



# Flowmeters

## Paddle Wheel

### Cole-Parmer® Battery-Powered In-Line Flowmeters

#### Battery-powered meters are perfect for remote locations

- Polypropylene (PP) in-line fittings feature NPT(F) true-union connections for simple installation on existing pipe
- Factory-calibrated for GPM or LPM
- Corrosion-resistant polyvinylidene fluoride (PVDF) sensor features a NEMA 4X enclosure acceptable for outdoor use
- Simple operation with nothing to program
- Accurate measurement with virtually zero pressure drop



Flowmeter with totalizer 32555-50

#### Specifications



- Fluid type:** water-like, less than 1% solids  
**Accuracy:** ±2% full scale  
**Operating temperature:** 200°F (93°C) max  
**Operating pressure:** 300 psi (20.7 bar)  
**Wetted materials:** polypropylene, PVDF, Hastelloy-C, Viton®  
**Power:** two AAA batteries (included)  
**Battery life:** one year minimum  
**Enclosure rating:** NEMA 4X  
**Display type:** 6-digit LCD, 3/8"H  
**Display update:** 1.5 seconds  
**Dimensions (W x H x D):** 3" x 5" x 2" (7.6 x 12.7 x 5.1 cm)

Connections NPT(F)	English scale			Metric scale		
	Flow range (GPM)	Catalog number	Price	Flow range (LPM)	Catalog number	Price
<b>Flowmeters</b>						
3/8"	0.4 to 4	<a href="#">TW-32555-00</a>		1 to 10	<a href="#">TW-32555-02</a>	
3/8"	0.8 to 8	<a href="#">TW-32555-04</a>		3 to 30	<a href="#">TW-32555-06</a>	
1/2"	2 to 20	<a href="#">TW-32555-08</a>		7 to 70	<a href="#">TW-32555-10</a>	
3/4"	4 to 40	<a href="#">TW-32555-12</a>		15 to 150	<a href="#">TW-32555-14</a>	
1"	6 to 60	<a href="#">TW-32555-16</a>		25 to 250	<a href="#">TW-32555-18</a>	
1 1/2"	10 to 100	<a href="#">TW-32555-20</a>		40 to 400	<a href="#">TW-32555-22</a>	
1 1/2"	15 to 150	<a href="#">TW-32555-24</a>		60 to 600	<a href="#">TW-32555-26</a>	
2"	30 to 300	<a href="#">TW-32555-28</a>		100 to 1000	<a href="#">TW-32555-30</a>	
<b>Flowmeters with totalizers</b>						
3/8"	0.4 to 4	<a href="#">TW-32555-50</a>		1 to 10	<a href="#">TW-32555-52</a>	
3/8"	0.8 to 8	<a href="#">TW-32555-54</a>		3 to 30	<a href="#">TW-32555-56</a>	
1/2"	2 to 20	<a href="#">TW-32555-58</a>		7 to 70	<a href="#">TW-32555-60</a>	
3/4"	4 to 40	<a href="#">TW-32555-62</a>		15 to 150	<a href="#">TW-32555-64</a>	
1"	6 to 60	<a href="#">TW-32555-66</a>		25 to 250	<a href="#">TW-32555-68</a>	
1 1/2"	10 to 100	<a href="#">TW-32555-70</a>		40 to 400	<a href="#">TW-32555-72</a>	
1 1/2"	15 to 150	<a href="#">TW-32555-74</a>		60 to 600	<a href="#">TW-32555-76</a>	
2"	30 to 300	<a href="#">TW-32555-78</a>		100 to 1000	<a href="#">TW-32555-80</a>	

[TW-09376-00](#) Replacement batteries; AAA. Pack of 12

[TW-17080-12](#) NIST-traceable calibration with data

### Cole-Parmer® Economical In-Line Flowmeters

#### Accurate measurement with virtually zero pressure drop

- Simple operation with nothing to program
- Factory-calibrated for GPM or LPM



Flowmeter with totalizer 32556-24

These injection-molded in-line flowmeters are battery powered (two AAA batteries included) making them perfect for remote locations. Enclosure is rated NEMA 4X and can be used in outdoor locations. Sensor is constructed of corrosion-resistant PVDF; in-line NPT(M) fittings are of PP.

#### Specifications



- Fluid type:** water-like, less than 1% solids  
**Accuracy:** ±1% full-scale  
**Operating temperature:** 200°F (93°C) max  
**Operating pressure:** 300 psi (20.7 bar)  
**Wetted materials:** PP, PVDF, Viton®  
**Power:** two AAA batteries (included)  
**Battery life:** one year minimum  
**Enclosure rating:** NEMA 4X  
**Display type:** 6-digit LCD, 3/8"H  
**Display update:** 1.5 seconds (10 second average)  
**Dimensions (W x H x D):** 3" x 5" x 2" (7.6 x 12.7 x 5.1 cm)

