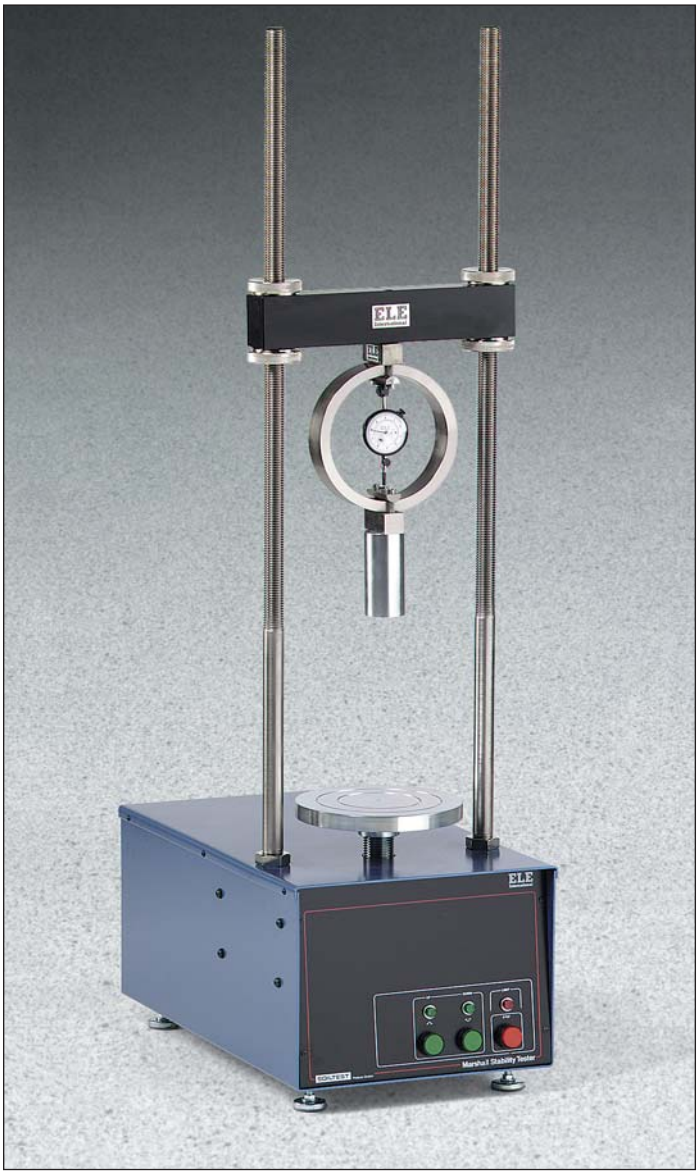



## Marshall Stability Tester

AASHTO T-245.

- ***Compact size takes up little counter space in the lab.***
- ***Push-button operation controls movement of load screw. Indicator lights show when unit is running and when test limit or maximum travel is reached.***
- ***Standard unit equipped with 6,000 lb. (27 kN) capacity proving ring.***

The Marshall Stability Tester quickly and accurately measures the resistance to plastic flow of bituminous mixtures, in accordance with AASHTO T-245 testing standards.

With operator convenience in mind, the machine features push-button operation with indicator lights to show when the unit is in operation and when the platen has reached its limit or point of maximum travel.

| ***Specifications*** | |
|---|---|
| *Frame Capacity.* | *10,000 lbf. (44.5 kN) maximum.* |
| *Proving Ring.* | *6,000 lbf. (27 kN) capacity.* |
| *Controls.* | *Push-button up/down/stop with running and limit indicator lights.* |
| *Motor.* | *3/4 h.p., reversible.* |
| *Speed.* | *2" (50.8 mm) per minute.* |
| *Travel.* | *2.5" (64 mm) maximum.* |
| *Clearances.* | *10" (254 mm) between uprights, 7-1/2" (191 mm) between platen and load piston.* |
| *Overall Dimensions.* | *14" w. x 23" d. x 40" h. (356 x 584 x 1,016 mm).* |
| *Housing.* | *14" w. x 23" d. x 11" h. (356 x 584 x 279 mm).* |
| *Weight.* | *Net 185 lbs. (84 kg); Shpg. 200 lbs. (91 kg).* |

