

GLCG

BUFFER/BARRIER FLUID SYSTEM

Operation Manual

GLCG - DT - JS - 1034 - 2019(A)



Preface

Thank you for choosing the products of Dandong TOP Electrical Appliance (Group) Co.

This instruction manual provides you with important information on installation, connection and commissioning as well as for maintenance, troubleshooting and storage. Please read it carefully before installation and commissioning and keep it close to the instrument as an integral part of the product, so that you can refer to it at any time.

You can download this instruction manual by entering the version number at www.ddtop.com.

If the instrument is not operated in accordance with these instructions, the protection provided by the instrument may be impaired.

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During the warranty period, Dandong Top Electronics Instrument (Group) Co., Ltd. is responsible for repairing or replacing the equipment free of charge for the buyer (or owner) if the product is returned with quality problems and the claim made is determined to be covered by the warranty after inspection by the manufacturer.

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Quality

Dandong Top Electronics Instrument (Group) Co., Ltd. has passed the ISO9001 quality system certification. The whole production process is carried out in strict accordance with the provisions of the quality system to provide the strongest guarantee for the quality of products and services.

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1 Safety Tips

Unauthorized modification or alteration of the product is expressly forbidden for safety reasons. Repair or replacement is permitted only with parts specified by the manufacturer.

1.1 An explosion may cause death or serious injury.

When installing equipment in explosive atmospheres, always follow applicable local, national, and international standards, codes, and procedures. Ensure that equipment is installed in accordance with intrinsically safe or non-flammable site work procedures.

1.2 Serious injury or death may result from process leakage.

If the process seal is damaged, leakage of media may occur at the connection.

1.3 Failure to comply with safety installation guidelines may result in death or serious injury.

All operations described in these instructions must be performed by trained and qualified or end-user appointed personnel.

2 Product Description

2.1 Main product structure - Figure 1

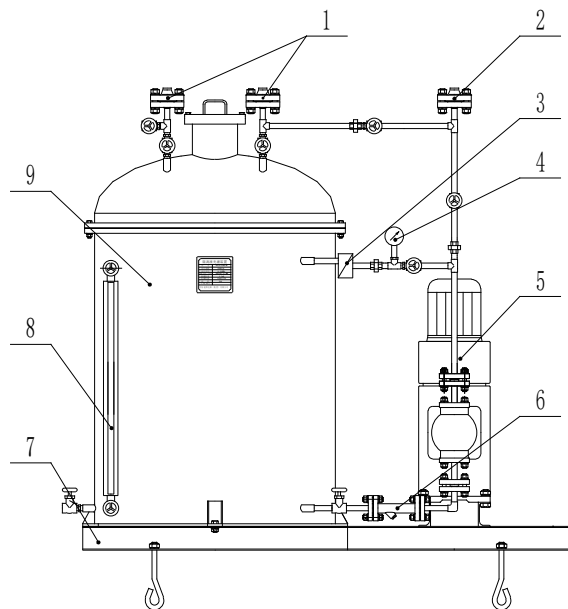


Figure 1

1. Inlet flanges: connecting to the air and water pipes of the device separately.
2. Outlet flanges: connecting to piping to be filled
3. Relief valve: stabilizing pressure and preventing overload to ensure constant export pressure.
4. Pressure gauge: indicating the change in outlet pressure.
5. Metering pumps: pressurizing and delivering isolation fluid.
6. Filter: filtering impurities from storage tanks
7. Base frame: fixing and supporting
8. Glass tube level meter: displaying the height of the isolated liquid level in the tank.
9. Liquid storage tanks: storage of isolation fluids

2.2 Operating Principle

Buffer/Barrier Fluid System is mainly composed of isolated fluid storage tank, level gauge, filter, metering pump and various valves, etc. The device is pressurized by metering pump to deliver the isolated fluid in the storage tank to the process device, to achieve antifreeze and cleaning effect and ensure the continuous and stable operation of the process device.

2.3 Packaging

Please take the packaging waste to a special recycling facility.

