



*Proven Performance
for Over 50 Years*

Turbine Flowmeter Manifold System

FOR AUTOMATIC, WIDE RANGE FLOW MEASUREMENT

- Rangeability of up to 3000:1
- Automatic operation
- 0.5% system accuracy
- Fail safe operation
- Prevents overspeeding of meters
- Flow straighteners
- Stainless steel tubing
- High pressure systems

PRIMARY FEATURES OF THE COX 4050 LINEAR MULTIFLOW COMPUTER:

- Monitors up to three independent flow sensors
- Provides automatic switching for manifold applications
- Select mass or flow rate display via unique hand-held remote or front key pad
- Provides temperature compensation with RTD input
- Offers RS485 communications port for PC interface
- User friendly data entry and setup
- Program or reprogram calibration data and unit setup via the RS485 interface



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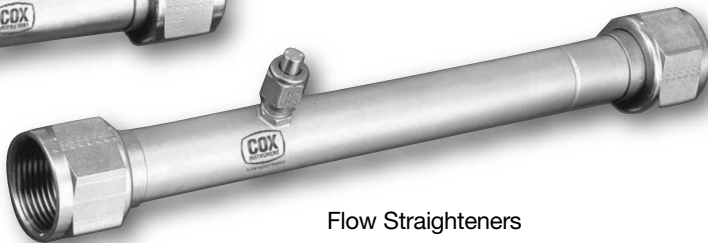
The COX Turbine Flowmeter Manifold is designed for applications where extremely wide rangeability, automatic operation, and high accuracy are required, such as in jet engine cells, fuel control stands, and flowmeter calibrating devices. With the Manifold System, flow ranges of 100:1, 1000:1 or higher are available for high pressure systems. System accuracy of $\pm 0.5\%$ of flow rate is attainable.

The Manifold System consists of a stainless steel manifold with flow straightening sections, two or three turbine flowmeters and one (or two in a three-element system) air operated electrically controlled shutoff valve. Valve operation is signaled by the flow rate of the liquid being metered by COX Instrument microprocessor based instrumentation. This instrumentation controls automatic switch-over from one meter to another as well as controlling valve operation for complete automatic range coverage. Operation of the manifold system is automatic and fail safe as normally-open valves are used. No danger of turbine flowmeter overspeeding is possible as a result of air or power failure.

Manifold Systems are available up to 3000 psi. For higher ratings, contact factory.

Specifications

Flow Ranges:	(See Flow Rate Tables)
Accuracy:	$\pm 0.5\%$ of flow rate $\pm 0.6\%$ for Size 6 flowmeters
Pressure Range:	Size 6-12, 3000 psi Size 16, 2500 psi Size 20-32, 2000 psi
Valves:	Air operated, electrically actuated, cast iron body
Solenoid Valve:	Class 1, Group D Explosion proof rating
Air Supply:	80 psi
End Connectors:	37° flared (female)

