
रीढ़स्नान के टब — विशिष्टि

Spinal Bath Tub — Specification

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FOREWORD

Naturopathy is a form of medicine that employs therapeutic qualities of natural resources namely soil, water, sunlight, air, space (emptiness), diet, rest and exercise enabling the body to heal itself. It is helpful in treating and preventing diseases as well as in promoting overall well-being. The therapeutic techniques involved in naturopathy are based on the customs and culture of the Indian sub-continent documented in the *Upanishads*, *Purāṇās* and other ancient Indian Scriptures.

A branch of naturopathy, hydrotherapy (or) water-therapy involves external and internal therapeutic application of water in any of its three states namely ice, water or steam for addressing and averting illness while fostering holistic health.

Spinal bath is a water-based therapy where a person is made to lie down in a specially designed tub so that the para-spinal region from neck to lower back (only the back including the spine) is immersed in water at desired temperature for prescribed duration. Spinal bath is most useful in treating conditions like hypertension, insomnia, nervous system disorders, Cervical & Lumbar Spondylosis etc.

This bath is taken in a specially designed tub filled with water at required temperature and the patient is made to lie down along the length of the tub placing the neck on the gently-slanted slope and thighs on the steeply-slanted slope. The head and the legs should be outside the water.

As available spinal bath tubs in the market are neither standardized nor of the assured quality, there is a need for standardization of spinal bath tub for quality, safety and advantage of the users and other stakeholders.

This standard is stipulating the standardized specification of spinal bath tub.

The inputs for formulation of this standard have been derived from the information available in the public domain in print and electronic media including authoritative books of naturopathy and related Indian and International Standards. Technical inputs from subject matter experts have also been used to formulate the standard.

CAUTION—The treatment should be given upon the recommendation of a naturopathy physician and supervised by a naturopathy therapist.

The composition of the Committee responsible for the formulation of this standard is given in Annex A.

SPINAL BATH TUB — SPECIFICATIONS

1 SCOPE

This standard specifies the dimensional specifications of Spinal Bath Tub. Each Spinal Bath Tub comprises of three components – (a) Tub; (b) Stand; and (c) Foot-rest.

This standard covers minimum requirements and dimensional details for a spinal bath tub made of gel-coated glass fiber reinforced polyester resin or heavy-duty fiberglass [glass reinforced plastic (GRP) or fiber reinforced plastic (FRP)] or polyurethane foam (PUF) filled fiber or fiberglass resin or acrylic or any other suitable material(s).

2 REFERENCES

The standards given below contains provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated was valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of these standards.

<i>IS No.</i>	<i>Title</i>
IS 4033 : 1968	General requirements for hospital furniture
AYD 3 (24752)	Glossary of naturopathy terminology

3 TERMINOLOGY

For the purpose of this standard, the definitions given in Doc No. – AYD 3 (24752) shall apply.

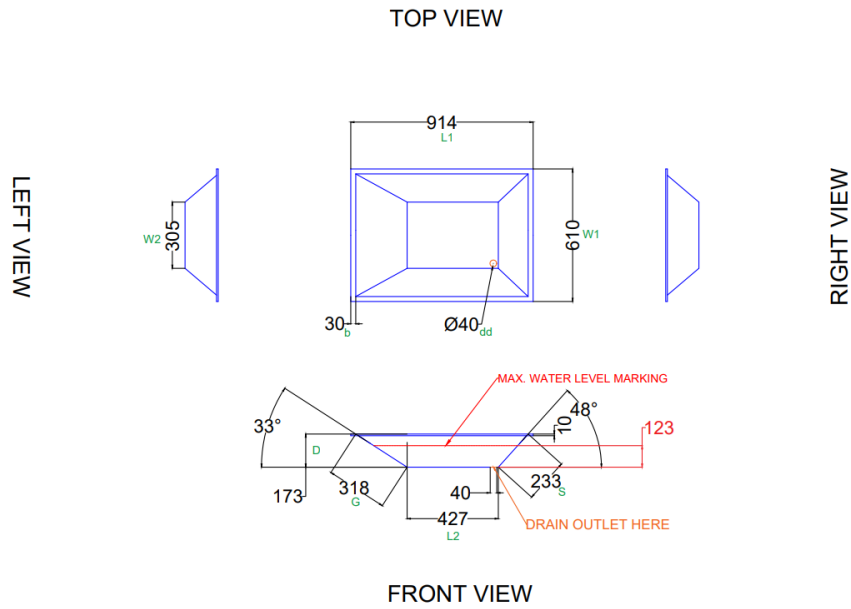
4 MATERIALS

The materials from which the spinal bath tub is made shall not have undesirable effect on the patient.

