

### 1. Information on the product

#### 1.1 Scope of application, dimensions

This user information applies to

- EWE ball diaphragm backflow preventers (German abbreviation KMR) part numbers 3441XX, 64430XX, 64451XX, 64450XX

#### 1.2 Field of application/Fluid

- cold water, untreated water and cooling water
- type specifications for drinking water applications see 1.5.1-1.5.4
- EA = controllable backflow preventer
- EB = non-controllable backflow preventer

Other applications are available on request.

#### 1.3 Permissible component operating pressure (PFA)

10 bar

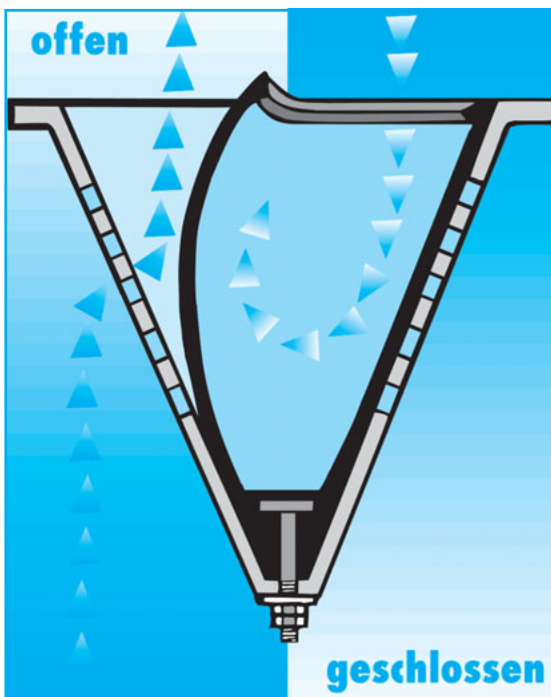


Figure 1

#### 1.4 Functional description

The EWE-KMR is supplied with threads, fittings and in various flange versions such as a flange clamp and as an intermediate flange solution for insertion into the pipeline. The respective housing includes a stainless steel cone support with a permanently bonded membrane. The volumetric flow during forward movement folds the membrane to the inside so that the fluid flows on the membrane with low pressure loss (see Figure 1). As soon as the volumetric flow stops or a backflow arises, the membrane returns to its original shape on the cone support, preventing a backflow of the fluid.

#### 1.5 Materials/Dimensions

The EWE-KMR cone support is made of A4 stainless steel.

The cone membrane is made of EPDM or silicone.

Alternative membrane materials are available on request.

##### 1.5.1 EWE-KMR with and without draining, with threaded connections or with fittings, depending on the version, type EA or EB

- Modell 3441XXX
- (pressed) brass housing, DN 20 – DN 65

##### 1.5.2 EWE-KM flange backflow preventer, type EA

- model 64430XX
- housing made of plastic-coated, ductile cast iron, DN 50 – DN 200

##### 1.5.3 EWE-KM intermediate flange backflow preventer, type EB

- model 64451XX
- A4 stainless steel cone support, DN 40 – DN 80

##### 1.5.4 EWE-KM single flange backflow preventer, type EB

- model 64450XX
- plastic coated steel flange, DN 50 – DN 150

#### 1.6 Manufacturer's address

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### 2. Installation instructions

**Perform the tasks and jobs required for installation in compliance with the legal stipulations and accident prevention regulations along with the generally recognised rules for engineering. Installation and maintenance should be performed by qualified personnel only.**

#### 2.1 Pipeline system

Before installation, check the valve for damage and soiling.

Installation must be performed with suitable hoisting gear to preclude damage to the coating. Installation in the pipeline system must be carried out force and torque-free.

### 2.2 Instructions on the installation location

Select the installation location to allow sufficient space for later maintenance and performance tests. Installation near pumps is not recommended. If no other installation location is possible, soft pump start and stop is required. Such conditions lead to increased wear of the membrane!

The EWE-KMR must be installed corresponding to the flow direction. It can be used in the horizontal fitting position or vertically in rising pipes.

### 2.3 Flow velocity

The EWE-KMR can be operated with flow velocities of maximum 3m/s.

## 3. Commissioning

Visual inspection of the EWE-KMR and the entire system is mandatory before commissioning.

### 3.1 Performance test

Check the functionality of the entire system.

## 4. Maintenance and repair

The membrane is a wearing part. Maintenance intervals for the EWE-KMR and, if applicable, replacement of the membrane depend on the application and the fluid.

The maintenance intervals for drinking water systems are specified in the technical rules and regulations. Under non-compliant operating conditions, increased wear on the membrane can occur, making more frequent maintenance of the KMR necessary.

A performance test can be performed on models with installed test plugs. For this, block the intake and open the test plug with due care.

Discharge of residual amounts is only permitted between intake and housing. Fluid from the downstream installation must be blocked by the EWE-KMR. If that is not the case, the membrane must be repaired.

Shut off and depressurize the pipeline system before starting maintenance work on the EWE-KMR. Furthermore, secure the pipeline system against unintentional restarting. Comply with all necessary safety regulations according to the type and hazardousness of the operating fluid and the system.

### 4.1 Replacing the cone support with membrane

The EWE-KMR must be depressurized. Installation and removal must be performed as described. Dismantle and unscrew housing parts in accordance with the design of the housing. Remove the cone support together with the membrane. Insert the new cone support together with the membrane, replace gaskets and reassemble the housing.

Test for leakproofness and functioning..

## 5. Applicable documents

- DIN 1988-4
- DIN 1988-8
- DIN EN 1717
- DIN EN 1514-1
- DVGW worksheet W 392

### For your information:

Our employees are available by telephone during business hours for additional information. Please make a personal appointment for on-site product instruction by our employees.

## 6. Pressure drop curves

