

**Warning:** filectime(): stat failed for  
/var/www/vhost/www.omal.it/htdocs/https://www.omal.it./FilesProdotti/RICEVUTADEPOSITOF.T.ATEXN.AP-18.pdf in  
/var/www/vhost/www.omal.it/htdocs/prodotto-printable.php on line 65

**Warning:** filectime(): stat failed for /var/www/vhost/www.omal.it/htdocs/https://www.omal.it./FilesProdotti/34-Certificate-202029301-OMAL-AttuatoriSRSRNDADAN.pdf in /var/www/vhost/www.omal.it/htdocs/prodotto-printable.php on line 65

**Warning:** filectime(): stat failed for /var/www/vhost/www.omal.it/htdocs/https://www.omal.it./FilesProdotti/TAP00001G5-revision1.pdf in /var/www/vhost/www.omal.it/htdocs/prodotto-printable.php on line 65

**Warning:** filectime(): stat failed for /var/www/vhost/www.omal.it/htdocs/https://www.omal.it./FilesProdotti/UITG0G01-UITG0G01ATX-FogliettoIstruzioniAttuatoriAGO.pdf in /var/www/vhost/www.omal.it/htdocs/prodotto-printable.php on line 65

**Warning:** filectime(): stat failed for /var/www/vhost/www.omal.it/htdocs/https://www.omal.it./FilesProdotti/UMAAPV00-AGOHANDWHEEL-attuatoriconvolantinointegrato-IT.pdf in /var/www/vhost/www.omal.it/htdocs/prodotto-printable.php on line 65

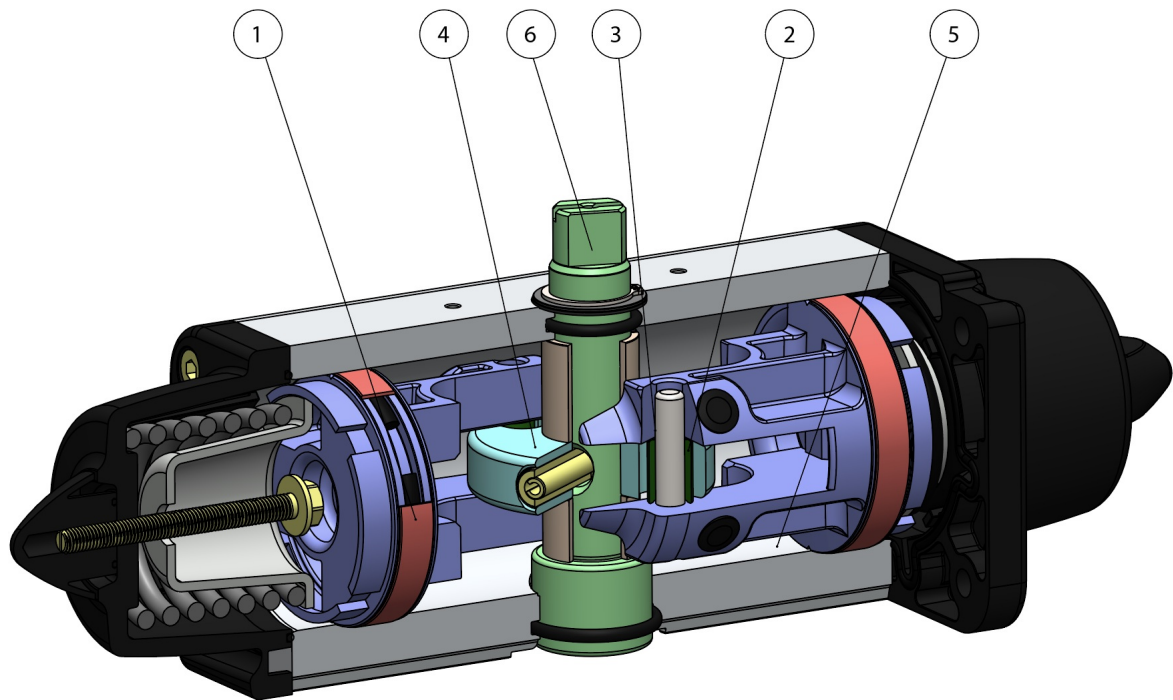
## AGO HANDWHEEL - SR with integrated handwheel

Macro Pneumatic actuators

Category AGO HANDWHEEL - Actuators with  
integrated handwheel



benefits



#### 1. Energized and self-lubricated strips

Less friction between piston and cylinder

It prevents the bonding of the seal to the cylinder even after long periods of inactivity

#### 2. Slots, bushes and pins made by steel with hardness higher than 50 HRC

Higher resistance to the forces inside the actuator

#### 3. Rolling friction between piston and slot

Less friction

#### 4. Scotch yoke with rolling friction (transforming rotary motion into linear motion using piston and shaft without teeth/gears)

Reduced friction between piston and shaft with consequently less wear on the relevant parts

Empowered Breakaway Torque (BTO & BTC)

Smaller volume/size than rack and pinion actuators (with the same torque) therefore less space required for installation

Less weight than the rack and pinion (-30% kg / Nm), with consequent savings on the construction sizing of the plant/equipment

Lower air consumption compared to the rack and pinion actuators (-40% air cm<sup>3</sup>/Nm for Double Acting and -20% air cm<sup>3</sup>/Nm for Spring Return) therefore less load on the compressor or the possibility of using a smaller compressor's size.

#### 5. Rolled cylinder

Less wear of the energized ties thanks to the low roughness of the surface

#### 6. Stainless Steel shaft

Higher corrosion resistance

#### From sizes bigger than DAN15, NAMUR interface for solenoid valve is already integrated

No need for extra plate.

