



by ALFACOM

AMT SERIES

RACK & PINION PNEUMATIC ACTUATORS

Performance.
Reliability.
Control.



PNEUMATIC ACTUATORS
www.alfacom.co.il

MODEL: AMT-63DA

SO No.: 123600087

Working Temp.: -20°C ~ +80°C

Max. Pressure: 8 bar



ATEX
2014/34/EU

⚠ CAUTION! DO NOT DISASSEMBLE PRESSURIZED!



ATEX
2014/34/EU



IEC 61508



European
Conformity



ISO 5211
Mounting



NAMUR
VDI/VDE 3845



2014/68/EU

AMT SERIES

RACK & PINION PNEUMATIC ACTUATORS

**Engineered for Performance.
Built for Reliability.**

AMT Series rack & pinion pneumatic actuators deliver high torque in a compact and robust design. Engineered for quarter-turn operation of ball, butterfly and plug valves, the AMT series ensures reliable performance in the most demanding industrial applications.



HIGH PERFORMANCE

High torque output in a compact and lightweight design.



ACCURATE OPERATION

Rack & pinion mechanism for smooth and precise actuation.



RELIABLE & DURABLE

Hard anodized body, corrosion resistant fasteners and long service life.



UNIVERSAL INTERFACE

Compliant with ISO 5211, NAMUR and VDI/VDE 3845 for easy integration.



WIDE RANGE

Operating temperature from -20°C to +80°C as standard.



EASY MAINTENANCE

Modular construction and simple parts replacement.

VERSATILE APPLICATIONS

AMT Series actuators are designed for quarter-turn valves in a wide range of industries.



 **WATER & WASTEWATER**



 **OIL & GAS**



 **CHEMICAL PROCESS**



 **POWER GENERATION**

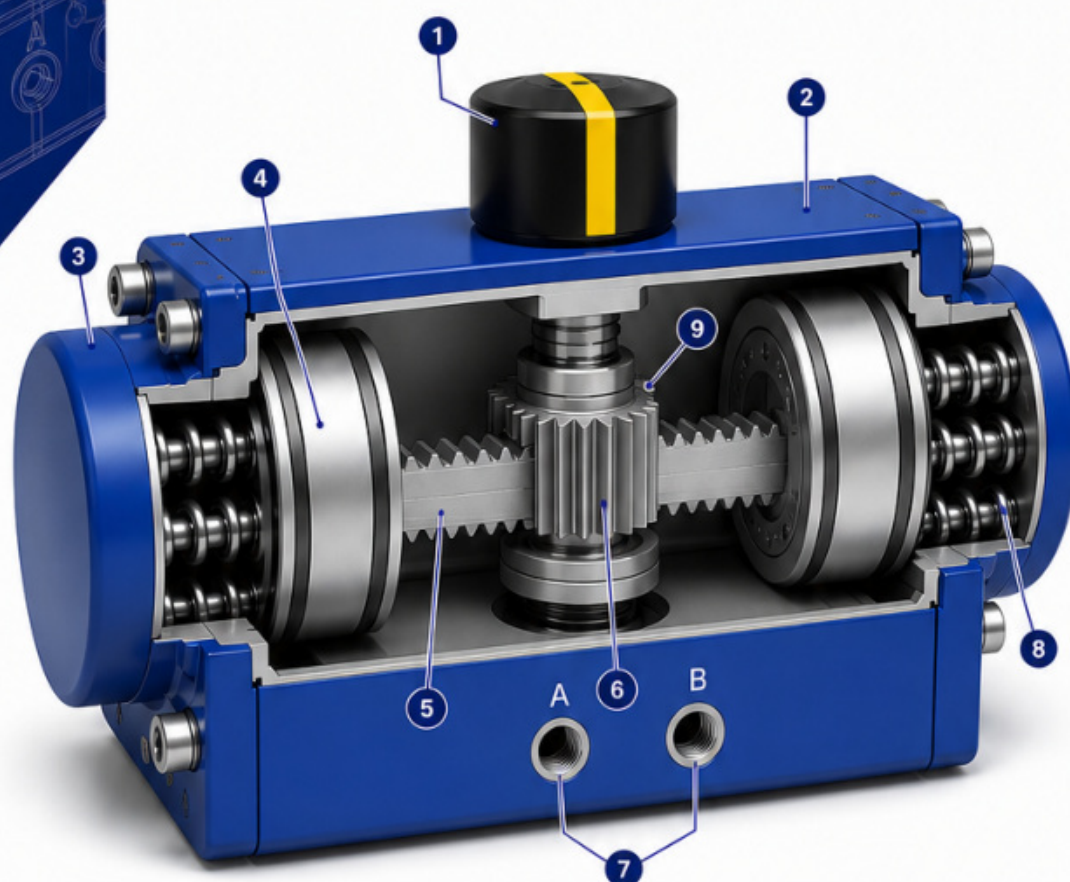
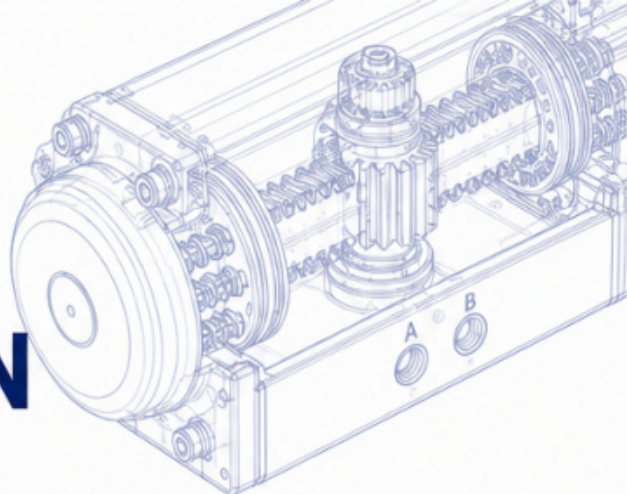


 **GENERAL INDUSTRY**

DESIGN & CONSTRUCTION

ENGINEERED FOR RELIABILITY

The AMT Series rack & pinion pneumatic actuators are precision engineered with high quality materials and advanced manufacturing processes to deliver maximum performance and long service life in the most demanding conditions.



1 POSITION INDICATOR

High visibility indicator shows valve position at a glance.

2 BODY

Hard anodized extruded aluminum body for high strength and corrosion resistance.

3 END CAPS

Die-cast aluminum end caps with epoxy polyester coating for enhanced durability.

4 PISTONS

Die-cast aluminum pistons with low friction, long life seals for smooth operation.

5 RACKS

High strength steel racks with precise tooth profile for efficient torque transmission.

6 PINION

Alloy steel pinion for high torque output and maximum reliability.

7 AIR PORTS (NAMUR)

Standard NAMUR air connections at the bottom for quick and easy installation.

A – CCW B – CW

8 SPRING CARTRIDGE (SR)

Preloaded springs coated for corrosion protection and easy configuration.

9 BEARINGS & GUIDES

High performance bearings and guides support the pinion on both sides for low friction, precise movement and long service life.

STRUCTURE AT A GLANCE



ROBUST DESIGN

Compact and rigid structure for high torque output in a lightweight package.



PRECISE OPERATION

Rack & pinion mechanism ensures accurate quarter-turn operation and repeatability.



EASY MAINTENANCE

Modular construction allows quick disassembly, inspection and replacement.



CORROSION PROTECTION

Premium coatings, surface protection and quality control guarantee long term reliability.



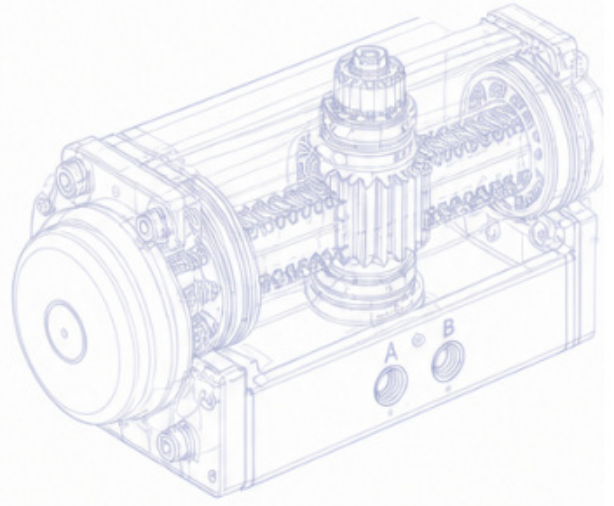
LONG SERVICE LIFE

High quality materials and precision manufacturing provide reliable performance for many years.

KEY FEATURES

ENGINEERED TO DELIVER MORE. BUILT TO LAST.

The AMT Series combines compact design, robust materials and precise engineering to provide outstanding performance, flexibility and reliability in every application.



1. COMPACT HIGH-TORQUE DESIGN

Rack & pinion mechanism delivers high torque output in a compact and lightweight package.



2. DOUBLE ACTING & SPRING RETURN

Available in double acting (DA) and spring return (SR) models for fail-safe operation.



3. FLEXIBLE SPRING CONFIGURATION

A wide range of spring sets allows precise torque requirements to be met for every application.



4. $\pm 5^\circ$ TRAVEL ADJUSTMENT

Easy and precise adjustment of open and close positions ($\pm 5^\circ$) for accurate valve positioning.



5. ISO 5211 & NAMUR COMPATIBILITY

Standard mounting interface ensures easy integration with a wide range of valves, solenoids and accessories.



6. MULTIPLE SURFACE PROTECTION OPTIONS

Hard anodizing, polyester coating, PTFE coating and nickel plating options for superior corrosion resistance.



7. WIDE TEMPERATURE RANGE OPTIONS

Standard, High Temperature (HT) and Low Temperature (LT) versions available to suit various environments.



8. SPECIAL STROKE VERSIONS

Available in 120°, 135°, 180° and Three Position (T) versions to meet different control requirements.



9. FACTORY LUBRICATED FOR LIFE

All moving parts are factory lubricated for life. No routine maintenance required.



10. INDOOR & OUTDOOR SERVICE

Designed for reliable performance in a wide range of installations and weather conditions.

COMPATIBILITY & STANDARDS



ISO 5211
Mounting Interface



NAMUR
VDI / VDE 3845



PED 2014/68/EU
(Optional)



ATEX 2014/34/EU
(Optional)

OPTIONS AVAILABLE



Manual
Override



Limit
Switch Box



Solenoid
Valve



Positioner



FRL
Unit

Custom configurations available upon request.

MATERIALS & CORROSION PROTECTION

BUILT WITH QUALITY. PROTECTED FOR LIFE.

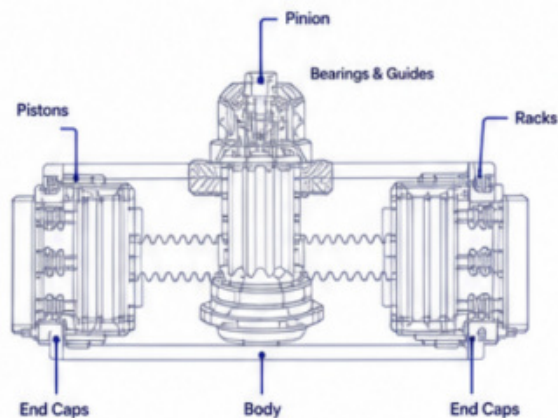
The AMT Series is manufactured using premium materials and advanced surface protection technologies to ensure maximum corrosion resistance and long service life in all environments.

MATERIALS OF CONSTRUCTION

COMPONENT	STANDARD MATERIAL	OPTIONAL MATERIAL
Body	Extruded Aluminum (6063-T6)	Stainless Steel (AISI 316)
End Caps	Aluminum (ADC12)	Stainless Steel (AISI 316)
Pistons	Die-cast Aluminum	Stainless Steel (AISI 316)
Racks	Alloy Steel	Stainless Steel (AISI 420)
Pinion	Alloy Steel	Stainless Steel (AISI 420)
Bearings & Guides	Bearing Steel	Stainless Steel
Spring Cartridge (SR)	Carbon Steel	Stainless Steel
Position Indicator	Engineering Plastic (ASA)	—
Fasteners	Stainless Steel	FKM (Viton®) / EPDM / Silicone
O-rings & Seals	NBR (Buna-N)	FKM (Viton®) / EPDM / Silicone
Bushing (Pinion Top)	PTFE Filled	Bronze / PEEK
Thrust Washers	POM	PTFE

Note: Material options may vary depending on actuator model, torque range and application.

TYPICAL MATERIAL LOCATIONS



CORROSION PROTECTION – SURFACE COATING OPTIONS

Multiple coating systems are available to suit different environments and customer requirements. All coatings are applied after a rigorous pre-treatment process for maximum adhesion and durability.

HARD ANODIZING (Type III)

Excellent corrosion resistance and wear protection for standard industrial environments.



POLYESTER POWDER COATING

High durability outdoor coating with excellent weather and UV resistance.



PTFE (TEFLON®) COATING

Superior chemical resistance for aggressive media and corrosive environments.



ELECTROLESS NICKEL PLATING

Uniform coating with excellent corrosion resistance and surface hardness.



SPECIAL COATINGS (OPTIONAL)

Other coating systems available upon request for specific application needs.



Coating thickness and performance in accordance with applicable international standards.

CORROSION PERFORMANCE



Tested in accordance with ASTM B117 (Salt Spray) up to 1000+ hours*



Suitable for onshore, offshore and marine applications



Designed for harsh industrial and coastal environments

* Performance depends on selected coating system and operating conditions.

