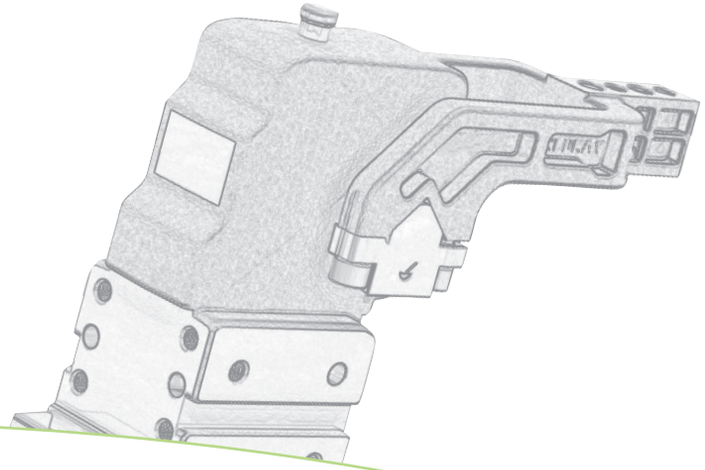
PNEUMAX FOR AUTOMOTIVE

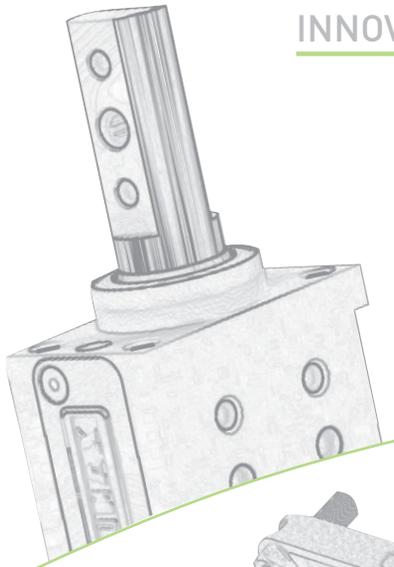
The ULTIMATE CLAMPING TECHNOLOGY.

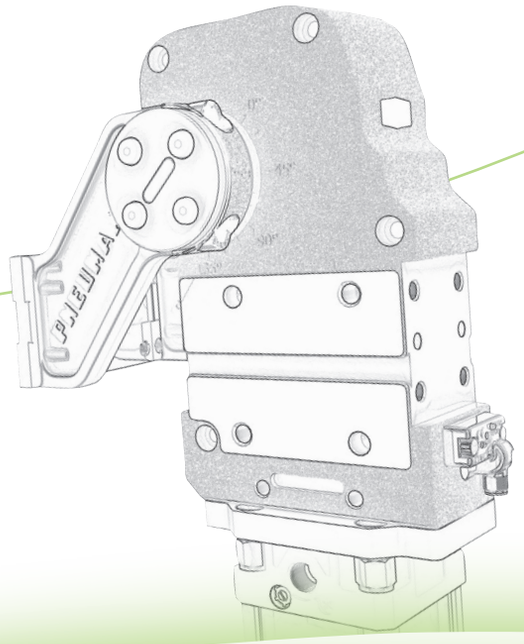
Innovation begins with Research and Development and extends to industrial processes and business activities, with the ultimate aim of total customer satisfaction.

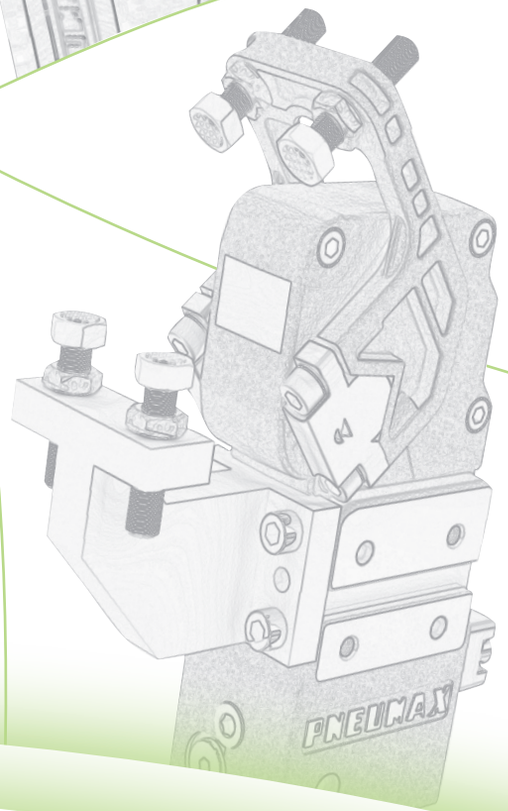
INNOVATION DOWN TO THE LAST DETAIL

TABLE OF CONTENTS









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

WHY PNX

COMPANY STRUCTURE

40TH YEAR

100,000

m^2 MANUFACTURING LOCATION

500 THINKING HEADS

70 MLN € TURNOVER

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

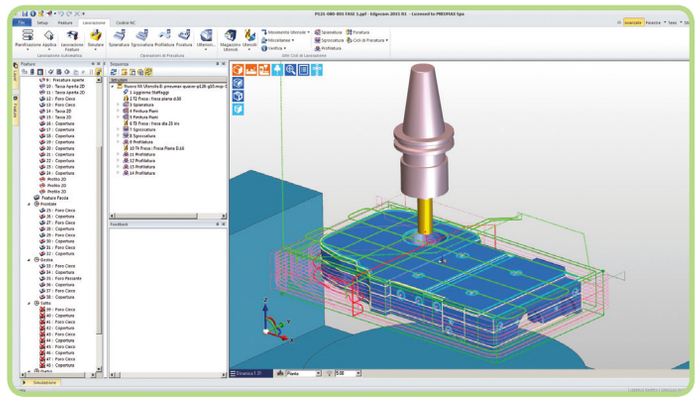
The first close-to-series samples are machined, using the **latest generation machinery**.
The first **FMEA** is prepared.

5 EVALUATION AND INSPECTION

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

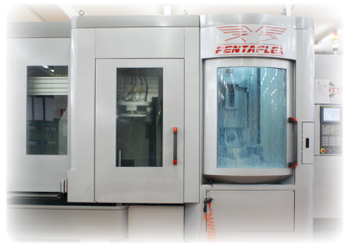
6 ENGINEERING

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

Verication and validation that the product meets the requirements.

WORLDWIDE PRESENCE

Distribution network through

13 international subsidiaries

7 national subsidiaries

43 approved dealers in further countries

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

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 maching 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.

to new requirements at short notice.

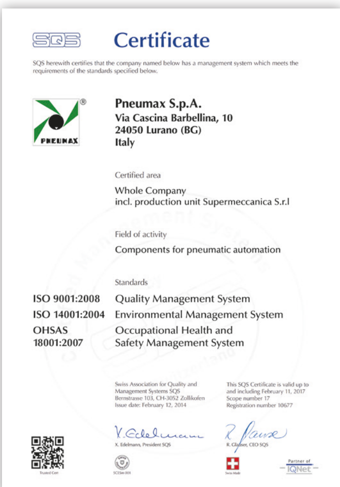
WARRANTY

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

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


SQS **Certificate**

SQS herewith certifies that the company named below has a management system which meets the requirements of the standards specified below.

Pneumax S.p.A.
Via Cascina Barbellina, 10
24050 Lurano (BG)
Italy

Certified area

Whole Company
incl. production unit Supermeccanica S.r.l

Field of activity

Components for pneumatic automation

Standards

ISO 9001:2008	Quality Management System
ISO 14001:2004	Environmental Management System
OHSAS 18001:2007	Occupational Health and Safety Management System

Swiss Association for Quality and Management Systems SQS
Bernstrasse 103, CH-3052 Zollikofen
Issue date: February 12, 2014

This SQS Certificate is valid up to and including February 11, 2017
Scope number 17
Registration number 10677

X. Edelmann, President SQS
R. Glauser, CEO SQS

Trusted Cert · SCESm 001 · Swiss Made · Partner of IQNet


IQNet
THE INTERNATIONAL CERTIFICATION NETWORK
CERTIFICATE
IQNet and SQS
hereby certify that the organisation

Pneumax S.p.A.
24050 Lurano (BG)
Italy

Certified area
Whole Company incl. production unit Supermeccanica S.r.l

Field of activity
Components for pneumatic automation

has implemented and maintains a
Management System
which fulfills the requirements of the following standard(s)

ISO 9001:2008 / ISO 14001:2004 / OHSAS 18001:2007

Scope No(s): 17
Issued on: 2014-02-12
Validity date: 2017-02-11
Registration Number: ***CH-10677***

Michael Drechsel
President of IQNet

Roland Glauser
CEO SQS

IQNet Partners*:
AENOR Spain AFNOR Certification France AIB-Vinçotte International Belgium ANCE-SIGE Mexico APCER Portugal CCC Cyprus CISQ Italy CQC China CQM China CQS Czech Republic Cro Cert Croatia DQS Holding GmbH Germany FCAV Brazil FONDONORMA Venezuela ICONTEC Colombia IMNC Mexico Inspecta Certification Finland IRAM Argentina JQA Japan KFQ Korea MIRTEC Greece MSZT Hungary Nemko AS Norway NSAI Ireland PCBC Poland Quality Austria Austria RR Russia SII Israel SIQ Slovenia SIRIM QAS International Malaysia SQS Switzerland SRAC Romania TEST St Petersburg Russia TSE Turkey YUQS Serbia
IQNet is represented in the USA by: AFNOR Certification, CISQ, DQS Holding GmbH and NSAI Inc.
* The list of IQNet partners is valid at the time of issue of this certificate. Updated information is available under www.iqnet-certification.com

Standards and regulatory Compliance

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.

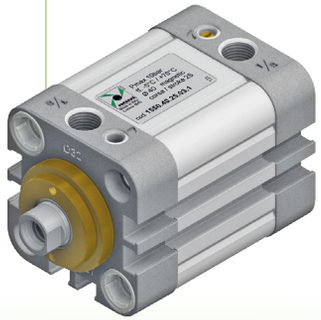
Selection of Pneumatic Components for the Automotive Industry

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.

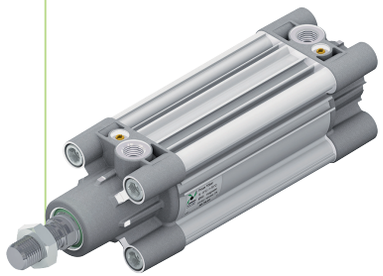
ECOMPACT

- 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



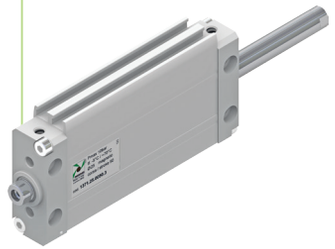
ECOLIGHT ISO 15552 STANDARD-BASED LIGHT CYLINDERS

- 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



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

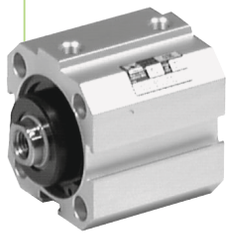
Selection of Pneumatic Components for the Automotive Industry

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

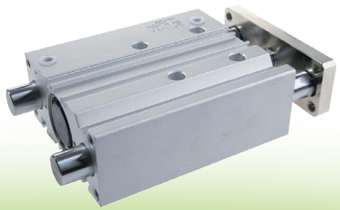
GUIDED COMPACT CYLINDERS

- 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

Metal rod scrapers upon request

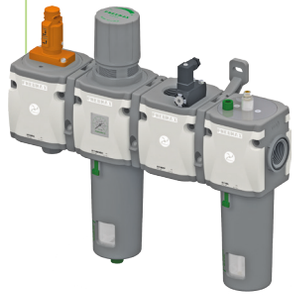


ROTARY ACTUATORS

- 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



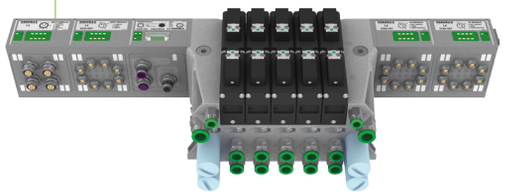
WHY PNX

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

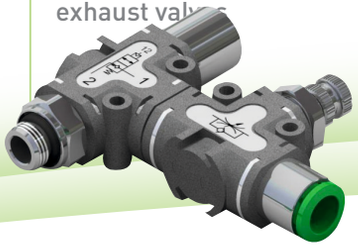
Mini slides

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

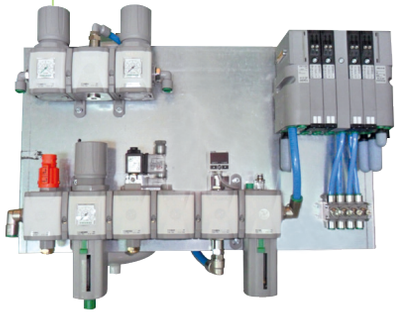
Available functions:

- 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

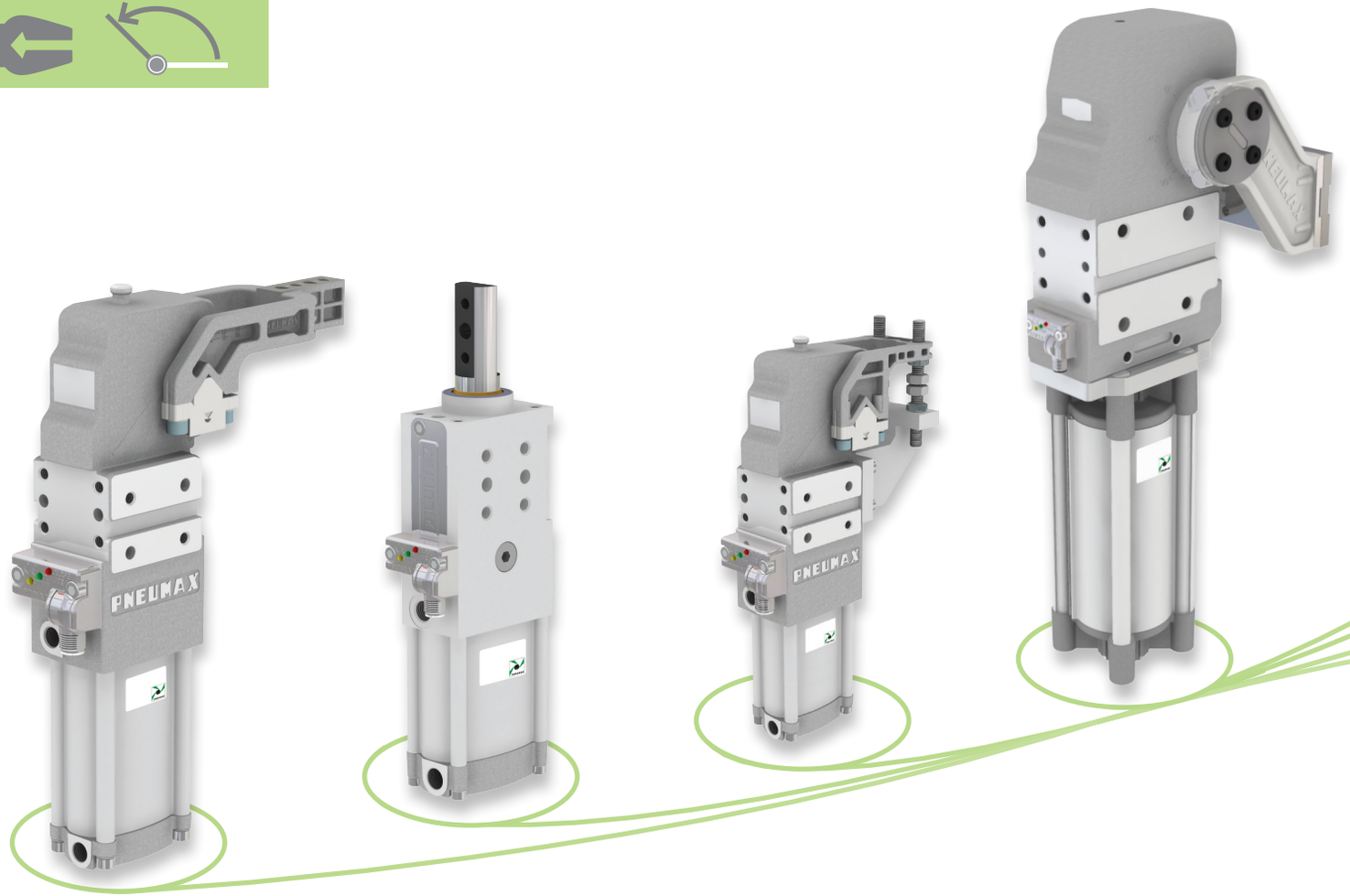
- Pneumax provides its customers with complete solutions, panel and cabinet assemblies upon control diagrams designs
- Custom configured, ready-to-install plates, with wiring and tubing included for a direct and quick connection to the machine
- Combinations of components from our product range will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



C-SERIES
K-SERIES
HE-SERIES

clamping

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

locating

J-SERIES
JK-SERIES

handling

P-SERIES

pivoting

PNEUMAX FOR AUTOMOTIVE

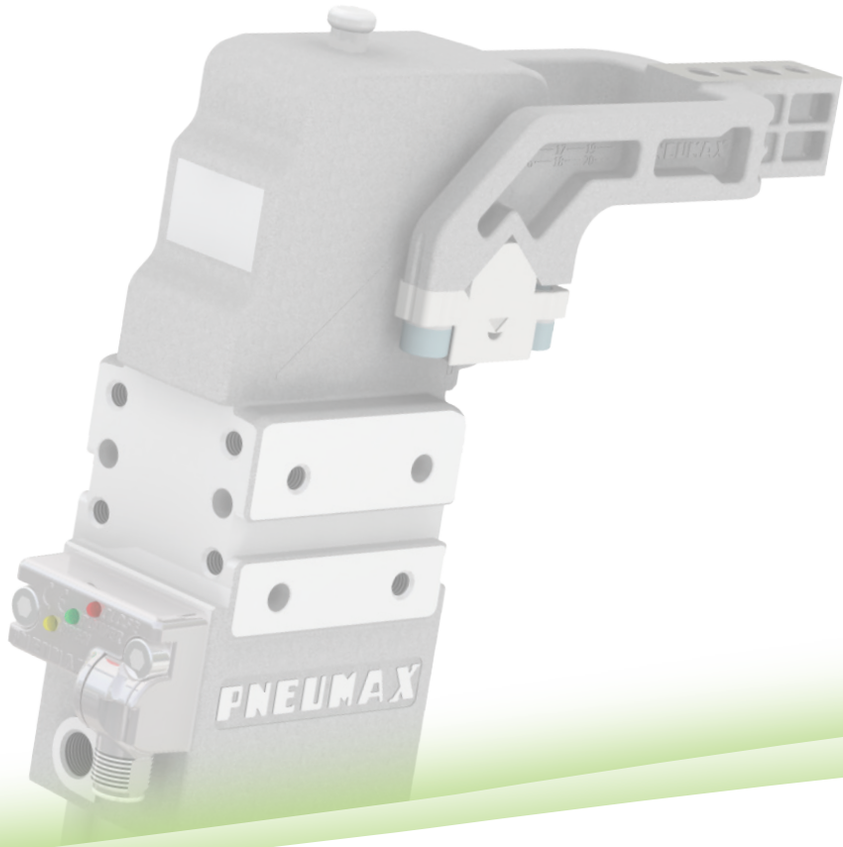
The ULTIMATE CLAMPING TECHNOLOGY.

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

CLAMPING

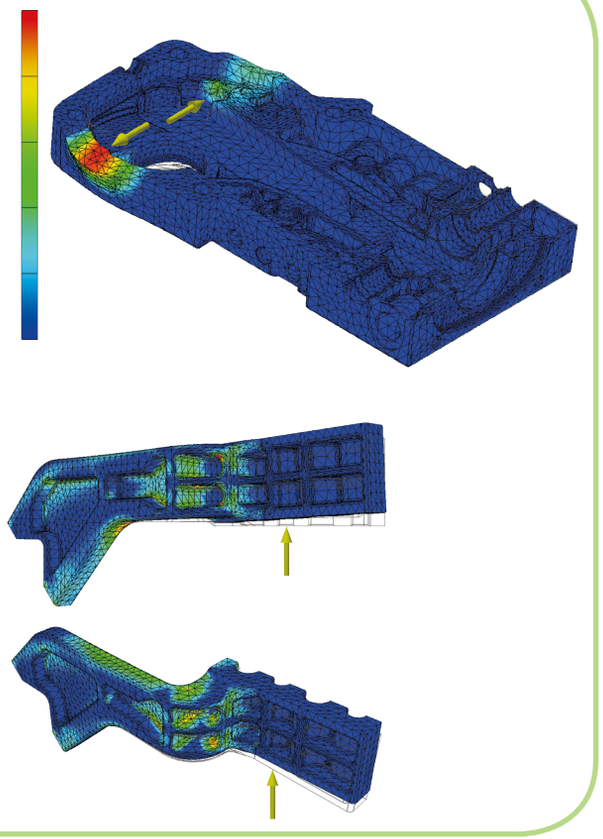
C-SERIES	European and NAAMS Standard clamps
K-SERIES	High compensation clamps
HE-SERIES	High Efficiency clamps



THE LIGHTEST AND MOST COMPACT

Pneumax clamps' series have all been developed with a modern and compact design which goes towards **enhancing the operational performances**, such as the cycle time, combined with a very limited total weight without compromising their **strength** and **resistance**.
Due to the material chosen for the housings and the clamping arms, a high quality aluminum alloy, as well as due to the compact design of the cylinder and the housings, to minimize any interfering contours, Pneumax devices are **the lightest and most compact power clamps in the market**.

FIELD RELIABILITY

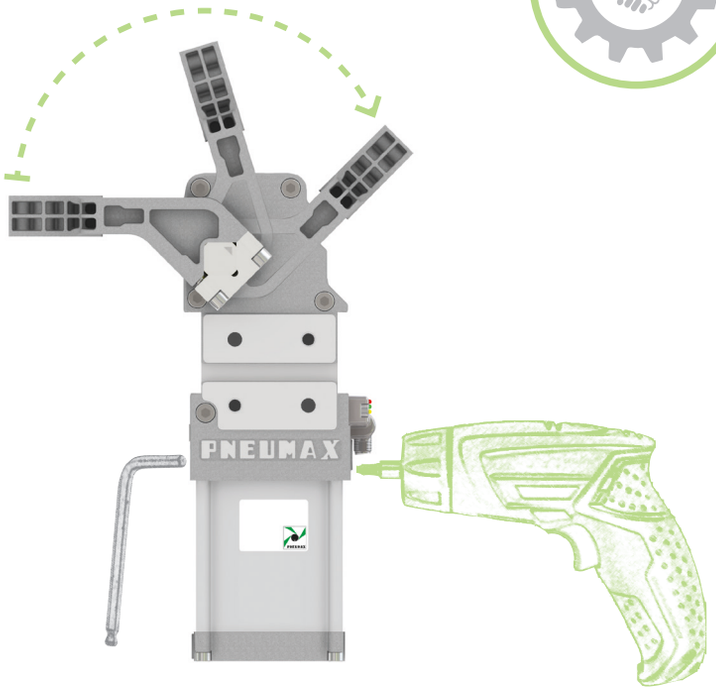


All our clamps' series are equipped with an **internal hard stop** which secures a **precise and backlash-free positioning**. No adjustment neither maintenance operations are required.
The **structural strength and stiffness** of the our clamps' series ensure limited deflection even with longer clamping arms.
The shaft and the housings are **so precisely guided** that no side backlash of the clamping arm can take place.

The sensor is **process proven and CE certified**: it is **immune to magnetic fields** complying to **EMC EN 60947-5-2:2007 + A1:2012**.
These features enhance the reliability of the clamps during their operating cycles and for the whole service life.

All the functional components have been calculated by the FEM (Finite Element Method) and have been designed for **maximum structural resistance and fatigue strength**.

MAINTENANCE FRIENDLY SOLUTIONS



One access point to opening angle adjustment on each side

Easily accessible stepless opening angle adjustment. **Simple field adjustment** of the clamp arm opening angle **from the rear and front side** of the clamp with an Allen wrench or a screw gun,

WITH THE SHORTEST SET-UP TIME ON THE MARKET.

This allows for an optimum setting of the opening angle to provide the shortest cycle times without interference during load and unload procedures.
It generates savings in the warehouse management as the clamp can be set in any opening angle from 0° to 135° > only 1 clamp at stock for each size!
Complete reliability of the angle adjustment over time: integrated mechanism secures the adjusted position and prevents any sliding or opening angle displacement.
A **retain mechanism** secures the **adjustment tool in its seat** and prevents the Allen wrench to fall down during the adjustment procedure.
Even without air, the clamp can be toggle-locked through the adjustment means.

PATENT PENDING

WHY PNX

HIGH RESISTANCE TO CONTAMINATION AND CORROSION

IP68 for the sensor
IP56 for the clamps

The clamp IP integrity is safeguarded even if the sensor has been removed.

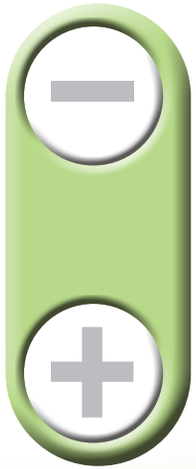
Completely encapsulated design of the clamps: the toggle mechanism is fully encapsulated within the lightweight aluminum body construction. **Sandblasted housings and long life built-in zinc protected components in rust prevention**. The clamps are all equipped with **sealed roller bearings**, to prevent any contamination from entering the bearings.

Protection against weld spatter, dirt and coolants enabling clamps to operate continuously in extreme environments.

AN EFFICIENT CUSHIONING SYSTEM

Original cushioning system which prevents abrupt movements, decelerates the arm mass, enhances the cycle time and contributes to guaranteeing a longer life of the clamps.

Economic advantage: if mass complies with specification, **no flow control valve** is required as all clamps have calibrated fixed orifices into the ports.



Less noise

Less abrupt movements – no slamming – no shocks

Less impact forces generated by dynamic stress factor

Shorter cycle time

Controlled movements

Longer life time

WHY PNX

INDUCTIVE SENSOR

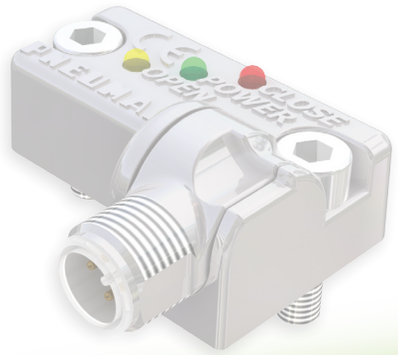
1 for ALL

1 sensor for all product families and all series

- ✔ COMPLETELY ENCAPSULATED VERSION WHICH SAFEGUARDS THE **CLAMP IP INTEGRITY EVEN IF REMOVED**
- ✔ EASILY REMOVABLE
- ✔ STEPLESS ORIENTATION OF THE CONNECTOR
- ✔ ALL METAL SENSOR –IP68
- ✔ CE CONFORMITY DECLARATION EMC COMPLIANCE TO EN 60947-5-2:2007 + A1:2012
- ✔ OPTIMAL LED VISUALIZATION FROM EACH ANGULAR ORIENTATION

PATENT PENDING

Quick set up and changeover: easy removal and a quick changeover which can be achieved in less than a minute.

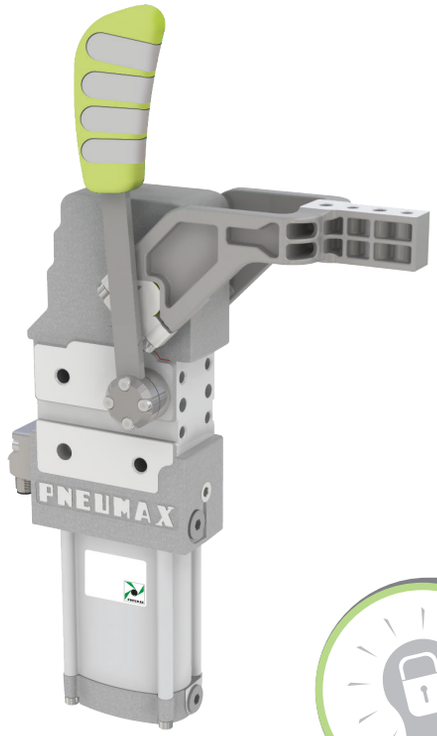


INTEGRATED MANUAL OPERATION

Robust solution with extremely
compact and flat dimensions.
Sturdy and durable.

Handle rotation area is smaller
than arm opening angle.
Secure, quick and easy mounting of the handle.

USER FRIENDLY SOLUTION
Ergonomic handle for a safe operation.
Low force required to engage the
toggle linkage manually.

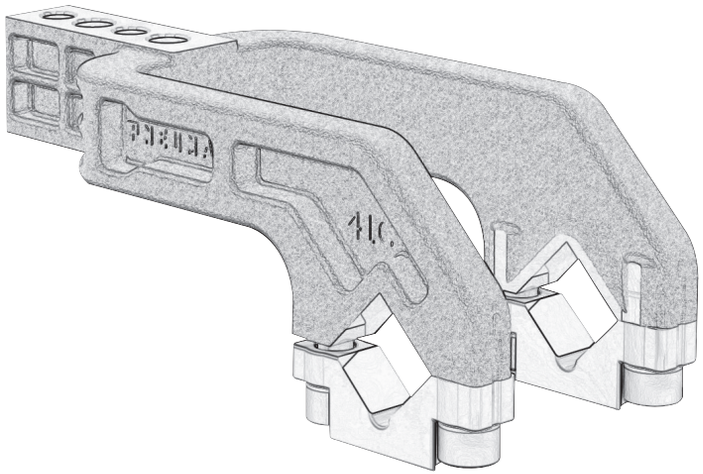


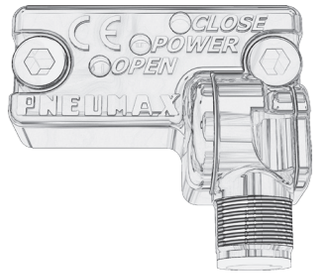
PATENT
PENDING

WHY PNX

TECHNOLOGICAL AND MODERN DESIGN

All our clamp series have been designed with an eye to their distinctive technological solutions, such as that used for the **clamping arms**, which is innovative and patent pending, and the sensor.
Robust, designed for harsh conditions, powerful but with a streamlined look.





PATENT PENDING

ORDERING STRING C1-SERIES

C	1	P	63	E	G	4	S	01

VERSION
C = clamp

MOUNTING PATTERN STANDARD
1 = European mount

OPERATION
P = pneumatic
M = manual
D = pneumatic with

1 = 
2 = 
3 = 

SIZE
40 = Ø 40 mm
50 = Ø 50 mm
63 = Ø 63 mm

SENSOR
E = electronic with M12 swivel connector
N = no sensor

PORTS
G = GAS
N = NPT
D = dual GAS ports on rear end cap
A = dual NPT ports on rear end cap

ARM MOUNT
1 = 
2 = 
3 = 
4 = 

ARM MATERIAL
A = aluminum
S = steel

CLAMP ARM TYPE
01 = wishbone, central, 15 mm offset, Ø 6H7 - Ø 9 mm*
02 = wishbone, right, 15 mm offset, Ø 6H7 - Ø 9 mm*
03 = wishbone, left, 15 mm offset, Ø 6H7 - Ø 9 mm*
04 = wishbone, central, 45 mm offset, Ø 6H7 - Ø 9 mm
05 = wishbone, right, 45 mm offset, Ø 6H7 - Ø 9 mm
06 = wishbone, left, 45 mm offset, Ø 6H7 - Ø 9 mm

Please see the charts in the datasheets for arm position as well as for max. opening angle

*for size 80 mm > 20 mm offset
*for size 40 mm > Ø 6H7 - Ø 7 mm

Subject to change without notice

C1P40E

Power clamp

European std

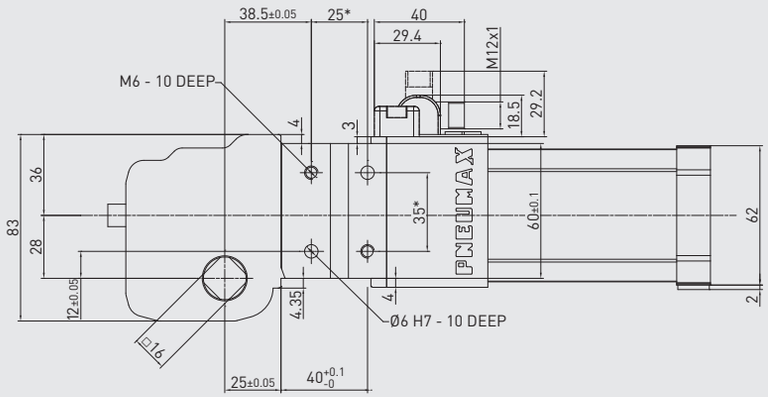
40 mm bore

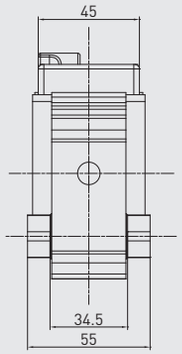
WEIGHT

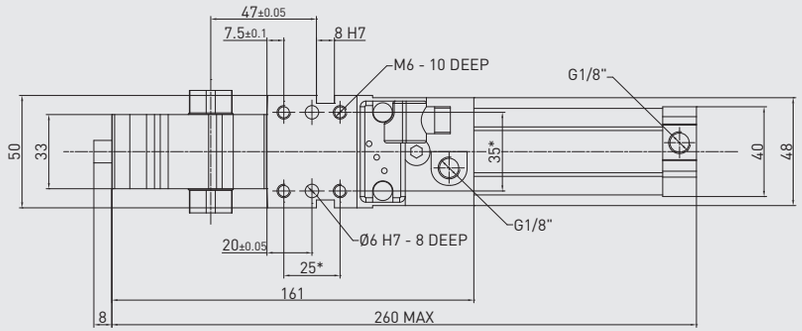
kg
1.45

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 31/03/2015







Technical features

Manual release button to open the linkage when air pressure is removed during setup. Pneumatic **ports on both sides** of the cylinder.	
Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

Subject to change
without notice

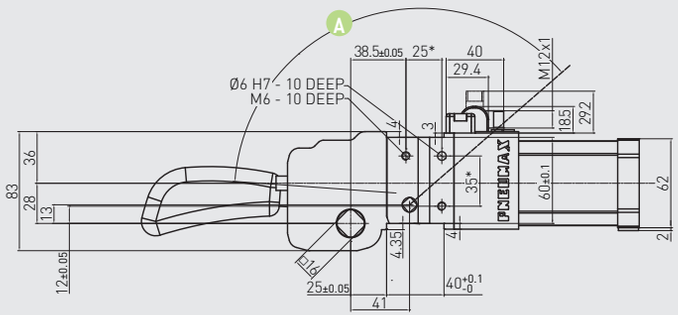
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

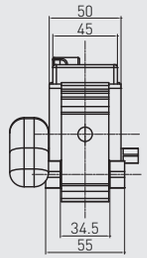
REV. 00 - 17/06/2015

WEIGHT

kg 1.75

D1 handle included





C1D_40E

Power clamp

European std

40 mm bore

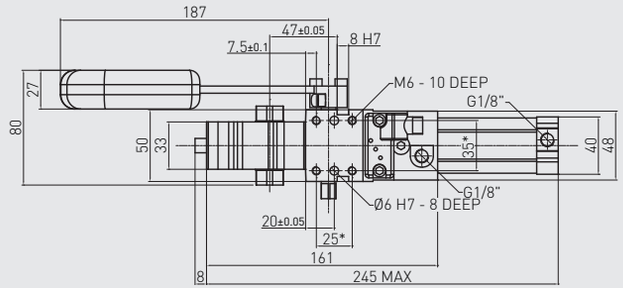
With manual operation

Manual operation

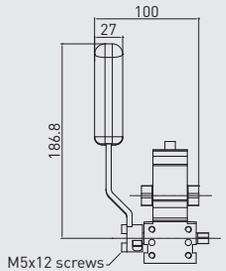
D2

D3

D1 VERSION

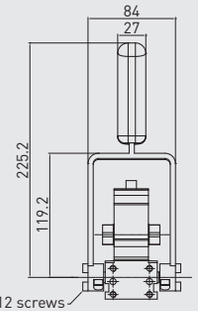


D2 VERSION



M5x12 screws
Tightening torque: 5 N m

D3 VERSION



M5x12 screws
Tightening torque: 5 N m

Handle swivel angle

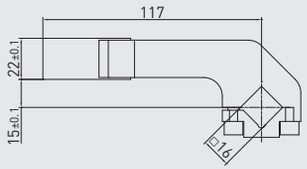
Arm opening angle	Handle swivel angle (A)
0°	4.12°
15°	22.65°
30°	38.2°
45°	58.4°
60°	83.6°
75°	107.6°
90°	123.6°
105°	132.75°
120°	137.7°

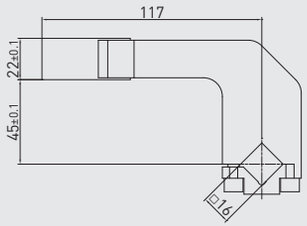
Subject to change without notice

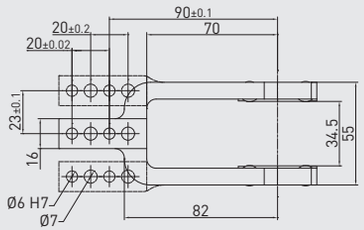
CLAMPING ARMS

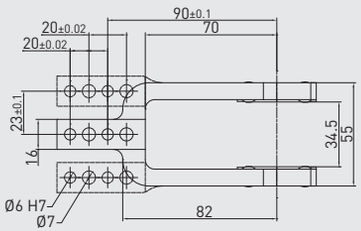
16 mm shaft

Aluminum Steel









16 mm shaft – 15 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B1601	Aluminum	Central	0.24	135°	135°	N/A	45°
Q1601	Steel	Central	0.44	135°	135°	N/A	45°
B1602	Aluminum	Right	0.24	135°	135°	N/A	45°
Q1602	Steel	Right	0.46	135°	135°	N/A	45°
B1603	Aluminum	Left	0.24	135°	135°	N/A	45°
Q1603	Steel	Left	0.46	135°	135°	N/A	45°

Screws: M6x20 **Tightening torque:** 10 N m

Subject to change without notice

16 mm shaft – 45 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B1604	Aluminum	Central	0.3	135°	135°	N/A	N/A
Q1604	Steel	Central	0.55	135°	135°	N/A	N/A
B1605	Aluminum	Right	0.3	135°	135°	N/A	N/A
Q1605	Steel	Right	0.57	135°	135°	N/A	N/A
B1606	Aluminum	Left	0.3	135°	135°	N/A	N/A
Q1606	Steel	Left	0.57	135°	135°	N/A	N/A

Screws: M6x20 **Tightening torque:** 10 N m

FUNCTIONAL CHARTS
SIZE 40 mm

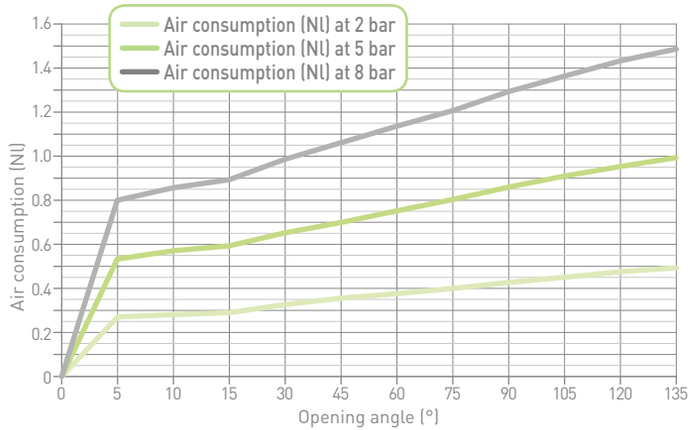
Clamping moment (at 5 bar)	130 N m
Holding moment	380 N m

The above data are meant for correct working conditions of the clamp – with the same performance level during its life time.

