

# WEISS INSTRUMENTS

## Stainless Steel Case Gauges



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Where vibration, corrosion and pulsating conditions exist, the Weiss line of stainless steel cased liquid filled industrial pressure gauges are designed to meet the most severe applications.

Some recommended uses are for agricultural equipment, hydraulic systems, oil field equipment, pumps, compressors and car wash systems. All liquid filled gauges are offered for direct mounting to the equipment, wall or panel mounting. With ranges from Vacuum to 15,000 psi, the Weiss line will provide the instrument for both the specific requirement of the OEM and the industrial user.

## CASE STYLES

Direct Mounted, Front Flange, Back Flange and U-Clamp mounts.



C-Tube

Coiled Spiral Tube

## INTERNALS

Phosphor bronze or Stainless Steel "C-Tube" or Coiled Spiral Bourdon Tube Assembly. The Coiled Spiral Bourdon Tube is standard for pressure ranges of 1000 psi and above.

## LIQUID FILLINGS

Glycerine is Standard and is suitable for temperature conditions between +20°F and +150°F. Silicone filling rated at -40°F/150°F is available on special order.

## INDICATING DIALS

Nominal 2 1/2", 4" and 6". Custom dials are available.

## RELIEF VALVE

Provided on all Liquid Filled Pressure Gauges to compensate for internal case pressure build-up.

**WARNING:** Misuse of this product may cause explosion and personal injury, read ANSI B40.1 before installation or use. Glycerine can combine with *strong oxidizing agents* including (but not limited to) chlorine, nitric acid and hydrogen peroxide and result in an explosion which can cause property damage. Consult factory for proper filling medium in hazardous service. Additional information can be obtained by reading Pressure Gauge Standard ANSI/ASME B40.1 available from the *American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, NY 10017.*

## Liquid Filled Gauges-Crimped Ring Stainless Steel Cases 2 1/2"

### LF251



LF251U

LF251F

**CASE & RING:** 2 1/2" type 304 stainless steel case with polished stainless steel crimped ring.  
**DIAL:** ABS, white with black and red markings.(psi & kPa)  
**WINDOW:** Clear acrylic.  
**TUBE:** Phosphor Bronze to 6000psi, 316SS to 10,000psi.  
**SOCKET:** Brass with threaded restrictor.  
**POINTER:** Black anodized aluminum.  
**MOVEMENT:** Brass.  
**ACCURACY:** ±1.6% of span.  
**CONNECTION:** 1/4" NPT bottom or center back.  
**RANGES:** Vacuum, Compound, Pressure to 10,000 psi.

**PANEL MOUNTING OPTIONS**  
**U-CLAMP:** Series LF251U  
**FRONT FLANGE:** Series LF251F

### LF252



**CASE & RING:** 2 1/2" type 304 stainless steel case with polished stainless steel crimped ring.  
**DIAL:** ABS, white with black and red markings.(psi & kPa)  
**WINDOW:** Clear acrylic.  
**TUBE:** Type 316 Stainless Steel.  
**SOCKET:** Type 316 Stainless Steel with threaded restrictor.  
**POINTER:** Black anodized aluminum.  
**MOVEMENT:** Stainless Steel.  
**ACCURACY:** ±1.6% of span.  
**CONNECTION:** 1/4" NPT bottom or center back.  
**RANGES:** Vacuum, Compound, Pressure to 10,000 psi.

**PANEL MOUNTING OPTIONS**  
**U-CLAMP:** Series LF252U  
**FRONT FLANGE:** Series LF252F

## Liquid Filled Gauges-Crimped Ring Stainless Steel Cases 4"

### LF441



**CASE & RING:** 4" type 304 stainless steel thin line case with polished stainless steel crimped ring.  
**DIAL:** White aluminum with black and red markings. (psi & kPa)  
**WINDOW:** Clear acrylic.  
**TUBE:** Phosphor Bronze.  
**SOCKET:** Brass with threaded restrictor.  
**POINTER:** Black anodized aluminum.  
**MOVEMENT:** Brass rotary type with bushings.  
**ACCURACY:** 1% of span.  
**CONNECTION:** 1/4" NPT bottom.  
**RANGES:** Vacuum, Compound, Pressure to 1000 psi.

