Testing Machines & Solutions

For metals and building materials

WANCE Testing Machine

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WANCE Testing Machine

Contents

Representative Customers

NUCOR Steel, VarSteel, AMERI-PRECISION METALS, Solaxis, Lincoln Structural, University of Arkansas, Friends University, Whitewater, Simwon Texas, Bingham
North America

MPI, Lonestar Fasteners, LIBERTY STEEL, IRIS NDT, OIS Engineering, Rotech, JW Kane, IRIS, SGS, WQIC, WRR Pedley, BST, Cal-Test, RMR, MTD, Red Roosta, Alloy Wire International, Mainetti
UK

UNIME, UNINA, UNIPG, UNISA, Carisma, Plastica Gambardella, University of Enna , CNR IPCB
Italy

HABAS, TCDD, TOSCELIK, GEMCILER, ERDEMIR, MAKIM, OZYEGIN, AKIN, TULOMSAS, EMIN, BAKU, ASEN METAL, KORFEZ DOKUM, TNC, MAKERSAN MAKINA, SPINTEKS
Turkey

Melbourne Testing, ACM LABORATORY, ONESTEEL, DSTO, PIHA, BISALLOY, MECHTEST, Annex Products, Pope Packaging, Alliance Geotechnical, TORO, Curtin University, University of WA, SGS NZ, ANCHOR WIRE, Reoco, Taranaki, Thorpe, CLS, RSM, Brilliant steel, MEGABOLT
Australia / New Zealand

Plastics App, Tosaf, Manna, Fiber Technik, SHAHAF, Infimer, Topgreen, Keter (Israel)
Almeer, ITCO LAB (Kuwait), Exova (Oman),Element (Doha) Gulf Acrylic, Anchor (UAE)
GCIR, Group Five Pipe, Global Pipe, SMI, Global Resource, Jawdah Cables, Element (KSA)
GST, Mahindra, Air Springs Private Limited, Ramaiah Institute, Yanfeng India (India)
Middle East

Vitzromiltec, KIST, KCL, Shinjin Chemical, Molex, Showa, Molex Korea, Daehan i.m, KITECH, PPI Pipe
Korea, Japan

Lock&Key Hardware, CHRS Samawira Mesh, Perusahaan Chew Hur, Deho Industries, WeiDat Steel Wire, Element (Singapore), R.A.K. Materials Consultants, SETSCO SERVICES
Malaysia/Singapore

BUET, RUET, KUET, BSRM, GPH, RAHIM, ANWAR, MOHSTEEL, CSRM, RRM, SALAM, MOHAMMADI, MAGNUM, COPPERTECH, FORTUNA, KDA, RFL, JSRM
Bangladesh

ATLANTA, UNITEC, TANAY, LACKO, ALASCO, PGA, TESTLAB, Maccaferri, Fibritecture
Philippines

FHS, ITST, HUST, QUATEST, Thien Long Group, ABC Chemical, KMV, UHM, EUROSTARK, DEKKO COR., VESTGAARD,BENKAN,VICOSTONE, UL, RF Thai, BA AN JSC, ARITEX
Vietnam

Dextra, Danieli, SGS, Fisher & Paykel, GCPC, Omyai Sirichai (1991), Thai OPP, SUMITOMO ELECTRIC WINTEC (THAILAND) , BYD Auto Components (Thailand)
Thailand

POLNES, PNK, ITM, UNILON, MITSUBISHI JAYA, PLASTICOLORS, Avia Avian, GUNUNG STEEL, PT. PLASTICOLORS EKA PERKASA, PT.HO WAH GENTING, PT DSI UNDERGROUND
Indonesia

Pekay Adhesives, Allan Maskew, Milson Engineering, PFISTERER, ROCK MECHANICS, Myplas, Chep, Kasodur, Geotech, Johannesburg University, SCAW METAL
South Africa

Egyptian Steel, Al Ezz Dekheila, National Port Said Steel, AL MAADI STEEL, CMRDI, Hiteknofal, Hegazy, Nassar Plastic Factories, LAMINTEC, Premier plastics, Hakim Misr Paco
Egypt

CASTCO, FUGRO, Hong Kong Testing, STANGER, QCC, PROMETLAB, Material Tech, TRINSEO, TECHNOFORM, PolyU, City University, LECM
Hong Kong / Macau

Company Profile

WANCE was founded in 2011, is a collection of research and development, manufacturing, sales, services and professional mechanical performance testing solutions to provide, implementation as one of the national high-tech enterprises. Its subsidiaries include Shenzhen WANCE, Shanghai WANCE, Hubei WANCE and Beijing WANCE.

WANCE has total more than 500 staffs. Headquarter is located in Shenzhen. WANCE has R&D centers and manufacturing facilities in Shenzhen and Wuhan respectably. The company has passed and obtained ISO9001 quality system certification, ISO14000 environmental management system certification, occupational health and safety management system certification, CE certification. WANCE has participated in draft, compilation, revision of more than 50 industry standards. Around 200 patents were filed and granted. With its powerful technology, professional services and rapid development, WANCE has been fully recognized by governments at all levels and all sectors of society.

Our products, services, and solutions are widely used in R&D, quality analysis and quality control field, covering testing equipment, testing technology and transfer system of a quantitative value. Customers cover aero-space, mechanical manufacture, vehicle, ship, construction, biological materials, college, universities, research institutes, national quality inspection institutes, export and import inspection institutes. We are keeping tight cooperation with all factories, research institutes, and quality inspection organizations, and providing high quality products and services along with customer uptime demands.From small melt flow indexer to big 100000J drop weight impact testing machine, WANCE relies on years of industrial expertise and creative technical team, delivering the greatest test support and confidence to customers across a wide range of fields. WANCE is committed to accelerating the innovation of test technology and test equipment, to supporting research projects, to motivating enterprises in brand development and improvement, and products selling in global market.

We are committed to providing complete products and solutions deeply and widely. WANCE will be your primary and reliable partner!

TSE-B Series

Typical specimens

Small components, reinforced plastics, metals, wires, composites, elastomers, wood products, textiles, biomaterials, paper products, adhesives, foams, consumer products.

Features

● Pre-loaded ball screws and heavy duty bearings assure long life with zero backlash as well as linear low force and through zero performance.

● Fully-protected lead screw covers provide longer life and greater operator protection.

