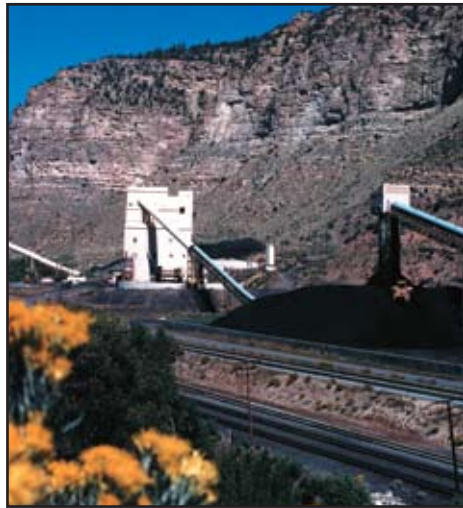


# Mining Industry



## The Industry's Most Preferred

Now more than ever, it's essential that your mining operation run smoothly and efficiently. Every process is critical to your success, and it's imperative that the power transmission products you specify perform reliably – at maximum efficiency – around the clock. With Baldor Electric, you have one dependable source for a complete line of wire-to-shaft solutions.

With Baldor Electric, you get rock-solid system performance. We offer a full line of field-proven, performance-driven, energy efficient equipment specifically designed for the mining industry. This includes mining duty motors, large horsepower gearing, controlled start transmissions, variable speed drives, mounted bearings, and conveyor components. Products engineered with industry-driven designs and patented technology that ensure greater uptime with less maintenance. With our in-depth understanding of your application needs, Baldor•Reliance and DODGE brands provide high value, feature rich products which are rugged, reliable solutions specifically designed for long lasting service in the most severe mining and industrial environments.

**DODGE**<sup>®</sup>

**BALDOR • RELIANCE**

**BALDOR**<sup>®</sup>  
BALDOR • DODGE • RELIANCE

Mining Process	Products								
	Severe Duty Motors	MSHA Certified Motors	Shaft Mounted Gearing	Concentric, Parallel & Helical Gearing	Planetary Gear Reducer	Spherical Roller Bearings	Couplings & PT Components	Variable Speed Drives	Generators
Surface Mining	x		x	x	x	x	x	x	x
Conventional Mining	x	x		x	x	x	x	x	
Longwall Mining	x	x		x	x	x	x		
Preparation/Processing	x	x	x	x	x	x	x	x	x

