

# NTZ-NQZ-NFZ

Intelligent pneumatic actuators



Pneumatic piston

Screw

Lock

Encoder



## NTZ

Pneumatic actuator with integrated digital measuring detector and safety locking system  
Ø 32 ÷ 63 mm



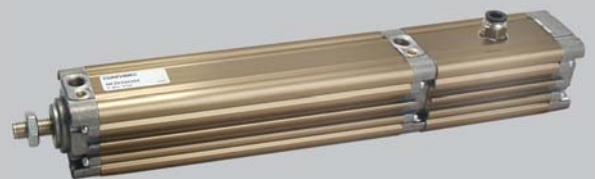
## NQZ

Pneumatic actuator with digital measuring detector  
Ø 32 ÷ 63 mm



## NFZ

Pneumatic actuator with integrated safety locking system  
Ø 32 ÷ 63 mm



Pneumatic actuator with integrated digital measuring system and safety locking device

■ **NTZ**



The system does not need to be connected to the moving part of the mechanism, as movement is generated by an internal piston with bidirectional pneumatic function. Such piston, operated by a 5-way valve, moves autonomously until it meets the obstacle, thus measuring the stopping position.

Position detection is obtained by the transformation of the translation movement of the piston rod into the rotary movement of the screw, by means of screw-female screw coupling. Then the encoder turns the rotation into a sequence of electrical impulses.

The piston and the encoder body need to be fixed, i.e. must not move regardless of screw rotation. This is the reason why the cylinder has been designed with octagonal piston and properly modified non-rotating piston rod.

The speed of the impact against the obstacle is limited by proper calibrated reducers which are embodied in the actuator, while the translation speed can be suitably controlled by means of a standard flow regulator.

For the indicated repeatability of reading to be guaranteed, the translation speed needs to be kept as constant as possible.

Main application fields are: mechanisation, palletization and automation of operating machines.

**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 = Ø 32 ÷ 63 mm - Pneumatic actuator with integrated digital measuring system and safety locking device	032 = Ø32 040 = Ø40 050 = Ø50 063 = Ø63	0350 (Ø32) 0450 (Ø40) 0600 (Ø50) 0750 (Ø63)

Pneumatic actuator with digital measuring system

■ **NQZ**



Pneumatic actuators with digital measuring system are particularly suitable for:

- Detection of stopping position
- Anti-collision control in critical sequencing cycles
- Level control in palletization / de-palletization of piled objects
- Identification, classification and dimensional selection of objects (tolerances and rejects)
- Certification stations of machined pieces or tool breaking on machines for chip removal

The device can be used as both digital measuring detector and pneumatic actuator with digital measuring system

Max speed: 0,2 m/s (detector) 0,8 m/s (actuator)

Repeatability accuracy: ± 0,02 mm

**CODIFICATION KEY**

N	Q	Z	0	3	2	0	3	5	0
1		2			3				

1 Series	2 Bore (mm)	3 Max stroke (mm)
NQZ = Ø 32 ÷ 63 mm - Pneumatic actuator with integrated digital measuring system	032 = Ø32 040 = Ø40 050 = Ø50 063 = Ø63	0350 (Ø32) 0450 (Ø40) 0600 (Ø50) 0750 (Ø63)

Pneumatic actuator with integrated safety locking device

■ NFZ



Locking device embodied in the cylinder rear part in axial position.  
High repeatability and intervention speed (16 m/s).

Recommended application:

Emergency braking intervention at the speed allowed by the cylinder; for repeated functioning, as locking unit or braking intervention  $\leq 50$  mm/s.

Piston rod holding force (without axial backlash):  $\geq 3$  times the thrust of a cylinder supplied at 6 bar.

Locking force independent from ambient conditions or piston rod maintenance.

Locking device passive functioning, in absence of signal and/or air supply.

Minimum pressure:  $\geq 3$  bar

CODIFICATION KEY

N	F	Z	0	3	2	0	3	5	0
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1	2	3
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1 Series	2 Bore (mm)	3 Max stroke (mm)
NFZ = $\varnothing 32 \div 63$ mm - Pneumatic actuator with integrated safety locking device	032 = $\varnothing 32$ 040 = $\varnothing 40$ 050 = $\varnothing 50$ 063 = $\varnothing 63$	0350 ( $\varnothing 32$ ) 0450 ( $\varnothing 40$ ) 0600 ( $\varnothing 50$ ) 0750 ( $\varnothing 63$ )