

# Unit Handling Industry



**BALDOR**<sup>®</sup>

## The Industry's Most Preferred

Warehouse distribution centers are constantly being challenged to increase throughput without compromising quality or reliability. Baldor-Reliance, Dodge and Maska Brand Products have been the preferred electrical and power transmission solution for many years because no other manufacturer can match the depth and breadth of products, with the highest level of quality in the industry. We provide the most efficient solutions from the power line to the driven shaft from a single source supplier.

Baldor products are used on almost every part of the process in a distribution center. We have experience applying products in applications ranging from line shaft conveyors to high cycling induction conveyors and brake meter belts. Our products are applied from the pick lines all the way to the trailer loaders. We have experience in many different styles of accumulation conveyors, merges, and sorters.

With over 40 years experience and over 10 million electrical and power transmission components in the industry, Baldor is committed to the Unit Handling Industry. Baldor provides reliable system performance and dedicated, field-experienced experts who understand the products and the demanding environments in which they are used. From initial on-site consultation to complete system integration and operation, our customers know they are working with the very best.

**BALDOR® • RELIANCE®**

**DODGE®**

**MASKA**

**BALDOR®**

Process	Products					
	Motors	Gearing	Bearings	PT Components	Drives	Generators
High-Level Infeed Case Palletizer	X	X	X	X	X	—
Floor-Level Case Palletizer System	X	X	X	X	X	—
Articulated Robotic Pick: Place Palletizer	X	X	X	X	X	—
Sortation	X	X	X	X	X	—
Merge/Induction	X	X	X	X	X	—
Accumulation	X	X	X	X	X	—
Pick Modules	X	X	X	X	X	—
Shipping Lanes/Trailer Loading	X	X	X	X	X	—

