

## **BUREAU OF INDIAN STANDARDS**

*(Not to be reproduced without the permission of BIS or used as a Standard)*

### ***Draft Indian Standard***

## **VITREOUS CHINA SANITARY APPLIANCES — SPECIFICATION PART 3 SPECIFIC REQUIREMENTS OF SQUATTING PANS**

[Sixth Revision of IS 2556 (Part 3)]

(ICS 91.140.70)

---

Sanitary Appliances and Water Fittings  
Sectional Committee, CED 03

Last date of Comments:  
**16 March 2023**

---

Sanitary Appliances and Water Fittings Sectional Committee, CED 3

### **FOREWORD**

*(Formal clauses to be added later.)*

This standard was first published on 1963 and thereafter revised in 1967, 1973, 1981, 1994 and 2004 respectively. In the last (2004) revision, saw dust and splash test were included. In this revision, the standard has been brought out in the latest style and format. The following major modifications have also been incorporated:

- a) The main title of the standard has been modified from 'Vitreous Sanitary appliances (vitreous China)' to 'Vitreous China Sanitary Appliances'.
- b) Additional requirements for water efficiency and labelling of water closets have been incorporated through reference to the concerned Indian Standard.
- c) Other changes, keeping in view the manufacturing practices prevalent in the country at that time, were made.

This Standard helps in achievement of following Sustainable Development Goals

- a) SDG 6 : Clean Water and Sanitation
- b) SDG 11: Sustainable Cities and Communities
- c) SDG 12: Ensure sustainable consumption and production patterns

Other standards on Vitreous China Sanitary Appliances of 2556 are:

IS No.	Title
IS 2556 (Part 1) : 2021	Vitreous China Sanitary Appliances — Specification Part 1 General Requirements ( Fourth Revision )
IS 2556 (Part 2) : 20XX	Vitreous China sanitary appliances — Specification Part 2 Specific requirements of washdown water closets (Sixth Revision) ( <i>finalized for publication</i> )
IS 2556 (Part 4):2004	Vitreous sanitary appliances (vitreous China) — Specification: Part 4 Specific requirements of wash basins ( <i>fourth revision</i> )
IS 2556 (Part 5):1994	Vitreous sanitary appliances (vitreous China) — Specification: Part 5 Specific requirements of laboratory sinks ( <i>third revision</i> )
IS 2556 (Part 6):2021	Vitreous China sanitary appliances — Specification: Part 6 Specific requirements of urinals and partition plates ( <i>fifth revision</i> )
IS 2556 (Part 7):1995	Vitreous sanitary appliances (vitreous China) — Specification: Part 7 Specific requirements of accessories for sanitary appliances ( <i>third revision</i> )
IS 2556 (Part 8):2021	Vitreous China sanitary appliances — Specification: Part 8 Specific requirements of close-coupled and one-piece pedestal washdown and syphonic water closets ( <i>sixth revision</i> )
IS 2556 (Part 9):2004	Vitreous sanitary appliances (vitreous China) — Specification: Part 9 Specific requirements of pedestal type bidets ( <i>fifth revision</i> )
IS 2556 (Part 14):20XX	Vitreous China sanitary appliances — Specification Part 14 Specific requirements of integrated squatting pans ( <i>in Wide Circulation</i> )
IS 2556 (Part 15):20XX	Vitreous China sanitary appliances — Specification Part 15 Specific requirements of universal water closets(Third Revision) ( <i>finalized for publication</i> )
IS 2556 (Part 16):20XX	Vitreous China sanitary appliances — Specification Part 16 Specific requirements of washdown wall mounted water closets (First Revision) ( <i>finalized for publication</i> )

IS 2556 (Part 17):2001	Vitreous sanitary appliances (vitreous China) — Specification: Part 17 Specific requirements of wall mounted bidets
------------------------	---

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2:2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

**BUREAU OF INDIAN STANDARDS***(Not to be reproduced without the permission of BIS or used as a Standard)****Draft Indian Standard*****VITREOUS CHINA SANITARY APPLIANCES — SPECIFICATION  
PART 3 SPECIFIC REQUIREMENTS OF SQUATTING PANS**

[Sixth Revision of IS 2556 (Part 3)]

(ICS 91.140.70)

Sanitary Appliances and Water Fittings  
Sectional Committee, CED 03Last date of Comments:  
**16 March 2023****1 SCOPE**

This standard (Part 3) covers the requirements for patterns, sizes, construction, dimensions, finish, flushing tests, inspection and marking for vitreous China squatting pans.

