

sdtork[®]

An ISO 9001:2008 Certified Company

Manufacturing Range



1000-Series



2000-Series



3000-Series



4000-Series



5000-Series



6000-Series



7000-Series



8000-Series

10000-Series



CE

SDTORK Controls Pvt. Ltd.
Complete solution in Valve Automation

SDTORK comprises a dynamic and committed team of young professionals blended with expertise and experience - Technocrats, Engineers and Managers. Sdtork team is well aware of the latest developments in modernization and automation with stress on economy, efficiency and quality. The present trend is 'speed' which means replacement of rather sluggish and outdated mechanical devices with faster and modern electronic and electrical devices. Sdtork is precisely in this business of automation of valves through intelligent approach to the same.

SDTORK's motto is **Technology + Field Engineering + Implementation + Back-up supports**. Sdtork team strives to give an optimal return to the customer for the money and effort they put in, in other words, keep the customer entirely satisfied.

With the above objectives in mind, SDTORK has developed Electric Actuators - 'Intelligent Actuators' to suit every valve application. The latest technology like PROFIBUS-interface is adopted in these Intelligent Actuators to provide greater advantage to the end user, apart from using feed-back devices and fail-safe devices. These Intelligent Actuators are designed for both on-off [open-close] application and also modulating application. Sdtork Intelligent Actuators are customer friendly and guarantee precise control every time, with repeated operations also. With a variety of valve types, Sdtork uses special adaptors with the Intelligent Actuators to suit each valve type for greater customer satisfaction.

Sdtork team assures that the customer will ever love to approach Sdtork for their further needs and will never regret the decision to go with Sdtork.

Innovation Facilitation

REPLACE OR RETROFIT ?

To keep pace with technological innovations, and improve efficiency and economy of operations, the continuous challenge before the plant managers is : Replace or Retrofit (i.e) go in for new facilities or upgrade existing facilities. The current facilities like pipes and valves may, by and large, cater to present and future requirements. Hence the need of the hour is solution through technology combined with innovation, in other words, 'Technovation'.

Sdtork steps in here to provide technovation solutions to a meaningful and optimal degree. A wide range of options with varied applications give Sdtork cutting edge to offer optimum solutions for almost all valve and actuator upgradation needs. Configured for total upgradation, it adapts well to the existing plant logistics, leading to greater economy of operations. Sdtork's actuators are designed for smooth operation and relative ease of maintenance.

THE ADVANTAGES OF TECHNOVATION

Field Engineering upgradation concept has the following inbuilt advantages:

- Modifications required are minimal
- Shutdown time to carryout the changes is very much on the lower side
- Continuous technical assistance is available during the upgradation process
- Extended lifetime of the installation
- Exposure to latest ideas in modernisation and automation
- Improved efficiency with comparatively lower investment
- Economy of scales of operation
- In effect, allround improvement in efficiency and economy

OPERATING INSTRUCTIONS
Operator to diagram
Diagnose the problem faced.

SDTORK FACILITIES

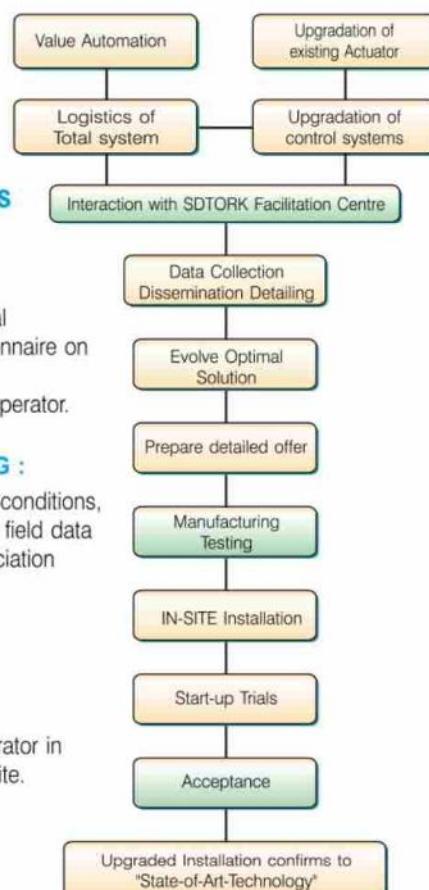
TECHNOLOGY :
Basis for Technological support is the Questionnaire on Valve / Actuator, to be filled in by the operator.

FIELD ENGINEERING :

Visit Site, Size-up site conditions, collect further relevant field data as necessary, in association with the operator.

IMPLEMENTATION :
Assistance to the operator in Retro-Fitting work at site.

BACK-UP :
Back-up technological support is provided on request



SDTORK Technovation Solutions

Sdtork upgradation concept helps to eliminate, to the maximum extent, all the unknown and unforeseen elements in a process through valve automation with electric actuators. Sdtork offers total logistical solutions for entire system control by installing Sdtork make electric actuators; additionally automation of other control factors like level monitoring, flow monitoring, and control panel can also be offered, on request. This gives an added advantage to valve users to make full use of Sdtork's Technological expertise.

How and When to approach?

Contact Sdtork 'Upgradation Facilitation Centre.' Any time! Sdtork will depute their Field Representative, a Technocrat, to the site; this representative will make a complete survey, collect relevant data, size-up site conditions, disseminate the data, assess the needs taking an overall view, and submit a viable solution with attendant costs, i.e., an effective quotation will be submitted. On receiving the go ahead signal in writing, Sdtork will take up the work and execute the same in a time frame of a few weeks to a few months depending on the quantum of work.

Why?

The simple, foremost and logical need for going in for valve automation is improved efficiency resulting in economy. From a 'Centralized Control Centre', control of several valves can be effected and with continuous feed-back, timely corrective action can also be initiated automatically, which is virtually impossible to achieve with manual operation. Another vital point is that unfavourable conditions for human beings like heat, fire, fumes, hazardous chemicals, adverse weather conditions will have little effect on operation and control of process. Added to these is the consistency in product quality due to high degree of automation. Sdtork has a good repertoire of technically competent personnel to take up upgradation and retrofitting work.

