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Seibu Penstock Operation Actuator

● *Sem flex*[®]-LP Series (Servo drive type)



Future is made by combination
of the latest technology with
reliability

1. Positioning control by Servo drive technology .
2. High efficient deceleration machine technology .
3. Ubiquitous correspondence technology .



Sem flex is our registered trademark
Sem stands for S eibu E lectric & M achinery
Flex stands for F low-Flex ible.

Customer's Advantages



Well-shaped externals (Small, Light, and Compact)

Small, Light, and Compact design. (50% lighter than previous type.)

The installation space has been minimized without spoiling an environmental fine externals.

All wires are built into the machine.(There is no exposing wire.)



Quick opening and closing

The opening and closing speed can be three times and programmable.

In emergency, high-speed closing is possible.

At first it opens slowly (0.3m/min), and later becomes high-speed (1.0m/min).

When it is closing, high-speed re-try mode (to remove the obstacle) and flushing mode (to clean the bottom of the penstock) are available as standard function.



Easy maintenance(Reduction in life cycle cost)

The oil exchange is concentrated in one place, and the amount of wasted oil become 1/10.

Reliability improved greatly according to the parts become 1/5 by economical design.



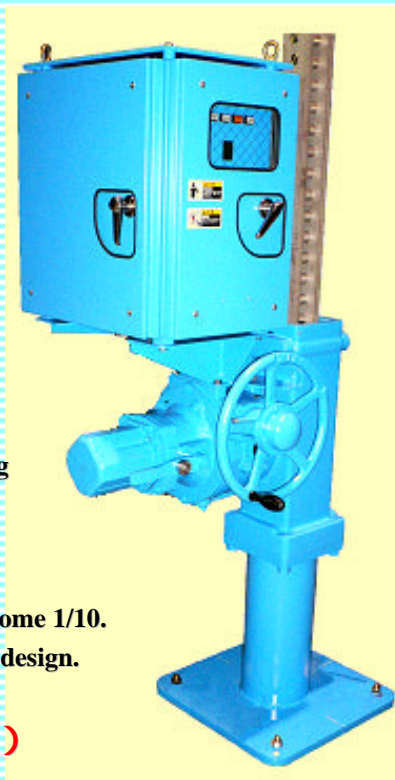
Simple & Ubiquitous (Corresponds with communication facilities)

Immediate operation just by plugging in. (Built-in control panel is standard)

Superb reliability through all-in-one design.

Capable of easy connection to various telecommunication systems.(option)

Sem flex-LP Series



Complying Standards

Technological dam and weir facilities standard (draft) conforming.

Hydraulic gate and penstock technological standard.

Standard Functions

1. Electric and manual opening and closing
2. Overload protection function.
3. Self descending function.
4. Lock function for preventing mischief.
(At manual handle, self descending lever.)
5. Reliable braking function with double braking mechanism.
6. Control board with heat shield plate.
7. Controller's door with lock key.

Controller specifications

Input power supply	3 phase AC200V ~ 230V +10 ~ -15% ,50/60Hz
Use temperature	0 ~ 45
Preservation temperature	-25 ~ 85 (cannot be operated out of the use temperature)
Humidity	90%RH or less (also not dewiness)
Main control	PLC control
Motion control	Speed & position control by Servo
Positional detection	It depends on the output axis encoder.
Operation	Operation on machine side with push-button (opening, close, and stop) Operation by remote input (opening, close, and stop)
Display	Operation display (open, close, liquid crystal display of abnormality) Open time display(cm), Warning buzzer
Instruction	Close position (starting point), the middle position, open position, check position etc. can be freely set up..
Dynamic brake	Action at servo main power-off.
Open time position memory	Backup of position data with battery when main power supply is off.
Protection function	Over t Servo, PLC, Battery, Cont Overtime protection by displaying the alarm.

