

APS

Zero Point Clamping System



Page 0.10

APS
Zero point clamping system modules
- 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)



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APS
Special module height extensions
- For automation



Page 0. 17

APS
Clamping pins
- Large entry radii on the clamping pins for easy and safe loading
- Wear-resistant



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APS
Combi units
- Ready to use combi module units
- Different heights



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APS
Clamping units
- Fully assembled clamping unit
- Ready to use
- Customer-specific versions available in a short time



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APS
Clamping pallets
- Fully assembled clamping pallet
- Optional with interface for module height extension
- Customized clamping pallets for any machine / application



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APS
Module height extensions
- Ready to use single module units
- Different heights



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APS
Spacers
- Adapt one or more combi units



Page 0. 36

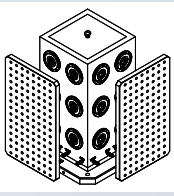
APS
Special clamping units
- Customer-specific versions
- For vertical lathes
- For automation



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APS
Accessories
- Protection covers
- Pins and keys for orientation (single use)
- Fixing screws for clamping units

APS
WATCH THE VIDEO

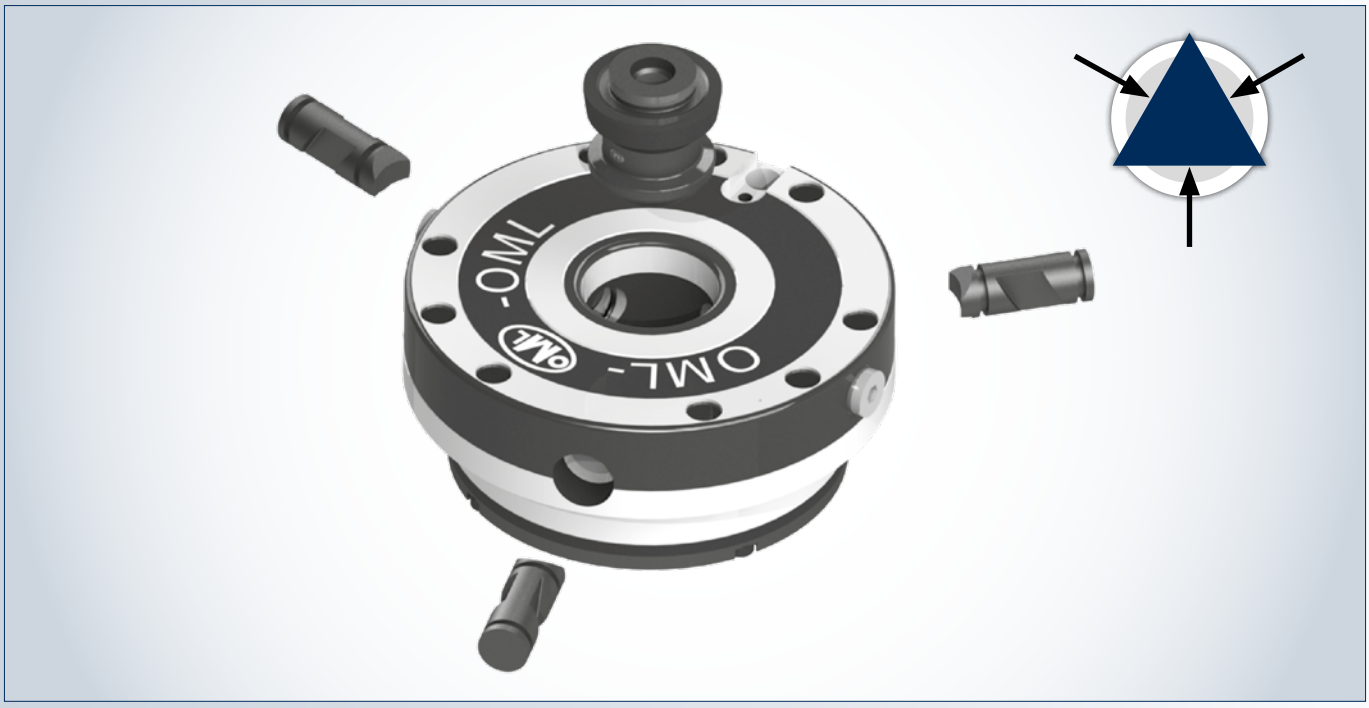


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APS
Accessories
- Tombstone
- Crankwebs
- Plates

