby saving you money.
- The HEPA filtration system has a gauge that notifies you when the filter element needs to be replaced. This ensures you that your filtration system is operating at peak efficiency.
- The HEPA filter comes with it's own stand to stabilize the filter unit.
- Connection ends are ribbed to make for a stronger tubing-to-housing fit.

The optional High Heat HEPA Filter is excellent for tank and hopper drying. Where normal air drying time can take 8 hours or longer, the high heat HEPA filter can cut that time down to as little as a half hour.

HEPA filter units can be mounted to carts to serve as portable sanitary dryers for multiple tank and other CIP/DIP applications.

Note: It's a good idea to have a HEPA Filter replacement in stock. To determine when the filter needs to be replaced, check the filter change indicator gauge.



DRY-IN-PLACE® Sanitary Drying

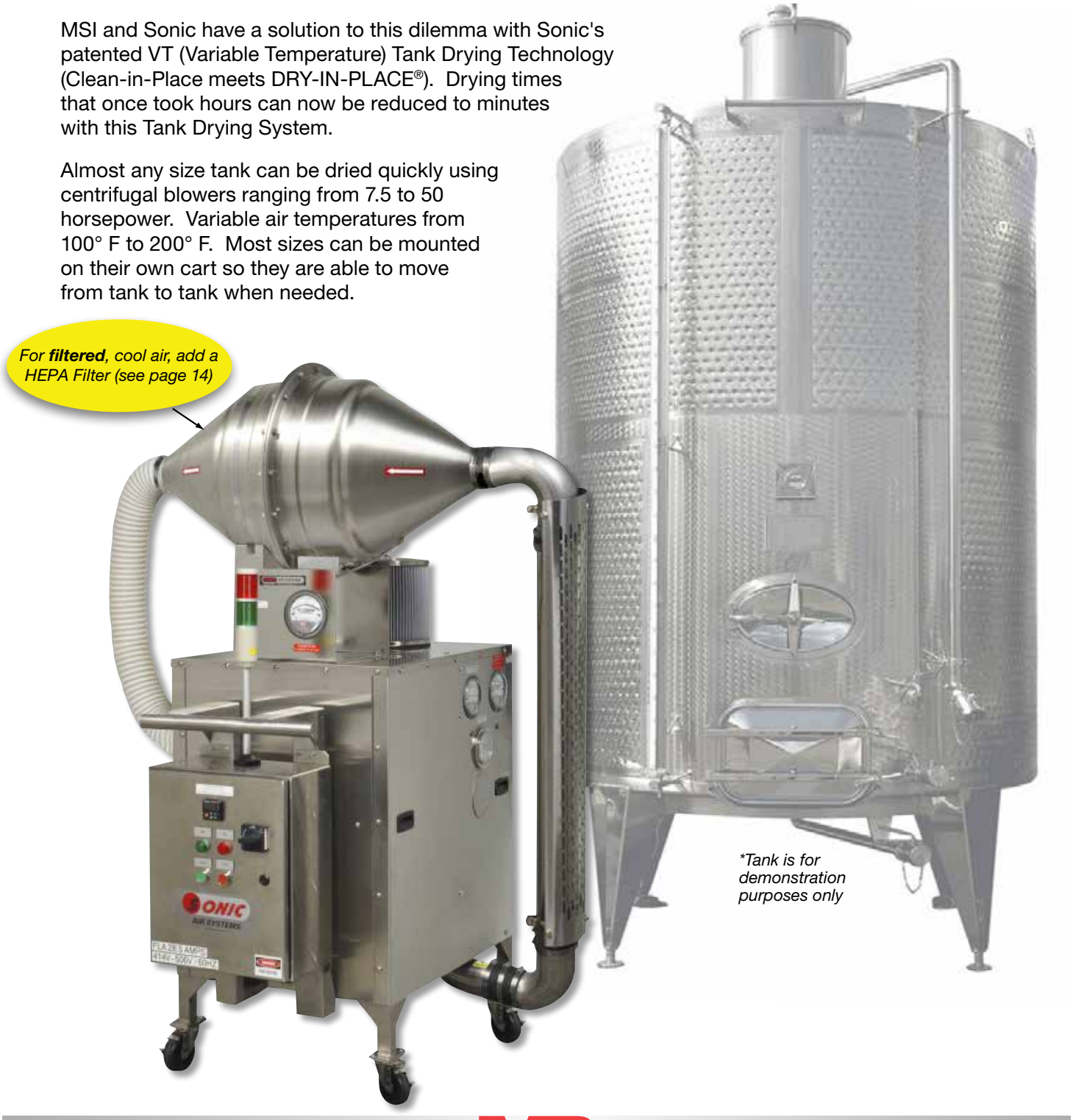
Tank blending wet or dry products can be very costly in terms of number of tanks needed to keep a variety of different blended products flowing through a processing plant. Corporate downsizing has aggravated this situation by bringing many different products under one roof. The ability to switch from one product to another as the market changes puts a major demand on how quickly a blending tank is cleaned, dried and put back into production.

It is not uncommon for a blending department to clean in place and allow a tank to air dry for a shift or longer before putting it back in operation with the next blended product. That is a lot of lost production if frequent product changeovers are the norm and extra tanks aren't available to bring into production.

MSI and Sonic have a solution to this dilemma with Sonic's patented VT (Variable Temperature) Tank Drying Technology (Clean-in-Place meets DRY-IN-PLACE®). Drying times that once took hours can now be reduced to minutes with this Tank Drying System.

Almost any size tank can be dried quickly using centrifugal blowers ranging from 7.5 to 50 horsepower. Variable air temperatures from 100° F to 200° F. Most sizes can be mounted on their own cart so they are able to move from tank to tank when needed.

*For **filtered**, cool air, add a HEPA Filter (see page 14)*



**Tank is for demonstration purposes only*

DRY-IN-PLACE® Sanitary VT Tank & Process Piping Dryer

HEPA Filter Unit (Optional)
(with 0.3 micron filtering)

Blower/Motor filtered intake noise containment enclosure

Sonic's patented DRY-IN-PLACE® (D-I-P®) VT (Variable Temperature) Tank Dryer is the fastest way to dry any tank, mixer, tote, process piping and valves.

The system provides up to 10 air exchanges a minute within the tank and up to 200°F blower heat thereby requiring no in-line heaters of any kind.

The application of the D-I-P® VT Tank Dryer System is simple:

Once the interior of the tank has been opened and a drying tube is inserted into the tank, the tank is purged for roughly 15-30 minutes.

Here's how it works:

The heated blower air is introduced into the tank system from the Sonic blower. A cap on the entrance point forces the pressurized air to flow vertically into the tank and pushes the water and moist air out the lowest drainage point.

The in-line 0.3 micron HEPA Filter can be added to the tank dryer for sanitary applications.

Features

- Adjustable air temperatures from 100° to 200°F (37° to 93°C) with thermocouple/PLC monitoring (optional)
- Stainless steel plumbing and enclosure
- Sonic blowers from 7.5 HP to 50 HP
- Complete piping systems are available
- Air exchange rates can be engineered to meet any drying cycle requirement
- 75 dB noise rating at blower enclosure

Benefits

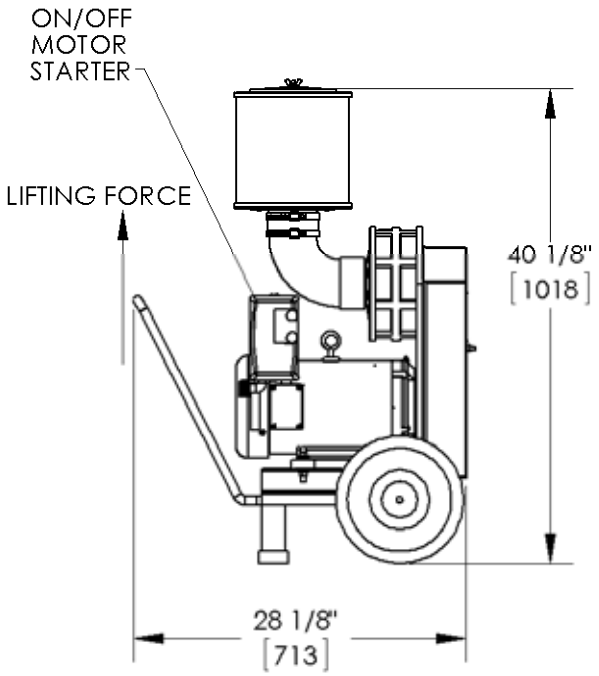
- Wash water and cleaning chemical removal prior to tank re-use
- Drying temperature achieved without use of an external heating source saving you on energy costs
- Moisture removal and surface drying from 75% to 100% as required
- Customized VT system for an infinite number of tank drying applications

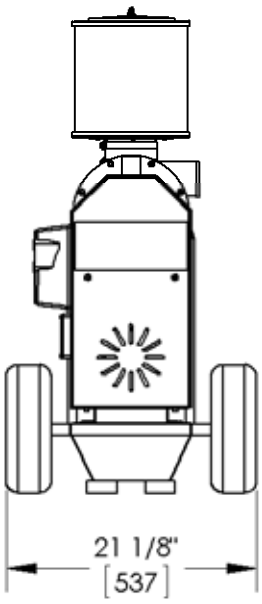
DRY-IN-PLACE® Centrifugal Blower

The Sonic DRY-IN-PLACE® (D-I-P®) Mobile Blower is a low cost alternative to a full-scale centralized Sonic Drying system and allows you to take the "drying system" to wherever you need it in your facility. The D-I-P® is ideal for plants that have many processing lines that don't operate all of the time. Simply roll the D-I-P® over to the line that is operating, connect it to the air knife inlet and begin processing. The D-I-P® provides the ultimate in portability and flexibility for those plants that need high velocity air in a variety of different locations over any given period of time.

