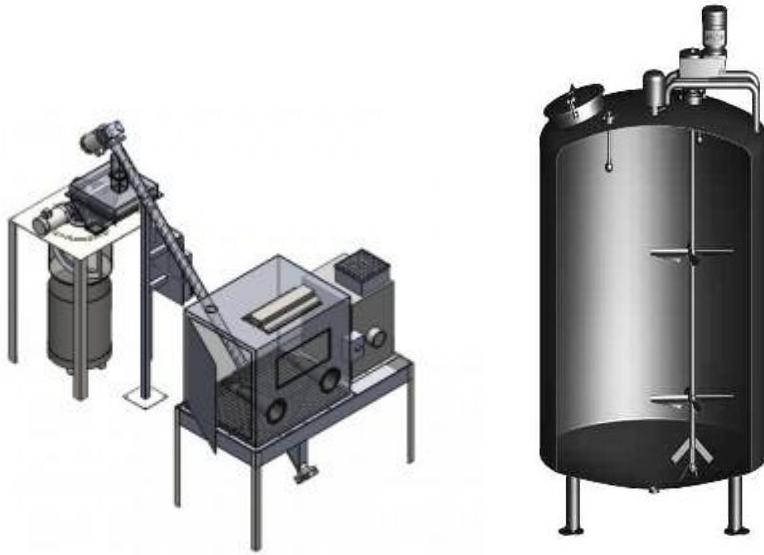


In Line Blending Systems



WMProcess core competency of mixing and blending is harnessed to offer more complex automated and continuous in line blending systems. These mixing systems offer a more customized approach where we work with you to meet your exact process specifications. With mixing and blending paramount to providing the final uniform or dispersed end product, we can help to accurately meter all raw ingredients in either liquid or solid or gas phase form to achieve the final blend to your specifications.

Blending systems are done in either batch, semi-continuous, or inline continuous blending formats.

- recipe control metering and mixing of components
- save money by reducing raw materials and off spec product
- one stop source for mixers, tanks, pumps, and controls at WMProcess
- meet your mixing room footprint requirements with compact modular blend system
- save labor and production costs by continuous inline blending

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We usually draw raw materials from bulk tanks, drums, or IBC totes. Often times chemicals that settle out or need to stay homogenized are blending in the bulk containers. Powders and solids are metered or conveyed to the blend tank with appropriate solids feeding equipment. Load cells on blend tanks or loss in weight feeders can provide precise accuracy required. Metering pumps or PD pumps and the use of mass or volumetric flow meters can provide very uniform and precision accuracy of liquid feeds into the agitated vessel. Instrumentation is added as required for control of temperature, pH, etc and mixers with variable speed drives offer flexibility of mixing and agitation as process requires.

Process blending vessels can be poly plastic (PE, PP, PVDF most common) or stainless steel (304ss and 316ss most common) as desired. Sanitary **blending systems** include polished 316L stainless and AL6XN mixtanks and FDA/USP VI plastic as required. Systems requiring pressure, vacuum, or heating/cooling jackets would be metal tanks. Poly process vessels are great for atmospheric applications, and often use slight nitrogen blankets.

Manual mixing and In-tank blending is common. Ingredients are weighed or hand dumped from bags and accuracy is always questionable. Automated or semi automated **blending systems** offer a precise and repeatable process which is able to be validated.

Typical **blending system** specifications and bill of materials can include:

- Process Tank – stainless or plastic
- Mixer – air or electric operated agitator
- Industrial or sanitary design, cGMP as specified
- Heating or cooling
- Pressure or vacuum
- Mixer speed controller
- Agitator tachometer
- Low Shear Mixing System
- High Shear Mixing, dispersing and homogenizing
- Batch and inline mixing/blending
- Top and bottom entry mixers
- Inline high shear and static mixers
- Valves
- Instruments
- Temp and pH control
- Manways and ports
- Sight glass
- Pumps
- Pressure relief valves, rupture discs, hepa filters, vent filters

- Dust collector, solid feeders
- Metering pumps
- Heating and cooling temperature control units

- CIP spray wands, balls, nozzles
- CIP system
- FAT
- Document packages
- On site installation and service

Thanks for thinking of White Mountain Process for your **blending system** needs.

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