

# Meters and accessories for Diesel Exhaust Fluid (DEF)

Application Brochure TCS900-600

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TotalControl of America, LLC

# TOTAL CONTROL SYSTEMS

“The Standard of Measurement”

*MADE IN AMERICA*

*[www.tcsmeters.com](http://www.tcsmeters.com)*

## About Us

Total Control Systems is a leading manufacturer of piston and rotary positive displacement flow meters located in Fort Wayne, Indiana. All meters are designed with the highest quality to provide superior performance in custody-transfer measurement of diesel exhaust fluid, refined fuels, LPG, fertilizers, chemicals, alcohols, and solvents. Marketed to provide application-driven flow meter solutions for vehicles, dispensers, and fixed-site installations, we provide a full line of accessory equipment including strainers, air and vapor eliminators, control valves, pulse transmitters, and mechanical or electronic registration to complete system requirements. Meters are designed and created using sound engineering principles and state-of-the-art computer numerically controlled (CNC) machines in a world-class manufacturing facility. Each flow meter is completely assembled and tested by highly skilled members of our production team, who strive for excellence in workmanship and quality. Our reputation for providing innovative, high-quality, and reliable fluid measurement products is coupled with our sense of customer-driven services. Our first priority is to help our customers achieve increased productivity and provide value to your business today and tomorrow.

### APPLICATIONS

Delivery vehicles

Dispensers

Intermediate bulk containers (IBC)

### FEATURES

10-year warranty

Reciprocating 3-piston design

Flow range 0.2-50 gpm (0.76-190 lpm)

Superior accuracy

Low maintenance

Long service life

75 years of proven performance

### CONSTRUCTION

**Housing & Internals:**  
Stainless Steel

**Seals:**  
EPDM

### ACCURACY <sup>1</sup>

250:1 = +/- 0.10%

### REPEATABILITY <sup>1</sup>

0.01% of rated flow

(1) Accuracy tested at constant operating conditions with 682 Series meter and mechanical registration using De-Ionized water as test fluid.

## 682 Series Piston Flow Meters

The 682 Series piston flow meter is a true positive displacement flow meter that has an inline design consisting of three (3) reciprocating pistons operating within their respective measuring chambers. The pistons are fitted to a wobble plate, which has a shaft extending from its upper surface and a valve pivot attached beneath it. The valve pivot drives a sliding valve from piston to piston as a known amount of product flows through each cylinder bore, controlling the sequence of events in a smooth mechanical motion. The 682 piston flow meter combines outstanding accuracy (+/- 0.1%) with an exceptional turndown ratio of 250:1 (flow range from 0.2 to 50 gpm).

### Accessories

The 682 Series meter is available with a full complement of accessories including air eliminators, strainers, and valves, as well as mechanical and electronic registers with temperature volume compensation (TVC), and printers from industry leading suppliers.

### Testing and Approvals

Meters are Weights & Measures approved for custody transfer and are flow-tested for accuracy before leaving the factory. Manufactured to meet the high purity ISO 2224-1 requirements for safe handling of Diesel Exhaust Fluid.

Meter Model No.	Flange Size NPT + *	Max. Capacity#		Working Pressure		Working Temperature	
		gpm	lpm	psi	bar	°F	°C
682-15	1-1/2"	0.2 to 50	0.76 to 190	150	10.5	-40 to 160	-40 to 71

+ NPT flange is standard. BSPT, Slip Weld, ANSI and others available upon request.

\* Optional flange sizes available upon request.



682 Series meter on a delivery vehicle...

## 700 Series Flow Meters

The 700 Series Diesel Exhaust Fluid Rotary Positive Displacement Flow Meters reflect a tri-rotor design with no metal-to-metal contact between rotors and housing to minimize internal wear, maintain high accuracy over time, and to extend the time between meter calibrations.

### Accessories

The 700 Series meters are available with a full complement of accessories including air eliminators, strainers, and valves, as well as mechanical and electronic registers with temperature volume compensation (TVC), and printers from industry leading suppliers.

### Testing and Approvals

Meters are Weights & Measures approved for custody transfer and are flow-tested for accuracy before leaving the factory. Manufactured to meet the high purity ISO 2224-1 requirements for safe handling of Diesel Exhaust Fluid.

### APPLICATIONS

Delivery vehicles

Dispensers

Intermediate bulk containers (IBC)

### FEATURES

1-year warranty

Sustained high accuracy

Long service life, low maintenance

Low pressure drop

Light-weight design

### CONSTRUCTION

**Housing and rotors:**

Stainless Steel

**Bearing plate and bearings:**

Ryton

**Gears**

Stainless Steel

**Seals**

EPDM

### ACCURACY <sup>1</sup>

5:1 = +/- 0.10%

10:1 = +/- 0.15%

### REPEATABILITY <sup>1</sup>

0.02% of rated flow

(1) Accuracy tested at constant operating conditions with 700 Series meter and mechanical registration using De-ionized water as test fluid.

700 Series meter, DMP pulse transmitter and register on a delivery vehicle...



700 Series meter, register on a bulk delivery skid for box vans...

Meter Model No.	Flange Size NPT +*	Max. Capacity		Working Pressure		Working Temperature	
		gpm	lpm	psi	bar	°F	°C
700-20	2"	100	380	150	10.5	-40 to 160	-40 to 71

+ NPT flange is standard. BSPT, Slip Weld, ANSI and others available upon request.

\* Optional flange sizes available upon request.



700-20SS2DXD flow meter and DMP pulse transmitter...



**Total Control Systems** is a leading manufacturer of precision measurement systems. Our world-class positive displacement flow meters are among the most accurate available in any industry and are backed by excellent customer service, support, and prompt deliveries.

TCS meters are designed and manufactured to meet or exceed your needs. Our meters are used world-wide in a multitude of applications including Agriculture, Aviation, Diesel Exhaust Fluid, Marine, LPG, Refined Fuels, Industrial Chemicals, and Alternative Fuels.

***Discover why Total Control Systems  
should be the future of your metering solutions!***



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2515 Charleston Place Fort Wayne, IN 46808  
Tel: (260) 484-0382 Toll Free: (800) 348-4753 Fax: (260) 484-9230  
E-mail: [sales@tcsimeters.com](mailto:sales@tcsimeters.com) Website: [www.tcsimeters.com](http://www.tcsimeters.com)

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