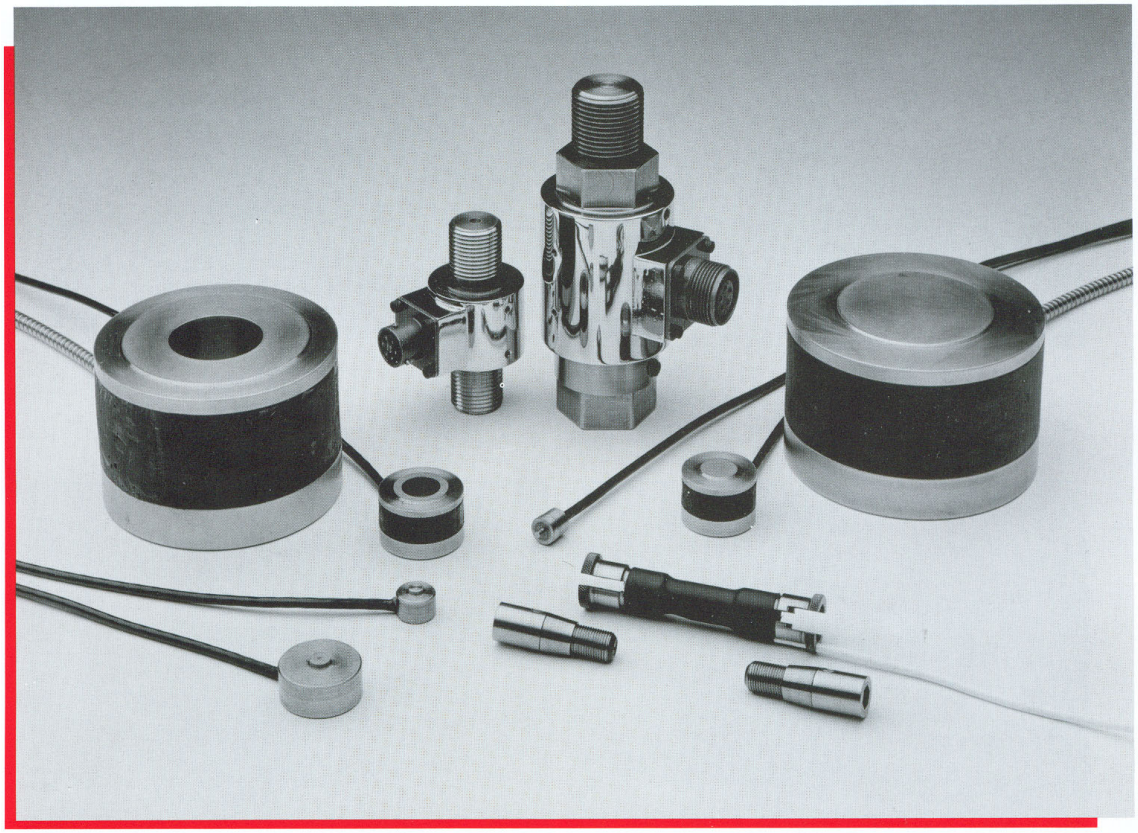
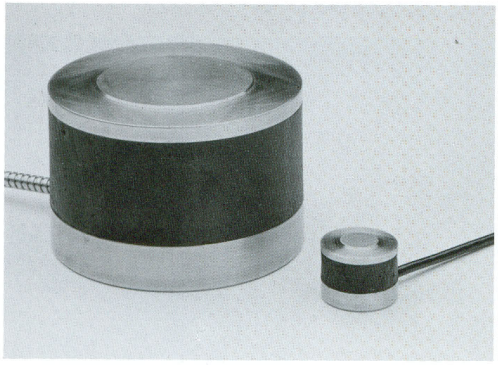
HELM



LOAD CELLS

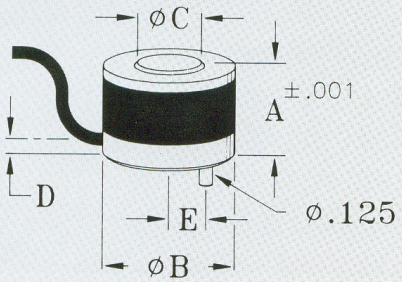
LOW PROFILE SOLID

Helm LPS Series load cells are built from high quality steel to accurately measure compression forces from .5 to 500 tons. The low profile design allows for easy mounting in confined areas. Special protective coatings protect the strain gage elements and an anti-rotation pin is supplied with each load cell to assure proper alignment.



