

# “A” Series Meter

400A  
675A, 800A, 1000A (ET)

## Benefits

- Lowers handling and shipping costs
- Eliminates costs of duplicate inventory
- Reduces training time
- Improves safety
- Superior accuracy over all flow rates
- Maintenance free operation
- Cost effective temperature compensation

## Description

The “A” Series commercial diaphragm meters comprise a range of positive displacement gas measurement devices with capacities of 400 to 1000 ft<sup>3</sup>/hr (11m<sup>3</sup>/hr to 28m<sup>3</sup>/hr). These meters use proven diaphragm meter technology in a 3-chambered design to provide accurate measurement across their respective flow ranges. Long-life and low maintenance are assured by the combination of a self-lapping orbital valve, a one-piece seamless diaphragm, and few moving parts. Careful attention to design makes them compact and lightweight for their capacity ratings.

## Applications

### 400A

- Restaurants, Dry Cleaners and Service Stations
- 675A, 800A, 1000A (ET)
- Schools, Hospitals and Hotels

## Features

- Lightest meters in their respective capacity ranges
- Retrofits to any competitive installation
- 3-chamber design
- Wearless orbital valve
- One piece, seamless, convoluted diaphragm
- Lubrication-free bearings
- Instrument adaptable
- EZ-VU Adjustment System (675A-1000A)
- O-ring diaphragm seal



### (675A-1000A)

- Parts commonality with old style Sprague
- Easy Turn (ET) allows simple installation
- AMR compatible

## Compatibility

These meters are intended primarily for use with natural gas, but are compatible with a variety of non-corrosive dry gases. A compatibility listing is found in the table to the right. For gases not listed, contact your Actaris representative.

Gas Type	Specific Gravity	Conversion Factor
Air	1.00	1.00
Argon	1.38	.85
Dry Carbon Dioxide	1.52	.81
Ethane	1.04	.98
Helium	.14	1.49
Hydrogen	.07	1.49
Krypton	2.82	.59
Methane (pure)	.55	1.35
Natural Gas	.60	1.29
Neon	.70	1.20
Nitrogen	.97	1.02
Propane	1.53	.81
Xenon	4.53	.47

# Specifications

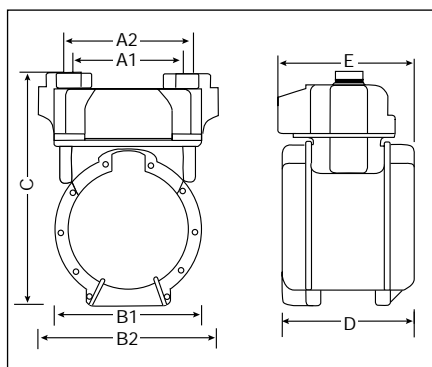
Meter Classification	400A	675A	800A	1000A
Meter Type	Non-temperature compensated or temperature compensated			
Hub Center-to-Center	6-25/32" or 8-1/4"	10"	11"	11"
Hub Sizes	#4 Sprague Standard 20LT, 30LT, 45LT	#4 Sprague Standard 30LT, 45LT	#5 Sprague Standard 30LT, 45LT, 60LT, 100LT	#5 Sprague Standard 45LT, 60LT, 100 LT
Index Type	4 circle dial (ft <sup>3</sup> ) • Standard 7", 14", 2 psig 4 digit direct read (ft <sup>3</sup> ) 5 digit direct read (ft <sup>3</sup> or m <sup>3</sup> ) 7 digit direct read (m <sup>3</sup> )		5 circle dial (ft <sup>3</sup> ) • Standard 7", 14" 5 digit direct read (ft <sup>3</sup> ) 6 digit direct read (m <sup>3</sup> ) 7 digit direct read (m <sup>3</sup> )	
Sealing	Red plastic snap-seals			
Badge information	As required			
Adjustment Information	As required			
Surface Treatment	ASA 49 Gray Paint			
Packaging	Single Pack 24 per skid	Single Pack 12 per skid		

