## WÖHLER



# LEAKAGE CLASS ACHIEVED?

Wöhler DP 700 Leakage Tester







## Wöhler DP 700 Leakage Tester

## Just 3 entries to classify an air ductwork system or a component!

Depending on the time the tests are carried out the Wöhler DP 700 makes it possible to detect leakages in air ducts, components and appliances during production or prior to plant acceptance. In that way leakage tests with the Wöhler DP 700 make an important contribution to assuring quality during production and installation and, as a consequence, to the energy efficiency of airconditioning and ventilation systems.

Ever-increasing demands are being placed on the energy efficiency of VAC systems. In that respect the leak-tightness of ductwork has a particularly important role to play. This aspect holds the greatest potential for saving energy, if it is possible to adapt the air flow to actual requirements

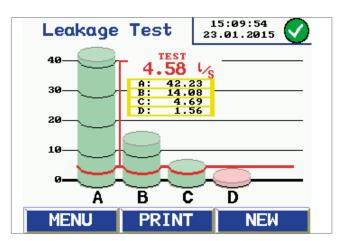
in conjunction with low leakage rates. In this respect, low device- and ductwork leakages will in future need to be taken into consideration a great deal more. Consequently, corresponding measurements will gain in importance.

## **ADVANTAGES**

- Leakage tests in large air leakage ranges: From individual components through to complete systems consisting of several 100 m<sup>2</sup>
- Leakage tests on air-conditioning units, switchgear cabinets, climatic test cabinets, heat exchangers, cabinets for clean room technology and other housings
- Leakage testing of rooms
- On-site and laboratory measurements on structural components (e.g. OSB boards, windows)
- Can be integrated into the final inspection routine of series production runs including optional program remote control, (controlled from a PC via USB port)
- Suitable for tests of lower output performance (40 l/s), 110 V, 60 Hz



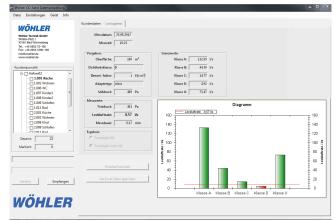
Leakage tests on several 100 m<sup>2</sup> of installed ductwork systems.



Printable graphic representation of results.



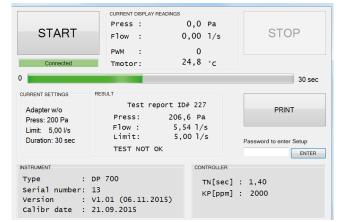
Quality control during series production of ducts and components.



Wöhler DC Series PC software for data transmission and subsequent processing (optional documentation set).



Component test on small, individual components.



Control the Wöhler DP 700 via USB connection with optional remote program control(e.g. to integrate in the final inspection routine of series production).

#### **TECHNICAL DATA** Pressure Principle piezoresistive semiconductor senso Measurement range .± 7000 Pa .0.1 Pa... ± 900 Pa, thereafter 1 Pa Resolution $\pm$ 0.5 Pa or $\pm$ 2.5 % of reading Accuracy Volume flow (based on 1013 hPa and 20 °C) .Hot film anemometer Measurement range .0.0000 to 55.00 l/s .0.0001 l/s to 0.3000 l/s, 0.001 l/s to 3.000 l/s, Resolution 0.01 l/s > 3.00 l/s.± 0.0009 l/s or 5% of reading Accuracy General technical data Power supply 110...230 V, 50...60 Hz Power consumption. Max. 9 A Operating temperature range .5 °C...40 °C - 20 °C...+ 50 °C Storage temperature range .9.5 kg

#### PRINCIPLE OF OPERATION

#### Leakage test on VAC systems according to DIN EN 12599

For reasons of accessibility the leakage test should be carried out during the installation phase. The leakage test is performed according to contractual agreement to verify compliance with leakage classes A-D as defined in DIN EN 13779.

For this purpose the ductwork is generally subdivided into different sections and sealed. The leakage tester then generates positive pressure in the correspondingly sealed sections of the supply air ducts and negative pressure in the exhaust air ducts, which should respectively be as close as possible to the mean of the average operating pressure. The standard suggests +200, +400 or +1.000 Pa as positive pressure or rather -200, -400 or -750 Pa as negative pressure. The required air flow rate to maintain the pressure is the leakage rate for which limit values are determined according to the interior surface area and test pressure specified in the relevant standards.

The user selects the test pressure and enters the interior surface area. The instrument then determines the air leakage rate based on the surface and pressure completely automatically and rates the system according to leakage classes.

