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TECHNOLOGY GROUP

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Find the *Cole-Parmer 12122-36* at our website: *Click HERE*





Cole-Parmer®

polystat®

Circulating Baths



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polystat® Circulating Baths

Quality Circulating Baths Provide Accurate, Dependable Results—Whatever Your Need

Cole-Parmer® PolyStat® heating and cooling circulating baths are available in multiple configurations to deliver the ideal combination of precision, versatility, and repeatability for your requirements. The next generation of circulating baths feature touch-pad setting, making it easier to adjust the temperature to your requirements. Enhanced controller and temperature sensor ensure accurate and repeatable readings. In addition to circulating baths, the PolyStat line includes immersion circulators that make it easy to convert any water bath into a circulating bath.

Units are available to accommodate common lab applications, including sample preparation. Other typical uses are:

Immersion/Submersion Cooling/Heating

- Beakers,flasks, etc.
- DNA curves
- Calibration

Equipment Cooling/ Heating

- Refractometers
- Spectrophotometers
- Electrophoresis
- Rotary evaporators

External Apparatus Cooling/Heating

- Calibration
- Kinetics research
- Distillation



Guarantee Accurate Results and Repeatability

Unlike still baths, constant circulation systems deliver uniform temperature control to improve stability. Still baths tend to heat from the sides and bottom, causing fluid near the heating element to be warmer than that in the center. Circulating baths continuously move the fluid, making sure there are no variations in the temperature. Eliminating temperature variation with the use of PolyStat circulating baths ensures that your work can be repeated accurately each and every time. Plus the digital display allows you to continuously monitor fluid temperature.



Gain More Functionality from a Single Circulating Bath

Versatile PolyStat circulators offer you more options than still baths, including the ability to cool or heat external applications. The ¼" rear fittings allow you to connect tubing so cooled/heated fluid can be pumped to your external applications, such as a rotary evaporator. If your cooling and heating needs are varied, these circulating baths are a great choice. You can also accomplish more work with a single unit, saving valuable space in the lab.

Tackle Even Demanding Lab Applications

Built with strong industrial-grade pumps, robust refrigeration systems, and powerful heaters, these circulating baths are an excellent choice for even the most demanding applications. Cool fluids from +20°C to –20°C in as little as 50 minutes, and heat fluids from +20°C to +80°C in as little as 50 minutes. Constructed of durable materials, including 304L stainless steel, the circulatoring baths are designed for years of use. Small footprint design maximizes valuable bench space.

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Choose the Controller that Delivers the Best Value for Your Requirements

Available in bath capacities of 6, 13, or 28 liters, these baths are suited for any job. Choose the bath size that is right for you, then choose from three different controller types, (listed below). Whether you need control for less demanding applications with few temperature fluctuations, or more sophisticated options for complex temperature control, we offer a controller that will meet your needs.



Digital controller

Digital controller for routine temperature control

Features include:

- Adjustable PID (proportional, integral, and derivative) controller—adjusts automatically to correct any deviation from set point
- Single-line LCD
- Temperature stability of ±0.05°C
- Selectable temperature display in °C or °F with resolution of 0.1°
- Overtemperature and low-level cutoffs with visual alarms
- Moisture-tight seamless keypad



Advanced digital controller

Advanced digital controller for greater precision

Same great features as the digital controller, PLUS:

- Expanded temperature range (varies depending on model)
- Two-line LCD shows both set point and actual fluid temperature
- Temperature stability of ±0.01°C
- Selectable temperature display in °C, °F, or °U (user defined) with improved resolution of 0.1° or 0.01°
- Overtemperature and low-level cutoffs with audible and visual alarms
- RS-232 interface



Programmable controller

Programmable controller for automation and remote operation

Same great features as the advanced digital controller, PLUS:

- Multistep programming with varying set point intervals
- Remote temperature control of external systems

