SINO-JAPANESE JOINT VENTURE
RELIABLE AND DURABLE PRODUCTS

NZCQ HTHP Consistometer

- Dual cell, dual temperature and control system and dual screen display realize the respective control of temperature and pressure, therefore experiments can be conducted completely independently; the large-size touch screen ensures that the test data and curve graphs can be displayed and recorded directly and clearly.

- Users can set parameters of temperature controller from Eurotherm through the touch screen; with a concise user interface, the touch screen makes it easier for users to input or alter test parameters; users can set alarm values for multiple parameters as needed.

- Stable and reliable SIEMENS PLC can meet users' special demands and upgrade the instrument' s function in the future by programming.

- The change of oil level in the oil reservoir can be tracked through the touch screen or an oil level indicator, monitoring the progress of oil fill and oil return in real time.

- Users can disassemble and install the filter element by single hand with a small wrench without disassembling the pipeline. TEE type high pressure filter boasts larger filter area and longer cleaning frequency.

- Newly-designed potentiometer is more accurate and durable and it is more convenient to calibrate and clean.

- High-quality components: Quality and Durable Touch Screen, switches from NKK SWITCHES, customized thermocouple made in Japan, liquid pump from SC and high-pressure tubing from HiP.

PRODUCT INTRODUCTION

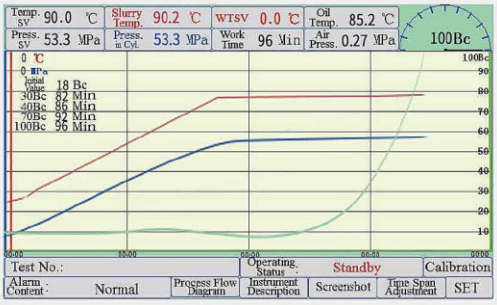
Overview

NZCQ Dual-cell HTHP consistometer is a new smart instrument designed and engineered in strict accordance with API Standard-10 and used for simulating high-temperature and high-pressure downhole well conditions and measuring consistency change and thickening time of oil well cement slurry continuously. The instrument is equipped with dual cell, dual temperature and pressure control system and dual screen display, which realizes the respective control of temperature and pressure, therefore experiments can be conducted completely independently. The large-size touch screen ensures that the test data and curve graph can be displayed and recorded directly and clearly. Surface of the instrument is made of stainless steel, which is more durable in use. When using the instrument, users can set alarm values for multiple test parameters, such as consistency, pressure, air supply pressure, oil level in the oil reservoir, etc. the alarm sound can be turned off through one-button operation easily. Moreover, it is composed of a series of high-quality components, including SIMENS PLC, temperature controller from Eurotherm, liquid pump from SC, air operated valve from HiP, switches from NKK SWITCHES, touch screen and thermocouple made in Japan.

Features & Innovations

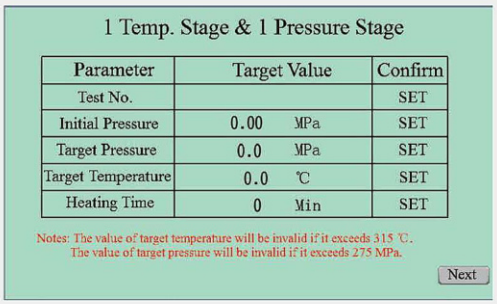
No.	NZCQ Dual-cell HTHP Consistometer	Conventional HTHP Consistometer
1	Users may input test parameters through the touch screen directly.	Temperature controller is adopted to set parameters; it is complex to operate and error-prone.
2	Test parameters and curve graphs of dual cells are directly and clearly displayed on the dual screen respectively.	It is inconvenient to observe test data of temperature, pressure and consistency as they are displayed on three separate dials.
3	The instrument can operate automatically with one-button operation after test parameters are set.	Alternate operation between hand valves and switches is complex and confusing.
4	With a built-in coil pipe made of stainless steel, the cast-aluminum chiller has higher efficiency of cooling and longer service life.	The chiller with stainless steel surface needs longer cool-down time.
5	Reasons for alarm are shown on the touch screen in a simple and straightforward manner.	Users have to find out reasons for alarm by themselves because the instrument is only equipped with alarm indicators, resulting in low efficiency.
6	Oil level sensor is used to give a signal automatically when there is no enough oil in the oil reservoir or the oil reservoir is filled up with oil.Detachable oil reservoir makes it easy to clean the sludge and impurities deposited at the bottom, ensuring the cleanliness of the oil.	Users have to take notice of the oil level in oil reservoir from time to time as it is easily neglected. Besides, the oil reservoir cannot be removed, therefore it' s inconvenient to clean the impurities deposited at the bottom.
7	Smart calibration system saves users from frequent adjustment of the spring as long as the zero point is corrected.	Frequent adjustment of the spring will be a must once the measurement of consistency is inaccurate, which is inefficient and unreliable.
8	Newly-designed potentiometer makes it easy to calibrate consistency to 0Bc; it can make good contact with contact pins in the test cell. The spring, installed at the bottom of the potentiometer, won' t be affected by the cement slurry.	As for conventional potentiometer, it is difficult to calibrate consistency to 0Bc; loose contact between potentiometer and contact pins in the test cell affects the accuracy of measurement; its bearing is not resistant to corrosion and is easy to get stuck. Besides, cement slurry tends to accumulate around the spring easily.

Observe Test Data



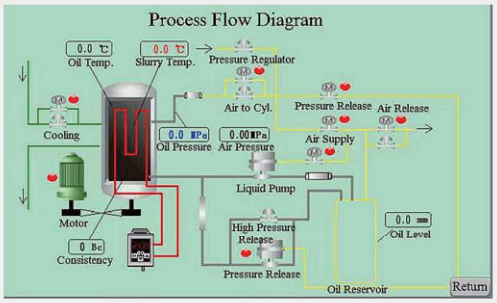
It' s convenient to observe test data and curve graph; users can take screenshots and output and save these screenshots.

Set Test Parameters



Users can set parameters through the touch screen instead of complicated buttons, making the operation simple and straightforward.

Track the Change of Oil Level



Users can look over the process flow diagram and track the change of oil level in oil reservoir and the switch status of electrically operated valves through the touch screen. Besides, users can also check oil level by an oil level indicator.

Touch Screen for Displaying Test Data and Curve Graphs

The front panel can be removed when cleaning the cylinder or doing maintenance work, making the operation more convenient.

Innovative, Simple and Durable

Regulate Pressure Automatically

During the test, the instrument can regulate pressure automatically as required by API standards to simulate the high-temperature and high-pressure downhole well conditions accurately. Therefore, the accuracy of test can be ensured because errors caused by manual adjustment are reduced.Functions can be realized by operating the only high pressure valve installed on each cylinder, which makes the operation simple and labor-saving.

Set Multiple Alarm Values for Parameters

When using the instrument, users can set alarm values for multiple test parameters, such as consistency, pressure, air supply pressure, oil level in the oil reservoir, etc. as required by the test. Reasons for alarm are shown on the touch screen in a simple and straightforward manner.

Considerate Design of Valves

Both electrically operated valves and manually operated valves are available for cooling system, air exhaust system and air to cylinder system. Users can end the test by using manually operated valves only when emergencies occur (e.g., power failure). It’ s a considerate design.

Shorter Cool-down Time

Cast-aluminum chiller accelerates heat diffusion and enlarges contact surface, so it can effectively shorten the cool-down time.

Spring Free from Influence of Cement Slurry

The spring is installed at the bottom of potentiometer, so there is no cement slurry accumulating around it. Therefore, the spring is able to keep good performance.

Easy Calibration to 0Bc

Users can easily calibrate the consistency to 0Bc only by adjusting one screw nut of the potentiometer.

Contact Springs

Replacing traditional metal plates with contact springs helps to improve the contact stability.

Broad Vision

No beam is installed above the potentiometer, so users can enjoy a broad vision, making it easier to install the mixing paddle.

Torsional Spring Used as Contact Arm

With the feature of automatic compensation, a torsional spring has better contact stability, so it is used as the contact arm of potentiometer to improve the accuracy of test data.

Contact Arm with Limited Range

Contact arm of potentiometer is limited to rotate within the range of resistor.

Good Stability

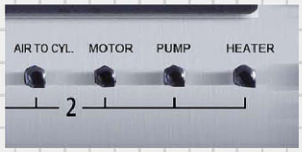
The potentiometer has three conductive rods to support it, making it more stable.

Well-designed and User-friendly

Quality Guaranteed

Thermocouple Made in Japan

Higher accuracy, better stability and reliability



Switches from NKK SWITCHES

Longer service life and better contact stability

SIEMENS PLC

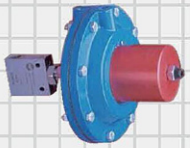
Stable performance with more durability

Temperature Controller from Eurotherm

High control accuracy and long service life

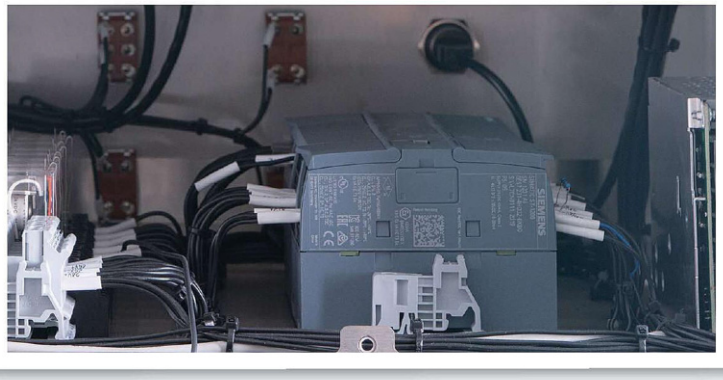
Liquid Pump from SC

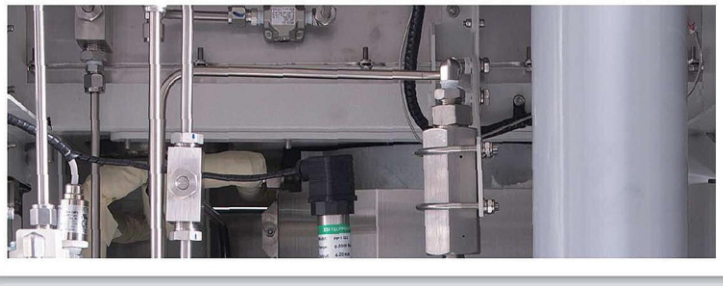
Fast pressurization speed long service life

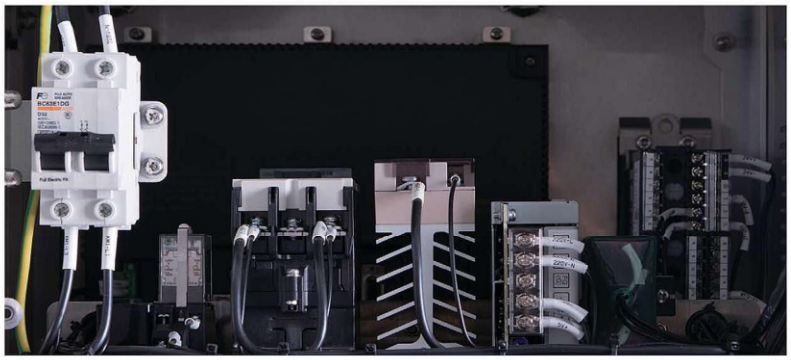


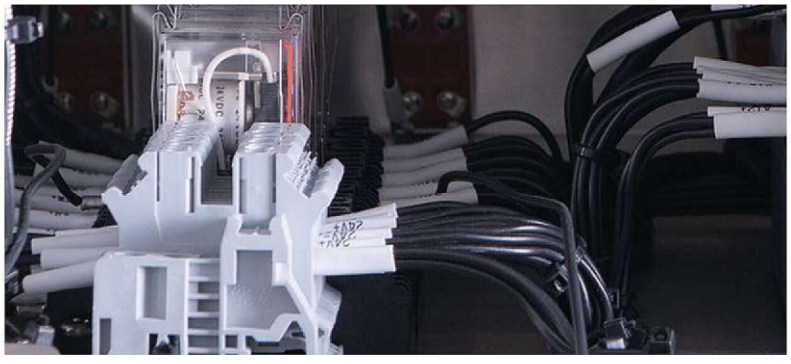
Air Operated Valve from HiP as Optional Item

High control accuracy and long service life









Detail-oriented, Easy and Safe to Use

Specifications

Max. Temperature	315°C	Max. Working Pressure	275MPa
Input Voltage	AC 100-110V 60HZ /220V 50HZ	Input Power	9000W
Consistency Range	0-100BC	Rotation Speed	150±15rpm
Air Supply Pressure	0.4-0.7MPa	Pressure of Cooling Water	0.2-0.5MPa
Dimensions (W*D*H)	127*80*177cm	Mass	950Kg
Heater Power	4000W*2	Connector Size of Cooling Water Pipe	Inner Diameter: 10mm

Available Models

NZCQ — 2 — 2 — 17 — R — A

No.	Power Supply
1	AC100-110V/60Hz
2	AC220V/50Hz

No.	Test Cell
1	Single Cell
2	Dual Cell

No.	Optional Item
R	Adjustable Speed of Rotation (0-600rpm)

No.	Optional Item
A	Equipped with a Strip Chart Recorder

- **For instance, the model number NZCQ2217RA refers to a dual-cell HTHP consistometer which can run on 220V power and is equipped with adjustable speed of rotation and a strip chart recorder.**

Part No.

Name	Image	Name	Image	Name	Image
Central Shaft of Mixing Paddle	 PZC001	Resistor	 PZC005	Metal O-ring	 PZC009
Rubber Diaphragm	 PZC002	Spring	 PZC006	High Pressure Oil Filter Element	 PZC010
Slurry Cup	 PZC003	Thermocouple (for Measuring Slurry Temperature)	 PZC007	Removal Tool for Magnetic Drive	 PZC011
Potentiometer	 PZC0047	Heater	 PZC008	Paddle	 PZC012

SINO-JAPANESE JOINT VENTURE
RELIABLE AND DURABLE PRODUCTS

NZCQ HTHP Consistometer

- The instrument adopts a large-size touch screen, through which the test data and curve graph can be displayed and recorded directly and clearly.
- Users can set parameters of temperature controller from Eurotherm through the touch screen; with a concise user interface, the touch screen make it easier for users to input or alter test parameters.
- Stable and reliable SIEMENS PLC can meet users' special demands and upgrade the instrument' s functions in the future by programming.
- The change of oil level in the oil reservoir can be tracked through the touch screen or an oil level indicator, monitoring the progress of oil fill and oil return in real time.
- Users can set alarm values for multiple parameters as needed.
- Creative design of potentiometer improves accuracy and durability.
- High-quality components: switches from NKK SWITCHES, customized thermocouple made in Japan, liquid pump from SC and high-pressure tubing from HiP.

PRODUCT INTRODUCTION

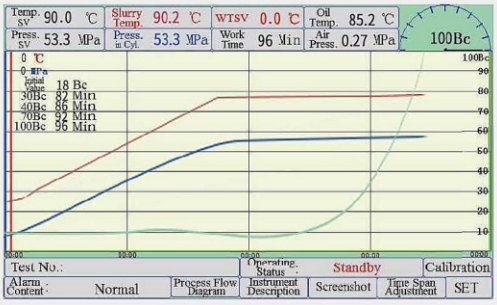
Overview

NZCQ HTHP consistometer is a new smart instrument designed and engineered in strict accordance with API Standard-10 and used for simulating high-temperature and high-pressure downhole well conditions and measuring consistency change and thickening time of oil well cement slurry continuously. Surface of the instrument is made of stainless steel, which is more durable in use. When using the instrument, users can set alarm values for multiple test parameters, such as consistency, pressure, air supply pressure, oil level in the oil reservoir, etc. and users can set multiple alarm values for each test parameter; the alarm sound can be turned off through one-button operation easily. Moreover, it is composed of a series of high-quality components, including SIEMENS PLC, temperature controller from Eurotherm, liquid pump from SC, air operated valve from HiP, switches from NKK SWITCHES, thermocouple made in Japan.

Features & Innovations

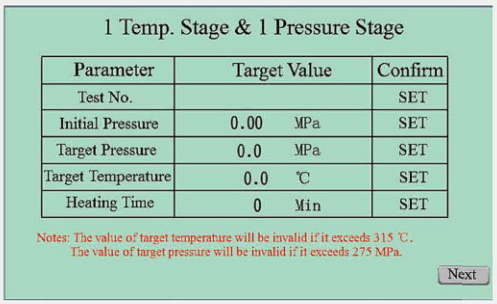
No.	NZCQ HTHP Consistometer	Conventional HTHP Consistometer
1	Users may input test parameters through the touch screen directly.	Temperature controller is adopted to set parameters; it is complex to operate and error-prone.
2	Test parameters and curve graphs are displayed on the touch screen directly and clearly.	It is inconvenient to observe test data of temperature, pressure and consistency as they are displayed on three separate dials.
3	The instrument can operate automatically with one-button operation after test parameters are set.	Alternate operation between hand valves and switches is complex and confusing.
4	With a built-in coil pipe made of stainless steel, the cast-aluminum chiller has higher efficiency of cooling and longer service life.	The chiller with stainless steel surface needs longer cool-down time.
5	Reasons for alarm are shown on the touch screen in a simple and straightforward manner.	Users have to find out reasons for alarm by themselves because the instrument is only equipped with alarm indicators, resulting in low efficiency.
6	Oil level sensor is used to give a signal automatically when there is no enough oil in the oil reservoir or the oil reservoir is filled up with oil.	Users have to take notice of the oil level in oil reservoir from time to time as it is easily neglected.
7	Smart calibration system saves users from frequent adjustment of the spring as long as the zero point is corrected.	Frequent adjustment of the spring will be a must once the measurement of consistency is inaccurate, which is inefficient and unreliable.
8	Newly-designed potentiometer makes it easy to calibrate consistency to 0Bc; it can make good contact with contact pins in the test cell; its ceramic bearing has a small coefficient of friction and long service life. Besides, the spring, installed at the bottom of the potentiometer, won' t be affected by the cement slurry.	As for conventional potentiometer, it is difficult to calibrate consistency to 0Bc; loose contact between potentiometer and contact pins in the test cell affects the accuracy of measurement; its bearing is not resistant to corrosion and is easy to get stuck. Besides, cement slurry tends to accumulate around the spring easily.

