

# **AIRMATIC**®

**WE'LL HANDLE IT.**



## ***martin***®

# **AIR CANNONS**

## **COMPRESSED AIR FLOW AID SOLUTIONS**

### **AIRMATIC**

284 Three Tun Rd. Malvern, PA 19355

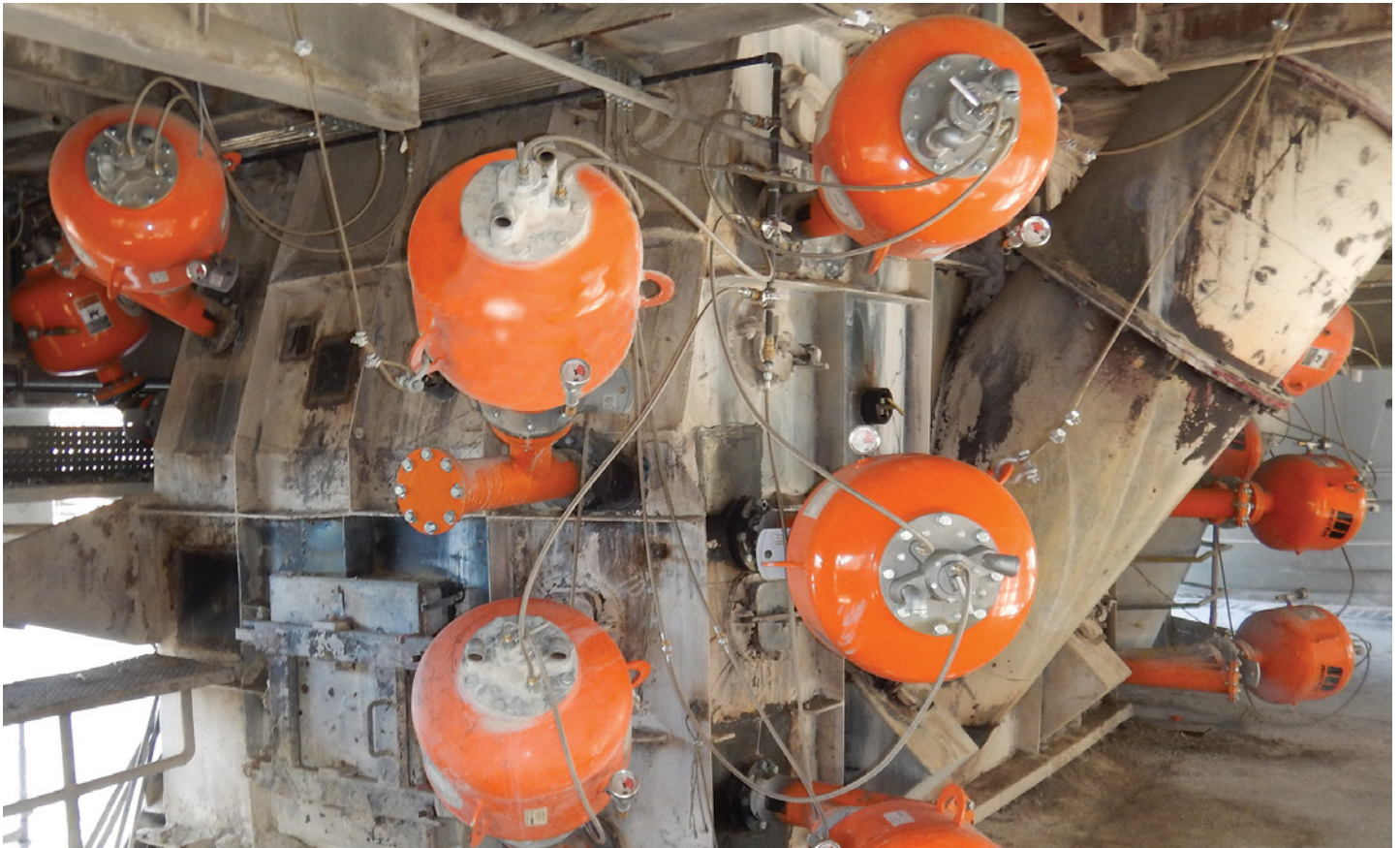
215.333.5600

[infocenter@airmatic.com](mailto:infocenter@airmatic.com)

[airmatic.com](http://airmatic.com)

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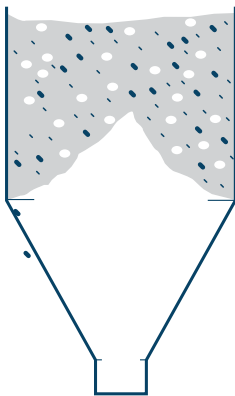
Problems in material flow can bring an operation's efficiency and productivity to a halt. Hang-ups in storage systems and accumulations in process vessels choke material flow while bottlenecks create costly reductions in equipment and process performance. Poor material flow raises maintenance expenses and drags profits down.

