

System20

Inline Sensors & Monitors



A proven method of accurate condition monitoring of a system

Effective inline sensors and monitors for fluid condition monitoring

Inline System20 sensors and hand-held monitors designed to give accurate and instant fluid system readings of flow, pressure and temperature. 3 sizes of inline System20 sensor for pressures up to 420 bar, an analogue monitor that utilizes 3 day-glow gauges with protective cover. EM20 electronic monitor with full digital display and 300 test memory.



Contact Information:

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Product Features:

- 2 types of System20 sensor are available.
STI=industrial with reverse flow capability.
STS=Mobile without reverse flow capability.
- 3 sizes of industrial inline System20 sensor for pressures up to 420 bar. 2 sizes of Mobile System20 sensor.
- Analogue monitor utilizes 3 day-glow gauges with protective cover.
- EM20 electronic monitor with full digital display and 300 test memory.
- For use with all mineral oils, water and oil/water emulsions.

System20

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Features & Benefits

Covering a wide range of flow rates, fluid types and applications, Parker's System 20 sensors are designed to be used with System 20 electronic or analogue monitors, icountLCM, icountPD and the H₂Oil. Specially developed System20 sensors are available for use with aggressive fluids. (EPDM Seals)

- System20 monitors, combined with the inline sensor, give the user accurate and instant readings of flow, pressure and temperature without the need for costly system downtime.
- For use with all mineral oils, water and water/oil emulsions.

Analogue Monitor

- Utilises 3 Day-Glo dial gauges with a protective hinged cover.
- Calibrated up to 380 l/min with dual scale bar/PSI & °C/°F. (USGPM also available)

EM20 Electronic Monitor

- Gives a full digital display.
- Automatically calibrated for all 3 sizes of sensor.
- Indicates line, differential and rising peak pressure.
- Easily scrolled from metric to US.
- 300 test memory.
- Capable of downloading saved data to download software.

Typical Applications

- Drilling equipment
- Mining
- Grinding and conveying
- Industrial hydraulics
- Mobile applications

Hydraulic system users need to ensure that lost production is kept to the absolute minimum. To ensure this, predictive maintenance utilising routine condition monitoring of hydraulic systems is essential.

System20 inline sensors remain at the heart of condition and contamination monitoring. Whether you're mining the coal, building the new bypass, harvesting the crops, crossing the oceans or drilling offshore – whatever your industry, System20 represents the premier system monitoring available today.



2 sizes of System20 Inline Mobile Sensors are available

System20

Inline Sensors & Monitors

Specification: Sensors

Construction:

Industrial: (STI)

Body: S/Steel 303

Internal components: S/Steel and Brass

Mobile: (STS)

Body: S/Steel 303

Internal components: Cast Aluminium and S/Steel

Flow capacities:

All suitable for use with oil, water and oil/water emulsion

Size 0: 6-25 l/min (1.58 - 6.6 US GPM)

Size 1: 20-100 l/min (5.28 - 26.41 US GPM)

Size 2: 80-380 l/min (21.13 - 100.38 US GPM)

Max. working pressure:

420 bar (6000PSI)

Capability:

Reverse flow (STI only)

Pressure drop:

At max. rated flow, Δp is 1.1 bar (mineral oil fluid at 30 cSt 140 SSU).

Ports:

Size 0: G $\frac{3}{8}$

Size 1: G $\frac{3}{4}$

Size 2: G1 $\frac{1}{4}$

Repeatability:

$\pm 1\%$ FSD

Accuracy:

Flow $\pm 2.5\%$ full scale deflection*

Weight:

Size 0: 0.5kg (1.2lbs)

Size 1: 3.5kg (8.4lbs)

Size 2: 4.4kg (9lbs)

Aggressive Fluid Applications:

EPDM internal/external seals



Dimensions (mm)

	Size	Model	AØ	B	C
Industrial	0	STI	30	95	56
	1	STI	41	137	66.5
	2	STI	66.7	231.3	73.5
Mobile	1	STS	41	105	79
	2	STS	60	165	97

System20 Saving £50,000 Pump Damage

Installing System 20 was part of a major restructuring plan to improve mining effectiveness and profitability. Machine operator training and oil storage operative training were essential elements of the plan. Prior to this investment, pump terminal damage could cost £10,000 for a replacement, over £1000 service costs and up to £39,000 in lost production. Add to this the difficulties of the mine's geography and it's easy to see the problems that have now been overcome.

