

# Dodge® mechanical power transmission

## Global product offering

ABB is a world leader in automation technologies, with an extensive portfolio of mechanical power transmission solutions. From mounted bearings, enclosed gearing, couplings, pulleys and other PT components, our products are engineered to perform reliably with less maintenance, even in the harshest environments.

MOUNTED ROLLER BEARINGS			
Product / Offering		Benefits and features	Suggested applications
<p><b>ISN spherical roller bearings</b></p> <p>A mounted spherical roller bearing that is dimensionally interchangeable with SN dimensioned housings. Available in a cast iron two-bolt plummer block bore sizes 30 to 140 mm and ductile iron four-bolt plummer block bore sizes 150 to 170 mm.</p>		<p>A patented integral adapter mounting and removal system makes this bearing easy to install and remove. The ISN is factory sealed and greased, arrives in one piece, and is out-of-the-box ready to install. Trident triple lip and labyrinth seal options provide superior protection, extending the life of the bearing.</p>	<p>Applications in the following industries: Grain, aggregate, cement, forest, paper, water, wastewater, sugar.</p>
<p><b>ISNX hydraulic spherical roller bearings</b></p> <p>A heavy duty plummer block bearing with a built-in hydraulic mount and dismount system that is dimensionally interchangeable with SD 3100 dimensioned products. Available in 150 mm to 360 mm bore sizes.</p>		<p>A built in hydraulic mount and dismount nut makes this bearing easy to install and remove with a standard hydraulic pump. Shaft ready out-of-the-box, the normal installation or removal of the ISNX can be accomplished in 15 minutes or less, with no feeler gauges or special tools required. An integral taconite style seal protects the bearing from contamination in harsh environments.</p>	<p>Applications in the following industries: Mining, aggregate, cement, grain, metals, forest, paper, power generation, water, wastewater.</p>
<p><b>Type E-EXTRA® tapered roller bearings</b></p> <p>A mounted roller bearing with tapered rolling elements. Available in 35 mm to 180 mm bore sizes.</p>		<p>Completely assembled, factory adjusted, lubricated and shaft ready. This bearing features the XTS triple-lip seal. For extra protection an E-Tect seal is also available.</p>	<p>Applications in the following industries: Grain handling, aggregate, cement, forest, paper, water, wastewater, sugar.</p>
<p><b>SNX/SDX spherical roller bearings</b></p> <p>A split-housed plummer block bearing that matches industry standard SN and SD mounting dimensions. Available in series 22200, 22300, 23000, 23100.</p>		<p>A cast iron housing and solid feet for enhanced load capacity make the SNX or SDX a rugged, reliable solution. The SNX features two drilled and tapped grease holes, two lubrication drain holes, and four cap bolts for extra strength. The SDX offers an extra capacity oil sump, an oil equalization passage that allows oil flow from side to side, and oil return slots to ensure oil returns to the sump and prevent leakage. Both bearings are available with multiple seal options, or with grease or oil lubrication.</p>	<p>Applications in the following industries: Mining, aggregate, cement, grain, mining, metals, forest, paper, power generation, water, wastewater, HVAC.</p>

