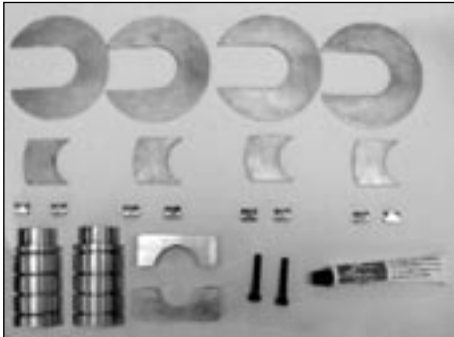


**DIVA**  
**Heat Sink Kit - Fitting Instructions**  
**Installation and Maintenance Instructions**

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- 1. Safety information*
- 2. Fitting instructions*

# 1. Safety information

Safe operation of the unit, after fitting the heat sink kit, can only be guaranteed if it is properly fitted, installed, commissioned and maintained by a qualified person (see Section 1.11) in compliance with the fitting instructions within and the operating instructions for the DIVA flowmeter. General installation and safety instructions for pipeline and plant construction, as well as the proper use of tools and safety equipment must also be complied with.

## Manufacturer:-

Spirax Sarco Ltd  
Charlton House  
Charlton Kings  
Cheltenham  
Glos  
GL53 8ER

The product is designed and constructed to withstand the forces encountered during normal use. Use of the product for any other purpose, or failure to install the product in accordance with these fitting instructions, could cause damage to the product, will invalidate the  $\text{CE}$  marking, and may cause injury or fatality to personnel.

## Warning

The DIVA flowmeter complies with the requirements of Electromagnetic Compatibility Directive 89/336/EEC by meeting the standards of:

EN 61326: 1997 Electrical equipment for measurement, control and laboratory use - EMC requirements. Immunity to industrial locations annex A - Table A1.  
Emissions to domestic locations Table 4.

The following conditions should be avoided as they may create interference above the limits specified in EN 61326: 1997 if:

- The product or its wiring is located near a radio transmitter.
- Cellular telephones and mobile radios may cause interference if used within approximately 1 metre (39") of the product or its wiring. The actual separation distance necessary will vary according to the surroundings of the installation and the power of the transmitter.

If this product is not used in the manner specified by this IMI, then the protection provided may be impaired.

## 1.1 Intended use

Referring to the Installation and Maintenance Instructions, name-plate and Technical Information Sheet, check that the product is suitable for the intended use/application. The product listed complies with the requirements of the European Pressure Equipment Directive 97/23/EC, carries the  $\text{CE}$  mark when so required. The product falls within the following Pressure Equipment Directive categories:

Product	Group 1 Gases	Group 2 Gases	Group 1 Liquids	Group 2 Liquids
DIVA flowmetering system DN50 to DN100	-	1	-	-

- The product has been specifically designed for use on saturated steam only which is in Group 2 of the above mentioned Pressure Equipment Directive.

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- ii) Check material suitability, pressure and temperature and their maximum and minimum values. If the maximum operating limits of the product are lower than those of the system in which it is being fitted, or if malfunction of the product could result in a dangerous overpressure or overtemperature occurrence, ensure a safety device is included in the system to prevent such over-limit situations.
  - iii) Determine the correct installation situation and direction of fluid flow.
  - iv) Spirax Sarco products are not intended to withstand external stresses that may be induced by any system to which they are fitted. It is the responsibility of the installer to consider these stresses and take adequate precautions to minimise them.
  - v) Remove protection covers from all connections before installation.

## **1.2 Access**

Ensure safe access and if necessary a safe working platform (suitably guarded) before attempting to work on the product. Arrange suitable lifting gear if required.

## **1.3 Lighting**

Ensure adequate lighting, particularly where detailed or intricate work is required.

## **1.4 Hazardous liquids or gases in the pipeline**

Consider what is in the pipeline or what may have been in the pipeline at some previous time. Consider: flammable materials, substances hazardous to health, extremes of temperature.

## **1.5 Hazardous environment around the product**

Consider: explosion risk areas, lack of oxygen (e.g. tanks, pits), dangerous gases, extremes of temperature, hot surfaces, fire hazard (e.g. during welding), excessive noise, moving machinery.

## **1.6 The system**

Consider the effect on the complete system of the work proposed. Will any proposed action (e.g. closing isolation valves, electrical isolation) put any other part of the system or any personnel at risk?

Dangers might include isolation of vents or protective devices or the rendering ineffective of controls or alarms. Ensure isolation valves are turned on and off in a gradual way to avoid system shocks.

## **1.7 Pressure systems**

Ensure that any pressure is isolated and safely vented to atmospheric pressure. Consider double isolation (double block and bleed) and the locking or labelling of closed valves. Do not assume that the system has depressurised even when the pressure gauge indicates zero.

## **1.8 Temperature**

Allow time for temperature to normalise after isolation to avoid the danger of burns and consider whether protective clothing (including safety glasses) is required.

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## 1.9 Tools and consumables

Before starting work ensure that you have suitable tools and/or consumables available. Use only genuine Spirax Sarco replacement parts.

## 1.10 Protective clothing

Consider whether you and/or others in the vicinity require any protective clothing to protect against the hazards of, for example, chemicals, high /low temperature, radiation, noise, falling objects, and dangers to eyes and face.

## 1.11 Permits to work

All work must be carried out or be supervised by a suitably competent person. Installation and operating personnel should be trained in the correct use of the product according to the Installation and Maintenance Instructions.