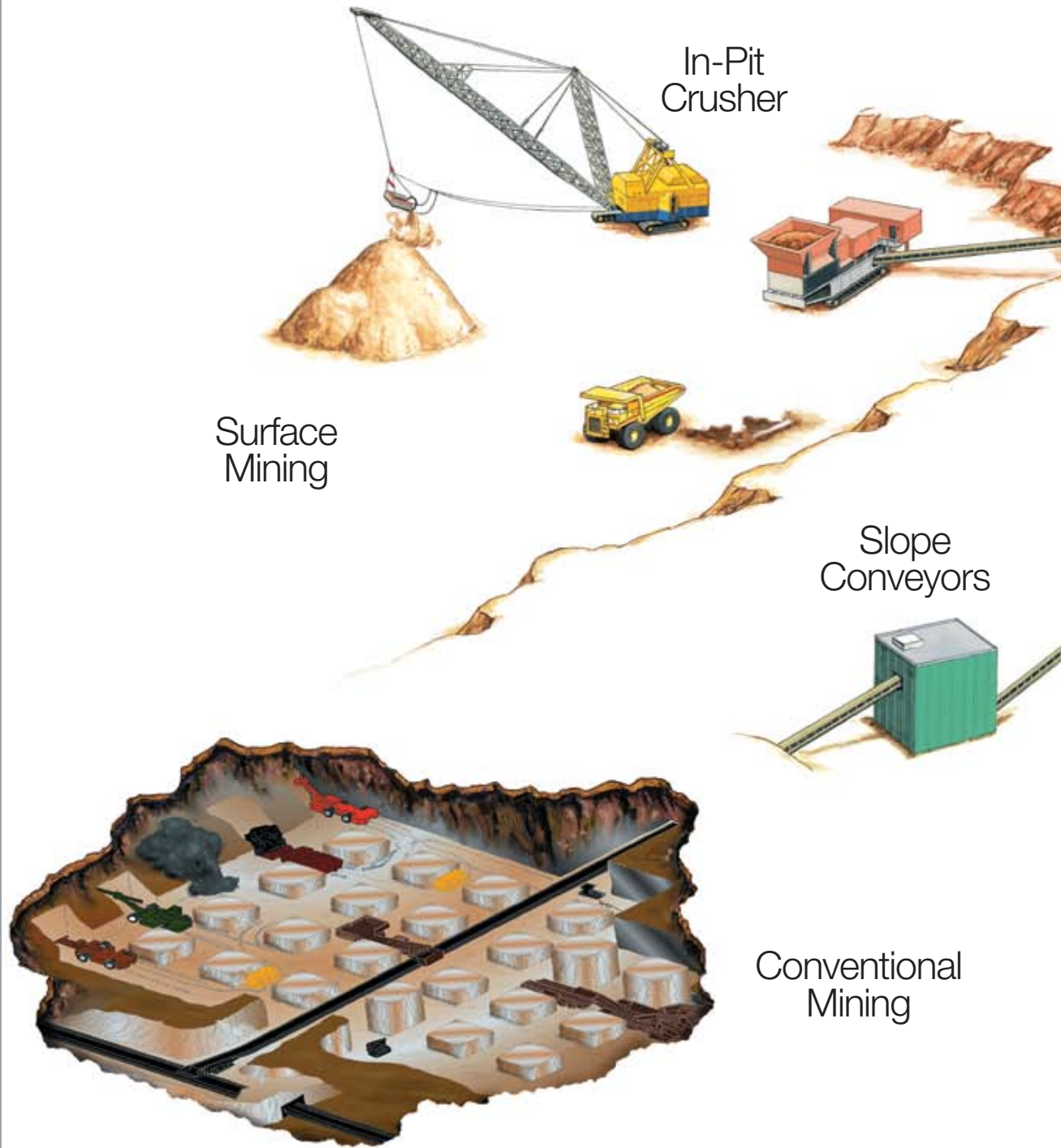
$$V_p = \frac{Q_p \times S_p}{C \times T}$$

