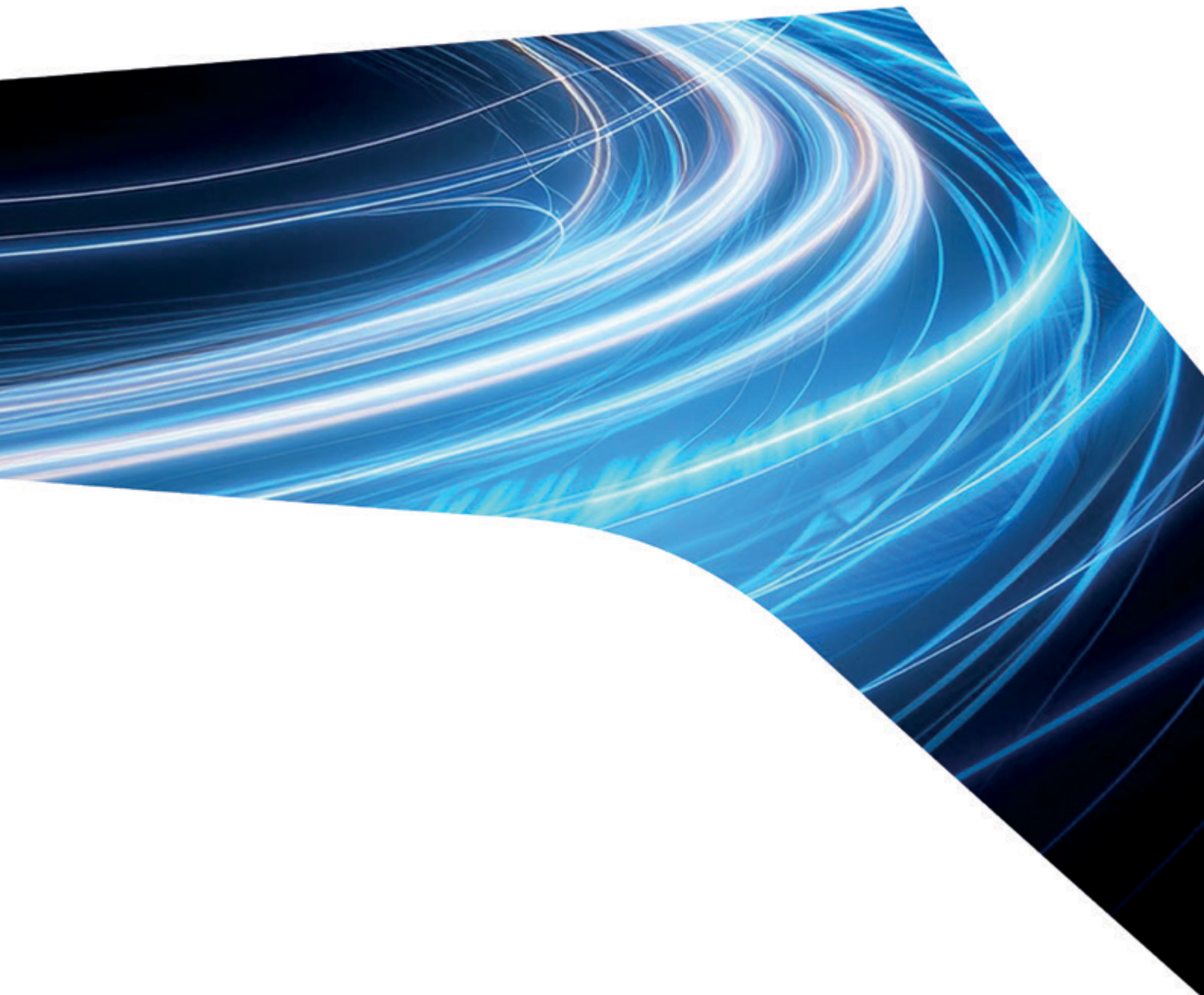




Off-Highway
Drive and Motion Systems
Industrial Business





People Finding A Better Way®

1904

history dating back 120 years

88

major manufacturing facilities

42K

employees globally

13K

customers in 140 countries

31

countries with Dana presence

10

country network of technology centers

Our Vision

Powering Innovation to Move Our World

Our 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.