### *Ordering Information*

**EI45-6832/02.** 110vAC, 60 Hz, 1ø.
**EI45-6832/06.** 220vAC, 60 Hz, 1ø.
**EI45-6832/01.** 220vAC, 50 Hz, 1ø.

### *Accessories*

**EI45-6892.** Asphalt Flow Indicator with Brake. English.
**EI45-6894.** Asphalt Flow Indicator with Brake. Metric.
**EI45-6855.** 4" (101 mm) Marshall Breaking Head.
**EI78-0860.** Proving Ring, 11,200 lbf. (50 kN) Capacity. Required when testing 6" (152 mm) diameter specimens.

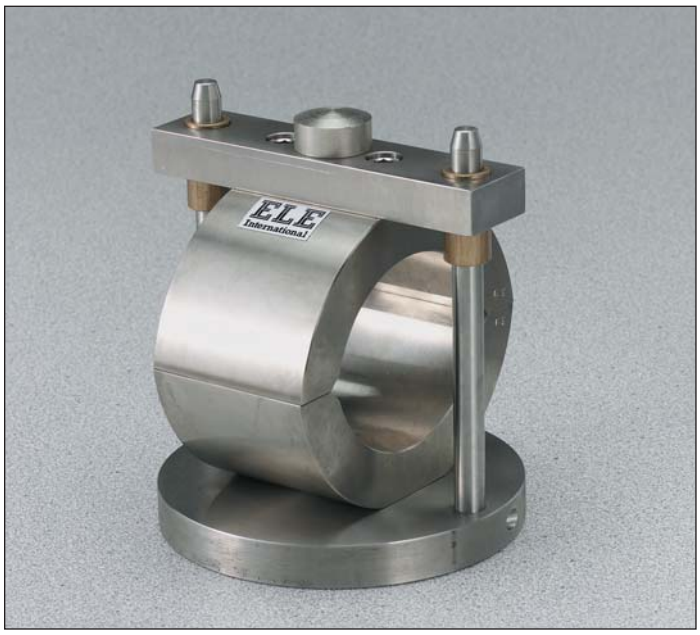
## Basic 4" Marshall Stability Test Set with Manual Compaction

AASHTO T-245.

### *Ordering Information*

**Set includes:**
1 Marshall Stability Tester (45-6832/0x).
1 4" Breaking Head (45-6855).
1 Flow Indicator (45-6892).
1 Stability Compaction Hammer (45-6460).
1 Compaction Mold Holder (45-6414).
1 Compaction Pedestal (45-6416).
2 4" Compaction Molds (45-6310).
1 Asphalt Sample Ejector (45-6480).
1 4" Filter Paper Discs (45-6462).
1 Water Bath (45-6475/0x).

**EI5002/02.** 110vAC, 60Hz, 1ø.
**EI5002/01.** 220vAC, 50Hz, 1ø.
**EI5002/06.** 220vAC, 60 Hz,1ø.




## Marshall Stability Breaking Head

AASHTO T-245.

- ***Manufactured to AASHTO standards.***
- ***Bronze bearings for free sliding fit.***
- ***Plated steel construction for easy cleaning and rust resistance.***
- ***Available in either 4" (101 mm) or 6" (152 mm) models.***

The Marshall Stability Breaking Head is made of plated steel to AASHTO specifications. Bronze bearings in the upper part assure a free sliding fit on the steel posts. The plating achieves a smooth surface for easy cleaning.

