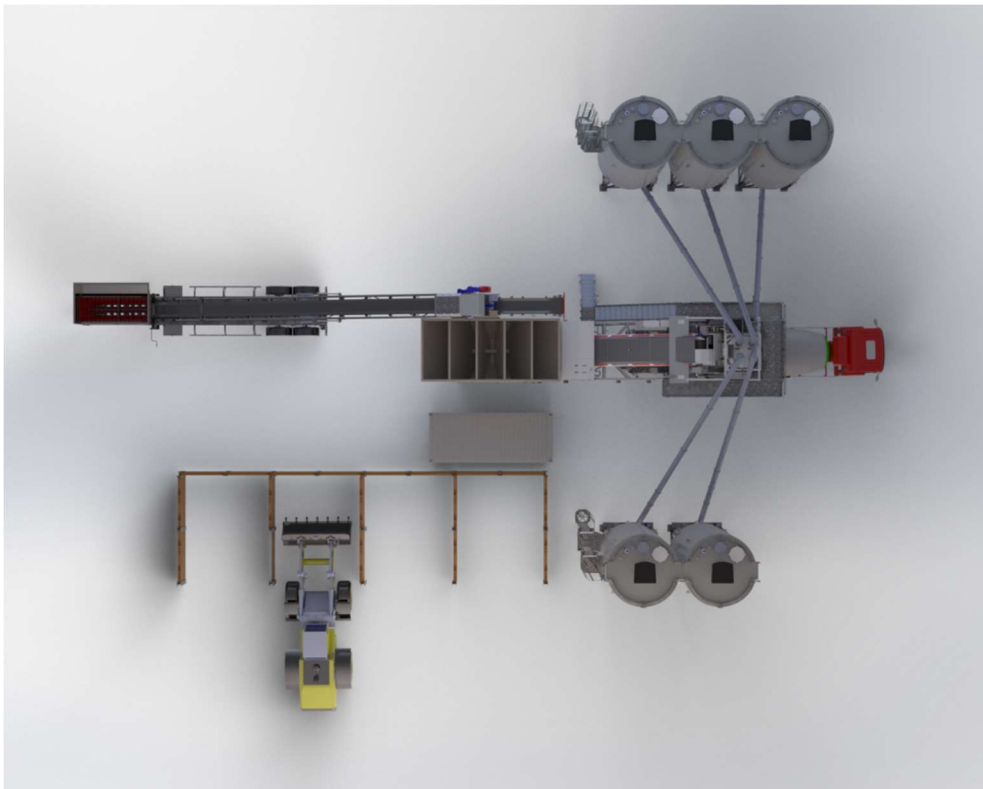


Example Plant Layout



Machine Specifications:

Item 1

MB120 - Self-erecting Ultra Mobile Concrete Batching Plant



The 100m³/hr Mobile Plant includes the following features:

- Cement and water is weighed and gravity fed, discharging immediately from above the mixer for optimal cycle time efficiency.
- Facility for up to 4 No. cement silos, 4 admixtures and 4 aggregates.
 - Plant comes with 2 No. cement silos (free issue _____), 4 admixture pumps and 5 aggregate bins (in-line style)
- Reduced no. of transport loads with aggregate hoppers and cabin fully integrated
- Self-erecting allowing for faster set-up
- No civils works required (*if placed on hard, compacted, level surface*)
- No planning permission required (*subject to local regulations*)
- No loading ramp required (*if using loading hopper*)
- High capacity up to 120m³/hr theoretical output (90 sec cycle) / real world 100m³/hr for optimal project flexibility and enhanced residual / market value from a fully mobile operation.
- Low maintenance costs using premium European components
- Fully wired, plug & play facility – no on-site wiring required
- Transported on a tri-axle rear steering chassis

Aggregate Storage Bins / Hoppers:

- 5 x No. 15 ton capacity aggregate storage bins with all tapers fitted with additional, interchangeable 6mm Tivar low friction wear liners for longer life. The aggregate bins are raised into operational position with hydraulic rams, then locked into position.
- High and low level indicators to show aggregate fill level
- Vibrators on aggregate bins to aid discharge
- Total Aggregate Bin Storage Capacity:
 - 5 bin aggregate storage – 5 x 15 Tonnes
- Wear Protection:
 - Interchangeable 6mm low friction 'Tivar' wear liners

Aggregate Moisture Probes:

- Hydronix Moisture Probes
- Microwave Measurement System measuring 25 times per second to detect rapid changes in moisture.
- 2 No. Moisture Probes (with facility to fit more to all aggregate bins)
- Includes terminal connection box IP65
- Includes control box and software package with main display providing overview of all probes and storing of data of every batch

Aggregate Weigh Hopper:

- Capacity – 7,500kg
- Deflector plate – centred for reducing impact load and flow of material up the belt
- Wear protection
 - Interchangeable 6mm low friction 'Tivar' wear lining on all inclined surfaces of the weigh hopper
- Dust and safety protection
 - Tarpaulin cover over bin discharge into weigh hopper to reduce dust and prevent access
- 1 No. Vibrator to aid material flow onto belt

Inclined aggregate conveyor belt:

- Length -12.2m
- Width - 1200mm
- Output - 1000TPH
- Drive – 1 No. 30kW NORD Bevel Helical Geared Motor
- Belt – Chevron type EP500 / 3 ply
- Cleat profile height – 25mm

th rubber friction lagging

- 2 x sets of guide rollers, head and tail
- Galvanised walkway with railings and guards
- Dust / rain protection covers over conveyor length
- Safety devices:
 - E-Stops top and bottom of plant
- Belt cleaning:
 - Adjustable, finger type rubber belt scraper
- Galvanised drip trays along length of conveyor underside with collection point for storage and onward processing / recycling
- Spray bar fitted below head drum to wash down the drip tray

Load Cells:

- 6 No. Compression load cells on aggregate weigh hopper / conveyor head section

Mixer:

- BHS DKX 3.33 Twin Shaft Batch Mixer
- Compacted concrete – 3.33m³
- Batch volume dry mix – 5m³
- Drive – 2 x 65kW
- Frequency / Voltage – 50Hz / 400V
- Moisture probe fitted in mixer
- Discharge gate
 - Hydraulic actuating
 - 3 No. limit switches
- Side platforms for easy maintenance entry
- Fortress trapped key interlock system for 100% safe entry to mixer
- Wearing front and side wall plates:
 - SONTID chrome hard cast – 12mm
- Wearing bottom wall plates:
 - SONTID chrome hard cast – 19mm
- Hydraulic power pack for discharge slider
 - 4kW
 - Hand lever for emergency discharge
- Impulse-controlled central lubrication system for 4 No. greasing points
- Manual lubrication from central point for 10 No. greasing points

IMPACT WASHOUT.

The high pressure cleaning system from WALTER achieves a high level of cleanliness of the mixer. By the use of three-dimensional rotating nozzle systems with a precise spraying geometry all areas of the mixer (incl. mixer cover) are cleaned. Benefits are:

- Excellent cleaning results
- Low water consumption
- Significant time saving due to automation
- Protection of the wear parts
- Improvement of the working conditions

High pressure cleaning system consists of:

- Computerised high pressure unit
- Electric control with cabinet, mounted at the high pressure unit
- Remote control incl. 20m of cable
- High pressure plunger pump with self-adjusting seals and electric motor
- Nozzle systems with three-dimensional rotating nozzles incl. drive, 15m high pressure hose per head, and 15m cables per head pre-wired on the head side
- Wash head valves pre-mounted next to the control cabinet
- Connecting set for the connection of the high pressure unit to the water feed pipe
- 2 No. pumps – 2 x 11kW
- Cleaning pressure – 100 bar
- Water quantity – 100l/min
- Full automatic cleaning system with independent electric cabinet
- 4 No. cleaning nozzles inside mixer top cover

Safety equipment:

- Automatic disconnection via time switch
- Water deficiency press switch
- Manual anti-freeze protection
- Thermal monitoring

High Pressure Washer / Truck Fill

- High pressure 3,000 PSI lance complete with 15m cable for general washing around the plant.
- Quick connection points at ground level and at mixer
- Independent to washout system - can be safely operated when mixer doors are open
- High pressure truck fill point

Mixer Discharge Hopper:

- Galvanised steel hopper
- Vibrating motor to reduce blockages
- Rubber sleeve for loading truck mixers
- Discharge height – 4.0m
- High pressure nozzles to wash down the discharge chute

Cement Weigh Hopper:

- Capacity – 1750kgs
- 3 No. load cells fitted – compression style
- 6 No. Aeration nozzles
- Outlet
 - Butterfly valve DN250
 - Electro pneumatic actuated
 - Valve 110V with end-switch
- 1 No. MVE 100 Vibrator
- Designed in accordance with EC type approval DIN EN45501 for non-automatic scales

Water Weigh Hopper:

- Capacity – 750 litres
- 2 No. load cells fitted
- Outlet
 - Butterfly valve DN150
 - Electro pneumatic actuated
 - Valve 110V with end-switch
- Water Dosing
 - Weighed water (hot, cold, well / fresh, recycled / grey water)
 - 1 No. 3” supply inlet for hot, cold, well / fresh
 - 1 No. 3” supply inlet for recycled / grey water
- Designed in accordance with EC type approval DIN EN45501 for non-automatic scales

Tempered / Metered Water:

- Separate tempered (metered) hot or cold water – fresh / well water only
- Metered water controlled down to 1 litre pulses

Fresh / Well Water Storage:

- Capacity – 5,000 litre water tank integrated into plant
- Tank can be fed by mains direct or auxiliary water storage tank
- Multiple drain down and testing points
- Partial or full drain down of plant as required

Additive / Admixture Weigh Vessel:

- Weighing range – up to 40 litres (max 4 No. admixtures)
- Weigh vessel is spilt 50 / 50.
- Installed in IP65 rated protective cabinet
- 1 No. platform load cell 100kg
- 4 No. Additive pumps
 - Flow rate 22l per minute
 - Motor 1.1kW 230/400V 50Hz
 - 2m suction hose & back flow preventer
 - Strainer basket
 - Incl. pipes and hoses
- Additive weigh vessel rinse out after each cycle
- Designed in accordance with EC type approval DIN EN45501 for non-automatic scales

Electrical Installation:

Electrical cabinet

- According to valid machinery directive PNWER
- Industrial cabinet with lockable main switch for over current - Short circuit protection
- All safety elements for drives and actuators
- Safety Contractors and Emergency relays for all emergency circuits and safety devices with reset control
- Mixer MCB with under voltage shunt trip
- Mixer Interlock key system
- Installation conditions:
 - Max. humidity 85%, no direct
 - Sun exposure, operating temperature 5 – 40 degrees
 - Control voltage 110V
 - Switchgear

Electrical equipment

- Cable trays, pneumatics valves, lighting, Aeration Panels
- Cables SY PVC / BS EN 50525-1 BS EN 50525-2-51 BS EN 50525-2-11
- In sections where there are multiple devices located, terminal boxes are used (IP65)
- Incl. Voltage, measurement, shielded control lines
- Plug and Sockets industrial IMLE - SCAME
- All cables marked with unique ID

Control room

- 3ph 8 T/P Dis-Board
- MCC Electrical cabinet all equipment CE marked
- Heating, light, sockets
- 1 x door, 1 x windows

Additional Notes for reference:

- Pull down points for calibration
- BSI/ISO compliant
- Recommended 6 monthly inspection intervals on electrical equipment. This would include testing of all motors, connections and cables. All safety devices tested and cleaned, Inspection report.
- Typical downtime period inspections is 2-3 hours This can done outside of normal working hours.