Model	TSE104 / TSE503 / TSE203 / TSE103 / TSE502 TSE202 / TSE102 / TSE501 / TSE201 / TSE101
Type	B
Capacity (kN)	10, 5, 2, 1, 0.5, 0.2, 0.1, 0.05, 0.02, 0.01
Accuracy	Class 0.5
Force measurement range	0.4%-100%FS
Force accuracy	±0.5% of reading
Force resolution	1/500000FS
Position accuracy	±0.5% of reading
Position resolution (μm)	0.02
Crosshead speed (mm/min)	0.005~500
Crosshead speed accuracy	±0.5% of setting
Crosshead travel (mm)	1000
Test width (mm)	420
Power requirement	Single-phase, 220V±10% VAC, 50/60Hz
Power consumption (kW)	0.5
Dimension (mm) (W x D x H)	784x547x1500
Weight (kg)	150

Electromechanical Universal Testing Machine

TSE-C Series

Typical specimens:

Small components, reinforced plastics, metals, wires, composites, elastomers, wood products, textiles, biomaterials, paper products, adhesives, foams, consumer products

Features:

● Robust guidance columns with self-lubrication increase lateral stiffness and ensure linear crosshead travel.
● Pre-loaded ball screws and heavy duty bearings assure long life with zero backlash as well as linear low force and through zero performance
● Fully-protected lead screw covers provide longer life and greater operator protection

Model	TSE504 / TSE254 / TSE104 / TSE503
Type	C
Capacity (kN)	50, 25, 10, 5
Test space	Single / dual test space
Accuracy	Class 0.5
Force measurement range	0.4%-100%FS
Force accuracy	±0.5% of reading
Force resolution	1/500000FS
Position accuracy	±0.5% of reading
Position resolution (μm)	0.03
Crosshead speed (mm/min)	0.005~1000
Crosshead speed accuracy	±0.5% of setting
Crosshead travel (mm)	1050
Test width (mm)	420
Power requirement	Single-phase, 220V±10% VAC, 50/60Hz
Power consumption (kW)	1.4
Dimension (mm) (W x D x H)	800x680x1840
Weight (kg)	400

Electromechanical Universal Testing Machine

Metal

TSE-D Series

Typical specimens:

Metals, building components, large fasteners, composites, wood products

Features:

- Robust guidance columns with self-lubrication increase lateral stiffness and ensure linear crosshead travel.
- Pre-loaded ball screws and heavy duty bearings assure long life with zero backlash as well as linear low force and through zero performance
- Fully-protected lead screw covers provide longer life and greater operator protection

Model	TSE254 TSE504 TSE105	TSE255	TSE605	TSE106	TSE206 TSE256
Type	D				
Capacity (kN)	25/50/100	250	600	1000	2000/2500
Accuracy	Class 0.5				
Force measurement range	0.4%~100%FS			1%~100%	
Force accuracy	±0.5% of reading				
Force resolution	1/500000FS				
Position accuracy	±0.5% of reading				
Position resolution (μm)	0.02	0.02	0.01	0.01	0.01
Crosshead speed (mm/min)	0.005~1000	0.005~500	0.005~250	0.005~250	0.005~200
Crosshead speed accuracy	±0.5% of setting				
Crosshead travel (mm)	1150	1150	1684	2027	2594
Test width (mm)	600	650	700	900	1100
Power requirement	Single-phase 220V±10% VAC 50/60Hz	Three-phase 380±10% VAC 50/60Hz			
Power consumption (kW)	2	5	7	13	22
Dimension (mm) (W x D x H)	1150×800 ×2350	1220×890 ×2465	1250×758 ×3040	1500×820 ×3540	2036×1070 ×4220
Weight (kg)	1200	1500	4500	8000	14000

Electromechanical Universal Testing Machine

TSE-D with furnace and video extensometer

2500KN with side action grip

TSE-D dual space

TSE-D with chamber

Automated Testing System

XY stage auto tensile testing machine

Robotic tensile testing machine

Metal

Automated Testing System

Robotic tensile testing machine

Robotic tensile testing machine

These three-zone split furnaces are designed for floor standing type universal testing machines and creep testing machines. The elements of the split furnaces have been designed to achieve optimum performance and give the longest possible useful life. The heating elements are individually wound on MULLITE half tube sections, and provide three heat zones for excellent control of temperature gradients and reliable continuous operation up to the specified maximum temperature.

High performance multi-crystal mullite refractory fabrics insulation is used to reduce heat losses and provide fast heat up rate. The specimen is heated primarily through radiation.

The exterior finish is stainless steel. Adjustable stainless steel latches keep the furnace sections locked together during tests and facilitate opening and closing of the furnace.

Ceramic closures at top and bottom fit closely around the loading bars and reduce heat loss at these points.

Each furnace has been designed for long life, good temperature uniformity and safe operation.

Model	WHTF 113A-B	WHTF 113A-C	WHTF 113A-B1	WHTF 113A-C1	WHTF 113A-B2	WHTF 113A-C2
Type	Standard		Front open (for contact extensometer)		Glass window (for video extensometer)	
Furnace structure	Split type, 3-zone heating and seperate control					
Temperature range(°C)	200°C~1100°C					
Uniform zone(mm)	150	200	150	200	150	200
Inside dimension(mm)	Φ110×330	Φ110×380	Φ110×330	Φ110×380	Φ110×330	Φ110×380
Outside dimension(mm)	Φ350×450	Φ350×500	Φ350×450	Φ350×500	Φ350×450	Φ350×500
Extensometer front slot (mm), H x W	No		80 X 20		110 X 30	
Heating element	Φ 1.5mm Nichrome wire					
Power supply	3-phase, 380V±10%, 50Hz, 3.5kW					
Outer surface temperature	⩽900°C, <65°C, 900°C~1100°C, <85°C					
Accuracy(°C)	Temperature		Fluctuation		Uniformity	
	200~600		±2		2	
	600~900		±3		3	
	900~1100		±4		4	

Standard

Front open

Glass window

Model	WHTF123B-C	WHTF123B-C1	WHTF123B-C2
Type	Standard	Front open (for contact extensometer)	Glass window (for video extensometer)
Extensometer front slot(mm), H x W	No	80 X 20	110 X 30
Temperature range (°C)	200-1200		
Uniform zone (mm)	200		
Inside diameter (mm)	Φ90 X 445		
Outside diameter (mm)	Φ350 X 500		
Heating element	Φ 5mm Alchrome		
Heating voltage(V)	24		
Heating power(kW)	5		
Outer surface temperature	⩽900°C, <65°C 900°C~1200°C, <85°C		
Accuracy(°C)	Temperature	Fluctuation	Uniformity
	200~600	±2	2
	600~900	±3	3
	900~1200	±4	4
Power supply	3-phase 5-line, AC380V, 50Hz, 5kW		

Environmental Chamber for Liquid Nitrogen Cooling

WANCE offers various kinds of environmental chamber to address the needs of non-ambient tensile, compression and bending tests.

