Content

1. ERIKS operating companies

ECON ball valves are being delivered by several ERIKS operating companies on a worldwide basis. In this manual these will be referred to as 'ERIKS', the individual terms of delivery of the ERIKS operating company having executed the order are applicable.

2. Product description

The ECON ball valves are designed according the information in our latest catalogue or see our website www.eriks.com and should be used in accordance with the applicable pressure-temperature rating as stated on this website. Ball valves are provided with marking, according to EN 19. The marking makes the identification of the valve easier and contains:

- size (inch)
- pressure rating class
- body material marking
- ECON logo
- heat numbers

3. Requirements for maintenance staff

The staff assigned to assembly, operating and maintenance tasks should be qualified to carry out such jobs and in any circumstance, ensure personal safety

4. Transport and storage

During transport and storage the valves should be protected against external forces, influence and destruction of the painting layer as well. The purpose of the painting layer is to protect the valve against rust, during transport and storage. The valves should be stored in an unpolluted space and should also be protected against all atmospheric circumstances. There should be taken care of the temperature and humidity in the room, in order to prevent condensate formation.

5. Function

ECON ball valves are designed to stop the flow of a medium. The valve is closed by turning the lever counter clockwise; please don't use tools to increase the torque on the lever.

6. Application

The ECON ball valves are used for industrial systems gasses and liquids. The valves are designed for standard operating conditions. For the use of extreme conditions e.g. aggressive or abrasive media, it is recommended to mention this at the ordering stage, to verify whether the valve is suitable. The installation designer is responsible for the valve selection, suitable for the working conditions. The valves are unsuitable, without written permission of an ERIKS company, to apply for hazardous media as referred into Regulation (EC) No 1272/2008.

7. Installation

a. Remove the protective plastic cap on 2-threaded end, and clean or flush the valves.
b. Prior to mounting, flush and/or clean the pipeline to remove all accumulated extraneous maters, which maters shall damage to the seats and ball surface.
c. Check the preferred flow direction of the valve and take this direction into account during installation.
d. Use conventional sealant (e.g. Teflon) on the threaded connections.
e. Apply a pipe wrench on the end cap of the valve only while tightening. Tightening by using the valve body or handle can seriously damage the valve. Please check catalogue or Econosto website for installation diameter.
f. The pipeline shall be free of stress after installation.
g. The valve should be installed in the pipeline, in open position.
h. For any further information please contact the ERIKS company that has supplied the valves. Contact information can be found on www.eriks.com
i. Make sure the pipeline is flushed clean prior to operation.
j. The operation of the valve consist of turning the stem (by manual or automated means) ¼ turn (90^0) clockwise to close, and ¼ turn counter-clockwise to open.
k. When the handle (if used) and/or groove on top of the stem is in line with the pipeline, the valve is open.
l. Besides operating by handle, fig. 7752ISO can also be operated with an actuator, mounted on the ISO 5211 “Direct Mount” top-flange. (Please see our catalogue to check top-flanges sizes)
m. Operating torque requirements will vary depending on the length of time between cycle, media in the system line pressure and type of valve seat.

8. Maintenance

Long life and maintenance-free design is only applicable for valves under normal working conditions and in accordance with pressure/temperature and corrosion data chart

Warning:

- In closed position ball valves can trap pressurized fluid in the ball cavity.
- Prior to maintenance, relieve the line pressure.

Re-tighten Packing

For maximum stem packing life, proper packing adjustment procedure must be followed:

- Should a leakage occur at the gland packing, retighten the stem nut (12).
- Take care that the stem nut (12) is not tighten too much. Normally the leakage can be stopped by simply turning the stem nut (12) by 30°to 60°.

