MG-Series™

Magnetic Liquid Level Indicators

Jogler® INC.

Features & Benefits

- TOTAL PROCESS CONTAINMENT
- ELIMINATE FUGITIVE EMISSIONS
- LOW COST OF OWNERSHIP
- FULL ASME B31.1 & B31.3 RATED
- SCHEDULE 40 CHAMBERS, STANDARD
- MAXIMUM CHAMBER LENGTH TO 20 FT.
- MAWP: FULL VACUUM to 3600 PSIG
- MAWT: -200° F to +1000° F
- DENSITIES AS LOW AS 0.30 GM/CM^3
- EXTRA WIDE INDICATOR DESIGN
- CLEAR VISIBILITY TO 200 FT.
- SOLID CERAMIC FLAG INDICATORS
- NO ALUMINUM OR PLASTIC FLAGS
- BALANCED MAGNETIC COUPLING
- TOTAL & INTERFACE MEASUREMENT
- NON-INVASIVE LEVEL CONTROLS
- HIGH TEMP. & CRYOGENIC INSULATION
- EXPEDITED DELIVERIES
- NACE MRO175 CERTIFIED
- APPROVALS: HARTFORD STEAM, FM, CSA

Principles Of Operations

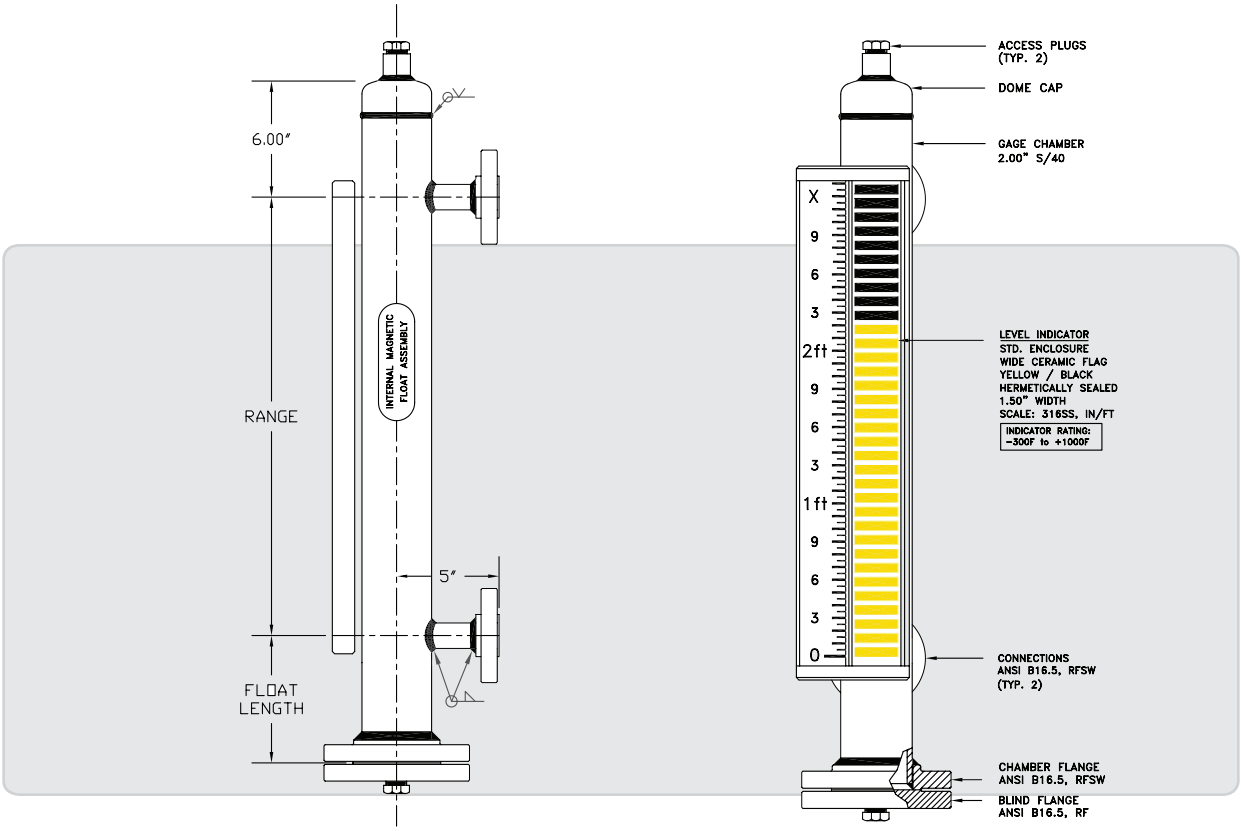
Jogler's MG-Series magnetic level indicator is a proven and cost effective method to accurately monitor and control liquid level requirements in any process environment. MG-series level indicators can be designed and installed on any tank or vessel for extreme operating conditions, low density, corrosive or hazardous materials.

