



## PNEUMATIC POSITIONERS

 **centork**  
VALVE CONTROL

# CENTORK. ESPECIALISTS IN VALVE ACTUATION

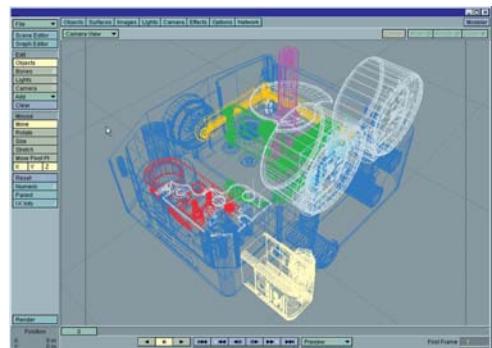
With its wide range of actuation products- electric actuators, pneumatic actuators and positioners- Centork covers virtually any need in the actuation and control of valves.

Inheriting the experience acquired during the last 30 years by Centralair and pushed by its dynamic R+D department, Centork has developed valve actuation products, from the standard product to the special product according to the customers high specifications, that are successfully competing in the international market. Centork has the experience, know-how and product range to supply any valve actuation solution.

From a water sewage treatment plant to an offshore oil platform, through a power generation facility, Centork is present to deliver the best customer service anywhere in the world.

Our international partners network ensures a local answer to our customers, from the initial enquiry through to after-sales service, maintenance or retrofitting.

In a world more and more specialized, with the introduction of the new digital technologies, being able to rely on an actuation specialist like Centork is a warranty for the future.

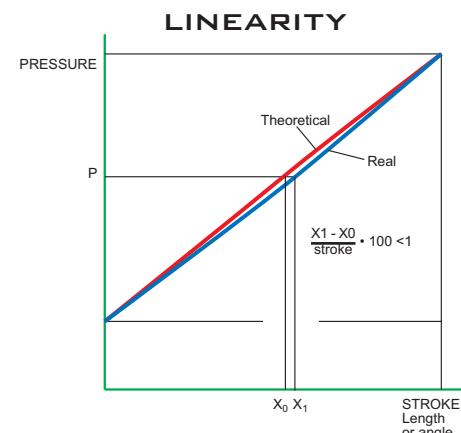


# CENTORK QUARTER TURN AND LINEAR POSITIONER CHARACTERISTICS

The present range of CENTORK positioners offers the following basic features:

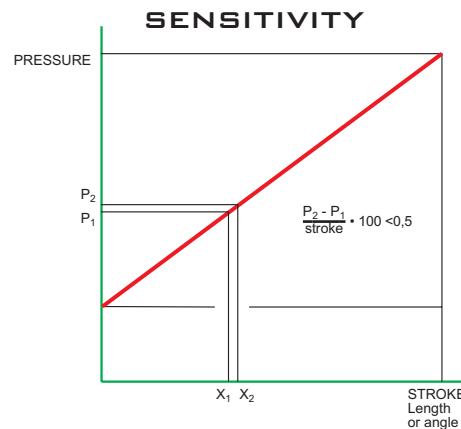
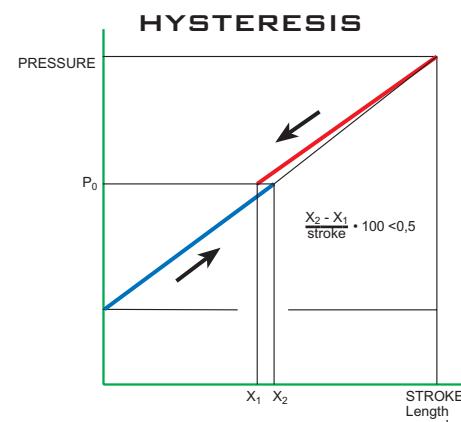
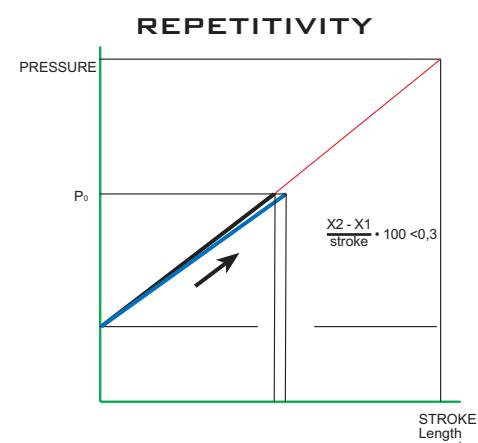
- Reliable: Excellent sensibility, repetitivity and hysteresis performance.
- Strong: The pneumatic and electropneumatic versions are resistant to the physical and chemical agents.
- Simple: Reduced number of parts.

