

JUNE 2022 | CASE STUDY

# LEAK TESTS OF PNEUMATIC CYLINDERS

Pneumatic cylinders are tools used in many different sectors such as automotive, machinery, and automation and are used to convert the energy created by compressed air into mechanical energy. These elements, which provide energy conversion with the control of compressed air, must be leakproof. In case of leakage, the efficiency of the system decreases, and the cost increases. For this reason, leak tests must be carried out correctly during the production phase of pneumatic cylinders.

Tested with Adlema BT 4000 series leak testing devices, these types of equipment continue to be used safely without decreasing their efficiency.





In order to obtain linear or angular movements, pneumatic cylinders using compressed air must be leakproof. The pressure force created by the compressed air on the cylinder sleeve in pneumatic cylinders provides movement and power transmission. Felts, which are used as sealing elements, ensure the sealing of the compressed air between the chambers in the cylinder and between the pneumatic cylinder and the outside environment.



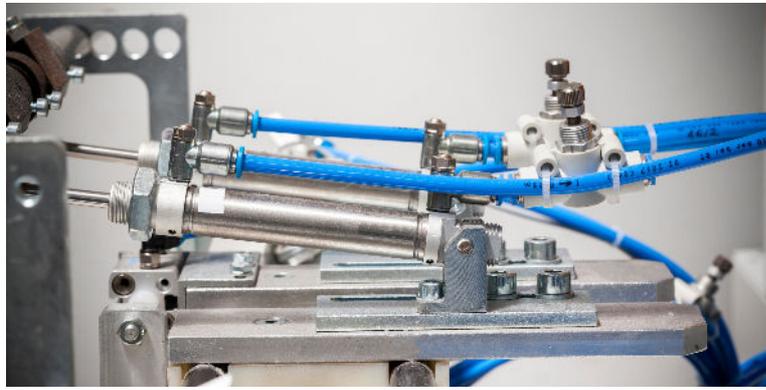
# 1 PERFORMING THE TEST

Since the leakage of pneumatic cylinders will cause power and efficiency losses, every pneumatic cylinder produced must pass the leak tests. As it is known, there are 2 independent volumes in order to provide the movement with compressed air in pneumatic cylinders. In the leak tests performed with the Adlema BT4000 Series Advanced Leak Testing Devices, both volumes are pressurized by the device and the leak tests are performed fully automatically.



# 2

## POST-TEST



In the leak tests using the pressure decay method, even the smallest leaks are detected by monitoring the compressed air in the product at the level of 0.1 Pa. Adlema BT4000 series devices automatically decide if the tested products are OK/NOK. In this way, subjective test results originating from the operator are not encountered. Thanks to its reportability feature, you can examine the leak testing performance of your products and keep records.

# Sensitivity that does not miss even small leaks

You can contact us for detailed information and a demo.

