

SPUMA cables

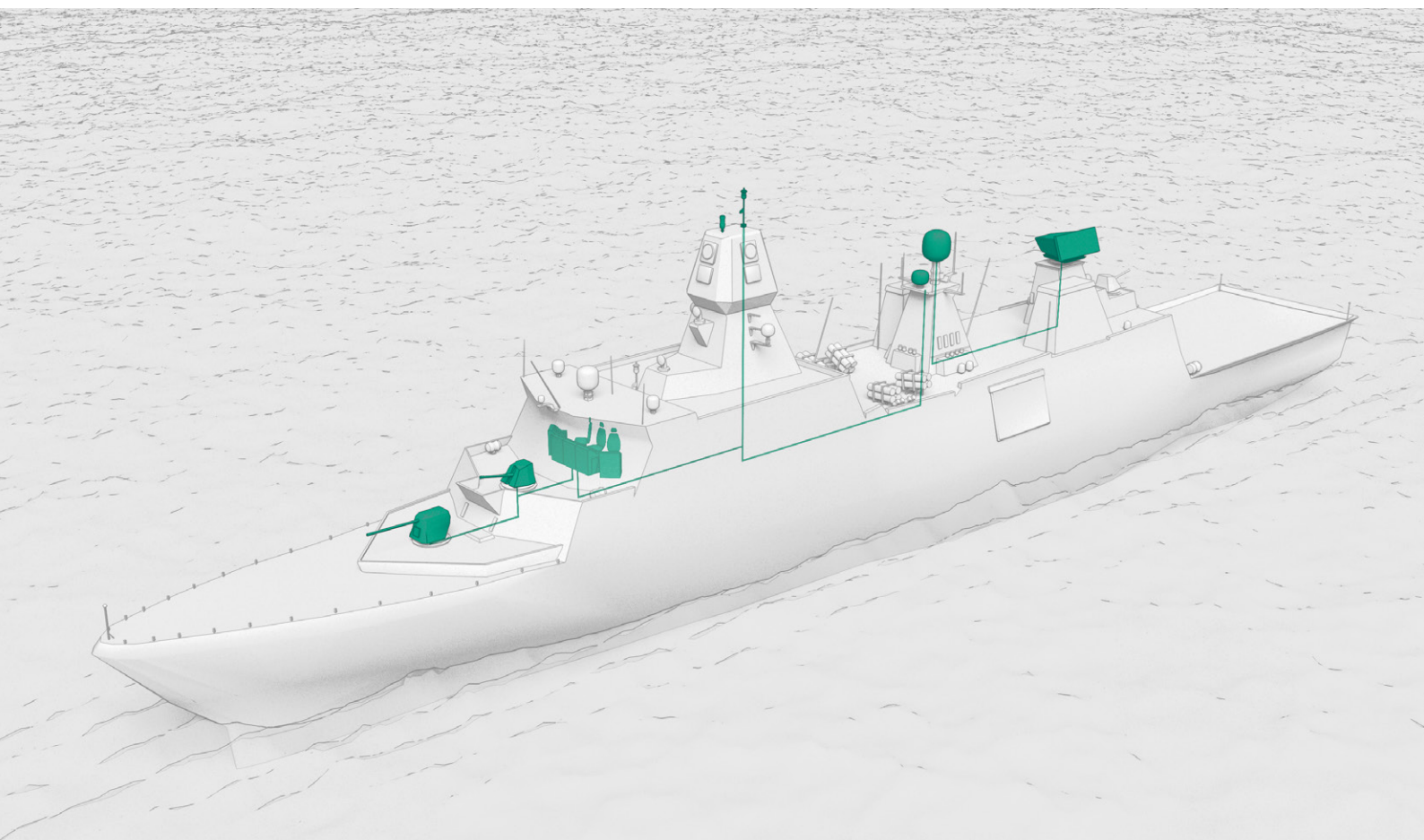
Low loss and flexibility



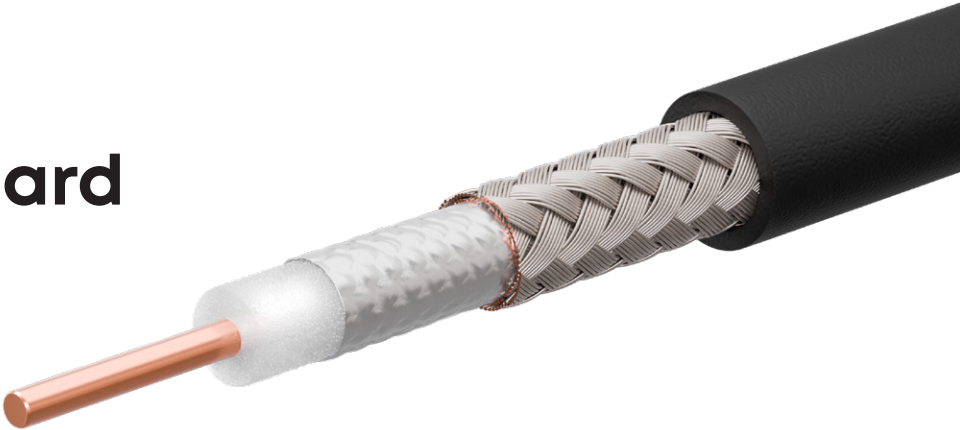
In demanding radio frequency environments, making the right choice of cable is crucial in ensuring system performance, installation efficiency and long-term reliability.

SPUMA® cables from HUBER+SUHNER redefine RF connectivity by bridging the gap between conventional cable technologies. While RG cables offer outstanding flexibility with relatively high attenuation, and corrugated cables deliver extremely low loss at the expense of rigidity, SPUMA combines the best of both worlds. Delivering low-loss performance together with excellent flexibility in a single, optimised solution. SPUMA cables are halogen-free and available both as bulk cable and as fully assembled solutions, allowing either ready-to-use integration or independent on-field mounting of the connector interfaces by end customers.

The centre conductor is surrounded by a low-loss foamed polyethylene dielectric, which is key to achieving the excellent attenuation values while keeping the cable lightweight and flexible. This is complemented by an inner foil and outer braided shield to provide high screening effectiveness and completed by a durable outer jacket available in standard or low-smoke, flame-retardant materials. SPUMA cables are available in standard industry-recognised dimensions and, depending on the specific variant, reach frequencies of up to 6/8 GHz.



