



SCROLL AIR COMPRESSORS: A SPACE SAVING AND QUIET SOLUTION FOR LABORATORIES

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Scroll air compressors have been around for decades but it wasn't until recently that they became a major player in the compressed air industry. Today, oil free scroll air compressors are well proven, and well received, in medical/research and development (R&D) laboratories, pharmaceutical and toxicology and forensic testing facilities. Labs use air in their nitrogen generation process, which requires air purity and clean, dry compressed air.

First, on how scroll technology works. Within each scroll compressor are two interleaving scrolls: one orbiting and one fixed. Atmospheric air entering the compression chamber is gradually reduced as the orbiting scroll rotates. Compressed air is exhausted through the outlet at the center. Because air movement is continuous from the suction port through the discharge port, scroll compressors provide pulsation-free delivery of oil free compressed air.

Why are oil free scroll air compressors popular in medical and laboratory applications? There are many reasons but the top five include:

1. Clean, Oil Free Air

Sullair scroll compressors – the SRL Series – provide 100% oil free air for these critical applications. SRL Series compressors are certified oil free under ISO8573-1. Oil free compressors help eliminate potential contamination as no oil or lubricant is introduced into the air compression process.

2. Ultra-Quiet Operation

When you walk into a laboratory, it's often like walking into a library. Loud noise is a problem in medical, lab and testing facilities, making oil free scroll air compressors the solution.

Scroll compressors are not just quiet — they're ultra-quiet. SRL Series compressors offer noise levels as low as 48 dBA, making them suitable for indoor applications. To compare, libraries are typically around 40 dBA. This means scroll compressors also do not require a separate sound attenuated room. Scroll compressors can even be installed at point-of-use, resulting in lower installation and piping costs.

3. Compact Footprint

Scrolls have the advantage of a smaller footprint, which minimizes the floor space needed. We've found many labs tend to put the scroll compressor in a closet, which is another advantage, as a designated compressor room is not required.

4. Easy to Operate and Maintain

SRL Series scroll compressors are known for their simplicity and reliability. The scroll design has a minimal number of moving parts, helping ensure a long operating life. If maintenance is needed, the unit is easily accessible for inspection and repairs.

5. Matching Air Demand

Maximizing efficiency means more than just having an efficient air compressor. One benefit specific to Sullair SRL Series oil free scroll air compressors is they have a built-in logic to help utilize the air compressors most efficiently. A patented process modifies operation by shutting down compressor pumps not needed and lowering maximum pressure setting automatically.

This not only saves wear and tear on the compressor, but also provides energy savings by not producing unneeded air. In other words, there are additional cost savings.



With the longevity of the SRL Series' pumps, the compressors typically see a lifetime of 15,000 hours, which is typically 5,000 more operating hours than some competitive units. This presents another cost savings opportunity.

Oil free scroll air compressors eliminate the risk of oil contamination while providing a reliable, efficient and highly cost-effective source of oil free compressed air. As with any compressor, the best way to know what's best for you and your application is to contact the experts, but a scroll compressor may be just what the doctor ordered.