

Guideline

B-34

CLAP

FORM N°X084

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Directive References: Article 2 (2)

Article 2 § 10

Article 13 § 2

Subject: Classification – Category of hermetically sealed refrigeration compressor

Question: How to determine the category of a hermetically sealed refrigeration compressor?

Answer: Hermetically sealed refrigeration compressors are pressure vessels.

Usually, a compressor is composed of two chambers: the low pressure side PS1, the volume of which is V1, and the high pressure side PS2, the volume of which is V2. The equalizing pressure during standstill is PS3 (always higher than PS1).

The category is the higher of the low pressure side (based on PS3 and V1) and of the high pressure side (based on PS2 and V2).

See Guideline A-12 (CLAP X018).

Note 1: The highest pressure cannot occur simultaneously on both sides; during standstill there is no direct communication between the 2 chambers, due to the presence of the valves; if a valve fails, the movement of the piston cannot create pressure.

Note 2: When a compressor has more than 2 chambers (i.e. several chambers constitute the low pressure side and several chambers constitute the high pressure side) the above volumes V1 and V2 are the sums of the low pressure and the high pressure chambers respectively.