

भारतीय मानक

IS 8297 : 2023

Indian Standard

*16 टन तक सकल द्रव्यमान वाले परिवहन ट्रैक्टरों एवं
ट्रेलरों के बीच उपयोग किये जाने वाले टोइंग जॉ की
विशिष्टता*

(पहला पुनरीक्षण)

**SPECIFICATION FOR TOWING JAW FOR
USE BETWEEN TRAILERS OF UP TO 16
TONNES GROSS MASS AND TRANSPORT
TRACTOR**

(First Revision)

(ICS 43.040.70)

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भारतीय मानक ब्यूरो

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Price Group

Transport Tractors, Trailers and Industrial Trucks Sectional Committee, TED 22

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Transport Tractors, Trailers and Industrial Trucks Sectional Committee had been approved by the Transport Engineering Division Council.

This standard was first published in 1976. This first revision incorporates the experience gained with the use of this standard and brings the standard in line with the latest development in the field.

The requirements of this standard, which relate only to vehicles used on the public highways, are intended to ensure the maximum degree of compatibility between commercial and government department standards.

Towing jaws may be forged or cast.

The material specifications are for the minimum qualities acceptable, and do not exclude the use of other materials provided that these are at least equal in quality so that road safety is not impaired.

This standard should be used in conjunction with IS 8274: 1976 The jaw has been designed to accommodate a drawbar eye of 51 mm internal diameter and 40 mm stock or 76 mm internal diameter and 40 mm stock.

The standard applies to connections to trailers of up to 16 tonnes gross mass. The specification for a towing jaws for connections to trailer of up to 35 tonnes gross mass is given in IS 8296 : 1976 and for trailers of up to 5 tonnes gross mass is given in IS 8298 : 1976.

In the preparation of this standard, considerable assistance has been derived from BS AU 26 : 1964 ‘ Specification for towing jaw for use between trailers of 5-16 tonnes gross weight and towing vehicle ‘, issued by the British Standards Institution.

The composition of the committee responsible for formulation of this standard is given as 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 (revised)’. 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

**SPECIFICATION FOR TOWING JAW FOR USE BETWEEN TRAILERS OF UP TO 16
TONNES GROSS MASS AND TRANSPORT TRACTOR**
(*First Revision*)

1 SCOPE

1.1 This standard specifies the basic dimensions and quality of materials for a towing jaw and its mountings, for use in connection between a transport tractor and a trailer of up to 16 tonnes gross mass.

1.2 The gross mass refers to gross laden train masses where more than one trailer is drawn.

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 editions of these standards.

<i>IS No</i>	<i>Title</i>
IS 1875 : 1992	Carbon steel billets, blooms, slabs and bars for forgings - Specification (Fifth Revision)
IS 1030 : 1998	Carbon steel castings for general engineering purposes - Specification (Fifth Revision)
IS 5517 : 1993	Steels for hardening and tempering - Specification (Second Revision)
IS 8299 : 1976	Specification for towing hook for use between trailers of up to 16 tonnes gross mass and transport tractor
IS 8300: 1976	Specification for towing hook for use between trailers of up to 35 tonnes gross mass and transport tractor
IS 1364 (Part 1) : 2018	Hexagon head bolts, screws and nuts of product grades A and B: Part 1 hexagon head bolts (Size Range M 1.6 To M 64) (Fifth Revision)

3 MATERIALS

3.1 The jaw shall be made from a material of quality not less than Grade C20 of IS 1875 for steel in normalized condition for the forged jaw and Grade 23-45 of IS 1030 for the cast jaw.

3.2 The towing pin shall be made from a material of quality not less than Grade 35Mn2Mo 28 steel of IS 5517.

4 DIMENSIONS

4.1 Dimensions shall be as shown in Fig. 1. The dimensions marked with asterisk (*) in Fig. 1 are essential for interchangeability, other dimensions apply to the forged jaw and are for guidance only.

NOTE — The dimensions specified for the forged jaws have been calculated on the basis of the total yield strength being not less than two-thirds the gross mass being towed. It is necessary that any other part not covered by this standard, connecting the coupling to the towing tractor shall have a similar strength.

