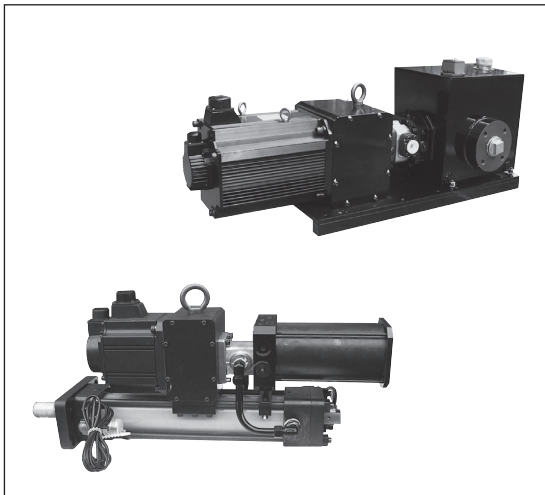


POWER SERVO SYSTEM TOYOPAC MOTION



An electric servo system that reconciles higher precision and energy-saving.

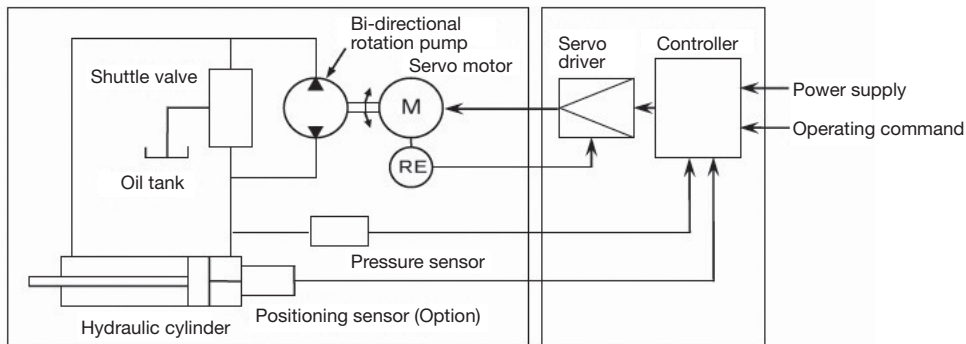
This system reciprocates cylinder motions by rotating a bi-directional rotation motor in forward and reverse direction with the control of a servo motor.

This hydraulic system enables to control the speed, positioning, pressure and load of the hydraulic cylinder at higher level, making the most of the servo motor (high response, forward-reverse, high speed rotation, etc.).

■Features

1. With a simple device configuration that eliminates a control valve, it enables to control the positioning and the pressure with higher accuracy.
Positioning: ± 0.01 mm
Pressure: $\pm 2\%$ (F.S)
Load: $\pm 2\%$ (F.S)
2. The system supplies necessary flow and pressure when they are required, and is free from pressure loss on the control valve, improving energy-saving.
3. Since less heat generates from power loss, etc., no cooling devise is required and the tank capacity can be reduced to the minimum requirement, making the system very compact.
4. Hydraulic cylinder that bears load on the face has a longer service life compared with a ball screw that bears load at the point, ensuring accuracy for a long period of time.
5. Rich variations
Motor capacity: 0.4 to 55 kW

■System configuration



■Specifications

Hydraulic cylinder

		High speed/low torque type				Low speed/low torque type			
		$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$	$\phi 80$	$\phi 100$	$\phi 125$	$\phi 140$
Cylinder bore		$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$	$\phi 80$	$\phi 100$	$\phi 125$	$\phi 140$
Rated thrust	kN	13	22	35	55	70	110	170	215
Max. thrust (within 3 sec)	kN	20	30	50	80	100	160	250	300

Toyopac motion

		High speed/low torque type					Low speed/low torque type					
		08	15	20	30	40	18	29	44	55	75	
Model: HTM□□		08	15	20	30	40	18	29	44	55	75	
Motor output	kW	0.75	1.5	2.0	3.0	4.0	1.8	2.9	4.4	5.5	7.5	
Thrust side max. speed mm/sec	Cylinder bore	$\phi 50$	50	75	125	200	250	—	—	—	—	—
		$\phi 63$	32	48	80	128	160	—	—	—	—	—
		$\phi 80$	20	30	50	80	100	25	40	62	80	100
		$\phi 100$	12	18	30	48	60	16	25	40	50	63
		$\phi 125$	—	—	—	—	—	10	16	25	32	40
		$\phi 140$	—	—	—	—	—	8	13	20	26	32

Common specifications

Stroke	mm	100 to 800
Ambient temperature	$^{\circ}\text{C}$	6 to 40
Ambient humidity	%	20 to 80 (No dewing permissible)
Hydraulic fluid		Equivalent to ISO VG46
Oil tank	Closed circuit type	Free mounting direction
	Open circuit type	Mounting direction is restricted (Standard: Horizontal and vertical)
Feedback control accuracy	Positioning	± 0.1 to ± 0.01 mm (Varies depending on the sensor resolution and load variation.)
	Pressure	$\pm 2\%$ ·FS
	Load	$\pm 2\%$ ·FS