

प्रारम्भिक व्यावसायिक परीक्षण रिपोर्ट
INITIAL COMMERCIAL TEST REPORT
THIS TEST REPORT VALID UP TO :

खया/No. CSIR/CMERI/FMTTC/2023/001
माह/Month: March, 2023
31st MARCH, 2028



**ASPEE TURRBO-MINI (DTMP001/14AHBR)
DOUBLE MOTOR PORTABLE BATTERY SPRAYER**



कृषि मशीनरी प्रशिक्षण और परीक्षण केंद्र
Farm Machinery Training and Testing Centre
सीएसआईआर- केन्द्रीय यांत्रिक अभियांत्रिकी अनुसंधान संस्थान
CSIR - Central Mechanical Engineering Research Institute
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Name & Address of Applicant : ASPEE Agro Equipment Pvt. Ltd.
Off. Chikhli Road, Antalia Village,
Taluka - Gandevi, Dist. - Navsari,
Bilimora (Gujarat) - 396321

Test Conducted at : Farm Machinery Training and Testing Centre
CSIR-Central Mechanical Engineering Research
Institute, M G Avenue, Durgapur, Pin - 713209,
West Bengal.

THIS TEST REPORT VALID UP TO: 31/03/2028

[vide DAC&FW OM No. 13-24/2018 - M&T (I&P) dated 19.09.2018]



Report No.: CSIR/CMERI/FMTTC/2023/001

Month: March

Year: 2023

CSIR - Central Mechanical Engineering Research Institute,
Durgapur - 713209
(W.B.), INDIA

I. SPECIFICATIONS**1.1 General**

Type	: Battery Operated Portable Sprayer
Make*	: ASPEE
Model*	: DTMP001/14AHBR
Serial No.	: 00007
Name of manufacturer	: Snowball Group Co. Ltd. Room 2105, Trend Centre, 29-31 Cheung Lee Street, Chai Wan, Hongkong, China
Year of manufacture	: August-2021
Output Capacity of sprayer, L/min.	: 7
Working pressure, kg/cm ²	: 4.2 – 5.6 (60 – 80 psi)

1.2 Motor (As per Sticker)

Type	: D C Motor
No. of Motor	: 02
Make	: Not specified
Serial number	: RS-775-4446
Motor operating voltage	: 12 V, DC
Motor power	: Not Specified
Max. Current*	: Not Specified
Rated speed*, rpm	: Not specified

1.3 Battery (As per Sticker)

Type	: Sealed, Lead-Acid Battery
Make	: Zhejiang Zhongshan Power Supply Co. Ltd.
Model	: 6-DFM-14
Serial number	: B202203H4ZS
Capacity & rating*	: 12V, 14 AH
Country of origin	: Not Specified
Location	: Under the body cover.

1.4 Battery Charger from AC Supply

Make	: ASPEE
Model	: Not specified
Input voltage*	: AC 110 - 240V
Output voltage *	: DC 12 V
Output current*	: 1.7 A
Country of origin	: Not specified

1.5 Pump

Type	: Diaphragm
Make	: Not Specified
Model	: Not Specified
Sr. number	: Not Specified
Method of drive	: Directly connected to motor
Working pressure, kg/cm ²	: 4.2 – 5.6 (60 – 80 psi)
Rated pressure, kg/cm ²	: 4.2 (60 psi)
Rated speed, rpm	: Not Specified
Discharge capacity at rated pressure*, L/min	: 7



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Country of origin : Not specified
 Mounting arrangement : Motor & pump is mounted on body.
 * As per data provided by the applicant

1.6 Chemical Tank : Not Applicable

1.7 Agitating Device : Not Applicable.

1.8 Spray Gun

Make : ASPEE
 Type : Screw type
 No. of Spray gun : 1
 Recommended operating pressure : Not specified
 Discharge rate, lit/ min : Cone – 1.8 lit/ min
 Jet – 2.60 lit/min

1.9 Accessories (for operator's safety against pesticides) : Mask, hand-gloves and goggles provided.

1.10 Overall Dimensions, mm

Height : 305
 Width : 235
 Length : 228

1.11 Total Mass, kg

1.11.1 Mass with all accessories, Kg : 7.31

1.11.2 Identification/ Labelling plate : Two stickers are provide on the sprayer with following details:

ASPEE DOUBLE TURRBO
 MINI PORTABLE
 BATTERY SPRAYER DTMP001/14AHBR
 SR. NO. 00007 BATCH: Y H
 ASPEE AGRO EQUIPMENT PVT. P TD
 Antalia, Chikbali Rd., Bilimora-396321
 An ISO 9001-2016 Certified Company

ASPEE
 PORTABLE SMART ELECTRIC SPRAYER



Handwritten signatures and initials.

