Técnica Industrial Oswaldo Filizola Ltda.

User Manual
AME / BME Series Universal Testing Machines

rev. may/11

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Introduction

Técnica Industrial Oswaldo Filizola Ltda. thanks you for the purchase of this product. This machine was designed to be a reliable tool for mechanical testings, presenting a long maintenance-free service life. Please feel free to contact us at any moment.

This universal testing machine is used for tensile, compressive, flexural and other testings, according to the grips and accessories supplied. Its motion system is based on precision ball screw and a motor/driver set, totally controlled by DynaView Standard/Pro M Software, allowing simple and efficient compliance with many testing standards (ISO, ASTM, DIN etc) of many materials (plastics, metals, rubber etc).

Setup

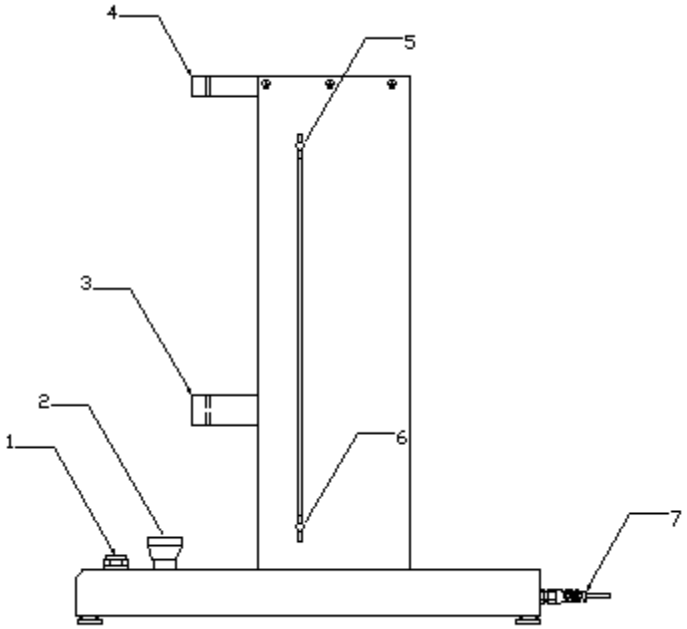
This machine must be installed on a table or workbench, away from humidity or direct sunlight. It must be installed close to the computer which will control it. It must be connected to a power outlet ranging from 93 to 135Vac or 187 to 250Vac, 47 to 63Hz (universal full-range supply) with minimum rated power 0,1kVA. The serial cable (DB9F connector) must be connected to a PC serial port or a serial adapter.

WARNING

Connection to power outlet outside the specification may severely damage the machine.

Parts description

Main machine parts are the following:



1 – On/off button: must be pressed to turn on the machine. When pressed a lamp inside the button will light, indicating the machine is ready.

2 – Safety emergency stop button: must be pressed to stop the machine in emergency situations. To restore machine functions turn the button clockwise until it is unlocked.

3 – Crosshead: where load cell and/or grip/accessory is fixed. This part can exert forces equal to or greater than machine rated capacity (specified in kN) in the upward or downward direction.

4 – Upper head: part where load cell and grip may be optionally fixed.

5/6 – Upper and lower end-of-travels: must be used to limit crosshead movement, e.g. to avoid collision between grips.

7 – Serial cable and supply conductor.

Maintenance

Maintenance of this product must be performed only by factory trained personnel. Changes to driver settings or motor replacement may damage both of them. If customer is instructed by factory to make any kind of maintenance, power plug must be disconnected from power outlet before that. In case of any maintenance need please get in contact with manufacturer.

The machine ball screw must be periodically lubricated. This lubrication is done by removing the ball screw nut lubrication hole cap and applying lithium-based grease (e.g. blue grease). Reinsert the cap after lubrication. This lubrication must be done every 6 months or in smaller intervals.

Scheduled maintenance

A scheduled maintenance must be done every 3 years. It consists of a disassembly of machine in which all mechanical parts are cleaned and lubricated. Scheduled maintenances increase the service life of mechanical parts, motor and driver.

If machine is exposed to excessive dirt during usage an yearly maintenance is recommended.

WARNING

Maintenance of this product can be performed only by factory trained personnel.

Safety precautions

The machine crosshead can exert forces equal to or greater than rated capacity (specified in kN) in the upward or downward direction.

According to machine model this force may be considerably higher than rated capacity.

The crosshead may cause hazards to user, who can have his hand or other body part trapped by machine, resulting in serious physical hazards or death.

Every machine has an emergency stop button which will immediately cease any crosshead movement. Every user must be trained to properly use the emergency stop button prior to machine usage.

