

# Flowmeters & Monitors

A range of cost saving solutions



**Protect systems,  
reduce fluid and air  
loss and increase  
efficiency**

**Effective and accurate flow  
measurement**

An extensive range of flow metering products. LoFlow oil and water flowmeters. 10 bar max. working pressure. Easiflow meters and flowswitches with flows from 1 to 150 l/min. Dataflow 4-20mA and pulse output flow transmitters and the Dataflow Compact inline flow transmitter. Flowline oil, water and air calibrated flowmeters and flowswitches available in brass or Stainless Steel. Hydraulic Test Units for the speedy diagnosis of hydraulic circuit faults with flow ranges from 2 to 360 l/min.



## Contact Information:

Parker Hannifin  
**Hydraulic Filter Division Europe**

**European Product  
Information Centre**  
**Freephone: 00800 27 27 5374**  
**(from AT, BE, CH, CZ, DE, EE, ES,**  
**FI, FR, IE, IT, PT, SE, SK, UK)**  
**filtrationinfo@parker.com**

[www.parker.com/hfde](http://www.parker.com/hfde)

## Product Features:

- LoFlow oil and water flowmeters. 10 bar max. working pressure.
- Easiflow meters and Flowswitches. Work in any plane. Flows from 1 to 150 l/min.
- Dataflow 4-20mA and pulse output flow transmitters and Dataflow Compact inline flow transmitter.
- Flowline oil, water and air calibrated flowmeters and flowswitches available in brass or Stainless Steel.
- Hydraulic Test Units for the speedy diagnosis of hydraulic circuit faults with flow ranges from 2 to 360 l/min.

# LoFlow - Oil and Water Flowmeters

## Flowmeters

### Features & Benefits



- Easy to read, permanent printed scales.
- Large scale definition for precise measurement.
- Easy panel mounting assembly.
- Negligible pressure drop characteristics.
- 10 bar pressure rating.
- Simple to use.

### Specification

#### Construction:

Body Grillon TR55.  
Back body half ABS 7020.  
Ball retainer ABS 7020.  
Back panel PVC.  
Float See below.

**Maximum working pressure:**  
10 bar.

**Maximum working temperature:**  
60°C.

**Accuracy:**  
±2% typical.

**Repeatability:**  
±1%.

**Connections:**  
1/4" and 3/4" tapered threads.

Note: Always install vertically.

### Installation Details

#### Simple to fit, easy to use

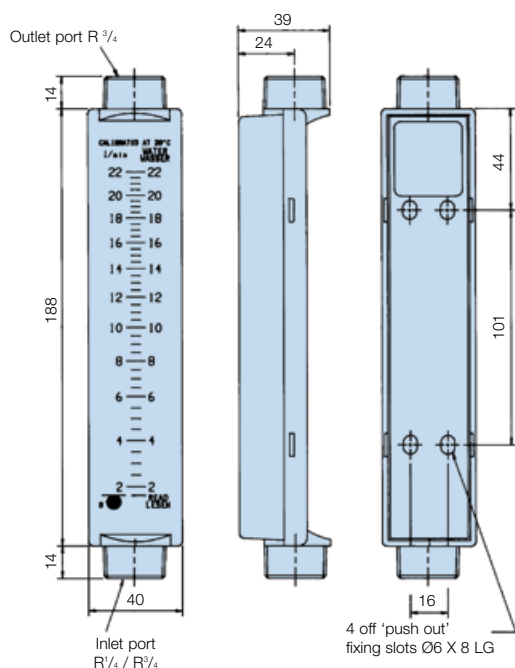
The LoFlow meter has been designed for those industries where the need exists for a low cost solution to small measurements of flow with an accurate reading. LoFlow uses the well tried and tested principle of variable area flow measurement utilising the movement of a ball or float inside a calibrated tapered bore.

### Typical Applications

Pharmaceutical industry  
Filtration systems  
Hospital equipment  
For water applications

Water treatment  
Photography and X-ray  
Equipment  
Swimming pools

### Installation Details



### Ordering Information

#### Standard products table

Product number	Supersedes	Media	Ports (BSPT male)	Flow range (l/min)	Float material
<b>LF802412</b>	LF.2020	Water	3/4 - 3/4	0.2 - 2.0	Acetal
<b>LF802413</b>	LF.2100	Water	3/4 - 3/4	2.0 - 10.0	S/Steel
<b>LF802414</b>	LF.2220	Water	3/4 - 3/4	3.0 - 22.0	S/Steel
<b>LF801431</b>	LF.1002	Oil	1/4 - 3/4	0.010 - 0.20	S/Steel
<b>LF802432</b>	LF.1009	Oil	3/4 - 3/4	0.1 - 0.9	Acetal
<b>LF802434</b>	LF.1090	Oil	3/4 - 3/4	1.0 - 9.0	S/Steel
<b>LF801411</b>	LF.2005	Water	1/4 - 3/4	0.06 - 0.55	S/Steel

Note 1: Part numbers featured with bold highlighted codes will ensure a 'standard' product selection.