All MG-series magnetic level indicators are comprised of a chamber, internal magnetic float and external indicator. The internal float, located within the chamber, maintains a constant magnetic circuit with the external indicator. As the float reacts to fluctuating liquid levels within the adjoining tank, the external indicator responds to the rising or falling motion of the float, which provides an indirect level indication of the tank.

The Chamber is non-ferrous and can be fabricated to any length up to 20 feet with a standard specification of 2.00 inch, Schedule 40. Larger diameter and higher rated chambers are available depending upon application requirements. Jogler's MG-series magnetic level chambers are fully rated to ASME B31.1 & B31.3 boiler and process piping codes.

The internal magnetic float is engineered and designed for the minimum density of the process media at the maximum operating conditions. Each float contains a rotating 360° magnetic assembly which is generates a strong and balanced magnetic circuit with the external indicator.

The external indicator is hermetically sealed and is available in Wide Flag or Single Tracker styles. Each indicator type contains its own magnetic assembly that is balanced with the internal float. This generates a strong magnetic circuit that ensures an accurate and constant level indication.



Indicators

Single Tracker

Wide Flag

Available Enclosures:
Anodized Aluminum or 316 Stainless Steel

Single Tracker (ST)

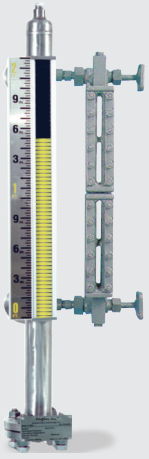
- Extra Large Indicator
- 1.50” width, maximum visibility
- Yellow Indicator, Black Background
- Other Colors Available
- Balanced Magnetic Coupling
- Rating: -40° F to +300° F

Ceramic Wide Flag (WF)

- 1.40” width, maximum visibility
- Solid One Piece Construction
- Dual Points of Rotation
- Yellow (Liquid) Black (Vapor)
- Other Colors Available
- Balanced Magnetic Coupling
- Rating: -200° F to +1000° F

Custom Features Available

Sanitary Mag-Gauge



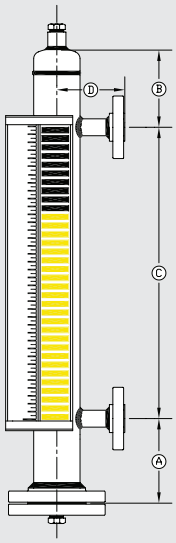
Drum Level Indicator

Meets ASME Boiler Code (PG60) for water level indicators on Boiler Drum

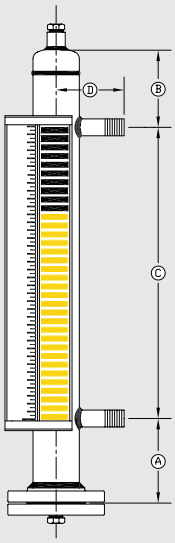
High Temperature Insulation shown with Red/White WF Indicator option