Enormous setting and maintenance simplicity.



## THE FUNCTIONAL FEATURES ARE:

- Linearity: It shows the approach to the theoretical regulation that can be achieved, by the positioner valve.
- Repetitivty: It reflects the difference in the response value, to a given control signal, when the set value is produced from any end of the control scale.
- Hysteresis: It is the maximum difference in the response value, for the same control signal, when the set value is produced from any end of the control scale.
- Sensitivity: It is the difference in the control signal in which the positioner valve reacts producing a response.



# CENTORK LINEAR POSITIONERS

## CENTORK LINEAR POSITIONERS, EXTERNAL SPRING PR-120 SERIES

The external spring linear positioners are the ideal complement to adjust, according to a pneumatic or electrical control signal, the linear movement of a conventional pneumatic cylinder.

The 120 Series linear positioner valve is mounted on a subplate forming a reduced in size compact unit, which is adapted directly onto any pneumatic cylinder end cover.

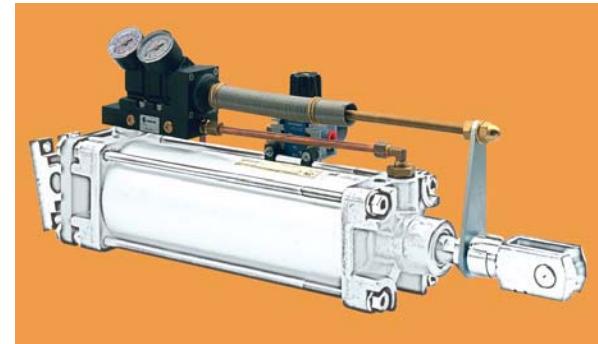
The retro - feed spring, together with its assembly accessories, are supplied adapted in length to the stroke of each cylinder.

**1701.PR120:** Direct Linear Pneumatic Positioner

**1701.PR120R:** Reverse Linear Pneumatic Positioner

**1701.PR121:** Direct Linear Electro-Pneumatic Positioner

**1701.PR121R:** Reverse Linear Electro-Pneumatic Positioner



### COMMON CHARACTERISTICS FOR THE 4 MODELS

Main air suply	3 - 10 bar
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Linearity	>99% full range
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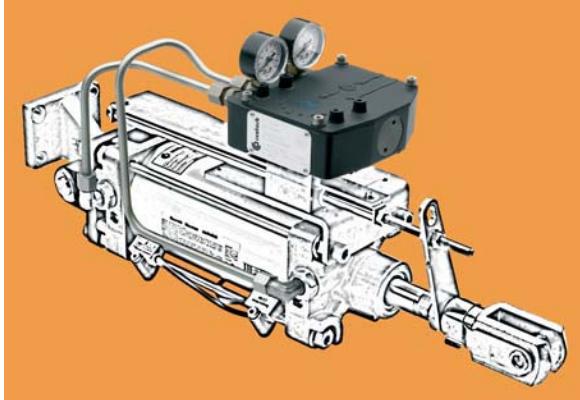
Hysteresis	<0,5% full range
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Repetitivty	<0,3% full range
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*Full range = stroke*

Please check corresponding technical sheets.

## CENTORK LINEAR POSITIONERS, CHARACTERIZABLE CAM PR-730 SERIES



**1730.PR730:** Pneumatic Rotary Positioner

**1731.PR731:** Electro-Pneumatic Rotary Positioner (4-20 mA imput signal)

**1735.PR735:** Electro-Pneumatic Rotary Positioner (0-10 V imput signal)

**1733.PR733:** Electro-Pneumatic Rotary Positioner



### COMMON CHARACTERISTICS FOR THE 2 MODELS

Main air suply	3 - 10 bar
----------------	------------

Linearity	>99% full range
-----------	-----------------

Hysteresis	<0,5% full range
------------	------------------

Repetitivty	<0,3% full range
-------------	------------------

*Full range = stroke*

Please check corresponding technical sheets.

The characterizable cam linear positioners converts the conventional pneumatic cylinder linear movement into a turning movement suitable to the 730 series positioner valve, to be applied to the quarter turn control adjustment. The cylinder position is transmitted to the positioner by means of a cam.

