



ANDERSON-NEGELE

FLOW  
LEVEL  
PRESSURE  
ANALYTICAL  
TEMPERATURE  
INSTRUMENTATION  
PASTEURIZATION CONTROLS

## DS Series Metering System

- *High Accuracy milk measurement for critical control of direct transport loading applications and herd management information*
- *3-A compliant; Third party verified in accordance with standard 28-03*
- *Meter-based on-line sampling provides true representative sample*

The "DS" Series Metering Systems offer a variety of configurations designed with focus on management of herds and larger volume milk production. Central to these systems is Anderson-Negele Instrument Company's IZMAG flow meter. Recognized as the dairy processing industry standard for superior accuracy and durability, the IZMAG has been a natural choice for dairy farm applications. This robust flow meter has again outperformed the competition in new applications where the demands have been more of a challenge than those found in processing plants.

The extreme flow ranges generated by variable speed pumps supplying chillers, the start-stop of traditional milk receiver controls, and the low milk flow velocities that typically will be as low as 0.5 ft/sec make accurate measurement

impossible for most flow meters. Anderson-Negele dairy systems overcome these obstacles to provide accurate measurement and superior performance. Anderson-Negele understands these applications, and has designed a variety of systems centered around our flow meter that provide solutions to a variety of needs. From the basic function of providing a display of group and daily production totals, the addition of printing capabilities, a system with the capability of remote reset, to printed results and composite milk sampling. Anderson-Negele understands the farms needs and has the equipment to satisfy them.

Complete specifications and ordering information are available inside. For more information please visit our Web Site at [www.andinst.com](http://www.andinst.com), or contact your local Authorized Anderson-Negele Distributor.



# Dairy System Packages



## DS1

Includes the IZMAG flowmeter connected to the FTT controller/ printer housed in a stainless steel enclosure. Provides measurement of milk flow, recording of milk volumes on printed paper, capable of being coupled to external inputs for remote reset of milk total (typical use for group management). System can also be configured as an alarm to protect against overflow of direct to transport loading. Standard features include 110 vac input to inhibit measurement during cleaning cycle, 110 vac operation, includes interconnecting cables between flowmeter and control.



## DS2

Includes all of the features of above unit along with integrated controls for online meter-based pneumatic sampler. System includes flowmeter, FTT controller/printer housed in a stainless steel enclosure, SA70 pneumatic solenoids housed in ABS enclosure, air lines, PS sampler configured for vertical line insertion with bottle adapter (horizontal configuration available), and PVC bottle.



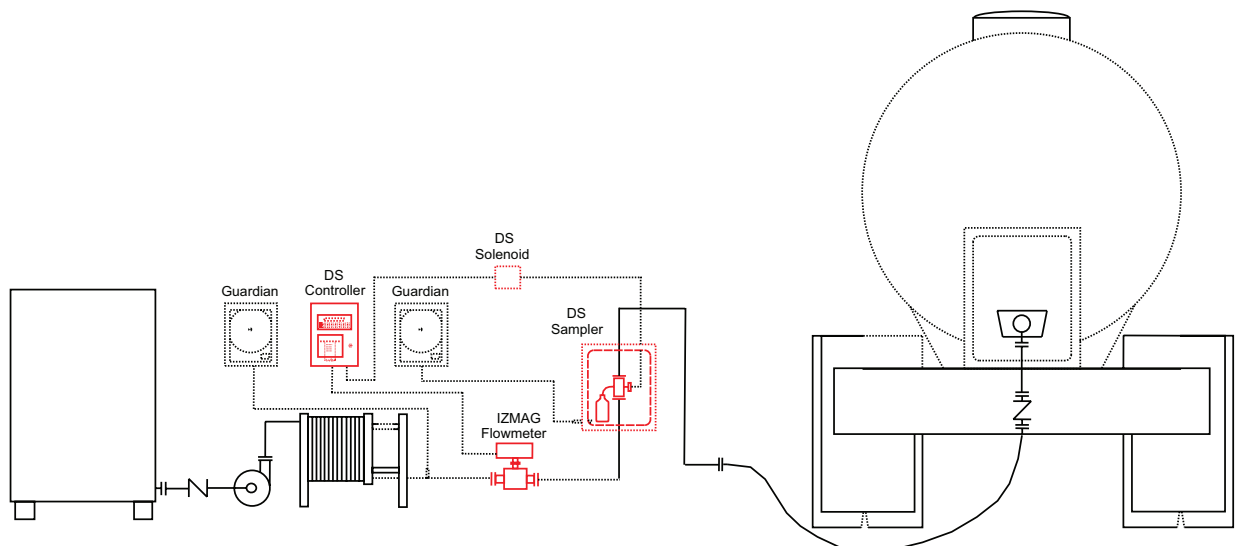
## DS3

Includes the IZMAG flowmeter connected to the FTT-50-2 dual display in an ABS enclosure. Provides independently resettable totals for use to determine group production, milking totals, and/or daily production totals. Display includes 110vac input to inhibit measurement during cleaning cycle, 110vac operation, and interconnecting cables between flowmeter and display.



