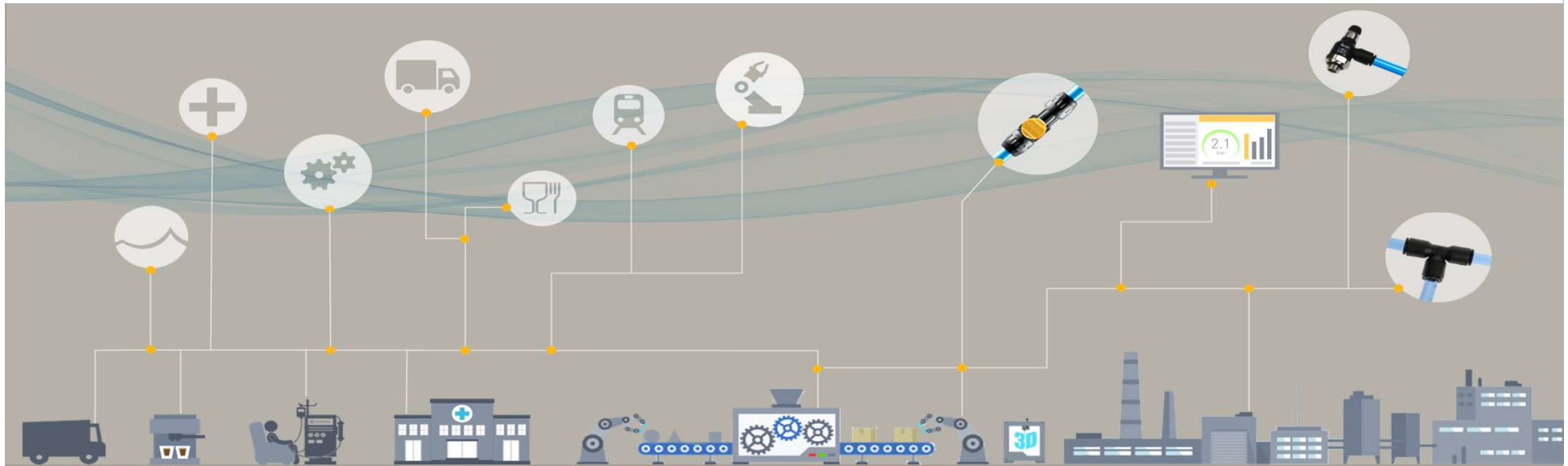




# THIS IS ENERGY EFFICIENCY

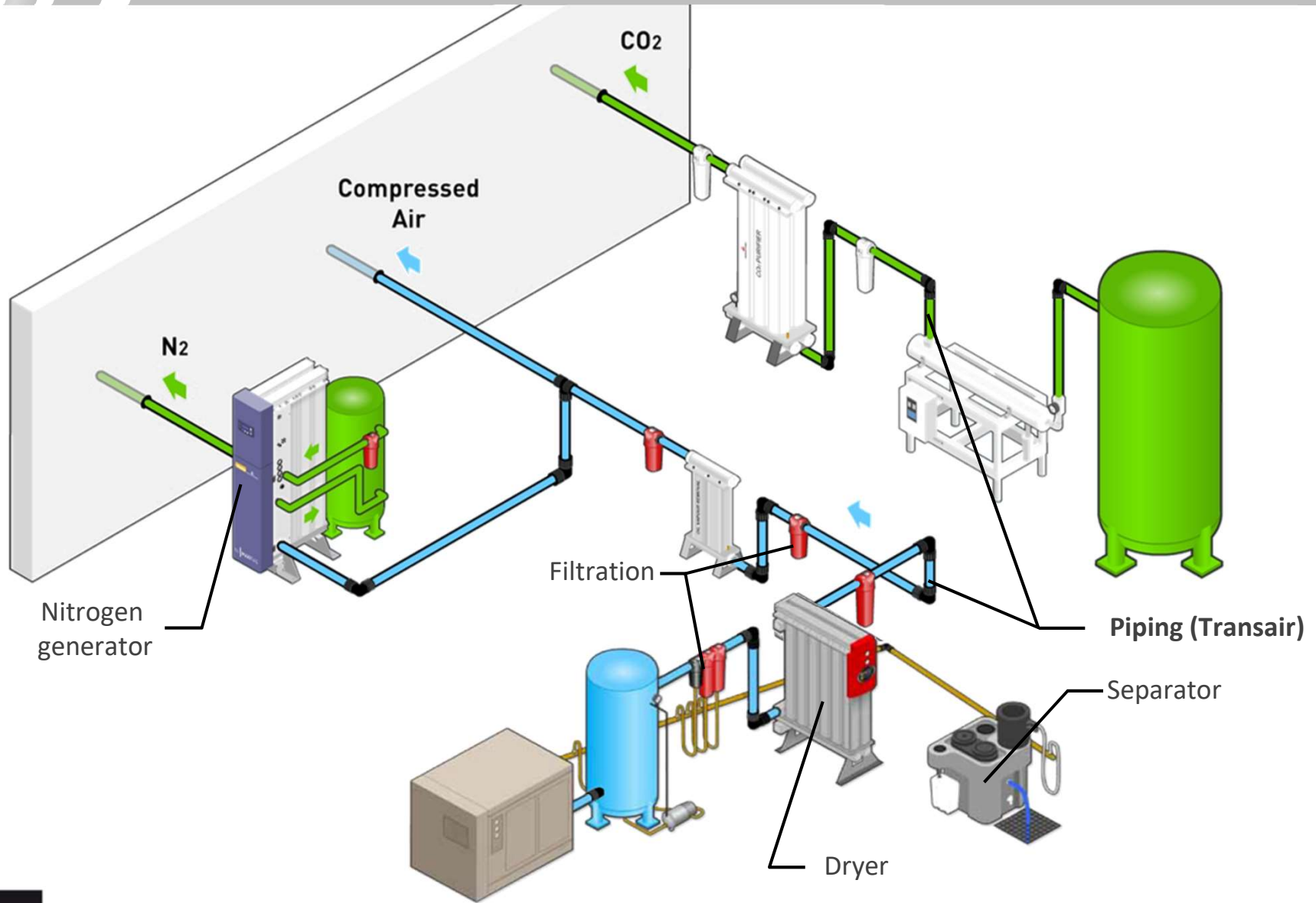


■ Parker – Worldwide group

- Project
- Distribution



# COMPRESSED AIR SYSTEM



## Parker domnick hunter OIL-X - Compressed Air Filters & Water Separators



### ■ Coalescing Filters:

- From 21 to 2,219 SCFM at nominal conditions
- AO Grade: 1  $\mu\text{m}$ , 99.925% efficiency
- AA Grade: 0.01  $\mu\text{m}$ , 99.9999% efficiency
- ACS Grade: Oil vapour removal down to 0.003  $\text{mg}/\text{m}^3$

### ■ Water Separators:

- From 21 to 1,695 SCFM at nominal conditions
- >92% bulk water removal efficiency

## Parker domnick hunter and Airtek Compressed Air Dryers

### ■ Modular and Twin Tower Style Desiccant Dryers:

- From 32 SCFM to 7,5000 SCFM
- -20, -40, -70°C dewpoints
- Heated and vacuum purge options available



