

Motor Spindle Test Stand

>PMS3<



Developed for testing the characteristics of electrically operated linear actuators.

It can be adapted for linear actuators with different parameters.

- > To load linear actuators, two hydraulic cylinders are provided with max. 6kN or max. 25kN.
- > By using a position measurement system and a load cell, the relevant parameters for stroke, speed and force are detected.
- > On the one hand, the safety doors with polycarbonate-panels protect the operator, on the other hand, they provide optimal access to the test room.

ADDITIONAL INFORMATION

- > Automatic test procedures with report evaluation
- > Remote control to retract/extend the load cylinders
- > Operation is carried out via a mobile control cabinet
- > Stroke measurement by means of an encapsulated length measuring system
- > Network connection enables maintenance of TEST-FUCHS test stand software, test procedures as error shooting on the device

TECHNICAL DATA

<p>> Hydraulic parameters:</p> <ul style="list-style-type: none"> - Hydraulic medium Mobil DTE 25 - Tank 60 liters (15.9gal) - Variable axial piston pump 20l/min, 150bar (5.28USgpm, 2,180psi) - Diaphragm accumulator 1.4 liters (0.37gal) - Oil-air-cooler - High pressure filter 6μ with electrical and optical contamination indication - Return filter 10μ with electrical and optical contamination indication - Pressure gauge 200bar (2,900psi), cl. 1.6 - Safety valve 160bar (2,320psi) - Overtemperature switch 70°C (158°F) - Minimum level switch (- Sight glass) 	<p>> Mains supply:</p> <ul style="list-style-type: none"> - Mains connection: 3/N/PE AC 50Hz 400V - Nominal current: max. 9.4A - Performance: approx. 6.5kVA - Prefuse: 32A gG (mains line) 																		
<p>> Mechanic parameters:</p> <ul style="list-style-type: none"> - Thrust bridge 1: <table style="margin-left: 20px;"> <tr><td>Force:</td><td>max. \pm20kN (4496lbf)</td></tr> <tr><td>Speed:</td><td>max. \pm150mm/s (5.91in/s)</td></tr> <tr><td>Stroke:</td><td>max. 500mm (19.7in)</td></tr> </table> - Thrust bridge 2: <table style="margin-left: 20px;"> <tr><td>Force:</td><td>max. \pm6kN (1349lbf)</td></tr> <tr><td>Speed:</td><td>max. \pm150mm/s (5.91in/s)</td></tr> <tr><td>Stroke:</td><td>max. 400mm (15.7in)</td></tr> </table> 	Force:	max. \pm 20kN (4496lbf)	Speed:	max. \pm 150mm/s (5.91in/s)	Stroke:	max. 500mm (19.7in)	Force:	max. \pm 6kN (1349lbf)	Speed:	max. \pm 150mm/s (5.91in/s)	Stroke:	max. 400mm (15.7in)	<p>> Maintenance supply (tapped before mains supply):</p> <ul style="list-style-type: none"> - Mains connection: 1/N/PE AC 50Hz 230V - Nominal current: max. 13A - Performance: approx. 3kVA - Prefuse: 16A gG - Connection: tapped before mains supply 						
Force:	max. \pm 20kN (4496lbf)																		
Speed:	max. \pm 150mm/s (5.91in/s)																		
Stroke:	max. 500mm (19.7in)																		
Force:	max. \pm 6kN (1349lbf)																		
Speed:	max. \pm 150mm/s (5.91in/s)																		
Stroke:	max. 400mm (15.7in)																		
<p>> Operating conditions:</p> <ul style="list-style-type: none"> - Installation height: max. 1,000m (3,280ft) MSL (main sea level) - Operating temperature: +5°C to +35°C (41 to 95°F) - Storage temperature: 0°C to +60°C (32 to 140°F) - Relative humidity: max. 95% (non-condensing) 	<p>> Electrical parameters:</p> <ul style="list-style-type: none"> - DC supply <table style="margin-left: 20px;"> <tr><td>Constant signal 1:</td><td>0 to 50VDC, 0 to 200A</td></tr> <tr><td>Constant signal 2:</td><td>0 to 50VDC, 0 to 200A</td></tr> <tr><td>Constant signal 3:</td><td>0 to 40VDC, 0 to 19A</td></tr> <tr><td>Constant signal 4:</td><td>\pm 50VDC, \pm 28A</td></tr> </table> 	Constant signal 1:	0 to 50VDC, 0 to 200A	Constant signal 2:	0 to 50VDC, 0 to 200A	Constant signal 3:	0 to 40VDC, 0 to 19A	Constant signal 4:	\pm 50VDC, \pm 28A										
Constant signal 1:	0 to 50VDC, 0 to 200A																		
Constant signal 2:	0 to 50VDC, 0 to 200A																		
Constant signal 3:	0 to 40VDC, 0 to 19A																		
Constant signal 4:	\pm 50VDC, \pm 28A																		
	<p>> Dimensions and weight:</p> <ul style="list-style-type: none"> - Test stand: <table style="margin-left: 20px;"> <tr><td>Width:</td><td>approx. 3,900mm (154in)</td></tr> <tr><td>Depth:</td><td>approx. 1,420mm (55.9in)</td></tr> <tr><td>Height:</td><td>approx. 3,240mm (128in) (incl. lifting access door)</td></tr> <tr><td></td><td>approx. 2,315mm (91.1in) (without lifting access door)</td></tr> <tr><td>Weight:</td><td>approx. 2,340kg (5,160lb)</td></tr> </table> - Control cabinet: <table style="margin-left: 20px;"> <tr><td>Width:</td><td>approx. 800mm (31.5in)</td></tr> <tr><td>Depth:</td><td>approx. 800mm (31.5in)</td></tr> <tr><td>Height:</td><td>approx. 2,130mm (83.9in)</td></tr> <tr><td>Weight:</td><td>approx. 155kg (331lb)</td></tr> </table> 	Width:	approx. 3,900mm (154in)	Depth:	approx. 1,420mm (55.9in)	Height:	approx. 3,240mm (128in) (incl. lifting access door)		approx. 2,315mm (91.1in) (without lifting access door)	Weight:	approx. 2,340kg (5,160lb)	Width:	approx. 800mm (31.5in)	Depth:	approx. 800mm (31.5in)	Height:	approx. 2,130mm (83.9in)	Weight:	approx. 155kg (331lb)
Width:	approx. 3,900mm (154in)																		
Depth:	approx. 1,420mm (55.9in)																		
Height:	approx. 3,240mm (128in) (incl. lifting access door)																		
	approx. 2,315mm (91.1in) (without lifting access door)																		
Weight:	approx. 2,340kg (5,160lb)																		
Width:	approx. 800mm (31.5in)																		
Depth:	approx. 800mm (31.5in)																		
Height:	approx. 2,130mm (83.9in)																		
Weight:	approx. 155kg (331lb)																		

