Transparent Level Gauge

TG32 / TG120

Edition 01/2023

D-03-B-50371-EN-01

ASSEMBLY AND OPERATING

Product philosophy

Thank you for placing your trust in IGEMA and deciding in favour of one of our high-quality products.

For more than 100 years, measuring and control systems have been developed, produced and sold worldwide under the IGEMA brand name.

“Steam is our passion” and we offer you the entire programme for the safe and economic operation of your plants, especially in the steam and condensate sector.

Please read the installation and operating instructions carefully to ensure a safe and reliable operation.

In addition to the information on installation and operation, you will also find important information on maintenance, care, safety and value retention of your measuring and control system.

Table of contents

1 Important safety instructions

KEEP THESE INSTALLATION AND OPERATING INSTRUCTIONS IN A SAFE PLACE!

Commissioning as well as maintenance and repair work may only be carried out by qualified persons in compliance with the installation instructions given in this operating manual. The correct installation, commissioning, maintenance and operation of the device presupposes that the person in charge is familiar with measurement and control systems and complies with the general installation and safety instructions. In addition, the correct and intended use of tools and the handling of safety devices must be ensured. Unqualified persons must not be assigned the above tasks!

IGEMA GmbH accepts no liability for damage to property or personal injury caused by unqualified persons or by failure to observe these installation and operating instructions. If no sufficiently qualified person can be found, IGEMA GmbH can be commissioned with the installation/maintenance.

1.1 Symbols used in these instructions

In the following installation and operating instructions, safety instructions are marked with the following symbols:

 Danger	This symbol and signal word refer to a potentially hazardous situation which could result in death or injuries if ignored.
 Caution electrical voltage	This symbol and signal word indicate live parts with an immediate danger of death from electric shock.
 Caution hot	This symbol with a signal word indicates a potentially hazardous situation that can result in severe burns and scalds all over the body.
 Caution	This symbol and signal word refer to a potentially hazardous situation which could result in personal injury, property and environmental damage if ignored.
 Caution	This symbol and signal word refer to a potentially hazardous situation which could result in damage to the equipment if ignored.
 Info	This symbol indicates useful information and recommendations as well as measures that will prolong the value of your measuring and control system.

1.2 Intended use of the device

Use these installation and operating instructions, the identification on the rating plate (see 3.2) and the technical data sheet to check whether the device is suitable for the intended use/application. The device complies with the requirements of the European Pressure Equipment Directive 2014/68/EU.

The device may only be used to indicate fill levels on containers.

The maximum values of the pressure and temperature range of the device must be checked before installation. If the maximum allowable operating values of the device are lower than those of the system on which it is to be installed, protective instruments for the device, such as pressure reducers or similar, must be provided to avoid limit situations. The device may only be used in accordance with the information in these installation and operating instructions or for the parameters and applications agreed in the supply contract. (see rating plate, 3.2) The operator of the direct water level indicator is obliged to familiarise himself on the compatibility of the medium and the device. In case of doubt, contact the relevant installation manager or site manager.

The correct installation position, alignment and flow direction of the device must be observed! Before installing the IGEMA product on boilers or containers, it is essential to remove all protective covers and, if necessary, the protective film from rating plates and sight glasses.

1.3 Safety at work

Danger

Before installation or carrying out maintenance work on the device, safe access must be ensured and a secure working area with sufficient lighting must be defined and marked out. Always use lifting equipment for heavy loads!

Before starting any work, carefully check which liquids or gases are or have been in the pipeline. (flammable substances, irritating substances, substances hazardous to health) When opening or dismantling the device, residues of the medium can escape. Subsequent fumes are also possible in unpressurized and cold systems. Use designated PPE such as safety goggles and respiratory protection!

Special attention must be paid to the condition of the environment around the installation or maintenance site. Be aware of e.g.: potentially explosive atmospheres, lack of oxygen in tanks and pits, dangerous gases/liquids, extreme temperatures, hot surfaces, fire hazard (e.g. during welding) and moving machine and system components. Protect yourself from excessive noise by taking the required protective measures.

For all maintenance work or new installations, on new or existing boilers or vessels, it is imperative to check that the boiler or vessel has been depressurised and that the pressure has been safely reduced to atmospheric pressure. In principle, no system should be regarded as unpressurized even if indicated by pressure measuring devices such as pressure gauges or sensors. When releasing the pressure, make sure that no persons are in the release area. Carefully check whether you and/or other persons in the vicinity need PPE to protect yourself from external influences such as high and low temperatures, radiation, noise, danger to eyes, loose objects that can fall down or chemicals.

There is always a risk of injury when handling large and/or heavy equipment. Observe the load handling regulation as a minimum requirement for working with loads. Avoid handling the device with your own physical force, e.g. by lifting, pulling, carrying, pushing or supporting it, especially to prevent back injuries. Use lifting equipment to move heavy and bulky equipment in accordance with Article 1, Section 2 of the German Load Handling Regulation (LasthandhabV).

