

HE1-Series

High Efficiency power clamps International mount

INTERNATIONAL
MOUNT



Patented

Air consumption saving up to 41%

The perfect combination between **functionality** and **efficiency**: same clamping moment, same holding moment, same overall and functional dimensions, same load capacity of a standard clamp with International and NAAMS mounts available.

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

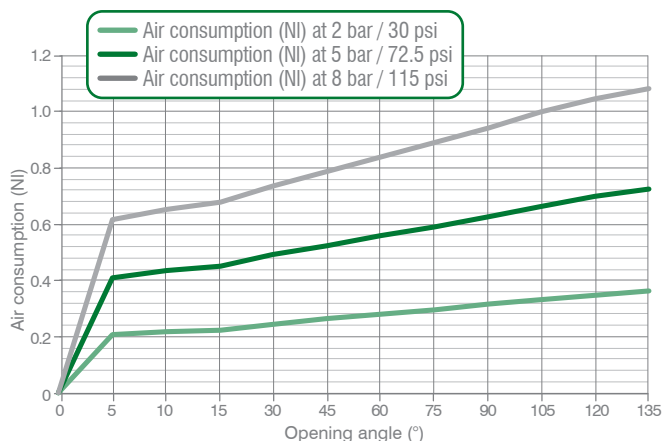
Operating pressure	from 2 to 8 bar / from 30 to 115 psi
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

Functional charts

HE1P0E

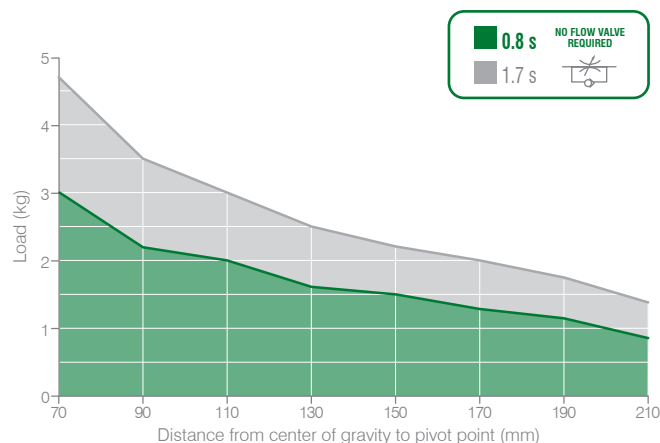
• Air consumption

Air consumption for complete cycle (opening and closing)
REV. 00 - 21/01/2016



• Tooling weight chart

5 bar operating pressure – 135° opening angle
REV. 00 - 17/06/2015



- **Clamping moment (at 5 bar / 72.5 psi)**
130 N m / 95,88 lb-ft

- **Holding moment**
380 N m / 280,27 lb-ft

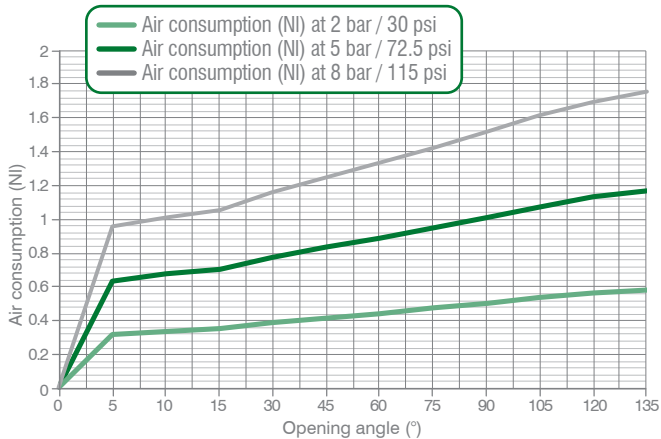
- **Cycle time for max stroke**
< 0.8 s

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.

HE1P1E

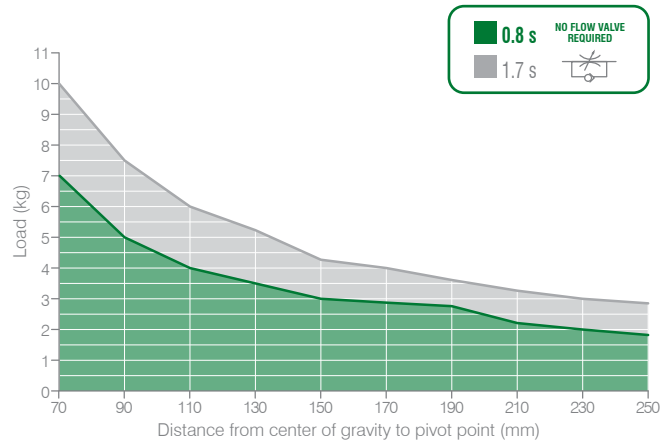
Air consumption

Air consumption for complete cycle (opening and closing)
REV. 00 - 31/03/2015



Tooling weight chart

5 bar operating pressure – 135° opening angle
REV. 00 - 17/06/2015



- Clamping moment (at 5 bar / 72.5 psi)
185 N m / 136,44 lb·ft

- Holding moment
800 N m / 590,04 lb·ft

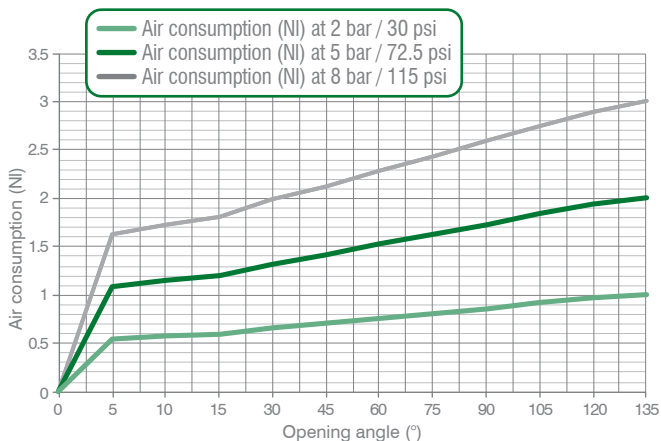
- Cycle time for max stroke
< 0.8 s

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HE1P2E

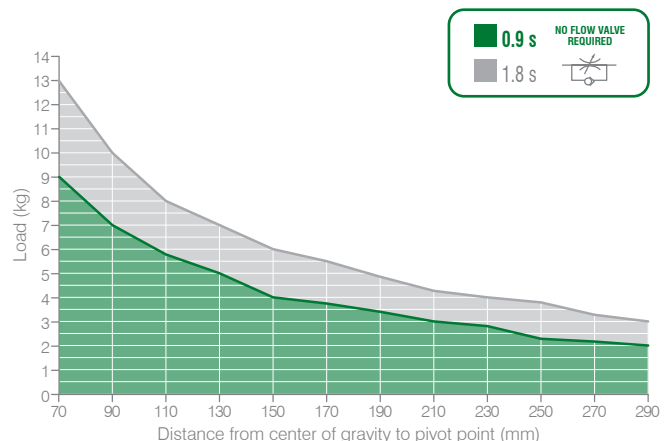
Air consumption

Air consumption for complete cycle (opening and closing)
REV. 00 - 31/03/2015



Tooling weight chart

5 bar operating pressure – 135° opening angle
REV. 00 - 17/06/2015



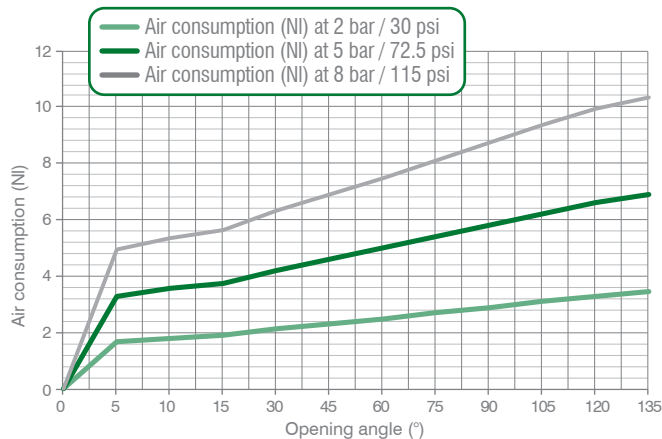
- Clamping moment (at 5 bar / 72.5 psi)
390 N m / 287,64 lb·ft

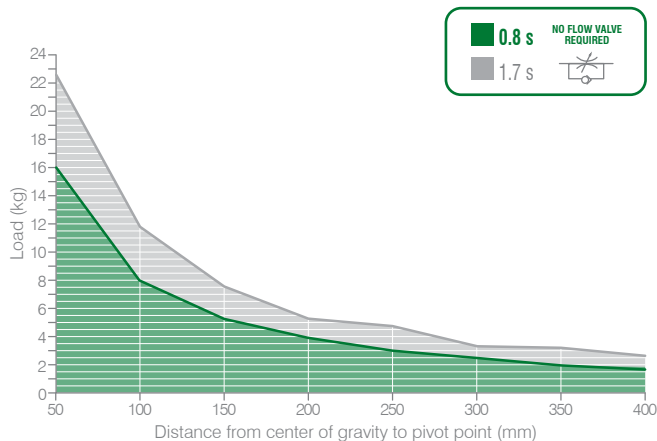
- Holding moment
1500 N m / 1.106,34 lb·ft

- Cycle time for max stroke
< 0.8 s

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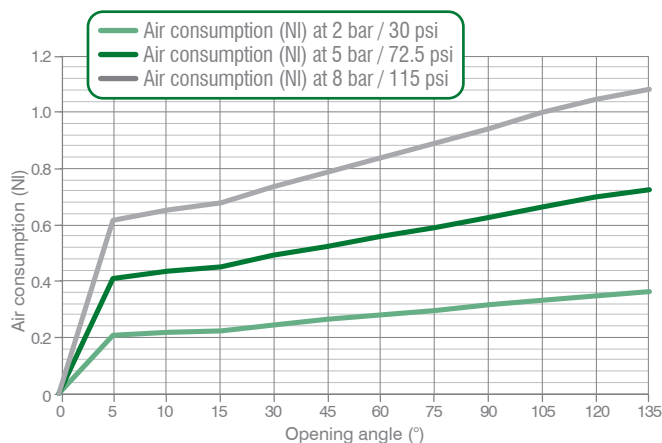
HE1-Series / Functional charts (continued)
HE1P3E
• Air consumption

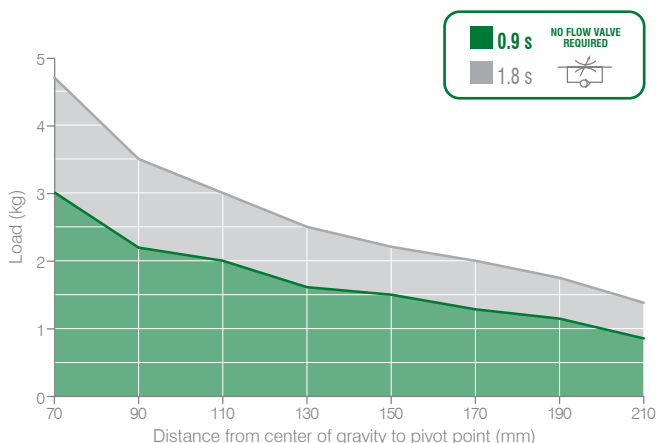
 Air consumption for complete cycle (opening and closing)
REV. 00 - 21/01/2016

• Tooling weight chart

 5 bar operating pressure – 135° opening angle
REV. 00 - 17/06/2015

• Clamping moment (at 5 bar / 72.5 psi)
850 N m / 626,92 lb-ft
• Holding moment
2500 N m / 1843,90 lb-ft
• Cycle time for max stroke
< 0.9 s

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

HE1P4E
• Air consumption

 Air consumption for complete cycle (opening and closing)
REV. 00 - 21/01/2016

• Tooling weight chart





 5 bar operating pressure – 135° opening angle
REV. 00 - 17/06/2015

• Clamping moment (at 5 bar / 72.5 psi)
130 N m / 95,88 lb-ft
• Holding moment
380 N m / 280,27 lb-ft
• Cycle time for max stroke
< 0.8 s

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.