Note 2: Alternate displayed part number selection will require you to contact Parker Filtration for availability.

# Easiflow - Meters and Flowswitches

## Flowmeters

### Features & Benefits



- Oil and water calibrated.
- Works in any plane.
- Pressures up to 10 bar.
- Flows from 1 to 150 l/min.
- Accuracy  $\pm 5\%$  FSD.
- Repeatability  $\pm 1\%$  FSD.
- Switches – fully adjustable flow rate signalling.
- Plant and equipment protection.



### Easiflow Meters Specification

#### Construction:

Cone	Acetal
Viewing glass	Borosilicate glass
Calibrated spring	Stainless steel
Seal	Nitrile
Body	Glass filled nylon

**Maximum working pressure:**  
10 bar.

**Minimum working pressure:**  
1 bar.

**Temperature range:**  
+5°C to +80°C - Oil.  
+5°C to +60°C - Water.

#### Flow rate:

1 to 150 l/min.

#### Viscosity range:

10 to 200 centistokes (oil).

#### Accuracy:

$\pm 5\%$  FSD.

#### Repeatability:

$\pm 1\%$  FSD.

#### Connections:

1" BSP parallel threads.

#### Weight:

0.4kg.

### Flowswitch Specifications

The Easiflow switch is a flow measuring device incorporating an AC/DC switch suitable for controlling valves or pump motors or for activating alarm signals.

#### General flowmeter specification:

See material details opposite.

#### Switch type specifications:

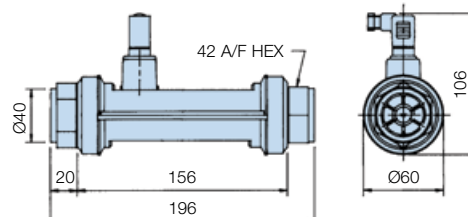
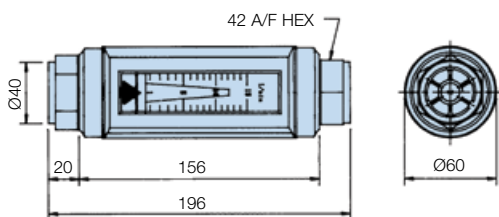
Magnetically operated reed switch.

#### Electrical details:

Voltage range	300Vac/dc
Maximum current	2.5Amps
Maximum load	100W resistive 70W inductive



### Installation Details



### Ordering Information

#### Standard products table – Flowmeter only

Product number	Supersedes	Media	Flow range (l/min)
<b>EF773111220</b>	EFW.0302	Water	2 - 30
<b>EF773111220</b>	EFW.0502	Water	4 - 50
<b>EF7731113220</b>	EFW.1002	Water	5 - 100
<b>EF7731114220</b>	EFW.1502	Water	10 - 150
<b>EF7731110120</b>	EFL.0151	Oil	1 - 15
<b>EF7731111120</b>	EFL.0301	Oil	2 - 30
<b>EF7731112120</b>	EFL.0501	Oil	4 - 50
<b>EF7731113120</b>	EFL.1001	Oil	5 - 100
<b>EF7731114120</b>	EFL.1501	Oil	10 - 150
<b>EF7731110220</b>	EFW.0152	Water	1 - 15

Note 1: Part numbers featured with bold highlighted codes will ensure a 'standard' product selection.

Note 2: Alternate displayed part number selection will require you to contact Parker Filtration for availability.

#### Standard products table – Flowmeter plus one switch

Product number	Supersedes	Media	Flow range (l/min)	Switch range (l/min)
<b>EF7731110221</b>	ESW.015S1	Water	1 - 15	5 - 15
<b>EF7731111221</b>	ESW.030S1	Water	2 - 30	5 - 30
<b>EF7731110121</b>	ESL.015S1	Oil	1 - 15	5 - 15
<b>EF7731111121</b>	ESL.030S1	Oil	2 - 30	5 - 30
<b>EF7731112121</b>	ESL.050S1	Oil	4 - 50	10 - 50
<b>EF7731113121</b>	ESL.100S1	Oil	5 - 100	20 - 100
<b>EF7731114121</b>	ESL.150S1	Oil	10 - 150	30 - 150
<b>EF7731112221</b>	ESW.050S1	Water	4 - 50	10 - 50
<b>EF7731113221</b>	ESW.100S1	Water	5 - 100	20 - 100
<b>EF7731114221</b>	ESW.150S1	Water	10 - 150	30 - 150

Note 1: Part numbers featured with bold highlighted codes will ensure a 'standard' product selection.

Note 2: Alternate displayed part number selection will require you to contact Parker Filtration for availability.