### *Specifications*

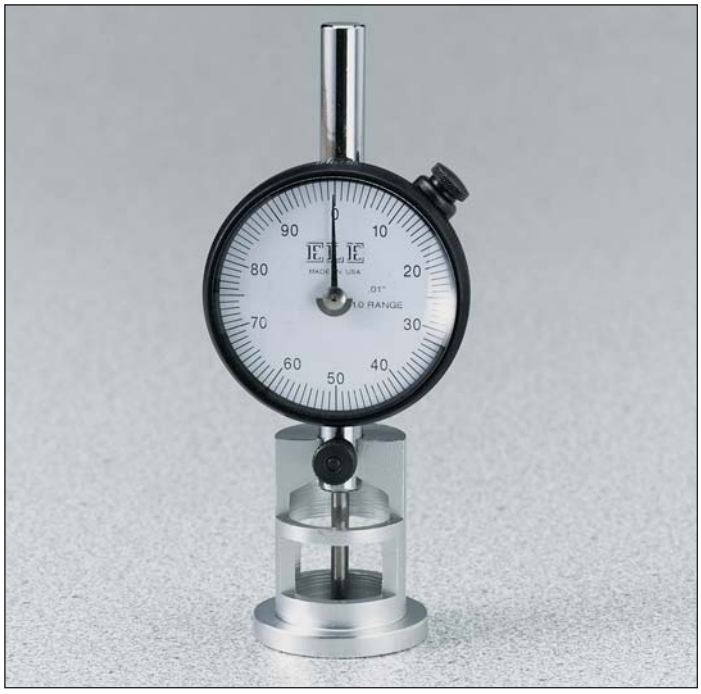
| | |
|---|---|
| *Design.* | *Split-type.* |
| *Finish.* | *Plated for easy cleaning and rust resistance.* |
| *Dimensions.* | *4" (101.6 mm) i.d.* |
| *Base.* | *6" (152.4 mm) diam.* |
| *Weights.* | *Net 20 lbs. (9 kg).* |

### *Ordering Information*

**EI45-6855.** 4" (101.6 mm) Marshall Breaking Head.

### *Accessories*

**EI45-6892.** Asphalt Flow Indicator with Brake. English.
**EI45-6894.** Asphalt Flow Indicator with Brake. Metric.




## Asphalt Flow Indicator with Brake

- ***Brake-type indicator retains peak reading until released.***
- ***Cast aluminum holder securely holds indicator in proper position.***
- ***Available in either English or Metric models.***

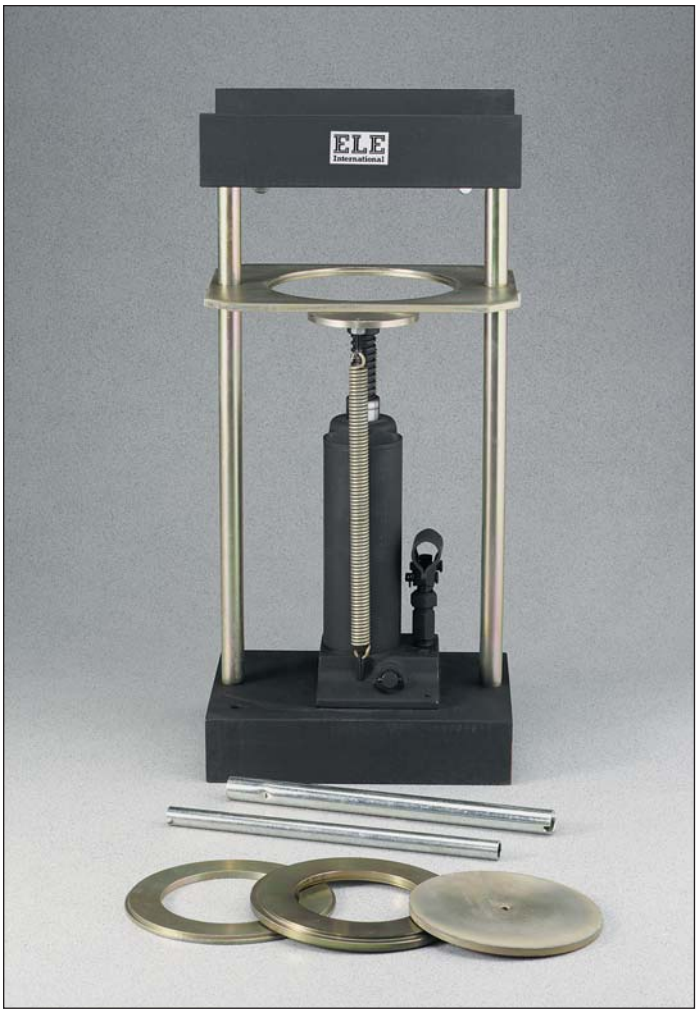
The Flow Indicator is designed to sit on the post of the stability mold during the Marshall test. A built-in brake on the indicator retains the peak reading of the needle. The cast aluminum holder securely holds the dial indicator in position during the test.