Such cam can be shaped (mechanically carved), in such a way that the cylinder response is not linear, offering the flexibility to adapt the cylinder/actuator performance to the needs of the valve on which it is mounted. The retro - feed cam, together with its assembly accessories, is supplied adapted in length to the stroke of each cylinder.

This is a rather compact assembly.

A linear, direct or inverted adjustment, can be obtained according to the cam carving, or depending on the customer's specifications.

# CENTORK ROTARY POSITIONERS

## CENTORK ROTARY POSITIONERS, PR-720 SERIES

The quarter turn positioners control the conventional pneumatic quarter turn actuator movement according to a proportional control signal.

The PR-700 Series positioner valves are incorporated on top of the actuator and their adaptation is simple as it has standard measures according to the Namur VDI/VDE 3845 Standard. There is a variety of positioner kits to be assembled onto the actuator which enable a quick adaptation onto it.

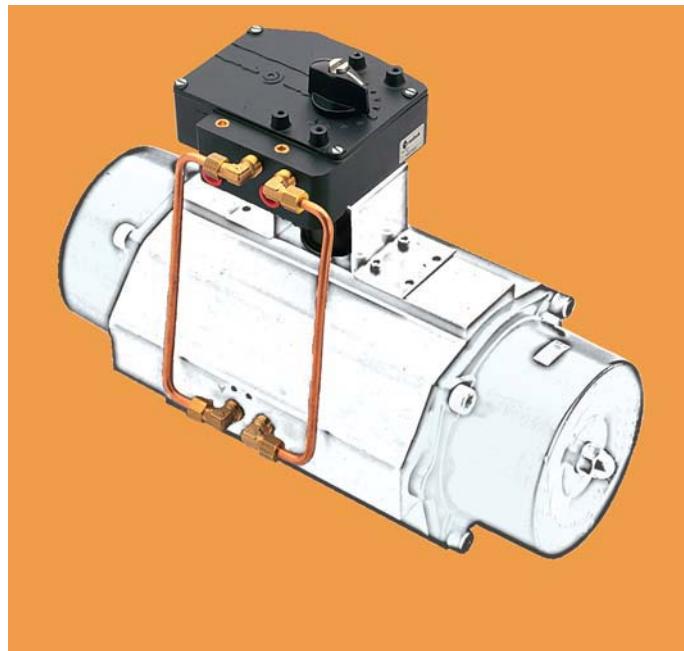
**1720.PR720:** Pneumatic Linear Positioner

**1721.PR721:** Electro-Pneumatic Linear Positioner (4-20 mA input signal)

**1725.PR725:** Electro-Pneumatic Linear Positioner (0-10 V input signal)

**1723.PR723:** Electro-Pneumatic Linear Positioner

Intrinsically safe Eexia II CT6



### COMMON CHARACTERISTICS

Main air supply	3 - 10 bar
Linearity	>99% full range
Hysteresis	<0,5% full range
Repetitivty	<0,3% full rangea

Full range = 90°

Please check corresponding technical sheets.

Right or left quarter turn according to the position of the cam. 0-90° standard adjustments. Split range, other regulations for specific functions, are available on demand.

## CENTORK POSITIONERS FOR CONTROL VALVES, PR-640 SERIES

The 640 Series positioners have been designed to control the process valves with a linear movement pneumatic actuator. The positioner valve assembly is carried out on to the valve. There is an assembly kit standardised according to the Namur Standard, which enables the positioner assembly and fixing. Lever assembly to follow up control valve head 15-80 mm. linear stroke. Positioner adapted onto the valve according to the Namur Standard.

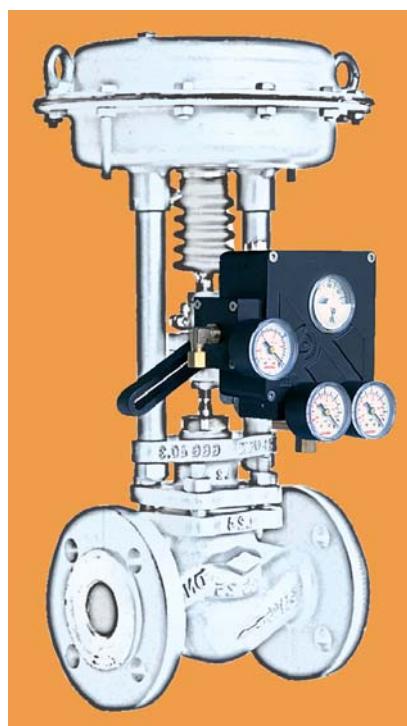
**1702.PR640:** Pneumatic Linear Positioner

**1702.PR641:** Electropneumatic Linear Positioner (input signal 4-20 mA)

### COMMON CHARACTERISTICS FOR THE 2 MODELS

Main air supply	3 - 10 bar
Linearity	>99% full range
Hysteresis	<0,5% full range
Repetitivty	<0,3% full range
Recorrido actuador	15 - 80 mm
Tipo de montaje	Lever

Full range = stroke



## RELIABLE

S

The PR-700 series quarter turn positioners are incorporated onto quarter turn actuators and control their position (between 0 and 90°) proportionally to a pneumatic or electronic control signal.

