भारतीय मानक **IS 9081 : 2024**

Indian Standard

स्वचल वाहन — हवा भरे टायरों के लिए वाल्व एवं वाल्व के सहायक अंग — विशिष्टि

(छठा पुनरीक्षण)

Automotive Vehicles — Valves and Valve Accessories for Pneumatic Tyres — Specification

(Sixth Revision)

ICS 43.040.60; 83.160

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September 2024 **Price Group 13**

Automotive Tyres, Tubes and Rims Sectional Committee, TED 07

FOREWORD

This Indian Standard (Sixth Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Automotive Tyres, Tubes and Rims Sectional Committee had been approved by the Transport Engineering Division Council.

This standard was first published in 1979 and was revised in 1985, 1992, 2001, 2011 and 2017. This revision has been undertaken to update the standard based on industry practices and incorporate latest development in the field. Following are the major changes in this revision:

a) Tolerance on rubber base diameter changed to + 1 /- 2;

b) Truck and bus valves with base diameter 70 added;

c) New truck and bus valves with base diameter 95 and with 10V2 threads added and optional core chamber No.3 regularized;

d) JS 430, PVR 70, F 35 3 17, TR 416S, TR 416, V3.20 series, V3.22.1, TR 542 series, TR 570 series, TR 618A , V3-18 series, TR J690 series valves added;

e) Modifications in figures and tolerances have also been done in order to align them with the present worldwide practices;

f) In this revision of standard updated valves with optional core chamber no.3 wherever applicable; and

g) Valve accessories added for standardization.

Valves designation system comprising six character alpha-numeric code derived from their major functional as well as basic dimensional characteristics as per IS 10939 : 2023 'Designation system for tyre tube valves for automotive vehicles (*first revision*)', has been used in this standard.

A list of widely used valves with their valve designation along with TR&A, ETRTO and JATMA valve codes is given in Annex B.

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

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

AUTOMOTIVE VEHICLES — VALVES AND VALVE ACCESSORIES FOR PNEUMATIC TYRES — SPECIFICATION

(Sixth Revision)

1 SCOPE

This standard specifies the dimensions, materials, tests and acceptance standards for valves and valve accessories for tyre tubes as supplied for application with inner tubes, and valves for use with automotive vehicles including two wheeled vehicles, off-the-road vehicles and animal drawn vehicles. This standard gives those dimensions of commonly used valves which are important for fitment and interchangeability. Although the tests for valve cores have been included, the dimensions for valve core chambers have not been included since the same is covered in IS/ISO 20562 'Tyre valves — ISO core chambers no. 1, no. 2, no. 3 and no. 4'. Valve caps are also not covered in this standard since these are covered by IS 9453 : 2014 'Valve caps for tyre tube valves for automotive vehicles — Specification.'

2 REFERENCES

The standards listed in Annex A 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 agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of these standards.

3 VALVE CLASSIFICATION

3.1 Rubberized Valves

a) Truck valves;

b) Passenger car valves;

c) Motor cycle valves, scooter valves, moped (light duty) valves; and

d) Off-the-road vehicles (OTR) valves, agricultural tractor (including power tiller) valves and animal drawn slow moving vehicle (ADV) valves.

3.2 Supply Condition of Valves

a) Unless otherwise specified, valves as per respective designation indicates straight form;

b) Valve designation with suffix 'SB' indicates 'single bend' form; and

c) Valve designation with suffix 'DB' indicates 'double bend' form.

4 DIMENSIONS AND DESIGN FEATURES

4.1 Dimensional tolerances, in mm (*see* Fig. 1) shall be as follows (unless specified):

Effective length	:	+ 1.00 − 2.00
Rubber base diameter	:	+ 1.00 − 2.00
Rubber base thickness	:	± 0.50
Bend height	:	± 1.5
Bend length	:	± 4.0
Bend angle	:	± 2°

4.2 The basic dimensions of the valves classified in **3.1** shall conform to those in Fig. 2 to Fig. 41.

4.3 Details of valve threads shall conform to IS/ISO 4570.

4.4. The basic dimensions of the valves accessories shall conform to those in Fig. 42 to Fig. 59.

5 VALVE DESIGNATION

5.1 Valves shall be designated in accordance with IS 10939.

5.2 Reference may be made to IS 10939 for examples and details for designating widely used valves.

6 REQUIREMENTS FOR RUBBERIZED VALVES

6.1 Material

The metal stems of inserts may be made from brass conforming to IS 319 or IS 2704, IS 4170, IS 6912 or any other suitable brass material. The rubber base shall be butyl rubber/halo butyl rubber/butyl EPDM and its derivatives and blends. Natural rubber and its derivatives and blends may also be used, if specified by the purchaser.

6.2 Bendability of Valve Stem

Truck valves shall be bendable to 90° and scooter valves to 55° and 90° with the help of the appropriate valve bending tools, without breaking or cracking during bending.

6.3 Hardness

The rubber forming the valve base shall be tested for hardness either by a shore Type A durometer, if practicable or an IRHD micro-hardness Tester. The hardness shall be between 58 to 73 measured on the shore Type A durometer or on the IRHD micro-hardness tester. The testing shall be done in accordance with IS 3400 (Part 2).

6.4 Pull-Out Strength of Rubber Base

Rubber covered valves when tested for stem pull out strength according to **6.4.1**, shall meet the minimum breaking load values specified in **6.4.2**.

6.4.1 *Procedure*

The rubber base of the valve shall be clamped in a fixture and the cap thread or body thread shall be screwed on the threaded adapter on a suitable tensile testing machine. The hole in the fixture through which the valve comes out shall be 15 mm in diameter for moped valves (*see* Fig. 30), 22.2 mm in diameter in case of scooter and motor cycle valves (smaller base diameter) (*see* Fig. 27, Fig. 28, Fig. 31 and Fig. 32) and 31.8 mm diameter for other valves and 38 mm for large bore spuds (*see* Fig. 35). A direct pull shall be made at the rate of 15.0 cm/min until the rubber base separates from the stem. The minimum pull out values shall determine conformance of the quality to the acceptable standard.

6.4.2 Minimum breaking (pull out) load values shall be as follows:

Sl No.	*Valve Type*	*Valve Designation*	*Minimum Breaking Load* (*Pull Out Values*) N
(1)	(2)	(3)	(4)
i)	Scooter valves	A 40 2 45	450
		A 47 2 45	450
ii)	Motor cycle valves	A 29 1 45	450
iii)	Moped valves	A 29 1 32	350
iv)	Passenger car valves	B 35 3 57	450
		B 35 4 57	500
		B 35 5 57	700
		B 49 5 57	700
		B 35 1 57	350
		B 46 3 57	450
		B 57 3 57	450
v)	Agricultural vehicle off-the-road (OTR) vehicle and animal drawn vehicle valves	B 20 5 63/B 20 5 82	900
		B 30 5 63/B 30 5 82	900
vi)	Truck and bus valves	A 65 5 82/A 65 5 95	1 750
		A 83 5 82/A 83 5 95	1 750
		A 97 5 82/A 97 5 95	1 750
		A A6 5 82/A A6 5 95	1 750
		A B1 5 82/A B1 5 95	1 750
		A B4 5 82/A B4 5 95	1 750
		A C3 5 82/A C3 5 95	1 750
		A D4 5 82/A D4 5 95	1 750

Sl No.	*Valve Type*	*Valve Designation*	*Minimum Breaking Load* (*Pull Out Values*) N
(1)	(2)	(3)	(4)
		A E7 5 82/A E7 5 95 A G0 5 82/A G0 5 95 A 95 5 95	1 750 1 750 1 750
vii)	Spud for large bore	L 08 6 B4	2 000

6.5 Adhesion Test

Adhesion test is conducted to test the bond between metal and rubber. In all cases, adhesion shall be considered to be unacceptable, if the total area of separation between brass and rubber, or brass and cement, or cement and rubber is in excess of 41 mm^2.

6.5.1 *Method of Checking*

After subjecting the valve to the hot air treatment (*see* **6.5.2**) the rubber cover over the stem or metal insert shall be cut down to the metal face. Each side of the cut rubber base or cover shall be gripped suitably and the rubber pulled away from the metal using pliers. As much rubber as possible, shall be removed from the base of the valve and the sides of the insert and the area of separation for rubber to metal bond shall be examined.

6.5.2 *Hot Air Treatment*

The valves for the adhesion test (*see* **6.5**) shall be kept in hot air at a temperature of 165 °C ± 2 °C for 10 min and allowed to cool down to room temperature before testing for adhesion.

6.6 Buffing

Valves shall be buffed (if required, by the purchaser) on the rubber base side which is to be vulcanized on to tubes. Buffing shall not be too rough or too smooth and the rubber base edge shall have a light feathery finish.

6.7 Workmanship

Valves shall be free from defects like incomplete rubber base, blisters larger than the size of a pin head, incomplete or damaged threads, foreign matter embedded in rubber base and cracks or cuts on rubber base or on the metal stem. The through hole in the valve stem shall be perfectly clear. Bloom shall be avoided to the extent of impairing of adhesion of valve base with the tube.

6.8 Marking

Containers of valves shall be clearly marked with the following:

a) Valve designation; and

b) Indication of source of manufacturer or code.

If practicable the above markings may also be carried out on the stem of the valve, or on the rubber with or without equivalent TR code or ETRTO code.

6.9 Requirement for Tubeless Valves

a) For test methods of rubber covered tubeless snap in valves, *see* ISO 14960 (Part 1); and

b) For test methods of tubeless clamp-in valves, *see* IS/ISO 14960 (Part 2);

7 VALVE CORE (*see* Fig. 27)

7.1 Materials

Valve core components may be manufactured from brass conforming to IS 319, IS 2704 or IS 3168 or any other suitable materials. The spring may be made from brass, phosphor bronze or stainless steel wire. The sealing washer material may be synthetic rubber or polymer.

7.2 Valve Core Leakage

Valve cores shall not leak (in excess of one bubble per minute) when tested as follows:

The core shall be fitted into a tested valve stem with a torque of 0.23 Nm to 0.56 Nm for core Chamber No. 1 and 3, 0.34 Nm to 0.56 Nm for core Chamber No. 2. Any desired pressure up to 900 kPa shall then be applied from the back of the valve while the tip of the valve is kept immersed in water, mouth downwards.

7.3 Valve Core Interchangeability

Valve core shall be interchangeable. Valve cores shall be made to dimensions such that when installed and properly tightened in valves, the core pin shall not extend above the level of the tip end of the valve

by more than 0.25 mm or below the tip end of the valve by more than 0.9 mm.

7.4 Acceptable Operating Temperatures

The temperatures range of the valve cores functioning shall be between – 40 °C and 100 °C.

7.5 Marking

The packing/container of the valve core shall be marked with the valve core designation and indication of source of manufacturer or code. Valve cores may not be marked, if it is not practicable to do so.

7.6 Workmanship

Valve cores shall be free from foreign matter, broken washer etc, which lead to leakage.

8 QUALITY ASSURANCE PROVISION

8.1 Criteria of conformity and sampling for inspection and tests

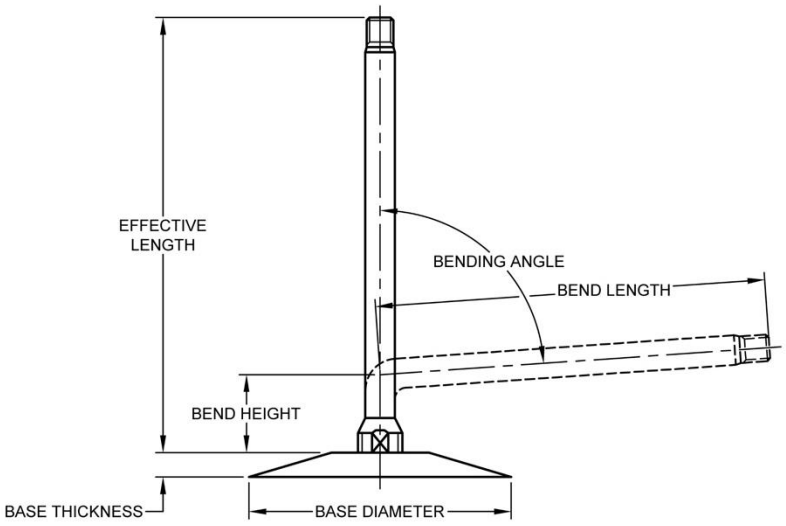
8.1.1 For the purpose of ascertaining conformity to this standard, the extent of sampling and the criteria of conformity shall be subject to agreement between the purchaser and the manufacturer.

8.1.2 Unless otherwise agreed, the manufacturer is responsible for carrying out all inspection and test requirements as specified herein.

8.2 Sampling shall be according to IS 2500 (Part 1) and the samples shall be selected as per agreement between the manufacturer and the purchaser.

