



An ISO 9001:2015 certified company

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GSTIN : 27AAYPD7338Q1ZO

Accuracy and Resolution

1. Piston Stroke : **200mm**
2. Load Resolutions : **50000 / 100000 Counts**
3. Load Accuracy : **± 1% of shown reading**
4. Displacement resolution : **0.01 mm**
5. Displacement Accuracy : **± 0.5% of shown reading**
6. Extension Resolution : **0.001 mm**
7. Extension Accuracy : **± 1% of shown reading**

Note :

1. **Extensometer** is used for calculating **0.1, 0.2 up to 1% Proof Stress** and proof load values and **Young's Modulus / Modulus of elasticity**
2. **UTES (Servo) Machines** will have the facility of conducting **Stress Rate Control / Load Rate Controlled / CH. Strain Control Tests** as per ASTM E8, ISO 6892 and IS 1608 (Control Method A2 and Control Method B in ISO 6892 / IS 1608). **Achieved Stress Rate Control / Load Rate Controlled / CH. Strain Rate controlled Graphs can be printed on the test reports as per NABL requirement**
3. **Warranty : 2 years from the date of installation for all Electronic Control Panel.1 year for Motors and other electronic components**

HYDRAULIC SERVO additional features :

1. Load Rate accuracy control **+ - 3 %** or **+ - 3 kN** of set Load Rate within specified limits
2. Displacement Rate accuracy of **+ - 2%** or **+ - 2 mm** of set Disp. Rate
3. Real time display of Load Rate and Displacement Rate
4. Working Auto Detect yield facility for changing from Load Rate to Displacement Rate
5. Hold Load upto 250 Secs with appropriate valve settings.
6. Load Rate / Stress Rate can be set in required units



Hydraulic Gripping - Front Loading Machine



Electronic Hardware Points:

1. 50000 Counts over the range for Load
2. 100000 counts optional for load
3. Extensometer Facility integrated by default in Motherboard
4. Single Point Controller Calibration For Load and Extensometer.
 - a. No potentiometers required
5. Peak Load displayed on the controller post test automatically.
6. Supports extensometer of any make
7. Machine turn off on rupture - No Pc software required
8. RS485 Communication protocol with PC software - works upto 100 meters

Software Points

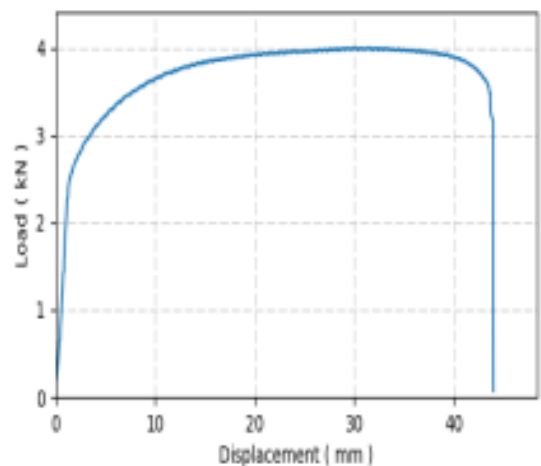
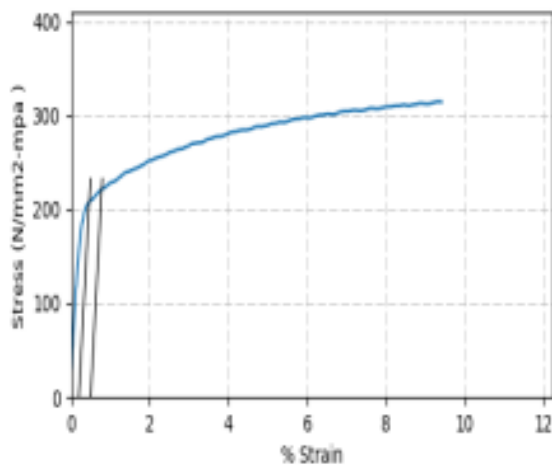
1. Load / Displacement / Extension display on Home Page.
2. Video Extensometer Integration
3. Sample type customization
4. Real time graph in selected units for Load and Stress.
5. Integration of multiple extensometers in one system
 - a. Can save calibration for each one of the seperately.
6. Real Time Load Rate/ Disp Rate / Stress rate display in Servo Mode
7. Ability to Freeze real time graph
8. Prefect yield calculation as per customer demand
 - a. Accurate calculation from graphical method
 - b. ASTM method offset selection from 0.1 % to 1 %
 - c. Yield calculation method can be change post test
9. Ability to select / unselect results displayed in printed report.
10. Ability to change input parameters (Gauge length / CS. Area) post test.
11. Ability to add up to 10 extra Key-Value Pairs as input. Customer can use these key value pairs as per his requirement
12. Ability to add up to 2 extra Key-Value Pairs in the report header. Customer can use these key value pairs as per his requirement
13. Ability to export reports to excel with graphs.
14. Ability to print all Test Data Points of a selected test in selected units.
15. Graph Cursor - Zoom - Pan Facility
16. Unlimited Tests in one batch file.
17. Proof stress calculation from 0.1 % to 1 %
18. Report Customization as per customer demand.

