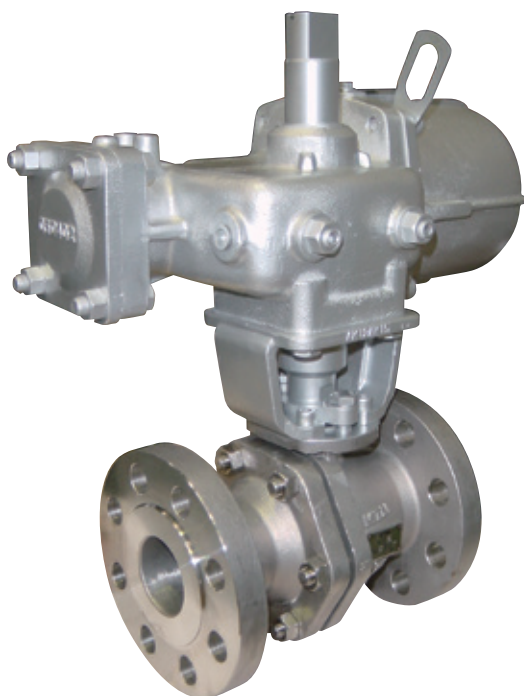


KTM PNEUMATIC ACTUATORS

AGN SERIES

Rugged and highly reliable pneumatic actuator with outstanding strength and durability for small and medium sized valves



FEATURES

- Compact rack and pinion design provides simple construction and constant output torque throughout the 90° stroke
- ISO 5211 mounting pattern to provide the greatest flexibility for valve adaptation
- NAMUR drive slot allows for simple and direct mounting of accessories
- Precision manufacturing of rack and pinion ensures efficient tooth engagement and provides positive piston thrust
- Minimal number of rotating parts for reduced air consumption
- Interchangeable spring return sets according to each operating pressure/torque:

Standard:	AGN-S	0.4 to 0.7 MPa
Low pressure type:	AGN-R	0.2 to 0.6 MPa
High torque type:	AGN-D	0.4 to 0.7 MPa

GENERAL APPLICATIONS

- Suitable for actuation of several types of quarter-turn valves
- Available for using at heavy-duty process because of its compact, simple and durable design
- Adequate for small to middle size valves

TECHNICAL DATA

Actuator model
 Double acting: AGN06, 09, 13
 Spring return*: AGN06S, 09S, 13S

Supply pressure
 Double acting: 0.3 to 0.7 MPa
 Spring return*: 0.4 to 0.7 MPa

Temperature : -20°C to 80°C
 (ambient temperature)

