

Certificates, accreditations & Classification societies



- » IGEMA is certified in accordance with **DIN EN ISO 9001**
- » Our products are manufactured in compliance with the **ASME Boiler Code**, as well as the **European Pressure Equipment Directive (PED)**



- » UL listed electronic components
- » American Bureau of Shipping
- » TÜV (Rheinland)
- » Germanischer Lloyd
- » Bureau Veritas
- » Det Norske Veritas
- » Lloyd's Register
- » CRN
- » GOST
- » Indian Boiler Regulations (IBR)
- » ATEX, NEC500
- » Nippon Kaiji Kyokai
- » Korean Register of Shipping
- » China Classification Society

References



- » BASF
- » Shell
- » Alstom Power
- » Siemens Energy
- » Hitachi Power
- » Bechtel
- » Burns McDonnell
- » Doosan Babcock Energy
- » Nooter Eriksen
- » Alfa Laval
- » Oschatz
- » Linde AG
- » Total
- » Volkswagen AG
- » ArcelorMittal
- » Vogt Power International
- » Gemma Power Systems
- » Valmet / Metso
- » NEM / Siemens HTT
- » CMI
- » RWE / E.ON
- » Black & Veatch
- » Andritz Energy
- » Foster Wheeler/AMEC
- » CB & I
- » Babcock & Wilcox
- » Endesa
- » GE
- » TOYO
- » Formosa
- » Conoco
- » Georgia Power
- » BHEL
- » Progress Energy/Duke Energy
- » Aalborg Engineering
- » Louisiana-Pacific Corp
- » Sasol
- » Saacke
- » Thermax Ltd.
- » Petronas
- » Vattenfall
- » GDF SUEZ
- » Nestle
- » Bayer
- » BP

» A detailed project list can be provided upon request

Direct Reading Level Gages

Product Range

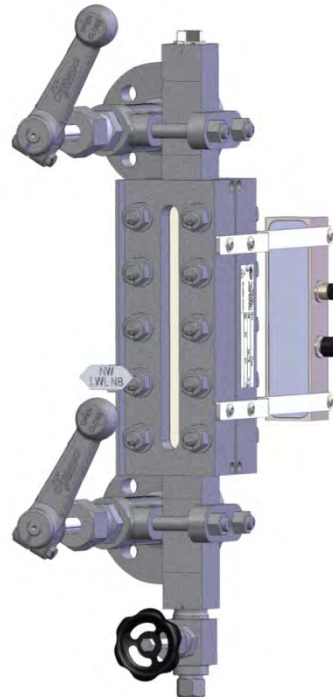


Reflex Level Gage



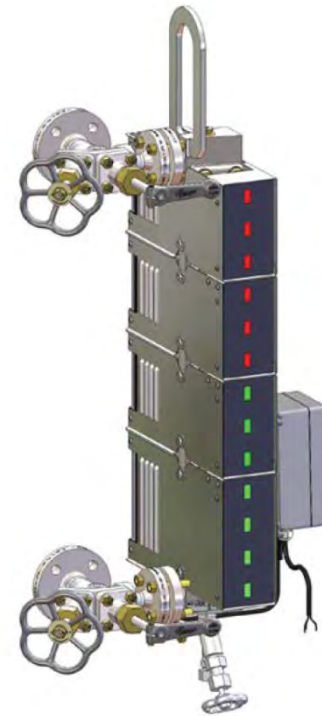
up to 465 psi

Transparent Level Gage
Glass-Mica, Mica only



up to 3000 psi

Bi-Color Level Gage,
Green/Red

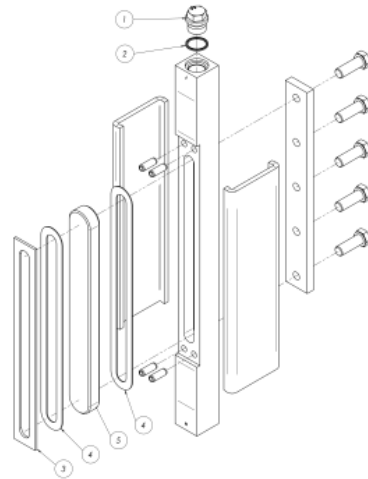


up to 3000 psi

Reflex Gage LG40



Igema LG40
WSP max. 465 psi / 462° F
Less bolts, no nuts
Fully compliant connection sizes
More visibility → single section glass sizes available to 15.75"



IGEMA LG40

Transparent Gage TG (Glass-Mica)



Steam service up to 1740 psi / 619° F

Single Window Gage visibility = 15.75"

Width of window slot 6/8" vs. CR which has 5/8"

Center distance can equal the visibility
→ no minimum centers required

Full length visibility with no obstructions
gives definitive readings and conforms
to the latest ASME codes for sight glass gauges

High quality SA516 Gr. 70 steel used
for gage body and covers.

