



Liquid Controls Sponsler Cryogenic Measurement Systems

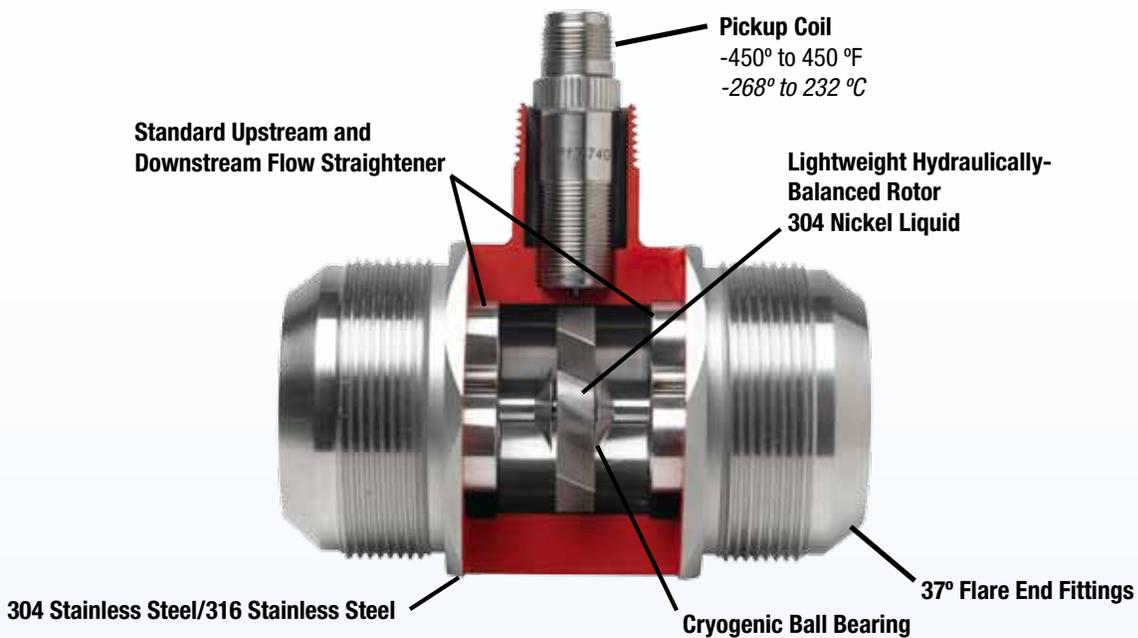
Whether transporting, loading, or delivering, Sponsler cryogenic measurement systems are specifically designed and tested to thrive in the harsh conditions of the cryogenic industry. Tested in the frigid expanses of the Canadian Northwest and the humidity of equatorial South America, Sponsler's cryogenic measurement systems have proven their reliability and accuracy in extreme, and temperate, conditions for decades.

The cornerstone of our cryogenic measurement systems is the Sponsler precision turbine flowmeter. Sponsler precision turbine flowmeters are constructed with a unique combination of alloys that ensure rotor reliability and flowmeter accuracy.

Our selection of electronic and mechanical registers allow you to assemble a cryogenic measurement system perfectly suited to your needs. Because they are compact and provide multiple mounting options, Sponsler registers are easy to install. The T675 Cryogenic Flow Totalizer—Sponsler's electronic register designed specifically for cryogenic applications—provides a comprehensive array of transaction, metrological, security, and maintenance options, allowing you to tailor your cryogenic measurement system according to your operations.

Sponsler cryogenic measurement systems are available in volumetric and mass configurations that provide precision performance in both cryogenic and ambient temperatures. Our cryogenic measurement systems are designed and certified to meet or exceed the requirements stated in NIST Handbook 44 as well as OIML R81, OIML R117-1, and MID. Reports of test and published data are available upon request.