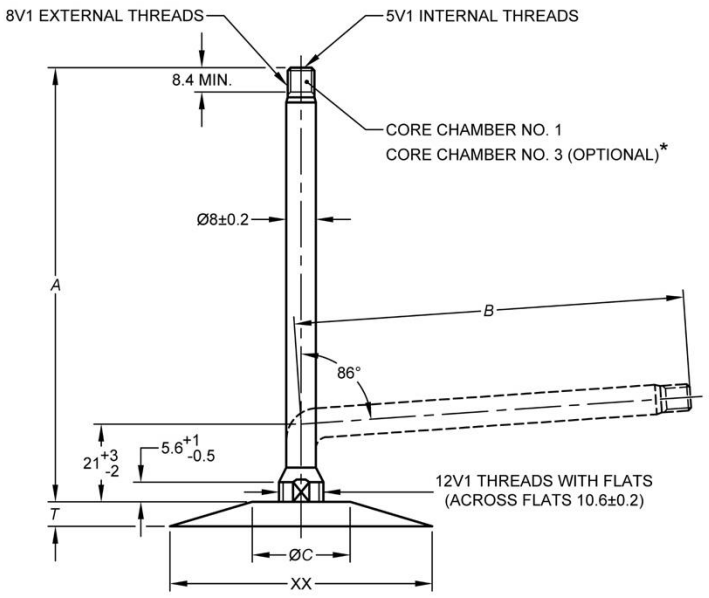
9 BIS CERTIFICATION MARKING

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.



All dimensions in milimetres.

FIG. 1 DIMENSION TOLERANCES



Valve Designation [1)]	*A*	*B*
A 65 5 XX	65	48
A83 5 XX	83	66
A 97 5 XX	97	80
A A6 5 XX	106	89
A B1 5 XX	111	94
A B4 5 XX	114	97
A C3 5 XX	123	106
A D4 5 XX	134	117
A E7 5 XX	147	130
A G0 5 XX	160	143

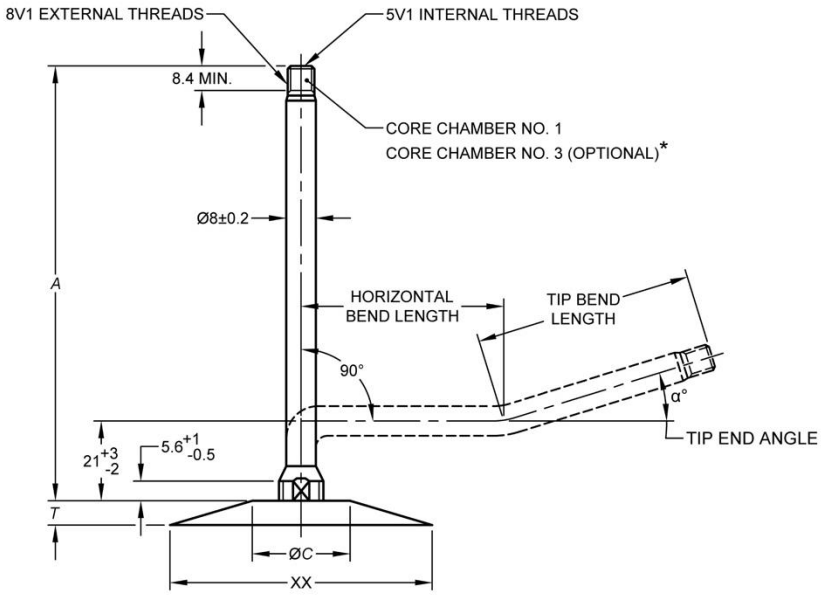
NOTE — XX: For valves having base diameter 82, T = 7, ØC = 28 *Max*.
For valves having base diameter 85, T= 6.7, ØC = 20 *Max*.
XX: that is, 82 or 95 may be marked either on metal insert or on the rubber base or valve.

All dimensions in millimetres.

FIG. 2 TRUCK AND BUS VALVES

[1)] Designation with suffix 'SB' indicates single bend valve.

***** Accommodates short core only.



Sl No.	*Valve Designation*[1)]	*A*	*Horizontal Bend Length*	*Tip End Angle* (α°)	*Tip Bend Length*
(1)	(2)	(3)	(4)	(5)	(6)
i)	A 97 5 XX	97	35	31°	48
ii)	A A6 5 XX	106	40	31°	51
iii)	A B4 5 XX	114	46	26°	54
iv)	A E7 5 XX	147	63	21°	70
v)	A G0 5 XX	160	75	21°	70

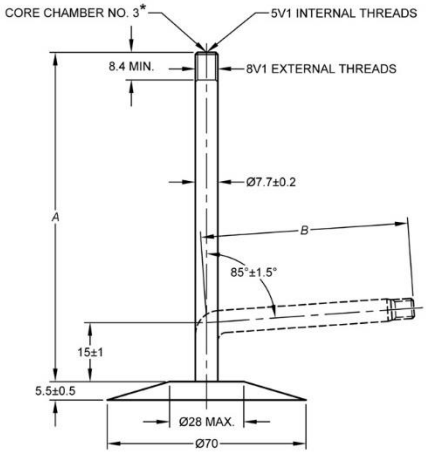
NOTE — XX: For valves having base diameter 82, T = 7, ØC = 28 *Max*.
For valves having base diameter 85, T= 6.7, ØC = 20 *Max*.

XX: that is, 82 or 95 may be marked either on metal insert or on the rubber base or valve.

All dimensions in milimetres.

FIG. 3 TRUCK AND BUS VALVES

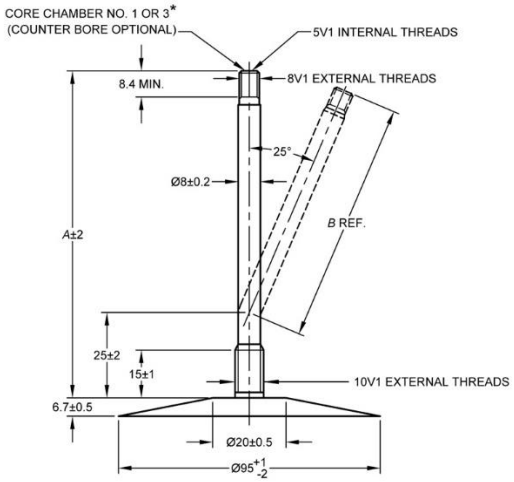
[1)] Designation with suffix 'DB' indicates double bend valve.
* Accommodates short core only.



Sl No. (1)	*Valve Designation* [1)] (2)	*A* (3)	*B* (4)
i)	A 85 5 70	85	75
ii)	A A5 5 70	105	95
iii)	A B5 5 70	115	105
iv)	A C5 5 70	125	115
v)	A E5 5 70	140	130
vi)	A F5 5 70	155	145

All dimensions in millimetres.

FIG. 4 TRUCK AND BUS VALVES



Valve Designation [1)]	*A*	*B*
A95 5 95	95	70

Valve designation may be marked either on metal insert or on the rubber base of value

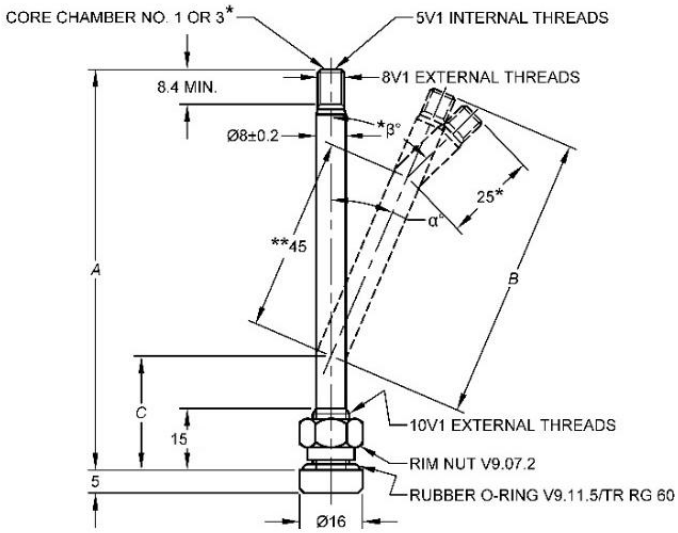
All dimensions in milimetres.

FIG. 5 TRUCK AND BUS VALVES

Accessories to be used: TR RW8 Ring washer and V9-07-2 Nut

[1)] Designation with suffix 'SB' indicates single bend valve.

* Accommodates short core only.



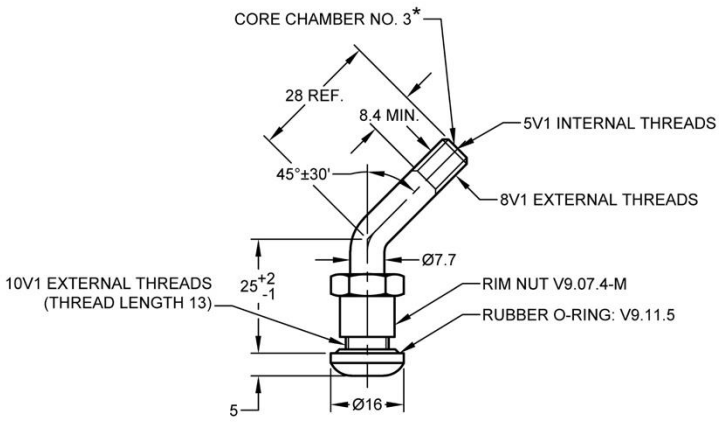
Sl No.	*Valve Designation (ETRTO)*	*A*	$B^{\pm 2}$	C^{+2}_{-1}	$\alpha°$	$\beta°$	*Valve Hole Size in Rim*	*Installation Torque*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
i)	V3.20.1	36	-	-	-	-		
ii)	V3.20.2	90	60	30	17°30'	-		
iii)	V3.20.3	82						
iv)	V3.20.4	-	60	25	27	-		
v)	V3.20.5		40	25	27	-		
vi)	V3.20.6		85	25	27	-		
vii)	V3.20.7		50	25	27	-	$Ø9.7_0{}^{+0.3}$	12 Nm to 15 Nm
viii)	V3.20.8		85	29	12	-		
ix)	V3.20.9		52	45	12	-		
x)	V3.20.10	-	25	50	27	-		
xi)	V3.20.11	95	-	25	27	42		
xii)	V3.20.12	-	70	25	27	-		

All dimensions in millimetres.

FIG. 6 TUBELESS CLAMP-IN TRUCK AND BUS VALVE (O-RING TYPE - ROUND BASE)

** FOR V3-20-11 only.

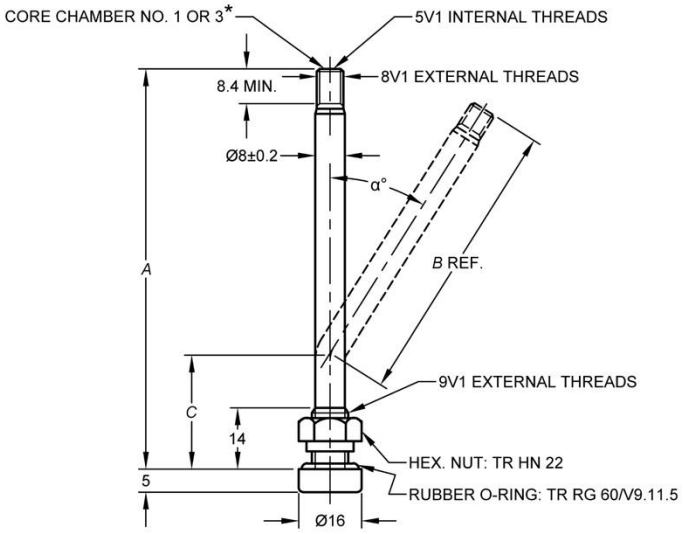
* Accommodates short core only.



Sl No.	*Valve Designation (ETRTO)*	*Valve Hole Size in Rim*	*Installation Torque*
(1)	(2)	(3)	(4)
i)	V3.22.1	$Ø9.7^{+0.3}_{0}$	12 Nm to 15 Nm

All dimensions in millimetres.

FIG. 7 TUBELESS CLAMP-IN TRUCK AND BUS VALVE (O-RING TYPE - ROUND BASE)



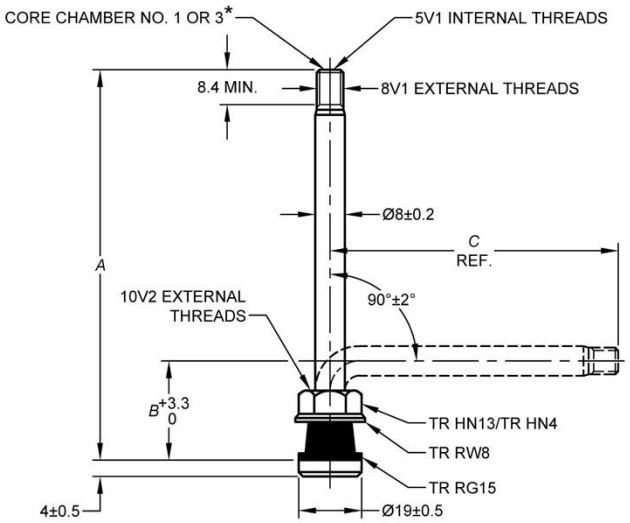
Sl No.	*Valve Designation (TR Code)*	A	B ± 2	C^{+2}_{-1}	α° ±2	*Valve Hole Size in Rim*	*Installation Torque*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
i)	TR 542	32	-	-	-		
ii)	TR 543	59	-	-	-		
iii)	TR 543C	59	36.5	23.5	45		
iv)	TR 543D	59	35	25	60		
v)	TR 543E	59	35	25	75		
vi)	TR 544	73	-	-	-		

*Accommodates short core only.

