



#### Seibu Electric & Machinery Co., Ltd.

Industrial Machine Division

3-3-1 Eki-higashi, Koga, Fukuoka 811-3193 Japan

Tel: +81-92-941-150 Fax: +81-92-941-151

#### Head Office & Factory

3-3-1 Eki-higashi, Koga, Fukuoka 811-3193 Japan Tel: +81-92-941-1500 Fax: +81-92-941-1511

#### Tokyo Branch

2-26-11 Kameido, Koto-ku, Tokyo 136-0071 Japan Tel: +81-3-5628-0015 Fax: +81-3-5628-0023

#### Osaka Branch

3-4-5 Umeda, Kita-ku, Osaka 530-0001 Japan Tel: +81-6-4796-6711 Fax: +81-6-4796-6707

#### Nagoya Sales Office

2-3101 Hara, Tenpaku-ku, Nagoya 468-0015 Japan Tel: +81-52-800-5051 Fax: +81-52-800-5030

#### Kyushu Sales Office

3-3-1 Eki-higashi, Koga, Fukuoka 811-3193 Japan Tel: +81-92-941-1530 Fax: +81-92-941-1522

#### Hiroshima Sales Office

1-17 Hatchobori, Naka-ku, Hiroshima 730-0013 Japan Tel: +81-82-502-1651 Fax: +81-82-502-1653

Sapporo Sales Office

8-352 Kita Sanjo Higashi, Chuo-ku, Sapporo 060-0033 Japan Tel: +81-11-221-0521

Fax: +81-11-221-3392

#### Sendai Sales Office

17-22 Futsukamachi, Aoba-ku, Sendai, Miyagi 980-0802 Japan Tel: +81-22-797-6695 Fax: +81-22-797-6696

#### Tokyo Service Center

1-13-2 Tajiri, Ichikawa, Chiba 272-0014 Japan Tel: +81-47-378-7261 Fax: +81-47-378-7266

#### Osaka Service Center

1-17 Nakasoujijicho, Ibaraki, Osaka 567-0803 Japan Tel: +81-72-630-5850 Fax: +81-72-630-5852

#### Nagoya Service

2-3101 Hara, Tenpaku-ku, Nagoya 468-0015 Japan Tel: +81-52-800-5051 Fax: +81-52-800-5030

#### Kyushu Service

3-3-1 Eki-higashi, Koga, Fukuoka 811-3193 Japan Tel: +81-92-941-1761 Fax: +81-92-941-1522

http://www.seibudenki.co.jp
Please use the contact form on our website for inquiries.

Register via the website to download a variety of technical data.

We offer a wide range of options not described in this catalog. Contact one of our offices or agents for additional information.



Ver.

# Valve Actuators

**General Catalog** 



**SEIBU ELECTRIC & MACHINERY CO., LTD.** 

# INDEX

	Introduction to electronic actuators	<b>▶</b> P3
	Semflex-A series	<b>▶</b> P5
Electronic	Semflex-VM series	<b>▶</b> P7
	Semflex-VP series	<b>▶</b> P9
	PROFIBUS control system Package software	▶P11
	Merits of intelligent system design	▶P12
	Introduction to mechanical actuators	▶P13
	LTRH/LTRM	▶P15
Mechanical	LTKD/LTMD series	<b>▶</b> P16
Wechanical	LTKB series	▶P20
	SRH series	▶P21
	SRJ series	▶P22
Manual	BRM series **Can be used as a valve secondar reducer	▶P23
	Actuator line-up	▶P25
Other	Support	▶P27
Other	Quality control	▶P29

Request for quote

# **Precise Flow Control**

Water, electricity, gas, and petroleum: Vital elements that make our safe and comfortable lifestyle possible. And Seibu is working to ensure safe, accurate control worldwide.

Seibu began manufacturing valve actuators and gate drive mechanisms in 1954, recognizing their critical nature in bringing energy into our daily lives in the form of water, electricity, gas, and petroleum. We have pioneered a host of new industrial application fields and today we hold the top share of the Japanese market.

We will continue to meet the needs of an increasingly global world, applying unique technology and long experience in the field to provide customers with the optimal solutions.

















#### High-reliability actuators, electronically controlled for safe, powerful system operation.

Delivering environmental resistance, operability, and maintainability: Perfect for mission-critical systems

Compact, lightweight, simple construction offers excellent environmental resistance

Semflex valve actuators with electronic sensors offer compact, lightweight, simple construction. Designed to fit into even tight spaces, they come with IP68-rated waterproofing and double sealing on terminals for unsurpassed environmental resistance.

OExplosion-proof specification also available as an option.

•JIS •CE Marking •UL Standards

Compliance standards

> Simple settings and remote operation for top-class operability in set-up and adjustment

Our all-in-one construction integrates the control unit, for immediate operation after you power up. It comes with a rich array of fluid control functions, and an intuitive control panel for quick and easy set-up and adjustment.

Remote operation also available as an option. For example, a single PC (master) can operate and monitor up to 125 actuators via PROFIBUS.

Standard

●Electric value open/close ●LCD indicator Pushbutton limit switch and torque set

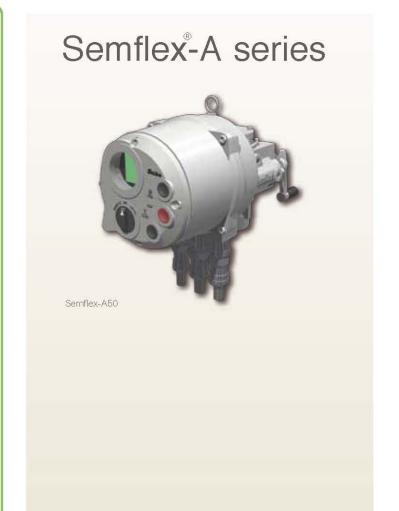
(no need to open the cover) Manual/electric select switch (defaults to electric on auto-recover)

Fewer inspection items for faster maintenance and improved reliability

Semflex is designed for fewer, simpler inspections and disassembly steps, slashing maintenance time and cost, and with the optional self-diagnosis function can predict required maintenance. Semflex is the best choice for valve actuators in mission-critical systems!

#### Seibu Electric & Machinary Flow-Flexible

"Semflex" is a registered trademark of Seibu Electric & Machinery Co., Ltd. "Sem" standard for Seibu Electric & Machinery. "Flex" stands for Flow-Flexible.

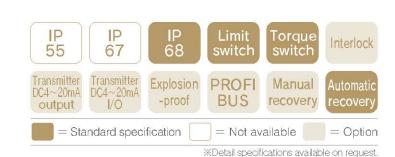


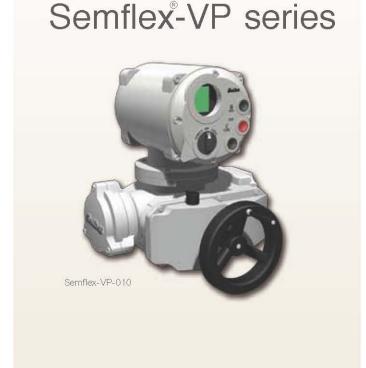
Semflex-A50	Max. output torque:50Nm/Max. thrust:25kN Output speed min'(50/60Hz):1~100
Semflex-A100	Max. output torque:100Nm/Max. thrust:54kN Output speed min-1(50/60Hz):1~100





Semflex-VM-01	Max. output torque:150Nm/Max. thrust:70kN Output speed min <sup>-1</sup> (50/60Hz) 11.3/13.5~75.9/91.1
Semflex-VM-04	Max. output torque:550Nm/Max. thrust:130kN Output speed min <sup>-1</sup> (50/60Hz) 11.3/13.5~75.9/91.1
Semflex-VM-07	Max. output torque:850Nm/Max. thrust:160kN Output speed min <sup>-1</sup> (50/60Hz) 11.3/13.5~75.9/91.1
Semflex-VM-1	Max. output torque:1800Nm/Max. thrust:270kN Output speed min <sup>-1</sup> (50/60Hz) 11.3/13.5~75.9/91.1





Semflex-VP-010	Max. output torque:125Nm Open/close speed sec/90° (50/60Hz) 9/7.5·18/15
Semflex-VP-020	Max. output torque:250Nm Open/close speed sec/90° (50/60Hz) 18/15·36/30
Semflex-VP-060	Max. output torque:600Nm Open/close speed sec/90° (50/60Hz) 18/15·36/30
Semflex-VP-1	Max. output torque:1000Nm Open/close speed sec/90° (50/60Hz) 18/15-36/30
Semflex-VP-2	Max. output torque:2000Nm Open/close speed sec/90° (50/60Hz) 36/30·72/60



The smaller power actuator

Semflex-A series actuators have on-board servomotors, delivering the same high-speed valve open/close performance as air actuators. The small, light design is perfect for installation in maintenance pits or other

Features

Small, lightweight design about the size of a sheet of paper.