Ability to print following graphs in test report (PDF).

- 1. Load vs Time with Load Rate in Servo Test**
- 2. Stress vs Time with achieved Stress Rate in Servo Test**
- 3. Strain vs Time with achieved Strain Rate in Servo Test**

Extensometer Test - Stress vs Strain and Load vs Displacement

Date : 10/1/2023 Customer Name : Tata 4 mm sample Trial	
Test Type : : Tensile Test - Stress Vs Strain File Name : : rval_demo1_45deg Sample Type : : Rectangular Rate Disp. : : 5.0 (mm/min)	Material Test Results Max. Load (kN) : 4.000 Tensile Strength (N/mm ²) : 328.431 Disp. at Max. Load (mm) : 30.08 Max. Displacement (mm) : 43.96 Yield Load (kN) : 2.887 Yield Stress (N/mm ²) : 237.062 Proof Stress 0.2 % Offset (N/mm ²) : 206.496 Proof Stress 0.5 % Offset (N/mm ²) : 221.163 Proof Load 0.2 % Offset (kN) : 2.515 Proof Load 0.5 % Offset (kN) : 2.694 Youngs Modulus (N/mm ²) : 62534.729 Max. Extension (mm) : 4.7 Extension @ Fmax(mm) : 4.68 % AGT : 9.36 YS/UTS : 0.63 UTS/YS : 1.59
Gauge Length (mm) : 80.0 Thickness (mm) : 0.58 Width (mm) : 21.0 Initial Area (mm²) : 12.18 Sample Id : : Sample 1 :	