# Dimensions

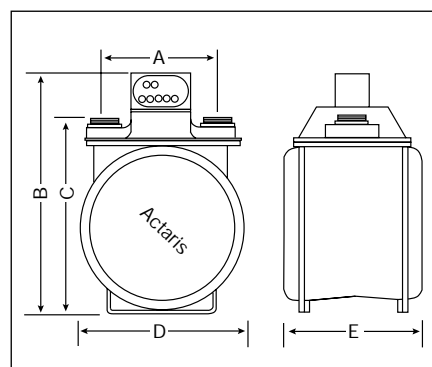
Model	Imperial - Inches							lbs Wt
	A1	A2	B1	B2	C	D	E	
400A	6.78"	8.25"	9.5"	10.9"	14.71"	8.71"	9"	12.3
	A		B		C	D	E	Wt
675A	10"		23.2"		18.6"	15.6"	13.3"	43
800A	11"		23.2"		18.6"	15.6"	13.3"	43
1000A	11"		23.2"		18.6"	15.6"	13.3"	43
675A ET	10"		24.8"		18.6"	15.6"	13.3"	43
800A ET	11"		24.8"		18.6"	15.6"	13.3"	43
1000A ET	11"		24.8"		18.6"	15.6"	13.3"	43

Model	Metric - mm							kg Wt
	A1	A2	B1	B2	C	D	E	
400A	172	210	241	277	374	221	229	5.6
	A		B		C	D	E	Wt
675A	254		589		472	396	338	19.5
800A	279		589		472	396	338	19.5
1000A	279		589		472	396	338	19.5
675A ET	254		630		472	396	338	19.5
800A ET	279		630		472	396	338	19.5
1000A ET	279		630		472	396	338	19.5

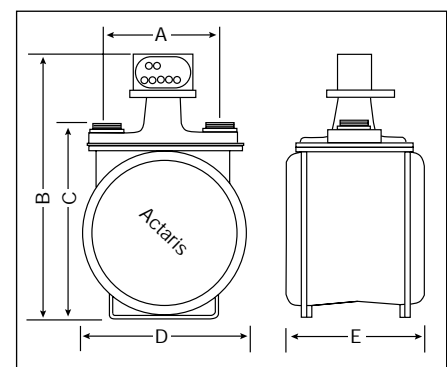
**400A**



**675A, 800A, 1000A**



**675A ET, 800A ET, 1000A ET**



# Construction

## 400A

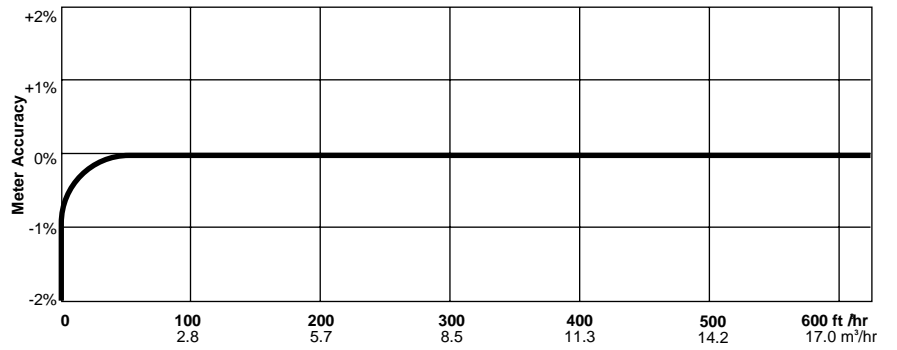
<b>Badges</b>	Aluminum
<b>Carrier wire brackets</b>	Acetyl
<b>Carrier wires</b>	C117 Steel, Zinc Dichromate Plate
<b>Case screws</b>	Grade 1
<b>Center shaft</b>	416 Stainless Steel
<b>Diaphragm</b>	Nitrile Rubber, Dacron Polyester Voile Fabric
<b>Diaphragm tin</b>	Center : #500S-H22 Aluminum Outer: Tin Plate Outer Flange: Tin Plate
<b>Gaskets</b>	Cork/Neoprene
<b>Hubs</b>	Zinc-plated steel
<b>IDM Seal</b>	Acetyl
<b>Index box</b>	Polycarbonate
<b>Index drive movement</b>	Shaft: 416 Stainless Steel Housing: Acetyl
<b>Index face plate</b>	ABS
<b>Index gears</b>	Acetyl
<b>Links</b>	Acetyl
<b>Lower main</b>	Die Cast zinc ZA-3
<b>Meter center, sides, topcase</b>	Die-cast aluminum alloy 13380 or 13383
<b>Tangent Crank</b>	Die cast zinc ZA-3
<b>Timing Arm</b>	360 Brass
<b>Valve seat and cover</b>	Thermoset phenolic

