See Boiler Water Level at Any Angle, Any Distance

Simpliport® 180
Water Gage System

Clark·Reliance®

Simpliport® 180
Water Level Gage System

Patent # 7,047,806B2

Red indicates steam, green indicates water level in boiler.

New **Wide Angle Optics**
Illuminates Boiler Water Level at

Any Angle, Any Distance

Installed worldwide since 1962, Simpliport® Boiler Water Level Glass Gages provide reliable direct-reading, bi-color indication up to 3000 PSI (206 Bar). Continuous improvements to the Simpliport design have made them easier to install, easier to maintain and now, much easier to view.

Wherever you may be standing within 180˚ of the Simpliport Wide Angle Hood, you can clearly see the bright red or green indication of steam and water level. You'll decrease your exposure time to the boiler environment while maintaining a crystal clear view of a direct reading gage as required by ASME.

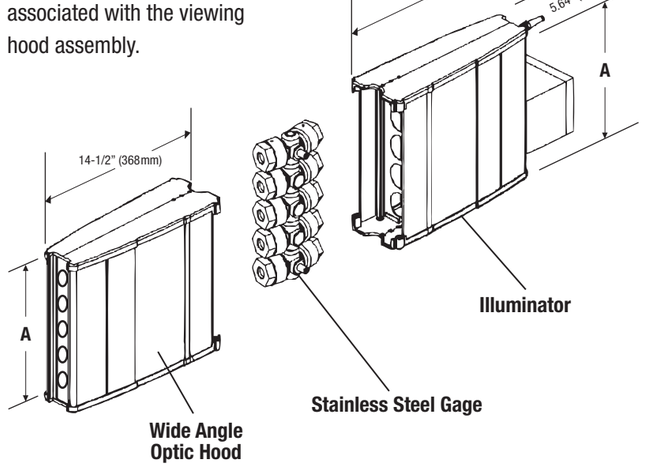
Wide Angle Hood

- Clear and bright viewing from any angle, any distance
- Improves visibility of existing gages... can provide clearer readings from dirty, contaminated gages...easy field retrofits!
- Eliminates need for mirrors in most applications
- Easy to install: new mounting bar design eliminates spring pins
- For indoor or outdoor use

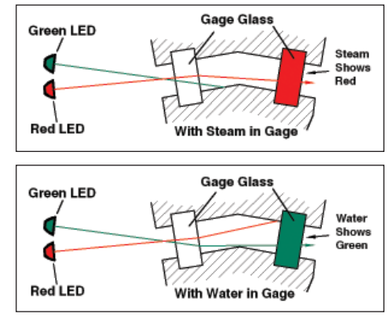
Simpliport® LED Illuminator and Viewing Hood: Anywhere you can see it, you can read it!

The Simpliport® 180 System

The Simpliport 180 System consists of a stainless steel gage body, an LED illuminator assembly, and a wide angle optic viewing hood assembly. There are no service parts associated with the viewing hood assembly.



The Simpliport 180 System is manufactured and installed to meet ASME Boiler Code (Section 1) requirements.



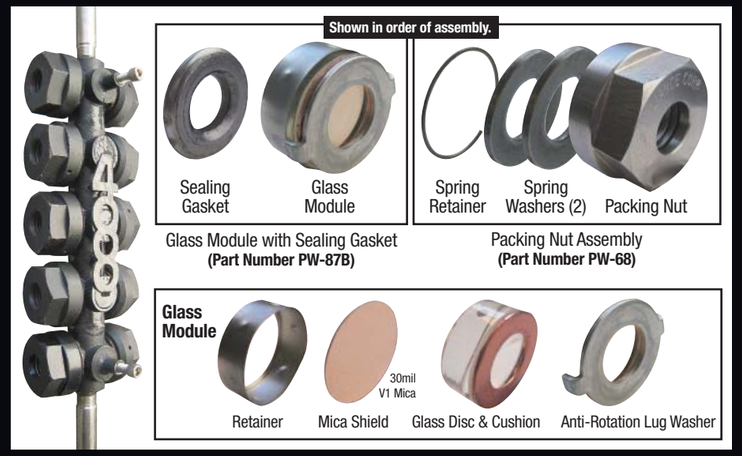
Light does not refract through water on the same line that light reflects through steam. By calculated placement of a light source and gage glass, the Simpliport gage indicates water levels by displaying green ports at water level and red ports for steam above.

