

# COMMAND FOR DOZING

## BUILD EFFICIENCY AND ENHANCE SAFETY WITH DOZING AUTOMATION.

Cat® MineStar Command for dozing improves safety and efficiency by taking operators off their machines and letting them work from either nearby or remote locations. Command delivers value across the entire operation through consistent dozing, increased safety, greater operational efficiency, reduced operational waste and lower costs. Deep integration with Cat machine systems enables smooth, precise control for maximum efficiency and productivity.

The system is scalable and flexible, with three modes of operation. An over-the-shoulder, portable console works well for short-duration activities. A remote operator station enables the operator to work in a comfortable, seated position with familiar controls. And semi-autonomous operation allows a single operator to manage multiple machines for maximum efficiency.

### BENEFITS

- » Protects operators from on-site dangers and environmental hazards.
- » Eliminates prolonged exposure to noise, dust and vibration.
- » Allows application of geo-fencing and Avoidance Zone capabilities from Cat MineStar Terrain.
- » Enables operations from a comfortable off-site command center close to home.
- » Reduces travel costs and infrastructure needs.
- » Improves equipment utilization and shift-long operator efficiency.
- » Provides a range of Command for dozing offerings to suit the needs of individual sites and applications.
- » Improves productivity and efficiency by making it possible for one operator to control multiple dozers.

#### REMOTE CONSOLE



#### REMOTE STATION



#### SEMI-AUTONOMOUS



### DIFFERENTIATORS

- » **Integration.** MineStar is a fully integrated system, and Command for dozing is deeply integrated with the machine systems on Cat dozers for maximum efficiency.
- » **Semi-autonomy.** Command for dozing is the only semi-autonomous dozer product available in the mining industry.

**3 MILLION**  
ADDITIONAL BANK CUBIC  
METERS ANNUALLY

**15%**  
PRODUCTIVITY  
IMPROVEMENT



**\$0.02-\$0.05**  
REDUCTION IN  
COST PER YARD

**40%**  
REDUCTION IN  
OPERATIONAL WASTE

**SUCCESS STORIES**

Cat MineStar Command for dozing has proven results at a number of sites and production studies have shown significant opportunities. We partner with customers to get real-world feedback about how the system is performing and we use that feedback to continually improve the product and processes.

- » One mine implemented semi-autonomous dozing for just two dozers, and achieved a 90 percent return on investment in just five years. However, that timeline can be shortened by adding more dozers to the system.
- » An Australian site has fully implemented semi-autonomy throughout, equipping seven dozers and netting \$2 million per year in increased profit thanks to an increased production gain of 3 million bank cubic meters annually.
- » A D11 value analysis done using a North American mine validated a 15 percent productivity improvement through a production study, as well as a reduction in cost per yard of \$0.02-\$0.05. The study also identified the potential for additional cost savings from labor reductions and optimized use of the dozer fleet.
- » A coal mine in Wyoming implemented semi-autonomy on four dozers and reported the system paid for itself in under a year.
- » We've estimated a 40 percent reduction in operational waste thanks to the improved efficiencies of automated dozing.