### ■ Refrigerated Dryers:

- From 10 SCFM to 1,200 SCFM
- 4°C dewpoint
- Direct expansion and thermal mass available



# NITROGEN GENERATOR

## Parker domnick hunter Nitrogen Generators



### ■ PSA MIDIGAS Nitrogen Generators:

- N2 purities up to 99.999%
- Up to 864 SCFH of N2
- 3 sizes in the product range



### ■ PSA NITROSource Nitrogen Generators:

- N2 purities up to 99.9995%
- Up to 5,474 SCFH of N2
- 9 sizes in product range



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BEST PRACTICES



**Parker** ENGINEERING YOUR SUCCESS.

### Major causes of pressure loss:

- Air velocity
- Bad sizing
- Internal pollution
- Corrosion
- Bad material quality
- Bad air quality
- Environmental conditions

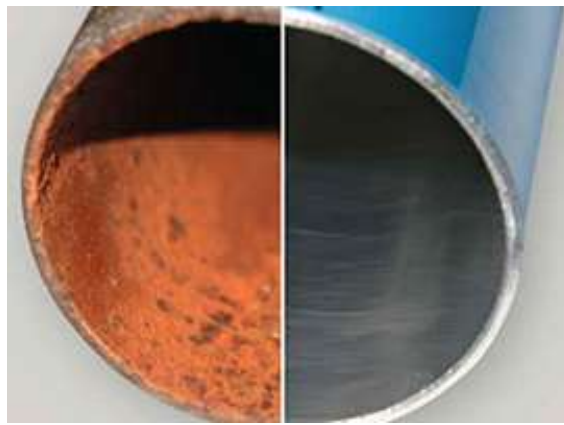
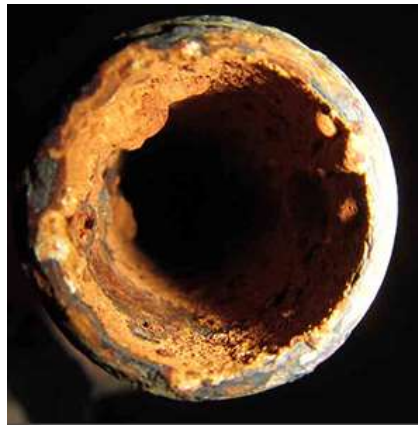
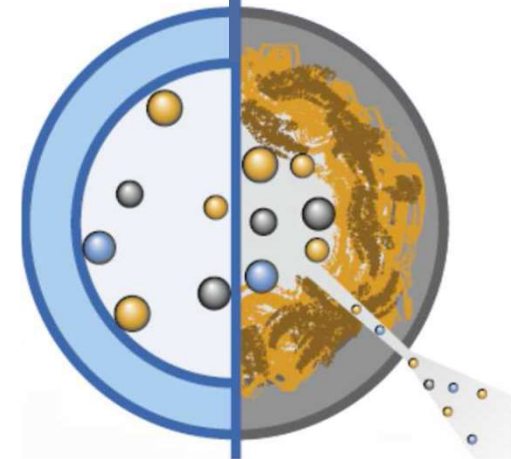
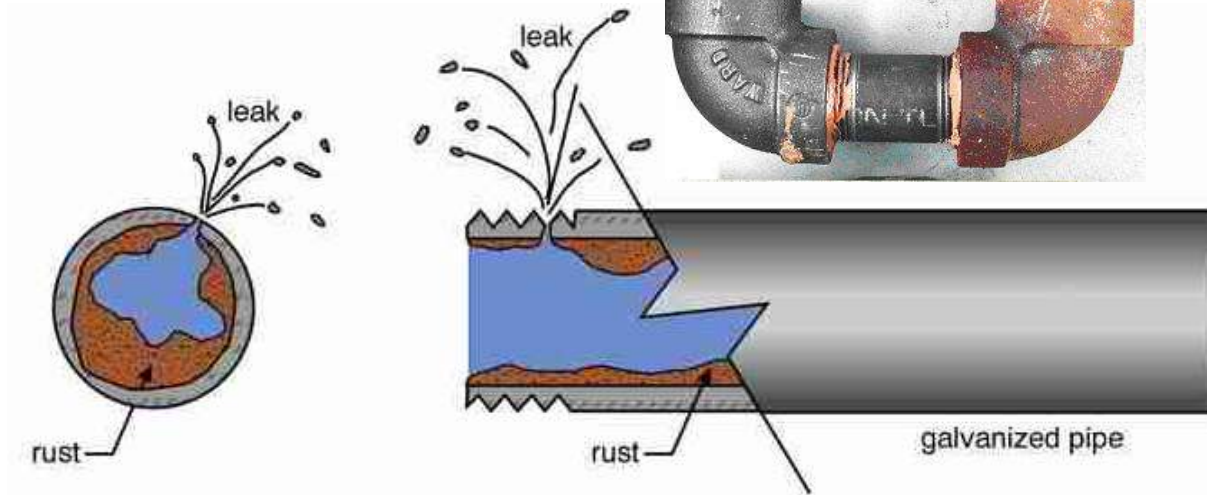




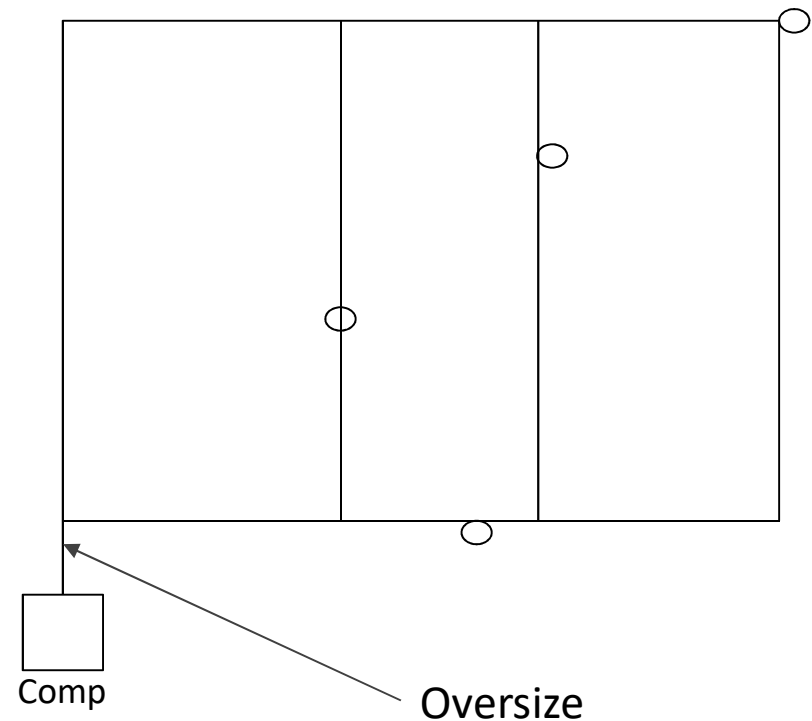
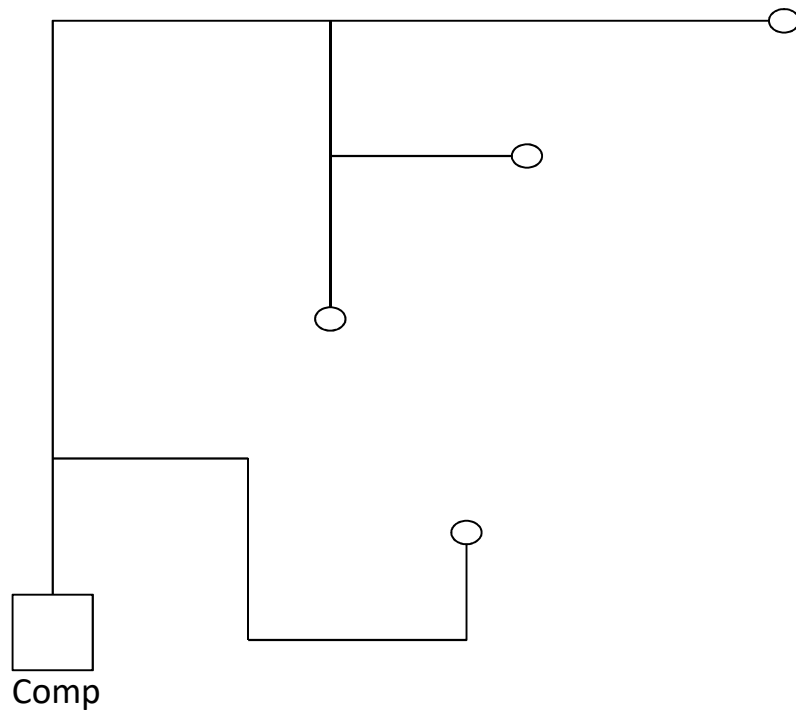
# BEST PRACTICES – PRESSURE LOSS