IGEMA TG Gage design
for added strength and rigidity.

Transparent Gage Mica



Quick facts:

Steam service up to 3000 psi / 693° F

Single Window Gage visibility = 14.96"
vs. CR = 10.12" (FG1500/2000)

Center distance can equal the visibility
→ no minimum centers required

High quality SA516 Gr. 70 steel
used for gage body and covers.

Full length visibility with no obstructions
gives definitive readings and conforms
to the latest ASME codes for sight glass gauges

IGEMA is the only provider of mica only gages
→ easy maintenance and less parts!



Bicolor Green-Red Multiport (BM)

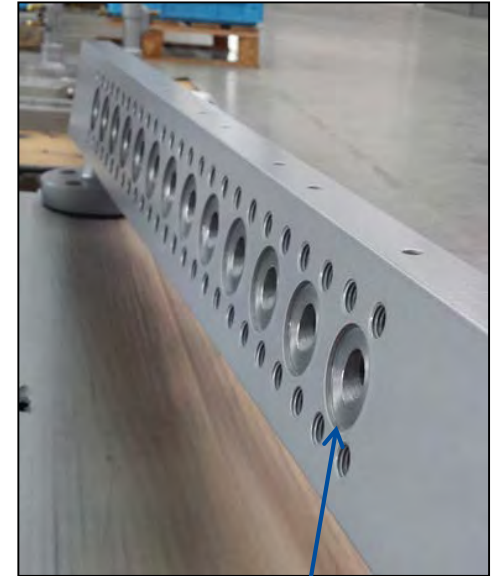


For steam applications up to 3000 psi / 693°F



Quick facts:

- One-Piece solid body chamber, precision machined into a trapezoid shape
- Forged Steel One-Piece Covers
 - Center distance can equal the visibility, no minimum centers required
 - Very robust sealing system
- Extremely compact, depth of only 15.6" from front to back



Large sealing surface

IGEMA LED Illuminators



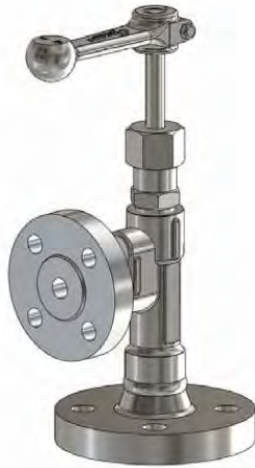
- No lamp maintenance
- Igamma design eliminates lenses, mirrors and glass color strips
- Single piece LED illuminator (multiple modules used for longer visibilities)
- Extremely compact, only 3.15" wide and 1.2" thick
→ overall depth of Level Gage 15.6" from front to back
- Igamma design eliminates lamp heat
- Available for Explosion Proof / Hazardous Area
- Stainless steel viewing hood



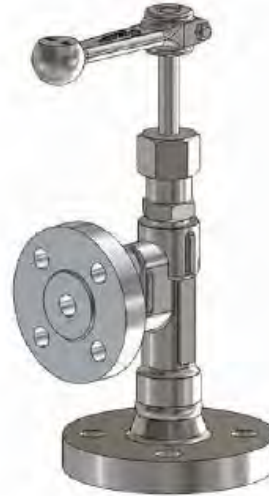
LED Module

Shut-off valves

Product range (all with ball check)



A120
(470 psi)



A150
(1740 psi)



A190
(3000 psi)

- All with Ball Check
- Designed and manufactured by IGEMA in Germany.
- All inner parts (SS316) are replaceable.

- Double-stem shut-off valves, providing two shut-off mechanisms in one valve.

Remote Level Indicator EWLI-3

for steam applications WSP 3000 psi / 693°F



- 2 - 32 probes, the probe spacing can be specified as required
- Individually assignment of relay contacts to the probes → any desired division of the measuring range can be achieved
- Trip logic and fault finding logic is done by independent processors
- Local and remote level indication with green and red LEDs via Display Unit (three different sizes available)
- 7x variable relay contacts SPDT or 3x DDPT (with time delay option)
- 2 fixed relay contacts SPDT as failure signaling contacts