<b>MOUNTED PLAIN BEARINGS</b>		
<b>Product / Offering</b>	<b>Benefits and features</b>	<b>Suggested applications</b>
<p><b>Sleevoil® RTL series hydrodynamic pillow block bearings</b></p> <p>A base mounted hydrodynamic oil film bearing that utilizes a water cooled design to provide long life in continuous running industrial fan applications. Available in 2-15/16 inch to 12 inch bore sizes.</p> 	<p>The RTL series is specifically designed for industrial fans and can be water cooled, oil cooled or air cooled to allow the bearing to run continuously by removing heat at its source. The RTL bearing includes a wide range of standard features and are pre-machined for circulating oil, an immersion heater, thermostat and secondary sealing options. These bearings are machined to accept the following remote bearing monitoring devices; RTD's or thermocouples, accelerometers and proximity probes. The bearing components are fully split for ease of installation and replacement.</p>	<p>Applications in the following industries: Power generation, metals, paper, cement, oil and gas, chemical.</p>
<b>MOUNTED BALL BEARINGS</b>		
<b>Product / Offering</b>	<b>Benefits and features</b>	<b>Suggested applications</b>
<p><b>Set screw ball bearings</b></p> <p>A mounted ball bearing with a 65° set screw angle for greater holding power and ease of installation. Available in 17 mm to 85 mm bore sizes. Offered in pillow block, flange, tapped base, and take-up frames.</p> 	<p>This bearing features a unique design with premium cup-point set screws at a 65° angle that offers an optimum balance between locking force and inner ring stress. The patented DualGuard seal protects the bearing insert using a mechanically retained single lip seal in addition to a rubberized flinger to repel contamination. To minimize misalignment, these bearings have a tightly controlled swivel torque value, as well as an anti-rotation pin on the outer ring.</p>	<p>Applications in the following industries: General industrial applications</p>
<p><b>Grip Tight® ball bearings</b></p> <p>A mounted ball bearing with a thin wall adapter mounting system that offers 360° full shaft contact and concentricity with no shaft marring or fretting corrosion. Available in bore sizes 17 mm to 85 mm</p> 	<p>Grip Tight bearings lock to the shaft concentrically and through the entire bearing bore, which minimizes vibration. This locking mechanism does not damage the shaft during installation and is designed with a built in dismount feature. The patented DualGuard seal, a mechanically retained single lip seal with a rubberized flinger, and a heat stabilized nylon finger cage are standard.</p>	<p>Applications in the following industries: Fans, HVAC equipment</p>
<p><b>E-Z Kleen® coated insert ball bearings</b></p> <p>A mounted ball bearing with either a stainless steel or reinforced polymer housing with a corrosion resistant, coated insert. Available in bore sizes 20 mm to 50 mm. Offered in Grip Tight adapter mount, D-LOK concentric clamp collar, and set screw. Optional metal detectable end covers are available.</p> 	<p>E-Z Kleen bearings feature a patented corrosion resistant coated insert that offers 300% longer bearing life versus other coated products in the market. E-Z Kleen bearings feature the patented QuadGuard sealing system made up of a triple-lip seal and flinger, creating four areas of protection to keep contaminants out and grease in. These bearings also feature the industry-leading Max Life cage, a two-piece design that creates a constant grease compartment around each of the rolling elements, retaining lubricant and preventing washout in wet environments. Factory-filled with food grade grease, E-Z Kleen bearings are designed to provide extended life in harsh washdown conditions.</p>	<p>Applications in the following industries: Food, beverage, pharmaceutical.</p>
<p><b>Ultra Kleen® stainless steel insert ball bearings</b></p> <p>A mounted ball bearing with either a stainless steel or reinforced polymer housing, and a stainless steel insert. Available in 20 mm to 50 mm bore sizes. Offered in set screw mounting. Optional metal detectable end covers are available.</p> 	<p>Ultra Kleen bearings feature a 100% stainless steel insert and are factory-filled with food grade grease. A patented QuadGuard sealing system, made up of a triple-lip seal and flinger, create four areas of protection to keep contaminants out and grease in. These bearings also feature the industry-leading Max Life cage, a two-piece design that creates a constant grease compartment around each of the rolling elements, retaining lubricant and preventing washout in wet environments. The polymer housing is one-piece with no cavities to trap contaminants and contains an anti-microbial agent which resists bacterial and fungus growth. The Ultra Kleen line is designed to withstand extreme sanitary washdown applications.</p>	<p>Applications in the following industries: Food, beverage, pharmaceutical.</p>