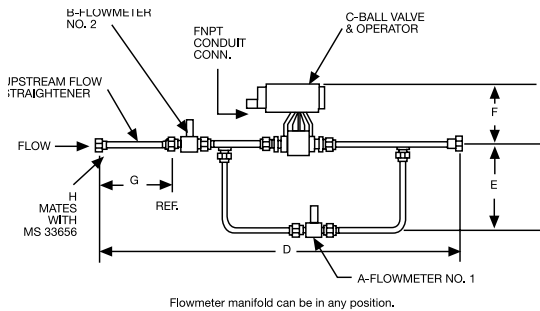


Flow Straighteners

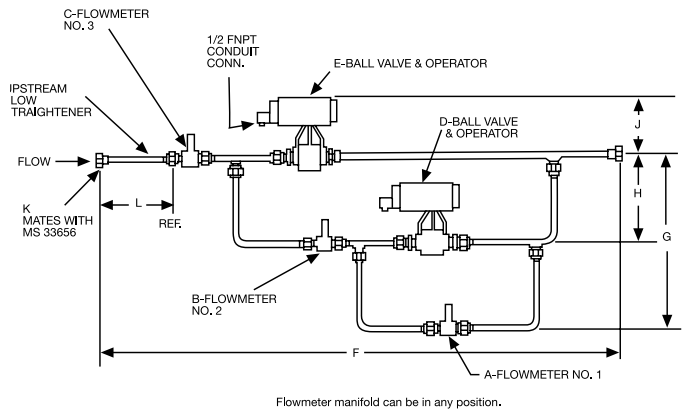
TWO ELEMENT SYSTEMS

Nominal Flow Range GPM	Part No.	A Flow Meter No. 1	B Flow Meter No. 2	C Ball Valve Size	D	E	F	G Ref.	H 33656-Configuration	Max. Operating Pressure @ 180°F
.007-.75	90G0054R4010	LF 6-000	LF 6-2	3/8	24.00	6.00	6.25	5.00	-6	3000 PSI
.012-1.25	90G0054R4010	LF 6-00	LF 6-3	3/8	24.00	6.00	6.25	5.00	-6	3000 PSI
.025-2.5	90G0054R4020	LF 6-0	AN 8-4	1/2	24.00	6.00	6.25	5.00	-8	3000 PSI
.050-5.0	90G0054R4020	LF 6-1	AN 8-6	1/2	24.00	6.00	6.25	5.00	-8	3000 PSI
.075-7.5	90G0054R4020	LF 6-2	AN 8	1/2	24.00	6.00	6.25	5.00	-8	3000 PSI
.125-12.5	90G0054R4120	LF 6-3	AN 10	3/4	26.00	6.00	6.38	6.25	-10	3000 PSI
.06-30	90G0054R4130	LFC 6-3	ANC 12	3/4	29.00	6.00	6.38	7.50	-12	3000 PSI
.06-65	90G0054R4070	LFC 6-3	ANC 16	1	34.00	6.00	7.00	10.00	-16	2500 PSI
.20-15.5	90G0054R4100	ANC-8-4	ANC 10	3/4	27.00	6.00	6.38	6.25	-10	3000 PSI
.25-25	90G0054R4060	AN 8-4	AN 12	3/4	29.00	6.00	6.38	7.50	-12	3000 PSI
.50-50	90G0054R4090	AN 8-6	AN 16	1	34.00	6.00	7.00	10.00	-16	2500 PSI
.75-75	90G0054R4030	AN 8	AN 20	1 1/4	37.00	6.00	8.44	11.00	-20	2000 PSI
1.25-125	90G0054R4140	AN 10	AN 24	1 1/2	42.00	6.00	8.94	12.00	-24	2000 PSI
1.0-300	90G0054R4180	AN 10	AN 32	2	49.00	8.00	9.09	14.00	-32	2000 PSI
1.5-150	90G0054R4190	AN 12	AN 24	1 1/2	42.00	6.00	8.94	12.00	-24	2000 PSI
1.5-300	90G0054R4040	AN 12	AN 32	2	50.00	8.00	9.09	14.00	-32	2000 PSI

