



Specific Gravity  
Bench Set



# Introduction

## Product Description

The Humboldt Specific Gravity Bench Set includes the H-2714 Deluxe Bench, the H-2712A Specific gravity tank kit with heater and circulating pump and the HB-4537WB scale— a 20,000g x .1g readability scale with weigh-below feature.

The bench is 46" tall with a 31" x 25" platform top, which includes a hole to accommodate the weigh-below scale feature; and, a crank-operated shelf that lets you bring the water tank up to the sample, making for easier sample immersion.

The H-2712A tank kit is comprised of a 26 gal. polyethylene tank, which measures 18" x 18" x 18" and comes with a drain valve and overflow port. It also comes with a 200-watt, durable, tank heater and a circulating pump, both of which are attached to a stainless steel mounting bracket that holds both securely to the tank. The cover photo shows the Bench Set with the optional H-3371 wire basket.

A complete Bill of Materials:

<b>Part No.</b>	<b>Qty</b>	<b>Description</b>
<b>H-2710A.1</b>	<b>1</b>	<b>Specific Gravity Bench</b>
<b>H-2712A</b>	<b>1</b>	<b>Specific Gravity Tank assembly</b>
<b>H-2712A.1</b>	<b>1</b>	<b>Tank</b>
H-2712.3	1	Elbow
H-2712.5	1	PVC fitting w/neoprene gaskets
H-2712.7	1	Faucet, 3/4" NPT
<b>H-2712A.6</b>	<b>1</b>	<b>Pump, Heater and Bracket assembly</b>
H-2712A.2	1	Tank Heater
H-2712.6	1	Pump, 120VAC, 4 watt
H-2712.4A	1	Bracket, SST
<b>HB-4537WB</b>	<b>1</b>	<b>Balance 20,000g x .1g w/weigh below</b>
	<b>1</b>	<b>User Manual</b>

## General Information

### Inspection

Your Specific Gravity Bench Kit was thoroughly inspected before it was shipped and should be ready to operate as soon as you have completed the set-up procedure.

Notify Humboldt Mfg. Co. or your local agent and file a claim with any carriers involved if you find any damage to the machine. Unpack all of the equipment carefully to prevent loss of small items or manuals.

### Physical Specification

Shipping weight: 185 lbs. (78.9 kg)

Overall Dimensions: 16"x18"x10"

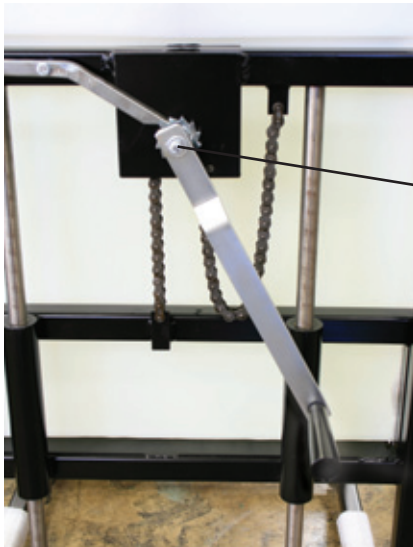
### Required Power Supply

120 VAC 60 Hz 1 phase, 3 amps

### Initial Installation

Remove the packing list and verify that all parts have been received. Normally you will receive one crate containing the bench and all it's components packed together. To install remove all the packing from the bench and accessories. Place the bench in the location it will be used.

To aid in shipping, the crank arm is installed in a reversed position. Before use, remove the bolt attaching the crank arm and handle (not the bolt holding the handle to the crank arm) to the unit and reverse it so that the handle is pointing out and reinstall. This allows the crank arm to be rotated without hitting the bench top.



This is the bolt, which should be used to turn the handle and crank arm into the correct operating orientation.

Next, install the overflow port extension and the drain valve to the Specific Gravity Tank, The bulkhead fittings are shipped installed into the tank. The overflow port extension and the drain valve are shipped with teflon thread tape installed so that you can just thread these items into their respective bulkhead fittings in the tank, snugly, to prevent leaks. Refer to product photo for correct orientation.

The Tank Heater and Circulator are shipped as a single mountable unit. Just hang the unit onto the tank lip and plug into a 120VAC source.