Ordering Information

Standard products table

Product number	Supersedes	Size	Flow range l/min	Fluid type	Port threads	Reverse Flow capability
STI0144100	STI.0144.100	0	6-25	Mineral	$\frac{3}{8}$	Yes
STI1144100	STI.1144.100	1	20-100	Mineral	$\frac{3}{4}$	Yes
STI2144100	STI.2144.100	2	80-380	Mineral	1 $\frac{1}{4}$	Yes
STI0148100	STI.0148.100	0	6-25	Aggressive	$\frac{3}{8}$	Yes
STI1148100	STI.1148.100	1	20-100	Aggressive	$\frac{3}{4}$	Yes
STI2148100	STI.2148.100	2	80-380	Aggressive	1 $\frac{1}{4}$	Yes
STS5117210	STS.5117.210	1	20-100	Mineral	$\frac{3}{4}$	No
STS5217210	STS.5217.210	2	80-380	Mineral	1 $\frac{1}{4}$	No

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: Mobile Sensors are also available - Contact Parker

Note 4: *Accuracy 5.5% > 95 L/min. (Applies to STI1144100 and STI1148100 only)

System20 reduces the cost of lost Production

The mining industry puts a considerable demand on hydraulics and there are others such as agricultural machinery, harvesters or tractors and, for example, cement manufacturing plants that are equally demanding of hydraulic efficiency.

A grinding and conveying plant processes in excess of 1000 tons of ore per day in the manufacture of cement products. A days lost production costs £000's. After one year of operation the Plant Engineers decided to invest in System20 equipment, strategically placed to allow the Engineers to 'fault-find' the major components quickly and easily. The result is that downtime and loss of production have been reduced by 80%.

System20

EM20 Electronic Monitor

Electronic Monitor Specification

Construction:

A sealed assembly requiring no routine maintenance or adjustment. Body moulding in Acrylonitrile Butadene Styrene (ABS). Key pad moulded in silicon rubber. The monitor is suitable for use with all mineral oils, water and oil/water emulsions.

LCD details

Flow section:

The analogue flow scale has reverse flow and overflow indication and provides a percentage reading of the digital full scale display automatically calibrated for all sizes of System 20 Sensor.

Pressure section:

Designed to indicate line pressure, differential pressure and rising peak pressure. Connected to a System 20 Sensor it will monitor pressure up to 420 bar (6000 psi) with an accuracy of $\pm 1\%$ FSD.

Temperature section:

Temperature reading between -10°C and $+110^{\circ}\text{C}$ (14°F to 230°F).

Weight:

1.4kg (3lbs).

Data logging:

Each test logs the following data:

Test number; time & date; sensor size; media tested; flow rate, pressure & temperature.

Data download:

The System 20 electronic monitor is capable of downloading saved test data to a compatible PC via an RS232 connection using datum.