**PANEL MOUNTING OPTIONS**  
**BACK FLANGE:** Series LF441BF

## Liquid Filled Gauges-Crimped Ring Stainless Steel Cases 4"

### LF442



**CASE & RING:** 4" type 304 stainless steel case with polished stainless steel crimped ring.

**DIAL:** White aluminum with black and red markings.

**WINDOW:** Safety glass.

**TUBE:** Type 316 stainless steel.

**SOCKET:** Type 316 S.S. with threaded restrictor.

**POINTER:** Black anodized aluminum.

**MOVEMENT:** Stainless steel rotary type with bushings.

**ACCURACY:** 1% of span.

**CONNECTION:** 1/4" NPT bottom or center back.

**RANGES:** Vacuum, Compound, Pressure to 15,000 psi.

#### PANEL MOUNTING OPTIONS

**FRONT FLANGE:** Series LF442F

**BACK FLANGE:** Series LF442BF

## Liquid Filled Gauges-Bayonet Ring Stainless Steel Cases 6"

### LF602



**CASE & RING:** 6" type 304 stainless steel case with polished stainless steel bayonet ring.

**DIAL:** White aluminum with black and red markings.

**WINDOW:** Tempered Glass.

**TUBE:** Type 316 stainless steel.

**SOCKET:** Type 316 stainless steel with threaded restrictor

**POINTER:** Black anodized aluminum, micro adjustable.

**MOVEMENT:** Stainless steel rotary type with bushings.

**ACCURACY:** 1/2% of span.

**CONNECTION:** 1/4" NPT bottom.

**RANGES:** Vacuum, Compound, Pressure to 15,000 psi.

#### PANEL MOUNTING OPTIONS

**BACK FLANGE:** Series LF602BF

## Panel Mounting Options



**FRONT FLANGE:** Series LF442F



**BACK FLANGE:** Series LF602BF



## NF252



**CASE & RING:** 2 1/2" type 304 stainless steel case with polished stainless steel bayonet lock ring.  
**DIAL:** ABS, white with black and red markings (psi & kPa).  
**WINDOW:** Clear acrylic.  
**TUBE:** Type 316 stainless steel.  
**SOCKET:** Type 316 stainless steel with threaded restrictor.  
**POINTER:** Black anodized aluminum, adjustable.  
**MOVEMENT:** Stainless steel.  
**ACCURACY:** ±1.6% of span.  
**CONNECTION:** 1/4" NPT bottom or center back.  
**RANGES:** Vacuum, Compound, Pressure to 6000 psi.

## NF402



**CASE & RING:** 4" type 304 stainless steel case with polished stainless steel bayonet ring.  
**DIAL:** White aluminum with black and red markings (psi & kPa).  
**WINDOW:** Safety glass.  
**TUBE:** Type 316 Stainless Steel.  
**SOCKET:** Type 316 Stainless Steel with threaded restrictor.  
**POINTER:** Black anodized aluminum, micro adjustable.  
**MOVEMENT:** Stainless Steel rotary type with bushings.  
**ACCURACY:** 1% of span.  
**CONNECTION:** 1/4" NPT bottom.  
**RANGES:** Vacuum, Compound, Pressure to 5,000 psi.

**PANEL MOUNTING OPTIONS**  
**BACK FLANGE:** Series NF402BF

## NF602



**CASE & RING:** 6" type 304 stainless steel case with blow out disc, polished stainless steel bayonet ring.  
**DIAL:** White aluminum with black and red markings.  
**WINDOW:** Tempered Glass.  
**TUBE:** Type 316 Stainless Steel.  
**SOCKET:** Type 316 Stainless Steel with threaded restrictor.  
**POINTER:** Black anodized aluminum, micro adjustable.  
**MOVEMENT:** Stainless steel rotary type with bushings.  
**ACCURACY:** 1/2% of span.  
**CONNECTION:** 1/4" NPT bottom.  
**RANGES:** Vacuum, Compound, Pressure to 15,000 psi.