Cryogenic Insulation with MGT-6000

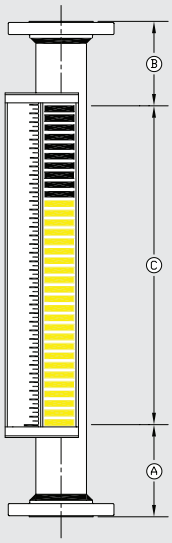
Chamber Styles



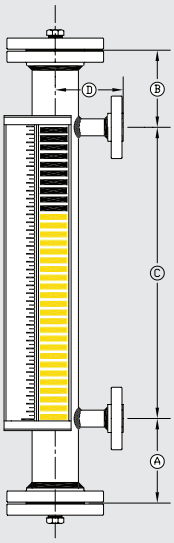
A



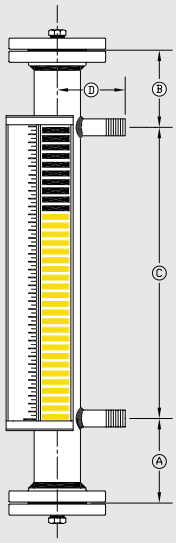
B



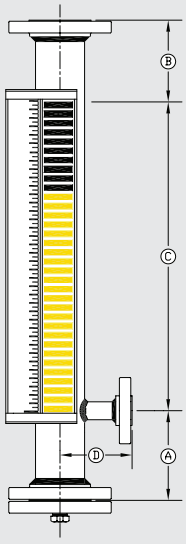
C



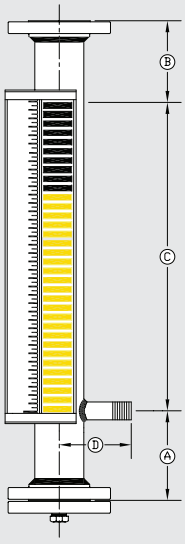
D



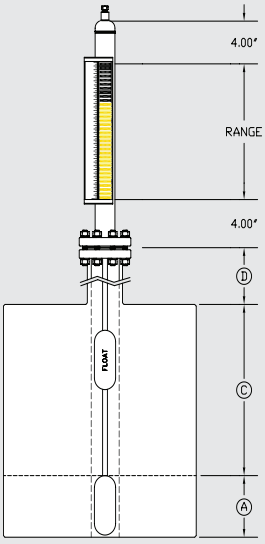
E



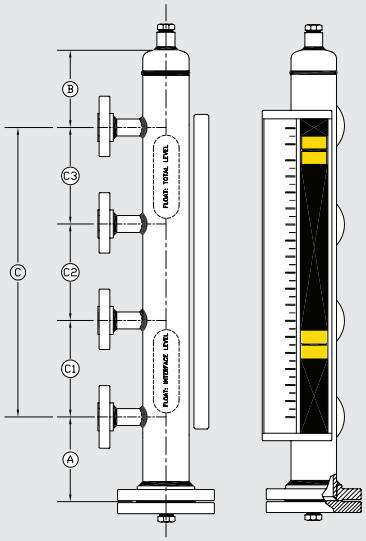
F



G



H



I

Standard Specifications

Chamber:

- Non-ferrous chamber material, 2.00", Schedule 40
- Any length from 12" to 20 ft.
- Full ASME B31.1 & B31.3 rated
- Schedule 40 branch connections
- Vent & drain connections: ½" to 1"
- Process connections: ½" to 3"
- MAWP: Full Vacuum to 3600 PSIG
- MAWT: -200° F to +1000° F
- Density Range: 0.30 to 2.00 gm/cm³

Scale:

- Feet & Inches, ¼" divisions, standard
- Photoeched on stainless steel
- Options: Metric, Percentage or Volumetric
- Extra Wide 3 ½" Acrylic scales available

Indicator:

- Yellow & Black, standard
- Maximum visibility to 200ft.
- Hermetically Sealed

Material:

4S	304/304L SS	4T	Teflon Lined 304 SS	MO	Monel	CP	CPVC
4C	304 SS / CS	4H	Halar Coated 304 SS	TT	Titanium	PV	PVC
6S	316/316L SS	NS	Non-Stick Coating	HB	Hastelloy B	KY	Kynar (PVDF)
6C	304 SS / CS	AL	Aluminum	HC	Hastelloy C	PP	Polypropylene
2S	312 SS	A2	Alloy 20	ZR	Zirconium	CM	Other material

Process Connection Size:

05	0.5"
07	0.75"
10	1.00"
15	1.50"
20	2.00"

Flange Rating:

01	150#
03	300#
06	600#
09	900#
15	1500#
25	2500#

OPTIONS

Chamber:

WN	Weld Neck Flanges
lL	Lap Joint Flanges
RJ	Ring Joint Flanges
BW	All Butt Weld Construction
NM	NACE MR0175
NDE	Non-Destructive Examination

Valves:

IV	Isolation Valves
GV	Gate Valves
BV	Ball Valves
VD	Vent & Drain Valves

Temperature Control:

CI	Low Temp. Cryogenic Insulation
IB	High Temp. Insulation Blanket
EH	Electrical Heat Tracing
FP	Freeze Protection
ST	Steam Tracing
FE	Frost Extension