Caution hot!

Under normal operating conditions the surface of the device can become very hot! Under the maximum operating conditions, the surface temperature can exceed 350°C. After shutting off or, if necessary, shutting down the boiler, wait until the temperature has normalized to room level. To avoid the risk of burns and scalds, always use PPE including safety goggles!

1.4 Safety instructions for this device

These installation and operating instructions are an integral part of the device and must be forwarded to the responsible departments "Goods inward, Transport, Installation, Commissioning and Maintenance". They must be kept in such a way that the technical staff have access to these documents at all times. If the device is passed on to a third party, these installation and operating instructions must also be included in the national language of the third party.

Avoid shocks and hard contact during transport, as this can lead to damage. During intermediate storage, the device must be kept dry and secured against damage.

When servicing the unit, make sure to use sharp-edged internal parts and avoid shards of broken glass. There is a risk of cutting hands and arms! Always wear work gloves when changing packing, valve seat and valve plug.

For units with a dead weight of 30 kg or more, the customer must provide adequate support (e.g. via a spring suspension device, etc.). This can be attached to the holding strap/eyelet on the device.

When returning goods to IGEMA GmbH, the applicable safety and environmental laws according to GGVSEB [German ordinance on the national and international carriage of dangerous goods by road, rail, and inland waterways] must always be observed. If there are any risks to health or the environment due to residues or the device has a mechanical defect this must be indicated when returning the device and the necessary precautionary measures must be taken. If the returned goods are devices that have come into contact with or contain hazardous substances, a safety data sheet must be enclosed, and the goods must be clearly marked. In addition, the hazardous substance must be reported to the logistics service provider.

1.5 Exclusion of liability

IGEMA GmbH Mess- und Regelsysteme will assume no liability if the above regulations, instructions and safety precautions are not observed and followed. If they are not expressly listed in the installation and operating instructions, changes to an IGEMA device are carried out at the risk of the user.

2 Contents of packing

1. Unless otherwise agreed, the level gauge is delivered in units A and B.

   Unit A consists of:
   - glass holder (1-15)
   - top shutoff valve (16)
   - bottom shutoff valve (17)
   - drain valve (18)
   - transport unit (20) – offset version
   - water level mark (21) - optional

   Unit B consists of:
   - Illuminating device (19)

2. Installation and operating instruction.

3 The Transparent Level Gauges TG32 and TG120

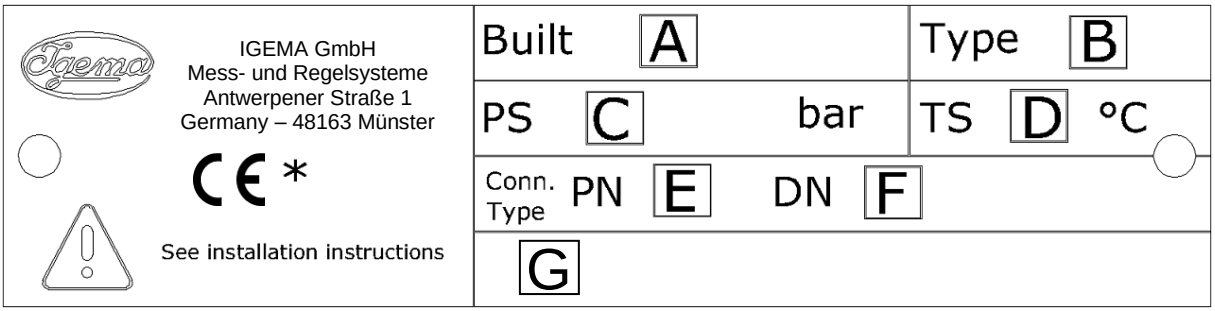
3.1 Device versions

The transparent level gauges TG32 and TG120 are available as standard in two variants, one with a simple sight length and one with sight lengths offset to each other. In the offset variant there is always an overhang of 26mm to the opposite sight length. The two variants are presented below.

Single sight length	Sight lengths offset to each other
	

3.2 Identification plate/ Marking

The following data are indicated on the identification plate:



* marking depending on the realization

A - Date of manufacture + order number
B - Type of unit
C - Max. all. pressure
D - Max. all. temperature
E - Nominal pressure (not listed)
F - Nominal diameter
G - TAG-no. (Optional)

3.3 Intended use

Caution

The direct water level gauge is for measurement and control purposes and must only be used to display fill levels on a tank. Here care must be taken that pressure and temperature do not exceed the maximum limitations of use. These can be found on the identification plate.

Caution

The operator of the direct water level gauge is responsible for the intended use of the indicator.

