

# **KING-GAGE**

A NOSHOK Company

**Marine Systems for Tank Level Gauging,  
Draft Measurement and Ballast Monitoring**



# Instrumentation for Tank Level, Draft Monitoring and Vessel Management

**Ballast Water**

**Fuel Oil**

**Fresh Water**

**Lube Oil**

**Brine**

**Preload**

**Holding**



**KING-GAGE LP3**  
MULTIPLE TANK LEVEL DISPLAY SYSTEM

- Intuitive graphical operator interface
- 10.4-in. color LCD touch screen terminal
- Ethernet and serial digital communications

LP3 system provides continuous real-time measurement of level in service or ballast tanks and vessel draft. Tanks are graphically displayed on the screen and include a simple bargraph icon to convey tank level status at a glance. This tank liquid level measurement display package includes signal conditioning, data acquisition and network communications link(s) that can simplify the integration of tank level into a ballast control or vessel management system.



**KING-GAGE LP2**  
MULTIPLE TANK LEVEL INDICATOR

- Monitors up to 8 tanks or draft points
- Displays tank level in units of volume (or depth)
- Non-volatile memory retains tank capacity data

LP2 digital multiple tank indicator combines intelligent signal processing with accurate volumetric measurement. The LP2 will indicate tank levels for ballast water, fuel oil, potable water and/or draft measurement. An alphanumeric LCD panel provides 10-character tank identification with 8-digit display value of depth, volume and percent full. Digital serial output (RS-485) can be leveraged for integration to vessel management systems or additional remote display locations.



LevelWAV Radar Transmitter



788 D/P Purge Control

TANK LEVEL TRANSMITTERS

- Downpipe (hydrostatic) sensor mounts external to tank
- Sanitary configuration LevelWAV safeguards fresh water stores
- Remote power via 4-20mA signal cable simplifies shipboard wiring

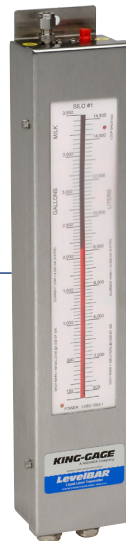
Purge Control transmitters are an advanced hybrid design of proven hydrostatic (or bubbler) technology. These extremely rugged units transmit level as a proportional 4-20mA output. Downpipe penetration can be at the top of the tank or through a lower side bulkhead. LevelWAV radar level transmitters automatically adjust transmit energy and receiver gain to ignore spurious reflections for accurate level measurement. Also available in sanitary configuration for potable water applications due to its stainless steel connection and PTFE antenna.

KING-GAGE LevelBAR

MARINE TANK LEVEL INDICATOR

- Rugged stainless steel housing
- LED graphically displays draft or tank level
- Calibrated scale for reading volume and/or depth

LevelBAR indicator delivers a bright multi-segment LED column to graphically display tank level or monitor vessel draft. As part of a system, the LevelBAR provides power to the remote 4-20 mA transmitter and can be used singly or in multiple locations for remote display of level. An available option provides an internal pressure sensor for direct replacement of mercury filled or bourdon tube tank gauges. Also available as on-demand tank level bubbler gauge utilizing a built-in hand pump.



738 D/P LiquiSeal Purge Control

D/P LIQUISEAL PURGE CONTROL TRANSMITTER

KING-GAGE D/P LiquiSeal Purge Control was engineered for marine level applications and is ABS type approved. This rugged component integrates an air purge regulator, pressure transmitter and isolation diaphragm to continuously measure hydrostatic pressure (created by liquid depth). Mounted external of the tank, it automatically maintains an extremely low flow continuous purge regardless of depth minimizing formations in the downpipe while ensuring real-time response to dynamic level changes. 4-20mA output can be transmitted virtually any distance within the vessel.

