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REV.

PNEUMAX FOR AUTOMOTIVE



INNOVATION DOWN TO THE LAST DETAIL



PNEUMAX FOR AUTOMOTIVE^e

The ULTIMATE CLAMPING TECHNOLOGY.

Innovation begins with Research and Development and extends to industrial processes and business activities, with the ultimate aim of total customer satisfaction.

INNOVATION DOWN TO THE LAST DETAIL





WHY PNX

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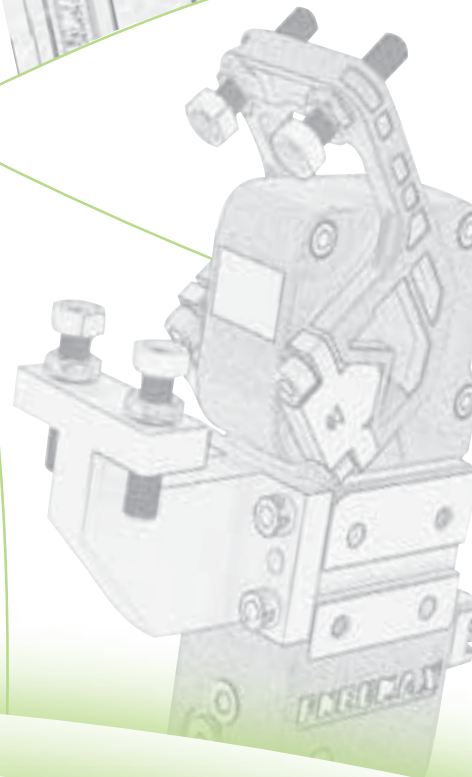
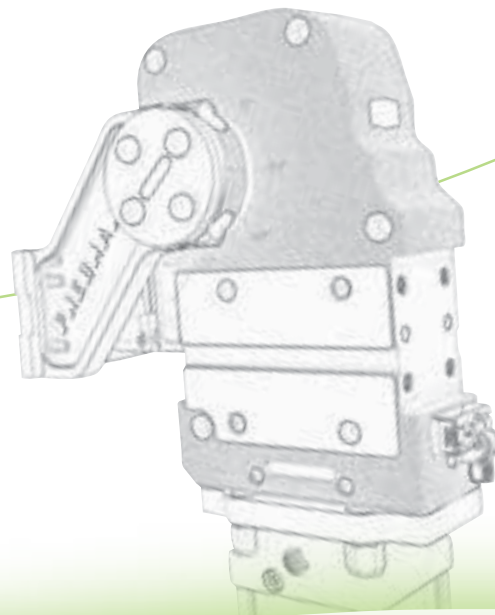
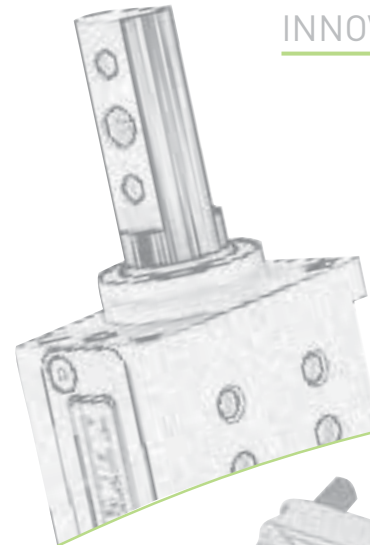
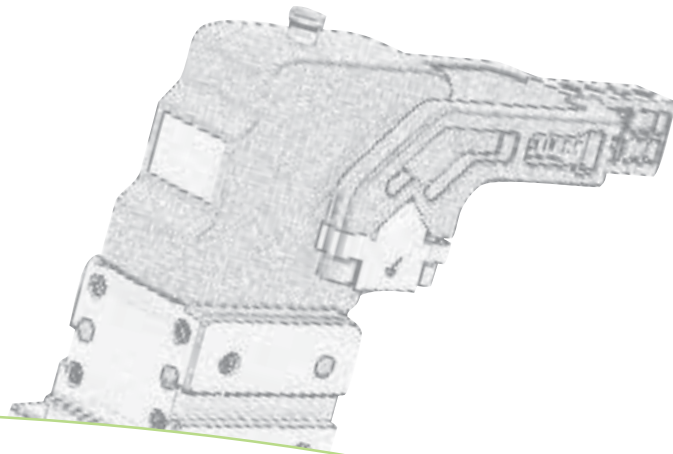
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INNOVATION DOWN TO THE LAST DETAIL