Model	EMC003A-1	EMC003A-2
Compatible with model	TSE-C, ETM-C	TSE-D, ETM-D
Temperature range	-70~+350°C	
Wind circulation method	Centrifugal blower	
Temperature fluctuation	⩽±1°C	
Temperature accuracy	-70~200°C: ⩽±2°C	
	200~350°C: ⩽±3.5°C	
Temperature uniformity	-70~200°C: ⩽±2°C	
	200~350°C: ⩽±3.5°C	
Temperature reading accuracy	0.1°C	
Heating time	3°C/min	
Cooling time	2°C/min	
Cooling method	Liquid nitrogen	
Heat insulating material	Aluminum silicate wool	
Inside dimension	D240×W200×H600 mm	D320×W300×H600 mm
Outside dimension	D900×W350×H760 mm	D950×W450×H760 mm
Weight	100kg	120kg
Heating power	1.6 kW	2.4 kW
Power supply	1-phase, AC220V±10%, 50Hz	3-phase 5-line, AC380V±10%, 50Hz
Maximum specimen length after break	L=specimen clamp length between two grips +200	
Working environment	Temperature: +5°C~+35°C	
	Humidity:⩽85%	
	Atmospheric pressure: 86~106KPa	

Environmental Chamber for Compressor Cooling

WANCE offers various kinds of environmental chamber to address the needs of non-ambient tensile, compression and bending tests.

EMC003B-1: -70 ~ +350°C for TSE-C, ETM-C
EMC003B-2: -70 ~ +350°C for TSE-D, ETM-D
EMC004B-1: -40 ~ +350°C for TSE-C, ETM-C
EMC004B-2: -40 ~+350°C for TSE-D, ETM-D

Model	EMC003B-1, EMC003B-2	EMC004B-1, EMC004B-2
Compatible with model	TSE-C, ETM-C, TSE-D, ETM-D	TSE-C, ETM-C, TSE-D, ETM-D
Temperature range	-70~+350°C	-40~+350°C
Wind circulation method	Centrifugal blower	
Temperature fluctuation	⩽±1°C	
Temperature accuracy	⩽±2°C (⩽200°C), ⩽±3.5°C (>200°C)	
Temperature uniformity	⩽2°C (⩽200°C), ⩽3.5°C (>200°C)	
Temperature reading accuracy	⩽±0.1°C	
Heating time	⩾3°C/min	
Cooling time	⩾2°C/min	
Cooling method	Compressor	
Inside dimension (DxWxH)	240×200×600mm	240×200×600mm
	320×300×600mm	320×300×600mm
Outside dimension (LxWxH)	1820×650×930mm	1820×650×930mm
	1900×710×930mm	1900×710×930mm
Weight	320kg, 350kg	310kg, 330kg
Heating power consumption	4.7kW, 5.3kW	4.3Kw, 4.9kW
Power supply	3-phase, AC380V±10%, 50Hz	
Pull rod hole diameter	Φ48mm	Φ48mm

Servo-hydraulic universal testing machine

Metal

HUT-A Series, dual test space, wedge action grip

●Application: commonly used for sheet metal, rebar, fasteners, etc.

●Standards: ISO6892, BS8810, BS4482, BS4483, BS4449, ASTM E4, ASTM A1034, ASTM A370.....

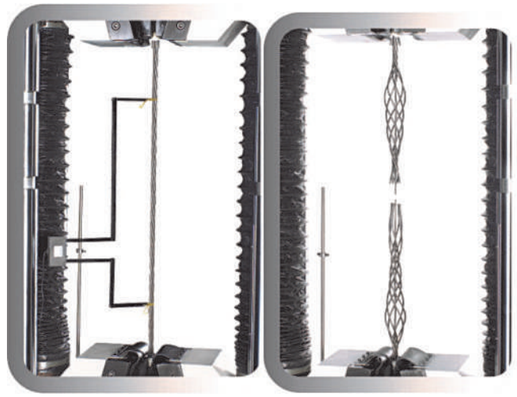
●Features: upper tensile and lower compression, cylinder is lower seated, hydraulic wedge grip

Model	HUT305	HUT605	HUT106	HUT206
Type	A			
Capacity (kN)	300	600	1000	2000
Calibration accuracy	Class 0.5			
Force accuracy	Better than ±0.5%			
Force range	1% ~ 100%FS			
Resolution	1/500000FS			
Position resolution	0.004mm			
Position accuracy	Better than ±0.5% of reading			
Actuator (piston) stroke (mm)	150	250	250	250
Actuator (piston) speed (mm/min)	0 ~ 180	0 ~ 140	0 ~ 90	0 ~ 70
Middle crosshead speed (mm/min)	0 ~ 350	0 ~ 270	0 ~ 310	0 ~ 360
Force loading speed	0.02% ~ 2% FS /s			
Column number	4	6	6	6
Column spacing(mm)	410	435	450	730
Maximum tension space (mm)	520	710	750	900
Maximum compression space (mm)	520	700	660	750
Diameter of round specimens (mm)	Φ10 ~ Φ32	Φ10 ~ Φ40	Φ12 ~ Φ55	Φ15 ~ Φ70
Thickness of flat specimens (mm)	2 ~ 25	2 ~ 30	2 ~ 40	10 ~ 70
Compression platens (mm)	Φ120	Φ150	200x200	Φ240
Frame dimension (WxDxH,mm)	820x570x1955	940x650x2400	1020x670x2600	1370×820×3150
Hydraulic Power Unit (WxDxH,mm)	1150×600×900			
Hydraulic Power Unit weight (kg)	300			
HPU flow rate (L/min)	5	5	5	7.2
Power consumption (kW)	2.5	3.5	4	6
Power supply	3-phase, 5-line, AC380V, 50Hz			
Frame weight (kg)	1500	2500	3500	6800

Servo-hydraulic universal testing machine

HUT-C Series for stranded steel wire tensile test

HUT-C series is designed with extra-long jaw face for tensile test of stranded steel wire



●Application: commonly used for sheet metal, rebar, fasteners, etc.

●Standards: ISO6892, ISO15630, BS8810 ,BS4482, BS4483, BS4449, ASTM E4, ASTM A1034, ASTM A370, ASTM A416,.....

