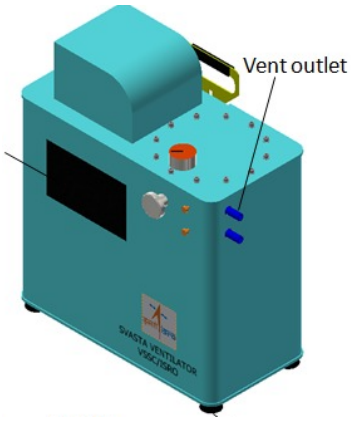
Technology Transfer of Novel Non-invasive Ventilator-'SVASTA'

Interest Exploration Note

VSSC/ISRO has developed a gas-powered ventilator – **'Space Ventilator Aided System for Trauma Assistance (SVASTA)'** - for basic mode for non-invasive ventilation. This ventilator is well suited for emergency use for first line treatment and as transit ventilators inside vehicles. The basic design is simple, and the components can be easily mass produced for emergency use in pandemic like situations.

The innovative ventilator runs on compressed air. It is able to perform various ventilation conditions using manual mechanical settings. The system is capable of pressure control ventilation (PCV) in its basic mode of operation with provision for setting different tidal volumes. The basic ventilator design can be re-engineered appropriately by the manufacturer to cater to various modes of ventilation with control systems, electronics, and associated software.



SPECIFICATIONS

Sl.	Parameter	Remarks
1	Driving source	Pneumatic air @ 1.5 bar max
2	Modes of operation in manual mode	PCV
3	Tidal Volume (manual setting)	250-1000 cc

4	IE ratio (manual setting)	1:1 to 1:3
5	Breathing rates (manual setting)	10-30 per minute
6	Respiratory pressure	Up to 40 mbar
7	Display	7 inch display panel
8	Weight, kg	20
9	Size, mm	400x375x200 (compressor attachment not included)
10	Input power options	Option 1: 230V, 50Hz AC Option 2: 12 V DC
11	Pneumatic air source	Option 1: AC compressor Option 2: DC compressor

The proto type developed at VSSC/ISRO has undergone in-house test & evaluation and meets the specifications given above. The responsibility of obtaining mandatory certification from approving agencies of government of India before clinical usage vests with the industry.

ISRO intends to transfer the technology of SVASTA Ventilator to PSUs/Industries/Start-ups having good track record in manufacture of critical medical/electronic equipment manufacturing.

Interested industries / entrepreneurs are requested to submit their **expression of interest along with details as per attached annexure** in the email address provided below for the purpose of evaluation. Shortlisted industries will be contacted over the email address provided, along with details.

Last date for application: **5 pm on June 15, 2021**.

The EoI applications and all communications are to be send to svastaventilator@gmail.com

Response form for ToT of "SVASTA" Ventilator

1. Name of the Firm
2. Nationality of the firm
3. Address of the Registered Office
4. Start-up or established firm (Include registration number)
5. Nature of present business
6. Details of medical equipment manufactured earlier
7. Financial Background
8. Manpower available for realisation of product (Electronics, Mechanical)
9. Plan for realisation of the product
10. Infrastructure available for realisation of the equipment (Electronics & Mechanical Fabrication)
11. Test and evaluation plan
12. Marketing plan
13. Email Address
14. Contact Person Name
15. Contact Person Phone Number

I declare that the information submitted above is true to the best of my knowledge and the information will be used by ISRO for shortlisting the industry for the purpose of technology transfer. I understand that if any information furnished here is found to be wrong/fabricated, it will lead to forfeiture of the technology transfer and any future association of my industry with ISRO.

PREPARED AND SUBMITTED BY

(AUTHORISED SIGNATORY WITH SEAL)

To

The Head
Technology Transfer & Industry Coordination Division
Vikram Sarabhai Space Centre
Indian Space Research Organisation
Thiruvananthapuram