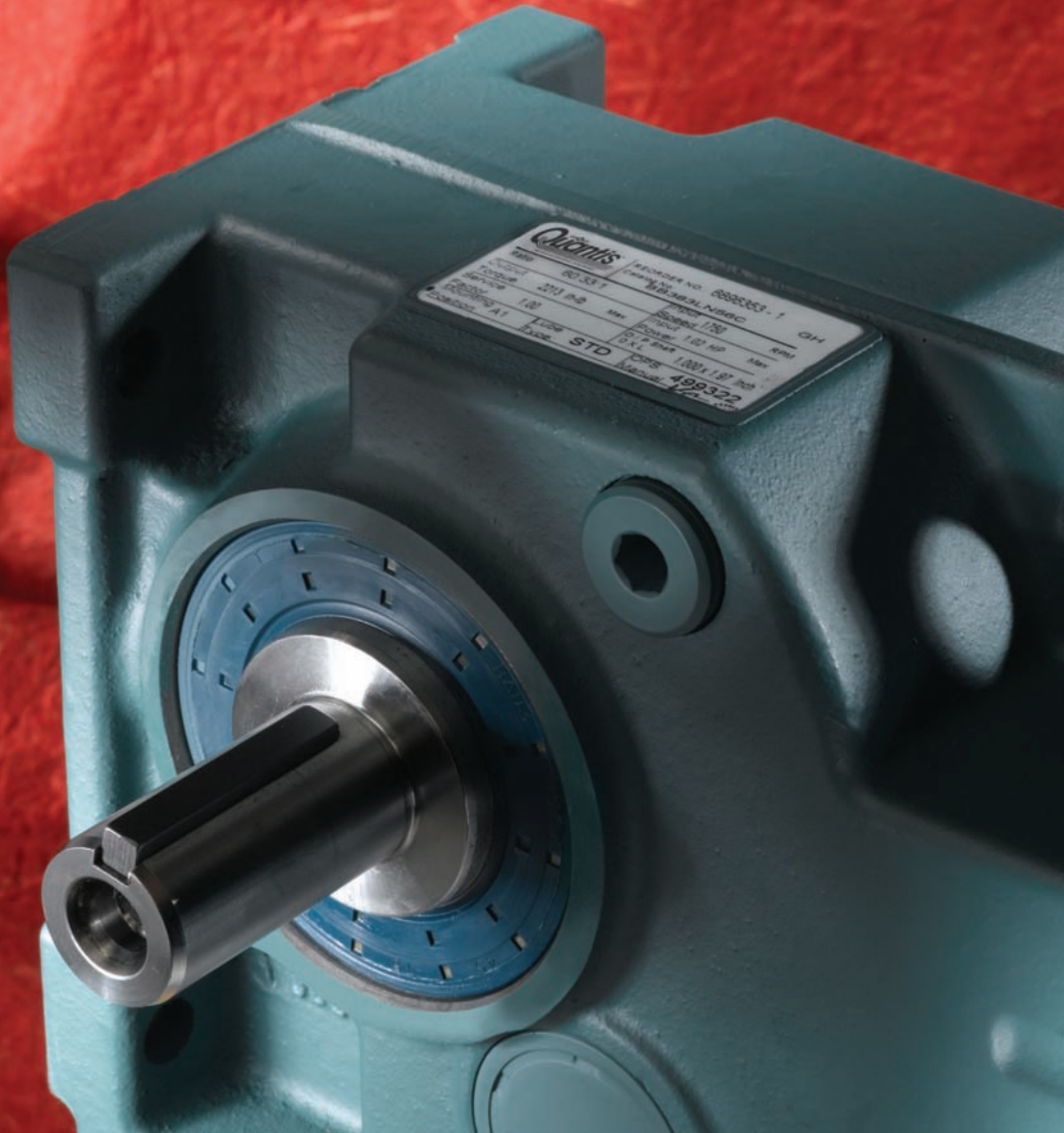


# QUANTIS<sup>®</sup> GEARMOTORS & REDUCERS **DODGE**<sup>®</sup>



**BALDOR**<sup>®</sup>

## FLEXIBLE • POWERFUL • GLOBAL

The DODGE QUANTIS product line offers a full line of modular gear drives engineered for flexibility, greater torque density in a compact housing configuration, and increased horsepower capability from 1/4 to 75 Hp.

The QUANTIS family of products offers the customer three types of gear reducers: In-Line Helical (ILH), Right-Angle Helical Bevel (RHB) and Motorized Shaft Mount (MSM).

All three types of reducers are dimensionally interchangeable with major global competitors.



