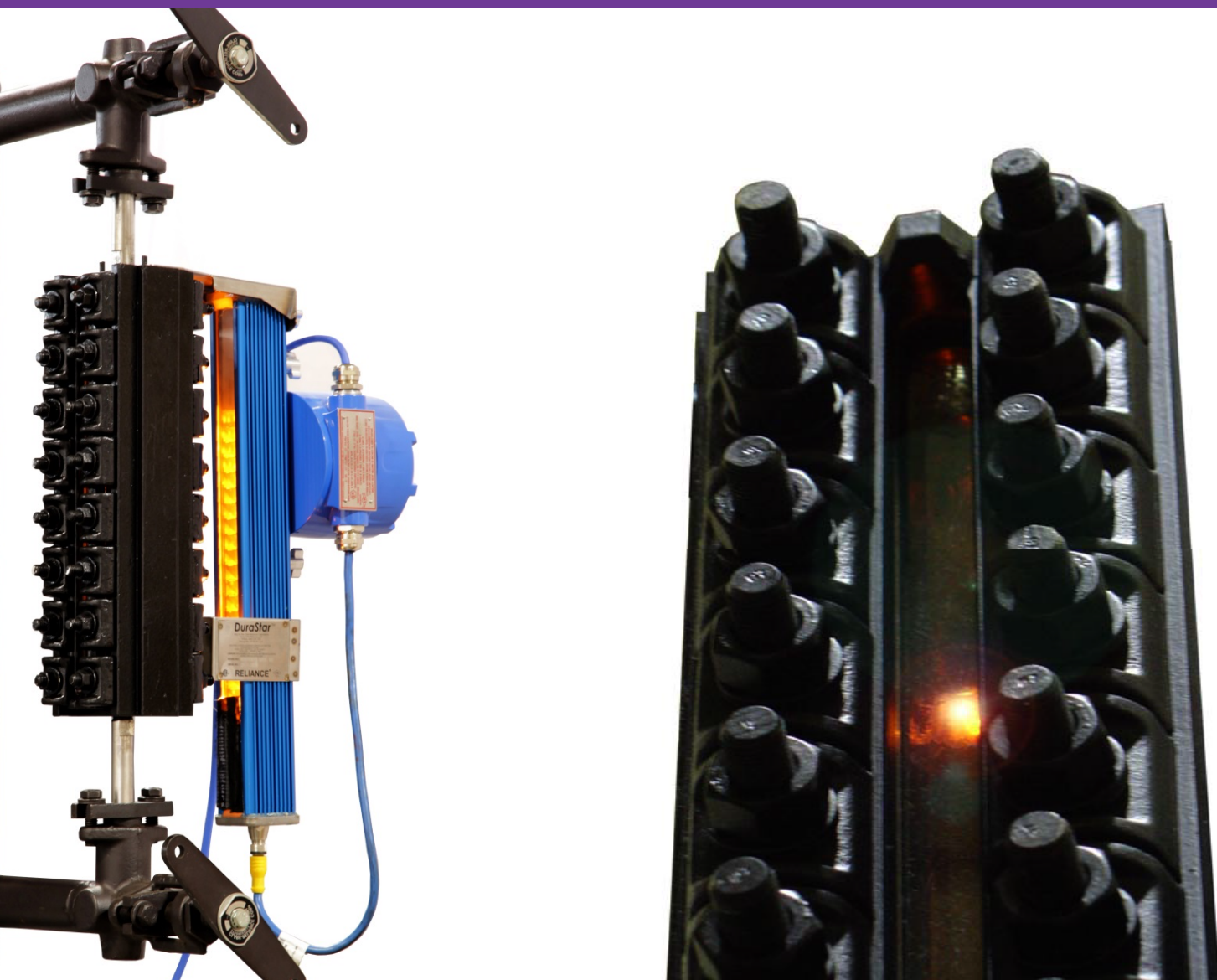


# Flat Glass Water Gages and DuraStar™



**Reliance®**

A PRODUCT OF CLARK-RELIANCE

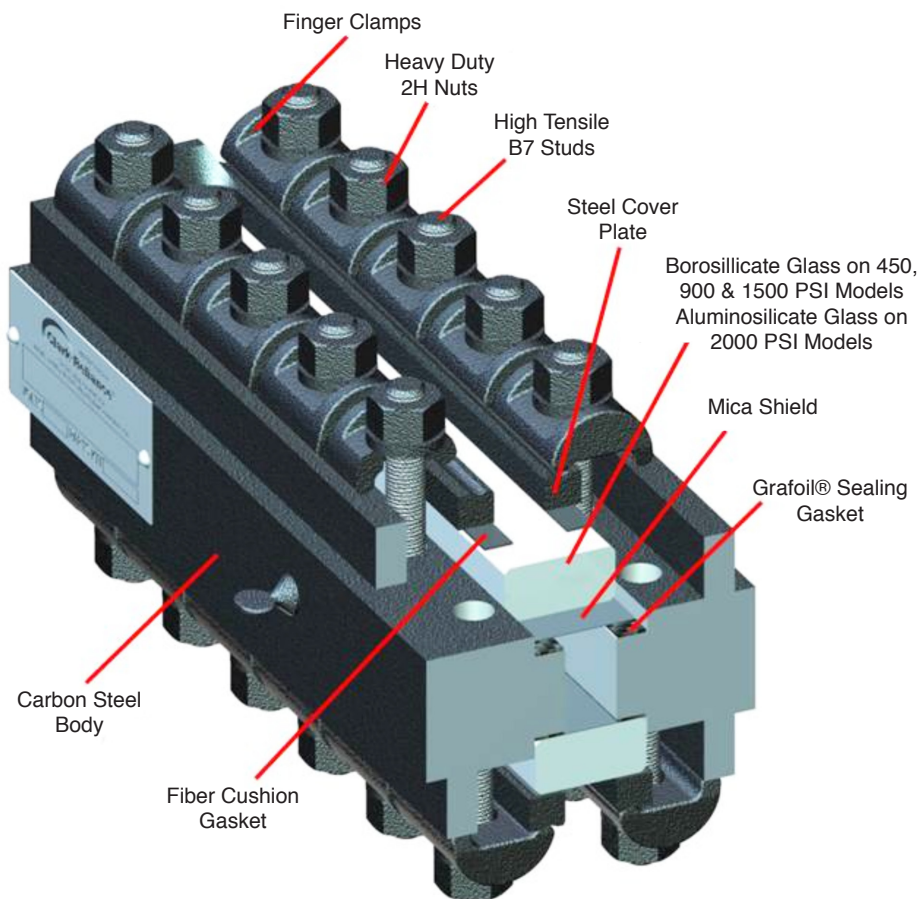
# Reliance<sup>®</sup>

## Flat Glass Gages

The precision manufacturing of these time-tested designs assures outstanding performance and service life. Choose from single, double or triple windows for ultimate visibility.

FG Series Gages provide wide-body construction for added strength and rigidity. Tempered flat glass composition of premium quality to resist thermal shock. All glass is tested for surface trueness prior to assembly and is protected with a high quality mica shield for steam applications.

All models feature finger-clamps which impart a uniform, perpendicular load across the glass surface, assuring gasket tightness. This design allows easy dismantling for cleaning and servicing.



A window slot, 5/8" (15.9 mm) wide, provides high visibility gage reading. For many installations, Water Gage Illuminators are recommended to improve gage readability.

# Flat Glass Water Gages 450 – 2000 PSI

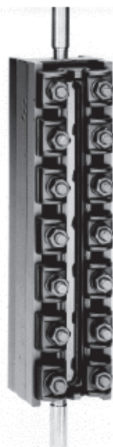