Connections NPT(M)	English scale			Metric scale		
	Flow range (GPM)	Catalog number	Price	Flow range (LPM)	Catalog number	Price
<b>Rate only flowmeters</b>						
3/8"	0.4 to 4	<a href="#">TW-32556-00</a>		1 to 10	<a href="#">TW-32556-32</a>	
3/8"	0.8 to 8	<a href="#">TW-32556-02</a>		3 to 30	<a href="#">TW-32556-34</a>	
1/2"	2 to 20	<a href="#">TW-32556-04</a>		7 to 70	<a href="#">TW-32556-36</a>	
3/4"	3 to 30	<a href="#">TW-32556-06</a>		11 to 110	<a href="#">TW-32556-38</a>	
1"	6 to 60	<a href="#">TW-32556-08</a>		25 to 250	<a href="#">TW-32556-40</a>	
1 1/2"	10 to 100	<a href="#">TW-32556-10</a>		40 to 400	<a href="#">TW-32556-42</a>	
1 1/2"	15 to 150	<a href="#">TW-32556-12</a>		60 to 600	<a href="#">TW-32556-44</a>	
2"	30 to 300	<a href="#">TW-32556-14</a>		100 to 1000	<a href="#">TW-32556-46</a>	
<b>Rate and totalizer flowmeters</b>						
3/8"	0.4 to 4	<a href="#">TW-32556-16</a>		1 to 10	<a href="#">TW-32556-48</a>	
3/8"	0.8 to 8	<a href="#">TW-32556-18</a>		3 to 30	<a href="#">TW-32556-50</a>	
1/2"	2 to 20	<a href="#">TW-32556-20</a>		7 to 70	<a href="#">TW-32556-52</a>	
3/4"	3 to 30	<a href="#">TW-32556-22</a>		11 to 110	<a href="#">TW-32556-54</a>	
1"	6 to 60	<a href="#">TW-32556-24</a>		25 to 250	<a href="#">TW-32556-56</a>	
1 1/2"	10 to 100	<a href="#">TW-32556-26</a>		40 to 400	<a href="#">TW-32556-58</a>	
1 1/2"	15 to 150	<a href="#">TW-32556-28</a>		60 to 600	<a href="#">TW-32556-60</a>	
2"	30 to 300	<a href="#">TW-32556-30</a>		100 to 1000	<a href="#">TW-32556-62</a>	

[TW-09376-00](#) Replacement batteries; AAA. Pack of 12

[TW-17080-12](#) NIST-traceable calibration with data



**Cole-Parmer® Micro-Flo Rate and Total Meters**

**Economical low-flow ranges**

- Displays flow rate and total
- Preset factory calibrations or custom field-calibrated

These economical meters are capable of very low flow rates. The display is programmable for preselected factory settings or can be field calibrated for high accuracy in a specific application. Displays units in milliliters, ounces, liters, or gallons; displays time in minutes, hours, or days. Display can be programmed for up to four decimal places. All units are supplied with a 115 VAC/DC power supply.



32550-01

**Specifications**

- Accuracy:** ±6% full-scale
- Maximum fluid temperature:** 130°F (54°C)
- Maximum working pressure:** 200 psi (13.8 bar)
- Materials of construction:**  
PVDF body, paddle, axle, tubing connections;  
PVC NPT connections and lens; Viton® O-rings
- Power:** 115 VAC/DC plug-in transformer



Flow range (mL/min)	¼" NPT(F) pipe connection		¼" ID x ¾" OD tubing connection	
	Catalog number	Price	Catalog number	Price
30 to 300	<a href="#">TW-32550-01</a>		<a href="#">TW-32550-13</a>	
100 to 1000	<a href="#">TW-32550-03</a>		<a href="#">TW-32550-15</a>	
200 to 2000	<a href="#">TW-32550-05</a>		<a href="#">TW-32550-17</a>	
300 to 3000	<a href="#">TW-32550-07</a>		<a href="#">TW-32550-19</a>	
500 to 5000	<a href="#">TW-32550-09</a>		<a href="#">TW-32550-21</a>	
700 to 7000	<a href="#">TW-32550-11</a>		<a href="#">TW-32550-23</a>	

**Turbo-Prop Open-Channel Flowmeters**

**Accurately measure water velocity in open channels and partially filled pipes**

- Digital display in ft/sec or m/sec
- Records 30 data sets for later analysis
- Lightweight, rugged, and reliable

Water velocity flowmeter consists of a protected water turbo-prop positive displacement sensor coupled with an expandable probe handle ending in a digital readout display. Meter incorporates true velocity averaging for the most accurate flow measurements. Magnetic material in the propeller tip passes a pickup point in the water velocity meter handle producing electrical impulses that are carried to the readout display by an internal cable. The flowmeter propeller rotates freely on its bearing shaft with no mechanical interconnections for minimal friction.

The turbo-prop is easily removed for cleaning or replacement. The sensor is designed to shed debris and is protected inside a 2" diameter housing. Probe housing may be placed directly on the bottom of a pipe or streambed for measuring flow in depths as low as 2".

Large LCD displays average, minimum, and maximum water velocity readings. Up to 30 sets of time-and-date stamped data points can be stored in the computer with the push of a button. The computer has a water-resistant housing and incorporates a unique four-button operation for changing functions and resetting the display. Computer is powered by a non-replaceable battery that will last approximately five years with normal use. Low battery and end of data warnings will also display.

A 3-foot Mylar®-coated staff gauge (graduated in hundredths of a foot and centimeters) is attached to the lower section of the water velocity probe for instant water depth measurements and accurate propeller positioning. Meter is ideal for measuring flows in streams, rivers, canals, stormwater, wastewater, inflow and infiltration studies, and industrial process waters.

**What's included:** padded carrying case.



**Specifications**

- Fluid type:** water
- Accuracy:** ±0.1 ft/sec
- Flow range:** 0.3 to 19.9 ft/sec
- Operating temperature:** -4 to 158°F (-20 to 70°C)
- Display:** 3-digit LCD, 0.5"H

- Material of construction**  
Probe: PVC and anodized aluminum with SS water bearing  
Computer: ABS/PC housing with polyester overlay
- Power:** lithium battery (nonreplaceable)
- Battery life:** approx 5 years



Flowmeter display



Flowmeter turbine

Catalog number	Handle length	Price
<a href="#">TW-32922-01</a>	3 to 6 ft (0.9 to 1.8 m)	
<a href="#">TW-32922-02</a>	5 to 15 ft (1.5 to 4.5 m)	

[TW-17080-12](#) NIST-traceable calibration