HM Technologies
Specialist Construction Equipment Solutions

7 Merlin Court, Castle Hill, NSW, 2154, Australia
(T) +61 (0)2 9659 9530 (F) +61 (0)2 9659 5008
www.hmtechno.com Email: Info@hmtechno.com

Multi Compartment Chemical Admixture Scale

Admixtures are a potent modifier of concrete properties, correct dosage is critical to ensure optimal performance. Small changes in actual dosage can have significant effects on the concrete quality and properties.

The ***HMT Multi Compartment Chemical Admixture Scale*** by HM Technologies ensures the highest degree of accuracy and flexibility giving you complete confidence and certainty that admixture dosages are correct. Saving time and money by reducing the risk of failure and allowing optimal mix costs.

Designed specifically for the Concrete industry. The scale is a vibration resistant, multi product weighing system that accurately dispenses both aggressive and non-aggressive chemical compounds in liquid form. The scale has the capability to significantly exceed the batching accuracy requirements as specified in AS1379 or ASTM C-94,

Concrete producers will see the benefits through improved

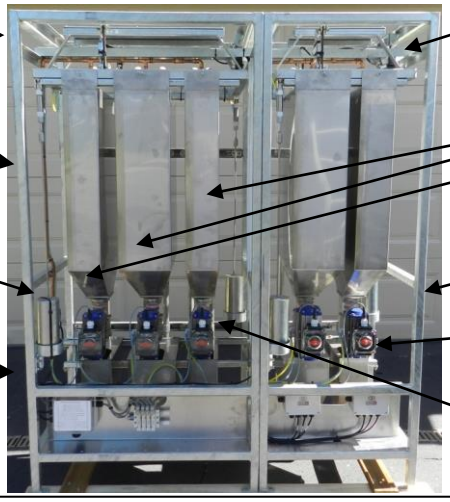
Risk Management - Each batch is weighed it is therefore easy to detect and correct overruns or incorrect dosages before the admixture is added to the concrete. Weighing of admixtures ensures a high degree of constancy ***allowing for optimal mix designs and therefore costs***. With the increase of specialized concrete requirements best practice is to reduce the risk of error at all phases of the manufacturing process.

Speed and Control of batching admixtures - Faster batching cycles - Admixtures are pre-batched then dumped as required and controlled by Batch Computer, Admixtures can be dosed at any stage of batching and in multiple dumps – ***thereby achieving optimal performance***

Accuracy - Scales are properly calibrated to exacting national and international standards and tolerances ***ensuring complete traceability***.
Verification of calibration is “hands off” and automated and can be done as often as required.

Flexibility & Convenience - ***Admixtures can easily be added or taken out*** without the need for calibration. Self-flushing automation ensures the batching hoppers are continually emptied and cleaned after each batch minimizing the risks of contamination.

Reliability - Significantly better, proven reliability and low maintenance reduces risk of downtime at busy concrete plants.



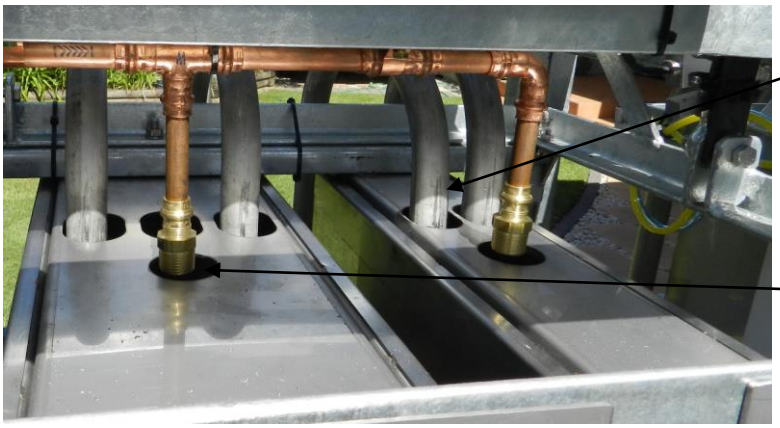
Example shown is a double weigh frame - 1 medium and 1 small

Driving Innovation, improving Safety, Efficiency and Quality

7 Merlin Court, Castle Hill, NSW, 2154, Australia
(T) +61 (0)2 9659 9530 (F) +61 (0)2 9659 5008
www.hmtechno.com Email: Info@hmtechno.com

Design features that set this scale system apart from the market:

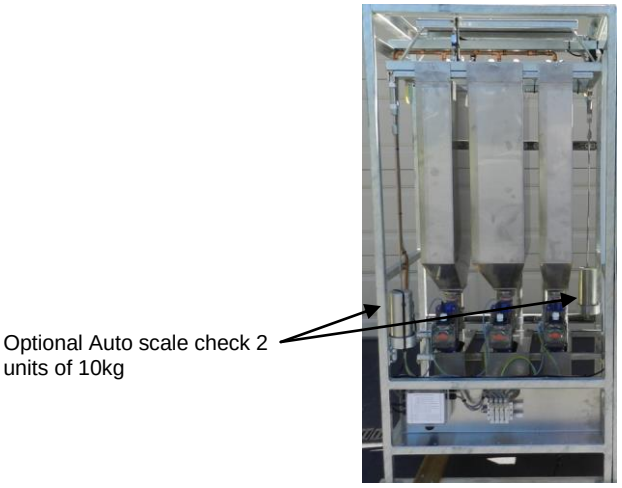
- Modular system across three (3) frame sizes allowing compartments to be changed or added when required.
- Fully enclosed weather proof scale
- Mounted on vibration dampening supports to minimize effect of plant vibration
- No pipes linked directly to weighing mechanism which may influence accuracy
- Option for multiple weigh frames in a dispensing system allows multiple admixtures to be batched at the same time
- Admixtures are discharged directly to funnels which lead to the appropriate discharge point.
- Multiple compartments – to avoid contamination of products
- Up to 4 admixtures can be dispensed per compartment.
- Accurate weighing of small (20ml) or large quantities (225L) of admixture.
- Scalable, additional admixtures can be easily added
- Multiple tension load cells and design - increase accuracy, capability to significantly exceed the batching accuracy requirements as specified by AS1379 & ASTM C-94
- Flexible discharge options – partial or full sequential discharge options allow admixtures to be added in the most appropriate point in the batching cycle
- Corrosive resistant components – Galvanized steel frames, stainless steel hoppers & ball valves, aluminium covers
- Self-flushing automated after every load and manually at the end of the day
- Proximity switches on discharge valves prevent admixtures being batched unless discharge valves are closed.
- Components are interchangeable with other HMT scales
- Auto scale check option



7 Merlin Court, Castle Hill, NSW, 2154, Australia
(T) +61 (0)2 9659 9530 (F) +61 (0)2 9659 5008
www.hmtechno.com Email: Info@hmtechno.com

Self Calibration

The calibration system comprises of two (2) 10 Kg weights (located in front left and rear right hand corners), when not checking the scale the weights rest on platforms and do not affect the workings or accuracy of the scale. When activated two actuators lift the weights to the scale and the batch plant operator can verify the mass and accuracy of the scale.



Weighed Batching Vs Volumetric Batching

Weigh Batching	Volumetric batching
100% traceability and compliance with ISO 9000 quality requirements	Batch records may not tie up with actual dosage as flow meter inaccuracy cannot be recorded
Scales are properly calibrated and traceable to national and international standards and tolerances . Batch computers hold a record of what has been weighed ensuring traceable confirmation of the volume dispensed.	Flow meters are not calibrated in the strict compliance sense supply companies simply do a check and issue a dosage check document. Although the batch computer holds a record of what has been requested from the flow meter there is physically no confirmation that what was requested is what has been dispensed.
Admixtures are pre-weighed then held in the hoppers ensuring rapid discharge with no impact on batch cycle.	Admixtures are batched directly into concrete mix, which could slow batching cycle
Admixtures can be dosed at any stage of batching and in multiple dumps – thereby achieving optimal performance	Admixtures are difficult to batch at certain stages of the batching sequence
Calibration is "hands off" and automated and can be executed after every batch if required.	Calibration is cumbersome and messy; the frequency is reduced due to the inconvenience
New Admixtures can be added to the scale simply	New Admixtures require a full admixture line, and possibly an extra controller.
Large quantities of admixture (up to 225l) can be dispensed rapidly and accurately into the batch, ensuring optimal dosing and no delays in the batch cycle.	Dispensing large volumes can cause increased inaccuracy, an inability to dispense at optimal time in the batch cycle and delay the batch cycle time.
The batching hoppers are continually emptied and cleaned after each batch.	Reliability can be hindered by the efficiency and cleanliness of the pulse meter
The weighing of the liquid ensures an accurate dosage, continuous self calibration maintains accuracy	To ensure accuracy a second pulse meter or sight glasses is often needed or requested
Target weigh tolerance of 0.01% to 0.05% of volume	AS1397 allows a tolerance of ±5% or less, volumetric batching makes it difficult to detect what has actually gone into the load
Each batch is weighed to easily detect overruns or incorrect dosages.	Difficult to detect overruns or incorrect dosages

For more information please contact HM Technologies Pty Ltd