Observe Test Data



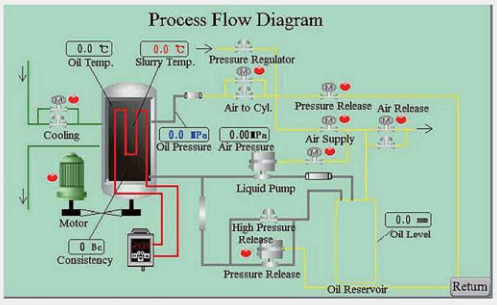
It' s convenient to observe test data and curve graph; users can take screenshots and output and save these screenshots.

Set Test Parameters



Users can set parameters through the touch screen instead of complicated buttons, making the operation simple and straightforward.

Track the Change of Oil Level



Users can look over the process flow diagram through the touch screen; they can track the change of oil level in oil reservoir and the switch status of electrically operated valves by looking over the process flow diagram. Besides, users can also check oil level by an oil level indicator.

Smart and Simple, Durable and Reliable

Innovative, Simple and Durable

Regulate Pressure Automatically

During the test, the instrument can regulate pressure automatically as required by API standards to simulatethe high-temperature and high-pressure downhole well conditions accurately. Therefore, the accuracy of test can be ensured because errors caused by manual adjustment are reduced.

Set Multiple Alarm Values for Parameters

When using the instrument, users can set alarm values for multiple test parameters, such as consistency, pressure, air supply pressure, oil level in the oil reservoir, etc. and users can set multiple alarm values for each test parameter as required by the test. It's simple and useful.

Considerate Design of Valves

Both electrically operated valves and manually operated valves are available for cooling system, air exhaust system and air to cylinder system. Users can end the test by using manually operated valves only when emergencies occur (e.g., power failure). It' s a considerate design.

Shorter Cool-down Time

Cast-aluminum chiller accelerates heat diffusion andenlarges contact surface, so it can effectively shortenthe cool-down time.

NZCQ HTHP Consistometer

Spring Free from Influence of Cement Slurry

The spring is installed at the bottom of potentiometer, so there is no cement slurry accumulating around it. Therefore, the spring is able to keep good performance.

Easy Calibration to 0Bc

Users can easily calibrate the consistency to 0Bc only by adjusting one screw nut of the potentiometer.

Contact Springs

Replacing traditional metal plates with contact springs helps to improve the contact stability.

Broad Vision

No beam is installed above the potentiometer, so users can enjoy a broad vision, making it easier to install the mixing paddle.

Torsional Spring Used as Contact Arm

With the feature of automatic compensation, a torsional spring has better contact stability, so it is used as the contact arm of potentiometer to improve the accuracy of test data.

Contact Arm with Limited Range

Contact arm of potentiometer is limited to rotate within the range of resistor.

Good Stability

The potentiometer has three conductive rods to support it, making it more stable.

Well-designed and User-friendly

Quality Guaranteed

Thermocouple Made in Japan

Higher accuracy, better stability and reliability

SIEMENS PLC

Stable performance with more durability

Liquid Pump from SC

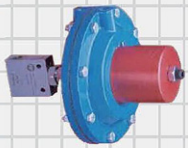
Fast pressurization speed long service life

Switches from NKK SWITCHES

Longer service life and better contact stability

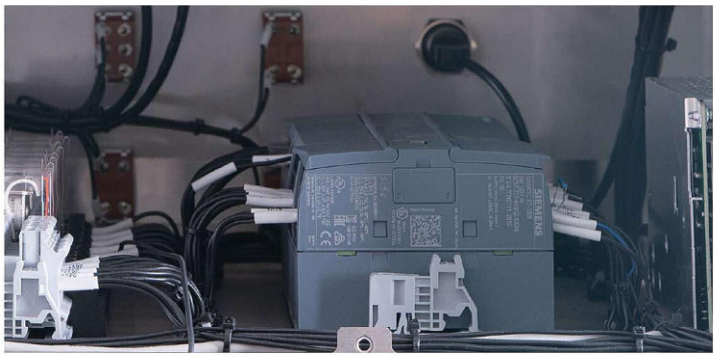
Temperature Controller from Eurotherm

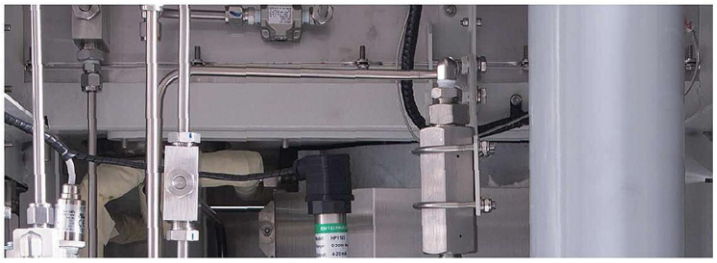
High control accuracy and long service life

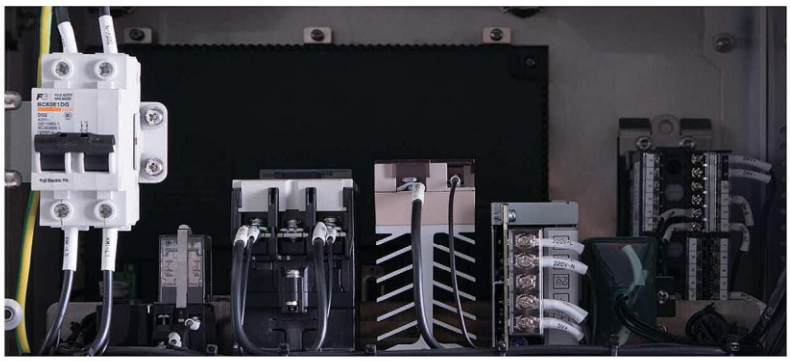


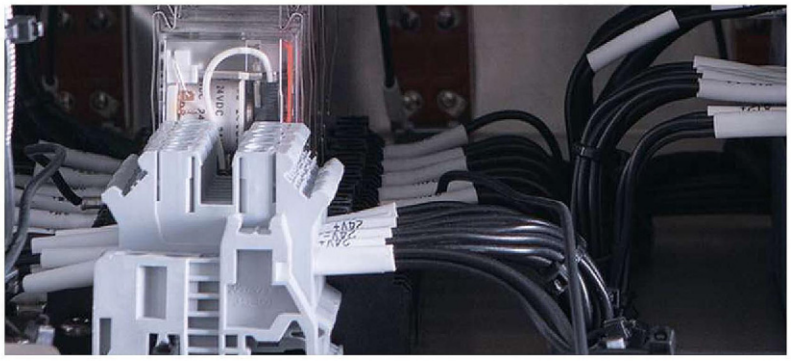
Air Operated Valve from HiP

High control accuracy and long service life









Detail-oriented, Easy and Safe to Use

Specifications

Max. Temperature	315°C	Max. Working Pressure	40000psi(275MPa)
Input Voltage	AC 100-110V 60HZ /220V 50HZ	Input Power	4500W
Consistency Range	0-100BC	Rotation Speed	150±15rpm
Air Supply Pressure	0.4-0.7MPa	Pressure of Cooling Water	0.2-0.5MPa
Dimensions (W*D*H)	70*100*172cm	Mass	550Kg
Heater Power	4000W	Connector Size of Cooling Water Pipe	Inner Diameter: 10mm

Available Models

NZCQ — 1 — 1 — 17 — R — A

No.	Power Supply
1	AC100-110V/60Hz
2	AC220V/50Hz

No.	Test Cell
1	Single Cell
2	Dual Cell

No.	Optional Item
R	Adjustable Speed of Rotation (0-600rpm)

No.	Optional Item
A	Equipped with a Strip Chart Recorder

- **For instance, the model number NZCQ2117A refers to a HTHP consistometer which can run on 220V single phase power and is equipped with a single cell and a strip chart recorder.**

Part No.

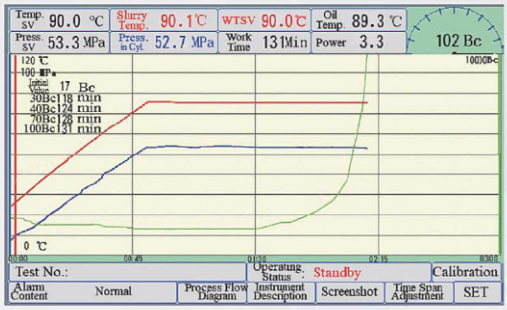
Name	Image	Name	Image	Name	Image
Central Shaft of Mixing Paddle	 PZC001	Resistor	 PZC005	High Pressure Oil Filter Element	 PZC010
Rubber Diaphragm	 PZC002	Spring	 PZC006	Removal Tool for Magnetic Drive	 PZC011
Slurry Cup	 PZC003	Thermocouple (for Measuring Slurry Temperature)	 PZC007	Metal O-ring	 PZC009
Potentiometer	 PZC047	Heater	 PZC008	Paddle	 PZC012

SINO-JAPANESE JOINT VENTURE
RELIABLE AND DURABLE PRODUCTS

NZCJ HTHP Consistometer

- The instrument adopts a large-size touch screen, through which the test data and curve graph can be displayed and recorded directly and clearly.
- Users can set parameters of temperature controller from Eurotherm through the touch screen; with a concise user interface, the touch screenmake it easier for users to input or alter test parameters.
- It's easily to disassemble the cylinder cover without use of hammer.
- Stable and reliable SIEMENS PLC can meet users' special demands and upgrade the instrument' s functions in the future by programming.
- Automatic pressure relief is optional to meet the needs of different customers.
- Users can set alarm values for multiple parameters as needed.
- Creative design of potentiometer improves accuracy and durability.
- High-quality components

Observe Test Data



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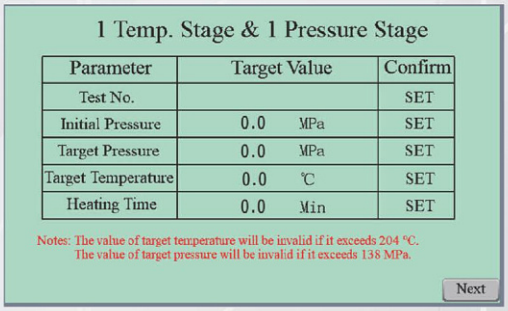
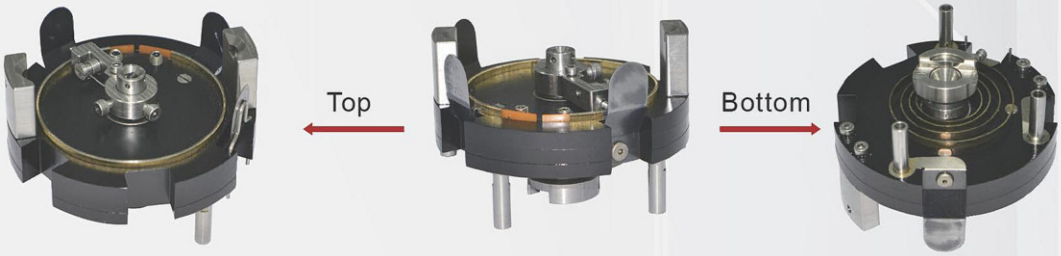
Set Test Parameters



Users can set parameters through the touch screen instead of complicated buttons, making the operation simple and straightforward.

Creative design of potentiometer improves accuracy and durability.



- Easy Calibration to 0Bc
- Better Contact Stability with Torsional Spring as Contact Arm
- Contact Arm with Limited Range
- Spring Free from Influence of Cement Slurry

Specifications

Max. Temperature	204°C	Max. Working Pressure	22000psi (150MPa)
Input Voltage	AC 100-110V 60Hz/ 220V 50Hz	Input Power	3500W
Consistency Range	0-100BC	Rotation Speed	150±15rpm
Air Supply Pressure	0.4-0.7MPa	Pressure of Cooling Water	0.2-0.5MPa
Dimensions (W*D*H)	60*87*171cm	Mass	270Kg
Heater Power	3000W	Connector Size of Cooling Water Pipe	Inner Diameter: 10mm

SINO-JAPANESE JOINT VENTURE
RELIABLE AND DURABLE PRODUCTS

NZYQ HTHP Curing Chamber

- No need to screw down bolts repeatedly. All the user needs to do is to screw down a central nut.
- Multiple filters can adequately protect valves.
- Many details on thermal insulation design help to realize safer operation.
- Users can connect the instrument to a computer for remote control.
- The instrument uses a touch screen, through which users can set test parameters and test data can be shown in real time.
- Surface of the instrument is made of stainless steel.
- Alarm and pre-alarm functions are available.
- High-quality components: SIEMENS PLC, touch screen from OMRON, sensor from ESI and switches from NKK SWITCHES

PRODUCT INTRODUCTION

Overview

NZYQ HTHP curing chamber is a new generation of instrument designed and engineered in strict accordance with API Standard-10 and used for curing oil well cement slurry at high-temperature and high-pressure conditions. Without so many bolts in its cylinder cap, the cylinder can be assembled and disassembled efficiently, so it can save users from complicated operations. The instrument uses a touch screen, through which users can set test parameters and all of test data can be shown and observed clearly. Surface of the instrument is made of stainless steel, which is more durable in use. Moreover, the instrument is composed of a series of high-quality components, including sensor from ESI, SIEMENS PLC, switches from NKK SWITCHES, etc.

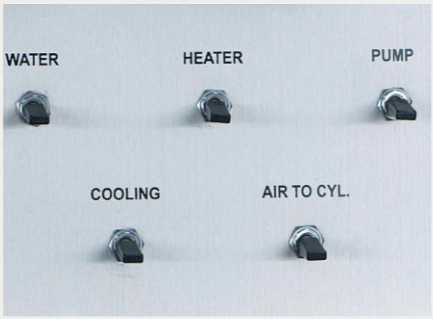
Features & Innovations

No.	NZYQ HTHP Curing Chamber	Conventional HTHP Curing Chamber
1	A nut is enough to ensure that the cylinder cap can be screwed tightly, so users needn't screw down so many bolts repeatedly.	Users have to screw down bolts with a wrench again and again. It's too complicated and difficult to mount the cylinder cap.
2	Multiple filters can adequately protect valves.	The instrument has only one filter, so impurities are easy to enter into pipes and damage valves.
3	Test parameters and curve graphs are displayed on the touch screen directly and clearly.	It is inconvenient to observe test data of temperature and pressure as they are displayed by two separate dials.
4	Test parameters can be inputted through the touch screen directly.	Temperature controller is adopted to set parameters, which is complex to operate and error-prone.
5	Many details on thermal insulation design help to realize safer operation.	Without thermal insulation design, the instrument is easy to scald users.
6	Users can connect the instrument to a computer for remote control.	There is no available software.

NITHONS » Touch Screen Design

The test data can be observed through the touch screen clearly. It is more convenient to operate with intelligent control.

Switches from Japanese NKK SWITCHES



Long service life and better contact stability

Liquid Pump from SC

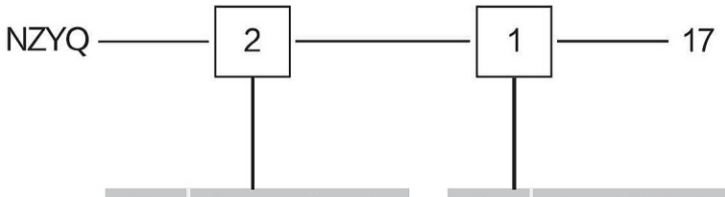
Liquid Pump from SC,Quality-assured

Smart and Simple, Durable and Reliable

» Specifications

Max. Temperature	370℃	Max. Working Pressure	35MPa
Input Voltage	AC100–110V 60Hz/220V 50Hz	Heater Power	4.5Kw
Dimensions(W*D*H)	65*80*171cm	Mass	415Kg
Pressure of Cooling Water	0.2–0.5MPa	Connector Size of Cooling Water Pipe	Inner Diameter: 10mm
Input Power	4.7Kw	Moulds Qty	8

» Available Models



No.	Power Supply
1	AC100–110V /60Hz
2	AC220V / 50Hz

No.	Test Cylinder
1	Single Cylinder
2	Dual Cylinder

■ For instance, the model number NZYQ2117 refers to a HTHP curing chamber which can run on 220V single phase power and is equipped with a single cylinder.

» Part No.

Name	No.	Image	Name	No.	Image
Thermocouple	NZYA0023		Water Filter	PZY004	

SINO-JAPANESE JOINT VENTURE
RELIABLE AND DURABLE PRODUCTS

NCCQ Atmospheric Consistometer

- With dual cell, dual temperature control system, dual motor and dual curve graph displayed on the touch screen, the instrument allows its two test cells to be operated independently.

- Test consistency by sensors, making it unnecessary to connect wires of potentiometer, so that the instrument features lower fault rate and simpler operation.

- Independent water baths are easy to disassemble and assemble.

- Touch screen design ensures the real-time display of curve graphs.

- Surface of the instrument is made of stainless steel.

- It can raise the alarm and the pre-alarm.

- The cone point threaded rod of mixing paddle is replaceable.

- High-quality components: Mettler Toledo's sensors and switches from NKK SWITCHES.