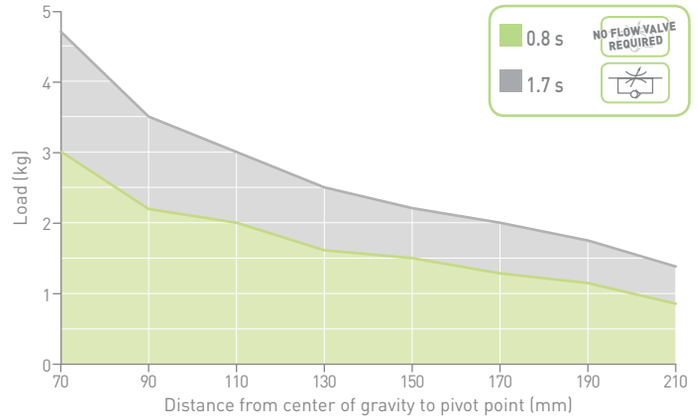
For applications which exceed the above data, please contact our sales representatives.

Air consumption

REV. 00 - 17/06/2015



Tooling weight chart



Calculation tool available upon demand

Please consult our technical representatives

Subject to change without notice

C1P50E

Power clamp

European std

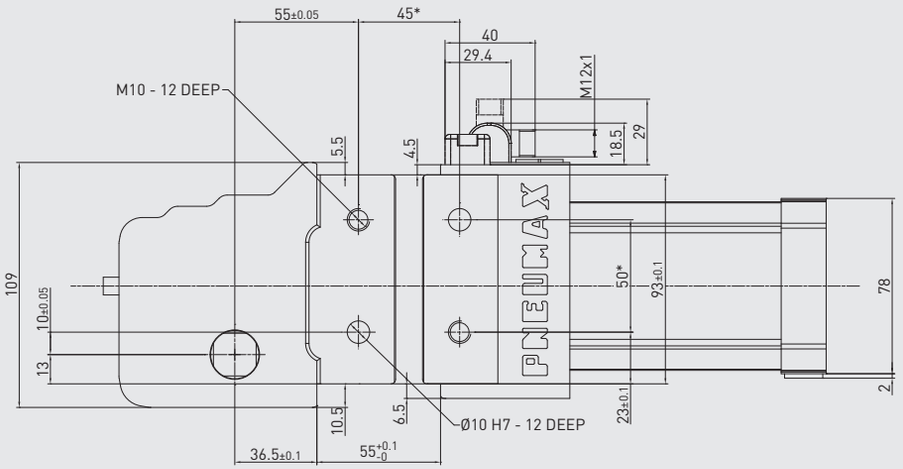
50 mm bore

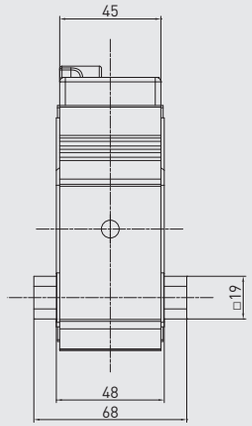
WEIGHT

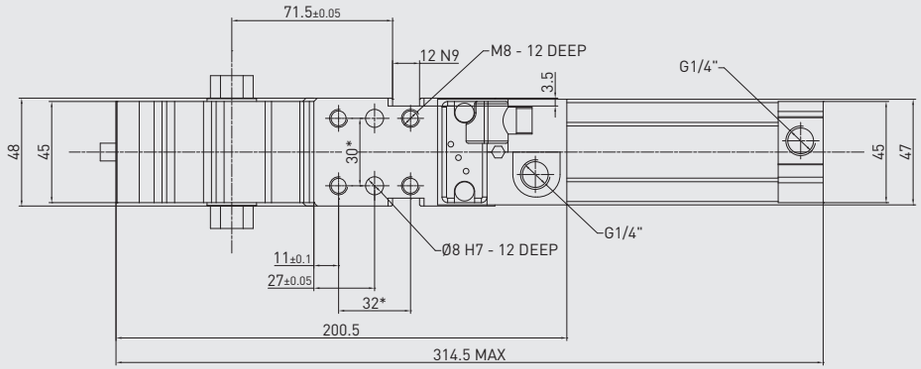
kg 2.7

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 31/03/2015







Technical features

Manual release button to open the linkage when air pressure is removed during setup. Pneumatic **ports on both sides** of the cylinder.	
Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

Subject to change without notice

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 16/06/2015

WEIGHT

kg 3.1

D1 handle included

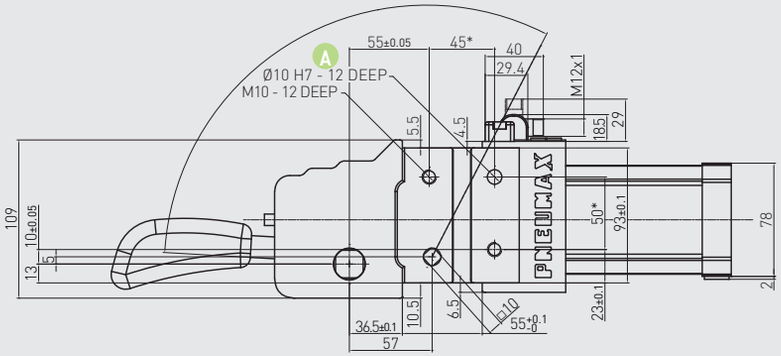
C1D_50E

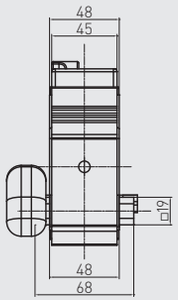
Power clamp

European std

50 mm bore

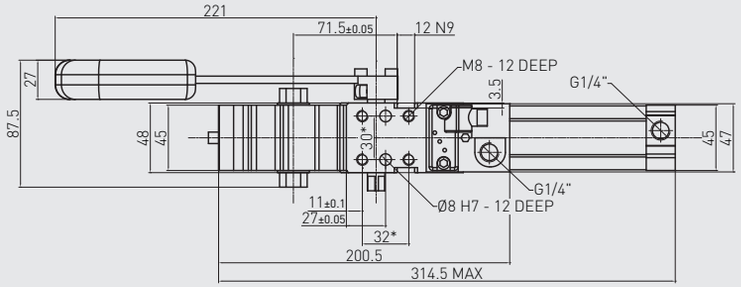
With manual operation



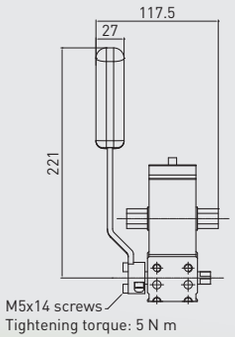


Manual operation

D1 VERSION



D2 VERSION



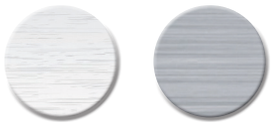
Handle swivel angle

Arm opening angle	Handle swivel angle (A)
0°	3.25°
15°	27°
30°	43°
45°	59.3°
60°	75.4°
75°	89.75°
90°	101°
105°	109°
120°	114.25°
135°	117.2°

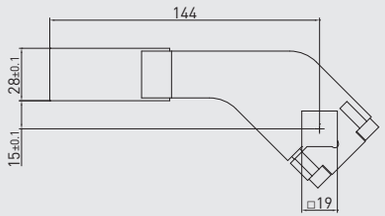
Subject to change without notice

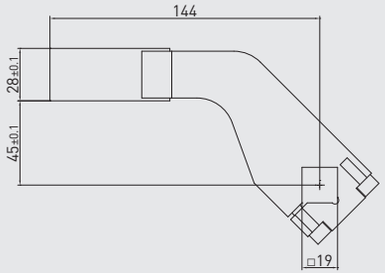
CLAMPING ARMS

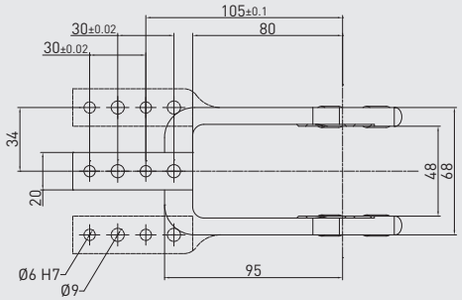
19 mm shaft

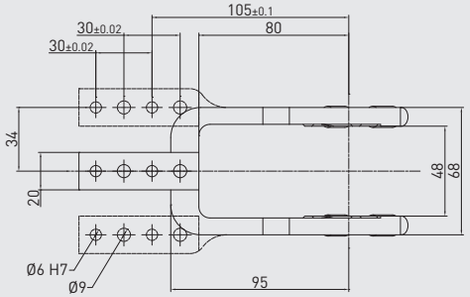


REV. 00 - 31/03/2015









19 mm shaft – 15 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B1901	Aluminum	Central	0.41	135°	115°	135°	80°
Q1901	Steel	Central	0.71	135°	115°	135°	80°
B1902	Aluminum	Right	0.43	135°	115°	135°	80°
Q1902	Steel	Right	0.79	135°	115°	135°	80°
B1903	Aluminum	Left	0.43	135°	115°	135°	80°
Q1903	Steel	Left	0.79	135°	115°	135°	80°

19 mm shaft – 45 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B1904	Aluminum	Central	0.45	135°	135°	135°	80°
Q1904	Steel	Central	0.77	135°	135°	135°	80°
B1905	Aluminum	Right	0.46	135°	135°	135°	80°
Q1905	Steel	Right	0.81	135°	135°	135°	80°
B1906	Aluminum	Left	0.46	135°	135°	135°	80°
Q1906	Steel	Left	0.81	135°	135°	135°	80°

Subject to change without notice

FUNCTIONAL CHARTS
SIZE 50 mm

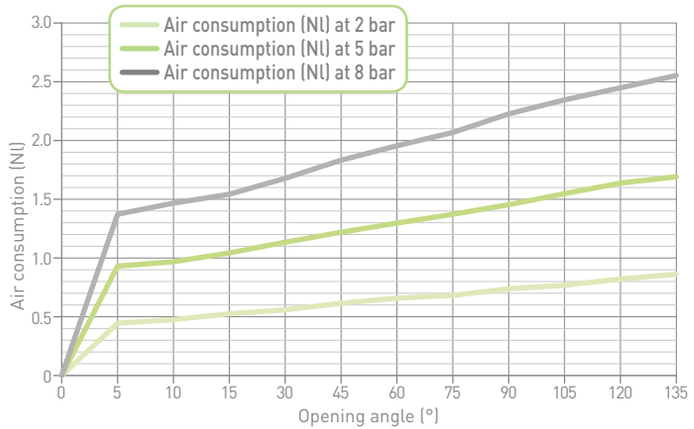
Clamping moment (at 5 bar)	185 N m
Holding moment	800 N m

The above data are meant for correct working conditions of the clamp – with the same performance level during its life time.

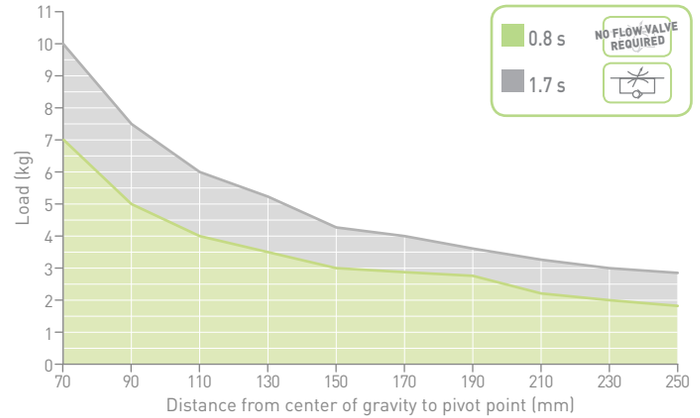
For applications which exceed the above data, please contact our sales representatives.

Air consumption

REV. 00 - 16/06/2015



Tooling weight chart



Calculation tool available upon demand

Please consult our technical representatives

Subject to change without notice

C1P63E

Power clamp

European std

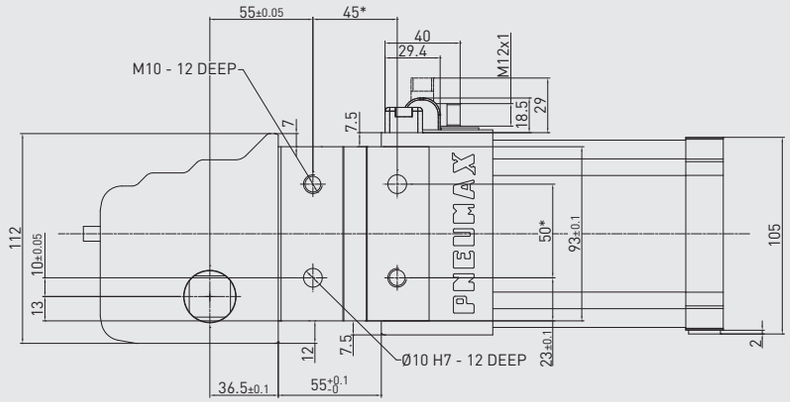
63 mm bore

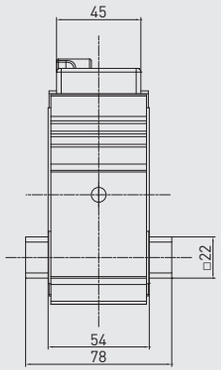
WEIGHT

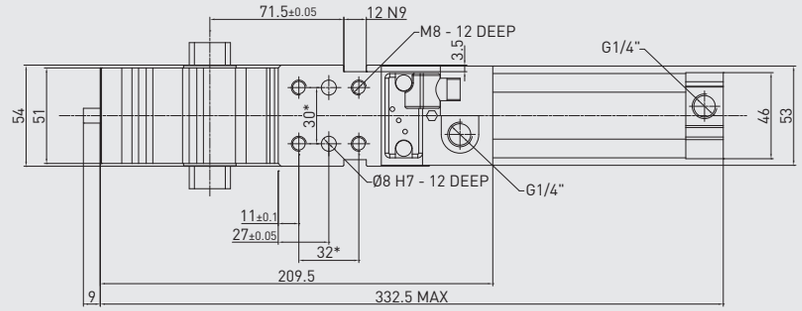
kg 3.5

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 31/03/2015







Technical features

Manual release button to open the linkage when air pressure is removed during setup. Pneumatic **ports on both sides** of the cylinder.	
Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

Subject to change without notice

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 17/06/2015

WEIGHT

kg 3.93

D1 handle included

C1D_63E

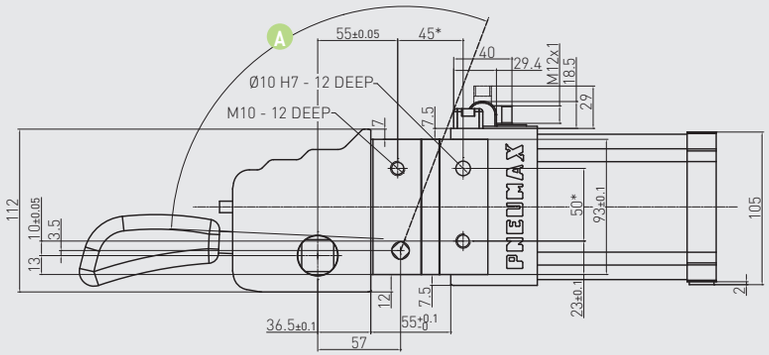
Power clamp

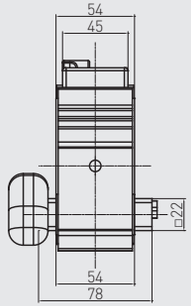
European std

63 mm bore

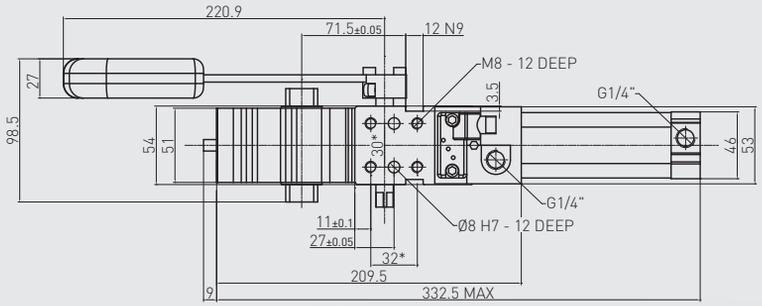
With manual operation

Manual operation

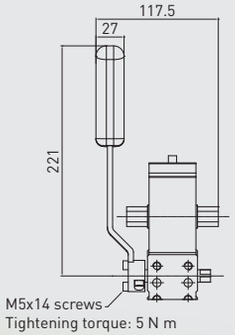




D1 VERSION



D2 VERSION



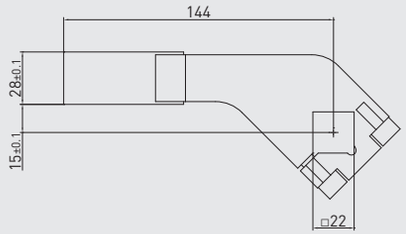
Handle swivel angle

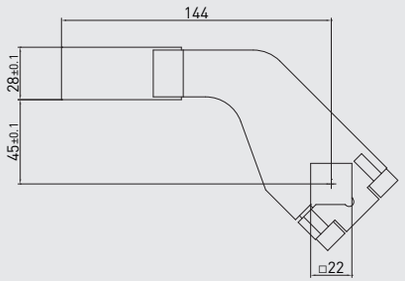
Arm opening angle	Handle swivel angle (A)
0°	2.65°
15°	26.35°
30°	41.38°
45°	56°
60°	70.38°
75°	83.43°
90°	94°
105°	102°
120°	107°
135°	110.7°

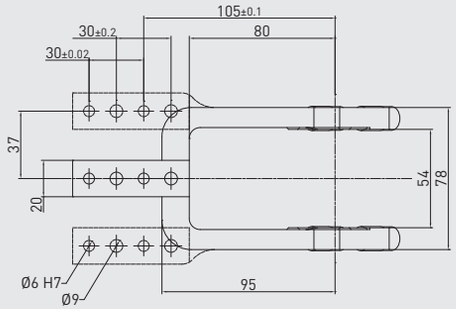
Subject to change without notice

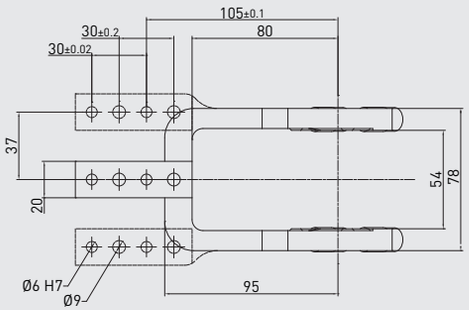
CLAMPING ARMS

Aluminum Steel









22 mm shaft – 15 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B2201	Aluminum	Central	0.52	135°	115°	135°	80°
Q2201	Steel	Central	0.9	135°	115°	135°	80°
B2202	Aluminum	Right	0.54	135°	115°	135°	80°
Q2202	Steel	Right	0.93	135°	115°	135°	80°
B2203	Aluminum	Left	0.54	135°	115°	135°	80°
Q2203	Steel	Left	0.93	135°	115°	135°	80°

Screws: M8x25 **Tightening torque:** 25 N m

Subject to change without notice

22 mm shaft – 45 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B2204	Aluminum	Central	0.57	135°	135°	135°	75°
Q2204	Steel	Central	0.98	135°	135°	135°	75°
B2205	Aluminum	Right	0.58	135°	135°	135°	75°
Q2205	Steel	Right	1.02	135°	135°	135°	75°
B2206	Aluminum	Left	0.58	135°	135°	135°	75°
Q2206	Steel	Left	1.02	135°	135°	135°	75°

Screws: M8x25 **Tightening torque:** 25 N m

FUNCTIONAL CHARTS
SIZE 63 mm

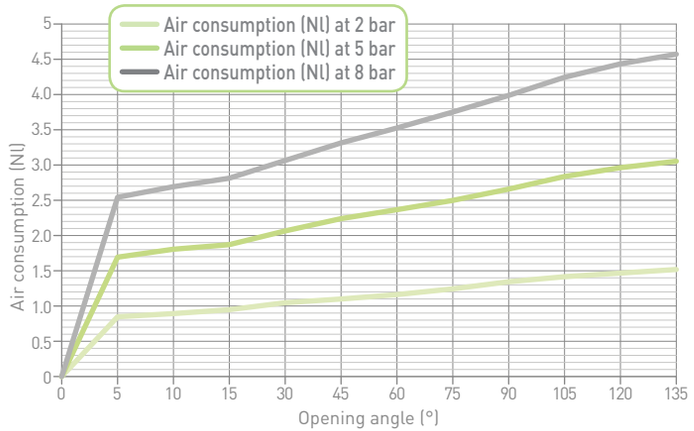
Clamping moment (at 5 bar)	390 N m
Holding moment	1,500 N m

The above data are meant for correct working conditions of the clamp – with the same performance level during its life time.

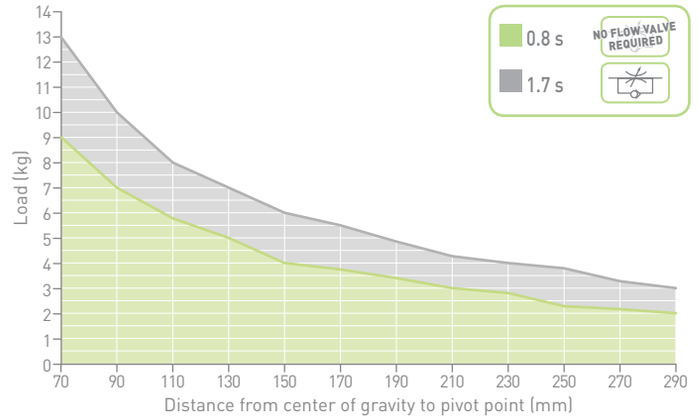
For applications which exceed the above data, please contact our sales representatives.

Air consumption

REV. 00 - 17/06/2015



Tooling weight chart



Calculation tool available upon demand

Please consult our technical representatives

Subject to change without notice

C1P80E

Power clamp

European std

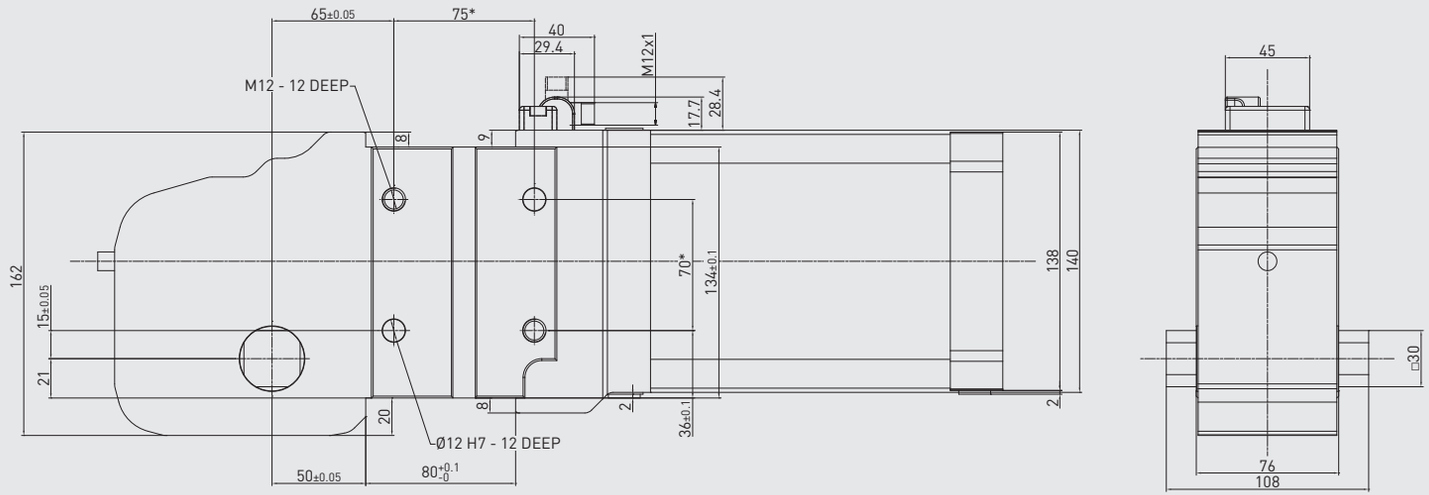
80 mm bore

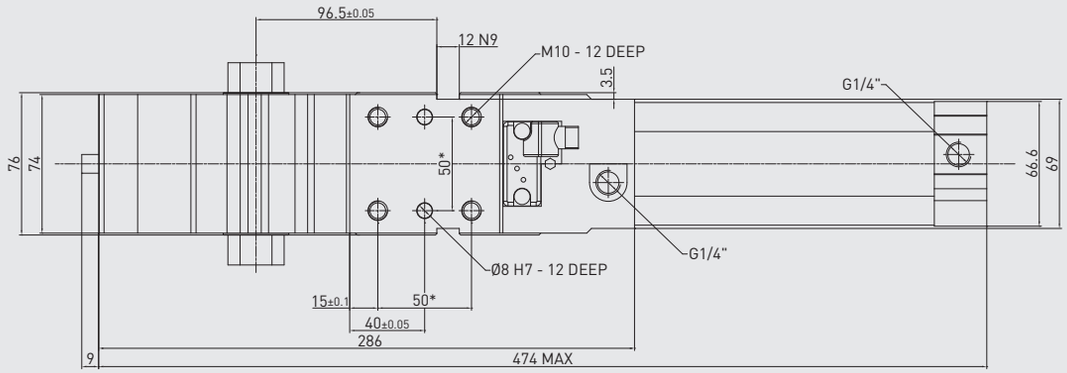
WEIGHT

kg
8.54

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 31/03/2015





Technical features

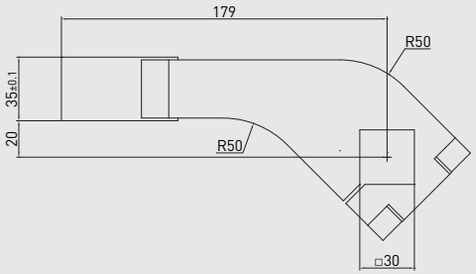
Manual release button to open the linkage when air pressure is removed during setup. Pneumatic **ports on both sides** of the cylinder.	
Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

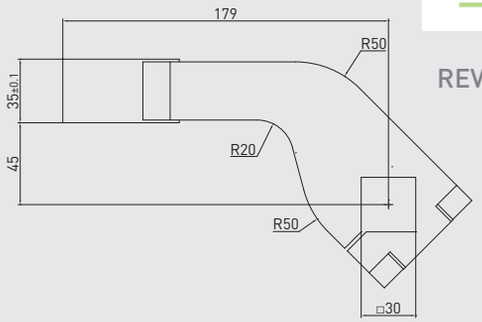
Subject to change without notice

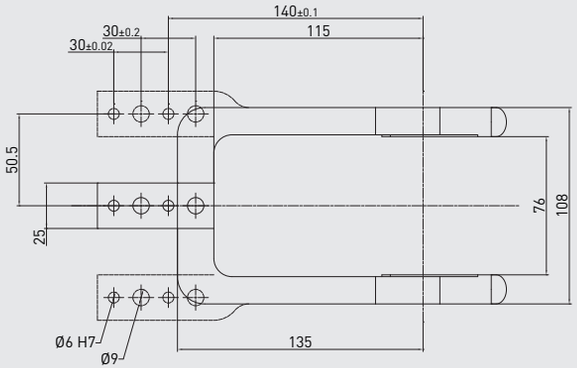
REV. 00 - 29/05/2015

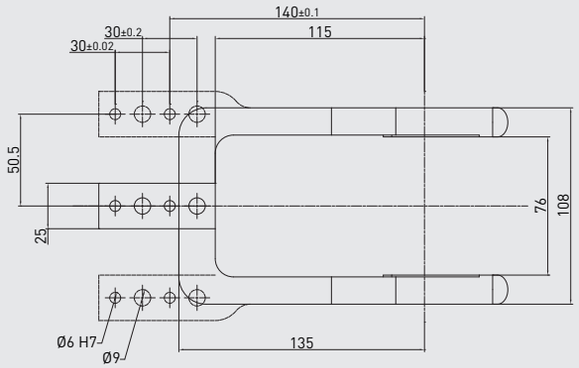
CLAMPING ARMS

30 mm shaft









Aluminum

30 mm shaft – 20 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B3001	Aluminum	Central	1.1	135°	110°	135°	75°
B3002	Aluminum	Right	1.15	135°	110°	135°	75°
B3003	Aluminum	Left	1.15	135°	110°	135°	75°

Screws: M10x35 **Tightening torque:** 35 N m

30 mm shaft – 45 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B3004	Aluminum	Central	1.18	135°	110°	135°	75°
B3005	Aluminum	Right	1.2	135°	110°	135°	75°
B3006	Aluminum	Left	1.2	135°	110°	135°	75°

Screws: M10x35 **Tightening torque:** 35 N m

Subject to change without notice

FUNCTIONAL CHARTS
SIZE 80 mm

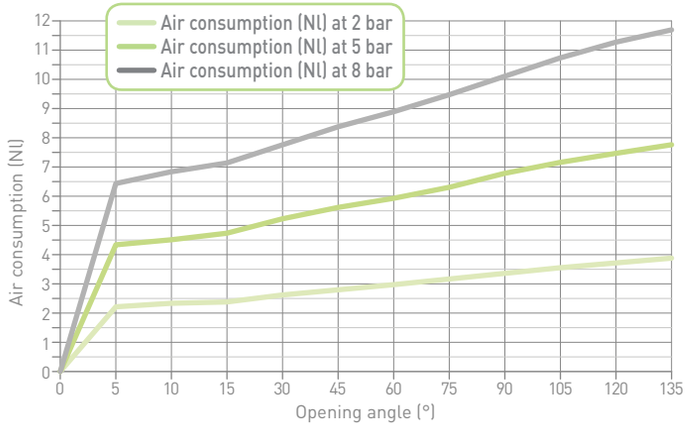
Clamping moment (at 5 bar)	850 N m
Holding moment	2,500 N m

The above data are meant for correct working conditions of the clamp – with the same performance level during its life time.

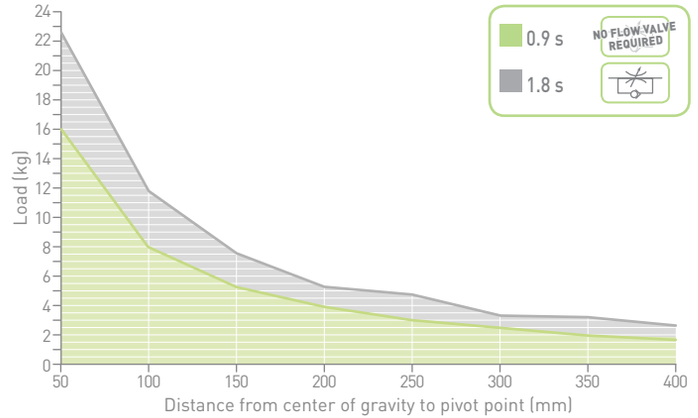
For applications which exceed the above data, please contact our sales representatives.