CL 5.8 Overflow Pipe	An overflow pipe of suitable diameter and length shall be provided.	Not applicable for this design.	NA
CL 5.9 Pump Inlet/ Outlet Port	This may be integral or separately attached to pump body. The thread size of inlet/outlet port shall conform to thread size specified in IS: 2643-2005. The engaged length of the thread shall be not more than 8 mm.	Pump body is separately attached with four nos. screws. The engaged threaded length of outlet port is 14.20 mm.	Conforms
CL 5.10 Regulator cum Relief Valve	A pressure regulator or valve to adjust the working pressure up to rated pressure shall be provided. It shall be able to release all or part of the liquid delivered by the pump to be returned to the tank at set pressure. It shall not allow the increase of pressure by more than 25% of maximum pressure declared by the manufacturer.	Not applicable for this design.	NA
CL 5.11 Pressure Gauge	A suitable pressure gauge/ pressure indicator having full scale reading not exceeding two and half times and not less than 1.5 times the rated pressure shall be provided.	Not applicable for this design.	NA
CL 5.12 Pressure Dampener	A pressure dampener may be provided at the option of the purchaser to facilitate easy reading of pressure.	Not applicable for this design.	NA
CL 5.13 Gaskets	The gaskets, wherever provided shall withstand the test prescribed in 7.4 of IS:10134-1994.	Not applicable as made of PVC.	Conforms
CL 5.14 Delivery Hose	If provided with couplings shall have suitable diameter and length as agreed to between the purchaser and the supplier.	Delivery hose provided of dia. 11.8 mm and length 16 meters.	Conforms
CL 5.14.1 Hose Connections	The hose connections for threaded type and nipple type connections shall be nut-nipple and clamp type and clamp type respectively.	The hose connection is threaded nut type.	Conforms
CL 5.14.2	The metallic nut if provided shall have the internal thread size, minimum of designation G $\frac{1}{4}$ B IS:2643-2005 Part-1. The clamp shall consist of ferrule or clip. Other thread sizes if used shall be of standard pipe threads. (IS:2643-2005)	Metallic nut of internal thread size G5/16 is provided.	Conforms
CL 5.14.3	The hose and hose connection shall withstand the test prescribed in 7.2 of IS: 10134-1994.	There was no leakage, crack and breakage in hose & hose connection during testing.	Conforms



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Cl. 5.15 Nozzles	Unless otherwise specified by the purchaser, the nozzle shall conform to the requirements of Annexure F of IS: 3652- 1995.	No separate nozzle is provided but a nozzle disc is fitted with spray gun.	Conforms
Cl. 5.16	The engine shall conform to the requirements as given IS: 7347-1974 (Reaffirmed 2006).	Not applicable for this design.	NA
Cl. 5.16.1	The exhaust outlet of the engine shall be so positioned that the smoke does not directly affect the operator or crop. A guard shall be provided on or near the exhaust pipe for the protection of the operator.	Not applicable for this design.	NA
Cl. 5.17	The fuel and chemical discharge controls shall be in easy access of the operator.	Easily accessible to the operator.	Conforms
Cl. 5.18	Air pressure chamber shall with stand the test prescribed in 8.7 without any deformation or damage.	No leakage or deformation of pressure chamber was found during the test	Conforms



[Handwritten signatures]

15 TECHNICAL LITERATURE

The operator, maintenance & parts manual of sprayer was provided during the test which found adequate, however, the manual should be updated as per IS: 8132:1999, with the inclusion of safety instructions regarding handling poisonous agrochemical and first aid.

TESTING AUTHORITY

Report Prepared by	Sr. Technical Officer, CSIR-CMERI Farm Machinery Testing Centre	 13/03/2023
Report Verified by	Scientist, CSIR-CMERI Farm Machinery Testing Centre	 13/03/23
Report Approved by	In-Charge, CSIR-CMERI Farm Machinery Testing Centre	 13/03/2023
Report Approved for release by	Head, Business Innovation and Skill Group, CSIR-CMERI, Durgapur	 13/3/23

16 APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's Comments
16	14.1 – 14.4	Noted, we will specify
	14.5 – 14.6	Noted
	14.7	Noted, we will do
	14.8 – 14.10	Noted

