Health & Safety

Operating a compressed air system carries with it a number of risks. As such, there are a number of safe work procedures that all compressed air owners / operators should observe.

What are the risks?

There are various risks associated with operating a compressed air system. These should be minimised - if not eliminated, and include;

- Trip hazards created by hoses left in work areas and or walkways
- Handling injuries cause by moving hoses or compressors manually
- Being struck by uncontrolled hoses or couplings
- Hearing loss or ruptured ear drums cause by excessive noise
- Dust or dirt in the skin created by improper use of compressed air
- Entanglement or crushing in belt drive systems

Inappropriate and unsafe use of compressed air can lead to serious personal injury such as; ear or eye damage, subcutaneous embolisms, and even death.

Guidelines for controlling the risk

A compressed air system should therefore be installed and operated; in accordance with OH&S, in a safe manner, and in line with all local, state, and national regulations.

Managing the risk

Risk can no doubt be managed by following safety guidelines provided by your State or Territory OH&S authority. Following all safety recommendations provided by the manufacturer of the equipment will also assist in managing the risks associated with operating compressed air equipment. However, some general guidelines would include;

- Employ only qualified Technician's to perform electrical work that use; UL approved materials, properly insulated tools and equipment as well as appropriate PPE (personal protective equipment).
- Ensure that the compressed air system does not pose any threat to the health and safety of employees that work within the vicinity. This may include installing sufficient ventilation to remove heat from the area. In addition, where using a belt drive system, the compressor drive system should be covered with belt guards to isolate them. An interlock switch could also be fitted to the access doors which would switch the machine off if the doors are opened.
- Make sure hearing protection is available and worn in line with OH&S standards. Where appropriate display noise hazard warning signs.

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In addition, Safe Work Australia[1] recently set out a number of guidelines on how to manage the risks associated with using compressed air in a workplace. This includes;

- Ensure compressors and air receivers are regularly maintained and inspected by a competent person. Air receivers require both external and internal inspections at suitable intervals. Seek advice from the manufacturer or a competent pressure vessel inspector.
- Never tamper with the relief valve.
- Unless fitted with an automatic drain valve, drain water condensate daily by opening the drain valve, typically when switching off the compressor at the end of the day.
- Regularly inspect automatic drain valves as recommended by the manufacturer.
- Periodically test that the relief valve release mechanism can move freely (e.g. monthly)
- Never direct compressed air at a person as the air can penetrate the skin and cause significant health issues.
- It is not recommended to use compressed air for cleaning, especially if there are other people in the vicinity. However, if required to use air, use low pressure and wear eye protection.
- Fixed compressors and air receivers should be secured in accordance with the recommendations of the manufacturer or of a competent person. The bolt down requirements should be covered in the installation manual.

Resources: Visit Safe Work Australia or your State or Territory Safe Work website for further details.

References

[1]Safe Work Australia (December 2015): Compressed air and air receiver information sheet

http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/949/compressed-air-information-sheet.pdf

Please note: this factsheet may not cover all potential hazards associated with operating compressed air equipment and should be used as a guideline only.

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