DANGER Accidents with machine can result in serious physical hazards or death.

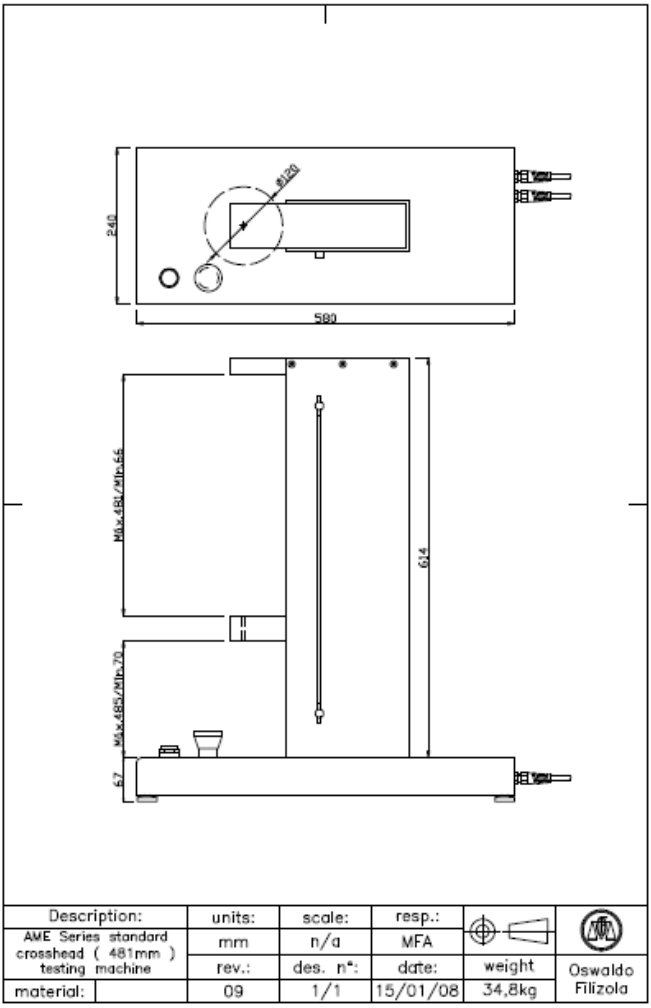
Machine control

This universal testing machine is totally controlled by DynaView Standard/Pro M software. This software features powerful motion control resources which allow not only tensile, bending, compressive and flexural testings but also cyclic and creep testings, complying with a wide range of testing standards.

Detailed information about software commands are found in DynaView Reference Manual, which is installed in DynaView folder in pdf format and can be reached at Start>Programs>DynaView menu.

