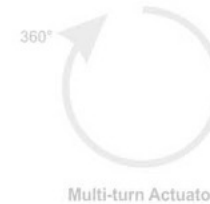


ATM SERIES

Three Phase Multi-Turn



actuate with accuracy | KEY FEATURES



SUPPLY VOLTAGE

415 V AC – (+ 10%), 50 / 60 Hz
380 V AC, 460V AC (Available on request)

ENCLOSURE – IP 67 / 68

Weatherproof – IS / IEC 60529
Flameproof or Ex-Proof – IS / IEC 60079 | Zone II, Gas Group IIB T4

TORQUE RANGE

50Nm ~ 2400Nm

MANUAL OVERRIDE

Advanced design with Auto Declutch Mechanism to prevent user from injury.

INTEGRAL STARTER UNIT

Selector Switches	Open / Stop / Close
Indicator Lamps	Auto / Manual or Remote / Local
	Open / Close / Error

VARIOUS OPTIONS

ON/OFF Type
Modulating Control (Signal Input - 4 ~ 20mA / 1 ~ 5V DC / 2 ~ 10V DC).
Potentiometer Feedback (4 ~ 20mA).
Auxiliary Limit Switches (2 Units).
2 Wire for ON/OFF Operation.

Three Phase Multi-Turn Electrical Actuators



Design Approvals



Widely Used in Fields Such as

- ~ Water Treatment
- ~ Pharmacy
- ~ Municipal Water Supply Board
- ~ Paper Industry
- ~ Petroleum
- ~ Energy
- ~ Chemical Industry
- ~ Textile
- ~ Power Plant
- ~ Food Processing
- ~ Metallurgy
- ~ Automation etc...

Motorized Valves

- ~ Gate Valves
- ~ Knife Gate Valves
- ~ Globe Control Valves
- ~ Pinch Valves

ATM SERIES

Three Phase Multi-Turn

MANUFACTURING STANDARDS

- **Actuator Manufacturing Standard**
IEC / EN 15714 – 2 (Electrical Actuator for Industrial Valves)
- **Actuator Enclosure Standard – IP 67 / 68**
IS / IEC 60529 – 2009 (Degree of Protection provided by Enclosure)
- **Actuator Motor Standard**
IEC- 60034 – 1 (Rotating Electrical Machines)
IS-325 (Three Phase Induction Motor)
- **Actuator Mounting Standard**
ISO 5211

TECHNICAL DATASHEET

STANDARD SPECIFICATIONS

Model No.	Max Torque NM	Motor Kw	Actuator RPM	415 V AC Motor Current			Acceptable Stem Ø mm
				START (A)	RUN (A)	LOCK (A)	
ATM 5	50	0.18	36	3.8	0.87	3.8	30
ATM 10	100	0.25	18	5.2	1.2	5.2	34
ATM 10	100	0.37	36	6.5	1.5	6.5	34
ATM 20	200	0.55	18	8	2.2	8	36
ATM 20	200	0.75	36	13.5	2.7	13.5	36
ATM 20	200	1.1	72	17	3.1	17	36
ATM 30	300	0.75	18	13.5	2.7	13.5	36
ATM 30	300	1.1	36	17	3.1	17	36
ATM 60	600	1.5	18	21	4.3	21	65
ATM 60	600	2.2	36	28	6	28	65
ATM 90	900	2.2	18	28	6	28	80
ATM 90	900	3	36	32	8.5	32	80
ATM 120	1200	3	18	32	8.5	32	80
ATM 120	1200	4	36	55	13	55	80
ATM 240	2400	5.5	18	80	13	80	100
ATM 240	2400	7.5	36	105	16	105	100

Note : Specifications mentioned here are subject to revision without notice due to continuous product improvements. (Rev.-1)

