

# Water & Bead Baths

**SHELOLAB**<sup>®</sup>

Lab **ARMOR**<sup>®</sup>



Sheldon Manufacturing, Inc. is an ISO 9001:2008 certified manufacturer of high quality and innovative constant temperature equipment to the global market. Major product lines include incubators, humidity test chambers, ovens, water and bead baths, and anaerobic chambers for the life science, pharmaceutical, biomedical, environmental and industrial markets. Founded in 1970, Sheldon utilizes over 40 years of manufacturing expertise to aggressively pursue new product opportunities that add value to our customers' portfolio. Sheldon markets a complete line of products under the SHEL LAB and Lab Armor brands, which compliment our OEM manufacturing capabilities.



Sheldon Manufacturing's SHEL LAB and Lab Armor Products have been evolving for over forty years.

The SHEL LAB line of Temperature and Environmental Control Equipment addresses a broad scope of Research, Industrial, and Clinical Laboratories and are as innovative as the industries that use them.

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The SHEL LAB Water Baths are truly unique in construction. Sheldon Manufacturing was the first to introduce the non-contact recessed heating element, found on this type of product, to the analytical research marketplace. This design specifically curtails element burnout and eliminates tank hot spots that are chronic challenges for other water baths.

The SHEL LAB Digital water baths remain an industry standard for precise control and quality of design. The operator is able to calibrate this bath using the touch pad controls. This is a convenient feature for facilities concerned with IQ/OQ/PQ validation. The SHEL LAB constant temperature digital water baths are perfect for conducting a host of applications including; bacteriological examinations, food processing/QC procedures and microbiology assays just to name a few.

# Water Baths

## Digital Series



The SHEL LAB high-performance water baths are accurate, easy to use, safe and durable. The water bath design incorporates a drip free cover holster and pocket handles so users can easily transport the water bath.

A microprocessor achieves precise temperature control regardless of how the unit is loaded. Calibration is performed with the convenient, front panel touch pad.

### FEATURES

- Easy-to-Clean Stainless Steel Tank
- Pocket Handles for Easy Lifting
- Recessed Heating Element Prevents "Burnout"
- Unique SHEL LAB Design Eliminates "Hot Spots"

### Precise Temperature Control -

- Over Temperature Protection
- Temperature Uniformity +/- 0.2% at 37°C
- Temperature Range Ambient + 5°C to 80°C



Filled with  
Lab Armor  
Beads

**2 Year  
Limited  
Warranty!\***

\*Tank is excluded from the 2 year warranty.



General Purpose Water Baths		Model Number		
		SWB7	SWB15	SWB23
Exterior Dimensions (wxdxh)	Inches	15.3 x 12.0 x 9.0	15.0 x 19.0 x 9.0	15.0 x 25.3 x 9.0
	cm	38.8 x 30.5 x 22.9	38.1 x 48.3 x 22.9	38.1 x 64.2 x 22.9
Bath Tank Dimensions (wxdxh)	Inches	11.7 x 6.0 x 6.0	11.7 x 13.0 x 6.0	11.5 x 19.5 x 6.2
	cm	29.8 x 15.2 x 15.2	29.8 x 33.0 x 15.2	29.2 x 49.5 x 15.8
Tank Capacity	L	7	15	23
Stainless Steel Gable Cover(s)	Yes/No	Yes - One Included	Yes - One Included	Yes - One Included

All specifications are determined by using average values on standard equipment at an ambient temperature of 25°C (77°F) and line voltages within +/-10% of unit type (115V/230V). Temperature specifications follow DIN 12880 methodology.  
We reserve the right to change specifications at any time.



# Water Baths

## Specialty - Circulating



SHEL LAB Special application water baths boast the same features as our other high-performance models, such as: being highly accurate, easy-to-use, rugged, and safe. These SHEL LAB water baths include a polymer coated stainless steel tank for quick cleaning and lasting durability.



