

Modular Robotics Vendor Procurement Matrix (v1)

For Indoor Modular Housing Production

Purpose

Provide a practical procurement view of robotics vendors, purchase models, expected capex bands, deployment timeline, and best-fit use cases.

A) Core Production Robotics (Walls/Floors/Roofs)

| Vendor | Model / Family | Category | Buy Model | Typical Capex Band* | Deployment Time | Best Use Case |

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| Randek | ZeroLabor System | Robotic framing/assembly line | Direct + integrator project | High (project-based) | 4–10 months | Automated wall/floor/roof panel production |

| WEINMANN (HOMAG) | WALLTEQ / full line systems | Timber frame production line | Direct + distributor/integrator | High | 4–10 months | Scalable prefab timber panel lines |

| House of Design Robotics | Automated Panel Framing | Panel framing automation | Direct + project engineering | Mid–High | 3–8 months | Framing stations, repetitive panel tasks |

| KUKA / Kawasaki / ABB / FANUC | Industrial robot cells (custom EOAT) | Robotic workcell automation | Integrator-led | Mid–High | 3–9 months | Nailing, sheathing, handling, cutouts |

B) MEP Accuracy & Rough-In Enablement

| Vendor | Model | Category | Buy Model | Typical Capex Band* | Deployment Time | Best Use Case |

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| HP | SitePrint | Autonomous layout robot | Purchase or service partner | Low–Mid | 2–8 weeks | MEP point layout, clash reduction, faster trade alignment |

| Hilti | Jaibot | Automated drilling robot | Direct purchase/lease options by market | Mid | 2–10 weeks | High-volume overhead drilling for electrical/mechanical |

C) Interior Finishing Robotics

| Vendor | Model | Category | Buy Model | Typical Capex Band* | Deployment Time | Best Use Case |

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| Canvas | 1200CX (and platform variants) | Robotic drywall finishing | Service/project model in many markets | Service-based / Mid equivalent | 2–8 weeks (service start) | Drywall mudding/sanding acceleration, finish consistency |

D) Structural/Rebar Robotics (If Applicable)

| Vendor | Model | Category | Buy Model | Typical Capex Band* | Deployment Time | Best Use Case |

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| Advanced Construction Robotics | TyBOT / IronBOT | Rebar tying automation | Purchase + service options | Mid–High | 1–3 months | Rebar tie workflows and labor reduction |

E) Humanoid Pilots (Constrained Use First)

| Vendor | Model | Category | Buy Model | Typical Capex Band* | Deployment Time | Best Use Case |

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| Appttronik | Apollo | Humanoid pilot platform | Partnership/pilot agreements | Pilot-based | 3–9 months | Material handoff and repetitive assist tasks |

| Agility Robotics | Digit | Humanoid/mobile handling | Pilot/commercial programs | Pilot-based | 3–9 months | Indoor logistics and repetitive movement tasks |

| Figure AI | Figure platform | Humanoid pilot platform | Partnership/pilot agreements | Pilot-based | 3–12 months | Controlled industrial task automation pilots |

F) Procurement Notes (Critical)

1. Most systems are sold as engineered projects (not off-the-shelf list pricing).
2. Require integrator + safety architecture + commissioning package.
3. Demand a FAT/SAT acceptance plan tied to KPI outcomes.
4. Use phased rollout: pilot cell first, then replicate.
5. Include annual support and spare parts in TCO model.

G) Recommended Sequence for Your Modular Plant

1. Panel/framing line automation (Randek/WEINMANN/HoD)
2. Layout robot (HP SitePrint)
3. Drilling robot (Hilti Jaibot)
4. Drywall finishing robot (Canvas)
5. Humanoid pilot in constrained zones after KPI stabilization

H) Bid Package Requirements (Send to Every Vendor)

- Scope of work and throughput targets
- Safety requirements and compliance standard
- Integration requirements (PLC/MES/SCADA)
- FAT/SAT test cases and acceptance criteria
- Warranty/SLA and training package
- Full capex + recurring support breakdown
- Deployment schedule with milestone gates

I) Evaluation Scorecard (100 Points)

- Technical fit: 25
- Throughput impact: 20
- Reliability/support: 15
- Integration complexity: 15
- Total cost of ownership: 15
- Delivery speed: 10

***Capex Band Guidance**

- Low: <\$100K
- Mid: \$100K–\$500K
- High: \$500K+

(Actual pricing varies by scope, geography, integrator, and support terms.)