2.4 Lifting for transport

Please use qualified lifting equipment and lifting straps, and pay attention to safety.

2.5 Storage

Storage temperature $-20^{\circ}\text{C} \sim 40^{\circ}\text{C}$; storage humidity $\leq 20\%$.

3.2 Main Technical parameters

Outlet Pressure: 0 ~ 5MPa, 0 ~ 8MPa, 0 ~ 10MPa, 0 ~ 16MPa

Outlet Flow Rate: 125L/h, 160L/h, 200L/h

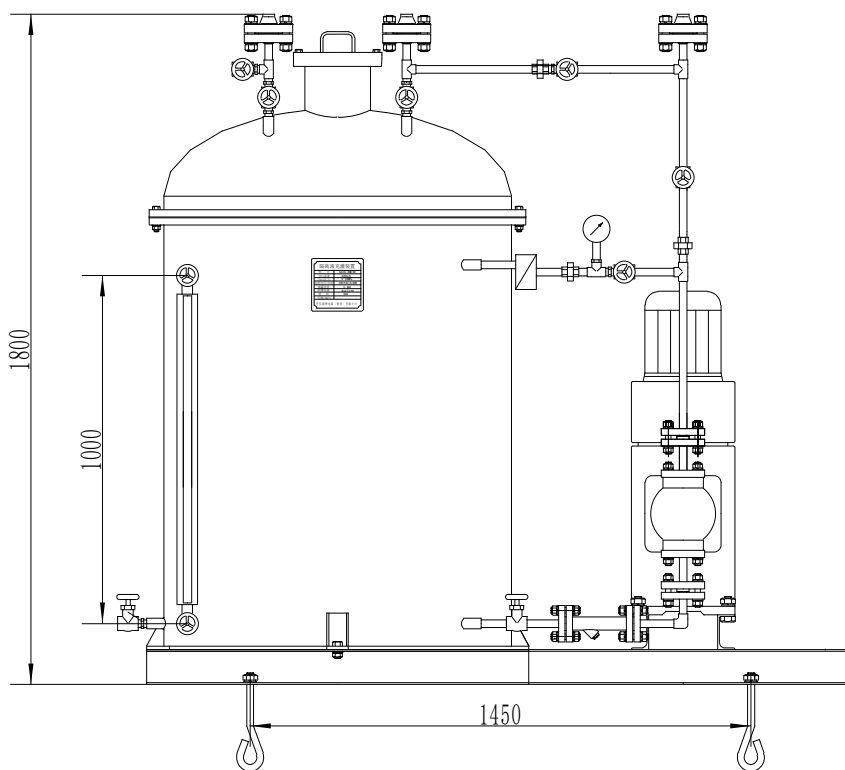
Tank Capacity: 1.1 m³

Motor Power: 2.2kW、4kW

Power Supply: 380VAC 50Hz

System Material: 304

4 Outline drawing



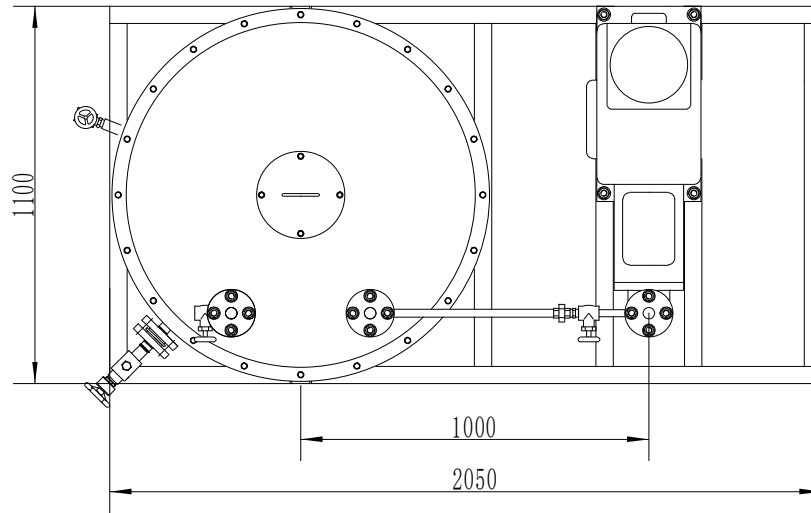


Figure 2 Outline drawing

5 Unpacking and Checking

5.1 Precautions for unpacking inspection

5.1.1 Check whether the Product Name Plate (Figure 3) is consistent with the information in the supply list.

Buffer/Barrier Fluid System	
Model	GLCG-160/8
Outlet Flow Rate	160L/h
Outlet Pressure	0 ~ 8MPa
Motor Voltage/Power	380VAC/3.0KW
Tank Capacity	1.1 m ³
Explosion-Proof Rating	Ex d II CT4
Material	304
Date / Code	
Dandong Top Electronics Instrument (Group) Co., Ltd.	

Figure 3 Product Name Plate

5.1.2 Check whether the quantity and material of each part are correct against the packing list.

5.2 Check the contents

5.2.1 Check the appearance of the meter for defects, damage, etc.

6 Installation

6.1 Installation tools

6.1.1 Wrenches, welding machines, etc. for process connections

6.2 Methods of use and operating procedures - Figure 4

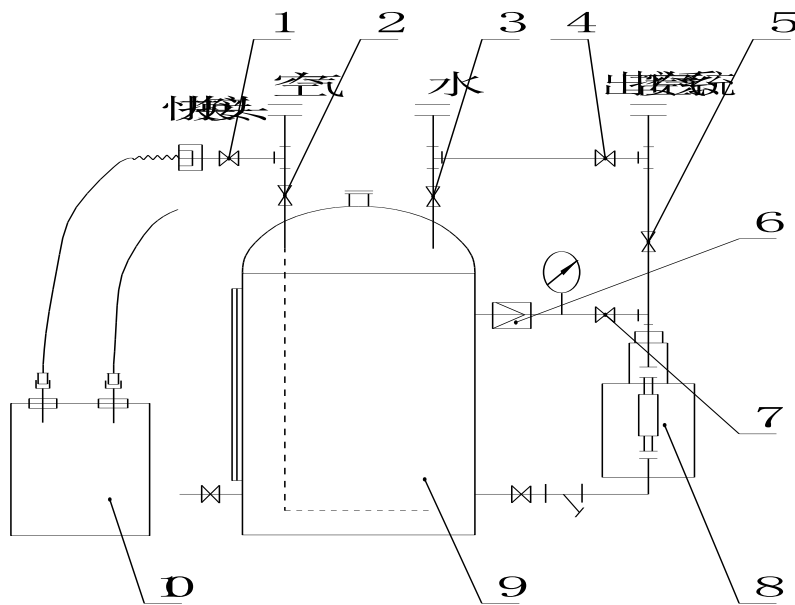


图 4

1. After the installation of the equipment, the first thing is to check the equipment thoroughly and carefully. The liquid storage tank and pipeline should be purged and cleaned to prevent debris from entering the pipeline system.

2. When filling the isolation fluid, connect the No. 10 isolation fluid tank with quick-change couplings as shown in Figure 4. Close valve 2 and slowly open valve 1. Slowly press the antifreeze solution into the reservoir with compressed air and close valve 1 when the demand is reached.

3. Close valve 4 and open valve 3. Fill the tank proportionally with fresh water and open valve 2. Stir the solution with compressed air, and close valve 3.

4. Once the above is completed, the outlet pressure adjustment can be made. First, close the valve 5, and open the valve 7, start the metering pump. After the metering pump runs normally, adjust the pressure regulator 6 until it is adjusted to the required pressure. At this point you can open the valve 5 on the system for filling.

5. During the summer months, valves 3 and 5 can be closed and valve 4 opened to directly fill the system with fresh water, depending on the conditions.

7 Disassembly

7.1 Warnings

Before disassembly, attention should be paid to hazardous process conditions, such as excessive pressure in the piping.

7.2 Waste removal

Please follow the existing guidelines for waste disposal in your region.