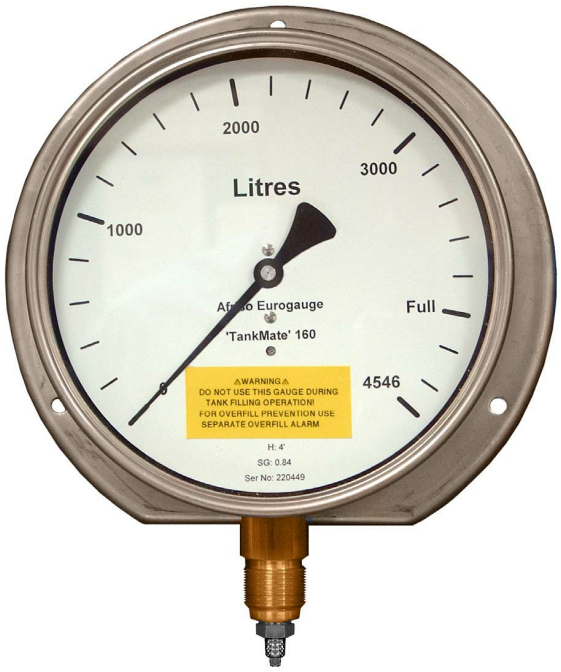
Tankmate™ Series

Tank Contents Gauge



+ Read guide before use!
+ Observe all safety information!
+ Keep guide for future use!

If In Doubt ASK !

+44(0)1293 658360
tech@afriso-eurogauge.co.uk

About this User Guide

This guide is part of the device installation.

Read this guide before using the device.

Keep this guide during the entire service life of the device and always have it readily available for reference.

Always hand this guide over to future owners or users of the device.

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WARNING TERMS

The type and source of danger associated with this device is shown here.

Precautions to take in order to avoid the danger are shown here.
There are three different levels of warning:

DANGER	Imminent danger! Failure to observe the information will result in death or serious injuries.
WARNING	Possible imminent danger! Failure to observe the information may result in death or serious injuries.
CAUTION	Dangerous situation! Failure to observe the information may result in minor or serious injuries and damage to property or device not working as expected.

General Installation

The device must be installed in accordance with the details given later in this guide.

Troubleshooting

Repairs and fault finding may only be performed by Afriso Eurogauge personnel or qualified personnel under Afriso Eurogauge instruction.

Safety

Intended use

The device may only be used for continuous level monitoring in containers and tanks for the storage of the following media.

Lubricating oils, diesel, kerosine, aviation fuels and heating oils, water and other liquids specified by Afriso Eurogauge Ltd

Any use other than the application explicitly permitted in this guide or authorised by Afriso Eurogauge is not permitted.

WARNING **Do not tamper with or modify the device in any way whatsoever.**

Transport and storage

CAUTION **Damage to the device due to improper transport.**

Do not throw or drop the device.

Staff Qualification
The device may only be mounted, commissioned, operated, maintained, shut down and disposed of by trained staff.

Modifications to the device
Changes or modifications made to the device by unauthorised persons may lead to malfunctions and are prohibited for safety reasons unless specifically instructed by the manufacturer.

Use of spare parts and accessories
Use of unsuitable spare parts and accessories may cause damage to the device. Use only genuine manufacturer spare parts and accessories.

Liability information
The manufacturer shall not be liable in any form whatsoever for direct or consequential damage resulting from failure to observe the technical instructions, guidelines and recommendations given in this guide or ancillary documents.
The manufacturer or sales agent shall not be liable for costs or damages incurred by the user or by third parties in the usage or application of this panel, in particular in case of improper use of the device, misuse or malfunction of the connection, malfunction of the device or of connected devices.
The manufacturer or sales agent shall not be liable for damage whatsoever resulting from any use other than the use explicitly permitted in this guide or ancillary documents.

The manufacturer shall not be liable for misprints.

Disposal and Recycling
Dismount the device.
To protect the environment, this device must **not** be disposed together with normal household waste
Dispose of the device according to according to local directives and guidelines.
This device consists of materials that can be recycled.

Where it is not possible to dispose of the device locally in accordance with environmental regulations please contact us for return or disposal instructions.