Remote Display Unit DU-3

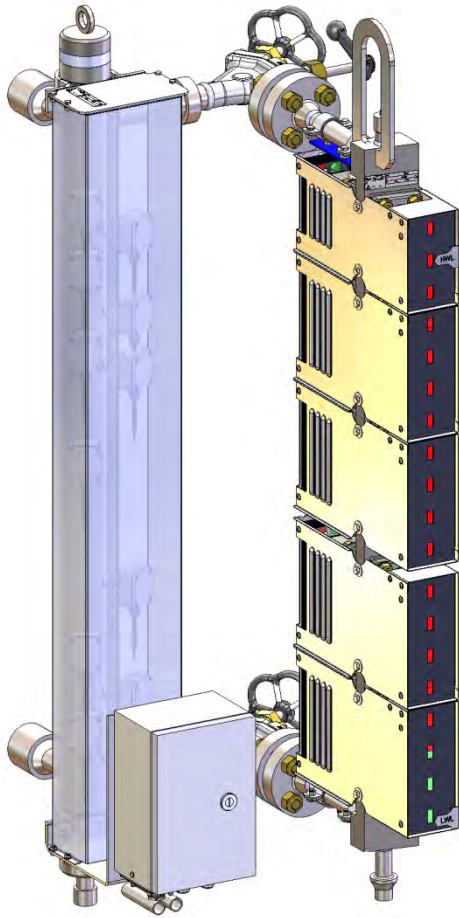


Control Unit CU-3



Probe EL60

Combined Level Gage & Remote Level Indicator



HP Drum
Version



IP Drum
Version



LP Drum
Version

- Only one set of process connections required on drum
- Eliminates some portion of the field piping & welding
- Compact design for any application
- Electronics can be combined into one junction box
- All connections can be furnished as required

TWIP System (Electronic Water Level Switch)

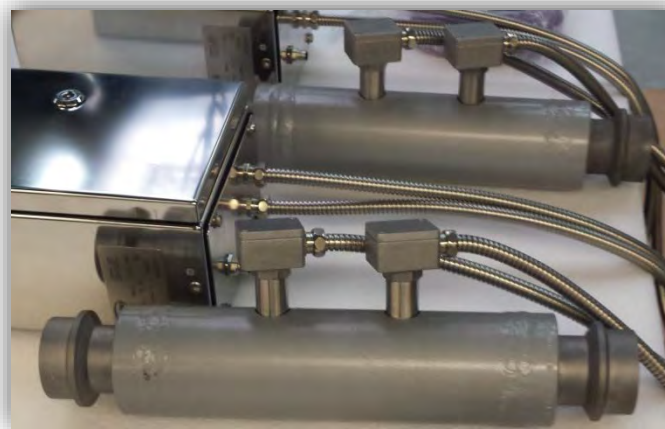


Control Box with Relays,
Signal Lamps etc.

- Up to 1100° F and 3000 psi
- Field configurable through 4 Buttons & 16-Digit Display
- Trip logic and fault finding logic (incl. self-diagnostics features) is done by independent and redundant processors
- Individual configuration of multiple relay contacts to the probes
- Explosion proof / Hazardous Area Version available



NEMA 4X
Probe



TWIP for pipe mounting
(with NEMA 4X Probes)



Complete unit with
enclosure (process
connection side/side)

Magnetic Level Indicator NA7



Available options:

- MRK → 4-20 mA Transmitter
(for continuous control and indication)
- Guided Wave Radar GWR400 (up to 5800 psi)
multiple output options
- Snap Action Magnetic Switch M510
- Insulation
- LED Indicator for remote level
indication (LB16)



LED-Indicator LB16



Magnetic Switch
M510

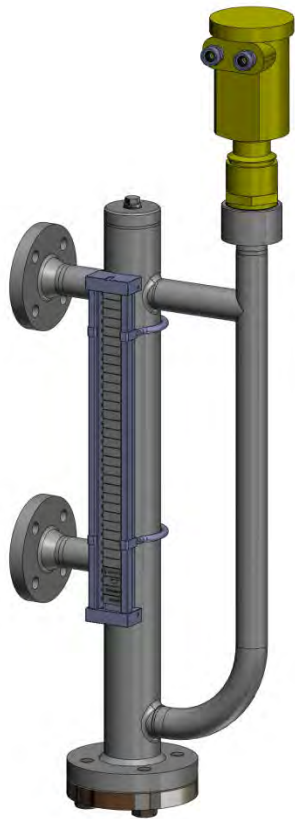


Magnetic Level
Indicator NA7



Limiting/Controlling the level

Magnetic level gauge NA7 with GWR



Within a non-magnetic chamber of the magnetic level indicator, a float containing a 360° magnet system rises and falls according to the fluid level. The float is weighted to the specific gravity of the media and as it is carried by the fluid level, its internal magnets attract the external line of highly visible magnetic flags. Once the flags attract, they rotate and visibly track the exact measurement of the fluid.