RHB



MSM



ILH



# DODGE QUANTIS IN-LINE HELICAL (ILH)

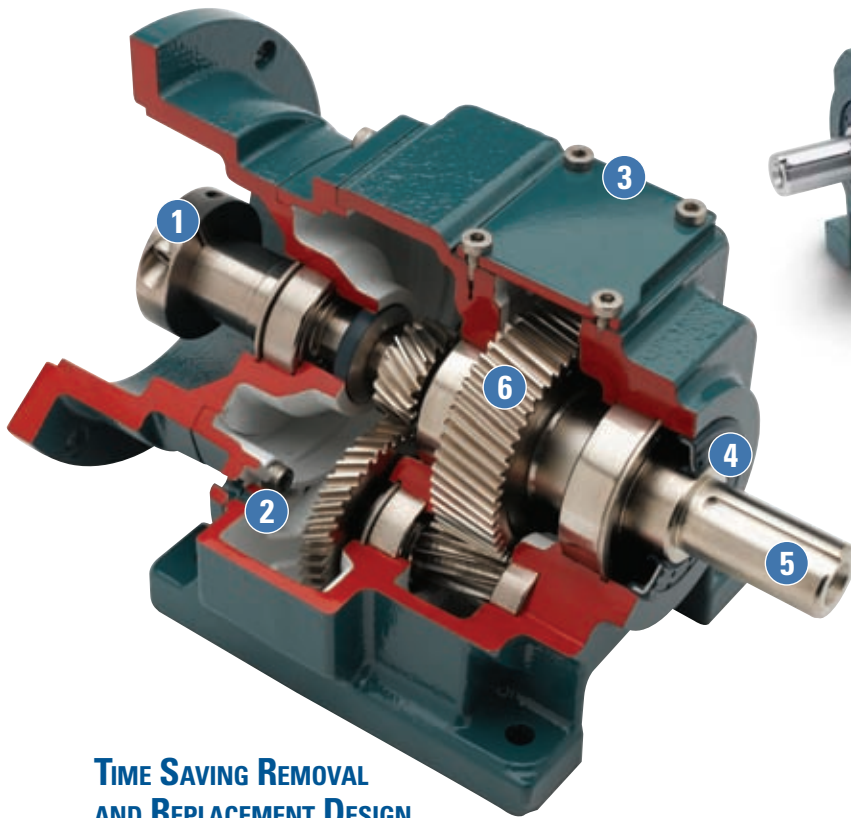
Designed to achieve greater output torque ratings, increased horsepower ratings and expanded ratio range, the QUANTIS ILH product line may allow the customer to downsize from existing units, resulting in a reduced product cost.

- Eight sizes: 38, 48, 68, 88, 108, 128, 148, and 168
- Torque ratings up to 124,000 in-lbs (14,000 Nm)
- Ratio: 1.4 to 360:1
- Single, Double, Triple Reduction
- Input power of 1/4 - 75 Hp (0.18 - 55kW)
- Concentric sizes (38-128)
- Two output flange options: B5 and B14
- Adjustable slide bases
- Optional XT harsh duty output seal for wet and abrasive environments. This seal features a quadra lip design, rubber coated inner and outer seals and a protected seal running surface
- Scoop mount motor/reducer option
- Top motor mount option

## NEW ILH

### EASY SELECTION PART NUMBERS QUICK SHIP CAPABILITY

- ILH Sizes 38-168
- Select ratios available
- Clamp Collar Input: 56C-280TC
- Foot Mounted Housing
- See 2009 Quantis Engineering Catalog Pages ILH-67 thru ILH-77 for available part numbers



## TIME SAVING REMOVAL AND REPLACEMENT DESIGN

- 1) Multiple input options – integral motor, separate input shaft, and two c-face options – clamp collar and 3-piece coupled
- 2) All gearboxes are filled with Mobilgear 600 XP 220 mineral oil prior to shipment to insure proper oil grade and fill level
- 3) Reducer housings are constructed of class 30 gray iron with cast internal ribbing for added strength
- 4) Spring loaded double lip seals of nitrile rubber (NBR) material. All seals are rubber coated to eliminate seal-to-bore joint leakage
- 5) Output shafts available with inch and metric dimensions
- 6) Gearing is of single helical design and ground to provide an ellipsoid tooth form which eliminates tooth wearing and assures meshing in the strongest tooth area.



- Gear material is alloy steel
- All gears are case hardened and ground to AGMA class 11 to insure high surface durability and resilient tooth core for greater impact resistance and longer service life
- 20 degree pressure angle to minimize noise characteristics
- Up to 98% efficient per stage

# DODGE QUANTIS RIGHT-ANGLE HELICAL BEVEL (RHB)

The QUANTIS RHB product line features a helical-bevel-helical gear train that offers cost-effective, high and low-speed solutions with efficiency ratings up to 94%.

