



Technical Drawing Extraction

ASSET INTELLIGENCE

The Smart Equipment Passport applies AI extraction to a plant's three richest sources of engineering knowledge – P&IDs, piping isometrics, and electrical schematics. Each output is scored, traceable, and expert-reviewed before release.

ONE PIPELINE, MULTIPLE DRAWING TYPES

Three drawing types, one asset model.

The extraction pipeline is the same: recognition → validation → expert release. What changes per drawing type is the symbol world, the AI and data model and the rules. Here is what the platform reads from each, and what it unlocks.

01 P&IDs

WHAT IT EXTRACTS

Equipment tags, valves and safety devices, measurement points and loops, line numbers with nominal diameter, material and medium, logical connectivity and off-page connectors, cross-references and revision states.

WHAT YOU CAN DO WITH IT

Build the master-data foundation for a brownfield digital twin, prepare turnarounds and inspection scopes, feed HAZOP / safety reviews, and reconcile equipment data against SAP and EAM.

02 Piping isometrics

WHAT IT EXTRACTS

Pipe geometries and routing, weld seams and joint positions, supports and fittings, material classes, nominal diameters and lengths, spool and line references.

WHAT YOU CAN DO WITH IT

Plan inspection and wall-thickness measurement campaigns, build digital weld and spool registers, support material traceability for audits, and accelerate fabrication and modernisation projects.

03 Electrical schematics

WHAT IT EXTRACTS

Circuits and current paths, protective devices, loads and consumers, transformers and switchgear, terminals and cable references, signal and control loops.

WHAT YOU CAN DO WITH IT

Support energy- and availability analysis, selectivity and protection studies, commissioning (FAT / SAT), and keep electrical maintenance documentation consistent with the installed base.

WHAT YOU CAN DO ACROSS ALL DRAWING TYPES

Four high-value use cases.

Whatever the drawing type, the value comes from the same four moves – from legacy plans to digital governance.

01 From analog to digital drawings

Bring scanned, plotted or PDF-only drawings into the data world. Tags, components and connectivity are recognised and exported as DEXPI XML or Excel – every value traceable to plan, coordinate and revision.

02 Harmonisation across drawing tools

Multiple sites, multiple CAD vendors, multiple house standards: the platform normalises content from heterogeneous tools into one consistent asset data model – so teams, contractors and auditors share the same baseline.

03 Reconciling drawings with IT system data

Tags on the drawing rarely match equipment master data in SAP, EAM or EH&S exactly. The platform makes the discrepancies visible as continuous data-quality control between engineering documentation and operational systems.

04 Compliance check for digital drawings

Existing drawings are checked automatically against current conventions (ISA-5.1, ISO 10628, DEXPI, IEC for electrical) and in-house standards – outdated symbology and inconsistencies surface before the audit, not during.

Start with a Readiness Check.

A 30-minute first call: which drawing types and formats you have, where the strongest economic case sits, and what a credible pilot looks like. You leave with a written proposal.

[Request a demo](#)

info@coac.de | www.coac.de/p&id

About coac. coac GmbH develops data-driven platforms for regulated industrial environments. Our Technical Drawing Extraction combines AI-supported extraction with a lifecycle-oriented asset data model and integration into SAP, EAM and compliance processes.