# Dataflow - 4 to 20mA and Pulse Output Flow Transmitters

## Flowmeters

### Features & Benefits



- 4 to 20mA output.
- Pulse output available for totalising/batching.
- Works in any plane.
- Accepts reverse flow.
- Maximum flow 150 l/min.
- Negligible pressure drop.
- Pressures up to 10 bar.
- Low cost. Simple to install.
- For use with most liquids.
- Factory calibrated. Accuracy  $\pm 2\%$ .
- DIN 43650 plug connection (included).

### Specification

#### Construction:

Borosilicate glasstube.  
Nitrile seals.  
Body – Glass filled nylon.  
Rotor and locator – Acetal.  
Washers and shaft – Stainless steel.  
Rotor tips – Stainless steel.

#### Max. working pressure:

10 bar oil/water.

#### Flow indication:

Min: 2 l/min.  
Max: 150 l/min.  
Accepts reverse flow.

#### Accuracy:

$\pm 2\%$  FSD.

#### Temp range:

+5°C to +80°C oil.  
+5°C to +60°C water.

#### Connections:

1" BSP parallel threads.

#### Weight:

0.7Kg.

#### Calibration 4 to 20mA:

4mA = 0 l/min,  
20mA = 100 l/min.

#### Calibration pulse output per litre:

'K' factors.  
Oil = 51.14  
Water = 44.25

#### Electrical details 4 to 20mA:

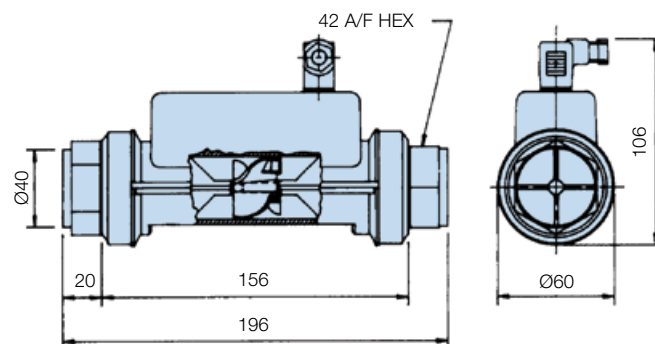
Supply = 24Vdc.

#### Pulse output:

Supply = 24Vdc.  
(open collector transistor).



### Installation Details



### Ordering Information

#### Standard products table

Product number	Supersedes	Description
<b>DFT980</b>	DFT.980	Dataflow "Pulse" output transmitter
<b>DFT990</b>	DFT.990	Dataflow 4-20mA transmitter

Note 1: Part numbers featured with bold highlighted codes will ensure a 'standard' product selection.

Note 2: Alternate displayed part number selection will require you to contact Parker Filtration for availability.



Dataflow 4-20mA transmitter can be connected to a Digital Display Unit (DDU1001 or DDU1002)

### Digital Display Specification (DFT 990 only)

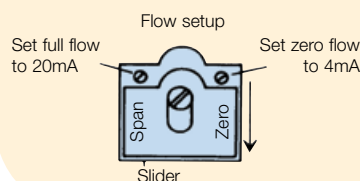
For indicator options please refer to MS150 section of the catalogue, reference DDU1001 and DDU1002 indicators

### 4 to 20mA On-Site Calibration

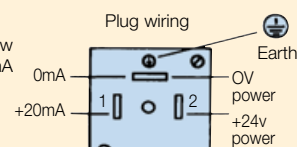
Set your system to zero flow. Connect a multimeter across terminals 1 (+20mA) and  $\ominus$  (0mA) (Dia. 2). Set the zero to read 4mA on your multimeter (Dia. 1). Set your system to full flow and set the span to read 20mA on your multimeter. (Dia. 1)

Note: Minimum span setting = 30 l/min

#### Diagram 1



#### Diagram 2



# Dataflow Compact - Inline Flow Transmitter

## Flowmeters

### Features & Benefits



- Pulse output signal for flows up to 25 l/min.
- Lightweight and robust.
- Operates in any plane. Simple to install.
- Low cost flow measurement.
- Negligible pressure drop.
- Accepts reverse flow.
- $\frac{3}{8}$  BSP male connection.
- Water or compatible clear fluids only.
- Ideal for washing machines, showers and vending machines.

### Specification

#### Construction:

Body Grilamid – TR55.  
Rotor 18% PTFE filled nylon.  
Shaft Stainless steel.  
Shaft Retainers Grilamid TR55.

#### Operation:

Infra-red.

#### Maximum working pressure:

20 bar.

#### Pressure drop:

Max 0.1 bar at 15 l/min.

#### Flow range:

1 to 25 l/min.  
(Accepts reverse flow).

#### Calibration:

'K' Factor 752 pulses per litre, typical.  
Subject to application.

#### Accuracy:

±2% typical.



#### Repeatability:

±1%.