## ■ Corrosion

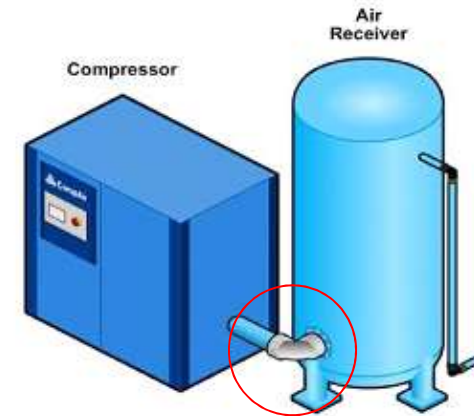
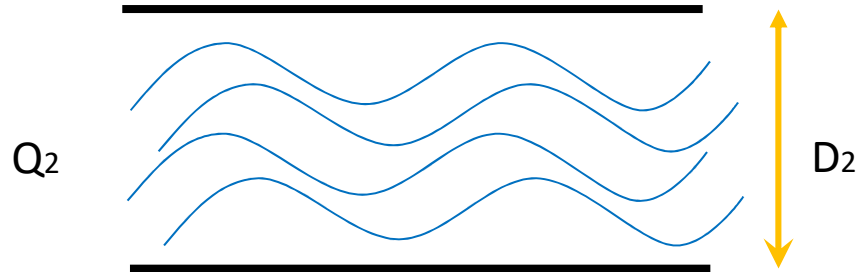
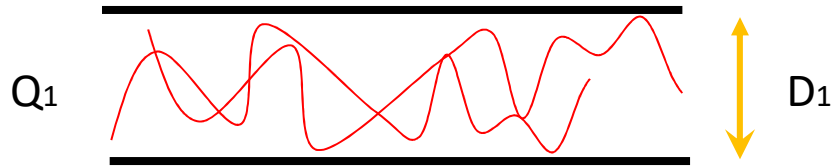
 **transair** | Steel pipe



■ Network layout



## BEST PRACTICES – VELOCITY



$$\left. \begin{array}{l} Q_1 = Q_2 \\ V_1 \neq V_2 \end{array} \right\} \nearrow \Delta P$$

### ■ Velocity Guidelines

- No more than **20 ft/sec** in compressor room headers
- No more than **30 ft/sec** in the distribution header
- No more than **50 ft/sec** in piping drops based on peak end use flows.

# BEST PRACTICES – SIZING

## ■ Main input data

- Working pressure
- Flow
- Length

## ■ Main output data

- Pipe diameter
- Maximum flow
- Velocity

### Project Data

Units

Gas	<input type="text" value="Compressed Air"/>	
Pressure	<input type="text" value="115"/>	psig
Flow	<input type="text" value="600"/>	Scfm
Length	<input type="text" value="700"/>	ft.
Max pressure drop	<input type="text" value="5.75"/> psig or <input type="text" value="5"/> %	
Network	<input type="text" value="Closed main ring"/>	
Transair Range	<input type="text" value="Aluminium"/>	

Size diameter

### Project Results



#### Sizing

Transair® pipe diameter	<input type="text" value="63 mm"/>
Transair® max flow	<input type="text" value="1 180 Scfm"/>
Velocity of the gas	<input type="text" value="19.2 ft./s"/>

#### Pressure drop

Transair® pipe	<input type="text" value="1.57"/> psig
New steel pipe	<input type="text" value="2.61"/> psig
Corroded steel pipe	<input type="text" value="4.71"/> psig

Request for quotation



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### Major causes of air leaks:

- Holes in pipe
- Faulty joint connections
- Expansion/contraction related stresses
- Corrosion
- Installation errors
- Threaded connections
- Environmental conditions



« Leaks can be a significant source of wasted energy in an industrial compressed air system, sometimes wasting, **20-30%** of a compressor's output. »

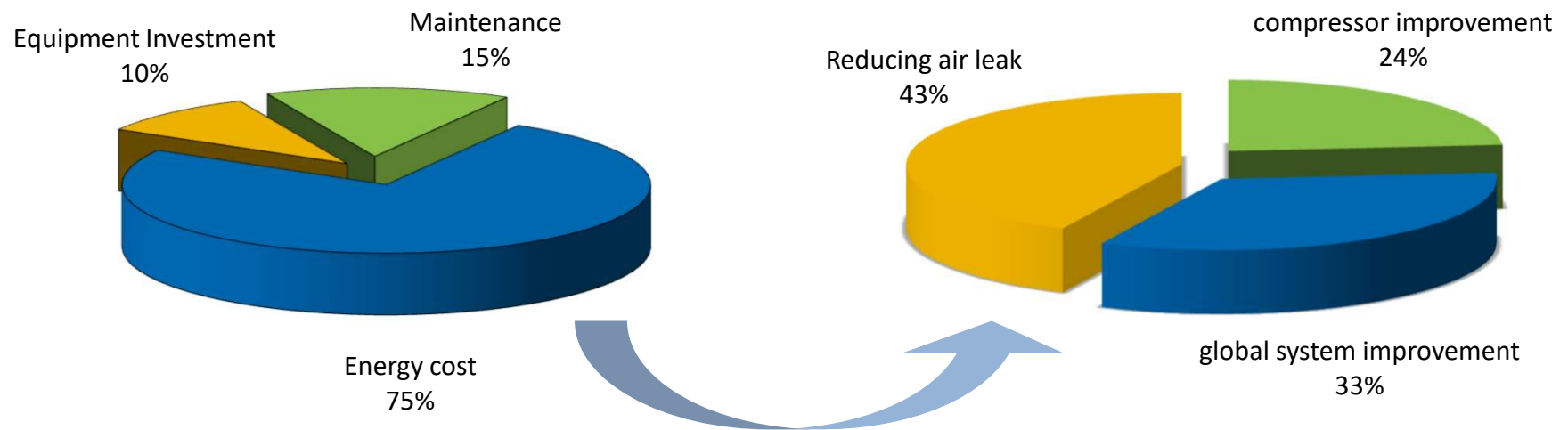


## ■ Energy costs:

Compressed air → accounts an **average of 10% of industrial facilities consumption** of electricity

