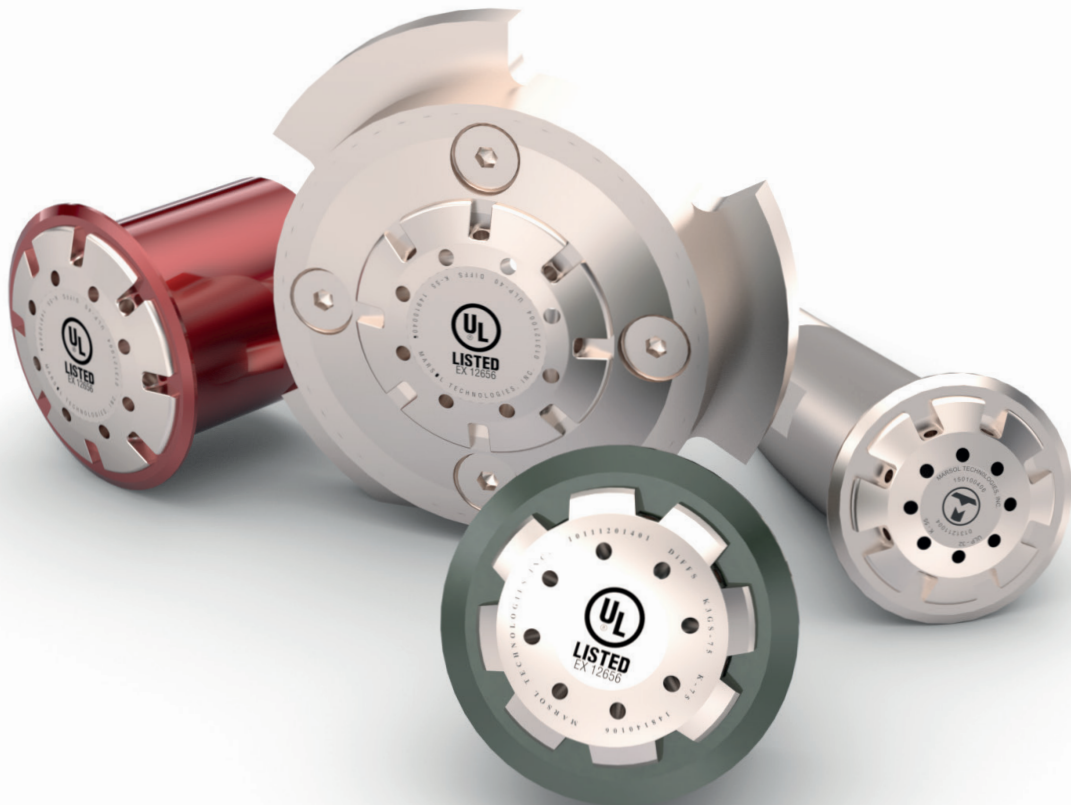
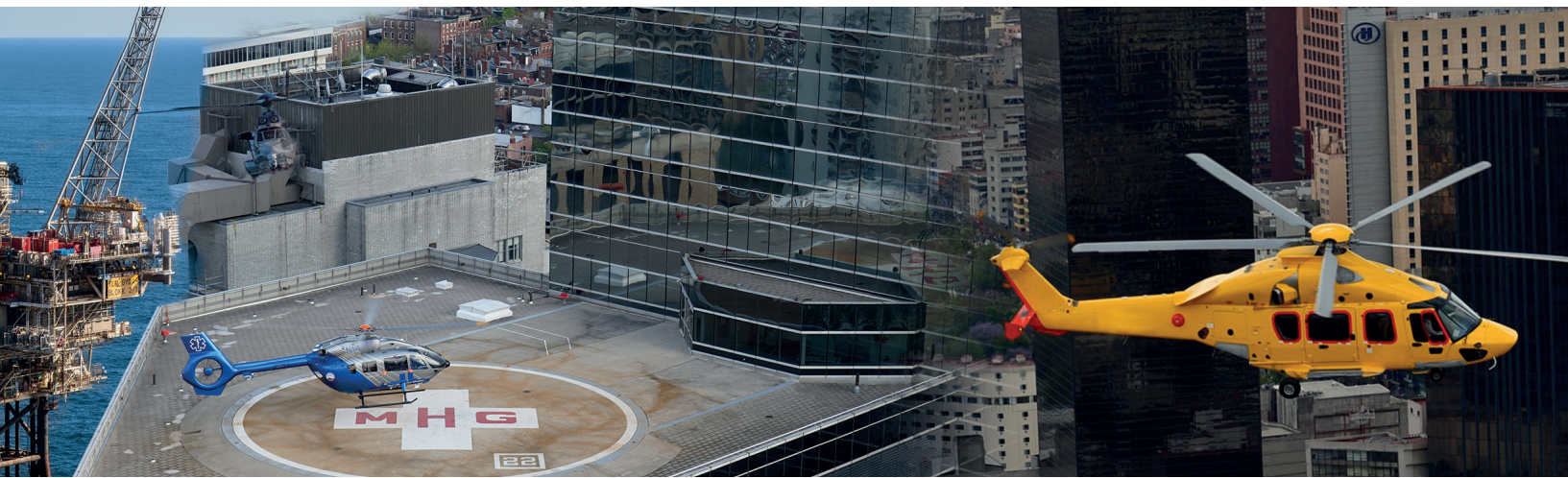
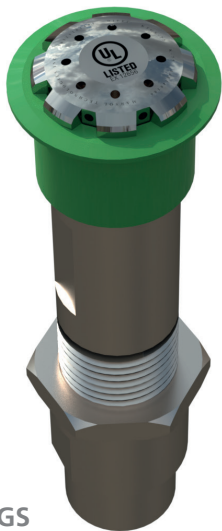




