

Premium Data Center Cooling Solutions



Hanna Rubber: Advanced Thermal Management for Modern Data Centers



A SINGER INDUSTRIAL COMPANY

Hanna Rubber provides Continental's industry-leading DataGuard and FlexCool hose technologies—engineered to keep today's high-density, high-performance data centers running efficiently, safely, and reliably.

These premium cooling hoses act as critical lifelines that prevent overheating, malfunctions, and hardware damage while maintaining peak system performance. Efficient liquid cooling also reduces energy costs, lowers carbon footprint, and creates a more stable operating environment.

Hanna Rubber

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Why Hanna Rubber?

- **200 Years of Combined Experience**
- **Large & Diverse Inventory**
- **State-of-the-art Fabrication Equipment**
- **ISO Certification**

Continental FLEX COOL BLADE 3/16" 150 PSI (1.0 MPa) EPDM-P UL 94 V-0 Made in USA

FlexCool Blade

FlexCool Blade is designed for the efficient cooling of server chips. It features a peroxide-cured EPDM tube, and its braided reinforcement delivers exceptional flexibility, while a thin wall gauge ensures routing is a breeze. This lightweight hose accommodates clamp, push-on and crimped fittings, along with UL94 V-0 flame rated cover to meet industry requirements. FlexCool Blade is built for reliability in compact server environments and facilitates liquid cooling performance so data centers can run at peak efficiency.

Attachment Method: Clamp/Crimp/Push-On

Temperature Range: -40°F to 210°F (Clamped or crimped) & -40°F to 180°F (Push-on)

Tube: Black EPDM rubber, peroxide cured

Cover: Black CPE, UL 94 V-0 flame resistant

Reinforcement: Braided synthetic textile, single layer

| SAP Material | ID | | OD | | Working Pressure | | Bend Radius | Weight | |
|--------------|-------|-----|------|------|------------------|------|-------------|--------|-------|
| | IN | MM | IN | MM | PSI | MPA | IN | LBS/FT | KG/M |
| 21206536 | 3/16" | 4.7 | 0.43 | 10.9 | 150 | 1.03 | 0.6 | 0.065 | 0.097 |
| 21206550 | 1/4" | 6.3 | 0.50 | 12.7 | 150 | 1.03 | 1.0 | 0.078 | 0.116 |

Continental FLEX COOL JUMPER 150 PSI (1.0 MPa) EPDM-P UL 94 V-0 Made in USA

FlexCool Jumper

FlexCool Jumper is designed for the reception of cooling fluid from the source line system, transitioning it from the manifold to the individual server blades and manifold drain lines. The peroxide-cured EPDM tube protects against contamination of your cooling fluid by greatly reducing leaching compared to traditional sulfur-cured hoses. This hose accommodates crimped, clamped, and push-on fittings, giving you flexibility in your system designs. The UL94 V-0 flame rated cover provides peace-of-mind protection, ensuring industry regulations are met. FlexCool Jumper is your solution for consistent and continuous flow within your data cooling system.

Attachment Method: Clamp/Crimp/Push-On

Temperature Range: -40°F to 210°F (Clamped or crimped) & -40°F to 190°F (Push-on)

Tube: Black EPDM rubber, peroxide cured

Cover: Black CPE, UL 94 V-0 flame resistant

Reinforcement: Braided synthetic textile, single layer

| SAP Material | ID | | OD | | Working Pressure | | Bend Radius | Weight | |
|--------------|------|------|------|------|------------------|------|-------------|--------|------|
| | IN | MM | IN | MM | PSI | MPA | IN | LBS/FT | KG/M |
| 21212455 | 3/8" | 9.5 | 0.64 | 16.1 | 150 | 1.03 | 2.0 | 0.11 | 0.16 |
| 21213948 | 1/2" | 12.7 | 0.82 | 20.8 | 150 | 1.03 | 3.0 | 0.19 | 0.28 |
| 21212472 | 3/4" | 19.1 | 1.11 | 28.2 | 150 | 1.03 | 4.0 | 0.30 | 0.45 |
| 21212477 | 1" | 25.4 | 1.34 | 34.0 | 150 | 1.03 | 6.0 | 0.34 | 0.51 |

UL94 HB

Attachment Method: Clamp/Crimp

Temperature Range: -40°F to 210°F (Clamped/crimped)

Tube: Black EPDM rubber, peroxide cured

Cover: Black EPDM rubber, UL 94 HB flame resistant

Reinforcement: Braided synthetic textile, single layer

UL94 V-0

Attachment Method: Clamp/Crimp

Temperature Range: -40°F to 210°F (Clamped/crimped)

