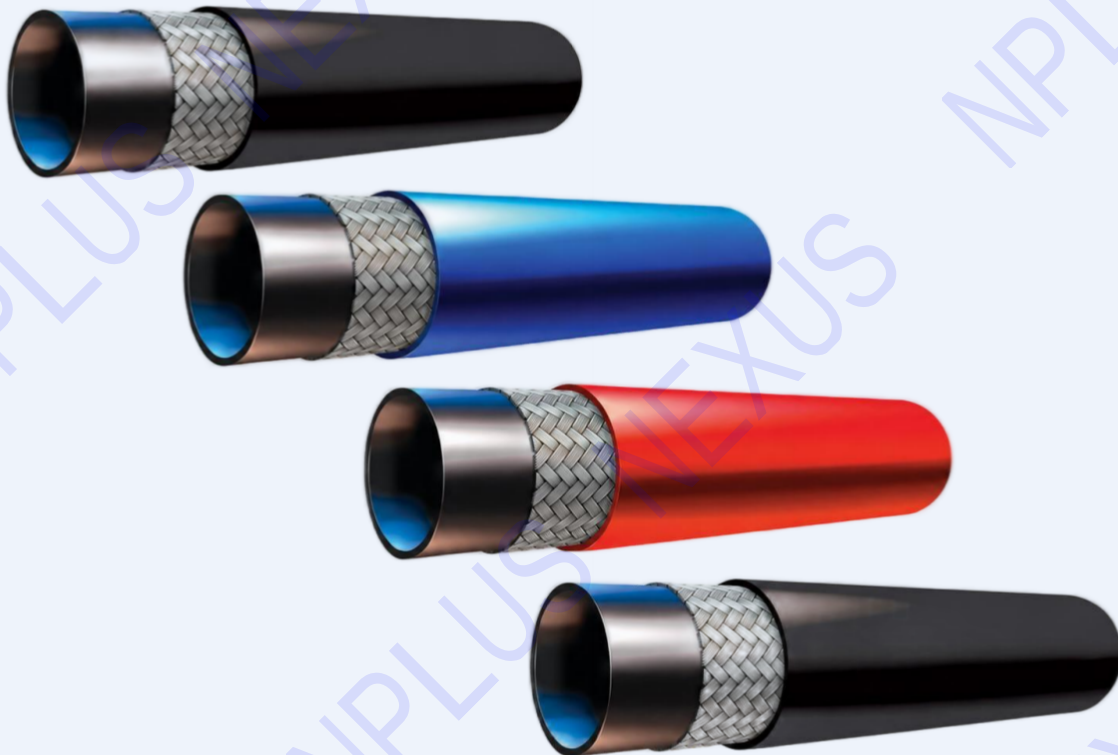


LIQUID COOLING CONNECTION TECHNOLOGIES

NPLUS DATA CENTER LIQUID COOLING EPDM HOSE

数据中心液冷 EPDM 软管

Engineered Flexible Coolant Transfer for AI Liquid Cooling Infrastructure
面向 AI 液冷基础设施的工程化柔性冷却液输送软管



随着 AI 服务器功率密度持续提升，液冷管路不仅需要完成冷却液输送，还必须满足介质洁净度、耐温性、柔韧性、阻燃性以及长期密封可靠性的综合要求。

Nplus 数据中心液冷 EPDM 软管专为 CDU、机柜歧管、服务器液冷回路以及维护连接场景设计，为高密度计算基础设施提供稳定、灵活、可靠的冷却液输送路径。

As AI computing density continues to increase, liquid cooling hoses must provide more than fluid transfer. They must support coolant purity, thermal stability, flexible routing, flame resistance and long-term sealing reliability.

The Nplus Liquid Cooling EPDM Hose Series is engineered for CDU interfaces, rack manifolds, server cooling loops and service connections within next-generation AI liquid cooling infrastructure.