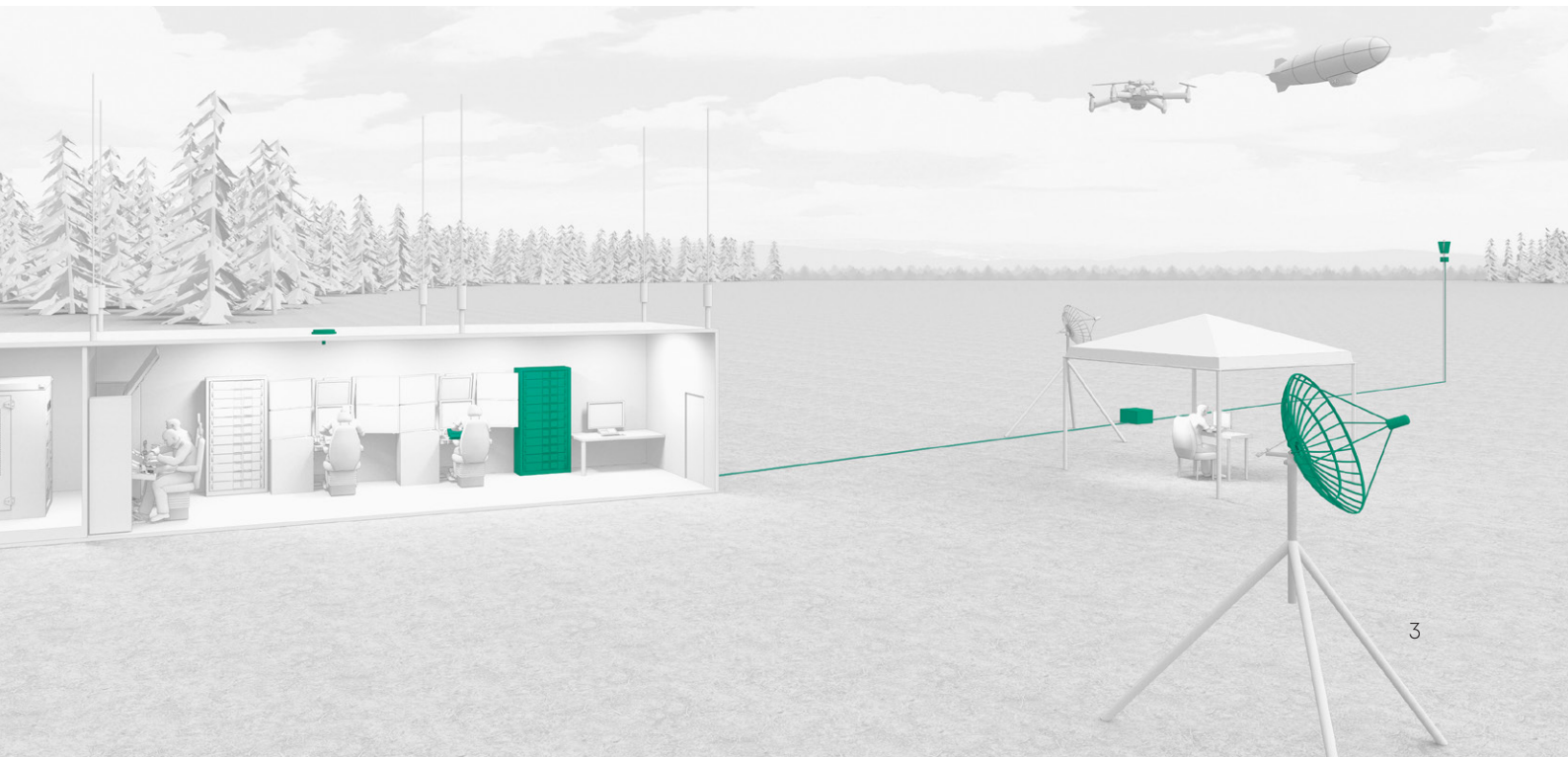
SPUMA Standard



The SPUMA standard range represents the core SPUMA offering for cost-effective and general-purpose RF applications. It provides the fundamental benefits of the [SPUMA family of coaxial cables](#), combining low loss, good flexibility and reliable shielding

in a versatile solution suitable for a wide range of industry-driven applications. SPUMA standard cables are halogen-free according to IEC 60754-1 and feature a black polyethylene jacket.

Item number	Product code	Outer Ø	Attenuation @ 1GHz	Impedance	Max Power @ 1GHz
84151727	SPUMA_195	4.95 mm	0.392 dB/m	50 Ω	160 W
84151737	SPUMA_240	6.15 mm	0.260 dB/m	50 Ω	260 W
84102703	SPUMA_400	10.25 mm	0.132 dB/m	50 Ω	600 W
84151738	SPUMA_600	14.99 mm	0.087 dB/m	50 Ω	930 W