Extensive Product Range covering
Clamping, Locating, Handling, Pivoting
functions, with all
options required in the
BIW production lines.





Our clamping series features the widest range in clamping moment
& stepless adjustable opening in the industry.



RP50



RP32



JP40



P80



Shims



Auto-retaining devices



Ecolight Cylinders



RP63



RA32



JKP40



P100



Spacers



Special arm types



RC50 CNOM0



HP50



JD40



P125



Sensors



RC63 CNOM0



FP40



JKD40



Sensor cables



RD50



FP63



LOCATING



HANDLING



PIVOTING



ACCESSORIES

COMPLEMENTARY PRODUCTS

WHY
PNX



40TH
YEAR



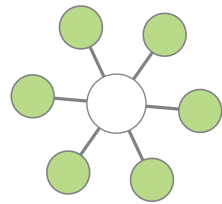


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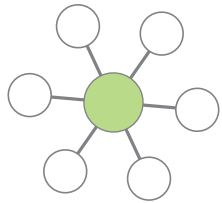


WHY PNX

THE COMPANY IN NUMBERS



13
**INTERNATIONAL
SUBSIDIARIES**



7
**NATIONAL
SUBSIDIARIES**

PLUS 500+
PNX **SPECIAL PRODUCTS
MANUFACTURED YEARLY**



43
**COUNTRIES
WITH A PNEUMAX
APPROVED DEALER**



3
**PRODUCTION
COMPANIES**



INNOVATION DOWN TO THE LAST DETAIL

600
THINKING HEADS
WORLDWIDE



100,000
m² MANUFACTURING
LOCATION



5 BRANCHES

PNEUMATIC
AUTOMATION

AUTOMOTIVE

Oi&Gas PNEUMAX

XCUUM
TECHNOLOGY

LINEAR
ACTUATORS



WHY PNX

PRODUCT DEVELOPMENT

Our steps towards the highest level of efficiency and superior quality

1

PRODUCT CONCEPT

Market requirement evaluation and product specs definition by product management. The project team analyzes the technical feasibility and sets a general timeline.

2

PROTOTYPING

After a **structural mechanics simulation analysis**, the R&D team prepares a CAD model which is used with a **3 axis printing-moulding machine** to manufacture the first prototypal batches. A first evaluation of the product concentrates on the functional and dimensional requirements.

3

ELECTRONICS INTEGRATION

Electronic components are developed and manufactured **in-house** by Pneumax to be integrated in any system or as interface to any protocol.

4

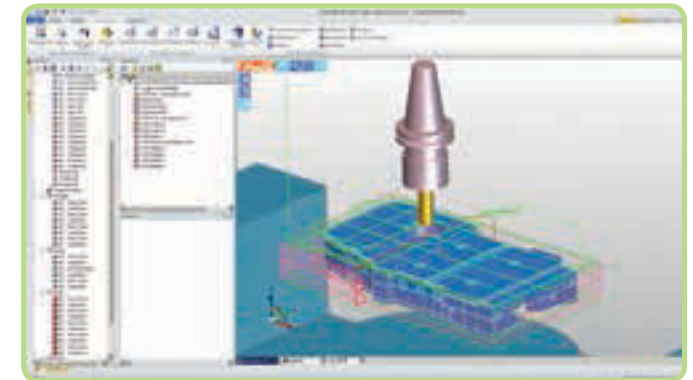
FMEA

The first close-to-series samples are machined, using the **latest generation machinery**. The first **FMEA** is prepared.