Applications for the D-I-P® include:

- Off-line drying of cans or bottles
- Internal drying of piping and ingredient tanks
- Keg drying before or after filling and rinsing
- Hand-held nozzle cleaning of Clean-in-Place equipment
- Connecting to a Sonic Air Eductor/Conveyor for loading of ingredients into tops of tanks
- New process testing prior to equipment installation and start up





Standard Air Knives

The patented "tear drop" design of the Sonic Air Knife creates unmatched air-flow volume and velocity.

Item 1
Stainless Steel

Item 4
Stainless Steel Sanitary Type CIP/COP

Item 2
Hard Anodized Aluminum Knozzle™

Item 5 & 6
Comb-Type Aluminum or Stainless Steel

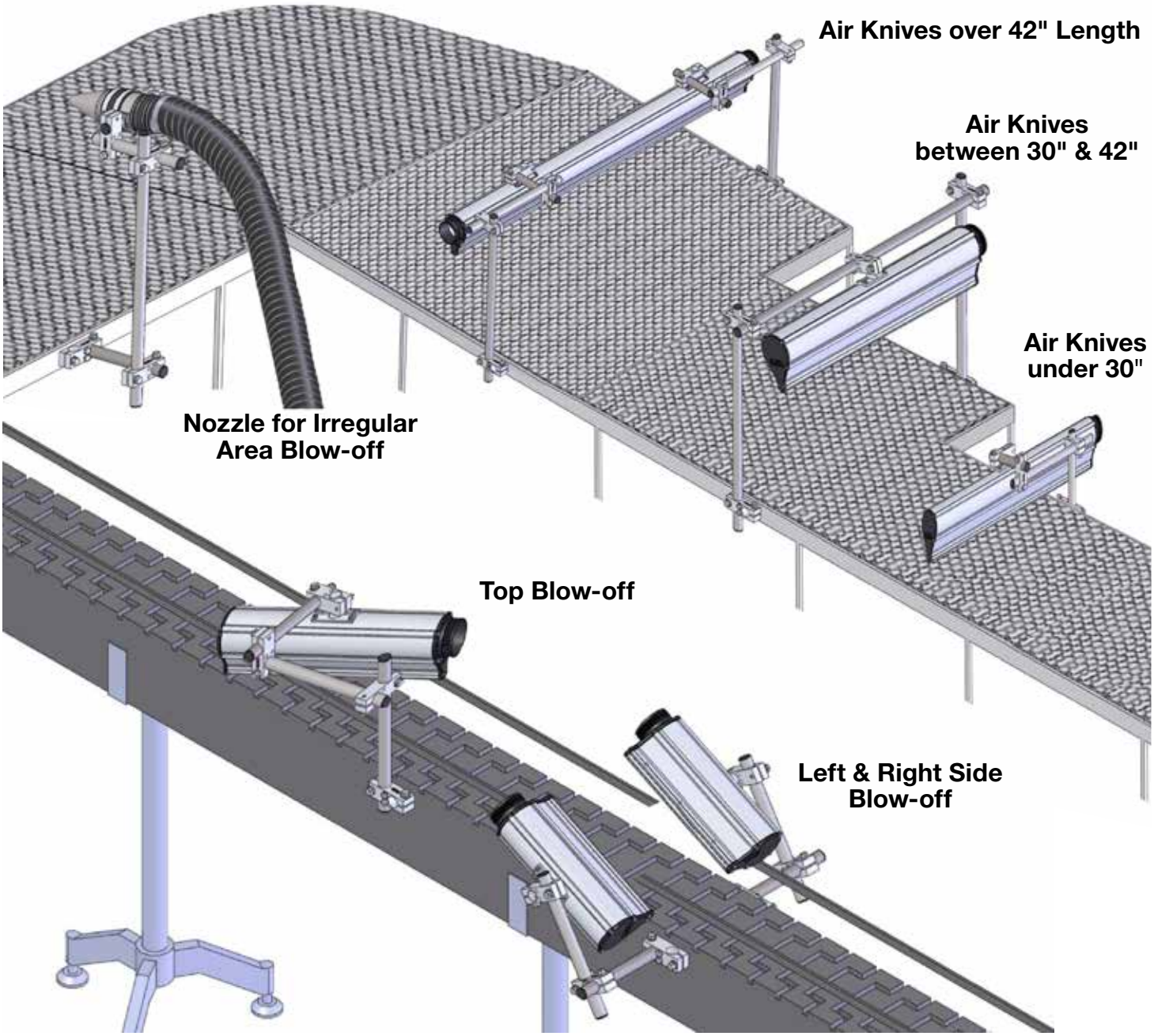
Item 3
Hard Anodized Aluminum

Item 7
Static Control Ionizer Bar
(optional)

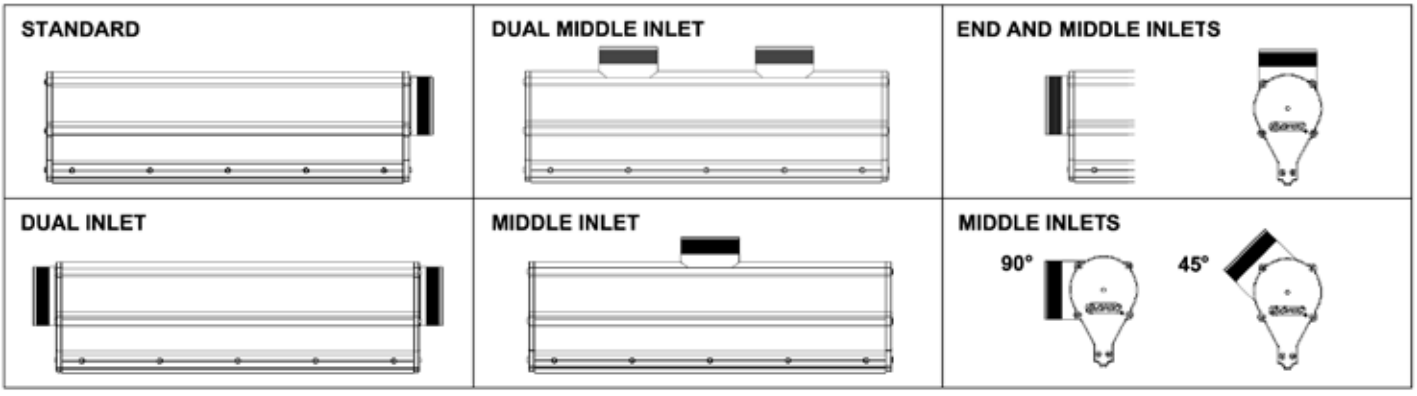
Item 8
Flex Nozzle
(designed to remove water under easy open pop tops)

Item	MSI Part Number	Description
1	SA12224-(length)	3" Inlet 300 Series Stainless Steel Air Knife
2	SA16200-(length)	3" Inlet Hard Anodized Aluminum Knozzle[tm] Air Knife
3	SA12852-(length)	3" Inlet Hard Anodized Aluminum Air Knife
4	SA12987-(length)	3" Inlet 3A Stainless Steel Sanitary Air Knife
5	SA12606-(length)	3" Inlet Hard Anodized Aluminum Comb-Type Air Knife
6	SA12609-(length)	3" Inlet 300 Series Stainless Steel Comb-Type Air Knife
7	SA14755	Static Control Ionizer Bar (optional)
8	SA16163-24	⅝" X 24" Custom Flex Nozzle Attachment