### FEATURES

- Easy-to-Clean Polymer Coated Tank
- Pocket Handles for Easy Lifting (SWBC22 only)
- Recessed Heating Element Prevents "Burnout"
- Unique SHEL LAB Design Eliminates "Hot Spots"

### Precise Temperature Control -

- Over Temperature Protection
- Temperature Uniformity +/- 0.2% at 37°C
- Temperature Range Ambient + 5°C to 80°C



Specialty Water Baths	Model Number	
	Chambers	SWBC22 Circulating
Exterior Dimensions (wxdxh)	Inches	15.0 x 25.5 x 9.0
	cm	38.1 x 64.8 x 22.9
Bath Tank Dimensions (wxdxh)	Inches	11.5 x 19.5 x 6.2
	cm	29.2 x 49.5 x 15.8
Tank Capacity	L	22
Stainless Steel Gable Cover(s)	Yes/No	Yes - One Included

\*Tank is excluded from the 2 year warranty.

All specifications are determined by using average values on standard equipment at an ambient temperature of 25°C (77°F) and line voltages within +/-10% of unit type (115V/230V). Temperature specifications follow DIN 12880 methodology. We reserve the right to change specifications at any time.



Shaking Water Baths (also known as Reciprocating Water Baths), are designed to handle a wide variety of applications. These baths can be used effectively in molecular biology protocols (such as hybridization), bacterial culturing, as well as in solubility and metabolism studies. These SHEL LAB water baths are designed to deliver precise temperature control and a smooth reciprocal shaking motion.

The oscillator control is independent, allowing the baths to also be used for regular constant temperature water bath applications such as thawing, warming reagents, or general incubation. Both of these models offer an adjustable stroke length ( 0.5", 1" or 1.5"), giving the user the ability to affect the degree of agitation. With a RPM range of 20-200, these versatile reciprocating water baths are sure to meet many application needs.

### FEATURES

- Independent Oscillation and Temperature Controls
- Adjustable Stroke Length
- Platform Tray Included
- Recessed Heating Element Prevents "Burnout"
- Unique SHEL LAB Design Eliminates "Hot Spots"
- Cover Included

### Precise Temperature Control -

- Over Temperature Protection
- Temperature Uniformity +/- 0.2% at 37°C
- Temperature Range Ambient + 5°C to 80°C

**2 Year  
Limited  
Warranty!\***

Reciprocating Water Baths	Chambers	Model Number	
		SWBR17	SWBR27
		Single Chamber (1)	
Exterior Dimensions (wxdxh)	Inches	25.5 x 15.5 x 12.5	37.5 x 14.8 x 12.5
	cm	64.8 x 39.4 x 31.8	95.3 x 37.5 x 31.8
Bath Tank Dimensions (wxdxh)	Inches	14.7 x 11.7 x 7.5	27.0 x 12.0 x 7.2
	cm	37.4 x 29.8 x 19.0	68.5 x 30.4 x 18.4
Tank Capacity	L	17	27
Stainless Steel Gable Cover(s)	Yes/No	Yes - One Included	Yes - One Included

\*Tank is excluded from the 2 year warranty.

All specifications are determined by using average values on standard equipment at an ambient temperature of 25°C (77°F) and line voltages within +/-10% of unit type (115V/230V). Temperature specifications follow DIN 12880 methodology. We reserve the right to change specifications at any time.

# Beads



- Compatible with standard constant temperature water baths; Tub with 4-8 inches depth is best
- Accepts and supports any size and shape vessel
- Compatible with a broad temperature range from -80°C to 180°C
- Cleans with mild soap, water and 70% ethanol solution
- Beads Thermal Uniformity:  
From 37-42°C +/- 1-3°C  
From 55-65°C +/- 3-8°C

Lab Armor Beads embody Lab Armor's continuing environmental progress. It is designed with the following features to reduce environmental impact:

- Recyclable
- Non-toxic, non-vaporizing material
- No daily requirement for biocide use – no gray water
- Improves energy efficiency of standard water baths by over 50%

## Labs are better **waterless**.

No more contamination. Ruined experiments. Lost materials. Hassles.

