DTE Energy®
Know Your Own Power®

2016

DTE Energy Efficiency Program for Business

and

Compressed Air Technical Session

Sept. 14, 2016

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Outreach Manager

DTE Energy®
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Agenda

- Presentation by **Hank van Ormer**
  Air Power USA
- Break
- Presentation continues
- Program Overview by **Adam Constantino**
- Program Case Studies
- Program Incentives Status
- Questions
- Networking/Lunch

Technical Session

Hank van Ormer

Air Power USA

Break

Hank van Ormer

Air Power USA

Compressed Air Technical Seminar
Part 2: Demand-side Technology

September 14, 2016

AIR POWER USA
Independent and Brand Neutral

Compressed Air Energy Savings Productivity & Quality Improvement

Utilizing Modern Control Systems

Compressed air is dynamic and its optimum operating profile is ever changing with the conditions.

System controls – particularly on the demand-side are often set to a fixed condition. This limits their ability to hold a consist optimum cycle.

The following is a brief look at several new technologies and controls that have proven or may prove to offer significant improvement at low initial cost.

Packaging Type Operations

- Blow Off Air
- Vacuum an Vacuum Generators
- Air Cylinders
- Connections and Fittings

Blow Off Air

Basic Compressed Air Blowing Technology

- Thrust from pressure (psig) is required to loosen the object to be removed
- **Thrust** dissipates very rapidly once the air has left the "blow off" device
- **Volume of total air (cfm)** – critical to carry the material away within the air stream
    - On all blow off devices, the higher the air pressure, the more compressed air is used
- When appropriate, install controls to operate only when required

Blow Off Air for Cleaning, Cooling and Drying

Low pressure blower air

Lower cost to produce

Low Thrust / High Volume

LOW PRESSURE
BLOWER GENERATED
BLOW OFF AIR

Electrical Energy Cost to Produce 500 cfm at 100 psig = $43,000

Electrical Energy Cost to Produce 500 cfm at 50 psig = $26,000

Electrical Energy Cost to Produce 500 cfm at 15 psig = $18,000

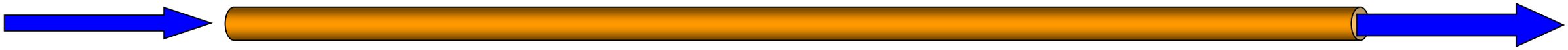
Electrical Energy Cost to Produce 500 cfm at 7 psig = $ 8,000

Venturi Amplifiers or Flow Inducers

32 cfm
80 psig

¼” Tube 12 Inches Long

80 cfm



80 cfm - $3,200 year

26 cfm
80 psig

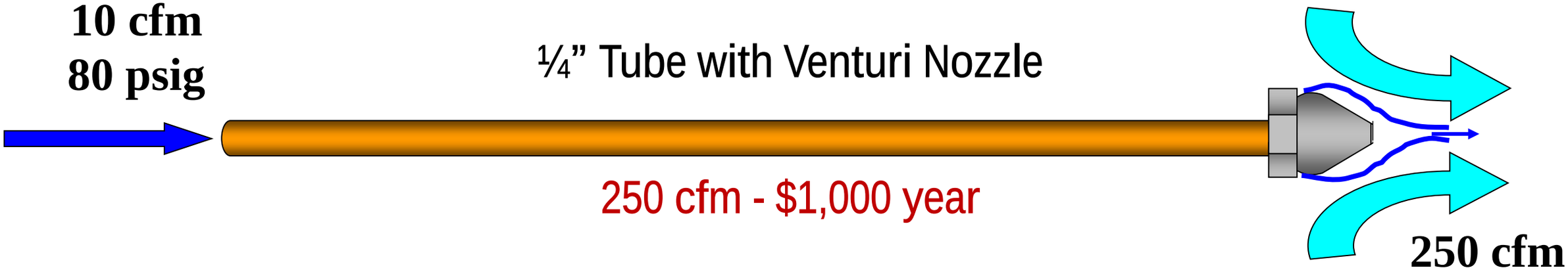
¼” Tube with Air Dispersion Nozzle

95 cfm - $2,600 year

95 cfm

10 cfm
80 psig

¼” Tube with Venturi Nozzle



250 cfm - $1,000 year

250 cfm

Typical Open Blow Application

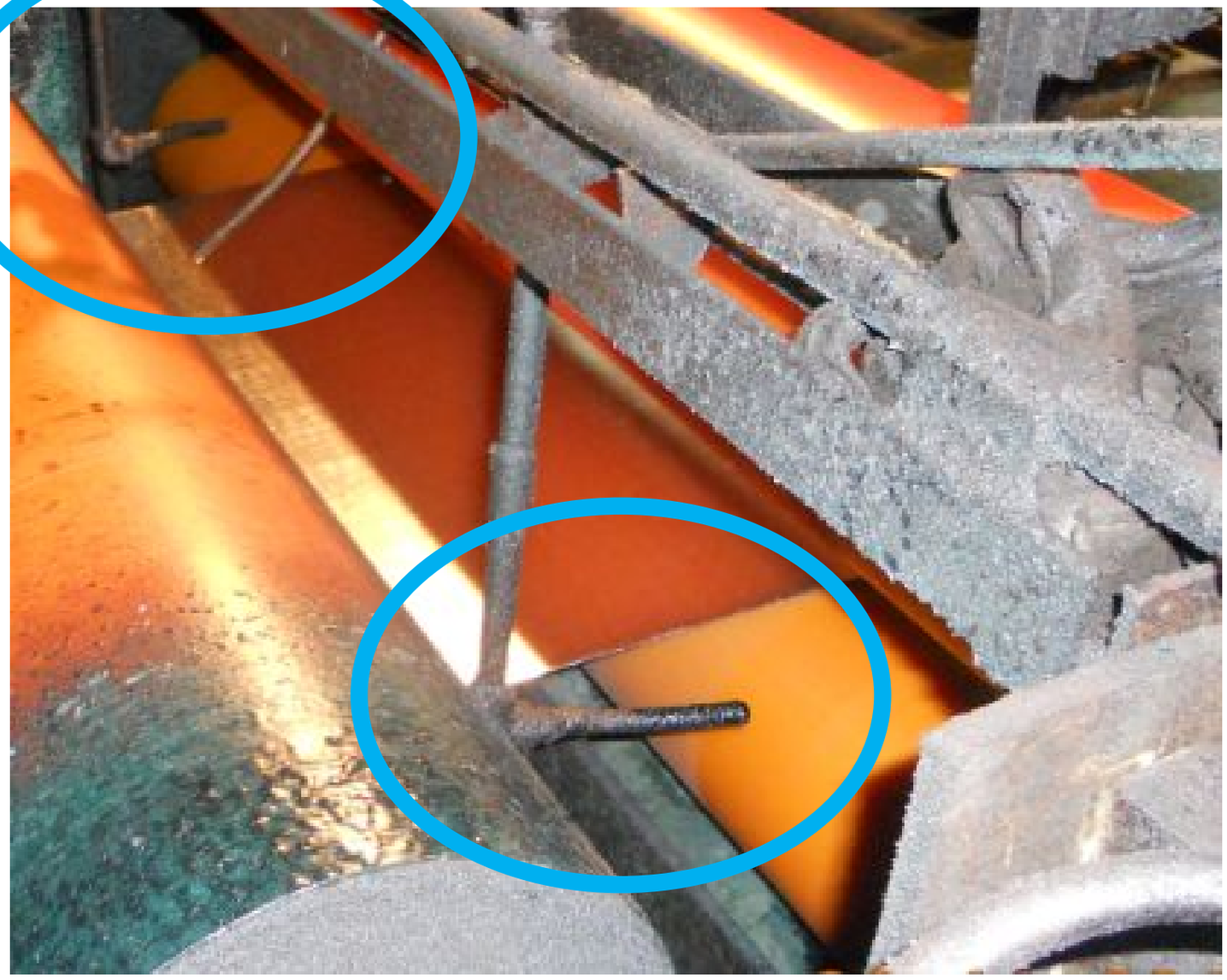
1/4” Tube Open Blow uses 25 cfm:

- Add Fixed 1/4” air amplifier: 9 cfm
- Energy Cost (Uncontrolled): $2,500 /yr.
- Energy Cost w/ Nozzle: $900 /yr.

Energy Savings: $1,600 year

Nozzle Cost: $17.00 each

Steel Plant Rolling Mill Open Blow



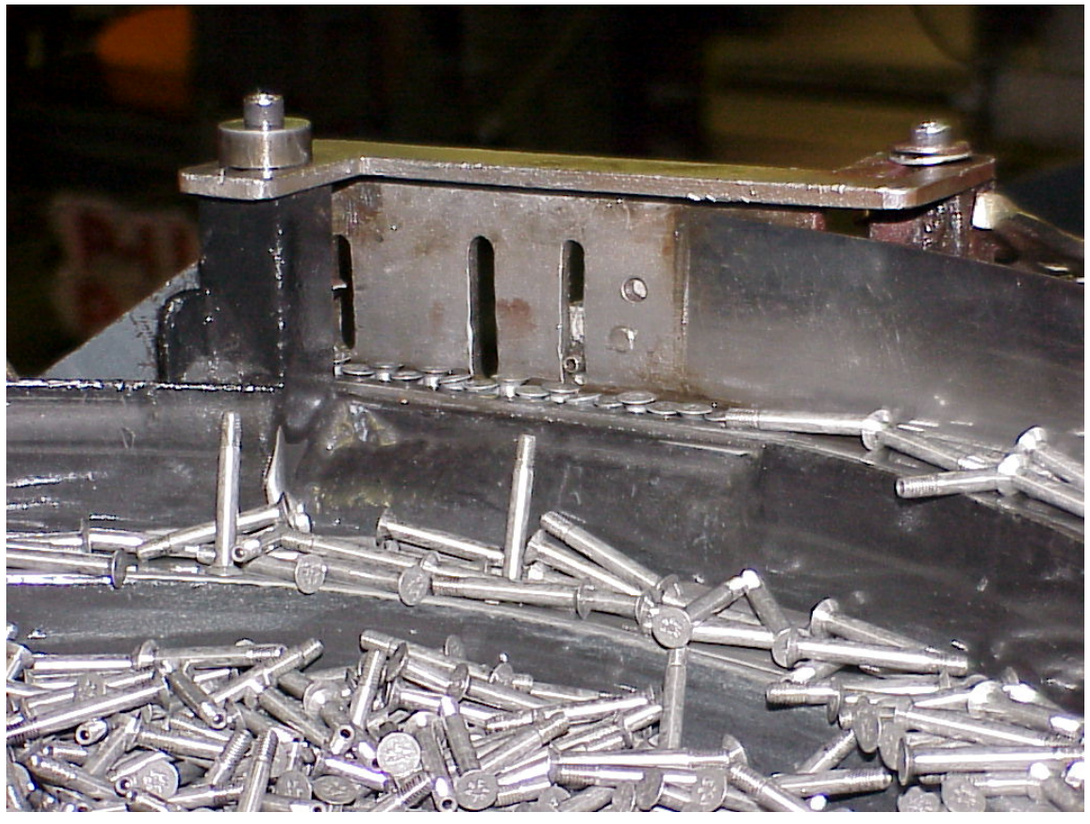
Energy Savings:
$7,000 year

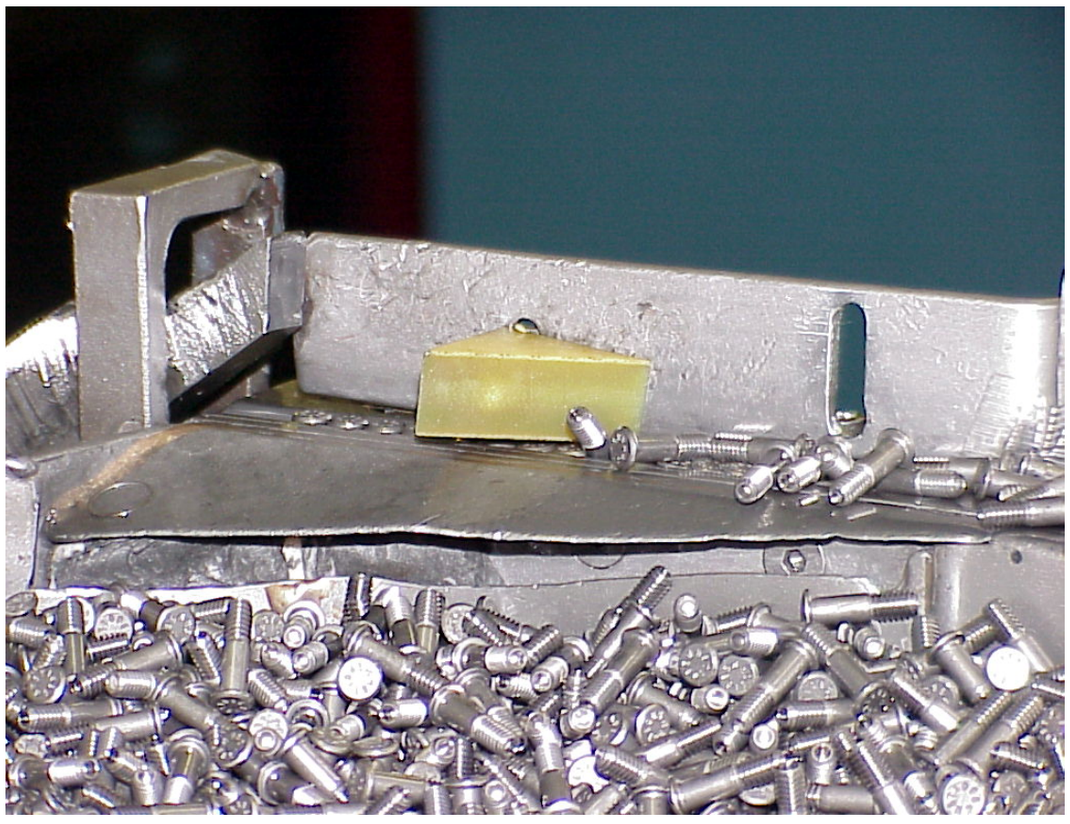
Nozzle Cost: $110

Shut Off Blow Air When Not Needed

Replace Blow Off Air with Mechanical

1/4” tube blows continuously to clear parts from press – 32 cfm





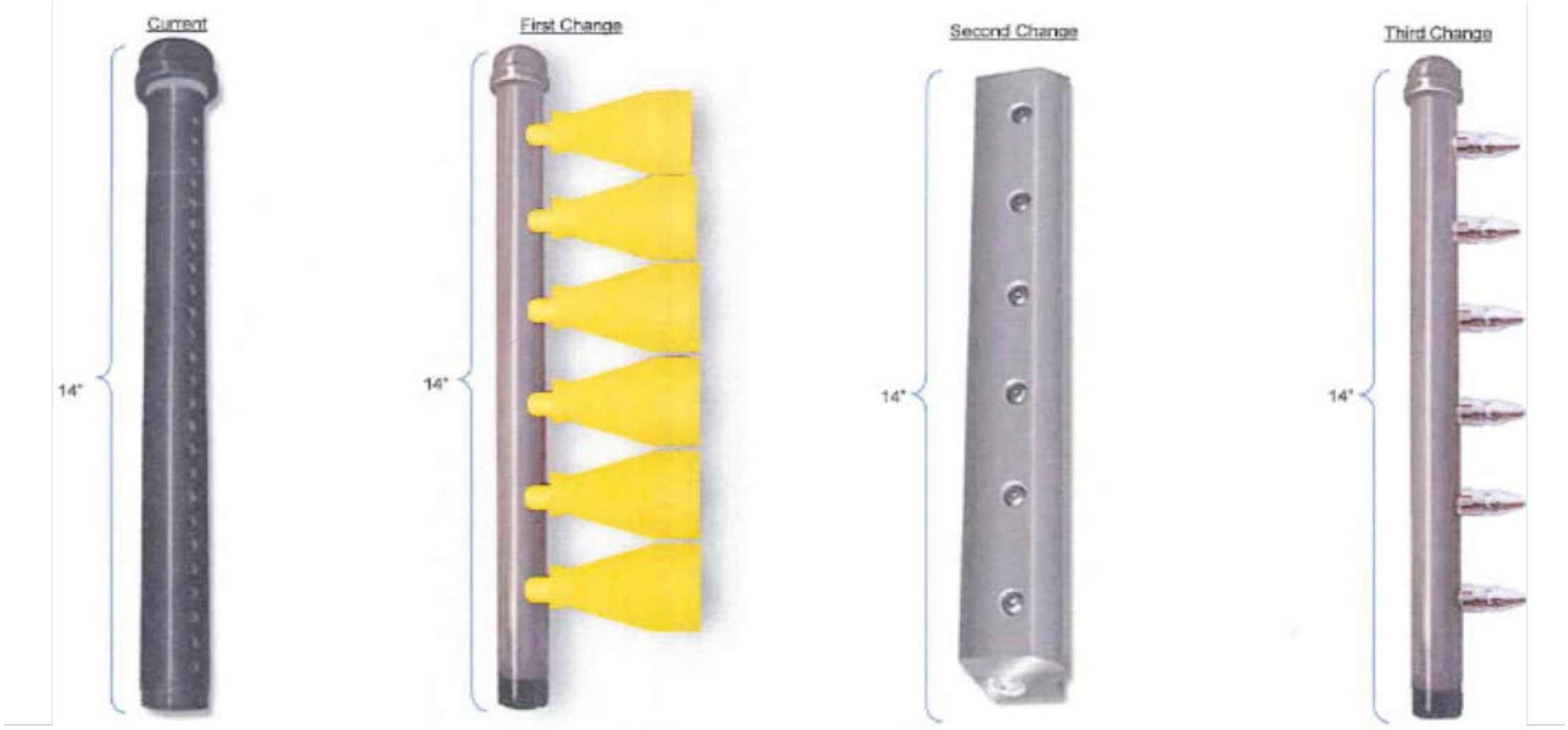
Uncontrolled Open Blow in Steel Plant - Later Replaced with Venturi Amplifiers