We at Sdtork committed to the ultimate measure of Quality which confirms the complete customer satisfaction and the only way to guarantee a successful and lasting presence in today's market.

Not only is the functional capability of our products and a continuous development programme key to our company fundamentals, the application of our quality concept is present in all areas of the business including, development, manufacture, suppliers services and our own purchasing and sales departments.

Our customers are the source of our business, their ideas and wishes must be realized through the products of Sdtork offers.

The greatest asset of our company is its work face. All embracing quality is not the result of individual effort, but of successful team work. The capacity to develop new ideas, to accept responsibility and to show initiative and creativity all lead to the continued progress of the firm this way of working has to be achieved at every level and is assured by on going training.

By regular personal contact with the user, we can rapidly come up with appropriate solutions. This is based on Sdtork's specialist know - how in intensive fields of

Selection Guide Line For Electrical Actuators

TYPE OF VALVE	MOVEMENT	SERIES	ELECTRICAL ACTUATOR RANGE
Ball Valves Plug Valves Butterfly Valves Dampers & Diverters	Quarter turn	1000	Single phase Quarter turn Electrical Actuator Torque range : 20 Nm to 600 Nm Out put speed : 17 to 80 Sec/90°
Globe Valves Gate Valves Rotary Valves with lever	Linear	2000	Single phase linear Electrical Actuator Thrust range : 50 kgs to 1200 kgs Out put speed : 0.24 to 1 mm/Sec
Globe Valves Gate Valves Knife-gate Valves Diaphragm Valves Sluice Valves	Multi-turn	3000	Three phase multi-turn Electrical Actuator Torque range : 20 Nm to 300 Nm Out put speed : 10 to 365 RPM
Globe Valves Gate Valves Knife-gate Valves Diaphragm Valves Sluice Valves	Multi-turn	3000-SG	Three phase multi-turn Electrical Actuator + spur gear box Torque range : 54 Nm to 3600 Nm Out put speed : 0.4 to 1.32 RPM
Ball Valves Plug Valves Butterfly Valves Dampers & Diverters	Quarter turn	4000	Three phase Quarter turn Electrical Actuator Torque range : 60 Nm to 500 Nm Out put speed : 40 or 80 Sec/90°
Ball Valves Plug Valves Butterfly Valves Dampers & Diverters	Quarter turn	4000-WG	Three phase multi-turn Electrical Actuator + Worm gear box Torque range : 180 Nm to 102000 Nm Out put speed : 5 to 1844 Sec/90°
Rotary Valves with lever Damper & Diverters	Quarter turn	5000	Three phase multi-turn Electrical Actuator + Worm gear box + lever + Mounting bracket Torque range : 60 Nm to 102000 Nm Out put speed : 5 to 1844 Sec/90°
Globe Valves Gate Valves Rotary Valves with lever	Linear	6000	Three phase linear Electrical Actuator Thrust range : 200 kgs to 5000 kgs. Out put speed : 0.83 to 11.66 mm/sec
Damper & Diverters	Linear / Angular	7000	Three phase thruster Electrical Actuator Thrust range : 200 to 3500 kgs Out put stroke : 50 to 1000 mm Out put speed : 2 to 90 mm/sec
Globe Valves Gate Valves Knife-gate Valves Sluice Valves	Multi-turn	8000	Three phase multi-turn Electrical Actuator + Bevel gear box Torque range : 40 Nm to 1200 Nm Out put speed : 3.33 to 46.67 RPM

development and manufacture.

The quality of our products is undeniably dependent on the performance of our suppliers. Thorough reviews are undertaken and documented and serve as the basis for a close customer supplier relationship.



Test Jig for Testing & Calibration of Electrical Actuator

Tork Testing Jig

1000 Series

Single Phase Quarter Turn Electrical Actuator

SDTORK Electric Actuator type 1000 Series have been designed for remote control of Ball valves, Butterfly Valves, Dampers & Other actuating devices, Which require up to 90° rotary actuation & tight closure in end positions.

They are simple in design with compact in size and lighter in weight due to high grade aluminium alloy housing.



Also available in Flame Proof Version



New series developed for light duty application



Ball Valve with
Electric Actuator



Butterfly Valve with
Electric Actuator



VIV Damper with
Electric Actuator



Plastic Ball Valve, Butterfly Valve
with Electric Actuator



Technical Specification of Actuator

SPECIFICATION	DETAILS
Supply Voltage	Single phase 230 V +/-10%, 50 Hz +/-5%, also available in 24 V AC / 110 V AC Supply.
Duty	S2-10 min, S4-30% - 1200 cycles/hour.
Insulation resistance	At least 20 MW under dry condition : At least 2 MW after a damp test.
Actuator life	at least 1×10^6 operations with a running time of 0.75 s at the rated torque.
Self-locking	Self-locking facility of the actuators is provided by mechanical locking feature of worm & worm wheel mechanism.
Local position Indicator	A continuous local mechanical position indicator is provided with actuator which always gives a faithful indication of actuator position independent of power supply.
Adjustable mechanical stoppers	Two adjustable mechanical stoppers are provided with actuator in open & close direction. This feature gives backup safety to final control device.
Auxiliary limit switches	Maximum four numbers of micro limit switches for end position can be provided. Type: 1 NO+1NC change over contact, Contact rating: 10A, 125 - 250 V AC.
Intermediate limit switches	Maximum two numbers of micro limit switches for intermediate end position can be provided. Type: 1 NO+1NC change over contact, Contact rating: 10A, 125 - 250 V AC.
Torque limit switches	Maximum two numbers of micro limit switches for end positions can be provided. Type 1 NO + 1NC change over type, Contact rating: 10A, 125- 250 V AC.
Feed back Potentiometer	A multi turn pot meter is used for 100-235 ohms output feedback value
Position controller	Field/Panel mounted having Input signal: 4-20mA / 0-10 V DC
Position Transmitter	Actuator mounted having Input from actuator mounted Potentiometer & output will be 4-20mA proportionate.
Remote position indicator	Panel mounted digital position indicator for 0-100% open indication.
Space heater	To prevent water condensation, the actuator are fitted with an anti condensation heater called as space heater, the latter can be connected to the AC or DC voltage of 230 V.