## FG Series Flat Glass Gages feature four functional designs:

### To 450 PSI

(31 Bar G, 31.6 Kg/cm<sup>2</sup>)

SINGLE WINDOW GAGES						
MODEL NUMBER	VISIBILITY		MINIMUM WATER GAGE CENTERS			
	INCHES	MM	BG404S		SG854	
			INCHES	MM	INCHES	MM
FG404	6-5/8	168	14	356	17	432
FG405	7-3/4	197	16	406	18	457
FG406	9	229	17	432	20	508
FG407	10-1/8	257	18	457	21	533
FG408	11-3/4	298	20	508	22	559
FG409	12-1/2	318	20	508	23	584
DOUBLE WINDOW GAGES						
FG466	15	381	24	610	26	660
FG477	17-1/2	444	26	660	29	737
FG488	20	508	29	737	31	787
FG499	21-1/2	546	30	762	33	838

Three or more window models available upon request.



### To 900 PSI

(62.1 Bar G, 63.27 Kg/cm<sup>2</sup>)

SINGLE WINDOW GAGES					
MODEL NUMBER	VISIBILITY		MINIMUM WATER GAGE CENTERS		
	INCHES	MM	INCHES	MM	
				INCHES	MM
FG904	6-5/8	168	17	432	
FG905	7-3/4	197	18	457	
FG906	9	229	20	508	
FG907	10-1/8	257	21	533	
FG908	11-3/4	298	22	559	
FG909	12-1/2	318	23	584	
DOUBLE WINDOW GAGES					
FG966	15	381	26	666	
FG977	17-1/2	444	29	737	
FG988	20	508	31	787	
FG999	21-1/2	546	33	838	

Minimum centers quoted apply to Clark-Reliance Gage Valve Series SG854 / SG860.

