



Date: _____

Project: _____

Subcontractor: _____

Submittal Description: _____

Review Stamps:


Comments:

Engineer Comments:

1. The previous version of this submittal included the digital control panel specified in section 2.2.M of spec 233513. This revision seems to have removed that. Please confirm the intelli-touch panel will still be provided.

2. The extraction arms are approved but they should be recategorized under specification 233416 for the O&M since they are specified there.

Elford



Review of this submittal by Elford is not conducted for the purpose of determining accuracy and completeness of details such as dimensions, quantities, constructability, safety, performance characteristics, etc. all of which remain the sole responsibility of the Subcontractor or Supplier as required by the Contract Documents and Elford's Subcontract or Purchase Order (the Agreement). Additionally, reviewed submittals do not define the Subcontractor's or Supplier's Scope of Work or modify the Agreement in any way.


Reviewed By: GAB 09/03/25

Architect



Engineer

DATE REC'D: _____ AECOM JOB No: 60673783



Review is only for conformance with the design concept of the Project and general compliance with the Contract Documents. Nothing herein authorizes additional cost. The Contractor is totally responsible for:

- deviation from the Contract Documents
- conformance to field dimensions
- fabrication process information
- means, methods, techniques, sequences, and procedures of construction, and construction safety
- coordination of the work

CONFORMS AS IS <input type="checkbox"/>	CONFORMS AS NOTED <input checked="" type="checkbox"/>
DOES NOT CONFORM <input type="checkbox"/>	REVISE & RESUBMIT <input type="checkbox"/>

BY Anjali Gupta DATE 05SEP2025



Submittal
Detailed
233513-2

25100-H CCAD - Center for Creative Collaboration (25100-H)

490 E Gay Street,
Columbus, OH 43215

233513 - Dust Collection Systems (Rev 1)

Subject

Dust Collection Systems (Rev 1)

Status

Submitted ●

Spec section

23 35 13 - Sawdust Collection Systems

Submittal package

Spec sub section

Responsible company

Gutridge

Type

Product Data

Importance

Normal

Location

Author

Gutridge
Jordan Herring

Resolved by

DESCRIPTION Jordan Herring on 8/29/2025 08:26 AM (Edited by Jordan Herring on 8/29/2025 08:28 AM)

Revised product data for dust collection systems.



File

ENVIR. AIR TECH --
Jordan Herring

SUBMITTAL

Job Title: COLUMBUS COLLEGE OF ART & DESIGN

Location: COLUMBUS, OHIO

Date: 8-28-2025

Submitted By: Jess Myers

*Air Control Products
1201 Essex Avenue
Columbus, Oh. 43201
U.S.A.*

Phone: 614-299-1747

Fax: 614-299-1301

E-mail: jessm@aircontrolproducts.com





Commercial & Industrial Air Purification Systems

Wood Dust Collection System

<u>Company:</u>	COLUMBUS COLLEGE OF ART & DESIGN Columbus, OH.
<u>Project</u>	Wood Dust Collection System
<u>Date:</u>	8/27/25
<u>Compliance:</u>	NFPA 664, NFPA 652, NFPA 654
<u>Model</u>	Micro Air Model FRP8
<u>Overall Dimensions</u>	175.5" H X 54.605" W X 48.5" D- with long legs
<u>Weight</u>	2,262 lbs.
<u>Cabinet</u>	12 Gauge welded, galvanealed steel with exterior surfaces ground smooth. NFPA compliant cabinet with ledgeless design
<u>Finish</u>	Industrial grade, textured, baked crimson red enamel paint inside and out
<u>Filtration</u>	Eight (8) each, high efficiency, fire retardant cartridge filters with 100% spunbond polyester filter media. Each filter is equipped with 150 ft. ² of filter media
<u>Filter Cleaning System</u>	Unique rotating tube with pre-drilled holes. As air is pulsed into the tube, it rotates, and air exits the pre-drilled holes. This combination provides a highly efficient and total cleaning of the cartridges
<u>Compressed Air Pulse Valves</u>	Robust valve assemblies rated for 5 million cycles with no maintenance
<u>Filter Access</u>	Easy access through hinged doors
<u>Top Mount Motor</u>	40 Hp. single speed blower, 3 -Phase, 208-volt, 60 HZ, TEFC motor
<u>Air Volume</u>	7,300 CFM @ *14.53" external w. c. (*Includes loss for collector with 95% plugged filters)
<u>VFD System Controls</u>	Micro Air Intelli-Blower with built-in VFD capable of operating the dust collector in STATIC pressure mode. Intelli-Blower can be set to maintain a duct static pressure to automatically adjust air volume. By controlling the air volume, ensures that the system is always providing the required duct velocity and provides energy savings by only using the horsepower necessary at any given time.
<u>Filter Change Indicator</u>	Analog Magnehelic gauge
<u>Wind Load Rating</u>	100 MPH
<u>Cabinet Pressure Rating</u>	+/- 30 Inches W.C.
<u>Inlet</u>	One (1) Front 34" X 13" panel
<u>Compressed Air Regulator</u>	Two (2) stage compressed air dryer / regulator included with system
<u>Hopper</u>	12 Gauge welded steel with 10" diameter outlet
<u>Waste Barrel Connection</u>	10" Diameter, clamp together duct between hopper and waste barrel lid
<u>Waste Barrel</u>	One (1) 55 Gallon Steel Barrel
<u>Explosion Vent Kit NFPA Requirement</u>	Cabinet mount explosion relief vent installed on LEFT side of dust collector

<p><u>Ground Mount Explosion Vent Deflector</u></p>	<p>Due to the proximity of the explosion vent to occupied spaces, the dust collection system will include one (1) ground mount, explosion vent deflector. The deflector is designed to divert explosive pressure wave and flames up and away from occupied spaces.</p>
<p><u>ECOMAXX NRV Control Panel</u> <u>NFPA Requirement</u></p>	<p>One (1) NRV Explosion Isolation Damper Control Panel</p> <ul style="list-style-type: none"> <input type="checkbox"/> Control panel for sensor power and integration <input type="checkbox"/> Micro-switch for system shut down <input type="checkbox"/> Dust level sensor <input type="checkbox"/> 100% NFPA 69-2014 compliant
<p><u>ECOMAXX NRV Explosion Isolation Damper</u> <u>NFPA Requirement</u></p>	<p>One (1) 18" Vigiflap Explosion Isolation Flap Valve</p> <ul style="list-style-type: none"> <input type="checkbox"/> Painted steel body <input type="checkbox"/> All stainless steel flap <input type="checkbox"/> Silicone flap gasket <input type="checkbox"/> Inductive explosion sensor <input type="checkbox"/> ATEX Certified
<p><u>ECOMAXX Spark Detection & Suppression System Control Panel</u> <u>NFPA Requirement</u></p>	<p>Status lights RED / GREEN Required relays, fusing, intrinsic safe barrier for explosive environments including:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Terminals for microswitch connection <input type="checkbox"/> Circuit for capacitive dust level sensor <input type="checkbox"/> System shutdown output <input type="checkbox"/> NEMA 4 rated outdoor enclosure and UL label, 120 V
<p><u>ECOMAXX Spark Detection & Suppression System</u> <u>NFPA Requirement</u></p>	<p><u>Spark Detector</u> Includes one (1) #EMFCS-SD Spark Detector (IP 65 enclosure, ATEX zone 22 D, FM Approved) and (1) EM-FCS-MK Mounting Kit (ATEX Zone 21 G/D cat.2, FM Approved)</p> <p><u>External Test Lamp</u> Includes one (1) EM-FCS-TL packaged external test lamp, (IP 65 enclosure, ATEX zone 22 D, FM Approved) and one (1) EM-FCS-MK mounting kit (ATEX Zone 21 G/D cat. 2, FM Approved)</p> <p><u>Spark Extinguishing Group</u> (1) 1" 24VDC solenoid valve, (1) 1" water filter, (1) pressure switch (1-12 Bar), (1) ball valve with microswitch, electrical connection box, TUGGE2 hose kit with connectors and (2) 3/4" SS cone jet nozzles with shutters and duct mounts. IP 65 enclosure (electronics), FM Approved, ATEX components. (Requires approximately 15.83 gallons per minute @ 72.5 psi water supply)</p>
<p><u>ECOMAXX Raptor Gate Abort Gate</u> <u>NFPA Requirement</u></p>	<p>One (1) high speed abort gate designed to divert any flames or explosions up and away from the dust collection system. The abort gate includes the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 24-volt control panel with status lights to spark detection panel <input type="checkbox"/> Weather hood <input type="checkbox"/> Triple security protection <input type="checkbox"/> Epoxy coated <input type="checkbox"/> Flanged inlet / outlet <input type="checkbox"/> NFPA compliant with spark detection control
<p><u>ECOMAXX Water Booster Pump</u></p>	<p>One (1) #RC-CPR water booster pump equipped with epoxy powder coated steel enclosure, 3/8" water inlet with 1-way valve, water reservoir tank with level sensor and pressure gauge, 1" water outlet connection, 3/8" compressed air inlet with 1-way valve, air tank pressure switch, regulator, solenoids and cable grips.</p>
<p><u>Clamp Together Ductwork Package</u></p>	<p>Ductwork package includes all duct components sized and designed in accordance with NFPA requirements. Clamp together ductwork available in diameters of 3" to 24", adjustable nipples and collars attached to other components will have one or both ends die form rolled to provide a uniform edge around the circumference of the rolled end. All connections will have a gasket in the seal. The single lever clamp is of similar duct material. The pipe and adjustable nipples have a longitudinal seam LASER WELDED to allow for a tighter slip joint and reduce system pressure losses. All laser welds undergo a light test to ensure there are no voids or imperfections in the system. Pipe lengths using laser welded seams will not exceed a nominal 60" length. The rolled edges provide structural support at 5' intervals or less and can be interpreted as a stiffener where SMACNA specifications are required. An adjustable nipple is used for adjustment during the install process. All standard elbows have a centerline radii of 1.5 x diameter. Standard elbows 3" to 7" are pressed formed, and 8" and larger are gored construction with a lock form standing seam every 15°. Branch fittings are produced to have a concentric design, as they taper to a specific dimension. Joints are lapped, spot welded, cleaned and painted with industrial tough coat, acrylic enamel #1760 aluminum. seams are sealed with sealant. Fitting gauges vary from 22 to 20 gauge, depending on the configuration or the branch or fitting. All branches are produced on a 45° angle. all hoods, floor sweeps and fittings are available with rolled edges. Maximum negative pressure is -40".</p>
<p><u>Noise Attenuator</u></p>	<p>System includes one (1) inline noise attenuator designed to reduce exhaust noise to an average 78 dBA.</p>
<p><u>EXTRACTION ARMS METAL -101</u></p>	<p>FOUR (4) WELD FUME EXTRACTION ARMS MICRO AIR MODEL SCA612</p>

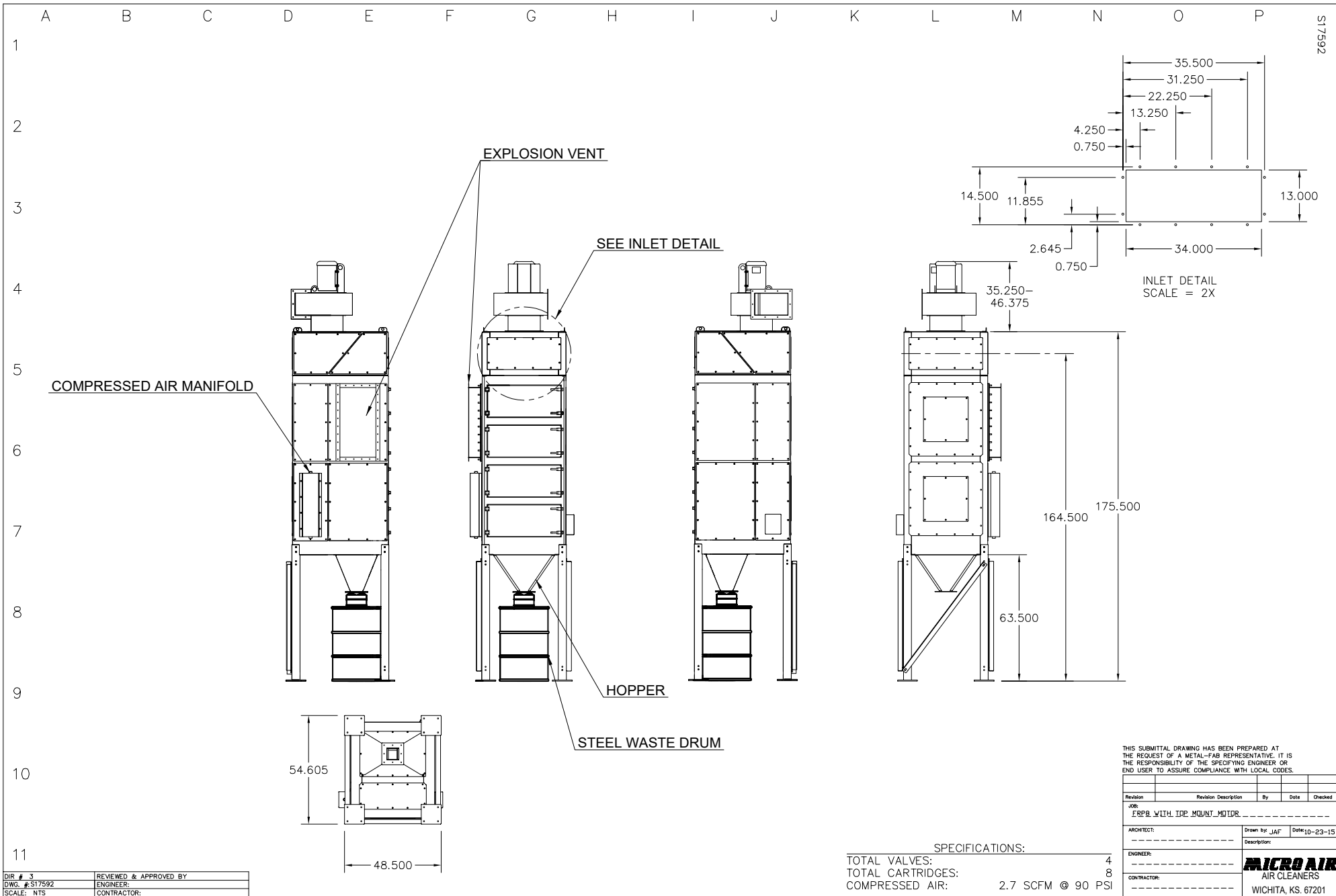
Spark Detection & Suppression System Notes:

