

INDUSTRIAL SERIES

KPX MODELS

Industrial Series KPX Models are designed for high-capacity tension, compression, bend/flex, and shear testing. Featuring an ultra-large test space and adjustable crosshead options, these frames deliver exceptional flexibility for a wide range of applications and are available in capacities ranging from 1500 kN (787,000 lbf) to 2,000 kN (450,000 lbf). Understanding the critical importance of operator safety, Instron's KPX Models incorporate high-quality materials, components, and craftsmanship.

FEATURES AND BENEFITS

- Adjustable crosshead options allow the ultra-large test space to be adapted to a wide range of test specimens, applications, and accessories
- Linear guidance system maintains precise alignment of the load string over the entire stroke of the actuator
- Co-axially mounted encoder accurately measures actuator travel at the center of the load string
- Convenient working height and ergonomic controls improve operator productivity and comfort
- Machine base design reduces operator fatigue by allowing the operator to get close to the load string centerline when installing specimens
- Long stroke, high-speed actuator accommodates both tension and compression testing applications
- Optional open-front hydraulic wedge-action and side-acting grips improve operator safety and throughput, and allow a limited number of jaw faces to cover a large range of specimen sizes
- 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 frame capacities:
 - 1500 kN (337,500 lbf)
 - 2000 kN (450,000 lbf)

TESTING APPLICATIONS

- Metals - Bar, Plate, Pipe & Tube, Rebar, Structural
- Wire - Rod, Strand
- Concrete
- Fasteners
- Wood
- Composites
- Components



STANDARDS

KPX 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
- BS 4449
- EN10002-1, 10002-2
- JIS Z2241, Z2248

ACCESSORIES

- Hydraulic Wedge Action and Side-Acting Grips
- Bend/Flex and Shear Fixtures
- Extensometers, Deflectometers
- Tee Slot Tables
- Fastener Fixtures
- Compression Platens - Plane and Self-Aligning

SPECIFICATIONS

Model	Load Capacity		Test Stroke		Maximum Test and Jog Speed		Horizontal Test Opening		Optional Tee Slot Table Dimensions	
	kN	lbf	mm	in	mm/min	in/min	mm	in	mm	in
1500 KPX	1,500	337,500	610	24	203	8	438	17.25	711 × 711	28 × 28
2000 KPX	2,000	450,000	610	24	203	8	940	37	711 × 711	28 × 28

CROSSHEAD STYLE

	1500 KPX	2000 KPX
Fixed Position Crosshead, No Grips	-	J4
Hydraulically Adjustable Crosshead	J3	J3
Manually Adjustable Crosshead	J1	-

ADDITIONAL SPECIFICATIONS

Model	Vertical Test Opening ¹		Maximum Machine Height		Machine Weight	
	mm	in	mm	in	kg	lbs
1500 KPX						
J3C	889 - 2,921	35 - 115	5,135	202	5,160	11,370
J3D	889 - 3,226	35 - 127	5,440	214	5,265	11,600
2000 KPX						
J3A	0 - 2,311	0 - 91	4,675	184	9,040	19,930
J3D	0 - 3,226	0 - 127	5,590	220	9,635	21,240

Notes:

1. Measured between bottom of load cell and top of machine base

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

Position Accuracy
≤ ±0.13 mm (0.005 in) or ± 0.1% of displayed reading, whichever is greater

Position Control Resolution Options
Coaxial High Resolution Encoder - 1 µm (0.00004 in)
Ultra-High Resolution Encoder - Consult Factory

Hydraulic Power Supply Voltage Options
208/230 VAC, 3 Ph, 50/60 Hz
380/400/415 VAC, 3 Ph, 50/50 Hz
460 VAC, 3 Ph, 50/60 Hz

Spare Parts Kits
W-1855-A 1500KPX Basic Kit
W-1855-B 1500KPX Recommended Kit
W-1855-C 1500KPX Comprehensive Kit
W-1856-A 2000KPX Basic Kit
W-1856-B 2000KPX Recommended Kit
W-1856-C 2000KPX Comprehensive Kit

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