PRODUCT INTRODUCTION

Overview

NCCQ atmospheric consistometer is a new smart instrument designed and engineered in strict accordance with API Standard-10 and used for testing consistency performance of oil well cement slurry under atmospheric pressure. The two test cells both have independent heating and cooling systems. The consistency can be measured by sensors, so it's unnecessary to use potentiometers, saving users from tedious work on connecting wires. The cone point threaded rod of mixing paddle is designed to be replaceable. Users may just replace a new cone point threaded rod instead of a mixing paddle when the old one wears out to save on consumables. Surface of the instrument is made of stainless steel, which is durable in use. Besides, this instrument is composed of a series of high-quality and durable components, including Mettler Toledo's sensors and switches from NKK SWITCHES.

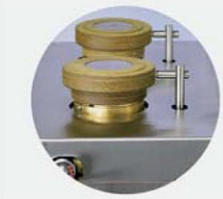
Features & Innovations

No.	NCCQ Atmospheric Consistometer	Conventional Atmospheric Consistometer
1	Thanks to the design of dual cell and dual temperature control system, it enables users to conduct two tests under different temperatures simultaneously.	Two tests have to be carried out at the same temperature if conducted simultaneously as the instrument is only equipped with one oil tank.
2	The instrument adopts sensors to test the consistency and shows its curve graphs on the screen, increasing operational simplicity.	Testing consistency by conventional potentiometer is complex and inconvenient.
3	Easy-to-disassemble water bath features convenience of cleaning and maintenance.	It is difficult to disassemble the water bath, leading to inconvenience of cleaning and maintenance.
4	Test parameters and curve graphs are displayed on the touch screen directly and clearly.	It is inconvenient to observe test data of temperature and consistency as they are displayed by two separate dials.
5	Test parameters can be inputted through the touch screen directly.	Temperature controller is adopted to set parameters, which is complex to operate and error-prone.
6	Smart calibration system saves users from frequent adjustment of the spring as long as the zero point is corrected.	Frequent adjustment of the spring will be a must once the measurement of consistency is inaccurate, which is inefficient and unreliable.
7	The instrument can raise a pre-alarm one minute in advance intelligently to prevent users from missing points in time during the test.	Without pre-alarm function, points in time during the test are easily neglected.

Dual Cell and Dual Temperature Control System

Two independent water baths can perform heating and/or cooling operations separately. In this way, two tests can be carried out in different temperatures simultaneously. One NCCQ atmospheric consistometer is equivalent to two conventional atmospheric consistometers.

Measure Consistency Based on the Spring' s Property of Linear Deformation



Test Consistency by Sensors

Test Consistency by Potentiometers

Test Consistency by Sensors

Sensors, connected with torque bars, are used to test consistency, so it's unnecessary to use potentiometers, saving users from tedious work on connecting wires and increasing convenience of cleaning and durability. Besides, the use of Mettler Toledo's sensors improves test accuracy.

Test Consistency by Potentiometers

Troublesome work on connecting wires of potentiometers is necessary for every test. Besides, it's inconvenient to clean it up and is not damage resistant.

Smart and Simple, Durable and Reliable

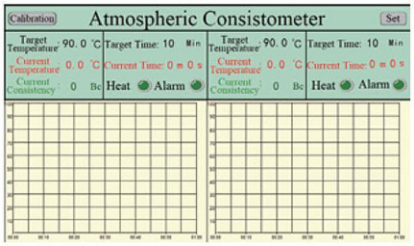
Innovative, Simple and Durable

Easy-to-disassemble Water Bath Features Convenience of Cleaning and Maintenance.

1 . Pull the front cover plate upward after loosening the screws in it.

2 . Remove screws in the lower part of water baths, unplug quick couplings of power supply cables and cooling water pipes, and then pull out water baths gently to complete the disassembly.

Touch Screen Enhances Operational Simplicity.



Touch Screen, Simple Operation

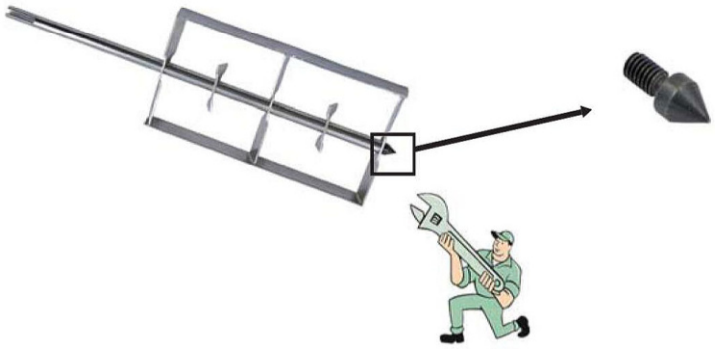
1. Curve graphs of consistency and test data can be observed through the touch screen directly and clearly.

2. Test parameters can be set through the touch screen conveniently.

3. Smart calibration system, which enables users to calibrate the instrument through the touch screen, saves users from frequent adjustment of the spring as long as the zero point is corrected.

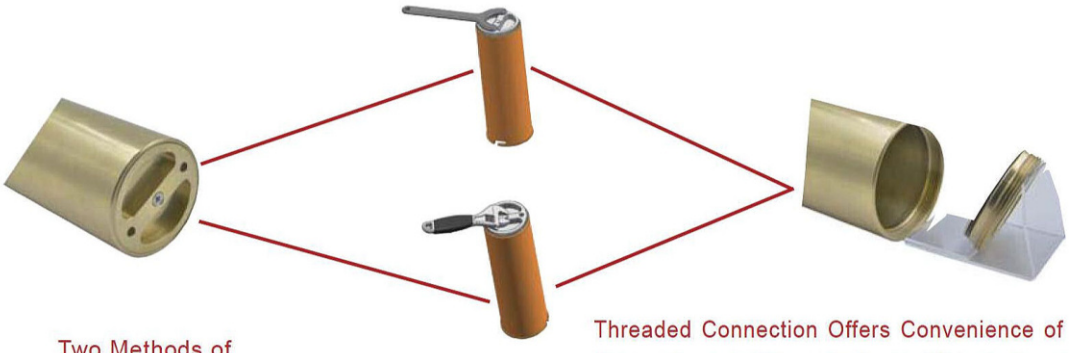
Mixing Paddle with Removable Cone Point Threaded Rod

The cone point threaded rod engages with the central shaft of mixing paddle by screw threads. Users may just replace a new cone point threaded rod instead of a mixing paddle when the old one wears out. In this way, users can prolong the mixing paddle's service life and save costs.



Easy-to-Disassemble Mixing Slurry Cup

Detachable slurry cup is easy to clean and maintain. Threaded connection increases convenience of assembly and disassembly. Two methods can be used to assemble and disassemble the slurry cup, so it will cause little inconvenience to users if the special tool is lost.



Two Methods of
Assembly and Disassembly

Threaded Connection Offers Convenience of Assembly and Disassembly as Well as Less Damage to Rubber Ring and Slurry Cup.

Well-designed and User-friendly

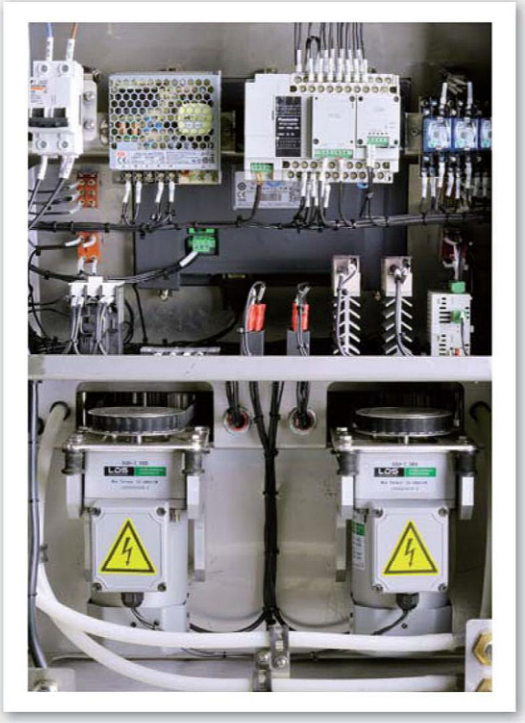
Quality Guaranteed

Switches from NKK SWITCHES

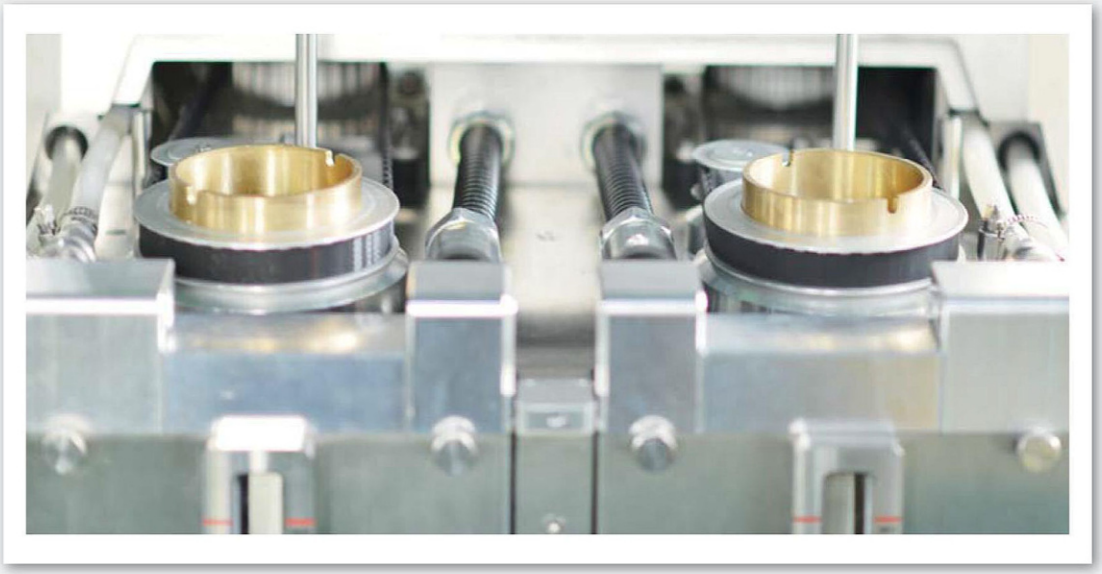
Longer service life and better contact stability

Mettler Toledo's Sensors

High sensitivity, high accuracy and long service life



Easy-to-disassemble Water Baths & Cooling Water Pipes and Power Supply Cables with Quick Couplings



Detail-oriented, Easy and Safe to Use

Specifications

Max Temperature	93℃	Max. Working Pressure	Atmospheric Pressure
Input Voltage	AC100-110V 60Hz/ 220V 50Hz	Power of Heater	2400W
Consistency Range	0-100BC	Rotational Speed	150±15rpm
Dimensions (W*D*H)	54*65*65cm	Mass	80Kg
Pressure of Cooling Water	0.2-0.5MPa	Connector Size of Cooling Water Pipe	Inner Diameter: 10mm
Input Power	2700W	Volume of Slurry Cup	470ml

Available Models

NCCQ — 2 — 217 — A

No.	Power Supply
1	AC100-110V / 60Hz
2	AC220V / 50Hz

No.	Optional Item
A	
B	

■ **For instance, the model number NCCQ2217 refers to an atmospheric consistometer which can run on 220V single phase power.**

Part No.

Name	No.	Image	Name	No.	Image
Spring	PZC006		Cone Point Threaded Rod of Mixing Paddle	PCC004	
Mixing Paddle	PCC001		Threaded Rod Cap	PCC005	
Slurry Cup	PCC002		Top Cap of Slurry Cup	PCC006	

SINO-JAPANESE JOINT VENTURE
RELIABLE AND DURABLE PRODUCTS

NCCJ Atmospheric Consistometer

- With dual cell, dual temperature control system and dual curve graph displayed on the touch screen, the instrument can conduct two tests under different temperatures in two test cells simultaneously.
- Independent water baths are easy to disassemble and assemble.
- Touch screen ensures the real-time display of curve graphs.
- Surface of the instrument is made of stainless steel.
- It can raise the alarm and the pre-alarm.
- The cone point threaded rod of mixing paddle is replaceable.
- High-quality components: customized spring made in Japan and switches from Japanese NKK SWITCHES.

PRODUCT
INTRODUCTION

Overview

NCCJ atmospheric consistometer (basic version) is a new smart instrument designed and engineered in strict accordance with API Standard-10 and used for testing consistency performance of oil well cement slurry under atmospheric pressure. The two test cells both have independent heating and cooling systems. The consistency can be measured based on the linear deformation of a spring, so it's unnecessary to use potentiometers, saving users from tedious work on connecting wires. The cone point threaded rod of mixing paddle is designed to be replaceable. Users may just replace a new cone point threaded rod instead of a mixing paddle when the old one wears out to save on consumables. Surface of the instrument is made of stainless steel, which is durable in use. Besides, this instrument is composed of a series of high-quality and durable components, including customized spring made in Japan and switches from NKK SWITCHES.

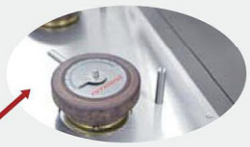
Features & Innovations

No.	NCCJ Atmospheric Consistometer (Basic Version)	Conventional Atmospheric Consistometer
1	Thanks to the design of dual cell and dual temperature control system, it enables users to conduct two tests under different temperatures simultaneously.	Two tests have to be carried out at the same temperature if conducted simultaneously as the instrument is only equipped with one oil tank.
2	Based on the spring's property of linear deformation, the consistency can be observed through the dial plate on the top cap of slurry cup. Therefore, it's unnecessary to connect wires of potentiometer, making it easy to clean and cost-effective.	Testing consistency by conventional potentiometer is complex and inconvenient.
3	Easy-to-disassemble water bath features convenience of cleaning and maintenance.	It is difficult to disassemble the water bath, leading to inconvenience of cleaning and maintenance.
4	Test parameters and curve graphs are displayed on the touch screen directly and clearly.	It is inconvenient to observe test data of temperature and consistency as they are displayed by two separate dials.
5	Test parameters can be inputted through the touch screen directly.	Temperature controller is adopted to set parameters, which is complex to operate and error-prone.
6	The instrument can raise a pre-alarm one minute in advance intelligently to prevent users from missing points in time during the test.	Without pre-alarm function, points in time during the test are easily neglected.

Dual Cell and Dual Temperature Control System

Two independent water baths can perform heating and/or cooling operations separately. In this way, two tests can be carried out in different temperatures simultaneously. One NCCJ atmospheric consistometer is equivalent to two conventional atmospheric consistometers.

Measure Consistency Based on the Spring's Property of Linear Deformation



NITHONS - Observe Consistency through the Dial Plate on the Top Cap

Conventional Instrument -Test Consistency by Potentiometers

Observe Consistency through the Dial Plate on the Top Cap Directly

Based on the spring's property of linear deformation, the instrument can control the pointer of dial plate on the top cap to indicate changes of consistency. It can save users from tedious work on connecting wires and keep the instrument clean.

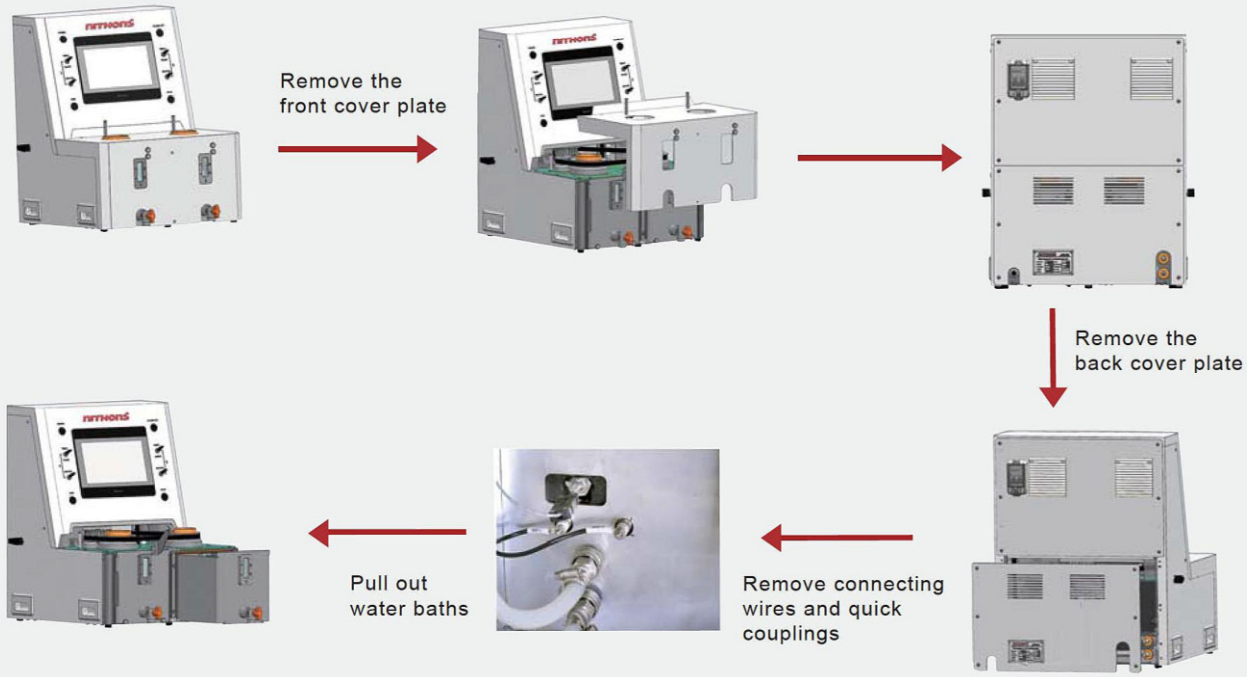
Test Consistency by Potentiometers

Troublesome work on connecting wires of potentiometers is necessary for every test. Besides, it's inconvenient to clean it up and is not damage resistant.

