

Surface and Underground Mining

Off-Highway Drive and Motion Systems





1904

history dating back 120 years

88 major manufacturing

employees globally

13K customers in

140 countries

countries with Dana presence

country network of technology centers

Off-Highway Segments

Dana leverages our global expertise to engineer the most advanced, customized product solutions for developed and emerging markets. Our drive and motion products serve a wide range of demanding industries, including applications for equipment with wheel and track drives as well as stationary machines.

Vision

Powering Innovation To Move Our World

Mission

Driving stakeholder value by powering vehicles and machines around the world shaping sustainable progress through invention and execution; and making the amazing happen wherever people live, work, and play.

Values

Value Others

Inspire Innovation

Grow Responsibly

Win Together





Mobile











CONSTRUCTION AND FORESTRY





Industrial















HEAVY INDUSTRY: STEEL, SUGAR, AND CEMENT







PLASTIC AND RUBBER



38%

Light Vehicle Drive Systems

CORPORATE BUSINESS UNITS

20% **Commercial Vehicle Drive and Motion Systems**



12%

Technologies

30%

Drive and Motion Systems

|1

Drive and Motion Innovations

Propelling Transformations in Mining

The mining industry is facing an unprecedented transformation including accelerating demand for minerals, decarbonization initiatives, the predictive insights available through digitization, and the movement toward autonomous vehicle operation.

From field-proven systems for traditional equipment designs to next-generation hybrid and electric technologies, Dana offers a wide portfolio of drive and motion solutions to help boost the performance and profitability of mining operations.

Every mine is unique, which is why our global team designs, engineers, and manufactures systems for mobile and industrial applications customized for regional, regulatory, vehicle, application, duty cycle, supply chain, and operator requirements.

Whatever your strategy, our goals remain the same: helping mining enterprises improve efficiency, reduce fuel consumption, promote safety, simplify maintenance, extend life cycles, support sustainability initiatives, and optimize the total return on investment.

Mobile Solutions We Keep Mines Moving

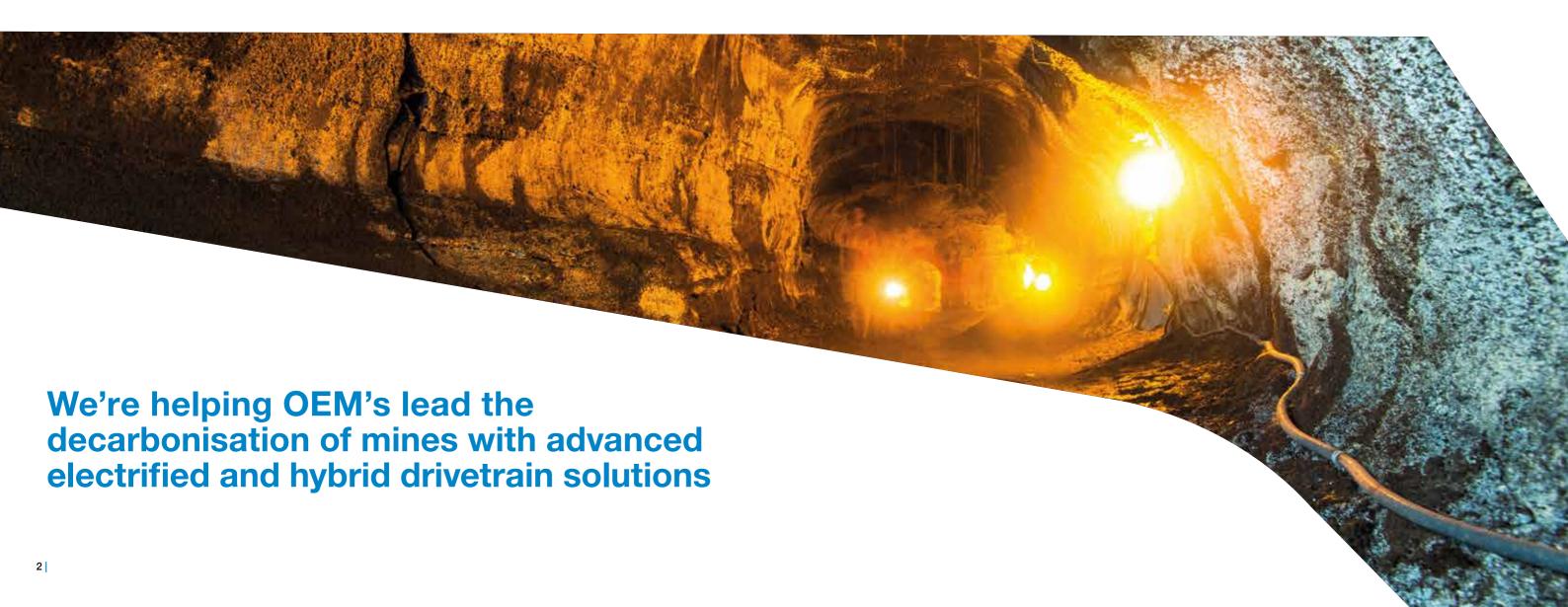
High-productivity mining operations employ a broad spectrum of mobile equipment to promote process efficiency and maximize throughput.