DESIGNED FOR VARIOUS ENVIRONMENTS



Marine & Offshore



Chemical & Petrochemical



Mining & Minerals



Water & Wastewater



Power Generation

WIDE TEMPERATURE CAPABILITY (WITH SUITABLE SEALS)

Low Temperature (LT)

-40°C to +120°C
(LTNBR)

~ -40 ~ +120 °C
(Standard NBR)

Standard (STD)

-20°C to +80°C
(NBR)

~ -20 ~ +80 °C
(Standard NBR)

High Temperature (HT)

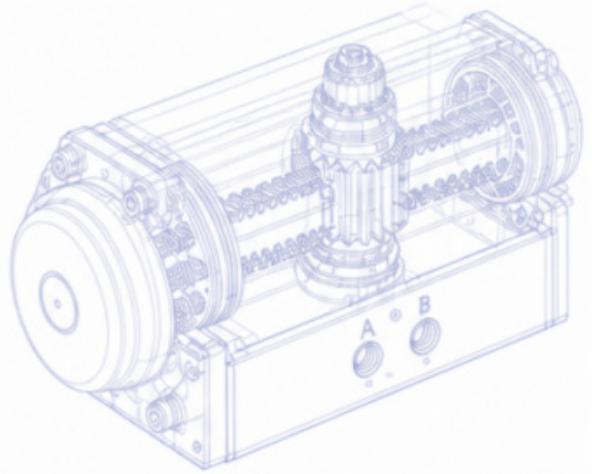
-20°C to +150°C
(FKM / Viton®)

~ -20 ~ +150 °C
(FKM / Viton®)

STANDARDS & CERTIFICATIONS

BUILT TO MEET INTERNATIONAL STANDARDS. TESTED FOR RELIABILITY.

The AMT Series is designed and manufactured in accordance with recognized international standards to ensure safety, quality, interchangeability and long-term performance.



COMPLIANT WITH INTERNATIONAL STANDARDS

 ISO 5211 Mounting Interface Standardized mounting dimensions for actuator to valve assembly.	 NAMUR VDI / VDE 3845 Standard for connecting solenoid valves and accessories.	 PED 2014/68/EU (Optional) Designed in accordance with the Pressure Equipment Directive.	 ATEX 2014/34/EU (Optional) Suitable for use in potentially explosive atmospheres.
 ASTM B117 (Salt Spray) Corrosion resistance tested up to 1000+ hours*.	 ISO 9001 Manufactured under a certified Quality Management System.	 Inspection & Testing Each actuator is tested for function, torque output and air tightness before shipment.	 Material Certificates Material traceability and certificates available upon request.

* Performance depends on selected coating system and operating conditions.

DESIGNED FOR GLOBAL APPLICATIONS

The AMT Series meets the requirements of major industrial standards, ensuring easy integration and compliance in global projects.



QUALITY ASSURANCE

- 
INCOMING INSPECTION
 All raw materials and components are inspected to ensure compliance with specified standards.
- 
IN-PROCESS CONTROL
 Critical dimensions and assembly parameters are monitored throughout the manufacturing process.
- 
FINAL TESTING
 100% functional testing including torque, stroke and leakage test.
- 
SECURE PACKAGING
 Protective packaging ensures safe delivery and product integrity.

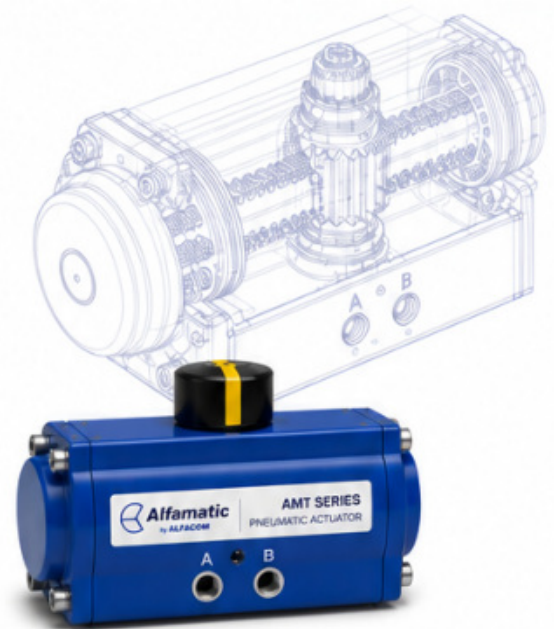


Alfatic AMT Series actuators are engineered to the highest standards to deliver safe, reliable and consistent performance in any environment.

MOUNTING & INTERFACES

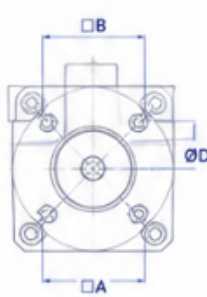
FLEXIBLE INTERFACES. EASY INTEGRATION.

The AMT Series is designed for easy installation on a wide range of valves and accessories, with standardized mounting and connection interfaces.



1 ISO 5211 – BOTTOM MOUNTING

Standardized mounting flange for direct mounting to valves in accordance with ISO 5211.

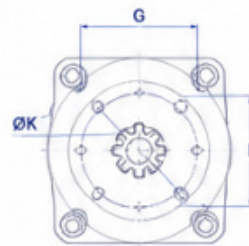


ACTUATOR SIZE	ISO 5211 FLANGE	A (mm)	B (mm)	ØD (mm)	DEPTH (mm)
AMT-032	F03	36	50	M5	4
AMT-052	F05	50	70	M6	4
AMT-063	F05 / F07	50	70	M6	4
AMT-075	F07 / F10	70	102	M8	4
AMT-083	F07 / F10	70	102	M8	4.5
AMT-092	F10 / F12	102	125	M10	4.5
AMT-105	F10 / F12	102	125	M10	4.5
AMT-125	F12 / F14	125	140	M12	5
AMT-140	F14 / F16	140	165	M16	5

Note: All dimensions in mm. Tolerances per ISO 5211.

2 NAMUR / VDI-VDE 3845 – TOP INTERFACE

Standard interface for mounting of accessories such as positioners, limit switches and position transmitters.

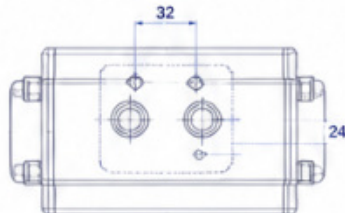


ACTUATOR SIZE	G (mm)	H (mm)	ØK (mm)	THREAD (mm)
AMT-032	30	24	36	M5
AMT-052	30	24	36	M5
AMT-063	30	24	36	M5
AMT-075	30	24	42	M6
AMT-083	30	24	42	M6
AMT-092	30	24	50	M8
AMT-105	30	24	50	M8
AMT-125	30	24	70	M10
AMT-140	30	24	70	M10

Note: Dimensions per VDI-VDE 3845.

3 NAMUR SOLENOID INTERFACE

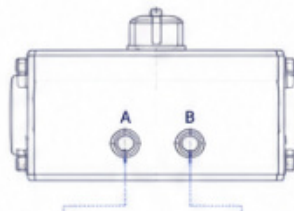
Standard air connection interface for mounting NAMUR solenoid valves.



CONNECTION	NAMUR
Air supply ports	1/4" NPT
Exhaust ports	1/4" NPT
Mounting pattern	32 x 24 mm
NAMUR standard	VDI-VDE 3845

4 AIR PORTS

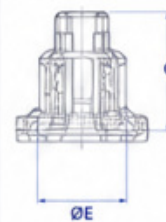
Dual air connection ports for actuator pressurization.



ACTUATOR SIZE	AIR PORTS	
	A	B
AMT-032 – AMT-063	1/8" NPT	1/8" NPT
AMT-075 – AMT-092	1/4" NPT	1/4" NPT
AMT-105 – AMT-125	3/8" NPT	3/8" NPT
AMT-140	1/2" NPT	1/2" NPT

5 DRIVE CONNECTION (OUTPUT)

The pinion drive is designed for secure connection with valves and accessories.



ACTUATOR SIZE	ØE (mm)	C (mm)	SPLINE
AMT-032	12	15.5	Dual Square 9x9
AMT-052	14	17.5	Dual Square 11x11
AMT-063	14	17.5	Dual Square 11x11
AMT-075	17	20.5	Dual Square 14x14
AMT-083	17	20.5	Dual Square 14x14
AMT-092	22	24.5	Dual Square 17x17
AMT-105	22	24.5	Dual Square 17x17
AMT-125	27	30.5	Dual Square 22x22
AMT-140	36	38.5	Dual Square 27x27

Note: Other drive types available upon request.

6 MOUNTING EXAMPLES

Typical installation with accessories.



Direct Mount
on Valve



With Positioner
(Namur Top)



With Solenoid Valve
(Namur Interface)

INTERFACE ADVANTAGES



Standardized interfaces ensure easy and reliable integration with valves and accessories.



Reduces installation time and simplifies maintenance.

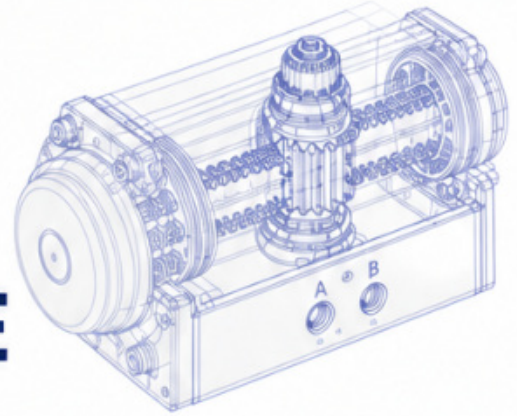


Secure and repeatable connections for long-term performance.



Global compatibility with industry standards.

DOUBLE ACTING – OPERATING PRINCIPLE



The AMT Series double acting actuator uses pressurized air to rotate the pinion and deliver controlled 90° rotation. Air pressure alternates between Port A and Port B to achieve opening and closing.

1 OPENING (COUNTERCLOCKWISE)

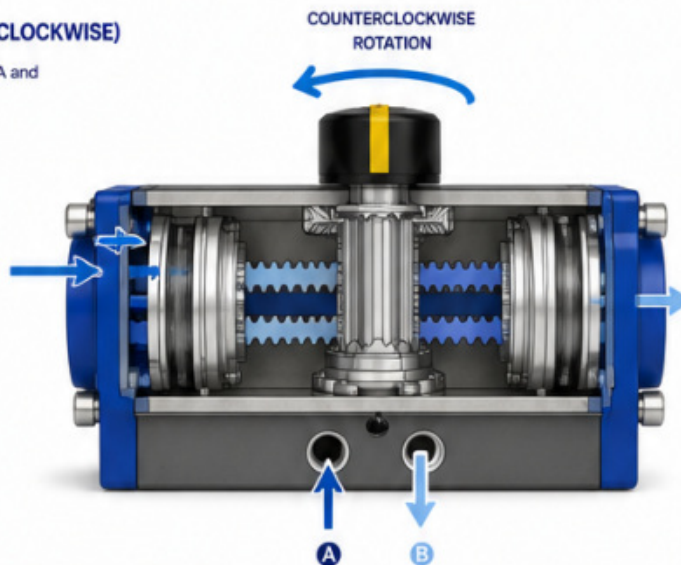
Pressurized air enters Port A and exhausts from Port B.

A SUPPLY AIR

Air pressure applied to Port A pushes the pistons outward.

B EXHAUST AIR

Air from Port B is exhausted.

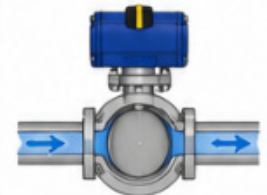


OUTPUT



APPLICATION EXAMPLE

Valve turns to the open position.



2 CLOSING (CLOCKWISE)

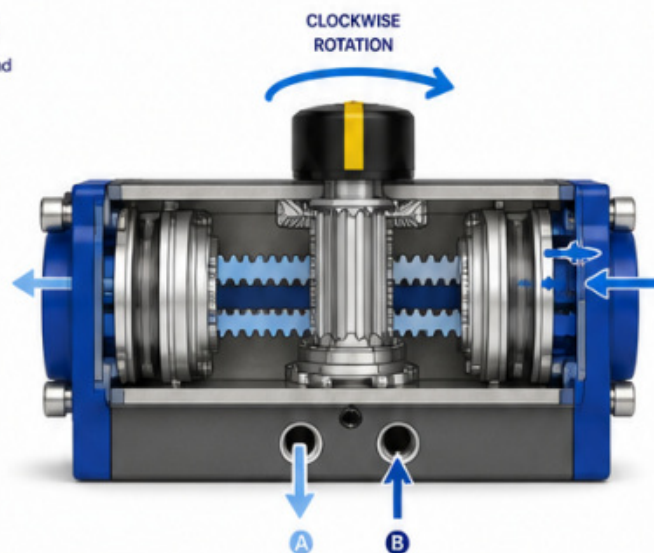
Pressurized air enters Port B and exhausts from Port A.

A EXHAUST AIR

Air from Port A is exhausted.

B SUPPLY AIR

Air pressure applied to Port B pushes the pistons outward.

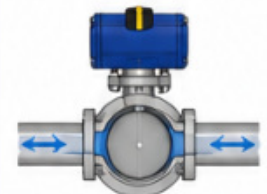


OUTPUT



APPLICATION EXAMPLE

Valve turns to the closed position.



HOW IT WORKS



DUAL PISTONS & RACKS

Air pressure moves the pistons linearly. The racks convert the linear motion into rotary motion by driving the central pinion.



PINION ROTATION

The pinion rotates 90° in either direction, providing precise and reliable valve operation.



ALTERNATING AIR SUPPLY

By alternately pressurizing Port A or Port B, the actuator opens or closes the valve.

NOTE: In double acting actuators, air pressure is required to both open and close the actuator.

SPRING RETURN – OPERATING PRINCIPLE

The AMT Series spring return actuator uses air pressure to compress the springs and move the pistons. When air is removed, the stored spring energy returns the pistons to the safe position.