Simpliport 180 Wide Angle Assembly	Illuminator & Hood Height "A"	
	Inches	MM
SWA-180-5*	12-1/2	318
SWA-180-6*	14-7/8	378
SWA-180-7*	17-1/4	438
SWA-180-8*	19-5/8	498
SWA-180-9*	22	559
SWA-180-10*	24-3/8	619

Suffix represents the number of ports in the gauge.* ***Note:* *Consult factory for applications in hazardous (classified) areas.*

See the video at:
www.simpliport180.com

Simpliport 4000 Gage Body Assembly



The 4000 Series Simpliport Gage is engineered with a spiral wound sealing gasket featuring a unique inner support ring and cushion pad, which eliminates the Hot-Torque step required on past models. The result is a gage that is ready-to-use upon installation.

"We have replaced our old units with the **Clark-Reliance Simpliport** boiler sight glasses and have had much better performance. We are very satisfied with Clark-Reliance products. Their new LED illuminator works well, lasts long and has great support."

George Machuta
Maintenance Supervisor
Municipal Power Plant

Simpliport®
LED Illuminator & Hood
for Bi-Color Water Gage Glass

- Features the brightest LEDs in the boiler gage industry
- Low power consumption (< .1 Amp)
- LEDs generate no heat
- 120 or 240 VAC operation
- Indoor or outdoor use

The new Simpliport LED Illuminators feature high-intensity long life red and green LED's, and eliminates the traditional red and green glass color strips. The service life of the LEDs is up to 10 years, which far exceeds any traditional incandescent or halogen lamps in previous models.

LED ILLUMINATOR SPECIFICATIONS

Power Supply:	120 or 240 VAC @ 50-60 Hz
Power Consumption	.10 Amp @ 120 VAC .10 Amp @ 240 VAC
Est. Life:	Up to 10 years (continuous)
Agency Approval:	FM
Rating:	Ordinary locations
Wire Size:	Min. 16 AWG / Max 12 AWG
Max distance from power supply to light:	9' (27.5 M) Standard Cable = 8' (2.5 M)
Ambient Temperature:	-40°F (-40°C) to 170°F (77°C)

Simpliport® Gage is Built for Continuous Service to **3000 PSI (206 Bar) Steam Pressure**

Proven Bi-Color Gage

- Direct reading up to 3000 PSI (206 Bar)
- Spiral wound sealing gaskets
- No hot-torquing required
- Highest quality (V1), thickest (30 mil) mica shields
- Over 12,000 in service worldwide

Designed and manufactured to rigid quality standards, the Clark-Reliance Simpliport gage is proven for accurate and easy water level reading. Worldwide, Simpliport gages have delivered outstanding performance in dependability, low maintenance and installation versatility.

To meet specific requirements, Simpliport gages are offered in visibility lengths from 10-1/4" (260 mm) to 71-5/8" (1819 mm). Special gages of longer visibility can be supplied. In all lengths, gage ports are tightly spaced for maximum reading accuracy.

The gage operates on the reliable principles of light refraction. Light does not refract through water on the same line that light refracts through steam. The Simpliport gage indicates water level by displaying green ports for water and red ports for steam.

The Simpliport unit is the only high pressure gage with a repairable body, **a significant economic advantage for operators.**

High Quality, Repairable Construction

Quality construction is a Simpliport gage mainstay. Gage bodies are manufactured from Type 304 stainless steel. In addition, high quality materials throughout all gage components impart product integrity to even its smallest parts. The result is a premium gage, extremely strong yet lightweight. For example, the six-port Model P4006 with 12-5/8" (321 mm) visibility weighs only 16 lbs.

New design features include the "all around" spring support for Glass Disc Modules. This provides positive and uniform loading to prolong the life of gage glass and the highest quality (V1) 30 mil mica shields. Service life may vary based upon actual operating conditions and water quality.

See pages 5-6 for Simpliport® Gage Model Numbers and Dimensions.

100 year old power plant with Simpliport retrofit.

Simpliport®
Gage Assemblies

"I've never seen a gage that you can see so well from extreme angles. With this sight glass, if I'm standing anywhere within 180˚ of it, the level is visible."

Bob Martin
Maintenance
Municipal Power Plant

Commissioning Kit Included

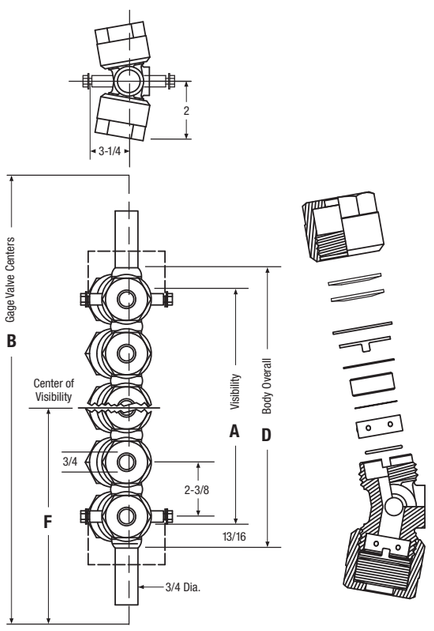
For commissioning purposes, Simpliport gages are furnished with two spare Glass Disc Modules, a 1-7/8" socket, a 3/4"-1/2" drive adaptor, high temperature thread lube, and module extractor pliers.

