

DATA CENTER PROTECTION SOLUTIONS

INNOVATIVE PROTECTION PRODUCTS FOR THE DATA CENTER MARKET



Challenges

- Prevention of cable entanglement and kinking
- Bending and abrasion
- Pinch points
- Puncture damage
- Simplified maintenance and retrofit
- Prevention of heat transfer to cables routed close to heat-generating components

Applications

- Copper Power Cables
- Copper Data Cables
- Coolant Tubes & Hoses
- Fiber Optic Cables
- Server Rack Routing

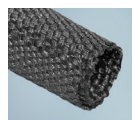
Experience

- Technical leadership
- Quick iterative design creation
- Customized testing
- Global manufacturing



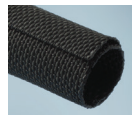
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Systems Protection offers solutions for managing large quantities of wire bundles in densely packed AI server racks. Unlike sharp plastic materials, our textile-based products provide a soft interior surface critical for protecting sensitive cables and fiber optics. From bundling solutions that reduce wiring entanglement to thermal solutions for high-performance computing environments, SP's sleeving products are well positioned to meet the growing needs of data centers.



ROUNDIT® 2601 / Organization and Abrasion

- Operating temperature from -70°C to +125°C (-94°F to +257°F)
- Self-wrapping design
- Easy to apply and remove
- Ideal for reworking components without disconnecting them



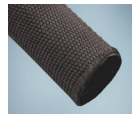
ROUNDIT® 2602 / Organization and Abrasion / Noise Suppression

- Operating temperature up to +150°C (+302°F)
- Self-closing tubular design
- Excellent abrasion resistance
- Noise suppression



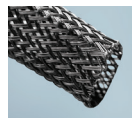
Therm-L-Wrap™ 26 / Heat Resistance

- Operating temperature from -60°C to +200°C (-76°F to +392°F)
- Self-wrapping sleeve with an adhesive closure offers excellent radiant and convective heat protection
- Unique design offers good flexibility not found in other reflective products



ProGard® 2631 / Sharp Edges and Pinch Points

- Operating temperature up to +125°C (+260°F)
- Enhanced abrasion resistance
- High coverage for maximum protection
- Fluid resistant



Expando® 2621 / Organization and Abrasion

- Operating temperature from -70°C to +125°C (-94°F to +257°F)
- UL recognized component
- Outstanding protection against abrasion and cut-through
- Does not trap heat or humidity



FyreJacket® 2611 / Heat Insulation and Fire Resistance

- Operating temperature from -54°C to +260°C (-65°F to +500°F)
- Fire protection up to +1100°C (+2012°F) - 15 mins / +800°C (+1472°F) - 30 mins
- Fluid resistant
- Easy installation



ROUNDIT® EMI 2601 / EMI Protection

- Operating temperature up to +150°C (+302°F)
- Provides electromagnetic shielding
- Self-wrapping design
- Durable and tear-resistant



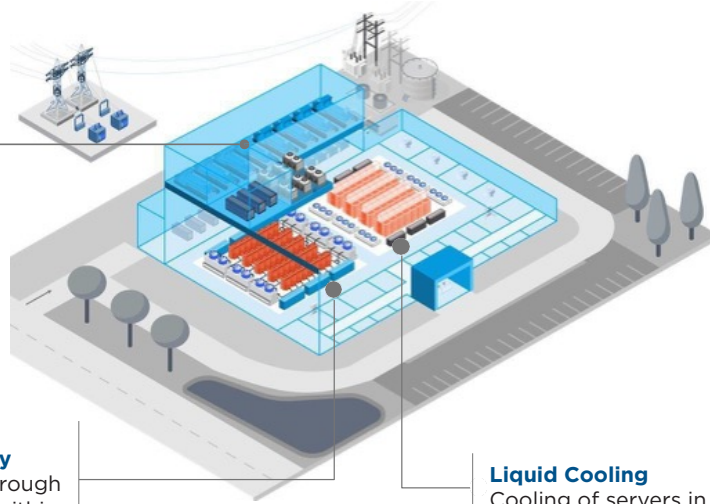
Product Market Fit: Extensive cabling to facilitate connectivity within a Data Center necessitates protective sleeves