Sl No.	*Valve Designation (TR Code)*	A	B ± 2	C^{+2}_{-1}	α° ±2	*Valve Hole Size in Rim*	*Installation Torque*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
vii)	TR 544C	73	49	25	45	$Ø9.7^{+0.3}_{0}$	12 Nm to 15 Nm
viii)	TR 544D	73	49	25	60		
ix)	TR 545	89	-	-	-		
x)	TR 545D	89	66	25	60		
xi)	TR 545E	89	66	25	75		
xii)	TR 546	108	-	-	-		
xiii)	TR 546-36	108	85	25	36		
xiv)	TR 546 D	108	85	25	60		
xv)	TR 546E	108	85	25	75		
xvi)	TR 547 D	119	96	25	60		

All dimensions in millimetres.

FIG. 8 TUBELESS CLAMP-IN TRUCK AND BUS VALVE (O-RING TYPE - ROUND BASE)

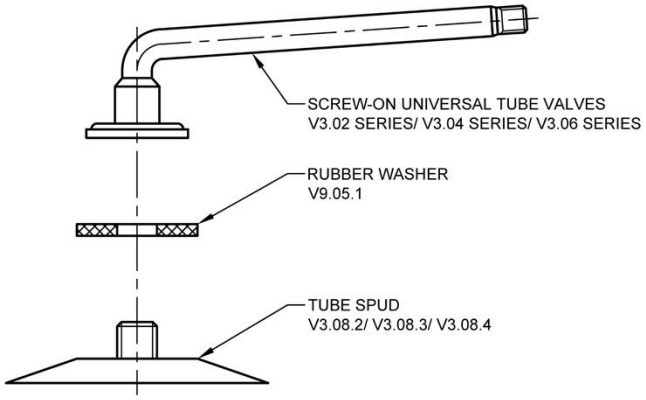


Sl No.	*Valve Designation (TR Code)*	*A*	$B^{+3.3}_{0}$	*C Ref*	*Valve Hole Size in Rim*	*Installation Torque*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	TR 575	29	-	-	$Ø15.7^{+0.3}_{0}$	4 Nm to 6 Nm
ii)	TR 500	51	-	-		
iii)	TR 501	38	-	-		
iv)	TR 570	80	-	-		
v)	TR 571	86	-	-		
vi)	TR 572	95	-	-		
vii)	TR 573	111	-	-		
viii)	TR 574	127	-	-		
ix)	TR 570C	-	33	51		
x)	TR 571C	-	33	58		
xi)	TR 572C	-	33	67		
xii)	TR 573C	-	33	83		

All dimensions in millimetres.

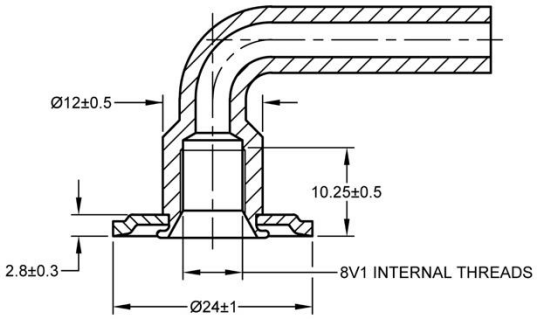
FIG. 9 TUBELESS CLAMP-IN TRUCK AND BUS VALVE (GORMET TYPE- ROUND BASE)

* Accommodates short core only.



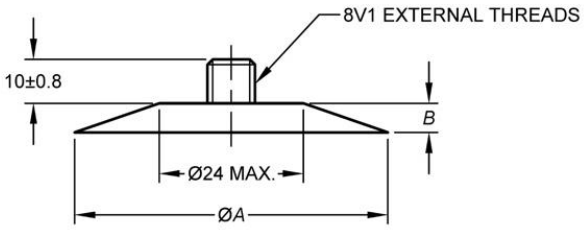
All dimensions in millimetres.

FIG. 10 SCREW-ON UNIVERSAL TUBE VALVES-ASSEMBLY



All dimensions in millimetres.

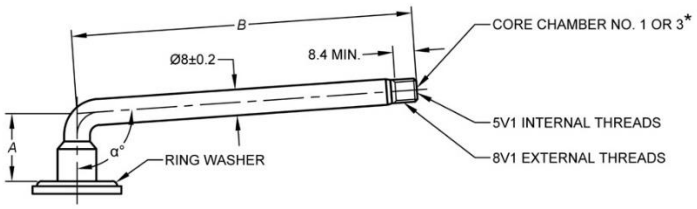
FIG. 11 SCREW-ON UNIVERSAL TUBE VALVES HEAD SHAPE-TRUCK AND BUS VALVES



Sl No.	*Valve Designation* (*ETRTO*)	*A*	*B*
(1)	(2)	(3)	(4)
i)	V3.08.2	70	7
ii)	V3.08.3	80	8
iii)	V3.08.4	57	5

All dimensions in milimetres.

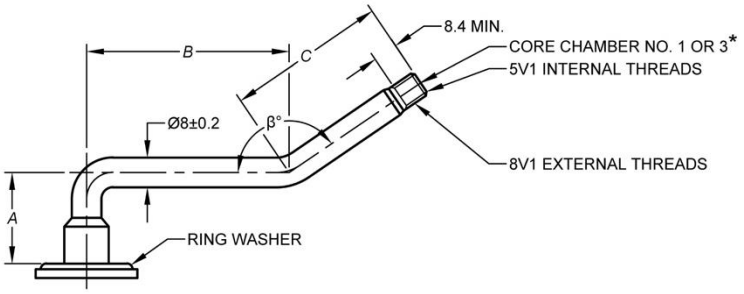
FIG. 12 SCREW-ON UNIVERSAL TUBE VALVE SPUDS TRUCK AND BUS VALVE



Sl No.	*Valve Designation* (*ETRTO*)	*A*	*B*	α°
(1)	(2)	(3)	(4)	(5)
i)	V3.02.7	22.5	71.5	100
ii)	V3.02.8	20.5	89.5	94
iii)	V3.02.9	20.5	99.5	94
iv)	V3.02.10	20.5	115	94
v)	V3.02.11	20	126	98
vi)	V3.02.12	20.5	132	94
vii)	V3.02.14	20.5	138.5	94
viii)	V3.02.15	20.5	145.5	94
ix)	V3.02.16	20.5	149.5	90
x)	V3.02.18	22.5	74.5	90
xi)	V3.02.19	20.5	60	94
xii)	V3.02.20	22.5	56.4	95
xiii)	V3.02.26	20.5	105	94
xiv)	V3.02.27	20	75	94
xv)	V3.02.29	20	127	94

All dimensions in millimetres.

FIG. 13 SCREW-ON UNIVERSAL TUBE VALVE SINGLE BENT TRUCK AND BUS VALVES

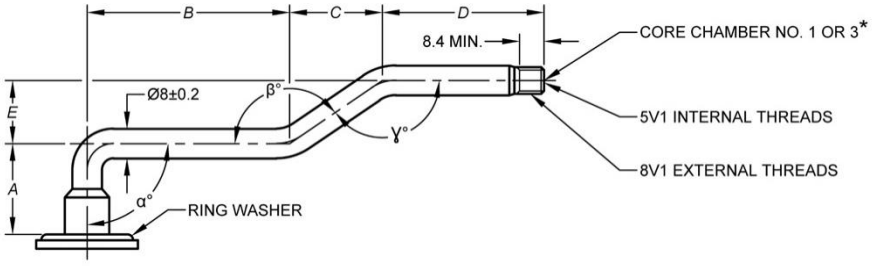


Sl No.	*Valve Designation* (*ETRTO*)	*A*	*B*	*C*	α°	*β*°
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	V3.04.4	20	74	40	94	144
ii)	V3.04.5	20	76	47.5	90	153
iii)	V3.04.6	20	86	47.5	90	153
iv)	V3.04.10	20.5	47	53	90	154
v)	V3.04.11	20.5	47	63.5	90	154
vi)	V3.04.15	20.5	42	38.5	90	120
vii)	V3.04.21	20	83	57	94	154
viii)	V3.04.25	20	80	47	94	164

All dimensions in milimetres.

FIG. 14 SCREW-ON UNIVERSAL TUBE VALVE DOUBLE BENT TRUCK AND BUS VALVES

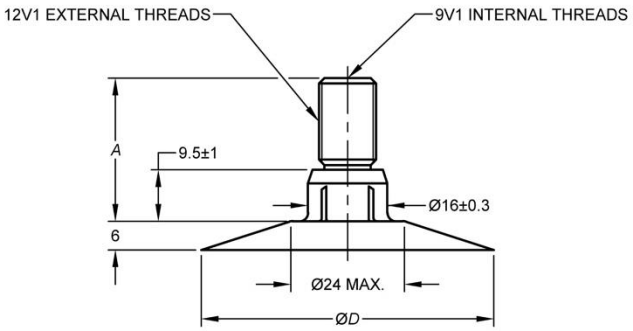
*Accommodates short core only.



Sl No.	*Valve Designation* (*ETRTO*)	*A*	*B*	*C*	*D*	*E*	α°	*β°*	*γ°*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
i)	V3.06.5	20.5	62.5	19.5	49	17	90	139	139
ii)	V3.06.6	20	79.5	19.5	37.5	17	90	139	139
iii)	V3.06.7	20.5	45.5	18.5	42.5	17	90	137	137
iv)	V3.06.8	24.5	61.5	14.5	50.5	7.5	94	153	153
v)	V3.06.9	20.5	67.5	19.5	54.5	17	90	139	139
vi)	V3.06.16	20	62	13	50	7	94	153	153
vii)	V3.06.17	20	75	13	50	7	94	153	153

All dimensions in milimetres.

FIG. 15 SCREW-ON UNIVERSAL TUBE VALVE DOUBLE BENT TRUCK AND BUS VALVES



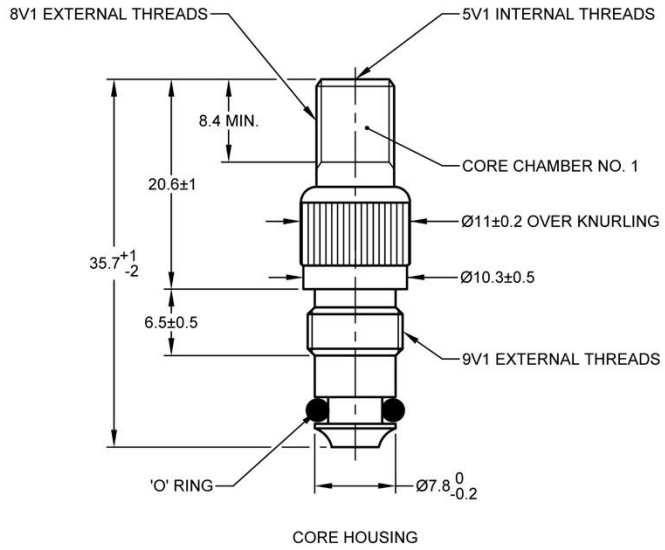
Sl No.	*Valve Designation*		*A*
(1)	(2)	(3)	(4)
i)	B 20 5 63	B 20 5 82	20
ii)	B 30 5 63	B 30 5 82	30

For valves B 20 5 63 & B 30 5 63, ØD = 63
For valves B 20 5 82 & B 30 5 82, ØD = 82

All dimensions in milimetres.

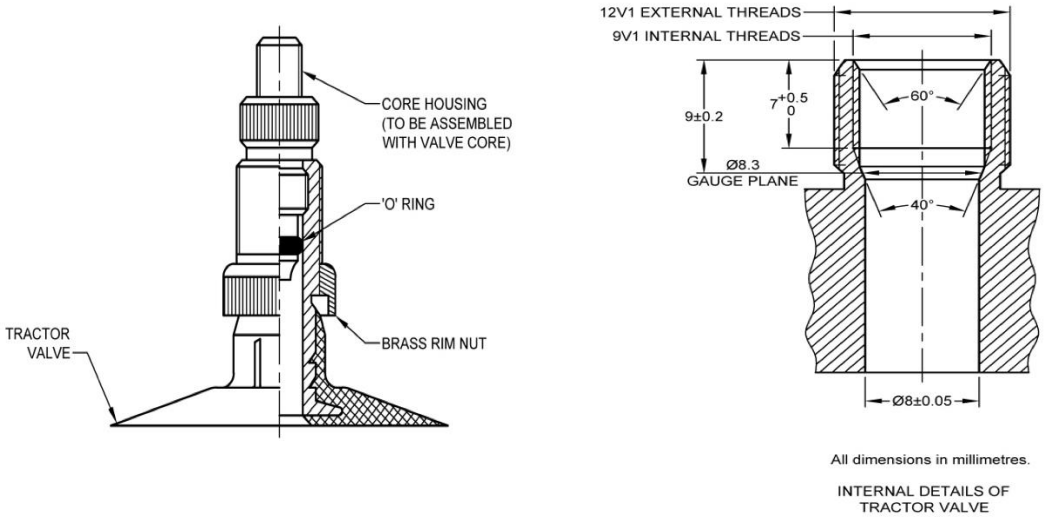
FIG. 16 TRACTOR VALVE AIR WATER FILLING TYPE (*SEE* FIG. 18 FOR ASSEMBLY)

* Accommodates short core only.