## 675A, 800A, 1000A

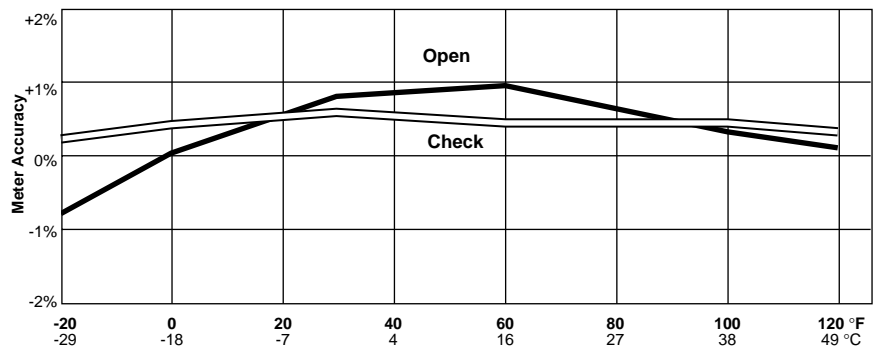
<b>Badges</b>	Aluminum
<b>Carrier wire brackets</b>	Acetyl
<b>Carrier wires</b>	C117 Steel, Zinc Dichromate Plate
<b>Case screws</b>	Grade 1
<b>Center bracket</b>	Glass-reinforced nylon
<b>Center shaft</b>	416 Stainless Steel
<b>Diaphragm</b>	Nitrile Rubber, Dacron Polyester Voile Fabric
<b>Diaphragm tin</b>	Center : #500S-H22 Aluminum Outer: Tin Plate Outer Flange: Tin Plate
<b>Gaskets/O-Rings</b>	Nitrile rubber
<b>Hubs</b>	Zinc-plated steel
<b>IDM Seal</b>	Acetyl
<b>Index box</b>	Polycarbonate
<b>Index drive movement</b>	Shaft: 416 Stainless Steel Housing: Acetyl
<b>Index face plate</b>	ABS
<b>Index gears</b>	Acetyl
<b>Links</b>	Acetyl
<b>Lower main</b>	Lead
<b>Meter center, sides, topcase</b>	Die-cast aluminum alloy 13380 or 13383
<b>Tangent Crank</b>	360 Brass
<b>Timing Arm</b>	360 Brass
<b>Valve seat and cover</b>	Thermoset phenolic
<b>ET Mounting Plate</b>	Die-cast aluminum alloy 13380 or 13383