The PR-700 series also offers sensitivity, hysteresis and repetitiviy features that enable it to be incorporated to very different types of control valves.

Its design offers the maximum flexibility degree from the adaptation point of view according to the Namur Standard.

Stainless steel cam with 3 profiles, standard adjustment, split range adjustment and possibility of special carving. There are also available cams for specific functions (quick opening, equal percentage, etc.).

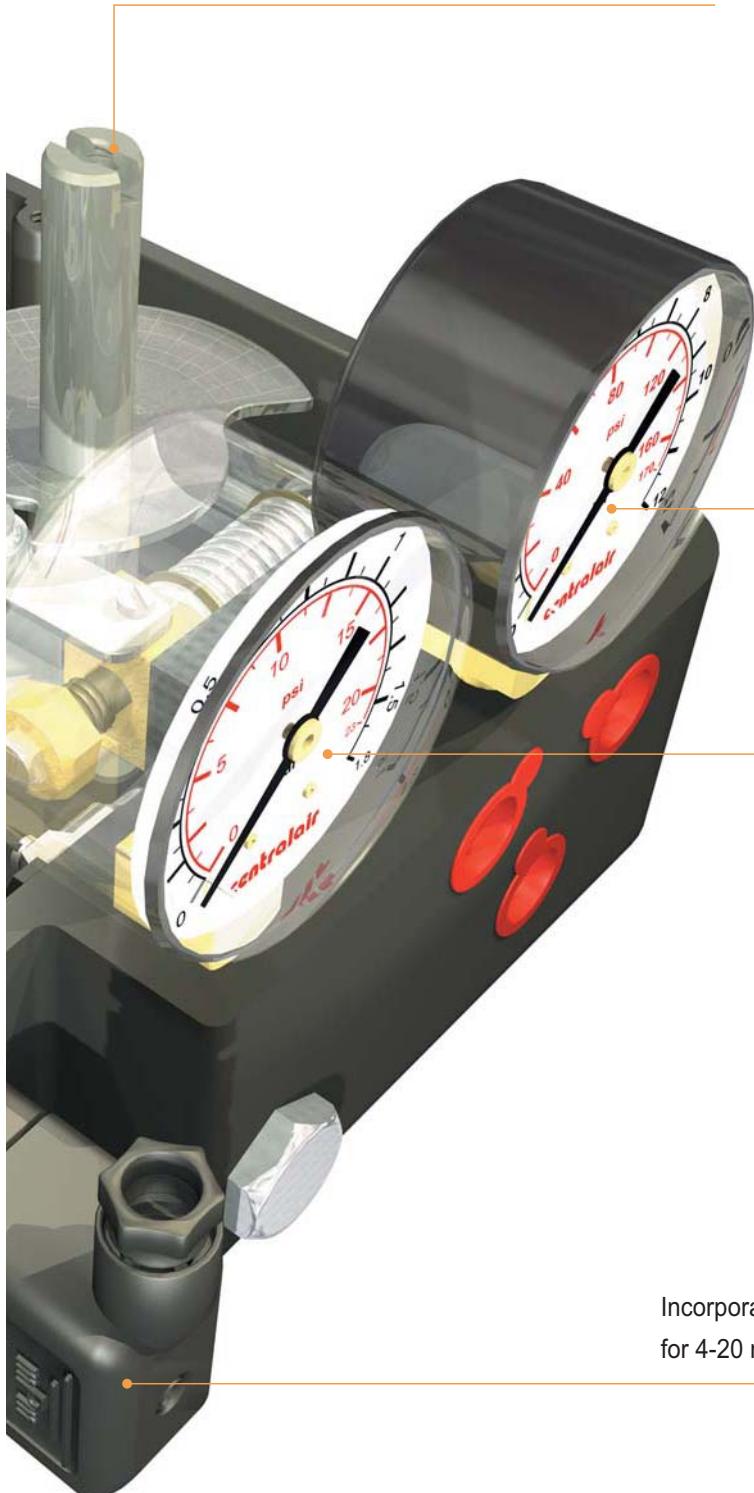
Zero and span easy regulation.