Table 1 Requirements for Spinal Bath Tub (Small - S)

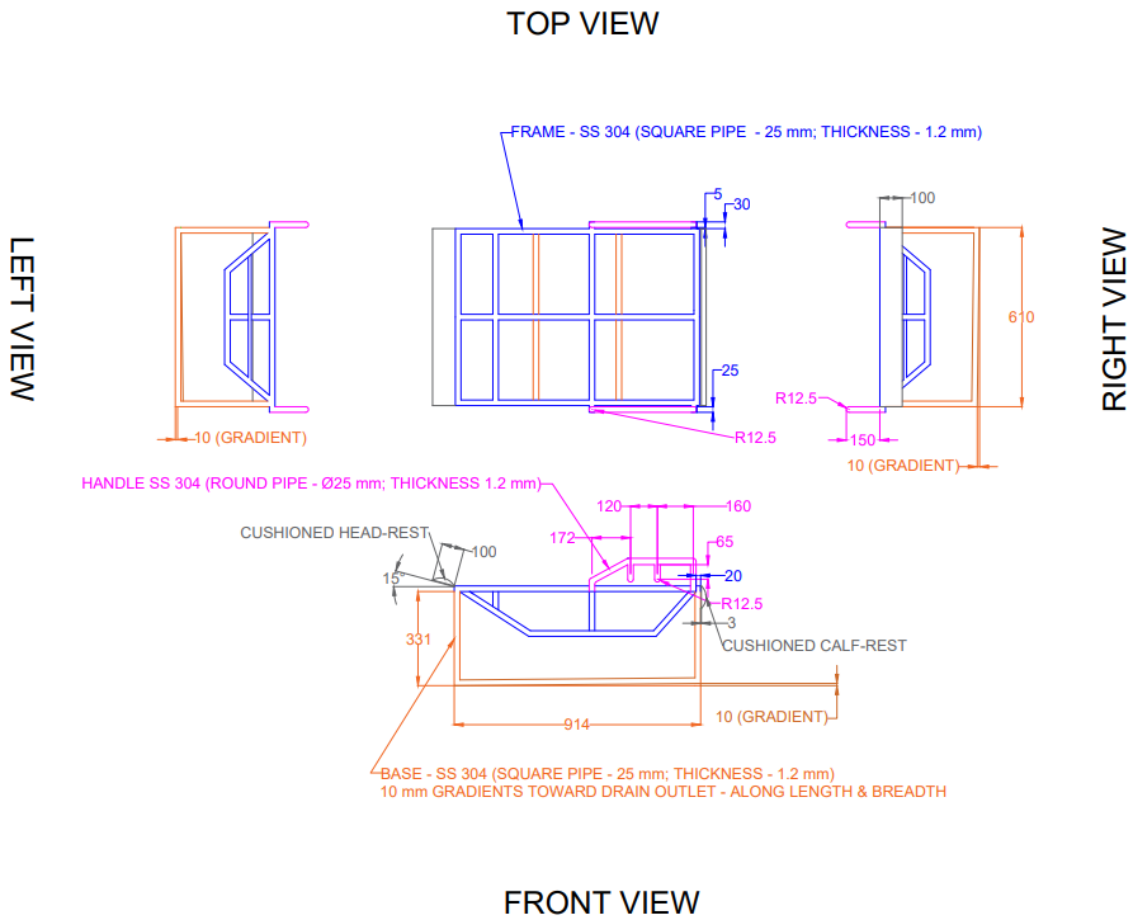
(Clause 4.1)

