



# Gordon by Thalo Labs

Make every installer a rockstar.

## Six-Figure Problem Hiding in Plain Sight

The HVAC industry averages ~77% first-time install success for split systems – meaning nearly 1 in 4 installs requires a return visit due to refrigerant leaks, improper charge, or vacuum failures, often tied to line set connections. At 100 installs per month, that's 20+ extra truck rolls – quietly compounding into hundreds of thousands in annual losses.

## Gordon:

### Quality Assurance, Not Just Measurement

Gordon 1.0 is a connected diagnostic and installation tool that transforms HVAC line set commissioning from a manual, experience-driven process into a guided, sensor-verified workflow. By automating prescribed pressure holds, micron-level vacuum verification, and refrigerant charge validation, it shifts installation from technician-dependent measurement to tool-enforced verification – dramatically reducing installation failures and callbacks.

## How it works



### 1 Install

Attach Gordon to the HVAC ports and connect to site power. Scan the equipment QR code using the mobile app to initiate the digital setup.



### 2 Verify

After installation, Gordon performs automated pressure and vacuum testing. Once complete, the app displays the exact calculated charge and monitors the final fill in real-time.



### 3 Certify

The system generates a digital certification report, and stores the data in the cloud for warranty tracking.

## Without Gordon vs. With Gordon

	✓ With Gordon	Without Gordon
Vacuum Holds	Sensor-enforced full hold; won't pass until spec is met	Technician eyeballs 5–10 min, cuts short under time pressure
Pressure Tests	Continuous logged data; flags micro-drops automatically	Quick glance at gauge; slow leaks go undetected
Overnight Tests	Cellular connectivity – leave on site, get alerts remotely	Tech must stay nearby (Bluetooth range) or skip entirely
Documentation	Auto-generated PDF certification with timestamped sensor data	Manual logs, copy/paste spreadsheets, paper sign-offs
Supervisor Visibility	Real-time dashboard across all crews; bypass flags visible	No insight until a warranty claim arrives
Callback Rate	Target ≤5% with enforced process discipline	~23% of installs require return visits <sup>1</sup>
Annual Cost @ 100/mo	~\$120,000 – saving ~\$432,000/year	~\$552,000 in preventable rework

## Your Savings with Gordon

Installs / Month	Current Rework Cost	With Gordon	Annual Savings
20	\$110,400/yr	\$24,000/yr	~\$86,400
50	\$276,000/yr	\$60,000/yr	~\$216,000
100	\$552,000/yr	\$120,000/yr	~\$432,000
200	\$1,104,000/yr	\$240,000/yr	~\$864,000

Assumes ~\$2,000/truck roll. Current rework at 23% callback rate; with Gordon at 5%.

## Technical Specifications

Pressure Range	0–1,000 PSI (N <sub>2</sub> and refrigerant compatible)
Vacuum Measurement	Dedicated micron gauge (Pirani/MEMS); A2L-ready for R-32 systems (≤50 μm rise validation)
Temperature Comp.	Onboard ambient sensor; auto-corrects pressure drift
Connectivity	4G LTE cellular + GPS – no Wi-Fi or Bluetooth dependency
Reports	Cloud dashboard; auto-generated PDF certification reports
Fittings	Standard 1/4" and 3/8" flare; all major OEM compatible
Power	120V-240V AC; rated for continuous 24–48 hr unattended operation
Enclosure	Ruggedized field enclosure; operational –10°F to 120°F