#### 100% in- house manufacturing process technology

Maximum control and accuracy in all the stages of the manufacturing process

#### ATEX Certificate

Installation is allowed in a potential explosive environment

#### Up to SIL 3 Certified

Guarantee of the high level of functional safety.

## features

### TECHNICAL FEATURES

Torque from 30 Nm to 1920 Nm.

Mounting flange according to EN ISO 5211

F05 - F07 - F10 - F12 - F14 - F16.

In compliance with EN 15714-3

Rotation angle: 92° (-1°, +91°)

Torque: the return torque depends on spring action only notwithstanding the air supply. The spring is provided in four different sizes (see table).

The code numbers after the letters SRNV, always correspond to the breakaway torque in Nm by 5,6 bar air supply.

The actuator automatic closing takes place in clockwise direction by means of its springs. ATEX version in conformity with directive 2014/34/EU. Please add YX at the end of the code for ATEX version.

### WORKING CONDITION

Temperature: from -20°C to +80°C. (Special versions: high temperature: -20°C +150°C; low temperature: -50°C +60°)

Air supply: 5,6 bar; maximum 8,4 bar.

Actuating media: filtered dry compressed air, not necessarily lubricated.

In case of lubricated air, either non detergent oil, NBR compatible oil, must be used.

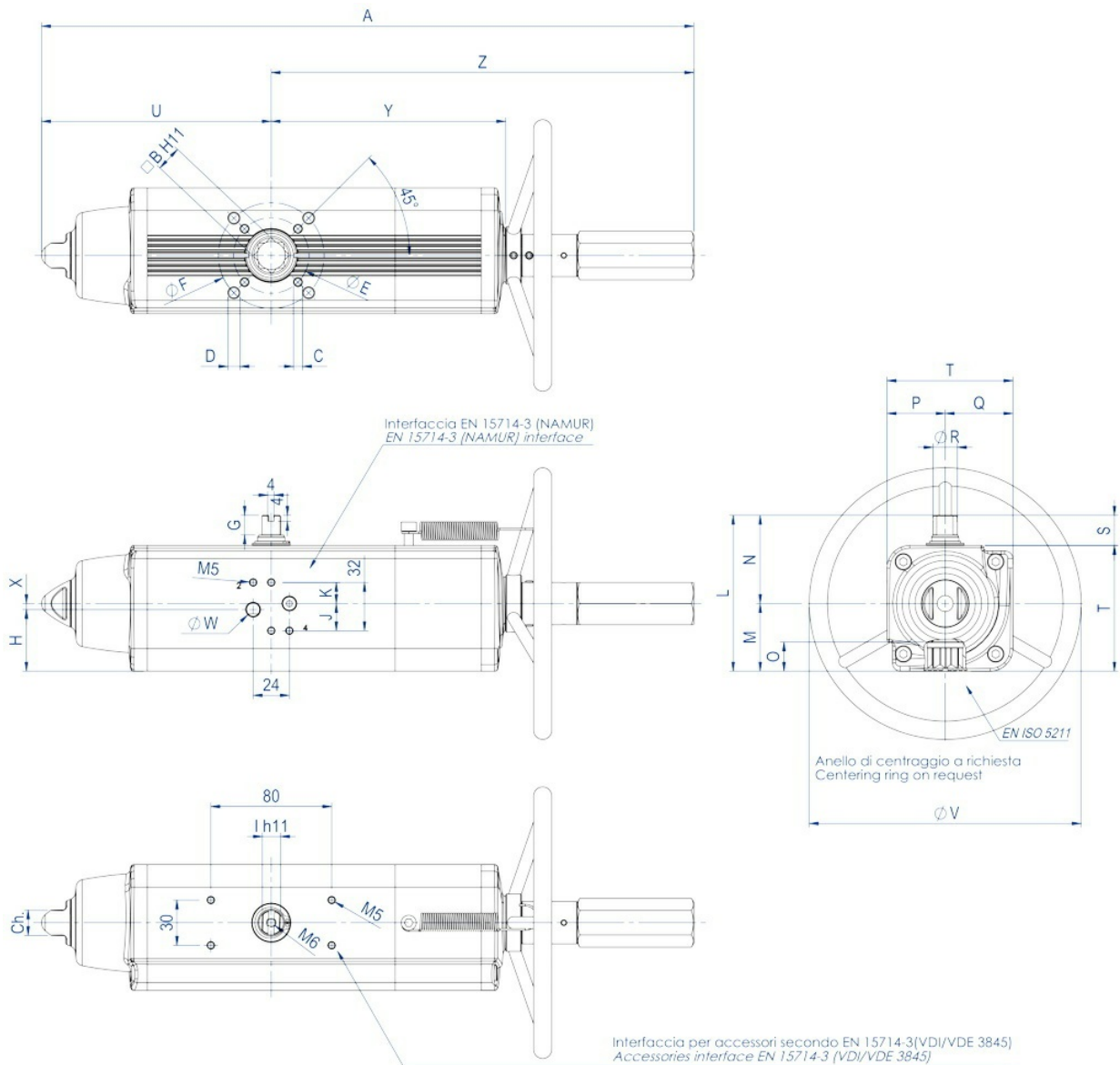
Once required the quarter turn pneumatic actuator can be equipped with a manual handwheel.

The device can be integrated either in Double Acting and Spring Return versions. For the proper functioning of the system and for the mechanical integrity of the device is essential to ensure that the pneumatic actuator is disconnected from the power lines of compressed air before performing any operation using the manual handwheel.

The manual handwheel acts on the transmission of the primary mechanical transmission of the pneumatic actuator and with torques applied to the handwheel according to EN 12570 it releases output torque of equal value of the nominal torque of the actuator.

