भारतीय मानक

Indian Standard

IS 2342 : 2025

दूध के डिब्बो के लिए मानव चलित धुलाई यंत्र — विशिष्टि

(पहला पुनरीक्षण)

Manually Operated Milk Can Washer — Specification

(First Revision)

ICS 65.040.10

भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS
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May 2025 **Price Group 4**

Dairy Equipment Sectional Committee, FAD 33

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Dairy Equipment Sectional Committee had been approved by the Food and Agriculture Division Council.

Small dairy plants or collecting centres not equipped with mechanical power operated can washer employ manual washing method for handling one milk can at a time. The can washer consists of heavy cast iron base, a steel tubular support and a cast iron tray or a heavy cast iron base with a manually operated revolving tray on which the cans are inverted during washing. It is equipped with pedal-operated spring-loaded valves for water and steam and with a spray pipe or a suitable spraying device.

Therefore, a need was felt to develop this standard and it was first published in 1963 which prescribed the important constructional details of two typical designs of manually operated milk can washer. In this revision, the following major changes have been made considering the latest manufacturing practices and technological development:

a) Only one design of milk can washer has been recommended;

b) The material of all the parts of this equipment have been specified;

c) Wooden block as earlier recommended for support has been replaced with stainless steel bar;

d) Minimum thickness for galvanization, wherever prescribed, has been specified; and

e) Constructional requirement for section spray pipe has also been given.

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

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.

Indian Standard

MANUALLY OPERATED MILK CAN WASHER — SPECIFICATION

(First Revision)

1 SCOPE

This standard prescribes the constructional requirements for a pedal-operated (manual) milk can washer (can steaming block) meant for handling one can at a time.

2 REFERENCES

The standards given below contain provisions which through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were 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:

IS No.	*Tittle*
IS 210 : 2009	Grey iron castings — Specification (*fifth revision*)
IS 2062 : 2011	Hot rolled medium and high tensile structural steel — Specification (*seventh revision*)

3 MATERIALS

The components of the can washer shall be made from material as specified in col (3) of Table 1. The materials should conform to the relevant standards as per col (4) of Table 1. Non-metallic materials may be used for joints sealing, gland and gasketing as necessary. Minimum thickness of galvanization coat shall not be less than 55 µm, wherever prescribed for galvanization.

4 COSTRUCTIONAL REQUIREMENTS

The design of this steam device shall be such as to make it suitable for easy dismantling, cleaning, and assembly.

4.1 Base

The base shall be of sturdy construction and of sufficient strength to give a rigid and stable support for the can while cleaning and sterilizing. Provision shall be made in the base for securing it firmly to the floor.

4.2 Valve Assembly

The valve assembly shall be secured to the base by bolts and nuts or other suitable arrangement. The valve assembly has two valves - one for injecting steam and the other for water. These valves shall be operated by pedals and shall be capable of operating separately or jointly. The design of the valve assembly shall be such that it shall be possible for the can to be washed with cold water, hot water, and steam. The steam and water connection pipes should end outside with suitable non return valves. The valves shall withstand up to 588.4 kPa (6 kg/cm^2) pressure.

4.3 Mild Steel Tubular Support

The tubular support, if provided, shall be a push fit to the valve assembly.

4.4 Tray

The can shall be designed according to Fig. 1, the cast iron tray shall be fixed to the tubular support. Necessary arrangements shall be made in the tray to ensure that the waste water is drained out.

4.5 Section Spray Pipe

Section spray pipe shall have 20 circular perforations on its surface. The diameter of the perforation shall be in between 3 mm to 3.5 mm. The perforation shall be drilled in such a way that its normal passes though the axis of spray pipe. The distribution of the perforations on the pipe shall be as indicated in Fig. 1 where the angular displacement between the normal of two adjacent perforations shall be 72 °C ± 1 °C. The perforations shall be made in such a way that any perforation of one plane comes in the middle of two adjacent perforations of adjacent plane.

4.6 Spray Pipe

The tube/pipe with a number of perforations shall be fitted to the mixer. The spray head pipe shall be covered at the top by a cover. The number and size of holes shall be such that the steam or water is sprayed evenly and in adequate pressure to ensure that the inside of the can is satisfactorily sterilized and cleaned.