Caution

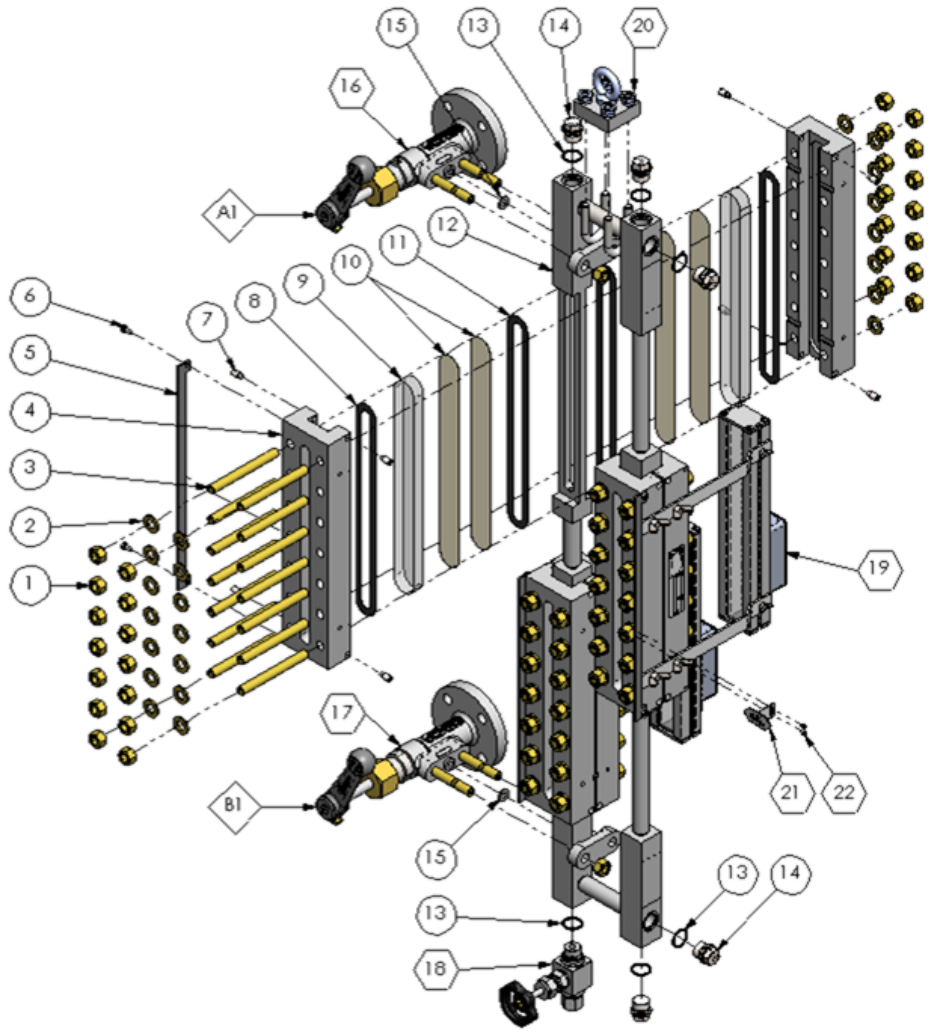
With the “offset” version adequate support (e.g. by spring suspension elements etc.) must be provided to the device at the customer’s premises. This can be fastened to the “transport unit”.

3.4 Function description

The transparent level gauge, in different versions, is used to detect the liquid level of tanks and steam generators. The level gauge works according to the physical principle of communicating tubes. The liquid level is visible through the rear lighting in the viewing opening.

3.5 Assembly

Example staggered version

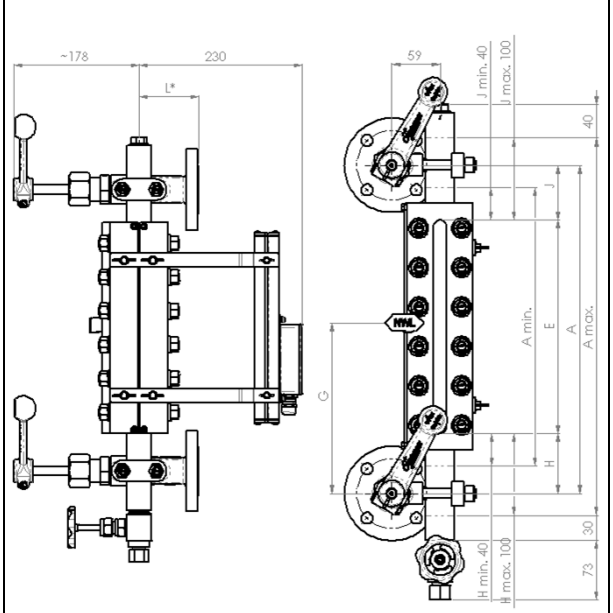
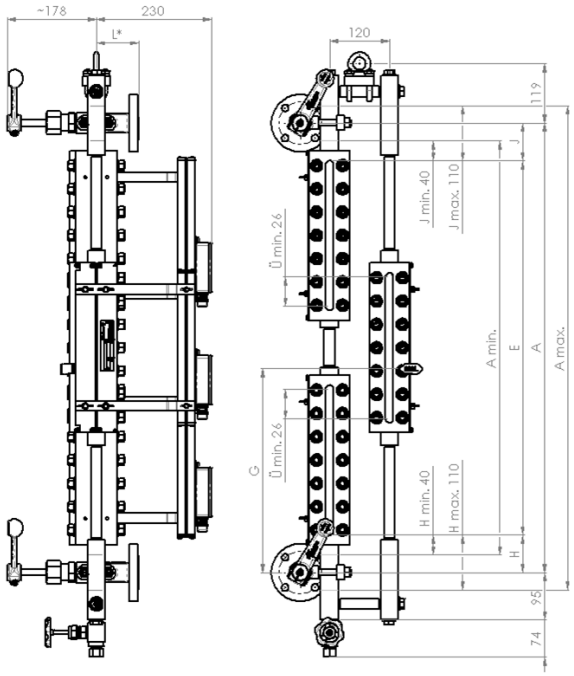