FAIL CLOSE (AIR TO OPEN)

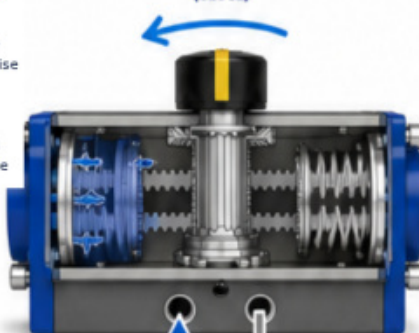
Air pressure rotates the actuator counterclockwise to open the valve.

Without air, the springs return clockwise to close the valve.

AIR STROKE (POWER STROKE)

Air pressure drives the actuator against the springs.

COUNTERCLOCKWISE
(OPEN)
(CLOSE)

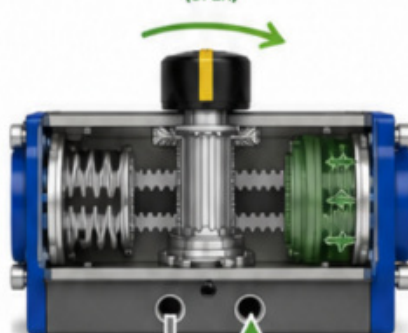


■ A PRESSURIZED ■ B EXHAUSTED

SPRING STROKE (RETURN STROKE)

Air is exhausted and the springs return the actuator.

CLOCKWISE
(CLOSE)
(OPEN)



■ A EXHAUSTED ■ B EXHAUSTED

OUTPUT

AIR STROKE (CLOSE)
AIR STROKE (OPEN)



0° → 90° CCW

SPRING STROKE (OPEN)

SPRING STROKE (CLOSE)



90° → 0° CW

APPLICATION EXAMPLE

Fail safe closed
(air to open).

(AIR TO OPEN)

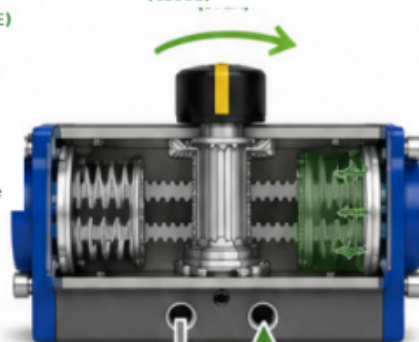


FAIL OPEN (AIR TO CLOSE)

Air pressure rotates the actuator clockwise to close the valve.

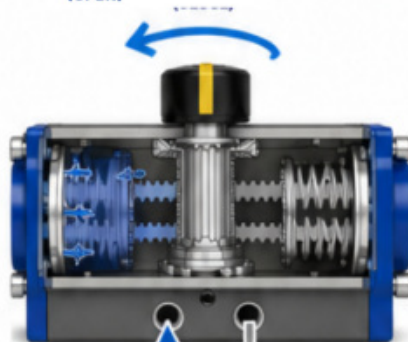
Without air, the springs return counterclockwise to open the valve.

CLOCKWISE
(CLOSE)



■ A EXHAUSTED ■ B PRESSURIZED

COUNTERCLOCKWISE
(OPEN)



■ A PRESSURIZED ■ B EXHAUSTED

AIR STROKE (CLOSE)

AIR STROKE (OPEN)



0° → 90° CW

SPRING STROKE (OPEN)



90° → 0° CCW

Fail safe open
(air to close).

AF

Fail safe closed
(air to open).



HOW IT WORKS



DUAL PISTONS & RACKS

Air pressure moves the pistons linearly. The racks convert the linear motion into rotary motion by driving the central pinion.



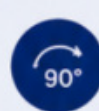
SPRING PACKS

High-strength springs are preloaded on both sides. They store energy when compressed and provide the return stroke when air is removed.



ALTERNATING AIR SUPPLY

Pressurizing Port A or Port B moves the actuator in one direction. Exhausting the port allows the springs to return it in the opposite direction.



90° ROTATION

The pinion rotates 90° between the open and close positions for reliable quarter-turn valve operation.



NOTE: Spring return actuators require air pressure only for one direction of travel. In the event of air failure, the actuator moves to the safe position by spring force.

OPERATING CONDITIONS

The AMT Series actuators are designed for reliable performance within the following operating limits. Exceeding these conditions may affect performance and service life.



1 AIR SUPPLY PRESSURE



Clean, dry compressed air in accordance with ISO 8573-1.

ACTUATOR TYPE	PRESSURE RANGE
Double Acting	2 - 8 bar
Spring Return	2 - 8 bar
Minimum Operating	2 bar (29 psi)
Maximum Pressure	8 bar (116 psi)

i Do not exceed the maximum pressure.

2 TEMPERATURE RANGE



SEAL / VERSION	TEMPERATURE RANGE
NBR (Standard)	-20°C to +80°C
FKM / Viton (HT)	-20°C to +150°C
LTNBR (LT)	-40°C to +120°C

i Select appropriate seal material for your application.

3 OPERATING MEDIUM



Filtered, clean and dry or lubricated compressed air.

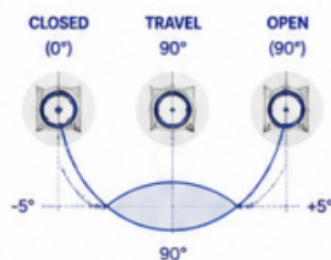
PARAMETER	RECOMMENDATION
Medium	Dry or lubricated air
Gas	Non-corrosive gas
Particle size	< 30 µm

i Use air preparation unit (FRL) to ensure air quality.

4 ROTATION ANGLE



Standard rotation is 90° (adjustable). Adjustable range is ±5° in both directions.



i Mechanical stops are factory set to 90° ±5°.

5 END OF TRAVEL ADJUSTMENT



Both OPEN (0°) and CLOSE (90°) positions can be adjusted independently.

ITEM	ADJUSTMENT
Adjustment Range	±5° at each end
Adjustment Method	External stop bolts
Locking	Lock nuts
Factory Setting	90° ±5°

i Ensure valve compatibility after adjustment.

6 LUBRICATION



All internal moving parts are pre-lubricated at the factory.

ITEM	DETAILS
Type	High performance lithium-based grease
Re-lubrication	Not required under normal conditions
Service Life	> 1,000,000 cycles (typical)

i For extreme conditions, consult Alfatic.

7 GENERAL OPERATING CONDITIONS



Indoor and outdoor use. Suitable for corrosive environments with appropriate coating.



Protect from direct exposure to severe weather, chemicals and abrasive environments.



Avoid excessive vibration and impact loads.



Actuator must be mounted correctly and securely in accordance with instructions.

CONDITIONS SUMMARY

Air Supply Pressure	2 - 8 bar (29 - 116 psi)
Temperature Range	-20°C to +150°C*
Operating Medium	Dry/lubricated air or non-corrosive gas
Max. Particle Size	< 30 µm
Rotation Angle	90° (adjustable ±5°)
Lubrication	Factory lubricated; no routine re-lubrication
Mounting	Any position
Duty Cycle	100%
* Depending on seal material.	
Duty Cycle	100%

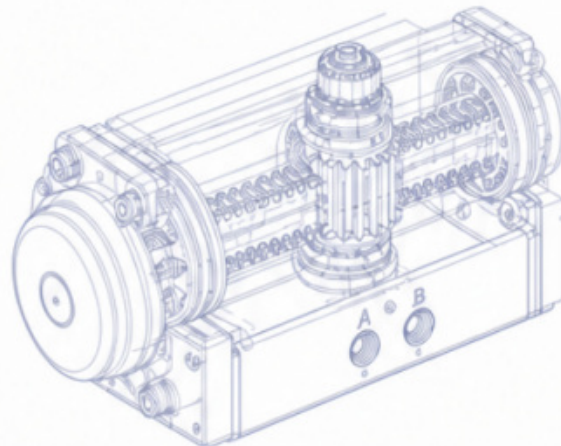
* Depending on seal material.

i **NOTE:** Operating outside these limits may reduce performance, cause damage and void warranty.

DOUBLE ACTING - OUTPUT TORQUE

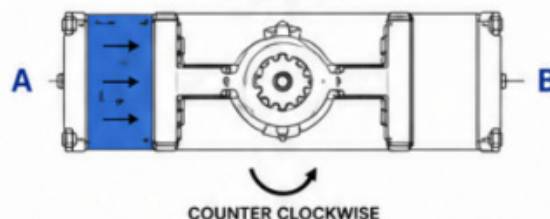
The table below shows the theoretical output torque for double acting actuators at various supply pressures.

For spring return actuators, refer to pages 12-14 for spring return torque.



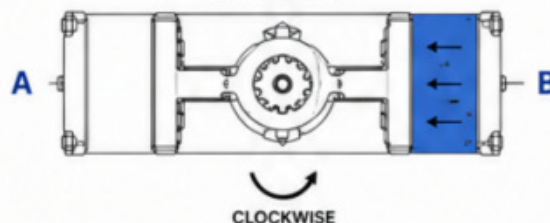
DOUBLE ACTING

AIR TO PORT "A"



COUNTER CLOCKWISE

AIR TO PORT "B"



CLOCKWISE

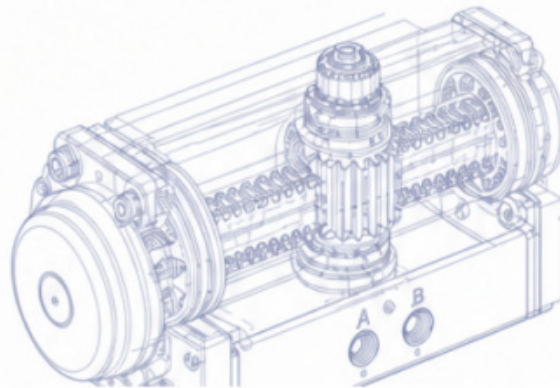
DOUBLE ACTING - OUTPUT TORQUE (Nm)

Unit: Nm

MODEL	SUPPLY PRESSURE (BAR)						
	2.5	3	4	5	6	7	8
AMT-032	4	5	6	8	9	11	12
AMT-040	6	7	10	12	14	17	19
AMT-052	10	12	16	20	24	28	32
AMT-063	18	22	29	36	44	51	58
AMT-075	25	30	40	50	60	70	80
AMT-083	39	47	63	78	94	110	125
AMT-092	56	68	90	113	135	158	181
AMT-105	83	99	132	165	198	231	264
AMT-115	108	130	173	216	259	302	346
AMT-125	125	150	200	251	301	351	401
AMT-140	214	256	342	427	513	598	684
AMT-160	333	399	532	665	798	931	1,064
AMT-190	532	638	851	1,064	1,277	1,490	1,702
AMT-210	665	798	1,064	1,330	1,596	1,862	2,128
AMT-240	962	1,154	1,539	1,924	2,308	2,693	3,078
AMT-270	1,462	1,754	2,339	2,924	3,509	4,094	4,679
AMT-300	1,908	2,289	3,052	3,815	4,578	5,341	6,104
AMT-350	2,856	3,427	4,570	5,712	6,854	7,997	9,139
AMT-400	4,070	4,884	6,512	8,140	9,768	11,396	13,024

NOTES:

- Theoretical output torque at the actuator pinion.
- Apply the appropriate safety factor for valve sizing.
- Spring return actuators: refer to pages 12-14 for spring return torque.
- For spring return actuators, refer to pages 12-14.



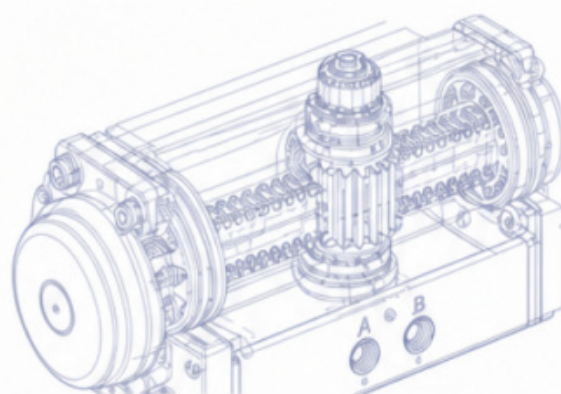
SPRING RETURN OUTPUT TORQUE - PART 1/3

Model range: AMT-040 to AMT-083

| Torque unit: Nm

Model designation: ALFAMATIC AMT Series.

