

# 80 cm<sup>2</sup> Nominal Diameter Hydraulic Load Cell



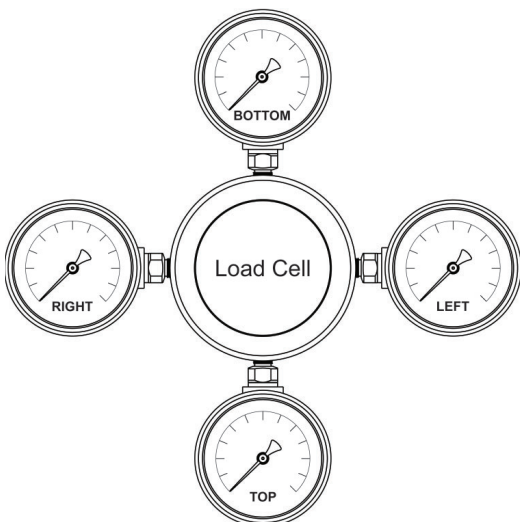
## 3000 SERIES

- Designed for measuring axial loads and bearing forces
- Ranges from 360 lb<sub>f</sub> to 70,000 lb<sub>f</sub>
- Lateral forces with an angle of  $\pm 3^\circ$  can be regarded as negligible which allows the 3000 Series to provide the highest degree of accuracy
- Accuracy levels range from  $\pm 0.25\%$  full scale (BFSL) to  $\pm 1.5\%$  full scale, depending on the measuring instrument
- Various flexible and rigid tubing options allow easy installation in challenging application environments
- Durable Stainless Steel housing and self adapting piston provide exceptional corrosion resistance and durability
- A high quality NOSHOK 300 Series pressure gauge or 100, 200 or 615 Series transducer is directly mounted to the load cell for precise measurement indication
- Operates without an external power supply when using a pressure gauge for indication
- Provides an extremely high degree of accuracy because the load cell is vacuum filled and sealed, eliminating the error that can be caused by entrapped air
- Steel jacketed flexible tubing and capillary systems are offered to accommodate applications that require remote mounting of the gauge or transducer
- An optional fluid filled gauge dampens the effects of pulsation, vibration and shock, and lubricates the gauge internals for extended service life
- Various output signals available in transducer models that are CE compliant

### APPLICATIONS

- Turning and drilling machines
- Extruders
- Measuring and test equipment
- Production lines
- Overload protection
- Vices
- Control systems and machine tools

### Instrument Connection



### SPECIFICATIONS

Nominal diameter	ND 80
Load cell housing	Stainless Steel
Piston	80 cm <sup>2</sup> Stainless Steel
Max piston stroke	0.02" (0.5 mm)
Connecting type	Direct (standard) Flexible tubing with spiral Steel jacket - optional (max. length 2 m) Capillary restrictor (optional)
Gauge fill fluid	Glycerin Others available upon request
Load cell fill	Glycerin and water
Operating temperature	-4 °F to 140 °F (-20 °C to 60 °C)
Ambient temperature	-4 °F to 140 °F (-20 °C to 60 °C)

For Load Cells using NOSHOK 300 Series Gauge:



**WARNING:** This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

For Load Cells using NOSHOK 100, 200 & 615 Series Transducers/Transmitters:



**WARNING:** This product can expose you to chemicals including Chromium (VI) and Nickel, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

ORDERING INFORMATION				
<b>LOAD CELL</b>	3080 ND 80 - Compression - standard design			
<b>MEASURING RANGES</b>	360A	360 lb <sub>f</sub>	2500A	2,500 lb <sub>f</sub>
	700A	700 lb <sub>f</sub>	3500A	3,500 lb <sub>f</sub>
	2000A	2,000 lb <sub>f</sub>	5000A	5,000 lb <sub>f</sub>
Other ranges available, please consult factory.				
<b>INSTRUMENTS</b>	1	25-300 Series gauge	6	100 Series transmitter
	4	40-400 Series gauge	7	200 Series transducer
<b>INSTRUMENT CONNECTIONS*</b>	A	Bottom	C	Right side
	B	Top	D	Left side
	E None**			
25-300 SERIES GAUGE OPTIONS	40-400 SERIES GAUGE OPTIONS	100 SERIES TRANSMITTER OPTIONS	200 SERIES TRANSDUCER OPTIONS	615 SERIES TRANSDUCER OPTIONS
0 No options	0 No options	<b>Accuracy</b>	<b>Accuracy</b>	<b>Accuracy</b>
1 Dry gauge	1 Glycerin filled	1 0.50%	1 0.50%	1 0.50%
2 Max. indicating pointer	2 Max. indicating pointer	2 0.25%	2 0.25%	2 0.25%
3 Set pointer	3 Set pointer	<b>Output</b>	<b>Output</b>	<b>Output</b>
4 Rubber case protector	8 SS rear flange	1 4 mA to 20 mA	2 0 Vdc to 5 Vdc	1 4 mA to 20 mA
5 Glass overlay		<b>Electrical Connection</b>	3 1 Vdc to 5 Vdc	2 0 Vdc to 5 Vdc
6 Safety glass overlay		1 Option 7 with 36" cable	5 0 Vdc to 10 Vdc	3 1 Vdc to 5 Vdc
		3 6-pin Bendix	<b>Electrical Connection</b>	5 0 Vdc to 10 Vdc
		6 1/2" NPT conduit w/ 36" cable	1 Option 7 with 36" cable	<b>Electrical Connection</b>
		7 Mini-Hirschmann	3 6-pin Bendix	1 Option 8 with 36" cable
		25 M12 x 1 (4-pin)	6 1/2" NPT conduit w/ 36" cable	3 6-pin Bendix
			7 Mini-Hirschmann	6 1/2" NPT conduit w/ 36" cable
			25 M12 x 1 (4-pin)	8 Hirschmann
				25 M12 x 1 (4-pin)
<b>CONNECTING TYPES</b>	0 Direct	2 100 mm SS spacer		
	1 50 mm SS spacer	3 Capillary w/ spiral protective sleeve		
<b>CAPILLARY LENGTH</b>	## Specify in feet (for options 3 and 4)			

