# Fig. KBCK20 Bronze Swing Check Valve
# Installation & Maintenance Instructions

## PRODUCT LIFE CYCLE

The life of the valve is dependent on its application and freedom from misuse.

The properties of the fluid being transported such as pressure and temperature must be taken into account to avoid premature failure.

Other factors to be considered are the electrolytic interaction between dissimilar metal used in the system, dezincification and stress corrosion cracking occurring on chilled water service.

Before commissioning a system, it should be flushed to eliminate debris and chemically cleaned as appropriate to eliminate contamination, all of which will prolong the life of the valve.

## OPERATING PRESSURES AND TEMPERATURES

Maximum non shock pressure and temperature range:

20 bar from -10˚C to 100˚C

9 bar at 180˚C

Water hammer and other shock conditions should be avoided.

Not suitable for fatigue loading, creep conditions, fire testing, fire hazard environment, corrosive service or transporting abrasive solids.

## PRESSURE / TEMPERATURE RATING

These valves must be installed in a piping system where the normal pressure and temperature do not exceed the above ratings.

If system testing will subject the valve to pressures in excess of the working pressure rating, this should be within the test pressure for the body with the valve in the open position.

If the limits of use specified in these instructions are exceeded or if used on applications for which it was not designed, a potential hazard could result.

## LAYOUT AND SITING

It should be considered at the design stage where valves will be located.

The installation orientation is with the cap upper most in horizontal pipework and with the flow in the upwards direction in vertical pipework.

Swing check valves having 6 diameters of straight pipe upstream and 3 diameters downstream are suitable for flow velocities up to 3 m/s.

If the valve is situated such that turbulent flow enters the valve or is situated close to a reciprocating pump then the velocity should not exceed 2 m/s.


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## INSTALLATION

Prior to installation, a check of the identification plate and body marking must be made to ensure that the correct valve is being installed.

Valves are precision manufactured items and as such, should not be subjected to misuse such as careless handling or allowing dirt to enter the valve through the end ports.

All special packaging material must be removed.

Confirm that the pipe threading length is correct to avoid excessive penetration of the pipe into the valve which would otherwise cause damage.

It is common practice to apply thread sealing compounds appropriate to the application but excessive use should be avoided, since this increases thread interference and may cause overstressing of the body ends.

The direction arrow cast on the body must be coincident with the direction of flow in the pipeline.

Ensure the threads are properly engaged and proceed to tighten the valve onto the pipe. The wrench must only be located on the valve end into which the pipe is being threaded to avoid distortion of the valve.

Valves and adjoining pipework must be provided with adequate support to avoid inducing bending stresses into the valve body, which will impair its performance.

Immediately prior to valve installation, the pipework to which the valve is to be fastened should be checked for cleanliness and freedom from debris.

## OPERATION

Swing check valves are self-acting and therefore require no manual operation.

## MAINTENANCE

Bronze swing check valves are maintenance free.


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