A/B gears used in conventional designs have been eliminated, slashing operating noise to no more than 50 db.

Smaller actuator simplifies pipe design, and helps downsize plants overall

Servomotor speed control enables variable sleeve speed of 1~100min-

SURFDRIVE (minimal motor shaft vibration) function increases internal gear efficiency

Valve interface complies with ISO5211.

#### **Applications**

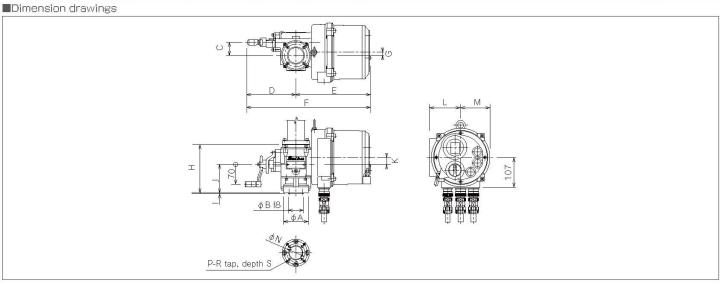
Gates (flow control)

#### ■Controller specifications

Function	Specification
Actuator type	Intelligent (internal motor drive)
Main power supply	AC 200V/400V class
Manual handle	Handle directly linked to motor shaft (manual power loss reduction)
Manual switch	Depress handle (manual operation recovery, interlocked)
Position indicator	LCD display (international icons)
Power control	Pushbutton switches (contactless)
Settings	Set from control panel (non-intrusive)
Position detection	Resolver encoder (maximized reliability)
Torque detection	Intelligent detection (improved accuracy)
External interface	Plug-in connector (reduced volume) Terminal strip type (option)
Standards compliance	CE, UL, JIS, NK

#### ■Specifications

-opcomod done										
Model	Max. output	Max. thrust	Flange	Max. shaf	t dia. (mm)	Output speed min-1			Mass	
Model	torque (Nm)	(kN)	size	Rod	Screw	(50/60 Hz)	Power supply	Output kW	(kg)	
Semflex-A-50	50	25	F07	28	30	1-100	Three-phase 200V class	0.4	15	
Semflex-A-100	100	54	F10	38	40	1~100	Three-phase 400V class	0.75	16	



#### **■**Dimensions

Model	$\phi A$	φВ	C	D	E	F	G	H	l	J	K	L	M	φN	P	R	S
Semflex-A-50	90	55	47	181	265	446	12	220	3	102	15	110	104	70	4	M8	12
Semflex-A-100	125	70	50	185	270	455	14	216	3	97	16	110	104	102	4	MIO	16
	W Dlac	oo looul	ro for one	ind Instal	lation or	on drone	ntal ragi	dramanta	(Vibratia	n.Maabaa	iom 10 .	marc alast	rical com	nananta .	arooodin.	a 0 50 pc	aina ata

#### Butterfly valve implementation

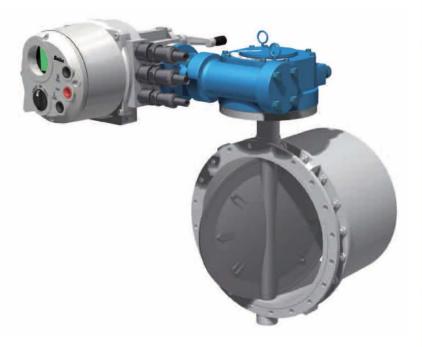
Model: Semflex-A-50 / BRM-3F

- 1. Motor operation Via the actuator panel (standard equipment)
- 2.Setting open/close limits and torque Settable with pushbutton switches.
- 3. Actuator status check Position, torque alarm and other status information can be checked on the LCD.



List of models by pipe diameter (reference values)

Model	Applicable butterfly valves (mm)	Applicable gate valves (mm)										
A-50	50~350	50~100										
A-100	250~400	100~150										



Note:We do not manufacture or sell valves.

#### Sample Semflex-A / BRM installation



#### Description

Installed as power actuator for an emergency cut-off on the wastewater path for a pharmaceuticals firm.

#### User requirements

Previously an air actuator was used to open and close this emergency cut-off valve, but the user wanted a rapid-action power valve that could be installed in a narrow pit.

#### Solution proposal

The Semflex-A series of power valve actuators with inboard servomotors was proposed, offering the same high-speed open/close action as air actuators. The power valve actuator is the smallest in the world, facilitating installation in a narrow pit.

Computerized actuators for even large-diameter pipes

Semflex-VM actuators, available with optional on-board inverter function, can handle variable open/close speeds, as well as offering a valve purge function, and water-hammer prevention design.

Small, lightweight design (about half the mass of our prior model).

IP68-rated waterproofing and double sealing on terminals to minimize faults caused by liquid penetration.

Valve operation possible immediately after supplying power.

Supports wide range of operation

(water-hammer prevention, valve purge, torque retry, etc.).

On-board inverter (option) to adjust open/close speed.

2-wire PROFIBUS communication network (option) can be easily added.

Supports a variety of remote functions. Wireless communication means operation from anywhere, with simple status monitoring.

Explosion-proof ExdII BT4 construction (option).

Valve interface complies with ISO5211.

#### **Applications**



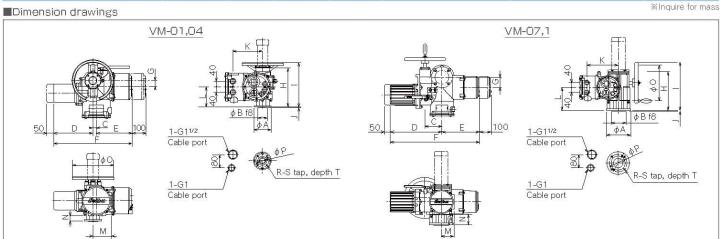


#### ■Controller specifications

Function	Specification	Remarks
Main power supply	Three-phase AC 200V/400V class	Inquire for alternate power supplies
Control CPU	16-bit CPU with ADC and DAC, 16-MHz clock	
Position detection	Electronic absolute encoder, 16 pulse	
Torque detection	±5% precision	Worm motion sensing (contactless potentiometer)
LCD	Position (% open), fault icons, indicator, 3-character data	Displays with main power off
Basic operation	Open, stop, and dose pushbuttons; Local/remote	
Adjustable open/dose speed	Inverter (option)	
Position set	0%, 100%, and 4 intermediate user-defined points	User-definable within encoder count range
Torque set	User-adjustable between 30% and 100%	
Options	Inverter proportional control (stepless positioning), fieldbus support (PROFIBUS-DP), self-diagnosis	

Coo	nifin	ations	
200		BUULIS	

Model	Max. output	Max. thrust	Flange	Max. shaf	t dia. (mm)	Output speed min-1	Motor	//
	torque (Nm)	(KN)	size	Rod	Screw	(50/60 Hz)	Power supply	Output kW
Semflex-VM-01	150	70	F10	34	40			0.2,0.4,0.75
Semflex-VM-04	550	130	F14	50	58	110/105 750/011	Three-phase 200V class	0.75、1.5、2.2
Semflex-VM-07	850	160	F16	60	72	11.3/13.5~75.9/91.1	Three-phase 400V class	1.5,2.2,3.7
Semflex-VM-1	1,800	270	F25	80	95			2.2,3.7



Differisions																			
Model	φΑ	φВ	С	D	E	F	G	H		J	K	L	M	N	φΟ	φP	R	S	T
Semflex-VM-01	125	70	25	283	285	568	44	287.5	320	3	216	147	135	37	300	102	4	MIO	30
Semflex-VM-04	175	100	22	298	310	608	48	340.5	370	4	260	170	132	90	450	140	4	M16	38
Semflex-VM-07	210	130	146	445	325	770	88	342	417.5	3	276	200	110	90	314	165	4	M20	45
Semflex-VM-1	300	200	173	479	375	854	115	365	468	5	305	225	113	100	400	254	8	M16	43

\*\*Please inquire for special installation or environmental requirements. (Vibration: Mechanism 1G max., electrical components exceeding 0.5G, noise, etc).