Current use:
260 scfm at 70 psig

Corrected use:
64 scfm at 60 psig

Correction:
Nozzle cost $250
Savings: $20,000 year

Progressing to Efficiency in Blow Off Applications



Qty. 25 - 3/16” Holes

175 scfm @ 60 psig

Dispersion Nozzles

144 scfm @ 60 psig

14” Air Knife

42 scfm @ 80 psig

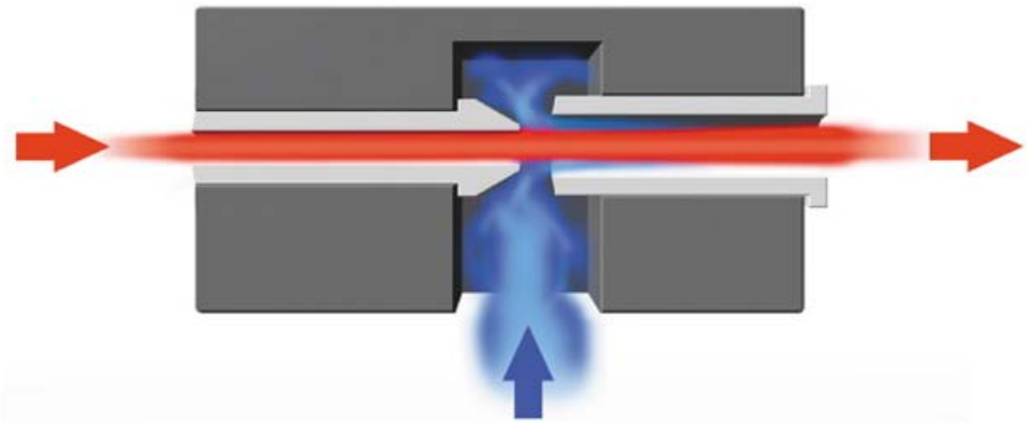
Delivers 1,050 cfm

6 Micro Venturi Amplifiers

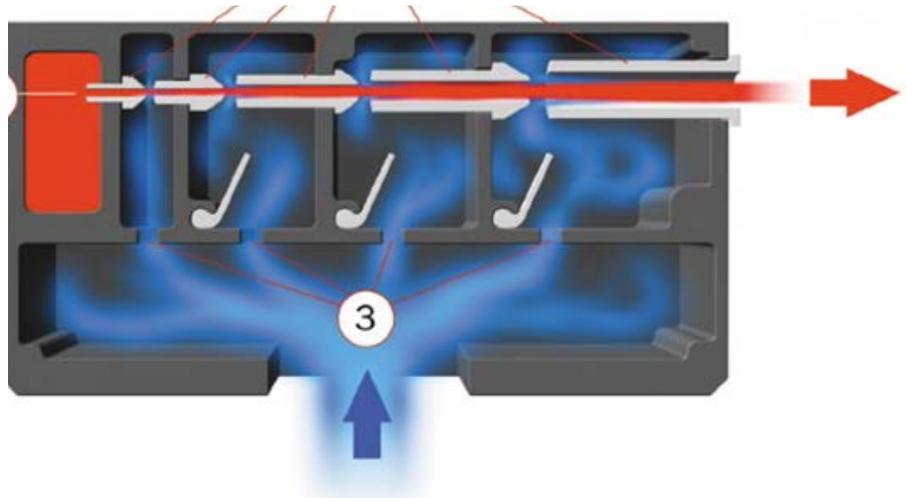
15 cfm @ 80 psig

Delivers 375 cfm

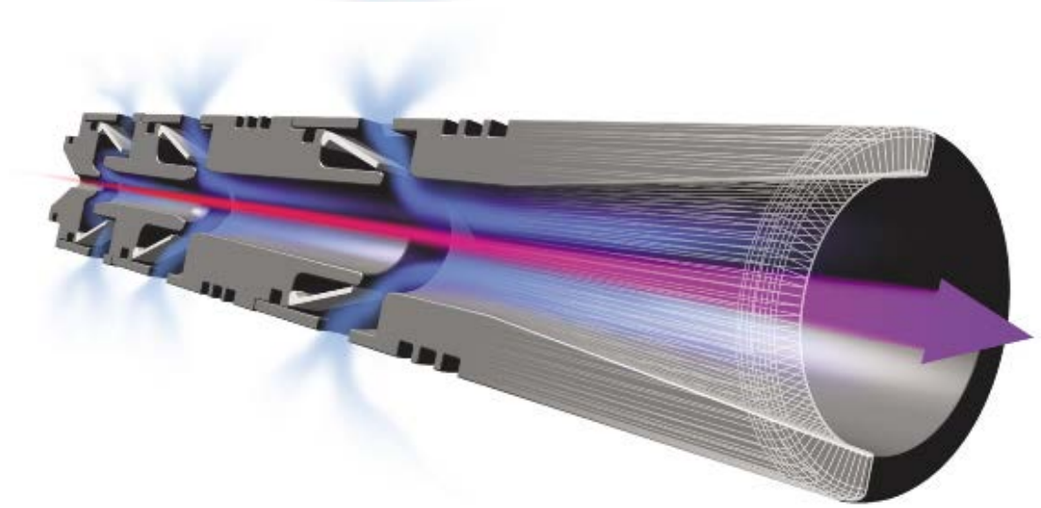
Improved Venturi Vacuum Generators



Single-Stage

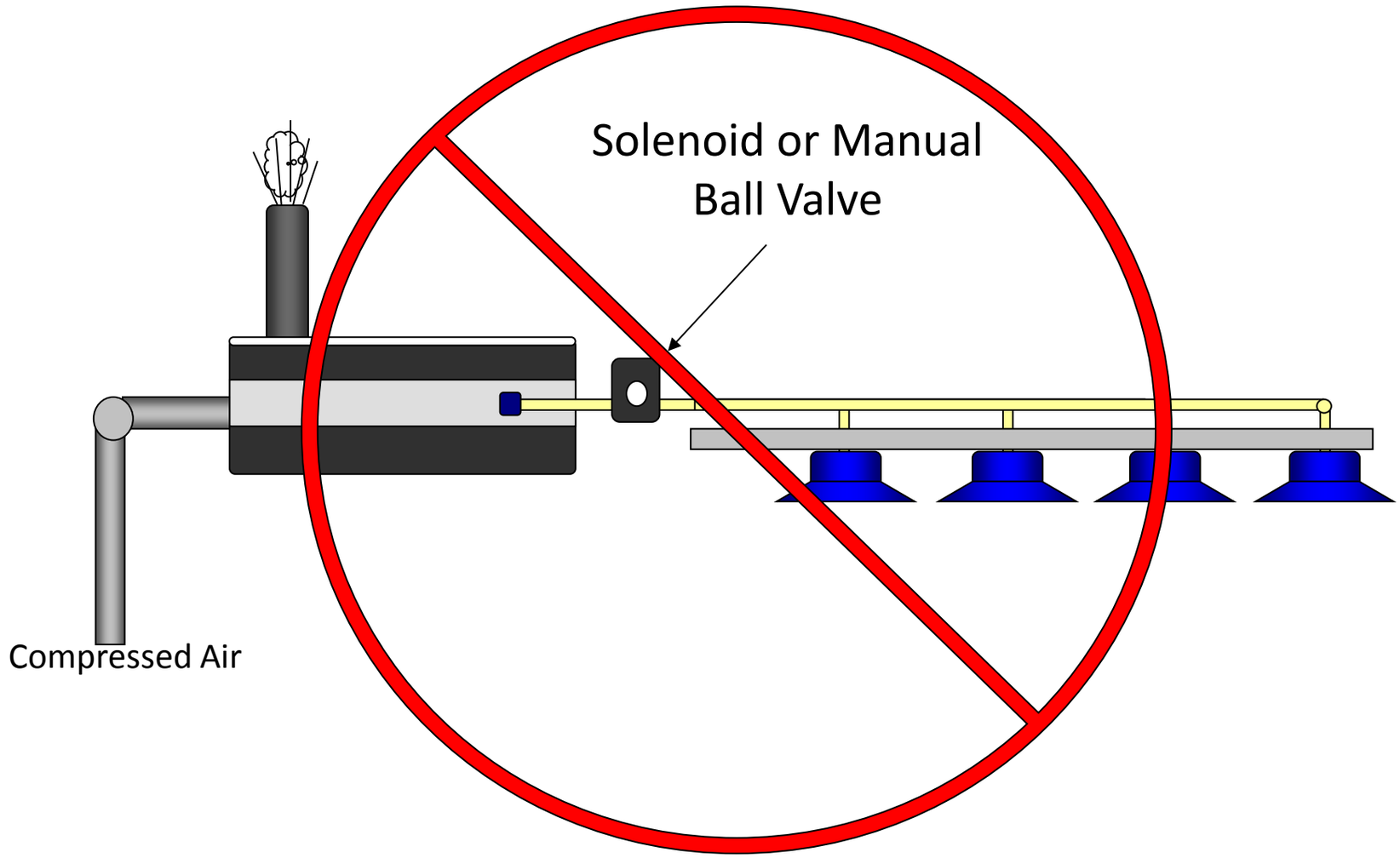


Multi-Stage



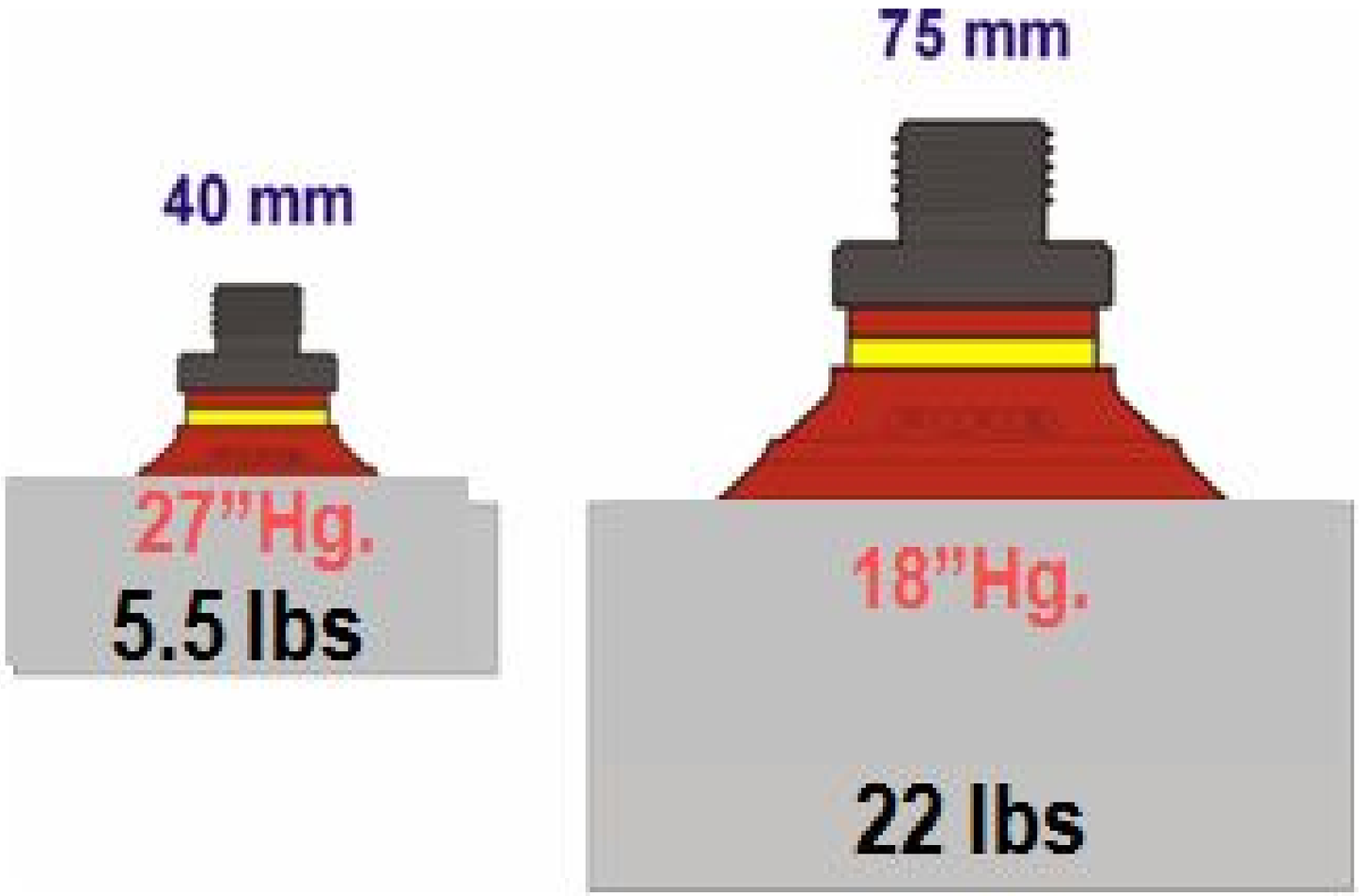
Co-Axial

Biggest and Most Common Error: Shut off the air supply (solenoid) to shut off the vacuum!



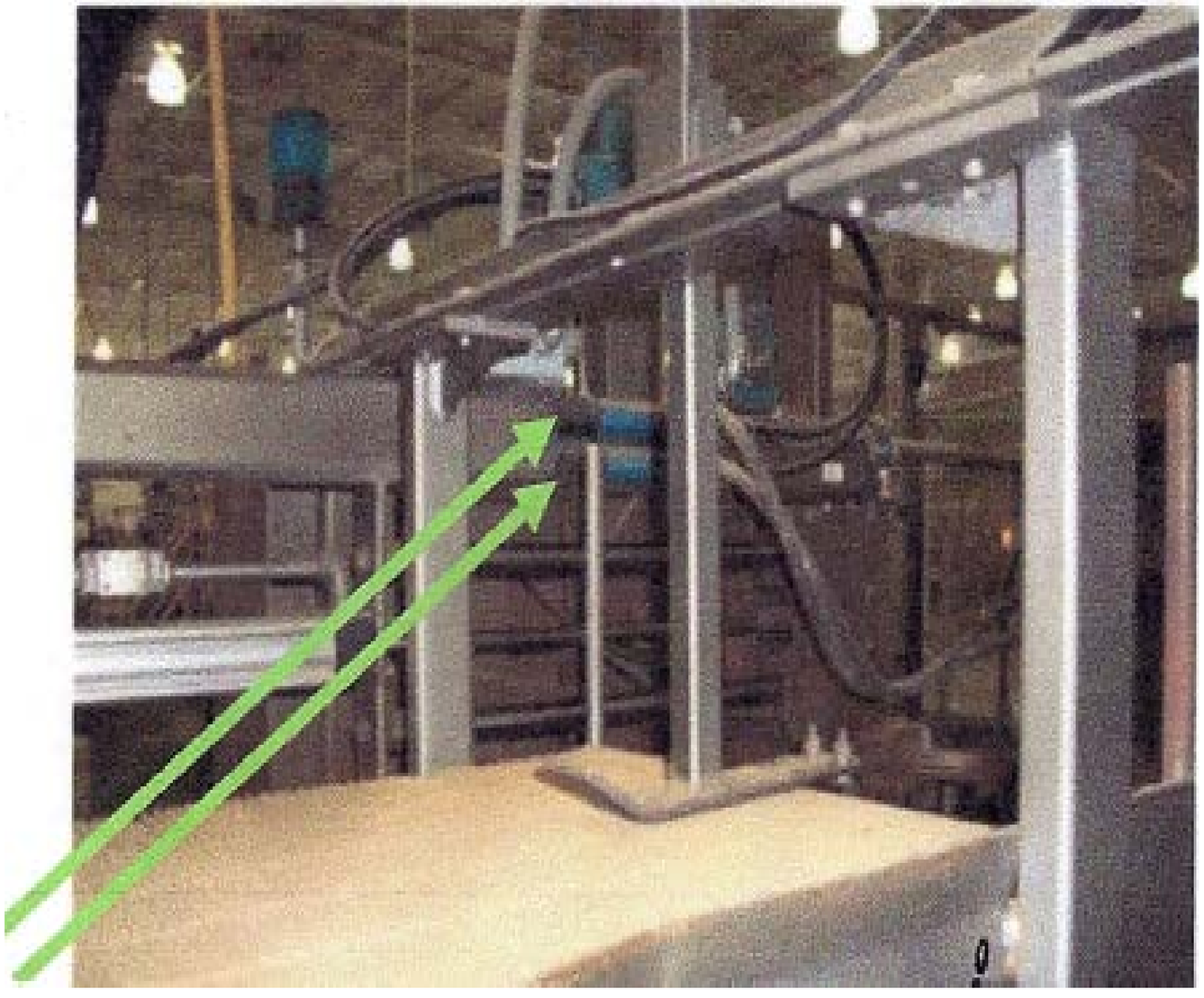
Larger Cups at Lower Vacuum

Better holding forces while using less energy = less compressed air

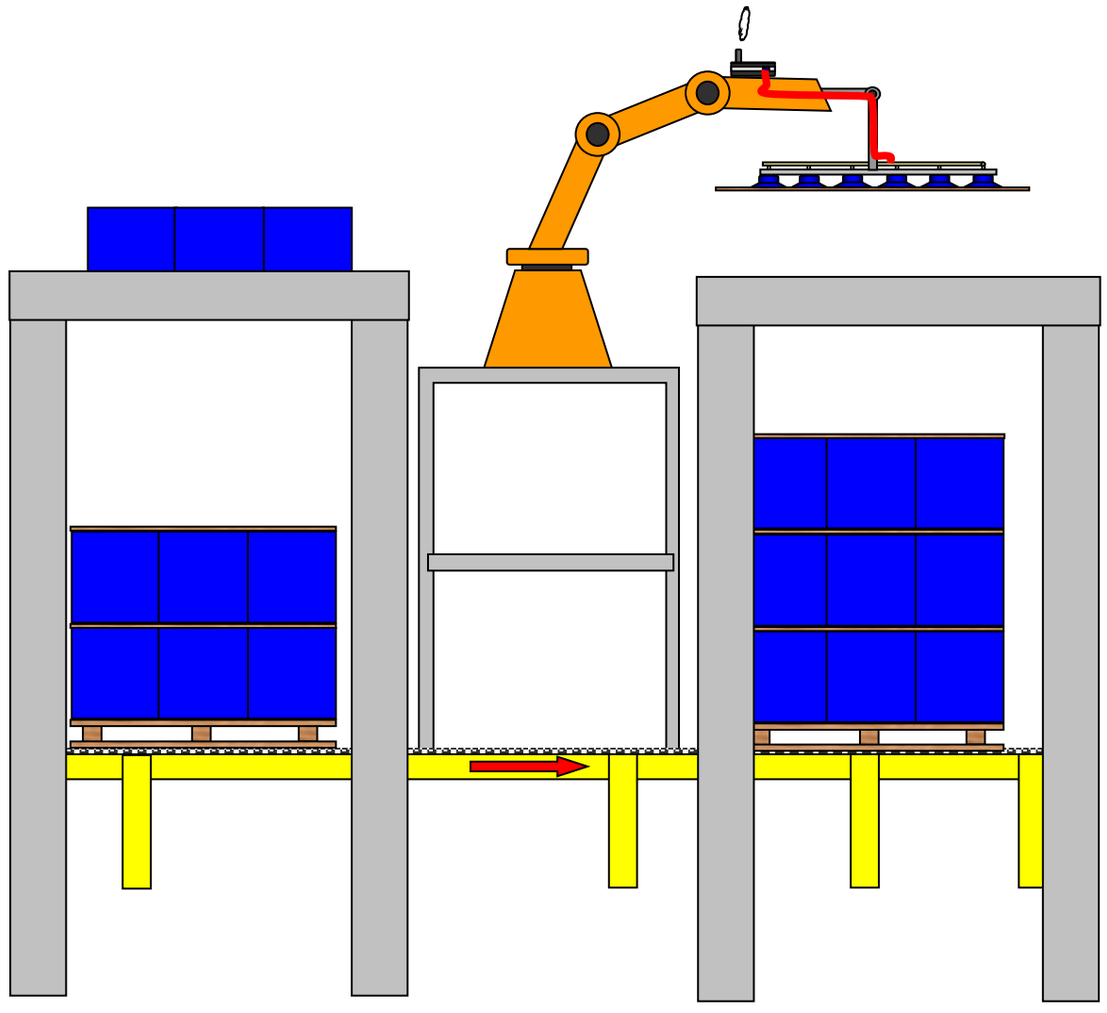


- Use a larger cup at lower vacuum levels will lower energy costs and increase holding force.
- Less force on cup equals longer life.

Venturi Vacuum Generators Auto Shut Off



Typical Venturi vacuum generators on palletizer



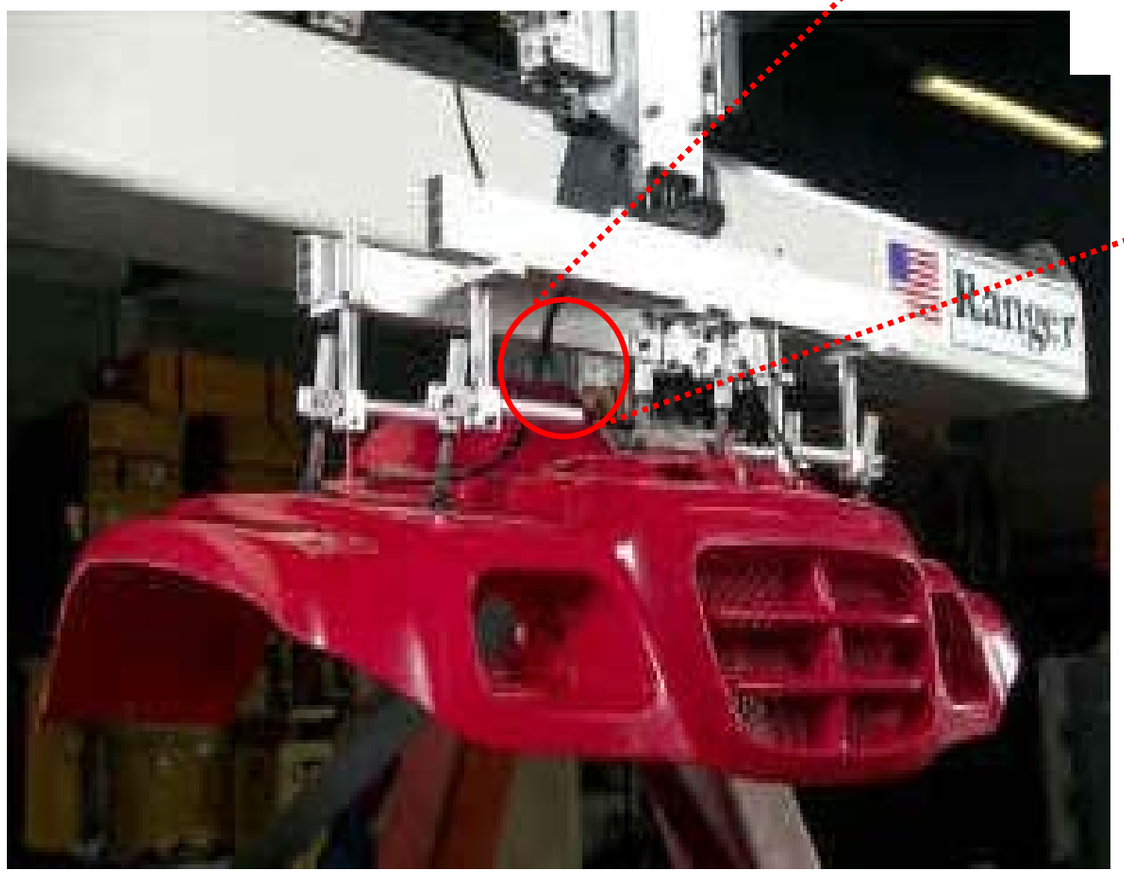
Auto shut off Venturi generator

Saves $3,200 year

Decentralize Vacuum System

Use smaller point-of-use vacuum systems / Auto shut off

- Venturi vacuum generator with auto start/stop
- On time = .72 minutes per hour

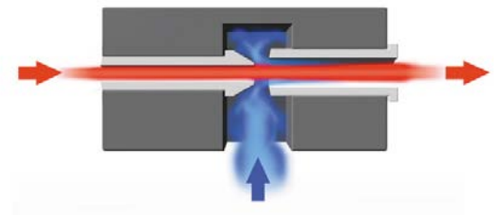


Centralized
$11,200 per year / 112 cfm

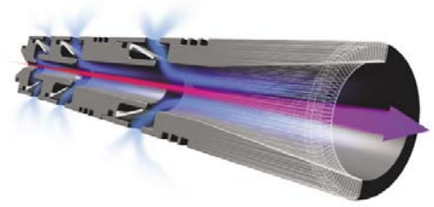
Decentralized AS&S
$1,079 per year / 10.79 cfm

Venturi Vacuum Generators

Multi-stage Co-axial are more efficient than Single-stage



Single-Stage		
Inlet Pressure	Compressed Air	Vacuum
45	8.6	12”
50	9.4	14”
55	10.2	16”
60	10.9	18”
65	11.6	22”
70	12.4	25”
80	13.8	27”
100	16.8	26”