## dimensions

### SRNV 30 ÷ SRNV 240



**DATA SHEET SRNV 30 ÷ SRNV 240**

<b>Code</b>	<b>SRNV0030401S</b>	<b>SRNV0030402S</b>	<b>SRNV0053401S</b>	<b>SRNV0060401S</b>	<b>SRNV0090401S</b>	<b>SRNV0120401S</b>
Spare Seals	KGGI0016VX	KGGI0016VX	KGGI0060VX	KGGI0018VX	KGGI0019VX	KGGI0022VX
<b>Size</b>	<b>SRNV 30</b>	<b>SRNV 30</b>	<b>SRNV 53</b>	<b>SRNV 60</b>	<b>SRNV 90</b>	<b>SRNV 120</b>
ISO	F04	F05/F07	F05/F07	F05/F07	F07/F10	F07/F10
A	392,7	392,7	431,4	457,7	534,9	558,5
B	14	14	17	17	22	22
C x depth	M5x8	M6x9	M6x9	M6x9	M8x12	M8x12
D x depth	-	M8x12	M8x12	M8x12	M10x15	M10x15
E	42	50	50	50	70	70
F	-	70	70	70	102	102
G	13	13	13	13	16	17
H	33,7	33,7	40,8	42,8	52,5	56,1
J	18	18	18	18	18	18
K	14	14	14	14	14	14
I	10	10	12	12	15	15
L	90,4	90,4	103,3	107	137,5	141,1
M	37,7	37,7	44,8	46,8	56,5	60,1
N	52,7	52,7	58,5	60,2	81	81
O	16,5	16,5	19,3	19,3	24,8	24,8
P	32,7	32,7	38,5	40,2	51	51
Q	37,7	37,7	44,8	46,8	56,5	60,1
R	14,5	14,5	16,2	18	20,2	22,5
S	20	20	20	20	30	30
T	70,4	70,4	83,3	87	107,5	111,1
U	129,4	129,4	152,1	169,3	196,8	204,8
V	180	180	180	180	220	220
W (Gas)	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"
X	4	4	4	4	4	4
Y	137,6	137,6	154,8	163,9	183,5	199,1
Z	263,3	263,3	279,3	288,4	338,1	353,7
Ch	13	13	17	17	22	22
N°of turns*	11	11	13	14	16	18
Weight (Kg)	3,2	3,2	4,5	5,3	6,8	9
Air (dm <sup>3</sup> /cycle)	0,17	0,17	0,3	0,33	0,55	0,8

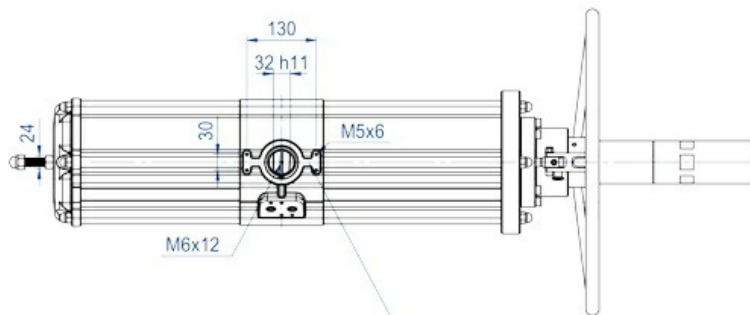
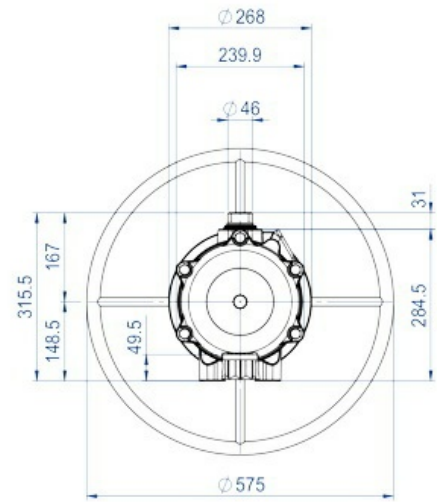
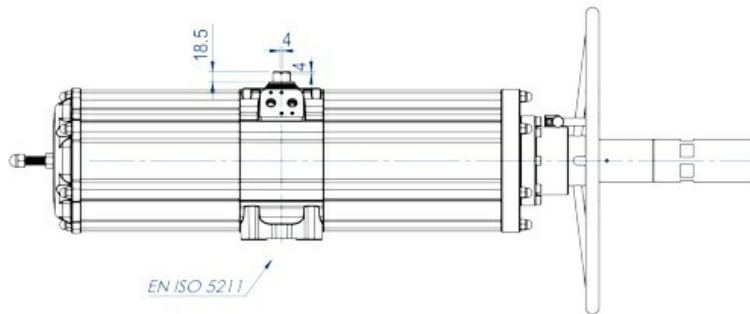
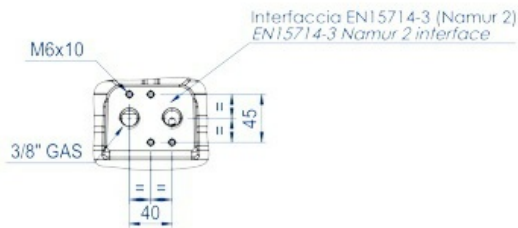
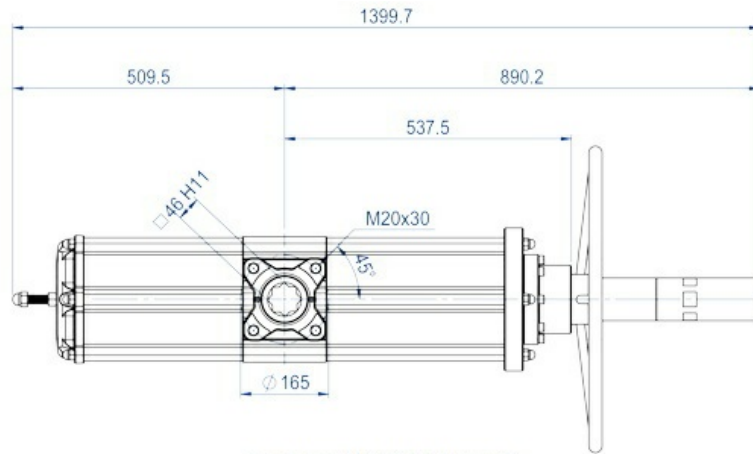
\* Theoretical n° of turns to close/open starting from neutral position.