It is the customer's responsibility to supply the following:

1. Dedicated 120V power complete with clean ground to the spark detection control panel location.
2. Low voltage wiring between the control panel and the spark detector.
3. Water supply line complete with pressure gauge and a 1" ball valve complete with supervisory switch and solenoid valve to the extinguishing system. Water supply lines between the solenoid valve and water spray nozzle(s).
4. The size of the water supply line as well as the minimum water flow rate and pressure required, are as shown in the mechanical notes on the spark detection drawing. Requires approximately 15.83 gallons per minute @ 72.5 psi water supply.

Exclusions:

- Installation
- Electrical wiring
- Compressed air piping
- Duct hangers
- Air compressor
- Any necessary permits
- Any required UL onsite inspections
- Any items not specifically listed in this document



DIR. # 3	REVIEWED & APPROVED BY
DWG. # S17592	ENGINEER:
SCALE: NTS	CONTRACTOR:

SPECIFICATIONS:
 TOTAL VALVES: 4
 TOTAL CARTRIDGES: 8
 COMPRESSED AIR: 2.7 SCFM @ 90 PSI

THIS SUBMITTAL DRAWING HAS BEEN PREPARED AT THE REQUEST OF A METAL-FAB REPRESENTATIVE. IT IS THE RESPONSIBILITY OF THE SPECIFYING ENGINEER OR END USER TO ASSURE COMPLIANCE WITH LOCAL CODES.

Revision	Revision Description	By	Date	Checked

JOB: FRP WITH IPD MOUNT MOTOR

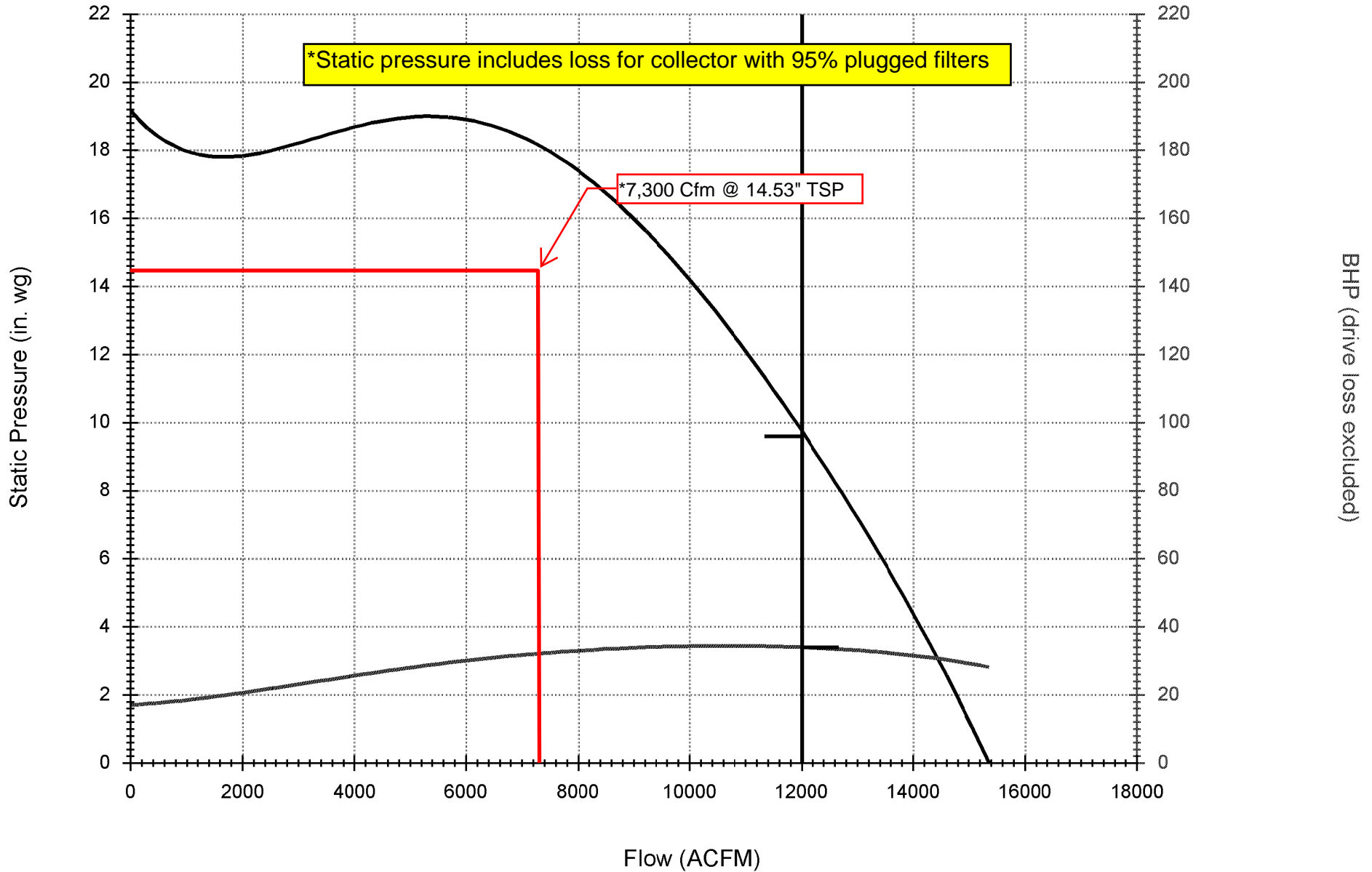
ARCHITECT: _____ Drawn by: JAF Date: 10-23-15
 Description: _____

ENGINEER: _____

CONTRACTOR: _____

MICRO AIR
 AIR CLEANERS
 WICHITA, KS. 67201

Cincinnati Fan HDBI-200 HD Backward Inclined Wheel (Full Width) @ 3,550 RPM
Rating Point: 12,000 ACFM @ 9.5 in. wg SP, 0.073 lb./ft.³ Density, 34.0 BHP





Clean. Easy. RED.

SCA—Source Capture Arms Specifications and Technical Data

TYPICAL APPLICATIONS

Source Capture of:

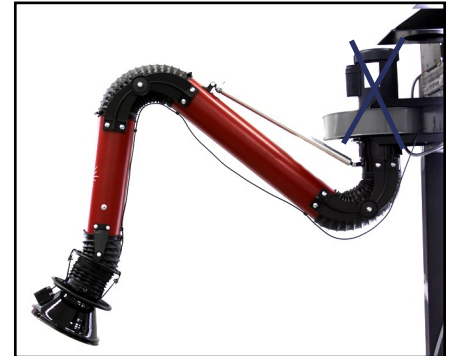
- Welding Smoke and Fumes
- Grinding Dust
- Powders
- Other Dry Dusts

Features:

- Industrial Strength Construction
- Hood Mounted Controls
- Versatile Design
- Smooth Tube Construction
- Air Diverter in the Hood
- Hood Grab Handle
- External Joints and Supports
- Integral Airflow Damper

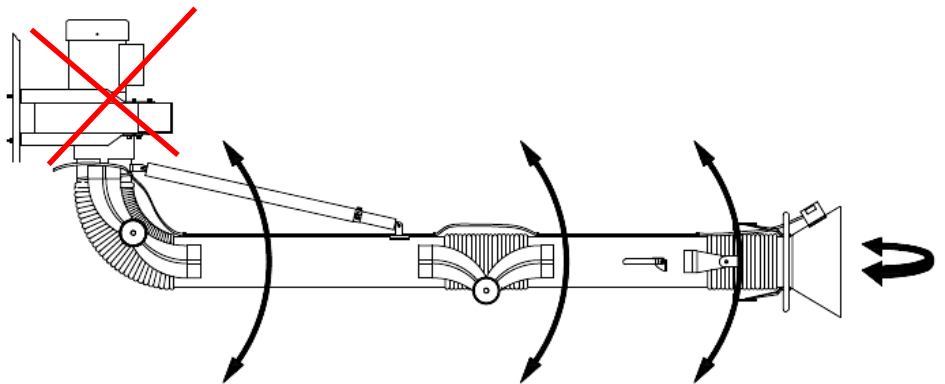
Specifications:

- SCA 405 4" dia. X 5' L
- SCA 407 4" dia. X 7' L
- SCA 607 6" dia. X 7' L
- SCA 609 6" dia. X 9' L
- **SCA 612 6" dia. X 12' L**
- SCA 807 8" dia. X 7' L
- SCA 809 8" dia. X 9' L
- SCA 812 8" dia. X 12' L



Benefits:

- Withstands Rigors of Industrial Use
- User-Friendly Controls
- Ease of Operation
- Higher Airflow Performance
- Increased Capture Velocity
- Easy Movement and Positioning
- Less Restriction, Holds Position



Options:

- Exhausters
- Hood Mounted 12V LED Lamp
- ~~Boom Arm Extensions 10' or 14'~~

Options: Exhausters

HP	Voltage	Phase	Arm Dia.	Arm Length	CFM	dBA @ 5'
1	120	1	4"	5', 7'	1275	79
1	120	1	6"	7', 9', 12'	1825	84
1	230/460	3	6"	7', 9', 12'	1825	83
3	230/460	3	6"	7', 9', 12'	2000	94
3	230/460	3	8"	7', 9', 12'	2000	94

Micro Air's Source Capture Arms, available in 4", 6" or 8" diameter, provide versatility, durability, and an economical method of collecting particulate at the source. SCA arms are externally supported, with no internal working parts other than the damper, offering increased airflow, ease of movement, and exact positioning.

Specifications subject to change without notice.

Sold and Serviced by:

L2755-05/19

IB—Intelli-Blower Energy Savings Control Specifications and Technical Data

TYPICAL APPLICATIONS

- Dust Collectors
- Oil Mist Units
- Wet Collection
- Retro Compatible

Features:

- Energy Savings
- Soft Start
- **Runs in Static Pressure Mode**
- Measures Static pressure & stabilizes CFM

Benefits:

- Reduces Peak energy consumption costs utilizing slow-start, eliminating surges or spikes in power usage.
- Quieter Operation utilizing lower fan speeds when possible.
- Reduces wear on motor and prolongs filter life.
- Allows for system balancing in multiple drop applications & utilizes the minimum amount of energy needed to power drops that are being used.

Options:

- Remote Mounted panel.
- **230v or 460v operation**
- Can be added to existing unit.