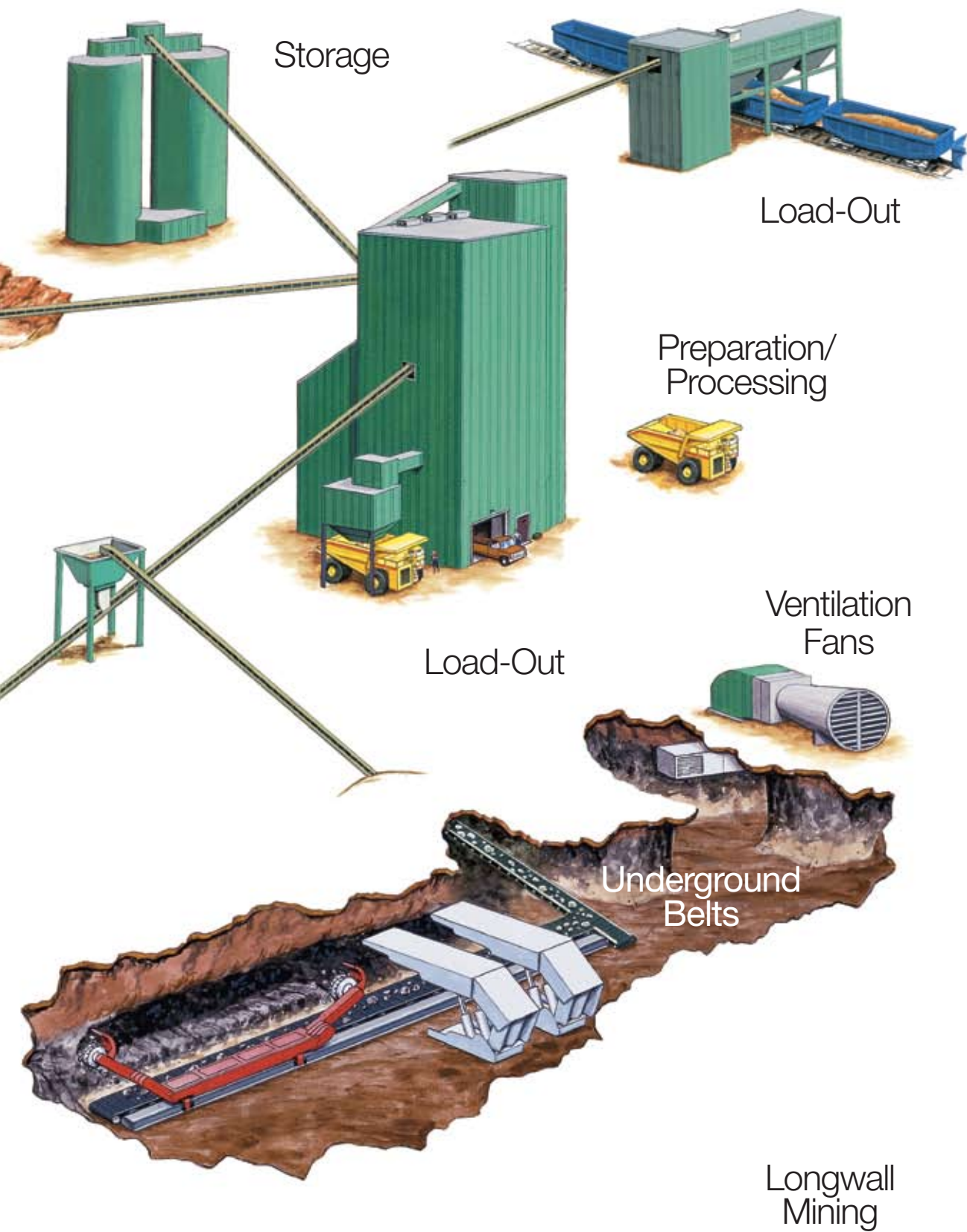
**V = Value**      **Q = Quality**      **S = Service**  
**C = Cost**        **T = Time**        **P = Perceived**

The Value Formula illustrates the importance of Quality, Service, Cost and Time in shaping our customers' perception of Value.



# Typical Mining OPERATION





Storage

Load-Out

Preparation/  
Processing

Ventilation  
Fans

Load-Out

Underground  
Belts

Longwall  
Mining

## Large, Medium and Small AC Mining Industry Motors

- Available in standard TEFC configurations with IP55 rating
- Extra tough external construction for the rough mining environment
- Bearing and seal design for long life in harsh environments
- Mining Industry nameplate (stainless steel, raised letter) for accurate identification in mining environment



## Super-E® Premium Efficient Motors

- NEMA Premium® or higher efficiencies
- Single and three Phase
- 1/4 hp through 500 hp (0.18 kW through 370 kW)
- Enclosures: TEFC, TENV, ODP
- Foot and face mount
- NEMA and IEC low and medium voltage
- Explosion Proof motors
- Brake motors



## Severe Duty Motors

- TEFC and TENV - Super-E® – XT/XEX – 841XL – 661XL
- 1/3 - 500 hp (0.25 - 370 kW), IEEE: 1/2 - 250 hp (0.37 - 187 kW)
- Cast iron frames
- Inverter capable on specified models
- Standard, EPAct, NEMA Premium® efficiencies
- IEEE 841 – Inpro/Seal® on fan and drive end shafts
- 1 through 250 hp (0.75 - 187 kW) stock; to 500 hp (370kW) custom
- Quarry Duty Motors with Design C Torque



