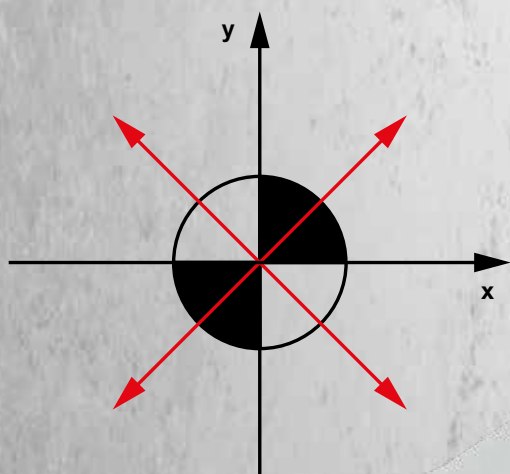




## STATIONARY WORKHOLDING

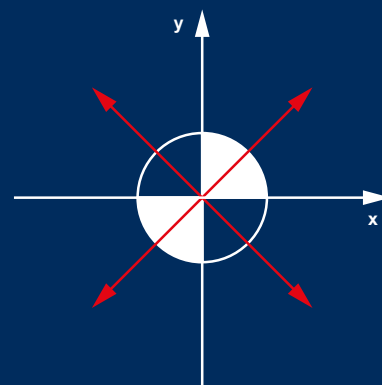


# PLUS5



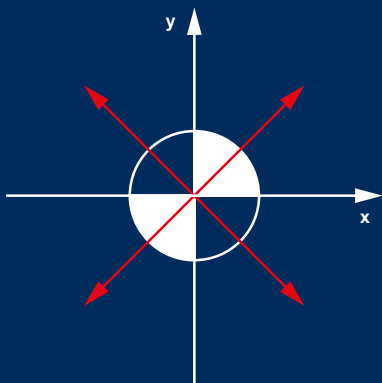
# PLUS5

MECHANICAL ZERO POINT SYSTEM



## Esempio di impiego - Working example





# PLUS5

## MECHANICAL ZERO POINT SYSTEM



**PLUS 5 - 52**  
Sistema Zero Point meccanico  
Mechanical Zero Point system

Pag. 6



**PLUS 5 - 96**  
Sistema Zero Point meccanico  
Mechanical Zero Point system

Pag. 7



**PLUS 5 ALL IN ONE 52/96**  
Sistema Zero Point meccanico  
Mechanical Zero Point system

Pag. 8



**PLUS 5 INDEX - 52**  
Sistema Zero Point meccanico  
Mechanical Zero Point system

Pag. 9



**PLUS 5 INDEX - 96**  
Sistema Zero Point meccanico  
Mechanical Zero Point system

Pag. 10



**PLUS 5 INDEX ALL IN ONE 52/96**  
Sistema Zero Point meccanico  
Mechanical Zero Point system

Pag. 11



**PLUS 5 - 52**  
**PLUS 5 - 96**  
Piastra serraggio  
Clamping plate

Pag. 12



**PLUS 5 - 52**  
Interfaccia 96  
Interface 96

Pag. 16



**PLUS 5 - 52/96**  
Piastra di riduzione  
Reduction plates

Pag. 17



**PLUS 5 - 52/96**  
Perni di bloccaggio  
Clamping pins

Pag. 18



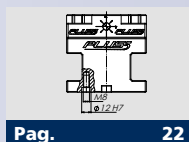
**PLUS 5 - 52/96**  
Piastra di interfaccia pallets  
Pallet interface plate

Pag. 20



**PLUS 5 - 52/96**  
Piastra  
Plates

Pag. 21



**PLUS 5 - 52/96**  
Rialzi  
Risers

Pag. 22



**PLUS 5 - 52/96**  
Piramidi alluminio  
Alu pyramid

Pag. 23



**PLUS 5 - 52**  
**PLUS 5 - 96**  
Bascole  
Tiltings

Pag. 24



**PLUS 5 - 96**  
Bascula multipla  
Multiple tilting

Pag. 26



**PLUS 5 - 52/96**  
■ Piastrina di sicurezza - Safety plate  
■ Piastra allineamento - Alignment plate

Pag. 27



**PLUS 5 - 52**  
Cubi  
Tombstone

Pag. 28



**PLUS 5 - 96**  
Cubi  
Tombstone

Pag. 29

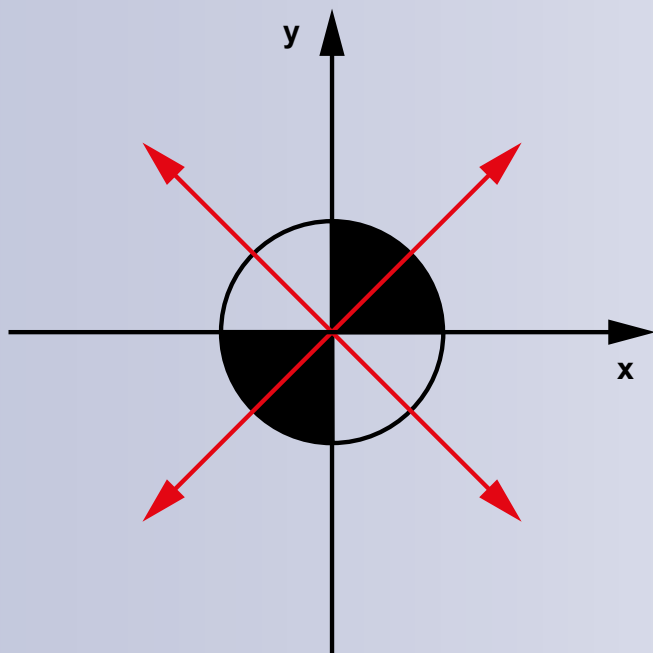
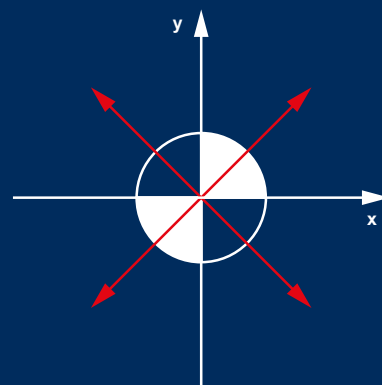


**PLUS 5 - 52/96**  
Accessori  
Accessories

Pag. 30

# PLUS5

MECHANICAL ZERO POINT SYSTEM



## PLUS5

- ▶ Il simbolo qui a lato rappresenta il sistema di trasmissione vettoriale delle forze che agisce vincolando i perni in modo uniforme e in tutte le direzioni.
- ▶ The symbol on the side represents the vectorial force transmission system that acts by binding the pins uniformly and in all directions.

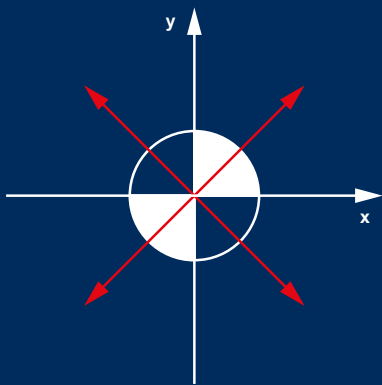


Guarda il video



Watch the video

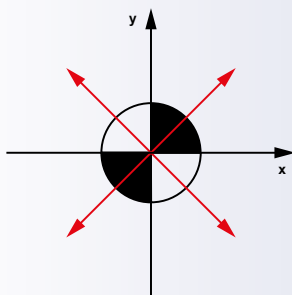




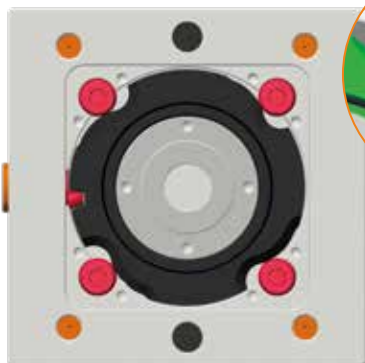
# PLUS5

## MECHANICAL ZERO POINT SYSTEM

### PLUS5 BENEFITS

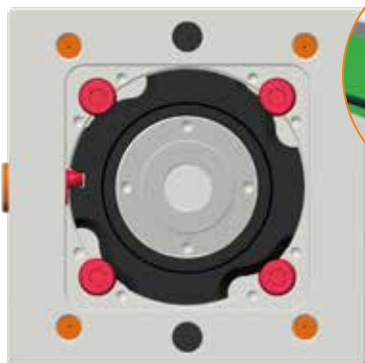


- ▶ Sistema di bloccaggio sbloccaggio dei perni con una rotazione di soli 180 gradi
- ▶ Non necessita di chiave dinamometrica. Il fine corsa determina il bloccaggio/sbloccaggio
- ▶ Ripetibilità < 0.005mm
- ▶ Pull down force 7 kN per Plus 5 52 e 8 kN per Plus 5 96
- ▶ Forza di tenuta 40 kN per Plus 5 52 e 80 kN per Plus 5 96
- ▶ Locking and unlocking system of the pins with a rotation of only 180 degrees
- ▶ Does not require a torque wrench. The limit switch determines locking / unlocking
- ▶ Repeatability < 0.005mm
- ▶ Pull down force 7 kN for Plus 5 52 and 8 kN for Plus 5 96
- ▶ Holding force 40 kN for Plus 5 52 and 80 kN for Plus 5 96

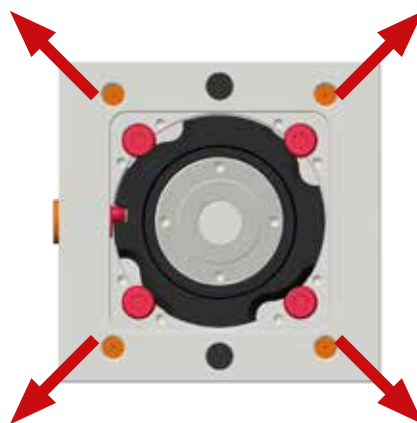


Aperto - Open

- ▶ Il meccanismo progettato per bloccare i perni è costituito da una camma azionata da un perno eccentrico. Il sistema garantisce elevate prestazioni in termini di precisione e forza di bloccaggio. Ciò è dovuto in particolare al fatto che la camma blocca contemporaneamente i 4 perni verso l'esterno.
- ▶ The mechanism designed for locking the pins consists of a cam which is operated by an eccentric pin. The system guarantees high performance in terms of precision and clamping force. This is due in particular to the fact that the cam locks the 4 pins outwards at the same time.



Chiuso - Closed

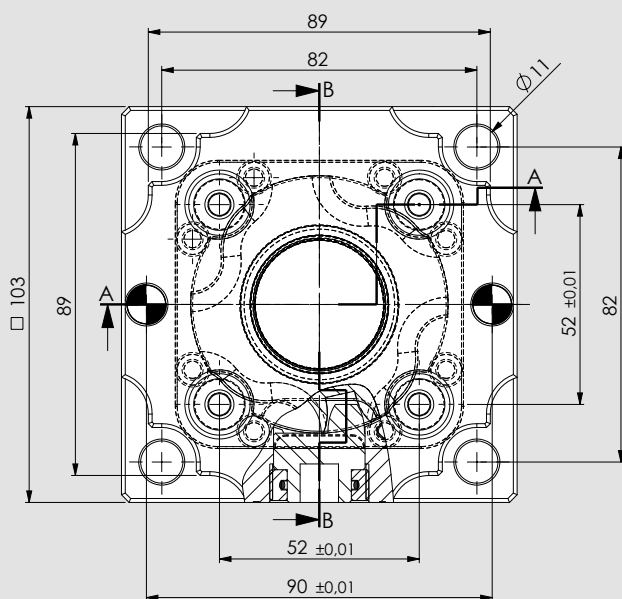
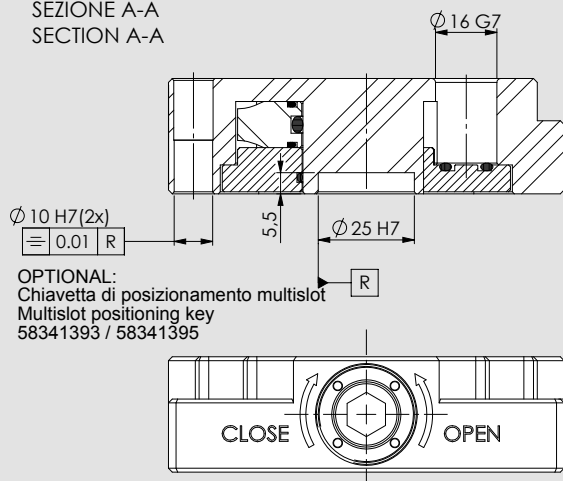




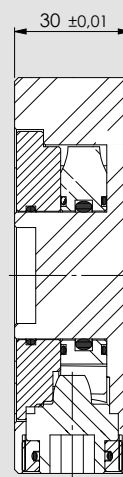
- Completo di chiave 10mm
- Perni non inclusi

- Complete with wrench 10mm
- Pins not included

SEZIONE A-A  
SECTION A-A



SEZIONE B-B  
SECTION B-B



Soggetto a modifiche tecniche  
Subject to technical changes.