#### **VM** Butterfly valve implementation

Model: Semflex-VM-01 / BRM-3F

- 1. Motor operation Via the actuator panel (standard equipment)
- 2.Setting open/close limits and torque Settable with pushbutton switches.
- 3. Actuator status check Position, torque alarm and other status information can be checked on the LCD.



List of models by pipe diameter (reference values)

Model	Applicable butterfly valves (mm)	Applicable gate valves (mm)
VM-01	300~500	100~150
VM-04	600~900	200~500
VM-07	700~1000	300~700
VM-1	1000~1200	500~900



Note: We do not manufacture or sell valves.

#### Sample Semflex-VM installation



#### Description

Insulator wash system installed to prevent insulation degradation due to salt spray at insulator port. Semflex-VX was used to open and close the valve for wash water.

#### User requirements

The previous system had only on/off control, but the long pipe length resulted in abnormal pressure at close (water hammer). The customer required a slower valve closing speed to prevent water hammer issues.

#### Solution proposal

The Semflex-VM series with inverter control reduces valve open/close speed when the valve is almost closed, eliminating water hammer issues and delivering valve closure at nominal water pressure.

#### Computerized actuators for small-diameter pipes

Small and lightweight with IP68-rated waterproofing and optional explosion-proof construction, perfect for installation in hazard areas.



#### Features

Small, lightweight design (about half the mass of our prior model). IP68-rated waterproofing and double sealing on terminals to minimize faults caused by liquid penetration.

Valve operation possible immediately after supplying power.

Supports wide range of operation (water-hammer prevention, valve purge, torque retry, etc.).

On-board inverter (option) to adjust open/close speed.

2-wire PROFIBUS communication network (option) can be

Valve interface complies with ISO5211.

#### **Applications**

Controller enecifications

Gates (flow control)

# ■Dimension drawings

Function	Specification	Remarks
Main power supply	Three-phase AC 200V/400V class	
Control CPU	16-bit CPU with ADC and DAC, 16-MHz clock	
Position detection	Contactless potentiometer	
Torque detection	±5% precision	Worm motion sensing (contactless potentiometer)
LCD	Position (% open), fault icons, indicator, 3-character data	Displays with main power off
Basic operation	Open, stop, and close pushbuttons; Local/remote	
Adjustable open/close speed	Inverter (option)	
Position set	0%, 100%, and 4 intermediate user-defined points	User-definable within encoder count range
Torque set	User-adjustable between 30% and 100%	
Options	Inverter proportional control (stepless positioning), fieldbus support (PROFIBUS-DP), self-diagnosis	

Specifications										
Model	Max. output	Flange	Max. shaft	Valve speed	Motor	Mass				
Model	torque (Nm)	size	dia. (mm)	sec/90° (50/60 Hz)	Power supply	Output W	(kg)			
Semflex-VP-010	125	F07	00	9/7.5~18/15		40	25			
Semflex-VP-020	250	FU/	28	18/15~36/30	Three-phase 200V class	40	20			
Semflex-VP-060	600	F10	42	18/15~36/30	Three-phase 400V class	100	30			
Semflex-VP-1	1,000	E14	60	18/15~36/30	Tillee-pilase 400V class	200	52			
Semflex-VP-2	2,000	F14	.60	36/30~72/60		200	52			

■Dimensions									14										
Model	φА	φΒ	С	D	E	F	G	Н	Ţ	J	K	L	М	N	P	φR	S	T	U
Semflex-VP-010	90	55	167	3	379	201	113	20	121	186	56	64	68	B70	10	70	8	M8	15
Semflex-VP-020	30	55	107	9	3/3	201	1110	20	141	1.00	50	04	00	N/U	10	70	0	IVIO	10
Semflex-VP-060	125	70	191	3	396	325	130	20	136	202	60	60	65	R110	8	102	8	M10	15
Semflex-VP-1	175	100	268	4	462	262	191	20	174	240	60	111	141	R110	70	140	8	M16	15
Semflex-VP-2	1/5	100	200	4	402	000	191	20	1/4	240	00	aliahah.	141	HIIO	/ 0	140	0	IVI 16	15

#### %Please inquire for special installation or environmental requirements. (Vibration: Mechanism 1G max., electrical components exceeding 0.5G, noise, etc).

#### **VP** Butterfly valve implementation Model:Semflex-VP-010

- 1. Motor operation Via the actuator panel (standard equipment)
- 2.Setting open/close limits and torque Settable with pushbutton switches.
- 3. Actuator status check Position, torque alarm and other status information can be checked on the LCD.



List of models by pipe diameter (reference values)

Model	Applicable butterfly valves (mm)
VP-010	50~100
VP-020	50~150
VP-060	150~300
VP-1	200~350
VP-2	250~400



Note: We do not manufacture or sell valves.

#### Sample Semflex-VP installation







#### Description

A midsize coastal petroleum tanker installed power freight handling and ballast piping valves. As the trial vessel for the national Super Eco-Ship (SES) research project, it completed national evaluations and is now in commercial service.

#### User requirements

Hydraulic actuators have been commonly used in hazard areas of petroleum and gas tankers to prevent explosions, but the requirement was for electric valve actuators to reduce the needed hydraulic machinery and marine pollution. Construction for the control system and wiring also needed to be reduced to minimize cost.

#### Solution proposal

The Semflex-VP and VM series of electric valve actuators were linked via the PROFIBUS field bus, significantly reducing control panel wiring. In addition, the system supports valve operational

data monitoring and valve actuator preventive maintenance.

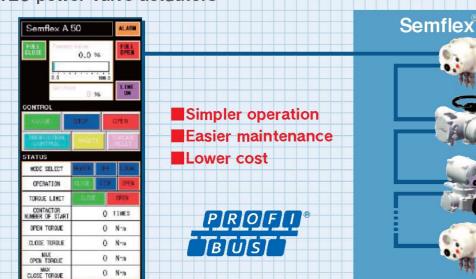
#### PROFIBUS-DP Control System

Supports the Semflex series



#### Package software

Connect up to 125 power valve actuators



Monitor many data items (torque, motor current, number of operations, etc.) to prolong service life of actuators and valves by status control, self-diagnosis, and preventative maintenance (failure prediction).

Communication protocol	PROFIBUS-DP									
Interface	RS-485	RS-485								
	Baud rate (kbit/s)	Cable length (without repeater								
	9.6	1200m								
	19.2	1200m								
David sets ( seesas	93.75	1200m								
Baud rate / range	187.5	1000m								
	500.0	400m								
	1500.0	200m								
	12000.0	100m								
Wiring	Twist pair cable									
	DP Master class 1 (PLC, PC, etc.)									
Station types	DP Master class 2 (programing configuration tool)									
	DP Slave (other slave systems)									
Connected stations	32 stations without re	peater								
Confected stations	With repeater expanda	able up to 125								
Communication	Data: 8 bit									
settings	Parity: Odd									
settirigs	Stop bit: 1									
Encoding	Non Return to Zero (N	NRZ)								

Electronic controls	Integral controls Seibu Semiflex series					
Baud rate detection	Automatic					
	OPEN					
Control signals	STOP					
Control signals	CLOSE					
	Proportional control [Option]					
	Limit switch OPEN/CLOSE					
	Torque switch OPEN/CLOSE					
Feedback signals	Opening/Closing signals					
r eedback signals	Position REMOTE					
	Valve position [Option]					
	Self diagnosis data [Option]					
	1.Motor protection tripped					
Fault signals	2.Torque abnormal					
	3.Other					

#### Application examples

#### Steelmaking plant

#### Fast response, lower cost

The power valve actuator offers fast control response for accurate valve operation. Because it does not use conventional I/O contact control, installation wiring and labor costs are also reduced.

#### Simplified maintenance

Electronic sensors slash the component count, for a smaller, lighter, simpler construction, which simplifies maintenance and provides significant reductions in required personnel and man-hours.



#### Plant machinery

#### PROFIBUS-DB communication system

Semflex series products can be automatically controlled via PROFIBUS communication, contributing to unmanned operation, and improving operational safety and transport quality.