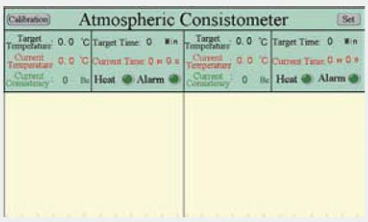
Smart and Simple, Durable and Reliable

Innovative, Simple and Durable

Easy-to-disassemble Water Bath Features Convenience of Cleaning and Maintenance.



Touch Screen Enhances Operational Simplicity.

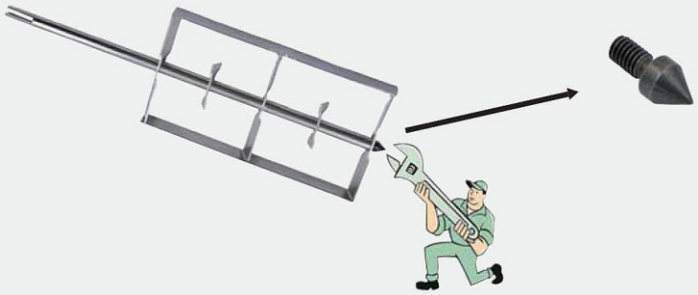


1. Curve graphs of temperatures and test data can be observed through the touch screen directly and clearly.
2. Test parameters can be set through the touch screen conveniently.

Touch Screen, Simple Operation

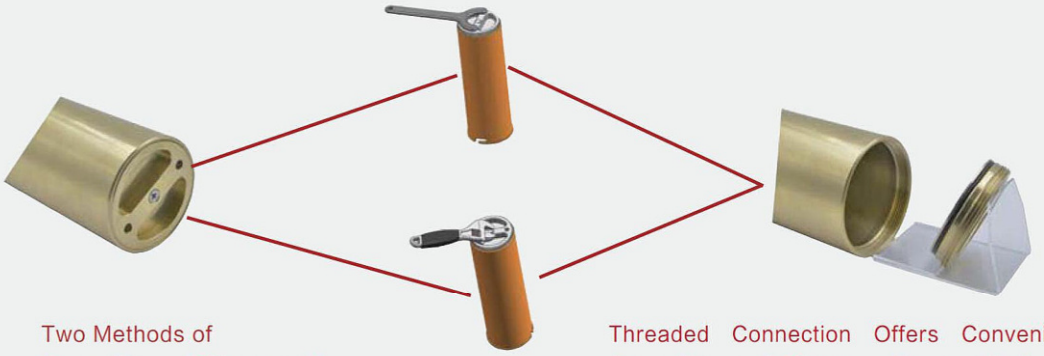
Mixing Paddle with Removable Cone Point Threaded Rod

The cone point threaded rod engages with the central shaft of mixing paddle by screw threads. Users may just replace a new cone point threaded rod instead of a mixing paddle when the old one wears out. In this way, users can prolong the mixing paddle's service life and save costs.



Easy-to-Disassemble Mixing Slurry Cup

Detachable slurry cup is easy to clean and maintain. Threaded connection increases convenience of assembly and disassembly. Two methods can be used to assemble and disassemble the slurry cup, so it will cause little inconvenience to users if the special tool is lost.



Two Methods of
Assembly and Disassembly

Threaded Connection Offers Convenience of Assembly and Disassembly as Well as Less Damage to Rubber Ring and Slurry Cup.

Well-designed and User-friendly

Quality Guaranteed

Switches from v SWITCHES

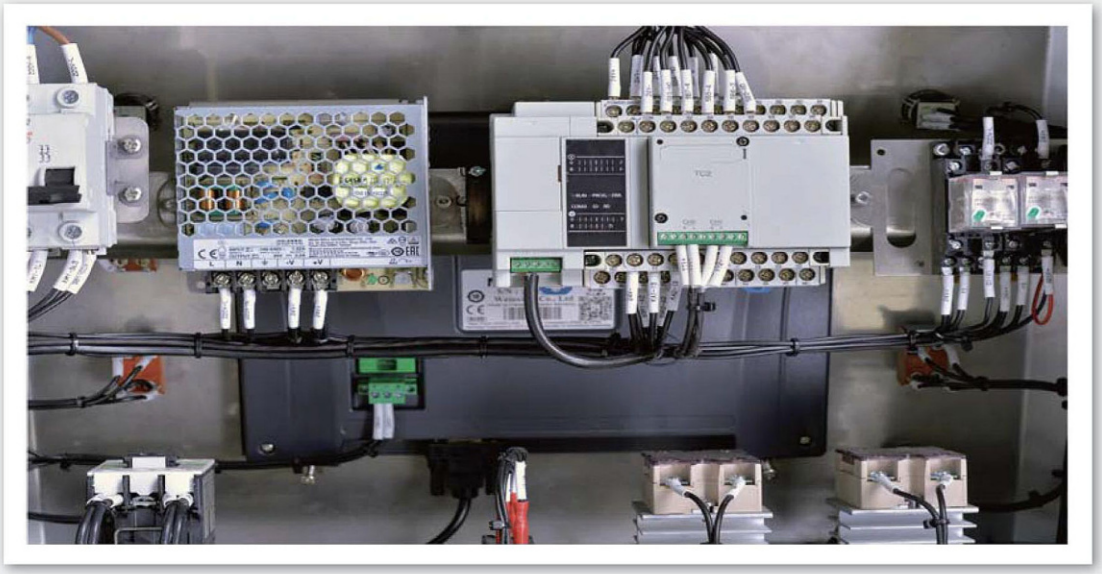
Longer service life and better contact stability

Customized Spring Made in Japan

Better performance with more durability

Window for Observing Liquid Level

Liquid level of two water baths can be observed through two separate windows.



Detail-oriented, Easy and Safe to Use

Specifications

Max. Temperature	93℃	Max. Working Pressure	Atmospheric Pressure
Input Voltage	AC100-110V 60Hz / 220V 50Hz	Power of Heater	2400W
Consistency Range	0-100BC	Rotational Speed	150±15rpm
Dimensions (W*D*H)	50*60*65cm	Mass	80Kg
Pressure of Cooling Water	0.2-0.5MPa	Cooling Water Connector Size	Inner Diameter: 10mm
Input Power	2600W	Volume of Slurry Cup	470ml

Available Models

NCCJ — 1 — 217

No.	Power Supply
1	AC100-110V / 60Hz
2	AC220V / 50Hz

■ **For instance, the model number NCCJ2217 refers to an atmospheric consistometerwhich can run on 220V single phase power.**

Part No.

Name	No.	Image	Name	No.	Image
Spring for Consistency Measurement	PZC006		Cone Point Threaded Rod of Mixing Paddle	PCC004	
Mixing Paddle	PCC001		Threaded Rod Cap	PCC005	
Slurry Cup	PCC002		Top Cap of Slurry Cup (Basic Version)	PCC007	

SINO-JAPANESE JOINT VENTURE
RELIABLE AND DURABLE PRODUCTS

NHJQ Constant Speed Mixer

- Easy switch between automatic mode and manual mode.
- Dual-seal blending assembly reduces the frequency of cleaning and is more durable.
- The instrument features pulse cleaning function, anti-foam function and anti-splash function (by virtue of the low-speed start-up by default), etc.
- Touch screen.
- Surface of the instrument is made of stainless steel.
- High-quality components: SIEMENS PLC, mixing cup and motor control made in America and switches from NKK SWITCHES.

PRODUCT INTRODUCTION

Overview

NHJQ constant speed mixer is a new smart instrument designed and engineered in strict accordance with API Standard-10 and used for preparation of cementing slurry samples. The instrument can run according to API standards in both full-automatic mode and manual mode, and the two modes can be easily switched at any time during the test, improving its operational simplicity. Surface of the instrument is made of stainless steel, which is durable in use. Besides, this instrument is composed of a series of high-quality components, including SIEMENS PLC, motor control and mixing cup made in America and switches from NKK SWITCHES.

Features & Innovations

No.	NHJQ Constant Speed Mixer	Conventional Constant Speed Mixer
1	Intelligent control program enables the instrument to always start up at a low speed, improving the safety of operation and preventing slurry from splashing.	High-speed start-up will occur once users forget to switch off the high-speed mode. In this case, the cement slurry will splash and even worse, the instrument will be damaged.
2	Touch screen is adopted to set test parameters. Users may set mixing time and speed as needed.	During a test, the speed has to be adjusted through manual operation instead of presetting. Users can only preset one mixing time with the timer.
3	All test data is displayed on the touch screen directly and clearly .	It is inconvenient to observe test data of speed and time as they are shown on two separate digital display units.
4	Automatic anti-foam function is created to mix slurry uniformly and reduce amount of foam contained in the slurry. Users can turn on and off the switch for this function as needed.	The instrument lacks anti-foam function, so the slurry inevitably contains much foam.

Easy Switch between Automatic Mode and Manual Mode Increases Operational Simplicity

By one-button operation, the instrument can conveniently complete mixing process from low speed to high speed in full accordance with API standards automatically. Besides, users may easily switch to manual mode from automatic mode at any time during a test.

Anti-splash Function Helps to Keep Clean and Improves Safety of Operation

Intelligent control program enables the instrument to always start up at a low speed of no more than 4000rpm, preventing slurry from splashing even in the case of misoperation.

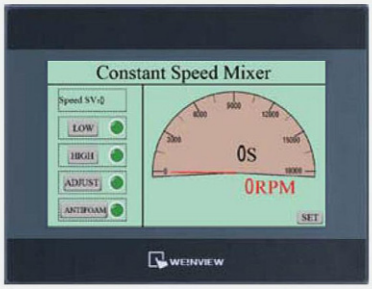
Original Anti-foam Function Improves Data Accuracy

The original anti-foam function can reduce amount of foam efficiently, so it can reduce foam's influence on the curve graph of consistency and on the compressive strength of test cube. Therefore, the data accuracy can be increased. Users can turn on and off the switch for this function as needed.

Smart and Simple, Durable and Reliable

Innovative, Simple and Durable

Operation throughTouch Screen



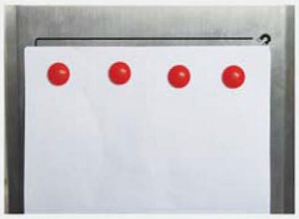
Test data is displayed directly and clearly on the touch screen, through which users can easily set test parameters as needed.

NHJQ Constant Speed Mixer

Pulse Cleaning Function

Unique pulse cleaning function improves convenience of cleaning. Simply by holding the PULSE switch down, users can start to clean the instrument.

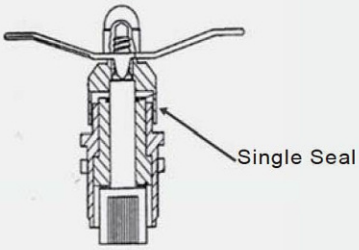
Magnetic Buttons



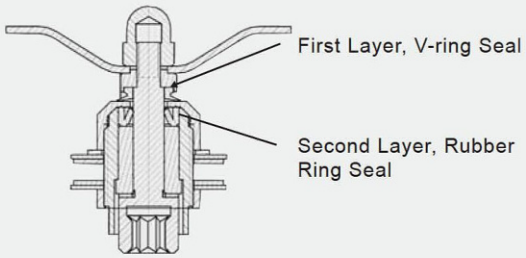
Considerate design of magnetic buttons enables users to conveniently look up test data in hard copy form.

Dual-seal Blending Assembly

The design of dual seal offers good sealing performance, so only a little cement slurry will enter into gaps. Therefore, users needn't disassemble and clean the blending assembly so frequently after preparation of cement slurry, improving efficiency of operations.



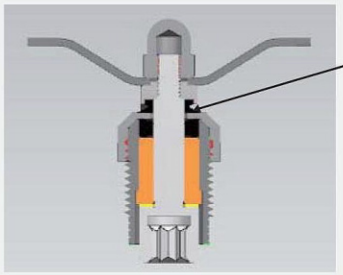
Conventional Blending Assembly



Dual-seal Blending Assembly

Unique V-ring Seal

A V-ring seal is adopted to replace a conventional ring seal, because it is of better sealing performance, reduces abrasion, prolongs service life of blending assembly and saves costs. Besides, it can improve efficiency of operations by saving users' time spent on disassembling, cleaning and replacing the blending assembly.



The first protection layer adopts a V-ring seal instead of a conventional ring seal.

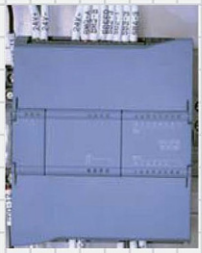
V-ring Seal

Well-designed and User-friendly

Quality Guaranteed

Switches from NKK SWITCHES

Longer service life and better contact stability



SIEMENS PLC

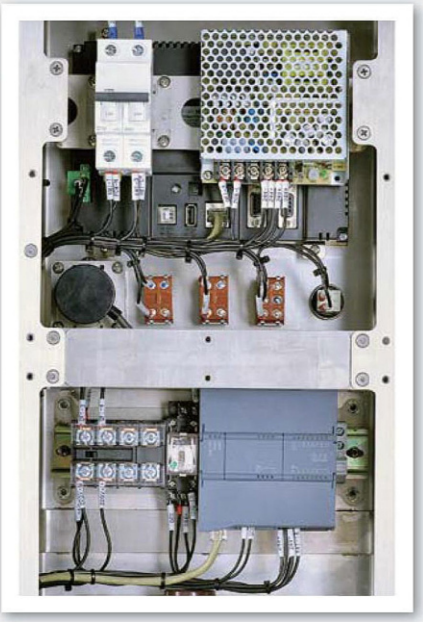
Stable performance with more durability

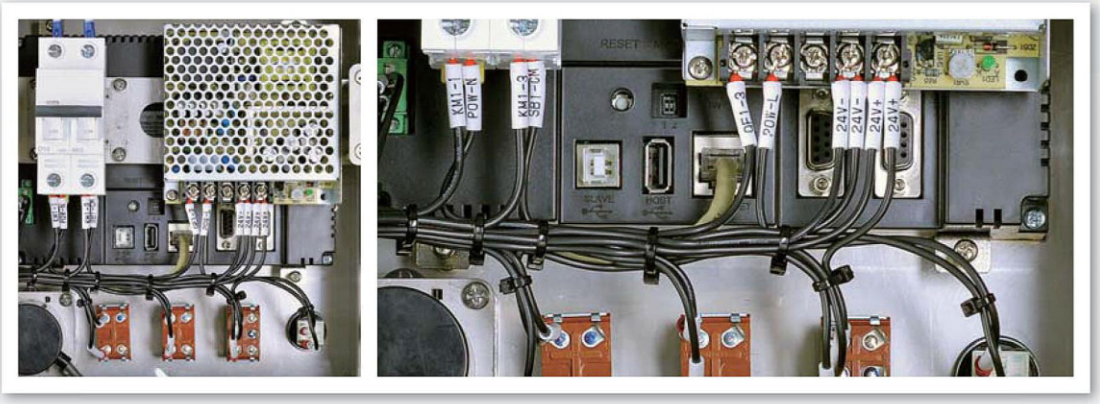
Motor Control Made in America

Accurate speed control and powerful drive

Mixing Cup Made in America

Made of stainless steel and durable in use





Detail-oriented, Easy and Safe to Use

Specifications

Rotational Speed	1000-18000rmp	Volume of Mixing Cup	1L
Input Voltage	AC 100-110V 60Hz/ 220V 50Hz	Input Power	1200W
Dimensions (W*D*H)	40*26*64cm	Mass	27Kg

Available Models

NHJQ — 1 — 017

No.	Power Supply
1	AC100-110V /60Hz
2	AC220V / 50Hz

■ For instance, the model number NHJQ2017 refers to a constant speed mixer which can run on 220V single phase power.

Part No.

Name	No.	Image	Name	No.	Image
Blending Assembly	PHJ001		Central Shaft of Blending Assembly	PHJ005	
Mixing Cup	PHJ002		V-ring Seal	PHJ006	
Blade of Blending Assembly	PHJ003		Ring Seal for Central Shaft of Blending Assembly	PHJ007	
Copper Bushing of Blending Assembly	PHJ004		Thrust Washer of Blending Assembly	PHJ008	

SINO-JAPANESE JOINT VENTURE
RELIABLE AND DURABLE PRODUCTS

NHJJ Constant Speed Mixer

- Easy switch among automatic mode, manual mode and adjustable mode.
- Surface of the instrument is made of stainless steel.
- High-quality components: motor control and mixing cup made in America and switches from NKK SWITCHES.
- Dual-seal blending assembly reduces the frequency of cleaning and is more durable.

PRODUCT

INTRODUCTION

Overview

NHJJ constant speed mixer is a new smart instrument designed and engineered in strict accordance with API Standard-10 and used for preparation of cementing slurry samples. The instrument can run according to API standards in both full-automatic mode and manual mode, and the two modes can be easily switched at any time during the test, improving its operational simplicity. Surface of the instrument is made of stainless steel, which is durable in use. Besides, this instrument is composed of a series of high-quality components, including motor control and mixing cup made in America and switches from NKK SWITCHES.

Features & Innovations

No.	NHJJ Constant Speed Mixer	Conventional Constant Speed Mixer
1	Automatic, manual and adjustable modes are available. In automatic mode, the instrument always starts up at a low speed, improving the safety of operation and preventing slurry from splashing.	Only manual mode is available. High-speed start-up will occur once users forget to switch off the high-speed mode. In this case, the cement slurry will splash and even worse, the instrument will be damaged.
2	The mixing time of the instrument when it runs at a high speed and the mixing time of the instrument when it runs at a low speed are user-settable, allowing different combinations of mixing time and speed to be customized.	During a test, the speed has to be adjusted through manual operation instead of presetting. Users can only preset one mixing time with the timer.
3	The dual-seal blending assembly is developed by our in-house team; it is convenient to clean up the assembly and it is more resistant to damage.	The blending assembly with a single ring seal allows more cement slurry to enter into gaps; it is not resistant to damage and it is inconvenient to clean up the assembly.