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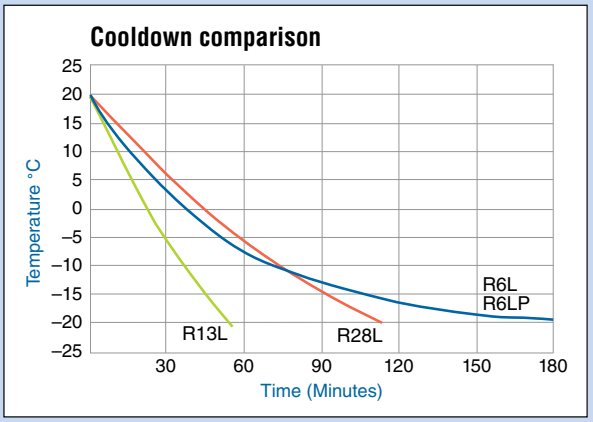
polystat® Cooling/Heating Circulating Baths

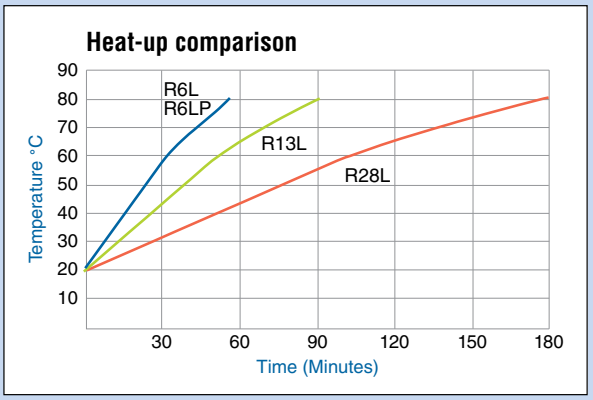
- High cooling capacities
- Durable construction
- Excellent temperature stability

Twelve different models allow you to choose the perfect unit for your application. Choose between 6-, 13-, and 28-liter (1.5-, 3.3-, and 7.4-gallon) models. Then decide which controller suits your needs; see details on page 3. The low-profile model (R6LP) allows easy bath access when lab counter heights present a challenge.

The seamless-drawn tank is made of 304L stainless steel for durability, fluid compatibility, and easy cleaning. With an oversized refrigeration system, these baths ensure samples and applications are cooled quickly and efficiently. The fine-tuned refrigeration monitoring system allows for excellent temperature stability, even during changing demands.

Time-to-Temperature Curves





Temperatures were obtained using a fluid with a specific heat of 0.5.



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Performance Specifications

2 year warranty

Model		R6L		R6LP		R13L		R28L	
Description		6-liter cooling/heating circulating bath		6-liter cooling/heating low-profile circulating bath		13-liter cooling/heating circulating bath		28-liter cooling/heating circulating bath	
Reservoir volume		6 liters (1.5 gallons)		6 liters (1.5 gallons)		13 liters (3.3 gallons)		28 liters (7.4 gallons)	
Temperature range[1,2]	Digital	–20 to 150°C		–20 to 150°C		–30 to 150°C		–25 to 100°C	
	Advanced digital	–20 to 200°C		–20 to 200°C		–30 to 200°C		–25 to 100°C	
	Programmable	–20 to 200°C		–20 to 200°C		–30 to 200°C		–25 to 100°C	
Stability[3]	Digital	±0.05°C		±0.05°C		±0.05°C		±0.05°C	
	Advanced digital	±0.01°C		±0.01°C		±0.01°C		±0.01°C	
	Programmable	±0.01°C		±0.01°C		±0.01°C		±0.01°C	
Work area dimensions		8"W x 6"H x 5¼" D (20 x 15 x 13 cm)		8"W x 6"H x 5¼"D (20 x 15 x 13 cm)		9"W x 8"H x 5¼"D (23 x 20 x 13 cm)		11¼"W x 8"H x 11½"D (29 x 20 x 29 cm)	
Overall dimensions		10"W x 21½"H x 15¾"D (25 x 55 x 40 cm)		18¾"W x 15⅝"H x 15¾"D (48 x 40 x 40 cm)		15"W x 26⅛"H x 17⅝"D (38 x 66 x 45 cm)		27½"W x 18⅝"H x 22"D (70 x 47 x 56 cm)	
Shipping weight[4]		79 lb (36 kg)		70 lb (32 kg)		112 lb (51 kg)		162 lb (73 kg)	
Heater		800 W	1000 W	800 W	1000 W	800 W	1000 W	800 W	1000 W
Cooling capacity[5]	At +20°C	350 W	290 W	350 W	290 W	660 W	545 W	700 W	580 W
	At 0°C	120 W	100 W	190 W	175 W	480 W	400 W	450 W	370 W
	At –10°C	90 W	75 W	90 W	85 W	—	—	—	—
	At –20°C	—	—	—	—	200 W	165 W	175 W	145 W
Refrigerant		R134A		R134A		R404A		R404A	
Pumping capacity[6]		15 L/min at 0 psig	12 L/min at 0 psig	15 L/min at 0 psig	12 L/min at 0 psig	15 L/min at 0 psig	12 L/min at 0 psig	15 L/min at 0 psig	12 L/min at 0 psig
Drain valve		No		No		Yes		Yes	
Electrical requirements		115 VAC, 60 Hz	230 VAC, 50 Hz	115 VAC, 60 Hz	230 VAC, 50 Hz	115 VAC, 60 Hz	230 VAC, 50 Hz	115 VAC, 60 Hz	230 VAC, 50 Hz
		15 amps	10 amps	15 amps	10 amps	20 amps	16 amps	20 amps	16 amps
Digital controller	**Catalog number**	MK-12122-00	MK-12122-05	MK-12123-00	MK-12123-05	MK-12122-30	MK-12122-35	MK-12122-60	MK-12122-65
Advanced digital controller	**Catalog number**	MK-12122-10	MK-12122-15	MK-12123-10	MK-12123-15	MK-12122-40	MK-12122-45	MK-12122-70	MK-12122-75
Programmable controller	**Catalog number**	MK-12122-20	MK-12122-25	MK-12123-20	MK-12123-25	MK-12122-50	MK-12122-55	MK-12122-80	MK-12122-85