#### Self-diagnosis function

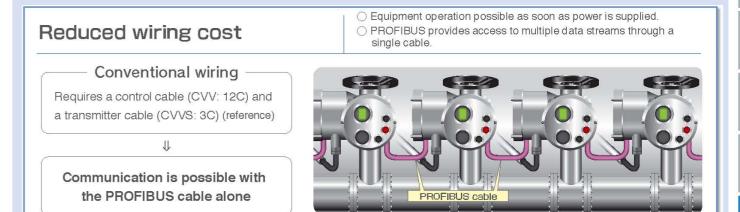
Various data items (torque, motor current, number of operations, etc.) can be monitored at high speed via the communication path for simple actuator and valve status management. Ideal for preventing trouble and





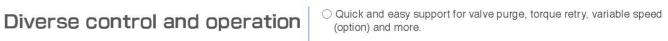
Intelligent system merits

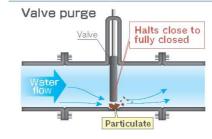
Digital communication between plant production equipment and the controlling PC enables a variety of control operations, while providing a host of advantages including improved communication accuracy and redundancy, and reduced wiring cost.



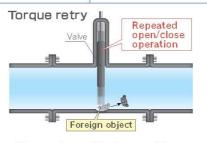




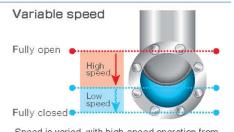




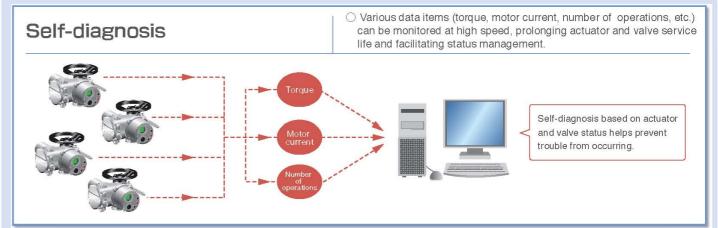
Valve halts close to fully closed, using flow to remove particles.



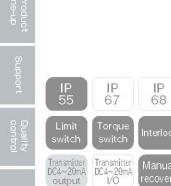
After over-torque detection, open/close is repeated several times



Speed is varied, with high-speed operation from fully open almost to fully closed, and then lowspeed operation until fully closed.



LTRH/LTRM





LTRH-01 Allowable torque:120 Nm/Allowable thrust;38kN

10.9/13.0~35.6/42.8

**XSleeve** speeds are reference only.

LTRM-01 Sleeve speed min<sup>-1</sup>(50/60Hz)





LTKD-02 Allowable torque:450 Nm/Allowable thrust:65kN LTMD-02 Sleeve speed min<sup>-1</sup> (50/60Hz) 10.5/12.7~66.0/79.2

LTKD-05 Allowable torque:850 Nm/Allowable thrust:105kN LTMD-05 Sleeve speed min<sup>-1</sup> (50/60Hz) 14.8/17.8~71.3/85.5

XSleeve speeds are reference only

Position

= Not available = Option



LTKD-10B Allowable torque:12,000 Nm/Allowable thrust:1,100kN LTMD-10B Sleeve speed min-1 (50/60Hz) 10.6/12.8~63.1/75.7

XSIeeve speeds are reference only.

10.7/12.9~61.2/73.4





18/15-36/30











\*Detail specifications available on request





#### Features

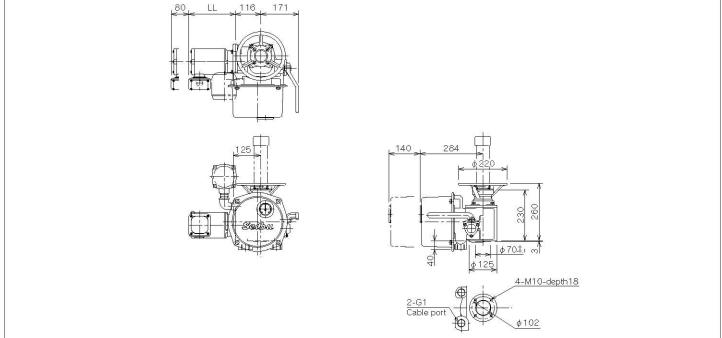
Manual and automatic recovery

Safety mechanisms: limit switch, torque switch, interlock (LTRH only)

Compact and lightweight for easy installation into tight



# ■Dimension drawings



#### ■Specifications

A Committee of the Comm	Allowable	Allowable	Allowable va	ve stem dia. (mm)	Motor							
Model	torque (Nm)	thrust (kN)	Rising stem	ve stem dia. (mm) Non-rising stem	Sleeve speed min-1 (50/60 Hz)	Power supply	Output kW					
LTRH-01 LTRM-01	120	38	28	30	10.9/13.1~35.6/42.8	Three-phase 200V class Three-phase 400V class (Please inquire for single-phase specifications)	0.1,0.2,0.4					

			minquire for mass.
Motor output (kW)	0.1	0.2	0.4
Without brake	G3/4 / 209	G3/4 / 209	G3/4 / 202
KD/LL With brake Without Loosen equipment in ()	G3/4 / 195	G3/4 / 282 (259)	G3/4 / 285 (263)
Motor removal space X	80	80	80
	XPlease inquire for special installation or environ	nmental requirements. (Vibration: Mechanism 1G max	.,electrical components exceeding 0.5G, noise,etc).

LTKD-01/02 LTMD-01/02

Features

Manual and automatic recovery

Safety mechanisms: limit switch, torque switch, interlock (LTKD only)

Uses motor appropriate for valve. Improved safety with independent wiring using dedicated terminal box.

One-touch auto/manual select

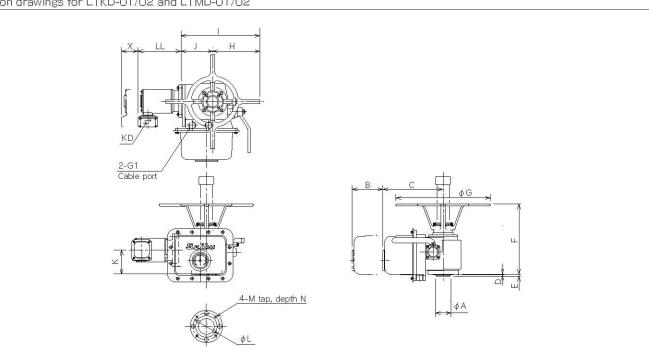
Available in submersible and explosion-proof specifications



■Dimension drawings for LTKD-01/02 and LTMD-01/02

Mechanical

actuators



■Specifications for	Specifications for LTKD-01/02 and LTMD-01/02														
Model	Allowable torque (Nm	Allowable thrust (kN			/e stem di   Non-ris			e speed 50/60 H		Motor Power supply Output kW					
LTKD-01/LTMD-01	250	45	2	28	3	30 .		2.6~71.3	3/85.5		phase 20 phase 40		0.2,0.4,0.75		
LTKD-02/LTMD-02	450	65	Z	10	42		10.5/12				quire for si	ngle-phase oi		0.4,0.75,1.5	
■Dimensions for LT	KD-01/02	and LTMD-	01/02										₩ Inquir	e for mass.	
Model	φΑ	В	С	D	E	F	φG	III.		J	K	φL	М	N	
LTKD-01/LTMD-0	01 73	150	293	3	11	342	460	230	385	155	117	125	MIO	17	
LTKD-02/LTMD-0	)2 88	160	327	4	12 377		460	230	385	155	142	160	M12	22	
Motor output (kW) 0.2						0.4			0.75			1.5			

G3/4 / 202 G3/4 / 215 Without brake G3/4 / 209 G3/4 / 243 KD/LL With brake Without Loosen equipment in () G3/4 / (259) G3/4 / 285 (263) G3/4 / 304 G3/4 / 334 80 80 80 Motor removal space X

\*\* Please inquire for special installation or environmental requirements. (Vibration: Mechanism 1G max., electrical components exceeding 0.5G, noise, etc)



#### Features

Safety mechanisms: limit switch, torque switch, interlock

Uses motor appropriate for valve. Improved safety with

Standard safety equipment prevents damage to valve and gate

Available in submersible and explosion-proof specifications.