The Switch Used to Select Different Operating Modes

Automatic, manual and adjustable modes are available.

Automatic Mode

In automatic mode, the instrument can run at different speeds for different periods of time automatically according to the user's settings; when the test is terminated, the instrument can also stop running automatically. In automatic mode, the instrument always starts up at a low speed, preventing slurry from splashing, improving the safety of operation and keeping it clean.

Manual Mode

In manual mode, users can choose to make the instrument run at a high speed or at a low speed by pulling the HIGH/LOW switch upwards or downwards as needed.

Adjustable Mode

In adjustable mode, users can adjust the instrument's rotational speed manually by rotating the SPEEDER knob. The rotational speed is stable and the speed control is accurate.

Smart and Simple, Durable and Reliable

Innovative, Simple and Durable

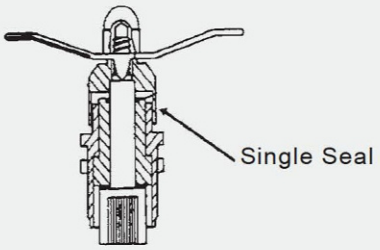
NHJJ Constant Speed Mixer

Text Display to Show and Set Parameters

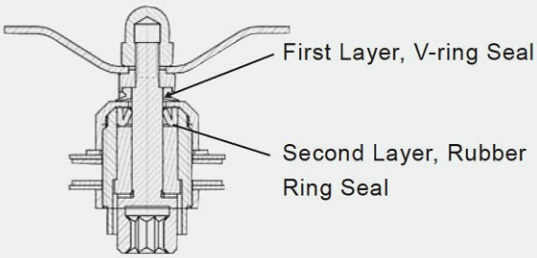
- The instrument adopts a text display, on which the rotational speed, test status and operating time can be shown.
- The instrument's operating time and rotational speed in manual mode and/or in automatic mode can be set through the text display.

Dual-seal Blending Assembly

The design of dual seal offers good sealing performance, so only a little cement slurry will enter into gaps. Therefore, users needn't disassemble and clean the blending assembly so frequently after preparation of cement slurry, improving efficiency of operations.



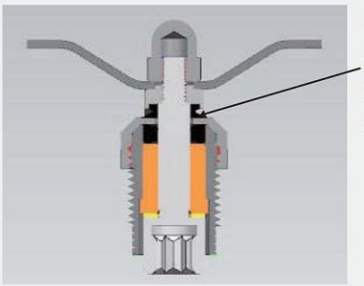
Conventional Blending Assembly



Dual-seal Blending Assembly

Unique V-ring Seal

A V-ring seal is adopted to replace a conventional ring seal, because it is of better sealing performance, reduces abrasion, prolongs service life of blending assembly and saves costs. Besides, it can improve efficiency of operations by saving users' time spent on disassembling, cleaning and replacing the blending assembly.



The first protection layer adopts a V-ring seal instead of a conventional ring seal.

V-ring Seal

Well-designed and User-friendly

Quality Guaranteed

Switches from NKK SWITCHES

Longer service life and better contact stability

Mixing Cup Made in America

Made of stainless steel and durable in use

Motor Control Made in America

Accurate speed control and powerful drive

Dust-proof Switch

To keep the switch clean

Dust Shield

To prevent slurry from splashing onto the display during operation of the instrument

The instrument is designed to be compact with less demand for space, making it easy to move it.

Detail-oriented, Easy and Safe to Use

Specifications

Rotational Speed	1000-18000rpm	Volume of Mixing Cup	1L
Input Voltage	AC100-110V 60Hz/ 220V 50Hz	Input Power	1200W
Dimensions（W*D*H）	23*28*40cm	Mass	12Kg

Available Models

NHJJ — 1 — 017

No.	Power Supply
1	AC100-110V /60Hz
2	AC220V / 50Hz

■ **For instance, the model number NHJJ2017 refers to a constant speed mixer which can run on 220V single phase power.**

Part No.

Name	No.	Image	Name	No.	Image
Blending Assembly	PHJ001		Central Shaft of Blending Assembly	PHJ005	
Mixing Cup	PHJ002		V-ring Seal	PHJ006	
Blade of Blending Assembly	PHJ003		Ring Seal for Central Shaft of Blending Assembly	PHJ007	
Copper Bushing of Blending Assembly	PHJ004		Thrust Washer of Blending Assembly	PHJ008	

SINO-JAPANESE JOINT VENTURE
RELIABLE AND DURABLE PRODUCTS

NXNQ Rotational Viscometer

- Users may select different test modes flexibly (with easy switch among automatic, manual and gel strength test modes).
- In automatic mode, the instrument can measure the viscosity of cement slurry and record test data for different rotational speeds automatically in full accordance with API standards.
- Gel strength test can be completed by the instrument automatically.
- In manual mode, the instrument can satisfy users' specific requirements on the test.
- The instrument can record and display test data on the touch screen automatically during the test.
- The instrument is equipped with LED lights for observing slurry level and test progress conveniently.
- The electrically operated test platform can ascend or descend automatically.
- Surface of the instrument is made of stainless steel.
- High-quality components: SIEMENS PLC, switches from NKK SWITCHES and customized spring made in Japan.

PRODUCT INTRODUCTION

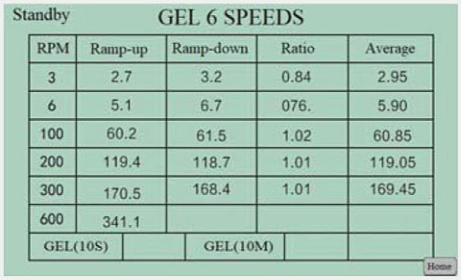
Overview

NXNQ rotational viscometer is a new smart instrument designed and engineered in strict accordance with API Standard-10 and used for measuring rheological parameters of cementing slurry samples. It can run in three test modes, including automatic mode, manual mode and gel strength test mode, which can be switched easily. The instrument can complete the test and record test data in a fully automatic mode according to test requirements, improving its operational simplicity. Test platform is equipped with LED lights for observing test progress and slurry level conveniently. Surface of the instrument is made of stainless steel, which is durable in use. Moreover, it is composed of a series of high-quality components, including SIEMENS PLC, switches from NKK SWITCHES and spring made in Japan.

Features & Innovations

No.	NXNQ Rotational Viscometer	Conventional Rotational Viscometer
1	The touch screen makes it more convenient for users to view test data recorded on the screen and operate the instrument.	With a small screen (or even no screen) and complicated buttons, the conventional instrument provides poor user experience and is inconvenient for users to view test data.
2	Easy switch among automatic mode, manual mode and gel strength test mode satisfies various test requirements.	Users have to change rotational speed of the instrument manually.
3	Smart calibration system saves users from frequent adjustment of the spring as long as the spring is fairly linear.	Frequent adjustment of the spring will be a must once the reading is inaccurate, which is inefficient and unreliable.
4	The platform can ascend and descend automatically and the function of fine adjustment can be used to place the slurry level to a desired position, making the instrument user-friendly and labor-saving.	Manual adjustment makes it troublesome to operate the instrument.
5	Based on test requirements, the instrument can calculate related test data by performing regression analysis or using the two point method after the test is completed.	Users have to calculate test data manually, wasting time and energy.

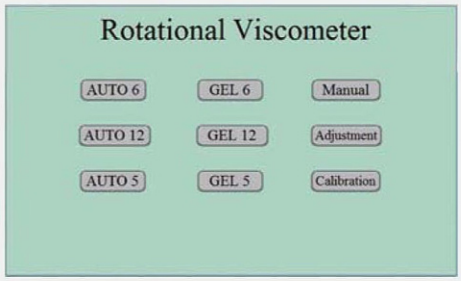
Conduct Tests in Accordance with API Standards and Record Data Automatically



The instrument can automatically measure viscosity of slurry in strict accordance with API standards, calculate ratio and average reading, and record and display related data on the touch screen. Therefore, changing rotational speeds and recording test data manually will be unnecessary. All in all, this fully automated instrument achieves operational simplicity.

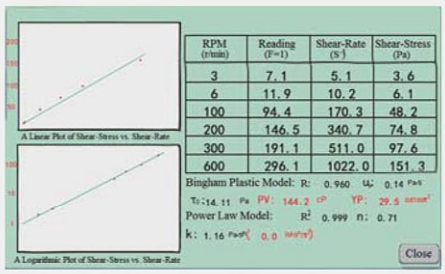
NXNQ Rotational Viscometer

Various Options for Test Modes and Rotational Speeds



The instrument can run in three test modes, including automatic mode, manual mode and gel strength test mode. Users can switch test modes flexibly by tapping corresponding buttons based on test requirements. The instrument also adopts automatic programs which can provide three speed options, including 5 speeds, 6 speeds and 12 speeds. More options, more convenience.Besides, customization is available.

Regression Analysis and Two Point Method

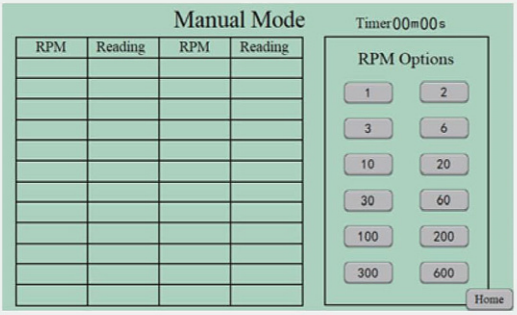


The instrument can calculate data using regression analysis or the two point method. In automatic mode or gel strength test mode, after the test is completed and test data is recorded automatically, tap Regression button or Two Point button, and then the calculated test data will be shown automatically. The function is useful for analyzing data and saving time.

Smart and Simple, Durable and Reliable

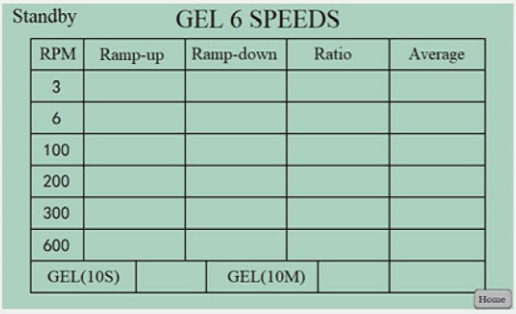
Innovative, Simple and Durable

Conduct Gel Strength Test Automatically



Users can use the instrument to conduct the gel strength test. Once one of the buttons indicated with “GEL” on the home screen is tapped, the instrument will be going to complete a gel strength test and record data automatically. It is very easy to operate.

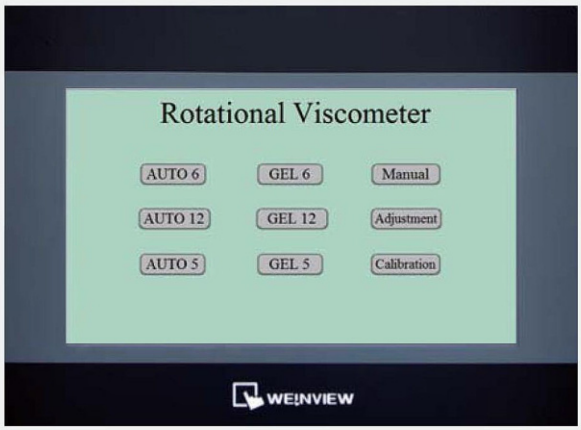
Manual Operation—To Satisfy Specific Test Requirements



There are 12 different rotational speeds. Users only need to tap speed buttons shown on the screen according to test requirements, and then test data will be recorded automatically. It's simple and applicable for special test requirements.

NXNQ Rotational Viscometer

Touch Screen -- More Advantages



1. Through the screen, users can observe rheological parameters and test data directly and clearly. After the test is completed, test data will be recorded and displayed on the touch screen automatically.

2. Touch screen enables users to set test parameters and calibrate & adjust the instrument by tapping buttons simply. Users needn't disassemble the instrument to adjust it by regulating the spring.

Automatic Ascent and Decent of Test Platform Increases Operational Simplicity

LED Lights

LED lights over the test platform are convenient for users to observe test progress and to keep slurry level aligned with the scribed line on the rotor.

Automatic Ascent and Decent of Test Platform

The test platform can ascend and descend automatically once the switch is pulled. By virtue of in-built sensors, the test platform can stop at specific positions. Thanks to its considerate program design, the instrument has fine adjustment function. It's very easy to use the platform.

Well-designed and User-friendly

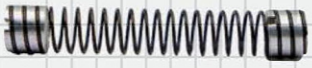
Quality Guaranteed

Switches from NKK SWITCHES

Longer service life and better contact stability

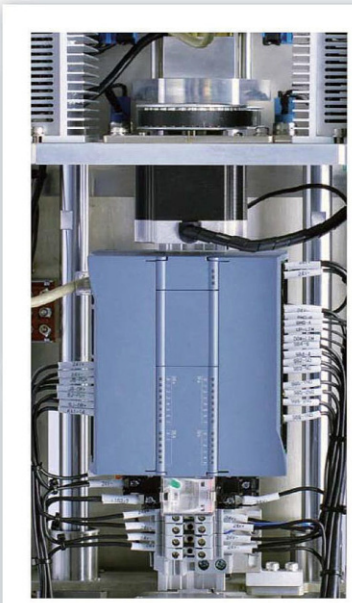
SIEMENS PLC

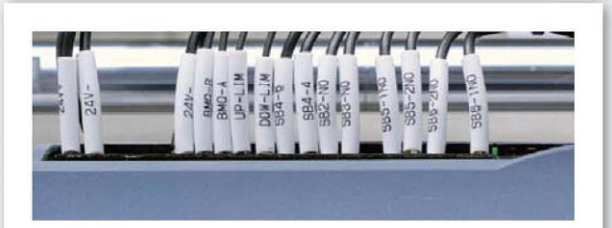
Stable performance with more durability

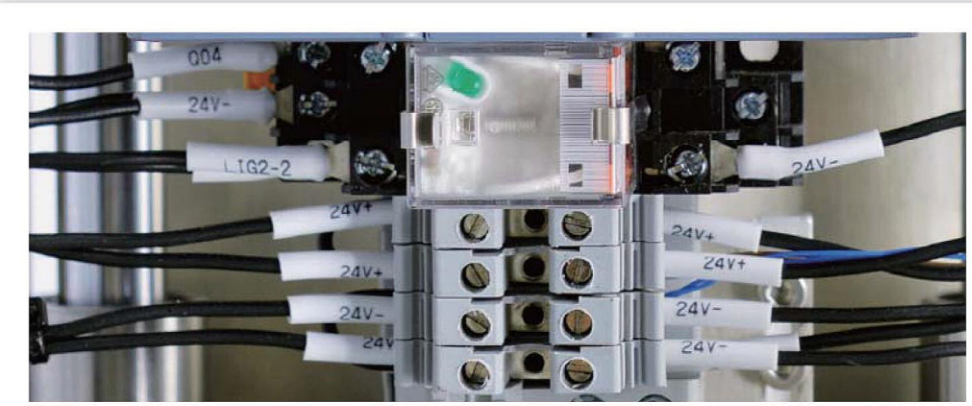


Spring Made in Japan

Better performance and longer service life







Detail-oriented, Easy and Safe to Use

Specifications

Max. Temperature of Sample	93℃	Volume of Sample Cup	350ml
Input Voltage	Applicable for AC100-230V	Power of Main Body	200W
Dimensions (W*D*H)	21*35*53cm	Total Mass	25Kg
Shear Rate	1.7-1022 s^{-1}	Max. Reading	430
Power of Heater	200W	Mass of Heater	3kg
Rotational Speed	1, 2, 3, 6, 10, 20, 30, 60, 100, 200, 300, 600rpm		

Available Models

NXNQ0017 —— H

No.	Optional Item
H	Heater

- **NXNQ0017 rotational viscometer can run on both AC100-110V and AC220V power supply. The model number NXNQ0017H refers to a rotational viscometer equipped with a heater.**

Part No.

Name	No.	Image	Name	No.	Image
Slurry Cup	PXN001		Spring	PXN002	

SINO-JAPANESE JOINT VENTURE
RELIABLE AND DURABLE PRODUCTS

NXNJ Rotational Viscometer

- Users may select different test modes flexibly (with easy switch among automatic, manual and gel strength test modes).
- In automatic mode, the instrument can measure the viscosity of cement slurry and record test data for different rotational speeds automatically in full accordance with API standards.
- Gel strength test can be completed by the instrument automatically.
- In manual mode, the instrument can satisfy users' specific requirements on the test.
- In manual mode, the instrument can satisfy users' specific requirements on the test.
- The instrument can record and display test data on the touch screen automatically during the test.
- Surface of the instrument is made of stainless steel.
- USB port and Ethernet interface are available.

PRODUCT INTRODUCTION

Overview

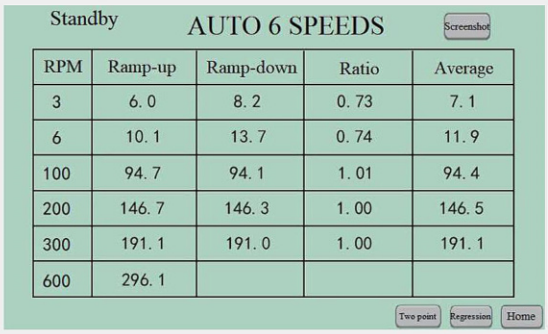
NXNJ rotational viscometer is a new smart instrument designed and engineered in strict accordance with API Standard-10 and used for measuring rheological parameters of cementing slurry samples. It can run in three test modes, including automatic mode, manual mode and gel strength test mode, which can be switched easily. The instrument can complete the test and record test data in a fully automatic mode according to test requirements, improving its operational simplicity. Besides, it can calculate related test parameters once it has recorded test data automatically, saving users' time and improving its practicability. Surface of the instrument is made of stainless steel, which is durable in use. Moreover, it is composed of a series of high-quality components, including SIEMENS PLC, switches from NKK SWITCHES and spring made in Japan.