Standard Air Knife Layouts



Air Knife Inlet Orientations



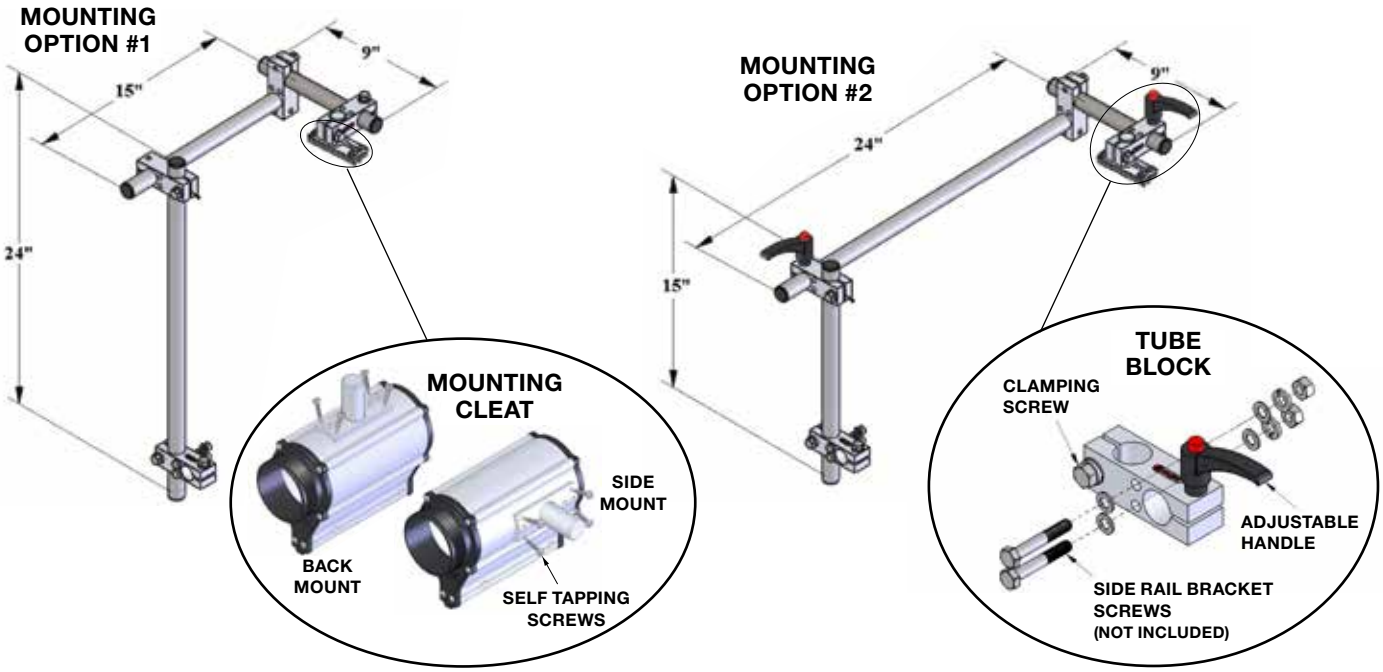
Single-Bracket Adjustable Air Knife Mounting System

The Sonic single-bracket adjustable air knife mounting system makes it easy to reposition the air knives to accommodate different product shapes and container sizes. As seen below, using the same components, two different mounting options are available to suit your needs.

This single mounting bracket design provides a rigid single-point air knife attachment with a 5-axis air knife adjustment (see Tube Block inset) that requires only one bracket for each air knife. The key advantage of the single-bracket system is the mounting cleat which can be fastened to any location along the body of the XE air knife (see Mounting Cleat inset). The cleat design accommodates flat and radius air knife profiles of 2, 3 and 4-inch sizes. The single-bracket system can be mounted to the equipment frame at whichever point is the most accessible.

The following parts are included in assembly SA15959:

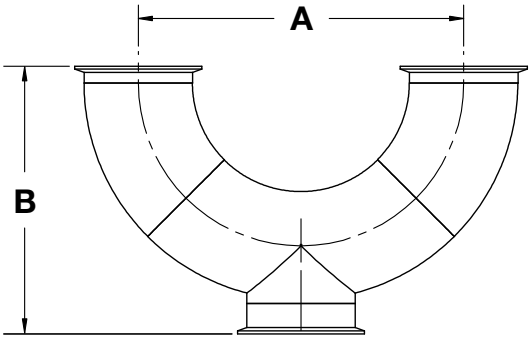
3 Connecting Tubes	6 Tube Caps	1 Mounting Cleat	4 Self Tapping Screws
4 Tube Blocks	6 Clamping Screws	2 Adjustable Handles	



MSI Part Number	Description
SA15959	Single-Bracket Mounting System for 2" or 3" Sonic air knife

MSI U-Branch Fittings w/ Two Outlets and Clamp Ferrules

MSI's polished U-Branch Fittings are offered in nominal tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga).



SPECIFICATIONS:

SIZES: 3" OD & 4" OD

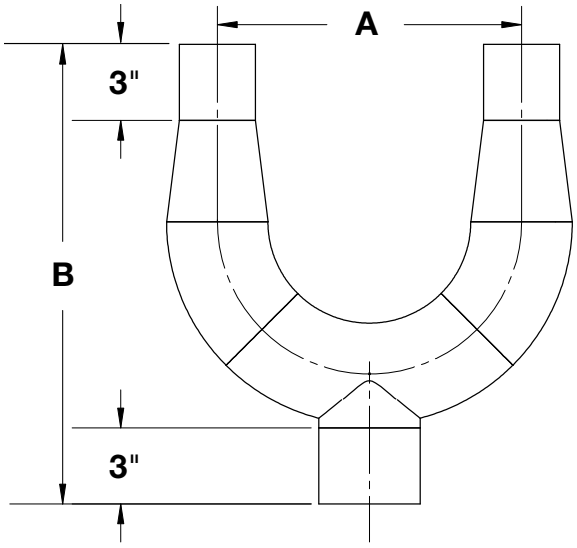
MATERIAL: T304L

FINISH: 32 Ra polish - ID & OD

MSI Part No.	Description	End	Inlet	Outlets	A	B
SA20013	MSI U-Branch Fitting	Clamp	3"	3"	9.000	7.750
SA20015	MSI U-Branch Fitting	Clamp	4"	3"	12.000	13.750
SA20011	MSI U-Branch Fitting	Clamp	4"	4"	12.000	9.880

MSI U-Branch Fittings w/ Two Outlets and Weld (Coupling) Inlet/Outlets

MSI's polished U-Branch Fittings are offered in nominal tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga).



SPECIFICATIONS:

SIZES: 3" OD & 4" OD

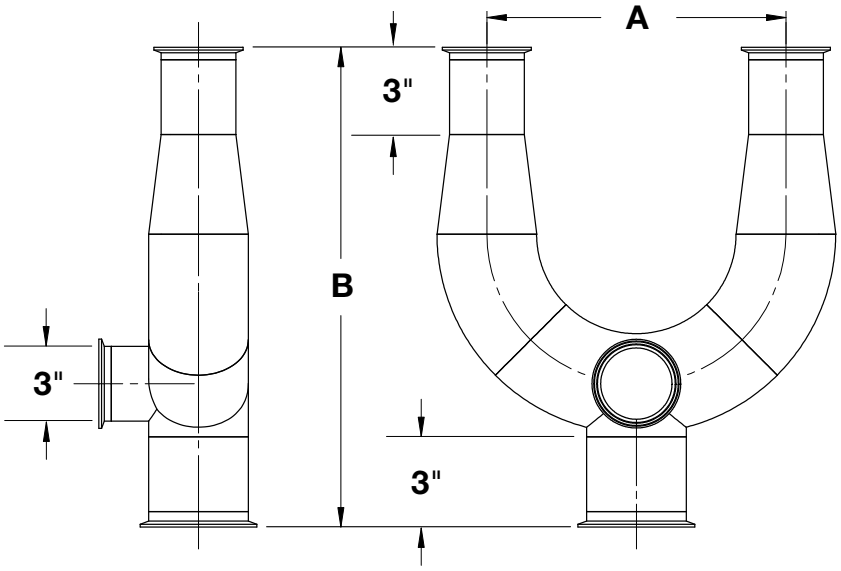
MATERIAL: T304L

FINISH: 32 Ra polish - ID & OD

MSI Part No.	Description	End	Inlet	Outlets	A	B
SA20012	MSI U-Branch Fitting	Weld	3"	3"	9.000	12.130
SA20014	MSI U-Branch Fitting	Weld	4"	3"	12.000	18.130
SA20010	MSI U-Branch Fitting	Weld	4"	4"	12.000	14.130

MSI U-Branch Fitting w/ Three Outlets and Clamp Ferrules

MSI's polished U-Branch Fittings are offered in nominal tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga).



SPECIFICATIONS:

SIZES: 4" OD Inlet &
3" OD Outlets

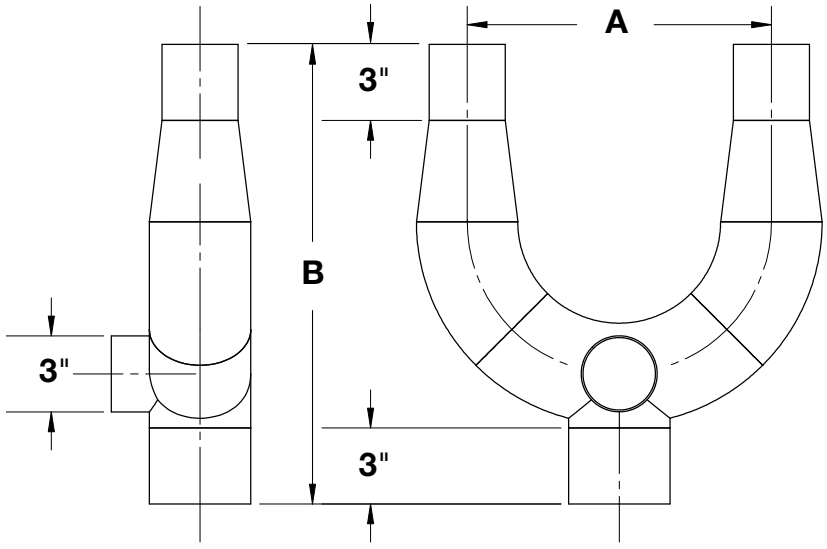
MATERIAL: T304L

FINISH: 32 Ra polish
ID & OD

MSI Part No.	Description	End	Inlet	Outlets	A	B
SA20014AC	MSI U-Branch Fitting	Clamp	4"	3"	12.000	19.250

MSI U-Branch Fitting w/ Three Outlets and Weld (Coupling) Inlet/Outlets

MSI's polished U-Branch Fittings are offered in nominal tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga).



