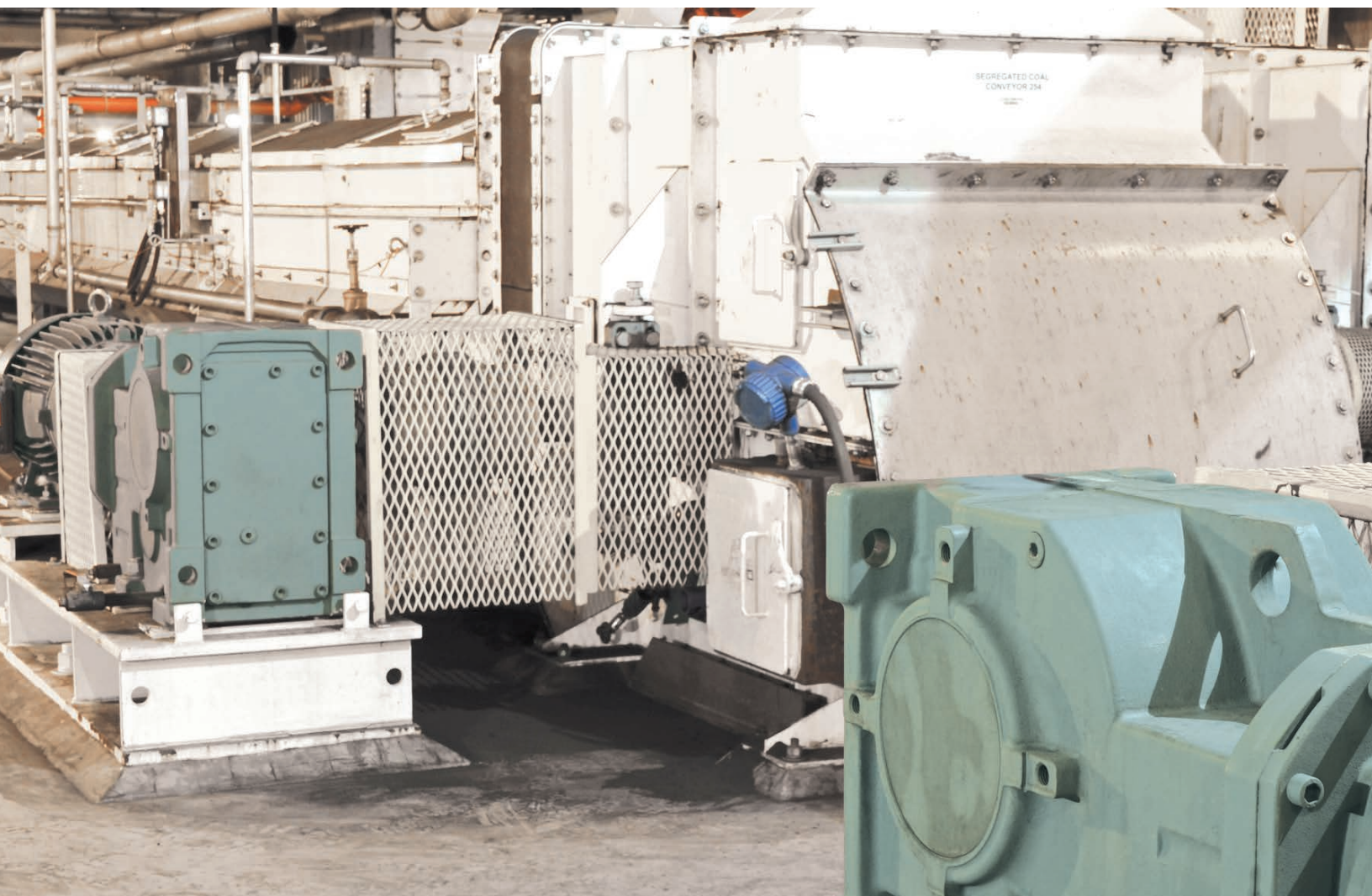


MECHANICAL POWER TRANSMISSION

Quantis® gearmotors & reducers

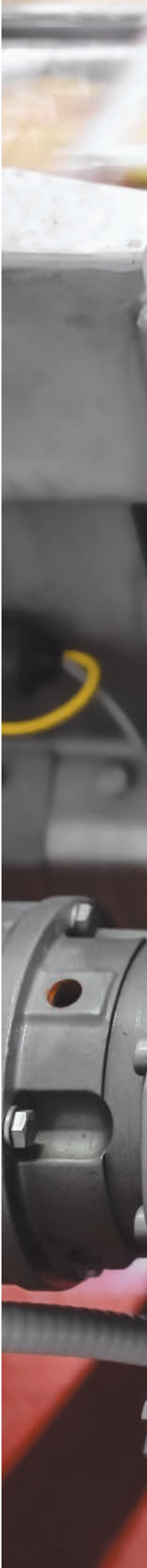
DODGE®

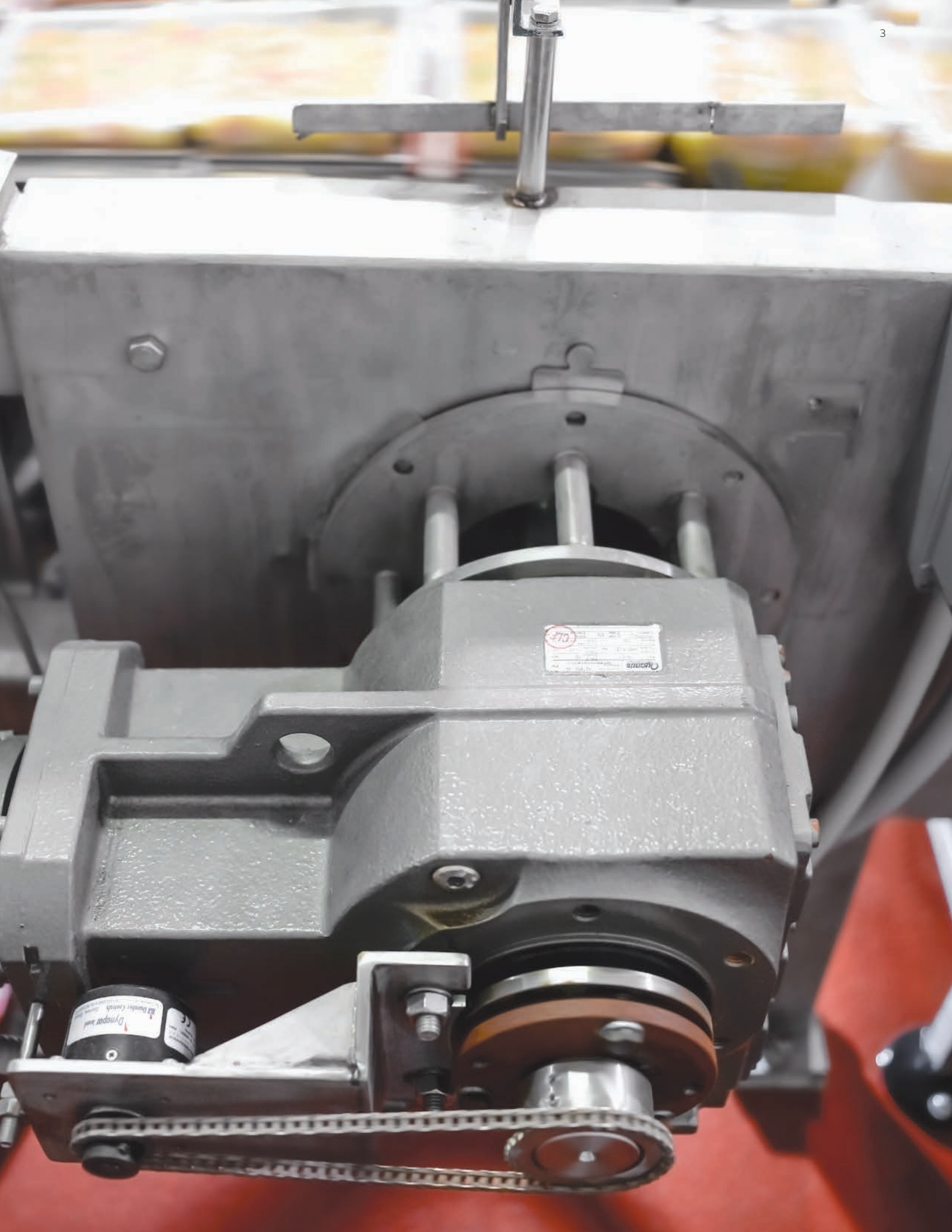


Dodge® Quantis®

We provide motors and mechanical power transmission products, services and expertise to save energy and improve customers' processes over the total lifecycle of our products, and beyond.