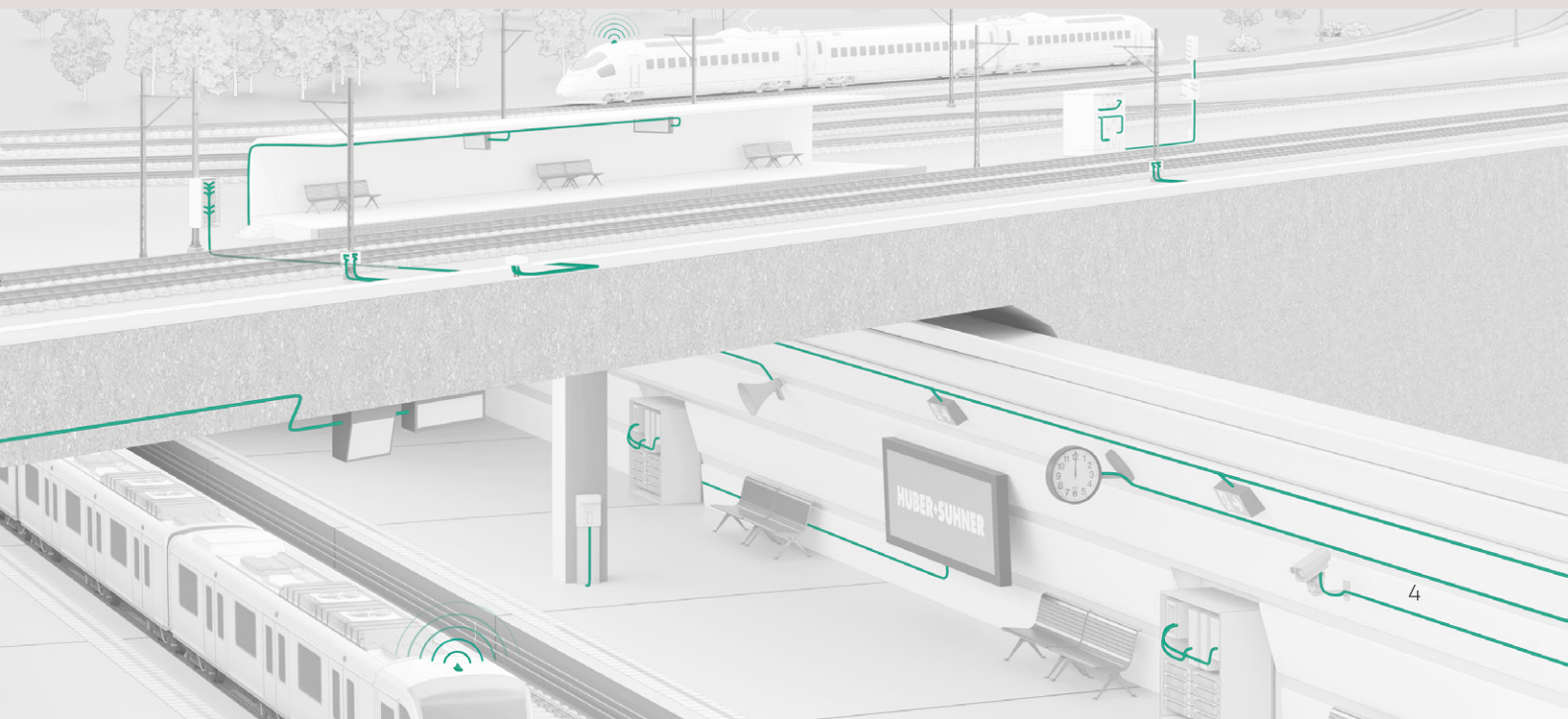
SPUMA Flame Retardant



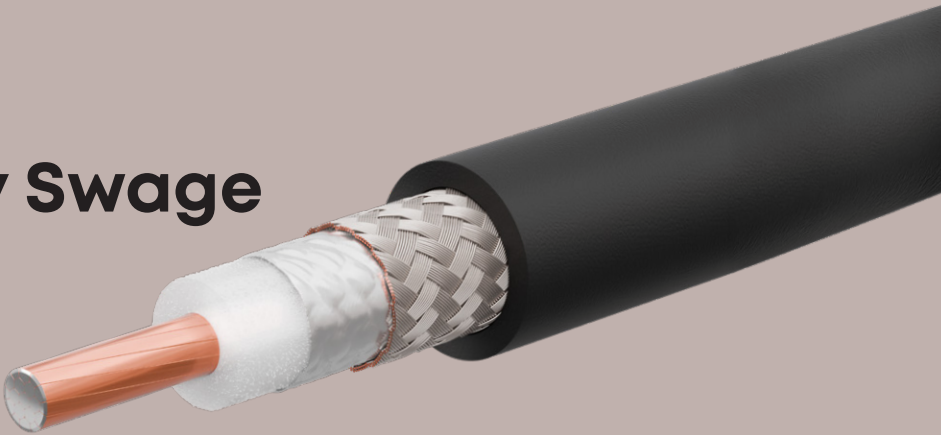
SPUMA Flame Retardant (FR) cables are designed for environments where fire safety is critical. Their flame-retardant construction helps limit the spread of fire along the cable. The LSFH materials (low smoke, free of halogen) ensure reduced smoke and no halogen emissions: a key advantage in confined spaces such as indoor and railway installations. By combining controlled fire behaviour with low smoke emission, SPUMA FR cables are engineered to address key fire-related risks, including limiting vertical