**2 REFERENCES**

The Indian Standards given below contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreement based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards given below:

<i>IS No.</i>	<i>Title</i>
IS 774 : 2021	Ceramic (vitreous China) flushing cisterns for water closets and urinals — Specification ( <i>sixth revision</i> )
IS 2556 (Part 1) : 2021	Vitreous China Sanitary Appliances — Specification Part 1 General Requirements ( Fourth Revision )
IS 2556 (Part 7) : 1995	Vitreous sanitary appliances (vitreous China) — Specification: Specific requirements of accessories for sanitary appliances ( <i>third revision</i> )
IS 9140 : 1996	Method for sampling of vitreous and fire clay sanitary appliances ( <i>second revision</i> )
IS 17650 (Part 1):2021	Water Efficient Plumbing Products — Requirements Part 1 Sanitaryware

### 3 GENERAL REQUIREMENTS

The general requirements relating to terminology, material and manufacture, glazing, defects, minimum thickness, tolerances, performance and methods of tests shall conform to IS 2556 (Part 1).

### 4 PATTERNS AND SIZES

4.1 Squatting pans shall be made in any of the following patterns and sizes:

<i>Pattern</i>	<i>Size, mm</i>	<i>Ref to Fig.</i>
Long	580 and 630	Fig. 1A and 1B
Orissa	580 X 440 and 630 X 450	Fig. 2
Rural	480	Fig. 3

4.2 The squatting pan may also be made in other patterns and/or sizes where so agreed between the manufacturer and the purchaser. However, except for functional dimensions all other requirements as laid down in this standard shall be complied with.

### 5 CONSTRUCTIONS

5.1 Each pan shall have an integral flushing rim of suitable type. Rural pattern, however, shall have no integral flushing rim.

5.1.1 Squatting pan, both Long and Orissa pattern, of 630 mm size shall be of the box rim type. Squatting pan of sizes smaller than 630 mm may be made either box rim or open rim type. In case of pans with box rim construction, number of holes shall be provided in the rim to satisfy requirements of flushing tests given in 8. The flushing rim shall have an inlet or supply horn for connecting the flush pipe. The flushing rim and inlet shall be of self-draining type. A weephole shall be provided at the flushing inlet of the pan. The flushing inlet, for the long pattern pan, may be located either at the narrow end or broad end or at both the ends as stipulated by the purchaser.

5.2 The inside of the bottom of the pan shall have sufficient slope from the front towards the outlet to enable easy and quick disposal while flushing. The exterior surface shall not be glazed and this surface shall be sufficiently rough or scored or grooved at right angles to the axis of the outlet.

5.3 Each pan shall be provided with a trap where so specified by the purchaser. The trap for Long and Orissa pattern pan shall have either 'P' or 'S' outlet with or without inspection vent as specified by the purchaser and the trap shall conform to the

requirements given in IS 2556 (Part 7). The trap for rural pattern pan shall conform to the dimensions specified in Fig. 3B of IS 2556 (Part 7). The trap shall be glazed inside.

**6 DIMENSIONS AND TOLERANCES**

**6.1** The functional and connecting dimensions of Long and Orissa pattern pans shall conform to those given in Tables 1 and 2 respectively read with Fig. 1A, 1B and 2. The dimensions of rural pattern shall be as shown in Fig. 3.

**6.2** The top surface, in the case of long pattern shall not at any point vary from its design plane or contour by more than 6 mm for size 580 mm and by more than 10 mm for size 630 mm; the variation shall not exceed 10 mm in the case of Orissa pattern.