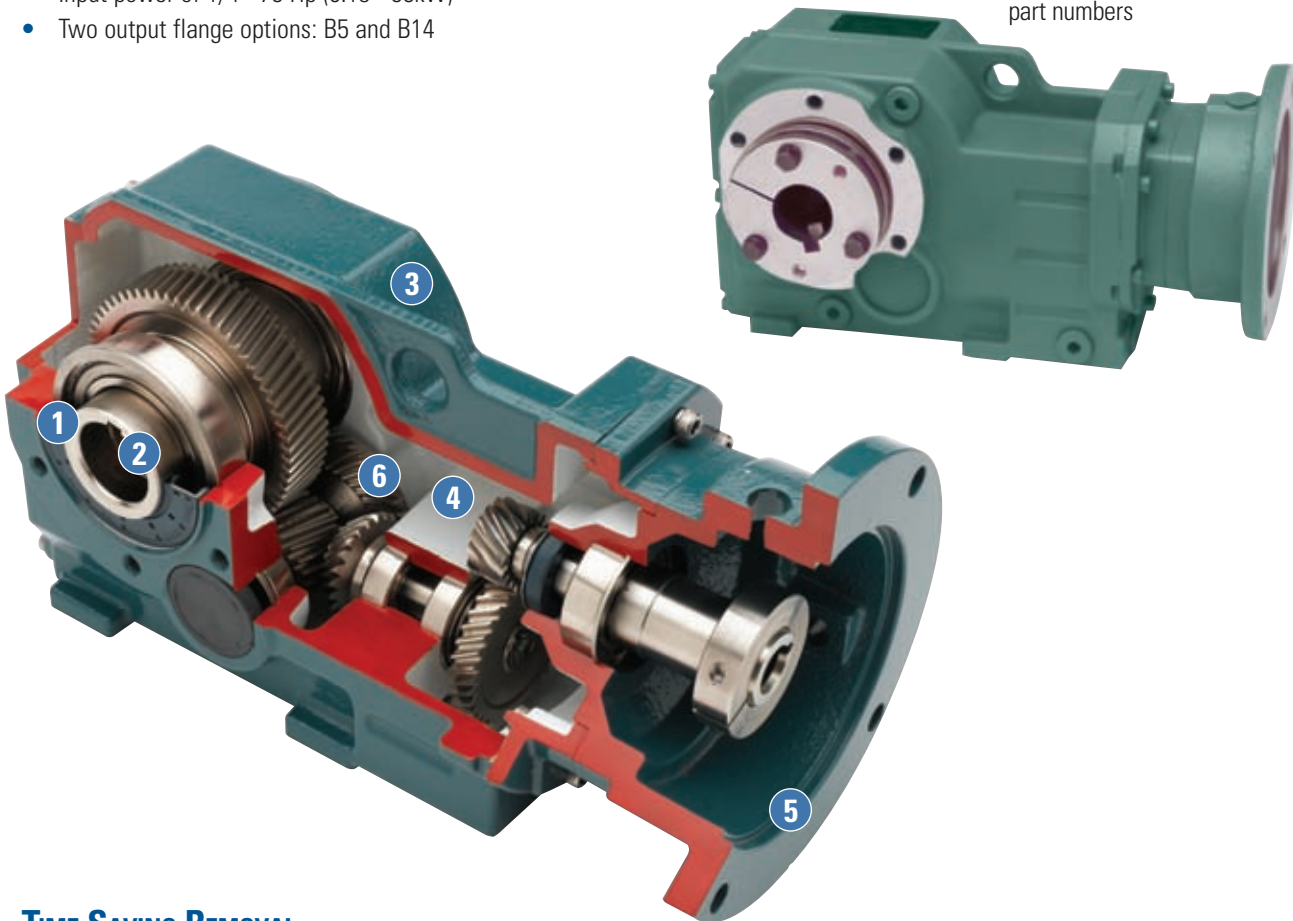
- Eight sizes: 38, 48, 68, 88, 108, 128, 148, and 168
- Torque ratings up to 120,000 in-lbs (13,500 Nm)
- Ratio: 4:1 to 307:1
- Input power of 1/4 - 75 Hp (0.18 - 55kW)
- Two output flange options: B5 and B14
- Tie rod kit option
- Optional XT harsh duty output seal for wet and abrasive environments.
- CEMA screw conveyor drive option
- Twin Tapered bushings (Standard and Short Shaft)
- Scoop mount motor/reducer option