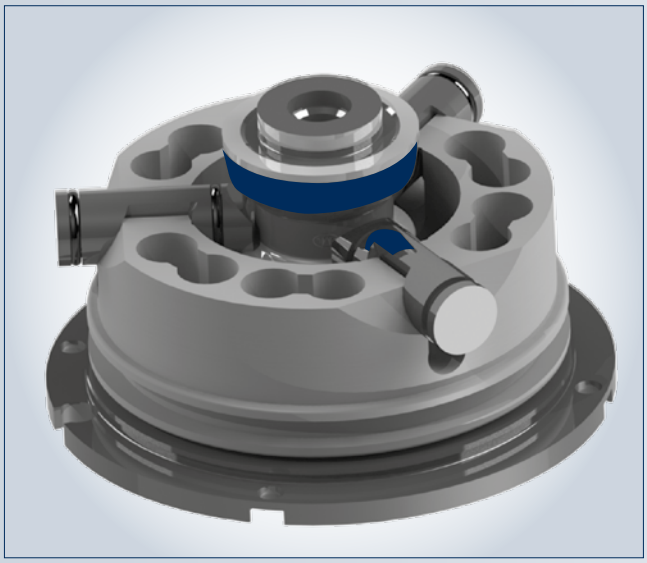


AUTOMATIC POSITIONING SYSTEM



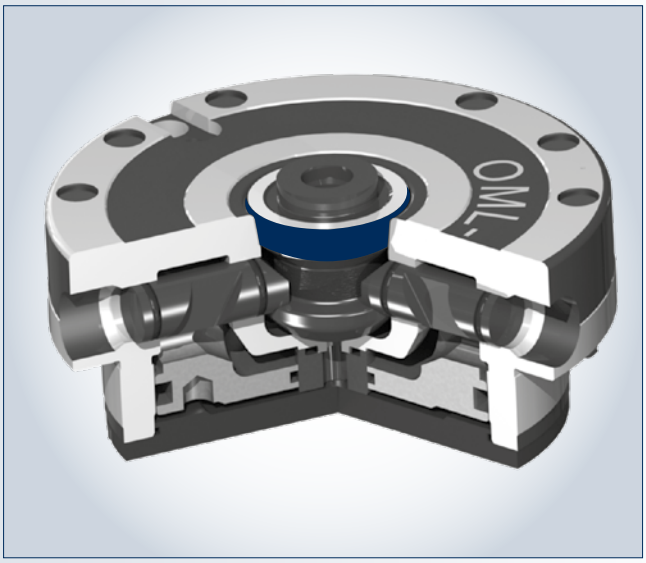
CLAMPING SYSTEM WITH 3 JAWS AT 120°

APS is the only one clamping system ZERO POINT with 3 jaws at 120° and thanks to special treatments antifriction and anticorrosion of the pins and the clamping jaws (already preliminarily treated to 62 HRC), further improves its performance.



MAXIMUM RIGIDITY!

- Monolithic piston with inclined planes
- Jaws with double inclined plane which generates the "PULL DOWN" effect

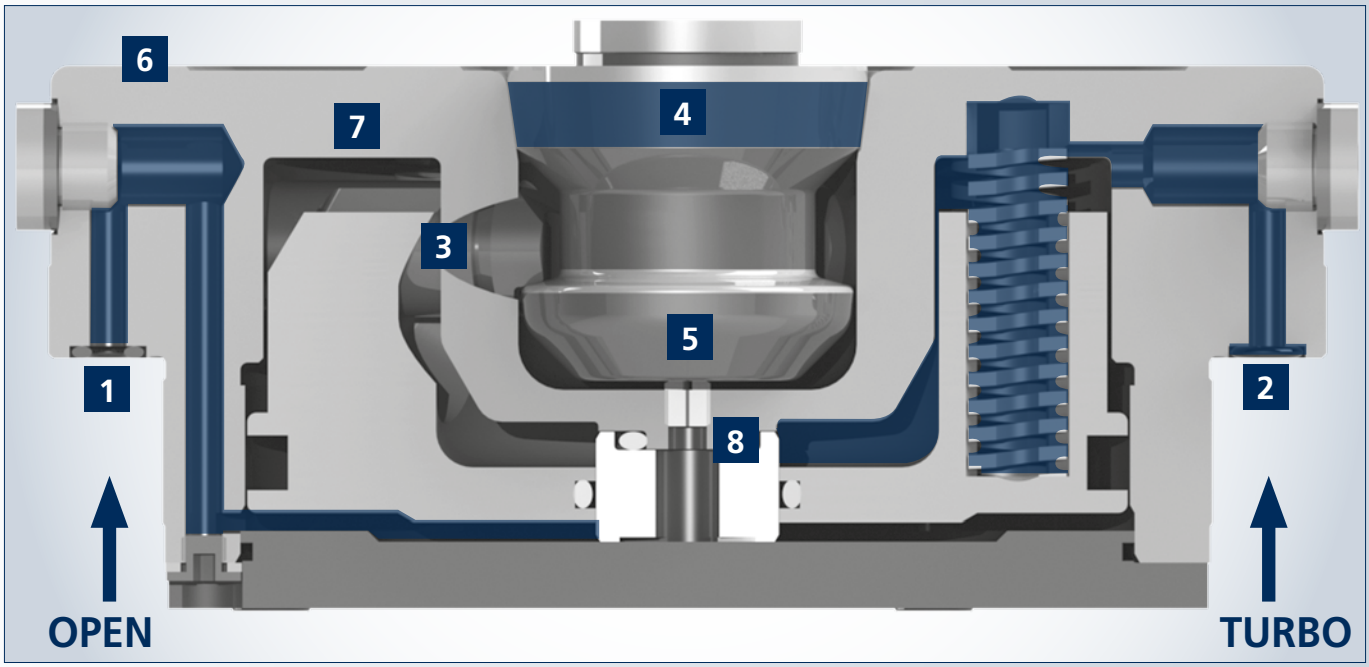


MAXIMUM ACCURACY!

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

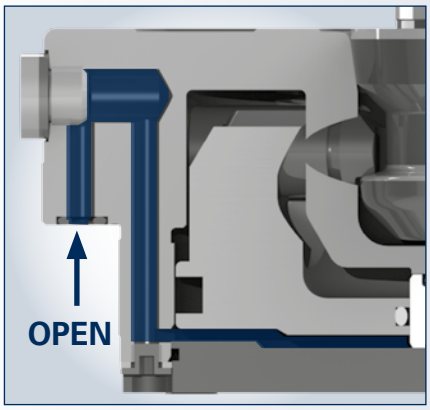


AUTOMATIC POSITIONING SYSTEM

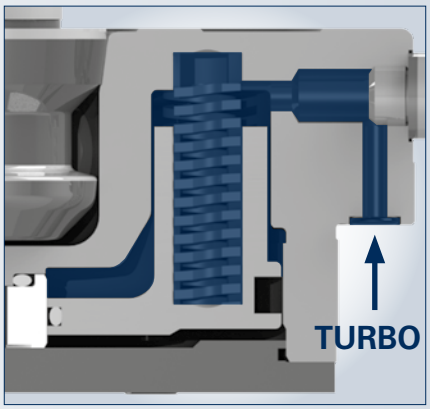


Functional Overview of the APS Zero Point Clamping System

1. Unlocking function
2. Turbo function for increasing the pull-in forces
3. 3 Clamping slides for maximum stiffness and protective coating (wear-resistant and rust protected)
4. Clamping pins with precise short taper centering and protective coating (wear-resistant and rust protected)
5. Large entry radii of the clamping pins for easy and safe loading
6. Large flat surface for highest stiffness
7. Hardened parts
8. Air cleaning (while opening the modules)