Sponsler Precision Turbine Flowmeters

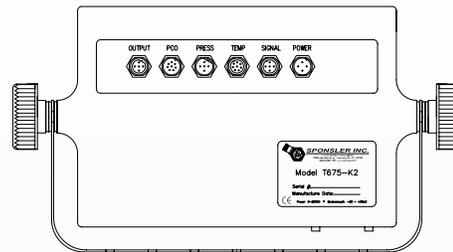
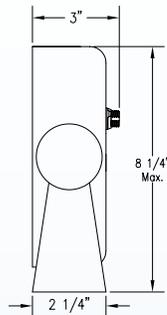
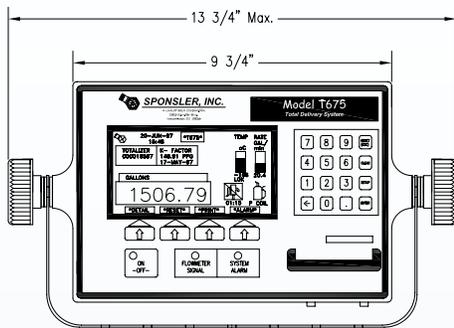


NOMINAL METER SIZE	NOMINAL FLOW RANGE U.S. Gallons (Liters) Per Minute				METER FACTOR "K" Pulses/U.S. Gallon (Liter)	APPROXIMATE METER WEIGHT lbs./kg
	Minimum Repeatable	Minimum Linear	Nominal Maximum	Extended Maximum		
½" (13mm)	0.6 (2)	1.25 (5)	9.5 (36)	12 (45)	6912 (1758)	2/1
⅝" (15mm)	0.9 (3)	1.75 (7)	16 (61)	18 (68)	4043 (1110)	2/1
¾" (17mm)	1.75 (7)	2.5 (10)	29 (110)	35 (133)	1684 (445)	4/2
1" (25mm)	3 (11)	4 (15)	60 (227)	75 (283.9)	726 (192)	5/2.5
1¼" (32mm)	4 (15)	6 (23)	93 (352)	115 (436)	324 (86)	7/3
1½" (38mm)	6 (23)	8 (30)	130 (492)	175 (662)	200 (53)	8/3.5
2" (51mm)	12 (45)	15 (57)	225 (851)	275 (1041)	149 (39)	13/6
2½" (64mm)	15 (57)	25 (95)	400 (1514)	500 (1893)	81 (21)	18/8
3" (76mm)	30 (114)	40 (151)	650 (2460)	800 (3028)	47 (12)	19/8.5

T675 Cryogenic Flow Totalizer



- Dual microprocessors
- Large, backlit 3 x 5" (7.6 x 12.7 cm) display
- 10 point flowmeter linearizer
- User-friendly, menu-driven programming, no scrolling
- Temperature volume compensation for 8 individual products
- Bluetooth, infrared, and RS232 communication ports
- Complete audit trail
- Programmable maintenance reminders based on actual turbine service
- Pump control output with programmable delay interval
- Complete system alarm display
- Versatile mounting configurations
- CE compliant
- CA type 2 approved



Taking full advantage of a dual microprocessor design and a large, backlit 3 x 5" (7.6 x 12.7 cm) display, the Sponsler T675 Flow Totalizer is one of the most powerful, user-friendly electronic registers available today. Installation is simple. The space-saving construction offers multiple mounting options, and the non-scrolling, menu-driven programming results in a thorough, easily-managed set up. In the field, the T675 maintains the highest standards of accuracy and reliability while providing valuable features such as: real-time calculations, programmable maintenance reminders, complete audit trails, pump control output with programmable delay interval, and temperature volume compensation for 8 individual products.

Input Power

9-26 VDC, 3 W typical 8 W maximum

Internal Power

Lithium battery pack

Environmental

-40 to 125 °F (-40 to 50 °C)

Physical Dimensions

9.75 x 7.5 x 3.75"
(24.8 x 19.1 x 9.5 cm)

Weight

3 lbs

Display

240 x 128 full graphic with CCFL backlight

Signal Input

0 - 2500 HZ, 50 mv RMS @ 10 HZ

Sensor Inputs

- (1) RTD and 4-20 mA loop or
- (2) 4-20 mA loops

RTD

Platinum 1000 Ω

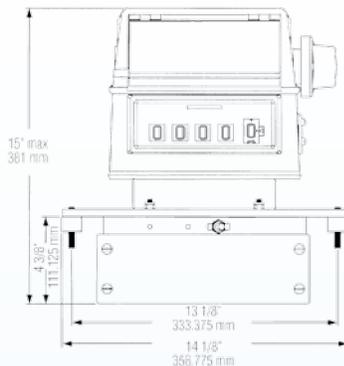
Outputs

(2) Form C 2 A relays, 4-20 mA for rate, I.R. data port, optional RS232, and optional Bluetooth