Features & Innovations

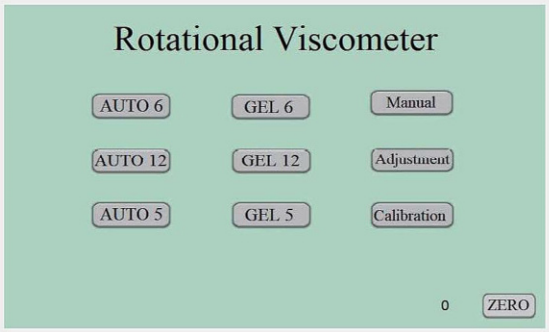
No.	NXNJ Rotational Viscometer	Conventional Rotational Viscometer
1	The touch screen makes it more convenient for users to view test data recorded on the screen and operate the instrument.	With a small screen (or even no screen) and complicated buttons, the conventional instrument provides poor user experience and is inconvenient for users to view test data.
2	With a USB port, the screenshots of test results can be saved for statistics.	The test results can only be saved through taking notes or photos, which is easy to lose.
3	With an Ethernet interface, the instrument can get connected to computer software to record test data and realize remote upgrade.	With no Ethernet interface, the instrument is unable to get connected to computer software or realize remote upgrade.
4	Smart calibration system saves users from frequent adjustment of the spring as long as the spring is fairly linear.	Frequent adjustment of the spring will be a must once the reading is inaccurate, which is inefficient and unreliable.
5	Based on test requirements, the instrument can calculate related test data by performing fitting method or using the two point method after the test is completed.	Users have to calculate test data manually, wasting time and energy.
6	Easy switch among automatic mode, manual mode and gel strength test mode satisfies various test requirements.	Users have to change rotational speed of the instrument manually.

Conduct Tests in Accordance with API Standards and Record Data Automatically

The instrument can automatically measure viscosity of slurry in strict accordance with API standards, calculate ratio and average reading, and record and display related data on the touch screen. Therefore, changing rotational speeds and recording test data manually will be unnecessary. All in all, this fully automated instrument achieves operational simplicity.



RPM	Ramp-up	Ramp-down	Ratio	Average
3	6.0	8.2	0.73	7.1
6	10.1	13.7	0.74	11.9
100	94.7	94.1	1.01	94.4
200	146.7	146.3	1.00	146.5
300	191.1	191.0	1.00	191.1
600	296.1			

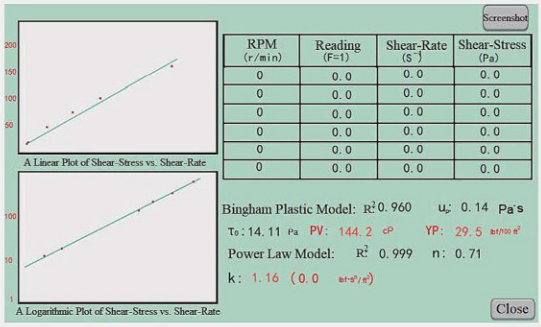


Various Options for Test Modes and Rotational Speeds

The instrument can run in three test modes, including automatic mode, manual mode and gel strength test mode. Users can switch test modes flexibly by tapping corresponding buttons based on test requirements. The instrument also adopts automatic programs which can provide three speed options, including 5 speeds, 6 speeds and 12 speeds. More options, more convenience. Other speed options are also customizable.

Fitting Method and Two Point Method

The instrument can calculate data using fitting method or the two point method. In automatic mode or gel strength test mode, after the test is completed and test data is recorded automatically, tap Fitting button or Two Point button, and then the calculated test data will be shown automatically. The function is useful for analyzing data and saving time.

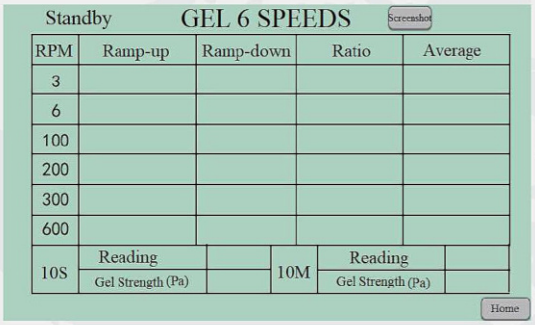


RPM (r/min)	Reading (F=1)	Shear-Rate (S^{-1})	Shear-Stress (Pa)
0	0.0	0.0	0.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

Smart and Simple, Durable and Reliable

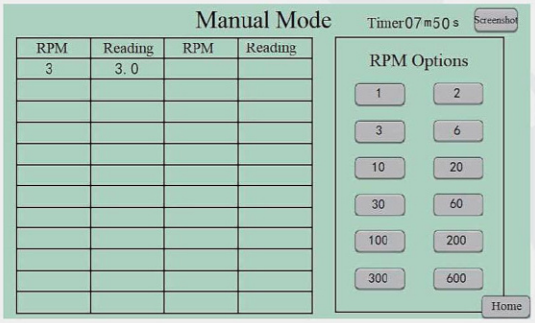
Innovative, Simple and Durable

Conduct Gel Strength Test Automatically



Users can use the instrument to conduct the gel strength test. Once one of the buttons indicated with "GEL" on the home screen is tapped, the instrument will be going to complete a gel strength test and record data automatically. It is very easy to operate.

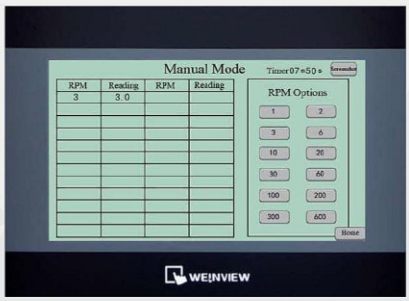
Manual Operation—To Satisfy Specific Test Requirements



There are 12 different rotational speeds. Users only need to tap speed buttons shown on the screen according to test requirements, and then test data will be recorded automatically. It's simple and applicable for special test requirements.

NXNJ Rotational Viscometer

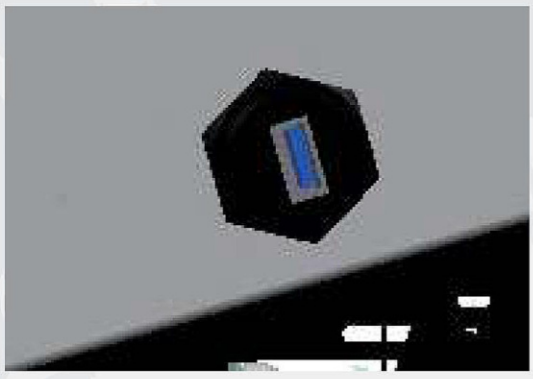
Touch Screen -- More Advantages



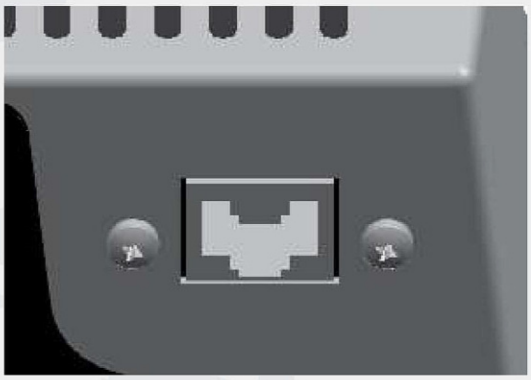
1. .Through the screen, users can observe rheological parameters and test data directly and clearly. After the test is completed, test data will be recorded and displayed on the touch screen automatically.

2. Touch screen enables users to set test parameters and calibrate & adjust the instrument by tapping buttons simply. Users needn't disassemble the instrument to adjust it by regulating the spring.

Data Export – Output through USB Port or Recorded by Software through Ethernet Interface



With a USB port, the screenshots of test results can be saved for statistics.



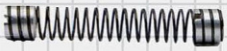
With an Ethernet interface, the instrument can get connected to computer software to record test data and realize remote upgrade.

Well-designed and User-friendly

Quality Guaranteed

Mushroom Push Button

Long mechanical life and good contact stability with automatic reset



Spring Made in Japan

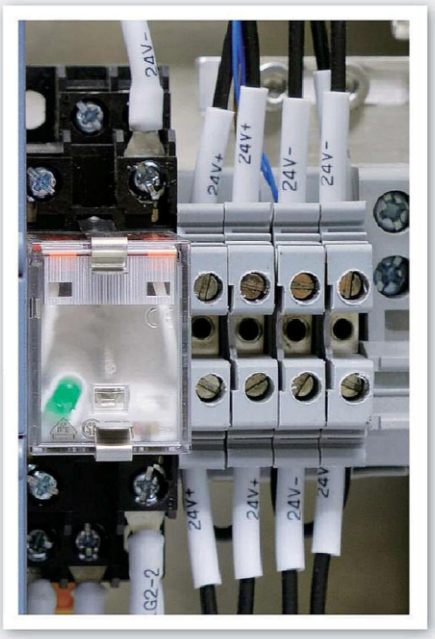
Better performance and longer service life

Motor Driver

High speed accuracy, high output torque, high response frequency, low running noise and good dynamic characteristics.

SIEMENS PLC

Stable performance with more durability



Detail-oriented, Easy and Safe to Use

Specifications

Max. Temperature of Sample	93°C	Volume of Sample Cup	350ml
Input Voltage	Applicable for AC100-230V	Input Power	200W
Dimensions(W*D*H)	23*33*49cm	Mass	23Kg
Shear Rate	1.7-1022 s^{-1}	Max. Reading	430
Rotational Speed	1, 2, 3, 6, 10, 20, 30, 60, 100, 200, 300, 600rpm		

Available Models

NXNJ0020

- **NXNJ0020 rotational viscometer can run on both AC100-110V and AC220V power supply.**

Part No.

Name	No.	Image	Name	No.	Image
Sample Cup	PXN001		Spring	PXN002	

SINO-JAPANESE JOINT VENTURE
RELIABLE AND DURABLE PRODUCTS

NJSJ Static Fluid Loss Cell

- Fluid loss cylinder with new designhelps to avoid blocking during fluid loss and it is easy to be cleaned up.
- High pressure connection with quickly detachable design
- More durable filter with new technique
- It is able to keep time and raise an alarm. The alarm sound can be turned off through easy operation.
- Housing of the instrument is all made of stainless steel.
- High-quality components: thermocouple made in Japan, Japanese NKK switch and quick coupling manufactured in Japan

PRODUCT
INTRODUCTION

Overview

NJSJ HTHP static fluid loss cell is a new smart instrument designed and engineered in strict accordance with API Standard-10 and used for measuring fluid loss of cement slurry under high-temperature and high -pressure condition. Housing of the instrument is all made of stainless steel, which is durable in use. With self-designed high pressure connection, operational simplicity and safety are reinforced. The instrument is also able to keep time and raise an alarm, in the meanwhile, the alarm sound can be turned off through simple operation. Besides, this instrument is composed of a series of high-quality components, including Japanese NKK switch and thermocouple made in Japan.

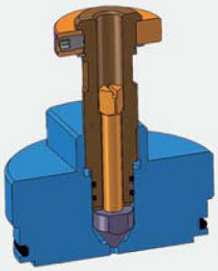
Features & Innovations

No.	NJSJ Static Fluid Loss Cell	Conventional Static Fluid Loss Cell
1	Exhaust with larger bore diameter helps to avoid blocking.	Exhaust with small bore diameter tends to block and thus requires frequent cleaning.
2	It is convenient to assemble and disassemble the quick-disconnect connector for high-pressure gas passage.	The connector for high-pressure gas passage is difficult to be assembled and disassembled, so its simplicity of operation is limited.
3	Separated from the compression ring, the integrated sintered filter becomes damage resistant and cost-saving with prolonged service life.	Two separate filters are welded with the compression ring, thus making the filters easy to be damaged and short in service life with high cost to get it replaced.

Originality—Valve for Exhaust and Fluid Loss

Exhaust with larger bore diameter helps to avoid blocking, making it easier to maintain and clean.

Valve for Exhaust and Fluid Loss



Originality—End Cover for Exhaust and Fluid Loss

User-friendly design enables users to open the end cover conveniently with an ordinary wrench.

End Cover for Exhaust and Fluid Loss

Smart and Simple, Durable and Reliable

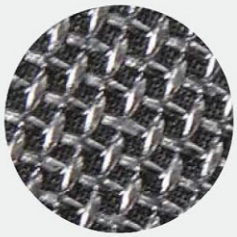
Innovative, Simple and Durable

Filter

325-mesh Filter

Mainly playing the role of filtering including cement slurry and allowing the fluid to pass through

+ Sintering Technique



60-mesh Filter

Playing the role of supporting during filtration and enhancing strength of the whole filter

Sintered Filter

Sintered filter is made by sintering a 325-mesh filter and a 60-mesh filter, thus the two filters are tightly sealed with no gap. Besides,it is easily washable and damage-resistant.

Easy Disassembly and Assembly Design of High Pressure Connection

Connectors of high pressure pipe and exhaust are connected together by a pin, making the connection easy to complete through three simple steps. Compared with threaded connection, this method makes the connection tighter and increases operational safety.

1、Connect and fasten the exhaust's end cover, the valve and the exhaust's connector.

2、Simply insert the exhaust's connector into the high pressure pipe's connector without tightening them.

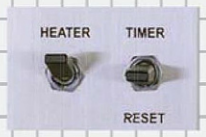
3、Insert the pin into the pin hole to complete the operation.

Well-designed and User-friendly

Quality Guaranteed

Thermocouple Made in Japan

Higher accuracy, good stability and reliability

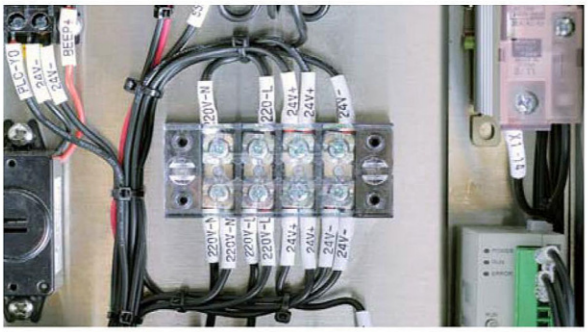


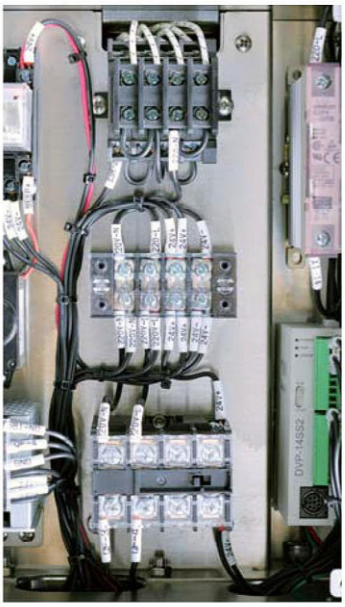
Japanese NKK Switch

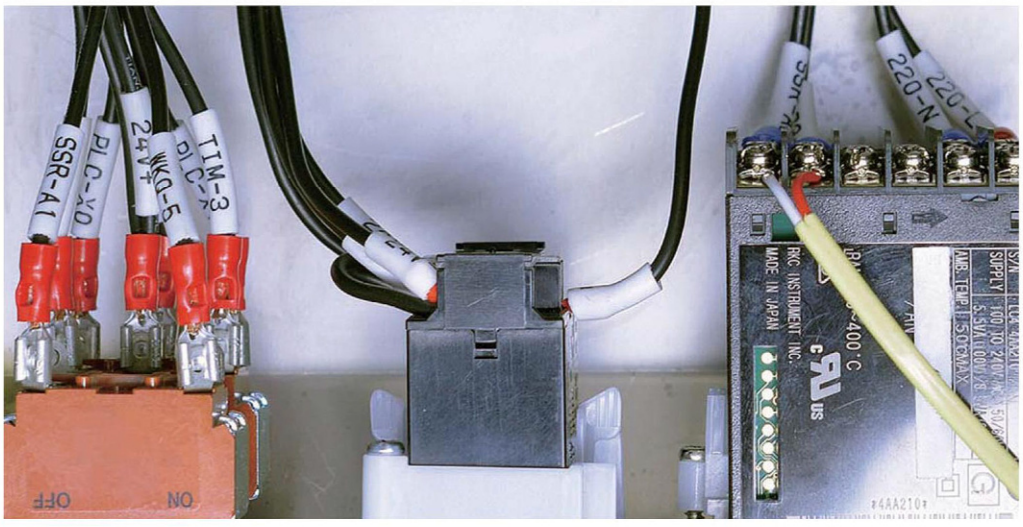
Long service life and better contact stability

Quick Coupling Made in Japan

Good connectivity and long service life







Detail-oriented, Easy and Safe to Use

Specifications

Max Temperature	260℃	Max. Pressure	2000psi（14MPa）
Heater Power	1200W	Test Cell Volume	450ml
Input Voltage	AC 100-110V 60Hz / 220V 50Hz	Input Power	1300W
Dimensions	30*32*75cm	Net Weight	36Kg

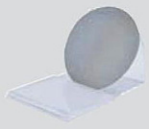
Available Models

NJSQ — 1 — 017

No.	Power Supply
1	AC100-110V /60Hz
2	AC220V / 50Hz

- **For instance, model number NJSQ2017 refers to static fluid loss cell applicable to AC220V/50Hz of single phase.**

Codes of Parts

Name	Code	Image	Name	Code	Image
Thermocouple	PFS001		Filter	PFS002	

SINO-JAPANESE JOINT VENTURE
RELIABLE AND DURABLE PRODUCTS

NFSQ Stirred Fluid Loss Cell

- Based on test temperature, the instrument can automatically adjust initial values of high pressure and low pressure to standard pressure range according to API standards and can ensure stable differential pressure; therefore, manual adjustment will be unnecessary.
- The built-in oil-circulation cooling system is creative and it can cool down the instrument at a faster speed, so there is no need to tap the instrument into a water source, improving operational simplicity.
- It uses a touch screen where test data and curve graphs can be displayed directly and clearly.
- Unique design of pressurization structure
- The stirring structure is internally installed with a bearing and equipped with an electromagnetic lock, improving operational simplicity and safety.
- Unique rotary sealing structure uses stainless-steel pipes to replace plastic hoses, making it more durable.
- Users can set alarms for multiple parameters, making the instrument smarter.
- Surface of the instrument is all made of stainless steel.
- High-quality components: SIEMENS PLC, temperature controller from Eurotherm, sintered filter screen, switches from NKK SWITCHES, touch screen and quick connectors from OMRON and thermocouple made in Japan.

