

OPERATOR'S MANUAL

THIS MANUAL COVERS THE OPERATOR'S INSTRUCTIONS OF
JUNTTAN ENERGY MEASUREMENT SYSTEM

MANUAL REFERENCE NUMBER: EME3002000
MODEL: EME300
YEAR OF MANUFACTURE: 2000

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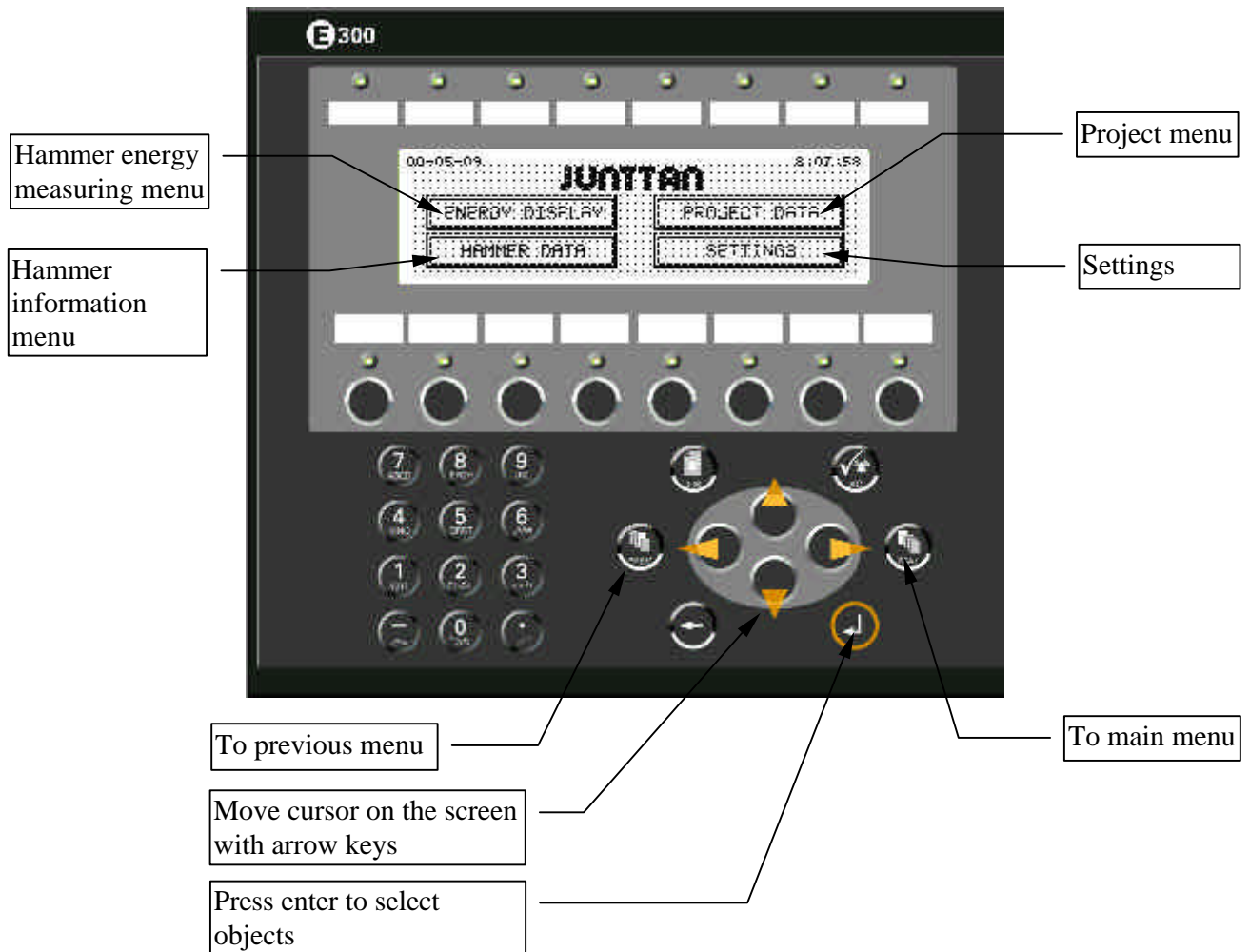
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1. INTRODUCTION

The energy measurement system includes speed sensors, calculating unit, display, keyboard and printer. Display and keyboard are placed to the top console of the cab. Calculating unit is in the electric centre which is behind the operator's seat (rear console). Printer is in the left console. Speed sensors are assembled to the hammer.