Typical cost breakdown:

Over a ten years period, **the cost of energy consumed** by an average compressed air system **exceeds** other costs, including **the initial cost of equipment and installation**

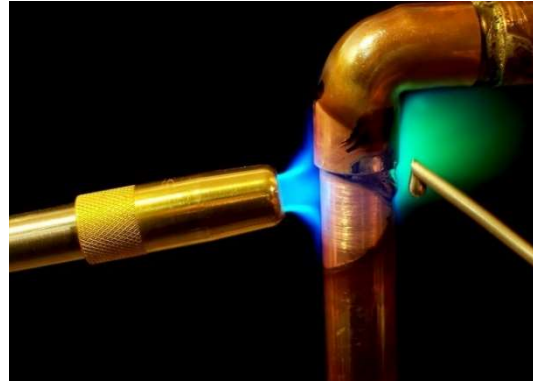


## COMPETITIVE OVERVIEW

### Galvanized/Steel Pipe



### Copper Pipe



### Advantages

- Low cost components
- Readily available
- Rated to high pressure
- Established technology
- Resistant to corrosion
- Lightweight

### Stainless Steel Pipe



### Plastic Pipe



### Disadvantages

- Labor intensive
- Corrosion problems
- Prone to leaks
- Costly to repair
- Not easily modified
- Safety concerns

## COMPETITIVE OVERVIEW

### Aluminum Pipe System



### Advantages:

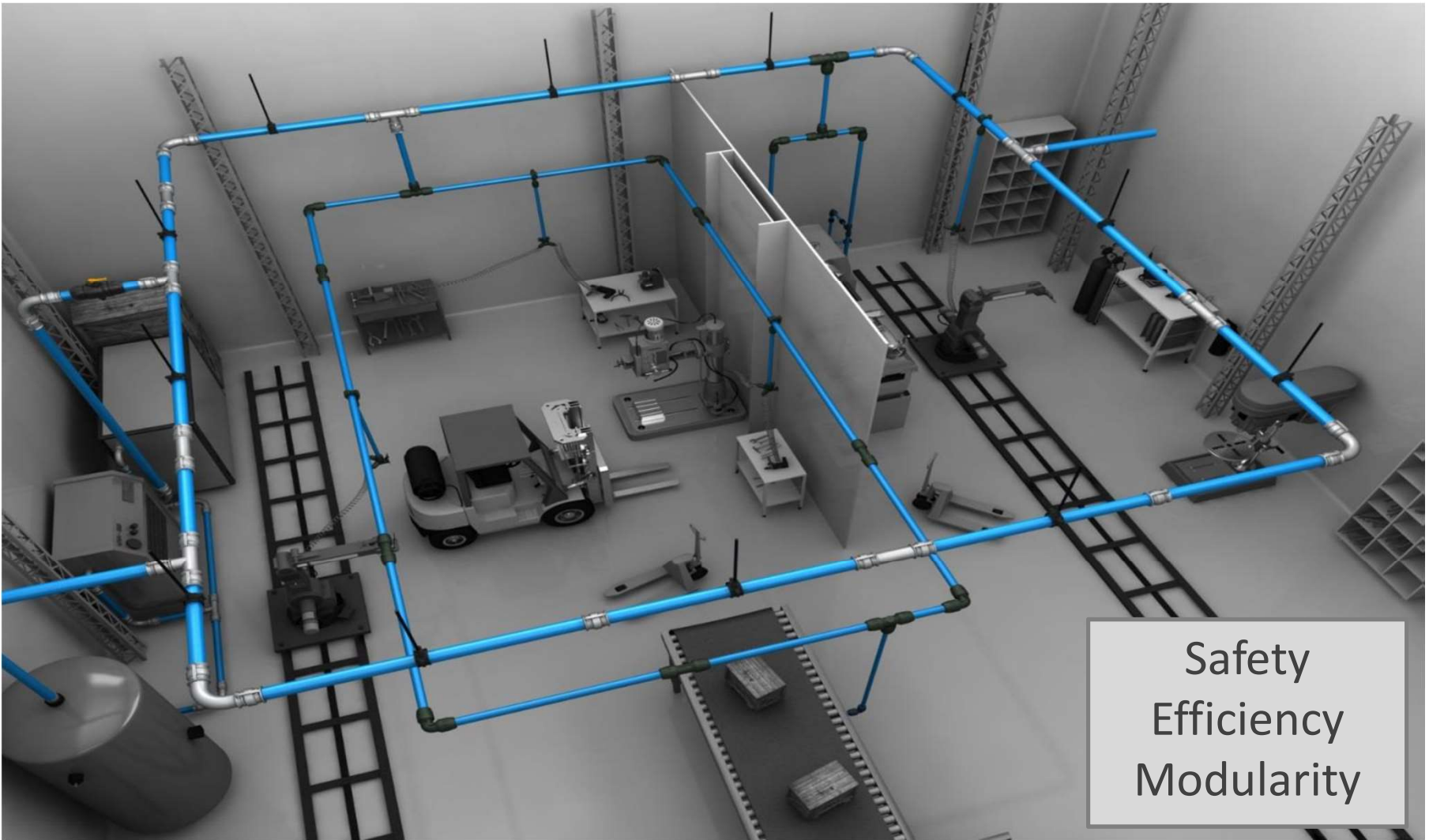
- Provides clean air
- Resistant to corrosion
- Energy efficiency
- Light weight
- Low pressure loss
- **Modularity**
- **Easy and Fast to install**
- **No heavy tooling**
- High quality