(1) Hexagonal nut
(2) Washer
(3) Threaded bolt
(4) Cover rail
(5) Mounting late of water level mark
(6) Fastening screw
(7) Set screw (mounting aid)
(8) Graphite gasket (glass protection)
(9) Borosilicate glass
(10) Mica shield (TG120)
(11) Graphite gasket
(12) Base body
(13) Soft iron gasket
(14) Thread plug G½"
(15) Gasket
(16 /A1) Top shutoff valve
(17 /B1) Bottom shutoff valve
(18) Drain valve
(19) Illuminating device
(20) Transport unit
(21) Water level mark (accessories)
(22) Fixing screws

The transparent level gauge item details refer to the item numbers listed here.

4 Technical Data

4.1 Device dimensions

One sight glass opening	Sight glass openings offset to each other
	
*L=Abhängig vom Prozessanschluss	Ü=min. 26mm *L=Abhängig vom Prozessanschluss

The dimensions H/J, E and A are stated in your order and can be viewed.
All other dimensions can be found in the following tables.

Single show length						
Size	Visible length (Dimension E)		Process connection length (Dimension A)			
			Min.		Max.	
5	200mm	7 7/8"	280mm	11 "	400mm	15 3/4"
6	230mm	9 "	310mm	12 1/5 "	430mm	17 "
7	260mm	10 1/4"	340mm	13 2/5 "	460mm	18 1/9"
8	300mm	11 4/5"	380mm	15 "	500mm	19 2/3"
9	320mm	12 3/5"	400mm	15 3/4 "	520mm	20 1/2"
10	350mm	13 7/9"	430mm	17 "	550mm	21 2/3"
11	380mm	15 "	460mm	18 1/9 "	580mm	22 5/6"

Corresponding table for drawings on page 13							
Staggered show length							
Type	Sec-tions	Visible length (Dimension E)		Process connection length (Dimension A)			
				Min.		Max.	
5/8	2	470mm	18 1/2"	550mm	21 2/3"	690mm	27 1/6"
5/5	3	610mm	24 "	690mm	27 1/6"	830mm	32 2/3"
8/8	3	750mm	29 1/2"	830mm	32 2/3"	970mm	38 1/5"
5/5	4	890mm	35 "	970mm	38 1/5"	1110mm	43 5/7"
8/8	4	1030mm	40 5/9"	1110mm	43 5/7"	1250mm	49 1/5"
5/5	5	1170mm	46 "	1250mm	49 1/5"	1390mm	54 5/7"
8/8	5	1310mm	51 4/7"	1390mm	54 5/7"	1530mm	60 1/4"
5/5	6	1450mm	57 "	1530mm	60 1/4"	1670mm	65 3/4 "
8/8	6	1590mm	62 3/5"	1670mm	65 3/4"	1810mm	71 1/4"
5/5	7	1730mm	68 1/9"	1810mm	71 1/4"	1950mm	76 7/9"
8/8	7	1870mm	73 5/8"	1950mm	76 7/9"	2090mm	82 2/7"
5/5	8	2010mm	79 1/7"	2090mm	82 2/7"	2230mm	87 4/5"
8/8	8	2150mm	84 2/3"	2230mm	87 4/5"	2370mm	93 1/3"
5/8	9	2290mm	90 1/6"	2370mm	93 1/3"	2510mm	98 5/6"
8/8	9	2430mm	95 2/3"	2510mm	98 5/6"	2650mm	104 1/3"
5/8	10	2570mm	101 1/6 "	2650mm	104 1/3 "	2790mm	109 5/6 "
8/8	10	2710mm	106 2/3"	2790mm	109 5/6 "	2930mm	115 1/3 "

4.2 Limitation of use

For steam applications, the following application limits apply to both the single inspection length and the offset version. The values given here must under no circumstances be exceeded!!

	TG32	TG120
Max. Pressure	32bar / 464,1psi	120bar / 1740,5 psi
Max. Temp.	239°C / 462,2°F	326°C / 618,8°F

The maximum operating conditions specified here apply to our standard design.
These values can be reduced or increased by customer-specific designs or connections.
In these cases, the conditions of use on the type plate of the level gauge always be valid

4.3 Materials

Parts in contact with the medium: Carbon steel or stainless steel as per DIN or ASME.