SI No. (1)	Characteristics (2)	Requirements (3)	Tolerance (4)
i)	Length at top (L1)	914 mm	± 8 mm
ii)	Width at top (W1)	610 mm	± 6 mm
iii)	Length at bottom (L2)	427 mm	± 4 mm
iv)	Width at bottom (W2)	305 mm	± 3 mm
v)	Depth (D)	173 mm	± 2 mm
vi)	Gently-slanted slope (Cranial slope) (G)	318 mm	± 3 mm
vii)	Steeply-slanted slope (Caudal slope) (S)	233 mm	± 2 mm
viii)	Rim (b)	30 mm	± 1 mm
ix)	Drain diameter (dd)	40 mm	± 1 mm
x)	Maximum water level (marking)	123 mm	± 2 mm
xi)	Weight of Spinal Bath Tub	As per agreement between manufacturer and purchaser	
xii)	Height of the stand	356 mm	± 3 mm
xiii)	Gradient (along length) at base	10 mm	± 0.5 mm
xiv)	Gradient (along breadth) at base	10 mm	± 0.5 mm
xv)	Foot-rest	360 mm × 240 mm × 160 mm (length × width × height)	± 3 mm × ± 2 mm × ± 1 mm (length × width × height)
xvi)	Foot-rest Gradient	60 mm	± 1 mm



All dimensions in millimetres

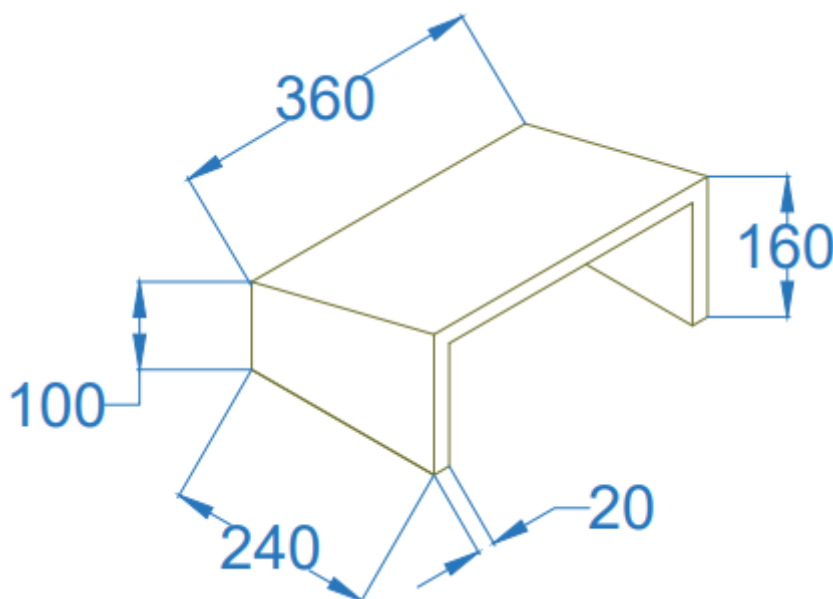
FIG. 1 (A) DIAGRAMMATIC SHAPE OF TUB (SMALL - S)



All dimensions in millimetres

FIG. 1 (B) DIAGRAMMATIC SHAPE OF STAND (SMALL - S)