**DATA SHEET SRNV 360 ÷ SRNV 960**

Code	SRNV0360401S	SRNV0480401S	SRNV0480402S	SRNV0720401S	SRNV0720402S	SRNV0960401S
Spare Seals	KGGI0023VX	KGGI0024VX	KGGI0024VX	KGGI0025VX	KGGI0025VX	KGGI0025VX
<b>Size</b>	<b>SRNV 360</b>	<b>SRNV 480</b>	<b>SRNV 480</b>	<b>SRNV 720</b>	<b>SRNV 720</b>	<b>SRNV 960</b>
ISO	F10/F12	F10/F12	F14	F14	F12	F14
A	810,1	842,4	842,4	1035,4	1035,4	1067,7
B	27	36	36	36	36	46
C x depth	M10x15	M10x15	M16x24	M16x24	M12x18	M16x24
D x depth	M12x18	M12x18	-	-	-	-
E	102	102	140	140	125	140
F	125	125	-	-	-	-
G	19,5	19,5	19,5	19,5	19,5	18,5
H	61,5	78	78	86,5	86,5	99,2
J	16	16	16	16	16	16
K	16	16	16	16	16	16
I	22	24	24	27	27	32
L	178	198	198	216	216	237,7
M	78,5	93,5	93,5	101,5	101,5	114,7
N	99,5	104,5	104,5	114,5	114,5	123,7
O	29,5	38,5	38,5	38,5	38,5	48,5
P	69,5	74,5	74,5	84,5	84,5	93,7
Q	78,5	93,5	93,5	101,5	101,5	114,7
R	31,8	36,5	36,5	41	41	46
S	30	30	30	30	30	30
T	148	168	168	186	186	207,7
U	306,6	324,1	324,1	399	399	414,7
V	350	350	350	400	400	400
W (Gas)	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
X	-	-	-	-	-	-
Y	282,3	297,1	297,1	365,6	365,6	382,7
Z	503,5	518,3	518,3	636,4	636,4	653,7
Ch	27	27	27	36	36	36
N°of turns*	19	20	20	25	25	26
Weight (Kg)	19,5	28,1	28,1	38,8	38,8	50,6
Air (dm3/cycle)	2	2,8	2,8	4,2	4,2	5,9

\* Theoretical n° of turns to close/open starting from neutral position.

**SRNV 1920**



Interfaccia per accessori secondo (EN15714-3 VDI/VDE 3845)  
Accessories interface EN15714-3 (VDI/VDE 3845)

**DATA SHEET SRNV 1920**

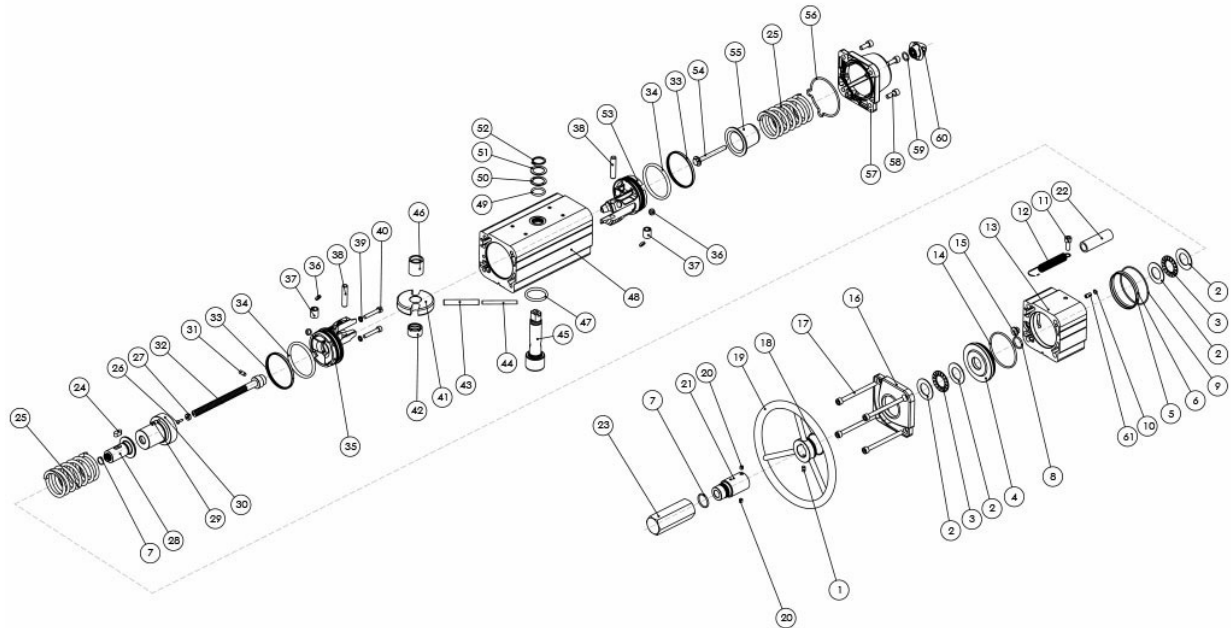
<b>Code</b>	<b>SRNV1920E1608A</b>
Spare Seals	KGGI0230VX
Size	SRNV 1920
ISO	F16
N°of turns*	30
Weight (Kg)	91
Air (dm <sup>3</sup> /cycle)	12,5

\* Theoretical n° of turns to close/open starting from neutral position.



