Flat Glass Water Gages and DuraStar®



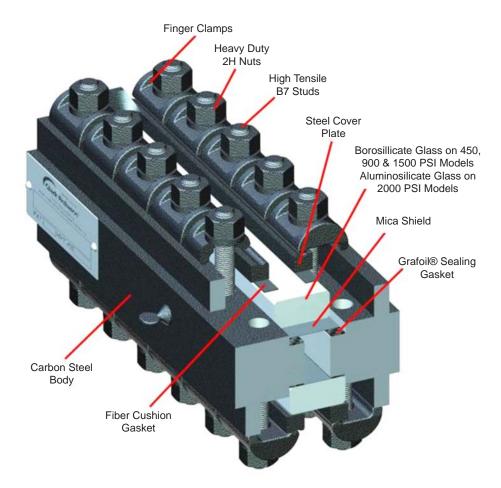


Reliance[®] Flat Glass Gages

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:

	SING	LE WI	NDOW	GAGES				1 CC		SIN	IGLE W	INDOW GAGE	S	
1100551	VISIBILITY		MINIMUM WATER GAGE CENTERS				MODEL	VISIB		MINIMUN				
MODEL NUMBER	VISIBILITY		BG404S		SG				NUMBER			GAGE C		
	INCHES	MM	INCHES	MM	INCHES	MM			50004	INCHES		INCHES	MM	
FG404	6-5/8	168	14	356	17	432			FG904 FG905	6-5/8 7-3/4	168 197	17 18	432 457	
FG405	7-3/4	197	16	406	18	457			FG905	9	229	20	508	
FG406	9	229	17	432	20	508		Ta	FG906	10-1/8	229	20	533	
FG407	10-1/8	257	18	457	21	533	0	10	FG908	11-3/4	298	22	559	
FG408	11-3/4	298	20	508	22	559			FG909	12-1/2	318	23	584	
FG409	12-1/2	318	20	508	23	584		6		100-110	0.0	EV.		
										DO	UBLE W	INDOW GAGE	S	
	DOU	BLE W	NDOW	GAGE	S			10	FG966	15	381	26	666	
FG466	15	381	24	610	26	660		100	FG977	17-1/2	444	29	737	
			26	660	29		11 C 11		FG988	20	508	31	787	
FG477	17-1/2	444	20	000	29	737								
FG477 FG488	17-1/2 20	444 508	26	737	31	737			FG999	21-1/2	546	33	838	
FG488 FG499		508 546	29 30 odels av	737 762 vailable	31 33 <i>upon re</i> D PS	787 838 equest.			FG999 Minimu		rs quotea es SG854	33 apply to Clark- / SG860. To 200	Reliance	
FG488 FG499	20 21-1/2 • more win	508 546 ndow m (103	29 30 odels av 0 1 3.4 Bar	737 762 ailable 50(G, 105	31 33 <i>upon re</i> D PS 5.5 Kg/e	787 838 equest.			FG999 Minimu	um center	rs quotea es SG854	33 l apply to Clark- / SG860.	Reliance	
FG488 FG499	20 21-1/2 • more win	508 546 ndow m (103	29 30 odels av	737 762 vailable 50(G, 105	31 33 <i>upon re</i> 5.5 Kg/c EES	787 838 equest.			FG999 Minimu	um center	rs quotea es SG854	33 apply to Clark- / SG860. To 200	Reliance	
FG488 FG499	20 21-1/2 • more win	508 546 ndow m (103 NGLE V	29 30 odels av 0 1 3.4 Bar	737 762 vailable 50(G, 105 W GAG	31 33 9 upon re 5.5 Kg/0 5.5 Kg/0 5.5 Kg/0	787 838 equest. cm ²)			FG999 Minimu	um center alve Serie	rs quotea es SG854 (1	33 apply to Clark- / SG860. To 200	Reliance D PSI .6 Kg/cm²)	
FG488 FG499 <i>Three or</i>	20 21-1/2 7 more win SIN VISIBI	508 546 adow m (103 NGLE V	29 30 odels av odels av 3.4 Bar WINDOV	737 762 vailable 50(G, 105 W GAG	31 33 <i>upon re</i> 5.5 Kg/c EES	787 838 equest. cm ²) TER ERS			FG999 Minimu Gage V	um center alve Serie SIN	(1 GLE W	33 1 apply to Clark- / SG860. TO 2000 138 Bar G, 140	Reliance D PSI .6 Kg/cm²)	
FG488 FG499 Three or MODEL NUMBER	20 21-1/2 7 more win SIN VISIBI INCHES	508 546 adow m (103 NGLE V ILITY MM	29 30 odels av O 1 3.4 Bar WINDOV	737 762 vailable 50(G, 105 W GAG MININ GAGI CHES	31 33 9 upon re 5.5 Kg/0 5.5 Kg/0 5.5 Kg/0	787 838 equest. cm ²)			FG999 Minimu Gage V	um center lalve Serie SIN VISIBII	GLE W	33 1 apply to Clark- / SG860. TO 2000 138 Bar G, 140 INDOW GAGE MINIMU GAGE	Reliance D PSI .6 Kg/cm ²) S JM WATER CENTERS	