Special accessories also can be supplied on request after confirmation with SDTORK.

Technical Data

ACTUATOR	UNIT	MODEL NUMBER						
Model No.		1000-03	1000-05	1000-10	1000-20	1000-30	1001-40	1001-50
Rated Torque	Nm	30	50	100	200	300	400	500
Working Stroke	degree	90	90	90	90	90	90	90
Operating Speed	sec/90°	17	17	20	20	26	80/40	80/40
Duty		S2-10 min : S4-30% - 1200 Cycles/hour						
Weight	Kgs	8	9	12	13	25	35	37
Degree of Protection		IP65	IP65	IP65	IP65	IP65	IP65	IP65
Area of Operation		Safe	Safe	Safe	Safe	Safe	Safe	Safe
Supply Voltage	Volts	230 +/- 10%	230 +/- 10%	230 +/- 10%	230 +/- 10%	230 +/- 10%	230 +/- 10%	230 +/- 10%
Supply frequency	Hz	50 +/- 5%	50 +/- 5%	50 +/- 5%	50 +/- 5%	50 +/- 5%	50 +/- 5%	50 +/- 5%
Output Watt	Watts	88	110	154	220	264	180	180
Nominal Current	Amps	0.38	0.48	0.67	0.96	1.15	1.8	1.8
Motor Speed	RPM	60	60	60	60	60	1400/2800	1400/2800
Class of Insulation		F	F	F	F	F	F	F
Ambient temperature	°C	45	45	45	45	45	45	45

1001-ECO Series

Technical Data Sheet

ACTUATOR	UNIT	MODEL NUMBER							
Model No.		SD-1001-03-ECO	SD-1001-05-ECO	SD-1001-10-ECO	SD-1001-20-ECO	SD-1001-30-ECO	SD-1001-40-ECO	SD-1001-60-ECO	SD-1001-100-ECO
Rated Torque	Nm	30	50	100	200	300	400	600	1000
Working Stroke	degree	90	90	90	90	90	90	90	90
Operation Speed	Sec/90°	20	20	30	30	30	30	45	50
Duty		S2-10 min : S-4-30% - 1200 Cycles/hour							
Weight	Kgs	2.6	2.6	4.5	9	10	10	10	12
Degree of Protection		IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65
Area of Operation		Safe	Safe	Safe	Safe	Safe	Safe	Safe	Safe
Supply Voltage	Volts	220 +/- 10%	220 +/- 10%	220 +/- 10%	220 +/- 10%	220 +/- 10%	220 +/- 10%	220 +/- 10%	220 +/- 10%
Supply Frequency	Hz	50 +/- 5%	50 +/- 5%	50 +/- 5%	50 +/- 5%	50 +/- 5%	50 +/- 5%	50 +/- 5%	50 +/- 5%
Motor Output Speed	RPM	1400	1400	1400	1400	1400	1400	1400	1400
Motor Power	Watts	15	15	25	40	90	90	90	100
Rated Current	Amps	0.24	0.24	0.32	0.88	1	1	1	1.2
Class of Insulation		F	F	F	F	F	F	F	F
Ambient Temperature	°C	45	45	45	45	45	45	45	45
Actuator Mounting		F03 & F05	F03 & F05	F05 & F07	F07 & F10	F07 & F10	F07 & F10	F07 & F10	F10 & F12
Output Bore	mm	14x14 17mm Deep	14x14 17mm Deep	17x17 20mm Deep	22x22 25mm Deep	22x22 25mm Deep	22x22 25mm Deep	22x22 25mm Deep	27x27 45mm Deep

- Alternate option for voltage available on demand. (24V / 110V AC & 24 VDC)
- Alternate options for degree of Protection for Enclosure available
- Also available for alternate stroke range
- Over torque protection & space heater option available on demand
- Valve torque for same size varies with different manufacturers & different working conditions. Hence we suggest, when you choose the model of electrical actuator, consider rated output torque of 60-80% for valve operation torque.
- Paint Shade RAL 5021
- Stroke : 90°±5°