INNOVATION DOWN TO THE LAST DETAIL



5

EVALUATION AND INSPECTION

Life test and approval. The products are subjected to **functional, performance, temperature tests** for millions of cycles.

6

ENGINEERING

The engineering department evaluates and adopts the most suitable manufacturing technology and assembly procedure to implement, using **3D simulation programs**.

7

PRODUCT INDUSTRIALIZATION

The industrialization team together with the technical department develop any specific equipment and tool required. Suppliers' evaluation is accomplished.

8

PILOT SERIES RELEASE AND PRODUCT AUDIT

Verification and validation that the product meets the requirements.

WHY PNX

WORLDWIDE PRESENCE

- Distribution network through
- 13 international subsidiaries
 - 7 national subsidiaries
 - 43 approved dealers



Europe

Czech Republic
France
Germany
Poland
Portugal
Russia
Spain
Spain (Catalunia)
Sweden
United Kingdom

Asia

China
India
Singapore

South America

Brasil

For a complete list of our distributors and contacts,
please visit our website www.pneumaxspa.com or contact
our sales representatives at info@pneumaxspa.com



WHY PNX

CUSTOMER-ORIENTED GLOBAL SERVICE

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Pneumax guarantees quick component availability and prompt service, as well as technical and application support worldwide.



Pneumax offers continuous engineering support, from suggesting the best solution to the customers' applications based on the latest technological standards, to sizing the components and systems and to providing comprehensive documentation, 3D and components layout.

WHY PNX

HIGH PRODUCT AVAILABILITY

Pneumax, with its commitment to continuous improvement, is equipped with the **latest generation machinery with fast set up times**, to achieve high productivity and to guarantee a **quick and high delivery capability**.

Most of the goods from our core product lines are dispatched **from our shelves**.

Our production machining dept., at the forefront in manufacturing, is online synchronized with our planning dept. to allow the fastest possible goods work flow from order receipt to dispatch from our shelves.

FLEXIBLE

VERSATILE
VERSATILE
VERSATILE

ADAPTIVE

to new requirements at short notice.

WHY
PNX

WARRANTY

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- ✓ NO BACKLASHES
- ✓ NO WEAR
- ✓ CONSTANT FUNCTIONAL PARAMETERS, PERFORMANCE LEVEL AND REPEATABILITY OVER TIME

WHY PNX

QUALITY UNDER EACH ASPECT



Pneumax has proven its commitment to quality of:

- ✓ **PRODUCT** through automated inspection processes at each step of the manufacturing
- ✓ **MANUFACTURING** through regular tooling and machinery inspection and calibration
- ✓ **PRODUCT RANGE** through continuous R&D activities
- ✓ **PROCESS** through regular internal quality audits
- ✓ **LOGISTICS** through a regular monitoring of lead time, completeness, flexibility and productivity
- ✓ **AFTER SALES** through quick and professional technical support, and effective reaction time for the supply of the spare parts



Pneumax is pursuing total quality in full respect of environmental and safety conditions in compliance with **ISO 9001:2008**, **ISO 14001:2004** and **OHSAS 18001:2007** towards a high level of environmental awareness and sustainability.

Standards and regulatory Compliance

WHY PNX

ONE SOURCE SUPPLIER

INNOVATION DOWN TO THE LAST DETAIL



Selection of Pneumatic Components for the Automotive Industry

Pneumax is a

ONE-SOURCE SUPPLIER

for the Automotive Industry
with a comprehensive line of:

- ✓ Pneumatic drives
- ✓ Valves
- ✓ Valve terminals
- ✓ Communication control blocks
- ✓ Compressed air preparation
- ✓ Grippers
- ✓ Exhaustive range of clamping, locating, handling and pivoting devices for BiW.