		Output torque of air to springs																				Spring's output	
Air Pressure		2.5 Bar		3 Bar		3.5Bar		4 Bar		4.5 Bar		5 Bar		5.5 Bar		6 Bar		7 Bar		8 Bar			
Model	Spring Qty.	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
AMT-040	SR2					4.0	1.8	5.6	3.4	6.4	4.2	7.6	5.4	8.8	15.4	9.6	7.4	12.6	10.4	14.6	12.4	6.6	4.4
AMT-052	SR5	5.7	3.8	7.6	5.7	9.7	7.8															6.2	4.3
	SR6	4.9	2.5	6.9	4.5	9.0	6.6	10.9	8.5	13.0	10.6											7.4	5.0
	SR7	4.0	1.3	6.0	3.3	8.1	5.4	9.8	7.3	12.1	9.4	14.0	10.4	16.1	13.4							8.6	5.9
	SR8			5.2	2.0	7.3	4.1	9.2	6.0	11.3	8.1	13.2	9.1	15.3	12.1	17.2	14.1					9.9	6.7
	SR9			4.3	0.8	6.4	2.9	8.3	4.8	10.4	6.9	12.3	7.9	14.4	10.9	16.3	12.8	20.3	16.8			11.1	7.6
	SR10					5.5	1.6	7.4	3.6	9.5	5.6	11.5	6.7	13.5	9.6	15.5	11.6	19.5	15.6			12.4	8.5
	SR11					4.7	0.4	6.6	2.3	8.7	4.4	10.6	5.4	12.7	8.4	14.6	10.4	18.6	14.3	22.6	18.3	13.6	9.3
	SR12										7.8	3.2	9.7	4.2	11.8	7.2	13.8	9.1	17.8	12.2	21.8	17.1	14.8
AMT-063	SR5	11.4	7.7	15.0	11.4	18.4	14.8	22.3	14.9	25.6	22.0											10.4	6.8
	SR6	10.1	5.7	13.6	9.3	17.0	12.7	20.9	16.6	24.2	19.9	28.3	23.9	31.4	27.1							12.5	8.2
	SR7	8.6	3.6	12.5	7.2	15.6	10.6	19.5	14.5	22.8	17.8	26.8	21.9	30.0	25.0							14.6	9.6
	SR8			10.9	5.1	14.3	8.5	18.2	12.4	21.5	15.7	25.5	19.8	28.7	22.9	32.8	27.0	40.1	34.3			16.7	10.9
	SR9					12.9	6.4	16.8	10.4	20.1	13.6	24.1	17.7	27.3	20.8	31.4	24.9	38.7	32.2			18.8	12.3
	SR10					11.5	4.3	14.0	8.2	18.7	11.5	22.8	15.6	25.9	18.7	30.0	22.8	37.3	30.1	44.7	37.4	20.9	13.7
	SR11									17.4	9.5	21.5	13.5	24.6	16.7	28.7	20.7	36.0	28.0	43.3	35.3	22.9	15.0
	SR12									16.0	7.4	20.0	11.4	23.2	14.6	27.3	18.6	34.6	25.9	41.9	33.3	25.0	16.4
AMT-075	SR5	14.5	10.6	19.4	15.5	24.5	20.5	29.5	25.7	34.5	30.5											14.5	10.5
	SR6	12.4	7.6	17.3	12.6	22.3	17.6	27.4	22.7	32.3	27.6	37.5	32.8	42.3	37.6							17.4	12.7
	SR7	10.4	4.8	15.2	9.7	20.2	14.7	25.3	19.9	30.2	24.7	35.4	29.9	40.2	34.7							20.3	14.8
	SR8			13.1	6.8	18.1	11.8	23.1	16.9	28.1	21.8	33.3	27.0	38.1	31.8	43.2	37.0	53.3	47.0			23.2	16.9
	SR9					16.0	8.9	21.0	14.1	26.0	18.9	31.2	24.1	36.0	28.9	41.1	34.1	51.2	44.2			26.1	19.0
	SR10					13.9	6.0	19.0	11.1	23.9	16.0	28.8	21.2	33.9	26.0	39.0	31.2	49.1	41.2	59.1	51.2	29.0	21.1
	SR11									21.8	13.1	27.0	18.3	31.8	23.1	37.0	28.3	47.0	38.4	57.0	48.4	31.9	23.2
	SR12									19.7	10.3	24.9	15.4	29.7	20.3	34.9	25.4	44.9	35.4	54.9	45.4	34.7	25.3
AMT-083	SR5	23.3	16.1	31.1	24.0	38.8	31.6	46.8	39.7	54.4	47.2											23.0	15.8
	SR6	20.1	11.5	28.0	19.3	35.6	27.0	43.7	35.1	51.2	42.6	59.4	50.7	66.8	58.2							27.6	19.0
	SR7	17.0	6.9	24.8	14.8	32.5	22.4	40.5	30.5	48.1	38.0	56.2	46.2	63.7	53.6							32.2	22.1
	SR8			21.7	10.1	29.3	17.8	37.4	25.8	44.9	33.4	53.1	41.5	60.5	49.0	68.8	57.2	84.5	72.9			36.8	25.3
	SR9					26.1	13.2	34.2	21.3	41.7	28.8	49.9	37.0	57.3	44.4	65.6	52.6	81.2	68.3			41.4	28.5
	SR10					23.0	8.6	31.0	16.6	38.6	24.2	46.7	32.3	54.2	39.8	62.4	48.0	78.1	63.7	93.8	79.3	46.0	31.6
	SR11									35.4	19.6	43.6	27.7	51.0	35.2	59.3	43.4	75.0	59.1	90.6	74.8	50.6	34.8
	SR12									32.2	15.0	40.4	23.2	47.8	30.6	56.1	38.9	71.7	54.5	87.4	70.2	55.2	38.0



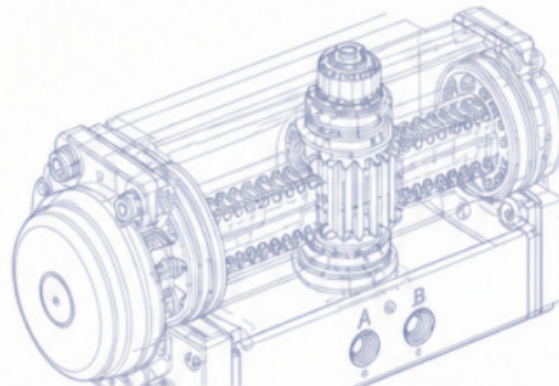
SPRING RETURN OUTPUT TORQUE - PART 2/3

Model range: AMT-092 to AMT-190

Torque unit: Nm

Model designation: ALFAMATIC AMT Series.

Air Pressure		Output torque of air to springs																				Spring's output	
		2.5 Bar		3 Bar		3.5Bar		4 Bar		4.5 Bar		5 Bar		5.5 Bar		6 Bar		7 Bar		8 Bar			
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°		
Model	Spring Qty.	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
AMT-092	SR5	33.1	22.0	44.2	33.2	55.8	44.7	66.8	55.9	78.4	67.3											34.4	23.3
	SR6	28.4	15.2	39.6	26.4	51.1	37.9	62.2	49.0	73.7	60.5	84.8	71.6	96.3	83.1							41.2	28.0
	SR7	23.8	8.2	34.9	19.4	46.4	31.0	57.5	42.1	69.0	53.6	80.2	64.7	91.6	76.2							48.1	32.7
	SR8			31.3	12.6	41.8	24.1	52.9	35.2	64.4	46.7	75.5	57.9	87.0	69.3	98.1	80.5	120.7	103.0			55.0	37.3
	SR9					37.1	17.2	48.2	28.4	59.7	39.8	70.9	51.0	82.3	62.4	93.5	73.6	116.0	96.1			61.9	42.0
	SR10					32.4	10.4	43.6	21.5	55.0	33.0	66.2	44.1	77.6	55.6	88.8	66.7	111.3	89.2	134.0	111.8	68.7	46.7
	SR11									50.3	26.1	61.5	37.2	72.9	48.7	84.1	59.9	106.6	82.4	129.2	105.0	75.6	51.4
	SR12									45.7	19.2	56.8	30.4	68.3	41.8	79.4	53.0	101.9	75.5	124.5	98.1	82.5	56.0
AMT-105	SR5	51.0	33.4	67.5	49.9	83.9	66.3	100.6	83.0	116.9	99.3											49.2	31.6
	SR6	44.7	23.5	61.1	40.0	77.5	56.4	94.2	73.2	110.5	89.4	127.3	106.2	143.5	122.4							59.1	38.0
	SR7	38.4	13.7	54.9	30.3	71.2	46.6	87.9	63.4	104.2	79.6	121.0	96.4	137.2	112.6							68.9	44.3
	SR8			48.5	20.4	64.9	36.8	81.6	53.5	97.9	69.8	114.7	86.5	130.9	102.8	147.7	119.6	180.8	152.7			78.7	50.6
	SR9					58.6	26.9	75.3	43.7	91.6	59.9	108.4	76.8	124.6	92.9	141.5	109.8	174.5	142.9			88.6	56.9
	SR10					52.2	17.1	68.9	33.4	85.2	50.1	102.0	66.5	118.2	83.1	135.1	99.6	168.2	132.6	201.2	165.7	98.4	63.3
	SR11									78.9	40.2	95.7	57.0	111.9	73.2	128.7	90.1	161.8	123.1	194.8	156.2	108.3	69.6
	SR12									72.6	30.4	89.4	47.5	105.6	63.4	122.5	80.6	155.5	113.6	188.6	146.7	118.1	75.9
AMT-115	SR5	65	43	87	65	108.2	86.2	130	108	151	129											65	43
	SR6	56	30	78	52	99.2	73.2	121	95	142	116	164	138	186	160							78	52
	SR7	47	17	69	39	90.2	60.2	112	82	133	103	155	125	177	147							91	61
	SR8			61	26	82.2	47.2	104	69	125	90	147	112	169	134	190	155	233	198			104	69
	SR9					73.2	34.2	95	56	116	77	138	99	160	121	181	142	224	185			117	78
	SR10					64.2	21.2	86	43	107	64	129	86	151	108	172	129	215	172	259	216	130	87
	SR11									99	51	121	73	143	95	164	116	207	159	251	203	143	95
	SR12									90	38	112	60	134	82	156	104	198	146	242	190	156	104
AMT-125	SR5	73	47	98	72	123.7	96.7	148	122	174	147											79	52
	SR6	63	31	88	56	112.7	81.7	138	107	163	132	188	157	213	182							94	63
	SR7	52	15	77	40	102.7	65.7	127	90	153	116	178	141	203	166							110	73
	SR8			67	25	91.7	50.7	117	75	142	101	167	125	192	151	217	176	268	226			125	84
	SR9					81.7	34.7	107	59	132	85	157	109	182	135	207	159	257	210			141	94
	SR10					70.7	18.7	96	44	121	69	146	94	171	119	196	144	247	194	297	245	157	105
	SR11									111	53	136	78	161	103	186	128	236	178	286	228	173	115
	SR12									101	38	125	63	151	88	176	113	226	163	276	213	188	125
AMT-140	SR5	128	85	171	127	212.9	169.9	256	213	298	255											129	86
	SR6	111	59	154	102	195.9	143.9	239	187	281	229	325	273	367	315							155	103
	SR7	94	33	137	76	178.9	117.9	222	162	264	203	308	247	350	289							181	120
	SR8			120	50	161.9	92.9	205	136	247	178	291	221	333	264	376	307	462	392			206	137
	SR9					143.9	66.9	187	110	229	152	273	196	315	238	358	281	444	367			232	155
	SR10					126.9	40.9	170	84	212	126	256	169	298	212	341	255	427	340	512	426	258	172
	SR11									195	100	238	143	281	186	324	229	409	314	495	400	284	189
	SR12									178	74	221	118	264	160	307	203	392	289	478	374	310	206
AMT-160	SR5	193	124	259	191	325.5	257.5	392	324	459	391											208	140
	SR6	165	83	232	149	297.5	215.5	365	282	431	349	498	415	564	482							250	168
	SR7	137	41	203	107	269.5	173.5	336	240	403	307	469	373	536	440							292	196
	SR8			176	66	242.5	132.5	309	199	376	266	442	327	509	399	575	465	708	598			333	223
	SR9					214.5	90.5	280	157	348	224	413	290	481	357	546	423	679	556			375	251
	SR10					186.5	48.5	253	115	320	182	386	248	453	315	519	381	652	514	785	647	417	279
	SR11									292	141	358	207	425	274	491	340	624	473	757	606	458	307
	SR12									264	99	330	165	397	232	463	298	596	431	729	564	500	335
AMT-190	SR5	332	222	438	329	544.8	435.8	651	542	758	649											309	200
	SR6	292	161	398	267	504.8	373.8	611	480	718	587	824	693	930	799							371	240
	SR7	252	99	358	205	464.8	311.8	571	418	678	525	784	631	890	737							433	280
	SR8			318	143	424.8	249.8	531	356	638	463	744	569	850	675	957	782	1169	995			495	320
	SR9					384.8	187.8	491	295	598	401	704	507	810	613	917	720	1130	933			557	360
	SR10					344.8	126.8	451	233	558	340	664	446	770	552	877	658	1090	871	1302	1084	618	400
	SR11									518	278	624	384	730	490	837	579	1050	809	1263	1022	680	440
	SR12									478	216	584	322	690	428	797	535	1010	748	1223	960	742	480



SPRING RETURN OUTPUT TORQUE - PART 3/3

Model range: AMT-210 to AMT-400

Torque unit: Nm

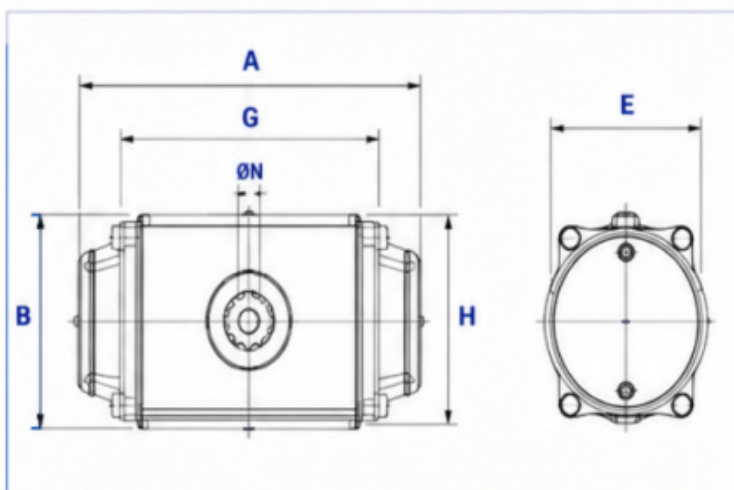
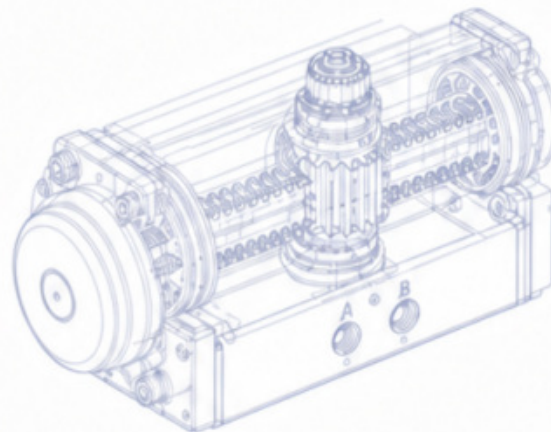
Model designation: ALFAMATIC AMT Series.

