

Equipment & Supplies

from Lab to Process

Page 20



Page 23



Page 25



1-800-323-4340

Expert product assistance

Polo, Application Specialist

Find
>100,000 products
at **ColeParmer.com**

Cole-Parmer: experts in science, dedicated to your success

At Cole-Parmer, you come first. We've been in the industry more than 60 years, so we understand your expectations and challenges. That's why you will only find industry-leading brands you can trust, backed by a team of application experts who will work with you to meet your requirements. Consider us part of your team. We are dedicated to being your source for fluid handling products, instrumentation, equipment, and supplies. Your 100% satisfaction is our number one goal.

We look forward to helping you succeed.



Have questions?

We have answers.

Our team of highly-trained technical specialists has more than 150 years of experience solving the most demanding customer applications. We will work with you on product selection, troubleshooting, regulatory compliance, or maintenance and repair. With expertise across scientific and industrial disciplines, we will help you achieve the highest performance and cost effectiveness for your project. Call, email, or live chat today to put us to work for you.

 **1-800-323-4340**

 **ColeParmer.com**

 **sales@coleparmer.com**

 **1-847-247-2929**

Go to www.coleparmer.com/terms for a full list of terms and conditions. For full information on returns, go to www.coleparmer.com/returns.

©2018 Cole-Parmer Instrument Company, LLC. All rights reserved. Printed in the United States of America. For a listing of Cole-Parmer owned trademarks, go to ColeParmer.com/trademarks. All other trademarks, servicemarks, tradenames, or other logos of third parties are and remain the property of such third parties.

Ensure Your **Accuracy.** Get Calibrated.

- ✓ **Precalibration**
- ✓ **Recalibration**
- ✓ **On-Site**
- ✓ **Repair**



Conformity*

ANSI/ISO/IEC 17025:2005 accredited
NIST Handbook 150, 2000 Edition
ANSI/NCSL Z540-2-1997
NIST Technical Note 1297 ISO 9000:2000

*Please check our scope of accreditation for any limitations.

INNOCAL®
INNOVATIVE CALIBRATION SOLUTIONS

866-INNOCAL (866-466-6225)

InnoCalSolutions.com info@innocalsolutions.com

Look Inside for...



**Masterflex® L/S®
Digital Pump System**



Customer Approved

NEW
Oakton® pHTestr® 50
Pocket Tester



**Cole-Parmer® Symmetry®
Touch-Screen Balances**



**Cole-Parmer®
Graduated
Carboy**



Customer Approved



Masterflex® Pumps.....	4-5
Pumps.....	6-7
Tubing.....	8-9
Fittings.....	10-11
Flowmeters.....	12-13
Mixers.....	14-15
Filtration.....	16
Pressure.....	17
Temperature.....	18-19
Electrochemistry.....	20-21
Balances.....	22-23
Heating & Cooling....	24-25
Life Science.....	26-27
Lab Supplies.....	28-29
Safety.....	30-31

We're Here to Help!

Get expert technical
assistance when
you need it...

Call
E-mail
Chat Live

Find even more at **ColeParmer.com**

1 resource 100,000 products



Plus, convenient
tools to help you:



Research
specs and
technical articles



Live Chat
expert answers
immediately



Watch
videos to
do it right

Why Masterflex® Pumps?



- 1 Easy**
 - Quick installation
 - Low maintenance
 - Easy tubing changeover
- 2 Durable**
 - Trusted for over 45 years
 - Broad chemical compatibility
- 3 Versatile**
 - From research to process
 - Handles just about any fluid
 - Multichannel capabilities
- 4 Customizable**
 - Configurable systems
 - Many tubing options
 - Easy scale-up
- 5 Accurate**
 - Flow ranges from 0.0006 mL/min to 42 L/min
 - Rigorous design and testing standards

L/S® Digital Miniflex® Pumps

Small footprint, yet delivers accurate flow over a wide range

- Flow range of 0.004 to 315 mL/min (depending on model and tubing size selected)
- Tubing calibration function ensures accuracy
- Open-head sensor stops drive when pump head is opened
- Compact, stackable drive with remote control
- Automatic tubing retention makes tube loading quick and easy



MASTERFLEX®

Number of channels	rpm	Power	Catalog number	Price
1	0.1 to 300	90 to 260 VAC, 50/60 Hz	VQ-07525-20	
2			VQ-07525-40	

VQ-07523-92 Foot switch, momentary start/stop; DB25 male; 6-ft (1.8-m) cable

VQ-07523-95 Cable assembly, DB25 male connector and 25-ft (7.9-m) cable with stripped wire ends

VQ-07523-97 Handheld remote controller, DB25 male, route tubing through handle for dispensing applications; 6-ft (1.8-m) cable

L/S® Variable-Speed Pump Systems

Easy setup and operation—get pumping faster

- Programmable, reversible motor accepts up to four pump heads
- Graphical LCD shows flow rate, rpm, dispense volume, copy number, and cumulative volume
- Brushless, maintenance-free motor reduces operating costs and offers $\pm 0.1\%$ speed control accuracy
- Programmable flow rate and dispense interval for automated dispensing
- Remote control capabilities



MASTERFLEX®

Flow range†	Pump head included	Tubing included	Tubing sizes accepted	Drive included	Catalog number	Price
0.08 to 480 mL/min	L/S Easy-Load® 3 77800-60	C-Flex® ULTRA L/S 16 06434-16; 10 ft (3 m)	L/S 13, L/S 14, L/S 16, L/S 25, L/S 17, L/S 18	07522-20 (0.1 to 600 rpm); 90 to 260 VAC, 50/60 Hz	VQ-77921-65	
0.28 to 1700 mL/min	L/S Easy-Load II 77200-62	C-Flex ULTRA L/S 24 06434-24; 10 ft (3 m)	L/S 15, L/S 24, L/S 35, L/S 36		VQ-77921-75	

I/P® Digital Brushless Process Pump Systems

Improve dispensing accuracy with antidrip motor

- Graphical LCD shows four operating modes: continuous run, timed dispense, copy dispense, volume dispense
- Change as your needs change—change tubing size and pump head combination to achieve flow rates from 0.0006 to 19 LPM
- Dependable, low-maintenance motor provides accuracy of $\pm 0.1\%$ speed control
- Clean up easily with IP66-rated drive—simply wash down
- Double your efficiency—accepts up to two pump heads

MASTERFLEX®



Flow range†	Pump head included	Tubing included	Tubing sizes accepted	Drive included	Power	Catalog number	Price
0.001 to 8.0 LPM	Easy-Load® 77602-10	C-Flex® ULTRA I/P 73 06434-73; 10 ft (3 m)	I/P 26, I/P 73, I/P 82	Stainless steel 77420-10 0.1 to 650 rpm	90 to 260 VAC, 50/60 Hz	VQ-77964-20	
				Powder-coated steel 77420-20 0.1 to 650 rpm	90 to 260 VAC, 50/60 Hz	VQ-77964-30	

†Flow range with included tubing; extend the flow range of these systems with additional sizes of tubing.



B/T® Variable-Speed Pump System

Make quick work of bulk transfer requirements—pumps up to 42 LPM

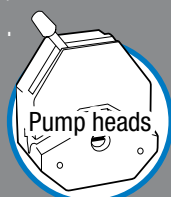
- Washdown, IP56 rated to handle the toughest process and production applications, then clean up with ease
- Place detachable controller wherever it's convenient—connected to drive by 6-ft cable
- Swing-away cover for CIP or SIP protocols
- Durable construction ensures long service life with minimal maintenance
- Safety interlock switch shuts off power when door is opened
- Gentle peristaltic action—ideal for pumping shear-sensitive or viscous fluids up to 10,000 cps
- Fast and easy tubing changes

MASTERFLEX®

Flow range†	Pump head included	Tubing included	Tubing sizes accepted	Power (VAC, Hz)	Catalog number	Price
1.4 to 42 LPM (0.4 to 11.1 GPM)	Rapid-Load®	Tygon® E-LFL B/T 91 06440-91; 3 ft (1 m)	B/T 87, B/T 91	115, 50/60	VQ-77111-60	
				230, 50/60	VQ-77111-67	

†Flow range with included tubing; extend the flow range of these systems with additional sizes of tubing.

Masterflex pumps allow you to choose each component for your unique demands...



+



+



...or choose a Complete System

Convenient preconfigured systems include everything you need to get started. Then change out components as your needs change.

Get Pumped

With 2300+ models to choose from, we have the right technology for you.

Find more at ColeParmer.com/Pumps



Reglo Independent Channel Control (ICC) Pumps

Pump each channel at different speeds and directions!

- Expand your benchtop pumping capabilities with a single compact unit
- Individually control flow and direction of each channel from the intuitive keypad or your computer
- Delivers continuous pumping or precision dispensing up to 43 mL/min
- USB interface for quick computer connections via graphical user-interface
- Accepts 3-stop tubing

ISMATEC®



IPC Low-Flow High-Accuracy Pumps

Precision multichannel dispensing—up to 24 channels

- Smooth rotation and accurate liquid flow—better than $\pm 1\%$
- Planetary drive for less pulsation and longer tubing life
- Control via keypad, computer, or remote control
- Five modes—flow rate, time, batches, drip-free, and volume
- Accepts 2-stop tubing

ISMATEC®



Channels	Rollers	Power (VAC, Hz)	Catalog number	Price
Benchtop pumps				
2	6	100 to 240, 50/60	VQ-78001-58	
	8		VQ-78001-60	
	12		VQ-78001-62	
3	6	100 to 240, 50/60	VQ-78001-68	
	8		VQ-78001-70	
	12		VQ-78001-72	
4	6	100 to 240, 50/60	VQ-78001-78	
	8		VQ-78001-80	
	12		VQ-78001-82	
Panel-mount pumps. Can install into custom systems				
2	8	100 to 240, 50/60	VQ-78001-43	
3	8		VQ-78001-45	
4	8		VQ-78001-47	
4	12		VQ-78001-49	

Channels	Rollers	Cassette style	115 VAC, 50/60 Hz		230 VAC, 50/60 Hz	
			Cat. no.	Price	Cat. no.	Price
IPC-N models. Flow: 0.0004 to 11 mL/min per channel						
4	8	Click'n'go	VQ-78001-00		VQ-78001-06	
8			VQ-78001-10		VQ-78001-16	
12			VQ-78001-20		VQ-78001-26	
16			VQ-78001-30		VQ-78001-36	
24			VQ-78001-40		VQ-78001-46	
IPC models. Flow: 0.002 to 44 mL/min per channel						
4	8	Click'n'go	VQ-78001-02		VQ-78001-08	
8			VQ-78001-12		VQ-78001-18	
12			VQ-78001-22		VQ-78001-28	
16			VQ-78001-32		VQ-78001-38	
24			VQ-78001-42		VQ-78001-48	

Gear Pump Benchtop Systems

Ready to use—
drive and pump head included!

