Proctor Moulds and Rammers

Mould and rammer options for standard and modified Proctor testing

ASTM • EN • BS • Water content-dry density relationship



Standard

LOWER COMPACTIVE EFFORT

Modified

HIGHER COMPACTIVE EFFORT

ASTM D698 • ASTM D1557 • EN 13286-2

Photographs and Equipment Structure

Mould body, extension collar, base plate and rammer

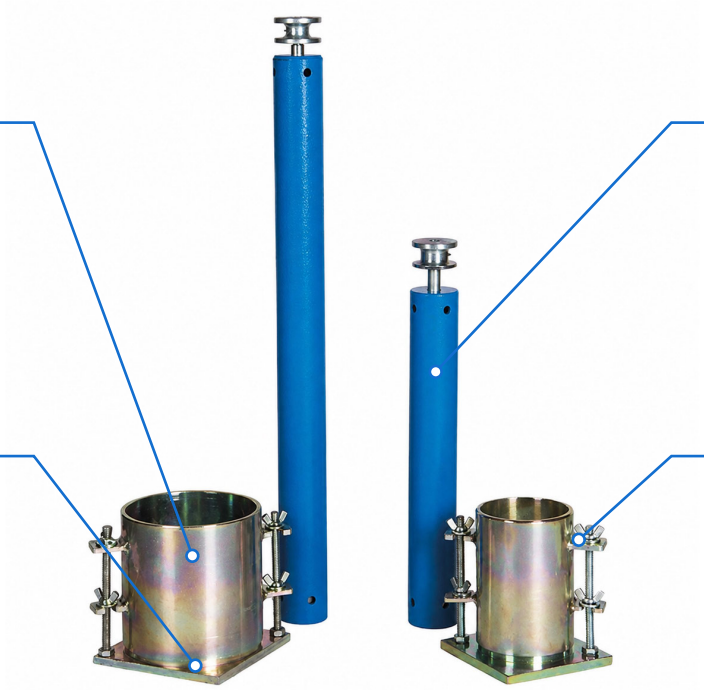
Proctor moulds and rammers compact material at different water contents using controlled energy. A test series supports evaluation of the compaction curve, optimum moisture content and maximum dry density.

MOULD BODY

Holds the specimen in a defined geometry. Select the mould according to the test method.

BASE PLATE

Supports the mould assembly; check its connections before testing.



RAMMER

Applies compaction energy to the layers using a defined mass and drop height.

COLLAR AND FIXINGS

The extension collar supports filling. Fixings hold the mould assembly together.



Mould, extension collar and base plate



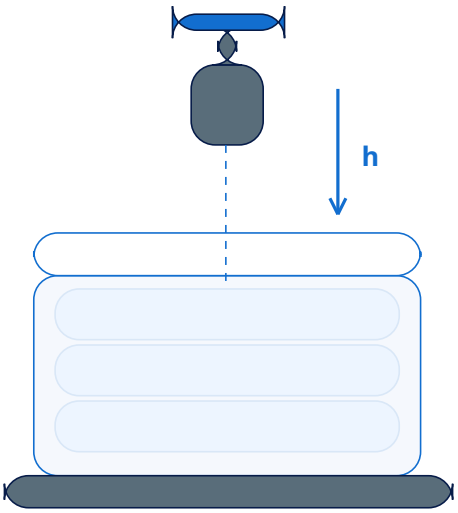
Rammer handle and guide body

PROCTOR | ASTM • EN • BS

Compaction with Controlled Energy

Select the method • Fill in layers • Compact • Determine density

RAMMER DROP + LAYERED SPECIMEN



ENERGY: MASS × GRAVITY × DROP HEIGHT

TEST: CONTROLLED LAYERS AND BLOWS

Use mould volume and compacted specimen mass

Establish the water content-dry density curve

REPRESENTATIVE MANUAL COMPACTION DIAGRAM • NOT TO SCALE

Select the Configuration

Match mould diameter, rammer mass and drop height to the test method.

Compact the Layers

Place material in layers. Apply the required number and distribution of blows.

Establish the Curve

Repeat at different water contents. Compare the resulting dry densities.

Compactive effort depends on rammer mass, drop height, numbers of blows and layers, and mould volume. Different methods produce different energy levels. Evaluate results within the same method and equipment configuration.

Preparing the Mould Assembly

Clean the mould body, extension collar and base plate. Determine mould volume and empty mould mass according to the procedure. Check connections before placing material.

After compaction, remove the collar, trim excess material flush with the mould body and perform the required weighing operations.

Standard and Modified Options

Standard Proctor procedures use lower compactive effort. Modified procedures apply greater effort using a heavier rammer and a greater drop height.

ASTM, EN and BS options differ in diameter, mass and drop height. Maintain the selected method's layer and blow pattern throughout the test. Use suitable weighing and drying equipment for water-content determination.

PROCTOR | ASTM • EN • BS

Mould and Rammer Specifications

Dimensions are nominal; rammer mass refers to the falling mass

Mould Code	Type / Method	Bore (mm)	Body (mm)
LT-S0055	Standard • ASTM	101.6	116.4
LT-S0056	Modified • ASTM	152.4	116.4
LT-S0060	Type A • EN	100	120
LT-S0061	Type B • EN	-	-
LT-S0065	1 litre mould	-	-

Rammer Code	Type	Dia. (mm)	Drop (mm)	Mass (g)
LT-S0057	Standard ASTM	50.8	304.8	2495
LT-S0058	Modified ASTM	50.8	457	4540
LT-S0062	Type A EN	50	305	2500
LT-S0063	Type B EN	50	457	4500
LT-S0066	BS • 2.5 kg	50	300	2500
LT-S0067	BS • 4.5 kg	50	450	4500

Select Equipment According to the Test Method

Record mould code, volume, rammer mass and drop height. Apply the method-defined numbers of layers and blows; evaluate water-content and dry-density records together.

Proctor Test Workflow

01
Prepare
Prepare material and suitable equipment.

02
Compact
Compact the layers according to the method.

03
Measure
Determine specimen mass and water content.

04
Evaluate
Establish the compaction curve and report.

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