		Output torque of air to springs																				Spring's output	
Air Pressure		2.5 Bar		3 Bar		3.5Bar		4 Bar		4.5 Bar		5 Bar		5.5 Bar		6 Bar		7 Bar		8 Bar			
Model	Spring Qty.	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
AMT-210	SR5	390	285	523	418	656	551	789	684	922	817											380	275
	SR6	335	209	468	342	601	475	734	608	867	741	1000	874	1133	1007							456	330
	SR7	280	133	413	266	546	399	679	532	812	665	945	798	1078	931							532	385
	SR8			358	190	491	323	624	456	757	589	890	722	1023	855	1156	988	1422	1254			608	440
	SR9					436	247	569	380	702	513	835	646	968	779	1101	912	1367	1178			684	495
	SR10					381	171	514	304	647	437	780	570	913	703	1046	836	1312	1102	1578	1368	760	550
	SR11									592	361	725	494	858	627	991	760	1257	1026	1523	1292	836	605
	SR12									537	285	670	418	803	551	936	684	1202	950	1468	1216	912	660
AMT-240	SR5	552	109	744	600	936.8	792.8	1129	985	1322	1178											554	410
	SR6	470	297	662	489	854.8	681.8	1047	874	1240	1067	1432	1259	1624	1451							665	492
	SR7	388	187	580	379	771.8	571.8	964	764	1157	957	1349	1149	1541	1341							775	575
	SR8			498	268	690.8	460.8	883	653	1076	846	1267	1037	1460	1230	1652	1422	2037	1807			886	656
	SR9					607.8	348.8	800	542	993	734	1185	926	1377	1118	1569	1311	1954	1696			998	739
	SR10					525.8	238.8	718	431	911	624	1103	816	1295	1008	1488	1201	1872	1586	2257	1970	1108	821
	SR11									829	513	1021	705	1213	897	1406	1090	1791	1474	2176	1859	1219	903
	SR12									747	402	939	594	1131	786	1323	979	1708	1363	2093	1748	1330	985
AMT-270	SR5	903	675	1195	968	1487	1260	1779	1552	2072	1845											787	560
	SR6	790	519	1083	811	1375	1104	1667	1396	1960	1689	2252	1981	2544	2273							943	672
	SR7	679	316	972	654	1264	945.8	1556	1238	1849	1531	2141	1823	2433	2115							1101	783
	SR8			860	497	1152	788.8	1444	1081	1737	1374	2029	1666	2321	1958	2614	2252	3199	2836			1258	895
	SR9					1040	630.8	1332	923	1625	1216	1917	1509	2209	1800	2502	2094	3087	2678			1416	1007
	SR10					927.8	474.8	1220	767	1513	1060	1805	1352	2097	1644	2390	1937	2974	2521	3560	3107	1572	1119
	SR11					815.8	316.8			1401	902	1693	1194	1985	1486	2278	1779	2862	2364	3448	2949	1730	1231
	SR12					704.8	159.8			1290	745	1582	1037	1874	1329	2167	1623	2751	2207	3336	2792	1887	1342
AMT-300	SR5	1097	729																			1061	730
	SR6	935	494	1316	875	1795	1398															1273	876
	SR7	772	258	1153	639	1649	1186	1916	1402	2412	1949											1485	1022
	SR8			991	403	1503	973.5	1754	1166	2266	1737	2517	1929	3029	2500							1697	1168
	SR9					1357	761.5	1592	930	2120	1525	2355	1693	2883	2288	3118	2456					1909	1314
	SR10					1211	548.5	1430	695	1974	1312	2193	1458	2737	2075	2956	2221	3719	2984	4482	3747	2122	1460
	SR11									1828	1100	2030	1222	2591	1863	2793	1985	3556	2748	4319	3511	2334	1606
	SR12									1682	888	1868	986	2445	1651	2631	1749	3394	2512	4157	3275	2546	1752
AMT-350	SR5	1553	964																			1702	1173
	SR6	1292	586	1863	1157	2590	1955															2043	1408
	SR7	1031	208	1602	779	2356	1615	2745	1922	3499	2758											2383	1642
	SR8			1341	401	2121	1274	2484	1544	3264	2417	3626	2686	4406	3559							2724	1877
	SR9					1886	934.4	2224	1165	3029	2077	3336	2307	4171	3219	4508	3449					3064	2112
	SR10					1652	593.4	1963	787	2795	1736	3105	1929	3937	2878	4247	3071	5390	4214	6532	5356	3405	2346
	SR11									2560	1396	2844	1551	3702	2538	3986	2693	5129	3836	6271	4978	3745	2581
	SR12									2325	1055	2584	1172	3467	2197	3726	2314	4869	3457	6011	4599	4086	2816
AMT-400	SR7	2028	869																			2880	1837
	SR8	1736	411	2550	1225																	3292	2100
	SR9			2259	768	3336	1995	3887	2396													3703	2362
	SR10			1967	311	3074	1583	3595	1939	4702	3211	5223	3567									4115	2624
	SR11					2811	1172	3303	1482	4439	2800	4931	3110	6067	4428	6559	4738					4526	2887
	SR12					2549	760	3012	1025	4177	2388	4640	2653	5805	4016	6268	4281	7895	5908	9523	7536	4938	3149
	SR13									3914	1977	4348	2195	5542	3605	5976	3823	7603	5450	9231	7078	5349	3412
	SR14									3652	1565	4057	1738	5280	3193	5685	3366	7312	4993	8940	6621	5761	3674
	SR15									3389	1154	3765	1281	5017	2782	5393	2909	7020	4536	8648	6164	6172	3937
	SR16													4755	2370	5101	2452	6728	4079	8356	5707	6584	4199

DIMENSIONS

Common dimensional envelope for
AMT Series pneumatic actuators.

All dimensions are in millimeters (mm).



DIMENSIONS - AMT SERIES (mm)

MODEL	A	B	C	D	E
AMT-032	116	51	45	65	Ø40
AMT-040	120	65	60	80	Ø40
AMT-052	147	71.5	72	92	Ø40
AMT-063	165	83	88	108	Ø40
AMT-075	182	95	99.5	119.5	Ø40
AMT-083	208	103	109	129	Ø40
AMT-092	262	108.5	116.5	136.5	Ø40
AMT-105	270	124.5	133	153	Ø40
AMT-115	298	134	144	164	Ø55
AMT-125	301	142	155	175	Ø55
AMT-140	395	152.5	172	192	Ø55
AMT-160	454	174	197	217	Ø55
AMT-190	528	206	230	260	Ø80
AMT-210	536	226	255	285	Ø80
AMT-240	608	260	289	319	Ø80
AMT-270	721	294	328	358	Ø80
AMT-300	769	406	348	378	Ø80
AMT-350	909	460	408	438	Ø80
AMT-400	925	516	480	510	Ø80

NOTE: Dimensions are based on the manufacturer reference data and are subject to change without notice.

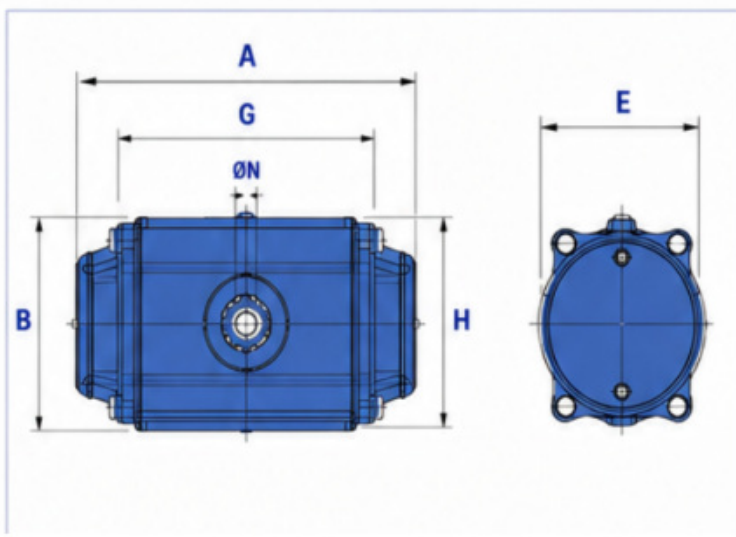
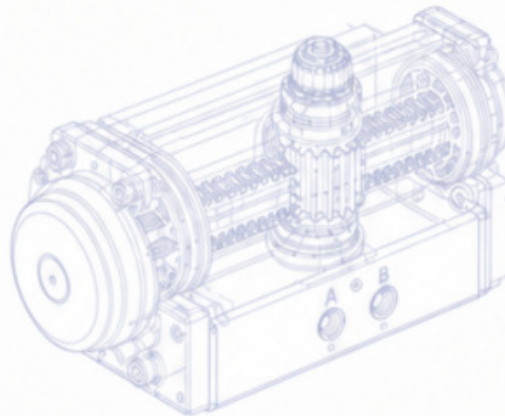
NOTES:

- Dimensions are subject to change without prior notice.

WEIGHT DATA (kg)

The table below shows the approximate weight of actuators.

All weights are in kilograms (kg).



WEIGHT DATA (kg)

MODEL	DOUBLE ACTING	SPRING RETURN
AMT-032	0.8	-
AMT-040	0.97	1.1
AMT-052	1.22	1.35
AMT-063	2.02	2.19
AMT-075	2.6	2.86
AMT-083	3.23	3.64
AMT-092	4.58	5.35
AMT-105	5.92	6.76
AMT-115	8.18	9.3
AMT-125	8.68	10.06
AMT-140	14.1	16.5
AMT-160	20.6	24.4
AMT-190	33.2	40.2
AMT-210	39.7	49.2
AMT-240	57	70
AMT-270	78.7	100.3
AMT-300	114	141
AMT-350	171	220
AMT-400	240	285

* AMT-040 spring return uses 2 springs in the manufacturer reference configuration.

AMT-270

126.0

160.6

AMT-300

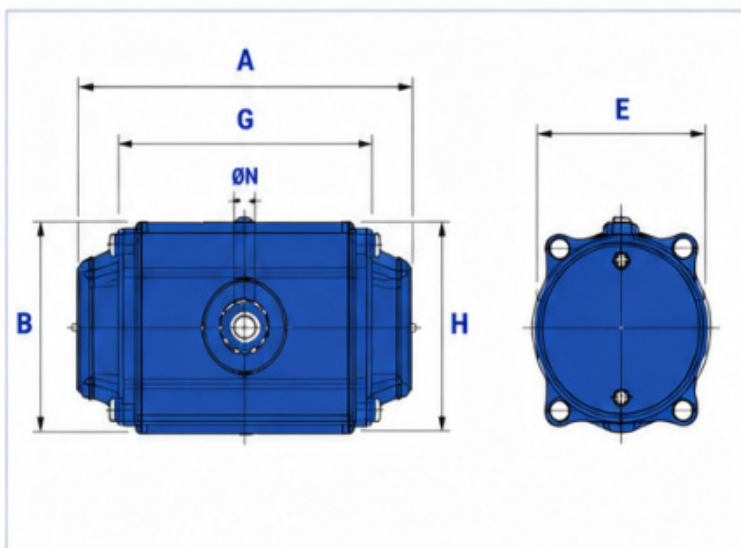
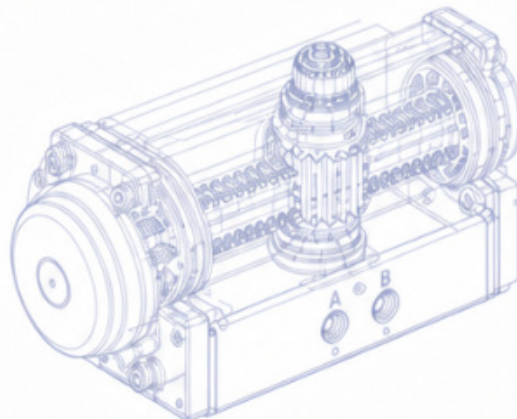
156.0

196.4

AIR CONSUMPTION (NL/min)

The table below shows the approximate air consumption of actuators.

All values are in NL/min.