#### Manual recovery

independent wiring using dedicated terminal box.

even if excess force applied in manual operation.

LTMD-05/1/3/5

#### Features

#### Manual recovery

Safety mechanisms: limit switch, torque switch, etc.

Uses motor appropriate for valve. Improved safety with independent wiring using dedicated terminal box.

Standard safety equipment prevents damage to valve and gate even if excess force applied in manual operation.

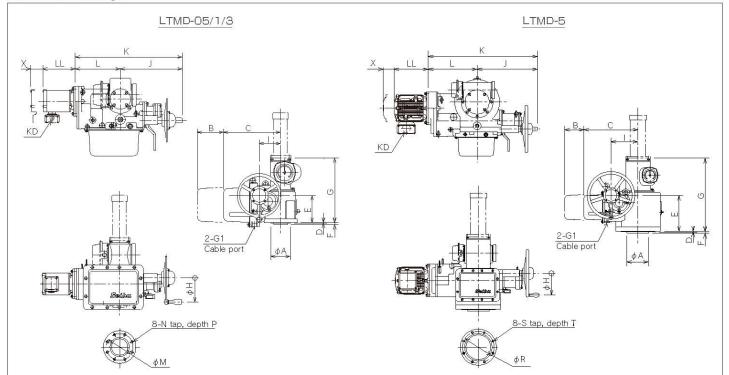
Available in submersible and explosion-proof specifications.

Note: Model also available with mechanical interlocks (LTMDG)

#### ■Dimension drawings

Mechanical

actuators



#### ■Specifications

KD/LL With brake
Without
Loosen equipment in ()

Model	Allowable		wable			alve ster					ed min	-1 _				lotor					
	torque (Nm)	uiru	st (kN)	RISIN	g stem	Non-r	ising st	tem	(50/60 Hz)				FO	wersu	ibbià		Output kW				
LTMD-05	850	1	05	5	50		52		14.8/17.8~71.3/85.5			5.5 -	Three-pl	hase 2		ass	0.4,0.75,1.5,2.2,3.7				
LTMD-1	1,750	2	200	6	32		70		9.3/17	1.2~6	6.0/79								늄		
LTMD-3	4,000	3	20	8	30		90		8.0/9	.6~64	1.5/77.										
LTMD-5	6,500	5	00	1	00		115						DC specifications)				5.5、7.5、11、15				
■Dimension:	S																3	KInquire 1	for mass.		
Mo		φА	В	С	D	Е	F	G	φН	İ	J	K	L	φM	N	P	φR	S	Ť	Ē	
LTMI	D-05	103	175	360	5	140	16	429	160	84	375	575	200	180	M16	25	- <del>-</del>	-	ATC.	- 37	
LTMI	D-1	132	175	400	5	175	17	490	160	110	425	685	260	250	M16	25	-	-			
LTMI	D-3	168	170	411	5	200	20	545	200	151	470	740	270	300	M20	30	V	-	ATC.	8	
LTMI	D-5	206	175	477	5	242.5	18	665	200	258	645	929	285	-:	_	_	360	M24	40	control	
Motor out	tout (kW)	(	).4		.75		1.5		2.2		3.7		5.5		7.5		11	1 7	5	으	

Without brake G3/4 / 202 G3/4 / 215 G3/4 / 243 G3/4 / 264 G3/4 / 278 G1 / 312 G1 / 350 G1 / 435 G1 / 435

Motor removal space X 80 80 80 80 100 100 100 150 150 \*\*Please inquire for special installation or environmental requirements. (Vibration: Mechanism 1G max., electrical components exceeding 0.5G, noise, etc).

G3/4 / (263) G3/4 / 304 G3/4 / 334 G3/4 / 358 G3/4 / 392 G1 / 424 G1 / 467 G1 / 594 G1 / 594

#### ■Dimension drawings

2	LTKD-05/1/3	LTKD-5
	KD B C	X LL K J S S S S S S S S S S S S S S S S S S
	2-G1 OA Cable port	Cable port  AA  8-S tap, depth T

#### ■Specifications

LINE	0-00		I UU	i	JU		02		14.0/1/.	0/	1.0/00.0	2 T	hree-pha	se 21	OOV clas	50	1.4.U. / U.	1.00	C. U./
LTKE	0-1 1,750	2	200	6	52		70		9.3/11.2	2~6	5.0/79.2		hree-pha				1.5, 2.2	2,3.7,	5.5
LTKE	0-3 4,000	3	320	8	30		90		8.0/9.6	~64	1.5/77.4		Please inquir				3.7,5.5	5、7.5、	11
LTKE	0-5 6,500	5	500	1	00		115	1	10.7/12.	9~E	1.2/73.4	4 [	DC specifica	ions)			5.5,7.	5,11,	15
■Dime	ensions																<b>%</b> I	nquire f	or mas
	Model	φА	В	С	D	E	F	G	φН	1	J	K		φΜ	N	Р	φR	S	Ť
	LTKD-05	103	175	359	5	140	15	429	160	84	360 5	575	200	180	M16	25	-	-	
	LTKD-1	132	175	400	5	175	17	490	160	110	425 6	385	260	250	M16	25	-		
	LTKD-3	168	170	411	5	200	20	545	200	151	470 7	740	270	300	M20	30		1 <del></del>	77
	LTKD-5	206	175	479	5	243	18	665	200 2	258	644 9	929	285	==	:-	-	360	M24	40
Mot	or output (kW)	C	0.4	(	).75		1.5	j	2.2		3.7	T)	5.5		7.5		11	1	5
	Without brake	G3/4	/ 202	G3/4	/ 215	G3/4	/ 243	G3/	4 / 264	1 G3	3/4 / 27	8 6	91 / 312	2 G1	/ 350	G1	/ 435	G1 /	435
KD/LL	With brake Without Loosen equipment in ()	G3/4	/ 285 (263)	G3/4	/ 304	G3/4	/ 334	4 G3/	4 / 358	3 G3	3/4 / 39	2 6	91 / 42	4 G1	/ 467	G1	/ 594	G1 /	594
Motor	removal space X	8	30		80		80		80		100		100		100		150	15	50

\*\*Please inquire for special installation or environmental requirements. (Vibration: Mechanism 1G max., electrical components exceeding 0.5G, noise, etc).

₫₹

R

control F

Seibu Seibu

#### Features

#### Manual recovery

Safety mechanisms: limit switch, torque switch, interlock (LTKD only)

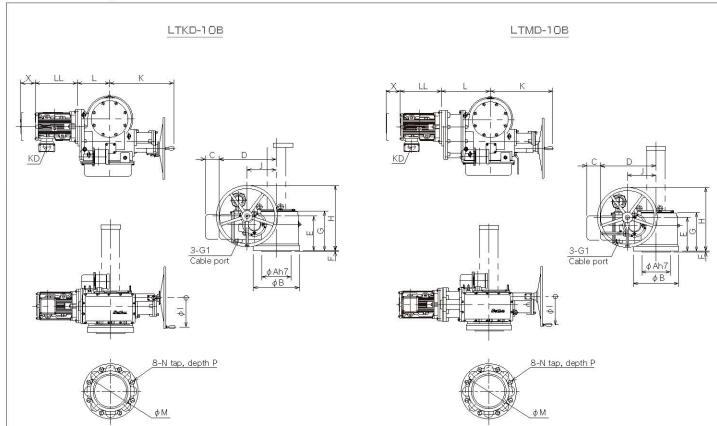
Uses motor appropriate for valve. Improved safety with independent wiring using dedicated terminal box.

Standard safety equipment prevents damage to valve and gate even if excess force applied in manual operation.

One-touch auto/manual select

Available in submersible and explosion-proof specifications.

■Dimension drawings for LTKD-10B and LTMD-10B



■Specifications for LTKD-10B and LTMD-10B

	LTMD-10B 12000	1100	115	135	1	0.6/12.8	~63.1/75.7	THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TW	hase 400V clas refor DC specificatio		11,15,18.	5,22
	■Dimensions											or mass.
₽	Model	фА фВ	С	D E	F	G	Η ф	J	K L	φM	N	P
2	LTKD-10B	300 47!	5 140	590 355	8	405	670 30	0 302	660 330	406	M36	70
₹	LTMD-10B	300 47	5 140	590 355	8	405	670 30	0 302	660 515	406	M36	70
	Motor output (kW)	7.5	5	11			15		18.5		22	
	KD/LL Without brake	G1 /	350	G1 / 43	35	G <sup>-</sup>	/ 435	G	2 / 488	G	2 / 488	\$
	With brake	G1 /	467	G1 / 59	94	G <sup>-</sup>	/ 594	G	2 / 657	G	2 / 657	E.
	Motor removal space X	100	)	150			150		150		150	
		×Please inquir	e for special ins	stallation or environi	mental re	quirements.	(Vibration: Mecha	anism 1G max	electrical compone	ents exceed	ing 0.5G, noi	ise,etc).