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

**Q = Quality**  
**C = Cost**

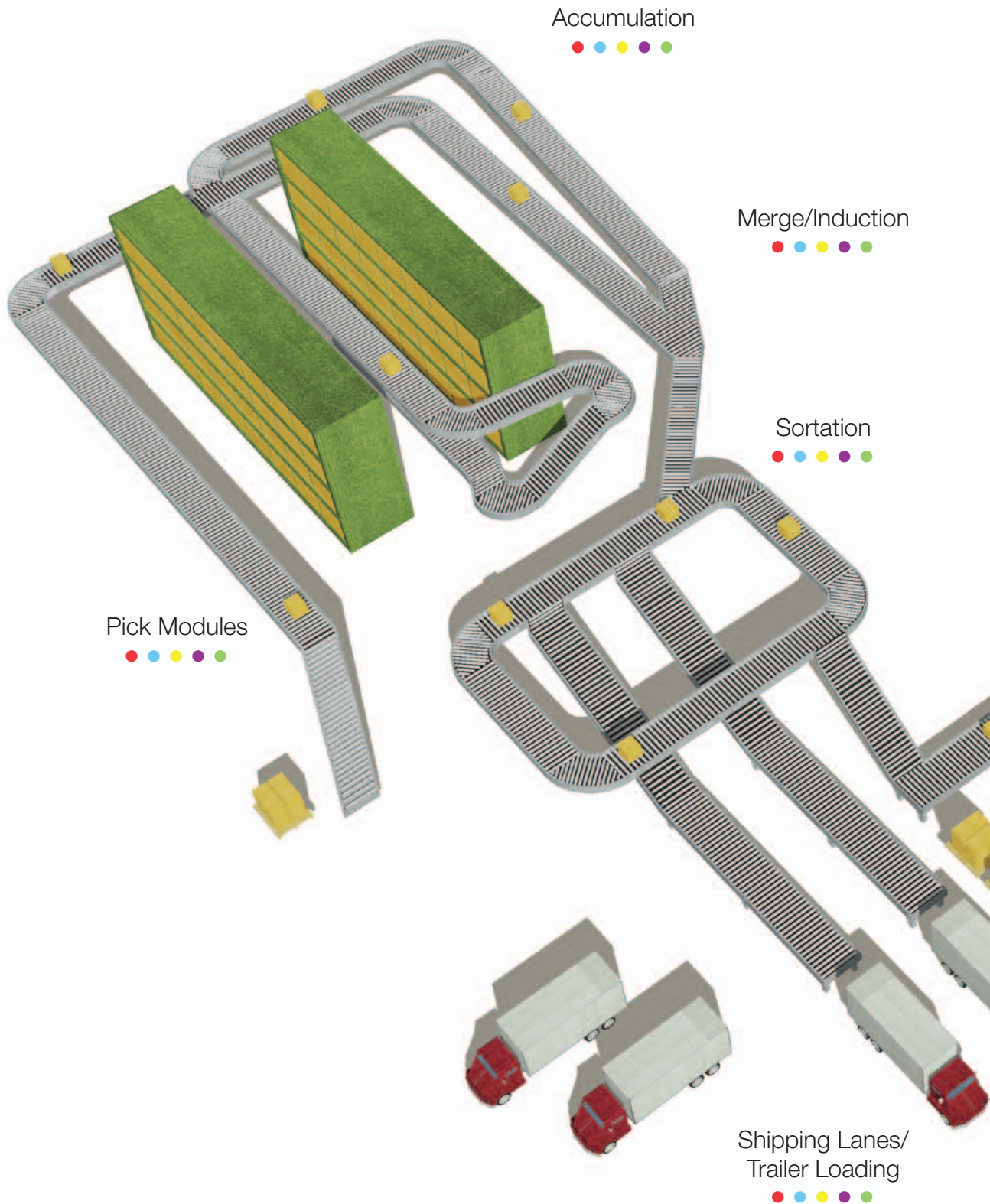
**S = Service**  
**T = Time**

**P = Perceived**

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

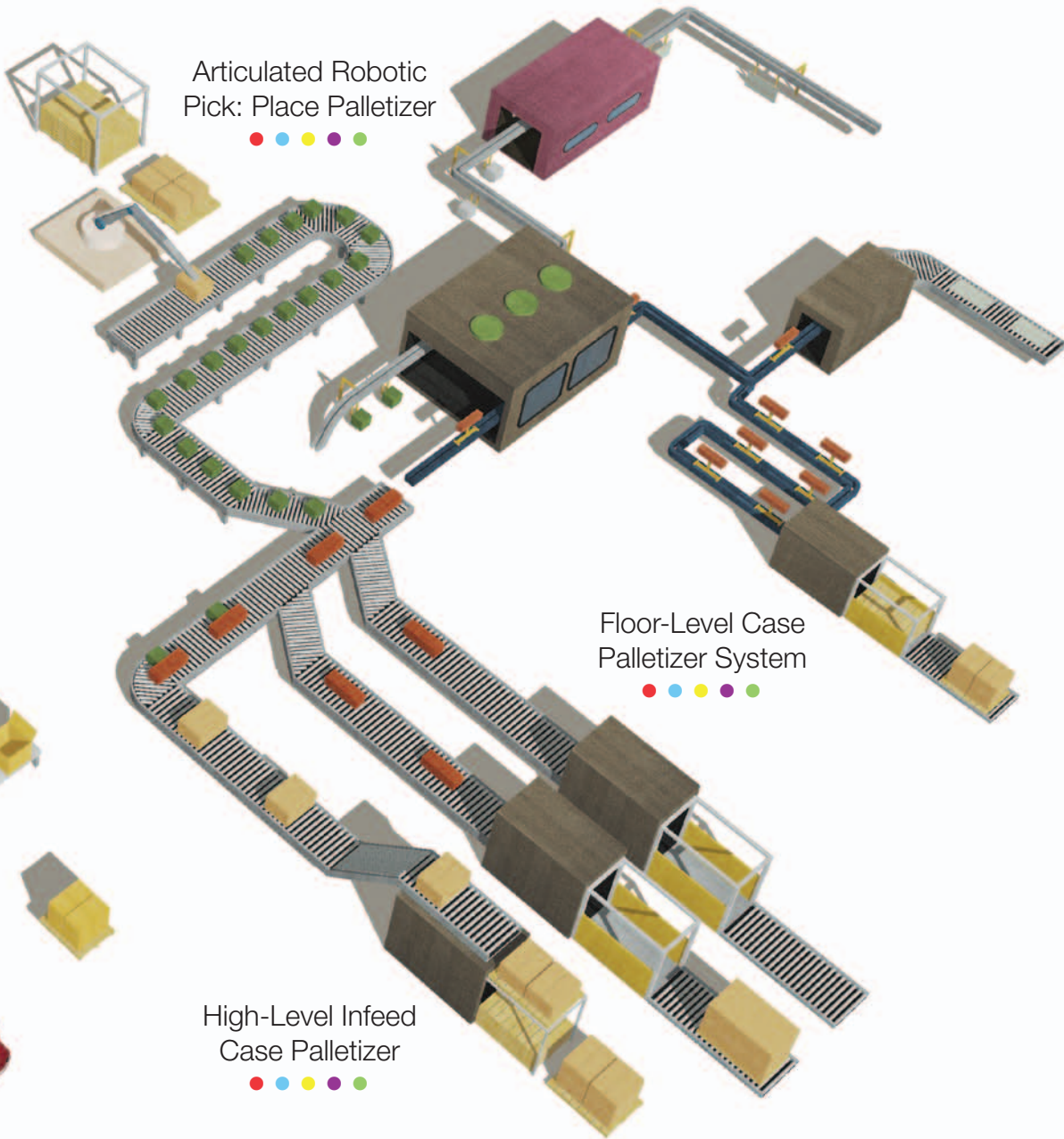


# Typical Distribution/Manufacturing OPERATION



## Map Legend

	Motors
	Gearing
	Bearings
	PT Components
	Drives
	Generators



# Unit Handling Products

from **BALDOR**



## Unit Handling Motors

- 0.5 – 5 Hp
- Standard-E and Nema Premium Super-E Design
- Inverter Capable (Standard-E 4:1 CT; 20:1 CT)
- Large Top Mounted CIB
- UL/UR, CSA, and CE
- Premium Dodge Brake Motors Available
  - Separate Connection for use on inverters



## Brake Motors

- Single phase 1/4 - 1 hp stock (0.18 - 0.746 kW)
- Three phase 1/4 - 30 hp stock (0.18 - 22 kW)
- Super-E® NEMA Premium®
- Washdown duty
- Short series brake motors with integral Dodge brake
- TENV/TEFC motors with Dodge D-series brakes 1/2 - 10 hp



## InverterDuty® and Vector Duty® Motors

V\*S Master® and Inverter Duty

- 1/3 - 300 hp stock (0.25 - 224 kW)