Martin Air Cannons supply a quiet but powerful release of compressed air that dislodges buildups and enhances the flow of bulk materials, to improve efficiency and maintain profitability.

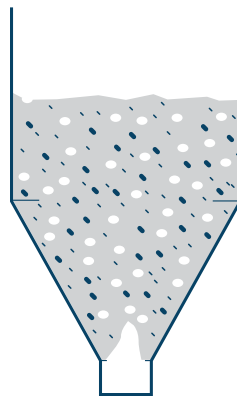
**Problem Solved**<sup>™</sup>  
*GUARANTEED!*

Since 1974, Martin Air Cannons have been used around the world to prevent buildups and improve material flow. Martin Engineering remains the leader in the application of air cannon technology to overcome bottlenecks and boost the movement of material through high-capacity vessels.

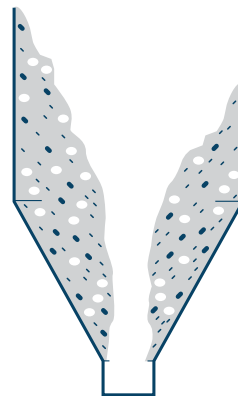
## TYPES OF BUILD UP



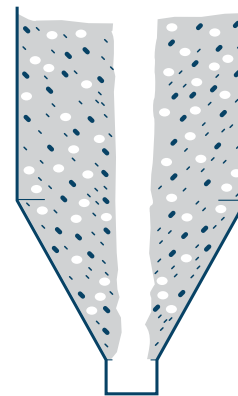
**ARCHES**



**PLUGS**



**BUILDUPS**



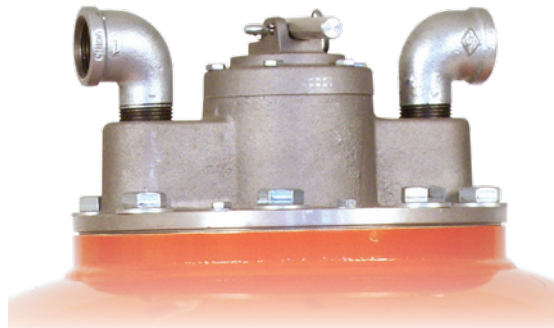
**RAT HOLES**

## UNDERSTANDING VALVE DESIGN

Martin Engineering offers a full line of air cannon technologies; representing both established traditional designs and the latest leading-edge innovations in valve design, as well as hybrid and multiple-valve technologies. This matrix provides an overview of the range of valve designs and air cannons available from Martin Engineering.

### POSITIVE-PRESSURE FIRING

Requires pulse of air to trigger discharge, eliminating unintentional firings due to drops in pressure.



### MARTIN HURRICANE

Most direct air path, maximum force output, minimal air consumption, smallest footprint, simplest installation, and one-step maintenance.

**NEGATIVE-PRESSURE FIRING**

Minimal plumbing requires only one line of air to fill tank and trigger valve.



**MARTIN TYPHOON**

Hybrid design combines minimal plumbing with the most direct air path and maximum force output of centrally-located Hurricane valve technology.



### HURRICANE AIR CANNON

Positive-acting, centrally-located valve design represents state-of-the-art engineering, with most direct air path, maximum force output, minimal air consumption, smallest footprint, and simplest installation.

### ONE-STEP MAINTENANCE

The design of the Martin Hurricane Air Cannon allows for simple maintenance. The complete valve assembly can be removed in one easy step, working from one side of the tank. It can be replaced within minutes to keep your process running. There is no need to ever remove the tank from the vessel for service.

- **Positive Action, High Output**

Maximum discharge strength from high velocity output with half the air volume, for highly effective discharge and reduced operating costs.

- **Improved Safety**

Discharge requires positive signal from solenoid, eliminating the risk of accidental firing.

- **Allows Longer Air Lines**

Positive-acting valve allows control solenoid to be positioned as far as 200 feet (60 m) from the tank, keeping solenoids away from harsh conditions and difficult service.



### TECHNOLOGICAL HYBRID

The hybrid design of the MartinTyphoon Air Cannon offers an improvement on negative pressure firing systems by combining the simple one-line plumbing of traditional valve design with the power, efficiency, and ease of maintenance of advanced internal valve design.



### MARTIN TYPHOON AIR CANNON

Hybrid design combines minimal one-line plumbing with compact, powerful, and efficient centrally-located valve.