Warranty
The manufacturer's warranty for this device is 24 months after the date of purchase.
This warranty shall be good in all countries this device is sold by the manufacturer or its authorised dealers or agents.
Refer to separately supplied installation guides for information regarding warranty on external components.

Copyright
The manufacturer retains the copyright to this device. This guide or any separately supplied installation guide may not be reprinted, translated, copied in part or in whole without prior written consent.
We reserve the right to make technical modifications with reference to the specifications in this guide without notice.

Customer Satisfaction
Customer satisfaction is our prime objective.
Please get in touch with us if you have any questions, suggestions or problems concerning the device or external components.

Contact
Afriso Eurogauge Ltd
Unit 4, Satellite Business Village
Fleming Way, Crawley
West Sussex. RH10 9NE

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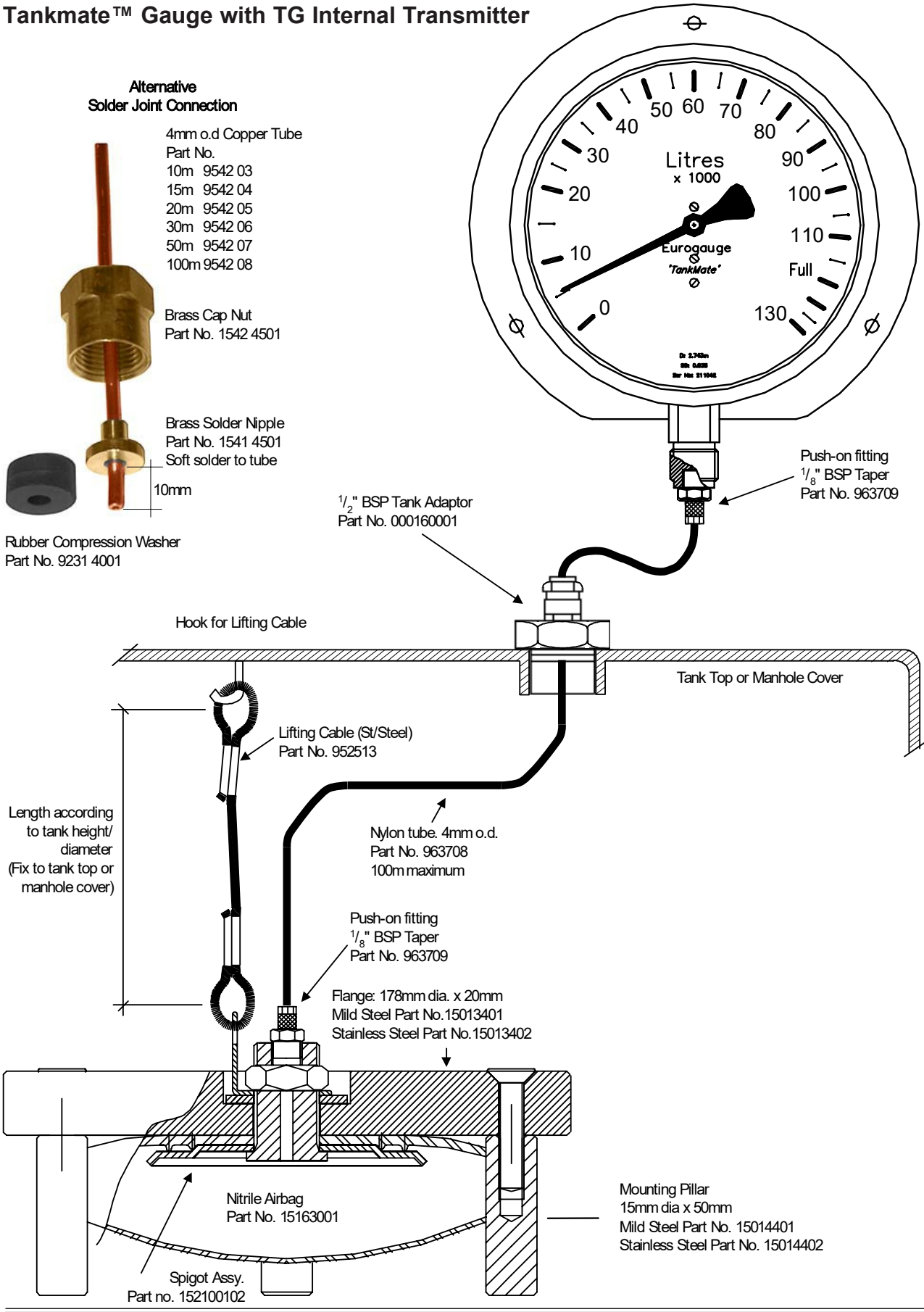
email: techoffice@eurogauge.co.uk
Web: www.eurogauge.co.uk

