

# ISO 5149-1:2014 Refrigerating Systems and Heat Pumps Safety and Environmental Requirements

This standard is consists of four parts

1. Part 1 (ISO 5149-1:2014) Definitions, classification and selection criteria
2. Part 2 (ISO 5149-2:2014) Design, construction, testing, marking and documentation
3. Part 3 (ISO 5149-3:2014) Installation site
4. Part 4 (ISO 5149-4:2014) Operation, maintenance, repair and recovery

United States, United Kingdom, Japan, Italy, Germany, France, Canada, Belgium, and Australia are the countries participated on working to develop the ISO 5149. The efforts began in 1997 to revise ISO 5149:1993, Mechanical refrigerating systems used for cooling and heating – Safety requirements, to include environmental safety aspects and refrigeration safety which is based on EN 378. ISO 5149 is currently under development by ISO/TC 86/SC 1.[1]

## **Abstract**

ISO 5149-1:2014 specifies the classification and selection criteria applicable to the refrigerating systems and heat pumps. These classification and selection criteria are used in ISO 5149-2, ISO 5149-3, and ISO 5149-4.[2]

ISO 5149-1:2014 also applies in the case of the conversion of a system to another refrigerant. Systems containing refrigerants which are not listed in ISO 817 are not covered in ISO 5149-1:2014.[2]

ISO 5149-2:2014 is applicable to the design, construction, and installation of refrigerating systems, including piping, components, materials, and ancillary equipment directly associated with such systems, which are not covered in ISO 5149-1, ISO 5149-3, or ISO 5149-4. It also specifies requirements for testing, commissioning, marking, and documentation. Requirements for secondary heat-transfer.[3]

ISO 5149-3:2014 is applicable to new refrigerating systems, extensions or modifications of existing systems, and for used systems being transferred to and operated on another site. It also applies in the case of the conversion of a system for another refrigerant.[4]

ISO 5149-4:2014 specifies requirements for safety and environmental aspects in relation to operation, maintenance and repair of refrigerating systems and the recovery, reuse and disposal of all types of refrigerant, refrigerant oil, heat transfer fluid, refrigerating system and part thereof.[5]