TWO ELEMENT SYSTEM



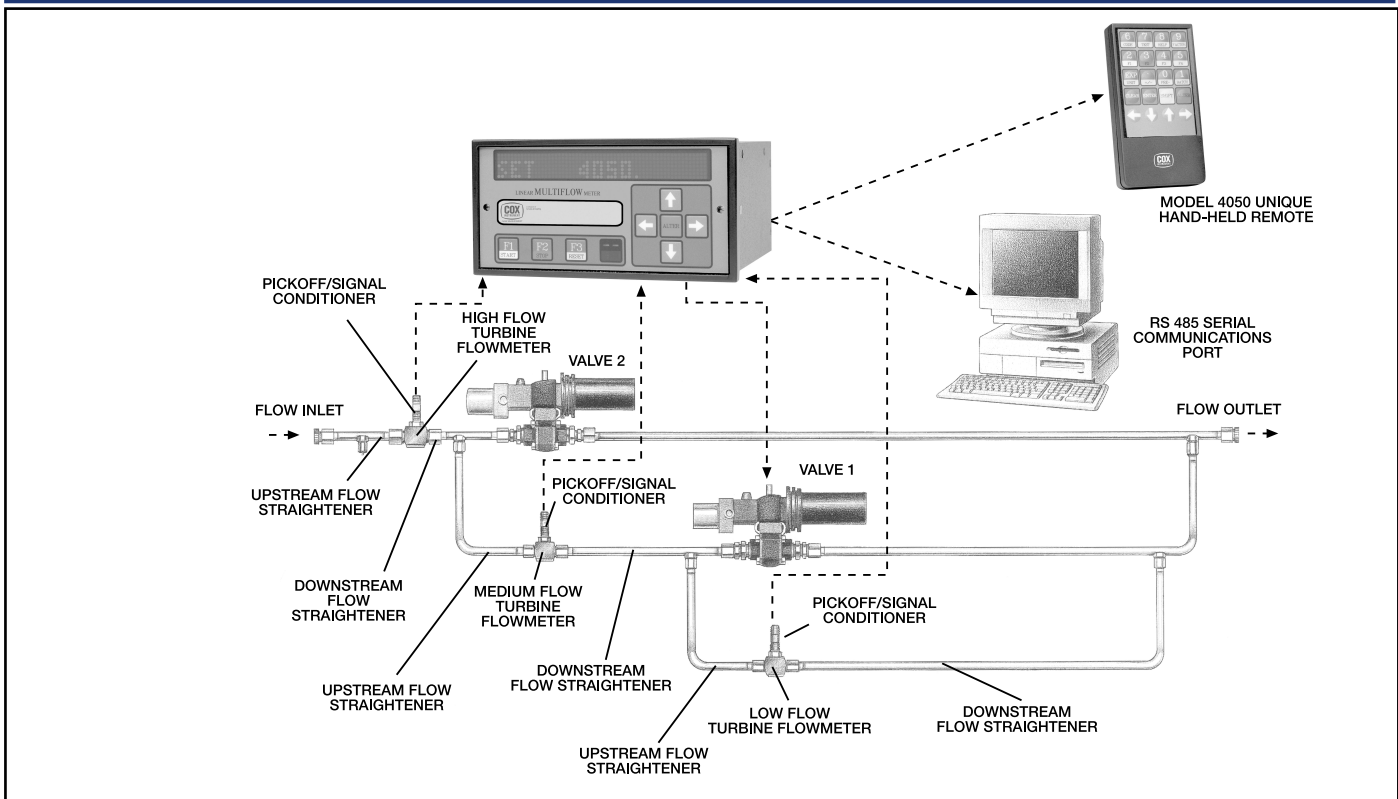
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.007-7.5	90G0058R5010	LF 6-000	LF 6-2	AN 8	3/8	1/2	40.00	15.00	9.00	6.25	-8	5.00	3000 PSI
.012-12.5	90G0058R5020	LF 6-00	LF 6-3	ANC 10	3/8	3/4	42.00	15.00	9.00	6.38	-10	6.25	3000 PSI
.025-25	90G0058R5030	LF 6-0	AN 8-4	AN 12	1/2	3/4	45.00	15.00	9.00	6.38	-12	7.50	3000 PSI
.050-50	90G0058R5040	LF 6-1	AN 8-6	AN 16	1/2	1	48.00	15.00	9.00	7.00	-16	10.00	2500 PSI
.075-75	90G0058R5080	LF 6-2	AN 8	AN 20	1/2	1 1/4	50.00	15.00	9.00	8.44	-20	11.00	2000 PSI
.125-125	90G0058R5050	LF 6-3	AN 8	AN 24	3/4	1 1/2	57.00	16.00	10.00	8.94	-24	12.00	2000 PSI
.006-310	90G0058R5090	LFC 6-000	ANC 8-4	ANC 32	1/2	2	57.00	15.50	9.50	9.09	-32	14.00	2000 PSI

Turbine Flowmeter Manifold System



COX 4050 APPLICATIONS

Users who need to manifold up to three turbine meters for flow ranges to 30,000:1 such as:

- Engine test cell
 - Applications monitoring:
 - Fuel consumption
 - Inventory management
 - Coolant flow rates
- Hydraulic power components performance testing applications monitoring:
 - Power steering systems
 - Precision control valves
 - Hydraulic motors

USERS WHO NEED TO:

- Replace COX 8500 and 8550 modular electronics systems

USERS WHO NEED TO:

- Replace COX Series 12 glass tube variable area meters and who want to create a new system offering the benefits of:

- ✓ More flexibility to reprogram if flow conditions change
- ✓ Ability to interface with other data acquisition systems
- ✓ Much lower cost

COX 4050 SPECIFICATIONS

Information display

- Large alphanumeric—exceptionally wide viewing angle
- Configure units of measurement to suit application (GPM, PPH, etc.)
- Red LED dot matrix (152 mm wide x 18 mm high)
- Six characters for rate and frequency; 8 characters for total

DATA ENTRY

- Calibration data entered via hand-held infrared keyboard
- Passcode protected
- Can inhibit one keyboard reception if two units are side by side

INPUTS

- Maximum of three voltage pulse frequency inputs
- Frequency range 0.5 Hz to 20 KHz
- Programmable frequency and flow rate cutoffs

REGULATED OUTPUT:

24 VDC

DIMENSIONS

Panel mounted steel double DIN enclosure, 192 mm wide x 96 mm high x 210 mm deep (7.56 in. wide x 3.78 in. high x 8.27 in. deep). Panel cut out size 186 mm wide x 92 mm high (7.32 in. wide x 3.62 in. high) (+1.0 mm/-0.0 mm).

POWER REQUIREMENTS

220 to 240 VAC 50/60 Hz or 110 to 120 VAC 50/60 Hz.



Proven Performance
for Over 50 Years

For more information, contact COX Instruments or your local COX Instruments representative.

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