1001 - Series

Single/Three Phase - Quarter Turn Flame Proof Electrical Actuator

Sr. No.	Model No.	Rated Torque	Tripping Torque Range	Output Speed	Operation Time	Output Bore Mounting PCD	Motor Data : Type : Three Phase Squireerl cage Induction Motor				Appr. Wt.	Item Code
							Supply	Rating	Speed	Current		
		Nm	Nm	RPM	SEC / 90°	MM	at 50 Hz	Watts	RPM	Amp	Kg.	
1	FSD-1001-20 / 40 / 50	200	60-200	DIA.45, F10 / F12	0.187	80	1 PH 230 VAC 50 Hz	60	1400	0.4	32	FSD-1001-20-0.187-1
					0.375	40		90	2800	0.5		FSD-1001-20-0.375-1
					0.750	20		90	2800	0.5		FSD-1001-20-0.750-1
					1	15		90	2800	0.5		FSD-1001-20-1-1
					0.187	80	3 PH 415 VAC 50 Hz	120	1400	0.4		FSD-1001-20-0.187-3
					0.375	40		180	2800	0.45		FSD-1001-20-0.375.3
					0.750	20		180	2800	0.45		FSD-1001-20-0.750-3
					1	15		180	2800	0.45		FSD-1001-20-1-3
2	FSD-1001-40 / 40 / 50	400	120-400	DIA.45, F10 / F12	0.187	80	1 PH 230 VAC 50 Hz	90	1400	0.45	32	FSD-1001-40-0.187-1
					0.375	40		180	2800	1		FSD-1001-40-0.375-1
					0.750	20		180	2800	1		FSD-1001-40-0.750-1
					1	15		180	2800	1		FSD-1001-40-1-1
					0.187	80	3 PH 415 VAC 50 Hz	120	1400	0.4		FSD-1001-40-0.187-3
					0.375	40		180	2800	0.45		FSD-1001-40-0.375.3
					0.750	20		180	2800	0.45		FSD-1001-40-0.750-3
					1	15		180	2800	0.45		FSD-1001-40-1-3
3	FSD-1001-50 / 40 / 50	500	150-600	DIA.45, F10 / F12	0.187	80	1 PH 230 VAC 50 Hz	90	1400	0.45	32	FSD-1001-50-0.187-1
					0.375	40		180	2800	1		FSD-1001-50-0.375-1
					0.750	20		180	2800	1		FSD-1001-50-0.750-1
					1	15		180	2800	1		FSD-1001-50-1-1
					0.187	80	3 PH 415 VAC 50 Hz	120	1400	0.4		FSD-1001-50-0.187-3
					0.375	40		180	2800	0.45		FSD-1001-50-0.375.3
					0.750	20		180	2800	0.45		FSD-1001-50-0.750-3
					1	15		180	2800	0.45		FSD-1001-50-1-3

- We can supply actuator for 60 Hz supply also
- Degree of protection in IP68
- Alternate options for operation speed available on demand
- Accessories will be supplied as per client demand
- Alternate options for supply voltage 110 VAC / 380 VAC available on demand

2000 Series

Single Phase Linear Electrical Actuator

Sdtork Electric Actuator type 2000-series is designed for linear, quarter turn & angular actuation applications for remote control of various types of valves such as Globe, V-notch ball, Butterfly, Diaphragm and various types of dampers such as single / multi louver / VIV dampers. Sdtork's 2000-series is mainly used for control/regulating duty applications. The special design features of 2000 series give value addition to our customers in following ways :

VERSATILITY | ROBUSTNESS | RELIABILITY | ECONOMY



Also available in Flame Proof Version

Available Thrust Range upto 1200 kgs



Globe Valve with
Electric Actuator



Diaphragm
Valve with
Electric Actuator



Square Damper
with Electric Actuator



Butterfly Valve with
Electric Actuator



Ball Valve with
Electric Actuator



VIV Damper with
Electric Actuator

Technical Data & Specifications of 2000-Series Actuators For Linear Application

MODEL	Stroke length	Oper-ating Speed	Rated actuating Force	Max. Closing force	Switching frequency Operation / Hour	Motor Details						Weight of Actuator	
	mm	mm/sec	kgs	kgs	Short Time	Nor-mal	Supply	Output Watts	Nominal Current mA 9220 V	Class of Insulation	Amb. Temp °C	Degree of protection	kgs
SD-2000-200-1	40	0.26	200	350	7000 1800	220 V / 110 V AC 50/60 Hz	3.14	40.5	B	45	IP65/IP67	4.5	
SD-2000-200-2	40	0.52	200	300								8.5	
SD-2000-200-3	60	0.26	200	350								10.5	
SD-2000-200-4	60	0.52	200	300								20	
SD-2000-500-1	60	0.24	500	600									
SD-2000-600-1	60	0.45	600	900									
SD-2000-600-2	60	0.8	600	750									
SD-2000-600-3	75	0.45	600	900									
SD-2000-600-4	75	0.8	600	750									
SD-2000-1000-1	80	1	1000	1200									

Technical Data & Specifications of 2001-Series Actuators For Quarter Application

DESCRIPTION	SD-2001-04	SD-2001-06	SD-2001-15	SD-2001-20
Rated actuating torque Nm	40	68	150	200
Maximum closing torque Nm	70	120	180	300
Time of operation Sec/900	120	230	90	130
Switching frequency	- Shot time	7000		
Operations/hour	- Normal	1800		
Degree of protection		IP65/IP67		
Supply		220/110 VAC, 50/60 Hz, Single Phase		
Motor type		Non Blocking A.C. Synchronous motor		
Out put power watts	3.14	3.14	16.5	16.5
Nominal current at 220 V mA	40.5	40.5	133	133
Class of insulation	B	B	E	E
Ambient temp 0C	45	45	45	45
Weight- Kgs.	8.5	8.5	15	15

Technical Data & Specifications of 2002-Series Actuators For Damper Application

MODEL	SD-2002-1	SD-2002-2	SD-2002-3	SD-2002-4
Input Supply	220/110 VAC, 50/60 Hz, Single Phase			
Output force 'P' (Kgs)	40	40	85	65
	60	60	130	100
Output Torque (Kgs)	8	8	25	20
	12	12	37.5	30
Stroke (mm) Max (2E)	180	180	360	360
Time of operation for maximum stroke (minutes)	2.4	1.2	2.2	1.2
Supply	220/110 VAC, 50/60 Hz, Single Phase			
Motor Type	Non Blocking A.C. Synchronous Motor			
Output power watts	3.14	3.14	16.5	16.5
Nominal current at 220 V mA	40.5	40.5	133	133
Class of insulation	B	B	E	E
Ambient temp 0C	45	45	45	45
Weight - Kgs.	8.5	8.5	15	15