Pressure holding components: Carbon steel or stainless as per DIN or ASME.

4.4 Corrosion resistance

The safety of the unit is not affected by corrosion if it is used as intended.

5 General Information on the Shutoff Valve

5.1 Information

IGEMA shutoff valves are mostly maintenance-free and easy to handle. All IGEMA valves are equipped with metal gaskets, the valve spindles are sealed with a gland packing. The shutoff valve versions go from simple shutoff (designation A1--) to double shutoff (designation A2--). All main valve spindles are equipped with a quick closure function that ensures that the valve can be opened or closed with a ⅓ turn.

5.2 Functional principle

Handle/handwheel rotated clockwise: shutoff valve is closed.

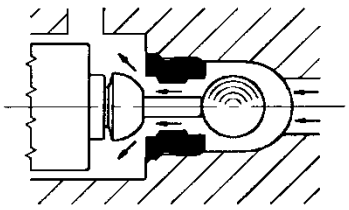
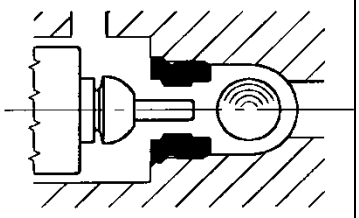
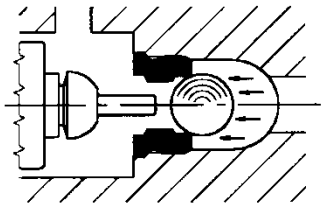
Handle/handwheel rotated anticlockwise: shutoff valve is opened.

Tools to increase hand torque are not permitted.

5.3 Self-closing ball safety function

All IGEMA GmbH shutoff valves are equipped with a self-closing ball function.

The self-closing ball is a safety device which automatically closes valve passage of shutoff valve if e.g. level gauge is damaged (e.g. mica break).

Fig.1	Fig.2	Fig. 3
		
Ball position during commissioning or flushing / purging	Ball position during normal operation	Ball position during glass/mica break or incorrect commissioning

Functioning of self-closing ball is only guaranteed if valve is fully opened. Residues (dirt, welding beads etc.) can put self-closing ball out of action.

Spare parts and further information can be found in the product-specific assembly and operating instructions or in the data sheet.

6 General information on the Drain valve

6.1 Information

The drain piping to the drain valve must ensure that no leakage of the medium into the atmosphere is possible and must be protected from pressure surges.

If the drain valve is equipped with a Ø12 cutting ring screw, the Ø12x1 pipe (from material 35.8) must be mounted as per DIN 2353. With a welding end only welding processes 111 and 141 are permitted.

6.2 Functional principle

Handwheel rotated clockwise: drain valve is closed.

Handwheel rotated anticlockwise: drain valve is opened.

Tools to increase hand torque are not permitted.

Spare parts and further information can be found in the product-specific assembly and operating instructions or in the data sheet.

7 Commissioning and maintenance phase

7.1 Commissioning and maintenance requirements


Danger

Commissioning and maintenance must be carried out by qualified personnel! If no sufficiently qualified person can be employed, IGEMA GmbH can be commissioned to carry out the commissioning. In principle IGEMA GmbH recommends commissioning the indicator at the same time as the boiler (point 7.2). If it is not possible to commission the indicator according to point 7.2, the indicator can be commissioned with the boiler under pressure and temperature (point 7.3)

All liquid level gauges are subjected to 100% pressure testing before delivery. In individual cases, material settling may occur during transport, longer storage or during assembly. All screw connections must therefore be checked for tight fit and appropriate torque (see following text).

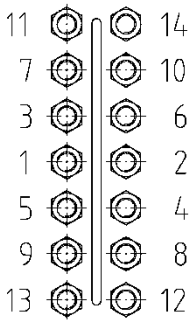

Caution

Tightening sequence to be observed for the cover rails is presented below!

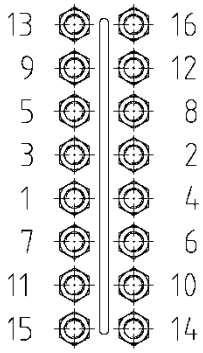
Non-compliance may result in leakage, glass and mica break.

The following tightening sequence must be ensured at the cover rails (drawing below). Non-compliance can lead to leaks, which are not covered by the warranty. In the first step with 1. Md=20 Nm, in the second step with 2. Md=40 Nm and in the third and last step with 3. Md=65 Nm.

odd number



even number



At the latest 24 h after commissioning, the screw connections must be checked and tightened again with the torques specified above in the listed tightening sequence due to material settlements that cannot be ruled out! This should be repeated until the bolts permanently hold the specified torques.

The union nuts of the valves must be tightened so that no leakage occurs at the spindle and the handwheel / hand lever can still be turned.

Info

Note!

After commissioning, slight leaks can occur in the valves, but these will reappear after a short time due to temperature and pressure.