Analog Drives

- Continuous-duty operation with Micropump® A-mount pump heads
- Gradual, one-second acceleration offers smooth control of drive speed and flow rate
- Permanent-magnet, direct-current (PMDC) drive is built to last—excellent for long-term applications



Digital Drives

- Operate in continuous run, volume dispense, copy dispense, and timed dispense modes with precise, pulseless batching and dispensing
- IP33-rated enclosure protects the internal components from dust and splashes



74013-45



74014-12

Flow rates (mL/min)*			Max pressure		Wetted parts			Benchtop analog drives		Benchtop digital drives	
mL/rev	at 50 rpm	at 3600 rpm	Diff (psi)	System (psi)	Body	Gears	Seals	Catalog number	Price	Catalog number	Price
0.017	0.85	85	20	300	316 SS	Graphite	PTFE	VQ-74013-70		VQ-74014-72	
0.092	4.60	331.2	75	300	316 SS	PPS	PTFE	VQ-74013-00		VQ-74014-02	
0.092	4.60	331.2	75	300	316 SS	PPS	PPS	VQ-74013-60		VQ-74014-62	
0.261	13.05	939.6	125	300	316 SS	PEEK	Viton®	VQ-74013-50		VQ-74014-52	
0.316	15.8	1137.6	75	300	316 SS	PPS	PTFE	VQ-74013-10		VQ-74014-12	
0.64	32.0	2304	75	300	316 SS	PPS	PTFE	VQ-74013-20		VQ-74014-22	
0.91	45.5	3276	75	300	316 SS	PPS	PTFE	VQ-74013-30		VQ-74014-32	
1.17	58.5	4212	60	300	316 SS	PPS	Viton	VQ-74013-40		VQ-74014-42	

*Flow rates in mL/min are based on water at room temperature and no back pressure.

[VQ-07523-92](#) Foot switch, momentary start/stop, 1.8-m cable

[VQ-06385-10](#) Male pipe adapter (straight); PP, ¼" OD x ⅛" NPT(M). Pack of 10

[VQ-30621-31](#) Male pipe adapter; HDPE, ⅛" NPT(M) x ¼" ID. Pack of 10

[VQ-40610-36](#) Male pipe adapter; natural PP, ⅛" NPT(M) x ¼" ID. Pack of 10

Specifications

Remote control:

Analog drives: none
Digital drives: (input) on/off by contact closure (0 to 10 VDC, 0 to 20 mA, 4 to 20 mA), and remote output

Speed:

Analog drives: 50 to 5000 rpm
Digital drives: 36 to 3600 rpm

Power:

Analog drives: 115 VAC
Digital drives: 90 to 260 VAC

Touch-Screen Syringe Pumps

Configure quickly and easily with full touch screen

- Daisy chain up to 99 pumps together with the built-in RS-485 connectivity
- Accuracy of ±0.5
- Accept any type of syringe—glass, plastic, or stainless steel from 0.5 µL to 60 mL
- Place pump on its side for a smaller footprint—display automatically rotates



Number of syringes	Syringe sizes	Flow rate per syringe	Power (VAC, Hz)	Catalog number	Price
Infusion only pumps					
1	0.5 µL to 60 mL	1.28 pL/min to 88.28 mL/min	100 to 240, 50/60	VQ-74905-02	
2	0.5 µL to 10 mL			VQ-74905-06	
Infusion/withdrawal programmable pumps					
1	0.5 µL to 60 mL	1.28 pL/min to 88.28 mL/min	100 to 240, 50/60	VQ-74905-04	
2	0.5 µL to 10 mL	1.28 pL/min to 88.28 mL/min		VQ-74905-08	
2	0.5 µL to 10 mL	0.58 pL/min to 11.70 mL/min		VQ-74905-12	
1	0.5 µL to 1000 µL	3.66 pL/min to 363 µL/min		VQ-74905-34	

Your Tubing Experts

>170 formulations to choose from

Find them all at ColeParmer.com/Tubing

Tygon® Non-DEHP Lab Tubing

No BPA or phthalates—
environmentally responsible
and safer to use

- Chemical-resistant, nonoxidizing tubing offers long life
- Able to bend to sharp radius curves—easily works with fittings
- FDA-compliant (21 CFR 175.300) and meets USP Class VI and NSF 51 requirements

Clear C-Flex® Tubing

High-performance tubing
at an economical price

- Economical alternative to platinum silicone
- Exceptional tensile and tear strength, good biocompatibility, excellent chemical resistance, and low gas permeability
- Transparent formulation for easy viewing of sample
- Manufactured in accordance with quality regulations CFR Title 21, Part 820 Quality System Requirements (GMP)

Dimensions: in. (mm)			Max psi at 70°F (bar at 21°C)	Catalog number	Price/ 50-ft pk
ID	OD	Wall			
1/32 (0.8)	3/32 (2.4)	1/32 (0.8)	69 (4.8)	VQ-06407-70	
1/16 (1.6)	1/8 (3.2)	1/32 (0.8)	36 (2.5)	VQ-06407-71	
1/16 (1.6)	3/16 (4.8)	1/16 (1.6)	69 (4.8)	VQ-06407-72	
3/32 (2.4)	7/32 (5.6)	1/32 (0.8)	25 (1.7)	VQ-06407-73	
3/32 (2.4)	7/32 (5.6)	1/16 (1.6)	47 (3.2)	VQ-06407-74	
1/8 (3.2)	3/8 (9.6)	1/32 (0.8)	20 (1.4)	VQ-06407-75	
1/8 (3.2)	1/4 (6.4)	1/16 (1.6)	36 (2.5)	VQ-06407-76	
3/32 (2.4)	7/32 (5.6)	1/32 (0.8)	17 (1.2)	VQ-06407-77	
3/16 (4.8)	5/16 (8.0)	1/16 (1.6)	25 (1.7)	VQ-06407-78	
3/16 (4.8)	3/8 (9.6)	3/32 (2.4)	36 (2.5)	VQ-06407-79	
1/4 (6.4)	3/8 (9.6)	1/16 (1.6)	20 (1.4)	VQ-06407-80	
1/4 (6.4)	7/16 (11.2)	3/32 (2.4)	28 (1.9)	VQ-06407-81	
1/4 (6.4)	1/2 (12.8)	1/8 (3.2)	35 (2.5)	VQ-06407-82	
5/16 (8.0)	7/16 (11.2)	1/16 (1.6)	17 (1.2)	VQ-06407-83	
5/16 (8.0)	1/2 (12.8)	3/32 (2.4)	23 (1.6)	VQ-06407-84	
5/16 (8.0)	9/16 (14.4)	1/8 (3.2)	30 (2.1)	VQ-06407-85	
3/8 (9.6)	1/2 (12.8)	1/16 (1.6)	14 (1.0)	VQ-06407-86	
3/8 (9.6)	9/16 (14.4)	3/32 (2.4)	20 (1.4)	VQ-06407-87	
3/8 (9.6)	5/8 (16.0)	1/8 (3.2)	25 (1.7)	VQ-06407-88	
7/16 (11.2)	9/16 (14.4)	1/16 (1.6)	13 (0.9)	VQ-06407-89	
1/2 (12.8)	5/8 (16.0)	1/16 (1.6)	12 (1.8)	VQ-06407-90	
1/2 (12.8)	11/16 (17.8)	3/32 (2.4)	15 (1.0)	VQ-06407-91	
1/2 (12.8)	3/4 (19.1)	1/8 (3.2)	20 (1.4)	VQ-06407-92	
1/2 (12.8)	13/16 (20.8)	3/32 (2.4)	24 (1.7)	VQ-06407-93	
5/8 (16.0)	13/16 (20.8)	3/32 (2.4)	13 (0.9)	VQ-06407-94	
5/8 (16.0)	7/16 (11.2)	1/8 (3.2)	17 (1.2)	VQ-06407-95	
3/4 (19.1)	1 (25.4)	1/8 (3.2)	14 (1.0)	VQ-06407-96	
3/4 (19.1)	1 1/8 (28.6)	3/16 (4.8)	20 (1.4)	VQ-06407-97	
1 (25.4)	1 1/4 (31.8)	1/8 (3.2)	12 (0.8)	VQ-06407-98	
1 (25.4)	1 1/2 (38.1)	1/4 (6.4)	20 (1.4)	VQ-06407-99	

Customer Approved
“This tubing is great”



Dimensions: in. (mm)			Max psi at 70°F (21°C)	Catalog number	Price/ 25-ft pk
ID	OD	Wall			
1/50 (0.5)	1/12 (2.1)	1/32 (0.8)	50	VQ-06422-00	
1/32 (0.8)	3/32 (2.4)	1/32 (0.8)	51	VQ-06422-01	
1/16 (1.6)	1/8 (3.2)	1/32 (0.8)	25	VQ-06422-02	
3/32 (2.4)	5/32 (4.0)	1/32 (0.8)	23	VQ-06422-03	
1/8 (3.2)	3/16 (4.8)	1/32 (0.8)	17	VQ-06422-04	
1/8 (3.2)	1/4 (6.4)	1/16 (1.6)	35	VQ-06422-05	
5/32 (4.0)	7/32 (5.6)	1/32 (0.8)	17	VQ-06422-06	
3/16 (4.8)	1/4 (6.4)	1/32 (0.8)	15	VQ-06422-07	
3/16 (4.8)	5/16 (8.0)	1/16 (1.6)	22	VQ-06422-08	
3/16 (4.8)	7/16 (11.2)	1/8 (3.2)	36	VQ-06422-09	
1/4 (6.4)	3/8 (9.6)	1/16 (1.6)	20	VQ-06422-10	
1/4 (6.4)	7/16 (11.2)	3/32 (2.4)	28	VQ-06422-11	
1/4 (6.4)	1/2 (12.8)	1/8 (3.2)	28	VQ-06422-12	
5/16 (8.0)	7/16 (11.2)	1/16 (1.6)	17	VQ-06422-13	
5/16 (8.0)	1/2 (12.8)	3/32 (2.4)	27	VQ-06422-14	
3/8 (9.6)	1/2 (12.8)	1/16 (1.6)	17	VQ-06422-15	
3/8 (9.6)	5/8 (16.0)	1/8 (3.2)	23	VQ-06422-16	
1/2 (12.8)	11/16 (17.8)	3/32 (2.4)	17	VQ-06422-17	
1/2 (12.8)	3/4 (19.1)	1/8 (3.2)	17	VQ-06422-18	

Silicone Tubing

Nontoxic formulation won't contaminate your products

- Does not contain plasticizers or additives that could leach into your product
- Highly flexible and tear resistant, with excellent heat resistance
- Elastomer is FDA-compliant (21 CFR 177.2600) and meets USP Class VI requirements; tubing is manufactured according to GMP
- Peroxide-cured silicone tubing is less costly and offers longer pump life
- Platinum-cured silicone tubing has a smoother surface and exceeds 3A Sanitary Standards

Customer Approved

“This product exceeds my expectations!”