- TEBC, TEFC, TENV
- Continuous constant torque to zero speed
- Encoder ready on Inverter Duty, encoder mounted on Vector Duty
- NEMA and IEC frames
- Severe Duty Vector Motors in stock 1-50 hp (.746 - 37 kw)
- 1000 : 1 CT



### TIGEAR®-2 Speed Reducers

- Single-worm with quill, separate or 3-piece coupled input, cast iron construction
- Totally enclosed, maintenance free, ventless
- 10 case sizes 1.33" to 4.75" center distances
- 5:1 to 60:1 reductions, solid or hollow output
- GRIP TIGHT® bushing system available
- E-Z KLEEN® and stainless steel design available
- Factory filled with synthetic lubricant
- Premium 316 stainless steel housings



### QUANTIS® ILH, MSM and RHB C-Face Reducers/Integral Gearmotors

- 8 sizes
- Fractional hp to 75 hp
- Ratios: 1.41 to 359.30
- Up to 123,919 (in-lb) torque
- Mounting flexibility
- Direct coupled
- Forest Products Duty Output Seal
- 95% Efficient

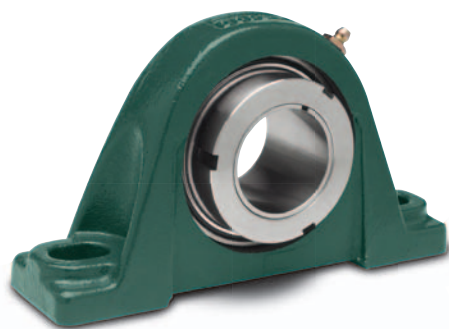


### TORQUE-ARM™ II Shaft Mount Reducers

- 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
- AGMA output torque ratings up to 500,000 in-lbs (56,500 Nm)