Cod. - Id. No.  
46240101

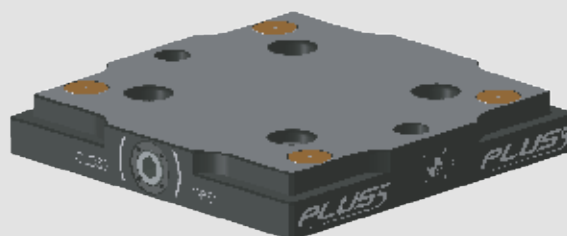
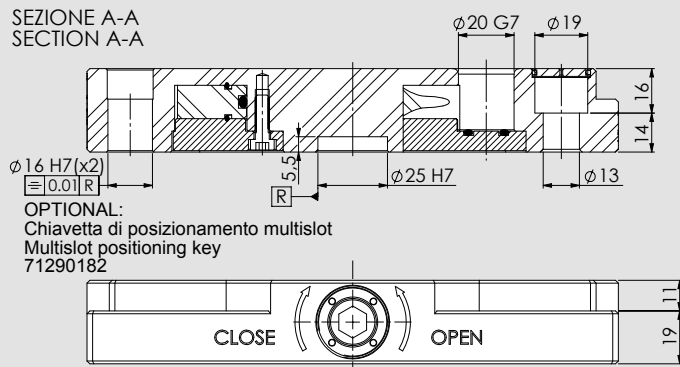
Peso - Weight (Kg)  
2



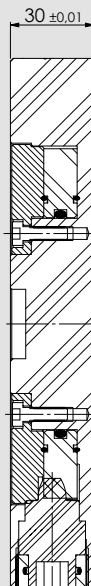
- Completo di chiave 10mm
- Perni non inclusi

- Complete with wrench 10mm
- Pins not included

SEZIONE A-A  
SECTION A-A



SEZIONE B-B  
SECTION B-B



Soggetto a modifiche tecniche  
 Subject to technical changes.

Cod. - Id. No.  
 46240102

Peso - Weight (Kg)  
 7,5

# PLUS 5 All in One 52/96

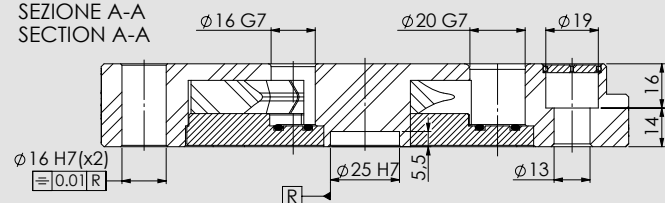
PLUS 5 All in One - Sistema Zero Point meccanico  
PLUS 5 All in One - Mechanical Zero Point system



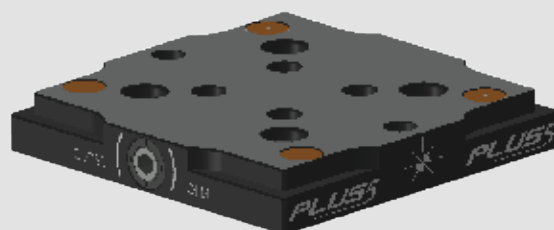
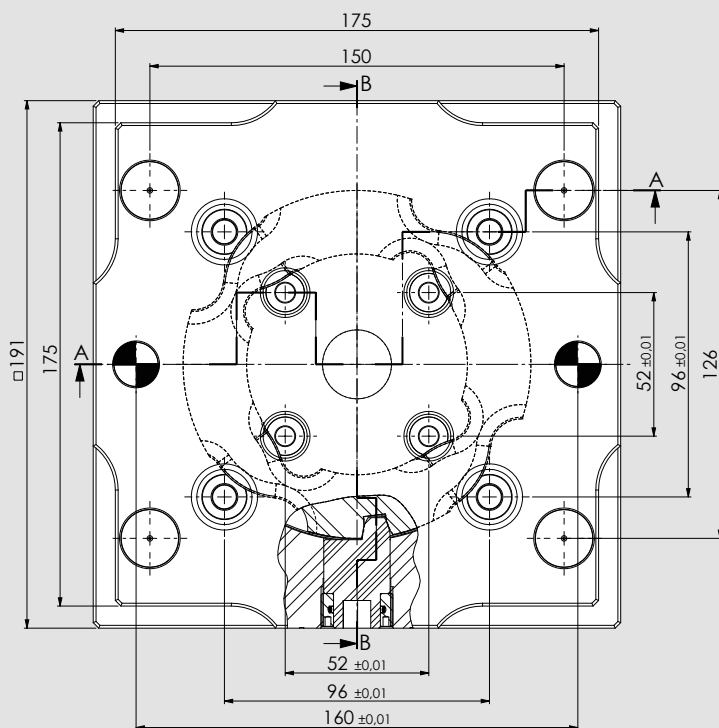
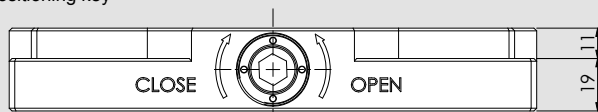
- Completo di:
  - chiave 10mm
  - tappi di protezione (Plus 5 52 / 96)
- Perni non inclusi

- Complete with:
  - wrench 10mm
  - protection caps (Plus 5 52 / 96)
- Pins not included

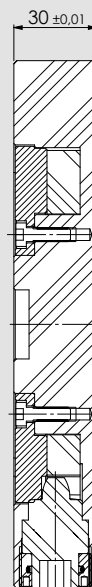
SEZIONE A-A  
SECTION A-A



OPTIONAL:  
Chiavetta di posizionamento multislot  
Multislot positioning key  
71290182



SEZIONE B-B  
SECTION B-B



Soggetto a modifiche tecniche  
Subject to technical changes.

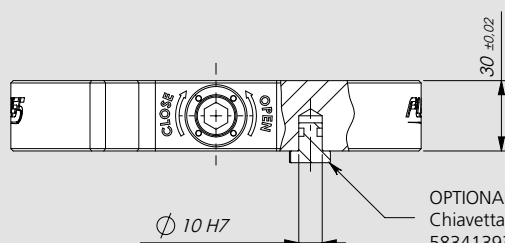
Cod. - Id. No.  
46240103

Peso - Weight (Kg)  
7,5

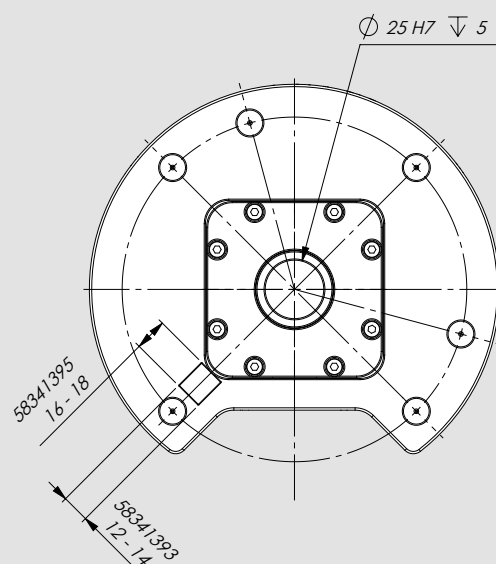
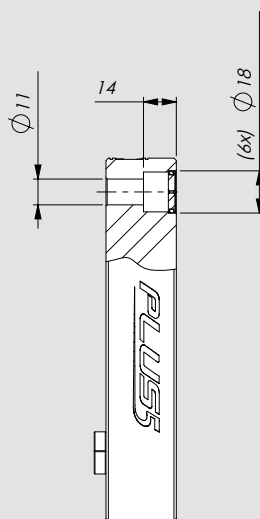
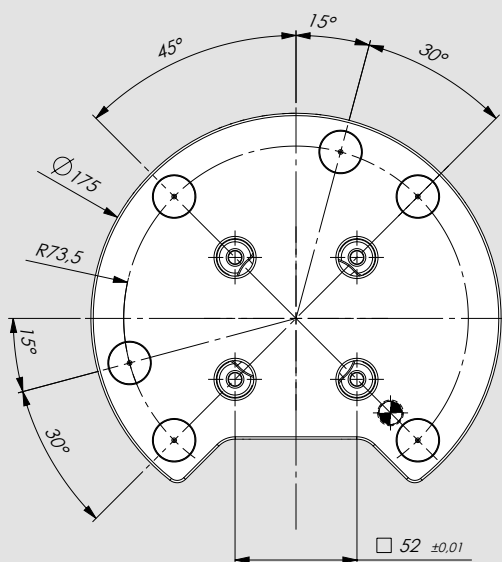


- Completo di chiave 10mm
- Perni non inclusi

- Complete with wrench 10mm
- Pins not included



OPTIONAL:  
Chiavetta di posizionamento multislot - Multislot positioning key  
58341393 / 58341395



Soggetto a modifiche tecniche  
Subject to technical changes.

Cod. - Id. No.  
46240111

Peso - Weight (Kg)  
6

# PLUS 5 INDEX

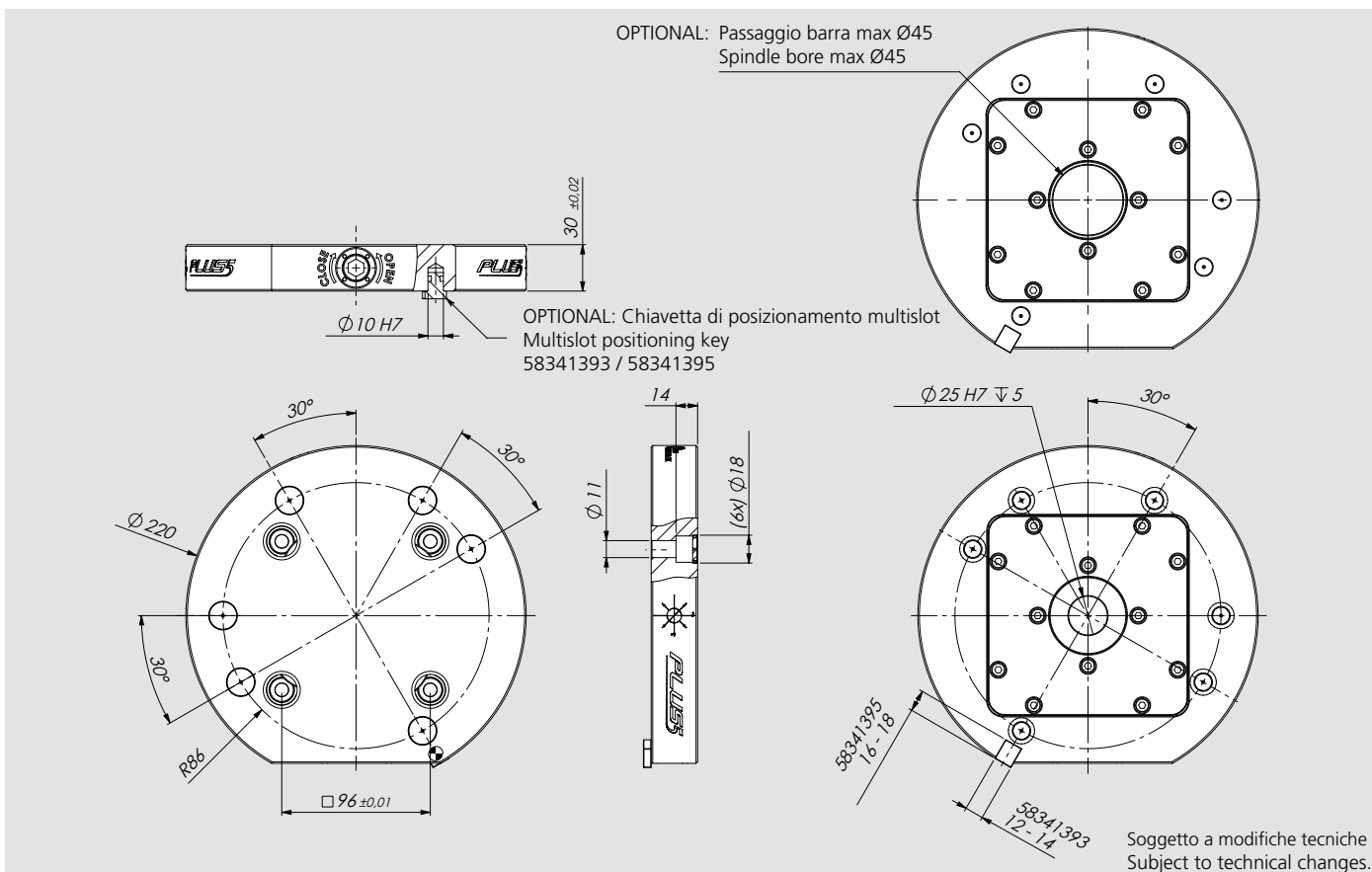
## 96

PLUS 5 INDEX - Sistema Zero Point meccanico  
PLUS 5 INDEX - Mechanical Zero Point system



