INSTRON®

The difference is measurable®

INDUSTRIAL SERIES

600DX MODELS

Industrial Series DX Models are designed for high-capacity tension, compression, bend/flex, and shear testing. Featuring a dual test space and a single footprint, these frames are available in a 600 kN (135,000 lbf) capacity. Understanding the critical importance of operator safety, the Instron® DX Models are CE compliant and incorporate high-quality materials, components, and craftsmanship.

Features and Benefits

- Load frame, hydraulic power supply, and controller combined in a single package saves valuable lab floor space while providing a protective environment for hydraulic and electrical components
- Two test space design makes changing between tension and compression testing safer and more efficient – no need to remove heavy fixtures
- Open-front grip design improves operator safety and throughput, and allows a limited number of jaw faces to cover a large range of specimen sizes
- Convenient working height, large toe kick, and ergonomic controls increase operator productivity and comfort
- Ergonomic handset with a fine position adjustment wheel, two programmable softkeys, start, stop and return functions, and variable speed jog
- Powerful, yet user-friendly materials testing software provides repeatable and reproducible results for simple to sophisticated testing requirements
- Variable pressure hydraulic power supply provides pressure on demand, reducing heat generation, increasing oil life, and eliminating the need for water cooling
- Available capacity: 600 kN (135,000 lbf)

Testing Applications

- Metals - Bar, Plate, Pipe & Tube, Rebar, Structural
- Wire Rod
- Fasteners
- Concrete - Cubes, Cylinders, Beams
- Wood

Standards

DX Models conform to many international standards, including (but not limited to):

- ASTM A370, A615, C39, C109, E4, E8, E9, E83, E290, F606
- ISO 6892-1, 6892-2, 7438, 7500-1, 9513, 15630-1, 13849-1, 12100
- BS4449
- EN10002-1, 10002-2
- JIS Z2241, Z2248

Accessories

- In-Head Grip Jaws/Faces - flat, round
- Bend/Flex and Shear Fixtures
- Compression Platens - plane and self-aligning
- External Load Strings:
  - Button Head, Shoulder End Holders
  - Fastener Fixtures
  - Low-Capacity Load Cells
- Extensometers, Deflectometers
- Interlocked Safety Enclosures
- T-Slot Tables
- Furnaces

Common Specifications

Data Acquisition Rate by Software
Up to 1 kHz synchronous on load and strain

Load Measurement Accuracy
± 0.5% of reading down to 1/500 of load cell capacity

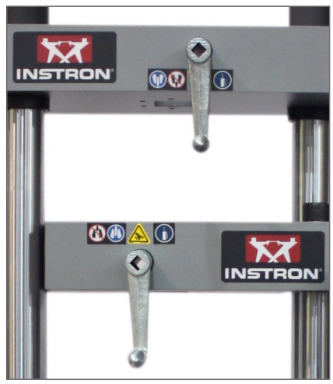
Strain Measurement Accuracy
Meets or surpasses the following standards: ASTM E8, ISO 9513, and EN 10002-4

High-Resolution Encoder
Resolution: 1.0 µm (0.00004 in)
Position accuracy of ±0.5% or 0.13 mm (0.005 in) displacement (whichever is greater)

Hydraulic Power Supply Voltage Options
200-250 VAC, 3PH, 50/60 HZ, 15 Amps
380-415 VAC, 3PH, 50/60 HZ, 10 Amps
440-480 VAC, 3PH, 50/60 HZ, 10 Amps

Specification Table

Crosshead Style	Open	G7
	Closed	G1
Load Capacity	kN	600
	kgf	60,000
	lbf	135,000
Maximum Test Speed	mm/min	80
	in/min	3.2
Actuator Stroke	mm	152
	in	6
Crosshead Adjusting Speed	mm/min	380
	in/min	15
Vertical Compression Opening*	mm	6 - 540
	in	0.025 - 21.25
Compression Table Size	mm	556 × 279
	in	21.9 × 11
Floor Space Requirements (W × D)	mm	974 × 1205
	in	38.3 × 47.4