Specifications:

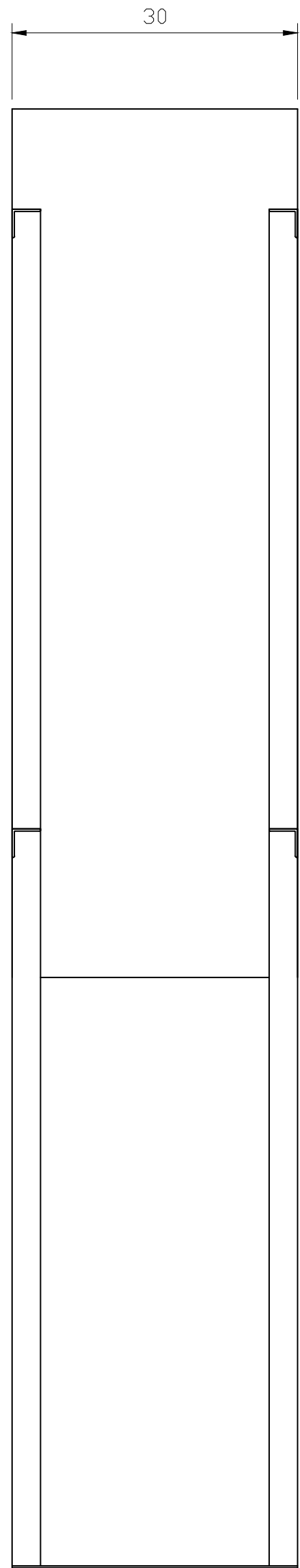
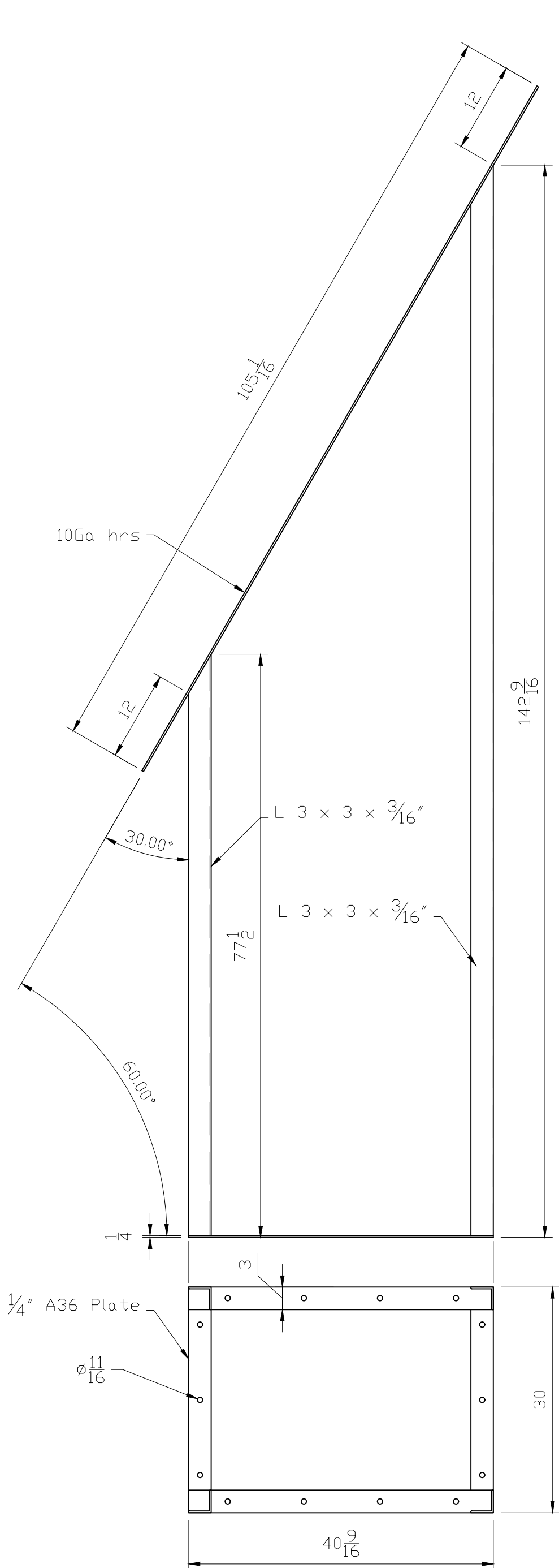
- **230V 5hp — 50hp**
- 460V 5hp — 150hp



The Intelli-Blower control panel for use with Micro Air dust collection system that enables the dust collector to continually operate at the static pressure set point. By operating at the exact specifications your application requires, there is no wasted horsepower or energy. Once set up, the system will run at a constant CFM regardless of the changing static pressures ofr filter loading in the dust collector.

Sold and Serviced by:

L3133 3/25



Shop Notes:

- Remove All Splatter & Burrs
- All Welds to Be $\frac{3}{16}$ Fillet U.N.O
- Painted Gray Primer
- Hardware By Customer

QTY: 1
 Mat: As Noted
 Deflector

Sheet Title

Project
 Deflector Plate

Rev. No.	REVISION DESCRIPTION	DATE	BY
E			
D			
C			
B			
A	Drawing Submitted for Approvals	12.7.20	OR

DESIGNED BY	None-J.N.O.
CHECKED BY	OR
APPROVED BY	AGW
DRAWING NUMBER	32371
DATE	12.7.20
SHEET NO.	E1



Product codeS: 56501, 56502, 56503 & 56504

Spark Detection and Extinguishing System

APPLICATIONS

The Raptor Spark™ Detection and Extinguishing System is an FM APPROVED safety device that is designed to detect and extinguish sparks and glowing embers that are traveling through a duct system. The hazard is detected by infrared sensors and extinguished with water spray nozzles within milliseconds of detection. The High Power Raptor Spark™ Detection control module has the capacity to receive hazard alert signals from multiple components (Dust Probes & Thermal Probes) and monitor multiple duct-zones and vessels.

The Raptor Spark™ Detection and Extinguishing System is an essential Fire Protection, Fire Isolation and Diversion device that is commonly installed with EcoMAXX® High Speed Abort Gates, FireBreak Shutters, EcoMAXX®/VigilEX Explosion Vents and explosion certified EcoMAXX®/VDL Rotary Valves. Typical automatic functions include hazard detection, system shut-down, isolation/abort, and extinguish and/or suppression.



CERTIFICATIONS & STANDARDS

Models P and MA
ATEX EN 1366-2, EN 13501
CSI I 643FR, REI 120-RE 120
CE



STANDARD FEATURES

- Output for Pre-Alarm
- Output for Alarm
- 4-20mA proportional output
- Bus RS485
- IP65 Enclosure

OPTIONAL FEATURES

- Magnetic
- Pneumatic
- Fusible Link

copyright 2021 Boss Products, LLC



SINGLE ZONE

Spark Detection & Extinguishing Kits

Small Package



Amazing Capacity

KIT 1	60101-010000	RS-KIT01	SINGLE ZONE SPARK DETECTION & EXTINGUISHING KIT For pipe sizes smaller than 20" diameter; includes Raptor Spark RS-CUSP1L Control Panel, (2) Spark Detectors, Extinguishing Kit, Flexible hoses, Audible Alarm & Warning Light.
KIT 2	60101-020000	RS-KIT02	SINGLE ZONE SPARK DETECTION & EXTINGUISHING KIT For pipe sizes 20"- 40" diameters; includes Raptor Spark RS-CUSP1L Control Panel, (2) Spark Detectors, Extinguishing Kit, Flexible hoses, Audible Alarm & Warning Light.
KIT 3	60101-030000	RS-KIT03	SINGLE ZONE SPARK DETECTION & EXTINGUISHING KIT For pipe sizes 40" – 68" diameters: includes Raptor Spark RS-CUSP1L Control Panel, (3) Spark Detectors, Extinguishing Kit, Flexible hoses, Audible Alarm & Warning Light.
KIT 4	60601- 040000	RS-KIT04	SINGLE ZONE ABORT GATE/CLEAN SIDE DETECTION KIT For pipe sizes smaller than 40" diameter includes; Raptor Spark RS-CUSP1L Control Panel, (2) Spark Detectors, Audible Alarm & Warning Light.
KIT 5	60601-050000	RS-KIT05	SINGLE ZONE ABORT GATE/CLEAN SIDE DETECTION KIT For pipe sizes 40" – 68" diameters includes; Raptor Spark RS-CUSP1L Control Panel, (3) Spark Detector assemblies, Audible Alarm & Warning Light.

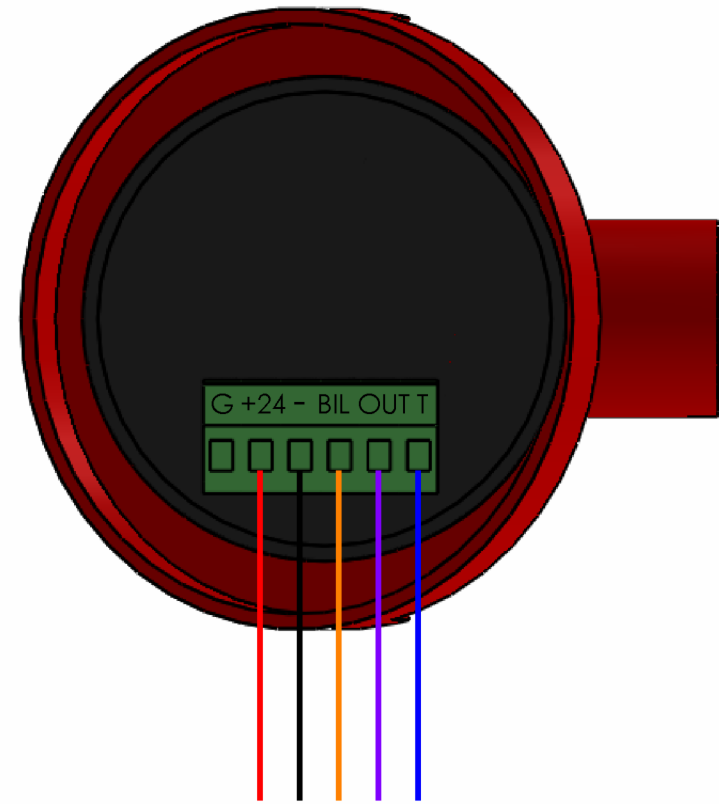
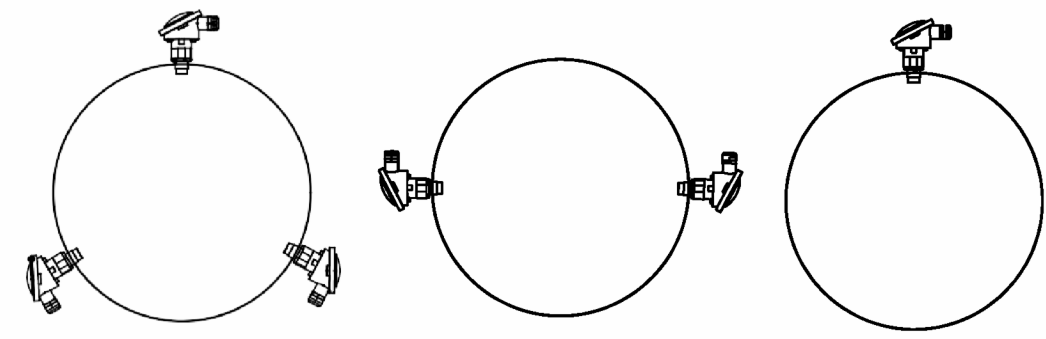
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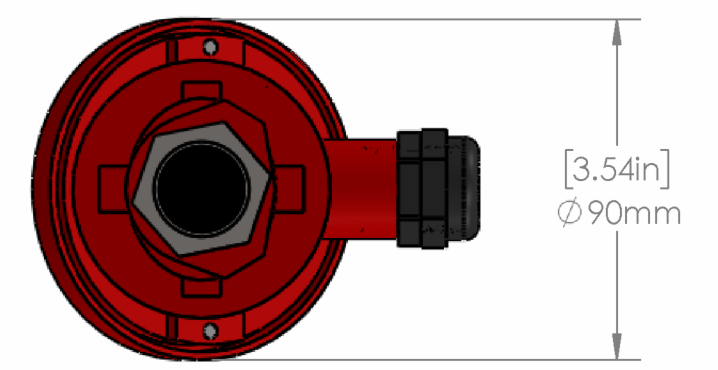
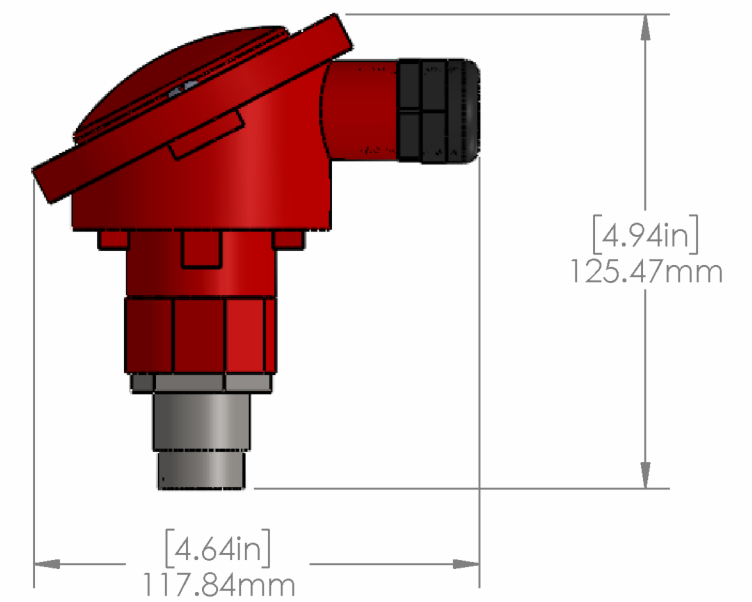
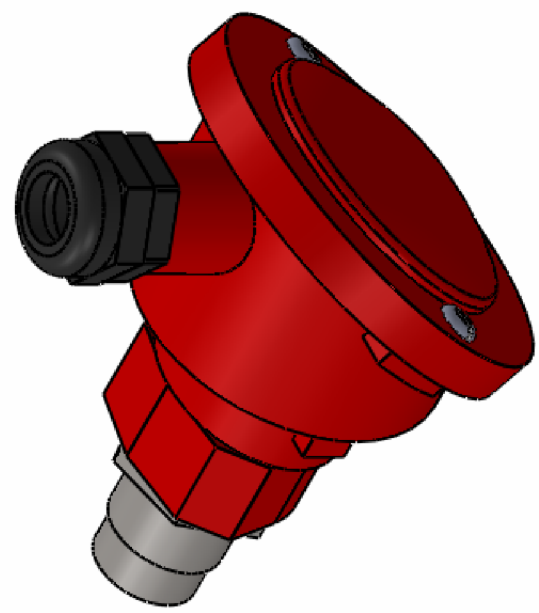
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Installation Orientation for 1, 2, and 3 Detectors