ECOMPACT

- Compact Cylinders according to ISO 21287 Standard
- The new barrel clean profile has two sensor slots on the three sides suitable for sensors housing, without need for adaptors
- Aluminum end caps
- All edges are carefully rounded
- Version with adjustable end stroke pneumatic cushioning is also available, still complying to the ISO 21287 required overall dimensions
- Non rotating version upon request



ECOLIGHT ISO 15552 STANDARD-BASED LIGHT CYLINDERS

- End plates: die-casting aluminum
- Rod: C43 chromed steel or stainless steel
- Barrel: aluminum alloy anodised
- Rod-guide bushing: spheroid bronze on steel band with PTFE coat
- Seals: Standard: NBR oil resistant rubber, PUR piston rod seals upon request
- Lightweight bodies and end caps



HL High Lights

1390...01R
version with
steel rodscraper



ECOFLAT

- Profiled tube has two "T" slots on the side hosting sensors without adaptors
- Two additional connections are also available on rear cover for cylinder supply
- Female rod/male rod
- Female push/pull rod-male push/pull rod



WHY
PNX

ONE SOURCE SUPPLIER

Selection of Pneumatic Components for the Automotive Industry

RODLESS CYLINDERS

- Space saving option over conventional cylinders
- Heavy duty construction for demanding applications
- Profiled tube allows mounting of sensors on the two sides of carriage, by means of brackets
- Standard accessories include foot mounting brackets for installation on cylinder end caps, intermediate mounting brackets to give support to long stroke cylinders under load (over one metre), an oscillating coupling device for installation between the mounting plate and the load
- With linear control unit
- No maintenance



SHORT STROKE COMPACT CYLINDERS

- Profiled tube has three “T” slots on the three sides hosting sensors without adaptors
- A complete range of accessories makes them easy to install under any conditions
- Mounting pattern according to ISO 6431, to adapt to most of the mounts
- Single or double acting versions
- Non-rotating device available
- Tandem push with common or independent rods
- UNITOP version available



ISO 6432 STANDARD-BASED MICROCYLINDERS

- Threaded end covers
- Without rear eye version
- Push/pull rod version
- Rolled end covers
- Non-rotating hexagonal rod for applications where the cylinder is used as a guide and support
- Stainless Steel AISI 316 end covers available
- Nylon 66 reinforced with glass fibres end covers available





GUIDED COMPACT CYLINDERS

- Suitable for compression, conveyance, manipulation, pushing, lifting and stopping applications
- Single compact cylinder with integral guided rods, designed with installation flexibility and space saving features

The rod guide is available with:

- Self-lubricating bronze bushes – useful for absorbing lateral loads and forces, especially as a stopper
- Bearing bushes – guaranteeing high precision and uniform movement with low friction characteristics, useful with misaligned loads
- Mounting on three sides through holes or “T” slots
- Adjustable mounting holes in the front plate ensure safe and accurate assembly

HL High Lights



Metal rod scrapers
as 6100.01R version



ROTARY ACTUATORS

- Cover plates: UNI 5079 aluminum alloy casting
- Central body: oxidised aluminum
- Pinion: cemented and tempered 18 NiCrMo4
- Rack: C43
- Barrel: anodised aluminum Ra = 0.3-0.5
- Sliding shoe: acetal resin
- Cushion bushings: hardened aluminum
- Piston: vulcanized rubber block on steel core with incorporated permanent magnet or without magnet plus rear spacer for non magnetic version
- Seals: NBR 80 shore rubber
- Cushion adjustment screw: nickel plated steel
- Rotating angle adjustment assy: nickel plated brass
- Female or male pinion