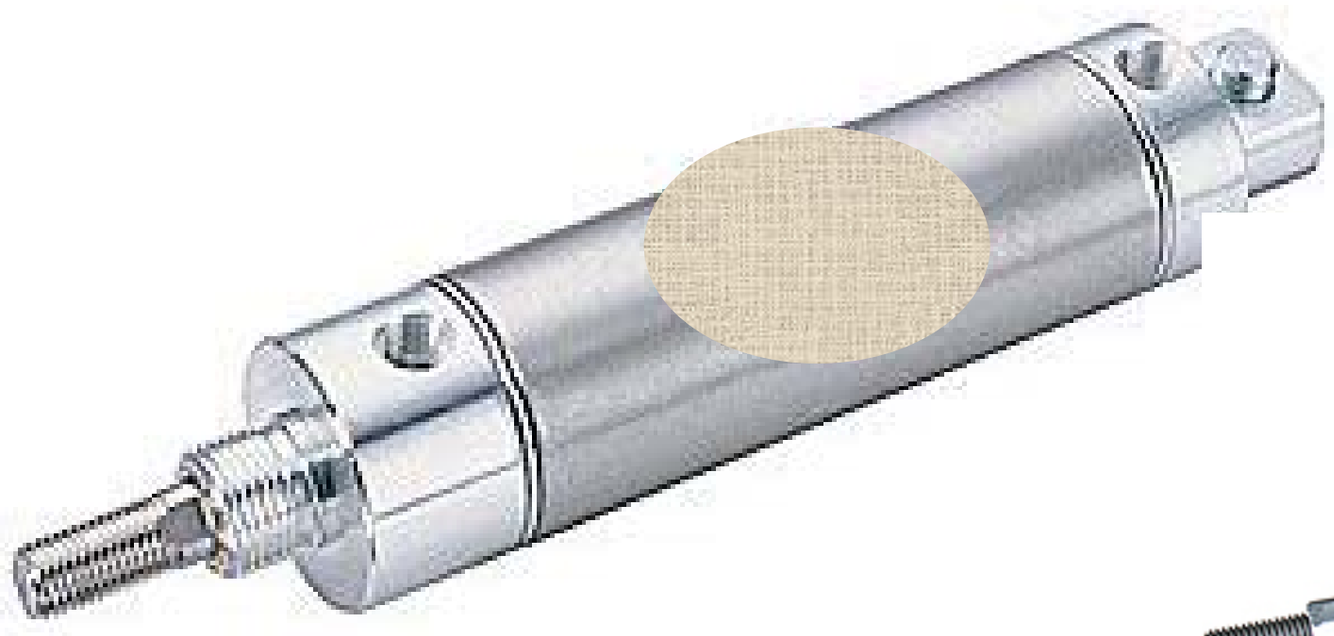


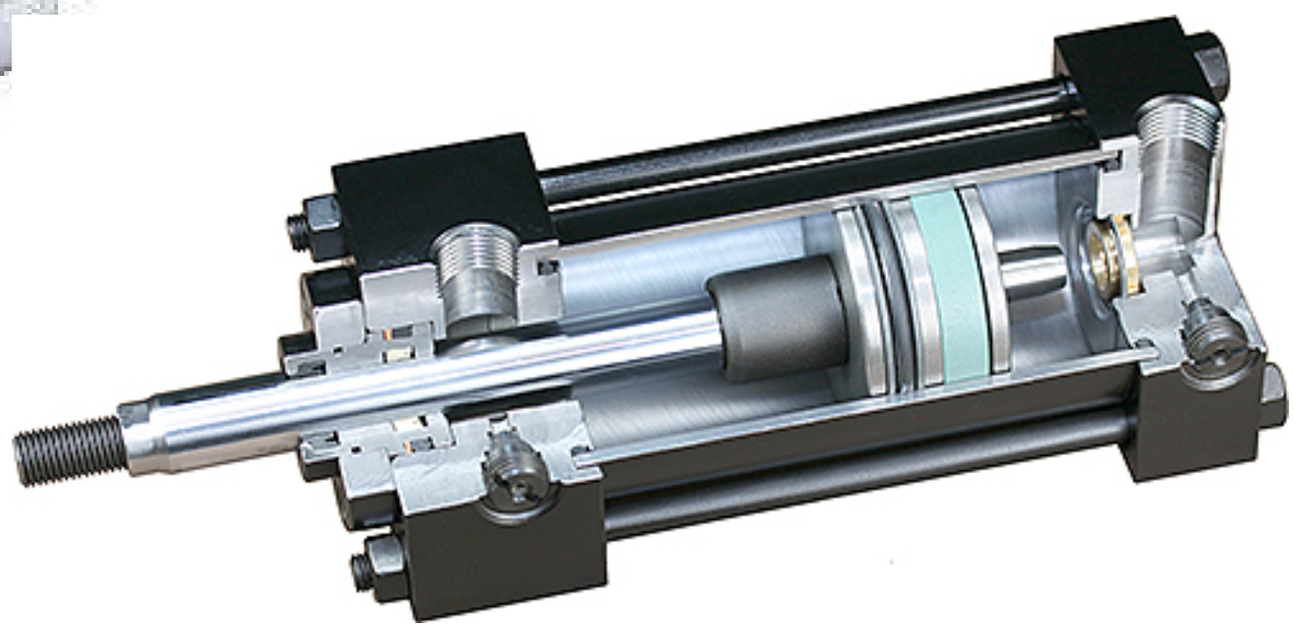
Co-Axial		
Inlet Pressure	Compressed Air	Vacuum
45	4.2	26”
50	4.6	26”
55	4.9	26”
60	5.3	26”
65	5.7	26”
70	6	24”
80	6.7	24”
100	8.2	22”

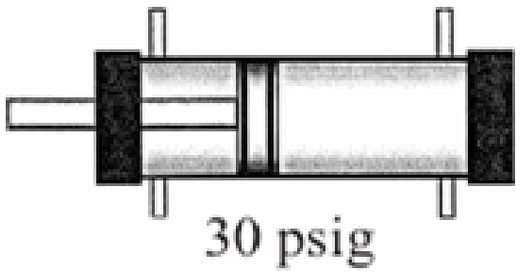
Generate similar vacuum at lower pressure and lower flow

Compressed Air Linear Actuators (Air Cylinders)

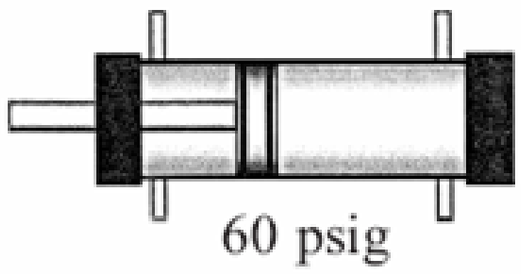
Lowest Effective Pressure, Power and Return Stroke



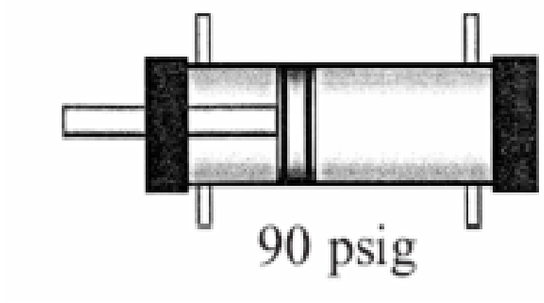




8 CuFt
$465 per year



16 CuFt
$930 per year

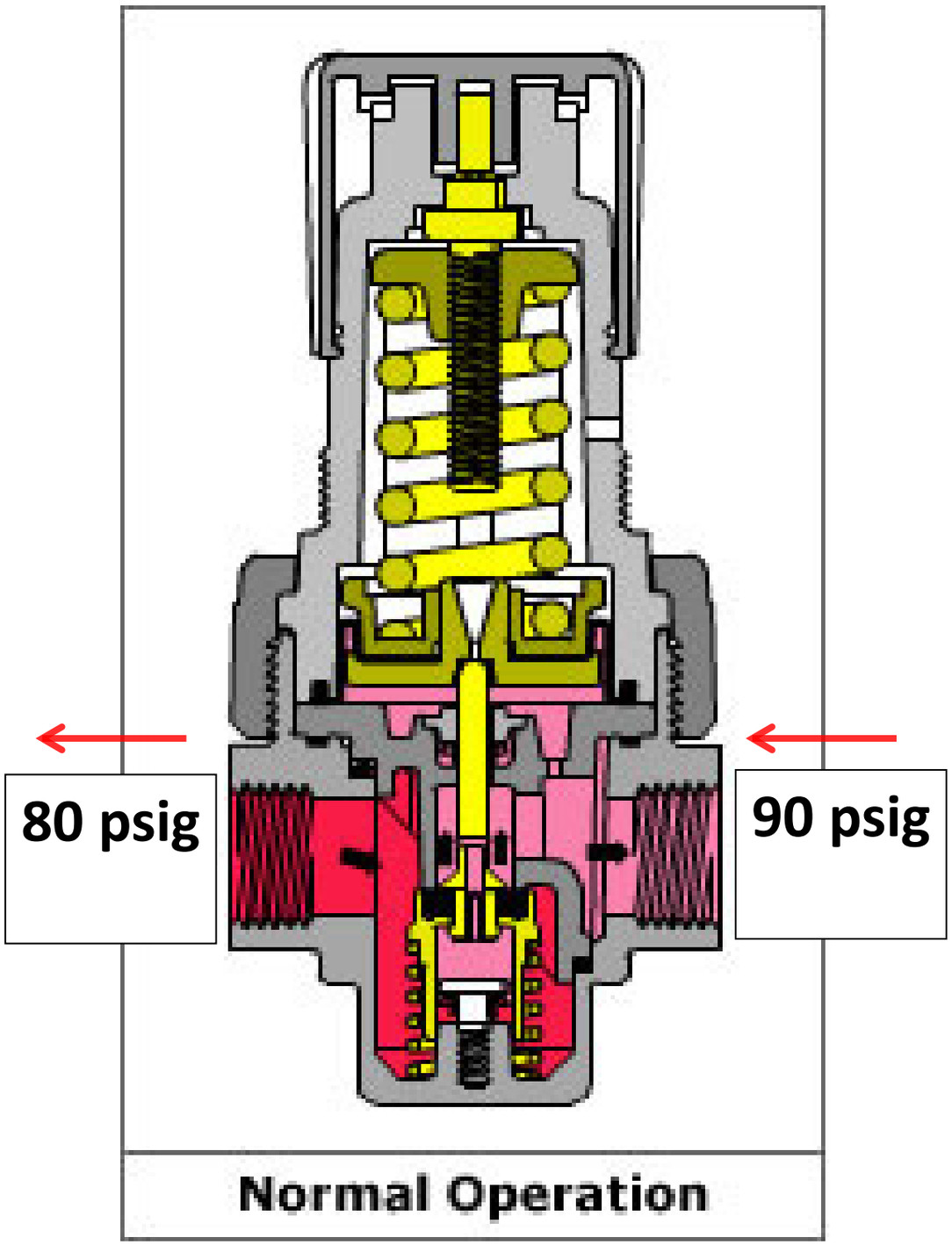


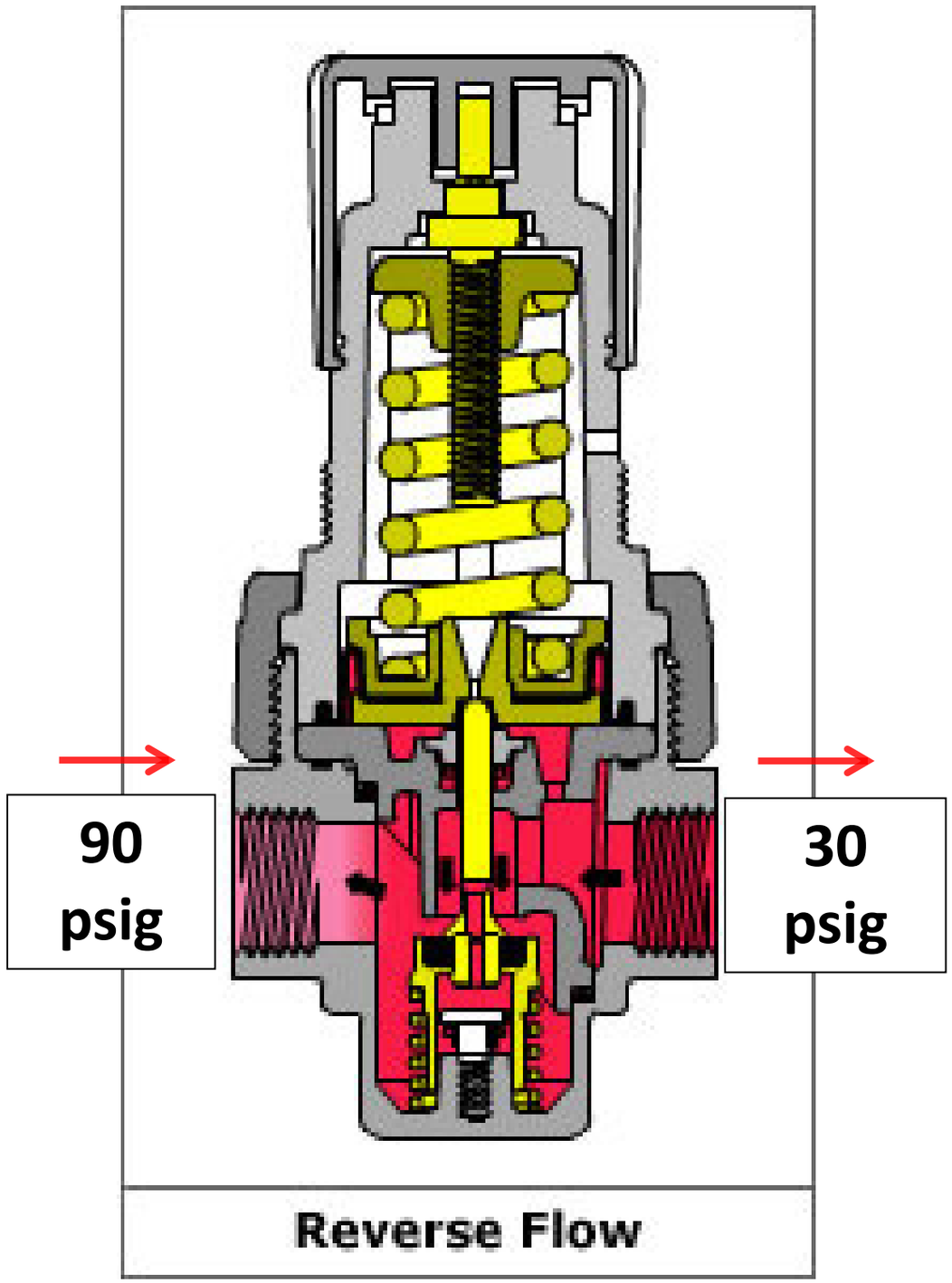
24 CuFt
$1,395 per year

High Pressure = More Compressed Air

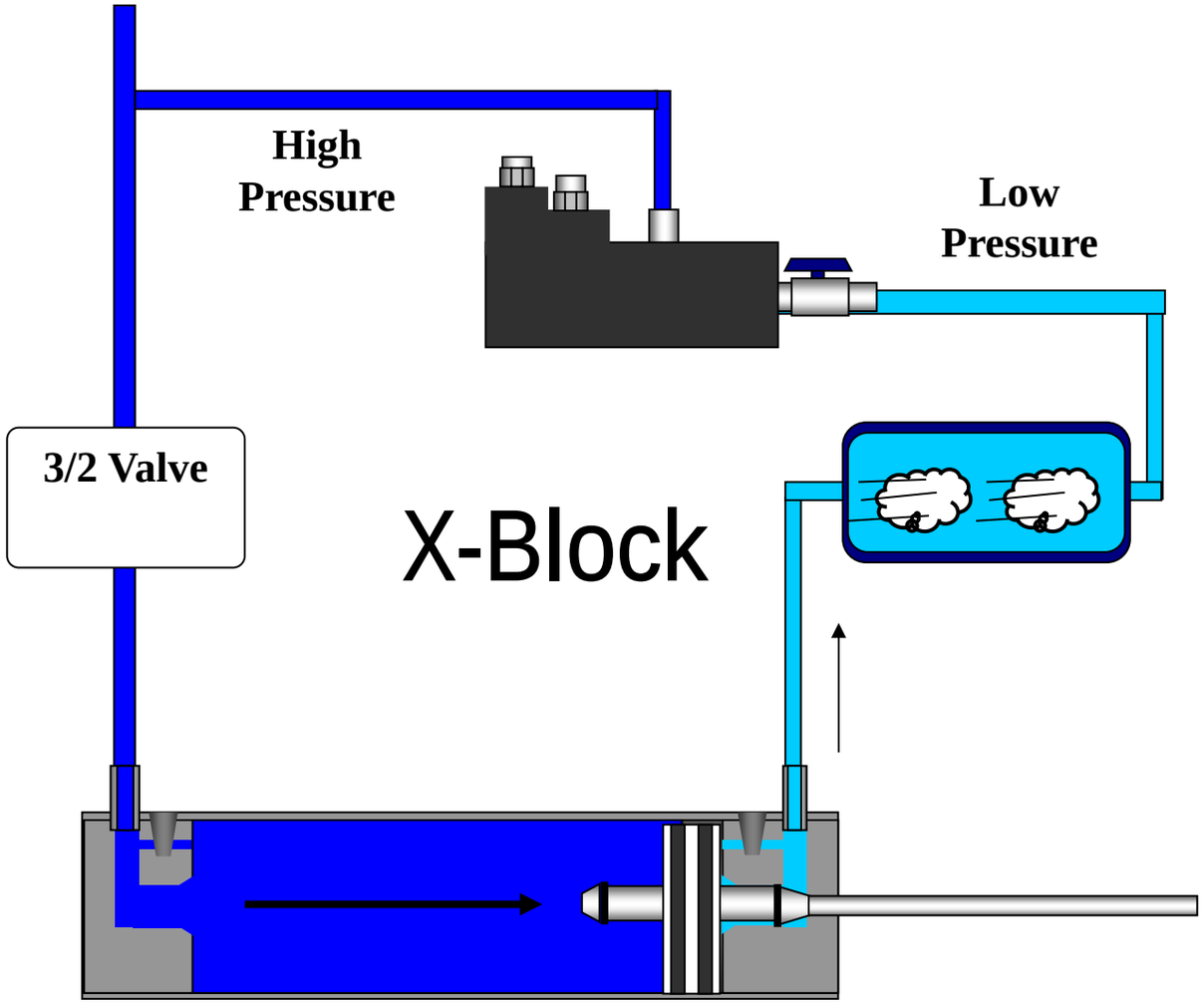
Are you operating at lowest effective pressure?