FG488 FG499 Three or MODEL	20 21-1/2 7 more win SIN VISIBI	508 546 adow m (103 NGLE V	29 30 odels av O 1 3.4 Bar WINDOV	737 762 vailable 50(G, 105 W GAG	31 33 9 upon re 5.5 Kg/0 5.5 Kg/0 5.5 Kg/0	787 838 equest. cm ²) TER ERS			FG999 Minimu Gage V MODEL NUMBER	um center (alve Serie SIN VISIBII INCHES	GLE W	33 I apply to Clark- / SG860. TO 2000 ISB Bar G, 140 INDOW GAGE MINIMU GAGE INCHES	Reliance D PSI .6 Kg/cm ²) S JM WATER CENTERS MM	
FG488 FG499 Three or MODEL NUMBER FG1504	20 21-1/2 more win SIN VISIBI INCHES 6-5/8	508 546 adow m (103 NGLE V ILITY MM 168	29 30 odels av 5 0 1 3.4 Bar WINDOV	737 762 ailable 50(G, 105 W GAG MININ GAGI CHES 20	31 33 9 upon re 5.5 Kg/0 5.5 Kg/0 5.5 Kg/0	787 838 equest. cm ²)		0.016 0.016	FG999 Minimu Gage V MODEL NUMBER FG2004	IIII CENTER SIN VISIBIL INCHES 6-5/8	GLE W LITY 168	33 I apply to Clark- / SG860. TO 2000 I.38 Bar G, 140 INDOW GAGE MINIMU GAGE INCHES 15	Reliance OPSI .6 Kg/cm ²) S M WATER CENTERS MM 381	
FG488 FG499 Three or MODEL NUMBER FG1504 FG1505	20 21-1/2 more win SIN VISIBI INCHES 6-5/8 7-3/4 9	508 546 (103 NGLE V ILITY MM 168 197	29 30 odels av To 1 3.4 Bar WINDOV	737 762 762 6, 105 6, 105 6, 105 MININ GAGI CHES 20 21 23	31 33 9 upon re 5.5 Kg/0 5.5 Kg/0 5.5 Kg/0	787 838 equest. Cm ²) TER ERS MM 508 533			FG999 Minimu Gage V MODEL NUMBER FG2004 FG2005	um center alve Serie SIN VISIBIL INCHES 6-5/8 7-3/4	GLE W LITY 168 197	33 I apply to Clark- / SG860. TO 2000 ISB Bar G, 140 INDOW GAGE MINIMU GAGE INCHES 15 16	Reliance D PSI .6 Kg/cm ²) S M WATER CENTERS MM 381 406	
FG488 FG499 Three or MODEL NUMBER FG1504 FG1505 FG1506	20 21-1/2 more win SIN VISIB INCHES 6-5/8 7-3/4	508 546 adow m (103 NGLE V ILITY MM 168 197 229	29 30 odels av O 1 3.4 Bar WINDOV	737 762 railable 500 G, 105 W GAG MININ GAG CHES 20 21	31 33 9 upon re 5.5 Kg/0 5.5 Kg/0 5.5 Kg/0	787 838 equest. Ccm ²)			FG999 Minimu Gage V MODEL NUMBER FG2004 FG2005 FG2006	IIII Center alve Serie SIN VISIBII INCHES 6-5/8 7-3/4 9	GLE W ITY 197 229	33 1 apply to Clark- / SG860. TO 2000 138 Bar G, 140 INDOW GAGE MINIMU GAGE INCHES 15 16 17	Reliance DPSI .6 Kg/cm ²) S MWATER CENTERS MM 381 406 432	
FG488 FG499 Three or MODEL NUMBER FG1504 FG1505 FG1505 FG1507	20 21-1/2 more win sin NSIB INCHES 6-5/8 7-3/4 9 10-1/8	508 546 adow m (103 NGLE V ILITY MM 168 197 229 257	29 30 odels av O 1 3.4 Bar WINDOV	737 762 762 6, 105 6, 105 70 6, 105 70 70 70 70 70 70 70 70 70 70 70 70 70	31 33 9 upon re 5.5 Kg/0 5.5 Kg/0 5.5 Kg/0	787 838 equest. Cm ²) TER RS MM 508 533 584 609			FG999 Minimu Gage V MODEL NUMBER FG2004 FG2005	um center alve Serie SIN VISIBIL INCHES 6-5/8 7-3/4	GLE W LITY 168 197	33 I apply to Clark- / SG860. TO 2000 ISB Bar G, 140 INDOW GAGE MINIMU GAGE INCHES 15 16	Reliance D PSI .6 Kg/cm ²) S M WATER CENTERS MM 381 406	
FG488 FG499 Three or MODEL NUMBER FG1504 FG1505 FG1507 FG1507 FG1507	20 21-1/2 more wir inches 6-5/8 7-3/4 9 10-1/8 11-3/4	508 546 adow m (103 NGLE V NGLE V 168 197 229 257 298	29 30 odels av O 1 3.4 Bar WINDOV	737 762 762 6, 105 6, 105 70 6, 105 70 70 70 70 70 70 70 70 70 70 70 70 70	31 33 9 upon re 5.5 Kg/0 5.5 Kg/0 5.5 Kg/0	787 838 equest. Cm ²) TER ERS MM 508 533 584 609 635			FG999 Minimu Gage V MODEL NUMBER FG2004 FG2005 FG2006	UN CENTER INCHES 6-5/8 7-3/4 9 10-1/8	GLE W LITY 168 197 229 257	33 1 apply to Clark- / SG860. TO 2000 138 Bar G, 140 INDOW GAGE MINIMU GAGE INCHES 15 16 17 19	Reliance D PSI .6 Kg/cm ²) ES MWATER CENTERS MM 381 406 432 483	