Dimensions: in. (mm)			Max psi at 70°F (21°C)	Peroxide-cured silicone –60 to 460°F (–51 to 238°C)		Platinum-cured silicone –58 to 446°F (–50 to 230°C)	
ID	OD	Wall		Catalog number	Price/25-ft pk	Catalog number	Price/25-ft pk
1/50 (0.5)	1/12 (2.1)	1/32 (0.8)	30	VQ-06411-59		VQ-95802-00	
1/32 (0.8)	3/32 (2.4)	1/32 (0.8)	31	VQ-06411-60		VQ-95802-01	
1/16 (1.6)	1/8 (3.2)	1/32 (0.8)	15	VQ-06411-62		VQ-95802-02	
3/32 (2.4)	5/32 (4.0)	1/32 (0.8)	14	VQ-06411-63		VQ-95802-03	
1/8 (3.2)	3/16 (4.8)	1/32 (0.8)	10	VQ-06411-64		VQ-95802-04	
1/8 (3.2)	1/4 (6.4)	1/16 (1.6)	21	VQ-06411-67		VQ-95802-05	
1/8 (3.2)	3/8 (9.6)	1/8 (3.2)	25	VQ-06411-68		VQ-95802-06	
5/32 (4.0)	7/32 (4.0)	1/32 (0.8)	10	VQ-06411-65		VQ-95802-07	
3/16 (4.8)	1/4 (6.4)	1/32 (0.8)	9	VQ-06411-66		VQ-95802-08	
3/16 (4.8)	5/16 (8.0)	1/16 (1.6)	13	VQ-06411-03		VQ-95802-09	
3/16 (4.8)	7/16 (11.2)	1/8 (3.2)	22	VQ-06411-69		VQ-95802-10	
1/4 (6.4)	5/16 (8.0)	1/32 (0.8)	8	VQ-06411-70		VQ-95802-11	
1/4 (6.4)	3/8 (9.6)	1/16 (1.6)	12	VQ-06411-71		VQ-95802-12	
1/4 (6.4)	7/16 (11.2)	3/32 (2.4)	17	VQ-06411-72		VQ-95802-13	
1/4 (6.4)	1/2 (12.8)	1/8 (3.2)	17	VQ-06411-74		VQ-95802-14	
5/16 (8.0)	7/16 (11.2)	1/16 (1.6)	10	VQ-06411-75		VQ-95802-15	
5/16 (8.0)	1/2 (12.8)	3/32 (2.4)	16	VQ-06411-76		VQ-95802-16	
5/16 (8.0)	9/16 (14.4)	1/8 (3.2)	20	VQ-06411-77		VQ-95802-17	
3/8 (9.6)	1/2 (12.8)	1/16 (1.6)	10	VQ-06411-12		VQ-95802-18	
3/8 (9.6)	9/16 (14.4)	3/32 (2.4)	12	VQ-06411-78		VQ-95802-19	
3/8 (9.6)	5/8 (16.0)	1/8 (3.2)	14	VQ-06411-79		VQ-95802-20	
1/2 (12.8)	5/8 (16.0)	1/16 (1.6)	8	VQ-06411-80		VQ-95802-21	
1/2 (12.8)	11/16 (17.6)	3/32 (2.4)	10	VQ-06411-19		VQ-95802-22	
1/2 (12.8)	3/4 (19.2)	1/8 (3.2)	12	VQ-06411-55		VQ-95802-23	
5/8 (16.0)	13/16 (20.8)	3/32 (2.4)	10	VQ-06411-82		VQ-95802-24	
5/8 (16.0)	7/8 (22.4)	1/8 (3.2)	12	VQ-06411-58		VQ-95802-25	
3/4 (19.2)	1 (25.4)	1/8 (3.2)	9	VQ-06411-83		VQ-95802-26	

DON'T CHANCE IT

Our chemical compatibility database provides important information on chemical resistance—check it out at ColeParmer.com/ChemChart



Add on these essential tools

Benchtop Tubing Cutter

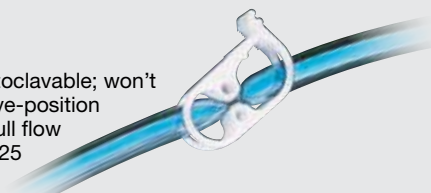
Steel blade makes right-angle cuts in plastic tubing 1/16" to 5/8" OD.



Description	Catalog number	Price
Benchtop cutter	VQ-06438-10	
Replacement blade	VQ-06438-11	

Ratchet Clamps

Durable Celcon® plastic is autoclavable; won't rust, corrode, or distort. Twelve-position ratchet control adjusts from full flow to complete closure. Pack of 25 clamps.



For tubing OD	Catalog number	Price/pk
1/8" (2.1 mm)	VQ-06833-01	
1/2" (12.7 mm)	VQ-06833-00	

Stay Connected

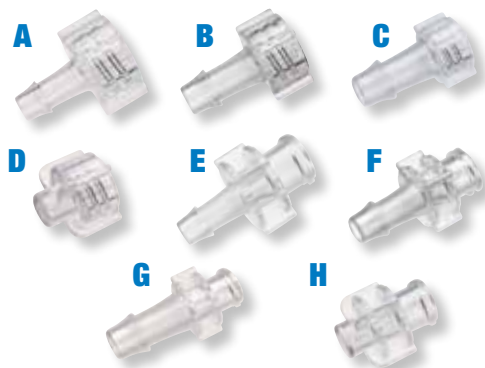
Barbed, luer, quick disconnect and more—
with 4500+ options, finding the right fitting is easy.

Find more at ColeParmer.com/Fittings

Large-Bore Slip-Fit Adapters

Larger bore for enhanced fluid flow

- Perfect for higher flow volumes
- Free of contaminants—manufactured in an ISO Class 8 environment
- Lot traceable
- Cannot be used with standard luer fittings



 **Cole-Parmer®**

Key	Description	Polycarbonate (PC)		Nylon	
		Catalog number	Price/ pk of 25	Catalog number	Price/ pk of 25
Male large bore adapters					
A	3/16" hose barb	VQ-45509-50		VQ-45509-70	
B	1/4" hose barb	VQ-45509-52		VQ-45509-72	
C	5/16" hose barb	VQ-45509-54		VQ-45509-74	
D	Connector plug	VQ-45509-64		VQ-45509-84	
Female large bore adapters					
E	3/16" hose barb	VQ-45509-56		VQ-45509-76	
F	1/4" hose barb	VQ-45509-58		VQ-45509-78	
G	5/16" hose barb	VQ-45509-60		VQ-45509-80	
H	Connector cap	VQ-45509-62		VQ-45509-82	

Quick-Disconnect Couplings

Quick and easy—just
push button to
disconnect

- Lock in place instantly—just plug insert into body
- Valved fittings shut off flow when disconnected
- Order body and insert separately—make sure to match flow size
- Additional styles available online



Tubing ID	Flow size	Resin	Valved fittings		Straight-through fittings	
			Catalog number	Price/ each	Catalog number	Price/ each
Hose barb bodies						
1/16"	1/8"	Acetal	VQ-06360-19		VQ-06361-09	
1/8"	1/8"	Acetal	VQ-06360-20		VQ-06361-11	
3/16"	1/8"	Acetal	VQ-06360-22		VQ-06361-12	
1/4"	1/8"	Acetal	VQ-06360-25		VQ-06361-13	
1/4"	1/4"	Acetal	VQ-06360-65		VQ-06361-51	
5/16"	1/4"	Acetal	VQ-06360-67		VQ-06361-52	
3/8"	1/4"	Acetal	VQ-06360-70		VQ-06361-53	
1/16"	1/8"	PP	VQ-06364-19		—	
1/8"	1/8"	PP	VQ-06364-20		—	
1/4"	1/8"	PP	VQ-06364-25		—	
1/4"	1/4"	PP	VQ-06364-65		—	
3/8"	1/4"	PP	VQ-06364-70		—	
Hose barb inserts						
1/16"	1/8"	Acetal	VQ-06360-36		VQ-06360-38	
1/8"	1/8"	Acetal	VQ-06360-40		VQ-06360-42	
3/16"	1/8"	Acetal	VQ-06360-43		VQ-06360-44	
1/4"	1/8"	Acetal	VQ-06360-45		VQ-06360-47	
1/4"	1/4"	Acetal	VQ-06360-80		VQ-06360-82	
5/16"	1/4"	Acetal	VQ-06360-83		VQ-06360-84	
3/8"	1/4"	Acetal	VQ-06360-85		VQ-06360-87	
1/16"	1/8"	PP	VQ-06364-38		VQ-06364-39	
1/8"	1/8"	PP	VQ-06364-40		VQ-06364-42	
1/4"	1/8"	PP	VQ-06364-45		VQ-06364-47	
1/4"	1/4"	PP	VQ-06364-80		VQ-06364-82	
3/8"	1/4"	PP	VQ-06364-85		VQ-06364-87	

Barbed Fittings

No tools needed for assembly

- High-Density Polypropylene (HDPE) offers very good chemical resistance with a temperature range of –65 to 150°F (–53 to 65°C); sterilize by ethylene oxide
- Polypropylene (PP) offers very good chemical resistance with a temperature range of –9 to 150°F (–23 to 66°C); sterilize by ethylene oxide or gamma irradiation
- PVDF provides excellent chemical resistance, especially acids, with a temperature range of –80 to 226°F (–62 to 108°C); sterilize by ethylene oxide or autoclave



Customer Approved

“Good quality.”



Tubing ID	HDPE			PP			PVDF		
	Cat. no.	Qty/pk	Price/pk	Cat. no.	Qty/pk	Price/pk	Cat. no.	Qty/pk	Price/pk
Straight connectors									
3/16"	VQ-30622-55	10		VQ-40622-57	10		VQ-30703-04	10	
1/4"	VQ-30621-85	10		VQ-40610-00	10		VQ-30703-05	10	
3/8"	VQ-30621-89	10		VQ-40610-02	10		VQ-30703-07	10	
1/2"	VQ-30621-92	10		VQ-40610-03	10		VQ-30703-08	10	
5/8"	VQ-30621-79	10		VQ-40610-04	10		VQ-30703-09	10	
3/4"	VQ-30621-81	10		VQ-40610-05	5		VQ-30703-10	5	
1"	VQ-30621-83	10		VQ-40610-06	5		VQ-30703-11	5	
Reducing connectors									
1/4" x 1/8"	VQ-30622-27	10		VQ-41518-36	10		VQ-30703-50	10	
1/4" x 3/16"	VQ-30622-29	10		VQ-40622-32	10		VQ-30703-52	10	
3/8" x 1/4"	VQ-30622-35	10		VQ-40610-08	10		VQ-30703-54	10	
1/2" x 1/4"	VQ-30622-38	10		VQ-40610-10	10		VQ-30703-56	10	
1/2" x 3/8"	VQ-30622-42	10		VQ-40610-12	10		VQ-30703-58	10	
3/8" x 1/4"	VQ-30621-96	10		VQ-40610-13	10		VQ-30703-59	10	
3/8" x 1/2"	VQ-30622-03	10		VQ-40610-16	10		VQ-30703-62	10	
3/4" x 1/2"	VQ-30622-09	5		VQ-40610-18	5		VQ-30703-64	5	
1" x 1/2"	VQ-30622-15	5		VQ-40610-20	5		VQ-30703-66	5	
1" x 3/4"	VQ-30622-13	5		VQ-40610-22	5		VQ-30703-68	5	
Y connectors									
1/16"	VQ-30726-01	10		VQ-40726-41	10		VQ-30703-90	10	
3/32"	VQ-30726-02	10		VQ-40726-42	10		VQ-30703-91	10	
1/8"	VQ-30726-03	10		VQ-40726-43	10		VQ-30703-92	10	
3/16"	VQ-30726-04	10		VQ-40726-44	10		VQ-30726-64	10	
1/4"	VQ-30726-05	10		VQ-40726-45	10		VQ-30726-65	10	
3/8"	VQ-30726-06	10		VQ-40726-46	10		VQ-30703-93	10	
1/2"	VQ-30726-07	10		VQ-40726-47	10		VQ-30703-94	10	
5/8"	VQ-30726-08	10		VQ-40726-48	10		VQ-30726-68	10	
NPT male threaded adapters, NPT(M) x tubing ID									
1/8" x 1/8"	VQ-30621-26	10		VQ-40621-28	25		VQ-30704-07	10	
1/8" x 1/4"	VQ-30621-31	10		VQ-40610-36	10		VQ-30704-09	10	
1/4" x 1/8"	VQ-30621-42	10		VQ-40621-45	10		VQ-30621-43	10	
1/4" x 1/4"	VQ-30621-46	10		VQ-40610-38	10		VQ-30704-11	10	
3/8" x 1/4"	VQ-30621-56	10		VQ-40610-41	10		VQ-30704-14	10	
3/8" x 3/8"	VQ-30621-62	10		VQ-40610-42	10		VQ-30704-15	10	
1/2" x 1/4"	VQ-30621-73	10		VQ-40610-44	10		VQ-30704-17	10	
1/2" x 3/8"	VQ-30621-75	10		VQ-40610-45	10		VQ-30704-18	10	
1/2" x 1/2"	VQ-30621-77	10		VQ-40610-46	10		VQ-30704-19	10	
3/4" x 1/2"	VQ-30621-20	10		VQ-40610-50	5		VQ-30704-23	5	
3/4" x 3/4"	VQ-30621-12	10		VQ-40610-51	5		VQ-30704-24	5	
1" x 1"	VQ-31517-18	10		VQ-40610-53	5		VQ-30704-26	5	

Straight connector



Reducing connector



Y connector



Threaded adapter



Get the Right Fit

After you've decided on the right pump, chromatography system, or fermentation equipment, you'll want to make the right connections. The wrong fittings can cause leaks, unwanted flow restrictions, and costly downtime. The proper fittings let your equipment do the work that you intend it to do. That's why we offer such a large selection of fittings. Whether you're connecting microbore tubing or pipes, you'll find the right fitting for your application among the wide range of fitting types and sizes offered here.

