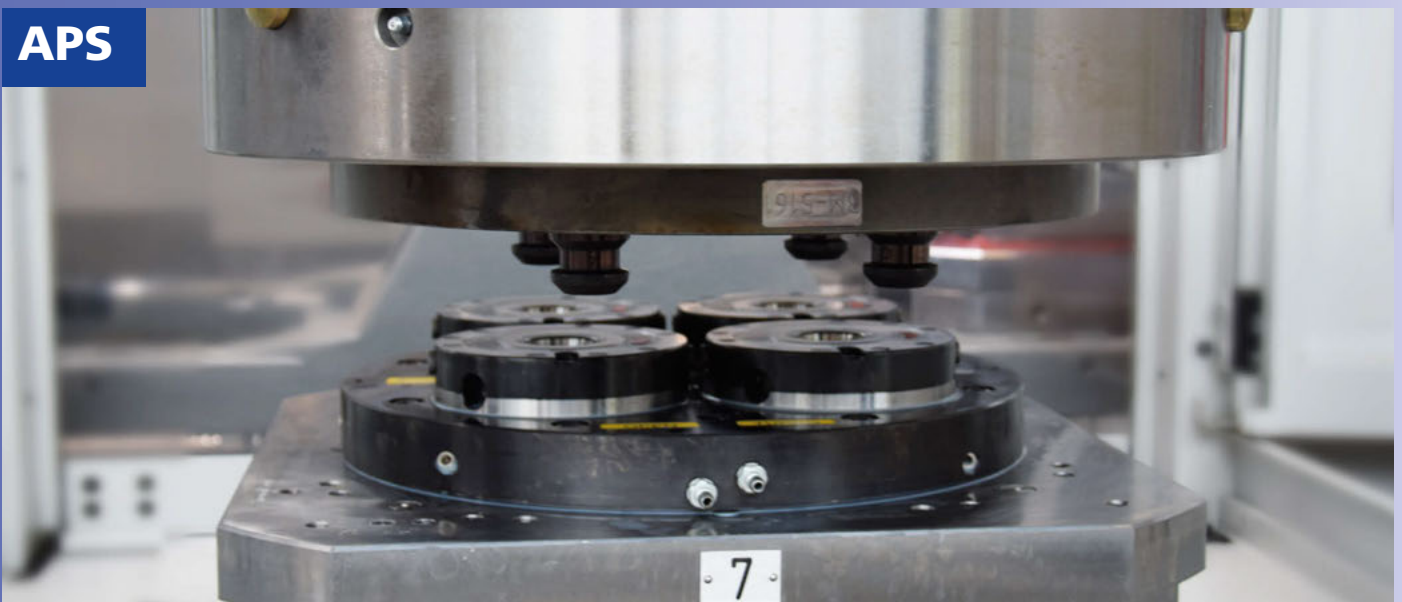
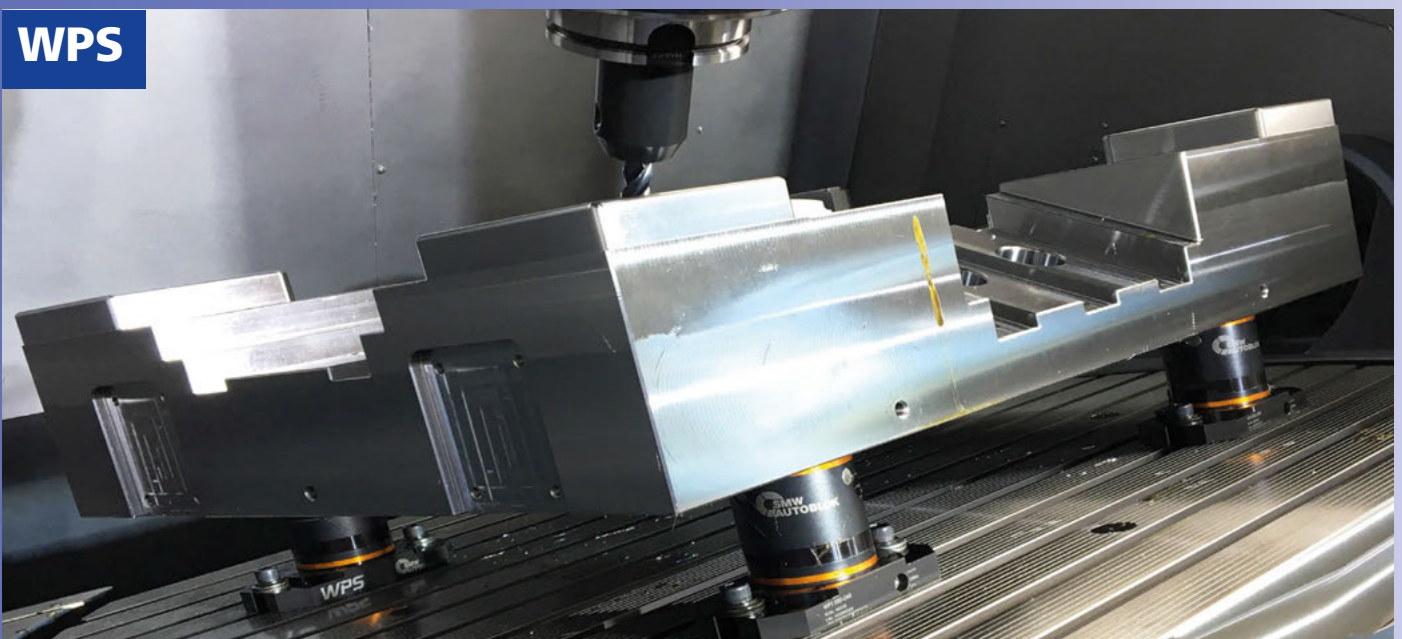


Significant reduction of set-up times

APS



WPS

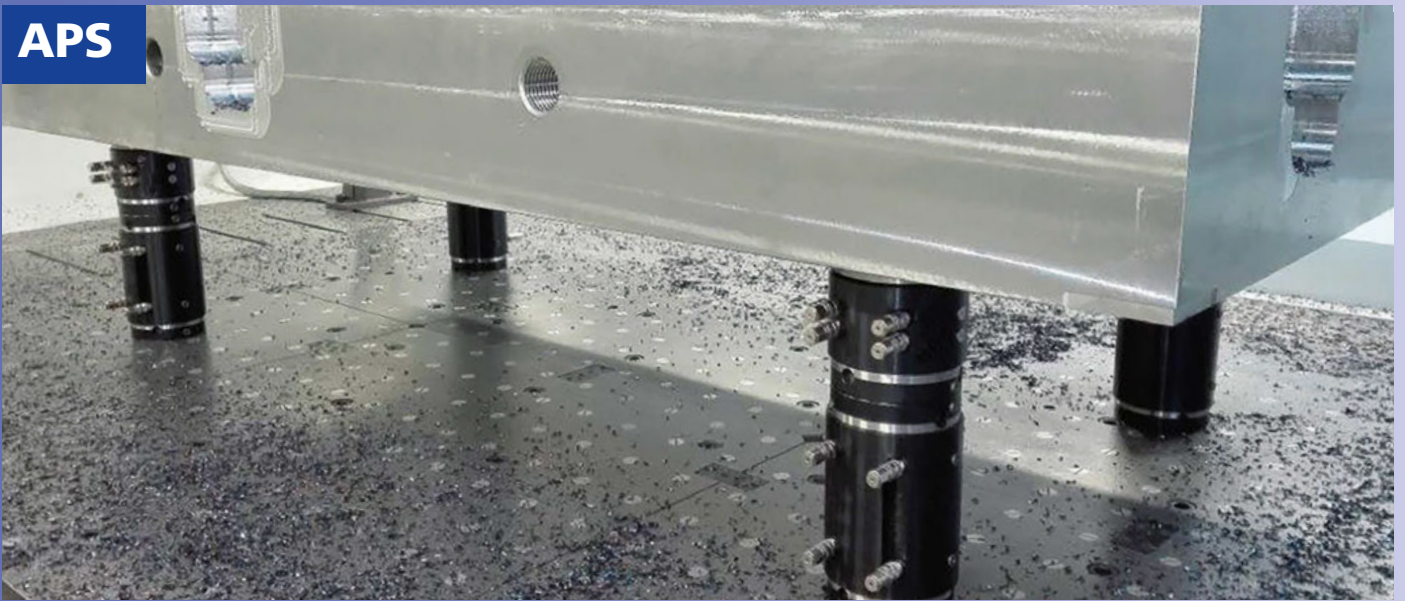


Zero point clamping systems (Page 1 of 2)

 <p>proofline® series fully sealed – low maintenance</p>	<p>APS Zero point clamping system modules</p> <ul style="list-style-type: none"> ■ Highest precision ■ Wear-resistant and rust protected ■ Maximum pull-in forces due to turbo function ■ Suitable for automation ■ Low installation height due to compact design ■ Modules fully sealed (proofline) 		<p>APS Special module height extensions</p> <ul style="list-style-type: none"> ■ For automation
	<p>APS Clamping pins</p> <ul style="list-style-type: none"> ■ Large entry radii on the clamping pins for easy and safe loading ■ Wear-resistant 		<p>APS Combi units</p> <ul style="list-style-type: none"> ■ Ready to use combi module units ■ Different heights
	<p>APS Clamping units</p> <ul style="list-style-type: none"> ■ Fully assembled clamping unit ■ Ready to use ■ Customer-specific versions available in a short time 		<p>APS Clamping pallets</p> <ul style="list-style-type: none"> ■ Fully assembled clamping pallet ■ Optional with interface for module height extension ■ Customized clamping pallets for any machine / application
	<p>APS Module height extensions</p> <ul style="list-style-type: none"> ■ Ready to use single module units ■ Different heights 		<p>APS Spacers</p> <ul style="list-style-type: none"> ■ Adapt one or more combi units
	<p>APS Special clamping units</p> <ul style="list-style-type: none"> ■ Customer-specific versions ■ For vertical lathes ■ For automation 		<p>APS Accessories</p> <ul style="list-style-type: none"> ■ Protection covers ■ Pins and keys for orientation (single use) ■ Fixing screws for clamping units
<p>Page 10</p>		<p>Page 50</p>	
<p>Page 21</p>		<p>Page 54</p>	
<p>Page 27</p>		<p>Page 56</p>	
<p>Page 37</p>		<p>Page 62</p>	
<p>Page 42</p>		<p>Page 63</p>	

Significant reduction of set-up times

APS



WPS



Zero point clamping systems (Page 2 of 2)



proofline® series
fully sealed - low maintenance

Page 74

WPS

Workpiece positioning system

- Ideal for workpiece direct clamping
- Highest precision
- Single quick-actuation
- Opening and closing with only 3.5 rotations
- Maximal holding forces
- Modules fully sealed (proofline)



proofline® series
fully sealed - low maintenance

Page 100

WPS Mini

Mini workpiece positioning system

- Mini version - 40 mm diameter
- Manual quick actuation (270° rotation)
- Highest repeatability
- Maximum pull-in and holding forces
- Modules fully sealed (proofline)



Page 81

WPS

Accessories

- Clamping pins
- Drawing for mounting clamping pins
- Reductions
- Mounting bolts
- Positioning set



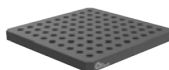
proofline® series
fully sealed - low maintenance

Page 106

WPS ZeroAct

Connectable flexible zero point module

- Up to 3 modules connectable in a row with central actuation
- Very flat design
- Manual quick actuation (270° rotation)
- Highest repeatability
- Maximum pull-in and holding forces
- Modules fully sealed (proofline)



Page 87

WPS

Grid plates

- Standard and customized grid plates
- Rust protected
- Short delivery times



Page 112

WPS-Z-Flex

Workpiece positioning system

- Ideal for workpiece direct clamping
- Highest precision
- Single quick-actuation
- Opening and closing with only 3.5 rotations
- Maximal holding forces
- Modules fully sealed (proofline)
- Continuously adjustable



Page 89

WPS

Adapter for APS

- Adapter to use WPS on APS



Page 90

WPS-PPD

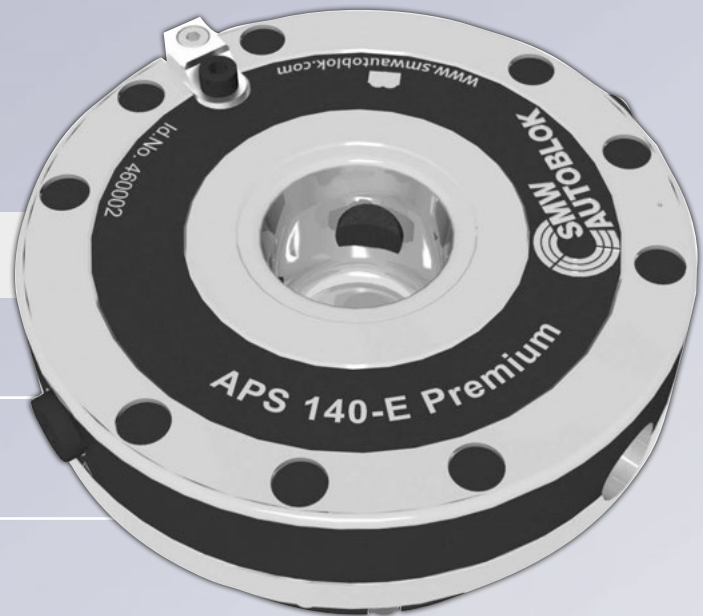
Workpiece preparation device

- Ideal for OP 10
- Preparation of the workpiece for WPS
- Clamping height of the workpiece adjustable
- Very strong and compact design

APS zero point clamping system

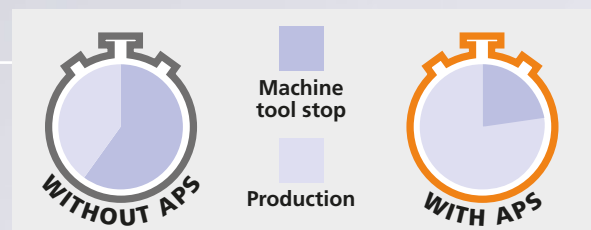


Industry 4.0
Product

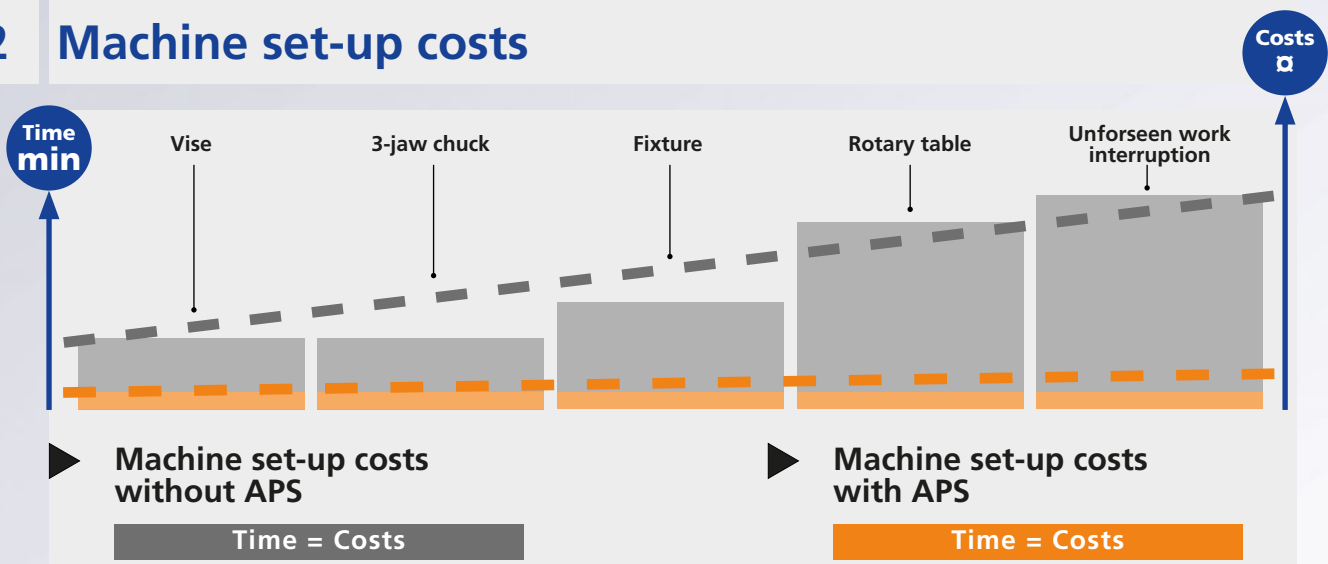


1 Customer benefits

- ▶ Fully sealed (proofline)
- ▶ Highest stiffness by means of 3 clamping slides
- ▶ Low installation height due to the compact design
- ▶ Highest process reliability and repeat accuracy < 0.005 mm
- ▶ Modular construction kit system: Existing clamping systems can be modified very easy
- ▶ Significantly reduced costs due to reduced set-up times



2 Machine set-up costs





WATCH THE VIDEO



3 Overview APS versions

▶ BASIC

- 2 Clamping slides
- Turbo function
- Sealed

▶ PREMIUM LIGHT

- 3 Clamping slides
- Turbo function
- Air cleaning (except INOX version)
- Sealed
- Stainless steel (only INOX version)
- High temperature (INOX-HEAT)

▶ PREMIUM LIGHT SC

- 3 Clamping slides
- Turbo function
- Air cleaning
- Stroke control system
- Air sensing
- Sealed

▶ PREMIUM

- 2-3-6 Clamping slides (based on sizes)
- Turbo function
- Air sensing
- Air cleaning (100-140 sizes)
- Sealed
- 2 or 4 feedings
- Key
- Stroke control system (except 100 size)

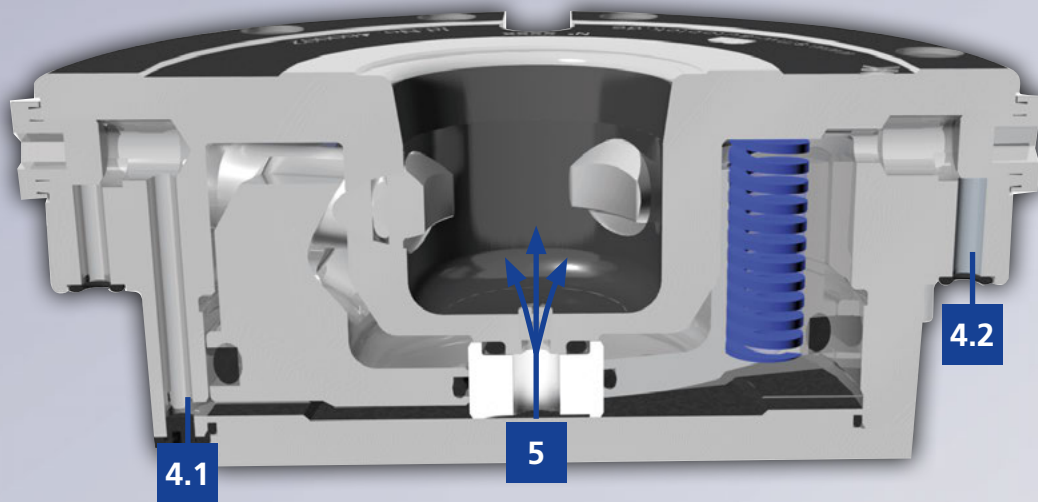
Type	APS classification	Size	Clamping slides	Turbo	Air cleaning	Stroke control	Air sensing	Key	Feedings	+10°C + 70°C	+10°C + 130°C
BASIC	BASIC	100	2	●						●	
		140	2	●						●	
PREMIUM LIGHT	PREMIUM LIGHT	140	3	●	●					●	
	PREMIUM-LIGHT INOX	140	3	●						●	
	PREMIUM-LIGHT INOX-HEAT	140	3	●							●
PREMIUM LIGHT SC	PREMIUM LIGHT SC	140	3	●	●	●	●			●	
	PREMIUM LIGHT SC	160	3	●	●	●	●			●	
PREMIUM	PREMIUM	100	2	●	●		●	●		●	
	PREMIUM SC	140	3	●	●	●	●	●		●	
		190	3	●		●	●	●		●	
		250	6	●		●	●	●		●	
	PREMIUM SC-2INN	190	3	●		●	●	●	●	●	
	PREMIUM SC-4INN	190	3	●		●	●	●	●	●	

APS Features

SIZES 100-140-160-190-250



Industry 4.0
Product



1 Maximum rigidity

Jaws with double inclined plane which generates the "PULL DOWN" effect and piston with integral inclined planes.

2 Maximum accuracy

Maximum accuracy of the tapered coupling between the pin and the module.

3 Air sensing

It is possible to monitor the clamping device's supporting surface through the air sensing.

4 Turbo function

▶ **4.1 Unlocking function**
at 6 bar

▶ **4.2 Turbo function**

The TURBO function is always integrated in APS PREMIUM modules TURBO is the function by means of which the compressed air increases the clamping force applied by the springs until reaching the "PULL DOWN" clamping force.

5 Air cleaning

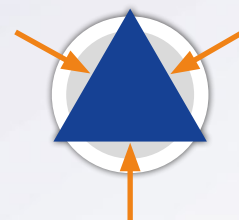
The built-in air cleaning function ensures that the clamping system's supporting surface remains clean and free of chips while the modules are being opened.



6 Clamping system with 3 jaws at 120°

APS is the only one zero point clamping system with 3 jaws at 120° and thanks to special treatments of the pins and the clamping jaws further improves its durability.

- Centering the stud in the body perfectly
- Vibration dampening with tooling working from any direction
- More accuracy and better vibration dampening

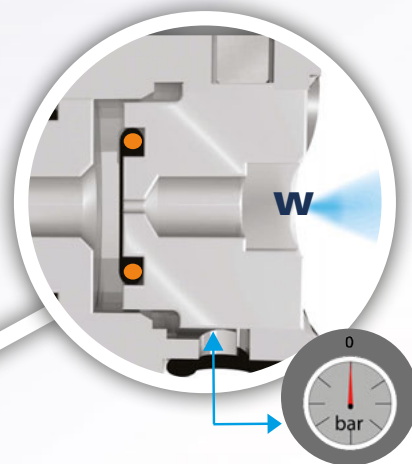
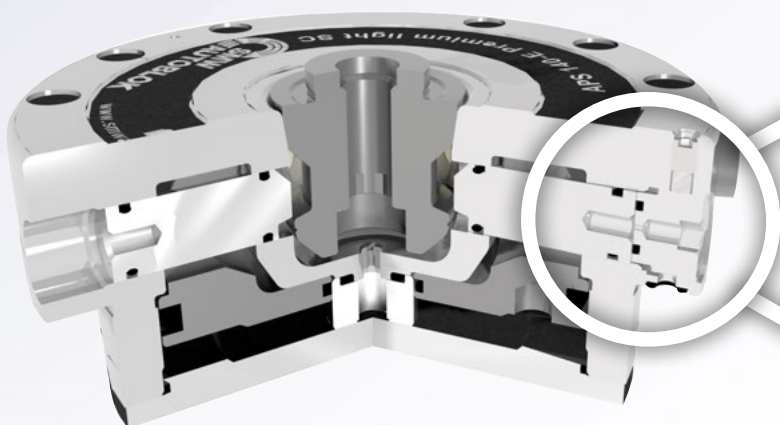


7 Stroke control system

The patented SC system is ideal for automated applications with robot loading and unloading of the pallets. The APS locking and unlocking is monitored by air pressure.

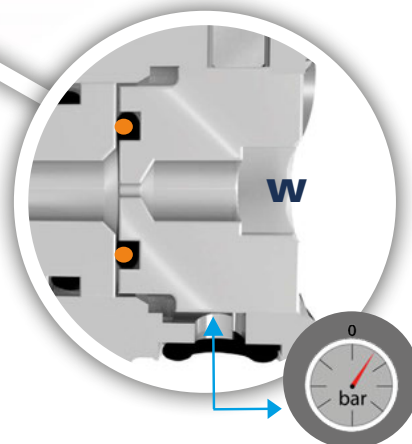
▶ 7.1 Locking position

The air enters from the lower side inlet the hole and exits out from the hole **w** = pressure drop in the line and the machine receives a "APS locked" confirmation.



▶ 7.2 Unlocking position

The air enters from the lower side inlet and it can't escape from the hole **w** = no pressure drop in the line and the machine receives a "APS unlocked" confirmation.



ATTENTION: the pneumatic system of the pressure switch must signal the alarm condition and must prevent the pallet exchange on the APS or any robot operation when the inlet pressure is less than 6 bar.

APS 100-E

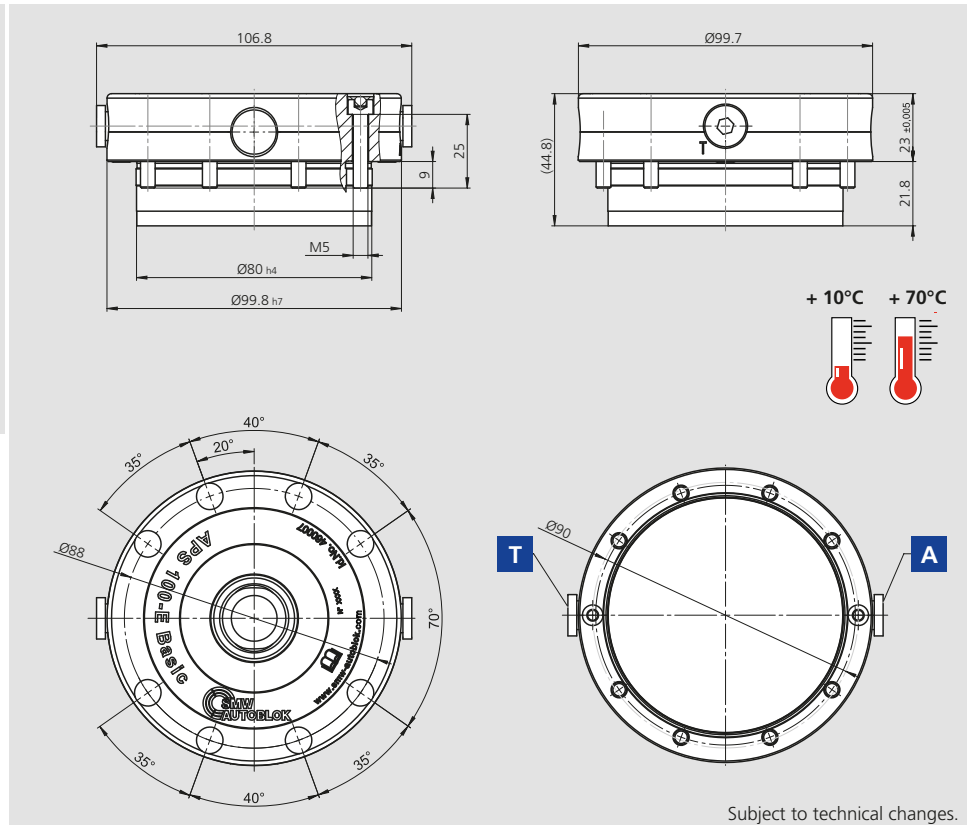
BASIC

Zero point clamping module



Technical features

- 2 clamping slides
- Turbo function **T** to increase the pull-down force



A = Open

Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 100-E BASIC	460007	4 / 15**KN	13(M6)*** 25(M8) kN	6 bar	< 0,005 mm	1.9 kg

* With screws DIN EN ISO 4762 - 12.9 / ** With "Turbo effect" / *** Screws EN-ISO10642

APS 100-E

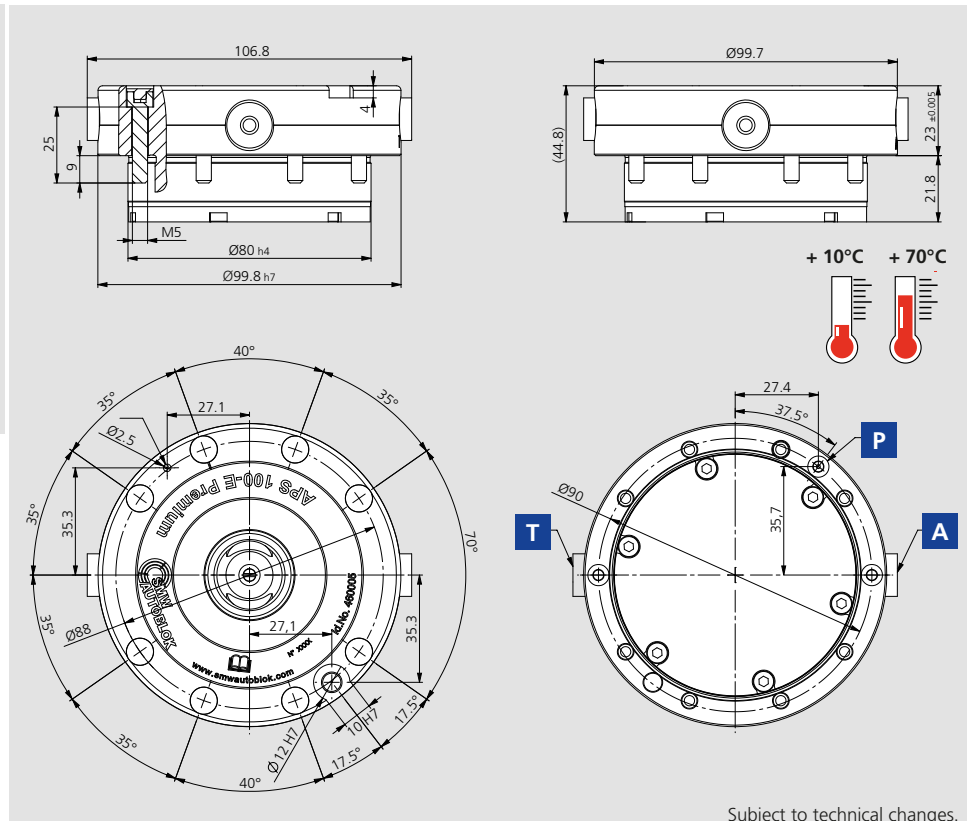
PREMIUM

Zero point clamping module



Technical features

- 2 clamping slides
- Turbo function **T** to increase the pull-down force
- Anti-rotation key seat
- Air sensing **P**
- Air cleaning



A = Open

Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 100-E PREMIUM	460005	4 / 15**KN	13(M6)*** 25(M8) kN	6 bar	< 0,005 mm	1.9 kg

* With screws DIN EN ISO 4762 - 12.9 / ** With "Turbo effect" / *** Screws EN-ISO10642

BASIC

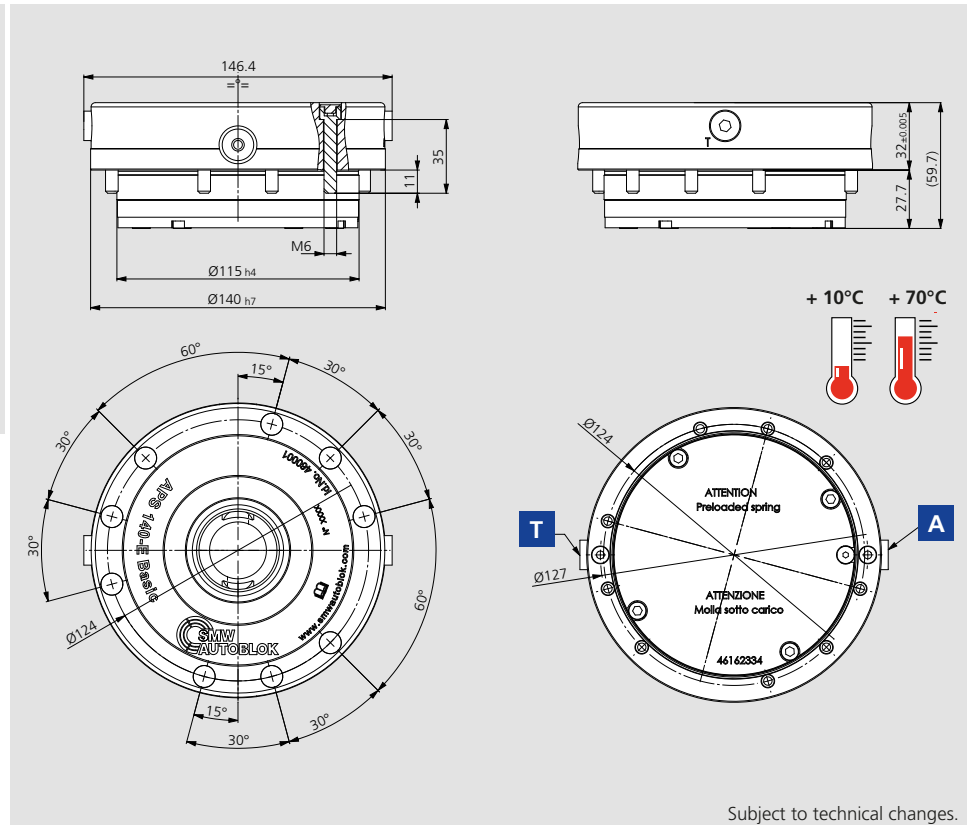
Zero point clamping module

APS 140-E



Technical features

- 2 clamping slides
- Turbo function **T** to increase the pull-down force



A = Open

Subject to technical changes.

Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 140-E BASIC	460001	7.5 / 26**kN	35(M10) 50(M12) 75(M16) kN	6 bar	< 0,005 mm	4.5 kg

* With screws DIN EN ISO 4762 - 12.9 / ** With "Turbo effect"

PREMIUM LIGHT

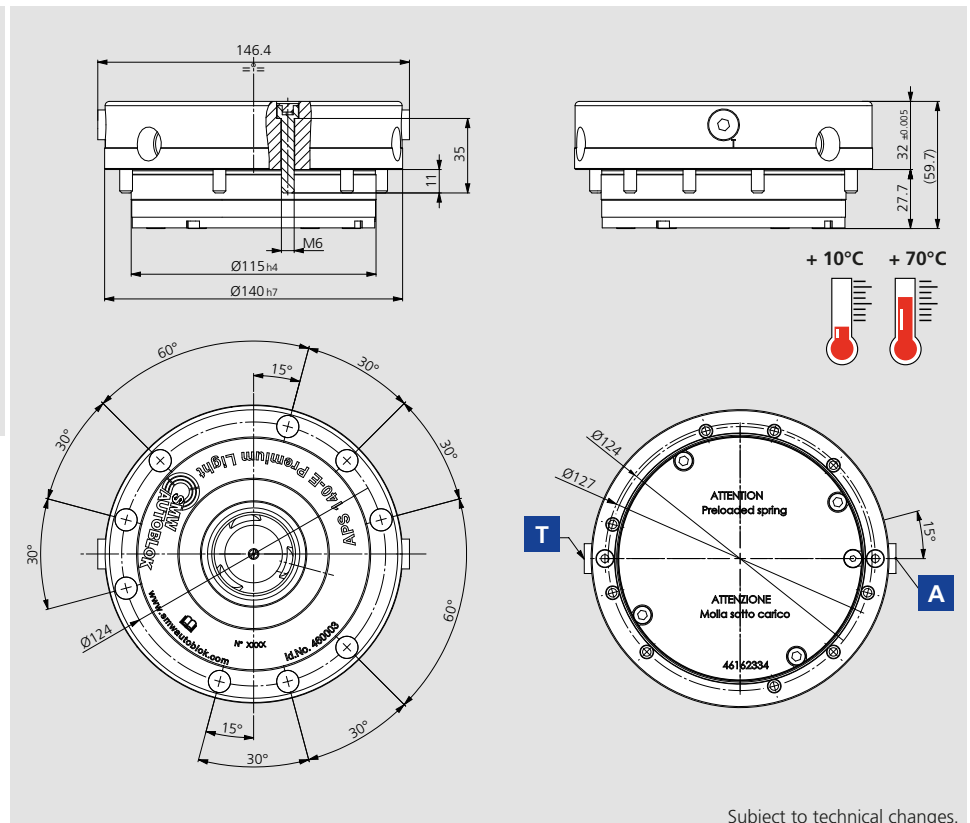
Zero point clamping module

APS 140-E



Technical features

- 3 clamping slides
- Turbo function **T** to increase the pull-down force
- Air cleaning



A = Open

Subject to technical changes.

Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 140-E PREMIUM LIGHT	460003	7.5 / 26**kN	35(M10) 50(M12) 75(M16) kN	6 bar	< 0,005 mm	4.5 kg

* With screws DIN EN ISO 4762 - 12.9 / ** With "Turbo effect"

APS 140-E

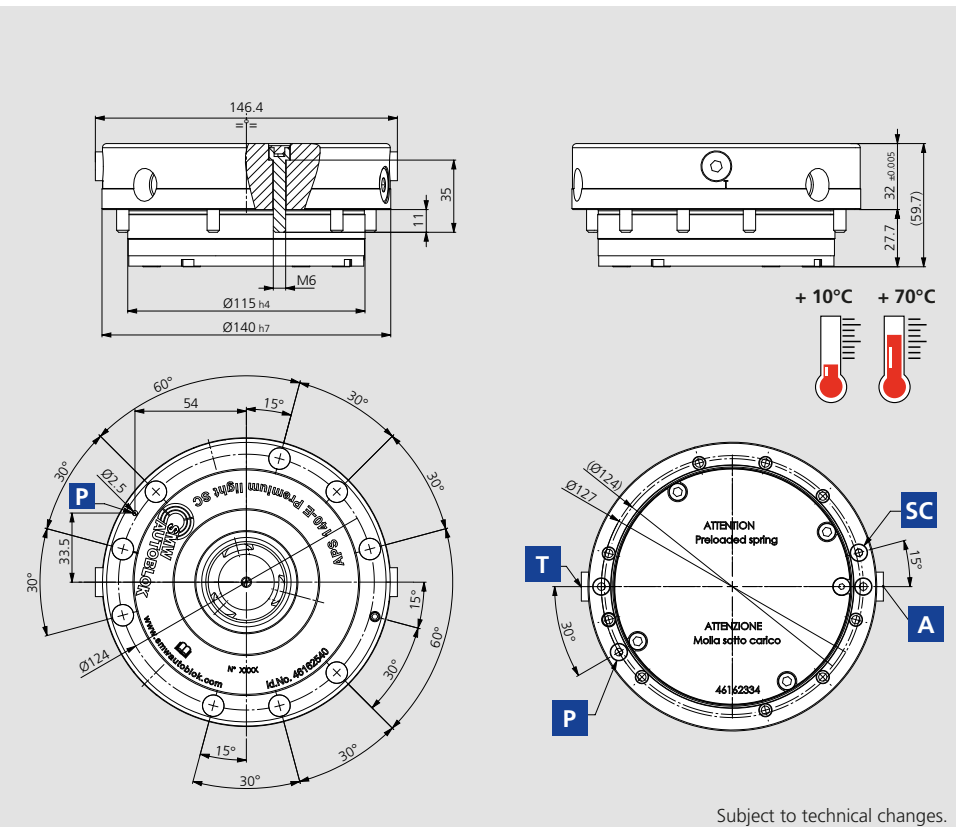
PREMIUM LIGHT SC

Zero point clamping module



Technical features

- 3 Clamping slides
- Turbo function **T** to increase the pull-down force
- Pneumatic stroke control **SC**
- Air sensing **P**
- Air cleaning



A = Open

Subject to technical changes.

Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 140-E PREMIUM LIGHT SC	46162540	7.5 / 26**KN	35(M10) 50(M12) 75(M16) kN	6 bar	< 0,005 mm	4.5 kg

* With screws DIN EN ISO 4762 - 12.9 / ** With "Turbo effect"

APS 140-E

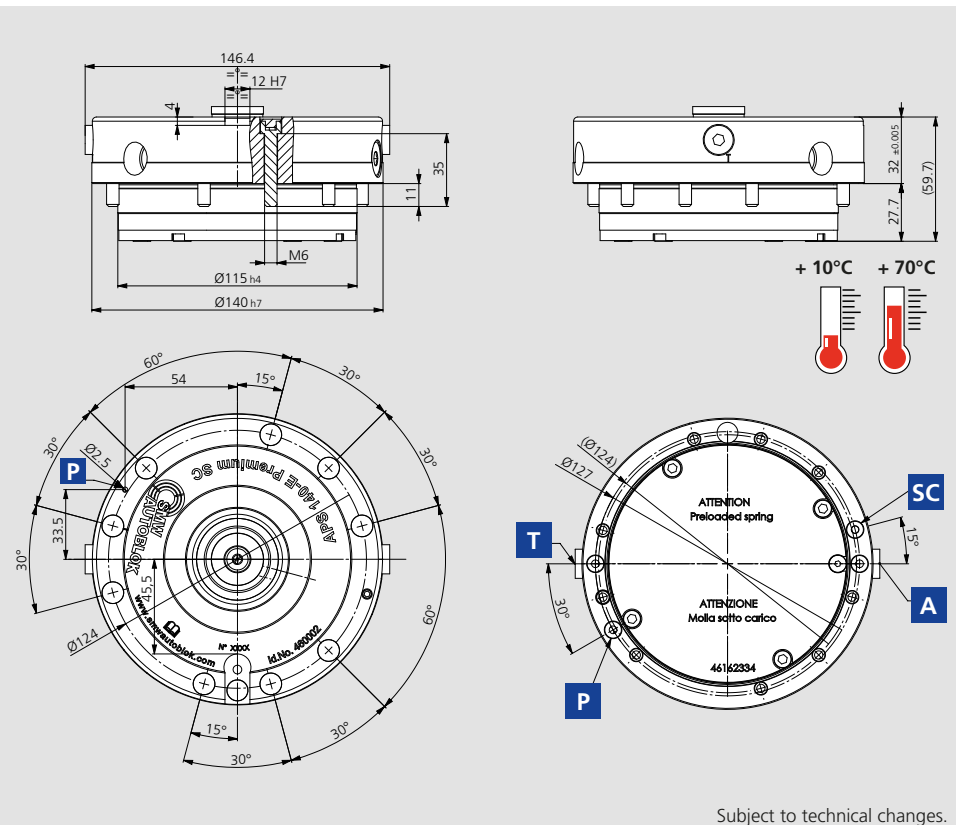
PREMIUM SC

Zero point clamping module



Technical features

- 3 Clamping slides
- Turbo function **T** to increase the pull-down force
- Pneumatic stroke control **SC**
- Air sensing **P**
- Air cleaning
- Anti-rotation key seat



A = Open

Subject to technical changes.

Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 140-E PREMIUM SC	460002	7.5 / 26**KN	35(M10) 50(M12) 75(M16) kN	6 bar	< 0,005 mm	4.5 kg

* With screws DIN EN ISO 4762 - 12.9 / ** With "Turbo effect"

PREMIUM LIGHT INOX

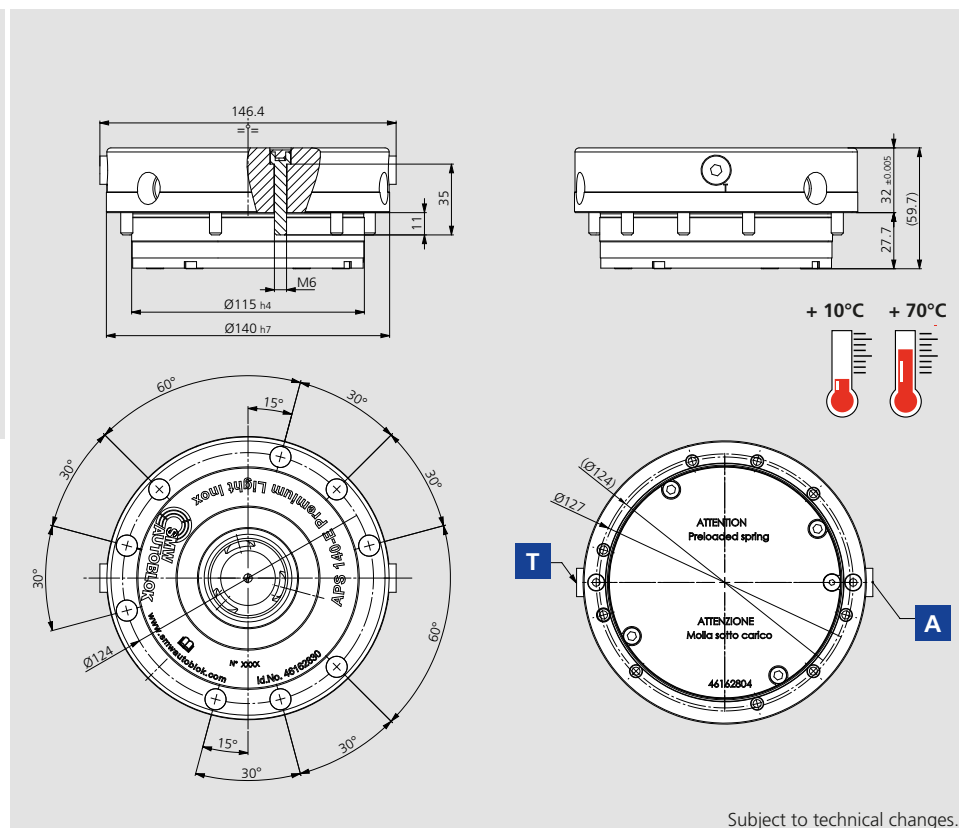
Zero point clamping module

APS 140-E



Technical features

- Inox body
- 3 clamping slides
- Turbo function **T** to increase the pull-down force
- Ideal for EDM Machines



A = Open

Subject to technical changes.

Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 140-E PREMIUM LIGHT INOX	46162830	7.5 / 26**KN	35(M10) 50(M12) 75(M16) kN	6 bar	< 0,005 mm	4.5 kg

* With screws DIN EN ISO 4762 - 12.9 / ** With "Turbo effect"

PREMIUM LIGHT INOX-HEAT

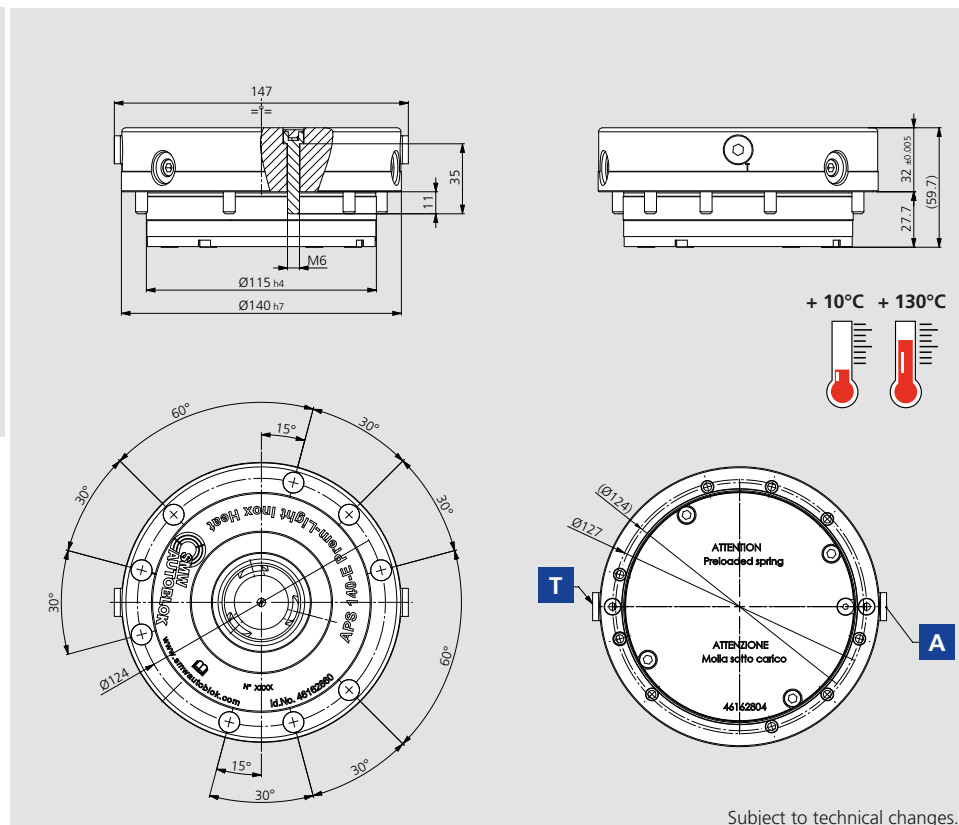
Zero point clamping module

APS 140-E



Technical features

- Inox body
- 3 clamping slides
- Turbo function **T** to increase the pull-down force
- Ideal for HT



A = Open

Subject to technical changes.

Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 140-E PREMIUM LIGHT INOX-HEAT	46162860	7.5 / 26**KN	35(M10) 50(M12) 75(M16) kN	6 bar	< 0,005 mm	4.5 kg

* With screws DIN EN ISO 4762 - 12.9 / ** With "Turbo effect"

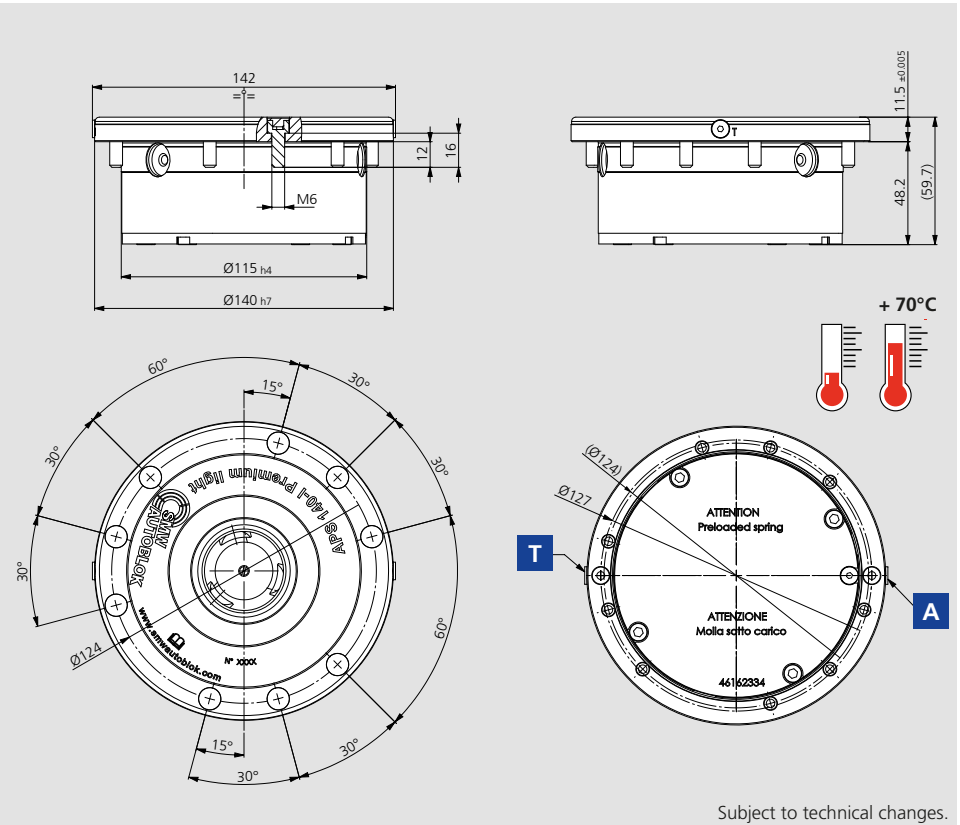
APS 140-I

PREMIUM LIGHT Zero point clamping module



Technical features

- 3 clamping slides
- Turbo function **T** to increase the pull-down force
- Air cleaning



A = Open

Subject to technical changes.

Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 140-I PREMIUM LIGHT	46162480	7.5 / 26**KN	35(M10) 50(M12) 75(M16) kN	6 bar	< 0,005 mm	4.5 kg

* With screws DIN EN ISO 4762 - 12.9 / ** With "Turbo effect"

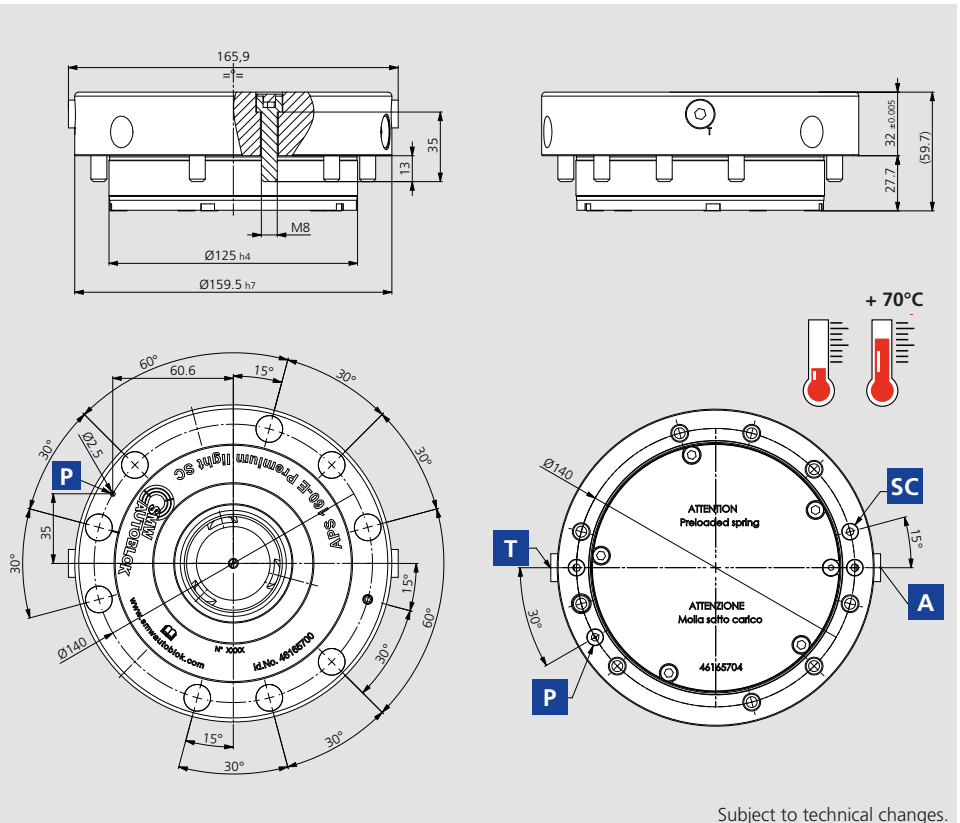
APS 160-E

PREMIUM LIGHT SC Zero point clamping module



Technical features

- 3 Clamping slides
- Turbo function **T** to increase the pull-down force
- Air sensing **P**
- Air cleaning
- Pneumatic stroke control **SC**

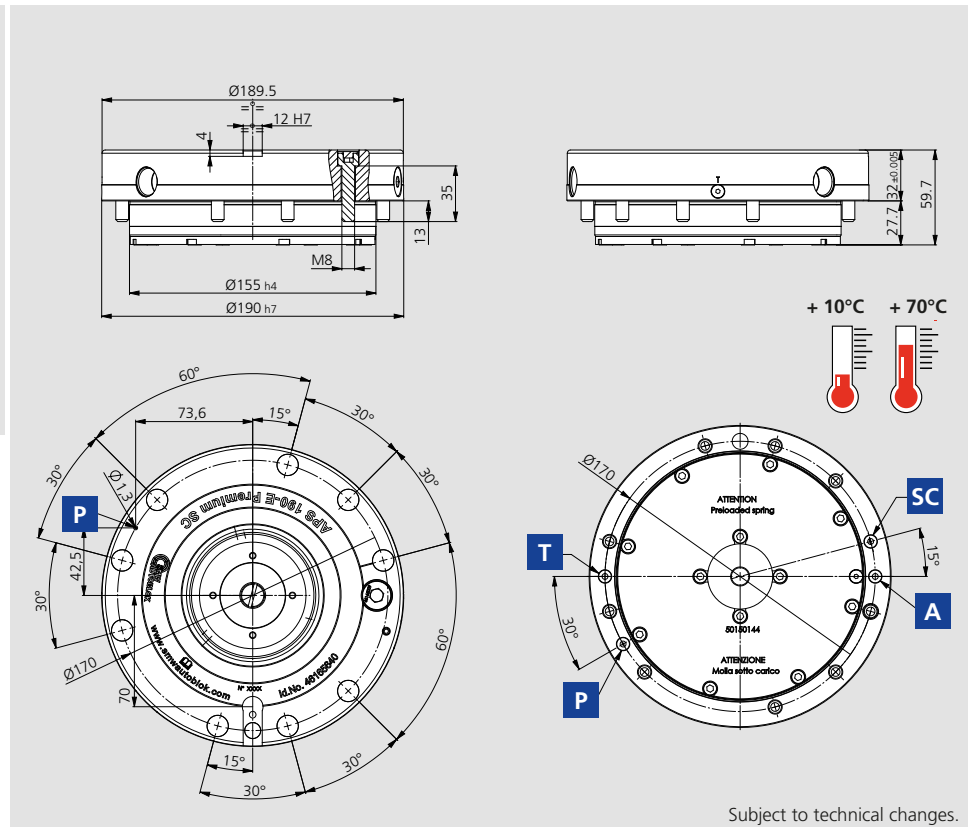


A = Open

Subject to technical changes.

Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 160-E PREMIUM LIGHT SC	46165700	9 / 30**KN	50(M12) 75(M16) kN	6 bar	< 0,005 mm	5.9 kg

* With screws DIN EN ISO 4762 - 12.9 / ** With "Turbo effect"



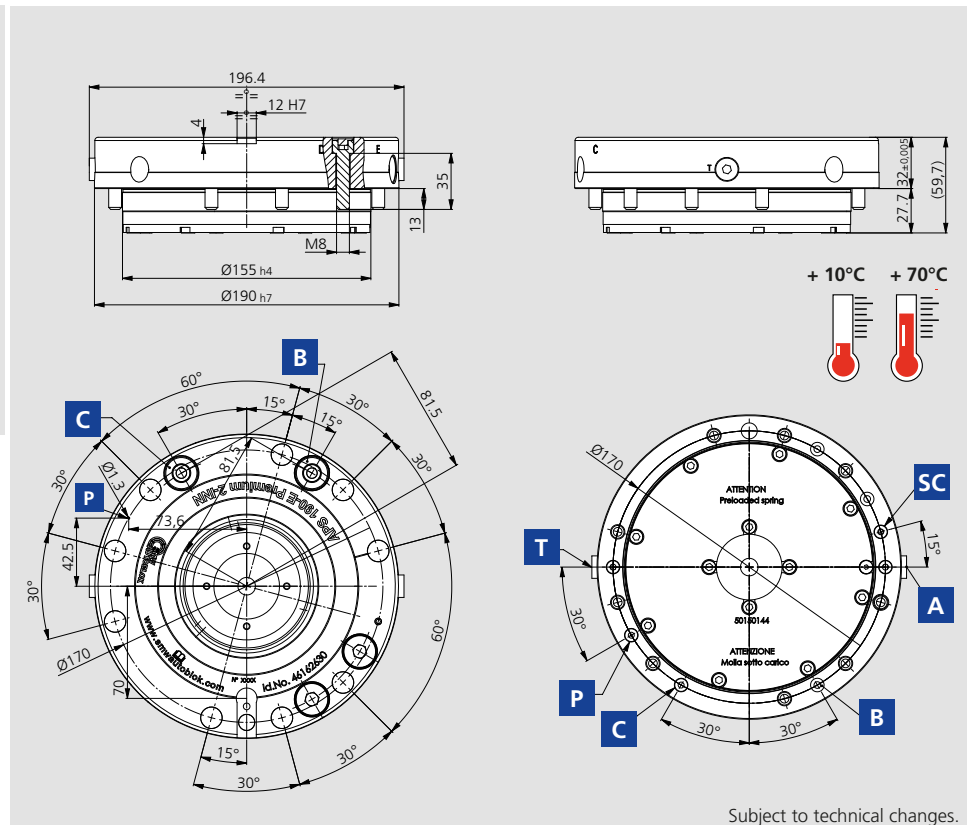
Technical features

- 3 clamping slides
- Turbo function **T** to increase the pull-down force
- Anti-rotation key seat
- Air sensing **P**
- Pneumatic stroke control **SC**

A = Open

Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 190-E PREMIUM SC	46165640	13.5 / 45**KN	50(M12) 75(M16) 80(6xM6) 150(6xM8) kN	6 bar	< 0,005 mm	6.9 kg

* With screws DIN EN ISO 4762 - 12.9 / ** With "turbo effect"



Technical features

- 3 Clamping slides
- Turbo function **T** to increase the pull-down force
- Anti-rotation key seat
- Air sensing **P**
- Pneumatic stroke control **SC**
- N.2 pneumatic / hydraulic feedings **B C**

A = Open

Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 190-E PREMIUM SC 2-INN	46162630	13.5 / 45**KN	50(M12) 75(M16) 80(6xM6) 150(6xM8) kN	6 bar	< 0,005 mm	6.9 kg

* With screws DIN EN ISO 4762 - 12.9 / ** With "Turbo effect"

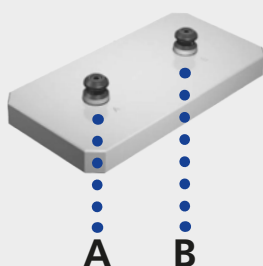
Clamping pins



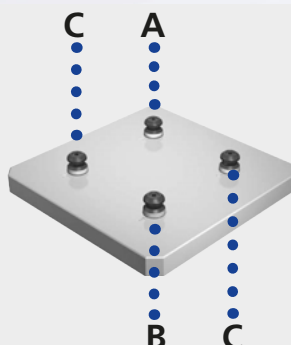
Industry 4.0
Product

1 Type and position of the clamping pins

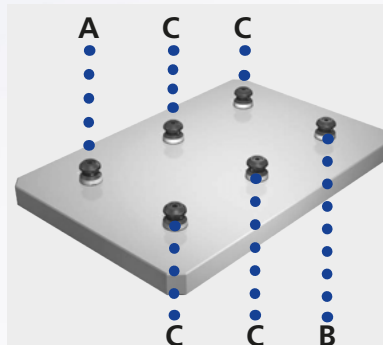
- ▶ **Type A
Centering pin**
- Used for centering and clamping



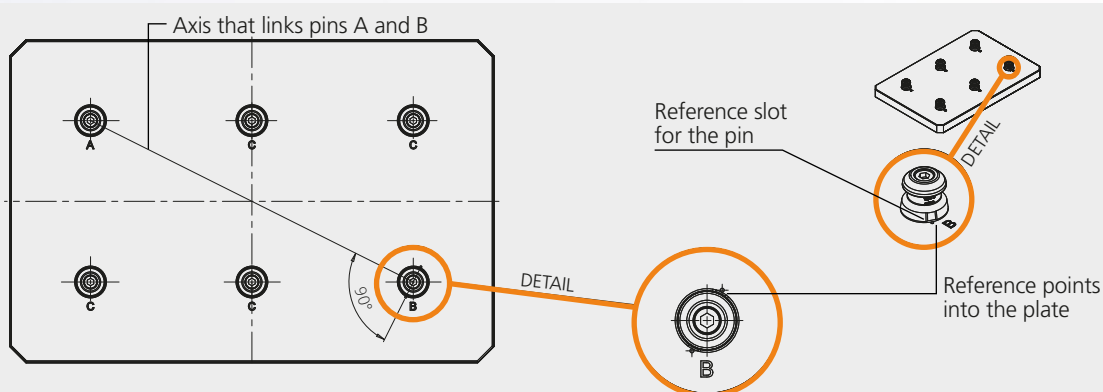
- ▶ **Type B
Reference pin**
- Used for reference and clamping



- ▶ **Type C
Pull-down pin
 ± 0.05 mm**
- Only for clamping



2 Positioning of the sword pin type B

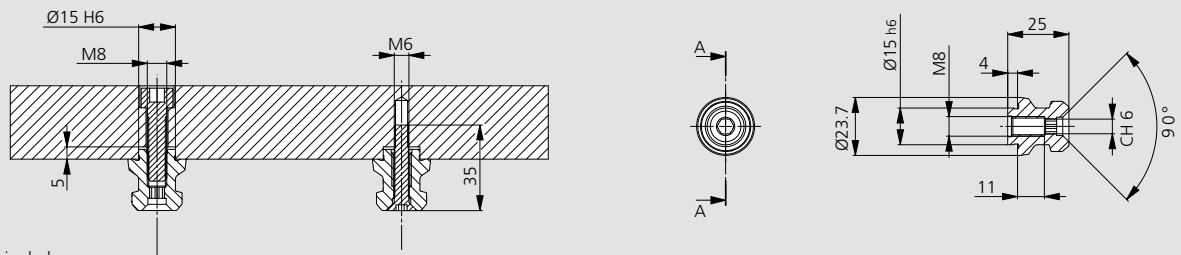


3 Tightening torque for pins mounting bolts

Bolts	Nm
M6	13
M8	35
M10	60
M12	110
M16	200

APS 100

Pins

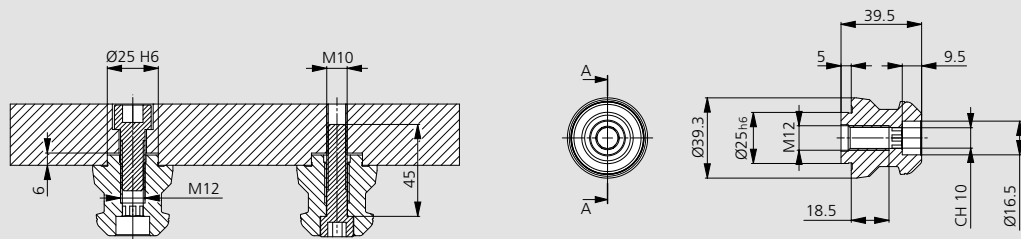


Subject to technical changes.

Id. No.	Type	Weight [kg]
46162155	A	0.05
46162156	B	0.05
46162157	C	0.05

APS 140

Pins - M12 thread

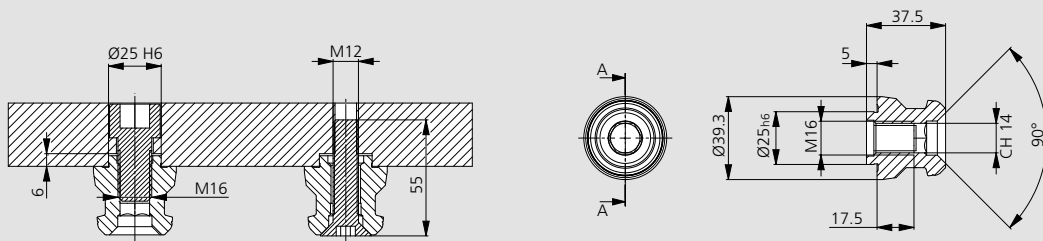


Subject to technical changes.

Id. No.	Type	Weight [kg]
46162355	A	0.2
46162356	B	0.2
46162357	C	0.2

APS 140

Pins - M16 thread

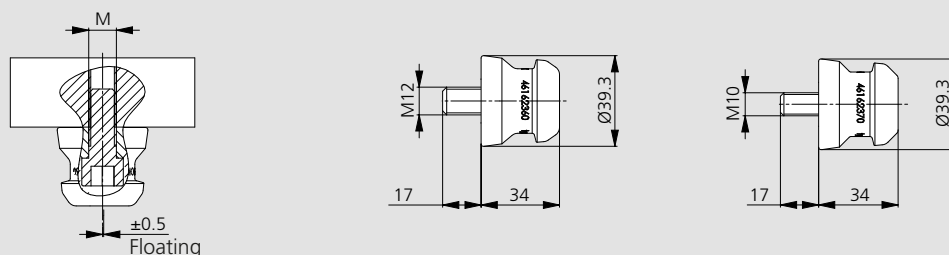


Subject to technical changes.

Id. No.	Type	Weight [kg]
46162455	A	0.2
46162456	B	0.2
46162457	C	0.2

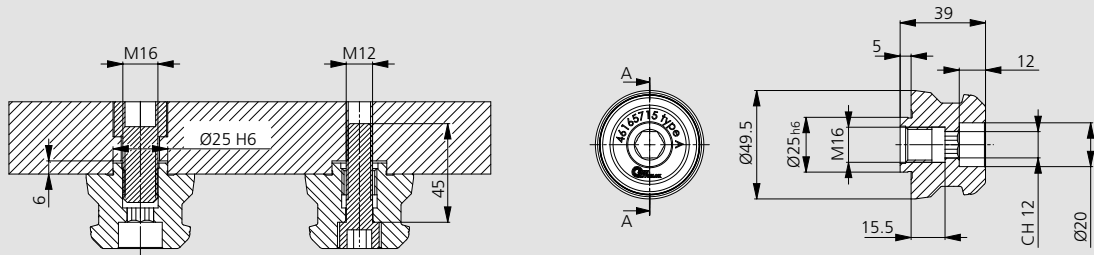
APS 140

Pins type C floating



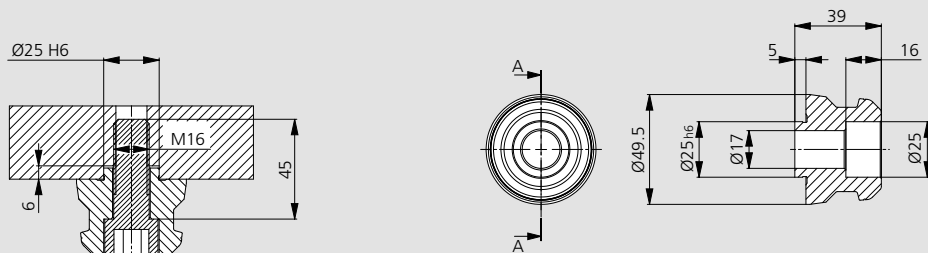
Subject to technical changes.

Id. No.	Type	Weight [kg]
46162370	C - Floating ± 0.5 mm	0.2
46162360	C - Floating ± 0.5 mm	0.2



Subject to technical changes.

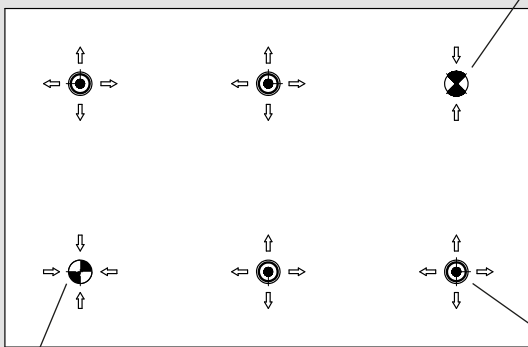
Id. No.	Type	Weight [kg]
46165715	A	0.35
46165716	B	0.35
46165717	C	0.35



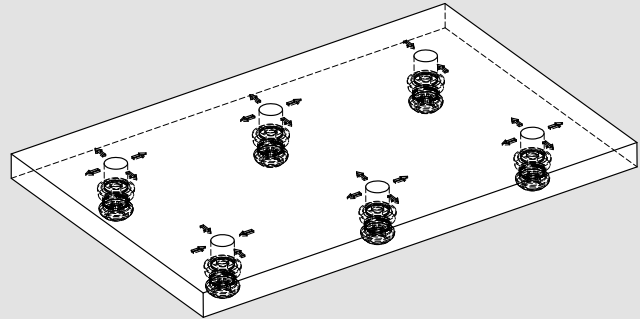
Subject to technical changes.

Id. No.	Type	Weight [kg]
46165705	A	0.3
46165706	B	0.3
46165707	C	0.3

Type B
Clamping pin for positioning in one direction

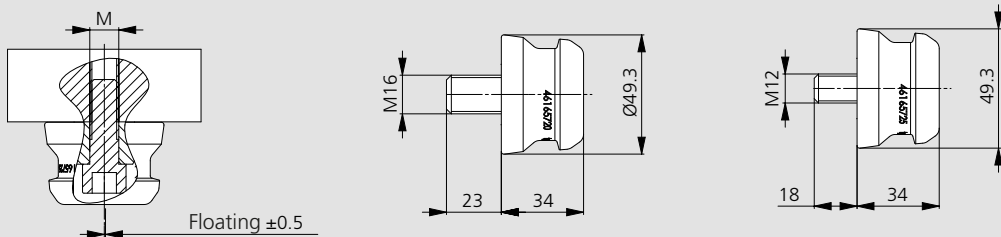


Type A
Clamping pin with positioning accuracy



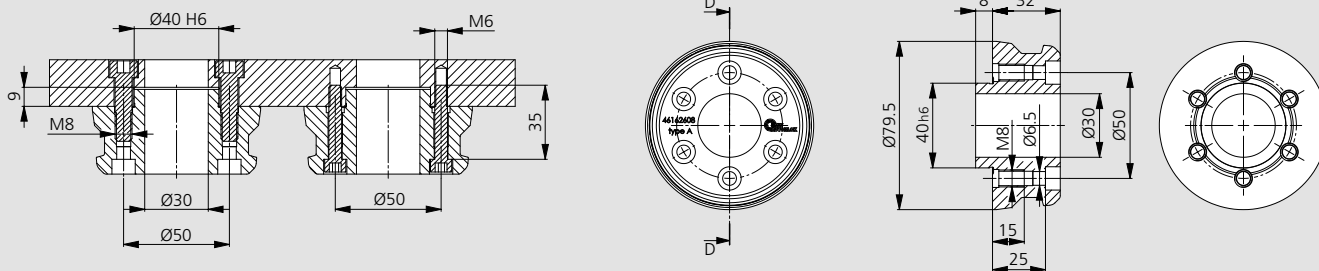
Type C floating
Clamping pin with centering clearance of 0.1 mm

Subject to technical changes.



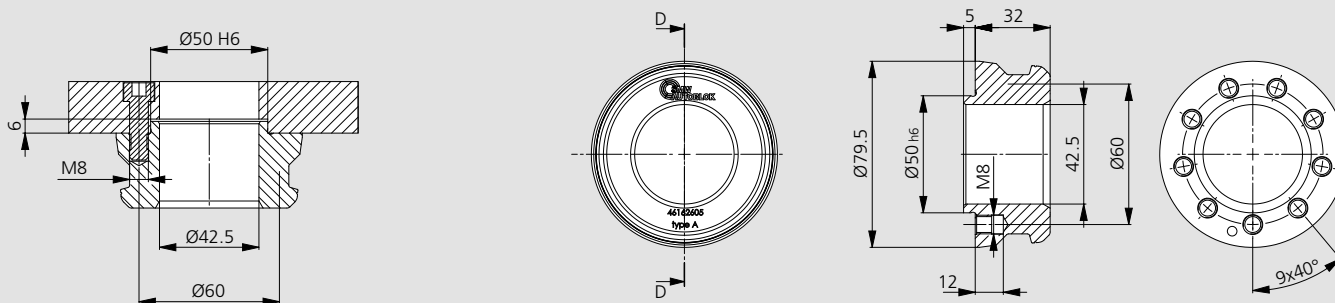
Subject to technical changes.

Id. No.	Type	Weight [kg]
46165720	C - Floating ± 0,5 mm	0.4
46165725	C - Floating ± 0,5 mm	0.35



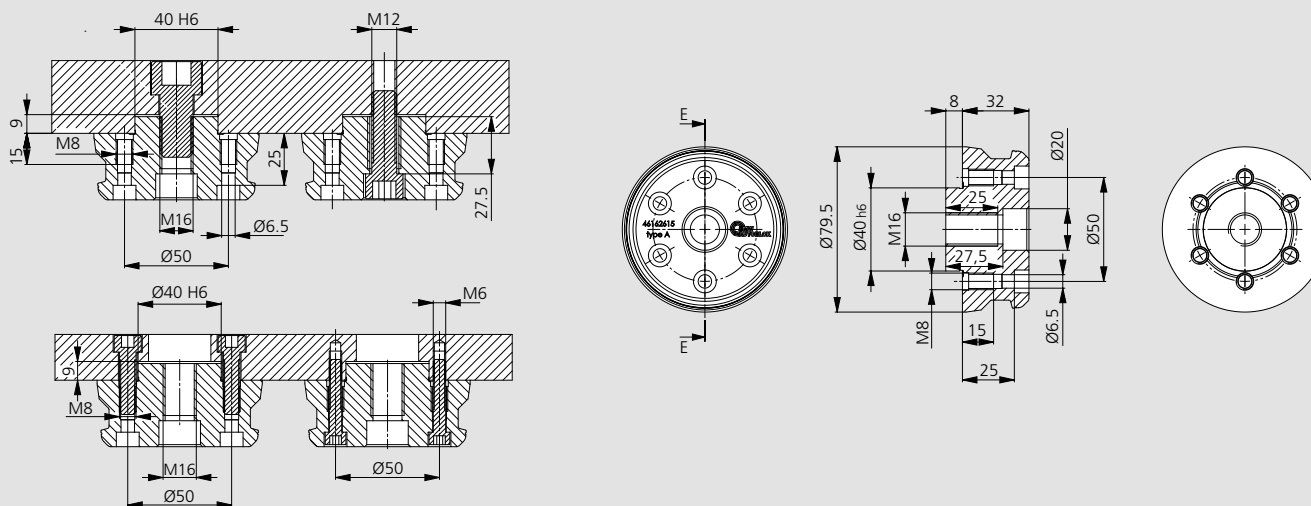
Subject to technical changes.

Id. No.	Type	Weight [kg]	Note
46162608	A	0.85	Pin with central hole Ø 30



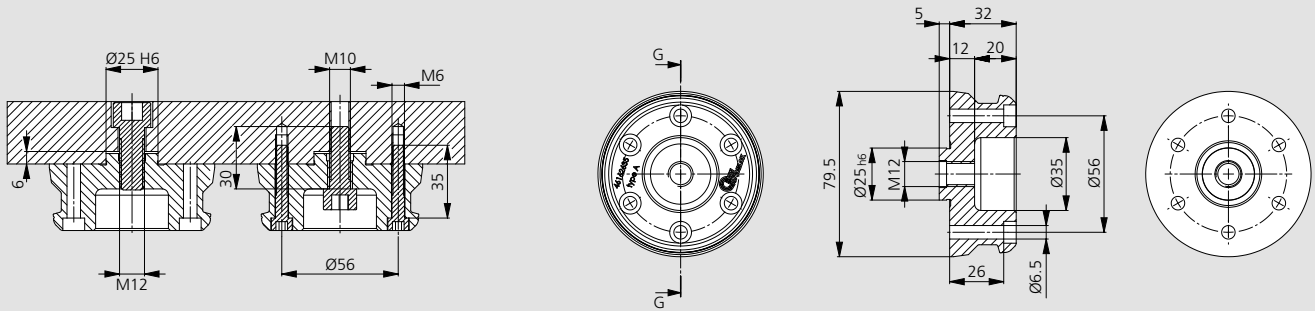
Subject to technical changes.

Id. No.	Type	Weight [kg]	Note
46162605	A	0.7	Pin with central hole Ø 42



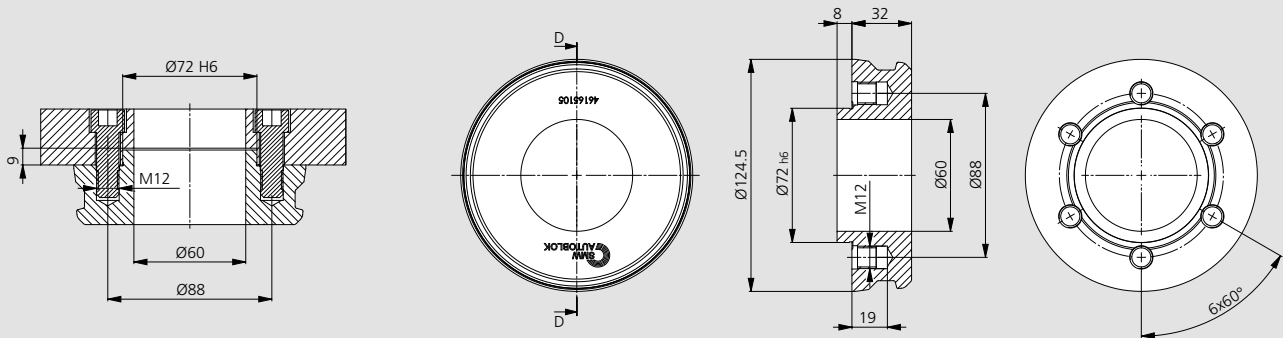
Subject to technical changes.

Id. No.	Type	Weight [kg]
46162615	A	M16
46162616	B	M16
46162617	C	M16



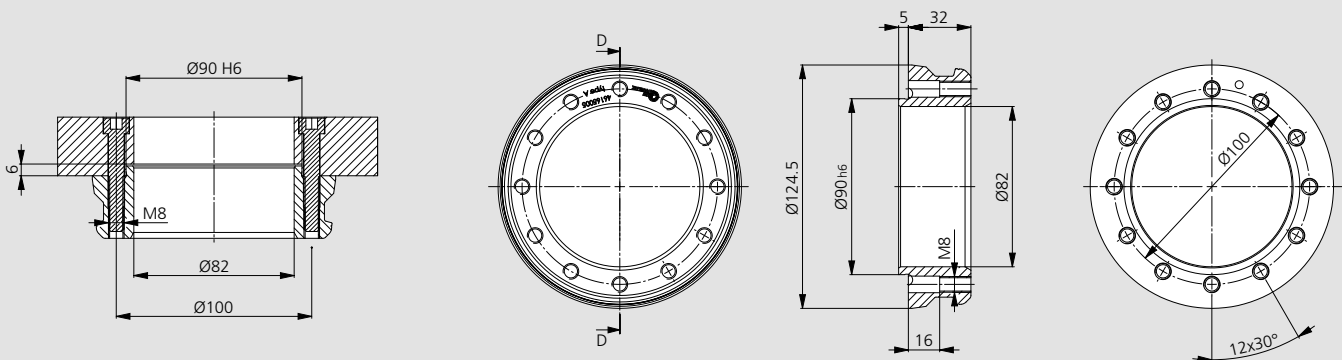
Subject to technical changes.

Id. No.	Type	Weight [kg]
46162635	A Mounting pin = To the pin APS-140 M12	0.85



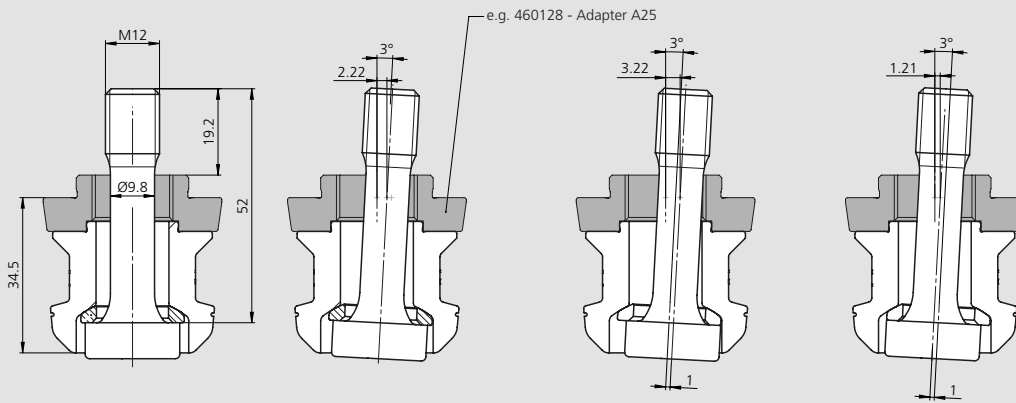
Subject to technical changes.

Id. No.	Type	Weight [kg]	Note
46165105	A	2	Pin with central hole $\varnothing 60$



Subject to technical changes.

Id. No.	Type	Weight [kg]	Note
46165005	A	1.3	Pin with central hole $\varnothing 82$



Subject to technical changes.

Id. No.	Type	Weight [kg]	Note
460421	C	0.25	Max. holding force 35 kN
460449	C	0.25	Max. holding force 35 kN

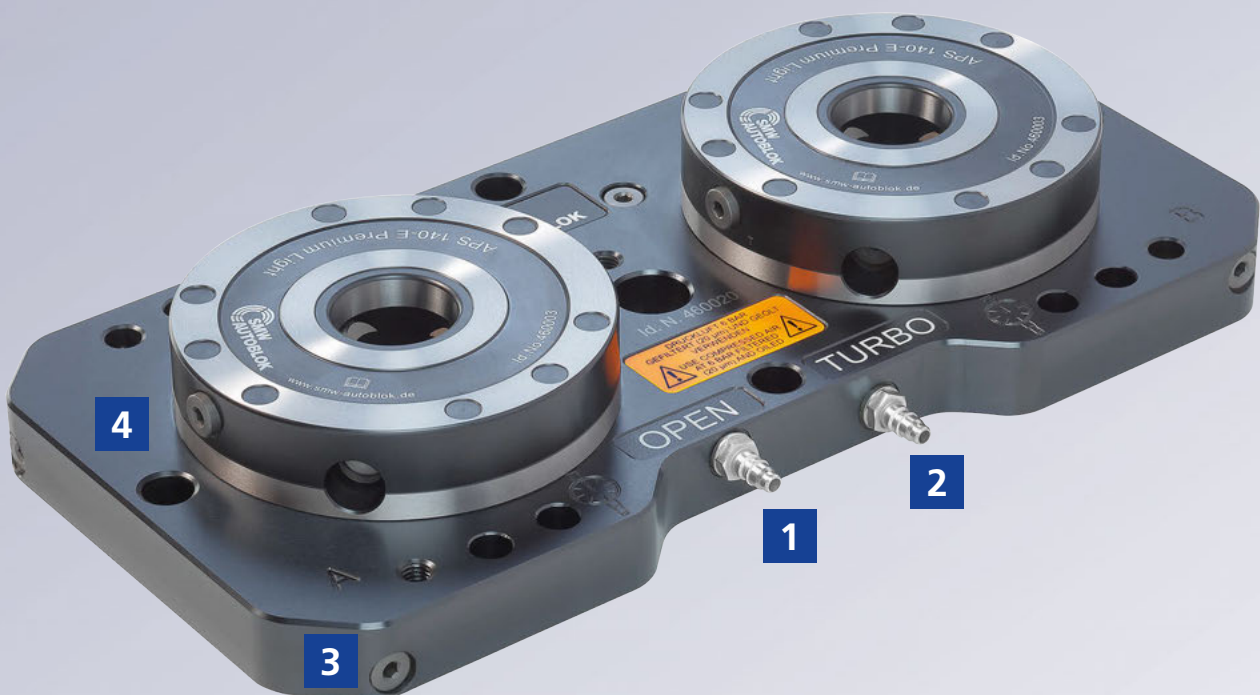
APS

Clamping unit fully assembled

Ready for use



Industry 4.0
Product



1 Functional overview of the APS clamping units

- ▶ Quick pneumatic connections 1
- ▶ Turbo function for highest pull-in forces 2
- ▶ Solid base plate (height 28 mm) for maximum stiffness at a total height of only 60 mm 3
- ▶ Easy mounting on the machine table due to positioning holes 4



Application/customer benefits

- Pre-assembled clamping unit with 2 pieces APS 140 Premium Light or Basic
- Universal applicable
- Fast and easy set-up

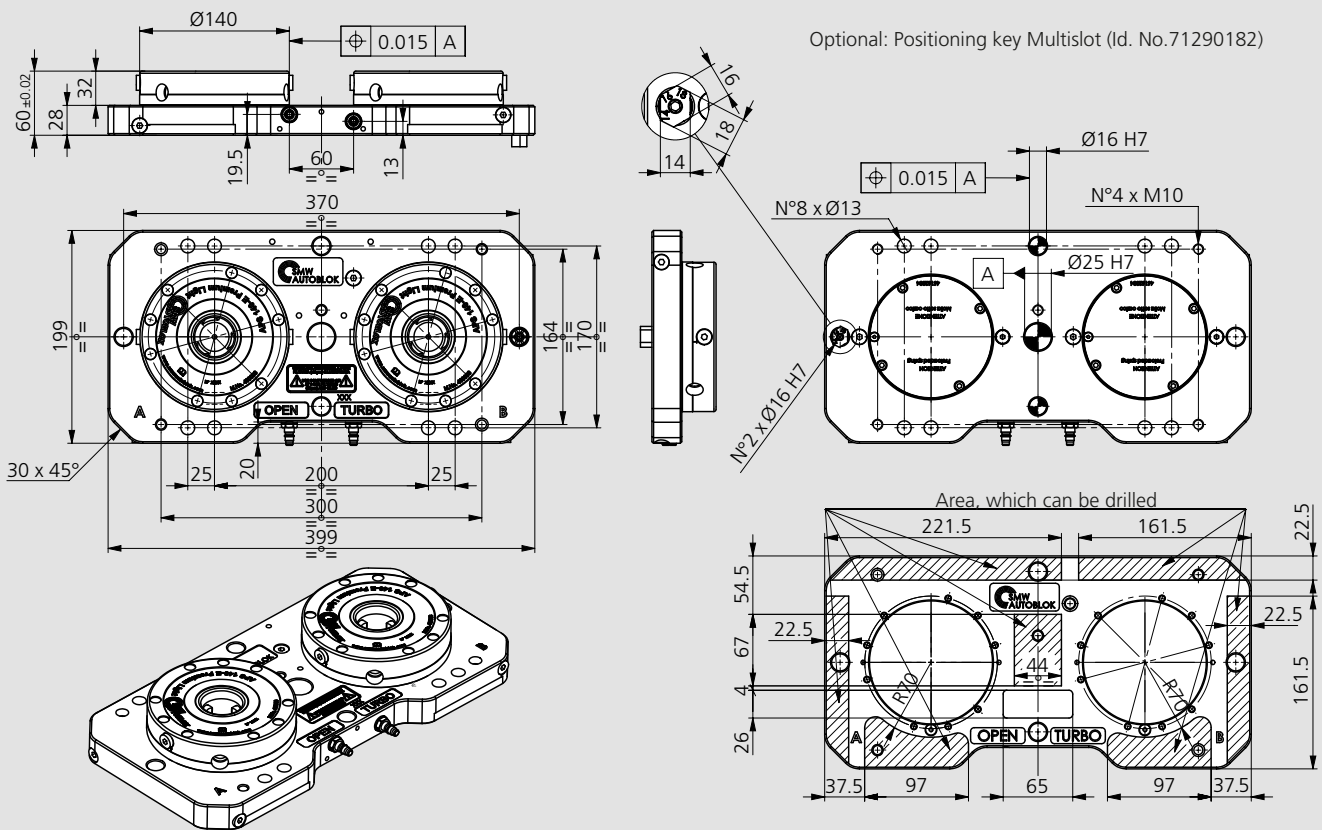
Technical features

- 3 clamping slides (Basic: 2 clamping slides)
- Repeatability < 0.005 mm
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Air cleaning (only Premium Light)
- Grid dimension 200 mm

Standard equipment

Clamping unit with 2 pieces APS 140 Premium Light or Basic
Quick pneumatic connections

For clamping pallets please see page 56



Subject to technical changes.

Order numbers

Type	Id. No.	Pull-in force with Turbo [kN]	Repeatability [mm]	Weight [kg]
Clamping unit with 2 APS 140-E Premium Light	460020	26*	< 0.005	21
Clamping unit with 2 APS 140-E Basic	460021	26*	< 0.005	21

* For each module.



Application/customer benefits

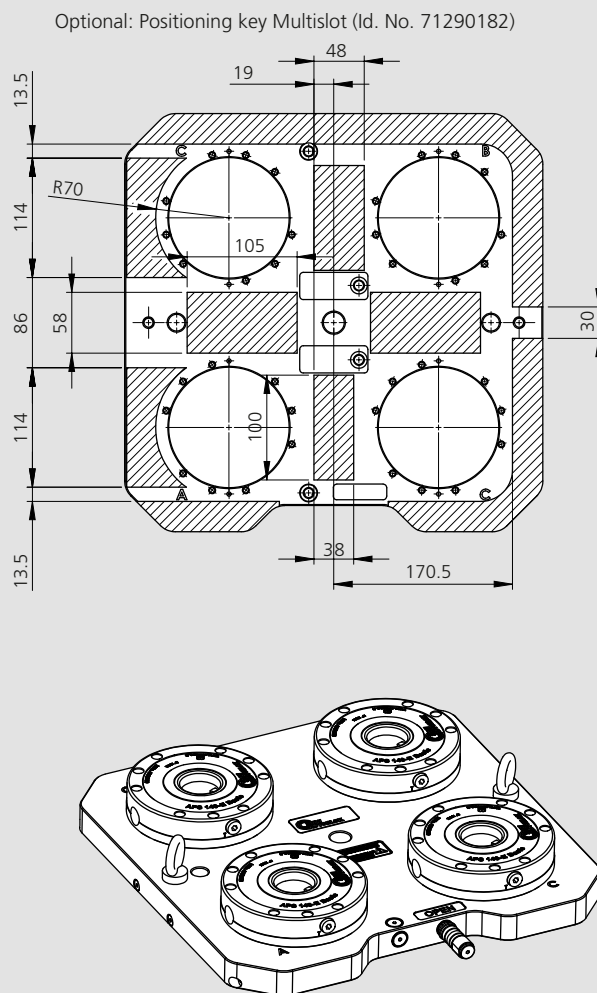
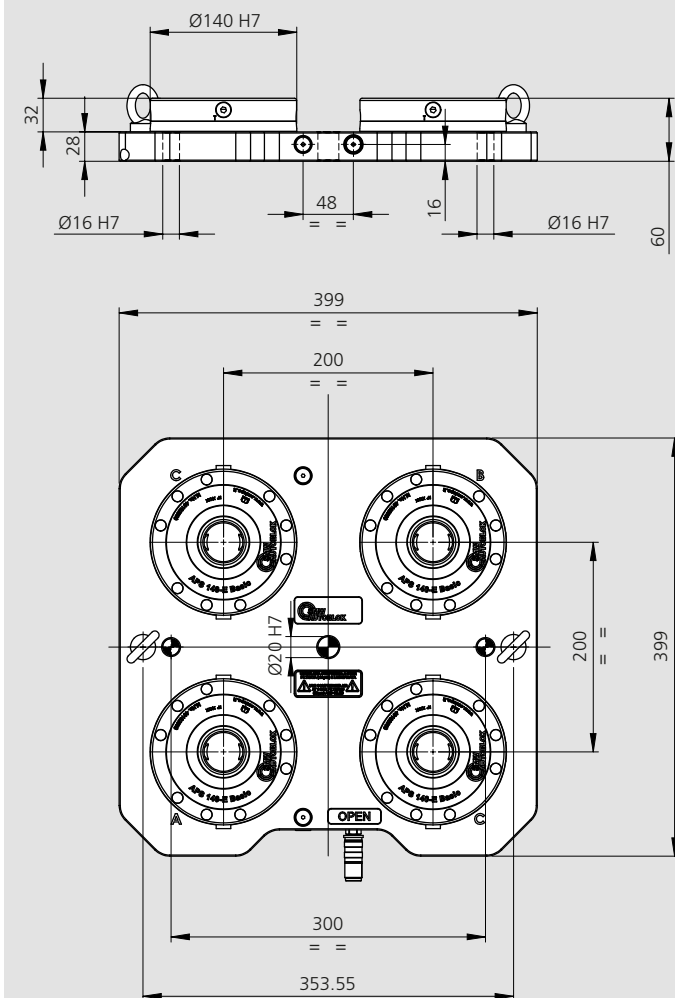
- Pre-assembled clamping unit with 4 pieces APS 140 Premium Light or Basic
- Universal applicable
- Fast and easy set-up

Technical features

- 3 clamping slides (Basic: 2 clamping slides)
- Repeatability < 0.005 mm
- Pull-in force without Turbo 7.5 kN
- Air cleaning (only Premium Light)
- Grid dimension 200 mm

Standard equipment

Clamping unit with 4 pieces APS 140
 Quick pneumatic connections
 For clamping pallets please see page 56



Subject to technical changes.

Order numbers

Type	Id. No.	Pull-in force without Turbo [kN]	Repeatability [mm]	Weight [kg]
Clamping unit with 4 APS 140-E Basic	46168215	7.5*	< 0.005	41

* For each module.



Application/customer benefits

- Pre-assembled clamping unit with 4 pieces APS 140 Premium Light or Basic
- Universal applicable
- Fast and easy set-up
- Suitable for vertical machines

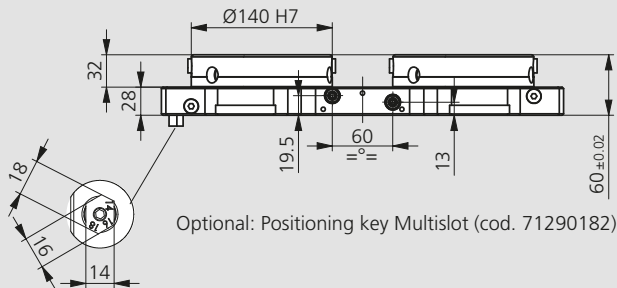
Technical features

- 3 clamping slides (Basic: 2 clamping slides)
- Repeatability < 0.005 mm
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Air cleaning (only Premium Light)
- Grid dimension 200 mm

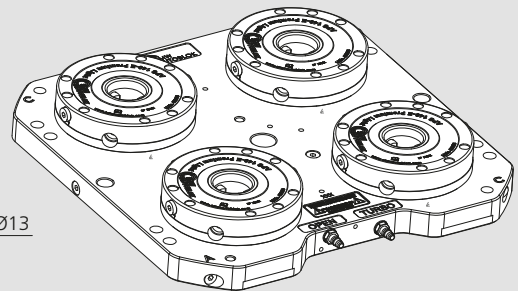
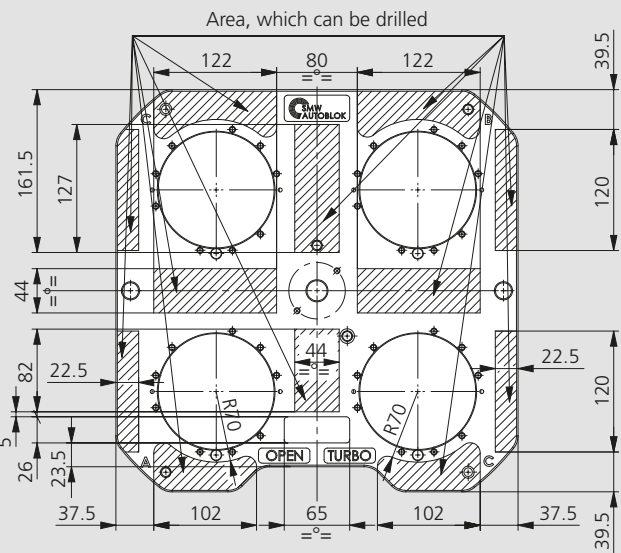
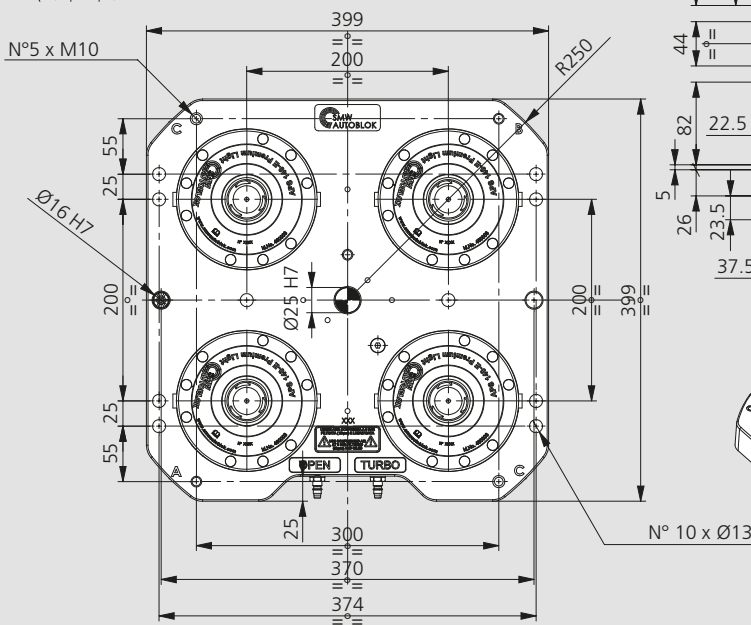
Standard equipment

Clamping unit with 4 pieces APS 140 Premium Light or Basic
Quick pneumatic connections

For clamping pallets please see page 56



Optional: Positioning key Multislot (cod. 71290182)



Subject to technical changes.