Technical Data - 2000 Series - Flame Proof Electrical Actuator -

Sr. No.	Model No.	Output Motion	Option	Rated Output	Maximum Closing	Stroke	Output Speed	Supply	Power	Current	Insulation	Approx. Weight
				Thrust	Thrust				Watts	mA		Kg
1	HQ-008 / FSD-2001-04 / FLP	Linear	L11	200 Kgs.	350 Kgs.	40 mm	0.26 mm / Sec.	1PH-220 / 110 VAC 50/60 HZ	3.14	40.5	B	10
			L12	200 Kgs.	350 Kgs.	40 mm	0.52 mm / Sec.					
			L13	200 Kgs.	350 Kgs.	40 mm	0.26 mm / Sec.					
			L14	200 Kgs.	350 Kgs.	40 mm	0.52 mm / Sec.					
		Rotary	R4	40	70	90°	120 Sec/90°					15
			R6	70	120	90°	230 Sec/90°					
		Angular	D1	40	60	180 mm / 40°	2.4 Min					12
			D2	40	60	180 mm / 40°	1.2 Min					
2	HQ-015 / SD-2001-15 / FLP	Linear	L21	600 Kgs.	900 Kgs.	60 mm	0.45 mm / Sec.	1PH-220 / 110 VAC 50/60 HZ	16.5	133	E	18
			L22	600 Kgs.	750 Kgs.	60 mm	0.8 mm / Sec.					
			L23	600 Kgs.	900 Kgs.	75 mm	0.45 mm / Sec.					
			L24	600 Kgs.	750 Kgs.	75 mm	0.82 mm / Sec.					
		Rotary	R4	40	70	90°	90 Sec / 90°					22
			R6	70	120	90°	130 Sec / 90°					
		Angular	D1	40	60	360 mm / 60°	2.2 Min					20
			D2	40	60	360 mm / 60°	1.2 Min					

- Accessories will be supplied as per client demand
- Options available for degree of protection in IP55, IP67 & IP68
- Alternate options for operation speed available on demand
- We can supply actuator for 60 Hz supply also
- Alternate option for 24 VDC available on demand

3000 Series

Three Phase Multiturn Electrical Actuator

Sdtork Electric Actuator type 3000-Series is designed for multturn application for remote control of various type valves such as Sluice Valve, Gate Valve, Kniefe Edge Gate Valve and Sluice Gate.



Available Torque Range upto 300 Nm

Three Phase Multiturn Electrical Actuator with Supplementary Spur Gear Box



Available Torque Range upto 3600 Nm



Motorised
Sluice Valve



Motorised
Globe / Piston Valve



Motorised
Sluice Valve



Motorised
Knife Edge Gate Valve



Motorised
Sluice Gates

4000 Series**Three Phase Quarter Turn Electrical Actuator**

Sdtork Electric Actuator type 4000-Series is designed for Quarter Turn application for remote control of various type valves such as Ball Valve, Butterfly Valve, Plug Valve and Damper.



Available torque range upto 102000 Nm



Motorised Butterfly Valve



Motorised Butterfly Valve



Motorised Butterfly Valve



Motorised Butterfly Damper



Motorised Ball Valve

6000 Series

Three Phase Linear Electric Actuator

Sdtork Electric Actuator type 6000-Series is designed for Linear application for remote control of Globe Valve and Dosing Pump.



Available Thrust Range upto 5000 kgs



Motorised Globe Valve

7000 Series

Three Phase Thruster Electric Cylinder Actuator

Sdtork Electric Cylinder Actuator 7000-Series are suitable for operation of Fan Dampers, Valves with Rising Stem, Flap Gates, Shutter Valves, Fuel Feed Mechanisms, Blower Pitch Regulators, Fart Blades, Pitch Adjusters, Fluid Couplings for Speed Control and many more similare applications.



Available Thrust Range upto 3500 kgs

Technical Data

Sr. No.	Model No.	Output Thrust	Stroke	Output Drives Speed	Feature	Weight	Motor Data : Type : Three Phase Squireerl cage Induction Motor						G.A. Drawing Reference No.
							Supply Voltage 415 VAC, 50 Hz						
		Kgs.	mm	mm/Sec		Kg/Lbs.	Rated Output Kw/Hp	Rated Speed RPM	Rated Current Amp.	Starting Current Amp.	Power Factor Cosθ	Frame Size	
1	SD-7001-03-200-300	200	300	70 kgs.	2	SL	0.37/0.5	1340	1	4.5	0.72	71	SDGA-7000-01
					3	SL	0.37/0.5	1340	1	4.5	0.72	71	
					4	SL	0.37/0.5	1340	1	4.5	0.72	71	
					6	SL	0.37/0.5	1340	1	4.5	0.72	71	
					8	SL	0.37/0.5	1340	1	4.5	0.72	71	
					12	SL	0.37/0.5	1340	1	4.5	0.72	71	
					14	SL	0.37/0.5	1340	1	4.5	0.72	71	
					16	SL	0.37/0.5	2800	1.1	5.39	0.7	71	
					24	SL	0.37/0.5	2800	1.1	5.39	0.7	71	
					28	SL	0.37/0.5	2800	1.1	5.39	0.7	71	
					38	NSL	0.37/0.5	2800	1.1	5.39	0.7	71	
					48	NSL	0.37/0.5	2800	1.1	5.39	0.7	71	
					54	NSL	0.37/0.5	2800	1.1	5.39	0.7	71	
					73	NSL	0.37/0.5	2800	1.1	5.39	0.7	71	
2	SD-7001-03-500-300	500	300	85 kgs.	2	SL	0.37/0.5	1340	1	4.5	0.72	71	SDGA-7000-02
					3	SL	0.37/0.5	1340	1	4.5	0.72	71	
					4	SL	0.37/0.5	1340	1	4.5	0.72	71	
					6	SL	0.37/0.5	1340	1	4.5	0.72	71	
					8	SL	0.37/0.5	1340	1	4.5	0.72	71	
					12	SL	0.37/0.5	1340	1	4.5	0.72	71	
					14	SL	0.37/0.5	1340	1	4.5	0.72	71	
					16	SL	0.37/0.5	2800	1.1	5.39	0.7	71	
					24	SL	0.37/0.5	2800	1.1	5.39	0.7	71	
					28	SL	0.37/0.5	2800	1.1	5.39	0.7	71	
					38	NSL	0.37/0.5	2800	1.1	5.39	0.7	71	
					48	NSL	0.37/0.5	2800	1.1	5.39	0.7	71	
					54	NSL	0.37/0.5	2800	1.1	5.39	0.7	71	
					73	NSL	0.37/0.5	2800	1.1	5.39	0.7	71	

