

Morehouse

MODEL 45 DIRECT READING DIGITAL RING FORCE GAUGE

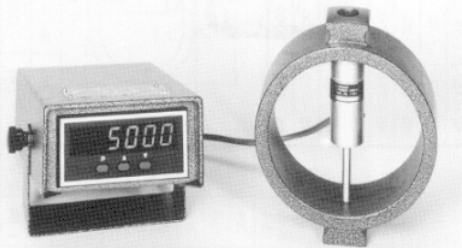


Figure 1. Model 45C; 5000 lbf capacity Ring Force Gauge.

DIGITAL RING FORCE GAUGE

The Morehouse Model 45 Digital Ring Force Gauge provides a rugged transportable instrument to accurately measure force. All loads are read directly in engineering units from the digital indicator.

The Digital Ring Force Gauge can be used anywhere accurate measurement of mechanical forces is required. Applications include anything from a simple weighing procedure to checking and calibrating load cells, testing machines, and other force sensing devices. Other applications include use as both the load sensing element and indicator in plant operating equipment, production equipment, and testing equipment.

DESIGN & PRINCIPLE OF OPERATION

The Digital Ring Force Gauge is designed around an elastic steel ring similar to that used in the Morehouse Proving Ring, which has set standards for accuracy the world over. An elastic steel ring properly forged, carefully machined, and properly heat-treated, performs as a near perfect elastic member. Every time a duplicate load is applied to the ring it will deflect exactly the same amount. Thus by measuring the amount of deflection, it is possible to precisely determine the load applied.

To utilize the principle of the elastic steel ring, it is necessary to incorporate a means of measuring the deflection under load. In high accuracy Proving Rings the mechanical deflection measuring apparatus is designed to achieve the highest possible degree of accuracy.

In the Digital Ring Force Gauge, where convenience is the prime requisite, the deflection is sensed by advanced electronics and indicated by a digital display. Calibration data is stored in a microprocessor and load readings are shown directly, requiring no further operation or interpolation.

By combining the reliability of the elastic steel ring with an electronic digital indicator, Morehouse has produced a Digital Ring Force Gauge is accurate, dependable, and easy to use. The Digital Ring Force Gauge offers a high degree of accuracy and versatility.

SPECIFICATIONS

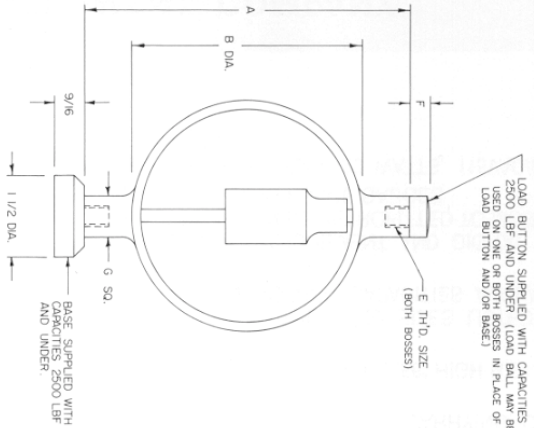
- **CALIBRATED TO READ DIRECTLY IN ENGINEERING UNITS IN POUNDS, KILOGRAMS OR NEWTONS**
- **MODES: TENSION, COMPRESSION, OR TENSION & COMPRESSION**
- **ACCURACY: 1 PART IN 1000 (0.1%) FOR TENSION OR COMPRESSION MODELS AND 2 PARTS IN 1000 (0.2%) FOR TENSION AND COMPRESSION MODELS**
- **MAXIMUM LOAD OR MINIMUM LOAD VALUES CAN BE RECALLED AND RESET**
- **CERTIFICATION OF CALIBRATION AND STATEMENT OF TRACEABILITY TO THE UNITED STATES NATIONAL INSTITUTE OF STANDARDS & TECHNOLOGY (NIST)**
- **INSTRUMENT STORAGE AND CARRYING CASE INCLUDED**
- **FULL 6 DIGIT, HIGH VISIBILITY, .56" HIGH RED LED DISPLAY**
- **STANDARD CAPACITIES AND SIZES LISTED ON REVERSE SIDE (OTHER CAPACITIES AVAILABLE ON REQUEST)**
- **ELECTRONIC MEASUREMENT AND DIGITAL DISPLAY SYSTEM CAN BE RETROFITTED TO MODEL 5 MECHANICAL RING FORCE GAUGES**
- **POWER REQUIREMENT: 20 WATTS, 115VAC/60HZ OR 220V/50HZ**

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OTHER CAPACITIES AVAILABLE ON REQUEST.

