

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

- Thermal Protection (100 Ohm Platinum RTDs at 140°C)
- Design A on 250 - 500 HP (Locked Rotor Torque \geq 200%, Breakdown Torque \geq 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 \geq 200% Full Load Torque; BDT \geq 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



* A TECO Group Company

Keep it rolling with TECO-Westinghouse.

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