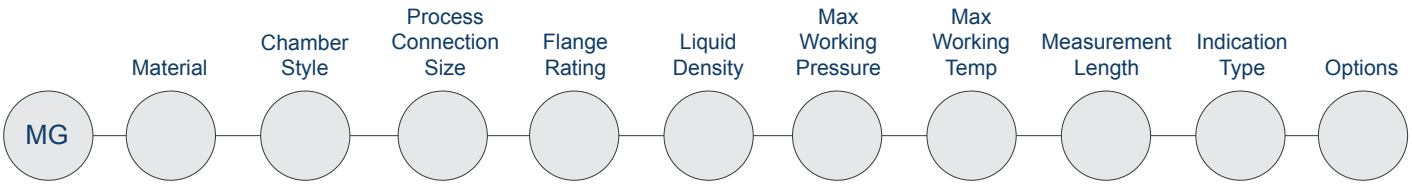
Testing:

NM	Nace MRO175
NDE	100% Nondestructive Testing (Die Penetration, X-Ray)

Indicator & Scale:

WF	Wide Flag
ST	Single Tracker
MS	Metric Scale
PS	Percent Scale
VS	Volumetric Scale
AS	3 ½ " Acrylic Scale
FE	Non Frost Extension
DI	Dual Indication
IF	Interface Indication
AR	Stagnant Level Arrow Indicators
IL	Illuminator
IG	Indicator Guard

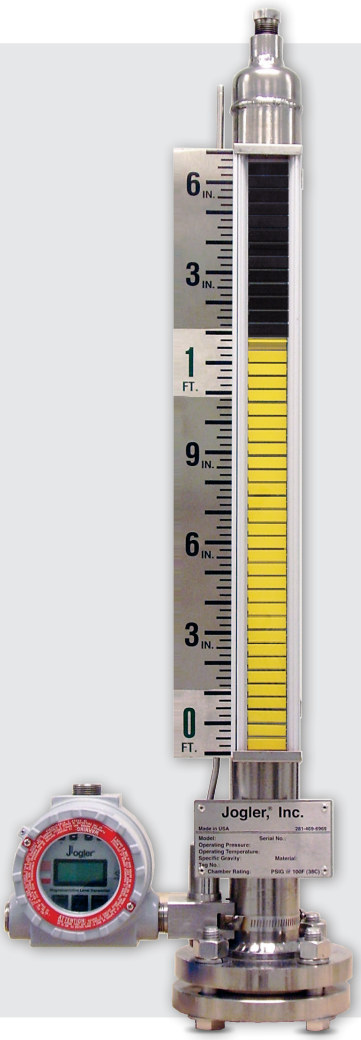
To construct a MG-Series™ Liquid Level Gauge



Level Transmitter

MGT-6000

Jogler's MGT-6000 series level transmitter is the latest development in magnetostrictive level sensing technology that is designed exclusively for magnetic level gauges. The MGT-6000 contains a low profile waveguide that is mounted away from the level gauge chamber. This durable slim design isolates the dual sealed waveguide from excessive vibration and temperature. From enhanced sensor technology, the output signal is fast, stable and extremely accurate.



Standard Features

- Two wire, loop powered, 24 VDC nominal
- 4-20 mA, inches/metric and/or percent output signal
- Scrolling LCD digital display in 4-20 mA, in/cm or percent
- Local and remote detection for total or interface level elevations.
- HART protocol field communication
- Local programmability allows for quick & easy setup
- No recalibration necessary, set it and forget it
- Non wetted, dual sealed low profile waveguide design, 316 SS
- Isolated from excessive thermal & vibration effects
- Top, bottom or remote transmitter head mountings
- Accurate to within 0.01% of total span selected
- Durable design with a strong, noise free signal output
- State of the art sensor and transmitter electronics
- Unique transmitter puck design
- Simple retrofit to most magnetic level gauge chambers
- Explosion proof housing, NEMA Type 4X
- Class I, Division 1, Groups B, C, D
- Class II, Division 1, Groups E, F, G
- Class III

HART® FIELD COMMUNICATIONS PROTOCOL · FM APPROVED · PACTware™

Point Level Switches

Jogler's point level magnetic level switches are non-mercury, bi-stable latching and non-invasive. This allows the operator to install or vertically adjust any switch without disruption to process operations. All switches meet FM, CSA and UL guidelines.

