

## Pump and Compressor Expertise in Conventional Refining Successfully Applied to SAF and RD Production

By Sundyne's Helene Balligand, Winter 2024



Sundyne has more than 60 years of experience supplying reliable pump and compressor solutions to conventional refineries. That expertise can be directly transferred to services found in the production of Sustainable Aviation Fuel and Renewable Diesel. Sundyne pumps and compressors are suitable for all SAF & RD production pathways, including HEFA, Alcohol-to-Jet, Biomass-to-Liquid and Power-to-Liquid.

Sundyne has supported many of the initial SAF & RD greenfield projects with pumps and compressors that are backed by years of successful and reliable operation. For this reason, major SAF & RD licensors are specifying Sundyne products in their processes. Sundyne has also provided equipment for refinery conversions from conventional to renewable fuel production.

Several services in a SAF & RD production plant are characterized by low flow and high head, such as Renewable feedstock, overhead, bottoms, reflux, boiler feedwater and recycle. Integrally geared LMV pumps present the highest efficiency available in the market at low flows. LMV pumps produce multistage performance in a single stage design, resulting in appreciable compactness and low installation costs. Tens of thousands of LMV pumps installed around the world are a testimony to their reliability.



In services such as boiler feedwater or desuperheater (to control process steam temperatures), Sunflo integrally geared pumps deliver water at low flow and high head in a simple single stage design. The close-coupled configuration eliminates the need for motor-coupling-pump alignment and offers a compact footprint. Sunflo is reliable and, should it require repair, maintenance can be done in-line.



Sundyne has also supplied HMD sealless pumps throughout SAF & RD production plants. Sealless pumps offer increased reliability and Mean Time Between Failure. No seals or seal support systems guarantee zero leakage. A simple design with simple installation and operation reduces the cost of ownership. As an added benefit, HMD's non-metallic containment ZeroLoss™ shell reduces heating of the process liquid, which is essential when pumping volatile and heat sensitive liquids.



Many services, such as SAF & RD renewable feedstock charge, reactor feed and finished product transfer, are well served by Sundyne Marelli API 610 pumps, in overhung, between





## Pumps & Compressors for SAF and Renewable Diesel Production

**Sundyne Equipment is a Safe, Reliable and Efficient choice for:**

- Pretreatment
- HEFA SAF production
- Alcohol-to-Jet production
- Fischer-Tropsch Synthesis
- Power-to-Liquids, including green H<sub>2</sub> and CO<sub>2</sub> capture
- Common offsites and utilities services



Sundyne has more than 60 years of experience in conventional refineries. Today, we are applying this expertise to SAF.

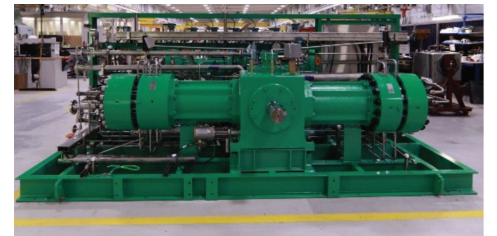
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bearing or vertical constructions. Marelli pumps are designed for extreme reliability and a wide range of flowrates, to accommodate the most stringent customer specifications.

Services such as gas recycle and ethylene feed are supported by Sundyne integrally geared compressors. In the SAF & RD production, where process optimization and control are critical, Sundyne compressors offer improved efficiency and precise control of operating conditions in a compact and robust design.



Lastly, Sundyne's PPI diaphragm compressors have been used to compress hydrogen from electrolyzers into storage tanks. Hydrogen is essential to all SAF & RD production pathways. Sundyne's diaphragm compressor is highly reliable, leak-free and guarantees that the hydrogen is not contaminated. It offers superior Mean Time Between Maintenance due to longer life diaphragms.

**Sundyne is one of the most popular suppliers of pumps & compressors for the production of SAF and Renewable Diesel. Extensive experience and a large, worldwide installed base at satisfied customers are the reasons why SAF & RD plants rely on Sundyne's quality and service excellence. To learn more, please visit: [www.sundyne.com](http://www.sundyne.com)**