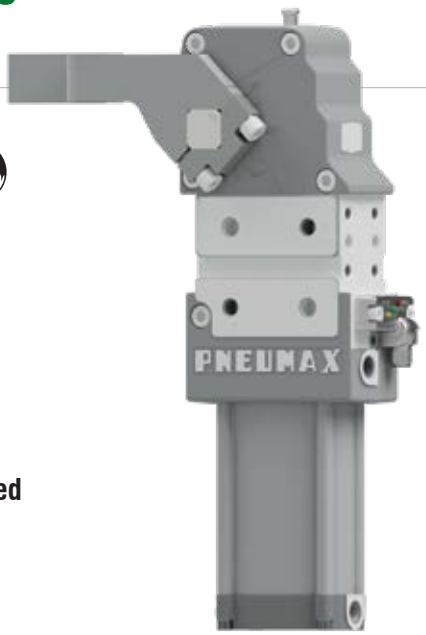
HE1-Series

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

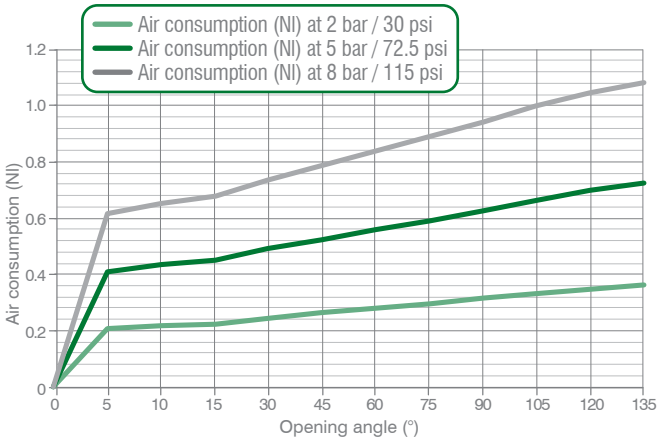
Manual release button to open the linkage when air pressure is removed during setup. **Pneumatic ports on both sides** of the cylinder.

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

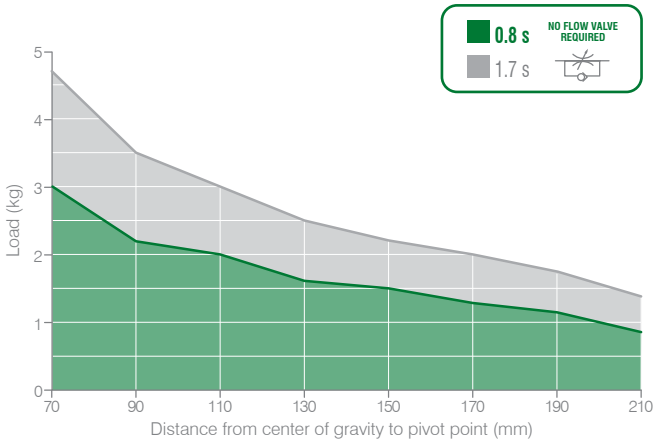
Functional charts

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



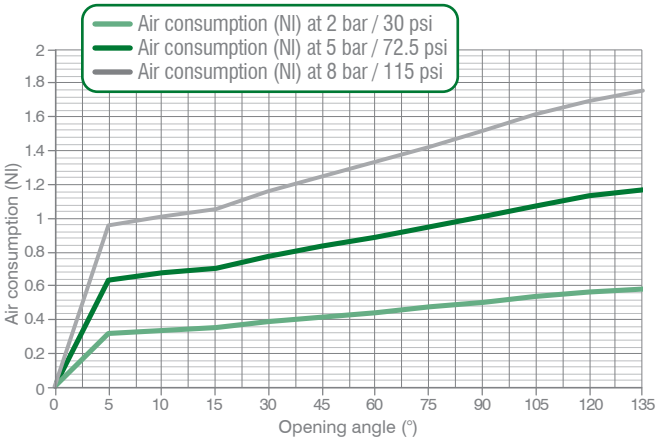
- **Clamping moment (at 5 bar / 72.5 psi)**
  130 N m / 95,88 lb·ft