- **Minimal Plumbing**

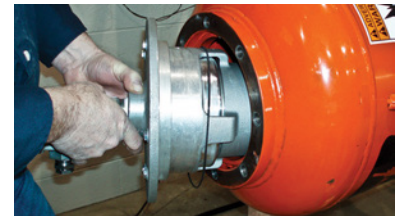
Requires only one air line to fill tank and trigger valve.

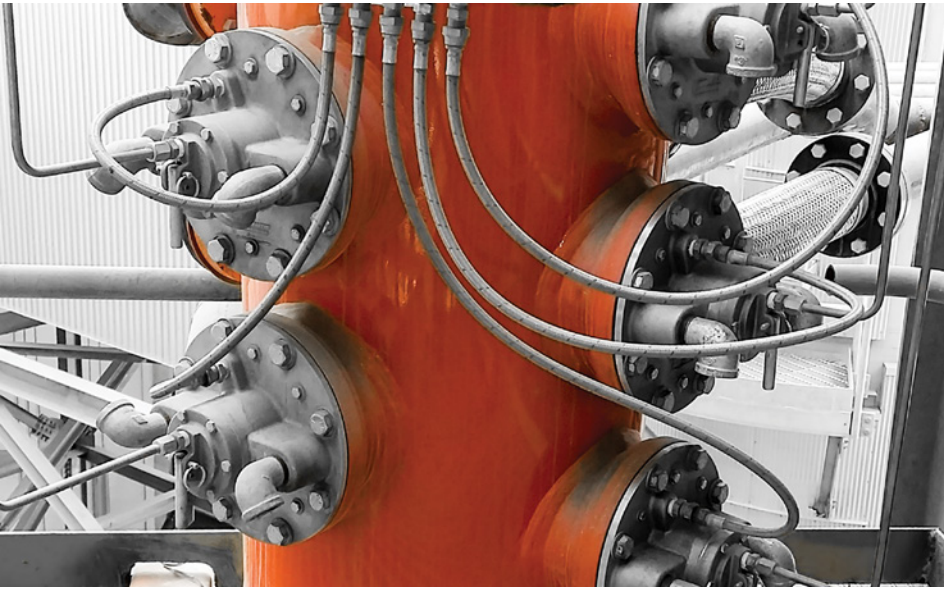
- **Outstanding Performance, Modest Price**

Negative-pressure firing and the most direct air path provides effective performance in challenging applications with limited budgets.

- **One-Step Maintenance**

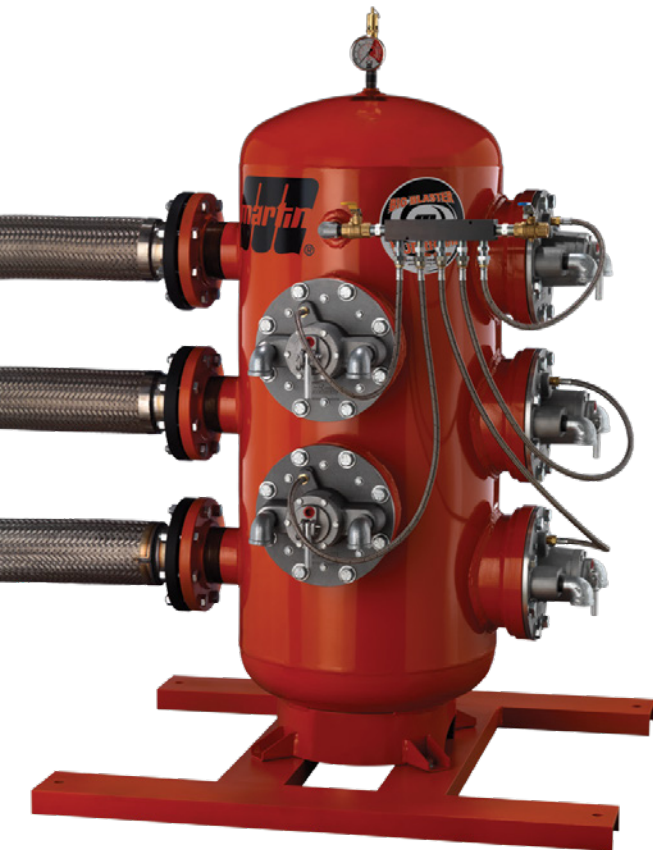
The complete valve assembly can be removed in one easy step, working from one side of the tank, and replaced within minutes to keep your process running. There is no need to ever remove the tank from the vessel for service.





### EFFICIENCY MULTIPLIED

The latest innovation in air cannon systems, the Martin Multi Valve Air Cannon incorporates Martin's advanced Hurricane Valve design with multiple-port application technology. The multiple-port system incorporates one air reservoir to provide the air to improve flow at a number of points in a process vessel.