Ordering string

HE1-Series





HE 1 P 1 E G 1 A 01

HE	VERSION	HE = high efficiency clamp	
1	MOUNTING PATTERN	1 = International mount	
P	OPERATION	P = pneumatic	
1	SIZE	0 = housing size 40 / cylinder Ø 32 mm 2 = housing size 63 / cylinder Ø 50 mm 1 = housing size 50 / cylinder Ø 40 mm 3 = housing size 80 / cylinder Ø 63 mm	
E	SENSOR	E = electronic sensor with M12 swivel connector - PNP A = electronic sensor with M12 swivel connector - NPN N = no sensor B = electronic sensor with M8 swivel connector - PNP	
G	PORTS	G = G thread – BSPP N = NPT	
1	ARM MOUNT	1 =  2 =  3 =  4 = 	
A	ARM MATERIAL	A = aluminum S = steel	
01	CLAMP ARM TYPE	01 = wishbone, central, 15 mm offset* 04 = wishbone, central, 45 mm offset 02 = wishbone, right, 15 mm offset* 05 = wishbone, right, 45 mm offset 03 = wishbone, left, 15 mm offset* 06 = wishbone, left, 45 mm offset	

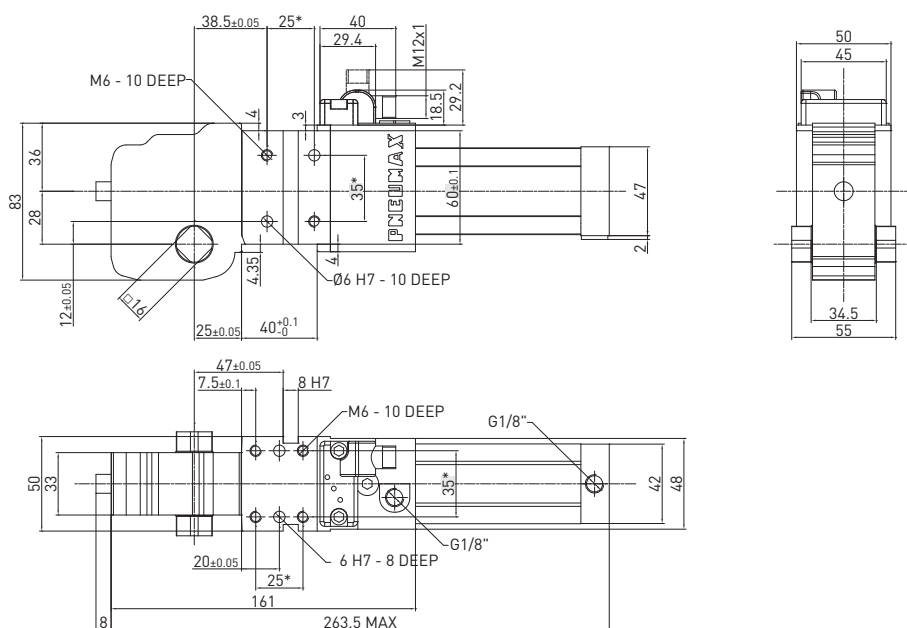
* for size 80 mm > 20 mm offset

HE1-Series

HE 1 P 4 E G 1 A 54

HE	VERSION	HE = high efficiency clamp	
1	MOUNTING PATTERN	1 = International mount	
P	OPERATION	P = pneumatic	
4	SIZE	4 = housing size 40 / cylinder Ø 32 mm Mounting pattern interchangeable to 50 and 63 mm bore clamps	
E	SENSOR	E = electronic sensor with M12 swivel connector - PNP A = electronic sensor with M12 swivel connector - NPN N = no sensor B = electronic sensor with M8 swivel connector - PNP	
G	PORTS	G = G thread – BSPP N = NPT	
1	ARM MOUNT	1 =  2 =  3 =  4 = 	
A	ARM MATERIAL	A = aluminum	
54	CLAMP ARM TYPE	54 = wishbone, central, 45 mm offset 55 = wishbone, right, 45 mm offset 56 = wishbone, left, 45 mm offset	

HE1P0E / High Efficiency clamp - International mount - Housing size 40 / cylinder Ø 32 mm

WEIGHT 1.36 kg


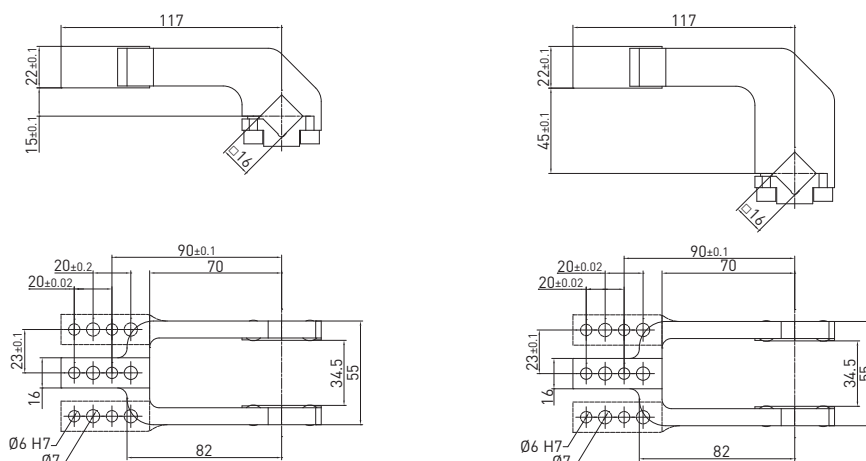
* DIMENSIONAL TOLERANCE
FOR DOWEL HOLES: ± 0.02

DIMENSIONAL TOLERANCE
FOR THREADED HOLES: ± 0.1

REV. 00 - 02/10/2015

Clamping arms / 16 mm shaft for clamps' size 40 mm

REV. 02 - 07/10/2015



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°

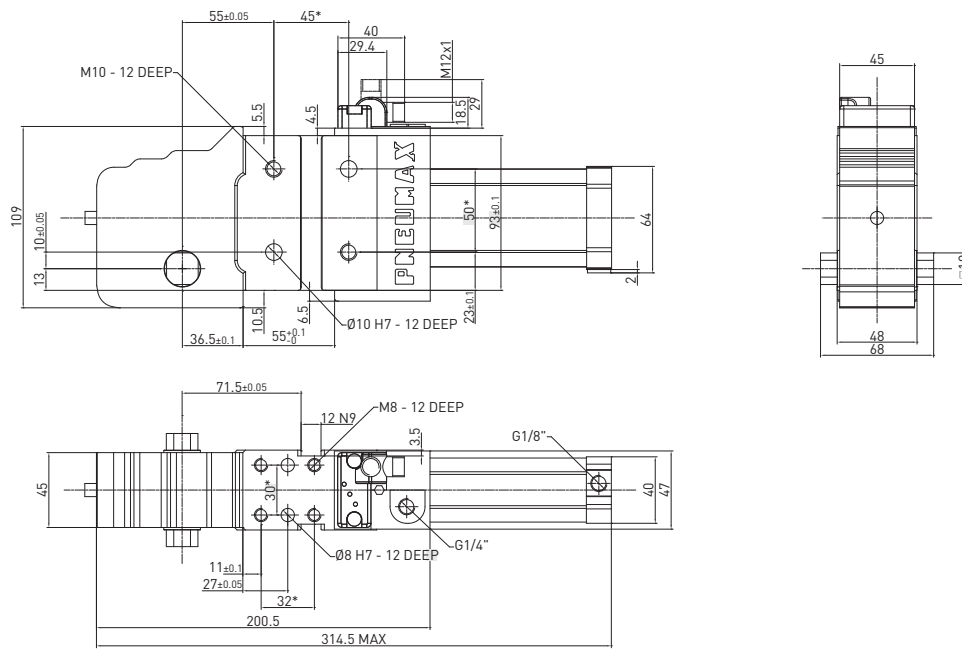
Screws: M6x20 Tightening torque: 10 N m / 7.37 lb ft

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	45°
Q1604	Steel	Central	0.55	135°	135°	N/A	45°
B1605	Aluminum	Right	0.3	135°	135°	N/A	45°
Q1605	Steel	Right	0.57	135°	135°	N/A	45°
B1606	Aluminum	Left	0.3	135°	135°	N/A	45°
Q1606	Steel	Left	0.57	135°	135°	N/A	45°

Screws: M6x20 Tightening torque: 10 N m / 7.37 lb ft

HE1P1E / High Efficiency clamp - International mount - Housing size 50 / cylinder Ø 40 mm

WEIGHT 2.53 kg


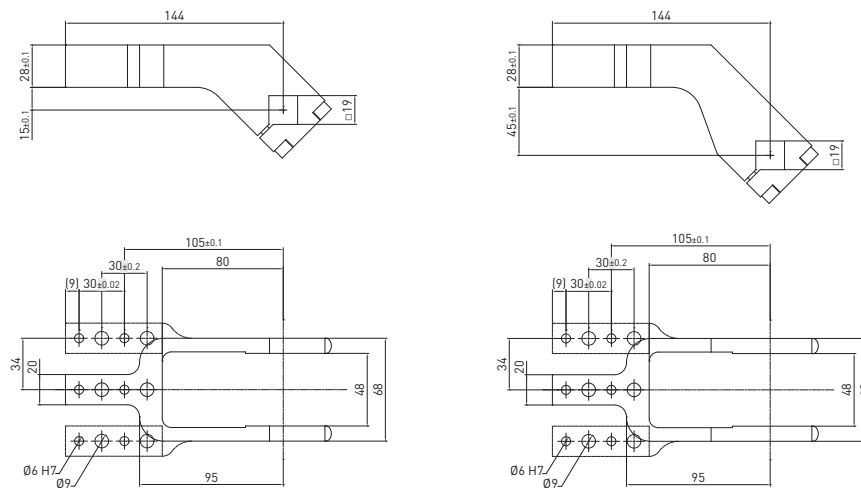
* DIMENSIONAL TOLERANCE
FOR DOWEL HOLES: ± 0.02

DIMENSIONAL TOLERANCE
FOR THREADED HOLES: ± 0.1

REV. 02 - 29/03/2019

Clamping arms / 19 mm shaft for clamps' size 50 mm

REV. 01 - 08/02/2019



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°

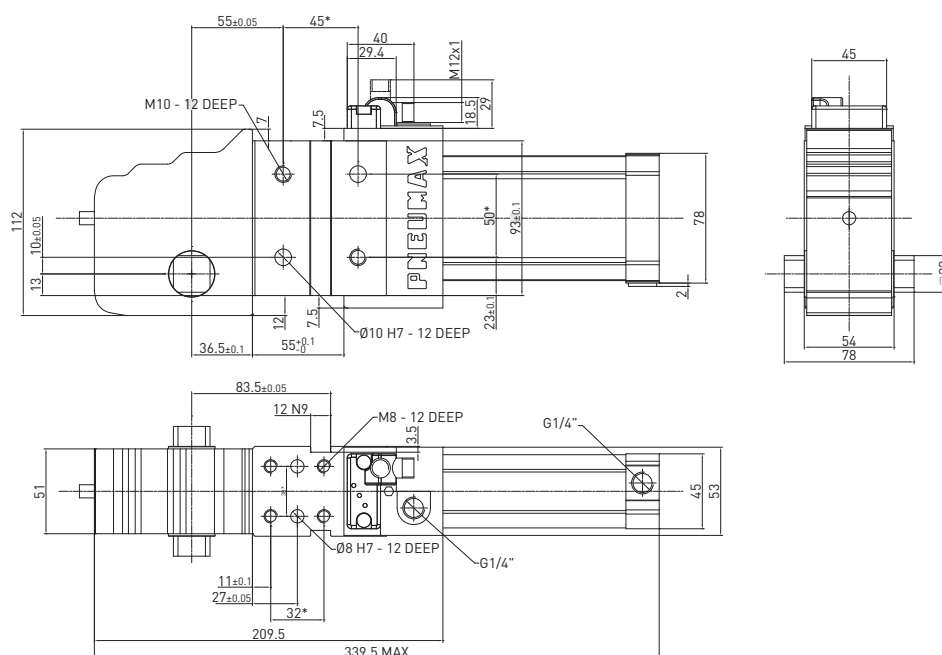
Screws: M6x25 Tightening torque: 10 N m

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

HE1P2E / High Efficiency clamp - International mount - Housing size 63 / cylinder Ø 50 mm