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

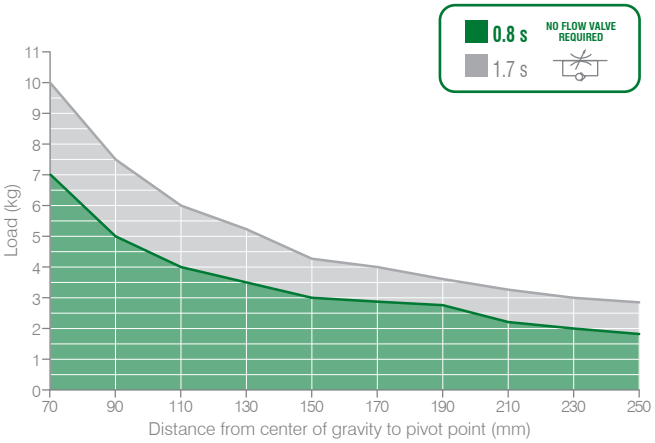
The above data are meant for correct working conditions of the clamp with the same performance level during its life time.
For applications which exceed the above data, please contact our sales representatives.

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



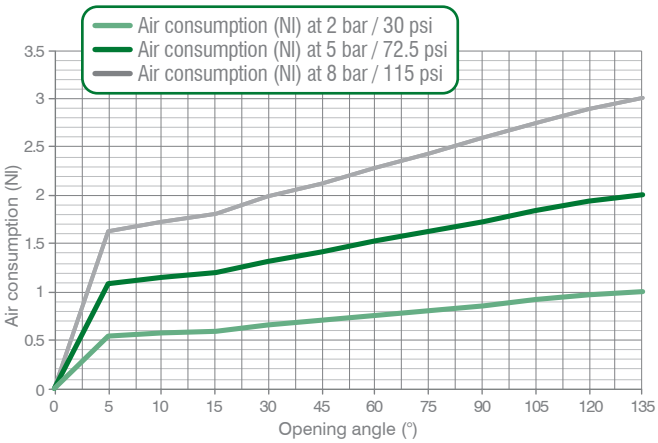
- **Clamping moment (at 5 bar / 72.5 psi)**
  185 N m / 136,44 lb·ft

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

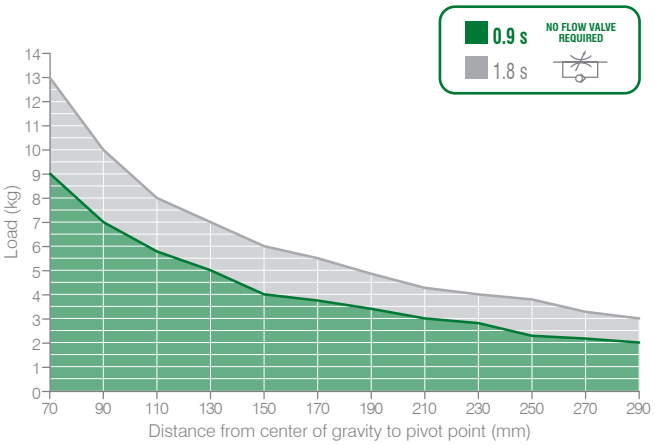
The above data are meant for correct working conditions of the clamp with the same performance level during its life time.
For applications which exceed the above data, please contact our sales representatives.

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

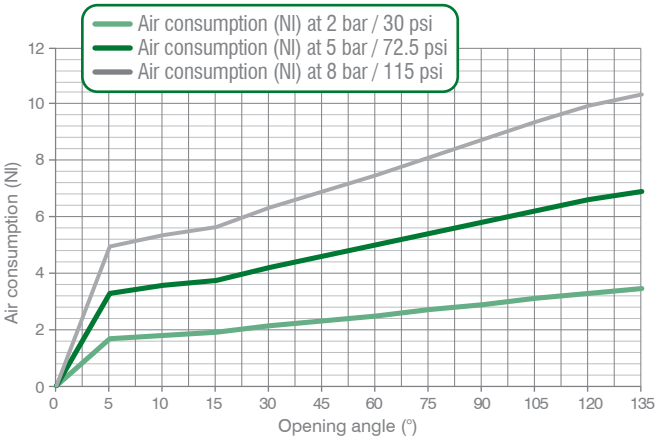
- **Holding moment**
  1500 N m / 1.106,34 lb·ft

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.