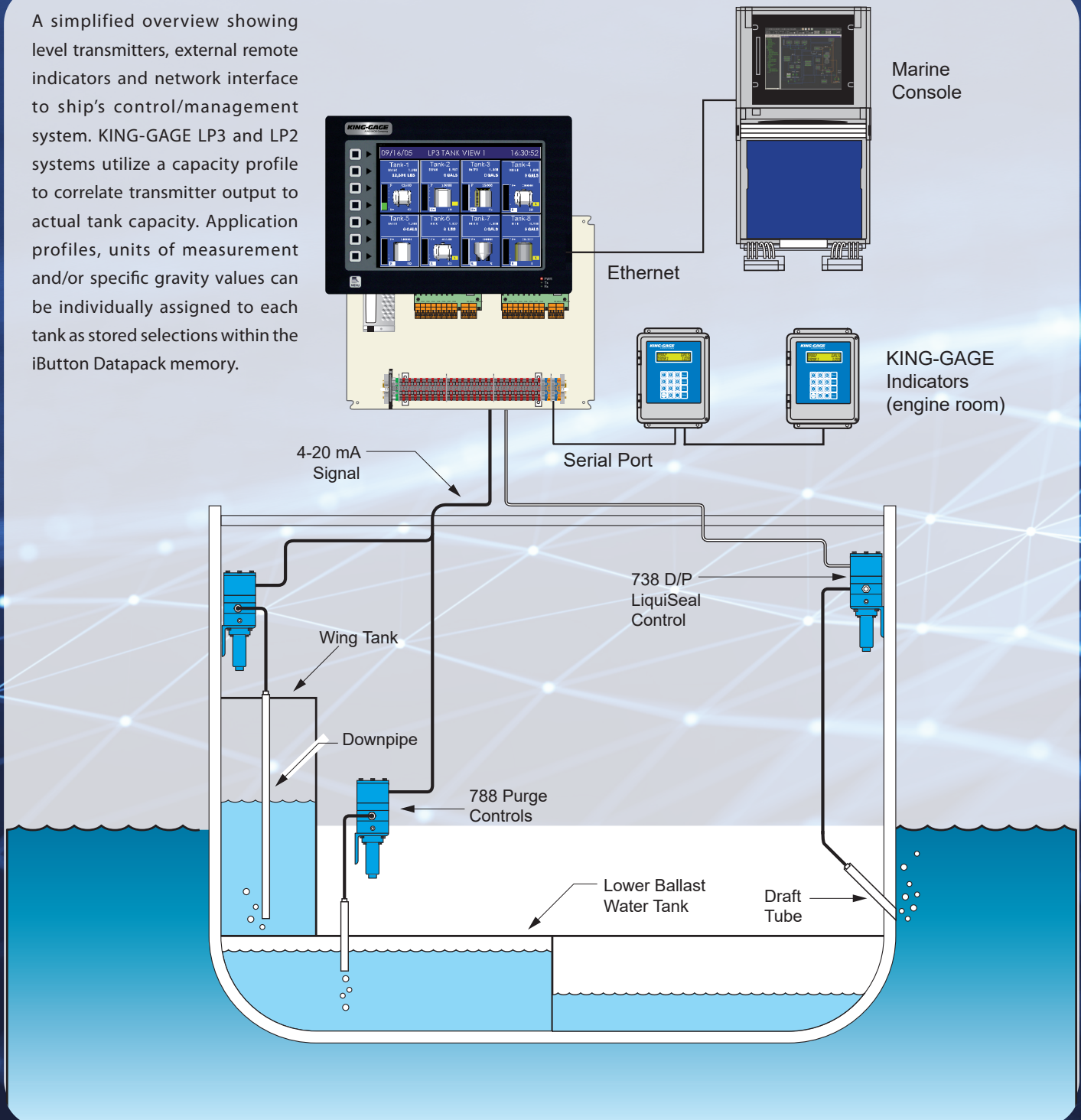
DOWNPIPE CHECK VALVE

The KING-GAGE Downpipe Backflow Check Valve is an engineered component to guard against liquid traveling up through the downpipe and into the system pressure line(s). A specially designed float pin rises up to seal the valve shut when liquid enters from the downpipe through the bottom of the unit. Use for downpipe purge systems employing KING-GAGE Purge Control or LiquiSeal Purge Control liquid level transmitters.



# Integrated System View

A simplified overview showing level transmitters, external remote indicators and network interface to ship's control/management system. KING-GAGE LP3 and LP2 systems utilize a capacity profile to correlate transmitter output to actual tank capacity. Application profiles, units of measurement and/or specific gravity values can be individually assigned to each tank as stored selections within the iButton Datapack memory.



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