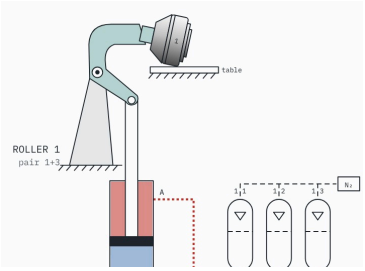
MACHYD

Hydraulic troubleshooting built on your machine and your schematic.

MACHYD runs your clinker cooler or mill hydraulics as a live circuit, state by state. When something goes wrong, it ranks the likely causes and names the best next check: your hydraulic expert, on every shift.



OK MILL · ROLLER GRINDING

OUR UNIQUE VALUE · BUILT FROM YOUR DRAWINGS

Six ways MACHYD is your machine, not a textbook circuit

1 Your schematic
Redrawn from your hydraulic schematic and parts list.

2 Your item numbers
Every valve, gauge and solenoid carries your tags.

3 Your states
Every mode in your mode table, oil flowing as it really does.

4 Your faults
Failure modes for every part, with what the crew sees.

5 Your gauges
Healthy readings worked out at your set points.

6 Your checks
Field checks your crew can do with the tools at hand.

Schematics hide it. Visio explains it. **MACHYD runs it.**

01 MACHINES COVERED

- **Clinker coolers:** MMC, SF and CB clinker cooler drives and power units.
- **Vertical roller mills:** OK, ATOX and FRM roller tensioning and spring systems.
- Valves, cylinders and accumulators move in time; every part shows its function, its lines and how it fails.

02 TROUBLESHOOTING, STEP BY STEP

- **Tick what the crew sees,** in plain words.
- **Read the gauges:** MACHYD compares them with a healthy machine.
- **See the likely causes,** ranked by how well each explains everything so far.
- **Do the best next check:** one look or measurement that splits the causes.
- **Print the field checklist:** every check, result and time on one sheet.

03 WHAT PLANTS GET FROM IT

- **Shorter breakdowns:** crews go straight to the check that matters instead of swapping parts.
- **An expert on every shift,** including nights and weekends.
- **Faster learning:** new technicians see how the circuit works, state by state.
- **A record of every case,** kept as signed field checklists.

04 SIMPLE TO RUN

- Standard **Windows laptop, fully offline,** with no link to the PLC or DCS.
- **Priced to pay back on the first breakdown it shortens.**
- Annual support, with updates, costs less than an hour of downtime.
- Your drawings stay private and are never shared.

05 FROM YOUR SCHEMATIC TO YOUR MACHINE · WITHIN A WEEK PER SYSTEM

STEP 1
Send
Hydraulic schematic, parts list, mode table and any troubleshooting notes.

STEP 2
Build
Circuit redrawn; every part, state and failure mode modelled and checked.

STEP 3
Review
Open points marked and confirmed with your maintenance team.

STEP 4
Use
Installed on your laptops, ready for the next breakdown and for training.

Built by cement people. MACHYD is developed by Macprotec Engineering in Houston, whose team has designed, commissioned and operated cement plants around the world.

Send us your schematic. We'll show you your machine.

MACPROTEC ENGINEERING
Makers of MACHYD · Excellence in Process

Manirul Haque, Founder & Principal Process Engineer
+1-346-550-0964 · process@macproteceng.com · www.macproteceng.com