

SUCCESS STORY

Temperature control of a high vacuum system
for thermic testing under space conditions

huber



Aeronautics and space travel

Inspired by **temperature**



Unistat for temperature control of the high vacuum system TVAC 2.0

JUST VACUUM GmbH developed the high-vacuum system TVAC 2.0 for a European company of space technology, intended to perform thermal function tests under space conditions. A complete system concept was developed according to the customer's specification. The high-vacuum chamber can be opened via a frame with lift to which the chamber itself, a cryogenic pump, and a backing pump are fastened. With a Unistat 912w it is possible to heat or cool the copper table and copper shroud in the chamber. The vacuum chamber and the Unistat 912w circulation thermostat are connected via two heat-insulating temperature control hoses. To simulate the lighting conditions in space, the copper shroud was painted with a special colour on the inside.

The high-vacuum system TVAC 2.0 for this use works in a temperature range from -75°C to $+45^{\circ}\text{C}$ (200 K to 320 K). With software specially developed for this system by JUST VACUUM, temperature profiles can be reproduced and displayed as a table or graph. This software controls all other functions of the system.



High vacuum system TVAC 2.0 with Unistat 912w