7.2 Commissioning the indicator at the same time as the boiler

Caution

First make sure that the drain valve (18) is closed. Then open the shut-off valves (A1, B1) to the stop. The boiler can now be commissioned with the indicator. After commissioning the indicator must be checked for function and leakage. The specified torques and the described tightening sequence (point 7.1) apply.

7.3 Starting up the indicator when the boiler is under pressure

The shut-off valves (A1, B1) must be closed and the drain valve (18) must be fully open. Next, slowly and carefully open the upper stop valve (A1) a little so that the glass (TG32) or or mica (TG120) is carefully heated. Then the upper stop valve closes again.

Now the upper stop valve (A1) canbe opened slowly until it stops. Next the lower stop valve (B1) must be opened slightly (approx.: 5-minute position) so that the ball in the valve cannot block the valve passage. After pressure compensation, open the lower stop valve (B1) as far as it will go. Wait for the water level to be adjusted and then check the indicator for leakage. After commissioning the indicator must be checked for function and leakage. The specified torques and the described tightening sequence (point 7.1) apply.

7.4 Maintenance

When replacing components, it must be ensured that only original IGEMA GmbH parts are used.

Any warranty is void if components from other manufacturers are used.

7.5 Cleaning the indicator

Close top and bottom shutoff valves (A1, B1).

Open drain valve (18), unit will empty; this normally signifies that cleaning is completed.

Put the device into operation as described under Chapter 8.

If cleaning was not sufficient:

- Close top and bottom shutoff devices (A1, B1).
- Open drain valve (18), then slowly open top shutoff device (A1); the steam flowing through the unit cleans the glass/mica shields.
- Reclose upper shutoff device (A1) and drain valve (18).
- Put the device into operation as described under Chapter 8.
- Refit new glasses and mica shields if cleaning was not sufficient.

Spares kits and product numbers are listed in Chapter 11 Spare Parts and Accessories.

7.6 Cleaning the glass or mica shields

During first commissioning or re-commissioning of a boiler, oil and grease residues can deposit on the inside of the glass/mica shields. In such cases, close the drain valves (16, 17). Next wait until the gauge has cooled down.

After the plug(s) (14) have been removed, the glass/mica shields and the channel inside the gauge body can be cleaned with a circular brush.

Mica shields are a natural product and slight streaking and inclusions may occur. This does not affect the safety of your gauge.

7.7 Replacing the glass or mica shields

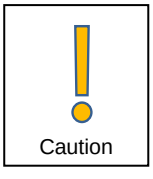
As soon as the cover rails are removed, new glasses, mica screens and seals must always be installed!

For safety reasons and to ensure full use of the indicator, glasses, mica and gaskets must always be replaced annually. Without the annual replacement IGEMA will not accept any warranty if this causes damage to the sealing surfaces of the indicator body.

7.7.1 Dismantling

Attention! Disassembly only when cold!

Close shutoff valves (A1, B1).
Open drain valve (18), unit will empty.
Wait until the gauge has completely cooled down.
Release nuts (1) from the cover rails (4) and remove together with the washers (2) and bolts (3). Release the side set screws and carefully remove the cover rails. A flat head screwdriver may have to be used at the side to loosen the cover rail by levering.
Take out the sealing used as padding (5), glass (6), mica shield (7) and sealing (8).
The sealing surface of the gauge body and the bearing surface of the cover rail must be freed of sealing residue and cleaned.



Caution, if defects or other damage arise during dismantling, it is essential that they are removed before the gauge is put back into operation, please contact the customer service of your contract partner or of IGEMA GmbH.

7.7.2 Fitting

Caution

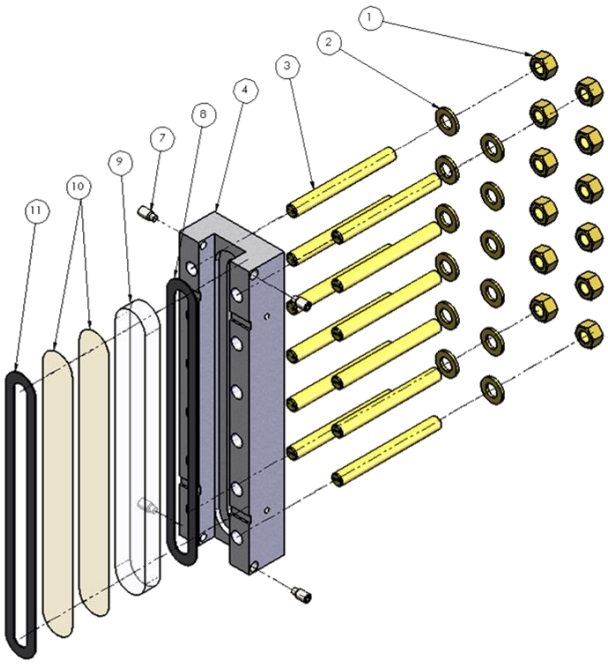
Fit mica packets with the surface marked “Wasserseite (water side)” towards the medium!

