

# Self-Propelled Sprayer Drive and Motion Solutions



# Full-System Solutions for Sprayers

Dana's portfolio of advanced technologies have been engineered to meet the needs of farmers. Our modern equipment supports higher crop yields and lower operating costs. Dana's fullsystem solutions for self-propelled sprayers include proven Spicer® Torque-Hub® wheel drives and Brevini® hydraulic and electronic components specifically designed to improve speed, maneuverability, efficiency, and safety.



Patented service brake to meet on-road stopping requirements

Heavy duty main bearings and retention for high wheel offsets and side loads

machines up to 60 km/h



# Brevini® Piston Pump and Gear Brevini® Fan Drive Gear Motor **Pumps HD1/OT300+OT200**

Wide range of swashplate controls available Two built-in pressure relief valves protect the system from pressure overloads

Swashplate design Integrated electro proportional and on-off valves

Embedded additional bearings for external loads



# Brevini® Programmable **Control Unit**

Dual / redundant microprocessor Optimized for off-highway equipment performance and safety enhancement Waterproof, aluminum compact body PWM outputs with closed loop current



### **Brevini® Tilt sensor SP Series**

Constantly measures vehicle tilt



Designed for sprayers capacities carrying from 2000 to 8000 liters

High speed thermal stability for operating

Low maintenance requirements and easy to service



Cast iron body for improved efficiency especially at high oil temperature

High volumetric and mechanical efficiencies

Low noise level

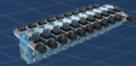
Built-in proportional relief valve for fan speed control Built-in anti cavitation valves



# Brevini® HIC Series - Customized Brevini® Cetop valves **Hydraulic Integrated Circuit**

Best In Class valve technology taken from Cartridge and Cetop valves range Less leakage risk. No check valves need on the cylinders

Compact overall dimension Easier Piping /Hosting



Fixed and variable displacement options On/off or proportional directional flow Bankable cetop valves for harsh



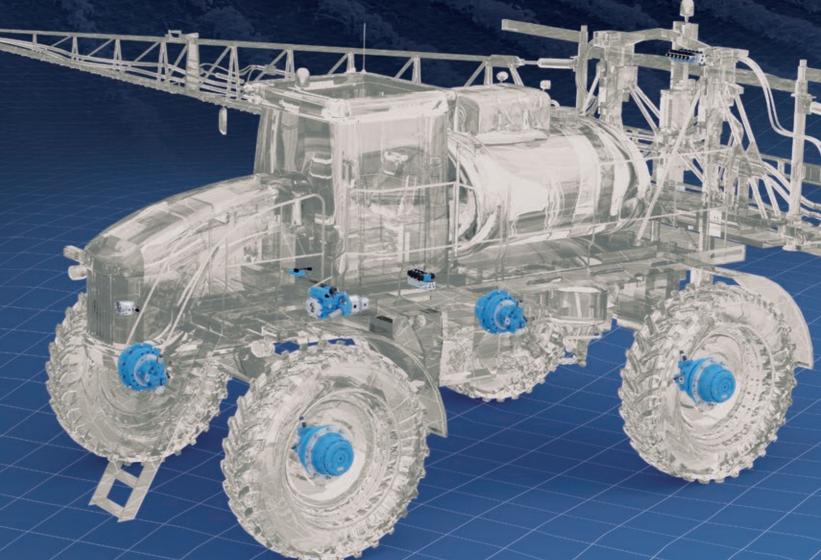
## **Brevini® Proportional Pressure Compensated Bankable Valve**

LSA and LSB valves available

GAS and SAE ports available

Same interface of all Dana bankable valves range to mix slices with post-compensated or not compensated valves

Modular valves (check and pressure relief)



# Spicer® Torque-Hub® C0 Series

# A New Standard in Sprayer Drives

With 50 years' experience with spray tractor applications, Dana took a fresh approach incorporating the best design features into the new C0 family of Spicer® Torque-Hub® wheel drives. These features provide machine designers with the greatest flexibility to accommodate the current market demands for a range of machines, satisfying requirements for machine weight, speed, tire offsets, braking performance and durability.