Dual Pressure Regulators

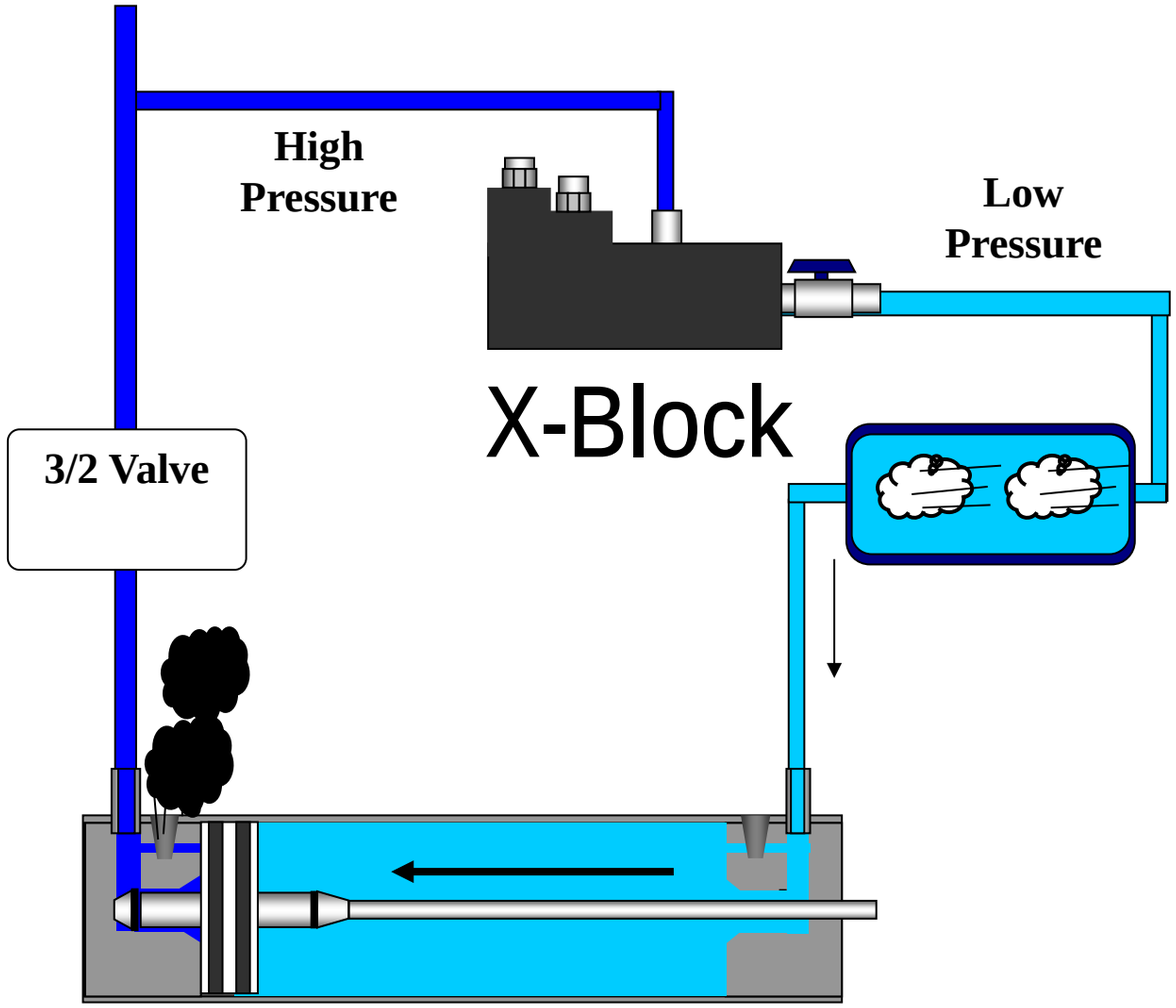




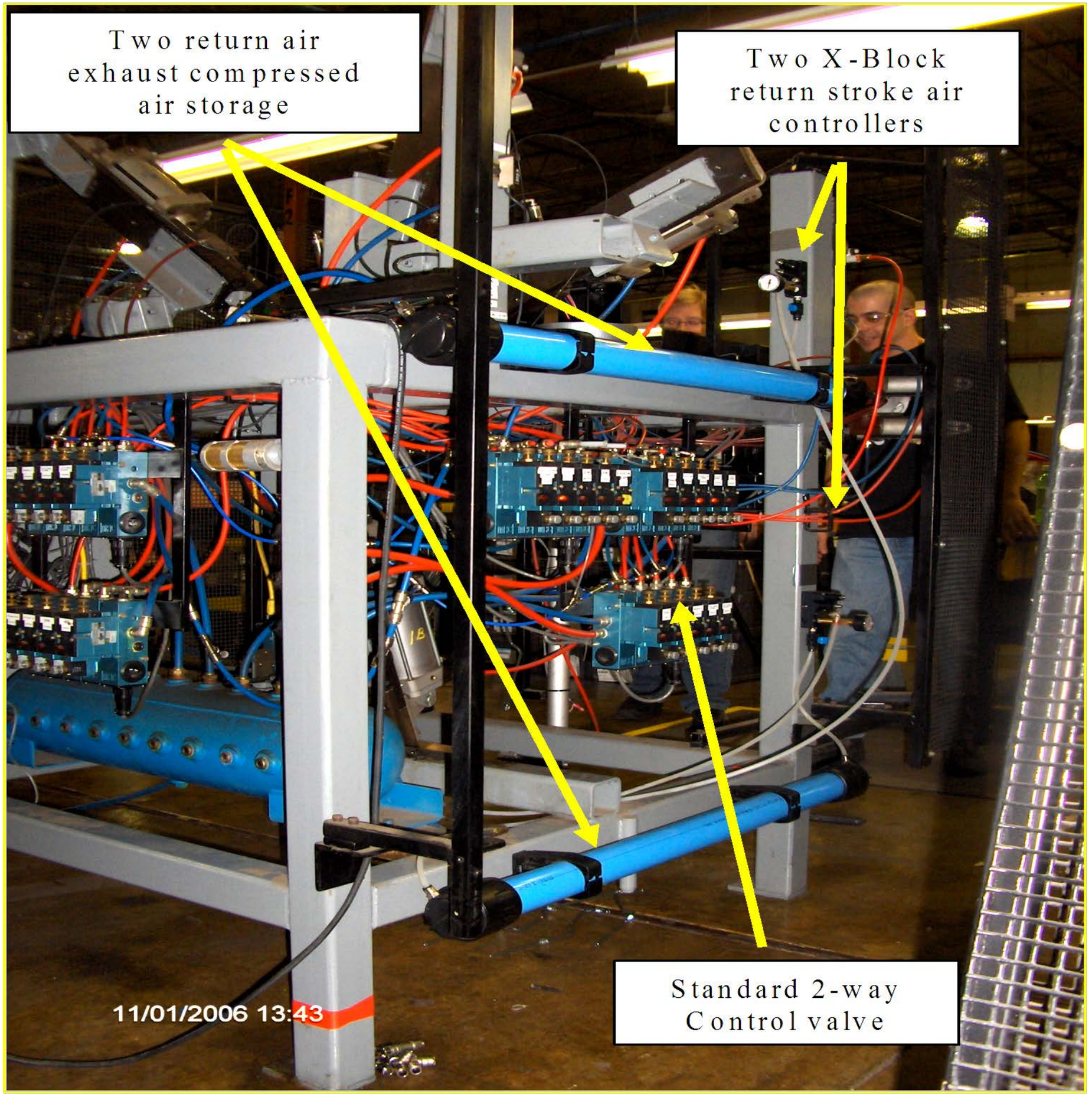
New Technology



POWER STROKE



RETURN STROKE



BEFORE

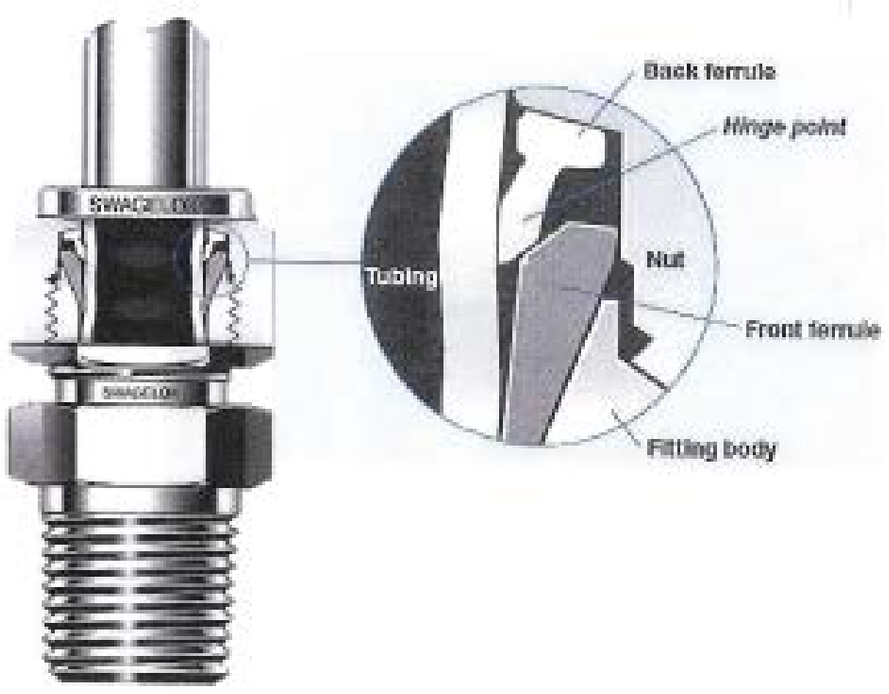
- 25 cylinders
- 7.82 cycles/min
- 105 psig
- 22 cfm

AFTER

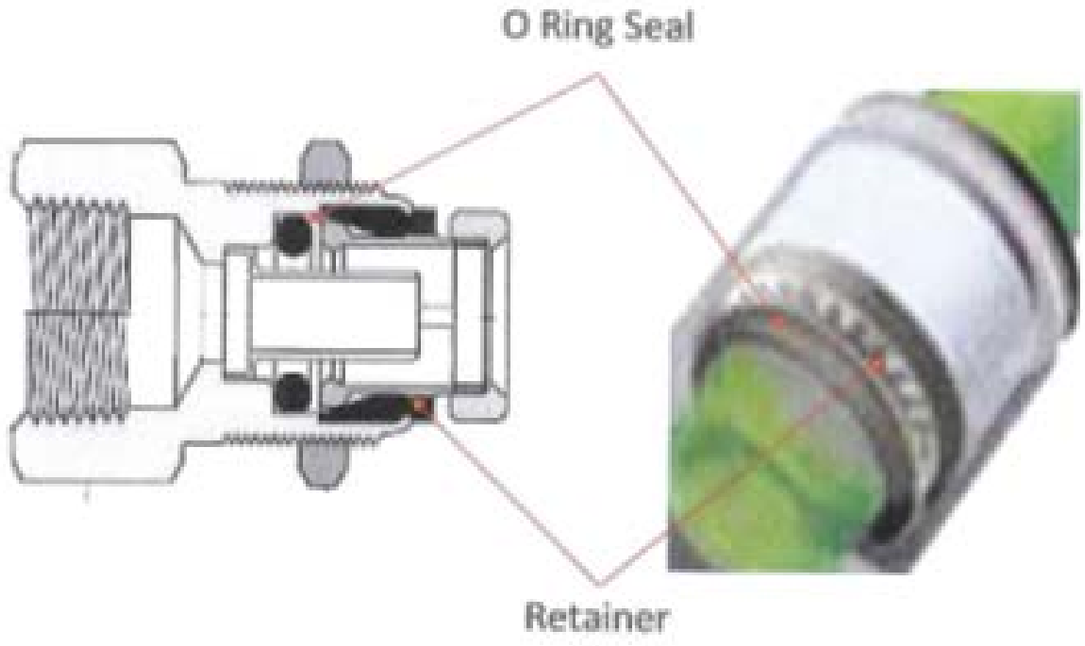
- 7.82 cycles/min
- 95 psig
- 5.94 cfm

Push-to-Connect vs. Two Piece Ferrule Wedge Type Fittings

Two Piece Ferrule Sealing Wedge



Typical Push-to-Connect Fitting



Economic Case Study:

All push-to-connect fittings from the OEM

(7) Inserters = 18 cylinders each – 30 fittings
(7) Case Packers = 101 cylinders each – 79 fittings

- Shut down to repair all leaks
- 94% of leaks are found at the fitting
- Replaced as failed – Last "fix" two-weeks prior

All completely repaired – 14 machines – Tested with ultrasonic / sweep.

Cost Before and After the Fitting Replacement

	Average Air Flow Before Repair	Average Flow After Complete Repair	Average Total Savings
Inserter	128 scfm	64 scfm	64 scfm
Case Packer	83 scfm	43 scfm	40 scfm
Total	**211 scfm**	**107 scfm**	**104 scfm**

Total compressed air savings assuming constant leaks at this rate with the existing fittings: **104 scfm**

Average annual savings @ 50% utilization - $10,400 year

All units filled / replaced with two piece ferrule wedge type fitting- One year later with full monitoring: no significant change in demand.

Project Cost

Quantity	Size	Wedge Type Fitting	Wedge Type Fitting Cost	Standard Fitting Cost	Push-pull Type Fitting Cost
707	¼" x ¼"	$2.90 each	$2,050.30	$2.69 each	$1,901.83
56	3/8" x 3/8"	$3.90 each	$218.40	$4.44 each	$248.64
Total Fitting Cost			**$2,268.70**		**$2,150.47**

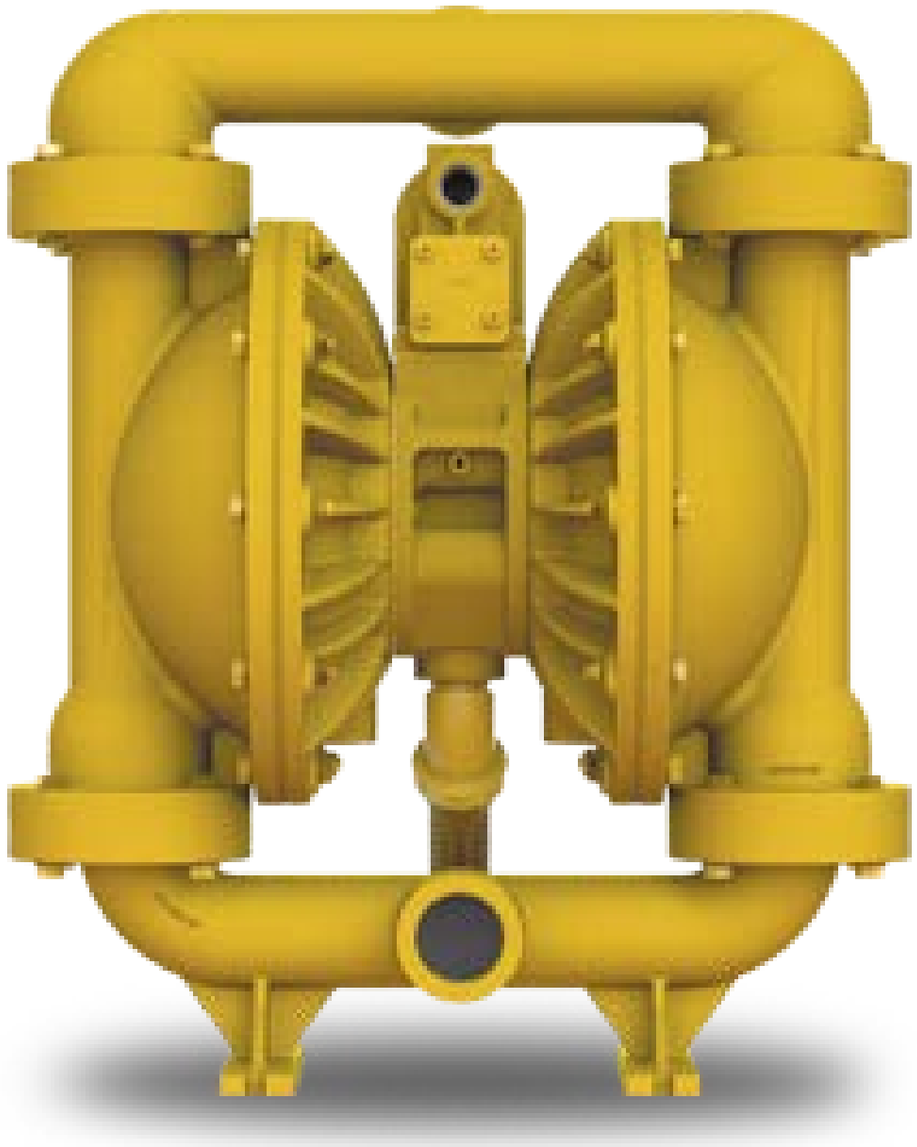
The wedge type fittings appear to be more expensive than the push to connect fitting. The machine OEM has no incentive at this time to spend more!

Annual Savings: **$10,400**
Added Project Cost: **$118.23**

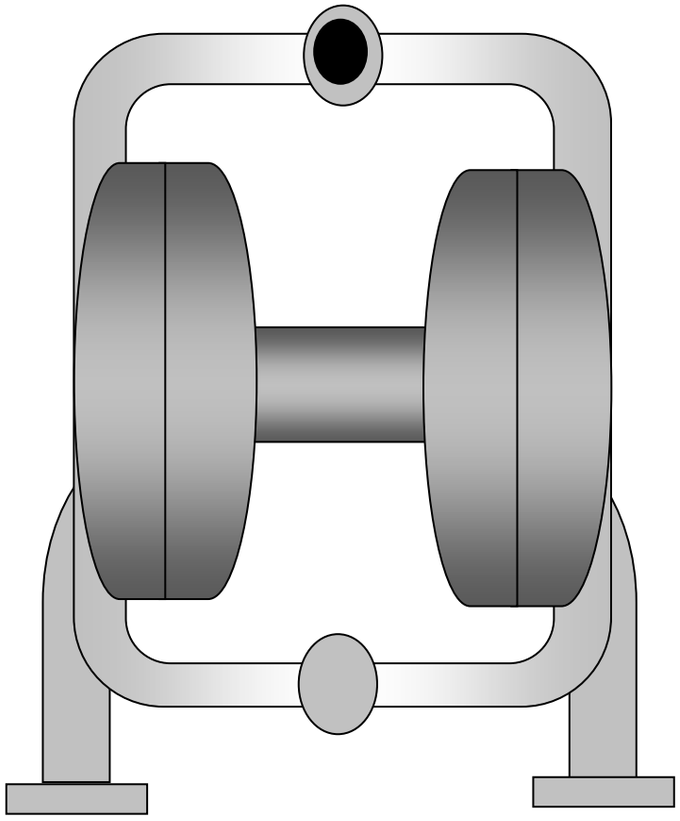
Less than 1 week simple payback!

Optimizing Air Operated Double Diaphragm Pumps

- Control pressure
- Control cycles
- Automatic shut off controls
- Covert to electric
- Install electronic stroke optimizers

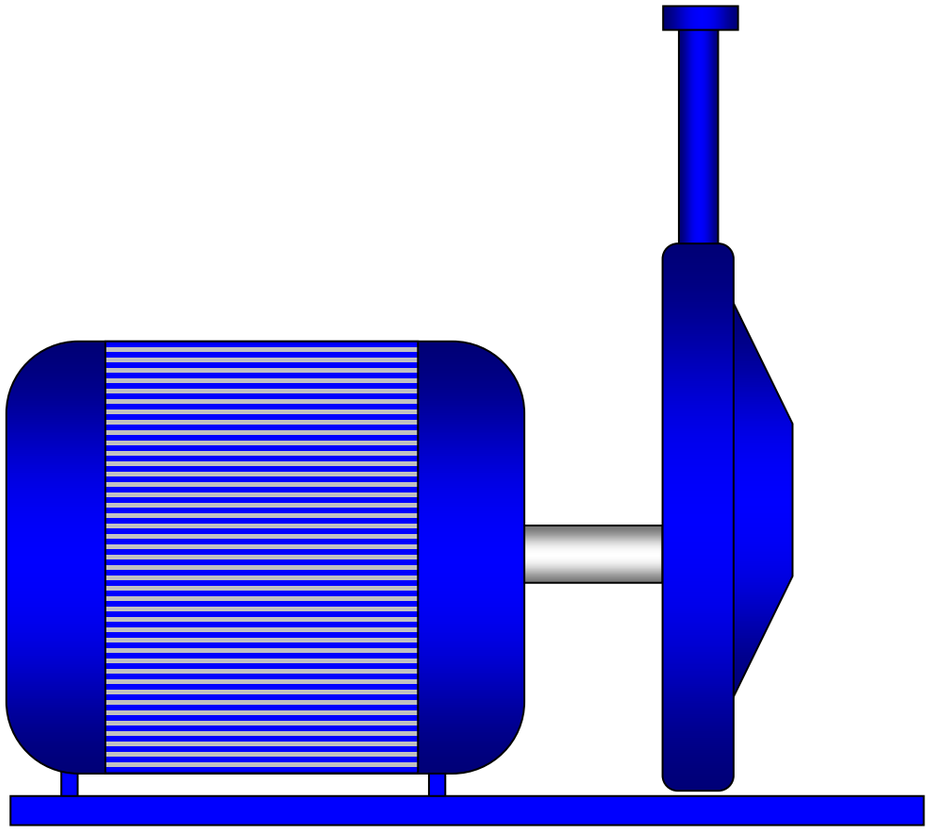


Air Operated Diaphragm Pump Compared to Electric



2” Diaphragm Pump / Water/ 40 foot head
75-gallons per minute
75 psig inlet pressure
70 cfm

$7,000 per year



Electric Pump
3 Horsepower

$780 per year

Electronic optimized stroke control, pneumatic operated or 24v DC

30-40% less air - same through put

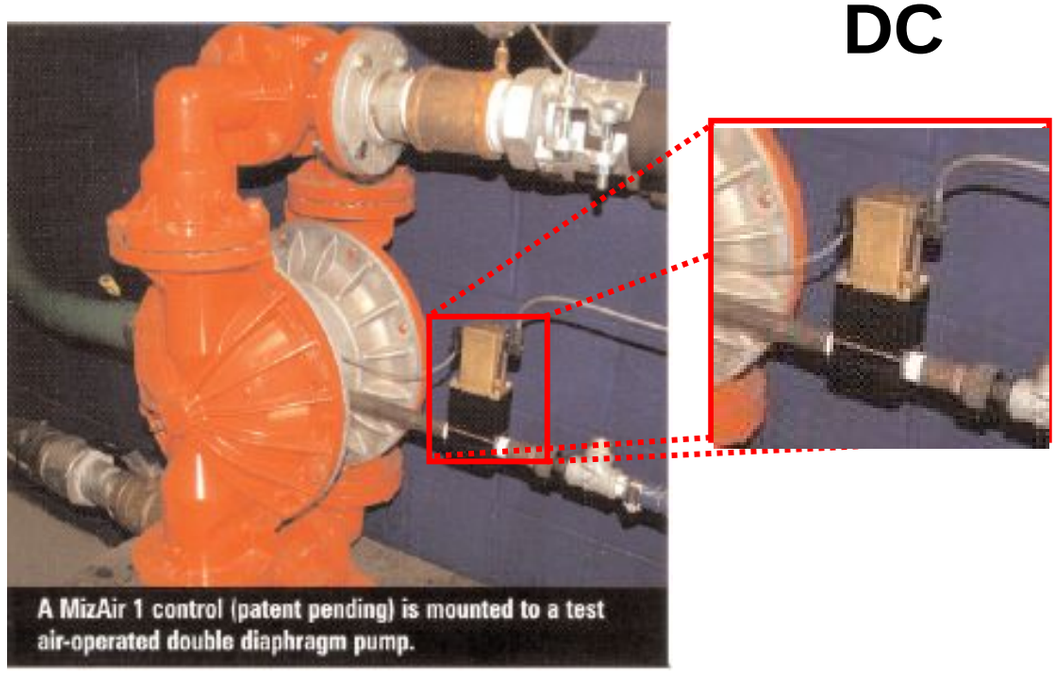
“AirVantage” Pneumatic

Potential Compressed Air Savings: $3,000-$6,000 year

Cost: $1,000 - $1,200

Electric Drive

MizAir 24v DC



A MizAir 1 control (patent pending) is mounted to a test air-operated double diaphragm pump.