## DS4

Includes the IZMAG flowmeter connected to a controller housed in a stainless steel enclosure. This system is designed for primary use as an alarm to protect against overflowing when loading directly to a transport trailer. Provides a display of milk measurement and flowrate. Standard features include 110 vac input to inhibit measurement during cleaning cycle, 110 vac operation, includes interconnecting cables between flowmeter and control.



# Specifications

## ENVIRONMENTAL SPECIFICATIONS

Ambient Temperature:  
32°F to 120°F (0°C to 50°C)

Maximum Product Temperature:  
176°F (80°C)

Maximum Cleaning Temperature:  
250°(120°C) for 30 minutes

Maximum Inlet Pressure:  
DS1,DS3,DS4 115psi (8 bar)  
DS2 60psi (4.2 bar)

## MATERIAL / CONSTRUCTION

### Flow Meter:

Housing: 304 SS body/Coated AL electronics housing  
Lining: PTFE  
Electrodes: 316L SS

### Electronics:

#### **Enclosure**

DS1,DS2,DS4: 304 SS  
DS3: ABS Plastic  
DS2 Sampler solenoids: ABS Plastic  
DS2 Sampler: 304 SS ,PVC bottle

Process Connections All: Sanitary Clamp

Display All: 2 lines backlit LCD

Printer DS1, DS2: 24 column tape printer  
Paper width 2.25" wide

## ELECTRONICS / SUPPLY REQUIREMENTS

### Supply:

Electrical Supply All: 115 VAC 50-60 Hz

Power Consumption All: 1A

Air Pressure DS2: 75 psi 0.5 cfm

Vacuum DS2: (needed when line pressure below 6 psi)

### Outputs:

DS1, DS2, DS4: (2) Form C contacts  
250 VAC @ 5 amps  
30 VDC @ 5 amps

## OPERATIONAL SPECIFICATIONS

### IZMAG Flow Meter:

Minimum Fluid Conductivity: 5µS/cm

Flow Range:  
1.5" 1-85 GPM  
2" 3-198 GPM

Accuracy:  
1.5" <1.0% for flow >1.0 GPM  
<.025% for flow >2.0 GPM

2" <1.0% for flow >3.0 GPM  
<0.25% for flow >6.0 GPM

### Sampler:

Sample Rate: Meter-based

Maximum Sample Rate: 20 cycles/min

Sample Size: approx. 1cc

Bottle Type: 16 oz. (.5L) with 28mm opening

## HOW TO ORDER



### **DAIRY SYSTEM PACKAGE**

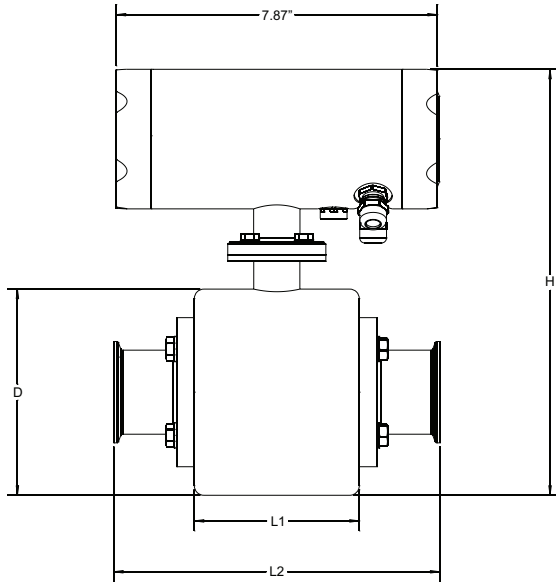
- 1 DS 1 (Controller/Printer, Flowmeter)
- 2 DS 2 (Controller/Printer,Flowmeter, Pneumatic Sampler)
- 3 DS 3 (Dual Display, Flowmeter)
- 4 DS 4 (Controller, Flowmeter)

