

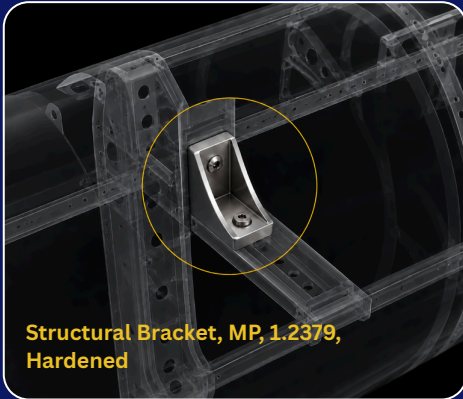
APPLICATIONS – MATERIALS & FINISHES BY PART TYPE

meviy enables rapid-turnaround precision parts for aerospace. 1.4301 is selected for high corrosion resistance; AW-5052 for formability and fatigue strength in sheet form. Copper and brass alloys are gaining traction for their electrical conductivity and machinability. Materials and finishes are grouped below by the part they serve.

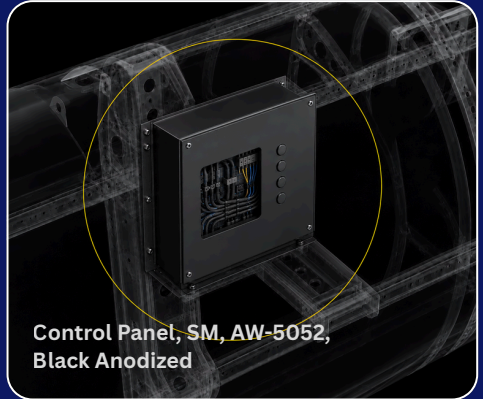


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Structural Brackets, Control Panels, Electronic enclosures - Sheet Metal (SM) / Milling (MP)



Structural Bracket, MP, 1.2379, Hardened



Control Panel, SM, AW-5052, Black Anodized

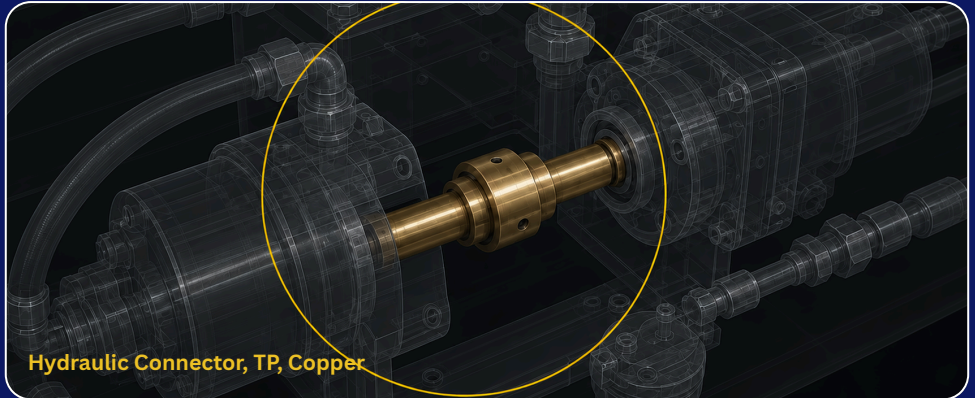
MATERIALS

- **Aluminium AW-5052 (SM)**
Best formability in sheet. Stays strong under repeated stress without extra heat processing.
- **Aluminium EN AW-7075 (MP)**
Steel-level strength at one-third the weight. Industry default for primary structural brackets & ideal for blocks requiring tight tolerances
- **Aluminium EN AW-5083 (SM & MP)**
Saltwater and harsh-environment resistant. No surface treatment needed for basic protection.
- **Steel EN 1.2379 (MP)**
Tough structural steel that can be hardened for wear-critical parts.

