GC SUPPLIES UK LTD

Installation, Operating and Maintenance Instructions:

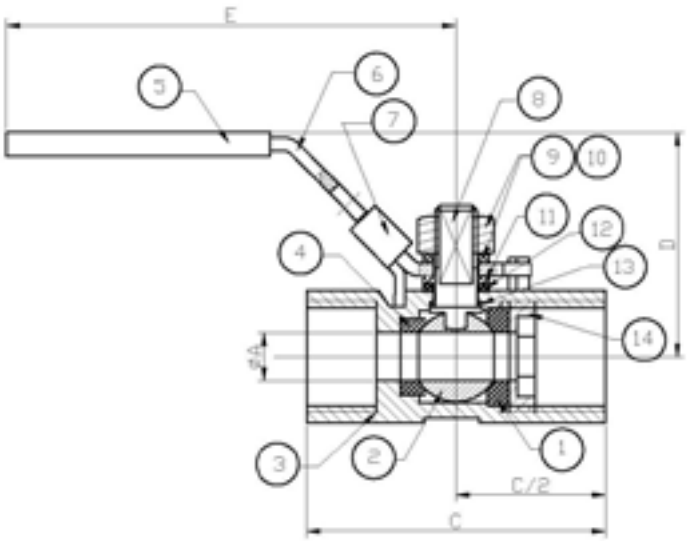
ETG-R-(1/1MF/1RT)
1-Pce Reduced Bore Ball Valve
(Lever Operated/Male x Female/T-Handle)

Contents

Valve Information

ETG R-1

1-Pce Reduced Bore Ball Valve
Lever Operated



Item	Part	Material	Qty.
1	Joint Gasket	PTFE	1
2	Ball	CF8M	1
3	Body	CF8M	1
4	Seat	PTFE	1
5	Handle Cover	PLASTIC	1
6	Handle	304	1
7	Locking Device	304	1
8	Stem	316	1
9	Stem Nut	304	1
10	Stem Washer	304	1
11	Gland Nut	304	1
12	Stem Packing	PTFE	1
13	Thrust Washer	PTFE	1
14	Body Insert	CF8M	1

• ASTM A351 CF8M 316 Stainless Steel construction, 316 Trim.

• PTFE Seats and Seals. Slide type Locking Lever.

• 1000 psi/g Pressure rated.

• -20 / + 180 Deg C Temperature rated.

• BSP and NPT Screwed end connections available.

• CE marked (sizes 1.1/4” upward) in accordance with the PED 2014/68/EU

A good quality, general purpose ball valve suitable for most Liquid and Gaseous duties

Full material Test Certificates available

Test standard – API 598

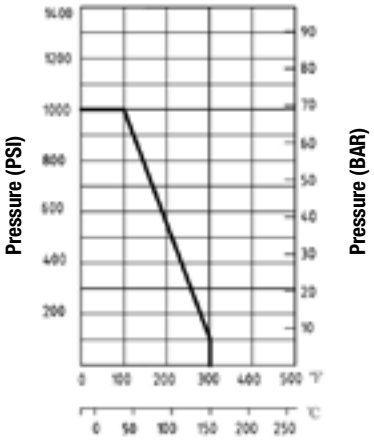
BSP Ends - ISO 7-1

NPT Ends - ASME B1.20.1

Available size range: 1/4” - 2”

SIZE	A	C	E	D
1/4”	5	39	77	39
3/8”	7	44	77	39
1/2”	9.2	56.5	88	44
3/4”	12.8	59	88	48
1”	15	71	109	57
1-1/4”	20	78	109	59
1-1/2”	25	83	135	70
2”	32	100	135	74

Pressure-Temp. Rating

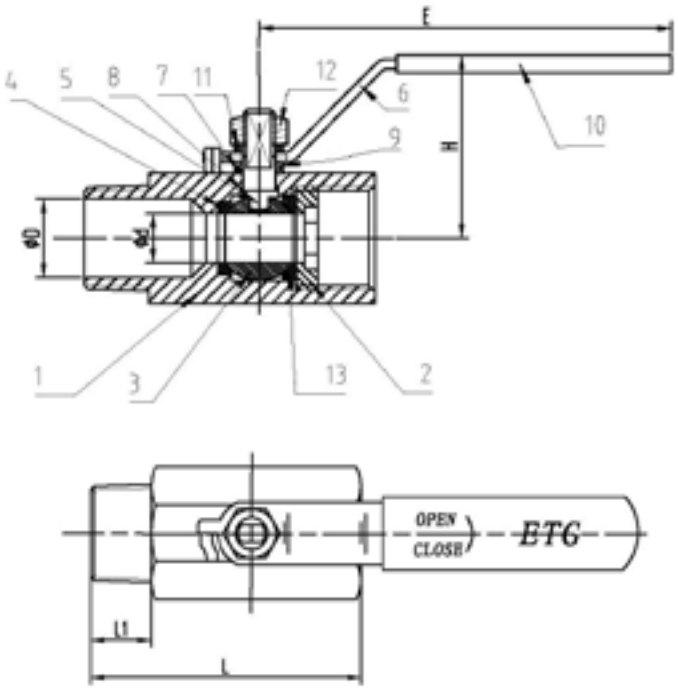


Temperature

Valve Information

ETG-R-1MF

1-Pce Reduced Bore
Male x Female Ball Valve



Item	Part	Material	Qty.
1	Body	316	1
2	Body Insert	316	1
3	Ball	316	1
4	Seat	PTFE	1
5	Stem	316	2
6	Handle	304	1
7	Stem Packing	PTFE	1
8	Thrust Washer	PTFE	1
9	Gland Ring	304	1
10	Handle Cover	PLASTIC	1
11	Stem Washer	304	1
12	Stem Nut	304	1
13	Joint Gasket	PTFE	1