**GEARING**

Product / Offering	Benefits and features	Suggested applications
<p><b>Motorized Torque-Arm II (MTA) gear reducers</b></p> <p>A heavy-duty right angle direct drive solution. Available in 7 case sizes from 1,5 to 75 kW, with a torque range of up to 14,700 Nm.</p> 	<p>With a compact, space saving design, the MTA is ATEX certified and features the patented Dodge twin-tapered bushing system that makes installation and removal easy. Engineered for reliability, the MTA has a patented sealing system that ensures maximum up-time with less maintenance. The MTA is also available as a motorized screw conveyor drive with adapter and drive shaft.</p>	<p>Applications in the following industries: Grain, food, aggregate, cement, mining, metals, power generation, waste water.</p>
<p><b>Torque-Arm II gear reducers</b></p> <p>A heavy-duty belt driven solution. Available in 12 sizes through 300 kW with a torque range of up to 36,700 Nm.</p> 	<p>With a rugged cast iron housing and heavy-duty seals for extended life, the Torque-Arm II is designed to deliver reliable performance in demanding applications. This gear reducer is ATEX certified and features the patented Dodge® twin-tapered bushing system that makes installation and removal easy.</p>	<p>Applications in the following industries: Grain, food, aggregate, cement, mining, metals, power generation, waste water.</p>
<p><b>Magnagear XTR® gear reducers</b></p> <p>Magnagear XTR is a power-dense reducer that offers increased reliability in a compact, heavy-duty package. Available in 12 case sizes from 20 kW to 3240 kW, with a torque range from 11,300 to 395,000 Nm. Offered in parallel shaft or right angle configurations, with solid or hollow shaft outputs.</p> 	<p>Featuring a rugged cast iron housing, bearings that exceed best in class standards for <math>L_{10}</math> life, and a premium tandem taconite sealing system, the Magnagear XTR offers dependability and ease of maintenance. Hollow shaft reducers, available with up to a 200 mm shaft diameter, feature the patented twin-tapered bushing system that makes installation and removal easy. Reducers come in several mounting configurations, including swing-base and tunnel housings. Flippable housings, standard on sizes G100 through G920 and an option on sizes G1400, G2100 and G3500, provide flexible mounting options to minimize spares.</p>	<p>Applications in the following industries: Mining, aggregate, grain, power generation, forest.</p>
<p><b>Quantis® in-line helical bevel (ILH) gear reducers and gearmotors</b></p> <p>An in-line helical gear reducer designed with high torque density in a compact housing configuration. Available in 8 case sizes up to 14,000 Nm output torque with ratios up to 7500:1.</p> 	<p>Quantis ILH gear reducers provide high torque density in a compact housing and feature an expended ratio range, which may allow the customer to reduce their costs by downsizing from existing units. Quantis gear reducers are third party ATEX certified.</p> <p>ILH gearmotors include IEC rated motors which have NEMA Design B torque characteristic offering up to 50% more starting and overload torque versus competitive products. This means more torque is available when cold or fully loaded starting is required. Power-off brake motors are also available from 4 to 68 Nm.</p>	<p>Applications in the following industries: Food and beverage, package handling, grain, forest, paper, HVAC, unit handling.</p>
<p><b>Quantis right-angle helical bevel (RHB) gear reducers and gearmotors</b></p> <p>The RHB features a helical-bevel gear train that offers cost-effective, high and low-speed solutions with efficiency ratings up to 94%. Available in 8 case sizes up to 14,00 Nm output torque with ratios up to 7500:1.</p> 	<p>Quantis RHB gear reducers feature a helical-bevel gear train that offers a cost-effective, high and low speed solution. RHB units feature the patented Dodge twin-tapered bushing system that makes it easy to install and remove the reducer, even after years of service. Quantis gear reducers are third party ATEX certified.</p> <p>RHB gearmotors provide the highest starting torque and easiest shaft mounting of any major gearmotor available. This gearmotor includes IEC rated motors which have NEMA Design B torque characteristics that deliver up to 50% more starting and overload torque versus competitive products. This means more torque is available when cold or fully loaded starting is required. Power-off brake motors are available from 4 to 68 Nm.</p>	<p>Applications in the following industries: Grain handling, food and beverage, package handling, forest, paper, mining, HVAC, unit handling.</p>

Product / Offering	Benefits and features	Suggested applications
<p><b>Quantis motorized shaft mount (MSM) gear reducers and gearmotors</b></p> <p>The Quantis MSM gear reducer's universal housing accommodates either footed or flanged configurations and is up to 98% efficient per stage. Available in 8 case sizes up to 14,000 Nm output torque with ratios up to 7500:1.</p>	<p>The universal housing of the Quantis MSM gear reducer accommodates either footed or flanged configurations. This reducer offers the patented Dodge twin-tapered bushing system that makes it easy to install and remove the product, even after years of service. Quantis gear reducers are third party ATEX certified.</p> <p>MSM gearmotors provide the highest starting torque and easiest shaft mounting of any major gearmotor available. This gearmotor includes IEC rated motors which have NEMA Design B torque characteristics that deliver up to 50% more starting and overload torque versus competitive products. This means more torque is available when cold or fully loaded starting is required. Power-off brake motors are available from 4 to 68 Nm.</p>	<p>Applications in the following industries: Grain handling, food and beverage, package handling, forest, paper, mining, HVAC, unit handling.</p>
		
<p><b>Quantis® Ultra Kleen® gear reducers</b></p> <p>A total stainless steel right-angle helical bevel reducer specifically designed for the food and beverage industry. Available in two case sizes up to 450 Nm output torque with ratios up to 179:1</p>	<p>The Ultra Kleen reducer is totally enclosed and features a smooth, rounded housing with no crevices to harbor food or microbes. A standard two-piece harsh duty output seal provides industry leading protection against high pressure sprays and abrasive materials. An IEC B5 dimensional clamp collar input flange is available for 71, 80, 90, and 100 frame motors. A NEMA clamp collar C-face is available for 56 C, 143/145TC, and 182/184TC. Features easy motor mounting and removal with the innovative clamp collar design. Available with IEC or NEMA motor dimensioned inputs.</p>	<p>Applications in the following industries: Food, beverage, pharmaceutical.</p>
		