FINISHES & FEATURES

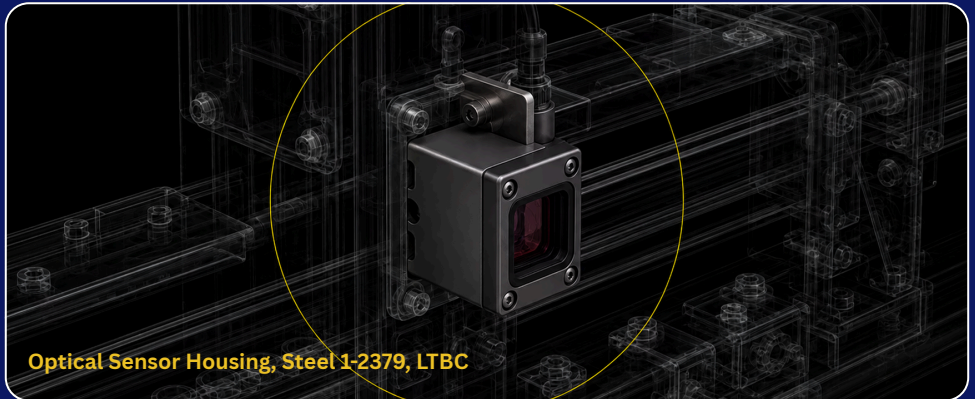
- **Trivalent Chromate SurTec 650 (for Aluminium)**
Electromagnetic conductivity preserved + paint adhesion base on Aluminium.
- **Hard Anodised (clear) (for Aluminium)**
~500 HV (Hardness Vickers) on Aluminium surfaces. Near-steel wear resistance at Aluminium weight.
- **Anodised (clear / black) (for Aluminium)**
Corrosion protection, zero dimensional impact. Black adds low reflectance.
- **± 0.01 mm Tolerances (for Aluminium & Steel)**
For assembly-critical interfaces.
- **Hardening Treatment (for Steel)**
Very hard, wear resistant. Rockwell C Hardness (HRC) 50-63

Parts in Hydraulic Systems – Milling (MP) / Turning (TP)



MATERIALS	FINISHES & FEATURES
Stainless Steel EN 1.4401 (316) (MP & TP) Resists corrosion from saltwater, fuel and hydraulic fluids	Passivation (for Stainless Steel) Corrosion that builds up inside tight joints and fluid contact surfaces. No dimensional change.
Aluminium EN AW-6061 (MP & TP) Lightweight, weldable, corrosion resistant for low-pressure lines.	Electroless Nickel (for Aluminium & Copper) Uniform on complex geometry, doesn't affect hole sizes or thread fits.
Copper CW004A / CW008A (MP & TP) High-purity copper for fluid-adjacent connectors. CW004A safe for use in hydrogen fuel environments	Trivalent Chromate SurTec 650 (For Aluminium) Corrosion protection while maintaining electromagnetic conductivity for bonded Aluminium fittings.
Brass CW614N Easy to machine to tight tolerances on connector bodies and instrument fittings.	GD&T Geometric Tolerancing (All Materials) Roundness and alignment tolerances automatically included in the quote. Essential for leak-free assembly.

Sensor / Optical Housing Milling (MP) / Turning (TP)



MATERIALS	FINISHES & FEATURES
• Stainless Steel EN 1.4301 / 1.4401. Non-magnetic. No sensor interference, corrosion resistant.	• Low Temp. Black Chrome (LTBC) Absorbs light instead of reflecting it, essential for cameras and optical sensors. Holes and fits stay accurate
• Cu CW004A / CW008A Best heat dissipation for cooling parts and electromagnetic shielding.	• Passivation (for Stainless Steel) Prevents particles and residue from contaminating sensitive assemblies.
• Brass CW614N Easy to machine to tight tolerances on connector bodies and instrument fittings.	• Hard Anodised (clear) Doesn't conduct electricity but still dissipates heat. Prevents corrosion where aluminium meets other metals.
• Steel EN 1.2379 (MP) Tough structural steel that can be good machined.	• Electroless Nickel Even coating regardless of shape complexity. Hole sizes and thread fits unaffected.
	• Grinding / Finefinish Ra 0.4 Mirror-smooth contact surfaces. Ra 0.4–3.2 selectable per surface.