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iii Illawarra
Industrial
Instrumentation

Zero Energy Pneumatic Isolation



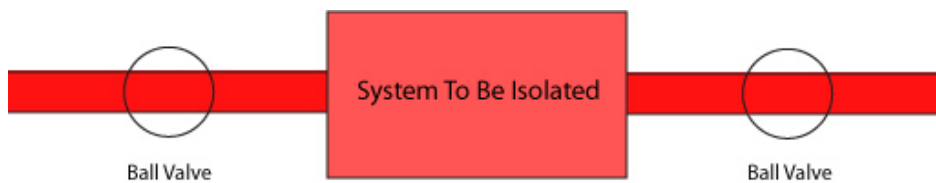
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Zero Energy Isolation of Pneumatic Circuits

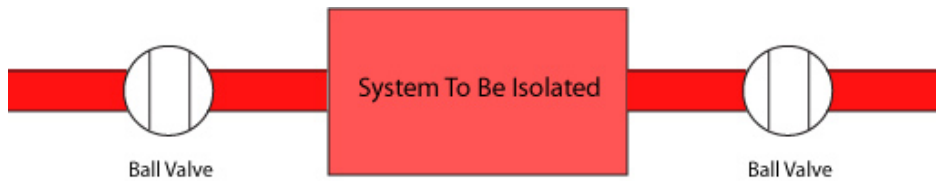
More and more sites are forming ‘Zero Energy Isolation’ policies, ensuring that when you isolate a particular system there is no risk of harm from stored energy being released.

While many sites put in indicators and other equipment to monitor their electrical systems, not many pay close attention to their pneumatic circuits and how to make them zero-energy.

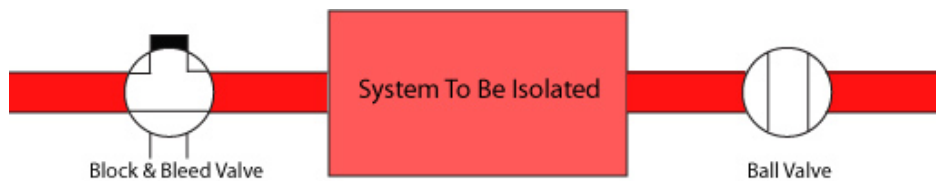
Let’s take a regular installation where we have installed ball valves on either side of the device in order to isolate it from your air system.



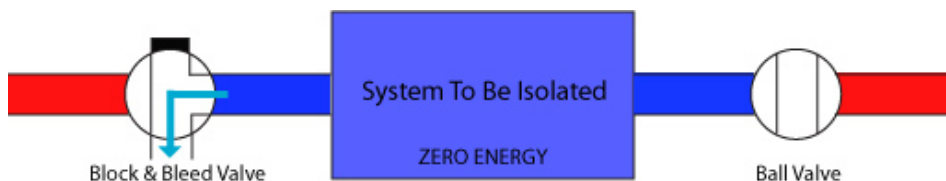
If we isolate the downstream and upstream ends, we have effectively isolated the device...but we have also trapped pressure in the system. This is not a zero-energy isolation, since when we open the pipework the remaining energy will exhaust in a potentially dangerous blow.



So how can we isolate in a zero-energy way? The answer is simple. We replace the isolation valve BEFORE the system to a 3-ported ‘block and bleed’ valve.



This makes no difference when we are in the running condition, but when we isolate, the air already in the system is vented in a safe manner.





SMC VHS Series Block & Bleed Valves

Illawarra Industrial Instrumentation carries the SMC block and bleed valves in a number of port sizes, suitable for installation in both standard and Bluescope Steel sites.

It allows you to isolate a system in a zero-energy manner with a lockable valve.

A special Bluescope Steel compliant version is also available for BSL sites.



VR3110-01 Pneumatic Indicator

This simple device 'pops' up when pressure is present in a line and drops down again when pressure is exhausted. It is an excellent and inexpensive visual method of detecting when your circuit is at zero energy.

Using an appropriate mounting block, it can be easily installed down-stream from a VHS isolation valve or fitted to a tapping point to confirm isolation.



AVL Series Isolation Valve & Soft Starter

Combining a lockable isolation valve and a soft-starter creates the perfect main isolation valve & emergency stop for a pneumatic system. Not only does the system allow you to quickly and easily isolate your process, but when you turn the system back on, it slowly raises your pressure from zero rather than simply opening all the way – avoiding the damage that may occur from creating a large pressure shock to downstream instruments.