**PANEL MOUNTING OPTIONS**  
**BACK FLANGE:** Series NF602BF

## Industrial Stainless Steel Cases 4" and 6" - Copper Alloy Wetted Parts

### NF401



**CASE & RING:** 4" type 304 stainless steel case with polished stainless steel bayonet ring.

**DIAL:** White aluminum with black and red markings (psi & kPa).

**WINDOW:** Clear acrylic.

**TUBE:** Phosphor Bronze to 600psi, 316SS to 5,000psi.

**SOCKET:** Brass with threaded restrictor.

**POINTER:** Black anodized aluminum, adjustable.

**MOVEMENT:** Brass rotary type with bushings.

**ACCURACY:** 1% of span.

**CONNECTION:** 1/4" NPT bottom.

**RANGES:** Vacuum, Compound, Pressure to 5000 psi.

**PANEL MOUNTING OPTIONS**

**BACK FLANGE:** Series NF401BF

### NF601



**CASE & RING:** 6" type 304 stainless steel case with blow out disc, polished stainless steel bayonet ring.

**DIAL:** White aluminum with black and red markings (psi & kPa).

**WINDOW:** Tempered Glass.

**TUBE:** Phosphor Bronze.

**SOCKET:** Brass with threaded restrictor.

**POINTER:** Black anodized aluminum, micro adjustable.

**MOVEMENT:** Stainless steel rotary type with bushings.

**ACCURACY:** 1/2% of span.

**CONNECTION:** 1/4" NPT bottom.

**RANGES:** Vacuum, Compound, Pressure to 600 psi.

**PANEL MOUNTING OPTIONS**

**BACK FLANGE:** Series NF601BF

## Panel Mounting Options

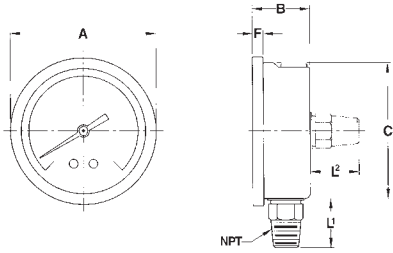


**BACK FLANGE:** Series NF401BF



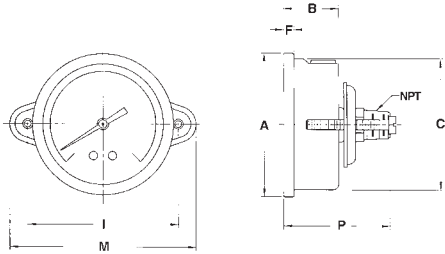
**BACK FLANGE:** Series NF601BF

## Case Dimensions LF & NF25



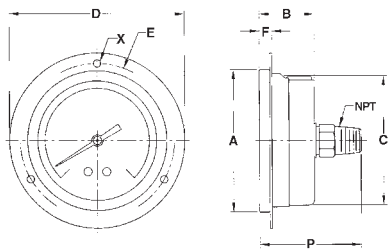
LOWER AND CENTER BACK CONNECTION

SERIES		A	B	C	F	L <sub>1</sub>	L <sub>2</sub>	NPT
LF251	INCH	2.68	1.18	2.45	.24	.93	1.00	1/4"
LF252	MM	68	30	62	6	24	25	
NF252								



U CLAMP MOUNT - CENTER BACK CONNECTION

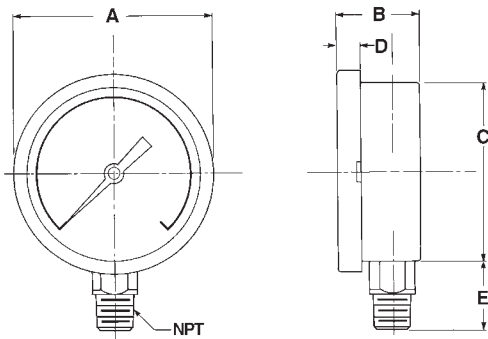
SERIES		A	B	C	F	I	M	P	PANEL HOLE	NPT
LF251U	INCH	2.68	1.18	2.45	.24	3.15	3.66	2.20	2.50	1/4"
LF252U	MM	68	30	62	6	80	93	56	64	