AIR CONSUMPTION (NL/min)

MODEL	DOUBLE ACTING (NL/min)				SPRING RETURN (NL/min)			
	3 BAR	5 BAR	6 BAR	8 BAR	3 BAR	5 BAR	6 BAR	8 BAR
AMT-032	3.1	5.2	6.2	8.3	3.6	6.0	7.2	9.6
AMT-040	4.3	7.1	8.5	11.4	5.0	8.4	10.1	13.5
AMT-052	6.9	11.5	13.8	18.4	8.2	13.6	16.4	21.8
AMT-063	9.6	16.0	19.2	25.6	11.7	19.5	23.4	31.2
AMT-075	13.5	22.4	26.8	35.8	16.5	27.5	33.0	44.0
AMT-083	18.6	31.0	37.2	49.6	22.8	38.0	45.6	60.8
AMT-092	24.7	41.1	49.3	65.7	30.3	50.5	60.6	80.8
AMT-105	33.7	56.2	67.4	89.8	41.3	69.0	82.5	110.0
AMT-125	52.6	87.7	105.2	140.3	64.2	107.0	128.4	171.2
AMT-140	73.1	121.9	146.3	195.0	89.3	148.9	178.6	238.1
AMT-160	103.8	173.1	207.7	276.9	126.7	211.2	253.4	337.8
AMT-190	154.2	257.0	308.4	411.2	188.2	313.6	376.4	501.9
AMT-210	195.7	326.1	391.4	521.8	239.0	398.4	478.0	637.4
AMT-240	276.6	460.9	553.2	737.5	337.1	561.8	674.2	899.0
AMT-270	358.2	597.0	716.4	955.2	436.8	728.0	873.6	1,164.8
AMT-300	457.3	762.2	914.6	1,219.4	557.2	928.7	1,114.4	1,485.8

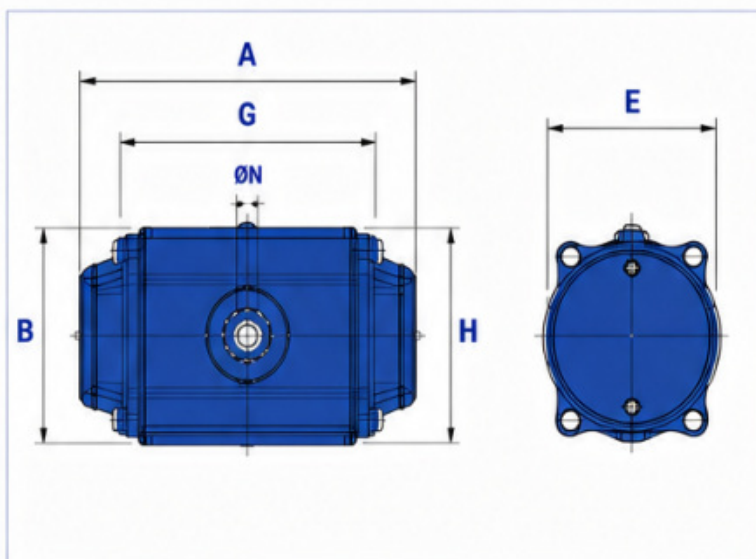
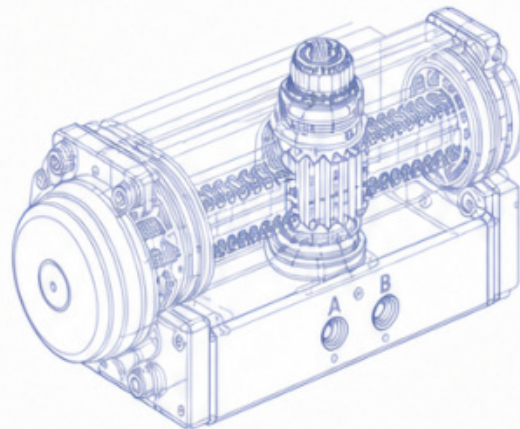
NOTE:

- Air consumption may vary depending on operating conditions.

OPERATING TIME (SECONDS)

The table below shows the approximate operating time of actuators.

All values are in seconds (sec).



OPERATING TIME (SECONDS)

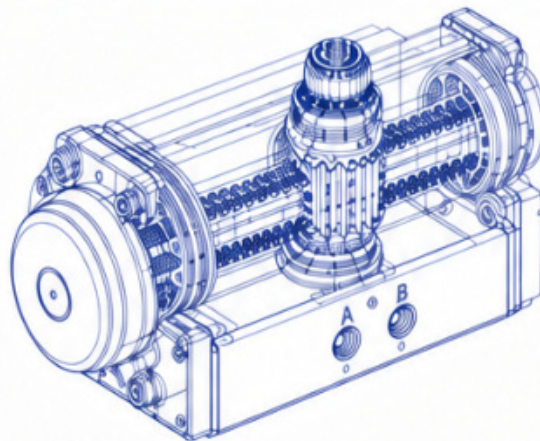
MODEL	DOUBLE ACTING (SECONDS)				SPRING RETURN (SECONDS)			
	3 BAR	5 BAR	6 BAR	8 BAR	3 BAR	5 BAR	6 BAR	8 BAR
AMT-032	0.25	0.18	0.15	0.11	0.58	0.41	0.33	0.24
AMT-040	0.30	0.22	0.18	0.13	0.63	0.44	0.35	0.25
AMT-052	0.35	0.25	0.20	0.15	0.70	0.49	0.39	0.28
AMT-063	0.40	0.28	0.23	0.16	0.80	0.56	0.46	0.33
AMT-075	0.45	0.33	0.28	0.20	0.95	0.66	0.55	0.39
AMT-083	0.55	0.40	0.33	0.24	1.03	0.72	0.60	0.43
AMT-092	0.60	0.45	0.38	0.28	1.15	0.81	0.68	0.49
AMT-105	0.70	0.50	0.43	0.31	1.25	0.88	0.73	0.52
AMT-125	0.80	0.56	0.48	0.35	1.40	0.98	0.81	0.58
AMT-140	0.90	0.62	0.53	0.38	1.55	1.09	0.90	0.64
AMT-160	1.00	0.70	0.60	0.43	1.80	1.26	1.04	0.74
AMT-190	1.20	0.85	0.73	0.52	2.10	1.47	1.21	0.86
AMT-210	1.40	1.00	0.86	0.62	2.40	1.68	1.39	0.99
AMT-240	1.60	1.15	0.98	0.72	2.80	1.96	1.61	1.15
AMT-270	1.80	1.28	1.10	0.80	3.15	2.20	1.80	1.28
AMT-300	2.00	1.45	1.24	0.90	3.50	2.45	2.00	1.43

NOTE:

- Operating time may vary depending on operating conditions.

ACCESSORIES

A range of accessories is available to suit your installation needs.



LIMIT SWITCH BOX



Mechanical or inductive limit switch boxes for open/close position feedback.

SOLENOID VALVE



NAMUR interface solenoid valves for efficient air control.

POSITIONER



Electro-pneumatic positioners for precise modulation control.

MOUNTING KIT



Mounting kits for easy installation to valves.

MANUAL OVERRIDE



Manual override options for emergency operation.

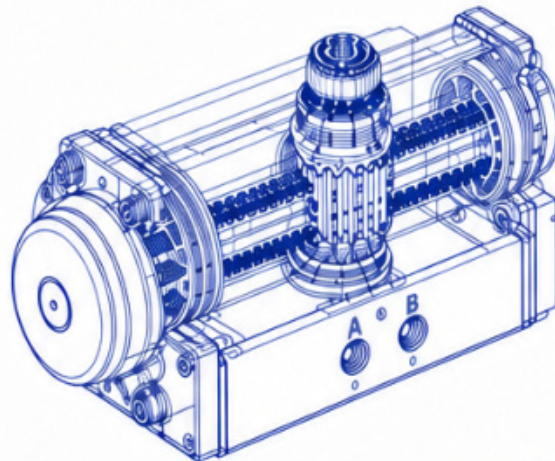
ACCESSORY	DESCRIPTION	SUITABLE FOR
Limit Switch Box	Mechanical or inductive limit switch box with visual position indicator.	All AMT Series
Solenoid Valve	NAMUR 3/2 or 5/2 solenoid valve, 24V DC, 110V AC, 230V AC.	All AMT Series
Positioner	Electro-pneumatic positioner, 4-20mA input, NAMUR mounting.	AMT-075 and above
Mounting Kit	ISO 5211 mounting kit including bracket and coupling.	All AMT Series
Manual Override	Declutchable manual override (handwheel or hex key).	All AMT Series

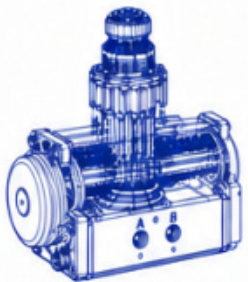
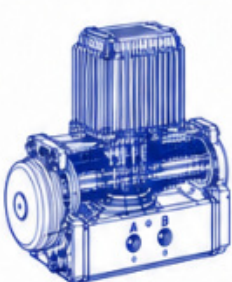
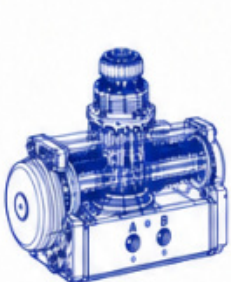
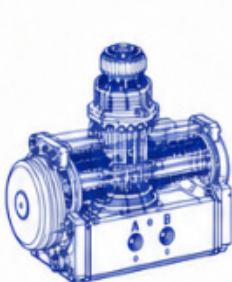
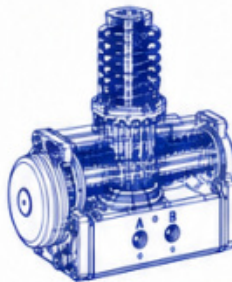
NOTE:

- Please contact ALFACOM for more information about accessories and configurations.

SPECIAL VERSIONS

Special versions are available to meet specific application requirements. Please contact ALFACOM for details.



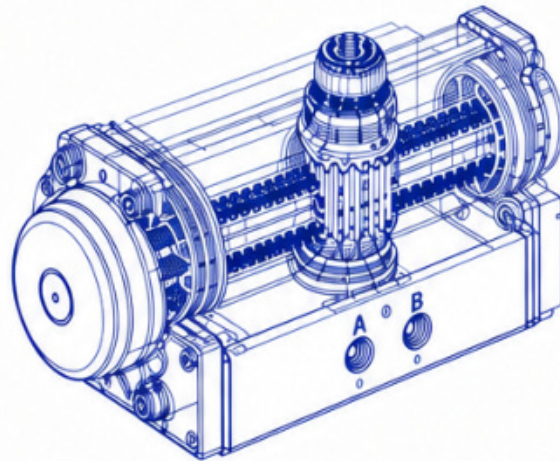
HIGH TEMPERATURE VERSION	LOW TEMPERATURE VERSION	CORROSION RESISTANT VERSION	STAINLESS STEEL VERSION	FAIL-SAFE VERSION
				
				
Designed for high ambient and process temperatures up to +150°C.	Designed for low ambient temperatures down to -40°C.	Special surface treatment and materials for corrosive environments.	Stainless steel construction for marine and harsh conditions.	Spring return configuration for fail-safe operation (air to open or air to close).

SPECIAL VERSION	DESCRIPTION	AVAILABLE OPTIONS	SUITABLE FOR
High Temperature Version	Designed to operate in high ambient and process temperatures.	Up to +150°C	All AMT Series
Low Temperature Version	Designed for low ambient temperatures.	Down to -40°C	All AMT Series
Corrosion Resistant Version	Special surface treatment and materials for corrosive environments.	Epoxy coating, anodizing, NACE compliant	All AMT Series
Stainless Steel Version	Stainless steel construction for superior corrosion resistance.	SS 304 / SS 316	All AMT Series
Fail-Safe Version	Spring return configuration for fail-safe operation.	Air to open (ATO) Air to close (ATC)	All AMT Series

NOTE:

- Please contact ALFACOM for technical details, availability and ordering information.

ACTUATOR SELECTION GUIDE



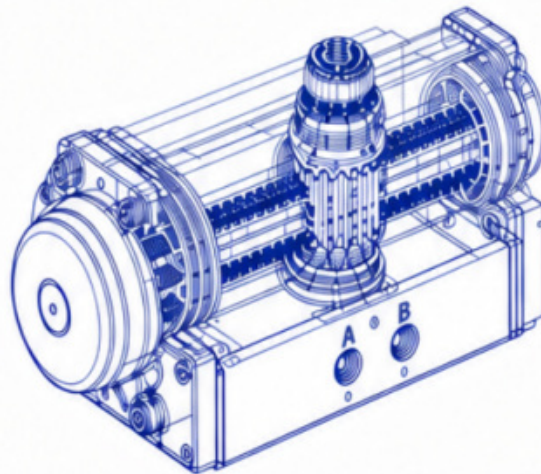
Use the following guide to select the most suitable actuator for your application.

1. TORQUE REQUIREMENT	2. OPERATING PRESSURE	3. STROKE REQUIREMENT	4. ENVIRONMENTAL CONDITIONS	5. SAFETY REQUIREMENTS
				
Determine the required torque to operate the valve under worst case conditions.	Check the available air supply pressure and ensure it is within the actuator operating range.	Match the actuator stroke to the valve rotation requirement (typically 90°).	Consider ambient temperature, corrosive media, humidity and other factors.	Determine if fail-safe operation (air to open or air to close) is required.

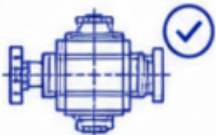
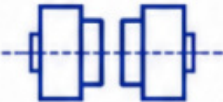
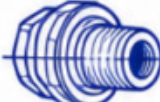
APPLICATION TYPE	RECOMMENDED ACTUATOR	ACTION	KEY CONSIDERATIONS	SUITABLE FOR
 ON/OFF SERVICE	AMT Series Rack & Pinion Pneumatic Actuator	Double Acting or Spring Return	- Fast operation - Reliable sealing - Fail-safe option available	Ball valves, butterfly valves, plug valves
 MODULATING SERVICE	AMT Series with Positioner	Double Acting	- Precise positioning - Use with positioner - Stable performance	Control valves, dampers
 HIGH TEMPERATURE	AMT Series High Temperature Version	Double Acting or Spring Return	- Up to +150°C - Suitable materials - High temperature seals	High temperature processes
 LOW TEMPERATURE	AMT Series Low Temperature Version	Double Acting or Spring Return	- Down to -40°C - Low temperature seals - Reliable operation	Cold storage, LNG, cryogenic applications
 CORROSIVE ENVIRONMENTS	AMT Series Corrosion Resistant Version	Double Acting or Spring Return	- Special surface treatment - Corrosion resistant materials - Long service life	Chemical, marine, offshore, wastewater
 FAIL-SAFE APPLICATIONS	AMT Series Spring Return Actuator	Spring Return (ATO or ATC)	- Air to open (ATO) or Air to close (ATC) - Safe in power or air failure	Critical processes, ESD systems

NOTE: • For assistance in actuator sizing and selection, please contact ALFACOM.

INSTALLATION GUIDELINES



Follow these general guidelines to ensure proper installation and reliable operation of your AMT Series actuator.