1. Low-end temperatures and cooling capacities achieved using a fluid with a specific gravity of 0.5.
2. System does not offer full range cooling. Cooling system engages for set points below 35°C.
3. Stability is measured at fluid temperature of 20°C, ambient of 20°C, with water as the fluid and not in maximum cooling mode.
4. R28L shipping weight includes 23-lb skid.
5. 20°C heat load data taken in maximum cooling mode.
6. Pumping capacity for units operating at fluid temperature of 20°C, ambient of 21°C, with water as the fluid.

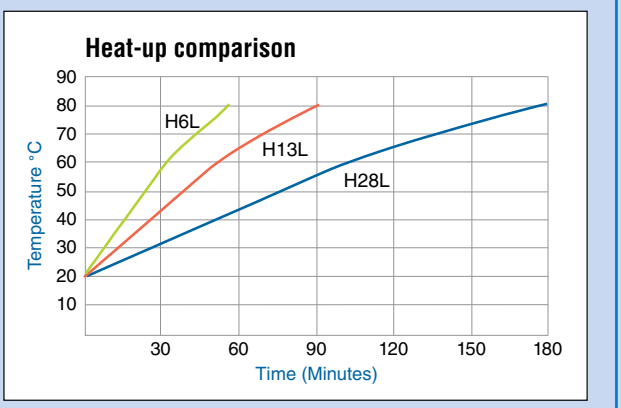
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polystat® Heated Circulating Baths

- Heat to 200°C
- Powerful 800 to 1000 W heaters
- Rugged, 304L stainless steel baths

These heated circulating baths feature a long-life, high-wattage heater that delivers rapid fluid heatup and ensures fluid compatibility—even during temperature fluctuations. The overtemperature and low reservoir level cutoffs protect samples and unit from damage. Nine different configurations help make sure you get the unit best suited to your needs. Choose between 6-, 13-, and 28-liter (1.5-, 3.3-, and 7.4-gallon) models. Then choose the controller that best suits your requirements; see details on page 3.

Time-to-Temperature Curves



Temperatures were obtained using a fluid with a specific heat of 0.5.