ISOMETRIC VIEW

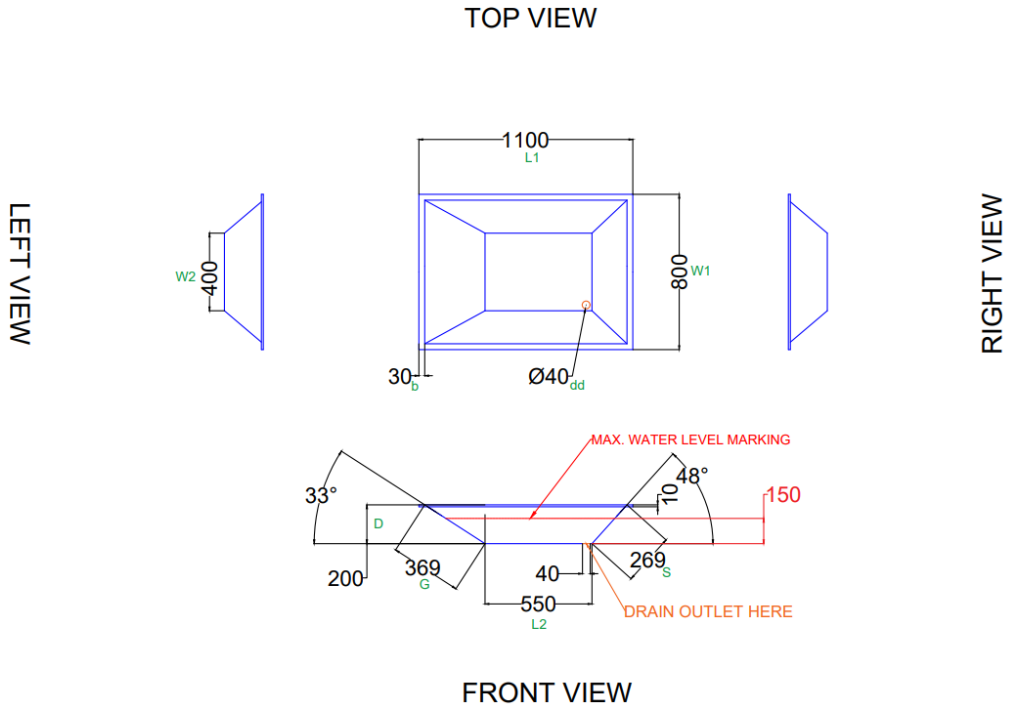


All dimensions in millimetres

FIG. 1 (C) DIAGRAMMATIC SHAPE OF FOOT-REST (SMALL - S)

Table 2 Requirements for Spinal Bath Tub (Medium - M)
(Clause 4.2)

SI No. (1)	Characteristics (2)	Requirements (3)	Tolerance (4)
i)	Length at top (L1)	1100 mm	± 8 mm
ii)	Width at top (W1)	800 mm	± 6 mm
iii)	Length at bottom (L2)	550 mm	± 4 mm
iv)	Width at bottom (W2)	400 mm	± 3 mm
v)	Depth (D)	200 mm	± 2 mm
vi)	Gently-slanted slope (Cranial slope) (G)	369 mm	± 3 mm
vii)	Steeply-slanted slope (Caudal slope) (S)	269 mm	± 2 mm
viii)	Rim (b)	30 mm	± 1 mm
ix)	Drain diameter (dd)	40 mm	± 1 mm
x)	Maximum water level (marking)	150 mm	± 2 mm
xi)	Weight of Spinal Bath Tub	As per agreement between manufacturer and purchaser	
xii)	Height of the stand	420 mm	± 3 mm
xiii)	Gradient (along length) at base	10 mm	± 0.5 mm
xiv)	Gradient (along breadth) at base	10 mm	± 0.5 mm
xv)	Foot-rest	360 mm × 240 mm × 160 mm (length × width × height)	± 3 mm × ± 2 mm × ± 1 mm (length × width × height)
xvi)	Foot-rest Gradient	60 mm	± 1 mm



All dimensions in millimetres
 FIG. 2 (A) DIAGRAMMATIC SHAPE OF TUB (MEDIUM - M)