Our Values

Value Others

Inspire Innovation

Grow Responsibly

Win Together

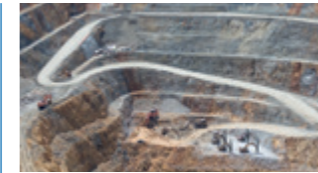
Off-Highway Segments

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.

Mobile



AGRICULTURE



MINING



MATERIAL HANDLING



CONSTRUCTION AND FORESTRY

Industrial



BULK MATERIAL AND MINING



ONSHORE AND OFFSHORE MARINE



INDUSTRIAL AND STATIONARY EQUIPMENT



HEAVY INDUSTRY: STEEL, SUGAR, AND CEMENT



WASTE MANAGEMENT AND RENEWABLE ENERGY



PLASTIC AND RUBBER

Corporate Business Units



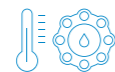
38%

Light Vehicle Drive Systems



20%

Commercial Vehicle Drive and Motion Systems



12%

Power Technologies



30%

Off-Highway Drive and Motion Systems

Enhanced Brand Portfolio

Dana's well-respected brands offer both standard and customized products backed by engineering, manufacturing, and distribution facilities positioned near customer supply chains around the world.



Planetary Drives

Slewing Drives

Winches

Helical and Bevel-Helical Drives

Gearmotors

Electronic Sensors and Controls



Driveshafts



Extruder drives



Custom Gears and Drive Systems

Dana's Industrial Focus

Dana's Industrial business team is uniquely positioned to support customers in **specialized sectors with power-transmission technologies.**

We determine each customer's **unique needs** in developing the right solution that delivers reliability, efficiency, and performance for both mobile and industrial applications.

Dana Industrial Business



Our team dedicated to **your industrial business**

At Dana, our integrated teams have decades of expertise in developing and supporting precision-made packages for our customers' highly specialized applications.

Our local technical experts can quickly define the exact drive and motion needs of your application, with support as needed from specialist application engineers ready to custom-design an integrated system solution that meets your specific needs.

Off-Highway Drive and Motion Systems

Industrial Market Technology Leader with:

Global Reach

Local Presence

Superior Manufacturing and Service

Our Strengths

Global Identity

We leverage our global expertise to deliver **premium quality**, technically advanced, and cost-effective solutions - all designed to meet the specific needs of our customers.

Technical Consulting

Dana recognizes that every customer has individual needs. Our engineers discuss the requirements of each customer in detail, calling on their in-depth knowledge of global industrial markets to **develop the right solution**.

Local and Fast

Our network of Service and Assembly Centers and sales offices provide **local support and expertise for our customers**. Our local inventory and assembly capabilities deliver the right product to you at the right time.

Extensive Product Range

Our portfolio of world-class solutions meets the needs of more than 20,000 customers around the world today through **standard and customized products** that can meet most requirements.

Solutions Provider

Dana's experienced team can match **technologies and key components** together to deliver industrial system solutions that integrate seamlessly into your application, improving performance, and simplifying your supply base.

Lifetime Support

Our global network of Service and Assembly Centers support you throughout the **lifetime of your application** with a wide and flexible portfolio of cost-effective solutions.

Customization

We **collaborate with our customers** to define your specific application requirements and provide fully customized, tailor-made solutions that check all the boxes for performance, reliability, and efficiency.