MGS-200EX & MGS-200EX/2

Type:	Electrical
Volts:	150 VAC / VDC
Current:	1.00 Amps
Power:	0.25 Watts
Contacts:	SPDT or DPDT
Deadband:	½ inch
MAWT:	-40°F to +600° F
Enclosure:	NEMA 4X
Connection:	¾" FNPT

MGS-500EX & MGS-500EX/2

Type:	Electrical
Volts:	500 VAC/VDC
Current:	3.00 Amps
Power:	100 Watts
Contacts:	SPDT or DPDT
Deadband:	½ inch
MAWT:	-40°F to +600° F.
Enclosure:	NEMA 4X
Connection:	¾" FNPT

MGS-700EX & MGS-700EX/2

Type:	Electrical
Volts:	125/250 VAC
Current:	10.00 Amps
Power:	2500 Watts
Contacts:	SPDT or DPDT
Deadband:	½ inch
MAWT:	-40°F to +600° F.
Enclosure:	NEMA 4X
Connection:	¾" FNPT

MGS-900EX & MGS-900EX/2

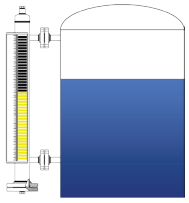
Type:	Electrical
Volts:	125/250 VAC
Current:	15.00 Amps
Power:	3750 Watts
Contacts:	SPDT or DPDT
Deadband:	½ inch
MAWT:	-40°F to +600° F.
Enclosure:	NEMA 4X
Connection:	¾" FNPT

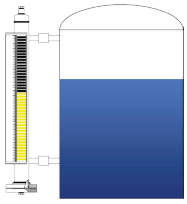
ELECTRICAL AREA CLASSIFICATION: CLASS I, DIVISION I, GROUPS B, C, D

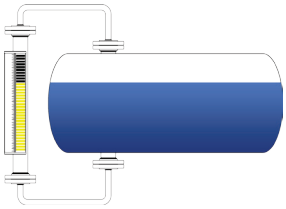
MGS-100

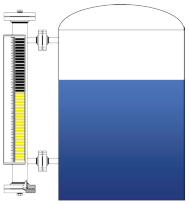
Type:	Non-Bleed Pneumatic
Supply Pressure:	30 – 200 PSIG
Deadband:	½ inch
MAWT:	0°F to 200° F.
Enclosure:	316 SS
Connection:	¼" FNPT

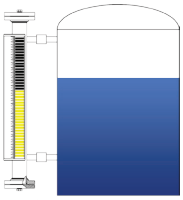
Typical Installation

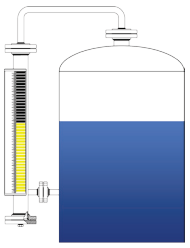

Style A

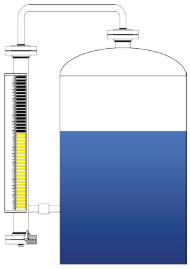

Style B

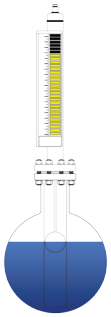

Style C

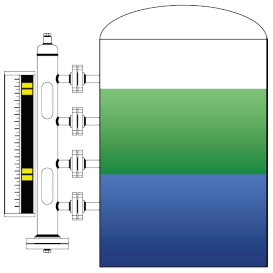

Style D


Style E


Style F

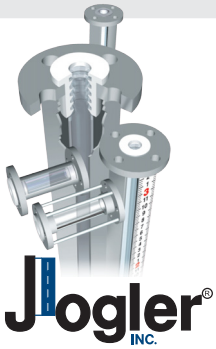

Style G


Style H


Style I

Applications

Acetic Acid	Chlorine	Hydrochloric Acid	Pharma Solvents
Aluminum Sulfate	Crude Oil	Hydroflouric Acid	Phosgene
Anhydrous Ammonia	Deionized Water	Hydrogen Sulfide	Refrigerants
Aqueous Ammonia	Dowtherm / Syltherm	Kerosene	Sodium Bisulfite
Benzene	Ethylene Dichloride	Liquid CO2	Sodium Hypochlorite
Boiler Feedwater	Glycol	LNG	Sulfuric Acid
Butane	HC Condensate	LPG	Sumps
Caustic	Hexane	Oil / Water Interface	Waste Water



9715 Derrington, Houston, TX 77064, USA
Phone: 281.469.6969 | Fax: 281.469.0422
www.jogler.com | sales@jogler.com

Represented By: