



*Eliminate Unplanned
Downtime Forever*

Plastics Extruder Motor Case Study



PROBLEM: A Midwest HDPE pipe manufacturer needed an end-to-end condition monitoring system to monitor the health of their machine assets, prevent persisting unplanned downtime and increase productivity. The manufacturer selected a risk-free trial of Vero and in July 2020, Nikola Labs installed 57 monitoring points on 13 critical assets. Four days after installation, the dedicated Vero Condition Monitoring Engineer (CME) observed harmonics of 126 Hz with 30 Hz sidebands on the drive end of the facility's primary Extruder Motor. The bearings on this motor had been replaced just five months prior and route-based monitoring had failed to find any issues in April.



RECOMMENDATION: After analyzing the data, the Vero CME quickly issued a Prescriptive Asset Alert (PAA), recommending immediate replacement of the motor bearings at the next available opportunity and, until then, ensure bearings are greased without over greasing.

RESOLUTION: The manufacturer's maintenance contractor inspected the motor and found multiple issues, including damaged DE bearings with heavy fluting, DE and ODE bearing housings oversized/out of round, and no housings insulated. The 5-month old motor bearings were replaced, all fits restored, and an Aegis grounding brush installed on the DE. Quick action prevented up to 13 weeks of unplanned downtime and avoided \$30k-\$60k in extensive repair costs – 19X to 38X more than the \$1,596 Vero monthly subscription.

**\$30k-\$60k
Costs
Avoided**

**6-13 Weeks
Downtime
Prevented**

**19X-38X
ROI**

Contact Michael Bernhard at Nikola Labs
And Stop Unplanned Downtime Today!

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Vero

*Eliminate Unplanned
Downtime Forever*

Rapidly Deployable, End-to-End Remote Condition Monitoring Solution

Vero is the Only Condition Monitoring Solution for Manufacturing that Includes:

- Dedicated Condition Monitoring Engineer (CME) Tracking Your Machine Health 24/7
- Monitoring Hardware & Communication Network
- Data Visualization Software
- Professional and Quick Installation
- Unlimited Customer Support
- One Low Monthly Cost

Your dedicated CME works with you to understand your operation and identify critical assets to monitor.

As your newest team member, your CME analyzes your data, receives threshold alerts, creates prescriptive asset alerts and communicates maintenance recommendations to you before machines fail.

**All-Inclusive
Pricing**

No CAPEX

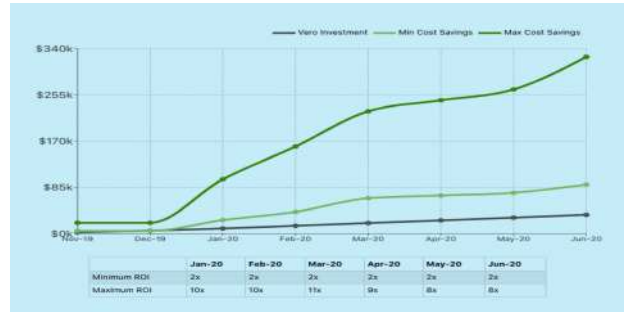
**Integrates with
your CMMS**

**8.3x
Average ROI**

DYNAMIC ROI >>

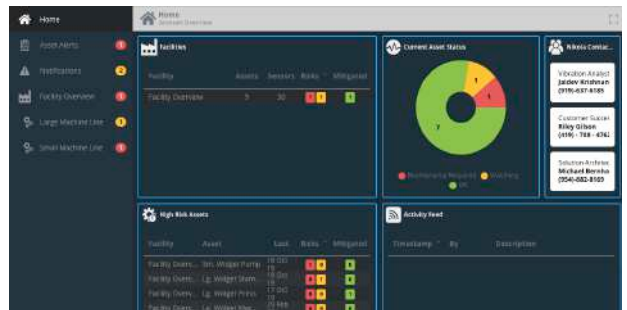
See your Return on Investment in real time with our Dynamic ROI® tool.

Our customers have averaged 8.3x ROI.



<< PRESCRIPTIVE ASSET ALERTS

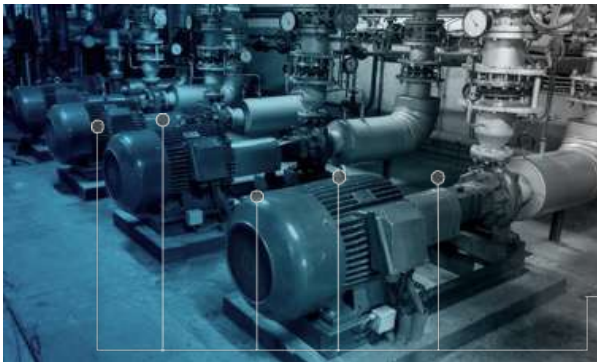
With Vero, you don't get sensor alerts. You receive in-depth analysis and prescriptive recommendations from your CME, and peace of mind knowing a trusted partner is watching your machines for issues.



CLOUD-BASED SOFTWARE >>

Collaborate with your dedicated CME around machine issues using your full suite of vibration and temperature analysis tools.

Dashboard and reporting help keep your pulse on asset health across your facility and enterprise.



<< MAINTENANCE-FREE WIRELESS SENSORS

Cutting edge proprietary technology in ultra-low power electronic design means your sensors will last for many years without needing to be replaced and, when they do, we replace them for free.

Sensors monitor Tri-Axial Vibration and Temperature

Contact Michael Bernhardt Today to Schedule Your Risk-Free Trial and Reduce Downtime Forever.

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