

प्रारंभिक व्यावसायिक परीक्षण रिपोर्ट  
INITIAL COMMERCIAL TEST REPORT

संख्या/No. CSIR/CMERI/FMTTC/2024/048

माह/Month: September 2024

THIS TEST REPORT VALID UP TO

:

31<sup>st</sup> AUGUST, 2031



**BALWAAN HTP POWER SPRAYER  
(MODEL: BHE 33)**



सत्यमेव जयते  
Government Of India



कृषि मशीनरी प्रशिक्षण और परीक्षण केंद्र  
**Farm Machinery Training and Testing Centre**  
सीएसआईआर- केन्द्रीय यांत्रिक अभियांत्रिकी अनुसंधान संस्थान  
**CSIR - Central Mechanical Engineering Research Institute**

महात्मा गांधी एवेन्यू, दुर्गापुर  
**Mahatma Gandhi Avenue, Durgapur**  
पश्चिम बंगाल - 713209  
**West Bengal - 713209**  
**Website: <https://cmeri.res.in>**

**E-mail:** [fmttc.cmeri@gmail.com](mailto:fmttc.cmeri@gmail.com)

Telephone: 9434592007 / 7001361295

Fax: +91-343-2546745

CSIR/CMERI/FMTTC/2024/048	<b>BALWAAN (BHE 33) HTP POWER SPRAYER (INITIAL COMMERCIAL TEST)</b>
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<b>Name of Machine</b>	: HTP Sprayer
<b>Type</b>	: Engine Operated Power Sprayer
<b>Make</b>	: Balwaan Krishi
<b>Model</b>	: BHE 33
<b>Name and address of Manufacturer</b>	: Modish Tractor Aurkisan Pvt. Ltd. 17-C Sharma Colony, Extension. 22, Godam Industrial Area, Jaipur – 302006, Rajasthan
<b>Name and address of Applicant</b>	: Modish Tractor Aurkisan Pvt. Ltd. C-17, Purohit Ji Ka Bas, Road No – 1, MSME Office, 22 Godam Industrial Area, Jaipur – 302006.
<b>Test Conducted at</b>	: Farm Machinery Training & Testing Center, CSIR – Central Mechanical Engineering Research Institute, M G Avenue, Durgapur, Pin – 713209, West Bengal

**THIS TEST REPORT IS VALID UP TO: 31<sup>st</sup> August, 2031**  
[vide DAC&FW OM No. 13-22/2020- M&T (I&P) dated 12.12.2023]



<b>Report No.:</b> CSIR/CMERI/FMTTC/2024/048	<b>Month:</b> September	<b>Year:</b> 2024
<b>CSIR - Central Mechanical Engineering Research Institute, Durgapur - 713209 (W.B.), INDIA</b>		

Report prepared by

*[Handwritten signature]*

Report verified by  
*[Handwritten signature]*

<b>Farm Machinery Training and Testing Centre, CSIR-Central Mechanical Engineering Research Institute, Durgapur THIS REPORT IS VALID UPTO: 31<sup>st</sup> August, 2031</b>	1 of 29
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## 2 TEST CODE/ PROCEDURE

IS: 11313 – 2007 (Reaffirmed 2012)	:	Hydraulic Power Sprayers – Specification.
IS: 3652 – 1995	:	Crop Protection equipment – Foot Sprayer – specification.
IS: 4905 – 1968	:	Method for random sampling.
IS: 2 – 1960	:	Rules for rounding off numerical values
Office Order No. 13 – 1/2019 – M & T (I & P) dated 17.06.2019		
Minutes of Meeting vide 13 – 1/2018 – M & T (I & P) dated NIL F. NO. 9 – 1/2018 – M & T (I&P) dated 20 <sup>th</sup> August, 2019		