FG488 FG499 Three or MODEL NUMBER FG1504 FG1505 FG1507 FG1507 FG1507	20 21-1/2 more win sin NCHES 6-5/8 7-3/4 9 10-1/8 11-3/4 12-1/2	508 546 adow m (103 NGLE V ILITY MM 168 197 229 257 298 318	29 30 odels av O 1 3.4 Bar WINDOV	737 762 762 762 762 762 762 762 762 762 76	31 33 a upon re DPS 5.5 Kg/d BES MUM WA E CENTE	787 838 equest. Cm ²) TER ERS MM 508 533 584 609 635			FG999 Minimu Gage V MODEL NUMBER FG2004 FG2005 FG2006	UN CENTER INCHES 6-5/8 7-3/4 9 10-1/8	GLE W LITY 168 197 229 257	33 1 apply to Clark- / SG860. TO 2000 138 Bar G, 140 INDOW GAGE MINIMU GAGE INCHES 15 16 17	Reliance D PSI .6 Kg/cm ²) ES MWATER CENTERS MM 381 406 432 483	
FG488 FG499 Three or MODEL NUMBER FG1504 FG1505 FG1507 FG1507 FG1507	20 21-1/2 more win sin NCHES 6-5/8 7-3/4 9 10-1/8 11-3/4 12-1/2	508 546 adow m (103 NGLE V ILITY MM 168 197 229 257 298 318	29 30 odels av 3.4 Bar WINDOV	737 762 762 762 762 762 762 762 762 762 76	31 33 a upon re DPS 5.5 Kg/d BES MUM WA E CENTE	787 838 equest. Cm ²) TER ERS MM 508 533 584 609 635 660			FG999 Minimu Gage V MODEL NUMBER FG2004 FG2005 FG2006	UN CENTER INCHES 6-5/8 7-3/4 9 10-1/8	GLE W LITY 168 197 229 257	33 1 apply to Clark- / SG860. TO 2000 138 Bar G, 140 INDOW GAGE MINIMU GAGE INCHES 15 16 17 19	Reliance D PSI .6 Kg/cm ²) ES MWATER CENTERS MM 381 406 432 483	
FG488 FG499 Three or MODEL NUMBER FG1504 FG1505 FG1505 FG1507 FG1508 FG1509	20 21-1/2 more wir sin NSIB INCHES 6-5/8 7-3/4 9 9 10-1/8 11-3/4 12-1/2 DO	508 546 1000 m (103 NGLE V NGLE V NGLE V 107 229 257 298 318 UBLE	29 30 odels av 3.4 Bar WINDO	737 762 762 763 763 762 765 762 762 762 762 762 762 762 762 762 762	31 33 a upon re DPS 5.5 Kg/d BES MUM WA E CENTE	787 838 equest. Cm ²) TER ERS MM 508 533 584 609 635			FG999 Minimu Gage V MODEL NUMBER FG2004 FG2005 FG2005 FG2006 FG2007	SIN VISIBII INCHES 7-3/4 9 10-1/8 DOL	GLE W ITY MM 197 229 257 JBLE W	33 I apply to Clark- / SG860. TO 2000 ISB Bar G, 140 INDOW GAGE INCHES 15 16 17 19 INDOW GAG	Reliance D PSI .6 Kg/cm ²) S M WATER CENTERS MM 406 432 483 ES	
FG488 FG499 Three or MODEL NUMBER FG1504 FG1505 FG1506 FG1508 FG1509 FG1509	20 21-1/2 more wir incres 6-5/8 7-3/4 9 10-1/8 11-3/4 12-1/2 DO 15	508 546 mdow m (103 NGLE V NGLE V 168 197 229 257 2298 318 UBLE 381	29 30 odels av 3.4 Bar WINDOV	737 762 762 762 762 762 762 762 762 762 76	31 33 a upon re DPS 5.5 Kg/d BES MUM WA E CENTE	787 838 equest. Cm ²) TER ERS MM 508 533 584 609 635 660 737			FG999 Minimu Gage V MODEL NUMBER FG2004 FG2005 FG2005 FG2005 FG2005 FG2005	UNCENTER INCENTER INCENTER 6-5/8 7-3/4 9 10-1/8 DOL 12	GLE W GLE W 197 229 257 JBLE W 305	33 1 apply to Clark- / SG860. TO 2000 138 Bar G, 140 INDOW GAGE 16 17 19 INDOW GAG 20	Reliance D PSI .6 Kg/cm ²) S M WATER CENTERS MM 406 432 483 ES 508	

