

**HST WAW-300D 300kN Computer Control
Servo Hydraulic Universal Testing Machine (Class 0.5)**



Application:

WAW Series Computer-Controlled Servo-hydraulic Universal Testing Machine is suitable to test various metallic & non-metallic materials for tension, compression, bending and shearing testing.

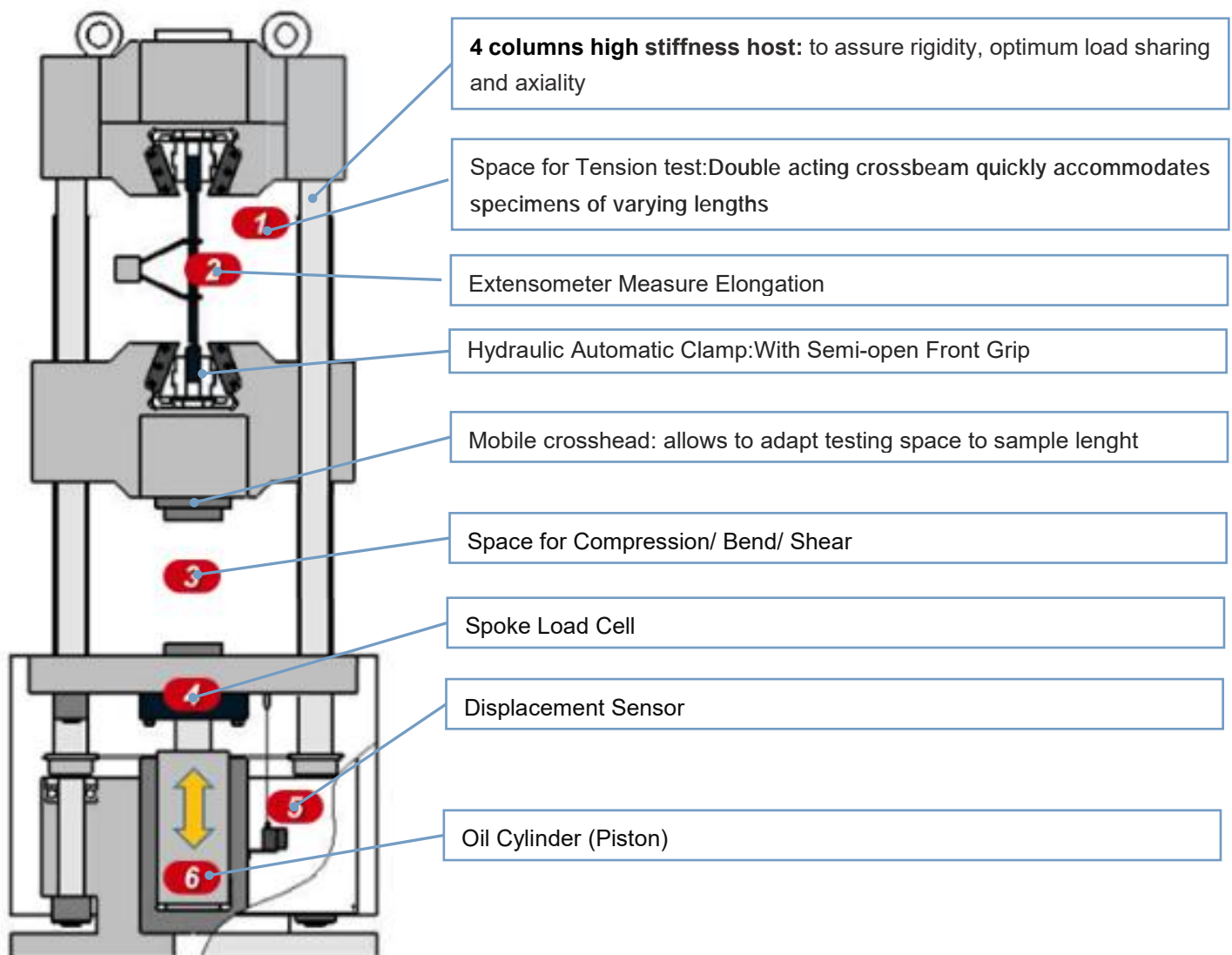
Types of specimens and materials:

1. Metals-(wire, rod, tube, strip, plate, strip) ;
2. Fasteners (tensile, proof, single and double shear) ;
3. Construction materials (reinforcement bar, wire, mesh, folding, compression of concrete and components), etc.