- **Service for Five**

One installation supplies up to 5 individual discharge points through flexible stainless steel hose.

- **Shelters the Moving Parts**

Centralized location removes working components from exposure to high temperatures and process dust.

- **Improved Service and Access**

All the accessibility benefits of a multiple port system for convenient installation and service.

- **Improved Reliability**

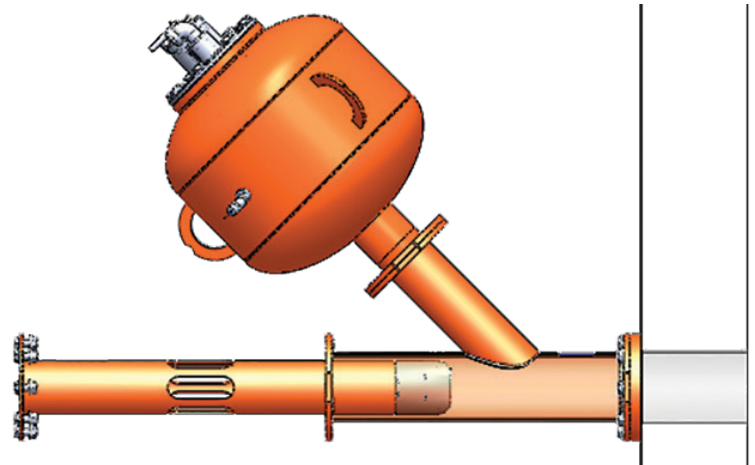
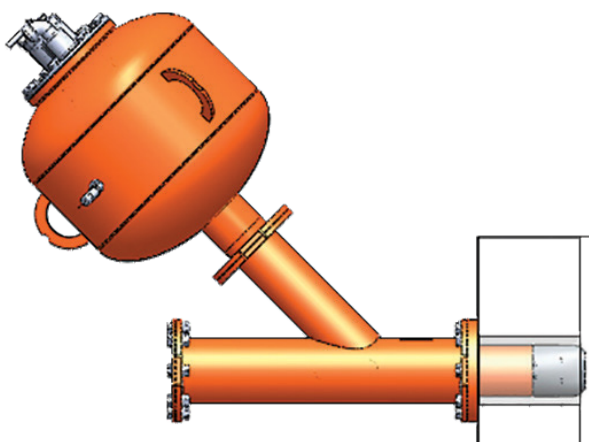
Even if one valve requires service, the multiple valve air cannon continues to function with low maintenance requirements.



### JET NOZZLE

The Martin SMART™ Series Jet Nozzle offers a simple yet innovative solution to the age-old problem of labor-intensive nozzle replacement. Eliminate the time and cost of cutting holes and breaking refractory to replace worn out nozzles.

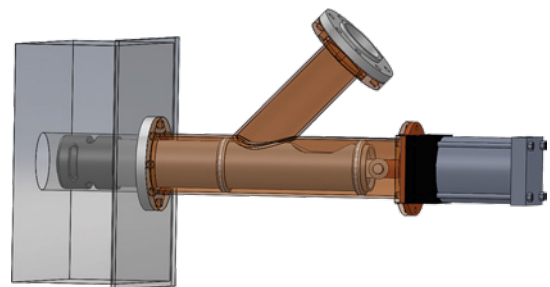
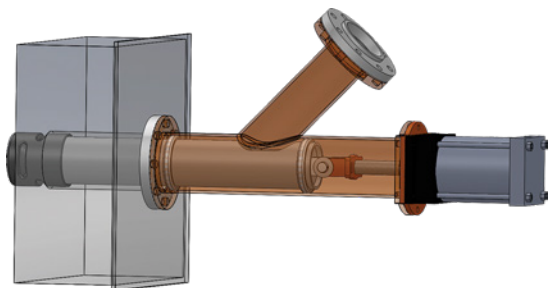
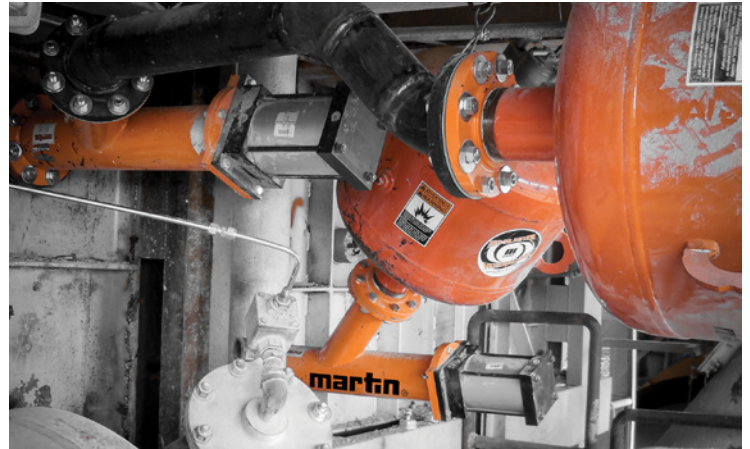
- Replacement is quick and easy
- Limits or entirely eliminates damage to surrounding refractory
- No need to remove the air cannon tank
- Eliminates improper alignment
- No entry required into the tower or cooler
- Provides the wide area of influence of a standard fan nozzle
- Available in straight or “Y” pipe arrangement