Technical Data : 7000 Series - Three Phase Thruster Electric Cylinder Actuator

Sr. No.	Model No.	Output Thrust	Stroke	Output Drives Speed	Feature	Weight	Motor Data : Type : Three Phase Squireerl cage Induction Motor						G.A. Drawing Reference No.	
							Supply Voltage 415 VAC, 50 Hz							
							Rated Output	Rated Speed	Rated Current	Starting Current	Power Factor	Frame Size		
		Kgs.	mm	mm/Sec		Kg/Lbs.	Kw/Hp	RPM	Amp.	Amp.	CosØ			
3.	SD-7001-06-750-600	750	600	13	SL	90 kgs.	0.75/1	1410	1.8	8.1	0.78	80	SDGA-7000-02	
					SL		0.75/1	1410	1.8	8.1	0.78	80		
					SL		0.75/1	1410	1.8	8.1	0.78	80		
					SL		0.75/1	1410	1.8	8.1	0.78	80		
					SL		0.75/1	1410	1.8	8.1	0.78	80		
					SL		0.75/1	1410	1.8	8.1	0.78	80		
					SL		0.75/1	1410	1.8	8.1	0.78	80		
					SL		1.1/1.5	2860	2.55	15.05	0.78	80		
					SL		1.1/1.5	2860	2.55	15.05	0.78	80		
					SL		1.1/1.5	2860	2.55	15.05	0.78	80		
4	SD-7000-10-1000-1000	1000	1000	20	SL	170 kgs.	0.75/1	410	1.8	8.1	0.78	80	SDGA-7000-02	
					SL		0.75/1	1410	1.8	8.1	0.78	80		
					SL		0.75/1	1410	1.8	8.1	0.78	80		
					SL		0.75/1	1410	1.8	8.1	0.78	80		
					SL		0.75/1	1410	1.8	8.1	0.78	80		
					SL		0.75/1	1410	1.8	8.1	0.78	80		
					SL		2.2/3	2860	4.6	29.9	0.82	90L		
					SL		2.2/3	2860	4.6	29.9	0.82	90L		
					SL		2.2/3	2860	4.6	29.9	0.82	90L		
					NSL		2.2/3	2860	4.6	29.9	0.82	90L		
					NSL		2.2/3	2860	4.6	29.9	0.82	90L		
					NSL		2.2/3	2860	4.6	29.9	0.82	90L		
5	SD-7000-20-2000-1200	2000	1200	13	SL	210 kgs.	0.75/1	1410	1.8	8.1	0.78	80	SDGA-7000-03	
					SL		0.75/1	1410	1.8	8.1	0.78	80		
					SL		0.75/1	1410	1.8	8.1	0.78	80		
					SL		0.75/1	1410	1.8	8.1	0.78	80		
					NSL		1.5/2	1410	3.4	19.04	0.78	90L		
					NSL		1.5/2	1410	3.4	19.04	0.78	90L		
					NSL		2.2/3	2860	4.6	29.9	0.82	90L		
					NSL		2.2/3	2860	4.6	29.9	0.82	90L		
					NSL		2.2/3	2860	4.6	29.9	0.82	90L		
					NSL		2.2/3	2860	4.6	29.9	0.82	90L		
6	SD-7000-30-3000-1200	3500	1000	13	SL	280 kgs.	1.5/2	1410	3.4	19.04	0.78	90L	SDGA-7000-04	
					SL		1.5/2	1410	3.4	19.04	0.78	90L		
					SL		1.5/2	1410	3.4	19.04	0.78	90L		
					SL		1.5/2	1410	3.4	19.04	0.78	90L		
					NSL		2.2/3	1430	4.8	28.32	0.8	100L		
					NSL		2.2/3	1430	4.8	28.32	0.8	100L		
					NSL		3.7/5	2880	7.3	43.2	0.84	100L		
					NSL		3.7/5	2880	7.3	43.2	0.84	100L		
					NSL		3.7/5	2880	7.3	43.2	0.84	100L		
					NSL		3.7/5	2880	7.3	43.2	0.84	100L		

NOTE: We can also supply electric cylinder base on customer demand. Pl consult SDTORK

8000 Series

Basic Multiturn Electrical Actuator with Bevel Gear Box

Sdtork Actuator type 8000-Series is designed for multturn application for remote control of various types of Kneif Edge Gates, Sluice Gates, etc.



Available Torque Range upto 1200 Nm

Technical Data

Sr. No.	Model No.	Rated Torque	Tripping Torque Adjustable	Output Speed	Effective Output Speed	Feature SL/NSL	Output Bore Mounting PCD	Motor Data : Type : Three Phase Squireel cage Induction Motor						Appr. Wt.
								Supply Voltage 415 VAC, 50 Hz						
		Nm	Nm	RPM	RPM		MM	Rated Output	Rated Speed	Rated Current	Starting Current	Power Factor	Frame Size	
1	SD-8001-06-BG 03	140	40-140	10	3.33	SL	35 / F10,F12	0.75/1.0	1410	1.8	8.1	0.78	80	58
				15	5.00	SL	35 / F10,F12	0.75/1.0	1410	1.8	8.1	0.78	80	
				20	6.67	SL	35 / F10,F12	0.75/1.0	1410	1.8	8.1	0.78	80	
				30	10.00	SL	35 / F10,F12	0.75/1.0	1410	1.8	8.1	0.78	80	
				40	13.33	SL	35 / F10,F12	0.75/1.0	1410	1.8	8.1	0.78	80	
				60	20.00	SL	35 / F10,F12	0.75/1.0	1410	1.8	8.1	0.78	80	
				70	23.33	SL	35 / F10,F12	0.75/1.0	1410	1.8	8.1	0.78	80	
				80	26.67	SL	35 / F10,F12	1.10/1.5	2860	2.55	15	0.78	80	
				120	40.00	SL	35 / F10,F12	1.10/1.5	2860	2.55	15	0.78	80	
				140	46.67	SL	35 / F10,F12	1.10/1.5	2860	2.55	15	0.78	80	