- Completo di chiave 10mm
- Perni non inclusi

- Complete with wrench 10mm
- Pins not included



Cod. - Id. No.  
46240112

Peso - Weight (Kg)  
8

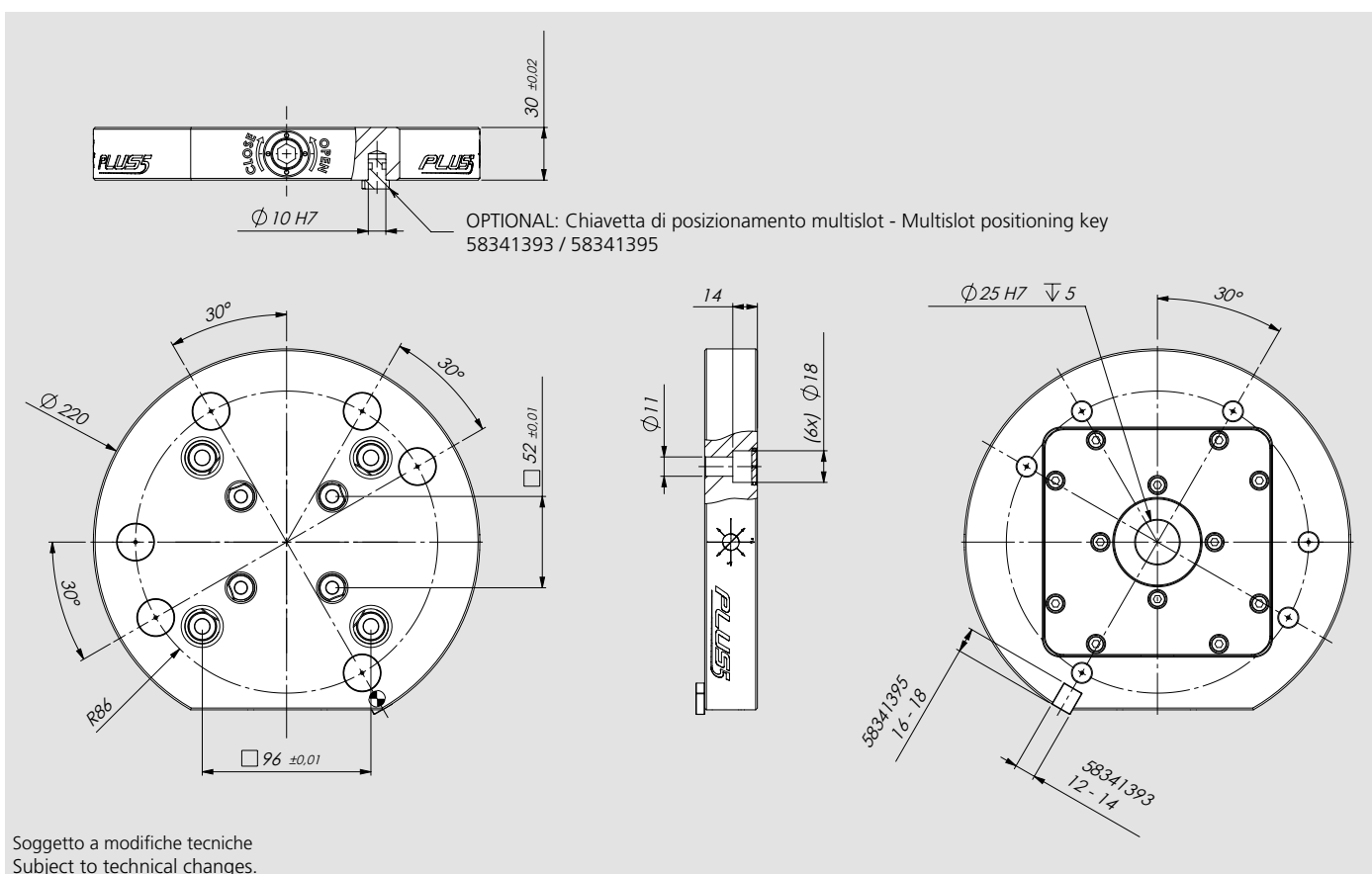
Esempio di impiego  
Working example





- Completo di:
  - chiave 10mm
  - tappi di protezione (Plus 5 - 96)
- Perni non inclusi

- Complete with:
  - wrench 10mm
  - protection caps (Plus 5 - 96)
- Pins not included



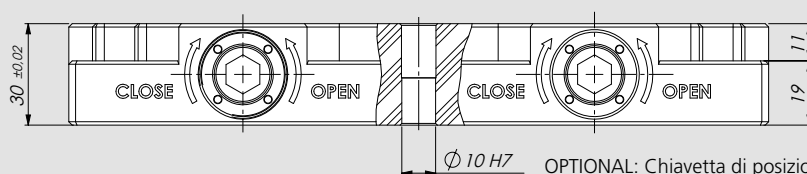
Cod. - Id. No.  
46240113

Peso - Weight (Kg)  
8

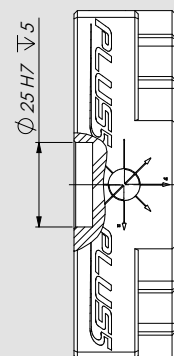
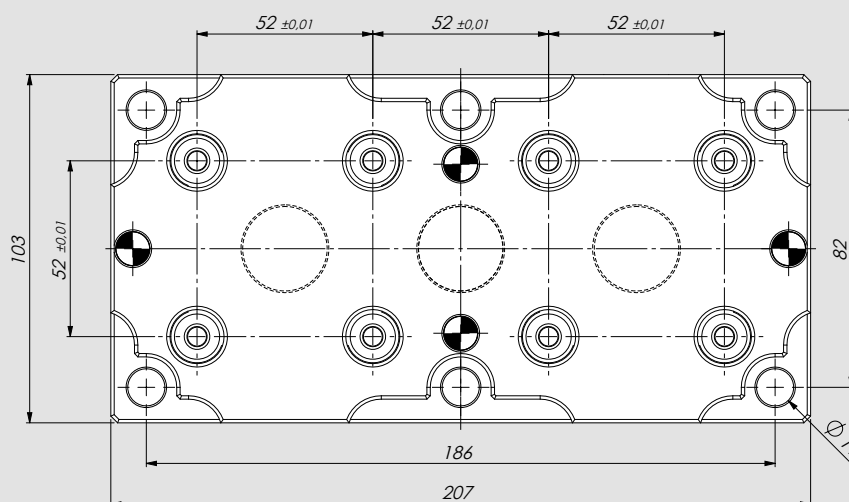


- Completo di:
  - chiave 10mm
  - n. 2 piastrelle di sicurezza (cod. 46248205)
- Perni non inclusi

- Complete with:
  - wrench 10mm
  - n. 2 safety plates (Id. No. 46248205)
- Pins not included



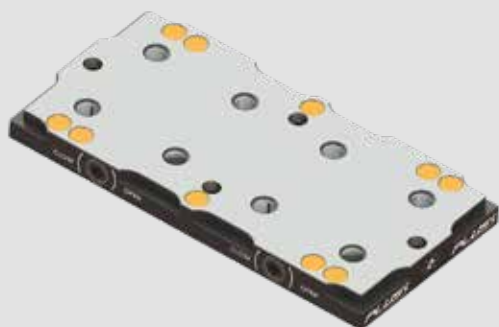
OPTIONAL: Chiavetta di posizionamento multislot - Multislot positioning key  
58341393 / 58341395



Soggetto a modifiche tecniche  
Subject to technical changes.

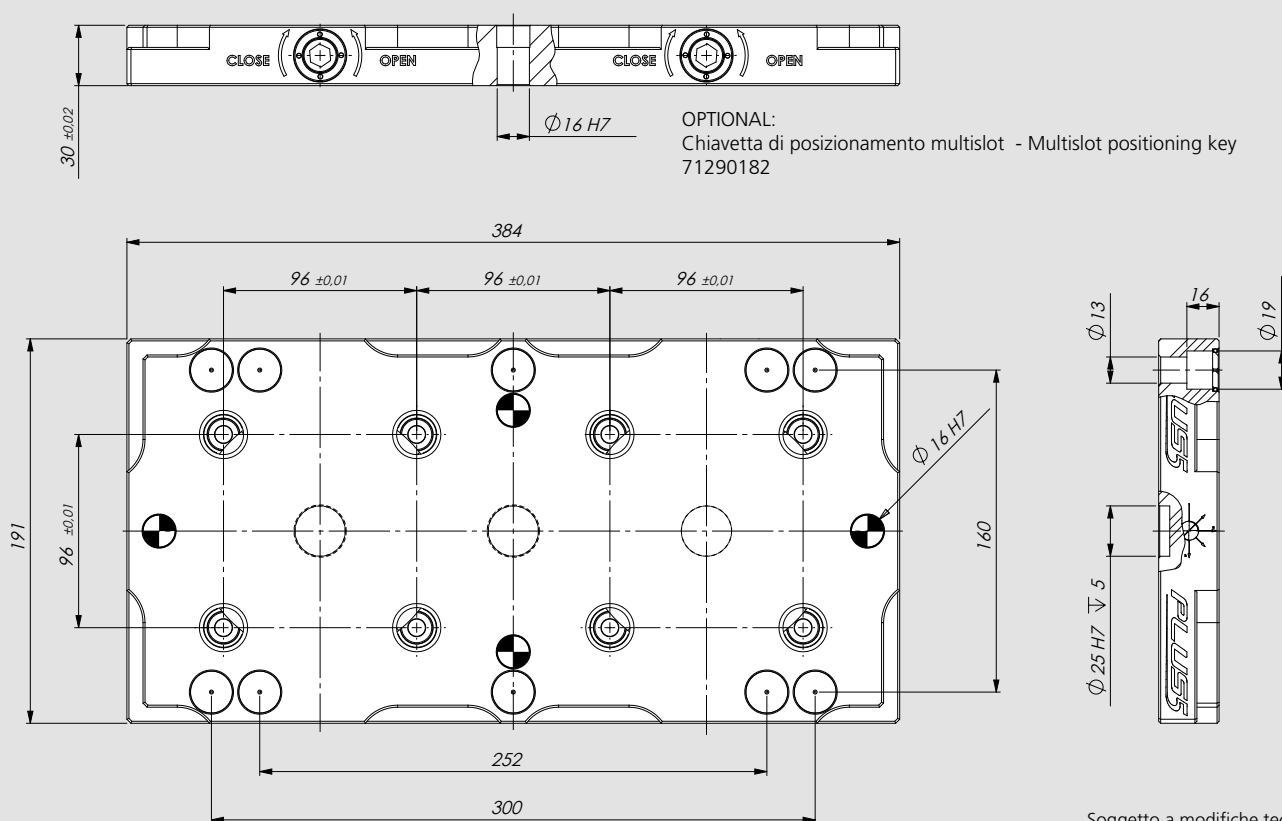
Cod. - Id. No.  
46248200

Peso - Weight (Kg)  
4



- Completo di:  
- chiave 10mm  
- n. 2 piastine di sicurezza (cod. 46248215)
- Perni non inclusi

- Complete with:  
- wrench 10mm  
- n. 2 safety plates (Id. No. 46248215)
- Pins not included



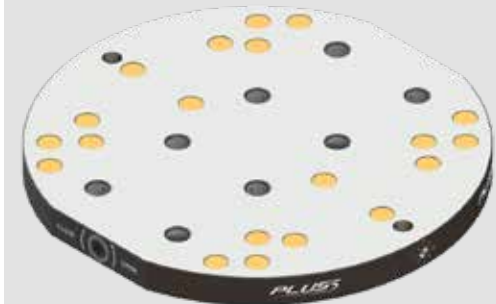
Soggetto a modifiche tecniche  
Subject to technical changes.