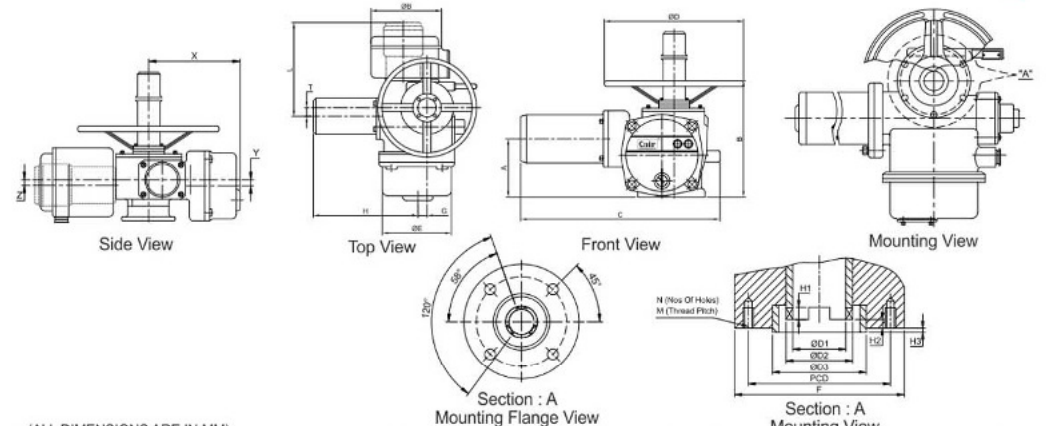
APPLICABLE DIRECTIVES

- **EC Machinery Directive – 2006 / 42 / EC**
- **Low Voltage Directive – 2006 / 95 / EC**
- **EMC Directive – 2004 / 105 / EEC**

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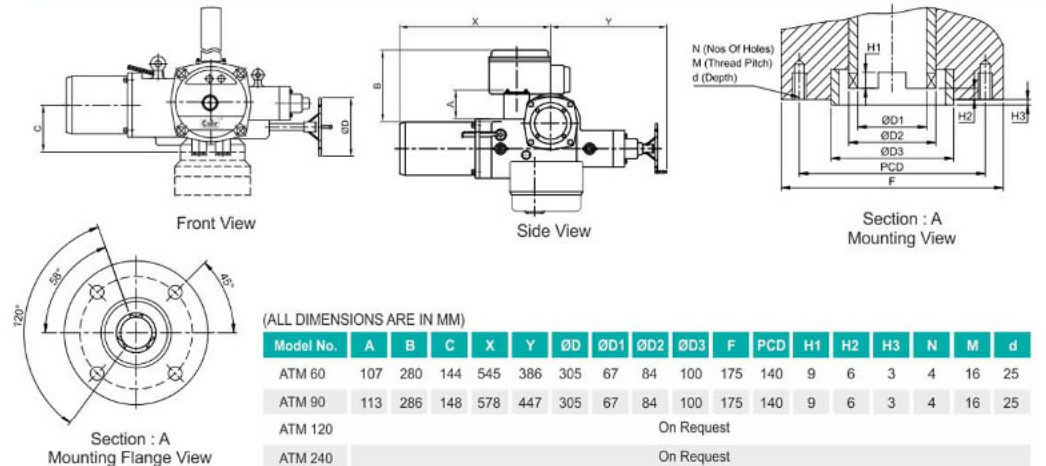


Dimension Details



(ALL DIMENSIONS ARE IN MM)

Model No.	A	B	C	ØD	X	Y	Z	ØB	L	T	H	G	ØE	ØD1	ØD2	ØD3	F	PCD	H1	H2	H3	N	M
ATM 05	137	300	552	305	244	30	44	216	181	30.5	391	23	200	38	50	70	125	102	7	2	3	4	10
ATM 10	137	300	552	305	244	30	44	216	181	30.5	391	23	200	38	50	70	125	102	7	2	3	4	10
ATM 20	137	300	552	305	244	30	44	216	181	30.5	391	23	200	38	50	70	125	102	7	2	3	4	10
ATM 30	137	300	552	305	244	30	44	216	181	30.5	391	23	200	38	50	70	125	102	7	2	3	4	10