Selecting Your Fittings

1. Consider the Tubing Used: Barbed fittings work best with flexible tubing such as silicone or PharMed® BPT. Compression fittings work well with rigid tubing such as PTFE or polypropylene.
2. Determine Material Compatibility: Fluids that are incompatible with fitting material may cause leakage or system damage. For highly corrosive fluids, PTFE is best. See our online Chemical Resistance Charts to check the material compatibility of your fluid.
3. Check Temperature and Pressure Conditions: Make sure the fittings you choose are rated for your operating conditions. Most fittings are not capable of performing at their max temperature and max pressure ratings simultaneously.

Go With The Flow

Liquid, gas, or steam—with 3200+ options we have an instrument for you.

Find more at ColeParmer.com/Flowmeters



Flowmeter 05609-17
with sanitary connection

Cole-Parmer®



Flowmeter 05609-21
with NPT(F) connection

Heavy-Duty Flowmeters/Totalizers

Eliminate the need for expensive wiring with battery power

- Two totalizers allow for process or period-specific volume monitoring
- Compact, yet robust design is ideal for manufacturing, pilot-plant, or quality control areas

Flow range	Connections	Body material	Catalog number	Price
1 to 10 GPM (3.8 to 37.9 LPM)	½" NPT(F)	Aluminum	VQ-05609-01	
	½" NPT(F)	316 SS	VQ-05609-03	
	¾" Sanitary†	316 SS	VQ-05609-05	
2 to 20 GPM (7.6 to 75.7 LPM)	¾" NPT(F)	Aluminum	VQ-05609-07	
	¾" NPT(F)	316 SS	VQ-05609-09	
	1" Sanitary†	316 SS	VQ-05609-11	
5 to 50 GPM (18.9 to 190 LPM)	1" NPT(F)	Aluminum	VQ-05609-13	
	1" NPT(F)	316 SS	VQ-05609-15	
	1½" Sanitary†	316 SS	VQ-05609-17	
	1" ANSI‡	316 SS	VQ-05609-19	
10 to 100 GPM (38 to 380 LPM)	1½" NPT(F)	Aluminum	VQ-05609-21	
	1½" NPT(F)	316 SS	VQ-05609-23	
	2" Sanitary†	316 SS	VQ-05609-25	
	1½" ANSI‡	316 SS	VQ-05609-27	
20 to 200 GPM (6 to 760 LPM)	2" NPT(F)	Aluminum	VQ-05609-29	
	2" NPT(F)	316 SS	VQ-05609-31	
	2½" Sanitary†	316 SS	VQ-05609-33	
	2" ANSI‡	316 SS	VQ-05609-35	

†Sanitary flange

‡150# ANSI flange

Acrylic Variable-Area Flowmeters for Bench or Panel Mount

Don't sacrifice durability for precision

- Easily and precisely control flow of your application via manual valve
- Durable acrylic bodies with integral metering tubes for accurate readings
- Stand up to even aggressive plant environments

Float†	For liquid applications			For air applications		
	Flow range	Cat. no.	Price	Flow range	Cat. no.	Price
Flowmeters with 4" scale						
SS	1–10 GPH	VQ-32461-00		0.4–5 scfh	VQ-32461-10	
SS	2–25 GPH	VQ-32461-02		1–10 scfh	VQ-32461-12	
SS	6–60 GPH	VQ-32461-06		4–40 scfh	VQ-32461-16	
SS	0.2–2.5 GPM	VQ-32461-07†		10–100 scfh	VQ-32461-18	
SS	0.4–5 GPM	VQ-32461-08†				
SS	—	—	—	20–200 scfh	VQ-32461-22	
AL	—	—	—	0.5–5 scfm	VQ-32461-24†	
SS	—	—	—	1–10 scfm	VQ-32461-26†	
Flowmeters with 5" scale						
SS	1–10 GPM	VQ-32466-50		3–25 scfm	VQ-32466-60	
SS	2–20 GPM	VQ-32466-52		4–50 scfm	VQ-32466-62	

†These models have dual scale: GPM/GPH, scfm/scfh, LPM/LPH; they also have 1/4" NPT(F) connections and use optional tripod base 32462-60 sold separately online.

‡Float material key: SS = stainless steel, AL = aluminum.

[VQ-32462-55](#) Tripod base for flowmeter with 4" scale

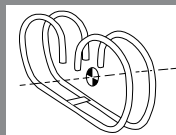


Cole-Parmer®

Find your next flowmeter here

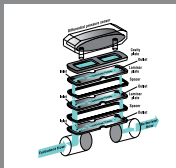
Coriolis

Extreme accuracy, no pressure drop, tracks mass flow, high turn-down ratio.



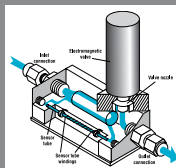
Differential Pressure

Very high accuracy; multiple calibrations, outputs, and size. For water or gases only, no particulates, needs power.



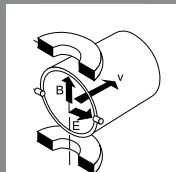
Gas Mass

No moving parts; measures the mass of gas, not volume, so it's very accurate. Gas must be dry and free of particulates, fairly slow response time.



Magnetic

No obstruction of flow path, no pressure drop, no moving parts, can handle heavy slurries. Fluid must be conductive, must ground pipe.



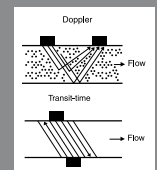
Turbine

High accuracy, millisecond response time, high pressure and temperature capabilities. Moving parts can wear or become clogged, not good for low flows.



Ultrasonic

Very high accuracy, can be used to measure corrosiveness of slurry fluid flow, no pressure drop, no obstruction of flow path, no moving parts, low maintenance costs. Fluid must contain particulates, not good for low-flow applications.



Variable Area

Easy to set up and use, low setup cost, very low maintenance, can be used for liquids and gases. Low accuracy, no data output or recording capabilities.



Find them all at ColeParmer.com/Flowmeters

Mix Things Up

From laboratory/benchtop to bulk container mixers, you'll find reliable, high-quality products with the latest technology.

Find more at ColeParmer.com/Mixers

Ultra-Compact Digital Mixer

Dependable mixing in a compact unit

- Maintenance-free brushless motor provides mixing from 50 to 2500 rpm
- LED display allows precise speed adjustments and repeatability
- Ready to go out of the box—includes mixer, stand, and two mixing blades

 **Cole-Parmer®**

Speed (rpm)	hp	Max torque (in-oz)	Power (VAC, Hz)	Catalog number	Price
50 to 2500	1/100	14.2	100 to 240, 50/60	VQ-50006-01	

General-Purpose Mixer

High quality, reliability, and full-range performance

- Ideal for light-duty mixing of water-like fluids
- Integrated control for both on/off and speed settings
- Smooth-start motor ramps to set speed
- Mixer includes SS shaft, propeller and mounting rod; complete system adds clamp and support stand

Stir-Pak®

Description	Speed (rpm)	hp	Max torque (in-oz)	Power (VAC, Hz)	Catalog number	Price
Mixer	0 to 4000	1/50	9.5	115/230, 50/60	VQ-04555-00	
Complete system					VQ-04555-50	

Digital Dual-Range Mixer

Value and versatility in one

- Through-shaft design provides virtually limitless adjustment for impeller depth
- Two speed ranges to suit a variety of mixing applications:
60 to 500 rpm and 240 to 2000 rpm
- Maintenance-free motor rated for continuous duty
- LCD with speed display lets you precisely control and repeat process parameters
- Affordable complete system includes with chuck, mounting rod, four-blade propeller, mixer stand, and clamp
- Provides 259 in-oz of torque—use for liquid volumes up to five gallons and viscosities up to 10,000 cps (approximately the viscosity of honey)

Speed range (rpm)	hp	Max torque (in-oz)	Power (VAC, Hz)	Catalog number	Price
60 to 500 and 240 to 2000	1/25	259	115, 50/60 230, 50/60	VQ-50705-00 VQ-50705-10	

Customer Approved
“This one is a keeper.”



IKA®



Digital Batch Mixer

Tackle volumes up to 52 gallons (200 L)

- User-friendly operation—PLC/PC programmability, data logging, and intuitive graphic touch-screen interface
- Two-speed transmission provides smooth, quiet operation
- Through-shaft design allows for easy impeller adjustment, less downtime
- High torque has power to mix up to 52 gallons (200 L) and viscosity up to 180,000 cps
- RS-232 and USB interfaces to record date, time, speed, and torque data
- Digital touch-screen control let you to select time and speed with a gloved hand or pencil tip

Cole-Parmer®

Speed range (rpm)	hp	Max torque (in-oz)	Power (VAC, Hz)	Catalog number	Price
50 to 1500	1/2	4248	120, 60	VQ-50009-00	

Filters for Any Application

Whether you're preparing, purifying, or extracting a sample, we have the filtration and separation products you need.

Find more at ColeParmer.com/Filtration

Mixed Cellulose Ester Membranes

High quality at low prices

ADVANTEC®

— Made from over 90% cellulose nitrate for strength and thermostability

These MCE membranes can be exposed to temperatures up to 266°F (130°C). Can be used for many laboratory applications including filter sterilizing biological fluids, microbiology, contamination analysis, and air monitoring.



Pore size (µm)	Bubble point (psi)	Flow (L/min/cm²)		13 mm (100/pk)		25 mm (100/pk)		47 mm (100/pk)		90 mm (25/pk)		142 mm (25/pk)		293 mm (25/pk)	
		H ₂ O†	Air	Cat. no.	Price	Cat. no.	Price	Cat. no.	Price	Cat. no.	Price	Cat. no.	Price	Cat. no.	Price
0.10	35.3	0.027	0.67	VQ-06639-25		VQ-06639-28		VQ-06639-31		VQ-06639-34		VQ-06639-41		VQ-36230-81	
0.20	54.5	0.018	2.4	VQ-06639-01		VQ-06639-05		VQ-06639-13		VQ-06639-35		VQ-06639-17		VQ-36230-82	
0.45	35.0	0.045	3.7	VQ-06639-02		VQ-06639-06		VQ-06639-14		VQ-06639-36		VQ-06639-18		VQ-36230-83	
0.80	16.4	0.165	15.0	VQ-06645-30		VQ-06645-32		VQ-06645-34		VQ-06645-36		VQ-06645-38		VQ-36230-84	
1.00	13.9	0.220	20.4	VQ-06639-47		VQ-06639-49		VQ-06639-51		VQ-06639-55		VQ-06639-53		VQ-36230-85	
3.00	10.2	0.300	28.3	VQ-06639-26		VQ-06639-29		VQ-06639-32		VQ-06639-39		VQ-06639-42		VQ-36230-86	
5.00	8.5	0.400	40.9	VQ-06639-27		VQ-06639-30		VQ-06639-33		VQ-06639-40		VQ-06639-43		VQ-36230-87	

†Using water prefiltered to 0.1 µm at 10 psi.