PEROXIDE-CURED EPDM
过氧化物硫化 EPDM 内管



FLEXIBLE ROUTING
灵活布管



COOLANT COMPATIBILITY
冷却液兼容



FLAME-RESISTANT COVER
阻燃外层



RELIABLE SEALING
可靠密封

ENGINEERED FOR LIQUID COOLING INFRASTRUCTURE

面向液冷基础设施的
工程化软管结构



01 FLUID PURITY

Peroxide-cured EPDM tube supports fluid purity in thermal management systems.

过氧化物硫化 EPDM 内管有助于满足冷却液洁净度要求。

02 FLEXIBLE ROUTING

Flexible construction supports routing in CDU, manifold and server loops.

适用于受限空间内的 CDU、歧管和服务器回路布管。

03 THERMAL RESISTANCE

Coolant transfer from -40°C to +100°C.

冷却液输送适用温度范围为 -40°C 至 +100°C。

04 FLAME-RESISTANT COVER

Synthetic rubber cover meets UL94 V-0 requirements.

合成橡胶外覆层满足 UL94 V-0 阻燃等级要求。

05 RELIABLE SEALING

Engineered hose and fitting interfaces support durable, leak-resistant connections.

软管与接头界面协同设计，支持耐久可靠密封。

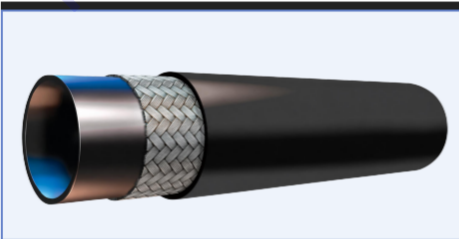
06 SYSTEM INTEGRATION

Integrates with Nplus valves, fittings, clamps and connection components.

可与 Nplus 阀门、接头、卡箍及连接组件集成。

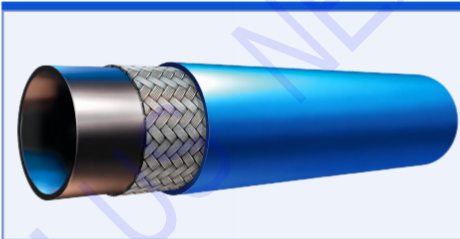
AVAILABLE COVER COLORS

可选外层颜色 · 颜色用途仅为系统识别建议



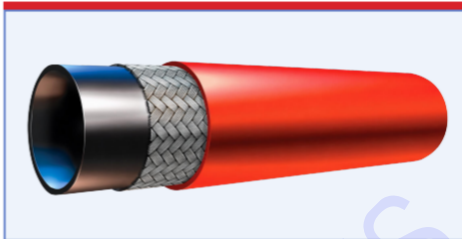
BLACK

General Cooling Line
通用冷却管路



BLUE

Coolant Supply
冷却液供液



RED

Coolant Return
冷却液回液

01 TUBE / 内管

PEROXIDE-CURED EPDM

Black EPDM for coolant purity and thermal stability.
黑色过氧化物硫化 EPDM，支持介质洁净与耐高温要求。

02 REINFORCEMENT / 增强层

ONE FIBER BRAID

Textile reinforcement balances pressure capability and flexibility.
单层纤维编织兼顾承压能力与柔性布管。

03 COVER / 外覆层

UL94 V-0 SYNTHETIC RUBBER

Smooth black, blue or red cover for system identification.
光滑黑、蓝或红色外层，便于管路识别。



ENGINEERING SELECTION REFERENCE

TECHNICAL SPECIFICATIONS

技术参数与规格选型

Combined unit columns preserve all engineering values while improving A4 portrait readability.
组合单位列保留全部参数，并优化 A4 竖版阅读。