Please consult your local NOSHOK Distributor or NOSHOK, Inc. for availability and delivery information.

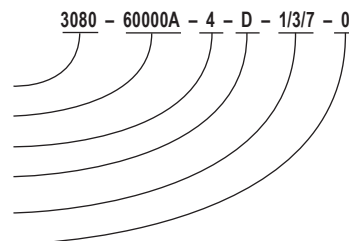
\* Refer to Instrument Connection diagram on previous page.

\*\* Not required for transmitters, switches, or any instrument other than a dial indicating gauge.

**Note:** Separate multiple options with forward slash "/"

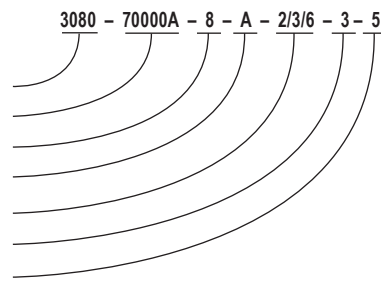
**EXAMPLE - With Pressure Gauge**

Load cell..... 3000 Series ND 80  
 Measuring range..... 60,000 lb<sub>f</sub>  
 Instrument..... 40-400 Series gauge  
 Instrument connection..... Left side connection  
 Options..... Glycerin filled gauge, set pointer, adjustable pointer  
 Connecting type..... Direct



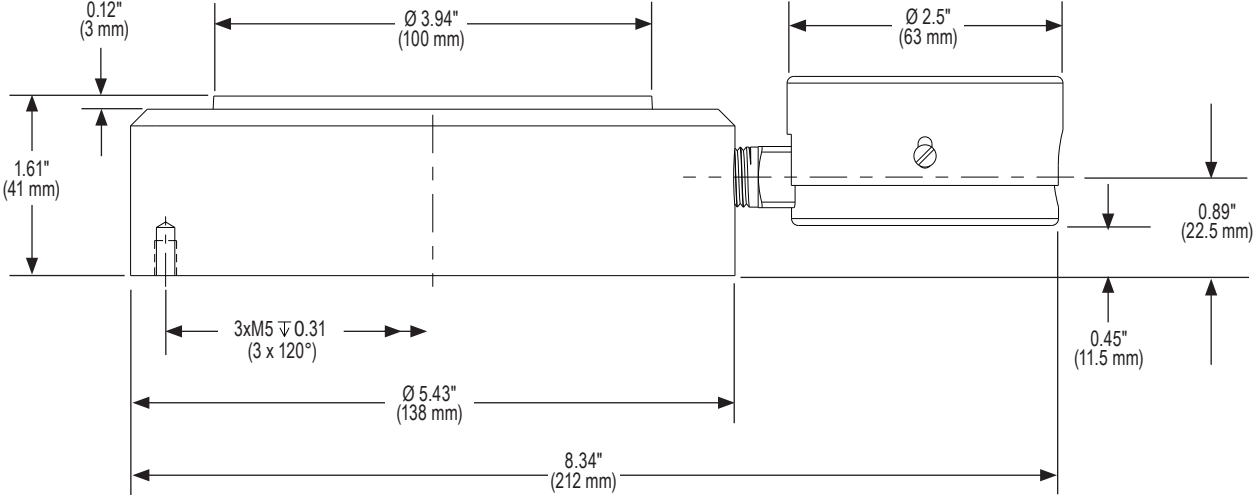
**EXAMPLE - With Pressure Transducer**

Load cell..... 3000 Series ND 80  
 Measuring range..... 70,000 lb<sub>f</sub>  
 Instrument..... 615 Series transducer  
 Instrument connection..... Bottom connection  
 Options..... 0.25% accuracy, 1 Vdc to 5 Vdc, 1/2" NPT w/36" cable  
 Connecting type..... Capillary w/spiral protective sleeve  
 Capillary length..... 5'