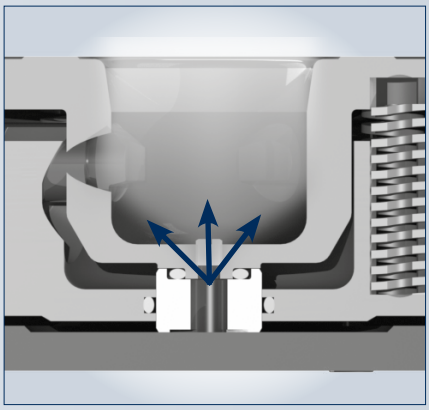


UNLOCKING FUNCTION at 6 bar



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 of 45 kN.



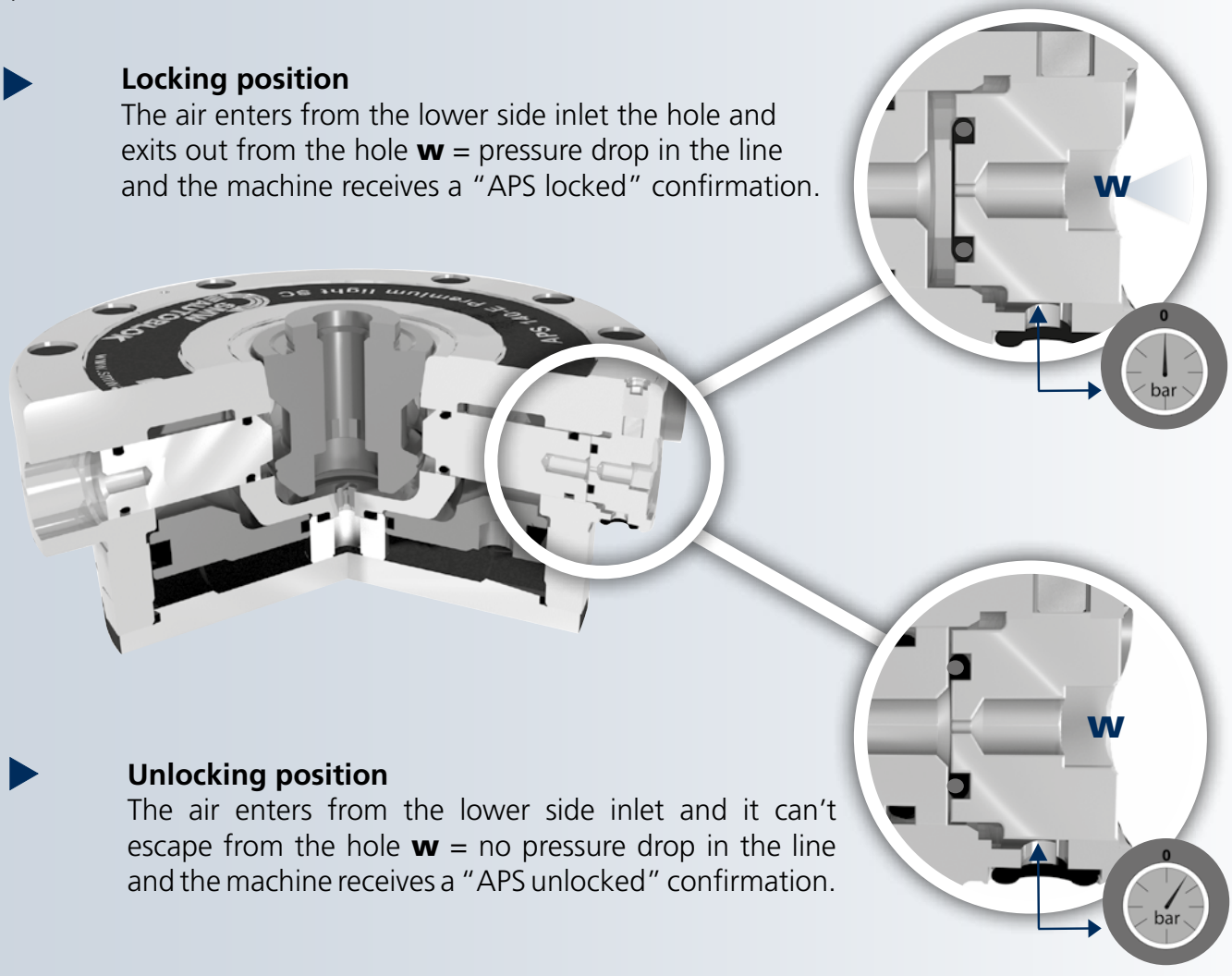
AUTOMATIC CLEANING FUNCTION (APS PREMIUM)



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.

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.



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.