Order numbers

Type	Id. No.	Pull-in force with Turbo [kN]	Repeatability [mm]	Weight [kg]
Clamping unit with 4 APS 140-E Premium Light	460022	26*	< 0.005	41
Clamping unit with 4 APS 140-E Basic	460023	26*	< 0.005	41

* For each module.

■ Preferably for horizontal machining center

Application/customer benefits

- Pre-assembled clamping unit with 4 pieces APS 140 Premium Light or Basic
- Suitable for standard machine pallets type JIS 6337-1980
- Universal applicable
- Fast and easy set-up

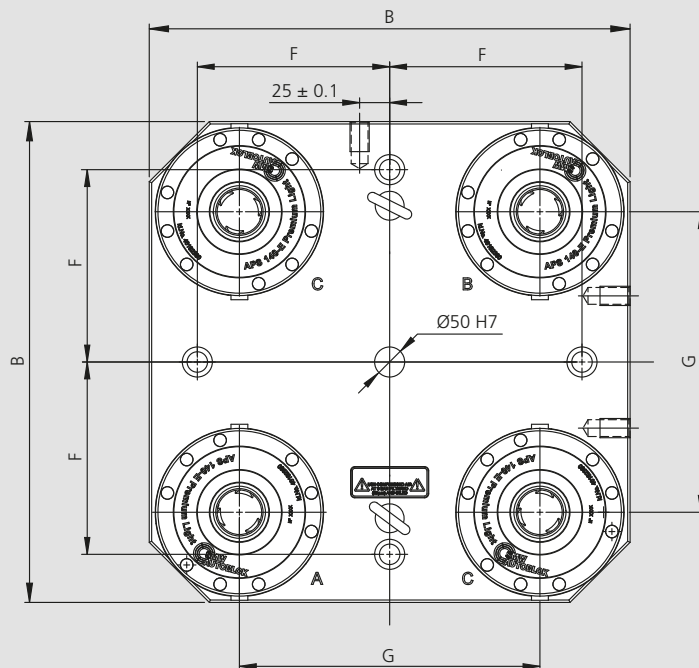
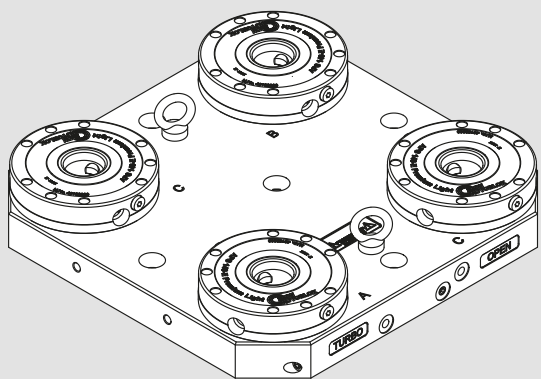
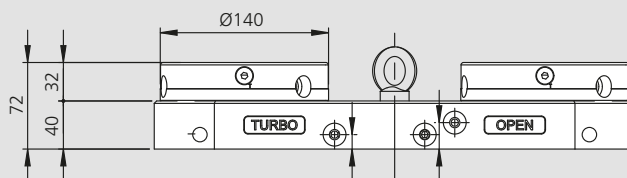
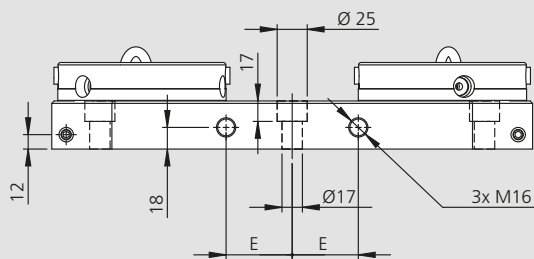
Technical features

- 3 clamping slides (Basic: 2 clamping slides)
- Repeatability < 0.005 mm
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Air cleaning (only Premium Light)

Standard equipment

Clamping unit with 4 pieces APS 140 Premium Light or Basic
Quick pneumatic connections

For clamping pallets please see page 56



Subject to technical changes.

Order numbers

Type	Id. No.	B [mm]	E [mm]	F [mm]	G [mm]	Pull-in force with Turbo [kN]	Repeatability [mm]	Weight [kg]
Clamping unit with 4 APS 140 Premium Light	46167040	400	55	160	250	26*	< 0.005	57
Clamping unit with 4 APS 140 Basic	46167045	400	55	160	250	26*	< 0.005	57
Clamping unit with 4 APS 140 Premium Light	46167050	500	75	200	300	26*	< 0.005	85
Clamping unit with 4 APS 140 Basic	46167055	500	75	200	300	26*	< 0.005	85
Clamping unit with 4 APS 140 Premium Light	46167060	630	100	250	420	26*	< 0.005	130
Clamping unit with 4 APS 140 Basic	46167065	630	100	250	420	26*	< 0.005	130

* For each module.

■ For 5-axis machining center

Application/customer benefits

- Pre-assembled clamping unit with 4 pieces APS 140 Premium Light or Basic
- For 5-axis machining center
- Universal applicable
- Fast and easy set-up

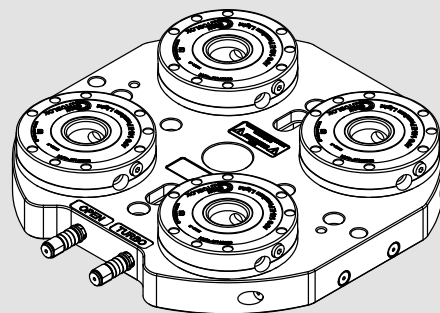
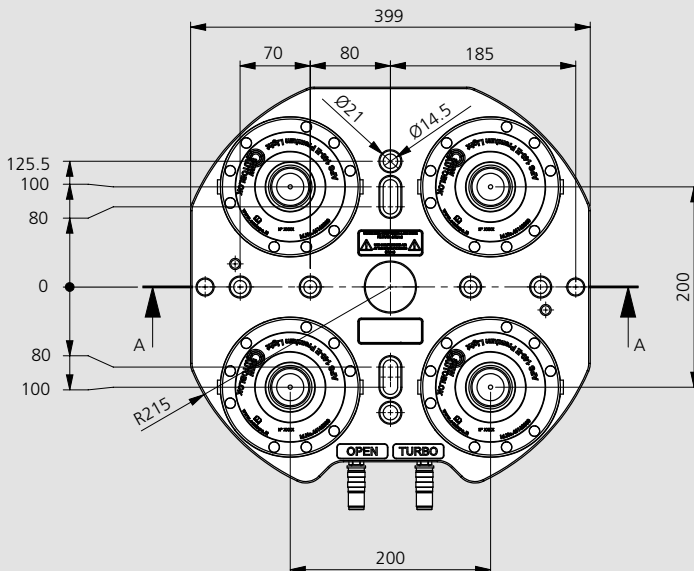
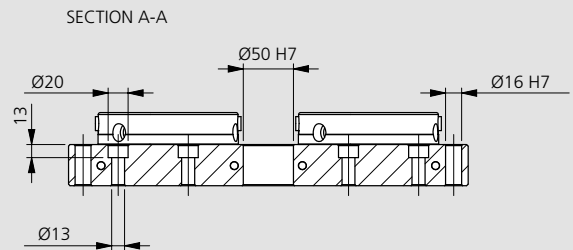
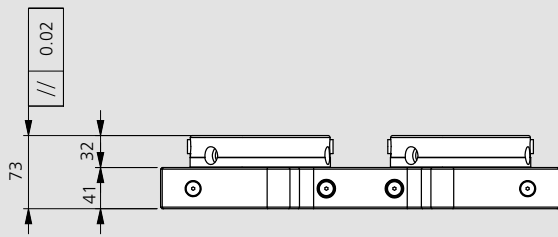
Technical features

- 3 clamping slides (Basic: 2 clamping slides)
- Repeatability < 0.005 mm
- Turbo function to increase the pull-in forces (pull-in force without Turbo 7.5 kN)
- Air cleaning (only Premium Light)

Standard equipment

Clamping unit with 4 pieces APS 140 Premium Light or Basic
Quick pneumatic connections

For clamping pallets please see page 56



Subject to technical changes.

Special clamping units on request.

Order numbers

Type	Id. No.	Pull-in force with Turbo [kN]	Repeatability [mm]	Weight [kg]
Clamping unit with 4 APS 140 Premium Light	46168020	26*	< 0.005	45
Clamping unit with 4 APS 140 Basic	46168025	26*	< 0.005	45

* For each module.

■ For 5-axis machining center

Application/customer benefits

- Pre-assembled clamping unit with 5 pieces APS 140 Premium Light or Basic
- For 5-axis machining center
- Universal applicable
- Fast and easy set-up

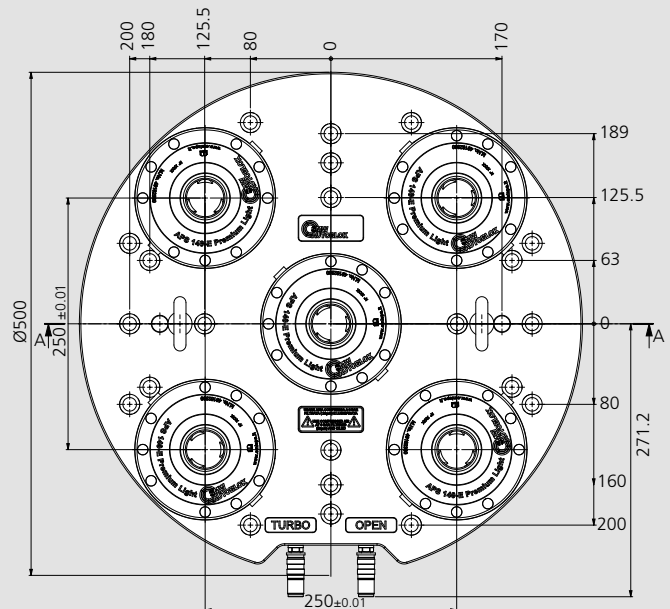
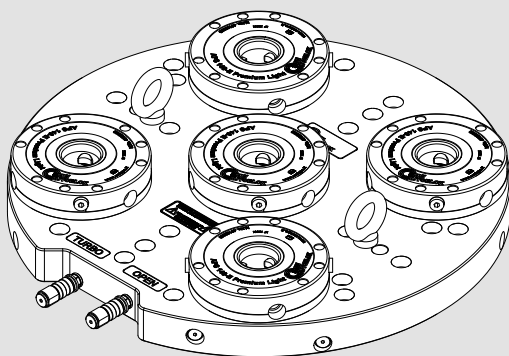
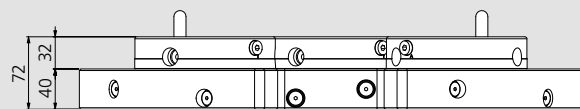
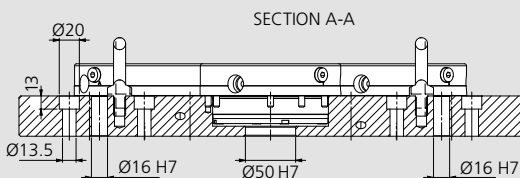
Technical features

- 3 clamping slides (Basic: 2 clamping slides)
- Repeatability < 0.005 mm
- Turbo function to increase the pull-in forces (pull-in force without Turbo 7.5 kN)
- Air cleaning (only Premium Light)
- Grid dimension 250 mm

Standard equipment

Clamping unit with 5 pieces APS 140 Premium Light or Basic
Quick pneumatic connections

For clamping pallets please see page 56



Subject to technical changes.

Special clamping units on request.

Order numbers

Type	Id. No.	Pull-in force with Turbo [kN]	Repeatability [mm]	Weight [kg]
Clamping unit with 5 APS 140 Premium Light	46168030	26*	< 0.005	68
Clamping unit with 5 APS 140 Basic	46168035	26*	< 0.005	67

* For each module.

Application/customer benefits

- Pre-assembled clamping unit with 6 pieces APS 140 Premium Light or Basic
- Universal applicable
- Fast and easy set-up

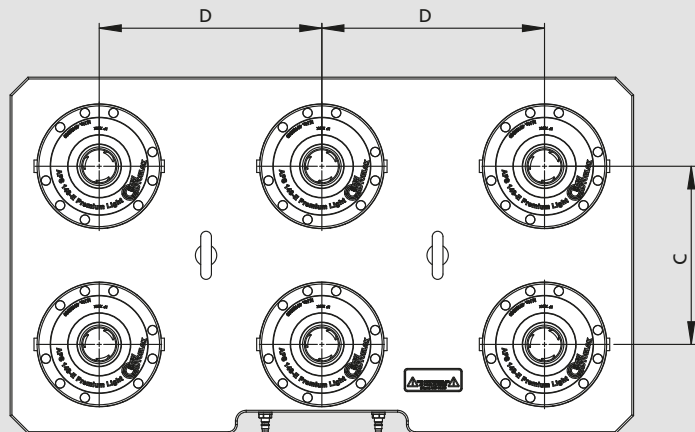
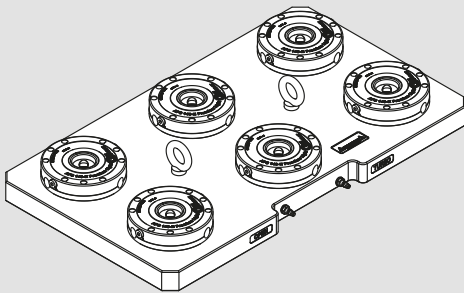
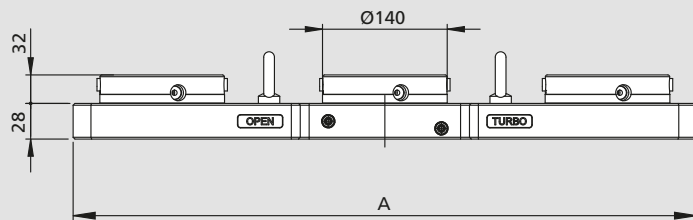
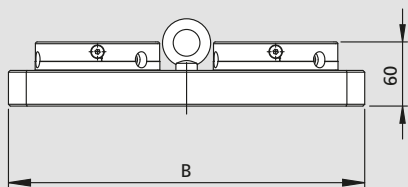
Technical features

- 3 clamping slides (Basic: 2 clamping slides)
- Repeatability < 0.005 mm
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Air cleaning (only Premium Light)
- Grid dimension 200 mm

Standard equipment

Clamping unit with 6 pieces APS 140 Premium Light or Basic
Quick pneumatic connections

For clamping pallets please see page 56



Subject to technical changes.

Special clamping units on request.

Order numbers

Type	Id. No.	A [mm]	B [mm]	C [mm]	D [mm]	Pull-in force with Turbo [kN]	Repeatability [mm]	Weight [kg]
Clamping unit with 6 APS 140 Premium Light	46168110	600	400	200	200	26*	< 0.005	83
Clamping unit with 6 APS 140 Basic	46168115	600	400	200	200	26*	< 0.005	84

* For each module.

Media feed 3-axis zero feedings

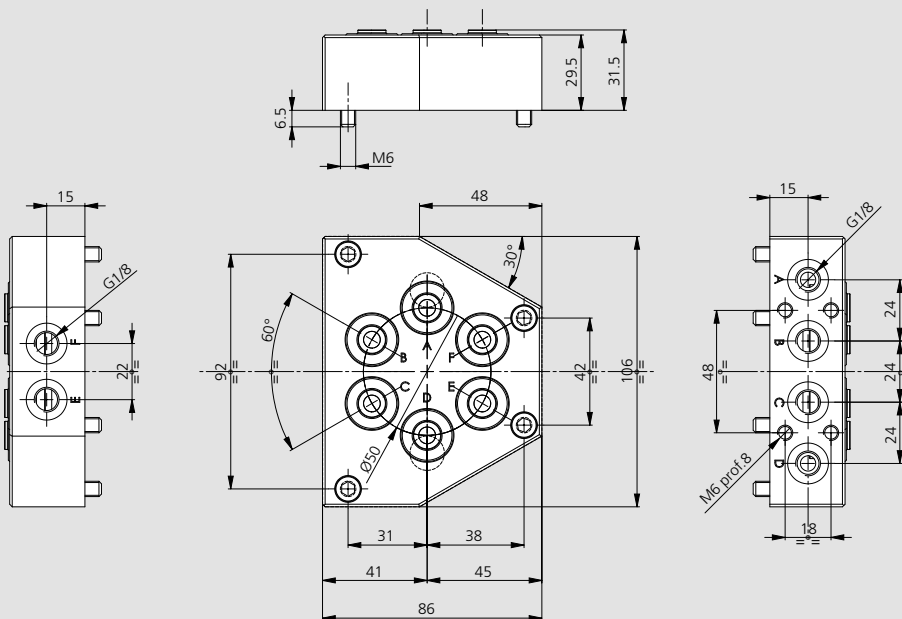
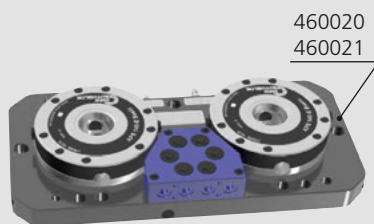
■ For plate with 2 APS 140 E

APS 140-E

0



Example



Subject to technical changes.

Media feed for plate with 2 APS 140

Id. No.

Possible feedings

Weight [kg]

Kit SUPP-2 INN PASCAL WVP-2FPL on plate with 2 APS 140 3-axis

46202040

A-D

1.6

Kit SUPP-4 INN PASCAL WVP-2FPL on plate with 2 APS 140 3-axis

46202032

A-B-C-D

1.6

Kit SUPP-6 INN PASCAL WVP-2FPL on plate with 2 APS 140 3-axis

46202033

A-B-C-D-E-F

1.6

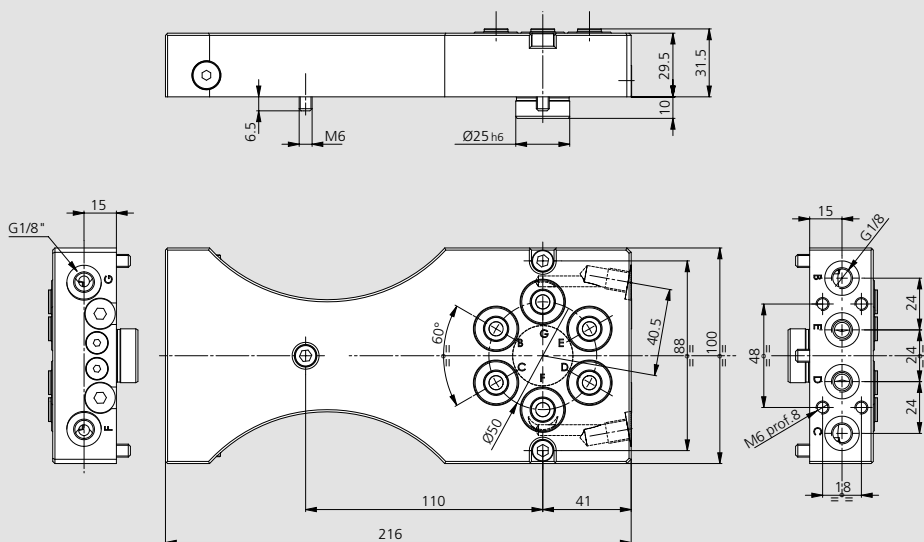
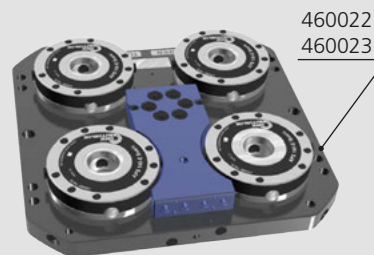
Media feed 3-axis zero feedings

■ For plate with 4 APS 140E

APS 140-E



Example



Subject to technical changes.

Media feed for plate with 4 APS 140

Id. No.

Possible feedings

Weight [kg]

Kit SUPP-2 INN PASCAL WVP-2FPL on plate with 4 APS 140 3-axis

46202039

B-C

3.8

Kit SUPP-4 INN PASCAL WVP-2FPL on plate with 4 APS 140 3-axis

46202028

B-C-D-E

3.8

Kit SUPP-6 INN PASCAL WVP-2FPL on plate with 4 APS 140 3-axis

46202029

B-C-D-E-F-G

3.8



Application/customer benefits

- Pre-assembled clamping unit with 1 piece APS 140 Premium
- Universal applicable
- Fast and easy set-up

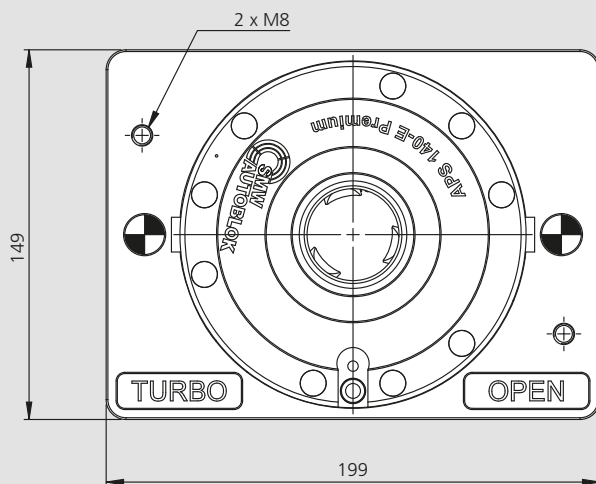
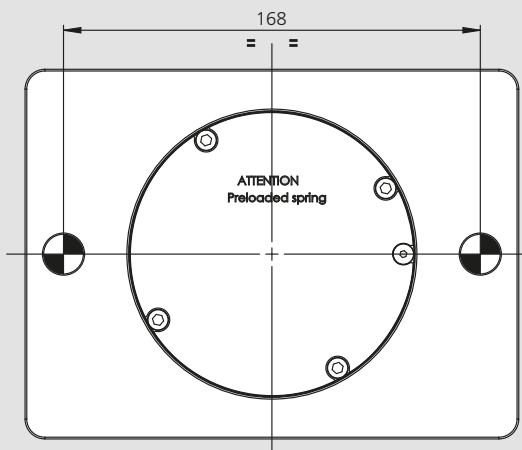
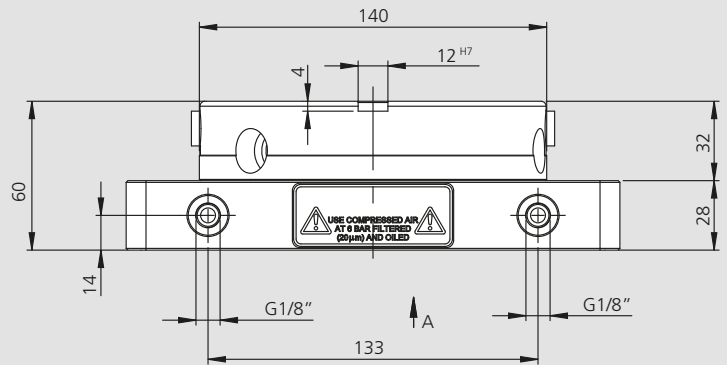
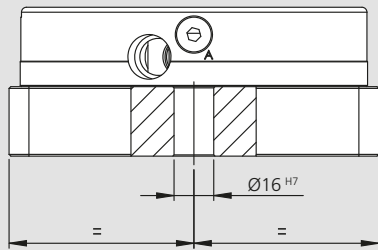
Technical features

- 3 clamping slides
- Repeatability < 0.005 mm
- Turbo function to increase the pull-in forces (pull-in force without Turbo 7.5 kN)
- Anti rotating protection
- Air cleaning

Standard equipment

Clamping unit with 1 piece APS 140 Premium
Quick pneumatic connections

For clamping pallets please see page 56



Subject to technical changes.

Order numbers

Module height extensions (APS included)	Id. No.	Height [mm]	Weight [kg]
Module extension with 1 APS 140 Premium	46168260	60	11



Application/customer benefits

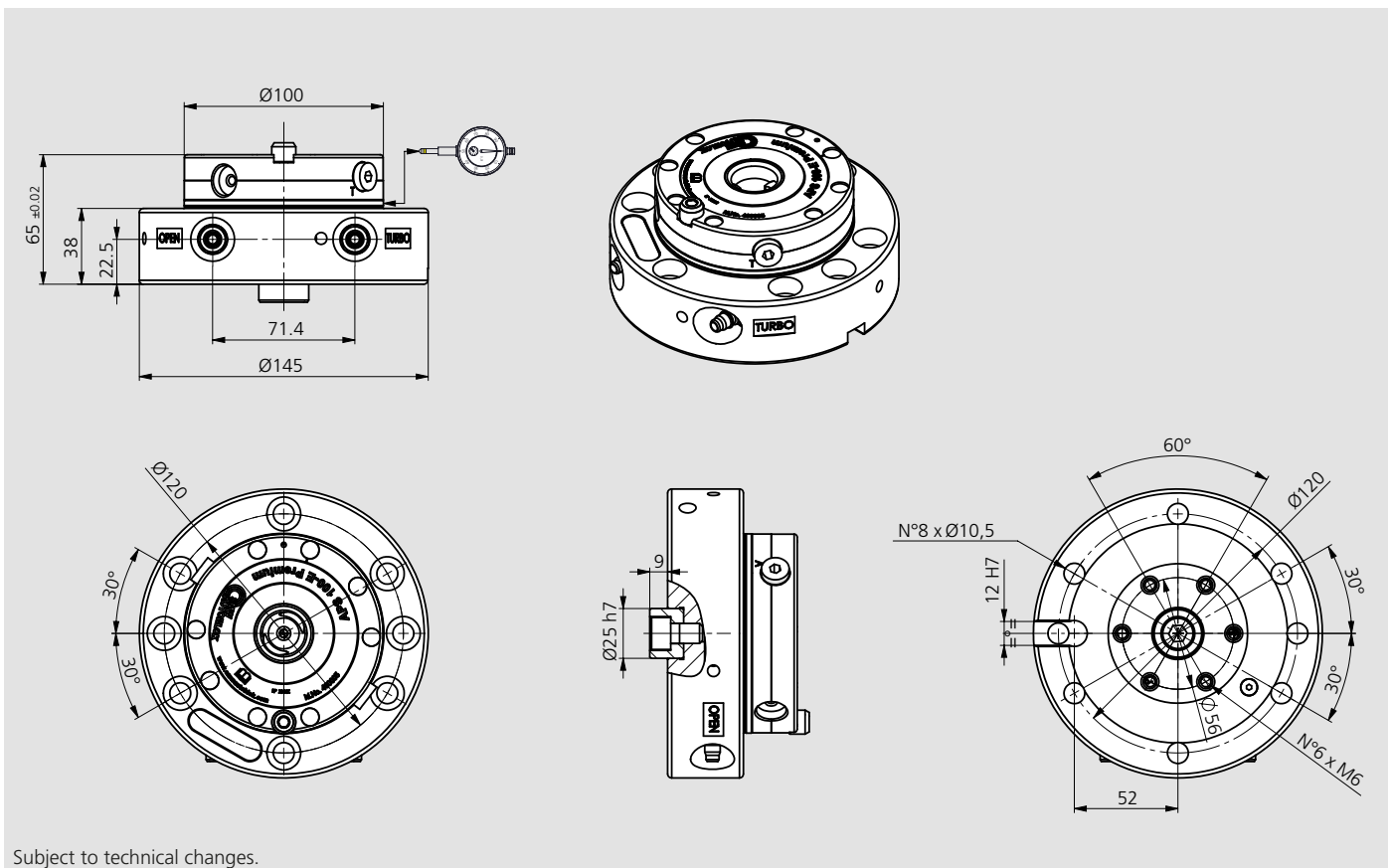
- Pre-assembled module extension unit with 1 piece APS 100 Premium
- Universal applicable
- Fast and easy set-up

Technical features

- 2 clamping slides
- Repeatability < 0.005 mm
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 4 kN)
- Anti rotating key-seat
- Air cleaning

Standard equipment

Module height extension with 1 piece APS 100 Premium



Subject to technical changes.

Order numbers

Module height extension (APS included)	Id. No.	Height [mm]	Weight [kg]
Module extension APS 100 Premium H65	460110	65	6

Note 1: For every unit the key (Id. No. 46162133) is included

Note 2: Optional T-nuts sets: 46204100 with T-slot 12 / 46204101 with T-slot 14 / 46204102 with T-slot 18. Drawings and shares of these sets.

Note 3: Mountable also on APS 140.

Note 4: When using the module in rotation (r.p.m. 200-1000) request balancing (listed separately).

Note 5: The module extension is equipped with radial screws for the fine centering of the APS.



Application/customer benefits

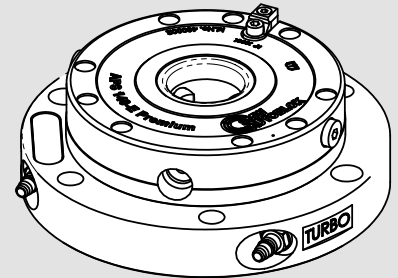
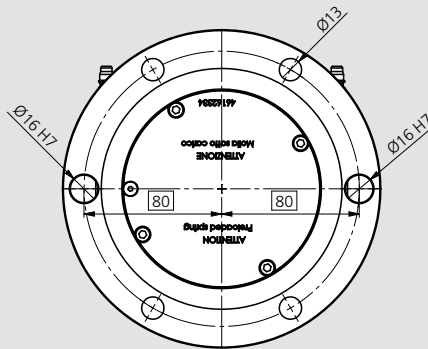
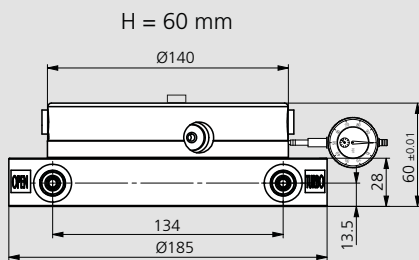
- Pre-assembled clamping unit with 1 piece APS 140 Premium
- Universal applicable
- Fast and easy set-up

Technical features

- 3 clamping slides
- Repeatability < 0.005 mm
- Turbo function to increase the pull-in forces (pull-in force without Turbo 7.5 kN)
- Anti rotating protection
- Air cleaning

Standard equipment

Module height extension with 1 piece APS 140 Premium



Subject to technical changes.

Order numbers

Module height extension (APS included)	Id. No.	Height [mm]	Weight [kg]
Module extension APS 140 Premium H60	460112	60	8

Note 1: For every unit the key (Id. No. 46162333) is included.

Note 2: For the pair of clamps please see accessories APS on page 65.



Application/customer benefits

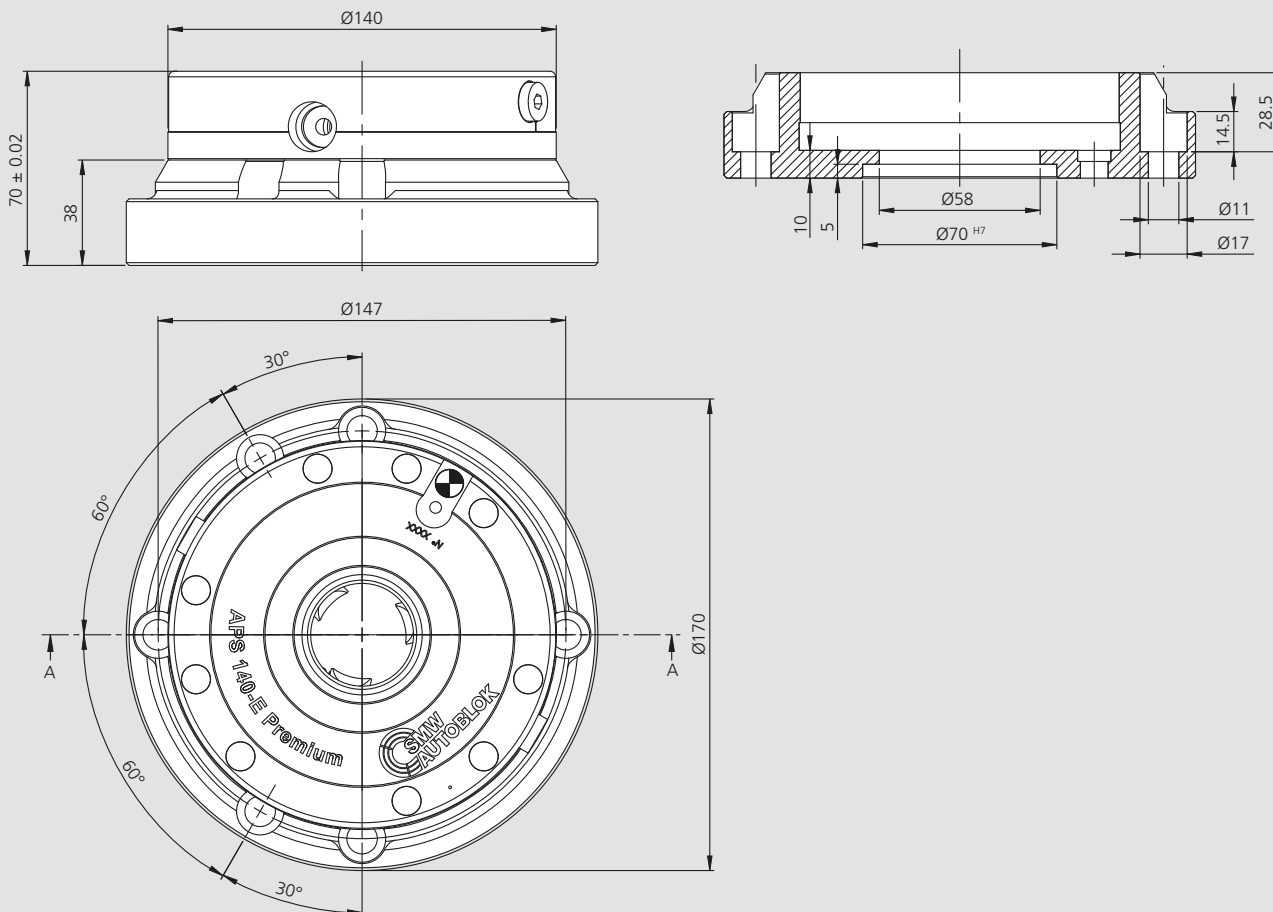
- Flange for indexing tables and CNC indexing tables with T-slots flange

Technical features

- 3 clamping slides
- Repeatability < 0.005 mm
- Turbo function to increase the pull-in forces (pull-in force without Turbo 7.5 kN)
- Anti rotation key-seat
- Air sensing
- Air cleaning
- Fully sealed (proofline)

Standard equipment

Flange with 1 APS 140 modul for indexing tables and for orientation on indexing tables with T-slots



Subject to technical changes.

Order numbers

Module height extension (APS included)	Id. No.	Höhe [mm]	Gewicht [kg]
Module height extension	46167620	70	17



Application/customer benefits

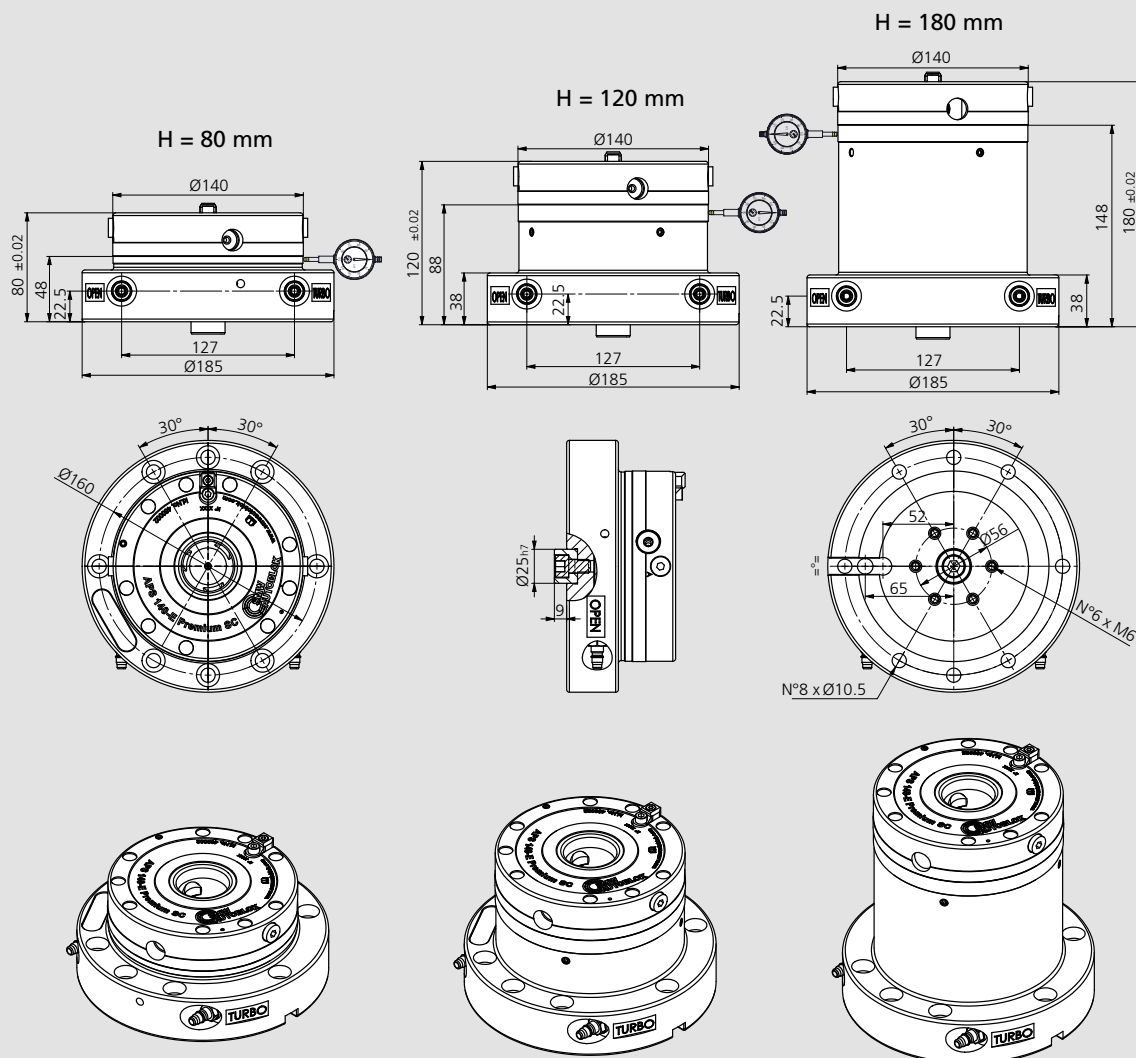
- Pre-assembled module extension unit with 1 piece APS 140 Premium
- Universal applicable
- Fast and easy set-up

Technical features

- 3 clamping slides
- Repeatability < 0.005 mm
- Turbo function to increase the pull-in forces (pull-in force without Turbo 7.5 kN)
- Anti rotating protection
- Air cleaning

Standard equipment

Module height extension with 1 piece APS 140 Premium



Subject to technical changes.

Module height extension (APS included)	Id. No.	Height [mm]	Weight [kg]
Module extension APS 140 Premium H80	460113	80	11
Module extension APS 140 Premium H120	460114	120	14
Module extension APS 140 Premium H180	460115	180	18

Note 1: For every unit the key (Id. No. 46162133) is included

Note 2: Optional T-nuts sets: 46204100 with T-slot 12 / 46204101 with T-slot 14 / 46204102 with T-slot 18. Drawings and shares of these sets.

Note 3: Mountable also on APS 190 and APS 140.

Note 4: When use the module in rotation (200-1000 r.p.m.) request balancing (listed separately).

Note 5: The module extension is equipped with radial screws for the fine centering of the APS.



Application/customer benefits

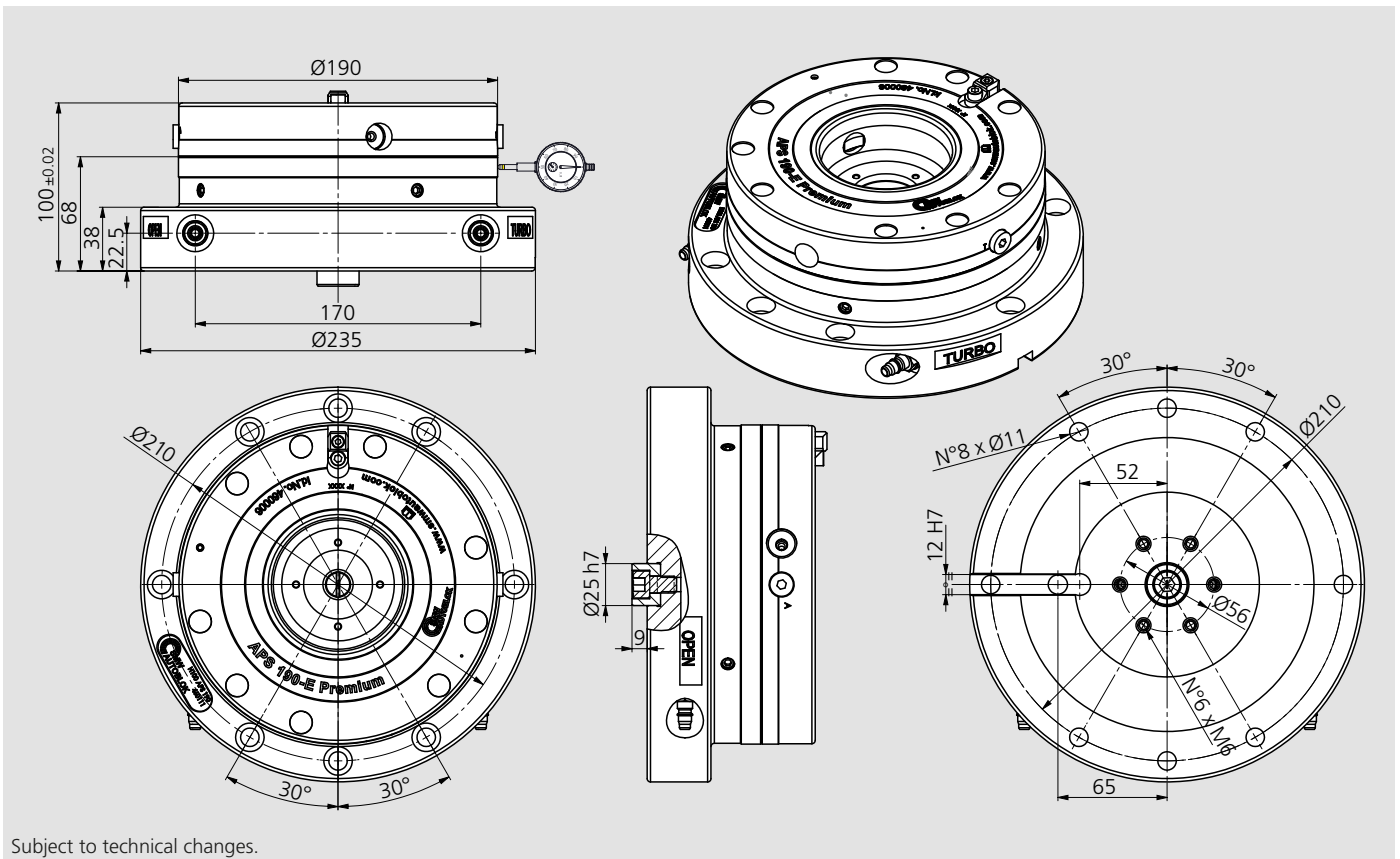
- Pre-assembled module extension unit with 1 piece APS 190 Premium
- Universal applicable
- Fast and easy set-up

Technical features

- 3 clamping slides
- Repeatability < 0.005 mm
- Turbo function to increase the pull-in forces (pull-in force without Turbo 7.5 kN)
- Anti rotating protection
- Air cleaning

Standard equipment

Module height extension with 1 piece APS 190 Premium



Subject to technical changes.

Order numbers

Module height extension (APS included)	Id. No.	Height [mm]	Weight [kg]
Module extension APS 190 PREMIUM H100	460111	100	20.5

Note 1: For every unit the key (Id. No. 46162133) is included

Note 2: Optional T-nuts sets: 46204100 with T-slot 12 / 46204101 with T-slot 14 / 46204102 with T-slot 18. Drawings and shares of these sets.

Note 3: Mountable also on APS 190 and APS 140.

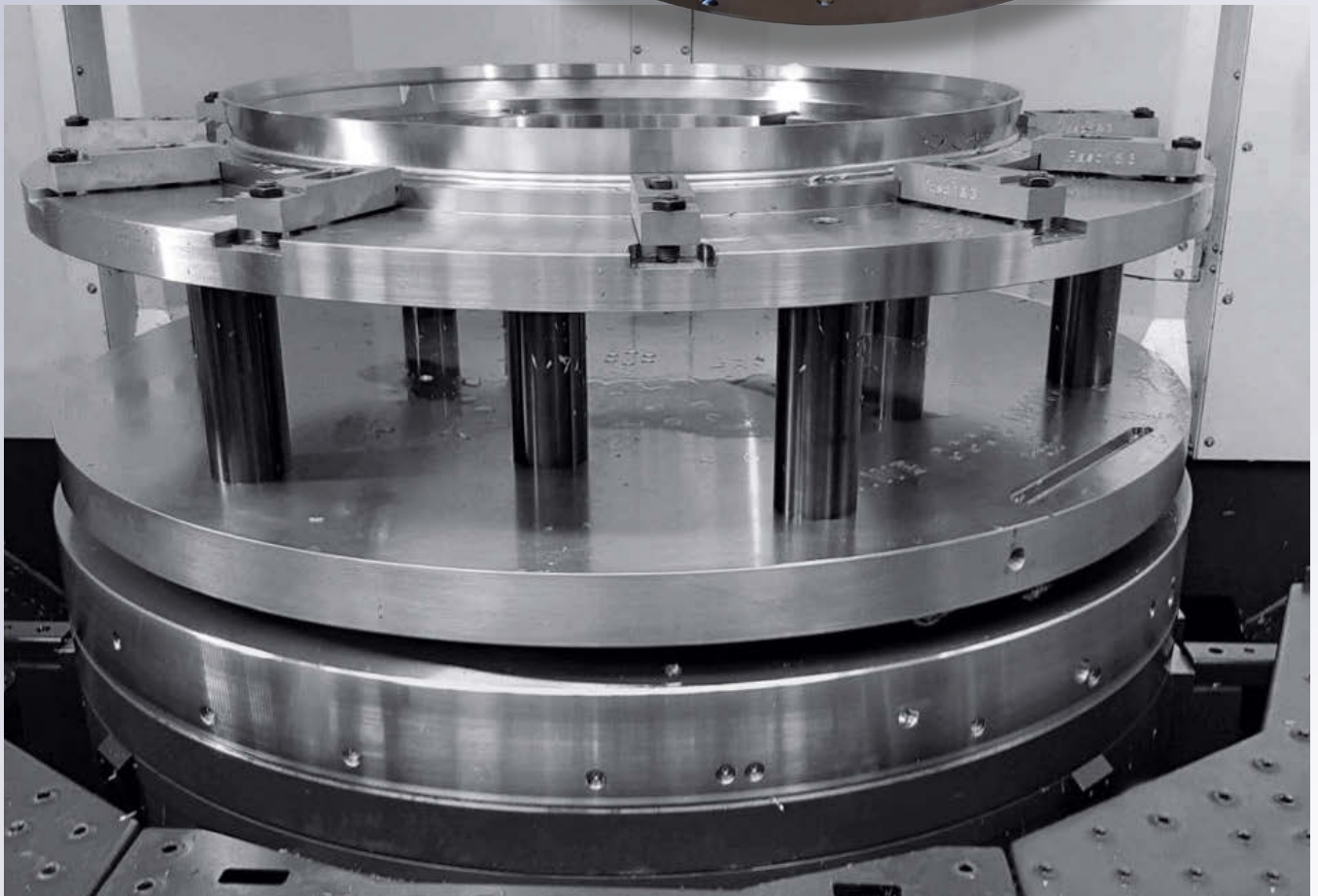
Note 4: When use the module in rotation (200-1000 r.p.m.) request balancing (listed separately).

Note 5: The module extension is equipped with radial screws for the fine centering of the APS.