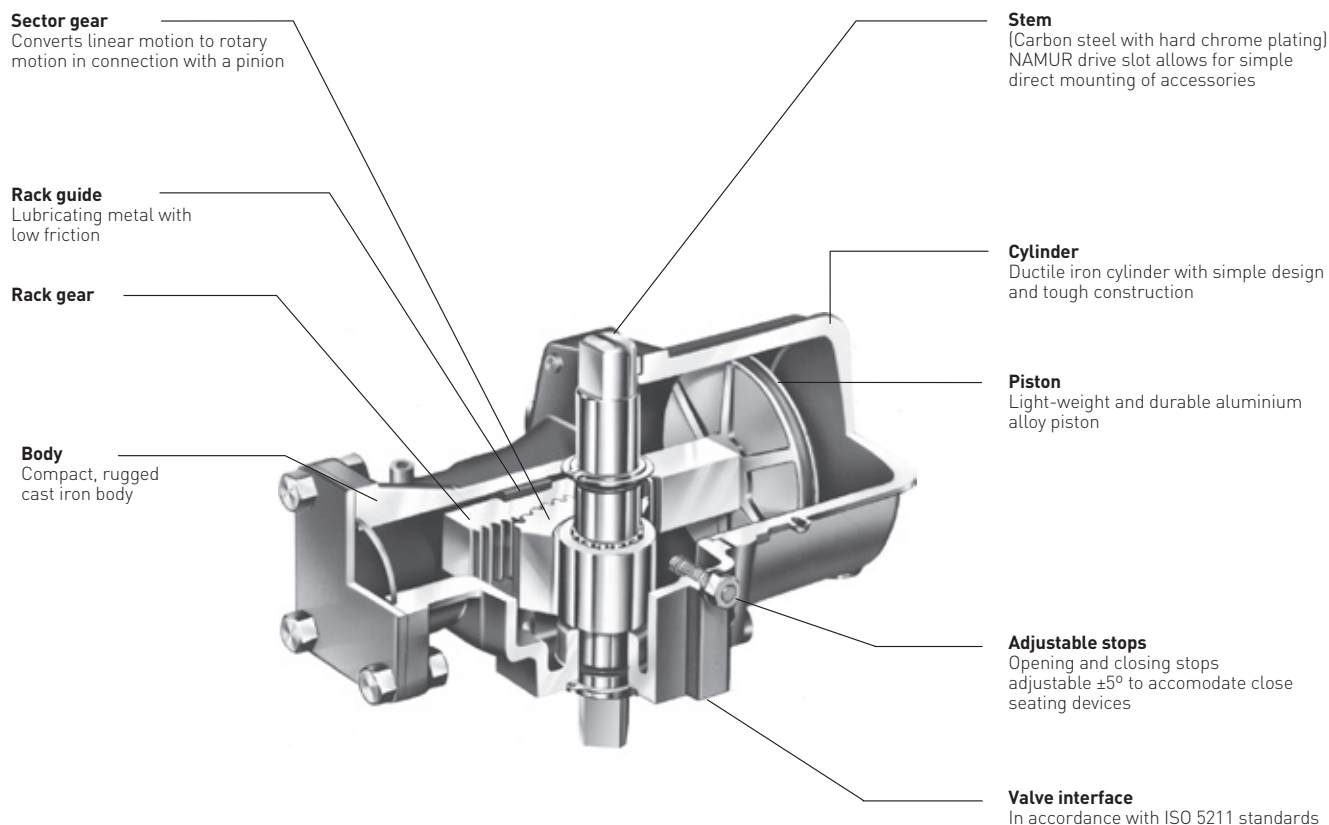
Output torque
 Double acting: 28 to 265 Nm
 Spring return*: 12 to 175 Nm

* Available in low pressure type (R) and high torque type (D). For more details please consult us.

For product options see page 4.

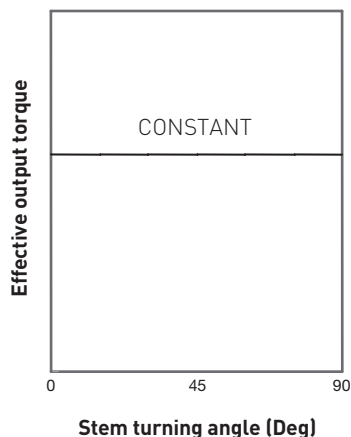
KTM PNEUMATIC ACTUATORS

AGN SERIES (FOR SMALL AND MEDIUM SIZED VALVES)

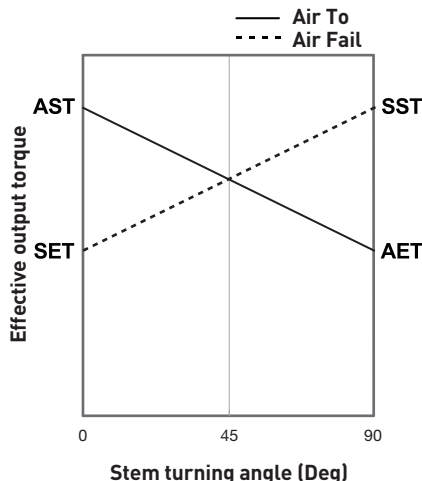


OUTPUT TORQUE TABLE

Double acting type



Spring return type



Double acting		Spring return		
	Nm		Nm	
			AET/SET	AST/SST
AGN06	28	AGN06S (R)	12	18
AGN09	82	AGN09S (R)	35	52
AGN13	265	AGN13S (R)	106	175

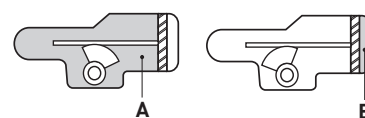
NOTE:

The above table shows output torque at the standard supply pressure of 0.4 MPa
For more details of high torque type (D), please consult us.

