

# Submittal Comments

**Item No:** 230519.01  
**(CSI No:)**

**Item** Thermometers & Gauges  
**Descript:**

**Re:** **Submittal** Comments  
**Cascade Science** Lab Renovation  
**2008-046.CSL** 8.3

*Architecture*  
*Engineering*  
*Technology*  
*Interior Design*  
*Landscape Architecture*

*Wil-Fra-Mar Building*  
*320 East Vermont Street*  
*Indianapolis IN 46204-1640*  
*317.263.6226*  
*317.263.6224 (fax)*  
*www.schmidt-arch.com*

Reviewed and checked only for conformance with design concepts and with the information given in the Contract Documents. Approval does not release the Contractor from the responsibility to provide appropriate quantities, field measurements, dimensional stability, installation, anchorage, and coordination with other trades or release the Contractor from responsibility for deviations from the requirements of the Contract Documents or from responsibility for errors and omissions contained thereon.

	Not approved. Resubmit
	Approved as noted. Correct and resubmit
	Approved as noted. No resubmittal required
XX	Approved as submitted
By: Lennie Brim	
Date: May 6, 2009	

Comments

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# D80 Series

## Dry or Liquid Filled • Stainless Steel Case

UTILITY GAUGES



D82LFB shown

- ▶ 1 1/2", 2", 2 1/2", 4" Dial Sizes
- ▶ ±1.6% Accuracy
- ▶ Stainless Steel Case
- ▶ Glycerine Fill Standard

The Trerice **D80 Series** Utility Gauge is designed for rugged performance requirements at an economical cost. This liquid filled gauge is furnished with a stainless steel case and crimped ring. Wetted parts are either bronze tube with brass socket or stainless steel.

- Optional features and case style variations available: Please consult the Options & Accessories Section for details.
- For correct use and application of all pressure gauges, please refer to: Pressure Gauge Standard ASME B40.100.

### Specifications

Models	Wetted Parts	
<b>D82B</b>	(dry)	Bronze tube, brass socket
<b>D82LFB</b>	(liquid filled)	brass socket
<b>D83SS</b>	(dry)	316 Stainless steel tube & socket
<b>D83LFSS</b>	(liquid filled)	
<b>Dial Sizes</b>	1 1/2", 2", 2 1/2", 4"	
<b>Fill</b>	Glycerine, other fills available See Optional Features Section	
<b>Movement</b>	<b>D82:</b> Brass <b>D83:</b> 316 Stainless steel	
<b>Connection</b>	Lower male or center back male, Lower back male on 4" D83	
<b>Case</b>	304 stainless steel, stem-mounted flangeless	
<b>Ring</b>	Crimped 304 stainless steel	
<b>Window</b>	Acrylic	
<b>Pointer</b>	Plain, black finished	
<b>Dial Face</b>	Aluminum, white background with black graduations and markings	
<b>Additional Features</b>	Restrictor screw standard on D83LFSS and D83SS	
<b>Accuracy</b>	±1.6% Full Scale	
<b>Maximum Temperature</b>	<b>150°F (65°C)</b>	
<b>Approximate Shipping Weight</b>	1 1/2" Dial Size: 0.4 lbs [0.18 kg] 2" Dial Size: 0.4 lbs [0.18 kg] 2 1/2" Dial Size: 0.5 lbs [0.23 kg] 4" Dial Size: 1.0 lbs [0.45 kg]	

### HOW TO ORDER

Sample Order Number: **D82LFB 25 02 L A 110**

Model	Dial Size	Connection Size	Connection Location	Units of Measure	Range Code
<b>D82LFB</b>	15 1 1/2"	01 1/8 NPT*	L Lower	A psi	See Standard Ranges
<b>D83LFSS</b>	20 2"	02 1/4 NPT**	B Back	D psi/kPa	
<b>D82B</b>	25 2 1/2"				
<b>D83SS</b>	40 4"				

\* 1/8 NPT connection size not available with 4" dial size.