Air & Electric Driven Motor Hoists
5,000 Lb. Class Hoist

Electric:

- **5,600 lbs base drum pull**
- **Average price $3,000 each**
- **1.5 kW x $.06/kWh x 1-hr**
- **= $.09/hr Electrical Cost**

Pneumatic:

- **28-hp, 23.2 kW**
- **5,000 lbs base drum pull**
- **Average price $3,500 each**
- **23.2 kW x $.06/kWh x 1-hr**
- **= $1.39/hr Air Cost**

Air Motor-Driven Mixers

Air Motor Horsepower	Air Motor Drive		Electric Drive
	cfm	Equivalent kW	kW
1/4	8	1.6	.25
1/3	11	2.2	.33
1/3	11	2.2	.33
1/2	15	3	.5
1/2	15	3	.5
3/4	25	5	.75
1	30	6	1.0
1 1/2	45	9	1.5

Sandblast Nozzles & Suction Entry Pressure vs. Air Flow

Venturi suction type nozzles

Typical carbide nozzle with seal

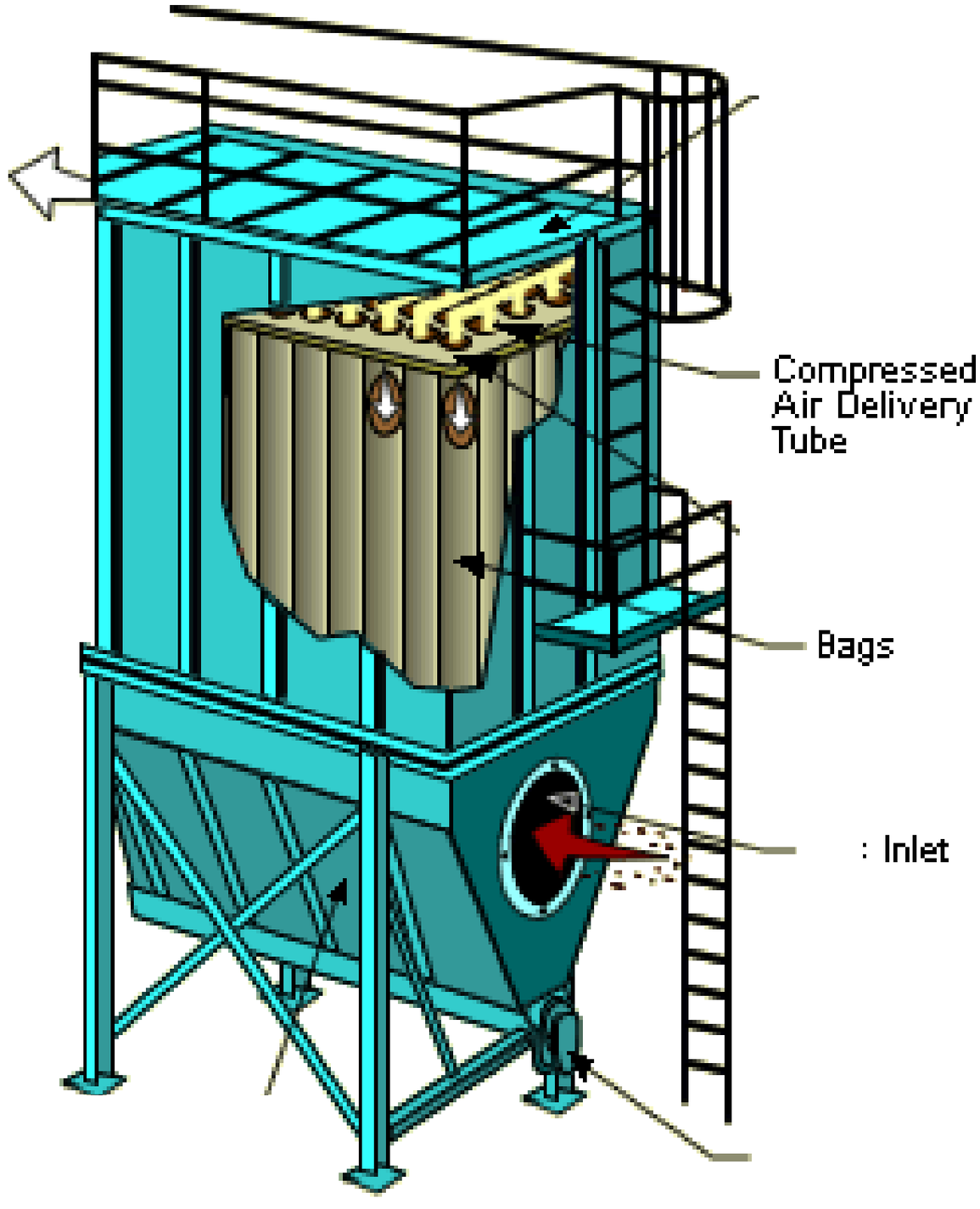
Air Flow Cfm Through Pressure Blast Nozzle

Nozzle Diameter	Blast Pressure												
	20	25	30	35	40	45	50	60	70	80	90	100	120
1/8”	7	7	8	9	10	12	13	14	15	17	19	20	
3/16”	15	16	18	20	22	24	26	30	33	38	41	45	
1/4”	27	30	32	37	41	45	49	55	61	68	74	81	97
5/16”	42	46	50	57	64	70	76	88	101	113	126	137	152
3/8”	55	63	73	82	91	100	109	126	143	161	173	196	220
7/16”	72	85	99	112	124	137	149	170	194	217	240	254	300
1/2”	96	112	129	146	163	179	194	224	252	280	309	338	392
5/8”								356	404	452	504	548	611

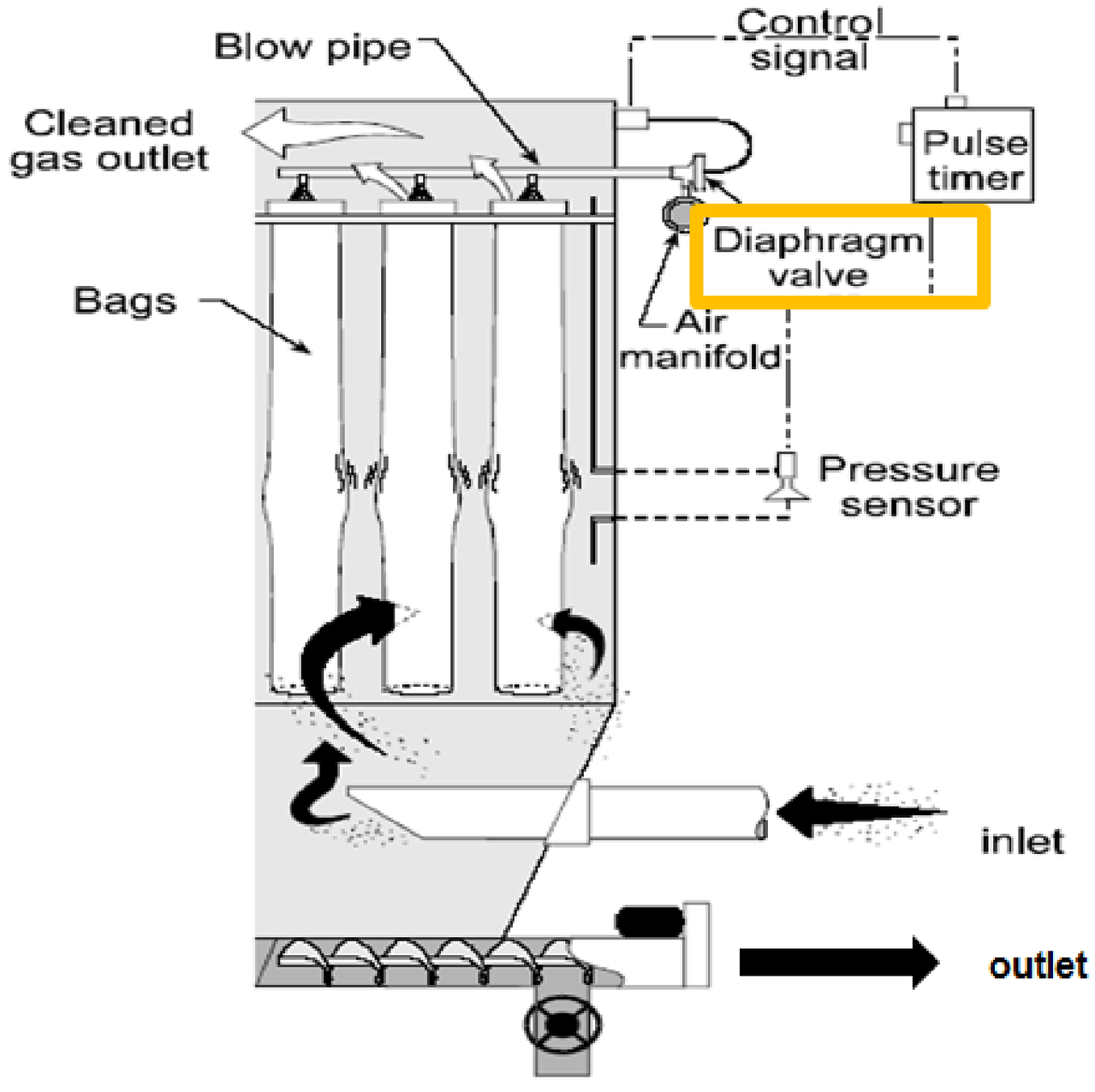
Air Flow Cfm Through Suction Blast Gun

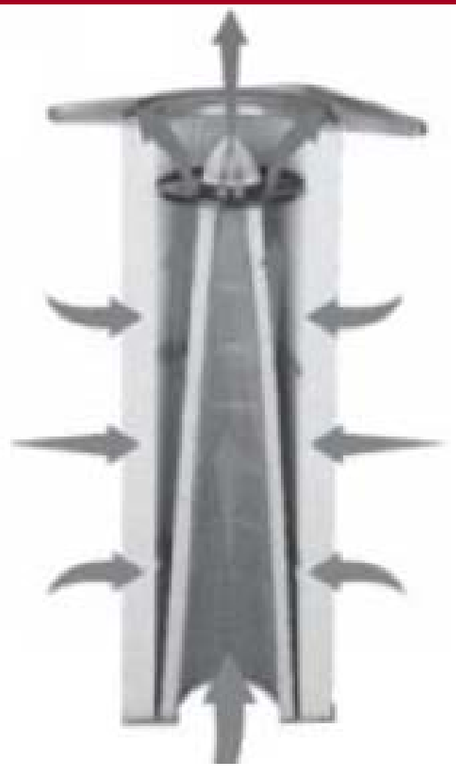
Nozzle Size	Air Jet Size	Blast Pressure							
		30	40	50	60	70	80	90	100
1/4”	1/8”	10	12	15	17	19	21	23	26
5/16”	5/32”	15	19	23	27	31	37	38	42
3/8”	3/16”	24	29	35	39	45	50	56	62
7/16”	7/32”	31	38	45	52	59	66	73	80

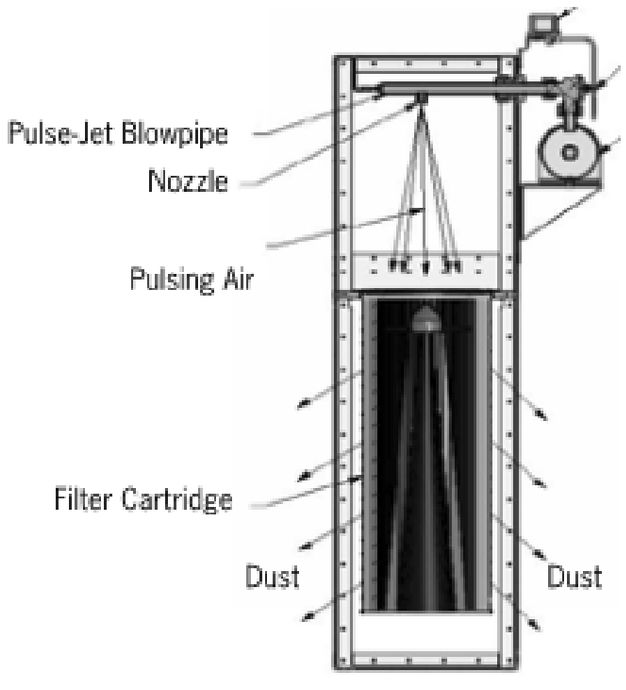
Dust Collectors: Pulse Jet Baghouse / Filters



Pulse Jet Baghouse / Filter Cleaning







Compressed Air Delivery & Supply May Create an Ineffective Pulse

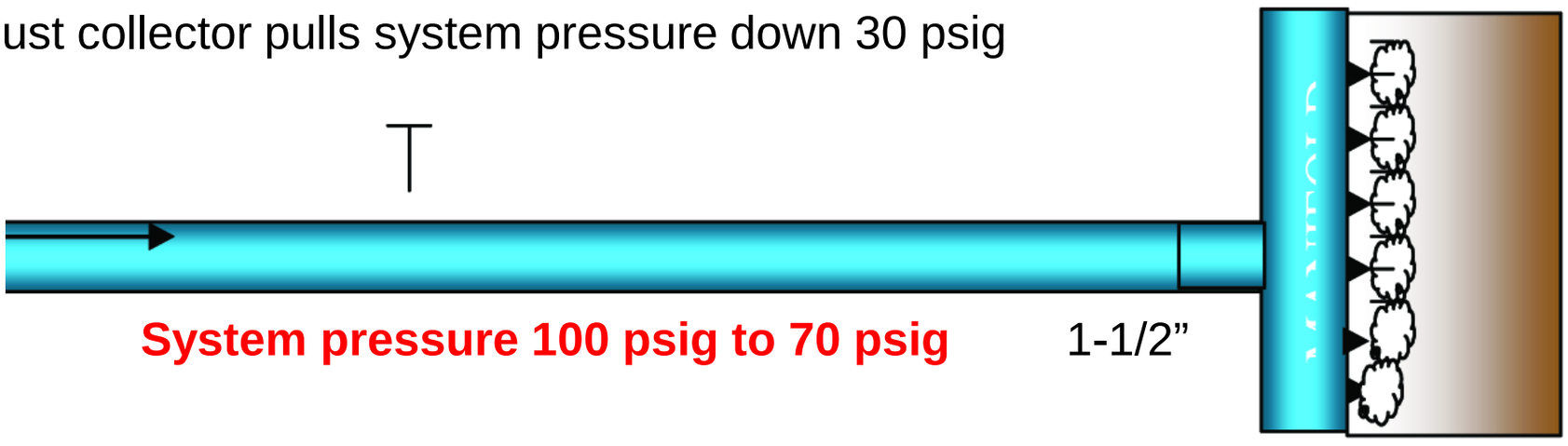
- Use proper line size to handle rate of flow without high pressure loss
- Use appropriate regulator with storage to supply air without pulling down feed to receiver/collector
- Monitor inlet pressure and drop at pulse
- Monitor flow
- ***Too much pressure loss at pulse will deliver incomplete cleaning***

Typical Line Sizing

Each valve uses 3.5 scfm/pulse - 6 valves on collector all valves open simultaneously

Problem: “Flow” / “Rate of Flow”

Dust collector pulls system pressure down 30 psig

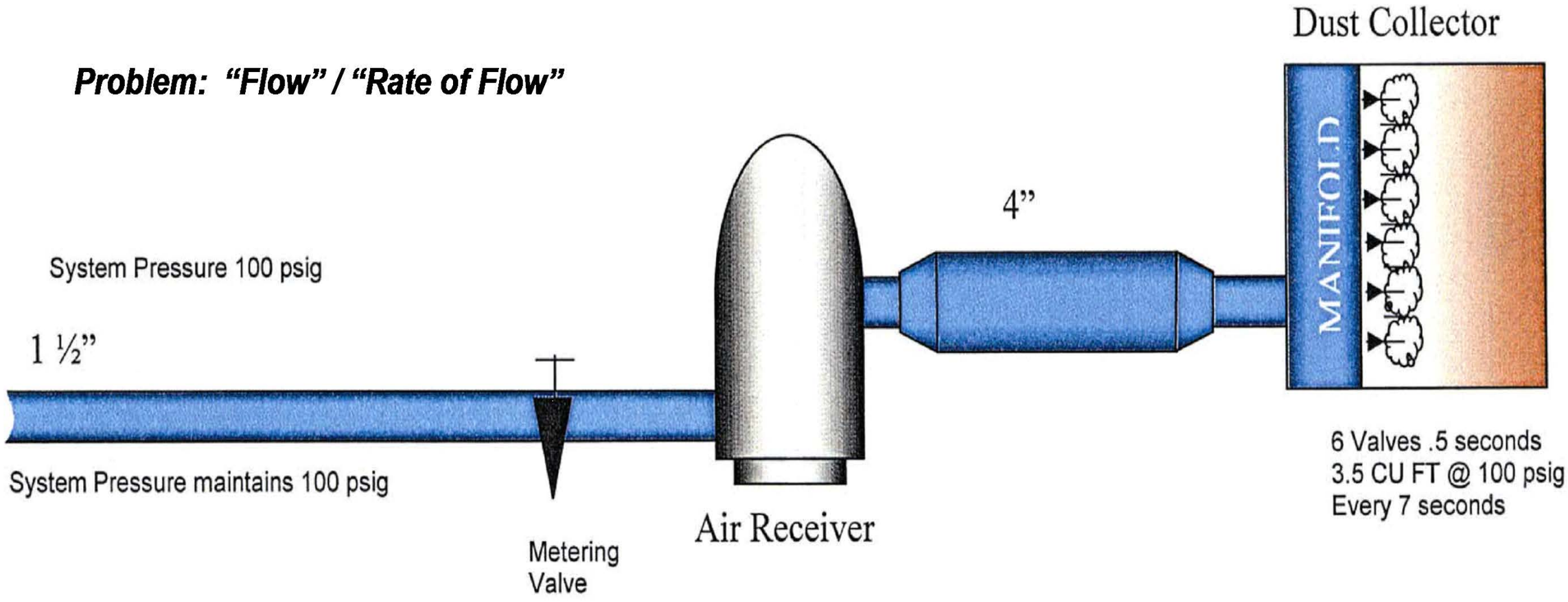


6 Valves at .5 seconds
3.5 cu ft. at 100 psig
Every 7 seconds

Rate of flow to dust collectors:

6 x 3.5 = 21 cu ft. x 60 ÷ 5 = 2520 cfm rate of flow

Sequence Controllers Require Proper Line Size – Available Air Rate of Flow



Replace Timer Pulse Control with Pressure Differential Demand Control

Major Opportunities:

- Identify and repair ruptured diaphragms, flow indicators, electronic control system
- Add automatic pulse controls based on ΔP instead of only timer activated
- But, not always easy because……

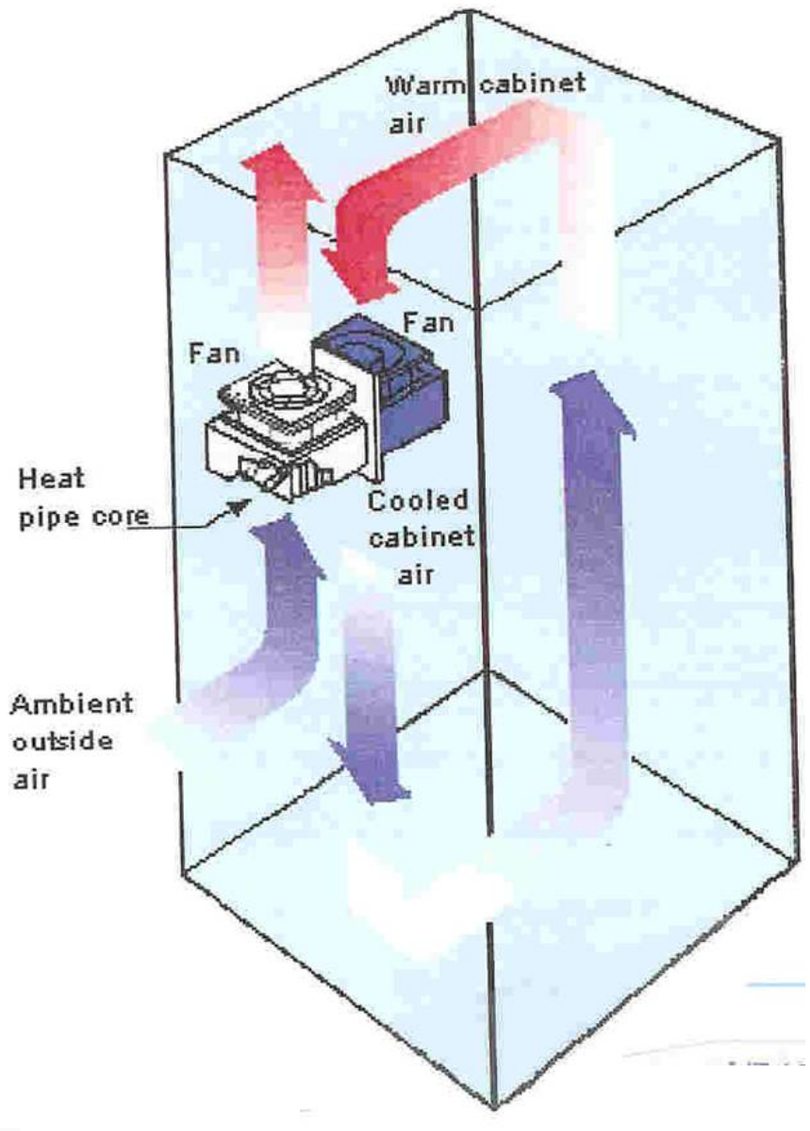
Typical Compressed Air Use - One, 10-row Dust Collector