APS Clamping units for vertical turning lathes



Industry 4.0
Product



■ For vertical turning lathes

Application/customer benefits

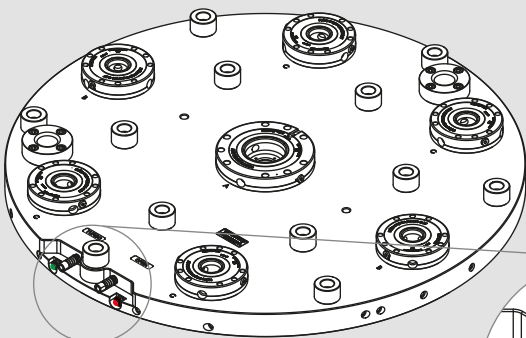
- Pre-assembled clamping unit with APS 190 Premium and APS 140 Premium Light
- For vertical turning machining center
- Universal applicable with ASA flanges or directly on the spindle nose
- Fast and easy set-up

Technical features

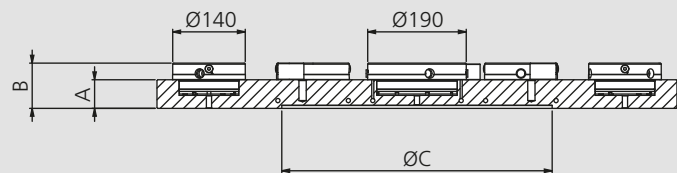
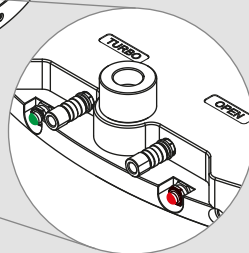
- 3 clamping slides
- Repeatability < 0.005 mm
- Turbo function to increase the pull-in forces (pull-in force without Turbo 13.5 kN for APS 190 and 7.5 kN for APS 140)
- Visual control for open and turbo
- Air cleaning

Standard equipment

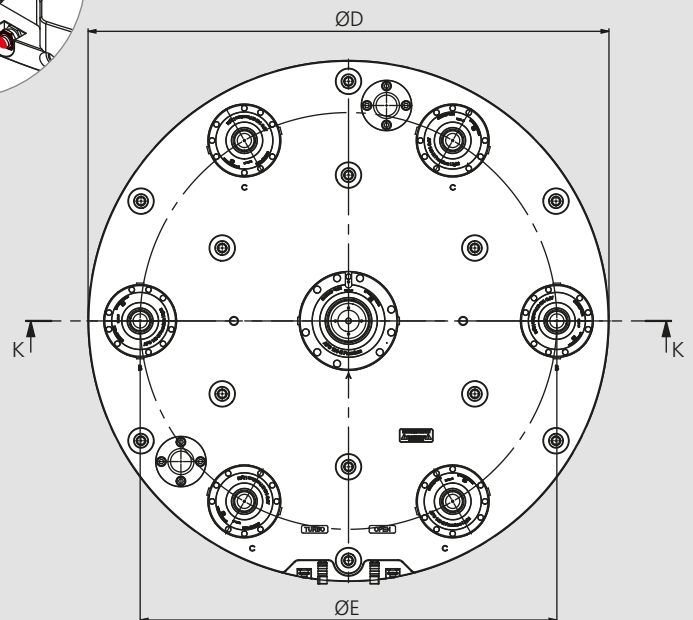
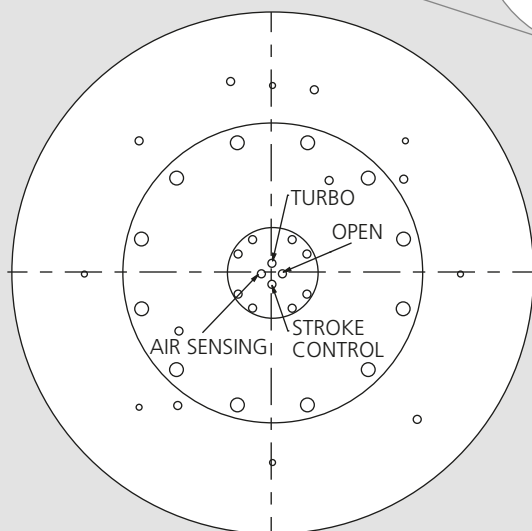
Clamping unit with APS 190 Premium and APS 140 Premium Light
ASA flange not included



Visual control



On request



Subject to technical changes.

Type	Id. No.	Pull-in force with Turbo [kN]	Repeatability [mm]	Ø	A	B	C	D	E	APS 140 n°	APS 190 n°	Weight [kg]
Clamping unit with APS 190 Premium + APS 140 Premium light	on request	45 (APS 190) 26 (APS 140)	< 0.005	630	50	82	380	630	480	4	1	128
	on request		< 0.005	800	55	87	520	800	600	6	1	222
	on request		< 0.005	1000	55	87	520	1000	800	6	1	346
	on request		< 0.005	1200	60	92	720	1200	1000	8	1	519



Application/customer benefits

- Pre-assembled clamping pallet for APS turning plates
- Universal applicable
- Ready to use

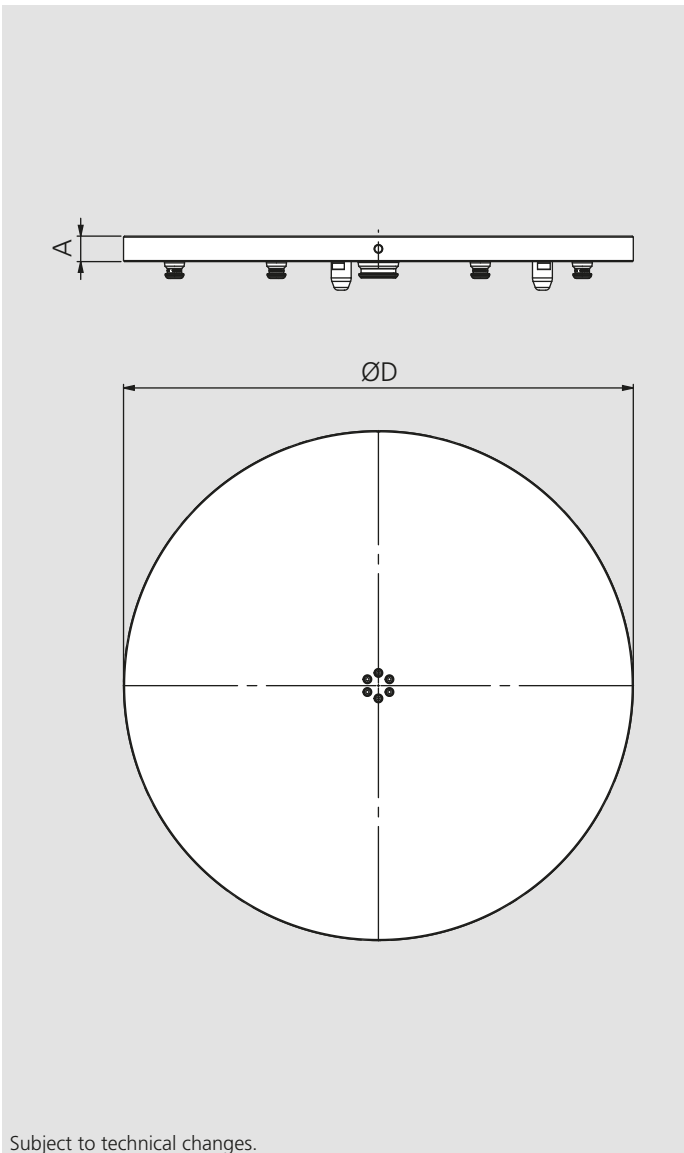
Technical features

- Fully assembled
- Rust protected
- High quality steel (1.1730)

Standard equipment

1 clamping pallet: Fully assembled with 1 clamping pin (type A for APS 190), 2 clamping pin (type B for APS 140); 2 / 4 / 6 clamping pin (type C for APS 140), 2 male pre-centering pins

Application examples



Subject to technical changes.



Id. No.	Ø	A	Weight [kg]
on request	630	40	102
on request	800	40	163
on request	1000	50	316
on request	1200	50	455

- Direct and indirect mounting
- Reduction and increase mounting

DIN 55026 / ISO-A 702/1



Application/customer benefits

- Flanges for short taper mount spindles (DIN 55026/ISO-A 702/1)
- Easy installation of chucks on the machine spindle

Flange FF 1 = Direct mounting

Flange FF 2 = Reduction of taper

Flange FF 3 = Increase of taper

Technical features

- Case hardened
- High precision grinding of the taper and all reference dimensions

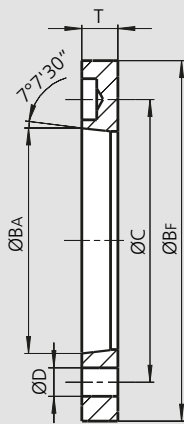
Standard equipment

Fixing bolts of the indirect mounting flange on the spindle nose

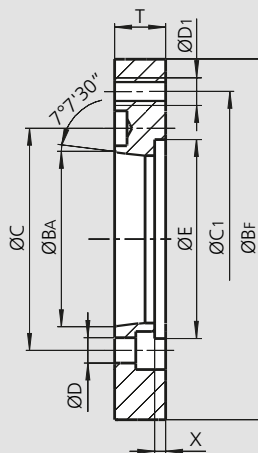
Ordering example

Flange FF 2 A8 Id. No. 24185000

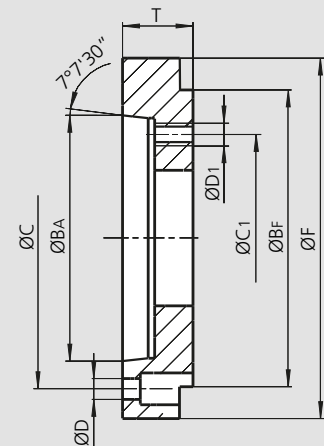
Type FF 1
ISO-A mounting direct



Type FF 2
ISO-A mounting reduction



Type FF 3
ISO-A mounting increase



Subject to technical changes.

Flange type FF 1

Flange Id. No.	Spindle nose	BF [mm]	BA [mm]	C [mm]	D [mm]	T [mm]	Weight [kg]
24125000	A15	380	285.775	330.2	25	23	8
24127100*	A15	380	285.775	330.2	25	33	11.5
24178000	A20	520	412.775	463.6	27	25	14.5

* Suggestion: This flange is thicker than the standard one, to be used only if necessary!

Flange type FF 2

Flange Id. No.	Spindle nose	BF [mm]	BA [mm]	C [mm]	D [mm]	C1 [mm]	D1 [mm]	E [mm]	X [mm]	T [mm]	Weight [kg]
24185000	A8	380	139.719	171.4	17	330.2	M24	197	10	40	24
24115000	A11	380	196.869	235	21	330.2	M24	197	10	40	21
24116100	A11	520	196.869	235	21	463.6	M24	267	12	45	54
24126100	A15	520	285.775	330.2	25	463.6	M24	-	-	40	40
24179400	A20	720	412.775	463.6	27	647.6	M30	-	-	50	93

Flange type FF 3

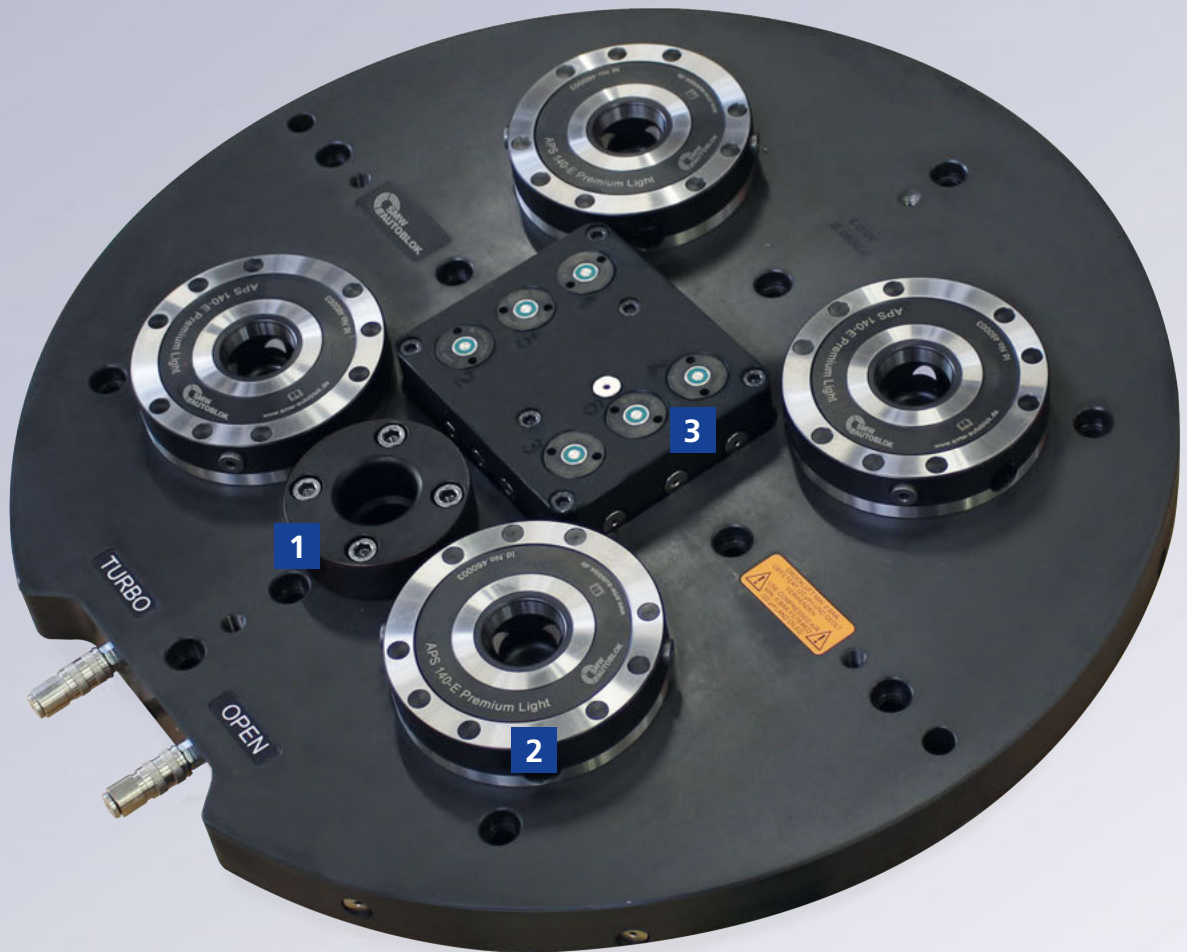
Flange Id. No.	Spindle nose	BF [mm]	BA [mm]	C [mm]	D [mm]	C1 [mm]	D1 [mm]	F [mm]	T [mm]	Weight [kg]
24175000	A20	380	412.777	463.6	27	330.2	M24	520	58	55

APS Clamping units

Customized solutions
for automation



Industry 4.0
product

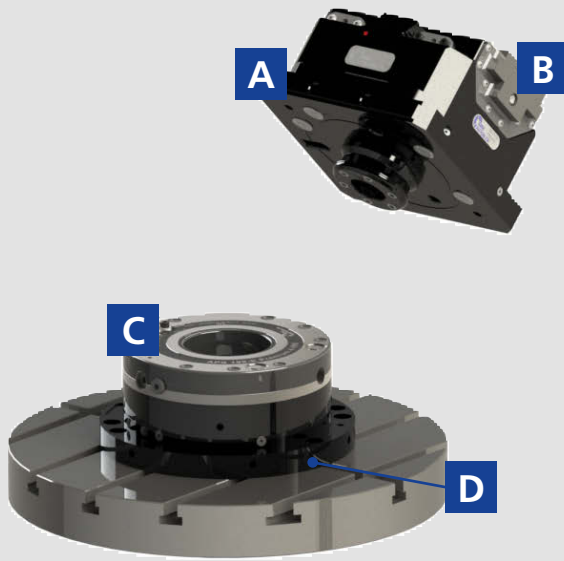


Functional overview of the APS clamping units

- 1** Pre-centering
- 2** APS zero point clamping module
- 3** Distribution plate for media feed (pneumatic / hydraulic) 6 channel

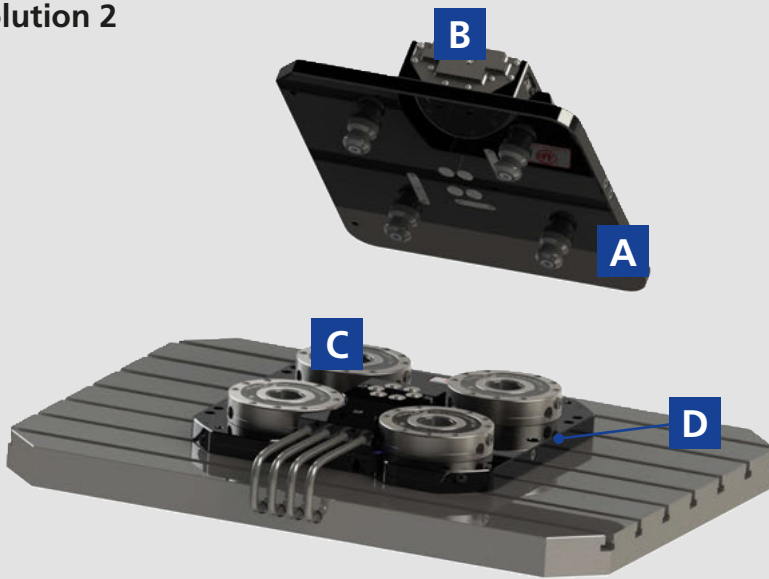
Application examples

Solution 1



Id. No.	Solution 1	Solution 2	Solution 3
A	46200103	46201111	46201111
B	77904418	77904418	77904418
C	46162640	46202028	46202024
D	46203000	460022	46202000

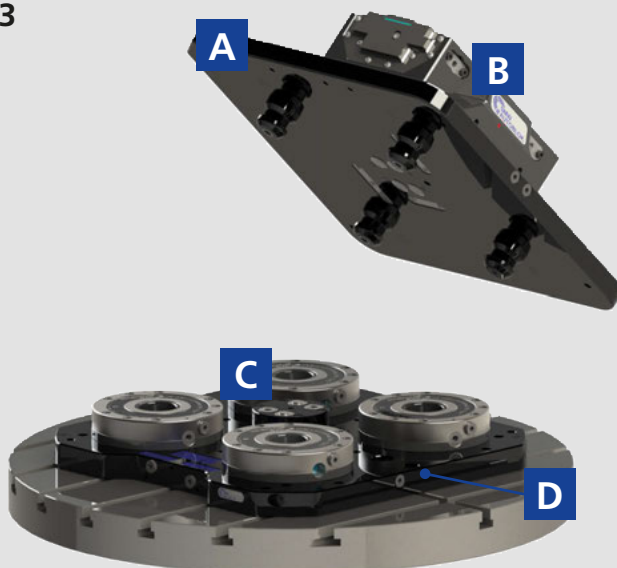
Solution 2



Hydraulic power chuck



Solution 3



APS Clamping units for automation



For more detailed information please ask our SMW-AUTOBLOK experts.

Possible configuration scheme for 5-axis machines
2 / 3 / 4 feedings

1 Feedings - for 5-axis machines

▶ 2 feedings cover



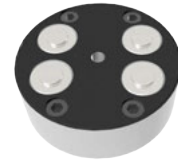
Id. No. 46202008 std. equipment with plate Id. No. 46202000

▶ 4 feedings media feed 5-axis



Id. No. 46202025

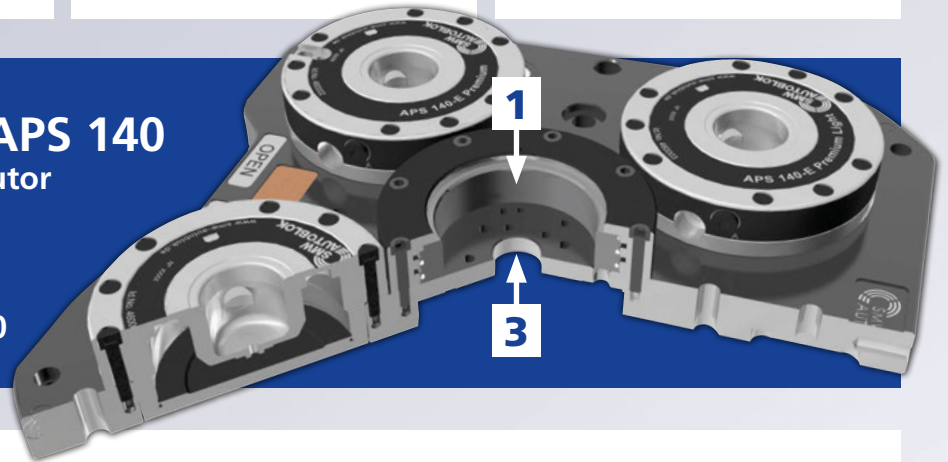
▶ 6 feedings media feed 5-axis



Id. No. 46202024

2 Plate with 4 APS 140 with central distributor

▶ Prepared for 6 feedings
Id. No. 46202000



3 Distributor

▶ To be designed specifically for each machine until to 6 feedings (must be defined in case of order).

▶ 2 feedings



▶ 4 feedings



▶ 6 feedings



4 T-nuts set

Optional
See page 70

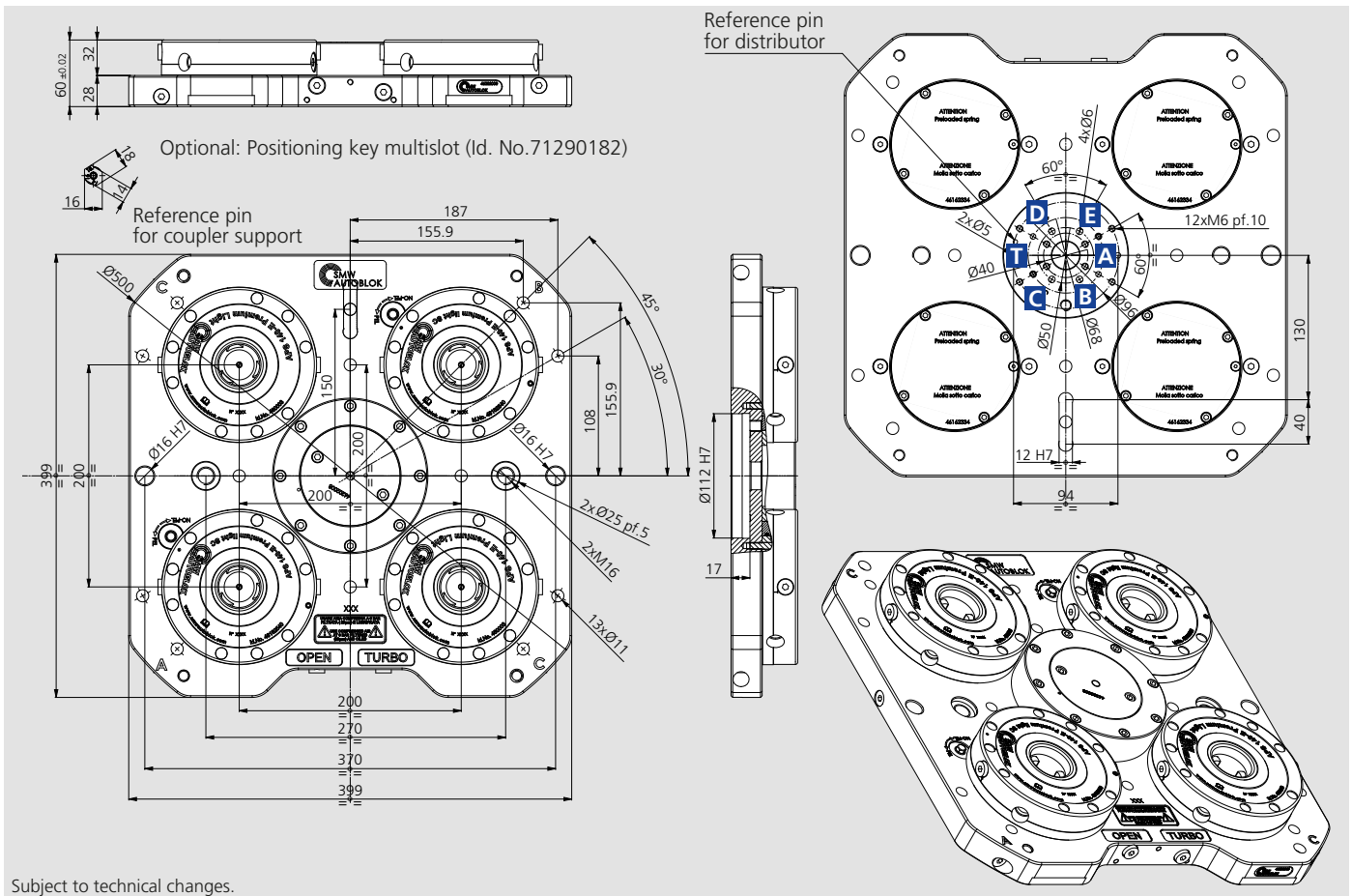


Order guide: Plate with 4 140 APS to order pos. **1+2+3+4**

1. Media feed
2. Plate group with n.4 APS 140 Id. No. 46202000 (n.4 140 APS supplied)
3. Distributor
4. T-nuts set

Order examples:

n.1 distributor + n.1 46202000 + n.1 support + n.1 T-nuts set



Subject to technical changes.

Plate (APS included)	Id. No.	Weight [kg]
Plate 4 APS 140 E PREMIUM for 5-axis	46202000	43

- A** APS open
- T** Air sensing / Turbo APS

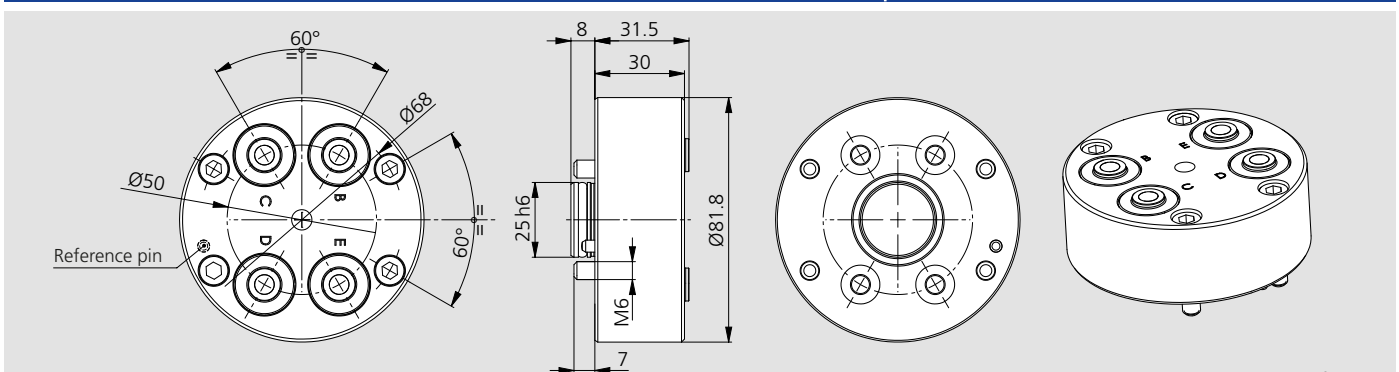
The feedings **BCDE** are transferred on the pallet between pneumatic and hydraulic couplers put on the body of the APS (Id. No. 46202024 or 46202025). If there are one or more of the Twin Vise models STV or PT mounted on the pallet, the feedings can be used in these different ways:

- B** Twin Vise open
- C** Twin Vise closed
- D** Stroke control valve Twin Vise
- E** Air sensing Twin Vise

* **Note 1:** Can be used the air sensing on the plate for the 5 axis using the TURBO feeding.
 ****Note 2:** When air sensing is not used, it can be excluded between two selectors present on the plate face.

Media feed 5-axis 2 / 4 / 6 feedings

4 APS 140-E



Subject to technical changes.

Represented at 4 feedings

Media feed 4 APS 140 5-axis	Id. No.	Possible feedings
Kit SUPP-4 INN PASCAL WVP-2FPL on plate 4 APS-140 5-axis	46202024	B-C-D-E
Kit SUPP-2 INN PASCAL WVP-2FPL on plate 4 APS-140 5-axis	46202025	B-C

APS

Module height extension for automation



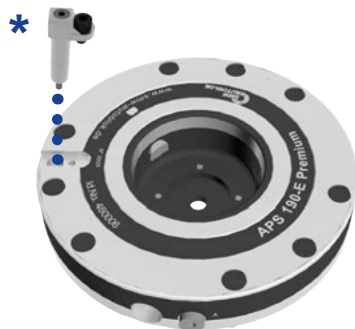
Industry 4.0
Product

For more detailed
information
please ask our
SMW-AUTOBLOK
experts.

Possible configurations scheme for 5-axis machines 2 / 4 / 6 feedings

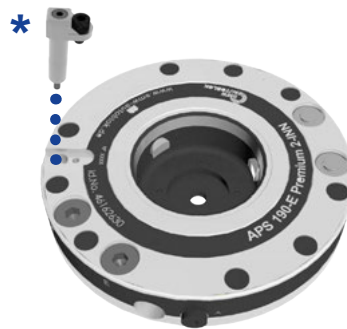
1 APS 190

2 feedings configuration



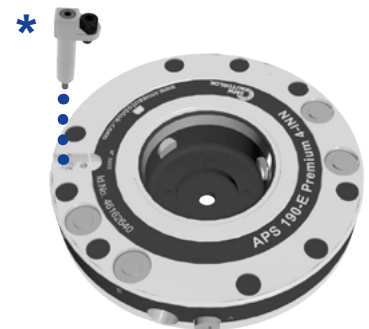
APS 190 E PREMIUM
46165640

4 feedings configuration



APS 190 2 INN
46162630

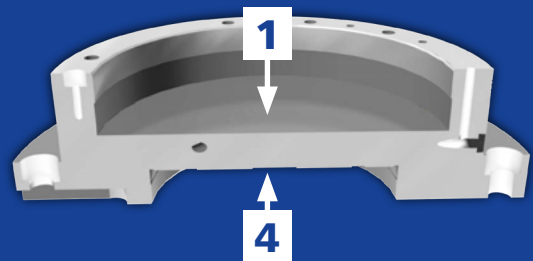
6 feedings configuration



APS 190 4 INN
46162640

2 Module height extension group

- ▶ Prepared for 6 feedings
Id. No. 46203000



3 Key*

4 Distributor (example)

- ▶ To be designed specifically for each machine until to 6 feedings
(must be defined in case of order).

2 feedings



4 feedings



6 feedings



5 T-nuts set

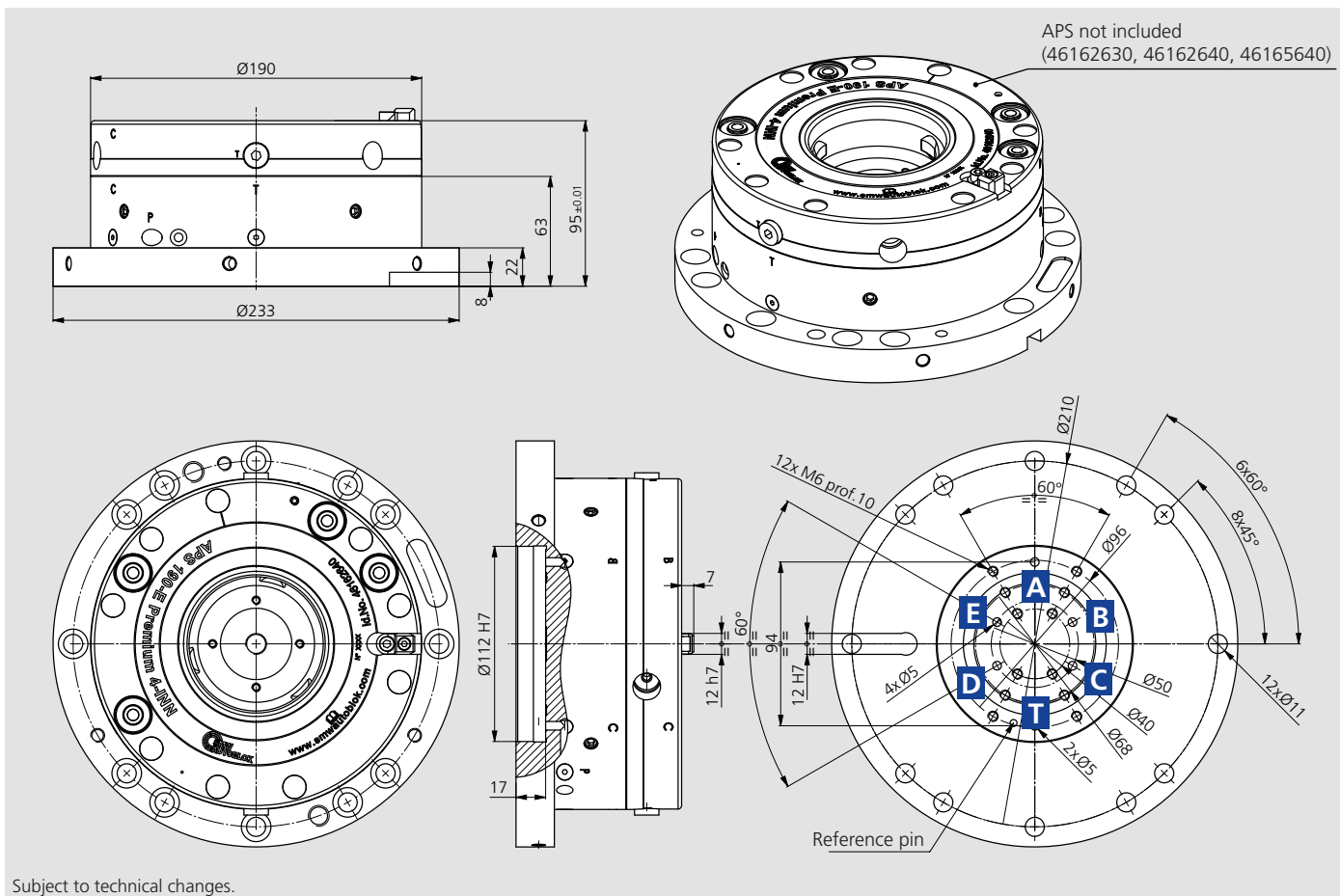
Optional
See page 70



Order guide: APS with 1 key to order positions 1-5:

1. 190 APS with single key
2. Module height extension group Id. No. 46203000
3. To order key Id. No. 46162333
4. Distributor
5. T-nuts set

Order example: 1 pc. 46203000 + 1 pc. 46165640 + 1 pc. 46162333 + 1 pc. personalized distributor + 1 T-nuts set.



Subject to technical changes.

Module height extension (APS not included)	Id. No.	Height [mm]	Weight [kg]
Module height extension group N.6 feedings H95	46203000	95	10.5

- A** APS open
- T** Air sensing / Turbo APS

The feedings **B C D E** are used on the pallet between pneumatics and hydraulics couplers put on the body of 190 APS (Id. No. 46162630 and 46162640). When on the pallet is mounted a Twin vise model STV or PT the feedings can be used in these different ways:

- B** Twin Vise open
- C** Twin Vise closed
- D** Stroke control valve Twin Vise
- E** Air sensing Twin vise or Driver pin stroke control APS

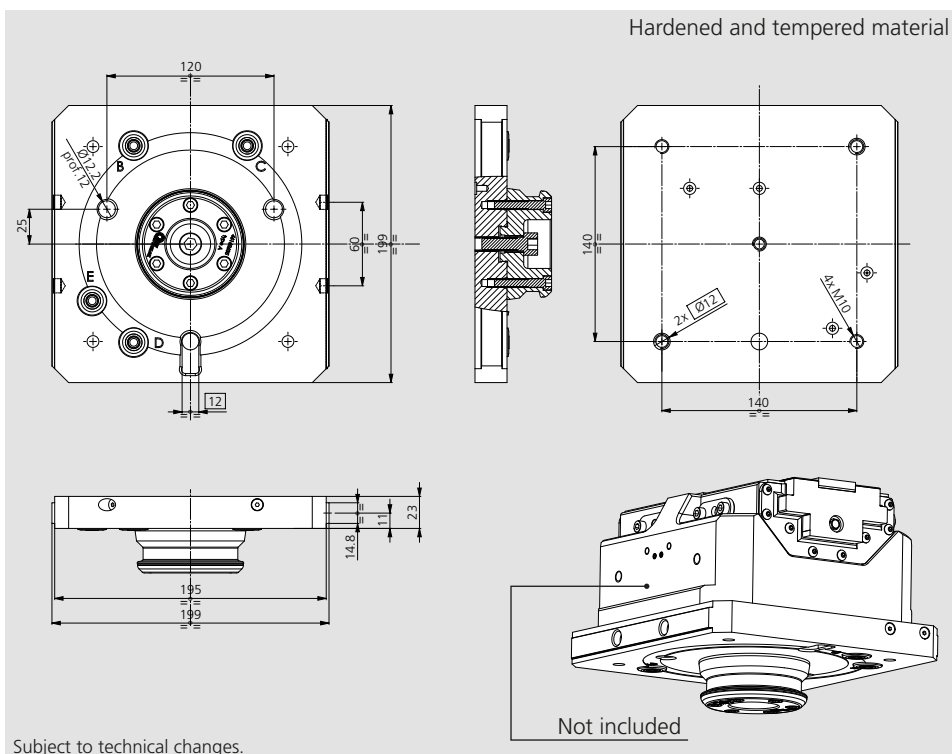
The feeding **E** can not to be used on the pallet with the pneumatic / hydraulic coupler but can be used in another way to oversee the pneumatic stroke control of the APS 190; in this case the feeding is called **SC**.

180 STV

Pallet holder with 2 - 4 feedings

■ Prepared for robot loading

The pallet is prepared for loading with robots.



Subject to technical changes.

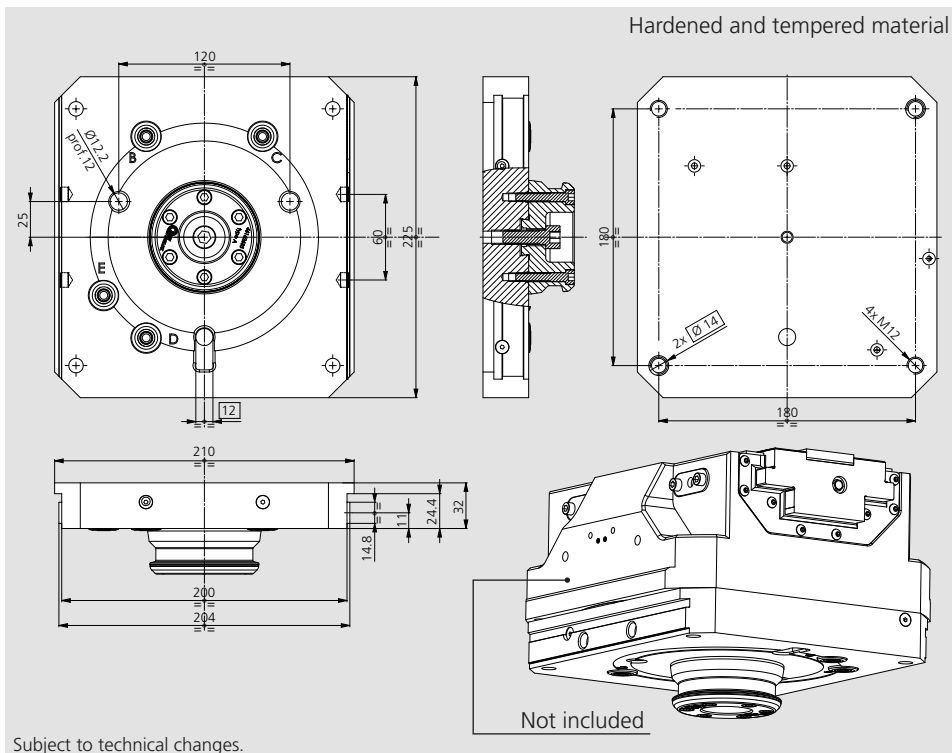
Type pallet (without vise)	Id. No.	Feedings to be used	Weight [kg]
Pallet holder 180STV 2-3 jaws with 4 feedings APS 190 loading robot	46200101	B-C-D-E	7.7
Pallet holder 180STV 2-3 jaws with 2 feedings APS 190 loading robot	46200103	B-C	7.7

225 STV

Pallet holder with 2 - 4 feedings

■ Prepared for robot loading

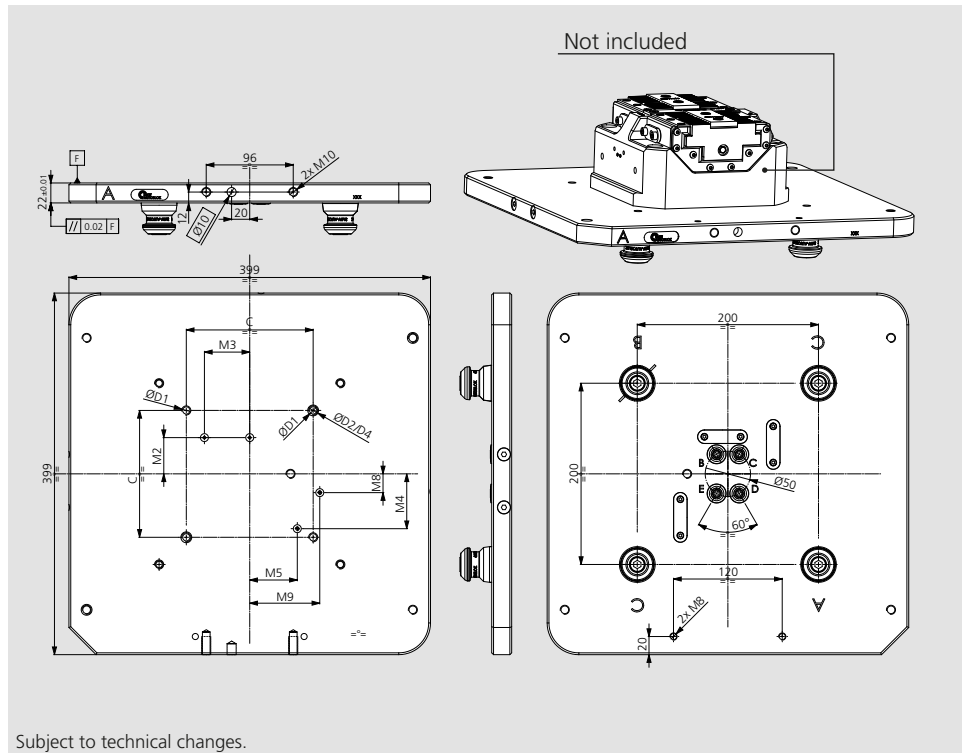
The pallet is prepared for loading with robots.



Subject to technical changes.

Type pallet (without vise)	Id. No.	Feedings to be used	Weight [kg]
Pallet holder 225STV 2-3 jaws with 4 feedings APS 190 loading robot	46200106	B-C-D-E	12
Pallet holder 225STV 2-3 jaws with 2 feedings APS 190 loading robot	46200108	B-C	12

The pallet is prepared for handling with robots.



Type pallet (without vise)	Id. No.	Weight [kg]
Pallet Q400 prepared for 180 STV with feedings loading robot	46201111	28
Pallet Q400 prepared for 225 STV with feedings loading robot	46201101	28



Application/customer benefits

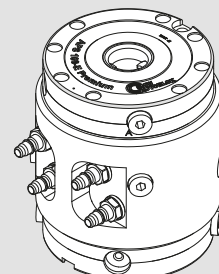
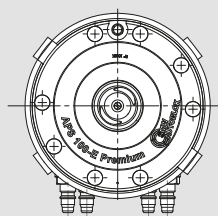
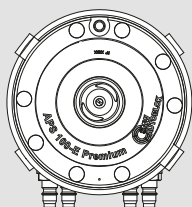
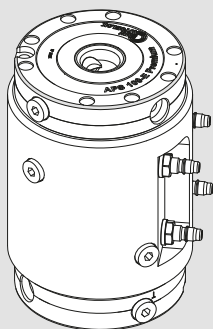
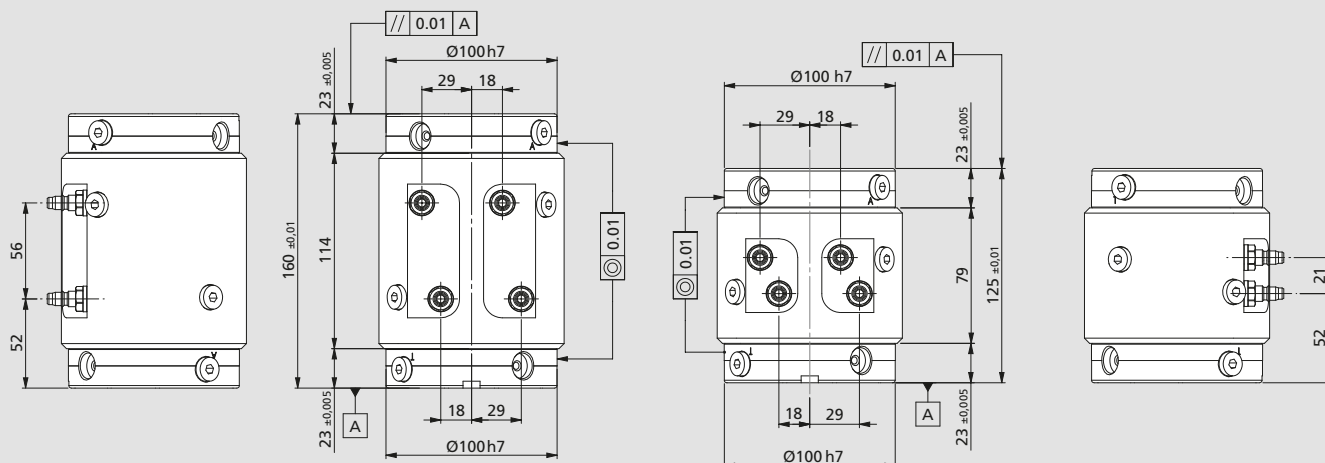
- Pre-assembled clamping unit with 2 pieces APS 100 Premium
- Universal applicable
- Fast and easy set-up

Technical features

- 2 clamping slides
- Repeatability < 0.005 mm
- Turbo function to increase the pull-in forces up to 15 kN (pull-in force without Turbo 4 kN)
- Anti rotating protection
- Air cleaning

Standard equipment

Combi unit with 2 pieces APS 100 Premium



Subject to technical changes.

Order numbers

Type	Id. No.	Height [mm]	Weight [kg]
Combi unit with 2 pieces APS 100 Premium	460117	125	7
Combi unit with 2 pieces APS 100 Premium	460118	160	9



Application/customer benefits

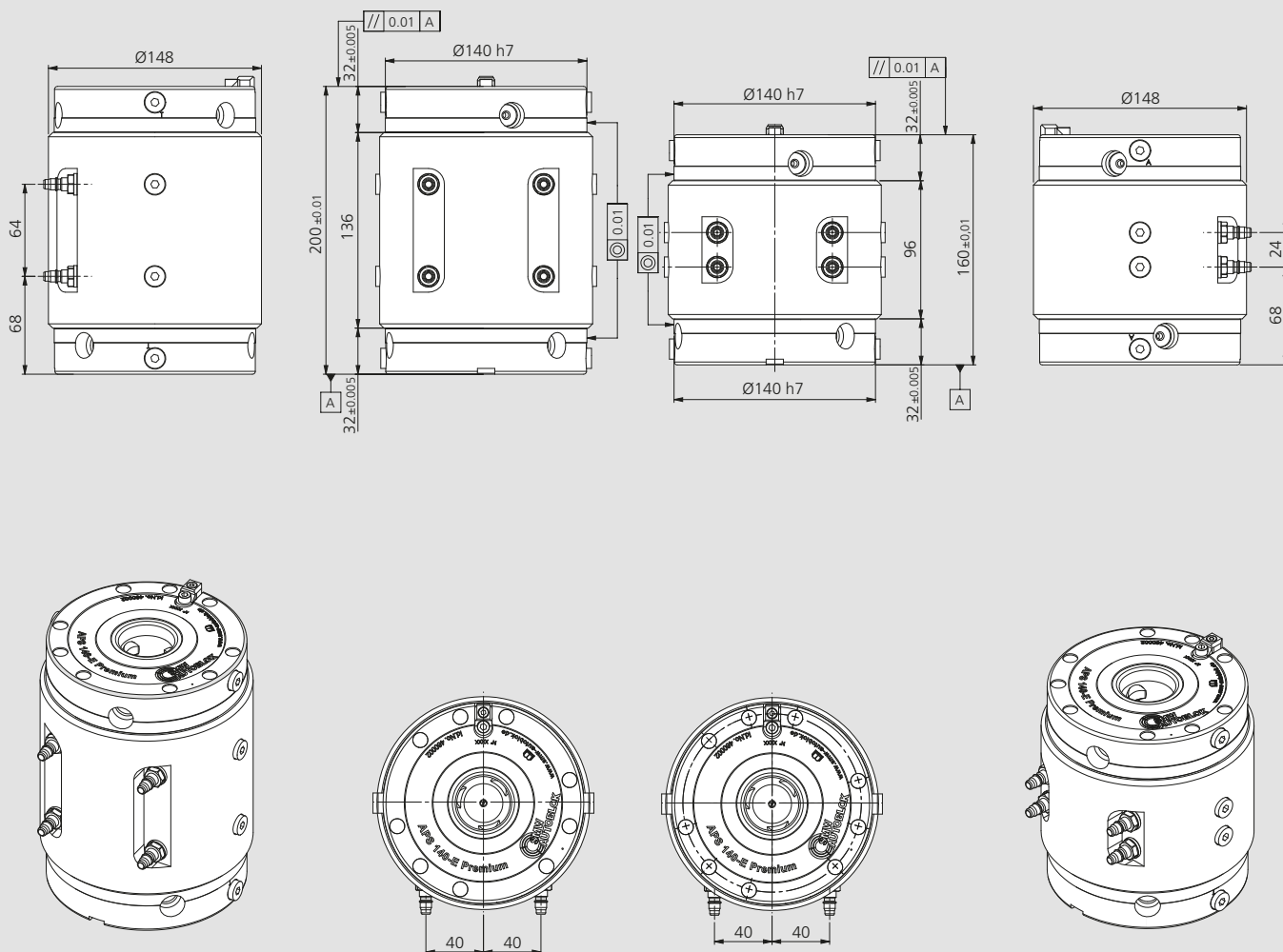
- Pre-assembled clamping unit with 2 pieces APS 140 Premium
- Universal applicable
- Fast and easy set-up

Technical features

- 3 clamping slides
- Repeatability < 0.005 mm
- Turbo function to increase the pull-in forces up to 26 kN (pull-in force without Turbo 7.5 kN)
- Air cleaning
- Anti rotation protection

Standard equipment

Clamping unit with 2 pieces APS 140 Premium



Subject to technical changes.