flame propagation, reducing smoke generation, avoiding toxic and corrosive effects, and minimising the formation of burning droplets—while maintaining the expected low-loss RF performance. Depending on the specific product, SPUMA FR cables are qualified against recognised fire safety standards, including EN 45545 (1), NFPA-130 (2), CPR (3), UL (4), and ISO 6722-1 5.22 UN ECE-R 118.01 (5), ensuring compliance with the requirements of railway, infrastructure, automotive and industrial applications.

Item number	Product code	Outer Ø	Attenuation @ 1GHz	Impedance	Cert	Max Power @ 1GHz
85021562	SPUMA_195-FR-01	4.98 mm	0.392 dB/m	50 Ω	(1, 2)	160 W
85021563	SPUMA_240-FR-01	6.17 mm	0.270 dB/m	50 Ω	(1, 2, 3)	260 W
84040210	SPUMA_400-FR	10.25 mm	0.132 dB/m	50 Ω	(4)	600 W
84132035	SPUMA_400-FR-01	10.25 mm	0.132 dB/m	50 Ω	(1, 2)	600 W
85022187	SPUMA_400-FR-75	10.25 mm	0.134 dB/m	75 Ω	(1)	400 W
85021564	SPUMA_500-FR-01	12.78 mm	0.111 dB/m	50 Ω	(1)	750 W
85069658	SPUMA_195-FR-AM	4.98 mm	0.392 dB/m	50 Ω	(5)	160 W
85069656	SPUMA_240-FR-AM	6.17 mm	0.266 dB/m	50 Ω	(5)	260 W