Installation Schematic

Tankmate™ Gauge with TG Internal Transmitter



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Installation

Tankmate Gauge with TG Internal Transmitter

Check the gauge dial for correct calibration, depth and specific gravity and check whether pointer is on zero.

If the pointer is not on zero, carefully remove the front bezel from the gauge and reset the pointer to zero via the adjustment screw on the gauge dial.

Mount the gauge in the required position. If mounting outdoors, the gauge should be protected from direct sunlight.

Remove the manhole cover from the tank and mount the tank adaptor close to the manhole or in the cover itself.

Attach the lifting cable to a suitable fixing point at the top of the tank.

Pass the nylon tube through the tank adaptor and connect it to the TG internal transmitter (if using copper tube then make connection in accordance with diagram on page 4).

Important: This must be a 100% airtight connection.

Run the tube to the gauge ensuring that there are no sharp bends or kinks

Connect the tube to the gauge (if using copper tube then make connection in accordance with diagram on page 4).

Important : This must be a 100% airtight connection.

Lower the TG transmitter using the lifting cable (**DO NOT USE THE TUBE**) to the bottom of the tank.

Provided that airtight connections have been made at both the transmitter and gauge ends, a correct indication will be obtained and the gauge will maintain a constant reading of the liquid level.

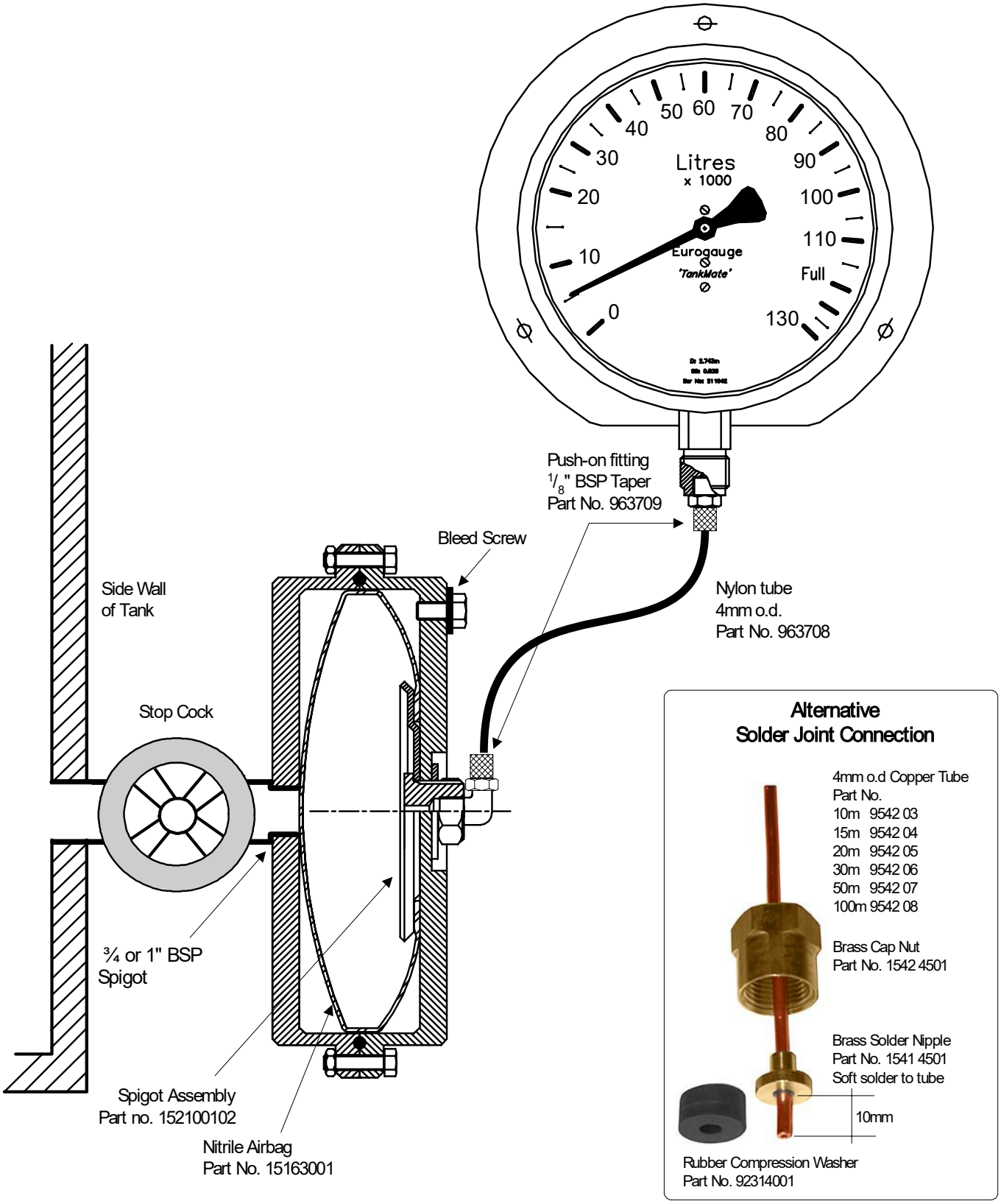
Attention: If for any reason the tube has to be disconnected, the transmitter must be first removed from the tank to prevent the airbag in the transmitter from collapsing.