1. INSPECT BEFORE INSTALLATION  Inspect the actuator for any damage that may have occurred during transport.	2. MOUNTING POSITION  Install in any position. Ensure adequate support and secure mounting.	3. COUPLING ALIGNMENT  Ensure proper alignment between actuator output and valve stem.	4. AIR SUPPLY CONNECTION  Connect to clean, dry air supply. Use appropriate fittings and tubing.	5. AIR QUALITY  5. AIR QUALITY Use clean, dry air filtered so the maximum particle size is less than 30 µm. Routine lubrication is not required.
6. PRESSURE SETTINGS  Ensure air supply pressure is within the actuator operating range.	7. LIMIT SETTINGS  Set open and close positions using the limit indicators or positioner.	8. LEAK TEST  Pressurize and check for leaks at all connections.	9. FUNCTION TEST  Cycle the actuator several times to verify smooth operation.	10. SAFETY CHECK  Ensure all safety devices are operational before putting the system into service.

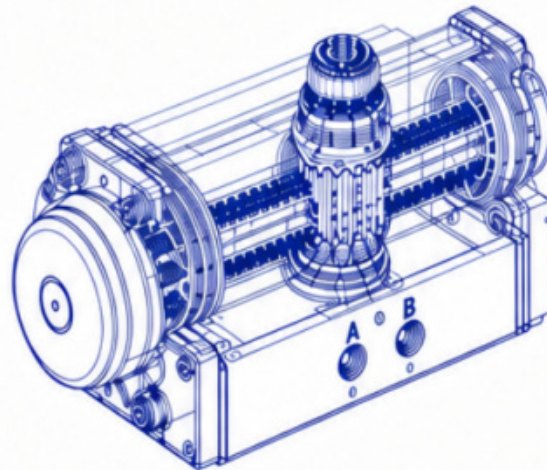


CAUTION: Depressurize the air supply and isolate the actuator from the process before installation, maintenance or any adjustments.

RECOMMENDED TOOLS	NOTES
- Wrenches and hex keys - Torque wrench - Air hose and fittings - Pressure gauge - Leak detection solution	- Refer to the actuator and valve manuals for specific mounting dimensions. - Maintain regular inspection and maintenance for optimum performance. - Contact ALFACOM for any special installation requirements.

MAINTENANCE GUIDELINES

Regular maintenance ensures long service life and reliable performance of your AMT Series actuator.



1. VISUAL INSPECTION  Regularly inspect the actuator for external damage, leakage, corrosion or loose fasteners.	2. AIR SUPPLY CHECK  Check air pressure regularly and ensure it is within the recommended operating range.	3. FACTORY LUBRICATION The actuator is factory lubricated. Under normal operating conditions, no routine re-lubrication is required. levels.	4. FASTENER TIGHTNESS  Check all mounting bolts and fasteners for tightness. Retighten if necessary.	5. STROKE AND OPERATION CHECK  Verify full stroke operation and smooth movement. Check for any unusual noise or resistance.
6. SEAL INSPECTION  Inspect seals and O-rings for wear, damage or leakage. Replace if required.	7. CLEANING  Clean the actuator exterior and remove any dust, dirt or contaminants.	8. CONNECTION CHECK  Check all air connections and fittings for leaks. Tighten or replace if necessary.	9. PERFORMANCE MONITORING  Monitor actuator performance and record any changes in operation.	10. SERVICE INTERVAL  Follow recommended maintenance intervals based on operating conditions and application.



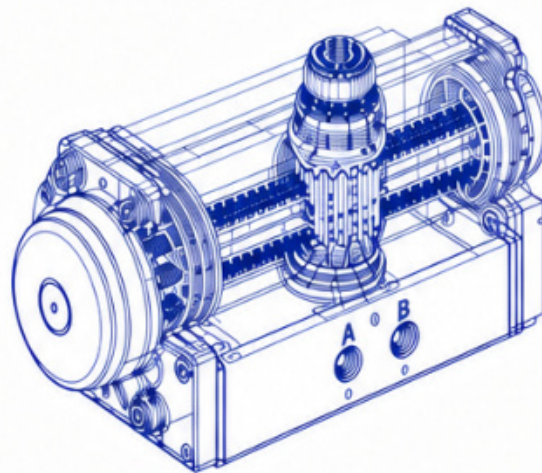
NOTE: Maintenance frequency depends on operating conditions. For harsh environments or continuous operation, inspect more frequently.

MAINTENANCE ITEM	RECOMMENDED FREQUENCY	
Visual Inspection	Not required*	Verify pressure and filtration.
Air Supply Check	Weekly	No routine lubrication under normal conditions.
Lubrication	Monthly	Verify pressure, filtration and lubrication.
Fastener Tightness	Monthly	Check lubricator levels and top up if necessary.
Seal Inspection	Every 3 Months	Inspect and tighten mounting bolts and fasteners.
Performance Monitoring	Monthly	Inspect seals and O-rings, replace if worn or damaged.
Full Maintenance Check	Every 6 Months	Monitor operation and record performance data.
		Complete inspection, testing and cleaning.



CAUTION: Depressurize the air supply and isolate the actuator from the process before maintenance or any adjustment.

TROUBLESHOOTING GUIDE



This guide helps identify common issues and suggests possible causes and solutions for your AMT Series actuator.

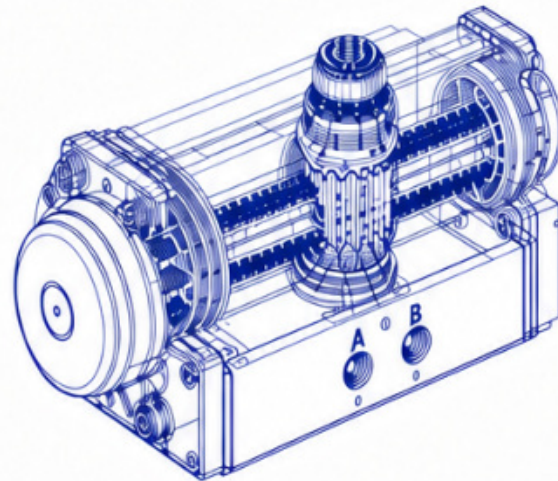
PROBLEM	POSSIBLE CAUSES	POSSIBLE SOLUTIONS	NOTES / CHECK POINTS
 1. ACTUATOR DOES NOT MOVE	- No air supply - Incorrect wiring (for solenoid valve) - Blocked air passages - Internal damage	- Check air supply and pressure - Check solenoid valve operation and wiring - Clean air passages and fittings - Inspect actuator internals and repair if needed	- Verify air pressure at actuator inlet - Check for indicator movement on valve - Ensure manual override (if available) works
 2. INSUFFICIENT TORQUE OUTPUT	- Low air pressure - Air leaks - Incorrect actuator sizing - Worn internal components	- Increase air pressure within operating range - Check and fix air leaks - Verify actuator sizing for application - Inspect and replace worn components	- Check pressure at actuator during operation - Ensure all fittings are tight - Confirm valve torque requirement
 3. AIR LEAKAGE	- Loose connections - Damaged seals or O-rings - Worn piston seals - Cracked housing	- Tighten all connections - Replace seals and O-rings - Replace piston seals - Inspect housing and replace if damaged	- Use leak detection solution to identify leaks - Check both actuator ports (A and B)
 4. EXCESSIVE NOISE DURING OPERATION	- Exhaust restriction - High operating pressure - Worn internal components - Loose fasteners	- Ensure exhaust ports are clear - Operate within recommended pressure range - Inspect and replace worn components - Tighten fasteners	- Check silencers/mufflers if installed - Verify mounting is secure
 5. OVERHEATING	- High cycle rate - High ambient temperature - Insufficient lubrication - Dirty environment	- Reduce cycle rate if possible - Improve ventilation or cooling - Lubricate as recommended - Clean actuator exterior	- Monitor temperature during operation - Refer to operating temperature range specifications
 6. INCONSISTENT STROKE / POSITION	- Irregular air supply - Incorrect limit settings - Internal wear - Contamination inside actuator	- Check and stabilize air supply - Adjust limit stops or positioner - Inspect internal wear and replace parts - Clean internal components	- Use position indicator to verify stroke - Check positioner calibration (if applicable)

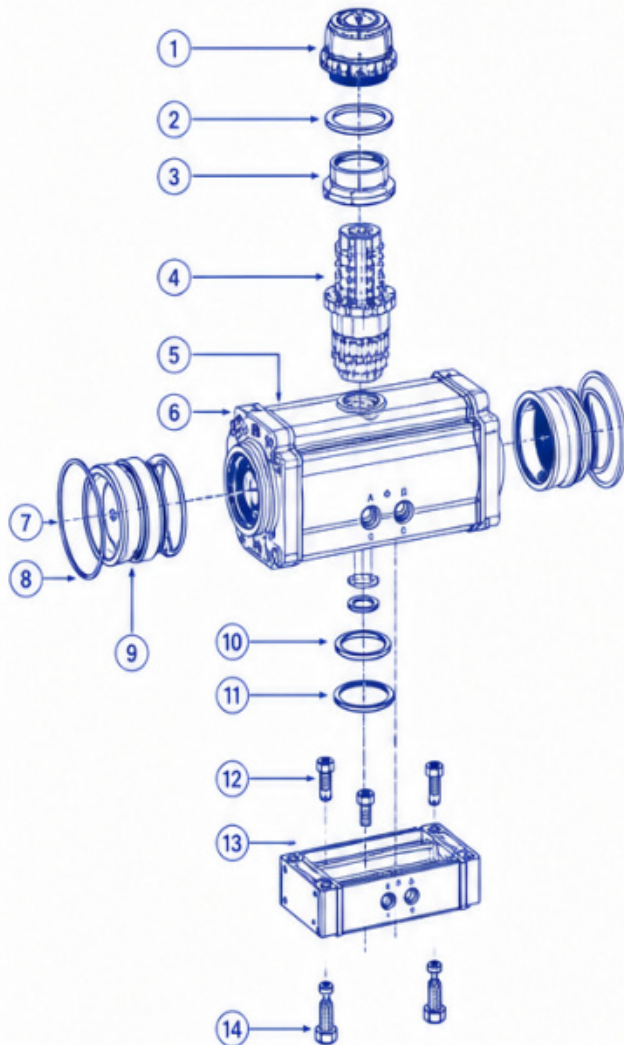


NOTE: If the problem persists after following the suggested solutions, please contact ALFACOM for technical support.

EXPLODED VIEW AND PARTS LIST

The exploded view below shows the main components of the AMT Series actuator. Refer to the parts list for identification and ordering information.



EXPLODED VIEW		PARTS LIST			
		NO.	PART NAME	MATERIAL	QTY.
		①	Position Indicator	Polycarbonate	1
		②	Indicator O-Ring	NBR	1
		③	Travel Stop	POM	1
		④	Pinion Shaft	Alloy Steel	1
		⑤	Actuator Body	Aluminum Alloy (Anodized)	1
		⑥	End Cap	Aluminum Alloy (Anodized)	2
		⑦	Piston	Aluminum Alloy	2
		⑧	Piston Seal	NBR	2
		⑨	Piston Guide Ring	POM	2
		⑩	Wear Pad	POM	2
		⑪	Body O-Ring	NBR	2
		⑫	End Cap Bolt	Stainless Steel	8
		⑬	Bottom Cover	Aluminum Alloy (Anodized)	1
⑭	Bottom Cover Bolt	Stainless Steel	2		



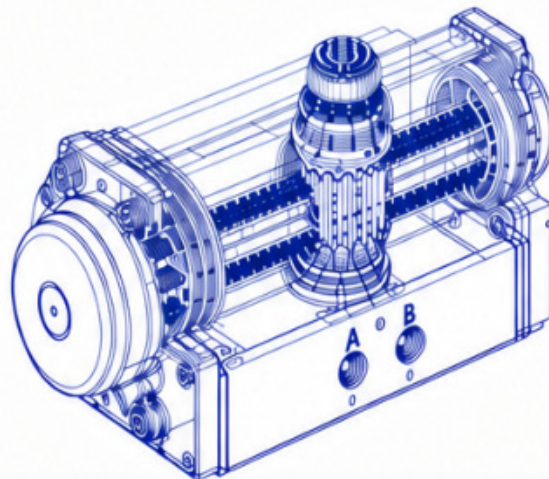
NOTE: Parts are subject to change without notice. For ordering, please provide actuator model and serial number.



Contact ALFACOM for spare parts availability and pricing.

SPECIAL ROTATION

120° / 135° / 180°



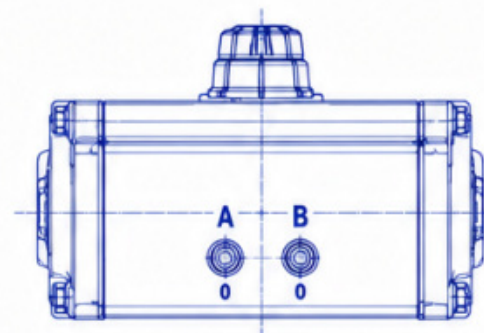
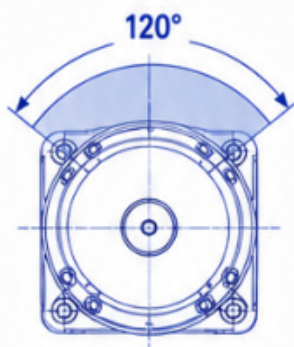
AMT Series actuators are available in special rotation angles to suit various valve requirements. Standard rotation is 90°. The options below are available upon request.

120° ROTATION

For valves that require 120° rotation.

Typical Application:

3-way ball valves,
special quarter-turn valves.

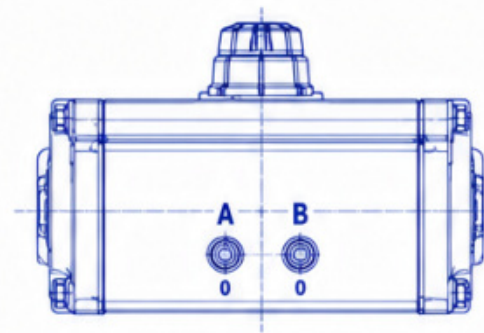
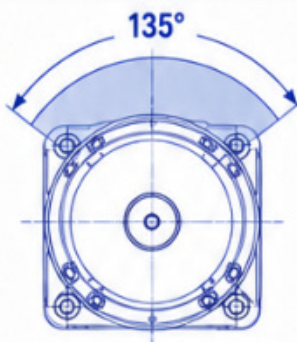


135° ROTATION

For valves that require 135° rotation.