Electrical Connections To CU1610
 Red: + (AD1-8)
 Black: - (AD1-8)
 Purple: L1-16
 Blue: T (on the door of CU1610)
 Orange: Not used

Electrical Connections To Raptor Spark
 Red: + (Detection Group)
 Black: - (Detection Group)
 Orange: L1-3 (Detection Group)
 Blue: T1
 Purple: Not used



B

B

A

A

Revisions			
#	Description	Date	By:



Ex II 2GD c T85°C (T6)

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES: Ø0.0787 in
 TOLERANCES: 2mm
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		



DWG. NO. RS-SD02
 Raptor Spark: Spark Detector



6729 Guada Coma Dr.
 Schertz, TX, 78154
 210-664-4200

SCALE: SHEET 1 OF 1

4

3

2

1

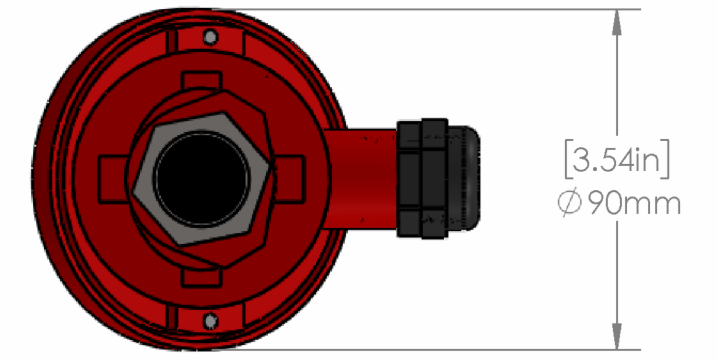
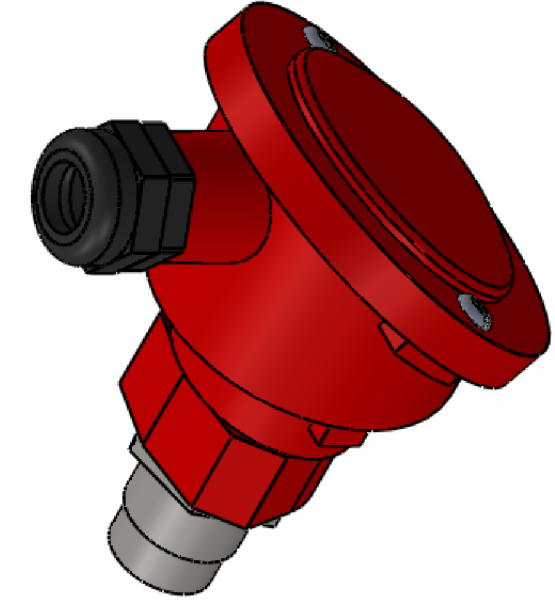
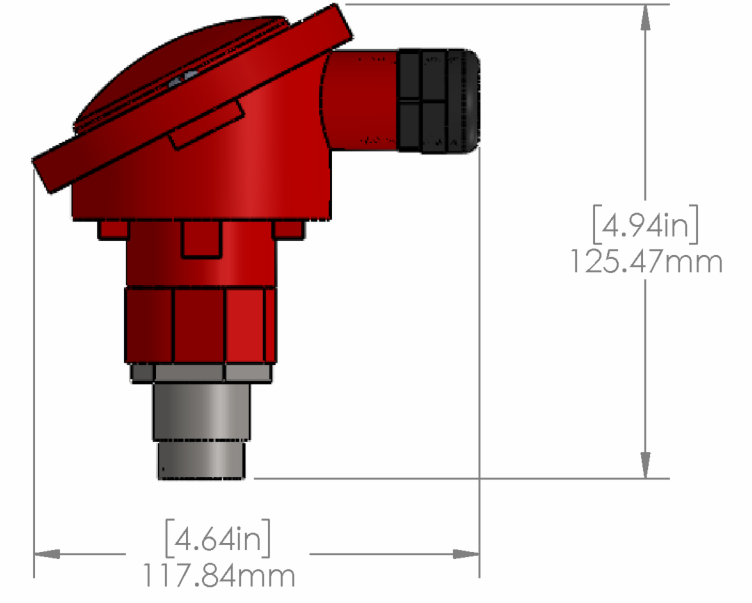
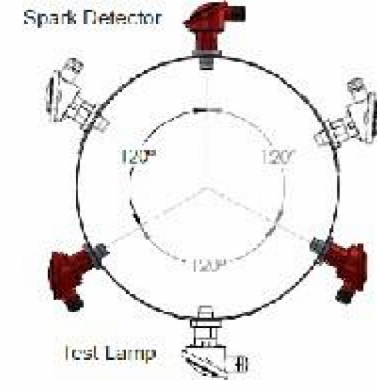
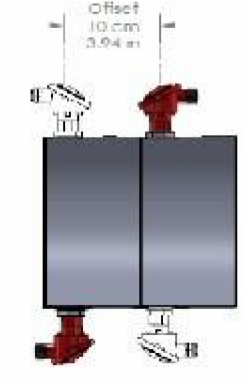
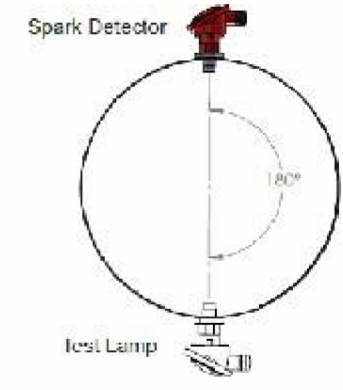
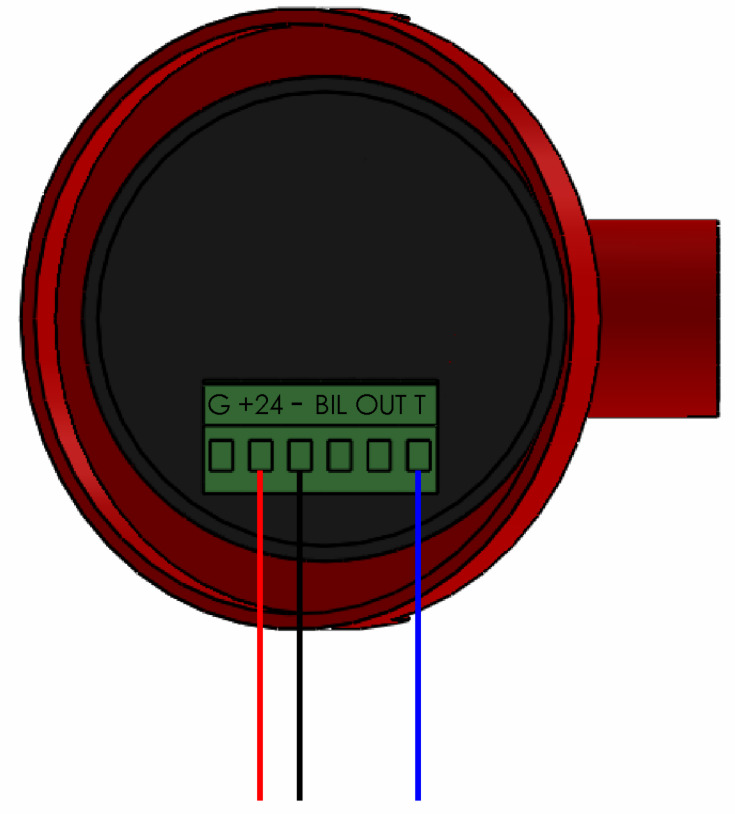
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3

2

1

Installation Orientation for 1, 2, and 3 Test Lamps



Electrical Connections To CUSP1L Raptor Spark
 Red: + (Detection Group or Extinguishing Check or 24V1)
 Black: - (Detection Group or Extinguishing Check or 24V1)
 Blue: T1

B

B

A

A

4

3

2

1

Revisions

#	Description	Date	By:



Ex II 2GD c T85°C (T6)

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES: Ø0.0787 in
 TOLERANCES: 2mm
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		