FRL COMPRESSED AIR PREPARATION

- Modular design
- No additional devices required for the assembly
- Zinc alloy body or reinforced technopolymer body with threaded aluminum insert connections
- Wall mounting possibility with M4 screws protected by covers
- Transparent technopolymer bowl screwed to the body
- Shock resistant bowl with technopolymer protection
- Water level visibility on 360° even with bowl protection assembled
- Automatic water drainage bowl available on request



WHY PNX

ONE SOURCE SUPPLIER

Selection of Pneumatic Components for the Automotive Industry

ISO 15407 VALVE MANIFOLD SERIES

- With electric control interface
- Aluminum die casted body
- Aluminum die casted sub-base
- 1/4" threaded connections
- Monostable and bistable
- Quick connection to sub-base through screws
- Multipolar through SUB-D 37 pin
- Multipolar through SUB-D 25 pin



OPTYMA VALVE MANIFOLD SERIES

- Vast array of valve sizes for every application
- Flow rate up to 550 NL: solenoid pilots are low consumption and fitted on the same side of the valve
- Mono stable and bi stable valves with the same dimensions
- Easy and fast assembly on the sub base through one-screw mounting solution
- Possibility to replace a valve without the need of disconnecting the pneumatic pipes
- Electrical and pneumatic connections on the same side
- Possibility to operate with different pressures and vacuum
- Quick coupling connections for consumption, exhaust and air supply all on the same side



SERIAL SYSTEMS

Serial connections with:

- CANopen
- EtherCAT
- DeviceNet
- PROFIBUS
- PROFINET
- EtherNet

PARALLEL GRIPPERS

- The parallel grippers cater for larger openings (three different strokes for each diameter) with synchronised operation via a pinion-rack system with high strength thanks to a double piston mechanism



Radial grippers (180°)



Three-points grippers



Angle grippers



Mini slides



INNOVATION DOWN TO THE LAST DETAIL

TECNO FUN

- Line of different logic functions which can be used everywhere in the secondary pneumatic circuit and can be installed directly onto the main pneumatic components (distributors or cylinders)
- Modular design allows multiple logic functions to be connected together easily

Available functions:

- Flow control valves
- Pressure regulators
- Block valves
- Quick exhaust valves
- OR gates
- AND gates
- Pressure gauges
- Pressure regulators + pressure gauges
- Block valves + flow control valves
- Block valves + quick exhaust valves



PANEL SYSTEMS

- Pneumax provides its customers with complete solutions, panel and cabinet assemblies upon control diagrams designs
- Custom configured, ready-to-install plates, with wiring and tubing included for a direct and quick connection to the machine
- Combinations of components from our product range will fulfil each required function