Applied Standards:

Load meets or exceeds the following standards: ASTM E4, ISO7500-1, EN 10002-2, BS1610, DIN 51221.

Strain measurement meets or exceeds the following standards: ASTM E83, ISO 9513, BS 3846 and EN 10002-4.

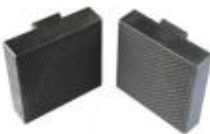


Specifications:

Product Model	HST WAW-300D
Number of columns	6 (4 columns and 2 screws)
Load Capacity	300kN
Load Capacity	30000kgf
Calibration standard	ISO 7500
Calibration standard	Class 0.5
Testing load Accuracy	±0.5%
Load Measuring Range	1%~100%FS
Load Resolution	1/500,000 of FS
Accuracy of Stress Rate Control	±0.5%
Displacement resolution	0.0025mm
Displacement accuracy	≤±0.5% of Indicating Value
Deformation measuring range	1%~100%FS
Deformation resolution	1/±500000FS of the max deformation
Deformation accuracy	≤±0.5% of Indicating Value
Overload Protection	≥5% of Full Range
Main frame parameters	
Max. Tensile Testing Space	680mm
Max. Compression Testing Space	550mm
Distance between two columns	485mm
Column diameter	Φ60mm
Max. Piston stroke	200mm
Piston diameter	Φ130mm
Testing Speeds	0~150mm/min
Cross beam adjustment for max speed	About 220 mm/min
Cross beam moving motor power	0.4KW
Controls parameter	
Control mode	Force closed loop control, deformation closed loop control, displacement closed loop control
Force control controls the speed range	0.001%~5%FS/s
Force control speed control accuracy	When 0.001% ~ 1% FS/s is better than ≤± 0.5%;

	When 1% ~ 5% FS/s better than $\leq \pm 0.2\%$
Force control hold accuracy	$\pm 0.002\% F.S$
Deformation control controls speed range	0.001%~5%FS/s
Deformation control accuracy accuracy	When 0.001% ~ 1% FS/s is better than $\leq \pm 0.5\%$; When 1% ~ 5% FS/s better than $\leq \pm 0.2\%$;
Deformation control hold accuracy	$\leq \pm 0.002\% F.S$
Displacement control speed range	0.1~100mm/min
Displacement control speed accuracy	$\leq \pm 0.2\%$
Displacement control hold accuracy	$\leq \pm 0.02\text{mm}$
Accessory parameters	
Clamping mode	Built-in wedge type hydraulic automatic clamping
Round specimen clamping range	$\Phi 10 \sim 26\text{mm}$, $\Phi 26 \sim 45\text{mm}$, Optional 4-10mm
Flat specimen clamping thickness	0--30mm
Compression plate dimensions	$\Phi 160\text{mm}$
Machine parameter	
Load frame dimension	745x685x1900mm
Oil power dimension	1000x600x780mm
Gross Weight(kG)(Host+oil source)	1618
Power supply	2.75kW, 3 phase, AC380V $\pm 10\%$, 50Hz
Operating Temperature	0 to +38° C (+32 to +100° F)
Humidity Range	10% to 90% non-condensing
NOTE: 1. Extra wide and/or extra height frames are available. 2. Power supply system is completely customizable. 3. Specifications are subject to change without notice.	

