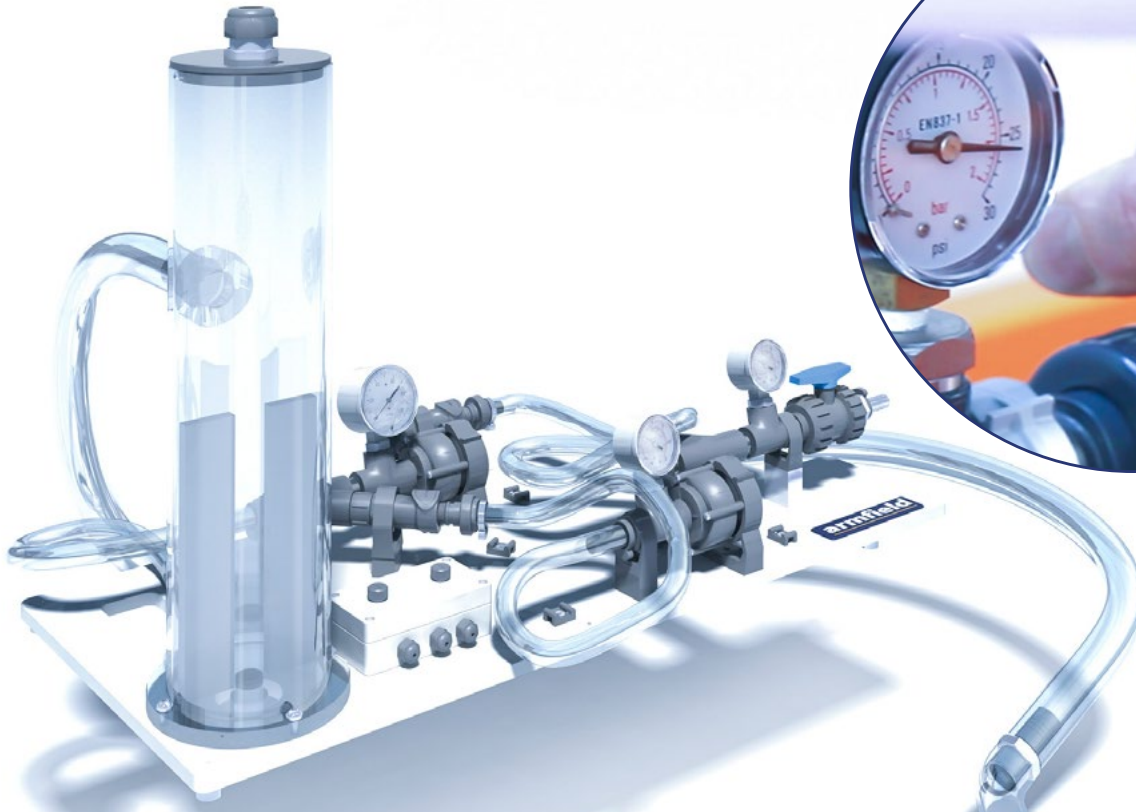


### F SERIES

### Series/Parallel Pumps - F1-35

The F1-35 accessory is for use with the F1-10-2 Hydraulics Bench and is used to demonstrate the head / flow characteristics of Rotodynamic or Velocity pumps.



F1-35 Flow valve

#### Experimental content

Determining the head/flow rate characteristics of:

- ▶ A single centrifugal pump at a single speed
- ▶ Two similar pumps operating in parallel configuration at the same speed
- ▶ Two similar pumps operating in series configuration at the same speed
- ▶ Two similar pumps operating in parallel configuration at a variable speed
- ▶ Two similar pumps operating in series configuration at a variable speed

#### Description

The series and parallel accessory is designed to be positioned securely on the F1-10-2 Hydraulics Bench and has two pumps to demonstrate the characteristics of pumps connected in series or parallel. The pumps are driven by integral DC motors **with variable speed control**. Pressure gauges are mounted to measure the pressure at the inlet and outlet.

The pumps are fed from a constant head tank that forms part of the accessory, fed by the F1-10-2 pump. Flow discharges into the volumetric tank of the F1-10-2 via a flow control valve which permits an output pressure to be applied to load the pumps.

They can be operated either independently or in conjunction connected in series or parallel. Both pumps speeds are individually controlled and varied by using the controllers allocated on the frame.

Flexible tubing and quick release connectors are supplied to allow the pumps to be connected for single pump, series or parallel pump operation.

#### Overall dimensions

Length	0.85m
Width	0.35m
Height	0.55m

#### Packed and crated shipping specifications

Volume	1.2m <sup>3</sup>
Gross weight	20Kg

#### Technical details

Power Consumption	48W (max. per pump, for this application)
Max. Flow Rate	22L/min (max per pump (series), for this application (44L/min in parallel))
Max. Head	0.96m (datum to manifold gauge) (max pump head = 11m)
Constant head tank	2L (approx)
Speed range	0-22 L/min
<b>Measuring ranges</b>	
Pressure (inlet)	2 x 0.24 bar
Pressure (outlet)	1 x 2.2 bar

See Hydraulics Bench F1-10 technical details for primary pump characteristics.

Specifically requires Hydraulics Bench Service unit F1-10-2 for operation

#### Ordering codes

- ▶ F1-35

UK office - email: [sales@armfield.co.uk](mailto:sales@armfield.co.uk) tel: +44 (0) 1425 478781 (for ROW)

USA office - email: [info@armfield.inc](mailto:info@armfield.inc) tel: +1 (609) 208-2800 (USA only)

Service and maintenance support: [armfieldassist.com](http://armfieldassist.com)

Issue: 2

URL: <http://www.armfield.co.uk/f1>

Applications

ChE ME CE IP

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