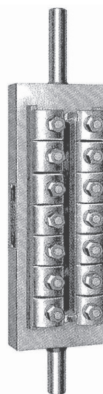


### To 1500 PSI

(103.4 Bar G, 105.5 Kg/cm<sup>2</sup>)

SINGLE WINDOW GAGES				
MODEL NUMBER	VISIBILITY		MINIMUM WATER GAGE CENTERS	
	INCHES	MM	INCHES	MM
FG1504	6-5/8	168	20	508
FG1505	7-3/4	197	21	533
FG1506	9	229	23	584
FG1507	10-1/8	257	24	609
FG1508	11-3/4	298	25	635
FG1509	12-1/2	318	26	660
DOUBLE WINDOW GAGES				
FG1566	15	381	29	737
FG1577	17-1/2	432	31	787
FG1588	19-1/2	495	33	838
FG1599	21	533	35	889

Three or more window models available upon request.  
Minimum centers apply to Clark-Reliance Gage Valve Series SG854 / SG860.



### To 2000 PSI

(138 Bar G, 140.6 Kg/cm<sup>2</sup>)

SINGLE WINDOW GAGES				
MODEL NUMBER	VISIBILITY		MINIMUM WATER GAGE CENTERS	
	INCHES	MM	INCHES	MM
FG2004	6-5/8	168	15	381
FG2005	7-3/4	197	16	406
FG2006	9	229	17	432
FG2007	10-1/8	257	19	483
DOUBLE WINDOW GAGES				
FG2055	12	305	20	508
FG2066	15	381	23	584
FG2077	17	432	25	635

Three or more window models available upon request.  
Minimum centers apply to Clark-Reliance Gage Valve Series SG777.  
All FG2000 Series Gages are supplied with flanged connections.



Shown with expansion loop option

# DuraStar™

## Flat Glass Gage LED Illuminator

### The Most Dependable LED Illuminator for all Reliance® Flat Glass Level Gages

- High Contrast
- Superior Visibility Day or Night
- Field Upgradable
- Maintenance Free
- Long Life ~100,000 hrs.
- No Heat Generation
- Versatile  
- *Continuous or "On-Demand"*
- Amber LED's for high intensity "star-like" image of the water line
- Longest Field-of-View
- Pays for itself in electricity savings alone!
- No weather-proof illuminator hood used
- Models for Ordinary or Classified locations
- ATEX models available



#### **SPECIFICATIONS FOR ORDINARY LOCATION MODELS**

Power Supply: 100- 277 VAC @ 50/60 Hz\*

100-240 VAC @50/60Hz

Power Consumption: 320 mA @ 100 VAC

Est. Life: 100,000 Hours (continuous)

Agency Approvals: FM Ordinary Locations

CFM Ordinary Locations

Recommended Wire Size: 12AWG- 18AWG

Max dist. from power supply to light: 700ft. (216m)

Ambient Temperature: -40F (-40C) to 160F (70C)

Electrical Connection: 3/4" FNPT

\*Voltage for North America Only

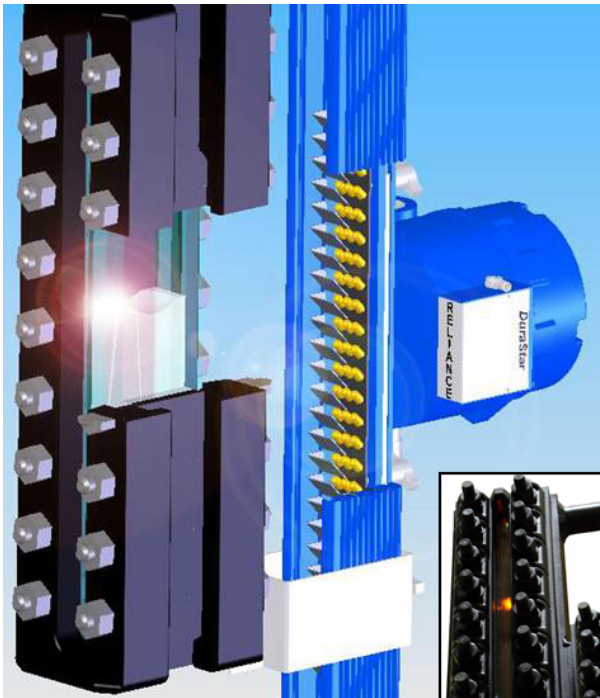
The DuraStar™ is approved for use in Class 1, Div 1, Group B, C & D environments. Contact your local representative or a Reliance Applications Engineer to configure a DuraStar™ for your transparent glass level gages.



