Test Rig for Power Drive Units

>TR-PDU1<



The test rig >TR-PDU1< is designed for production acceptance of Power Drive Units and, therefore, tests the complete unit as well as the assembly “gear".

- Servomotor to test the gear without hydraulic motor
- Load the hydraulic motor on the gear by a hydraulically operated brake
- Test the PDU-emergency unlock
- Voltage measurement on UUT
- Voltage measurement and angle measurement connected via PLC-Bus
- a separate feed line (maintenance circuit) supplies two service-sockets (NEMA 5-15)

GENERAL INFORMATION

- Test chamber with laminated safety glass and safety door monitoring
- Rotatable HMI
- Equipped with UPS for PLC, measuring systems and main computor to protect from mains failure or fluctuation
- Easy accessibility for maintenance tasks by doors and removable covers
- Especially manufactured adaptions and test cables for single UUTs

TECHNICAL DATA

Hydraulic parameters:

High pressure (HP)

Pressure:	0 to max. 300bar (4,350psi)
Flow:	0 to max. 76l/min (20 gal/min)

Static high pressure (SHP)

Pressure:	0 to max. 450bar (6,525psi)
Flow:	0 to max. 10l/min (2.65gal/min)
Medium:	MIL-PRF-83282
Fluid purity:	AS 4059, class 5 or better

Cooling water circuit

Pressure:	2 to 10bar (29 to 145 psi)
Flow:	min. 75l/min (20 US gal/min)
Diff. pressure:	min. 1bar (14psi)
Temperature:	max. 20°C (68°F)
Water quality:	Industrial quality (min. VDI 2035, VDI 3803)
Water hardness:	<6 °dH / <250 mg/l

Electrical supply (main supply):

Mains connection:	480Y/277V 3ph 3w 60Hz
Nominal current:	120A
Power:	100kVA
Prefuse:	200A gG

Electrical supply (maintenance supply):

Mains connection:	120V 1ph 2w 60Hz
Nominal current:	max. 13A
Power:	approx. 3kVA
Prefuse:	16A gG

Dimensions and weight (without swivel arm):

Length:	approx. 3,800mm (150in)
Width:	approx. 1,400mm (55in)
Height:	approx. 2,700mm (105in)
Weight:	approx. 4,000kg (8,800lb)

Operating conditions:

Operating temperature:	20 to 30°C (68 to 86°F)
Storage temperature:	5 to 50°C (41 to 122°F)
Height:	up to 1,000m (3,280ft) via MSL
rel. air humidity:	< 90% (non condensing)
Noise emission:	max. 80dB(A), 1m (3.28ft)

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> Measurements:

Pressure: (3 off)	0 to 400bar (0 to 5,800psi) ±0.5% of full scale (FS)
Pressure: (2 off)	0 to 40bar (0 to 580psi) ±0.5% FS
Pressure: (2 off)	0 to 10bar (0 to 145psi) ±0.5% FS
Pressure: (2 off)	0 to 600bar (0 to 8,700psi) ±0.5% FS
Flow: (1 off)	1l/min to 80l/min (0.26 to 21gpm) ±0.8% FS
Temperature: (3 off)	0 to 100°C (32 to 212°F) ±2°C abs. (±3.6°F abs.)
Temperature: (1 off)	0 to 80°C (32 to 176°F) ±2°C abs. (±3.6°F abs.)
Angle: (1 off)	0 to 360° ±0.5° abs.
Speed: (1 off)	0 to 500rpm ±1% of measuring range (MR)
Torque: (1 off)	-8,850.8 to 8,850.8lb-in ±0.5% FS
Torque: (1 off)	-44.25 to 44.25lb-in ±0.5% FS
Torque: (1 off)	-17.7 to 17.7lb-in ±0.5% FS
Current (1 off):	0ADC to 1ADC ±0.5% FS
Current (1 off): (Servo valve)	-10 to 10mA ±0.1mA abs.
Voltage (2 off):	0VDC to 35VDC ±0.3% FS
Voltage (3 off): (LVDT)	0.2Vrms to 7Vrms ±0.2% of measured value (MV); ±0.005Vrms abs.
Voltage (5 off): (LVDT)	0.1Vrms to 7Vrms ±0.2% (MV); ±0.005Vrms abs.
Frequency (2 off): (LVDT)	100Hz to 5000Hz ±1% MV; ±0.0001Hz abs.
Frequency (2 off): (LVDT)	10Hz to 5000Hz ±1% MV; ±0.0001Hz abs.

OPTIONS

A wide range of options is available to fulfil our customers‘ requirements.
e.g.: adaption to numerous UUTs, test program requirements, dimensioning,...

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Technical data are subject to change!