FRONT FLANGE - CENTER BACK CONNECTION

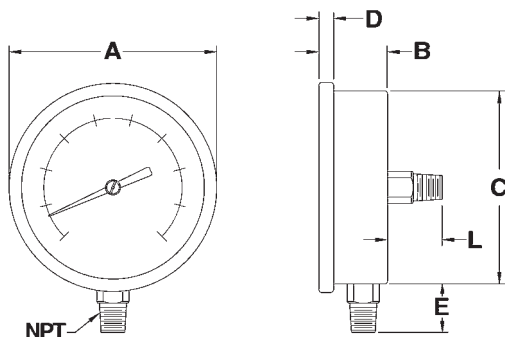
SERIES		A	B	C	D	E	F	X	PANEL HOLE	NPT	
LF251F	INCH	2.68	1.18	2.45	3.45	2.95	.28	2.20	.19	2.65	1/4"
LF252F	MM	68	30	62	88	75	7	56	5	67	

## Case Dimensions LF & NF4



LOWER CONNECTION

SERIES		A	B	C	D	E	NPT
NF401	INCH	4.35	1.54	3.91	.58	1.24	1/4"
NF402	MM	110	39	99	15	31.5	

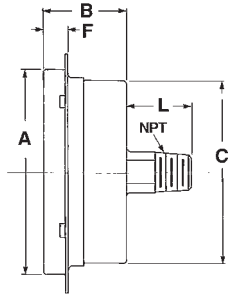
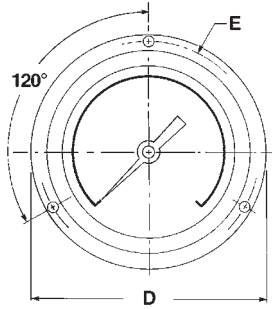


LOWER AND CENTER BACK CONNECTION

SERIES		A	B	C	D	E	L	NPT
LF441	INCH	4.28	1.42	3.97	.31	.95	1.13	1/4"
LF442	MM	109	36	101	8	24	29	

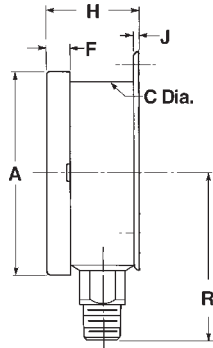
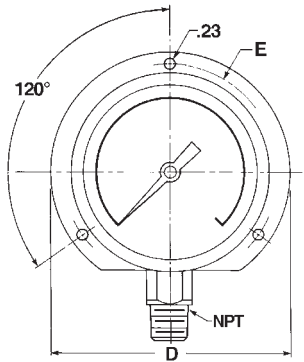


# Case Dimensions LF & NF4



FRONT FLANGE - CENTER BACK CONNECTION

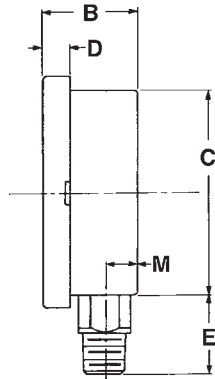
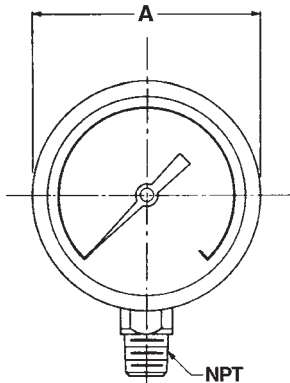
SERIES		A	B	C	D	E	F	L	PANEL HOLE	NPT
LF442F	INCH	4.28	1.43	3.97	5.17	4.62	.39	1.37	4.10	1/4"
	MM	109	36	101	130	118	10	34.8	104	