For data on Classified Area and ATEX models, consult factory.

# DuraStar™

## Flat Glass Gage LED Illuminator



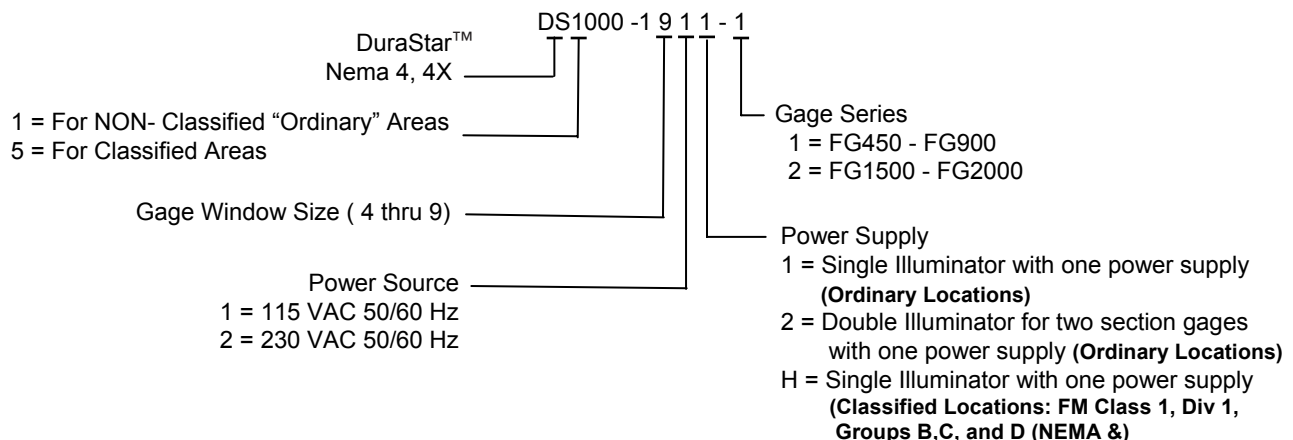
The DuraStar™ Illuminator uses three columns of “directed” amber color LED’s to create a brilliant star-like image at the water level. The DuraStar™ easily attaches to new or existing Reliance level gages without the use of tools.



Explosion Proof Power Supply

Intrinsically Safe Lighting Circuit

DuraStar™ Model No.	Fits Gage Glass	Length (Inches)	Length (mm)	Wt (lb)
DS1000-1411-1	FG404 or FG904	11.75	298	7.50
DS1000-1511-1	FG405 or FG905	13.00	330	7.75
DS1000-1611-1	FG406 or FG906	14.50	368	8.00
DS1000-1711-1	FG407 or FG907	15.75	400	8.25
DS1000-1811-1	FG408 or FG908	17.25	438	8.50
DS1000-1911-1	FG409 or FG909	18.00	457	8.75
DS1000-1411-2	FG1504 or FG2004	13.00	330	7.75
DS1000-1511-2	FG1505 or FG2005	14.50	368	8.00
DS1000-1611-2	FG1506 or FG2006	15.75	400	8.25
DS1000-1711-2	FG1507 or FG2007	16.50	419	8.50
DS1000-1811-2	FG1508	18.00	457	8.75
DS1000-1911-2	FG1509	19.00	483	9.00



### Notes:

1. For gages with three or more sections, combine single and double illuminators to minimize power supply requirements.
2. For remote mounting of power supply, specify Part No. V20602 for a 6.5’ power cable extension.
3. Consult Factory for assistance with ATEX approved models and specifications.

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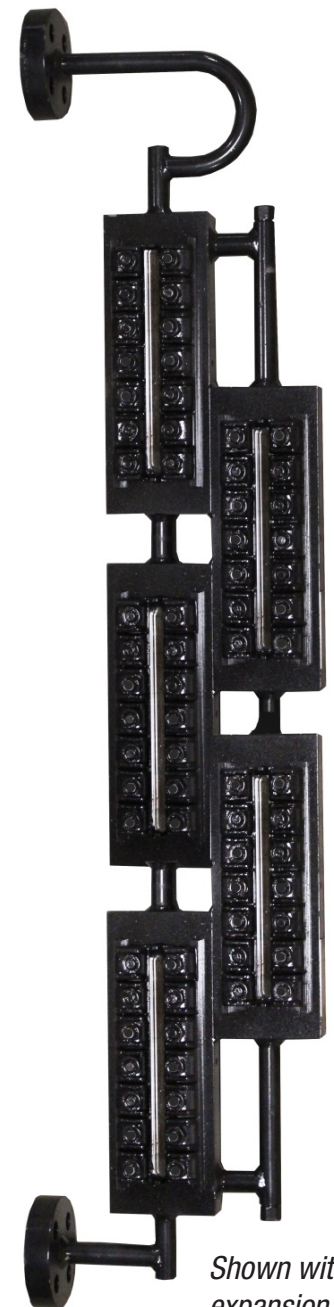
## Sizing Multiple Section Gages