## NEW RHB

### EASY SELECTION PART NUMBERS

### QUICK SHIP CAPABILITY

- RHB 38-168
- Select ratios available
- Foot and Flange Mounted Housing
- Clamp Collar Input: 56C-280TC
- See 2009 Quantis Engineering Catalog Pages RHB-50 thru RHB-62 for available part numbers



## TIME SAVING REMOVAL AND REPLACEMENT DESIGN

- 1) Spring loaded double lip seals of nitrile rubber (NBR) material. All seals are rubber coated to eliminate seal-to-bore joint leakage
  - 2) Multiple output options – solid shaft, double shaft, straight hollow bore, shrink disk and tapered hollow in both inch and metric dimensions
  - 3) Reducer housings are constructed of class 30 gray iron with cast internal ribbing for added strength
  - 4) All gearboxes are filled with Mobilgear 600 XP 220 mineral oil prior to shipment to insure proper oil grade and fill level
  - 5) Multiple input options – integral motor, separate input shaft, and two c-face options – clamp collar and 3-piece coupled
  - 6) Gearing is of single helical design and ground to provide an ellipsoid tooth form which eliminates tooth wearing and assures meshing in the strongest tooth area. RHB units also utilize spiral bevel gearing
- Gear material is alloy steel
  - All gears are case hardened and ground to AGMA class 11 to insure high surface durability and resilient tooth core for greater impact resistance and longer service life
  - 20 degree pressure angle to minimize noise characteristics

# DODGE QUANTIS MOTORIZED SHAFT MOUNT (MSM)

The QUANTIS Motorized Shaft Mount (MSM) universal housing accommodates either footed or flanged configurations.

- Eight sizes: 38, 48, 68, 88, 108, 128, 148, and 168
- Torque ratings up to 119,000 in-lbs (13,500 Nm)
- Ratio: 6:1 to 350:1
- Input power of 1/4 - 75 Hp (0.18 - 55Kw)

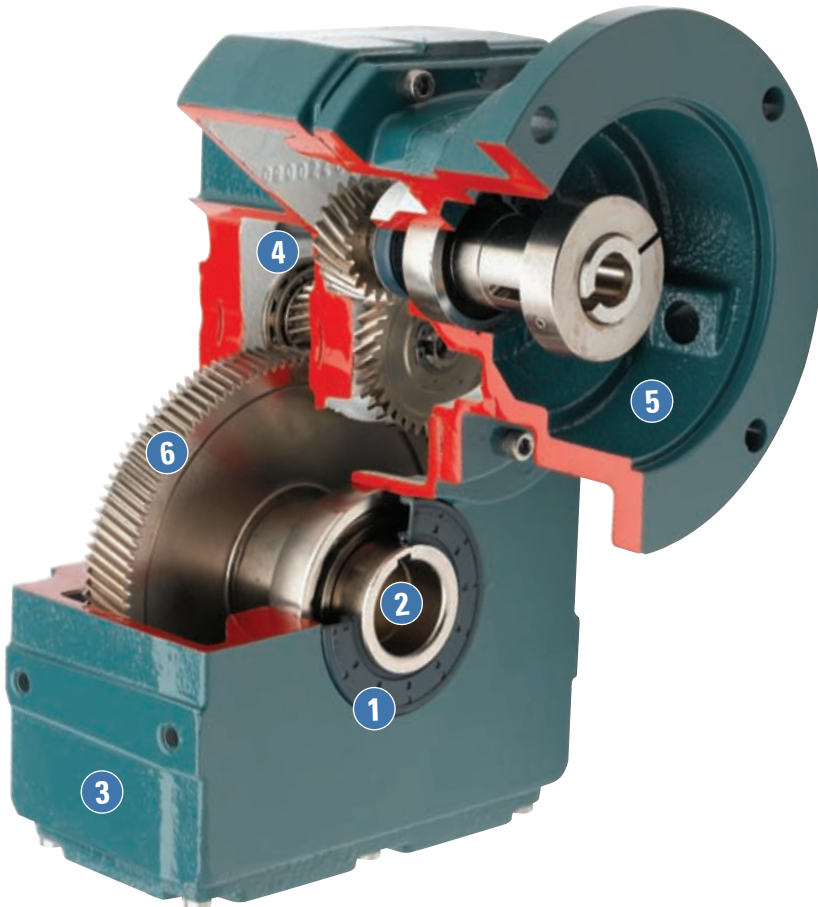
- XT harsh duty output seal option for wet and harsh environments
- TORQUE-ARM bushing option
- Two output flange options: B5 and B14
- CEMA screw conveyor drive option
- Twin Tapered bushings (Standard and Short Shaft)

