

# TURNING INHERENT ISSUES INTO INTRINSIC SOLUTIONS

Innovation is more than our end goal. It's our state of mind. We don't just work towards it- we work within it.

This mindset has powered Sandvik since our founding in 1862. Precise solutions are the natural byproduct of constant improvement. To that end, we've created a patented Compressor Management System (CMS) to tackle two of the primary issues facing drillers today – increasing productivity and reducing environmental impact.

## VALUE IN EVERY MODE

**Start-Up:** CMS holds the inlet butterfly closed to allow the engine to crank, start, and accelerate to low idle, making the drill much easier to start.

**Off Load:** When the compressor is off load, the CMS regulates receiver pressure and evacuates the main compressor, thus reducing engine load and compression where when air is not needed.

**On Load:** When the compressor is on load, the CMS throttles the volume of the compressor to deliver the desired up hole velocity so no air is wasted with excess pipe and bit wear.

**Shutdown:** CMS unloads the compressor from the engine to allow for cooler engine shutdown, extending turbo and engine life.

"The Sandvik CMS will save us thousands of gallons of fuel every year. It was a classic no-brainer."

– Mark Gilbertson, Director of Asset Management, Cloud Peak Energy



# REDUCE IMPACT IMPROVE EFFICIENCY

COMPRESSOR MANAGEMENT SYSTEM



B2-XXXXENG © Sandvik Mining and Rock Technology 2017  
Sandvik, AutoMine and iSure are trademarks owned by Sandvik AB through Sandvik Intellectual Property AB and other subsidiaries.

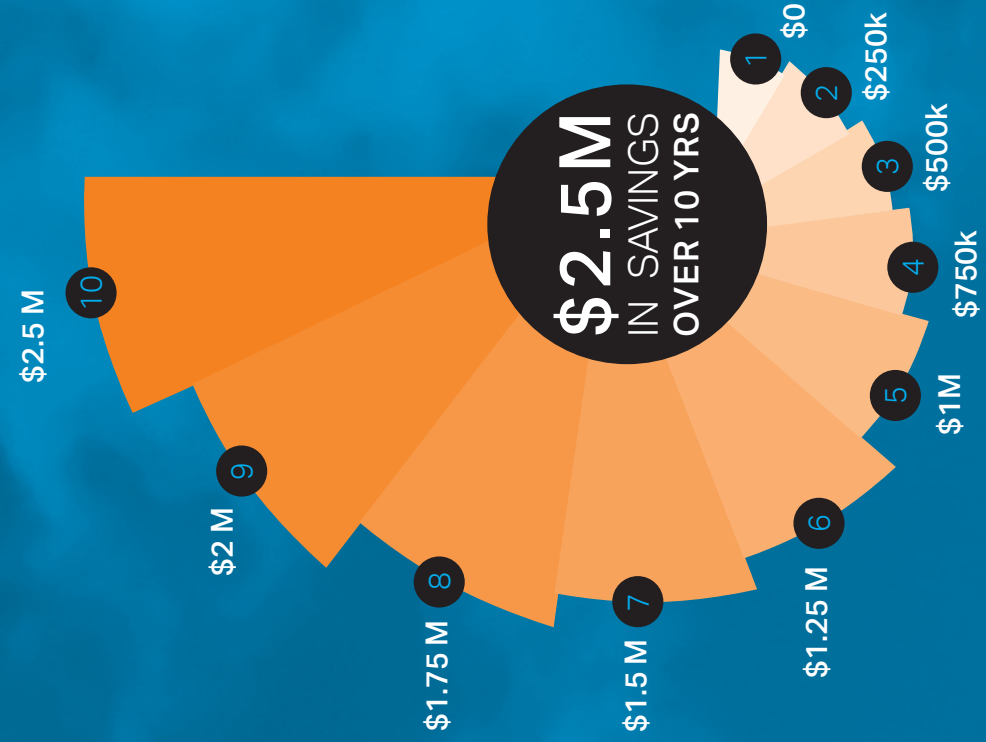


# THE SANDVIK CMS ADVANTAGE

## BOOST PRODUCTIVITY AND REDUCE EMISSIONS

### HOW IT WORKS

The system works by isolating the compressor and eliminating the need to maintain pressure when the machine is not drilling. This reduces the load on the engine, saving you a significant amount of fuel and reducing wear and tear on your engine.

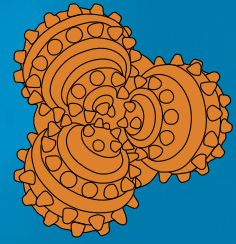


### SERIOUS SAVINGS

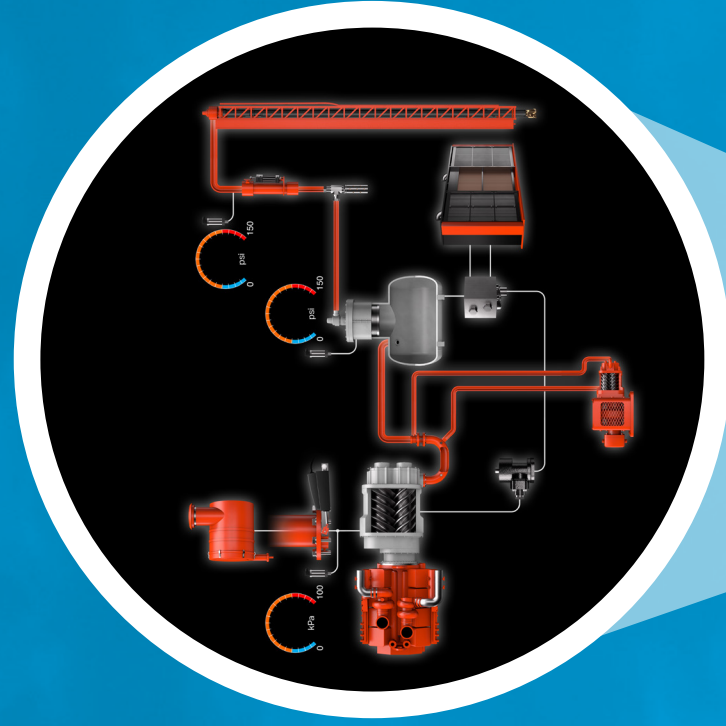
Customers who implement our compressor management system could achieve a cumulative savings as high as **\$2,500,000\*** OVER 10 YEARS.

### ADVANTAGES

**20-35%  
LESS FUEL  
CONSUMPTION**



**REDUCE  
DRILL BIT  
& DRILL PIPE  
WEAR**



**22.9**  
GALLONS  
W/OUT CMS

**86.7**  
LTR/HR  
W/OUT CMS

**16.9**  
GALLONS  
WITH CMS

**64**  
LTR/HR  
WITH CMS

### CUSTOMER RESULTS

BURNED **24,000**  
**FEWER**  
gallons of fuel per year

🔥 = 1,000 gallons of fuel

CUSTOMERS EXPERIENCED  
**A SAVINGS OF  
\$108,000/YEAR**

**CO<sub>2</sub>**  
REDUCED CARBON  
EMISSIONS by 300t



**INCREASED  
ENGINE AND  
COMPRESSOR LIFE**

**MAINTENANCE**  
intervals  
**EXTENDED**

