



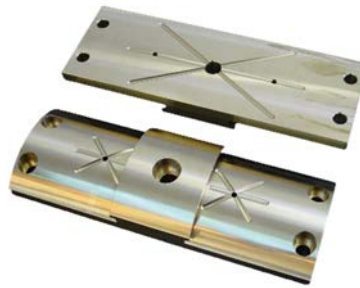
Technical Data Sheet

AMPCO® 18.136

AMPCO® 18.136 is a specialty bronze alloy known for its exceptional properties and precise specifications. This alloy is heat treated to increase its impact strength by 40% while increasing its yield strength by 10% while maintaining its impressive tensile strength. With a unique balance of durability and versatility, it is an ideal choice for demanding steel mill applications.

Key Features:

- ▶ Heat treated
- ▶ Increased impact resistance by 40%
- ▶ Improved yield strength by 10%
- ▶ No compromises in tensile strength
- ▶ High ductility & elongation
- ▶ Good sliding properties
- ▶ Corrosion resistant
- ▶ No nickel contamination & no galling against stainless steel



Nominal Composition:

Copper (Cu)	Aluminum (Al)	Iron (Fe)	Others
Balance	10.5%	3.5%	max. 0.5%

Applications:

- ▶ Designed for extreme wear-applications
- ▶ Tailor-made for steel mill components such as slippers & screw-down nuts
- ▶ Applications with high pressure and significant impact loads
- ▶ Plain bearing bushings with soft counter rotors
- ▶ Used in heavy machinery, industrial equipment or other demanding environments



AMPCO® 18.136 finds its niche in critical steel mill applications where extreme wear pressures and significant impact loads are daily challenges. Tailored and heat treated to excel in these conditions, it proves invaluable in components such as slippers and nuts. Whether in heavy machinery, industrial equipment, or other demanding environments, the alloy delivers exceptional performance and durability, making it the first choice for those seeking reliability and durability in the most demanding environments.



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Mechanical Properties (Nominal values)	Sand Casted	Centrifugally Casted
Tensile Strength R_m (MPa)	620	689
Yield Strength $R_{p0.5}$ (MPa)	269	289
Elongation A_5 (%)	18	20
Brinell Hardness (10/3000)	166	170
Compressive Strength R_{mc} (MPa)	965	979
Shear Strength R_{cm} (MPa)	379	386
Modulus of Elasticity E (GPa)	110	110
Charpy a_k (J)	19	22
Izod a_k (J)	27	30
Fatigue (100 million cycles) σ_N (MPa)	207	214

Physical Properties:

Density ρ (g/cm ³)	Coefficient of Expansion α (10 ⁻⁶ /K)	Thermal Conductivity λ (W/m·K)	Electrical Conductivity (% I.A.C.S.)	Specific Heat c_p (J/g·K)
7.45	16.2	59	13	0.42

Machining Parameters:

Operation	Cutting Speed v_c (m/min)	Feed f (mm/rev)	Depth a (mm)	Tool Specification
Milling – Roughing	110 - 160	0.1 - 0.4	up to 4	K10 - K20
Milling – Finishing	90 - 115	0.05 - 0.1	0.1 - 0.5	K10 - K20
Turning – Roughing	150 - 200	0.1 - 0.2	up to 2	K10 - K20
Turning – Finishing	180 - 250	0.05 - 0.1	0.1 - 0.2	K10 - K20

Scan the QR Code to view our machining recommendations:



Contact us