**Servo Test Reports with Load vs Time (345 kN/min)
and Displacement vs Time Graphs (12 mm/min)**

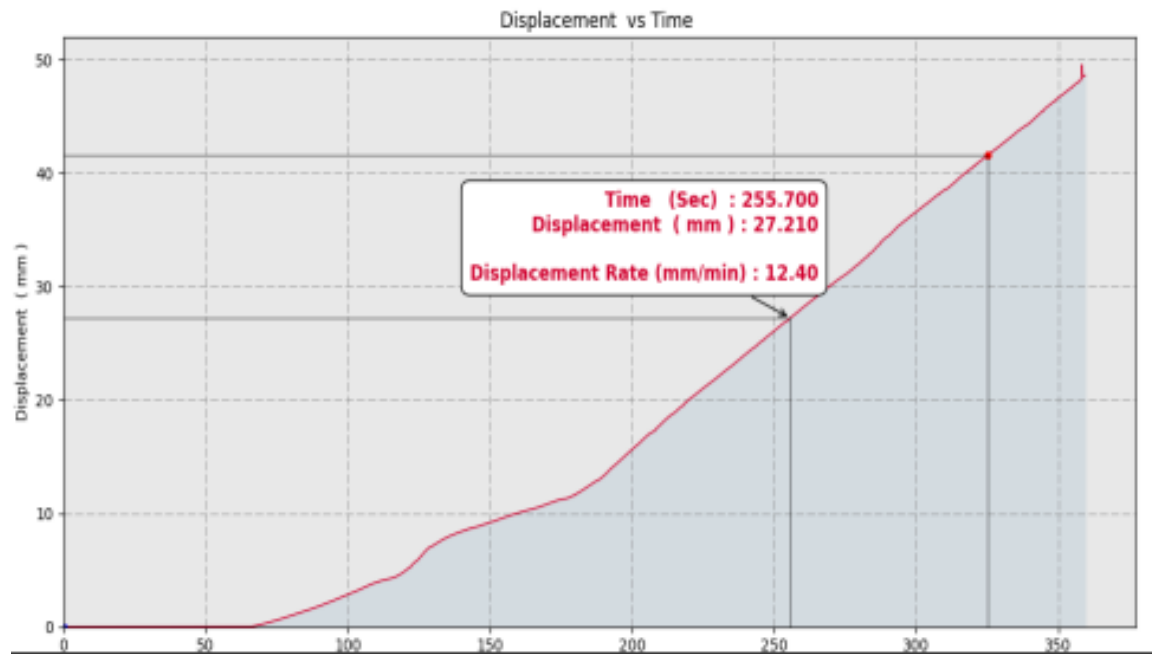
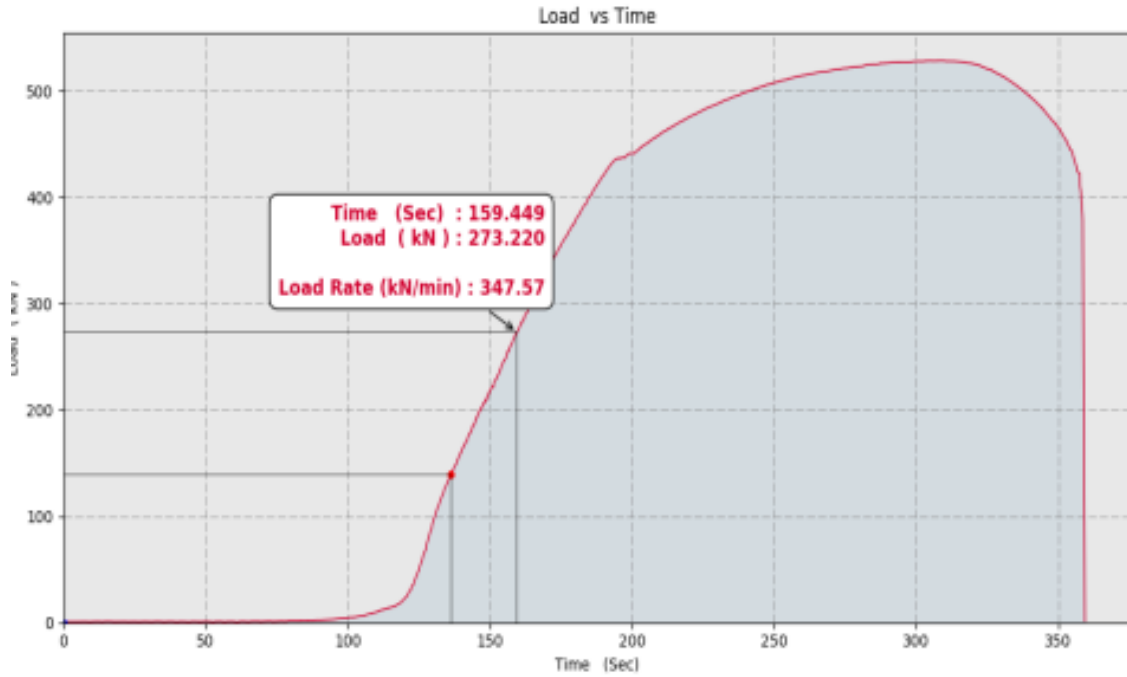
345 kN/min pre yield speed and 12 mm/min Post Yield Speed	
Date : 17/8/2021 Customer Name :	
<p>Input Data</p> <p>Test Type : : Tensile Test File Name : demooo Rate Load. : 345.3 (kN/min) Sample Type : Tmt Rate Disp. : 12.0 (mm/min)</p>	<p>Material Test Results</p> <p>Max. Load (kN) : 528.26 Ult. Stress (N/mm²) : 642.464 Disp. at Max. Load (mm) : 38.23 Max. Displacement (mm) : 48.61 Yield Load (kN) : 448.5 Yield Stress (N/mm²) : 545.461 YS/UTS : 0.849 UTS/YS : 1.178 Elongation % : 12.500 Final Gauge Length (mm) : 180.0</p>
<p>Density (gm/cc) : 7.85 Gauge Length (mm) : 160.0 Length (mm) : 440.0 Weight (Kg) : 2.84 Initial Area (mm²) : 822.24 Weight (kg/meter) : 6.455</p>	
<p>Grade : dddd Make : Jindal Nominal Dia : 25</p>	
<p>The graph plots Load (kN) on the y-axis (0 to 500) against Displacement (mm) on the x-axis (0 to 50). The curve starts at (0,0), rises to a yield point of approximately 448.5 kN at 12.5 mm displacement, reaches a maximum load of 528.26 kN at 38.23 mm displacement, and then drops to zero at 48.61 mm displacement.</p>	