BACK FLANGE - LOWER CONNECTION

SERIES		A	C	D	E	F	H	R	J	NPT
LF441BF NF401BF LF442BF NF402BF	INCH	4.28	3.97	5.16	4.65	.31	1.43	3.08	.04	1/4"
	MM	109	101	131	118	8	36	78	1	

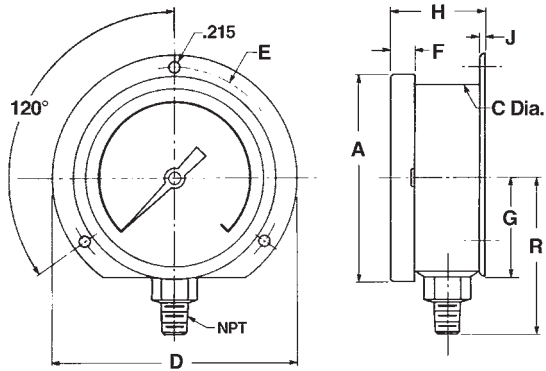
# Case Dimensions LF & NF6



LOWER CONNECTION

SERIES		A	B	C	D	E	M	NPT
NF601 LF602 NF602	INCH	6.33	1.95	5.90	.66	1.16	.60	1/4"
	MM	160	50	150	17	29	15	

# Case Dimensions LF & NF6



BACK FLANGE - LOWER CONNECTION

SERIES		A	B	C	D	E	F	G	H	R	J	NPT
NF601BF	INCH	6.33	5.90	7.64	6.85	.66	3.4	1.95	4.08	4.25	.04	1/4"
LF602BF	MM	160	150	194	174	17	86	50	104	108	1	
NF602BF												

## Standard Ranges

### PRESSURE - Series LF & NF25

Range	Figure interval	Minor graduation
0-15	2	0.5
0-30	5	0.5
0-60	10	1
0-100	10	2
0-160	20	2
0-200	50	5
0-300	50	5
0-400	100	10
0-600	100	10
0-1000	200	20
0-1500	200	20
0-2000	500	50
0-3000	500	50
0-5000	1000	100
0-6000	1000	100
0-10,000	2000	200

### COMPOUND

Range	Figure interval		Minor graduation	
	in Hg	psi	in Hg	psi
30"Hg-30psi	10	5	2	1
30"Hg-60psi	10	10	2	2
30"Hg-100psi	30	20	5	2
30"Hg-150psi	30	20	5	5
30"Hg-200psi	30	20	5	5
30"Hg-300psi	30	50	10	5

### VACUUM

Range	Figure interval	Minor graduation
0-30"Hg	5" Hg	0.5" Hg

### PRESSURE - Series LF & NF4 and LF & NF6

Range	Figure interval	Major grads	Minor grads
0-15	2	2	0.1
0-30	5	5	1.0
0-60	5	5	0.5
0-100	10	10	1
0-160	20	10	1
0-200	20	20	2
0-300	50	50	2
0-400	50	10	5
0-600	100	10	10
0-1000	100	10	10
0-1500	300	100	10
0-2000	200	100	20
0-3000	500	100	20
0-5000	500	100	50
0-10,000	1000	500	100
0-15,000	3000	1000	100

### COMPOUND

Range	Figure interval		Minor graduation	
	in Hg	psi	in Hg	psi
30"Hg-30psi	10	5	0.5	1
30"Hg-60psi	10	10	0.5	1
30"Hg-100psi	30	10	1	2
30"Hg-150psi	30	30	1	5
30"Hg-300psi	30	50	2	10