CYLINDER CAPACITY (l)

Model	A	B	A + B
AGN06	0.21	0.16	0.37
AGN09	0.61	0.47	1.08
AGN13	1.90	1.50	3.40

For spring return type please refer to value B



Air consumption V_D , V_S

The air consumption V_D , V_S shows the volume of air consumed in a certain time period. For the same size cylinder, air consumption increases in direct proportion to the operating time. The consumption is determined by the formula as shown below. The total air consumption is equivalent to the sum obtained for the total units.

Air consumption of double acting cylinder (Nl):

$$V_D = (A+B) \{ (P+0.1)/0.1 \} n$$

Air consumption of spring return cylinder (Nl):

$$V_S = B \{ (P+0.1)/0.1 \} n$$

Remarks

V_D : Air consumption of double acting cylinder (Nl)

V_S : Air consumption of spring return cylinder (Nl)

A, B: Cylinder capacity (l)

P: Supply pressure (MPa)

n: Operating cycles in a time period

(One cycle means one reciprocating action)

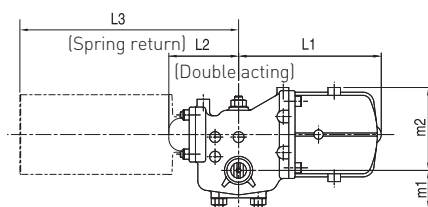
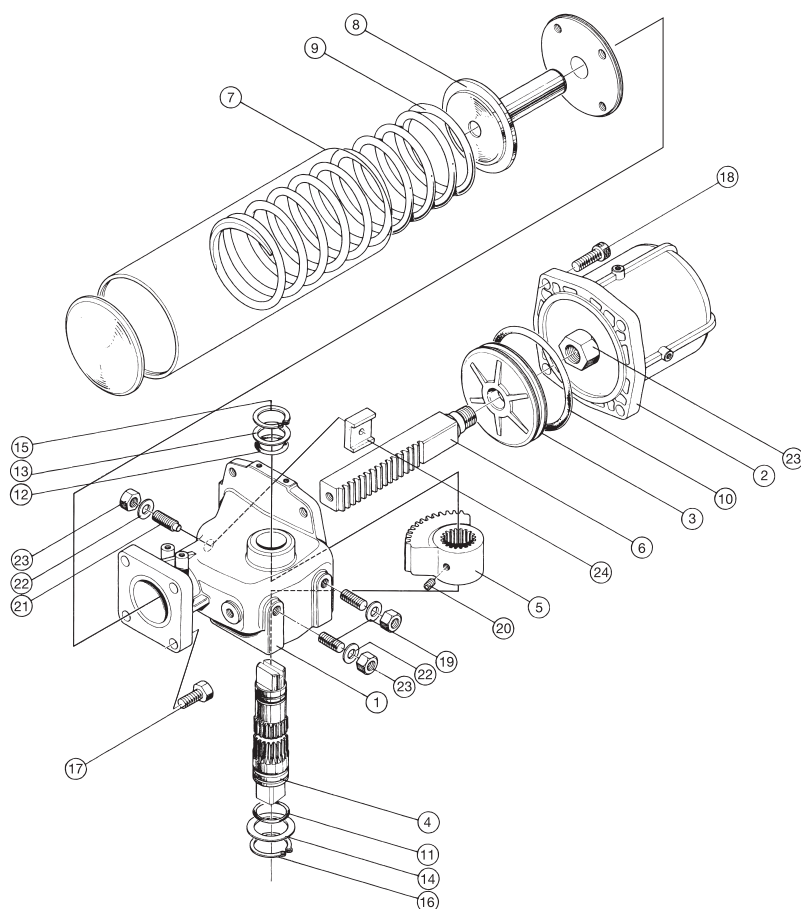
KTM PNEUMATIC ACTUATORS

AGN SERIES (FOR SMALL AND MEDIUM SIZED VALVES)