#### Temperature range:

+5°C to +70°C.

#### Overall dimensions:

52mm x 29mm x 27mm.

#### Weight:

16 grams.

#### Connections:

$\frac{3}{8}$  BSP

#### Cable length:

300mm.

#### Power supply:

5 Vdc.

#### Output signal:

5 Vdc - square wave

### Dataflow Compact – The Low Cost Transmitter

The Dataflow Compact Transmitter was designed to offer OEM's and end users alike a means of monitoring low flows on liquids with an electronic output signal – but at LOW COST. Fluid passes through the one piece sensor body impacting on the twin vaned turbine rotor, causing it to rotate at a speed proportional to the flow rate. Two opposing photo-transistors are mounted either side of the rotor and externally of the clear sensor body, these generate a continuous signal.

As the rotor spins each blade obscures the infra red signal. This is then converted into an industry standard pulse output signal – compatible with inexpensive display units for flow rate, totalising, batch control and large, central control systems. The lightweight Grilamid body with its virtually unrestricted flow path, offers negligible pressure drop for flows up to 25 l/min and withstanding pressures up to 20 bar.

### Flow Rate • Totalising • Batch Control and applications in many industries

Dataflow Compact Transmitters are small and very robust having been developed and tested extensively in industry applications where space is a restriction. Dataflow Compact with its Grilamid body and BSP connections can be installed almost anywhere and once installed will give accurate and reliable output signalling.

### Ordering Information

#### Standard products table

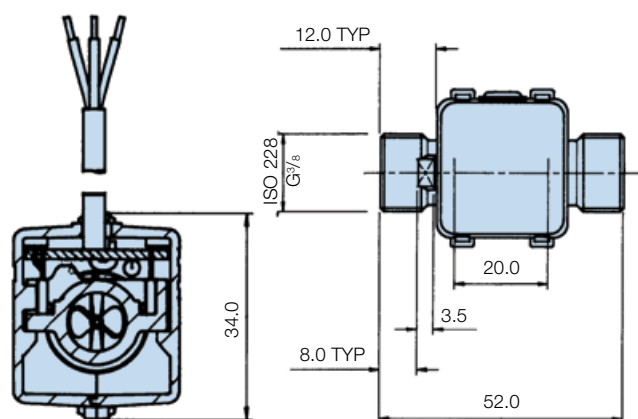
Product number	Supersedes	Description
<b>DFC9000100</b>	DFC.9000.100	Dataflow compact flow transmitter

Note 1: Part numbers featured with bold highlighted codes will ensure a 'standard' product selection.

Note 2: Alternate displayed part number selection will require you to contact Parker Filtration for availability.

### Installation Details

Red wire +5V supply  
Green wire Output signal  
Blue wire 0V supply





# Flowline - Oil and Water Calibrated Flowmeters (Brass Version)

## Flowmeters

### Features & Benefits



- Works in any plane.
- Pressure up to 350 bar (5000 psi).
- Flows up to 360 l/min.
- Accuracy  $\pm 5\%$  FSD.
- Repeatability  $\pm 1\%$  FSD.
- Direct reading.
- Relatively insensitive to viscosity changes.
- Oil or water calibrated.
- Optional reed switch upgrade.

### Specification

**Construction:**  
Brass body to BS 2874 CZ114.

**Maximum working pressure:**  
Up to 350 bar.

**Minimum working pressure:**  
1 bar.

**Temperature range:**  
Brass  $-20^{\circ}\text{C}$  to  $+90^{\circ}\text{C}$ .

**Calibration:**  
Oil Specific gravity  
0.856 at  $20^{\circ}\text{C}$ .  
Water Specific gravity  
1.0 at  $20^{\circ}\text{C}$ .

**Viscosity range:**  
10 to 200 cSt (oil).

**Accuracy:**  
 $\pm 5\%$  FSD.

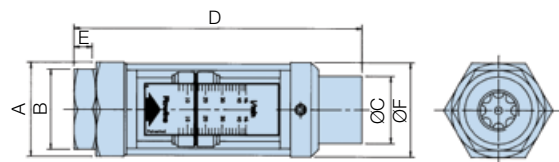
**Repeatability:**  
 $\pm 1\%$  FSD.