G1 - Closed with Manual Crank and Pinion

G1 with Tension Rods and Split Insert Tensile Grips

G7 - Open Front with Hydraulic Actuation


G7 iwth Fastener Holder

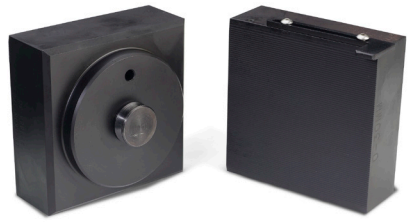
Specification Table

Model	Tension Opening (Adjustable)		Maximum Operating Height		Tension Specimen Lengths[1]		Net Weight	
	mm	in	mm	in	mm	in	kgs	lbs
G1E1	44 - 914	1.75 - 36	2505	99	350 - 1168	13.8 - 46	2270	5000
G1E2	44 - 1321	1.75 - 52	2910	115	350 - 1575	13.8 - 62	2310	5085
G7E1	0 - 965	0 - 38	2910	115	300 - 1168	11.8 - 46	2390	5265
G7E2	0 - 1372	0 - 54	3315	131	300 - 1575	11.8 - 62	2430	5350

Notes:
1. Minimum tension specimen length measured using 152 mm (6 in) clearance between adjustable and tension crosshead, piston fully retracted, and 80% specimen engagement in grip faces when grip faces are flush with crosshead. Maximum tension specimen length measured using maximum clearance between adjustable and tension crossheads, piston fully extended, and 100% specimen engagement in grip faces when grip faces are flush with crosshead.

G7 Style Jaw Faces for Flat Specimens

Model	Specimen Thickness Range		Maximum Specimen Width		Jaw Dimensions (W × L)		Tooth Profile (Per Inch)
	mm	in	mm	in	mm	in	Horizontal Cut
W-5197-A	0 - 30	0 - 1.18	100	4	100 × 100	4 × 4	20
W-5197-B	30 - 60	1.18 - 2.36	100	4	100 × 100	4 × 4	20



G7 Style Jaws for Flat Specimens

G7 Style Jaw Faces Round Specimens

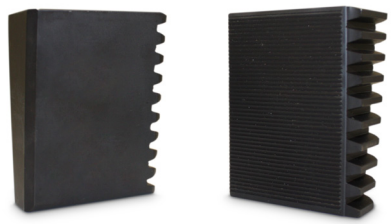
Model	Specimen Diameter Range		Jaw Length		Tooth Profile (Per Inch)
	mm	in	mm	in	Horizontal Cut
W-5198-A	3 - 10	0.12 - 0.39	10	4	20
W-5198-B	10 - 35	0.39 - 1.38	10	4	20
W-5198-C	35 - 57	1.38 - 2.25	10	4	20

Note: Minimum engagement is the minimum depth of specimen insertion in the jaw for clamping, defined as 80% of the jaw length

G7 Style Jaws for Round Specimens

G1 Style Jaw Faces for Flat Specimens

Model	Specimen Thickness Range		Maximum Specimen Width		Jaw Dimensions (W×L)		Tooth Profile (Per Inch)
	mm	in	mm	in	mm	in	Horizontal Cut
W-1408	0 - 45	0.175	70	2.75	70 × 125	2.75 × 5	8
W-1408-A*	0 - 45	0.175	70	2.75	70 × 125	2.75 × 5	8
W-1409	0 - 45	0.175	70	2.75	70 × 125	2.75 × 5	8
W-1409-A*	0 - 45	0.175	70	2.75	70 × 125	2.75 × 5	8



G1 Style Jaws for Flat Specimens

G1 Style Jaw Faces Round Specimens

Model	Specimen Diameter Range		Jaw Length		Tooth Profile (Per Inch)
	mm	in	mm	in	Horizontal Cut
W-1410	12.7-57	0.5-2.25	125	5	10
W-1410-A	7-25	0.25-1	125	5	16
W-1411	12.7-57	0.5-2.25	125	5	16

Note: Minimum engagement is the minimum depth of specimen insertion in the jaw for clamping, defined as 80% of the jaw length

G1 Style Jaws for Round Specimens

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