Air consumption

REV. 00 - 29/05/2015



Tooling weight chart



Calculation tool available upon demand

Please consult our technical representatives

Subject to change without notice

ORDERING STRING C2-SERIES

GLOBAL STANDARD COMPONENTS NAAMS

C | 2 | P | 50 | E | N

VERSION
C = clamp

MOUNTING PATTERN STANDARD
2 = NAAMS mount

OPERATION
P = pneumatic
D = pneumatic with manual operation

2 = 

SIZE
50 = Ø 50 mm
63 = Ø 63 mm
80 = Ø 80 mm

SENSOR
E = electronic with M12 swivel connector
N = no sensor

PORTS
G = GAS
N = NPT
D = dual GAS ports on rear end cap
A = dual NPT ports on rear end cap

NAAMS clamping arms to be ordered separately

Please see the charts in the datasheets for arm position as well as for max. opening angle

WEIGHT

kg
2.7

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1
NAAMS DIMENSIONAL VALUES ARE HIGHLIGHTED

REV. 00 - 31/03/2015

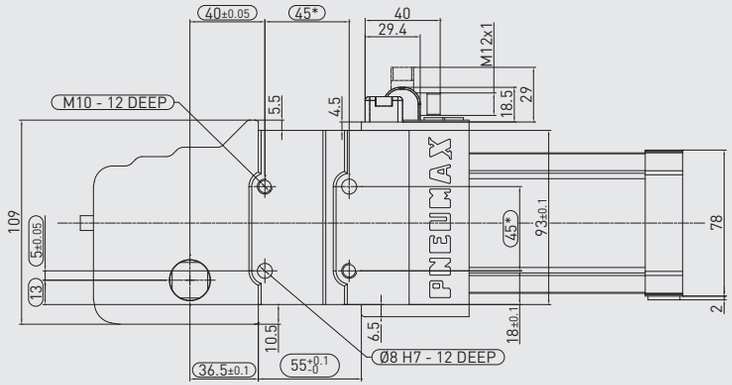
GLOBAL STANDARD COMPONENTS
NAAMS

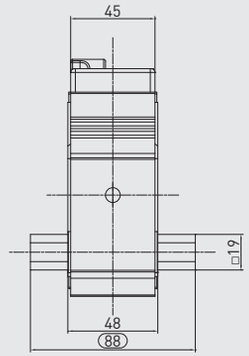
C2P50E

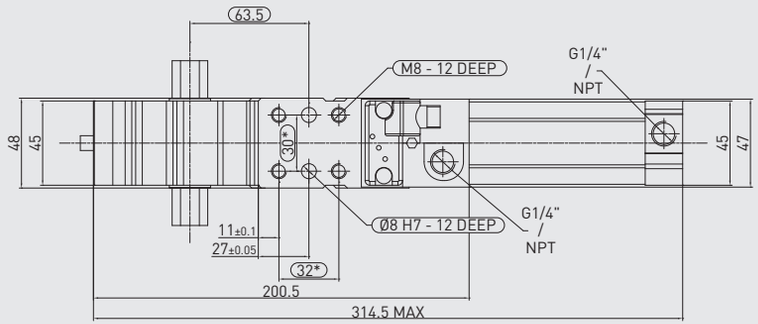
Power clamp

NAAMS std

50 mm bore







Technical features

Manual release button to open the linkage when air pressure is removed during setup. Pneumatic **ports on both sides** of the cylinder.	
Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

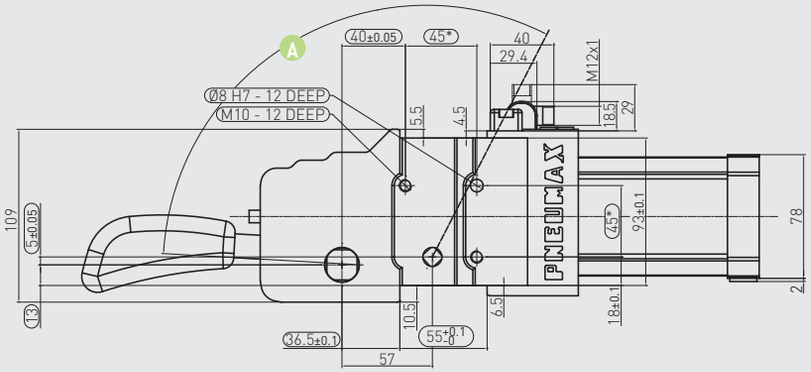
Subject to change
without notice

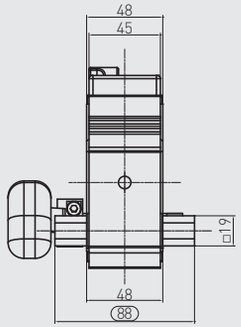
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1
NAAMS DIMENSIONAL VALUES ARE HIGHLIGHTED

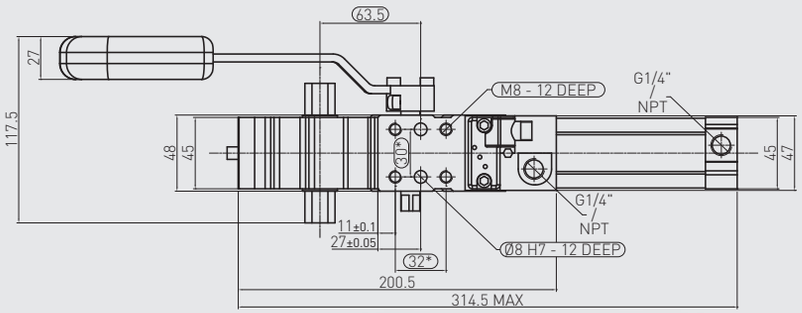
REV. 00 - 17/06/2015

WEIGHT

kg 3.17
D2 handle included







GLOBAL STANDARD COMPONENTS
NAAMS

C2D250E

Power clamp

NAAMS std

50 mm bore

With manual operation

Handle swivel angle

Arm opening angle	Handle swivel angle A
0°	3.25°
15°	27°
30°	43°
45°	59.3°
60°	75.4°
75°	89.75°
90°	101°
105°	109°
120°	114.25°
135°	117.2°

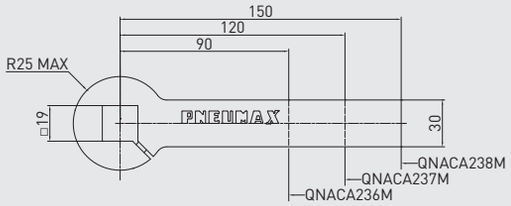
Subject to change without notice

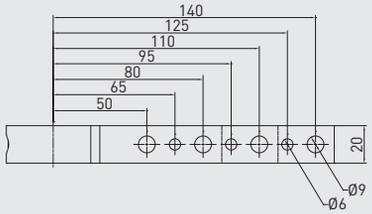
CLAMPING ARMS

19 mm shaft

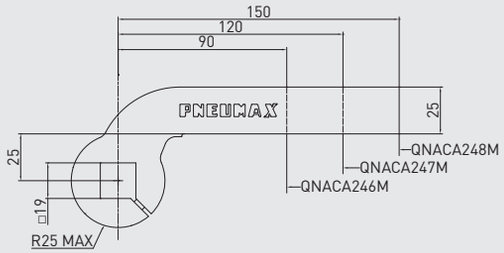
Steel

0 mm OFFSET

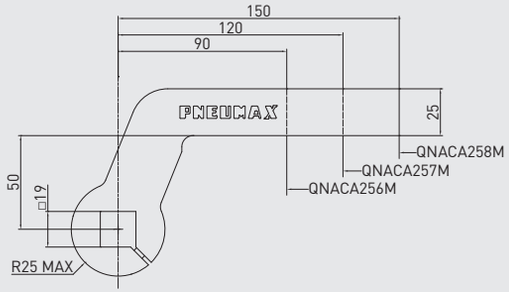




25 mm OFFSET



50 mm OFFSET



19 mm shaft – 0 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA236M	Steel	90	0.4	135°	135°	135°	135°
QNACA237M	Steel	120	0.49	135°	135°	135°	135°
QNACA238M	Steel	150	0.58	135°	135°	135°	135°

Screws: M6x16 **Tightening torque:** 10 N m

19 mm shaft – 25 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA246M	Steel	90	0.44	135°	135°	135°	135°
QNACA247M	Steel	120	0.52	135°	135°	135°	135°
QNACA248M	Steel	150	0.6	135°	135°	135°	135°

Screws: M6x16 **Tightening torque:** 10 N m

19 mm shaft – 50 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA256M	Steel	90	0.52	135°	135°	135°	135°
QNACA257M	Steel	120	0.6	135°	135°	135°	135°
QNACA258M	Steel	150	0.68	135°	135°	135°	135°

Screws: M6x16 **Tightening torque:** 10 N m

Subject to change without notice

FUNCTIONAL CHARTS
SIZE 50 mm

GLOBAL STANDARD COMPONENTS NAAMS

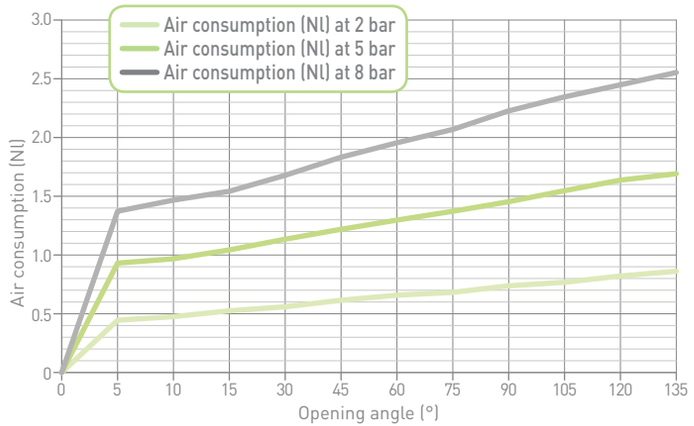
Clamping moment (at 5 bar)	185 N m
Holding moment	800 N m

The above data are meant for correct working conditions of the clamp – with the same performance level during its life time.

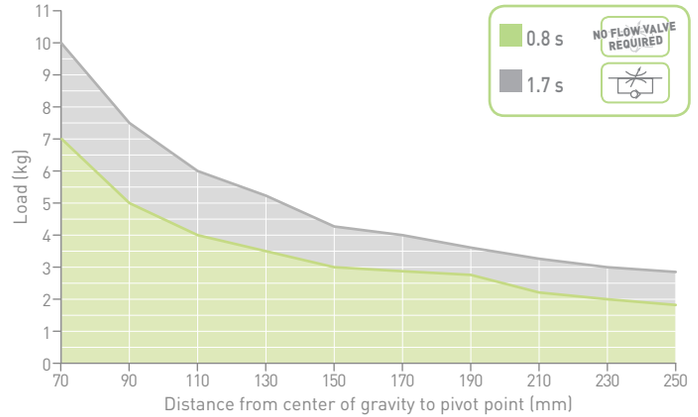
For applications which exceed the above data, please contact our sales representatives.

Air consumption

REV. 00 - 17/06/2015



Tooling weight chart



Calculation tool available upon demand

Please consult our technical representatives

Subject to change without notice

WEIGHT

kg 3.5

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1
NAAMS DIMENSIONAL VALUES ARE HIGHLIGHTED

REV. 00 - 31/03/2015

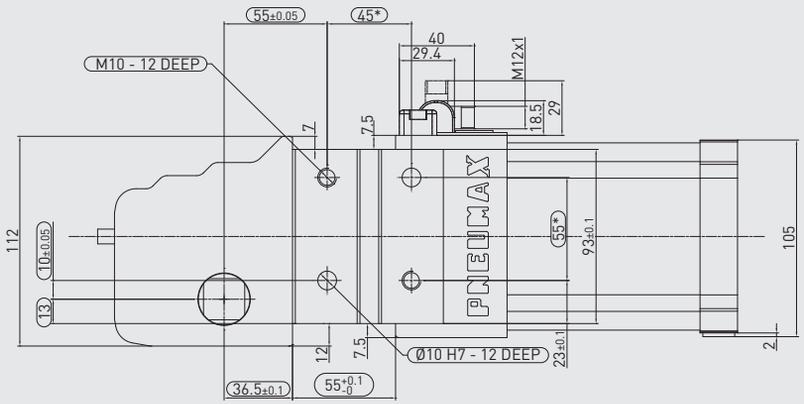
GLOBAL STANDARD COMPONENTS
NAAMS

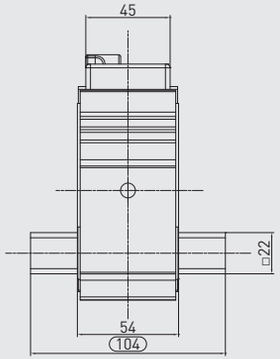
C2P63E

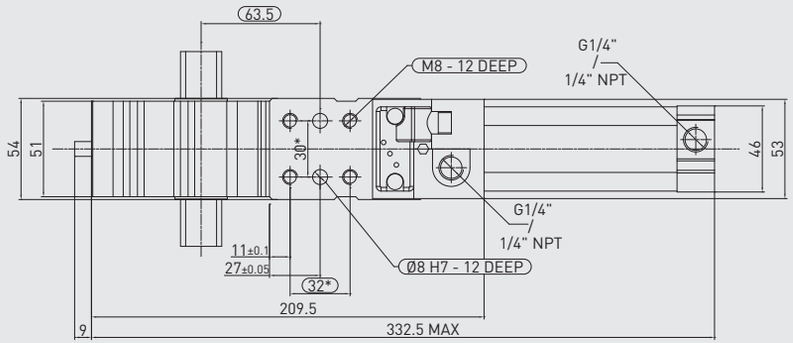
Power clamp

NAAMS std

63 mm bore







Technical features

Manual release button to open the linkage when air pressure is removed during setup. Pneumatic **ports on both sides** of the cylinder.	
Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

Subject to change without notice

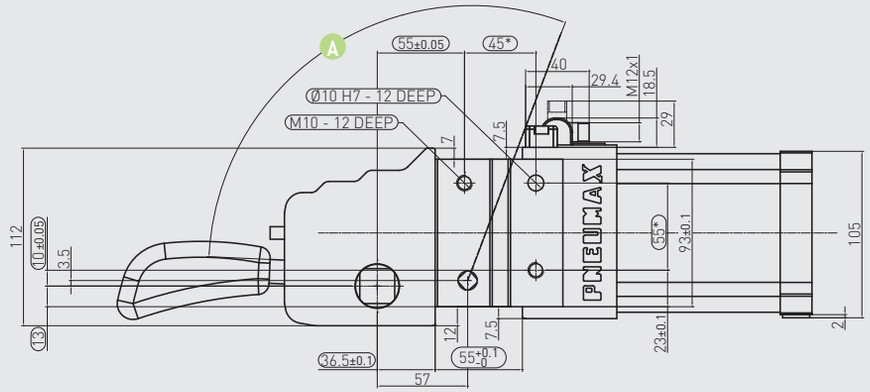
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1
NAAMS DIMENSIONAL VALUES ARE HIGHLIGHTED

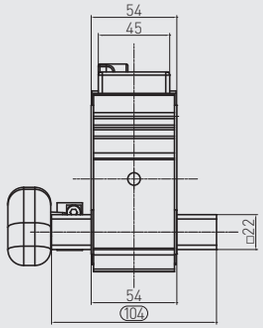
REV. 00 - 17/06/2015

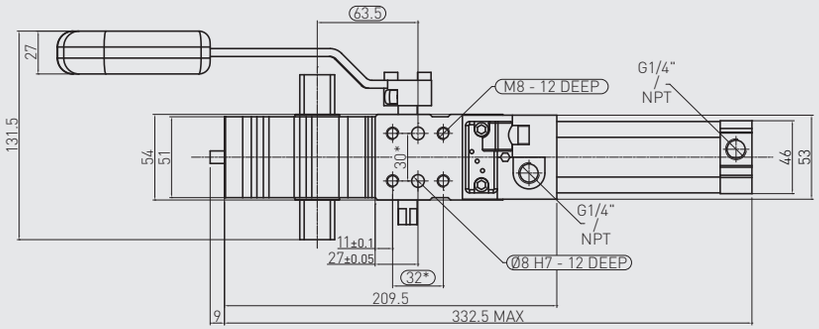
WEIGHT

kg 4

D2 handle included







GLOBAL STANDARD COMPONENTS
NAAMS

C2D263E

Power clamp

NAAMS std

63 mm bore

With manual operation

Handle swivel angle

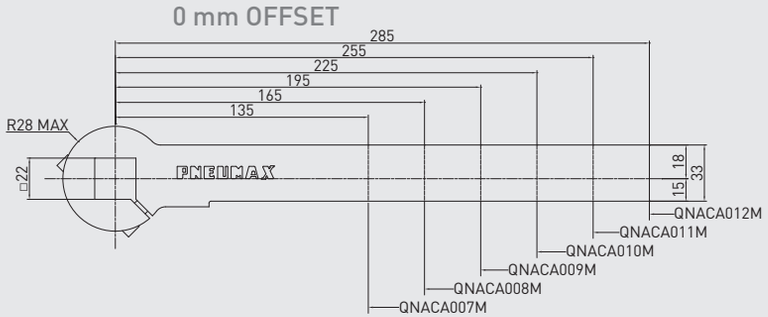
Arm opening angle	Handle swivel angle A
0°	2.65°
15°	26.35°
30°	41.38°
45°	56°
60°	70.38°
75°	83.43°
90°	94°
105°	102°
120°	107°
135°	110.7°

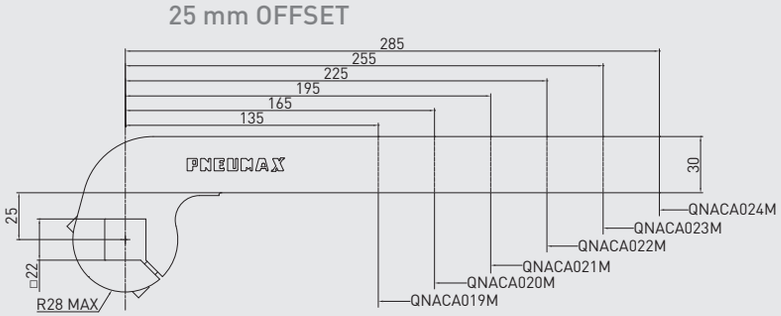
Subject to change without notice

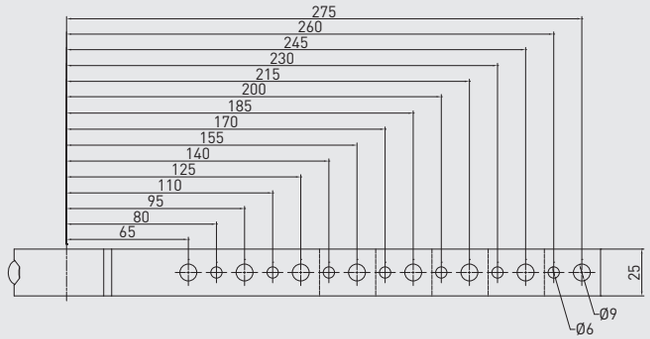
CLAMPING ARMS

22 mm shaft

Steel







22 mm shaft – 0 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA007M	Steel	135	0.72	135°	135°	135°	135°
QNACA008M	Steel	165	0.83	135°	135°	135°	135°
QNACA009M	Steel	195	0.94	135°	135°	135°	135°
QNACA010M	Steel	225	1.05	135°	135°	135°	135°
QNACA011M	Steel	255	1.16	135°	135°	135°	135°
QNACA012M	Steel	285	1.28	135°	135°	135°	135°

Screws: M8x18 **Tightening torque:** 25 N m

22 mm shaft – 25 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA019M	Steel	135	0.84	135°	135°	135°	135°
QNACA020M	Steel	165	0.95	135°	135°	135°	135°
QNACA021M	Steel	195	1.05	135°	135°	135°	135°
QNACA022M	Steel	225	1.16	135°	135°	135°	135°
QNACA023M	Steel	255	1.26	135°	135°	135°	135°
QNACA024M	Steel	285	1.37	135°	135°	135°	135°

Screws: M8x18 **Tightening torque:** 25 N m

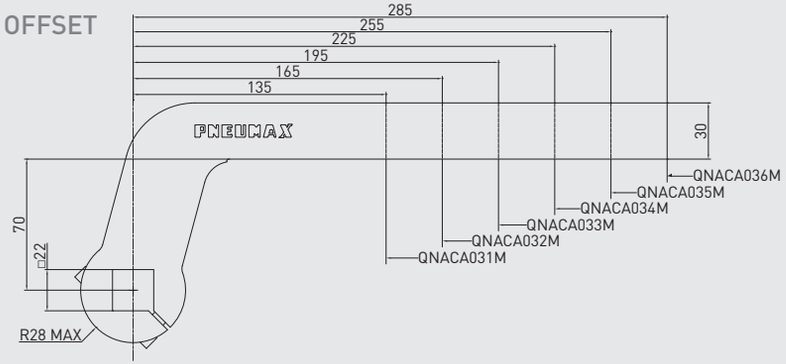
REV. 00 - 31/03/2015

CLAMPING ARMS

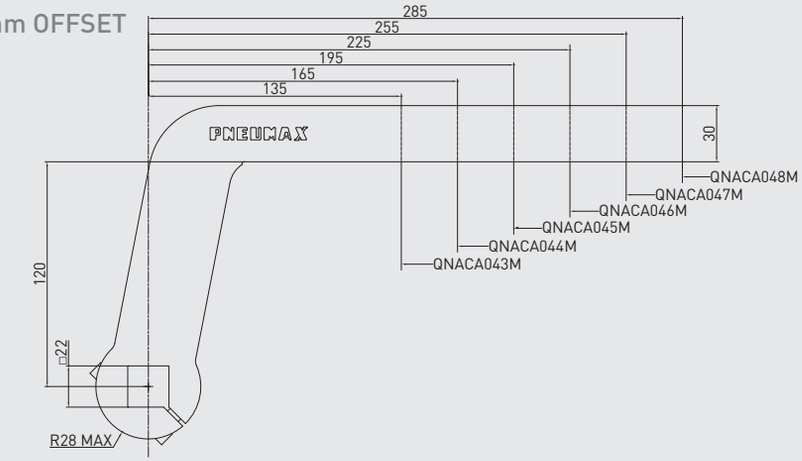
22 mm shaft

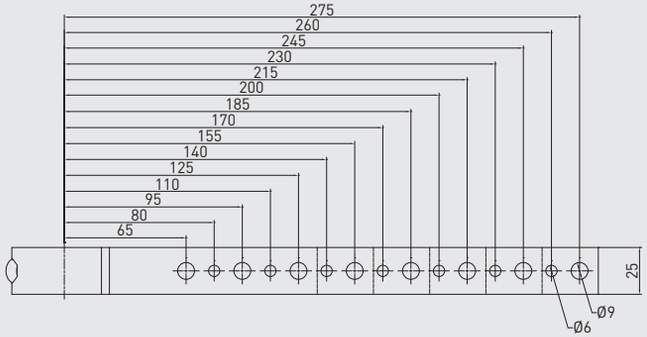
Steel

70 mm OFFSET



120 mm OFFSET





22 mm shaft – 70 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA031M	Steel	135	1.05	135°	135°	135°	135°
QNACA032M	Steel	165	1.16	135°	135°	135°	135°
QNACA033M	Steel	195	1.27	135°	135°	135°	135°
QNACA034M	Steel	225	1.38	135°	135°	135°	135°
QNACA035M	Steel	255	1.49	135°	135°	135°	135°
QNACA036M	Steel	285	1.6	135°	135°	135°	135°

Screws: M8x18 **Tightening torque:** 25 N m

22 mm shaft – 120 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA043M	Steel	135	1.27	135°	135°	135°	135°
QNACA044M	Steel	165	1.37	135°	135°	135°	135°
QNACA045M	Steel	195	1.48	135°	135°	135°	135°
QNACA046M	Steel	225	1.58	135°	135°	135°	135°
QNACA047M	Steel	255	1.69	135°	135°	135°	135°
QNACA048M	Steel	285	1.8	135°	135°	135°	135°

Screws: M8x18 **Tightening torque:** 25 N m

FUNCTIONAL CHARTS
SIZE 63 mm

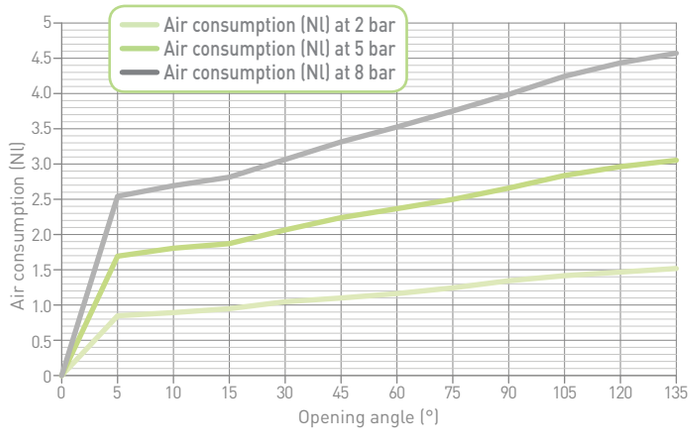
Clamping moment (at 5 bar)	390 N m
Holding moment	1,500 N m

The above data are meant for correct working conditions of the clamp – with the same performance level during its life time.

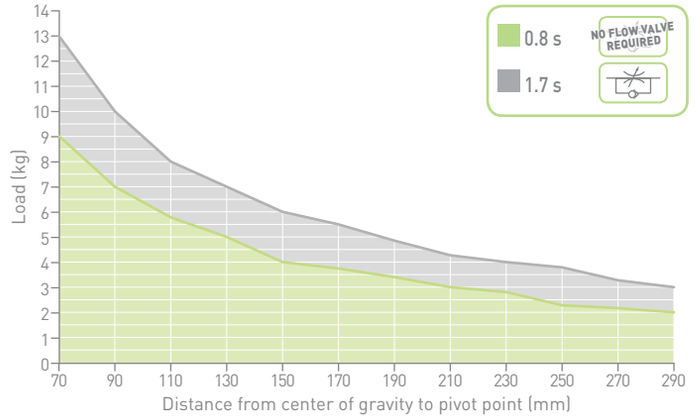
For applications which exceed the above data, please contact our sales representatives.

Air consumption

REV. 00 - 17/06/2015



Tooling weight chart



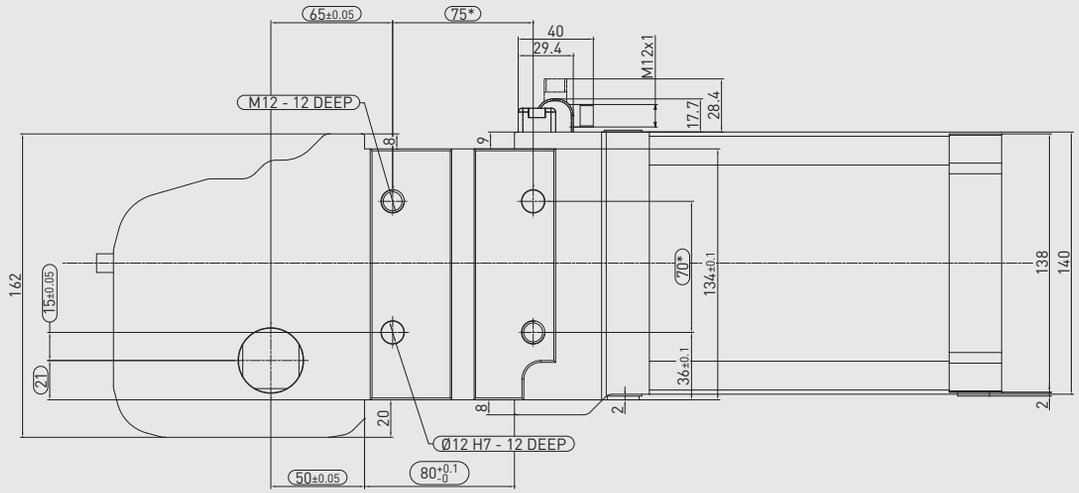
Calculation tool available upon demand

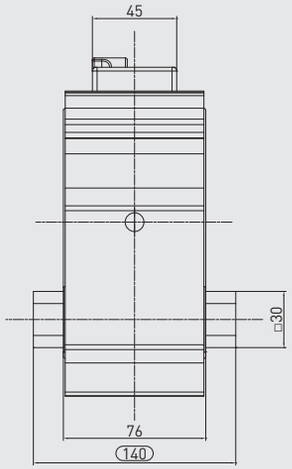
Please consult our technical representatives

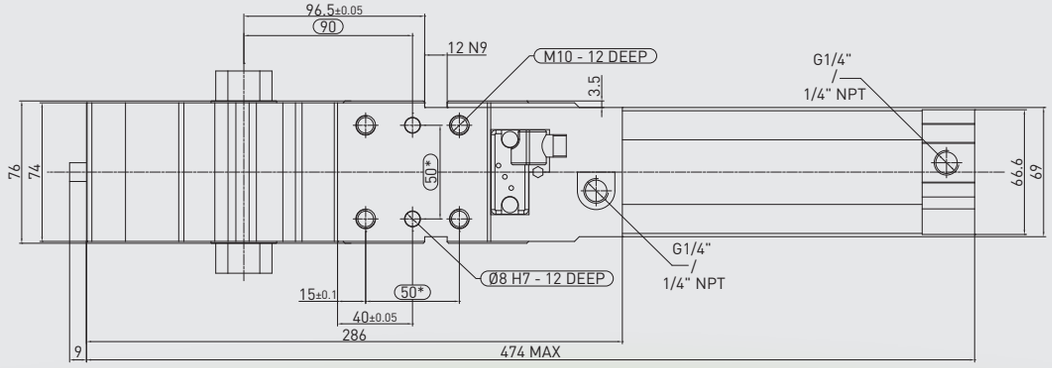
Subject to change without notice

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1
NAAMS DIMENSIONAL VALUES ARE HIGHLIGHTED

REV. 01 - 31/07/2015







WEIGHT

kg
8.75

GLOBAL STANDARD COMPONENTS
NAAMS

C2P80E

Power clamp

NAAMS std

80 mm bore

Technical features

Manual release button to open the linkage when air pressure is removed during setup. Pneumatic **ports on both sides** of the cylinder.	
Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

Subject to change without notice

GLOBAL STANDARD COMPONENTS
NAAMS

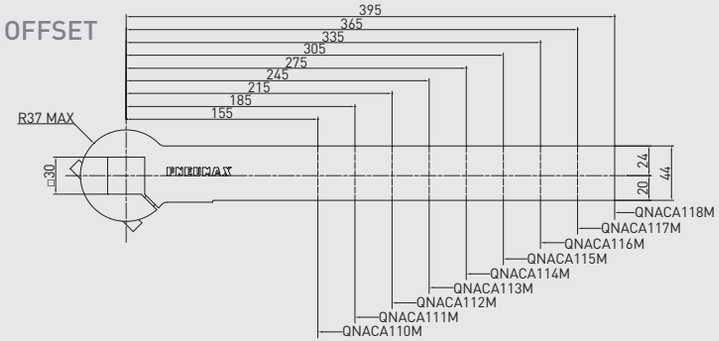
CLAMPING ARMS

30 mm shaft

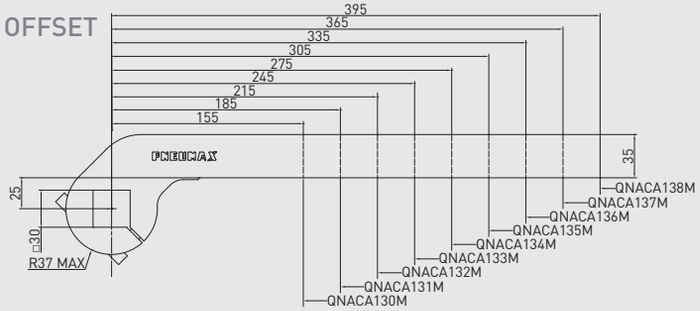
Steel

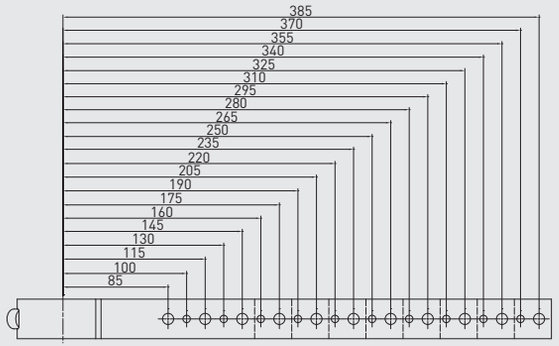
REV. 00 - 31/03/2015

0 mm OFFSET



25 mm OFFSET





30 mm shaft – 0 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA110M	Steel	155	1.41	135°	135°	135°	135°
QNACA111M	Steel	185	1.58	135°	135°	135°	135°
QNACA112M	Steel	215	1.76	135°	135°	135°	135°
QNACA113M	Steel	245	1.93	135°	135°	135°	135°
QNACA114M	Steel	275	2.1	135°	135°	135°	135°
QNACA115M	Steel	305	2.27	135°	135°	135°	135°
QNACA116M	Steel	335	2.45	135°	135°	135°	135°
QNACA117M	Steel	365	2.62	135°	135°	135°	135°
QNACA118M	Steel	395	2.8	135°	135°	135°	135°

Screws: M10x20 **Tightening torque:** 50 N m

30 mm shaft – 25 mm offset

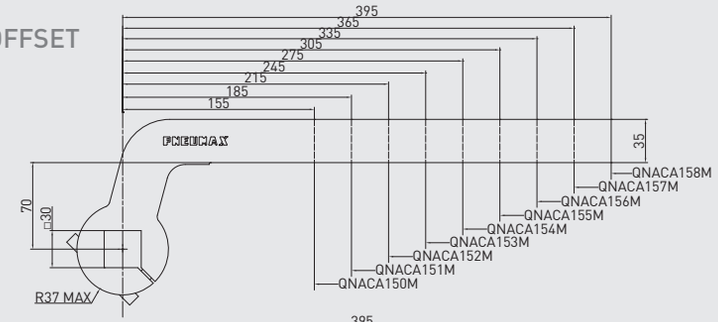
PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA130M	Steel	155	1.24	135°	135°	135°	135°
QNACA131M	Steel	185	1.39	135°	135°	135°	135°
QNACA132M	Steel	215	1.54	135°	135°	135°	135°
QNACA133M	Steel	245	1.69	135°	135°	135°	135°
QNACA134M	Steel	275	1.84	135°	135°	135°	135°
QNACA135M	Steel	305	2	135°	135°	135°	135°
QNACA136M	Steel	335	2.14	135°	135°	135°	135°
QNACA137M	Steel	365	2.29	135°	135°	135°	135°
QNACA138M	Steel	395	2.45	135°	135°	135°	135°

Screws: M10x20 **Tightening torque:** 50 N m

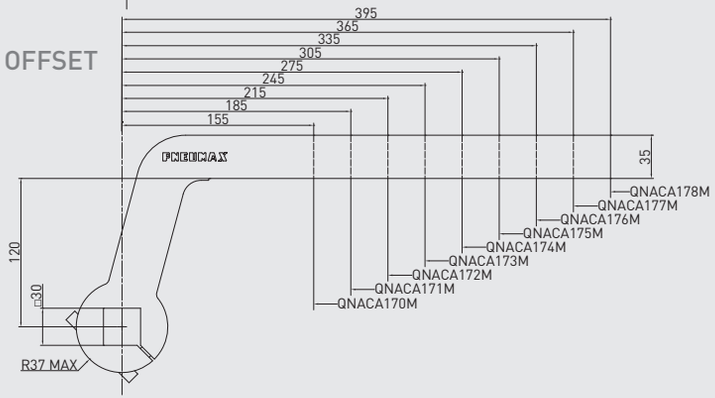
Subject to change without notice

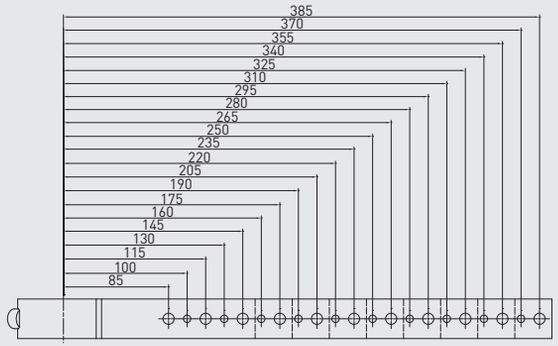
REV. 00 - 31/03/2015

70 mm OFFSET



120 mm OFFSET





GLOBAL STANDARD COMPONENTS NAAMS

CLAMPING ARMS

30 mm shaft

Steel

30 mm shaft – 70 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA150M	Steel	155	1.7	135°	135°	135°	135°
QNACA151M	Steel	185	1.85	135°	135°	135°	135°
QNACA152M	Steel	215	2	135°	135°	135°	135°
QNACA153M	Steel	245	2.15	135°	135°	135°	135°
QNACA154M	Steel	275	2.3	135°	135°	135°	135°
QNACA155M	Steel	305	2.45	135°	135°	135°	135°
QNACA156M	Steel	335	2.6	135°	135°	135°	135°
QNACA157M	Steel	365	2.76	135°	135°	135°	135°
QNACA158M	Steel	395	2.92	135°	135°	135°	135°

Screws: M10x20 **Tightening torque:** 50 N m

30 mm shaft – 120 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA170M	Steel	155	1.97	135°	135°	135°	135°
QNACA171M	Steel	185	2.12	135°	135°	135°	135°
QNACA172M	Steel	215	2.27	135°	135°	135°	135°
QNACA173M	Steel	245	2.42	135°	135°	135°	135°
QNACA174M	Steel	275	2.57	135°	135°	135°	135°
QNACA175M	Steel	305	2.72	135°	135°	135°	135°
QNACA176M	Steel	335	2.87	135°	135°	135°	135°
QNACA177M	Steel	365	3.02	135°	135°	135°	135°
QNACA178M	Steel	395	3.19	135°	135°	135°	135°

Screws: M10x20 **Tightening torque:** 50 N m

Subject to change without notice

FUNCTIONAL CHARTS
SIZE 80 mm

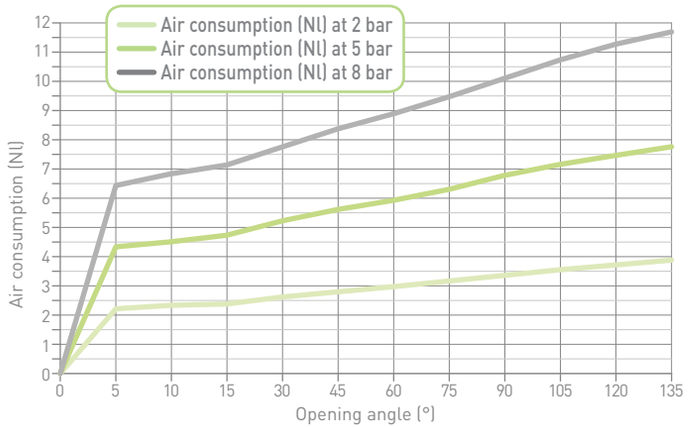
Clamping moment (at 5 bar)	850 N m
Holding moment	2,500 N m

The above data are meant for correct working conditions of the clamp – with the same performance level during its life time.

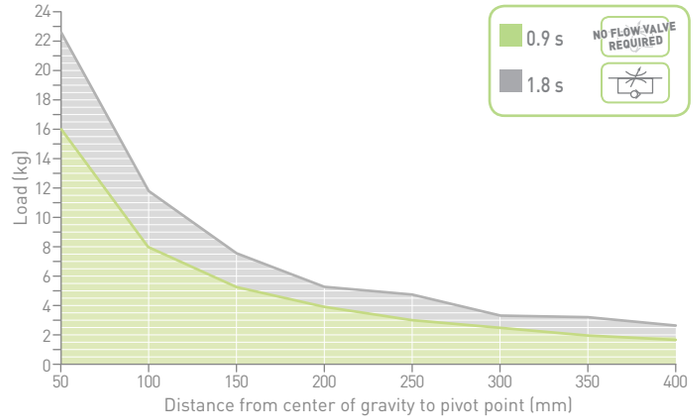
For applications which exceed the above data, please contact our sales representatives.