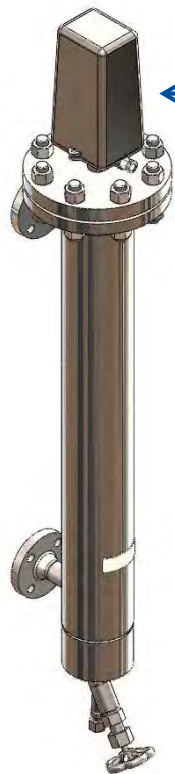
A second chamber on the indicator houses a GWR400 Guided Wave Radar Level Transmitter. The process of guided wave radar combines time domain reflectometry (TDR), equivalent time sampling (ETS) and modern low-power circuitry to provide an output relative to the media level.



Limiting/Controlling the level - Mechanical



Float switches



← **NEMA 3 or
NEMA 4
Switch Housing**



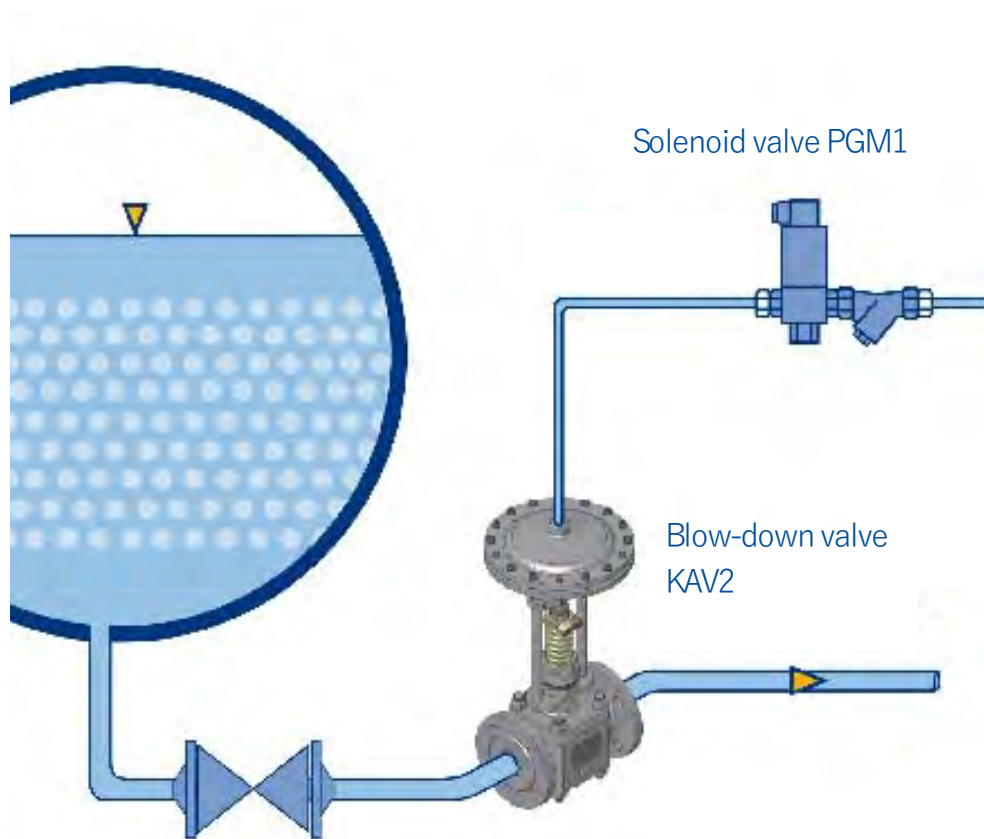
**Snap Action
Magnetic switch
M130-KG**

- » Float switches available up to 200 bar
 - » Wide range of mounting options
 - » Multiple switching points (up to 12) possible
- » Compact (dry contact) switching mechanism eliminates bulky housing
 - » Rugged and robust design for demanding applications
 - » Precision fabricated floats and displacers
 - » Easily retrofitted to most competitor models
 - » Nearly free of maintenance
 - » Chambers are designed to ASME B31.1 Power Piping Code.

Typical Applications: Separators, Condensers, Storage Tanks, Drainpots, Fuel Tanks, Flash Vessels, Feedwater Heaters, Service Tanks, Compressors, Water Sumps, De-actuators, Process Vessels, Header Tanks, Lube Oil Tanks, Accumulators, Scrubbers etc.

Boiler Monitoring

Blow-down valve



Intermittent blow-down should be carried out to remove suspended solids from the bottom of the boiler drum.

Blow Down Valve Models:

- Manually operated (Type KAV1R-1N)
- Pneumatically actuated (Typ KAV2R-1N) + Solenoid valve PGM1

Boiler Monitoring

Continuous Automatic Blow-down