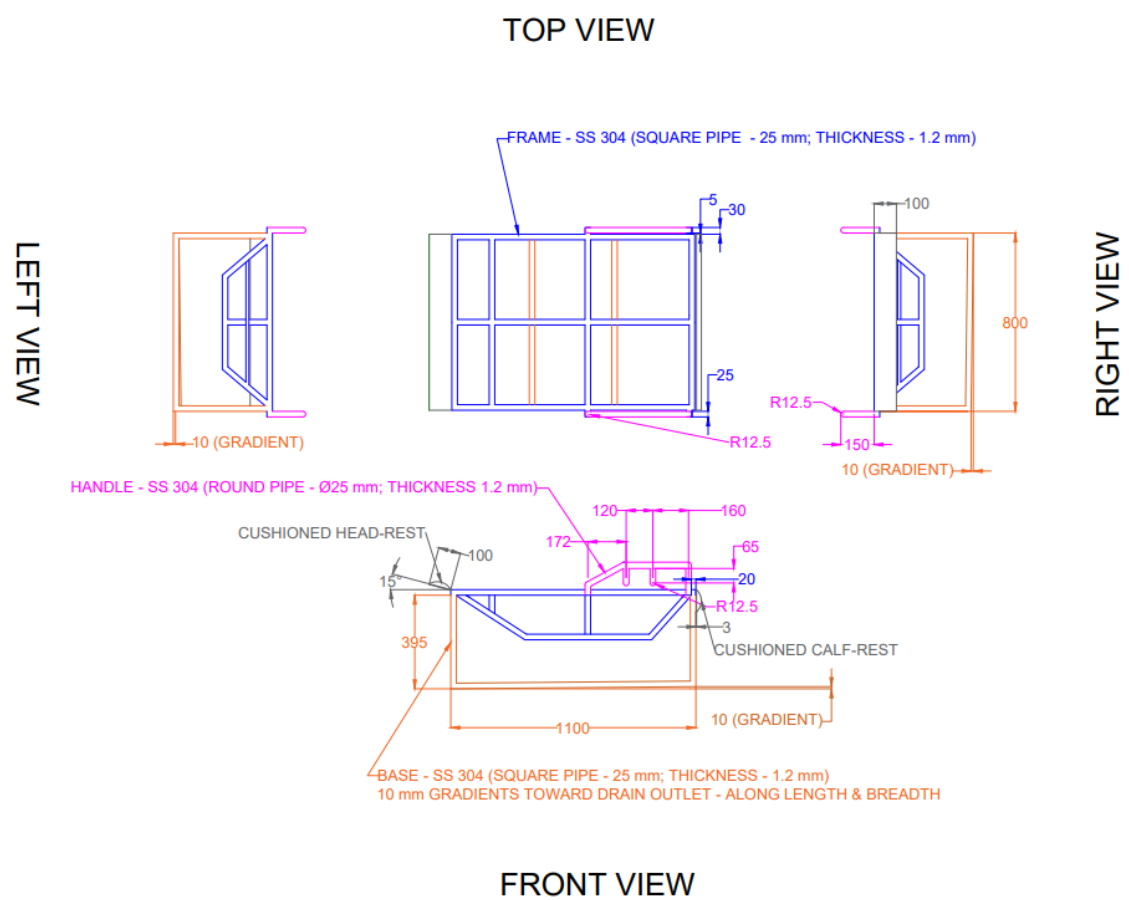
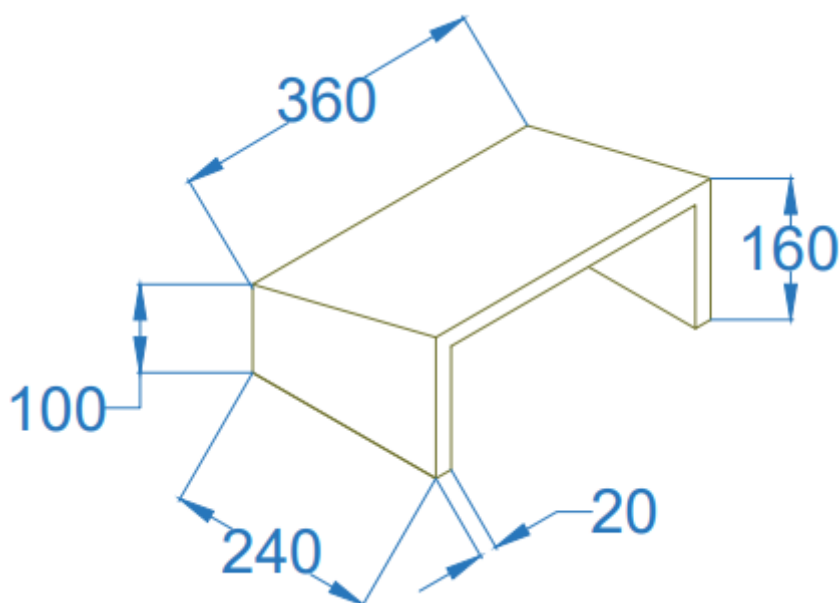


FIG. 2 (B) DIAGRAMMATIC SHAPE OF STAND (MEDIUM - M)