## NEW MSM

### EASY SELECTION PART NUMBERS

### QUICK SHIP CAPABILITY

- MSM 108-168
- Select ratios available
- Universal housing/twin tapered output
- Clamp Collar Input: 180TC-280TC
- See 2009 Quantis Engineering Catalog Pages MSM-57 thru MSM-61 for available part numbers



## TIME SAVING REMOVAL AND REPLACEMENT DESIGN

- 1) Spring loaded double lip seals of nitrile rubber (NBR) material. All seals are rubber coated to eliminate seal-to-bore joint leakage
- 2) Multiple output options – solid shaft, straight hollow bore, shrink disk and tapered hollow in both inch and metric dimensions
- 3) Reducer housings are constructed of class 30 gray iron with cast internal ribbing for added strength

- 4) All gearboxes are filled with Mobilgear 600 XP 220 mineral oil prior to shipment to insure proper oil grade and fill level
- 5) Multiple input options – integral motor, separate input shaft, and two c-face options – clamp collar and 3-piece coupled
- 6) Gearing is of single helical design and ground to provide an ellipsoid tooth form which eliminates tooth wearing and assures meshing in the strongest tooth area

- Gear material is alloy steel
- All gears are case hardened and ground to AGMA class 11 to insure high surface durability and resilient tooth core for greater impact resistance and longer service life
- 20 degree pressure angle to minimize noise characteristics
- Up to 98% efficient per stage



# DODGE QUANTIS GOLD

DODGE QUANTIS ILH, RHB and MSM C-Face Gearmotors are now available with Baldor•Reliance Super-E Premium Efficient Motors

QUANTIS C-Face Gearmotors are available with easy to order, single part numbers from ½ to 10 Hp. Additional capabilities are available for both clamp collar and 3-piece coupled up through 75 Hp through the QUANTIS Configurator.

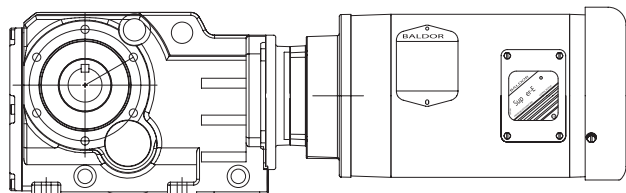
Baldor's line of Super-E motors offer customers the highest level of overall efficiencies available from any motor manufacturer, meeting or exceeding NEMA Premium Efficiency.

Super-E motors are Inverter-Ready and meet NEMA MG1Part 31.4.4.2. Super-E motors are suitable for use with inverter drives in applications with variable and constant torque up to 20:1 speed range except as noted in the Baldor 501 Catalog.

Utilizing Baldor•Reliance Super-E Premium Efficient motors, total system efficiency has now been raised to the "Gold" standard.

## QUANTIS RHB HELICAL/BEVEL

1 HP Super-E Motor (VEM3546)  
54.49:1 ratio  
C-face motor.....87.5% efficient  
Quantis reducer.....94% efficient  
Total system.....82.25% efficient

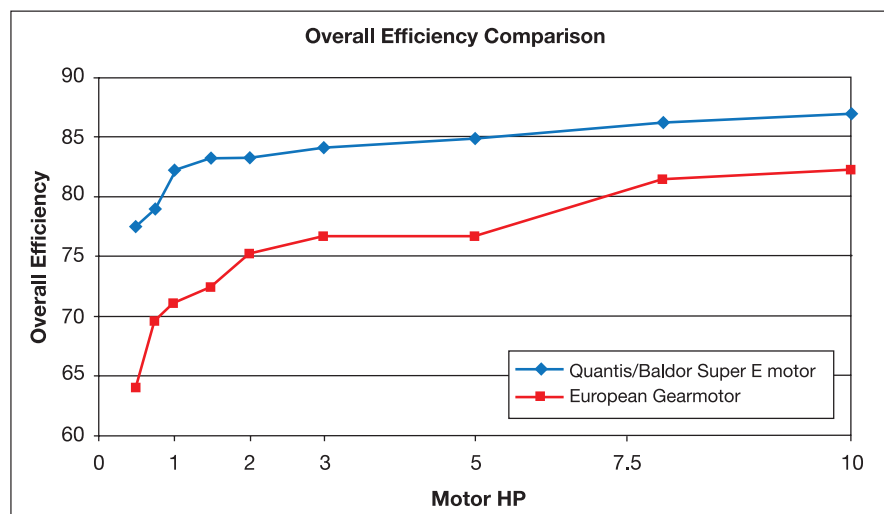
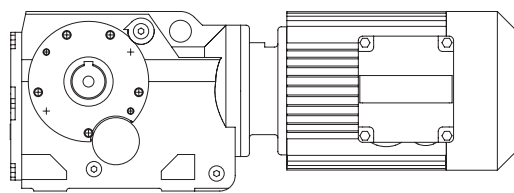


Yearly savings per unit\* = \$103.80.