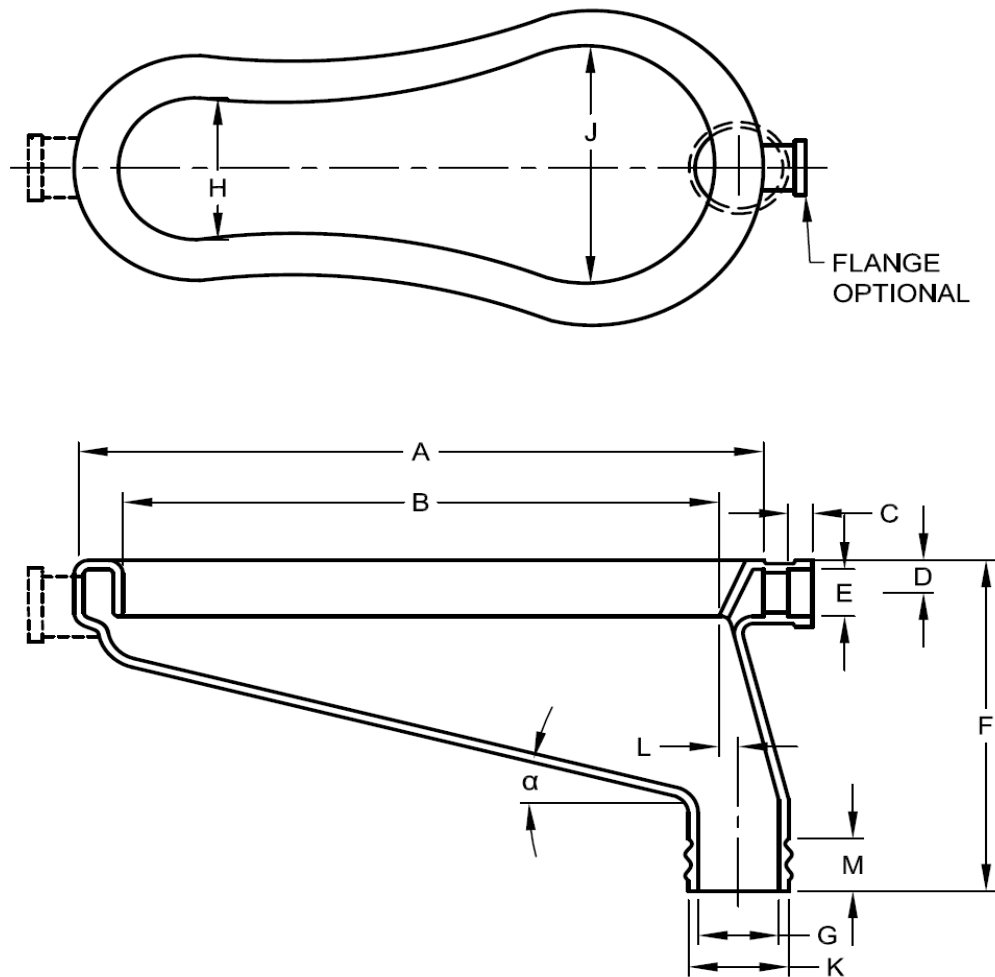


FIG. 1A LONG