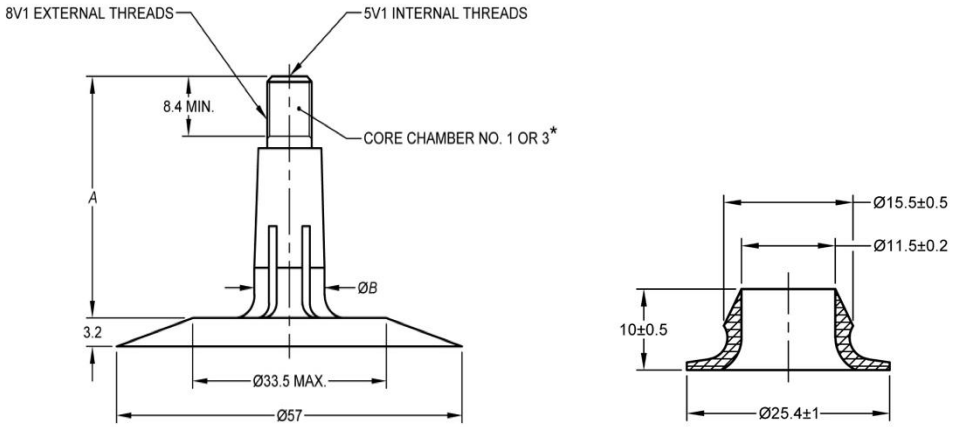
All dimensions in milimetres.

FIG. 17 CORE HOUSING, CH_3



All dimensions in milimetres.

FIG. 18 TRACTOR VALVE ASSEMBLY

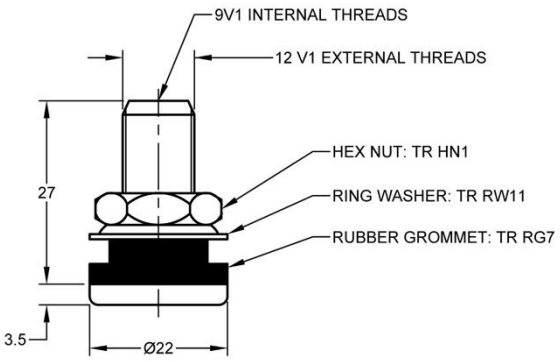


Sl No.	*Valve Designation*	*A*	*B* (± 0.3)
(1)	(2)	(3)	(4)
i)	B 35 3 57	35	11.7
ii)	B 35 4 57	35	13.1
iii)	B 35 5 57	35	16.5
iv)	B 49 5 57	49	16.5
v)	B 35 1 57	35	9.1

NOTE — Plastic bushing to make up for B dimensions of B 35 5 57 valve where necessary, to suit old design rims of 13 to 15 nominal diameter a valve hole of 15.9 mm.

All dimensions in milimetres.

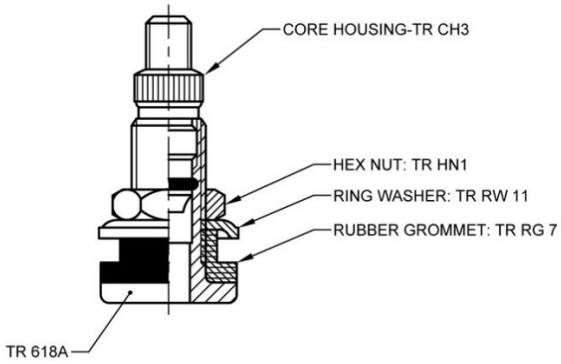
FIG. 19 RUBBER COVERED TUBE VALVE — PASSENGER CAR, JEEP, SCOOTER DERIVATIVES, FRONT TRACTOR LIGHT TRUCK, TRACTOR IMPLEMENT ANIMAL DRAWN AND FORK LIFT



Sl No.	*Valve Designation* (*TR Code*)	*Valve Hole Size in Rim*	*Installation Torque*
(1)	(2)	(3)	(4)
i)	TR 618A	$Ø15.7^{+0.4}_{0}$	5 Nm to 8 Nm

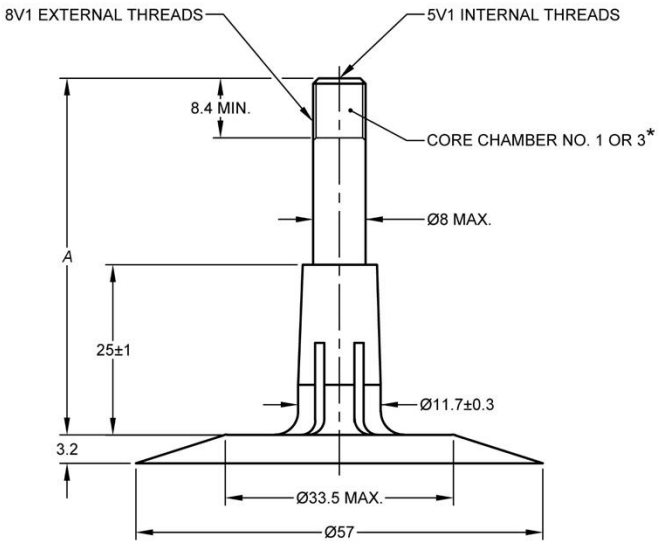
FIG. 20 TUBELESS CLAMP-IN TRACTOR VALVE AIR-WATER FILLING TYPE (*SEE* FIG. 21 FOR ASSEMBLY)

* Accommodates short core only.



All dimensions in millimetres.

FIG. 21 TUBELESS CLAMP-IN TRACTOR VALVE ASSEMBLY

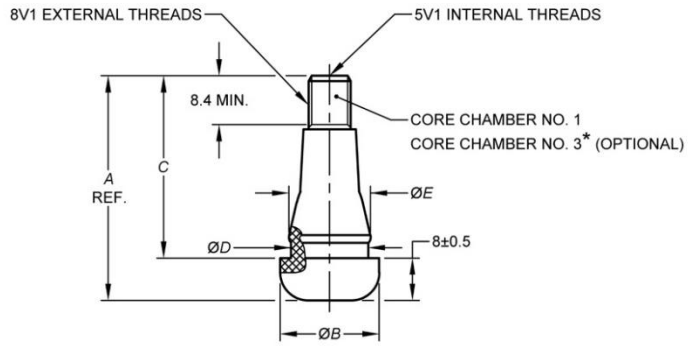


Sl No.	*Valve Designation*	*A*
(1)	(2)	(3)
i)	B 57 3 57	57
ii)	B 46 3 57	46

All dimensions in milimetres.

FIG. 22 RUBBER COVERED TUBE VALVES — PASSENGER CAR

* Accommodates short core only.

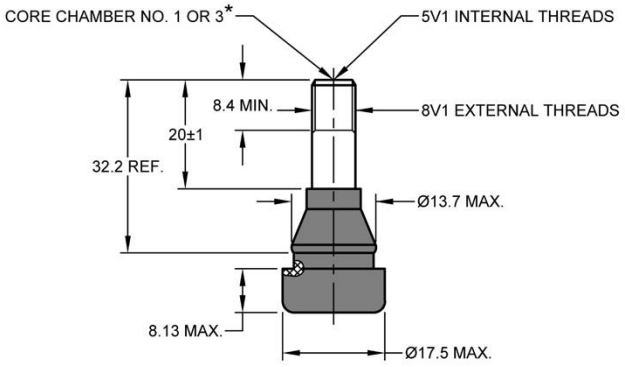


Sl No.	*Valve Designation*	*A*	*B* $^{\pm 0.5}$	C_{-2}^{+1}	*D*	$E_{0}^{+0.5}$	*Valve Hole Size in Rim*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
i)	F 25 3 19[1)]	33.0	19.5	25.5	15.0 min.	16.0	$Ø11.3_{0}^{+0.4}$
ii)	F 35 3 19	42.5	19.5	35	$15.0^{\pm 0.3}$	16.0	$Ø11.3_{0}^{+0.4}$
iii)	F 41 3 19	48.5	19.5	41	$15.0^{\pm 0.3}$	16.0	$Ø11.3_{0}^{+0.4}$
iv)	F 54 3 19	61.5	19.5	54	15.0 min.	16.0	$Ø11.3_{0}^{+0.4}$
v)	F 67 3 19	74.0	19.5	66.5	15.0 min.	16.0	$Ø11.3_{0}^{+0.4}$
vi)	F 49 3 19	56.5	19.5	49	15.0 min.	16.0	$Ø11.3_{0}^{+0.4}$
vii)	F 35 5 24	42.5	24.0	35	19.2 min.	20.2	$Ø15.7_{0}^{+0.4}$
viii)	F 54 5 24	61.5	24.0	54	19.2 min.	20.2	$Ø15.7_{0}^{+0.4}$
ix)	F 35 1 16	42.0	16.0	35	12.3 min.	13.2	$Ø8.8_{0}^{+0.3}$

NOTE — Products for use up to 450 kPa cold inflation pressure maximum & 210 kmph maximum.

All dimensions in milimetres.

FIG. 23 RUBBER COVERED TUBELESS SNAP-IN VALVES



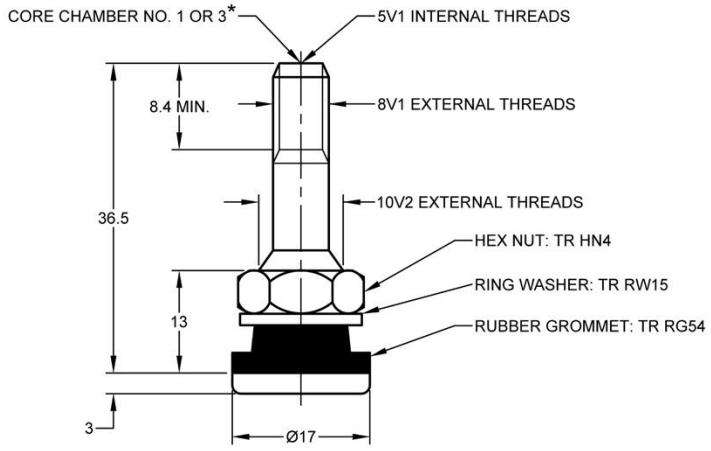
Sl No.	*Valve Designation*	*Valve Hole Size in Rim*
(1)	(2)	(3)
i)	F 35 3 17	$Ø11.3_{0}^{+0.4}$

NOTE — Products for use up to 550 kPa cold inflation pressure maximum and 210 Kmph maximum.

All dimensions in millimetres.

FIG. 24 RUBBER COVERED TUBELESS SNAP-IN SCOOTER VALVES

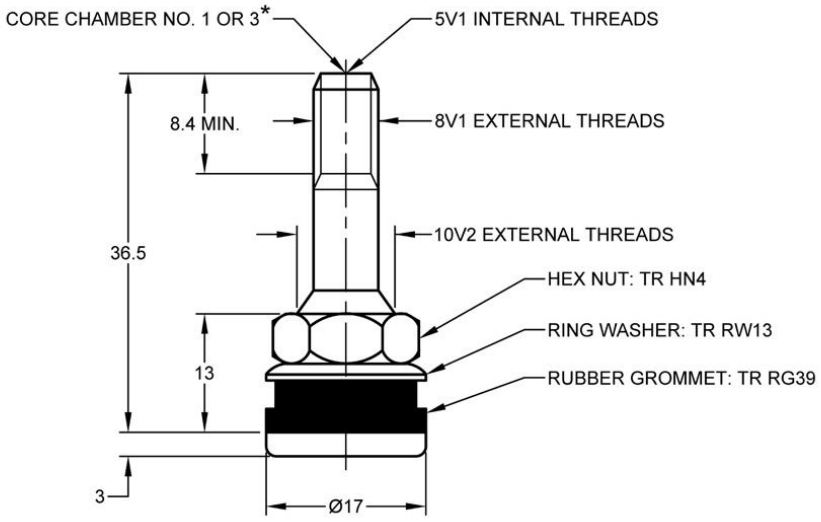
* Accommodates short core only.
1) core Chamber No. 3 for F 25 3 19.



Sl No.	*Valve Designation (TR Code)*	*Valve Hole Size in Rim*	*Installation Torque*
(1)	(2)	(3)	(4)
i)	TR 416 S	$Ø11.3^{+0.4}_{0}$	3 Nm to 5 Nm

All dimensions in millimetres.

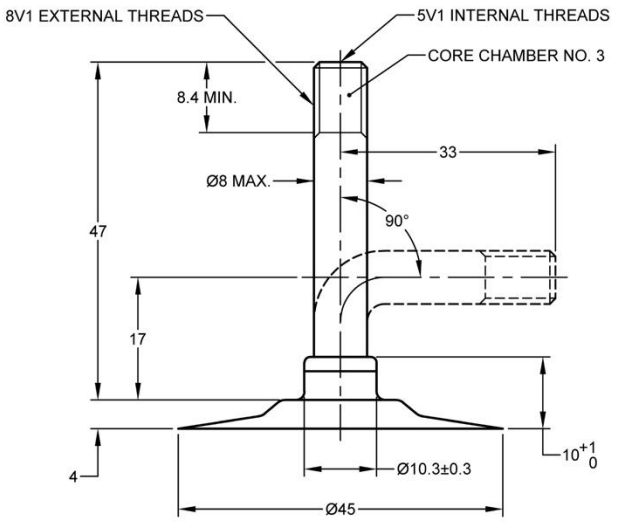
FIG. 25 TUBELESS CLAMP-IN PASSENGER CAR VALVES



Sl No.	*Valve Designation (TR Code)*	*Valve Hole Size in Rim*	*Installation Torque*
(1)	(2)	(3)	(4)
i)	TR 416	$Ø15.7^{+0.4}_{0}$	3 Nm to 5 Nm

All dimensions in millimetres.