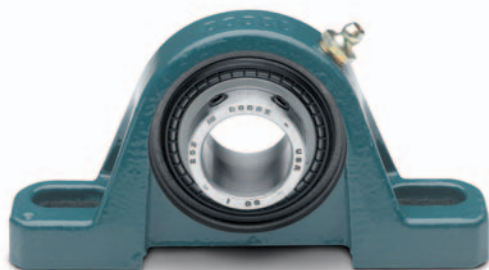
# Unit Handling Products

from **BALDOR**



## Grip Tight® Ball Bearings

- Normal duty GT and medium duty GTM
- Single-lip contact seal with flingers standard
- Interchangeable mounting dimensions
- 360° full shaft contact and concentricity
- Anti-rotation device prevents insert rotation
- Plus or minus 2° static misalignment
- Pillow Block, Tapped Base, 2, 3, 4 bolt flange, piloted flange and take up mounting
- High temperature available – up to 400° F
- Patented tapered adapter sleeve mounting



## SetScrew Ball Bearings

VSC Value Line  
SC Normal Duty  
SC M Medium Duty  
SCED Extreme Duty  
SCMED Extreme Medium Duty

- 65° setscrew locking system
- Precision-hardened and honed inner and outer rings
- Grade 10 balls
- Wide inner ring design
- Available sizes 1/2" - 3-1/2" (17mm - 70mm)
- Cooler operation for longer grease life
- Housing styles:
  - Pillow Block
  - Tapped Base
  - Flange - 2-Bolt, 3-Bolt, and 4-Bolt
  - Piloted Flange
  - Flange Bracket
  - Cylindrical Unit
  - Take-Up



## D-Lok Bearing

- Reinforced polymer and stainless steel housings
- Patented polymer housing includes anti-microbial agent which resists bacterial and fungus growth
- Two inserts: corrosion resistant (comparable to 440 stainless steel) and standard steel insert with flingers
- Three locking devices: 65° setscrew angle (SC), concentric clamp collar (D-LOK), and GRIP TIGHT® adapter mount
- Single-lip contact seal with flingers (standard), end covers available from stock
- Interchangeable mounting dimensions with most competitive products
- Anti-rotation device prevents insert rotation associated with heavy loads, vibration, unbalanced loads, and high-speed applications
- Plus or minus 2° static misalignment
- Available in inch and metric bores up to 210 series

## AC MicroDrives



### VS1SM

- 200 -230 Vac Single Phase/ 0.5 ~ 3 Hp
- IP20/UL open type
- V/Hz (Fan/Pump, Linear, Custom), Sensorless Vector
- User friendly control; basic start/stop and speed control potentiometer
- LED Display
- Basic parameter group for quick start-up
- Digital Inputs (5)
- Digital Outputs (2)
- Analog Inputs (2)
- Analog Output (1)
- Preset Speeds (8)
- Fault Memory - Last (5) fault history
- Communications
- RS485 Modbus RTU



### VS1MD

- Input Voltages / Power Ratings  
240 Vac: 0.5 to 30 Hp  
480 Vac: 0.5 to 30 Hp
- Enclosures / Mounting  
IP20/UL open type  
IP20/UL Type 1 with optional NEMA 1 conduit kit installed
- V/Hz (Fan/Pump, Linear, Custom), Sensorless Vector
- User friendly control
- LED Display; four character
- Basic parameter group for quick start up
- Remote keypad option (copycat capable)
- Digital Inputs (8)
- Digital Outputs (2)
- Analog Inputs (2)
- Analog Output (1)
- Preset Speeds (8)
- Fault Memory - Last (5) fault history



### VS1MX

- Single Phase Input Voltage / Power Ratings (115VAC / 230VAC)
- Three Phase Input Voltage / Power Ratings (240VAC / 480 VAC)
- NEMA 4X (IP66)
- NEMA 12 (IP55)
- Enhanced V/Hz Control (Fan/Pump, Linear, Custom)
- User friendly control; basic start/stop, forward/reverse and speed control LED Display; six character
- Basic parameter list for quick start up1
- Remote keypad option
- Program loader (upload/download capable)
- Brake transistor (frames B & C)
- Modbus-RTU Standard (built-in)
- Digital Inputs 1 & 2
- Digital Input 3 / Analog Input 2:
- Analog Input 1 / Digital Input 4:
- Relay Output: Normally Open Contact
- Analog Output: 0-10V / Digital Output
- Preset Speeds (4)
- Fault Memory - Last (4) fault history