Cod. - Id. No.  
46248210

Peso - Weight (Kg)  
16

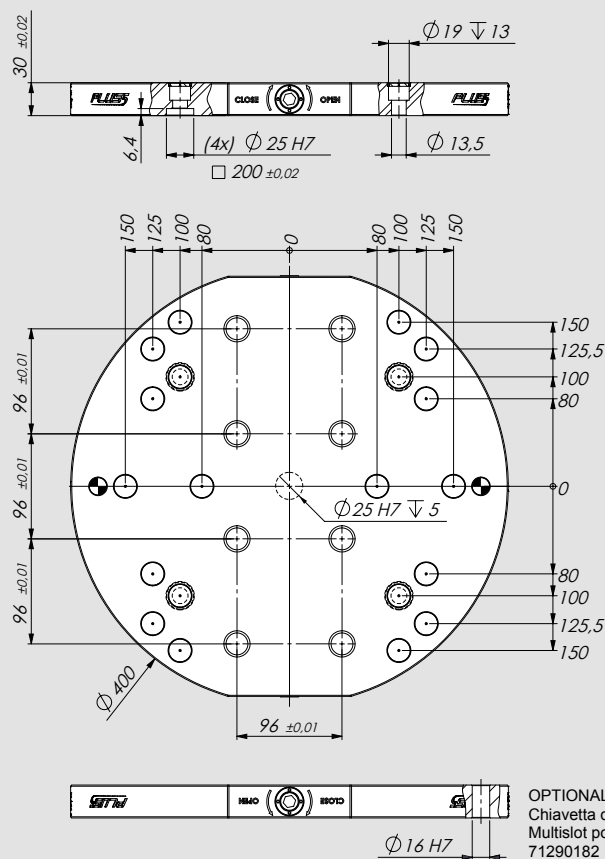
**Esempio di impiego**  
**Working example**





- Completo di:
  - chiave 10mm
  - n. 2 piastrine di sicurezza (cod. 46248215)
- Perni non inclusi

- Complete with:
  - wrench 10mm
  - n. 2 safety plates (Id. No. 46248215)
- Pins not included



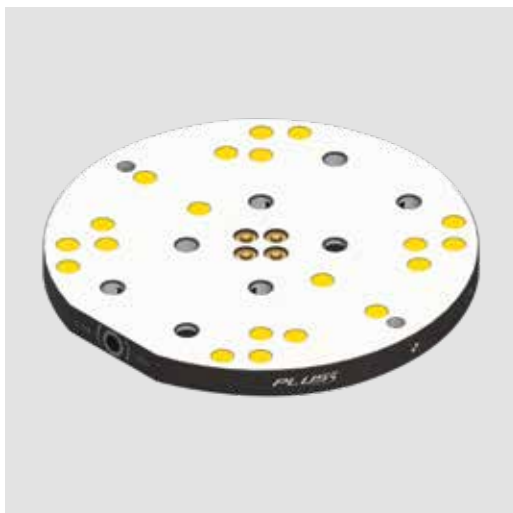
Soggetto a modifiche tecniche  
Subject to technical changes.

Cod. - Id. No.  
46248220

Peso - Weight (Kg)  
27

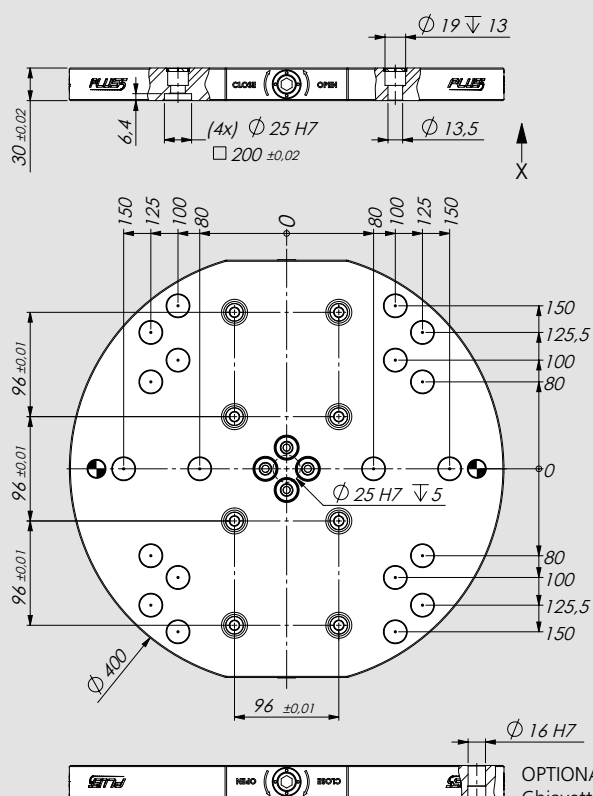
Esempio di impiego  
Working example



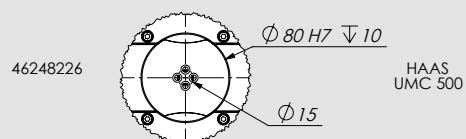
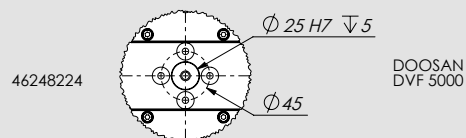
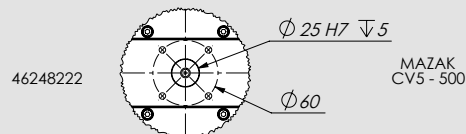


- Completo di:  
 - chiave 10mm  
 - n. 2 piastrine di sicurezza  
 (cod. 46248215)
- Perni non inclusi
- n. 4 innesti maschio

- Complete with:  
 - wrench 10mm  
 - n. 2 safety plates  
 (Id. No. 46248215)
- Pins not included
- n. 4 fittings male



VISTA da X



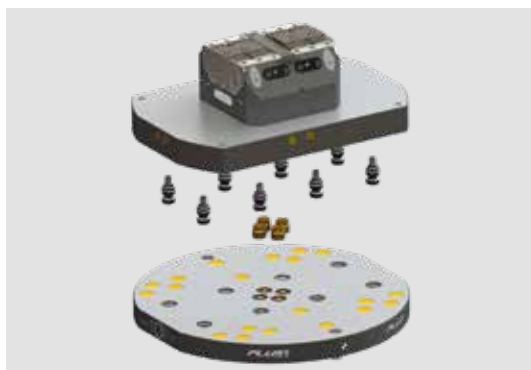
Soggetto a modifiche tecniche  
 Subject to technical changes.

OPTIONAL:  
 Chiavetta di posizionamento multislot  
 Multislot positioning key  
 71290182

Cod. - Id. No.  
 46248224

Peso - Weight (Kg)  
 27

**Esempio di impiego**  
**Working example**

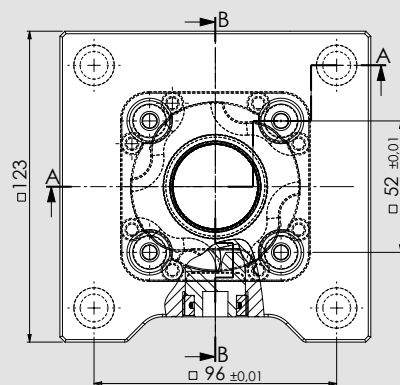
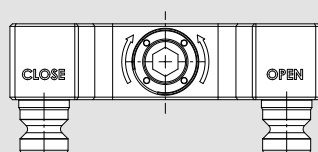
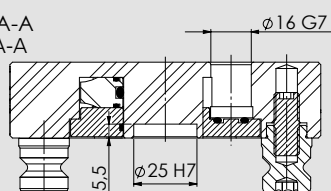




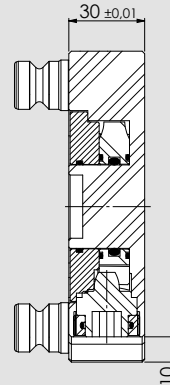
- Completo di:  
- chiave 10mm
- n. 4 perni 96 (46240220)

- Complete with:  
- wrench 10mm
- n. 4 pins 96 (46240220)

SEZIONE A-A  
SECTION A-A



SEZIONE B-B  
SECTION B-B



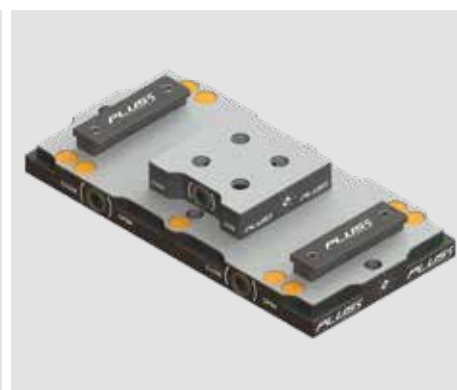
Cod. - Id. No.

46240104

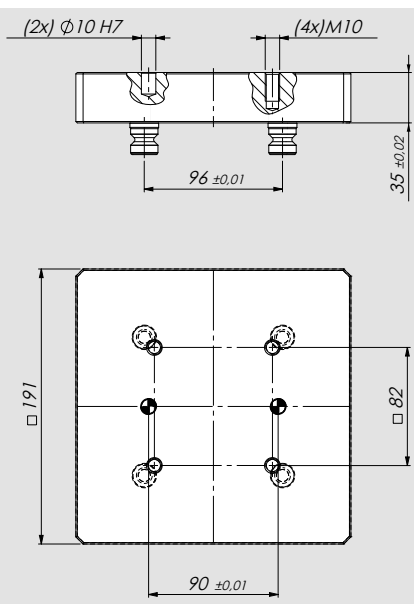
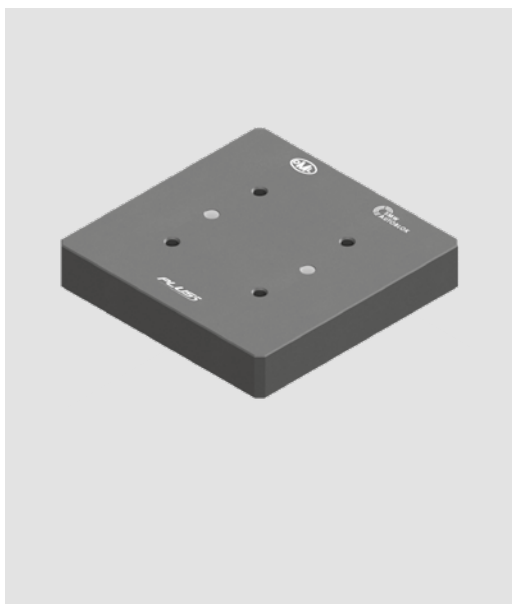
Peso - Weight (Kg)

3,5

### Esempio di impiego Working example



## Piastra di riduzione - Reduction plate



### Esempio di impiego Working examples



Completo di

- Viti e spine di fissaggio per Plus 5 52
- Set 4 Perni Plus 5 96

Complete with

- Fixing screws and dowel pins for Plus 5 52
- Set of 4 Plus 5 96 pins

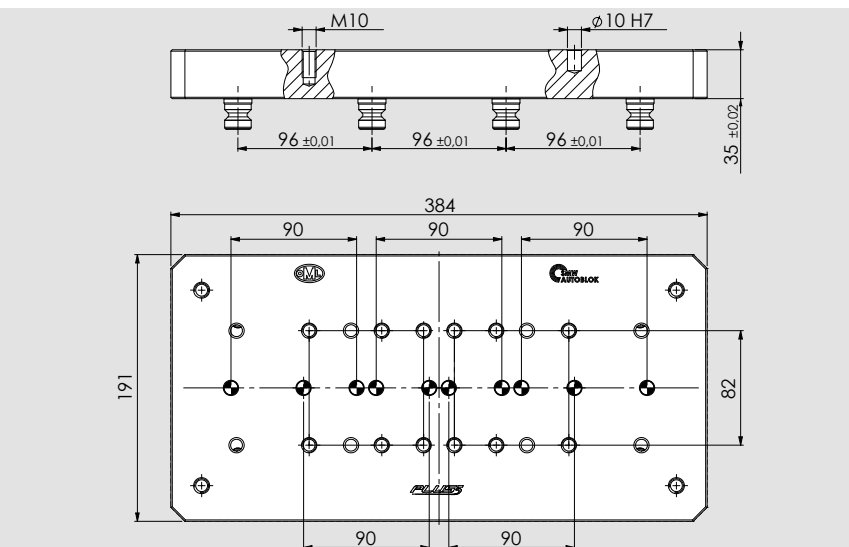
Cod. - Id. No.