Successful mining operations are defined by their ability to be highly productive and efficient. The evolution of mobile equipment to meet these needs has been constantly accelerating, needing to work together in harmony whilst each with a specific function innovated over decades.

We have over 60 years of crafting advanced solutions, each robustly engineered to satisfy the mining industry's ever-increasing demands.

Recognizing that every application is distinct, we offer a versatile range of Spicer® Drivetrains, Spicer Torque-Hub™ track drives, and Brevini™ motion solutions, designed to help move more material, more efficiently. Our newly certified remanufacturing program breathes new life into your existing transmissions and axles. This not only extends their lifecycles but also enhances the return on investment.

As pioneers in technology, we're spearheading efforts to decarbonize mining. Our low and zeroemission driveline solutions are testament to our commitment to a greener future.



Load Haul Dumper





Spicer® Planetary Rigid Axle

- Single piece, cast iron housings withstands
 Seamless gear shifting with proven the most severe working conditions
- Upgraded sealing solutions specified for the extreme requirements of underground mining

A century of quality and innovation

Multiple driveshaft and end-fitting

Spicer® Driveshaft

8.5C Series

combinations



Spicer® Powershift Transmission

- proportional TE powershift transmission control technology
- 4-speed symmetrical gearing for exceptional performance in both driving directions





Spicer® Powersplit Transmission

- CVT powersplit technology providing increased productivity with maximum fuel savings
- Stepless drive with no interrupted acceleration enhances operator comfort



Spicer® e-Transmission eSP502

- Highly-integrated, zero-emission driveline solution for loader and truck applications
- Dual motor architecture allows for flexibility between high-performance or high efficiency operations



LD HV1200



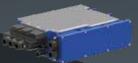
- 3-Phase, 140kW 750V high-voltage motor
- High torque / low speed IPM motor suitable for mid-sized PTO applications





Dana TM4™ On Engine Generator HP HV2500

- 6-Phase, 440kW 750V high-voltage generator
- Continuous rating suited for diesel engines up to 350kW





Dana TM4™ High-Voltage Inverters CO Series

- 3- or 6-phase 800V inverter solutions
- New Si-C technology available with improved output power and system efficiency

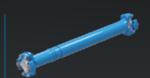
Dana offers customized solutions to meet a range of customer needs, including modular designs and add-on accessories.

Drill Rig



Spicer® Planetary Rigid Axle

- Compact, high-strength axle designs maximise tramming capacity in modern drilling applications
- Integrated positive wet discs brake with negative parking function (SAHR) for safety in operation



Spicer® Driveshaft

7C Series

- A century of quality and innovation
- Multiple driveshaft and end-fitting combinations



Spicer® Powershift Transmission

- Industry-leading powershift transmission, available in both reliable mechanical version to full electronic control system
- 3 or 4 speed fully symmetric gearing for maximum performance in both driving directions



Spicer Torque-Hub™ CTM Series

- Integrated hydraulic motor and gearing system for precise positioning of drilling boom
- Minimised backlash of internal gears stabilizes boom for maximum drilling accuracy





Dana TM4™ ePTO System LD HV1200

- 3-Phase, 140kW 750V high-voltage motor Single speed transmissions' range (3 sizes)
- designed for input speed up to 12K rpms High torque / low speed IPM motor suitable 40% efficiency improvement at double for mid-sized PTO applications speed compared to a conventional