SIZE	ø D±0.5	ø d±0.5	E ± 3	H ± 3	L ± 1	L1 ± 1
1/4” x 1/4”	8	5	40/72	27	46	12
1/2” x 1/4”	8	9.2	94	42	54	12
1/2” x 1/2”	14.5	9.2	94	42	60.5	18.5

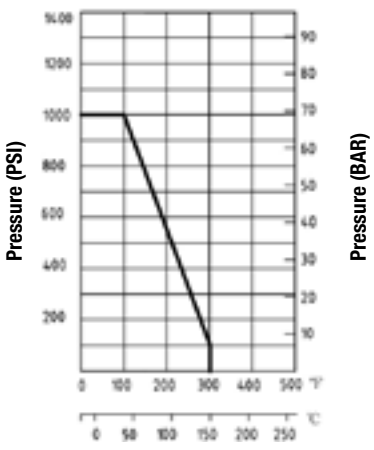
- ASTM A351 CF8M 316 Stainless Steel construction, 316 Trim.
- BSPT and NPT End connections.
- PTFE Seats and Seals.
- 1000 psi/g Pressure rated.
- -20 / + 180 Deg C Temperature rated.

Full material Test Certificates available

Test standard – API 598

Available size range: 1/4” - 1/2”

Pressure-Temp. Rating

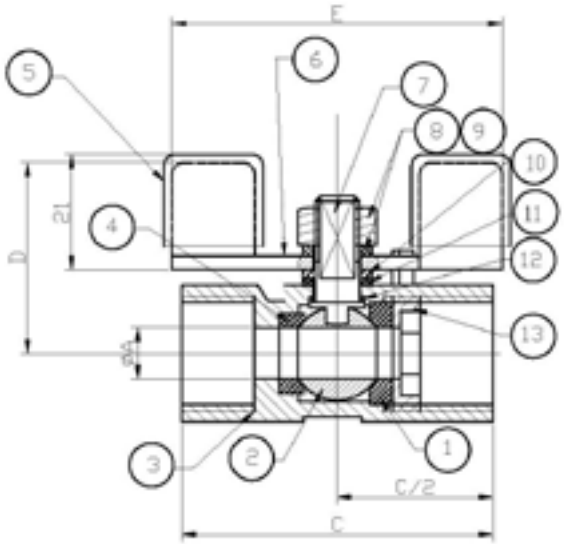


Temperature

Valve Information

ETG-R-1T

1-Pce Reduced Bore
T-Handle Ball Valve



Item	Part	Material	Qty.
1	Joint Gasket	PTFE	1
2	Ball	CF8M	1
3	Body	CF8M	1
4	Seat	PTFE	1
5	Handle Cover	PLASTIC	2
6	Handle	304	1
7	Stem	316	1
8	Stem Nut	304	1
9	Stem Washer	304	1
10	Gland Nut	304	1
11	Stem Packing	PTFE	1
12	Thrust Washer	PTFE	1
13	Body Insert	CF8M	1

- ASTM A351 CF8M 316 Stainless Steel construction, 316 Trim.
- PTFE Seats and Seals. 1000 psi/g Pressure rated.
- -20 / + 180 Deg C Temperature rated.
- Screwed BSP only.

A good quality, general purpose ball valve suitable for most Liquid and Gaseous duties.

Full material Test Certificates available

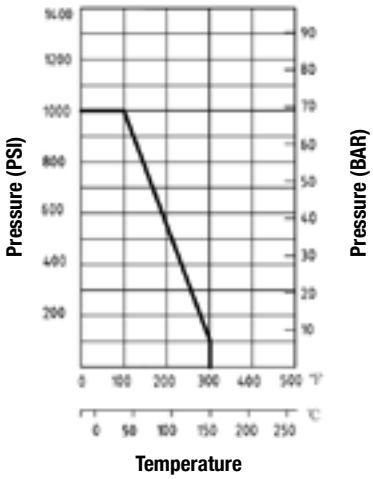
Test standard – API 598

BSP Ends - ISO7-1

Available size range: 1/4” - 1”

SIZE	A	C	E	D
1/4”	5	39	44	35
3/8”	7	44	55	35
1/2”	9.2	56.5	60	36.5
3/4”	12.8	59	60	40.5
1”	15	71	80	46.5

Pressure-Temp. Rating



Introduction

G.C. Supplies offers a wide range of ball valves (90º turn), designed and assembled to handle and drive fluids in industrial procedures.