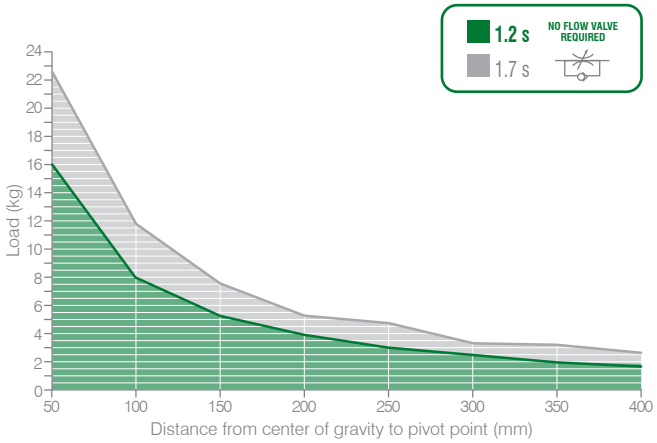
HE1-Series / Functional charts (continued)

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



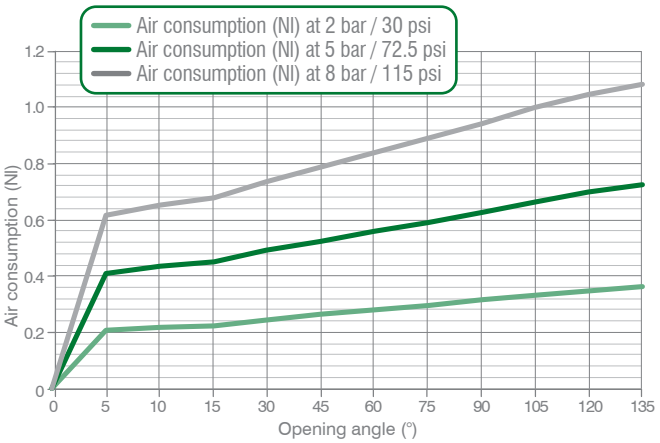
- **Clamping moment (at 5 bar / 72.5 psi)**
  850 N m / 626,92 lb·ft

- **Holding moment**
  2500 N m / 1843,90 lb·ft

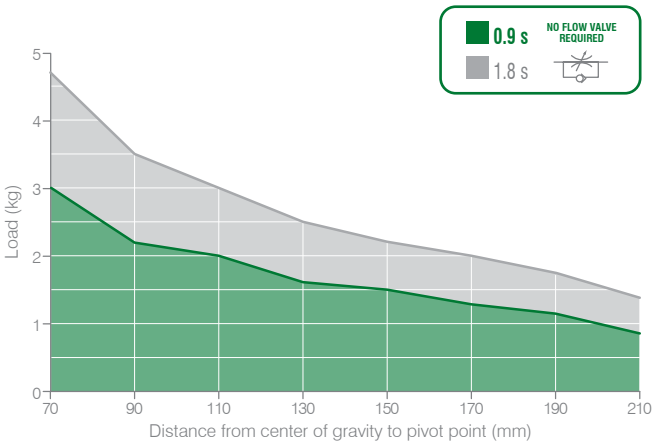
The above data are meant for correct working conditions of the clamp with the same performance level during its life time.
For applications which exceed the above data, please contact our sales representatives.