<b>COUPLINGS</b>		
<b>Product / Offering</b>	<b>Benefits and features</b>	<b>Suggested applications</b>
<p><b>D-Flex couplings</b></p> <p>An elastomeric sleeve style coupling with bore sizes up to 140 mm and a torque range up to 8,189 Nm.</p>	<p>Four-way flexing action handles shock, vibration, and misalignment. The simple design and interchangeable components make installation quick and easy. The spacer offering features a drop-out center assembly for easy equipment maintenance, and is available in all common ANSI and ISO shaft spacings.</p>	<p>Applications in the following industries: Mining, metals, aggregate, cement, chemical, oil and gas, food, forest, paper, HVAC, power generation.</p>
		
<p><b>Raptor couplings</b></p> <p>An elastomeric, split tire style coupling with bore sizes up to 229 mm and a torque range up to 38,438 Nm.</p>	<p>Raptor couplings feature patented WingLock™ technology that increases surface area at the most critical areas of the element, resulting in higher bond strength, improved fatigue resistance, and up to six times longer life than competitive urethane designs. A split natural rubber element allows for easy assembly, reduced maintenance, and significantly decreases total costs. Designed for drop-in interchangeability, Raptor couplings work in many existing applications without any modifications. The Raptor is backed by over 50 years of natural rubber expertise and is offered with an industry leading 5-year warranty. Third party ATEX certified.</p>	<p>Applications in the following industries: Mining, metals, aggregate, cement, chemical, oil, gas, food, forest, paper, HVAC, power generation.</p>
		
<p><b>Para-Flex® couplings</b></p> <p>A flange-mounted elastomeric tyre style coupling with bore sizes up to 203 mm and a torque range up to 51,180 Nm.</p>	<p>Para-Flex couplings offer industry leading misalignment capabilities, a 5-year warranty, and are ATEX certified. A "problem solver" element absorbs shock and dampens vibrations. The no maintenance non-lubricated design assures trouble-free operation.</p>	<p>Applications in the following industries: Mining, metals, aggregate, cement, chemical, oil, gas, food, forest, paper, HVAC, power generation.</p>
		

Product / Offering	Benefits and features	Suggested applications	
<p><b>Gear couplings</b></p> <p>A lubricated flexible metallic gear style coupling with bore sizes up to 1050 mm and a torque range up to 5,340,000 Nm.</p>		<p>The Dodge® Gear coupling is the most power-dense metallic coupling available. A crowned tooth profile provides longer life, and the coupling is interchangeable with industry standard AGMA gear couplings through size 9. Available designs include spacer, floating shaft, sliding gear, and other customizable designs.</p>	<p>Applications in the following industries: Mining, metals, aggregate, cement, chemical, oil and gas, forest, paper, power generation.</p>
<p><b>StarFlex couplings</b></p> <p>A jaw type coupling with bore sizes up to 67 mm and a torque range up to 704 Nm, depending on the choice of element inserts.</p>		<p>StarFlex couplings offer high torque capabilities for a wide variety of light to medium-duty applications. The coupling is designed to damp system vibration and accommodate misalignment, while providing fail-safe operation. Available with four types of insert materials to handle varying temperatures, environments, and torques, StarFlex is directly interchangeable with industry standard straight jaw couplings.</p>	<p>Applications in the following industries: Mining, metals, aggregate, cement, chemical, oil, gas, food, forest, paper, HVAC, power generation.</p>
<p><b>Grid-Lign couplings</b></p> <p>A lubricated flexible metallic tapered grid style coupling with bore sizes up to 555 mm and a torque range up to 8,000,000 Nm.</p>		<p>Grid-Lign couplings offer the torque density and large bore capacities of a metallic coupling and the misalignment and vibration damping capabilities of an elastomeric coupling. Grid-Lign couplings are third party ATEX certified.</p>	<p>Applications in the following industries: Mining, metals, aggregate, cement, chemical, food, forest, paper, power generation.</p>
<p><b>DM moment couplings</b></p> <p>A metallic, rigid style coupling with bore sizes up to 465 mm and torque ratings up to 419,696 Nm.</p>		<p>DM Moment couplings, ideally suited for bulk material handling applications, are specifically designed to make the rigid connection between the output shaft of the gearbox and driven equipment. Highly engineered to meet the most rigorous application requirements, these couplings are capable of handling both the required application torque and the bending moment forces of the suspended weight of the drive package.</p>	<p>Applications in the following industries: mining, aggregates, grain, power generation, forest.</p>