(345 kN/min) and (12 mm/min)

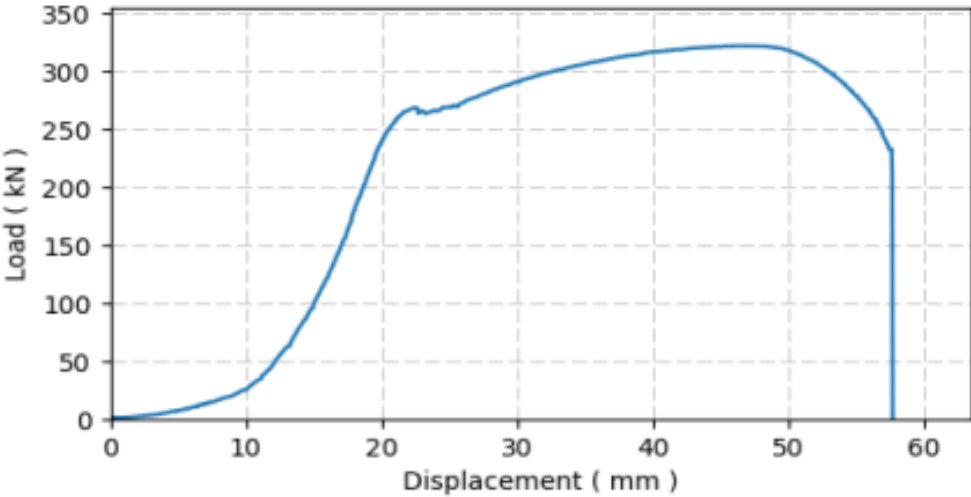
File Name : demooo

Load Rate : 347.57 (kN/min) from 139.84 kN [136.4 sec] To 273.22 kN [159.4 sec]

Displacement Rate : 12.4 (mm/min) from 41.58 mm [325.2 sec] To 27.21 mm [255.7 sec]