4.7 Pedals

Steam and water supply valves should be operable by pedals. The pedals should be operable independently and jointly and these should be named suitably.

5 MARKING

5.1 The can washer (can steaming block) shall be marked legibly and permanently with the following particulars in vernacular language:

a) Manufacturer's name, address and recognized trademark, if any;

b) Batch or code number;

c) Capacity, No. of cans/h;

d) Model No.; and

e) Year of manufacturing.

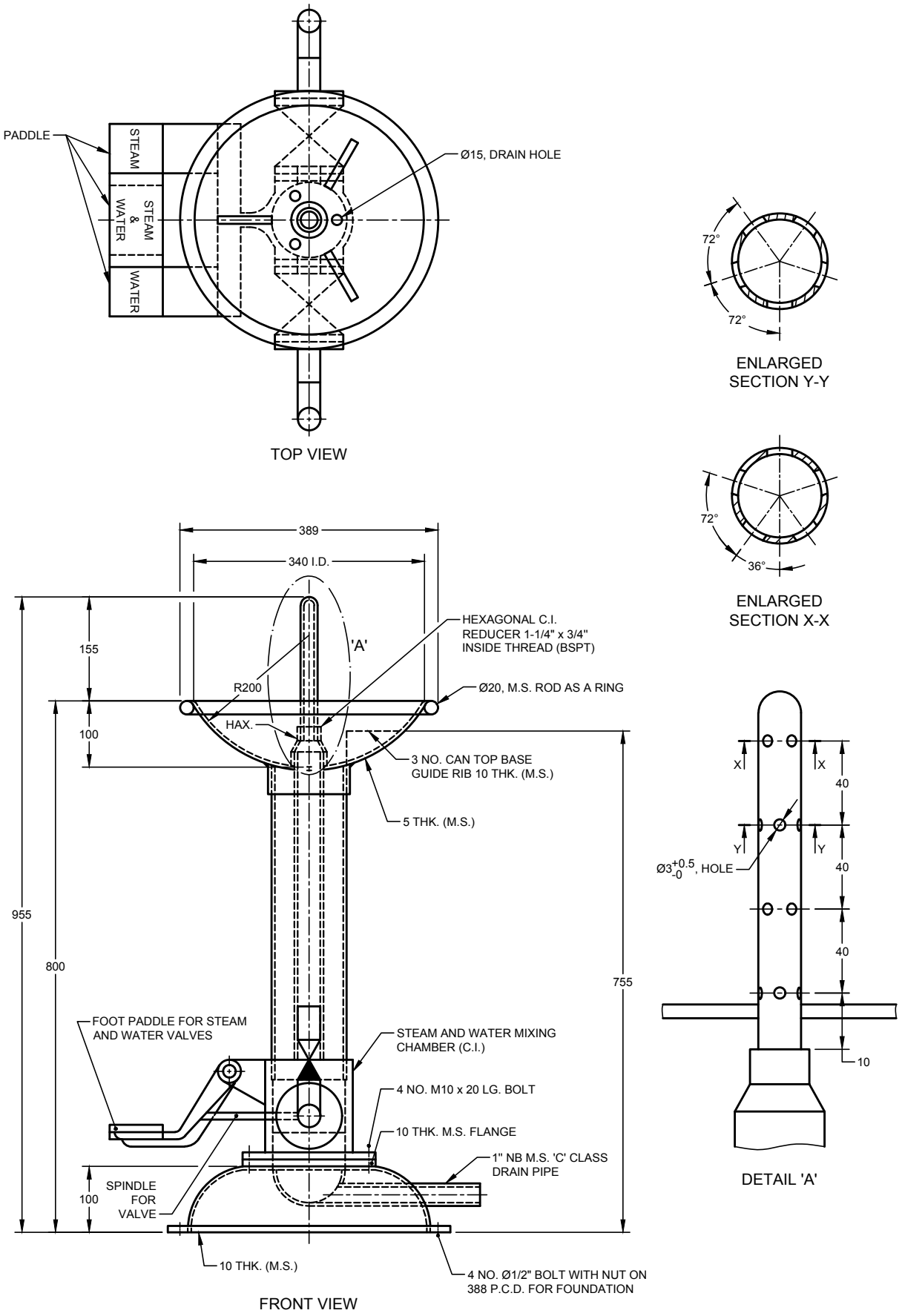
5.2 BIS Certification Marking

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 products may be marked with the Standard Mark.