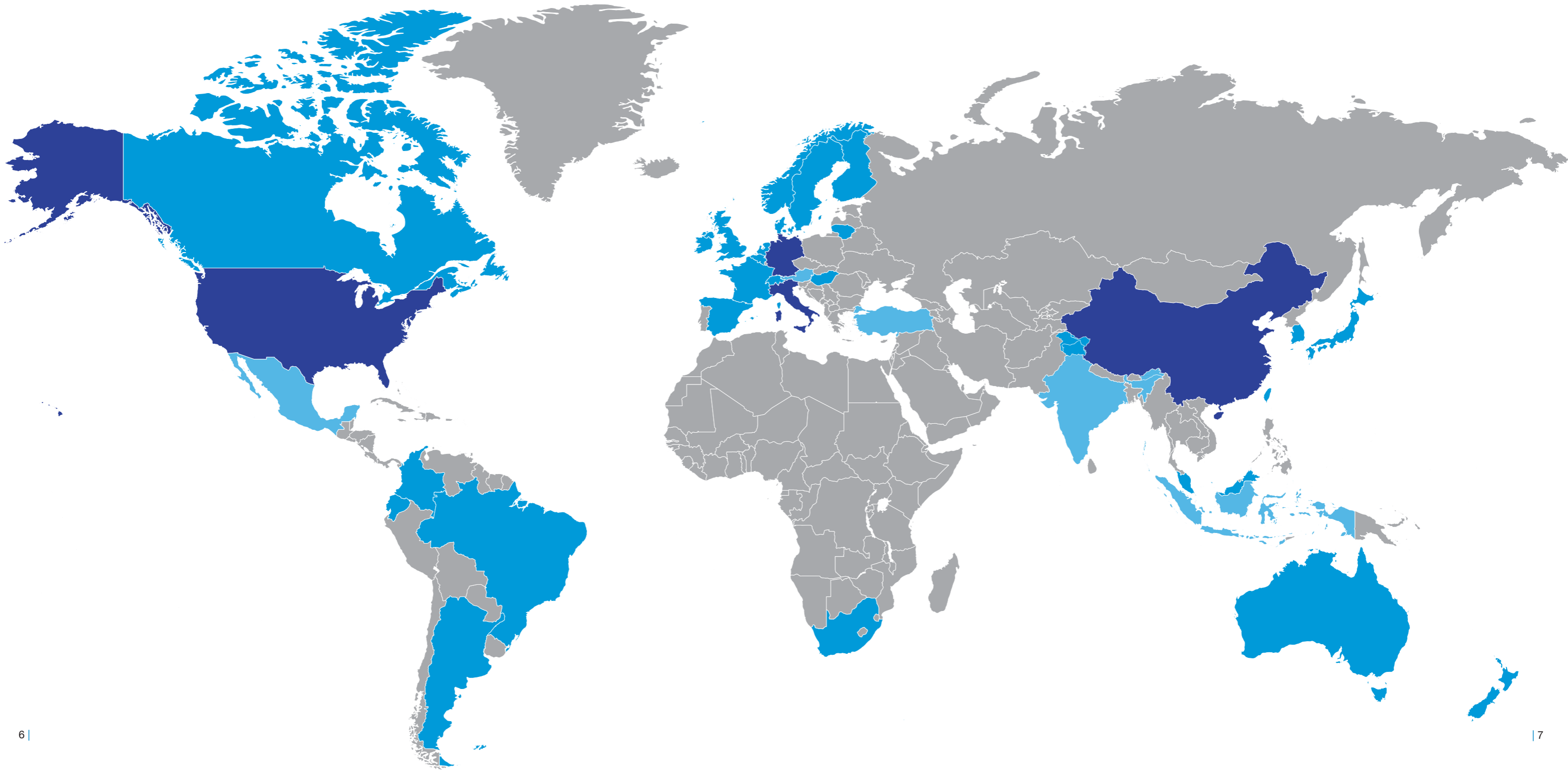
Today and Tomorrow

Our culture of continuous improvement drives us to deliver best-in-class **reliability and performance** through cost-effective solutions available today while developing advanced technologies for the future.

Our Global Network

Our worldwide network of **Service and Assembly Centers (SACs), Plants** and **Sales Offices**, provide a fast response, local market knowledge, product expertise, and after-sales support close to our customers across all market segments.