Mechanical LTKB-01A/02A/05A

Highly automated plants are running at faster speeds than ever, leading to rising demand for improvements in reliability and service life in output shafts of gate valves, globe valves and more.

The LTKB uses a ball screw instead of the conventional screw to significantly prolong service life and boost efficiency.

#### Features

Excellent screw efficiency makes possible smaller, lighter drives and motors.

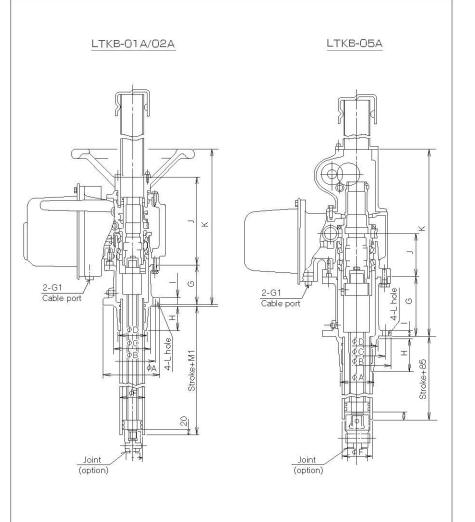
The protection cylinder completely encloses the ball screw section.

The valve stem screw remains in contact, achieving a transmission efficiency of 90% or higher.

Low thread wear and long service life even in high-frequency operation.

Note: Large-capacity designs for -1A, -3A and larger are also available. Inquire for details.

■Dimension drawings





Specifications (Pall cores appointed as require consultation, Inquire for details information)

Model	Allowable torque (Nm)	Allowable thrust (kh		Ive stem dia. (mm) Non-rising stem	Secretary Section 1997	speed min-1 /60 Hz)		Power	Motor supply	Out	put kW
LTKB-01A	250	45		30		0~67.5/81			200V class		0.2,0.4
LTKB-02A	450	65	-	42	10.0/11.9	0~62.5/75			400V class		0.4,0.7
LTKB-05A	850	105	-	75	10.0/12.0	~67.5/81		ease inquire for C specifications	r single-phase o s)	0.4	1.5, 2.2
V_025/0/50 50											
	- 1	1	21	g						<b></b> ∦ Inqu	uire for m
■Dimension Mo	- 1	φΑ φ	в фС	φD φF	G	H		J	K	∭ Inqu	uire for m M1
	del		B φC 0 100h7	φD φF 90 65	G 125	H 75	15	J 242	K 407	*Inq L φ12	Mı
Мо	del 01A		0 100h7	The second second		H 75 85	15 20		K 407 497	Ŀ	V25 0 0 185 0 140

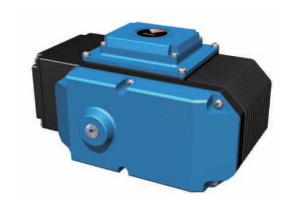
※Please inquire for special installation or environmental requirements. (Vibration: Mechanism 1G max., electrical components exceeding 0.5G, noise, etc).

19 Seibu 20

Output kW

Three-phase 200V class

### A small, lightweight, easy-to-handle actuator



#### Features

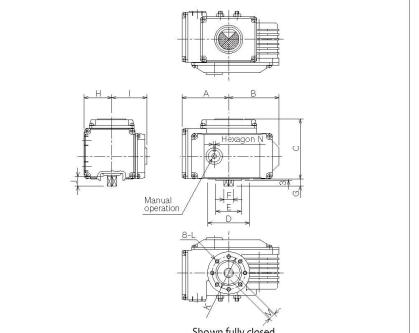
The body is made of aluminum and the cover of engineering

Inside, a worm gear/spur gear combination minimizes volume.

Terminal chamber is separated from switch to assure ample



#### ■Dimension drawings



#### ■Specifications

	Model	SRH-007	SRH-020	SRH-060
Allowa	ible output torque (Nm)	70	200	600
Open/close	e speed (sec/90°)50/60 Hz	12/10	•24/20	18/15•36/30
	Power supply (V)		Single-phase100、200	
	Output(W)	10	40	100
Motor	Insulation class		E	
	Thermal protector		Internal	
	Space heater		8W	
Micros	switch contact capacity		AC250V 5A	
	Lead port		2-G1/2	
Ar	mbient temperature		-10°C~50°C	
Pro	tective construction	IP55	/JPW55 (outdoor-use waterpro	ofing)
	Terminals		Screw M3.5×12P	
	Mass (kg)	4	8	15

I	Dimensions														
	Model	А	В	С	D	E	E	G	Н	1	J	K	L	M	N
Ī	SRH-007	100	108	128	φ90	φ55f8	φ20	15	60	75	20	70	M8	□15 <sup>-0.05</sup> <sub>-0.09</sub>	5
ı	SRH-020	121	135	139	φ90	φ55f8	φ28	35	63	90	30	70	M8	□23 -0.06 -0.11	6
ı	SRH-060	158	164	164	φ125	φ70f8	φ39	40	85	133	35	102	M10	30 -0.05	6

#Please inquire for special installation or environmental requirements. (Vibration: Mechanism 1G max., electrical components exceeding 0.5G, noise, etc).

#### Completely waterproof compact actuator

SRJ series



Mechanical

actuators

#### Features

Waterproof terminal chamber with submersible IP68

Rich range of options, including angle transmitter, RI converter, and proportional control.

ExdII BT4 explosion-proof construction available.

Valve interface complies with ISO5211.



c c	■Dimension drawin

Spec	ifications					
	Model	SRJ-010	SRJ-020	SRJ-060	SRJ-1	SRJ-2
	owable output torque(Nm)	125	250	600	1,000	2,000
	n/close speed /90°) 50/60 Hz	9/7.5 18/15	18/15 36/30	18/15 36/30	18/15 36/30	36/30 72/60
Max.	. shaft dia.(mm)	28	28	42	60	60
	Output(W)	40	40	100	200	200
	Supply voltage(V)	Thre	e-phase200	,400 Single	e-phase100	,200
Motor	Insulation class			Class B		
	Brake		Perma	anent, with	brake	
	Thermal protector		Inte	ernal to mo	tor	
Posi	tion limit switch	N	/licroswitch	RLS(1a1b)	LLS(lal	o)
To	orque switch	1	licroswitch	RTS(lalb)	LTS(lall	o)
Mai	nual operation		Automatic	recovery, v	with handle	
	Design life	10,00	00 cycles wi	th valve load	d, 500,000	starts
	Terminals		Motor(M4	-3P),contro	I(M4-32P)	
	Lead port			3-G1		
	sure-resistant, plosion-proof		Exc	III BT4(opt	ion)	
	Color		Standar	d paint(Mur	nsell N8)	
Ambie	ent temperature			-10°C~50°C	)	
S	pace heater		Include	ed(PTCtheri	mistor)	
Protec	tive construction			IP68		
	Mass(kg)	13	13	18	40	40

Dimensions																	
Model	φΑ	φВ	С	D	Е	F	G	Н	1	J	K	L	M	N	Р	φR	S
SRJ-010	00	EE	167	2	010	201	704	101	100	EC	7.0	64	60	70	10	70	MO
SRJ-020	90	55	167	3	218	281	104	121	186	56	10	64	68	70	10	70	M8
SRJ-060	125	70	191	3	235	325	130	136	202			60	65		8	102	MTO
SRJ-1	175	100	267		296	363	191	174	240	60	0	777	7 47	110	70	7.40	MIC
SRJ-2	175	100	201	4	290	303	191	1/4	240			111	141		70	140	M16

\*\*MPlease inquire for special installation or environmental requirements. (Vibration: Mechanism 1G max., electrical components exceeding 0.5G, noise, etc).

