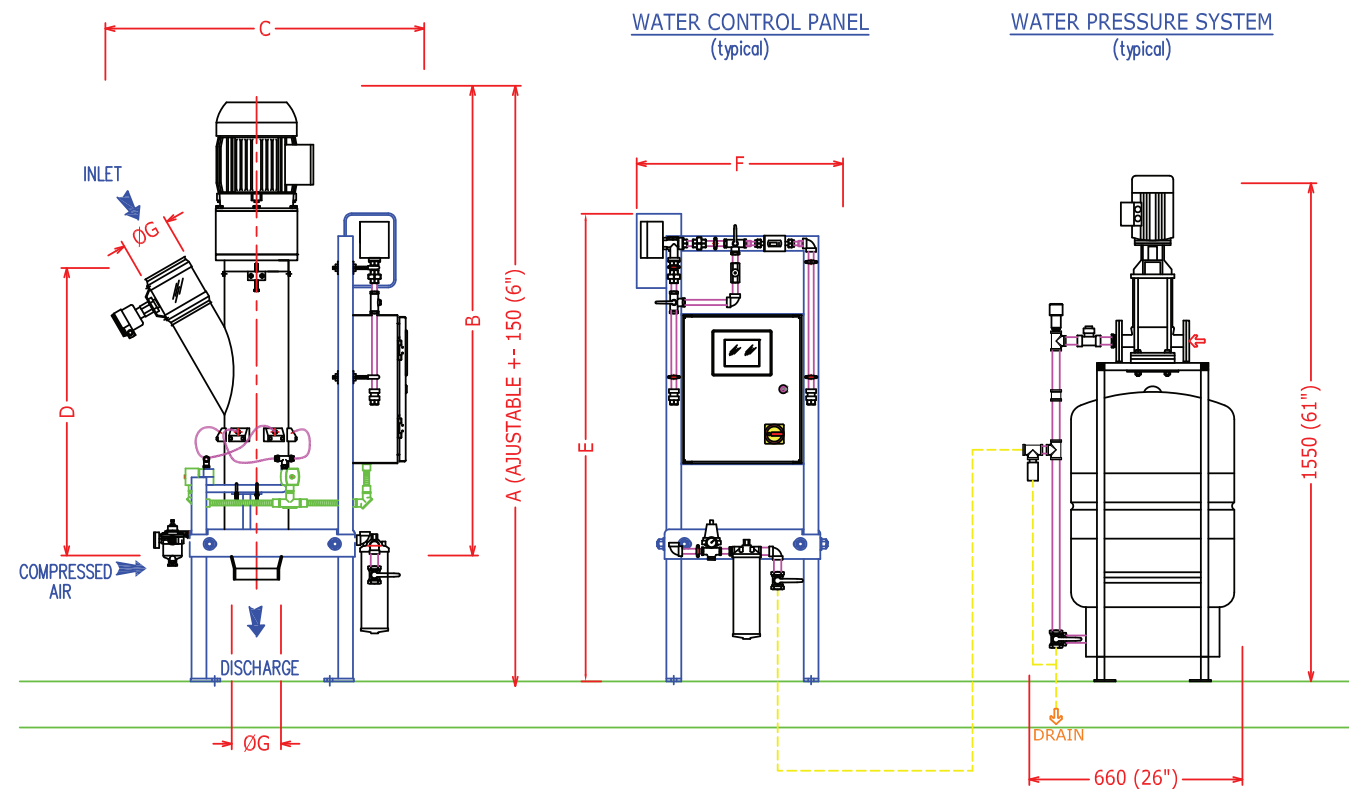


Technical and Dimensional Data.

HMX HYDROMAX



(PUMP/TANK TO BE INSTALLED AS CLOSE AS POSSIBLE TO HYDROMAX)
 < 7 mt. VERTICAL
 < 25 mt. HORIZONTAL

| MODEL | T/H | WATER CONSUMPT. | WEIGHT | POWER |
|---------|-----|------------------|---------|--------------|
| HMX/150 | 6 | 34gph. (130lt/h) | 268 Kg. | 3.3-5.5 kw |
| HMX/200 | 12 | 40gph. (150lt/h) | 450 Kg. | 7.5-11.0 kw |
| HMX/300 | 22 | 90gph. (330lt/h) | 680 Kg. | 18.5-22.0 kw |