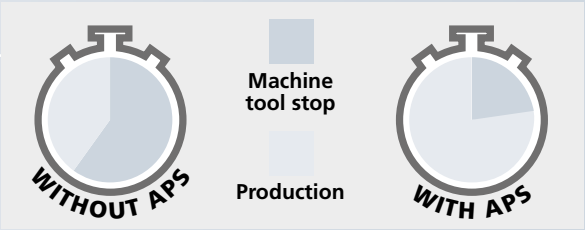
APS zero point clamping system

Industry 4.0 Product

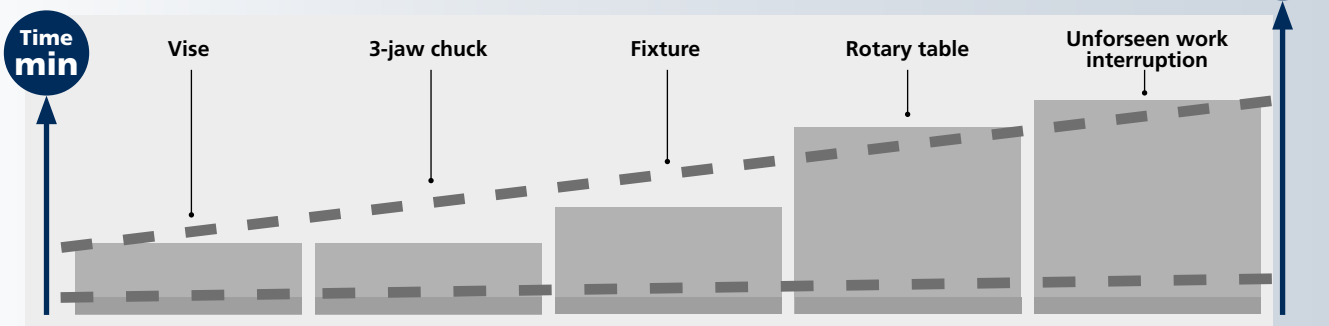


1 Customer benefits

- 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



- Machine set-up costs without APS

Time = Costs

- Machine set-up costs with APS

Time = Costs



WATCH THE VIDEO

Overview APS versions

BASIC
- 2 Clamping slides
- Turbo function
- Sealed (proofline®)

PREMIUM LIGHT
- 3 Clamping slides
- Turbo function
- Air cleaning
- Sealed (proofline®)

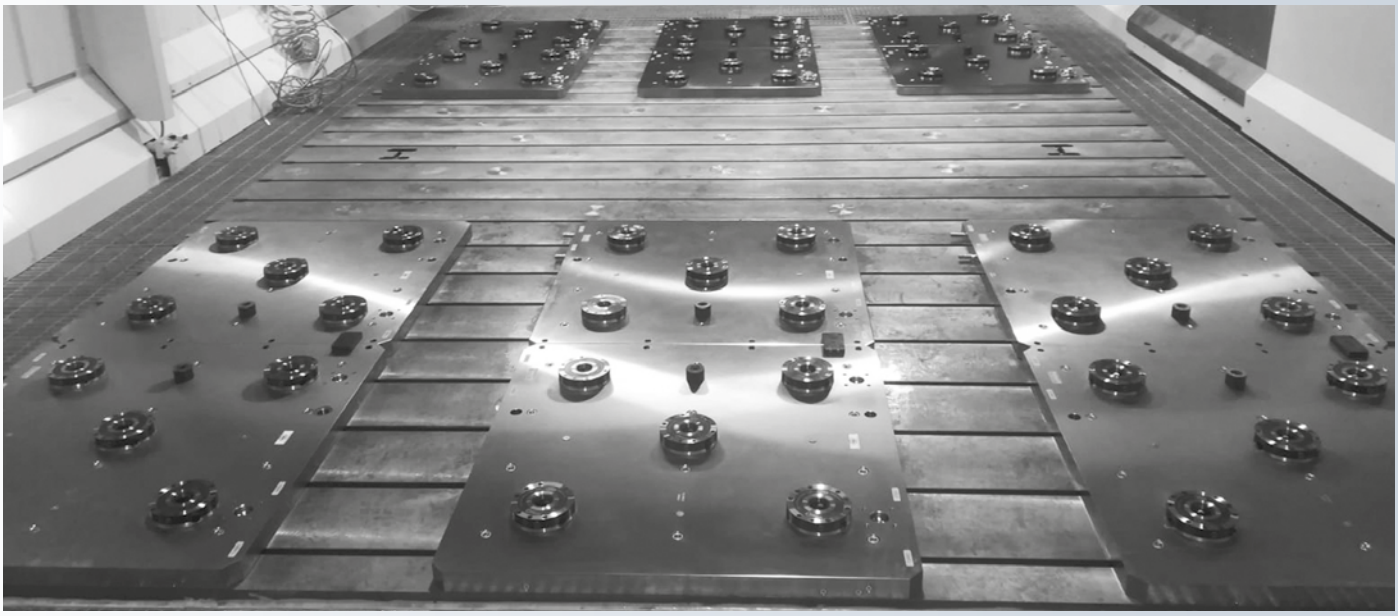
PREMIUM LIGHT SC
- 3 Clamping slides
- Turbo function
- Air cleaning
- Stroke control system
- Air sensing
- Sealed (proofline®)