abb.com/mechanicalpowertransmission





Dodge Quantis

The Quantis product line offers modular gear drives engineered to provide reliable operation for torque requirements from 12 to 14,000 Nm (106 to 122,000 in-lbs).

The Quantis family of products offer customers three types of gear arrangement: In-Line Helical (ILH), Right-Angle Helical Bevel (RHB) and Motorized Shaft Mount (MSM).

All three gear types are available with integrated or flange mounted motors, and are dimensionally interchangeable with major global competitors.

Dodge Quantis is a leading modular gear reducer for industrial applications.

Low energy consumption

- Up to 98% efficient per gear stage
- IE3 and NEMA Premium Efficient integrated motors

Easy installation and removal

- Clamp style or 3-piece coupled inputs facilitate easy motor install and removal
- Optional twin-tapered bushings for easy-on, easy-off shaft mounting

Fast delivery

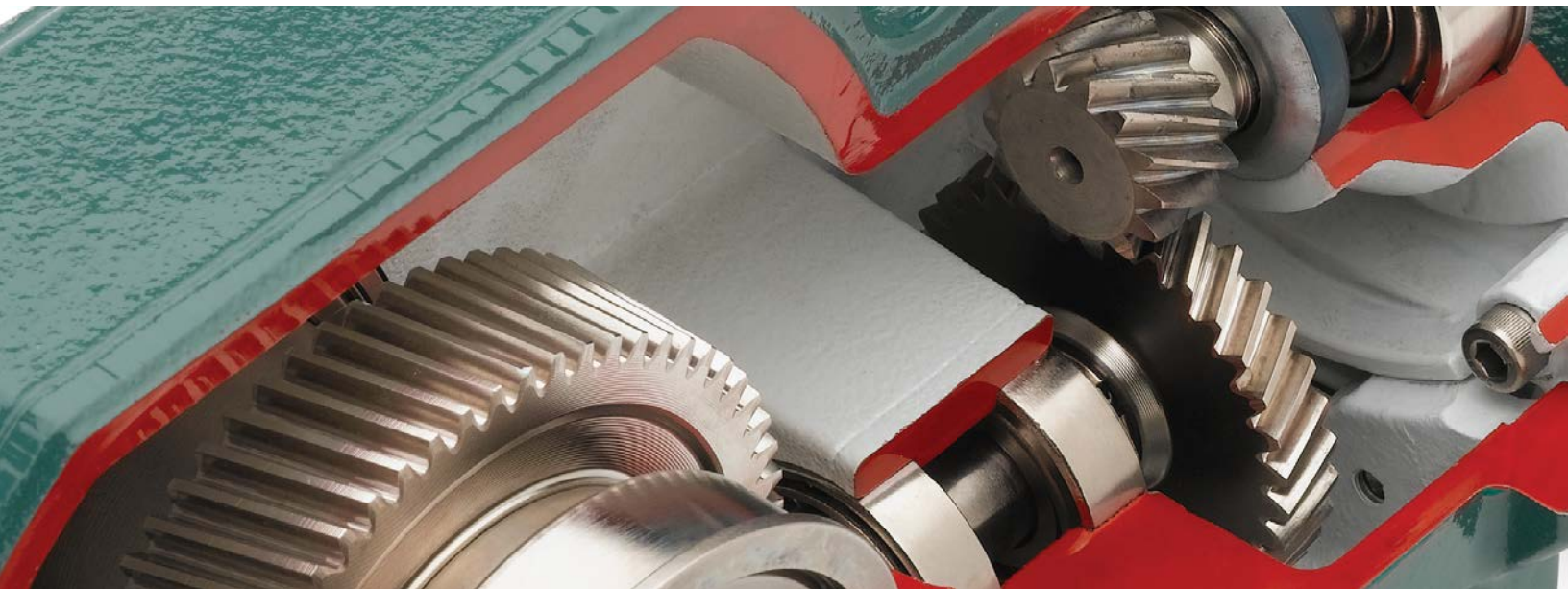
- 3-day standard lead times (check for availability)
- Popular reducer styles in-stock