Fit the glasses so that the marking is legible from outside!

If a mica disc pack is marked "water side", it must be installed with the "water side" marked side facing the medium! The glasses must be installed in such a way that the marking can be read from the outside! (drawing, item 7.1)

Grease the bolts (1) with a suitable assembly paste. Position graphite gasket (8/11), borosilicate glass (9), mica disc (10) (only for TG120) and again a graphite gasket in the lid rail in this order. Carefully place the cover rail (4) with its contents on the base body (12) of the indicator and tighten the lateral set screws (7) so firmly that they hold the indicator without external influence. The torques and the tightening sequence according to point 7.1 must be ensured (see drawing).

Layout of the cover rail



7.8 Maintenance work on shutoff valve

Do not carry out maintenance tasks and dismantling unless the boiler and level gauge are empty and depressurised.

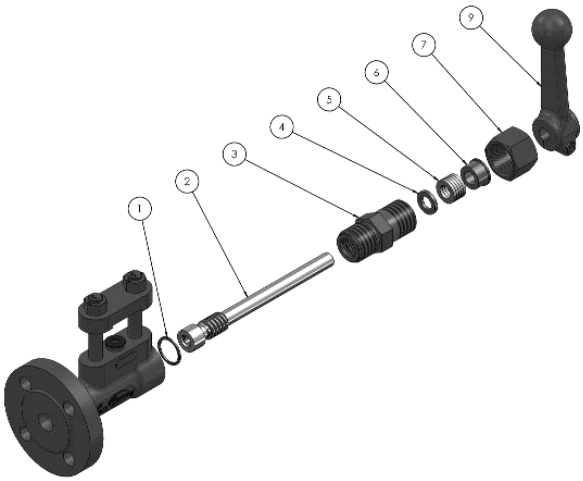
Always keep shutoff valve spindle thread greased.

Replacing the packing set on the shutoff valve

The following items must be renewed when changing the packing set: item: 1 soft iron gasket; item 5-6 packing set.

First of all release the handle (9) and pull it off the spindle, then release and screw out the cap nut (7). Then screw the upper part of the valve with the valve spindle out of the valve housing. Now the packing set (5,6,7) can be pulled off. It is important that the valve spindle is cleaned and freed of deposits, also ensure that it does not suffer any damage. Assembly is described in the next section Assembly.

As an example: A120-CS



Assembly of the shutoff valve after replacing the packing set

First of all insert a new soft iron gasket (1) into the housing. Then grease thread of valve spindle (2) and screw it into the upper part of valve (3) as far as it will go. Then insert base ring (4), gland packing (5) and gland (6).

Screw on cap nut (7) and tighten gradually.

- spindle must remain movable –

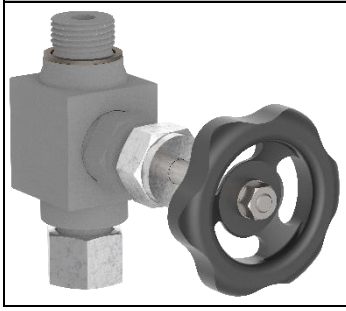
Screw in complete valve upper part (3) into the valve housing and tighten with tightening torque **Md max = 280 Nm**. Place on handle (9) and fix. Finally close the shutoff valve.

7.9 Maintenance work on drain valve

Dismantle only when the level indicator is depressurised and empty.

In case of defects and leaks, the complete drain valve must be replaced!

Drain valve AV250



The exchanging of the valve may only be carried out by specialists!

Loosen the pipe screw connection from the drain valve and pull off the pipe. Unscrew the shut-off valve from the transparent level gauge.

Screw a new drain valve with a new seal (supplied with shut-off valve) into the transparent level gauge, paying attention to the position of the handwheel. Screw the pipeline onto the shut-off valve. Check for leaks, tighten screw connections if necessary.

Spare parts and further information can be found in the product-specific assembly and operating instructions or in the data sheet.

8 Faults, Troubleshooting and Customer Service

8.1 Fault analysis and actions

Danger

In the event of damage, cordon off the danger zone over a wide area! Always exercise caution as severe burns may be sustained over the whole body

Fault	Cause	Action	Possible troubleshooting
Leakage	- glass/mica break - packing set not tight - seal not tight	1. Close shutoff valves 2. Slowly open drain valve (Depressurise gauge)	- replace glass/mica shield - replace packing set / seal - retighten screw connections
No water column visible in the gauge	- shutoff valves are not open - inlet or outlet pipe is blocked - connection bores in the gauge are blocked	1. Close shutoff valves 2. Slowly open drain valve (Depressurise gauge)	- carefully open shutoff valves. - clean inlet and outlet pipes - clean gauge

To put the level gauge back into operation, see section 8.