We'll Help Assure that Your Boiler Project Gets Up and Running Smoothly

Clark-Reliance's **SureStart**℠ Program can help qualified purchasers make certain that boiler level indication and control instrumentation will provide years of safe and reliable service in compliance with Section 1 of the ASME Code.

A direct Clark-Reliance employee will spend the day at your facility. We will verify the equipment installation, and conduct operation, use and maintenance training sessions with your operators. **SureStart** gives you the education and training necessary to provide safe and reliable level indication and control.

P4000 Series: Simpliport Gage with Nipple Connections (1500 PSI [103 Bar] Maximum)



Simpliport gage connections for pressures to 1500 PSI (103 Bar) include standard nipple connections (end stems), ANSI flanges (as specified) or male/female socket welds.

P4000 Series: Dimension Chart-Standard Size 0-1500 PSI (103 Bar)

Simpliport Model No.	# of Ports	Vision A inches (mm)	Min. Centers B inches (mm)	Body D inches (mm)	Min. F inches (mm)
P4005	5	10.25 (260)	21.00 (533)	11.88 (301)	10.38 (263)
P4006	6	12.62 (320)	23.37 (593)	14.25 (362)	11.56 (294)
P4007	7	15.00 (380)	25.75 (654)	16.62 (422)	12.75 (324)
P4008	8	17.38 (441)	28.12 (714)	19.00 (482)	13.94 (354)
P4009	9	19.75 (501)	30.50 (774)	21.38 (543)	15.25 (387)
P4010	10	22.12 (562)	32.88 (835)	23.75 (603)	16.31 (414)

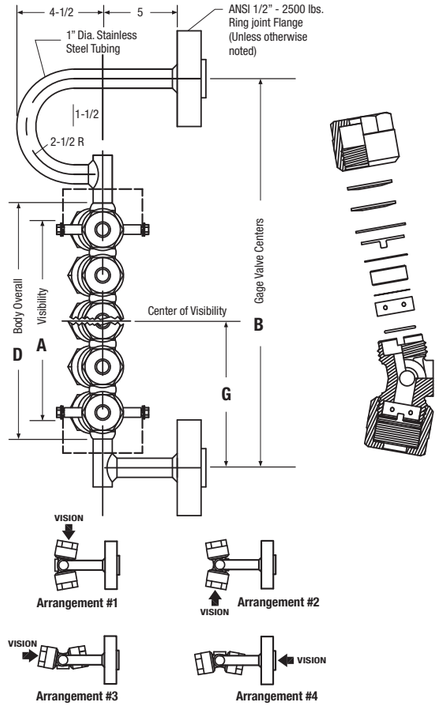
P4000 Series: Multi-Section Sizes 0-1500 PSI (103 Bar)

P4011	11	25.50 (650)	36.25 (920)	27.12 (688)	18.00 (457)
P4012	12	27.88 (708)	38.62 (980)	29.50 (749)	19.19 (487)
P4013	13	30.25 (768)	41.00 (1041)	31.88 (809)	20.38 (517)
P4014	14	32.62 (828)	43.38 (1101)	34.25 (869)	21.56 (547)
P4015	15	35.00 (885)	45.75 (1162)	36.62 (930)	22.75 (577)
P4016	16	37.38 (949)	48.12 (1222)	39.00 (990)	23.94 (608)
P4017	17	39.75 (1009)	50.50 (1282)	41.38 (1051)	25.12 (638)
P4018	18	42.12 (1069)	52.88 (1343)	43.75 (1111)	26.31 (668)
P4019	19	44.50 (1130)	55.25 (1403)	46.12 (1171)	27.50 (698)
P4020	20	46.88 (1190)	57.62 (1463)	48.50 (1231)	28.69 (728)
P4021	21	50.12 (1273)	61.00 (1549)	51.88 (1317)	30.13 (765)
P4022	22	52.62 (1336)	63.38 (1609)	54.25 (1377)	31.56 (801)
P4023	23	55.00 (1397)	65.75 (1670)	56.62 (1438)	32.75 (831)
P4024	24	57.38 (1457)	68.12 (1730)	59.00 (1498)	33.94 (862)
P4025	25	59.75 (1517)	70.50 (1790)	61.38 (1559)	35.12 (892)
P4026	26	62.12 (1577)	72.88 (1851)	63.75 (1619)	36.31 (922)
P4027	27	64.50 (1638)	75.25 (1911)	66.12 (1679)	37.50 (952)
P4028	28	66.88 (1698)	77.62 (1971)	68.50 (1739)	38.68 (982)
P4029	29	69.25 (1758)	80.00 (2032)	70.88 (1800)	39.88 (1012)
P4030	30	71.62 (1819)	82.38 (2092)	73.25 (1860)	41.06 (1043)

Note: Minimum Centers "B" are for Steel Water Gage Valves. See Bulletin AB5,1D for information on water gage valves.

