

Model LBS Miniature Compression Load Button

Why the Interface model LBS Miniature Compression Load Button is the best in class:

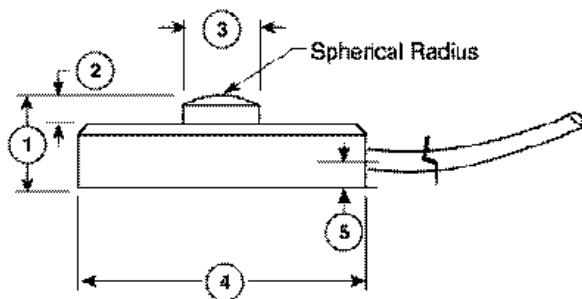
- Temperature compensated
- Integral load button
- Small diameter
- From .12" height



ACCESSORIES

Instrumentation

Consult factory for more technical information



SPECIFICATIONS

ACCURACY – (MAX ERROR)
 Nonlinearity-% FS±0.50
 Hysteresis-% FS±0.50
 Nonrepeatability-% RO±0.10

TEMPERATURE
 Compensated Range-°F60 to 160
 Compensated Range-°C15 to 71
 Operating Range-°F-65 to 225
 Operating Range-°C-54 to 107
 Effect on Zero-% RO/°F – MAX±0.005
 Zero Balance % FS±2

ELECTRICAL
 Rated Output-mV/V (Nominal)2.0
 Bridge Resistance-Ohm (Nominal)350
 Excitation Voltage5 VDC
 Excitation Voltage – MAX7 VDC

MECHANICAL
 CalibrationCompression
 Deflection0.001- 0.003
 Safe Overload-% CAP150
 Ultimate Overload % of CAP300
 Cable length-ft5
 4-conductor Teflon insulated cable with temperature compensation board

DIMENSIONS

| See Drawing | CAPACITY (lbf) | | | | | |
|-------------|----------------|------|----------|------|---------|------|
| | LBS Series | | | | | |
| | 5, 10, 25, 50 | | 100, 250 | | 500, 1K | |
| | inch | mm | inch | mm | inch | mm |
| ① | 0.12 | 3.00 | 0.15 | 3.80 | 0.25 | 6.4 |
| ② | 0.03 | 0.80 | 0.02 | 0.50 | 0.03 | 0.80 |
| ③ | 0.09 | 2.20 | 0.12 | 3.00 | 0.24 | 6.10 |
| ④ | 0.38 | 9.60 | 0.50 | 13.0 | 0.75 | 19.0 |
| ⑤ | 0.04 | 1.00 | 0.06 | 1.50 | 0.10 | 2.50 |

Model LBM Compression Load Button

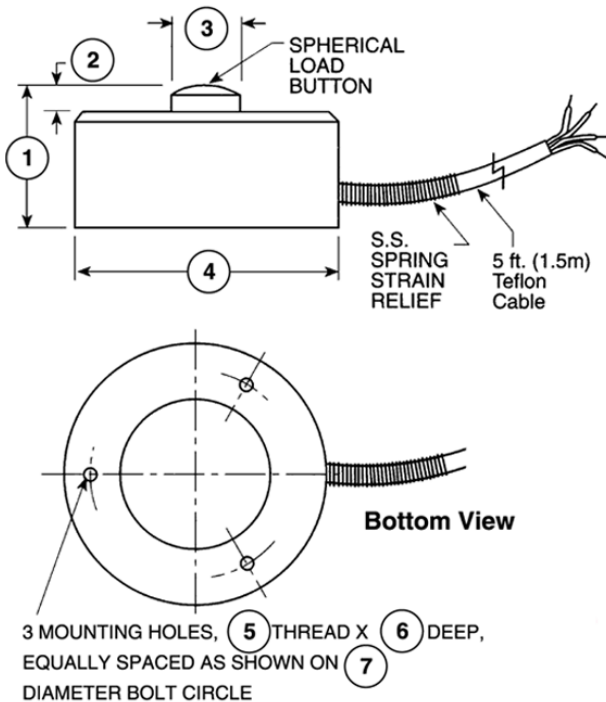
- Capacities from 25 to 50K lbf
- Temperature compensated
- Integral load button
- Small diameter
- Environmentally sealed
- Stainless steel



ACCESSORIES

Instrumentation

Consult factory for more technical information.



