

## OPERATING MANUAL

### Sample ball- valve Type PR

#### Contents

- 1 General Information
- 2 Safeties
- 3 Packing, Handling, Storing
- 4 Product descriptions
- 5 Preparations, Assembly
- 6 Commissioning
- 7 Handling
- 8 Attendances and Maintenance
- 9 Inspections
- 10 Overhauling
- 11 Disposals

#### 1 General Information

##### 1.1 Introduction

The Sample ball-valve Type PR is manufactured and tested according to DIN EN 12266-1.

It suits very well as a valve for sample taking on a pipeline or vessel.

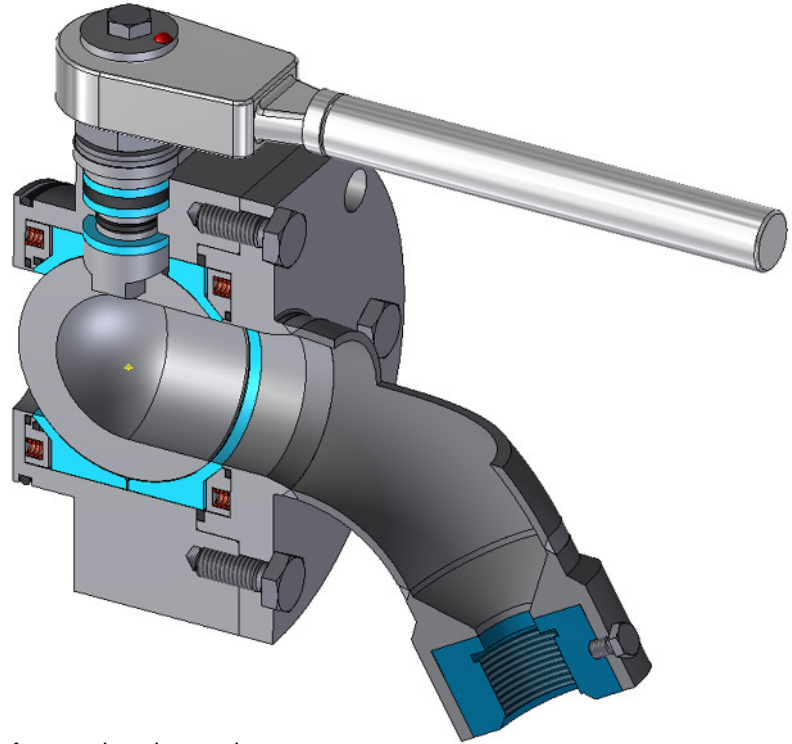
The cavity free ball-valve construction avoids unused product left behind between ball and housing which would lead to contamination of the medium, or would affect the function of the valve through crystallizing and polymerizing.

With the optional specific spring loaded sealing system it achieves a long lifetime because of the adjustable sealing pressure.

The shaft tightness system is constructed according to **TA- Luft** and meet requirements to **VDI 2440**.

**ATEX** directive **94/9/EG**: The ATEX does not apply. The valve can still be used in the EX-Area because it does not have any own ignition sources after the risk analysis.

The Data in the assembly instruction is nonbinding, changes reserved.



If the following notices and warnings are not observed, **dangers may result** and invalidate the manufacturer's guarantee. Please contact the manufacturer in case of any questions



Armaturenbau und -Technik GmbH



**Advice:**

**We explicitly advice that the installation is not allowed before checking the assembly according to Pressure Equipment Directive (PED) 97/23/EG**

## 1.2 Application Area

Sample ball-valve Type PR are used for uncritical mediums where stainless steel and PTFE are resistant. In special cases Hastelloy and PTFE-Derivatives are used.

## 2 Safeties

### 2.1 Warning notice



In this instruction very important advices are marked with the Hazard symbol; following warnings are not observed, dangers may result

### 2.2 Safety notice

ATEC –Products are highly sophisticated. By non observance of the application-oriented criteria like functionality, medium, pressure, temperature, selected materials etc. dangers may result. The Sample ball-valve Type PR has the function to close off and sample taking. It is not applied for throttling or regulating because the ball valve is not in its end position.