 **transair**





# THE ORIGINAL ALUMINUM PIPEWORK

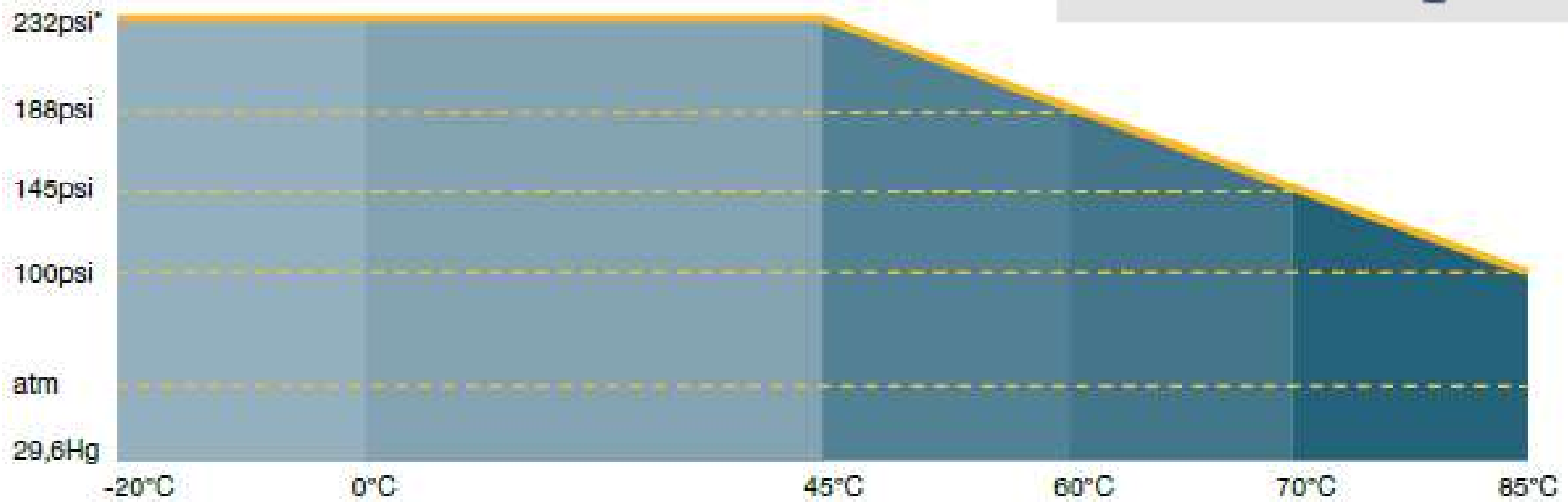
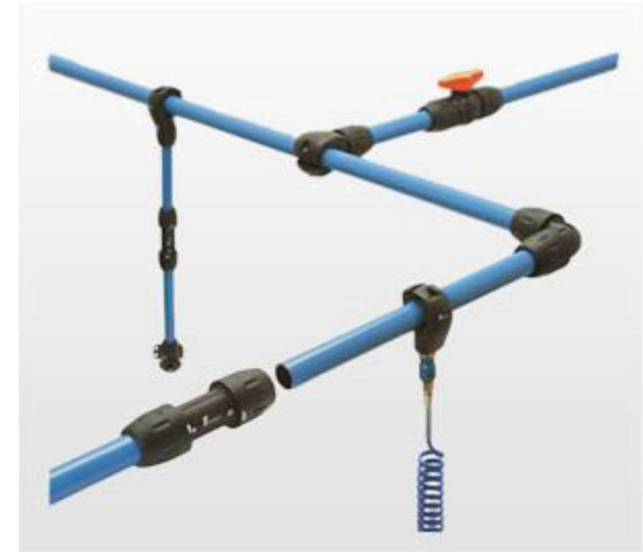


Safety  
Efficiency  
Modularity

## APPLICATIONS

### Multifluid System:

- **Compressed Air** (Dry, Wet and Lubricated)
- Vacuum (99% / 29.6" Hg)
- **Inert Gases** (Nitrogen, Argon, CO2)





## TECHNOLOGY

### Gripping Ring

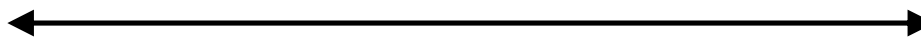
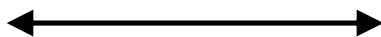
Push-to-connect

### Snap Ring

Quick-fit connection

### Lug & Clamp

Quick-fit connection



1/2"  
(16.5mm)

7/8"  
(25mm)

1 1/2"  
(40mm)

2"  
(50mm)

2 1/2"  
(63mm)

3"  
(76mm)

4"  
(100mm)

6"  
(168mm)

Safest technology for each diameter



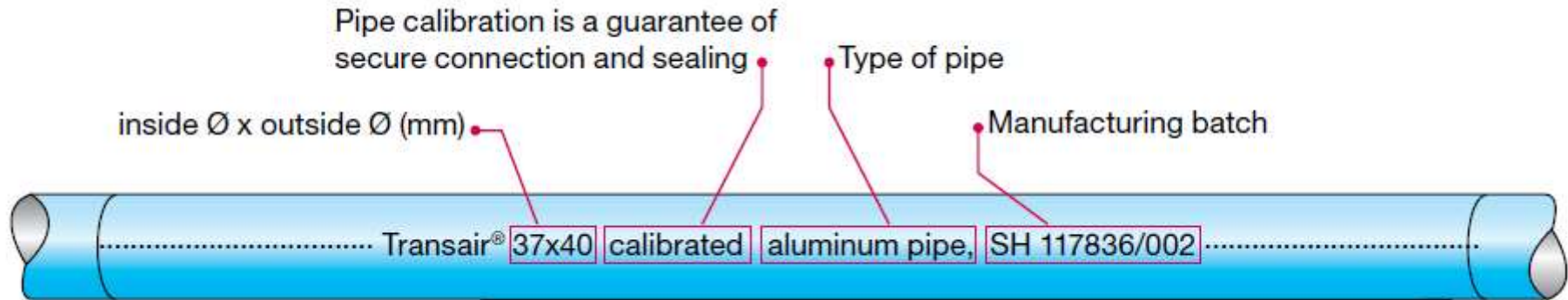
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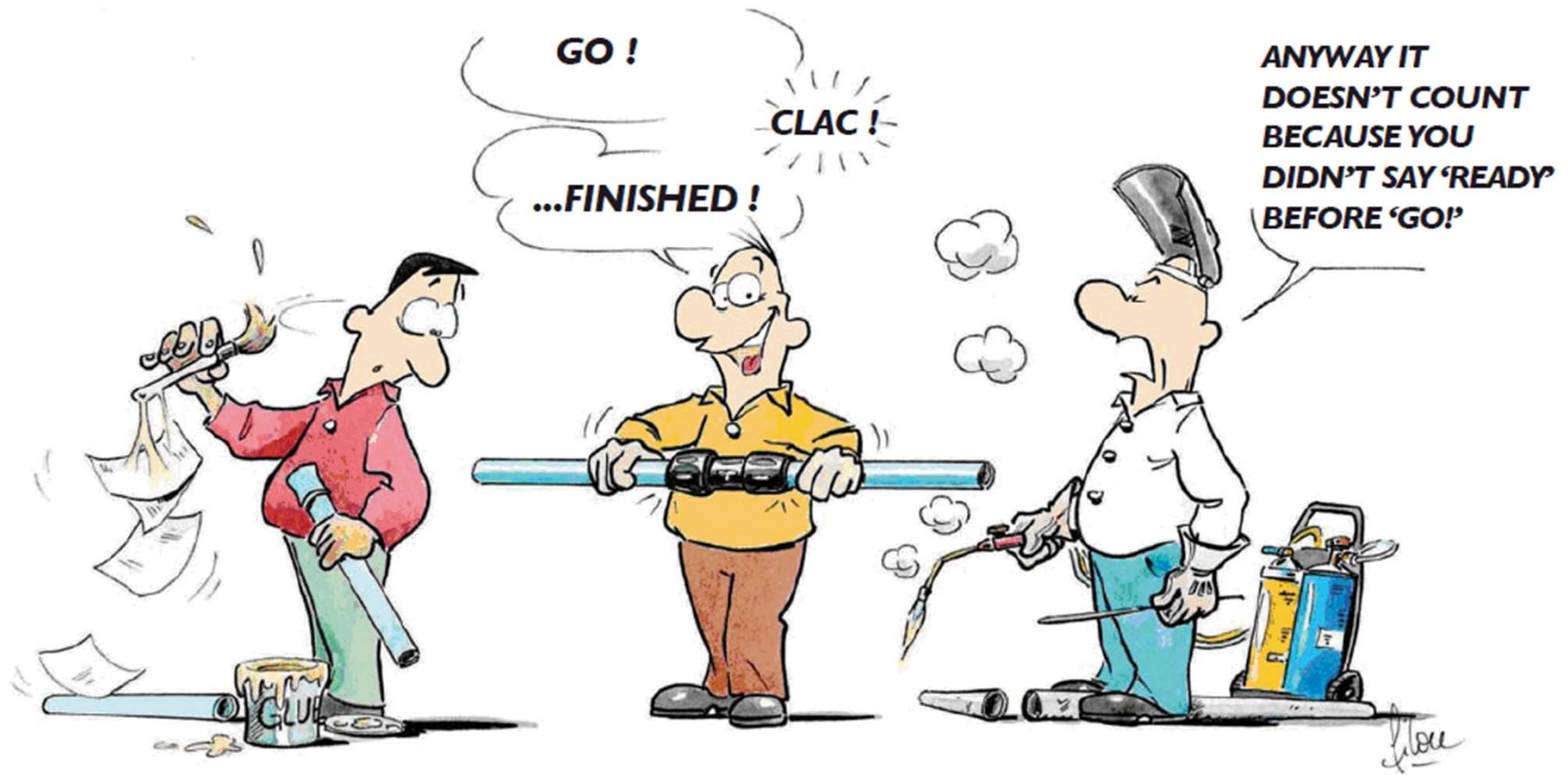