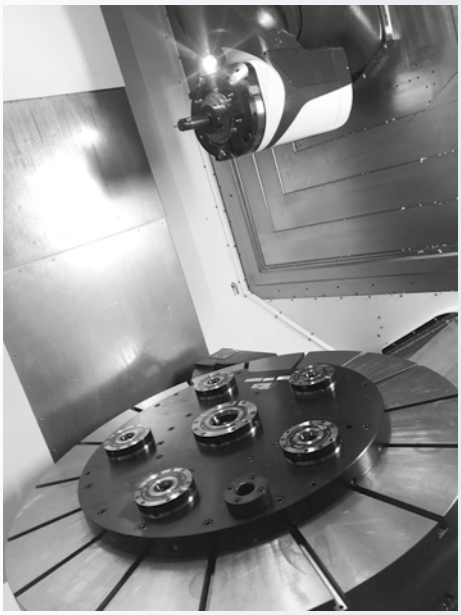
PREMIUM
- 2-3-6 Clamping slides (based on sizes)
- Turbo function
- Air cleaning (100-140 sizes)
- Stroke control system
- Air sensing
- 2 or 4 feedings
- Sealed (proofline®)

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 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	●		●	●	●	●	●	

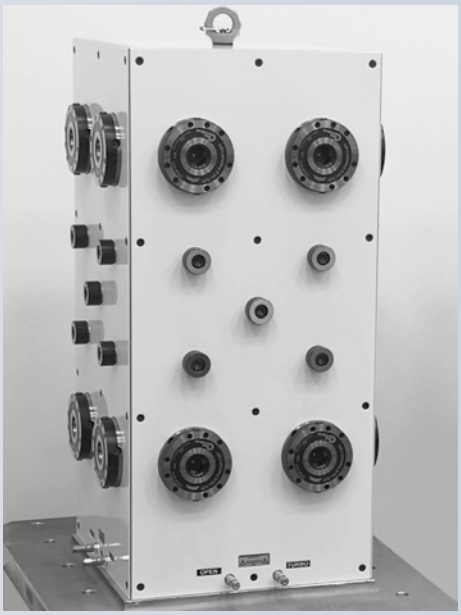


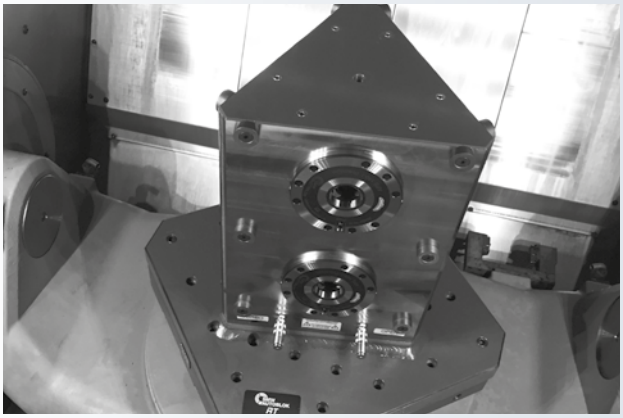
APPLICATION EXAMPLES

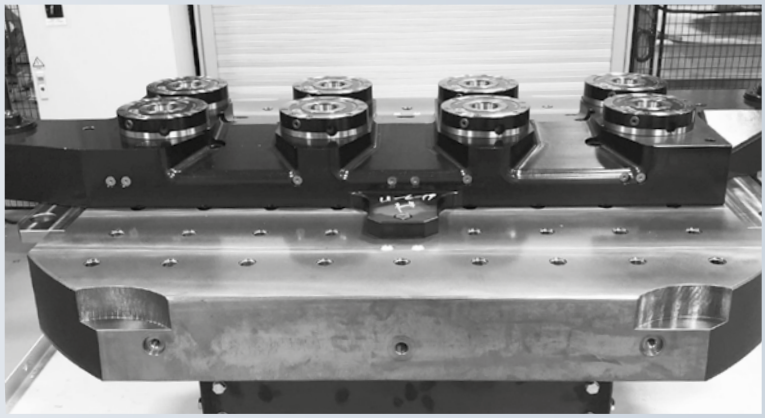














APS
ZERO POINT CLAMPING SYSTEM

Clamping Pins

A: Centering Pin



■ Type A is used for centering and clamping.

B: Reference Pin

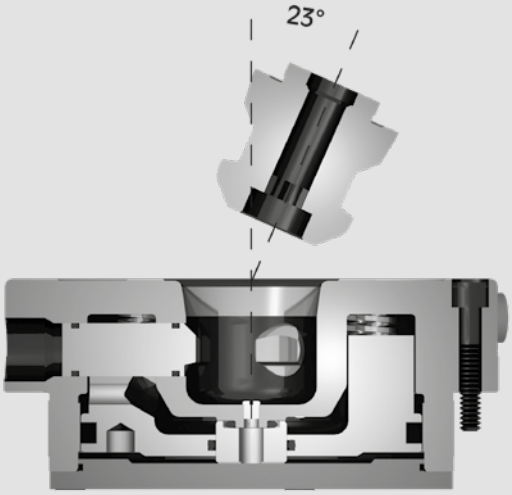


■ Type B is used for reference and clamping.

C: Pull-down Pin
± 0.05 mm



■ Type C is only used for clamping.



■ Large entry radii of the clamping pins ensure easy and safe loading.