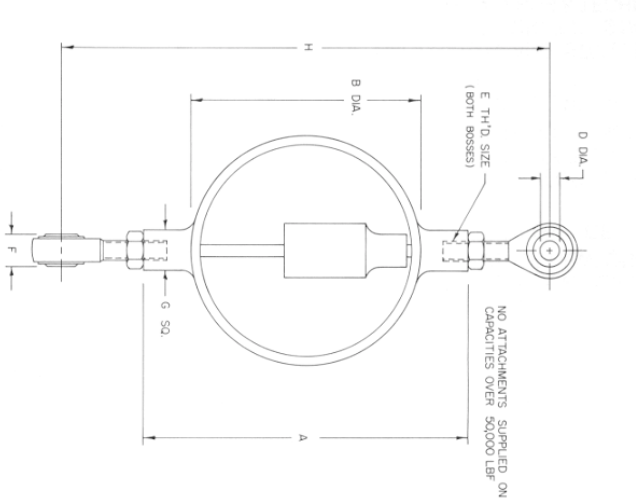
ALL DIMENSIONS ARE IN INCHES

ALL MODELS AVAILABLE IN KILOGRAM AND NEWTON CAPACITIES.



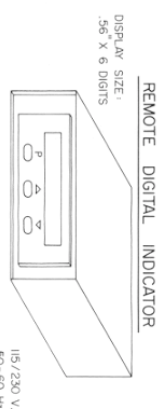
MODEL 45 C - COMPRESSION

PART NO.	CAP IN LBF	A	B	WIDTH	LOAD BALL	E TH'D	F	G
45-339	5	6	4 1/4	3/4	1/2	3/8-24	3/8	3/4
45-345	0	6	4 1/4	3/4	1/2	3/8-24	3/8	3/4
45-346	20	6	4 1/4	3/4	1/2	3/8-24	3/8	3/4
45-276	50	6	4 1/4	1	1/2	3/8-24	3/8	3/4
45-277	100	6	4 1/4	1 1/4	1/2	3/8-24	3/8	3/4
45-278	200	6	4 1/4	1 1/4	1/2	3/8-24	3/8	3/4
45-279	500	6	4 1/4	1 1/4	1/2	3/8-24	3/8	3/4
45-581	1000	6	5	1 1/4	1/2	3/8-24	3/8	3/4
45-584	2000	6	5	1 1/4	1/2	3/8-24	3/8	3/4
45-587	2500	6	5	1 1/4	1/2	3/8-24	3/8	3/4
45-282	5000	6 1/2	5 1/4	2	1	5/8-18	1 1/4	1 1/4
45-283	10000	6 1/2	5 1/4	2 1/2	1	5/8-18	1 1/4	1 1/4
45-284	20000	7	5 3/4	3	1	5/8-18	1 1/4	1 1/4
45-285	50000	9 1/2	7 1/2	3 1/4	1	5/8-18	1 3/4	1 3/4
45-286	100000	11	9	4 5/8	1	5/8-18	2 1/4	2 1/4
45-321	200000	13	11	4 1/2	1 1/2		2 1/2	2 1/2
45-335	300000	14 1/2	12 1/4	4 7/8			2 3/4	3
45-335	500000	16 1/2	14	5 1/2			3	3
45-335	600000	18 1/4	15 1/4	5 7/8			4	4
45-366	1,000,000	24	20	8			4 1/2	4 1/2