Filter Holders

Easy assembly

- Polypropylene (PP) holders are ideal for ultracleaning and sterilizing liquids under pressure, or for aseptic sampling of liquids and gases
- Dual support screens allow flow in both directions
- Assemble quickly and efficiently without membrane tears

The 25-mm holder features a female luer-lock on the inlet and a male luer-slip on the outlet. The 47-mm holder features a ¼" NPT(M) thread on the inlet and a ¼" NPT(M)-female luer-slip on the outlet. Both are autoclavable.



ADVANTEC®

Type of holder	Diameter	Catalog number	Qty/pk	Price/pk
Syringe	25 mm	VQ-06623-32	6	
In-line	47 mm	VQ-06623-22	1	

[VQ-02930-95](#) Support screen, 25 mm. Pack of 8

[VQ-06645-90](#) Support screen, 47 mm. Pack of 4

Syringe Filters

Get easy, reliable filtration—just slip on and twist

- Easy identification—membrane type and pore size printed on each filter
- Filter more confidently—filters are 100% integrity tested and manufactured in accordance with ISO 9002 standards
- Get a secure fit—bidirectional membrane support and luer lock inlet/outlet
- Sterile filters are sterilized by gamma irradiation and certified nonpyrogenic, noncytotoxic, and blister packed



Nylon Filters

Pore size	Membrane dia	Housing	Color	Qty/bx	Catalog number	Price/bx
Nonsterile filters						
0.22 µm	25 mm	PP	Natural	100	VQ-02915-16	
0.45 µm					VQ-02915-14	
Sterile filters						
0.20 µm	25 mm	PP	Red	50	VQ-02915-04	
0.45 µm			Natural		VQ-02915-02	

Glass Prefilters with Final Filter

Membrane Type	Dia	Pore size	Housing	Retention volume	Qty/ bx	Catalog number	Price/ bx
Nonsterile filters							
Cellulose acetate	26 mm	0.20 µm	Acrylic	0.23 mL	100	VQ-02915-90	
		0.45 µm				VQ-02915-92	
		0.80 µm				VQ-02915-94	
Sterile filter							
Cellulose acetate	26 mm	0.20 µm	Acrylic	0.23 mL	50	VQ-02915-40	

PTFE Filters

Pore size	Membrane dia	Housing	Color	Qty/bx	Cat. no.	Price/bx
Nonsterile filters						
0.20 µm	15 mm	PP	Natural	100	VQ-29550-08	
0.45 µm					VQ-29550-10	
0.20 µm	25 mm	PP	Natural	100	VQ-02915-20	
0.45 µm					VQ-02915-22	
0.20 µm	50 mm	PP	Natural	20	VQ-02915-28	
0.45 µm					VQ-02915-30	
Sterile filters						
0.20 µm	25 mm	PP	Natural	50	VQ-02915-08	
0.50 µm					VQ-02915-06	

Under Pressure?

When your system or process depends on pressure being measured and controlled, look no further.

Find them all at ColeParmer.com/Pressure

Liquid-Filled Gauges

- Get accurate readings—fluctuations minimized by Powerflex™ movement
- Glycerin fill and pressure snubber minimize any fluctuations
- 316 stainless steel all-welded construction for long life

Differential Gauges

- Industry standard for positive, negative, or differential pressures
- No manometer fluid to evaporate, freeze, or cause toxic or leveling problems
- Motion damped with high-viscosity silicone fluid
- Rugged design resists shock, vibration, and overpressure

Digital Gauges

- Simple to program
- Stainless steel sensor; IP67-rated case
- Features tare, min/max memory, and nine engineering plus one custom engineering units
- Backlight for easy viewing

High-Accuracy Transducers

- Economical, excellent accuracy, and high performance
- Suitable for your high-shock/vibration applications
- Stainless steel sensor attached to stainless steel electrode forms a variable capacitor
- 4 to 20 mA output (0.5 to 5.5 V output also available)

ASHCROFT



Range	Catalog number	Price
30 to 0" Hg	VQ-68022-00	
30" Hg to 30 psi	VQ-68022-01	
0 to 30 psi	VQ-68022-02	
0 to 60 psi	VQ-68022-03	
0 to 100 psi	VQ-68022-04	
0 to 200 psi	VQ-68022-05	
0 to 600 psi	VQ-68022-06	
0 to 1000 psi	VQ-68022-07	
0 to 2000 psi	VQ-68022-08	
0 to 3000 psi	VQ-68022-09	



Range	Catalog number	Price
0.05 to 0.2" H ₂ O	VQ-68062-00	
0 to 0.25" H ₂ O	VQ-68062-02	
0 to 0.5" H ₂ O	VQ-68062-04	
0 to 1" H ₂ O	VQ-68062-06	
0 to 2" H ₂ O	VQ-68062-08	
0 to 5" H ₂ O	VQ-68062-10	

ASHCROFT



Range	Catalog number	Price
0 to 30" Hg	VQ-68334-01	
30" Hg to 30 psi	VQ-68334-03	
30" Hg to 60 psi	VQ-68334-05	
30" Hg to 100 psi	VQ-68334-07	
0 to 15 psi	VQ-68334-09	
0 to 30 psi	VQ-68334-11	
0 to 60 psi	VQ-68334-13	
0 to 100 psi	VQ-68334-15	
0 to 200 psi	VQ-68334-17	
0 to 300 psi	VQ-68334-19	
0 to 500 psi	VQ-68334-21	
0 to 750 psi	VQ-68334-23	
0 to 1000 psi	VQ-68334-25	
0 to 5000 psi	VQ-68334-27	
0 to 7500 psi	VQ-68334-29	
0 to 10,000 psi	VQ-68334-31	
0 to 20,000 psi	VQ-68334-33	

Cole-Parmer



Range	Catalog number	Price
Compound transmitters		
-14.7 to 0 psi	VQ-68075-00	
-14.7 to 15 psi	VQ-68075-02	
Gauge pressure transmitters		
0 to 5 psi	VQ-68075-10	
0 to 10 psi	VQ-68075-12	
0 to 25 psi	VQ-68075-14	
0 to 50 psi	VQ-68075-16	
0 to 100 psi	VQ-68075-18	
0 to 250 psi	VQ-68075-20	
0 to 1000 psi	VQ-68075-24	

GET CALIBRATED!

Ensure your instrument's accuracy by having it calibrated to NIST-traceable standards. Cole-Parmer partners with InnoCal®, an accredited metrology lab, to calibrate your product before it ships—with no delays!



Customer Approved

"I would buy this product again and again."



Maintain Temperature

From pocket thermometers to noncontact meters, you'll find the temperature instrument you need.

Find more at ColeParmer.com/Temperature

Precalibrated Infrared Thermometers

Easily locate hot and cold spots

- Reliable measurements—guaranteed! Precalibrated to NIST-traceable standards
- Get easy readings from a distance—just aim, pull trigger and read!
- Continuous scanning via trigger lock



Professional infrared thermometers

General-purpose infrared thermometers

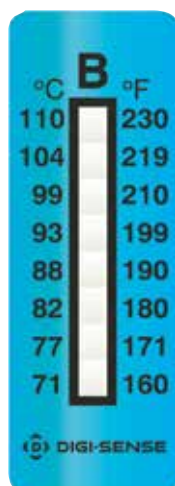


Description	General-purpose infrared thermometers			Professional infrared thermometers	
Catalog number	VQ-20250-04	VQ-20250-05	VQ-20250-06	VQ-20250-07	VQ-20250-08
Range (IR)	–4 to 630°F (–20 to 332°C)	–31 to 1000°F (–35 to 537°C)	–31 to 1472°F (–35 to 800°C)	–58 to 3002°F (–50 to 1650°C)	–58 to 3362°F (–50 to 1850°C)
Distance-to-sight ratio	10:1	12:1	20:1	30:1	50:1
Emissivity	0.95 fixed	0.10 to 1.0 adjustable			
USB interface	No	No			
Data logging	No	No			
Price	Yes, 100 internal reading				

Irreversible High-Temperature Labels

Verify temperature maintenance of product

- Self-adhesive design stays in place
- Easy to read—color change indicates temperatures that were reached
- Labels are irreversible—provides total temperature history



Temperature points	Dimensions (W x H)	Catalog number	Price/pk of 25*
Eight-point labels			
100, 105, 110, 115, 120, 130, 140, 150°F (37, 40, 43, 46, 49, 54, 60, 65°C)	¾" x 2" (19 x 51 mm)	VQ-08068-20†	
160, 170, 180, 190, 200, 210, 220, 230°F (71, 77, 82, 88, 93, 99, 104, 110°C)	¾" x 2" (19 x 51 mm)	VQ-08068-22	
240, 250, 260, 270, 280, 290, 300, 310°F (116, 121, 127, 132, 138, 143, 149, 154°C)	¾" x 2" (19 x 51 mm)	VQ-08068-24	
320, 330, 340, 350, 360, 370, 380, 390°F (160, 166, 171, 177, 182, 188, 193, 199°C)	¾" x 2" (19 x 51 mm)	VQ-08068-26	
Nine-point label			
400, 410, 420, 435, 450, 465, 480, 490, 500°F (204, 210, 216, 224, 232, 240, 249, 254, 260°C)	¾" x 2" (19 x 51 mm)	VQ-08068-28	
Eight- and nine-point label kit			
Contains five labels of each of the five types above		VQ-08068-90†	

*Discounts: Save 10% on 5–9 pks, 15% on 10–19 pks, 20% on 20+ pks.

†Note: Express shipping by air is required to prevent activation while in transit.

Digi-Sense® Single-Input Thermocouple Thermometers

Versatility and accuracy in a compact design

- Exclusive “3-way hands-free” operation—stand it, stick it, or hang it!
- Rugged armor withstands the toughest conditions
- Large illuminated display is easy to read, even in dim lighting
- Five-button control panel is simple to use

These robust and reliable meters work in any environment from the lab to the production floor. The sturdy armored construction protects against knocks and jars. All models are ergonomically designed for both large and small hands alike. The sealed keypad and ABS plastic case meet IP54 standards for splash resistance.



NEW

GET CALIBRATED!

Ensure your instrument's accuracy by having it calibrated to NIST-traceable standards. Cole-Parmer partners with InnoCal®, an accredited metrology lab, to calibrate your product before it ships—with no delays!



Type	Range	Catalog number	Price
J	–346 to 2192°F (–210 to 1200°C)	VQ-91428-00	
K	–418 to 2501°F (–250 to 1372°C)	VQ-91428-01	
T	–418 to 752°F (–250 to 400°C)	VQ-91428-02	

[VQ-35427-85](#) Optional “Hands-Free” kit

[VQ-17000-10](#) NIST-traceable calibration for meter only

[VQ-17002-10](#) NIST-traceable calibration for meter with probe

Add on these popular Thermocouple Probes

- Ergonomic, easy-to-grip glass-filled nylon handle provides maximum insulation and impact resistance
- Fingerstops prevent fingers from sliding
- Coiled 5-ft cord with strain relief spring protects from repeated flexing and tugging



Type	General-purpose probes (5"L)			Penetration probes (4"L)			Air/gas probes (8.5"L)			Surface probes (9.9"L)		
	Max temp	Cat. no.	Price	Max temp	Cat. no.	Price	Max temp	Cat. no.	Price	Max temp	Cat. no.	Price
J	1400°F (760°C)	VQ-08517-55		1400°F (760°C)	VQ-08517-65		1000°F (537°C)	VQ-08517-75		1200°F (649°C)	VQ-08517-60	
K	1652°F (900°C)	VQ-08516-55		1652°F (900°C)	VQ-08516-65		1000°F (537°C)	VQ-08516-75		1200°F (649°C)	VQ-08516-60	
T	752°F (400°C)	VQ-08500-55		752°F (400°C)	VQ-08500-65		1000°F (537°C)	VQ-08500-75		650°F (343°C)	VQ-08500-60	

Choose your temperature instrument

Labels and Crayons

Use to measure surface temperatures

Glass Thermometers

Liquid-filled thermometers for accurate, economical measurements

Bimetal Thermometers

Economical thermometers that require no power—simply read the measurement from the dial

Digital Indicators

Compact, easy-to-use thermometers for quick measurements

Thermocouple Meters

Versatile meters with a wide selection of probes, ideal for a variety of applications

Thermistor Meters

Thermistors exhibit a greater sensitivity and accuracy in the biological range—32 to 212°F (0 to 100°C)

Platinum RTD Meters

Provide excellent accuracy, stability, and repeatability over a wide temperature range

Infrared Thermometers

Noncontact meters provide fast response of surface temperatures

Thermal Imagers

Visually check surface temperatures and identify hot spots from a safe distance—thermal imagers display an image using different colors to represent different temperatures

Find them all at ColeParmer.com/Temperature

Electrochemistry Analysis

From pocket-sized testers to research-grade bench meters, find the water quality instrument you need.