Hammer energy is measured just before the ram block hit the drive cap. Calculating unit calculates the kinetic energy of the hammer by using the ram block weight which is set to unit. The energy, the speed and number of the blows can be seen on the display. Total time, piling time and time for one pile can be printed. Also it is possible to print total blows, total penetration (when using 25/50 mode) and total energy of the hammer.

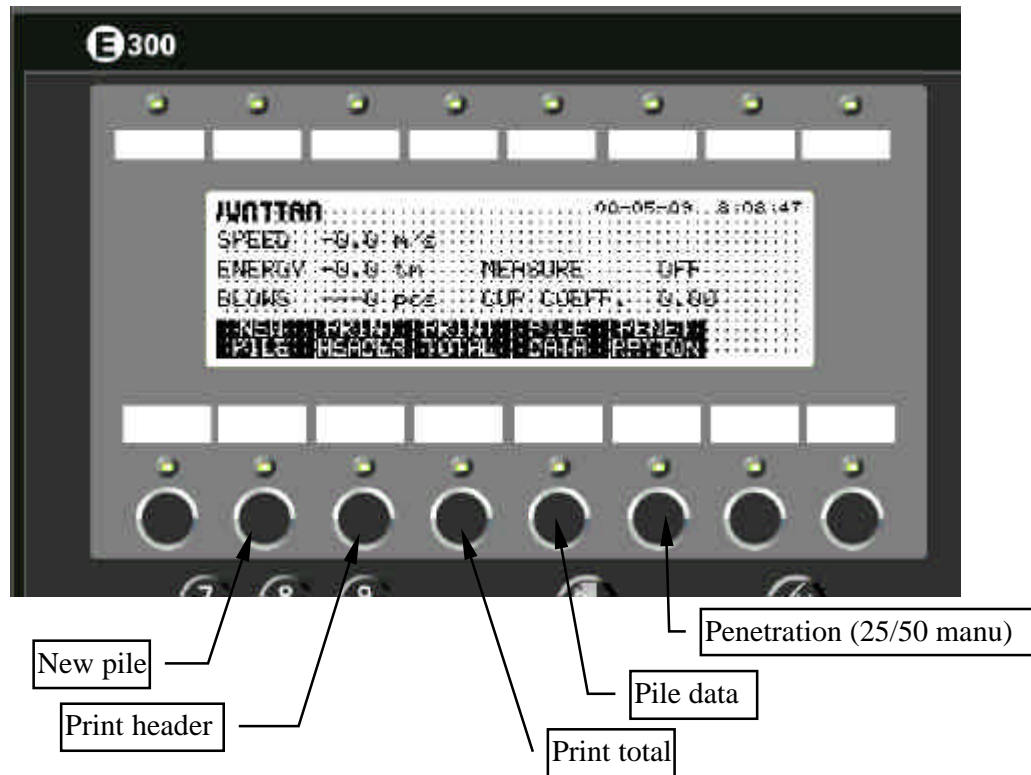


The main menu opens when the power of the energy measurement system is switched on (switch on the top console). In this menu you can select hammer energy measuring. Also it is possible to change settings or project information. Move cursor on the screen with arrow keys and select object by pressing Enter.

The function of the function keys is written to the top side of the key. You can select the function by pressing the key. The main menu is displayed always when you press the Main-key. Use Prev-key when you want return to previous menu.