## Tracability

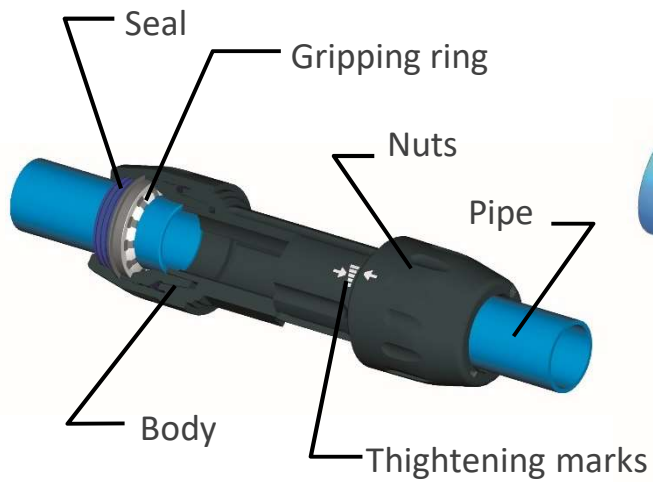
Batch number





### Gripping Ring

Push to connect

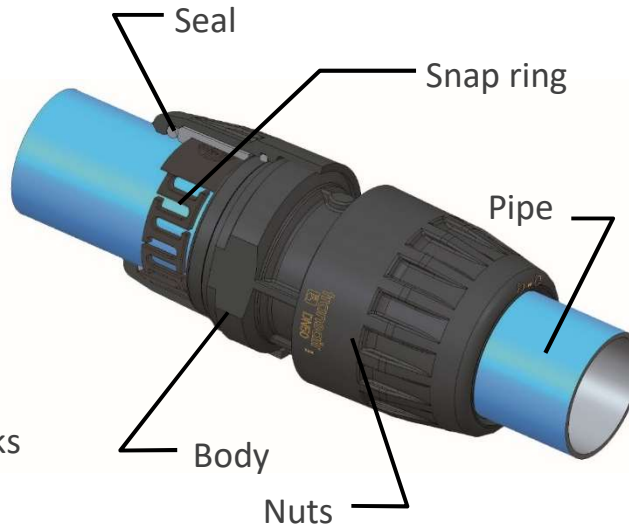


■ **Body**

Heat treated polyamide 6.6  
+  
30% of fiber glass reinforcement

### Snap Ring

Quick-fit connection

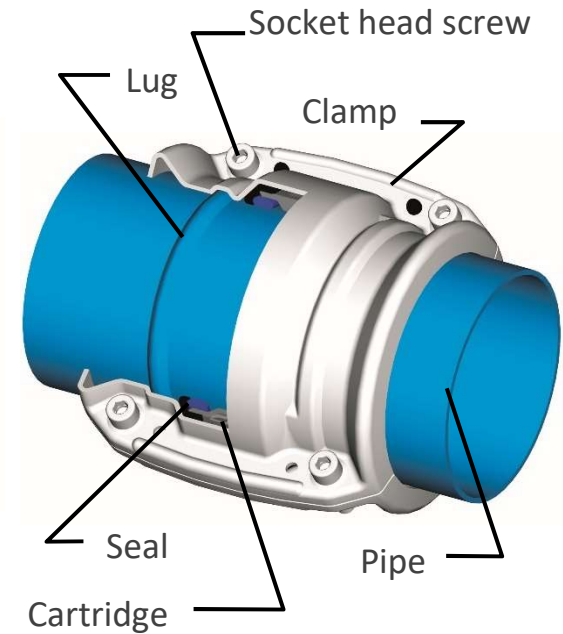


■ **Body**

Full Aluminum

### Lug & Clamp

Quick-fit connection



■ **Body**

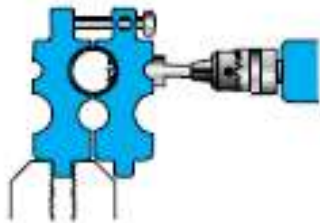
Full Aluminum

# DROPS



- Quickest installation
- No water on drops
- Low space needed
- High efficiency
- Modular

1 - Drill



2 - Deburr



3 - Install

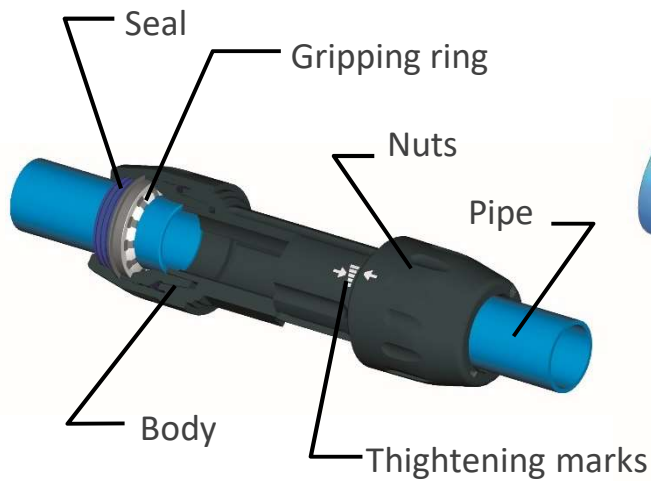


4 - Tighten the screw



### Gripping Ring

Push to connect

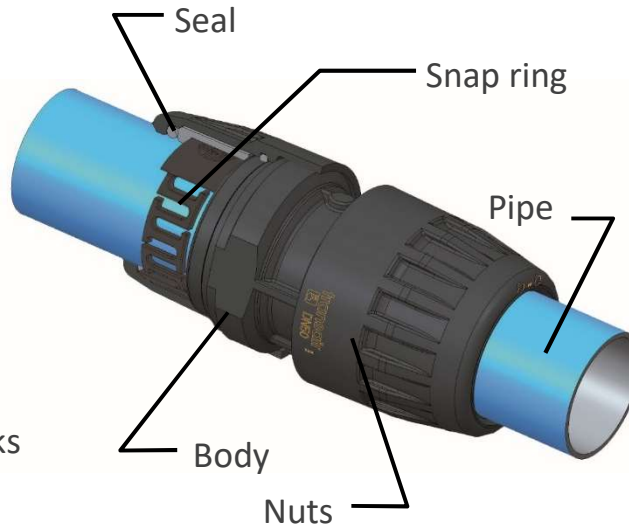


■ **Body**

Heat treated polyamide 6.6  
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30% of fiber glass reinforcement