T575N Cryogenic Truck Totalizer



- On-board microprocessor
- On-board diagnostics
- Field programmable
- 5-digit master register
- Integrally-mounted stepper motor
- Product density calculations
- Temperature volume compensation for 8 individual products
- Manual switch selects 8 cryogenic products
- Corrosion-resistant aluminum and stainless steel hardware
- Weatherproof construction and MS connections



For traditional measuring applications, the T575N Cryogenic Truck Totalizer—a full-featured mechanical register—delivers durability and simplicity. Constructed with corrosion-resistant aluminum and stainless steel hardware and equipped with MS connections, the heavy-duty T575N is completely weatherproof. The T575N is also entirely field programmable. Internal factor switches mounted to a stepper motor can calibrate the register in a wide range of engineering units. The T575N can support 8 individual cryogenic products, and each product can be compensated for temperature independently. And with self-diagnostic circuitry, repairs and adjustments can be made on-the-spot. The T575N also accurately calculates product density, compensating for product characteristics and temperature. Rugged and easy to care for, the T575N Cryogenic Truck Totalizer is a solid choice for cryogenic measurement systems in any environment.

Power

12 VDC nonpolarity sensitive

Display

5-digit delivery total,
8-digit accumulative total

Enclosure

NEMA 4 electronics enclosure

Mounting

Aluminum mounting plate with shock mounts

Signal Input

Precision turbine flowmeter or similar frequency generating device. 100 kHz frequency

Maximum Count Rate

1800 counts per minute based on 10 counts per revolution with a 2:1 step up gear plate

Input Impedance

20 kΩ

Weight

40 lbs (18.1 kg)

Optional Equipment

Bluetooth Printers

Bluetooth printers accept a wireless signal from the T675 Cryogenic Flow Totalizer and print a convenient 3 or 4" wide ticket for your customers and your own records. Printers are battery powered, handheld, easy to store in the cab, and easy to use. Minimal charging time keeps them ready for work throughout the day. Standard or custom tickets are available.



Cryogenic Flow Prover Model SP1200

The SP1200 is a secondary calibration standard used to verify existing calibration data and calculate the amount of measurement error in an existing system. The SP1200 is a self-contained unit complete with cables and a portable carry case that can be easily transported to your customers' facilities. To maintain an audit trail that is traceable to NIST Handbook 44, the SP1200 prints out calibration tickets in various engineering units.



Transitional Piping

Transitional piping is required at installations where swirl or erratic flow velocity may compromise flow meter measurement. Transitional piping straightens the flow and regulates velocity in order to present the turbine flow meter with a repeatable flow stream, ensuring accurate flow measurement. The piping is implemented in two sections, an upstream section and a downstream section. Piping diameters range from ½ to 2" diameters, and a variety of end fittings are available, from flared tube to flange.



Field Services

At the Sponsler manufacturing facilities in Lake Bluff, IL, we are proud of our products and devoted to helping our customers take full advantage of their valuable features and design. In order to assist and inform our customers, we provide an array of on-site field services for our flow measurement and delivery systems. Sponsler field services include calibration, repair, training, and education. Please contact us for more information.

LIQUID CONTROLS GROUP

The Liquid Controls Group provides custody transfer solutions for the control and management of high-value fluids and gases. In 2001, IDEX combined Corken, Liquid Controls and Sampi to form the Liquid Controls Group. Together, they used their combined resources to design valuable new products and offer cost-effective pump and meter solutions. They laid the foundation for LCG's successful program of collaboration and innovation. With the additions of Sponsler, Toptech Systems and Faure Herman, LCG quickly became a dependable, single source provider, large enough to supply comprehensive solutions yet flexible enough to customize solutions for unique needs. Today, the Liquid Controls Group has a strong global presence with seven business units in five countries, over 500 distributors on six continents, and six industry leading brands.



YOUR CUSTOMERS — OUR CUSTOMERS

The Liquid Controls Group (LCG) is part of the IDEX Corporation, a diversified, engineered products company. IDEX leverages the resources of high quality, similar-profile businesses to innovate solutions that bring real and lasting value to you, our customer. At LCG and IDEX, the voice of our customers is our driving force. We are committed to helping you develop better products and services to meet your customers' needs.

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