

RSM-JC6(E)

Static Load Tester



**Integrated DC Fully Automatic Oil Pump,
Automatic reversing and speed adjustable**

– Application

- Static Axial Compressive Load Testing
- Static Axial Tensile Load Testing
- Static Lateral Load Testing
- Plate Load Testing
- Bi-Directional Static Axial Compressive Load Testing
- Anchor Rod Load Testing



CE certificate

The RSM-JC6(E) Static Load Tester is an intelligent static load testing device with a high degree of automation, capable of easily handling various testing environments. The control box is integrated into the oil pump, allowing for pump speed adjustment to accommodate tests of various tonnages. The main unit can wirelessly control the control box. It also supports remote operation via smartphone mirroring control of the main unit, utilizing a guided operation design. The software includes various domestic and international testing methods and standards, ensuring simple, safe, and reliable operation.



– Technical Features



Integrated DC Fully Automatic Oil Pump

Providing precise loading and unloading without the need for manual reversing. Enabling precise control for tests of various tonnages. Pressure sensor can be built into the oil pump.



Wireless Displacement Sensor

Wireless distance exceeds 50 meters. High precision with digital display, showing various information. Continuous working for over 15 days. IP67 waterproof.



e+ Intelligent Control

Wireless range exceeding 1000 meters. Remote control via smartphone, staying away from complex and hazardous on-site environments.



Built-in Control Box

Utilizes a DC control box integrated within the oil pump. Equipped with a high-precision GPS/Beidou module, ensuring accurate positioning of test points.



6th Generation Unit

Features an industrial-grade capacitive touchscreen for precise and smooth operation. Designed with IP65 dustproof and waterproof protection, ensuring reliability in harsh environments.



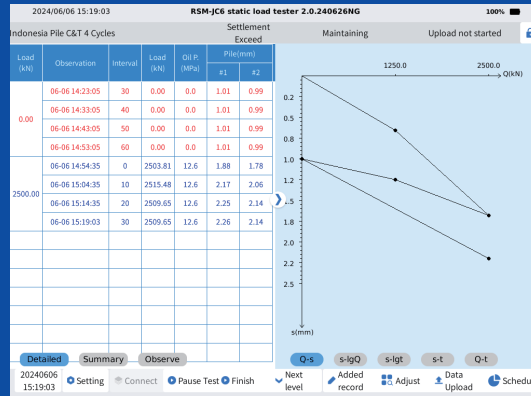
Compatible with Multiple Force Measurement Methods

Force output can be calculated using pressure sensors to convert jack force. Alternatively, one or more load sensors can be configured to directly record jack force.