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

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 **1** = housing size 50 / cylinder Ø 40 mm **2** = housing size 63 / cylinder Ø 50 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 * for size 80 mm > 20 mm offset	**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

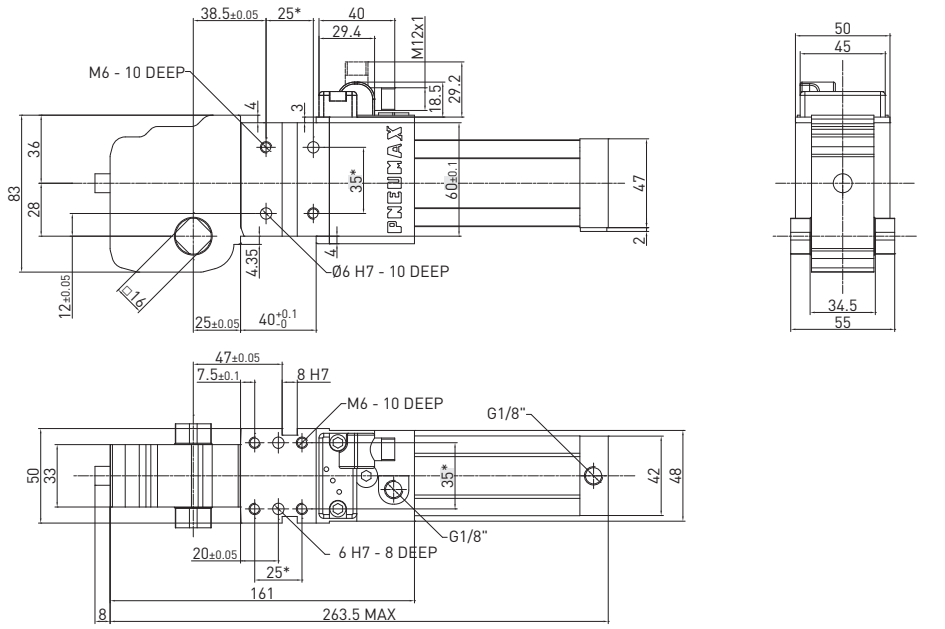
HE1-Series

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



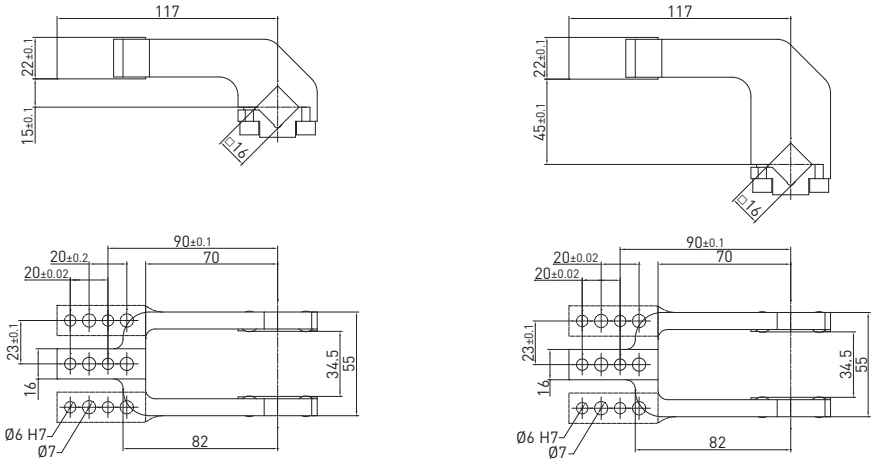
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02