PRODUCT INTRODUCTION

» Overview

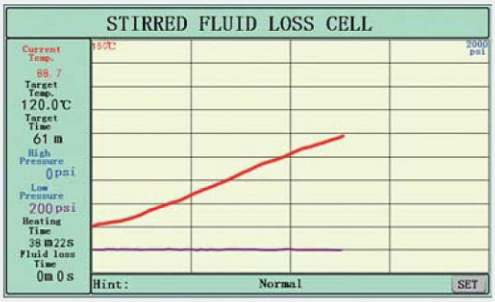
NFSQ stirred fluid loss cell is a new smart instrument designed and engineered in strict accordance with API Standard-10 and used for testing fluid loss performance of cementing slurry samples. When using the instrument, users can set alarm values for multiple test parameters, such as temperature, time, pressure, etc. and users can set multiple alarm values for each test parameter; the alarm sound can be turned off through one-button operation easily. Surface of the instrument is made of stainless steel, which is more durable in use. Besides, this instrument is composed of a series of high-quality components, including SIEMENS PLC, temperature controller from Eurotherm, sintered filter screen, switches from NKK SWITCHES, touch screen and quick connectors from OMRON and thermocouple made in Japan.

» Features & Innovations

No.	NFSQ Stirred Fluid Loss Cell	Conventional Stirred Fluid Loss Cell
1	Based on test temperature, the instrument can automatically adjust initial valuesof high pressure and low pressure to standard pressure range according to API standards and can ensure stable differential pressure.	Users have to adjust the pressure manually, leading to low efficiency and poor accuracy.
2	Unique pressurization structure makes it unnecessary to use the hollow shaft of mixing paddle to pressurize the cell, so the paddle will not be damaged and the hollow shaft will not be blocked easily.	Pressurize the cell through the hollow shaft of mixing paddle, making it easy to block the hollow shaft and damage the paddle.
3	Users may input test parameters through the touch screen directly.	Temperature controller is adopted to set parameters; it is complex to operate and error-prone.
4	Separated from the O-ring, the filter screen, which is made of two filter screens and integrated through sintering process, is damage-resistant and cost-saving with longer service life.	Two separate filter screens are welded together with the O-ring, making them easily damaged with shorter service life and higher cost.
5	Unique rotary sealing structure and metal cooling pipes help to significantly prolong cooling pipes' service life.	Rubber hose always ages easily, so it is unreliable.
6	The stirring structure is internally installed with a bearing and equipped with an electromagnetic lock, improving operational simplicity and safety.	The stirring structure offers great resistance and users need to unlock the spring lock by drawing it outwards manually, so it is difficult and unsafe to operate the instrument.
7	With a built-in coil pipe made of stainless steel, the cast-aluminum chiller has higher efficiency of cooling and longer service life.	Copper cooling coil pipe is inefficient and the limescale is easily formed to block up the pipe. Once the cooling coil pipe is damaged, it is troublesome to replace it.
8	The built-in cooling oil tank and cooling pump make it unnecessary to tap the instrument into a water source, improving its efficiency and operational simplicity.	Users need to tap the instrument into a water source, so the water quality and pressure are uncontrollable, leading to poor cooling performance.
9	A large-volume slurry cup helps to reduce the possibility of nitrogen blowing through, making test data more accurate and improving R&D efficiency.	A small-volume slurry cup increases the possibility of nitrogen blowing through when the fluid loss volume is large, making test data inaccurate.
10	Test parameters and curve graphs are displayed on the touch screen directly and clearly.	It is inconvenient to observe test data of temperature, pressure and time as they are displayed on three separate dials and no curve graph is available.

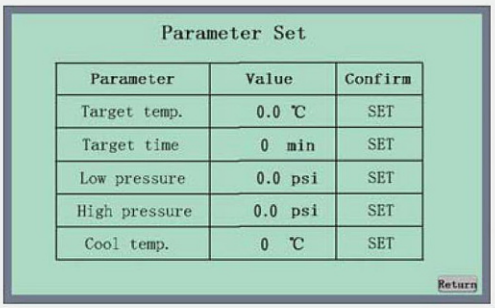
Touch Screen for Displaying Data and Setting Test Parameters

Observe Test Data



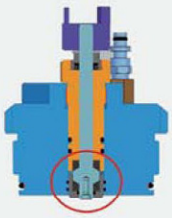
It's convenient to observe test data and curve graph.

Set Test Parameters



Users can set parameters through the touch screen instead of complicated buttons, making the operation simple and straightforward.

Graphite Seals with Good Sealing Performance



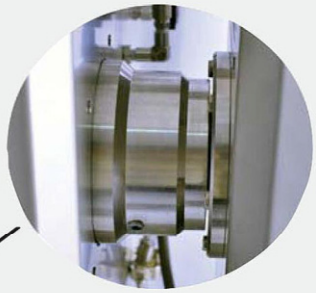
With good sealing performance and long service life, graphite seals are used in the shaft coupling of cylinder cap for gas passage; therefore, users needn't disassemble and clean it frequently.

Cylinder Cap For Gas Passage

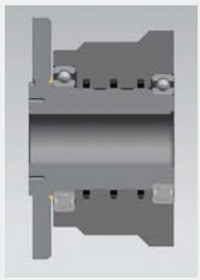
Innovative, Simple and Durable

Stirring Structure with a Bearing

The stirring structure is internally installed with a bearing and equipped with an electromagnetic lock to lock the stirring structure by one-button operation, improving operational simplicity and safety. Thanks to its considerate design, users can also unlock it manually in case of accidents.



Rotary Sealing Structure



Vertical Section of Rotary Sealing Structure

Unique Cooling Pipes

Unique rotary sealing structure enables cooling pipes to enter into the cast aluminum chiller built in a stirring mechanism through a rotary shaft. The chiller is installed internally with a steel pipe, which makes it more durable in use. Also, the unique oil-circulation cooling system shortens cool-down time and vastly increases its service life.

Considerate Design of Handle

Increases Operational Simplicity and Safety

NFSQ Stirred Fluid Loss Cell

Regulate Pressure Automatically

During a test, the instrument can regulate pressure to the target value automatically. Users can set target values of pressure through the touch screen. It's very easy and simple.

Set Multiple Alarm Values for Parameters

When using the instrument, users can set alarm values for multiple test parameters, such as temperature, time, etc. and users can set multiple alarm values for each test parameter as required by the test. Moreover, pre-alarm function is also available, making the instrument more useful.

Sintered Filter Screen

It is made of a 325-mesh filter screen and a 60-mesh filter screen through sintering process; the two filter screens are tightly integrated so there's no space for cement slurry to accumulate. Separated from the O-ring, the sintered filter screen is easy to clean and more cost-effective.

Well-designed and User-friendly

Quality Guaranteed

Switches from NKK SWITCHES

Longer service life and better contact stability

Temperature Controller from Eurotherm

High control accuracy and long service life

SIEMENS PLC

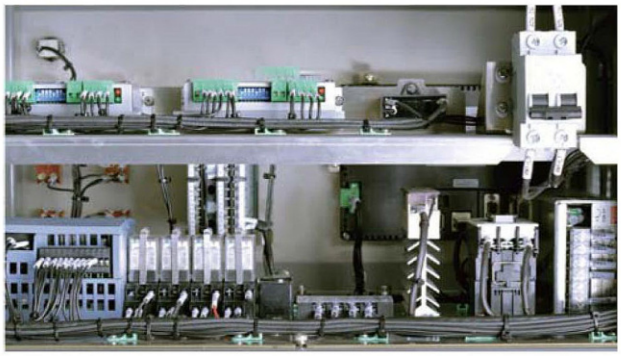
Stable performance with more durability

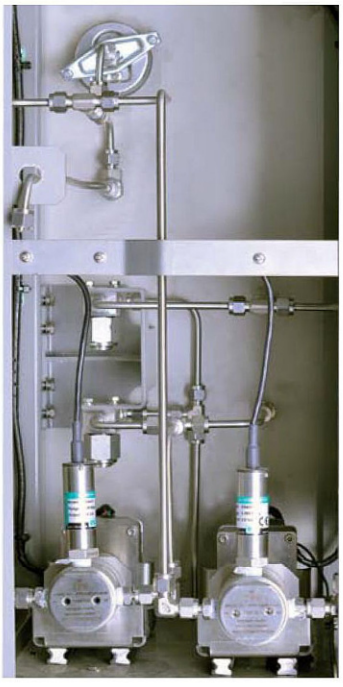
Thermocouple Made in Japan

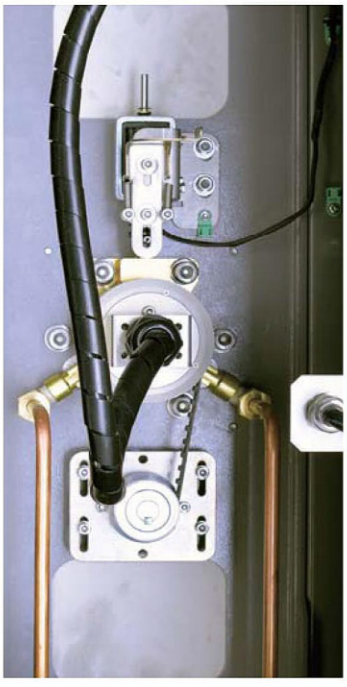
Higher accuracy, better stability and reliability

Quick Connectors Made in Japan

Good connectivity and long service life







Detail-oriented, Easy and Safe to Use

Specifications

Max. Temperature	260℃	Max. Working Pressure	2000 psi (14MPa)
Input Voltage	AC 100-110V 60Hz/ 220V 50Hz	Input Power	2500W
Stirring Speed	150±15rpm	Volume of Slurry Cup	450ml
Dimensions (W*D*H)	56*92*152cm	Mass	180Kg
Heater Power	2000W	Nitrogen Pressure	7-14MPa

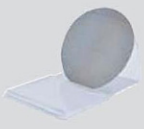
Available Models

NFSQ — 1 — 017

No.	Power Supply
1	AC100-110V/ 60Hz
2	AC220V / 50Hz

■ **For instance, the model number NFSQ2017 refers to a stirred fluid loss cell which can run on 220V single phase power.**

Part No.

Name	No.	Image	Name	No.	Image
Thermocouple	PFS001		Filter Screen	PFS002	

SINO-JAPANESE JOINT VENTURE
RELIABLE AND DURABLE PRODUCTS

NBCQ BENCH TOP CONSISTOMETER

- Touch Screen to display the testing data and thickening curve directly.
- USB and Internet Port makes the testing data is easy to be checked and saved timely
- Cast-Aluminum Chiller cools the instruments much more rapidly.
- Tee-Type High Pressure Filter is convenient for disassemble and cleaning.
- Innovative Potentiometer provides accurate testing and can be calibrated
- Full Stainless Steel Durable and Reliable Instrument Body
- Multiple Alarm covers different parameters and can be set as specific testing requirement.
- High quality components: Eurotherm Temperature controller (UK) ,Maximator high pressure pump, Hip (USA)High pressure Valve, Sensor from ESI (UK) ,Switches (NKK) and Thermocouple from Japan.

PRODUCT INTRODUCTION

Overview

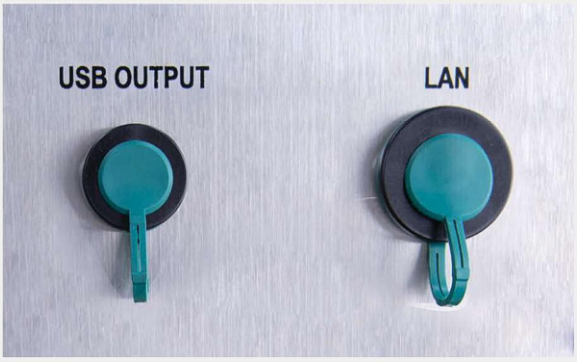
NBCQ Bench Top Consistometer is an instrument designed and engineered in strict accordance with API Standard-10 and used for simulating high-temperature and high-pressure downhole well conditions and measuring the consistency change and thickening time of oil well cement slurry continuously. The Instrument is durable in full stainless steel body and equipped with Touch Screen to show Consistency, Pressure, Temperature as well as Multiple Alarm function for the Consistency. Nithons has adopted quality components like Eurotherm Temperature controller (UK) , Maximator high pressure pump, Hip (USA)High pressure Valve, Sensor from ESI (UK) ,Switches (NKK) and Thermocouple from Japan to ensure the accurate and reliable testing in cementing laboratory.

Innovative Function and Breakthrough in Technology

No.	NBCQ Bench Top Consistometer	Traditional Bench Top Consistometer
1	Cast-aluminum chiller can cool the instrument much more rapidly and has longer service life.	Brass Coil Tubing Chiller with small contact area who is easy to blocked inside and cooling effect is not good.
2	TEE-Type High Pressure Filter can be detached with small wrench and convenient for cleaning.	Directional Filter. Hard to be detached and will need big size wrench with great effort to do the cleaning.
3	Innovative Potentiometer : Easy for Zero-Point adjustment . Stable Contact Arm on the Resistor . Spring on the back side to avoid pollution when cement slurry erupts during the testing.	Traditional Potentiometer is hard to adjust Zero-Point and Contact Arm on resistor is not stable to affect the testing accuracy. Spring on the upper side will be polluted by cement slurry to block the spring and bearing.
4	Thermocouple has protective design and can be placed safety.	User has to put Thermocouple on the working desk and risky to be damaged.
5	Touch Screen offer clear and direct viewing of parameter and thickening curve during the testing.	Display Temperature, Pressure and Consistency with 3 different gauge on instrument. Hard to check and read.
6	Testing Parameter can be set on Touch Screen more easily.	Complicated setting of different gauge and always have error when input the parameter.

OMRON Touch Screen from Japan

Wide Touch Screen to display and record testing data and thickening curve; Now, the operator is allowed Testing set the parameter on Touch Screen directly. No more complicated and difficult setting on traditional controllers. Setting and Checking of the Test becomes easy and directly.



USB and Internet Port

USB and Internet Port on Instrument. The testing data,curving and records are free to be saved by both screen shot to USB Flash Disk and data sheet on PC.

Innovative, Simple and Durable

Considerated High Pressure Filter Design

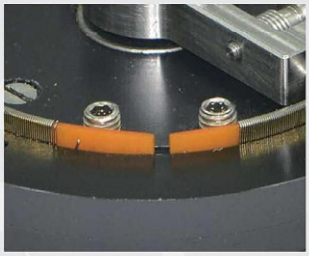
Tee-Type Structure High Pressure Filter only requires small wrench to detach it by one hand and more easy for cleaning in maintiance.

High Efficiency Cooling System

Cast-Aluminum Chiller expands the contact area with testing cell to and gives you faster temperature distribution as well as cooling experience.

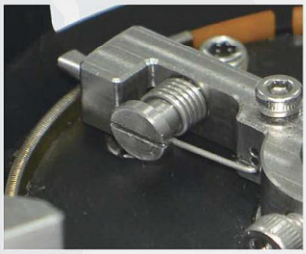
Independent Designed Potentiometer – Enjoys more Advantages

TOP



Contact Arm with Limited Range

Potentiometer has limitation point design to ensure the Contact Arm rotate within the range of resistor and prevent it from exceeding the range, which will result no data during testing.



Better Contact Stability

The potentiometer uses a torsional spring as contact arm to replace the traditional ones, a part with the feature of automatic compensation and better contact stability, to make test data more accurate.

Easy Calibration to 0 Bc

Users can easily calibrate the consistency to 0Bc only by loosening one bolt of the potentiometer.

Well-designed and User-friendly

Quality Guaranteed

Customized Thermocouple from Japan

Better accuracy, stability and reliability

NKK Industrial Switch from Japan

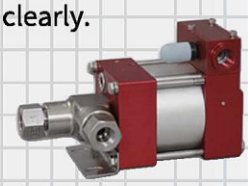
Long Service Life, Excellent Contact Stability

Omron Touch Screen Design

Wide Touch Screen to display testing data and curving directly and clearly.