SPECIFICATIONS

ACCURACY – (MAX ERROR)

| | |
|-----------------------|-------|
| Nonlinearity-% FS | ±0.5 |
| Hysteresis-% FS | ±0.3 |
| Nonrepeatability-% RO | ±0.10 |

TEMPERATURE

| | |
|------------------------------|------------|
| Compensated Range-°F | 70 to 170 |
| Compensated Range-°C | 21 to 77 |
| Operating Range-°F | -65 to 200 |
| Operating Range-°C | -54 to 93 |
| Effect on Zero-% RO/°F – MAX | ±0.005 |
| Effect on Output-%/°F – MAX | ±0.005 |
| Zero Balance % FS | ±2 |

ELECTRICAL

| | |
|---------------------------------|--------|
| Rated Output-mV/V (nominal) | 2.0 |
| Bridge Resistance-Ohm (nominal) | 350 |
| Excitation Voltage Max | 10 VDC |

MECHANICAL

| | |
|------------------------------------|-------------|
| Calibration | Comp. |
| Deflection | 0.001-0.003 |
| Safe Overload-% CAP | 150 |
| Ultimate Overload % of CAP Cable | 300 |
| Length-ft | 5 |
| 4-conductor Teflon insulated cable | |

DIMENSIONS

| See Drawing | CAPACITY (lbf) | | | | | | | | | |
|-------------|----------------|-------|------------------|------|----------|------|----------|------|----------|------|
| | LBM Series | | | | | | | | | |
| | 25, 50, 100 | | 250, 500, 1K, 2K | | 5K, 10K | | 20K | | 50K | |
| | inch | mm | inch | mm | inch | mm | inch | mm | inch | mm |
| (1) | 0.62 | 15.7 | 0.39 | 9.90 | 0.63 | 16.0 | 1.0 | 25.4 | 1.50 | 38.1 |
| (2) | 0.05 | 1.30 | 0.07 | 1.80 | 0.08 | 2.00 | 0.12 | 3.00 | 0.18 | 4.60 |
| (3) | 0.21 | 5.30 | 0.32 | 8.10 | 0.43 | 10.9 | 0.60 | 15.0 | 0.78 | 19.8 |
| (4) | 1.00 | 25.4 | 1.25 | 31.8 | 1.50 | 38.1 | 2.00 | 50.8 | 3.00 | 76.2 |
| (5) | 4-40 UNC | | 6-32 UNC | | 6-32 UNC | | 6-32 UNC | | 6-32 UNC | |
| (6) | 0.19 | 4.83 | 0.25 | 6.35 | 0.25 | 6.35 | 0.25 | 6.35 | 0.25 | 6.35 |
| (7) | 0.75 | 19.00 | 1.00 | 25.4 | 1.25 | 31.8 | 1.63 | 41.3 | 2.38 | 60.3 |



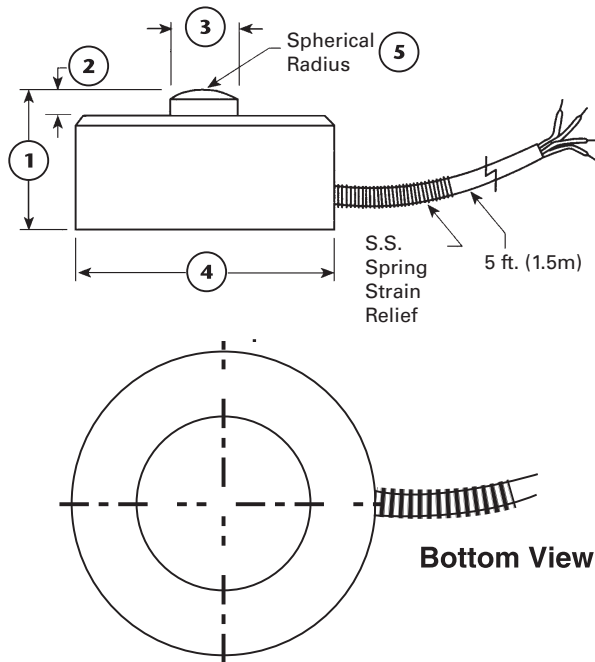
Model LBMU

Model LBMU High Accuracy Compression Load Button

- Capacities from 100 - 1K lbf
- Temperature Compensated
- Superior to Any Other Load Button
- Stainless Steel
- Enhanced Eccentric Load Rejection
- Low Power

