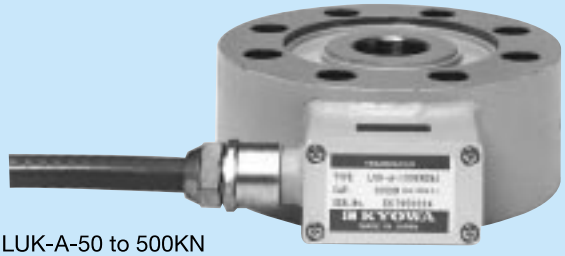
LUK-A

Tension/Compression Load Cells

●Thin ●5 kN to 2 MN

Tension/ Compression

LUK-A-5 to 20KN



LUK-A-50 to 500KN

• TEDS-installed versions can be manufactured. Inquiries are welcome.

The thin structure is suitable for installation where the height is limited. The service life can be extended by using with one-half the rated capacity if repetitive loads are applied continuously.

Specifications

Performance

Rated Capacity: See table below.

Nonlinearity:
Within ±0.1% RO (LUK-A-5KN to 200KN)
Within ±0.2% RO (LUK-A-500KN to 2MN)

Hysteresis:
Within ±0.1% RO (LUK-A-5KN to 200KN)
Within ±0.2% RO (LUK-A-500KN to 2MN)

Repeatability:
0.05% RO or less (LUK-A-5KN to 200KN)
0.1% RO or less (LUK-A-500KN to 2MN)

Rated Output: ±2 mV/V (±4000 μm/m) ±0.1% (±10% with 5KN to 20KN)

Environmental Chaacteristics

Safe Temperature Range: –35 to 80°C

Compensated Temperature Range: –10 to 70°C

Temperature Effect on Zero Balance: Within ±0.005% RO/°C

Temperature Effect on Output: Within ±0.005%/°C

Electrical Characteristics

Safe Excitation Voltage: 15 VAC or DC

Recommended Excitation Voltage: 1 to 10 VAC or DC

Input Resistance: 350 Ω ±1%

Output Resistance: 350 Ω ±1%

Cable: 4-conductor (0.3 mm^2) chloroprene shielded cable, 7.6 mm diameter by 5 m long, terminated with connector plug (Shield wire is not connected to mainframe.)

Mechanical Properties

Safe Overload Rating: 150%

Natural Frequency:

Model	Natural Frequency (Approx.)	Model	Natural Frequency (Approx.)
LUK-A-5KN	7.4 kHz	LUK-A-200KN	7.5 kHz
LUK-A-10KN	10.8 kHz	LUK-A-500KN	5.2 kHz
LUK-A-20KN	8.5 kHz	LUK-A-1MN	5 kHz
LUK-A-50KN	1 kHz	LUK-A-2MN	3.9 kHz
LUK-A-100KN	9 kHz		

Weight: See table below.

Safe Lateral Force Component: See table below.

Safe Moment: See table below.

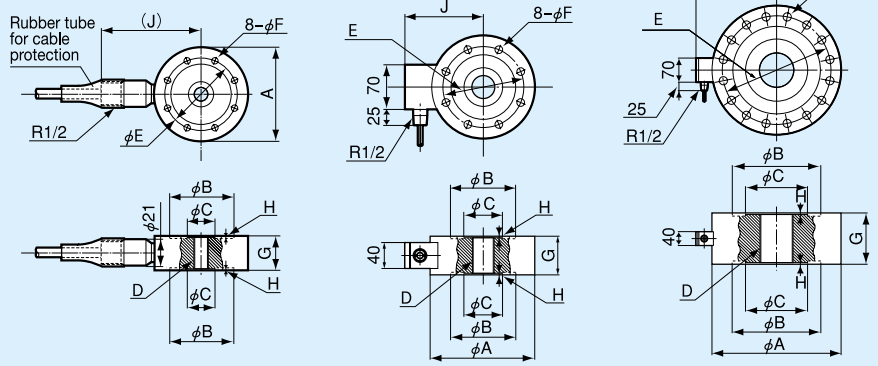
Features

• Thin • High accuracy • High stability
• Hermetically-sealed structure with inert gas filled in

To Ensure Safe Usage

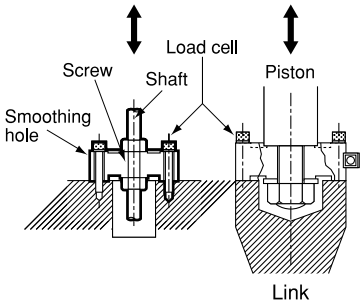
Be sure to prevent the shaft from turning when using for hanging load measurement.

Dimensions



LUK-5 to 20KN　LUK-A-50 to 500KN　LUK-A-1 to 2MN

Installation Example



Model	Rated Capacity	Safe Moment	Safe Lateral Force Component	φA	φB	φC	D	E	φF	G	H	J (Approx.)	Weight (Approx.)
LUK-A-5KN	±5 kN	15 N·m	250 N	77	52	20	M12 P=1.75	62	7	30	1	82	900 g
LUK-A-10KN	±10 kN	30 N·m	500 N										
LUK-A-20KN	±20 kN	60 N·m	1 kN	107	70	34	M18 P=1.5	85	9	40	1	97	2.7 kg
LUK-A-50KN	±50 kN	150 N·m	2.5 kN	127	77	40	M24 P=1.5	95	13	50	2	102	4.3 kg
LUK-A-100KN	±100 kN	500 N·m	5 kN	157	100	60	M36 P=2	125	17	60	2	119	7.5 kg
LUK-A-200KN	±200 kN	1 kN·m	10 kN	227	136	90	M50 P=2	180	22	70	2	157	20 kg
LUK-A-500KN	±500 kN	2.5 kN·m	25 kN	307	200	138	M76 P=3	256	26	105	3	198	50 kg
LUK-A-1MN	±1 MN	5 kN·m	50 kN	375	254	180	M100 P=3	314	26	150	3	233	90 kg
LUK-A-2MN	±2 MN	10 kN·m	100 kN	560	410	260	M150 P=4	485	36	200	3	326	245 kg