### 360° CLEANING

The Martin SMART™ Series Retractable Nozzle 360° is used for hard to reach locations in cement towers and other high-temp applications. The 360-degree nozzle makes cleaning on the center of the wall possible. Serviceable from the outside of the tower/vessel, so no waiting until the next scheduled outage for nozzle assembly replacement.

- 360-degree effective cleaning area
- Nozzle extends to fire then retracts to protect exposed tip from extreme heat
- Works with standard air cannons (150L Martin Hurricane is recommended)
- Nozzle weldment is serviceable from the outside of the riser duct
- Controlled by one solenoid (110 volt / 220 volt / 24 volt)
- Less aggressive than blasting, eliminating damage to refractory from improper use of compressed CO2

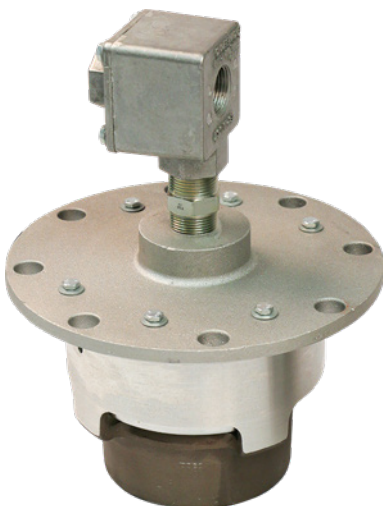




### MARTIN HURRICANE RETROFIT VALVE

Martin Hurricane Air Cannon improves the flow of bulk materials and prevent outages due to discharge blockages, buildups and ratholes. The Hurricane features a new valve concept that provides more force, uses less air and simplifies installation and maintenance.

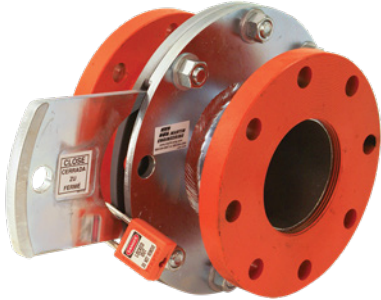
- Twice the force for half the air consumption when compared to our standard XHV 20-30 Air Cannon.
- Simple one-step maintenance program with all moving parts contained within a single assembly.
- Increased safety with a positive firing system; ensures the cannon fires only when you want it to.



### MARTIN TYPHOON RETROFIT VALVE

The Martin Typhoon Air Cannon features a hybrid valve concept that provides more force, uses less air and simplifies maintenance in challenging applications with limited budgets.

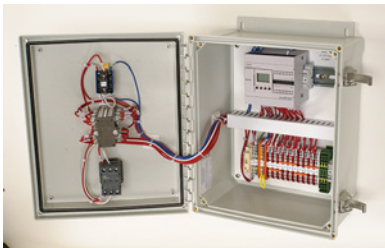
- 60% more blast force and half the air consumption when compared to our standard XHV 20-30 Air Cannon.
- Single air line system.
- Simple one-step maintenance program with all moving parts contained within a single assembly.



### MARTIN THERMO SAFETY SHIELD

Slide gate safety valve allows timely maintenance on air cannons in high temperature processes without requiring the tank to be dismantled.

- Improve Employee Safety: Shelters workers from exposure to severe heat, gases, and high temperature material.
- Simple to Install: Sliding shield bolts between air cannon valve and mounting flange.
- Secure, yet Simple to Operate: Sliding shield operates under tough conditions, yet can be locked out to prevent intrusion.



### MARTIN AIR CANNON CONTROLLER

Energizes the solenoid valves to control the discharge for a system of up to ten Martin Air Cannons.

- Precision Flow Management: Provides automatic sequencing of the discharge of up to ten cannons.
- Easy to Program: Integral keypad and LCD make it simple to set or adjust firing schedule.
- Indoor or Outdoor Installation: NEMA-4X Enclosure is water-tight/dust-tight/corrosion-resistant.