Interface with the actuator according to the VDI/VDE 3845 Namur Standard.

Aluminium positioner body, lacked and resistant to corrosion. IP65 protection.

# STRONG

Namur adaptation on the top cover.  
Possibility to incorporate microswitches  
boxes, position transmitter, etc.



# SIMPLE

- Same model for single acting and double acting actuators
- Only one supply and control air feed.
- Cover with flat waterproof joint.
- Position indicator to check the valve/Actuator/Positioner unit (option).
- Blind holes cover to hold microswitches boxes, position transmitter, etc. according to VDI/VDE 3845 Namur standard.
- Reduced and compact size.
- Highly resistant unit to aggressive agents.
- Good performance with vibrations.

Gauges to check the main pressure  
and control signal pressure.

Incorporated electrical connector, in the electropneumatic version,  
for 4-20 mA or 0-10 V electronic control signal.

# CENTORK POSITIONER OPTIONS/ ACCESORIES

## 1721.T1SV3

Rotary positioners with limit switches / 4.20 mA position transmitter

- 2 limit switches SPPT V3
- TPS (4-20 mA) electronic position transmitter
- 2 limit switches + TPS (4-20 mA) electronic position transmitter



Intrinsically safe ATEX CERTIFICATION  
II 2 G Eexia IICT4...T6



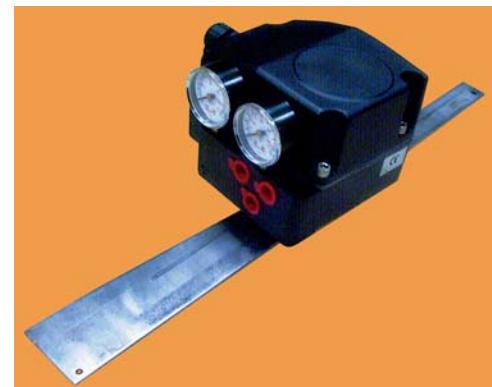
## 1731.T1SV3

Linear positioners with limit switches / 4-20 mA position transmitter

- 2 limit switches SPDT V3
- TPS (4-20 mA) electronic position transmitter
- 2 limit switches + TPS (4-20 mA) electronic position transmitter



Intrinsically safe ATEX CERTIFICATION  
II 2 G Eexia IICT4...T6



## ACCESSORIES

Due to its exclusive top NAMUR cover, a serie of accessories can be easily mounted on top of PR700 series positioners.

- Switchboxes:
- Electronic position transmitter switchboxes:
- Others: solenoid valves, manual override gearboxes, couplings, adaption kids.



# CENTORK POSITIONER APPLICATIONS

## 1771.DE771

Digital positioners that, using piezoelectric technology, have a very low consumption with all the 'smart' features based on the use of microprocessor based electronics.

Options:

Limit switches, electronic position transmitter, dome indicator.



The CENTORK positioners can be used in a wide range of applications in the process industry.

The **linear positioners**, basically, are incorporated onto pneumatic cylinders being the intelligent pneumatic or electrical control element.

The linear pneumatic actuators are mainly applied to:

- Control of valves.
- Control of dampers.
- Control of hoppers, registers, etc.



The **quarter turn positioners** have been designed, in order to be incorporated onto quarter turn single or double acting pneumatic actuators.

These quarter turn actuators operate on different types of valves: ball, butterfly, plug or dampers.

These valves actuated by a quarter turn actuator with positioner, change from on/off type into modulating type valves.



# CENTORK PRODUCT RANGE

## ELECTRIC ACTUATORS



MULTITURN



MULTITURN  
DIGITAL



SPECIAL  
ACTUATORS



LINEAR



QUARTER-TURN:  
MULTITURN +  
WORM GEARBOX



QUARTER-TURN



QUARTER-TURN  
WITH LEVER

## GEARBOXES



MULTITURN  
GEARBOXES



QUARTER-TURN  
GEARBOXES

## PNEUMATIC ACTUATORS



LINEAR



QUARTER-TURN



SPECIAL  
SOLUTIONS



## POSITIONERS



LINEAR



QUARTER-  
TURN



## CONTROL & COMMUNICATION



► Digital communication. Fieldbuses.



► Centronik control unit.



## STANDARDS

ATEX

European machine directive CE



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