## materials

### SPRING RETURN ACTUATOR COMPONENTS WITH MANUAL INTEGRATED HANDWHEEL - SIZES: UP TO SRNV960



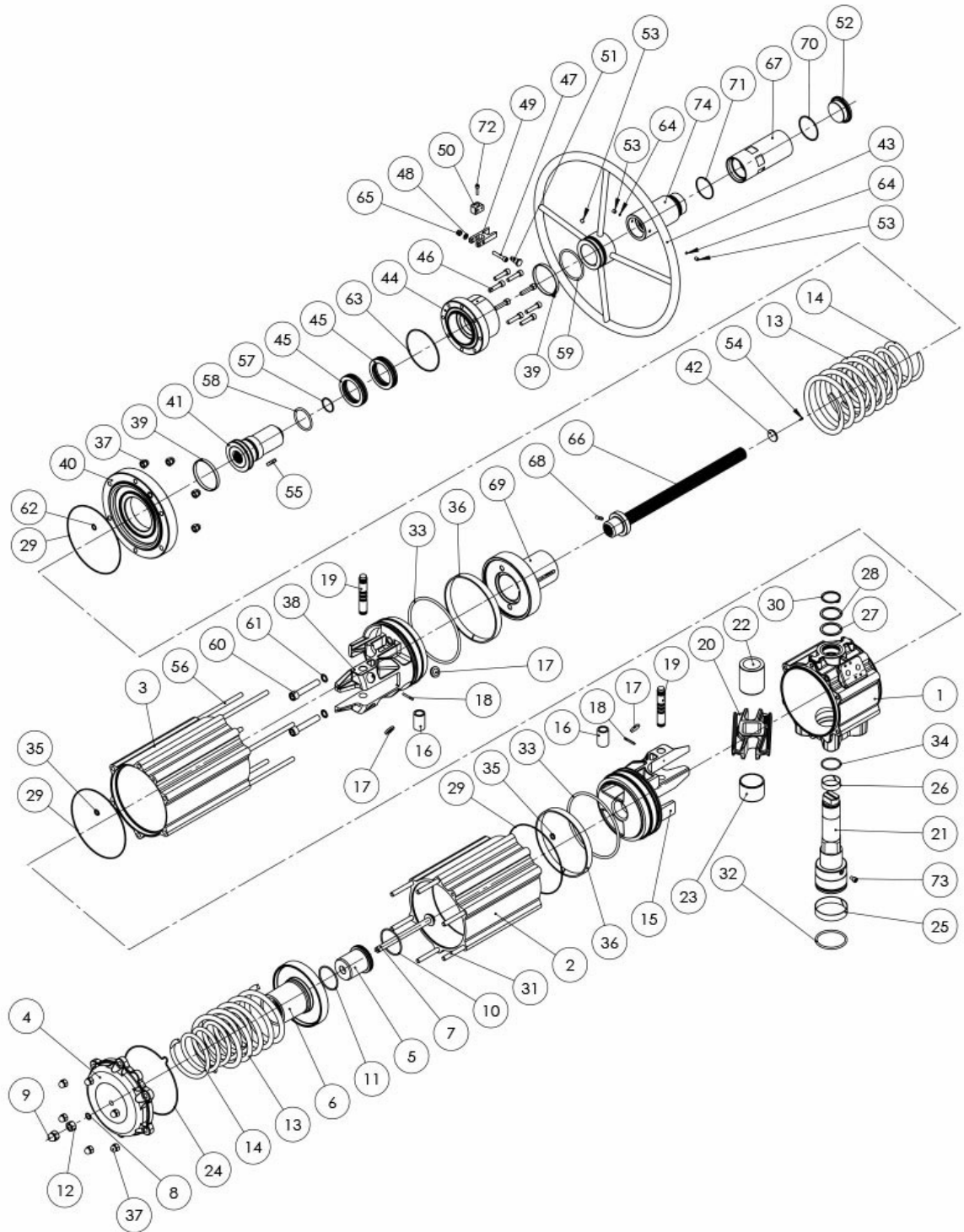
**MATERIALS UP TO SRNV960**

Pos	Denomination	Q.	Material
1	Screw	1	Stainless Steel
2*	Washer for roller bearings	4	Steel alloy
3*	Roller bearings	2	Steel alloy
4	Flange	1	Aluminium alloy
5	Centering ring (Only for SRNV360)	1	Aluminium alloy
6*	O'ring (Only for SRNV360)	1	Nitrilic rubber
7*	O'ring	2	Nitrilic rubber
8*	O'ring	1	Nitrilic rubber
9*	O'ring	1	Nitrilic rubber
10*	O'ring	1	Nitrilic rubber
11	Screw	1	Stainless Steel
12	Spring	1	Stainless Steel
13	Cylinder spacer	1	Aluminium alloy
14*	O'ring	1	Nitrilic rubber
15*	Seal cap	1	Brass+Nitrilic rubber
16	Cap (modified)	1	Aluminium alloy
17	Screw	4	Stainless Steel
18*	O'ring	1	Nitrilic rubber
19	Handwheel for maneuver	1	Steel alloy
20	Set screw	2	Stainless Steel
21	Protecting tube	1	Aluminium alloy
22	Trasparent tube	1	PVC
23	Protecting cap	1	Aluminium alloy
24	Key	1	Steel alloy
25	Spring	2	Steel alloy
26*	Rivet	1	Steel alloy
27*	Indicator	1	Polypropylene