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

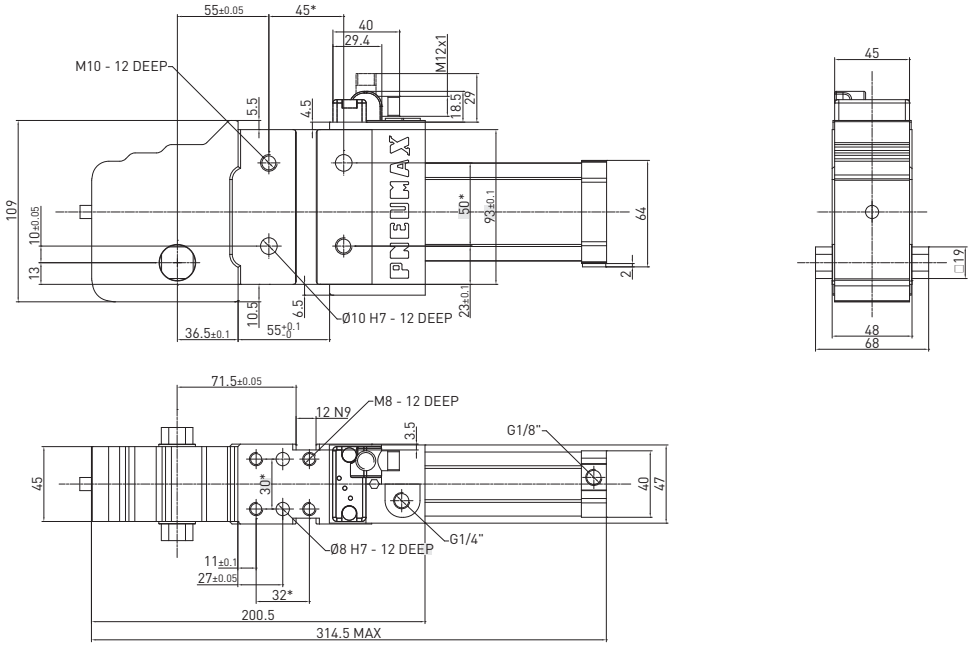
16 mm shaft – 45 mm offset

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



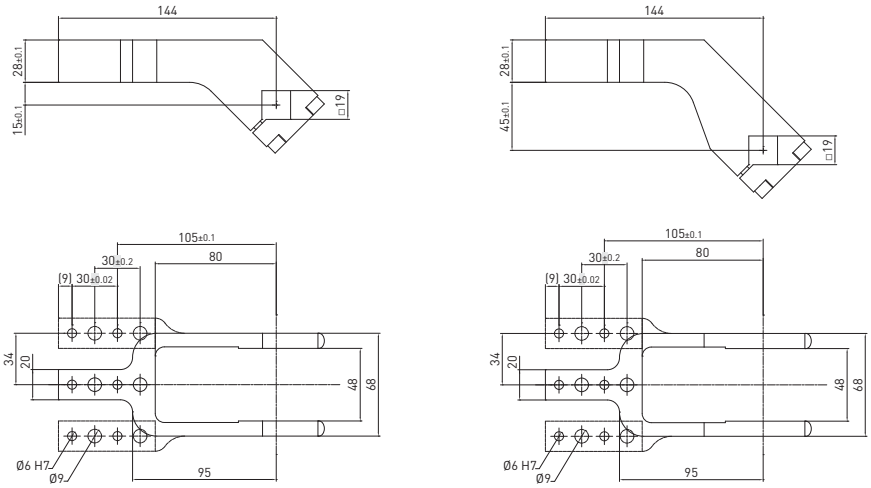
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02