### *Specifications*

| | |
|---|---|
| *Holder.* | *Cast aluminum.* |
| *Dial Indicator.* | *Special type with brake.* |
| *Range.* | *EI45-6892: 1.00" x 0.01" divisions.*<br>*EI45-6894: 25.4 mm x 0.254 mm divisions.* |
| *Weight.* | *Net 8 oz. (227 g).* |

### *Odering Information*

**EI45-6892.** English.
**EI45-6894.** Metric.




## Asphalt Sample Ejector

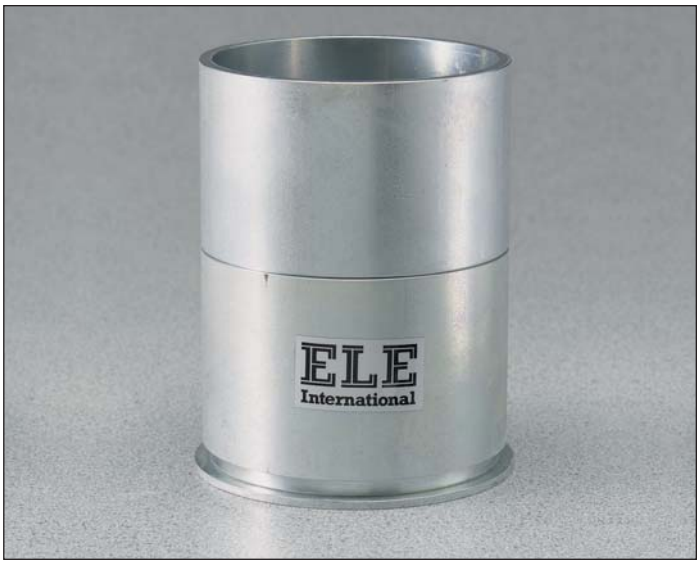
- ***Fast sample extrusion from both 4" (101 mm) and 6" (152 mm) asphalt compaction molds.***
- ***6,000 lbf. (26.7 kN) capacity hand-operated hydraulic jack.***
- ***Bench-top design for use in both the laboratory and the field.***
- ***All metal construction treated for rust resistance and long life.***

The Asphalt Sample Ejector is specifically designed to eject either 4" (101 mm) or 6" (152 mm) diameter asphalt specimens from compaction molds. Designed in a heavy-duty bench style, the ejector has a pushing force of 6,000 lbs. (26.7 kN) which is developed through a hand-operated hydraulic jack. This ejection force permits removal of samples with only a minimum of disturbance. Springs incorporated in the unit provide fast ram retraction when the return valve is opened.

| ***Specifications*** | |
|---|---|
| *Capacity.* | *4" (101.6 mm) and 6" (152.4 mm) molds, up to 7" (177.8 mm) l.* |
| *Pushing Force.* | *6,000 lbf. (26.7 kN).* |
| *Jack.* | *Hydraulic; hand-operated; 7" (178 mm) stroke; spring return.* |
| *Construction.* | *All metal; plated extrusion plates and piston discs; painted finish on housing and pump.* |
| *Dimensions.* | *10-3/8" w. x 8" d. x 23-3/8" h. (264 x 203 x 594 mm).* |
| *Weight.* | *Net 51 lbs. (23 kg).* |

### *Ordering Information*

**EI45-6480.**




## Asphalt Compaction Mold

AASHTO T-245.