● Plants ● SACs ● Sales offices



Service and Assembly Centers SACs



Extensive product range

Small batch quantities

Short lead times

Local inventory

Local assembly capabilities

Highly specialized requirements

System solutions

Decades of market experience

Application engineering

Local market presence

Customer Needs

Customers often require solutions with **low production volumes** and exceptionally specific requirements while managing costs.

Customers often require **short delivery times** for complete product solutions.

Industrial customers serve **exceptionally specific market needs** through highly engineered applications with exacting requirements.

Industrial customers can benefit from a broader **engineering perspective informed** by best practices from around the world.

Most local suppliers have limited industry expertise and resources to **develop state-of-the-art technologies.**

Dana SACs

Dana has an extensive range of modular, flexible solutions that can be **precisely customized** into highly specialized, cost-effective solutions.

To help accelerate the delivery of solutions to customers, our significant and continued investment in local inventory, logistics, and IT infrastructure enables our SACs to reliably **forecast, monitor, and achieve** each customer's delivery requirements.

Our SACs have deep expertise across all industrial markets, enabling them to deliver tailored system solutions that provide **superior overall performance.**

Our SACs offer in-market application **engineering capabilities** bolstered by a close alignment with Dana's global industry expertise and technical resources.

Our SACs leverage **Dana's global network** of comprehensive engineering and manufacturing resources to develop customized, precision-engineered solutions deployed and supported by a local team **working within your time zone and language.**

Repair and Maintenance Services

We provide three levels of superior repair and maintenance services:

- We repair virtually most makes, models and styles of gearboxes.
- We manufacture individual gears precision-made to customer requirements.
- Our dedicated field service teams can be deployed on-site for inspections, installation, and commissioning.



Our approach to gearbox repairs goes beyond getting your equipment working again. We make it work better.

The Benefits at a Glance:

Fast, Definitive Solutions

versus frequent stoppages due to regular repairs that do not solve the problem.

Improved Gearbox Performance

thanks to an engineered solution, designed and manufactured in-house.

Root Cause Analysis, Proactive Support, and In-House Engineering

versus inconclusive, expensive repairs that never completely address the issue.



Gearbox Repair

We leverage our extensive knowledge to assess the condition of your gearbox and recommend a cost-effective long-term solution. We are equipped to repair virtually most size and style of gearbox, even those in excess of 30 tons.



Loose Gearing

We expedite the manufacture of new loose gearing through expert reverse-engineering capabilities as well as an in-house loose-gear hobber and two-meter gear grinder. We also manufacture our own shafts and other components to make the process faster, more economical, and better suited to your needs.



Field Service

Our technical teams are available around the clock to provide on-site assessments and recommendations, especially in emergency situations and when equipment cannot be relocated. They are fully equipped to perform laser alignment, vibration analysis, start-up commissioning, and other services to expedite repairs and minimize downtime.



CONSTANT SUPPORT

Our global network of technicians works overtime to fast-track your service and minimize interruptions.



LIKE-NEW REPAIRS AND UPGRADES

We repair gearboxes to better-than-OEM standards backed by warranties and with options for technical upgrades.



TIMELY AND ECONOMICAL REPAIRS

Our efficient repair process quickly and effectively returns your gearbox to operation, minimizing the economic impact to your business.

Product Portfolio

We leverage our global expertise to offer a complete portfolio of highly efficient power-transmission technologies and for industrial and stationary equipment applications.

Brevini™ Planetary Gearboxes



S-Series

Range	Nominal Torque [Nm]
S300-S20000	34,000-2,170,000



Industrial Slewing Drives

Range	Nominal Torque [Nm]
RPR030-RPR2050	5,000-24,000
SLS300-SLS850	34,000-200,000



Industrial Planetary Gearboxes

Range	Nominal Torque [Nm]
EM1010-EM1320	1,000-24,000

Brevini™ Helical and Bevel Helical Gearboxes



Brevini EvoMax™

Range	Nominal Torque [Nm]
E2H-E3H- E4H-E3B- E4B-E3C- E4C	10,000-310,000



Posired™ 2

Range	Nominal Torque [Nm]
PC-PD-PE-PLC-PLD 60 - 91	340,000-1,100,000
PB / PLB 16 - 45	5,700-113,000