Air consumption

REV. 00 - 31/03/2015



Tooling weight chart



Calculation tool available upon demand

Please consult our technical representatives

Subject to change without notice

WHY PNX

K CLAMPS
COMPENSATION AS KEYWORD!

The K clamps series is able to compensate different metal sheet thicknesses or tolerances on die casts, which are being more often used in the production lines.
No maintenance neither external adjustment to the clamp is required to get the compensating function.

SAFE SOLUTION
The linkage is irreversible and will remain locked in case of air loss.

MAINTENANCE FRIENDLY
Maintenance adjustment shimming is not required!

PATENT PENDING

ORDERING STRING K1-SERIES

K	1	P	50	E	G	3	A	02

VERSION
K = workpiece thickness compensation clamp

MOUNTING PATTERN STANDARD
1 = European mount

OPERATION
P = pneumatic
M = manual
D = pneumatic with manual operation

1 = 
2 = 
3 = 

SIZE
40 = Ø 40 mm
50 = Ø 50 mm
63 = Ø 63 mm
80 = Ø 80 mm

SENSOR
E = electronic with M12 swivel connector
N = no sensor

PORTS
G = GAS
N = NPT
D = dual GAS ports on rear end cap
A = dual NPT ports on rear end cap

ARM MOUNT
1 = 
2 = 
3 = 
4 = 

ARM MATERIAL
A = aluminum

CLAMP ARM TYPE
01 = wishbone, central, 15 mm offset, Ø 6H7 - Ø 9 mm*
02 = wishbone, right, 15 mm offset, Ø 6H7 - Ø 9 mm*
03 = wishbone, left, 15 mm offset, Ø 6H7 - Ø 9 mm*
04 = wishbone, central, 45 mm offset, Ø 6H7 - Ø 9 mm
05 = wishbone, right, 45 mm offset, Ø 6H7 - Ø 9 mm
06 = wishbone, left, 45 mm offset, Ø 6H7 - Ø 9 mm

Please see the charts in the datasheets for arm position as well as for max. opening angle

*for size 80 mm > 20 mm offset
*for size 40 mm > Ø 6H7 - Ø 7 mm

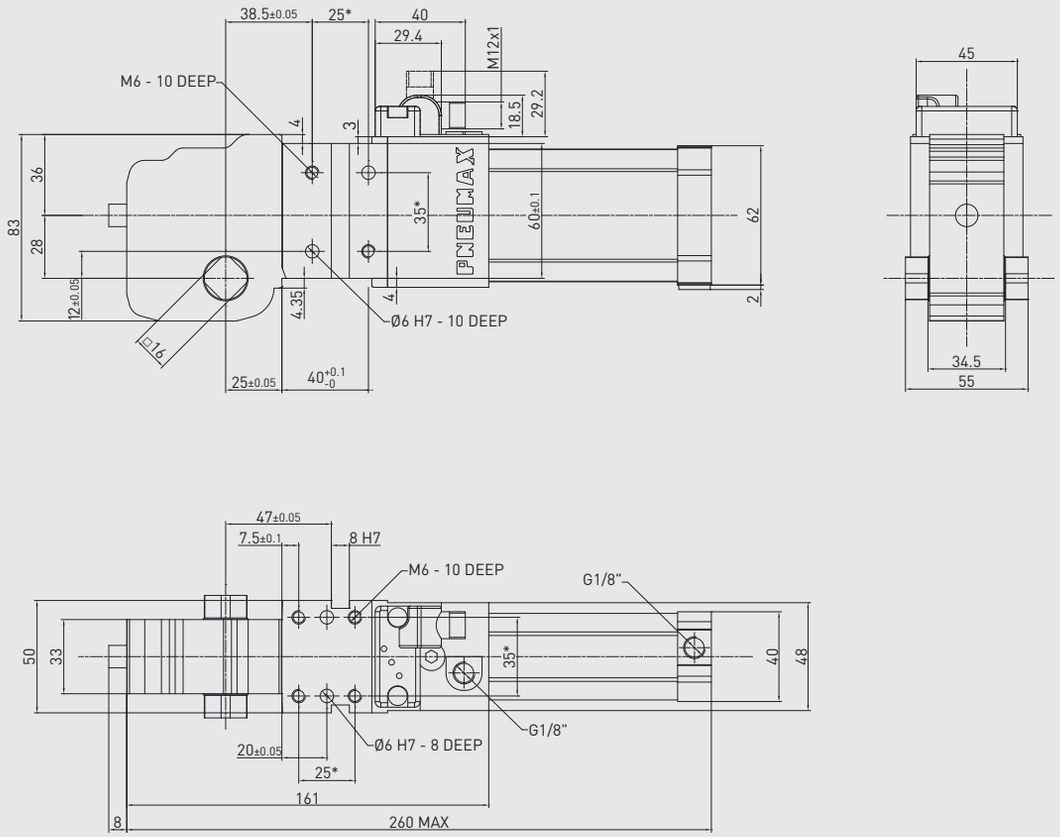
Subject to change without notice

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 31/03/2015

WEIGHT

kg 1.45



K1P40E

High compensation clamp

European std

40 mm bore

Technical features

Manual release button to open the linkage when air pressure is removed during setup. Pneumatic **ports on both sides** of the cylinder.	
Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

Subject to change without notice

K1D_40E

High compensation clamp

European std

40 mm bore

With manual operation

WEIGHT

kg 1.75

D1 handle included

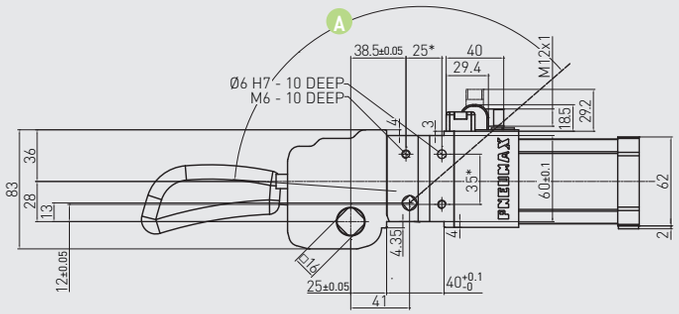
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

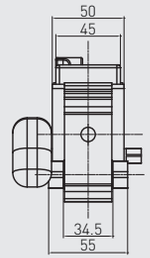
REV. 00 - 17/06/2015

Manual operation

D2

D3

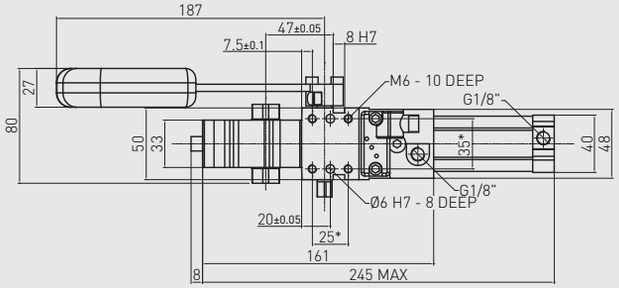




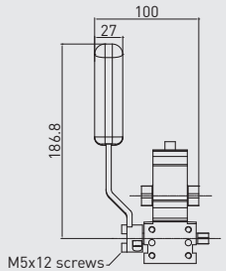
Handle swivel angle

Arm opening angle	Handle swivel angle A
0°	4.12°
15°	22.65°
30°	38.2°
45°	58.4°
60°	83.6°
75°	107.6°
90°	123.6°
105°	132.75°
120°	137.7°
135°	140°

D1 VERSION

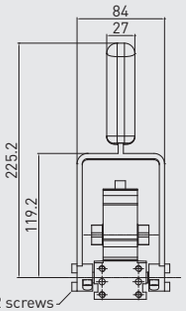


D2 VERSION



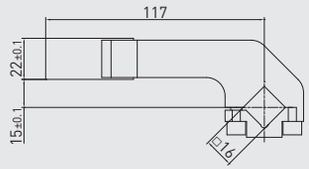
M5x12 screws
Tightening torque: 5 N m

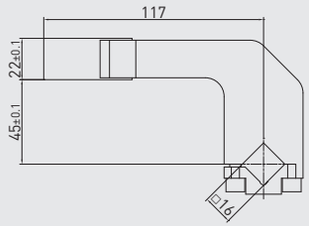
D3 VERSION

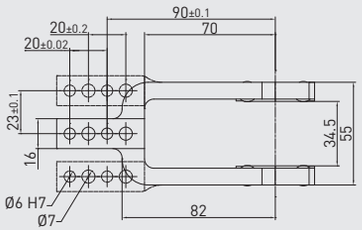


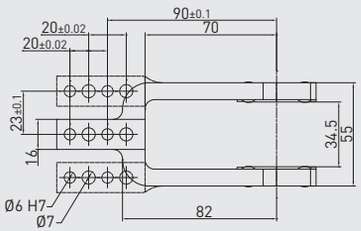
M5x12 screws
Tightening torque: 5 N m

Subject to change without notice









CLAMPING ARMS

16 mm shaft

Aluminum

16 mm shaft – 15 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B1601	Aluminum	Central	0.24	135°	135°	N/A	45°
B1602	Aluminum	Right	0.24	135°	135°	N/A	45°
B1603	Aluminum	Left	0.24	135°	135°	N/A	45°

Screws: M6x20 **Tightening torque:** 10 N m

16 mm shaft – 45 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B1604	Aluminum	Central	0.3	135°	135°	N/A	N/A
B1605	Aluminum	Right	0.3	135°	135°	N/A	N/A
B1606	Aluminum	Left	0.3	135°	135°	N/A	N/A

Screws: M6x20 **Tightening torque:** 10 N m

FUNCTIONAL CHARTS
SIZE 40 mm

Clamping moment (at 5 bar)	130 N m
Holding moment	380 N m

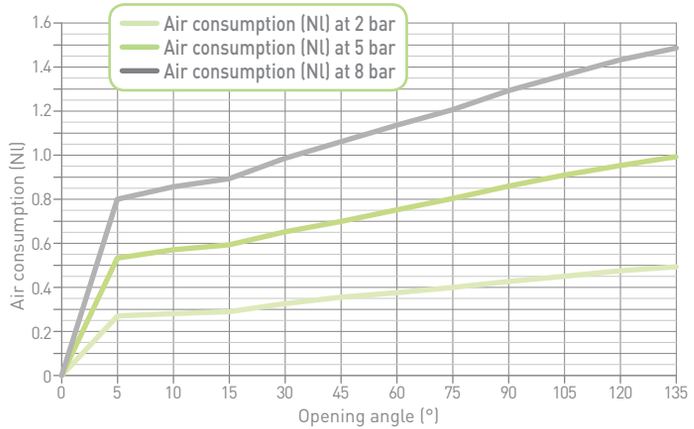
The above data are meant for correct working conditions of the clamp – with the same performance level during its life time.

For applications which exceed the above data, please contact our sales representatives.

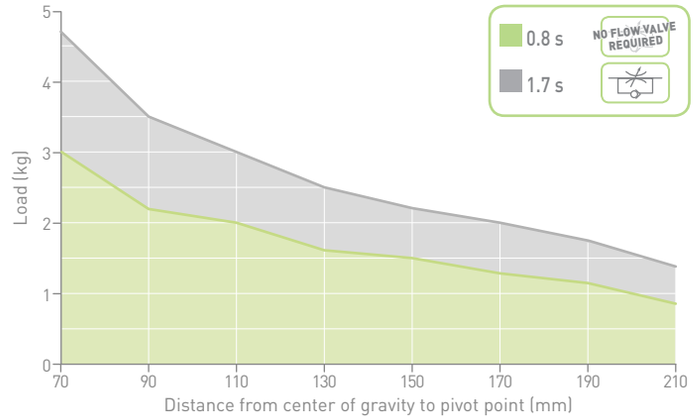
Material thickness compensation values and relative clamping force performance are available upon request: please get in touch with our sales representatives.

Air consumption

REV. 00 - 17/06/2015



Tooling weight chart



Calculation tool available upon demand

Please consult our technical representatives

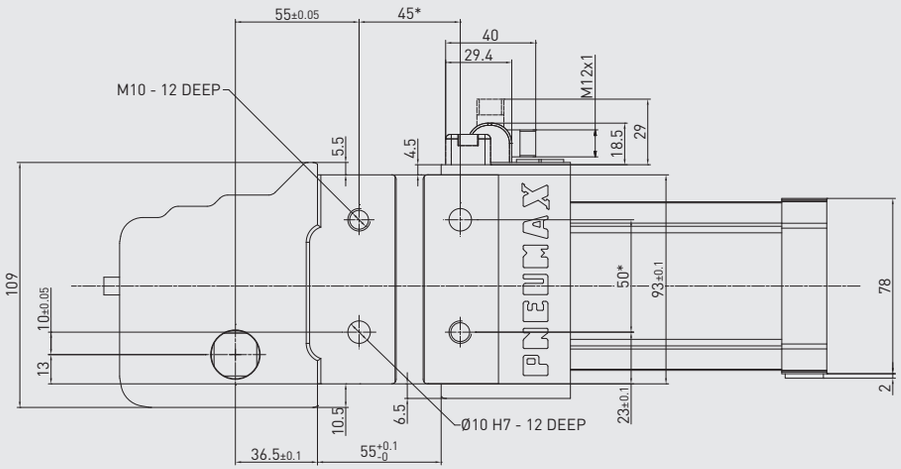
Subject to change without notice

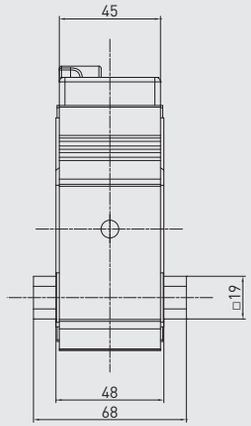
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

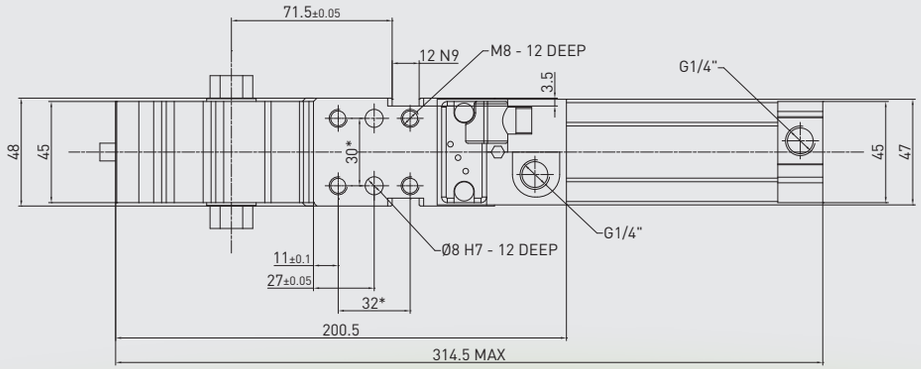
REV. 00 - 31/03/2015

WEIGHT

kg 2.7







K1P50E

High compensation clamp

European std

50 mm bore

Technical features

Manual release button to open the linkage when air pressure is removed during setup. Pneumatic **ports on both sides** of the cylinder.	
Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

Subject to change without notice

K1D_50E

High compensation clamp

European std

50 mm bore

With manual operation

WEIGHT

kg 3.1

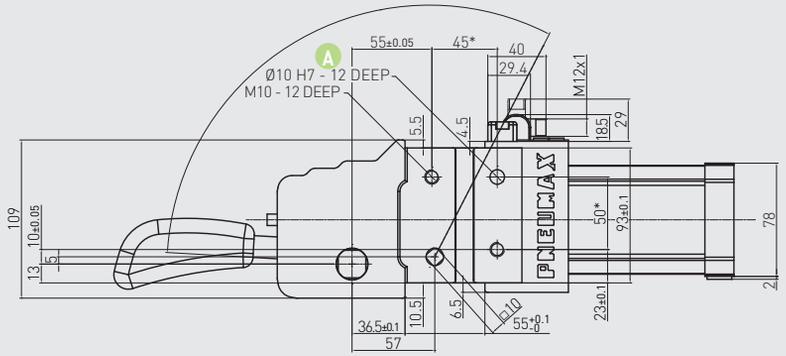
D1 handle included

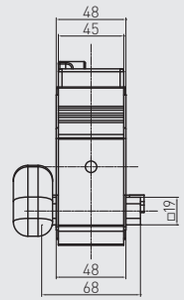
Manual operation

D2

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 16/06/2015

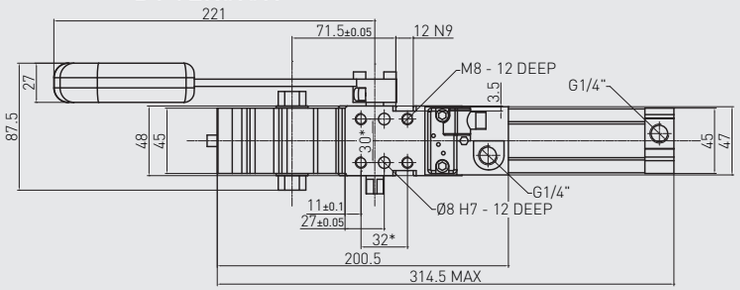




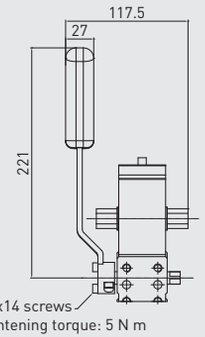
Handle swivel angle

Arm opening angle	Handle swivel angle A
0°	3.25°
15°	27°
30°	43°
45°	59.3°
60°	75.4°
75°	89.75°
90°	101°
105°	109°
120°	114.25°
135°	117.2°

D1 VERSION

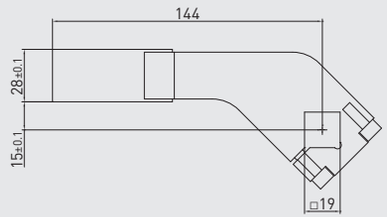


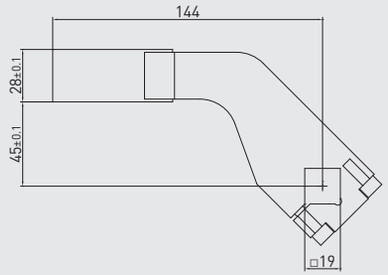
D2 VERSION

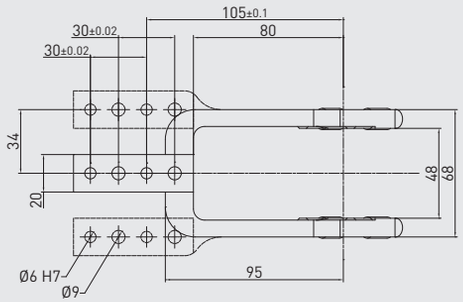


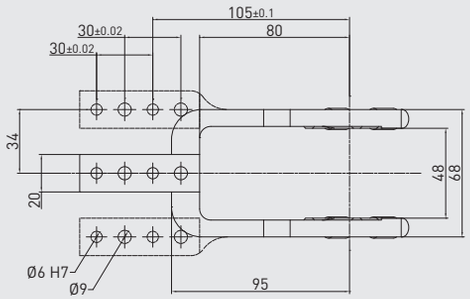
Subject to change without notice

CLAMPING ARMS









Aluminum

19 mm shaft – 15 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B1901	Aluminum	Central	0.41	135°	115°	135°	80°
B1902	Aluminum	Right	0.43	135°	115°	135°	80°
B1903	Aluminum	Left	0.43	135°	115°	135°	80°

Screws: M6x25 **Tightening torque:** 10 N m

19 mm shaft – 45 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B1904	Aluminum	Central	0.45	135°	135°	135°	80°
B1905	Aluminum	Right	0.46	135°	135°	135°	80°
B1906	Aluminum	Left	0.46	135°	135°	135°	80°

Screws: M6x25 **Tightening torque:** 10 N m

FUNCTIONAL CHARTS
SIZE 50 mm

Clamping moment (at 5 bar)	185 N m
Holding moment	800 N m

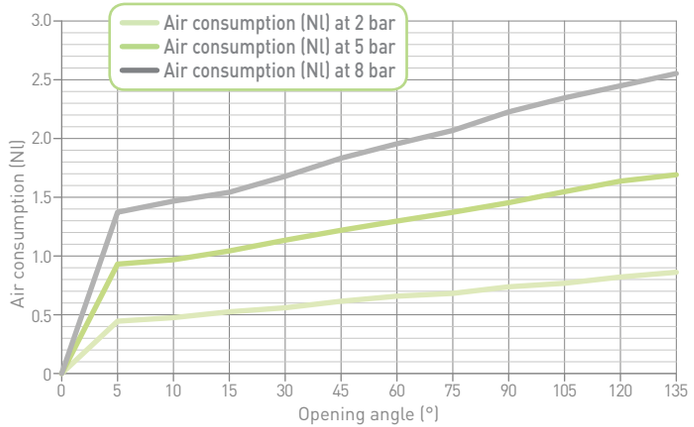
The above data are meant for correct working conditions of the clamp – with the same performance level during its life time.

For applications which exceed the above data, please contact our sales representatives.

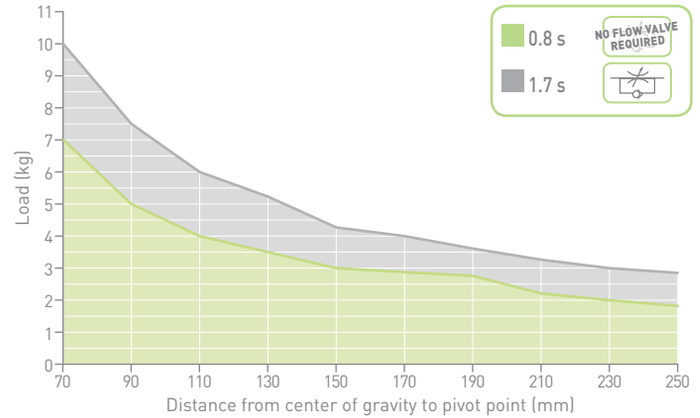
Material thickness compensation values and relative clamping force performance are available upon request: please get in touch with our sales representatives.

Air consumption

REV. 00 - 16/06/2015



Tooling weight chart



Calculation tool available upon demand

Please consult our technical representatives

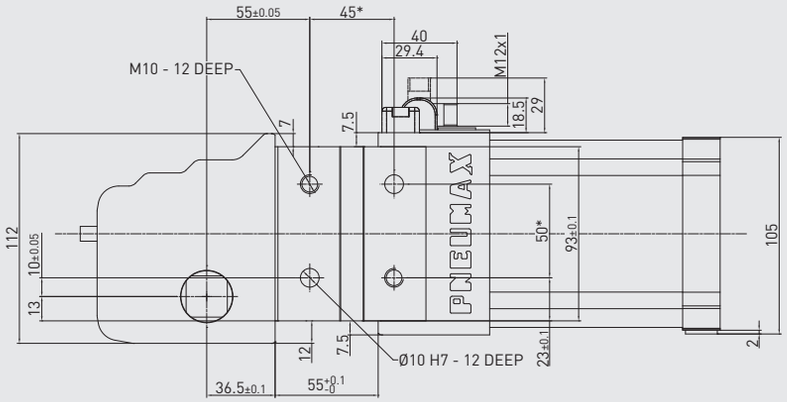
Subject to change without notice

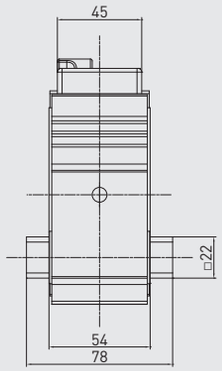
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

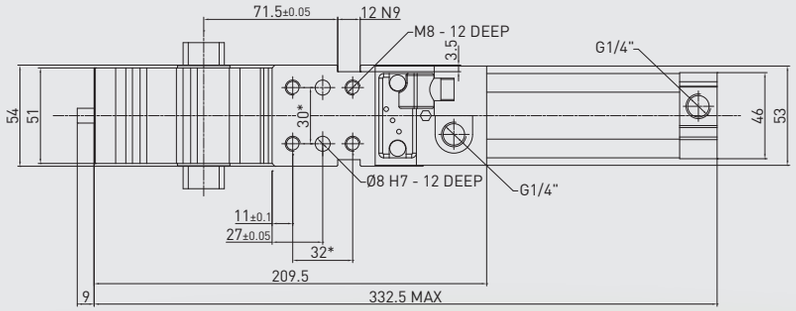
REV. 00 - 31/03/2015

WEIGHT

kg 3.5







K1P63E

High compensation clamp

European std

63 mm bore

Technical features

Manual release button to open the linkage when air pressure is removed during setup. Pneumatic **ports on both sides** of the cylinder.	
Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

Subject to change without notice

K1D_63E

High compensation clamp

European std

63 mm bore

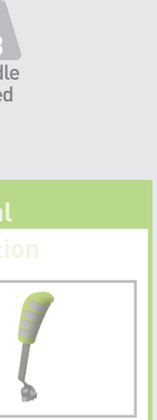
With manual operation

WEIGHT

kg
3.93
D1 handle included

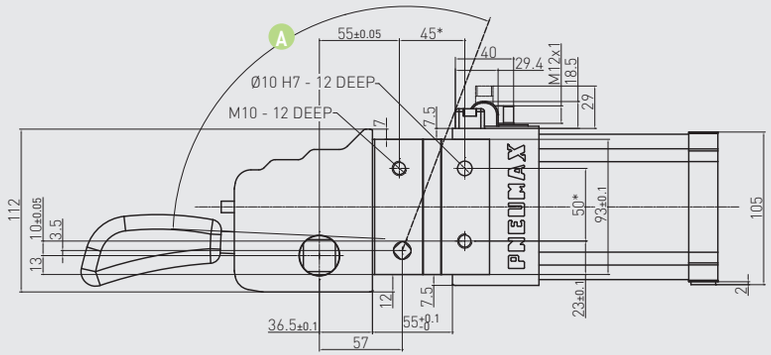
Manual operation

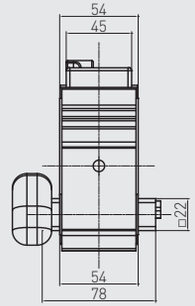
D2



* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 17/06/2015



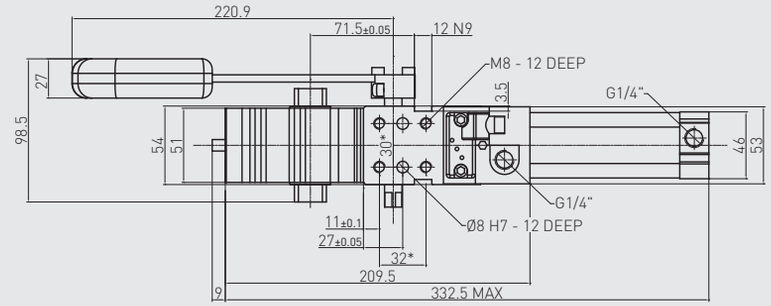


Handle swivel angle

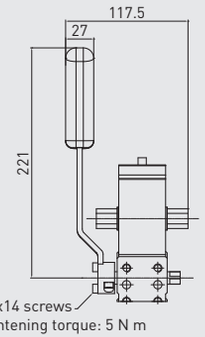
Arm opening angle	Handle swivel angle A
0°	2.65°
15°	26.35°
30°	41.38°
45°	56°
60°	70.38°
75°	83.43°
90°	94°
105°	102°
120°	107°
135°	110.7°

Subject to change without notice

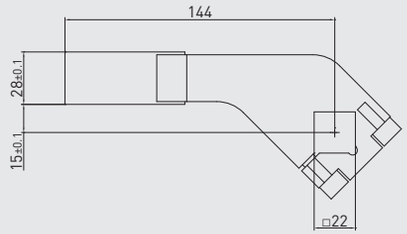
D1 VERSION

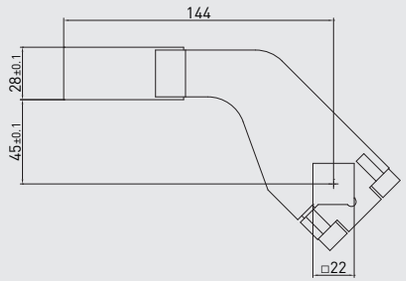


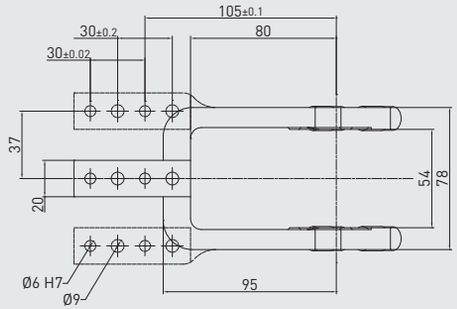
D2 VERSION

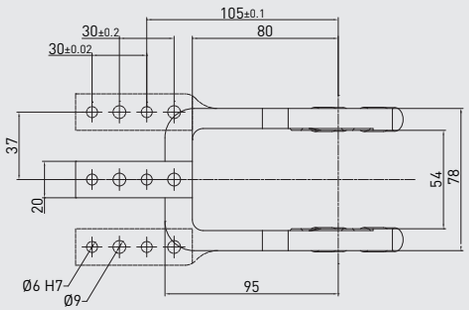


CLAMPING ARMS









Aluminum

22 mm shaft – 15 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B2201	Aluminum	Central	0.52	135°	115°	135°	80°
B2202	Aluminum	Right	0.54	135°	115°	135°	80°
B2203	Aluminum	Left	0.54	135°	115°	135°	80°

Screws: M8x25 **Tightening torque:** 25 N m

22 mm shaft – 45 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B2204	Aluminum	Central	0.57	135°	135°	135°	75°
B2205	Aluminum	Right	0.58	135°	135°	135°	75°
B2206	Aluminum	Left	0.58	135°	135°	135°	75°

Screws: M8x25 **Tightening torque:** 25 N m

FUNCTIONAL CHARTS
SIZE 63 mm

Clamping moment (at 5 bar)	390 N m
Holding moment	1,500 N m

The above data are meant for correct working conditions of the clamp – with the same performance level during its life time.

For applications which exceed the above data, please contact our sales representatives.

Material thickness compensation values and relative clamping force performance are available upon request: please get in touch with our sales representatives.

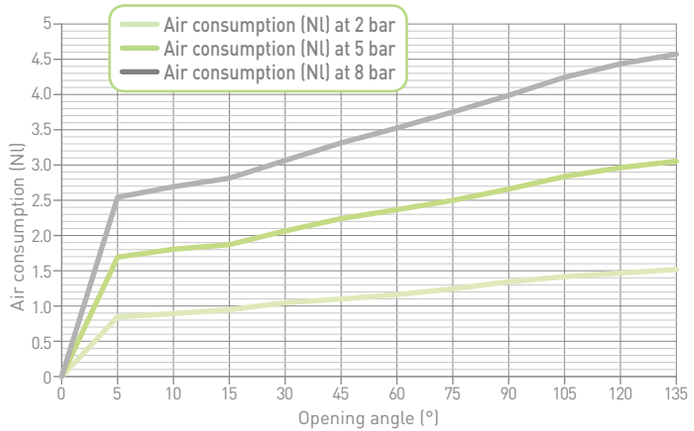
Calculation tool available upon demand

Please consult our technical representatives

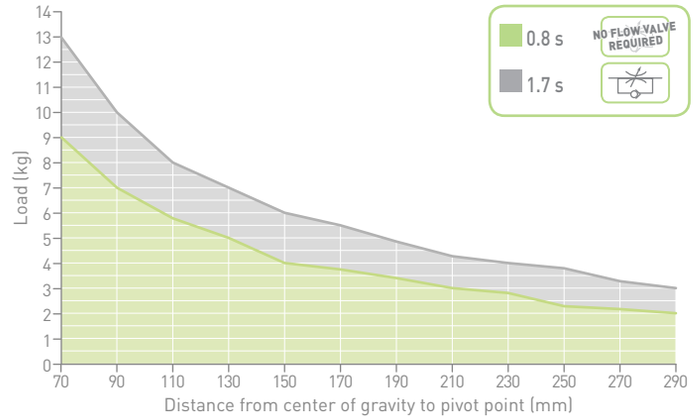
Subject to change without notice

Air consumption

REV. 00 - 17/06/2015



Tooling weight chart

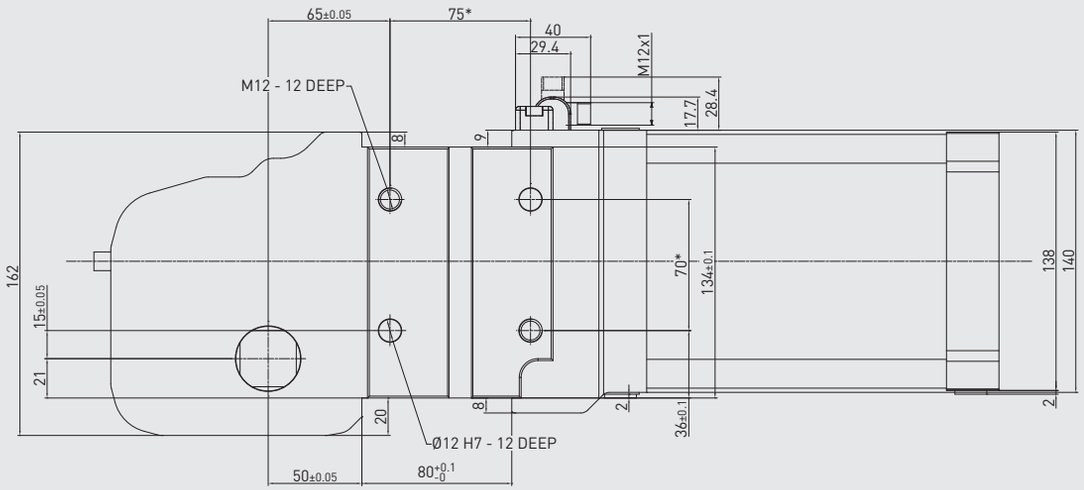


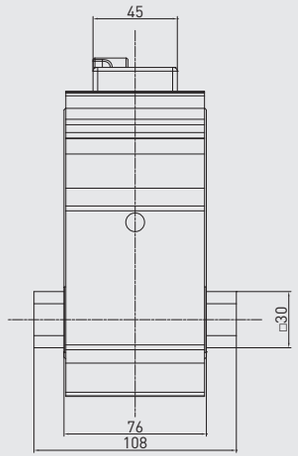
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

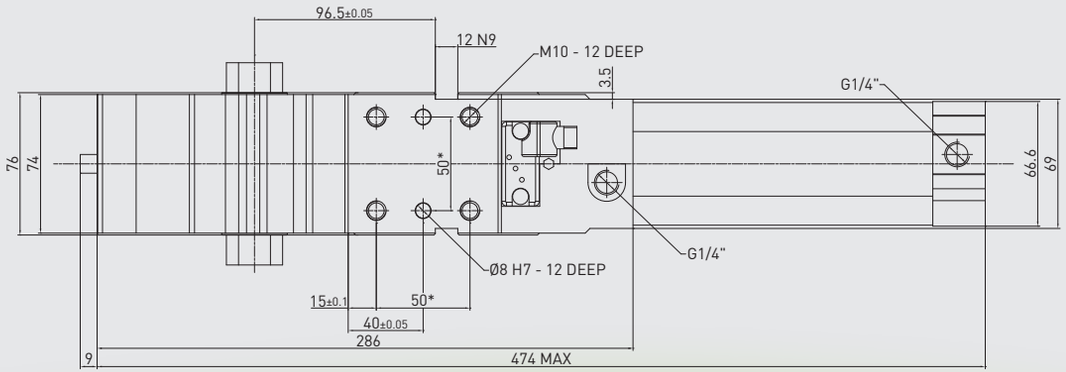
REV. 00 - 31/03/2015

WEIGHT

kg 8.54







K1P80E

High compensation clamp

European std

80 mm bore

Technical features

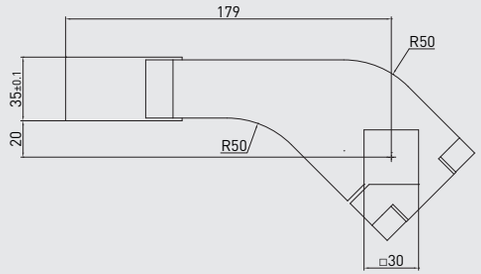
Manual release button to open the linkage when air pressure is removed during setup. Pneumatic **ports on both sides** of the cylinder.	
Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

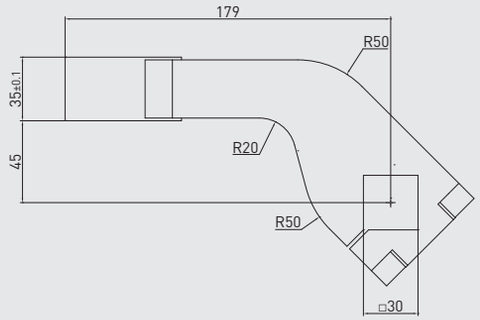
Subject to change without notice

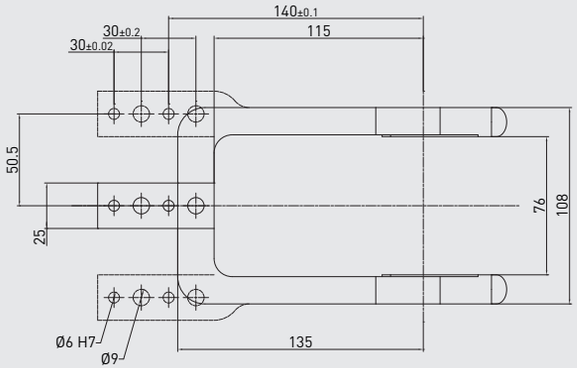
CLAMPING ARMS

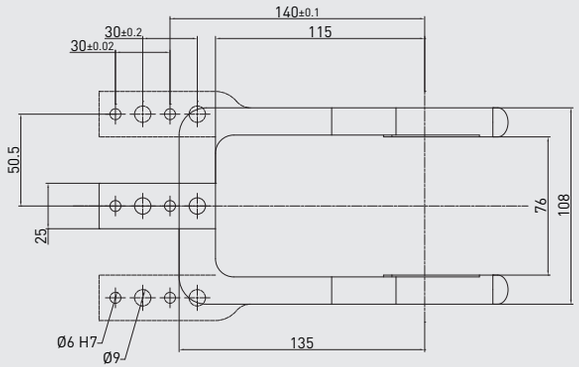
30 mm shaft

Aluminum









REV. 00 - 29/05/2015

30 mm shaft – 20 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B3001	Aluminum	Central	1.1	135°	110°	135°	75°
B3002	Aluminum	Right	1.15	135°	110°	135°	75°
B3003	Aluminum	Left	1.15	135°	110°	135°	75°

Screws: M10x35 **Tightening torque:** 35 N m

30 mm shaft – 45 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B3004	Aluminum	Central	1.18	135°	110°	135°	75°
B3005	Aluminum	Right	1.2	135°	110°	135°	75°
B3006	Aluminum	Left	1.2	135°	110°	135°	75°

Screws: M10x35 **Tightening torque:** 35 N m

Subject to change without notice

FUNCTIONAL CHARTS
SIZE 80 mm

Clamping moment (at 5 bar)	850 N m
Holding moment	2,500 N m

The above data are meant for correct working conditions of the clamp – with the same performance level during its life time.

