Aggregate Industry Solutions

Low & Medium Voltage Products



MAX-HT® High Torque Crusher Motors PBH Series Gear Reducers A510 Series Inverters

TEAMMaster® Soft Starters



MAX-HT® High Torque Crusher Motors

TECO-Westinghouse is focused on delivering robust solutions for the tough environmental conditions found in the aggregate industry. The MAX-HT® motor was designed with these conditions in mind as well as the high torque requirements that the typical applications demand. This motor, combined with our TEAMMaster® Heavy Duty Solid State Starters or Inverters, make a great package to control start-up and operation of these tough applications. Our packaged starter or inverter solutions are equipped with an internal across-the-line bypass for no downtime peace of mind. Also available are Motovario* S, B, and PBH series gear reducers that have rugged gray iron housings and have been designed using the latest FEA technology to insure increased load rating and reliability.



LOW VOLTAGE

- 20 200 HP; 4, 6, 8P; Design C; NEMA Premium Efficiencies
- 250 500 HP; 4, 6, 8P; Design A; NEMA Premium Efficiencies
- 3 Phase, 60 Hz, 230/460V (useable on 208V); 150 HP and larger motors are 460V only
- Class F Insulation with phenolic alkyd resin varnish 2 dips and bakes and 1-spray enamel top coating for abrasion resistance Class B temperature rise
- Aluminum die-cast rotor construction



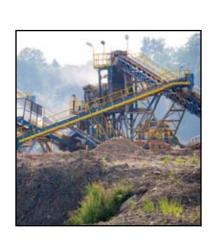
MEDIUM VOLTAGE

- 100 900 HP; 4, 6, and 8 Pole
- 3 Phase, 60 Hz, 2300/4160V
- Class F insulation with VPI treatment of solventless epoxy varnish Class B temperature rise
- Standard with 120V space heaters terminated in separate auxiliary box

COMMON FEATURES & BENEFITS



- Design A on 250 500 HP (Locked Rotor Torque≥200%, Breakdown Torque≥250%)
- 5000V class energy efficient designs where applicable
- High efficiency designs above 500 HP, where applicable
- Class I, Division 2, Groups A, B, C, & D, Temperature Code T3
- Class II, Division 2, Groups F & G, Temperature Code T3
- NEMA Design C (LRT≥200% Full Load Torque; BDT≥210% FLT)
- TEFC (IP 55) enclosure
- Bi-directional rotation
- Cast iron construction on frame and end brackets
- Oversized main terminal box, rotatable in 90 degree increments, fully gasketed with NPT threaded entrances F1 mounted; cast iron through 449T frame, fabricated steel through 6800 frame
- Oversized roller bearing with regreasable construction for belt drive applications
- Shaft V-ring seal on both ends (provisions required for Inpro-Seal modification as option)
- Two threaded drain holes with one-way breather (horizontal applications)
- Locknut and washer on ODE for vertical applications (either shaft up or down)
- Drain holes/ plugs installed at lowest point on end brackets, on both ends for frames 5000 and larger
- High strength, steel shaft of AISA 4140 shaft material 120,000 PSI tensile strength
- Polyurethane surface finish paint
- Corrosion resistant hardware





Heavy Duty Starters & Inverters

TEAMMaster® SOLID STATE STARTER FEATURES

Low Voltage:

- 230 575VAC
- 25 600 HP
- Rugged design for frequent, heavy starts
- NEMA 1, 3R, or 12
- Full HP rated across-the-line bypass contactors for any emergency
- Complete electronic motor overload protection (Class 1-30)
- Emergency bypass switch for simple run bypass select (SS/ Off/ ATL Switch)
- Solid state starter has proven performance & reliability
- Service entrance rated
- Capable of 450% full load amps for 30 seconds and 125% continuous duty
- Fully programmable to meet crusher motor starting requirements

Medium Voltage:

- 2300 6900VAC
- 500 6000 HP
- NEMA 12 or NEMA 3R, UL 374 listed, Class F
- 500% Full Load Amps 30 second rating
- Selectable solid state or emergency full voltage operation via selector switch
- Load matched Class R fusing with blown fuse indication
- 400A load break, 600A continuous 5kV rated disconnect switch
- Built-in self test (BIST) features for quick commissioning

A510 Heavy Duty Inverter:

- 230 690VAC
- 1 425 HP
- High starting torque capabilities
- LED keypad with full monitoring and diagnostics
- Speed and torque control features
- · ASIC design to protect and handle impact of sudden current changes
- Built-in PLC functionality
- Safety input

Motovario* Gear Reducers

- Universal Mounting: suitable for horizontal or vertical mounting
- Rigid cast iron casing
- PBH has casing split into two parts with reduced and direct maintenance
- Torque Ratings Range for pictured products (ratings per 1800 rpm input) 220 in–lbs - 650,000 in-lbs

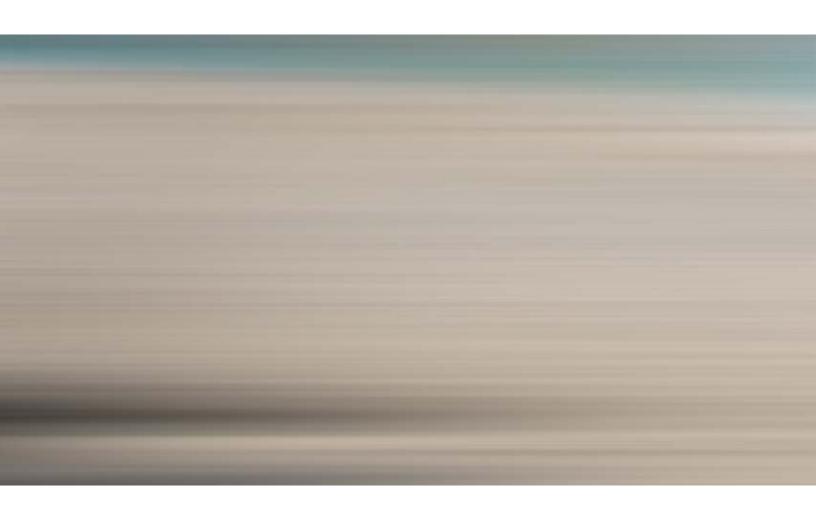














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