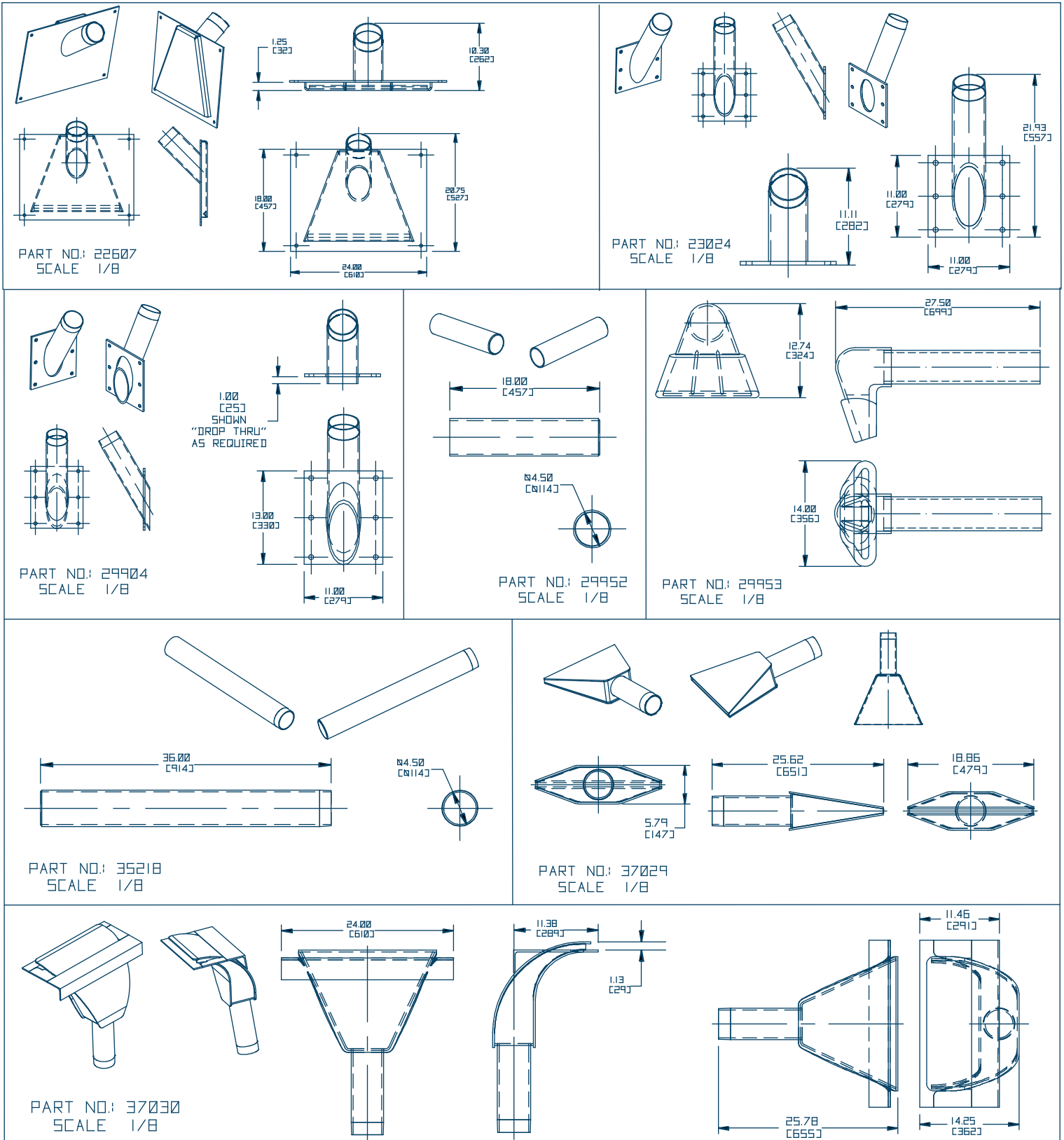


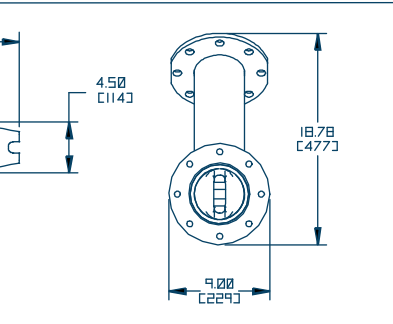
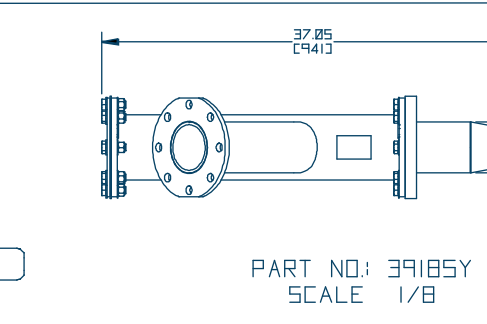
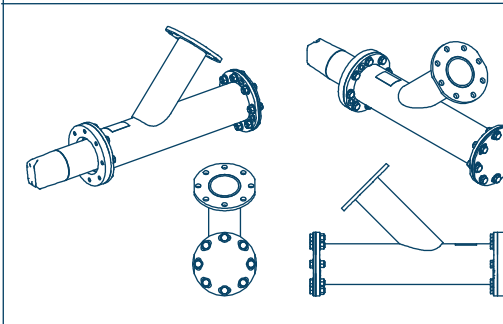
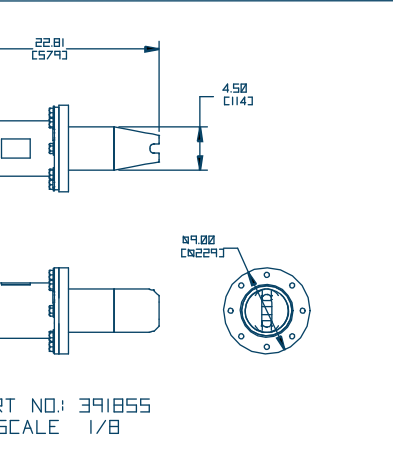
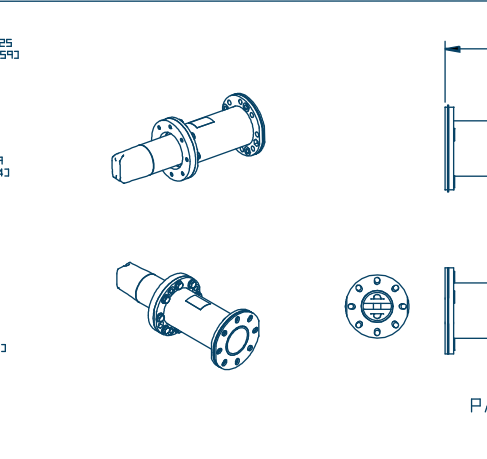
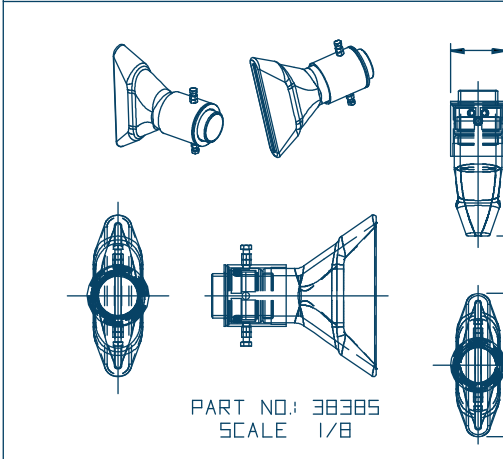
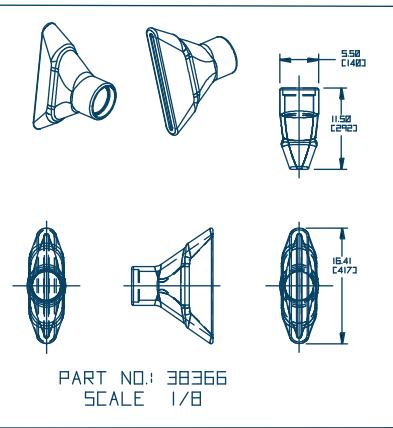
