# SP521/522 Turbine Flowmeter

The SP521/522 turbine flowmeters are primarily used for hydraulic circuit testing .They are designed for working at pressures up to 400 bar and for monitoring of flow, temperature and pressure .

**Integrated Test Points ✓**
**For acquiring temperature and pressure readings.**

**High Pressure Design ✓**
**200 bar or 400 bar pressure options**

**Frequency or Analogue Output ✓**
**4-20mA or pulsed output options available.**

**Optional Linearisation ✓**
**Fit with our FC7-SP7 for improved accuracy.**

## Application

The SP521/522 turbine flowmeter has been developed for the testing of hydraulic circuits but its stainless steel construction allows it to be used for other applications such as the metering of water, solvents and chemicals. As well as flow measurement, the 2 additional 1/4" tappings allow pressure and temperature monitoring .

## Principle of Operation

Liquid flows through the meter causing the rotor to turn. Every time a rotor blade passes the sensor a pulse is generated . The frequency of the pulses is proportional to the flowrate

## Construction

The SP521/522 is a robust mechanical turbine flowmeter . The stainless steel body gives high strength and corrosion resistance. The 431ss rotor is machined from solid and the tungsten carbide bearings ensure high levels of performance with minimal wear

## Instrumentation

The signal can be used for a local display, remote display or converted for transmission to a separate control system.

## Calibration

All Apollo turbine flowmeters are individually calibrated with water and are traceable to national standards. We provide you with a test certificate for each meter showing the number of pulses per litre (k. factor), which is used to set the instrumentation. As standard we will provide you with a graphically corrected k.factor for hydraulic oil use.

## Installation

The flowmeter is installed directly into the pipeline. To reduce turbulence and get the best results from your flowmeter we recommend that you install it in a straight section of pipework with at least 10 pipe diameters before the inlet and 5 diameters on the outlet.
Control valves should be installed downstream of the flowmeter.

## Approvals

The SP521/522 flowmeters are fully PED compliant .

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## Specification

### Construction:

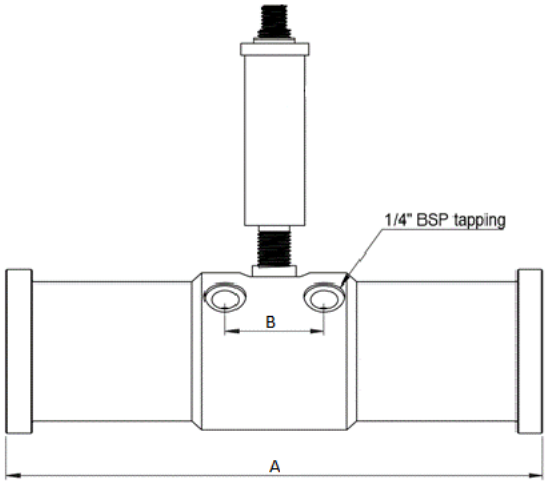
| | |
|---|---|
| Body: | 303 stainless steel |
| Rotor: | 431 stainless steel |
| Rotor Shaft: | Tungsten Carbide |
| Sleeve Bearings: | Tungsten carbide |
| Thrust Balls: | Tungsten Carbide |
| Hangers: | 316 stainless steel |
| Circlips: | 316 stainless steel |

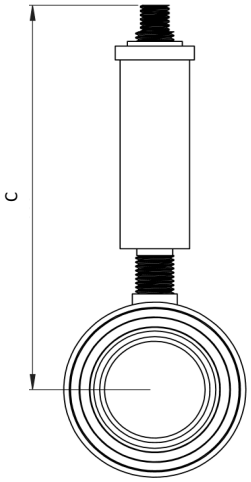
### Technical Data:

| | |
|---|---|
| Flowrange: | 50-750 l/min |
| Error: | ± 2.0 % as standard. Better than +/- 0.2% with FC7-SP7 |
| Repeatability: | +/-0.1% of reading |
| Maximum Working Pressure: | ISO6162 code 61 up to 210 bar<br>ISO6162 code 62 up to 400 bar |
| Temperature Range: | Dependent on process temperature<br>Standard pickoff -30ºC to 110ºC<br>High temp -30ºC to 232ºC |
| End Connections: | 2” IS061/62 code 61 (SAE 3000) or<br>2” IS061/62 code 62 (SAE 6000 ) |
| Body Connections: | 5/8”-18 UNF port for flow sensor<br>2x 1/4” BSP ports for P & t sensors |

## Dimensions

Shown fitted with FC7-SP7 F to I converter, (available separately)




| Model | A (mm) | B (mm) | C (mm) |
|---|---|---|---|
| ISO61/62/61 | 230 | 60 | 167 |
| ISO61/62/62 | 260 | 48 | 167 |

**Contact our flow measurement specialists for advice on your application**

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**Manufactured in the UK**

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