Table 1 Material for Various Components

(*Clause* 3)

Sl No.	Component	Material	Relevant Standard
(1)	(2)	(3)	(4)
i)	Base	Cast iron	IS 210
		Mild steel (hot-dip galvanized)	IS 2062
ii)	Tubular support	Mild steel (hot-dip galvanized)	IS 2062
iii)	Tray	Cast iron	IS 210
		Mild steel (hot-dip galvanized)	IS 2062
iv)	Spray pipe	Mild steel	IS 2062
v)	Cover	Mild steel	IS 2062
vi)	Water pipe	Mild steel	IS 2062
vii)	Steam pipe	Mild steel	IS 2062
viii)	Pedal	Mild steel (hot dip galvanized)	IS 2062



All dimension in millimetres.

FIG. 1 MANUALLY OPERATED MILK CAN WASHER (ALTERNATE DESIGN)

ANNEX A

(*Foreword*)

COMMITTEE COMPOSITION

Dairy Equipment Sectional Committee, FAD 33

Organization	*Representative(s)*
National Dairy Research Institute, Karnal	DR P. BARNWAL **(*Chairperson*)**
College of Dairy Technology, Tirupati	DR B. M. MANJUNATHA DR K. NAGESWARA RAO (*Alternate*)
Gujarat Cooperative Milk Marketing Federation Limited, Anand	SHRI PRASHANT SHETH
ICAR - Central Institute of Post Harvest Engineering & Technology (CIPHET), Ludhiana	DR RAVI PRAKASH DR CHANDAN SOLANKI (*Alternate*)
ICAR - National Dairy Research Institute, Karnal	DR CHITRANAYAK SINHA DR P. S. MINZ (*Alternate*)
Indian Dairy Association, New Delhi	SHRI RAJ KUMAR MALIK
Indian Institute of Technology Kharagpur, Kharagpur	DR BHUPENDRA M GHODKI DR RONIT MANDAL (*Alternate*)
Indigenously Manufacture Dairy Components Limited, Vithal Udyognagar	SHRI PRAVIN PRAJAPATI SHRI SANJAY LOHANI (*Alternate*)
Jupiter Glass Works, New Delhi	SHRI KARAN NANGIA SHRI AMREEK SINGH PURI (*Alternate*)
Mother Dairy Fruit and Vegetable Limited, Delhi	SHRI ANUJ KOUNDAL SHRI SAURABH CHAUDHARY (*Alternate*)
National Dairy Development Board, Anand	SHRI SHREYAS JAIN SHRI SACHIN SARVAIYYA (*Alternate*)
National Institute of Food Technology, Entrepreneurship and Management, Thanjavur	DR N. VENKATACHALAPATHY DR S. SHANMUGASUNDARAM (*Alternate*)
National Institute of Technology, Rourkela	DR DIBYAKANTA SETH DR CHANDRAKANT DALBHAGAT (*Alternate*)
NDDB CALF Limited, Anand	SHRI NIHIR SONI DR RAJIV CHAWLA (*Alternate*)
Punjab State Cooperative Milk Producers Federation Limited, Chandigarh	SHRI SANJEEV KUMAR SHARMA SHRI HARJINDER SINGH (*Alternate*)
SMC College of Dairy Science, Anand	SHRI YOGESH KUMAR VITTHALBHAI VEKARIYA MS ARPITA MULJIBHAI RATHVA (*Alternate*)
Tetra Pak India Private Limited, Pune	SHRI SOMNATH PAGIRE

Organization	*Representative(s)*
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Member Secretary
SHRI PRADEEP SHARMA
SCIENTIST 'B'/ASSISTANT DIRECTOR
(FOOD AND AGRICULTURE), BIS

Dairy Equipment-II Panel, FAD 33 : P2

Organization	*Representative(s)*
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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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