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Performance Specifications

Model		H6L		H13L		H28L	
Description		6-liter heated circulating bath		13-liter heated circulating bath		28-liter heated circulating bath	
Reservoir volume		6 liters (1.5 gallons)		13 liters (3.3 gallons)		28 liters (7.4 gallons)	
Temperature range[1]	Digital	ambient + 15°C to 150°C		ambient + 15°C to 150°C		ambient + 15°C to 150°C	
	Advanced digital	ambient + 15°C to 200°C		ambient + 15°C to 150°C		ambient + 15°C to 150°C	
	Programmable	ambient + 15°C to 200°C		ambient + 15°C to 150°C		ambient + 15°C to 150°C	
Stability[2]	Digital	±0.05°C		±0.05°C		±0.05°C	
	Advanced digital	±0.01°C		±0.01°C		±0.01°C	
	Programmable	±0.01°C		±0.01°C		±0.01°C	
Work area dimensions		8"W x 6"H x 5¼"D (20 x 15 x 13 cm)		9"W x 8"H x 5¼"D (23 x 20 x 13 cm)		10⅜"W x 8"H x 12⅛"D (26 x 20 x 31 cm)	
Overall dimensions		9¼"W x 14"H x 14¾"D (23 x 36 x 37 cm)		10⅞"W x 15⅜"H x 15¾"D (28 x 39 x 39 cm)		13³⁄₁₆"W x 15⅜"H x 22¾"D (33 x 39 x 58 cm)	
Shipping weight[3]		34 lb (15 kg)		45 lb (20 kg)		96 lb (44 kg)	
Heater		800 W	1000 W	800 W	1000 W	800 W	1000 W
Pumping capacity[4]		15 L/min at 0 psig	12 L/min at 0 psig	15 L/min at 0 psig	12 L/min at 0 psig	15 L/min at 0 psig	12 L/min at 0 psig
Electrical requirements		115 VAC, 60 Hz	230 VAC, 50 Hz	115 VAC, 60 Hz	230 VAC, 50 Hz	115 VAC, 60 Hz	230 VAC, 50 Hz
		15 amps	10 amps	15 amps	10 amps	15 amps	10 amps
Digital controller	**Catalog number**	MK-12121-00	MK-12121-05	MK-12121-30	MK-12121-35	MK-12121-60	MK-12121-65
Advanced digital controller	**Catalog number**	MK-12121-10	MK-12121-15	MK-12121-40	MK-12121-45	MK-12121-70	MK-12121-75
Programmable controller	**Catalog number**	MK-12121-20	MK-12121-25	MK-12121-50	MK-12121-55	MK-12121-80	MK-12121-85

1. Ranges defined "Ambient +15 to 200" means that the low-end limit is the room ambient temperature +15°C (i.e. room ambient = 20°C, low end = 20 +15 = 35°C.) Low-end temperatures are specified using a fluid with a specific gravity of 0.5. The low-end limits will be valid at 20°C ambient at nominal line voltage.
2. Stability is measured in the center of the work area with the work area cover installed. Stability is measured at circulator fluid temperature of 60°C, ambient of 20°C, no external heat load, all voltages, frequencies, etc. with water as the fluid.
3. H28L shipping weight includes 23-lb skid.
4. Pumping capacity for units operating at fluid temperature of 20°C, ambient of 21°C, with water as the fluid.

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polystat® Immersion Circulators

- Heat to 200°C
- Powerful 1000 to 2000 W heating capacity
- Choose from analog or digital PID controller

These robust circulators feature a long-life, high-wattage heater that allows you to easily convert an open bath into a constant temperature bath.

Analog Circulator features a PID temperature controller with high-temperature and low-level cutoffs to protect the application from accidental heater overrun, protecting your samples and equipment. High-wattage heater provides fast heat up without scorching bath fluids. Set temperature from 25 to 100°C with manual dial. Directable nozzle lets you set the direction of pump flow to maintain uniform temperature and ensure effective mixing. Use screw clamp to attach circulator to any bath wall up to 1" thick.