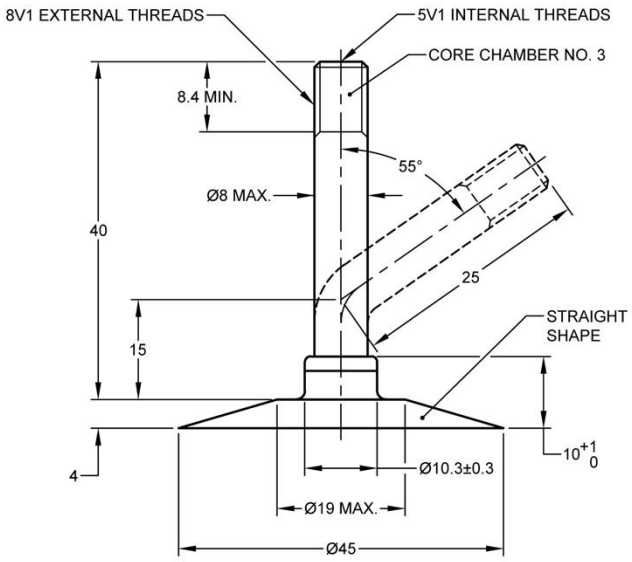
FIG. 26 TUBELESS CLAMP-IN PASSENGER CAR VALVES



NOTES

1 These valve accommodate only the appropriate short core.
2 Designation with suffix SB indicated single bent valve.

FIG. 27 SCOOTER VALVES A 47 2 45 (BASE-BALL SHAPE/STRAIGHT SHAPE)

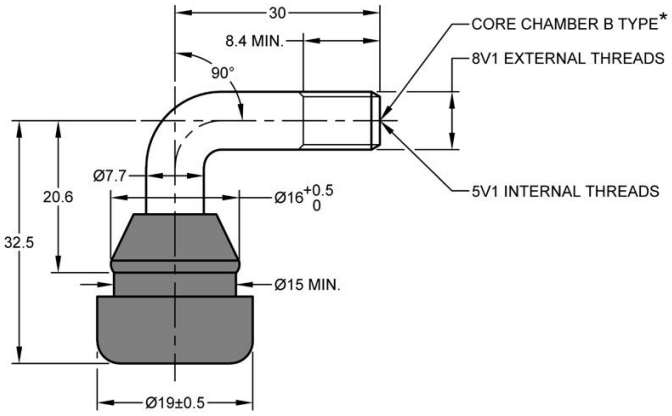


NOTES

1 These valve accommodate only the appropriate short core
2 Designation with suffix ‘SB’ indicated single bent valve

All dimensions in milimeters.

FIG. 28 SCOOTER VALVES A 40 2 45 (BASE-STRAIGHT SHAPE/BELL SHAPE)

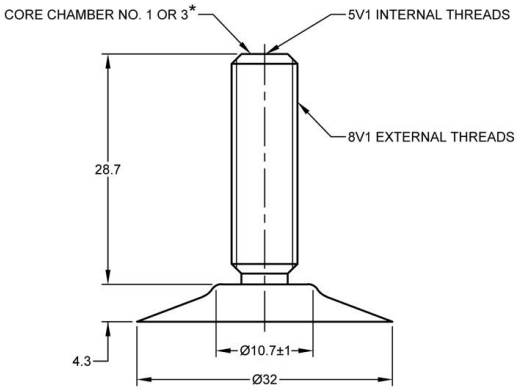


Sl No.	*Valve Designation* (JATMA)	*Valve Hole Size in Rim*
(1)	(2)	(3)
i)	PVR 70	$Ø11.3^{+0.4}_{0}$

NOTE — Products for use up to 450 kPa cold inflation pressure maximum and 210 kmph maximum.

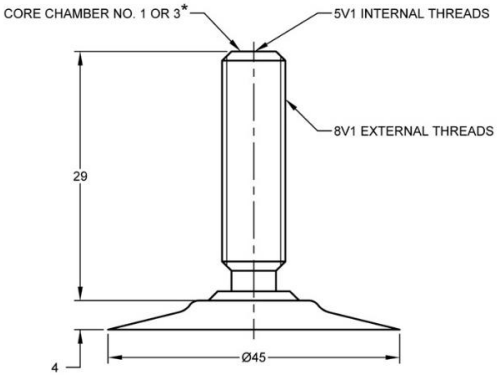
All dimensions in millimetres.

FIG. 29 RUBBER COVERED TUBELESS SNAP-IN SCOOTER VALVES



All dimensions in milimetres.

FIG. 30 MOPED VALVE A 29 1 32

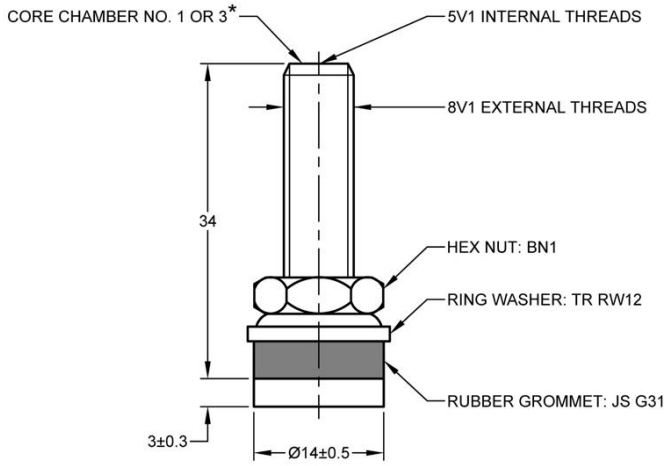


NOTE — The top of rubber base shall have an appropriate shape as shown to allow tubes at valve region to set correctly with certain shallow well rims.

All dimensions in millimetres.

FIG. 31 MOTORCYCLE VALVES A 29 1 45

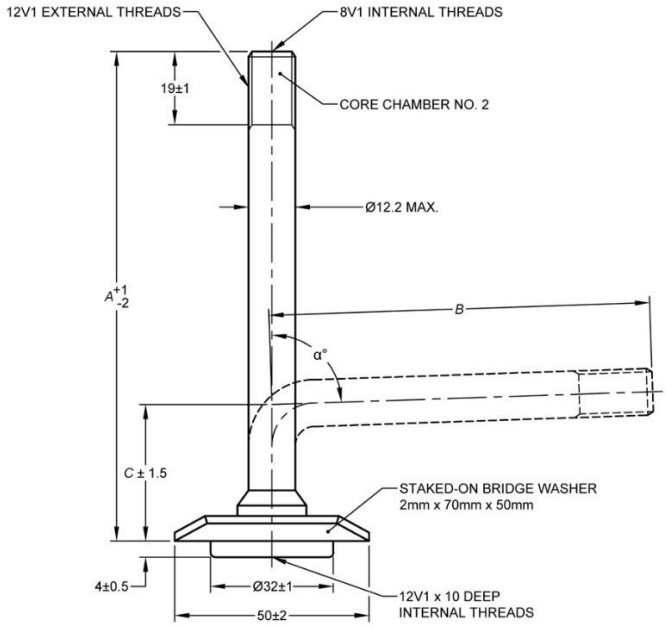
* Accomodates short core only.



Sl No.	*Valve Designation* (JATMA)	*Valve Hole Size in Rim*	*Installation Torque*
(1)	(2)	(3)	(4)
i)	JS 430	$Ø8.3^{+0.3}_{0}$	3 Nm to 5 Nm

All dimensions in millimetres.

FIG. 32 TUBELESS CLAMP-IN MOTOR CYCLE VALVE



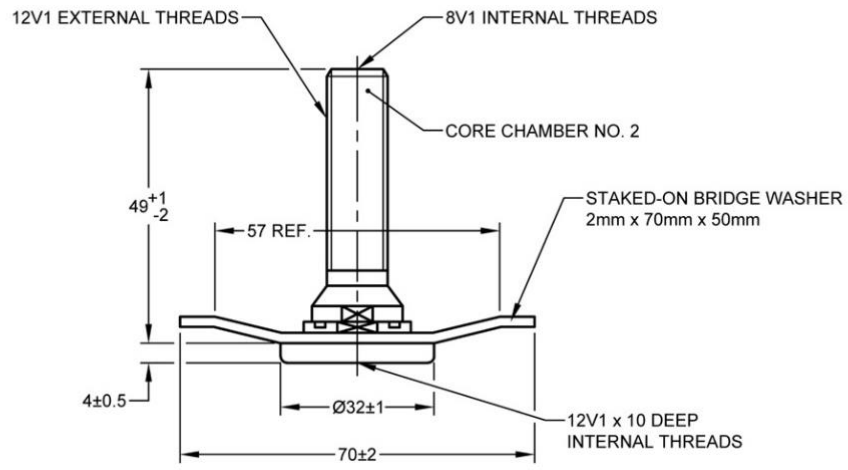
Sl No.	*Valve Designation*	*A*	*B*	*C*	*a°*
(1)	(2)	(3)	(4)	(5)	(6)
i)	E D4 6 32	134	—	—	—
ii)	E D4 6 32 - SB	—	105	35	88°

NOTE — Available in straight or bend form.

All dimensions in millimetres.

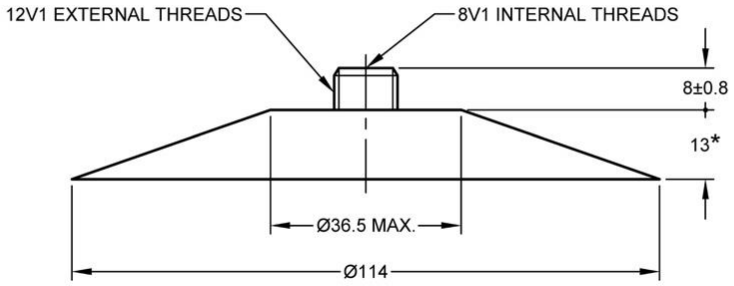
FIG. 33 LARGE BORE SCREW-ON TUBE VALVES — (OTR)E D 4 6 32 AND E D4 6 32 SB (FOR SIDE ELEVATION OF BRIDGE WASHER, *SEE* FIG. 34)

* Accomodates short core only.



All dimensions in millimetres.

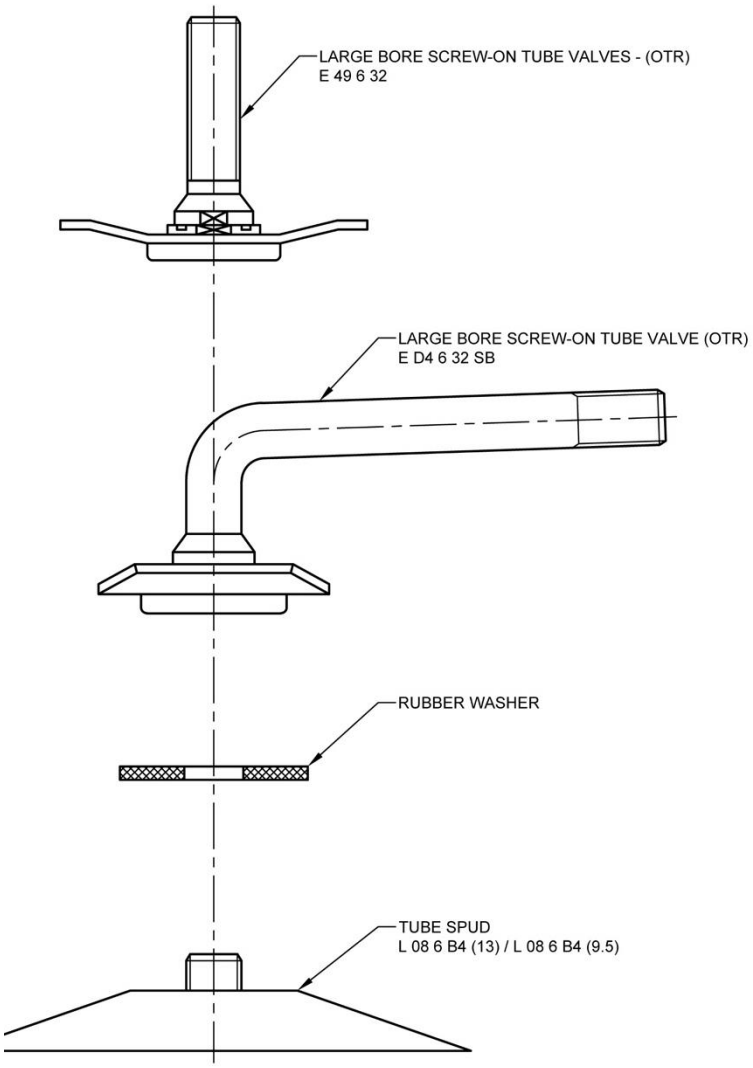
FIG. 34 LARGE BORE SCREW-ON TUBE VALVES — (OTR) E 49 6 32



All dimensions in millimetres.

