











October 2009 Information 5.09

## **Hydrostatic Testing of Aircraft Refuelling Hoses**

Prior to commissioning, aviation hose assemblies should be pressure tested.

Our hoses are tested twice before delivery: at ContiTech hose production and after assembly by ELAFLEX, with test pressure of 40 bar.

The test procedures for *used* aircraft refuelling hoses are described in the JIG Guidelines.

## ELAFLEX test according to EN 1361 / API 1529:

- New aviation hose assemblies are tested by twice the highest permitted working pressure (working pressure 20 bar = test pressure 40 bar).
- The hose assembly ideally lays in a straight line
- Before testing all air is bled off
- During testing we check for hose or coupling leaks, bubbles, deformations, twist / torsion, undue hose elongation, coupling attachment



Hydrostatic testing, water / at 40 bar

## **Measuring Electrical Continuity**

Aircraft refuelling hose assemblies are designed for safe electrostatic dissipation.

Aviation hoses are differentiated by 'Ohm' hoses (type C and F) and 'M'-hoses (e.g. type B, for army use only). The resistance shall not exceed

- 10<sup>6</sup> Ω for 'Ohm' hose assemblies
- 10<sup>2</sup> Ω for 'M' hose assemblies

between hose couplings.

## ELAFLEX test according to EN ISO 1361 / 8031:

- Electrical continuity testing is done after hydrostatic testing
- The hose assembly should be completely empty (no medium within the hose)
- Measuring is only done on dry and non conducting ground (e.g. no metal, no wet surface)
- Contact between hose covers is avoided (not reeled up)
- Measuring is only done from coupling to coupling
- Electrodes of testing instrument must not be touched during measuring
- ELAFLEX only deliver aircraft refuelling hose assemblies with an electrical continuity between  $10^3$  and  $10^6$  Ω for 'Ohm' hoses and  $< 10^2$  Ω for 'M' hoses



Ohmmeter: used for measuring 'M' hoses



Insulation Tester (500 V d.c.): used for measuring 'Ohm' hoses (EN ISO 8031)



Electrical continuity testing