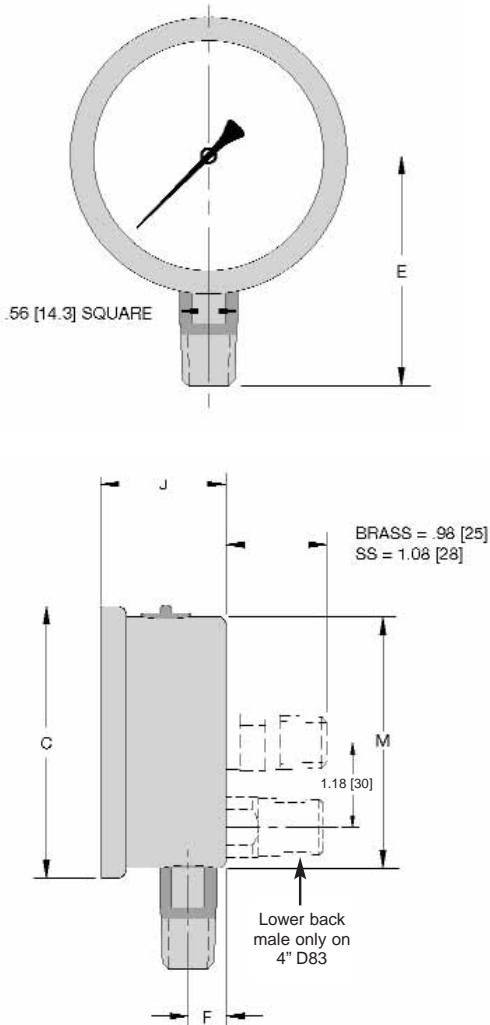
\*\* 1/4 NPT connection size not available with 1 1/2" dial size.



# D80 Series

Dry or Liquid Filled • Stainless Steel Case

All dimensions are nominal. Dimensions in [ ] are in millimeters.



## Standard Ranges

psi Ranges (A)		D82		D83	
Range Code	Specific Range (psi)	Figure Intervals	Minor Divisions	Figure Intervals	Minor Divisions
010	30" Hg to 0	5	0.5	5	0.5
020	30" Hg to 15 psi	10/5	1/0.5	10/5	1/0.5
030	30" Hg to 30 psi	10/10	2/1	10/5	2/1
040	30" Hg to 60 psi	10/10	2/2	10/10	2/1
050	30" Hg to 100 psi	30/20	2/2	30/20	5/2
060	30" Hg to 150 psi	30/30	10/5	30/30	10/5
070	30" Hg to 300 psi	30/50	10/5	30/50	10/5
080	0 to 15 psi	3	0.2	3	0.2
090	0 to 30 psi	5	0.5	5	0.5
100	0 to 60 psi	10	1	10	1
110	0 to 100 psi	20	2	10	2
120	0 to 160 psi	20	2	20	2
130	0 to 200 psi	20	2	20	2
140	0 to 300 psi	50	5	50	5
150	0 to 400 psi	50	5	50	5
160	0 to 600 psi	100	10	100	10
180	0 to 1000 psi	100	25	100	20
190	0 to 1500 psi	300	20	300	25
200	0 to 2000 psi	200	20	200	25
210	0 to 3000 psi	500	50	500	50
220	0 to 5000 psi	1000	100	1000	100

230	0 to 10000 psi	N/A	N/A	N/A	N/A
240	0 to 15000 psi	N/A	N/A	N/A	N/A

For dual scale ranges specify the appropriate Units of Measure: **D** (psi/kPa) followed by the corresponding **A** (psi) **Range Code**

Dial Size	C	E	F	J	M
1 1/2" D82	1.85 [47]	1.50 [38]	0.32 [8]	1.06 [27]	1.61 [41]
1 1/2" D83	1.85 [47]	1.50 [38]	0.32 [8]	1.06 [27]	1.61 [41]
2" D82	2.28 [58]	1.89 [48]	0.39 [10]	1.14 [29]	2.05 [52]
2" D83	2.28 [58]	2.05 [52]	0.35 [9]	1.18 [30]	2.05 [52]
2 1/2" D82	2.68 [68]	2.24 [57]	0.39 [10]	1.18 [30]	2.44 [62]
2 1/2" D83	2.68 [68]	2.32 [59]	0.51 [13]	1.38 [35]	2.44 [62]
4" D82	4.29 [109]	3.07 [78]	0.47 [12]	1.42 [36]	3.90 [99]
4" D83	4.29 [109]	3.94 [100]	0.75 [19]	1.93 [49]	3.94 [100]