DWG. NO. RS-TL02
 Raptor Spark: Test Lamp



6729 Guada Coma Dr.
 Schertz, TX, 78154
 210-664-4200

SCALE: SHEET 1 OF 1

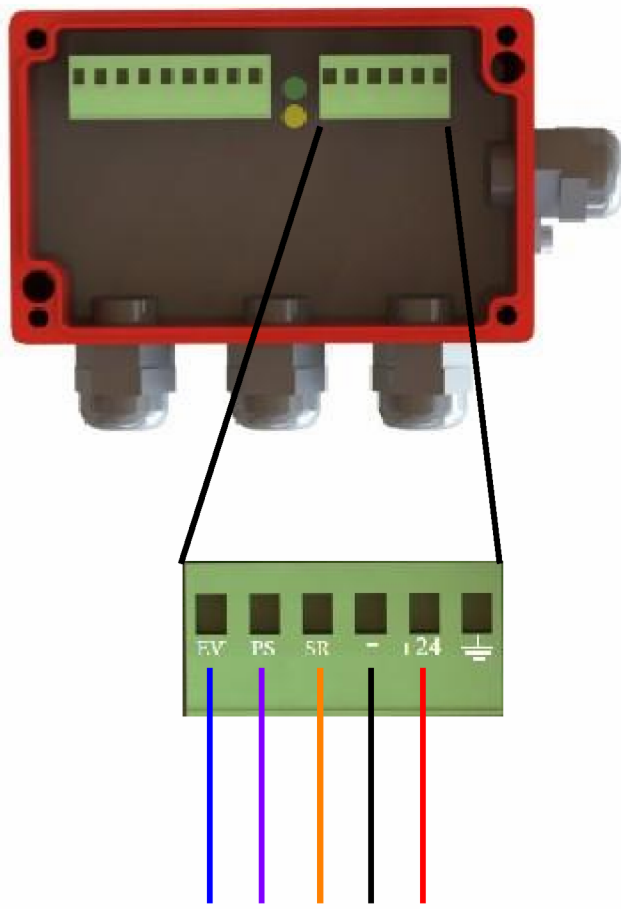


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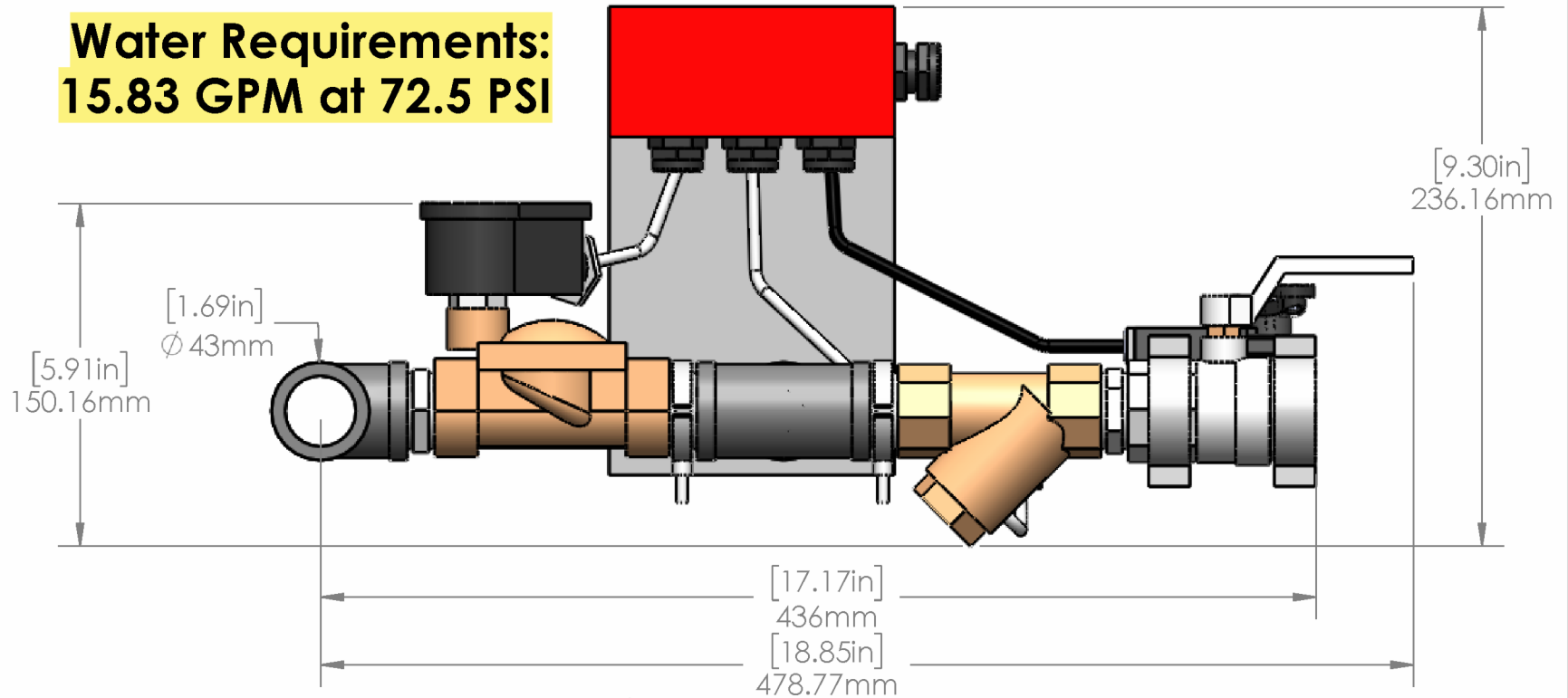
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2

1



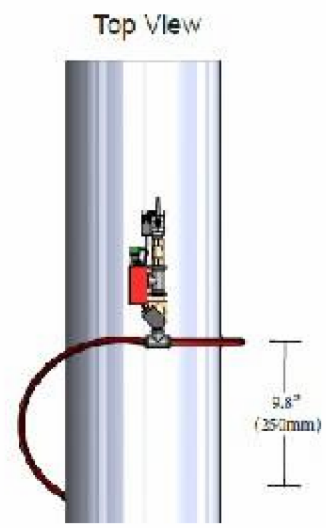
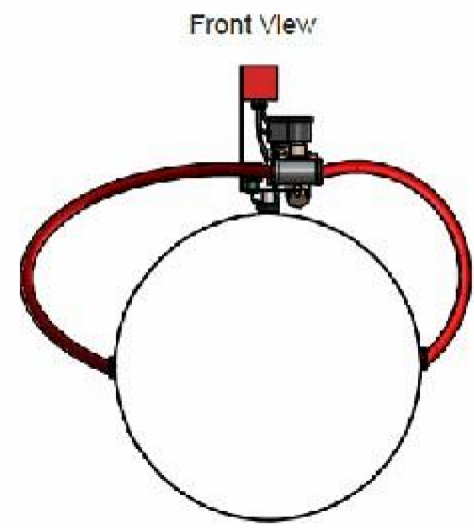
**Water Requirements:
15.83 GPM at 72.5 PSI**



Installation
(All Size Ducts Will Have (2) Hoses)

Electrical Connections to CU1610
 Red: + (AD1-8)
 Black: - (AD1-8)
 Purple: L1-16
 Blue: U1-5
 Orange: L1-16

Electrical Connections to CUSP1L Raptor Spark
 Red: + (Extinguishing Group)
 Black: - (Extinguishing Group)
 Purple: PS (Extinguishing Group)
 Blue: EV
 Orange: Not Used



A

A

Revisions			
#	Description	Date	By:



II 2GD c T85°C (T6)

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES: Ø0.787 in
 TOLERANCES: 2mm
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±



NAME	DATE
DRAWN	
CHECKED	
ENG APPR.	
MFG APPR.	

DWG. NO. RS-EXT02
Raptor Spark: Extinguishing

6729 Guada Coma Dr.
 Schertz, TX, 78154
 210-664-4200

SCALE: SHEET 1 OF 1

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1

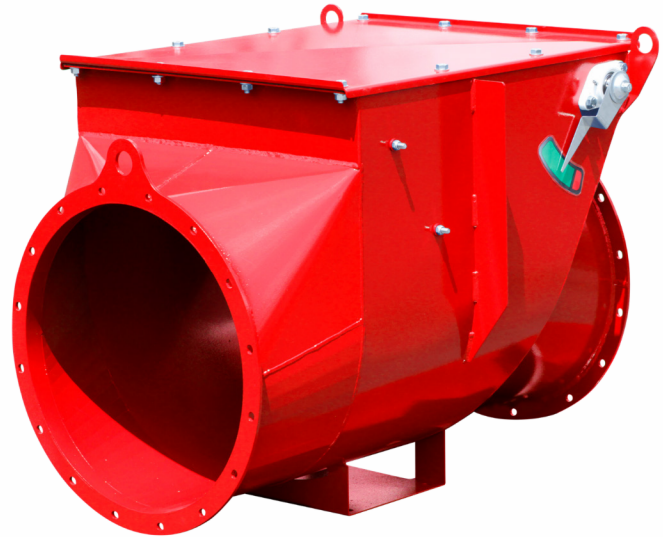
Explosion Isolation Valve VIGIFLAP

APPLICATIONS

The **VIGIFLAP** is an explosion isolation valve designed to prevent propagation of overpressure or flame front caused by an explosion downstream in vessels such as dust collectors, cyclones, and filters.

The valve is held open either by air flow or proprietary locking mechanism. As a result, the **VIGIFLAP** valve can be used as an explosion isolation device for both the inlet and outlet of a vessel.

The **Explosion Isolation Valve VIGIFLAP** complies with **NFPA** guidelines and is an **ATEX Certified** device for the containment of explosion.



CERTIFICATIONS & STANDARDS

EN 16447

NFPA 69 Compliant



STANDARD FEATURES

- Body : painted steel
- Diameters : $\phi 6''$ to $\phi 54''$ / $\phi 160$ mm to $\phi 1350$ mm
- Gasket : EPDM (Silicone FDA 356°F / 180°C option)
- Pressure drop : Lower pressure drop with round domed flap

OPTIONAL FEATURES

The VF is 100% NFPA 69 compliant with the following optional features:

- Body: Galvanized steel
- Body: Stainless steel
- Frame silicone FDA : 356°F / 180 °C
- Dust level sensor to prevent dust accumulation
- Connection box installed on the body, according to the ATEX zone (opposite side of the locking mechanism)



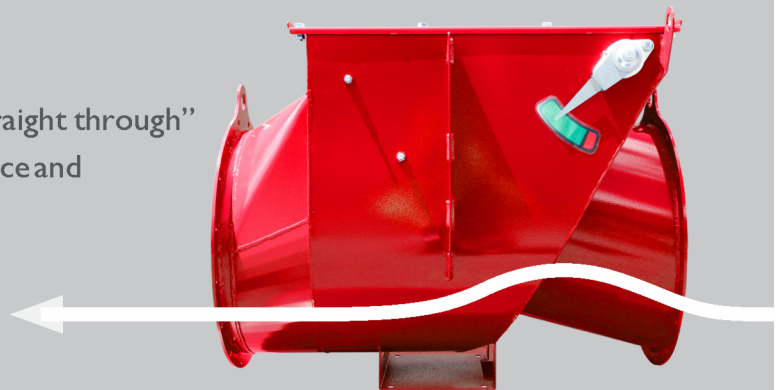
DIMENSIONS

DIMENSIONS				
Ø [inch]	Ø [mm]	Door gasket	Body gasket	Body
Ø 4	Ø 100	EPDM	EPDM	Mild Steel
Ø 5	Ø 125			
Ø 6	Ø 160			
Ø 7	Ø 180			
Ø 8	Ø 200			
Ø 10	Ø 250			
Ø 12	Ø 300			
Ø 14	Ø 350			
Ø 16	Ø 400			
Ø 18	Ø 450			
Ø 20	Ø 500			
Ø 22	Ø 550			
Ø 24	Ø 600			
Ø 26	Ø 650			
Ø 28	Ø 700			
Ø 30	Ø 750			
Ø 32	Ø 800			
Ø 34	Ø 850			
Ø 36	Ø 900			
Ø 38	Ø 950			
Ø 40	Ø 1000			
Ø 42	Ø 1050			
Ø 44	Ø 1100			
Ø 46	Ø 1150			
Ø 48	Ø 1200			
Ø 50	Ø 1250			
Ø 52	Ø 1300			
Ø 54	Ø 1350			