5 DESIGN

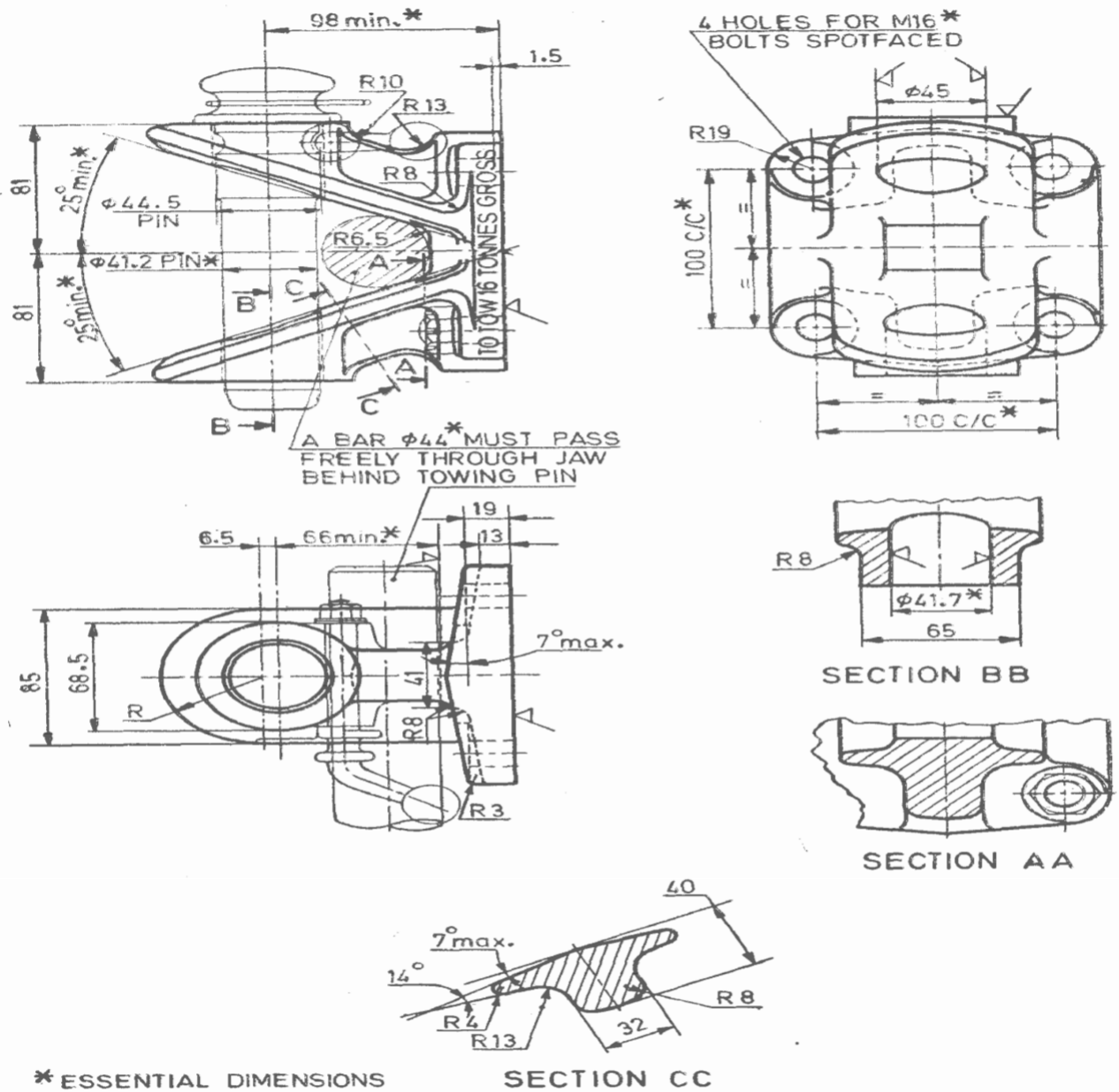
5.1 An efficient safety locking device shall be provided as indicated in Fig. 1 to prevent accidental extraction of the towing pin from the jaw.

5.2 The jaw shall be so designed that a bar of 44 mm diameter shall pass freely between the pin and the inside face of the jaw (*see* Fig. 1).

6 MOUNTING

6.1 The jaw shall be mounted with four bolts of 16 mm diameter conforming to designation M 16 × 1.5 (P) of IS 1364 (Part 1) at 100.0 × 100.0 mm centres. This renders it interchangeable in mounting with hooks specified in IS 8299 and IS 8300.

6.2 The nuts shall be secured either by peening the end of the bolt or by fitting a positive locking device such as a safe locking nut or a slotted nut and split pin.



All dimensions in millimetres.

FIG. 1 TOWING JAW FOR TRAILERS UPTO 16 TONNES

7 MARKING

7.1 The following wording, in clear lettering 10 mm high, raised or stamped, shall be marked on each towing jaw:

- a) 'TO TOW 16 TONNES GROSS' on one side; and
- b) **IS 8297: 2023** on the other side.

7.2 In addition, the towing jaws shall also be marked at the appropriate place, the following information:

- a) Name or trade-mark of the manufacturer;
- b) Date or year of manufacture; and
- c) The country of manufacture.