If the airbag of the transmitter collapses due to an air leak in the system, ensure that the airbag is re-inflated and assumes its normal rounded shape with the tube disconnected. (Blow down the inlet on top of the transmitter until resistance is felt).

Reconnect the tube to both transmitter and the gauge **before** the transmitter is lowered back to the tank bottom.

Installation Schematic

Tankmate™ Gauge with AG External Transmitter



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Installation

Tankmate™ Gauge with AG External Transmitter

Check the gauge dial for correct calibration, depth and specific gravity and check whether pointer is on zero. If pointer is not on zero, carefully remove the front bezel from the gauge and reset the pointer to zero via the adjustment screw on the gauge dial.

Mount the gauge in the required position. If mounting outdoors, the gauge should be protected from direct sunlight.

Ensure that the stopcock on the tank is fully closed. Connect the AG transmitter to the stopcock.

Ensure that the transmitter bleed screw is positioned vertically at the top of the transmitter.

Connect the nylon tube to the AG Transmitter (if using copper tube then make connection in accordance with diagram on page 6).

Important : This must be a 100% airtight connection.

Run the tube to the gauge ensuring that there are no sharp bends or kinks.

Connect the tube to the gauge (if using copper tube then make connection in accordance with diagram on page 6).

Important : This must be a 100% airtight connection.

Loosen bleed screw located in the top of the AG Transmitter.

Open stopcock **slowly** until liquid begins to run out of the bleed hole.

Retighten the bleed screw.

Turn the stop-cock fully on.

Provided that 100% airtight connections have been made at both the transmitter and gauge ends, a correct indication will be obtained and the gauge will maintain a constant reading of the liquid level.

Attention:

If the airbag of the transmitter collapses due to an air leak in the system, ensure that the airbag is re-inflated and assumes its normal rounded shape with the tube disconnected.

(Turn off the stopcock, disconnect the transmitter, drain out the liquid, blow down the inlet on top of the transmitter until resistance is felt).

Reconnect the tube to both transmitter and the gauge **before** the transmitter is lowered back to the tank bottom.

Specification

Gauge Head:-

Flange	196mm dia.
Bezel	160mm dia
Depth	59mm
Range	0.6 - 10m W.G. at S.G 1.00
Materials	Case, Bezel & Back Plate: Type 304 Stainless Steel (Bezel Polished).
Accuracy	Gauge ± 2% of full scale.
Zero Adjust	Approximately 10% of F.S.D.
Calibration	
Marks	Major max.10 , Minor max.30.
Protection	IP65 (BS5490/IEC529).
Position	Vertical Mounting.
Fixing:	3 holes 5.8mm dia. equispaced on 178mm pcd.