WEIGHT 3.3 kg


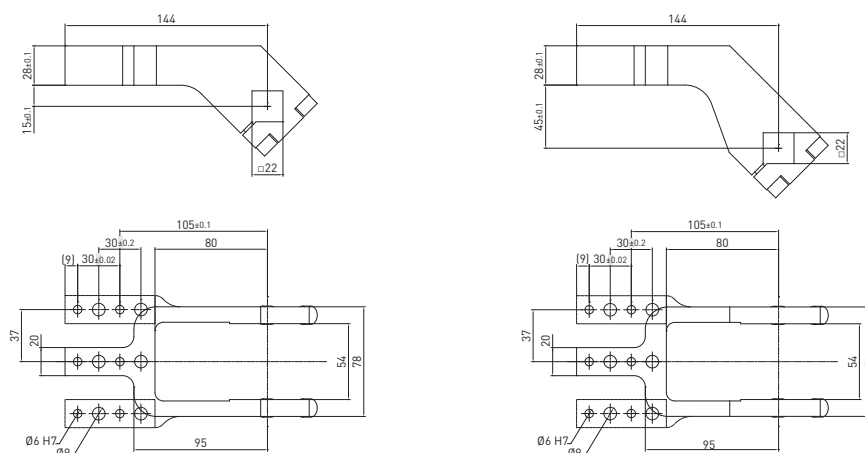
* DIMENSIONAL TOLERANCE
FOR DOWEL HOLES: ± 0.02

DIMENSIONAL TOLERANCE
FOR THREADED HOLES: ± 0.1

REV. 00 - 31/03/2015

Clamping arms / 22 mm shaft

REV. 01 - 08/02/2019



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

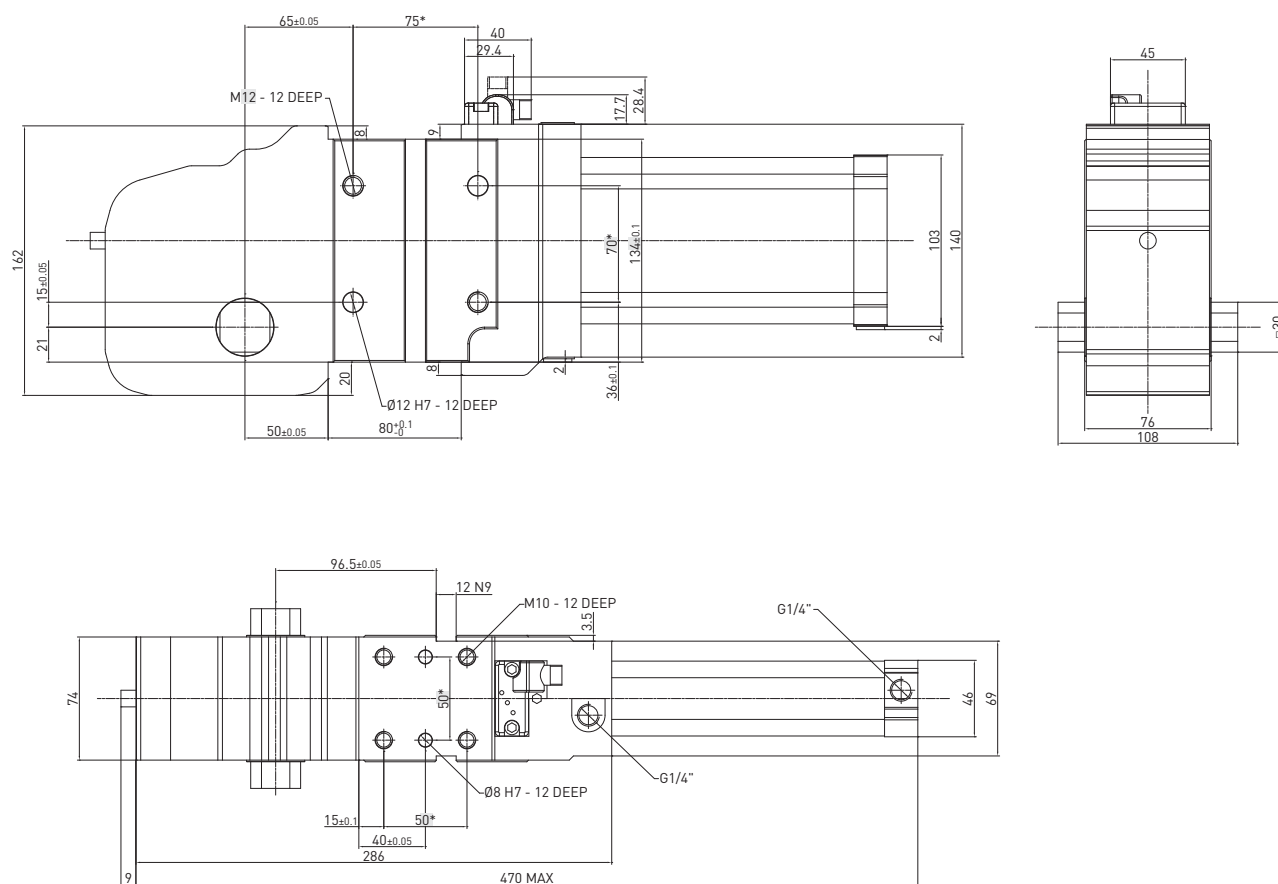
22 mm shaft – 45 mm offset

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

HE1P3E / High Efficiency clamp - International mount - Housing size 80 / cylinder Ø 63 mm

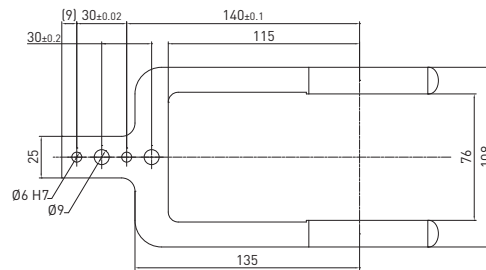
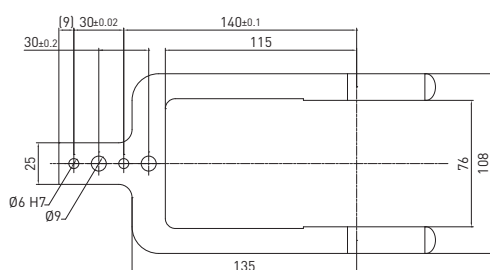
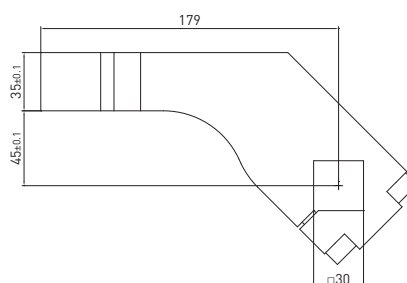
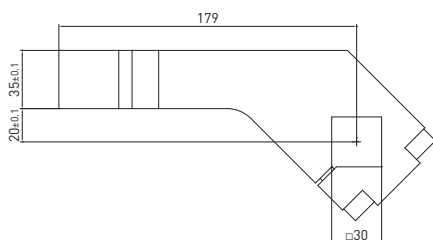
WEIGHT 7.55 kg

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

REV. 00 - 20/10/2015

Clamping arms / 30 mm shaft

REV. 01 - 08/02/2019



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: M10x40 Tightening torque: 35 N m / 25.81 lb ft

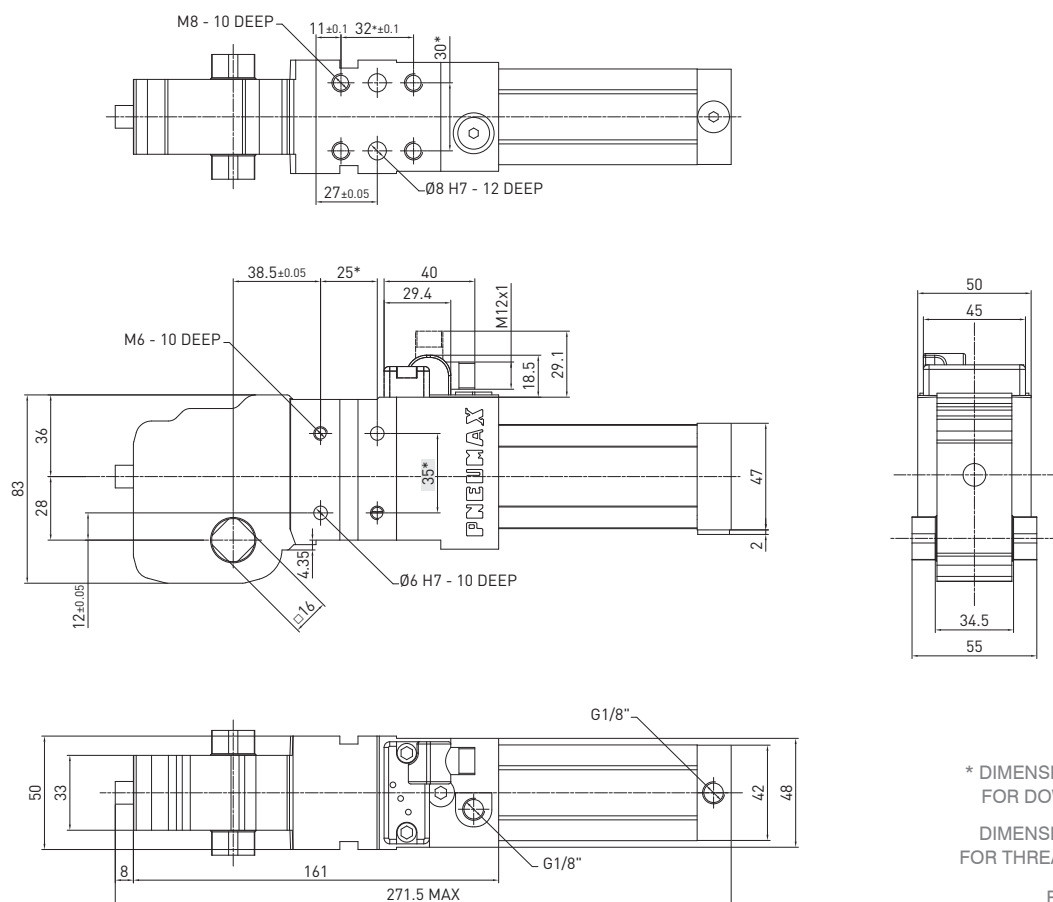
30 mm shaft – 45 mm offset

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: M10x40 Tightening torque: 35 N m / 25.81 lb ft

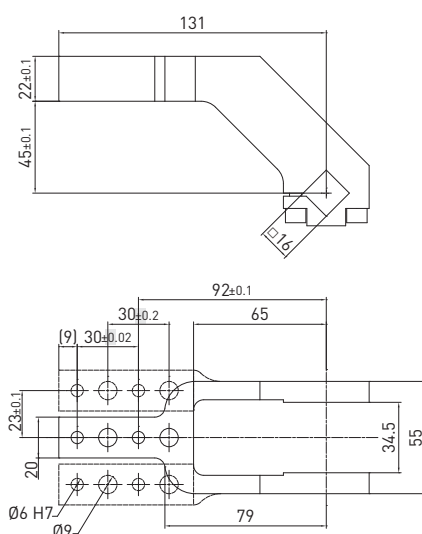
HE1P4EG / Power clamp - 32 mm bore cylinder and mounting pattern interchangeable to 50 and 63 mm bore clamps

WEIGHT 1.36 kg



Clamping arms / 16 mm shaft

REV. 00 - 23/04/2019



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
B1654	Aluminum	Central	0.3	135°	135°	N/A	45°
B1655	Aluminum	Right	0.3	135°	135°	N/A	45°
B1656	Aluminum	Left	0.3	135°	135°	N/A	45°

Screws: M6x20 Tightening torque: 10 N m / 7.37 lb ft

HE2-Series

High efficiency power clamps conforming to the NAAMS Standard



Patented

Air consumption saving up to 41%

The perfect combination between **functionality** and **efficiency**: same clamping moment, same holding moment, same overall and functional dimensions, same load capacity of a standard clamp with International and NAAMS mounts available.