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

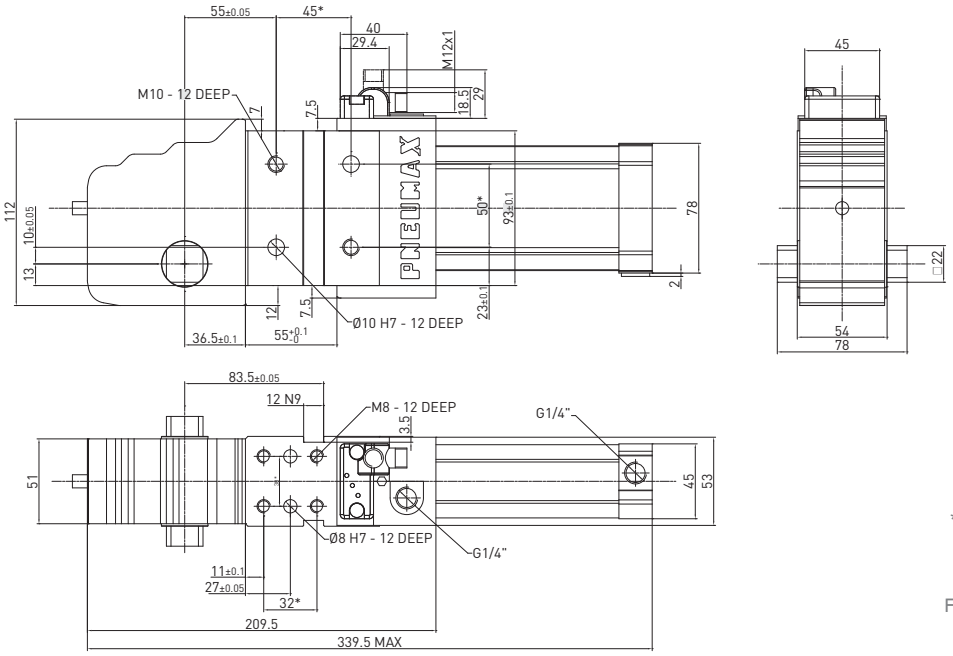
19 mm shaft – 45 mm offset

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



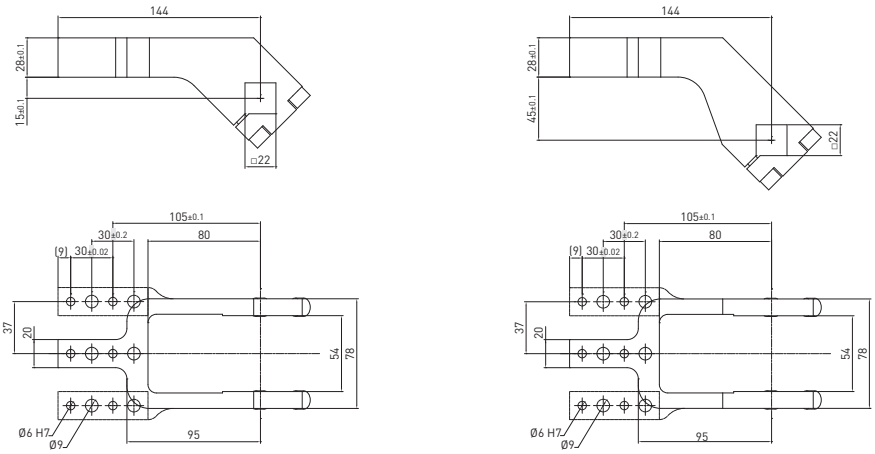
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02