**Min. scale reading:**  
10% FSD.

**Connections:**  
BSP parallel threads.

**Wetted/non-wetted parts:**  
Consult Parker for information.

**1/4", 1/2" and 3/4" BSP thread options  
(1 1/4" version on next page)**



Note: To add an electrically operated reed switch to your flowmeter please order B26307

### Ordering Information - Oil

#### Standard products table

Brass flowmeter for oil		Ports BSP	Flow range (l/ min)	Maximum pressure (bar)	Dimensions (mm)						Weight (kg)
Product number	Supersedes				A (A/F Hex)	B (A/F Hex)	C	D	E	F	
<b>FM26122212</b>	FM.26 122 212	1/4	0.5 - 4.5	350	32	29	19	123	7	32	0.4
<b>FM26122312</b>	FM.26 122 312	1/4	1 - 9	350	32	29	19	123	7	32	0.4
<b>FM26222112</b>	FM.26 222 112	1/2	2 - 20	350	41	38	32	165.5	12.5	46	0.9
<b>FM26222212</b>	FM.26 222 212	1/2	5 - 46	350	41	38	32	165.5	12.5	46	0.9
<b>FM26322112</b>	FM.26 322 112	3/4	5 - 55	350	58	46	43	190	15	58	1.75
<b>FM26322212</b>	FM.26 322 212	3/4	10 - 110	350	58	46	43	190	15	58	1.75
<b>FM26122112</b>	FM.26 122 112	1/4	0.2 - 2.0	350	32	29	19	123	7	32	0.4
<b>FM26422112</b>	FM.26 422 112	1 1/4	20 - 180	210	For installation details for 1 1/4 flowmeters see next page						8.0
<b>FM26422212</b>	FM.26 422 212	1 1/4	30 - 270	210							8.0
<b>FM26422312</b>	FM.26 422 312	1 1/4	40 - 360	210							8.0

### Ordering Information - Water

#### Standard products table

Brass flowmeter for water		Ports BSP	Flow range (l/ min)	Maximum pressure (bar)	Dimensions (mm)						Weight (kg)
Product number	Supersedes				A (A/F Hex)	B (A/F Hex)	C	D	E	F	
<b>FM26222122</b>	FM.26 222 122	1/2	2 - 20	350	41	38	32	165.5	12.5	46	0.9
<b>FM26222222</b>	FM.26 222 222	1/2	5 - 46	350	41	38	32	165.5	12.5	46	0.9
<b>FM26322122</b>	FM.26 322 122	3/4	5 - 55	350	58	46	43	190	15	58	1.75
<b>FM26322222</b>	FM.26 322 222	3/4	10 - 110	350	58	46	43	190	15	58	1.75
<b>FM26122122</b>	FM.26 122 122	1/4	0.2 - 2.0	350	32	29	19	123	7	32	0.4
<b>FM26122222</b>	FM.26 122 222	1/4	0.5 - 4.5	350	32	29	19	123	7	32	0.4
<b>FM26122322</b>	FM.26 122 322	1/4	1 - 9	350	32	29	19	123	7	32	0.4
<b>FM26422122</b>	FM.26 422 122	1 1/4	20 - 180	210	For installation details for 1 1/4 flowmeters see next page						8.0
<b>FM26422222</b>	FM.26 422 222	1 1/4	30 - 270	210							8.0
<b>FM26422322</b>	FM.26 422 322	1 1/4	40 - 360	210							8.0

Note 1: Part numbers featured with bold highlighted codes will ensure a 'standard' product selection.

Note 2: Alternate displayed part number selection will require you to contact Parker Filtration for availability.

# Flowline - Oil and Water Calibrated Flowmeters (Stainless Steel)

## Flowmeters

### Features & Benefits



- For flow measurement of corrosive or chemical media or in harsh locations.
- Manufactured in stainless steel 316.
- Works in any plane.
- Pressure up to 350 bar (5000 psi).
- Flows up to 360 l/min.
- Accuracy  $\pm 5\%$  FSD.
- Repeatability  $\pm 1\%$  FSD.
- Direct reading.
- Oil or water calibrated.
- Optional reed switch upgrade.

**1 1/4" BSP option**  
(1/4", 1/2" and 3/4" on previous page)

### Specification

**Construction:**  
Stainless steel to BS 970 316S.

**Maximum working pressure:**  
Up to 350 bar.

**Minimum working pressure:**  
1 bar.

**Temperature range:**  
-20°C to +105°C.

**Calibration:**  
Oil Specific gravity  
0.856 at 20°C.  
Water Specific gravity  
1.0 at 20°C.

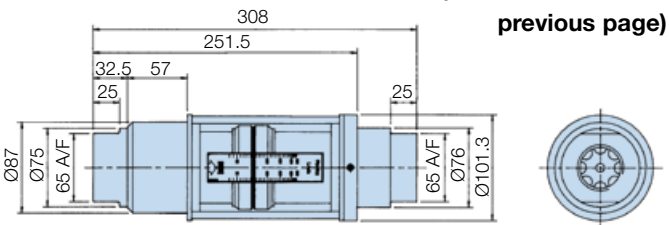
**Viscosity range:**  
10 to 200 cSt (oil).