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

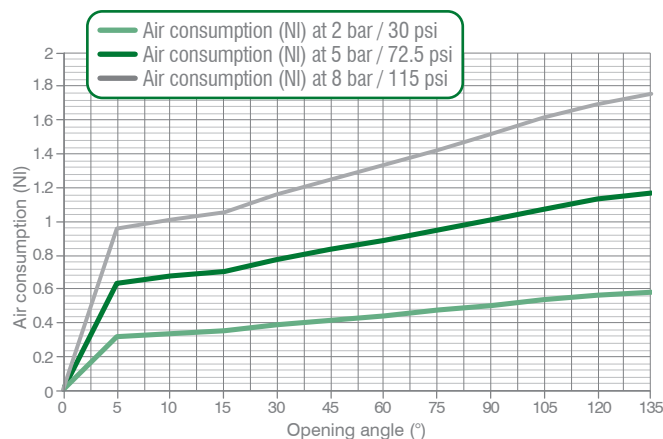
Operating pressure	from 2 to 8 bar / from 30 to 115 psi
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

Functional charts

HE2P1E

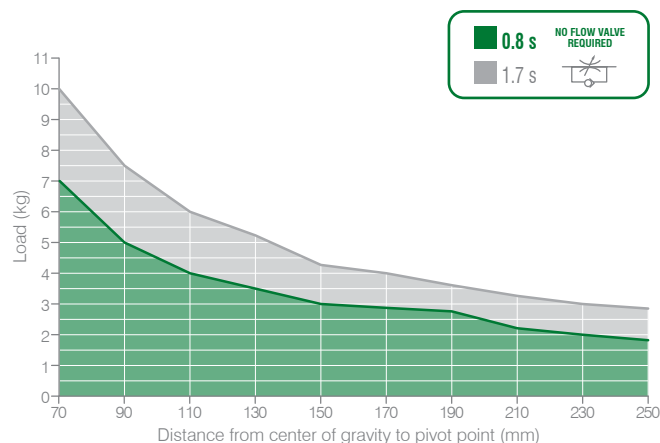
• Air consumption

Air consumption for complete cycle (opening and closing)
REV. 00 - 31/03/2015



• Tooling weight chart

5 bar operating pressure – 135° opening angle
REV. 00 - 17/06/2015



- **Clamping moment (at 5 bar / 72.5 psi)**
185 N m / 136,44 lb·ft

- **Holding moment**
800 N m / 590,04 lb·ft

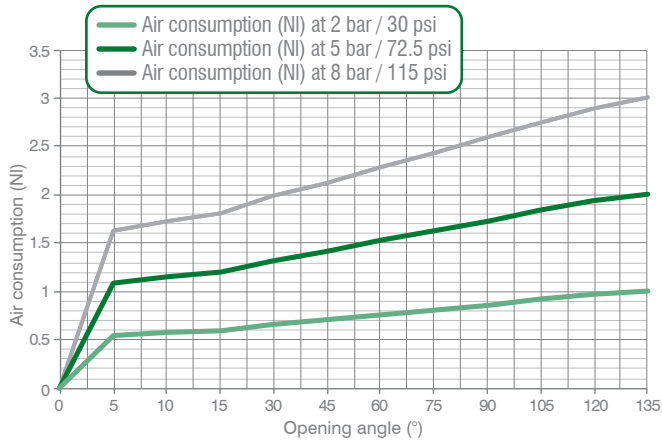
- **Cycle time for max stroke**
< 0.8 s

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HE2P2E

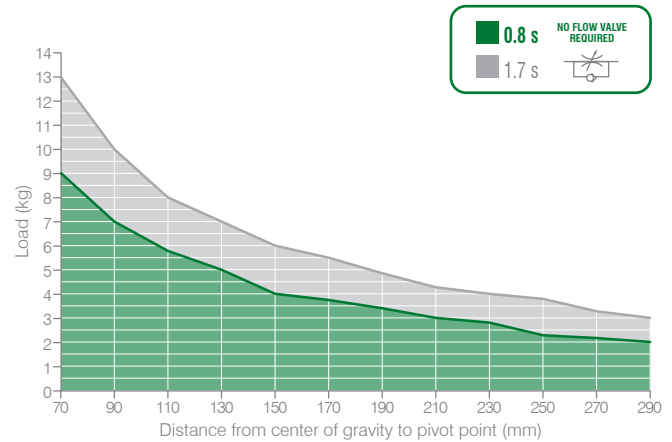
• Air consumption

Air consumption for complete cycle (opening and closing)
REV. 00 - 31/03/2015



• Tooling weight chart

5 bar operating pressure – 135° opening angle
REV. 00 - 17/06/2015



- Clamping moment (at 5 bar / 72.5 psi)
390 N m / 287,64 lb·ft

- Holding moment
1500 N m / 1.106,34 lb·ft

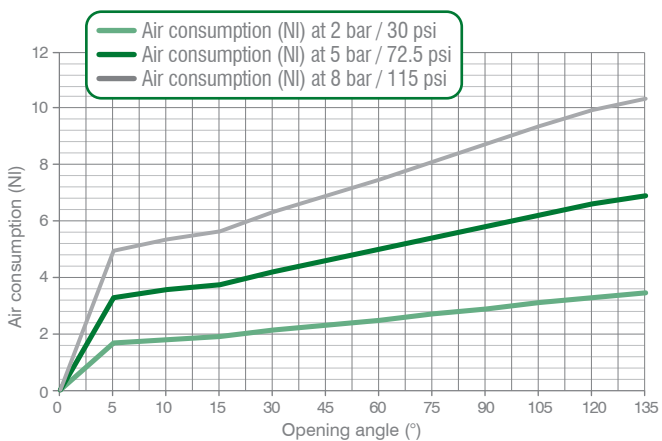
- Cycle time for max stroke
< 0.8 s

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HE2P3E

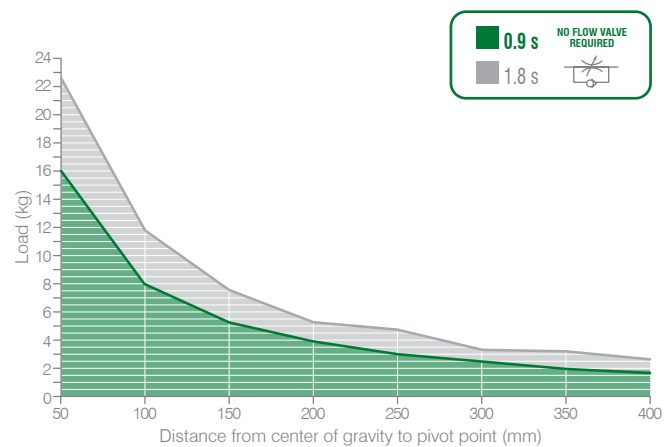
• Air consumption

Air consumption for complete cycle (opening and closing)
REV. 00 - 21/01/2016



• Tooling weight chart

5 bar operating pressure – 135° opening angle
REV. 00 - 17/06/2015



- Clamping moment (at 5 bar / 72.5 psi)
850 N m / 626,92 lb·ft

- Holding moment
2500 N m / 1.843,90 lb·ft

- Cycle time for max stroke
< 0.9 s

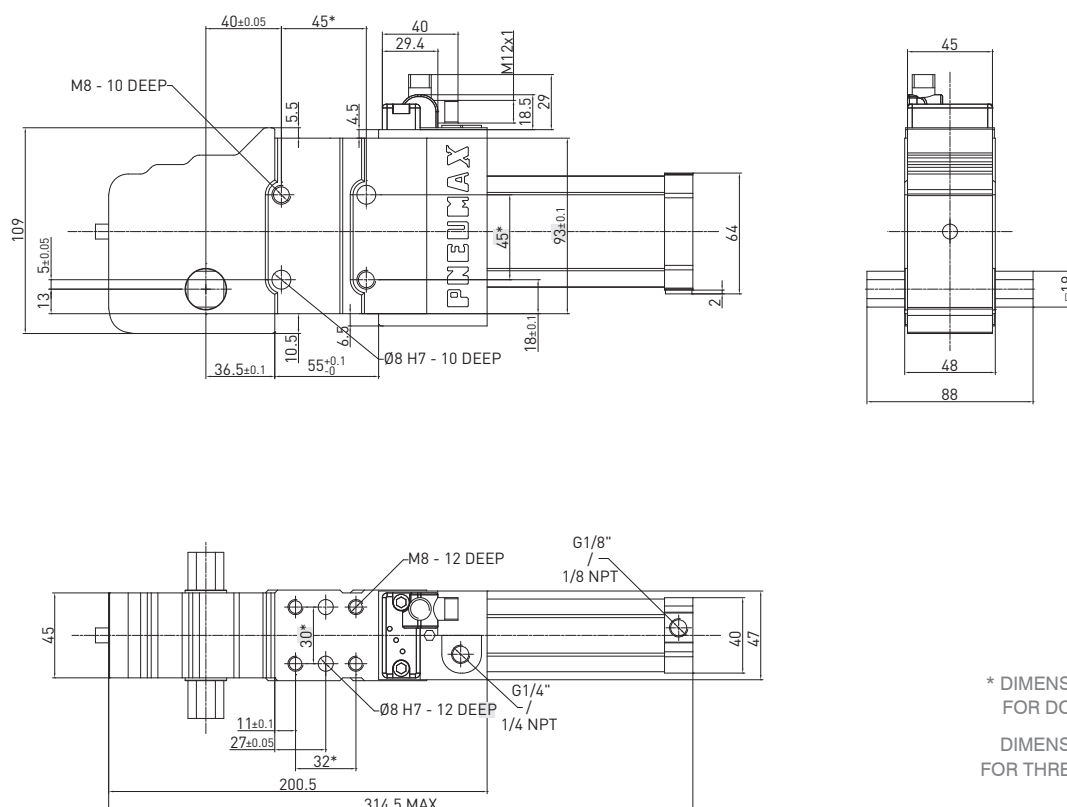
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For applications which exceed the above data, please contact our sales representatives.