ISOMETRIC VIEW

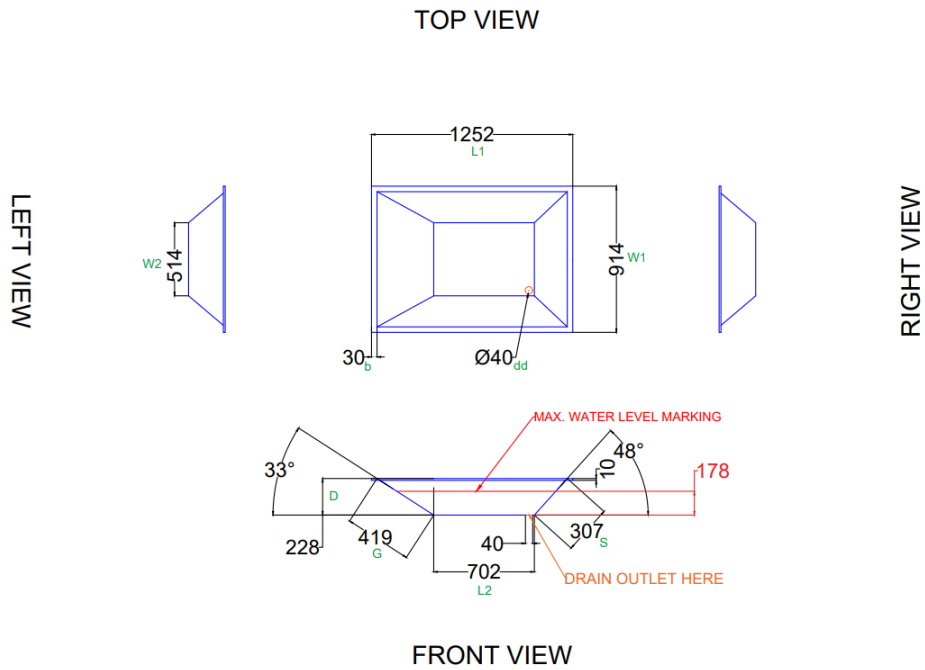


All dimensions in millimetres

FIG. 2 (C) DIAGRAMMATIC SHAPE OF FOOT-REST (MEDIUM - M)

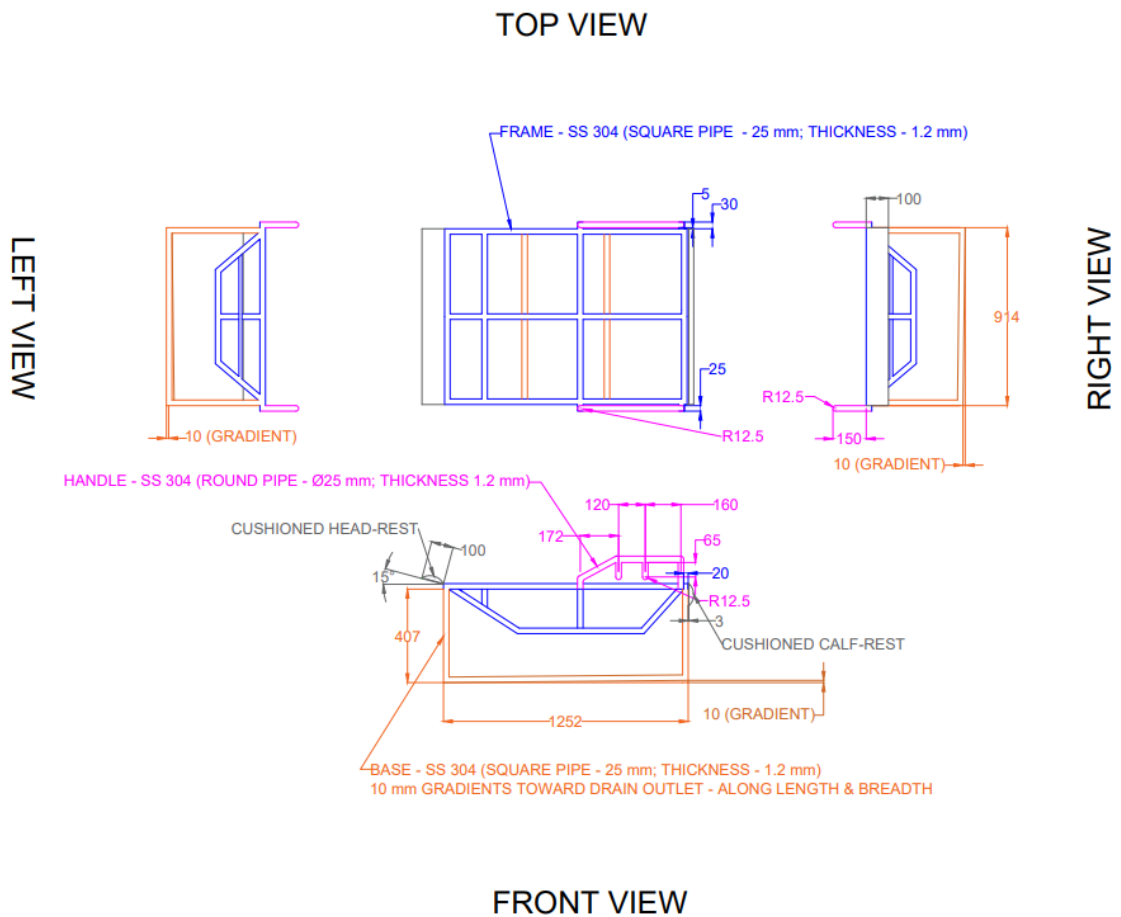
Table 3 Requirements for Spinal Bath Tub (Large - L)
(Clause 4.3)