## Hazardous Location Motors – Fixed and Variable Frequency

- Division 1 / Zone 1 Class I & II – 1/4 - 800 hp (0.18 - 600 kW) – 48 - 5810 frames
- Division 2 / Zone 2 Class I & II – 1 - 5000 hp (0.75 - 3700 kW) – 48 - 9500 frames
- ATEX – Zone 1 & 2 – 1 - 300 hp (0.75 - 225 kW) – 112 - 280 IEC frames (182T-449T)
- Bureau of Mines (BOM)
- MSHA Certified AFC Motor



## RPM AC Inverter Duty Vector Performance Motors

- 1/3 through 1,000 hp (0.25 - 750 kW) stock
- TEFC, TENV, TEBC, DPG-FV, Division 2
- Continuous constant torque to zero speed
- Encoder ready
- NEMA and IEC frames
- Compact, power dense, low inertia designs
- Extruder duty DPG-FV
- Encoder and stub shaft kits available
- Laminated steel frame construction



## InverterDuty® Motors

- V\*S Master® and Inverter Duty
- 1/3-500 hp (0.25 - 370 kW)
- 2 - 300 hp (1.5 - 225 kW) stock
- TEBC, TEFC, TENV, Division 2/ Zone 2
- Continuous constant torque to zero speed
- Encoder ready
- NEMA and IEC frames
- Washdown, paint free, all stainless and explosion-proof
- Inverter Gearmotors also available



## Wound Field DC Motors

- SCR-rated 90, 180, 240 or 500 volt
- Through 500 hp (370 kW) stock, 3000 hp (2240) custom
- Enclosures: TENV, TEFC, DPGF, DPBV, TEUC and TEAO
- C-face with base through 10 hp (7.5 kW) stock
- Tach adaptable
- Explosion-proof through 3 hp (2.2 kW) stock



## Adjustable Speed Drives

- Inverter, Encoderless Vector, Vector Drive, DC SCR (thyristor) and AC Servo available
- 230 volt, 3/4 through 60 hp (0.56 - 45 kW)
- 460 volt, 3/4 through 1000 hp (0.45 - 750 kW)
- 575 volt 3/4 through 1500 hp (0.56 - 1120 kW)
- Graphical operator display
- PID Process control loop
- Ethernet connection option



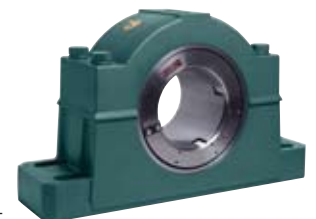
## Imperial SAF/SN (ISAF/ISN) Spherical Roller Bearings

- Industry's only push/pull adapter mount system
- Available in 2-bolt and 4-bolt pillow blocks, flanges, and take-ups
- Interchangeable with SAF style pillow blocks
- Full concentric shaft attachment with adaptor sleeve mount
- Virtually eliminates fretting corrosion
- Capable of withstanding static or dynamic misalignment of  $\pm 1^\circ$
- Installation and removal in less than 15 minutes
- Metric size Imperial adapter mount



## Hydraulic ISAF Bearing

- Patented integral hydraulically assisted mount and dismount system
- Automatic, accurate clearance setting without feeler gauges
- Full shaft contact reduces or eliminates fretting corrosion
- Normal installation and removal of ISAF can be accomplished in 15 minutes or less
- Four-bolt pillow blocks 8" and up



## Type E-XTRA® Tapered Roller Bearings

- Tapered rolling elements
- Completely assembled, factory adjusted, and properly lubricated – shaft ready
- Extra protection – E-TECT seal option
- Comparable mounting dimensions with ball bearings
- E-XTRA allows easy upgrade from ball bearings



## Dodge Unified SAF and SDAF Pillow Blocks

- Available in 22200, 22300, 23000, 23100 and 23200 series bearings.
- Adapter mount
- Split-spherical available
- LER, triple tech and Taconite sealing options
- Available as cast closed housing



