



Product Technical Specification

Stratus

Helicopter Dispersant Spray System



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Product Summary

The STRATUS is an underslung dispersant spray system which can be operated from any “helicopter of opportunity” which is equipped with a cargo hook. Carried as an under slung load by a single strop & harness, the system incorporates its own power supply and is controlled via a simple pilot/crew operated control box.



Stratus 1000



Stratus 2000

The system can be jettisoned in an emergency and requires no modifications to the helicopter. The STRATUS consists of a lightweight marine grade aluminium dispersant tank and frame which supports an electric start diesel engine, driving a centrifugal pump and a 10m Spray Boom assembly. The outer sections of the boom can be removed reducing the span to 6m if required.

The spray nozzles are fully configurable to provide a wide range of application rates and swath widths to suit almost any spill situation.

The STRATUS Tank has a unique aerodynamic profile to reduce drag, maximising fuel efficiency and transit/spraying speeds. The Mass of the system is carefully controlled to maximise dispersant load, rotorcraft fuel capacity and the stability of the system in flight.

System Properties

Model	Stratus 1000	Stratus 2000
Tank Capacity	1000L	2000L
Empty Weight	300Kg (estimated)	350Kg
All up Weight	1300kg when filled with 1000L of Dispersant or Water	2350kg when filled with 2000L of Dispersant or Water
Max Spraying speed	80kn (advised)	80kn (advised)
Nominal Dimensions:		
Length	2.8m (Fin Removed), 4.4m (Fin Installed)	3m (Fin Removed) 4.6m (Fin Installed)
Width	1.2m (Spray Booms Demounted)	1.2m (Spray Booms Demounted)
Height	1.5m	1.5m
Tank Diameter	1.2m	1.2m
Spray Boom Span	Configurable 10m or 6m	Configurable 10m or 6m
Motive Unit	Yanmar Electric Start Diesel Engine	Yanmar Electric Start Diesel Engine
Valves	Actuated V Notch Ball Valve	Actuated V Notch Ball Valve

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Product Summary

Materials

Tank	<p>Standard: 5083 Marine Grade Aluminium</p> <p>Optional: Insulated 5083 Marine Grade Aluminium</p>
Frame	5083 Marine Grade Aluminium
Spray Booms	<p>Standard: 5083 Marine Grade Aluminium</p> <p>Optional: Insulated 5083 Marine Grade Aluminium,</p>
Lifting Harness	Wire Rope Sling (LOLER Certified)
Seals	EPDM & Nitrile

Performance

Pump Capacity	450 LPM
Priming	Self-Priming
Spray Flow Rates	50 to 450 LPM
Droplet Size	600 to 1300 Microns
Swath Width	7 to 11m Dependent on Spray height
Dilution	Neat Only
Nozzles	11 Configurable for multiple spray configurations
Spray Configurations	High Flow Full Swath, Low Flow Full Swath, Narrow Swath, Spot Application, Low Flow Spot application

Control System (hand-held control panel)

Standard Equipment	Engine Start Stop
	Engine Running Indicator
	Flow Control
	Shielded Loom
	Breakaway Connector
	Tank Level Sensor
	12V Electrical System
	12v Control panel, operated from Helicopter
	Sprayed Dispersant Totalizer
	Application Rate Display
Option of Alternative Control Panel (Siemens HMI Touch Screen Display)	24V Electrical System
	Spray Arm Heating
	Tank Heating
	Tank Temp Readout
	Air Temp Readout
	Multilingual Display
	Dispersant Flow Meter & Readout
	Application Rate Display
	Tank Level Sensor
	Sprayed Dispersant Totalizer
GPS tracking	
Instant Pump disengagement to stop spraying when rotorcraft manoeuvres	

Tank Features

Capacity	<p>Stratus 1000: 1000 Litres</p> <p>Stratus 2000: 2000 Litres</p>
Free Air Space	10%
Ports:	Inward Vent Valve
	Tank Breather providing Venting & Overpressure Protection
	Dispersant Outlet
	Pressure Fill Connection (Dry Disconnect Hose connection)
	Gravity Fill Port
	Drain Port
	Internal Tank Temp

Documentation

Testing	Evidence of Flight Tests can be provided.
Quality	Manufactured under ISO9001 Quality System
Certification	Evidence to show compliance with LOLA lifting requirements
	Evidence to show compliance with recommendations in CAA, CAP 426 Helicopter external load operations
Manual	Comprehensive operating and maintenance manual