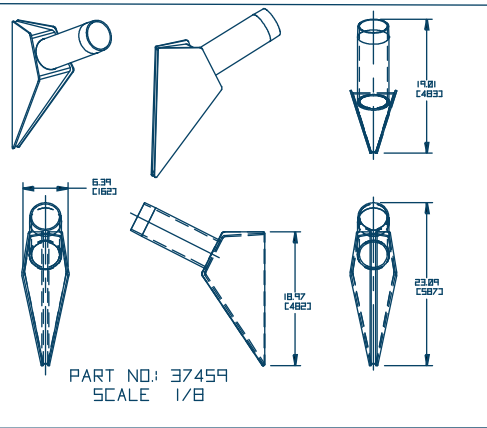
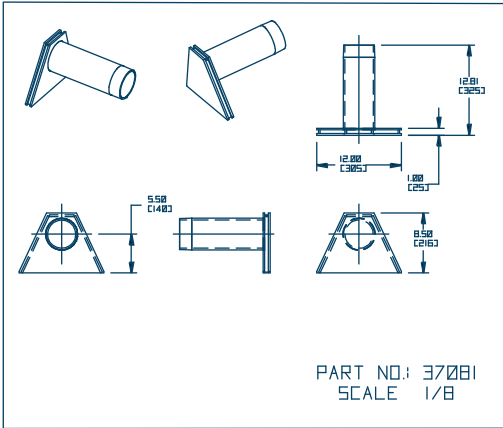
### MARTIN ROLL GEN™ SYSTEM

Self-contained, mini 24-Volt DC power station that generates enough power to run a wide variety of electronic systems. Can be used to power a PLC or timer to operate air cannons mounted inside of a transfer chute.