28	Lead nut maneuver	1	Steel alloy
29	Threaded bush (Only for SRNV240)	2	Stainless Steel
30	Special spring cap	1	Aluminium alloy
31	Pin	1	Steel alloy
32	Screw maneuver	1	Steel alloy
33*	Dynamic seal (Piston)	2	Polyurethane
34*	Piston o'ring	2	Nitrilic rubber
35	Piston (modified)	1	Aluminium alloy
36*	Piston's support	4	P.T.F.E. carbo-graphite filled
37	Bush	2	Steel alloy
38	Rotative sleeve	2	Steel alloy
39*	Bounded	2	Steel alloy+Nitrilic rubber
40	Screw	2	Stainless Steel
41	Scotch yoke	1	Steel alloy
42	Shaft support	1	Acetalic resin
43	External elastic pin of the yoke	1	Steel alloy
44	Internal elastic pin of the yoke	1	Steel alloy
45	Shaft	1	Stainless Steel
46	Support bush	1	Acetalic resin
47	Lower sealing shaft	1	FKM
48	Cylinder	1	Aluminium alloy
49	Upper sealing shaft	1	FKM
50	External support ring	1	Acetalic resin
51	Washer	1	Stainless Steel
52	Seeger	1	Stainless Steel
53	Piston (Standard)	1	Aluminium alloy
54	Spring loading screw	1	Stainless Steel
55	Spring cap (Standard)	1	Steel alloy or Aluminium alloy
56*	Cap o'ring	1	Nitrilic rubber
57	Cap (Standard)	1	Aluminium alloy
58	Screw	4	Stainless Steel
59*	O'ring	1	Nitrilic rubber
60	Nut	1	Aluminium alloy
61	Insert for o'ring (Only for SRNV53-120-180-360)	1	Stainless Steel

\* Components of spare part kit

**SPRING RETURN ACTUATOR COMPONENTS WITH MANUAL INTEGRATED HANDWHEEL - SIZE: SRNV1920**



### MATERIALS SRNV1920

Pos	Denomination	Q.ty	Material
1	Cylinder	1	Aluminium alloy
2	Cylinder	1	Aluminium alloy
3	Cylinder	1	Aluminium alloy
4	Cap (Standard)	1	Aluminium alloy
5	Internal spring support	1	Aluminium alloy
6	External spring support	1	Aluminium alloy
7	Spring loading screw	1	Stainless Steel
8*	O'ring	1	Nitrilic rubber

9	Cap Nut	1	Stainless Steel
10	O'ring	1	Nitrilic rubber
11	O'ring	1	Nitrilic rubber
12	Nut	1	Stainless Steel
13	External spring	2	Steel alloy
14	Internal spring	2	Steel alloy
15	Piston (Standard)	1	Aluminium alloy
16	Bush	2	Steel alloy
17*	Piston's support	4	Acetalic resin
18	Pin	2	Steel alloy
19	Rotative sleeve	2	Steel alloy
20	Scotch yoke	1	Steel alloy
21	Shaft	1	Stainless Steel
22	Support bush	1	Acetalic resin
23	Shaft support	1	Acetalic resin
24*	Cap o'ring	1	Nitrilic rubber
25*	Bearing (shaft bottom)	1	P.T.F.E. carbo-graphite filled
26*	Bearing (shaft top)	1	P.T.F.E. carbo-graphite filled
27*	External support ring	1	Acetalic resin
28	Washer	1	Stainless Steel
29*	O'ring	3	Nitrilic rubber
30	Seeger	1	Stainless Steel
31	Screw	6	Stainless Steel
32*	Lower sealing shaft	1	FKM
33*	Piston o'ring	2	Nitrilic rubber
34*	Upper sealing shaft	1	FKM
35*	O'ring	2	Nitrilic rubber
36*	Bearing (piston head)	2	P.T.F.E. Carbo-Graphite filled
37	Nut	12	Stainless Steel
38	Piston (modified)	1	Aluminium alloy
39*	Bearings (Handwheel)	2	Poliuretano
40	Cap (modified)	1	Aluminium alloy
41	Lead nut manuever	1	Steel alloy
42*	Indicator	1	Polypropylene
43	Handwheel for manuever	1	Steel alloy
44	Flange	1	Aluminium alloy
45*	Thrust bearings	2	Steel alloy
46	Screw	8	Stainless Steel
47	Screw	1	Stainless Steel
48	Washer	1	Stainless Steel
49	Closing fork	1	Aluminium alloy
50	Fork support	1	Aluminium alloy
51	Lock wheel	1	Stainless Steel
52	Protecting cap	1	Aluminium alloy
53	Screw	3	Stainless Steel
54*	Rivet	1	Stainless Steel
55	Key	1	Stainless Steel
56	Screw	6	Steel alloy
57*	O'ring	1	Nitrilic rubber
58*	O'ring	1	Nitrilic rubber
59*	O'ring	1	Nitrilic rubber
60	Screw	2	Stainless Steel

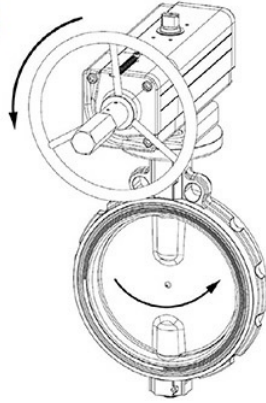
61*	Bounded	2	Steel alloy+Nitrilic rubber
62*	O'ring	1	Nitrilic rubber
63*	O'ring	1	Nitrilic rubber
64*	Plug	2	P.T.F.E
65	Nut	1	Stainless Steel
66	Screw maneuever	1	Stainless Steel
67	Protecting removable tube	1	Aluminium alloy
68	Pin	1	Stainless Steel
69	Special spring cap	1	Steel alloy
70*	O'ring	1	Nitrilic rubber
71*	O'ring	1	Nitrilic rubber
72	Screw	1	Stainless Steel
73	Safety screw	1	Stainless Steel
74	Protecting tube	1	Aluminium alloy
* Components of spare part kit			