SI No. (1)	Characteristics (2)	Requirements (3)	Tolerance (4)
i)	Length at top (L1)	1252 mm	± 12 mm
ii)	Width at top (W1)	914 mm	± 9 mm
iii)	Length at bottom (L2)	702 mm	± 7 mm
iv)	Width at bottom (W2)	514 mm	± 5 mm
v)	Depth (D)	228 mm	± 2 mm
vi)	Gently-slanted slope (Cranial slope) (G)	419 mm	± 4 mm
vii)	Steeply-slanted slope (Caudal slope) (S)	307 mm	± 3 mm
viii)	Rim (b)	30 mm	± 1 mm
ix)	Drain diameter (dd)	40 mm	± 1 mm
x)	Maximum water level (marking)	178 mm	± 2 mm
xi)	Weight of Spinal Bath Tub	As per agreement between manufacturer and purchaser	
xii)	Height of the stand	432 mm	± 5 mm
xiii)	Gradient (along length) at base	10 mm	± 0.5 mm
xiv)	Gradient (along breadth) at base	10 mm	± 0.5 mm
xv)	Foot-rest	360 mm × 300 mm × 140 mm (length × width × height)	± 3 mm × ± 3 mm × ± 1 mm (length × width × height)
xvi)	Foot-rest Gradient	60 mm	± 1 mm



All dimensions in millimetres

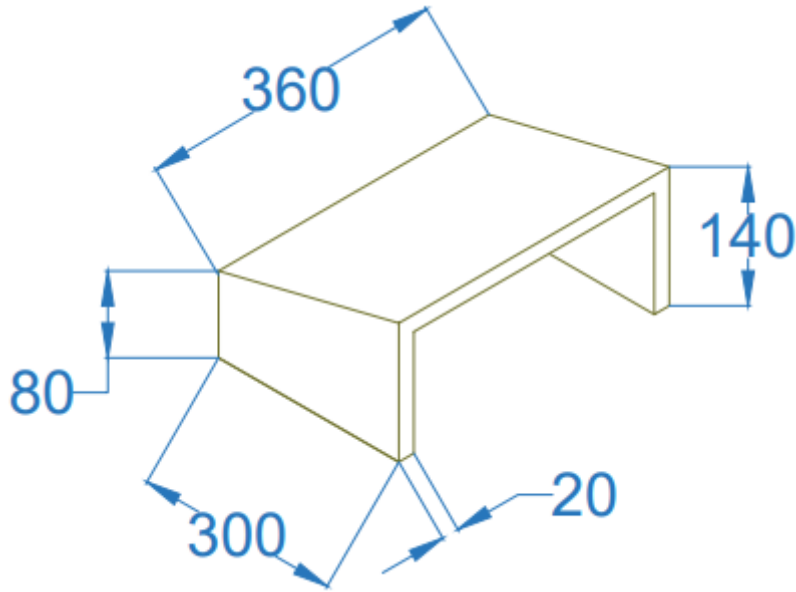
FIG. 3 (A) DIAGRAMMATIC SHAPE OF TUB (LARGE – L)