For applications which exceed the above data, please contact our sales representatives.

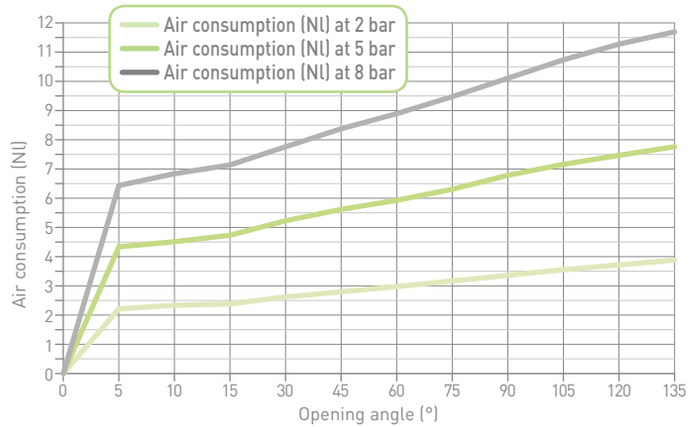
Material thickness compensation values and relative clamping force performance are available upon request: please get in touch with our sales representatives.

Calculation tool available upon demand

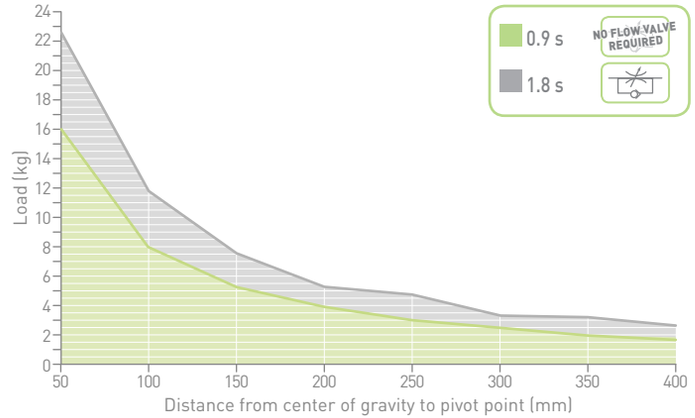
Please consult our technical representatives

Air consumption

REV. 00 - 29/05/2015



Tooling weight chart



Subject to change without notice

ORDERING STRING K2-SERIES

GLOBAL STANDARD COMPONENTS NAAMS

K | 2 | P | 50 | E | G

VERSION
K = workpiece thickness compensation clamp

MOUNTING PATTERN STANDARD
2 = NAAMS mount

OPERATION
P = pneumatic
D = pneumatic with manual operation

2 = 

SIZE
50 = Ø 50 mm
63 = Ø 63 mm
80 = Ø 80 mm

SENSOR
E = electronic with M12 swivel connector
N = no sensor

PORTS
G = GAS
N = NPT
D = dual GAS ports on rear end cap
A = dual NPT ports on rear end cap

NAAMS clamping arms to be ordered separately

Please see the charts in the datasheets for arm position as well as for max. opening angle

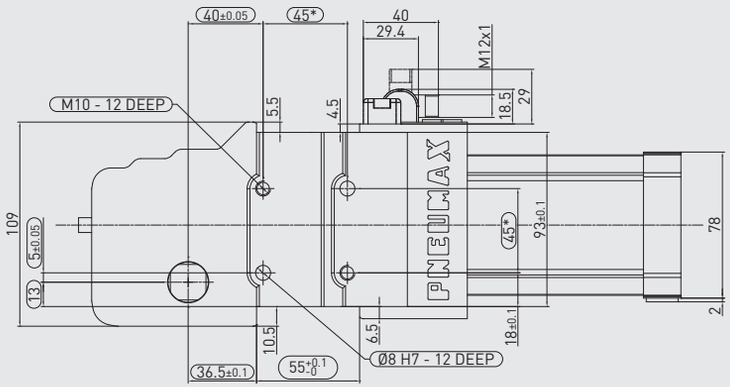
Subject to change without notice

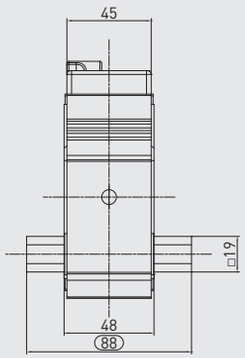
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1
NAAMS DIMENSIONAL VALUES ARE HIGHLIGHTED

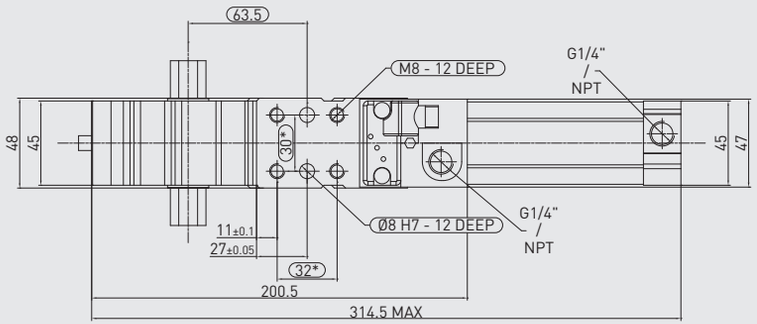
REV. 00 - 31/03/2015

WEIGHT

kg 2.7







GLOBAL STANDARD COMPONENTS
NAAMS

K2P50E

High compensation clamp

NAAMS std

50 mm bore

Technical features

Manual release button to open the linkage when air pressure is removed during setup. Pneumatic **ports on both sides** of the cylinder.	
Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

Subject to change without notice

GLOBAL STANDARD COMPONENTS
NAAMS

K2D250E

High compensation clamp

NAAMS std

50 mm bore

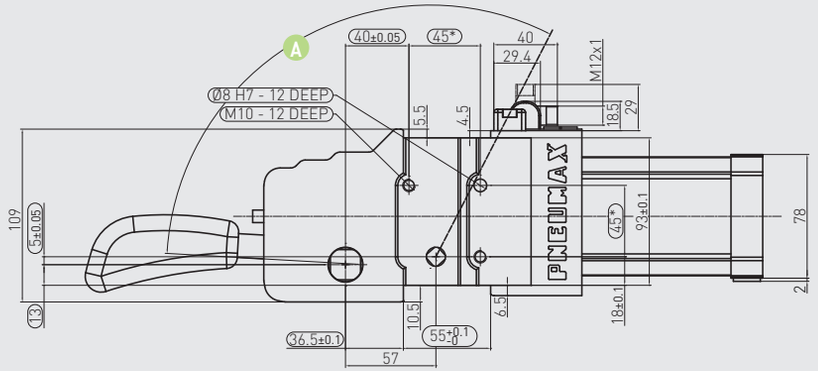
With manual operation

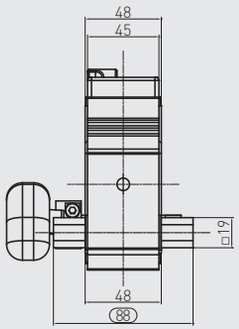
WEIGHT

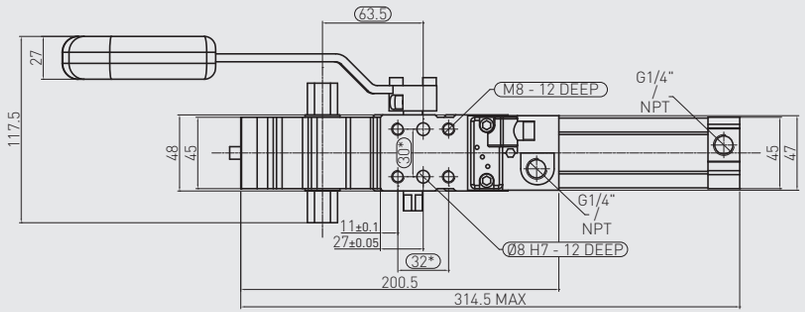
kg
3.17
D2 handle
included

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 17/06/2015







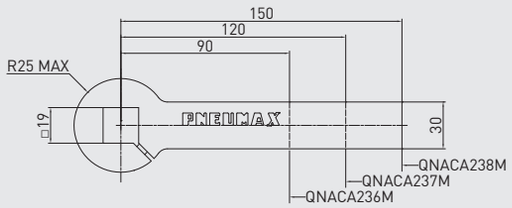
Handle swivel angle

Arm opening angle	Handle swivel angle A
0°	3.25°
15°	27°
30°	43°
45°	59.3°
60°	75.4°
75°	89.75°
90°	101°
105°	109°
120°	114.25°
135°	117.2°

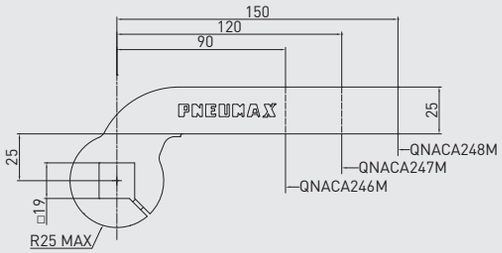
Subject to change
without notice

REV. 01 - 31/07/2015

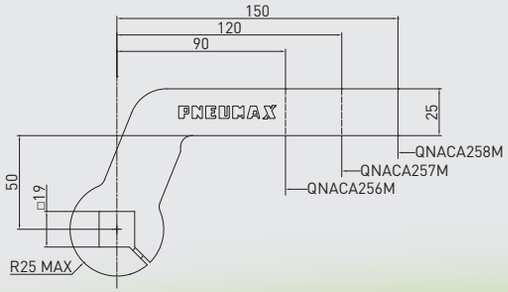
0 mm OFFSET

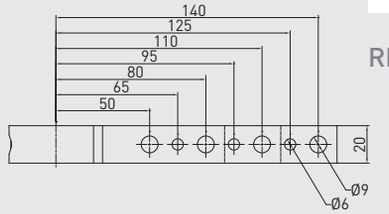


25 mm OFFSET



50 mm OFFSET





CLAMPING ARMS

19 mm shaft

Steel

19 mm shaft – 0 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA236M	Steel	90	0.4	135°	135°	135°	135°
QNACA237M	Steel	120	0.49	135°	135°	135°	135°
QNACA238M	Steel	150	0.58	135°	135°	135°	135°

Screws: M6x16 **Tightening torque:** 10 N m

19 mm shaft – 25 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA246M	Steel	90	0.44	135°	135°	135°	135°
QNACA247M	Steel	120	0.52	135°	135°	135°	135°
QNACA248M	Steel	150	0.6	135°	135°	135°	135°

Screws: M6x16 **Tightening torque:** 10 N m

19 mm shaft – 50 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA256M	Steel	90	0.52	135°	135°	135°	135°
QNACA257M	Steel	120	0.6	135°	135°	135°	135°
QNACA258M	Steel	150	0.68	135°	135°	135°	135°

Screws: M6x16 **Tightening torque:** 10 N m

Subject to change without notice

FUNCTIONAL CHARTS
SIZE 50 mm

GLOBAL STANDARD COMPONENTS NAAMS

Clamping moment (at 5 bar)	185 N m
Holding moment	800 N m

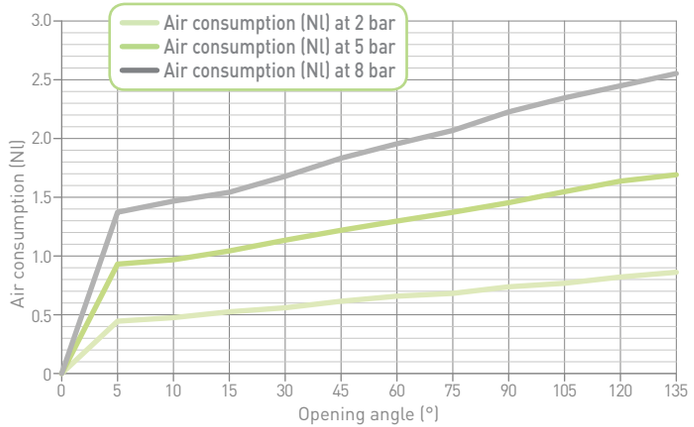
The above data are meant for correct working conditions of the clamp – with the same performance level during its life time.

For applications which exceed the above data, please contact our sales representatives.

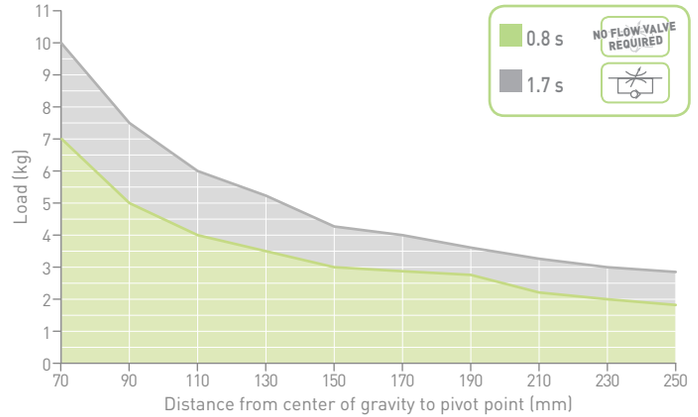
Material thickness compensation values and relative clamping force performance are available upon request: please get in touch with our sales representatives.

Air consumption

REV. 00 - 17/06/2015



Tooling weight chart



Calculation tool available upon demand

Please consult our technical representatives

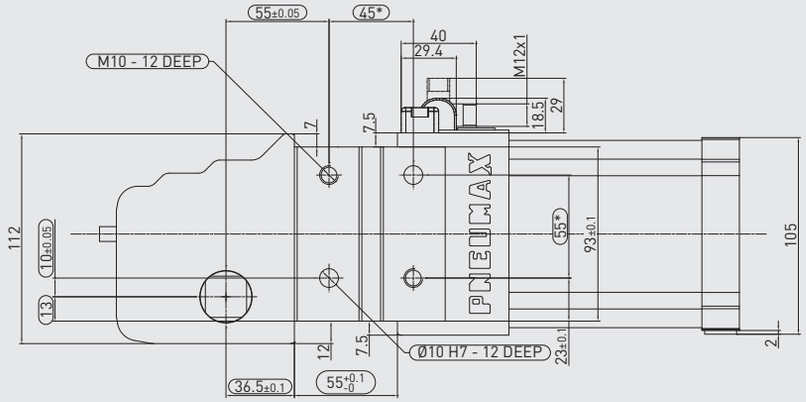
Subject to change without notice

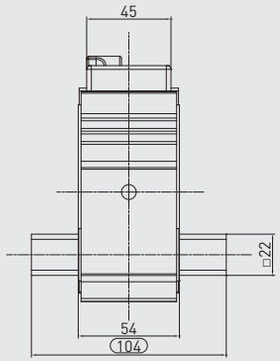
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1
NAAMS DIMENSIONAL VALUES ARE HIGHLIGHTED

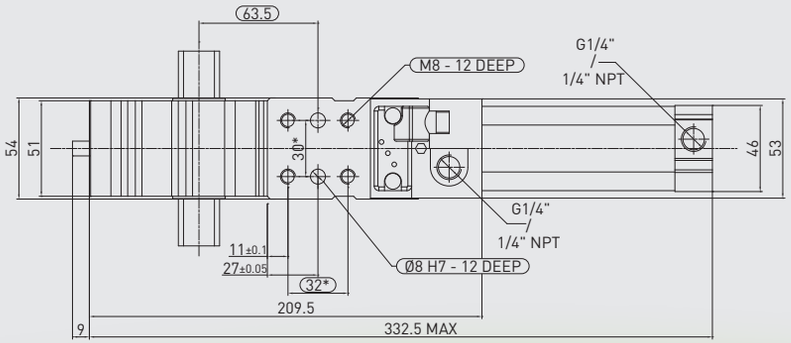
REV. 00 - 31/03/2015

WEIGHT

kg 3.5







GLOBAL STANDARD COMPONENTS
NAAMS

K2P63E

High compensation clamp

NAAMS std

63 mm bore

Technical features

Manual release button to open the linkage when air pressure is removed during setup. Pneumatic **ports on both sides** of the cylinder.	
Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

Subject to change without notice

GLOBAL STANDARD COMPONENTS
NAAMS

K2D263E

High compensation clamp

NAAMS std

63 mm bore

With manual operation

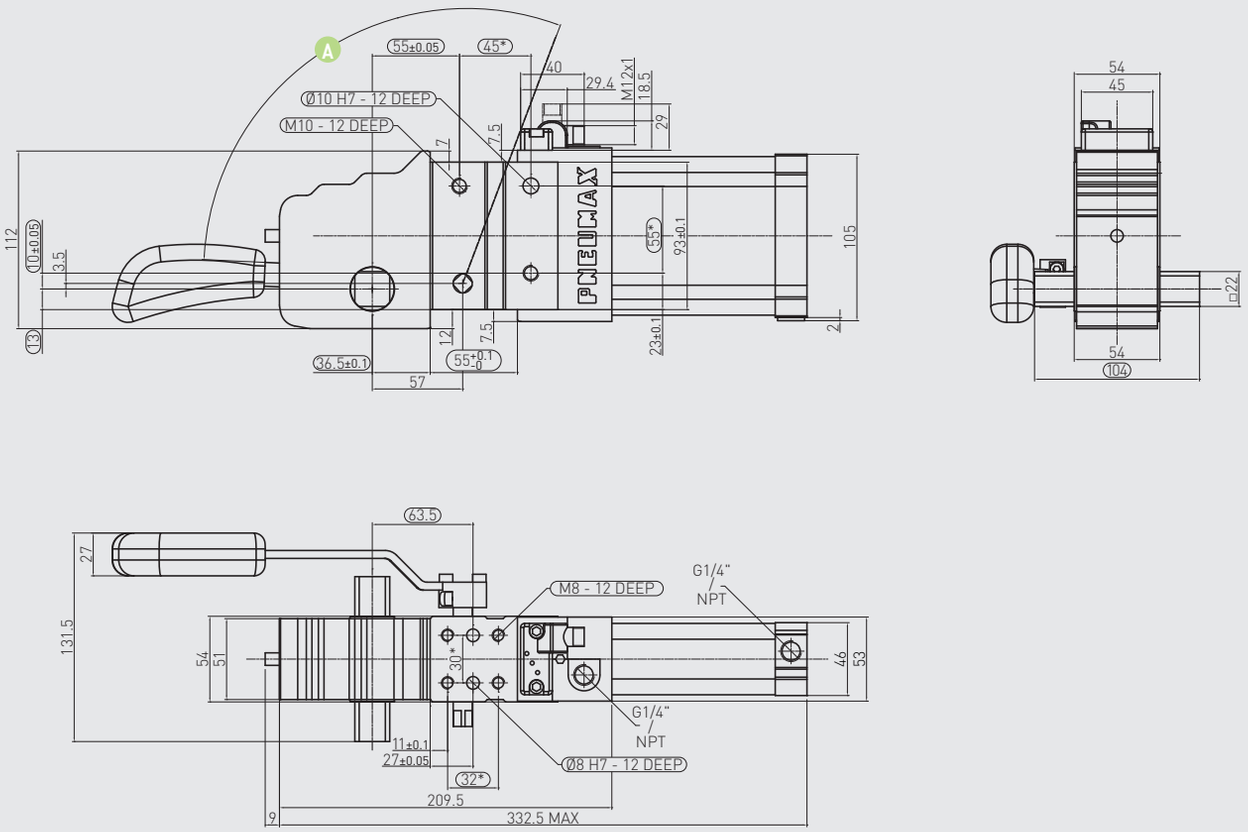
WEIGHT

kg 4

D2 handle included

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 17/06/2015



Handle swivel angle

Arm opening angle	Handle swivel angle A
0°	2.65°
15°	26.35°
30°	41.38°
45°	56°
60°	70.38°
75°	83.43°
90°	94°
105°	102°
120°	107°
135°	110.7°

Subject to change without notice

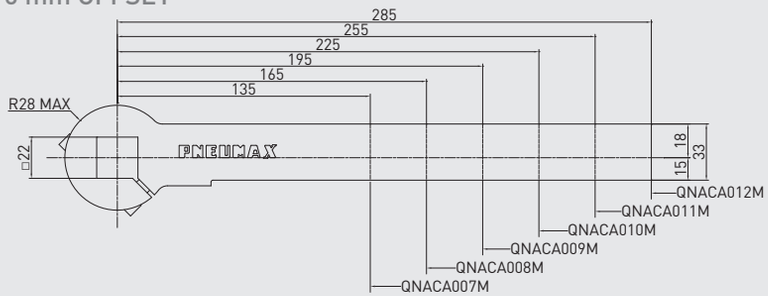
REV. 01 - 31/07/2015

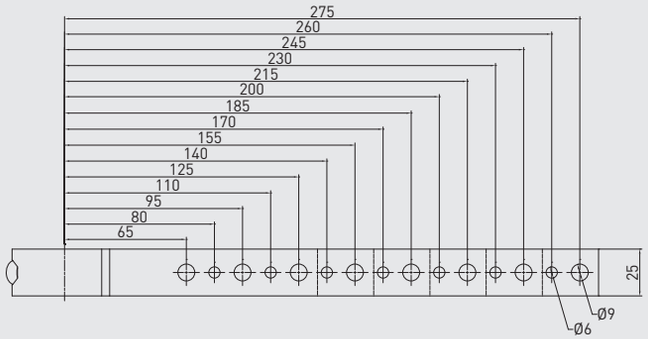
CLAMPING ARMS

22 mm shaft

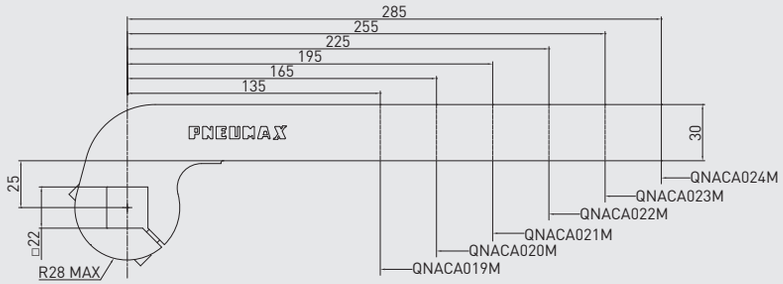
Steel

0 mm OFFSET





25 mm OFFSET



22 mm shaft – 0 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA007M	Steel	135	0.72	135°	135°	135°	135°
QNACA008M	Steel	165	0.83	135°	135°	135°	135°
QNACA009M	Steel	195	0.94	135°	135°	135°	135°
QNACA010M	Steel	225	1.05	135°	135°	135°	135°
QNACA011M	Steel	255	1.16	135°	135°	135°	135°
QNACA012M	Steel	285	1.28	135°	135°	135°	135°

Screws: M8x18 **Tightening torque:** 25 N m

22 mm shaft – 25 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA019M	Steel	135	0.84	135°	135°	135°	135°
QNACA020M	Steel	165	0.95	135°	135°	135°	135°
QNACA021M	Steel	195	1.05	135°	135°	135°	135°
QNACA022M	Steel	225	1.16	135°	135°	135°	135°
QNACA023M	Steel	255	1.26	135°	135°	135°	135°
QNACA024M	Steel	285	1.37	135°	135°	135°	135°

Screws: M8x18 **Tightening torque:** 25 N m

Subject to change without notice

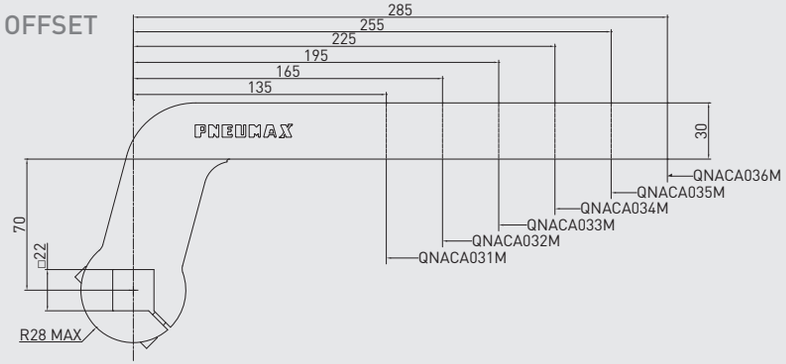
NAAMS

CLAMPING ARMS

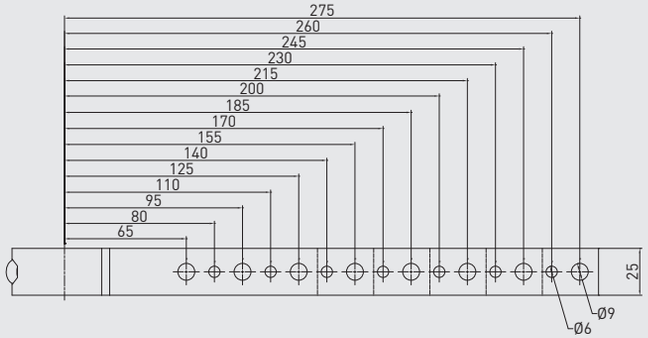
22 mm shaft

Steel

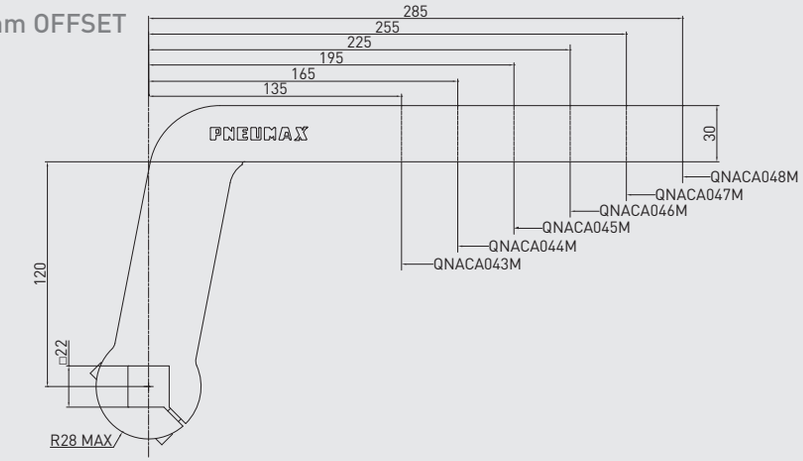
70 mm OFFSET



REV. 00 - 31/03/2015



120 mm OFFSET



22 mm shaft – 70 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA031M	Steel	135	1.05	135°	135°	135°	135°
QNACA032M	Steel	165	1.16	135°	135°	135°	135°
QNACA033M	Steel	195	1.27	135°	135°	135°	135°
QNACA034M	Steel	225	1.38	135°	135°	135°	135°
QNACA035M	Steel	255	1.49	135°	135°	135°	135°
QNACA036M	Steel	285	1.6	135°	135°	135°	135°

Screws: M8x18 **Tightening torque:** 25 N m

22 mm shaft – 120 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA043M	Steel	135	1.27	135°	135°	135°	135°
QNACA044M	Steel	165	1.37	135°	135°	135°	135°
QNACA045M	Steel	195	1.48	135°	135°	135°	135°
QNACA046M	Steel	225	1.58	135°	135°	135°	135°
QNACA047M	Steel	255	1.69	135°	135°	135°	135°
QNACA048M	Steel	285	1.8	135°	135°	135°	135°

Screws: M8x18 **Tightening torque:** 25 N m

FUNCTIONAL CHARTS
SIZE 63 mm

GLOBAL STANDARD COMPONENTS NAAMS

Clamping moment (at 5 bar)	390 N m
Holding moment	1,500 N m

The above data are meant for correct working conditions of the clamp – with the same performance level during its life time.

For applications which exceed the above data, please contact our sales representatives.

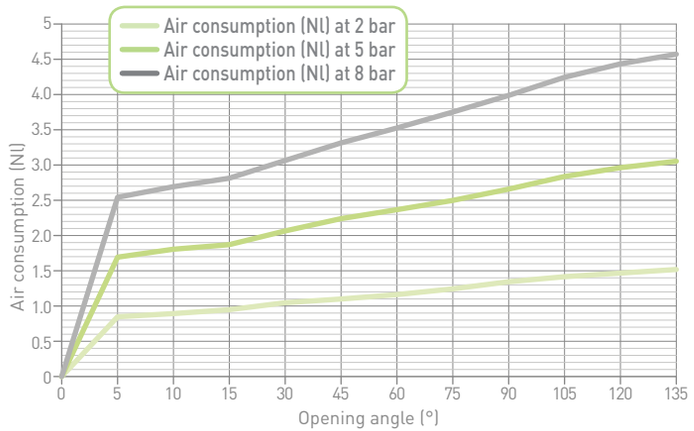
Material thickness compensation values and relative clamping force performance are available upon request: please get in touch with our sales representatives.

Calculation tool available upon demand

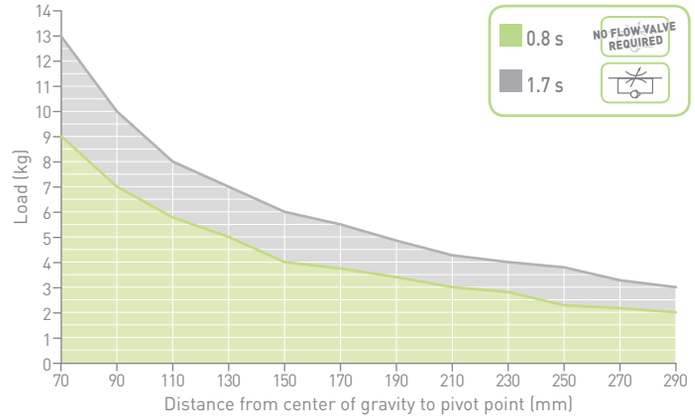
Please consult our technical representatives

Air consumption

REV. 00 - 17/06/2015



Tooling weight chart



Subject to change without notice

GLOBAL STANDARD COMPONENTS
NAAMS

K2P80E

High compensation clamp

NAAMS std

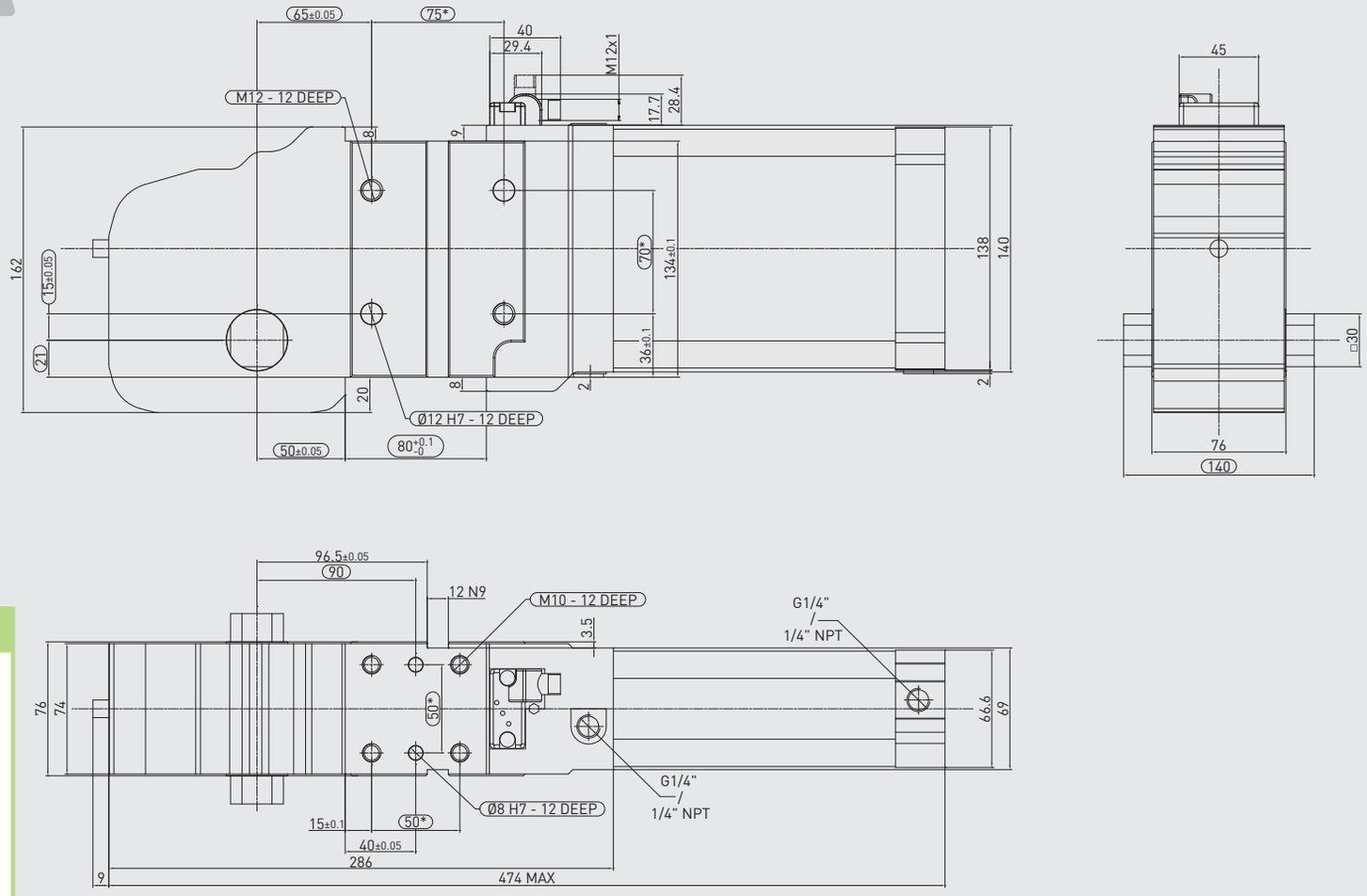
80 mm bore

WEIGHT

kg
8.75

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1
NAAMS DIMENSIONAL VALUES ARE HIGHLIGHTED

REV. 01 - 31/07/2015



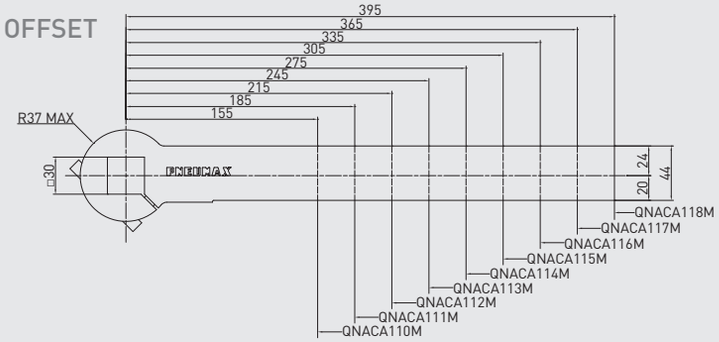
Technical features

Manual release button to open the linkage when air pressure is removed during setup. Pneumatic **ports on both sides** of the cylinder.	
Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