PATTERN SQUATTING PAN, TYPE I

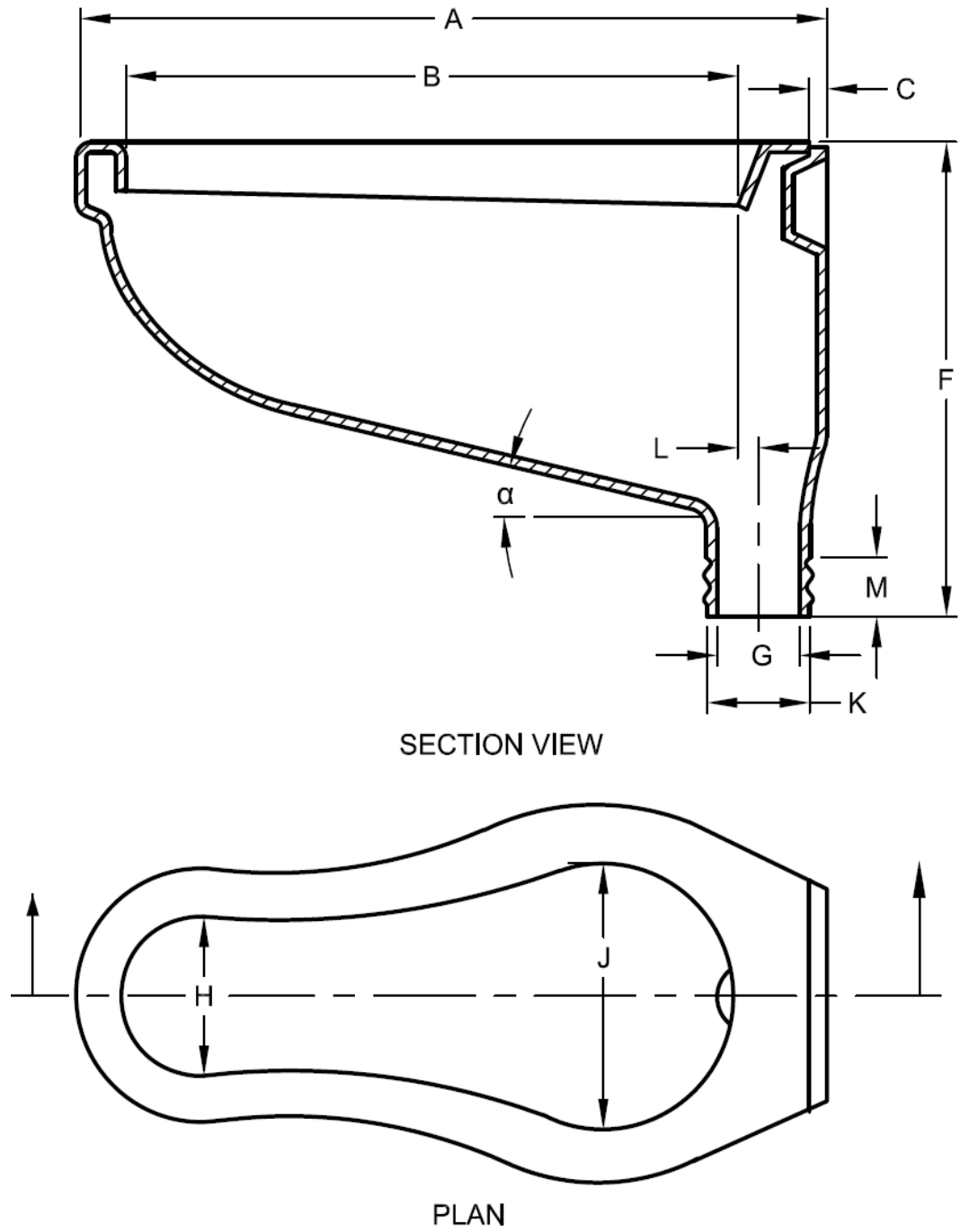