Find more at ColeParmer.com/Electrochemistry

Waterproof pH Pocket Meters

Just dip and read!

- Ergonomically designed LCD means measurements can be seen at a glance
- Economically priced with long-life sensors
- Great for outdoor pH measurements in lakes and streams
- Use cap as a sample cup and as a stabilizing base

OAKLON®

Easy-to-operate testers feature intuitive interface, automatic buffer recognition, auto-off, a hold function, and automatic temperature compensation. Waterproof IP67-rated housing stands up to harsh environments. All testers include case, lanyard, and batteries.

EcoTestr™ pH2+ is the most economical option with a nonreplaceable single-junction sensor and convenient belt clip.

pHTestr® 30 features ± 0.01 pH accuracy—suitable for most ASTM and EPA test procedures—and a replaceable double-junction sensor.

pHTestr® 50 brings the performance of a lab instrument into the field. Features simple one-button calibration and a replaceable double-junction sensor.

pHTestr 50S features a rugged spear tip to penetrate soft and semisolid materials, and the slender tip fits into microtubes and test tubes. Replaceable double-junction sensor minimizes clogging and contamination.



EcoTestr pH2+

pHTestr 30

pHTestr 50

pHTestr 50S

Model	EcoTestr pH2+	pHTestr 30	pHTestr 50	pHTestr 50S
Catalog number	VQ-35423-01	VQ-35634-30	VQ-35634-15	VQ-35634-25
Range	0.0 to 14.0 pH	-1.00 to 15.00 pH	-1.00 to 15.00 pH	-1.00 to 15.00 pH
Resolution	0.1 pH	0.01 pH	0.01 pH	0.01 pH
Accuracy	± 0.1 pH	± 0.01 pH	± 0.01 pH	± 0.01 pH
Price				



pH 5+ and pH 6+ Meters

Get high accuracy at low prices

- Autobuffer recognition for up to five-point calibration provides ± 0.01 pH accuracy
- Take this compact unit anywhere
- Get pH and temperature readings at the push of a button
- Protect your unit with protective rubber boot that doubles as a stand

Meter includes ATC probe. Meter with probe adds pH electrode 59001-65. Meter kit adds “All-in-one” pH electrode, pH buffer solutions, sample bottles, rinse bottle, and carrying case.

Range	Model	Catalog number	Price	Precalibrated cat. no.	Price
pH 5+ meter					
	Meter only	VQ-35613-50		VQ-35613-51	
pH: 0.00 to 14.00	Meter with probe	VQ-35613-52		VQ-35613-53	
	Meter kit	VQ-35613-54		VQ-35613-55	
pH 6+ meter					
	Meter only	VQ-35613-20		VQ-35613-41	
pH: 0.00 to 14.00	Meter with probe	VQ-35613-22		VQ-35613-42	
mV: ± 1000 mV	Meter kit	VQ-35613-24		VQ-35613-44	



Benchtop pH and Ion Meter Kits

Perfect unit for just about every need

- Compact footprint conserves valuable benchtop space
- Extra-large LCD provides excellent visibility—even from a distance
- Convenient pull-out quick reference card keeps procedures handy at all times
- Automatic temperature compensation (ATC) maintains reading accuracy
- Five-point pH calibration and automatic buffer recognition for both USA and NIST pH buffers

The 700 Series is an economical choice for your basic lab measurements. The 2700 Series allows you to meet GLP/GMP requirements with time/date and calibration stamp for all stored data; it also features advanced data logging and alarm options. All kits come complete with meter, pH electrode, ATC probe, fill solution, electrode stand, and universal power adapter.

Model	Range	Catalog number	Price
pH 700	pH: -2.00 to 16.00	VQ-35419-10	
Ion 700	pH: -2.00 to 16.00 Ion: 0.01 to 2000 ppm	VQ-35419-20	
pH 2700	pH: -2.000 to 20.000	VQ-35420-20	
Ion 2700	pH: -2.000 to 20.000 Ion: 0.001 to 19999 ppm	VQ-35421-00	

Add on these indispensable pH Buffer Solutions

- Ensure testing accuracy of your pH meters
- Buffers for meters with 0.01 resolution are standardized against NIST-traceable pH references within 0.01 pH at 77°F (25°C)
- Solution pack contains commonly used solutions for calibration and electrode maintenance—save over 25% compared to ordering separately!

Description	Catalog number	Price
pH buffer solutions for meters with 0.01 resolution		
One 500-mL bottle of pH 4.01	VQ-00654-00	
One 500-mL bottle of pH 7.00	VQ-00654-04	
One 500-mL bottle of pH 10.00	VQ-00654-08	
Buffer assortment pack		
One 500-mL bottle each of buffers 4, 7, and 10	VQ-05942-10	
Solution pack		
One 500-mL bottle each of buffers pH 4.01, 7.00, and 10.00; cleaning solution; and storage solution	VQ-05942-15	



Customer Approved
“All you need for calibration and care!”



Call for larger sized bottles and cost-savings cases

Weighing Your Options?

Don't miss out on the widest selection of quality balances and scales.

Find more at ColeParmer.com/Balances



SpatulaBalance™ Spatula

Scoop and weigh simultaneously

- Scoop design eliminates spilling and is removable for easy cleaning
- Digital display on easy-to-grip handle
- Three position soft-touch keys let you tare, hold reading, and change units from grams to ounces



Customer Approved
“Great for the field.”

Cole-Parmer®



Weighing range	Readability	Spoon capacity	Catalog number	Price
0 to 300 g (0 to 10.5 oz)	0.1 g	32 mL (1 oz)	VQ-01019-11	

Square Weigh Boats

- Antistatic polystyrene material minimizes sample loss
- Rounded corners simplify transfer of powdered or granular samples



Size	Weigh capacity	White		Blue	
		Catalog number	Price/pk of 500	Catalog number	Price/pk of 500
Small, 1 5/8" x 5/16"	20 mL	VQ-01017-05		VQ-01017-07	
Medium, 3 1/2" x 1"	100 mL	VQ-01017-15		VQ-01017-17	
Large, 5 1/2" x 7/8"	330 mL	VQ-01017-25		VQ-01017-27	

Cal-Pak™ Calibration Mass Sets

Finest grade of stainless steel available

- Low magnetic susceptibility for less interference with weighing instruments
- Alloy 8 SS offers uniform consistency and high corrosion resistance for long-term mass accuracy
- Low cost of ownership—recalibration costs lower for three weights versus an entire set



Masses	Catalog number	Price
ASTM Class 1 mass sets with NVLAP certificate†		
50 g, 5 g, 2g	VQ-11967-05	
50 g, 5 g, 200 mg	VQ-11967-07	
100 g, 10 g, 2g	VQ-11967-02	
100 g, 10 g, 200 mg	VQ-11967-01	
100 g, 10 g, 20 mg	VQ-11967-11	
200 g, 20 g, 2 g	VQ-11967-09	
200 g, 20 g, 200 mg	VQ-11967-06	
500 g, 50 g, 2 g	VQ-11967-10	
500 g, 50 g, 200 mg	VQ-11967-15	
1 kg, 100 g, 20 g	VQ-11967-03	
1 kg, 100 g, 2 g	VQ-11967-12	
2 kg, 200 g, 20 g	VQ-11967-04	
2 kg, 200 g, 2 g	VQ-11967-08	
5 kg, 500 g, 20 g	VQ-11967-13	
5 kg, 500 g, 2 g	VQ-11967-16	
ASTM Class 0 mass sets with NVLAP certificate†		
2 g, 200 mg, 1 mg	VQ-11967-14	
5 g, 500 mg, 1 mg	VQ-11967-17	
500 g, 50 g, 20 mg	VQ-11967-18	

†Troemner is accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code 105013-0.

Exclusive Laboratory Balances

Quality features at a remarkable price

Symmetry EC Toploading

- Perfect for your routine weighing applications requiring accuracy and traceability for GLP requirements
- Features include a print function, RS-232 interface, and capacity tracker
- Internal rechargeable battery allows convenient portability

Symmetry PT Toploading and PA Analytical Balances

- Fast stabilization and response time
- Digital filters compensate for vibration, drafts, or temperature changes
- Clearer viewing of results with oversized backlit LCD
- Maintain GLP/GMP compliance via USB and RS-232 interfaces to computer or printer

Symmetry MB Moisture Determination

- No need to monitor sample—auto test does the work for you
- Don't reprogram—stores test procedures for easy recall
- No need to change screens—displays temperature, time, and moisture simultaneously
- Measures what you need—grams, % moisture, % solids, % moisture vs dry weight, and % solid vs dry weight

Customer Approved

“Been very happy on this choice.”



Symmetry EC

Symmetry MB

Capacity	Readability	Cat. no. (115 VAC)	Price
Symmetry EC Toploading			
100 g	0.001 g	VQ-20000-32	
400 g	0.01 g	VQ-20000-36	
800 g	0.01 g	VQ-20000-38	
2000 g	0.1 g	VQ-20000-42	
4000 g	0.1 g	VQ-20000-44	
Symmetry PT Toploading			
210 g	0.001 g	VQ-10001-10	
410 g	0.001 g	VQ-10001-11	
2200 g	0.01 g	VQ-10001-12	
4200 g	0.01 g	VQ-10001-13	
Symmetry PA Precision Analytical			
120 g	0.0001 g	VQ-10001-08	
220 g	0.0001 g	VQ-10001-09	
Symmetry MB Moisture Determination			
40 g	0.001 g	VQ-11124-06	

[VQ-17101-52](#) NIST-traceable calibration for balances

Cole-Parmer® Symmetry® Touch-Screen Balances

Better weighing with just a touch

- 5" color capacitive touch-screen display provides clear visibility to weighing results and menu options
- Go touchless—IR proximity sensors offer programmable touch-free control
- Statistics working mode quickly analyzes data from series of measurements
- Enhanced features include autotest GLP function and internal calibration
- USB, RS-232, Ethernet, and Wi-Fi interfaces offer secure connection with peripheral devices
- Industry-leading 5-year warranty



NEW

Capacity	Readability	Cat. no.	Price
TT toploading balances			
360 g		VQ-10102-04	
600 g	0.001 g	VQ-10102-05	
1000 g		VQ-10102-06	
2100 g		VQ-10102-07	
4500 g	0.01 g	VQ-10102-08	
6000 g		VQ-10102-09	
10,100 g		VQ-10102-10	
TA analytical balances			
82/220 g	0.00001/0.0001 g	VQ-10102-00	
160 g		VQ-10102-01	
220 g	0.0001 g	VQ-10102-02	
310 g		VQ-10102-03	

Heating & Cooling Experts

From utility baths to specialty solutions, find the heating & cooling equipment you need.