SPECIFICATIONS:

SIZES: 4" OD Inlet &
3" OD Outlets

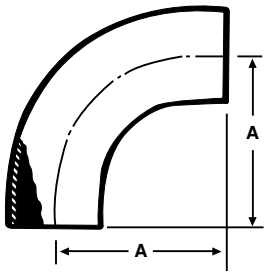
MATERIAL: T304L

FINISH: 32 Ra polish
ID & OD

MSI Part No.	Description	End	Inlet	Outlets	A	B
SA20014A	MSI U-Branch Fitting	Weld	4"	3"	12.000	18.130

MSI 90° Elbow Fittings

MSI's polished 90° Elbow Fittings are offered in nominal tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga). In 6" size, wall thickness is .109 (12 ga).



SPECIFICATIONS:

SIZES: 3" OD & 4" OD

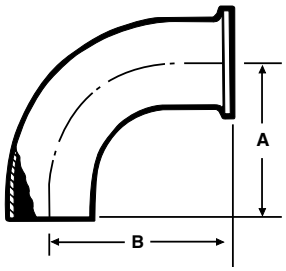
MATERIAL: T304L

FINISH: 32 Ra polish - ID & OD

MSI Part No.	Description	End	Inlet	Outlet	A
SA12735	MSI 90° Elbow Fitting	Weld	3"	3"	6.312"
SA12748	MSI 90° Elbow Fitting	Weld	4"	4"	8.312"

MSI 90° Elbow Fittings w/ Single Clamp Ferrule

MSI's polished 90° Elbow Fittings are offered in nominal tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga).



SPECIFICATIONS:

SIZES: 3" OD & 4" OD

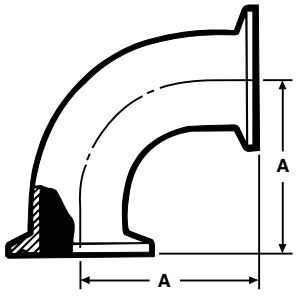
MATERIAL: T304L

FINISH: 32 Ra polish - ID & OD

MSI Part No.	Description	End	Inlet	Outlet	A	B
SA127351	MSI 90° Elbow Fitting	Weld / Clamp	3"	3"	6.312"	6.812"
SA127481	MSI 90° Elbow Fitting	Weld / Clamp	4"	4"	8.312"	8.937"

MSI 90° Elbow Fittings w/ Clamp Ferrules

MSI's polished 90° Elbow Fittings are offered in nominal tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga).



SPECIFICATIONS:

SIZES: 3" OD & 4" OD

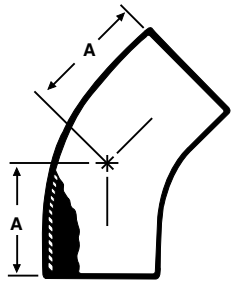
MATERIAL: T304L

FINISH: 32 Ra polish - ID & OD

MSI Part No.	Description	End	Inlet	Outlet	A
SA127352	MSI 90° Elbow Fitting	Clamp	3"	3"	5.000"
SA127482	MSI 90° Elbow Fitting	Clamp	4"	4"	6.625"

MSI 45° Elbow Fittings

MSI's polished 45° Elbow Fittings are offered in nominal tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga).



SPECIFICATIONS:

SIZES: 3" OD & 4" OD

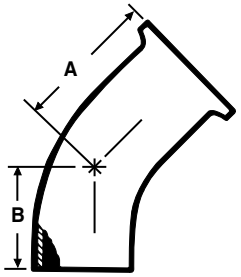
MATERIAL: T304L

FINISH: 32 Ra polish - ID & OD

MSI Part No.	Description	End	Inlet	Outlet	A
SA12731	MSI 45° Elbow Fitting	Weld	3"	3"	6.687"
SA12742	MSI 45° Elbow Fitting	Weld	4"	4"	4.812"

MSI 45° Elbow Fittings w/ Single Clamp Ferrule

MSI's polished 45° Elbow Fittings are offered in nominal tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga).



SPECIFICATIONS:

SIZES: 3" OD & 4" OD

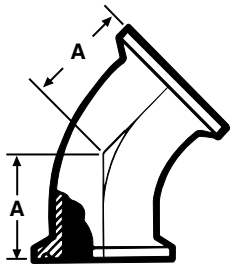
MATERIAL: T304L

FINISH: 32 Ra polish - ID & OD

MSI Part No.	Description	End	Inlet	Outlet	A	B
SA127311	MSI 45° Elbow Fitting	Weld / Clamp	3"	3"	4.187"	3.687"
SA127421	MSI 45° Elbow Fitting	Weld / Clamp	4"	4"	5.437"	4.812"

MSI 45° Elbow Fittings w/ Clamp Ferrules

MSI's polished 45° Elbow Fittings are offered in nominal tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga).



SPECIFICATIONS:

SIZES: 3" OD & 4" OD

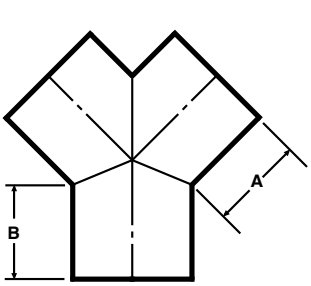
MATERIAL: T304L

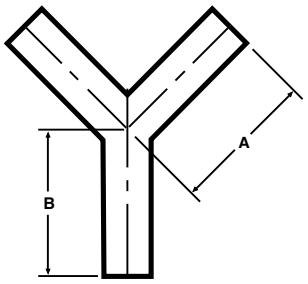
FINISH: 32 Ra polish - ID & OD

MSI Part No.	Description	End	Inlet	Outlet	A
SA127312	MSI 45° Elbow Fitting	Clamp	3"	3"	2.375"
SA127422	MSI 45° Elbow Fitting	Clamp	4"	4"	3.125"

MSI "Y" Fittings

MSI's polished "Y" Fittings are offered in nominal tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga).





SPECIFICATIONS:

SIZES: 3" OD & 4" OD

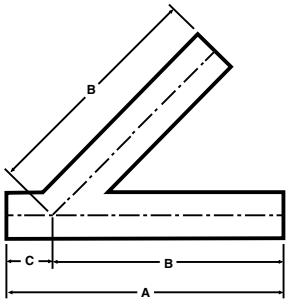
MATERIAL: T304L

FINISH: 32 Ra polish ID & OD

MSI Part No.	Description	End	Inlet	Outlets	A	B
NEW SA12113	MSI "Y" Fitting	Weld	3"	3"	3.500"	2.250"
NEW SA20038	MSI "Y" Fitting	Weld	4"	4"	4.000"	2.250"
SA12113L	MSI "Y" Fitting (Long)	Weld	3"	3"	6.000"	6.000"
SA20038L	MSI "Y" Fitting (Long)	Weld	4"	4"	8.000"	8.000"

MSI Lateral "Y" Fittings

MSI's polished Lateral "Y" Fittings are offered in nominal tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga).



SPECIFICATIONS:

SIZES: 3" OD & 4" OD

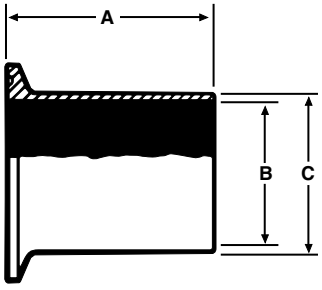
MATERIAL: T304L

FINISH: 32 Ra polish - ID & OD

MSI Part No.	Description	End	Inlet	Outlets	A	B	C
SA12113L	MSI Lateral "Y" Fitting	Weld	3"	3"	10.750"	8.875"	1.875"
SA20038L	MSI Lateral "Y" Fitting	Weld	4"	4"	12.812"	10.750"	2.062"

MSI In-Line Flex Adapters w/ Single Clamp Ferrule

MSI's polished In-Line Flex Adapters are offered in nominal tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga).