#### Leakage tests during the series production of air ducts

It is becoming increasingly advisable to document quality throughout series production. It is possible to carry out the test within a couple of minutes alongside the production process—and without any large-scale disruption.

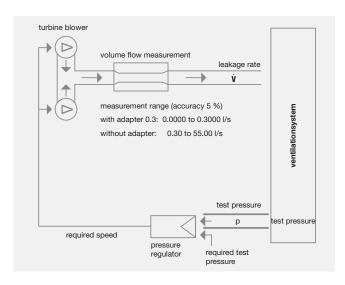
The test is particularly easily performed on rectangular and special ducting by simply carrying out a negative pressure test to determine deviations from the standard. The item under test is placed briefly on a test plate and simply sealed off with a loosely fitting lid.

#### Leakage test on controlled residential ventilation systems to DIN EN 14134

The leakage test on residential ventilation systems is similar to those performed to DIN EN 12599. However, the air leakage rate should be measured at least at three different points at pressure differences of about 20 Pa, 60 Pa and 200 Pa.

With what we know today, measurements with 3 pressures are no longer absolutely necessary; this European standard from 2004 is presently being revised.

#### Schematic measurement setup



#### ☆ Functionality

- Leakage test according to DIN EN 12599 to hand over air conditioning and ventilation systems
- Leakage test according to DIN EN 14134 installation checks of residential ventilation systems
- Measurement of leakage class according to DIN EN 13779 of ventilation ductwork systems and components in accordance with the standards DIN EN 1507, DIN EN 12237, DIN EN 13403 and DIN EN 13180.
- Fulfills the high accuracy requirements specified in DIN EN 1751 and DIN EN 15727 for measurements on individual components (± 0.0009 l/s)
- · Includes adapter for measurement range < 0.3 l/s
- · Easy to operate with operator guidance or expert mode
- · Automatic or manual measurement sequence
- · Separate differential pressure measurement possible
- Measurement values in desired units, without manual conversion
- Prints measurement reports on-site with thermal printer (optional accessory)
- · Practical set in 2 cases, easy to transport and store

#### X Wide range of applications

- Leakage tests in large air leakage ranges: From individual components through to complete systems consisting of several 100 m<sup>2</sup>
- Leakage tests on air-conditioning units, switchgear cabinets, climatic test cabinets, heat exchangers, cabinets for clean room technology and other housings
- · Leakage testing of rooms
- On-site and laboratory measurements on structural components (e.g. OSB boards, windows)
- Can be integrated into the final inspection routine of series production runs including optional program remote control, (controlled from a PC via USB port)
- Suitable for tests of lower output performance (40 l/s), 110 V, 60 Hz

#### Data management

- · Store up to 100 measurements
- · Data stored permanently in the instrument
- Customer and data management with the Wöhler DC Series PC software (optional accessory)
- · Data transmissions via USB connection
- Print out measurement results including graphic chart on a printer (optional accessory)

Two fans integrated in the instrument blow/extract air via an air hose in/out of the connected air ductwork system or component to be tested. In automatic mode the instrument automatically regulates the current system pressure to achieve the preselected test pressure.

This pressure is fed back to the instrument via the connected pressure hose

The volume of supply air flow required to maintain the pressure corresponds to the leakage of the object under test and is measured in the instrument.

## Wöhler DP 700 Leakage Tester

Just 3 entries to classify an air ductwork system or a component!

### 1. Basic set (ready to use)

Wöhler DP 700	Leakage Tes	ter
Basic Set		

Basic Set	
Scope of delivery	
Wöhler DP 700 Leakage Tester	
Air hose 3.75 m	
Air hose 4 m	
Pressure hose 10 m	
Calibration report	
Power cable 2.5 m	
Adapter 0.3, 2 brass nipples	
Hose connection for negative pressure	
Filter pad	
Silicone grease	
2 transport cases	

### 2. Select accessory set

Select suitable accessory sets for our basic sets





Scope of delivery	<b>Documentation Set</b>	Sealing Set round air ducts
Wöhler TD 100 fast thermal printer	•	
10 rolls of thermal paper	•	
Wöhler DC Series PC software	•	
USB cable	•	
K-pump with various adapters		•
5 Sealing bladders for round systems size 3 – for nominal size100-250 mm		•
5 Sealing bladders for round systems size 5 – for nominal size 200-400 mm		•
5 Sealing bladders for round systems size 10 – for nominal size 315-630 mm		•
15 hose clamps suitable for hoses D = 3.2-11 mm		•
Article no.	7130 J	7103 J