**No Other Load Button In the World
Can Meet or Beat This Accuracy!**

Dimensions



Specifications

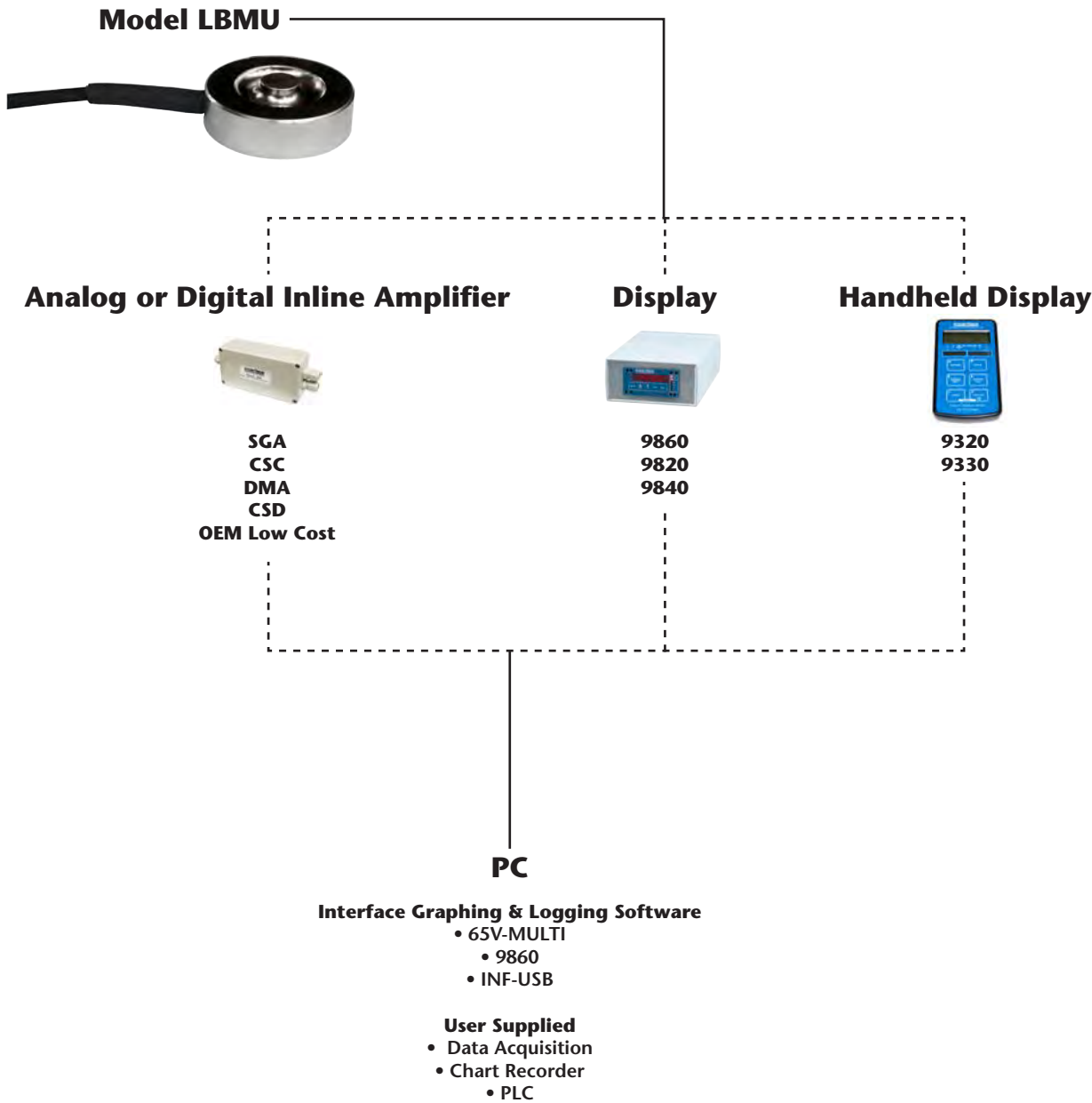
| Model | LBMU |
|--------------------------------|-----------------------------------|
| Capacity | US (lbf) 100, 250, 500, 1K |
| | Metric (kN) .45, 1.10, 2.20, 4.45 |
| Accuracy -(Max Error) | |
| Nonlinearity -%FS | ±0.15 |
| Hysteresis -%FS | ±0.15 |
| Nonrepeatability -%RO | ±0.05 |
| Temperature | |
| Compensated Range -°F | 70 to 170 |
| Compensated Range -°C | 20 to 75 |
| Operating Range -°F | -65 to 200 |
| Operating Range -°C | -55 to 90 |
| Effect On Zero -%/°F -Max | ±0.005 |
| Effect on Output -%/°F -Max | ±0.002 |
| Zero Balance -%FS | ±2 |
| Electrical | |
| Rated Output -mV/V (Nominal) | 2.0 |
| Bridge Resistance -Ω (Nominal) | 700 |
| Excitational Voltage | 5VDC |
| Mechanical | |
| Safe Overload -% CAP | 150 |
| Calibration | Compression |
| Ultimate Overload -% CAP | 300 |
| Deflection -in | 0.001 - 0.003 |
| Cable Length -ft | 5 |
| Cable Type | 4-Conductor |