## TORQUE-ARM™ & TORQUE-ARM™ II Shaft Mount Reducers

- 12 new reducer sizes with modular accessories
- All reducers can be shaft mounted; screw conveyor, vertical, and flange mounted
- Horsepower ratings through 400 hp
- Torque ratings through 500,000 lb-in
- Standard 5, 9, 15, 25, and up to 40:1 gear ratios
- Nearly 300:1 speed reduction with V-belt drives
- Twin-tapered bushing bores: 1" through 7"
- Highly efficient helical gearing
- Meets or exceeds AGMA standards, including 5,000 hours L10 life and 25,000 average hour life
- New heavy duty lip seals for extended wear life, -40° to + 300° F
- 100% factory noise and leak tested
- New metal shield sealing system with excluder lip



## Conveyor Pulleys

- CEMA Pulley assemblies fit CEMA dimensions and exceed the CEMA application standards by three to five times.
- Mine Duty Extra (MDX) pulleys utilize one-piece integral hubs eliminate welded hub heat-affected zones (HAZ)
- Dodge Engineered Class pulleys designed and built to individual conveyor needs.
- T-Section machined end disks are continuously butt welded to pulley rim for belt tensions in excess of 10,000 PIW.
- Patented Dodge HE bushing has 140 taper to reduce end disk stress
- Keyless locking assemblies available on MDX and Engineered class pulleys
- Vulcanized 45, 60, and 70 durometer SBR or Neoprene rubber lagged with plain and groove surfaces.
- Vulcanized 60 durometer D-Lag with 73% more abrasion resistance than 60 durometer SBR
- Crowned or straight face
- Wing pulleys



## QUANTIS® ILH, MSM and RHB

### C-Face Reducers/Integral Gearmotors

- 8 sizes
- Fractional to 75 hp
- Ratios: 1.41 to 359.30
- Up to 123,914 (lb-in) torque
- Mounting flexibility
- Direct coupled
- High mechanical efficiencies to 98% for reduced energy usage



## Drive Components

- Manufactured in North America using the highest quality materials and standards
- Designed for harsh environments
- Sheaves, synchronous sprockets, bushings and belts connect the driver and the driven components



## PARA-FLEX®, GRID-LIGN®, GEAR, RIGID and FLUID Couplings

- DODGE offers 10 different types of Elastomeric and Metallic couplings
- Torque ratings ranging up to 1,000,000 + lb-ins (113 kN-m)
- Bore sizes up to 12+ inches
- Shaft mounting available with clearance fit, interference fit, bushings (QD, TAPER-LOCK® and GRIP-TIGHT)
- Application specific couplings: spacer, flywheel, floating shaft, mill motor
- Rigid moment coupling for rigid mounting Dodge Magnagear to conveyor shafts.
- Single/multiple delay-fill and control fill fluid couplings available.



## CST

### (CONTROLLED START TRANSMISSION)

- Parabolic starting curves
- Adjustable acceleration times
- Deceleration (not braking) ramps
- Multiple Starting Duty
- Cooling system designed for repeated starts
- Main motor may be left running between starts



## Magnagear XTR

- Parallel shaft or right angle configurations available
- Torque capacities from 285,000 to 920,000 lb-in (32 to 104 kN-m) available<sup>(1)</sup>
- Global product design to fit all markets
- Multiple mounting configurations available (Base Mounting, Swing Base Mounting, Tunnel Housings)

(1) Contact Baldor with requests for torque requirements exceeding 920,000 lb-in.



## System-1

- System-1 packages utilize Baldor, Dodge and Reliance products
- Optimized design and product selection of all Baldor products
- Competitive solutions with package pricing
- Pre-assembled packages for ease of installation
- Project coordination to final destination



## Towable Generators & Light Towers

- Ratings from 25 kVA to 400 kVA
- Available with or without trailer
- Diesel engines
- Mobile Light Towers
  - 6000 watts total
  - (4) 1000 watt halide bulbs
  - 30 ft (9 m) telescoping mast



## Industrial Prime/Standby Generators

- Diesel ratings from 20 kW to 2,000 kW
- LP and Natural Gas to 880 kW
- Engines include: GM®, John Deere®, Detroit®, Mitsubishi®
- Prime power, industrial standby, peak shaving





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