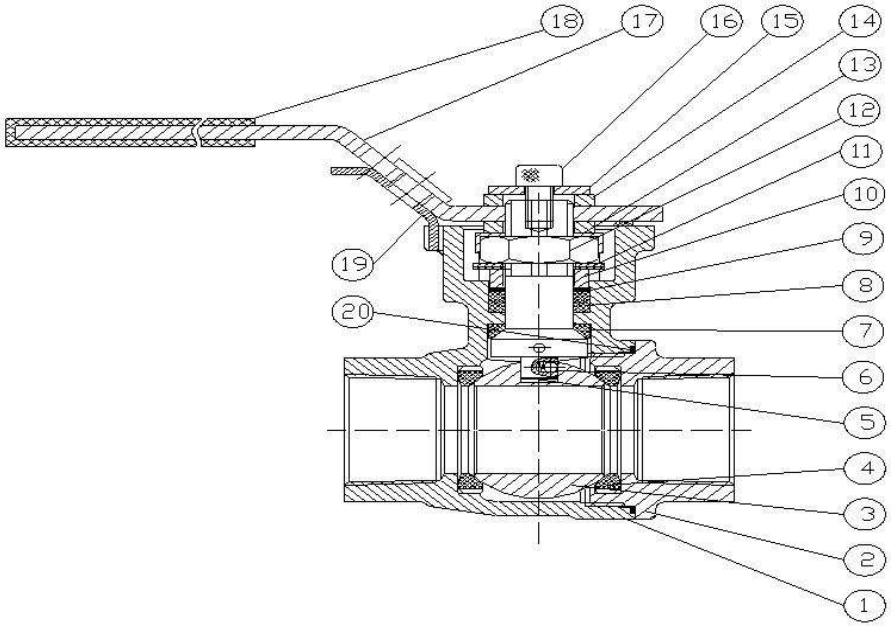

Table: Torque figure for stem nut tighten

Size	In-lb	n.m
DN6~DN10	70~80	8.0~9.0
DN 15	70~80	8.0~9.0
DN 20	70~80	8.0~9.0
DN 25	90~100	9.0~11.3
DN 32	90~100	9.0~11.3
DN 40	140~160	15.8~18.1
DN 50	140~160	15.8~18.1
DN 65	180~120	20.4~22.6
DN 80	180~120	20.4~22.6

9. Service and repair

All service and repair jobs should be carried out by authorized staff, using suitable tools and user shall use genuine valve parts.

- welding repair and drilling of the valve is forbidden.
- Unfortunately it's not possible to replace the seat rings or stem sealing, this because of the design of the ball valves.
- after replacement of the ball valve it is necessary to check the valve operation and tightness of all connections. Leakage test should be carried out.
- after installation, the valve should be checked and maintained periodically at least every 3 months, depending on the medium.

10. Troubleshooting

It is essential that the safety regulations are observed when identifying the fault.

Problem	Possible cause	Corrective measures
No flow	The ball valve is closed	Open the ball valve
	Dust caps were not removed	Remove dust caps
Little flow	Valve not completely open	Open valve completely
	Piping system clogged	Check piping system
Valve difficult to open	Stuffing box seal too tight	Slacken nut
	Wrong direction of rotation	Turn counter clockwise to open
	Ball seat damaged by foreign particles.	Replace the ball valve
	Expanded medium behind the ball	Cool down the ball valve
Leakage across the stem	Stuffing box gland slack	Tighten stuffing box gland, if necessary replace the ball valve
Leakage across valve seat	Valve not properly closed	Pull lever tight without tools
	Seat damaged by foreign particles	Replace the ball valve
	Medium contaminated	Clean valve and install dirt screen
Operating failure	Packing too tight	Loosen gland nut

11. Removal

Dismantled and rejected valves cannot be disposed with household waste. The valves are made of materials which can be re-used and should be delivered to designated recycling centers.

General warning:

General note for products which may be used for seawater:

Although our products can be used in seawater systems it should always be noted that, in case of installation in a piping system made of materials which are frequently used because of their excellent seawater resistance (e.g. Cunifer), large potential differences may occur possibly causing corrosion which could permanently damage the proper functioning and integrity of our product.
A combination of different materials should always be mentioned prior to the purchase of our products in order for us to give the best possible advise on a safe functioning.