| Model | LBMU | |
|----------|-------------------------|----------------------------|
| Capacity | US (Inch) | Metric (mm) |
| | 100, 250, 500, & 1K lbf | .45, 1.10, 2.20, & 4.45 kn |
| 1 | 0.39 | 9.91 |
| 2 | 0.07 | 1.78 |
| 3 | 0.32 | 8.13 |
| 4 | 1.25 | 31.75 |
| 5 | 1.50 | 38.10 |

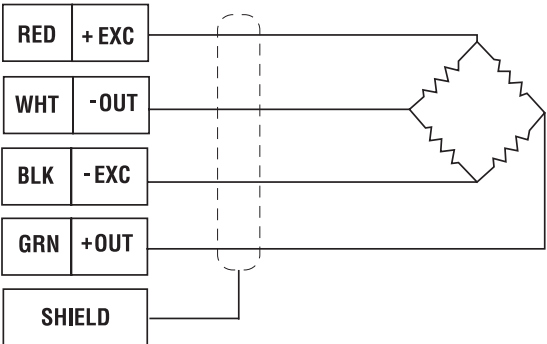
Specifications are subject to change without notice.

Custom Sizes and Capacities Available.

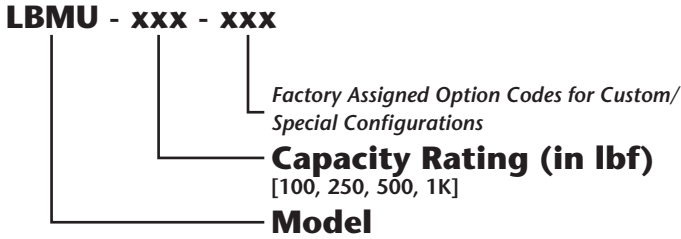
Sample System Overview



Wiring Diagram



Ordering Information



LBMP Overload Protected Compression Load Button

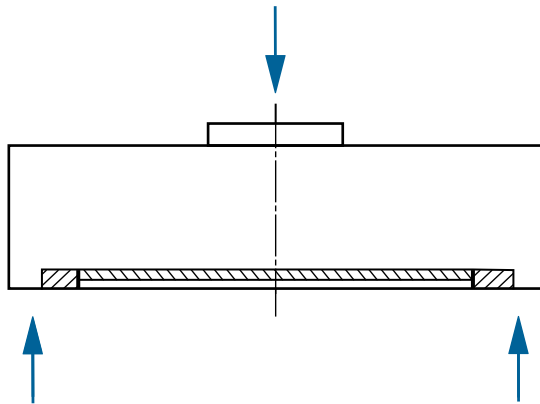


- Capacities from 0.01 kN to 100 kN
- Overload protected
- Temperature compensated
- Small diameter
- Environmentally sealed
- Stainless steel