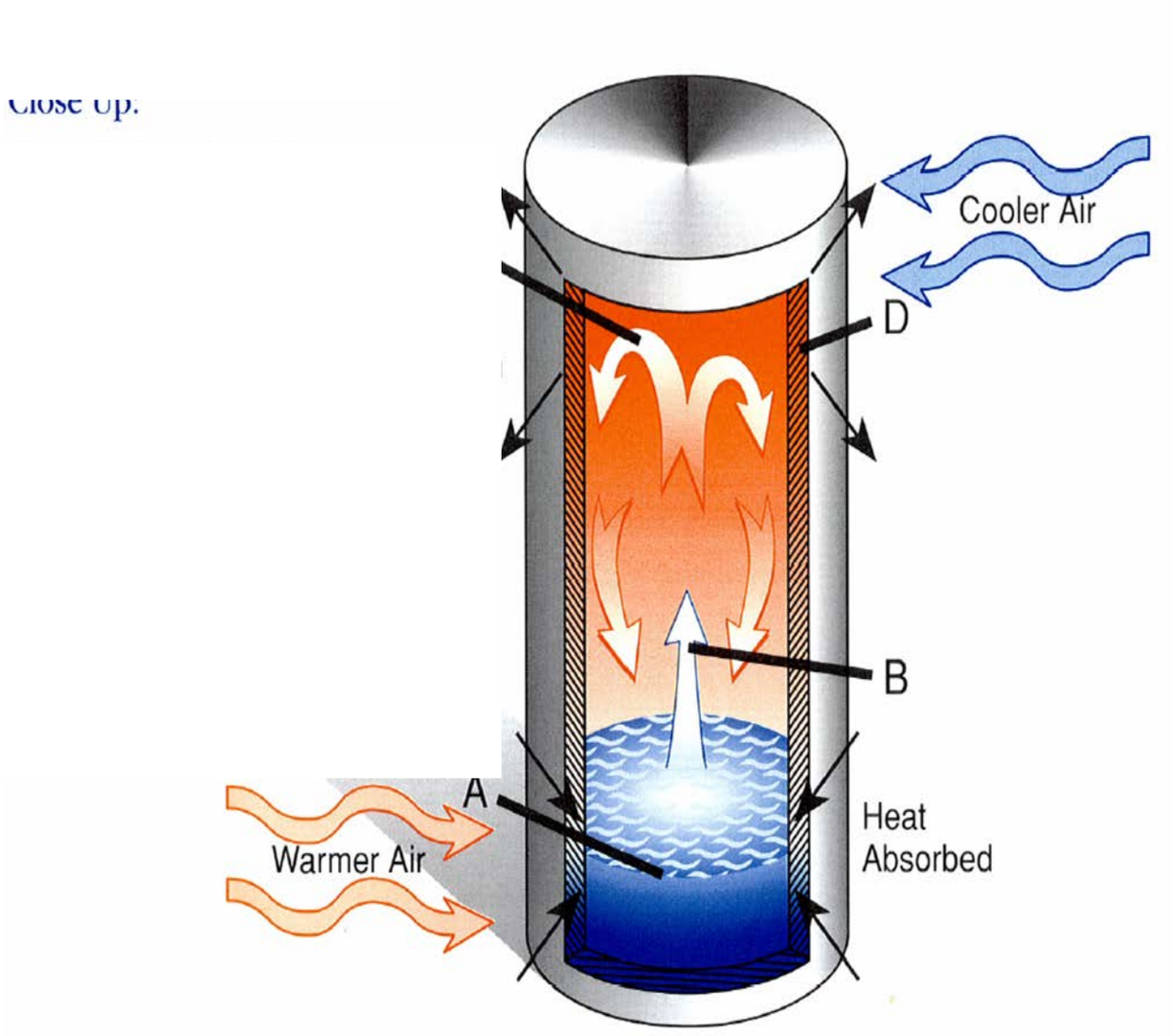
Valve Size	Standard Pulse with Demand Control		Continuous 356 pulse/hour	
	$ / Year	Avg. scfm	$ / Year	Avg. scfm
3/4”	$1,007	10.7	$3,205	32.05
1 1/8”	$2,040	20.4	$6,109	61.09
1 1/2”	$3,550	35.5	$10,610	106.61
2”	$4,890	48.9	$14,663	146.63

Control Cabinet Cooling

Do you actually need cabinet cooling?

Heat Pipe Cabinet Cooling



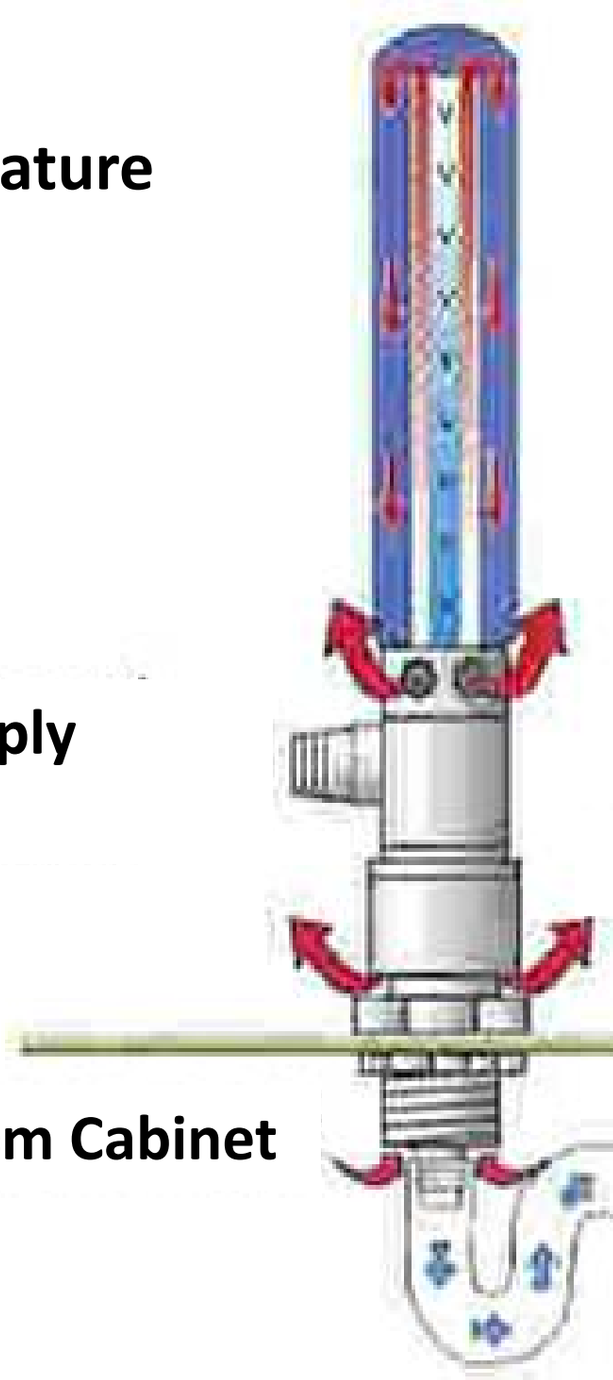


Air-cooled will not cool below ambient

Water-cooled will

Vortex Tube Refrigeration Cabinet Cooler

Compressed air temperature
Drop 60 to 90°F



Hot Air from Vortex Tube
230°F

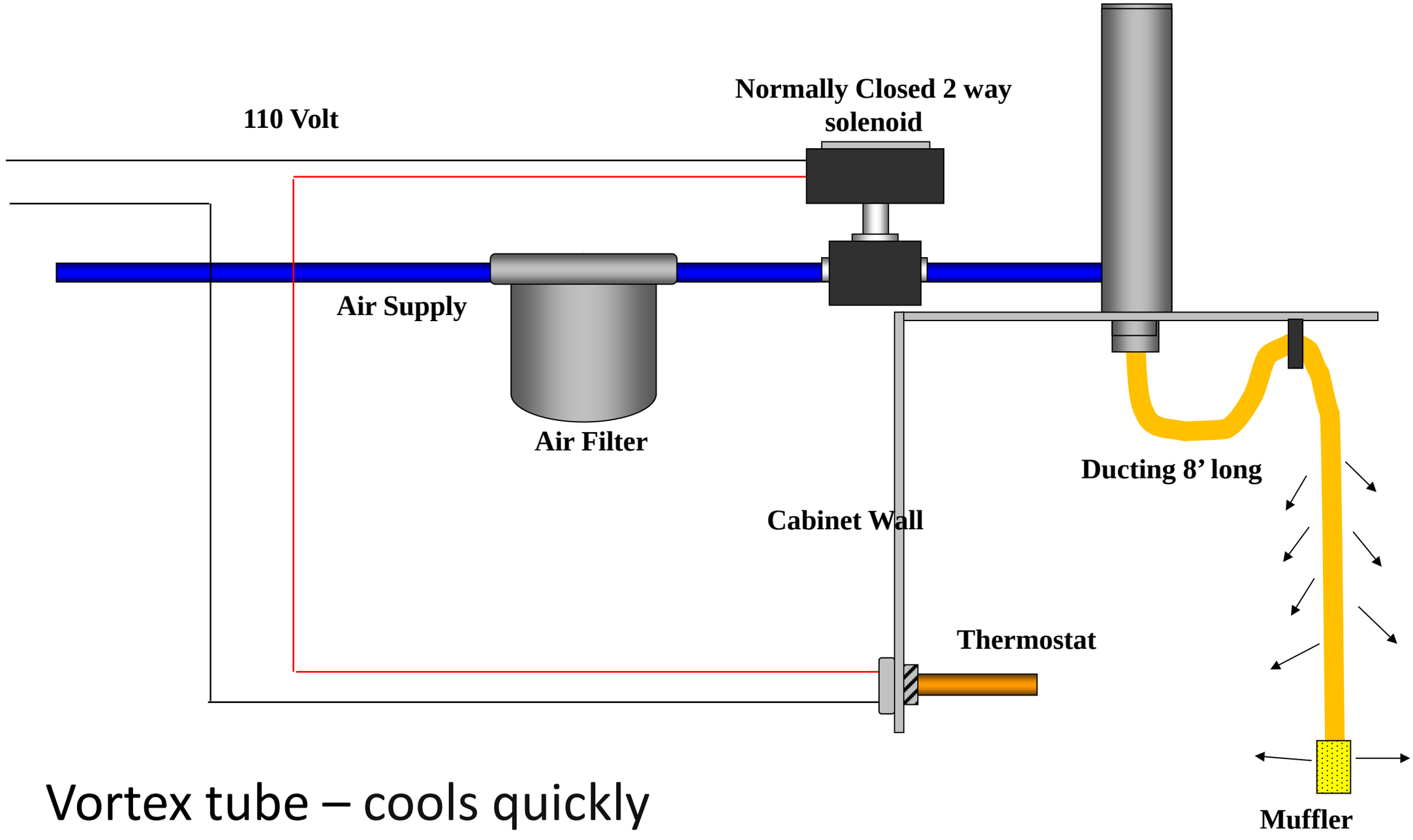
Compressed Air Supply
90 psig – 70°F

Cabinet Air Exhaust

Vented Hot Air from Cabinet

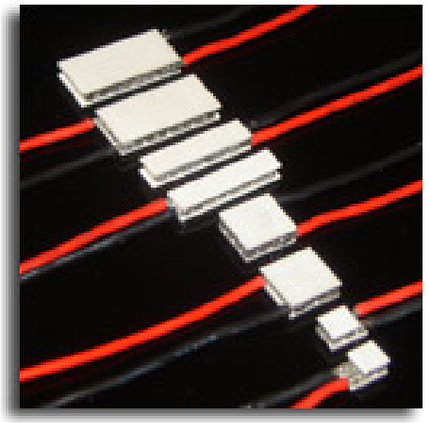
Cold Air -10°F

Thermostatic Automatic Shut Off

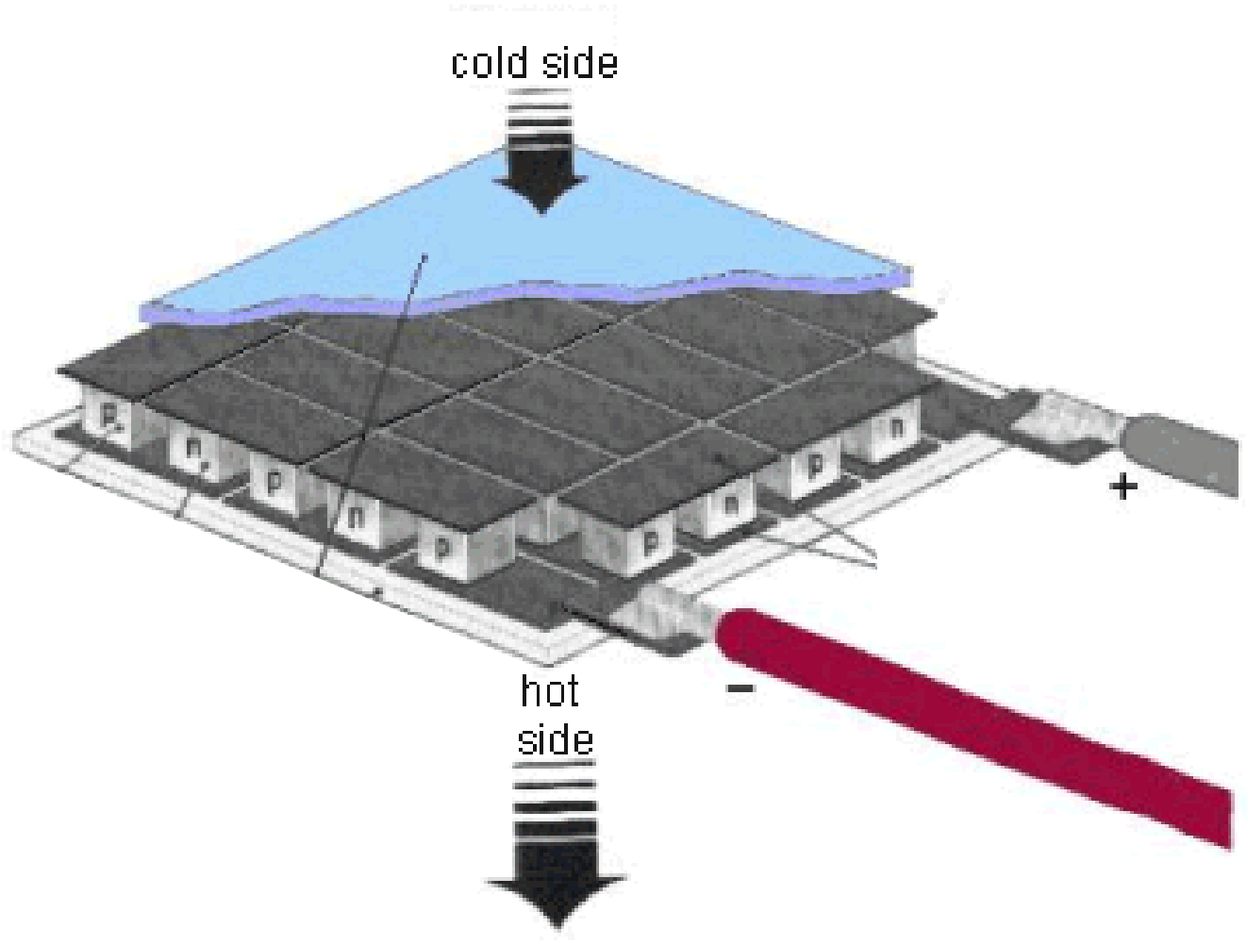


- Vortex tube – cools quickly
- Unlimited starts and stops; just shut off / turn on

Thermoelectric Refrigeration Cabinet Coolers – Peltier Cooling



Average cooling 10 – 30ºF



Works in a totally sealed cabinet

Refrigerated	Heat Pipe (Air or Water)		
		Water	Air
1,500 Btu/hr. = 1.5 kW	1,500 Btu/hr. =	.035 kW	.140 kW
6,000 Btu/hr. = 2.0 kW	6,000 Btu/hr. =	.140 kW	.035 kW
8,000 Btu/hr. = 2.3 kW	8,000 Btu/hr. =	.140 kW	.035 kW
12,000 Btu/hr. = 3.5 kW	12,000 Btu/hr. =	.280 kW	.105 kW

Thermoelectric	Max	Nominal
400 Btu/hr. Rating	.1 kW	70 Watts / .07 kW
800 Btu/hr. Rating	.2 kW	150 Watts / .15 kW
1,500 Btu/hr. Rating	.4 kW	280 Watts / .28 kW

(20) 6,000 Btu/hr. Refrigerated	40 kW	$21,000/yr.
(20) 6,000 Btu/hr. Heat Pipe	2.8 kW	$1,475/yr.

Measure and Monitor the Total System

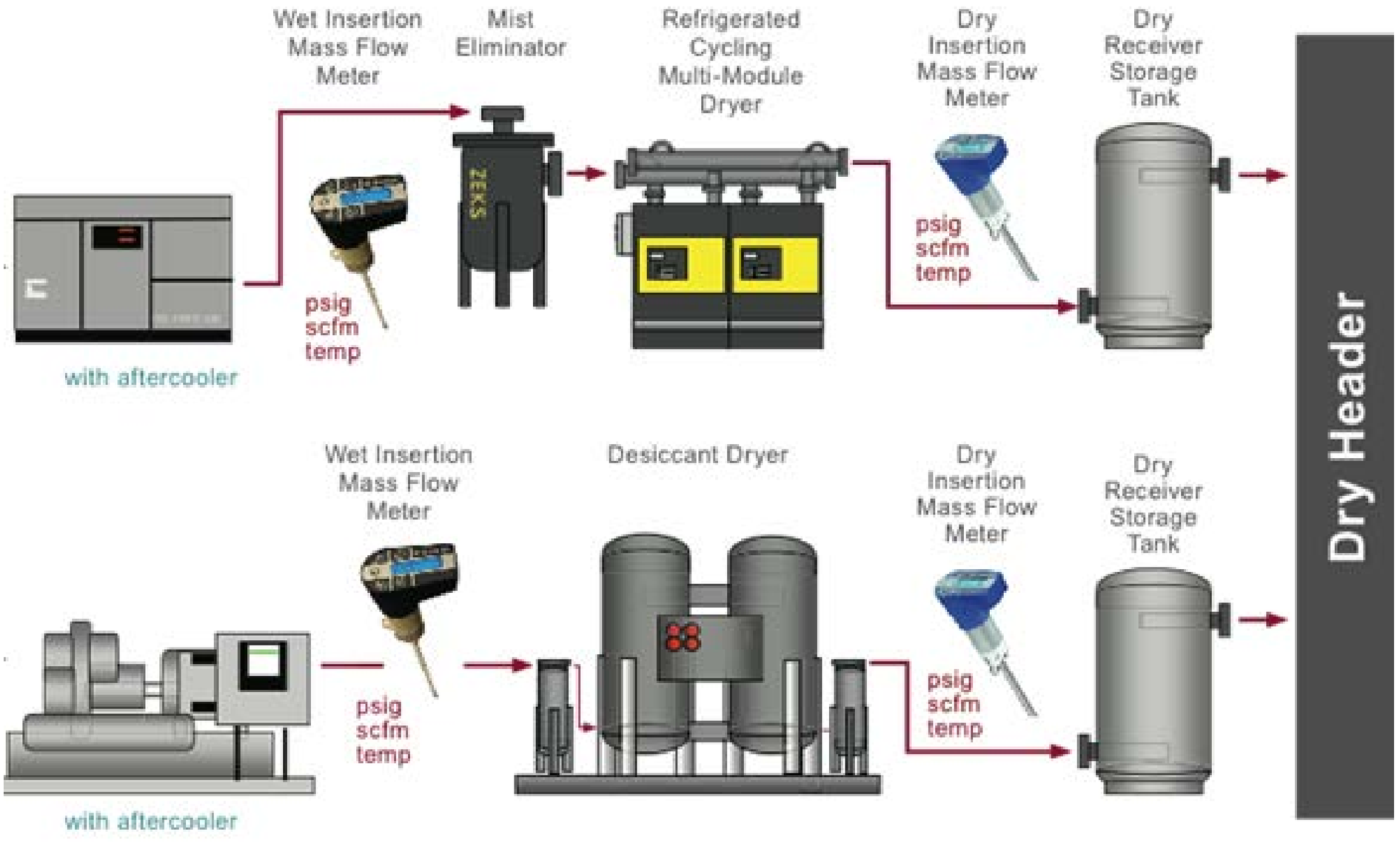
To evaluate the true system dynamics we need to know not just how much air is being produced and delivered, but where it is going.

