



Cert. No. LRQ 0963008

ISO 9001

# spirax sarco

TI-P337-19  
MI Issue 2

## DIVA Flowmeter - System Overview

### Description

The Spirax Sarco DIVA pipeline unit is a complete flowmetering system. It provides a fully density compensated 4-20 mA output proportional to mass flow as well as a digital pulsed output. The system comprises of:

The DIVA pipeline unit. This is installed in the line where the flow is to be measured. There is no requirement for impulse lines or additional equipment. The DIVA measures the force caused by the deflection of a precision made cone due to the flowrate and converts it to a 4 - 20 mA and digital pulsed output signal proportional to mass flow. This output signal can be used in a number of ways:-

- a- To act as a suitable input to an EMS/BEMS which can be programmed by the user with the linear 4- 20 mA scale. Additional inputs from pressure and temperature transmitters, generally used to carry out density compensation, are not required as the DIVA output is proportional to mass flow.
- b- To supply an M750 display unit. This gives a display of rate of mass flow and totalised flow. The M750 can also supply the loop power for the DIVA.

The DIVA pipeline unit can be used to measure the flow of saturated steam within the pressure and temperature limits detailed in the Technical Information sheet TI-P337-17.

### Installation

Care must be taken to meet all the requirements of the Installation and Maintenance Instructions that are included with the equipment.

#### Some installation points to watch are noted below:

1. Ensure that all pipework is adequately supported and properly aligned. Special care should be taken to ensure that the DIVA flowmeter is concentrically mounted in the line.
2. The DIVA flowmeter should be selected on capacity rather than line size. Where line size changes on steam systems are necessary, use eccentric reducers to avoid build-up of condensate.
3. The minimum recommended lengths of straight pipe are 6D upstream and 3D downstream.
4. Take care to ensure the correct direction of flow as indicated by the arrow on the flowmeter body.
5. Take care to avoid reverse flow through the flowmeter.
6. Avoid installing the flowmeter downstream of a pressure reducing valve as this may cause inaccurate readings. Similarly, avoid installing the flowmeter downstream of a partially open valve.
7. Remember that actuated valves may cause rapid pressure fluctuations, which could cause damage.
8. Care should be taken to ensure adequate line drainage, trapping etc, so as to avoid condensate slugs impacting the flowmeter. Steam separators should be fitted. These should be drained using a float trap set.

### Electrical wiring

All electrical wiring must be carried out to the appropriate standards. Full wiring interconnection details are included with the equipment.

### How to order

For details of how to specify system components refer to the relevant TI document.

### Associated equipment

|      |              |             |
|------|--------------|-------------|
| DIVA | Flowmeter    | TI-P337- 17 |
| M750 | Display unit | TI- P332-08 |

#### Note:

This drawing is schematic only, please see the Installation and Maintenance Instructions for specific installation information.