Tube: Black EPDM rubber, peroxide cured

Cover: Black CPE, UL 94 V-0 flame resistant

Reinforcement: Braided synthetic textile, single layer

| UL94 HB SAP Material | ID | | OD | | Working Pressure | | Bend Radius | Weight | |
|-------------------------|--------|------|------|------|------------------|------|-------------|--------|------|
| | IN | MM | IN | MM | PSI | MPA | IN | LBS/FT | KG/M |
| 21204605 | 1" | 25.4 | 1.47 | 37.3 | 200 | 1.38 | 5.0 | 0.49 | 0.73 |
| 21204627 | 1-1/2" | 38.1 | 2.08 | 52.8 | 200 | 1.38 | 8.0 | 0.88 | 1.31 |
| 21204635 | 2" | 50.8 | 2.52 | 64.0 | 200 | 1.38 | 12.0 | 0.94 | 1.40 |

| UL94 V-0 SAP Material | ID | | OD | | Working Pressure | | Bend Radius | Weight | |
|--------------------------|--------|------|------|------|------------------|------|-------------|--------|------|
| | IN | MM | IN | MM | PSI | MPA | IN | LBS/FT | KG/M |
| 21212753 | 1" | 25.4 | 1.47 | 37.3 | 200 | 1.38 | 5.0 | 0.51 | 0.76 |
| 21212759 | 1-1/2" | 38.1 | 2.08 | 52.8 | 200 | 1.38 | 8.0 | 0.92 | 1.37 |
| 21212768 | 2" | 50.8 | 2.52 | 64.0 | 200 | 1.38 | 12.0 | 0.98 | 1.46 |



ExtremeFlex DataGuard

ExtremeFlex DataGuard is a premium, ultra-flexible and lightweight source line hose, engineered to deliver a constant supply of coolant throughout your data center.

Attachment Method: Clamp/Crimp

Temperature Range: -40°F to 200°F

Tube: Black EPDM rubber, peroxide cured

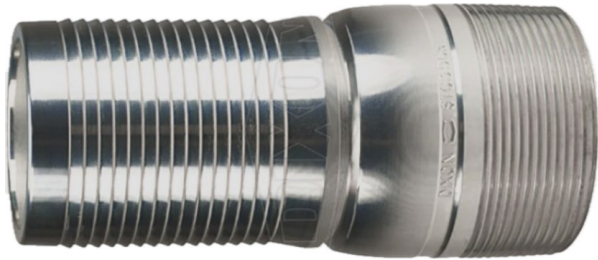
Cover: Corrugated Black EPDM (abrasion resistant, UL 94 HB Flame Resistant) (wrapped impression)

Reinforcement: Spiral-plyed fabrics with double helix wire

| SAP Material | ID | | OD | | Working Pressure | | Bend Radius | Vacuum | Weight | |
|--------------|--------|-------|------|-------|------------------|------|-------------|--------|--------|-------|
| | IN | MM | IN | MM | PSI | MPA | IN | HG | LBS/FT | KG/M |
| 21203745 | 3/4" | 19.1 | 1.15 | 29.1 | 150 | 1.03 | 0.75 | 29 | 0.34 | 0.501 |
| 21203748 | 1" | 25.4 | 1.39 | 35.4 | 150 | 1.03 | 1.00 | 29 | 0.42 | 0.630 |
| 21203750 | 1-1/4" | 31.8 | 1.65 | 41.9 | 150 | 1.03 | 1.25 | 29 | 0.53 | 0.793 |
| 21203752 | 1-1/2" | 38.1 | 1.90 | 48.2 | 150 | 1.03 | 1.50 | 29 | 0.62 | 0.923 |
| 21203754 | 2" | 50.8 | 2.44 | 61.9 | 150 | 1.03 | 2.00 | 29 | 0.85 | 1.266 |
| 21203756 | 2-1/2" | 63.5 | 3.00 | 76.3 | 150 | 1.03 | 2.50 | 29 | 1.25 | 1.859 |
| 21203758 | 3" | 76.2 | 3.50 | 89.0 | 150 | 1.03 | 3.00 | 29 | 1.49 | 2.213 |
| 21203760 | 4" | 101.6 | 4.53 | 115.1 | 150 | 1.03 | 4.00 | 29 | 2.11 | 3.142 |

Thermal Management Fitting Options

King Crimp Nipple



Crimp Sleeve



Cam & Groove



Crimp Ferrule



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