The compatibility of materials used to build the valves (see technical specifications) and the application of valves to the different industrial processes is at the user's risk. Valves will have an optimal behaviour when working conditions do not exceed the recommended pressure and temperature limits for which they have been designed.

Transport and Storage Conditions

Visual Inspection

It is important to conduct a visual inspection to check for any damage on the product that could have occurred during transport, unloading or placement. If you notice any kind of anomaly upon receiving the goods, please contact GC Supplies in order to resolve the issue.

Storage

During storage it is recommended to keep valves in a dry and clean environment within the included protective wrapping to avoid damage or dirt accumulation. Manual valves come by default in an open position, during storage it is recommended to maintain this same position. The protective wrap should not be removed until the valve is ready to be installed.

Before installing and/or manipulating these elements, read these instructions carefully. If you fail to understand any of their content, please contact G.C. Supplies.

Installation Instructions

Preparation

Remove the valve's wrapping. Make sure the pipe is clean and dry before installing it. Plan enough space for future maintenance operations before installing the valve. Control correct operation of the valve by turning the handle clockwise and making sure the ball closes the fluid flow. If this is not the case, check if there are foreign particles inside the valve and repeat the whole operation.

Assembling

Make sure the valve's pipe and threaded ends are clean and are compatible one with another. Apply an appropriate sealing compund onto the threaded ends and thread the valve being careful not to excessively overtighten. Do not use valve's handle as a lever to thread the valve into the pipe. To tighten the valve, it is recommended to use a spanner or monkey wrench only on the hexagonal area of the valves edges; the force applied being less than 30 Nm. Design of this kind of ball valve allows them to be installed in any position as they are bi-directional, so the direction of flow does not matter. If possible, it is recommended to install the valve in horizontal position and the stem (handle) upwards.

Once installed, it is recommended to open and close the valve a couple of times to check if there is any obstruction in the ball that prevents it from closing. It is also recommended to use filters in the pipe to extend the lifecycle of the valve.

Operating Instructions

Usage

Ball valves provide a leakproof seal when adjusted to the pressure and temperature values for which they have been designed.

Avoid leaving the valve in partially a open position if you are not aware of the pressure drop and flow rate of that position, as the service life of the ball seats can be reduced and/or damaged, due to the ball valve bore.

Any fluid that can be solidified, crystallised or polymerised should not be allowed to remain in the ball cavity as it is harmful for performance, service life of the valve and it can even render it unusable.

All components of the valve have to be fully compatible with the fluid circulating through the valve. Otherwise, the valve could be seriously damaged.

Torques required to operate valves are listed in the table ‘Activating Torques’ to activate the valves.

Operation

When operating the valve, you must avoid excessive lateral efforts with the handle. To close it, you must turn the handle 90 degrees clockwise. When the handle is inline with the pipe, the valve is open.

Maintenance Instructions

Frequency, place and process of maintenance should be determined by taking into account the usage of the product. However, periodical checks explained below will be useful to extend the service life of the valve and reduce installation problems.

The valve must not remain idle in an open or closed position for a long period of time. It is recommended, if the process allows for it, to operate it for control purposes every six months.

Verify possible leaks in the stem area; in case they exist, proceed to tighten the gland nut. If leak persists, valve should be replaced, refer to the Reparation Instructions section below.

Verify possible leaks through the seats; this defect is probably caused by deposition of impurities between ball and seat, transported by the fluid. Disassemble the valve from the pipe, clean it and reinstall it. If the problem persists you should change the valve - refer to the Reparation Instructions below.

Increase of operational torque; this defect is probably caused by deposition of impurities between ball and seat, transported by the fluid. Disassemble the valve from the pipe, clean it and reinstall it. If the problem persists you should change the valve - refer to the Reparation Instructions below.

Reparation Instructions

This type of valve, due to their easy assembling and reduced production cost is not worth repairing, because the time is simply not cost-effective, so we directly replacing it.

Before removing the valve from the pipeline to clean or replace it, make sure that line has been closed and depressurised because a bad operational procedure could cause a serious accident to staff and the installation. Before installing a new valve, check that it meets the requirements of the valve being replaced.

Activating Torques

SIZE	Activating torque (Nm)
1/4”	4 - 5
3/8”	4 - 5
1/2”	4 - 5
3/4”	7 - 8
1”	9 - 10
1-1/4”	12 - 14
1-1/2”	18 - 20
2”	28 - 30

Hygiene and Safety

The fluids that go through the valve can be corrosive, toxic, flammable or pollutant. When operating valves, you must follow the operation instructions.

It is recommended that you:

- Protect your eyes.
- Wear gloves and appropriate working clothes.
- Wear safety footwear.
- Wear a helmet.
- Have running water to hand.
- Have an extinguisher to hand when work with flammable fluids.

Before removing a valve from a pipe, check always if the line is completely cold, drained and depressurised.

Operate the valve in open position to make sure there is no pressure in the internal cavity.