### VACUUM

Range	Figure interval	Minor graduation
0-30" Hg	5" Hg	0.5" Hg

# TO SPECIFY

CHOOSE CAT. NO.			PLUS RANGE CODE			PLUS CONNECTION	
INDICATES CONSTRUCTION			RANGE CODE			SIZE & LOCATION	
CAT. NO. -	DIAL SIZE -	INTERNALS	RANGE CODE	RANGE - psi	kPa		
<b>LIQUID FILL</b>							
LF251	2 1/2"	Bronze	030	0-30	0-200	<b>4L</b>	= 1/4" Lower
LF252	2 1/2"	316S.S.	060	0-60	0-400		
LF441*	4"	Bronze	100	0-100	0-700	<b>4B</b>	= 1/4" Back
LF442*	4"	316S.S.	160	0-160	0-1100		
LF602	6"	316S.S.	200	0-200	0-1400		
			300	0-300	0-2100		
			400	0-400	0-2800		
<b>DRY</b>							
NF252	2 1/2"	316S.S.	600	0-600	0-4200		
NF401	4"	Bronze	1000	0-1000	0-7000		
NF402	4"	316S.S.	1500	0-1500	0-10,000		
NF601	6"	Bronze	2000	0-2000	0-14,000		
NF602	6"	316S.S.	3000	0-3000	0-21,000		
			5000	0-5000	0-40,000		
<i>*Thin Line Case</i>			6000	0-6000	0-42,000		
			10000	0-10,000	0-70,000		
			15000	0-15,000	0-100,000		
			VAC	0-30"HG	-100-0		
			V30	30"-0-30	-100-200		
			V60	30"-0-60	-100-400		
			V100	30"-0-100	-100-700		
			V150	30"-0-150	-100-1000		
			V200	30"-0-200	-100-1400		
			V300	30"-0-300	-100-2100		

Ex: LF251 – 100 – 4L

## PRESSURE MEASUREMENT CROSS REFERENCE CHART

psi	atms.	" H <sub>2</sub> O	mm H <sub>2</sub> O	cm H <sub>2</sub> O	oz/in <sup>2</sup>	Kg/cm <sup>2</sup>	" Hg	mm Hg (Torr)	cm Hg	mbar	bar	Pa (N/m <sup>2</sup> )	kPa	MPa
1	0.0681	27.71	703.8	70.38	16	0.0704	2.036	51.715	5.17	68.95	0.0689	6895	6.895	0.0069
14.7	1	407.2	10,343	1,034.3	235.1	1.033	29.92	760	76	1013	1.013	101,325	101.3	0.1013
0.0361	0.00246	1	25.4	2.54	0.5775	0.00254	0.0735	1.866	0.187	2.488	0.00249	248.8	0.249	0.00025
0.001421	0.000097	0.0394	1	0.1	0.0227	0.0001	0.00289	0.0735	0.00735	0.098	0.000098	9.8	0.0098	0.00001
0.01421	0.000967	0.3937	10	1	0.227	0.001	0.0289	0.735	0.0735	0.98	0.00098	98	0.098	0.0001
0.0625	0.00425	1.732	43.986	4.40	1	0.0044	0.1273	3.232	0.323	4.31	0.00431	431	0.431	0.00043
14.22	0.968	394.1	100,010	1,001	227.6	1	28.96	735.6	73.56	980.7	0.981	98,067	98.07	0.0981
0.4912	0.03342	13.61	345.7	34.57	7.858	0.0345	1	25.4	2.54	33.86	0.0339	3386	3.386	0.00339
0.01934	0.001316	0.536	13.61	1.361	0.310	0.00136	0.0394	1	.1	1.333	0.001333	133.3	0.1333	0.000133
0.1934	0.01316	5.358	136.1	13.61	3.10	0.0136	0.394	10	1	13.33	0.01333	1333	1.333	0.00133
0.0145	0.000987	0.4012	10.21	1.021	0.2321	0.00102	0.0295	0.75	0.075	1	0.001	100	0.1	0.0001
14.504	0.987	401.9	10,210	1021	232.1	1.02	29.53	750	75	1000	1	100,000	100	0.1
0.000145	0.00001	0.00402	0.102	0.0102	0.00232	0.00001	0.000295	0.0075	0.00075	0.01	0.00001	1	0.001	0.000001
0.14504	0.00987	4.019	102.07	10.207	2.321	0.0102	0.295	7.5	0.75	10	0.01	1,000	1	0.001
145.04	9.869	4019	102,074	10,207	2321	10.2	295.3	7500	750.	10,000	10	1,000,000	1,000	1



Send for Weiss Literature to match your specific application.



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