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

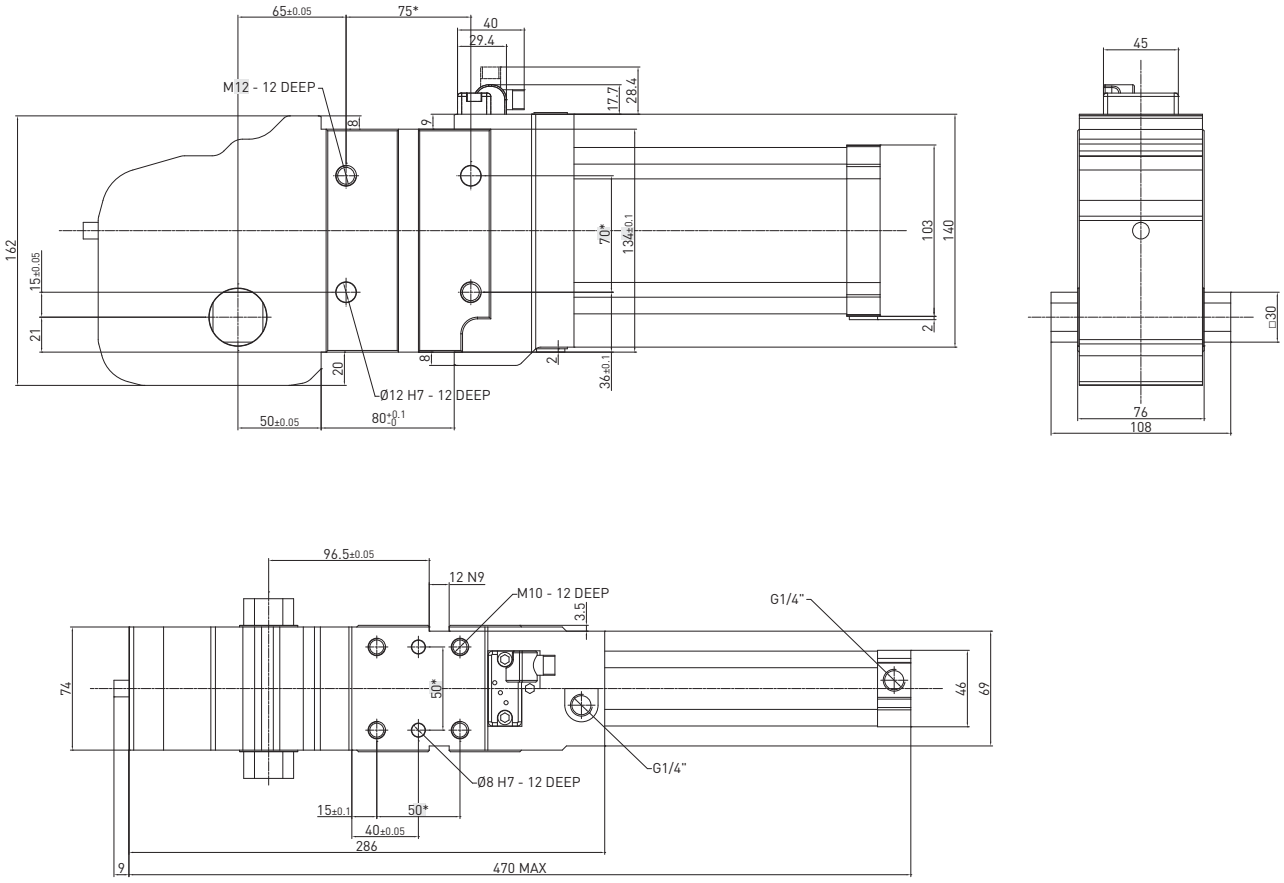
Part no.	Material	Version	Weight (kg)	Max op. angle pos. 1	Max op. angle pos. 2	Max op. angle pos. 3	Max op. angle pos. 4
B2204	Aluminum	Central	0.57	135°	135°	135°	75°
Q2204	Steel	Central	0.98	135°	135°	135°	75°
B2205	Aluminum	Right	0.58	135°	135°	135°	75°
Q2205	Steel	Right	1.02	135°	135°	135°	75°
B2206	Aluminum	Left	0.58	135°	135°	135°	75°
Q2206	Steel	Left	1.02	135°	135°	135°	75°

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

CLAMPING

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

WEIGHT 7.55 kg



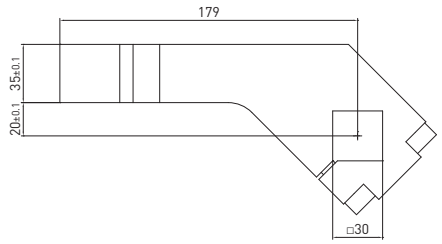
* DIMENSIONAL TOLERANCE
FOR DOWEL HOLES: ±0.02

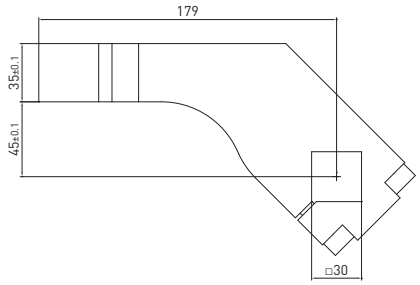
DIMENSIONAL TOLERANCE
FOR THREADED HOLES: ±0.1