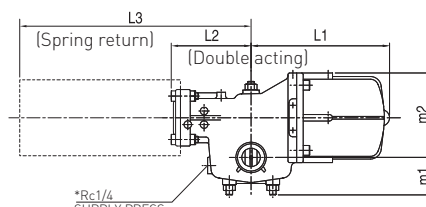
PARTS LIST

No.	Parts name
1	Body
2	Cylinder
3	Piston
4	Stem
5	Sector gear
6	Rack
7*	Spring case
8*	Spring retainer
9*	Spring
10	O-ring
11	O-ring
12	O-ring
13	Thrust bearing
14	Thrust bearing
15	Snap ring
16	Snap ring
17	Hexagonal bolt
18	Socket head bolt
19	Set screw
20	Set screw
21	Set screw
22	Gasket
23	Nut
24	Rack guide

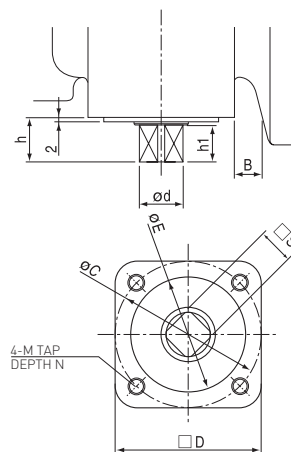
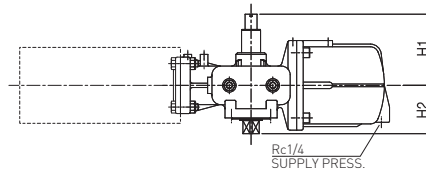
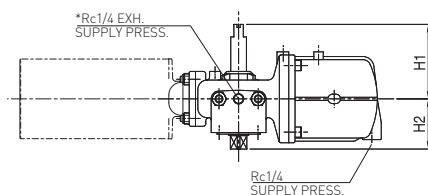
No. 7, 8 and 9 show spring set



*Exhaust port for spring return type
AGN06 (S), AGN09 (S)



*Exhaust port for spring return type
AGN13 (S)



Bottom works

DIMENSIONS (mm)

Model	m1	m2	L1	L2	(L3)	H1	H2	□ D	Ød	□ S	h	h1	ØC	ØE	M	N	B	ISO 5211	Weight (kg)
AGN06 (S)	42	79	137	64	(194)	78	56	60	18	14	18	14	50	35	M6	12	7.0	F05	3.4 (5.9)
AGN09 (S)	49	106	182	89	(279)	95	64	70	21	17	21	17	70	55	M8	12	13.5	F07	6.4 (11.7)
AGN13 (S)	70	156	255	147	(426)	131	89	96	30	24	29	24	102	70	M10	16	14.0	F10	18.9 (31.9)

NOTE 1: Data in parenthesis () apply to spring return type

NOTE 2: Available also for single acting type in low pressure type (R) and high torque type (D). For more details please consult us.

KTM PNEUMATIC ACTUATORS

AGN SERIES (FOR SMALL AND MEDIUM SIZED VALVES)

SELECTION GUIDE

Example	AGN	06	S	B	(000)
Actuator type					
AGN					
Actuator size					
06					
09					
13					
Operation type	Description (Supply pressure)				
Blank	Double acting type (0.3 to 0.7 MPa)				
S	Spring return type - Standard (0.4 to 0.7 MPa)				
R	Spring return type - Low pressure type (0.2 to 0.6 MPa)				
D	Spring return type - High torque type (0.4 to 0.7 MPa)				
Specials (Option)	Description				
Blank	No specials				
B	Stainless steel external bolts and nuts				
K	For high temperature (0°C to 120°C)				
T	For low temperature (-45°C to 60°C)				
Q	High speed / frequency (500,000 cycles): Available for AGN13 double acting type High speed: Available for AGN13 spring return type				
W	Two step motion				
Accessories (Option)	Description				
Blank	Without any accessories				
CO	ESDV of CO ₂ gas type: Available for AGN13 only				
H	For double acting type with manual override handle				
HS	For single acting type with manual override handle				
L	With lift-limiting unit				
PS	Partial stroke test				

OPTIONS

- Stainless steel external bolts and nuts
- For control valves
- High temperature service (0°C to 120°C)
- Low temperature service (-45°C to 60°C)
- Air connection port; NPT (with adaptor)
- High-speed / high-frequency
- Two step motion (double cylinder type / positioner type)
- ESDV of CO₂ gas type (for AGN13)
- Manual override handle
- Lift-limiting unit
- Partial stroke test
- Limit switch / proximity switch mounting
- Solenoid valve mounting
- Positioner mounting