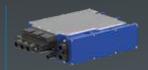
Spicer[™] e-Gearbox

comparable product

eSG101

Dana TM4™ On Engine Generator HP HV1000

- 3-Phase, 140kW 750V high-voltage motor
- Continuous rating suited for diesel engines up to 120kW



Dana TM4™ High-Voltage Inverters CO Series

- 3- or 6-phase 800V inverter solutions
- New Si-C technology available with improved output power and system efficiency



Spicer® Powershift Transmission TE50

- Single piece, cast iron housings withstands
 Seamless gear shifting with proven TE powershift transmission control technology
 - Integrated hydraulic retarder for unparalleled downgrade speed control



Spicer® Driveshaft 9C Series

- A century of quality and innovation
- Multiple driveshaft and end-fitting combinations



of underground mining

Spicer® Planetary Rigid Axle

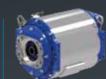
for the extreme requirements

the most severe working conditions

Upgraded sealing solutions specified

Mining Truck

- Spicer Torque-Hub™ eSH801
- A fully integrated, electrified wheel drive solution
- Each wheel drive includes a 3-phase, 215kW 750V traction motor





Dana TM4™ ePTO System LD HV1200

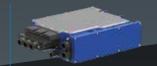
- 3-Phase, 140kW 750V high-voltage motor
- High torque / low speed IPM motor suitable for mid-sized PTO applications





Dana TM4™ On Engine Generator HP HV2500

- 6-Phase, 440kW 750V high-voltage generator
- Continuous rating suited for diesel engines up to 350kW



Dana TM4™ High-Voltage Inverters CO Series

- 3- or 6-phase 800V inverter solutions
- New Si-C technology available with improved output power and system efficiency

Dana offers customized solutions to meet a range of customer needs, including modular designs and add-on accessories.

Surface Drill Rig



Brevini Evolution¹¹ Series Winches

- Line pull up to 16 tons
- Wide range of safety controls



Spicer Torque-Hub Track Drives™ RCT Series

- Compact design solution
- Manual disengagement device for towing

Surface Dump Truck





- Handles added input torque and heavy loads
- Designed for longer life, minimal maintenance, and lower operating cost

Surface applications



Brevini™ Industrial Planetary Gearbox

In line and right angled configurations

Mobile Crusher

Compact design



Brevini™ Winch Drive

- Compact design
- Hydraulic / electric motor interface



Spicer Torque-Hub Track Drives™ RCT Series

- Compact design solution
- Manual disengagement device for towing



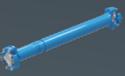


- Highly-integrated, zero-emission driveline solution for loader and truck applications
- Dual motor architecture allows for flexibility between high-performance or high efficiency operations





- HV1200 3-Phase, 140kW 750V high-voltage motor
- High torque / low speed IPM motor suitable for mid-sized PTO applications



Spicer® Driveshaft

- Handles added input torque and heavy loads
- Designed for longer life, minimal maintenance, and lower operating cost

Dana offers customized solutions to meet a range of customer needs, including modular designs and add-on accessories.

Market-Driven **Off-Highway Innovation**

About Dana Incorporated

Over 40,000 Dana dreamers in over 30 countries drive mobility and transportation forward — wherever the road, or offroad, takes our customers and communities.

A leader in the design and manufacture of propulsion and energy-management solutions, Dana powers vehicles and machines in all mobility markets across the globe.

Delivering groundbreaking drive systems. Advancing revolutionary motion technologies. Championing leading-edge power management innovations across thermal technologies for e-Propulsion; controls and software; battery management systems; and fuel cell plates.

With a balanced portfolio — including complete in-house electrification capabilities - Dana provides classleading products and systems supporting traditional, hybrid, and EV manufacturers. Everywhere.



About Dana Off-Highway Drive and Motion Systems

Dana delivers fully optimized solutions to customers in the construction, agriculture, material handling, mining, and industrial markets.

Dana.com/oh Dana-industrial.com/contact-us

Application Policy
Capacity ratings, features, and specifications vary depending upon the model and type of service. Application approvals must be obtained from Dana; contact your representative for application approval. We reserve the right to change or modify our product specifications. configurations, or dimensions at any time without notice.

