

EMERSON'S GREASE UNITS

Produce a Variety of Greases More Efficiently in a Single, Automated Production Unit

Emerson offers both batch and continuous, in-line Grease Units. We design grease manufacturing processes and integrate all the core equipment, instrumentation, and controls needed to automate the manufacturing of a variety of greases. Typical equipment supplied include metering/dosing equipment, finishing kettles, contactors, homogenizers/mills, filters, and piggable transfer systems.

How It Works

Grease can be manufactured in either a batch operation most commonly using a contactor and finished kettle, or in a continuous operation utilizing an in-line reactor.

The first step involves metering and dosing of reactants such as fatty acids, base oils, water, and alkali into a reactor. In the reactor, saponification occurs to convert the fatty acid to soap and also to disperse the soap throughout the mixture. After that, dehydration occurs to remove the water from the reaction. Then homogenization or milling is done to break the agglomerated particles and adjust the grease consistency. The grease is then cooled by base oil addition and thermal exchange. Deaeration is then executed to remove entrapped air prior to filling. If the grease requires special properties such as oxidation inhibitors, anti-corrosion, or anti-wear agents, an additivition step occurs.

In Batch manufacturing, a contactor is used for saponification along with a finishing kettle for deaeration and additivition. For continuous processes, saponification, dehydration, and finishing phases are performed continuously in an in-line reactor.

Applications

High quality manufacturing of a variety of simple/complex metal, clay, and polyurea grease production:

- Batch Units (1-20 Mtons/hr)
- Continuous Units (2+ Mtons/hr)

Features and Benefits

- Utilize one expert partner for complete design, supply, testing, and commissioning of your grease manufacturing unit
- Optimize energy efficiency and temperature control by utilizing Emerson's market leading technology including Micro Motion® ELITE® Coriolis Flow Meters, Rosemount® Temperature and Pressure Transmitters, and Fisher® Control Valves for precise process control
- Reduce waste generation with clean-in-place technology
- Increase operational flexibility by accommodating many types of greases
- Expedite production startup and achieve larger production volumes in a smaller space with a compact, modularly designed unit
- Accommodate future expansion with scalable design
- Verify system performance with Emerson's performance guarantees

Emerson's Grease Units are an engineered solution. Consult your Emerson representative for more details.

www.emerson.com/integratedblendingsolutions



Emerson supplies both batch and continuous grease production units for a variety of greases.



Partner with our experts from concept to commission to deliver a fully automated, thermally efficient grease manufacturing unit.



Our modular grease units ensure a fast installation and start-up.