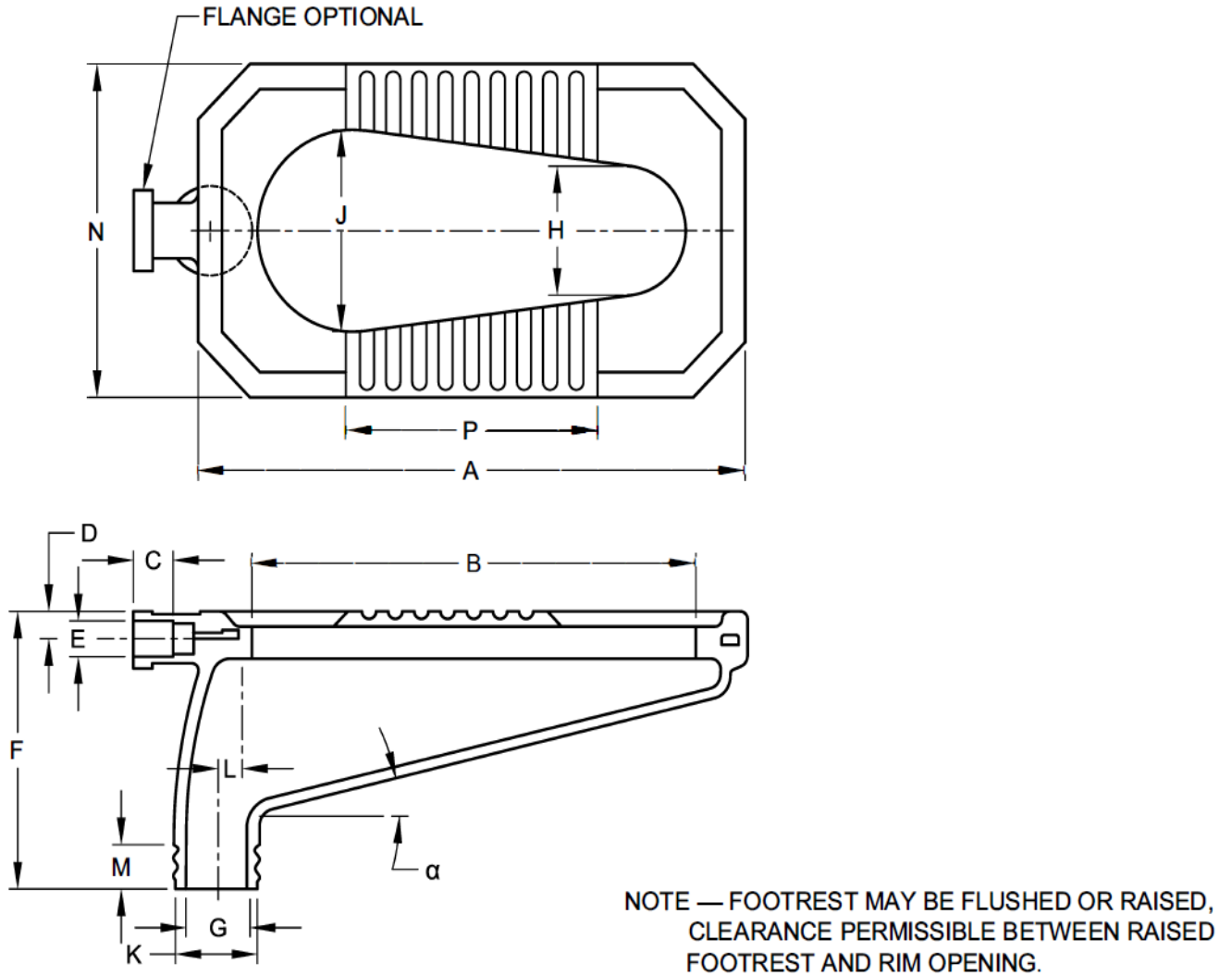