OPTIONS

- Extended Temperature Range
- Internal Shunt Resistor – 100% output
- Standardized Output

LOADING DIAGRAM



SPECIFICATIONS

| | | |
|-----------------------------------|-------------------------|-------------------|
| ACCURACY – (MAX ERROR) | | |
| Nonlinearity – %FS | | ±0.5 |
| Hysteresis – %FS | | ±0.5 |
| Non-repeatability – %RO | | ±0.2 |
| Creep, in 30 min – % | | ±0.1 |
| TEMPERATURE | | |
| Effect on Zero – %RO/°C | | ±0.02 |
| Effect on Output – %RO/°C | | ±0.02 |
| Compensated Range – °C | | 0 to +60 |
| Operating Range – °C | | -10 to +70 |
| ELECTRICAL | | |
| Output – mV/V | (0.01 kN) 0.5 ± 20% | |
| | (0.02 - 100 kN) 1 ± 20% | |
| Excitation Voltage – VDC | (0.01 - 0.05 kN) 2 - 6 | |
| | (0.1 - 100 kN) 2 - 12 | |
| Bridge Resistance – Ohm | | 350 |
| Electrical Connection | | 3-meter cable |
| MECHANICAL | | |
| Safe Overload – %CAP | (0.01 - 0.2 kN) 500 | |
| | (0.5 - 100 kN) 300 | |
| Deflection at Rated Capacity – mm | | < 0.15 |
| Cyclic Load Rating – %RO | | ±70 Peak |
| IP Rating | (0.01 - 0.02 kN) IP60 | |
| | (0.05 - 100 kN) IP65 | |
| Material | | * Stainless Steel |

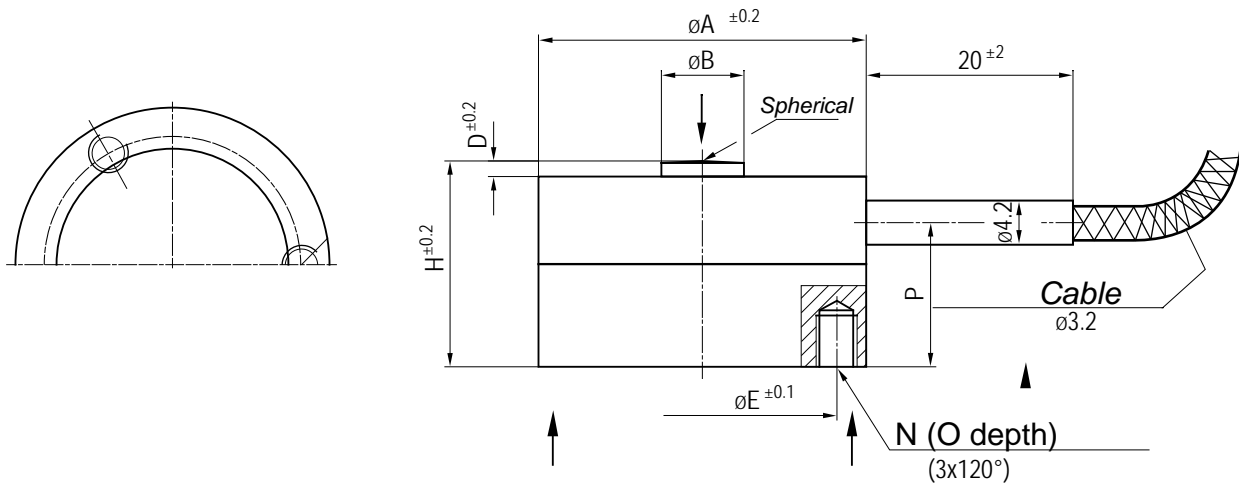
DIMENSIONS

| Measuring range [kN] | øA | øB | øC | øD | øE | H | K | L | M | N | O | P |
|---|----|----|----|-----|----|----|-----|---|------|----|---|------|
| 0.01 / 0.02 / 0.05 / 0.1 / 0.2 / 0.5 / 1 / 2 / 5 / 10 | 32 | 8 | 10 | 1.8 | 26 | 20 | 4 | 4 | M2.5 | M4 | 5 | 14 |
| 20 | 39 | 11 | 16 | 2 | 32 | 24 | 4.5 | 5 | M3 | M3 | 5 | 12.5 |
| 50 | 52 | 15 | 25 | 3 | 42 | 40 | 10 | 6 | M4 | M4 | 5 | 25 |
| 100 | 79 | 20 | 39 | 5 | 65 | 50 | 10 | 6 | M5 | M5 | 6 | 21 |