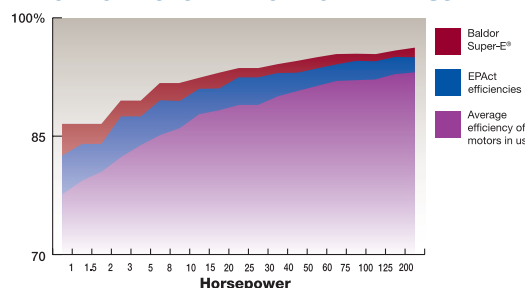
## EUROPEAN GEARMOTOR HELICAL/BEVEL

1 HP Integral Motor  
56.83:1 ratio  
Integral motor.....75.5% efficient  
European reducer...94% efficient  
Total system.....70.97% efficient

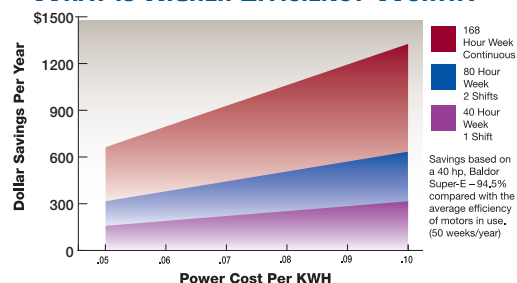


\*based on 20 hr/day, 6 days/week, 50 weeks/year, \$0.12kW/hr

## ELECTRIC MOTOR EFFICIENCY RATINGS



## WHAT IS HIGHER EFFICIENCY WORTH?



# DODGE QUANTIS INTEGRAL MOTOR AND BRAKEMOTOR PRODUCT LINE

- Product Range from 1/4 Hp (.18kw) up to 10 Hp (7.5kw)
- Available voltages
  - 208-230/460V at 60hz
  - 575v at 60hz
  - 220/400 at 50hz
  - Many others available
- Inverter capable, 10 – 60hz Constant Torque
- Class F Insulation
- Design B
- 1.15 Service Factor
- IP55 Enclosure
- Totally Enclosed Fan Cooled (TEFC)
- Meets or Exceeds EPA Efficiency Levels
- Brakemotor Torque available up to 50 ft-lbs.
- IEC Motors to include terminal block
- Additional Modifications available
  - Thermostats
  - Encoders



Integral Brakemotor



Integral Motor

# DODGE QUANTIS E-Z KLEEN

The robust protection features of a QUANTIS E-Z KLEEN reducer make it the right choice for harsh duty environments including washdown, food handling, packaging and pharmaceutical applications. QUANTIS E-Z KLEEN is offered in five sizes: 38, 48, 68, 88 and 108 for both the ILH, RHB and MSM housing styles. Either the clamp collar or the 3-piece coupled input is available for mounting a c-face motor. Separate inputs also available.

E-Z KLEEN reducers are manufactured with a 13 step coating system that provides more than three times the corrosion resistance of standard epoxy-painted units. Furthermore, to ensure the interior is as protected as the exterior, E-Z KLEEN reducers have a two piece, harsh duty sealing system that protects against high pressure sprays and sanitizing solutions.

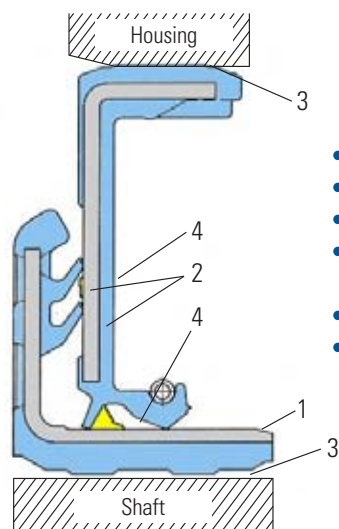
## E-Z KLEEN (WASHDOWN) FEATURES:

- Unique coating system provides greater than three times the corrosion resistance of standard epoxy paint
- White or Stainless steel color top coat
- XT Harsh Duty Output Seal features nitrile material and a quadralip design
- Thin dense nickel composite (TDNC) plated output shafts
- Non-cavity hardware
- Factory filled with mineral, synthetic or Food Grade USDA H-1 lubrication
- Water tight gasket on c-face input between motor and reducer
- One way washdown spring loaded breather