2. HAMMER ENERGY MEASURING MENU

Select the hammer energy measuring menu from the main menu. Hammer speed, energy and blows are shown on the display. The function of the function keys is written to the top side of the key (black background).



Before start measuring the energy you must input hammer data (see section hammer information menu), pile data and measuring method to unit .

2.1 MEASURING THE HAMMER ENERGY

1. Input hammer data (see section hammer information menu)
2. Press Main menu-key.
3. Select hammer energy measuring menu.
4. Select pile data and input pile number, length and starting depth.
5. Press Prev-key.
6. Press Print header-key.
7. Press New pile-key.
8. Start piling.
9. Printer prints piling report according to the measuring method (see section hammer information menu).

Piling report				
JUNTTAN OY				
06.11.1997		12:12:12		

Client	Junttan Oy			
Project	Test			
Address	Kuopio			

Pile number	1			
Pile length	13 m			
Material	concr			
square	280*280 mm			

1 - Penetration (m)				
2 - Blows /25 cm				
3 - Blows total				
4 - Energy /blow tm				
5 - Blows /minute				

1	2	3	4	5

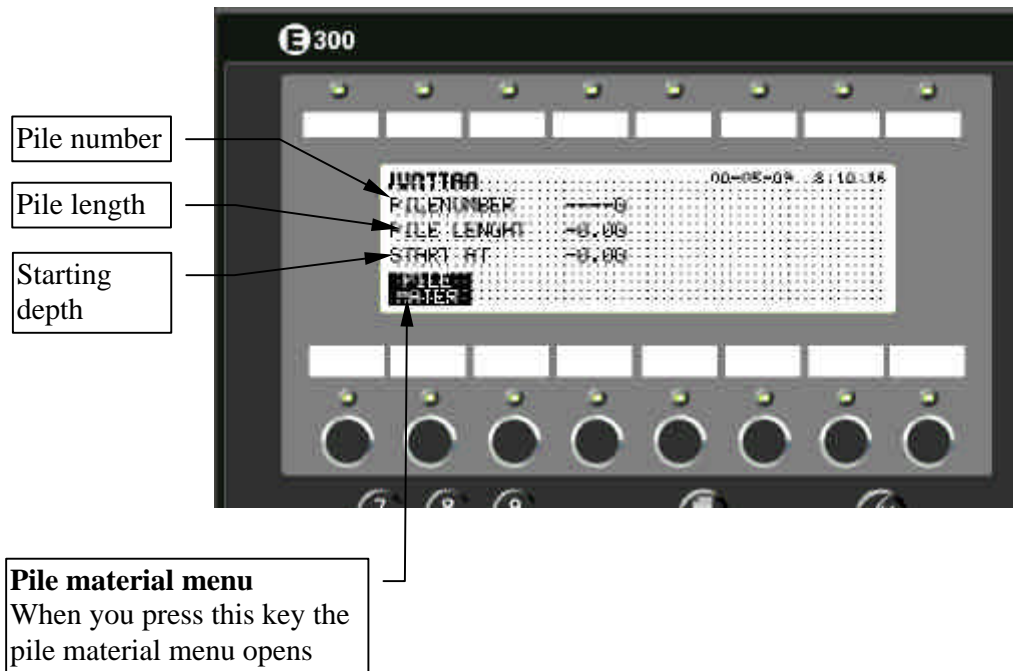
10. When the pile is ready press Print total-key. Printer prints piling report.

Blows total	26
Penetration total	1.00
Energy total	130
Total time	1:15
Effect time	0:43