| MODEL | DIM. 'A' | DIM. 'B' | DIM. 'C' | DIM. 'D' | DIM. 'E' | DIM. 'F' | DIM. 'G' |
|---------|-------------|-------------|-------------|-------------|-------------|------------|-------------|
| HMX/150 | 1626 64" | 1245 49" | 889 35" | 813 32" | 1270 50" | 635 25" | 120 4.5" |
| HMX/200 | 1880 74" | 1448 57" | 990 39" | 965 38" | 1270 50" | 635 25" | 150 6" |
| HMX/300 | 2286 90" | 1778 70" | 1143 45" | 1143 45" | 1346 53" | 762 30" | 200 8" |

Technical and Dimensional data are indicative only. They may be changed at any time, without notice, for market compliance, technical and manufacturing reasons.



Why control moisture?



Machine Details.



CETEC's HMX Hydromax hydrator is designed to add moisture to finished granulates and powders.

Many processes use intensive treatments, including grinding, heating, cooling, or a combination of these, all of which tend to dry a finished product. By the simple introduction of this system, process yield can be increased, and a consistent final product quality produced.

Moisture control is one of the most critical factors affecting the profitability and performance of a process. To provide customers with a product of

consistent moisture, traditionally means a compromise: the moisture content of a the raw material must be adjusted after considering not only the efficiency of the operation but also the moisture content of the finished product.

A conflict may arise here, as the moisture that gives the best process results does not necessarily provide the desired finished product moisture.

Many processors know only too well the challenges of obtaining and maintaining optimum performance. Have you ever sold a product at 8% moisture when your

customer would only accept (or want) a consistent 10%?

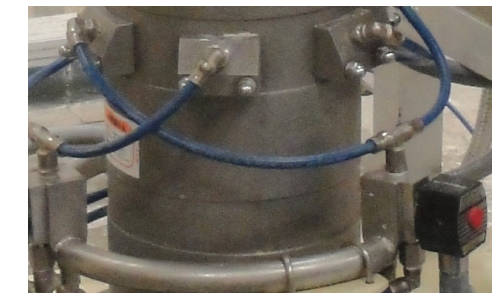
This hydration system may produce a small percentile of agglomerates that must be sifted out after hydration and ground. CETEC can provide a complete system to provide consistent hydration of products. This includes NIR or microwave based online control of the moisture, post hydration sifting and re-grinding of any agglomerates.

Key components.

Vertical Mixer.

The vertical stainless steel mixer is essentially composed of three main parts:

- First, the cylindrical hydration chamber with an inclined inlet and Doppler radar product sensor.
- Second, a rotating shaft fitted with a series of aerodynamically shaped paddles, driven by a variable speed, direct drive motor.
- Finally a ring of six or eight specially designed jets for precise water atomization.



Water Panel.

The water panel is an essential component of the system that provides filtered, high pressure water to the Hydromax. The water entering the panel is filtered through a 1 micron filter, and passes through a pressure regulator. The water flow rate is controlled by a high resolution electrically actuated valve and monitored by a digital flowmeter chosen for its accuracy and linearity. A manual by-pass system is provided for manual flow setting override.

Pump and Pressure Vessel.

A 1.5 hp (1.1 kW) pump generates the required pressure to feed the six atomizing nozzles, and stores the pressure in a Watts regulator vessel. A digital pressure switch starts and stops the pump to maintain desired pressure levels.

On-Line Quality Control.

The Hydromax is available with our optional NSX or MSX in line moisture analyzers. The Systems come as free standing stainless steel motorized units, to be mounted downstream of the Hydromax, to provide feed-back moisture control in the form of a 4-20mA signal. The applicable unit is best located after a rebolt sifter so as to provide the Hydromax with a true finished flour moisture reading. The NSX works on NIR technology for finer organic products, while the MSX works on Microwave technology for larger whole products. Incorporating the NSX or MSX systems provides for true closed loop moisture control.



Benefits.

Primary:

- Increased process yield.
- Increased production.
- Consistent product moisture.
- Lower process loss.
- Improved sanitation.
- More stable processing conditions.

Supplementary:

- Improved discharge of the process feed bins.
- Reduced grinding power consumption (kw/ton).
- Extended periods between sifter cleaning.
- Reduced protein loss (some organic processes).
- Reduced seasonal process changes.