**Accuracy:**  
 $\pm 5\%$  FSD.

**Repeatability:**  
 $\pm 1\%$  FSD.

**Min. scale reading:**  
10% FSD.

**Connections:**  
BSP parallel threads.



**Wetted parts:**  
Body, thread adaptor

**Piston, etc: cone locknut:**  
Stainless Steel.

**Flow cone:**  
BS 970 316S 16.

**Magnet encapsulation:**  
Stainless steel BS970/1:1991.  
:316S31.

**Spring:**  
Stainless steel to BS 2056 EN 58J.

**Seal:**  
Fluoroelastomer.

Note: To add an electrically operated reed switch to your flowmeter please order B26307

### Ordering Information - Oil

#### Standard products table

Stainless steel flowmeter for oil		Ports BSP	Flow range (l/min)	Maximum pressure (bar)	Dimensions (mm)						Weight (kg)
Product number	Supersedes				A (A/F Hex)	B (A/F Hex)	C	D	E	F	
<b>FM26232112</b>	FM.26 232 112	1/2	2 - 20	350	41	38	32	165.5	12.5	46	0.9
<b>FM26332112</b>	FM.26 332 112	3/4	5 - 55	350	58	46	43	190	15	58	1.75
<b>FM26332212</b>	FM.26 332 212	3/4	10 - 110	350	58	46	43	190	15	58	1.75
<b>FM26132112</b>	FM.26 132 112	1/4	0.2 - 2.0	350	32	29	19	123	7	32	0.4
<b>FM26132212</b>	FM.26 132 212	1/4	0.5 - 4.5	350	32	29	19	123	7	32	0.4
<b>FM26132312</b>	FM.26 132 312	1/4	1 - 9	350	32	29	19	123	7	32	0.4
<b>FM26232212</b>	FM.26 232 212	1/2	5 - 46	350	41	38	32	165.5	12.5	46	0.9
<b>FM26432112</b>	FM.26 432 112	1 1/4	20 - 180	350	For intallation details for 1 1/4 flowmeters see above						8.0
<b>FM26432212</b>	FM.26 432 212	1 1/4	30 - 270	350							8.0
<b>FM26432312</b>	FM.26 432 312	1 1/4	40 - 360	350							8.0

### Ordering Information - Water

#### Standard products table

Stainless steel flowmeter for water		Ports BSP	Flow range (l/min)	Maximum pressure (bar)	Dimensions (mm)						Weight (kg)
Product number	Supersedes				A (A/F Hex)	B (A/F Hex)	C	D	E	F	
<b>FM26132122</b>	FM.26 132 122	1/4	0.2 - 2.0	350	32	29	19	123	7	32	0.4
<b>FM26132222</b>	FM.26 132 222	1/4	0.5 - 4.5	350	32	29	19	123	7	32	0.4
<b>FM26132322</b>	FM.26 132 322	1/4	1 - 9	350	32	29	19	123	7	32	0.4
<b>FM26232122</b>	FM.26 232 122	1/2	2 - 20	350	41	38	32	165.5	12.5	46	0.9
<b>FM26232222</b>	FM.26 232 222	1/2	5 - 46	350	41	38	32	165.5	12.5	46	0.9
<b>FM26332122</b>	FM.26 332 122	3/4	5 - 55	350	58	46	43	190	15	58	1.75
<b>FM26332222</b>	FM.26 332 222	3/4	10 - 110	350	58	46	43	190	15	58	1.75
<b>FM26432122</b>	FM.26 432 122	1 1/4	20 - 180	350	For intallation details for 1 1/4 flowmeters see above						8.0
<b>FM26432222</b>	FM.26 432 222	1 1/4	30 - 270	350							8.0
<b>FM26432322</b>	FM.26 432 322	1 1/4	40 - 360	350							8.0

Note 1: Part numbers featured with bold highlighted codes will ensure a 'standard' product selection.

Note 2: Alternate displayed part number selection will require you to contact Parker Filtration for availability.

# Flowline - Flowswitches

## Flowmeters

### Features & Benefits



- 'Boxed' two-switch type.
- Intrinsically safe versions (supplied complete with flowmeter).
- Maximum/minimum switching models.
- Maximum working pressure 350 bar. (min 1 bar)
- Flows from 2.0 to 110 l/min.
- Stainless steel – suitable for corrosive fluids.
- Stainless steel to BS970 316516.

### Ordering Information

To order the required switching unit, simply add the appropriate prefix before the part numbers shown below.

