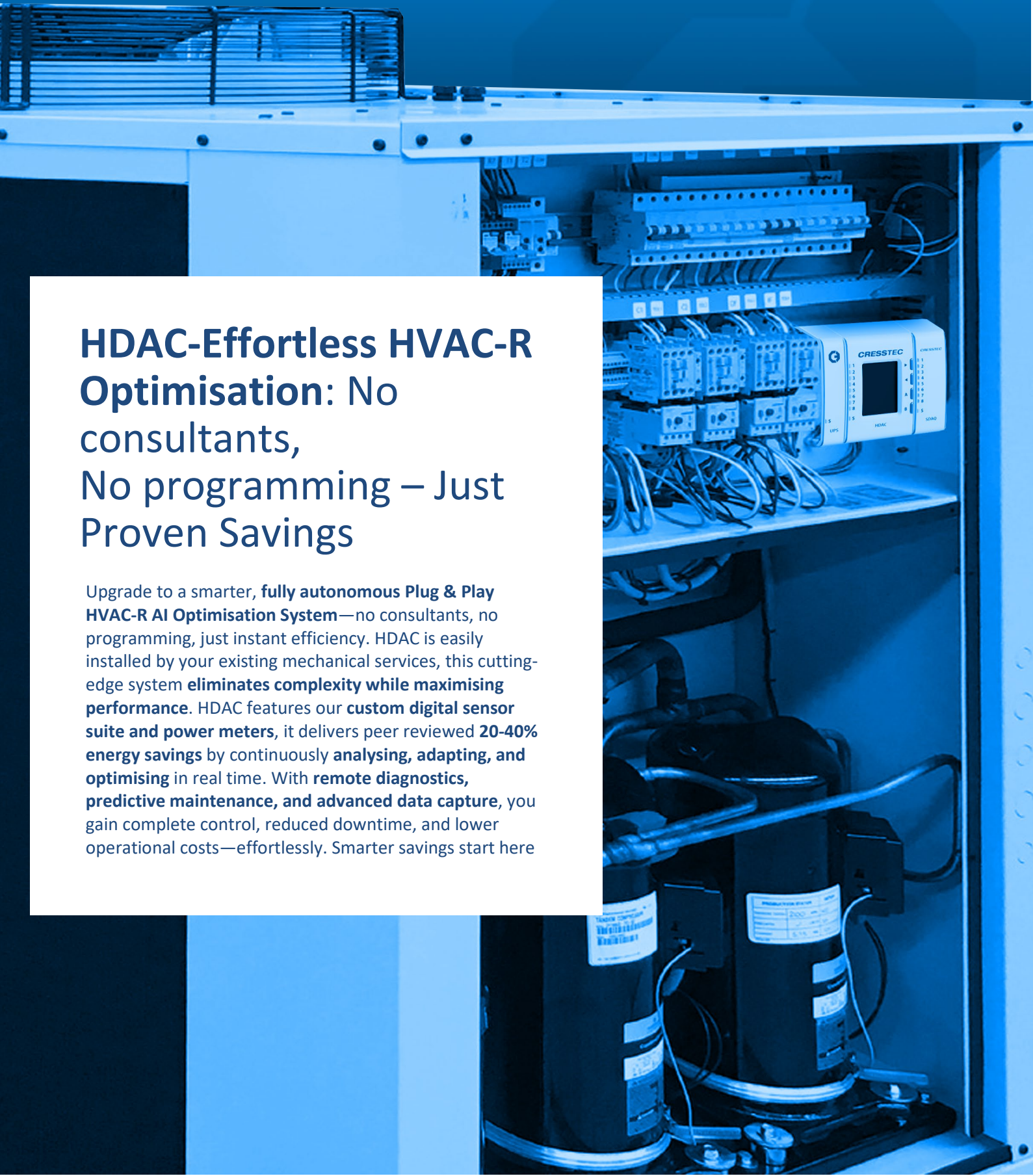


HDAC HVAC-R autonomous AI optimisation control system and data acquisition

Full digital sensor suite, plug and play operation. Suitable for all HVAC- R applications.