Electrical Connectivity

Power delivery infrastructure inside a data center that ensures continuous, reliable electrical power distribution

Data Networking Connectivity

Data signal transport fiber (through copper or fiber optic cables) within and across data centers



Liquid Cooling

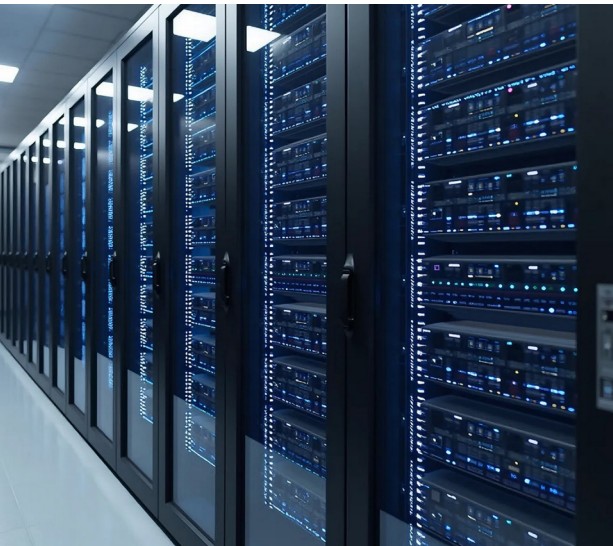
Cooling of servers in data halls (inside the rack)

Most data centers use protective cable management systems that combine specialized sleeving, routing hardware, strain-relief components, and thermal or abrasion-resistant jackets

Use-case rationales:

- Prevents **abrasion and puncture damage** to power, fiber, and coolant pathways
- Guides cables and coolant tubes through bends to **reduce kinking, snagging, and entanglement**, improving uptime and reliability
- Shields cables / tubes from **heat, vibration, moisture, and environmental contaminants**
- Simplifies **installation, maintenance, and retrofits**

Product Market Fit: Protective sleeving solves the main problems of abrasion damage, power cable thermal runaway, and coolant leakage



Cable Type	Key Issues / Pain Points	Current Solutions	SP Solution(s)
Coolant hose	<ul style="list-style-type: none"> • Insufficient connection • Integrity at connection points between soft-line hoses and coolant distribution manifolds • Reinforce and reduce leakage risk 	<ul style="list-style-type: none"> • Textile sleeve • Convolute tube • No additional protection 	<ul style="list-style-type: none"> • FyreJacket® 2611
Copper power cable	<ul style="list-style-type: none"> • Abrasion from sharp edges • Bundling challenges • Overheating from high current, generators, or batteries 	<ul style="list-style-type: none"> • Textile sleeve • Convolute tube • No additional protection 	<ul style="list-style-type: none"> • Expando® 2621 • ROUNDIT® 2601 • ROUNDIT® 2602 • Therm-L-Wrap™ 26 • EBS • ProGard® 2631
Copper data cable	<ul style="list-style-type: none"> • Abrasion from sharp edges and corners • Transition points from overhead raceways into server racks • Bundling, occasional overheating, EMI from generators or batteries 	<ul style="list-style-type: none"> • Textile sleeve • Convolute tube • No additional protection 	<ul style="list-style-type: none"> • ProGard® 2631 • ROUNDIT® EMI 2601 • Expando® 2621 • ROUNDIT® 2601 • ROUNDIT® 2602 • Therm-L-Wrap™ 26 • EBS
Fiber optic cable	<ul style="list-style-type: none"> • Abrasion from sharp edges and corners • Transition points from overhead raceways down into server racks), • Bundling and sensitive to sharp bends 	<ul style="list-style-type: none"> • Textile sleeve • Convolute tube • No additional protection 	<ul style="list-style-type: none"> • ROUNDIT® EMI 2601 • Therm-L-Wrap™ 26



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