Technical / Application Info

Hose and Tubing | Blow Guns | Quick Disconnects
Filters, Regulators, Lubricators – FRLs

Selecting The Proper Hose or Tubing Product

It is very important to select the proper tubing or hose product and related accessories. Each application should be carefully reviewed; failure to do so can result in equipment damage or injury. The following acronym lists important considerations to be included in selecting the proper hose or tubing product.

S.T.A.M.P.E.D.

Size – The working length of the hose or tubing.

Temperature – The temperature of the medium passing through the hose or tubing product, as well as, the temperature of the tubing or hose product environment.

Ambient – The working environment hose or tubing product.

Media – The fluid or gas going through the hose or tubing product.

Pressure – The required working pressure of the system the hose or tubing product will be used.

Ends – The fitting or connection requirements of the hose or tubing product.

Diameter – The inside and outside diameters of the hose or tubing products

Common Terms

PSI – **P**ounds per **S**quare **I**nch (Force) defines air pressure.

CFM or **SCFM** – **S**tandard **C**ubic **F**eet per Minute (Volume) defines air flow.

Durometer – A measurement scale used to determine the hardness of material.

Rockwell – A measurement scale used to determine the hardness of material.

NPT – American **N**ational Taper **P**ipe **T**hread is a standard thread used in the US.

FPT – **F**emale American National Taper **P**ipe **T**hread

MPT – **M**ale American National Taper **P**ipe **T**hread

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Choosing The Right Quick Disconnect

Quick disconnects offer a quick and efficient method of joining pneumatic lines. The operating principle for sleeve type couplers is basic, yet effective. When the sliding sleeve on the coupler is retracted, internal locking balls are released, permitting the connector to be inserted or removed. There are two basic areas to consider when determining coupler and connector compatibility, interchange and body size. Interchange refers to the locking design variations of the internal coupler mechanisms and connector external nose configurations. Body size refers to sizing of an individual interchange connection. The body size and flow capacity of quick disconnects generally corresponds to the inside diameter of the hose with which they are used.

The Industrial Interchange or Mil-Spec is the most commonly used quick disconnect interchange. Mil-Spec refers to the original military design specification MIL-C-4109.

The Automotive Interchange is commonly referred to as the Tru-Flate interchange. The Tru-Flate name refers to the original designer of the series.

The ARO Interchange design looks similar to the Industrial Interchange but they are not interchangeable. The ARO name refers to the original designer of the series.

The Lincoln Interchange design has a longer nipple by design than the any other interchange for which it gets its commonly used slang name “Long Nose”. The Lincoln name refers to the original designer of the series.

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Connector – Plug, coupler plug, male end, male plug, nipple

Coupler – Female body, socket, female end

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Choosing The Right Blowgun

A blowgun is a pneumatic device designed for use in many industrial applications where compressed air for cleaning purposes is used. Blowguns can be purchased with many tip configurations for many possible applications. However, the most important factor in choosing the right blowgun is SAFETY. Safety includes the following considerations: PSI (force), noise level, and ergonomics. Safety Standards for PSI and noise level are outlined in the following US Department of Labor, OSHA Standards For General Industry Revision 1999:

Standard 1910.242(B) – Compressed air for cleaning purposes shall not exceed 30 pounds (13.5 kilograms) per square inch (6.5 square centimeters) when the nozzle end

is obstructed or dead-ended, and then only with effective chip guarding and personal protective equipment.[1]

Standard 1910.95(a) – Protection against effects of occupational noise exposure shall be provided when the sound levels exceed those shown in Table G-16 of the Safety and Health Standards. Feasible engineering and/or administrative controls shall be utilized to keep exposure below the allowable limit.[1]

Table G-16 Permissible Noise Exposure

Duration Per Day (hours)	**Sound Level dBA Slow Response**
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

Ergonomics plays a large role especially if the blowgun is used for a long period of time. When selecting a blowgun the users' comfort is considered. Grip, weight, feel, and ease of use are important safety aspects that reduce user fatigue and discomfort.

Safety glasses and personal protective equipment are always used and required!

[1] General Industry Digest, US Department of Labor, Occupational Safety and Health Administration, OSHA2201, 1999(Revised)

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Selecting The Proper Air Preparation Unit

Air Preparation units are key elements in a compressed air line. Clean, regulated, and/or lubricated compressed air is essential in all industries and applications. Air preparation units prolong the life of tools, machinery, pneumatic controls, pneumatic valves, etc., reducing maintenance and downtime costs. Each application should be carefully reviewed; failure to do so can cause equipment damage or injury. The following are common components of air preparation units.

Filter – An air preparation unit designed to remove harmful contaminates such as pipe scale, rust, and other airborne contaminates from a compressed air line. Such contaminates can build up on internal surfaces which shorten the life of pneumatic devices

Coalescing Filter – An air preparation unit designed to remove liquid or oil aerosols and submicron particles from a compressed air line.

Regulator – An air preparation unit designed to regulate compressed air. They provide

pressure regulation for the various requirements of pneumatics devices and applications. The variety of sizes and designs increase accuracy for the particular application.

Filter/Regulator – An air preparation unit that combines the features and benefits of a filter and regulator in one unit. Commonly called a "Piggyback", this unit is an excellent space saving unit for applications were space is limited.

Lubricator – An air preparation unit designed to dispense lubrication to pneumatic devices. Pneumatic tools, machinery, controls, etc., require lubrication to run at peak efficiency. Lubricators can provide constant lubrication according to factory recommended specifications reducing maintenance and downtime costs.

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