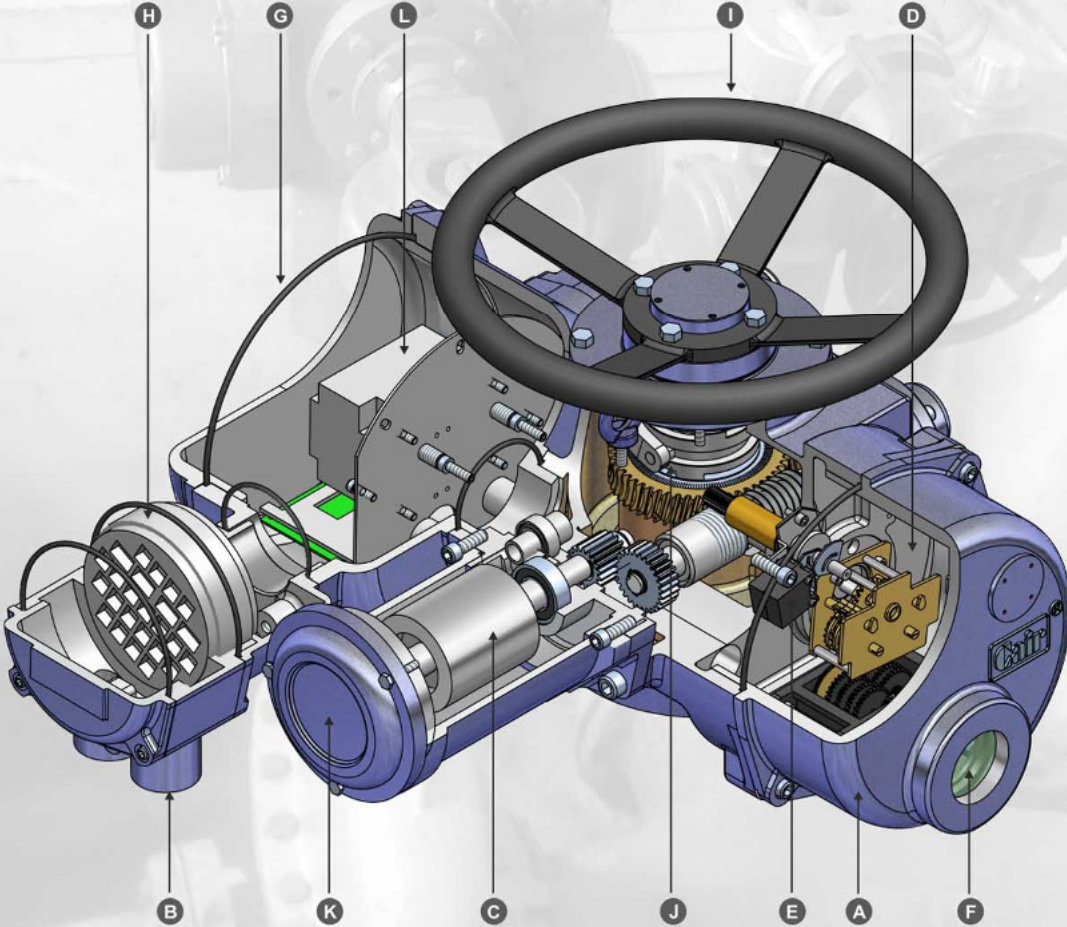


(ALL DIMENSIONS ARE IN MM)

Model No.	A	B	C	X	Y	ØD	ØD1	ØD2	ØD3	F	PCD	H1	H2	H3	N	M	d	
ATM 60	107	280	144	545	386	305	67	84	100	175	140	9	6	3	4	16	25	
ATM 90	113	286	148	578	447	305	67	84	100	175	140	9	6	3	4	16	25	
ATM 120																		On Request
ATM 240																		On Request

ATM SERIES

Three Phase Multi-Turn



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A ENCLOSURE

ATM series actuators are available in both Weather Proof and Flame Proof (Ex-Proof) enclosures. These enclosures are watertight to IP 67 / IP 68. The enclosures are hard anodized which provides resistance from high temperatures, acids, alkali and remain water proof and dust proof. All the joints on the enclosure are armed with a waterproofing seal making it suitable for mounting in extreme outdoor environment. Enclosure types with ambient temperatures are indicated below:

Weather Proof - (Standard)	Flame Proof - (Ex-Proof)	Rating	Ambient Temperature
Manufacturing Standard IEC 60529	Enclosure Code Exd IIB T4 Exd IIC T4	IP68	-30°C to +70°C
Manufacturing Standard IS/IEC 60079		IP68	-20°C to +70°C

B POWER SUPPLY

ATM series actuators are suitable for operation with the following Three Phase power supplies.