46242210

Peso - Weight (Kg)

10

## Piastra di riduzione multipla - Multiple reduction plate



Completo di

- Viti e spine di fissaggio per Plus 5 52
- n. 2 Set 4 Perni Plus 5 96

Complete with

- Fixing screws and dowel pins for Plus 5 52
- n. 2 Set of 4 Plus 5 96 pins

Cod. - Id. No.

46242220

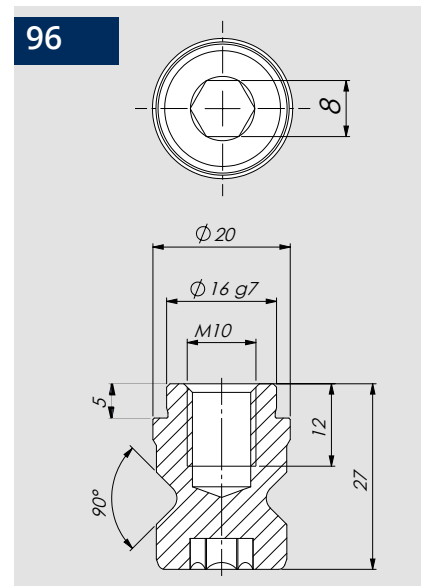
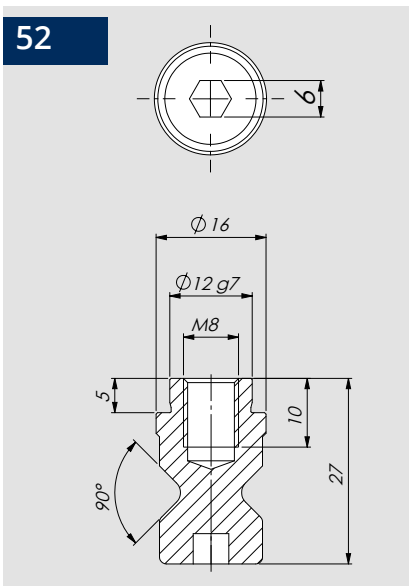
Peso - Weight (Kg)

21

### Esempio di impiego Working example



### Perni di bloccaggio - Clamping pins

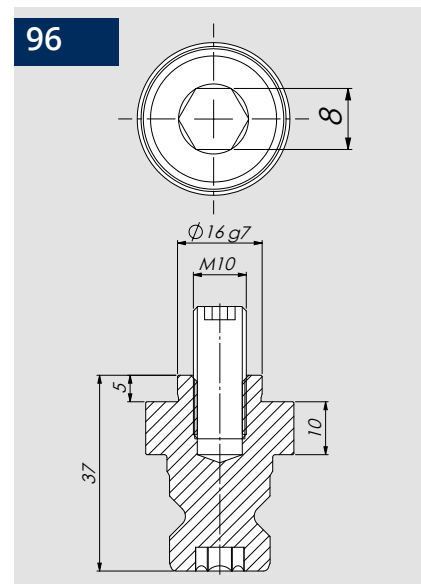
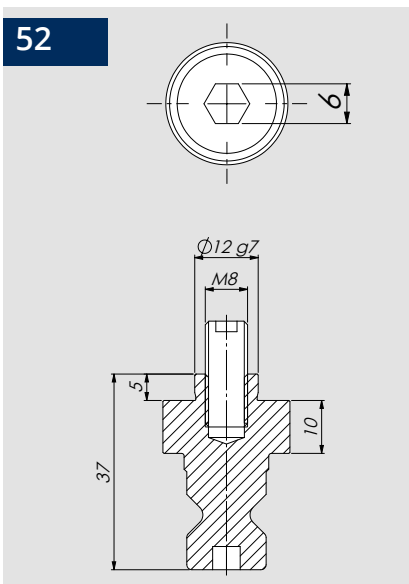


- Completi di grano M8 per Plus5 52 e M10 per Plus5 96
- Complete of grub screw M8 for Plus5 52 and M10 for Plus5 96

| Descrizione - Description                                | Cod. - Id. No. | Peso - Weight (Kg) |
|----------------------------------------------------------|----------------|--------------------|
| Set 4 perni per PLUS 5 - 52 - Set of 4 pins for PL5 - 52 | 46240214       | 0,12               |
| Set 4 perni per PLUS 5 - 96 - Set of 4 pins for PL5 - 96 | 46240224       | 0,20               |
| Perno per PLUS 5 - 52 - Pin for PL5 - 52                 | 46240210       | 0,03               |
| Perno per PLUS 5 - 96 - Pin for PL5 - 96                 | 46240220       | 0,05               |

Le dimensioni del perno identificano la compatibilità con altri perni presenti sul mercato  
The dimensions of the pin identify compatibility with other pins on the market

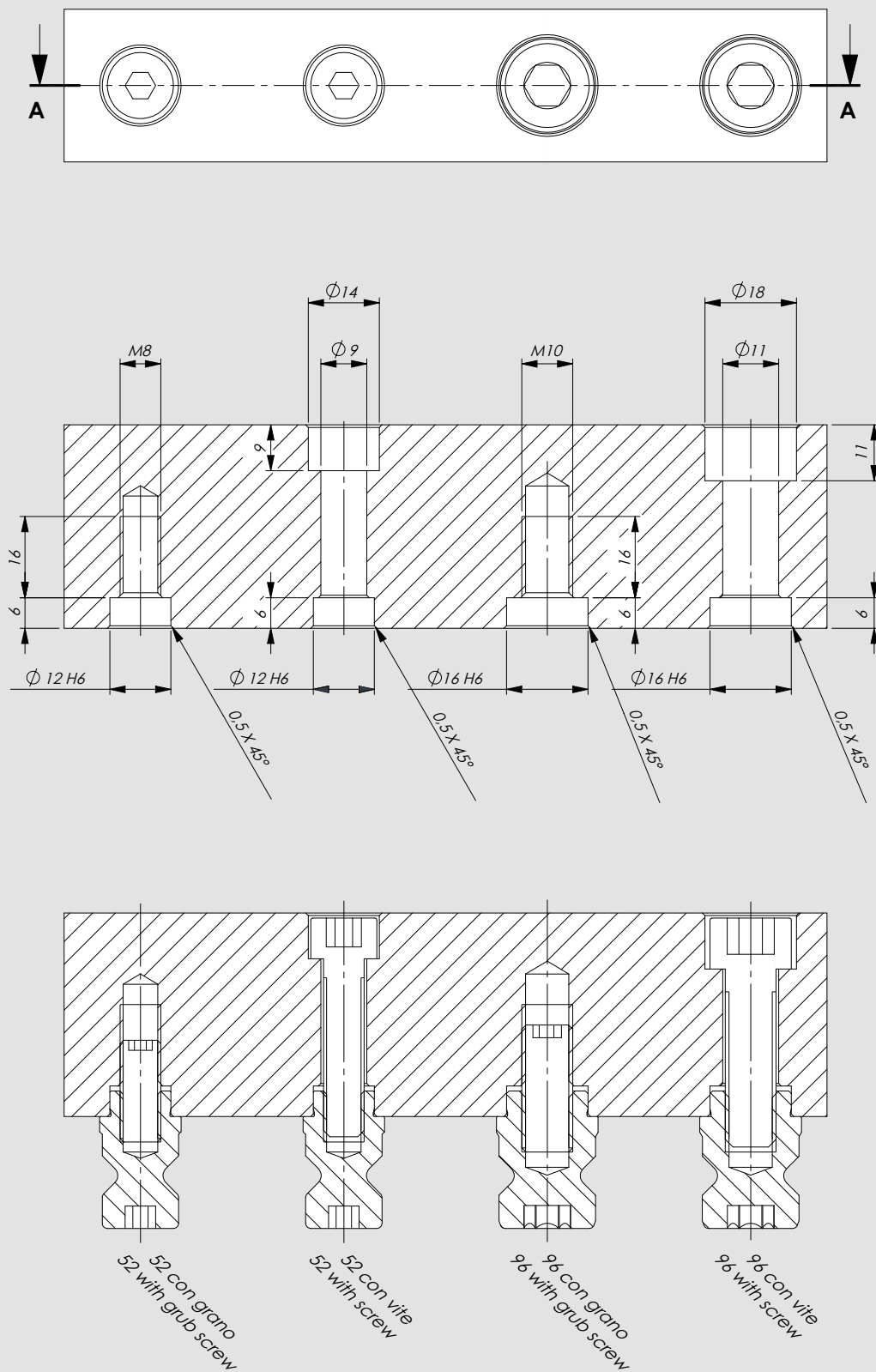
### Perni di bloccaggio rialzati - Raised clamping pins



- Completi di grano M8 per Plus5 52 e M10 per Plus5 96
- Complete of grub screw M8 for Plus5 52 and M10 for Plus5 96

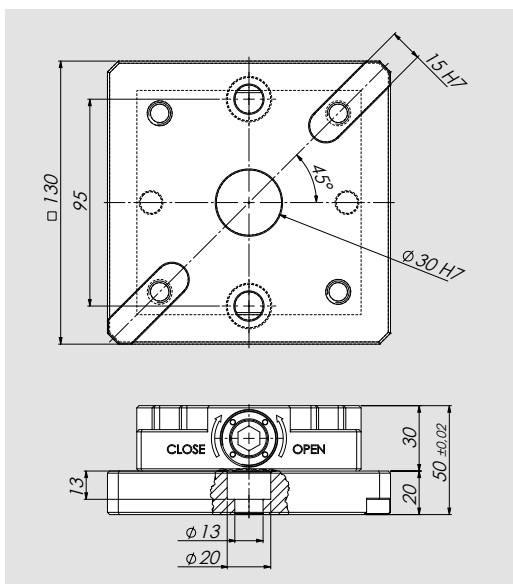
| Descrizione - Description                                                | Cod. - Id. No. | Peso - Weight (Kg) |
|--------------------------------------------------------------------------|----------------|--------------------|
| Set 4 perni rialzati per PLUS 5 - 52 - Set of 4 raised pins for PL5 - 52 | 46240234       | 0,12               |
| Set 4 perni rialzati per PLUS 5 - 96 - Set of 4 raised pins for PL5 - 96 | 46240244       | 0,20               |
| Perno rialzato per PLUS 5 - 52 - Raised pin for PL5 - 52                 | 46240230       | 0,03               |
| Perno rialzato per PLUS 5 - 96 - Raised pin for PL5 - 96                 | 46240240       | 0,05               |

Le dimensioni del perno identificano la compatibilità con altri perni presenti sul mercato  
The dimensions of the pin identify compatibility with other pins on the market





