

**PRODUCT MANUAL FOR  
CROP PROTECTION EQUIPMENT-ROCKER SPRAYER  
ACCORDING TO IS 3062:1995**

**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.**

<b>1.</b>	<b>Product</b>	:	IS 3062:1995
	Title	:	CROP PROTECTION EQUIPMENT-ROCKER SPRAYER-SPECIFICATION
	No. of Amendments	:	02
<b>2.</b>	<b>Sampling Guidelines:</b>		
a)	Raw material	:	Material of Construction of various components as per clause 4 of IS 3062:1995
b)	Grouping guidelines	:	Not Applicable
c)	Sample Size and other information	:	02 nos. of Rocker Sprayer. Discharge Rate & Spray angle of Spray Gun and Nozzle to be declared by Manufacturer.
<b>3.</b>	<b>List of Test Equipment</b>	:	Please refer ANNEX –A
<b>4.</b>	<b>Scheme of Inspection and Testing</b>	:	Please refer ANNEX –B
<b>5.</b>	<b>Possible tests in a day :</b>		
	(i) Discharge Rate Cl 5.1 (ii) Volumetric Efficiency Cl 5.2 (iii) Endurance Test Cl 5.3 ( Routine Test) (iv) Constructional Requirements Cl 6		
<b>6.</b>	<b>Scope of the Licence : (Use separate annexure if required)</b>		
	“Licence is granted to use Standard Mark as per IS 3062:1995 with the following scope:		
	Name of the product	Crop Protection Equipment- Rocker Sprayer	
	Type	Lance Type ( Type A or Type B) Cut off Device Type ( Type A or Type B) Nozzle Type ( Hollow Cone type, Fan type, Adjustable type)	



PM/ IS 3062/ 1/June 2019

**ANNEX A**  
**TO PRODUCT MANUAL FOR**  
**CROP PROTECTION EQUIPMENT-ROCKER SPRAYER**  
**ACCORDING TO IS 3062:1995**

**List of Test Equipment**

**Major test equipment required to test as per the Indian Standard**

<b>Sl. No.</b>	<b>Test Equipment</b>	<b>Tests used in with Clause Reference</b>
1.	Test set up as per Fig. 3 of IS 10134:1994, Stop Watch, Measuring Cylinder, Pressure Gauge Pressure Regulator, Hydraulic Pump.	Discharge Rate Cl 5.1
2.	Test set up as per Fig. 3 of IS 10134:1994, Stop Watch, Vernier Caliper, Measuring Cylinder, Pressure Gauge ,Pressure Regulator, Hydraulic Pump. Pressure Gauge, Pressure Regulator, Hydraulic Pump.	Volumetric Efficiency Cl 5.2
3.	Test set up as per Fig. 3 of IS 10134:1994, Watch, Pressure Gauge, Pressure Regulator, Hydraulic Pump.	Endurance Test Cl 5.3
4.	<p>a) Measuring Tape, Vernier Caliper</p> <p>b) Pressure Gauge, Hydraulic Pump.</p> <p>c) Measuring Tape, Vernier Caliper, Bevel Protractor Right angle, Pressure Gauge, Hydraulic Pump.</p> <p>d) Vernier Caliper, Pressure Gauge, Air Compressor, Hydraulic Pump, Stop Watch.</p> <p>e) Measuring Cylinder, Presssure Gauge, Air Compressor, Hydraulic Pump, Stop Watch.</p>	<p>Constructional Requirements</p> <p>a) Base Board Cl 6.1</p> <p>b) Frame Cl 6.2</p> <p>c) Handle Lever &amp; Extension Cl 6.3</p> <p>d) Pump Cl 6.4</p> <p>e) Pressure Chamber Cl 6.5</p>

<p>f) Thread Plug Gauge, Ring Gauge, Vernier Caliper</p> <p>g) Vernier Caliper</p> <p>h) Measuring Tape, Magnifying glass with scale, Vernier Caliper</p> <p>i) Measuring Tape, Hydraulic Pump with pressure gauge, Stop watch.</p> <p>Vernier Caliper, Trigger actuation test setup (as per fig. 6 of IS 3652- for Type A),Hydraulic Pump, Pressure Gauge, Stopwatch, Leakage and Reliability test setup with counter ( fig 7&amp; 8 for Type A and fig.9 for Type B)</p> <p>Vernier Caliper, Thickness Gauge, Measuring Tape, Bevel Protractor, Hydraulic Pump, Pressure Gauge, Stopwatch, Spray Angle test setup (as per fig 23 of IS 3652).</p> <p>Hydraulic Pump, Pressure Gauge, Stop watch, Measuring Cylinder, Spray Distribution test setup (Patternator as per fig 19 of IS 3652), Spray Angle test setup (as per fig 23 of IS 3652).</p> <p>j) Test mixture of 60% Kerosene, 5%Benzene, 20% Toluene and 15% xylene.</p> <p>k) Weighing Balance</p>	<p>f) Threaded Connections Cl 6.6</p> <p>g) Suction and Delivery Spout Cl 6.7</p> <p>h) Suction Line Cl 6.8</p> <p>i) Discharge Line Cl 6.9</p> <p>Cut-off device</p> <p>Spray Lance/ Spray Gun</p> <p>Nozzle</p> <p>j) Gasket Cl 6.10</p> <p>k)Total Mass Cl 6.11</p>
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**Note: -** The above list is meant self-guidance may not be treated as exhaustive.