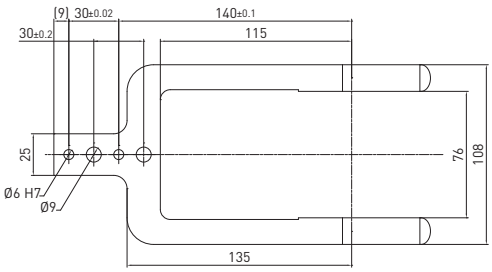
REV. 00 - 20/10/2015

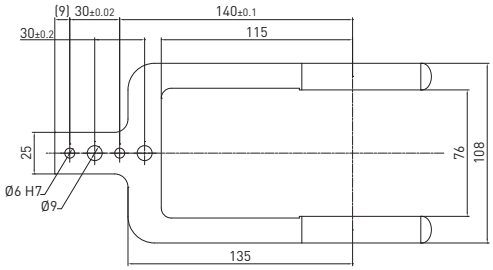
Clamping arms / 30 mm shaft

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

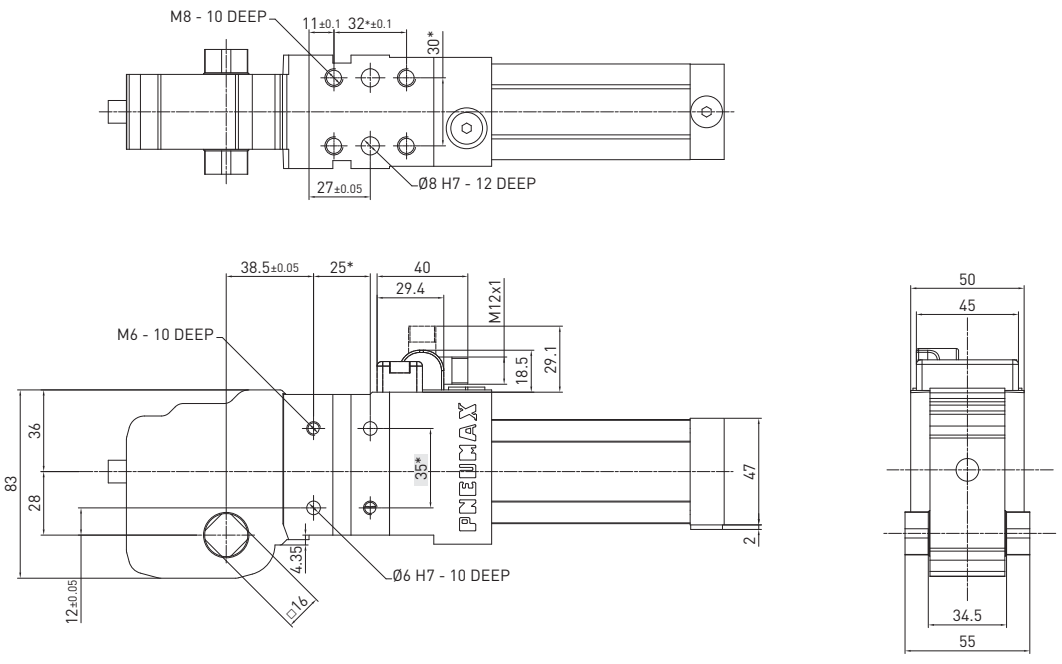
30 mm shaft – 45 mm offset

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



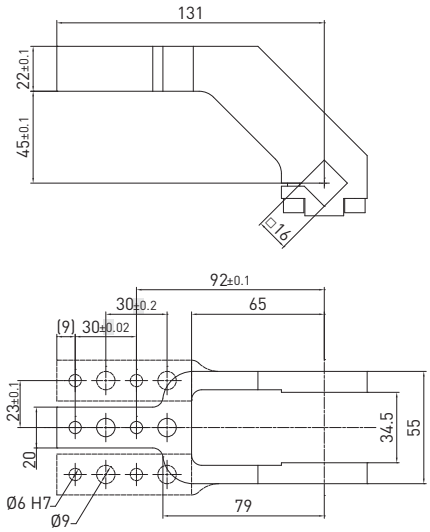
* DIMENSIONAL TOLERANCE FOR DOWEL HOLES: ±0.02

DIMENSIONAL TOLERANCE FOR THREADED HOLES: ±0.1

REV. 00 - 23/04/2019

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