HE2-Series / Ordering string
HE2-Series
HE 2 P 2 E G L

HE	VERSION	HE = high efficiency clamp
2	MOUNTING PATTERN	2 = NAAMS Standard
P	OPERATION	P = pneumatic
2	SIZE	1 = housing size 50 / cylinder Ø 40 mm 3 = housing size 80 / cylinder Ø 63 mm 2 = housing size 63 / cylinder Ø 50 mm
E	SENSOR	E = electronic sensor with M12 swivel connector - PNP A = electronic sensor with M12 swivel connector - NPN N = no sensor B = electronic sensor with M8 swivel connector - PNP
G	PORTS	G = G thread – BSPP N = NPT
L	SHAFT OUTPUT	— = dual output L = single output - LEFT R = single output - RIGHT

 GLOBAL STANDARD COMPONENTS
NAAMS

Please see the charts in the datasheets
for arm position as well as for max. opening angle.
NAAMS clamping arms to be ordered separately
*for size 3 > 20 mm offset

HE2P1E / High Efficiency clamp - NAAMS Std - Housing size 50/cylinder Ø 40 mm
WEIGHT 2.5 kg


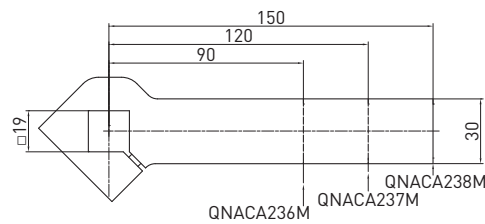
* DIMENSIONAL TOLERANCE
FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE
FOR THREADED HOLES: ±0.1

REV. 02 - 29/03/2019

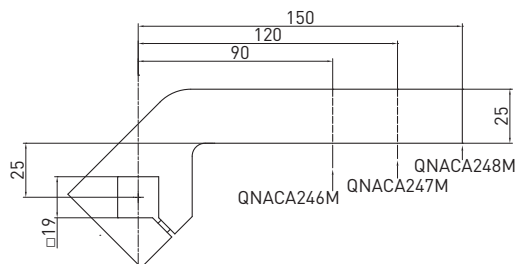
Clamping arms / 19 mm shaft - NAAMS Std

REV 03 - 29/03/2019

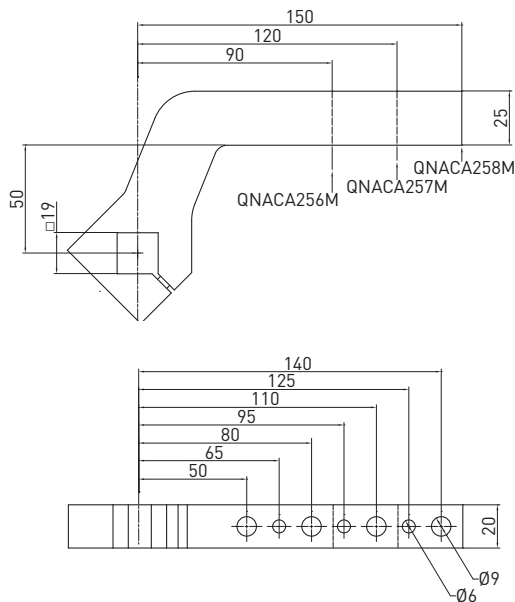
0 mm OFFSET



25 mm OFFSET



50 mm OFFSET



19 mm shaft – 0 mm offset

Part no.	Material	Length (mm)	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: M6x25 Tightening torque: 10 N m / 7.37 lb-ft

19 mm shaft – 25 mm offset

Part no.	Material	Length (mm)	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: M6x25 Tightening torque: 10 N m / 7.37 lb-ft

19 mm shaft – 50 mm offset

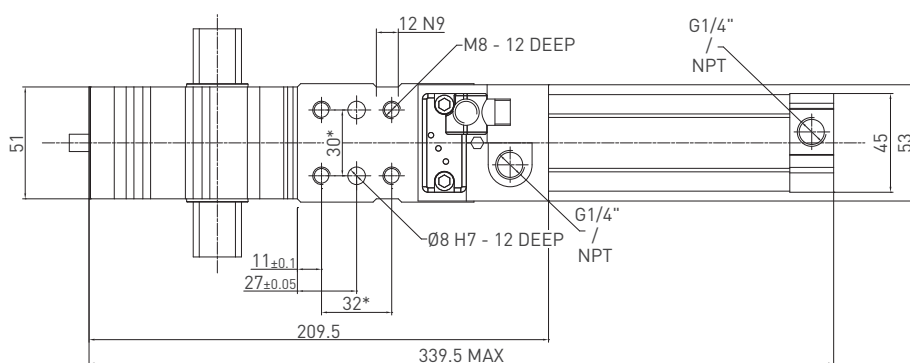
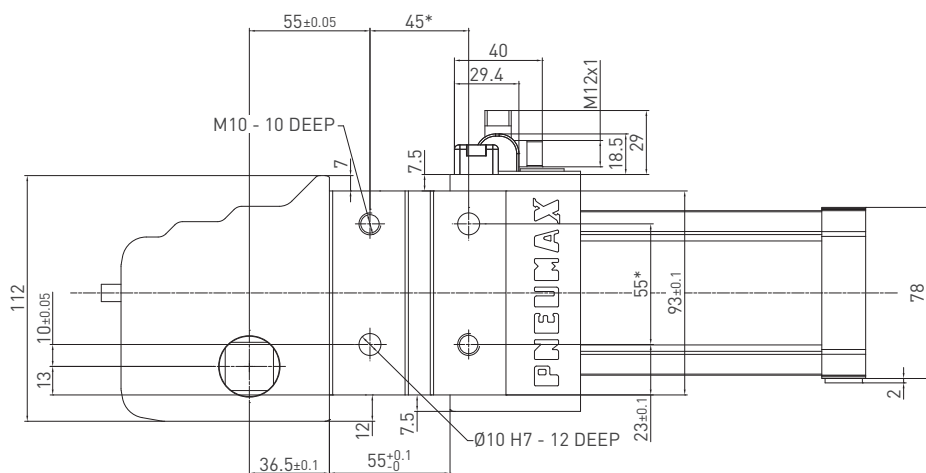
Part no.	Material	Length (mm)	Weight (kg)	Max op. angle pos. 1	Max op. angle pos. 2	Max op. angle pos. 3	Max op. angle pos. 4
QNACA256M	Steel	90	0.52	135°	135°	135°	135°
QNACA257M	Steel	120	0.6	135°	135°	135°	135°
QNACA258M	Steel	150	0.68	135°	135°	135°	135°

Screws: M6x25 Tightening torque: 10 N m / 7.37 lb-ft

HE2P2E / High efficiency clamp - NAAMS Std - Housing size 63 / cylinder Ø 50 mm

WEIGHT 2.8 kg

CLAMPING



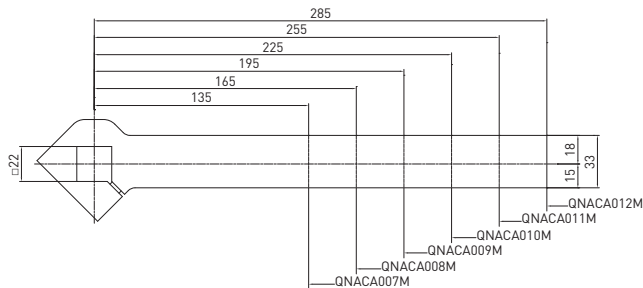
* DIMENSIONAL TOLERANCE
FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE
FOR THREADED HOLES: ±0.1

REV. 00 - 02/10/2015

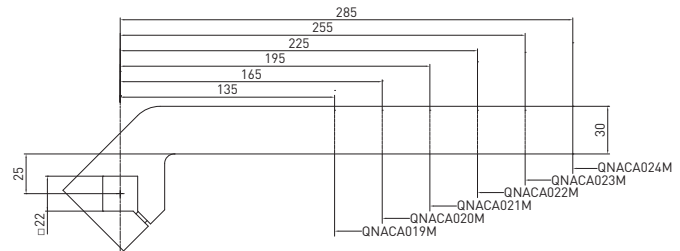
Clamping arms / 22 mm shaft - NAAMS Std

REV 02 - 29/03/2019

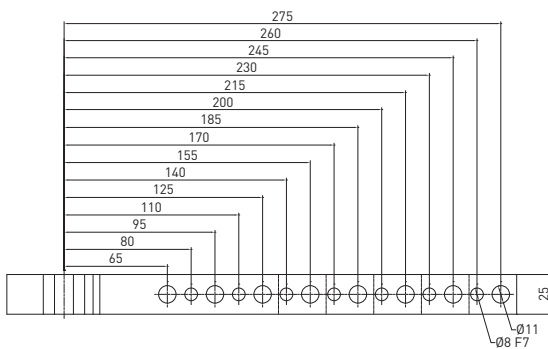
0 mm OFFSET



25 mm OFFSET



CLAMPING



22 mm shaft – 0 mm offset

Part no.	Material	Length (mm)	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: M8x25 Tightening torque: 25 N m / 18.43 lb ft

22 mm shaft – 25 mm offset

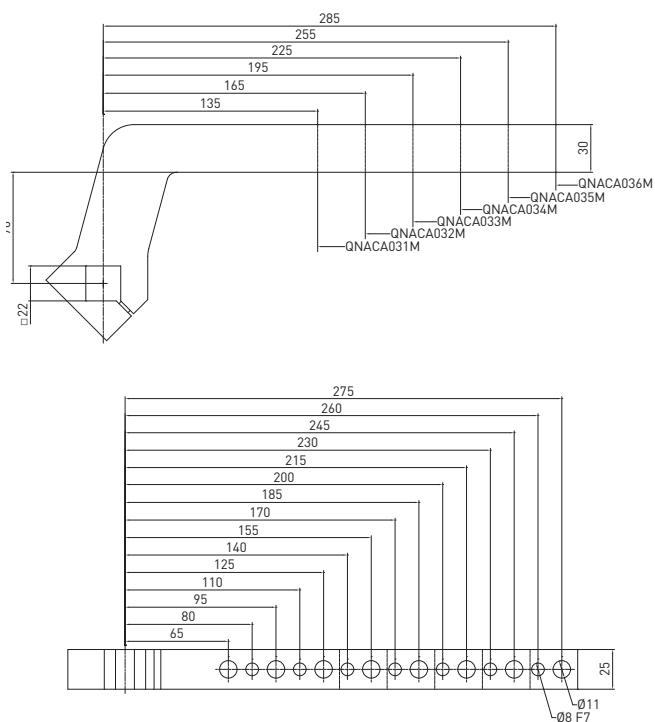
Part no.	Material	Length (mm)	Weight (kg)	Max op. angle pos. 1	Max op. angle pos. 2	Max op. angle pos. 3	Max op. angle pos. 4
QNACA019M	Steel	135	0.84	135°	135°	135°	135°
QNACA020M	Steel	165	0.95	135°	135°	135°	135°
QNACA021M	Steel	195	1.05	135°	135°	135°	135°
QNACA022M	Steel	225	1.16	135°	135°	135°	135°
QNACA023M	Steel	255	1.26	135°	135°	135°	135°
QNACA024M	Steel	285	1.37	135°	135°	135°	135°

Screws: M8x25 Tightening torque: 25 N m / 18.43 lb ft

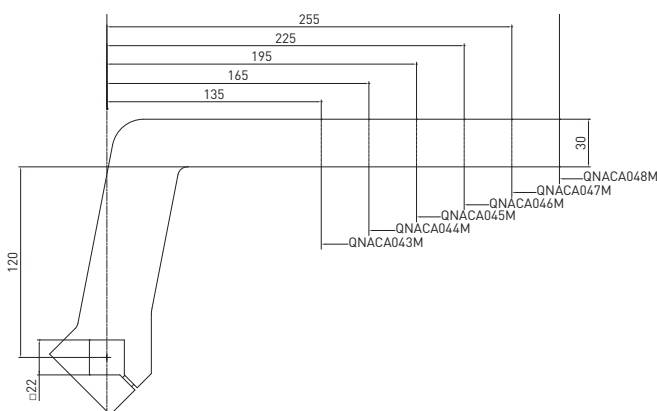
Clamping arms / 22 mm shaft - NAAMS Std

REV. 01 - 31/07/2015

70 mm OFFSET



120 mm OFFSET



22 mm shaft – 70 mm offset

Part no.	Material	Length (mm)	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: M8X25 Tightening torque: 25 N m / 18.43 lb ft