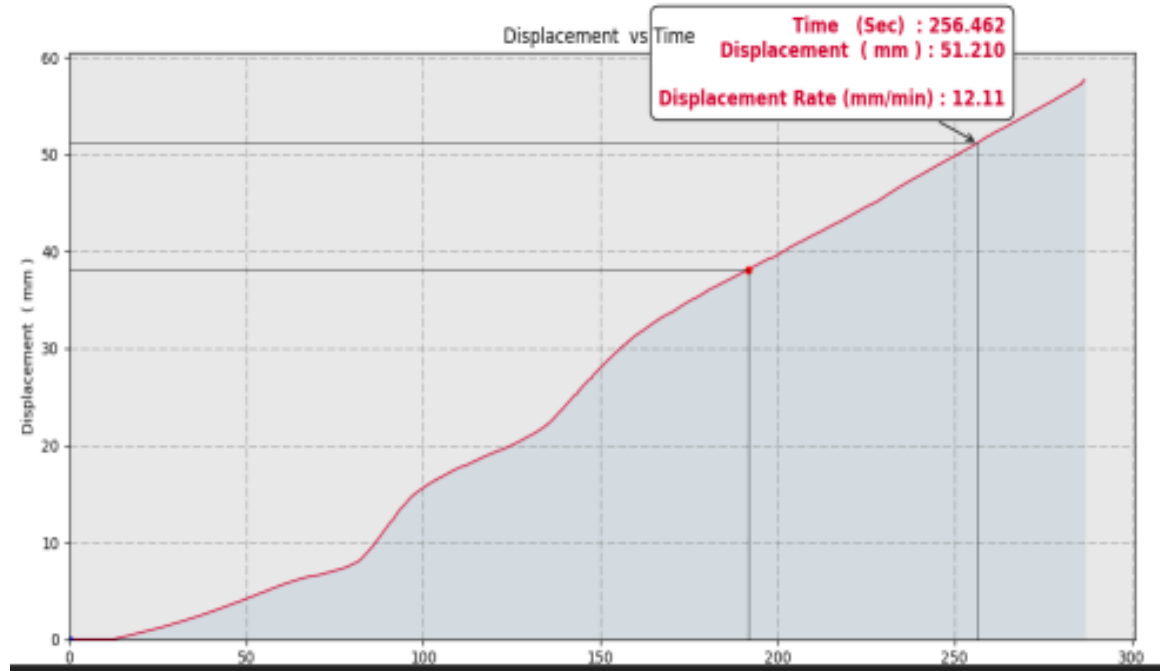
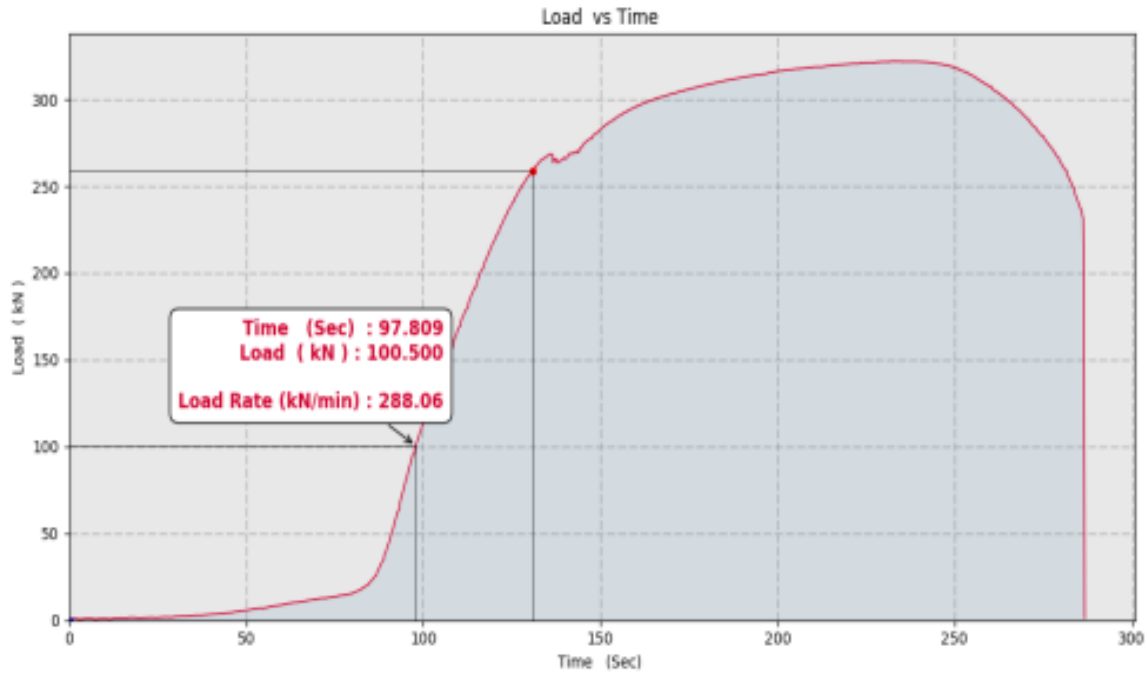
**Servo Test Reports with Load vs Time (288 kN/min)
and Displacement vs Time Graphs (12 mm/min)**