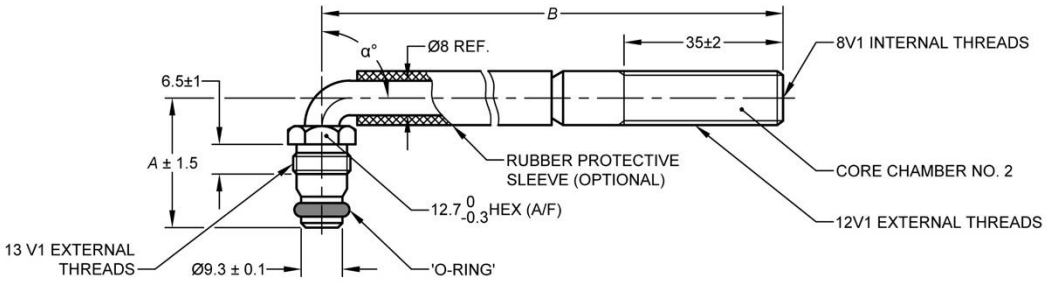
FIG. 35 TUBE SPUD L 08 6 B4

*Valve available with rubber base thickness of 9.5 mm on special order



All dimensions in millimetres.

FIG. 36 LARGE BORE SCREW-ON TUBE VALVES – ASSEMBLY

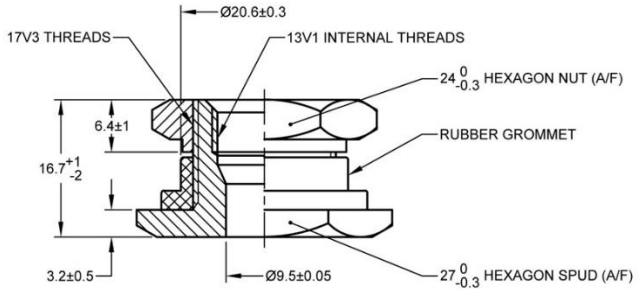


Sl No.	*Valve Designation*	*α°*	*A*	*B*
(1)	(2)	(4)	(5)	(6)
i)	R 79 6 09 – SB	80	27	79
ii)	R B9 6 09 – SB	90	32	119

NOTE — These swivel stems to be assembled with tubeless spud S 17 7 27 to be available in several standard lengths and 12.5 mm increment (dimension B).

All dimensions in millimetres.

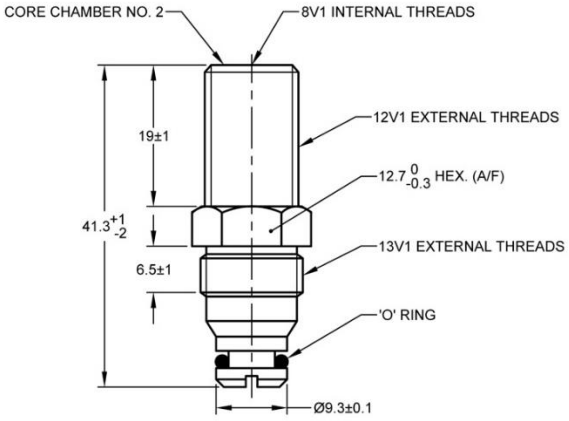
FIG. 37 LARGE BORE (OTR) VALVES R 79 6 09 SB AND R B9 6 SB - SWIVEL TYPE SINGLE BEND



NOTE — This straight stem to be assembled with tubeless spud S 17 7 27.

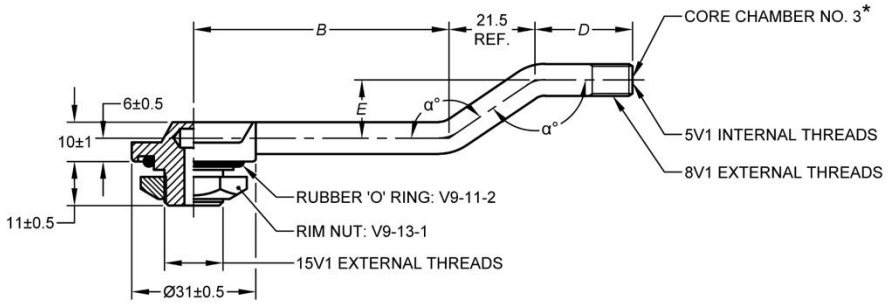
All dimensions in millimetres.

FIG. 38 LARGE BORE (OTR) VALVES R 41 6 09 STRAIGHT TYPE



All dimensions in millimetres.

FIG. 39 LARGE BORE (OTR) SPUD (TUBELESS SPUD) S 17 7 27

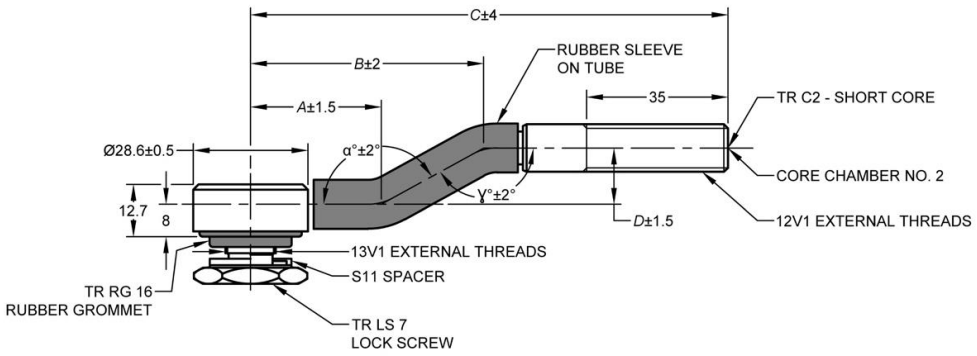


Sl No.	*Valve designation* (ETRTO)	$B^{\pm 2}$	$D^{\pm 2}$	$E^{\pm 1.5}$	$\alpha^{\circ \pm 2}$	*Valve Hole Size in Rim*	*Installation Torque*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
i)	V3.18.1	64	24.5	14.5	146	$20.5^{+0.5}_{0}$	25Nm-31 Nm
ii)	V3.18.2	81	24.5	14.5	146		
iii)	V3.18.5	68	37.5	19.5	138		

All dimensions in millimeters.

FIG. 40 TUBELESS CLAMP-IN TRIPLE BEND - TRUCK AND BUS VALVES

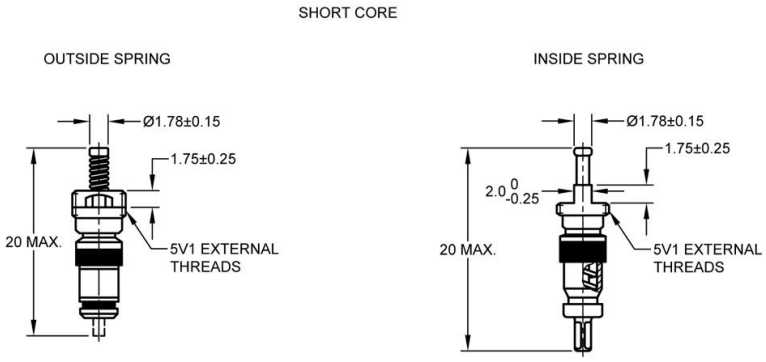
* Accommodates short core only.



Sl No.	*Valve Designation (TR Code)*	$A^{\pm 1.5}$	$B^{\pm 2}$	$C^{\pm 4}$	$D^{\pm 1.5}$	$\alpha^{\circ\pm 2}$	$\gamma^{\circ\pm 2}$	*Valve Hole Size in Rim*	*Installation Torque*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
i)	TR J690	31.75	58.6	119	14.2	152	152	$20.5_{0}^{+0.5}$	20 Nm to 23 Nm
ii)	TR J692	31.75	58.6	119	14.2	162	152		

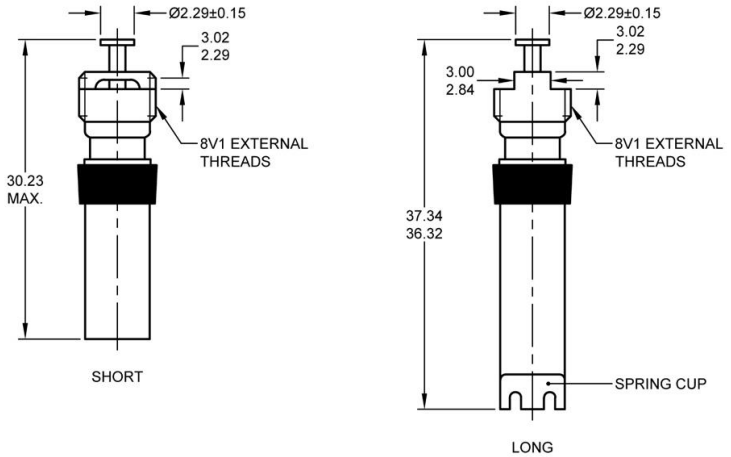
All dimensions in millimetres.

FIG. 41 LARGE BORE TUBELESS CLAMP-IN TURRET TYPE VALVES – OTR



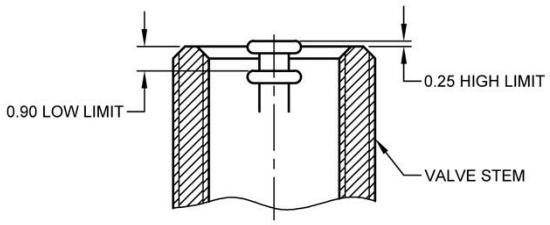
NOTE — Recommended torque at installation 0.23 Nm to 0.56 Nm.

(A) TYPE 1 VALVE CORE – STANDARD BORE



NOTE — Recommended torque at installation 0.34 Nm to 0.56 Nm.

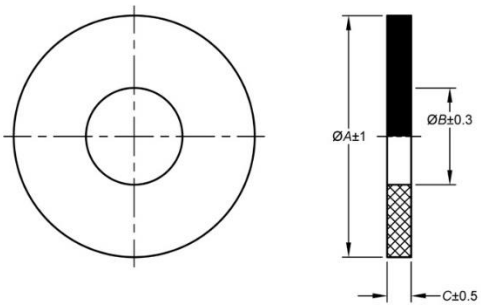
(B) TYPE 2 VALVE CORE – LARGE BORE



(C) CORE PIN HEAD POSITION – TYPE 1 AND TYPE 2

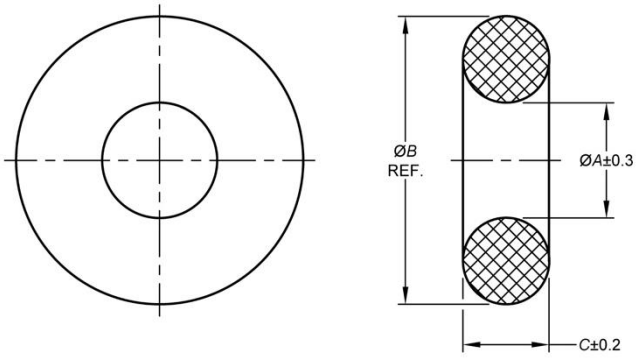
All dimensions in millimetres.

FIG. 42 VALVE CORE



Sl No. (1)	*Code* (2)	*ØA* (3)	*ØB* (4)	*C* (5)
i)	T-RUW 55	32	12.3	2
ii)	V9.05.1	24	8	2.5

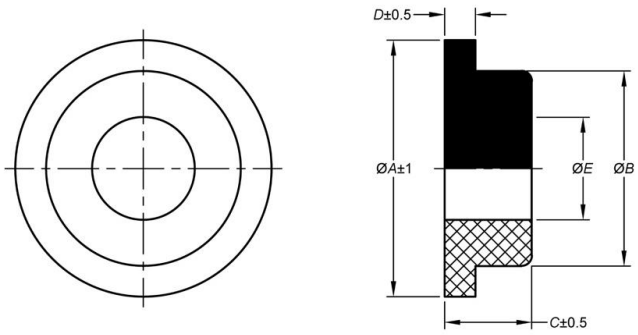
FIG. 43 RUBBER WASHERS



Sl No. (1)	*Code* (2)	*ØA* (3)	*ØB* (4)	*C* (5)
i)	TR RG 60/V9.11.5	8.9	12.7	1.9
ii)	TR RG 66	6	9.6	1.8
iii)	TR RG 67	4.4	8	1.8

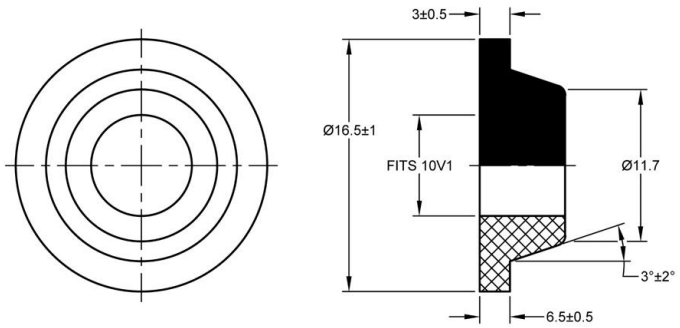
All dimensions in millimetres.

