

Consider the Air Source

Benefits of a Tuned System Air Supply

A properly tuned factory air supply system can help to ensure that your machines operate at peak efficiency and remain in good condition for years to come.

- ⦿ Improved Machine Efficiency
- ⦿ Reduced Maintenance Costs
- ⦿ Extended Machine Lifespan

CFM and PSI

Besides keeping your air supply pure as possible, two main factors in delivering air to your machine are CFM (Cubic Feet per Minute) and PSI (Pounds per Square Inch.)

- ⦿ CFM compares to the flow rate of water coming out of the hose. It represents how much water flows through the hose at any given time. In air systems, the horsepower of your system, size of pipe, and pipe layout affect CFM.
- ⦿ PSI compares to the pressure of the water coming out of the hose. It represents the force of the water that is pushed out of the hose.

In general, as the PSI of a pneumatic system increases, the delivered CFM may decrease due to various factors, such as pressure drop, frictional losses, and restrictions in the air distribution system.

Therefore, it is essential to monitor both air pressure and air volume to your machine.

If you see issues of timing and speed of the pneumatic system of your machine, verify that both air pressure and air volume meet air specifications of your machine as a first step.

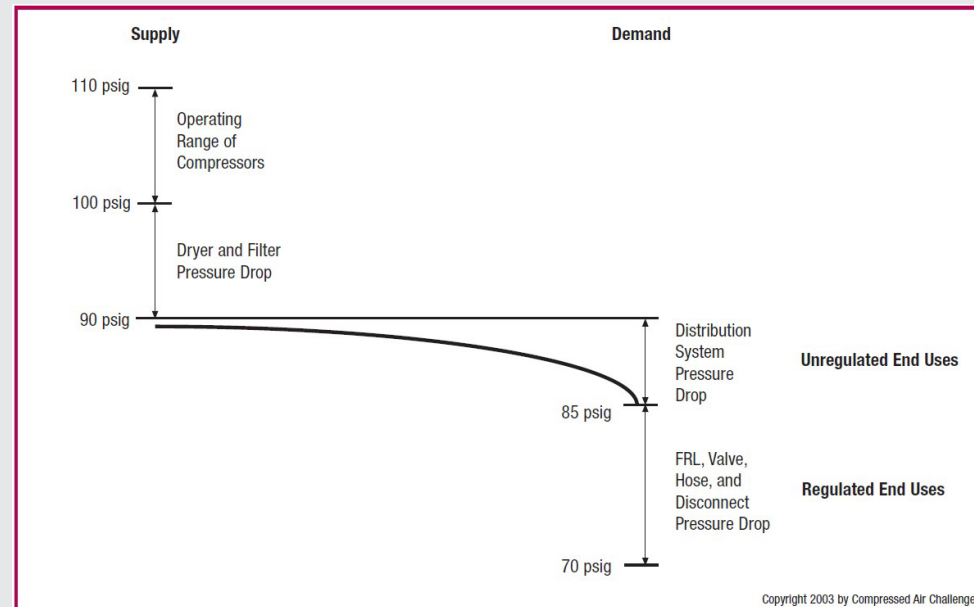
Keeping your air delivery system in top condition and tuned to your machines in the factory will result in a happy productive experience.

Maintaining Your System Air Supply

Maintaining a factory air system is important to ensure optimal performance and safety of the machinery. Below are some steps to take to maintain a factory air system.

Regular inspections: Regular inspections of the factory air system can help identify any potential issues before they become bigger problems.

Filter maintenance: Filters should be checked regularly and replaced as needed. Dirty filters can reduce the effectiveness of the air



system and lead to increased energy costs.

Monitoring air system: Regular monitoring of a factory air system can help identify any issues that occur. This can include monitoring contaminants such as water and oil, pressure, and volume.

Preventative maintenance: Regular preventative maintenance can help ensure that the air system is working properly and prevent potential issues from occurring. This can include lubrication of moving parts, checking electrical connections, and testing controls and sensors.

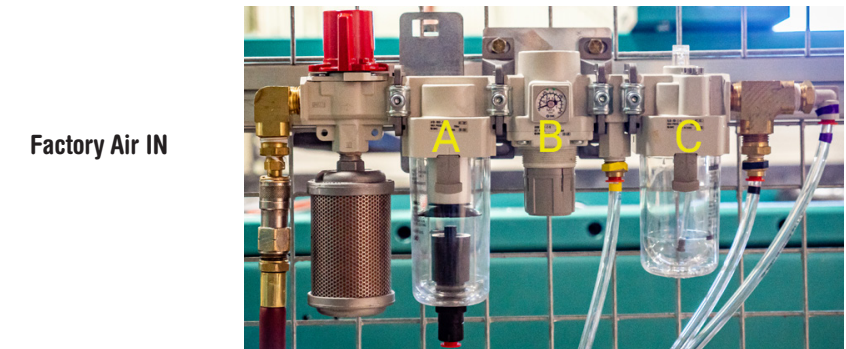
Training: Ensuring that employees are trained on the proper use and maintenance of the air system can help prevent potential issues and ensure that the system is being used to its full potential.

References:

Information and graphics in this supplement are derived from various sources at <https://www.cagi.org/>.

At the Kval Machine

The Filter Regulator Lubricator (FRL) takes in shop air and supplies filtered dry air and lubricated air to the machine.



A. Filter: The filter element removes impurities such as dust, dirt, and moisture from the compressed air supply before it enters the machine. This helps to protect the internal components of the machine from damage and prevent issues such as clogs or leaks.

B. Regulator: The regulator controls the pressure of the compressed air entering the machine. Confirm that the Air Pressure Gauge matches the specified pressure.

C. Lubricator: The lubricator injects a small amount of oil into the compressed air supply, which helps to lubricate the internal components of the machine. This reduces wear and tear on the machine, prolongs its lifespan, and helps to ensure that it operates smoothly.

Take Aways

- ⦿ Make sure your factory air system can supply the air specifications of the machine. Failure to do so will cause the machine not to run to full capacity and may void your factory warranty.
- ⦿ Monitor and maintain your factory air system. Consider installing a data logger to actively monitor your system.
- ⦿ Maintain your Kval machine's air system. Clean filters, purge water collected in the filter, verify the lubricated air is being delivered, and check air pressure on a regular basis. Refer to your machine's Service Manual for more information.

In Conclusion

A properly tuned and maintained factory air supply system is an essential component of any industrial machine setup. A tuned and maintained air supply system can help to improve efficiency, reduce maintenance costs, extend machine lifespan, and improve product quality. Don't let a poorly functioning compressed air supply drag down the performance of your industrial machines.