TEST RESULT	
288.9 kN/min Pre Yield and 12mm/min Post Yield Speed Control	
<div style="border: 1px solid gray; display: inline-block; padding: 2px 10px;">Press Esc to exit full screen</div>	
Date : 17/8/2021 Customer Name :	
Input Data Test Type : : Tensile Test File Name : : demoo13 Rate Load : : 288.9 (kN/min) Sample Type : : Tmt Rate Disp. : : 12.0 (mm/min)	Material Test Results Max. Load (kN) : : 321.92 Ult. Stress (N/mm2) : : 401.121 Disp. at Max. Load (mm) : : 46.27 Max. Displacement (mm) : : 57.66 Yield Load (kN) : : 275.28 Yield Stress (N/mm2) : : 343.007 YS/UTS : : 0.855 UTS/YS : : 1.169 Elongation % : : 12.000 Final Gauge Length (mm) : : 140.0
Density (gm/cc) : : 7.85 Gauge Length (mm) : : 125.0 Length (mm) : : 400.0 Weight (Kg) : : 2.52 Initial Area (mm ²) : : 802.55 Weight (kg/meter) : : 6.3	
Grade : : fe-500 Make : : Jindal Nominal Dia : : 25	
 <p>The graph plots Load (kN) on the y-axis (0 to 350) against Displacement (mm) on the x-axis (0 to 60). The curve starts at the origin, rises to a yield point of approximately 275 kN at 22 mm displacement, then continues to a maximum load of 321.92 kN at 46.27 mm displacement. After the peak, the load decreases until it reaches zero at 57.66 mm displacement.</p>	
Tested By	Checked By
Approved By	

File Name : demo013

Load Rate : 288.06 (kN/min) from 259.08 kN [130.8 sec] To 100.5 kN [97.8 sec]


Displacement Rate : 12.11 (mm/min) from 38.16 mm [191.8 sec] To 51.21 mm [256.5 sec]



(288 kN/min) and (12 mm/min)


Software Screenshots

Load (kN)
 Disp. (mm)
 Ext. (mm)




Start Sample Test

Start Sample test as per ASTM / IS / ISO standards.




Create New Batch

Test multiple samples in one file




Calibrate/ Settings


Calibration of control unit and factory settings



Results / Datastore

In-depth analysis of completed tests

 Demo Sample Test

 Demo New Batch

Activate Windows
 Go to Settings to activate Windows.

#1 : Select Graph Type

Load vs Displacement Stress vs Strain

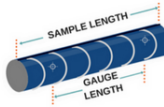
#2 : Select Extensometer Type

Clip On EE2 Video Ext.

Yield Str. % EUL
 Proof Str. Offset 1 : %
 Proof Str. Offset 2 : %

#3 : Select Sample Type

Round Solid Rectangular Round Hollow TMT Strand Other



Sample Length (mm) :

Weight (Kg) :

Density (gm/cc) :

Gauge Length (mm) :

Select output unit :

Load Stress
 N kN kGf lbs

Activate Windows
 Go to Settings to activate Windows.

Test Specifics

File Name : alpes-ve-2-gate-inner

Test Type : Load vs Extension

Test Type : Stress vs Strain

Test Speed : 10.0 (mm/min)

Sample Type : Round Solid

Select Results to Print

Max. Load (N) : 6835.351

Ult. Stress (N/mm2) : 222.795

Yield Load (N) : 5033.977

Yield Stress (N/mm2) : 164.080

Proof Stress 0.2 % Offset (N/mm2) : 154.983

Proof Stress 0.5 % Offset (N/mm2) : 169.084

Proof Load 0.2 % Offset (N) : 4754.878

Proof Load 0.5 % Offset (N) : 5187.497

Youngs Modulus (N/mm2) : 22884.809

Total Elongation @ Rupture (mm) : 1.5

% Total Uniform Elongation @ Fmax : 4.889

Total Uniform Elongation @ Fmax (mm) : 1.47

YS/UTS : 0.759

UTS/YS : 1.318

Select output unit

Load Displacement Stress

N kN kgf lbs

Elongation and Area

Final Gauge Length (mm) : 31.5

Elongation % : 5.000

Input Fields

Gauge Length (mm) :

Outer Diameter (mm) :

Extra Fields

Key 2	:	Value 2
Key 1	:	Value 1
	:	
	:	
	:	

Sample Type :

Consignee Name :

Edit Yield Load

New Yield :

Edit Elongation

Final GL :

Stress vs Strain

Select a window of points

Start X :

Start Y :

End X :

End Y :

Plot Offset Proof Lines

Yield From Graph - First Drop

ASTM Method - Offset %

Show Method in PDF

Activate Windows
Go to Settings to activate Windows.

Control panel Indicator

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Load (kN)

0.992

STD|20T|C:0|Pk:-0.000kN|H01d:00.0kN

Disp. (mm)

0.1

TARE LOAD

TARE DISP.

FREEZE

START STOP

MODE

UP

SHIFT

DOWN

SET

■