



Installation & Operating Manual



ART 195 Flanged Suction Diffuser

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1. Introduction

The purpose of this document is to provide installation and operational instructions for the below listed valves.

A complete risk assessment should take place prior to work commencing.

- Albion Valves (UK) Ltd range of Flanged Suction Diffusers are designed for the suction side of pump installations.
- Albion Valves (UK) Ltd range of Flanged Suction Diffusers are available with reduced and equal inlets / outlets.

2. Technical Data

Valve Type	Size Range	Connection Type	Temperature Rating	Pressure Rating
ART 195	Refer to data sheet	EN 1092-2 PN 16	-20°C – 120°C	16 bar

****Please refer to the data sheet for full technical specifications**

3. Initial Operation

Prior to start up please ensure the system has been suitably flushed & cleaned according to BSRIA guide BG29 to avoid premature fouling of the strainer within the suction diffuser.

4. Pre Installation Checks

- Albion Valves (UK) Ltd recommend that the installer adheres to the installation requirements as specified by the Water Supply Water Fittings Regulations 1999.
- Make certain the pressure and temperature conditions are within the specified capacity of the suction diffuser being installed. It is the responsibility of the installer to ensure the suction diffuser is suitable for service conditions e.g., temperature, pressure, and service media. Please refer to Figure 1.
- Suitable gaskets should be used during installation.
- Where fitted, remove flange protectors / dust caps and all other packaging material
- Inspect the mating flanges and check for any defects or imperfections. Perform this check on the mating surface of the pipework also. Care should be taken to ensure the surface finish of the suction diffuser is protected during installation. Any damage to the suction diffusers surface



may cause metallic corrosion.

- Ensure all mating surfaces are the same on both sides.
- For gasket installation, allow for ¼" gap on both ends. Check for adequate clearance for effortless operation when opening the cover and screen removal.

5. Installation Procedure for Suction Diffuser

- The suction diffuser may be installed in either a vertical or horizontal orientation, as dictated by the system design. Ensure that the inlet and outlet dimensions of the connecting pipework correspond exactly to the diffuser's specified connection sizes.
- Utilize appropriate lifting and handling equipment when positioning larger or heavier valve assemblies. Align the suction diffuser such that its flow direction corresponds with the pump inlet orientation.
- For units of substantial size, provide adequate mechanical support to the adjacent pipework at both the inlet and outlet connections to prevent excessive stress or misalignment during installation.
- To minimize mechanical strain on the pump assembly, install an adjustable support leg beneath the suction diffuser or as required by system load distribution.
- Secure the suction diffuser to the mating flanges using appropriate flange bolts. Tighten the bolts incrementally in a cross (star) pattern to ensure uniform gasket compression and even distribution of clamping forces across the flange faces.

6. Operation

- Following correct installation of the valve and suction diffuser assembly, initiate system start-up gradually to mitigate hydraulic shock or pressure transients that could impose undue stress on the strainer or associated components.
- Incrementally increase system flow until the designated operating (working) pressure is achieved.
- Conduct a detailed inspection of all flange connections for evidence of leakage. In the event of observed leakage, verify that all flange bolts are torqued to the manufacturer's recommended specifications and that gasket seating is uniform. Additionally, inspect the connected pipework for any misalignment or undue mechanical loading.
- Upon successful completion of system cleaning and hydrostatic testing, and once no leakage is detected, remove the temporary fine-mesh (disposable) startup screen from the suction diffuser to restore normal flow conditions.

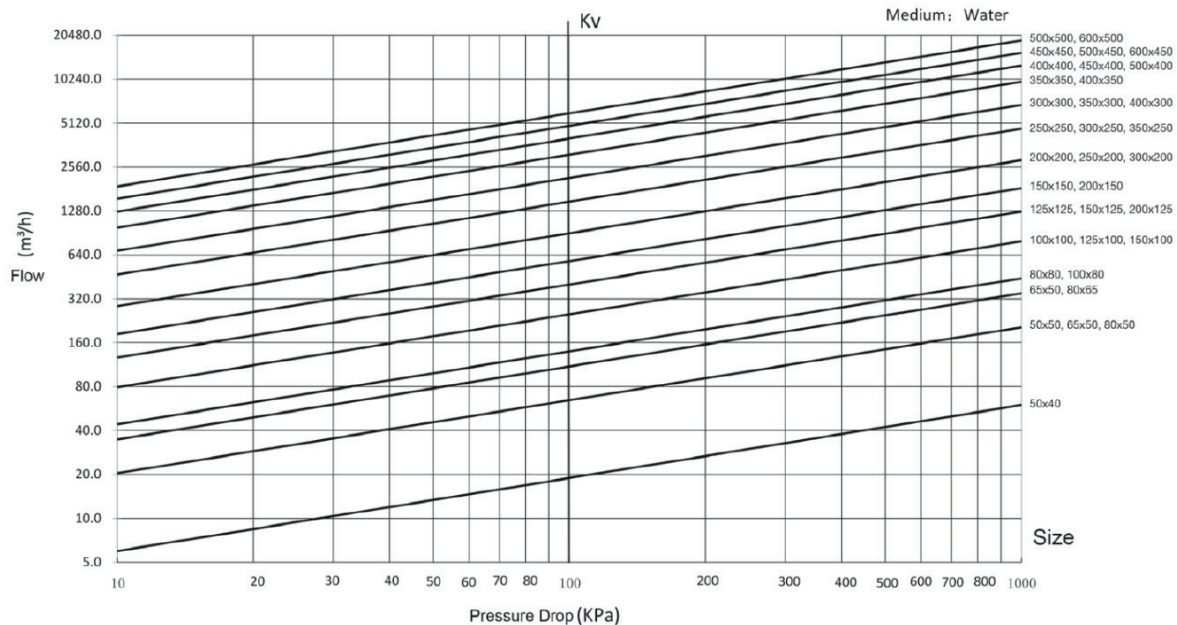


Figure 1

7. Approvals Classification

- Please contact Albion Valves (UK) Ltd Quality Department for further details of any specific product approvals and accreditations.

8. Troubleshooting

- If any maintenance is to be undertaken on Albion Valves (UK) Ltd range of Flanged Suction Diffusers it is the responsibility of the installer to ensure the system is adequately drained, depressurized and the suction diffuser is isolated before any work commences.
- A full risk assessment should be undertaken prior to any work taking place.

9. Warranty

- For further details of Albion Valves (UK) Ltd warranty period, please refer to Albion Valves (UK) Limited 'Conditions of Sale' available on our website.



About Albion Valves (UK) Limited

Albion Valves (UK) Limited has been in the industrial heating and valve market for over 40 years, with this comes a wealth of knowledge and expertise that allows us to support our network of independent distributors and their customers.

Albion aims to supply a readily available, complete, quality valve solution alongside excellent cradle-to-grave support and service.

That is why we say, 'It's all at Albion'.

Quality

Whatever you need, you can rest assured that if it comes from Albion it has been designed and manufactured to deliver optimum performance and is accredited with the necessary approvals. Our in-house quality and technical departments are always on hand too!

Service

Our cradle-to-grave approach means you will never be on your own. Whether you need assistance with your system designs, an industry-leading turnaround time on your quote, or some help with commissioning after installation, we have a team to help!

Delivery

We know that time is money, and when a priority project depends on a part, you can trust Albion to deliver. We deliver 95% of products the next day with 99.98% accuracy!

Choice

We may have started with a single brass ball valve, but our range has grown substantially since and we can now offer a full building services valve solution, alongside a comprehensive range of valves for the industrial and process markets.

It is becoming more and more apparent to the industry, that it really is, all at Albion.