Posired™ N

Range	Nominal Torque [Nm]
ND-NE 18 - 56	8,200-286,000



Posired™ TS

Range	Nominal Torque [Nm]
TS18 - TS63	8,200-400,000



Posired™ D

Range	Nominal Torque [Nm]
ILC14 - ILC25	3,100-22,800

Brevini™ Plano Helical Gearboxes



High Power

Range	Nominal Torque [Nm]
SL2PLB85016 SL2PLB200031	90,000-2,170,000



Posiplan

Range	Nominal Torque [Nm]
PH, BPH 13-28	3,900-35,000

Brevini™ Pump Drives



BZ

Range	Nominal Power [Kw]
BZ265	110-130
BZ290	170-190
BZ340	220-240
BZ470	380-480

Brevini™ Winches



Hoisting Winches

Range	Max Line Pull at First Layer [kg]
DW 050-090	500-900
BWE 015-160	1,500-16,000



Recovery Winches

Range	Max Line Pull at First Layer [kg]
BWT 10.000-30.000	10,000-30,000



Winch Drives

Range	Max Output Torque [Nm]
PWD 2100-31100	10,000-110,000
SLW 300-850	85,000-190,000
SMW 1200-3500	300,000-850,000
RCW 908-913	80,000-130,000

GWB™ Industrial Driveshafts



Driveshafts for Industrial Applications

Range	Torque Range Tcs [Nm]	Flange Diameter [mm]
687/688-598	35 up to 21,500	00-225 / 600-1,300
687-688	2,400-35,000	100-225
587	43,000-57,000	225-285
390/392/393/492	60,000-1,170,000	225-550
498/598	210,000-15,000,000	600-1,200

PIV™ Extruder Drives



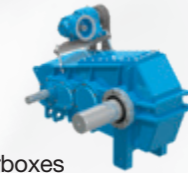
Posirex

Range	Nominal Torque [Nm]
XC-XD-XE 16 - 80	5,100-720,000



Positwin

Range	Center Distance	Torque / Shaft [Nm]
15B2N 146B2N	15-146	40-35,000



Special Gearboxes for Plastic & Rubber

Fairfield™ Custom Drives



Jacking System Drives



Tram System Drives



Transfer Case



Custom Drive Components

Range	Max Jacking Torque [Nm]
S60A-S2000	82,000-2,260,00

Product Portfolio

With over 30 years of experience, born from the legacy of BPE Electronics, Dana Sensing and Control is today a leader in the design and manufacture of sensors and electronic controllers for mobile machines, offering a complete range of products that can meet the needs of a wide range of applications, in the material handling, earthmoving, agricultural, forestry and construction sectors.

Brevini™ Sensing and Control



Solenoid Valve Drivers

Type	Description
MAV1152	Control unit for one proportional and up to 5 ON/OFF directional valves
MAV4211	Control unit for up to 4 proportional bidirectional valves



Motors and Pumps Drivers

Type	Description
MAV4211SH	Control unit for pumps, motors and hydrostatic transmissions control



Levelling Control Units

Type	Description	Axis	On-Off / PWM
GP200	Outriggers / stabilizers self levelling controller	2	ON/OFF
IDXYmp-ID3	Single or dual axis ON/OFF self levelling	1-2	ON/OFF



Electronic Control Units

Type	Description
M92	Pre programmed limitation controller

Brevini™ Sensing and Control



Angle / Tilt Sensors

Type	Description	Axis	Range
IDXYm-p-MKII	Double axis (X-Y) programmable tilt switch	1-2	±20
IDXYmp-ID3-MKII	Double axis programmable tilt switch	1-2	±20
TAC MKII	Single axis inclinometer	1	90-180-270-60
SP MKII	High accuracy double axis inclinometer	1-2	±20