* Units in inches rounded to the closest whole number

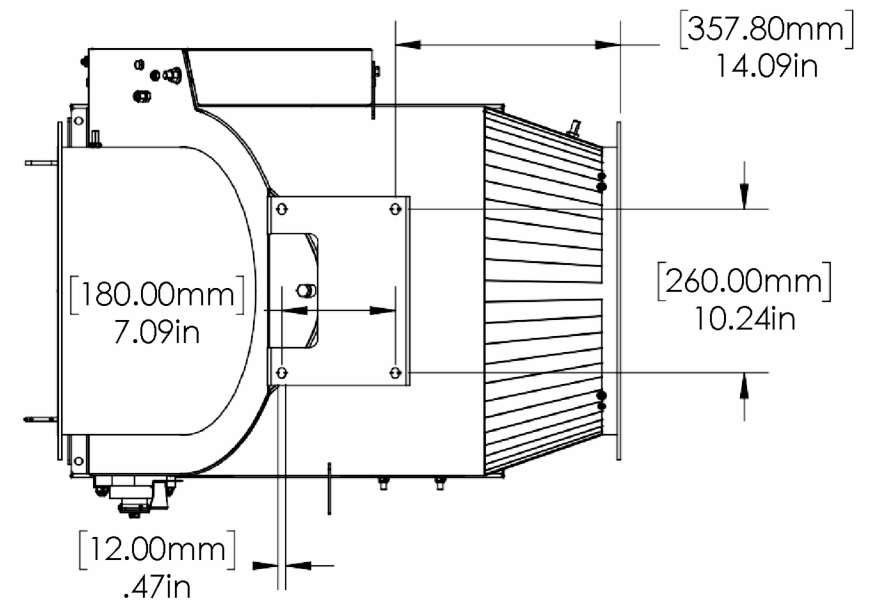
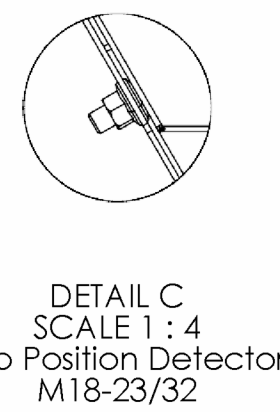
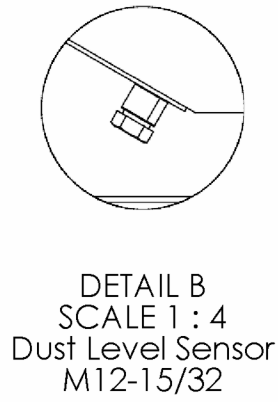
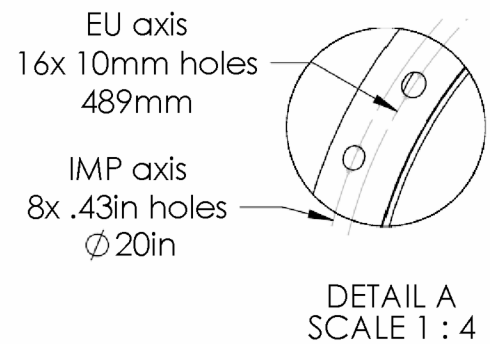
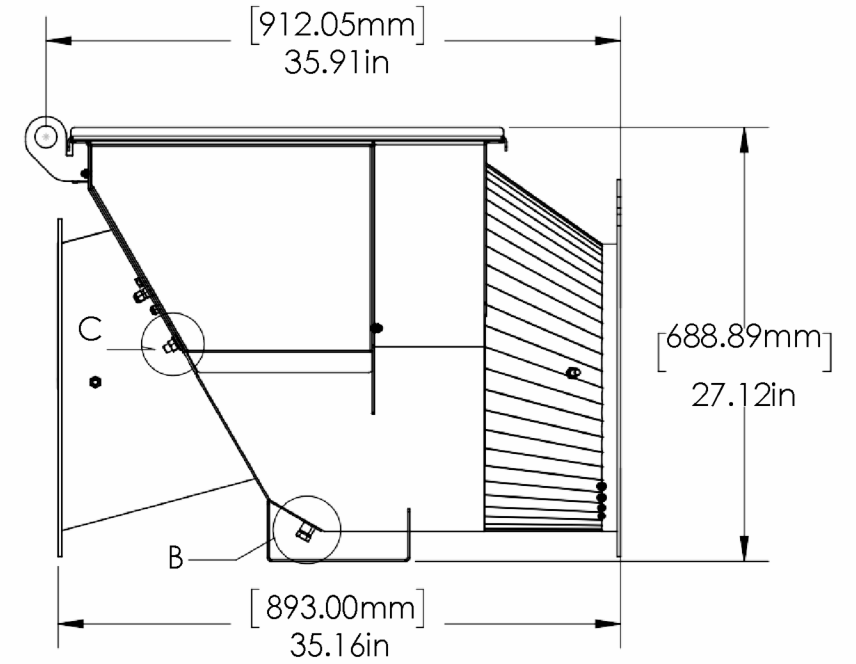
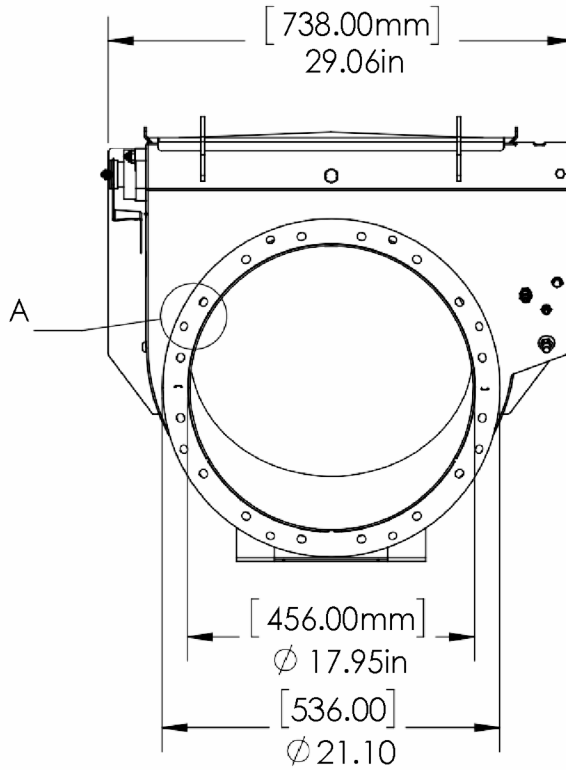
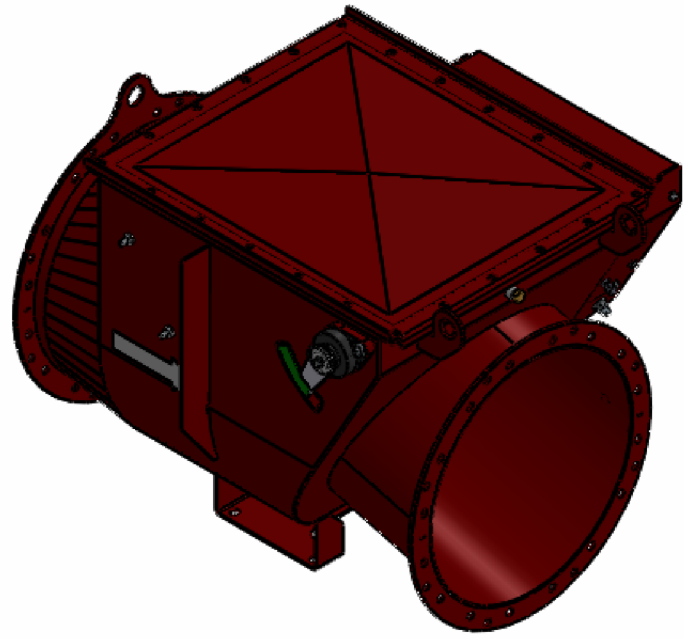
MINIMUM INTERNAL DUST ACCUMULATION

The VigiFlap's unique inlet & outlet "straight through" design ensures very low static resistance and reduces dust accumulation.



FREE FLOW DESIGN

copyright 2023 Boss Products, LLC



- Minimum Installation Distance:
- Flap position (Floating): 15.4' (4.7m)
 - Flap position (Locked Open): 22.0' (6.7m)
- Maximum Installation Distance:
- Flap position (Floating): 55.8' (17m)
 - Flap position (Locked Open): 55.8' (17m)
- Maximum Velocity(Dirty Air): 8858 FPM (45m/s)
 - Maximum Velocity (Clean Air): 5905 FPM (30m/s)
 - Pressure Resistance: 2 bar
 - Pred Max: 0.5 bar
 - KST Max : 250 bar m/s (organic, synthetic and metallic)
 - Weight: 170lbs (77kg)

- Installation Parameter:
- Horizontal, Vertical, and all Angles Accepted
 - Unlimited Amount of Elbows
 - Push and Pull Air Flow
 - Inlet and Outlet Isolation

* Refer to Manual for additional detailed information

Certification: ATEX EN 16447
NFPA 69 Compliant



	NAME	DATE
DRAWN	Sean	2/21/2024
CHECKED		

Notes:



Type:
18 Inch Vigiflap

DWG NO: VF18	Address: 6729 Guada Coma Rd. Schertz, TX 78154 210-664-4200	REV 6
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SCALE: 1:16 SHEET 1 OF 1

Heavy Duty High Speed Abort Gate

APPLICATIONS

The **Raptor Gate™ Heavy Duty High Speed Abort Gate** is an important part of any duct spark or leak detection system.

It can be located prior to the inlet of a dust collection system to prevent a flame or burning ember from entering the dust collection system. This method is used if your spark detection equipment is not adequate or not an option.

Fire, smoke, spark, or broken filter sensors can activate it in the event of a filter failure or fire.

The **Raptor Gate™ Heavy Duty High Speed Abort Gate** can be placed on the return air side of the dust collector to redirect contaminated air to a safe location. It is another way to keep personnel and dust collection equipment protected.

CERTIFICATIONS & STANDARDS

NFPA 652 & 654 Compliant when used in conjunction with FM Approved Spark Detection System.



STANDARD FEATURES

- Heavy duty and spring loaded with thicker walls and sturdier construction than the High Speed Abort Gate EM-HSAG02.
- Complete with electromechanical gate operation, indicator lights to monitor the system, manual test button, terminals to interlock with Raptor Spark detection system for activation, flanged inlet and outlet, and weather hood with bird screen.
- Available in sizes 4" to 60"
- 120 VAC Control Panel



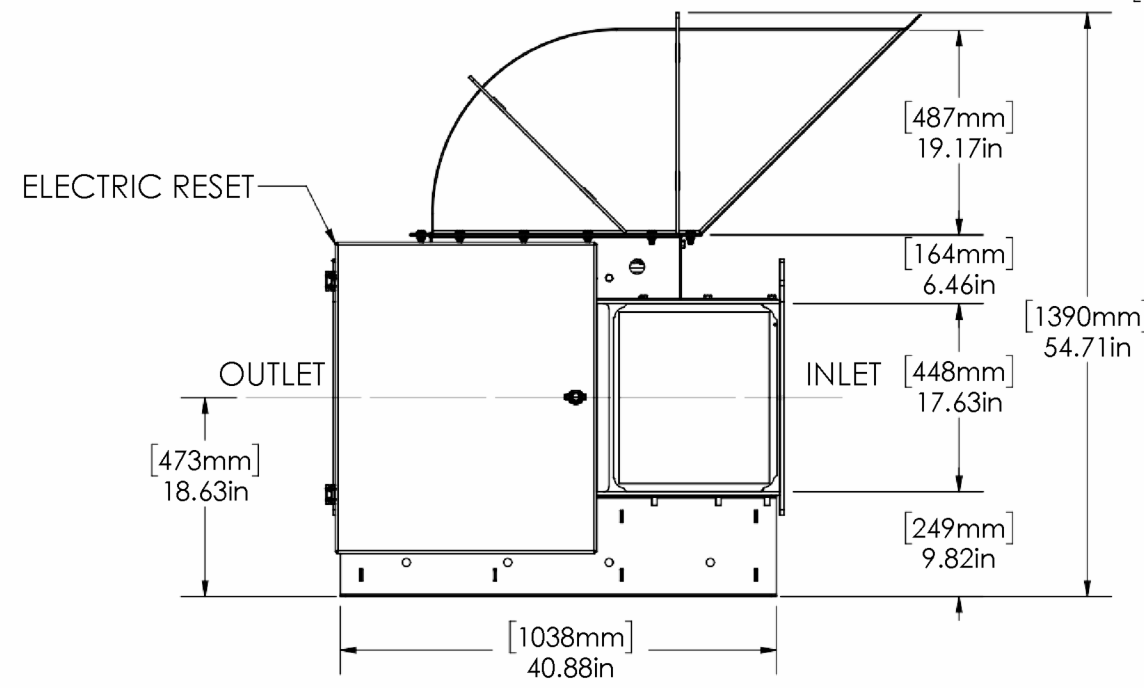
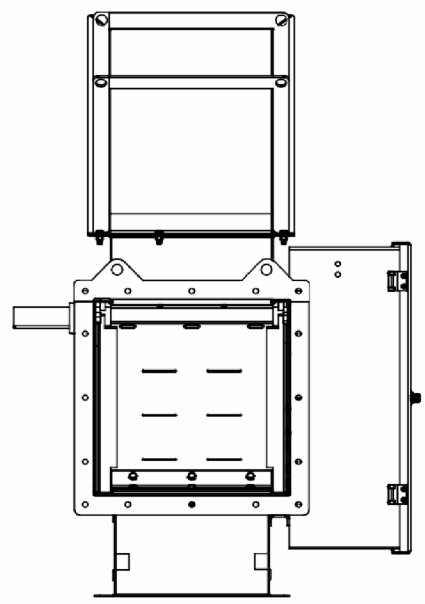
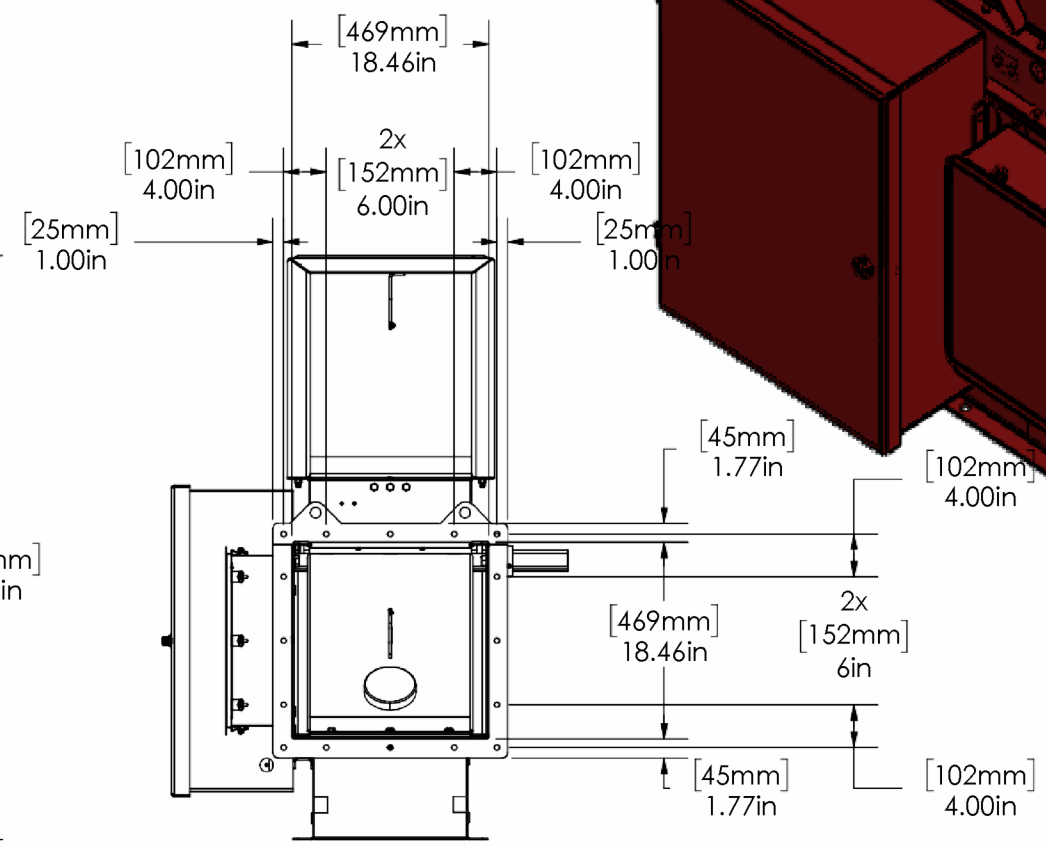
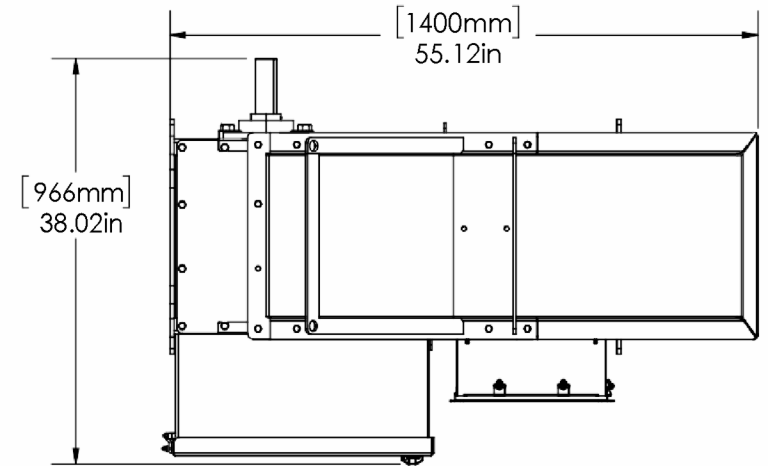
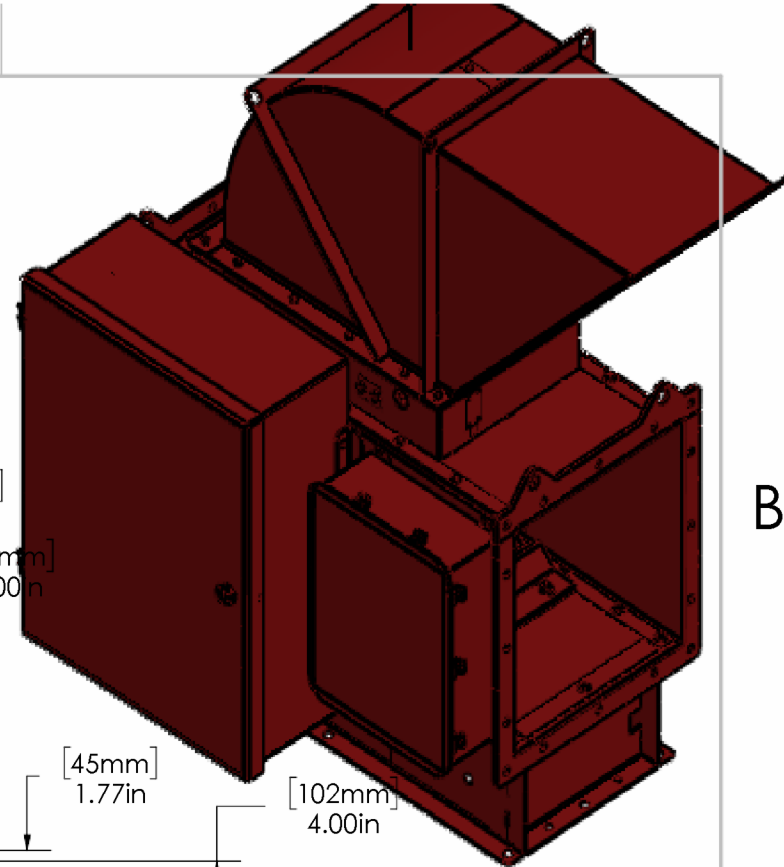
OPTIONAL FEATURES