## specifications

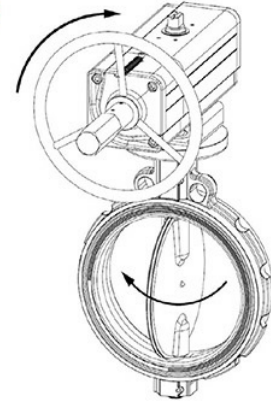
### Working plane pneumatic actuator with integrated handwheel

**Prima di azionare manualmente, assicurarsi che l'attuatore sia privo d'aria in pressione.**  
*Prior to operate manually, ensure that the actuator is free from pressure.*

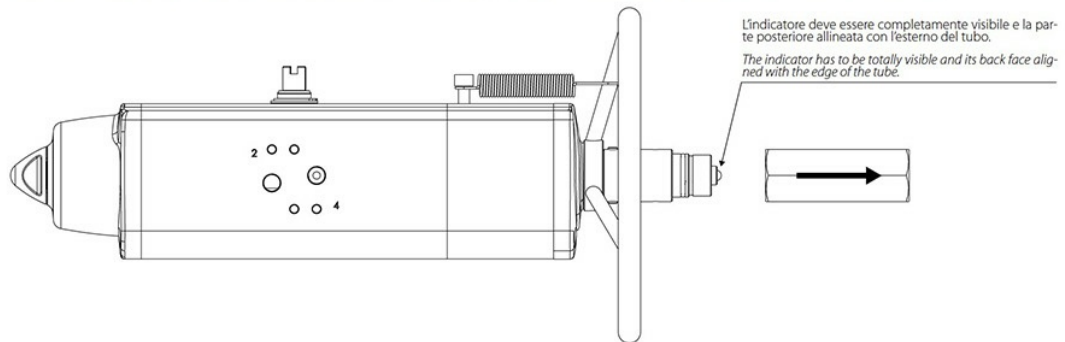
**APRIRE LA VALVOLA**  
**TO OPEN THE VALVE**



**CHIUDERE LA VALVOLA**  
**TO CLOSE THE VALVE**

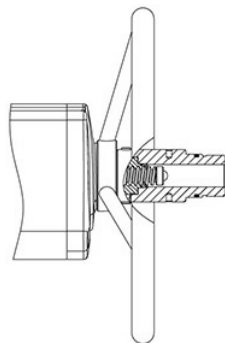


**Dopo che l'attuatore è stato azionato manualmente, ritornare alla posizione neutrale prima di riprendere l'azionamento pneumatico.**  
*When the actuator has been manually operated, return to the neutral position prior to start normal operation.*



### POSIZIONE NEUTRALE NEUTRAL POSITION

Con la vite in posizione neutrale, il pistone può muoversi liberamente e l'attuatore può essere comandato pneumaticamente.  
*With the screw in neutral position the piston can move freely and the actuator can be driven pneumatically.*



### AZIONAMENTO MANUALE

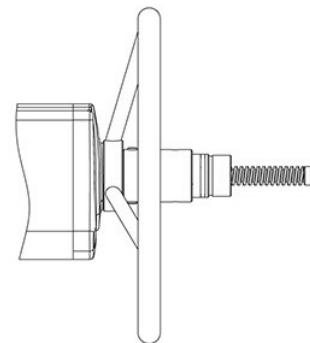
**DANV:** Quando il volantino gira in senso antiorario, spinge la vite e i pistoni verso l'interno. La valvola si apre.