### Maximum Water Gage Visibility for Flat Glass Gages

Dimensions - Inches (mm)

# of Sections	Glass Size				
	5	6	7	8	9
Three	21.25 (540)	25 (635)	28.375 (721)	33.25 (845)	35.5 (902)
Four	28 (711)	33 (838)	37.5 (953)	44 (1118)	47 (1194)
Five	34.75 (883)	41 (1041)	46.625 (1184)	54.75 (1391)	58.5 (1486)
Six	41.5 (1054)	48 (1219)	55.75 (1416)	65.5 (1664)	70 (1778)

- 1" (25.4 mm) minimum overlap on all multiple section designs
- Size 8 and 9 are not available for FG2000 series



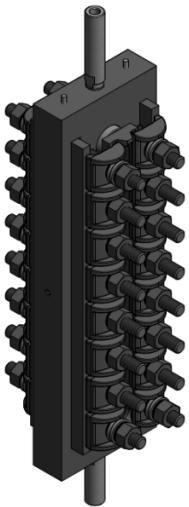
*Shown with  
expansion  
loop option*

**Note:** Gages with more than 3 sections will be offered with flanged connections.

# Reliance<sup>®</sup>

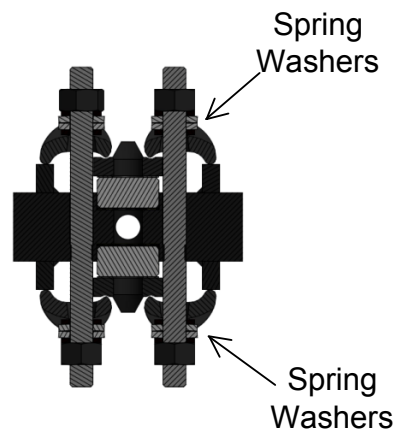
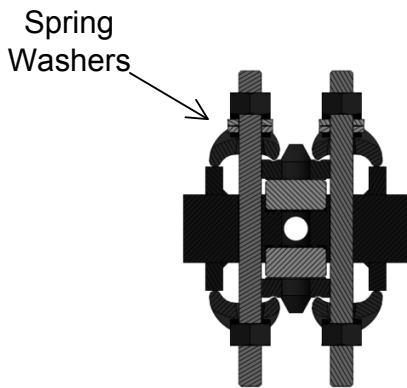
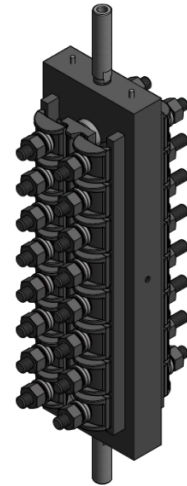
## Live Loading Options

For longer life on FG1500/FG2000 series installed on applications with frequent cycling.



Spring washers installed only on the 4 corners on one side

Spring washers installed on all studs on one side of the gage.



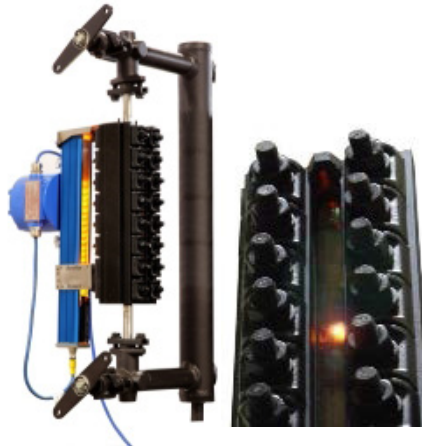
The longer studs with spring washers are provided on both sides of the gage on the 4 corner studs because the corner studs thread into the gage body to aid with assembly. Spring washers are needed only on one side of the middle studs, since these studs slide through the gage body.

Specify live loading by adding a "P" suffix to the gage model number.

# From the World's Largest Selection Of Boiler Instrumentation and Control Devices



**Eye-Hye® SmartLevel™**  
Local and Remote Indicators



**Flat Glass Gages**  
and **Durastar™** Illuminators



**LevelMax**  
Systems



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Water Gage System



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