### Esempi di impiego Working examples

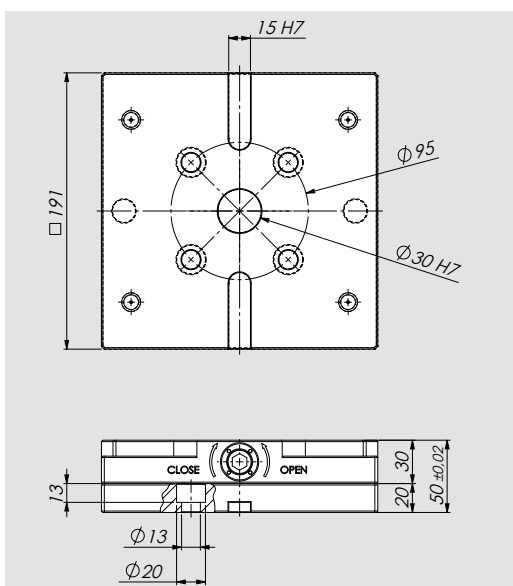


### PLUS 5 - 52

#### Piatra di interfaccia pallets Pallet interface plate

Completo di viti e spine di fissaggio  
Plus 5 non incluso  
Complete with screws and dowel pins  
Plus 5 not included

| Cod. - Id. No. | Peso - Weight (Kg) |
|----------------|--------------------|
| 46242110       | 2,5                |

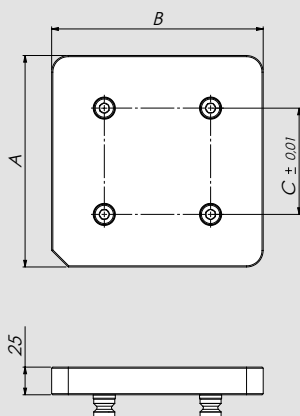


### PLUS 5 - 96

#### Piatra di interfaccia pallets Pallet interface plate

Completo di viti e spine di fissaggio  
Plus 5 non incluso  
Complete with screws and dowel pins  
Plus 5 not included

| Cod. - Id. No. | Peso - Weight (Kg) |
|----------------|--------------------|
| 46242120       | 5,5                |

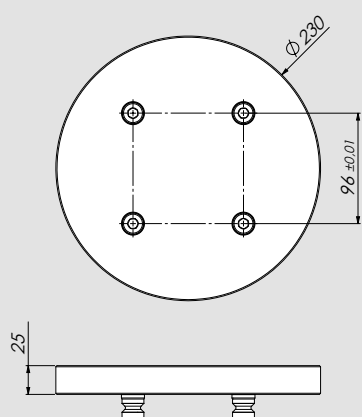


### PLUS 5 - 52 / 96

#### Piastra liscia - Smooth plate

Completo di set 4 perni  
Complete with set of 4 pins

| Cod. - Id. No. | Tipo - Type | A   | B   | C  | Peso - Weight |
|----------------|-------------|-----|-----|----|---------------|
| 46247710       | 52          | 103 | 103 | 52 | 2 Kg          |
| 46247720       | 96          | 191 | 191 | 96 | 7 Kg          |

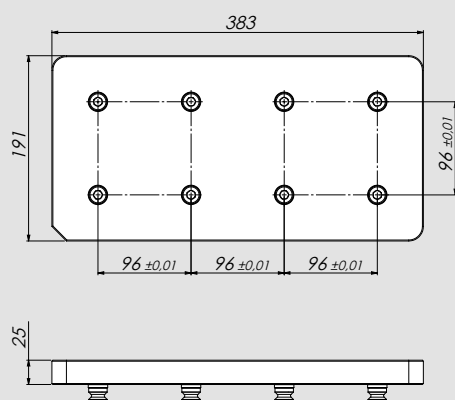


### PLUS 5 - 96

#### Piastra liscia tonda - Smooth round plate

Completo di set 4 perni  
Complete with set of 4 pins

| Cod. - Id. No. | Peso - Weight (Kg) |
|----------------|--------------------|
| 46247730       | 8                  |



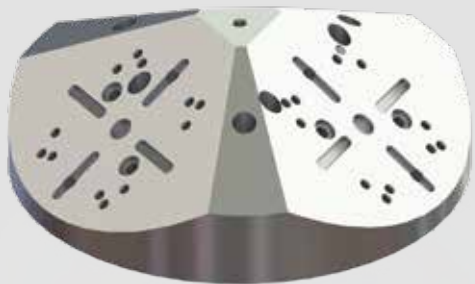
### PLUS 5 - 96

#### Piastra liscia doppia - Double smooth plate

Completo di n. 2 set 4 perni Plus 5 96  
Complete with n. 2 set of 4 pins Plus 5 96

| Cod. - Id. No. | Peso - Weight (Kg) |
|----------------|--------------------|
| 46247740       | 15                 |





### Applicazioni/Benefici cliente

- Ideale per macchine a 5 assi
- Design compatto
- Possibilità di montaggio diretto su tavola macchina con cave radiali a 45 / 60 gradi
- Possibilità di montaggio diretto su pallet APS con moduli passo 200/250mm e Plus 5

### Caratteristiche tecniche

- Materiale: ALU

### Dotazione standard

Chiavette e viti per IMG  
Perni e viti per Plus 5

### Applications / Customer Benefits

- Ideal for 5 axis machines
- Compact design
- Possibility to be mounted directly on machine tools with radial slots at 45 / 60 degrees
- Possibility to be mounted directly on single plate or DUO APS (pitch 200/250mm) and Plus 5

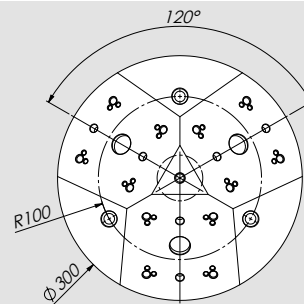
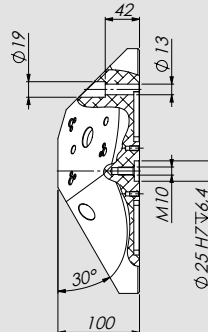
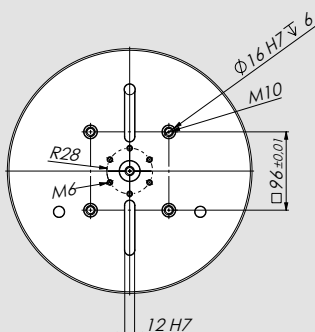
### Technical features

- Material: ALU

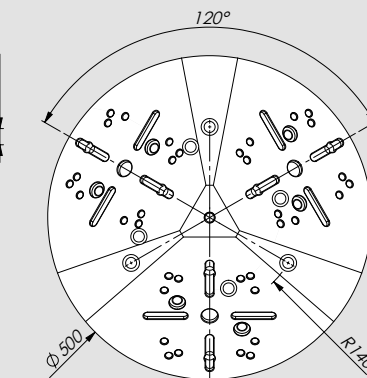
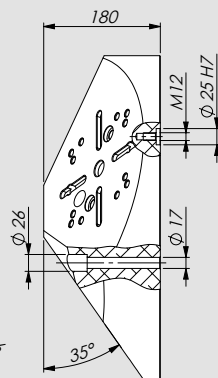
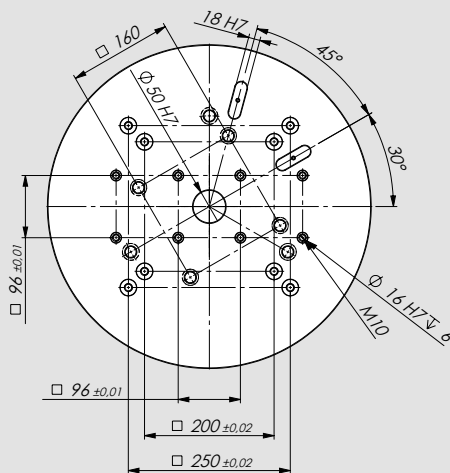
### Standard equipment

Positioning keys and screws for IMG  
Pins and screws for Plus 5

IMG 88 - 130  
PLUS 5 - 52



IMG 125 - 180  
IMG 125 - 220  
PLUS 5 - 96



### Tipo - Type

Per IMG 88-130 e PLUS 5 - 52 - For IMG 88-130 and PLUS 5 - 52

Per IMG 125-180, IMG 125-220 e PLUS 5 - 96 - For IMG 125-180, IMG 125-220 and PLUS 5 - 96

### Cod. - Id. No.

58343210

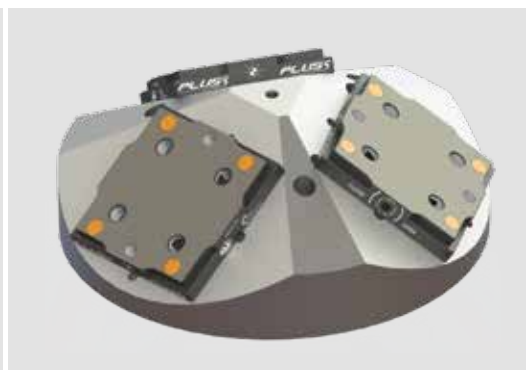
58353210

### Peso - Weight

12 Kg

55 Kg

### Esempio di impiego Working example



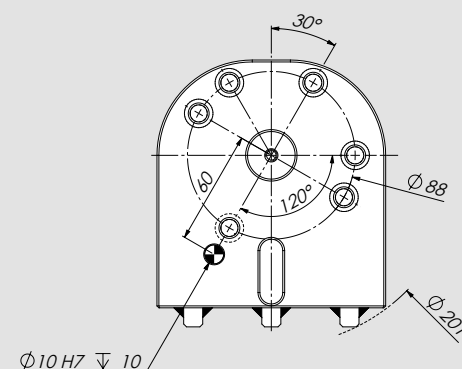
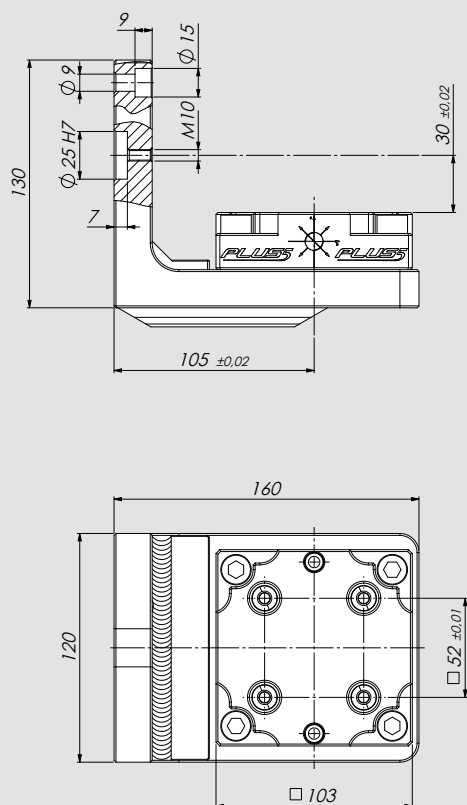
# PLUS 5 - 52

