

Industrial Series KPX Models are designed for high-capacity tension, compression, bend/flex, and shear testing. Featuring an ultra-large single test space and adjustable crosshead options, these frames deliver exceptional flexibility for a wide range of applications and are available in capacities ranging from 600 kN (135,000 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 stringover 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
- Productivity panel with multiple function keys and displays allows the operator to perform common testing functions and view key test information without returning to the computer
- 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:
 - 600 kN (135,000 lbf)
 - 1000 kN (225,000 lbf)
 - 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



		600KPX	1000KPX	1500KPX	2000KPX
Load Capacity	kN	600	1,000	1,500	2,000
	kgf	60,000	100,000	150,000	200,000
	lbf	135,000	225,000	337,500	450,000
Test Stroke	mm	508	610	610	610
	in	20	24	24	24
Maximum Test Speed	mm/min	203	203	203	203
	in/min	8	8	8	8
Maximum Jog Speed	mm/min	203	203	203	203
	in/min	8	8	8	8
Horizontal Test Opening	mm	762	762	876	876
	in	30	30	34.5	34.5
Machine Base Depth	mm	381	438	438	940
	in	15	17.25	17.25	37
Optional Tee Slot Table Dimensions	mm	641 × 641	711 × 711	711 × 711	711 × 711
	in	25 × 25	28 × 28	28 × 28	28 × 28

Crosshead Style	600KPX	1000KPX	1500KPX	2000KPX
Fixed Position Crosshead, No Grips	-	-	-	J4
Fixed Position Crosshead, With Grips	-	-	-	-
Hydraulically Adjustable Crosshead	J3	J3	J3	J3
Manually Adjustable Crosshead	J1	J1	J1	-

600KPX	J1D	J3B	J3D
Vertical Test Opening ¹	mm	0 - 2,540	254 - 1,930
	in	0 - 100	10 - 76
Maximum Machine Height	mm	4,405	3,795
	in	173	149
Machine Weight	kg	2,315	2,435
	lbs	5,100	5,365

1000KPX	J1C	J1D	J3C	J3D
Vertical Test Opening ¹	mm	0 - 2,921	0 - 3,226	889 - 2,921
	in	0 - 115	0 - 127	35 - 115
Maximum Machine Height	mm	4,995	5,300	4,995
	in	197	209	197
Machine Weight	kg	3,310	3,375	3,585
	lbs	7,290	7,430	7,900

1500KPX	J3C	J3D
Vertical Test Opening ¹	mm	889 - 2,921
	in	35 - 115
Maximum Machine Height	mm	5,135
	in	202
Machine Weight	kg	5,160
	lbs	11,370

2000KPX	J3A	J3D
Vertical Test Opening ¹	mm	0 - 2,311
	in	0 - 91
Maximum Machine Height	mm	4,675
	in	184
Machine Weight	kg	9,040
	lbs	19,930

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
≤ ±0.13mm (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-1853-A 1000KPX Basic Kit
W-1853-B 1000KPX Recommended Kit
W-1853-C 1000KPX Comprehensive Kit
W-1854-A 600KPX Basic Kit
W-1854-B 600KPX Recommended Kit
W-1854-C 600KPX Comprehensive Kit
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

Notes:

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

Load Cell Options

600KPX		
L1	kN	300
	kgf	30,000
	lbf	67,500
L2	kN	400
	kgf	40,000
	lbf	89,900
L3	kN	600
	kgf	60,000
	lbf	135,000