FIG. 44 RUBBER O-RINGS



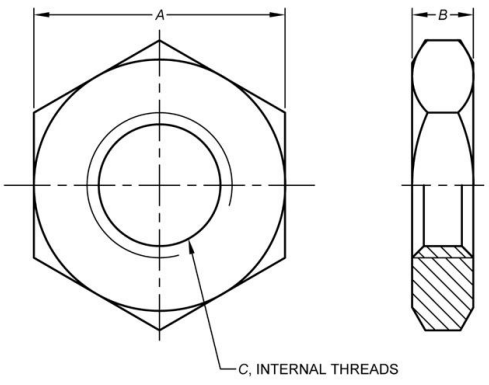
Sl No. (1)	*Code* (2)	*ØA* (3)	*ØB* (4)	*C* (5)	*D* (6)	*ØE Fits to* (7)
i)	TR RG 7	22.4	16	8.65	3.2	12V1
ii)	TR RG 22	25.4	20.6	6.4	2.3	17V3
iii)	TR RG 39/V9.10.8	18	16	8	2.3	10V2
iv)	JS G31	14	10	5	4	8V1

FIG. 45 RUBBER GROMMET



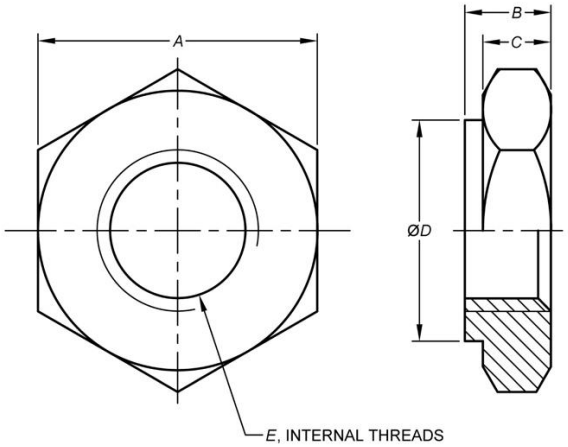
All dimensions in millimetres.

FIG. 46 RUBBER GROMMET – TR RG 54



Sl No. (1)	Code (2)	$A^{0}_{-0.3}$ (3)	B (4)	C (5)
i)	TR HN 1	16	4.8	12V1
ii)	TR HN 4 / V9.08.2	14	5	10V2
iii)	BN 1	12	4	8V1

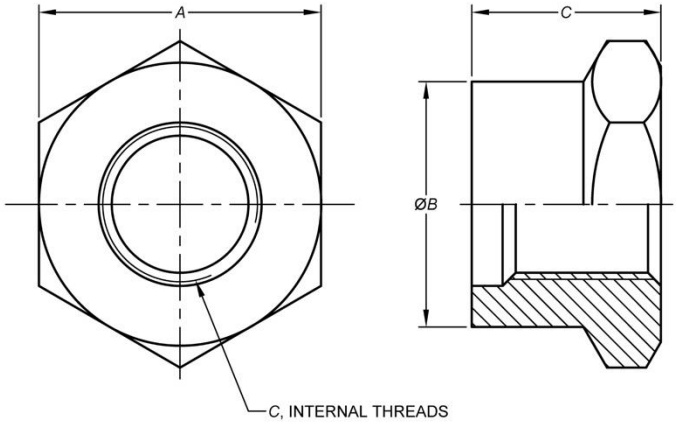
FIG. 47 HEX NUTS



Sl No. (1)	*Code* (2)	$A^{0}_{-0.3}$ (3)	$B^{\pm 0.5}$ (4)	$C^{\pm 0.5}$ (5)	$D^{\pm 0.5}$ (6)	*E* (7)
i)	TR HN 15 / V9.09.1	24	6.4	4.8	20.3	17V3
ii)	TR HN 22	16	10.2	5.2	15.5	9V1

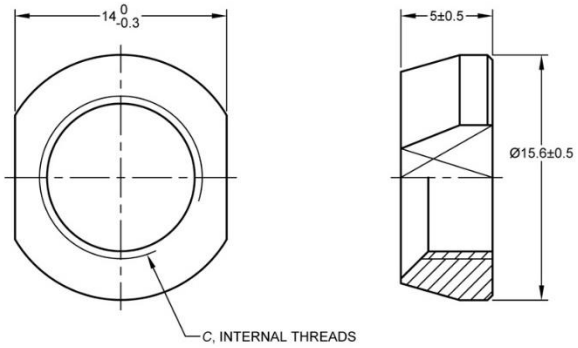
All dimensions in millimetres.

FIG. 48 HEX NUTS



Sl No. (1)	*Code* (2)	$A^{0}_{-0.3}$ (3)	*B* (4)	$C^{\pm 0.5}$ (5)
i)	V9.07.2	14	1 2	10V1
ii)	V9.07.4-M	14	1 2	10V1

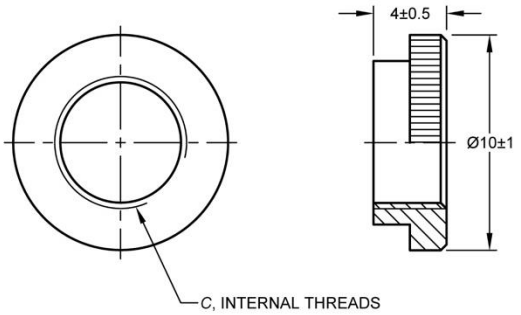
FIG. 49 RIM NUT



Sl No.	*Code*	$C^{\pm 0.5}$
(1)	(2)	(3)
i)	T-LN 53	12V1

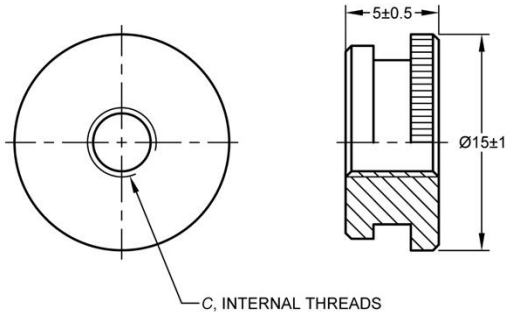
All dimensions in millimetres.

FIG. 50 RIM NUT



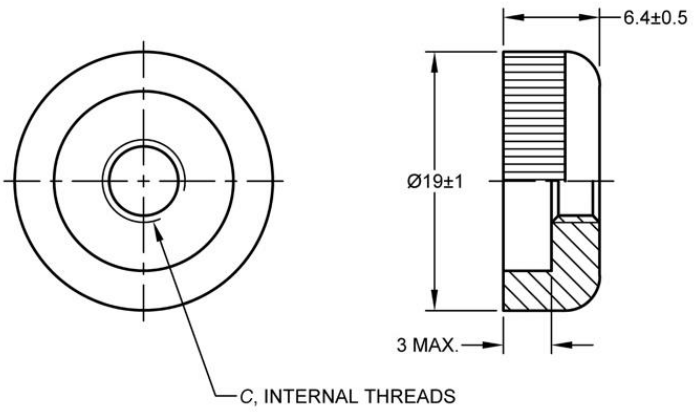
Sl No.	Code	$C^{\pm 0.5}$
(1)	(2)	(3)
i)	63	8V1

FIG. 51 RIM NUT



Sl No.	Code	$C^{\pm 0.5}$
(1)	(2)	(3)
i)	252	8V1

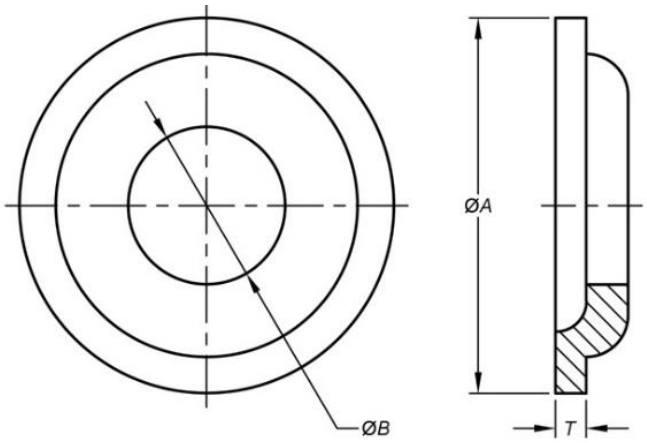
FIG. 52 RIM NUT



Sl No.	Code	$C^{\pm 0.5}$
(1)	(2)	(3)
i)	TR LN 10	12V1

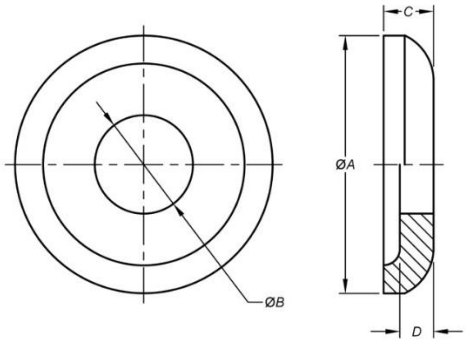
FIG. 53 RIM NUT

All dimensions in millimeters.



Sl No.	*Code*	$A^{\pm 1}$	$B^{\pm 0.2}$	$T^{\pm 0.2}$
(1)	(2)	(3)	(4)	(5)
i)	TR RW 3	27	12.4	1.4
ii)	TR RW 11	23.4	12.4	1.6
iii)	TR RW 12	16	8	1.6
iv)	T-RW 52	24	10.8	1.6

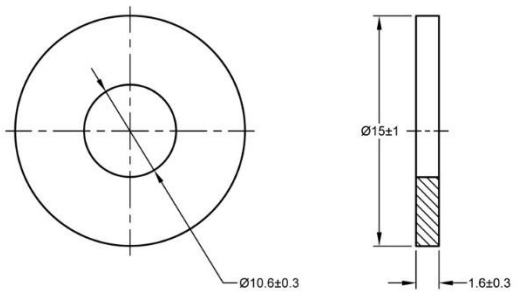
FIG. 54 RING WASHERS



Sl No.	*Code*	$A^{\pm 1}$	$B^{\pm 0.2}$	$C^{\pm 0.5}$	$D^{\pm 0.2}$
(1)	(2)	(3)	(4)	(5)	(6)
i)	TR RW 8/ V9.01.4	19	10.5	2.5	1.4
ii)	TR RW 13	19	10.5	1.5	0.8

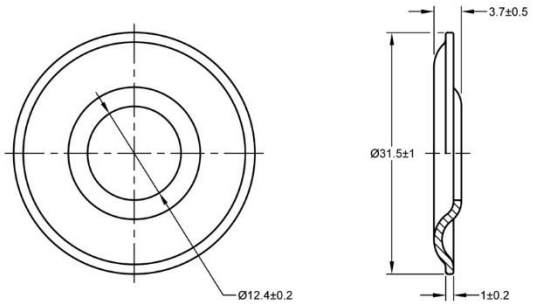
All dimensions in millimetres.

FIG. 55 RING WASHERS



Code
TR RW 15

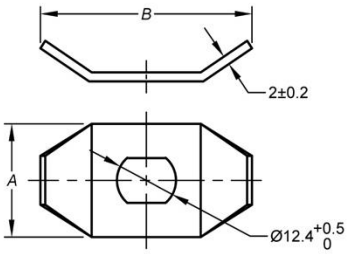
FIG. 56 RING WASHER



Code
T- RW 59

All dimensions in millimetres.

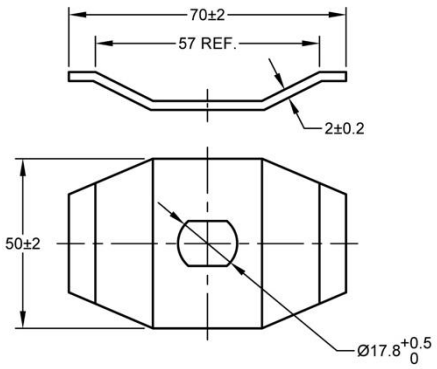
FIG. 57 RING WASHERS



Sl No. (1)	*Code* (2)	$A^{\pm 1.5}$ (3)	$B^{\pm 2}$ (4)
i)	TR BW 1	24	47
ii)	TR BW 2	28.5	54
iii)	TR BW 3	33	57

All dimensions in millimeters.

FIG. 58 BRIDGE WASHERS



Code
TR BW 18

All dimensions in millimetres.