Order numbers

Type	Id. No.	Height [mm]	Weight [kg]
Combi unit with 2 pieces APS 140 Premium	460119	160	17
Combi unit with 2 pieces APS 140 Premium	460120	200	21

Application/customer benefits

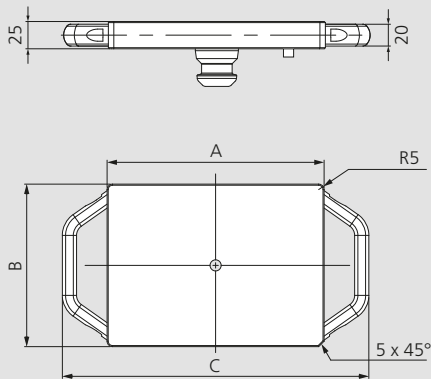
- Pre-assembled clamping pallet for APS 100 / 140
- Universal applicable
- Ready to use

Technical features

- Fully assembled
- Rust protected
- High quality steel (1.1730)

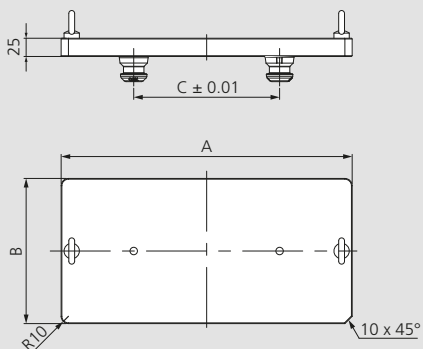
Standard equipment

- 1 clamping pallet: Fully assembled with 1 clamping pin (Type A), anti rotation key and hand grips
- 2 clamping pallet: Fully assembled with 1 clamping pin (Type A) and 1 clamping pin (Type B)
- 4 clamping pallet: Fully assembled with 1 clamping pin (Type A), 1 clamping pin (Type B), 2 clamping pin (Type C)



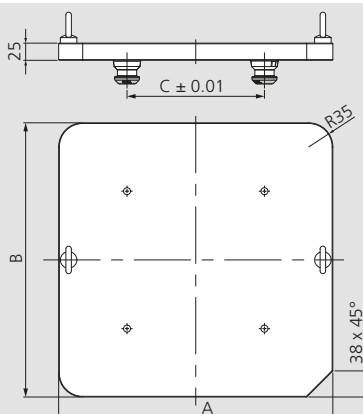
Subject to technical changes.

Type	Id. No.	A mm	B mm	C mm
Clamping pallet APS 100	46167721	149	149	231
Clamping pallet APS 140	46167722	199	149	281



Subject to technical changes.

Type	Id. No.	A mm	B mm	C mm
Clamping pallet APS 100	46167723	299	149	150
Clamping pallet APS 140	46167724	399	199	200



Subject to technical changes.

Type	Id. No.	A mm	B mm	C mm
Clamping pallet APS 100	46167725	299	299	150
Clamping pallet APS 140	46167726	399	399	200

Customer request data

- required for the preparation of the offer
- Simply fill in and send to:
contact@stationary-workholding.com

APS

0



Application/customer benefits

- Customized clamping pallets
- Short delivery times
- Usable for any machine or application
- Rust protected by means of burnishing

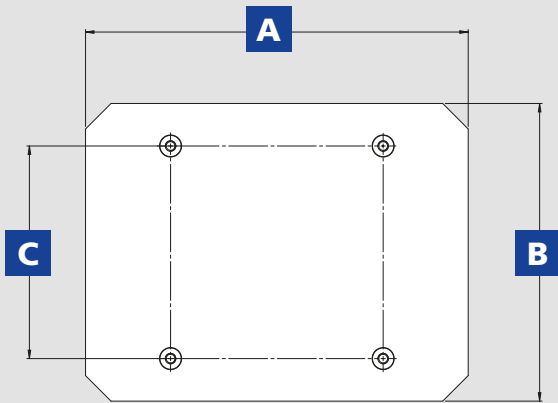
Technical features

- High quality steel (1.1730)

Standard equipment

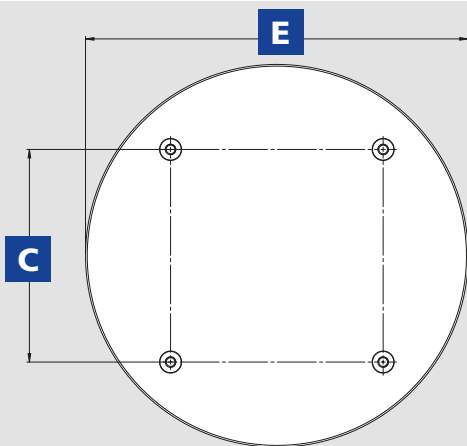
Customized clamping pallet with transport screws
Fully assembled with APS clamping pins on request

Customized clamping pallets



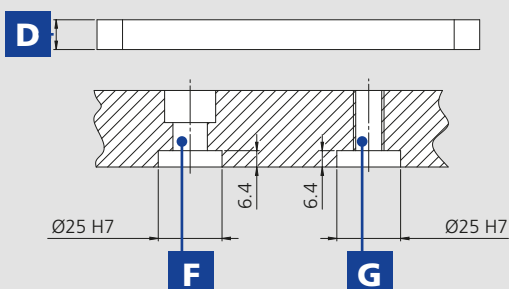
Dimensions

A	
B	
C	



Dimensions

C	
ØE	



Dimensions

D		
F	<input type="checkbox"/> M12	<input type="checkbox"/> M16
G	<input type="checkbox"/> M10	<input type="checkbox"/> M12

- Basic
- Premium

Application/customer benefits

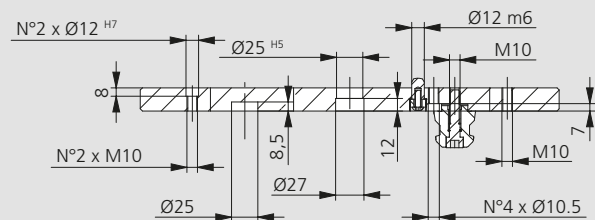
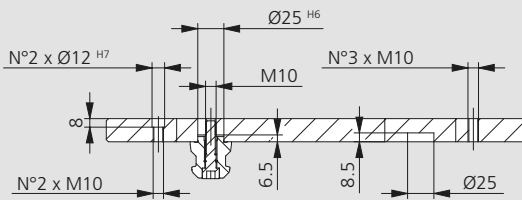
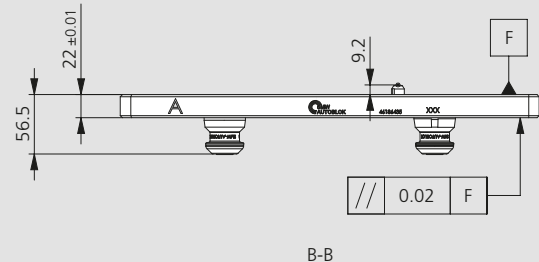
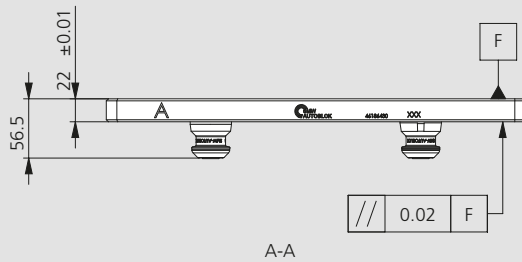
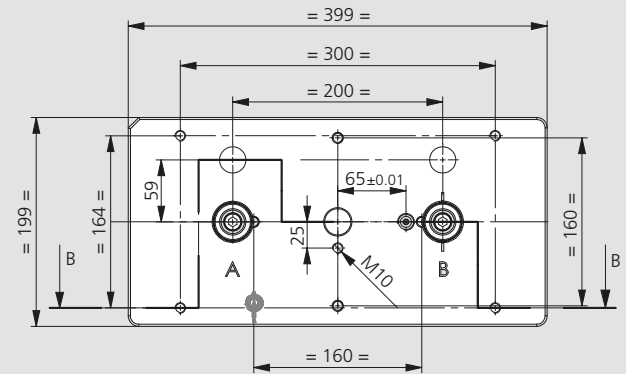
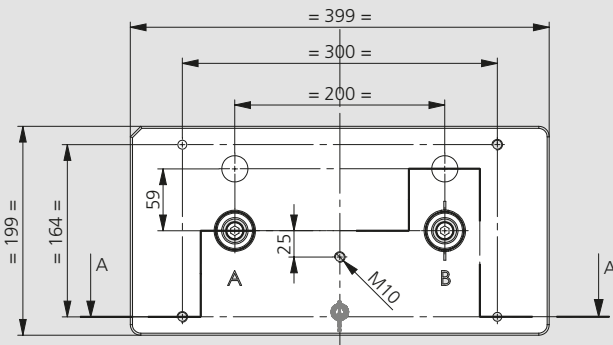
- Pre-assembled clamping pallet for APS 140
- Universal applicable
- 2 Versions: Premium and Basic

Technical features

- Grid dimension 200 mm
- Fully assembled including clamping pins
- Premium version with additional adaption for module units
- Rust protected

Standard equipment

Clamping pallet fully assembled with
 1 centering pin (type A),
 1 sword pin (type B),
 Transport screws



BASIC VERSION

PREMIUM VERSION

Subject to technical changes.

Order numbers

Type	Id. No.
Clamping pallet APS 140 Premium	46186435
Clamping pallet APS 140 Basic	46186430

- Basic
- Premium



Application/customer benefits

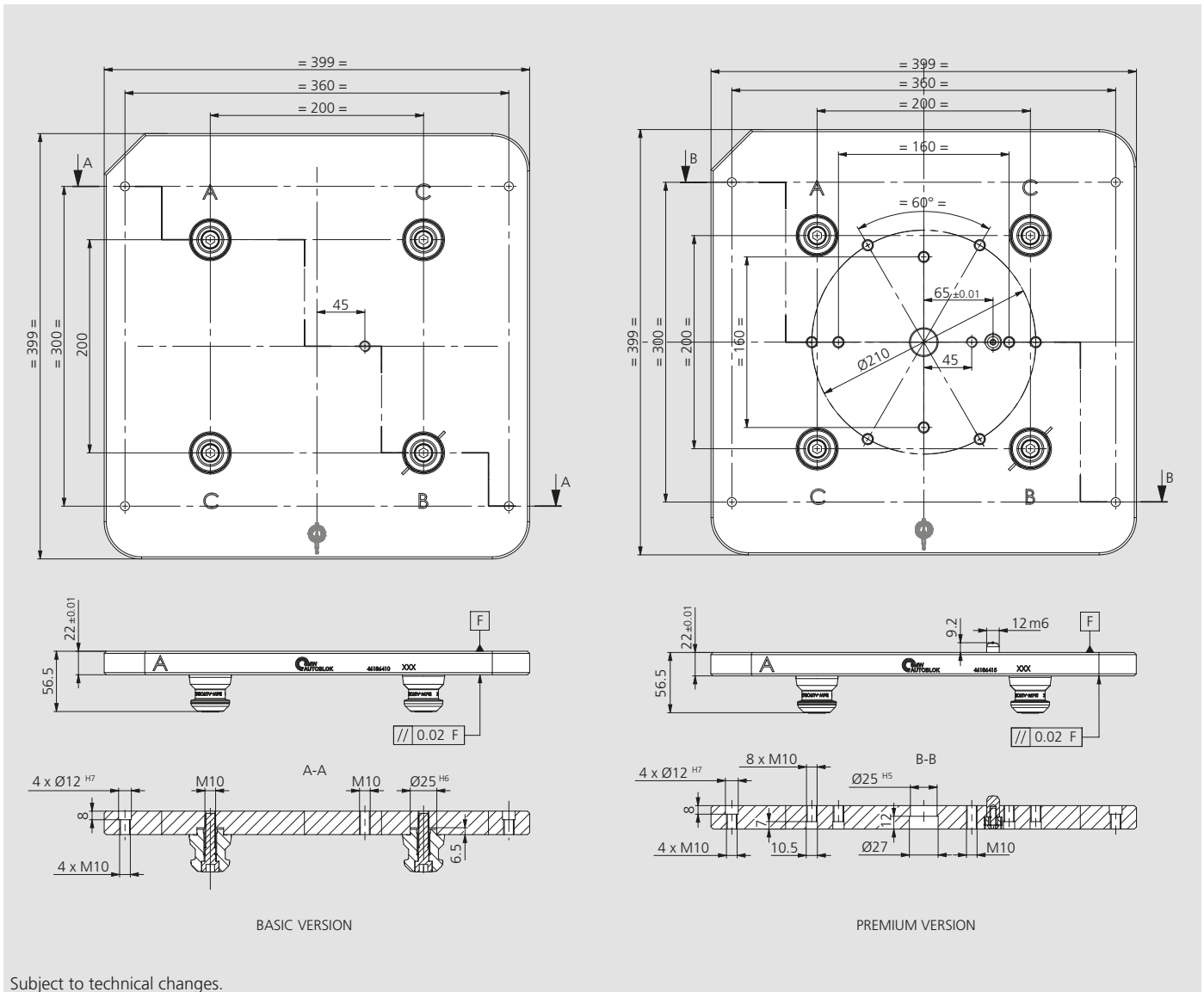
- Pre-assembled clamping pallet for APS 140
- Universal applicable
- 2 Versions: Premium and Basic

Technical features

- Grid dimension 200 mm
- Fully assembled including clamping pins
- Premium version with additional adaption for module units
- Rust protected

Standard equipment

Clamping pallet fully assembled with
 1 centering pin (Type A),
 1 sword pin (Type B),
 2 clamping pins (Type C),
 Transport screws



Order numbers

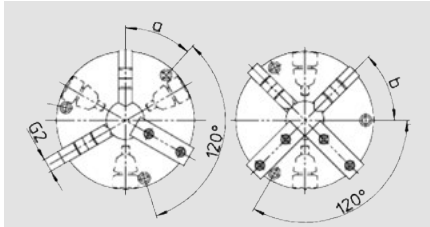
Type	Id. No.
Clamping pallet APS 140 Premium	46186415
Clamping pallet APS 140 Basic	46186410

Q400

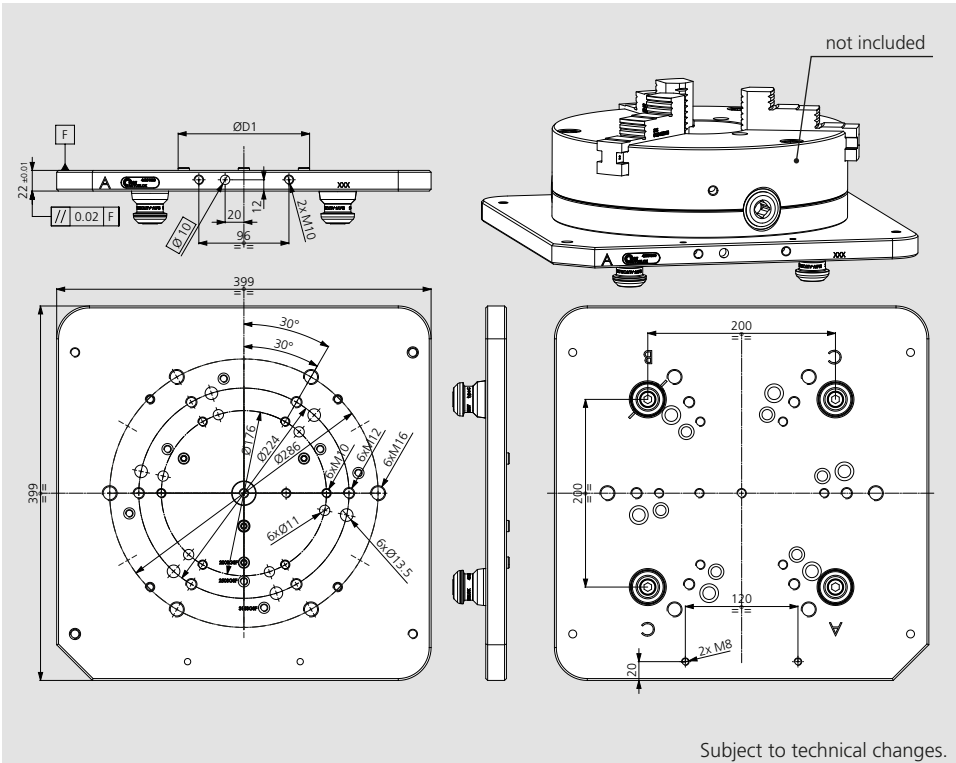
Clamping Pallet Q400

■ Pallet prepared for mounting SGSF chuck

This pallet is prepared for loading with robots.



Chuck type SGS-SGSF	200-55	250-76	315-103
Front thread 3+3	33031220	33031225	33031231
Front thread 4+4	33033220	33033225	33033231
Set-3 GRC	03652030	03652530	03653130
Set-4 GRC	03652040	03652540	03653140
Set-3 Soft jaws	03602030	03602530	03603130
Set-4 Soft jaws	03602040	03602540	03603140



Subject to technical changes.

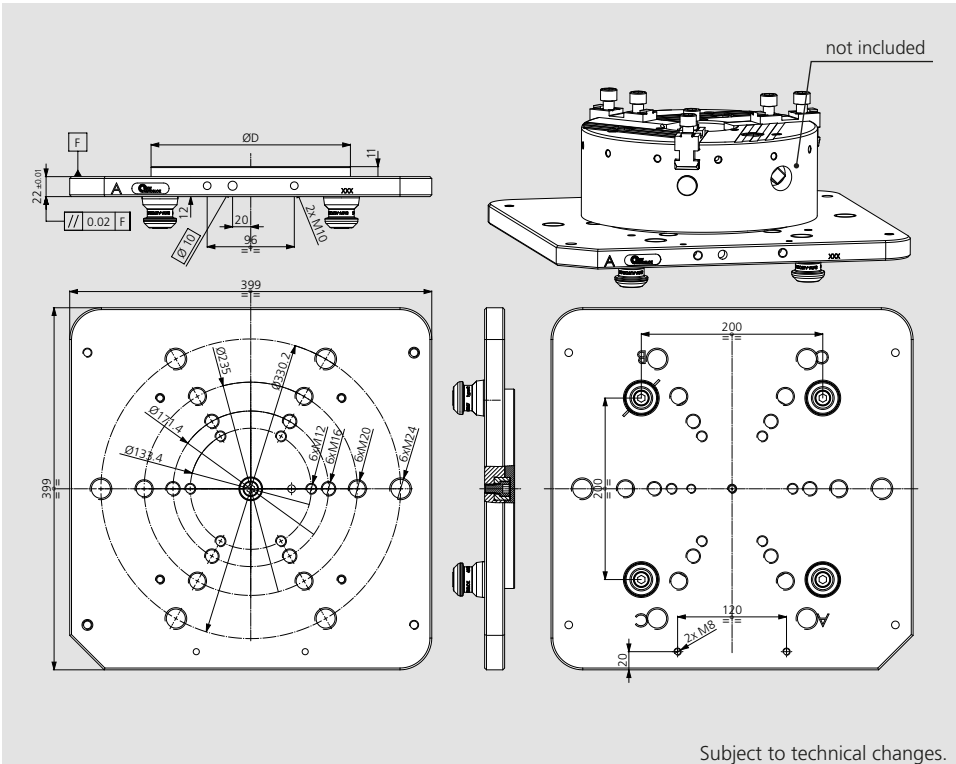
Type pallet (without chuck)	Id. No.	Weight [kg]	Manual chucks SGSF (optional)	
			Ø D1	Chuck model
Pallet Q400 prepared for chucks 200-250-315 SGSF handling robot	46201020	28	159.9	200 SGSF
			199.9	250 SGSF
			259.9	315 SGSF

Q400

Clamping Pallet Q400

■ Pallet prepared for mounting HG-N chucks

This pallet is prepared for loading with robots.
For information on HG chucks see page 320 - 339



Subject to technical changes.

Type pallet (without chuck)	Id. No.	ØD	Weight [kg]
GRP pallet Q400 + mounting D220 AUTC 260HG loading robot	46201012	219.7	30
GRP pallet Q400 + mounting D300 AUTC 315HG loading robot	46201013	299.7	32
GRP pallet Q400 + mounting D380 AUTC 400-500HG manual loading	46201014	379.7	36

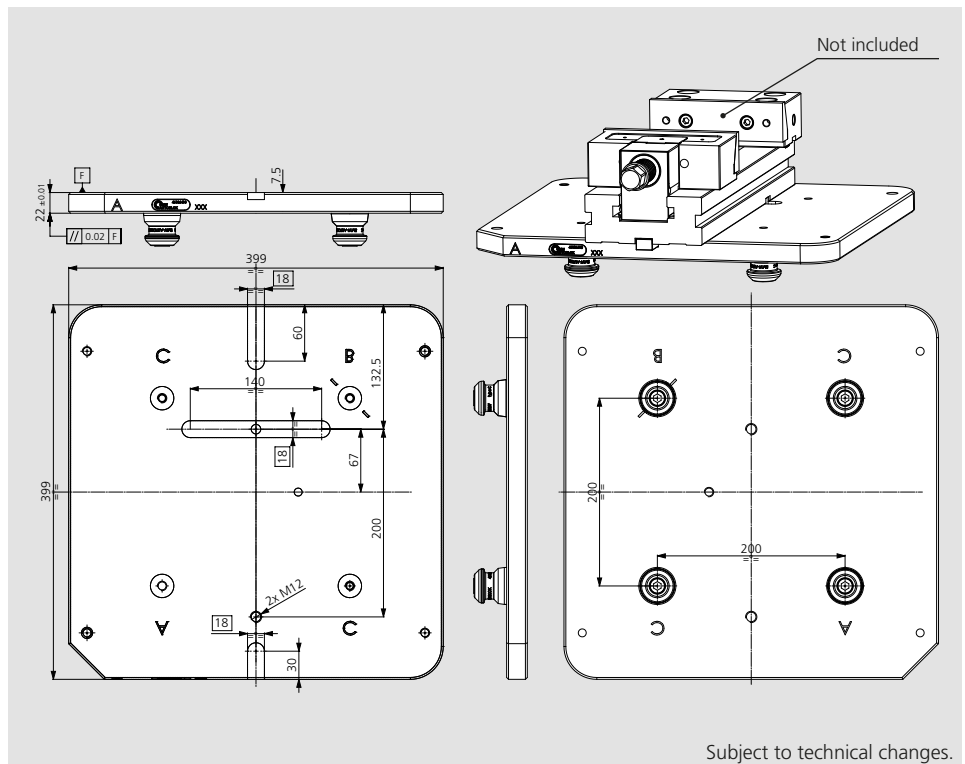
Clamping pallet for automation with MC150x200 vises

■ Pallet prepared for mounting 1 vise

4 APS 140

0

This pallet is **not** prepared for handling with robots.
For information on MC vises see page 283 - 288



Type pallet (without vise)

Pallet Q400 prepared for 1 vise MC150x200 manual loading

Id. No.

41702271

Weight [kg]

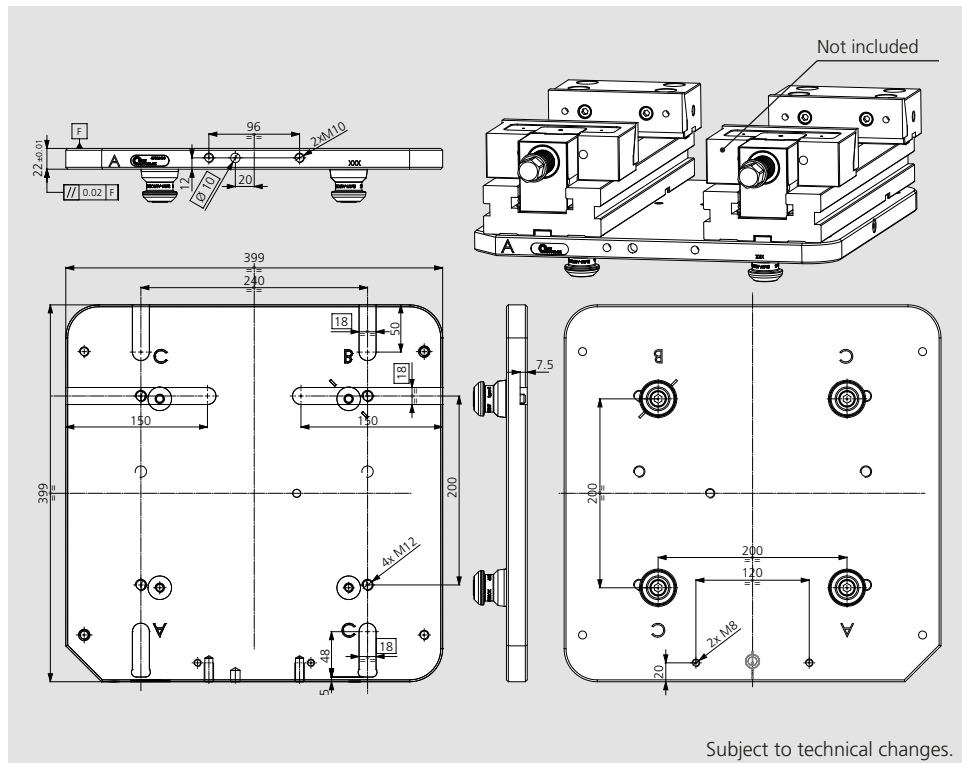
28

Clamping pallet for automation with MC150x200 vises

■ Pallet prepared for mounting 2 vises

4 APS 140

This pallet is prepared for handling with robots.
For information on MC vises see page 283 - 288



Type pallet (without vise)

Pallet Q400 prepared for 2 vises MC150x200 robot loading

Id. No.

41702261

Weight [kg]

28



Application/customer benefits

- Spacers to adapt more different module units
- Universal use

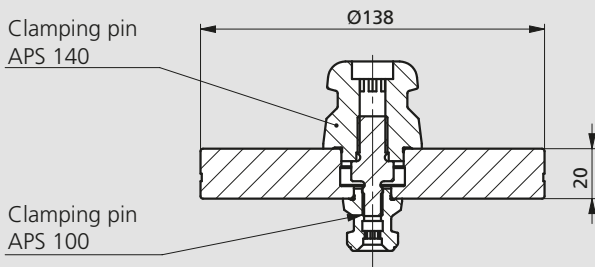
Technical features

- Height 20 mm

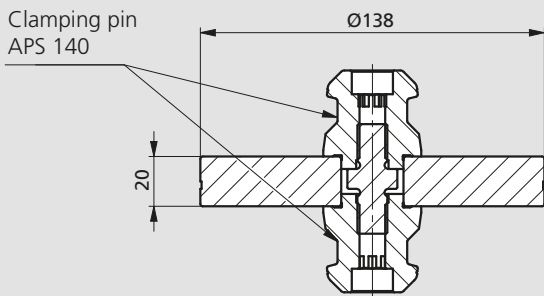
Standard equipment

Spacer without clamping pin

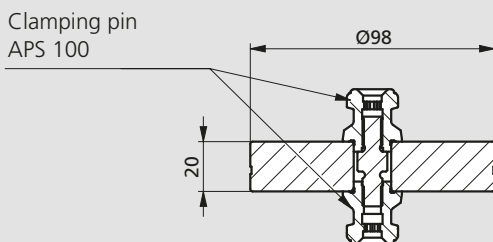
46168371



46168366

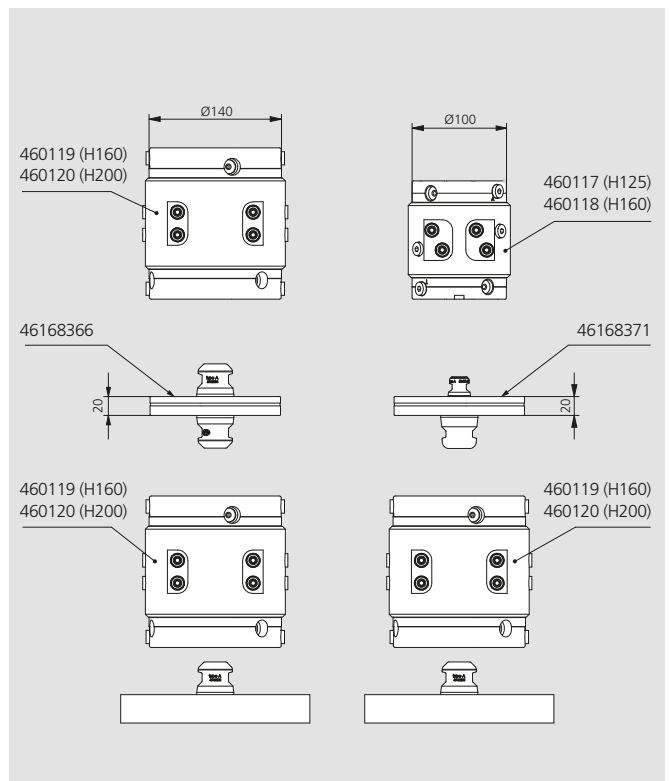


46168370

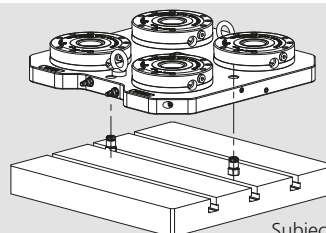
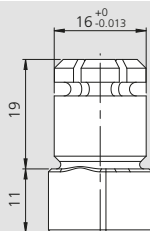
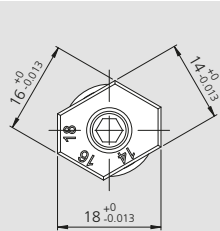


Type	Id. No.	Height [mm]	Weight [kg]
Spacer H20 APS 140-100	46168371	20	2.2
Spacer H20 APS 140-140	46168366	20	2.3
Spacer H20 APS 100-100	46168370	20	1.1

Application examples



Multi-Slot screw for the positioning of clamping units



Subject to technical changes.

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

Protection cover for screws for APS modules

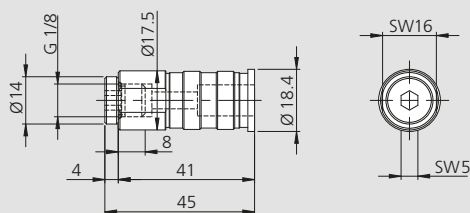


Subject to technical changes.

Type	Id. No.
APS 100	46162129*
APS 140	46162309*
APS 160	46162609*
APS 190	46162609*
APS 250	46165109*

* The Id. No. refers to one single piece.

Air connection - Protection cover quick connection 1/8"

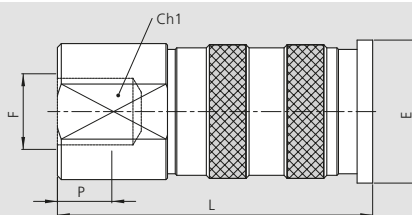


Subject to technical changes.

Type	Id. No.
APS 100 / 140	46167019*

* For all models. Must not be used in rotation.

Air Connection - Quick fitting female 1/8"

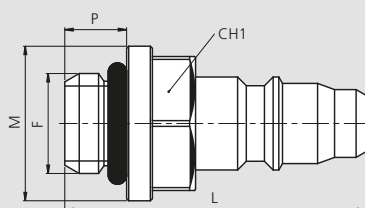


Subject to technical changes.

Type	Id. No.	Ø E	F	L	P
APS 100 / 140	71612801*	18.8	G1/8	42	7

* For all models. Must not be used in rotation.

Air connection - Quick fitting male 1/8"



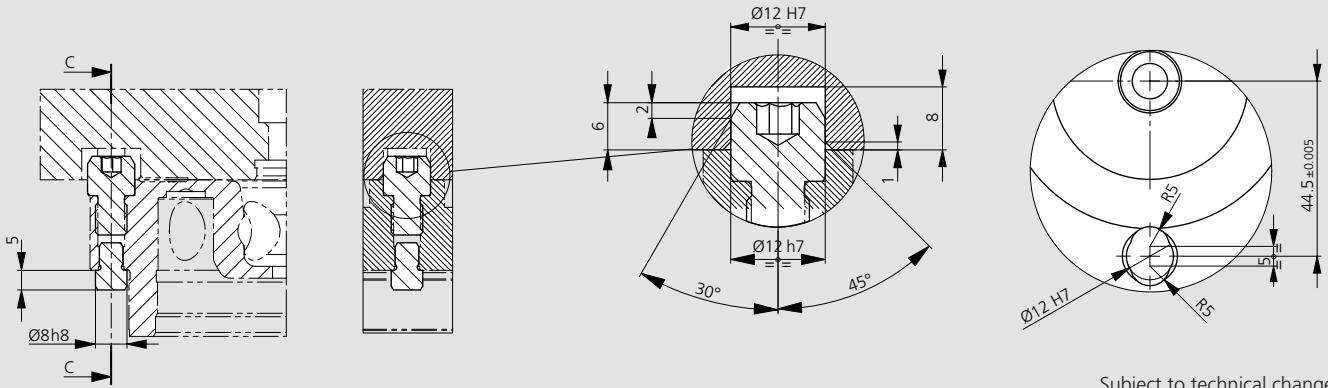
Subject to technical changes.

Type	Id. No.	F	L	Ø M	P
APS 100 / 140	71612802*	G1/8	29.3	15	6

* For all models. Must not be used in rotation.

Keys

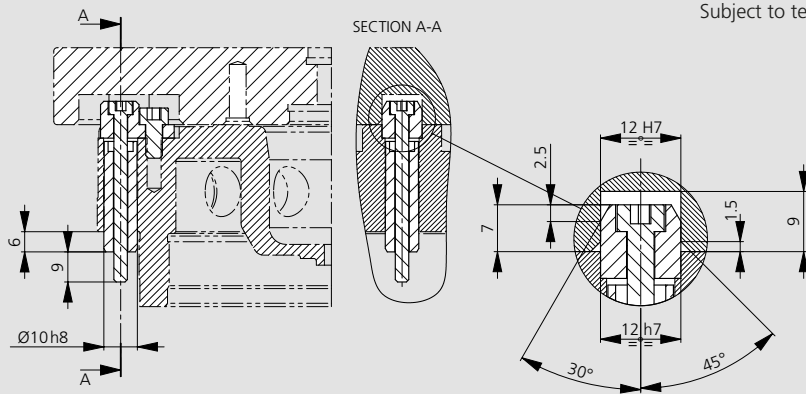
Keys kit for all APS models Orientation keys for APS Premium



Subject to technical changes.

Id. No.

46162133 - Key kit for APS 100



Subject to technical changes.

Id. No.

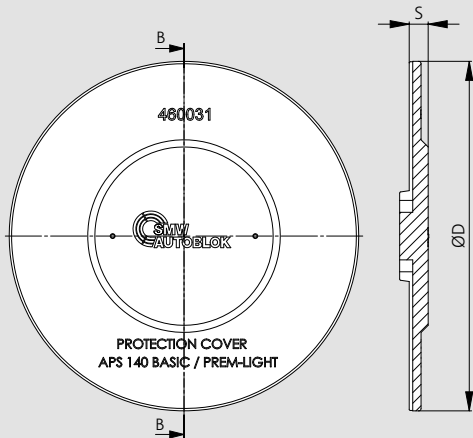
46162333 - Key kit for APS 140E / APS 190E

46162335 - Key kit SMF 12,5 APS 140E / APS 190E

Covers

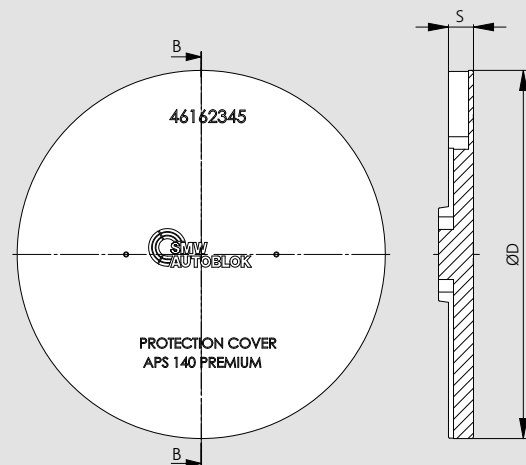
Magnet protection covers for all APS models

For Basic / Premium Light module



Subject to technical changes.

For Premium module



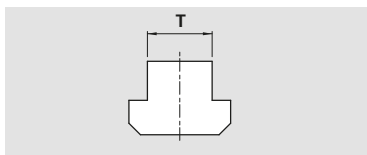
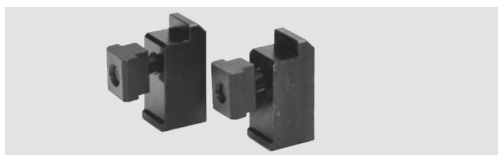
Subject to technical changes.

Id. No.	Model	S	ØD	Weight
460031*	Protection cover with magnet APS 140 Basic	8	147	0.8 kg
46165730*	Protection cover with magnet APS 160 Basic	8	167	1 kg

Id. No.	Model	S	ØD	Weight
460030*	Protection cover with magnet APS 100 Premium	8	107	0.45 kg
46162345**	Protection cover with magnet APS 140 Premium	10	147	0.45 kg
46162625**	Protection cover with magnet APS 190 Premium	10	197	0.85 kg
46165033**	Protection cover with magnet APS 250 Premium	10	257	1.5 kg

*Steel **Aluminium

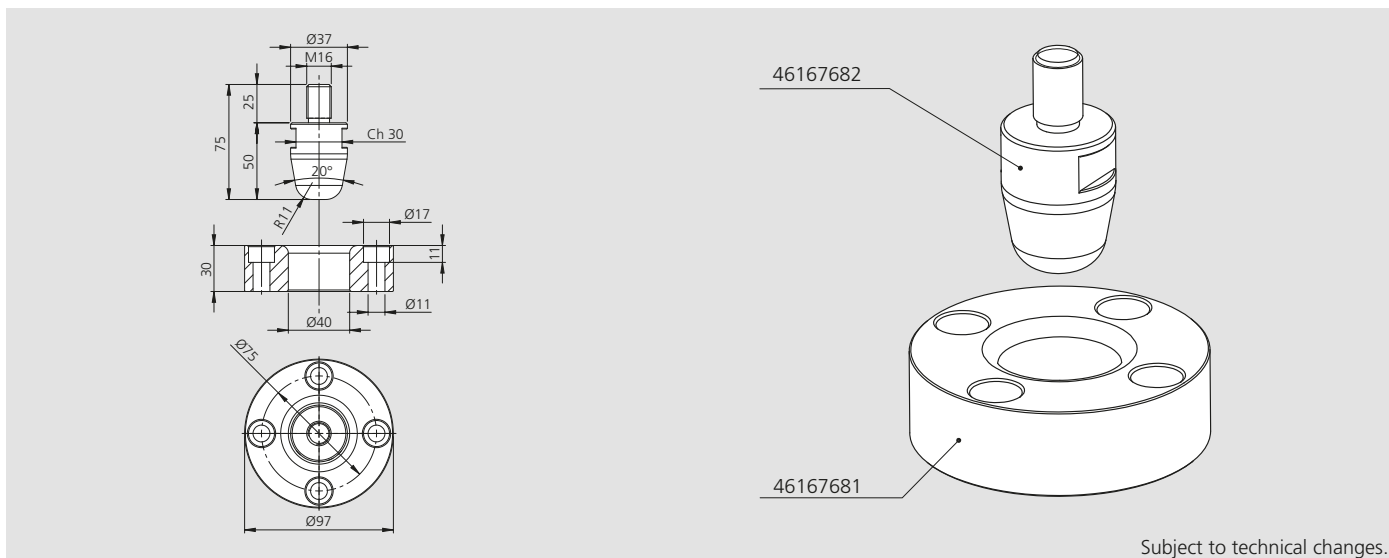
Pair of clamps (to clamp vises on the machine table from lateral sides)



Consisting of:
Pair of clamps
incl. T-nut and
screw

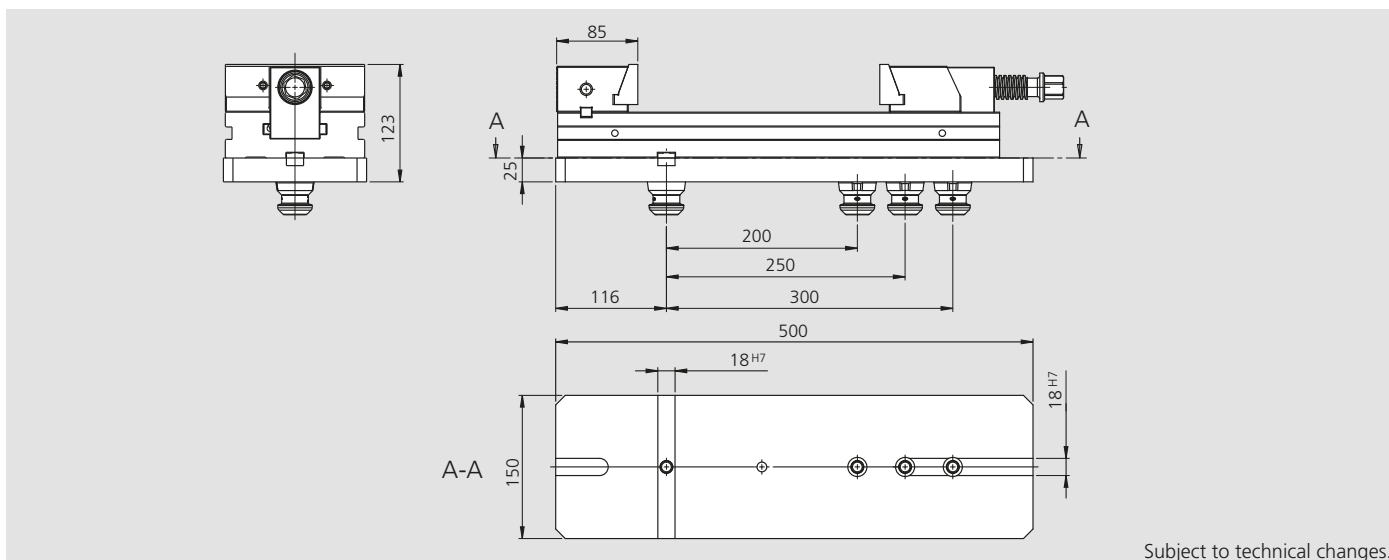
Type	Id. No.						
	T	12 mm	14 mm	16 mm	18 mm	20 mm	22 mm
APS		58042792	58042793	58042794	58042795	58042796	58042797

Pre-centering



Subject to technical changes.

Interface plate for TCi / MCi 150 on APS 140



Subject to technical changes.

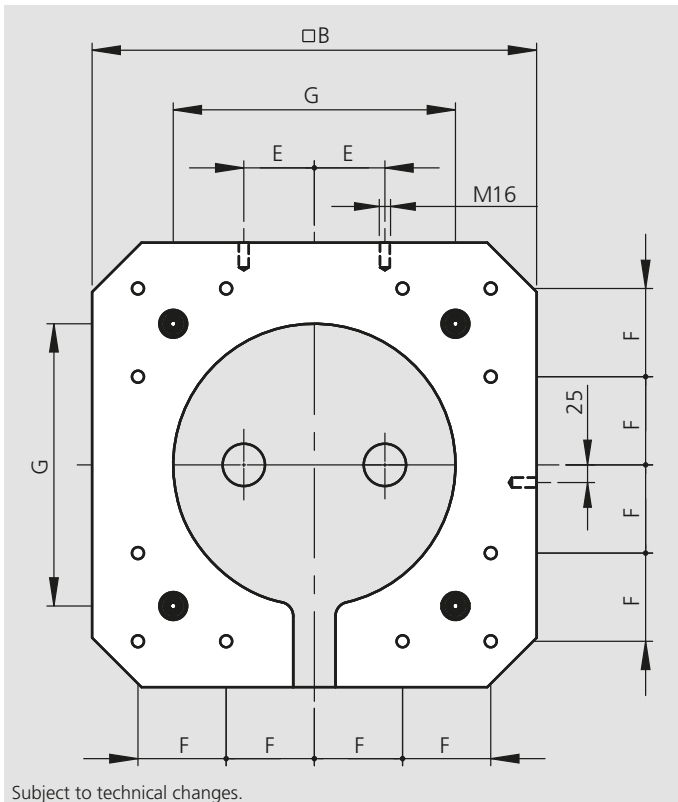
Order numbers

Type	Id. No.	Weight [kg]
Interface plate for TCi / MCi 150 on APS 140	46167710	14

Note: 2 pieces (1 Type A, 1 Type B) clamping pins included.

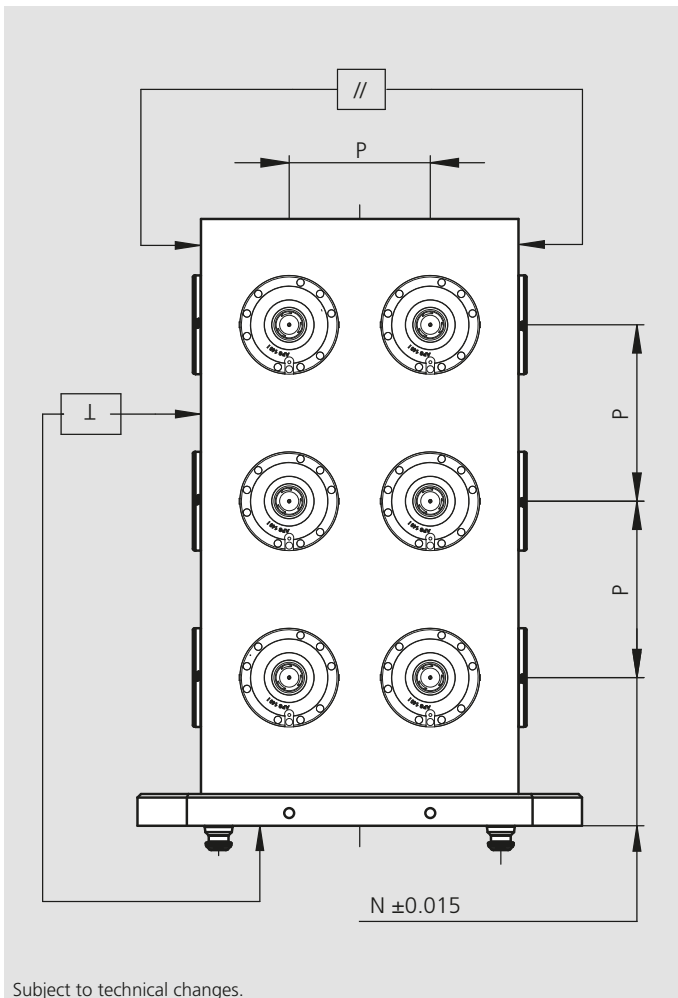
- Dimensions of standard adaptation
- Manufacturing tolerances

Dimensions of standard adaptation for machine tools pallet



B [mm]	E [mm]	F [mm]	G [mm]
400	55	80	250
500	75	100	300
630	100	125	420

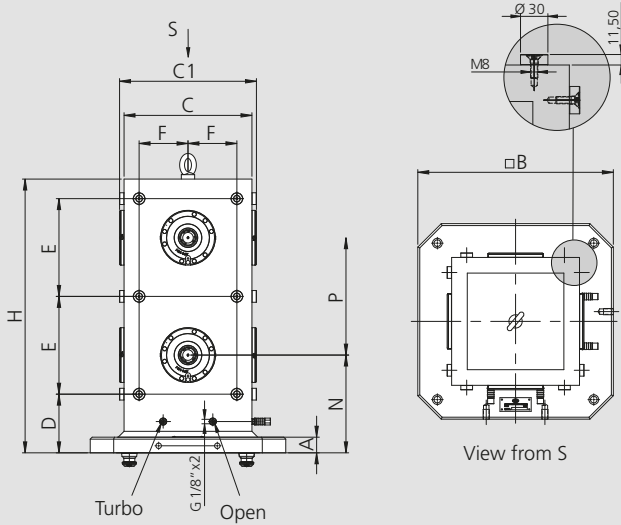
Manufacturing tolerances



L	//	P
0.02 / 0.035	0.03 / 0.05	± 0.01 / ± 0.02
500 / 1000	500 / 1000	200 / 300

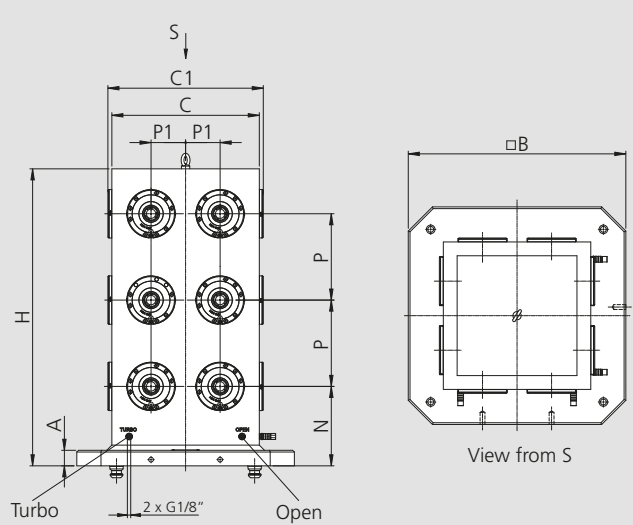
Application examples (Tombstone dimensions, type and number of modules are made according to customer specifications)

Tombstone with 8 APS modules



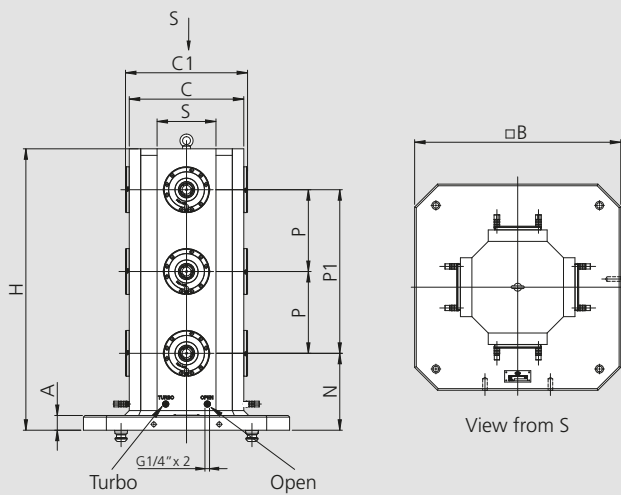
Subject to technical changes.

Tombstone with 24 APS modules



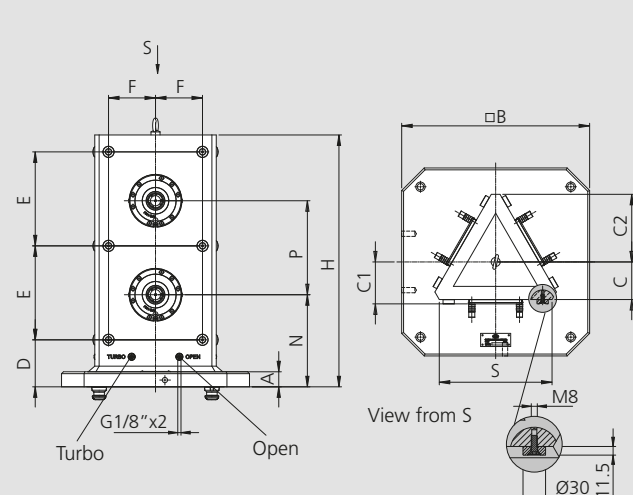
Subject to technical changes.