Holding Forces (kN) with screw DIN EN ISO 4762 - 12.9				
M6	**M8**	**M10**	**M12**	**M16**
15	25	35	50	75

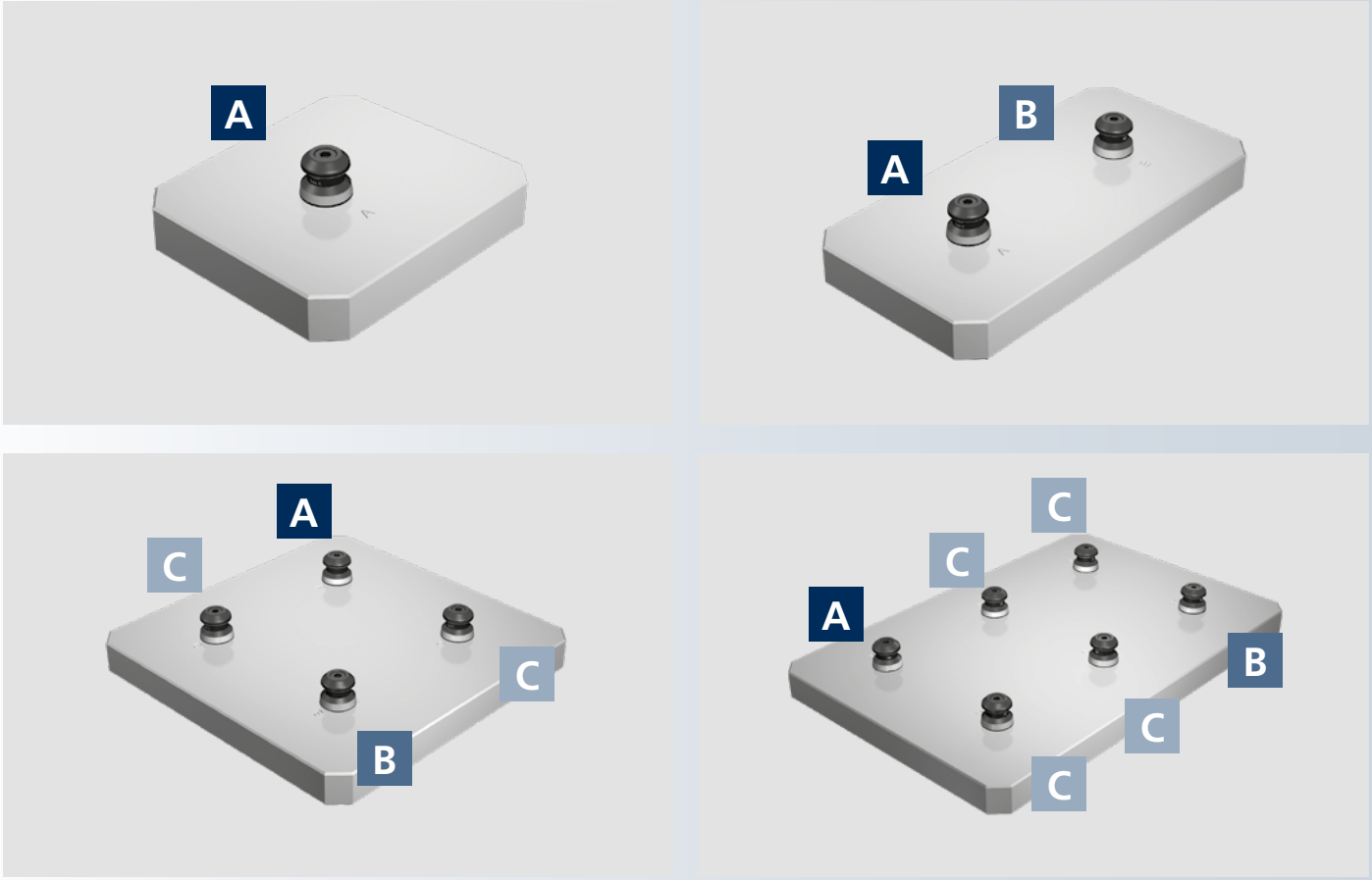
Tightening torque for pins mounting bolts

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

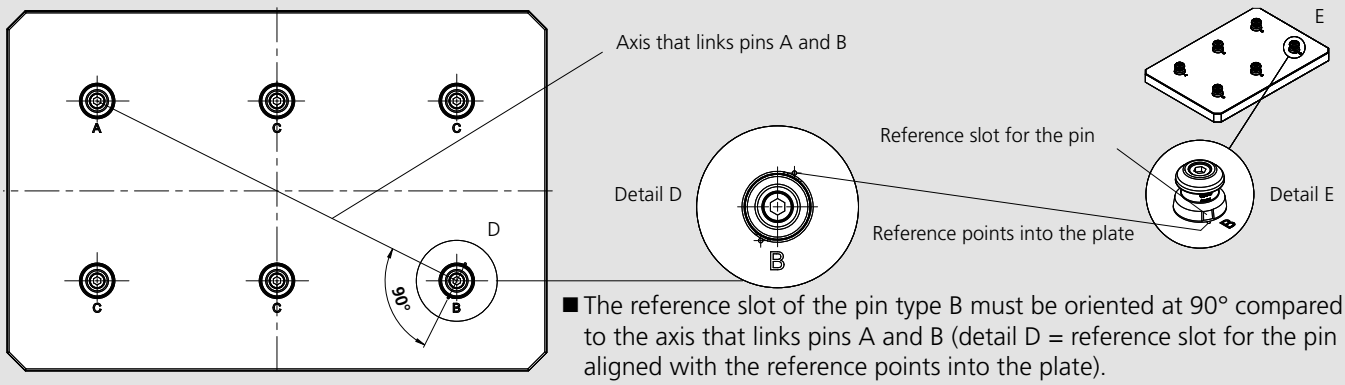


APS
ZERO POINT CLAMPING SYSTEM

Positions of the clamping pins



Positioning of the Reference Pin Type B

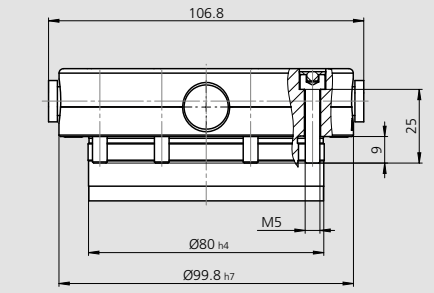


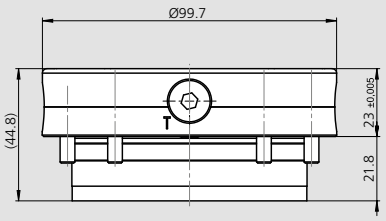
■ The reference slot of the pin type B must be oriented at 90° compared to the axis that links pins A and B (detail D = reference slot for the pin aligned with the reference points into the plate).

