



**PRODUCT MANUAL FOR
COMPRESSION TESTING MACHINE USED FOR TESTING OF
CONCRETE AND MORTAR
ACCORDING TO IS 14858 : 2000**

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

1.	Product	:	IS 14858 : 2000
	Title	:	COMPRESSION TESTING MACHINE USED FOR TESTING OF CONCRETE AND MORTAR
	No. of Amendments	:	NIL
2.	Sampling Guidelines:		
a)	Raw material	:	-
b)	Grouping guidelines	:	Compression testing machine of each capacity and display (Load scale indicator/Digital display) shall be tested to cover the particular variety tested.
c)	Sample Size	:	1 machine for all tests
3.	List of Test Equipment	:	Please refer ANNEX – A
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – B
5.	Possible tests in a day	:	All tests possible in a day
6.	Scope of the Licence :		
	“Licence is granted to use Standard Mark as per IS 14858 : 2000 with the following scope:		
	Name of the product	Compression Testing Machine Used for Testing of Concrete and Mortar	
	Method of display	Load scale indicators/ Digital displays	
	Capacity of compression testing machine in KN		
	Equipped with automatic load control or without automatic load control		

ANNEX A**List of Test Equipment***Major test equipment required to test as per the Indian Standard*

S. No.	Tests used in with Clause Reference	Test Equipment
1	Accuracy (Clause 5.4)	- Proving ring
2	Rate of loading (Clause 5.7)	- Stop watch
3	Machine platens (Clause 6.1)	- Hardness tester - Vernier calliper - Micrometre - Depth gauge - Protactor - Surface tester
4	Bottom bearing blocks (Clause 6.2)	- Hardness tester - Vernier calliper - Surface plate - Dial gauge - Micrometre
5	Auxiliary platens (Clause 7)	- Hardness tester - Vernier calliper - Surface plate - Dial gauge - Square arm - Squareness tester - Parallelism tester - Micrometre - Surface texture scales
6	Spacing blocks (Clause 8)	- Hardness tester - Vernier calliper - Surface plate - Dial gauge - Square arm - Squareness tester - Parallelism tester - Micrometre

The above list is indicative only and may not be treated as exhaustive.

ANNEX B

Scheme of Inspection And Testing

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipment.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. LABELLING AND MARKING – As per the requirements of IS 14858 : 2000.

In addition to the above, capacity of compression testing machine and method of loading i.e with automatic load control or without automatic load control shall be marked on name plate of machine.

4. LEVELS OF CONTROL - The tests as indicated in column 1 of [Table 1](#) and the levels of control in column 3 of [Table 1](#), shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

4.1 All the production which conforms to the Indian Standard and covered by the licence should be marked with Standard Mark.

5. REJECTIONS – Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Methods			No. of Sample	Frequency	Remarks
		Clause	Reference				
3	Construction						
3.1	General	3.1	IS 14858	R	Each machine	-	-
4	Design	4.1 to 4.3	IS 14858	R	Each machine	-	-
5	Loading						
5.1	Load control	5.1	IS 14858	R	Each machine	-	-
5.2	Load pacers	5.2	IS 14858	R	Each machine	-	-
5.3	Load scale indicator or digital display	5.3.1	IS 14858	R	Each machine	-	-
5.4	Accuracy	5.4	IS 14858	R	Each machine	-	-
5.6	Mean of applying load	5.6	IS 14858	R	Each machine	-	-
5.7	Rate of loading	5.7	IS 14858	R	Each machine	-	-
6	Machine platens (For hardness test)	6.1	IS 14858	S	Each block received	-	No further testing is required if material received with test certificate
	Machine platens (Other than hardness test)	6.1	IS 14858	R	Each machine	-	-

6.2	Bottom bearing blocks	6.2	IS 14858	R	Each machine	-	-
7	Auxiliary platens (For hardness test)	7.1	IS 14858	S	Each block received	-	No further testing is required if material received with test certificate
	Auxiliary platens (Other than hardness test)	7.1 to 7.6	IS 14858	R	Each machine	-	-
8	Spacing blocks (For hardness test)	8.2	IS 14858	S	Each block	-	No further testing is required if material received with test certificate
	Spacing blocks (Other than hardness test)	8.1 to 8.3	IS 14858	R	Each machine	-	-

Note-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note -2 : Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.