SPECIFICATIONS:

SIZES: 3" OD & 4" OD

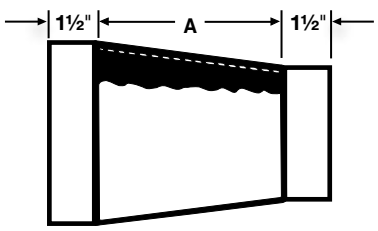
MATERIAL: T304L

FINISH: 32 Ra polish - ID & OD

MSI Part No.	Description	End	Inlet	Outlet	A	B	C
SA10958SAN	MSI In-Line Flex Adapter	Clamp / Weld	3"	3"	3.500"	2.870"	3.000"
SA12541SAN	MSI In-Line Flex Adapter	Clamp / Weld	4"	4"	3.625"	3.834"	4.000"

MSI Reducer Fittings

MSI's polished Reducer Fittings are offered in nominal tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga).



SPECIFICATIONS:

SIZES: 3" OD & 4" OD

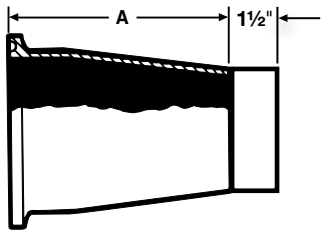
MATERIAL: T304L

FINISH: 32 Ra polish - ID & OD

MSI Part No.	Description	End	Inlet	Outlet	A
SA10958	MSI Reducer Fitting	Weld	4"	3"	4.000"
SA12541	MSI Reducer Fitting	Weld	6"	4"	5.500"

MSI Reducer Fittings w/ Single Clamp Ferrule

MSI's polished Reducer Fittings are offered in nominal tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga).



SPECIFICATIONS:

SIZES: 3" OD & 4" OD

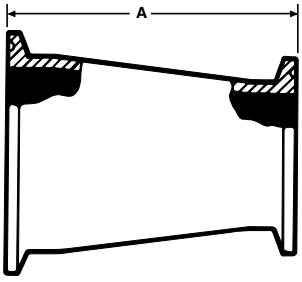
MATERIAL: T304L

FINISH: 32 Ra polish - ID & OD

MSI Part No.	Description	End	Inlet	Outlet	A
SA109581	MSI Reducer Fitting	Clamp / Weld	4"	3"	4.625"
SA125411	MSI Reducer Fitting	Clamp / Weld	6"	4"	6.375"

MSI Reducer Fittings w/ Clamp Ferrules

MSI's polished Reducer Fittings are offered in nominal tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga).



SPECIFICATIONS:

SIZES: 3" OD & 4" OD

MATERIAL: T304L

FINISH: 32 Ra polish - ID & OD

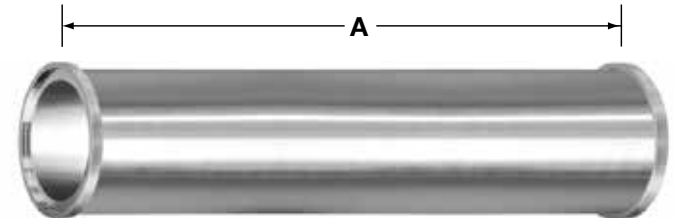
MSI Part No.	Description	End	Inlet	Outlet	A
SA109582	MSI Reducer Fitting	Clamp	4"	3"	5.125"
SA125412	MSI Reducer Fitting	Clamp	6"	4"	7.000"

NEW MSI Straight Tubes w/ Clamp Ferrules

MSI's polished Straight Tube with ferrule ends are offered in tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga).

Note: Sold in one-inch increments from 1 feet to 10 feet

The most commonly requested sizes are listed.



SPECIFICATIONS:

SIZES: 3" OD & 4" OD

MATERIAL: T304L

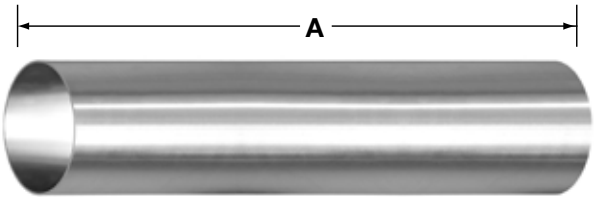
FINISH: 32 Ra polish - ID & OD

MSI Part No.	Description	End	Inlet	Outlet	A
SA10623	MSI Straight Tube	Clamp	3"	3"	1.000'
SA10630	MSI Straight Tube	Clamp	3"	3"	2.000'
SA12259	MSI Straight Tube	Clamp	3"	3"	3.000'
SA10173	MSI Straight Tube	Clamp	3"	3"	4.000'
SA10642	MSI Straight Tube	Clamp	3"	3"	5.000'
SA13952	MSI Straight Tube	Clamp	3"	3"	6.000'
SA10646	MSI Straight Tube	Clamp	3"	3"	7.000'
SA13953	MSI Straight Tube	Clamp	3"	3"	8.000'
SA13964	MSI Straight Tube	Clamp	3"	3"	9.000'
SA10625	MSI Straight Tube	Clamp	3"	3"	10.000'
SA10179	MSI Straight Tube	Clamp	4"	4"	1.000'
SA10651	MSI Straight Tube	Clamp	4"	4"	2.000'
SA13947	MSI Straight Tube	Clamp	4"	4"	3.000'
SA13954	MSI Straight Tube	Clamp	4"	4"	4.000'
SA10112	MSI Straight Tube	Clamp	4"	4"	5.000'
SA13955	MSI Straight Tube	Clamp	4"	4"	6.000'
SA13956	MSI Straight Tube	Clamp	4"	4"	7.000'
SA13961	MSI Straight Tube	Clamp	4"	4"	8.000'
SA13962	MSI Straight Tube	Clamp	4"	4"	9.000'
SA13963	MSI Straight Tube	Clamp	4"	4"	10.000'

MSI Straight Tubes

MSI's polished Straight Tube is offered in nominal tube sizes of 3" and 4" in T304L material. Uniform wall thickness for 3" size measures .065 (16 ga). In 4" size, wall thickness measures .083 (14 ga).

Note: Sold in 5 or 10 foot lengths



SPECIFICATIONS:

SIZES: 3" OD & 4" OD

MATERIAL: T304L

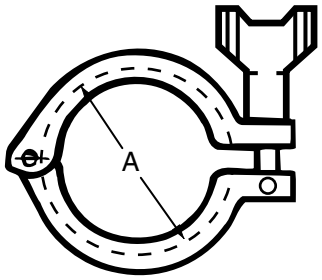
FINISH: 32 Ra polish - ID & OD

MSI Part No.	Description	End	Inlet	Outlet	A
SA12855	MSI Straight Tube	Weld	3"	3"	10.000'
SA12934	MSI Straight Tube	Weld	4"	4"	10.000'

MSI Tri Clamps (Ferrule Clamps)

MSI's unpolished Tri Clamps for use with Clamp End Fittings.

Note: Rugged EPDM Gasket included with clamp



SPECIFICATIONS:

TUBE SIZES: 3" OD & 4" OD

MATERIAL: T304L

FINISH: Unpolished

MSI Part No.	Description	Tube Size	A
SAG10201SAN	MSI Tri Clamp Fitting w/ Gasket	3"	3.717"
SAG10204SAN	MSI Tri Clamp Fitting w/ Gasket	4"	4.820"

MSI Tri Clamp Gaskets

MSI's EPDM Gaskets for use with Tri-Clamp and Clamp End Fittings.

SPECIFICATIONS:

TUBE SIZES: 3" OD & 4" OD

MATERIAL: EPDM (Black)

MSI Part No.	Description	Clamp Size
SA10177	Tri Clamp Fitting Gasket (EPDM)	3"
SA10178	Tri Clamp Fitting Gasket (EPDM)	4"

MSI Flex Hoses

MSI's Flex Hose consists of a smooth interior for easy flow and has excellent crush resistance. External helix allows for rough use in applications where the hose will be dragged.

SPECIFICATIONS:

SIZES: 3" OD & 4" OD

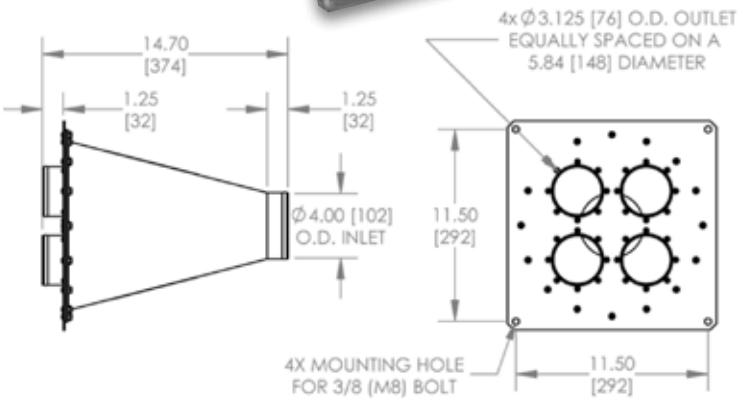
MATERIAL: Thermoplastic Rubber with an external polypropylene wear strip