## BASCUOLA PER PLUS 5 - 52 TRUNNION FOR PLUS 5 - 52



Plus 5 - 52 non incluso

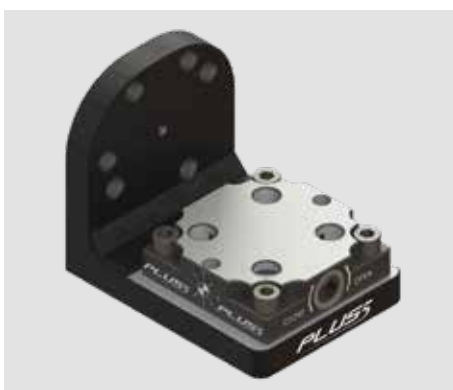
Plus 5 - 52 not included



Cod. - Id. No.  
46242038

Peso - Weight (Kg)  
6

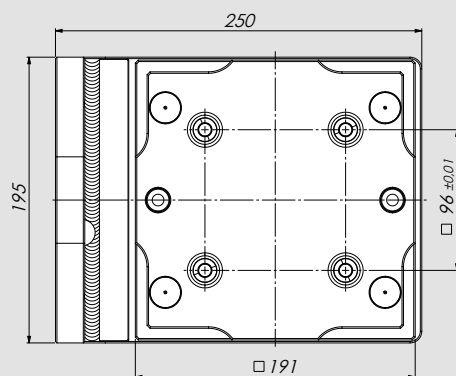
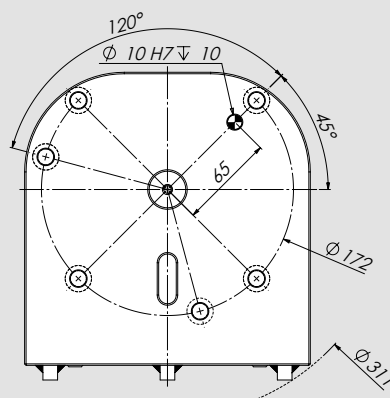
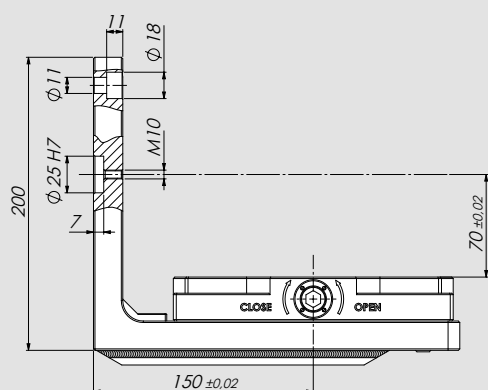
### Esempi di impiego Working examples





Plus 5 - 96 non incluso

Plus 5 - 96 not included



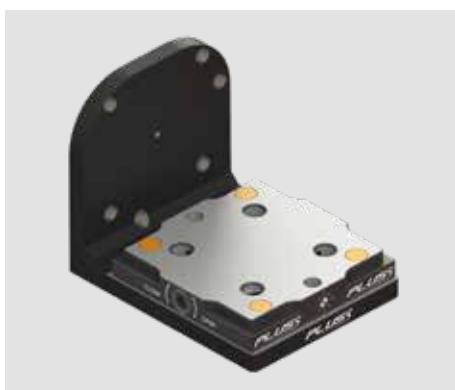
Cod. - Id. No.

46242039

Peso - Weight (Kg)

14

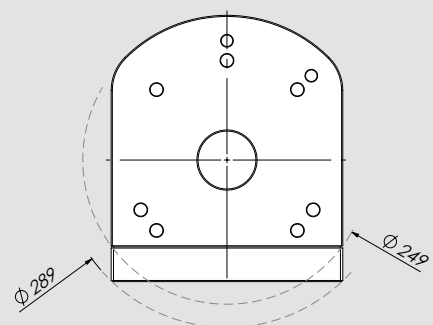
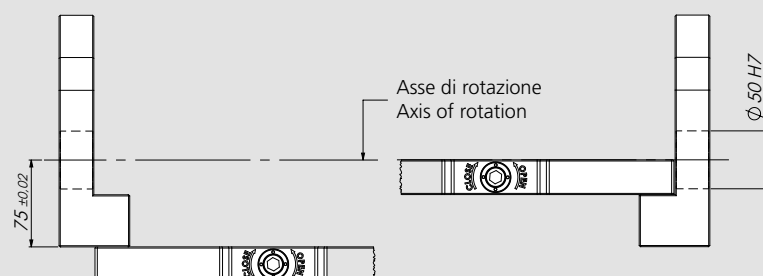
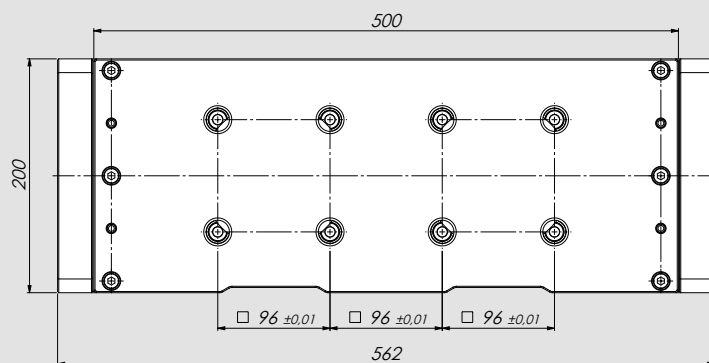
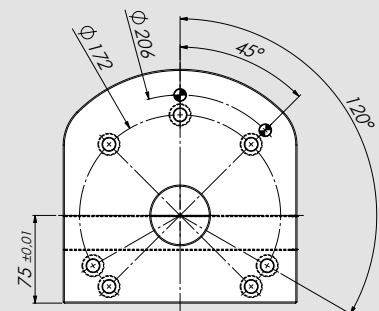
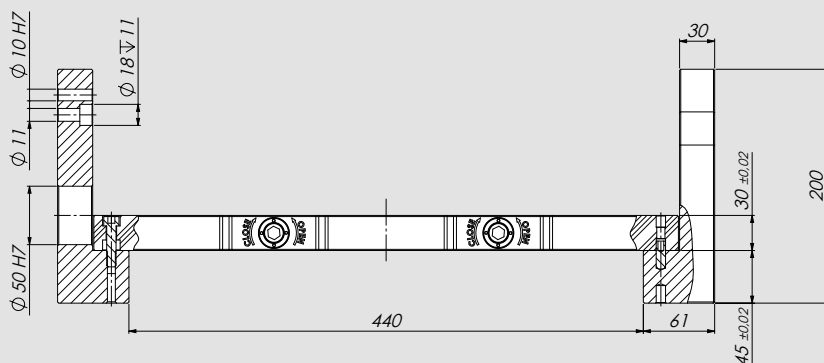
Esempi di impiego  
Working examples





- Completo di:
  - chiave 10mm
  - n. 2 piastrine di sicurezza (cod. 46248205)
- Perni non inclusi

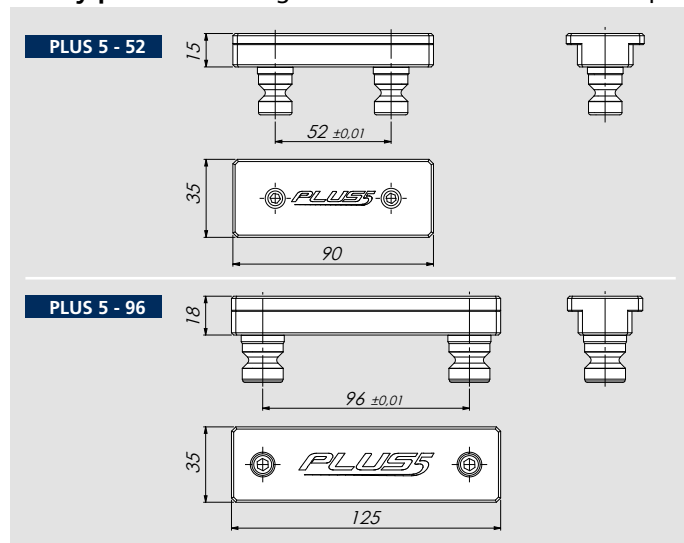
- Complete with:
  - wrench 10mm
  - n. 2 safety plates (Id. No. 46248205)
- Pins not included



**PLUS 5 - 96**

Piastrina di sicurezza per bloccaggio su due moduli diversi. Completo di perni 96

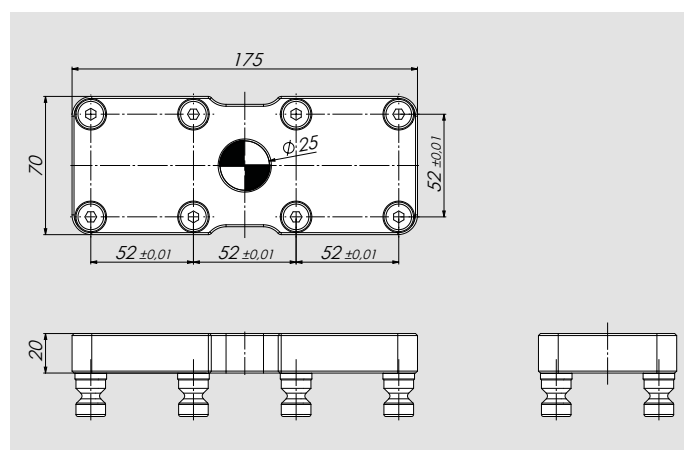
Safety plate for locking on two different modules. Complete with pins 96



| Modello - Type | Cod. - Id. No. | Peso - Weight (Kg) |
|----------------|----------------|--------------------|
| Plus 5 - 52    | 46248205       | 0,3                |
| Plus 5 - 96    | 46248215       | 0,4                |

**PLUS 5 - 52**

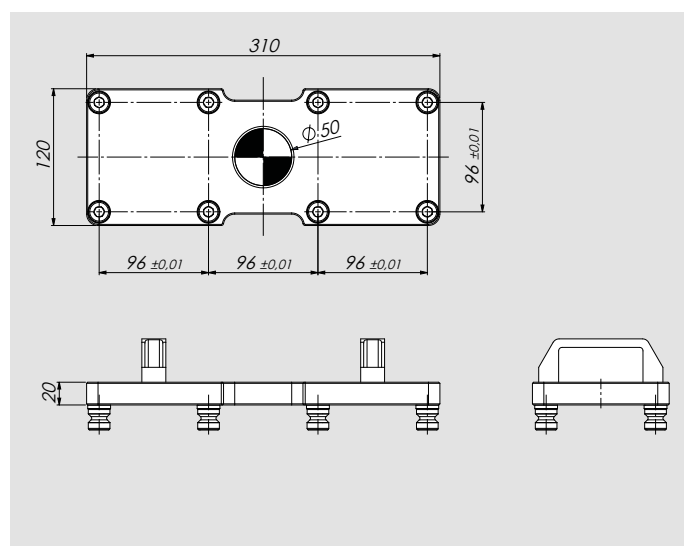
Piastra allineamento completa di perni 52 - Alignment plate complete with pins 52



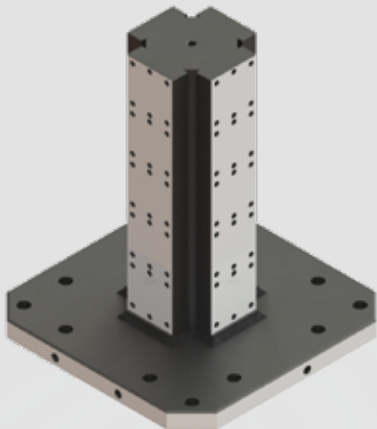
| Cod. - Id. No. | Peso - Weight (Kg) |
|----------------|--------------------|
| 46240410       | 2                  |

**PLUS 5 - 96**

Piastra allineamento completa di perni 96 - Alignment plate complete with pins 96



| Cod. - Id. No. | Peso - Weight (Kg) |
|----------------|--------------------|
| 46240420       | 6                  |



### Applicazioni/Benefici cliente

- Ideale per macchine orizzontali
- Design compatto

## Caratteristiche tecniche

- Materiale: acciaio

## Dotazione standard

Cubo in acciaio completo di viti e spine di fissaggio

## Applications / Customer Benefits

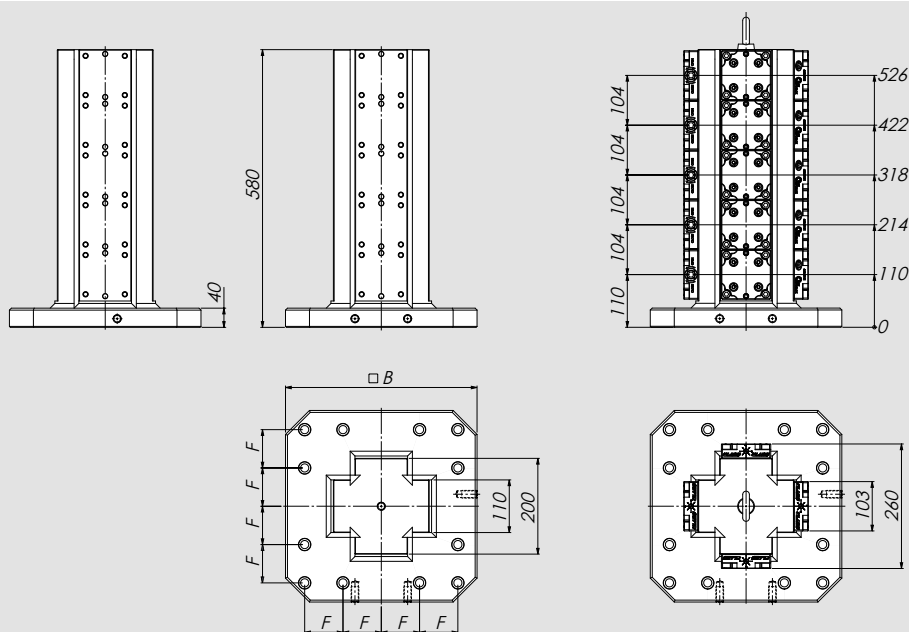
- Ideal for horizontal machines
- Compact design