Model	HUT605	HUT106	HUT206
Type	C		
Capacity (kN)	600	1000	2000
Calibration accuracy	Class 0.5		
Force accuracy	Better than ±0.5%		
Force range	1% ~ 100%FS		
Actuator (piston) speed (mm/min)	0 ~ 90		0 ~ 70
Middle crosshead speed (mm/min)	310		360
Force loading speed	0.02% ~ 2% FS /s		
Column number	6		
Column spacing (mm)	450		730
Maximum tension space (mm)	1000		1500
Maximum compression space (mm)	900		1350
Diameter of stranded steel wire (mm)	Φ 9.5 ~ Φ 12.7, Φ 12.7 ~ Φ 15.2, Φ 15.2 ~ Φ 18		
Diameter of round specimens (mm)	Φ10 ~ Φ45mm		Φ15~Φ70mm
Thickness of flat specimens (mm)	2 ~ 40		10 ~ 70mm
Compression platens (mm)	200×200		Φ240
Actuator (piston) stroke (mm)	250		250
Hydraulic Power Unit (WxDxH, mm)	1150×600×900		1150×600×900
Hydraulic Power Unit weight (kg)	340		400
Oil tank volume (L)	80		80
Flow rate (L/min)	5		7.2
Frame dimension (LxWxH) (mm)	1020×670×3050		2130×820×3150
Machine weight (kg)	4200		7500
Power Supply	3-phase, 5-line, AC380V, 50Hz		
Power consumption (kW)	4		6

HUT-D Series Wedge action grip

●Application: commonly used for sheet metal, rebar, fasteners, coupler, etc.

●Standards: ISO6892, ISO 15630, ISO 15835 BS8810 ,BS4482, BS4483, BS4449, ASTM E4, ASTM A1034, ASTM A370

●Features: single test space, cylinder is upper seated, hydraulic wedge-action grip.

Model	HUT605	HUT106	HUT206
Type		D	
Capacity (kN)	600	1000	2000
Calibration accuracy		Class 0.5	
Force accuracy		Better than ±0.5%	
Force range		1% ~ 100%FS	
Extension range		1% ~ 100%FS	
Extension accuracy		Better than ±0.5%	
Extension resolution		1/500000 of max extension	
Actuator (piston) up speed(mm/min)	280	240	195
Actuator (piston) down speed(mm/min)	660	375	310
Force loading speed		0.02%-2% FS /s	
Column number	4	4	4
Column spacing (test space width)(mm)	550×370	650×400	770×470
Maximum tension space (mm)	600	700	800
Maximum compression space (mm)	400	485	520
Diameter of round specimens (mm)	Φ10 ~ Φ40	Φ 12~ Φ 55	Φ15 ~ Φ70
Thickness of flat specimens (mm)	2 ~ 30	2~40	10 ~ 70
Compression platens (mm)	Φ150	200x200	Φ240
Actuator (piston) stroke (mm)	580	680	780
Frame dimension (LxWxH) (mm)	800x650x2950	940x720x3350	1180x880x3960
Hydraulic Power Unit dimension(LxWxH) (mm)	625×880×1000	900x1080x1150	860x1250x1290
Oil tank capacity (Liter)	90	210	380
Anti-wear hydraulic oil		46#	
Power requirement		3-phase, 5-line, AC380V, 50Hz	
Power consumption (kW)	4.5	8	11.5
Frame weight (kg)	2500+400	4200+550	9000+850

SHT5000P Series Single test space Side action grip

●Application: commonly used for sheet metal, rebar, fasteners, coupler, etc.

●Standards: ISO6892, ISO 15630, ISO 15835 BS8810, BS4482, BS4483, BS4449, ASTM E4, ASTM A1034, ASTM A370, AC133.....

●Features: single test space, cylinder is upper seated, hydraulic side-action grip to enable cyclic tension-compression test for coupler tests

Model	SHT5605P	SHT5106P	SHT5206P
Capacity (kN)	600	1000	2000
Calibration accuracy		Class 0.5	
Force accuracy		Better than ±0.5%	
Force range		1% ~ 100%FS	
Displacement accuracy		Better than ±0.5%	
Extension range		1% ~ 100%FS	
Extension accuracy		Better than ±0.5%	
Extension resolution		1/500000 of max. extension	
Position resolution (mm)		0.013	
Position accuracy		Better than ± 0.5% or 0.13mm, whichever is greater	
Actuator (piston) up speed (mm/min)	320	350	280
Actuator (piston) down speed (mm/min)	600	550	600
Force loading speed		0.02%-2% FS /s	
Column number	4	4	4
Distance between columns (mm)	505×345	660×400	800×450
Maximum tension space (mm)	600	700	815
Diameter of round specimens (mm)	Φ10- Φ20 Φ20- Φ45	Φ15- Φ30 Φ30- Φ60	Φ5- Φ15 Φ15- Φ40 Φ40- Φ100
Thickness of flat specimens (mm)	2-45	2-60	2-80
Compression platen	140x140	200×200	Φ240
Actuator (piston) stroke (mm)	580	680	800
Frame dimension (LxWxH) (mm)	850×550×2900	960×700×3540	1340×800×4180
Frame weight (kg)	4000	7500	8600
Hydraulic Power Unit dimension (LxWxH) (mm)		1520x660x1250	
Hydraulic Power Unit weight (kg)	600	600	800
Oil tank capacity (Liter)	450	500	500
Flow rate (L/min)	15	18	30
Anti-wear hydraulic oil	46#, L-HM46 or DTE-25	Brand: Mobile, Shell, Great wall, KUNLUN	
Power consumption (kW)	15.5	15.5	19.5
Power supply		3-phase, 5-line, AC380V, 50Hz	

Pendulum Impact Testing Machine

Metal

TSP452D1 Series

Applications:

- Impact on metals, Charpy test only
- Optional manual/automatic cooling system down to -180°C
- Optional instrumentation impact testing system

Standards:

ISO 148, ISO 14556, EN10045, ASTM E23,JIS Z 2242, GOST 9454, GB/T 229, GB/T 12778

Pendulum capacity:

150J,300J,450J

Advantages:

- Pneumatic brake enables pendulum stop at power off or emergency, greatly improving safety;
- Pneumatic action to lock pendulum when raised to top, greatly improving efficiency and safety;
- Full-enclosed aluminum protection cover features split type, easy to remove for maintenance. Glass window is convenient to watch test and metal mesh in the lower part ensures highest safety to prevent broken specimen to split;
- Pneumatic centering device enables fast aligning of specimen, greatly improving working efficiency, especially useful for low temperature test when feeding specimen to lower heat loss;
- Safety pin to lock pendulum during maintenance, extremely improving safety during maintenance;
- Optional computer with software control is available to realize semiautomatic operation. Operator only need charge specimens. Others can be controlled by software;
- Optional specimen feeding system is available. Combined with computer and software, fully automatic operation can be realized;
- Optional cooling system is available to satisfy cold specimen test down to -180°C .