Machine Accessories:

NO.	Part Name	Picture	Part Name	Qty.
1. Load frame				
1.1	Universal testing machine host		300KN, Six columns (4 columns and 2 screws), High intensity testing machine structure and crosshead, high stiffness to assure accuracy;	1set
1.2	Hydraulic automatic Wedge tensile grip		Hydraulic wedge clamps for easier loading and allowing rapid loading and unloading of specimens.	1set
			Φ10~26mm, Φ26~45mm, Optional 4-10mm	1set /each
			0-30mm Width of Flat Specimens: 90x90mm	
1.3	Compression test attachment		Dimension: Φ160 mm	1set
1.4	Bending test attachment		Optional , Maximum span (mm): 300 Pressure roller/support roller diameter (mm): Φ 50 Maximum support roller width (mm): 140 Pressure head diameter (mm): Φ 36 Maximum pressure head width (mm): 70	1set

2. Servo oil power system				
2.1	Servo hydraulic station		Max. Pressure:35MPa Max. Flow:3.6L/minx2 Power:1.5KW Oil Tank Capacity:60L	1set
2.2	Servo motor and drive system		1.5KW Ac servo motor pump ,1500Rpm	1set
2.3	Plug valve		The US SUN Valve effectively reduces The probability of oil Leakage in the hydraulic System and improves the Stability of the hydraulic system	1suit
2.4	Plunger pump		3.6L/minx2	1 set
2.5	Hydraulic integrated valve block		10μm, Includes precision oil filter	1set
2.6	Pressure gage		system pressure and clamping pressure	2 set
2.7	Magnetic exchange valve		pressure 31.5Mpa	3 set
3. Measurement and control part				

3.1	Load sensor		Class 0.5 Spoke sensor	1set
3.2	Digital displacement sensor		10000 wire , for the best positioning and measuring accuracy.	1set
3.3	Controller		EDCH550, Three closed loop (force, deformation, displacement) control system	1set
3.4	Monitoring system		provides a stable output power. When the power supply is abnormal (missing phase, wrong phase sequence, wrong wiring) the indicator light of the monitoring system will be off.	1set
3.5	Hand-held controller		Can control the rise and fall of moving beams and cylinders, clamping and loosening of jaws	1set
3.6	Measurement and Control Software		Standard English, Can optional English, Russia, Turkish, Spanish, etc	1set
3.7	Computer		HP	1set
3.8	Printer		HP	1set
3.9	Electronic Extensometer		Gauge Length: 50mm; Deformation: 10mm	1set
3.10	Camera(Optional)		can effectively record and play back the entire test experiment process	1set

4. Other accessories

4.1	L-shaped anchor bolt		Include the nut	4suit
4.2	Spare sealing element		Compound gasket,OR-GASKET-1SET	1suit

Other tensile grip (optional)



➤Grip of Chain



➤Grip of Chain



➤Grip for Fasteners (Bolt/Stud/Nut)



➤Grip for Welded fabric

Test area for compression /flexural / bending/shear (optional)



Servo oil power system compares with other company old system

Item	New servo hydraulic station (AC servo motor)	Traditional hydraulic station (three-phase asynchronous motor)
Control principle	Automatically control the speed of the AC servo motor according to the actual flow required by the current test, and provide as much as required.	Whatever the current test flow requirements, provide the maximum flow rate.
Energy saving	Most tests do not require the maximum flow rate. The motor speed can be reduced, and the motor power will decrease. In the case of long-term tests, the power saving effect is very obvious;	No matter what kind of test or how long it takes, the motor is running at rated speed, and output rated speed;
Fever	The increase in oil temperature of the hydraulic station is mainly determined by the size of the overflow volume. If the flow rate is controllable, the overflow will be greatly reduced, the heat generated will be reduced, and the oil temperature rise will be significantly slowed down.	The rise of the oil temperature of the hydraulic station is mainly determined by the capacity of the overflow flow. If the flow is not controllable, the overflow flow will be large, resulting in a lot of heat, and the oil temperature is obviously rising.
Mute	The noise of AC servo motor is much smaller than that of three-phase asynchronous motor, and the motor speed can be reduced and the noise can be reduced by 50%.	The three-phase asynchronous motor is noisy, the speed is constant, and the noise cannot be reduced.
Low cycle fatigue	Can perform long-lasting compression deformation and low-cycle fatigue of materials	No

Operation Software -HKTEST

Test process:

Selection a test--Enter the test scheme selection--Input the sample information--Start to test--end of the test

Features:

1. Full digital control

The whole measuring and control system adopts the special controller, which can achieve the digital adjustment of zero point and gain of load, deformation and displacement, and it's easy to operate and possesses the high reliability.