Load Sensors

Type	Description	Load range [kg]	Integrated amplification
TT	Shear beam load cell	350 - 10.000	Optional
TPE	Pin load cell	200 - 100.000	Optional
TC	Compression load cell	200 - 100.000	Optional
TR	Traction load cell	500 - 50.000	No
TAN	Ring load cell	500 - 3.000	No



Length Sensors

Type	Description	Maximum displacement [m]
AS-TL	Aluminum enclosure. High accuracy length measurement. Integrated angle sensor (optional)	12.5
ASu55-TLu66	Low profile body. High accuracy length measurement. Integrated angle sensor (optional)	5
ASu-TLu	Compact body. High accuracy length measurement. Integrated angle sensor (optional)	5.5



Pressure Sensors

Type	Description	Range [bar]	Output
TPV	Single pressure transducer	0-250 0-400	0.5-4.5 V
TPA	Single pressure transducer	0-250 0-400	4-20 mA
TPA	Doublele pressure transducer	0-250	4-20 mA 20-4 mA

Integrated System Solutions

With decades of experience providing customized packages for highly specialized applications, we can deliver complete, integrated solutions with the enhanced performance, packaging optimization, and reduced maintenance requirements that can help improve your bottom line.

Customized Product Solutions

The Dana Industrial business team has many years of **commercial and technical experience** gathered from every market and application around the world.

We use this bank of expertise to understand the specific needs of each individual customer and then design, manufacture, and deliver a customized product solution that meets the precise needs of your unique application.



Dana leverages high-quality technologies to enhance the performance of your application, simplify your supply chain, and give you the confidence to drive your business forward.



Designing and Engineering solutions for maximum efficiency

Dana Industrial Business

Bulk Materials

Dana provides high-performance solutions for mobile and stationary equipment used in the bulk material handling sector.

Dana delivers turnkey projects as well as new components, upgrades, and rebuilds. We offer consulting services, systems design, engineering, procurement, installation, and support.

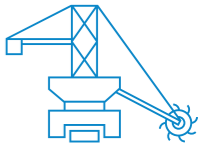
We support bulk material applications and self-propelled machines with planetary gearboxes, helical and bevel helical gearboxes, and winches. We also provide advanced solutions for critical power systems commonly used in low-speed power-transmission applications.

Driven by a talented team of engineers focused on innovation, Dana delivers proven, reliable technology from standardized products to customized solutions engineered specifically for customer needs.

Customization Excellence

Stacker Reclaimers

These versatile machines operate as both stackers and reclaimers, stacking material in stockpiles and reclaiming loads with a bucket wheel at the end of the boom. Often less costly than maintaining a fleet of dozers, stacker reclaimers move in three directions: horizontally along the rail, vertically by lifting the boom, and rotationally by slewing its boom.



APPLICATIONS



Ship Loaders / Unloaders



Stacker Reclaimers



Roller Presses



Conveyors



Wagon Tipplers and Positioners



Apron Feeders



Dana Industrial Business Heavy Industry

Dana provides a complete range of mechanical transmissions products to meet numerous requirements in heavy industry.

Our deep experience across all the heavy-industry market segments combined with a broad selection of technologies enable Dana to fulfill the requirements for the most diverse applications.

Initial consulting, design, and engineering are essential in supporting heavy-industry sectors such as steelmaking, sugar processing, and cement production.

Our custom-developed solutions and aftermarket support are essential for enterprises looking for reliable, efficient solutions.

Customization Excellence

Edging

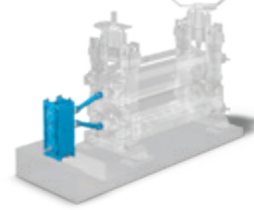
Typically used at the start of the rolling process, edging drives are used to reduce the width of steel slabs.