Martin Roll Gen System consists of:

- Martin Roll Generator coupled with either:
  - + Martin Roll Gen Power Supply
  - + Martin Roll Gen Continuous Power Supply





## AIR CANNONS

### MARTIN HURRICANE

35L Assembly P/N	38005-35
70L Assembly P/N	38005-70
150L Assembly P/N	38005-150
Technical Data Sheet P/N	L3800

### MARTIN TYPHOON

35L Assembly P/N	38005-35FD
70L Assembly P/N	38005-70FD
150L Assembly P/N	38005-150FD
Technical Data Sheet P/N	L3809

## RETROFIT VALVES

### MARTIN TORNADO VALVE

2-inch Valve Assembly P/N	37862
4-inch Valve Assembly P/N	37797
Operator Manual P/N	M3405-T

### MARTIN XHV VALVE

4-inch Valve Assembly P/N	35082
Operator Manual P/N	M3405

## ACCESSORIES

### MARTIN AIR CANNON CONTROLLER

Single Circuit	
Assembly P/N	38902
w/20 Amp output relay	38902-20
Technical Data Sheet P/N	L3880
Multiple Circuit	
Assembly P/N	38901
Technical Data Sheet P/N	L3873

### MARTIN TORNADO

2-inch Valve	
8x12-in. Tank Assembly P/N	37864-0812
8x20-in. Tank Assembly P/N	37864-0820
Technical Data Sheet P/N	L3723

### MARTIN 6 PACK

Martin 6 Pack P/N	38071-6R
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### MARTIN MULTI VALVE AIR CANNON

Hurricane Assembly P/N	38625
Technical Data Sheet P/N	L3821

## SMART SERIES NOZZLES

### MARTIN SMART SERIES JET NOZZLE

Straight Nozzle Assembly P/N	39185S
Replacement Straight Nozzle P/N	39184S-NW
Y-Pipe Nozzle Assembly P/N	39185Y
Replacement Y-Pipe Nozzle P/N	39184Y-NW
Technical Data Sheet P/N	L3986

### MARTIN SMART SERIES RETRACTABLE NOZZLE 360°

Nozzle Assembly P/N	38984
Replacement Nozzle P/N	38983-NW

### MARTIN THERMO SAFETY SHIELD

4-in. Threaded Assembly P/N	38189-4
4-in. Plain Assembly P/N	38189-4PE
Technical Data Sheet P/N	L3622

### MARTIN ROLL GEN SYSTEM

Roll Generator	RG1-010-XXPX
Roll Gen™ Power Supply	39413
Roll Gen™ Continuous Power Supply	contact for specs



**AIRMATIC INC** founded in 1944, is a woman-owned Industrial Distributor, with installation and maintenance capabilities, offering equipment, machinery, and shop supplies to the Industrial, Construction, Utility, Government, and Commercial Markets. Our products and services are sold through three business units:

The **MATERIALS MANAGEMENT GROUP** provides products and services to industries that convey, store, transport, and process powders and bulk solids from aggregates, cement, and chemicals to foods, grains, metals, power generation, and waste water treatment applications;

The **SERVICE GROUP** provides fabrication, installation, and maintenance services to improve bulk materials handling efficiency; mechanical clean-out services for silos and hoppers to eliminate material flow problems; and shop repair/rebuilding and modifications services of products sold by the Company.

The **TOOL GROUP** provides power tools, personal protective equipment, materials-handling equipment, shop equipment and MRO supplies used for production, fabrication, assembly, metal removal, maintenance, and storage in manufacturing, construction, utility, and commercial applications. Our Customers tell us that by choosing **AIRMATIC** to solve their problems, they gain increased productivity, decreased costs, and a safer, cleaner work environment.

The logo for MARTIN features the word "martin" in a bold, orange, lowercase sans-serif font with a registered trademark symbol (®).

# **martin**®

**MARTIN ENGINEERING** is the leading global supplier of system to make the handling of bulk materials cleaner, safer, and more productive. Since its founding in 1944, the company has grown dramatically through the development of solutions to help the solids-handling industries around the world. MARTIN ENGINEERING's success can be attributed to the development of practical, field-proven, cost-effective answers for "real life" problems. MARTIN Products are designed for tough industrial conditions; they are built to allow easy maintenance; they are engineered for simplicity, cleanliness, safety, and efficiency; they are personalized to meet each customer's unique requirements.

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