Standard Supply Voltages
 415 V AC : (± 10%), 50 / 60 Hz
 Supply Voltages available on request
 380 V AC : (± 10%), 50 / 60 Hz
 460 V AC : (± 10%), 50 / 60 Hz

Voltage Tolerance	- ± 10% Applies for rated torque performance; duty cycle and speed not guaranteed
Frequency Tolerance	- ± 5% Applies for rated torque performance; duty cycle and speed not guaranteed
Maximum Starting Voltage Drop	- -15% Actuator can start and run up to speed
Non Standard Tolerance	- Available on request
UPC Systems	- UPS systems should confirm to recognised supply standards such as EN6160 The above tolerances should not be exceeded.

C MOTOR

ATM series actuators are fitted with specially designed motors integral to the actuator. These motors can be broadly classified on the basis of their duty.

- On-Off Type | Modulating Type (proportional control)
 - Three phase capacitor / run start squirrel cage induction type synchronized motor.
 - Continuous duty (S2-15 mins).
 - Class F insulation with temperature rise restricted to Class B.
 - Thermostat protection : Thermostats embedded in the motor end windings will directly sense motor temperature. Thermostats will open circuit when set temperature is reached, thereby de-energising the motor and auto reset to continue operation once the motor has cooled off.
 - Low inertia design.
 - Nominal 50 starts per hour, 15 minutes rated based on a nominal torque of 33% of rated torque.
 - Micro-processor based modulating control card.

DUTY RATING

ON-OFF / INCHING
MODULATING

D TORQUE SWITCH/SENSOR

Independent torque switches are provided, one for each direction of travel having 2NO + 2NC potential free contacts. Output torque is controlled by switching the motor off when the set torque limit has been reached. The entire torque switch drive assembly is individually replaceable.

E POSITION SWITCH/SENSOR

Independent limit switches are provided, one for each direction of travel having 2NO + 2NC potential free contacts. Limit switches are operated by gear driven cams, which are mechanically linked to the driving devices. Easy setting of limit switches (counter-wheel-mechanism). If the switching point of limit switch gear has been overturned inadvertently by manual operation, the switching point itself does not change. No resetting is therefore required. All actuators have a continuous local mechanical position indicator.

F POSITION INDICATOR

Actuator are fitted with position indicator, having high strength and sunlight resistance making it suitable for outdoor environment. User can visualise position from any angle.

G SEALS

Actuator enclosures are sealed with superior quality rubber O-rings forming an air-tight seal.

H TERMINALS

ATM series actuators are provided with a separately sealed terminal compartment. Terminal screws and washers are supplied with the actuators

I HANDWHEEL

Manual Handwheel is provided to enable operation in case of power failure or during installation of actuator on valve.

J LUBRICATION

ATM series actuators come with premium quality lubricants and enable smooth functioning of rotating components at a wide temperature range.

K FINISH

The actuators are powder coated with corrosion proof epoxy coating.

L CONTROL - LOCAL / REMOTE CONTROL

- | | |
|-------------------|------------------------------------|
| Selector switches | : open / stop / close. |
| Selector switches | : auto / manual or local / remote. |
| Indicating lamps | : open / close / error. |
| Enclosure | : IP67 weather proof & dust proof. |
- Blinking LED lamp indication during open/close operation.
 - [Red - Fully Open | Green - Fully Closed.
 - Automatic phase rotation correction and phase loss protection.
 - 24V DC voltage level is applied for remote control.
 - Easy and flexible user connection way.
 - Non-intrusive local control switch with hall effect device to improve water proof feature.
 - Five passive contacts to indicate the working status of the electric actuator and facilitating the monitoring of the electric actuator by DCS system.
 - Operating mode select switch can be locked with ordinary lock to prevent improper operation.