8.2 Technical customer service

Our competent team at IGEMA GmbH will be happy to answer any questions you may have. In order to be able to ensure smooth service, please provide the following details:

- Date of manufacture + order number
- Device type

You can find the details on the type plate of your gauge. As soon as you have described your question or fault, our customer service will immediately seek a solution. If repairs or maintenance are due, we shall make you a proposal for the type and date for the work.

9 Accessories

Always indicate article no. and serial no. (indicated on the identification plate) in case of spare parts order or accessory order!

9.1 Spare parts

Pos.-No.:	Description	Size	Article-No.	Required quantity	
				Single sight glass	Sight glasses offset to each other
1	Locking screws set	G½"	40-00481	1	6
2	Sealing ring	for G½"	40-00099	1	6
Spare Part Set TG32					
3	Spare Part Set	5	15-13557	1	nx1
3	Spare Part Set	6	15-13558	1	nx1
3	Spare Part Set	7	15-13559	1	nx1
3	Spare Part Set	8	15-13560	1	nx1
3	Spare Part Set	9	15-13561	1	nx1
3	Spare Part Set	10	15-13566	1	nx1
3	Spare Part Set	11	15-13567	1	nx1
Spare Part Set TG120					
4	Spare Part Set	5	15-13067	1	nx1
4	Spare Part Set	6	15-13068	1	nx1
4	Spare Part Set	7	15-13069	1	nx1
4	Spare Part Set	8	15-13070	1	nx1
4	Spare Part Set	9	15-13071	1	nx1
4	Spare Part Set	10	15-13072	1	nx1
4	Spare Part Set	11	15-13073	1	nx1

n = Number of Sight Length.
Spare Part Set 3 consisting of 4x sealing and 2x Transparent glass.
Spare Part Set 4 consisting of 4 x sealing, 2x Transparent glass and 2x mica shield.

9.2 Accessory

Description	Marking	Article-No.
Water Level Mark	NW-LWL-NB	25-13645
Water Level Mark	HHWL	25-13717
Water Level Mark	HWCO	25-13697
Water Level Mark	HWL	25-13716
Water Level Mark	NWL	25-13698
Water Level Mark	LWL	25-13718
Water Level Mark	LWCO	25-13699
Water Level Mark	LLWL	25-13719
Water Level Mark will be attached with two self-tapping screws. Article Number: 40-11121		

10 Decommissioning

Severe burns and scalding's on the whole body are possible!

Before detaching flange connections, screw glands, cover screws or screw plugs, all connected lines must be depressurised (0 bar) and cooled off to ambient temperature (20°C)!

10.1 Disposal

Dismount unit and separate waste products.

When disposing the unit, observe legal regulations for waste disposal.

Dieses hochwertige IGEMA- Produkt wurde unter Anwendung der QM-System-vorgaben gemäß DIN EN ISO 9001:2015 projektiert, gefertigt und geprüft.

Sollte das angelieferte Gerät Transportschäden aufweisen oder trotz unserer Qualitäts-Endkontrolle zu Beanstandungen Anlass geben, so wenden Sie sich bitte umgehend an unsere SERVICE- Bearbeitung unter der Rufnummer *+49 2501 92424-0.*

11 Manufacturer's Declaration

Herstellererklärung
Manufacturer's Declaration

Zur EU-Richtline 2014/68/EU

Die Firma:
IGEMA GmbH
Antwerpener Str. 1
48163 Münster, Deutschland

erklärt, dass die

Füllstand-Direktanzeiger /
Transparentanzeiger

TG32
TG120

mit der Richtline übereinstimmen und auf Grund des geringen Volumens von V < 1 l, bei einem Fluid der Gruppe 2 und Drücken p < 200 bar, gemäß nach Art. 4 Abs. 3 ausgelegt wurden.

Angewandte Normen:

DIN EN 13445

Weitere berücksichtigte Regelwerke:

AD2000

Als Anlagenkomponente für Großwasserraumkessel/Wasserkessel erfüllt das Produkt ebenfalls die Anforderungen an die Norm:

DIN EN 12952-7
DIN EN 12953-6

Zertifiziertes
Qualitätsmanagmentsystem nach
ISO9001:2015

Regarding EU-Directive 2014/68/EU

The company:
IGEMA GmbH
Antwerpener Str. 1
48163 Münster, Germany

declares that the

Direct Level Gauges / Transparent level gauge

TG32
TG120

comply with the directive and, due to the low volume of V <1 l, with a fluid of group 2 and pressures p <200 bar, were designed in accordance with Art. 4 Para. 3.

Applied standards:

DIN EN 13445

Additional considered technical rules:

AD2000

As a system component for shell boilers / water boilers, the product also meets the requirements of the standard:

DIN EN 12952-7
DIN EN 12953-6

Certified Qualitymanagmentsystem as per ISO9001:2015

Münster, 25.05.2020

H. Gartenbröker
(Geschäftsführer)
(Managing Director)

C. Möllers
(Leitung Konstruktion)
(Head of construction)

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BOILER MONITORING HEAT & STEAM TECHNOLOGY

Link zum Pfd.-Direktdownload

Zur Produktseite im Internet

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