### **FLOW METER**

- 0 1-1/2" System
- 2 2" System

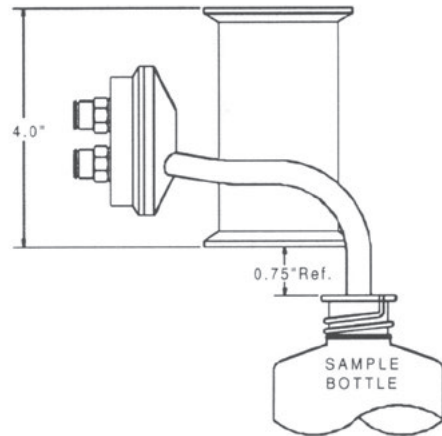
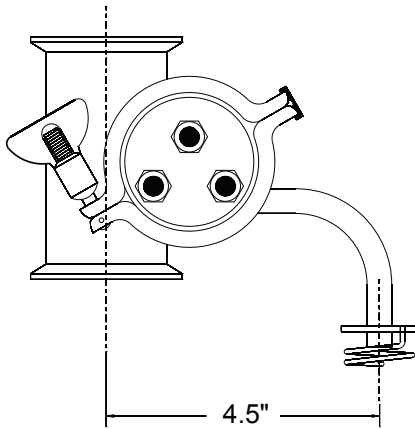
# Dimensions

## IZMAG

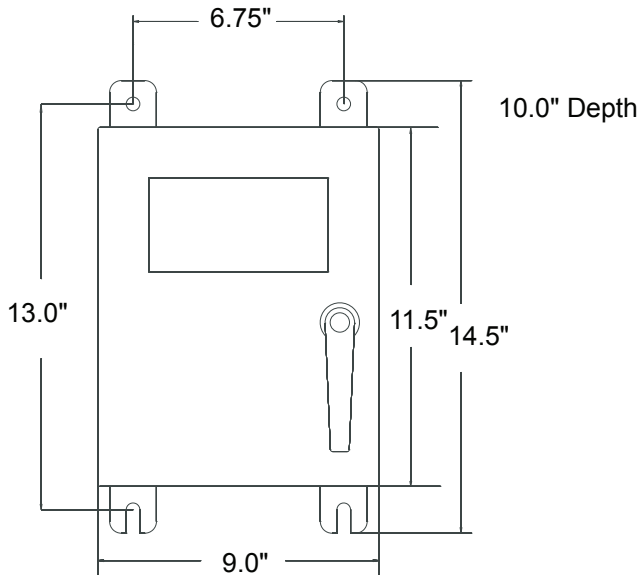


Flowtube	D	H	L1	L2				Weight (lbs)
				Length Option			Fitting Option	
				0	1	2	I	
1/2"	3.54"	8.86"	4.09"	6.75"	-	-	-	14.4
3/4"	3.54"	8.86"	4.09"	8.00"	13.25"	9.88"	13"	14.4
1"	3.54"	8.86"	4.09"	8.00"	13.25"	9.88"	13"	14.6
1-1/2"	4.13"	9.45"	4.09"	8.00"	13.25"	9.88"	13"	17.0
2"	5.12"	10.43"	4.09"	8.00"	13.25"	9.88"	13"	19.8
2-1/2"	5.12"	10.43"	6.30"	9.00"	13.25"	9.88"	13"	25.3
3"	6.10"	11.42"	6.30"	9.88"	13.25"	9.88"	13"	37.4
4"	6.69"	12.01"	7.87"	11.90"	13.67"	-	14"	50.5

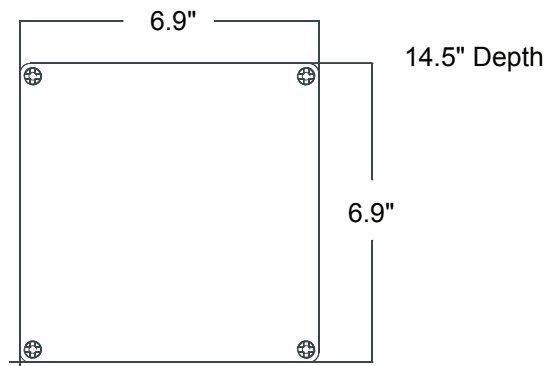
## PS



## FTT-710



## FTT-50-2/SA70



## FTT-720

Width 10.88" x H 8.75" x D 7.50"