

DIRECT DRIVE ACTUATOR

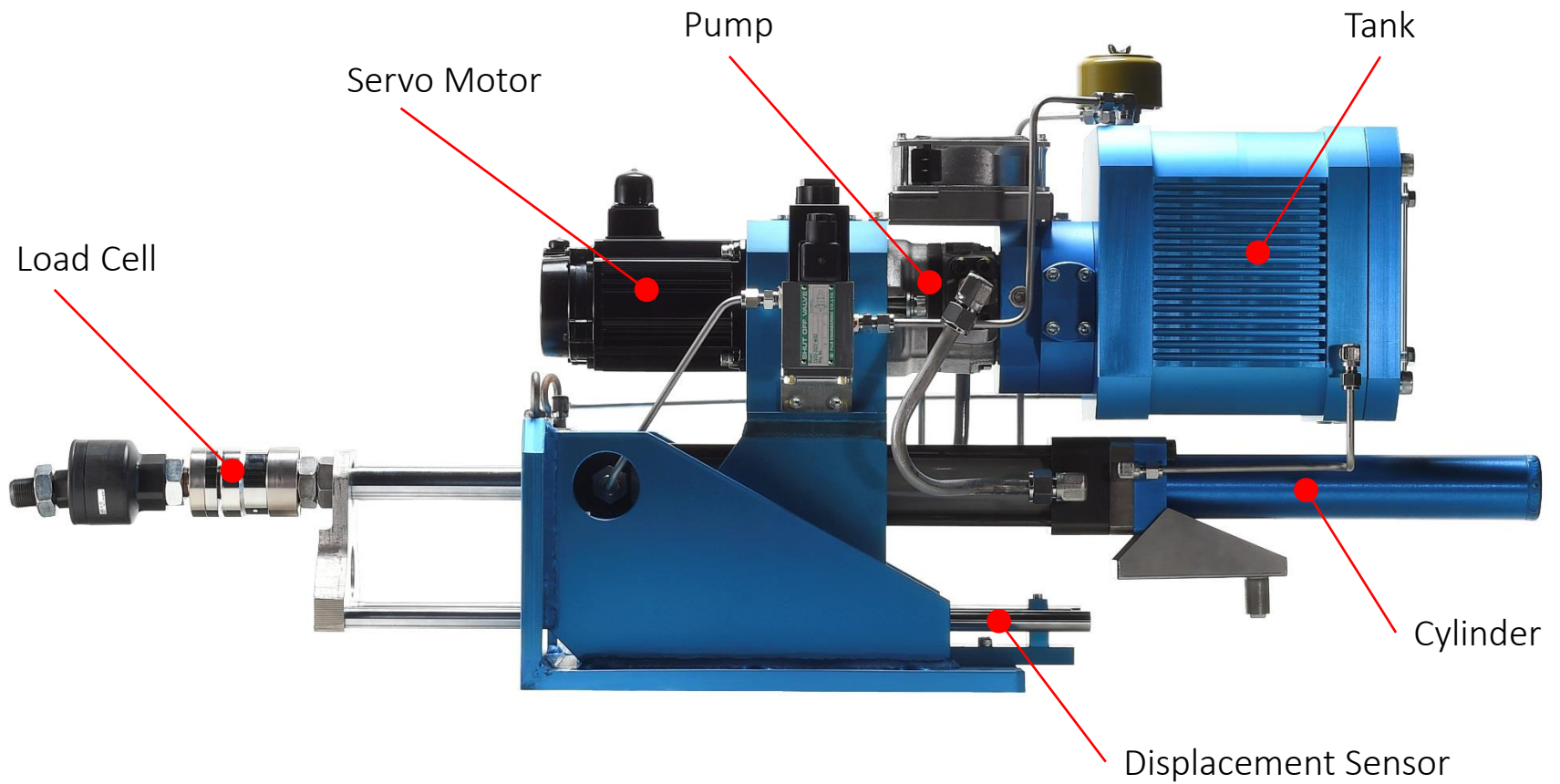
Combined with a servo motor, the new unit requires only a minimum amount of revolutions during pressurization, meaning that power consumption is held to a minimum.

This unit is capable of many other applications, including fatigue testing, press-fit and injection molding.



DIRECT DRIVE ACTUATOR

The names of each part to be configured are described below.



ADVANTAGES

Unlike conventional types of hydraulic units which remain very undesirable in terms of energy efficiency, this unit or a hybrid type direct drive actuator proves excellent in that point, showing promise in energy saving in many industrial sectors where any machine is running long each day.

Even under the maximum operational load, it offers an energy efficiency of as high as 90 percent.

SAVING ENERGY

The flow rate for the fixed delivery pump is placed under control by controlling the rpm of the servo motor, while the pump pressure is regulated by controlling the torque of the servo motor.

HIGH ACCURACY

Since using a servo motor as a drive source, it has approximately 20 times control resolution compared to conventional servo valve.

CONTROL ALGORITHM

The pressure and the flow rate can be continuously adjusted to any levels. On the other hand, provision of various communication I/Fs, feedback modules, and such enables control of many elements, including load (torque), displacement (angle) and speed (angular velocity). This control system is applicable to any related factors.

SPECIFICATION

The following specification is as standard.

It is also possible to meet to customer's request specifications.

Items	Parameters
Loading range	+/- 1 to 10 kN or more
Load measurement accuracy	+/- 0.3 % FS
Stroke	+/- 200 mm
Operation speed	+/- 10 to 120 mm/s
Displacement measurement accuracy	+/- 0.3 % FS
Exciting frequency	15 Hz
Exciting waveform	Sinusoidal wave, Rectangular wave, Triangular wave