**DRIVE COMPONENTS**

Product / Offering	Benefits and features	Suggested applications	
<p><b>HT 250 synchronous belt drives</b></p> <p>A rubber high-torque synchronous solution ideal for longer center distance applications. HT250 delivers 2.5 times the capacity of HTD, is 5% more efficient than V belts, and is static conductive in accordance with ISO9583. Available in 5 mm, 8 mm and 14 mm metric pitches.</p>		<p>HT 250 features fiberglass tensile cord that provides strength, excellent flex life and resistance to elongation. The Neoprene body provides protection against grime, grease, oil and moisture. Nylon tooth facing provides a durable wear surface for long service life. Mounting capabilities include Taper-Lock bushings that are easy to install and remove, deliver more torque, require less shaft space and reduce bearing loads.</p>	<p>Applications in the following industries: Grain, unit handling, forest, paper, food and beverage, air handling, mining, aggregate, cement, chemical, oil and gas, HVAC.</p>
<p><b>HT 500 synchronous belt drives</b></p> <p>A high-torque synchronous solution that delivers 5 times the capacity of HTD and is 5% more efficient than V-belts. Available in 8 mm and 14 mm metric pitches, the HT 500 is fully operational in temperature extremes of -54° C to +85° C.</p>		<p>HT 500 features carbon tensile cord that combines minimal stretch with superior strength and load carrying capacity, while absorbing shock and surge loads. Durable polyurethane construction resists chemicals, oil, pollutants, and abrasion. Nylon tooth facing reduces friction and eliminates the need for lubrication. Mounting capabilities include Taper-Lock bushings that are easy to install and remove, deliver more torque, require less shaft space, and reduce bearing loads.</p>	<p>Applications in the following industries: Grain, unit handling, forest, paper, food and beverage, air handling, mining, aggregate, cement, chemical, oil and gas, HVAC.</p>

PULLEYS			
Product / Offering		Benefits and features	Suggested applications
<p><b>Drum pulleys</b></p> <p>Pulley sizes available to fit any common diameter and face width. These pulleys are designed for use with conveyor belts rated up to 131 kN/m (750 PIW).</p>		Drum pulleys are available in heavy duty or mine duty extra construction with HE or XT style hubs. Available lagging includes SBR, neoprene or D-Lag in various thicknesses. Ceramic lagging is available as vulcanized or cold bonded.	Applications in the following industries: Mining, metals, power generation, aggregate, cement, grain, forest.
<p><b>Wing pulleys</b></p> <p>A complete line of wing pulleys designed for tail pulley applications requiring rugged durability with maximum belt cleaning.</p>		Wing pulleys are available with HE or XT style hubs. Wing pulleys feature 6 mm x 38 mm contact bars for high durability, and all meet CEMA dimensions. Available in spiral, heavy duty, and mine duty. Mine duty wing pulleys come standard with heavy duty retaining rings for extended life.	Applications in the following industries: Mining, metals, power generation, aggregate, cement, grain, forest.
<p><b>Elevator pulleys</b></p> <p>Single disc and double disc drum types up to 1,825 mm in diameter and face widths as narrow as 250 mm.</p>		Elevator pulleys are available with HE or XT style hub with vulcanized lagging up to 25 mm thick in SBR or FOS (fire, oil and static resistant) rubber.	Applications in the following industries: Grain.
<p><b>Pulley assemblies</b></p> <p>A complete pulley assembly that includes pulleys, bushings, shaft, and bearings.</p>		Custom pallets for export shipments are available, and all exposed metal is covered with anti-rust protection. Long-term storage preparation is available upon request.	Applications in the following industries: Mining, metals, aggregate, cement, grain, sugar, forest, power generation.
<p><b>Engineered class pulleys</b></p> <p>Dodge® engineered conveyor pulleys offer the ultimate in reliable performance and economy. Utilizing state-of-the-art design technologies and unmatched manufacturing capabilities, Dodge conveyor pulleys are designed to deliver reliability in the toughest applications.</p>		Engineers designing Dodge pulleys have extensive experience with conveyor system optimization. The result is a highly engineered pulley that is designed as a balanced integral unit, capable of handling the belt tension requirements of a conveyor. Engineered pulleys are offered with HE, XT or Bikon shaft locking devices, and integral hub, profiled, turbine, or T-section end disc designs. Manufacturing capabilities include CNC machining of shaft and pulley, static and dynamic balancing, AWS and ASME certified welding, and an ASNT NDE certified inspection program. Engineered class pulleys are offered with a 2 year warranty.	Applications in the following industries: Mining.

Please note: This is ABB's global offering and some products might not be available in your country. Refer to [abb.com](http://abb.com) for your location.



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