Tombstone with 12 APS modules



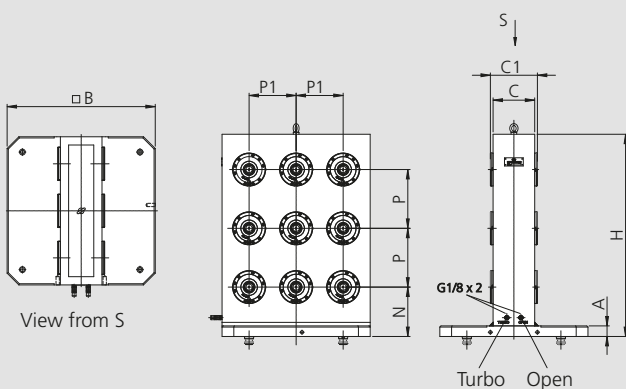
Subject to technical changes.

Tombstone with 6 APS modules



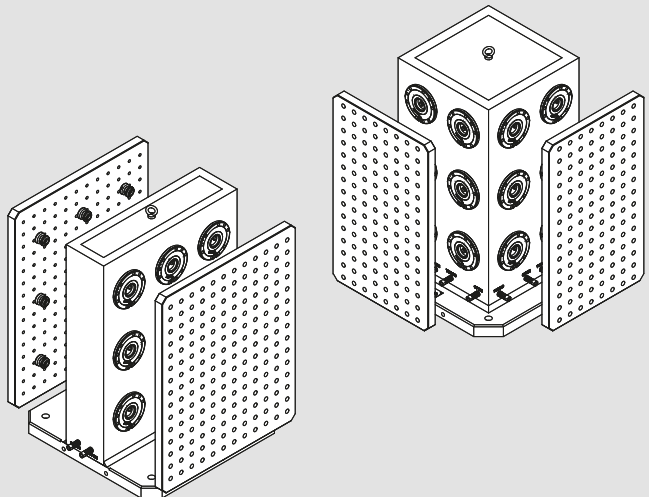
Subject to technical changes.

Crankweb with 8 APS modules



Subject to technical changes.

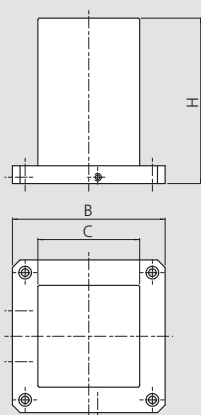
Tombstones



Subject to technical changes.

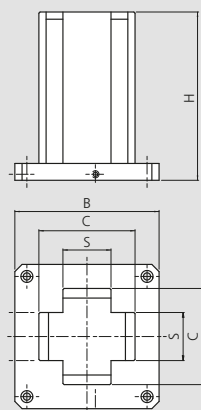
- Request form
- Simply fill in and send to:
www.stationary-workholding.com

Tombstones



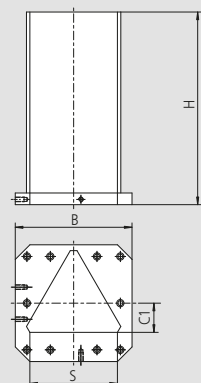
Technical data	
B	mm
C	mm
H	mm
Number of modules	
Modules type	
PREMIUM E open - Turbo	
PREMIUM LIGHT I open - Turbo	
BASIC open	

Cross Tombstones



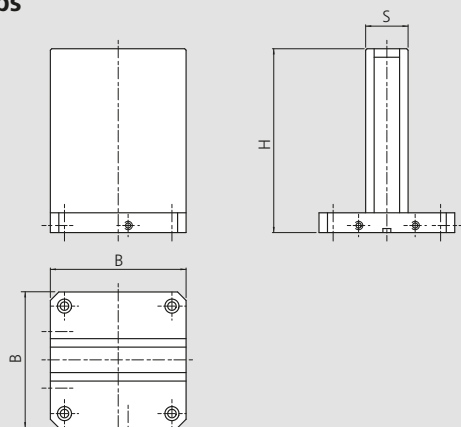
Technical data	
B	mm
C	mm
S	mm
H	mm
Number of modules	
Modules type	
PREMIUM E open - Turbo	
PREMIUM LIGHT I open - Turbo	
BASIC open	

Triangular Tombstones

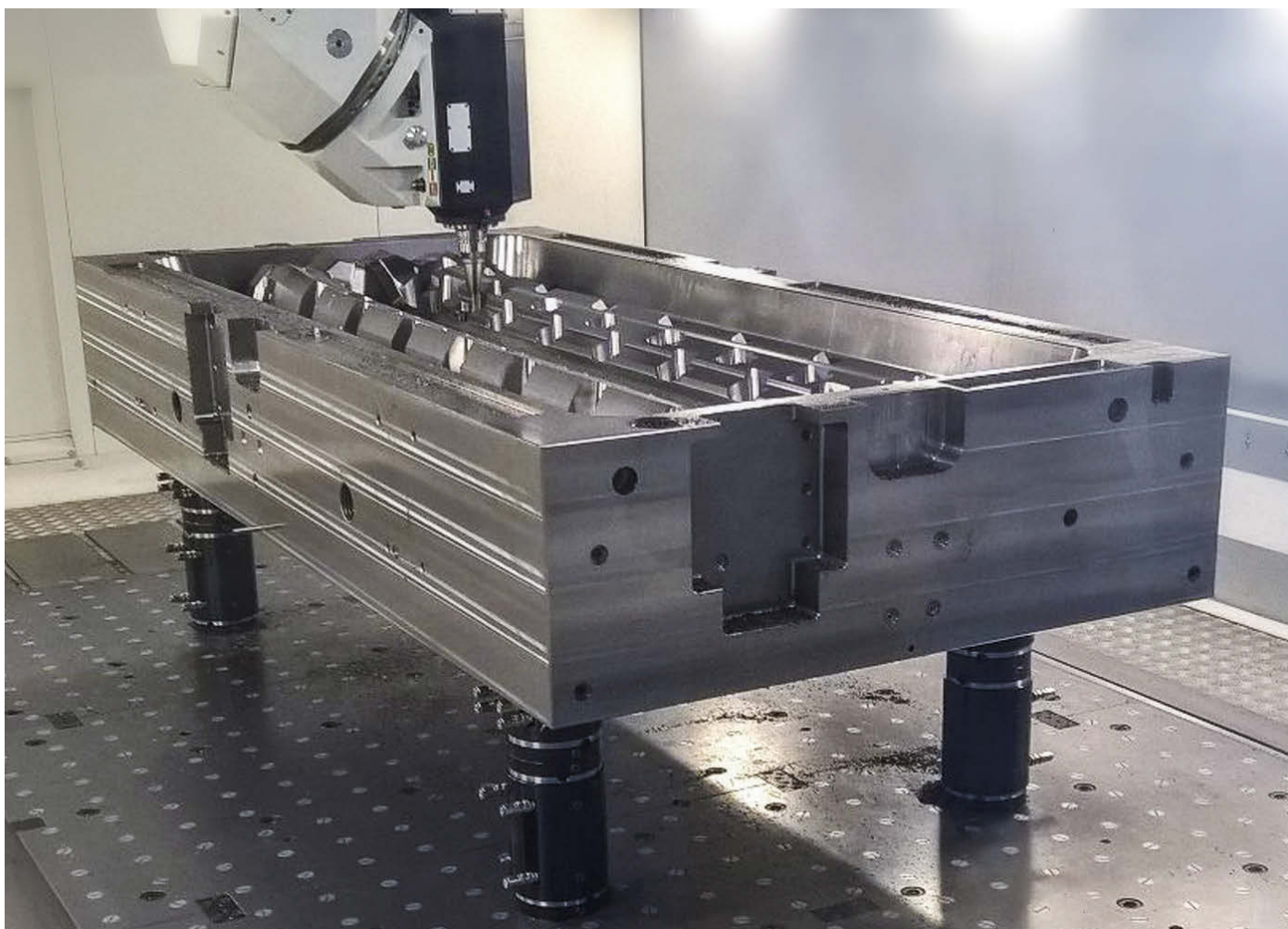


Technical data	
B	mm
C1	mm
S	mm
H	mm
Number of modules	
Modules type	
PREMIUM E open - Turbo	
PREMIUM LIGHT I open - Turbo	
BASIC open	

Crankwebs

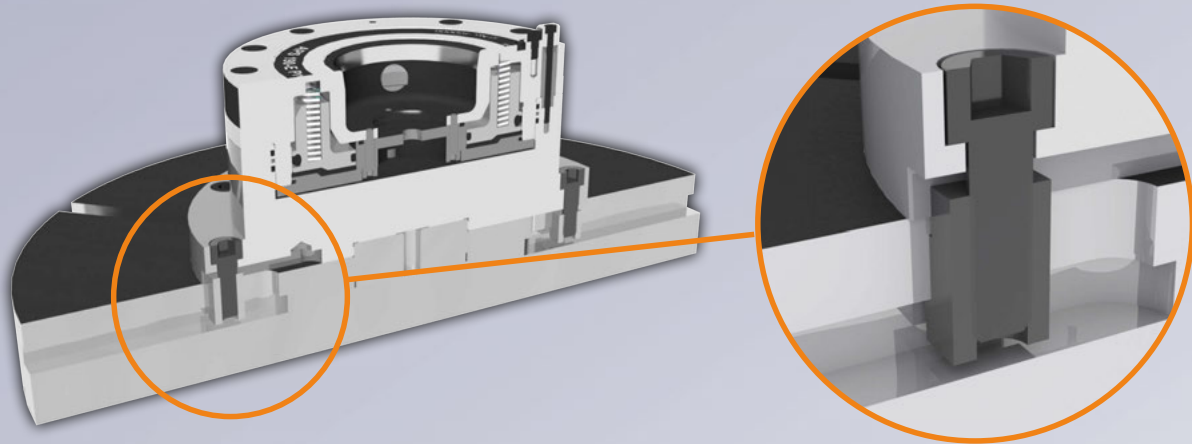


Technical data	
B	mm
S	mm
H	mm
Number of modules	
Modules type	
PREMIUM E open - Turbo	
PREMIUM LIGHT I open - Turbo	
BASIC open	



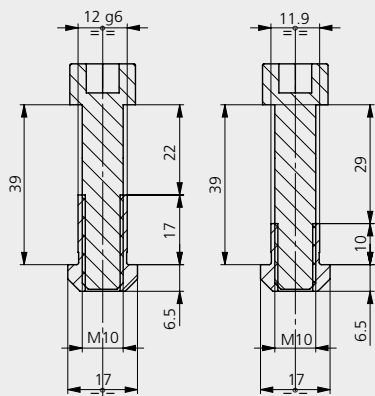
T-nuts set

for clamping unit APS and height extension APS

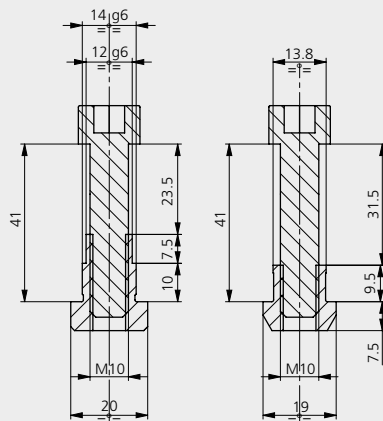


1 Set 9 T-nuts - 12-M10 for clamping unit 4 APS 140

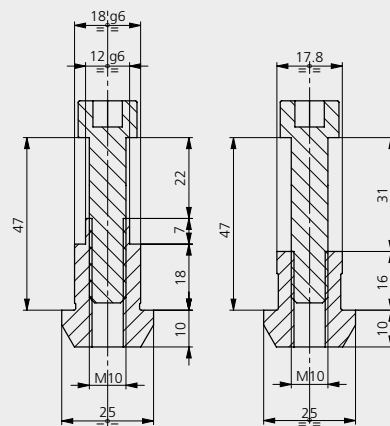
T-SLOT 12
46204100



T-SLOT 14
46204101

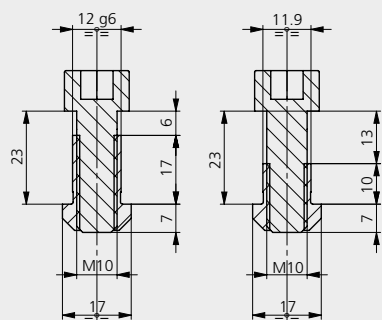


T-SLOT 18
46204102

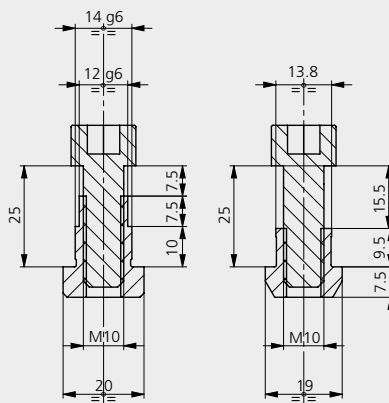


2 Set 8 T-nuts - 12-M10 for height extension APS

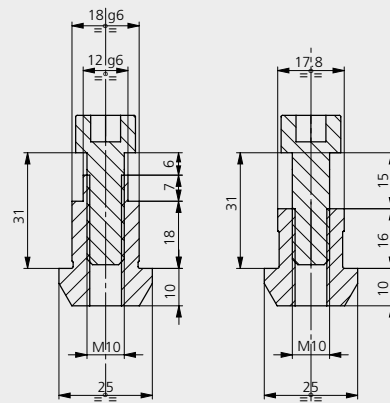
T-SLOT 12
46204103



T-SLOT 14
46204104



T-SLOT 18
46204105





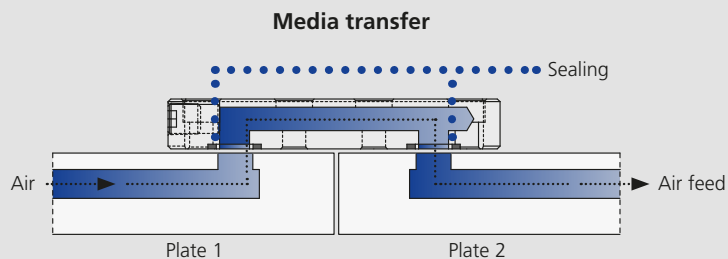
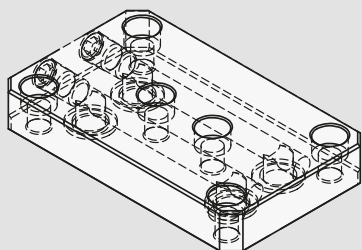
Application/customer benefits

- Smart, easy and accurate solution for large plates
- Any dimension of plates for machine tool tables possible
- Safe and reliable connection between the plates
- Maintenance free
- Large entry radius of the clamping pins for easy and safe loading

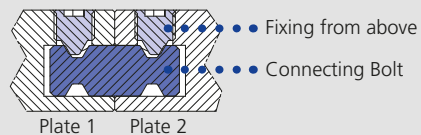
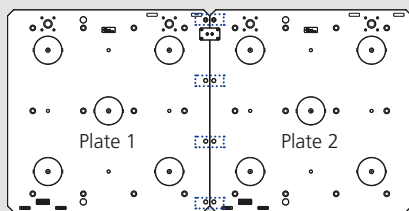
Technical features

- Sealed connecting element
- Media feed trough the connecting element

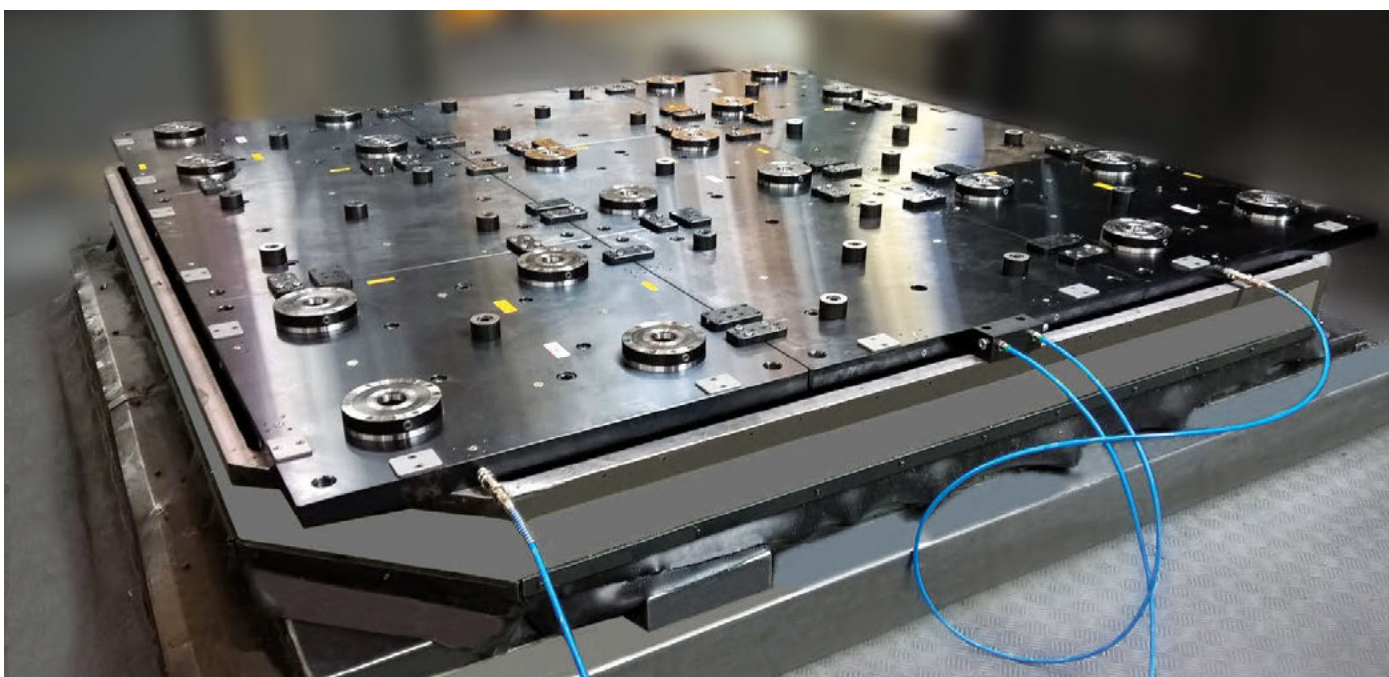
Connecting element for media transfer



Mechanical connection



Subject to technical changes.



APS Setting Table

SERIES 800



1 Functional Overview of the setting table

- ▶ Accurate to within 0.010
- ▶ Rotation speed variable between 0 and 3 r.p.m.
- ▶ Hand set jogging function with 3 speed selections
- ▶ Reduce set up time for loading component to fixture & fixture to machine
- ▶ Safety pull chord

Customized setting tables for fixture & fixture to machine

SERIES 1200



Model	Table sizes	Max. swing	Max. weight of fixture plate & component	r.p.m.	Voltage
SERIES 800	Ø 800	Ø 1100	1500 kg	0 - 3	220, 240, 380 - 480V
SERIES 1200	Ø 1200	Ø 1700	2000 kg	0 - 3	220, 240, 380 - 480V

WPS Workpiece positioning system

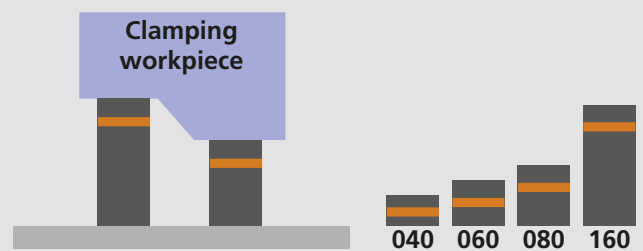
► Convincing advantages

Best accessibility



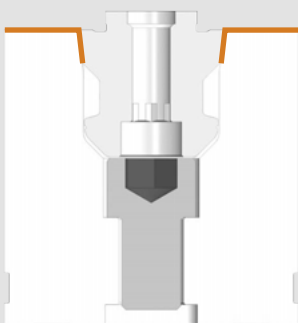
- Best accessibility, ideal for the 5-axis machining without interference.

Modular kit



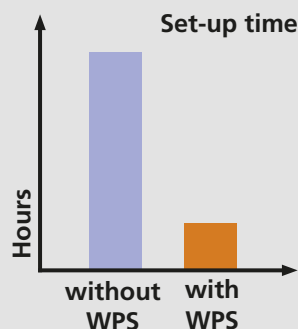
- Modular kit with a wide range of accessories ensures the flexible clamping of nearly every workpiece geometry. Furthermore, the clamping pins are interchangeable to the proven zero point clamping system APS.

Highest repeatability, extremely strong clamping



- The precise taper / face support ensures the interlocking and safe clamping with highest holding forces and maximum stiffness.

Increased efficiency



- Huge reduction of the set-up times and maximum efficiency. No other clamping devices are necessary.

Fully sealed



- Clamping modules are hermetic sealed, therefore low maintenance. The availability of the machine is increased.

► Function

1 Clamping pins



Clamping pins WPS with adapter
for fit dia. 18, 20, 22, 24
and 25 mm
thread M12 and M16

- SMW-AUTOBLOK clamping pins for the clamping of workpieces or the top mounting are case hardened. The clamping pins are protected against wear and rust. The accurate manufacturing ensures highest centering precision. Due to the weight of the workpiece and the clamping situation different versions are available as a standard.

2 Mounting screw

- Mounting screws for the clamping modules with thread M12 or M16 for maximum stability and stiffness.

3 Reducing washer

- Reducing washer for the mounting of the clamping modules for mounting screw M10 or M12.

4 Clamping modules

- Clamping modules with different heights (40, 60, 80 and 160 mm) guarantee the clamping of almost all workpiece geometries. The clamping modules can be mounted either on a grid plate or by means of a mounting flange directly onto the machine table.

5 Single quick-actuation

- Thanks to the single quick-actuation, the modules can be opened and closed by only 3.5 rotations. The actuation is done manual and without any media.
- The ideal accessibility of the actuation ensures a comfortable handling and use of the clamping system.

6 Adaption washers

- The adaption washers are available in different diameters (standard 25 mm). The clamping modules can be positioned exactly on the grid plate.

7 Grid plate

- The clamping modules will be mounted on the grid plate. Grid plates are available in different standard versions. Therefore, different workpiece configurations are possible. The grid plates are manufactured from tempered quality steel and are protected against wear and rust.



WPS Workpiece positioning system

Clamping pins Basic WPS

Clamping pins	Id. No.
Clamping pins Basic M12 (without adapter)	460122
Clamping pins Basic M16 (without adapter)	460123
Clamping pins Basic 7/16" (without adapter)	460108
Clamping pins Basic 5/8" (without adapter)	460109

Adapter

Ø	Type	Id. No.	Type	Id. No.	Type	Id. No.
18*	A	460124	B	460341	C	460129
20	A	460125	B	460342	C	460130
22	A	460126	B	460343	C	460131
24	A	460127	B	460344	C	460132
25	A	460128	B	460345	C	460133

Detail description see page 89

* Use only together with Clamping pins M12 / 7/16"

Clamping module with flange

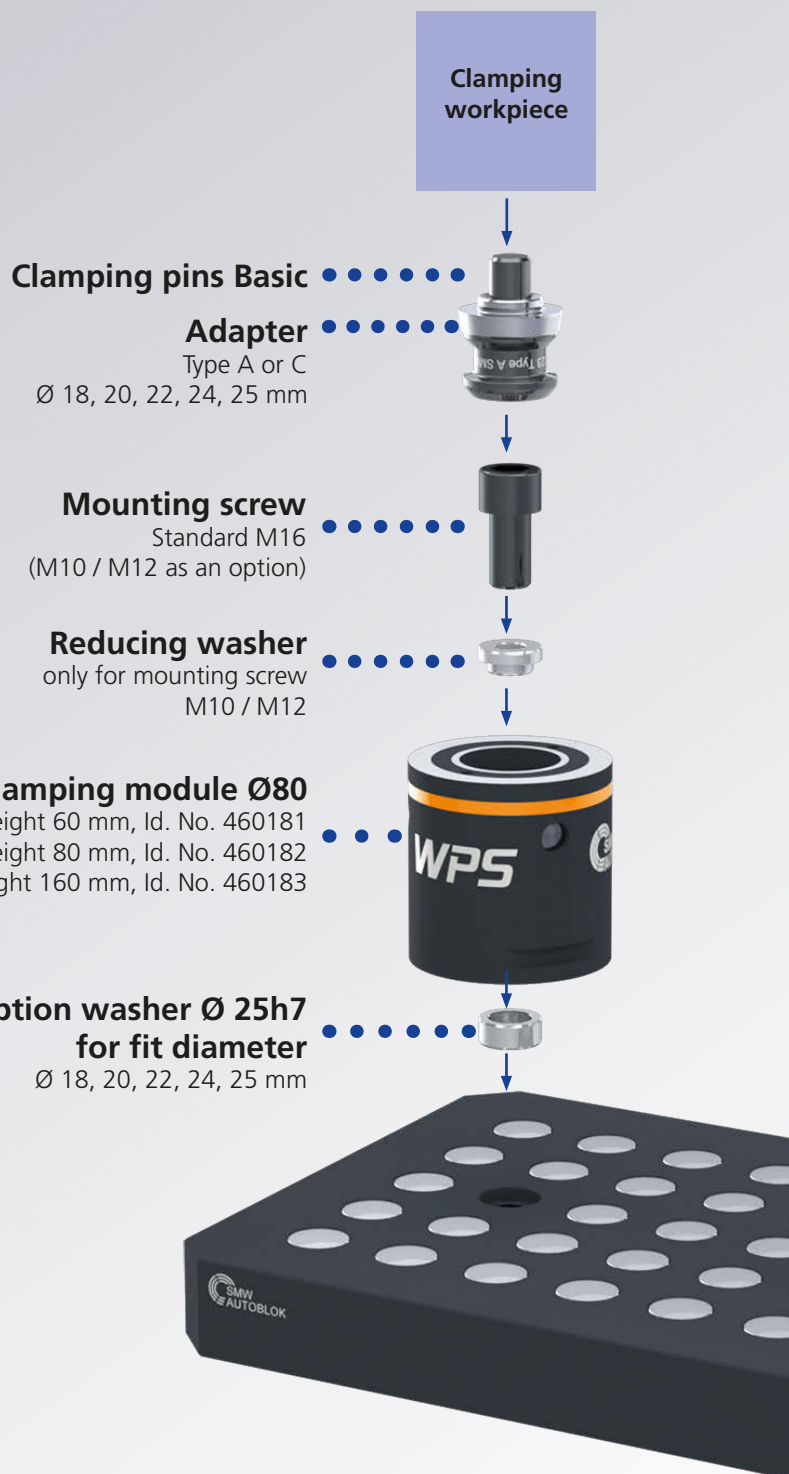
Height 40 mm
Id. No. 460180



Adaption washer Ø 25h7 on [D] pass diameter

Adaption washer Ø	Id. No.
Ø D 18	460135
Ø D 20	460136
Ø D 22	460137
Ø D 24	460138
Ø D 25	460139

For detailed description see page 83



Clamping workpiece



••••• **Reduction Ø 32**
Detail description see page 84



••••• **Further clamping modules Ø 80 mountable on top**
Height 60 mm, Id. No. 460181
Height 80 mm, Id. No. 460182
Height 160 mm, Id. No. 460183
with mounting kit (order separate):
Mounting kit WPS height 60 mm, Id. No. 460261
Mounting kit WPS height 80 mm, Id. No. 460262
Mounting kit WPS height 160 mm, Id. No. 460263
(Mounting kit consisting of clamping pin and mounting screw)



••••• **Mounting with reduction for smaller screws M10 and M12**

Mounting screw / reduction for M10 and M12	Screw M10	Reduction M10	Screw M12	Reduction M12
WPS height 60 mm, bolt length 40 mm	207780	460206	207779	460207
WPS height 80 mm, bolt length 50 mm	010814	460204	010212	460205
WPS height 160 mm, bolt length 130 mm	019363	460204	010599	460205

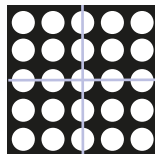
Detail description see page 83



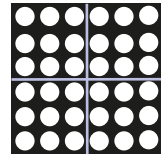
Grid plates (examples)

••••• Grid 50 and 100 mm
Material 1.2311/1.2312

Grid (in center)
Positioning holes Ø25H7, thread M12 / 16



Grid (not in center)
Positioning holes Ø25H7, thread M12 / 16



Grid	Length	Width
50 / 100	500	500
50 / 100	600	600
50 / 100	800	800
50 / 100	1000	500
50 / 100	1000	800
50 / 100	1200	800
50 / 100	1000	1000

Special versions on request

Grid	Length	Width
50 / 100	600	400
50 / 100	500	500
50 / 100	600	500
50 / 100	600	800
50 / 100	1000	500
50 / 100	1000	600
50 / 100	1000	800
50 / 100	1000	1000

Special versions on request



Manual zero point clamping system for workpiece direct clamping

- Single quick-actuation for the rapid opening and closing
- Fully sealed



Application/customer benefits

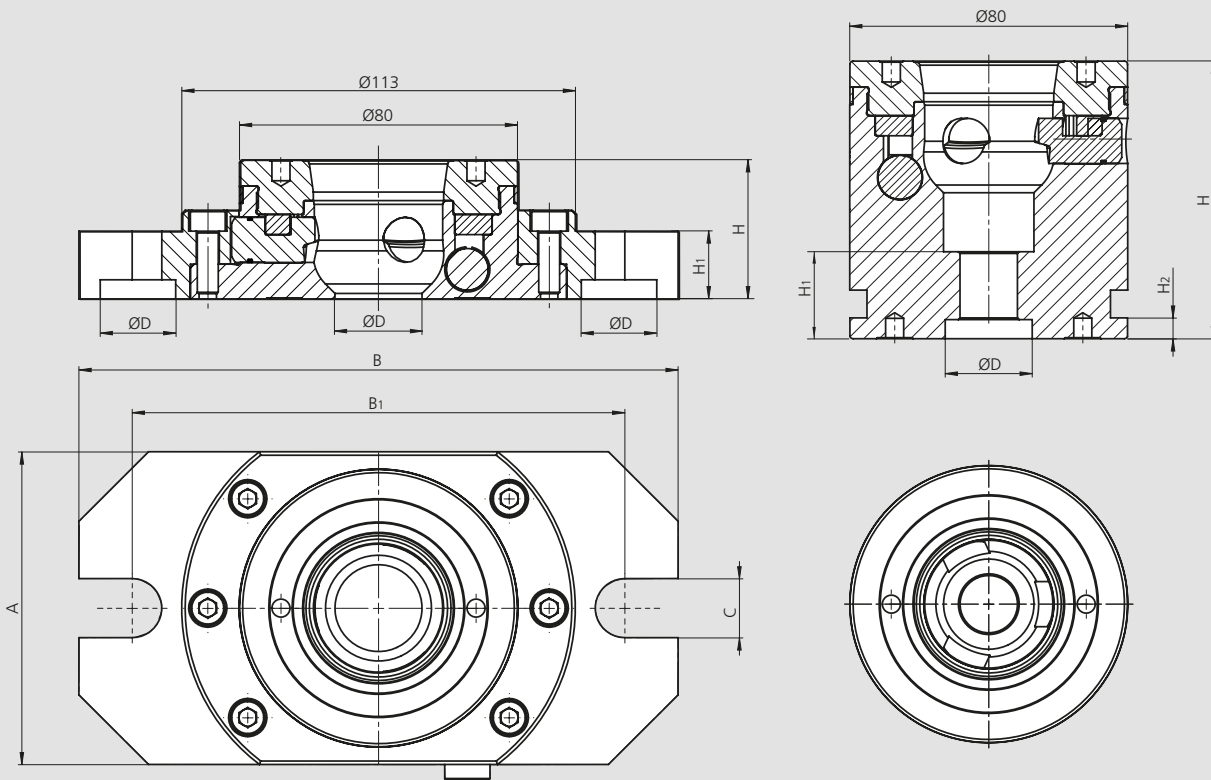
- Huge reduction of set-up times for highest efficiency
- Safe workpiece clamping with maximum holding forces and highest repeatability
- Ideal for 5-axis machining
- Single quick-actuation for the rapid opening and closing of the modules with only 3.5 rotations
- Flexible configurations for customized use
- Interchangeable to the proven zero point system APS

Technical features

- Diameter 80 mm
- Pull-in force 15 kN
- Max. torque 15 Nm
- Repeatability < 0.005 mm
- Holding force 50 / 75 kN (M12 / M16) depending on thread of clamping pin
- 3 clamping slides for maximum hold while clamping
- **proofline®** = fully sealed - low maintenance

WPS 080-040

WPS 080-060, 080-080, 080-160



Subject to technical changes.

Technical data

SMW-AUTOBLOK Type	WPS 080-040 460180	WPS 080-060 460181	WPS 080-080 460182	WPS 080-100 460199	WPS 080-120 460461	WPS 080-160 460183
A	90	-	-	-	-	-
B	172	-	-	-	-	-
B1	141.4	-	-	-	-	-
C	17	-	-	-	-	-
D / Depth	Ø 25H6 / 5.5***	Ø 25H6 / 5.5	Ø 25H6 / 5.5	Ø 25H6 / 5.5	Ø 25H6 / 5.5	Ø 25H6 / 5.5
H	40 ± 0.005	60 ± 0.005	80 ± 0.005	100 ± 0.005	120 ± 0.005	160 ± 0.005
H1	19.5	21	25	45	25	105
H2	-	6	6	6	6	6
Pull-in force (kN)	15	15	15	15	15	15
Repeatability (mm)	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Holding force M12 (kN)	25* / 50*	25* / 50*	25* / 50*	25* / 50*	25* / 50*	25* / 50*
Holding force M16 (kN)	40** / 75**	40** / 75**	40** / 75**	40** / 75**	40** / 75**	40** / 75**

* Holding force for ISO 4762 M10x45 - 12.9 / Holding force for ISO 4762 M12 - 12.9 (see clamping pins)
 ** Holding force for ISO 10642 M12x55 - 10.9 / Holding force for ISO 4762 M16 - 12.9 (see clamping pins)
 *** Do not use centre hole with module 460180

Manual zero point clamping system for workpiece direct clamping

- Single quick-actuation for the rapid opening and closing
- Fully sealed

WPS Index

Workpiece positioning system

0



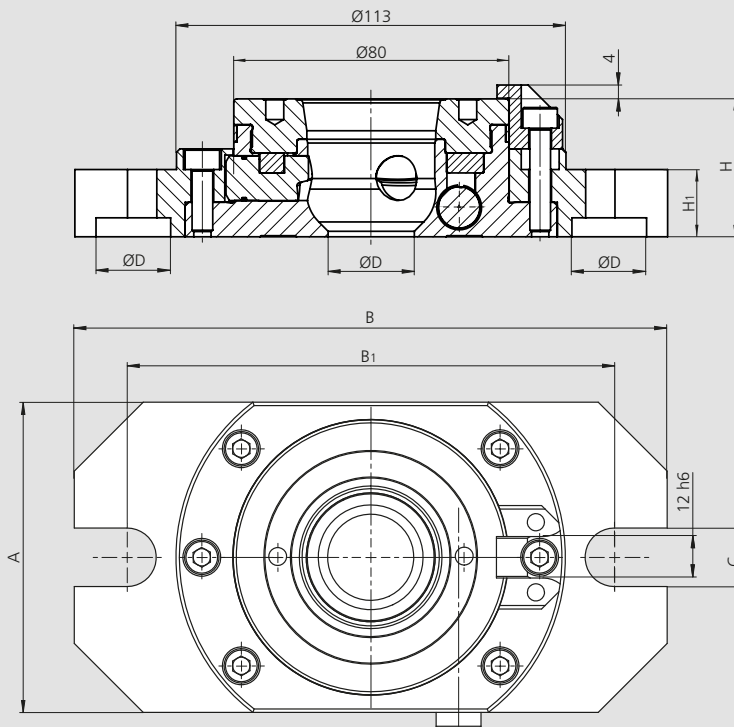
Application/customer benefits

- Huge reduction of set-up times for highest efficiency
- Safe workpiece clamping with maximum holding forces and highest repeatability
- Ideal for 5-axis machining
- Single quick-actuation for the rapid opening and closing of the modules with only 3.5 rotations
- Flexible configurations for customized use
- Interchangeable to the proven zero point system APS
- Anti rotating protection

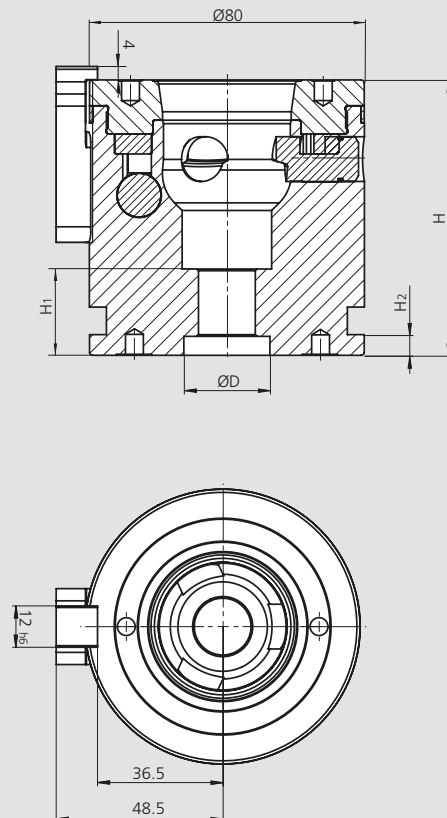
Technical features

- Diameter 80 mm
- Pull-in force 15 kN
- Max. torque 15 Nm
- Repeatability < 0.005 mm
- Holding force 50 / 75 kN (M12 / M16) depending on thread of clamping pin
- 3 clamping slides for maximum hold while clamping
- **proofline®** = fully sealed - low maintenance

WPS 080-040 Index



WPS 080-060, 080-080, 080-160 Index



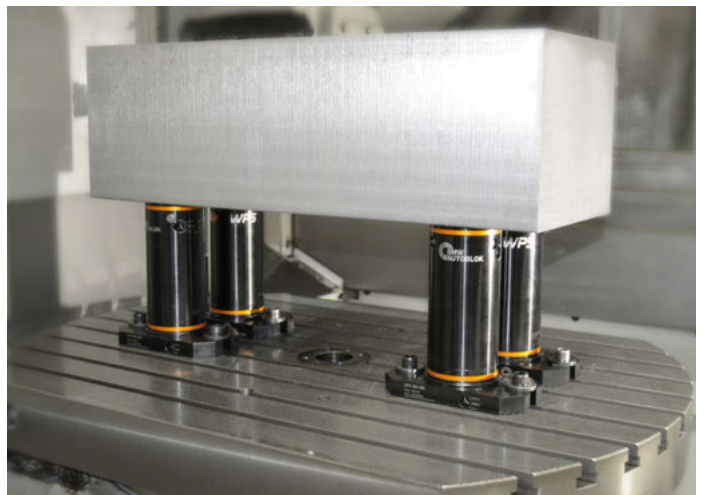
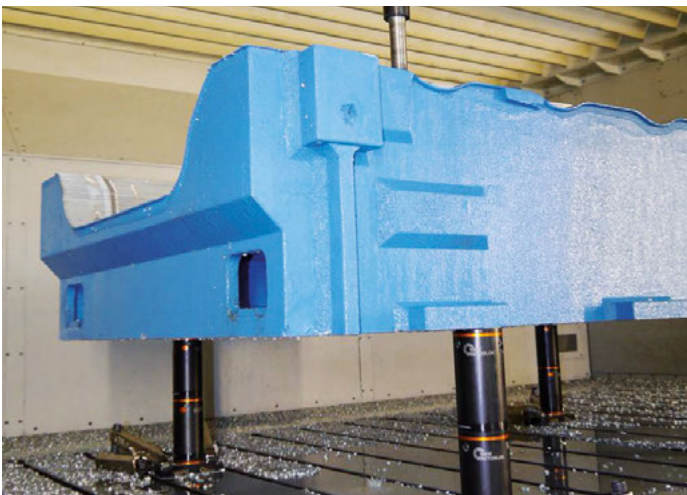
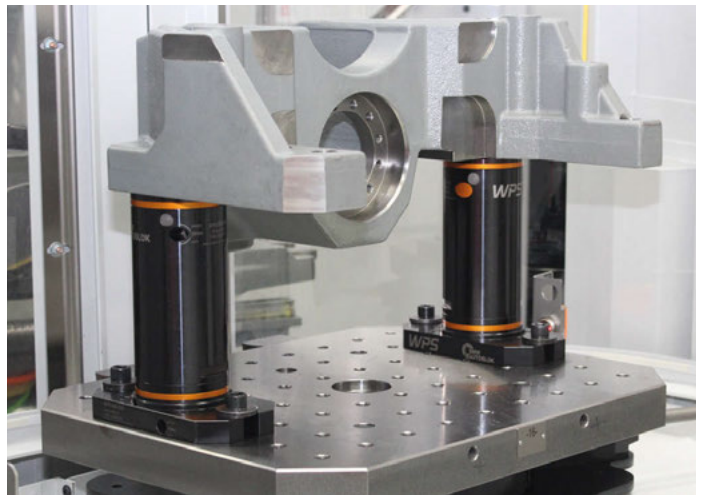
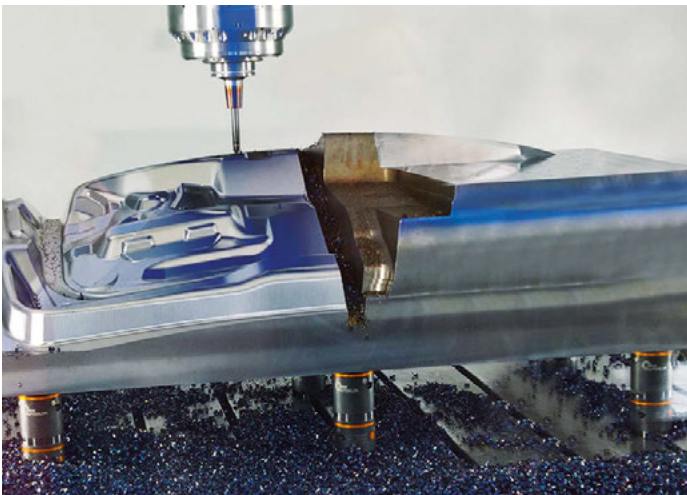
Subject to technical changes.

Technical data

SMW-AUTOBLOK Type	WPS 080-040 460240	WPS 080-060 460241	WPS 080-080 460242	WPS 080-160 460243
A	90	-	-	-
B	172	-	-	-
B1	141.1	-	-	-
C	17	-	-	-
D / Depth	Ø 25H6 / 5.5***	Ø 25H6 / 5.5	Ø 25H6 / 5.5	Ø 25H6 / 5.5
H	40 ± 0.005	60 ± 0.005	80 ± 0.005	160 ± 0.005
H1	19.5	21	25	105
H2	-	6	6	6
Pull-in force (kN)	15	15	15	15
Repeatability (mm)	< 0.005	< 0.005	< 0.005	< 0.005
Holding force M12 (kN)	25* / 50*	25* / 50*	25* / 50*	25* / 50*
Holding force M16 (kN)	40** / 75**	40** / 75**	40** / 75**	40** / 75**

* Holding force for ISO 4762 M10x45 - 12.9 / Holding force for ISO 4762 M12 - 12.9 (see clamping pins)
 ** Holding force for ISO 10642 M12x55 - 10.9 / Holding force for ISO 4762 M16 - 12.9 (see clamping pins)
 *** Do not use centre hole with module 460240

Workpiece positioning system



■ Clamping pins 1 piece

Workpiece positioning system

Application/customer benefits

- Fixation and positioning on the clamping system WPS
- Wear-resistant due to an extra hard protective coating
- Large entry radius of the clamping pins for easy and safe loading

Technical features

- Centering pin Type A (Standard)
- Sword pin Type B (Positioning pin)
- Clamping pin Type C (with centering play 0.1 mm)

Standard equipment

Clamping pin with mounting screw



Type A

Type B

Type C

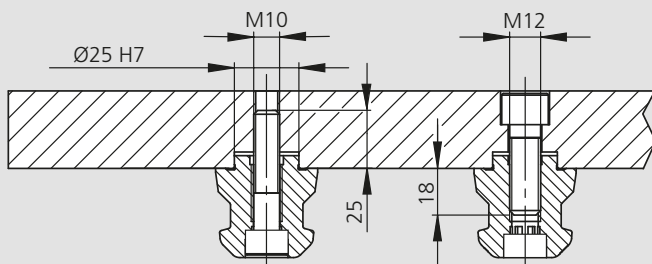
Clamping pin with thread M12

Type A-C

*ISO 4762 M10x45 / 12.9

Type A-C

ISO 4762 M12 / 12.9



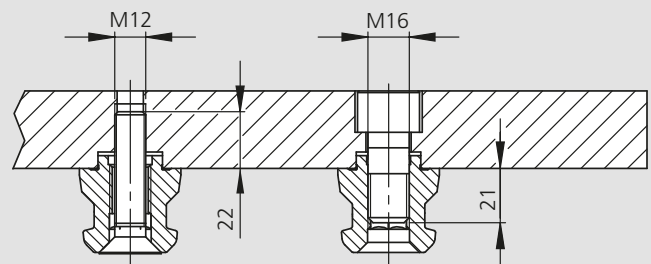
Clamping pin with thread M16

Type A-C

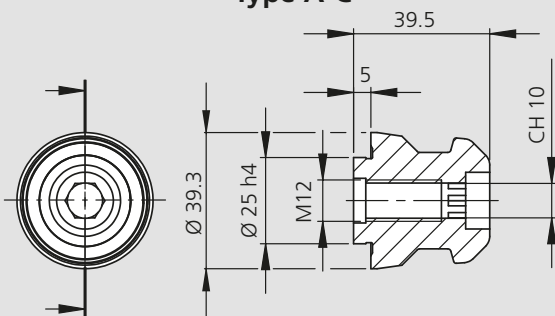
*ISO 10642 M12x55 / 10.9

Type A-C

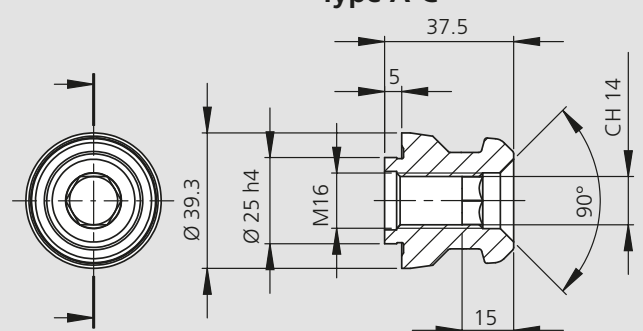
ISO 4762 M16 / 12.9



Type A-C



Type A-C



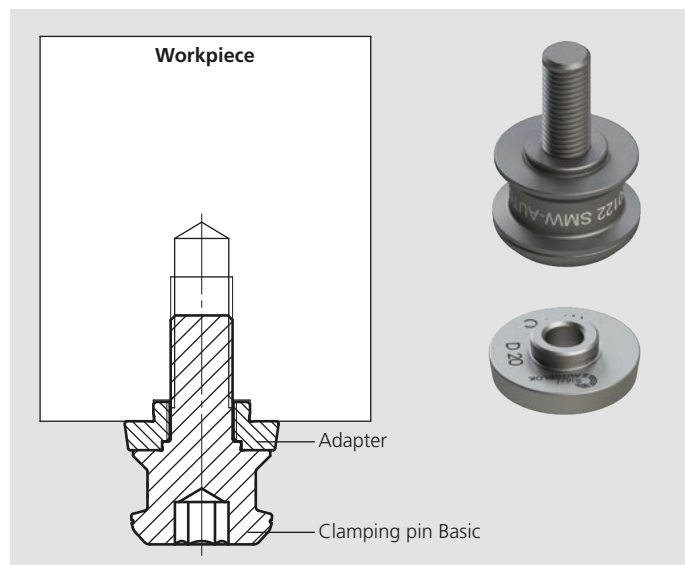
* included in delivery.

Subject to technical changes.