Lab Armor® Beads are eco-friendly and low-maintenance metallic beads that replace water in existing water baths, aluminum blocks in dry baths and even ice in ice buckets. The innovative Lab Armor Beads can also be used in containers placed in ovens and incubators to replace sample racks.

Lab Armor Beads, by their design, provide a concurrent thermal and antimicrobial activity that efficiently shields the lab and personnel from invading organisms while thermally heating or cooling like water in any standard water bath, heat block or ice bucket.

When you compare the cost of a lost set of experiments or even a few contaminated tubes of reagents and factor in the additional time spent on refilling the water bath, cleaning the water bath, and other expenses such as racks and bottleneck weights that you have to buy to go along with it, the difference in price between owning a Bead-filled water bath and a traditional water-filled bath clearly favors the Beads.

Lab Armor Beads	Part Number
0.75 Liters	42370-750
2 Liters	42370-002
4 Liters	42370-004
8 Liters	42370-008



The Bead Bath's eco-friendly, state-of-the-art design takes full advantage of the robust properties of Lab Armor Beads. It delivers exceptional temperature uniformity and gets up and running faster. So you can do things with this bath that you can't do with your old water bath. You aren't limited to water tight containers, so you can safely incubate multi-well plates, petri dishes, and open-top samples at any angle.

Lab Armor Digital Baths are durable, dependable, and are available with a variety of safety and convenience features:

- Digital microprocessor control
- Over-temperature protection
- Easy-to-clean stainless steel body and lid
- Surround heating eliminates hot spots
- Temperature range: 5°C above ambient to 80°C
- Thermal uniformity At 37°C ± 1.0°C
- Compatible with Beads only
- 12 month warranty



Lab Armor Bead Baths	120V 230V	Model Number		
		74309-706	74309-714	74309-720
	Beads	5 L	12 L	15 L
Exterior Dimensions (wxdxh)	Inches	12.0 x 6.0 x 6.0	12.0 x 12.0 x 6.0	12.0 x 18.0 x 6.0
	cm	30.5 x 15.2 x 15.2	30.5 x 30.5 x 15.2	30.5 x 45.7 x 15.2
Tank Capacity	L	6	14	20
Stainless Steel Gable Cover(s)	Yes/No	Yes - One Included	Yes - One Included	Yes - One Included

All specifications are determined by using average values on standard equipment at an ambient temperature of 25°C (77°F) and line voltages within +/-10% of unit type (115V/230V). Temperature specifications follow DIN 12880 methodology. We reserve the right to change specifications at any time.

Bead Baths are also available without beads



# Bead Blocks™



A fully Loaded Bead Block.  
The Ultimate All-in-one Dry Bath Block.  
One Bead Block fits everything from tiny microfuge tubes to large conical vials. All at the same time.

Bead Blocks replace common solid, drilled-out aluminum blocks in dry bath instruments. They eliminate the need for using multiple different size blocks to fit different sample vessels. Two sizes available in five colors. Temperature range from -80°C to 180°C (beads & blocks).

## Too Many Blocks? With Bead Block, One Size Fits All

Although it stands only slightly taller than a standard heat block, Bead Block's deeper tub gives you flexibility to incubate different kinds of tall and short vessels, wide and narrow vessels, all together – making life a little bit simpler in the lab.



Lab Armor Bead Blocks	Part Number	
	Single	Double
Black	52100-BLK	52200-BLK
Blue	52100-BLU	52200-BLU
Gold	52100-GLD	52200-GLD
Red	52100-RED	52200-RED
Silver	52100-SLV	52200-SLV

Lab Armor Bead Blocks	Specifications		
	Beads	Single 0.25 L	Double 0.50 L
Exterior Dimensions (wxdxh)	Inches	3.0 x 3.8 x 3.0	6.0 x 3.8 x 6.0
	cm	7.6 x 9.5 x 7.6	15.2 x 9.5 x 15.2
Tub Dimensions (wxdxh)	Inches	2.5 x 3.3 x 2.5	5.5 x 3.3 x 2.5
	cm	6.4 x 8.4 x 6.4	14.0 x 8.4 x 6.4
Weight	lbs	2	4



Replace old refrigerator, incubator, and oven sample racks.