Excitation Voltage:	5-15 Volts DC
Output Voltage:	2mv/volt nominal
Bridge Resistance:	175 ohms
Material:	17-4PH Stainless
Loading Surfaces:	Precision Ground Flat and Parallel
Overload Rating:	125%
Temperature Range:	60 to 200 Degrees F
Linearity/Hysterisis:	±0.50% Full Scale
Repeatibility:	±.25% Full Scale
Cable:	Four conductor shielded.
Cable Length:	15 feet (standard)
Wiring Code:	Compression
	+ Gage — Black
	− Gage — Green
	− Signal — Red
	+ Signal — White
	Ground — Shield

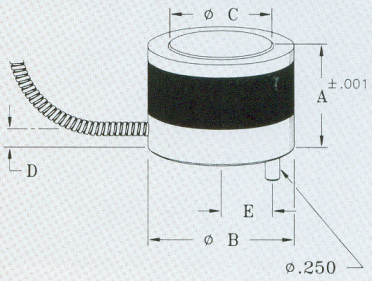
Low Capacity .5 to 8 Ton



Model	Capacity IN TONS	Dimensions in inches A	B	C	D	E
LCS-1K	.5	.625	.615	.312	.14	.150
LCS-2K	1	.625	.615	.312	.14	.150
LCS-4K	2	.750	.990	.500	.14	.250
LCS-8K	4	.750	.990	.492	.14	.250
LCS-12K	6	.875	1.24	.603	.14	.312
LCS-16K	8	.875	1.24	.696	.14	.312

Tolerance: X.XX = ±.010 X.XXX = ±.005

High Capacity 10 to 500 Ton

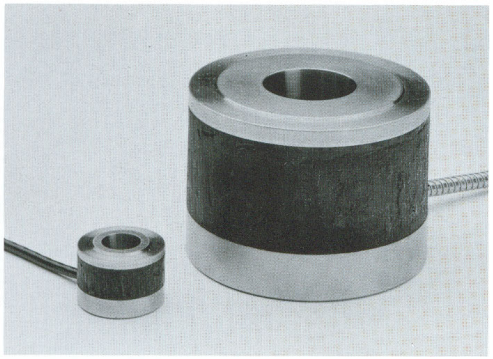


Model	Capacity IN TONS	Dimensions in inches A	B	C	D	E
HCS-10T	10	1.250	1.990	.778	.25	.500
HCS-15T	15	1.250	1.990	.953	.25	.500
HCS-20T	20	1.250	1.990	1.100	.25	.500
HCS-25T	25	1.750	2.490	1.230	.25	.625
HCS-50T	50	1.750	2.490	1.740	.31	.625
HCS-75T	75	2.250	3.490	2.130	.31	.875
HCS-100T	100	2.250	3.490	2.460	.31	.875
HCS-200T	200	3.500	5.230	3.480	.44	1.313
HCS-300T	300	3.500	5.230	4.260	.44	1.313
HCS-400T	400	4.000	6.480	4.920	.50	1.625
HCS-500T	500	4.000	6.480	5.500	.50	1.625

Tolerance: X.XX = ±.010 X.XXX = ±.005

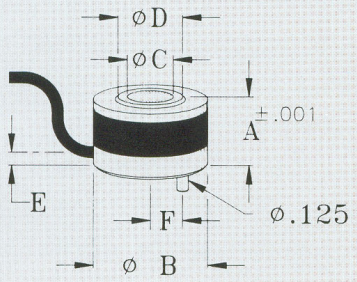
LOW PROFILE RING

Model LPR load cells feature a thru-hole design for applications where clearance is required through the center of the cell. Internal hole diameters range from .250 to 1.75. All cells incorporate a machined stress riser to allow accurate measurement in a wide range of applications.



Excitation Voltage:	5-15 Volts DC
Output Voltage:	2mv/volt nominal
Bridge Resistance:	175 ohms
Material:	17-4PH Stainless
Loading Surfaces:	Precision Ground Flat and Parallel
Overload Rating:	125%
Temperature Range:	60 to 200 Degrees F
Linearity/Hysterisis:	±0.50% Full Scale
Repeatibility:	±.25% Full Scale
Cable:	Four conductor shielded.
Cable Length:	15 feet (standard)
Wiring Code:	Compression
	+ Gage — Black
	− Gage — Green
	− Signal — Red
	+ Signal — White
	Ground — Shield