2.Possess the functions of storage, setting and loading for various kinds of parameters, which make it convenient to connect multiple transducers with one load frame.

3.Realize the close-loop control, and show the reference curve during the executive operator adjusting the close-loop parameters, so the user can observe the close-loop effect caused by the parameters.

4.Perfect graphic function to complete the functions of the reappearance, amplification, reduction, self-adaptation, lapping of the curves, display and print the curve at the appointed range, observe the coordinate of the test point.

5.Data processing supports automatic analysis and graphic man-machine mutual processing, which is convenient to check and compare the test results.

Multilevel identity management

Multilevel identity management, different identity has different functions, which not only makes the operation quick by ordinary operator, but also protect the system effectively.

6.Multi controlling channels: Displacement, force control, deformation, control, stress control, strain control, constant stress, constant strain etc.

7.Test standard: provide users with the necessary applications to the test, covering GB, ASTM, DIN, JIS, BS ... and other testing standard specification.

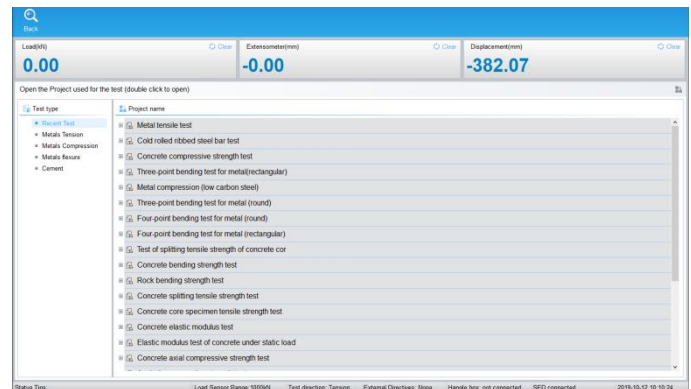
Multi measurement units

Load can be displayed in kN, lbf or kgf as selected by the operator.

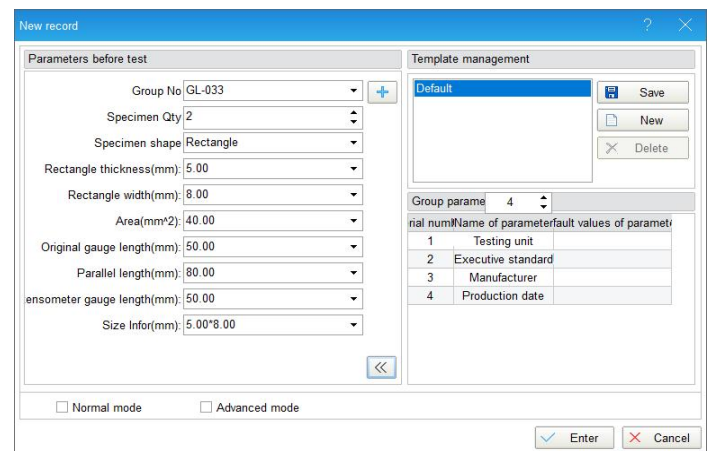
8.Record video:

optional DV Customers can

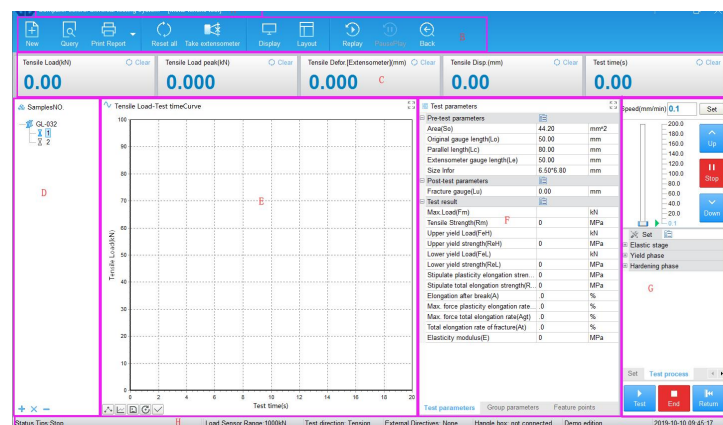
add cameras, the software has a recording function: can effectively record and play back the entire test experiment process