Typical Application:

Butterfly valves,
multi-port valves.

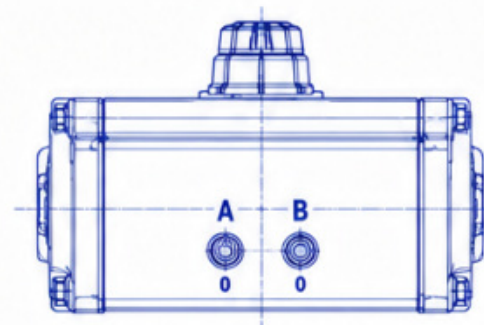
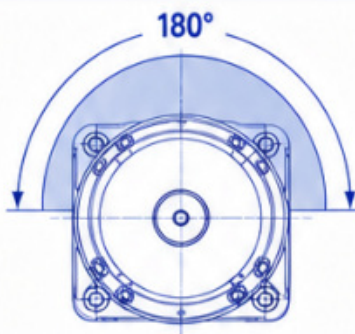


180° ROTATION

For valves that require 180° rotation.

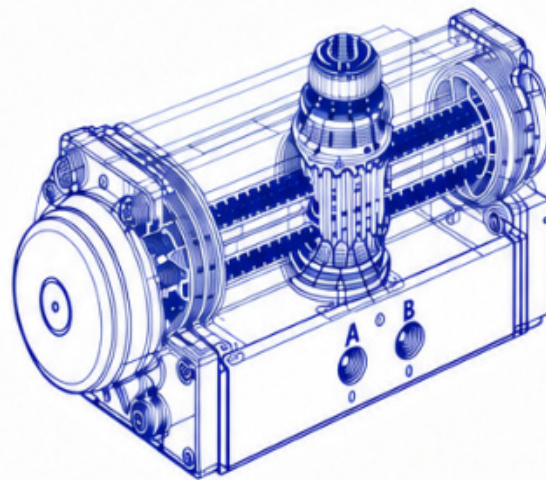
Typical Application:

Full rotation butterfly
valves, dampers.



NOTE: Special rotation options are available upon request.
Please contact ALFACOM for availability and lead time.

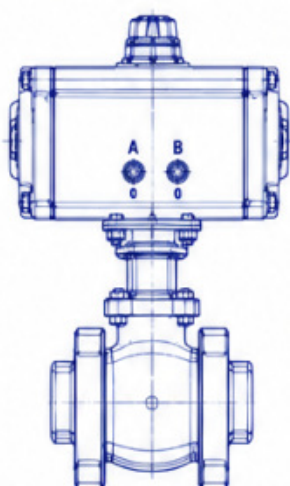
TYPICAL VALVE ASSEMBLIES



AMT Series actuators can be mounted on various quarter-turn valves.

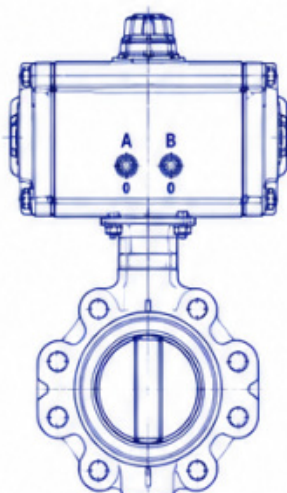
The examples below show common assembly configurations.

1. BALL VALVE Direct Mount



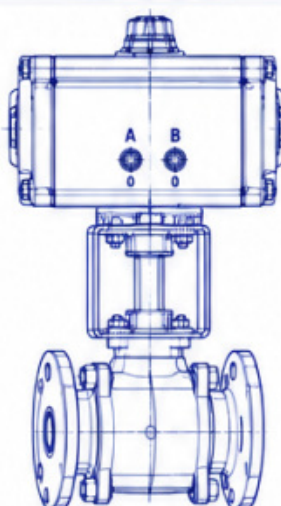
- Direct mounting, no bracket
- Compact and lightweight
- Ideal for small to medium size ball valves

2. BUTTERFLY VALVE Direct Mount



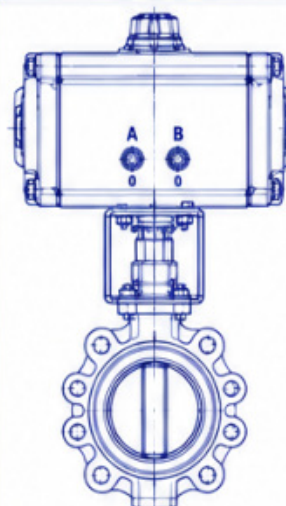
- Direct mounting to valve shaft
- Suitable for wafer and lug type
- High performance and reliable operation

3. BALL VALVE With Bracket



- ISO 5211 mounting bracket
- Allows for positioner, limit switch or accessories
- Recommended for larger actuators and valves

4. BUTTERFLY VALVE With Bracket

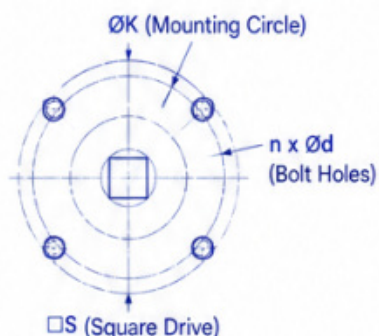


- ISO 5211 mounting bracket
- Flexible configuration with accessories
- Suitable for critical applications

MOUNTING STANDARD

AMT actuators are designed in accordance with the following international standards:

- ISO 5211 – Actuator mounting interface
- NAMUR – Solenoid valve interface
- VDI / VDE 3845 – Accessory mounting
- EN 15714-3 – Pneumatic actuators



ACCURATE ALIGNMENT
Precise mounting for optimal performance.



STRONG & RELIABLE
Robust connection for demanding applications.



EASY INSTALLATION
Standardized interfaces for quick and simple assembly.

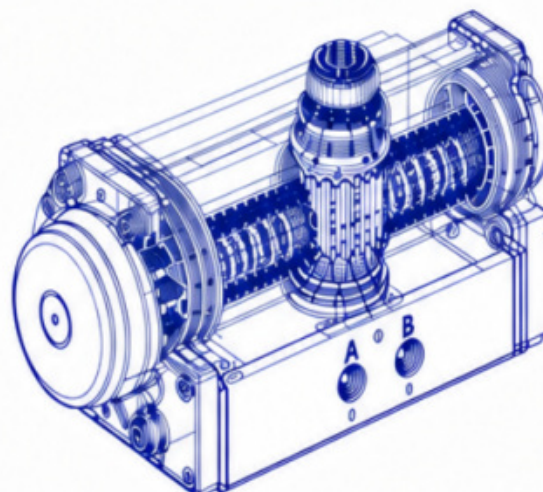


NOTE: Valve and accessories are not supplied by ALFACOM unless otherwise specified. For special requirements, please contact ALFACOM.



Contact ALFACOM for mounting kits, adapters and accessories.

SPRING SET CONFIGURATION

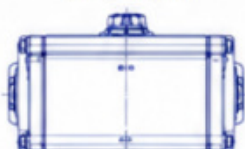


AMT Series actuators use modular spring sets to provide a wide range of fail positions and torque outputs.

Different combinations can be selected to meet specific valve and application requirements.

SPRING ACTIONS

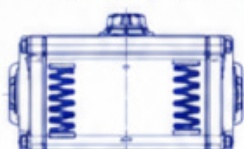
1. DOUBLE ACTING (NO SPRING)



Air to Open
Air to Close

No springs – actuator operates in both directions with equal torque.

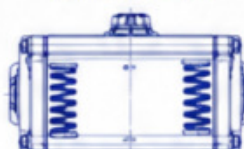
2. SPRING RETURN (AIR TO OPEN)



Air to Open
Spring to Close

Springs return actuator to the closed position when air supply fails.

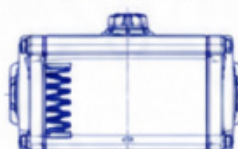
3. SPRING RETURN (AIR TO CLOSE)



Air to Close
Spring to Open

Springs return actuator to the open position when air supply fails.

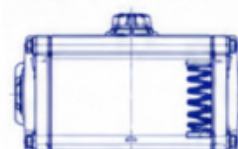
4. SPRING END (AIR TO OPEN)



Air to Open
Spring at End to Close

Springs are located on one side only – compact design with high efficiency.

5. SPRING END (AIR TO CLOSE)



Air to Close
Spring at End to Open

Springs are located on one side only – compact design with high efficiency.

Standard spring direction is for clockwise rotation to close. For counter-clockwise rotation, please contact ALFACOM.

VALID AMT MODEL RANGE & SPRING SET REFERENCE

Use the spring-return torque tables on pages 12-14 to select spring quantity for the required output torque.

AMT-032

AMT-040

AMT-052

AMT-063

AMT-075

AMT-083

AMT-092

AMT-105

AMT-115

AMT-125

AMT-140

AMT-160

AMT-190

AMT-210

AMT-240

AMT-270

AMT-300

AMT-350

AMT-400

NOTES

- AMT-040 spring return uses SR2 in the manufacturer reference configuration.
- For AMT-052 through AMT-400, select the spring quantity from the torque tables on pages 12-14.
- Do not use unlisted model numbers or theoretical spring-strength tables for sizing.



NOTES

- Torque values are theoretical at 20°C.
- Actual torque may vary depending on configuration, accessories and operating conditions.
- For special spring combinations not listed above, please contact ALFACOM.



HOW TO ORDER

Please specify the following when ordering:

- Actuator model
- Spring action (1-5)
- Spring strength (L / M / H / XH)
- Rotation direction (Clockwise / Counter-Clockwise)

PRECISION. RELIABILITY. CONTROL.

Alfatic AMT Series actuators deliver trusted performance and long service life in the most demanding applications.

**Engineered to perform.
Built to last.**



ACCURATE CONTROL

Consistent and precise operation for optimal performance.



STRONG & DURABLE

Robust construction for reliable operation in harsh environments.



EASY MAINTENANCE

Modular design for quick service and minimal downtime.



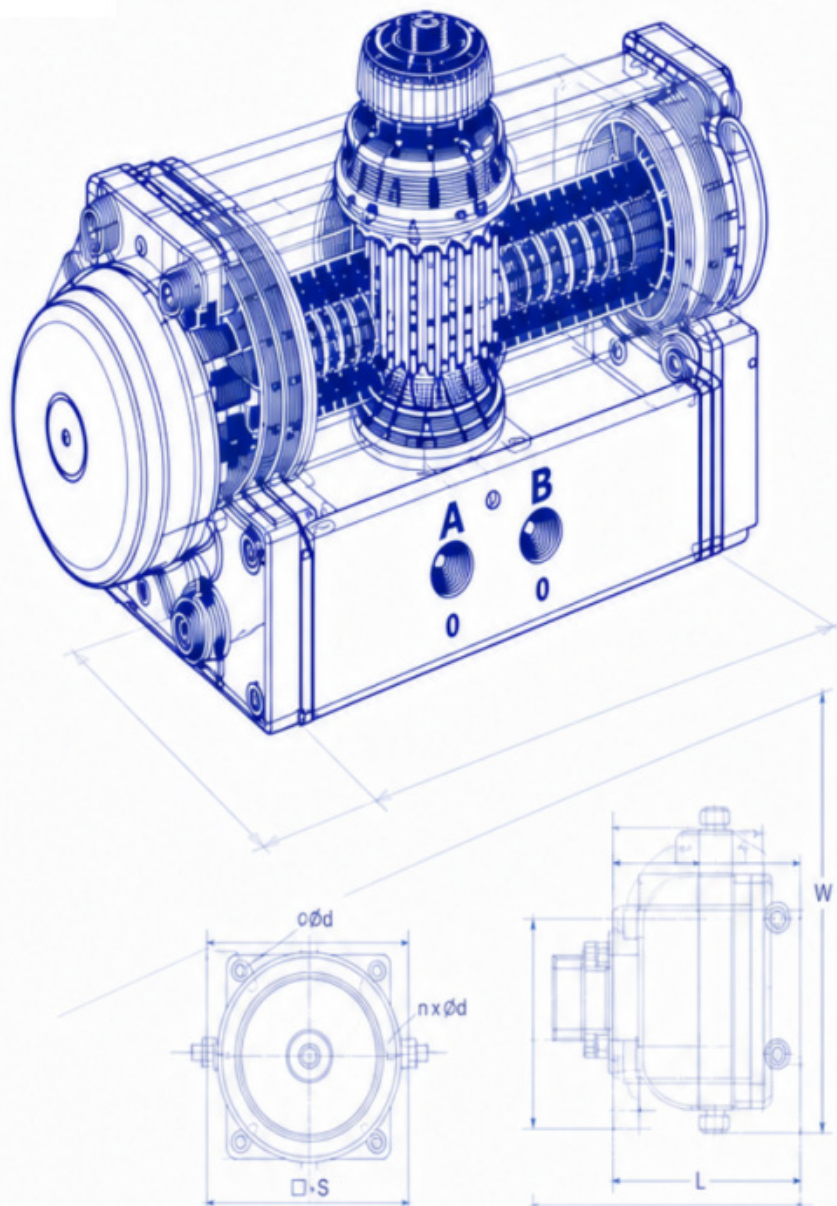
FLEXIBLE & VERSATILE

Multiple configurations and options to suit a wide range of valves and applications.



GLOBAL STANDARDS

Designed and manufactured in accordance with international standards.



THE POWER BEHIND EVERY QUARTER-TURN

THANK YOU FOR CHOOSING ALFAMATIC.

For more information, please contact ALFACOM.



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