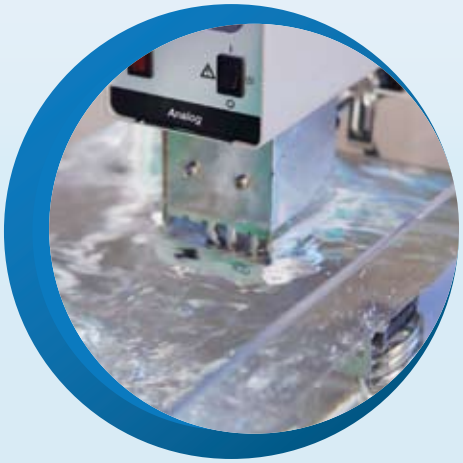
Digital Circulator lets you set temperature from 25 to 200°C with the touch-pad controls. Primary LED display shows set point or actual temperature with the touch of a button. Secondary LED display shows fault code whenever circulator automatically cuts off. Directable nozzle lets you set the direction of pump flow to maintain uniform temperature and ensure effective mixing. Use screw clamp to attach circulator to any bath wall up to 1" thick.



Analog circulator



Digital circulator



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Performance Specifications

2 year warranty

Controller type	Analog		Digital	
Electrical requirements	115 VAC, 60 Hz	230 VAC, 50/60 Hz	115 VAC, 60 Hz	230 VAC, 50/60 Hz
Temperature range	25 to 100°C	25 to 100°C	25 to 200°C	25 to 200°C
Stability	±0.04°C	±0.04°C	±0.02°C	±0.02°C
Pumping capacity	14 L/min	14 L/min	14 L/min	14 L/min
Heating capacity	1000 W	1500 W	1200 W	2000 W
Catalog number	MK-12120-00	MK-12120-05	MK-12120-10	MK-12120-15

CLICK HERE

Go to ColeParmer.com/4000 Read about these units being used by a famous US Chef.

polystat® Closed System Circulator

- Cools and heats from –10 to 80°C
- Compact design maximizes bench space

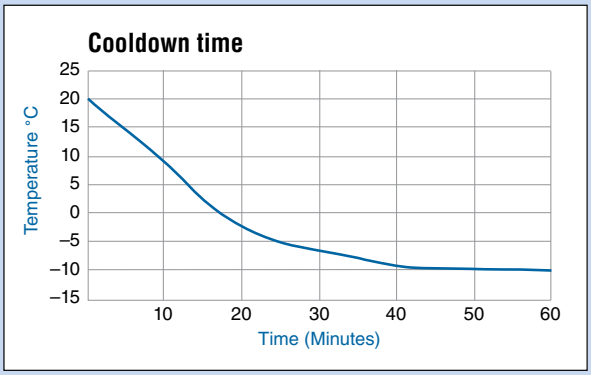
The PolyStat CC1080 Circulator provides dependable cooling and heating for a variety of applications at an affordable price. Unit is ideal for low-level applications such as cooling analytical equipment, jacketed equipment, and rotary evaporators. The stainless steel unit is compact, quiet and robust, making it well suited for the laboratory.

The bathless design minimizes the evaporation of temperature fluid (either water or ethylene glycol) during daily use. Isolating the fluid also prevents potential spillage and sloshing. The unit can be used as an economical chiller with heating options to replace tap water cooling in small lab applications.

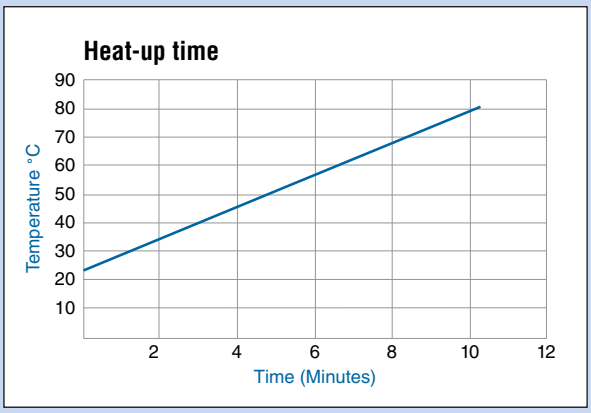
Water-tight keypad allows you to set four temperatures for easy recall or select from four preset temperatures. Visual alarm warns of overtemperature condition. Low-level cutoffs protect unit and samples from damage.



Time-to-Temperature Curves



Results obtained using nominal operating voltage, 25°C operating temperature, at 20°C ambient using 50% water/ 50% glycol.