Model	TSP452D1
Maximum energy	450J
Optional pendulum	150J, 300J
Angle of striking	150°±1°
Angle measurement resolution	0.025°
Distance from the axis of support to the center of percussion	750mm
Velocity of striking	5.24m/s
Specimen dimension	55 X 10 X 10mm 55 X 10 X 7.5mm 55 X 10 X 5mm
Weight	1400kg
Dimension(A x B x C) Including protection shield	2150 X 2150 X 860
Power requirements	3-phase, 5-line, AC 380V±10% 50Hz, 1 kW

Pendulum Impact Testing Machine

PIT-G Series

Applications:

- Impact on metals, Charpy and lzod
- Various angle impact test
- Various energy impact test
- Changing counter weight facilitates changing pendulum capacity between 300J and 450J
- Automatic brake at emergency button pressed
- Optional manual/automatic cooling system down to -180°C(only for Charpy)
- Optional instrumented impact testing system

Standards:

ASTM E23, ASTM E1820, ASTM E2298, AS 1544, IS0 148, EN10045, IS0 14556, JIS Z2242, GOST 9454

Model		PIT452G
Maximum impact energy		450J (300J, 150J)
Angle resolution		0.025°
Distance from the axis of support to the center of percussion		750mm
Velocity of striking		1.40~5.24m/s
Angle of striking		30°~150°, adjustable
Pendulum moment	150J	80.8348N·m
	300J	160.7695N·m
	450J	241.15 N·m
Charpy anvil	Span	40mm
	Radius of curvature of supports	1mm
	Angle of taper of supports	11°±1°
Charpy striking knife	Radius of striking edge	2mm(R2) or 8mm(R8)
	Angle of striking tip	30°
	Thickness of striker	16mm
Izod Striking knife	Radius of striking edge	0.8±0.2
	Angle of striking tip	75±1°
Dimension (with protection shield) AxBxC		1960mm×680mm×2000mm
Weight		800kg
Power supply		1-phase, 220±10%VAC, 50Hz
Power consumption		800W

TSP752D2 Series

Applications:

●Impact on metals,Charpy test only
●Various angle impact test
●Various energy impact test
●Changing counter weight facilitates changing pendulum capacity between 300J,450J,600J and 750J
●Automatic brake at power off
●Optional manual/automatic cooling system down to -180°C
●Optional instrumented impact testing system

Standards:

ASTM E23, ASTM E1820, ASTM E2298, AS 1544, IS0 148, EN10045,IS0 14556, JS Z 2242, GOST 9454

Advantages:

●Electromagnetic brake enables pendulum stop at power off or emergency, greatly improving safety;
●Variable-angle impact from 30° to 150°;
●Full-enclosed aluminum protection cover features split type, easy to remove for maintenance;
●Pneumatic centering device enables fast aligning of specimen;
●Safety pin to lock pendulum during maintenance, extremely improving safety during maintenance;
●Optional specimen feeding system;
●Optional cooling system is available to satisfy cold specimen test down to -180°C.

Model	TSP752D2
Maximum energy	750J
Optional pendulum	300J, 450J, 600J, 750J
Angle of striking	30°~150° ±1° adjustable
Angle measurement resolution	0.025°
Distance from the axis of support to the center of percussion	750mm
Velocity of striking	5.24m/s
Specimen dimension	55 X 10 X 10mm 55 X 10 X 7.5mm 55 X 10 X 5mm
Weight	1400kg
Dimension(A x B x C) Including protection shield	2150 X 2150 X 860
Power requirements	3-phase, 5-line, AC 380V±10% 50Hz,1 kW

PIT-E Series

Applications:

DWTT tear test on ferritic steels or on line pipe

Pendulum capacity:

DWTT test:40000J, 50000J, 60000J, 100000J

Standards:

ASTM E436, API RP*5L3, GB/T 8363

1.Heavy duty seat and frame ensures stiffness and accuracy, reducing shock after impact.
2.High strength pendulum body ensures stiffness in axial and transverse direction.
3.Automatic control: specimen feeding, impacting, pendulum raising and specimen collecting can be fully automatically operated.
4.Automatic specimen feeding and positioning device provides rapid feeding, precise positioning, high efficiency and safety, and reducing labor intensity.
5.Specimen collecting device brings the tested specimen out of the machine. It allows operator to collect specimen without going inside, greatly improving efficiency and working safety.

Model	PIT404E	PIT105E
Maximum impact energy	20000J,30000J,40000J	100000J
Angle of striking	81.6°,106.3°,135°	135°~63°
Distance from the axis of support to the center of percussion	2000mm	2400mm
Velocity of striking	5.788m/s,7.088m/s,8.183m/s	5.07～8.96m/s
Support span	254±0.8mm	
Radius of curvature of supports	14.3±0.5mm	
Angle of taper of supports	11°	
Radius of striking edge	25.4±0.4mm	
Thickness of striking tip	50.8±0.8mm	
Specimen dimension	305 x 76.2 x (3~40) mm	
Weight	40000kg	
Power requirements	3-phase, 5-line, AC 380V±10% 50Hz	

Pendulum Impact Testing Machine

Metal

PIT-E Series

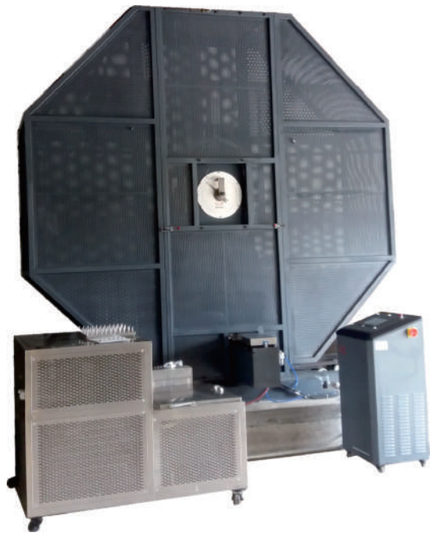
Applications:

Dynamic tear test on metals

Pendulum capacity:
DT test: 5000J, 7500J

Standards:

ASTM E604, GB/T 5482



Model	PIT503E	PIT753E
Maximum impact energy	5000J	7500J
Angle of striking	135°	135°
Angle resolution	0.1°	0.1°
Distance from the axis of support to the center of percussion	1380mm	1500mm
Velocity of striking	6.797m/s	7.087m/s
Support span	165±0.8mm	165±0.8,406±1.5,500±1.5, 600±1.5mm(adjustable)
Radius of curvature of supports	12.7±0.8mm	12.7±0.8mm,35±0.5mm
Angle of taper of supports	11°±1°	11°±1°
Radius of striking edge	12.7±0.8mm	12.7±0.8mm,38±0.5mm
Angle of striking tip	30°±1°	30°±1°
Thickness of striking tip	37mm	37mm
Specimen dimension	(180±2) x (40±1) x (5~16) mm	Standard specimen:180x40x5~16mm Non-standard specimen:460x120x25, 550x160x32, 650x200x40mm
Weight	6500kg	10000kg

Notch Making Machine

NSM201B notch making machine for metal

Model: NSM201B

Applications: Notch broacher for Charpy test specimen

Standards: ASTM E23,ISO148 EN10045,JIS Z 2242,GOST 9454

Notch type: V2, U2, U3, U5

Specimen hardness: ⩽HRC30

NSM401C DWTT notch making machine

Model: NSM401C

Applications: Notch press machine for DWTT test specimen

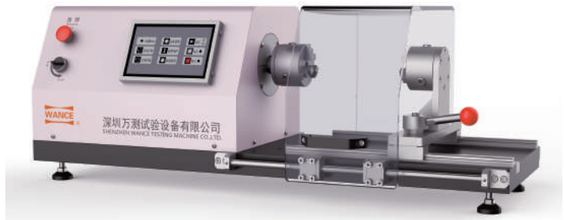
Standards: ASTM E436, API RP*5L3, GB/T 8363

Notch type: V type, depth 5mm, angle 45° ±2°, r = 0.025mm

Torsion Testing Machine

TST Series

Application:
This series torsion testing machine is mainly used for performing torsion test on metal materials complying with international standards.



Model	TST501	TST202	TST502	TST103	TST203	TST303	TST503
Torque range (Nm)	1-50	2-200	5-500	10-1000	20-2000	30-3000	50-5000
Torque reading accuracy	±0.5% of reading						
Torque resolution (Nm)	1/500000FS						
Torsion angle range (°)	0-10000						
Torsion angle accuracy	±0.5% of reading						
Troptometer angle resolution	0.001°						
Troptometer angle accuracy	±1.0% of reading						
Torsion speed (°/min)	0.01-10800	0.01-5400	0.01-1800		0.01-1080	6-720	
Torsion speed accuracy	±1.0% of setting						
Grip distance (mm)	300						
Gripping end diameter	Φ3- Φ8	Φ8- Φ18	Φ10- Φ20		Φ8- Φ20	Φ10- Φ28	
Motor consumption (kW)	0.4	0.85	0.85		1.3	2	2
Rated power supply	Single phase, 220VAC, 50Hz						
Machine size (mm)	1000X340X300	1000X400X450	1600X422X1200		1700X550X1200	1800X500X1350	1850X660X1200
Weight (kg)	60	100	500		700	750	750

Metal

Drop Weight Impact Testing Machine

DIT-B Series

Application:
This type of machine is specially for conducting drop-weight test to determine nil-ductility transition (NDT) temperature of ferritic steels

Standards:
ASTM E208,GB/T6803

Features:
- SIMENS PLC controls and touch screen provide high reliability and versatility.
- Automatic specimen feeding and automatic positing
- Frame structure is made of solid steel plate with high stability under impact
- Striker is made of high strength steel plate with high impact resistance
- Use chain to lift striker with high precision in height
- Self-lock design for striker clamping
- Full-closed guard

Model	DIT203B	DIT303B	DIT603B
Maximum energy (J)	2000	3000	6000
Minimum energy(J)	300	350	750
Striker mass (kg)	35		
Additional weight mass (kg)	10kgx3 5kgx1	10kgx6 5kgx1	10kgx16 5kgx1
Maximum striker weight with additional mass (kg)	70	100	200
Tup mass accuracy	±1%		
Drop height(mm)	750~3062		
Velocity of drop (m/s)	3.8~7.8		
Speed of tup raise (m/min)	3		
Height accuracy(mm)	⩽±10		
Hardness of tup nose	HRC58~62		
Radius of tup nose(mm)	R25±0.1		
Hardness of support anvil	HRC58~62		
Distance between striker center and support center (mm)	⩽±2.5		
Support anvil span (mm)	P-1: 305 P-2,P-3: 100		
Specimen dimension (mm) (length x width x thickness)	P-1: (360±1)×(90±2)×(25±2.5) P-2: (130±1)×(50±1)×(20±1) P-3: (130±1)×(50±1)×(16±0.5)		
Machine dimension (LxWxH) (mm)	1080×1700×4660		
Weight (kg)	1500		
Power requirements	3-phase 5-line, AC380V, 10A, 50Hz		
Air supply	0.4~0.7MPa, Φ8 quick coupler for air pipe		

DIT-C Series

Drop Weight Impact Testing Machine

Application: This type of machine is especially designed for drop-weight tear tests (DWTT) of ferritic steels and line pipe.

Capacity:30000J, 50000J, 80000J, 100000J

Standards:ASTM E436, APIRP*5L3, GB/T 8363

Use chain to lift striker with smaller elasticity and higher accuracy than wire rope. Chain has higher strength, higher abrasion resistance and safer than wire rope. The lifting motor is located at the bottom of the frame, easy to mount and maintain

It is specially design and will automatically lock after clamping the striker. This device won't open caused by gravity even when the power is off .It is equipped with approach switch to detect the position. If striker is not clamped, crosshead won't move

Framework is constructed with six columns connecting seat and top plate. The seat is made of machined solid steel plate to improve stability during impact test

PLC features high stability and reliability and strong anti-interference ability, avoiding any fault operation and improving safety of operators. Meanwhile this control system has alarm functions for such errors: specimen is not in the right position, striker is not locked and guard screen is wrong, striker is not lifted to the correct position

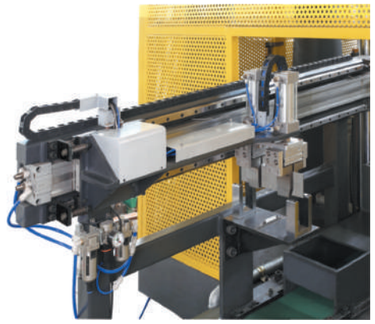
Tup is made of alloy steel with good impact resistance, little abrasion, long service life, and simple to change. The weights are separate, easy to change. Connection between weights is alignment pin with reliability

The framework of specimen feeding system is one body machined without welding , and with high strength