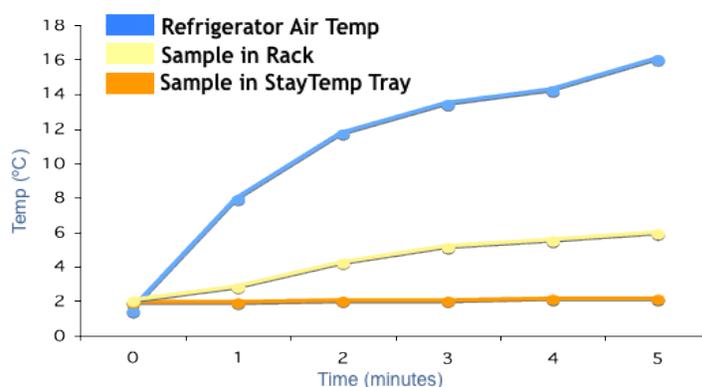
StayTemp Trays protect your samples while inside your equipment. It's a simple stainless steel container of Beads. It keeps your samples and reagents at temperature inside your incubator, oven, or refrigerator. Even when the door is left open.



Constant Temperature. Inside and Out.

StayTemp™ Equipment trays are an exciting new upgrade that keeps samples and reagents in your refrigerator, incubator, and laboratory ovens at temperature despite normal hourly fluctuations in air temperature. You no longer have to worry about how many times the doors were opened or whether or not your samples experience a defrost cycle.

### PERFORMANCE SPECIFICATIONS



Samples stay at temperature even when refrigerator door is left open for 5 min. With the refrigerator door open for 5 minutes, a 5 ml liquid sample (water) remained at the set temperature (2 °C ±0.5 °C) when stored in a 4 L StayTemp™ equipment Tray. When the same sample was stored in a standard rack, it warmed up to 6°C. The sample temperature was monitored over time. Data represent temperature measurements recorded by a single temperature probe. Values represent ±S.E. (n=3).

Lab Armor StayTemp Trays	Beads	Part Number		
		39956-050	39956-001	39956-003
		1 L	2 L	4 L
Exterior Dimensions (wxdxh)	Inches	6.0 x 6.0 x 4.0	6.0 x 12.0 x 4.0	10.0 x 12.0 x 4.0
	cm	15.2 x 15.2 x 10.2	15.2 x 30.5 x 10.2	24.4 x 30.5 x 10.2
Tank Capacity	L	1	2	4

# Chill Bucket™



The Re-Invented Ice Bucket.  
Works Without Ice.

The Chill Bucket is a revolutionary laboratory ice bucket that works without ice. It chills while keeping everything dry and in place, so you no longer have to worry about watery meltdowns or losing track of your samples. It substitutes for an ice bucket and maintains temperatures of -20°C to 8°C for up to 8 hours.

## DRY BEADS ARE A BETTER SOLUTION THAN WET ICE

- Vessels stay dry and in place. Keep samples organized. Avoid water puddles and float-away tubes.
- Get greater temperature flexibility. Use Chill Packs or dry ice. Use ambient or cold beads.
- Save on energy-consuming ice machines. The Chill Bucket can replace ice wherever ice is used.

## HERE'S HOW IT WORKS

Cool the Bead Bag and Chill Packs in your refrigerator or freezer. Then assemble the Chill Bucket - Chill Packs on bottom. Use the bucket and Chill Packs at 0 - 8°C or substitute the Chill Packs with dry ice for -20°C temperatures, or you can even create your own custom temperature range by starting with beads at ambient or cooled to 4°C, - 20°C, or - 80°C.

## PERFORMANCE SPECIFICATIONS

The Chill Bucket can maintain cold temperatures for 4 or more hours with one Chill Pack.

If you need up to 8 or more hours of cold, simply add a second Chill Pack to the bucket.



