

Corrosion tests on Reclaim compressors for coastal environments

Reclaim CO₂ hot water heat pump compressors are manufactured in Japan, a country with a similar maritime climate to New Zealand. Laboratory testing has been conducted in Japan on the Reclaim compressors for resistance to damage caused by salt spray. The unit has not had a specific coating applied to the evaporation coils.

The following tests, conducted according to Japanese Industrial Standards (JIS), resulted in a pass for the Reclaim compressor according to the testing limits.

Corrosion resistance test

A test specimen of the compressor was cut across and salt spray was applied constantly. The test was conducted for 960 hours.

After the test, adhesive cellophane tape was put on the crosscut part of the test specimen firmly. Then the adhesive cellophane tape was peeled off and the length of peeled off surface was checked if the length was within the limit range or not.

Laboratory salt spray test according to JIS Z 2371

Humidity resistance test

A test specimen of the compressor was exposed to an air temperature of 50°C and humidity of 95% or higher for 720 hours. Then the surface was checked for any swelling, peeling or cracking problems.

Laboratory humidity resistance test according to JIS K 5400

Accelerated weathering resistance test

A test specimen of the compressor was exposed to a weathering resistance test for 500 hours. Then the surface was checked for swelling, peeling, cracks and crack problems.

Laboratory weathering resistance test according to JIS D 0205