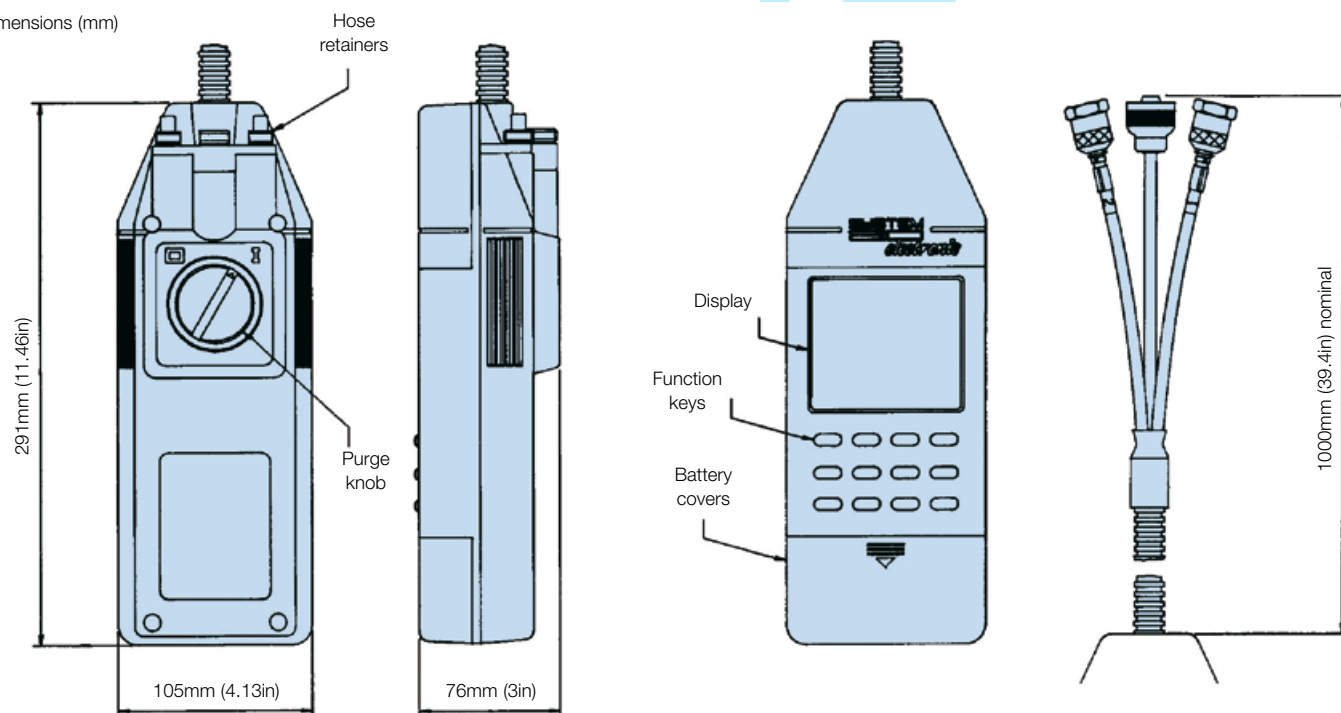
Batteries:

6 x AA batteries.

Re-calibration:

Annual certification by an approved Parker Service Centre.

Dimensions (mm)



Ordering Information

Standard products table

Product number	Supersedes	Description
EM209000	EM20.9000	System 20 electronic monitor
ACC6NJ000	P653607	Transit case
ACC6NJ001	B85617	Dongle and cable assembly

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.

System20

Analogue Monitor

Analogue Monitor Specification

Construction:

A sealed assembly requiring no routine maintenance or adjustment. Body moulding in Acrylonitrile Butadene Styrene (ABS). The monitor is suitable for use with all mineral oils, water and oil/water emulsions. The monitor has 3 dayglo dial gauges and features a protective hinged cover.

Gauge details

Flow section:

The flow scale has double scales for size 1 and 2 sensors only. Calibrated up to 100 l/min (26 US GPM) and 380 l/min (100 US GPM). The flow dial has excess-flow indication.

When the system is in reverse flow or when the high pressure lines to the sensor have been transposed, a 'below zero' indication is given.

Note: For measuring size Ø sensors - contact Parker

Pressure section:

Dial readings in both bar and psi up to 420 bar (6000psi).