SD-10000 Series

Electro - Hydraulic Actuator

Rotary Quarter Turn Electro-Hydraulic Actuator

SD-10000-10



Linear Type Electro-Hydraulic Actuator

SD-10000-11



Features :

- Intelligent Electronic Control Unit
- Composite Hydraulic Control System
- Rotary Quarter Turn Torque range 300 Nm ~ 32000 Nm
- Linear type, Thrust range : 9.6 KN ~ 530 KN
- On-Off, Modulating, Smart Type
- Double acting or Single acting
- Hand Pump for emergency operation
- Low energy consumption (0.4 Kw, 1.0Kw)
- Self-diagnosis System
- Internal Hydraulic Pump
- Maximum working pressure 210 Bar.
- Status indicator.
- 220 VAC, 50/60 Hz power control. Also available with alternate option.
- IP68 protection also available in explosion-proof protection.
- Temperature range 250C ~600C
- Local or remote control option available
- Option for emergency shut down function available on demand.

Ordering Specification

MODEL NO	SD	-	10000	-	<input type="text"/>								
Electro - Hydraulic Actuator Series													
10 - Quarter Turn	<input type="checkbox"/>												
11 - Linear Type	<input type="checkbox"/>												
10 - Torque NM	<input type="checkbox"/>												
11 - Thrust KN	<input type="checkbox"/>												
Mode : <input type="checkbox"/> O On-Off, <input type="checkbox"/> M Modulating <input type="checkbox"/> S Smart													
Acting type : <input type="checkbox"/> D Double Acting <input type="checkbox"/> S Single Acting													
Protection : <input type="checkbox"/> W Weather Proof <input type="checkbox"/> E Explosion Proof													
Optional Accessories : <input type="checkbox"/> ESD Emergency Shut Down Function													

* Please consult Sdtork for stroke time requirement
 * Torque & Thrust of Single acting type is half of double acting type

Rotary Quarter Turn Electro-Hydraulic Actuator



Linear Type Electro-Hydraulic Actuator



Model	Torque NM
SD-10000-10-01	600
SD-10000-10-02	1100
SD-10000-10-03	2200
SD-10000-10-04	5000
SD-10000-10-05	9000
SD-10000-10-06	16000
SD-10000-10-07	32000

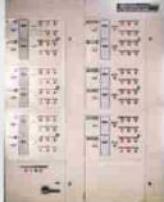
Model	Thrust KN
SD-10000-11-01	24
SD-10000-11-02	30
SD-10000-11-03	48
SD-10000-11-04	78
SD-10000-11-05	123
SD-10000-11-06	192
SD-10000-11-07	240

Accessories

SINGULAR CONSTRUCTION



MODULAR CONSTRUCTION



CONTROL PANEL WITH SERVO CONTROLLER



Local control panel is wall-mounted design made of sheet metal.

This can be supplied with the following components

- Main switch • MCB on fuses for power & control circuits
- Contactors • Push buttons for open / stop / close commands
- Indicating lamps for various indications such as power on, open, close, faulty operation
- Remote position indicator • Selector switch for Auto / Manual operations
- Overload relay cum single phase preventor • Phase sequence protector
- Current transformer • Space heater • Electronic braking unit for motor
- Electronic Positioner • Relays for non - self locking actuators
- D.C. supply source for two wire transmitter • Relays for DCS compatibility
- Digital indicator • Connectors

The above-mentioned items are provided as per customer's specific requirements & wired accordingly.

LOCAL PUSH BUTTON STATION



This is a field switch unit to operate actuator locally & designed to work with reversing starter.

This version consist of

- Local push buttons for "Open-Close-Stop" commands
- Selector switch for "Remote-Local-Off" commands

INTEGRAL STARTER



This is an integral part of the actuator. This version consists of in-built features of Local Push Button Station and Local Control Panel with minimum configuration of :

- Reversing contactor
- Selector switches for 'Remote-Local-Off' commands
- Local push buttons for 'Open-Close-Stop' commands

POSITIONER TRANSMITTER



resistance transmitter of 100-235Ω (alternative values are also available) or a current transmitter with a unified signal of 4-20 mA.

The maximum load resistance is 500 W. The supply voltage of the transmitter is 12 to 36 V.D.C.

Also available with non contact type position transmitter

POSITION INDICATOR



This will indicate 0-100% opening of the valve in control room. Input to this position indicator will be either from actuator mounted potentiometer (distance less than 5 m) or from actuator mounted current transmitter i.e.4-20mA.

ELECTRONIC POSITIONER



- Supply : Single phase 230 V AC • Input signal : 4-20 mA or 0 to 10 VDC • Output signal : 4-20 mA or 0 to 10 VDC • Output : Reversible contacts for Open & Close operation • Auto / Manual selection : Selector switch provided In auto mode open close operations are controlled by 4-20mA input signal & under Manual mode operation is through push buttons, by way of inching operations. • LED Indications : Open / Close / Opening / Closing • Digital Indicator : 3 1/2 Digit for 0 to 100 % opening of final control element
- Fuse protection provided

CONTROL STATION



LINKAGES

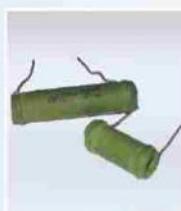


TRAVEL LIMIT & TORK LIMIT SWITCHES



Travel & Torque Limit Switches are available in 1NO + 1NC as well as 2NO + 2NC contact configuration.