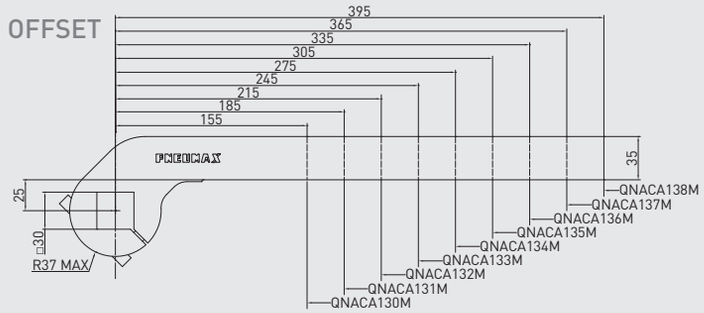
Subject to change
without notice

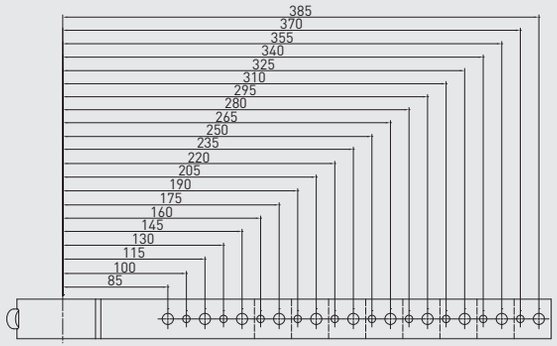
REV. 00 - 31/03/2015

0 mm OFFSET



25 mm OFFSET





GLOBAL STANDARD COMPONENTS NAAMS

CLAMPING ARMS

30 mm shaft

Steel

30 mm shaft – 0 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA110M	Steel	155	1.41	135°	135°	135°	135°
QNACA111M	Steel	185	1.58	135°	135°	135°	135°
QNACA112M	Steel	215	1.76	135°	135°	135°	135°
QNACA113M	Steel	245	1.93	135°	135°	135°	135°
QNACA114M	Steel	275	2.1	135°	135°	135°	135°
QNACA115M	Steel	305	2.27	135°	135°	135°	135°
QNACA116M	Steel	335	2.45	135°	135°	135°	135°
QNACA117M	Steel	365	2.62	135°	135°	135°	135°
QNACA118M	Steel	395	2.8	135°	135°	135°	135°

Screws: M10x20 **Tightening torque:** 50 N m

30 mm shaft – 25 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA130M	Steel	155	1.24	135°	135°	135°	135°
QNACA131M	Steel	185	1.39	135°	135°	135°	135°
QNACA132M	Steel	215	1.54	135°	135°	135°	135°
QNACA133M	Steel	245	1.69	135°	135°	135°	135°
QNACA134M	Steel	275	1.84	135°	135°	135°	135°
QNACA135M	Steel	305	2	135°	135°	135°	135°
QNACA136M	Steel	335	2.14	135°	135°	135°	135°
QNACA137M	Steel	365	2.29	135°	135°	135°	135°
QNACA138M	Steel	395	2.45	135°	135°	135°	135°

Screws: M10x20 **Tightening torque:** 50 N m

Subject to change without notice

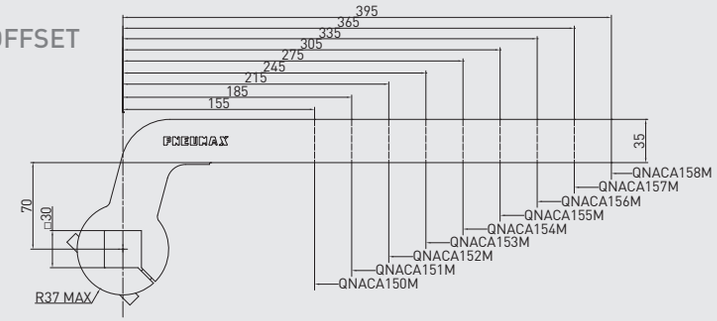
GLOBAL STANDARD COMPONENTS
NAAMS

CLAMPING ARMS

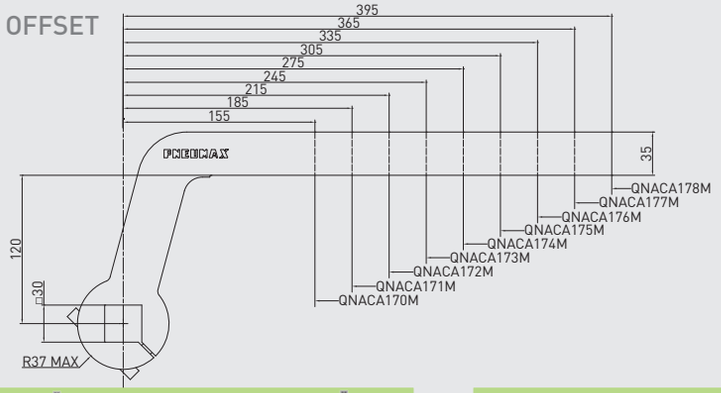
30 mm shaft

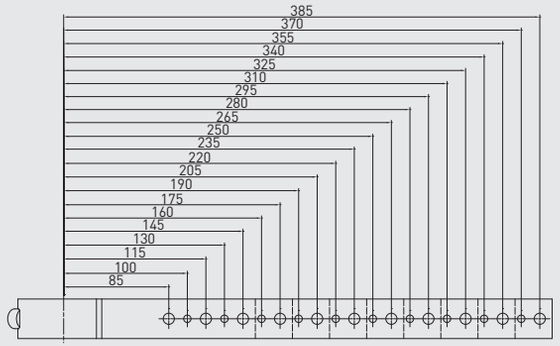
Steel

70 mm OFFSET



120 mm OFFSET





REV. 00 - 31/03/2015

30 mm shaft – 70 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA150M	Steel	155	1.7	135°	135°	135°	135°
QNACA151M	Steel	185	1.85	135°	135°	135°	135°
QNACA152M	Steel	215	2	135°	135°	135°	135°
QNACA153M	Steel	245	2.15	135°	135°	135°	135°
QNACA154M	Steel	275	2.3	135°	135°	135°	135°
QNACA155M	Steel	305	2.45	135°	135°	135°	135°
QNACA156M	Steel	335	2.6	135°	135°	135°	135°
QNACA157M	Steel	365	2.76	135°	135°	135°	135°
QNACA158M	Steel	395	2.92	135°	135°	135°	135°

Screws: M10x20 **Tightening torque:** 50 N m

30 mm shaft – 120 mm offset

PART NO.	MATERIAL	LENGTH	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
QNACA170M	Steel	155	1.97	135°	135°	135°	135°
QNACA171M	Steel	185	2.12	135°	135°	135°	135°
QNACA172M	Steel	215	2.27	135°	135°	135°	135°
QNACA173M	Steel	245	2.42	135°	135°	135°	135°
QNACA174M	Steel	275	2.57	135°	135°	135°	135°
QNACA175M	Steel	305	2.72	135°	135°	135°	135°
QNACA176M	Steel	335	2.87	135°	135°	135°	135°
QNACA177M	Steel	365	3.02	135°	135°	135°	135°
QNACA178M	Steel	395	3.19	135°	135°	135°	135°

Screws: M10x20 **Tightening torque:** 50 N m

Subject to change without notice

FUNCTIONAL CHARTS
SIZE 80 mm

GLOBAL STANDARD COMPONENTS NAAMS

Clamping moment (at 5 bar)	850 N m
Holding moment	2,500 N m

The above data are meant for correct working conditions of the clamp – with the same performance level during its life time.

For applications which exceed the above data, please contact our sales representatives.

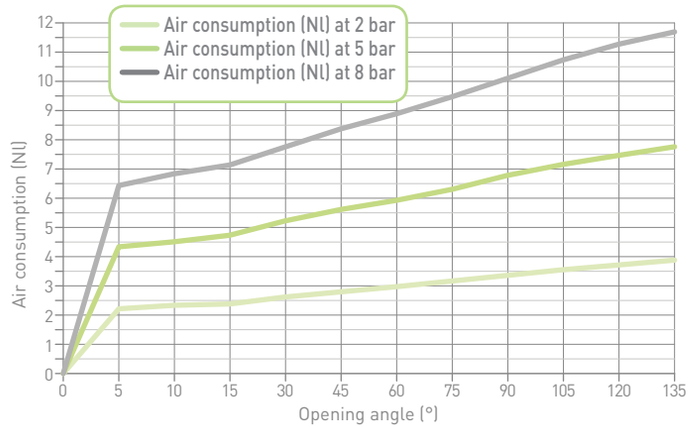
Material thickness compensation values and relative clamping force performance are available upon request: please get in touch with our sales representatives.

Calculation tool available upon demand

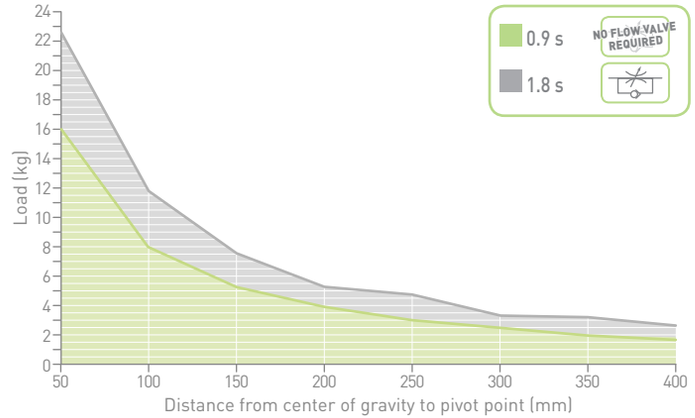
Please consult our technical representatives

Air consumption

REV. 00 - 31/03/2015



Tooling weight chart



Subject to change without notice

WHY PNX

HIGH EFFICIENCY
HE-SERIES

The perfect combination between **FUNCTIONALITY** and **EFFICIENCY**

Same clamping moment of a standard clamp + Lower consumption

Two sizes are available:

- ✔ HE1_1 (50 mm clamp housing + Ø 40 mm cylinder)
- ✔ HE1_2 (63 mm clamp housing + Ø 50 mm cylinder)

Less weight

Less emission

Less consumption

High efficiency product series

Enhanced engineered linkage

Generate savings

PATENT PENDING

ORDERING STRING HE-SERIES

HE	1	P	1	E	G	1	A	01

VERSION
HE = High Efficiency clamp

MOUNTING PATTERN STANDARD
1 = European mount

OPERATION
P = pneumatic

SIZE
1 = housing size 50/ cylinder Ø 40 mm
2 = housing size 63/ cylinder Ø 50 mm

SENSOR
E = electronic with M12 swivel connector
N = no sensor

PORTS
G = GAS
N = NPT

ARM MOUNT
1 =

2 =

3 =
4 =


ARM MATERIAL
A = aluminum
S = steel

CLAMP ARM TYPE
01 = wishbone, central, 15 mm offset, Ø 6H7 - Ø 9 mm
02 = wishbone, right, 15 mm offset, Ø 6H7 - Ø 9 mm
03 = wishbone, left, 15 mm offset, Ø 6H7 - Ø 9 mm
04 = wishbone, central, 45 mm offset, Ø 6H7 - Ø 9 mm
05 = wishbone, right, 45 mm offset, Ø 6H7 - Ø 9 mm
06 = wishbone, left, 45 mm offset, Ø 6H7 - Ø 9 mm

Please see the charts in the datasheets for arm position as well as for max. opening angle

Subject to change without notice

HE1P1E

High Efficiency clamp

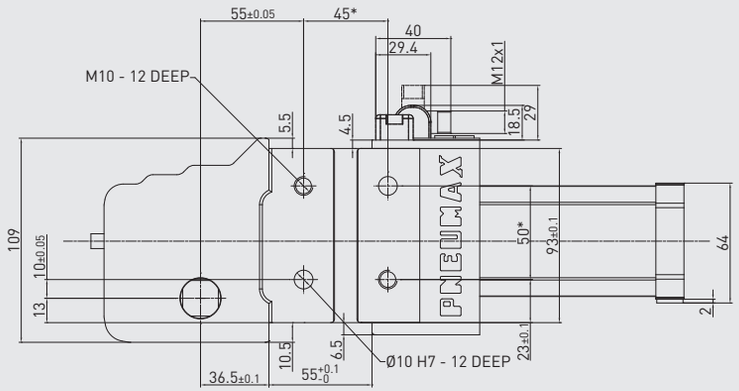
Housing size 50/

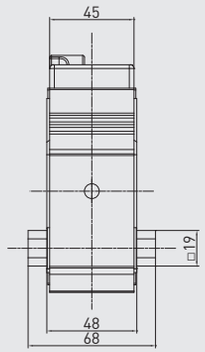
WEIGHT

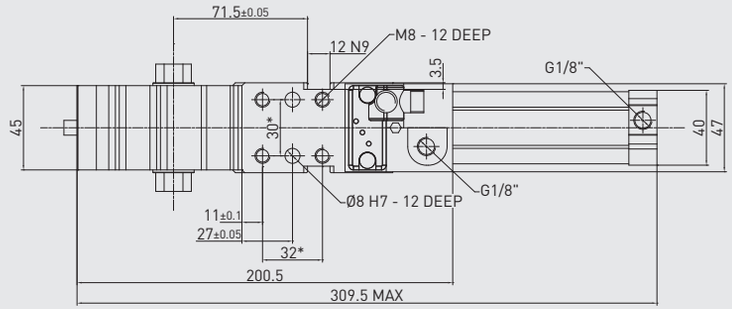
kg
2.55

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 31/03/2015



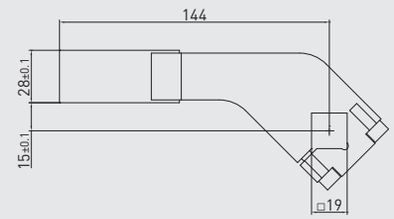


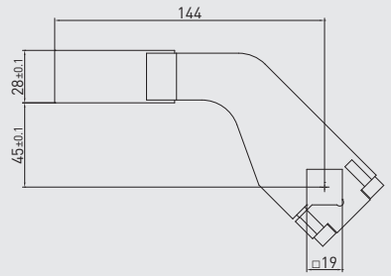


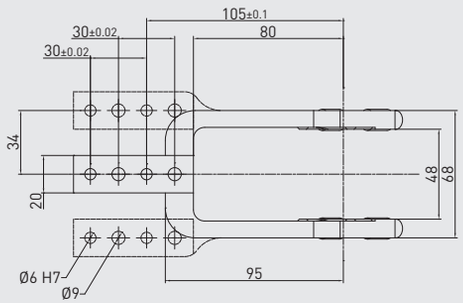
Technical features

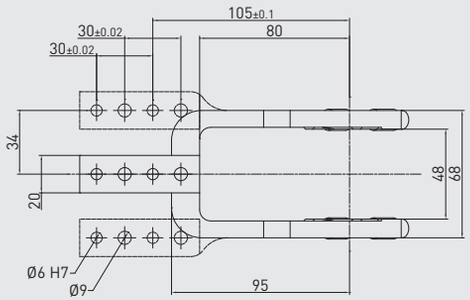
Manual release button to open the linkage when air pressure is removed during setup. Pneumatic **ports on both sides** of the cylinder.	
Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

Subject to change without notice



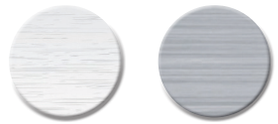






CLAMPING ARMS

19 mm shaft



19 mm shaft – 15 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B1901	Aluminum	Central	0.41	135°	115°	135°	80°
Q1901	Steel	Central	0.71	135°	115°	135°	80°
B1902	Aluminum	Right	0.43	135°	115°	135°	80°
Q1902	Steel	Right	0.79	135°	115°	135°	80°
B1903	Aluminum	Left	0.43	135°	115°	135°	80°
Q1903	Steel	Left	0.79	135°	115°	135°	80°

Screws: M6x25 **Tightening torque:** 10 N m

19 mm shaft – 45 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B1904	Aluminum	Central	0.45	135°	135°	135°	80°
Q1904	Steel	Central	0.77	135°	135°	135°	80°
B1905	Aluminum	Right	0.46	135°	135°	135°	80°
Q1905	Steel	Right	0.81	135°	135°	135°	80°
B1906	Aluminum	Left	0.46	135°	135°	135°	80°
Q1906	Steel	Left	0.81	135°	135°	135°	80°

Screws: M6x25 **Tightening torque:** 10 N m

Subject to change without notice

FUNCTIONAL CHARTS
SIZE HE1_1

Cycle time for max opening angle	< 0.8 s NO FLOW-VALVE REQUIRED

Clamping moment (at 5 bar)	185 N m
Holding moment	800 N m

The above data are meant for correct working conditions of the clamp – with the same performance level during its life time.

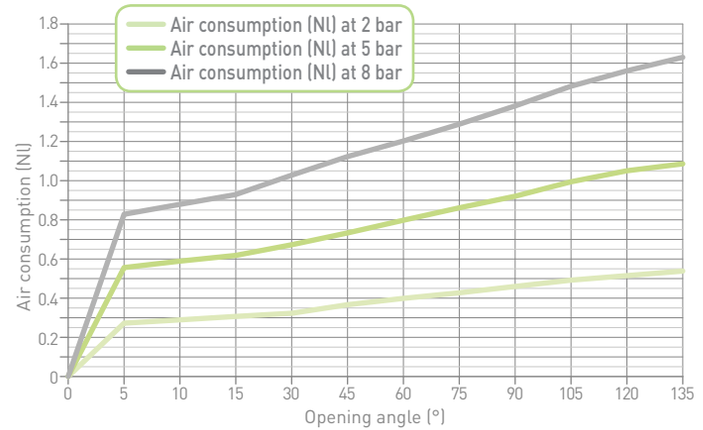
For applications which exceed the above data, please contact our sales representatives.

Calculation tool available upon demand

Please consult our technical representatives

Subject to change without notice

Air consumption REV. 00 - 31/03/2015

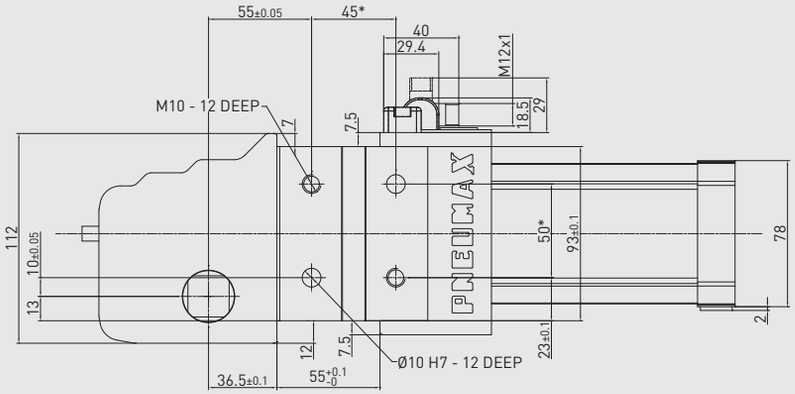


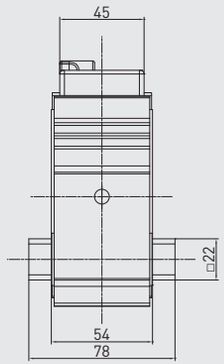
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

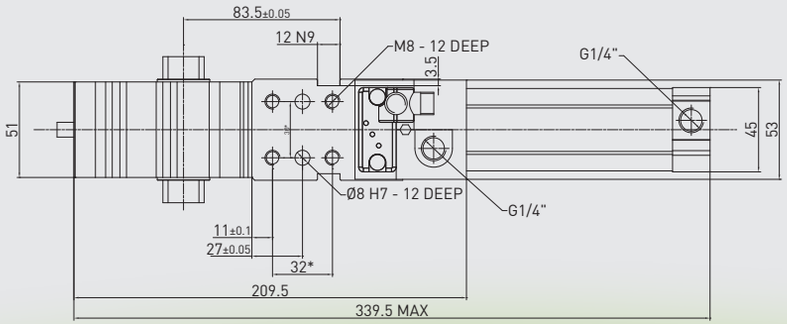
REV. 00 - 31/03/2015

WEIGHT

kg 3.4







HE1P2E

High Efficiency clamp

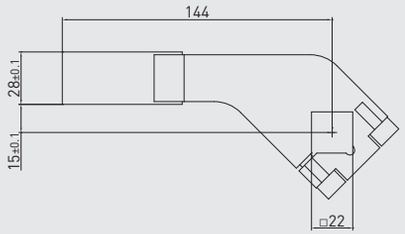
Housing size 63/

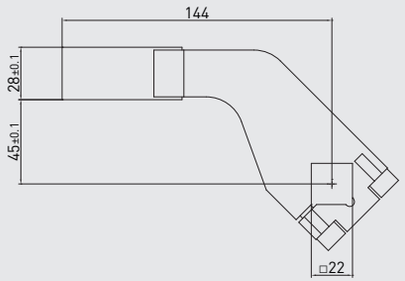
Technical features

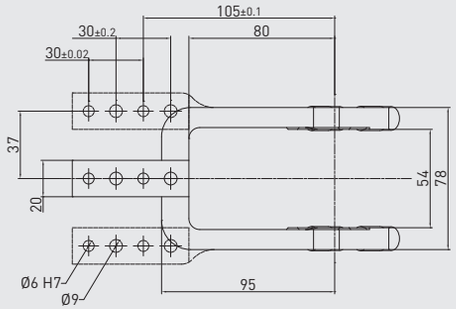
Manual release button to open the linkage when air pressure is removed during setup. Pneumatic **ports on both sides** of the cylinder.	
Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

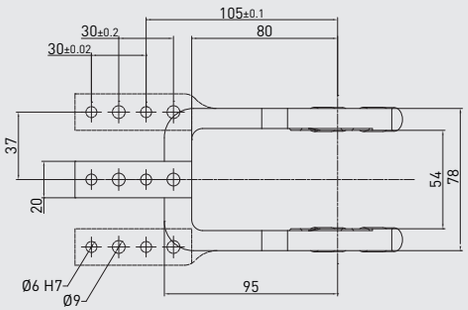
Subject to change without notice

CLAMPING ARMS










Aluminum


Steel

22 mm shaft – 15 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B2201	Aluminum	Central	0.52	135°	115°	135°	80°
Q2201	Steel	Central	0.9	135°	115°	135°	80°
B2202	Aluminum	Right	0.54	135°	115°	135°	80°
Q2202	Steel	Right	0.93	135°	115°	135°	80°
B2203	Aluminum	Left	0.54	135°	115°	135°	80°
Q2203	Steel	Left	0.93	135°	115°	135°	80°

Screws: M8x25 **Tightening torque:** 25 N m

Subject to change without notice

22 mm shaft – 45 mm offset

PART NO.	MATERIAL	VERSION	WEIGHT (kg)	MAX OP. ANGLE POS. 1	MAX OP. ANGLE POS. 2	MAX OP. ANGLE POS. 3	MAX OP. ANGLE POS. 4
B2204	Aluminum	Central	0.57	135°	135°	135°	75°
Q2204	Steel	Central	0.98	135°	135°	135°	75°
B2205	Aluminum	Right	0.58	135°	135°	135°	75°
Q2205	Steel	Right	1.02	135°	135°	135°	75°
B2206	Aluminum	Left	0.58	135°	135°	135°	75°
Q2206	Steel	Left	1.02	135°	135°	135°	75°

Screws: M8x25 **Tightening torque:** 25 N m

FUNCTIONAL CHARTS
SIZE HE1_2

Cycle time for max opening angle	< 0.8 s NO FLOW-VALVE REQUIRED

Clamping moment (at 5 bar)	390 N m
Holding moment	1,500 N m

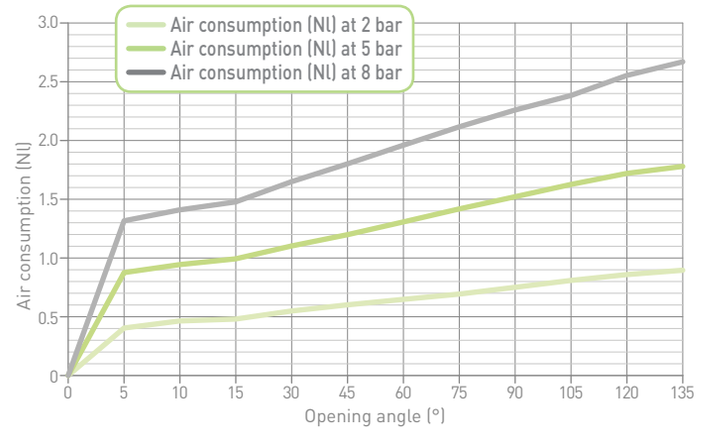
The above data are meant for correct working conditions of the clamp – with the same performance level during its life time.

For applications which exceed the above data, please contact our sales representatives.

Calculation tool available upon demand

Please consult our technical representatives

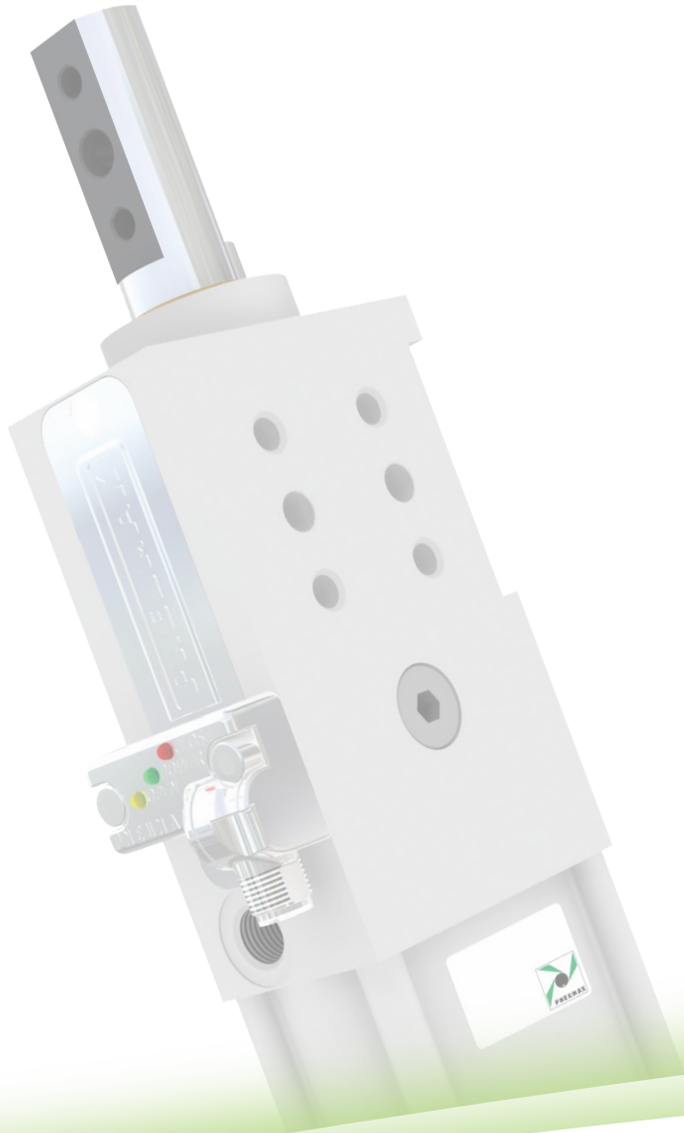
Air consumption REV. 00 - 31/03/2015



Subject to change without notice

LOCATING

R-SERIES	Retractable locating pin packages
RC-SERIES	Retractable locating pin packages with CNOMO mounting pattern
HP-SERIES	High Performance retractable locating pin packages
F-SERIES	Retractable locating pin packages with dual rods



WHY PNX

POSITIONING ACCURACY

- ✔ HIGH POSITIONING ACCURACY LEVEL: PRECISE GUIDING THROUGH DOUBLE BUSHINGS FOR AN OPTIMAL SUPPORT OF THE RODS > **TWIN PISTON ROD GUIDE**
- ✔ LOW DEFLECTION
- ✔ EFFICIENT ANTI ROTATION MECHANISM
- ✔ OPTIMAL CUSHIONING

MINIMAL OVERALL LENGTH

\+ FLAT AND NARROW DESIGN IN ALUMINUM ALLOY

= EXTRA LIGHT PRODUCTS

WHY PNX

HIGH RESISTANCE TO WELDING DEBRIS AND CORROSION

Protection against weld spatter, dirt and coolants enabling
pin packages to operate continuously in extreme environments:

CHROME ROD COATING as a protection against adhering weld sparks

+ METAL ROD SCRAPER to prevent welding debris from entering the pin package

IP68 for the sensor

IP57 for pin package

long life built-in protected components in **rust prevention**

Clear design with **user-friendly surfaces**
and no dirt or welding deposit traps

ORDERING STRING
R-SERIES

R	P	50	E	40	D	3	1

VERSION
R = retractable locating pin package

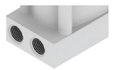
OPERATION
P = pneumatic
D = pneumatic with
1 = 

SIZE
50 = Ø 50 mm
63 = Ø 63 mm

SENSOR
E = electronic with M12 swivel connector
N = no sensor

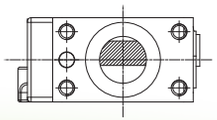
STROKE
15 = 15 mm
25 = 25 mm
40 = 40 mm
50 = 50 mm
60 = 60 mm

PORTS
G = GAS
D = dual GAS ports on rear end cap



ROD TERMINATION
1 = iØ 16 mm cross-cut key rod termination
2 = iØ 10 mm cross-cut key rod termination
3 = rod termination for offset pins
4 = rod termination with key
5 = iØ 10 mm flat termination
6 = iØ 12 mm flat termination

ROD ORIENTATION (FOR TERMINATION TYPE 3)
1 =
2 =
3 =
4 =



Subject to change without notice

RP50E_1

Retractable locating pin package

Size 50 mm

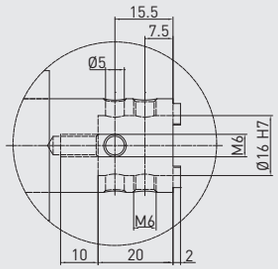
iØ 16 mm cross-cut key rod termination

WEIGHT

kg 1.85 min. stroke

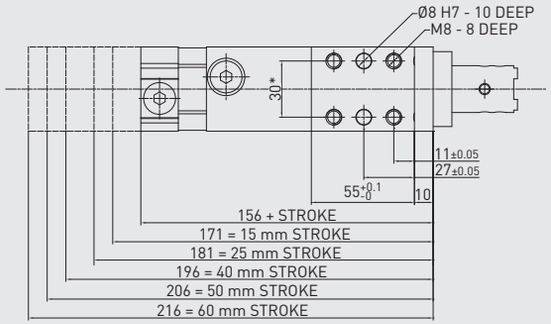
kg 2.1 max. stroke

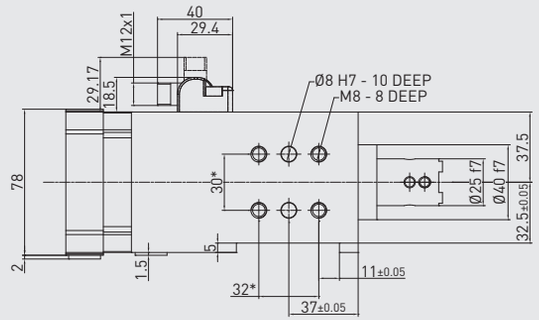
DETAIL: A

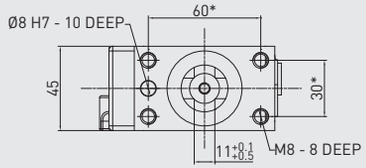


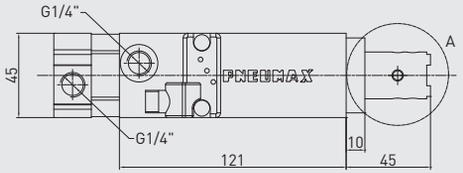
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 31/03/2015









Technical features

Operating features	
Operating pressure	from 2 to 8 bar

Subject to change without notice

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 31/03/2015

WEIGHT

kg 1.85	kg 2.1
min. stroke	max. stroke

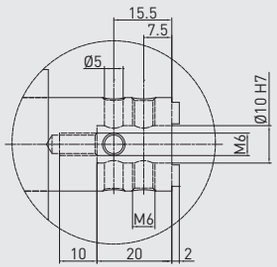
RP50E_2

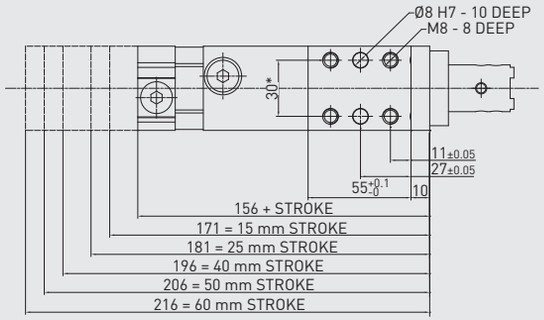
Retractable locating pin package

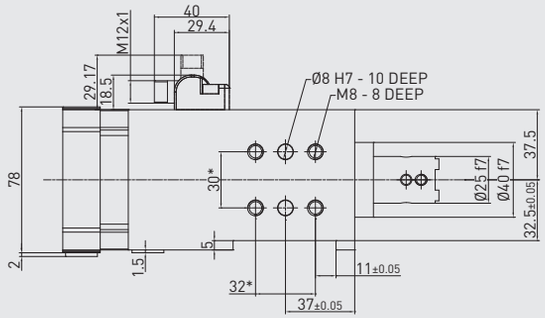
Size 50 mm

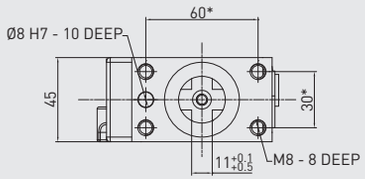
iØ 10 mm cross-cut key rod termination

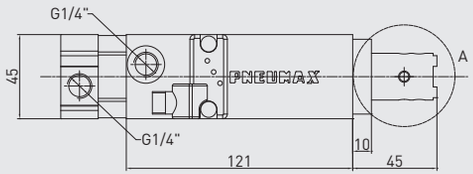
DETAIL: A











Technical features

Operating features	
Operating pressure	from 2 to 8 bar

Subject to change without notice

RP50E_3

Retractable locating pin package

Size 50 mm

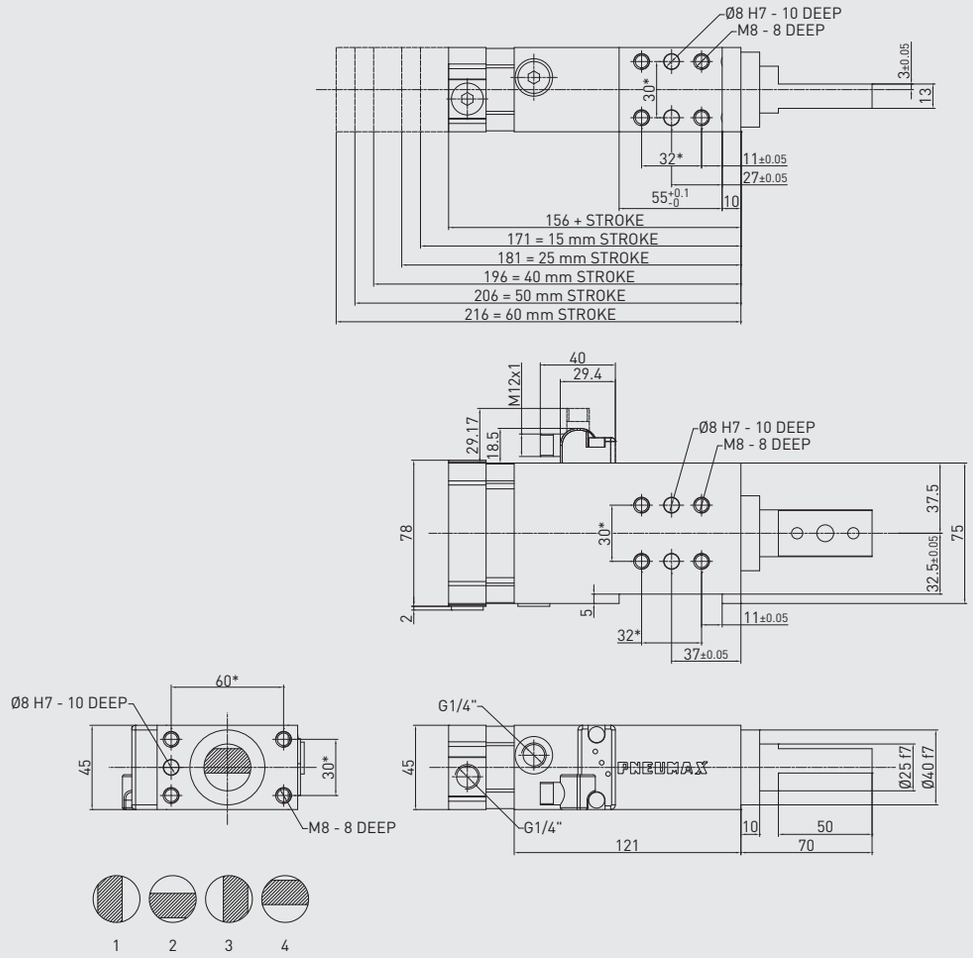
Rod termination for offset pins

WEIGHT

kg 1.85	kg 2.1
min. stroke	max. stroke

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 31/03/2015



Technical features

Operating features	
Operating pressure	from 2 to 8 bar

Subject to change without notice

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 31/03/2015

WEIGHT

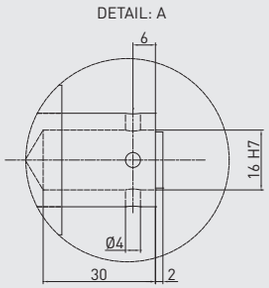
kg 1.85	kg 2.1
min. stroke	max. stroke

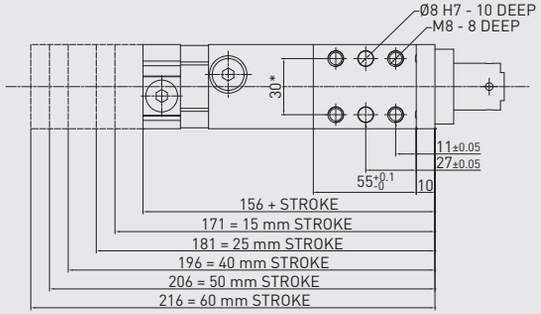
RP50E_4

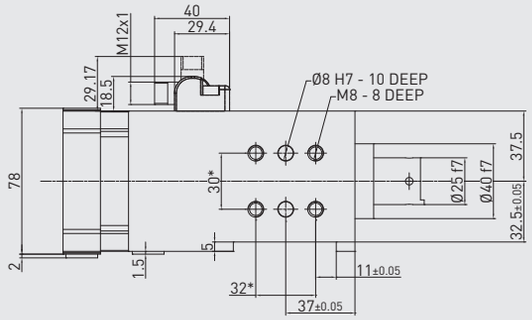
Retractable locating pin package

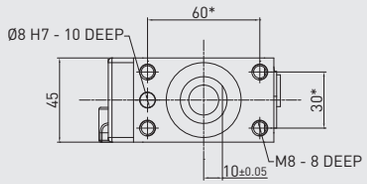
Size 50 mm

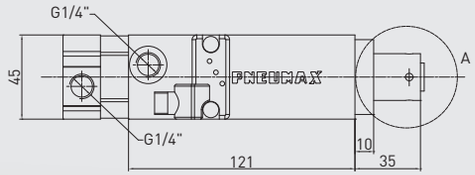
Rod termination with key











Technical features

Operating features	
Operating pressure	from 2 to 8 bar

Subject to change without notice

RD150E_1

Retractable locating pin package

Size 50 mm

iØ 16 mm cross-cut key rod termination

With manual operation

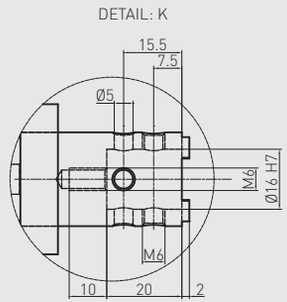
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