PART NUMBER Nplus 型号	ID in / mm	OD in / mm	MIN. BEND RADIUS in / mm	WEIGHT lb/ft / kg/m	WORKING PRESSURE psi / bar	STANDARD PACK Length / Type
NLH-EP-04-BLK-RL	1/4 6.4	0.48 12.2	1.0 25.4	0.08 0.12	150 10.3	600 ft Reel
NLH-EP-06-BLK-RL	3/8 9.5	0.63 15.9	1.5 38.1	0.12 0.18	150 10.3	450 ft Reel
NLH-EP-06X-BLK-RL	3/8 9.5	0.60 15.2	1.6 40.6	0.12 0.18	150 10.3	450 ft Reel
NLH-EP-08-BLK-RL	1/2 12.7	0.78 19.8	2.8 69.9	0.18 0.27	150 10.3	300 ft Reel
NLH-EP-10-BLK-RL	5/8 15.9	0.91 23.1	3.5 88.9	0.20 0.30	150 10.3	250 ft Reel
NLH-EP-12-BLK-RL	3/4 19.1	1.03 26.2	4.5 114.3	0.25 0.37	150 10.3	200 ft Reel
NLH-EP-16-BLK-RL	1 25.4	1.28 37	6.5 165.1	0.34 0.51	100 6.9	150 ft Reel
NLH-EP-32-BLK-RL	2 50.8	2.36 67	10.0 250	1.2 1.8	150 10.3	100 ft Reel

06 / 06X: same ID; different OD and bend radius.
内径相同，外径和弯曲半径不同。

1 inch: 100 psi / 6.9 bar. Other sizes: 150 psi / 10.3 bar.
1 英寸规格为 100 psi，其余规格为 150 psi。

GENERAL CONSTRUCTION
产品结构

TUBE / 内管

Black EPDM, peroxide cured
黑色过氧化物硫化 EPDM

REINFORCEMENT / 增强层

One fiber braid
单层纤维编织

COVER / 外覆层

Black, red or blue synthetic rubber; smooth finish
黑、红或蓝色合成橡胶，光滑表面

BLK

BLU

RED

RECOMMENDED NPLUS HOSE FITTING

Contact Nplus for fitting selection.
请联系 Nplus 进行配套接头选型。

HOSE MARKING / 软管印字建议

Nplus NLH-EP LIQUID COOLING EPDM HOSE
WP 1 MPa (150 psi) * · UL94 V-0 HOSE COVER
*NLH-EP-16: WP 0.69 MPa (100 psi)

DESIGN CONDITIONS
设计工况

TEMPERATURE RANGE / 温度范围

-40°F to +212°F
-40°C 至 +100°C

AIR TEMPERATURE / 空气温度

Up to +158°F
最高 +70°C

PHOSPHATE ESTER / 磷酸酯

-40°F to +176°F
-40°C 至 +80°C

DESIGN FACTOR / 设计系数

4:1

4:1

FLAME RESISTANCE / 阻燃

UL94 V-0 hose cover
UL94 V-0 软管外覆层

VACUUM / 真空能力

15 inHg: NLH-EP-04 through -12
10 inHg: NLH-EP-16
-04 至 -12: 15 inHg
-16: 10 inHg

APPLICATION MEDIA
适用介质

- Deionized water
去离子水
- Water/glycol coolant solutions
水—乙二醇冷却液
- Process cooling water
工艺冷却水
- Air
空气
- Dry air
干燥空气
- Phosphate ester
磷酸酯介质
- Industrial coolant solutions
工业冷却液

ENGINEERING NOTE / 工程提示

Final hose, fitting and coolant compatibility must be verified for actual operating conditions.
正式选型应结合实际介质、温度、压力和连接方式确认。

FROM HOSE TO COMPLETE CONNECTION SYSTEM

从液冷软管到完整连接系统



COOLANT CONNECTION PATH

冷却液连接路径



Nplus integrates liquid cooling hoses, dry break valves, safety clamps and precision connection components into a coordinated cooling infrastructure architecture.

Nplus 将液冷软管、干式互锁阀、安全快接卡箍及精密连接组件进行系统化协同，为 AI 数据中心提供完整、可靠的冷却液连接架构。

01
CDU SUPPLY & RETURN
CDU 供回液管路

02
RACK-LEVEL COOLING
机柜级液冷

03
MANIFOLD CONNECTIONS
歧管连接

04
SERVER COOLING LOOPS
服务器冷却回路

05
SERVICE & MAINTENANCE
维护与检修软连接

06
MODULAR DISTRIBUTION
模块化冷却液分配

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