

# Safety Instructions for Copeland™ brand compressors

Read these Safety Instructions and the dedicated Application Guidelines thoroughly before installation. Failure to comply can result in personal injury. These instructions should be retained throughout the lifetime of the compressor.

All Copeland brand compressors are intended for installation in systems according to the Machinery Directive MD 2006/42/EC. Moreover, Scroll compressors also comply with the Pressure Equipment Directive PED 2014/68/EU. Compressors may be put to service only if they have been installed in these systems according to instructions and conform to the corresponding provisions of legislation. Conformity to local regulations shall also be respected. The latest Copeland brand compressor models are built according to the Waste Electrical and Electronic Equipment Directive WEEE 2012/19/EU and to the Restriction of Hazardous Substances Directive RoHS 2011/65/EU.

**NOTE: Only flammable refrigerants marked compressors are allowed to be used with these refrigerants. In addition, systems using these refrigerants must comply with applicable legislation and regulations such as but not limited to ATEX 2014/34/EU. It remains the user's responsibility to select products compliant with legislation and regulations applicable for its application.**

**NOTE: Compressors operating with flammable refrigerants such as R290 and A2L shall use only the qualified terminal box supplied with the compressor.**

**NOTE: Compressors using R744 (ZO models): under some ambient conditions, the pressure can rise above the maximum design pressure PS. Therefore, the use of safety relief valves (set according to EN 378) is mandatory.**

## Safety statements

- Refrigerant compressors must be employed only for their intended use.
- Only qualified and authorized HVAC or refrigeration personnel are permitted to install, commission and maintain this equipment.
- Electrical connections must be made by qualified electrical personnel.
- All valid safety standards for connecting electrical and refrigeration equipment must be observed.
- The national legislation and regulations regarding personnel protection must be observed.



**Use personal safety equipment.** Safety goggles, gloves, protective clothing, safety boots and hard hats should be worn where necessary.

## General warnings



**Risk of collapse! Personal injuries!** Move compressors only with appropriate mechanical or handling equipment according to weight. Keep in the upright position. Stack pallets on top of each other when not exceeding 300 kg, max. 3 high for storage and 2 high for transport. Do not stack single boxes on top of each other. Keep the packaging dry at all times.

**Rapid release of pressurised gas! Personal injuries!** Compressors are factory charged with pressurised dry air to between 1.2 and 2 bar to ensure no ingress of air or moisture during transit. Pressure must be safely reduced prior to fully opening connections or removing blanking components.

**System breakdown! Personal injuries!** Systems without a full charge or with the service valves closed should be electrically locked/tagged if left unattended. Only approved refrigerants and refrigeration oils must be used.

**High pressure! Injury to skin and eyes possible!** Be careful when opening connections on a pressurised item.

**High pressure! Personal injuries!** The use of protection devices according to EN 378 is mandatory. Consider personal safety requirements and refer to test pressures prior to test.



**Conductor cables! Electrical shock!** Shut off the power supply and remove all the fuses before working on the electrics.



**Diesel effect! Compressor destruction!** The mixture of air and oil at high temperature and pressures can lead to an explosion. Avoid operating with air.

**System explosion! Personal injuries!** Do not use other industrial gases.

**Explosive flame! Fire hazard!** Oil/refrigerant mixtures are highly flammable. Remove all refrigerant before opening the system. Avoid working with an unshielded flame in a refrigerant charged system.



**High surface temperature! Burning!** Do not touch the compressor surface or piping until they have cooled down. Ensure that other materials in the area of the compressor do not get in touch with them.



**Low surface temperatures! Frostbite!** Do not touch the compressor surface or piping until they are at room temperature.

**Air/flammable refrigerant mixture! Explosive atmosphere!** When opening the refrigeration system or working on it avoid explosive atmosphere and ignition sources in any case. When replacing the compressor avoid explosive mixture, eg, air/R290.



**Air/flammable refrigerant mixture! Open terminal box! Explosion hazard!** Avoid explosive atmosphere in the terminal box. Before starting the compressor ensure that the terminal box is closed. The degree of protection (IP) will be safeguarded only if sealing and cable glands are properly fitted. Only run the compressor with permanently wired cables. The system manufacturer/installer shall provide the required strain relief.