

Dear Reader,

The X series industrial gear unit from SEW is ideal for heavy-duty applications and is typically used in various production processes. Powerful, robust and low-maintenance, X series gear unit meet all challenges like ambient conditions, danger zones and the need for high axial load of agitator at SMC.

To know more about how the SEW team has analysed the requirement and provided customized solution, please read the article below.

Brand & Communication Team,

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# Drive technology TODAY

## SMC relies on the agitator drives and experience provided by SEW-EURODRIVE

Synthetic latex is a product with fluctuating demand. To better adapt the quantity and type to the current market demand, the Italian company SMC constructs flexible plants with reliable drive technology.

### Overview

► SMC, from Spresiano (Province of Treviso) is a global manufacturer of production plants. It provides construction services as well as associated technical consulting and planning services. Its customers include leading companies from the chemicals, pharmaceuticals and food industry as well as the waste management and recycling sector. SMC developed special know-how in manufacturing plants that maximise productivity – with minimal actual costs for capital, energy, maintenance and downtime. Their eye for detail, new process solutions and the ability to provide special solutions for every requirement make the company a competent and reliable partner.

This challenge requires the selection of a reliable partner for drive technology. SEW-EURODRIVE has been supporting SMC in ambitious projects for 35 years. This cooperation is based on common principles, where the focus is on the customer: experienced sales engineers and technicians analyse the requirements together with the customer, identify the production characteristics and present customized solution proposals. As a global company, SEW-EURODRIVE can also provide quick, comprehensive and efficient service.



**Agitator for synthetic latex:  
The driving force is the X series gear unit**

The reactor displays impressive figures: an internal volume of 110 cubic meters, a production capacity of 90 cubic meters per cycle, an inner diameter of 3.80 meters, a height of 10.30 meters and a total mass of 79 tonnes. Every reactor is equipped with a customized agitator. As the agitator unit is of particular importance for these kinds of dimensions and requirements, the decision was made to use a robust X series industrial gear unit from SEW-EURODRIVE. The latest technology was used to

manufacture the gear wheel, for the heat treatment as well as for the mechanical processing and the robust housing for the industrial gear units used. Due to the high axial loads, the ambient conditions, the danger zone and the special customer requirements, SEW-EURODRIVE equipped the X series gear units (size 210) with a vertical mounting position and a reduction ratio of 44:1. They generate a nominal torque of 90,000 Nm.

**Powerful and safe agitation  
thanks to special adaptations**

The X series industrial gear units are ideal for heavy duty applications and are typically used in production processes. The robust and universal gear unit series can be optimally adjusted to the relevant application conditions thanks to finely stepped torque ratings. The universal modular system sets standards for availability and ensures an extremely broad range of application options. The accessories and the agitator drive's special equipment features guarantee the functionality and reliability of the energy transfer for operation in a potentially explosive atmosphere. The drive is included in Group II, Category 2, in line with Directive 94/9/EC, generally referred to as ATEX.

The following adaptations were made to the industrial gear units for use and operation in the reactor:

- Manufacture of a special flange for the connection as well as a special output shaft
- Use of reinforced bearings, capable of handling the applied loads
- Adaptation to the provisions of Directive 94/9/EC:
  - Oil bath lubrication by the oil compensation tank
  - Cooling with the support of a ventilation wheel, mounted to the input shaft, inside the motor bracket housing
  - Cooling cartridge on the lower part of the gear unit housing
  - Thermostat to control the oil temperature



Reactor transport



Industrial gear unit

### Customer request

To manufacture this reactor, with its impressive figures and the high power requirement, SMC's primary focus was to ensure that the gear units provided fully met these requirements in every respect. Moreover, quick and efficient service had to be guaranteed in the event of an incident.

### Our solution

Thanks to our low-maintenance X series industrial gear units and our comprehensive know-how in drive technology, we were able to provide a matching and powerful drive solution. As a global company, we also provide comprehensive service. ◀



Production capacity