Results obtained using nominal operating voltage, 25°C operating temperature, at 20°C ambient using water as fluid.

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Performance Specifications

2 year warranty

Electrical requirements		115 VAC, 60 Hz	230 VAC, 50 Hz
Reservoir capacity		3.5 liters (0.9 gallon)	3.5 liters (0.9 gallon)
Temperature range		–10 to 80°C	–10 to 80°C
Stability		±0.1°C	±0.1°C
Overall dimensions		10¼"W x 15¾"H x 19$^{11}/_{16}$"H (26 x 40 x 50 cm)	10¼"W x 15¾"H x 19$^{11}/_{16}$"H (26 x 40 x 50 cm)
Shipping weight		66.1 lb (30 kg)	66.1 lb (30 kg)
Heater		1.5 kW	1.5 kW
Cooling capacity	at 20°C	220 W	220 W
	at 0°C	60 W	60 W
Pumping capacity		12 L/min	12 L/min
Catalog number		MK-12123-50	MK-12123-55

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Cole-Parmer®

In the U.S.
625 E. Bunker Court
Vernon Hills, IL 60061
Call toll-free 800-323-4340
Phone: 847-549-7600
Fax: 847-247-2929
www.coleparmer.com

In Canada
Call toll-free 800-363-5900
Phone: 514-355-6100
Fax: 514-355-7119
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Phone: 91-22-6716-2222
Fax: 91-22-6716-2211
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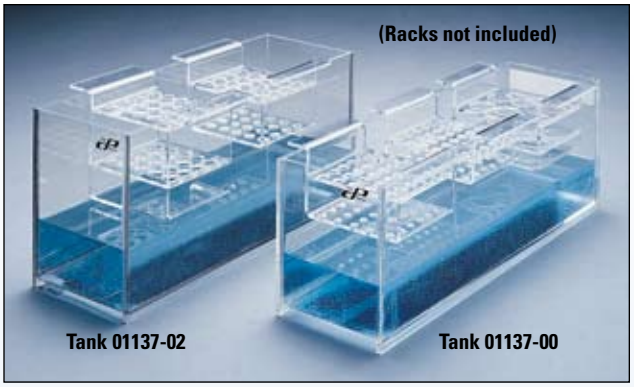
FREE TECHNICAL APPLICATIONS ASSISTANCE!

Cole-Parmer® Plexiglas® Tanks

- Withstand temperatures to 149°F (65°C)

These lightweight tanks are ideal for a wide variety of processes. Use independently, or with a circulator or stirring device. Unique U-shaped end panels keep tank bottoms elevated to help maintain internal temperature. The ¼"-thick Plexiglas walls are durable, colorless, corrosion resistant, and easy to clean.

Catalog number	Capacity	Dimensions (L x W x H)
MK-01137-02	6 liters	13⅜" x 4¾" x 5¹⁵⁄₁₆"
MK-01137-00	8 liters	17¾" x 4¾" x 5¹⁵⁄₁₆"
MK-01137-16	16 liters	18½" x 7½" x 10"
MK-01137-18	21 liters	18" x 7½" x 13⅛"
MK-01137-20	27.5 liters	20" x 8" x 12"



Hollow Ball Bath Covers

- Reduce vapor loss and cut heat loss or gain by 75% with one layer and by 92% with two layers

Polypropylene and high-density polyethylene (HDPE) balls form a tight cover over liquids. Use them instead of a lid with any of the baths listed.

ISO 9001:2000 CERTIFIED SUPPLIER

Description	Polypropylene balls				HDPE balls
Temperature range	0 to 110°C	0 to 110°C	0 to 110°C	0 to 110°C	–60 to 71°C
Ball diameter	10 mm	20 mm	20 mm	38 mm	20 mm
Balls per sq ft	1076	270	270	74	270
Specific gravity	0.38	0.24	0.24	0.16	0.24
Qty/pk	5000	500	2000	1000	2000
Catalog number	MK-06821-12	MK-06821-22	MK-06821-25	MK-06821-38	MK-06821-42



Use hollow balls as covers for baths and tanks.

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Artisan Technology Group is an independent supplier of quality pre-owned equipment

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