Selection Guide Line For Electrical Actuators



SPACE HEATER

To prevent water condensation, actuator is fitted with an anti-condensation heater called space heater; the latter can be connected to AC or DC voltage of 230 V.



POTENTIOMETER

Ohmic position transmitter are available in multiturn / single Turn pot with pot gears for require ohmic output.



THERMOSTATE

Thermostat can be provided in motor for protection against overload.

SPUR GEAR BOX



Sdtork Spur gear box units are designed with electric multturn 3000-series actuators. The unit is suitable to operate rising or non rising stem valves. These units are efficient, reliable & simple in construction.

GEAR BOXES

WARM GEAR BOX



Sdtork worm gear box units are specially designed to operate quarter turn valves like Ball Valve, Butterfly Valve, Plug Valves & Dampers. Adjustable Mechanical stopper & position indicator is standard feature of WG gear Box.

BEVEL GEAR BOX



These gear box have completely enclosed construction. The main casing is designed to withstand the shock & vibration of the piping system.

ELECTRIC ACTUATOR IN DOSING PUMP



Sdtork also supplies Electric Actuator in dosing pump application for stroke adjusting device.

MOUNTING BRACKETS & SPECIAL ADAPTOERS



Any automation solution should essentially take into account adaptation of new actuator to suit the existing valves, which invariably are with non-standard mounting flanges.

Hence the adaptor is to be designed to cater to the variety in valve mounting flange designs. Sdtork's special adaptor design solution fulfils all applications and all valve mounting flanges.

STANDARD FEATURES & ACCESSORIES

- Position Limit switches [1 NO + 1 NC] 2 nos. change-over type
- Travel Limit switches [1 NO + 1 NC]
- Hand wheel
- Wide speed range
- Easy maintenance
- Hammer blow effect
- Local position indication

OPTIONAL ACCESSORIES, CONTROLS & PROTECTIONS

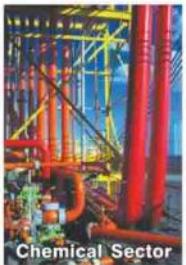
- Extra Limit switches
- 2 NO + 2 NC contacts for travel limit switches
- 2 NO + 2 NC contacts for torque Limit switches
- 'H' class insulation for motor
- Side mounted hand wheels to reduce rim pull effort, geared hand wheel is provided
- Remote position indicator Potentiometer, Current position transmitter, Non-contact type position transmitter
- Remote position indicator Analog / Digital
- Power supply
- Push button station
- Blinker switch
- Integral starter
- Control panel
- Electronic positioner
- Single phase protection
- Special control / protection features as per application demands can also be given for specific requirements.

CODES & STANDARDS

sdtork supplies actuators as per relevant National and International standards. As a minimum requirement, sdtork products are made to the following standards :

- Electric Motor operated actuator IS9334
- Degree of protection provided by enclosures at low voltage switch gear & control gear IS2147
- Degree of protection provided by enclosures at low voltage switch gear & control gear IS13247
- AC contactors for voltages not exceeding 1000 volts IS2959
- Degree of protection provided by enclosures for rotating electrical machinery IS4091
- Specification for motor rating electrical machines IS4722
- Flame Proof IS2148, 2004.





Chemical Sector



Chemical Sector



Power Sector



Other Sector



Food Industries



Filter Bed Automation



Sewage Treatment Plant



Water Sector

As "Electrical Actuator Specialist" we have put before you comprehensive range of our products, in the form of Abridged Catalogue; but you can observe, this is not the end of our product range. There are many actuators, which could not be listed here due to lack of space. Also there are many actuators, which are customized & Manufactured as per the customer's specification. The best way to obtain further information is to contact us by specifying you requirements using Telephone, Fax or E-mail; We assure you, there is a Actuator in our vast range which will suit your requirement.

Our Range of Products

■ 1000-SERIES

Single phase quarter turn Electrical Actuator

■ 2000-SERIES

Single phase linear Electrical Actuator

■ 3000-SERIES

Three phase multi-turn rotary Electrical Actuator with/without integral starter available in IP55, IP65, IP67, IP68 & FLP protections.

■ 4000-SERIES

Three phase quarter-turn rotary Electrical Actuator with/without integral starter available in IP55, IP65, IP67, IP68 & FLP protections

■ 5000-SERIES

Three phase quarter-turn rotary Electrical Actuator with linkages for damper application with/without integral starter available in IP55, IP65, IP67, IP68 & FLP protections

■ 6000-SERIES

Three phase linear Electrical Actuator for control valve with / without integral starter available in IP55, IP65, IP67, IP68 & FLP protections

■ 7000-SERIES

Three phase linear Cylinder Electrical Actuator (Thruster) with different strokes for material handling, coal handling & related applications

■ 8000-SERIES

Three phase Multi Turn Electrical Actuator with Bevel Gear Box

■ 10000-SERIES

Electro Hydraulic Actuator

■ Single phase damper actuator

Three phase multi-turn rotary Electrical

■ Actuator with spur gear combination

Three phase quarter-turn rotary Electrical

Actuator with worm gear combination

■ Wall/Panel mounted control panel /

customised control panel

■ Actuator mounted valve positioner

Servo controller, wall/panel mounted

■ Position transmitter

Position transmitter with linkage &

■ mounting for linear/rotary stroke

Manual push button controller, wall/panel

■ mounting type

Digital position indicator

■ Signal multiplier

4-20 mA source generator

■ PID controller

Complete pressure control loop

■ Complete temperature control loop

■ Complete flow control loop

Automation of existing valves by means

■ of retrofitting

Sdtork provides solutions for complete

■ valve automation

Registered Office, Bangalore



Factory & Branch Office, Pune



sdtork
The Complete Solution in Valve Automation

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