FIG. 1B LONG PATTERN SQUATTING PAN, TYPE II



All dimensions are in millimetres.

FIG. 2 ORISSA PATTERN SQUATTING PAN

**Table 1 Functional Dimensions of Long and Orissa Pattern Squatting Pan**  
(Clause 6.1)



All dimensions in millimetres.

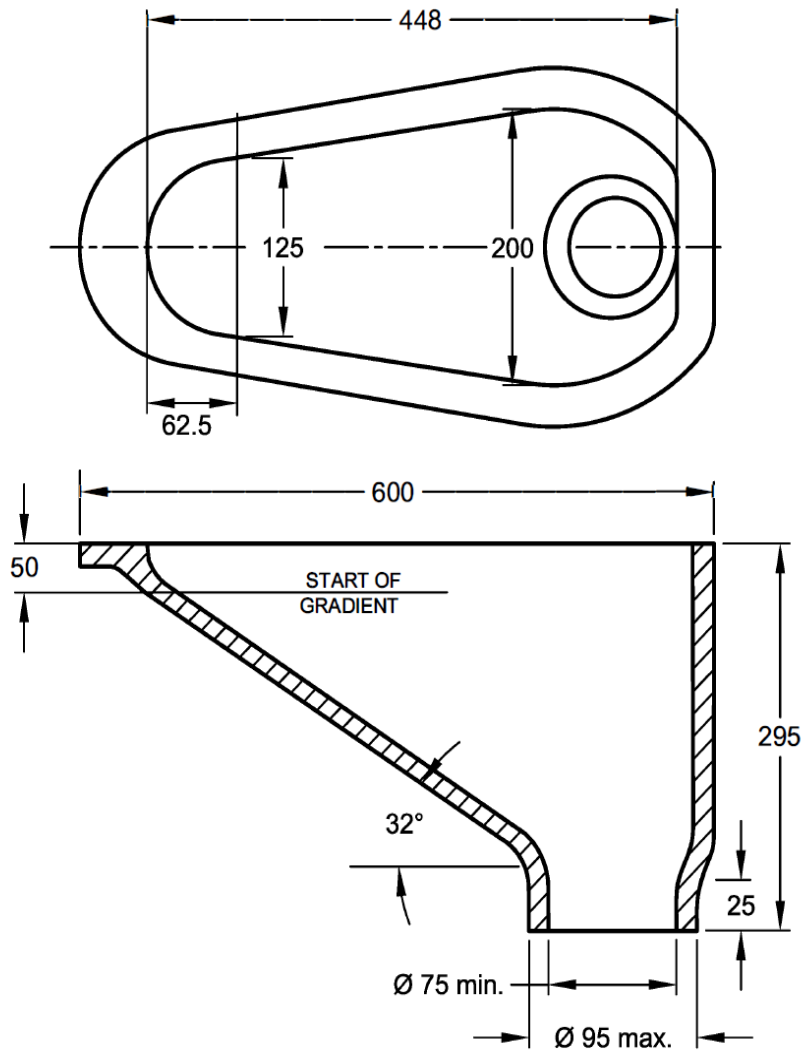
SI No.	Description	Ref in Fig. 1A, 1B and 2	Long Pattern of Size		Orissa Pattern of Size	
			(Type I) 580	(Type II) 630	580 x 440	630 x 450
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	Length	<i>A</i>	580	630	580	630
ii)	Length of opening, <i>Min</i>	<i>B</i>	480	530	470	500
iii)	Height	<i>F</i>	300 ± 10	320 ± 10	300 ± 10	320 ± 10
iv)	Width of opening, small end	<i>H</i>	170 ± 10	170 ± 10	180 ± 10	180 ± 10
v)	Width of opening, wide end	<i>J</i>	260 ± 10	260 ± 10	210 ± 10	220 ± 10
vi)	Slope of bottom of pan	$\alpha$	15°	15°	15°	15°
vii)	Distance between the centre of outlet to the inside face of flushing rim at the back, <i>Max</i>	<i>L</i>	70	70	70	70
viii)	Width	<i>N</i>	-	-	440	450
ix)	Length of footrest	<i>P</i>	-	-	310 ± 10	310 ± 10
NOTE — Tolerances where not specified shall conform to IS 2556 (Part 1) of the standard.						

**Table 2 Connecting Dimensions of Squatting Pans**  
(Clause 6.1)

All dimensions in millimetres.

SI No.	Description	Ref in Fig. 1A, 1B and 2	Long Pattern of Size		Orissa Pattern of Size	
			(Type I) 580	(Type II) 630	580 x 440	630 x 450
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	Depth of flush inlet socket, <i>Min</i>	<i>C</i>	25	25	25	25
ii)	Centre of inlet to top of inlet	<i>D</i>	34 ± 3	34 ± 3	34 ± 3	34 ± 3
iii)	Internal dia of flush inlet socket	<i>E</i> <sup>1)</sup>	50 ± 3	50 ± 3	50 ± 3	50 ± 3
iv)	Diameter of outlet, internal, <i>Min</i>	<i>G</i> <sup>2)</sup>	80	80	80	80
v)	Diameter of outlet, external	<i>K</i>	102 ± 5	102 ± 5	102 ± 5	102 ± 5
vi)	Length of serrated part of outlet, <i>Min</i>	<i>M</i>	40	40	40	40

<sup>1)</sup> Ovality is permissible within the variation allowed for the dimension.  
<sup>2)</sup> Ovality is permissible within the dimensions for inlet and outlet diameters.