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Quick-fit connection

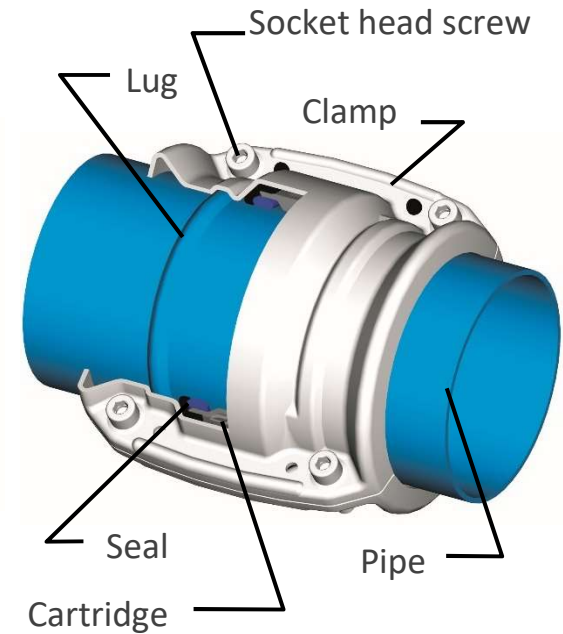


■ **Body**

Full Aluminum

### Lug & Clamp

Quick-fit connection



■ **Body**

Full Aluminum

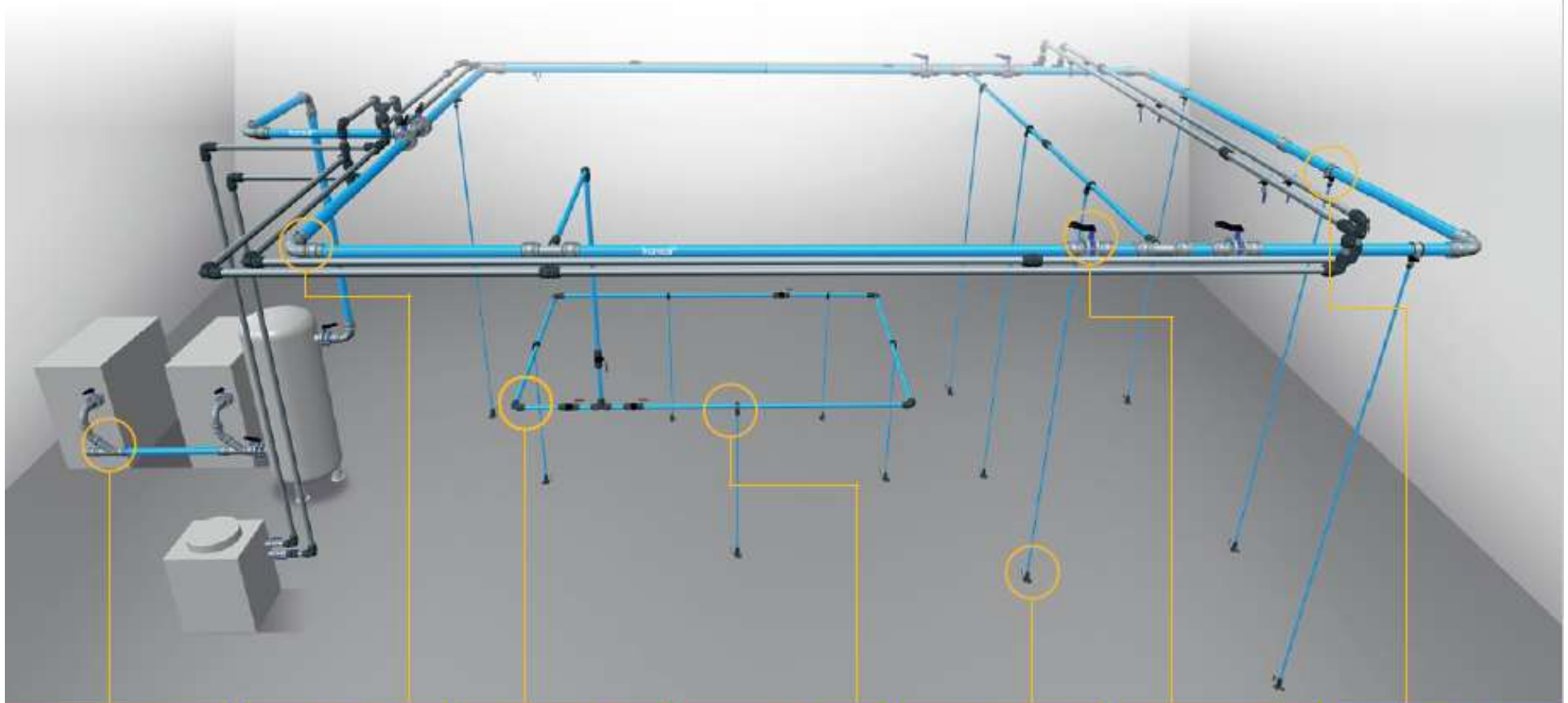


## TOOLS

6 main tools to install the complete range of TRANSAIR  
ALL OF THEM IN THE INSTALLATION KIT



# FULL RANGE OF FITTINGS



Technical Room	Main Ring	Secondary Ring	Drop	Point of Use	Isolation Valve	Take Off
						



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## INDUSTRIAL SECTORS

- Aerospace
- Automotive
- Construction materials
- Educational
- Electronics
- Energy
- Food & Beverage
- Laboratory / Pharmaceutical
- Metal working
- Mining
- Plastic industry
- Railway / Transportation
- Textile industry
- Tobacco



## What TRANSAIR offers to the users:

- A **complete range** from the outside of the compressor to using point: **dimeters from [1/2"] to [6"]**
- A **adapted to all sectors** system : Aerospace, food industries, automotive, pharmaceutical, laboratories and workshops
- A **more efficient** (high flow rate) and **lighter** technical system than traditional systems: Transair is 6 time lighter and faster to install than plastic, steel, stainless steel or copper pipes



## CERTIFICATIONS



■ **ISO 9001**  
Quality Management  
System



■ **TÜV**  
Safety and Quality



■ **ASME B31.1/B31.3**  
Requirement for piping  
systems for industrial  
plants



■ **CRN**  
Registered under CRN



■ **Qualicoat**  
Quality of the lacquer



■ **ISO 8573 1-1-1**  
Standard of quality



■ **10 Years guarantee**  
Free of defects

## CERTIFICATIONS



### ■ Product testing

Tested and controlled at every stages (pressure and leaks)