- Inlet and outlet transitions

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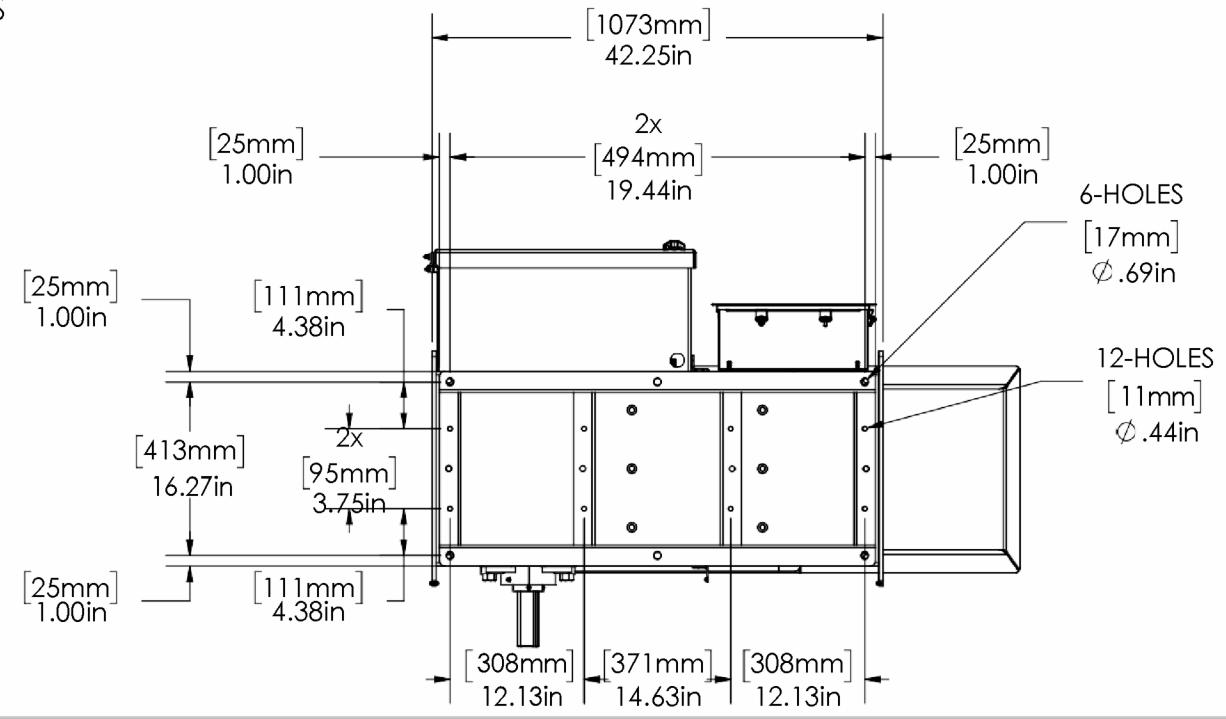
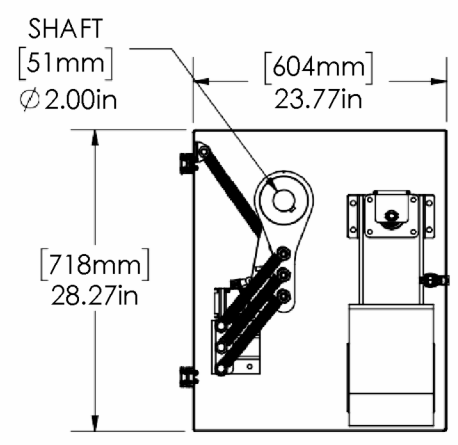
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INLET FLANGE DETAIL
INLET AND OUTLET FLANGES ARE THE SAME

INLET FLANGE DETAIL
INLET AND OUTLET FLANGES ARE THE SAME




RESET ASSEMBLY DETAIL

	NAME	DATE
DRAWN	Sean	06/06/24
CHECKED		

Notes
Material: 10ga Carbon Steel
Finish: Powder Coat (Red)
Weight: 63lbs
All Sharp Edge Be Rounded To A Smooth Radius.
All Burs, Weld Splatter, And All Other Sharp Surface Projections Shall Be Ground Smooth.

Disclaimer
Abort Gates are only used to divert clean air, sparks, fume, or fire and are not designed to stop explosions. Customer is responsible to check all local codes, NFPA, OSHA, and other AHJ for proper use and installation.

Product: 

**20" Raptor Gate
18" X 18" Inlet**

DWG NO: RG20

Address: 6729 Guada Coma Dr
Schertz TX, 78154

SCALE: 1:16

SHEET 1 OF 1

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A

REV 4

Water Pressure Booster Pump RS-CPR

APPLICATIONS

The Raptor Spark™ Water Pressure Booster Pump RS-CPR was designed to regulate water pressure going into the extinguishing unit. It is the best solution

for facilities that have over or under pressure water lines available for installation of the Spark Detection and Extinguishing System.



STANDARD FEATURES

- System comes in an epoxy powder coated steel enclosure and includes:
 - (1) 3/8" water inlet connection with I-way valve
 - (1) water reservoir tank with level sensor and pressure gauge
 - (1) 1" water outlet connection,
 - (1) 3/8" compressed air inlet connection with I-way valve (minimum pressure required is 116 PSI / 8 bar), compressed air reservoir tank, air tank pressure switch, regulator, solenoids, and cable grips.

OPTIONAL FEATURES

- Standard sizes : 15 L, 30 L, 40 L

ACCESSORIES FOR WATER PRESSURE BOOSTER PUMP RS-CPR

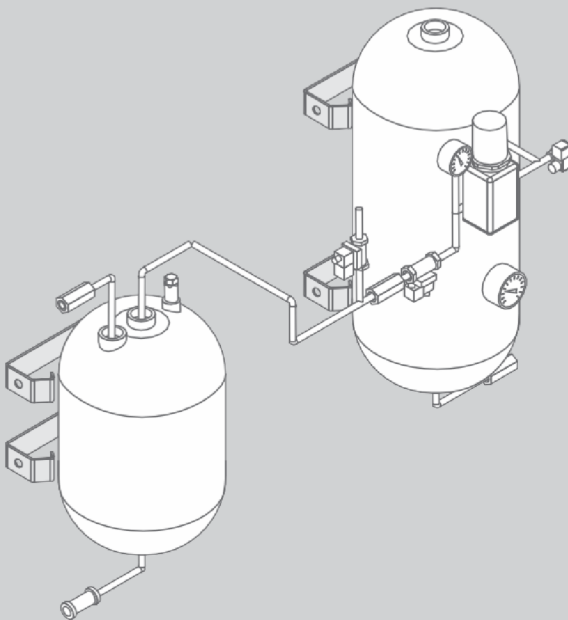
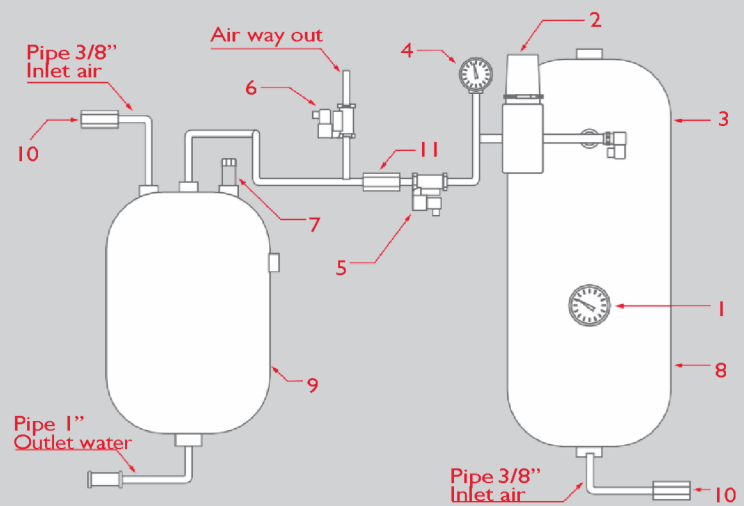
- RS-PWE (Packaged Water Extinguishing Group Assembly Kit)