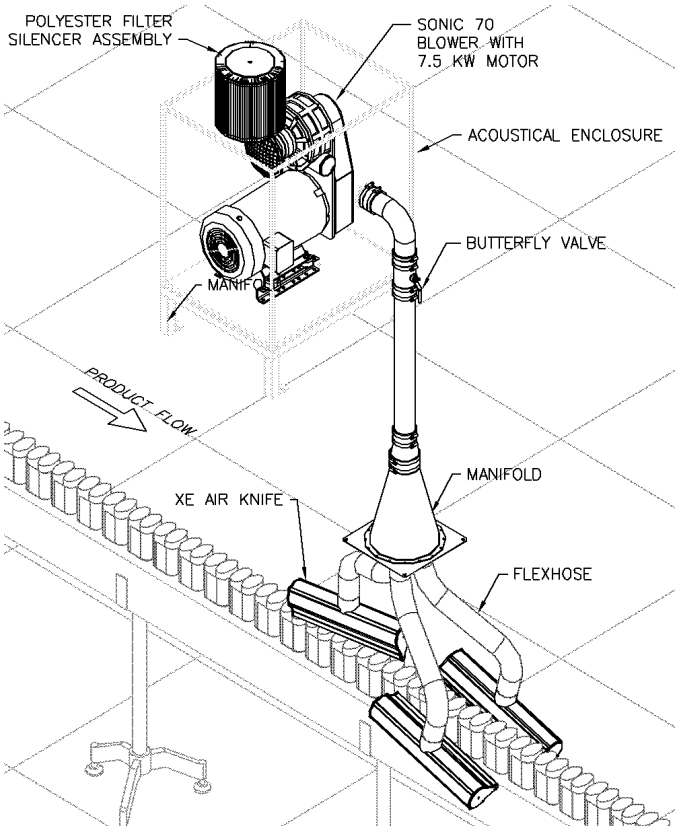
Note: Sold in 5' Increments
Standard box lengths are 25' and 50'

MSI Part No.	Description	End	Inlet	Outlet
SAVAHRP3	MSI Flex Hose	Weld	3"	3"
SAVAHRP4	MSI Flex Hose	Weld	4"	4"

Air Source to Air Knife Manifolds

Air knife manifolds are available in sizes ranging from three outlets up to a maximum of eight. They are used to direct air from a single high pressure inlet through the manifold outlets into flex tubing to air knife positions in a specific blow-off location.





Y-Verter - Air Diverter

The Sonic Y-Verter eliminates the need for an expensive VFD motor and control to ramp down (or stop) the air knife system when a line stoppage occurs. The gradual VFD air knife system restart when the line stoppage is cleared can result in product "missed" on the line which is not acceptable. Another concern on VFD controlled direct drive systems is blower/motor overspeed. This occurs when system demands exceed the capacity of the blower/motor package and the motor is required to operate continuously at full speed to deliver the needed air flow.

How does the Y-Verter eliminate these VFD system shortcomings?

The Y-Verter senses a stoppage using the signal from a safety interlock, optic sensor or PLC and *instantly* diverts the air flow to the other leg of the "Y" away from the stopped product. When the line restarts, air flow is *instantly* returned to the wet product ensuring that it's 100% dry at the next station.

- Air flow diverting prevents "cavitation generated vibration" and blower surge which, if severe enough, can lead to premature bearing failure.
- In diverting mode, the blower motor saves electricity by running with up to 75% reduced amperage draw.

MSI Part Number	Description
SA14598	Y-Verter
SA15293	Air Bleed
SA15322	Solenoid

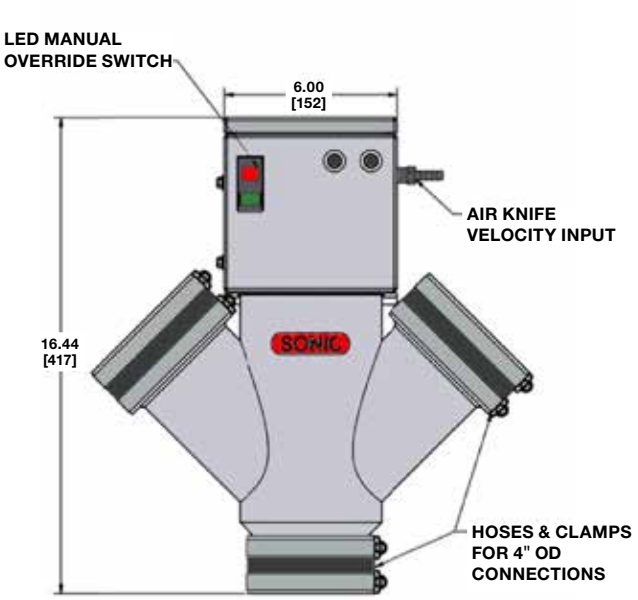
The three part numbers to the left are required when purchasing a Y-Verter assembly. They are listed individually for replacement part purposes only.

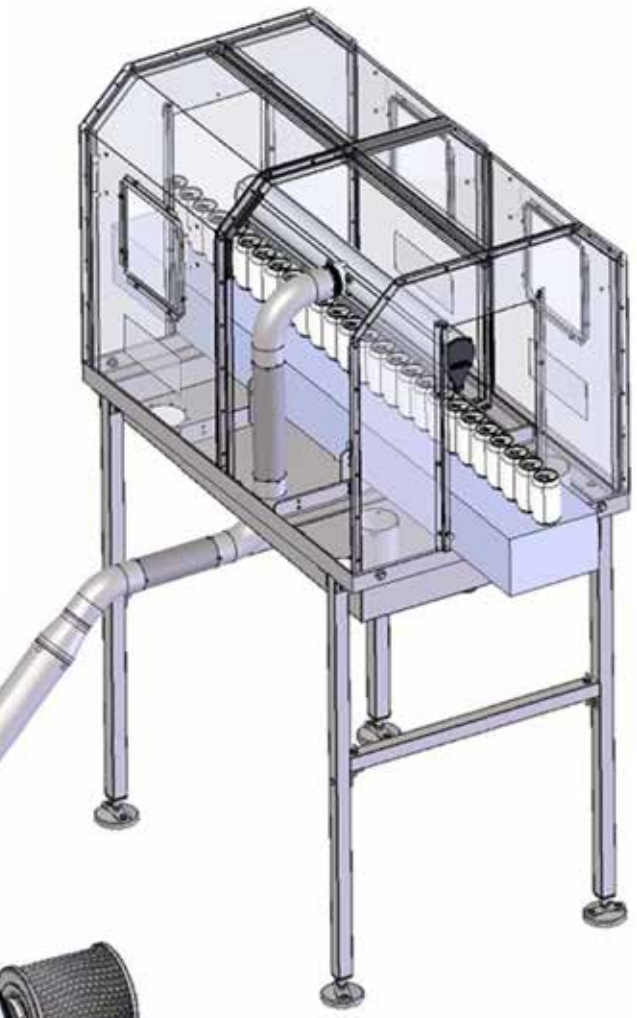
V3 Variable Velocity Valve

The basic Y-Verter is designed for “bypass” when reacting to a line stoppage or “full-on” once the stoppage is corrected. The Sonic V3 uses the basic principle from the Y-Verter of directing high velocity air to the product or bypassing air to the environment but it does that in five PLC controlled steps providing air velocities from zero to 35,000 FPM to the product.

The V3 offers the same system protection as the Y-Verter with full-flow-to-shutoff in less than five seconds but its primary function is providing the five custom air velocities for different line speeds or different products run on a single line.

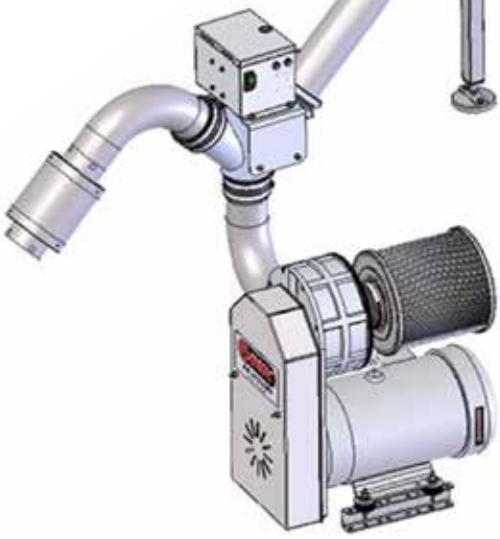
As part of the package, a Velocity Reference Gauge is also provided so that the user can determine what air velocity does the most effective job of “product drying” or “blow-off”.