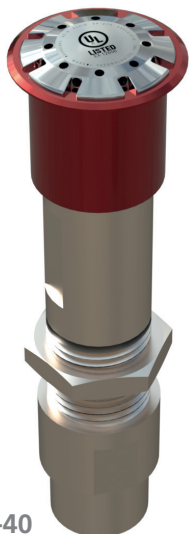
Deck Integrated Fire Fighting System

Non-Pop-Up Nozzle





K3GS



ULP-40



ULP-32

MARSOL

MARSOL Technologies, Inc. are based out of Houston, Texas, USA. Specializing in the design, manufacture and implementation of fire fighting safety systems and related products for helideck and helipad operations – for onshore, offshore and marine industry applications. Our ethos is to provide solutions that deliver safety critical performance significantly above and beyond minimum compliance requirements.

Product, Service, Support

- 🔥 DiFF Nozzles
- 🔥 Foam Skids
- 🔥 Foam Concentrates
- 🔥 Control Equipment
- 🔥 Custom Engineering
- 🔥 System Integration
- 🔥 Factory Approval Testing
- 🔥 Field Service and Technical Support

DiFFS Nozzle

The K3GS and ULP series of spray nozzles are especially designed to be used as part of a Deck Integrated Fire Fighting System (DiFFS). An array of these nozzles installed on a heliport / helideck provides an effective spray pattern and distribution of foam/water that covers the entire deck surface – even in severe weather conditions.

These spray nozzles have been specifically designed to be of simple construction – having orifices for both horizontal and vertical flow patterns. The nozzles do not ‘pop-up’ – instead, the foam/water discharges from a fixed, low profile position. The precise number and layout of nozzles is dependent on the specifics of the heliport/ helideck ‘D’ value and type. As required by the regulatory standards, there will be sufficient overlap of the horizontal flow pattern when all the nozzles are discharging during the system operation.

With no moving parts whatsoever, this means that the issues of malfunction and maintenance are, to all intents and purposes, redundant. Further, the issue of the nozzles being a trip hazard (foam hidden or otherwise) whenever the system may be operated is also removed.

Even if there is a blocked flow – e.g. due to a heavy object on top of the nozzle – the foam/water will still spray out from the horizontal orifices of the nozzle. The nozzles are suitable for wheeled and skid fitted helicopters.

Key Features

- 🔥 Non-Pop-Up Nozzle
- 🔥 SS-316L, Titanium Gr.2, Ni-Al-Bz
- 🔥 Range of ‘K’ Factors
- 🔥 Simple Installation
- 🔥 Easy, Reduced Maintenance
- 🔥 Straightforward Pipe System Testing
- 🔥 Quick Replacement of Nozzles
- 🔥 Comprehensive Certifications

Listing and Certifications

- 🔥 American Bureau of Shipping (ABS)
- 🔥 Civil Aviation Authority (CAAi-UK)
- 🔥 Directorate Gen. of Dubai Civil Defense (DCD)
- 🔥 United States Coast Guard (USCG)
- 🔥 Underwriters Laboratory (UL and ULC)



Technical Specifications

Pipe Diameter	40 mm (1 ½”), 32mm (1 ¼”) for ULP-32/Mini
Material	SS-316L, Titanium-Gr.2, Nickel Alu. Bronze
Working Pressure	3.5 bar (50.8 psi) ~ 7 bar (101.5psi)
Design Pressure	20 bar (290 psi)
Flow Tolerance	±5%
Horizontal Coverage	8 meters (26 feet)
Vertical Coverage	7 meters (23 feet)
Weight (K3GS)	1.57 Kg (3.46 lbs)
Weight (ULP-40)	1.30 Kg (2.86 lbs)
Weight (ULP-32)	1.00 Kg (2.20 lbs)
'O'-Ring	NBR
UL Nozzle Outer Body	Coated with Deep Chrome Green (BS381C:267)

Nozzle Inlet Connection Options

- Flanged
- Threaded
- Grooved

Compliance

- CAP-437
 - CAP-1264
 - NFPA-418
 - CAR-325
- ABS MODU / Marine Vessels
 - IMO MSC 1./Circ. 1431 (2012)
 - NORSOK, S-001: 2020+AC
 - United States Coast Guard (USCG)

UL Listing is in conjunction with below foam Concentrates

- Solberg ARCTIC 3% MIL SPEC AFFF
 - Solberg RE-HEALING RF3 Synthetic (Fluoropolymer-Free)
- ANSULITE AFC-3MS-C, 3% AFFF
 - Fomtec AFFF-1% ULTRA LT
 - Fomtec AFFF-3% ULTRA LT





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