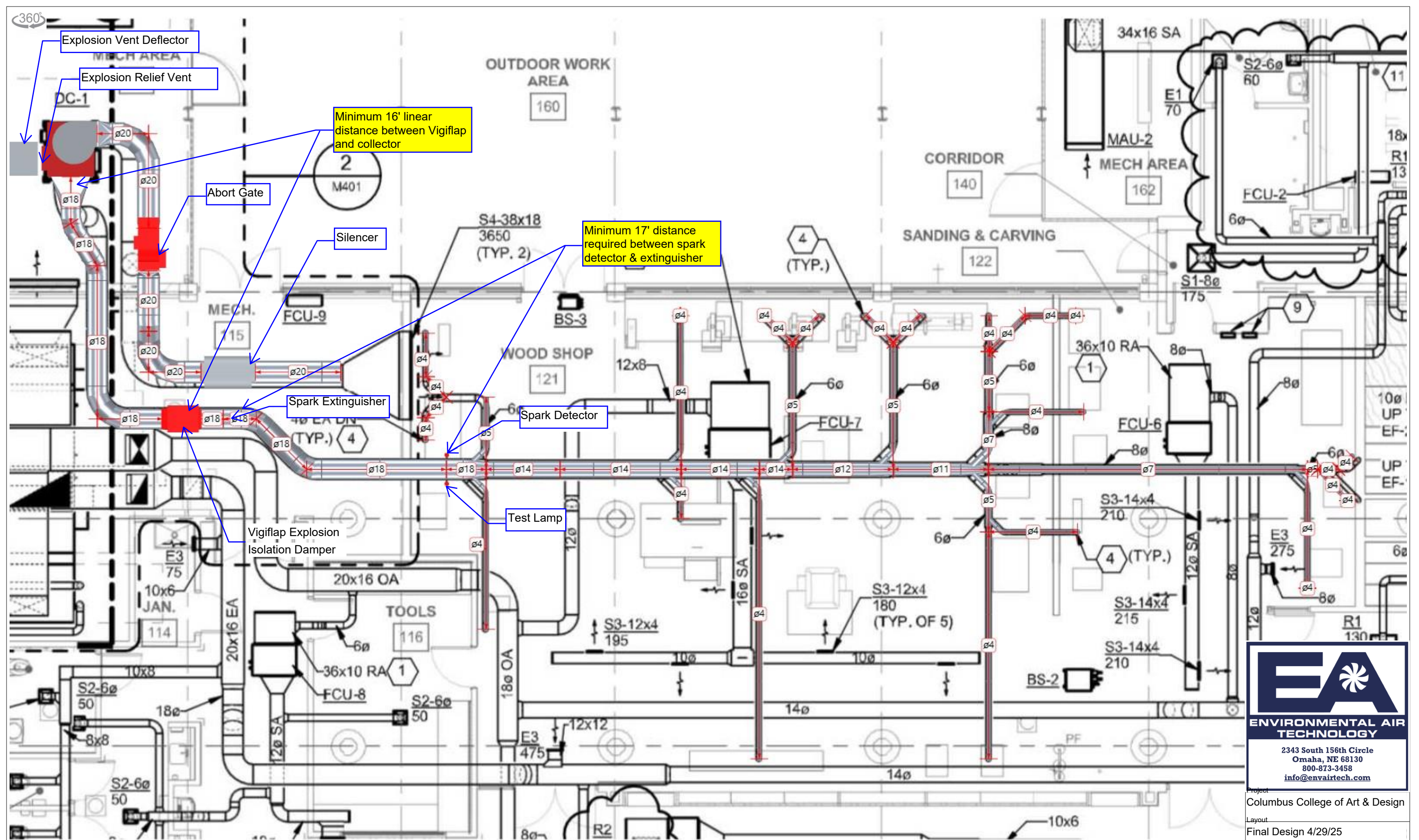
PRODUCT'S CATEGORY SUITABLE TO THE INSTALLATION'S ZONE

The distance between the water station must not exceed 23 ft.
The choice of model capacity is based on the number of nozzles.

COMPONENTS

- 1 - Air tank manometer
- 2 - Outler adjusting pressure water flux
- 3 - Air tank pressostat
- 4 - Water pressure manometer
- 5 - Air solenoid
- 6 - Airway out solenoid
- 7 - Water level sensor
- 8 - Air tank
- 9 - Water tank
- 10 - Water non return valve 3/8"
- 11 - Air non return valve 3/8"

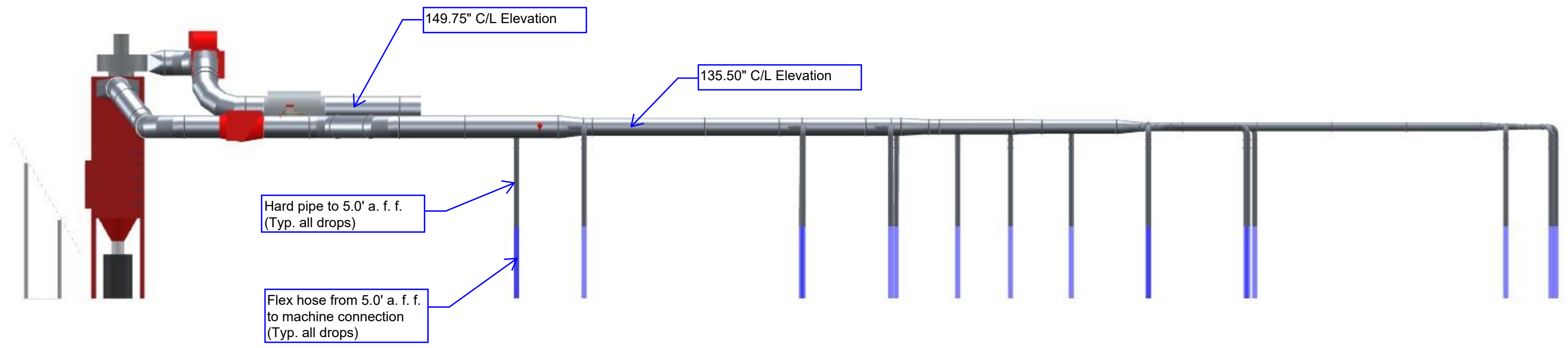




EA
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 Omaha, NE 68130
 800-873-3458
info@envairtech.com

Project Columbus College of Art & Design		
Layout Final Design 4/29/25		
Date 4/29/2025	By Mike Ellis	
System No 294397	Ref. No	Scale None

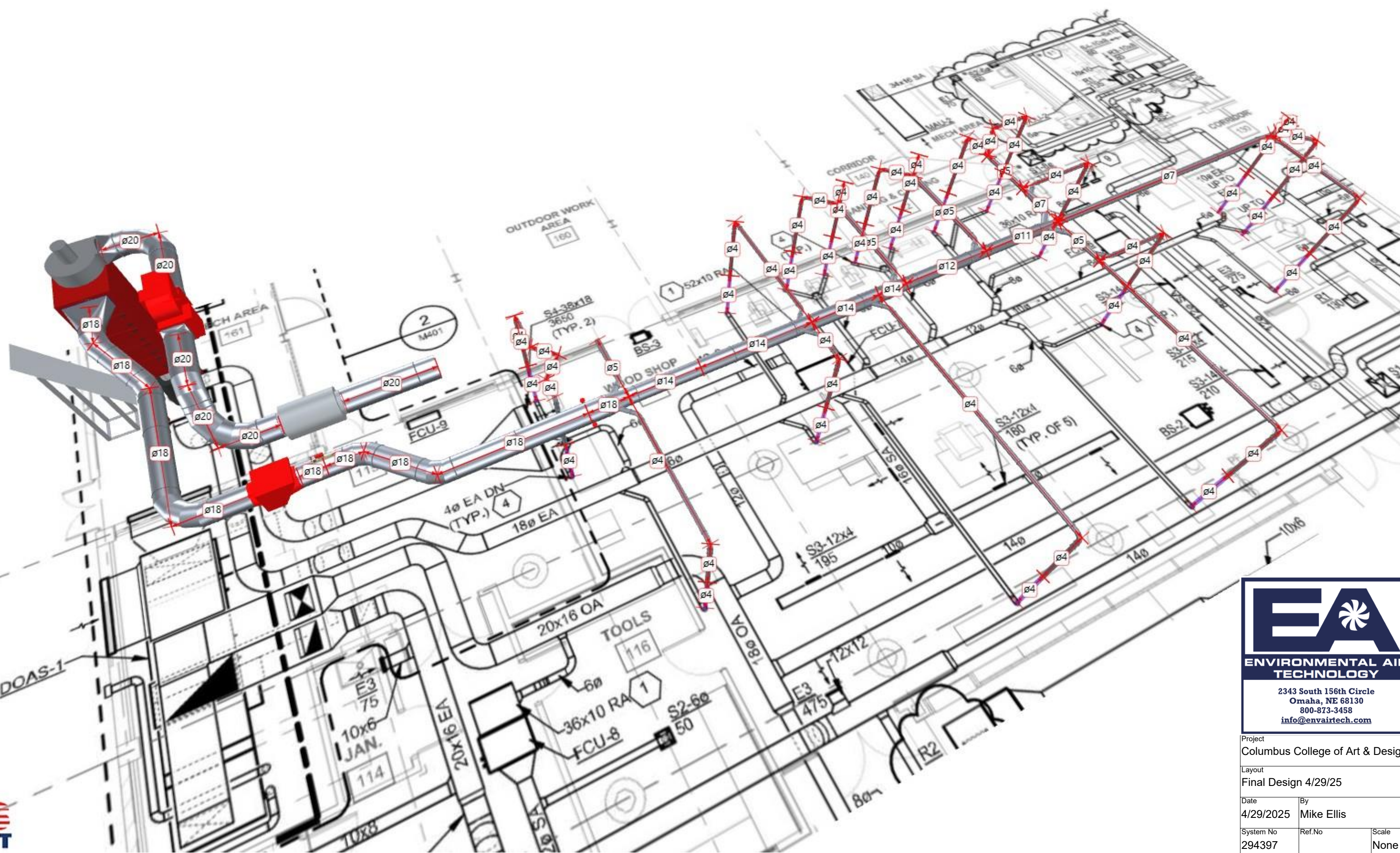




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System No 294397	Ref.No	Scale None





THE COMPLETE DUCT SOURCE

Quality—Delivery—Service—Design—Price

Clamp Together Duct— Specifications and General Info

General Clamp Together Description: This system is also often referred to as a rolled-lip system due the fact that ALL components have a rolled lip on at least one end. The rolled lip is formed directly onto the end of the straight duct/pipe. On the fittings- elbows, branches, hoods, adapters etc., the rolled lip is formed onto a 2.5" long collar which is applied to the fitting. The application method consists of spot welding and 'swedging/beading' the collar to the fitting for a tight smooth transition between the fitting and the collar. An over-center locking clamp is then used to encompass the two rolled lips of any two joining parts, pulling them together in the locking motion and then sealing them through the use of the gasket imbedded in the clamp.

Clamp: The clamp is all stainless in construction. The standard clamp has an N-Butyl rubber, 'winged' gasket that fits into the formed groove in the circumference of the clamp. Other gasket materials such as Silicon, Goretex and even fiberglass rope are available to address corrosive, food grade and temperature specific applications. An optional adjustable clamp with tightening screw is also available.

Straight DUCt: The duct is a nominal 5 feet in length—the variation being by the diameter of the pipe and the corresponding size of the rolled lip. The standard gauge duct is first formed by cutting stock sheet metal to specific widths. After rolling, the rolled duct is laser welded to a completely sealed seam. The final forming of the rolled lip onto the duct is accomplished by using opposing dies in a 5' hydraulic press.

Duct Standard Gauges for the duct are 26 ga for 3", 24 ga for 4-6", 22 ga for 7-12" and 20 ga for sizes 13-22". Typically, all sizes can go 2 gauges heavier and still have the rolled lip formed onto the end. But the duct is also available in gauges up to and including 10 gauge. At the higher gauges and dependent upon the size, a collar is applied to welded duct or tubing.

Field Adjustment: As the pipe is 5' in length, fitting to length is completed using either a part called an 'adjustable sleeve' or the collars on the fittings. Either will receive and slide over a cut piece of pipe that is cut to approximate length, where it is then locked to the pipe with the standard clamp. An O-ring slid over the cut pipe serves as the opposing rolled lip, to which the clamp attaches the rolled lip formed on the sleeve or collar. For more info go to <http://www.us-duct.com/clamp-together-duct/adjustability>.

Elbows: Elbows are available in a variety of styles depending upon the diameter, radius (length of turn), and gauge and material required. These include welded halves with a longitudinally welded seam, formed tube elbows, and gore/segmented elbow which are mechanically locked or fully welded to form the elbow. Typical degrees are 90, 60, 45 and 30 degree with standard radii of 1, 1.5 and 2.5 x Diameter. BUT ALL DEGREES AND ALL RADII ARE AVAILABLE. Elbows are typically two gauge heavier than the duct.

Branches (Lateral, T on tapers, Y's, double Branches, etc.): These are built to specification with the lightest gauge being 18 gauge. The laterals are FULLY welded to the body for a smooth transition. Standard degrees are 30, 45 or 90.

Cut-offs and Blast Gates: Standard cut-offs consist of aluminum body gates with either galvanized or SS blades. Other options include

- Fabricated galvanized or SS bodies
- Full welded air tight galvanized or SS bodies
- Fabricated bodies with UHMW seals that press against the blade
- Automatic gates- pneumatically operated/electrically activated- in any of the above styles. Cylinders require a minimum of 90psi. Activating voltages can be 12 or 24V AC or DC and line voltage up to 240V.

Miscellaneous Fittings: Adapters, hoods, transitions, reducers et al. are available to specification. Gauge is dependent upon size and application but range from 22 to 10 ga.

Materials: All Duct and Components are available in galvanized, stainless (304-316) as a standard. Optional: carbon steel and galvanized.

Gauges :

PRESSURERATING

Typically pressures for applications of US Duct range to 40 inches of water. However higher pressures are not out of the norm and particular pressure rating guarantees can be acquired by contacting US Duct.

Warranty- a 1 year warranty for material defects and workmanship is provided from the date of manufacture for all fabricated items. Our Stainless steel clamps have a lifetime replacement guarantee.