Reliable performance

- Wear-free helical gearing, finish-ground with ellipsoid tooth form
- Class 30 gray iron gearcase housings
- Available 2-piece harsh-duty output seal
- High-capacity cylindrical or tapered roller bearings (check for availability)
- Leak-free performance

Comprehensive offering

- 8 case sizes
- 10:1 constant torque inverter-ready gearmotors and brakemotors
- Ratios up to 7,500:1
- Food industry solutions
 - E-Z Kleen corrosion-resistant washdown
 - Ultra Kleen all-stainless steel
- Flexible mounting options and accessories
- Made-to-order capabilities



Configuration options

The advanced design concept of Dodge Quantis provides flexibility for applications that require the compactness of an integral gearmotor, the durability of a 3-piece coupling or a shaft input for direct coupled equipment.

Mechanical

- Eight gearcase sizes
- Gear ratios from 1.4:1 up to 7,500:1
- Input power up to 55kW (75HP)
- Solid shaft, hollow bore, tapered bushing or keyless bore outputs
- Clamp collar, 3-piece coupled or shaft inputs

Electrical

- Integral gearmotor or brakemotor inputs
- IE3 and NEMA Premium Efficient
- 10:1 constant torque inverter ready motors
- Direct-current, short-series holding brakes
- 50Hz and 60Hz operation
- Standard IP55 or optional IP56 enclosures

In-line helical

Ideal for applications requiring a solid shaft output, Quantis ILH units provide DIN class 6 (AGMA class 11) case-hardened and ground helical alloy steel gears for longer service life.

- Heavy duty output bearings (optional)
- High-strength cast iron housing
- Quiet operation

Right angle helical-bevel

With patented twin-tapered output bushings, Quantis RHB units are the go-to solution for easy-on, easy-off gear mounting.

- Time saving, trouble-free shaft mounting and removal
- 98% efficient per gear stage

Motorized shaft mount

As a flexible gear solution offering solid shaft, hollow bore and screw conveyor drive options, Quantis MSM does it all.

- Belt-free motor connection
- Easy to install
- Compact size

ILH
Gearmotor



RHB Twin
Tapered Bushing



MSM with
screw conveyor



Easy installation and removal

The Quantis gearing line features patented installation and removal that provides true value to our customers. Quantis features an easy method of removing a motor from a gear reducer or removing a shaft-mounted gearbox, without causing damage.

Saves time

Clamp collar inputs connect the motor to the gear reducer using simple Allen wrenches for installation. The split collar simply clamps onto the motor shaft. Motor removal is just a easy.

- No measuring
- Simple tools
- Fast install and removal

Delivers higher performance

3-piece coupled inputs connect the motor to the gear reducer using a jaw-style coupling. This robust design is well suited to hard starting, stopping and reversing applications. Motor removal is a breeze since the coupling element prevents metal-to-metal contact.

- Long life
- Best performance
- Prevents motor and gear damage

Makes installation and removal easy

Available twin tapered bushings connect the gear reducer to the driven shaft, supporting both sides of the reducer. After years of service in the harshest, most corrosive conditions, twin tapered bushings can still disassemble without damaging the driven equipment.

- Fast disassembly
- No cutting torches
- Prevents shaft damage



Clamp collar input



3-piece coupled input



Twin tapered bushings



Simple installation with Quantis screw conveyor drives

Quantis CEMA screw conveyor drives feature a rugged, compact design making it the ideal solution where belt drive, guards and motor mounts are taking up too much space.