● Fig.1 Test Selection Interface



● Fig 2. Input the sample information



● Fig 3. Start to test

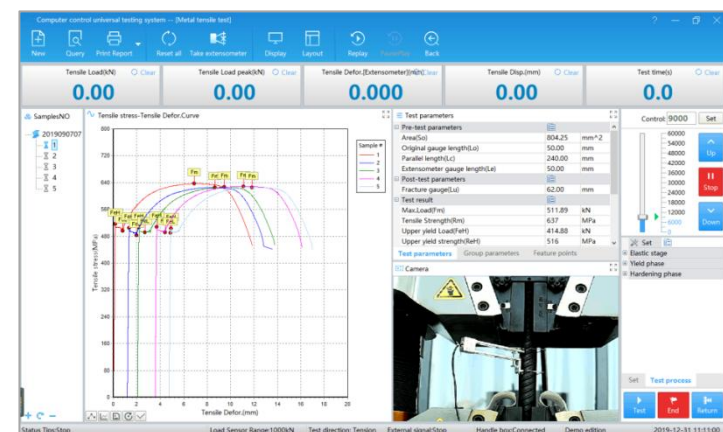
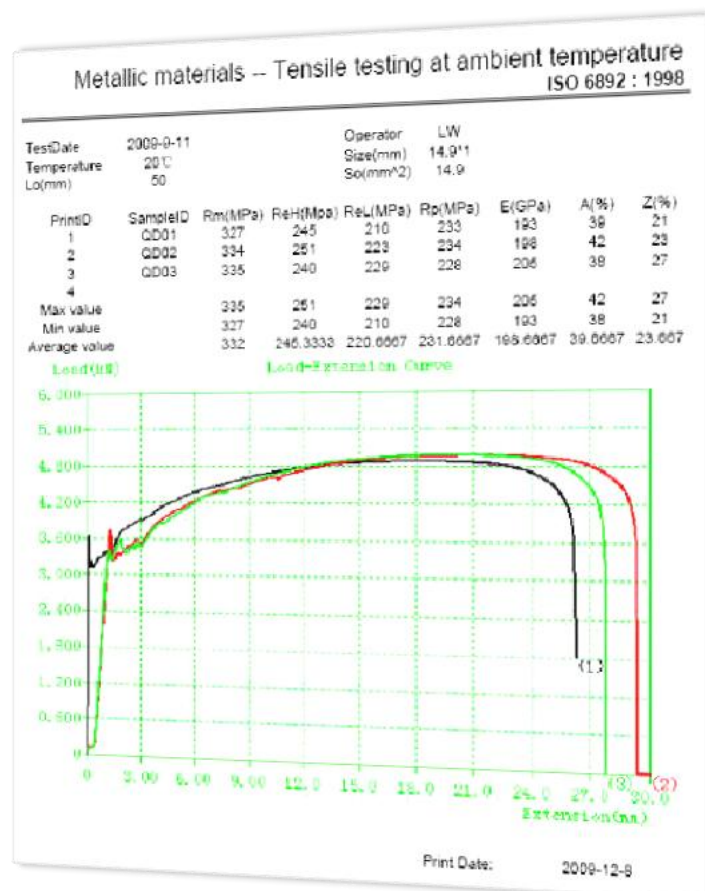
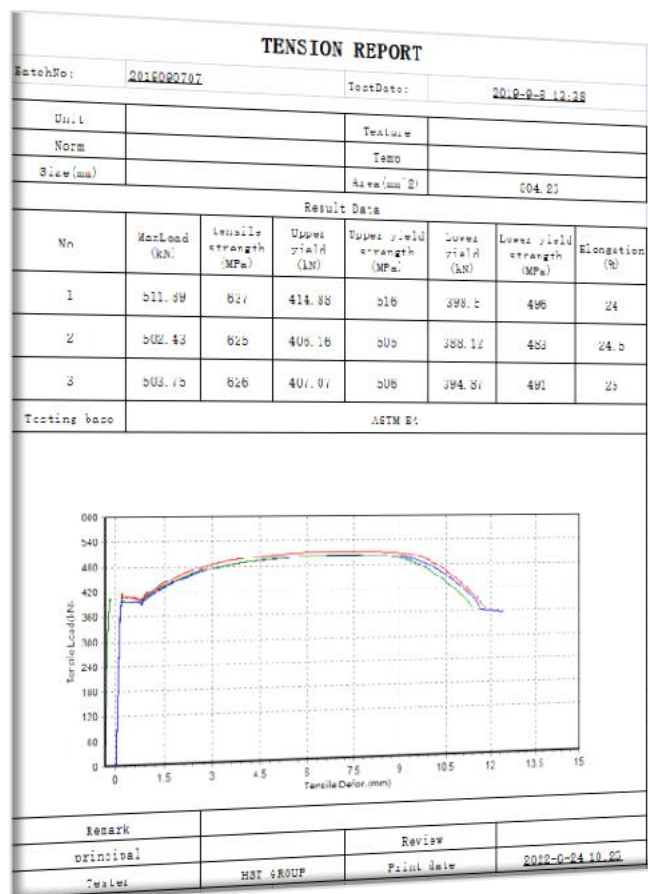