Installation area is to be shut down after slightest leakage by valves or other pipeline components. The leakage can lead to harm on people, environment and installation. The following maintenance, repair or disassembly only with protective clothing to be performed.

## 3 Packing, Handling, Storing

### 3.1 General handling and storing terms

Handling and storing of sampling ball- valve type ATEC only in original-packing.

Following storage conditions are binding

- Dry and dust free surroundings
- Closed room, protect from UV- Light
- Moderate temperature of max. 30°C

### 3.2 Storage time

Generally the storage time if handled under 3.1 is unlimited

## 4 Product description

### 4.1 Function

Sample ball-valve Type PR is a 180° turning valve. The ball-valve closes clockwise and opens the opposite way. In the position “sample taking” is marked with a red point at the hand lever.

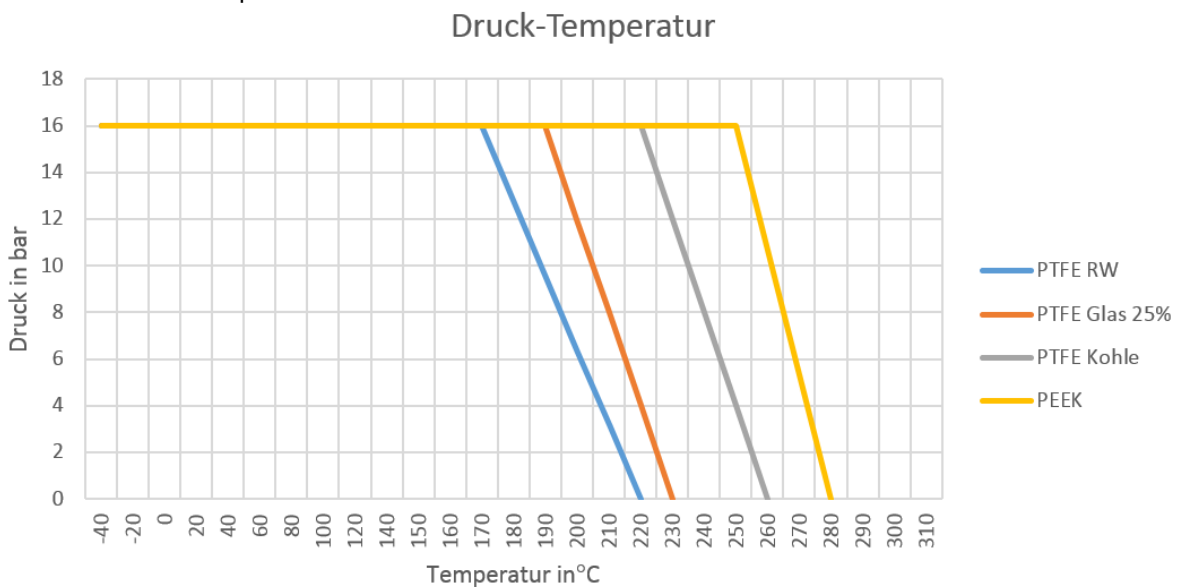
### 4.2 Characteristics

The general characteristics of the Sample ball-valve Type PR are shown in the data sheet. It is to be made sure, that the nominal pressure (stamped in valve housing) is not exceeded. The maximum temperature is -60°C to +260°C depending on the sealing material. By not mentioned special conditions is consultation with the manufacturer needed.



**By application under -10°C and over +80°C please use pressure-/ temperature chart**

Pressure and Temperature chart:



By ignoring these limit values, improper use of the compact- valve is the consequence and could lead to failure of the valve function.



**Attention!**  
**The resistance of the materials to the agent is to be verified!**

## 5 Preparations, Assembly

### 5.1 Assembly preparation

Make sure, the Sample ball-valve Type PR complies with the operating conditions like medium, pressure and temperature.