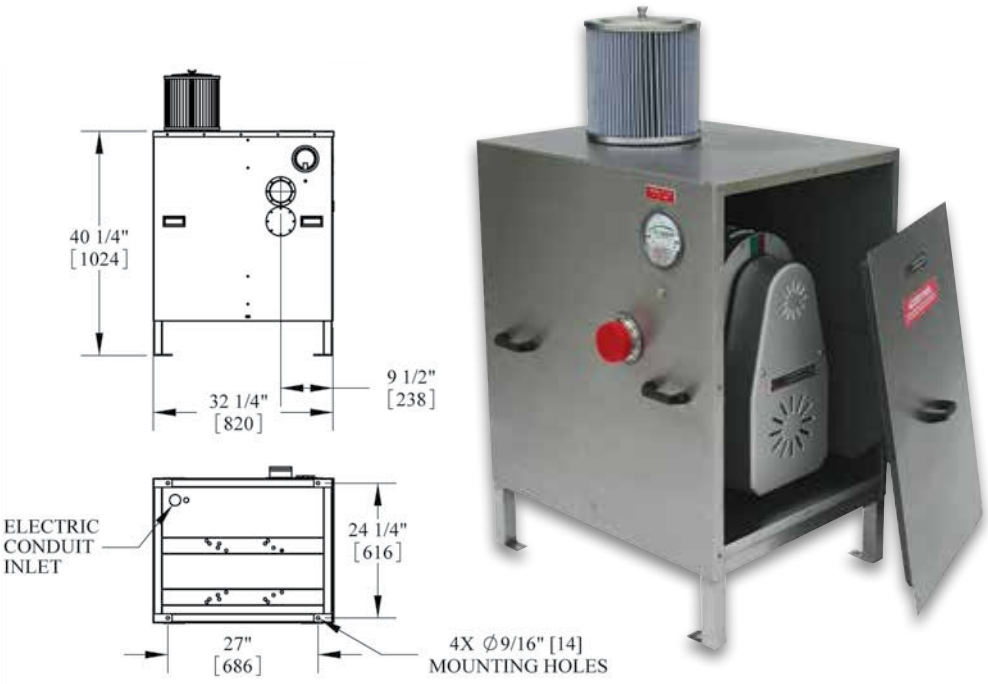


V3 VARIABLE
VELOCITY VALVE

VELOCITY
REFERENCE
GAUGE



Stainless Steel Enclosure for Noise Containment



Features:

- Stainless steel enclosure protects motor and blower from wash down chemicals and caustics
- Reduces blower noise to as low as 75 dB
- Accommodates all 70/85/100 and 150 blowers
- 10 micron filtration
- Filter change indicator gauge

Options:

- Washable polyester filter element
- Outdoor filter and weatherhood kit

Filter units shown are optional

Custom Polypropylene Enclosure for Noise Containment

Features:

- Polypropylene enclosure protects motor and blower from wash down
- Reduces blower noise to as low as 75 dB
- Accommodates 200 and 300 twin blowers
- Stainless steel frame construction
- 10 micron filtration
- Filter change indicator gauge

Options:

- Washable polyester filter element
- Outdoor filter and weatherhood kit

Centrifugal Blower Head w/ Pulley - Sonic 70, 85, 100 & 150

Sonic Centrifugal Blowers provide high velocity air to the Sonic Air Knives for the effective drying of cans, bottles, pouches, meats, cheese and so much more. Sonic blowers can replace compressed air knife drying systems for greater effectiveness and **up to 75% energy savings.**

Standard Features

- Auto belt tensioner
- Multiple mounting configurations
- Small size and footprint
- Adaptable to IEC and NEMA motors
- Lightweight aluminium construction

Optional Features

- Thermocouple for Programmable Logic Control (PLC) monitoring of outlet air temperature and blower bearing temperature
- Wash down, explosion proof, chemical duty motors
- Hard anodize and special blower coatings
- Welded flange inlet and outlet

Soft Starters are recommended for systems using motors with 15 HP or more.

MSI Part Number	Model	Flow	Pressure	Vacuum
SA14460P	Sonic 70	70-700 SCFM (120-1200 m3/hr)	0.5-3.5 PSIG (35-241 mbar)	1.0-6.6" Hg (34-224 mbar)
SA14454P	Sonic 85	85-850 SCFM (144-1444 m3/hr)	0.5-3.75 PSIG (35-259 mbar)	1.0-7.0" Hg (34-224 mbar)
SA14456P	Sonic 100	100-1000 SCFM (170-1700 m3/hr)	0.5-3.5 PSIG (35-241 mbar)	1.0-6.6" Hg (34-224 mbar)
SA14458P	Sonic 150	150-1250 SCFM (255-2124 m3/hr)	0.5-4.2 PSIG (35-290 mbar)	1.0-8.1" Hg (34-270 mbar)

Centrifugal Blower Head w/ Pulley - Sonic 200 & 300

Standard Features

- Auto belt tensioner
- Multiple mounting configurations
- Small size and footprint
- Adaptable to IEC and NEMA motors
- Lightweight aluminium construction

Optional Features

- Thermocouple for PLC monitoring of outlet air temperature and blower bearing temperature
- Wash down, explosion proof, chemical duty motors
- Hard anodize and special blower coatings
- Welded flange inlet and outlet

Soft Starters are recommended for systems using motors with 15 HP or more.

MSI Part Number	Model	Flow	Pressure	Vacuum
SA14456P	Sonic 200	200-2000 SCFM (340-3400 m3/hr)	0.5-3.5 PSIG (35-241 mbar)	1.0-6.6" Hg (34-224 mbar)
SA14458P	Sonic 300	300-2500 SCFM (510-4248 m3/hr)	0.5-4.2 PSIG (35-290 mbar)	1.0-8.1" Hg (34-270 mbar)

Centrifugal Blower Head w/ Pulley - Sonic 350

Features

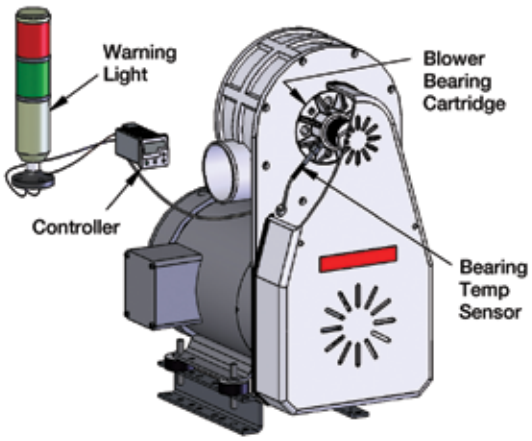
- Multiple mounting configurations
- Small size and footprint
- Adaptable to IEC and NEMA motors

Soft Starters are recommended for systems using motors with 15 HP or more.

MSI Part Number	Model	Flow	Pressure	Vacuum
SA16020	Sonic 350	300-3500 SCFM (595-5950 m3/hr)	0.5-3.5 PSIG (35-241 mbar)	1.0-6.6" Hg (34-224 mbar)

Predictive Maintenance Monitor (PMM)

- The PMM detects temperature deviations from normal bearing operating temperature ranges.
- High temperature deviation may indicate imminent bearing failure due to:
  - Badly worn bearing
  - Over/under tensioned belt
  - Cooling water supply problem
- Low temperature deviation may indicate a broken belt.
- The PMM can be connected to an alarm, warning light or local/remote mounted Programmable Logic Control (PLC).



Pulley Upgrade Kits

Quadruple belt life while avoiding the costly downtime of a belt replacement. Replace older design Sonic 5 and 12-groove flangeless pulleys and belts with the new 16-groove **flanged** blower and motor pulleys, 16-groove belts and Sonic's self-adjusting Auto Belt Tensioner. This conversion virtually eliminates slippage and extends belt life dramatically.

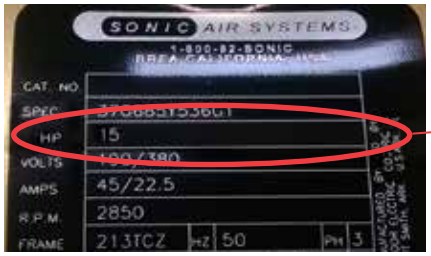
Sonic 16-groove Micro-V belts are designed specifically for the extremely high 9400 FPM belt speeds typical of Sonic air knife systems and, combined with new 16-groove **flanged** pulleys, belt lives of 8,000 to 10,000 hours (rather than 2,000 hours) is not uncommon.

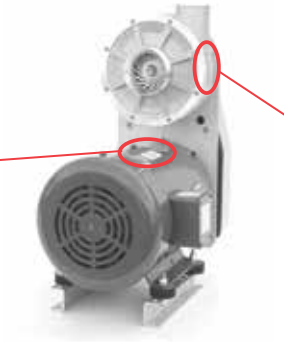
Provide MSI with the following for your **current system** and we will provide a 16-groove system upgrade that performs at the same output as your current system with the added benefit of a much longer belt life.