Fig 4. Record video

Test Report

Output and print report: Excel, word, template test report, can be edited customize To show test information, including test person, test standard, test curve, test max load etccan add your company LOGO and company name,easy to edit.



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Quality Standards & Accreditation

ISO:9001 and CE accredited and an active member of all the main international standard organizations, including GB, ISO, EN, ASTM, AASHTO and AWRG, we are also involved in steering future Standards' development so they are written with practical operation and application in mind for the benefit of the end-users.



Customer use site



OUR factory



OUR Certificate





MACHINERY DIRECTIVE ATTESTATION OF CONFORMITY

Technical file of the company mentioned below has been inspected and audit has been completed successfully.

2006/42/EC Machinery Directive Annex VIII has been taken as references for these processes.

Company Name : **JINAN HENSGRAND INSTRUMENT CO., LTD.**
Company Address : NO.4915, WEST JINGSHI ROAD, JINAN, CHINA
Related Directives and Annex : **2006/42/EC Machinery Directive/Annex VIII**
Related Standards : **EN ISO 12100:2010, EN 60204-1:2018**
Product Name : **TESTING MACHINE**
Report No and Date : TCF-JHIC230128-MD
Product Brand/Model/Type : WDS-1, WDS-2, WDS-3, WDS-5, WDS-10, WDS-20, WDS-30, WDS-50, WDS-100, WDS-200, WDS-300, WDS-500, WDW-1, WDW-2, WDW-3, WDW-5, WDW-10, WDW-20, WDW-30, WDW-50, WDW-100, WDW-200, WDW-300, WDW-500, WDW-600, WDW-1000, WE-300, WE-600, WE-1000, WE-2000, WEW-300, WEW-600, WEW-1000, WEW-2000, WAW-300, WAW-600, WAW-1000, WAW-2000, WAW-3000, WAW-5000, WAW-6000, LAW-1000, JB-300B, JBS-300, JBW-300, JB-500B, JBS-500, JBW-500, JBW-750, CST-50, VU-2Y, VU-1S, DWC-40, DWC-60, DWC-80, DWC-100, DWC-196, YES-2000, YES-300, YAW-1000, YAW-300, YAW-2000, YAW-3000, YAW-5000, NDS-200, NDS-500, NDS-1000, NDS-2000, NDW-200, NDW-500, NDW-1000, NDW-2000, NDW-3000, NDW-5000, NDW-10000, HEZ-3, HEZ-6, HEZ-10, JWJ-10, TLS, TLW, HST-P50, HST-P100, HST-P200, HST-P300, RDJ, NDT, DWTT, GBW-60, GW-50, HST, XNR-400

Certificate Number : **M.2023.206.C81366**
Initial Assessment Date : 31.01.2023
Registration Date : 01.02.2023
Reissue Date/No : -
Expiry Date : **31.01.2028**


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