



**SURFACE
PREPARATION
& COATING**

Bridges



**Property Damage
Restoration**



**Temporary
Humidity Control**



**Property Damage
Prevention**



APPLICATION

Overview

By nature, bridges are subjected to high levels of moisture. Deterioration from corrosion due to excess moisture is a significant threat to the life span of a typical steel bridge structure. Regular inspection and maintenance programmes are utilised to assess look out for the integrity and the safety of the structure. High performance coatings are often used to ensure that the steel remains protected and free from the destructive nature of corrosion. Often the location of most bridges creates moisture challenges during the preparation and coating operations, which cannot be easily overcome.

In such circumstances, coating companies are generally forced to implement strategies that assist them in completing their projects regardless of time of the year or the weather conditions. Using Munters expertise in humidity and temperature control, this kind of maintenance can be performed all year round, mitigating unreasonable time pressures and the inevitable cost implications.

Using temporary climate control equipment to assist in the re-coating of steel bridge structures is rapidly being accepted as normal practice within the industry. Whether the specifications ask for specific humidity levels or temperatures, Munters has the technical ability and equipment to provide a detailed solution to ensure success.

One way to tackle these demands is to ask for solutions that require experience, equipment innovation, engineering expertise and of course the people to ensure success every time. The use of Munters temporary desiccant dehumidifiers, heaters and air conditioners will provide the optimum environment to sand blast and re-coat the steel members of any bridge. The contractor can complete their project on time and without the threat of flash rusting, material blushing or weather related events.

At Munters, we can control the relative humidity and temperature at any time of the year. This allows the owners to plan maintenance around production schedules, without restrictions.



Using high performance dehumidifiers and experienced technicians, Munters are able to secure the right climate to undertake bridge repainting.



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PROCEDURE

In order to ensure that the equipment is tailored specifically to each bridge, the following detailed information is necessary:

- Size of the bridge
- Ventilation rate required
- External weather data
- Product specifications
- Size of the temporary enclosure
- Site logistics
- Available power sources.

Only when this information is compiled and analysed can the suitable equipment be selected. Munters personnel can then engineer the equipment for specific applications to meet the desired specifications for the project.

Munters technicians' service and check the equipment, ducting and ancillary items prior to site delivery. The equipment is then placed in a designated area, positioned close to a power supply and set up to maximise the safe operation of the unit.

Munters' state-of-the-art climate control equipment is utilised to deep dry the ambient air, ensuring that the moisture level in the bridge enclosure is low enough to eliminate flash rusting. Temporary cooling and heating equipment can also be provided to control temperature conditions within the enclosure to enhance the curing of specific coating types. Munters provides a turnkey solution with well engineered equipment offering an around the clock service that is unmatched in the industry.



Old paint leaves the surface free for corrosion attacks. Applying new paint protects sensitive riveted joints for many years.

RESULTS

Munters experienced and highly trained staff can consult contractors on the best solutions for their bridge recoat projects. By utilising Munters' state-of-the-art climate control equipment, conditions are closely controlled to maintain surface dew point and temperature throughout the re-coat process. This technology ensures that the contractor receives only the equipment required to meet the project specifications while maximising efficiency and guaranteeing the highest possible results.

BENEFITS

The benefits of utilising climate control for bridge coatings applications include:

- Elimination of the blast and coat cycle
- Reduction in weather related work delays
- Improvements in production rates and quality of work
- Extension of coating life by providing optimal conditions during application
- Allows a monolithic spray of each coat under proper climatic conditions
- Elimination of the traditional blast, clean and prime cycle
- Provides ideal humidity and temperature conditions for 'holding the blast'
- Reduction in fuel costs as Munters highly efficient dehumidifiers require lower power costs in comparison to using only heaters.



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(1) A new bridge is being painted in the workshop before transportation. An enclosure protects the fresh paint from the environment and a dehumidifier regulates the climate.

(2) A bridge ready for transport.

(3) Close-up. The dehumidifier can be seen in the background.