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

The DuraStar[®] 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.





SPECIFICATIONS FOR ORDINARY LOCATION MODELS

Power Supply: 100- 277 VAC @ 50/60 Hz* 100-240 VAC @50/60Hz Power Consumption: 320 rnA @ 100 VAC

Est. Life: 100,000 Hours (continuous)

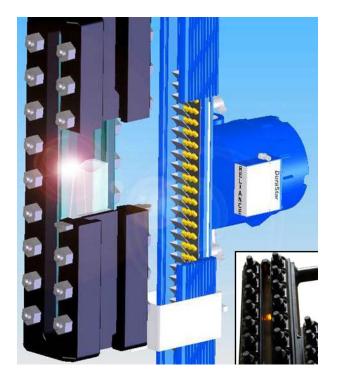
Agency Approvals: FM Ordinary Locations CFM Ordinary Locations

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

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

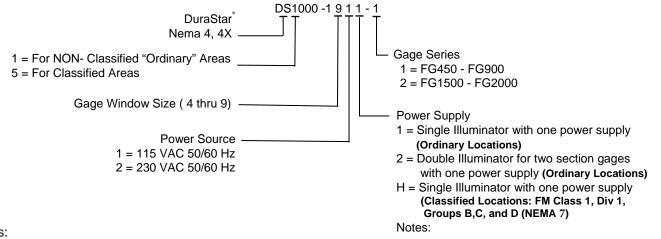
DuraStar® Flat Glass Gage LED Illuminator



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.



DuraStar® Model No.	Fits Gage Glass	Length	Length	Wt
	T its Daye Olass	(Inches)	(mm)	(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.

Reliance[®] Sizing Multiple Section Gages

Maximum Water Gage Visibility for Flat Glass Gages

Dimensions - Inches (mm)

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



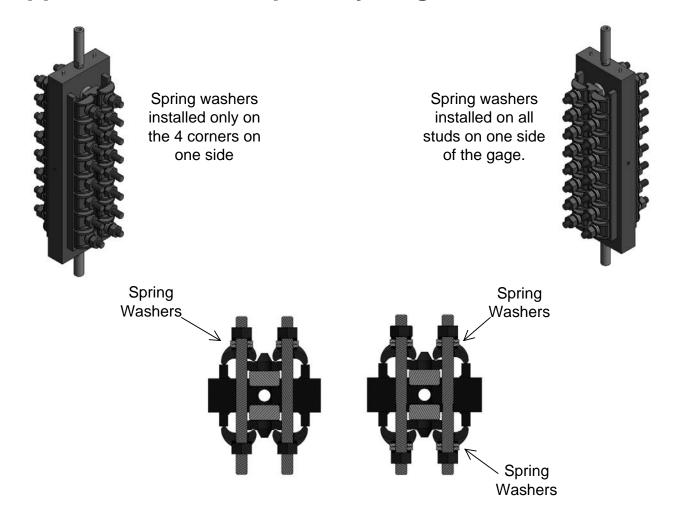
• 1" (25.4 mm) minimum overlap on all multiple section designs

· Size 8 and 9 are not available for FG2000 series

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

Reliance[®] Live Loading Options

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



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



Simpliport[®] 180 Water Gage System



Levalarm[®] Gold Boiler Level Switches

Maintain Optimum Performance and Accuracy with OEM Parts Critical spare parts for overnight delivery, direct from the manufacturer.

clark-reliance.com/parts



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