SANMOTION Application Case

Automated Biochemical Analyzer

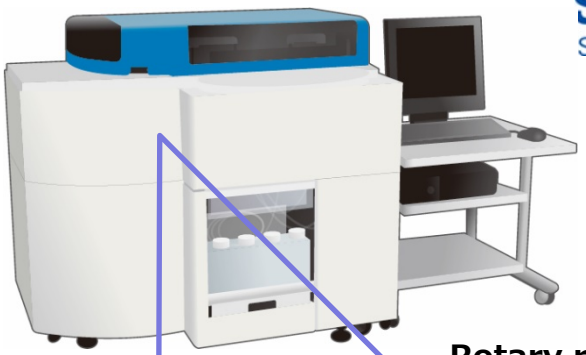
SANYO DENKI
SANMOTION F
STEPPING SYSTEMS

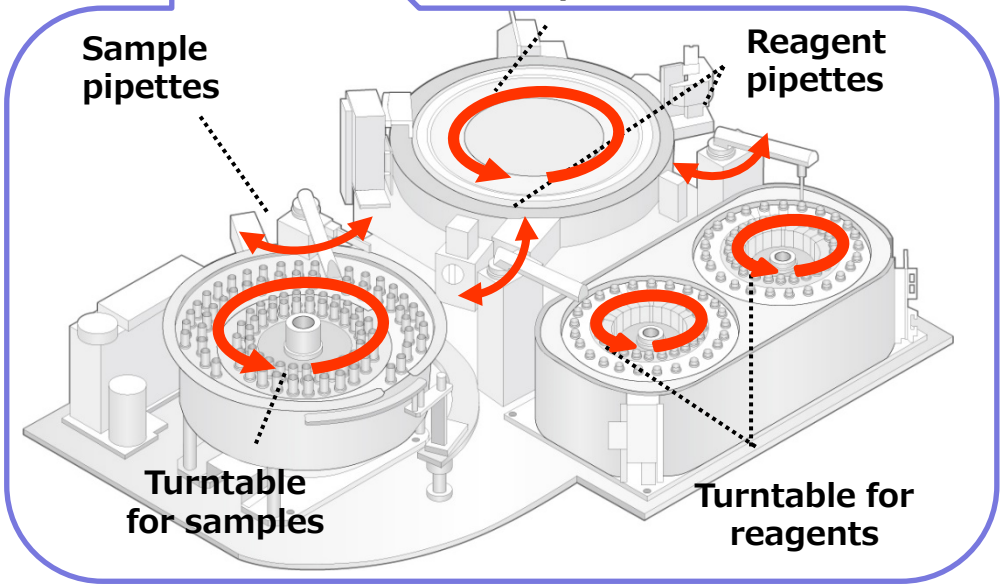
Description

An **automated biochemical analyzer** tests urine or blood serum samples, by inducing reactions with reagents to measure the component parts such as sugars and proteins.
These tests provide objective data used for the early detection and diagnosis of diseases, and also for determining the effects of treatment and patient prognoses.

Specified amount of samples and reagents from the turntables are taken by the pipettes, mixed in the rotary reactor to induce reactions. Reactions results will then be measured.

Structure:
Pipette transfer axis (reagent, sample)
Turntable rotary axis (reagent, sample)
Reactor rotary axis





SANYO DENKI Proposal

Motor	Motor details	Driver
SANMOTION F2 2-Phase stepping motor or SANMOTION F5 5-Phase stepping motor	42, 56, 60 mm sq. Some are equipped with reduction gear (low backlash gear)	DC Driver

Features

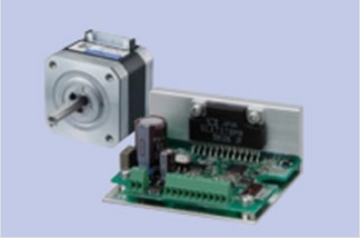
■2-& 5-Phase stepping motor + driver

■Wide variety of products

- 2-, 3-, 5-Phase stepping systems are available in our product lineup. SANYO DENKI is the only manufacturer offering products in all phases. Our Motor sizes range from 14 mm sq. to 106 mm diameter.

■Various drivers available for different needs

- DC drivers are available in both 2- and 5-Phase stepping system. They are frequently used in medical inspection devices. Moreover, 5-Phase AC drivers are also available when customers require high speed rotation and high torque for their equipment.



■Customizations available

- Our engineers provide technical advices on product use, to suit different requirement in customer equipment. Specifications such as rated current, torque, motor winding can be customized to suit customers' equipment requirements.

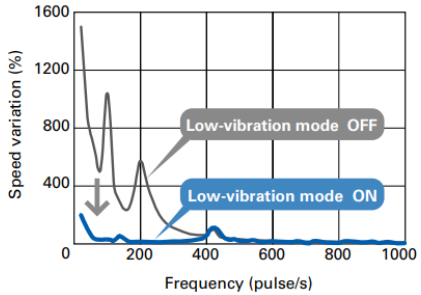
Merits

■Ideal solution for customer

- Customers could select the ideal motor with the required torque and size that suits their unique equipment requirements, from the wide variety of motors we provide. Apart from 2-Phase stepping system, customers can choose 3- and 5-Phase system to suit their different needs.

■Low vibration and low heat

- Low-vibration mode function provides smooth driving, even with one-division (full step) and two-division (half step) coarse resolution settings. This allows vibrations to be suppressed without control system restrictions.



- Micro step drive with resolution setting up to 16 divisions for 2-phase and 250 divisions for 5-phase can be used, enabling smooth equipment operation with low vibration.
- Lower machine vibration and heat could be achieved with optimal motor winding. Negative impacts to samples and reagents could be minimized.