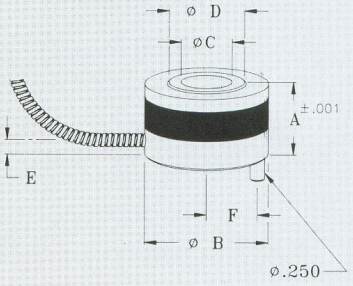
Low Capacity .5 to 8 Ton



Model	Capacity IN TONS	Dimensions in inches A	B	C	D	E	F
LCR-1K	.5	.625	.865	.250	.351	.14	.278
LCR-2K	1	.625	.865	.375	.512	.14	.310
LCR-4K	2	.750	1.115	.500	.609	.14	.404
LCR-8K	4	.750	1.115	.500	.702	.14	.404
LCR-12K	6	.875	1.365	.500	.783	.14	.466
LCR-16K	8	.875	1.365	.500	.857	.14	.466

Tolerance: X.XX = ±.010 X.XXX = ±.005

High Capacity 10 to 500 Ton

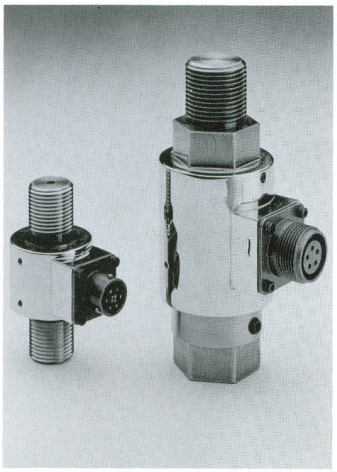


Model	Capacity IN TONS	Dimensions in inches A	B	C	D	E	F
HCR-10T	10	1.250	2.115	.875	1.171	.25	.750
HCR-15T	15	1.250	2.115	.875	1.294	.25	.750
HCR-20T	20	1.250	2.490	1.000	1.487	.25	.875
HCR-25T	25	1.750	2.490	1.000	1.586	.25	.875
HCR-50T	50	1.750	3.240	1.250	2.143	.31	1.125
HCR-75T	75	2.250	3.240	1.250	2.471	.31	1.125
HCR-100T	100	2.250	4.740	1.500	2.882	.31	1.563
HCR-200T	200	3.500	4.740	1.500	3.790	.44	1.563
HCR-300T	300	3.500	6.240	1.750	4.608	.44	2.000
HCR-400T	400	4.000	6.240	1.750	5.224	.50	2.000
HCR-500T	500	4.000	6.740	1.750	5.775	.50	2.125

Tolerance: X.XX = ±.010 X.XXX = ±.005

IN-LINE SERIES

Helm In-line load cells incorporate strain gages for direct measurement of any force transmitted through the longitudinal axis. The male and female threads at each end allow connection and measurement of both tension and compression forces. Capacities range from 1,000 to 30,000 pounds.



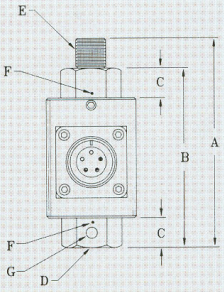
Excitation Voltage:	5-15 Volts DC
Output Voltage:	2mv/volt nominal
Bridge Resistance:	175 ohms
Material:	17-4PH Stainless
Loading Surfaces:	Precision Ground Flat and Parallel
Overload Rating:	125%
Temperature Range:	60 to 200 Degrees F
Linearity/Hysterisis:	±0.50% Full Scale
Repeatability:	±.25% Full Scale
Connector:	Amphenol 5 pin (97-3102A-14S)
Interconnect Cable:	Four conductor shielded (15 foot length) with 16 foot armor type sleeve (.28 diameter)
Wiring Code:	Compression

+ Gage	Black
− Gage	Green
− Signal	Red
+ Signal	White
Ground	Shield

LOW CAPACITY

MODEL	CAPACITY
ILS-L1	1000 pounds
ILS-L2	2000 pounds
ILS-L4	4000 pounds
ILS-L6	6000 pounds
ILS-L8	8000 pounds
ILS-L10	10000 pounds

Tolerance: X.XX = ±.010 X.XXX = ±.005



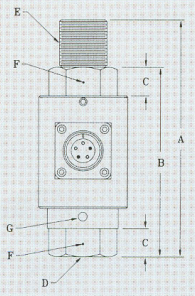
LOW CAPACITY DIMENSION KEY

A:	3.50 Inches
B:	3.00 Inches
C:	.50 Inches
D:	1/2-13x.50 Female
E:	1/2-13x.50 Male
F:	7/8 Hex Flats
G:	1/4-20 Set Screw