### 5.2 Assembly

The protection sheet is to be removed.

The Sample ball-valve Type PR is to be mounted with the smallish outside diameter into the pad-flange of the vessel and bolted together with a flange into the vessel.



**The tightening of screws must be done cross-over. It has to be made sure; the torque on all screws is the same. If this instruction is not followed the valve can be distorted.**

#### 5.2.1 Usage of flange gasket

Through the use of O-ring at pad-flange side of the valve.

#### 5.2.2 General guidelines and assembly

Pad-flange and sealings are to be cleaned to obtain a good sealing.

#### 5.2.3 Mounting, Torque, Flange screws

The mounting of the Sample ball-valve Type PR should always be done with a torque wrench.

Anzugsdrehmomente der Blockflanschschrauben in [Nm]:

DN	15	20	25	40	50	65	80	100	125	150
PN	16	16	16	16	16	16	16	16	16	16
Nm	22	28	34	56	95	95	100	105	110	110

### 5.3 Assembly accessories

For the assembly of the Sample ball-valve Type PR is no other tooling besides a torque wrench necessary.



Armaturenbau und -Technik GmbH

#### 5.4 Removal

The valve has to be removed as follows:

- Securing the vessel is empty
- If hazardous residues, attend internal instructions
- Open ball valve
- Remove flange screws and remove Sample ball-valve Type PR carefully.

### 6 Commissioning

#### 6.1 Before first time commissioning

Before first time commissioning the whole pipeline and vessel is to be flushed. If necessary a pressure test is to be conducted.

**Important: contamination and residues have to be removed through flushing.**

#### 6.2 At first time commissioning

At the first time commissioning following functional tests to be carried out again:

- Unhampered turning of ball into both end positions
- Ball valve check on leakage
- check proper open and closed position of accessory like actuator etc.



At first commissioning future operator and end-user should be briefed.

#### 6.3 commissioning with manual operation

For the manual operation are hand lever and manual drive in use.

#### 6.4 Automation with pneumatic and electric actuator

The automation is only with original ATEC adapter set safe. All parts on the ball valve stem have to be in line otherwise transverse force occur which could lead to a breakdown of the ball valve. Is the automation not carried out at ATEC we cannot give any guarantee for the function of the valve.

### 7 Handling

For correct handling following information malpractice by handling the sampling valve can lead to damage of other system components.

Valves belong often to the safety devices of an installation in critical cases safety instructions to the attached on to the valve

Valves should only be operated by trained personal.



Armaturenbau und -Technik GmbH

## **8 Attendances, Maintenance**

### 8.1 Attendance

Sample ball-valve Type PR need no attendance if used normally

### 8.2 Maintenance

By correct designed pipeline systems is no maintenance necessary that is.

- Corrosion and abrasion resistant valve material used.

### 8.3 Spares inventory

At corrosive or abrasive operating conditions it is necessary to replace wear parts like ball seal, housing seal, stem seal and seal spring.



**we point out that only original ATEC spareparts can be used**

For all future repairs please contact the supplier of the ATEC valve with the information of valve type, size and serial number of housing

### 8.4 Return to manufacturer

Before returning a ball valve for repair or analysis of objections approval of the manufacturer is needed. By dangerous product a safety data sheet has to be filled in. The valves are to be cleaned before dispatch.

## **9 Inspections**

At preventive inspections following point to be checked

- difficult open/closed function
- leakage on pipe connections
- corroded area on valve housing
- wear on ball seal and ball

## **10 Overhauling**

### 10.1 Breakdown, causes, elimination

By disruption in operation (for instance leakage or blockage) the unit must be shutdown and the manufacturer informed for assistance the delivery date, size and serial number is needed

### 10.2 External burning

After an extreme impact of heat threw fire near the valve a leak tightness check has to be made.

## **11 Disposals**

Fluoric-plastics like PTFE permitted to be burned.  
Internal disposal guidelines to be followed.