- ***Machined seamless steel mold construction.***
- ***Base and collar interchangeable at either end of mold.***
- ***Larger collar inner diameter for use as support during sample ejection.***
- ***Plated for rust resistance and long life.***

The Compaction Mold for preparation of stability test specimens consists of a base plate, forming mold and collar. The forming mold is machined from seamless steel tubing. Either end of the forming mold will fit the collar and the base. The collar has a larger inside diameter so that it can be used as a support in ejecting specimens.

| ***Specifications*** | |
|---|---|
| *Construction.* | *Machined seamless steel forming mold; base and collar.* |
| *Finish.* | *Plated for rust resistance.* |
| *Dimensions.* | *4" (101.6 mm) i.d. x 3" (76.2 mm) internal h. with base.* |
| *Weights.* | *Net 8 lbs. (3.6 kg).* |

### *Ordering Information*

**EI45-6310.** 4" (101.6 mm) Asphalt Compaction Mold.

## Filter Paper Discs

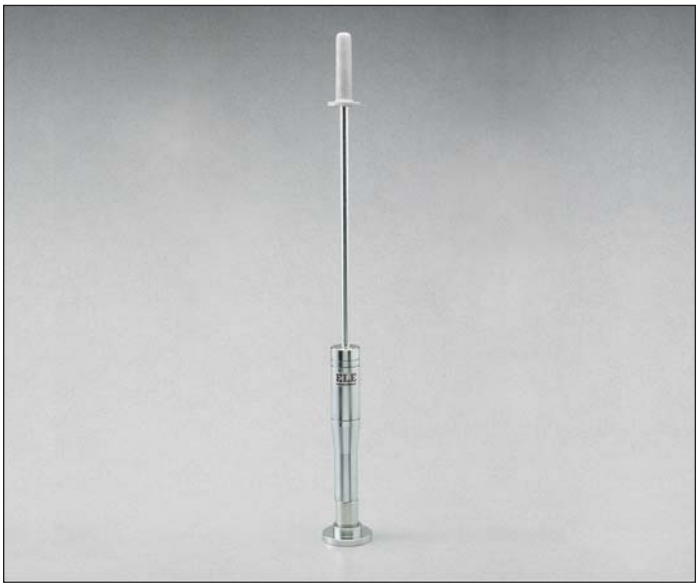
ASTM D-1561; AASHTO T-245, T-246.

Filter Paper Discs are installed between the asphalt mixture and the mold to prevent sticking during the compaction process.

| ***Specification*** | |
|---|---|
| *Weight.* | *Net 4 oz. (113g).* |

### *Ordering Information*

**EI45-6462.** 10 cm (3.93") diam. Pkg. of 100.



## Stability Compaction Hammer
AASHTO T-245.

- ***Heavy-duty, cast aluminum handle.***
- ***10 lb. (4.54 kg) hammer with 18" (457 mm) drop.***
- ***Plated for rust resistance and long life.***

The Compaction Hammer is used to dynamically compact the bituminous specimen in the compaction mold. The Hammer features a cast aluminum handle securely fastened to the steel shaft which guides the 10 lb. (4.54 kg) hammer during the compaction procedure.

| ***Specifications*** | |
|---|---|
| *Tamping Face.* | *3-7/8" (98 mm) diam.* |
| *Hammer.* | *10 lb. (4.54 kg).* |
| *Drop.* | *18" (457 mm).* |
| *Construction.* | *Machined steel; cast aluminum handle.* |
| *Weight.* | *Net 17 lbs. (7.7 kg).* |