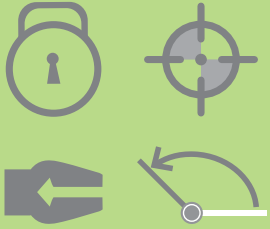


PROPORTIONAL REGULATORS

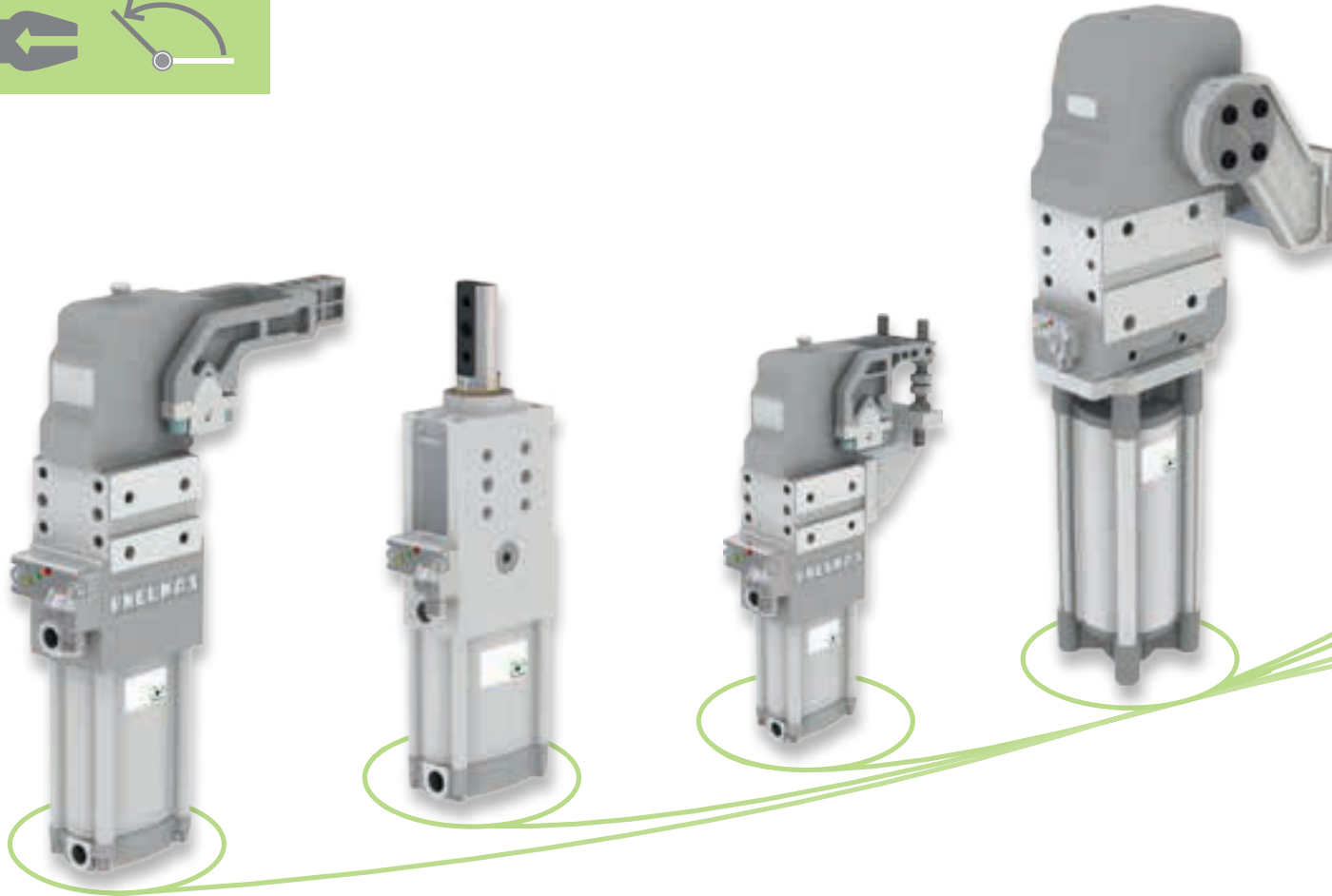
- Modern industrial applications require increasingly high performances from any pneumatic component. The speed and thrust of a pneumatic cylinder may need to vary dynamically when an operation is running. Our electronically controlled proportional regulators can modify pressure over time.
- Closed loop regulator – a pressure transducer in the circuit transmits a continuous analog signal to the microprocessor, which compares the reference value with the detected one and supplies the control solenoid valve accordingly.
- Three sizes are available, with flow rates up to 4,000 NI/min.



- Mainly used in closing systems, painting systems, tensioning systems, packaging systems, pneumatic braking systems, force control for welding grippers, thickness compensation systems, balancing systems, laser cutting, pressure transducers for the control of modulating valves, test benches, force control for buffers on polishers, etc.



THE ULTIMATE CLAMPING TECHNOLOGY





INNOVATION DOWN TO THE LAST DETAIL



C_X SERIES



C-SERIES
NANO clamps
K-SERIES
HE-SERIES

R-SERIES
RC-SERIES
HP-SERIES
F-SERIES

J-SERIES
JK-SERIES

P-SERIES



clamping



locating



handling



pivoting