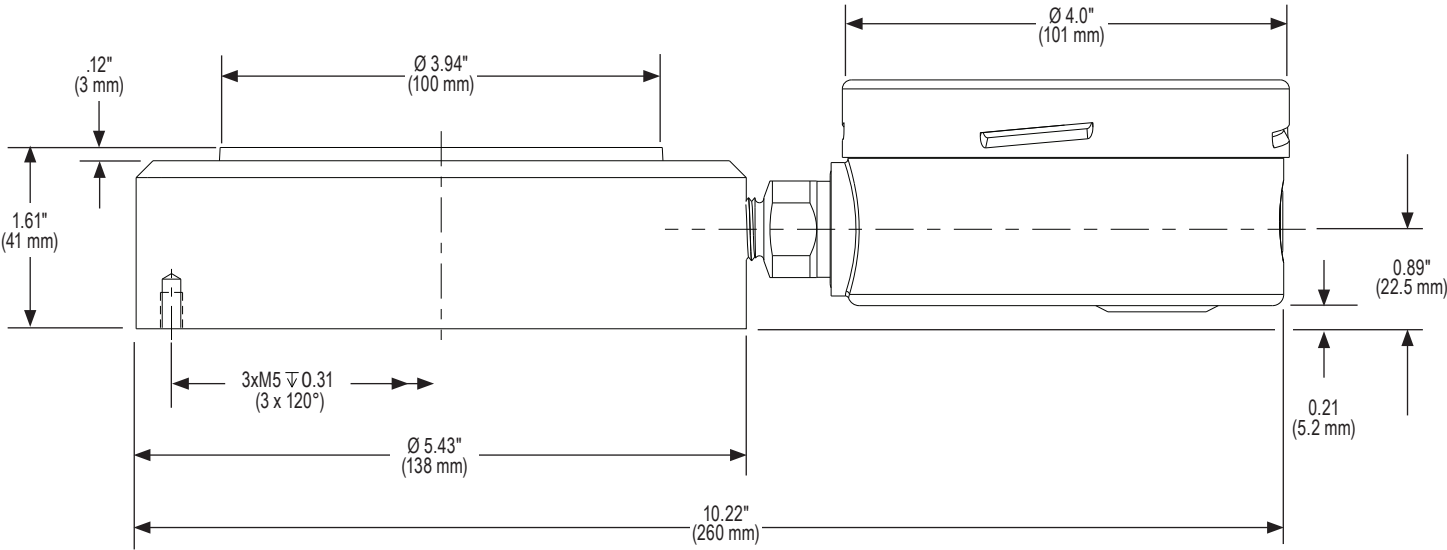


# Dimensions

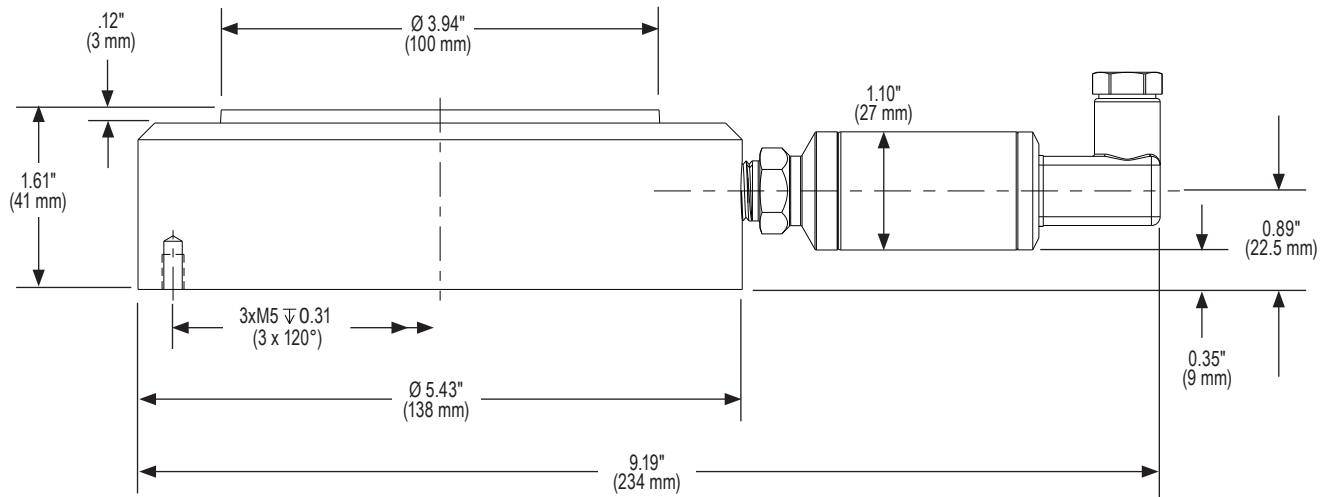
## With 25-300 Series Pressure Gauge



## With 40-901 Series Pressure Gauge



### With 100/200 Series Transducer



### With 615 Series Transducer