Accessories Wöhler	DP 700 Leakage Tester	Article no.
1	Wöhler DP 600 Capillary hose with (+) connector capillary hose 6 m, connector, silicone hose	2604 J
1	Wöhler DP 600 Capillary hose with (-) -connector Capillary hose 6 m and silicone hose	2672 J
1	Wöhler DP 600 Set of capillary hoses To perform the 4 Pa-Test. Scope of supply: Capillary hose 6 m with (+) port, capillary hose 6 m with (-) port, connector, silicone hose	2670 J
	Air tube	
	3,75 m long	21943 J
	10 m long	22235 J
	Sealing bladder set with 5 pcs. / with 5 clamps	
	size 3 Ø 100 - 250 mm	3314 O
	size 5 Ø 200 - 400 mm	3316 K
	size 10 Ø 315 - 630 mm	3317 K
	Filter pad Wöhler DP 700 / DP 600 pack with 5 pcs.	2617 K
	Wöhler TD 100 Thermal Fast Printer Infrared printer with 1 roll thermal paper and four batteries	4160 I
	Thermal Paper 57 mm width, 12 m long, 10 rolls for thermal printer Wöhler TD 100, TD 600	4145 I
	Data Exchange Software for Wöhler DC 4xx / DP 600 EN-FR-NL-CZ The Software can be down loaded. You will receive a separate email including the link.	1005 J

#### Accessories Wöhler DP 700 Leakage Tester Article no. Fog spray gun - Full Set 8450 I At the push of a button it generates a non aggressive oil dust for local leak detection. Scope of delivery: fog spray gun, fluid, machine attachment, small replacement attachment with mini-fan , screw-driver, 7 batteries, manual, all in a heavy-duty carrying case. Wöhler VIS 350 Service Camera 8794 J 20 m fix head for visual inspection of water pipes, flues and ventilation lines from 60 - 200 mm $\varnothing$ Scope of delivery: Wöhler VIS 350 Sevice Camera, digital meter counter, pan and tilt color camera head $\emptyset$ 40 mm, Wöhler TFT monitor 7" with 2 m cable, SD memory card 4 GB SD for recording of pictures and videos, mini USB cable, 20 m push rod 6.5 mm, 5 replacement plastic domes, 1 anti-slide-mat, 2 NiMH batteries and charger, plastic case Wöhler VIS Camera Trolley 4753 J Scope of delivery: Wöhler VIS Camera Trolley, Camerahead-holder, Storage bag Wöhler, Stabilization sleeve for light ring 26/40 or camera head $\emptyset$ 51 mm, Stabilization sleeve for adaptation of push rods with threaded connection M10 Wöhler VE 200 Video Endoscope 7792 I Scope of delivery: Wöhler VE 200 Video Endoscope with 1,2 m probe, 4x AA batteries, side tip mirror, magnet, hook tool, plastic case (The VE 200 is not compatible with Windows Phone) Wöhler Glass Mirror small 8064 O with telescopic handle Scope of delivery: Wöhler Glass Mirror small up to 1 m extendable, ball joint (pan and tilt), mirror plate 2,6 x 7 cm, aluminium edge protector, leather cover Wöhler Glass Mirror medium 8059 O with telescopic handle Scope of delivery: Wöhler Glass Mirror medium up to 1 m extendable, ball joint (pan and tilt), mirror plate 5 x 8 cm, aluminium edge protector, leather cover Wöhler Glass Mirror large 8087 O with telescopic handle Scope of delivery: Wöhler Glass Mirror large up to 1 m extendable, ball joint (pan and tilt), mirror plate 8 x 15 cm, aluminium frame, leather cover

## **Order Form**

Article no.	Article description	qty.
7135 J	Wöhler DP 700 Leakage Tester – Basic set	
7130 J	Documentation Set	
7103 J	Sealing Set round air ducts	

Billing address / customer		Delivery address (if different to billing address)	
Company		Company	
Name		Name	
Street/house no.		Street/house no.	
ZIP code/City		ZIP code/City	
Country		Country	
Telephone		Fax	
Mobile		E-Mail	
Customer number			
	Signature or company stamp		

## **WÖHLER**

Wöhler Technik GmbH Headquarters Germany Wöhler-Platz 1 · 33181 Bad Wünnenberg www.woehler-international.com

## Your contact