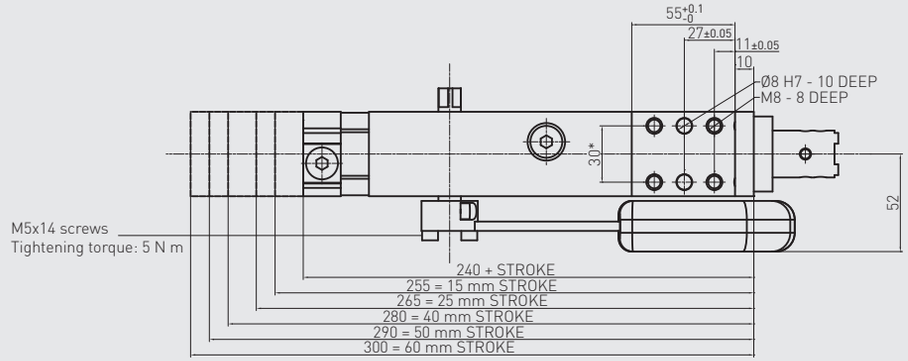
REV. 00 - 18/06/2015

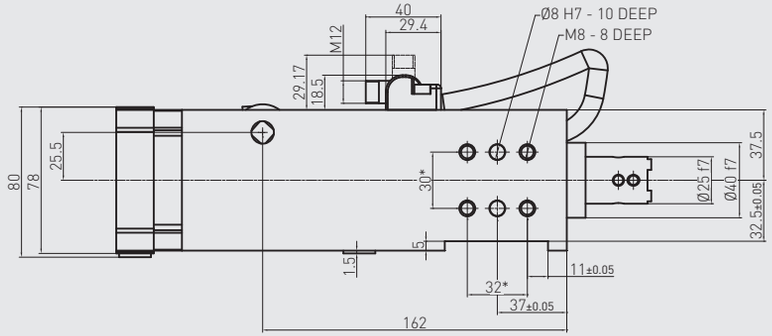
WEIGHT
D1 handle included

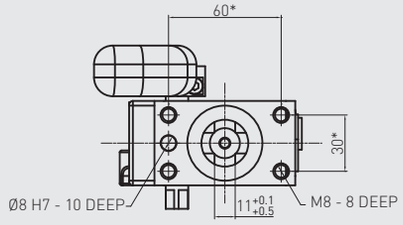
kg 2.85 min. stroke

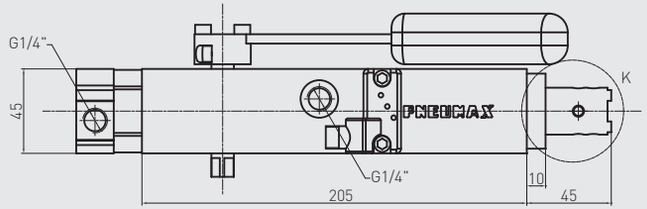
kg 3.1 max. stroke











Technical features

Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

Subject to change without notice

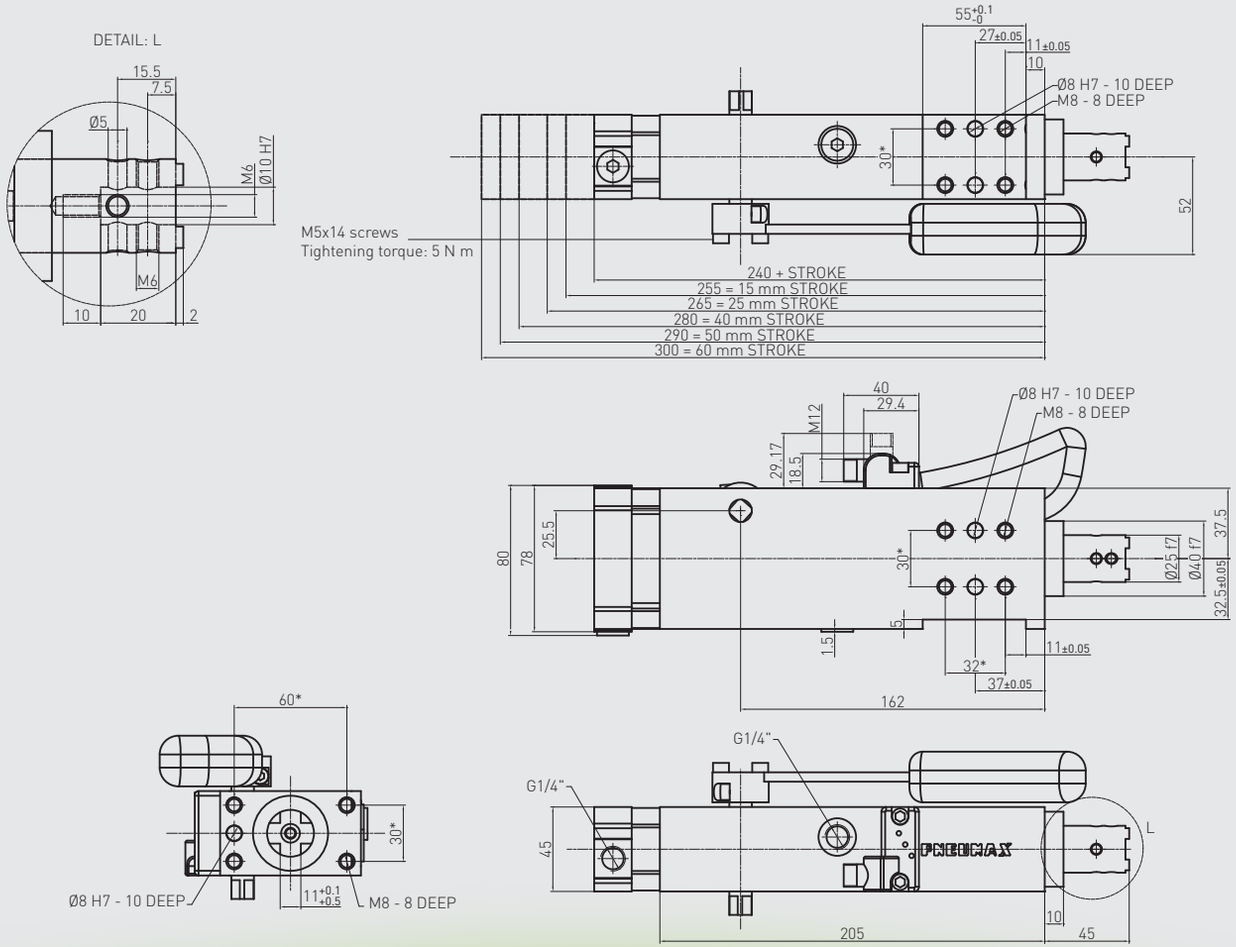
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 18/06/2015

WEIGHT
D1 handle included

kg 2.85 min. stroke

kg 3.1 max. stroke



RD150E_2

Retractable locating pin package

Size 50 mm

iØ 10 mm cross-cut key rod termination

With manual operation

Technical features

Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

Subject to change without notice

RD150E_3

Retractable locating pin package

Size 50 mm

Rod termination for offset pins

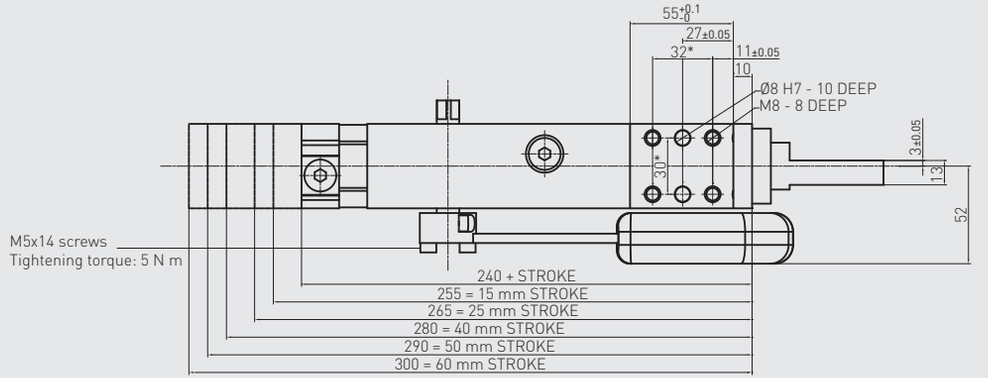
With manual operation

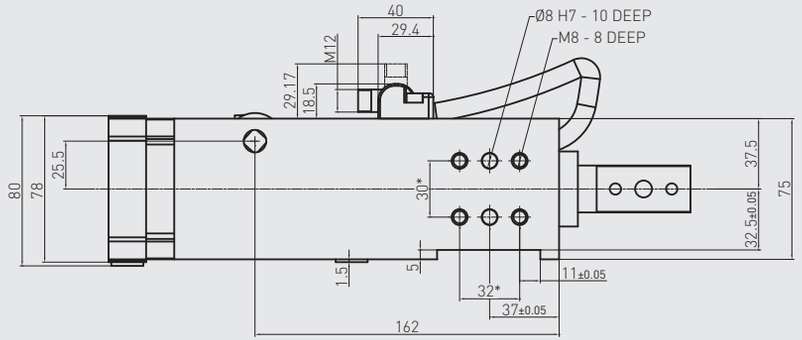
WEIGHT
D1 handle included

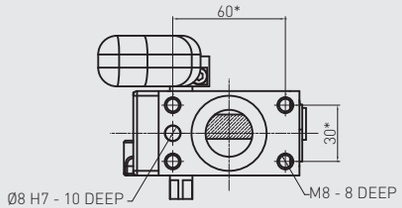
kg 2.85	kg 3.1
min. stroke	max. stroke

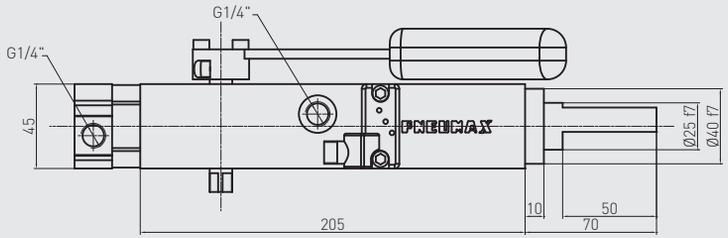
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 18/06/2015









Technical features

Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

Subject to change without notice

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 18/06/2015

WEIGHT
D1 handle included

kg 2.85 min. stroke

kg 3.1 max. stroke

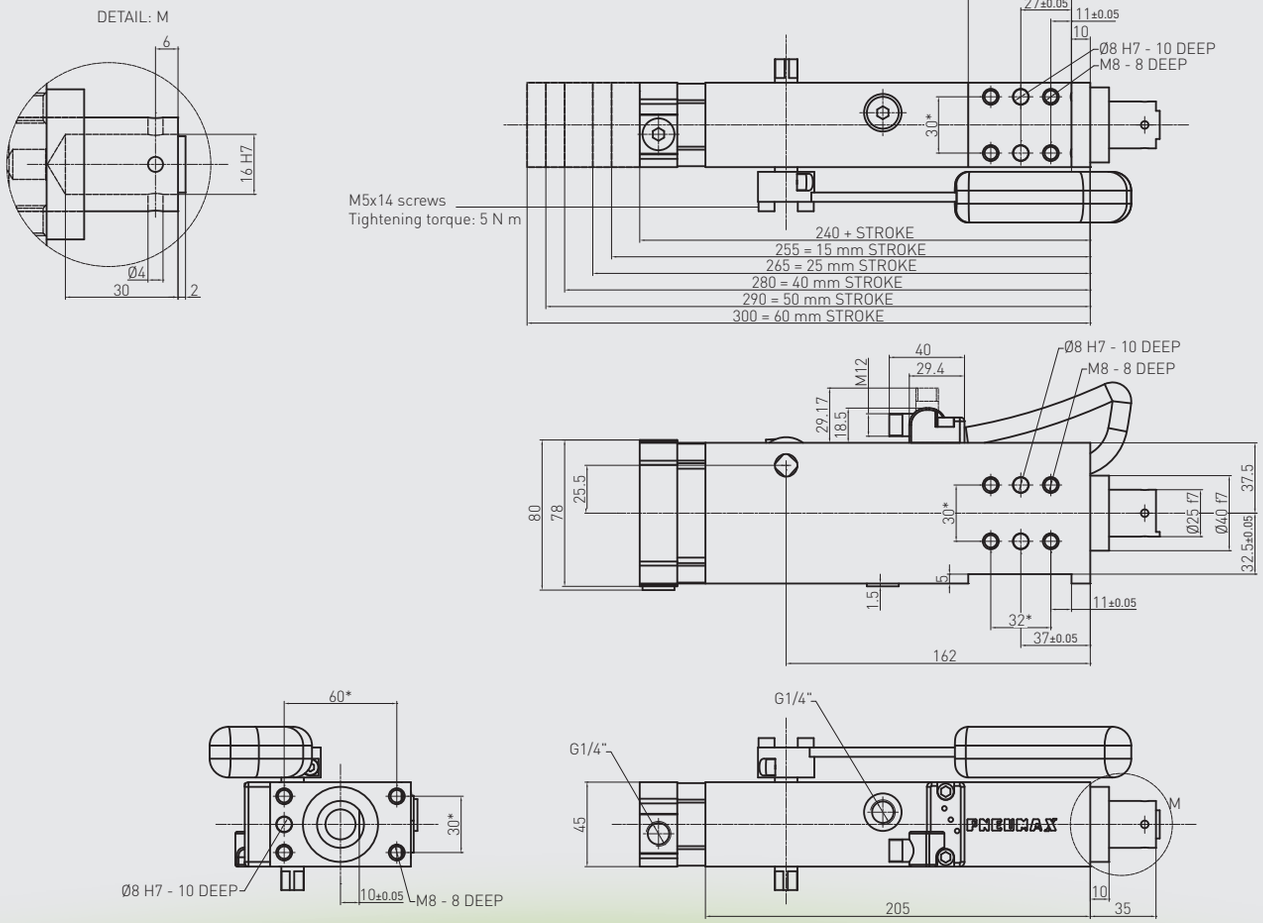
RD150E_4

Retractable locating pin package

Size 50 mm

Rod termination with key

With manual operation



Technical features

Operating features	
Operating pressure	from 2 to 8 bar
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

Subject to change without notice

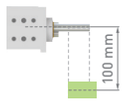
FUNCTIONAL CHARTS
SIZE 50 mm

Load position A

horizontal mounting position of the retractable locating pin/load centre on the rod

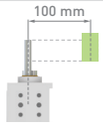
Load position B

horizontal mounting position of the retractable locating pin/load centre at 100 mm from the rod axis



Load position C

vertical mounting position of the retractable locating pin/load centre at 100 mm from the rod axis



Please get in touch with our technical representatives for any application which exceeds the above values, to find the appropriate solution for your

Subject to change without notice

Max deflection

Stroke	Load (kg)	Load position A deviation (mm)	Load position B deviation (mm)	Load position C deviation (mm)
60 mm	0.5	0.007	0.012	0.01
	1	0.013	0.025	0.023
	1.5	0.02	0.04	0.036
	2	0.03	0.053	0.049
	2.5	0.038	0.067	0.064
	3	0.045	0.082	0.075
50 mm	0.5	0.006	0.009	0.007
	1	0.013	0.02	0.018
	1.5	0.021	0.032	0.028
	2	0.026	0.047	0.043
	2.5	0.032	0.66	0.057
	3	0.037	0.075	0.068
40 mm	0.5	0.004	0.009	0.004
	1	0.009	0.02	0.009
	1.5	0.013	0.032	0.013
	2	0.018	0.047	0.018
	2.5	0.022	0.66	0.022
	3	0.026	0.075	0.026
25 mm	0.5	0	0.005	0
	1	0.005	0.015	0.005
	1.5	0.007	0.032	0.007
	2	0.011	0.047	0.011
	2.5	0.012	0.66	0.012
	3	0.014	0.075	0.014
15 mm	0.5	0	0.005	0
	1	0.002	0.018	0
	1.5	0.004	0.025	0.002
	2	0.007	0.033	0.006
	2.5	0.012	0.043	0.009
	3	0.014	0.052	0.013

Functional data (at 5 bar)

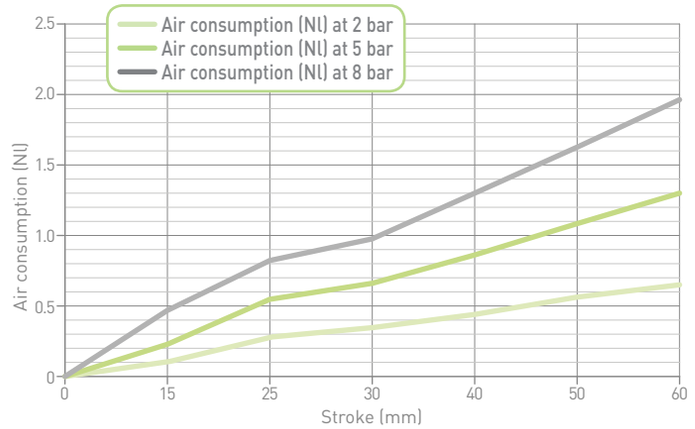
Thrust force	825 N
Pull force	980 N
Max bending moment	3 N m

Cycle time for max stroke

< 0.8 s NO FLOW VALVE REQUIRED

Air consumption

REV. 00 - 18/06/2015

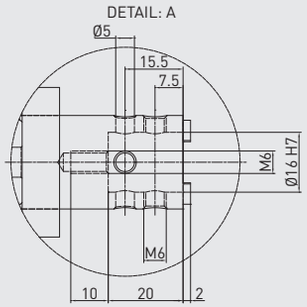


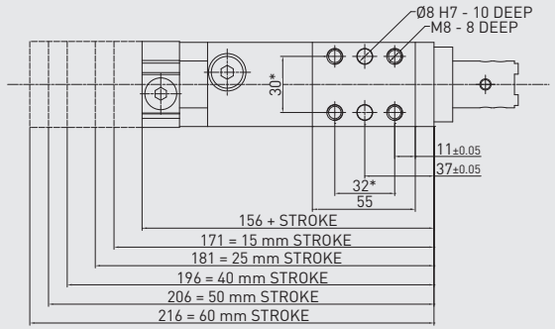
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

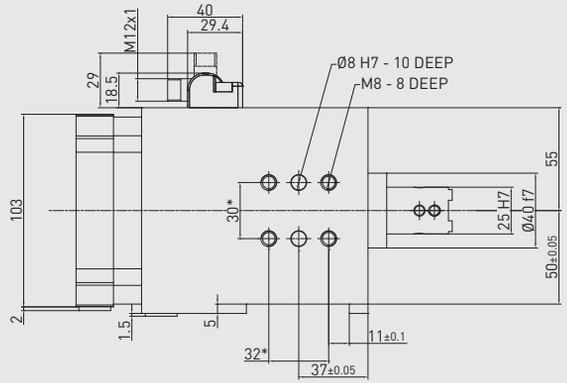
REV. 00 - 31/03/2015

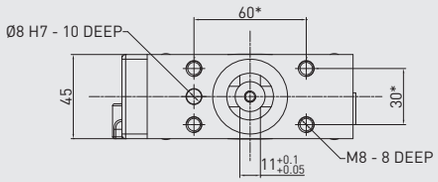
WEIGHT

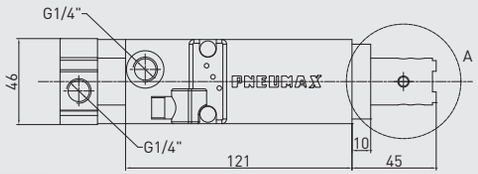
kg 2.45	kg 2.75
min. stroke	max. stroke











RP63E_1

Retractable locating pin package

Size 63 mm

iØ 16 mm cross-cut key rod termination

Technical features

Operating features	
Operating pressure	from 2 to 8 bar

Subject to change without notice

RP63E_2

Retractable locating pin package

Size 63 mm

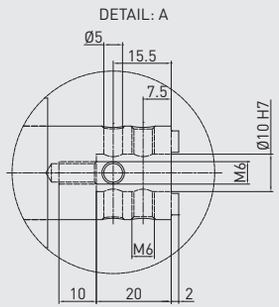
iØ 10 mm cross-cut key rod termination

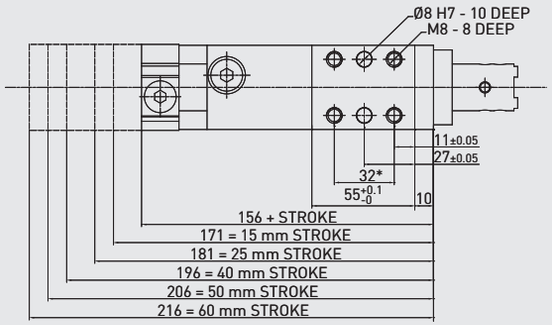
WEIGHT

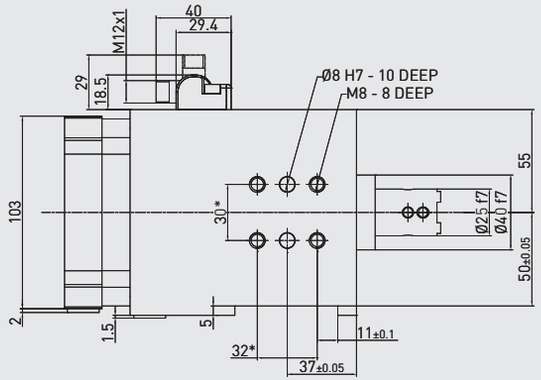
kg 2.45	kg 2.75
min. stroke	max. stroke

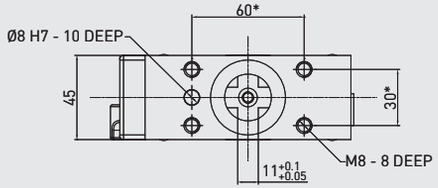
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

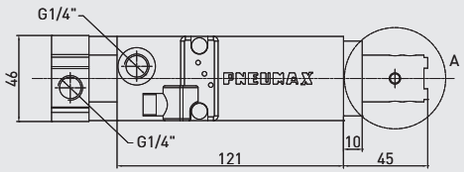
REV. 00 - 31/03/2015











Technical features

Operating features	
Operating pressure	from 2 to 8 bar

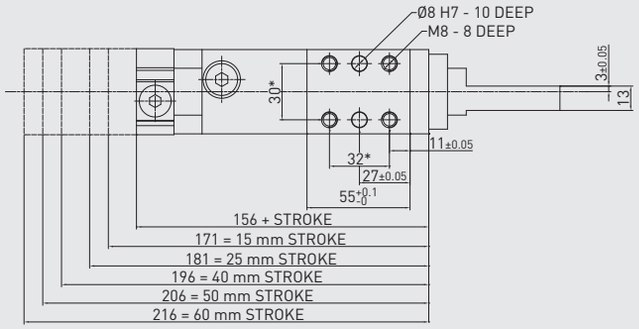
Subject to change without notice

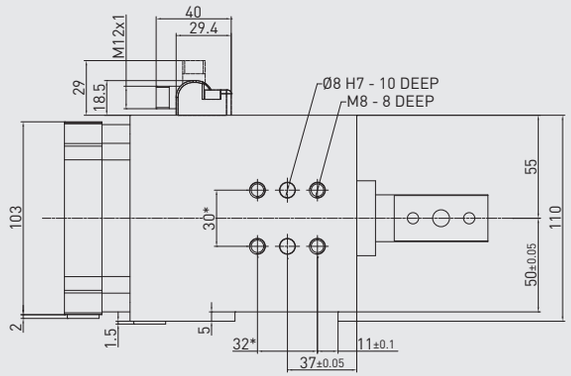
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

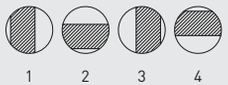
REV. 00 - 31/03/2015

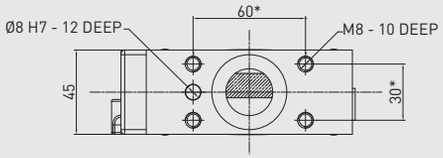
WEIGHT

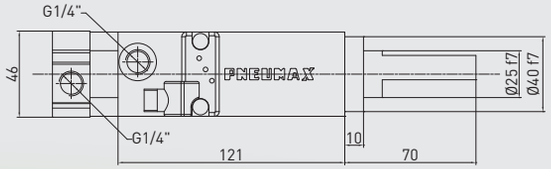
kg 2.45	kg 2.75
min. stroke	max. stroke











RP63E_3

Retractable locating pin package

Size 63 mm

Rod termination for offset pins

Technical features

Operating features	
Operating pressure	from 2 to 8 bar

Subject to change without notice

RP63E_4

Retractable locating pin package

Size 63 mm

Rod termination with key

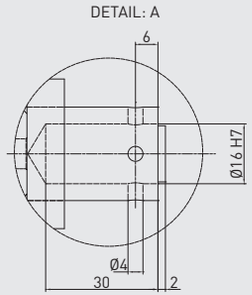
WEIGHT

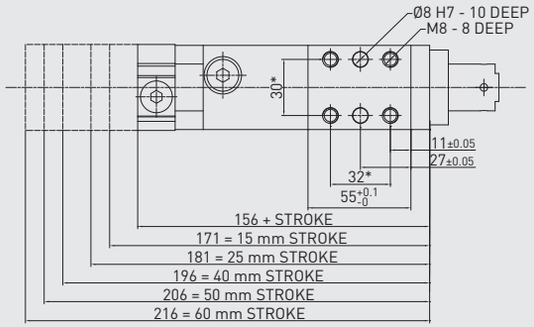
kg 2.45 min. stroke

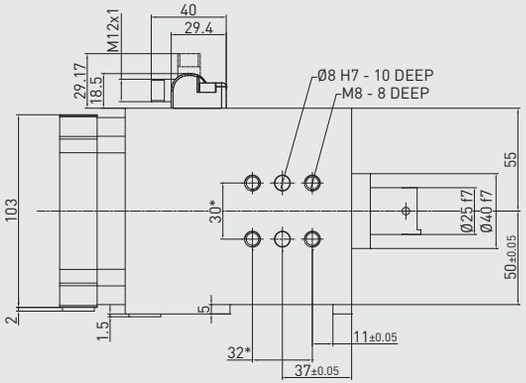
kg 2.75 max. stroke

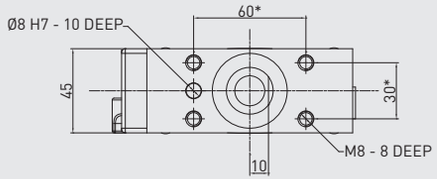
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

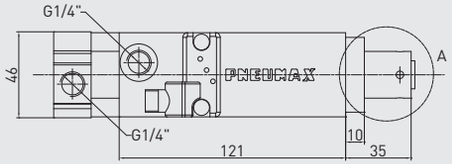
REV. 00 - 31/03/2015











Technical features

Operating features	
Operating pressure	from 2 to 8 bar

Subject to change without notice

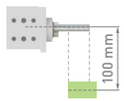
FUNCTIONAL CHARTS
SIZE 63 mm

Load position A

horizontal mounting position of the retractable locating pin/load centre on the rod

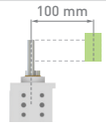
Load position B

horizontal mounting position of the retractable locating pin/load centre at 100 mm from the rod axis



Load position C

vertical mounting position of the retractable locating pin/load centre at 100 mm from the rod axis



Please get in touch with our technical representatives for any application which exceeds the above values, to find the appropriate solution for your

Max deflection

Stroke	Load (kg)	Load position A deviation (mm)	Load position B deviation (mm)	Load position C deviation (mm)
60 mm	0.5	0.007	0.012	0.01
	1	0.013	0.025	0.023
	1.5	0.02	0.04	0.036
	2	0.03	0.053	0.049
	2.5	0.038	0.067	0.064
	3	0.045	0.082	0.075
50 mm	0.5	0.006	0.009	0.007
	1	0.013	0.02	0.018
	1.5	0.021	0.032	0.028
	2	0.026	0.047	0.043
	2.5	0.032	0.66	0.057
	3	0.037	0.075	0.068
40 mm	0.5	0.004	0.009	0.004
	1	0.009	0.02	0.009
	1.5	0.013	0.032	0.013
	2	0.018	0.047	0.018
	2.5	0.022	0.66	0.022
	3	0.026	0.075	0.026
25 mm	0.5	0	0.005	0
	1	0.005	0.015	0.005
	1.5	0.007	0.032	0.007
	2	0.011	0.047	0.011
	2.5	0.012	0.66	0.012
	3	0.014	0.075	0.014
15 mm	0.5	0	0.005	0
	1	0.002	0.018	0
	1.5	0.004	0.025	0.002
	2	0.007	0.033	0.006
	2.5	0.012	0.043	0.009
	3	0.014	0.052	0.013

Functional data (at 5 bar)

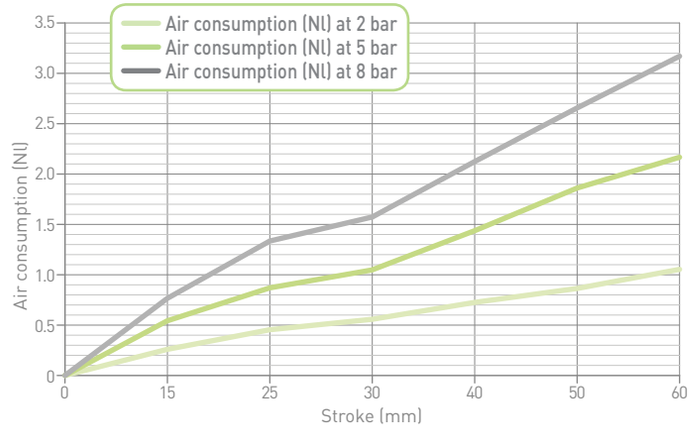
Thrust force	1,400 N
Pull force	1,555 N
Max bending moment	3 N m
Max distance from the load centre to the rod	200 mm

Cycle time for max stroke

< 0.8 s NO FLOW VALVE REQUIRED

Air consumption

REV. 00 - 31/03/2015



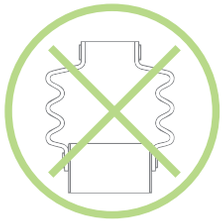
Subject to change without notice

WHY PNX

RC-SERIES

CNOMO

Retractable locating pin packages
with **CNOMO** mounting pattern



- ✔ Accurate positioning devices with **TWIN LINEAR ROD GUIDING BUSHINGS**
- ✔ HIGH PROTECTION AGAINST WELD SPATTER, DIRT AND COOLANTS
  > NO BELLOWS REQUIRED
- ✔ MAINTENANCE FREE DEVICES
- ✔ OPTIMAL CUSHIONING: NO FLOW CONTROL VALVE REQUIRED

ORDERING STRING RC-SERIES CNOMO

RC | 50 | E | 25 | 1 | D

VERSION
RC = retractable locating pin package with CNOMO mounting pattern

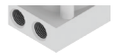
SIZE
50 = Ø 50 mm
63 = Ø 63 mm

SENSOR
E = electronic with M12 swivel connector
N = no sensor

STROKE
25 = 25 mm
50 = 50 mm

ROD TERMINATION
1 = iØ 12 mm rod termination
2 = iØ 20 mm rod termination

PORTS
G = GAS
D = dual GAS ports on rear end cap



Subject to change without notice

CNOMO

RC50E_1

Retractable locating pin package with CNOMO mounting pattern

Size 50 mm

iØ 12 mm rod termination

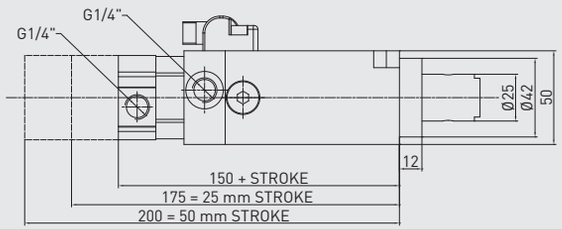
WEIGHT

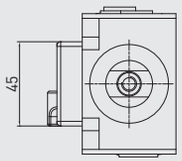
kg 1.8 min. stroke

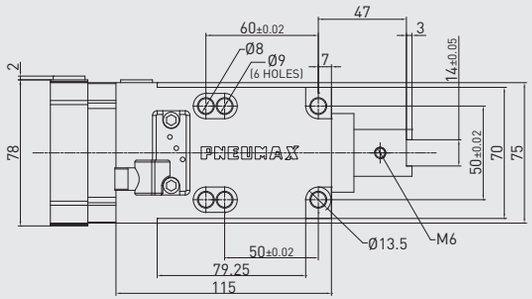
kg 1.9 max. stroke

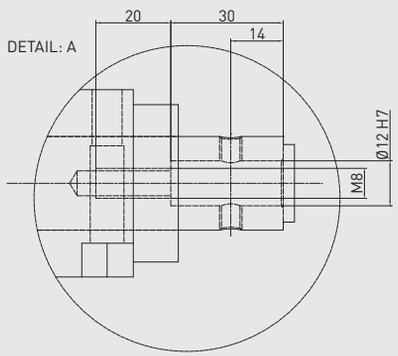
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

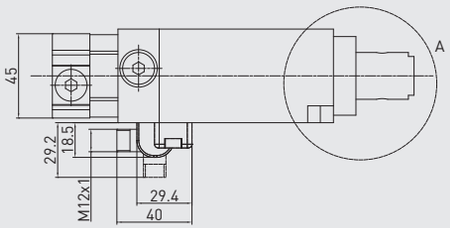
REV. 00 - 31/03/2015











Technical features

Operating features	
Operating pressure	from 2 to 8 bar

Subject to change without notice

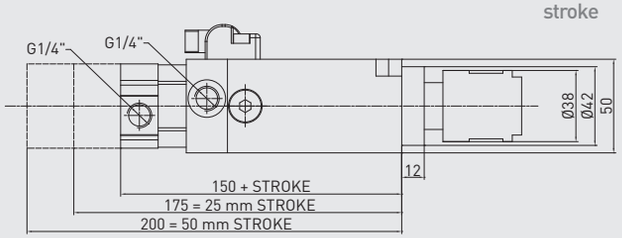
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

