



**PRODUCT MANUAL FOR  
RATCHET PIPE THREADER FOR  
TAPER PIPE THREADS (R-SERIES)  
ACCORDING TO IS 16176 : 2014**

*This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.*

1.	<b>Product</b>	:	IS 16176 : 2014
	<b>Title</b>	:	Ratchet Pipe Threader For Taper Pipe Threads (R-Series)
	<b>No. of Amendments</b>	:	1
2.	<b>Sampling Guidelines:</b>		
a)	<b>Raw material</b>	:	As per Clause 5.1 and Table 4 of IS 16176 : 2014
b)	<b>Grouping guidelines</b>	:	Please refer ANNEX – A
c)	<b>Sample Size</b>	:	One Pipe Threader
3.	<b>List of Test Equipment</b>	:	Please refer ANNEX – B
4.	<b>Scheme of Inspection and Testing</b>	:	Please refer ANNEX – C
5.	<b>Possible tests in a day</b>	:	All Tests
6.	<b>Scope of the Licence :</b>		
	“Licence is granted to use Standard Mark as per IS 16176 : 2014 with the following scope:		
	Name of the product	Ratchet Pipe Threader For Taper Pipe Threads (R-Series)	
	Sizes	½, ¾, 1, 1¼, 1½, 2, 2½, 3, 4, 5, 6	

**ANNEX A**

**Grouping Guidelines**

1. IS 16176: 2004 covers Ratchet Pipe Threader of the following Nominal Sizes:
  - $\frac{1}{2}$ ,  $\frac{3}{4}$ , 1,  $1\frac{1}{4}$ ,  $1\frac{1}{2}$ , 2,  $2\frac{1}{2}$ , 3, 4, 5 and 6
2. Considering the above, the grouping guidelines given below shall be followed for GoL/CSoL:
  - Sample of lowest and highest size shall be tested for all requirements to cover all sizes in that size range.
3. The Firm shall declare the varieties of Ratchet Pipe Threader intended to be covered in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.
4. During operation of the licence, BO shall ensure that all the varieties covered in the licence are tested in rotation to the extent possible.

**ANNEX B****List of Test Equipment***Major test equipment required to test as per the Indian Standard*

<b>Sl. No.</b>	<b>Tests used in with Clause Reference</b>	<b>Test Equipment</b>
1	Sizes, Shapes and Dimensions (Clause 4)	(i) Dial Gauge (ii) Go-No Go Gauges (iii) Measuring Scale (iv) Micrometre (v) Vernier Caliper
2	Hardness of Chaser (Clause 6.2)	Vickers Hardness Tester Or Rockwell Hardness Tester
3	Testing (Clause 9)	(i) Microscope (ii) Thread Gauges

*The above list is indicative only and may not be treated as exhaustive.*

ANNEX C

**Scheme of Inspection And Testing**

**1. LABORATORY** - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

**1.1** The manufacturer shall prepare a calibration plan for the test equipments.

**2. TEST RECORDS** – The manufacturer shall maintain test records for the tests carried out to establish conformity.

**3. LABELLING AND MARKING** – As per the requirement of IS 16176:2014.

**4. CONTROL UNIT** – Ratchet Pipe threader of same size manufactured in a day shall constitute a control unit.

**5. LEVELS OF CONTROL** - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

**5.1** All the production which conforms to the Indian Standards and covered by the licence should be marked with Standard Mark.

**6. REJECTIONS** – Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

**TABLE 1**

<b>(1)</b>				<b>(2)</b>	<b>(3)</b>		
<b>Test Details</b>				<b>Test equipment requirement R: required (or) S: Sub-contracting permitted</b>	<b>Levels of Control</b>		
<b>Cl.</b>	<b>Requirement</b>	<b>Test Method</b>			<b>No. of Sample</b>	<b>Frequency</b>	<b>Remarks</b>
		<b>Clause</b>	<b>Reference</b>				
3	Construction	3	IS 16176	R	Each piece	--	--
4	Size, Shape and Dimensions	4	IS 16176	R	Five	Every control unit	If any sample fails, then all the Ratchet Pipe threader of that control unit shall be checked and those found defective shall be rejected.
5	Materials	Table 4	IS 16176	S	One	Each consignment	Please see Note 1
6	Manufacture	6.1, 6.2, 6.3	IS 16176	R	Each piece		Except Hardness
6.2	Hardness of Chaser	6.2	IS 16176	R	Two	Each Batch of Chasers Heat treated	If any sample fails, then four more samples shall be checked & if any further sample fails, batch may be reheat treated/ rejected
7	Workmanship and Finish	7.1, 7.2, 7.3	IS 16176	R	Each piece		--
9	Testing	9.1 to 9.5	IS 16176	R	Five	Every control unit	If any sample fails, then all the pieces of that control unit shall be checked and those found defective shall be rejected.

Note- 1: Raw materials which are covered under mandatory certification of BIS shall be ISI marked. For other materials no further testing is required if consignment is accompanied with Test Certificate or ISI marked.

Note-2: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-3: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.