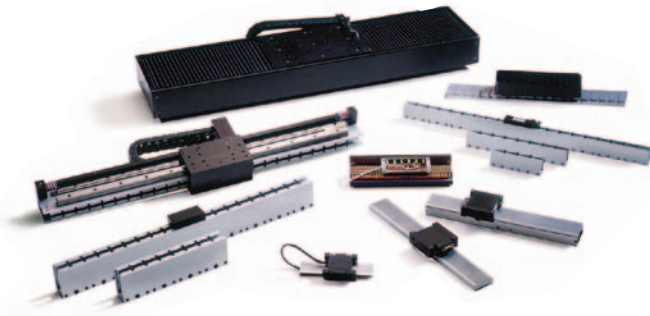
# Unit Handling Products

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## Motion Controls

- Single and Multi-axis controls
- Digital and Analog I/O
- Available in PCI format or stand alone units with USB and serial interfaces
- Program via Baldor's MintMT® (Multi-Tasking), embedded 'C' or ActiveX® Technologies
- Device Net, ProfibusDP, CANopen, Ethernet



## Linear Motors

- Very high acceleration – up to 10 g's (9.8 m/s<sup>2</sup>)
- High speeds to 320 in/sec (8 m/s)
- High peak forces to 3100 lbs (13,800 N)
- Extremely low backlash, high stiffness
- Positioning to 50 Nm



## AC Servo Motors

- Peak torques over 1500 lb-in (170 Nm)
- Standard or low inertia
- Potted stator – superior protection for high voltage and current spikes
- Premium 200°C moisture resistant, multi-coated wire
- Stainless steel IP67 enclosures available



### MECHANICAL DRIVE COMPONENTS

- BUSHING STYLES IN MULTIPLE BELT PROFILES 3V, 5V, 8V, A, B, C, D, E
- WIDE RANGE OF BUSHING SIZES
- FIXED BORE AND BUSHED LIGHT DUTY, VARIABLE PITCH, ADJUSTABLE PITCH, HEAVY DUTY ADJUSTABLE PITCH AND STEP FHP SHEAVES
- SYNCHRONOUS PULLEYS HAVE MULTIPLE TOOTH PROFILES AVAILABLE INCLUDING TRAPEZOIDAL, CURVILINEAR, MODIFIED CURVILINEAR AND REINFORCED PARABOLIC
- WIDE RANGE OF CLASSICAL AND NARROW V-BELTS, COGGED, BANDED, DOUBLE V, FHP AND SYNCHRONOUS BELTS
- DESIGNED FOR HARSH ENVIRONMENTS
- MADE-TO-ORDER SHEAVES AND BUSHING CAPABILITIES



### DODGE HTR and HTRC Synchronous Belt Drive System

- Requires no oil or grease.
- No need to re-tension the belts.
- Compact, maintenance free design.
- Allows synchronous transmission of power eliminating slippage and speed variation on high torque applications.
- Low installation tension reducing loads on other power transmission components (i.e., bearings, gearing, motors, etc.)
- Delivers power up to speeds of 10,000FPM (standard hardware is rated for 6,500 FPM, contact DODGE if greater speeds are required.)
- Superior meshing characteristics with the sprocket.
- Reduces sprocket wear due to friction.
- Higher power ratings than comparable timing belts.
- Quieter operation.
- Broad speed ratio range.

### MASKA HTD Sprockets

- All parts are completely machined in cast iron; some parts made from steel
- Positive, non-slip drive
- No lubrication necessary, non-stretch
- Smooth operation: no chain drive that results in vibration and speed variation
- Clean operation, long-life expectancy, low maintenance
- Quiet; no metal-to-metal contact



### 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



### 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 foot telescoping mast

# MISSION

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**"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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World Headquarters

P.O. Box 2400, Fort Smith, AR 72902-2400 U.S.A., Ph: (1) 479.646.4711, Fax (1) 479.648.5792, International Fax (1) 479.648.5895