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## Fig. KISD16 Iron Suction Diffuser Installation & Maintenance Instructions

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### PRODUCT LIFE CYCLE

The life of the suction diffuser 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 strainer.

### OPERATING PRESSURES AND TEMPERATURES

Maximum non shock pressure and temperature range:

16 bar from -10°C to 100°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 suction diffuser 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 suction diffuser to pressures in excess of the working pressure rating, this should be within the test pressure for the body.

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 suction diffuser will be located to give access for inspection and cleaning the screen element.

Isolation valves should be fitted immediately upstream and downstream to allow the suction diffuser to be isolated, drained and the screen element removed for cleaning

### INSTALLATION

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



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

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

Immediately prior to installation, the pipework to which the suction diffuser is to be fastened should be checked for cleanliness and freedom from debris. Suction diffuser end protectors should be removed immediately prior to installation.

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

For the purpose of cleaning the screen element and removing debris the suction diffuser must be installed with sufficient room so that the screen element can be withdrawn easily.

Suction diffuser should be lifted using the correct slings.

The surface finish and condition of the gasket contact face on both the suction diffuser and pipework should be checked. Incorrect surface finish or damage can cause leakage and no attempt to assemble should be made until it has been rectified.

Gaskets should be suitable for the operating conditions including the maximum temperature and pressure.

Care should be taken to align the flanges being assembled.

During assembly bolts should initially be hand tightened sequentially to make the initial contact ensuring gaskets are concentric with the suction diffuser ports and that the flanges are parallel.

### INSTALLATION

Finally tighten the bolts gradually and uniformly in an opposing sequence to prevent bending one flange relative to the other, particularly on flanges with raised faces.

Parallel alignment of flanges is especially important when assembling between exist flanges.

Flanged joints depend on compressive deformation of the gasket material to achieve a seal.

### MAINTENANCE

KIDS Suction diffuser will provide a long service life provided the screen element is cleaned regularly.

The suction diffuser should be at zero pressure and ambient temperature before any maintenance is carried out and correctly fitting tools should be used.

A full risk assessment and methodology statement must be compiled prior to any maintenance.

The element will require cleaning after the flushing process and periodically thereafter.

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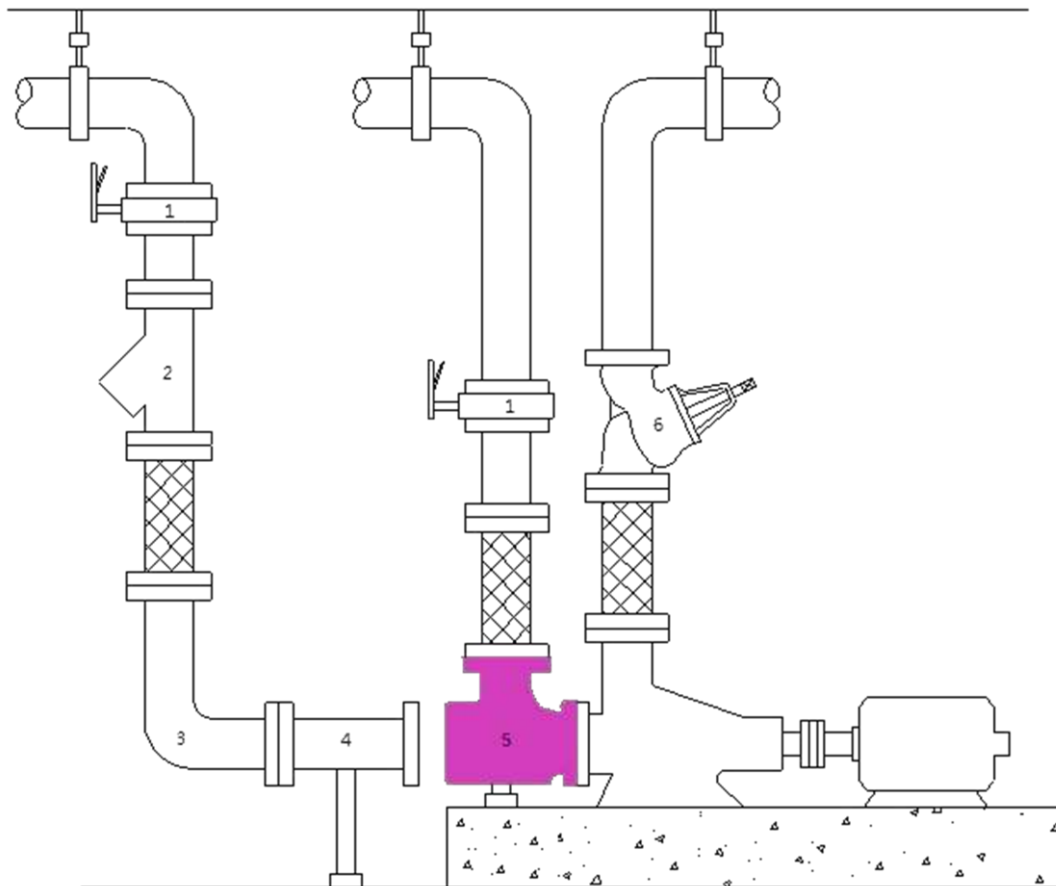
### SCREEN ELEMENT CLEANING

If fitted, close the isolating valves, unscrew the cover bolts, and remove the cover by inserting a screw driver or wedge between the cover and body then tap with a mallet to release adhesion.

The screen element is in the form of a basket with a lifting handle for easily withdrawal. Clean using a brush and or water jet, eye protection or goggles should be worn during the cleaning process.

Once the screen element and gasket face on the body and cover have been cleaned the suction diffuser can be re-assembled.

The screen element and sealing gasket should be renewed if damaged.



General Installation Layout Drawing