## 3 SPECIFICATIONS

### 3.1 General

Type of machine	:	HTP Hydraulic Power Sprayer Pump
Make	:	Balwaan Krishi
Model	:	BHE 33
Brand	:	BALWAAN
Serial No.	:	Not specified
Output Capacity, l/min	:	3.5 – 5
Name and address of manufacturer	:	Modish Tractor Aur Kisan Pvt. Ltd. 17-C Sharma Colony Ext. 22 Godam, Jaipur, (Rajasthan)
Year of manufacture	:	2024
Country of origin	:	India

3.2 **Recommended Source of Power:** Petrol Engine

### 3.3 Details of prime mover

Name and address of manufacturer	:	Modish Tractor Aur Kisan Pvt. Ltd. 17-C Sharma Colony Ext. 22 Godam, Jaipur, (Rajasthan)
Type	:	Air Cooled, 4 stroke, Overhead Valve (OHV), Single Cylinder, Horizontal Shaft, Petrol Engine
Make	:	Balwaan Krishi
Model	:	212 CC
Sr. No.	:	Not specified
Country of origin	:	India
Year of manufacture	:	2024
Engine speed (Manufacturer's	:	

Report prepared by

Report verified by  
Subrata Kr Mandal

*J. K. S.*

CSIR/CMERI/FMTTC/2024/048	BALWAAN (BHE 33) HTP POWER SPRAYER (INITIAL COMMERCIAL TEST)
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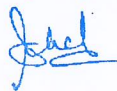
## 20 CONFORMITY TO INDIAN STANDARDS

1	IS:11313-2007 (Reaffirmed 2012) - Hydraulic power sprayers- specification	:	Partially conforms.
2	Hose and hose connection as per IS:10134-1994	:	Conforms.
3	Spray nozzle and spray gun as per IS:3652- 1995 (Reaffirmed 2011)	:	Partially conforms.
4	IS:7347-1974 (Reaffirmed 2006) – Specification for performance of small size spark ignition engines for agricultural water pumps, sprayers, tillers, reapers and other similar applications	:	Conforms.
5	IS: 2643-2005 - Pipe threads where pressure- tight joint are not made on the threads- dimensions, tolerance and designation.	:	Conforms.

## 21 COMMENTS & RECOMMENDATION

- 21.1 The spray nozzle is not marked and designated. It should be marked and designated as per standard.
- 21.2 The identification mark spray gun is not marked and designated. It should be marked and designated as per standard.
- 21.3 The operator, maintenance & parts manual of sprayer was provided during the test which found inadequate; however, the manual should be updated as per IS: 8132:1999.
- 21.4 Adequate information is not provided in marking and packing as per IS standards. It needs corrective action.
- 21.5 The machine is running smoothly and no rattling sound is observed.

**Report prepared by**



**Report verified by**



<b>Farm Machinery Training and Testing Centre, CSIR-Central Mechanical Engineering Research Institute, Durgapur THIS REPORT IS VALID UPTO: 31<sup>st</sup> August, 2031</b>	28 of 29
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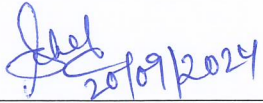
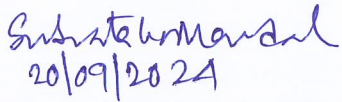
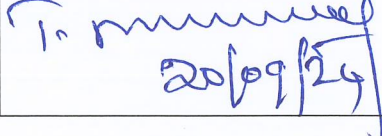
**22 TECHNICAL LITERATURE**

The following literatures are provided by the applicant during the test along with the application form.

- a) User's manual book
- b) Parts' catalogue
- c) Service manual

These manuals need to be updated as per IS: 8132-1999.

**TESTING AUTHORITY**

Report Prepared by	Senior Technical Officer CSIR-CMERI Farm Machinery Testing Centre	 20/09/2024
Report Verified & Approved by	In-Charge, CSIR-CMERI Farm Machinery Testing Centre	 20/09/2024
Report Approved for release by	Head, Business Development Unit, CSIR-CMERI, Durgapur	 20/09/24

**23 APPLICANT'S COMMENTS**

Para No.	Our Reference	Applicant's Comments
23	21.1 to 21.5	It's ok corrective action will be taken.

