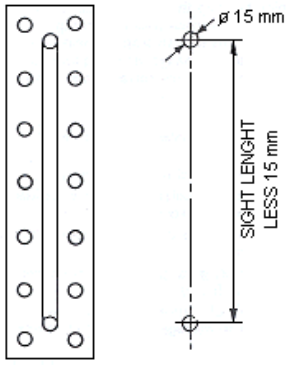
TC Fluid Control Ltd
Instrumentation +44 (0) 1322 622 400
www. tc-fluidcontrol.com

INSTALLATION AND SERVICE GUIDE
KLINGER Weld-on Level Gauges for process applications

Models MWR (PN 100), MWT (PN 100), UWR (PN 100) & UWT (PN 100)

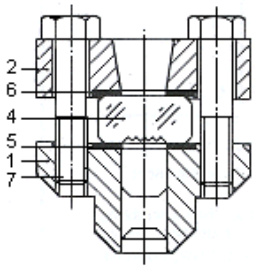


1 FITTING

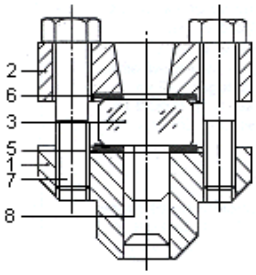
First dismantle the gauge as shown in 3.2 changing glasses.
It is not necessary to cut a slot in the vessel wall. Two 15mm diameter holes should be drilled in the vessel with centres 15mm less than the sight length of the gauge, as shown in Fitting diagram. With combined sight gauges, it is recommended that two holes be drilled for each section of the sight. The centre piece should then be positioned accurately over the holes and tack welded into place. Check for correct alignment, and finish weld ensuring that the heat does not distort the centre piece. The gauge can then be reassembled using reverse procedure to that shown in 3.2.

2 COMMISSIONING

Thermal shock considerably affects the life and performance of the glasses. Therefore, sharp changes in temperature should be avoided as much as possible. During initial warning up period, the cover and joints may settle and it is essential, therefore, to follow up all the clamping bolts to maintain the recommended torque (for correct order and torque see Tightening procedure).



MWR :
ANSI class 600
PN 100
Max. temp. 400°C
Actual rating subject to pressure limitation of vessel and quality of weld.

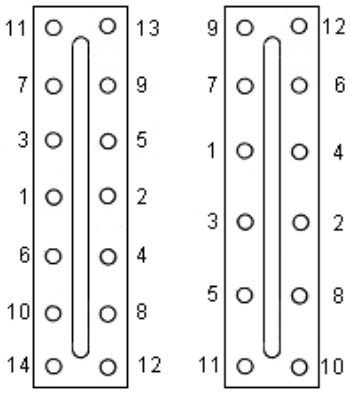


MWT :
ANSI class 600
PN 100
Max. temp. 400°C
Actual rating subject to pressure limitation of vessel and quality of weld.

TIGHTENING PROCEDURE

COVER BOLT TORQUE

Gauge	DaN.m	Lbs.ft
MWR	5.0	36
MWT	5.0	36



Item	Part list
1	Centre piece
2	Cover
3	Transparent glass type B
4	Reflex glass type B
5	Sealing joint
6	Cushion joint
7	Bolt
8	Protective shield (when fitted)

Note : UWR and UWT gauges can be supplied where the applications requires an enclosed glass. Please refer to MWR and MWT data for maintenance.

Further information

For further information, please send an E-mail to the following address: instruments@tc-fluidcontrol.com

Ref: 76NOT028-An-01/2001

Rev 0 June 2011

TC Fluid Control Ltd
Instrumentation +44 (0) 1322 622 400
www.tc-fluidcontrol.com

INSTALLATION AND SERVICE GUIDE
KLINGER Weld-on Level Gauges for process applications
Models MWR (PN 100), MWT (PN 100), UWR (PN 100) & UWT (PN 100)

3 MAINTENANCE INSTRUCTIONS
3.1 Any leaks which appear during service should immediately be stopped by following up all the clamping bolts in the correct order with the recommended torque (see Tightening procedure). If this fails to stop the leak it may be necessary to change the joints and the glass because the sealing surface may have suffered damage.
3.2 Changing glass
- Drain vessel to below level of glass to be changed,
- Relieve gauge and vessel of internal pressure,
- Release the clamping bolts,
- Remove the bolts from the gauge (supporting covers and internals),
- Remove the cover, glass, joints and protective shields, part 8 (if fitted),
- Clean joint faces of centre piece and cover, taking care not to damage joint face of centre piece,
- With new glass, joints and protective shields (if fitted) re-assemble gauge using reverse procedure, re-torque bolts from centre bolts as shown in Tightening procedure,
- Follow the commissionning procedure (point 2) to bring the gauge back into service.

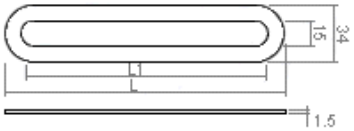
4 REFURBISHING
No refurbishing should be necessary other than the replacement of glasses, joints and Protective shields (refer to 3.2).

5 IMPORTANT INSTRUCTIONS
5.1 Use only original KLINGER replacement parts,
5.2 Cleanliness is most essential when assembling and points listed under 3.2 must be observed,
4.3 Draughts may cause thermal shock, resulting in glass breakages. If there are windows, lift doors, etc..., in the vicinity it is advisable that the gauge should be screened.
5.4 Glass corrosion - if the glasses become opaque or the liquid level definition deteriorates, the glasses should be examined, cleaned and if worn, replaced at once.
5.5 Protective shields can only be fitted to Transparent Level Gauges - they must never be fitted to Reflex Level Gauges.
When protective shields are fitted, they should be positioned between sealing joint (5) and gauge glass (3).

6 SPARES
It is recommended that one complete set of glasses, joints and Protective shields be kept for spares and a new set ordered as soon as these are used.
6.1 When ordering spares, please quote :
- type and size of gauge, e.g. MRW 2 - IX as stated on gauge type plate.
- construction of the level gauge components as stated on gauge plate, e.g. FS/H, M/H or M.
6.2 When ordering glasses , please quote transparent glasses type B + size :

Size	II	III	IV	V	VI	VII	VIII	IX
L	140	165	190	220	250	280	320	340

6.3 When ordering gaskets or Protective shields, please quote glasses type B + size of glass on which they are fitted :



Further information

For further information, please send an E-mail to the following address: instruments@tc-fluidcontrol.com
The characteristics of the products described on this page may be modified without notice, in the interests of regular improvement. In addition, the technical data reproduced here is provided for information only.

Ref: 76NOT028-An-01/2001