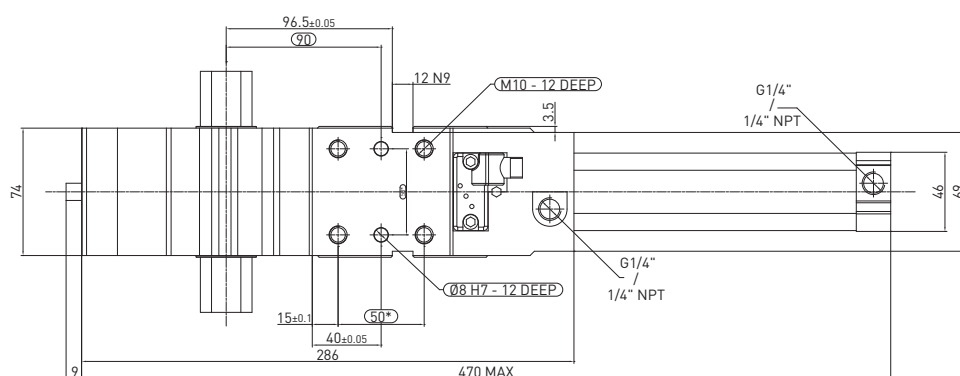
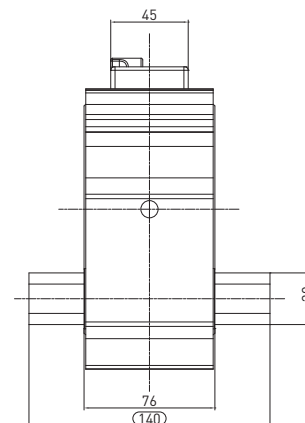
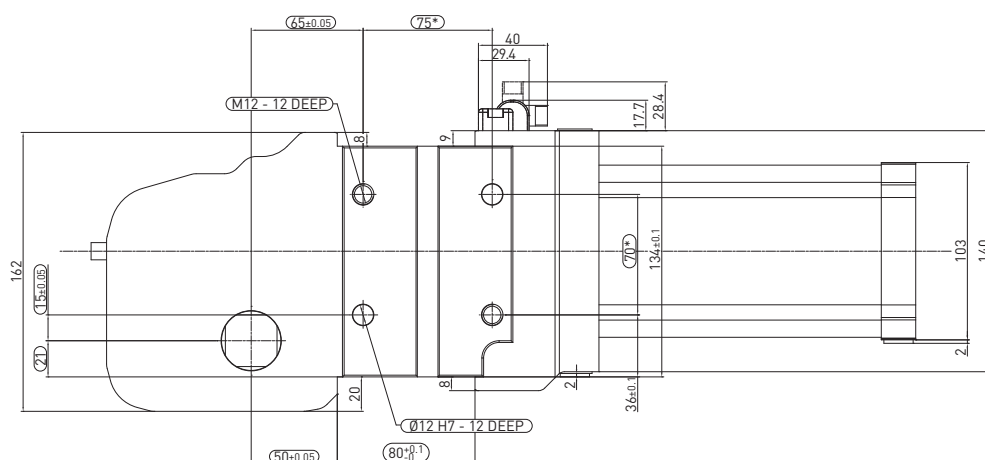
22 mm shaft – 120 mm offset

Part no.	Material	Length (mm)	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: M8X25 Tightening torque: 25 N m / 18.43 lb ft

HE2P3E / High Efficiency clamp - NAAMS Std - Housing size 80 / cylinder Ø 63 mm

WEIGHT 7.76 kg



* DIMENSIONAL TOLERANCE
FOR DOWEL HOLES: ± 0.02

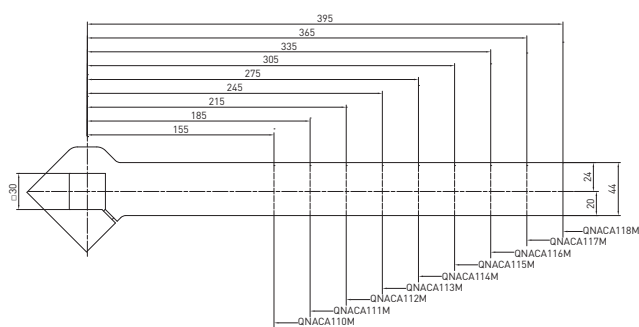
DIMENSIONAL TOLERANCE
FOR THREADED HOLES: ± 0.1

REV. 00 - 20/10/2015

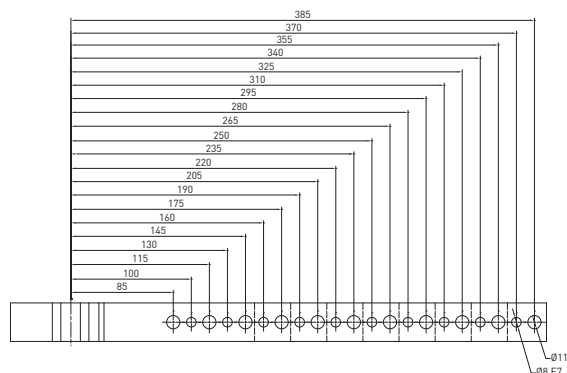
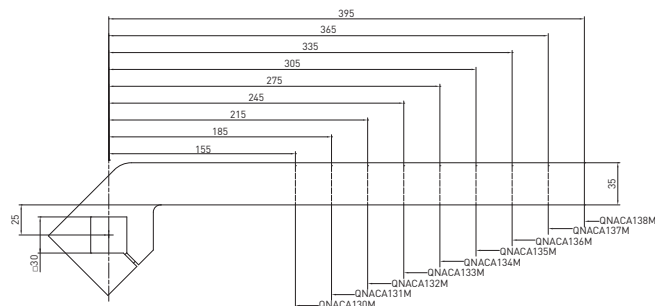
Clamping arms / 30 mm shaft - NAAMS Std

REV. 01 - 31/03/2015

0 mm OFFSET



25 mm OFFSET



30 mm shaft – 0 mm offset

Part no.	Material	Length (mm)	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: M10x40 Tightening torque: 35 N m / 25.81 lb ft

30 mm shaft – 25 mm offset

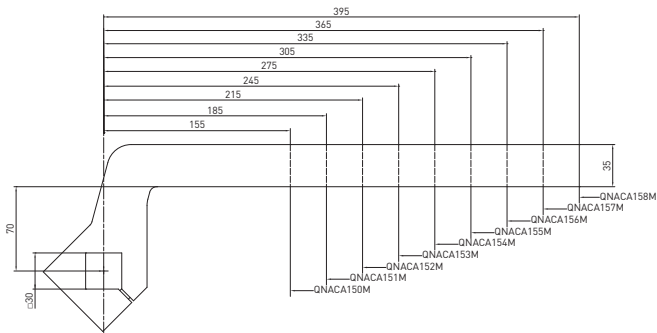
Part no.	Material	Length (mm)	Weight (kg)	Max op. angle pos. 1	Max op. angle pos. 2	Max op. angle pos. 3	Max op. angle pos. 4
QNACA130M	Steel	155	1.24	135°	135°	135°	135°
QNACA131M	Steel	185	1.39	135°	135°	135°	135°
QNACA132M	Steel	215	1.54	135°	135°	135°	135°
QNACA133M	Steel	245	1.69	135°	135°	135°	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: M10x40 Tightening torque: 35 N m / 25.81 lb ft

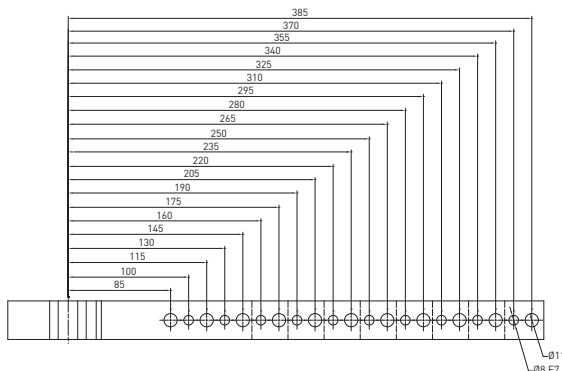
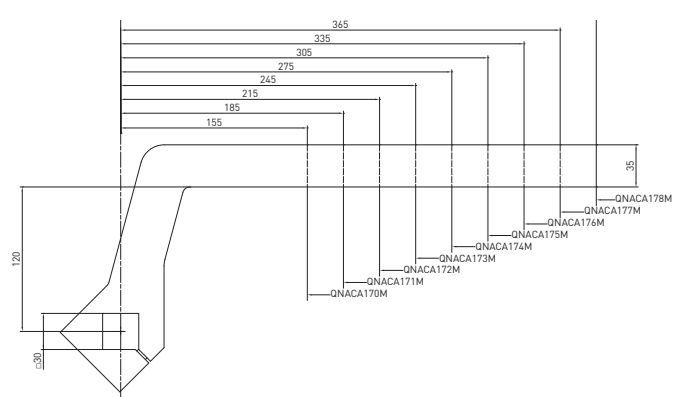
Clamping arms / 30 mm shaft - NAAMS Std

REV. 01 - 31/03/2015

70 mm OFFSET



120 mm OFFSET



30 mm shaft – 70 mm offset

Part no.	Material	Length (mm)	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: M10x40 Tightening torque: 35 N m / 25.81 lb ft

30 mm shaft – 120 mm offset

Part no.	Material	Length (mm)	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°

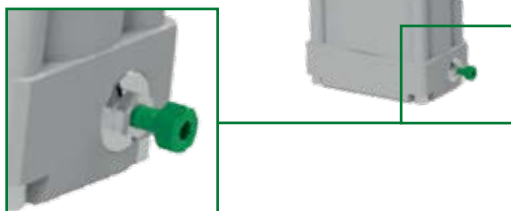
Screws: M10x40 Tightening torque: 35 N m / 25.81 lb ft

CX-Series

CLAMPING



Patented



Power clamps for double workpiece identification

International mount - Naams mount

For critical applications, where it is required to identify the unwilling presence of two metal sheets in the process and to avoid their clamping. This built-in device **allows a reliable double workpiece identification**.

The below end cap shows an **adjustment screw**: by loosening the screw, the inlet pressure is adjusted, i.e. reduced to the minimum required to guarantee the **clamping of a single workpiece**, not of two metal sheets. The toggle linkage is therefore prevented from engaging (no toggle lock) and consequently the sensor will not detect the closed position and will signal the anomaly. Once the clamp is properly adjusted from the below end cap screw, to be able to clamp a single workpiece, **it will be able to detect the false condition in case a second workpiece is inadvertently set on the tooling**.

Instructions

The adjustment cannot be performed without air.

- 1 Install the clamp on the fixture by using all 4 screws and dowels. If mounted on the side, use the key slot.
- 2 Check the shimming and make sure that that with 5/ 5.5 bars the clamp is operating smoothly (0.3 or less shimming is optimal).
- 3 Place the workpiece and clamp it. Make sure you get the red led signal for closed position.
- 4 Open the clamp.
- 5 Use, further to the workpiece, a thickness gauge (a feeler or a shim) whose thickness is half the thickness of the workpiece.
- 6 Close the clamp and tighten the screw slightly. Operate the clamp and check if the closed position signal is lost. In this way, the pressure is reduced and the cylinder won't get enough push force to engage the toggle linkage.
- 7 Open and close a few times, then double check with two workpieces and no red led light will be on, in such a condition.
- 8 If ok, tighten the bolt behind the screw to avoid its loosening.