Where a formal 'permit to work' system is in force it must be complied with. Where there is no such system, it is recommended that a responsible person should know what work is going on and, where necessary, arrange to have an assistant whose primary responsibility is safety.

Post 'warning notices' if necessary.

## 1.12 Handling

Manual handling of large and /or heavy products may present a risk of injury. Lifting, pushing, pulling, carrying or supporting a load by bodily force can cause injury particularly to the back. You are advised to assess the risks taking into account the task, the individual, the load and the working environment and use the appropriate handling method depending on the circumstances of the work being done.

## 1.13 Residual hazards

In normal use the external surface of the product may be very hot. If used at the maximum permitted operating conditions the surface temperature of some products may reach temperatures of 250°C (482°F).

Many products are not self-draining. Take due care when dismantling or removing the product from an installation (refer to 'Maintenance instructions').

## 1.14 Freezing

Provision must be made to protect products which are not self-draining against frost damage in environments where they may be exposed to temperatures below freezing point.

## 1.15 Disposal

Unless otherwise stated in the Installation and Maintenance Instructions, this product is recyclable and no ecological hazard is anticipated with its disposal providing due care is taken.

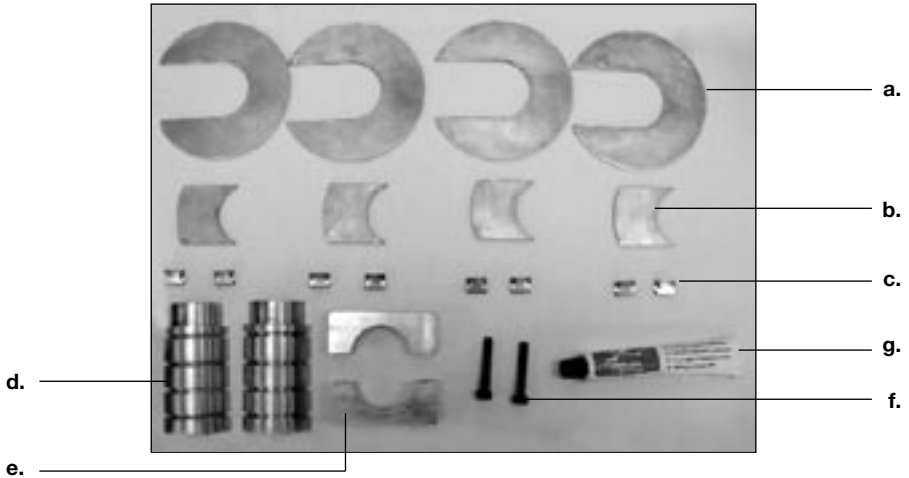
## 1.16 Returning products

Customers and stockists are reminded that under EC Health, Safety and Environment Law, when returning products to Spirax Sarco they must provide information on any hazards and the precautions to be taken due to contamination residues or mechanical damage which may present a health, safety or environmental risk. This information must be provided in writing including Health and Safety data sheets relating to any substances identified as hazardous or potentially hazardous.

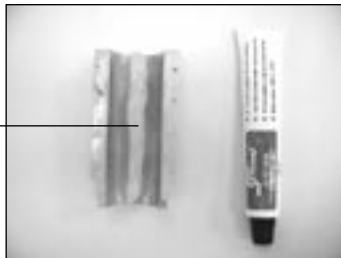
## 2. Fitting instructions

The heat sink kit contains the following components:-

- a. 4 x fins
- b. 4 x fin inserts
- c. 8 x fin clips
- d. 2 x fin bushes
- e. 2 x clamps
- f. 2 x M6 cap screws
- g. 1 x tube of heat sink paste



Apply heat sink paste liberally to the inside of both fin bushes



Fit one fin bush to the DIVA stand-off.



**Note:** the smaller diameter is nearest to the pipeline.



Fix the second fin bush to the stand-off. There should be a small gap between the fin bushes.

Mount one of the clamps to the smaller diameter of the fin bush.



Mount the second clamp to the smaller diameter of the fin bush



Using the 2 x M6 cap screws, join the clamp together so that it holds the fin bush together.



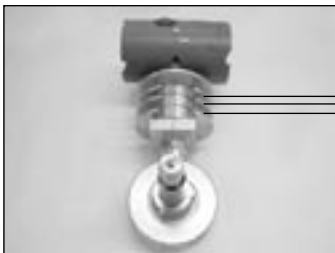
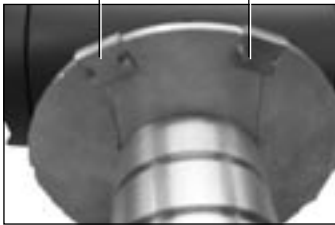


The top fin is labelled 'do not lag'. Insert this fin into the top groove as shown.

Slide a fin insert into the groove.



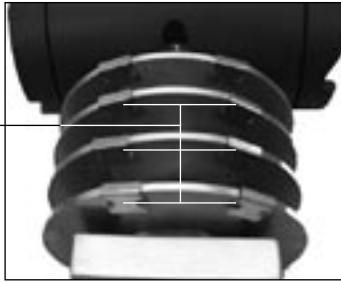
Fit two fin clips to hold the top fin and fin insert together.



Slide the remaining 3 fins into place as shown.

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Repeat the above action to hold all 4 fins in place. Make sure the clip is fitted centrally across the join of the fin insert and the fin.



The heat sink kit is now fully assembled, as shown.