OPTIONAL

FIELD BUS CONTROL OPTION

ATM series actuators are available with the network interface cards to enable remote control and indication using digital 'bus' network systems communication to the control systems. Network interface cards such as Modbus, Profibus and Foundation Fieldbus are compatible.

FAIL POSITION OPTION

In the event of loss of power supply a battery provides power to the control module/motor to update the valve position.

ATM SERIES

Three Phase Multi-Turn



Gate Valve
Multi-Turn Electrical Actuator Operated

SIZE :
1" to 40"
BODY / BONNET :
CI / WCB / WC 6 / WC 9 / SS 304 /
SS 316 / SS316L / Alloy Steel / Duplex
TRIMS :
13Cr / 18Cr 8N / SS
TEMP :
-20°C TO 750°C (As per Requirement)
ENDS :
Flanged to 150# / 300# / 600#
900# / 1500# / 2500#
DESIGN & MANUFACTURING STD.:
API 600 / BS 1414 / MSS-SP80 / BS 5352



Globe Valve
Multi-Turn Electrical Actuator Operated

SIZE :
1" to 16"
BODY / BONNET :
CI / WCB / WC 6 / WC 9 / SS 304 /
SS 316 / SS316L / Alloy Steel / Duplex
TRIM / PLUG (Equal Percentage)
13Cr / 18Cr 8N / SS (Stellited on Req.)
SEAT :
Teflon / Metal Seated (Class IV / Class VI)
ENDS :
Flanged to 150# / 300# / 600#
900# / 1500# / 2500#
DESIGN & MANUFACTURING STD.:
API 602 / BS 1873 / MSS-SP80 / BS 5352



Pinch Valve
Multi-Turn Electrical Actuator Operated

SIZE :
1" to 16"
BODY / BONNET :
CI / WCB / Aluminium / SS 304 / SS 316
TRIMS :
13Cr / 18Cr 8N / SS
ELASTOMER SLEEVE :
Natural, Nitrile, EPDM, Neoprene, Hyplon
MEDIA :
Abrasive Corrosive Application, Alkaline,
Slurries, Viscous fluid, Sludge
TEMPERATURE :
UPTO 180°C
ENDS :
Flanged to DIN / ANSI / BS / IS



Knife Gate Valve
Multi-Turn Electrical Actuator Operated

SIZE :
1" to 30"
BODY :
CI / WCB / SS 304 / SS 316 / Alloy Steel
KNIFE PLATE :
CI / WCB / SS 304 / SS 316 / Alloy Steel
SEAT :
Nitrile (NBR) / EPDM / VITON
LEAKAGE :
Upto 99% Sealing Efficiency
CLASS II / III / IV (As per FCI 70-2)
TEMPERATURE :
-20°C TO 750°C (As per Requirement)
ENDS :
Water / Double Flanged DIN 24154
PN 6 / PN 10 / PN 16



Slide Gate / Guillotine Damper Valve
Multi-Turn Electrical Actuator Operated

SIZE :
12" TO 108"
MOC :
IS 2062 MS /
SS400 Galvanised Steel
SEAT :
Nitrile (NBR) / EPDM / VITON
LEAKAGE :
Upto 99% Sealing Efficiency
CLASS II / III / IV (As per FCI 70-2)
TEMPERATURE :
-20°C TO 750°C (As per Requirement)
ENDS :
Water / Double Flanged DIN 24154
PN 6 / PN 10 / PN 16



Butterfly Valve With
Multi-Turn Electrical Actuator (Worm Gear Box) Operated

SIZE :
24" TO 72"
MOC :
CI / DI / WCB / SS 304 / SS 316 /
SS 316L / Alloy Steel / Duplex
SEAT :
Nitrile (NBR) / EPDM / VITON / PTFE
ENDS :
Water / Double Flanged / Lug Type
RATING :
PN 6 / PN 10 / PN 16 / PN 20 / PN 25
DESIGN & MANUFACTURING STD.:
API 609 Category A / BS 5155 /
MSS SP-67 / AWWA C-304

Motorized Valves

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Wiring Diagram

On - Off Duty

