

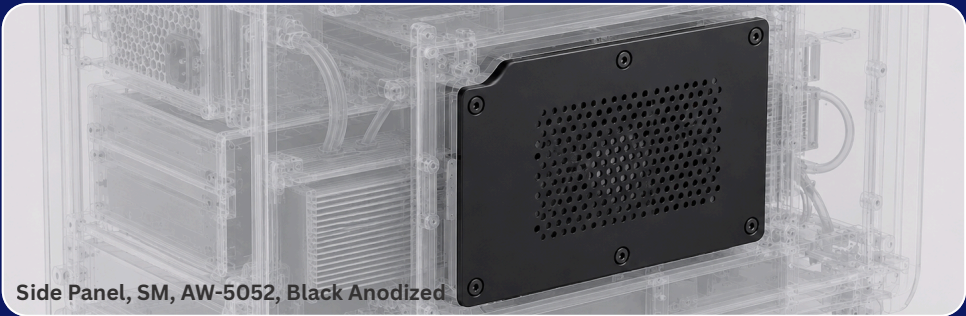
APPLICATIONS – MATERIALS & FINISHES BY PART TYPE

meviy enables rapid-turnaround precision parts for medical equipment manufacturers. Aluminium and stainless steel are the primary materials for structural and fluid-contact components. Engineering plastics such as PEEK and POM serve where electrical insulation or chemical resistance is needed. Materials and finishes are grouped below by the component type they serve.



meviy-eu.com

Structural Panels & Enclosure Components — Sheet Metal (SM) / Welded Sheet Metal / Milling (MP)



MATERIALS	FINISHES & FEATURES
Aluminium EN AW-5052 (SM) Best formability in sheet. Stays strong under repeated stress without extra heat processing. Standard for bent panels and covers.	Powder Coating (for Steel — SM only) Durable, chemical-resistant colour finish. Standard for external-facing equipment panels.
Aluminium EN AW-7075 (MP) Maximum rigidity for structural plates and frames requiring tight tolerances.	Anodised (clear / black / matte black) (for Aluminium) Corrosion protection, doesn't affect part dimensions. Easy to clean. Black adds low reflectance for internal panels.
Stainless Steel EN 1.4301 (SM & MP) Corrosion resistant, easy to clean. No post-treatment needed — important in medical environments where chemical cleaning is routine.	Trivalent Chromate SurTec 650 (for Aluminium) RoHS/REACH compliant. EMC conductivity preserved across assembled panels.
Steel EN 1.0038 (SM) Cost-effective structural steel for internal frames and base plates not exposed to cleaning agents.	Electroless Nickel (for Aluminium & Steel) Even coating regardless of shape complexity. Chemical resistant for parts exposed to cleaning agents.
	±0.01 mm Tolerance (for Aluminium) Where panels must align precisely across multi-part equipment assemblies.

Fluid & Mechanical Precision Components — Milling (MP) / Turning (TP)



Bioreactor probe mount,
TP, EN 1.4301, Passivated

MATERIALS	FINISHES & FEATURES
Stainless Steel EN 1.4301 / 1.4401 (MP & TP) Resists corrosion from cleaning agents and diagnostic reagents. Default for fluid-contact components in medical equipment.	Passivation (for Stainless Steel) Keeps fluid-contact surfaces clean and particle-free. No dimensional change — bore sizes and thread fits unaffected.
Aluminium EN AW-6061 (MP & TP) Lightweight, easy to machine precisely. For low-pressure fluid paths and mechanical drive components.	Electroless Nickel (for Aluminium & Steel) Even coating on complex fluid geometries. Chemical resistant, bore dimensions maintained post-coating.
Aluminium EN AW-7075 (MP) Maximum strength for structural manifold blocks and precision drive components under load.	Hard Anodised (clear) (for Aluminium) Surface hardness comparable to steel. Wear-resistant for drive components and rotating parts at Al weight.
Steel EN 1.7220 / 1.2379 (MP & TP) For shafts and drive components requiring hardening. Maintains dimensional accuracy under repeated mechanical load.	Anodised (clear) (for Aluminium) Corrosion protection for fluid-path components, zero dimensional impact.
	±0.01 mm Tolerance (for Aluminium & Steel) Critical for shaft fits, bearing seats and fluid port alignment.

Fixtures, Mounts & Functional Plates — Milling (MP) / Turning (TP)



Sensor Mount Bracket,
MP, PEEK

MATERIALS	FINISHES & FEATURES
Aluminium EN AW-7075 (MP) Maximum rigidity for PCB mounting plates and optical reference plates requiring flatness and tight hole tolerances.	Hard Anodised (clear) (for Aluminium) Surface hardness comparable to steel. Wear-resistant for fixture components used across many assembly cycles.
Aluminium EN AW-6061 (MP & TP) Good thermal conductivity for heat sink plates. Lightweight for sensor brackets and standoffs.	Black Oxide (for Steel) Zero coating thickness. Anti-reflective for optical reference fixtures. Mild corrosion protection.
Stainles Steel EN 1.4301 / 1.4401 (MP & TP) Won't interfere with magnetic sensors or electronics. Chemical resistant for fixtures in regularly cleaned environments.	Hardening AQ (for Steel) HRC 50–63, 14-day ship. Wear-critical locating pins stay accurate over thousands of assembly cycles.
Steel EN 1.2379 / 1.2344 (MP & TP) Can be hardened to HRC 50–63. For wear-critical locating pins used repeatedly across assembly cycles.	GD&T Tolerancing (All Materials) Flatness, perpendicularity and bore concentricity automatically included in the quote.
PEEK (MP & TP) Electrically insulating, chemical resistant. Ideal for non-conductive spacers and standoffs inside medical electronics assemblies.	Grinding / Finefinish Ra 0.4 (Al & Stainless Steel) Mirror-smooth surfaces for optical mounts and sensor alignment.
POM (MP & TP) Low friction, dimensionally stable. For sliding guides, bushings and non-conductive structural spacers.	