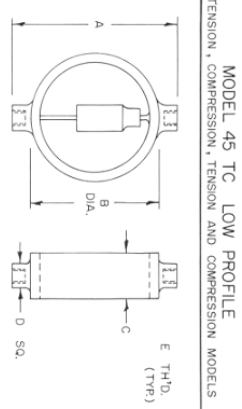


MODEL 45 BT - TENSION OR TENSION & COMPRESSION

PART NO.	CAP IN LBF	A	B	WIDTH	D	E TH'D	F	G	H
45-668	5	6	4 1/4	3/4	3/8	3/8-24	1/2	3/4	9
45-669	10	6	4 1/4	3/4	3/8	3/8-24	1/2	3/4	9
45-670	20	6	4 1/4	3/4	3/8	3/8-24	1/2	3/4	9
45-671	50	6	4 1/4	1	3/8	3/8-24	1/2	3/4	9
45-672	100	6	4 1/4	1 1/4	3/8	3/8-24	1/2	3/4	9
45-673	200	6	4 1/4	1 1/4	3/8	3/8-24	1/2	3/4	9
45-674	500	6	4 1/4	1 1/4	3/8	3/8-24	1/2	3/4	9
45-714	1000	6	5	1 1/4	3/8	3/8-24	1/2	3/4	9
45-715	2000	6	5	1 1/4	3/8	3/8-24	1/2	3/4	9
45-716	2500	6	5	1 1/4	3/8	3/8-24	1/2	3/4	9
45-287	5000	8	5 1/4	2	3/4	3/4-16	7/8	1 1/4	12 1/2
45-288	10000	8	5 1/4	2 1/2	3 1/4	3/4-16	7/8	1 1/4	12 1/2
45-367	20000	8	5 3/4	3	1	1 1/4-12	1 3/8	1 1/2	14 3/4
45-368	50000	10 3/4	7 1/2	3 1/4	1 1/2	1 1/2-12	1 5/8	2	19 1/4
45-369	100000	13	9	4 1/8	2-8		2 3/4	3	24
45-370	500000	16	10	4 1/8	2 1/2-12		3 1/2	4	28
45-371	2000000	16 1/2	11	5	2 1/2-14		4	4 1/2	30

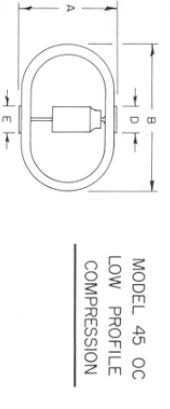


REMOTE DIGITAL INDICATOR
 DISPLAY SIZE: 5.6" X 6 DIGITS
 ENCLOSURE SIZE: 2 3/8" HIGH, 4 5/8" WIDE, 8" LONG
 POWER CORD: 6 FT. LG. SIGNAL CORD: 10 FT. LG.
 OPTIONAL CORD: 50 FT. LG.



MODEL 45 TC LOW PROFILE
 TENSION, COMPRESSION, TENSION AND COMPRESSION MODELS

PART NO.	CAP IN LBF	A	B	C	D	E TH'D
45-720	5	3	2 1/2	1	1/2	*10-32
45-721	10	3	2 1/2	1	1/2	*10-32
45-723	50	3	2 1/2	1 1/4	1/2	*10-32
45-724	100	3	2 1/2	1 1/4	1/2	*10-32
45-725	200	3	2 1/2	1 1/4	1/2	*10-32
45-728	500	3	2 1/2	1 1/4	1/2	*10-32
45-730	1000	4	3 1/4	1 1/2	3/4	3/8-24
45-731	2000	4	3 1/4	1 1/2	3/4	3/8-24



MODEL 45 OC
 LOW PROFILE
 COMPRESSION

PART NO.	CAP IN LBF	A	B	WIDTH	D	E
45-770	1000	3	4 3/4	1 7/8	5/8	1
45-771	2000	3	4 3/4	1 7/8	5/8	1
45-772	3000	3	4 3/4	1 7/8	5/8	1
45-767	5000	3	4 3/4	1 7/8	5/8	1
45-773	6000	4 3/8	6	1 7/8	1	1
45-768	10,000	4 3/8	6	1 7/8	1	1
45-769	20,000	4 3/8	6	1 7/8	1	1