## EZ-KLEEN ACCESSORIES

- TDNC Twin Tapered Bushings (inch or metric)
- E-Z KLEEN Tie Rod Kit
- E-Z KLEEN Torque Arm Bracket
- E-Z KLEEN B5 Flange Output Bracket

## XT HARSH DUTY SEAL



- Protected running surface for shaft seal (1)
- No risk of damage during assembly
- Additional seal-lips against dust (2)
- Separate sealing system prevents damage to the shaft through corrosion and dust
- Rubber coated inner ring and outer ring (3)
- Grease prevents dry run of lip of seals (4)

## ILH E-Z KLEEN



## RHB E-Z KLEEN



## MSM E-Z KLEEN WITH BALDOR WASHDOWN DUTY MOTOR





# NEW DODGE QUANTIS CONFIGURATIONS

## DODGE QUANTIS IN-LINE HELICAL (ILH) SINGLE REDUCTION

DODGE QUANTIS Single Reduction is complementary to our double and triple In-Line Helical (ILH) gearing products. This gearbox can be used in pump applications where low ratios are required, or combine with ILH or Right Angle Helical Bevel (RHB) gearboxes to make a tandem QUANTIS gearbox achieving ratios greater than 300 to 1.

- ILH Sizes 38 – 88
- Output Shafts – Inch and Metric
- Output Flanges – B14, B5, and NEMA
- Input Ratings up to 41 Hp
- Output Torque Ratings up to 3826 in-lbs
- 98% Efficiency
- Ratings listed in the QUANTIS Gear Engineering Catalog and QUANTIS Configurator



## DODGE QUANTIS TANDEM GEAR REDUCERS

DODGE QUANTIS Tandem Gear Reducers are available for applications that require ratios above 300 to 1. This is accomplished by mounting the DODGE QUANTIS ILH Single Reduction to the primary ILH, RHB, or MSM reducer. There are many ratios and configurations available to meet your requirements.

- Maximum ratio up to 3600:1
- Maximum output torque 120k in-lbs
- Typical service factor recommendation is Class II
- Tandem reducer is assembled at the manufacturing facility
- Contact application engineering for selection assistance



# OPTIONAL QUANTIS ACCESSORIES

## STANDARD TWIN-TAPERED BUSHING KITS

An easy on, easy off, no wobble bushing system featuring a fully split, ductile iron 8-degree taper and reliable twin support. Available in inch and metric bores.



## SHORT SHAFT BUSHING KITS

Eliminates the need for full length shafts. Constructed with ductile iron, it has all the features of our standard bushing system. Available in both inch and metric bores.



## 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.



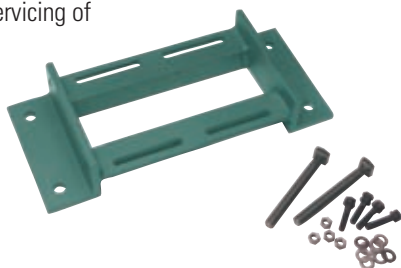
## XT HARSH DUTY OUTPUT SEAL

The rubber coated nitrile output seal consists of 2 parts; the inner sleeve and outer sleeve. The vertical flange of the inner sleeve protects the lip from high pressure washdown spray and the outer sleeve holds the actual lip. Two additional dirt excluder lips help to fling dirt away and provide a labyrinth.



## ILH ADJUSTABLE SLIDE BASE

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



## CEMA ADJUSTABLE ADAPTER ASSEMBLY

The RHB & MSM screw conveyor adapter assembly is available with two options, standard and harsh duty. The standard option includes the adapter with bolts, two double lip seals and hardware. The harsh duty option includes the adapter with bolts, two double lip seals, packing retainer, three braided seals and hardware.



## CEMA SCREW CONVEYOR DRIVE SHAFT

Screw conveyor drive shafts are made from high alloy steel material, designed with three bolt holes and engineered to CEMA dimensions. The screw conveyor drive shaft connects to either the RHB or MSM straight hollow bore reducer with the keeper plate and bolt assembly.