Features

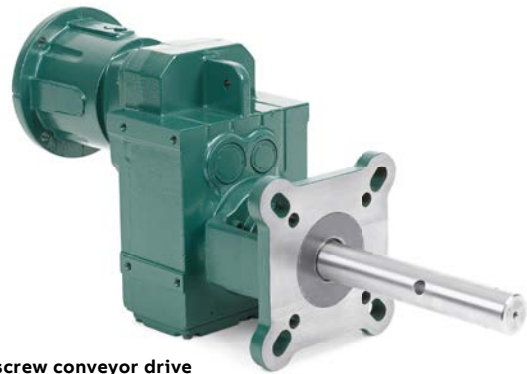
- Compact integral motor or C-face inputs
- CEMA dimensioned mounting
- High-thrust tapered roller bearings on output
- Class 30 grey iron housings

Customer benefits

- Simple to install
- Saves space
- Cost-effective
- Long lasting

Availability

- RHB or MSM styles
- Sizes 38 up to 128
- Imperial drive shafts from 1.5000" to 3.4375"
- Torque up to 54,000 lb-in (6,000Nm)



MSM screw conveyor drive



RHB screw conveyor drive



Dodge Quantis E-Z Kleen®

The robust protection features of Quantis E-Z Kleen make it the right choice for washdown environments found in food handling, packaging and pharmaceutical applications.

With modular flexibility and IP69K rated protection against high pressure, high temperature washdowns, Quantis EZ Kleen provides long service life and the lowest cost of ownership.

Corrosion resistant

- Unique coating system provides greater than three times the protection of standard epoxy paint
- Thin dense nickel composite (TDNC) plated output shafts

Long lasting

- Wear-free helical and bevel gearing
- Lubed for life
- 3-year standard warranty

Easy on, easy-off

- Clamp collar or 3-piece coupled inputs
- Twin taper bushed shaft mounting

EZ-Kleen benefits

- Lowest cost of ownership
- Less maintenance
- Longest service life

Performance Specifications

- 98% efficient gearing per stage
- 100 bar pressure spray tested, 2-piece output seals
- Output torque rating up to 45,000 lb-in (5,000 Nm)
- Integral gearmotor or C-face inputs



ILH E-Z Kleen



E-Z Kleen
Gearmotor



MSM E-Z Kleen
reducer with Baldor
washdown motor

Environmental protection

Quantis gearmotors are available with configurable protection levels. These protection levels cover both indoor and outdoor elements with specific features and benefits.

Standard protection level

- General industrial
- Neutral atmosphere

Severe duty protection level

- Heavy industrial
- Precipitation and humidity

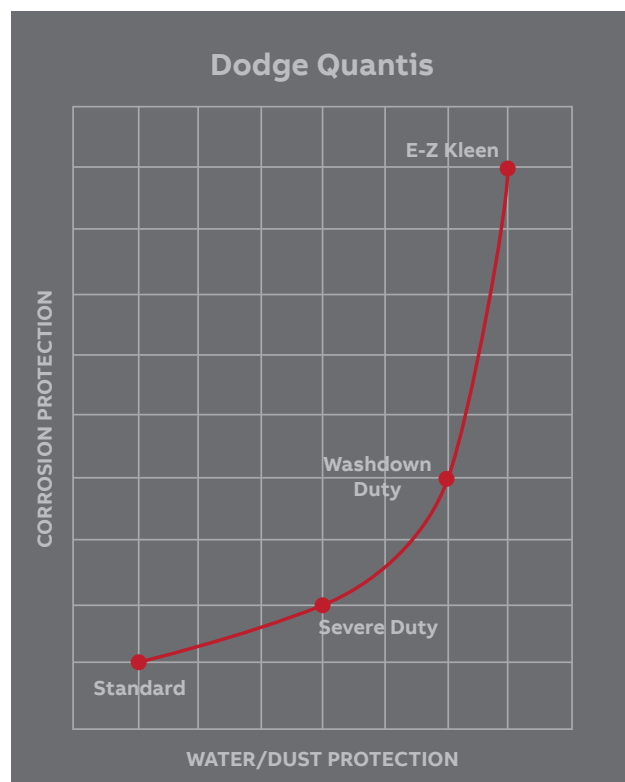
Washdown duty protection level

- High pressure sprays
- Occasional acidic or caustic chemicals
- Exposure to salt atmosphere

E-Z Kleen protection level



- High pressure sprays
- Regular acidic or caustic chemicals
- Continuous salt atmosphere



ATEX certified

Dodge Quantis reducers are available with ATEX certification for installation in potentially explosive environments. These reducers are manufactured under the guidelines of ATEX directive 94/9/EC.