Order review

Type	Thread	Type A Id. No.	Type B Id. No.	Type C Id. No.	Weight [kg]
Clamping pin WPS	M12	46162355	46162356	46162357	0.3
Clamping pin WPS	M16	46162455	46162456	46162457	0.3

Clamping pin WPS for workpieces



Clamping pins Basic WPS 2-pieces

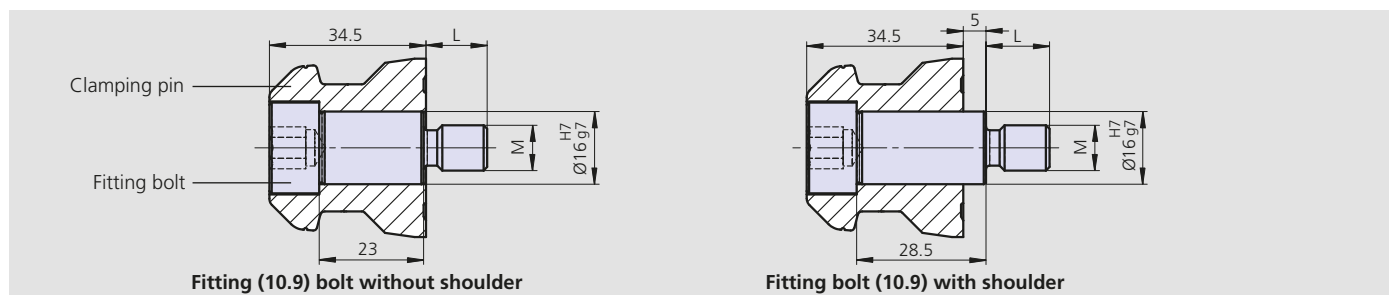
Clamping pins	Id. No.
Clamping pins Basic M12 (without adapter)	460122
Clamping pins Basic M16 (without adapter)	460123
Clamping pins Basic 7/16" (without adapter)	460108
Clamping pins Basic 5/8" (without adapter)	460109

Adapter

Ø	Type	Id.-No.	Type	Id.-NO.	Type	Id.-No.
18*	A	460124	B	460341	C	460129
20	A	460125	B	460342	C	460130
22	A	460126	B	460343	C	460131
24	A	460127	B	460344	C	460132
25	A	460128	B	460345	C	460133

Centering pin Type A (Standard)
 Sword pin Type B (Positioning pin)
 Clamping pin Type C (with centering play 0.1 mm)

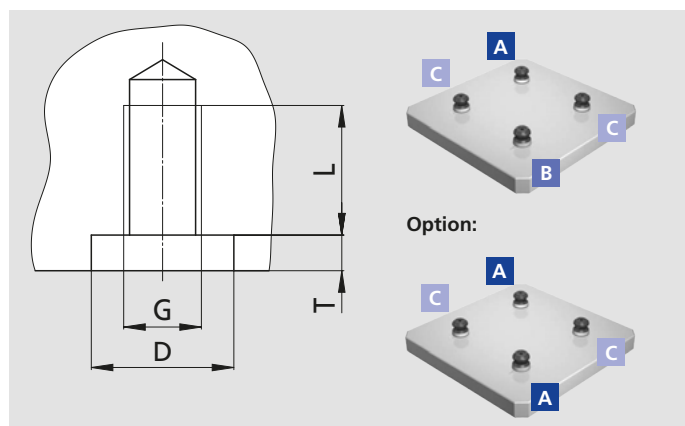
Clamping pin without shoulder



Id. No.	Id. No. Description	M	L
460093	Fitting bolt D16	M10	14
460091	Fitting bolt D16	M12	17
460096	Fitting bolt D16	M16	20
460258	Fitting bolt D16 with shoulder	M10	14
460259	Fitting bolt D16 with shoulder	M12	17
460260	Fitting bolt D16 with shoulder	M16	20
460176	Clamping pin without shoulder Type A	-	-
460208	Clamping pin without shoulder Type C*	-	-

* Centering play 0.1 mm

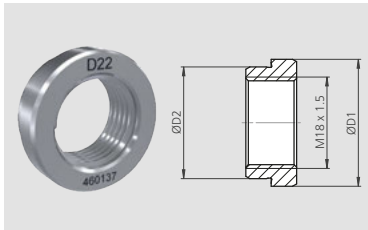
Interface dimensions for clamping pins in the workpiece



SMW-AUTOBLOK Type	D ^{H7}	G	L	T ^{+0.2}
Clamping pin Basic M12				
Adapter Ø18	18	M12	20	5.5
Adapter Ø20	20	M12	20	5.5
Adapter Ø22	22	M12	20	5.5
Adapter Ø24	24	M12	20	5.5
Adapter Ø25	25	M12	20	5.5
Clamping pin Basic M16				
Adapter Ø20	20	M16	25	5.5
Adapter Ø22	22	M16	25	5.5
Adapter Ø24	24	M16	25	5.5
Adapter Ø25	25	M16	25	5.5

Note: Id. No. clamping pins see page 81.
 Please download the 3D data for customer integration from our website www.stationary-workholding.com.

Adaption washer \varnothing 25h7
on [D] pass diameter



Adaption washer \varnothing		Id. No.
D1 (h7)	D2 (h7)	
\varnothing 25	\varnothing 18	460135
\varnothing 25	\varnothing 20	460136
\varnothing 25	\varnothing 22	460137
\varnothing 25	\varnothing 24	460138
\varnothing 25	\varnothing 25	460139

Mounting screws with reduction for WPS installation
for the use of M10 and M12 screws



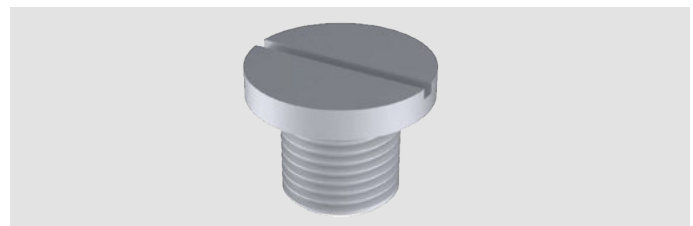
Mounting screw / reduction for M10 and M12	Screw M10	Reduction M10	Screw M12	Reduction M12
WPS height 60 mm, bolt length 40 mm	207780	460206	207779	460207
WPS height 80 mm, bolt length 50 mm	010814	460204	010212	460205
WPS height 100 mm, bolt length 70 mm	on request	on request	on request	on request
WPS height 160 mm, bolt length 130 mm	019363	460204	010599	460205

Cover plug with O-ring for grid plates



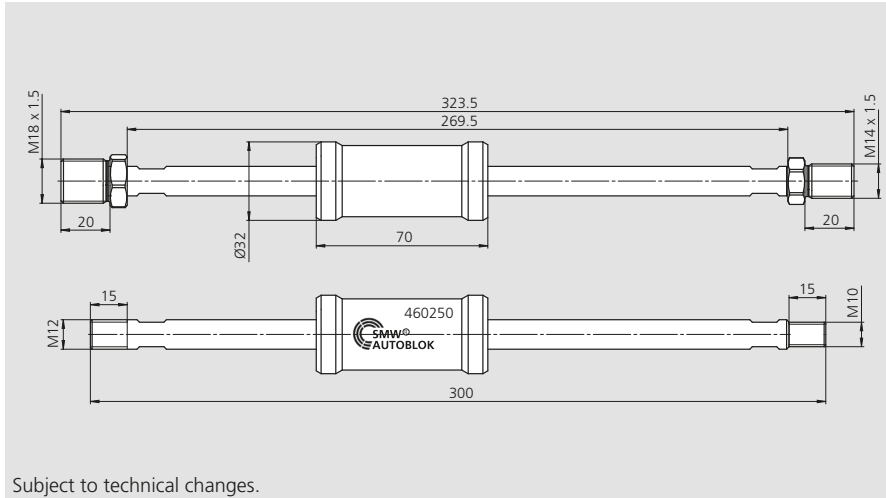
Type	Id. No.
Cover plug D=18	460163
Cover plug D=20	460255
Cover plug D=22	460256
Cover plug D=24	460257
Cover plug D=25	460164

Aluminium threaded plug for grid plates



Type	Id. No.
Aluminium threaded plug \varnothing 25 M16	57602397

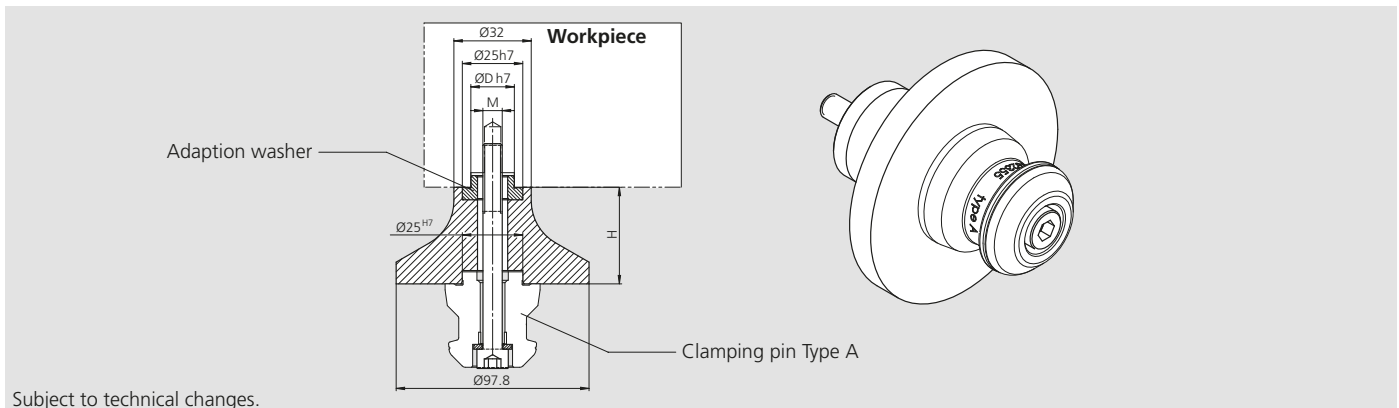
Extractor for adapter rings and clamping pin, Id. No. 460250



Subject to technical changes.

Extractor	Id. No.
for adapter rings and clamping pins	460250

Reduction D32 for WPS 080

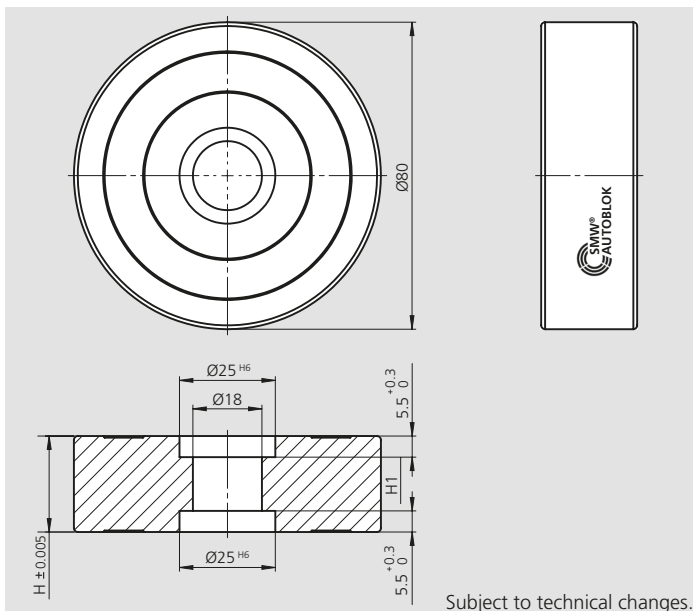


Subject to technical changes.

Reduction Thread [M]	Id. No.	
	Height 40 mm [H]	Height 80 mm [H]
M 08	460216	460219
M 10	460217	460220
M 12	460218	460221
M 16	460365	460366

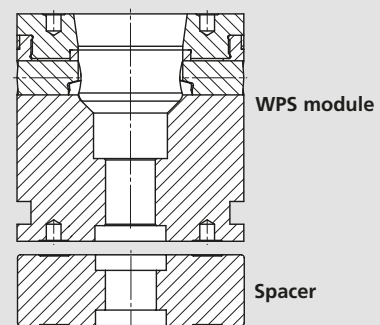
Note: Id. No. Adaption washers from Ø 25h7 to [D] (not included) see page 83

Spacers for WPS modules



Subject to technical changes.

Example:



Id. No.	H	H1
460224	10	0
460225	15	4
460226	20	9
460227	25	14
460236	45	34

Attention: Standard mounting bolt can not be used anymore. Please check for correct thread engagement.



Application/customer benefits

- Simply use of WPS modules on T-slot machine tables
- Easy and high precise grid-free positioning of WPS clamping modules on the machine table
- The positioning set will be mounted on a tool holder provided by the customer

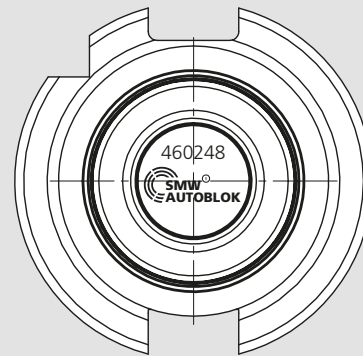
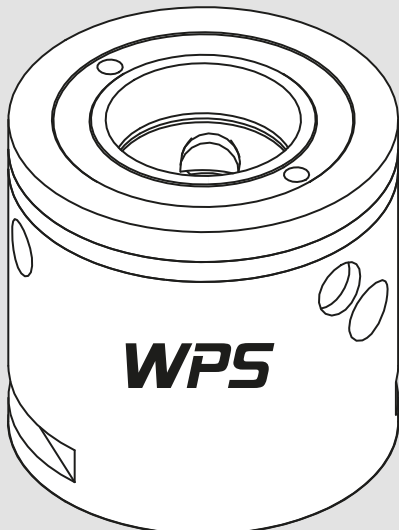
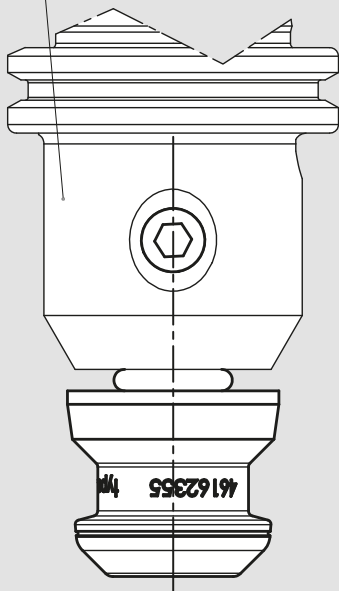
Technical features

- Compatible to all common tool holders
- Positioning of the module ± 0.03 (depending of tool holder)
- The WPS modules may be actuated with max. 2 Nm (instead of 15 Nm) by using the WPS positioning system, otherwise there is a risk of damage!

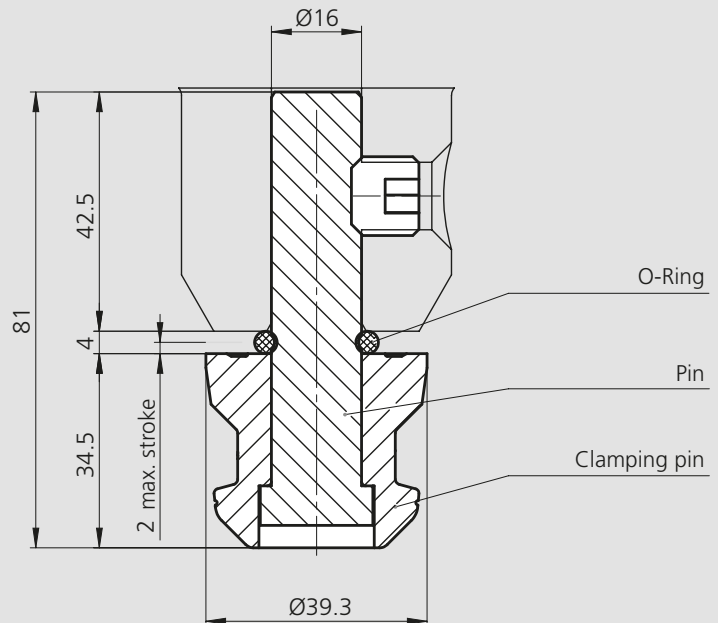
Standard equipment

Positioning set without tool holder

Customers tool holder:
- Weldon mounting
- ER collets
- Hydro expansion chuck

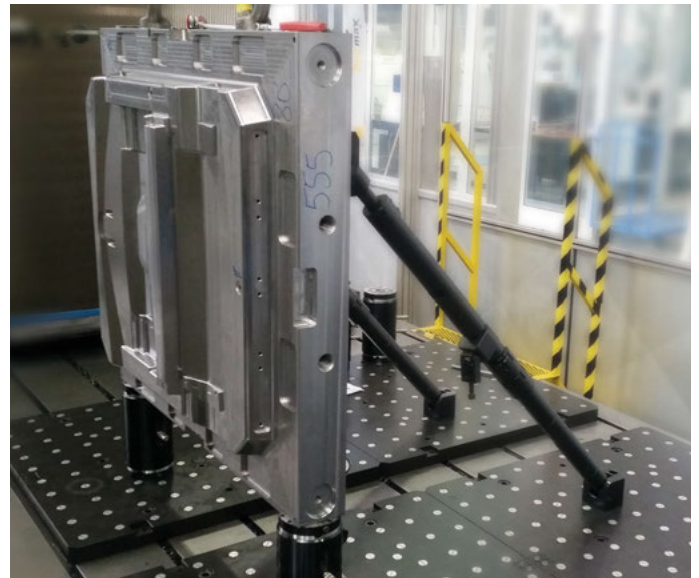


SCHNITT / SECTION A-A



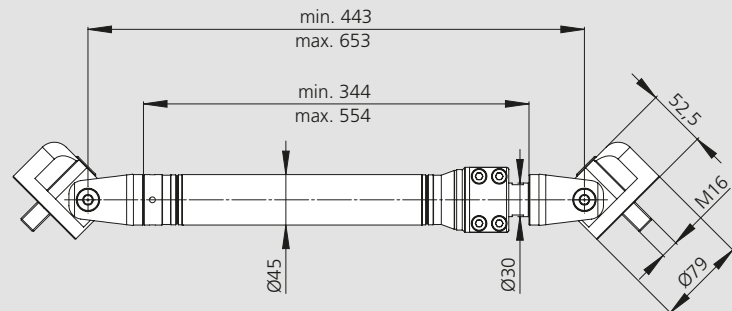
Subject to technical changes.

Workpiece stabilizer with telescope



Workpiece stabilizer WS-210

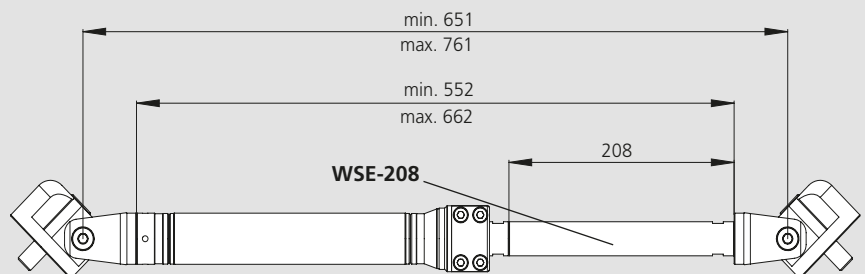
- Stroke 210 mm
- Optional fine adjustment



Subject to technical changes.

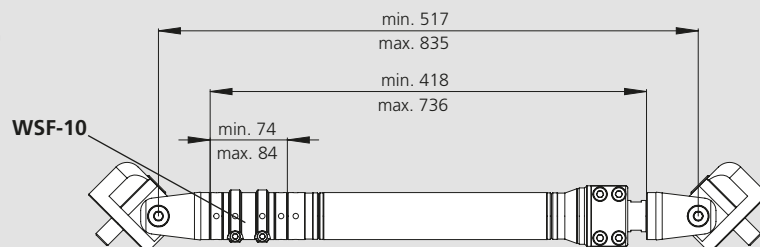
Workpiece stabilizer WS-210 with extension WSE-208

- Max. 2 pcs. of the extensions



Subject to technical changes.

Workpiece stabilizer WS-210 with fine adjustment WSF-10



Subject to technical changes.

Type	Id. No.
Workpiece stabilizer WS-210	460395
Extension WSE-208	460354
Fine adjustment WSF-10	460336

■ Grid plates

Workpiece positioning system

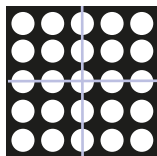


Application/customer benefits

- Easy and high-precise positioning of the zero point clamping modules
- Special sizes or customer request versions for maximum distances of the machine available in short time
- Alphanumeric labelling for the definition of the positioning of the clamping modules available on request
- Rust protected by means of phosphating

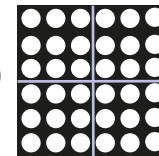
Technical features

- Grid and holes available as standard or on customer request
- High-quality steel (1.2311/1.2312)
- Standard = phosphating / optional = other surface treatment
- Machine specific holes on request



Grid (in center)

Positioning holes $\varnothing 25H7$,
thread M12/16



Grid (not in center)

Positioning holes $\varnothing 25H7$,
thread M12/16

Grid	Length	Width
50 / 100	500	500
50 / 100	600	600
50 / 100	800	800
50 / 100	1000	500
50 / 100	1000	800
50 / 100	1200	800
50 / 100	1000	1000

Special versions on request

Grid	Length	Width
50 / 100	600	400
50 / 100	500	500
50 / 100	600	500
50 / 100	600	800
50 / 100	1000	500
50 / 100	1000	600
50 / 100	1000	800
50 / 100	1000	1000

Special versions on request

Application examples



- Request form
- Simply fill in and send to: contact@stationary-workholding.com



Application/customer benefits

- Easy and high-precise positioning of the zero point clamping modules
- Special sizes or customer request versions for maximum distances of the machine available in short time
- Alphanumeric labelling for the definition of the positioning of the clamping modules available on request
- Rust protected by means of phosphating

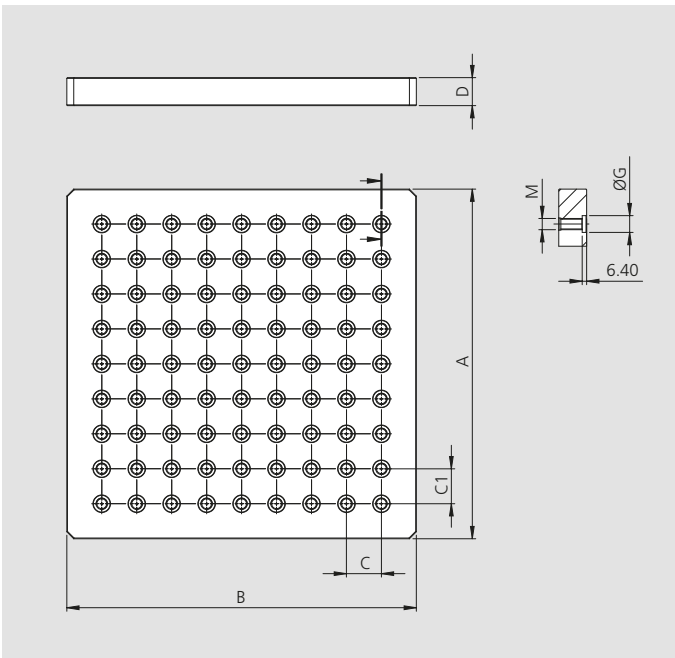
Technical features

- Grid and holes on customer request
- High-quality steel (1.2311/1.2312)
- Standard = phosphating / optional = other surface treatment

Standard equipment

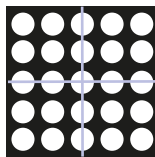
Customized grid plates

Customized grid plates

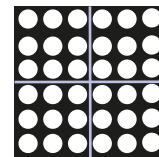


Dimensions		
A	Length	
B	Width	
C	Grid distance 1	
C1	Grid distance 2	
D	Thickness	
M	Thread	
G	Diameter	
Grid in center	Yes / No	

Grid (in center)



Grid (not in center)





Application/customer benefits

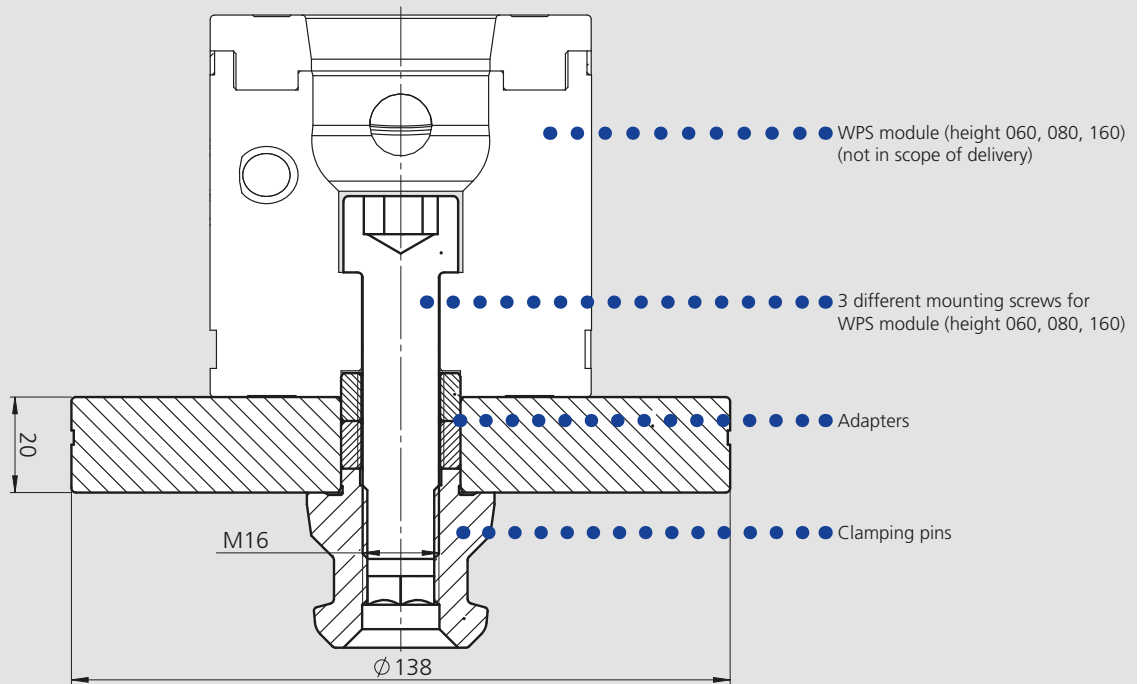
- Simply use of WPS modules on APS zero point clamping system
- Ready to use

Technical features

- Compatible to WPS modules height 060, 080 and 160

Standard equipment

Adapter-set including 3 different mounting screws
M16 for WPS height 060, 080, 160,
clamping pin and adapters (without WPS module)



Subject to technical changes.

SMW-AUTOBLOK Type

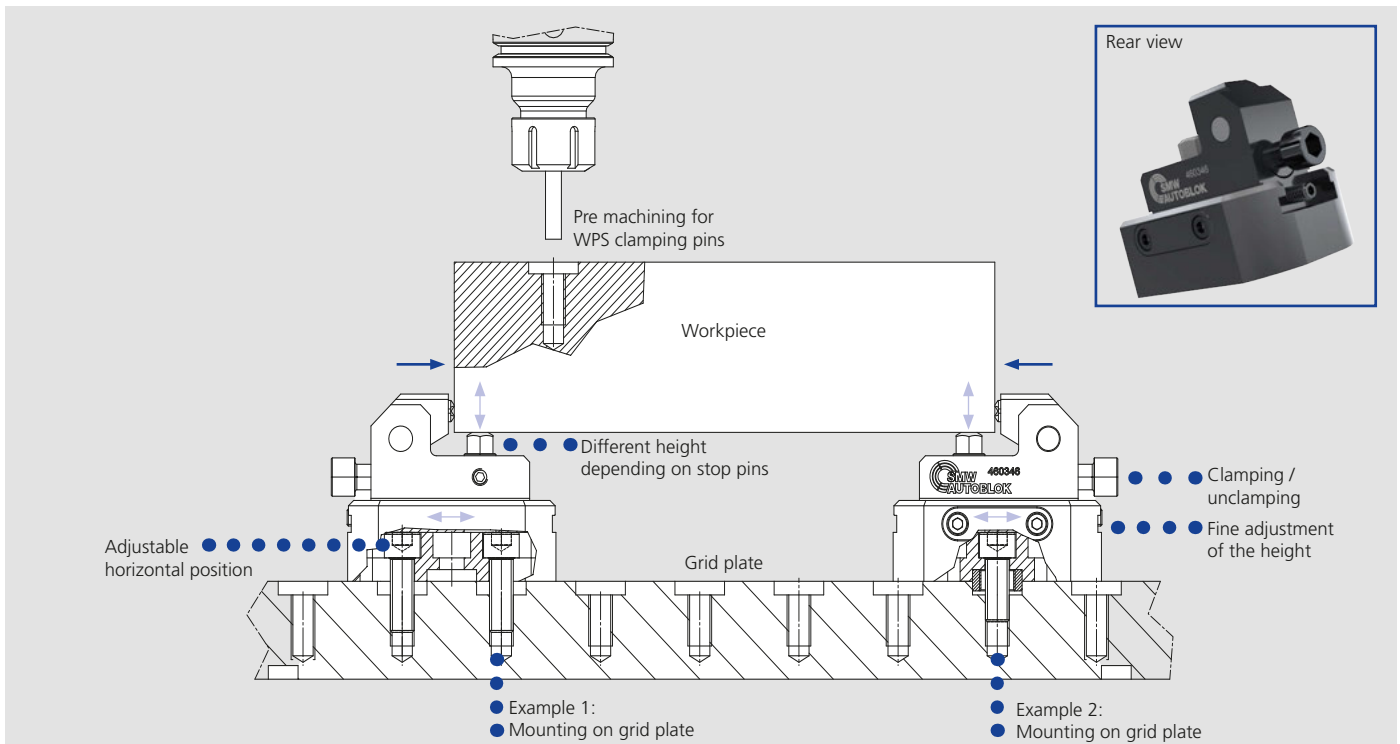
Id. No.

Adapter set WPS 080

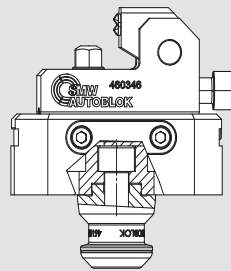
460359

- Ideal for OP 10: Preparation of the workpiece for WPS
- Flexible system

Mounting on Grip plate

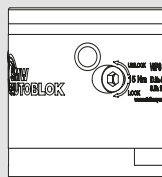


Mounting of a clamping pin for zero point system APS / WPS / ZeroAct:

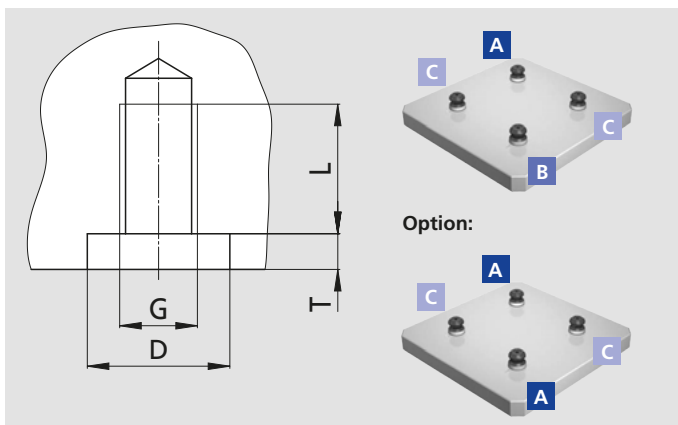


Example 3:
Mounting of clamping pin
(only WPS-PPD 12)

WPS (max height 80 mm)



Interface dimensions for clamping pins in the workpiece



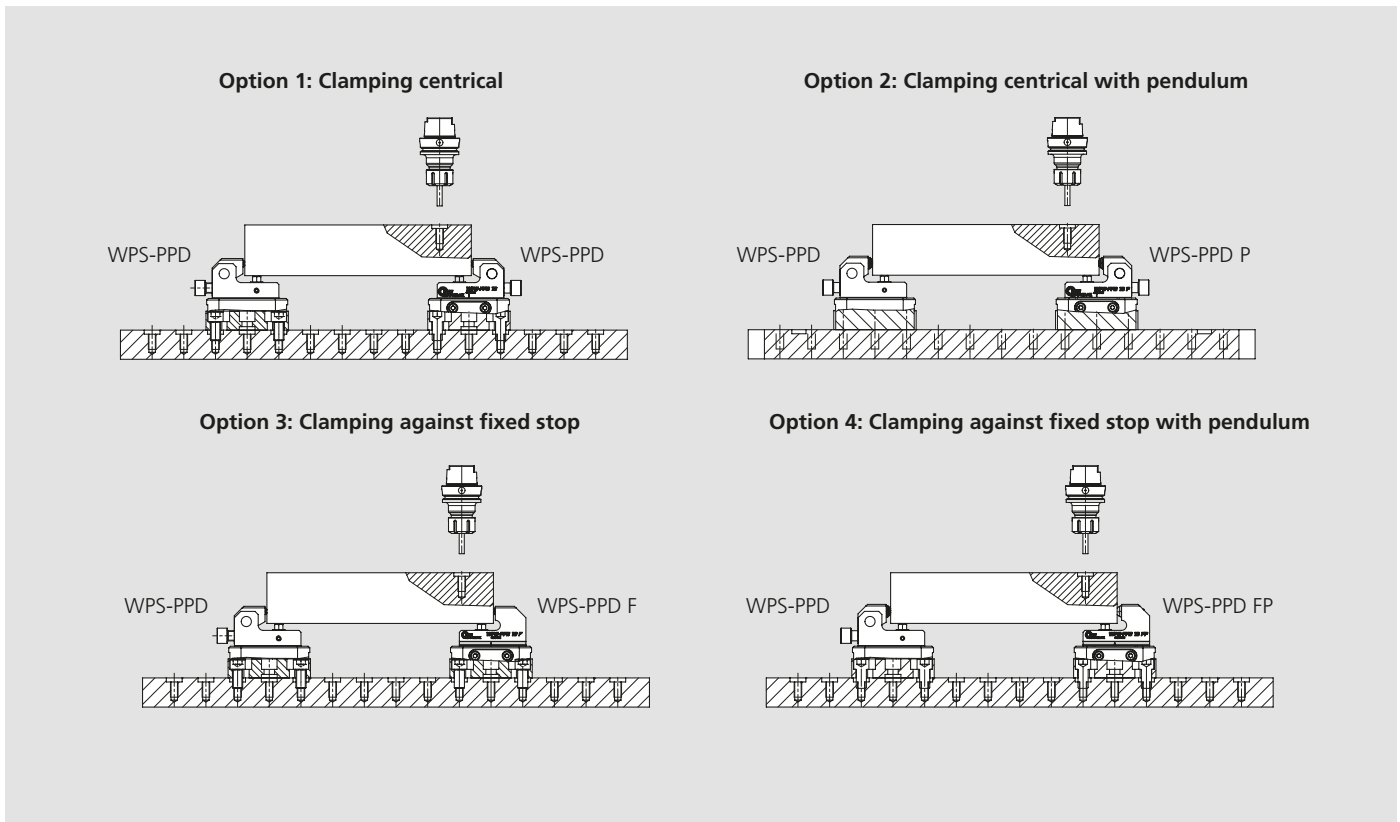
SMW-AUTOBLOK Type	D ^{H7}	G	L	T ^{+0.2}
Clamping pin Basic M12				
Adapter Ø18	18	M12	20	5.5
Adapter Ø20	20	M12	20	5.5
Adapter Ø22	22	M12	20	5.5
Adapter Ø24	24	M12	20	5.5
Adapter Ø25	25	M12	20	5.5
Clamping pin Basic M16				
Adapter Ø20	20	M16	25	5.5
Adapter Ø22	22	M16	25	5.5
Adapter Ø24	24	M16	25	5.5
Adapter Ø25	25	M16	25	5.5

Note: Id. No. clamping pins see page 81

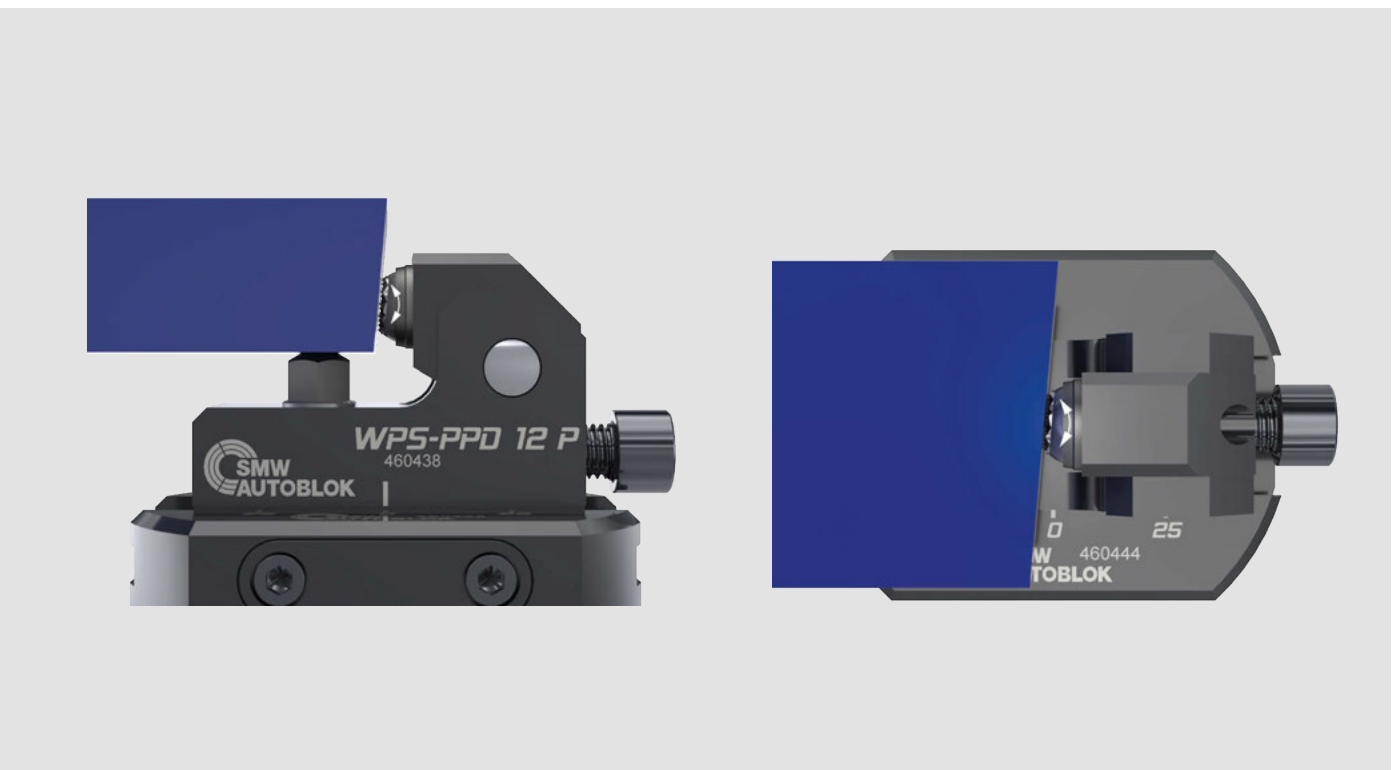
Please download the 3D data for customer integration from our website www.stationary-workholding.com.

- Ideal for OP 10: Preparation of the workpiece for WPS
- Flexible system

Application examples



Pendulum feature WPS-PPD P and FP



- Due to the integrated pendulum mechanism, the clamping position adjusts itself to the workpiece geometry automatically.
- Therefore, also not angular workpiece areas can be clamped fast and safe.
- Thanks to 4 different pendulum inserts, the clamping devices are very flexible in use.

- Ideal for OP 10: Preparation of the workpiece for WPS
- Flexible system



Application/customer benefits

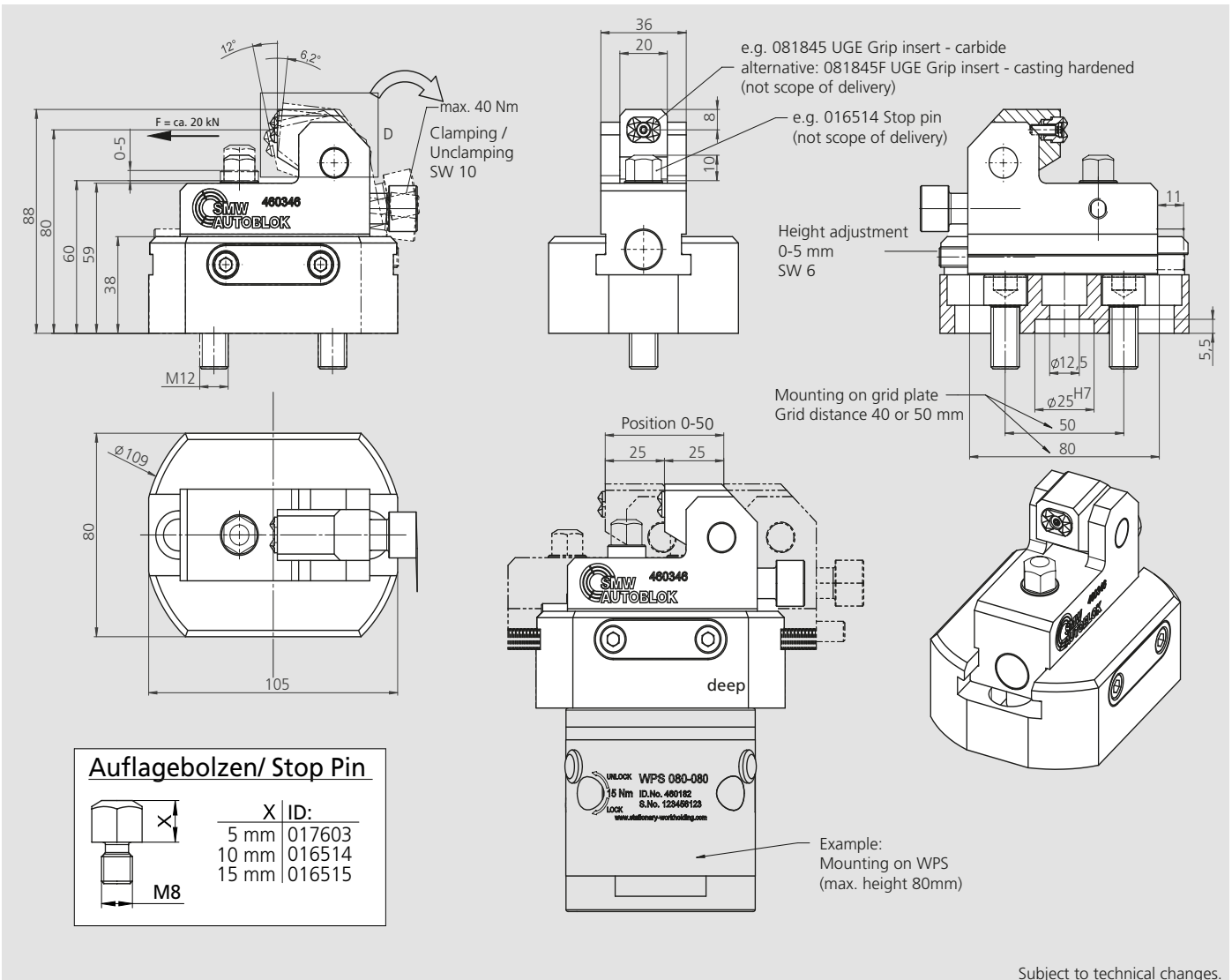
- Ideal for OP 10: Preparation of the workpiece for WPS
- Very strong and compact design for best accessibility
- Clamping height of the workpiece adjustable
- Easy and flexible mounting
- Direct interface for grid dimension 40 / 50 mm and interface for zero point system APS / WPS / ZeroAct as a standard

Technical features

- Manual actuation (SW 10)
- Horizontal position adjustable (0 - 50 mm)
- Position lockable clamping
- Pull-down effect
- Clamping force up to 20 kN (40 Nm)
- Different heights for the workpiece support by means of different stop pins
- Fine adjustment of the clamping height (0 - 5 mm)

Standard equipment

WPS-PPD with UGE Grip insert - carbide without stop pin



Subject to technical changes.

Order review

Type		Id. No.
WPS-PPD 12 Workpiece preparation device		460346
Stop Pin ALB	5 mm	017603
Stop Pin ALB	10 mm	016514
Stop Pin ALB	15 mm	016515
UGE Grip Insert	casting hardened	081845F

- Ideal for OP 10: Preparation of the workpiece for WPS
- Flexible system



Application/customer benefits

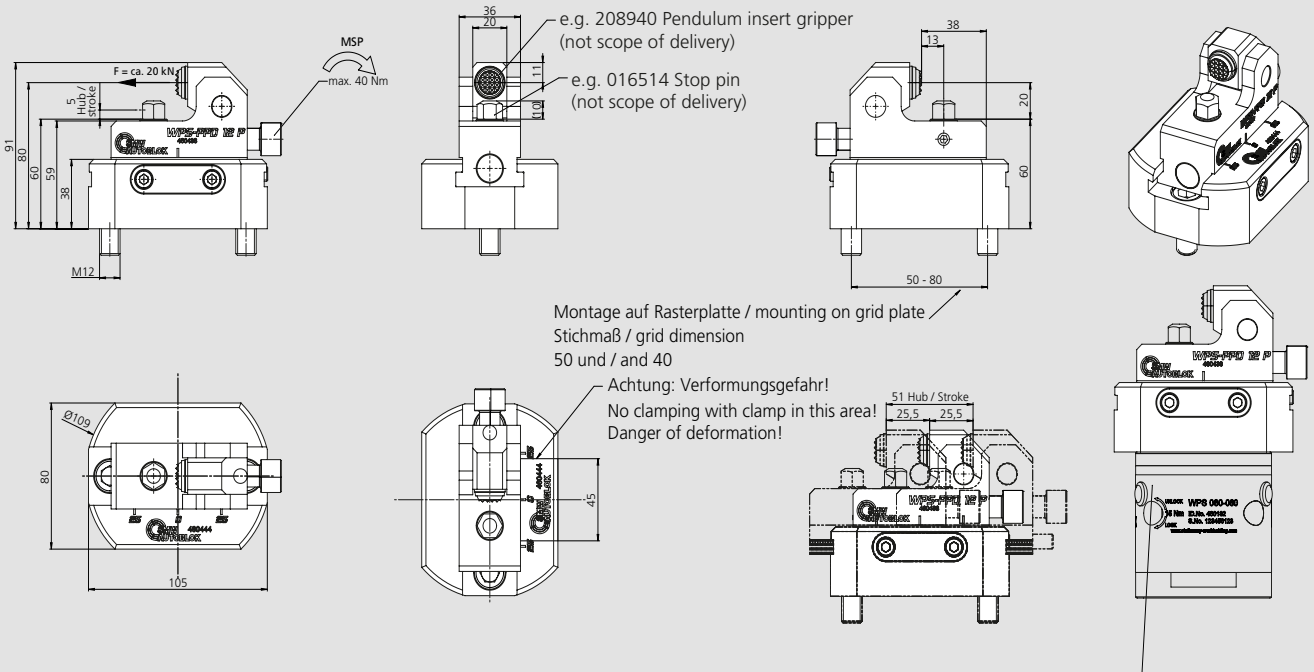
- Ideal for OP 10: Preparation of the workpiece for WPS
- Very strong and compact design for best accessibility
- Clamping height of the workpiece adjustable
- Easy and flexible mounting
- Direct interface for grid dimension 40 / 50 mm and interface for zero point system APS / WPS / ZeroAct as a standard

Technical features

- Manual actuation (SW 10)
- Horizontal position adjustable (0 - 50 mm)
- Position lockable clamping
- Pull-down effect
- Pendulum angle of the inserts: $\pm 9^\circ$
- Clamping force up to 20 kN (40 Nm)
- Different heights for the workpiece support by means of different stop pins
- Fine adjustment of the clamping height (0 - 5 mm)

Standard equipment

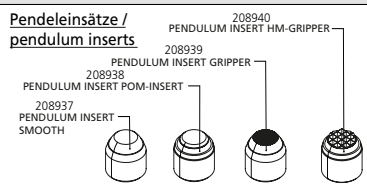
WPS-PPD 12 P without pendulum inserts and stop pin



Auflagebolzen / Stop Pin

X	ID:
5 mm	017603
10 mm	016514
15 mm	016515

Pendeleinsätze / pendulum inserts



Example: Mounting on WPS (max. height 80 mm)

Subject to technical changes.

Order review

Type		Id. No.
WPS-PPD 12 P Workpiece preparation device (with pendulum)		460430
Stop Pin ALB	5 mm	017603
Stop Pin ALB	10 mm	016514
Stop Pin ALB	15 mm	016515
Pendulum insert smooth		208937
Pendulum insert POM-Insert		208938
Pendulum insert gripper		208939
Pendulum insert HM-Gripper		208940

WPS-PPD 12 F/FP

Workpiece preparation device - fixed stop

- Ideal for OP 10: Preparation of the workpiece for WPS
- Flexible system



Application/customer benefits

- F: Fixed stop without pendulum
- FP: Fixed stop with pendulum
- Ideal for OP 10: Preparation of the workpiece for WPS
- Very strong and compact design for best accessibility
- Clamping height of the workpiece adjustable
- Easy and flexible mounting
- Direct interface for grid dimension 40 / 50 mm and interface for zero point system APS / WPS / ZeroAct as a standard

Technical features

- Horizontal position adjustable (0-50 mm)
- Position lockable clamping
- Pendulum angle of the inserts: $\pm 9^\circ$
- Different heights for the workpiece support by means of different stop pins
- Fine adjustment of the clamping height (0-5 mm)

Standard equipment

WPS-PPD 12 F with UGE Grip insert hard metal, without stop pin
 WPS-PPD 12 FP without pendulum inserts and stop pin

e.g. 208939 Pendulum insert gripper (not scope of delivery)
 e.g. 016514 Stop pin (not scope of delivery)

Montage auf Rasterplatte / mounting on grid plate
 Stichmaß / grid dimension
 50 und / and 40

Achtung: Verformungsgefahr!
 No clamping with clamp in this area!
 Danger of deformation!

Example:
 Mounting on WPS
 (max. height 80 mm)

Auflagebolzen / Stop Pin	
X	ID:
5 mm	017603
10 mm	016514
15 mm	016515

Pendeleinsätze / pendulum inserts	
208940	PENDULUM INSERT HM-GRIPPER
208939	PENDULUM INSERT GRIPPER
208938	PENDULUM INSERT POM-INSERT
208937	PENDULUM INSERT SMOOTH

Subject to technical changes.

Order review

Type		Id. No.
WPS-PPD 12 F Workpiece preparation device (w/o pendulum)	UGE Grip insert HM scope of delivery	460432
WPS-PPD 12 FP Workpiece preparation device (with pendulum)		460434
Stop Pin ALB	5 mm	017603
Stop Pin ALB	10 mm	016514
Stop Pin ALB	15 mm	016515
Pendulum insert smooth		208937
Pendulum insert POM-Insert		208938
Pendulum insert gripper		208939
Pendulum insert HM-Gripper		208940
UGE Grip insert	casting hardened	081845F

- Ideal for OP 10: Preparation of the workpiece for WPS
- Flexible system



Application/customer benefits

- Ideal for OP 10: Preparation of the workpiece for WPS
- Very strong and compact design for best accessibility
- Clamping height of the workpiece adjustable
- Easy and flexible mounting
- Direct interface for grid dimension 40 / 50 mm and interface for zero point system APS / WPS / ZeroAct as a standard

Technical features

- Manual actuation (SW 14)
- Horizontal position adjustable (0 - 66 mm)
- Position lockable clamping
- Pull-down effect
- Clamping force up to 30 kN (65 Nm)
- Different heights for the workpiece support by means of different stop pins
- Fine adjustment of the clamping height (0 - 7 mm)

Standard equipment

WPS-PPD 16 with UGE Grip insert - carbide without stop pin

e.g. 081845 UGE Grip insert - carbide
 alternative: 081845F UGE Grip insert - casting hardened (not scope of delivery)

e.g. 016514 Stop pin (not scope of delivery)

F = ca. 45 kN
 max. 30 kN
 Clamping / Undclamping SW 14

Achtung : Verformungsgefahr!
 No clamping with clamp in this area!
 Danger of deformation!

