Pick-and-place head: User Guide

PNP-1 | Blaide product line | 17 November 2026 | Design only: nothing built or tested | Draft



Using it

- **1.** Fit the head on a dock position and plug the hose into the port under the lid.
- **2.** Put parts in the tray pockets shown in the app, one value per pocket, and seat the tray in the bed slots.
- **3.** Dispense paste first; then choose Place parts.
- **4.** If the app reports an empty pocket, refill it and tap Continue.
- **5.** Parts listed for hand placement (connectors, tall parts) are shown at the end.
- **6.** Reflow as usual.

Safety

Hazard	Protection	What you must do
Pinch between nozzle and board	Stops on contact through the load cell	Low force; not measured
Small parts	Tray pockets	Keep away from children
Pump switch-off voltage	Flyback diode on the board	Simulation: 24.4 V on a 30 V part; a higher-rated part is recommended

Specification

Parameter	Target
Size / mass	38 x 35 x 114 mm, about 110 g
Nozzles	0.45, 0.75 and 1.4 mm
Parts	0402 to SOIC from a 24-pocket tray on a 12 mm pitch
Rotation	Hollow-shaft stepper on the nozzle axis
Vacuum	Diaphragm pump in the base; held below -25 kPa, open above -8 kPa
Pump current	0.3 A at 24 V (model)
Planned rate	35 parts in about 5 minutes on the sample board