**SRNV:** Quando il volantino gira in senso orario, spinge la vite e i pistoni verso l'interno. La valvola si chiude.

### MANUAL OPERATION

**DANV:** When the handwheel turned counter clockwise, pushes the screw and piston inwards. The valve opens.

**SRNV:** When the handwheel turned clockwise pushes the screw and piston inwards. The valve closes.



### AZIONAMENTO MANUALE

**DANV:** Quando il volantino gira in senso orario, tira la vite e i pistoni verso l'esterno. La valvola si chiude.

**SRNV:** Quando il volantino gira in senso antiorario, tira la vite e i pistoni verso esterno. La valvola si apre.

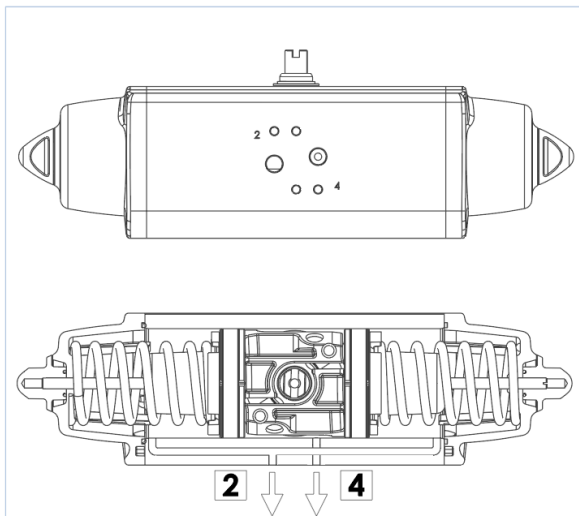
### MANUAL OPERATION

**DANV:** When the handwheel is turned clockwise, the screw and piston are drawn outwards. The valve closes.

**SRNV:** When the handwheel is turned counter clockwise, the screw and the piston are drawn outwards. The valve opens.

**WORKING PLANE PNEUMATIC ACTUATOR "SR" TYPE**

**SCHEMA FUNZIONAMENTO ATTUATORE PNEUMATICO AGO "SR"**  
**WORKING PLANE PNEUMATIC ACTUATOR AGO "SR" TYPE**

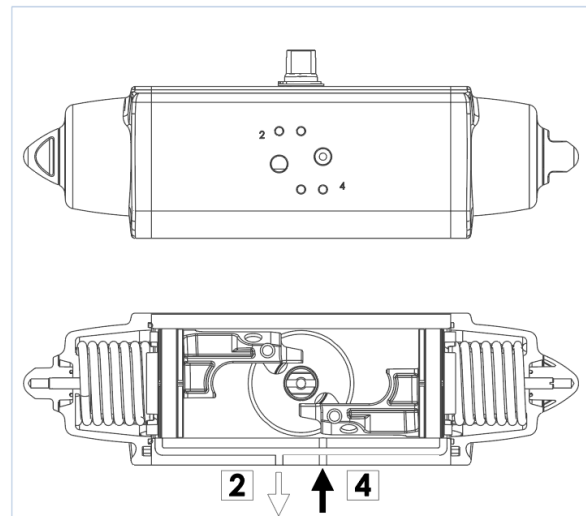


**SCHEMA DI FUNZIONAMENTO**

Senza pressione di alimentazione, nella versione semplice effetto, l'attuatore torna automaticamente in posizione di riposo compiendo una rotazione oraria e la posizione finale è quella rappresentata nel disegno. Sul foro 2 è consigliato montare un filtrino onde evitare che polvere o particelle solide possano entrare nella camera del cilindro senza tuttavia impedire il passaggio dell'aria.

**WORKING PLANE**

Without air supply, the spring return actuator returns to its resting position, rotating in a clockwise direction. The drawing shows its final position. We assembling a small filter on the air connection 2 to prevent dust and particles into the cylinder chamber without, however, preventing the passage of air.



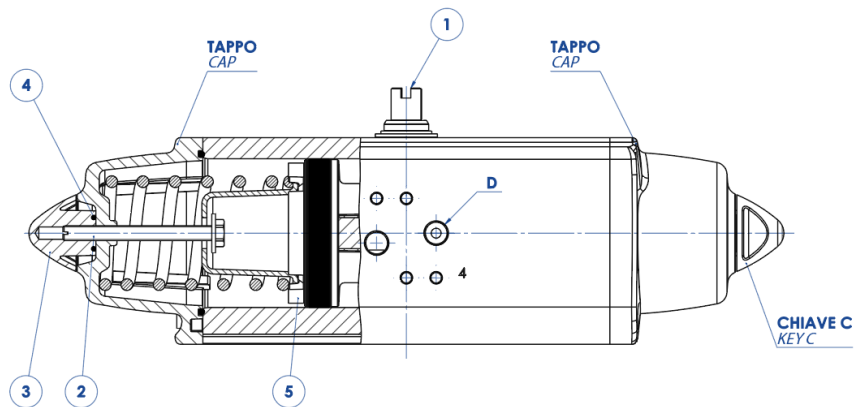
**SCHEMA DI FUNZIONAMENTO**

Immettendo aria nel foro 4 di alimentazione, i pistoni si muovono verso l'esterno comprimendo le molle, si ha una rotazione antioraria e la posizione finale è quella rappresentata nel disegno.

**WORKING PLANE**

Supplying air through the air connection 4, the pistons move outwards pressing the spring. An anticlockwise rotation takes place and the final position is shown above.

**ATTUATORE REGOLABILE-ISTRUZIONI PER L' UTILIZZO ACTUATOR WITH STROKE ADJUSTMENT-INSTRUCTIONS**



- A)** Verificare che le molle siano in posizione di riposo osservando la chiave dell'albero (part. n°1) come da disegno e controllando che nel foro "D" non ci sia pressione.
- B)** Togliere i controdadi (part. n°3) agendo sulla chiave C.
- C)** Con un cacciavite avvitare le viti (part. n°2) in senso orario ed effettuare la limitazione di corsa desiderata.
- N.B.** La corsa può essere limitata per un massimo di 10° da 80° a 90°
- D)** Immettere aria nel foro "D" e verificare che entrambe le viti (part. n°2) siano a battuta contro i pistoni (part. n°5).
- E)** Bloccare i controdadi (part. n°3) muniti di O-ring (part. n°4) per la tenuta tra controdado, tappo e vite.

N.B. queste spiegazioni sono indicative, per le istruzioni operative, vedere il manuale.

- A)** The springs must be at rest position, the shaft (part. 1) must be as shown in the drawing. Air connection D must not be supplied with air.
- B)** Remove the counter-nuts (part. 3), acting on C key.
- C)** By means of a screwdriver turn screws (part. 2) in a clockwise direction until you obtain the requested end-stroke regulation.
- Note:** maximum adjusting stroke 10°, ranging from 80° to 90°.
- D)** Supply connection D with air pressure and check that both adjusting screws (part. 2) stop the pistons (part. 5).
- E)** Screw the counter-nuts (part. 3) and their O-ring (part. 4) to keep nut and cap tight.

N.B. these explanations are indicative, for operating instructions, see the manual.





## documents

### Certificati

[ATEX - Pneumatic Actuators](#)

[SIL EN 61508 - Actuators: SR, SRN, DA, DAN](#)

[Type Approval Certificate for Marine and machinery systems and equipment](#)

### Istruzioni

[ISTRUZIONI ATEX UITGOG01ATX](#)

### Manuali

[MANUALE UMAAPV00](#)