APPLICATIONS



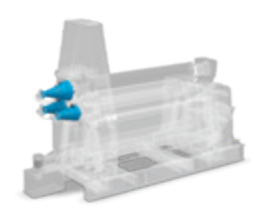
Calendars



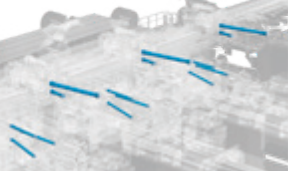
Edgers



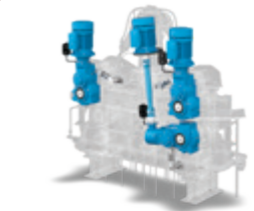
Bending Machines



Down Coilers



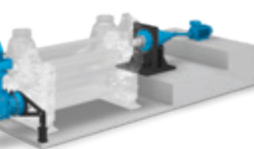
Straighteners



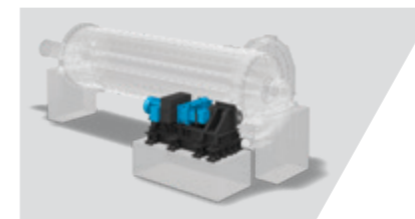
Crystallizers-Clarifiers



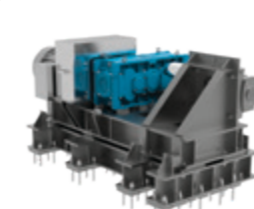
Sugar Mills – Multiple Drives



Juice Clarifiers



Ball / Rod Mills



Roller Presses



Vertical Mills



Conveyors



Dana Industrial Business Onshore Marine

Products developed for onshore applications include solutions for ship-to-shore (STS) cranes, rubber tyre gantry (RTG) cranes, rail-mounted gantry (RMG) cranes, harbor cranes (MHC and GHC), shiplift systems, reach stackers, and straddle carriers.

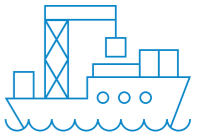
We design and manufacture fully integrated drive and motion products for all types of harbor cranes and other equipment used in the onshore marine sector. Our product portfolio includes planetary and helical gearboxes, winches, winch drives, cardan shafts and electronics.

Our planetary drives, helical gearboxes, and cardan driveshafts operate around the clock to load and unload enormous containers shipside as well as in stocking and handling areas.

Customization Excellence

Rubber Tyred Gantry (RTG) Cranes

Dana works with the leading OEMs of port handling equipment around the world.



APPLICATIONS



Luffing Cranes



Rubber Tyred Gantry (RTG) Cranes



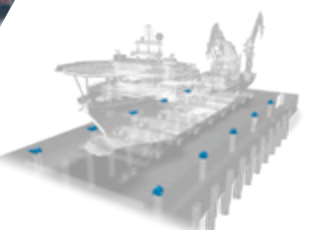
Ship to Shore (STS) Cranes



Mobile Harbor Cranes (MHC)



Shipyard Applications



Shipyard Trolleys



Dana Industrial Business Offshore Marine

Offshore applications covered by our range of solutions include cable- and pipe-laying vessels, cargo ships, subsea systems, oil platform equipment, remotely operated vehicle (ROV) launch and recovery systems, and more.

We supply products for lifting, pulling, and slewing machinery used in various marine and offshore applications, such as cranes, dredgers, gangways, anchor and mooring winches, and hatch covers. Additionally, our gearboxes are used on lifeboats.

Our extensive lineup of Brevini™ planetary gearboxes and slewing gear drives are engineered with the reliability and durability needed to deliver optimal performance in the harsh temperatures and weather common to marine applications.

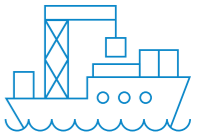
Customization Excellence

Cable-Laying Vessel

Dana can serve as a single supplier for the complex variety of products and applications used on cable-laying vessels.



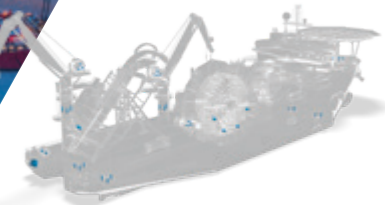
APPLICATIONS



Jack-up Systems



Cables and Pipe-laying Tensioners



Azimuth Trusters



Deck Cranes



Dana Industrial Business Environmental and Renewable Energy Applications

Dana embraces the movement toward a sustainable planet with environmentally friendly technologies and solutions for this emerging industry.