HDAC-Effortless HVAC-R Optimisation: No consultants, No programming – Just Proven Savings

Upgrade to a smarter, **fully autonomous Plug & Play HVAC-R AI Optimisation System**—no consultants, no programming, just instant efficiency. HDAC is easily installed by your existing mechanical services, this cutting-edge system **eliminates complexity while maximising performance**. HDAC features our **custom digital sensor suite and power meters**, it delivers peer reviewed **20-40% energy savings** by continuously **analysing, adapting, and optimising** in real time. With **remote diagnostics, predictive maintenance, and advanced data capture**, you gain complete control, reduced downtime, and lower operational costs—effortlessly. Smarter savings start here



Fully Autonomous AI System (no programming)

- AI system optimisation for energy savings
- AI system optimisation for plant life extension
- Self-diagnosing fault detection and reporting
- Self-learning, data calibration and baseline to controlling
- Self-calibrating digital sensor suite

Energy Savings

- 20-40%
- Observed savings of 40.6%
- Independently verified (CSIRO NP0031 – Report)

Remote Diagnostics – Predictive Maintenance

- Compressor, fan or expansion device failures
- Blocked Coils
- Major Refrigerant Leaks

Plant Life Extension

- If installed within the first 5 years, estimated 2.4 years

Secure and Reliable

- Uninterruptible Power supply (UPS) for safe shutdowns
- Isolated power supply

Connectivity

- 2 Ethernet ports RJ45
- 1 Interconnect Cable Port RJ45
- 8 sensor ports RJ12 (6P6C)
- Auto-recognition RJ12 sensor ports
- No special installation or wiring required
- 4G connectivity

HDAC Smarter HVAC-R Optimisation

Achieving maximum efficiency in HVAC-R systems has never been easier. Our **fully autonomous Plug & Play AI Optimisation System** eliminates the need for consultants, complex programming, or specialized integration. Designed for effortless deployment, it can be installed by your **existing mechanical services team**, instantly upgrading your system to **AI-driven intelligence**. This game-changing solution continuously **monitors, analyses, and optimises** performance in real time, ensuring your HVAC-R system operates at peak efficiency—**delivering 20-40% energy savings, verified through peer-reviewed research**.

At the core of our system is a **comprehensive digital sensor suite and power meters**, providing precise, real-time data on your HVAC-R system's performance. Unlike traditional setups that rely on static programming and manual adjustments, our AI-driven solution adapts dynamically to changing conditions, optimising energy consumption without compromising comfort or performance. The result? **Lower energy costs, reduced carbon footprint, and improved system longevity**, all with **zero ongoing manual intervention**.

Beyond energy savings, our system offers **remote diagnostics and predictive maintenance**, ensuring proactive issue detection before failures occur. By continuously analysing equipment health and performance trends, the AI can **predict potential faults and inefficiencies**, allowing maintenance teams to **address issues before they escalate into costly breakdowns**. This minimises downtime, extends equipment lifespan, and significantly reduces maintenance costs—transforming HVAC-R management from reactive to proactive.

Seamless integration, unmatched efficiency, and **effortless automation**—HDAC is the future of HVAC-R optimisation. Whether for commercial buildings, industrial facilities, or data centres, our **Plug & Play AI system** makes cutting-edge technology accessible **without complexity or disruption**. Experience the benefits of **verified energy savings, intelligent automation, and total operational control**—all in a system that works for you.

**: In preparation & continuously being updated.*

Product Overview	HDAC	SDAQ	UPS
Connectors	8x Sensor Ports (RJ12 6P6C)	8x Sensor Ports (RJ12 6P6C)	
	2x Ethernet (RJ45)		
	1x LTE/4G Female (SMA) (4G)		
	1x Interconnect Cable (RJ45)(2)	1x Interconnect Cable (RJ45) ⁽²⁾	
			1x 4 Pin Power Female
Terminal Blocks (Modbus RS485)	1x A/C Controller Connector (3 pin)		
	1x PDAQ ⁽³⁾ Connector (3 pin)		
	1x BMS ⁽⁴⁾ Connector (4 pin)		
Dimensions (LxWxH)	101mm x 76mm x 105mm	101mm x 38mm x 105mm	101mm x 25mm x 105mm
Mounting	DIN rail compatible		
Weight	400g	200g	200g
Operating Environment	-25 to +60 °C, 5% – 95% RH (non-condensing)		
Storage Temperature	-40 to +85 °C		
IP Rating	IP 42		
Power Supply	24V DC supplied by UPS ⁽⁵⁾	24V DC supplied by UPS ⁽⁵⁾	24V DC



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