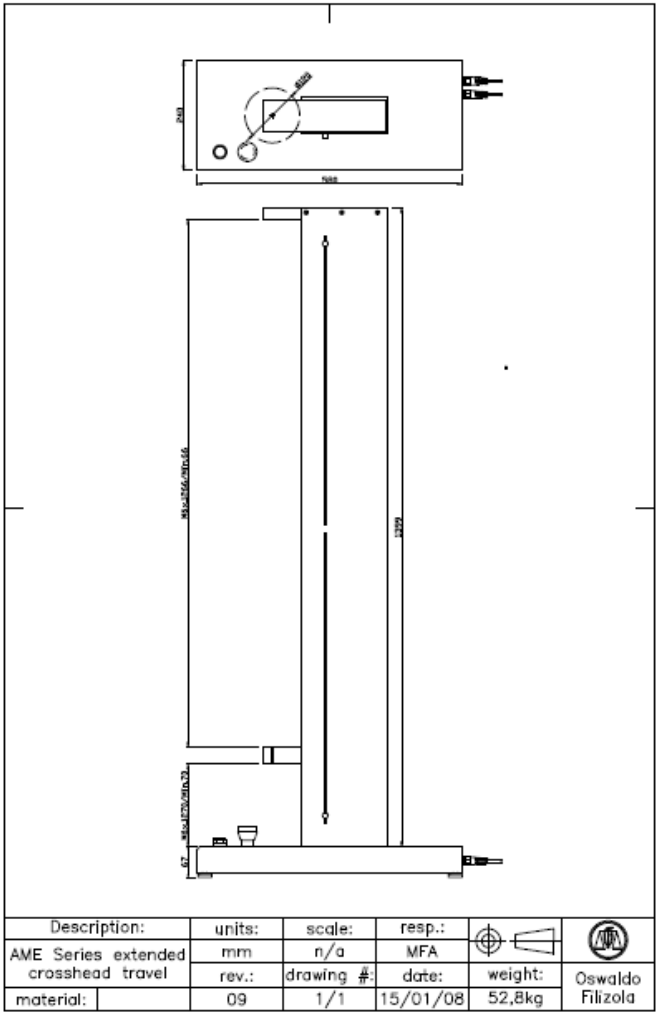
External dimensions

1. AME standard crosshead travel



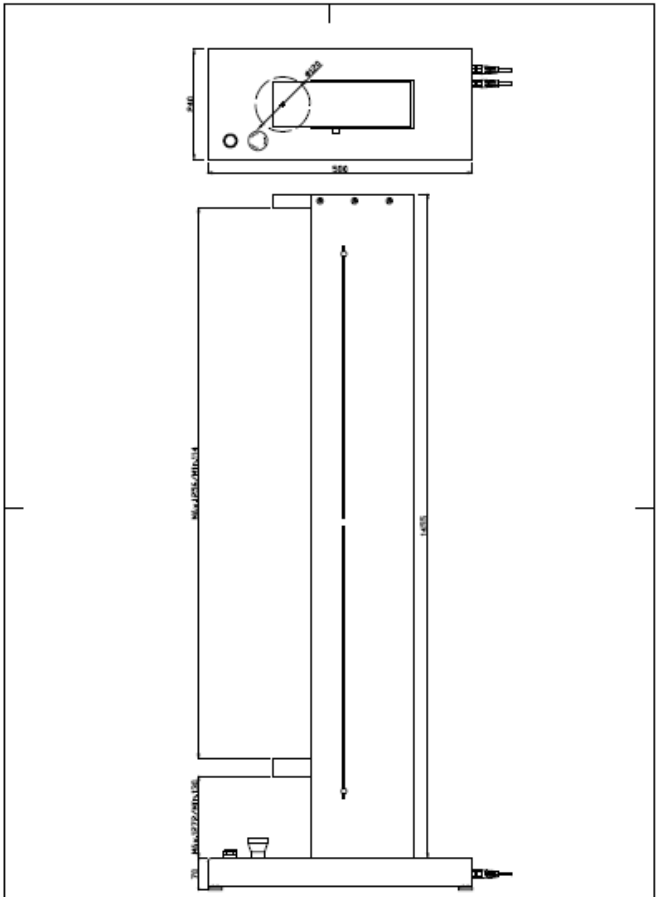
Description:	units:	scale:	resp.:		
AME Series standard crosshead (481mm) testing machine	mm	n/a	MFA		
	rev.:	des. n°:	date:	weight	Oswaldo Filizola
material:	09	1/1	15/01/08	34,8kg	

2. AME extended crosshead travel



Description:	units:	scale:	resp.:		
AME Series extended crosshead travel	mm	n/a	MFA		
	rev.:	drawing #:	date:	weight:	Oswaldo Filizola
material:	09	1/1	15/01/08	52,8kg	

3. BME



Description:	units:	scale:	resp.:		
BME Series Universal Testing Machines	mm	s/e	MFA		
	rev.:	drawing #:	date:	weight:	Oswaldo Filizola
material:	00	1/1	05/06/08	68,8kg	

Technical specifications

Universal Testing Machine	
External parts	carbon steel with synthetic painting
Transmission system	precision ball screw with preloaded nut
Protection degree	IP00
Capacity	according to model
Testing speeds	0,05 to 4,95 ± 0,05mm/min 5 to 500 ± 0,5mm/min
Power supply	universal full range (93 to 135Vac or 187 to 250Vac, 47 to 63Hz)
Consumption	90W (max.)
Storage temperature	-10 to 50 ºC
Operating temperature	0 to 40 ºC

Warranty and Limited Liability Agreement

This universal testing machine and accessories is warranted for 1 year from commercial invoice date against any defect, excluding defects caused by misuse or normal wear. Any repair during warranty will have no cost to customer, excluding machine transportation or technician displacement when required, which will run at customer´s expenses. Repair under warranty does not cover emission of certificates of calibration, even in cases in which machine or accessories were purchased with a certificate of calibration.

Results generated by this machine are calculated based on testing standards and general knowledge on mechanical properties of materials. The manufacturer will not supply testings from third parties aiming to validate results. The manufacturer will indicate, on request, a reference laboratory for this purpose, which will be contracted exclusively at customer´s expense. The customer acknowledges the need to contract specific insurance covering any risk associated to the use of testing results generated.

The manufacturer will under no circumstance be held responsible for losses, damages, lost profits or revenue, bodily injury, including permanent disability, paralysis and death arising out of the use of the machine.