Montage auf Rasterplatte / mounting on grid plate
 Stichmaß / grid dimension 50 und / and 40

66 Hub / Stroke
 33 33

Auflagebolzen / Stop Pin

X	ID:
5 mm	017603
10 mm	016514
15 mm	016515
20 mm	016516
25 mm	081191

Subject to technical changes.

Order review

Type		Id. No.
WPS-PPD16 Workpiece preparation device		460400
Stop Pin ALB	5 mm	017603
Stop Pin ALB	10 mm	016514
Stop Pin ALB	15 mm	016515
Stop Pin ALB	20 mm	016516
Stop Pin ALB	25 mm	081191
UGE Grip insert	casting hardened	081845F

- Ideal for OP 10: Preparation of the workpiece for WPS
- Flexible system



Application/customer benefits

- F: Fixed stop without pendulum
- FP: Fixed stop with pendulum
- Ideal for OP 10: Preparation of the workpiece for WPS
- Very strong and compact design for best accessibility
- Clamping height of the workpiece adjustable
- Easy and flexible mounting
- Direct interface for grid dimension 40 / 50 mm and interface for zero point system APS / WPS / ZeroAct as a standard

Technical features

- Manual actuation (SW 14)
- Horizontal position adjustable (0 - 50 mm)
- Position lockable clamping
- Pull-down effect
- Pendulum angle of the inserts: ± 9°
- Different heights for the workpiece support by means of different stop pins
- Fine adjustment of the clamping height (0 - 7 mm)

Standard equipment

WPS-PPD 16 F with grip insert hard metal, without stop pin
 WPS-PPD 16 FP without pendulum inserts and stop pin

Dimensions shown in drawing: 116, 105, 76, 75, 50, 100, 130, 30, 53.75, 18.75, 29, 76, 80 - 100, 55, 66 Hub/Stroke, 33, 33.

Callouts: e.g. 208940 Pendulum insert gripper (not scope of delivery), e.g. 016514 Stop pin (not scope of delivery), Achtung : Verformungsgefahr! No clamping with clamp in this area! Danger of deformation!

Montage auf Rasterplatte / mounting on grid plate
 Stichmaß / grid dimension 50 und / and 40

Auflagebolzen/ Stop Pin	
	X ID:
	5 mm 017603
	10 mm 016514
	15 mm 016515
	20 mm 016516
	25 mm 081191

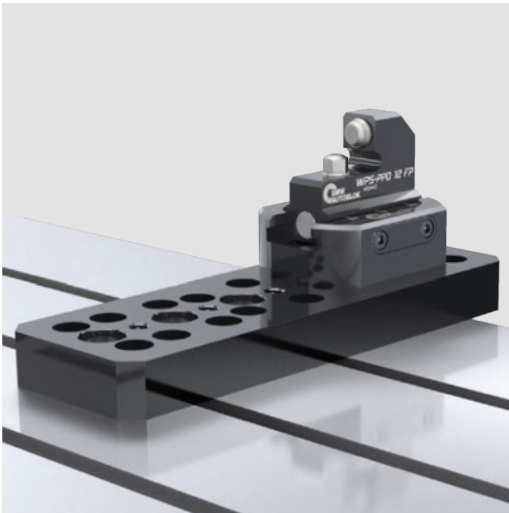
Pendeleinsätze / pendulum inserts	
	208940 PENDULUM INSERT HM-GRIPPER
	208939 PENDULUM INSERT GRIPPER
	208937 PENDULUM INSERT POM-INSERT
	208938 PENDULUM INSERT SMOOTH

Subject to technical changes.

Order review

Type		Id. No.
WPS-PPD 16 F Workpiece preparation device (w/o pendulum)	UGE Grip insert HM scope of delivery	460433
WPS-PPD 16 FP Workpiece preparation device (with pendulum)		460435
Stop Pin ALB	5 mm	017603
Stop Pin ALB	10 mm	016514
Stop Pin ALB	15 mm	016515
Stop Pin ALB	20 mm	016516
Stop Pin ALB	25 mm	081191
Pendulum insert smooth		208937
Pendulum insert POM-Insert		208938
Pendulum insert gripper		208939
Pendulum insert HM-Gripper		208940
UGE Grip insert	casting hardened	081845F

- Ideal for OP 10: Preparation of the workpiece for WPS
- Flexible system



Application/customer benefits

- Easy and flexible use of WPS-PPD direct clamping devices
- Fine adjustment on T-slot tables
- Mounting of WPS-PPD on grid plates between two row of holes possible
- Protected against corrosion
- Very strong version
- Undrilled version for customized finish machining

Technical features

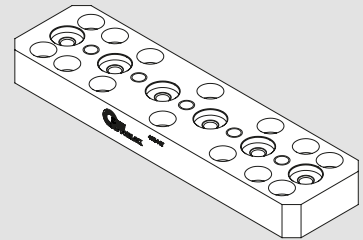
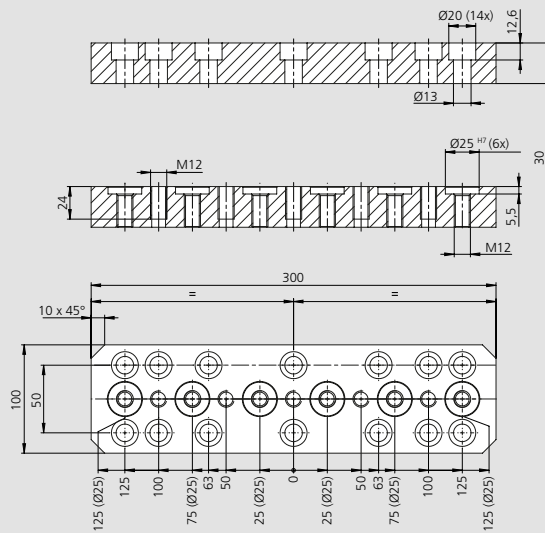
- Dimensions 100 x 300 mm
- Height 30 mm

Standard equipment

Clamping bar WPS-PPD

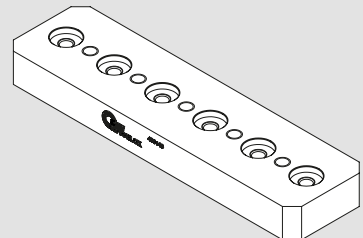
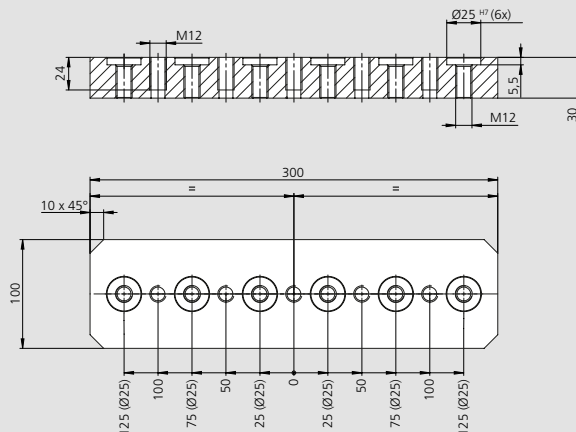
Options:

Clamping bar WPS-PPD
(drilled)



Subject to technical changes.

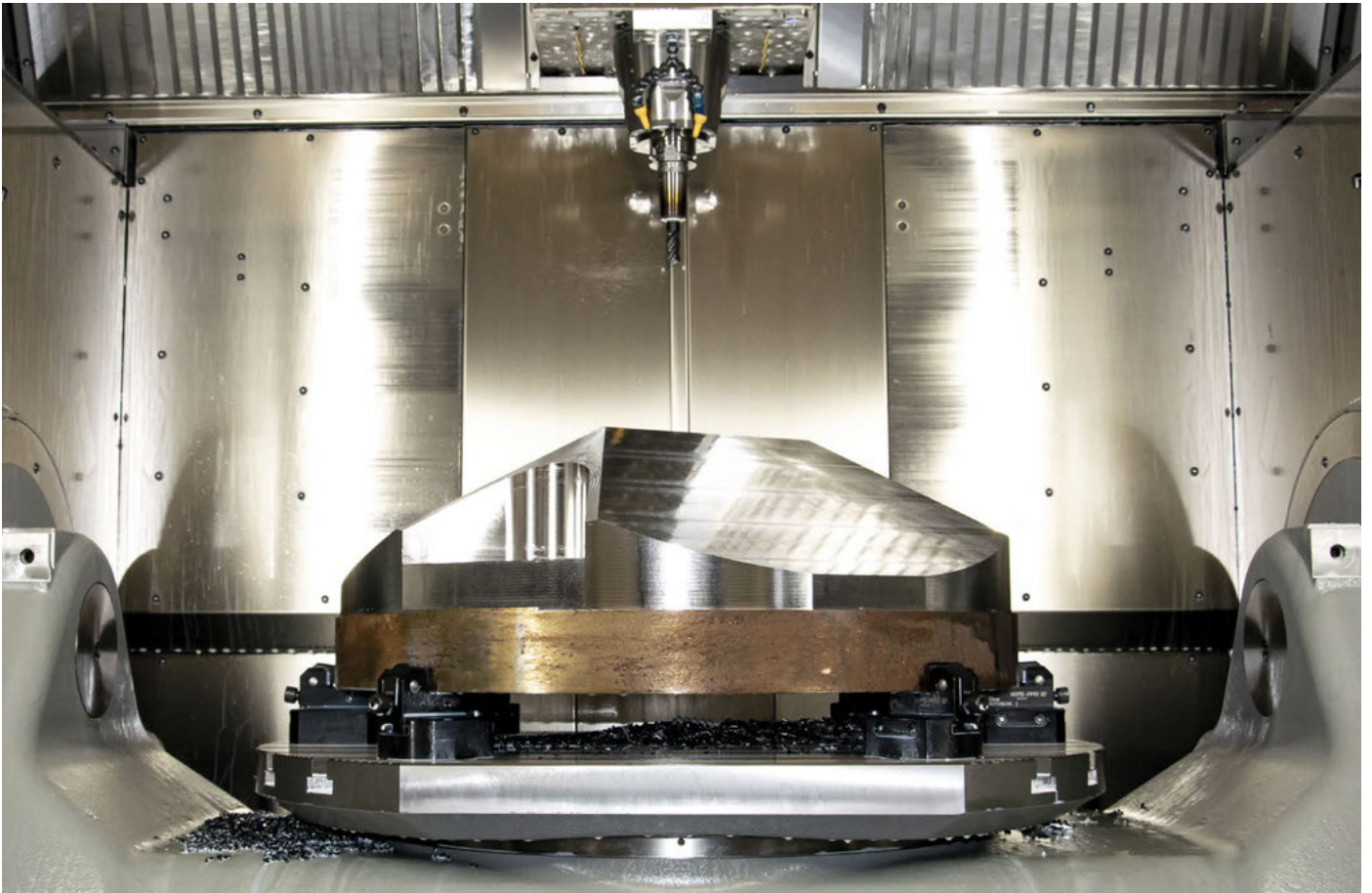
Clamping bar WPS-PPD
(undrilled)



Subject to technical changes.

Order review

Type	Id. No.
Clamping bar WPS-PPD (drilled)	460447
Clamping bar WPS-PPD (undrilled)	460448

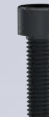


WPS Mini - Workpiece

Clamping pin WPS Mini

Clamping pin	Id.-No.
Clamping pin WPS Mini	460399

Clamping workpiece



WPS Mini flange module



Clamping pin M10

for mounting flange module on WPS 080
Id. No. 467008

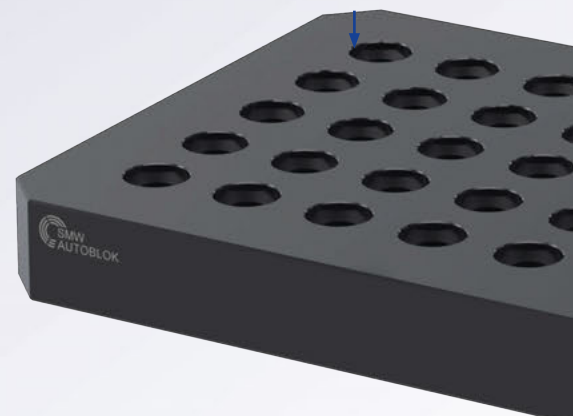


Clamping module Ø80

Height 60 mm, Id. No. 460181
Height 80 mm, Id. No. 460182
Height 160 mm, Id. No. 460183

Clamping module with flange

Height 40 mm
Id. No. 460180



positioning system

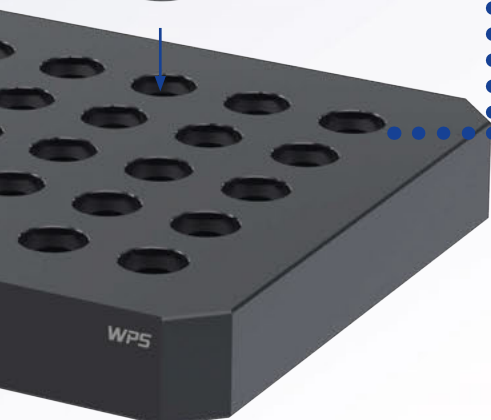
Clamping
workpiece



- • • • • • **Reduction Ø 20**
Detail description see page 104



- • • • • • **Further WPS Mini clamping modules Ø 40 mountable on top**
Height 40 mm, Id. No. 460396

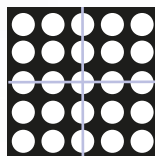


Grid plates (examples)

Grid 50 and 100 mm
Material 1.2311/1.2312

Grid (in center)

Positioning holes Ø12H6,
thread M10

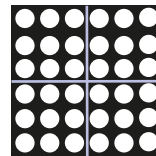


Grid	Length	Width
50 / 100	500	500
50 / 100	600	600
50 / 100	800	800
50 / 100	1000	500
50 / 100	1000	800
50 / 100	1200	800
50 / 100	1000	1000

Special versions on request.

Grid (not in center)

Positioning holes Ø12H6,
thread M10



Grid	Length	Width
50 / 100	600	400
50 / 100	500	500
50 / 100	600	500
50 / 100	600	800
50 / 100	1000	500
50 / 100	1000	600
50 / 100	1000	800
50 / 100	1000	1000

Special versions on request.

WPS Mini

Workpiece positioning system

Flange module

- Single quick-actuation for the rapid opening and closing
- Fully sealed

Application/customer benefits

- Huge reduction of set-up times for highest efficiency
- Safe workpiece clamping with maximum holding forces and highest repeatability
- Ideal for 5-axis machining
- Central quick actuation (270° rotation)
- Flexible configurations for customized use
- To adapt WPS Mini on WPS 080

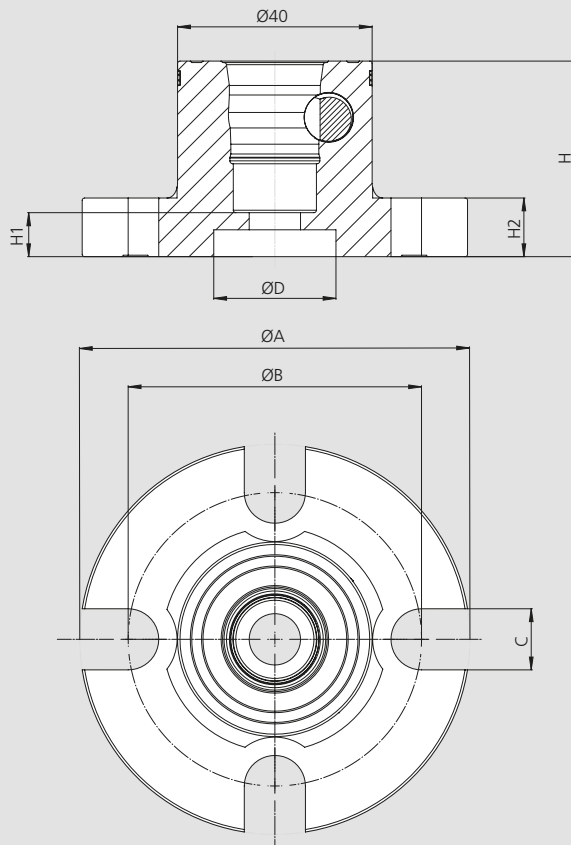
Technical features

- Diameter 80 / 40 mm, Height 40 mm
- Pull-in force 2.5 kN
- Max. torque 10 Nm
- Repeatability < 0.005 mm
- Holding force 25 kN (mounting screw M10 - 12.9)
- **proofline®** = fully sealed - low maintenance



proofline® series
fully sealed – low maintenance

Subject to technical changes.



Technical data

SMW-AUTOBLOK Type		WPS Mini 040 460485
A	mm	80
B	mm	60
C	mm	12.5
D / Depth	mm	Ø 25H6 / 5.5
H	mm	40 ± 0.005
H1	mm	9
H2	mm	12
Pull-in force	kN	2.5
Repeatability	mm	< 0.005
Holding force clamping pin M10	kN	16
Holding force clamping pin M8	kN	10

- Single quick-actuation for the rapid opening and closing
- Fully sealed

Workpiece positioning system



proofline® series
fully sealed – low maintenance

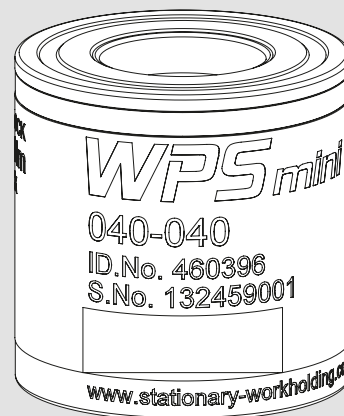
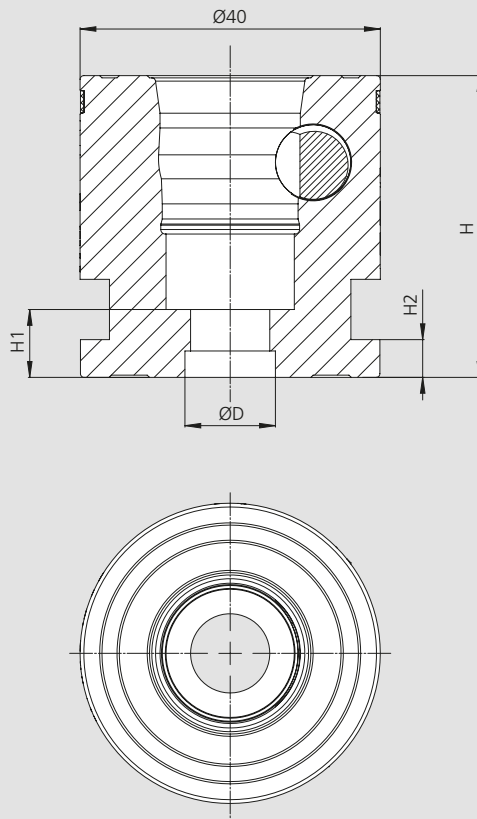
Application/customer benefits

- Huge reduction of set-up times for highest efficiency
- Safe workpiece clamping with maximum holding forces and highest repeatability
- Ideal for 5-axis machining
- Central quick actuation (270° rotation)
- Flexible configurations for customized use
- Interchangeable to the zero point system WPS by using flange module

Technical features

- Diameter 80 / 40 mm, Height 40 mm
- Pull-in force 2.5 kN
- Max. torque 10 Nm
- Repeatability < 0.005 mm
- Holding force 25 kN (mounting screw M10 - 12.9)
- **proofline®** = fully sealed - low maintenance

Subject to technical changes.



Technical data

SMW-AUTOBLOK Type		WPS Mini 040-040 460396	
D / Depth	mm	ø 25H6 / 5.5	
H	mm	40 ± 0.005	
H1	mm	9	
H2	mm	12	
Pull-in force	kN	2,5	
Repeatability	mm	< 0.005	
Holding force clamping pin M10	kN	16	
Holding force clamping pin M8	kN	10	

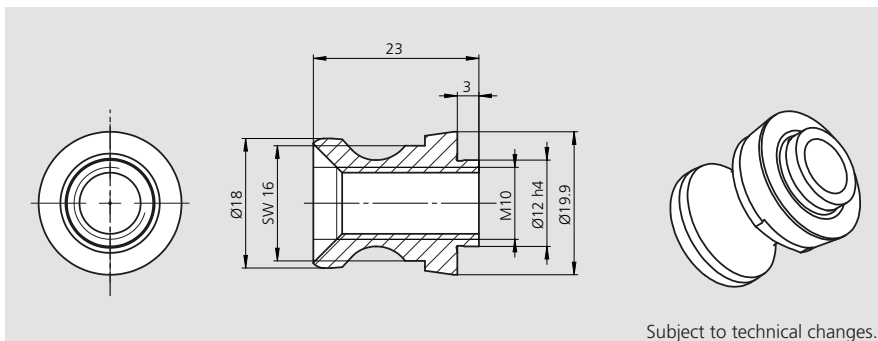
WPS Mini

Workpiece positioning system

Manual zero point clamping system for workpiece direct clamping

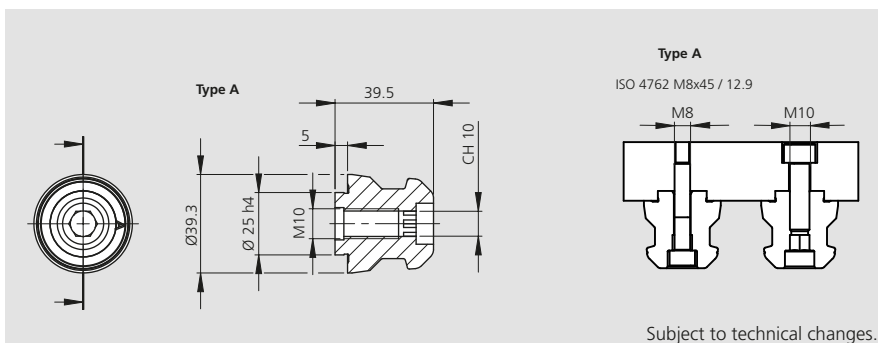
■ Accessories

Clamping pin for WPS Mini



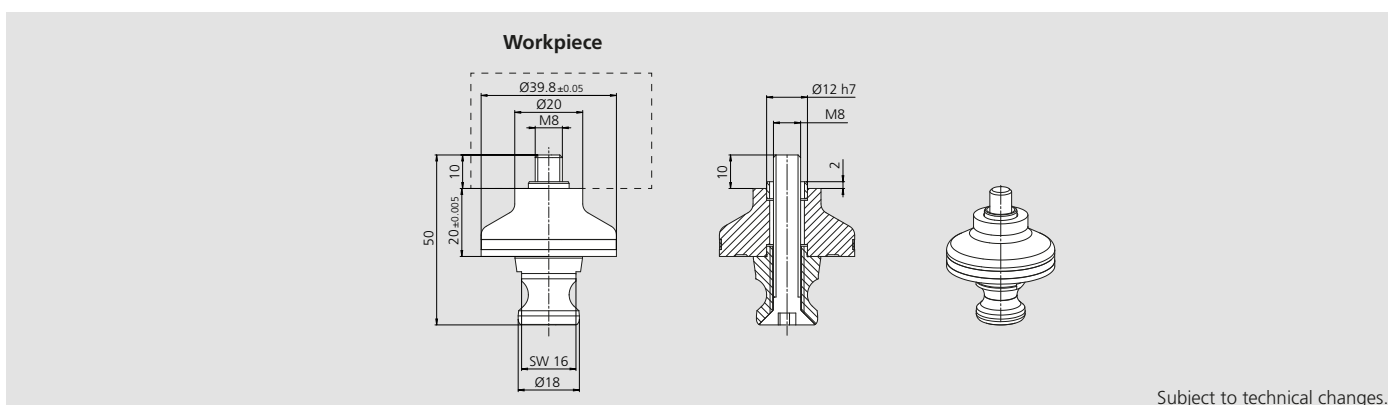
Clamping pin	Id. No.
Type A	460399

Clamping pin for WPS 080 M10



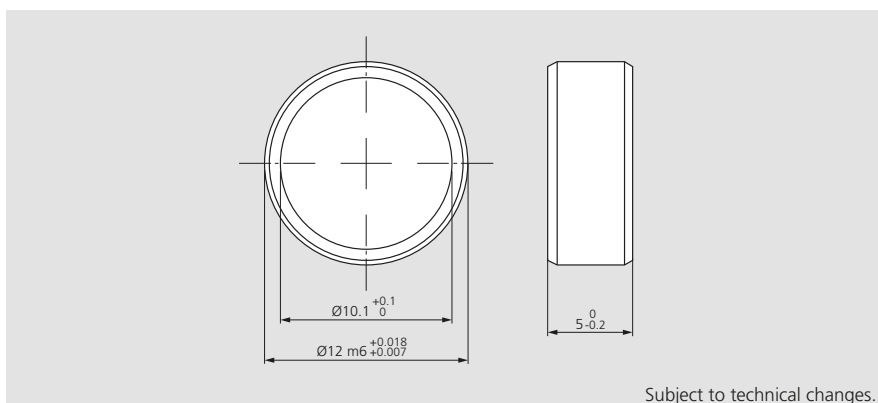
Clamping pin	Id. No.
for WPS 080	467008

Reduction D20 for WPS Mini



Reduction Thread [M]	Id. No.
M8 Type A	Height 20 mm 460487

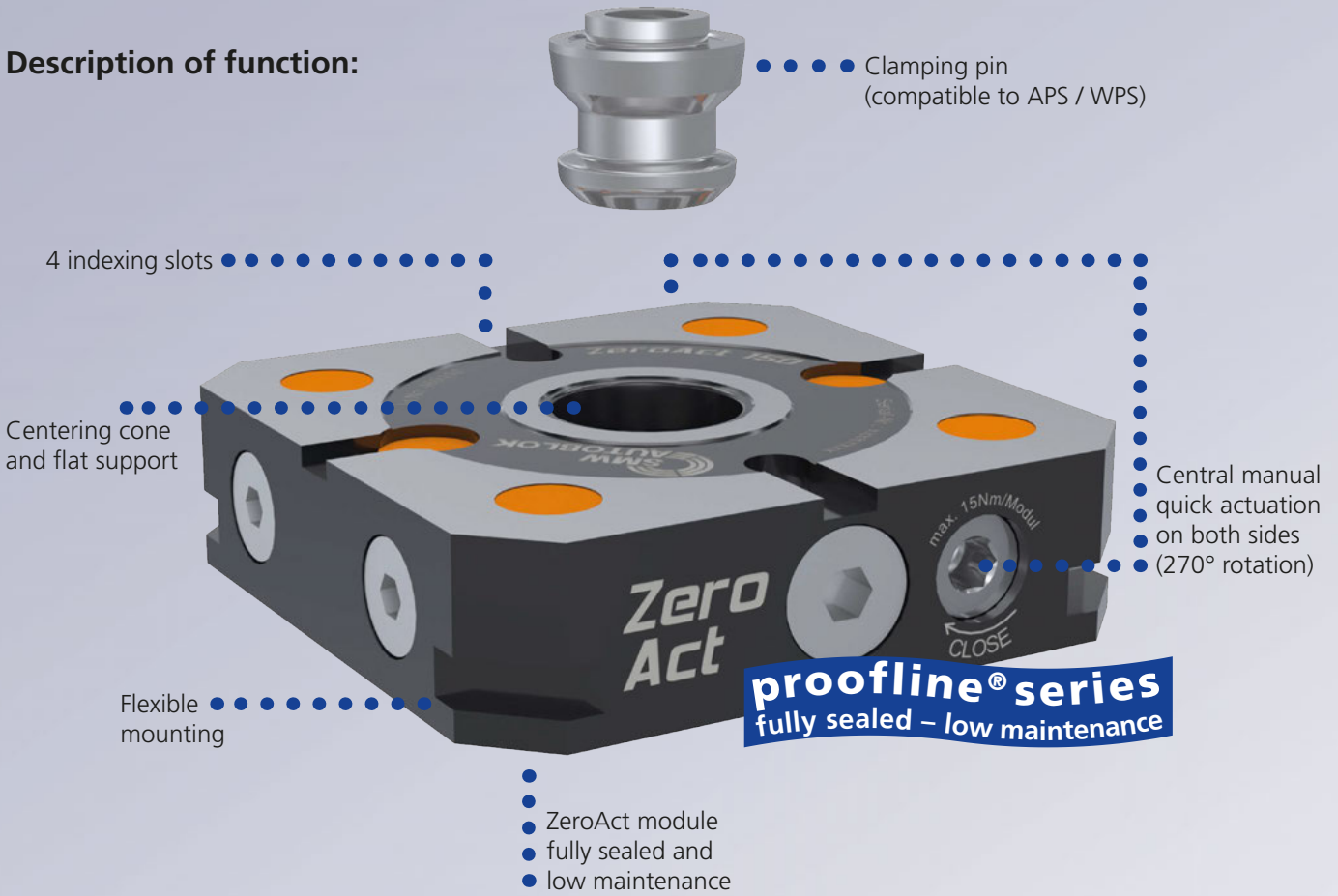
Center pin



Center pin	Id. No.
For WPS 080	209223

A large rectangular area filled with horizontal stripes in two shades of blue: a medium blue and a light blue. The stripes alternate in a repeating pattern, creating a template for writing notes.

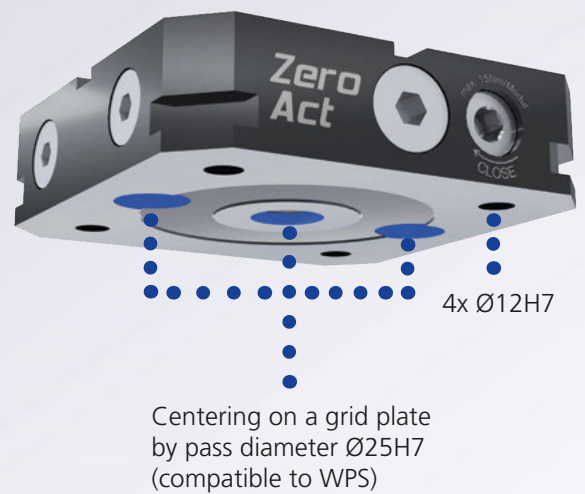
Description of function:



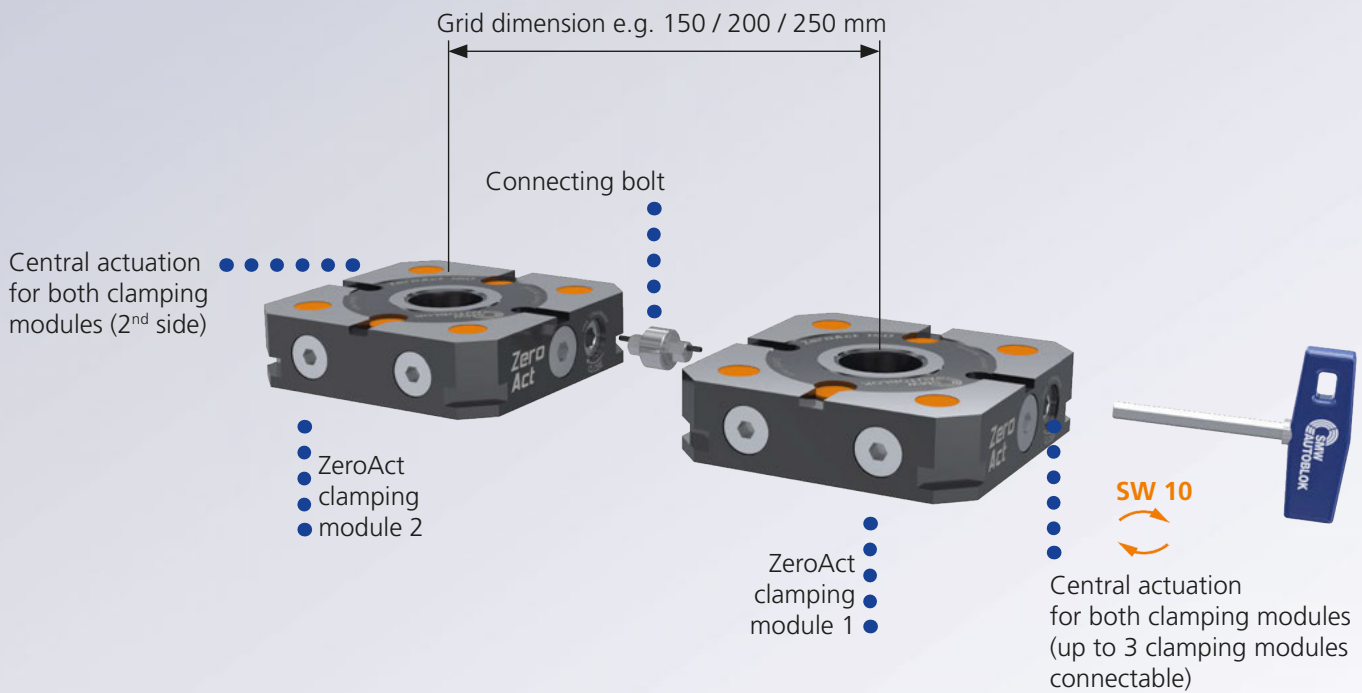
Mounting options:



View from below:



Up to 3 ZeroAct modules can be connected in a row with central actuation:



Application examples for connecting up to 3 clamping modules with central acuation:

2 ZeroAct clamping modules in a row, grid dimension 200 mm



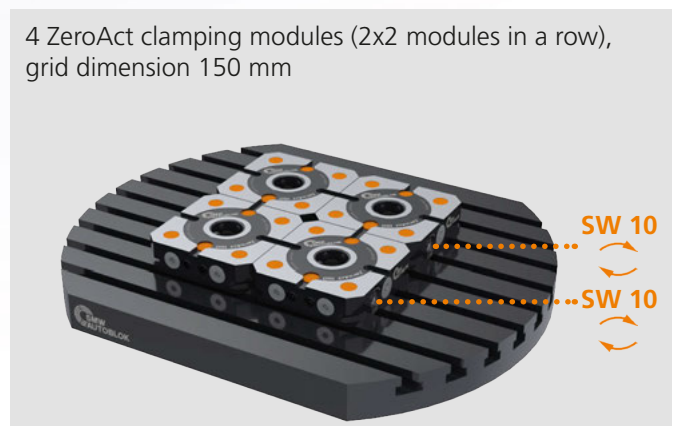
4 ZeroAct clamping modules (2x2 modules in a row), grid dimension 200 mm



6 ZeroAct clamping modules (2x3 modules in a row), grid dimension 200 mm



4 ZeroAct clamping modules (2x2 modules in a row), grid dimension 150 mm





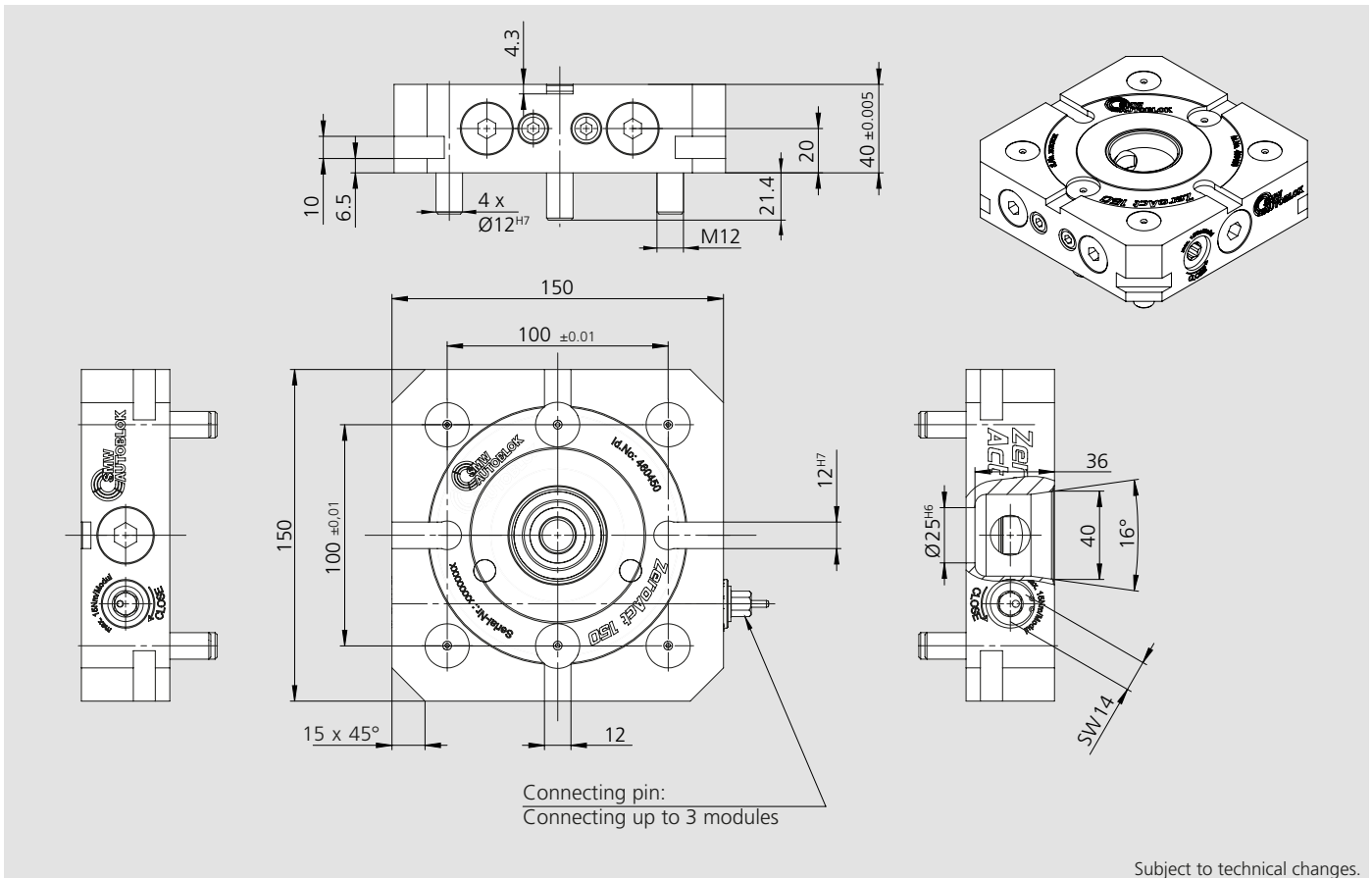
proofline® series
fully sealed – low maintenance

Application/customer benefits

- Up to 3 ZeroAct modules can be connected in a row with central actuation
- Single quick-actuation for the rapid opening and closing of the modules with only 270° rotation
- Extremely flat design
- Huge reduction of set-up times for highest efficiency
- Safe workpiece clamping with maximum holding forces and highest repeatability
- Flexible configurations for customized use
- 4 indexing slots
- Interchangeable to the proven zero point systems APS / WPS

Technical features

- Diameter 150 x 150 mm, height 40 mm
- Pull-in force 15 kN
- Max. torque 15 Nm
- Repeatability < 0.005 mm
- Holding force 35 / 50 / 75 kN (M12 / M16) depending on thread of clamping pin
- 2 clamping slides for maximum hold while clamping
- **proofline®** = fully sealed - low maintenance



Technical data

SMW-AUTOBLOK Type		ZeroAct 460450
Pull-in force	kN	15
Repeatability	mm	< 0.005
Holding force M10	kN	35
Holding force M12	kN	50
Holding force M16	kN	75

■ Clamping pins 1 piece

Manual zero point module

Application/customer benefits

- Fixation and positioning on the clamping system WPS
- Wear-resistant due to an extra hard protective coating
- Large entry radius of the clamping pins for easy and safe loading

Technical features

- Centering pin type A (standard)
- Sword pin type B (positioning pin)
- Clamping pin type C (with centering play 0.1 mm)

Standard equipment

Clamping pin with mounting screw

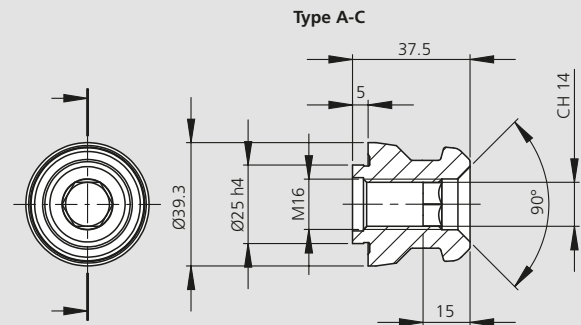
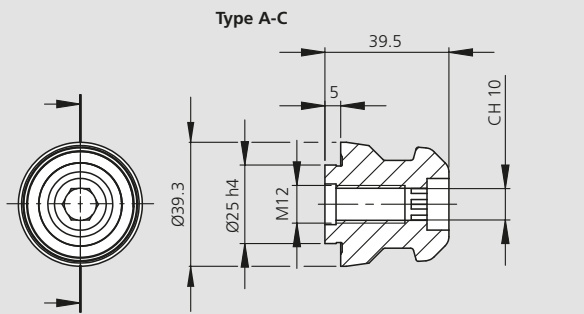
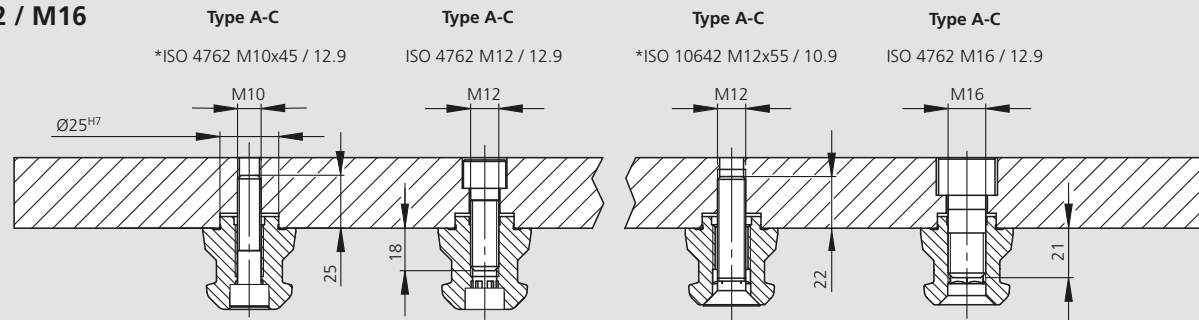


Type A

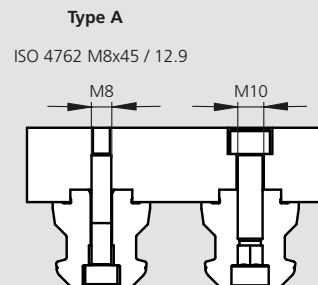
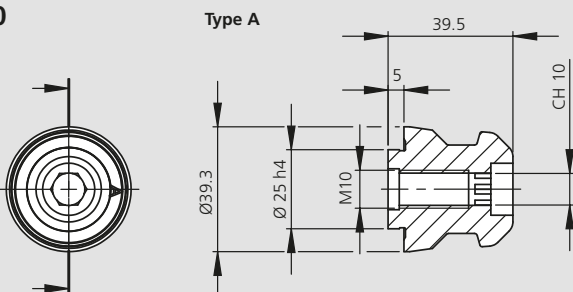
Type B

Type C

M12 / M16



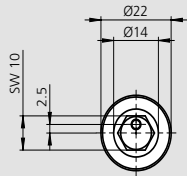
M10



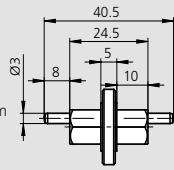
Subject to technical changes.

Order review

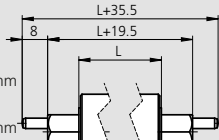
Type	Thread	Type A Id. No.	Type B Id. No.	Type C Id. No.	Weight [kg]
Clamping pin ZeroAct	M10 / 12.9	467008	on request	-	0.3
Clamping pin ZeroAct	M12 / 12.9	46162355	on request	46162357	0.3
Clamping pin ZeroAct	M16 / 12.9	46162455	on request	46162457	0.3



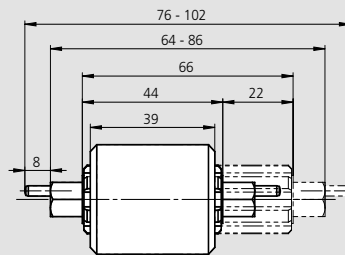
460457
Grid dimension 150 mm



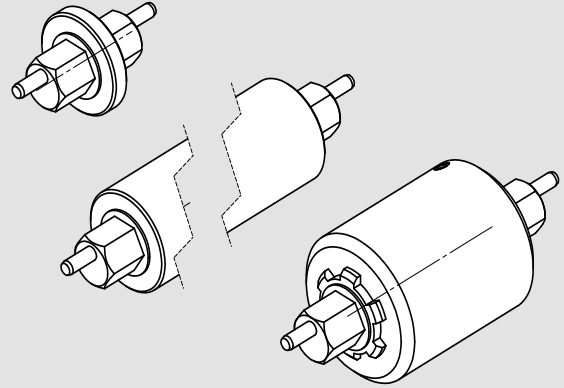
460474
Grid dimension 200 mm



460475
Grid dimension 250 mm



460476
T-Slot table
(grid dimension
189 mm - 210 mm)



Subject to technical changes.

Order review

Type	Grid distance	Id. No.
ZeroAct connecting pin length 5 mm	150 mm	460457
ZeroAct connecting pin length 55 mm	200 mm	460474
ZeroAct connecting pin length 105 mm	250 mm	460475
ZeroAct connecting pin length 44 - 66 mm	63 - 70 T-slot	460476

A large rectangular area filled with horizontal stripes in two shades of blue: a medium blue and a light blue. The stripes are evenly spaced and cover the majority of the page, providing a template for writing notes.

Z-Flex

Workpiece positioning system

Height adjustable, manual zero point clamping system for workpiece direct clamping

- Single quick-actuation for the rapid opening and closing
- Fully sealed



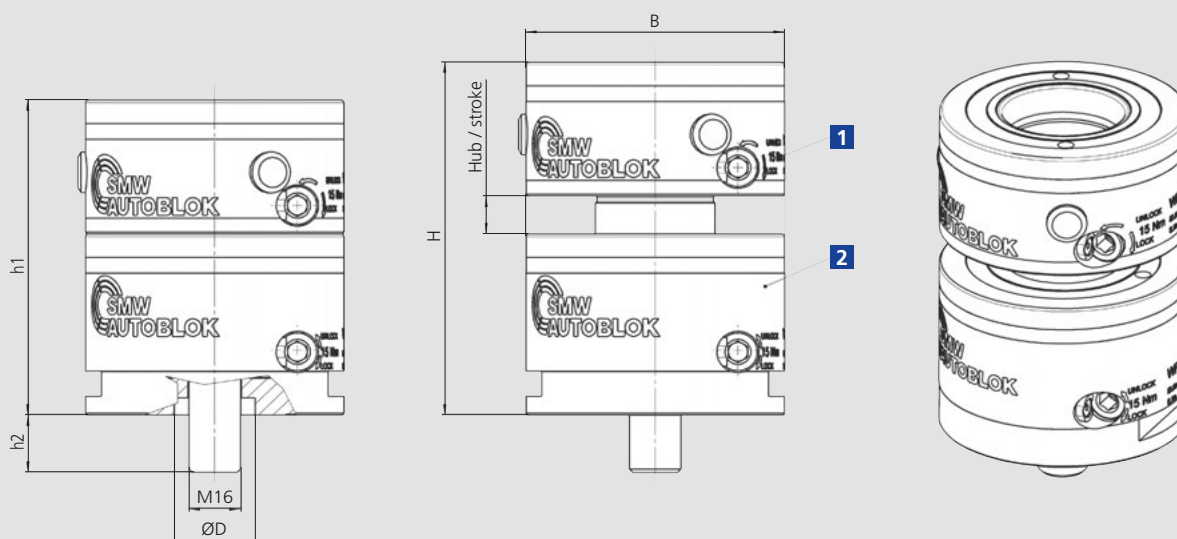
Application/customer benefits

- Huge reduction of set-up times for highest efficiency
- Continuous height adjustment
- Ideal for 5-axis machining
- Single quick-actuation for the rapid opening and closing of the modules with only 3.5 rotations
- Flexible configurations for customized use
- Interchangeable to the proven zero point system APS

Technical features

- Diameter 80 mm
- Stroke 12 mm
- Pull-in force / max. torque 15 kN / 15 Nm
- Max. axial load 800 kg
- Repeatability < 0.005 mm
- Holding force 50 / 75 kN (M12 / M16) depending on thread of clamping pin
- 3 clamping slides for maximum hold while clamping
- **proofline®** = fully sealed - low maintenance

Subject to technical changes.



WPS Z-Flex (Id. Nr. 460264) = WPS clamping module top (Id. No. 460265) **1** + WPS clamping module bottom (Id. No. 460266) **2**

Technical data

SMW-AUTOBLOK Type		WPS Z-Flex 080-100 460264
B	mm	Ø 80
D / Depth	mm	Ø 25H6 / 5.5
H	mm	100 - 112
h1	mm	100
h2	mm	18.2
Stroke	mm	12
Pull-in force	kN	15
Repeatability	mm	< 0.02
Holding force M12	kN	25* / 50*
Holding force M16	kN	40** / 75**

* Holding force for ISO 4762 M10x45 - 12.9 / Holding force for ISO 4762 M12 - 12.9 (see clamping pins)

** Holding force for ISO 10642 M12x55 - 10.9 / Holding force for ISO 4762 M16 - 12.9 (see clamping pins)