UTILITY GAUGES

# Thermowells

## for Industrial Thermometers

**K.P. MEIRING CO** *KPM*  
 CHECKED BY: \_\_\_\_\_  
 DATE CHECKED: April 20, 2009  
 REVIEWED WITH EXCEPTIONS: \_\_\_\_\_ XX  
 REJECTED RESUBMIT: \_\_\_\_\_  
 The review is only for general conformance with design concepts given in the contract documents. Subcontractor is responsible for dimensions, quantities, coordination with other trades and performing his work in a safe manner. No change to contract requirements is intended.

THERMOWELLS

- **SX9 Solar**
- **AX9, BX9, CX9 Adjustable Angle**
- **AX, BX, CX Rigid Stem**
- **BX Plus**



**Lengths**

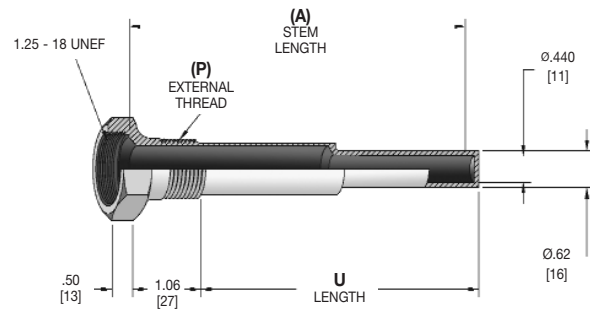
(A) Stem Length	Standard	with Lagging Extension	
	U Length	(T)	U Length
3 1/2"	2.50 [64]	1.00 [25]	1.70 [43]
6"	5.00 [127]	2.50 [64]	2.50 [64]
8"	7.00 [178]	2.50 [64]	4.50 [114]
12"	10.50 [267]	3.00 [76]	7.50 [191]

**Pressure Rating (psi)**

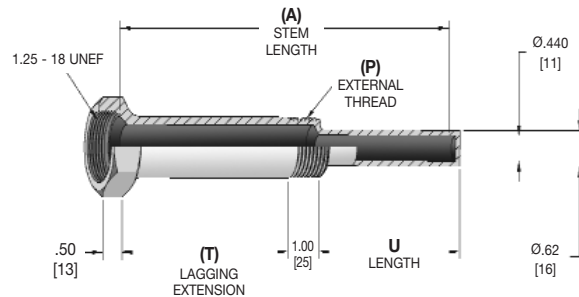
Material	Operating Temperature			
	70°F	200°F	400°F	600°F
Carbon Steel	610	550	430	350
304 Stainless Steel	630	570	460	380
316 Stainless Steel	650	600	570	500
Monel	540	480	440	400
Brass	300 psi @ 150°F		250 @ 350°F	

All dimensions

**Standard**



**with Lagging Extension**



Alternative materials and accessories are also available. Please consult the Options and Accessories Section for details.

Selection of the proper thermowell is the sole responsibility of the user. Temperature and pressure limitations must be considered. Improper application may cause failure of the thermowell, resulting in possible personal injury or property damage.

**HOW TO ORDER**

Sample Order Number: **3-4 F 2**

Thermowell Style	(P) External Thread	(A) Stem Length	(T) Lagging Extension	Material
3- Industrial	3 1/2 NPT*	F 3 1/2" Stem**	A 1" Extension (3 1/2" Stem only)	2 Brass
	4 3/4 NPT	J 6" Stem	D 2 1/2" Extension (6" and longer Stem only)†	3 Steel
	5 1 NPT	L 8" Stem	Omit if None	4 Monel
		R 12" Stem††		5 304SS
				6 316SS

\* Only available with 3 1/2" stem and 1" extension.  
 \*\* 3 1/2" stem Straight Shank.  
 † 3" extension on 12" stem.  
 †† 12" stem requires 1 NPT external thread.