1. Current System (5-groove or 12-groove)
2. Motor Horsepower (found on drive motor nameplate – see photos below)
3. Blower Model – 70/85/100/150/200/300 (found on blower nameplate on blower head – see photos below)
4. Blower pulley part number (the three digits above the P/N on blower pulley face - 1.55 through 2.20 – see photo below)

Pulley Upgrade Kit

Depending on your system, your kit may include Blower and Motor Pulleys, Belt and Mounting Plate, along with all necessary hardware





MSI Part Number	Description	System Motor Size
SA13806	Sonic 70 Model 5-Groove to 16-Groove Upgrade Kit	3 HP
SA13811	Sonic 70 Model 5-Groove to 16-Groove Upgrade Kit	5/7.5/10 HP
SA13827	Sonic 100 Model 5-Groove to 16-Groove Upgrade Kit	15 HP
SA13801	Sonic 100 Model 5-Groove to 16-Groove Upgrade Kit	20 HP
SA13678	Sonic 70/85 Model 12-Groove to 16-Groove Upgrade Kit	Any
SA13668	Sonic 100 Model 12-Groove to 16-Groove Upgrade Kit	20 HP
SA13677	Sonic 150 Model 12-Groove to 16-Groove Upgrade Kit	20 HP
SA13680	Sonic 150 Model 12-Groove to 16-Groove Upgrade Kit	25 HP

Replacement Auto Belt Tensioner

The Sonic self-adjusting Auto Belt Tensioner comes with every new Sonic Blower System and as a part of the 16-groove Pulley Upgrade Kit. This rugged unit is an important part of the new Micro-V belt system and the **exceptionally long belt life** that is the major benefit of the Micro-V design. The tensioner does have a service life and when the unit begins to get noisy, it is time for replacement. Failure to replace a noisy tensioner can lead to damaged blower and motor pulleys and a shredded belt. Like many of our customers do, play it safe and have a spare tensioner on the shelf.

MSI Part Number	Description
SA13455	Belt Tensioner Assembly (helps to optimize belt and pulley life)

Replacement Belts

Sonic replacement Micro-V belts are designed specifically for the extremely high 9400 FPM belt speeds typical to Sonic air knife systems. For that reason, Sonic belts differ from other belts when it comes to rubber compounds, core construction and belt backing thickness. These differences result in lower vibration and greatly reduced groove cracking and splitting.

When ordering, the Sonic 5-digit belt part number may be legible on the back of the belt

If **not** legible, or the belt is badly damaged, provide MSI with:

1. Number of grooves on the belt (12 groove or 16 groove)
2. Blower Model Number (found on blower head nameplate)
3. Motor Horsepower (found on drive motor nameplate)
4. Blower Pulley part number (last three digits of P/N on blower pulley face (155 through 220)

MSI Part Number	Description		Length
SA12235	Sonic 70/85 Model	12-Groove Belt (all pulleys)	41 ½"
SA12236	Sonic 100/150 Model	12-Groove Belt (1.55" to 1.90" pulley)	46"
SA12237	Sonic 100/150 Model	12-Groove Belt (1.95" to 2.20" pulley)	47"
SA12545	Sonic 100/150 Model	12-Groove Belt (1.55" to 2.20" pulley)	52"
SA13514	Sonic 70/85 Model	16-Groove Belt (all pulleys)	42"
SA13474	Sonic 100/150 Model	16-Groove Belt (1.55" to 1.90" pulley)	46"
SA13555	Sonic 100/150 Model	16-Groove Belt (1.95" to 2.20" pulley)	47"
SA13451	Sonic 150 Model-25 HP	16-Groove Belt (all pulleys)	52"

Replacement Bearing Cartridges

Sonic introduced the Replaceable Bearing Cartridge several years ago which allows you to replace just the bearing cartridge portion of the blower assembly rather that the complete blower head assembly. Introduction of the 16-groove flanged pulley, Micro-V belt and the self-adjusting Auto Belt Tensioner did much to lengthen the life of this high speed bearing package but eventually the bearing will heat up and get noisy which means the cartridge needs to be replaced. Many of our customers have a spare bearing cartridge on the shelf for quick replacement.

Including a Predictive Maintenance Monitor (PMM) will let you know earlier that a bearing is wearing out *(see page 133)*

The bearing cartridge (BC) is not interchangeable across all systems.
Provide MSI with the following off your blower:

1. Blower Model - 70/85/100/150 (found on blower nameplate on blower head – see photos below)
2. Serial Number of your blower head to determine if the head has a replaceable BC (stamped on the housing next to the blower head nameplate – see photos below).

MSI Part Number	Description
SA14452	Sonic 70/85 Model Bearing Cartridge
SA14453	Sonic 100/150 Model Bearing Cartridge

Replacement Blower head w/ Pulley

The telltale sound of a blower head bearing cartridge about to fail sometimes goes unnoticed or unaddressed and a blower head fails catastrophically. In these instances the only corrective action is to replace the complete blower head. Many of our customers take a proactive approach and have one of the system's more common blower heads on the shelf at all times.

MSI Part Number	Description
SA14460P	Sonic 70 Model Blower Head w/ Factory Installed Pulley
SA14454P	Sonic 85 Model Blower Head w/ Factory Installed Pulley
SA14456P	Sonic 100 Model Blower Head w/ Factory Installed Pulley
SA14458P	Sonic 150 Model Blower Head w/ Factory Installed Pulley

Canister & Replacement Filter Options

Sonic Replacement Filters are specifically designed for the high volume air flows typical with Sonic Air Knife Systems. This very durable, noise dampening material has superior filtering ability and does not deteriorate in harsh environments.

Sonic has two standard filters from which to choose and both work equally well for filtering intake air. The polyester filter is washable and reusable. The paper filter is a throw away filter. Sonic also has replacement filter elements for the HEPA filter system.

Blower Canister Filter w/ optional indicator gauge

Pre-Filter Blanket

HEPA Filter Element

MSI Part No.	Description
SA12291	Stainless Steel Filter Canister with Indicator Gauge and Polyester Filter
SA10316	Paper Filter Replacement Element (up to 1500 cfm)
SA10317	Washable Polyester Filter Replacement Element (up to 1500 cfm)
SA13528	Washable Polyester Hi-Capacity Filter Replacement Element (above 1500 cfm)
SA12148	Hepa Filter Replacement Element (1000 cfm)
SA15714	Hepa Filter with optional Hi-Temperature Element (700 cfm)
SA10318	Washable Pre-Filter Blanket for intake filter (helps to optimize intake air filtration)
SA13646	Washable Pre-Filter Blanket for hi-capacity filter (helps to optimize intake air filtration)
SA11791	Washable Pre-Filter Blanket for HEPA filter (helps to optimize belt & pulley operation)

Sonic Leads the Industry

- Sonic is in their 30th year with **over 60,000 systems installed** in nearly every industry and in more than 40 countries.
- Sonic is the only blower-powered air knife company in the U.S. designated as an **EPA Energy Star Partner.**
- Sonic's quality management system is **ISO 9001:2000 certified** and is re-certified every year.
- Sonic has an **18 month warranty** on their systems with an equipment **reliability rating of 99.5%** within the warranty period.
- Sonic holds **more patents than most of its competitors** with recent patents in place or pending for the Sonic VT Blower, Rotary Air Knife/Air Nozzle and Auto Belt Tensioner.
- Sonic's XE Air Knife is unmatched in the industry operating at **95% efficiency** at discharge.
- Sonic pioneered the **Compact Inlet Air Filter/Silencer** design.
- Sonic's In-Line HEPA Filter at 0.3 micron (available at 0.15 micron) is the **most efficient light weight, versatile, and cost effective** design available today.
- Sonic's exclusive Y-Verter (air diverter) **eliminates the need for expensive VFD motors and controls** for air-flow control.
- Sonic's modular SMART Air Knife Tunnel is the **most versatile and cost effective water and noise containment tunnel available.**
- Sonic provides the **highest level of technical support** for every aspect of the air engineering process for each system.
- Sonic was the first to develop a **computerized Return On Investment (ROI) energy savings comparison** for competing air knife products and systems **(see page 7)**.

- Sonic remains one of few companies in the industry to offer a **100% Money Back Guarantee** on qualified Sonic designed blower/air knife systems.
- Sonic has the **shortest inquiry to order fulfilment cycle** of all air knife system manufacturers.

The Broad Range of Sonic Applications

The list of applications for Sonic Air Knife Systems products is endless. Just a few of the more common applications are highlighted on the catalog pages that follow. A more complete list can be found below showing the broad range of applications that have been addressed by Sonic Air Knife Systems.

- **Container Drying**
  - PET bottles
  - Glass bottles
  - Shrink-wrap label bottles
  - Kegs and barrels
  - Beverage cans
  - 3-piece food cans
  - Boxed drinks
  - Fresh-cut produce pouches
  - Seafood pouches

- **Coating Thickness Leveling**
  - Bakery toppings
  - Can-coil coatings
  - Clear plastic to-go container films

- **Mold/Tray/Tote/Pallet Post-Wash Drying**
  - Bakery products (breads/muffins/bars)
  - Frozen dairy products
  - Confectionaries (chocolates, etc.)

- **Belt Conveyor Clean-In-Place/DRY-IN-PLACE®**
  - Fruits/vegetables
  - Cheese products
  - Bakery products
  - Raw meat products (meats/fish/poultry)

- **Blending Tank Drying**
  - Dry products (cereals/spices/powders)
  - Liquid products (juices/sauces/soups/dairy)

- **Product Cooling**
  - Leafy produce
  - Bakery
  - Confectionaries (chocolates, etc.)
  - Blow-molded pet/HDPE plastic bottles

- **Air Filtration**
  - 0.3 micron HEPA
  - 0.1 micron ULPA

- **Debris Removal/Static Neutral Surface Generation**
  - Cardboard packaging chad debris removal
  - Air Knife with Ionizing Bar (static charged dust removal)