

Proceedings of the **SR. DEPUTY TRANSPORT COMMISSIONER (TAX)**
(Present: **K MANOJKUMAR**)

Sub:-	Motor Vehicles Department – Installing induct UV-C Disinfection system in all Air Conditioned Public Transport plying in state of Kerala Reg	
Read:-	1.	Letter No .F No RT1-23018/6/2022-RT dated 01--2022 of Director Transport, MoRTH
	2.	Representation submitted by Sri Dheeraj Krishnan Perot recieved on 12.09.2022
	3.	WP(C) NO 33800/2022 FILED BY SRI DHEERAJ KRISHNAN PEROT BEFORE HIGH COURT OF KERALA -
	4.	Order dated 25-10-2022 of Honourable High Court of Kerala in WP(C) NO 33800/2022
		Statement of Sri Dheeraj Krishnan Perot hearing on 08.12.2022

Order No **C3/157/2022/TC** Dated. **09-01-2023**

Vide reference cited first, the Ministry of Road Transport and Highways ,Government of India has issued an advisory to to all states that all Air conditioned Buses operating on the road may be equipped with CSIR validated Ultra-Violet(C-band) light fitted in Air Condition Systems for ensuring safe public transport in the view of spread of COVID-19 Pandemic.

Sri Dheeraj Krishnan Perot,S/O Jayakrishnan Perot,Krishna House,Mayyannur P O Vadakara,Kozhikkode has filed Writ Petition (Civil) Before the Honourable High Court of Kerala praying to issue direction to take immediate steps to install induct UV-C Disinfection in all air conditioned vehicles used for public transport plying in the State of Kerala.

The Honourable High Court of Kerala Vide order dated 25/10/2022 in WP(C)-33800 of 2022 directed to consider the representation cited second.Accordingly Sri Dheeraj Krishnan Perot was called for a hearing on 08.12.2022.

Vide the representation he requests to installation of UV-C Disinfection system in state run and privately owned AC buses for ensuring safer public transport.The country is facing yet another wave of pandemic -SARS COVID challenging public transportation systems.

Airborne respiratory diseases such as COVID 19 poses significant challenges to Public Transportation.Public Transport being the critical place for contagion ,for the proximity of people commuting to and from work and other places.

In the light of above circumstances it is instructed that all AC buses operating on road may be equipped with CSIR -validated UV-C light fitted in the

AC systems in accordance with advisory by MoRTH cited first.

Thus the order of the Honourable High court of Kerala in WP(C)WP(C)-33800 of 2022 dated 25.10.2022 is complied with.

K MANOJKUMAR
SR. DEPUTY TRANSPORT COMMISSIONER (TAX)

To

All DTC,RTO, RTO(E) JRTO

Copy to

- 1 Sri. Dheeraj Krishnan Perot
S/o Jayakrishnan Perot Krishna House
Mayyanur.P.O Vadakara, Calicut-673542
dheerajperot@gmail.com
2. Additional Chief Secretary Home (SC) with CL
- 3.Liaison Officer MVD at O/o Advocate General ,Kerala
- 4.CAs to TC/Additional TC/Sr DTC Tax Senior Law Officer
- 5.Nodal Officer SSG Cell for Uploading to MVD Website
6. Superintendent E Section ,Transport Commissionarate

Exhibit - P5

F.No. RT1-23018/6/2022-RT
 Government of India
 Ministry of Road Transport and Highways
 (Transport Section)
 Transport Bhawan, 1, Parliament Street, New Delhi - 110001

Dated the 01 February, 2022

To,

Additional Chief Secretary (Transport)/ Principal Secretary (Transport)
 Transport Commissioners of all the States/UTs

Subject: Advisory on Induct UV_C Disinfection System for AC Buses - reg.

Sir/Madam,

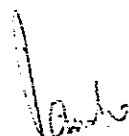
I am directed to draw your kind attention that in view of the spread of COVID-19 pandemic, ensuring safe public transportation has become a challenging endeavour. Reduction of passenger occupancy in public buses, particularly AC buses, puts pressure on revenue and it has been difficult to limit passenger numbers given the requirement of transport.

2. It is noted that the Council of Scientific and Industrial Research (CSIR)'s constituent laboratory, CSIR-Central Scientific Instruments Organization (CSIR-CSIO), Chandigarh along with CSIR-Central Building Research Institute (CSIR-CBRI), Roorkee has developed air sanitizing technologies using Ultra-violet (C-band) (UV_C) light. These products have been validated for over 99.9% virus deactivation in the air flow of CSIR-Institute of Microbial Technology (CSIR-IMTech), Chandigarh. A mathematical model by CSIR-CBRI indicates that the risk of infection by the infected passenger in a bus to all other passenger falls from more than 45% to less than 0.1% with the sanitization units present. One such product has been demonstrated on pilot scale in two UPSRTC buses on road for more than six months demonstrating the ruggedization for actual road conditions. The technology has been licensed to 31 industry partners (list attached) across India making it widely available.