11. Continue piling, input pile data, print header, press new pile and start piling.

2.2 PILE DATA MENU

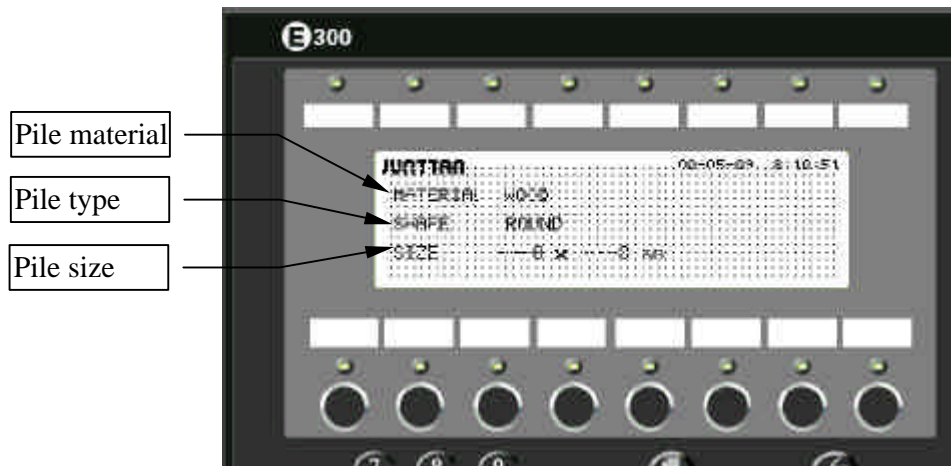
Input pile number by moving cursor to the line of the pile number, set the number and finally press Enter. Input pile length and starting depth at the same way. Return to energy menu by pressing Prev-key.



2.2.1 PILE MATERIAL MENU

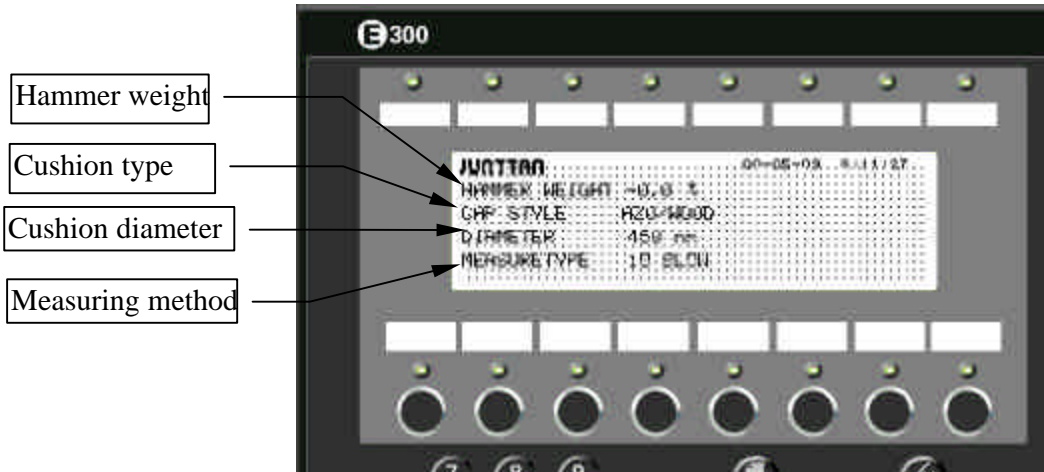
When you open the pile material menu the cursor is flashing on the pile material text. Select the pile material by pressing Enter. Pile material submenu opens and you can choose wood, concrete, steel or other.

Pile type is selected at the same way. Alternatives are round, square, profile or other. Input pile size with number keys and press Enter. Return to previous menu by pressing Prev-key



3. HAMMER INFORMATION MENU

Hammer data keeps in the memory if you switch off the power.