Note to Specifier: The three most important dimensions are A, B and F. (D is a constant.) Ask for a complete Reliance Engineered Product Specification Guide.

P4100 Series: Simpliport Gage with Flange Connections (3000 PSI [206 Bar] Maximum)



Select an arrangement required. Consult factory for applications with centers less than listed in the chart.

P4100 Series: Dimension Chart-Standard Sizes 0-3000 PSI (206 Bar)

Simpliport Model No.	# of Ports	Vision A inches (mm)	Min. Centers B inches (mm)	Body D inches (mm)	Min. G inches (mm)
P4105	5	10.25 (260)	21.63 (549)	11.88 (301)	9.19 (234)
P4106	6	12.62 (320)	24.00 (610)	14.25 (362)	10.38 (264)
P4107	7	15.00 (380)	26.38 (670)	16.62 (422)	11.56 (294)
P4108	8	17.38 (441)	28.75 (730)	19.00 (482)	12.75 (324)
P4109	9	19.75 (501)	31.13 (790)	21.38 (543)	13.94 (354)
P4110	10	22.12 (562)	33.50 (850)	23.75 (603)	15.12 (384)

P4100 Series: Multi-Section Sizes 0-3000 PSI (206 Bar)

P4111	11	25.50 (650)	36.87 (937)	27.12 (688)	16.81 (427)
P4112	12	27.88 (708)	39.25 (997)	29.50 (749)	18.00 (457)
P4113	13	30.25 (768)	41.63 (1057)	31.88 (809)	19.19 (487)
P4114	14	32.62 (828)	44.00 (1117)	34.25 (869)	20.38 (517)
P4115	15	35.00 (885)	46.38 (1177)	36.62 (930)	21.56 (547)
P4116	16	37.38 (949)	48.75 (1237)	39.00 (990)	22.75 (577)
P4117	17	39.75 (1009)	51.13 (1297)	41.38 (1051)	23.94 (607)
P4118	18	42.12 (1069)	53.50 (1357)	43.75 (1111)	25.12 (637)
P4119	19	44.50 (1130)	55.87 (1417)	46.12 (1171)	26.31 (667)
P4120	20	46.88 (1190)	58.25 (1477)	48.50 (1231)	27.50 (697)
P4121	21	50.12 (1273)	61.63 (1565)	51.88 (1317)	29.19 (741)
P4122	22	52.62 (1336)	64.00 (1625)	54.25 (1377)	30.38 (771)
P4123	23	55.00 (1397)	66.37 (1685)	56.62 (1438)	31.56 (801)
P4124	24	57.38 (1457)	68.75 (1745)	59.00 (1498)	32.75 (831)
P4125	25	59.75 (1517)	71.13 (1805)	61.38 (1559)	33.94 (861)
P4126	26	62.12 (1577)	73.50 (1865)	63.75 (1619)	35.12 (891)
P4127	27	64.50 (1638)	75.87 (1925)	66.12 (1679)	36.31 (921)
P4128	28	66.88 (1698)	78.25 (1985)	68.50 (1739)	37.50 (951)
P4129	29	69.25 (1758)	80.63 (2045)	70.88 (1800)	38.69 (981)
P4130	30	71.62 (1819)	83.00 (2105)	73.25 (1860)	39.88 (1011)

Note: Consult factory if smaller minimum centers, non-standard flanges or other special items are required.

Note to Specifier: The three most important dimensions are: A, B, G and the Viewing Arrangement.

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LevelMax Systems

See the video at:
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16633 Foltz Parkway, Strongsville, OH 44149 USA Phone: 440.572.1500 Fax: 440.238.8828
www.clark-reliance.com sales@clark-reliance.com

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Note: Clark-Reliance shall not be liable for damages of any kind resulting in part from failure to install its products in accordance with all applicable ASME Boiler Codes and/or state and local regulations, improper application and/or maintenance.

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REPRESENTED BY: YATES & COMPANY, INC. ♦ 1 Hollywood Ave, Unit 22 HoHoKus, NJ 07423
Tel: 201-345-3101 ♦ Email: info@yatesco.net