#### Standard products table

Product number	Supersedes	Description	Switch Range (Typical)
<b>FS643222112</b>	FS.643 222 112	2 switches, 2 - 20 l/min (1/2 BSP) Oil	2 -12 l/min and 10-20 l/min
<b>FS643222212</b>	FS.643 222 212	2 switches, 5 - 46 l/min (1/2 BSP) Oil	6-24 l/m and 20-46 l/m
<b>FS643322112</b>	FS.643 322 112	2 switches, 5 - 55 l/min (1/4 BSP) Oil	5-30 l/min and 30-55 l/min
<b>FS643322212</b>	FS.643 322 212	2 switches, 10 - 110 l/min (1/4 BSP) Oil	10-50 l/min and 50-110 l/min

#### Product configurator

Brass flowswitch for oil or water						
Product number		Flow range and (port size)		Fluid type		Switch Range (Typical)
<b>FS643</b>	2 switches	<b>2221</b>	2 - 20 l/min (1/2 BSP)	<b>12</b>	Oil	2 -12 l/min and 10-20 l/min
FS67A	Intrinsically safe high switch	<b>2222</b>	5 - 46 l/min (1/2 BSP)	22	Water	20-24 l/m
FS67B	Intrinsically safe low switch	<b>3221</b>	5 - 55 l/min (1/4 BSP)			5-30 l/min
FS67C	Intrinsically safe hi/low switch	<b>3222</b>	10 - 110 l/min (1/4 BSP)			10-50 l/min and 50-110 l/min

#### Product configurator

Stainless steel flowswitch for oil or water						
Product number		Flow range and (port size)		Fluid type		Switch Range (Typical)
<b>FS643</b>	2 switches	<b>2321</b>	2 - 20 l/min (1/2 BSP)	<b>12</b>	Oil	2 -12 l/min and 10-20 l/min
FS67A	Intrinsically safe high switch	<b>2322</b>	5 - 46 l/min (1/2 BSP)	<b>22</b>	Water	24-46 l/m
FS67B	Intrinsically safe low switch	<b>3321</b>	5 - 55 l/min (1/4 BSP)			5-30 l/min
FS67C	Intrinsically safe hi/low switch	<b>3322</b>	10 - 110 l/min (1/4 BSP)			10-50 l/min and 50-110 l/min

#### Ordering example

Product number	Supersedes
<b>FS643332212</b>	<b>FS.643 332 212</b>

Note 1: Part numbers featured with bold highlighted codes will ensure a 'standard' product selection.

Note 2: Alternate displayed part number selection will require you to contact Parker Filtration for availability.



# Hydraulic Test Equipment

## Flowmeters

### Features & Benefits



- Speedy diagnosis of hydraulic circuit faults.
- Flows ranging from 2 to 360 l/min.
- Measuring flow, pressure and temperature.
- Fully Portable – No power source required.
- Hydrotrac unit for flows from 2 to 110 l/min available.
- Designed for oil applications only.

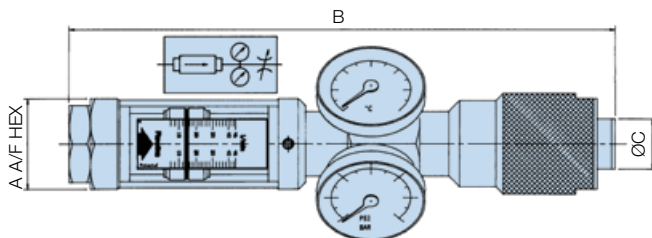
### Specification

**Flow range:**  
2 to 360 l/min.

**Pressure range:**  
1 to 350 bar.

**Temperature range:**  
0°C to +90°C.

### Installation Details



### Safety

An axial flow restrictor valve is fitted which can be adjusted under full load from open to fully closed<sup>1</sup>, and to complete the specification, a safety blow-out disc, set to fail at 455 bar is fitted to the manifold in a position facing away from the operator when reading the gauges normally. Two spare blow-out discs are supplied which are easily replaced by removing the hexagonal plug on the gauge manifold.

Additional blow out discs can be ordered - 41203B (Bag of 10)

### Ordering Information

#### Standard products table

Product number	Flow range (l/min)	Weight Kg (with case)	Dimensions (mm)		
			A	B	C
<b>4121</b>	10 - 110	7.4	46	350	35
<b>4120</b>	5 - 55	7.4	46	350	35
<b>4123</b>	2 - 110	11.8	46	350	35
<b>4168</b>	20 - 180	13.85	75	496	87
<b>4169</b>	30 - 270	13.85	75	496	87
<b>4170</b>	40 - 360	13.85	75	496	87
Part number	Supersedes	Description			
<b>41203B</b>	4120.3.B	Safety blow out discs x 10			

Note 1: Part numbers featured with bold highlighted codes will ensure a 'standard' product selection.

Note 2: Alternate displayed part number selection will require you to contact Parker Filtration for availability.

Note 3: 4123 'Hydrotrac' unit features 2 flowmeters (2 - 20 and 10 - 110 l/min) and 1 pressure gauge and 1 thermometer.

### Troubleshooting Test Units

Hydraulic Test Units are designed specifically for the speedy diagnosis of hydraulic circuit faults in mobile, marine and industrial systems using the normal range of mineral oils. Their rugged construction based mainly on mild steel, manganese bronze and acrylic materials makes them ideally suited for arduous use in the field.

Each unit is supplied in a convenient carrying case providing full protection and additional storage space for fittings. Because they need no power source such as batteries etc, they are always ready for instant use.