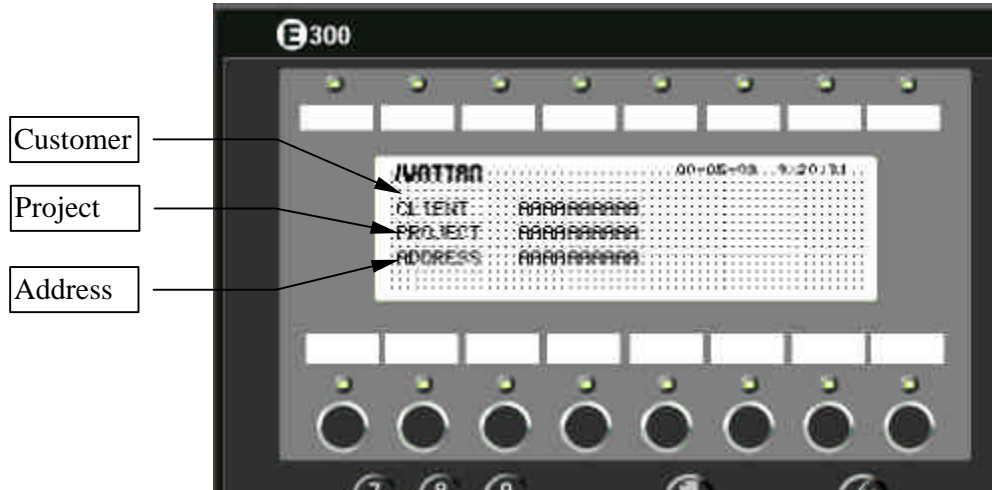
- Move cursor to the hammer weight column. Set weight and press Enter.
- Move cursor to the cushion type column and press Enter. Submenu opens and you can select the type. Alternatives are azo/wood, azo/steel, pla/steel and other.
- Cushion diameter is selected at the same way as cushion type. Alternatives are Ø450, Ø520, Ø600 and Ø750).
- Measuring method is also selected at the same way. Alternatives are 10 blow, 25 manu and 50 manu.

Measuring methods:

- | | |
|----------|--|
| 10 blow: | The printer prints automatically the piling report after each 10 blows. |
| 25 manu: | The printer prints pile total penetration, blows for 25 centimetres, average energy and blows per minute when the 25 manu switch (penetration key) is pressed. |
| 50 manu: | The printer prints pile total penetration, blows for 50 centimetres, average energy and blows per minute when the 50 manu switch (penetration key) is pressed. |

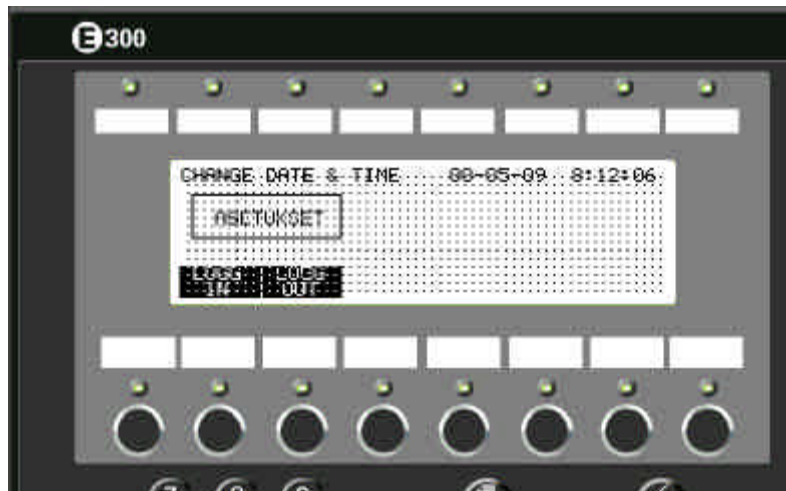
4. PROJECT MENU

From the main menu you can choose the project menu. Input necessary information to columns and press Enter. Letters are connected to the number keys. For example when you want write 'A', press number key 7 two times. When the word is ready press Enter and move the cursor to the next line. Return to main menu by pressing Main menu-key



5. CHANGING DATE AND TIME

You can change date or/and time. Go to the main menu and select Settings. The submenu opens. Press Enter. Use number keys to change the date and time. Return to main menu by pressing Main menu-key



6. PRINTER SPECIFICATIONS

Paper:

Type: Thermal paper
Appleton # T1022A
Jujo # TP 50 KSA
Honshu # FH 65 BX-HN

Width: 4.25“(112 mm), single ply

Temp of use: 5° to 50°C

Storage: protected from UV light and heat source