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 / from 30 to 115 psi
Lubrication	all the devices are lubricated for life at the factory. Inline air lubrication isn't required

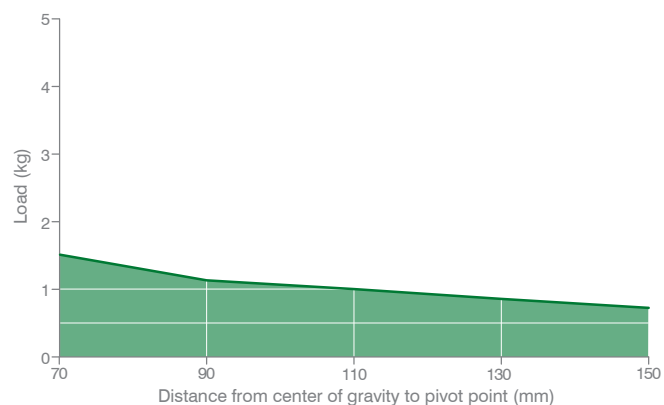
Functional charts

Size 40 mm

• Tooling weight chart

5 bar operating pressure – 135° opening angle

REV. 00 - 17/06/2015



• Holding moment

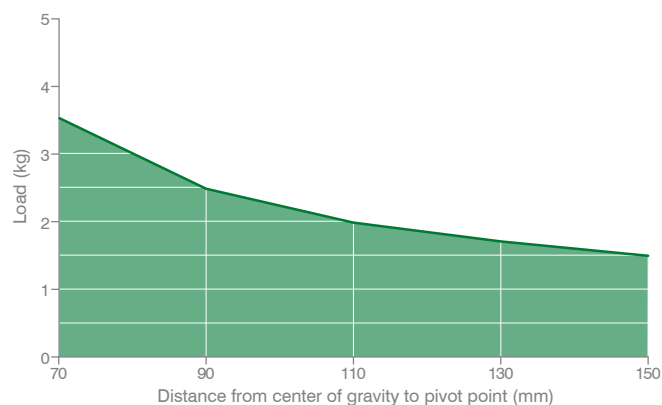
380 N m / 280,27 lb·ft

Size 50 mm

• Tooling weight chart

5 bar operating pressure – 135° opening angle

REV. 00 - 17/06/2015



• Holding moment

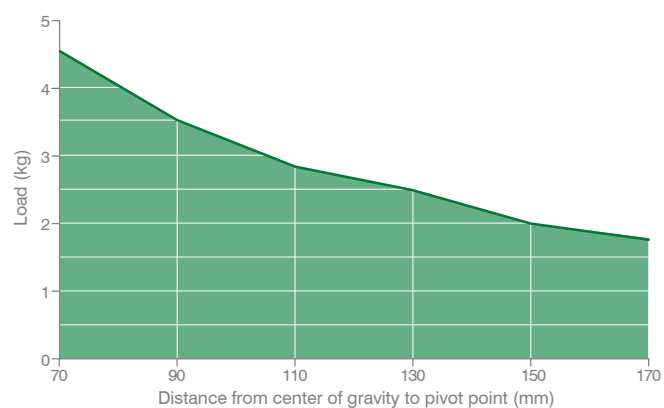
800 N m / 590,04 lb·ft

Size 63 mm

• Tooling weight chart

5 bar operating pressure – 135° opening angle

REV. 00 - 17/06/2015







• Holding moment

1.500 N m / 1.106,34 lb·ft

CX-Series / Ordering string

CX-Series

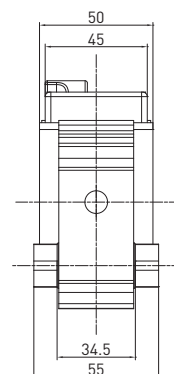
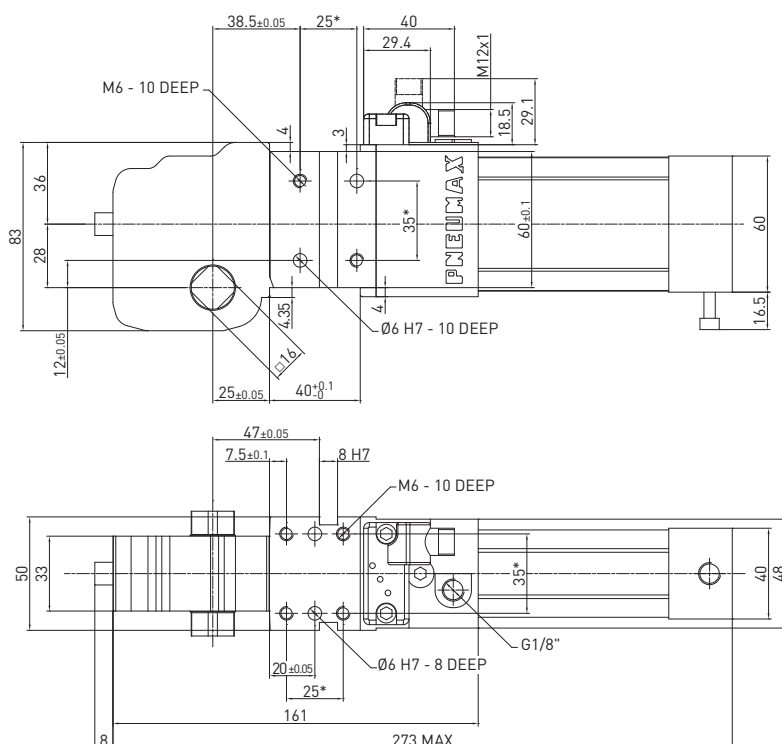
C 1 X 40 E G 1 A 01

C	VERSION	C = clamp
1	MOUNTING PATTERN	1 = International mount 2 = NAAMS Standard
X	OPERATION	X = double workpiece identification
40	SIZE	40 = 40 mm 63 = Ø 63 mm 50 = Ø 50 mm
E	SENSOR	E = electronic sensor with M12 swivel connector - PNP A = electronic sensor with M12 swivel connector - NPN N = no sensor B = electronic sensor with M8 swivel connector - PNP
G	PORTS	G = G thread – BSPP N = NPT
1	ARM MOUNT	1 =  2 =  3 =  4 = 
A	ARM MATERIAL	A = aluminum S = steel
01	CLAMP ARM TYPE	01 = wishbone, central, 15 mm offset 02 = wishbone, right, 15 mm offset 03 = wishbone, left, 15 mm offset 04 = wishbone, central, 45 mm offset 05 = wishbone, right, 45 mm offset 06 = wishbone, left, 45 mm offset

Please see the charts in the datasheets for arm position as well as for max. opening angle. NAAMS clamping arms to be ordered separately

C1X40E / Clamp with double workpiece identification - International mount - 40 mm bore

WEIGHT 1.6 kg

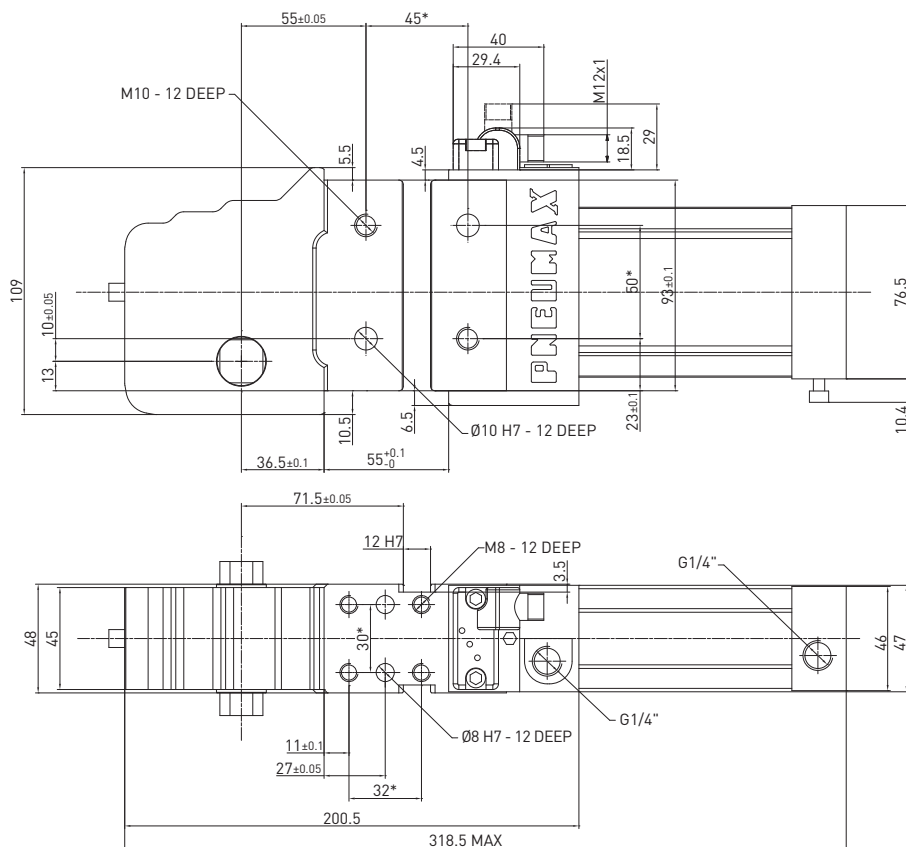


* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02
DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 20/08/2018

C1X50E / Clamp with double workpiece identification - International mount - 50 mm bore

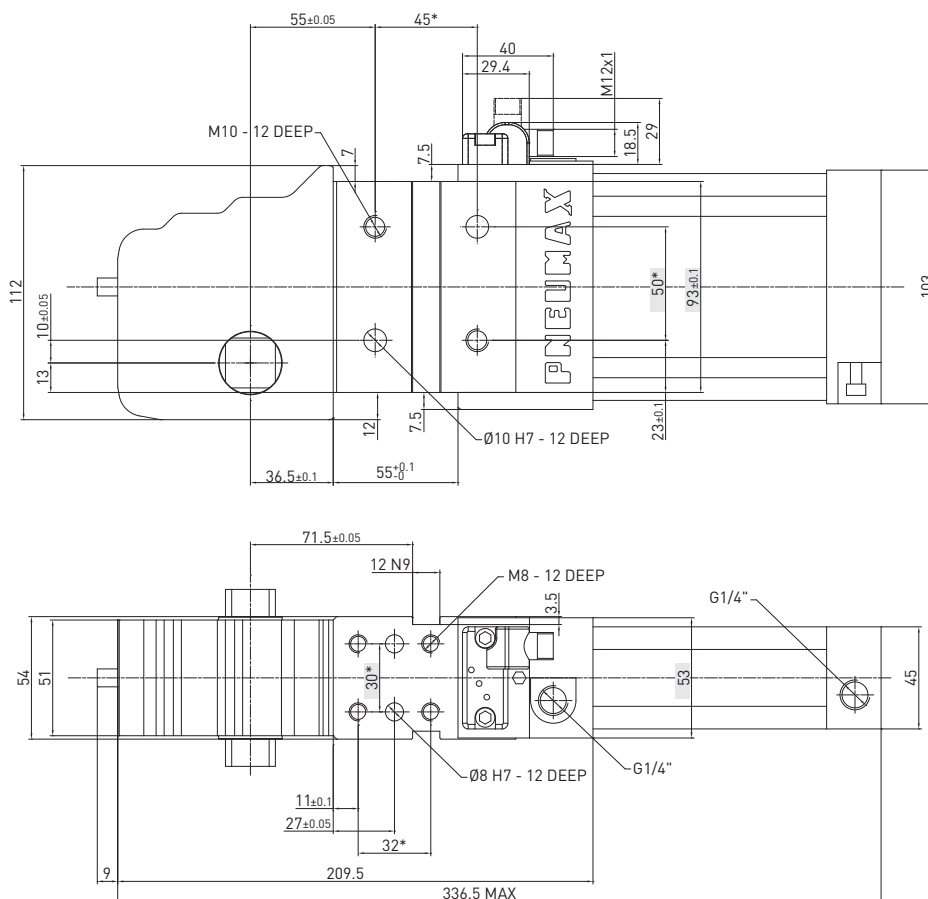
WEIGHT 2.9 kg

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

REV. 00 - 20/08/2018

C1X63E / Clamp with double workpiece identification - International mount - 63 mm bore