PM/ IS 3062/ 1/June 2019

**ANNEX B**  
**TO PRODUCT MANUAL FOR**  
**CROP PROTECTION EQUIPMENT-ROCKER SPRAYER**  
**ACCORDING TO IS 3062:1995**  
**(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. PACKING AND MARKING** – The Standard Mark, as given in the Schedule of the licence, shall be incorporated on each rocker sprayer, provided always that each rocker sprayer unit so marked conforms to all requirements of the specification:

3.1 Packing and marking shall be done as per the provision of IS 3062:1995. In addition, details of BIS Certification i.e. BIS licence Number CM/L-----and BIS website shall be marked on the package as follows. For details of BIS Certification please visit [www.bis.gov.in](http://www.bis.gov.in)

**4. CONTROL UNIT** –For the purpose of this scheme, all sprayers assembled in a day shall constitute a control unit/batch.

**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 Standard clause ensure that there is no violation of provisions of BIS Act, 2016.

**Table 1 (Levels of Control)**  
**CROP PROTECTION EQUIPMENT-ROCKER SPRAYER**  
**ACCORDING TO IS 3062:1995**  
**(Scheme of Inspection and Testing)**

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
6.1	Base Board	6.1	IS 3062:1995	R	one	Every 10 <sup>th</sup> piece	In Case of failure, two more samples shall be tested and Lot marked if both samples pass.
6.3	Handle Lever & Extension	6.3 & 6.3.1	IS 3062:1995	R	one	Every 10 <sup>th</sup> piece	-do-
6.4	Pump Cylinder, Inner dia Piston, Piston Spreader, Piston rod, Guide and Spring	6.3.1,6.3.2, 6.3.3,6.3.4, 6.3.5,6.3.6	IS 3652:1995	R	one	Every 10 <sup>th</sup> cylinder Every 10 <sup>th</sup> piece	-do-



PM/ IS 3062/ 1/June 2019

6.5	Pressure Chamber	6.5	IS 3062:1995	R	one	Every 10 <sup>th</sup> piece	-do-
6.6	Threaded Connection	6.5	IS 3652:1995	R	one	Every 10 <sup>th</sup> piece	-do-
6.7	Suction & Delivery Spout	6.6	IS 3652:1995	R	one	Every 10 <sup>th</sup> piece	-do-
6.8	Suction Line, Suction Hose, Strainer Assembly, Suction Hose Connection	6.7.1 6.7.2 6.7.3	IS 3652:1995	R	one	Every 10 <sup>th</sup> piece	-do-
6.9	Discharge Line Delivery Hose Delivery Hose Connection  Cut off device and Spray Lance Spray Gun Nozzle	6.8.1 6.8.2.1 & 6.8.2.2  Annex C&D Annex E Annex F	IS 3652:1995	R	one	Every 10 <sup>th</sup> piece Every 10 <sup>th</sup> piece  Each piece  Each piece Each piece	-do-
8.0	Workmanship & Finish	8.1 & 8.2	IS 3062:1995	R	Each sample	All components	
5.1	Discharge Rate	6.12	IS 10134:1994	R	Each sample	Each Sprayer	
5.2	Volumetric Efficiency	6.2	IS 10134:1994	R	Each sample	Each Sprayer	
6.2, 6.3 & 6.4	Frame, Handle Lever & Extension & Piston rod Strength Test	7.8	IS 10134:1994	R	one	Every 10 <sup>th</sup> sprayer	In Case of failure, two more samples shall be tested and Lot marked if both samples pass.
6.4.1	Pump Cylinder	7.1 6.3.1	IS 10134:1994 IS 3652:1995	R	Each sample	Each Pump Cylinder	



PM/ IS 3062/ 1/June 2019

6.5.1	Pressure Chamber	7.1	IS 10134:1994	R	Each sample	Each Pressure Chamber	
6.9	Test for Hose & Hose Connection	7.2 6.8	IS 10134:1994 IS 3652:1995	R	Each sample	Each Hose Connection	
6.10	Gaskets	7.4 6.9	IS 10134:1994 IS 3652:2016	R R	Two	Each Consignment Each Consignment	In Case of failure, two more samples shall be tested and Lot marked if both samples pass.
6.11	Total Mass	6.11	IS 3062:1995	R	One	Every 50 <sup>th</sup> sprayer in the control unit.	-do-
5.3	Endurance test a) Type test b) Routine test	8.1	IS 10134:1994	R	One Each sample	Every 20 <sup>th</sup> control unit Each Sprayer	

Note-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: The control unit and levels of control as decided by the Bureau are obligatory, to which the licensee shall comply with.

**OR**

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.