



Nitinol™ Nickel Titanium Shape Memory Alloys

Nitinol™ 镍钛形状记忆合金

Nickel Titanium (also known as Nitinol) is the unique class of materials known as shape memory alloys. A thermoelastic martensitic phase transformation in the material is responsible for its extraordinary properties. These properties include the shape memory effect, superelasticity, and high damping capability. The properties of Nitinol can be modified to a great extent by changes in alloy composition, mechanical working, and heat treatment. In most cases a trial and error process is required to optimize these factors for a particular application.

镍钛合金因其形状记忆功能被视为一类特殊的材料。材料特殊性质是产生热弹性马氏体相变的原因，这些性质包括：形状记忆效应，超弹性和高阻尼容量。改变合金的组份，或改变机械加工和热加工条件，可以对Nitinol的性质产生极大的影响。在绝大多数情况下，特种应用需要用试验的容错过程来优化这些条件。

Alfa Aesar offers a wide variety of NiTi components to meet your unique requirements. In addition, many standard items are in stock for immediate delivery.

Alfa Aesar 向您提供多种NiTi产品来满足您的特殊需求。需要说明的是，许多标准产品有库存，可以立即发货。

Tubing: 管形 :

Outer Diameter (O.D.) from 0.005" to 0.250" (0.125 to 6.4 mm) 外径从0.005" 至0.250"(0.125 至 6.4 毫米)

Wall Thickness down to less than 0.002" (0.05 mm) dependent upon O.D. size 壁厚由外径决定，最薄可至0.002" (0.05 毫米)

Wire & Ribbon: 线丝与条带形

Wire: diameters form 0.001" (0.025 mm) to 0.080" (2 mm) and above 线丝：直径从0.001" (0.025 mm) 至0.080" (2 mm) 或更大

Straight superelastic Nitinol wire with oxide; diameter from 0.0050 to 0.0230 mm 超弹性Nitinol直线丝：直径从0.0050 至0.0230 mm

Ribbon and Strip: from 0.001" x 0.002" (0.025 mm x 0.05 mm) to 0.030" x 0.400" (0.75 mm x 10mm) 缎带及条带：从0.001" x 0.002" (0.025 mm x 0.05 mm) 至 0.030" x 0.400" (0.75 mm x 10mm)

Stranded Wire: many different configurations available 标准线丝：多种外形可供选择

NiTi ACTM Wire: Nitinol filled with alternate materials for conductivity, radiopacity, etc. NiTi ACTM线丝：掺杂导电和抗幅射材料的Nitinol

Sheet: 片形 :

Thickness down to 0.007" (0.018mm) 可薄至0.007" (0.018mm)

Width of about 1" to 4" (25 to 100mm) 宽度约为1" to 4" (25 to 100mm)

Thickness厚度 (mm)	Width宽度 (Inches)	Length长度 (Inches)
0.0050	1.75	12
0.0075	3.50	12
0.0100	3.50	12
0.0125	3.50	12