

Solustar Disinfectant Robot (SDR) V1005

The primary feature of SDR is a bell-shaped casing that is self-disinfecting.

Operator can remote control or operate the SDR in autonomous navigation mode.

Standing at 1.2 metre tall, SDR assists operators to safely sanitise both habited and inhabited spaces whilst minimising the risk of infection due to exposure towards manual applicators.

Amidst COVID-19 pandemic, the robot is in high demand for the application in airport as that is the gate keeper of infection. Using SDR in areas such as cruise centre, medical facilities, commercial offices, hotels and public places is necessary for "new normal" safe practices



DEPLOYMENT AREA



Hospital



Airport



Train



Hotel Lobby

TECHNICAL SPECIFICATIONS

Dimensions

Length	695mm
Width	702mm
Height	1230mm
Heightclearance above ground	50mm
Weight (with batteries)	111kg
Color	White and Blue

Drive Train

Drive Wheels	180mm Rubber Wheel
Passive Wheels	180mm Omnidirectional Wheel
Steering	Differential

Speed and performance

Maximum Linear Velocity	Forwards: 0.4 m/s
	Backwards: 0.2 m/s
Maximum Angular Velocity	0.9 rad/s, 50 deg/s
Turning Radius	400mm Around Center of Robot
Position Accuracy	±10cm
Maximum Climbing Angle	≤ 5° INCLINE

Power

Robot Battery	Li-ion, 46.8V, 54.6Ah
Robot Battery Weight	16kg
Robot Battery Charger	Input: 220VAC, 50-60Hz/ Output: 48V, 10~20A
Approx. Charging Time	Maximum 4 Hours
System Running Time	5 hours

Spraying System

Air Compressor	230VAC/50Hz, 20kg, 1.5H.P, 8 Bar, 10L
Water Tank	10L
Nozzle Air Flow Rate (each)	24 L/min
Nozzle Nozzle Liquid Flow Rate (each)	1 L/h
Nozzle Nozzle Pressure (each)	1.5 Bar (recommended)
Nozzle Droplet Size	11.1 μm
Idle Noise	30 ~ 40 dB
Operating Noise	62 ~ 65 dB
Operating Horizontal Range	1 m
Operating Vertical Range	0 - 2 m
Spray coverage (each)	9 directional and 3 selection of spray types

Communication

Communication Type	Wifi and 4G LTE
Range	50m with line of sight, 3~10m indoor

Sensors & perception

Video Feedback	IP65 Fish-Eye Camera
Obstacle Avoidance & SLAM	270° 25m 2D Lidar + 3 Ultrasonic sensors

Autonomous Capability

Min. Detectable Obstacle Size	11 cm
Recommended Mapping and Deployment Area	50m x 50m (2,500 m ²)
Applicability	Indoor area with levelled surfaces and sufficient lighting (e.g., mall, hospital, office, hotel)
Allowable Passageway Width	90 cm
Max. Height of Vertical Over-Obstacle	1.5 cm

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