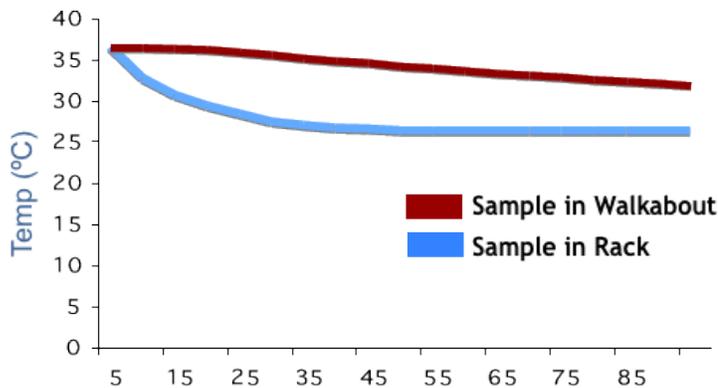
Lab Armor Chill Buckets		Includes			
Part Number	Description	Bucket (4L)	Bead Bag	Chill Packs	Beads
67200-001	Bead Kit	1	1	2	2 L
67200-002	Bag Kit		1	2	2 L
67200--005	Bucket Kit	1	1	2	
67200-200	Chill Packs			4	
67200-900	Bead Bag		1		



Transportability. You're free to Walk About.

Things happen when you take your samples, reagents, or cells out of their warm incubating environment and place them onto a cold surface. Why not keep them at temperature while you are setting up your experiment at the bench, under the hood, or while traveling between labs, or where ever you go. Your Walkabout Tray makes a great travel partner. It's a quarter the size of a traditional lab bucket. This makes it easy to use under the hood or in tight benchtop spaces. With its superior insulating properties, it keeps your samples and reagents at temperature after removing them from the Bead Bath, Chill Bucket, or the refrigerator.

## PERFORMANCE SPECIFICATIONS



The Walkabout can maintain a 5 ml liquid sample at 37 °C ±1.3 °C for 30 minutes after removing it from the water bath, whereas a sample placed in a standard rack will reach RT (25°C) in same time. Pre-warmed beads (37°C) were scooped out of the Bead Bath and into the Walkabout. From the same Bead Bath, a 15 ml conical tube containing 5 ml of sample (water) was removed and added to either the Walkabout containing beads or to a standard test tube rack. The sample temperature was monitored over time. Data represent temperature measurements recorded by a single temperature probe. Values represent ±S.E. (n=3).



- One piece molded, expanded PVC tray
- Unbreakable, light weight, long-lasting
- Compatible from -196°C to 93°C

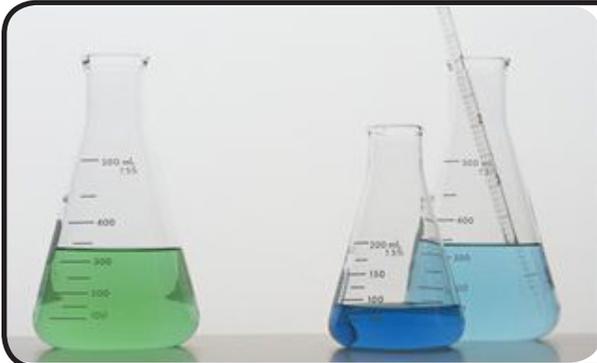
Lab Armor Walkabout Trays	Part Number		
	Beads	39438-001 0.5 L	39438-002 0
Exterior Dimensions (wxdxh)	Inches	6.0 x 6.0 x 3.0	6.0 x 6.0 x 3.0
	cm	15.2 x 15.2 x 7.6	15.2 x 15.2 x 7.6
Capacity	L	1	1



### Lab Armor Customer Testimonial

“Purchased to decrease water bath contamination. Experience has been wonderful with decreased time taken for cleaning and decreased contamination of tissue culture.”

- Vanderbilt University



### Water Bath Applications

- Sample Thawing
- Bacteriological Examinations
- Warming Reagents
- Coliform Determinations
- Microbiological Assays



Lab  ARMOR