HIGH CAPACITY

MODEL	CAPACITY
ILS-H2	2000 pounds
ILS-H5	5000 pounds
ILS-H10	10000 pounds
ILS-H15	15000 pounds
ILS-H20	20000 pounds
ILS-H25	25000 pounds
ILS-H30	30000 pounds

Tolerance: X.XX = ±.010 X.XXX = ±.005

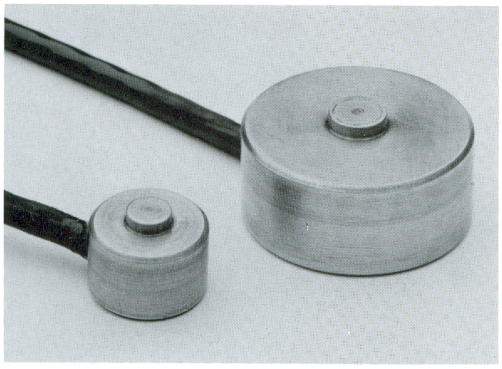


HIGH CAPACITY DIMENSION KEY

A:	5.00 Inches
B:	4.00 Inches
C:	.600 Inches
D:	1-14x1.00 Female
E:	1-14x1.00 Male
F:	1 1/4 Hex Flats
G:	1/4-20 Set Screw

BUTTON LOAD CELLS

High capacity in a small size are key features in Helm button load cells. These unique force sensors combine excellent linearity and repeatability characteristics in providing accurate measurements with minimal space requirements. Capacities range from 250 to 8000 pounds.

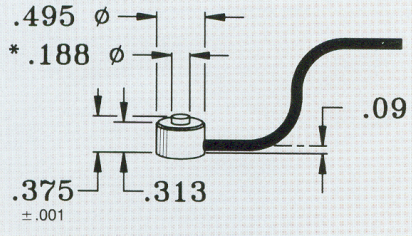


Excitation Voltage:	5-15 Volts DC
Output Voltage:	2mv/volt nominal
Bridge Resistance:	350 ohms
Material:	17-4PH Stainless
Loading Surfaces:	Precision Ground Flat and Parallel
Overload Rating:	125%
Temperature Range:	60 to 200 Degrees F
Linearity/Hysterisis:	±0.50% Full Scale
Repeatability:	±.25% Full Scale
Cable:	Four conductor shielded Teflon
Cable Diameters:	Low Capacity - Four conductor shielded Teflon (.11 diameter)
	High Capacity - Four conductor shielded (.13 diameter)
Cable Length:	15 feet (standard)
Wiring Code:	Compression

+ Gage	Black
− Gage	Green
− Signal	Red
+ Signal	White
Ground	Shield

LOW CAPACITY

MODEL	CAPACITY IN POUNDS
LCB - 250	250
LCB - 500	500
LCB - 1000	1000
LCB - 1500	1500
LCB - 2000	2000
LCB - 2500	2500
LCB - 3000	3000
LCB - 3500	3500
LCB - 4000	4000

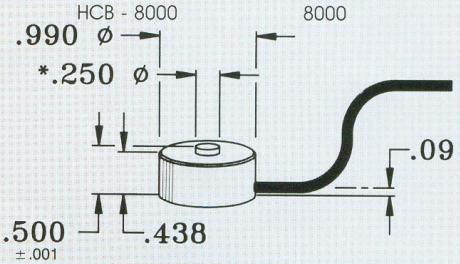


Tolerance: X.XX = ±.010 X.XXX = ±.005

*.125∅ on Model LCB-250

HIGH CAPACITY

MODEL	CAPACITY IN POUNDS
HCB - 250	250
HCB - 500	500
HCB - 1000	1000
HCB - 1500	1500
HCB - 2000	2000
HCB - 3000	3000
HCB - 4000	4000
HCB - 5000	5000
HCB - 6000	6000
HCB - 7000	7000
HCB - 8000	8000



Tolerance: X.XX = ±.010 X.XXX = ±.005

* .375∅ on Model HCB-8000

Catalog Load Cells

HELM force measurement systems are widely used in both standard and custom applications throughout the metal-forming industry. Many secondary operations such as staking, riveting, welding and assembly are sensitive to variations in force and can be accurately monitored and controlled using Helm force measurement systems. Our staff of transducer engineers are available to design force sensors in measurement capacities from a few pounds to several thousand tons. Consult your HELM representative for additional information on our products and services.

HELM

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