You are now ready to fill the tank with water. Place the tank on the Bench platform and fill the tank with water. The tank should be filled with a sufficient amount of water to allow the sample and the bail of the sample container to be under the water.

Unpack the balance and place on top of the bench so that the weigh-below port and hook line up with the hole in the top of the bench. Attach the AC cord to the scale and plug into a 120VAC outlet.

You are now prepared to proceed with a specific gravity determination. Mount your sample into an appropriate sample container and attach the sample and container to the scale's weigh-below hook. In most cases, you will need an accessory hook to attach the sample container to the weigh-below hook. In most cases this can be as simple as a piece of wire bent into an S-hook configuration. This hook is not included, since it depends on what type and size of sample and container are being used.

Once you have a sample and sample container attached to the scale, you can begin to raise the water tank up to immerse the sample and container into the water tank. To do this, push down on the silver, crank lock on the back of the bench. This releases the hand crank, which allows you to begin raising the tank up. To perform an accurate test, crank the tank up until both the sample and the bail of sample holder are beneath the water.

Please refer to ASTM C127 for specific test instructions and methods.

## Accessories

Following is an assortment of accessories, which can be used with the H-2713A Specific Gravity Bench Set.

### 8" Specific Gravity Sieve #4— H-3355 12" Specific Gravity Sieve #4— H-3356

Designed for use in specific gravity test applications. Heavy-gauge brass construction.



H-3355  
H-3356

### Hollow Tube Specific Gravity Cradle— H-2715

Through this unique, yet simple stainless steel hollow tube designed, water displacement is virtually eliminated for improved accuracy in specific gravity test applications.

### Specific Gravity Basket— H-3371

Stainless steel No. 8 wire mesh basket features reinforced construction and bail-type handle. Dimensions: 8" x 8" dia. Meets ASTM C127. Shipping wt. 9 lbs. (4kg)

H-2715



### Utility Bucket— H-3372

Heavily galvanized utility bucket has wire-reinforced top edge, bail-type handle and 14-qt. (13L) capacity. Meets ASTM C127.



H-3371

### Sample Container— H-3351

For use in testing aggregate soundness, container is used to immerse samples of coarse aggregate in solution and then transfer samples to oven for uniform drying in minimum time. No. 4 wire mesh, bottom soldered to frame after fabricating. Overall dimension: 10" x 4" dia. (254 x 102mm) with 1/8" (3mm) round wire handle. Meets ASTM C88; AASHTO T104.



H-3353

### Sample Container— H-3353

Used to immerse samples of coarse aggregates in solution and transfer samples to oven. #8 stainless steel wire mesh, bottom soldered to frame after fabricating. Overall dimension: 5-1/2" x 4" dia. (140 x 102mm). Meets ASTM C88; AASHTO T104. Shipping wt. 6 lbs. (2.7kg)



H-3351

**Heater/Circulator Assembly— H-2712A.6**

Comprised of a 200-watt, durable tank heater and circulating pump attached to stainless steel bracket that hangs on specific gravity tank to maintain constant temperature bath.

**Specific Gravity Tank w/ Heater/Circulator— H-2712A**

30 gal. polyethylene tank, which measures 18" x 24" x 18" and comes with a drain valve and overflow port. It also comes with a H-2712A.6, 200-watt, durable tank heater and circulating pump, both of which are attached to a stainless steel mounting bracket that holds both securely to the tank. ASTM C127.



H-2712A.6



H-2712A

## Warranty

Humboldt Mfg. Co. warrants its products to be free from defects in material or workmanship. The exclusive remedy for this warranty is Humboldt Mfg. Co., factory replacement of any part or parts of such product, for the warranty of this product please refer to Humboldt Mfg. Co. catalog on Terms and Conditions of Sale. The purchaser is responsible for the transportation charges. Humboldt Mfg. Co. shall not be responsible under this warranty if the goods have been improperly maintained, installed, operated or the goods have been altered or modified so as to adversely affect the operation, use performance or durability or so as to change their intended use. The Humboldt Mfg. Co. liability under the warranty contained in this clause is limited to the repair or replacement of defective goods and making good, defective workmanship.

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