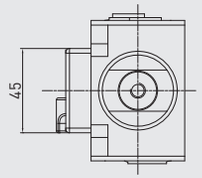
REV. 00 - 31/03/2015

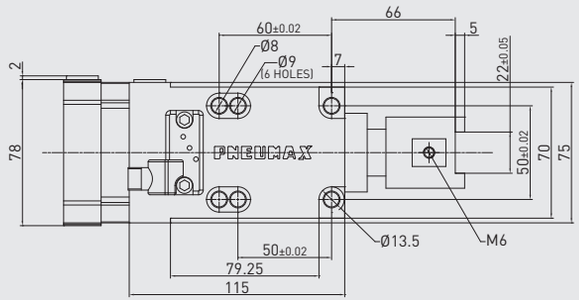
WEIGHT

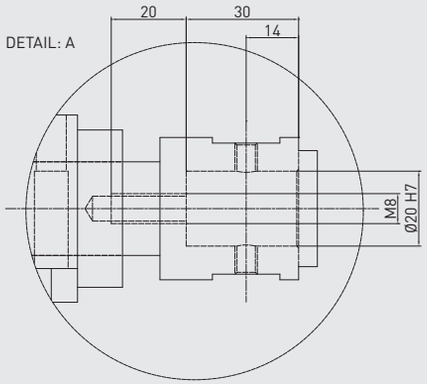
kg 2 min. stroke

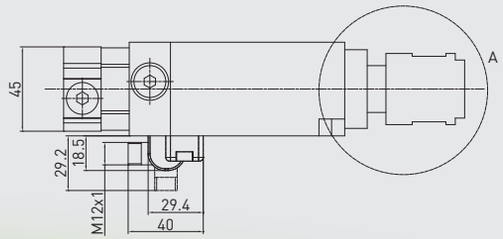
kg 2.1 max. stroke











CNOMO

RC50E_2

Retractable locating pin package with CNOMO mounting pattern

Size 50 mm

iØ 20 mm rod termination

Technical features

Operating features	
Operating pressure	from 2 to 8 bar

Subject to change without notice

CNOMO

RC63E_1

Retractable locating pin package with CNOMO mounting pattern

Size 63 mm

iØ 12 mm rod termination

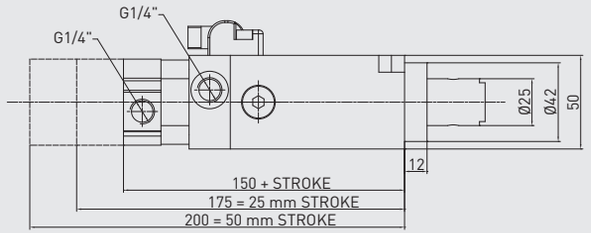
WEIGHT

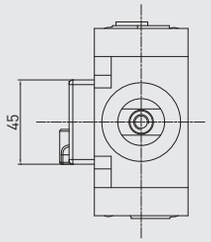
kg 2 min. stroke

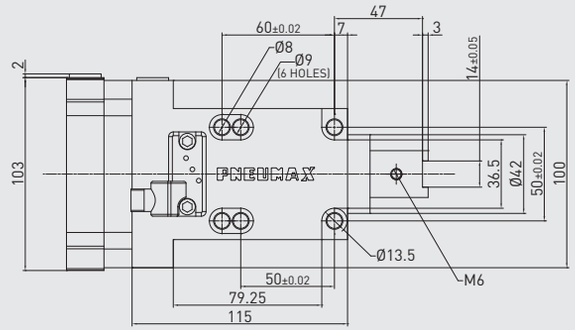
kg 2.1 max. stroke

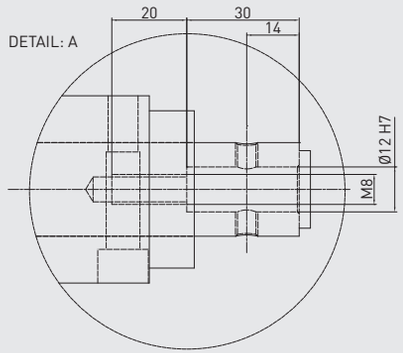
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

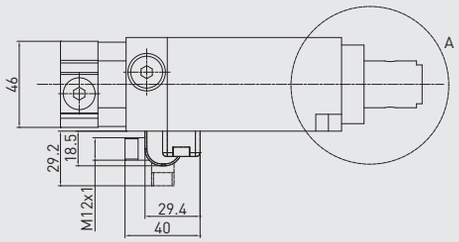
REV. 00 - 31/03/2015











Technical features

Operating features	
Operating pressure	from 2 to 8 bar

Subject to change without notice

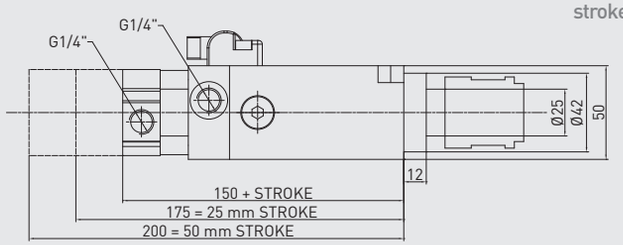
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

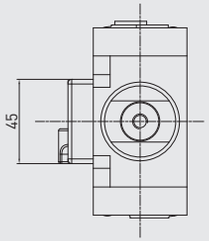
REV. 00 - 31/03/2015

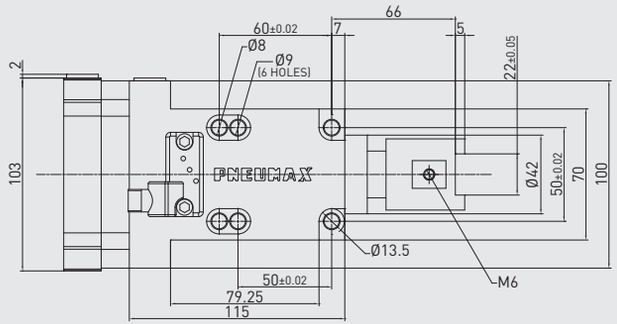
WEIGHT

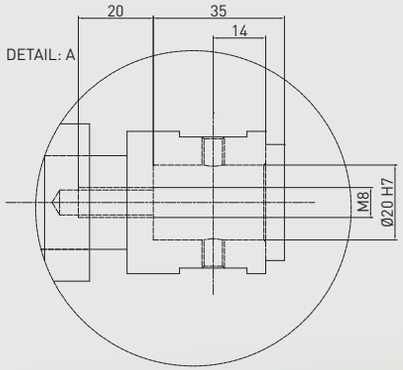
kg 2.2 min. stroke

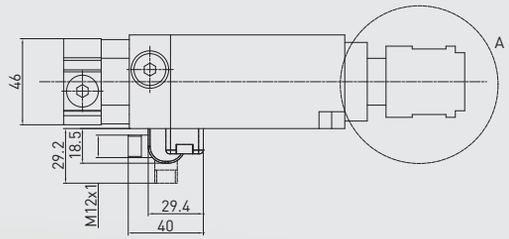
kg 2.3 max. stroke











CNOMO

RC63E_2

Retractable locating pin package with CNOMO mounting pattern

Size 63 mm

iØ 20 mm rod termination

Technical features

Operating features	
Operating pressure	from 2 to 8 bar

Subject to change without notice

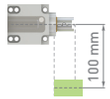
FUNCTIONAL CHARTS
RC-SERIES

Load position A

horizontal mounting position of the retractable locating pin/load centre on the rod

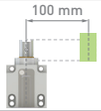
Load position B

horizontal mounting position of the retractable locating pin/load centre at 100 mm from the rod axis



Load position C

vertical mounting position of the retractable locating pin/load centre at 100 mm from the rod axis



Please get in touch with our technical representatives for any application which exceeds the above values, to find the appropriate solution for your

Subject to change without notice

Max deflection (RC50E - RC63E)

Stroke	Load (kg)	Load position A deviation (mm)	Load position B deviation (mm)	Load position C deviation (mm)
50 mm	0.5	0.006	0.009	0.007
	1	0.013	0.02	0.018
	1.5	0.021	0.032	0.028
	2	0.026	0.047	0.043
	2.5	0.032	0.66	0.057
	3	0.037	0.075	0.068
25 mm	0.5	0	0.005	0
	1	0.005	0.015	0.005
	1.5	0.007	0.032	0.007
	2	0.011	0.047	0.011
	2.5	0.012	0.66	0.012
	3	0.014	0.075	0.014

Functional data (at 5 bar)

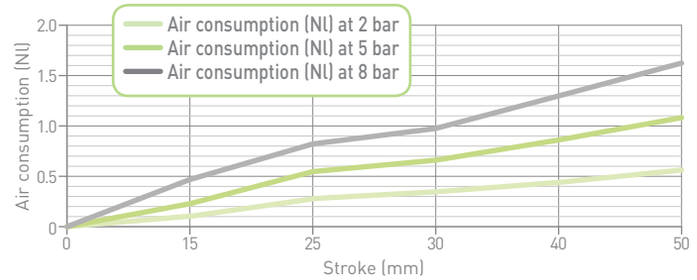
	RC50E	RC63E
Thrust force	825 N	1,400 N
Pull force	980 N	1,555 N
Max bending moment	3 N m	3 N m

Cycle time for max stroke

< 0.8 s NO FLOW VALVE REQUIRED

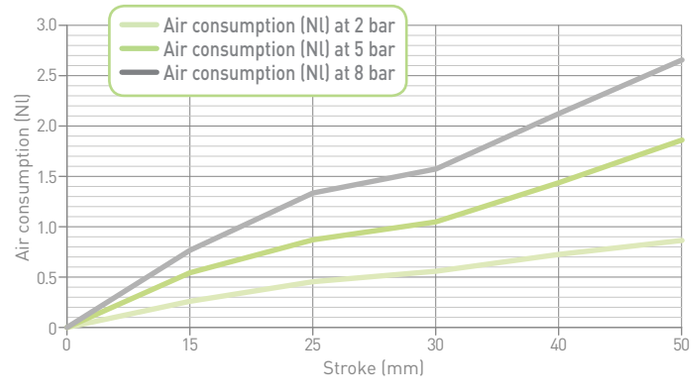
Air consumption (RC50E)

REV. 00 - 31/03/2015



Air consumption (RC63E)

REV. 00 - 31/03/2015



HIGH PERFORMANCE HP-SERIES

Higher level of **pull force**,

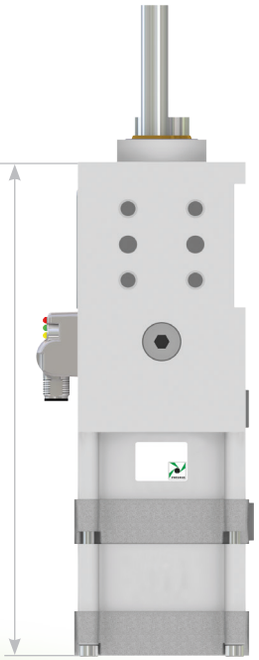
for all the applications where due to metal sheet tolerances, a higher level of force is required during the retracting movement, in order to disengage to the pin.

This solution is highly efficient for all the **applications** when **tensions** arise **in the metal sheet** during the machining process. Equipped with a **tandem cylinder** to improve the pull force.

COMPACT DESIGN

Even though these pin packages are equipped with a tandem cylinder, their overall dimensions still remain in line with the state of the art.

REPETITION ACCURACY



ORDERING STRING HP-SERIES

HP 50 E 40 1 D 1

VERSION

HP = High Performance retractable locating pin package

SIZE

50 = Ø 50 mm

SENSOR

E = electronic with M12 swivel connector
N = no sensor
P = pneumatic

STROKE

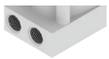
15 = 15 mm
25 = 25 mm
40 = 40 mm
50 = 50 mm
60 = 60 mm

ROD TERMINATION

1 = iØ 16 mm cross-cut key rod termination
2 = iØ 10 mm cross-cut key rod termination
3 = rod termination for offset pins
4 = rod termination with key
5 = iØ 10 mm flat termination
6 = iØ 12 mm flat termination

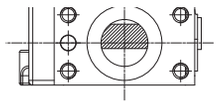
PORTS

G = GAS
D = dual GAS ports on rear end cap



ROD ORIENTATION (FOR TERMINATION TYPE 3)

1 =
2 =
3 =
4 =



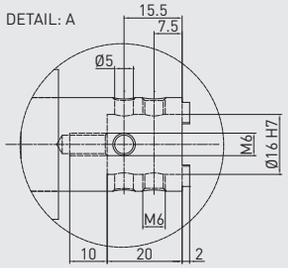
Subject to change without notice

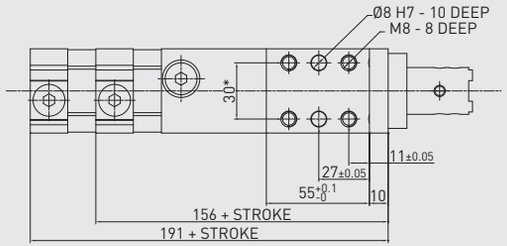
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

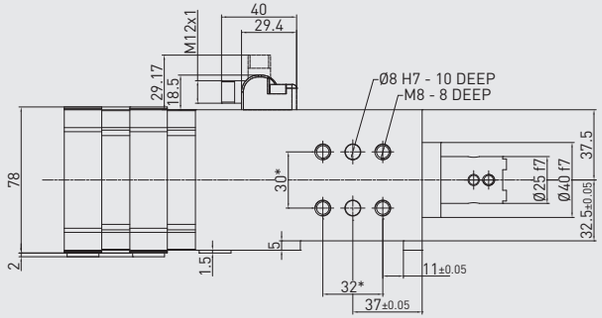
REV. 00 - 31/03/2015

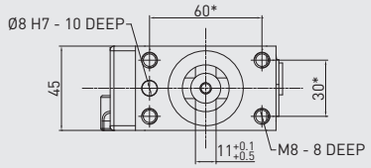
WEIGHT

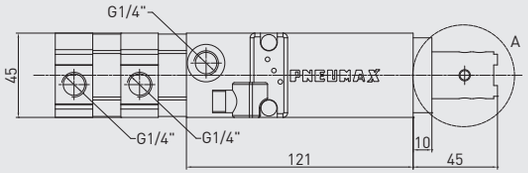
kg 2.2	kg 2.5
min. stroke	max. stroke











HP50E_1

High Performance retractable locating pin package

Size 50 mm

iØ 16 mm cross-cut key rod termination

Technical features

Operating features	
Operating pressure	from 2 to 8 bar

Subject to change without notice

HP50E_2

High Performance retractable locating pin package

Size 50 mm

iØ 10 mm cross-cut key rod termination

WEIGHT

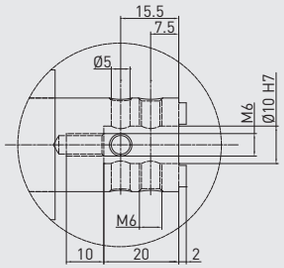
kg 2.2 min. stroke

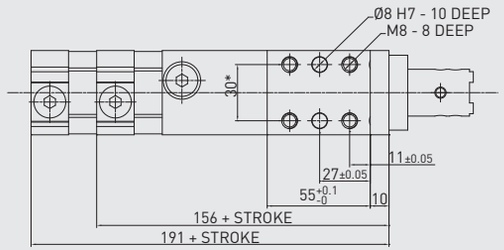
kg 2.5 max. stroke

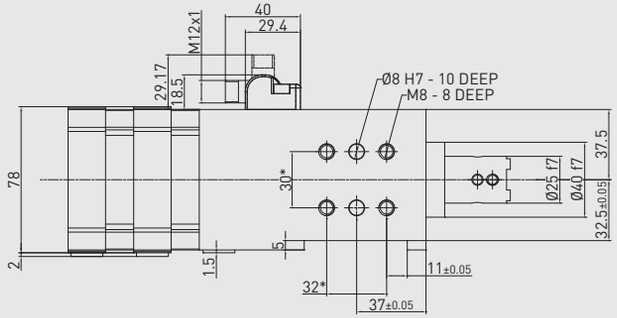
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

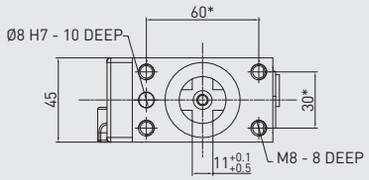
REV. 00 - 31/03/2015

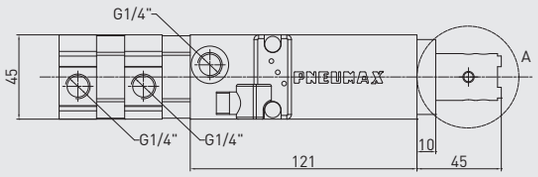
DETAIL: A











Technical features

Operating features	
Operating pressure	from 2 to 8 bar

Subject to change without notice

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 31/03/2015

WEIGHT

kg 2.2 min. stroke

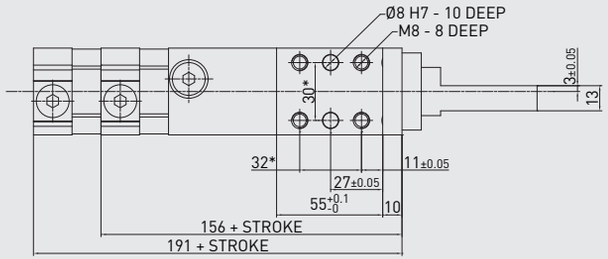
kg 2.5 max. stroke

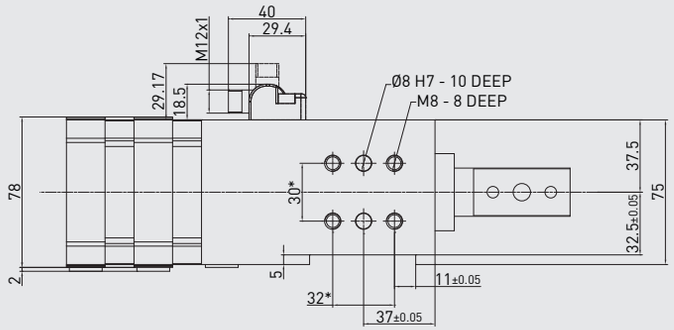
HP50E_3

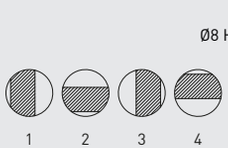
High Performance retractable locating pin package

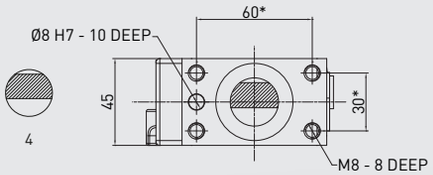
Size 50 mm

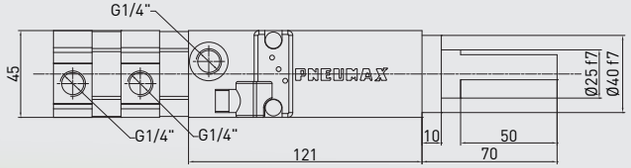
Rod termination for offset pins











Technical features

Operating features	
Operating pressure	from 2 to 8 bar

Subject to change without notice

HP50E_4

High Performance retractable locating pin package

Size 50 mm

Rod termination with key

* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

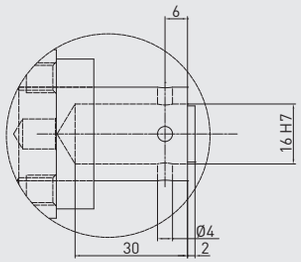
REV. 00 - 31/03/2015

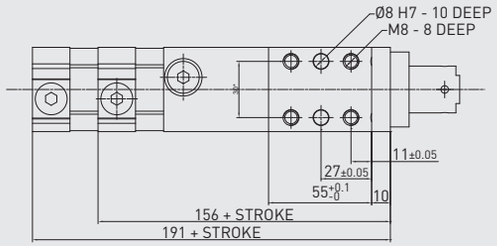
WEIGHT

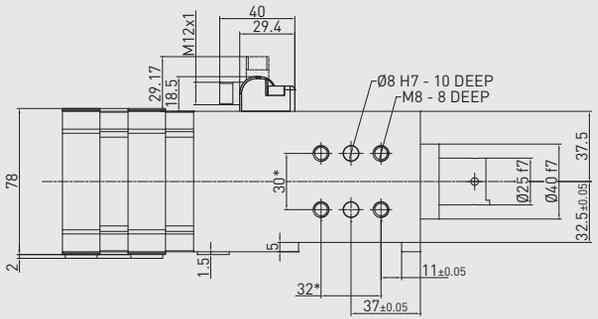
kg 2.2 min. stroke

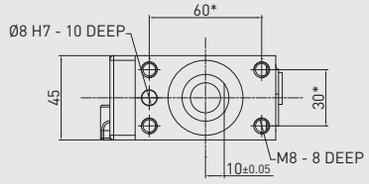
kg 2.5 max. stroke

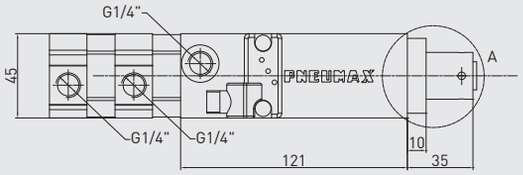
DETAIL: A











Technical features

Operating features	
Operating pressure	from 2 to 8 bar

Subject to change without notice

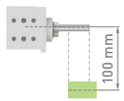
FUNCTIONAL CHARTS
SIZE 50 mm

Load position A

horizontal mounting position of the retractable locating pin/load centre on the rod

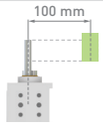
Load position B

horizontal mounting position of the retractable locating pin/load centre at 100 mm from the rod axis



Load position C

vertical mounting position of the retractable locating pin/load centre at 100 mm from the rod axis



Please get in touch with our technical representatives for any application which exceeds the above values, to find the appropriate solution for your

Max deflection

Stroke	Load (kg)	Load position A deviation (mm)	Load position B deviation (mm)	Load position C deviation (mm)
60 mm	0.5	0.007	0.012	0.01
	1	0.013	0.025	0.023
	1.5	0.02	0.04	0.036
	2	0.03	0.053	0.049
	2.5	0.038	0.067	0.064
	3	0.045	0.082	0.075
50 mm	0.5	0.006	0.009	0.007
	1	0.013	0.02	0.018
	1.5	0.021	0.032	0.028
	2	0.026	0.047	0.043
	2.5	0.032	0.66	0.057
	3	0.037	0.075	0.068
40 mm	0.5	0.004	0.009	0.004
	1	0.009	0.02	0.009
	1.5	0.013	0.032	0.013
	2	0.018	0.047	0.018
	2.5	0.022	0.66	0.022
	3	0.026	0.075	0.026
25 mm	0.5	0	0.005	0
	1	0.005	0.015	0.005
	1.5	0.007	0.032	0.007
	2	0.011	0.047	0.011
	2.5	0.012	0.66	0.012
	3	0.014	0.075	0.014
15 mm	0.5	0	0.005	0
	1	0.002	0.018	0
	1.5	0.004	0.025	0.002
	2	0.007	0.033	0.006
	2.5	0.012	0.043	0.009
	3	0.014	0.052	0.013

Functional data (at 5 bar)

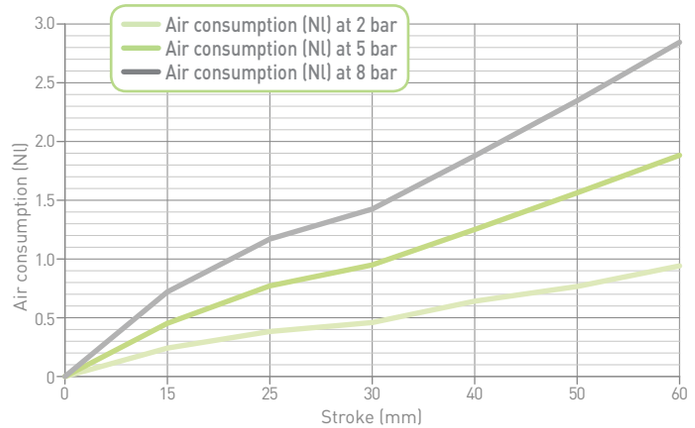
Thrust force	1,650 N
Pull force	980 N
Max bending moment	3 N m

Cycle time for max stroke

< 0.8 s NO FLOW VALVE REQUIRED

Air consumption

REV. 00 - 31/03/2015

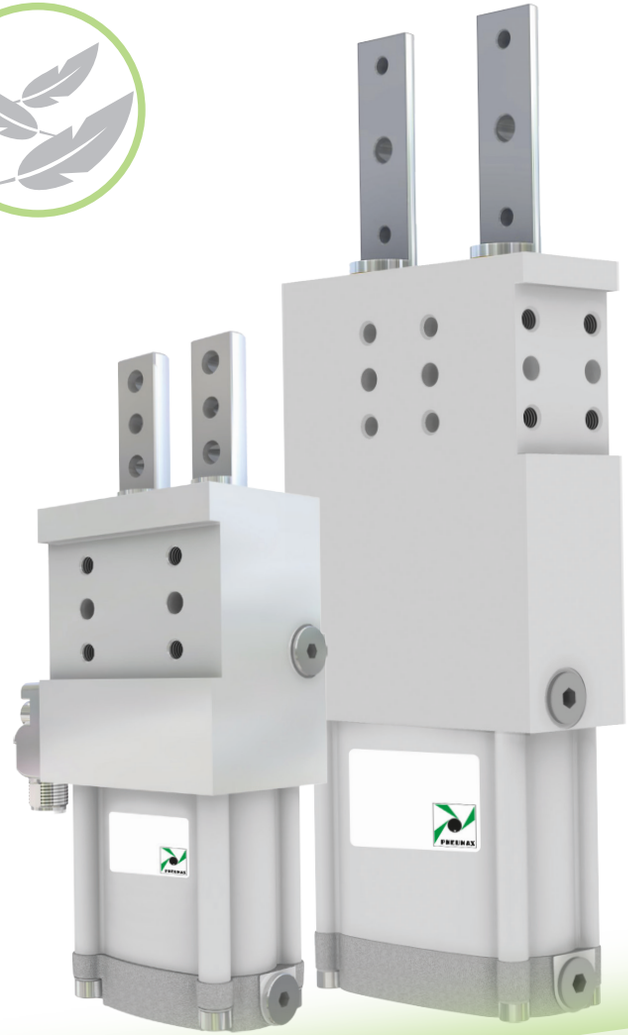


Subject to change without notice

ADVANTAGES

RETRACTABLE LOCATING PIN PACKAGES WITH DUAL RODS

- ✔ Extra light product: **20%** lighter than competing solutions
- ✔ Extremely low deflection value
- ✔ Higher side load acceptance
- ✔ Designed and manufactured to maximize durability and performance: robust and reliable
- ✔ 180° rod orientation
- ✔ Metal rod scrapers for long life in the toughest environments: for a reliable removing of any trace of weld slag from the heat treated rods
- ✔ No galling > maximum process reliability



ORDERING STRING F-SERIES

F P 40 E 20 3 D

VERSION	OPERATION	SIZE	SENSOR	STROKE	ROD TERMINATION	PORTS
F = retractable locating pin package with dual rod	**P** = pneumatic	**40** = Ø 40 mm	**E** = electronic with M12 swivel connector **N** = no sensor	**20** = 20 mm **40** = 40 mm	**3** = rod termination for offset pins **7** = rod termination for offset pins – with 4 dowel holes (see datasheet)	**G** = GAS **D** = dual GAS ports on rear end cap

F P 63 E 60 3 D

VERSION	OPERATION	SIZE	SENSOR	STROKE	ROD TERMINATION	PORTS
F = retractable locating pin package with dual rod	**P** = pneumatic	**63** = Ø 63 mm	**E** = electronic with M12 swivel connector **N** = no sensor	**15** = 15 mm **25** = 25 mm **40** = 40 mm **50** = 50 mm **60** = 60 mm	**3** = rod termination for offset pins	**G** = GAS **D** = dual GAS ports on rear end cap

Subject to change without notice

FP40E__3/7

Retractable locating pin package with dual rod

Size 40 mm

Rod termination for offset pins

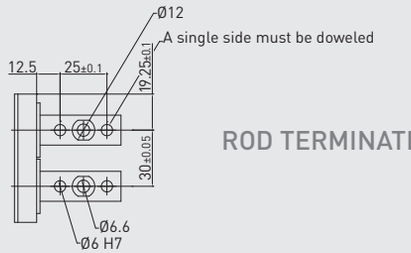
WEIGHT

kg 1.1 min. stroke

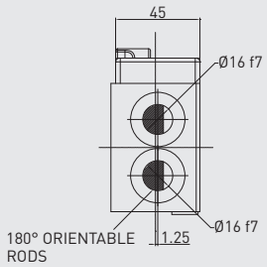
kg 1.25 max. stroke

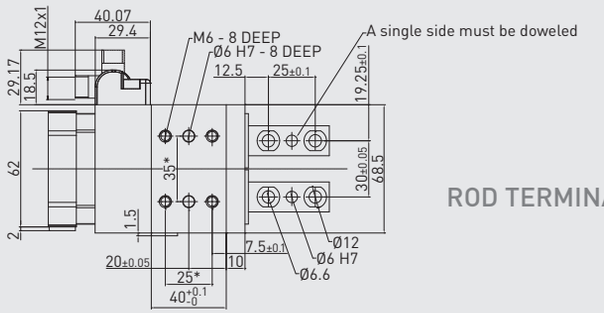
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 31/03/2015

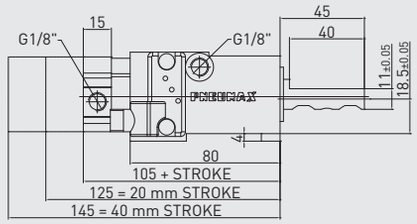


ROD TERMINATION TYPE 3





ROD TERMINATION TYPE 7



Technical features

Operating features	
Operating pressure	from 2 to 8 bar

Subject to change without notice

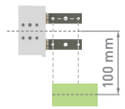
FUNCTIONAL CHARTS
SIZE 40 mm

Load position A

horizontal mounting position of the retractable locating pin/load centre on the rod

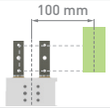
Load position B

horizontal mounting position of the retractable locating pin/load centre at 100 mm from the rod axis



Load position C

vertical mounting position of the retractable locating pin/load centre at 100 mm from the rod axis



Please get in touch with our technical representatives for any application which exceeds the above values, to find the appropriate solution for your

Max deflection

Stroke	Load (kg)	Load position A deviation (mm)	Load position B deviation (mm)	Load position C deviation (mm)
40 mm	0.5	0.004	0.021	0.003
	1	0.01	0.05	0.01
	1.5	0.015	0.08	0.019
	2	0.022	0.122	0.028
	2.5	0.03	0.158	0.037
	3	0.035	0.195	0.046
20 mm	0.5	0.004	0.013	0.005
	1	0.009	0.035	0.008
	1.5	0.013	0.053	0.011
	2	0.017	0.083	0.017
	2.5	0.021	0.107	0.021
	3	0.026	0.13	0.025

Functional data (at 5 bar)

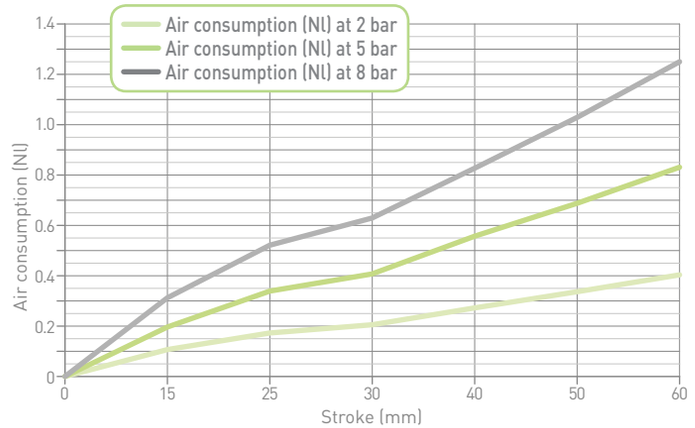
Thrust force	430 N
Pull force	630 N
Max bending moment	3 N m

Cycle time for max stroke

< 0.8 s NO FLOW VALVE REQUIRED

Air consumption

REV. 00 - 31/03/2015



Subject to change without notice

FP63E__3

Retractable locating pin package with dual rod

Size 63 mm

Rod termination for offset pins

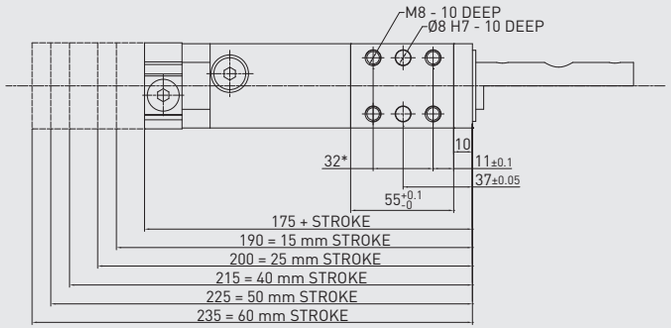
WEIGHT

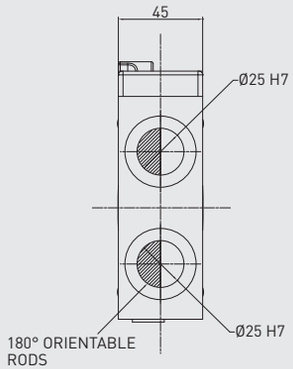
kg 3.35 min. stroke

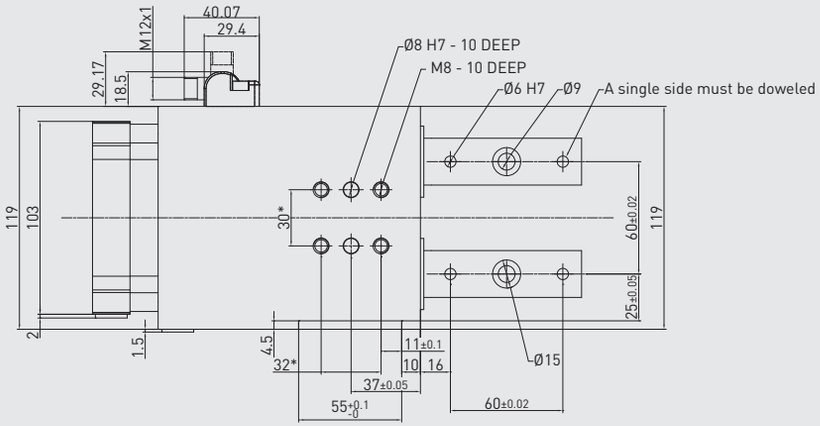
kg 3,65 max. stroke

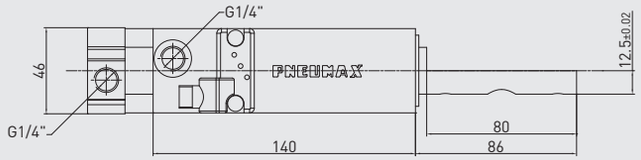
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 31/03/2015









Technical features

Operating features	
Operating pressure	from 2 to 8 bar

Subject to change without notice

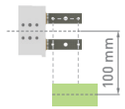
FUNCTIONAL CHARTS
SIZE 63 mm

Load position A

horizontal mounting position of the retractable locating pin/load centre on the rod

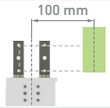
Load position B

horizontal mounting position of the retractable locating pin/load centre at 100 mm from the rod axis



Load position C

vertical mounting position of the retractable locating pin/load centre at 100 mm from the rod axis



Please get in touch with our technical representatives for any application which exceeds the above values, to find the appropriate solution for your

Max deflection

Stroke	Load (kg)	Load position A deviation (mm)	Load position B deviation (mm)	Load position C deviation (mm)
60 mm	0.5	0.003	0.009	0
	1	0.007	0.026	0.001
	1.5	0.013	0.043	0.007
	2	0.017	0.063	0.009
	2.5	0.022	0.085	0.018
	3	0.026	0.109	0.023
	3.5	0.031	0.129	0.033

Functional data (at 5 bar)

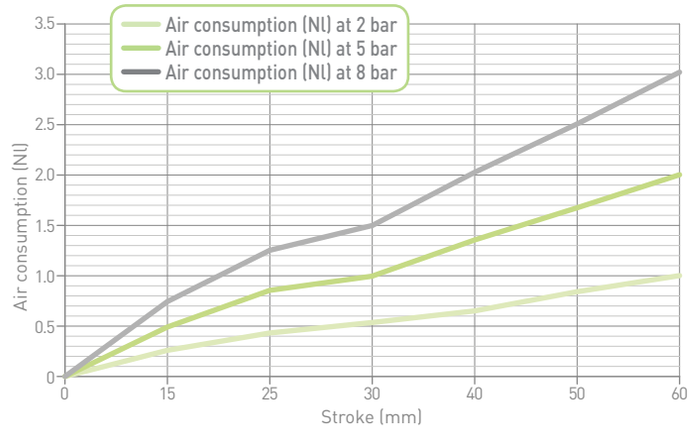
Thrust force	1,350 N
Pull force	1,550 N
Max bending moment	4 N m

Cycle time for max stroke

< 0.8 s NO FLOW VALVE REQUIRED

Air consumption

REV. 00 - 31/03/2015



Subject to change without notice