Reducer size	ATEX Certification Categories for Dodge Quantis Reducers	ILH		RHB		MSM	
		Max ratings		Max ratings		Max ratings	
		Input power Hp (Kw)	Torque in-lbs (nm)	Input power Hp (Kw)	Torque in-lbs (nm)	Input power Hp (Kw)	Torque in-lbs (nm)
38	ATEX Category 2 Group II and 1, for gas and dust environments	8.87 (6.61)	1947 (220)	5.6 (4.18)	2213 (250)	7.45 (5.55)	2921 (330)
48		13.88 (10.35)	3983 (450)	9.9 (7.38)	3985 (450)	7.7 (5.74)	4780 (540)
68		26.64 (19.86)	7081(800)	13.88 (10.35)	7262 (821)	26.92 (20.07)	8851 (1000)
88	ATEX category 2 and M2 (mining), Group II and 1, for gas and dust environments ATEX category 3 for all gas and dust environments with ignition temperatures higher than T4	45.45 (33.89)	14870 (1680)	26.94 (20.09)	11638 (1315)	45.47 (33.90)	16817 (16817)
108		92.12 (68.68)	27438 (3100)	45.36 (33.82)	22430 (2534)	74.16 (55.29)	30093 (3400)
128		135.98 (101.39)	45140 (5101)	92.65 (69.08)	41623 (4703)	133.21 (99.32)	53991 (6101)
148		144.74 (107.92)	70808 (8001)	136.15 (101.51)	70848 (8005)	144.74 (144.74)	77004 (8701)
168		158.68 (118.31)	123914 (14002)	120.91 (90.15)	104886 (11852)	158.78 (118.39)	118603 (13401)

Dodge Quantis Ultra Kleen®

The Dodge Quantis Ultra Kleen reducer is a total stainless steel solution engineered to provide ultimate reliability in harsh washdown food and beverage applications. With features designed around food industry sanitation standards, this reducer offers the highest level of performance in the most severe applications.



Food Safe

- AISI 304 series / EN 1.4301 stainless steel housing
- All stainless steel hardware and shafting
- Factory-filled H1 USDA/FDA/NSF/EHEDG compliant food grade lubrication

Sanitary*

- Rounded design to prevent liquid pooling
- Smooth surface textures within 0.003mm finish
- Laser-marked nameplate

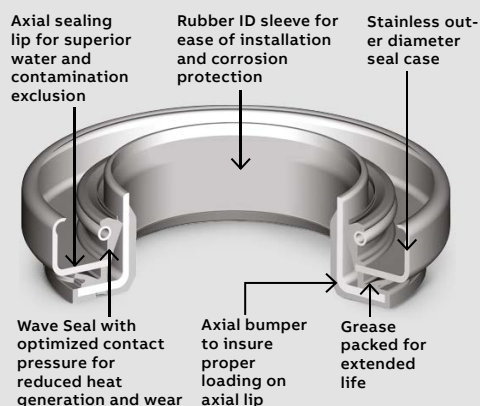
Long Lasting

- Water-tight, IP69K liquid ingress protection
- Wear-free helical-bevel gearing
- 3-year warranty

Performance Specifications

- 94% efficient gearing
- 100 bar pressure spray tested, 2-piece output seals
- Ratios up to 179:1
- Stainless steel solid shaft, straight hollow bore or Q-Loc keyless bushed shaft mount outputs

XT 2-piece output seal



*Meets 2013 Sanitary Equipment Design Taskforce (ed.). 2014. Sanitary equipment design principles: checklist & glossary. AMI Foundations, Washington, D.C.