All dimensions are in millimetres.

FIG. 3 RURAL PATTERN SQUATUNG PAN

## 7 FINISH

The inside of the pan shall be glazed uniform and smooth in order to ensure an efficient flush.

## 8 FLUSHING TESTS

8.1 The Long and Orissa patterns fitted with the trap with which it purports to form a suite, shall satisfy the tests given in 8.1, 8.2, 8.3, 8.4 and 8.5. For carrying out these tests, a flushing cistern conforming to IS 774 shall be fixed such that the height between the top of closet pan and bottom of the cistern is 1 250 mm, minimum for high level and

700 mm, minimum for low level and the closet pan is connected with cistern by a 40 mm outer diameter pipe. These tests shall be carried out by using the flushing cistern of the capacity with which the appliance is to be used.

## **8.2 Toilet Paper Test**

The pan shall be filled with water to its nominal water seal level and charged with six pieces of usual toilet paper or polythene sheet of thickness 0.05 mm approximately 150 mm X 115 mm in size and loosely crumpled. It shall then be flushed. This test shall be repeated four times and the pan shall discharge the full charge of the paper at least three out of four times.

## **8.3 Smudge Test**

The whole of the interior surface of the pan to 40 mm below the flushing rim shall be smudged with quartz power of contrasting colour passing through 1.18 mm IS sieve and shall then be flushed, carefully observing the surface of the pan during the flushing. Immediately after the flushing, there shall be no smudge left on the pan.

## **8.4 Water Holding Capacity Test**

The pan, when sealed at the outlet and vent (if fitted) with water-tight seal, shall be capable of holding not less than 10 litres of water between the normal water-level and the highest possible water-level of the pan as installed.

## **8.5 Saw Dust Test**

### **8.5.1 *Specification of the Saw Dust***

20 g of dry saw dust test sifted through 2 mm sieve.

### **8.5.2 *Procedure***

Set up the pan, cistern or flush valve and flush pipe (if required) as specified by the manufacturer. Charge the pan with water to its designed water seal level. Fully wet the entire internal surface of the pan below the rim. Sprinkle 20 g of fine dry saw dust of above specification on the inside of the pan between the normal water level and the flushing rim as completely and evenly as possible. Then flush the pan. The sprinkle saw dust should be cleaned below 40 mm of rim of pan.

## **8.6 Splash Test**

### 8.6.1 Procedure

Set up pan, cistern or flush valve and flush pipe (if required) as specified by the manufacturer. Charge the pan with coloured water to its design water seal level. Ensure that the floor area is cleaned and dry where the splash test to be carried out. Activate the flush valve or cistern to discharge the squatting pan. Observe and record whether flushing water splashed over rim onto the floor. Repeat the test 5 times. Record whether the flushing water splash over the rime onto the floor. Isolated droplets up to 10 nos. shall not be the cause for rejection.

## 9 SAMPLING, PROCESS INSPECTION AND LOT INSPECTION

The recommended method of sampling, process inspection and lot inspection shall be as given in IS 9140.

## 10 ADDITIONAL REQUIREMENTS FOR WATER EFFICIENCY

For water efficiency rating and labelling of squatting pans, the requirements given in IS 17650 (Part 1) shall be complied with.

Note — To achieve overall sustainability, it is strongly recommended that users opt for star rated squatting pans. Manufacturers in turn are encouraged to commit to the cause by manufacturing only water efficient squatting pans.

## 11 MARKING

11.1 Each piece of squatting pan shall be clearly and indelibly marked at a suitable place with the following:

- a) Name or trade-mark of the manufacturer,
- b) Batch/lot number, and
- c) Date (Week/Month/Year)

### 11.2 BIS Certification Marking

Each squatting pan 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 squatting pan may be marked with the Standard Mark.

\*\*\*\*\*