

SWEMA Leak Tester – Duct Leak Tester

Range: 22...130 l/s at ± 400 Pa duct pressure with hose $\varnothing 100$ mm

Preliminary: 25...103 l/s at ± 850 Pa duct pressure



Duct Leak Tester
Art.No. 771110

- **Fast and stable pressure control**
- **Optional mid and low range orifice plates**

The leakage tester consists of a high pressure radial fan and a measuring pipe with an orifice plate with a hole with diameter 80mm. The unit is connected to a universal instrument Swema 3000md with built-in pressure sensor and a connected external pressure sensor SWA 10. The built-in pressure sensor in Swema 3000md measures the pressure in the ventilation duct. The connected pressure sensor, SWA 10, measures the leakage flow across the orifice plate.

A fixed mounted orifice plate with k-factor in the measuring tube gives the flow. For smaller flows there are two alternative orifice plates (mid and low range) with smaller holes available as accessories, that easily are mounted with screws in the measuring pipe.

Set the duct test pressure in Swema 3000md to build up the selected pressure by the fan. Once the desired pressure is reached the leakage flow value is displayed and a measurement protocol can easily be saved in Swema 3000md. If the test duct enclosure area and density class are entered into the instrument, it is shown directly in the display whether the tightness of the channel is approved or not.

The fan used is a radial fan whose characteristics make it possible to build up a high pressure.

The section of the ventilation ducts to be tested is sealed with sealing bladders.
With an [anemometer](#) or with a [smoke pen](#) you can locate leaking air.

The duct leakage tester is used according to European standard **EN 12237** and **EN 1507** up to a limited pressure of 1900 Pa.

Standard Kit Comes With:

- 1) Duct Leak Tester (P/N: 771110)
- 2) SWEMA 3000md – Data Logger (P/N: 764202)
- 3) SWA 10 – Differential Pressure Probe (P/N: 761430)
- 4) Orifice Plate (P/N: 770960 & 770970)
- 5) Silicon Hose 8m – Connecting hose for tester and SWEMA 3000 and duct (P/N: 762470)

Optional Accessories:

- 1) Bladder dia 250mm – To seal duct (P/N: 765080)
- 2) Bladder dia 400mm – To seal duct (P/N: 765090)
- 3) Bladder dia 600mm – To seal duct (P/N: 765100)
- 4) Pump – Pump with connector to pump up bladders by hand (P/N: 766620)



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Standard Kit



SWEMA 3000md Micromanometer
Art.No. 764202

The instrument has a built-in differential pressure sensor and a zeroing valve. It includes a number of specific measuring programs complying with **EN 16211**, **12599** or **ISO 7730**. Air velocity is measured with a pitot-static tube. Air flow is displayed from air velocities across an area or measured on a valve with k-factor. The included barometer and thermocouple automatically compensate the velocity and flow for air density.



SWA 10
Art.No. 761430

SWA 10 is a field probe that is used together with SWEMA 3000md or 3000mdH+ and a leakage tester. SWEMA 3000md inbuilt differential pressure sensor measures the duct pressure while the differential pressure probe SWA 10 measures the leakage flow in the measuring pipe. SWA 10 has an inbuilt valve that zero checks the pressure.



Orifice Plate dia 19mm
Art.No. 770960

This orifice plate is an accessory to the duct leakage tester in order to have a mid flow range. The orifice plate is easily mounted in the existing measuring pipe on the leakage tester. The hole of the orifice plate has smaller diameter than the hole of the measuring pipe.

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Orifice Plate dia 38mm
Art.No. 770970



Silicone hose for connectors with $\varnothing 4-7$ mm.

Silicon Hose
Art.No. 762470



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Optional Accessories



When leakage testing buildings or ventilation ducts need to be tightened. This is done by the use of inflatable bladders

Bladder dia 250mm
Art.No. 765080



When leakage testing buildings or ventilation ducts need to be tightened. This is done by the use of inflatable bladders

Bladder dia 400mm
Art.No. 765090



When leakage testing buildings or ventilation ducts need to be tightened. This is done by the use of inflatable bladders

Bladder dia 600mm
Art.No. 765100

To be able to see air flow pattern and air leakage. Smokes after lighted with match or lighter. Stops after cover is put on. The smoke pen includes 6 smoke rods.



Smoke Pen
Art.No. 570132



SWA 31
Art.No. 758150

The probe SWA 31 with Swema 3000 measures 0,1...30m/s and is temperature compensated from -10 to +45°C.

On the 66 cm long telescopic shaft there is a scale for easy placement in ventilation ducts. The measurement is displayed directly or with a number of points as average, max and min.



SWEMA AB
Pepparvägen 27
SE-123 56 Farsta, Sweden

Tel: +46 8 94 00 90
swema@swema.se
www.swema.se

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Technical Data: MODEL 771110

Flow Over Pressure

Leakage Tester with hose $\varnothing 100$ mm:

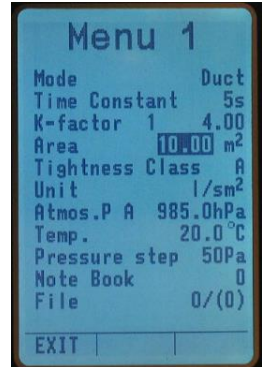
22...130 l/s at ± 400 Pa duct pressure

C-class Duct area 95...800 sqm at 400 Pa ([EN 12237](#), [1507](#))

25...103 l/s at +850 Pa duct pressure

Overpressure

16 l/s	at 1900 Pa
50 l/s	at 1500 Pa
73 l/s	at 1200 Pa
85 l/s	at 1000 Pa
110 l/s	at 500 Pa
114 l/s	at 400 Pa
122 l/s	at 200 Pa



Swema 3000 Instrument Menu Screen

Flow Under Pressure

Leakage Tester with hose $\varnothing 100$ mm:

22...130 l/s at ± 400 Pa duct pressure

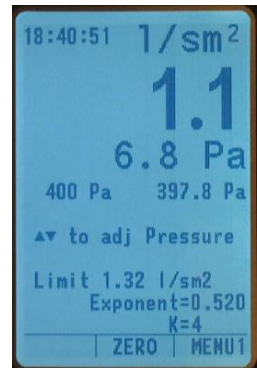
C-class Duct area 150...800 sqm at 400 Pa ([EN 12237](#), [1507](#))

25...103 l/s at +850 Pa duct pressure

Lower duct pressure extends the flow range.

Underpressure

128 l/s	at -500 Pa
120 l/s	at -750 Pa



Duct Leak Tester Measurement Screen

Measurement Uncertainty

$\pm 6.5\%$, read value (when used together with SWEMA 3000md and SWA10)

At 95% coverage probability in non condensing, non moist air, <80%RH, non aggressive gases.

Specifications

Weight: 20.3kg
Power: 200-240VAC, +/- 10%, 50-60Hz (0.37kW)
Size: 570x400x480 (mm)
Hose Dia: $\varnothing 100$ (mm)



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Pepparvägen 27
SE-123 56 Farsta, Sweden

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