3. ^{taking into consideration} Given the present wave of the Covid-19 pandemic, it is advised that all AC buses operating on road may be equipped with CSIR- validated UV_C light fitted in the AC systems.

4. Technical advice from CSIR in this respect will be available.

Yours faithfully


 (Paresh Kumar Goel)
 Director (Transport)

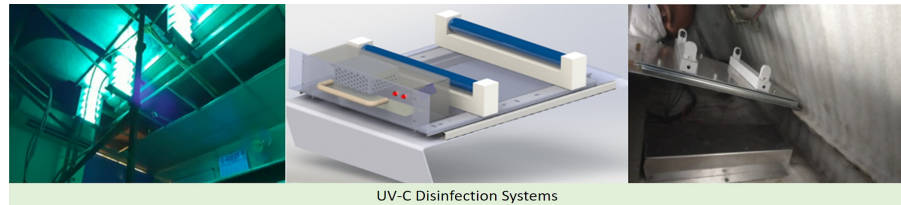
Tele. No. 011-23359167

E-mail: paresh.goel89@gov.in

Encl: As above

Copy to- MDs STUs
 ED ASRTU

UV-C Disinfection Systems



UV-C Disinfection Systems

CSIR-CSIO has developed and engineered Induct UV-C disinfectant system for HVAC ducts which has wide applications for disinfecting mechanically ventilated indoor spaces with a view to prevent the spread of Covid-19 like viruses, fungi, mold, bacteria etc. The retrofit UV-C system is designed to fit into any existing air-ducts / AHU with very minimal modifications. The virucidal dosages using UVC intensity and residence time have been optimized according to the existing spaces after considering the necessary air flow rates, shape and size of the air duct. The virus is deactivated in any aerosol particles or freely floating virus/bacteria in air and at the surfaces of the air ducts by the calibrated levels of UVC light.

Applications Sites

Air-ducts of HVAC SYSTEMS

- Applications in Auditoriums/Malls/Large HVAC Systems
- Buildings and Educational Institutions

Applications in AC Buses, Railways etc.

CIRCULATING AIR FLOW SYSTEMS

- For Lifts "Purelevator", Toilets, Washrooms etc.
-

Features of the CSIR Developed UV-C Systems

- Ergonomic Design
 - Retrofit, Minimal Changes, Maintenance Friendly
 - Optical Modelling and Analytics for Correct Dosage
 - CFD Analysis and Implementation in Duct Design
 - Prevents Dust and Particulate Matter IP-55
 - UV-Sealing & Leak Proof
 - Approved and Valid Certifications
 - UV-C Spectrum and Intensity Test Reports (CSIR-CSIO, ICMR Designated)
 - Virucidal Dose Validation (CSIR-IMTECH Chandigarh)
 - Valid Documentation
-

Technology Transferred to:

Aarco Engineering Projects Pvt. Ltd.	Gate No 77 Plot no 7, 8 Jyotiba Nagar, Nigadi-Talawade Road, Talawade, Pune, Maharashtra, 412114 E-mail: tasneem@aarcoair.com
Flexatherm Expanllow Pvt. Ltd.	354, GIDC Industrial Estate, Makarpura, Vadodara, Gujarat, 390010 E-mail: sales@flexatherm.com
Aeon Creations Pvt. Ltd.	J-79, MIDC, MIDC Road, Tarapur, Palghar, Maharashtra, 401506 E-mail: svta2001@gmail.com
Shreeson Technologies Pvt. Ltd.	H- I66/167/168, Ambad MIDC, Nashik, Maharashtra, 422010 Email: shreeson.acc@gmail.com
Reiz Electrocontrols Pvt. Ltd.	321, Phase-II, Sector 7, lmt Manesar, Gurugram, Haryana, 122050 Email: sidhartha@reizindia.com; atul@reizindia.com
Saras Engineering and Projects Pvt. Ltd.	C-5/2, Lane No. 2, Road No. 2, Vikrampuri, Secunderabad, Telangana, 500009 E- mail: johnson.seaprojects@gmail.com
Indicare Health Solutions Pvt. Ltd.	Second Floor, A-18/B1 Extn, Mathura Road, Mohan Cooperative Industrial Estate, South Delhi, Delhi, 110044 E- mail: rashmi.wadhwa@indicare.co.in