Temperature section:

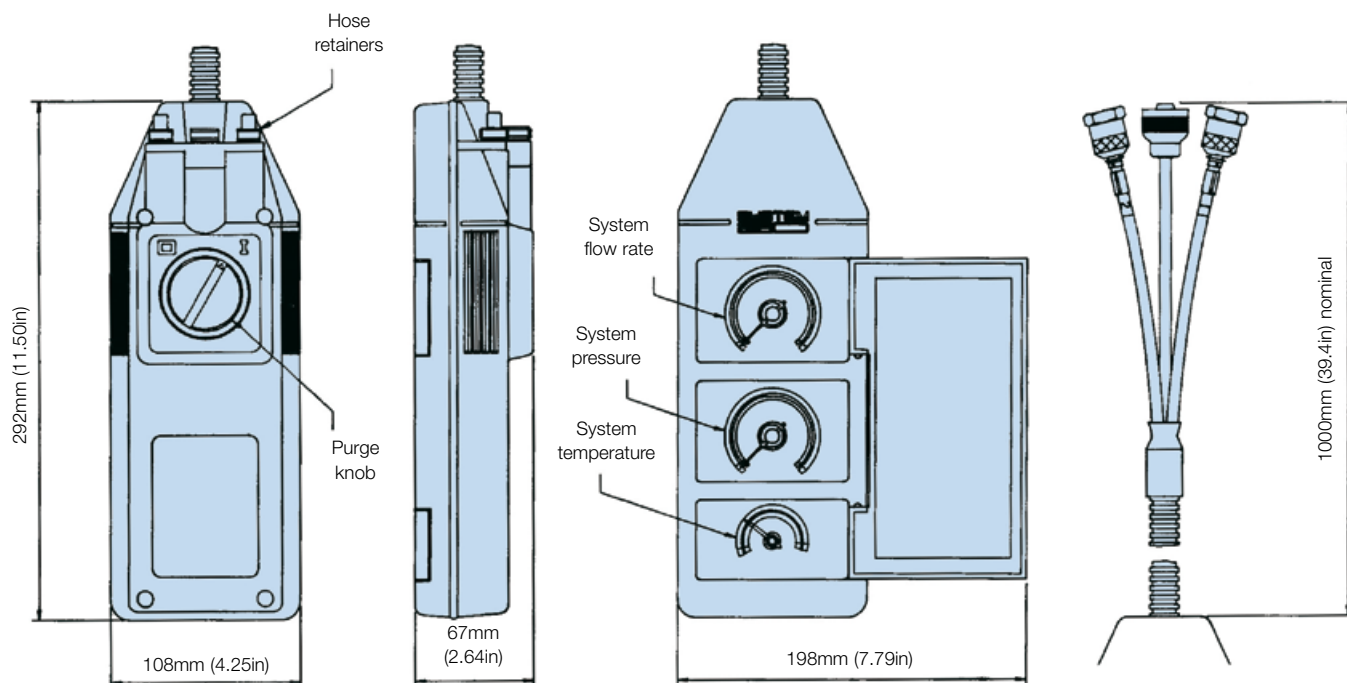
The temperature dial gives readings between -10°C and +110°C (14°F to 230°F).

Weight:

1.4kg (3lbs).

A viscosity chart is provided for mineral oil applications where monitoring is required at variable viscosities (cSt).

Dimensions (mm)



Ordering Information

Standard products table

Product number	Supersedes	Media type	Flow readings	Pressure readings	Temperature readings
STM6211110	STM.6211.110	Oil	l/min	Dual scale bar/PSI	Dual scale °C/°F
STM6611110	STM.6611.110	Oil	US GPM	Dual scale bar/PSI	Dual scale °C/°F
STM6211120	STM.6211.120	Water	l/min	Dual scale bar/PSI	Dual scale °C/°F
STM6611120	STM.6611.120	Water	US GPM	Dual scale bar/PSI	Dual scale °C/°F

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Accessories

Product number	Supersedes	Description
ACC6NJ000	P653607	Transit case
ACC6NJ002	P653106	Metal sensor protective cap