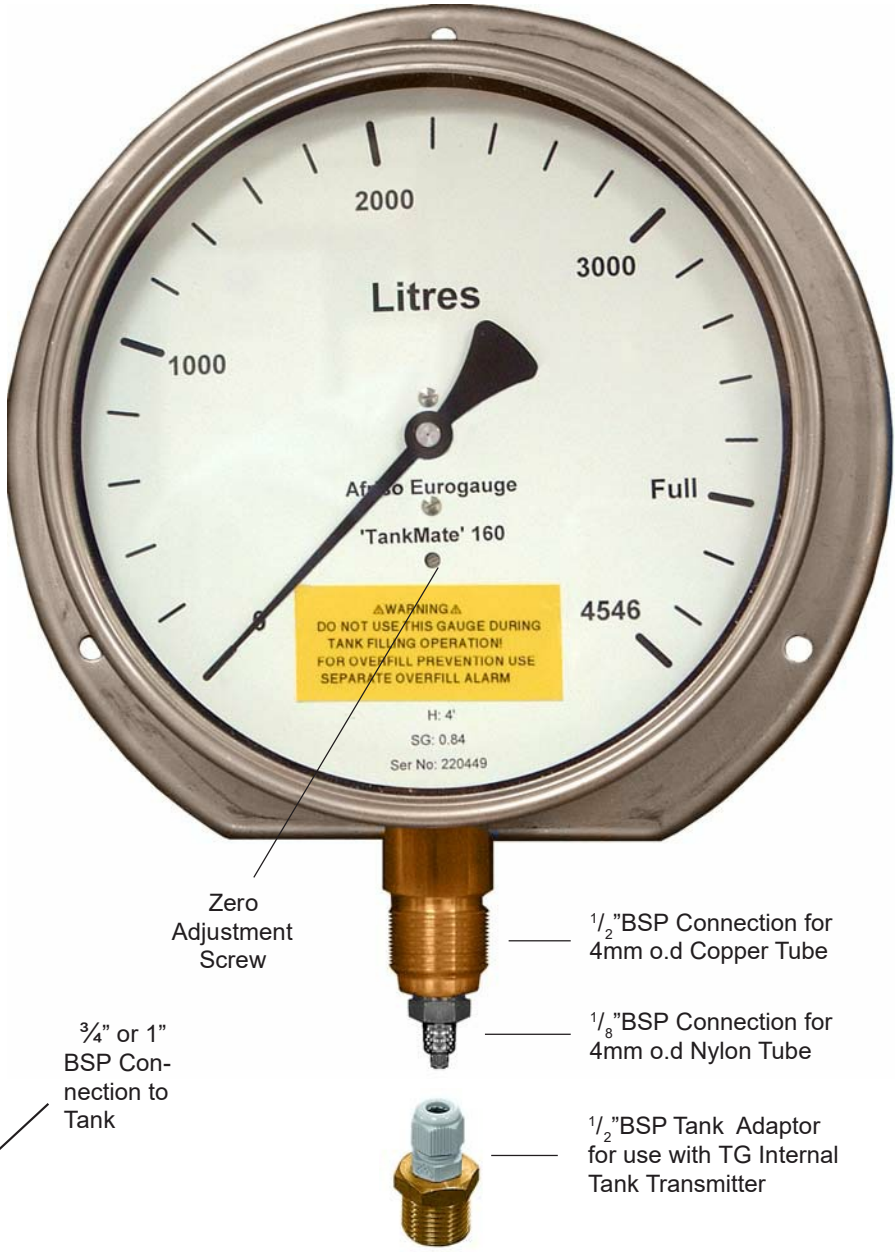
TG Internal Transmitter:-

Diameter	178mm
Height	140mm
Housing	Mild or Stainless Steel

AG External Transmitter:-

Diameter	178mm
Height	100mm
Housing	Mild or Stainless Steel

Maximum Distance from Transmitter to Gauge Head: **100 metres**



AG External Tank Transmitter

TG Internal Tank Transmitter

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Troubleshooting

Problem	Cause	Action
No reading Constant reading regardless of tank contents Slowly decreasing gauge reading	Air Leak Diaphragm in transmitter has collapsed. Minute air leaks	Check that capillary tubing has been correctly fitted. Make sure that the transmitter diaphragm has been correctly inflated (remove transmitter, blow down inlet on top of transmitter until resistance is felt). Then release pressure and the diaphragm will assume its correct shape. Connect transmitter back to tubing before putting back on or in the tank. Check for splits or twists in the capillary tube. Remake the capillary tube connections to the gauge and transmitter.
Gauge reading too low	Incorrect tank Calibration. Diaphragm in transmitter partially deflated.	Check calibration details against: 1 Gauge dial. 2 Original order. 3. Eurogauge advice note. Check diaphragm inflation (see above). Check the tank calibration as above.
Gauge reading too high	Incorrect tank calibration. Gauge in direct sun.	Re-mount gauge in a position where it is not exposed to direct sunlight or fit a sun shield.

If in any doubt about any of the above please contact us on 01293 658360. **Do not** dismantle gauge as this is factory adjustment only.

Part Numbers

TM160

Capsule Range
A=100mbar (1m) D=400mbar (4m) G=Other
B=160mbar (1.6m) E=600mbar (6m) X=NA
C=250mbar (2.5m) F=1000mbar (10m)

Gauge Head Connector
1=4mm Nylon 2=4mm Brass 3=4mm St/Steel

Transmitter Type
A=M/Steel Internal 4mm Nylon Connection
B=St/Steel Internal 4mm Nylon Connection
C=M/Steel Internal 4mm Brass Connection
D=St/Steel Internal 4mm St/Steel Connection
E=St/Steel External 1" BSP 4mm Nylon Connection
F=St/Steel External ¾" BSP 4mm Nylon Connection
G=St/Steel External 1" BSP 4mm Brass Connection
H=St/Steel External ¾" BSP 4mm Brass Connection
X=No Transmitter Required

Tank Adaptor
0=No Tank Adaptor
1=½" BSP Brass Tank Adaptor