### *Ordering Information*
**EI45-6460.**

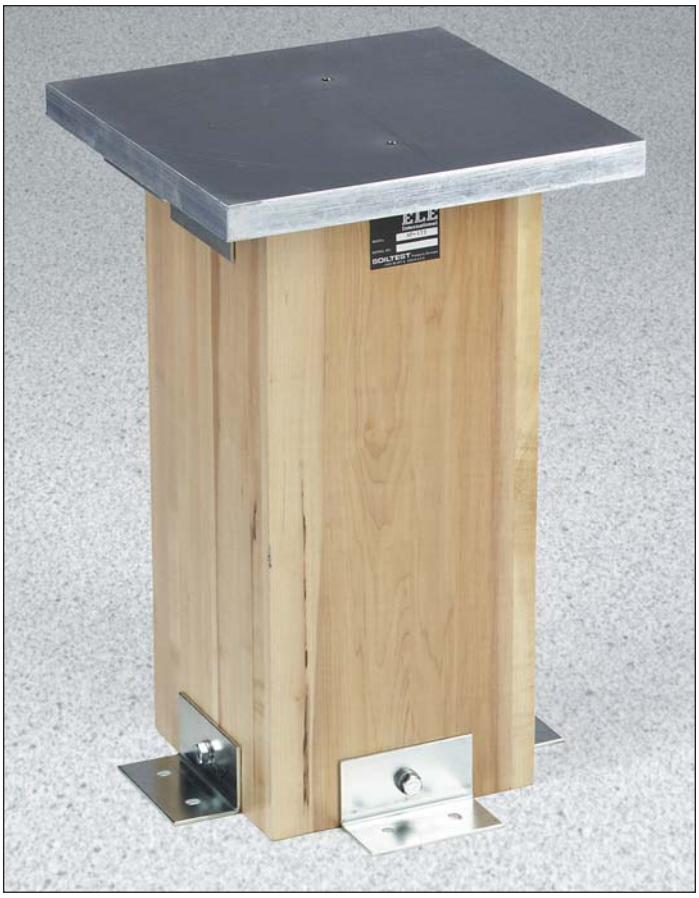
## Compaction Mold Holder
AASHTO T-245.

- ***Holds all sections of compaction mold together during the compaction process.***
- ***Easily installed on the EI45-6416 Compaction Pedestal.***
- ***Cast aluminum construction for rust resistance.***

The Mold Holder easily bolts to the top surface of the EI45-6416 Compaction Pedestal, securely holding the compaction mold during the Marshall compaction process. The mold is held in place by a spring loaded upper section allowing easy insertion and removal of the mold.

| ***Specifications*** | |
|---|---|
| *Construction.* | *Lightweight cast aluminum.* |
| *Components.* | *Upper and lower sections; tension springs.* |
| *Weight.* | *Net 4 lbs. (1.8 kg).* |

### *Ordering Information*
**EI45-6414.**



## Compaction Pedestal
AASHTO T-245.

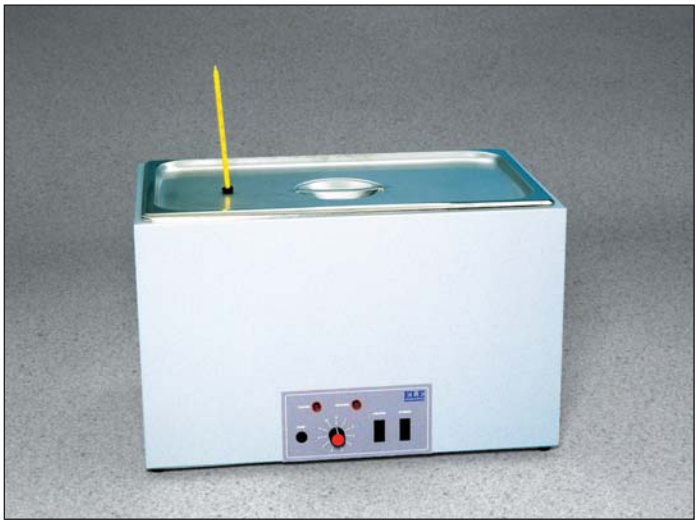
- ***Laminated maple construction provides solid base for compaction mold.***
- ***Plated steel top plate and angle brackets for rust resistance.***
- ***Optional Mold Holder to secure mold to pedestal.***