Find more at ColeParmer.com/Baths

Economical Digital Utility Water Baths

Easy setting and repeatability

- Recall settings at the touch of a button
- Know when process is complete with built-in timer
- Dual thermostat baths provide $\pm 0.1^\circ\text{C}$ precision from 5°C above ambient to 100°C
- Hinged polycarbonate lid allows condensation to flow back



StableTemp

Bath capacity	Bath opening (L x W)	Power	Catalog number	Price
2 L	3 $\frac{7}{8}$ " x 4 $\frac{1}{16}$ " (9.9 x 10.9 cm)	120 VAC, 60 Hz	VQ-14576-00	
5 L	5" x 10 $\frac{1}{16}$ " (12.7 x 27.4 cm)		VQ-14576-04	
10 L	10 $\frac{5}{8}$ " x 11 $\frac{1}{8}$ " (26.9 x 29.5 cm)		VQ-14576-08	
20 L	9 $\frac{1}{2}$ " x 17 $\frac{1}{2}$ " (24.2 x 44.5 cm)		VQ-14576-12	
28 L	9 $\frac{1}{2}$ " x 17 $\frac{1}{2}$ " (24.2 x 44.5 cm)		VQ-14576-16	

polystat®

Cooling/Heating Recirculators

Save time with quick ramp up and cool-down

- Don't lose valuable bench space—powerful unit in a compact design
- Internal circulating tank design was built to minimize fluid evaporation
- Easy cooling for smaller instruments, jacketed reactors, and rotary evaporators
- Reliable, robust system maintains temperature to $\pm 0.1^\circ\text{C}$ from -10 to 80°C

Cooling capacity at 20°C	Pump type	Flow rate (L/min)	Power (VAC, Hz)	Catalog number	Price
250 W	Force	17	115, 60	VQ-13042-01	
			230, 50	VQ-13042-03	
250 W	Force/suction	21	115, 60	VQ-13042-05	
			230, 50	VQ-13042-07	
500 W	Force	17	115, 60	VQ-13042-17	
			230, 50	VQ-13042-19	
500 W	Force/suction	21	115, 60	VQ-13042-21	
			230, 50	VQ-13042-23	





StableTemp



Cole-Parmer®

Stirrers and Stirring Hot Plates

Precision control ensures accurate, repeatable results

- Don't worry about spills—raised display diverts liquids away from critical components
- Advanced models offer programming and improved for advanced applications

Dimensions	Material	100 to 120 VAC		230 VAC	
		Catalog number	Price	Catalog number	Price
Stirrers					
4¼" x 4¼" (10.8 x 10.8 cm)	Ceramic	VQ-03406-01		VQ-03406-06	
7¼" x 7¼" (18.4 x 18.4 cm)	Ceramic	VQ-03406-11		VQ-03406-16	
10¼" x 10¼" (26 x 26 cm)	Ceramic	VQ-03406-31		VQ-03406-36	
Stirring hot plates					
4¼" x 4¼" (10.8 x 10.8 cm)	Ceramic	VQ-03407-01		VQ-03407-06	
7¼" x 7¼" (18.4 x 18.4 cm)	Ceramic	VQ-03407-11		VQ-03407-16	
10¼" x 10¼" (26 x 26 cm)	Ceramic	VQ-03407-31		VQ-03407-36	
Advanced stirrer					
7¼" x 7¼" (18.4 x 18.4 cm)	Ceramic	VQ-03406-41		VQ-03406-46	
Advanced stirring hot plate					
7¼" x 7¼" (18.4 x 18.4 cm)	Ceramic	VQ-03407-41		VQ-03407-46	

Stirrers and Stirring Hot Plates

Reduce clutter in your workspace with space-saving design

- Be safe—flashing light warns when top plate is hot (above 50°C), even when unplugged
- Unique housing allows legs of a support stand to slide underneath
- Conveniently store unit on its side—minimize storage space needed

Dimensions	Material	120 VAC		230 VAC	
		Catalog number	Price	Catalog number	Price
Analog stirrers					
6" x 6"	Ceramic	VQ-04801-50		VQ-04801-52	
(15 x 15 cm)	Stainless steel	VQ-04801-54		VQ-04801-56	
Advanced analog stirring hot plates					
6" x 6"	Ceramic	VQ-04801-60		VQ-04801-62	
(15 x 15 cm)	Coated aluminum	VQ-04801-65		VQ-04801-67	
Advanced digital stirring hot plates					
6" x 6"	Ceramic	VQ-04801-64		VQ-04801-66	
(15 x 15 cm)	Coated aluminum	VQ-04801-68		VQ-04801-70	

Add on these Laboratory Must-Haves

Mono-Mold® Stir Bars

- Super-strong alnico V magnets remain coupled to drive magnets—resisting “spin out” at high speeds
- Chemically inert, low-friction, leakproof PTFE coating provides smooth spinning and maximum energy transfer
- Spinning ring minimizes contact area between stir bar and vessel, reducing friction and noise

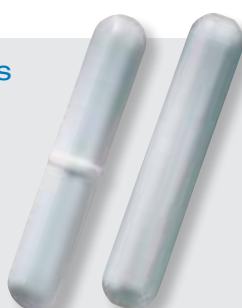
Size Length	Diameter†	With spinning ring		Without spinning ring	
		Cat. no.	Price	Cat. no.	Price
7/16" (11.1 mm)	3/16" (4.8 mm)	—	—	VQ-04775-10	
1/2" (12.7 mm)	5/16" (7.9 mm)	VQ-08548-00		VQ-04770-20	
5/8" (15.9 mm)	5/16" (7.9 mm)	VQ-08549-00		VQ-04770-30	
1" (25.4 mm)	3/8" (9.5 mm)	VQ-08550-00		VQ-04770-40	
1½" (38.1 mm)	3/8" (9.5 mm)	VQ-08551-00		VQ-04770-50	
2" (50.8 mm)	3/8" (9.5 mm)	VQ-08552-00		VQ-04770-60	
2½" (63.5 mm)	3/8" (9.5 mm)	VQ-04775-75		—	—
2½" (63.5 mm)	1/2" (12.7 mm)	—	—	VQ-04770-70	
3" (76.2 mm)	1/2" (12.7 mm)	VQ-04612-30		VQ-04612-40	

†Diameter given does not include the diameter of the spinning ring.

Stir Bar Retrievers

- Recover your stir bars without messy spills or glass breakage
- Alnico V magnet is completely enclosed
- Flexible shaft model 08555-20 is perfect for odd-shaped vessels

Description	Catalog number	Price
Flexible shaft, PTFE; 14¾" (37.5 cm) L	VQ-08555-20	
Rigid shaft, PE; 17" (43.2 cm) L	VQ-08555-40	



Life Science Solutions

Equipment and consumables for research and production.

Find more at ColeParmer.com/LifeScience



 **Cole-Parmer®**

Multipurpose Refrigerated Centrifuges

Powerful cooling protects your temperature-sensitive samples

- Pulse feature lets you perform very short runs to 90 seconds, perfect for fast pelleting
- Programmable memory allows quick access to routine tests—ideal for multiple users
- Advanced lid design for added safety: multipoint lock and gas struts, emergency release during power failure, and barrier ring to protect the chamber

Basic MPR16 model features bright blue LED displays indicating temperature, rpm, and time. Programmable memory supports ten programs including acceleration and deceleration rates, allowing you to quickly perform routine tasks.

Advanced MPR115 model is ideal for your research needs, offering reliable and repeatable separations. Large intuitive touch-screen LCD is simple to navigate, saving you time in the lab. Programmable memory supports 108 programs including acceleration and deceleration rates for routine tasks, or use the W2t functionality normally found only on ultracentrifuges.

Max speed (rpm)	Max RCF x g	Max capacity	110 VAC, 60 Hz		230 VAC, 50 Hz	
			Catalog number	Price	Catalog number	Price
MPR16 with fixed-angle rotor (17406-09)						
6000	4800	1 L	VQ-17406-20		VQ-17406-25	
MPR115 bundle with fixed-angle rotor (17406-13) and swing-out rotor (17406-11) with buckets and adapters						
15,000	22,000	1 L	VQ-17406-18		VQ-17406-19	

Products for Life Science applications

Animal Physiology
Balances
Baths & Circulators
Beakers
Centrifuges
Chemicals
Chromatography

Clamps & Supports
Cryogenics
Dialysis
Dishes
Electrophoresis
Electroporation
Fermentation

Filtration
Fittings
Flowmeters
Freeze Dryers
Glassware
Glove Boxes
Gloves
Histology

Homogenizers
Hoods
Incubators
Microbiology
Microplates & Readers
Microscopes
Mixers

PCR/Molecular Biology
pH Measurement
Pipettes & Pipettors
Pumps
Refrigeration
Safety Products

Shakers
Spectroscopy
Sterilizers
Stirrers & Hot Plates
Syringes
Tissue & Cell Culture

Tubes
Tubing
Ultrasonic Cleaners
UV Equipment
Vials
Water Purification

Find them all at ColeParmer.com/LifeScience

Single-Channel Electronic Pipettors

Save time on routine tasks

- Program up to six presets with function, volume, speed, and number of dispenses
- Nine pipetting functions cover common and specialized pipetting applications
- Adjust brightness and background on large color display to suit any lighting condition



Volume (μL)	Increments	Catalog number	Price
0.2 to 10	0.01 μL	VQ-24500-01	
5 to 100	0.1 μL	VQ-24500-02	
20 to 300	0.5 μL	VQ-24500-03	
50 to 1200	1 μL	VQ-24500-04	
500 to 5000	5 μL	VQ-24500-05	
1000 to 10,000	10 μL	VQ-24500-06	

Tips, Polypropylene

Volume (μL)	Pack description	Catalog number	Price
0.1 to 10	Bag of 1000	VQ-25711-49	
	10 racks of 96	VQ-25711-51	
	10 racks of 96, sterile	VQ-25711-53	
	10 racks of 96, sterile, filtered	VQ-25711-55	
	Bag of 1000	VQ-25711-57	
1 to 200	10 racks of 96	VQ-25711-59	
	10 racks of 96, sterile	VQ-25711-61	
	10 racks of 96, sterile, filtered	VQ-25711-65	
	Bag of 1000	VQ-25711-71	
1000 to 5000	Bag of 500	VQ-25711-73	
	Bag of 1000	VQ-25711-86	
1000 to 10,000	10 racks of 96	VQ-25711-67	
	10 racks of 96, sterile	VQ-25711-68	
	10 racks of 96, sterile, filtered	VQ-25711-69	

Disposable Inoculation Loops and Needles

Eliminate cross-contamination

- Loops ensure uniform streaking without damaging your gel surface
- Straight needles are ideal for picking single colonies
- Color coding identifies inoculation volume easily
- Packed sterile in tamperproof resealable bags, supplied with a quality certificate confirming sterility and accuracy; also available individually packaged



Description	Contained volume	Color	Catalog number	Qty/bag	Qty/cs	Price/cs
Needle	—	White	VQ-06231-09	25	1000	
Loop	1 μL	Blue	VQ-06231-02	25	1000	
	10 μL	Yellow	VQ-06231-04	25	1000	

CELLTREAT® Multiwell Tissue Culture Plates

Alphanumeric markings make well identification easy

- Select from treated tissue culture plates with a hydrophilic surface that is ideal for cell attachment or untreated plates that are ideal for suspensions
- Raised well rim nests in lid to reduce evaporation and minimize cross-contamination
- Sterile, individually packaged; includes lid

Multiwell Plates with Treated Surface

Number of wells	Cell growth area	Well shape	Catalog number	Qty/cs	Price/cs
6	9.60 cm ²	Flat	VQ-01959-01	50	
12	3.85 cm ²	Flat	VQ-01959-03	50	
24	1.93 cm ²	Flat	VQ-01959-05	50	
48	0.84 cm ²	Flat	VQ-01959-07	50	
96	0.33 cm ²	Flat	VQ-01959-11	50	
96	0.33 cm ²	Round	VQ-01959-09	100	

Multiwell Plates with Untreated Surface

Number of wells	Working volume	Well shape	Catalog number	Qty/cs	Price/cs
6	2 to 8 mL	Flat	VQ-01959-29	100	
12	2 to 4 mL	Flat	VQ-01931-13	100	
24	0.5 to 1.5 mL	Flat	VQ-01931-15	100	
48	0.3 to 1 mL	Flat	VQ-01959-15	100	
96	50 to 300 μL	Round	VQ-01959-21	100	
96	50 to 300 μL	Flat	VQ-01959-27	100	

Slideable Sterile Petri Dish

Easily slide a single dish from a large stack

- Ventilation ribs reduce condensation and allow air circulation
- Partial edge ring on base allows a single dish to be slid from a large stack and enhances stability when stacked
- Consistent flatness provides for even media distribution



Dia x H (mm)	Working volume	Cell growth area	Packaging	Catalog number	Qty/cs	Price/cs
100 x 15	15 to 16 mL	55 cm ²	20/bag	VQ-01932-31	500	

Lab Supplies

From beakers to vials, our selection of supplies and consumables won't disappoint. Plus, with quantity discounts, the more you buy, the more you save!