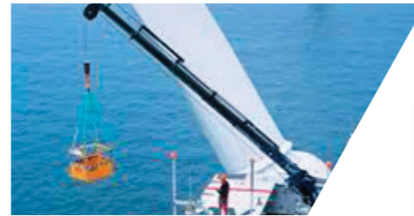
Dana offers a complete range of solutions used in applications for the environmental, renewable energy, and recycling industries. We leverage our experience gained since the initial emergence of these segments to provide solutions for biogas plants, water treatment systems, renewable energy applications, recycling shredders, and wind turbine nacelle cranes.

Customization Excellence

Agitator for Biogas Plant

As the paddles were conceived to run at a peripheral speed of 132 m/minute covering a stirring diameter of 4 meters, we felt it was necessary to integrate a flange shaft into each gearbox, providing additional strength and operational safety. A short delivery schedule plus a tailored service and warranty concept for short-notice repairs helped us clinch the deal.

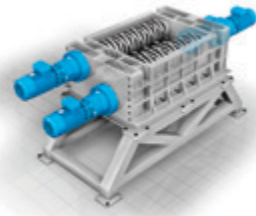
APPLICATIONS



Wind Turbine Nacelle Cranes



Recycling / Waste Management Machines



Biogas Plants



Water Treatment Plants



Dana Industrial Business Stationary Equipment

Dana has the extensive knowledge needed to provide the efficiency, reliability, and sustainability required by stationary applications used throughout the industrial sector.

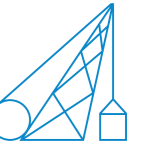
Dana provides numerous solutions for stationary equipment used in material-handling, construction, food processing, and many other sectors. We leverage synergies with our mobile business to supply tailored solutions that optimize performance and reduce the total cost of ownership.

Customization Excellence

Tower Crane

Used extensively in the construction industry, tower cranes provide the best combination of height and lifting capacity. Our full range of specifically designed gearboxes are used for transport, slewing, hoisting, and luffing.

APPLICATIONS



Tower Cranes



Overhead Gantry Cranes



Jib Cranes



Petrochemical / Pulp and Paper Equipments



Photo by Andritz



Tunnel Boring Machines



Dana Industrial Business Plastic and Rubber Industry

With more than a thousand extruder drives installed around the world, Dana has significant expertise in applications for the plastic and rubber market segments. Built for reliability, our gearboxes deliver high efficiency and superior sound attenuation, with aftermarket support that optimizes performance over the long term.

Our portfolio for plastic and rubber applications is anchored by the proven Brevini™ and PIV™ brands. We offer single- and twin-screw extruder drives, rack and pinion drives for injection molding machines, planetary gearboxes, and helical and bevel helical gearboxes.

Customization Excellence

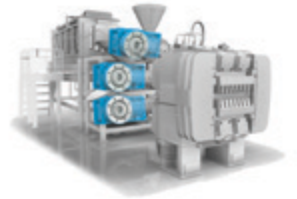
Twin Extruders

A leading Japanese machine tool manufacturer enlisted us for a solution for 28 extrusion machines used in plastic and chemical compounding applications. Our PIV™ Positwin twin-screw extruder drives backed by our prompt after-sales service capabilities support the round-the-clock, high-speed performance essential for maximizing production.

APPLICATIONS



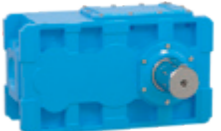
Rubber Extrusion Machines



Blow Film Machines



Injection Molding Machines



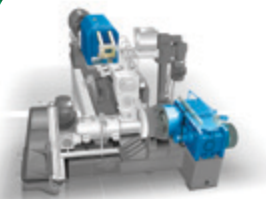
Blow Molding Machines



Flat Film Machines



Compounding Machines



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 class-leading 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-industrial.com/contact-us](https://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.

