

# NTZ

## Pneumatic actuator with integrated digital measuring system and safety locking device

- High repeatability and intervention speed (16 m/s).
- Piston rod holding force (without axial backlash):  $\geq 3$  times the thrust of a cylinder with air supply at 6 bar.
- Locking device passive functioning, in absence of signal and/or air supply.



### TECHNICAL CHARACTERISTICS

Ambient temperature	-10 ÷ 70°C
Fluid	30 µm filtered air
Working pressure	2 ÷ 10 bar
Min. pressure (locking system)	>3 bar
Max speed	1 m/s
Intervention speed	16 m/s
Precision of repeatability	± 0,3 mm
Bores	Ø 32 - 40 - 50 - 63 mm
Cushioning	adjustable pneumatic on both sides

### CONSTRUCTIVE CHARACTERISTICS

End caps	die-cast aluminium alloy
Barrel	extruded barrel in aluminium alloy
Piston	aluminium
Guide slide	acetalic resin
Piston rod	chromium-plated steel
Piston seal	double-lip seal in nitrile rubber
Guide bush for piston rod	acetalic resin
Shock absorber seals	nitrile rubber
Magnet	ferrite rubber (standard)

### ELECTRIC CHARACTERISTICS

Voltage	5 ÷ 24 V DC
Output	level L < 0,5 V - level HV CC
Limit frequency	60 KHz
Impedance	2 Kohm
Power consumption	40 mA max
Time of upstroke/downstroke	<1 µS
Pulse rate	500
Resolution	± 0,01 pulses/turn

### CODIFICATION KEY

N	T	Z	0	3	2	0	3	5	0
1		2			3				

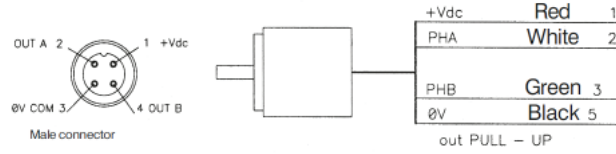
1 Series	2 Bore (mm)	3 Max stroke (mm)
NTZ = Pneumatic actuator with integrated digital measuring system and safety locking device Ø 32÷63 mm	032 = Ø32	350 (Ø32)
	040 = Ø40	450 (Ø40)
	050 = Ø50	600 (Ø50)
	063 = Ø63	750 (Ø63)

When the detector is used in environments with electromagnetic disturbances exceeding those allowed by the EN50081-2 standard, it is requested the adapter TAE011A10305 (our production) or suppressors of electromagnetic interferences available on the market.

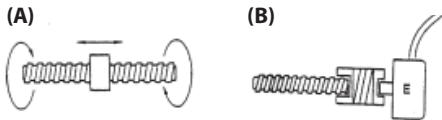
Theoretical forces (N)

Scheme of encoder

Ø	Thrust
	6 bar
32	400
40	600
50	960
63	1600



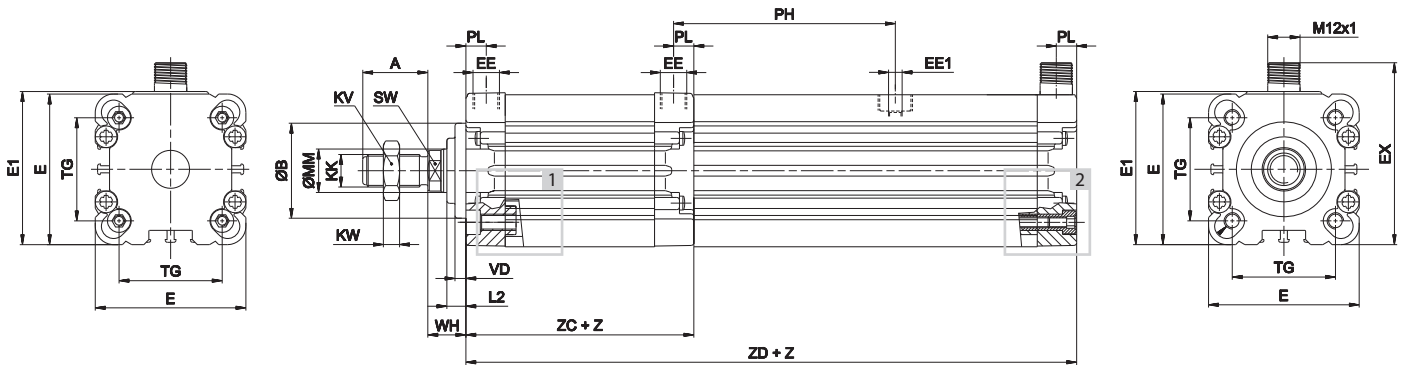
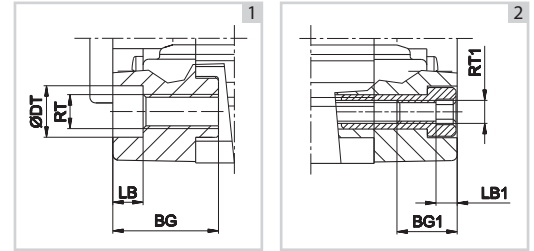
This product is the result of having linked to a pneumatic actuator both the digital position detector and the integrated safety locking system. The system does not need to be connected to the moving part of the mechanism as it generates by itself the movement by means of an internal pusher with bidirectional pneumatic function. This pusher, operated by a 5-way microvalve, moves autonomously until it meets the obstacle and measures the position. The detection of the position is obtained by transforming the translation movement of the piston rod in a rotation movement of the screw (B) by means of the coupling of screw-female screw (A); the encoder transforms the rotation (mechanical size) in sequences of electric pulses and establishes the relation between number of turns and number of pulses. The piston and the body of the encoder of the actuator must necessarily be fixed, i.e. must not move as regards to the rotation of the screw and for this reason has been used the cylinder with octagonal piston and non-rotating piston rod adequately modified.



The speed of the impact against the obstacle is limited by appropriate calibrated reducers which are built into the detector, whilst it is possible to adequately regulate the translation speed by means of a normal pressure regulator. In order to guarantee a reading with the indicated repeatability, the translation speed must be as constant as possible.

The main sectors of application are:  
Mechanization, palletization, automation of operating machines.

NTZ Ø 32 ÷ 63 mm



Z = Stroke

Ø	A	B	BG	BG1	DT	E	EE	EX	E1	EE1	KK	KV	KW
32	22	30	18	6,5	9	46	G1/8	57	47	M5	M10x1,25	17	6
40	24	35	18	6,5	9	56	G1/8	67	57	M5	M12x1,25	19	7
50	32	40	24	6,5	11	66	G1/8	77	67	M5	M16x1,5	24	8
63	32	45	24	6,5	11	79	G1/8	90	80	M5	M16x1,5	24	8

Ø	LB	LB1	L2	MM	PH	PL	RT	RT1	SW	TG	VD	WH	ZC	ZD
32	5,3	3,5	7	12	55,5	7,5	M6	M4	10	32,5	4	14	84	217,5
40	5,3	3,5	7	16	58	7,5	M6	M6	13	38	4	14	89	225
50	6,5	3,5	10	20	63	7,5	M8	M6	17	46,5	5	18	94	234
63	6,5	3,5	10	20	63	7,5	M8	M6	17	56,5	5	18	114	253

- For magnetic sensor DF series see chapter 5 Accessories
- Fixing elements and accessories: same as for STRONG series cylinders