## 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.

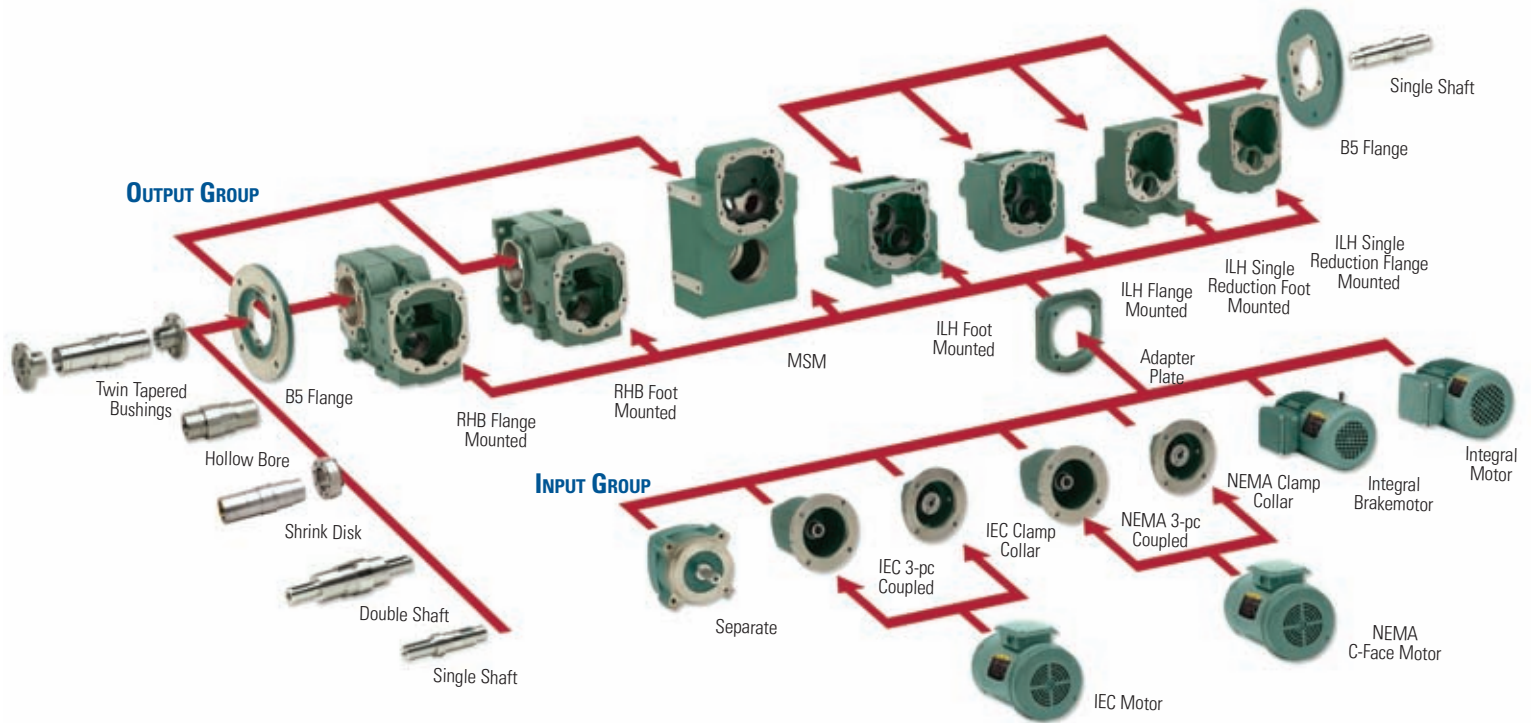


## ILH/RHB SCOOP MOUNT & ILH TOP MOTOR MOUNT

Scoop Mount and Top Motor Mounts are steel fabricated assemblies to provide customers with alternative means of supporting the motor.



# DODGE QUANTIS MODULARITY



## OUTPUT GROUP MODULARITY ILH, MSM & RHB

This illustration shows the modularity on the output side of ILH, MSM and RHB. All three styles can be furnished in a variety of output shaft configurations. All output shaft styles can be used with or without an output flange, depending on the customer's application.

### OUTPUT MODEL CONFIGURATIONS:

- |   |   |
|---|---|
| Solid Output Shaft (inch or metric)<br>– ILH, RHB and MSM | Double Output Shaft (inch or metric)<br>– RHB |
| Twin Tapered Bushings (inch or metric)<br>– RHB & MSM     | Shrink Disk (metric)<br>– RHB & MSM           |
| Hollow Bore (inch or metric)<br>– RHB and MSM             |   |

## INPUT GROUP MODULARITY ILH, MSM & RHB

This illustration shows the modularity on the input side of ILH, MSM and RHB. All three styles can be furnished in a variety of input configurations: integral motor, separate input shaft and two c-face options – clamp collar and 3-piece coupled.

# MISSION

**"Baldor is to be the best (as determined by our customers) marketers, designers, and manufacturers of industrial electric motors, mechanical power transmission products, drives and generators."**





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