Important questions to ask:

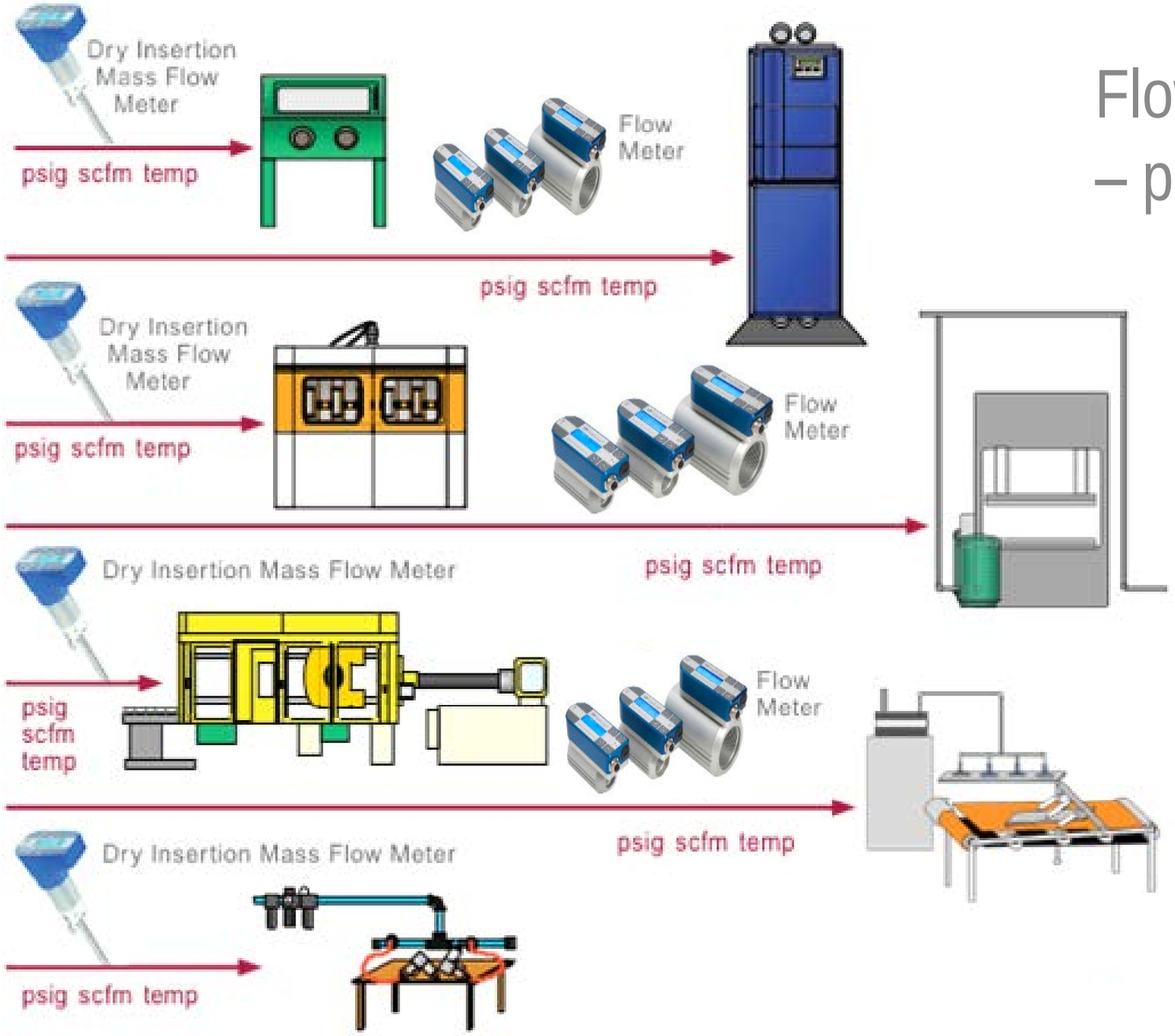
- Who is using it?
- How does this actually compare to the estimate or calculated estimate?
- How does the current flow volume compare to past measurements?
- Where are the peak / surge demands?

A Good Start

- Now we are monitoring how efficiently we produce, the proper quality of compressed air.



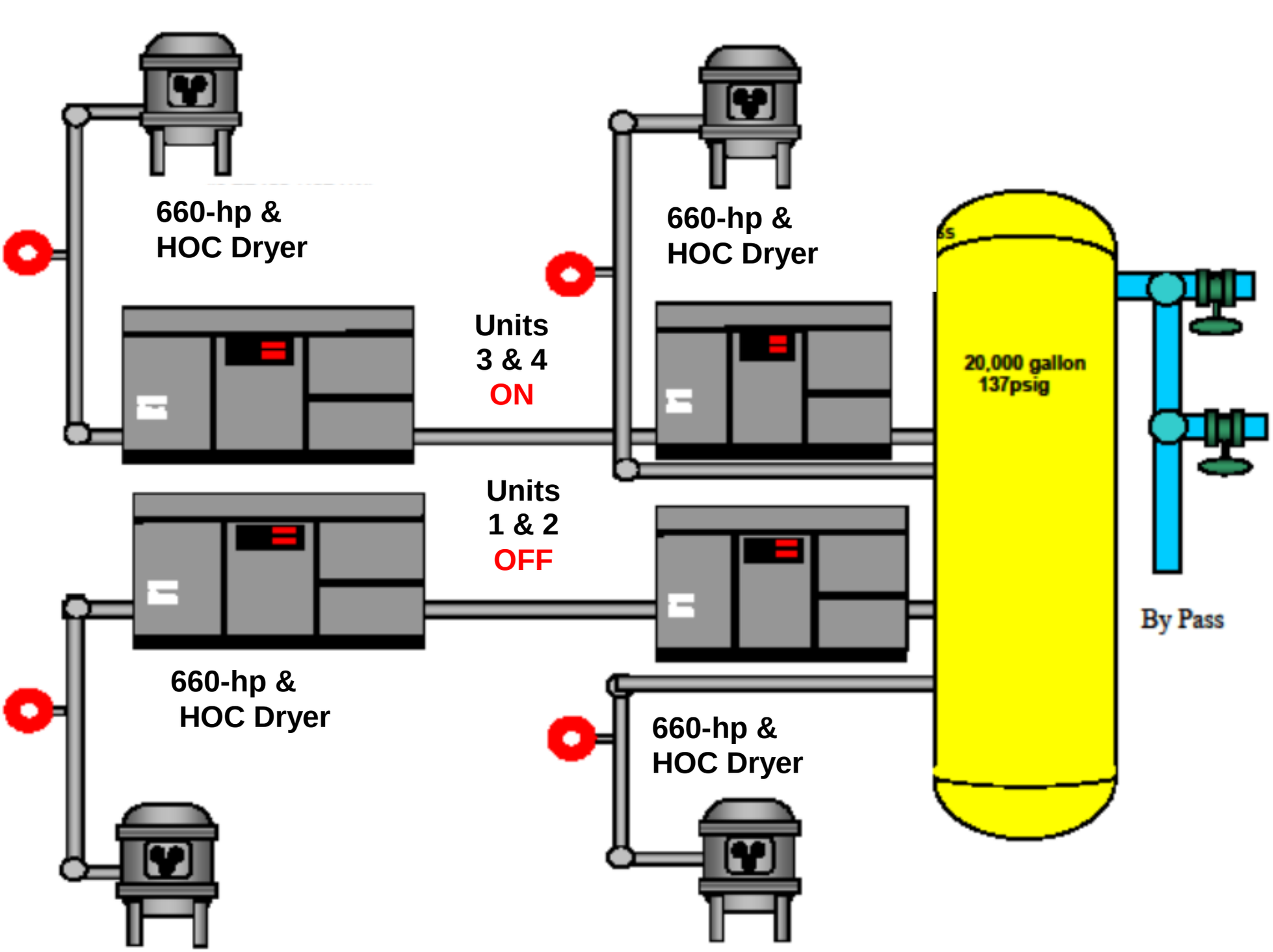
Measuring Each Independent Sector



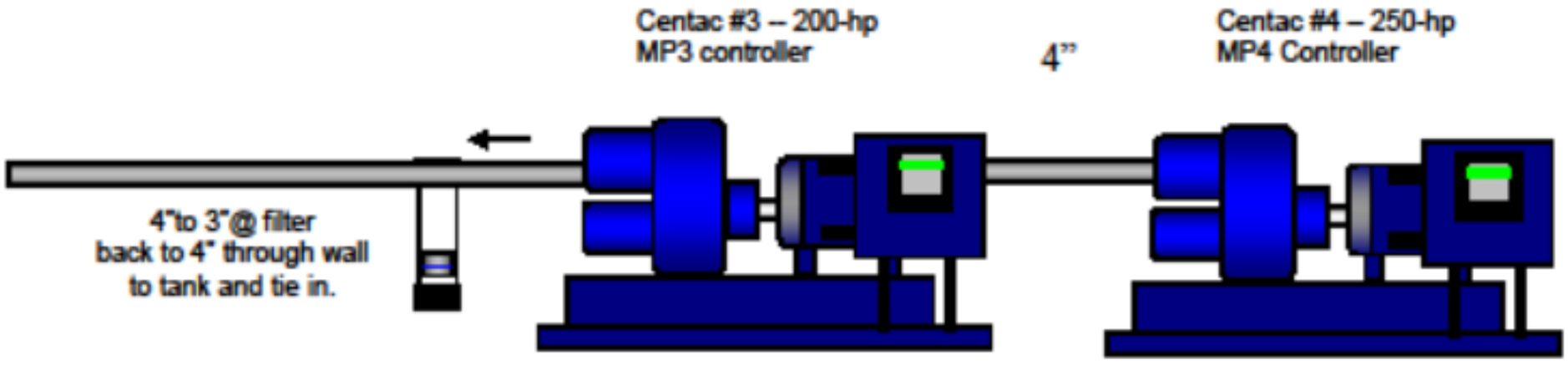
Flow to each independent sector – pressure and temperature.

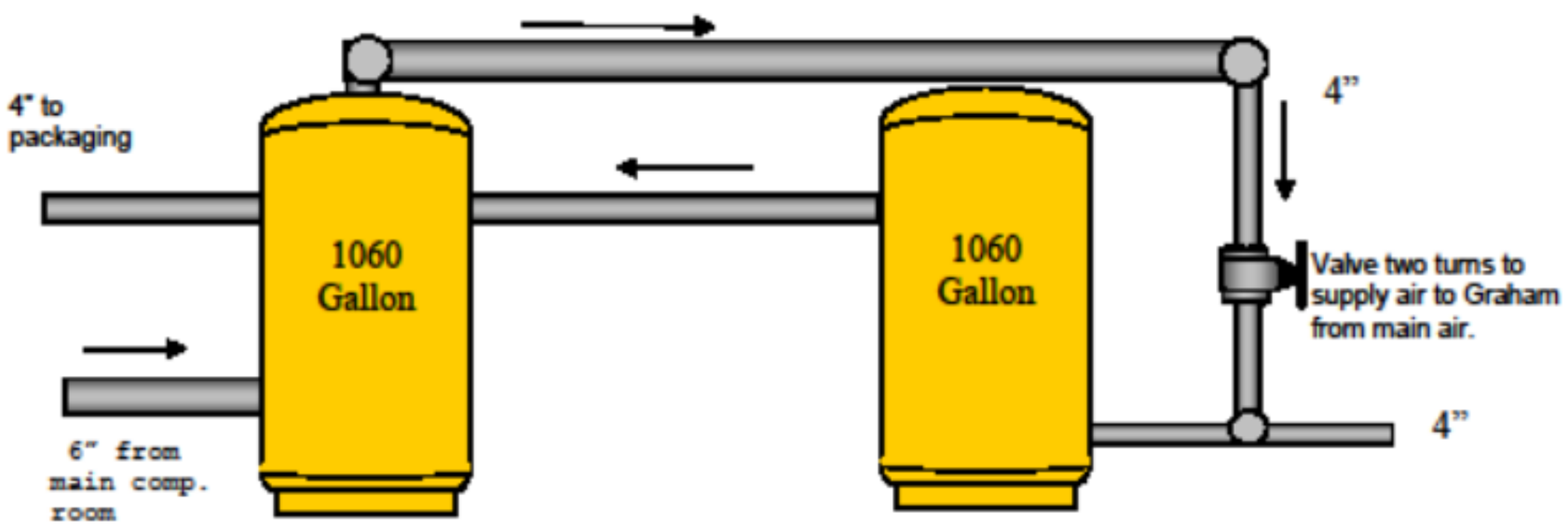
- Add pressure dewpoint if critical
- Assign optimum compressed air use of sector and monitor compared to budget
- Implement a program to operate at the lowest effective pressure

New Central Air System – Partly Used



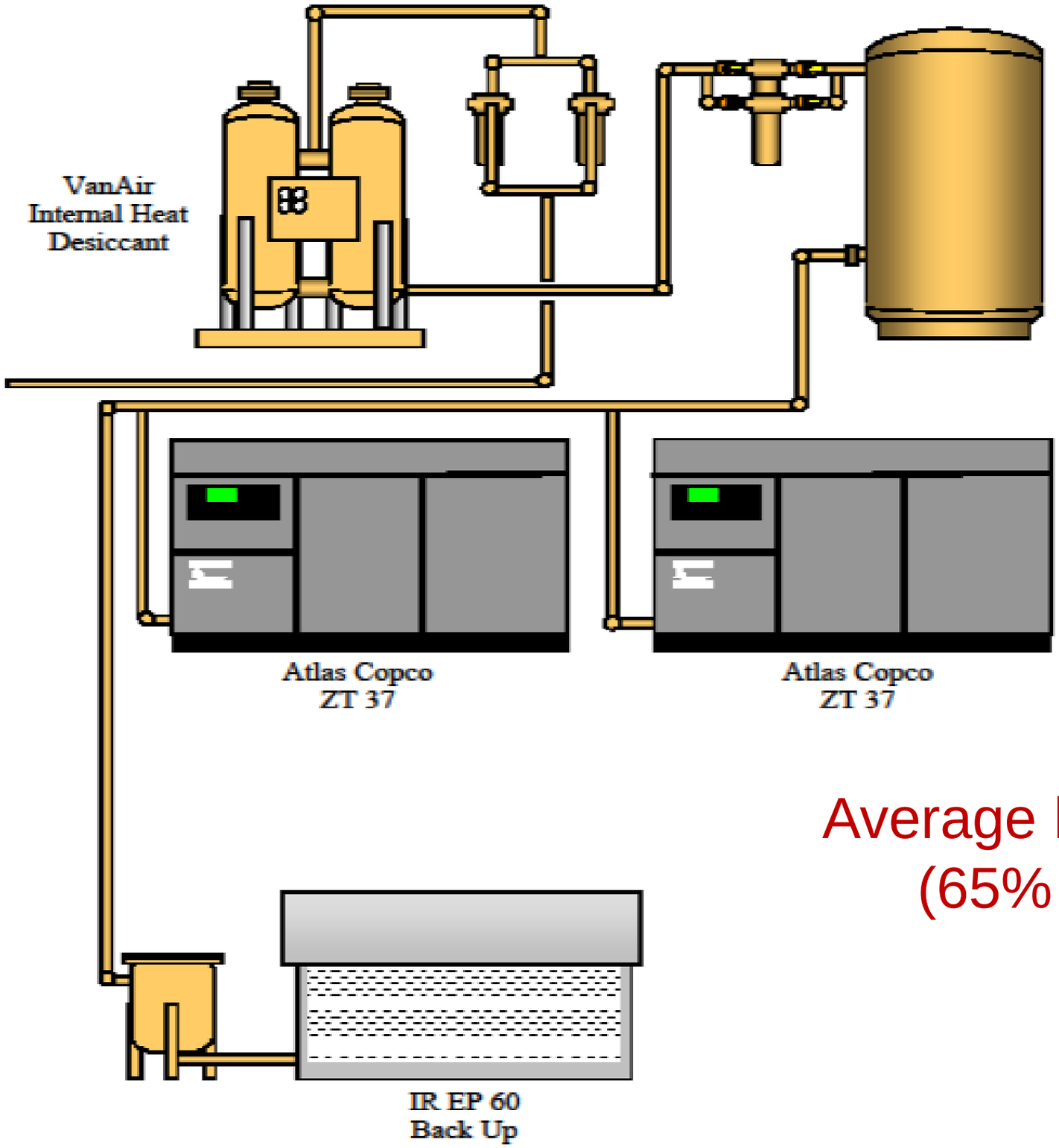
Processing - Other Less Efficient Systems





55 % FLOW / 85% POWER

South Campus – Sub System



Average kW per unit – 34.6 kW
(65% flow / 80% power)

Example: Fruit Juice Plant

- When completed, four additional areas of local supplied air were shut off and the process put on a central system.
- Processing West - $9,669 year
- Pallet repair - $3,208 year
- South campus - $5,555 year
- **Total savings = $55,384 year – More efficient compressed air supply.**

Seems simple?
Run your most energy efficient units.

Thank you for the opportunity
to present!

AIR POWER USA
Independent and Brand Neutral

Break

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Welcome back

DTE Energy®
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Adam Constantino

Outreach Manager

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Agenda

- Presentation by **Hank van Ormer**
  Air Power USA
- Break
- Presentation continues
- Program Overview by **Adam Constantino**
- Program Case Studies
- Program Incentives Status
- Questions
- Networking/Lunch

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Program funding

- **Michigan Public Act 295 (2008): statewide "Energy Optimization Surcharge" added to all ratepayers' bills to:**
  - Help customers save energy, manage costs.
  - Help reduce generation, offset new capacity.
- **This "surcharge" is rebated through the program as cash incentives that:**
  - Target specific energy-saving equipment and technologies.
  - Encourage energy-efficiency building and systems design.

For a customer to receive incentives

- Qualified measures must be installed at facilities served by DTE Energy.
- Projects must involve a **capital investment** that results in an improvement in energy efficiency of a system or building.
- The equipment installed must be new and meet the specifications spelled out in the Catalog.
- For each site, there must be at least one meter that is on an eligible rate schedule.
- You must be in good standing with DTE Energy and **not** be a Residential or Multifamily customer.

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These do not qualify for an incentive

- Customers who self-direct (and have opted out of the program)
- Load shifting/demand limiting projects.
- Renewable energy projects.
- Power quality improvements.
- Fuel switching projects.
- On-site electricity generation.
- Changes in operational and/or maintenance practices or simple control modifications that do **NOT** involve capital costs.

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Three types of program incentives

Prescriptive

- **Predetermined** measures and incentives for the installation of various energy efficient improvements.
- Incentives typically average 20% to 50% of the incremental cost.

Custom

- **Capital investment** projects that increase energy efficiency and are **NOT** eligible for a Prescriptive Incentive may qualify as a Custom Measure.
- Custom Incentives are determined on a case-by-case basis and are paid per unit energy saved (ex: $0.07/kWh and/or $4/Mcf).

New Construction
Major Renovation

- **New facilities/major renovations** of existing facilities or change of use projects.
- Adding load.

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Prescriptive

Prescriptive

- **Pre-determined** measures with specific energy savings and cash incentives
  - **Categories include**:
    - Lighting
    - HVAC Electric
    - Miscellaneous Electric
    - Process Electric
    - Food Service Electric
    - HVAC Gas
    - Hot Water & Laundry
    - Insulation
    - Process Gas
    - Boiler/Furnace Tune-up
    - Food Service Gas

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Custom

Custom Incentives

Capital investment projects that increase energy efficiency and are **NOT** eligible for a Prescriptive Incentive may qualify as a Custom Measure.

- Custom Incentives are determined on a case-by-case basis and are paid per unit energy saved (ex: $0.07/kWh and/or $4/Mcf).
  - **Examples include:**
    - Heat recovery
    - Lighting retrofits not 1 for 1

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New Construction
Major Renovation

New Construction/Major Renovation:

- New facilities/major renovations of existing facilities/change of use.
- Adding load.
- Incentives are offered in three areas:
  - **LEED Design Review Assistance:**
    - $1,500 for LEED project certification.
  - **Systems Approach:**
    - Pre-determined measures designed to optimize efficiency of individual systems.
  - **LEED Whole Building Approach**:
    - Based on LEED certification.
    - Three levels of incentives based on four LEED certification levels.

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Project Reservations

Reservation Applications set aside funds for your project to ensure availability when your project is completed and you submit your Final Application. Here are our guidelines:

Prescriptive

- Reservation Applications are not required for most Prescriptive projects, ***BUT*** they are ***highly recommended***.
- A Reservation Application ***is required*** for certain measures: check the Application for details.

Custom

- A Reservation Application ***is required*** for all Custom projects.

New Construction
Major Renovation

- A Reservation Application ***is encouraged*** for all New Construction and Major Renovation projects.

If you submit a Reservation Application, do **NOT** start your project until you receive a Reservation Letter!*

**Could take 4-6 weeks to receive the letter*

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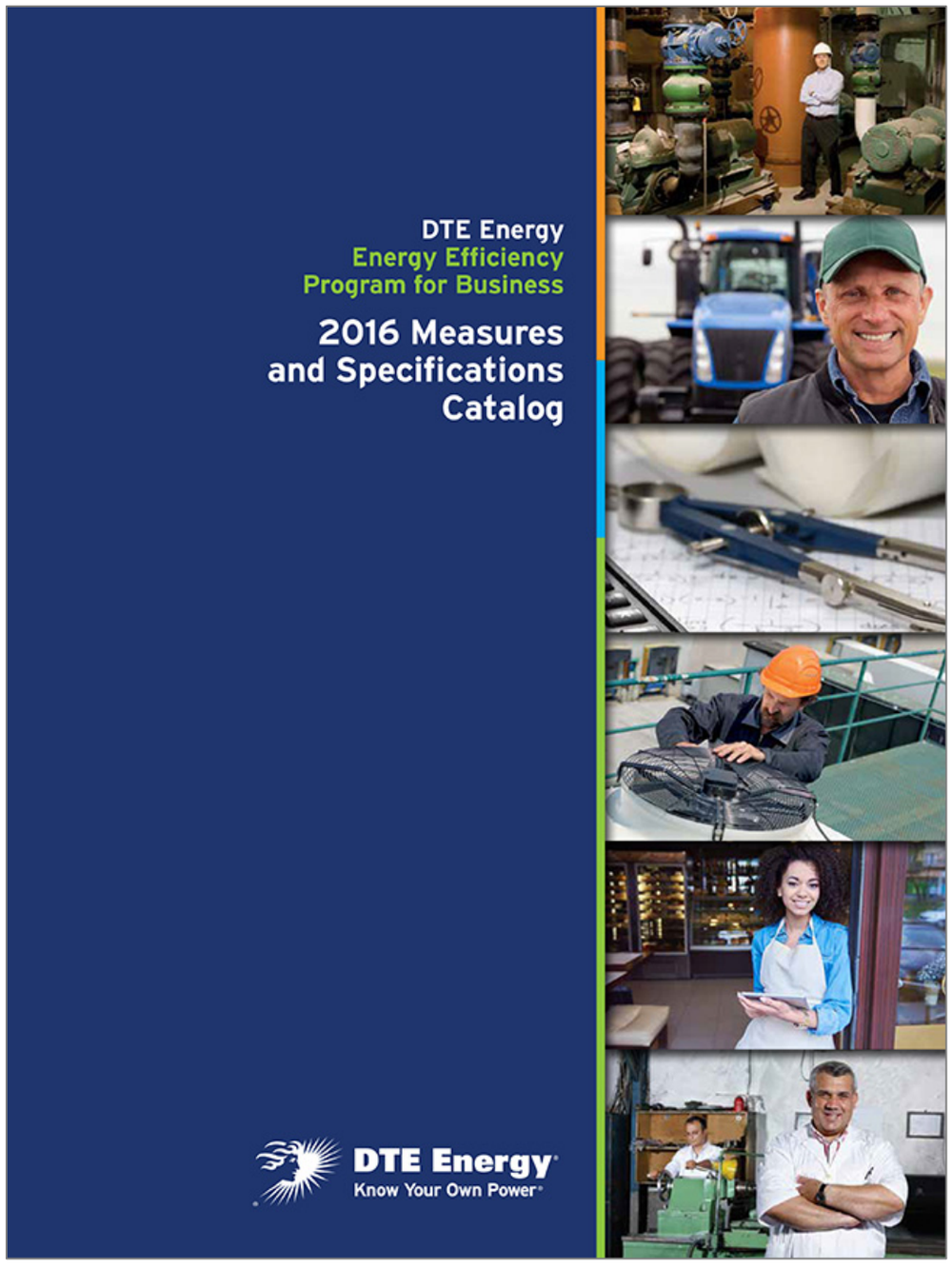
Program Catalog

- Includes specifications and details for every **Prescriptive** incentive measure.
- Includes specifications and details on how to submit a **Custom** project.
- Use it as a desktop reference for all your projects.