Find more at ColeParmer.com/Labware



CHEMICAL COMPATIBILITY

Can't decide on the right material for your sample? No worries—we make it as easy as 1, 2, 3 with our Chemical Compatibility Chart. Go to ColeParmer.com/ChemChart.

Precleaned EPA Glass Sample Containers

No contaminants—precleaned, ready to use

- Include certificate of conformance to US EPA specifications
- Identify samples easier with included labels (unattached)
- Bottles, Jars, and Jugs (A–D) include PTFE-lined caps; Septa Jars (E) include PTFE-lined silicone septa bonded to open-top caps

Capacity mL (oz)	Catalog number	Qty/ cs	Price/ cs
A Clear wide-mouth glass jars			
60 (2)	VQ-99540-40	24	
125 (4)	VQ-99540-41	24	
250 (8)	VQ-99540-42	12	
500 (16)	VQ-99540-43	12	
950 (32)	VQ-99540-44	12	
B Amber narrow-mouth glass bottles			
125 (4)	VQ-99540-30	24	
250 (8)	VQ-99540-31	12	
500 (16)	VQ-99540-32	12	
1000 (34)	VQ-99540-33	12	
C Amber wide-mouth glass bottles			
125 (4)	VQ-99540-51	12	
250 (8)	VQ-99540-53	12	
500 (16)	VQ-99540-55	12	
950 (32)	VQ-99540-57	12	
D Amber narrow-mouth glass jugs			
2500 (80)	VQ-99540-34	6	
4000 (135)	VQ-99540-35	4	
E Clear wide-mouth glass septa jars			
60 (2)	VQ-99540-20	24	
125 (4)	VQ-99540-21	24	

Cole-Parmer® Brand Labware

Stock up and save—buy in bulk and save up to 20%

Tri-Corner Beakers

- Easy pouring from three sides
- Easily mix on stirrer—flat bottom keeps stir bars centered
- Accurate to $\pm 5\%$; molded graduations
- Withstand temperatures to 250°F (121°C)
- Autoclavable



Disposable Lab Containers

- No more wasted space—containers stack easily
- Durable for longer use—stand up to boiling, freezing, and most chemicals
- Know what's inside—translucent containers come with tight-fitting lids



Capacity mL (oz)	Catalog number	Qty/ pk	Price/ pk	Save 10% 6-29 pks
50 (1.5)	VQ-06020-01	100		
100 (3.5)	VQ-06020-03	100		
250 (8)	VQ-06020-05	100		
400 (13)	VQ-06020-07	100		
800 (26)	VQ-06020-09	100		
1000 (32)	VQ-06020-11	100		
Five of each above	VQ-06010-07	30		

Capacity mL (oz)	Catalog number	Qty/ pk	Price/ pk	Save 10% 6-29 pks
120 (4)	VQ-06727-00	250		
240 (8)	VQ-06727-10	250		
480 (16)	VQ-06727-20	100		
960 (32)	VQ-06727-30	100		
2000 (64)	VQ-06727-35	50		
2500 (83)	VQ-06727-42	25		
5000 (170)	VQ-06727-50	25		

Economical Graduated Carboys

- Sturdy, octagonal design for added rigidity
- Easier filling and pouring with offset neck
- Leakproof spigot models have tube fitting for easier filling of containers
- Polypropylene closure reduces evaporation
- Autoclavable



Graduated Cylinders

- Molded graduations will not wear off
- Cylinders are calibrated “to contain”
- Polypropylene (PP) cylinders offer very good chemical resistance; transparent polymethylpentene (PMP) cylinders offer good chemical and heat resistance
- Meet ISO Standard 6706



Liters (gallons)	Catalog number	Qty/ pk	Price/ pk	Save 10% 6-29 pks
Heavy-duty carboys with shoulder handle				
5 (1¼)	VQ-62507-00	1		
10 (2½)	VQ-62507-10	1		
20 (5¼)	VQ-62507-20	1		
Heavy-duty carboys with shoulder handle and spigot				
5 (1¼)	VQ-62507-05	1		
10 (2½)	VQ-62507-15	1		
20 (5¼)	VQ-62507-25	1		

Capacity (mL)	Graduations	PP cylinders		PMP cylinders	
		Catalog number	Price/ pk of 1	Catalog number	Price/ pk of 1
10	0.2	VQ-06137-70		VQ-06137-50	
25	0.5	VQ-06137-72		VQ-06137-52	
50	1.0	VQ-06137-74		VQ-06137-54	
100	1.0	VQ-06137-76		VQ-06137-56	
250	2.0	VQ-06137-78		VQ-06137-58	
500	5.0	VQ-06137-80		VQ-06137-60	
1000	10.0	VQ-06137-82		VQ-06137-62	
2000	20.0	VQ-06137-84		VQ-06137-64	

Safety Matters

From PPE to safety instruments,
we've got you covered.

Find more at ColeParmer.com/Safety

Eye Protection

Glasses, goggles,
and face shields
from industry
leaders



Eyewashes

Plan for
unexpected
emergencies



Gas Detectors

Ensure your
environment
is safe



Gloves

From
disposable
to reusable,
keep your
hands safe in
any application



ThinTouch™ Nitrile Gloves

Soft feel and textured for better grip

- Specially formulated for enhanced tactile sensitivity
- Higher tensile strength for puncture and tear resistance
- Ergonomic design for user comfort—powder-free, ambidextrous

Size	Length	Thickness	1 box of 100		10 boxes of 100	
			Cat. no.	Price	Cat. no.	Price
Small	9½" (24 cm)	4.0 mil	VQ-15954-42		VQ-15954-24	
Medium			VQ-15954-43		VQ-15954-25	
Large			VQ-15954-44		VQ-15954-26	
X-large			VQ-15954-45		VQ-15954-46	

Add on a handy Glove Dispenser

- Hold one or two boxes
of disposable gloves
- Place on benchtop or
mount on wall



Description	Catalog number	Price
Single glove dispenser	VQ-63528-00	
Double glove dispenser	VQ-63528-02	



Universal Plus™ Spill Pads

Chemically inert sorbent is ideal for hazardous materials cleanup

- Built strong—withstand aggressive chemical cleanup
- Absorb 16 times their weight in chemicals, water, or oil
- Convenient pad format for placement anywhere you need it



Sorbent size	Absorption capacity/cs	Catalog number	Qty/cs	Price/cs
11" x 13" pad (27.9 x 33 cm)	21 gal.	VQ-86337-15	200	

Unisex Poly-Cotton Lab Coats

Lightweight, comfortable protection

- Stain-resistant
65% polyester/35% cotton poplin
- Easy pant pocket access through convenient side slits
- Keep pens and supplies at hand with three spacious pockets



META

Unisex size	White		Light blue		Navy blue	
	Cat. no.	Price	Cat. no.	Price	Cat. no.	Price
M (36–40)	VQ-10503-04		VQ-10505-04		VQ-10504-04	
L (42–44)	VQ-10503-05		VQ-10505-05		VQ-10504-05	
XL (46–48)	VQ-10503-06		VQ-10505-06		VQ-10504-06	
XXL (50–52)	VQ-10503-07		VQ-10505-07		VQ-10504-07	
XXXL (54–56)	VQ-10503-08		VQ-10505-08		VQ-10504-08	

Discounts: Save 10% on 6–11 coats; 15% on 12–23 coats; 20% on 24+ coats.

Hearing Protection

Protect your ears—keep the noise down!



Lockout / Tagout

Tags, hasps, and more help you stay in compliance



Safety Signs

Warn workers of potential hazards



Sound Meters / Dosimeters

Monitor work environments and individual worker exposure



Magnum™ 3G Glasses

Adjustable temples for a secure fit

- Ribbed, nonslip rubber nose-piece for all-day comfort
- ANSI Z87.1+ (High impact) compliant



Frame color	Lens	Catalog number	Price per pair	
			1 pr	10 pr
Magnum™ safety glasses (standard fit)				
Black	Clear	VQ-86285-00		
	Fog-free clear	VQ-86285-01		
Magnum Elite™ safety glasses (standard fit)				
Platinum	Clear	VQ-86285-10		
Mini-Magnum™ safety glasses (smaller fit)				
Black	Clear	VQ-86286-00		

Add on a handy Safety Eyewear Organizer

- Keep glasses within easy reach
- Separate compartments prevent scratching
- Label compartments for individual users
- Place where you need it—can be placed on table or wall mounted



Capacity	Dimensions (W x H x D)		Catalog number	Price
	in.	cm		
12 pair	12¼ x 9¼ x 6¾	31.1 x 23.5 x 17.1	VQ-86307-00	
20 pair	15¼ x 12¼ x 6¾	38.7 x 31.1 x 17.1	VQ-86307-05	



625 East Bunker Court
Vernon Hills, IL 60061-1844

Phone: 1-800-323-4340

Fax: 1-847-247-2929

E-mail: info@coleparmer.com

www.coleparmer.com

CHANGE SERVICE REQUESTED

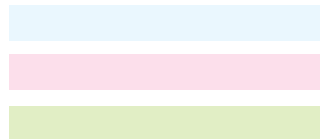


- ✓ Correct this address
- ✓ Unsubscribe from future mailings
- ✓ Remove name gone from organization

Simply go to www.wastefreemail.com and enter code from green box below left or fax this cover to 571-970-6072

Presorted Standard
U.S. Postage
PAID
Cole-Parmer
Instrument Company

Printed in U.S.A.



4474B

FREE Expert Technical Assistance—
Every Day! Call • E-mail • Chat Live

The industry's best testers, now even better!

- Easy-to-navigate interface for quick setup and calibration
- Leakproof, stabilizing cap: use to calibrate, stand upright, and store sensor
- Waterproof, IP67 rated



Oakton®
Pocket Testers
See page 20

OAKTON®

Stock up and **\$ave**

Save up to **20%** on
labware and supplies

See pages
28–29



Better weighing with just a touch

- Touch-screen display provides clear visibility to weighing results and menu options
- Go touchless—IR proximity sensors offer programmable touch-free control
- USB, RS-232, Ethernet, and Wi-Fi interfaces offer secure connection with peripheral devices

Cole-Parmer® Symmetry®
Touch-Screen Balances

See page 23