LBMP Overload Protected Compression Load Button

DIMENSIONS (continued)

LBMP with Overload protection



All dimensions in mm

MSC Small Diameter High Capacity Load Button

- Proprietary Interface temperature compensated strain gages
- Small compact design
- Environmentally sealed
- Stainless steel construction
- Low deflection



STANDARD CONFIGURATION

5 ft. Integral Cable

OPTIONS

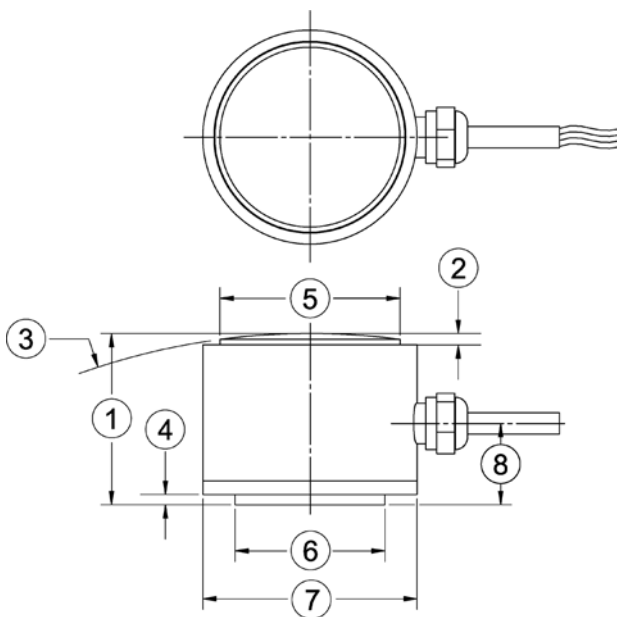
Extra Cable Length

ACCESSORIES

Instrumentation

SPECIFICATIONS

| | |
|---------------------------------|--------------|
| ACCURACY – (MAX ERROR) | |
| Nonlinearity-% FS | ±0.5 |
| Hysteresis-% FS | ±0.5 |
| Nonrepeatability-% RO | ±0.10 |
| Creep, in 20 min-% | ±0.15 |
| TEMPERATURE | |
| Compensated Range-°F | 40 to 140 |
| Compensated Range-°C | 5 to 60 |
| Operating Range-°F | -40 to 175 |
| Operating Range-°C | -40 to 80 |
| Effect on Output-%/°F-MAX | ±0.2 |
| Effect on Output-%/°C-MAX | ±0.005 |
| Effect on Zero-% RO/°F-MAX | ±0.5 |
| Effect on Zero-% RO/°C-MAX | ±0.002 |
| ELECTRICAL | |
| Rated Output-mV/V (Nominal) | 2 +40%/-20% |
| Zero Balance-% RO | ±2 |
| Bridge Resistance-Ohm (Nominal) | 350 +50/-3.5 |
| Excitation Voltage-MAX | 15 VDC |
| Insulation Resistance-Megohm | 5000 |
| MECHANICAL | |
| Calibration | Compression |
| Safe Overload - % CAP | 150 |
| Cable length-ft | 5 |



DIMENSIONS

| See Drawing | CAPACITY | |
|-------------|-----------------------|----------------------|
| | U.S. (lbf) | Metric (N) |
| | 15K, 20K, 30K inch | 65K, 90K, 130K mm |
| (1) | 1.00 | 25.4 |
| (2) | 0.06 | 1.52 |
| (3) | R 4.0 ±.5 | 101.6 ±13 |
| (4) | 0.06 | 1.52 |
| (5) | 1.05 | 26.67 |
| (6) | 0.875 | 22.23 |
| (7) | 1.25 | 31.75 |
| (8) | .5 ±0.1 | 12.32 |