# 400A Series Meter

## Meter Accuracy-Air

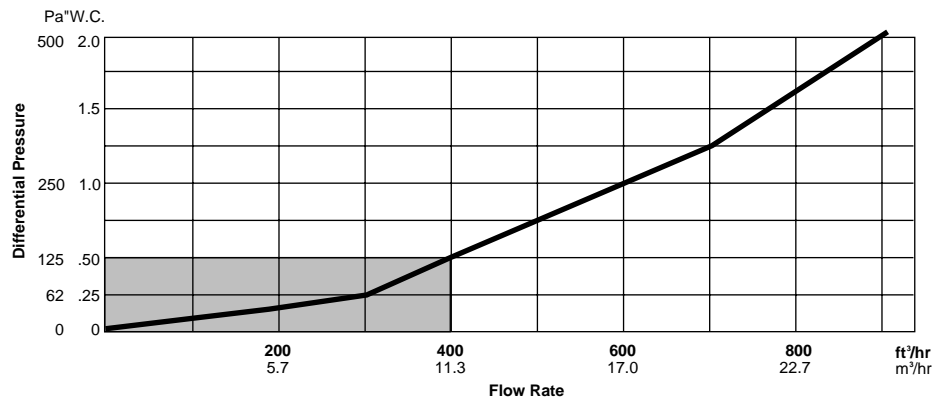


## Optional Temperature Compensation



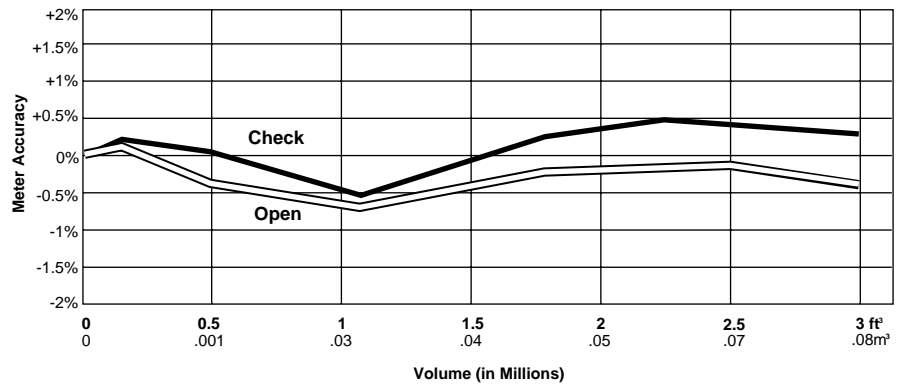
# 400A Series Meter

## Capacity & Pressure Loss



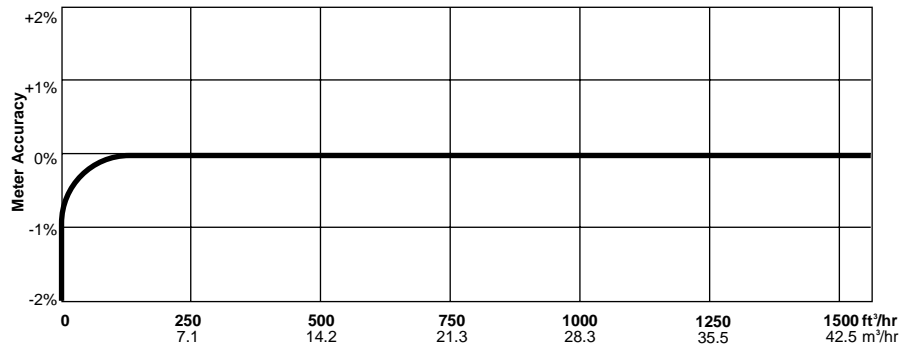
## Accelerated Life Test

400A Running a 800 ft³/hr (22.6 m³/hr)

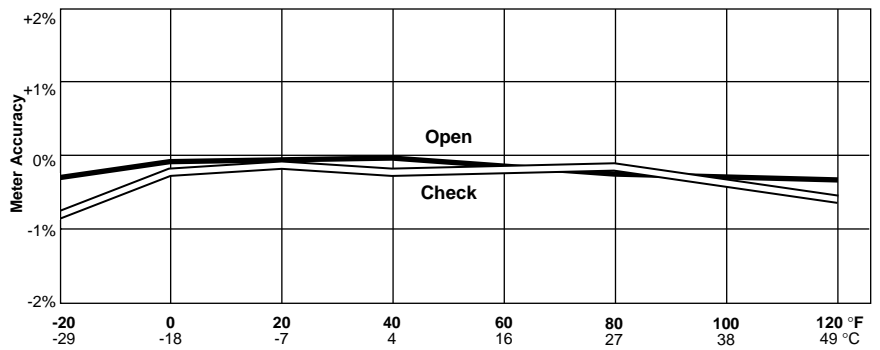


# 675A, 800A, 1000A Series Meters

## Meter Accuracy-Air

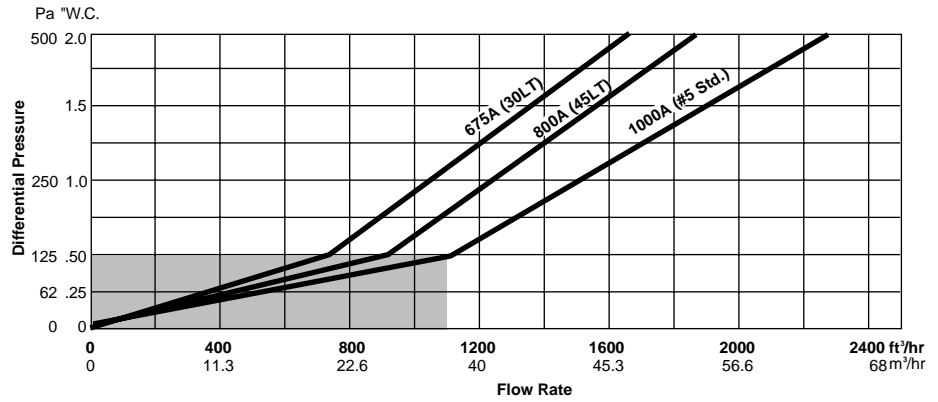


## Optional Temperature Compensation



# 675A, 800A, 1000A Series Meters

## Capacity & Pressure Loss



## Accelerated Life Test