7.3 BIS Certification Marking

7.3.1 Each towing jaw may also be marked with the Standard Mark.

7.3.2 The use of the Standard Mark is governed by the provisions of the Bureau of Indian Standards Act, 2016 and the Rules and Regulations made thereunder. The details of conditions under which the license for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

ANNEX A
(Foreword)

COMMITTEE COMPOSITION

TRANSPORT TRACTORS, TRAILERS AND INDUSTRIAL TRUCKS SECTIONAL COMMITTEE, TED 22

<i>Organization</i>	<i>Representative(s)</i>
Automotive Research Association of India, Pune	SHRI A. AKBAR BADUSHA (<i>CHAIRMAN</i>)
Automotive Research Association of India, Pune	SHRI RAMESH RAJU
	SHRI SACHIN MUNOT (<i>Alternate</i>).
	SHRI V. P. RAWAL (<i>Alternate</i>)
Construction Equipment Limited, Palwal	SHRI CHETAN GOLE
	SHRI INDERPAL SINGH BENIWAL (<i>Alternate</i>)
India Motor Transport Congress, New Delhi	SHRI NAVEEN GUPTA
	SHRI S. K. MITTAL (<i>Alternate</i>)
Leyland Limited, Chennai	SHRI PRASANNA VENKATESH
	SHRI FAUSTINO V (<i>Alternate</i>)
Automotive Component Manufacturers Association of India, New	SHRI SANJAY TANK
	SHRI SEEMA BABAL (<i>Alternate</i>)
Automotive Research Association of India, Pune	SHRI P. D. BETGERI
	SHRI. TUSHARKUMAR R. KAMBLE (<i>Alternate</i>)
Tractors India Limited, Chennai	SHRI P. VENUGOPAL
	SHRI G. DEVENDRAN (<i>Alternate</i>)
Central Institute of Road Transport, Pune	SHRI S.N.GUTTE (<i>Alternate</i>)
	SHRI S. N. DHOLE
Chennai Port Trust, Chennai	SHRI N A KAMATH
	SHRI V RAM DOSS (<i>ALTERNATE</i>)
Container Corporation of India, New Delhi	SHRI E GENERAL MANAGER (TECH)
Directorate General Factory Advice Service and Labour Institutes, Mumbai	SHRI H. CHATTOPADHAYAYA
Drej & Boyce Manufacturing Company Limited, Mumbai	SHRI VINAY G. KULKARNI
	SHRI ANAND SHANKAR TAWDE (<i>Alternate</i>)
BSI India Limited, New Delhi	SHRI SAURABH DALELA
	SHRI ALOK GANDHI (<i>Alternate</i>)
Tractors Engineering Company Limited, Thane	SHRI PROMOD M. POHALE
	SHRI SANTOSH SARAF (<i>Alternate</i>)
CON India Private Limited, Pune	SHRI SUNIL K. GUPTA
	SHRI RIZWAN KHAN (<i>Alternate</i>)
	SHRI ARUN BISH
Knorr-Bremse Systems for Commercial Vehicles India Private Limited, Pune	SHRI ATUL INGOLE (<i>Alternate</i>)
Machine and Mill Stores Corporation Private Limited, Howrah	SHRI DEEPAK GHOSH
	SHRI SUBHAM GOSH (<i>Alternate</i>)
Mahindra Trucks and Bus Division, Pune	SHRI NAGARAJU K.
	SHRI V. G. KULKARNI (<i>Alternate</i>)
Ministry of Heavy Industries and Public Enterprises, Department of Heavy Industry, New Delhi	SHRI B. K. MISHRA
	SHRI R. K. JAISWA (<i>Alternate</i>)

<i>Organization</i>	<i>Representative(s)</i>
Ministry of Labour and Employment Directorate, Mumbai	RI H. M. BHANDARI DR. R. N. MEENA (<i>Alternate</i>) SHRI K. Durai
Ministry of Road Transport and Highways, New Delhi	RI A. KANNAN SMT. DHARKAT R. LUIKANG (<i>Alternate</i>)
Ministry of Defence, CQA , Bangalore	SHRI SAM SHAIKH RI A. KANNAN RI SAM SHAIKH (ALTERNATE)
PL Haulwel Trailers, New Delhi SDR Auto Private Limited, Chennai	RI MANOJ VARGHESE RI B. RAMESH SHRI PRAVEEN KUMAR (<i>Alternate</i>)
Tata Motors Limited, Pune	RI SUNIL AGARWAL (<i>Alternate</i>) SHRI RAHUL MOHANRAO PATHAK
TRATEC Engineering Pvt. Ltd, Gurgaon	RI KAMAL KHOSLA RI C RAJASEKHAR (ALTERNATE)
Volvo Construction Equipment India Private Limited, Bengaluru	RI V. R. SAI PRASAD POLIPALLI
ZF Commercial Vehicle Control Systems India Limited, Pune Industry	ABHAKARAN DURAIRAJ SHRI SACHIN DESHMUKH (<i>Alternate</i>)
BEML Ltd Bangalore	RI RAMESH RAJU RI SETHU MADHAVAN (ALTERNATE)
BIS Directorate General	RI P.V. SRIKANTH, SCIENTIST 'D' & HEAD (TRANSPORT ENGINEERING DEPARTMENT) [REPRESENTING DIRECTOR GENERAL (<i>Ex-officio</i>)]

Member Secretary
SHRI AUGUST DUBEY
SCIENTIST 'B' (TRANSPORT ENGINEERING DEPARTMENT)