TECHNICAL DATA

> Mechanic measurements		
Description measurement	Range	Tolerance
Force:		
Force	-6 to +6kN	±0.25% of full scale
Force	-20 to +20kN	±0.25% of full scale
Stroke:		
Stroke	0 to 1,140mm (0 to 44.9in)	±0.05mm (0.002in)
Stroke	0 to 1,140mm (0 to 44.9in)	±0.05mm (0.002in)
Clearance:		
Stroke	0 to 30mm (0 to 1.18in)	±0.01% of full scale
Force	-0.1 to +0.1kN	±0.5% of measuring range
Pressure:		
Pressure	0 to 250bar (0 to 3,630psi)	±0.5 of measuring range
> Electrical measurements		
Description measurement	Range	Tolerance
DC supply - constant signal 1 / or 4		
Voltage	0 to 50VDC	±0.25% of full scale
Current	0 to 40ADC	±0.25% of full scale
Current	0 to 5ADC	±0.25% of full scale
DC supply - constant signal 2		
Voltage	0 to 50VDC	±0.25% of full scale
Current	0 to 40ADC	±0.25% of full scale
Current	0 to 5ADC	±0.25% of full scale
DC supply- constant signal 3		
Voltage	0 to 40VDC	±0.25% of full scale
Current	0 to 16ADC	±0.25% of full scale
Current	0 to 2 ADC	±0.25% of full scale

TECHNICAL DATA

> Electrical measurements (continuation)

Description measurement	Range	Tolerance
LVDT voltage / frequency measurement		
Excitation		
- Voltage	0 to 7Vrms	±0.1% of full scale
Measurement 1		
- Voltage	-7 to +7V	±0.1% of range
	0 to 7Vrms	±0.1% of full scale
- Phase displacement	-360 to +360°	±0.5° absolute
Measurement 2		
- Voltage	-7 to +7	±0.1% of range
	0 to 7Vrms	±0.1% of full scale
- Phase displacement	-360 to +360°	±0.5° absolute
Additional measurements on the UUT		
Voltage		
- UUT 1	0 to 50VDC	±0.25% of full scale
- UUT 2	0 to 50VDC	±0.25% of full scale
- UUT 3	0 to 50VDC	±0.25% of full scale
Tacho		
- Tacho (voltage)	-10 to 10 VDC	±0.5% of full scale
Resistance		
- Voltage (Potentiometer measurement)	0 to 10VDC	±0.02% of range
- Resistance	0 to 2,000Ohm	±1% of range



Hydraulic power unit



Test room