6 models are available to cover flow capacities up to 360 l/min and each incorporates a direct reading, uni-directional flow meter. The meter, which is both self cleaning and reasonably tolerant of contaminated fluids is coupled to a manifold that houses a glycerine-filled pressure gauge calibrated 0 to 350 bar and a dial-type thermometer with a 0°C to 100°C range.

Unit can only operate up to 90°C.

For further convenience the scale on the flow meter can be rotated to ensure visibility in any situation and the installed attitude of the assembly is not critical, though whenever possible the unit should be mounted with pressure gauge vertical and gauge case relief valve uppermost. The unit is designed for flow to be in the direction of the arrow on the flowmeter scale and must not be installed with the flow reversed.

<sup>1</sup> Note: Permissible allowed see page <50ml/min at 350 bar (5076 psi)

# Flow Products - For Compressed Air Applications

## Flowmeters & Monitors

### Features & Benefits



#### Ⓐ Flowline Flowswitches and Flowmeters

- Calibrated for direct reading of compressed air at 7 bar.
- Works in any plane.
- Brass or stainless steel models available in 4 sizes.
- Calibrated at 7 bar and 20°C.
- Flow ranges from 2 to 600 SCFM.
- Pressure 1-41 bar max.
- Optional reed switch upgrade.

#### Ⓑ Loflow Air Flowmeters

- Flow measurement from 1.1 to 720 l/min. Max 10 bar rating.

#### Ⓒ Compressed Air Test Equipment

- 6 models available – 1/4", 3/4" and 1 1/4" BSP.
- Air flow range 2 to 600 SCFM.
- Pressure 1-41 bar max.

### Specification

Full technical specifications for the Flowmeter, Flowswitch, LoFlow and test equipment products are provided in the respective pages for these products.

### Ordering Information

Standard products table

Brass flowmeter for air		Ports BSP	Flow range		Maximum working pressure (bar)
Product number	Supersedes		SCFM	l/sec	
FM26123332	FM.26 123 332	1/4	2 - 20	1 - 10	41
FM26223132	FM.26 223 132	1/2	5 - 50	2 - 25	41
FM26223232	FM.26 223 232	1/2	10 - 110	5 - 50	41
FM26323132	FM.26 323 132	3/4	15 - 125	6 - 60	41
FM26323232	FM.26 323 232	3/4	20 - 225	10 - 100	41
FM26423132	FM.26 423 132	1 1/4	40 - 400	20 - 200	25
FM26423232	FM.26 423 232	1 1/4	60 - 600	30 - 300	25

Standard products table - LoFlow

Product number	Supersedes	Ports (BSPT male)	Flow range	Float material
LF801450	LF.3007E	1/4 - 3/4	1.1 - 8.0 l/min	Acetal
LF802455	LF.3050E	3/4 - 3/4	10 - 50 l/min	Acetal
LF802452	LF.3135E	3/4 - 3/4	20 - 135 l/min	Acetal
LF802454	LF.3720E	3/4 - 3/4	2 - 12 l/sec	S/Steel
LF801451	LF.3021E	1/4 - 3/4	4 - 22 l/min	S/Steel
LF802453	LF.3330E	3/4 - 3/4	1.0 - 5.5 l/sec	S/Steel

Standard products table

Stainless steel flowmeter for air		Ports BSP	Flow range		Maximum working pressure (bar)
Product number	Supersedes		SCFM	l/sec	
FM26133332	FM.26 133 332	1/4	2 - 20	1 - 10	41
FM26233132	FM.26 233 132	1/2	5 - 50	2 - 25	41
FM26233232	FM.26 233 232	1/2	10 - 110	5 - 50	41
FM26333132	FM.26 333 132	3/4	15 - 125	6 - 60	41
FM26333232	FM.26 333 232	3/4	20 - 225	10 - 100	41
FM26433132	FM.26 433 132	1 1/4	40 - 400	20 - 200	41
FM26433232	FM.26 433 232	1 1/4	60 - 600	30 - 300	41

### Product configurator

Brass flowswitch for air		Flow range SCFM and (l/sec)		Ports (BSP)	Fluid type	
Product number						
FS643	2 switches	2231	5 - 50 (2 - 25)	1/2	32	Air
FS67A	Intrinsically safe high switch	2232	10 - 110 (5 - 50)	1/2		
FS67B	Intrinsically safe low switch	3231	15 - 125 (6 - 60)	3/4		
		3232	20 - 225 (10 - 100)	3/4		

### Ordering example

Product number	Supersedes
FS643323232	FS.643 323 232

Note 1: Part numbers featured with bold highlighted codes will ensure a 'standard' product selection.

Note 2: Alternate displayed part number selection will require you to contact Parker Filtration for availability.

Note 3: To add an electrically operated reed switch to your flowmeter please order B.26307