Metal

DIT-C Series

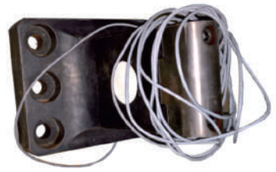
Drop Weight Impact Testing Machine



Semi-auto specimen feeding system

Full-auto specimen feeding system

Software



Instrumented striker

Model	DIT304	DIT504	DIT804	DIT105
Type	C			
Maximum energy (J)	30000	50000	80000	100000
Minimum energy(J)	8000	20000	20000	20000
Tup mass (kg)	630	1600	1620	1620
Tup mass accuracy	±1%			
Weight mass (kg)	390(13x30)	360(12x30)	780(26x30)	870(29x30)
Weight mass accuracy	±0.5%			
Total weight of tup	1020	1960	2400	2490
Drop height(mm)	1275~3000	1275~2600	1275~3400	1275~4130
Velocity of drop (m/s)	5~7.67	5~7.13	5~8.16	5~9
Striker lifting speed (m/min)	4			
Height accuracy(mm)	⩽±10			
Hardness of tup nose	HRC58~62			
Radius of tup nose(mm)	R25±0.1			
Hardness of support anvil	HRC58~62			
Alignment accuracy of center of tup nose, specimen and anvil center (mm)	⩽±1.5			
Support anvil span (mm)	254±1.5 (ASTM E436 & API RP*5L3) 250±2 (GOST 30456-97)			
Specimen dimension (mm) Length x width x thickness(mm)	(305±19) X (76.2±3) X (3~50) (ASTM E436 & API RP*5L3) (300±5) X (75±2) X (3~50) (GOST 30456-97)			
Weight (kg)	10000	15000	19000	20000
Power supply	3-phase, 5-line, AC 380V, 50Hz			
Power requirements	20A, 5kW			

Bending Testing Machine

HBT-D Series

Application:

This type of testing machine is designed to perform bending and re-bending test on metallic materials, like rod steel, plate steel and rebar, Bidirectional hydraulic loading ,easy to bend specimen to 180 degree.

Standards:

GB/T 232, GB/T 244, GB/T 3091, GB/T 8162, GB/T 13793, GB/T 28897
ISO 7438, ISO 8491, ISO 559, ISO 6935, BS 4449, BS 4482, BS EN 10080, DIN488-2, SS 212540, ASTM A775, ASTM A706

Model	HBT305D
Max pushing force(kN)	300
Vertical cylinder max travel(mm)	500
Vertical cylinder speed without specimen (mm/s)	0.5-4
Support roller diameter (mm)	45
Distance between supports (mm)	10~630mm
Mandrel diameter (mm)	Made according to test standards
Round specimen (mm)	Φ6~Φ50
Flat specimen thickness x width (mm)	(6~40)x50
Max. bending angle (°)	180
Power supply	3-phase, 380V, 50Hz
Power consumption(kW)	5.5
Main dimension(mm)	1470x735x2390
Weight (kg)	1700
Hydraulic power unit dimension (mm)	500×880×990
Hydraulic power unit weight (kg)	250
Hydraulic oil	46# anti-wearing hydraulic oil, 90 L

Metal

Bending Testing Machine

HBT-A Series

Application:

This series of bending testing machine is designed with 3-cylinder structure, allowing fast and freely adjusting the span and fulfilling 180 degree bend test, it is widely used for bending test of metallic material. It provides with constant loading rate and constant displacement rate control , able to switch from one to the other. This equipment is widely used in steel industries, quality lab, research institutes, universities, etc.

Standards:

GB/T 14452-93, GB/T 232-1999, ISO 7438, ISO 5173, GOST 6996, ASTM A370

Model	HBT505A	HBT106A	HBT206A	HBT306A
Max vertical force(kN)	500	1000	2000	3000
Maximum horizontal force(kN)	300	400	1000	2000
Accuracy	Class 1			
Frame structure	One-body cast steel			
Force resolution	1/500000			
Accuracy in synchronism	<2%			
Displacement resolution(mm)	0.01mm			
Displacement accuracy	±1% of reading			
Force loading speed	200N/s~20kN/s		400N/s~40kN/s	600N/s~60kN/s
Vertical piston speed (mm/min)	300	200	240	200
Vertical piston travel(mm)	200	345	350	500
Horizontal speed (mm/min)	300	480	480	250
Horizontal piston travel(mm)	75	180	175	205
Support roller diameter (mm)	Φ30 x 130	Φ50 x 200	Φ80 x 210	Φ100 x 240
Mandrel diameter (mm)	Φ5~ Φ36	Φ16~ Φ140	Φ16~ Φ140	Φ50~ Φ100
Maximum span (mm)	130	350	350	400
Machine dimension (mm) (Length x width x height)	1130×550×2200	1580×550×2200	1650×800×2500	2470×900×2800
Machine weight(kg)	1000	3000	5000	9000
Power supply	3-phase, 380V, 50Hz			
Power consumption(kW)	4	9	9	17
HPU dimension (mm) (Length x width x height)	Built-in machine	1150×600×1100	1150×600×1100	1350×680×1100
HPU weight (kg)		500	700	700
Hydraulic oil(L)	46#, 90L	46#, 100L	46#, 100L	46#, 100L

Creep testing machine

TSC-A Series
Dead weight type

●Functions: This dead weight type is designed as low cost solutions for long-term creep and stress-rupture testing applications of metallic and alloy materials under high temperature in accordance with ASTM, BS, EN, ISO and other similar international testing standards.

●Features: Horizontal layout allows all operations will be at one side, move convenient. Ball screw driven system provides high precision and stability, free of maintenance.

●Standards: GB/T 2039, HB 5151, HB 5150, ISO 204, ASTM E139

Model	TSC304A	TSC504A	TSC804A	TSC105A
Maximum force (kN)	30	50	80	100
Minimum force (N)	600	1000	1600	2000
Force accuracy	±0.5% of reading			
Lower pull rod speed (mm/min)	0.01~90			
Lower pull rod travel (mm)	0~200			
Automatic level adjustment range(mm)	0.1			
Lever arm ratio	1:50			
Axiality	⩽10%			
Test width (W,mm)	600			
Grip distance (H,mm)	1050		1000	
Grip distance (H,mm) With closed type furnace and auto lifting	1270		1250	
Timing accuracy	±0.1%			
Power supply	3-phase, 380V±10%, 50Hz, 7kW			
Length x width x height (AxBxC, mm)	970×540×2620		1100×680×2800	
With closed type furnace and auto lifting Weight (with dead weights)(kg)	1000		1400	

Creep testing machine

TSC-B Series
Motorized type

●Functions: This type of machine is designed for long-term creep and stress-rupture testing applications of metallic and alloy materials under high temperature in accordance with ASTM, BS, EN, ISO and other similar international testing.