Program Application

Use it as a:

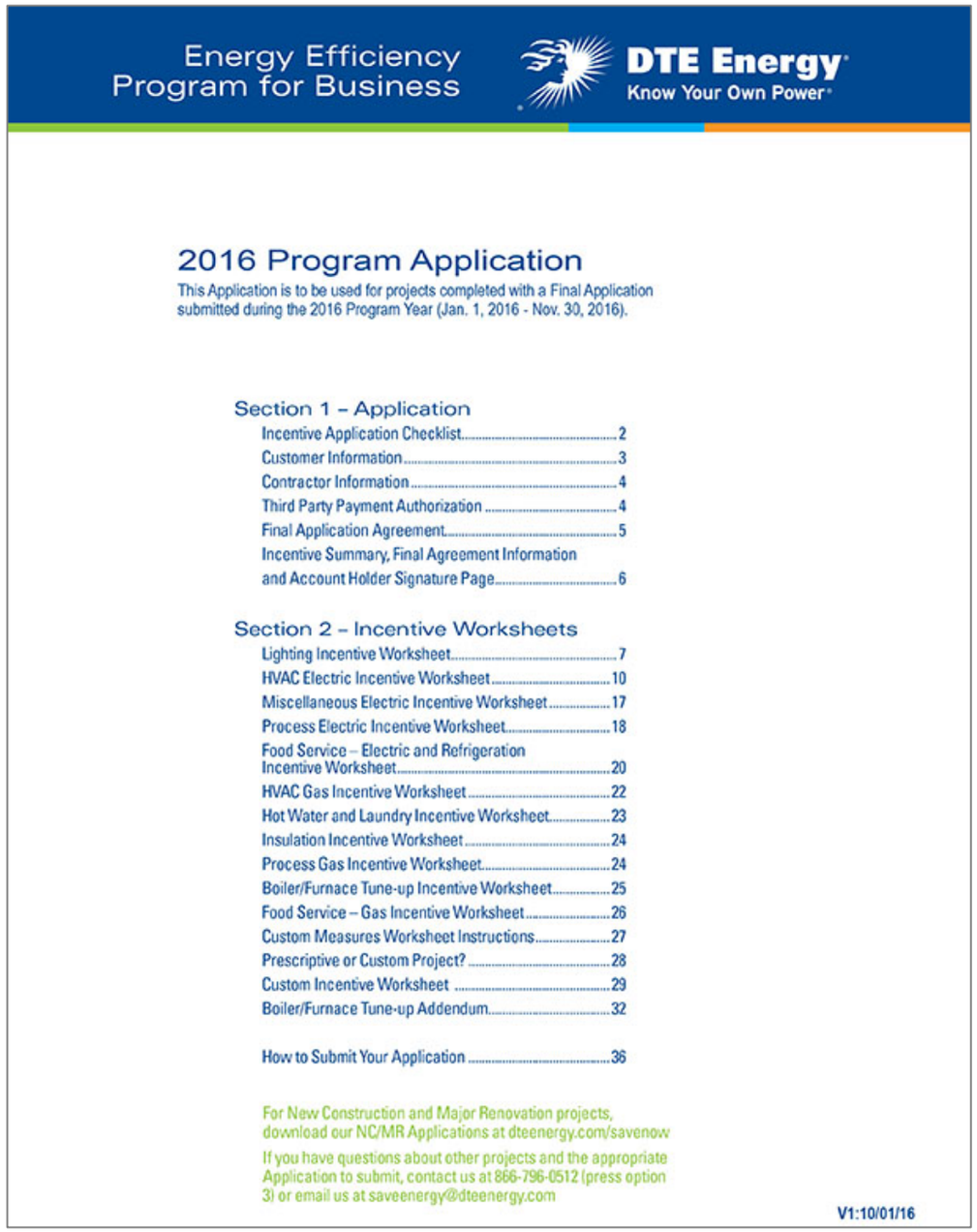
- **Reservation** Application

and a

- **Final** Application

NOTE: Funds **must** be reserved for all custom projects and for certain prescriptive measures.

We **encourage** you to submit a Reservation Application for all **prescriptive** projects.



Energy Efficiency Program for Business

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2016 Program Application

This Application is to be used for projects completed with a Final Application submitted during the 2016 Program Year (Jan. 1, 2016 - Nov. 30, 2016).

Section 1 – Application

Section 2 – Incentive Worksheets

For New Construction and Major Renovation projects, download our NC/MR Applications at dteenergy.com/savenow

If you have questions about other projects and the appropriate Application to submit, contact us at 866-796-0512 (press option 3) or email us at saveenergy@dteenergy.com

V1:10/01/16

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Online Application

- Provides a smooth, real-time application tool for customers and contractors alike.
- Program Process is still the same
  - 2016 Retrofit Program measures
  - Same program timeframes
  - All signed documents are required (live-pdf signed forms are welcome)
  - Multi-Measure Bonus
  - Michigan Made Bonus

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The Program Timeline

Reservation Application

↓

Application Review
(may require pre-inspection)

↓

Reservation Letter Issued
(Proceed with project)

↓

Install Measures
(Project must start within 30 days and be completed within 90 days of approval or end of Program year, whichever comes first.)

↓

Final Application & Review
(Submit within 60 days; may require post-inspection)

↓

Payment

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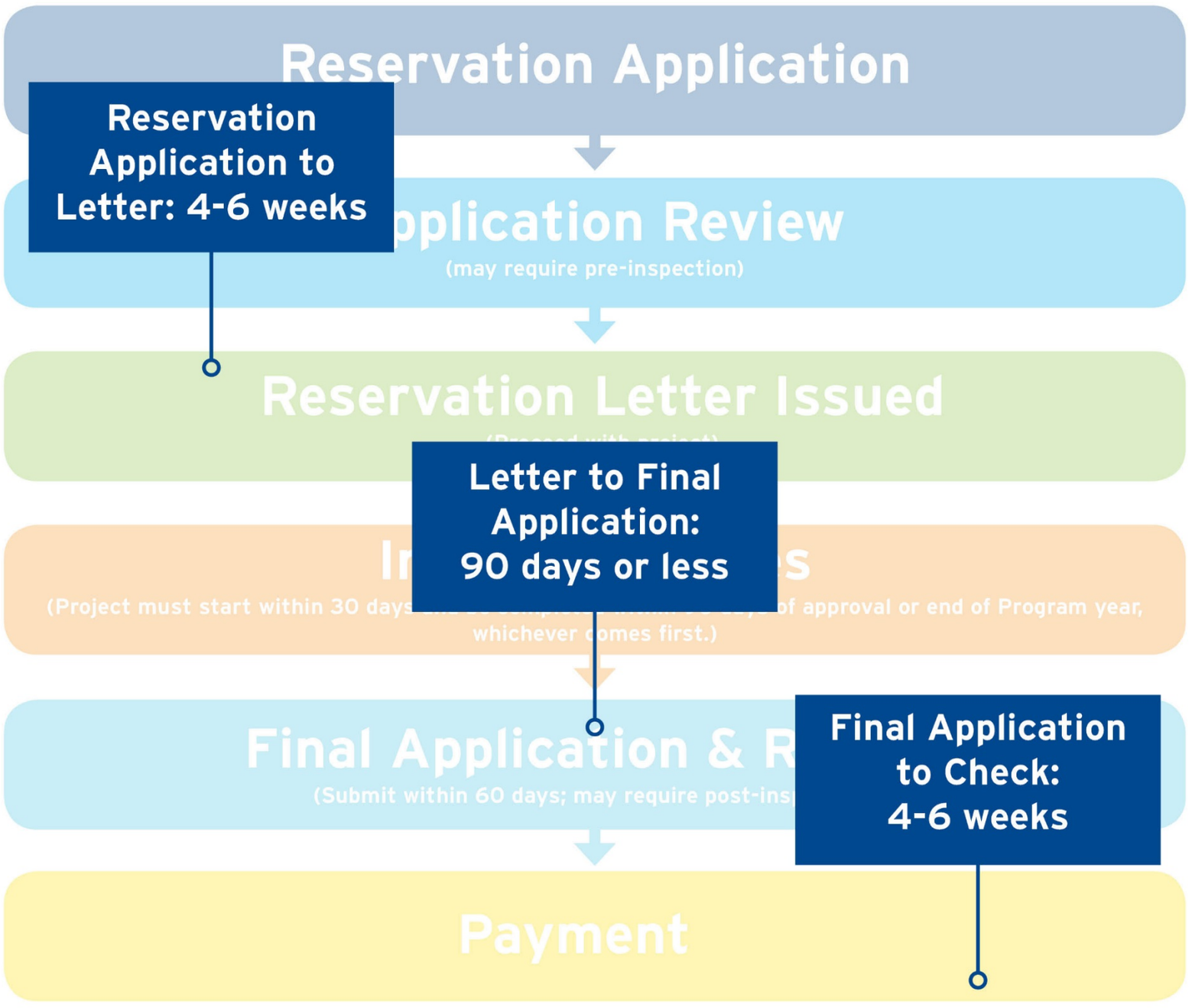
The Program Timeline



Program Overview

Prescriptive compressed air measures in the 2016 Application:

Measure	Incentive	Unit
Compressed Air Engineered Nozzle	$50.00	Nozzle
Compressed Air Pressure Flow Controller	$4.00	HP
Compressed Air Audit with Leak Repair	$35.00	SCFM
VSD Air Compressor	$80.00	HP
Compressed Air Dryers	up to $1.00	SCFM
Refrigerated Air Dryer replacing Desiccant Dryer	$30.00	SCFM
No–Loss Condensate Drains	$140.00	Drain
Compressed Air Storage Tank	$25.00	HP
Variable Displacement Air Compressor	$30.00	HP

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Chuck Wilt

DTE Energy Manager – General Motors

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Case Study #1 – General Motors Plant A

Overview:

- Automotive plant operating 2 shifts, 7 days a week.
- Existing Centac 1500hp 6000 CFM compressor with desiccant air dryer heaters and refrigerated air dryers, used during weekdays.
- Only 3100 CFM is needed, so the 6000 CFM compressor runs inefficiently at about 60% load.
- Two Atlas Copco 350hp 1500 CFM compressors, one with a VFD, are used on the weekends.

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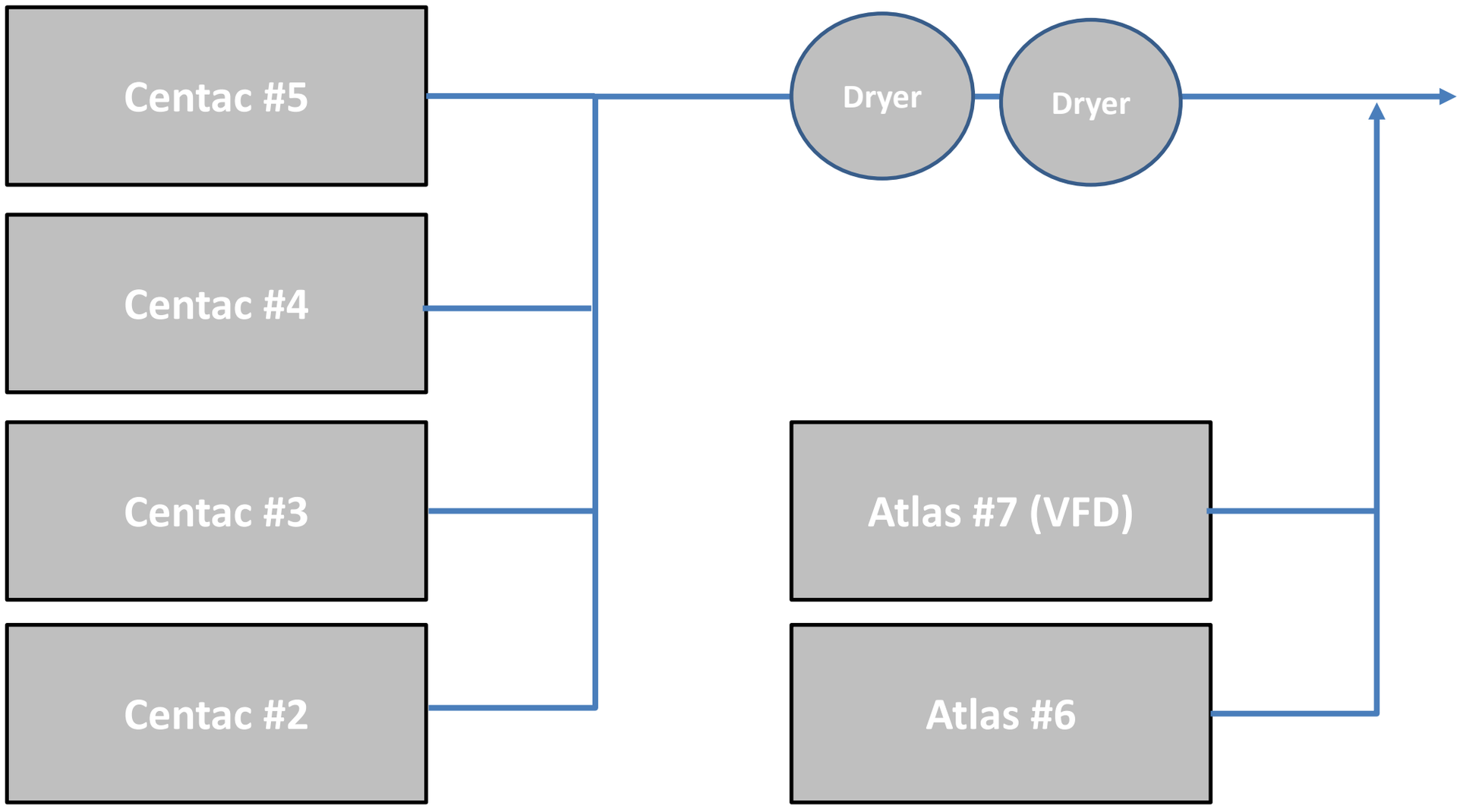
Case Study #1 – General Motors Plant A



Case Study #1 – General Motors Plant A

Proposed Retrofit:

- Install (1) new Atlas Copco 350hp compressor.
- The Centac compressor can then be eliminated by operating the three Atlas compressors during the week.
- The Atlas compressor with the VFD will be used as a trim compressor.
- The compressors are connected to a control system which displays kW, CFM, load %, and pressure.

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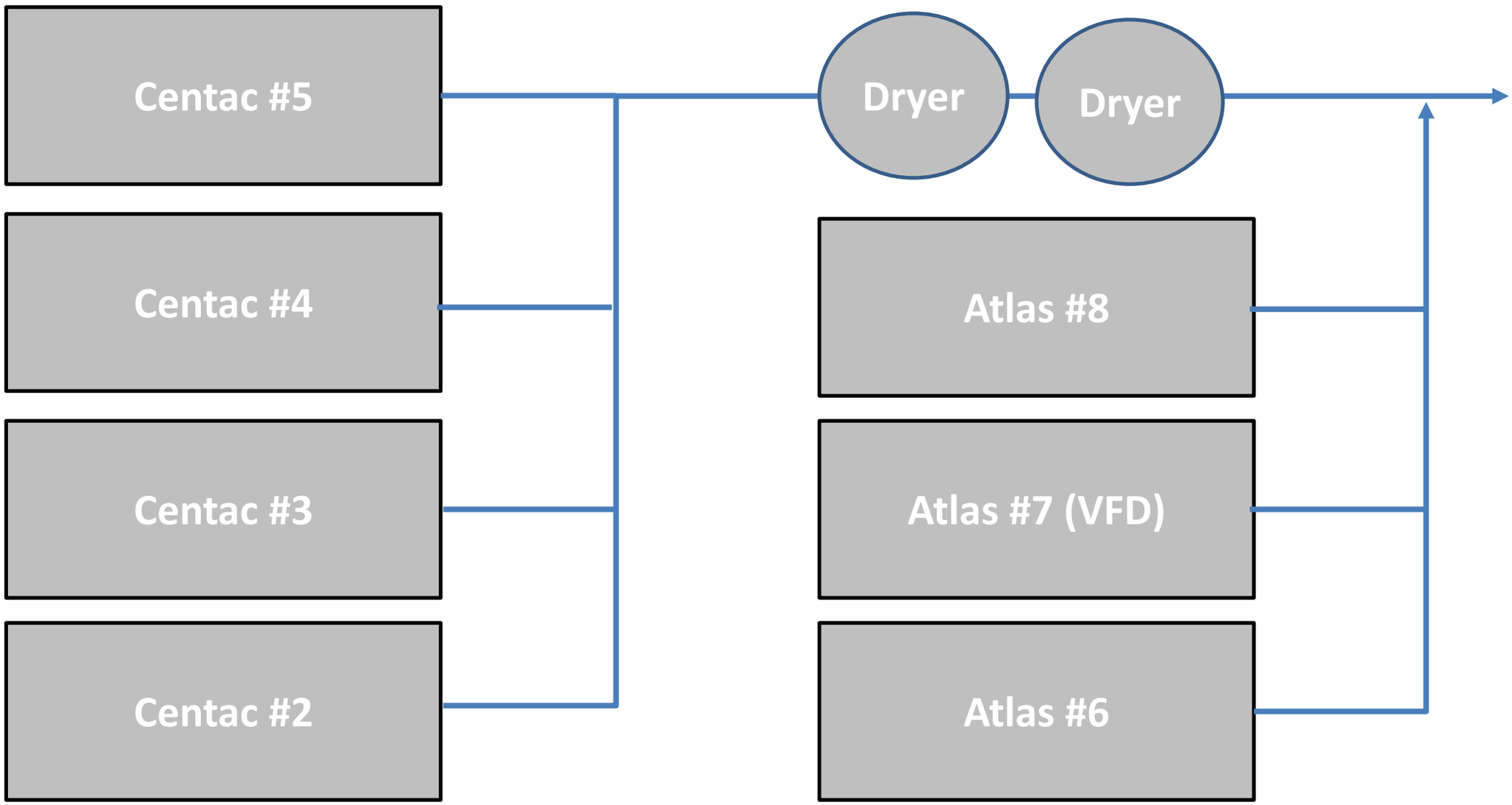
Case Study #1 – General Motors Plant A



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Case Study #1 – General Motors Plant A

- Current Weekly Avg. Energy Usage 110,000 kwh
- Proposed Weekly Avg. Energy Usage 80,000 kwh
- 27% Reduction in energy
- 414 kw Reduction in Demand
- Economics:
  - Total Project Cost $384,000
  - Simple Payback Before Incentive 1.93 yrs
  - DTE EO Incentive $142,000
  - Simple Payback After Incentive 1.21 yrs

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Case Study #2 – General Motors Plant B

Overview:

- Automotive plant operating 2 shifts, 7 days a week.
- Existing Top Coat Prep uses compressed air in 168 inches of air knife to blow off cars with ionized air for dust removal prior to entering the feather duster.
- High consumption of 4.3 CFM per inch of air knife used a tremendous amount of compressed air.
- System runs 24 hours per day, 365 days per year.

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Case Study #2 – General Motors Plant B

Case Study #2 – General Motors Plant B

Proposed Retrofit:

- Replace air knife system with 25 HP blower based system
- System runs only during production.

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Case Study #2 – General Motors Plant B

Case Study #2 – General Motors Plant B

Economics:

- Cost: $125,160.00
- Incentive $44,547.93
- Annual Cost Savings: $44,451.67
- Simple Payback after incentive: 1.81 years

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Case Study Questions?

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Program Funding

- Funding for electric projects has been 100% fully allocated for the 2016 Program Year.
- New 2016 applications will be placed on hold for a period of time should funding become available at a later date.
- Projects being held for possible funding will be approved only as other projects are cancelled and 2016 Program funds become available. They will be reserved in the order in which they were received.

Program Funding

- We continue to have funds available for gas projects and encourage you to apply for those projects while funds remain available.
- We expect to begin accepting 2017 Reservation Applications in the fourth quarter of 2016.
- We will accept completed Final Applications beginning Jan. 1, 2017, for projects completed after Nov. 1, 2016.

Questions?

If you have questions, please contact our office

Email: saveenergy@dteenergy.com

Phone: **866.796.0512** (press option 3)

Fax: **313.664.1950**

Website: dteenergy.com/savenow

Website: dtetradeally.com

: www.linkedin.com/in/dteenergysaveenergy