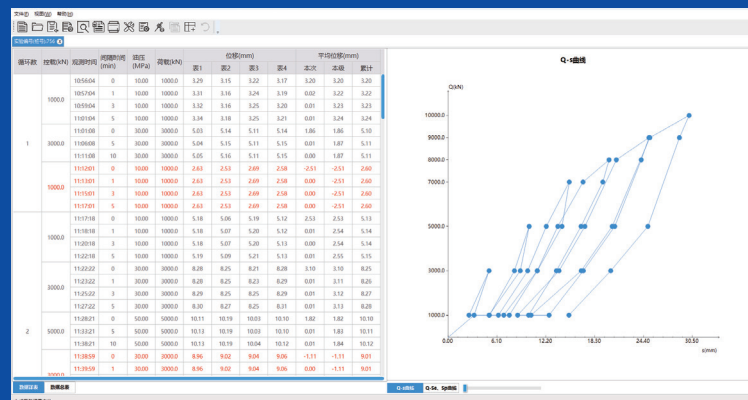
– Specification

RSM-JC6(E)			
Display method	8.4-inch true-color LCD screen Resolution: 800×600 (adjustable backlight)	Input / Output Interfaces	USB,Data export can be sent via email from the main unit
Operation mode	Capacitive Touchscreen (Lockable Screen)	Operating System	Linux
Data Backup	Automatic Backup	Main Control Unit	Low-power embedded system
Storage capacity	16G electronic hard disk	Operating temperature	-20 ~ +55℃
Communication Methods	Wireless / Wired	Environment humidity	≤85%
Wireless Communication Distance	≥1000m	Dimension	265*200*56 mm
Number of Wireless Control and Measurement Points	1	Weight	2.2kg (including lithium battery)
Power Supply Modes	DC 12V/5A power adapter, RSM-JC6 DC control box power supply, Removable and replaceable lithium battery		
RSM-JC DATA BOX + DC OIL PUMP			
Displacement Testing Channels	Wired Version: 4 Channels (requires a displacement adapter box) Wireless Version: 4 Channels		
Pressure Testing Channels	Pressure Sensor: 1 channel (can be built into the oil pump or externally connected) Load Sensor: 1 channel / 8 channels (8 channels require a load adapter box)		
Displacement Testing Accuracy	Error not greater than 0.1% FS		
Displacement Resolution	Not less than 0.01mm		
Pressure Testing Accuracy	Better than or equal to 0.5 grade / 0.25 grade (including pressure sensor and load sensor)		
Pressure / Load Range	Pressure Sensor Range: 0-70 MPa(0-10000PSI) Load Testing Range: 0-100000 kN (depending on the load sensor range)		
Displacement Power Supply	Wired displacement sensors are powered by the RSM-JC6 DC control box Wireless displacement sensors are equipped with rechargeable lithium batteries (can be used continuously for 15 days when fully charged)		
Wireless Distance	Greater than 1000 meters from the main unit Wireless displacement sensors can be installed within a 50-meter radius around the test point		
Power Supply Method	DC: Specified lithium battery (60V lithium battery)		
Oil Pump Reversing Method	Fully automatic reversing		

RSM Static Load Tester Software



Static Load Sampling Software Interface



RSM-JC6(E) Static Load Testing Project

– Anchor rod capacity test

Test time: January 4th, 2024

General Information:

Anchor rod type	Prestressed anchor cable
Anchor section soil layer	Non cohesive soil
Diameter	15.2mm
Bolt length	22m
Anchor section length	10m
Free section length	12m
Single hole anchor rod quantity	4 pieces
Maximum test load	779kN
Reference test specification	GB50086-2015

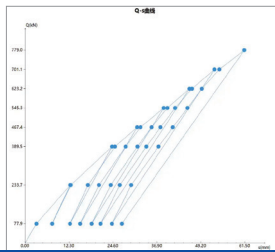
On site installation:



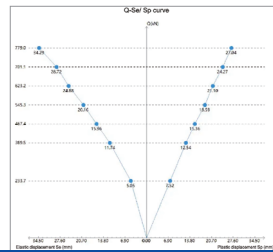
Test site:



Test result:



On site capacity test Q-s curve



On site capacity test Q-Se/Sp curve

No.	Load(kN)	Time(min)	Total	Displacement(mm)	Total
1	114.0	5	5	0.06	0.06
2	180.0	5	10	0.19	0.25
3	192.0	5	15	0.23	0.48
4	216.0	5	20	0.28	0.76
5	240.0	5	25	0.38	1.10
6	254.0	5	30	0.36	1.46
7	288.0	5	35	0.38	1.84
8	312.0	5	40	0.40	2.24
9	336.0	5	45	0.44	2.68
10	360.0	5	50	0.56	3.24
11	384.0	5	55	0.57	3.81
12	408.0	5	60	0.53	4.34
13	432.0	5	65	1.66	6.00
14	456.0	5	70	1.34	7.34
15	480.0	5	75	1.26	8.60

On site test data sheet

– Gradient load test

Test time: January 5th, 2024

General Information:

Anchor rod type	Prestressed anchor cable
Diameter	15.2mm
Anchor section length	10m
Free section length	12m
Single hole anchor rod quantity	4 pieces
Locking force design value	400kN
Maximum test load	480kN
Reference test specification	JGJ/T 401-2017

On site installation:



Installation of support bench and jack

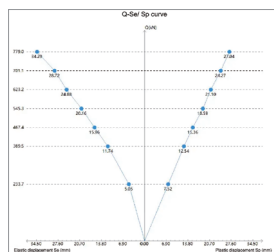


Installation of displacement sensors



On site equipment installation

Test result:



Gradient load test P-s curve

No.	Load(kN)	Time(min)	Total	Displacement(mm)	Total
1	114.0	5	5	0.06	0.06
2	180.0	5	10	0.19	0.25
3	192.0	5	15	0.23	0.48
4	216.0	5	20	0.28	0.76
5	240.0	5	25	0.38	1.10
6	254.0	5	30	0.36	1.46
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Gradient load test data