

TECHNICAL DATA SHEET (TDS)

INDICATIVE SPECIFICATION SHEET — FOR REFERENCE ONLY

Pietre Dure & Hardstone Marquetry

Florentine Commesso Artisan Stonework in Gem-Grade Lapis Lazuli, Malachite, Onyx & Mother of Pearl

Continuing the 16th-century Florentine commesso di pietre dure tradition, our master artisans hand-lap semi-precious gemstones, exotic marbles, and nacre into museum-grade pictorial panels, heraldic crests, dining tabletops, yacht bulkheads, and feature walls.

01 · PHYSICAL, MECHANICAL & DIMENSIONAL DATA

INDICATIVE REFERENCE VALUES (ASTM / DIN / EN)

Document Reference	TDS-PD-2026 (Rev. 2026.10)
Seam Fit Tolerance	0.1 – 0.25 mm hand-lapped hairline fit (traditional Florentine commesso)
Gemstone Hardness (Mohs)	Mohs 6.5–7.0 (Agate, Quartz, Tiger Eye, Jasper) · Mohs 5.5 (Lapis) · Mohs 4.0 (Malachite)
Carrier Slab Substrate	20 mm solid Nero Marquina / Statuario or lightweight marine aluminium honeycomb
Resin Matrix System	UV-stabilized, non-yellowing cycloaliphatic structural epoxy
Backlit / Lumen Options	Translucent White Quartz, Honey Onyx & Amethyst on custom LED diffuser core
Moisture & Marine Rating	Approved for interior wet zones, spa feature walls, and superyacht interiors
Protective Finish	Micro-crystalline museum wax or food-safe penetrating fluoropolymer guard
Crating & Protection	Foam-suspended velvet-lined ISPM-15 export cases with shock indicators
Production Lead Time	6–10 weeks depending on botanical/pictorial complexity

02 · REFERENCE STONE & METAL PAIRINGS

Badakhshan Lapis Lazuli

Deep ultramarine blue with natural golden pyrite flecks

Congolese Malachite

Banded emerald and forest-green copper carbonate chatoyant stone

White & Gold Mother of Pearl

Iridescent natural shell nacre hand-selected for floral petals & plumage

Northern Cape Tiger Eye

Chatoyant golden-brown quartz selected for directional light reflection

Belgian Black / Nero Marquina Carrier

Velvet-black monolithic stone ground that maximizes gemstone chroma

03 · ATELIER ENGINEERING & QA PROTOCOL

1:1 Pictorial Cartoon & Shading Study

Every petal, bird feather, and scroll is mapped by hand at 1:1 scale, assigning specific natural stone grain direction to create three-dimensional chiaroscuro shading without paint.

Micro-Waterjet & Hand File Finishing

Rough contours are cut via fine-nozzle waterjet and then bevel-filed by hand at the bench so adjoining pieces lock together with zero visible grout line.

Selective Multi-Stage Polishing

Because hardstones (Mohs 7) and calcite marbles (Mohs 3–4) abrade at different rates, our artisans polish each mineral family with dedicated diamond grit sequences.

Tabletop, Wall & Floor Integration

Supplied as monolithic furniture tops with profiled edges, book-matched wall slabs with concealed mechanical anchors, or recessed floor medallions.

04 · ARCHITECTURAL SPECIFICATION & SITE INSTALLATION SUMMARY

CSI MASTERFORMAT REFERENCE

09 30 33 / 12 36 40 — Semi-Precious Stone & Pietre Dure Marquetry

WALL MOUNTING SYSTEM

Undercut stainless steel (AISI 316) mechanical kerf anchors + structural epoxy

UV EXPOSURE GUIDANCE

Specify interior or UV-filtered glazing zones for malachite and organic mother-of-pearl

CARE & CLEANING

Wipe with damp microfiber cloth and pH-neutral cleaner; never use acidic or abrasive agents on malachite or nacre

IMPORTANT NOTICE — FOR REFERENCE ONLY: All technical parameters, stone densities, and dimensional tolerances in this sheet are provided for preliminary architectural reference only. Because natural stone varies by quarry block, final project-specific engineering specifications, 1:1 CAD shop drawings, and physical slab submittals are issued for formal sign-off prior to fabrication.