All dimensions in millimetres

FIG. 3 (B) DIAGRAMMATIC SHAPE OF STAND (LARGE – L)

ISOMETRIC VIEW



All dimensions in millimetres

FIG. 3 (C) DIAGRAMMATIC SHAPE OF FOOT-REST (LARGE – L)

5 DIMENSIONS

5.1 The Spinal bath tub shall conform to the requirements of Table 1, Table 2 and Table 3.

5.2 The spinal bath tub shall be leak proof. The gently-slanted slope and steeply-slanted slope should be at angles of 33° and 48° respectively with a tolerance of $\pm 2^\circ$.

5.3 The weight of the Spinal Bath Tub shall be as per the agreement between the manufacturer and purchaser.

6. WORKMANSHIP AND FINISH

The spinal bath tubs shall be free from cracks, crazing, pinholes, porosity, blisters, chipped areas or moulding defects that may affect their appearance and serviceability. There shall be no readily visible wrinkles in any area.

7. CONSTRUCTION

7.1 Body

Each spinal bath tub shall be one piece unit with an opening for drain outlet. An apron (side panel) may be integrated into the stand of the bath tub.

7.2 Stand/Mounting

The material used for the stand of the Spinal Bath Tub shall be at least similar to the material of the bath tub in resistance to deterioration with age.

7.3 Effectiveness of Support

When the spinal bath tub is installed in the supporting stand/structure, there shall be no permanent deformation of the bath tub or its supporting structure and no cracking or crazing of the spinal bath tub.

7.4 For the safety of users, spinal bath tubs shall be as flat-bottomed as practicable. The slope/gradient towards the outlet shall be adequate for complete emptying.

7.5 The drain outlet shall be so formed as to be suitable for receiving a 40 mm waste fitting.

8. PERFORMANCE REQUIREMENTS AND TESTS

8.1 Testing and performance assessment may be performed as per the procedures prescribed in Indian and/or international standard(s) for respective material(s) with which the Spinal Bath Tub is fabricated.

8.2 Some of the parameters which may be tested are impact resistance, hardness, cracking or crazing, water absorption, resistance to boiling water, resistance to hydrochloric acid, tensile strength of laminate, washability, loading capacity of rim and stand, load on unsupported areas, loading capacity of foot-rest etc.

9. MARKING

9.1 Each spinal bath tub shall be clearly marked by stamping and labeling in a prominent place with the size of the spinal bath tub, name and trade-mark of the manufacturer. The usable life of the spinal bath tub, spinal bath tub stand and Foot-rest should also be mentioned on them and should be clearly visible.

9.2 Each spinal bath tub shall comply with the provisions of 7.1 of IS 4033 and shall be marked with:

- a) Manufacturer's name/trademark;
- b) Name and address of the manufacturer;
- c) Name and address of the marketer;
- d) Month and year of manufacture;
- e) Unique Device Identification/Serial Number; and

9.3 BIS CERTIFICATION MARKING

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the product(s) may be marked with the Standard Mark.

NOTE — The use of the BIS Certification Mark is governed by the provisions of the *Bureau of Indian Standards (Certification Marks) Act* and the Rules and Regulations made thereunder. The BIS Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. BIS marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a license for the use of the BIS Certification Mark may be granted to manufacturers or processors, may be obtained from the Bureau of Indian Standards.

10. MANUFACTURER'S INSTRUCTIONS

The manufacturer shall furnish with each spinal bath tub, suitable instruction for cleaning and maintenance.

11. PACKING

The Spinal Bath Tub shall be packed in a case made of a suitable material in such a way that they are intact in the case. It shall be so designed that when the spinal bath tub is kept in position and the lid is closed, there shall be no rattling inside the case.