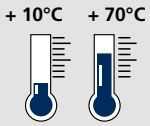
APS 100-E

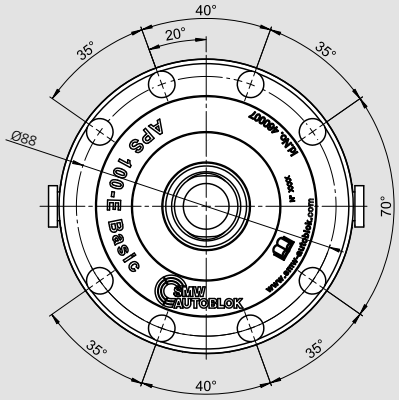
BASIC
Zero point clamping module

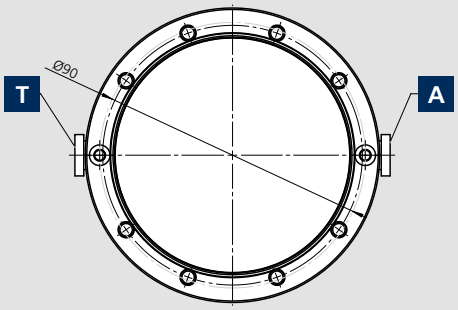












Technical features
- 2 clamping slides
- Turbo function **T** to increase the pull-down force

A = Open

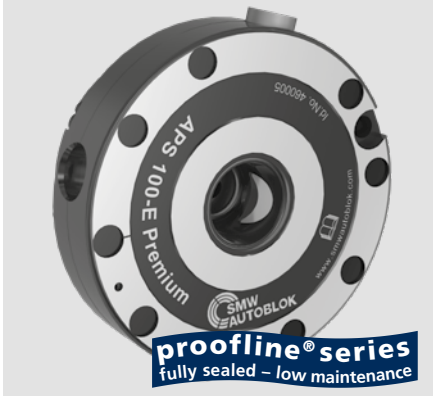
Subject to technical changes.

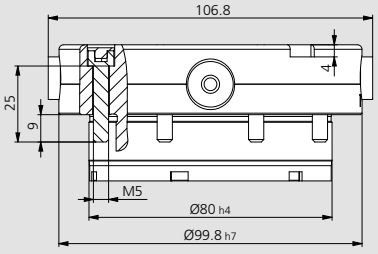
Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 100-E BASIC	460007	4 / 15**KN	13(M6)*** 25(M8) kN	6 bar	< 0,005 mm	1.9 kg

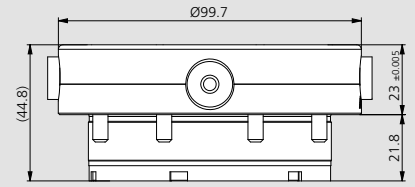
* With screws DIN EN ISO 4762 - 12.9 / ** With "Turbo effect" / *** Screws EN-ISO10642

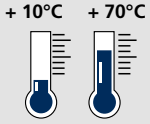
APS 100-E

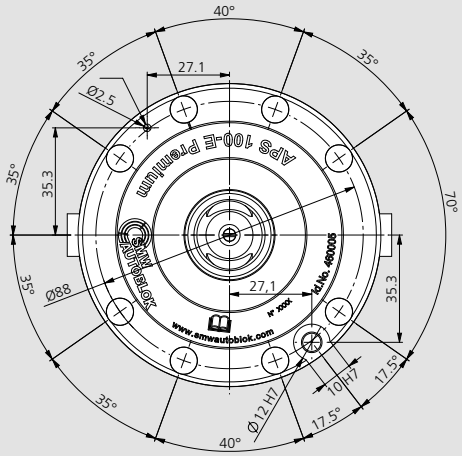
PREMIUM
Zero point clamping module

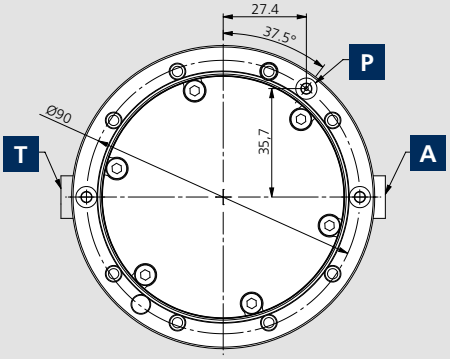












Technical features
- 2 clamping slides
- Turbo function **T** to increase the pull-down force
- Anti-rotation key seat
- Air sensing **P**
- Air cleaning

A = Open

Subject to technical changes.