### ■ Neutral gas & purity

Nitrogen purity certificate and compatibility with Argon, CO2 and mix



### ■ Safety

Euroclasses EN 13501-1 and UL 94HB equivalent to ULc S102-10



### ■ Product tracability

Long term declaration, certificate of origin and material certificate (pipe)



### ■ Labs free

Meet clean room and paint application



### ■ Silicone free

Premium air purity, no need of complementary filters



### ■ Gluten free

Certified no gluten



### ■ Oil free

Will not contaminate the fluid with oil or grease particules



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## What TRANSAIR offers to the users:

- A **resistant to corrosion** network which gives energy efficiency thanks to pressure loss reduction by the time
- A **removable and reusable** system thanks to unique connection technologies. The Transair system can be modified with quick and easy extensions
- A **high standard certifications & Constant Air Quality** (ISO 8573-1 class 1-1-1) system, from production center to point of use: reduction of maintenance cost



## COST COMPARISON

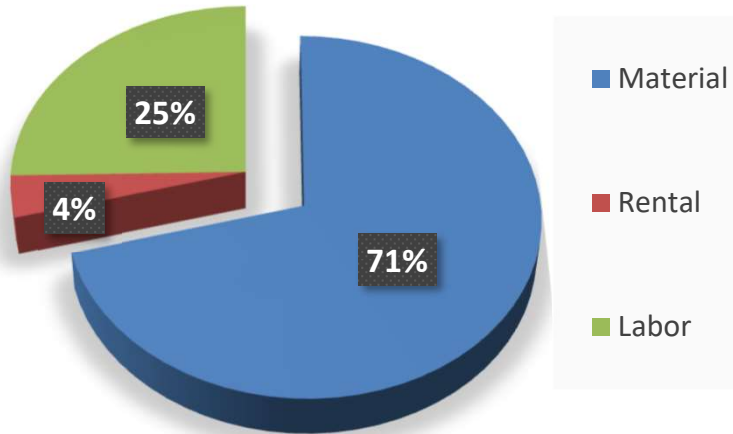
	Transair	Steel Welded	Steel Roll Grooved
<b>Material</b>	\$ 31,723.90	\$ 13,513.14	\$ 16,907.30
<b>Lift Rental</b>	\$ 644.00	\$ 2,127.50	\$ 1,772.92
<b>Lull Rental</b>	\$ -	\$ 1,782.50	\$ 1,485.42
<b>Labor</b>	\$ 5,347.50	\$ 29,250.00	\$ 24,277.50
<b>Drops</b>	\$ 5,299.90	\$ 8,832.00	\$ 11,063.00
<b>Total</b>	<b>\$ 43,015.30</b>	<b>\$ 55,505.14</b>	<b>\$ 55,506.14</b>



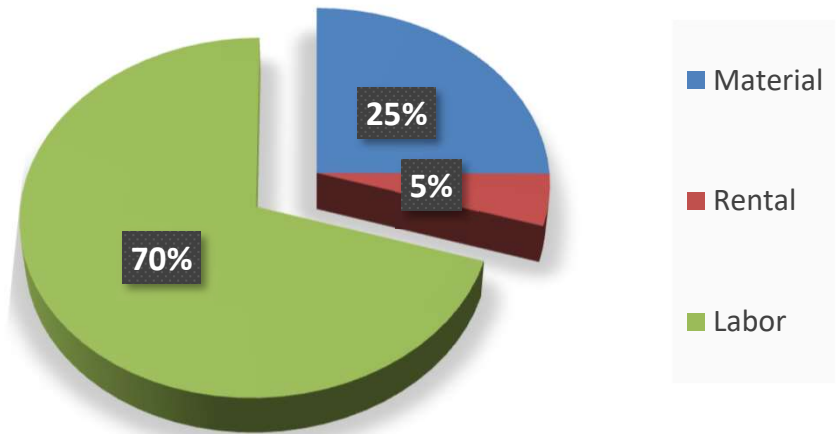


# COST COMPARISON

## Transair



## Traditional



## What TRANSAIR offers to the users:

- The first Aluminium piping system for compressed air with **20 years of experience** on the market
- **10 Years guarantee:** increasing efficiency and reducing pressure drops thanks to pre tested products
- **Already paint** with special UV resistant lacquer coating certified **Qualicoat** (Blue, Green or Grey)



## SERVICES

### ■ Engineering stage

- Technical report and recommendations
- Sizing calculations and layout
- Bill of material and cost analysis
- Estimation of installation time



### ■ Installation stage

- Coordination with contractors
- On-site training before installation
- Local inventory (Parker and Distributor)
- Delivery on-site



### ■ No charge software and technical tools

- Energy saving tool (Transair Energy)
- Sizing tool (Transair Flow Calculator)
- Drawing tool (CAD / BIM)



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## PRODUCT DESIGN AND SUPPORT

### ■ Made in France

- Head Office in Rennes
- Production in Muzillac and Malestroit
- Packaging in Baillé



### ■ Service in Canada

- Marketing and sales support
- Inventory and local distribution



# REFERENCES



## EXAMPLE OF APPLICATION



Amazon facility in Brampton, Ontario

## EXAMPLE OF APPLICATION



Transair & Queen Elisabeth II



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## EXAMPLE OF APPLICATION



Transair & Ex Bulgarian President: Rossen Plevneliev



Transair & Mexican President: Enrique Peña Nieto



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## EXAMPLE OF APPLICATION



Canada Post in Winnipeg, Manitoba

EXAMPLE OF APPLICATION



## EXAMPLE OF APPLICATION



## EXAMPLE OF APPLICATION



Ceisa in Spain



Salt mine in Romania



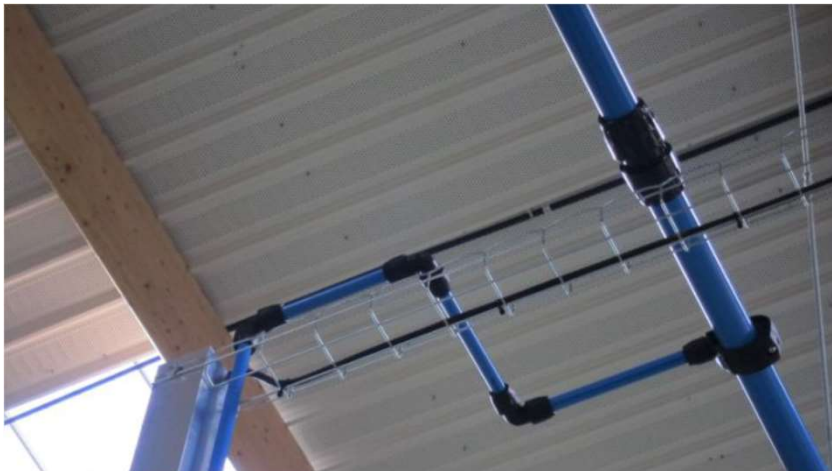
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## EXAMPLE OF APPLICATION



## EXAMPLE OF APPLICATION



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## EXAMPLE OF APPLICATION





TRANSAIR®,  
THE SYSTEM YOU CAN ALWAYS  
COUNT ON



# Thanks for your attention !



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Parker Canada Division

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