2=1" BSP St/Steel tank Adaptor

TM160				

Note: We reserve the right to amend specifications without prior notice.

Maintenance

Gauge installation should be inspected annually and checks made for any component failure or system air leaks. Where possible gauge reading should be checked against a tank dip assuming that an accurate dipstick is available or if not against a delivery of known amount.

If required, the gauge head may be returned to Afriso Eurogauge for a chargeable calibration check to be made against the original tank details. Calibration may also be checked on site (chargeable).

In either case a new calibration certificate will be issued by Afriso Eurogauge against each gauge checked.

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Declaration of Conformity

Tankmate™ - 19xx Series Contents Gauge

AFRISO EUROGAUGE Ltd
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www.eurogauge.co.uk
sales@afriso-eurogauge.co.uk

This is to certify that the above named product fully complies with the Pressure Equipment Directive 97/23/EC and manufactured to the following standards:

EN 837-1: Bourdon tube pressure gauges, dimensions, metrology, requirements and testing.

EN 837-2: Selection and installation recommendations for pressure gauges.

EN 837-3: Diaphragm and capsule pressure gauges, dimensions, metrology, requirements and testing.

Signed :

D. C Ward

Position: Technical Services Manager
Date: 01/02/2017
This declaration applies to all 19xx Series part number(s) .

Declaration of Product Origin

Tankmate™ Tank Contents Gauge

We confirm that the following product designs originate and have been partially manufactured in Germany by:

AFRISO-EURO-INDEX GmbH
Lindenstr 20 DE-74363 Güglingen
Germany
Tel: +49 (0) 7135 102-0
Fax +49 (0) 7135 102-147
info@afriso.com
www.afriso.com

and the United Kingdom of Great Britain and Northern Ireland by:

Afriso Eurogauge Ltd.
Unit 4, Satellite Business Village,
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West Sussex.
RH10 9NE. United Kingdom.
Tel: +44 (0)1293 658360
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sales@eurogauge.co.uk
www.eurogauge.co.uk

Signed: D C Ward Position: Technical Manager Date: 21/02/2007

This declaration applies to all 19*xx* Series part number(s)