## INTERNAL SERVICE BRAKE ELIMINATES CHEMICAL

EXCEPTIONAL THERMAL PERFORMANCE FOR HIGHER SPEEDS

> HEAVY DUTY DESIGN

> > PROVEN DURABILITY

DESIGNED FOR IMPROVED SERVICEABILITY

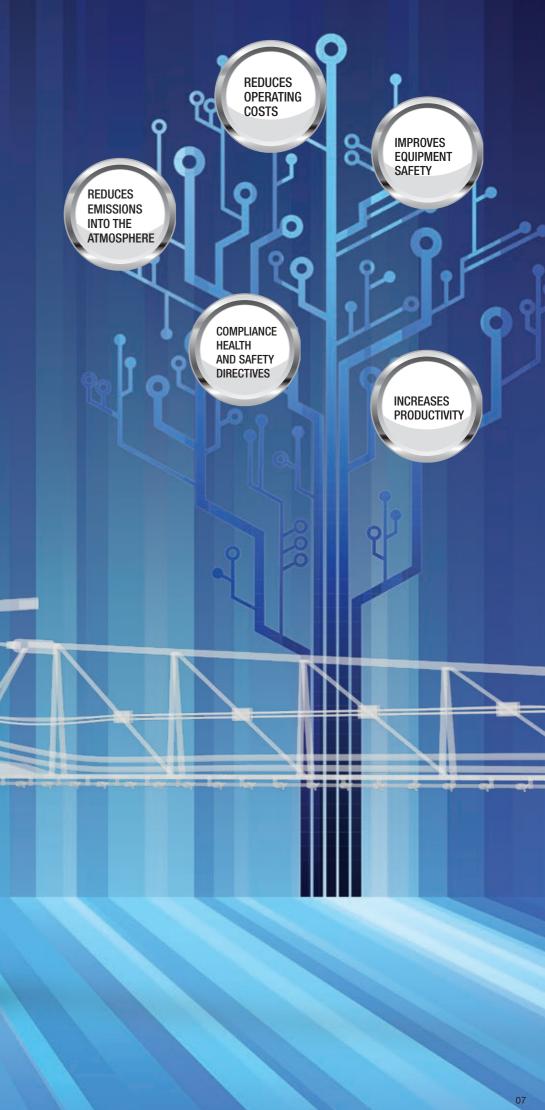
# Spicer® Torque-Hub® New C0 Series

- 1-Product range specifically designed for modern high-performance sprayers
- 4-Products for machine capacities carrying from 2000 to 8000 liters
- Torque ratings from 16.000 Nm to 36.000 Nm
- Patented service brake to meet on-road stopping requirements
- Heavy duty main bearings and retention for high wheel offsets and side loads
- High speed thermal stability for operating machines up to 60 km/h
- Low maintenance requirements and easy to service
- Suitable for hydraulic and electric driven vehicles, with Dana's hydraulic and electric motors
- Easily integrated with central tire inflation system (CTIS)

# Pioneering electrification, protecting the environment

A new era of mobility is upon us. Emissions regulations and government policies are manifesting at an ever-increasing pace, and visions of vehicles that reduce operating costs while enhancing productivity and safety are accelerating the need for alternative propulsion solutions. For over 20 years, our group of highly focused engineers has been dedicated to research and development of new technology solutions aimed at electrification. We have built a broad portfolio of award-winning, patented technologies, making us a leader in electrification.

Today we can proudly say that we are the ONLY supplier with the capability to help manufacturers bring electric-driven vehicles to market through our collaborative, systems-oriented approach; decades of expertise; and broad selection of proven drive and motion capabilities for electrified vehicles. Dana offers a full product portfolio and multiple technologies for electrification needs. Through our market-proven brands, we can provide motors, inverters and controllers for low- and high-voltage applications ranging from 24 to 800 V.





# Technologies Customized to Every Part of the Globe

With a presence in 33 countries,
Dana Incorporated boasts more than
145 engineering, manufacturing,
and distribution facilities. Our worldwide
network of local service centers provides
assurance that each customer will benefit
from our proximity and responsiveness.

### **About Dana Incorporated**

Dana is an integral partner for virtually every major vehicle and engine manufacturer worldwide. We are a leading supplier of drivetrain, sealing, and thermal technologies to the global automotive, commercial-vehicle, and off-highway markets. Founded in 1904, we employ thousands of people across six continents.





### **About Dana Off-Highway Drive and Motion Technologies**

Dana delivers fully optimized Spicer® drivetrain and Brevini® motion systems to customers in construction, agriculture, material handling, mining, and industrial markets. We bring our global expertise to the local level with technologies customized to individual requirements through a network of strategically located technology centers, manufacturing locations, and distribution facilities.

Learn more about Dana's drivetrain and motion systems at dana.com/offhighway.