Devintec Electrical Technologies Pvt. Ltd.	Grand Trunk Rd, Pragpur Village, Jalandhar, Punjab 144005 E-mail: dttenders@gmail.com
SRIAS Engineering Pvt. Ltd.	Hyderabad 1805, Pegasus B Block Meenakshi Skylounge, Khanamet, Rangareddy Hyderabad, Telangana, 500084 E-mail: bd@euroteckindia.com
Ozone Research & Application (I) Pvt. Ltd.	902, ABHANG, KHARE TOWN, DHARAMPETH, Nagpur, Maharashtra, 440010 E-mail: marketing@oraip.com
Elite Air Techniques Pvt. Ltd.	HSI IDC, Bahadurgarh, 17, Sector 16, Jhajjar, Haryana, 124507 E-mail: mudit.aggarwal@eflow.in
Airific Systems Pvt. Ltd.	Advant Navis Business Park, BC-6, First Floor, Sector 142, Uttar Pradesh 201305 E-mail: sales@uvheal.in, chandra.shekhar@uvheal.in
Quality Needs Automotives Pvt. Ltd.	G-1-167D, Riico Industrial Area, Iid Centre, Khushkhera, Bhiwadi, Alwar, Rajasthan, 301019 E-mail: qneeds.auto@gmail.com
TICEON-HSE LLP	267/425, Ottaplakkal Building, Chingavanam, Kottayam, Kerala, 686531 E-mail: ticeonhse@gmail.com
Alpha Linear	Plot No. V.55, 2nd Stage Peenya Industrial Estate Bangalore, 560058 E-mail: shakeer@alphalinear.co.in; alpl@alphalinear.co.in

Koyna Engineers Pvt. Ltd.	106, Street No 19, Satpur MIDC Rd, MIDC, Satpur Colony, Nashik, Maharashtra, 422007 E-mail: koynaeng.nsk1@gmail.com
Ultrafresh Marketing Pvt. Ltd.	CB 344, Ring Road Naraina, New Delhi, 110028 E-mail: bdultrafrh@gmail.com
Cenaura Technologies Pvt. Ltd.	FT-3-G,Block-A, Jain Srikar Aurovil, Khanamet, Madhapur, Hyderabad, Telangana, 500081 E-mail: prabhaker.yasa@cenaura.com; ragini.ravikiran@cenaura.com
Ideamines Management Consultants Pvt. Ltd.	P 2/21/E, Gautam Buddha Nagar, Uttar Pradesh, 201301 E-mail: pramendrasri@ideamines.com E-mail: pramendrasri@ideamines.com
M/s Penguins India	2nd Floor, Plot No. C/6, Commercial Plot, Civil Township, Rourkela, Sundargarh, Odisha, 769004 E-mail: pradyot@alfaindia.com
Softrays Power Solutions	KP-11-373, Nalanchira Softrays Power Solutions Nalanchira P.o, Thiruvananthapuram-695015, Kerala E-mail: softrayspowersolutions@gmail.com
KIRIT Engineering	126, Pushp-Kunj Ganesh Colony, Ganesh Colony, Jalgaon - 425001 E-mail: kiritgroup@gmail.com, drmanisha.air@ultrafresh.com
Chola Geoenergy Pvt. Ltd.	C142, Jaisree Towers, C4, Third Floor, 6th Cross East, Thillai Nagar, Tiruchirappalli, Tamil Nadu, 620018 E-mail: sales@cgpl-in.com

BDS Décor & Prefab Pvt. Ltd.	Plot No. 181, Phase 1, Industrial Area, Chandigarh, 160002 E-mail: bdsprefabbds@gmail.com
Laddha Enterprises	Akola Nagpur PROZONE, Opp. Birla Gate No. 2, Birla Road, Tapdiya Nagar, Akola - 444005 Plot No.-7, M.I.D.C. Phase No-II, Prozone, Tapdiya Nagar, Akola-444104, Maharashtra E-mail: laddhacooling@gmail.com
Sukrut UV Systems Pvt. Ltd.	Sr. no 24, Plot Hiss No.1A/1B, Narhe, Haveli, Pune, Maharashtra, 411041 E-mail: nagesh.k@sukrutuv.com; milind.joshi@sukrutuv.co m
ABS AIR Tech Pvt. Ltd.	Plot No. 37 A,, Sector-37, Phase-VI, Udyog Vihar, Gurgaon, Haryana, 122001 E-mail: anchalabsairtech@gmail.com, absairtechpvtltd@gmail.com
Unisem Electronics Pvt. Ltd.	193, 18th A main, 4th Cross Road, 6th Block, Koramangala, Bengaluru, Karnataka, 560095 E-mail: eliyas@unisemindia.com
Synergy Enterprises	136-140/80, Industrial Area, Industrial Area Phase I, Chandigarh,160002 Email: synergy1042@yahoo.co.in
Magneto Cleantech Pvt. Ltd.	9/22, Nehru Enclave, New Delhi, Delhi,110019 E-mail: bhanu@magneto.in

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