FIG. 59 BRIDGE WASHERS

ANNEX A

(*Clause 2*)

LIST OF REFERRED STANDARDS

IS No./Other Standards	*Title*
IS 319 : 2007	Free cutting leaded brass bars, rods and sections (*fifth revision*)
IS 2500 (Part 1) : 2000	Sampling inspection procedures: Part 1 Attribute sampling plans indexed by acceptance quality level (AQL) for lot-by-lot inspection (*second revision*)
IS 2704 : 1983	Brass wires for cold-headed and machined parts (*first revision*)
IS 3168 : 1981	Specification for brass strip and foil for deep drawing (*first revision*)
IS 3400 (Part 2) : 2014	Methods of test for rubber, vulcanized or thermoplastic: Part 2 Determination of hardness, Section 2 Hardness between 10 IRHD and 100 IRHD
IS 4170 : 1967	Specification for brass rods for general engineering purposes
IS 6912 : 2005	Copper and copper alloy forging stock and forging — Specification (*first revision*)
IS/ISO 4570 : 2002	Tyre valve threads
IS 10939 : 2023	Designation system for tyre tube valves for automotive vehicles (*first revision*)
IS/ISO 14960 (Part 2) : 2014	Tubeless tyres — Valves and components: Part 2 Clamp — In tubeless tyre valve — Test method
ISO 14960-1 : 2014	Tubeless tyres Valves and components — Part 1: Test methods

ANNEX B

(*Foreword*)

VALVE AND VALVE CORE DESIGNATION CROSS REFERENCE

Sl No.	Bis Code	Tr Code Cross Reference	Fig. No.
i)	A 65 5 82	TR 227	Fig. 2
ii)	A 83 5 82	TR 274A	Fig. 2
iii)	A 97 5 82	TR 75A	Fig. 2
iv)	A A6 5 82	TR 76A	Fig. 2
v)	A B1 5 82	—	Fig. 2
vi)	A B4 5 82	TR 177A	Fig. 2
vii)	A C3 5 82	TR 77A	Fig. 2
viii)	A D4 5 82	TR 175A	Fig. 2
ix)	A E7 5 82	TR 78A	Fig. 2
x)	A GO 5 82	TR 179A	Fig. 2
xi)	A 65 5 95	TR 227	Fig. 2
xii)	A 83 5 95	TR 274A	Fig. 2
xiii)	A 97 5 95	TR 75A	Fig. 2
xiv)	A A6 5 95	TR 76A	Fig. 2
xv)	A B1 5 95	—	Fig. 2
xvi)	A B4 5 95	TR 177A	Fig. 2
xvii)	A C3 5 95	TR 77A	Fig. 2
xviii)	A D4 5 95	TR 175A	Fig. 2
xix)	A E7 5 95	TR 78A	Fig. 2
xx)	A GO 5 95	TR 179A	Fig. 2
xxi)	A 85 5 70	TR 440	Fig. 4
xxii)	A A5 5 70	TR 441	Fig. 4
xxiii)	A B5 5 70	TR 442	Fig. 4
xxiv)	A C5 5 70	TR 443	Fig. 4
xxv)	A E0 5 70	TR 444	Fig. 4
xxvi)	A F5 5 70	TR 445	Fig. 4
xxvii)	A 95 5 95	—	Fig. 5
xxviii)	B 20 5 63	TR 218A	Fig. 16
xxix)	B 30 5 63	TR 220A	Fig. 16
xxx)	B 20 5 82	—	Fig. 16
xxxi)	B 30 5 82	—	Fig. 16
xxxii)	CH3	TR CH3	Fig. 17
xxxiii)	B 35 3 57	TR 13	Fig. 19
xxxiv)	B 35 4 57	TR 14	Fig. 19
xxxv)	B 35 5 57	TR 15	Fig. 19

Sl No.	Bis Code	Tr Code Cross Reference	Fig. No.
xxxvi)	B 49 5 57	TR 25	Fig. 19
xxxvii)	B 35 1 57	—	Fig. 19
xxxviii)	B 57 3 57	—	Fig. 22
xxxix)	B 46 3 57	—	Fig. 22
xl)	F 25 3 19	TR 412	Fig. 23
xli)	F 35 3 19	TR 413	Fig. 23
xlii)	F 41 3 19	TR 414	Fig. 23
xliii)	F 54 3 19	TR 418	Fig. 23
xliv)	F 67 3 19	TR 423	Fig. 23
xlv)	F 49 3 19	TR 414L(V2-03-8)	Fig. 23
xlvi)	F 35 5 24	TR 415	Fig. 23
xlvii)	F 54 5 24	TR 425	Fig. 23
xlviii)	F 35 1 16	TR 438	Fig. 23
xlix)	F 35 3 17	TR 600 HP	Fig. 24
l)	A 29 1 32	—	Fig. 30
li)	A 29 1 45	—	Fig. 31
lii)	E D4 6 32	TRJ 1175A-M	Fig. 33
liii)	E D4 6 32-SB	TRJ 1175C-M	Fig. 33
liv)	E 49 6 32	TRJ 1014-M	Fig. 34
lv)	L 08 6 B4	TR SP 1000	Fig. 35
lvi)	R 79 6 09-SB	TRJ 650	Fig. 37
lvii)	R B9 6 09-SB	TRJ 651	Fig. 37
lviii)	R 41 6 09	TRJ 670	Fig. 38
lix)	S 17 7 27	TR SP 2	Fig. 39
lx)	TYPE 1 SHORT	TR C1 SHORT	Fig. 42
lxi)	TYPE 2-SHORT	TRC2 SHORT	Fig. 42
lxii)	TYPE 2- LONG	TRC2 LONG	Fig. 42
ETRTO CODE			
lxiii)	A 47 2 45	V1.08.1	FIG. 27
lxiv)	A 40 2 45	V1.08.3	FIG. 28
JATMA CODE			
lxv)	—	JS 430	FIG. 32
lxvi)	—	PVR 70	FIG. 29

Sl No.	Bis Code	Tr Code Cross Reference	Fig. No.
lvii)	—	TR 416 S	Fig. 25
lviii)	—	TR 416	Fig. 26
lix)	—	TR 542	Fig. 8
lx)	—	TR 543	Fig. 8
lxi)	—	TR 543C	Fig. 8
lxii)	—	TR 543D	Fig. 8
lxiii)	—	TR 543E	Fig. 8
lxiv)	—	TR 544	Fig. 8
lxv)	—	TR 544C	Fig. 8
lxvi)	—	TR 544D	Fig. 8
lxvii)	—	TR 545	Fig. 8
lxviii)	—	TR 545D	Fig. 8
lxix)	—	TR 545E	Fig. 8
lxx)	—	TR 546	Fig. 8
lxxi)	—	TR 546-36	Fig. 8
lxxii)	—	TR 546 D	Fig. 8
lxxiii)	—	TR 546 E	Fig. 8
lxxiv)	—	TR 547 D	Fig. 8
lxxv)	—	TR 575	Fig. 9
lxxvi)	—	TR 500	Fig. 9
lxxvii)	—	TR 501	Fig. 9
lxxviii)	—	TR 570	Fig. 9
lxxix)	—	TR 571	Fig. 9
lxxx)	—	TR 572	Fig. 9
lxxxi)	—	TR 573	Fig. 9
lxxxii)	—	TR 574	Fig. 9
lxxxiii)	—	TR 570C	Fig. 9
lxxxiv)	—	TR 571C	Fig. 9
lxxxv)	—	TR 572C	Fig. 9
lxxxvi)	—	TR 573C	Fig. 9
lxxxvii)	—	TR 618 A	Fig. 20
lxxxviii)	—	TRJ 690	Fig. 41
lxxxix)	—	TRJ 692	Fig. 41

Sl No.	Bis Code	Etrto Code Cross Reference	Fig. No.
xc)	—	V3.20.1	Fig. 6
xci)	—	V3.20.2	Fig. 6
xcii)	—	V3.20.3	Fig. 6
xciii)	—	V3.20.4	Fig. 6
xciv)	—	V3.20.5	Fig. 6
xcv)	—	V3.20.6	Fig. 6
xcvi)	—	V3.20.7	Fig. 6
xcvii)	—	V3.20.8	Fig. 6
xcviii)	—	V3.20.9	Fig. 6
xcix)	—	V3.20.10	Fig. 6
c)	—	V3.20.11	Fig. 6
ci)	—	V3.20.12	Fig. 6
cii)	—	V3.22.1	Fig. 7
ciii)	—	V3.08.2	Fig. 12
civ)	—	V3.08.3	Fig. 12
cv)	—	V3.08.4	Fig. 12
cvi)	—	V3.02.7	Fig. 13
cvii)	—	V3.02.8	Fig. 13
cviii)	—	V3.02.9	Fig. 13
cix)	—	V3.02.10	Fig. 13
cx)	—	V3.02.11	Fig. 13
cxi)	—	V3.02.12	Fig. 13
cxii)	—	V3.02.14	Fig. 13
cxiii)	—	V3.02.15	Fig. 13
cxiv)	—	V3.02.16	Fig. 13
cxv)	—	V3.02.18	Fig. 13
cxvi)	—	V3.02.19	Fig. 13
cxvii)	—	V3.02.20	Fig. 13
cxviii)	—	V3.02.26	Fig. 13
cxix)	—	V3.02.27	Fig. 13
cxx)	—	V3.02.29	Fig. 13

Sl No.	Bis Code	Etr To Code Cross Reference	Fig. No.
cxxi)	—	V3.04.4	Fig. 14
cxxii)	—	V3.04.5	Fig. 14
cxxiii)	—	V3.04.6	Fig. 14
cxxiv)	—	V3.04.10	Fig. 14
cxxv)	—	V3.04.11	Fig. 14
cxxvi)	—	V3.04.15	Fig. 14
cxxvii)	—	V3.04.21	Fig. 14
cxxviii)	—	V3.04.25	Fig. 14
cxxix)	—	V3.06.5	Fig. 15
cxxx)	—	V3.06.6	Fig. 15
cxxxi)	—	V3.06.7	Fig. 15
cxxxii)	—	V3.06.8	Fig. 15
cxxxiii)	—	V3.06.9	Fig. 15
cxxxiv)	—	V3.06.16	Fig. 15
cxxxv)	—	V3.06.17	Fig. 15
cxxxvi)	—	V3.18.1	Fig. 40
cxxxvii)	—	V3.18.2	Fig. 40
cxxxviii)	—	V3.18.5	Fig. 40

ANNEX C

(*Foreword*)

COMMITTEE COMPOSITION

Automotive Tyres, Tubes and Rims Sectional Committee, TED 07

Organization	*Representative*(*s*)
In Personal Capacity (*302, Celestina Apts. S N 1841, Rambhu Kambale Path Shivajinagar, Pune 411005*)	SHRI D. P. SASTE **(*Chairperson*)**
Ashok Leyland Limited, Chennai	SHRI N. MUTHU KUMAR SHRI VED PRAKASH GAUTAM (*Alternate*)
Automotive Component Manufactures Association of India, New Delhi	SHRI SANJAY TANK MS SEEMA BABAL (*Alternate*)
Automotive Research Association of India, Pune	SHRI A. AKBAR BADUSHA SHRI VYANKATESH S. KHAIRATKAR (*Alternate*)
Automotive Tyres Manufacturers Association, New Delhi	SHRI RAJIV BUDHRAJA SHRI T. C. KAMATH (*Alternate*)
Bajaj Auto Limited, Pune	SHRI R. NARASIMHAN SHRI ARVIND V. KUMBHAR (*Alternate*)
Central Institute of Road Transport, Pune	SHRI FARUKH S MAKHDOOM SHRI SANJAY B. SALUNKHE (*Alternate*)
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Honda Cars India Research And Development Limited, Noida	SHRI S. MUTHU KUMAR SHRI GAGAN MANRAL (*Alternate*)
Indian Foundation of Transport Research and Training, New Delhi	SHRI S. P. SINGH SHRI J. S. WALIA (*Alternate*)
International Centre for Automotive Technology, Manesar	SHRI KESHAV KUMAR SHRI HARISH JOSHI (*Alternate*)
Indian Tyre Technical Advisory Committee, New Delhi	SHRI V. K. MISRA SHRI NITEESH SHUKLA (*Alternate*)
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Kalyani Maxion Wheels Chakan,Pune	SHRI SUNIL BHATAMBREKAR

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Maruti Suzuki India Limited, Gurugram	SHRI GURURAJ RAVI SHRI RAJ KUMAR DWIVEDI (*Alternate*)
Minda Kosei Aluminum Wheels Pvt Ltd, Bawal	SHRI HEMANT PARKHI SHRI DUSHYANT CHAUHAN (*Alternate*)
National Automotive Testing and R and D Infrastructure Project, Indore	SHRI S. J. SRIHARI SHRI J. K. CHAKRABARTY (*Alternate*)
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Steel Strips Wheel Limited, Chandigarh	SHRI VIMAL P. ANAND
Suzuki Motorcycle Indian Pvt. Ltd, Gurugram	SHRI AVINASH KHOT SHRI RAMKRISHNA AHIRE (*Alternate*)
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Tractor and Mechanization Association, New Delhi	SHRI PHILIP KOSHY SHRI PRADEEP SHINDE (*Alternate*)
Triton Valves Limited, Bengaluru	SHRI BHARATH CHANDRASHEKAR SHRI DEEPAK HV (*Alternate*)
Volvo Group India Private Limited, Bengaluru	SHRI KARTHIK SARMA SHRI PRAMOD KUMAR HUGAR (*Alternate*)
Volvo Trucks India, VE, Bengaluru	SHRI CHALLAPALLI NITHIN SHRI GEDELA CHAITANYA (*Alternate*)
Wheels India Limited, Chennai	SHRI PADMANABHAN V. SHRI SENTHIL KUMAR (*Alternate*)
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Member Secretary
SHRI AUGUST DUBEY
SCIENTIST 'C'/DEPUTY DIRECTOR
(TRANSPORT ENGINEERING), BIS

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Review of Indian Standards

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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