

### Ultrasonic leakage meter

The ultrasonic leakage meter GST 6108M measures the leak rate in hydraulic systems according to the ultrasonic transit time difference principle. Since the transducer is mounted on the pipe, it can be installed rapidly, without cutting into the pipe.

The leakage meter tests with its special electronics the incoming ultrasonic signals for their usefulness for the measurement and evaluates the plausibility of the measured values. The integrated microprocessors control the complete measuring cycle, eliminating disturbance signals by statistical signal processing techniques.

The operation of the leakage meter is especially easy thanks to the clearly structured user dialogue. A status display allows the user to assess application conditions while measuring flow. With the optional software FluxData, you can transfer your measuring data from the leakage meter to a PC, analyse and visualise the measuring results and manage the data files.

The leakage meter is used for:

#### Model of aircraft

Airbus A400M

#### Maintenance task

AMM / ATA chapter 29, C-check

#### Ground support equipment certificate of acceptance

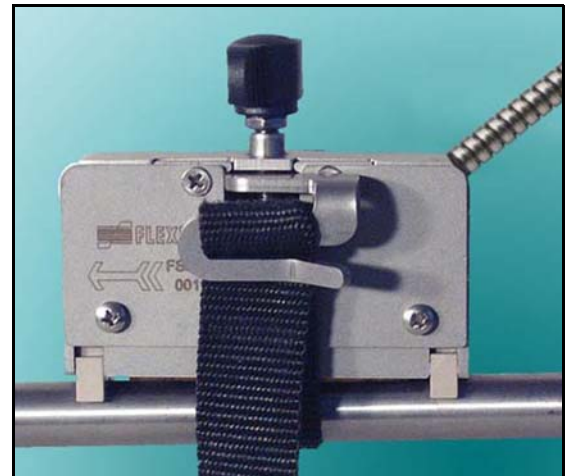
certificate no. D29051

#### Use

Functional check to monitor internal leak rate of yellow and blue hydraulic systems for sections Left Hand Wing, Right Hand Wing and Tail



GST 6108M



Leakage transducer

### Features

- Portable device of low weight
- User-friendly operation thanks to the clearly structured user dialogue
- Installation on different parts of the pipe of the hydraulic system
- Easy installation without cutting into the pipe, i.e. no additional leakage occurs by opening the hydraulic system
- Output and evaluation of the measured leak rate
- No GSM (Ground Service Manifold) is required, i.e. less weight aboard the aircraft
- No Hydraulic Ground Power Card is required

## Technical Data

Measurement	
measuring principle	ultrasonic time difference correlation principle
flow velocity	0.01 to 25 m/s (0.03 to 82 ft/s)
resolution	0.025 cm/s (0.0008 ft/s)
repeatability	0.15 % of reading $\pm 0.01$ m/s (0.15 % of reading $\pm 0.03$ ft/s)
accuracy	(for fully developed, rotationally symmetrical flow profile)
• volume flow	$\pm 1$ to 3 % of reading $\pm 0.01$ m/s ( $\pm 1$ to 3 % of reading $\pm 0.03$ ft/s) depending on application $\pm 0.5$ % of reading $\pm 0.01$ m/s ( $\pm 0.5$ % of reading $\pm 0.03$ ft/s) with process calibration
• path velocity	$\pm 0.5$ % of reading $\pm 0.01$ m/s ( $\pm 0.5$ % of reading $\pm 0.03$ ft/s)
accuracy at the defined test points for a leakage measurement	(flow profile not rotationally symmetrical)
• volume flow	$< 7$ % of reading $\pm 0.01$ m/s ( $< 7$ % of reading $\pm 0.03$ ft/s) for T = 10 to 60 °C (for T = 50 to 140 °F)
Transmitter	
enclosure	
• weight	approx. 3.9 kg <sup>1</sup> (approx. 8.6 lb)
• degree of protection	IP54 according to EN 60529 (NEMA 3S)
• material	aluminium, epoxy coated
• dimensions (with handle)	276 x 118 x 317 mm (10.87 x 4.64 x 12.48 in)
measuring channels	1
power supply	rechargeable battery (6 V/5 Ah) or external power supply 100 to 240 V AC)
operating time with battery	>10 h
charge time for max. capacity	15 h
display	2 x 16 characters, dot matrix, backlit
operating temperature	-10 to 60 °C (14 to 140 °F)
power consumption	<15 W
measuring cycle	100 to 1000 Hz (1 channel)

Measuring functions	
physical quantity	volume flow
units of measurement	l/min or gal/min
Data logger	
loggable values	all measured values
capacity	measured values: >100 000 series of measurement: 99
Communication	
interface	RS232
data	actual measured value, logged data, parameter records
Software FluxData (optional)	
function	<ul style="list-style-type: none"> <li>downloading measuring data/parameter records</li> <li>graphical presentation</li> <li>conversion to other formats</li> </ul>
operating systems	Windows™ versions <sup>2</sup> newer than Windows 98
Leakage transducer	
rated (possible) diameter range	9 to 25.4 mm (3/8 to 1 in)
dimensions (W x H x D)	75 x 41 x 43 mm (2.95 x 1.61 x 1.69 in) (without fastening strap)
material	enclosure: stainless steel contact surface: PEI
operating temperature	-30 to 130 °C (-22 to 266 °F)
degree of protection	IP65 according to EN 60529 (NEMA 4X)
<p><sup>1</sup> Avoirdupois pound: 1 lb = 0.45359237 kg</p> <p><sup>2</sup> Windows is a protected trademark of Microsoft Corporation.</p>	

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