Eurothermal Temperature Controller

Durable and Accurate in Operation

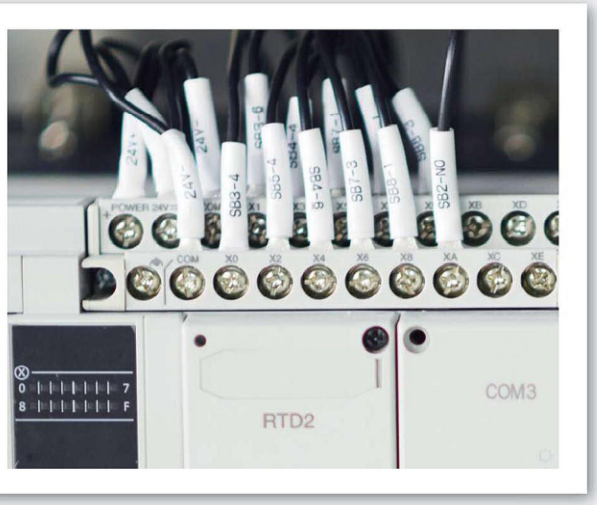


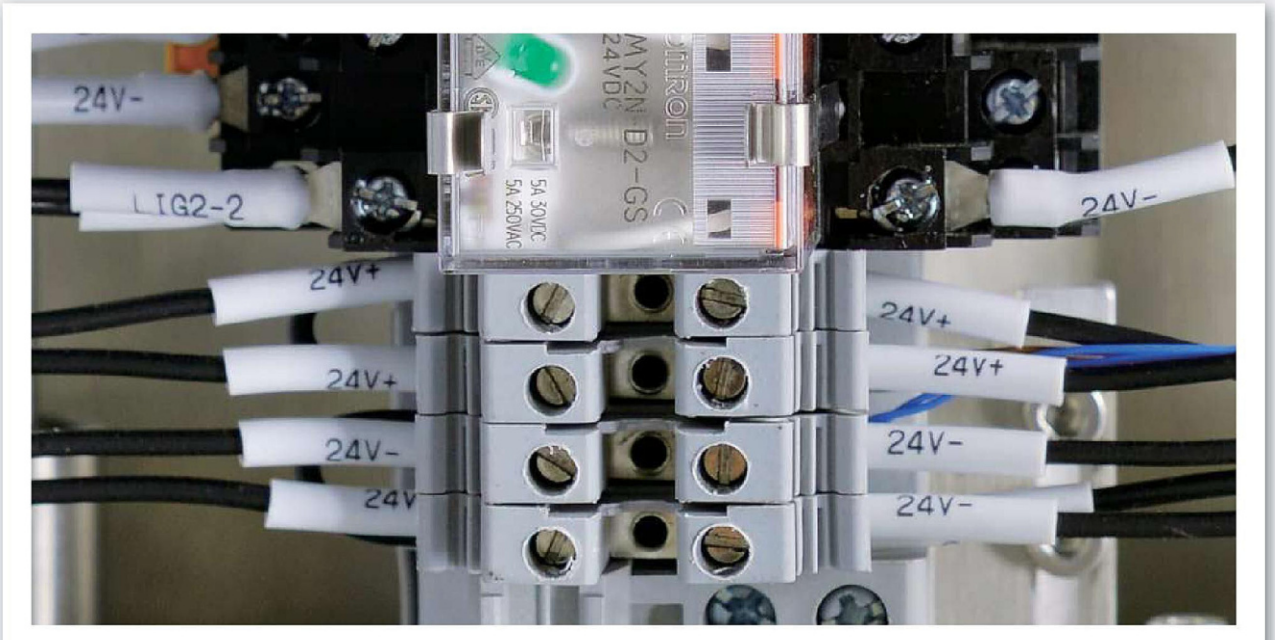
German Maximator High Pressure Pump

Fast Pressurized Speed with long service life

HIP High Pressure Valve from USA

Reliable in its long terms service time



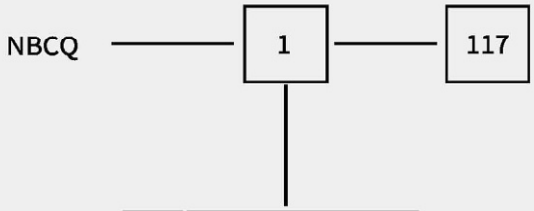


Detail-oriented, Easy and Safe to Use

Specifications

Max. Temperature	204°C	Max. Working Pressure	20000psi (138MPa)
Input Voltage	AC 100-110V 60Hz /220V 50Hz	Input Power	3200W
Consistency Range	0-100BC	Rotation Speed	150±15rpm
Air Supply Pressure	0.4-0.7MPa	Pressure of Cooling Water	0.2-0.5MPa
Dimensions (W*D*H)	70*46*60cm	Mass	150Kg

Available Models



No.	Power Supply
1	AC100-110V/60Hz
2	AC220V/50Hz

- **For instance, the model number NBCQ2117 refers to a HTHP consistometer which can run on 220V power supply.**

Part No.

Name	Image	Name	Image	Name	Image
Shaft of Mixing Blade	 PBC001	High Pressure Filter	 PBC002	Thermocouple (Internal)	 PBC003
Heater	 PBC004	Rubber Diaphragm	 PZC002	Potentiometer	 PZC004
Resistor of Potentiometer	 PZC005	Measuring Spring	 PZC006	Mixing Blade Paddle	 PZC012

SINO-JAPANESE JOINT VENTURE
WORLDWIDE SERVICE

NYSQ Compressive Strength Tester

- The large-size touch screen can display test data and test curve clearly
- The instrument can apply pressure to cement cube automatically according to API standards, so manual control of pressure is unnecessary; it can also improve the accuracy of test data and its operational simplicity.
- Stable and reliable SIEMENS PLC can satisfy users' demands for customization and adapt to upgrades in the future.
- The contact area of cement cube and pressurization rate can be set through the touch screen directly.
- The transparent protective container can protect the pressurization assembly, improving operational safety and making it easier to observe the test and clean the instrument.
- The instrument is not so wide, so it can save more space; its considerate design contains four casters which can help users to move it.
- High-quality components: stainless-steel surface, SIEMENS PLC and switches from NKK Switches in Japan

PRODUCT
INTRODUCTION

Overview

NYSQ compressive strength tester is a new generation of fully automatic instrument used for testing the compressive strength of cement cube, and it is designed and engineered in strict accordance with API Standard-10. Its surface is made of stainless steel with more durability. It adopts a touch screen, on which test data and test curve can be observed; meanwhile, it enables users to set test parameters easily. The quality of the instrument can be ensured by adopting high-quality components, such as SIEMENS PLC and switches from NKK Switches in Japan.

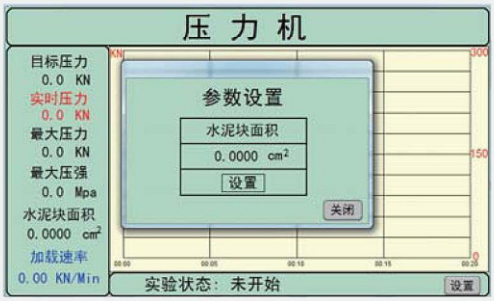
Features & Innovations

No.	NYSQ Compressive Strength Tester	Conventional Compressive Strength Tester
1	The instrument can apply pressure to cement cube at the pressurization rate automatically, so manual control of pressure is unnecessary; users can control pressure more accurately.	Users need to use the manual valve to control pressure, so the operation trends to be complicated and test data is not accurate.
2	The touch screen can display test data and test curve clearly.	No test curve is available and test data can only be observed on a digital display.
3	After setting test parameters, users can allow the instrument to operate automatically just by pressing one button.	Users have to use different manual valves and switches alternately to operate the instrument; it's so complicated and always makes users confused.
4	The instrument is not so wide, so it can save more space; its considerate design contains four casters which can help users to move it.	The volume of instrument is too large, so it needs more space; it has no caster, so it is difficult to move it.
5	The transparent protective container can protect the pressurization assembly, protect users from being hurt by detritus of cement cube when the cube is crushed and split and make it easier to clean the instrument.	The instrument is not equipped with a protective container or the protective container is non-transparent; therefore, it is not safe and not convenient to observe the test progress; it is also difficult to clean the instrument.

Observe Test Data

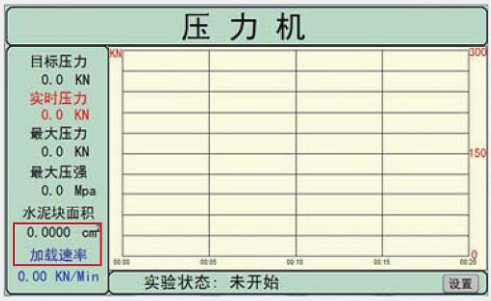
Users can observe many test data and the compressive strength curve on the touch screen clearly

Set Test Parameters



Users can set test parameters through the touch screen directly and easily, without frequent button-based

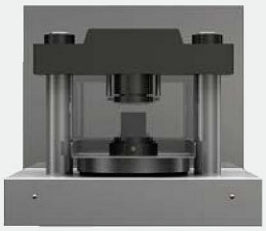
Apply Pressure at the Pressurization Rate Automatically



The pressurization rate can be set through the touch screen and the instrument can apply pressure to cement cube at the pressurization rate automatically, so manual control of pressurization rate by regulating the valve is unnecessary; its operation is simple and test data will be more accurate.operations.

Smart and Simple, Durable and Reliable

More Considerate Design



The Assembly Used to Test the Cement Cube

Safety Guaranteed by Protective Container

The assembly used to test the cement cube is protected by a transparent protective container. During the test, users can observe test progress through the protective container. It can protect users from being hurt by detritus of cement cube when the cube is crushed and split. It is easier to clean the instrument and the cleanliness and safety can also be improved.

Easy Movement Guaranteed by Casters

Casters are mounted at the base of the instrument and can be locked. The considerate design makes it convenient to move and fix the instrument, improving its practicality.

Specifications

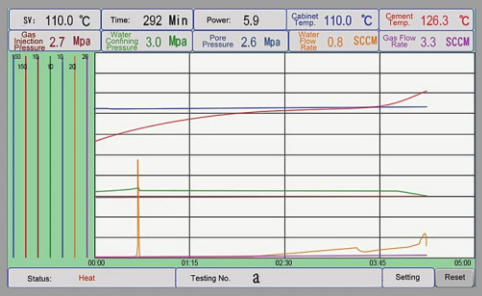
Input Voltage	220V	Max. Working Pressure	300 KN
Dimensions	50*60*160cm	Input Power	1300W
Inner Diameter of Oil Cylinder	125mm	Max. Oil Pressure	23MPa
Max. Compressive Strength	100MPa	Mass	230Kg

SINO-JAPANESE JOINT VENTURE
RELIABLE AND DURABLE PRODUCTS

NFQQ Gas Migration Tester

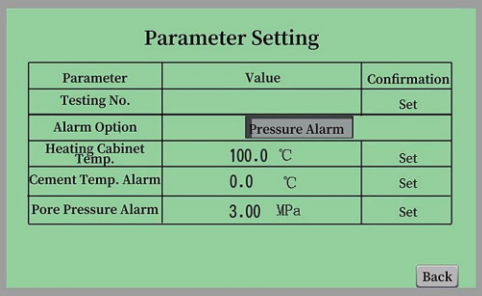
- Convenient touch screen design with PLC smart controller makes the testing parameter can be set by touch screen and the testing data and relevant curving can be checked on the screen directly.
- The flow rate and volume of gas that migrate into cement slurry is measured by gas flowmeter.
- Precise pressure transducer provide more accurate pressure data during the testing.
- Stainless steel durable instrument body with long service life and easy for cleaning.
- The operator can connect the instrument with PC via internet cable and set, check and save testing data on PC .
- Quality components and spare parts provides reliable testing performance such as Omron Touch Screen, Siemens PLC Controller, TESCOM Pressure Valve etc.

Easy to Check Testing Parameter on Screen.



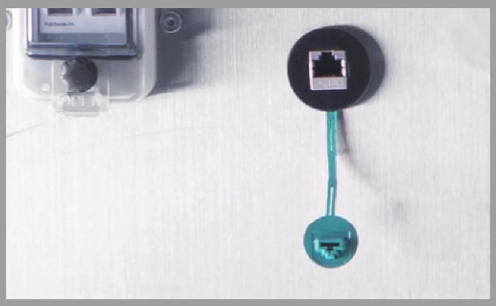
Convenient Touch Screen Design to Display Testing Parameter and Relevant Curving Directly . The Operator can get and save the Screen Shot with Touch Screen easily.

Simple Parameter Setting with Touch Screen.



Touch and set all the parameter on the Screen and the operator can enjoy more efficient testing experience without complicated button setting procedure.

Internet Cable Port for PC Connection



The Instrument can linked with PC to set the testing and keep testing record as well as upgrade the software program in Touch Screen remotely.

» Specifications

Max. Temp.	163℃	Max. Pressure	6.9MPa
Input Voltage	AC 100-110V 60Hz /220V 50Hz	Input Power	3.5 Kw
Water Supply Pressure	0.2-0.5WPa	Water Hose Connector	Soft Hose 1/4
Dimension	114*57*94 cm	Net Weight	145Kg

SINO-JAPANESE JOINT VENTURE
WORLDWIDE SERVICE

NHSQ Thermostatic Water Bath

- The detachable water bath is designed to be convenient for cleaning and maintenance.
- Automatic power failure function makes the instrument safer.
- The upper cover of the instrument and the area around water bath are equipped with thermal insulation system to keep temperature stable and save more energy.
- Its surface is made of stainless steel.
- High-quality components, such as Japanese switches from NKK SWITCHES and temperature controllers from RKC Instrument Inc.

PRODUCT
INTRODUCTION

Overview

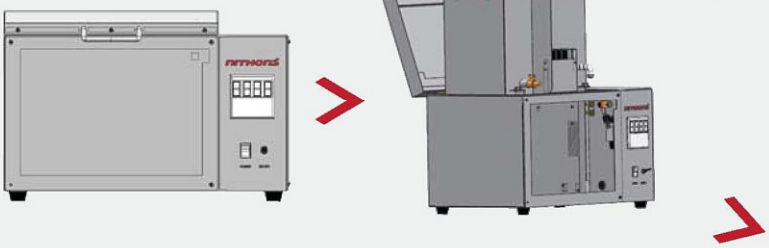
NHSQ thermostatic water bath is a new generation of instrument for curing the cement slurry in the test mould until it turns into set cement specimen step by step under atmospheric pressure before the compressive strength test is carried out, and it is designed and engineered in strict accordance with API Standard-10. Its surface is made of stainless steel with more durability. The detachable water bath is designed all by ourselves to be convenient for cleaning and maintenance. Automatic power failure function makes the instrument safer to use. The upper cover of the instrument and the area around water bath are equipped with thermal insulation system to keep temperature stable, reduce heat loss and save more energy. The quality of the instrument can be ensured by adopting high-quality components, such as Japanese temperature controllers from RKC Instrument Inc. and switches from NKK SWITCHES.

Features & Innovations

NO.	NHSQ Thermostatic Water Bath	Conventional Thermostatic Water Bath
1	The detachable water bath is designed to be convenient for cleaning and maintenance.	The water bath is not detachable, so it is difficult to clean the sediment each time.
2	The instrument will cut off electricity automatically once the front cover plate of water bath is disassembled, so it is safer to use.	It can not cut off electricity automatically, so it will be dangerous to use the instrument if the operator forgets to cut off electricity.
3	The upper cover of the instrument and the area around water bath are equipped with thermal insulation system, so it can not only save energy, keep temperature stable, but also insulate against heat to avoid burning the operator.	The outer wall of the instrument is not equipped with thermal insulation system, so it is easy to burn the operator and can not save energy.

Detachable Water Bath

The detachable water bath is designed all by ourselves to be convenient for disassembly and maintenance. The operator can lift up the water bath easily after taking out bolts in the front cover plate, taking down the front cover plate and unplugging the quick coupling of power supply and the connecting wire of thermocouple.

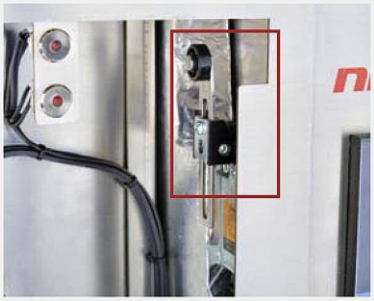


Quick Coupling of Power Supply

Connecting Wire of Thermocouple

Automatic Power Failure Function

If the operator intends to maintain the instrument or disassemble the water bath and forgets to cut off electricity, the instrument will cut off electricity automatically once its front cover plate is disassembled, so it can make the operation safer.



By adopting a limit switch, the instrument will cut off electricity automatically once its front cover plate is disassembled.

High control accuracy and long service life

Quality Guaranteed

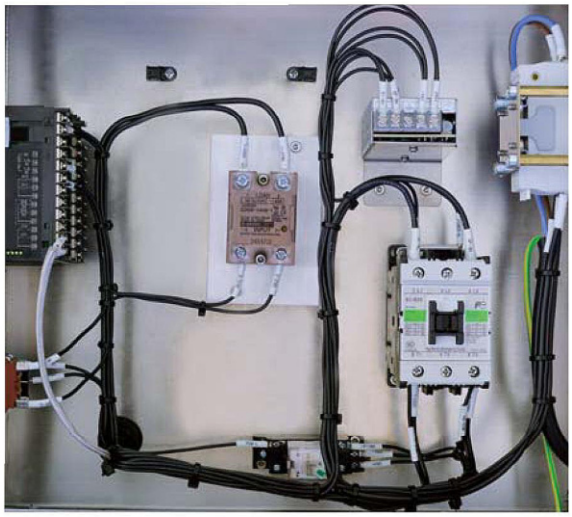
Japanese Switches from NKK SWITCHES

Long service life and better contact stability

Japanese Temperature Controllers
from RKC Instrument Inc.

High control accuracy and long service life

Sino-Japanese Joint Venture ,Worldwide Service



Detail-oriented, Easy and Safe to Use

Specifications

Max. Temperature	93℃	Dimensions of Cube Specimen	50.8*50.8*50.8mm
Input Voltage	AC100–110V 60Hz/ 220V 50Hz	Power	2100W
Dimensions (W*D*H)	62*47*42cm	Mass	37Kg

Available Models

NHSQ — 1 — 017

No.	Supply Voltage
1	AC100–110V /60Hz
2	AC220V / 50Hz

■ For instance, the model number NHSQ2017 refers to a thermostatic water bath (ultimate version) which can run on 220V single phase power.

Part No.

Name	No.	Image	Name	No.	Image
Thermocouple	PHS001		Mould	PHS002	