SPUMA Rotary Swage

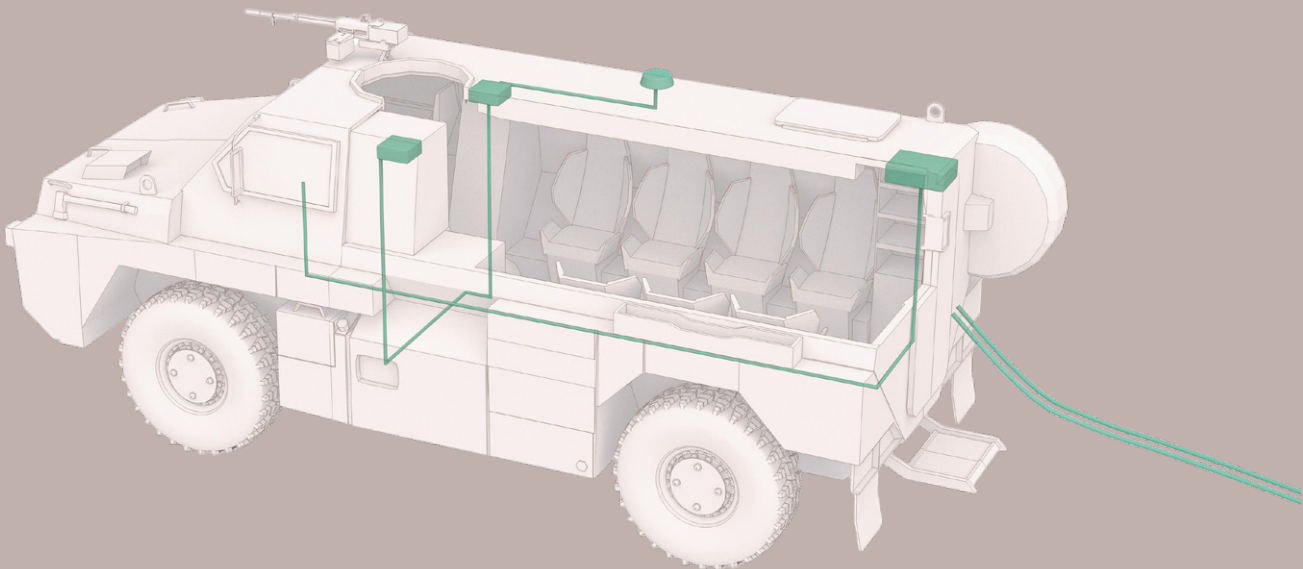


SPUMA Rotary Swage (RS) cables build on the fire-safety advantages of the SPUMA Flame Retardant range, while offering the most advanced combination of electrical performance and flexibility within the SPUMA portfolio. At the core of this design is [HUBER+SUHNER Rotary Swaging technology](#), which precisely forms the centre conductor to combine the mechanical flexibility of a stranded wire with the electrical performance advantages associated with a solid-conductor design. This allows the cable to be routed more easily through tight spaces and complex installations without

giving up the low attenuation, excellent return loss and stable signal transmission expected from high-performance RF cables.

This results in a premium SPUMA solution fit for both indoor and outdoor applications where both stringent fire-performance requirements and maximum cable flexibility are essential. SPUMA RS cables are therefore the ideal choice when the benefits of the flame-retardant version need to be combined with the highest level of installation freedom and RF performance.

Item number	Product code	Outer Ø	Attenuation @ 1GHz	Impedance	Cert	Max Power @ 1GHz
85089188	SPUMA_240-RS-FR	6.17 mm	0.293 dB/m	50 Ω	(1, 2)	230 W
85089191	SPUMA_400-RS-FR	10.25 mm	0.141 dB/m	50 Ω	(1, 2)	560 W
85240547	SPUMA_600-RS-FR	15.00 mm	0.095 dB/m	50 Ω	(1)	870 W



MIL qualifications for demanding environments

SPUMA cables are qualified through a combination of extensive mechanical and environmental testing, based on established MIL-STD methods, ensuring reliable performance in harsh and mission-critical environments. The qualification scope includes resistance to vibration, mechanical shock, temperature cycling, moisture, and biological exposure, as well as dedicated environmental tests such as sand & dust (see table below).

The following SPUMA cables have been validated against the test programme:

Item number	Product code
85021563	SPUMA_240-FR-01
84132035	SPUMA_400-FR-01
85089188	SPUMA_240-RS-FR
85089191	SPUMA_400-RS-FR

Validated test characteristics and standards

Test characteristics	Norm Reference
Vibration - High Frequency	MIL-STD-202H, method 204, condition G
Vibration - Random	MIL-STD-810, method 514.8
Mechanical shock - Half sine	MIL-STD-810G, method 516.8
Mechanical Shock - Saw Tooth	MIL-STD-810G, method 516.8
Temperature, Humidity, Altitude	MIL-STD-810C, method 518.1
Moisture Resistance	MIL-STD-202-106
Thermal Shock	MIL-STD-202, method 107
Fungus Resistance	MIL-STD-810G, method 508.8
Sand & Dust	MIL-STD-810H, method 510.7 proc. I and II
Solar Radiation	MIL-STD-810H, method 505.7 proc. I and II
Salt fog	MIL-STD-810H, method 509

Whether the priority is everyday RF performance, enhanced fire safety or maximum installation freedom, [the SPUMA portfolio](#) gives customers a clear path to the right cable solution. By combining low-loss transmission, flexible handling and application-focused qualifications, HUBER+SUHNER helps engineers specify RF connectivity that is easier to install, safer to use and built for reliable performance over time.

HUBER+SUHNER AG
Degersheimerstrasse 14
9100 Herisau
Switzerland
Phone +41 71 353 41 11
hubersuhner.com

HUBER+SUHNER is certified to ISO 9001, ISO 14001, ISO 45001, EN/AS 9100, IATF 16949 and ISO/TS 22163-IRIS.

Waiver

The facts and figures provided herein are for information only and do not represent any warranty of any kind.