■ Motorized type

#### Worm reducers also usable as motorized actuators

Features

Compact, lightweight design.

At least 30% smaller and 20% lighter than our previous design.

Outstanding resistance to corrosion and environmental

More variations than ever for the optimal specifications.

Valve interface complies with ISO5211.

The gear case is made of tough ductile casting, the worm gear of heat-treated structural-use carbon steel, and the worm wheel of wear-resistant aluminum-brass alloy. It is packed with multi-purpose lithium-soap-based grease for long-term, maintenance-free operation.

■ Manual type



Model:Semflex-VM-01/BRM-3F

**BRM** Butterfly valve application example

Model:LTKD-05/BRM-10F





■BRM series basic specifications

1	ŗ	Model	BRM-0	BRM	1-1	BRM-	-2	BRN	И <b>-</b> З	BR	(M-4		BRM-5			BRM-	10			BRM-1	18			BF	M-40				BR	M-80				BRM-15	0			BRI	M-200				BRI	<i>I</i> -300		
	1.	viousi	DIXIVI-O	Stan -13	S -1B	Stan -1S dard	-1B	Stan -1	S -1B	Stan - dard -	18 -1	B Stan	-18	-1B St	tan -13	S -1B	-2S -	2B S	tan -1	S -1B	-28	-2B	Stan dard	-18 -1	3 -28	-2B	-3B St	tan -1S	-1B	-2S -2	2B -3	B Stan dard	-1S -	-1B -29	-2B	-3B S	tan -13	3 -1E	3 -25	-2B	3B S	tan -1	S -1E	-28	-2B -3E	3
£	Input	Motorized:F	×	0 ×	0	0 ×	0	0 >	0	0	× C	0	0	0 (	0 0	0	×	×	0 0	0	×	×	0	0 0	×	×	×	0 0	0	×	× ×	0	0	0 ×	×	×	0 0	0	0	×	×	0 0	0	0	0 ×	
_	type	Manual:H	0	0 0	0	0 0	0	0 0	0	0	0 0	0	0	× :	× O	0	0	0	× O	0	0	0	×	×   ×	0	0	0	××	×	0 (	0	×	×	× O	0	0	××	×	×	0	0	× >	¢ ×	×	× O	
m		Allowable torque (Nm)	500	1,00	00	2,00	o	3,0	00	4,	000		5,000			10,00	0			18,00	0			4	0,000				80	0,000				150,000	)			20	000,000				30	0,000		
MA	Output specifi-	Gear ratio	1/40	1/40 1/8	0 1/80	1/60 1/150	0 1/150	1/60 1/1	50 1/150	1/60 1/	7150 1/1!	50 1/60	1/150 1	/150 1/	60 1/18	0 1/180	1/540 1/	450 1/	60 1/18	0 1/180	1/540	1/540	1/60	1/240 1/2	1/960	1/720	/2,400 1/	65 1/260	0 1/260	1/1,040 1/3	80 1/3,1	20 1/65	1/325 1	/325 1/1,62	5 1/1,300	1/4,875 1/	65 1/32	5 1/32	5 1/1,625 1,	/1,300 1	4,875 1/	65 1/3	25 1/32	5 1/1,825	1/1,300 1/4,87	75
	cations	Output flange bolt size Bolt tightening torque	F10,M10 16Nm	F12,M12	,32Nm	F14,M16,	.76Nm	F16,M20	),121Nm	F16,M2	20, 162N	m F20	,M16,65	5Nm	F2	o,M16,	65Nm		F30	,M20,2	201 Nm			F35,M	30,562	Vm		F	40,M3	6,1,1821	lm		F48	,M36,1,2	42Nm		ı	=60,M	36,796N	lm		F	=60,M3	6,1,194	Nm	
Produ		Allowable valve rod dia. (mm)	28	38	3	50		6	0		75		75			100(9	5)			115(11	10)			15	(145)				1	180				220					280				3	320		
ģ		ical advantage ratio x efficiency)	12	12 23.	3 23.3	18 43.7	43.7	18 43	3.7 43.7	18 4	3.7 43	.7 18	43.7 4	13.7 1	8 52.	4 52.4	1524 1	27	18 52.	4 52.4	152.4	127	18	69.8 69	8 271	203.2	657.1 19	9.5 75.7	7 75.7	293.6 22	0.2 854	3 19.5	94.6	94.6 458.	7 367	1,335 1	9.5 94.	6 94.6	3 458.7	367 1	,335 1	9.5 94	1.6 94.6	3 458.7	367 1,33	5
<u>و</u>	Input	Torque (Nm)	41.7	83.3	42.9	111.1 45.8	3 45.8	166.7 68	3.7 68.7	222.2 9	1.6 91	.6 277.8	3 114.5 1	14.5 55	5.6 190.	9 190.9	65.6 7	8.7 1,0	000 343	:6 343.6	118.1	141.7	2,222	572.7 57:	.7 147.6	196.8	60.9 4,1	1,057	7 1,057	2725 36	3.4 93	6 7,692	1,586 1	,586 327	408.8	112.4 10	256 2,11	4 2,11	4 436	545	150 15	,385 3,1	71 3,17	1 645	817 225	5
pport	Input shaft	Speed (Rev)	10	10	20	15 37.5	37.5	15 37	.5 37.5	15 3	7.5 37	.5 15	37.5 3	37.5 1	5 45	45	135 1	125	15 45	45	135	112.5	15	60 6	240	180	600 16	3.3 65	65	260 1	95 78	0 16.3	81.3 8	31.3 406.	3 325	1,2188 1	3.3 81.	3 81.3	8 406.3	325 1	2188 1	6.3 81	.8 81.3	3 406.3	325 1,218	.8
	Mass	(kg)	7.5	13	17.5	19.5 25	24	22 27	.5 26.5	34.5 4	2.5 45	.5 37.5	45.5 4	18.5 60	3.5 85	95.5	98	96 1	16 13	7 145	153	148	202	232 24	7 255	261	266 3	97 443	489	480 4	72 51	0 867	989 1	,060 1,09	0 1.034	1,1201,	0101,17	0 1,26	01,2501	,2101	,280 1,	370 1,6	70 1,72	0 1,820	1,760 1,86	0

1 The valve drive torque should be set within the allowable BRM torque.

- Use 1 or 2 keys to connect to the valve stem as appropriate. Values in parentheses are for old-style JIS key.
   Input types marked "X" are also available. Inquire for details.
- Mechanical advantage is the ratio between input-shaft torque and output-shaft torque (for efficiency, worm gear: 0.3, spur/bevel gear: 0.97). 5 Input-shaft torque shown for an output-shaft torque within the allowable torque.

6 Before attaching the BRM to a valve, please ensure that the strength class of the bolts is at least 10.9, and the length of engagement sufficient. Torque value shown in the minimum.

Note: The above values are subject to change without notice.

\*Please inquire for special installation or environmental requirements. (Vibration: Mechanism 1G max., electrical components exceeding 0.5G, noise, etc).