The Compaction Pedestal is used with the Compaction Mold and Mold Holder during the compaction process. The unit consists of a laminated hardwood post capped with a steel plate. Angle brackets fastened to the base allow bolting to a concrete slab or floor.

| ***Specifications*** | |
|---|---|
| *Top Plate.* | *Plated steel; 12" x 12" x 1" thick (305 x 305 x 25.4 mm).* |
| *Base.* | *Laminated hardwood.* |
| *Installation.* | *4 angle brackets for mounting to concrete slab.* |
| *Dimensions.* | *8" w. x 8" d. x 18" h. (203 x 203 x 457 mm).* |
| *Weight.* | *Net 85 lbs. (38 kg).* |

### *Ordering Information*
**EI45-6416.**

### *Accessories*
**EI45-6414.** Compaction Mold Holder.



## Circulating Water Bath

AASHTO T-245.

- ***Built-in magnetic circulating system.***
- ***Stainless steel interior.***
- ***Includes bath cover.***
- ***Meets ASTM and AASHTO requirements.***

The Circulating Water Bath incorporates a thermostatically controlled heater system and a magnetic circulator. The circulator assures that the water temperature is consistent throughout the bath.

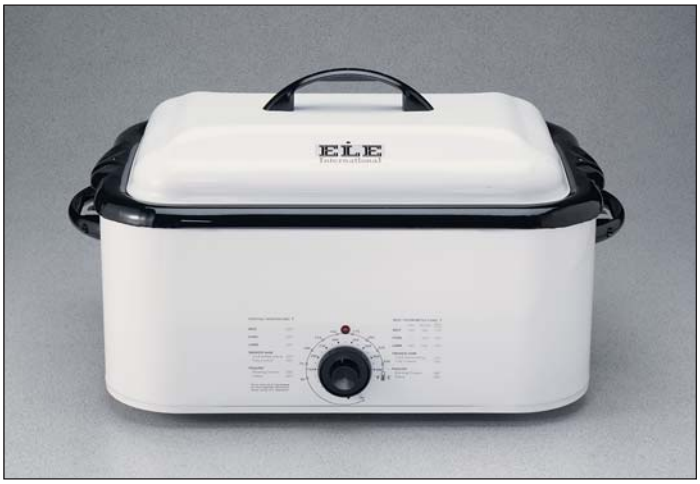
The bath is supplied complete with a shelf support that holds the specimen 2" (50.8 mm) above the bottom to ensure proper circulation around the samples.

### *Specifications*

| | |
|---|---|
| *Capacity.* | *Up to twelve 4" (101.6 mm) diam. Marshall specimens.* |
| *Heaters.* | *Thermostatically controlled.* |
| *Circulator.* | *Magnetic type.* |
| *Range.* | *Ambient to 150°F (65.5°C); accurate to within +/- 1°F (+/- 1°C).* |
| *Construction.* | *Insulated stainless steel tank with painted steel exterior.* |
| *Weight.* | *Net 47 lbs. (21.4 kg).* |

### *Ordering Information*

**EI45-6471/02.** 110vAC, 60 Hz, 1ø.
**EI45-6471/01.** 220vAC, 50/60 Hz, 1ø.



## Economy Water Bath

- ***Low cost, economy bath for basic heating uses.***
- ***Grid type false bottom for specimen support.***

This economical Water Bath can be used for heating specimens of bituminous materials for stability and other tests. The bath has a capacity of eight standard Marshall test specimens. The grid type false bottom permits water circulation beneath the test specimen.

### *Specifications*

| | |
|---|---|
| *Control.* | *Setting dial.* |
| *Capacity.* | *8 standard Marshall specimens.* |
| *False Bottom.* | *Grid-type.* |
| *Finish.* | *Baked enamel.* |
| *Weight.* | *Net 30 lbs. (13.6 kg).* |

### *Ordering Information*

**EI45-6475/02.** 115vAC, 50/60 Hz, 1ø. 1,320 Watts.
**EI45-6475/01.** 220vAC, 50/60 Hz, 1ø. 1,320 Watts. Includes Transformer.