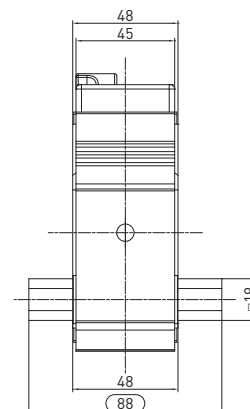
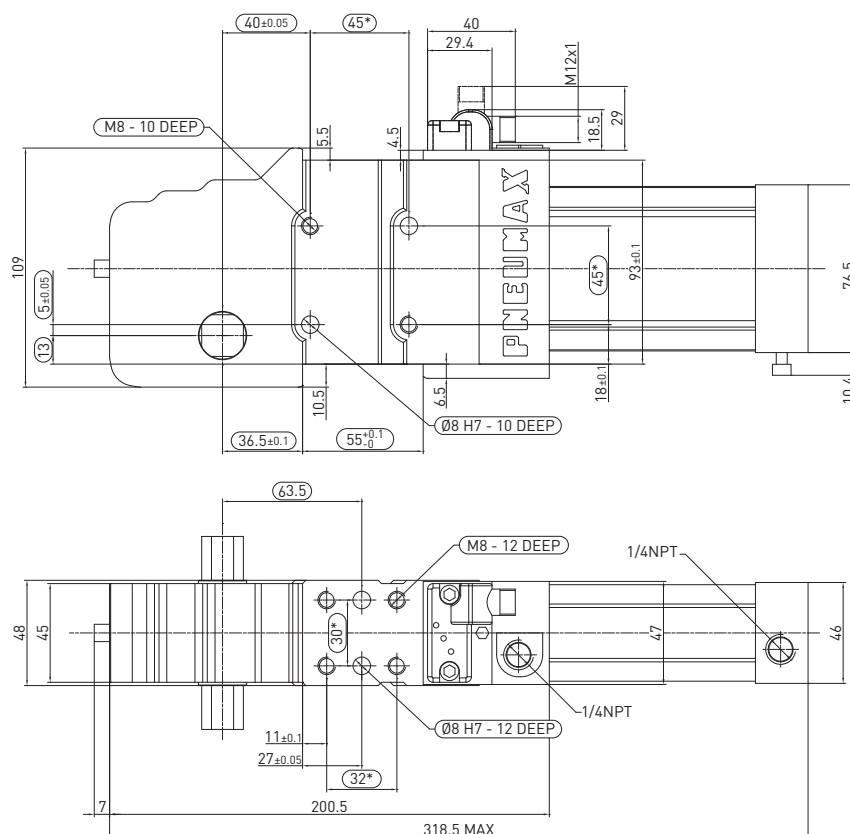
WEIGHT 3.7 kg

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

REV. 00 - 20/09/2018

C2X50E / Clamp with double workpiece identification - NAAMS Std - 50 mm bore

WEIGHT 2.95 kg



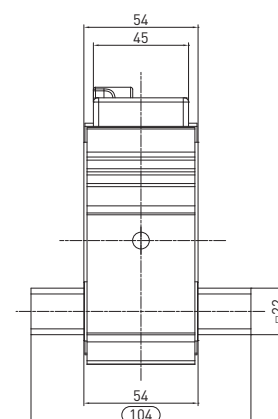
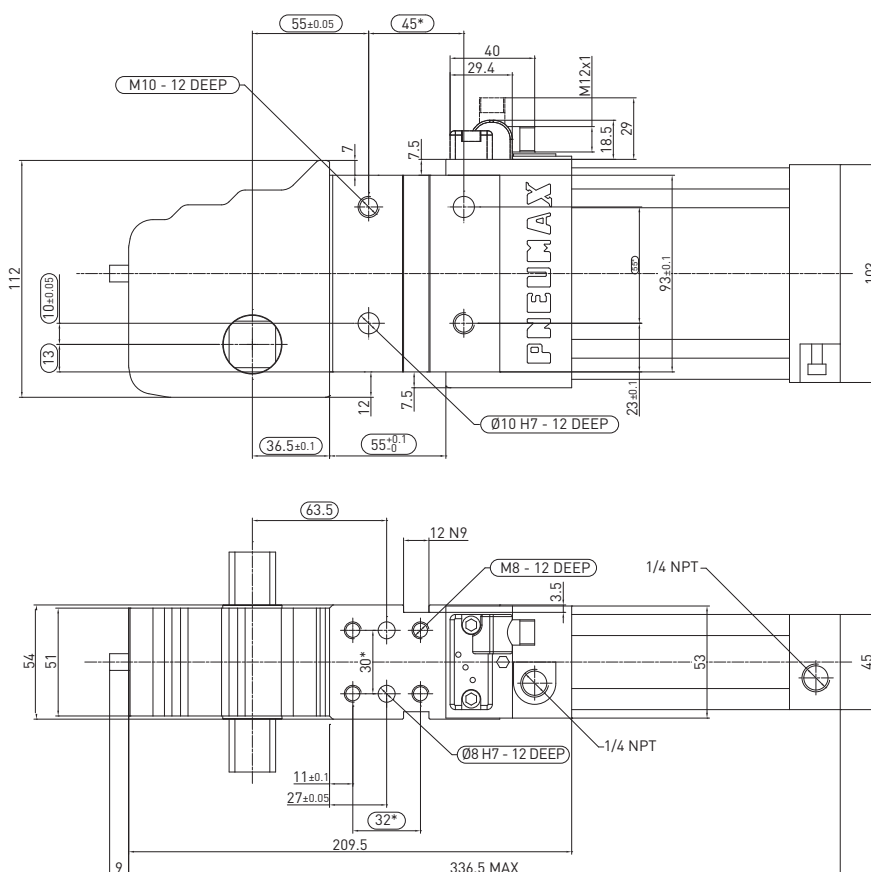
* DIMENSIONAL TOLERANCE
FOR DOWEL HOLES: ± 0.02

DIMENSIONAL TOLERANCE
FOR THREADED HOLES: ± 0.1

REV. 00 - 20/09/2018

C2X63E / Clamp with double workpiece identification - NAAMS Std - 63 mm bore

WEIGHT 3.75 kg



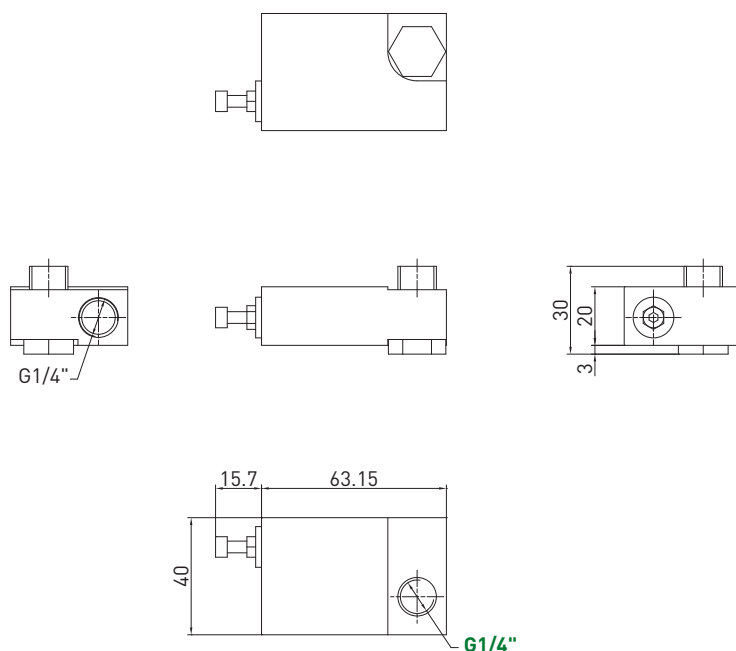
* DIMENSIONAL TOLERANCE
FOR DOWEL HOLES: ± 0.02

DIMENSIONAL TOLERANCE
FOR THREADED HOLES: ± 0.1

REV. 00 - 20/09/2018

ADWI14: for clamps size 50 and 63 mm / Devices for double workpiece identification - G 1/4"

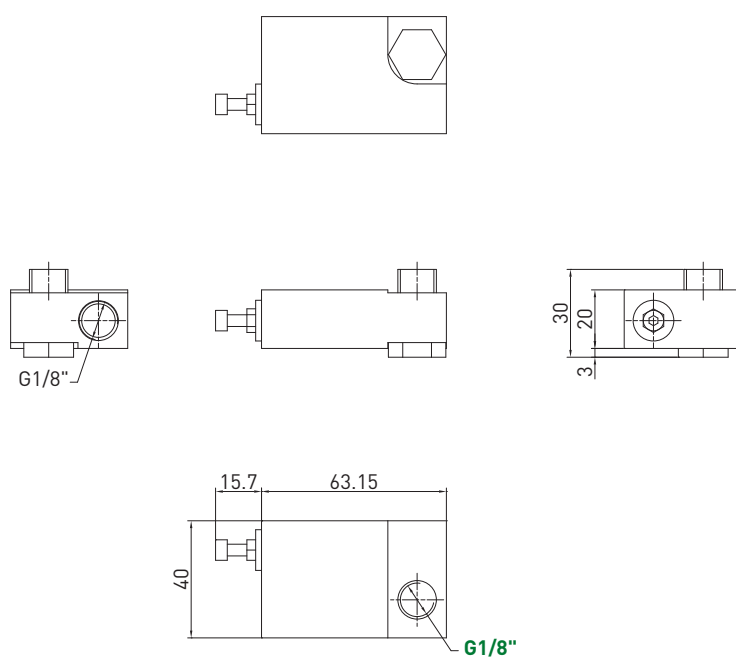
WEIGHT 100 g

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

REV. 00 - 20/09/2018

ADWI18: for clamps size 25,32 and 40 mm / Devices for double workpiece identification - G 1/8"

WEIGHT 100 g

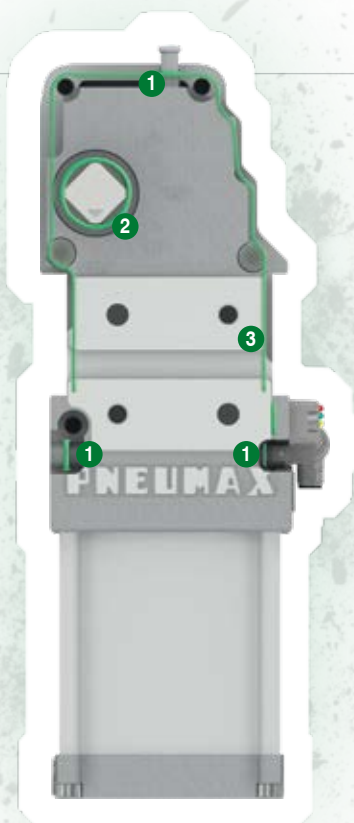
* DIMENSIONAL TOLERANCE
FOR DOWEL HOLES: ± 0.02 DIMENSIONAL TOLERANCE
FOR THREADED HOLES: ± 0.1

REV. 00 - 20/09/2018

CS/HES-Series

Sealed clamps

INTERNATIONAL
MOUNT
GLOBAL STANDARD COMPONENTS
NAAMS



- Weld-contamination proven
- Suitable for laser welding applications
- No dimensional change from conventional clamps

- 1 The manual unlock button and the adjustment access are sealed with an O-ring
- 2 The toggle mechanism is fully sealed
- 3 Acrylic-based Loctite® for full sealing



Ordering string

Sealed clamp

CS 1 P 63 E G 4 S 01

CS

VERSION

C = clamp
CS = sealed clamp

HE = high efficiency clamp
HES = high efficiency sealed clamp

1

MOUNTING PATTERN

P

OPERATION

63

SIZE

E

SENSOR

G

PORTS

4

ARM MOUNT

S

ARM MATERIAL

01

CLAMP ARM TYPE

Follow the ordering string of standard clamps.
For technical specifications please refer to the charts of standard clamps.