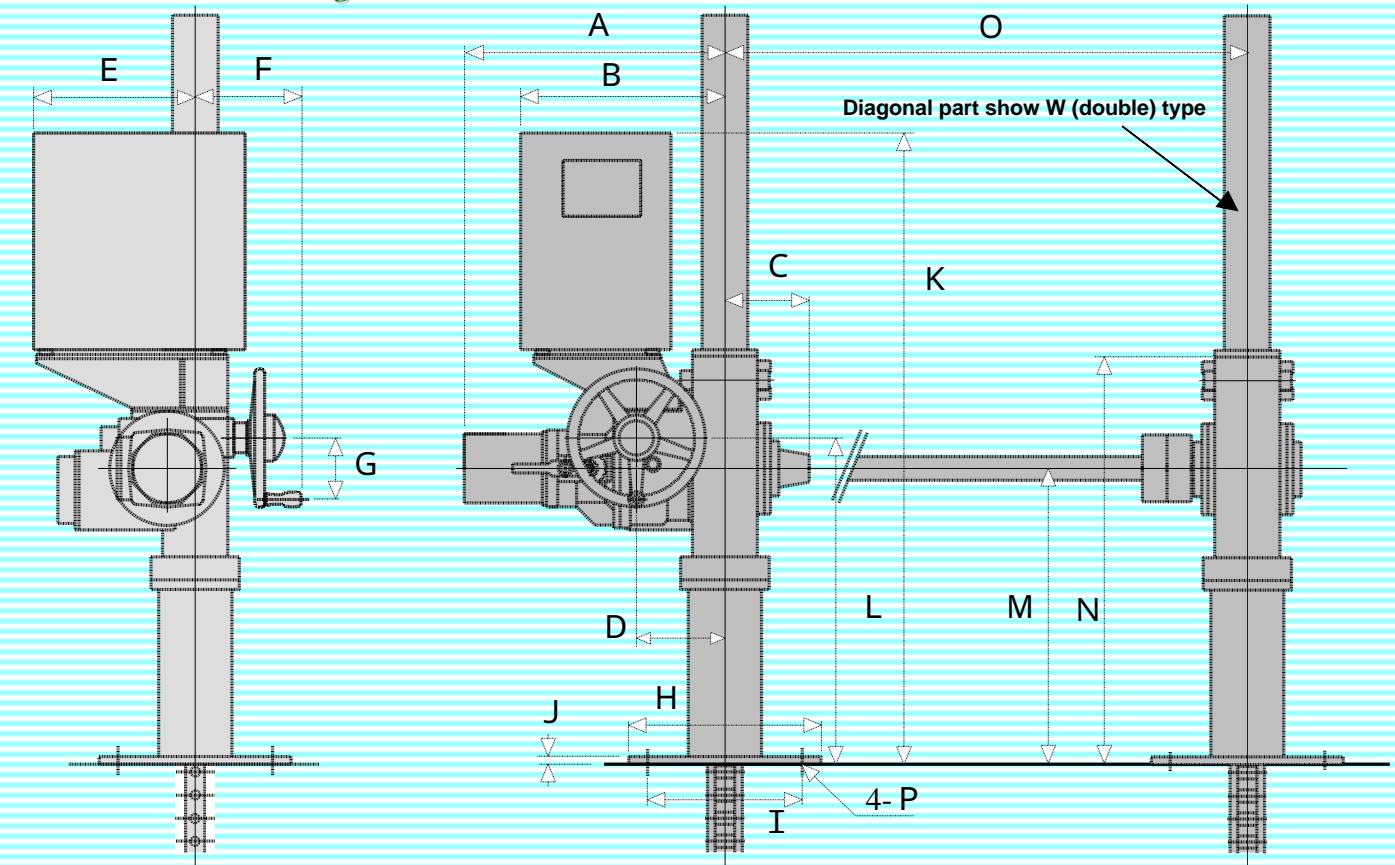
Mechanical specifications & Dimensions

Semflex-LP series	LP20S	LP30S	LP50S	LP75S	LP100S
	LP20W	LP30W	LP50W	LP75W	LP100W
Loading Ability (KN)	20	30	50	75	100
Operating Speed	0 ~ 1.0m/min (freely set up & programable)				
Self-descending Speed	Less than 3.0m/min (depend on the weight condition)				
manual operation force	Less t				
Ambient temperature	-10 ~ 50 (using space heater)				
Protection structure	IP55(JIS C9020 IEC529)				
Weight (Kg)	230	250	370	500	650
A	630	670	755	750	887
B	500	500	520	550	570
C(Stype)	220	230	300	330	385
D	270	283	325	380	412
E	430	430	423	450	462
F	300	300	300	300	290
G	160	160	160	160	250
H x H	500	500	500	600	600
I x I	400	400	400	500	500
J	22	22	22	28	28
K	1617	1617	1617	1700	1700
L	850	850	850	850	850
M	770	770	770	710	710
N	1060	1060	1070	1070	1070
O	more than 1000	more than 1000	more than 1150	more than 1270	more than 1300
4- P (Hole size)	28	28	28	28	34

For improvement of performance, design or outer dimensions are subject to change without notice.

(unit : mm)

External drawing



The turn direction of the manual operation handle makes open (rising) the standards with clockwise.