



# Instructions

## Angle stop valve EA 10

version: 07/2016

W 4111-6.10aE

Blatt 1 / 5 MW

Please read this manual carefully before installing, commissioning or operating the angle stop valve EA10



### 1. INTENDED USE

The angle stop valve EA is only intended for use in refrigeration systems.

### 2. SAFETY REQUIREMENTS

Any work with refrigeration systems must be carried out by trained personal. All safety regulations concerning prevention of accidents or use of refrigerants must be adhered to.

The nominal pressure of 65 bar must not be exceeded!

All safety regulations and codes of practice concerning the use of refrigerants must be adhered to. Special protection clothing and safety glasses must be worn. The recommendations of Regulation EN 378 must be followed.

### 3. TERMS OF WARRANTY

To avoid accidents and for safety the angle stop valve WITT EA10 should only be used for the intended use. No modifications or conversions may be carried out to the WITT EA10 without the explicit written approval of TH. WITT Kälemaschinenfabrik GmbH.

#### Our liability of warranty is void if:

The instructions were not followed correctly,  
The WITT EA10 is operated incorrectly or is installed contrary to these installation instructions  
The WITT EA10 is used for applications other than that for which it was intended,  
Modifications have been made without written approval from TH. Witt  
Safety regulations or codes of practice have been ignored

### 4. APPROVED FLUIDS

WITT angle Stop valves are suitable for all common refrigerants, such as ammonia, carbon dioxide, R 507, R 22, R134a, and are in accordance with DIN EN 12284.

In order to seal the cap, you can use the double holes that also release the pressure when opened.

It is possible to galvanize the valve together with the component. However, it is important the packing is removed before galvanizing and re-installed properly later. WITT is not responsible for any damaged that may occur during the galvanizing process.

### 5. ORDER SPECIFICATION

Please always state the required operating pressure and the material (black or stainless steel) when ordering the EA10.

### 6. DELIVERY CONDITION

All valves pass a leak and pressure test

- PN 65 (PS 65 according to PED) tested with 98 bar air under water

Threads and spindle are filled with grease.



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### 7. CERTIFICATES/APPROVALS

Angle stop valves EA10 are covered in article 4, chapter 3 of the PED and therefore do not fall under this regulation and must not receive a CE mark. The required good engineering practice is adhered to by following DIN EN 12284. The declaration of the manufacturer is available..

### 8. TECHN. DATA

**Max. allowable pressure Ps:** 65 bar  
**Weight:** 0,35 kg

**Temp./Pressure range**  
65 bar +150°C down to -10°C  
49 bar below -60°C

Angle stop valves EA have undergone a burst test in our works with more than 200 bar.

### Materials

#### Steel execution

Body	C15+C
Spindle:	1.4301
Stuffing box	Al
Packing:	Ne
Base ring:	St
Seat connection:	1.0460 (P250GH)
Side connection	1.0345 (P235GH)
Cap:	Al
In addition for models EA 10 G, GL, GB, GBL, GN, GNL	
Blind cap:	VA
Cap nut:	VA
Weld nipple:	1.0460 (P250GH)
Gasket:	Centellen

#### Stainless steel execution:

Body:	1.4541
Spindle:	1.4301
Stuffing box	Al
Packing:	Ne
Base ring:	VA
Seat connection:	VA
Side connection:	VA
Protective cap:	Al
In addition for models EA 10 G, GL, GB, GBL, GN, GNL	
Blind cape:	VA
Cap nut:	VA
Weld nipple:	VA
Gasket:	Centellen

**Subject to technical developments we reserve the right to change design or materials**





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## 10. DESCRIPTION OF OPERATION

Angle stop valves are used in refrigeration systems to isolate components or parts of the system. During operation angle stop valves EA must not be operated! Therefore they are sealed with a cap to prevent operation of persons that are not familiar with the system. Tools to remove the caps should be stored away to avoid misuse, but within reach.

When the spindle is turned clockwise the valve head is sealed against the valve seat and the flow of refrigerant is interrupted.

Turning the spindle against clockwise will open the valve again, whereby the spindle must be fully opened, to ensure backseating of the valve.

Angle stop valves EA should only be operated in the fully open (back seated) or fully closed condition. To throttle the flow there should be use regulating valves.

## 11. TRANSPORT AND SHIPPING

All openings are covered with yellow plastic caps, to prevent moisture and dirt intake. During storage or transportation the EA10 should be kept dry at all times. Make sure no moisture or dirt can contaminate the WITT EA10.

## 12. INSTALLATION

Install the angle stop valve in a correct position (the spindle should never face downwards to avoid contamination of the sealing surface). Any welds to the connections should be carried out without inducing any stress.



Make sure the valve is open and the packing removed while it is welded on to an other component .

Using WIG welding it may be sufficient to loosen the packing and cool the valve with a damp cloth. Use caution that no foreign material can contaminate the valve seat and spindle, causing damages.

If the valve is mounted on another component and should be galvanized, the packing must be removed prior to the galvanizing process and re-assembled thereupon.

To lead seal the cap, the release bore according to DIN 3158 is executed as a double bore.

## 13. COMMISSIONING

Operate the regulating valve only if you are sure all connections have been correctly made. Open the valve fully, if possible, so all contamination can be flushed out of the system. Reinstall the cap again. Thereupon lead seal the cap to avoid unauthorized operation!

Proper functioning and leak tightness should be checked once the operating pressure is reached. Possible leakages can be eliminated by carefully tightening the packing further.

## 14. OPERATION



The cap should be in place at all times. If the cap should be removed, it should be loosened carefully, so any refrigerant that may have condensed can escape.

Before opening the valve slightly loosen the stuffing box (1/4 turn) to prevent the packing is stressed. Thereupon the stuffing box must be tightened again.



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## 15. MAINTENANCE AND INSPECTIONS



Any tests or visual inspection should be carried out according to EN 378-2

Valves EA that are not operated frequently should be checked regularly (once every ¼ year or according to the regulations)

When leakages occur first tighten the stuffing box further. If this is not successful you can exchange the packing.

In order to change the packing you should fully open the valve, so it is backseated and sealed against the valve inside.

Remove the cap carefully and turn the spindle in a fully open position to ensure the valve is backseated. Then you can screw the stuffing box open and remove the packing with a small screwdriver. Exchange the packing, re-install the stuffing box and seal it tightly. Then re-install also the protective cap.

Use caution to avoid contamination of the spindle and the stuffing box when exchanging the packing. (if required clean the parts with a pill-free cloth.