## Technical features

- Material: steel

### Standard equipment

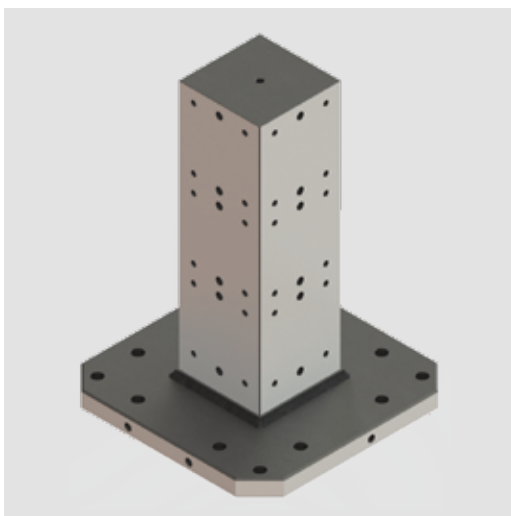
Steel tombstone complete with fixing screws and dowel pins



| Tipo - Type                             | Cod. - Id. No. | B   | F   | Peso - Weight | Peso - Weight<br>(solo cubo - only tombstone) |
|-----------------------------------------|----------------|-----|-----|---------------|-----------------------------------------------|
| Cubo - Tombstone Plus 5 - 52 - Base 400 | 46247110       | 400 | 80  | 162 Kg        | 121 Kg                                        |
| Cubo - Tombstone Plus 5 - 52 - Base 500 | 46247120       | 500 | 100 | 190 Kg        | 148 Kg                                        |

## Esempio di impiego Working example





### Applicazioni/Benefici cliente

- Ideale per macchine orizzontali
- Design compatto

### Caratteristiche tecniche

- Materiale: acciaio

### Dotazione standard

Cubo in acciaio completo di viti e spine di fissaggio

### Applications / Customer Benefits

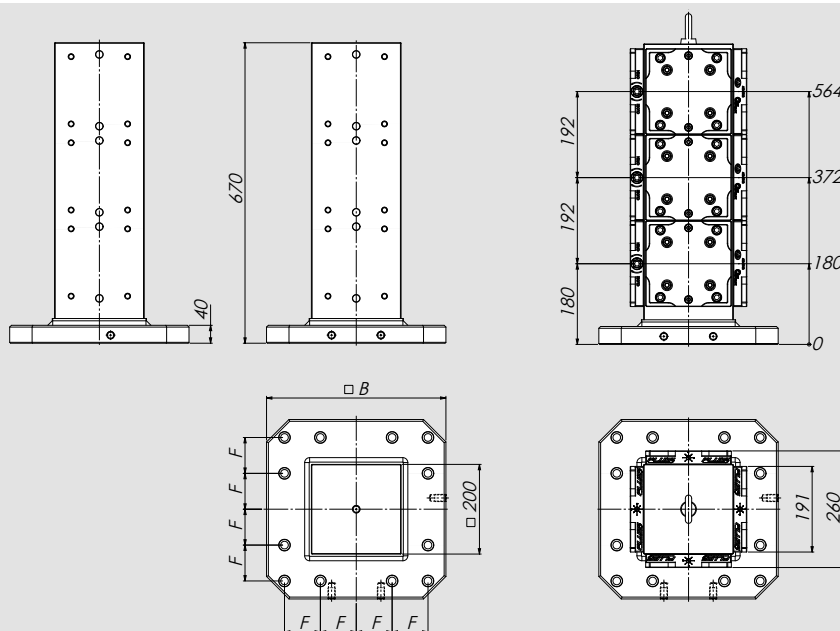
- Ideal for horizontal machines
- Compact design

### Technical features

- Material: steel

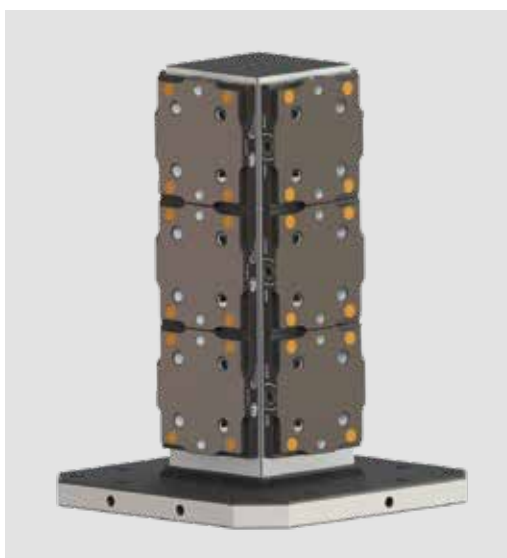
### Standard equipment

Steel tombstone complete with fixing screws and dowel pins



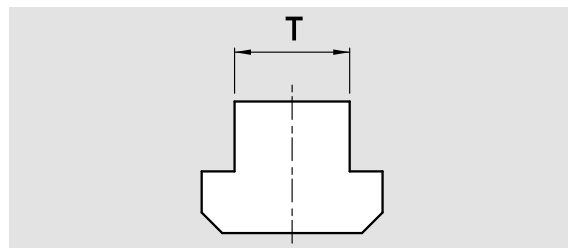
| Tipo - Type                             | Cod. - Id. No. | B   | F   | Peso - Weight | Peso - Weight<br>(solo cubo - only tombstone) |
|-----------------------------------------|----------------|-----|-----|---------------|-----------------------------------------------|
| Cubo - Tombstone Plus 5 - 96 - Base 400 | 46247210       | 400 | 80  | 253 Kg        | 160 Kg                                        |
| Cubo- Tombstone Plus 5 - 96 - Base 500  | 46247220       | 500 | 100 | 280 Kg        | 187 Kg                                        |

### Esempio di impiego Working example

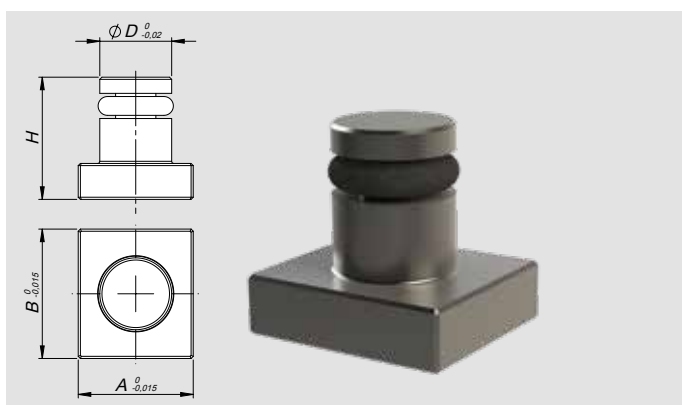


### PLUS 5 - 52/96

Coppia Staffe Fissaggio  
Pair of Clamps



| Tipo - Type  | mm 12    | mm 14    | mm 16    | mm 18    | mm 20    | mm 22    |
|--------------|----------|----------|----------|----------|----------|----------|
| PLUS 5 52/96 | 58022792 | 58022793 | 58022794 | 58022795 | 58022796 | 58022797 |



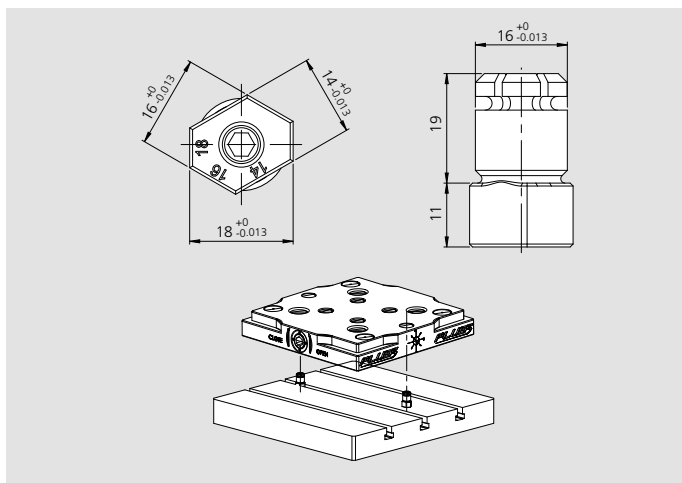
#### Chiavetta solo per

- Plus 5 52
- Plus 5 Index 96

#### Key only for:

- Plus 5 52
- Plus 5 Index 96

| Cod. - Id. No. | A  | B  | H  | D  |
|----------------|----|----|----|----|
| 58341393       | 12 | 14 | 17 | 10 |
| 58341395       | 16 | 18 | 17 | 10 |



#### Chiavetta multi-slot per Plus 5 96

Multi-Slot screw for Plus 5 96

| Tipo - Type             | Cod. - Id. No. |
|-------------------------|----------------|
| Multi-Slot 14 / 16 / 18 | 71290182       |

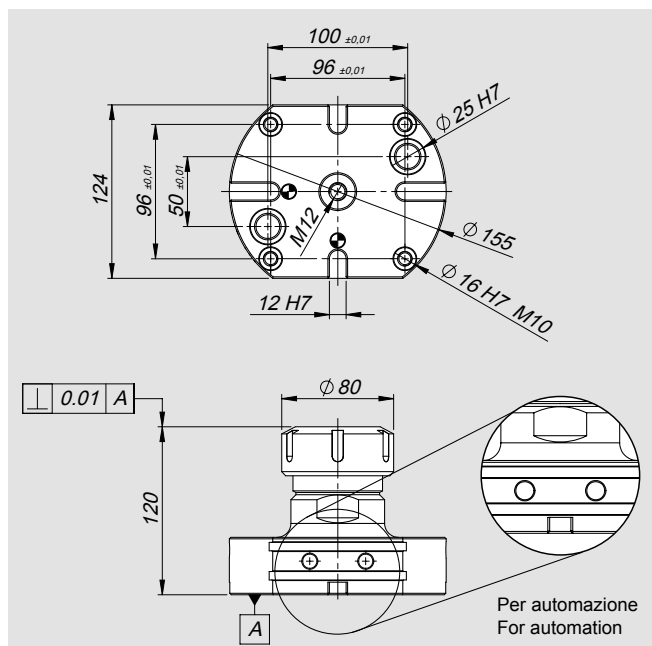


### PLUS 5 - 52/96

Tappo di protezione in acciaio  
Steel protection cap

| Tipo - Type                   | Cod. - Id. No. | Peso - Weight (Kg) |
|-------------------------------|----------------|--------------------|
| Set 4 tappi Plus 5 52         | 46240314       | 0,08               |
| Set 4 caps Plus 5 52          | 46240314       | 0,08               |
| Set 4 tappi Plus 5 96         | 46240324       | 0,16               |
| Set 4 caps Plus 5 96          | 46240324       | 0,16               |
| Tappo di protezione Plus 5 52 | 46240310       | 0,02               |
| Protection cap Plus 5 52      | 46240310       | 0,02               |
| Tappo di protezione Plus 5 96 | 46240320       | 0,04               |
| Protection cap Plus 5 96      | 46240320       | 0,04               |

MANDRINO PORTA PINZA ER50 - COLLECT CHUCK ER50



Cod. - Id. No.  
46233500

Esempio di impiego  
Working example





**TCI**



**MCI**



**CV**



**CV-S**



**FMS**



**SINTERGRIP**



**APS**



**CLAK SYSTEM**



**GENIUS**



**CAM SYSTEM**



**HOLDING CLAMPS**



**VARI CLAMP**



**JAWS**



**SINTEX**



**FAST CLAMPS**



**TWIN VISE**



**IMG**



**TDM**



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