Go keyless with Quantis Q-Loc

For ultimate convenience in shaft mounting, Quantis offers the Q-Loc keyless bushing system. Quantis Q-Loc is easy to install with common tools, and unlike other keyless locking systems, features split bushings making removal easy. Offered in a wide range of available bushing bore sizes, the Q-Loc keyless bushing system delivers high performance with unmatched convenience.

Features

- Keyless, bushed shaft mounting
- Commercial-grade shaft tolerances
- Multiple bore sizes
- Switchable to left or right hand side

Customer benefits

- Easy to mount and dismount
- Save money on shafting
- Bore size flexibility for less spare parts

Availability

- RHB or MSM styles
- Sizes 38 up to 108
- Imperial bores from 1.000 to 2.4375 in.
- Torque up to 1,800 Nm (16,000 lb-in)
- Standard or stainless steel



Dodge Ultra Kleen reducers have been tested and certified to meet IPX9K standards.



E-Z Kleen and Ultra Kleen IP69K certified for water

The Dodge Quantis Ultra Kleen and E-Z Kleen reducer have been tested and certified as water-tight under severe washdown conditions. The test requires that a product is sprayed from numerous angles and positions to ensure that liquids are prevented from entering the product.

- 100 bar (1,450 psi) high pressure spray
- 80°C (176°F) high temperature
- Sprayed at close range – 10 – 15 cm (4-6 in)



Quantis® integral motor and brakemotor product line

Standard features

- Product range from 1/4 hp (.18kW) up to 40 hp (30kW)
- Available voltage
 - 208-230/460V at 60hz
 - 575V at 60hz
 - 220/400V at 50hz
- Inverter capable
 - 1/4 hp (0.18kW) up to 3/4 hp (0.55kW) 6:1 CT
 - 1 hp (.75kW) up to 40 hp (30kW) 10:1 CT
- Class F insulation
- Design B
- 1.15 service factor
- IP54/IP55 or IP56 enclosure
- Totally enclosed fan cooled (TEFC)
- Meets or exceeds IE3 efficiency levels
- Brakemotor torque available up to 50 ft-lbs (N-m)
- UL/UR and CSA marked

Made to order options

- Thermostats/thermistors
- Space heaters
- Voltage and frequency options
- Encoder mounting



Integral brakemotor



E-Z Kleen Integral motor



A variety of industrial uses

Offering unmatched value in a flexible design, Dodge Quantis is the premier choice for virtually any gearmotor need. The modular design of Dodge Quantis makes it an ideal gearmotor for hundreds of applications in a wide range of industries.

Material handling

- Belt conveying
- Screw conveying
- Lifting
- Palletizing
- Sorting
- Mixing
- Feeding
- Air handling

Food and Beverage

- Belt conveying
- Screw conveying
- Mixing
- Pumping
- Packaging

Wastewater and water

- Screw conveying
- Pumping
- Aerating
- Clarifying
- Pressing



Optional Quantis accessories



Internal backstop

Helps prevent reverse rotation in high stop-start loads, and results in less wear and longer life. Its centrifugal throw out design eliminates sprag sliding and reduces wear. It operates with standard and EP lubricants and requires no external lubrication. For use with three-piece coupling and separate inputs



ILH adjustable slide base

Positions the reducer, providing simplified installation and servicing of belt and chain drives.



RHB tie rod kit

The RHB tie rod kit utilizes the “BF” style housing. RHB tie rod kits are available for restraining hollow shaft reducers. Each kit includes the mounting block, tie rods, turnbuckle, fulcrum and mounting hardware.



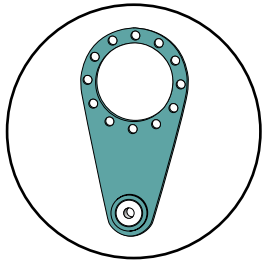
RHB torque arm bracket

For RHB shaft mounted applications using the “BF” style housing. The RHB torque arm bracket includes the bracket and hardware.



ILH scoop mount

Scoop mount are steel fabricated assemblies to provide customers with alternative means of supporting the motor.



Torque Arm

For RHB or MSM shaft mount applications, the Torque Arm provides a compact means for restraining the reducer. Available in zinc plated (KT) or stainless steel (KTS).

ABB

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