syste	ems	Prodi	uct line	-up													
Floor	tuo min		15,517		370	100	May abo	ft dia. mm		Transmitter spe	cifications					Waterproofing	7
actu	tronic ators		Manual recovery	Automatic recovery	Max. torque Nm	Max. thrust kN	Rod	Screw	Synchro	Resistance (potentiometer)	DC4~20mA	DC4~20mA I/O	Network (PROFIBUS)	Inverter (variable speed)	IP55	IP67	IP68
Semfle	121		A-50	A-50FJ	50	25	28	30	S—-	-	0	0	0	0	=:	-	0
Sellille	ex-A		A-100	A-100FJ	100	54	38	40	_	3	0.0	0	0	0		-	0
Semfle	v-VM	Multi-turn	VM	-01	150	70	34	40	_	-	, O	0	0	0	-	-	0
Ociliii		motorized	VM	-04	550	130	50	58	_	-	.0	0	0	0	-	_	0
	College		VM	-07	850	160	60	72	-	-	.0	0	0	0		_	0
	Buth		VM	-1	1,800	270	80	95	-	:-	.0	0	0	0	-	-	0
Semfle	x-VP		-	VP-010	125	-	28	-	-	:	00	0	0	0	-	-	0
	arrena.	Doublet trum	· —	VP-020	250	-	28	-	-	::	200	0	0	0	-	-	0
		Partial-turn motorized	· —	VP-060	600	-	42	-	-	:	00	0	0	0	-	-	0
			· —	VP-1	1,000	-	60	-	-	:	200	0	0	0	-	-	0
			· —	VP-2	2,000	-	60	-	-	:	00	0	0	0	-	-	0
Mac	hanical		Manual	Automotio	Allowable	Allowable	Allowable valve	e stem dia. mm		Transmitter spe	cifications		National	1		Waterproofing	
	ators		Manual recovery	Automatic recovery	torque Nm	thrust kN	Rod	Screw	Synchro	Resistance (potentiometer)	DC4~20mA output	DC4~20mA I/O	Network (PROFIBUS) *2	Inverter (variable speed) %2	IP55	IP67	IP68
LTRH LTRM			LTRH-01	LTRM-01	120	38	28	30	0	0	0	-	-	_	0	0	_
LTKD/I	TMD	-	LTKD-01	LTMD-01	250	45	28	30	0	0	0	0	-	_	0	0	0
series			LTKD-02	LTMD-02	450	65	40	42	0	0	0	0	=	-	0	0	0
,0,,00		1202 D. D.	LTKD-05	LTMD-05	850	105	50	52	0	0	0	0	-	-	0	0	△(KD not availa
		Multi-turn motorized	LTKD-1	LTMD-1	1,750	200	62	70	0	0	0	0	-	-	0	0	△(KD not availa
		motorized	LTKD-3	LTMD-3	4,000	320	80	90	0	0	0	0	-	-	0	0	△(KD not availa
			LTKD-5	LTMD-5	6,500	500	100	115	0		0	0	-	_	0	0	△(KD not availa
			LTKD-10B	LTMD-10B	12,000	1,100	115	135	0	0	0	0	-	-	0	0	△(KD not availa
LTKB			LTKB-01A	LTMB-01A	250	=	-	30	0	0	0	0	-	-	0	0	_
series			LTKB-02A	LTMB-02A	450	=	-	42	0	0	0	0	-	-	0	0	_
			LTKB-05A	LTMB-05A	850	=	=	75	0	0	0	0	-		0	0	-
SRH			-	SRH-007	70	.=.	<sup>□</sup> 15	-0.05 -0.09	-	0	0	0	=		0	_	-
series			-	SRH-020	200	=	□23	-0.06 -0.11	-	0	0	0	· <del>=</del>	=	0	-	-
			-	SRH-060	600	<del></del> -	□30	-0.05 -0.11	-	0	0	0	s <del>=</del> .	=	0	-	-
		Partial-turn	-	SRJ-010	125	=	28	-	-	0	0	0	-	=======================================	-	_	0
SRJ	- B	motorized	<del></del>	SRJ-020	250	2 <del>=</del> -	28	-	-	0	0	0	=	==	=	-	0
series	6		-	SRJ-060	600	=	42	=	-	0	0	0	. <del>-</del> -	=	=	-	0
			-	SRJ-1	1,000	<u></u>	60	=	-	0	0	0	:=:		-	.=	0
				SRJ-2	2,000	1 <u>=</u> 1	60	<del></del>	=	0	0	0	=	_	=.	=	0
			BRN	NAME OF THE STATE	500		28	5-3							=	0	0
BRM			BRN	AND SE	1,000	~=	38	=:							=	0	0
series			BRN		2,000	<u></u>	50	-							=:	0	0
			BRN	NEW OF	3,000	1=1	60	=							=:	0	0
	A RIVER	Partial turn	BRN	321 3	4,000		75								<del></del> .	0	0
	(Manual)	auto/manual		120 100	5,000	=	75								<del>7-</del> 8	0	0
			V*************************************	<i>I</i> -10	10,000	=	100(95) *1	==:							<del></del> 6	0	0
	10.		0770e-4 e.u	<i>I</i> -18	18,000	-	115(110)*1								<del>, -</del>	0	0
				/I-40	40,000 80,000	-	150(145) <sub>×1</sub>	-							5776 5576	0	0
(Auto)				/I-80	150,000	_	180 220	=							<u></u>	0	0
	de an			<i>I</i> -150	200,000	_	280								<u> </u>	0	0
				<i>I</i> -200			320								<u>2</u> 20	0	0
			ntheses are for old-sty	<i>I</i> -300	300,000 quire for information on i	_		-						equirements. (Vibration: M	<u> </u>	0	0

Warranty period

One year from product shipment

Any manufacturing defects will be handled

free of charge during the warranty period.

Maintenance engineering (ME) to prevent trouble before it happens,

Eliminating mechanical breakdown promotes smooth operation and

for heightened reliability!

Sapporo

Senda

Detecting and rectifying minor problems before they interfere with operation. A variety of deterioration

slashes cost.

## For example,

#### Full support to keep your system running smoothly!

Actuators must be maintained to ensure that they function when they're needed, especially in emergency situations. Expert technology and long experience means that inspections are performed as dictated by the specifics of each installation, backed up by emergency repairs as required.

#### Class A inspection

1–5 years from product shipment

On-site inspection of external appearance. operating circuits, insulation, etc.

Electrical insulation measurement

Limit switch inspection

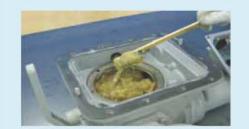
Class B

5-7 years from

#### inspection product shipment

Class A inspection. plus inspections of control mechanisms and gears.

#### Grease removal



Internal gear check



#### Class C inspection

7-10 years from product shipment

Disassembly at our plant, with parts replacement and repairs as needed.

#### Disassembly and inspection



Reassembly and testing



#### **Emergency** response

Service

Kyushu

Locations

Prompt investigation and repair as needed in emergency situations.

#### **Emergency investigation**

Hiroshima



Motor replacement



Lubricant solidifies, eliminating all





occurs inside the mechanical system over time

system to stop at the specified

Seibu 28

#### Seibu valve actuators are inspected with care, one at a time, before delivery.

Our actuators are utilized in a host of systems demanding precise, reliable control of water, electricity, gas, petroleum, and more, and because they are such critical components, actuators must deliver safe, accurate action. Every part purchased for use in a Seibu actuator, or manufactured in our own shops, is stringently tested, and each completed actuator assembly tested again before

#### Parts receiving











#### Processing and assembly











#### Inspection



#### Shipment









#### - Request for quote -

					Number of	sheets:
o: Seibu E	lectric & Machin	ery Co	., Ltd.	(1	Date:	/ / )
Nag	yo Branch (03) 5628 ka Branch (06) 4796 oya Sales Office (052) 806 shu Sales Office (092) 94	6-6707 0-5030	FAX Hiroshima Sapporo Sa Sendai Sale	ales Office	(011)2	502-1653 221-3392 797-6696
ompany name:						
Dept.		Conta	ict name:			
Tel:			Fax:			
		,	·			
	□ Motorworks/sowors	~~	□ Electric n	OWOr	Ctoolmo	kina

			.,		
dustry	☐ Waterworks/sewerage			☐ Steel	
of delivery					8
ve type	☐ Butterfly	☐ Gate valve	e	☐ Gate	☐ Other
cation dia.					
tion objective	□ On/off	☐ Flow cont	trol		
	☐ Other (				
s compliance	☐ Manufacturer standard	☐ Other (			
ation site	☐ Outdoors	□ Indoors			
rproofing	□ IP55	□ IP67		□ IP68	
-proofing, etc.	☐ Standard	□ d2G4		☐ Exd II BT4	
ly power	Drive power (		)	Eg. Triple-pha	ase 200V 50H
	Control power ☐ Single-ph	ase 200V class	☐ Single-pl	nase 100V class	☐ No supp
	☐ Other	(			)
specification	☐ Manual recovery	☐ Automatic	crecovery		
torque, load					
lose speed	☐ Manufacturer standard	☐ Other (			
pecification	☐ Manufacturer standard	□ Other (			
pecification	☐ Manufacturer standard	□ Other (			
t -	of delivery  ve type cation dia. tion objective s compliance ation site rproofing -proofing, etc. ly power  specification torque, load lose speed	Definition objective	Petroleum, industrial chemicals   Def delivery   Def delivery	Petroleum, industrial chemicals   Waterways     Def delivery   Gate valve     Cation dia.     Control power   Single-phase 200V class   Single-phase speed   Manufacturer standard   Other (	Petroleum, industrial chemicals   Waterways   Other of delivery