Pneumatic Test Rig For Cold Air Valves

>PP400LH<

Control Console (outside the test room)

The test rig is developed to test valves and other non-rotating pneumatic components with cold air according to the ATA-chapters 21, 49 and 80.

It can be adapted for other valves and pneumatic components.

- Easy mounting of UUTs. Preadaptation on a trolley and movable clamping slide.
- In order to protect the operator, the testing area (test room with test rig, limited operation via operating panel) is separated from the control console (outside the test room)
- An effective, high-defined camera monitors incidents in the test room
- Highly dynamic hydraulically operated flow control valves regulate inlet and outlet pressure
- Fine adjustment of the vacuum circuit for low pressure tests

MISCELLANEOUS INFORMATION

- The pressure measurement and regulation on the UUT is performed by a combination of pressure transducers with quick reaction time (for rough regulation) and high precision (precise adjustment)
- The leakage measuring circuit is provided with parallel connected flow measurements as cascade of measuring sections
- The freely rotatable operating arm is provided with two touch screens and freely configurable operating elements
- The test stand resists the hydraulic medium and cleaning detergent due to a special varnish and anodized aluminium front panels
- The LAN- connection enables maintenance of the TEST-FUCHS test rig software, test procedures, network printer and troubleshooting on the equipment
- Calibration tasks can be easily and quickly performed by means of the TEST-FUCHS standard software

TECHNICAL DATA

Pneumatic supply (requirements):

Pressure:	7bar (102psi), 10bar (145psi), 20bar (290psi) and 35bar (508psi)
Quality:	dry and oil-free, ISO 8573-1 ISO Code 1-4-2
Temperature:	max. 50°C (122°F)

Hydraulic supply (requirements):

Pressure:	max. 150bar (2,180psi)
Flow:	max. 20l/min (5.28USgal/min)
Medium:	Aeroshell Fluid 41 Mil-H-5606A

Electrical supply (requirements):

Mains connection:	3/N/PE AC 50Hz 400v
Nominal current:	12A
Nominal performance:	8.3kVA
Prefuse:	16A GL

Other supplies (requirements):

LAN for remote maintenance and network printer

Dimensions and weight:

Upstream and Downstream Unit		
Width:	approx. 6,000mm	(236in)
Depth:	approx. 1,500mm	(59.1in)
Height:	approx. 2,400mm	(94.5in)
Weight:	approx. 2,460kg	(5,420lb)
Test trolley		
Width:	approx. 950mm	(37.4in)
Depth:	approx. 800mm	(31.5in)
Height:	approx. 1,200mm	(47.2in)
Camera		
Width:	approx. 195mm	(7.68in)
Depth:	approx. 240mm	(9.45in)
Height:	approx. 280mm	(11.0in)

Operating conditions:

Operating temperature:	5 to 35°C (41 to 95°F)
Storage temperature:	0 to 55°C (32 to 131°F)
Height:	up to 1,000m (3,280ft) via MSL
Rel. air humidity:	10 to 95% (non condensing)
Altitude:	in a non-ex-area

OPTIONS

A wide range of options is available to fulfil our customers' requirements.
e.g.: Adaption for numerous UUTs, requirement to the test program, dimensioning,...

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TECHNICAL DATA

> Measurements:

AC- Measurements:

(3 off)	0 to 6ARMS ±0.5% o.m.r.
(3 off)	0 to 12ARMS ±0.2% o.m.r.
(3 off)	0 to 354VRMS ±0.2% o.m.r.
(3 off)	0 to 135VRMS ±0.5% o.m.r.
(1 off)	50 to 900Hz ±0.01% o.f.s.

DC- Measurements:

(1 off)	-500 to +500mA ±0.1% o.f.s.
(1 off)	-12 to +12VDC ±0.1% o.f.s.
(3 off)	0 to 6ADC ±0.25% o.f.s.
(3 off)	0 to 40VDC ±0.25% o.f.s.

DMM- Measurements:

(1 off)	50 to 1,000mA ±0.3% o.m.v.
(1 off)	10 to 1,000V ±0.3% o.m.v.
(2 off)	2 to 100mV ±0.3% o.m.v.
(1 off)	10 to 100VACrms ±0.4% o.m.v.
(1 off)	1 to 100V ±0.3% o.m.v.
(1 off)	0.8 to 10mA ±0.3% o.m.v.
(1 off)	1 to 10VACrms ±0.4% o.m.v.
(1 off)	0.1 to 10V ±0.3% o.m.v.
(1 off)	0.1 to 1VACrms ±0.4% o.m.v.
(1 off)	0.01 to 1V ±0.3% o.m.v.
(1 off)	75 to 750VACrms ±0.4% o.m.v.
(1 off)	40 to 300,000Hz ±0.01% o.m.v.

LVDT- Measurements:

(1 off)	0 to 27Vrms ±0.1% o.m.r.
(2 off)	0 to 7VRMS ±0.1% o.m.r.

Flow:

(1 off)	29.5 to 72.6kg/min (65 to 500lb/min) ±3% o.m.v.
(1 off)	1.81 to 31.8kg/min (4 to 70lb/min) ±3% o.m.v.
(1 off)	0.45 to 6.8kg/min (1 to 15lb/min) ±3% o.m.v.
(1 off)	0.045 to 0.68kg/min (0.1 to 1.5lb/min) ±3% o.m.v.
(1 off)	0.0045 to 0.068kg/min (0.01 to 0.15lb/min) ±3% o.m.v.
(1 off)	0.03 to 0.3kg/min (0.066 to 0.66lb/min) ±3% o.m.v.

Pressure:

(4 off)	0 to 20.7bar (0 to 300psi) ±0.5% o.m.r.
(4 off)	0 to 20.7bar (0 to 300psi) ±0.1% o.m.r.
(4 off)	0 to 6.89bar (0 to 100psi) ±0.5% o.m.r.
(3 off)	0 to 6.89bar (0 to 100psi) ±0.1% o.m.r.
(1 off)	0 to 3.45bar (0 to 50psi) ±0.2% o.m.r.
(2 off)	0 to 1.72bar (0 to 25psi) ±0.5% o.m.r.
(1 off)	0 to 1.03bar (0 to 15psi) ±0.2% o.m.r.
(1 off)	0 to 21bar abs. (0 to 305psi abs.)
(1 off)	0 to 6.89bar abs. (0 to 100psi abs.) ±0.2% o.m.r.
(1 off)	0 to 2.76bar abs. (0 to 40psi abs.) ±0.5% o.m.r.
(1 off)	0 to 2.76bar abs. (0 to 40psi abs.) ±0.25% o.m.r.
(1 off)	0 to 2.07bar abs. (0 to 30psi abs.) ±0.5% o.m.r.
(3 off)	0 to 2.07bar abs. (0 to 30psi abs.) ±0.2% o.m.r.
(1 off)	800 to 1100mbar (11,6 to 16psi abs.) ±0.2% o.m.r.

Differential Pressure:

(1 off)	-0.15 to +0.15bar (-2.2 to +2.2psi) ±0.25% o.m.r.
(1 off)	-0.31 to +0.31bar (-4.5 to +4.5psi) ±0.25% o.m.r.
(1 off)	0 to 2.07bar (0 to 30psi) ±0.5% o.m.r.

Temperature:

(1 off)	-55 to +280°C (-67 to 536°F)
(3 off)	10 to 50°C (50 to 122°F) ±1% o.f.s.
(1 off)	0 to 40°C (32 to 104°F) ±2°C

Air Humidity:

(1 off)	0 to 100% r.H. ±3%

Angle:

(1 off)	0 to 360° ±0.1°

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