

Servo Controlled Universal Testing Machine



This is hydraulically controlled servo Universal Testing Machine. All other specifications are as per TFUC model

The main advantage of this servo system is a test can be conducted by giving a specific load rate or elongation rate. The oil flow is controlled by the close loop feedback from the load elongation system. Test with specific load steps can also be conducted,

Servo data Entry

Test : Extension Test Filename : EXT1.DAT

Test mode select

- ☐ Manual Control
- ☐ Potentiometric Control
- ☐ Load Rate Control
- ☒ Elongation Rate control
- ☐ Load Hold
- ☐ Stress Rate Control
- ☐ Strain Rate Control

Rupture (% Peak)	50
Preload (kN)	2
Safe Load (kN)	1000
Hold time (Sec.)	10
Load Rate (kN/min)	200
Stress Rate (kN/sq.mm/min)	20
Elongation Rate (mm/min)	4.5
Strain Rate (%strain/min)	0.5
Initial Valve Open : 05-99%	20

Specimen Dimensions

Width	25
Thickness	0.38
Ext. Gauge Length	25
Speciman Gauge Length	80

Yield Determination Method

- ☐ From graph, Material with distinct Yield
- ☐ By Offset method as per ASTM E8
- ☒ By Extension-Under-Load method as per ASTM E8

Extension-Under-Load (% Strain)	0.5
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This screen opens when you start "Servo Test" from main menu. (For Servo Controlled m/c)

Test Related data Entries :

Safe Load (kN), Preload (kN) , Rupture % Peak (15 - 85) entries same as standard test

Speciman Dimensions :

entries same as standard test

You can select Yield determination Method same as standard test

Servo Data Entry :

First You have to select Servo control Mode. (Load Rate / Elongation rate etc.).

"Start test as" option is for initial gripping purpose. After preload control starts with selected rate.

Keep Initial Valve Open entry sufficient so that loading must start with this much valve open, as control will not start till preload.

After selecting "Servo control mode" , You have to fill green hilighted entries in given units.

You can save all Servo Data entry as some descriptive name , So as to recall same entries again. (With "Save Servo settings" & "Load Servo settings")

If required you can change Proportional Gain settings , or Method (ERROR / NEW RATE).

Default Gain & Method settings will work for about all specimans.

Click on "Data OK" to go for Test Start with Online Graph.



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