●Features: This series creep testing machine applies advanced servo motor and ball screw actuator which ensures loading conveniently and simply. The drive system comprises a printed circuit motor with toothed belt and gearbox to the recirculating ball screw actuator.
Motorized draw-head assembly automatically compensates for specimen elongation and keeps loading bar with excellent load accuracy of +/- 0.5% guaranteed.

●Standards: GB/T 2039, HB 5151, HB 5150, ISO 204, ASTM E139

Model	TSC304B	TSC504B	TSC804B	TSC105B
Max force (kN)	30	50	80	100
Min force (N)	300	500	800	1000
Force accuracy	±0.5% of reading			
Lower pull rod speed(mm/min)	0.01 ~ 110			
Lower pull rod travel(mm)	0 ~ 200			
Axiality	⩽10%			
Test width (W,mm)	600			
Grip distance (H,mm)	1100 (with split type furnace) 1250 (with closed type furnace with auto lifting)			
Power requirements	3-phase, 380V±10% AC, 50Hz, 7kW			
Dimension (AxBxC,mm)	710x520x2400 (with split type furnace) 710x520x2550 (with closed type furnace with auto lifting)			
Weight (kg)	600			

Servo-hydraulic Compression Testing Machine

Building

HCT-A Series (Servo valve)

●Functions: this series of compression testing machine is widely used for compression strength determination of cement, concrete and rock .Equipped with fixtures and measurement devices, it can be used for concrete splitting tensile test and flexure test.

●Features:

1. Compression space is adjusted by spacing block

2.Ergonomically designed load frames ensure safety, reduce operator fatigue, and provide the highest level of flexibility

3."Quick Return" hydraulic valve for higher throughput

4.Automatic limit checking, over-load, over-temperature and over-voltage protection .

5.Imported encoder mounted on the seat is for position measurement of piston with high accuracy

6.Imported servo valve provides high stability and reliability

Model	HCT605	HCT106	HCT206	HCT306
Type	A			
Capacity (kN)	600	1000	2000	3000
Calibration accuracy	Class 0.5			
Force accuracy	±0.5%			
Force range	1% ~ 100%FS			
Force resolution	1/500000FS			
Frame structure	One-body casting			
Column spacing (mm)	460	460	460	540
Maximum compression space (mm)	310	310	310	310
Platen adjustment	Spacing block			
Compression platens (mm)	Φ300	Φ300	Φ300	Φ300
Actuator (piston) stroke (mm)	70			
Actuator (piston) maximum up speed (mm/min)	100	100	90	55
Force loading speed (kN/s)	0.02%~2%FS/s			
Frame dimension (LxWxH) (mm)	620×410×1540			700×530×1665
Power supply	3-phase 380VAC±10%, 50Hz			
Power consumption (kW)	4		5	
Hydraulic Power Unit dimension (LxWxH) (mm)	1150×600×920			
0il tank volume (L)	80	80	80	80
Total weight (kg)	2000	2000	2000	2500

Servo-hydraulic Compression Testing Machine

HCT-E Series (Servo motor)

●Functions: this series of compression testing machine is widely used for compression strength determination of cement, concrete and rock.Equipped with optional fixtures and measurement devices. It can be used for concrete splitting tensile test and flexure test.

●Features:

1. Compression space is adjusted by spacing block

2.Ergonomically designed load frames ensure safety, reduce operator fatigue, and provide the highest level of flexibility

3."Quick Return" hydraulic valve for higher throughput

4.Automatic limit checking, over-load, over-temperature and over-voltage protection .

5.Imported encoder mounted on the seat is for position measurement of piston with high accuracy

6.Servo motor ensures high stability and reliabilty, with little maintenance

Model	HCT605	HCT106	HCT206	HCT306
Type	E			
Capacity (kN)	600	1000	2000	3000
Calibration accuracy	Class 1			
Force accuracy	±1%			
Force range	5% ~ 100%FS			
Force resolution	1/500000FS			
Column spacing (mm)	460	460	460	540
Maximum compression space (mm)	310	310	310	310
Platen adjustment	Spacing block			
Compression platens (mm)	Φ300			
Actuator (piston) stroke (mm)	70			
Maximum actuator up speed (mm/min)	90	90	105	65
Frame dimension (LxWxH) (mm)	620×410×1540			700×530×1665
Frame weight (kg)	2000	2000	2000	2500
Power supply	3-phase 380VAC±10%			
Power consumption (kW)	2		4	4
Hydraulic Power Unit dimension (LxWxH) (mm)	990×590×970			
0il tank volume (L)	60			

Electromechanical Compression Testing Machine

Building

ETM-F Series

● Functions: This type of machine is widely used for compression strength determination of cement, bricks and other building materials.

● Standards: EN196, ISO 679, ASTM C 109 and C 349

Model	ETM204F-1	ETM305F-2		ETM305F-3
Test	Flexure	Compression	Flexure	Compression
Maximum force	20kN	300kN	10kN	300kN
Accuracy	Class 0.5			
Force range	0.4%~100%FS			
Columns	2			
Distance between columns	330mm			
Force resolution	1/500000 of max force			
Force accuracy	±0.5% of reading			
Force rate range	0.02%-5% FS/s			
Distance between platens	N/A	230mm	N/A	230mm
Upper compression platen		Φ110mm		Φ110mm
Lower compression platen		Φ118mm		Φ118mm
Lower compression platen stroke		100mm		100mm
Lower compression platen max speed		50mm/min		50mm/min
Distance between bending nose and support roller	70/80mm	N/A	120mm	N/A
Support span	100/200mm		100mm	
Length of bending nose and support roller	48/130mm		48mm	
Diameter of bending nose and support roller	Φ10/ Φ30mm		Φ10mm	
Maximum travel	50mm		100mm	
Maximum speed	100mm/min		50mm/min	
Motor power consumption	0.4kW	1.5kW		
Power requirements	1phase, 220V/50HZ	1phase, 220V/50HZ		
Frame dimension	463x361x800mm	950×520×1720mm		
Weight	120kg	700kg		650kg

Other Testing Machine

Others

Tensile stress relaxation testing machine

Automatic gauge length marking machine

Wire rope horizontal tensile testing machine

Manhole cover testing machine

Pellet compression testing machine

Erichsen cupping testing machine

WANCE Testing Machine