Batch Control System:

- BPL Control System

Equipment Schedule

Hardware:

- PC – Intel Core Microprocessor including vRTC (Virtualized Real Time Controller)
- 22" Colour Graphics Monitor
- 80 Column Line Printer
- J/Box – Control Panel containing input / output racks
- Manual Station – Independent Control Panel Display, for weigh scales, metered materials and moisture probe.
- UPS

Manuals:

- Installation and operators manual.

- Horn control.
- Cement silo aeration control, auto/off/manual.
- Gate closed lamps, weigh scales.
- Air compressor start/stop.
- Aggregate discharge conveyor start/stop with lamps.
- Plant power safety lock.
- Miscellaneous switches with lamps.
- Manual power on/off.
- Emergency stop push-button.

Features:

- Printer control software module.
- Field configurable ticket.
- Truck flow rate control (Applicable to dry output plants only that meet required specification).
- Material usage report.
- Returned metres reuse program.
- Freewheel Facility (Option to setup continuous batching, from the load stack)
- Percentage substitution of fly ash and cement.
- Simulator mode.
- Field assignable input/output.
- Bin mapping.
- Unlimited mix designs storage + Polynomials.
- Password protection control.
- Low level bin warning.
- Slump control.
- Manual batch weight recording.
- Batch Weights stored.

Electrical:

- Control Voltage 110V

Compressed Air / Pneumatics:

- Screw compressor
 - Brand name - Renner
 - 7.5kW / 1 x 500 litre pressure tank, compressed air cooling dryer, maintenance unit, 3 part filter, pressure reducer, manometer.
- Pneumatics
 - Air lines, maintenance units, compressed air connections

Paint Finish:

- Paint Coating
 - Sandblasted steel
 - 3 x coats of 2 PAC epoxy paint – min. 125 microns
 - Plant Colour – as per customer request RAL Code TBC

- Galvanised Areas
 - Hot dipped galvanised to BS ISO 1461.
 - Steps, handrails, support structure for weigh hoppers, drip trays, dust covers, main support legs

Item 2

TBS MLH - Mobile Loading hopper



From the loading hopper the feed conveyor feeds a slewing conveyor which fills the 5 No. selected aggregate bins as required. The slew conveyor is controlled via remote control by the wheel loader operator from the safety of the wheel loader cabin. High and low level indicators on aggregate bins and visual light system on hopper feeder to clearly indicate when bins need filled. The Conveyor is hydraulically folded over for transport and features all necessary equipment to allow it to be towed by road going vehicle.

- Throughput – 400TPH
- Transport Dimensions
 - Length:12.25m (from 5th wheel pin)
 - Width: 2.45m
 - Height: 4.0m
- Weight – approx. 10 tonnes
- Hopper capacity – 10 tonnes
- Hopper feed height – 3.1m
- Hopper loading width – 3.5m
- Conveyor belt - 750mm wide
- Drive motor – 2 x 7.5kW Nord Gearbox and motor
- Slew motor – 0.75kW
- 2 No. lockable toolboxes incorporated in chassis
- Paint Coating:
 - Sandblasted Steel
 - 3 x coats of 2 PAC epoxy paint – min. 125 microns
 - Plant Colour – as per customers request – RAL code to be supplied

Item 3

Existing 2 No. 150T Powder Silos (supply)

CE Marking:

All plant and equipment is fully CE marked and certified

Quality Standards:

ISO 9001:2015

ISO 14001: 2015

ISO 45001: 2018

Certificate No. 382592022

Conformity to UK Health & Safety / CE / ISO Standards

DIRECTIVES:

2006/42/EC - Machinery Directive

2006/95/EC - Low Voltage Directive

2004/108/EC – Electromagnetic Compatibility Directive



Profitable, sustainable, secure

Ultra Mobile Concrete Batching Plants from TBS

Total Batching Solutions

28 Cabragh Road
Armagh
Co. Armagh
BT61 8EY
Northern Ireland
Tel: +44 (0) 28 3752 7276

sales@totalbatchingsolutions.com



All specifications subject to change without prior notice

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