

# Field and laboratory density / Bearing capacity

SOIL TESTING

Field density  
Sand replacement method

The verification of the degree of compaction can be determined on site by a simple procedure consisting essentially in removing and weighing a part of compacted soil and replacing it in the hole with sand by a simple apparatus recording the volume of sand and then calculating the density of the removed soil. Two versions are available: BS and ASTM. The principle of operation is the same but parts and sizes are different.

## SAND REPLACEMENT METHOD - ASTM, AASHTO, CNR, NF VERSIONS

### STANDARD

ASTM D1556, AASHTO T191, CNR No. 22  
NF P94-061-3

Complete sets: double cone, 2 plastic sand jar<sup>(1)</sup> 5 l cap. and metal tray

#### 35-T0128

4" (101.6 mm) sand density cone apparatus

#### 35-T0129

6.5" (165.1 mm) sand density cone apparatus

### Sand replacement set parts (ASTM, AASHTO, CNR versions)

Models (in./mm dia.)	Code 4"/101.6	Code 6.5"/165.1	Code 12"/304.8
Complete set	35-T0128	35-T0129	35-T0133
Weight approx. kg	3	3	20
Double cone	35-T1028/1	35-T0129/1	/
Plastic sand jar 5 l cap.	35-T0130/2	35-T0130/2	/
Metal base plate with flanged (rimmed) hole	35-T0128/2	35-T0129/2	/

### Sand replacement set parts (BS versions)

Models (mm dia.)	Code 100	Code 150	Code 200
Complete set	35-T0125	35-T0125/A	35-T0126
Weight (kg)	7.7	13	27.5
Sand pouring cylinder	35-T0125/1	35-T0125/A1	35-T0126/1
Weight (kg)	4	7.5	16
Calibration can	35-T0125/2	35-T0125/A2	35-T0126/2
Weight (kg)	2.2	3.5	8.5
Density tray	35-T0125/3	35-T0125/A3	35-T0126/3
Size (mm)	305x38	300x40	457x38
Weight (kg)	1.5	2	3

## Accessories

35-T0127/1 Standard sand 0.4 – 2 mm, CNR No. 22

35-T0130/8 Calibrating container, 6". For use with 35-T0129 apparatus. Internal dia. 165 mm, depth 187 mm. Weight approx. 5 kg

## note

In the 12", 35-T0133 model, the two cones are connected by a valve with pouring hole 25 mm dia. The clear plastic 15 litres container is fitted to the cone with two clamps. Supplied complete with 700 mm dia. baseplate. This model is recommended for gravel and coarse-grained soil.

#### 35-T0133

12" (304.8 mm) sand density cone apparatus

(1) Except the 12" model supplied with only 1 acrylic sand container

## SAND REPLACEMENT METHOD - BS VERSION

### STANDARD

BS 1377:9, 1924:2

Complete sets: pouring cylinder, calibration container and metal tray.

#### 35-T0125

100 mm sand replacement complete set

#### 35-T0125/A

150 mm sand replacement complete set

#### 35-T0126

200 mm sand replacement complete set

## Description and specifications

The sand pouring cylinder and calibration can are made of cast aluminium and precisely machined.

The tray is made of plated sheet steel. Each part can be ordered individually.



35-T0125, 35-T0125/A, 35-T0126

## Accessories

35-T0127 Standard sand 600/300 micron, 50 kg bag

Архангельск (8182)63-90-72  
Астана (7172)727-132  
Астрахань (8512)99-46-04  
Барнаул (3852)73-04-60  
Белгород (4722)40-23-64  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89

Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Казань (843)206-01-48  
Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Липецк (4742)52-20-81  
Киргизия (996)312-96-26-47

Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41  
Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Новосибирск (383)227-86-73  
Омск (3812)21-46-40  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пenza (8412)22-31-16  
Казахстан (772)734-952-31

Пермь (342)205-81-47  
Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Санкт-Петербург (812)309-46-40  
Саратов (845)249-38-78  
Севастополь (8692)22-31-93  
Симферополь (3652)67-13-56  
Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
Таджикистан (992)427-82-92-69

Сургут (3462)77-98-35  
Тверь (4822)63-31-35  
Томск (3822)98-41-53  
Тула (4872)74-02-29  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Уфа (347)229-48-12  
Хабаровск (4212)92-98-04  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Ярославль (4852)69-52-93