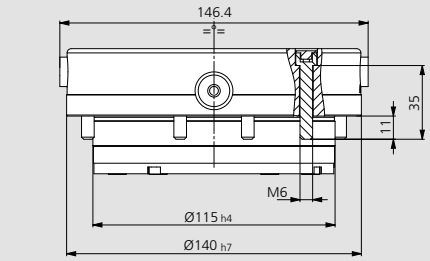
Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 100-E PREMIUM	460005	4 / 15**KN	13(M6)*** 25(M8) kN	6 bar	< 0,005 mm	1.9 kg

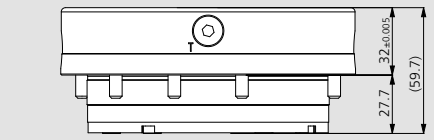
* With screws DIN EN ISO 4762 - 12.9 / ** With "Turbo effect" / *** Screws EN-ISO10642

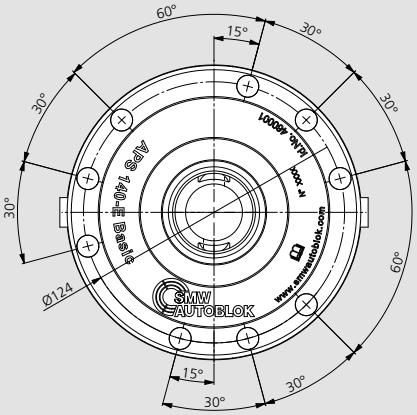
BASIC
Zero point clamping module

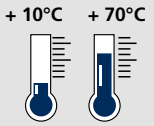
APS 140-E

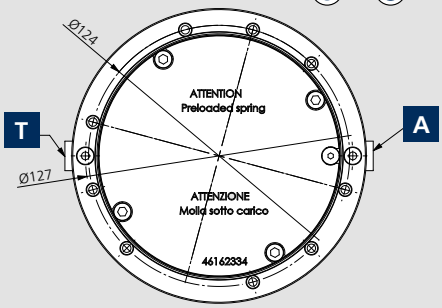












Technical features
- 2 clamping slides
- Turbo function **T**
  to increase the pull-down force

A = Open

Subject to technical changes.

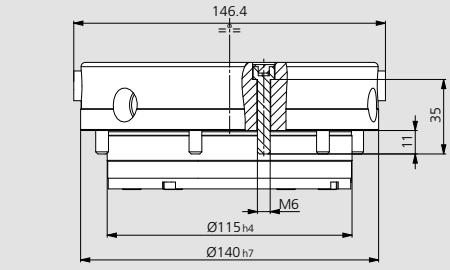
Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 140-E BASIC	460001	7.5 / 26**KN	35(M10) 50(M12) 75(M16) kN	6 bar	< 0,005 mm	4.5 kg

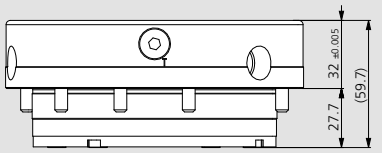
* With screws DIN EN ISO 4762 - 12.9 / ** With "Turbo effect"

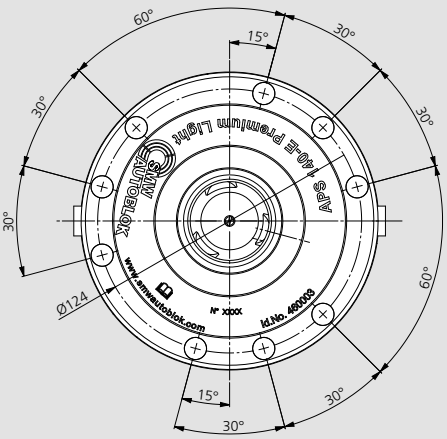
PREMIUM LIGHT
Zero point clamping module

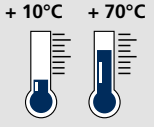
APS 140-E

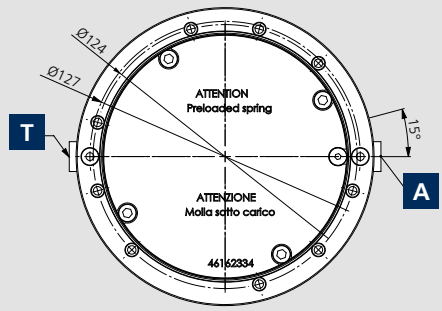












Technical features
- 3 clamping slides
- Turbo function **T**
  to increase the pull-down force
- Air cleaning

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

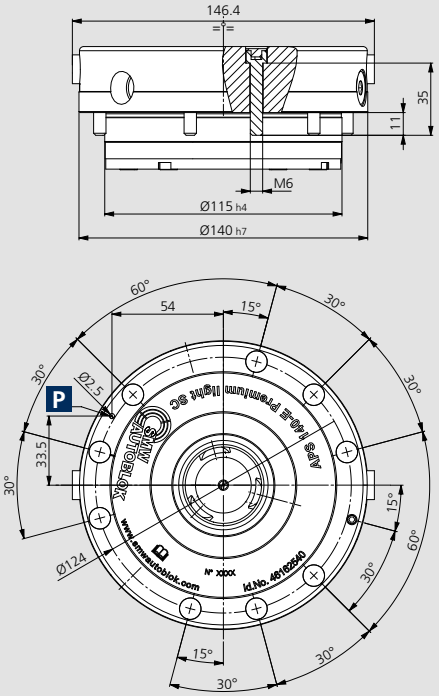
PREMIUM LIGHT SC

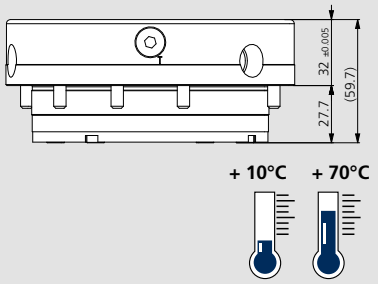
Zero point clamping module

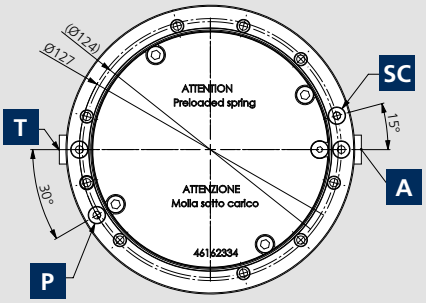


Technical features

- 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

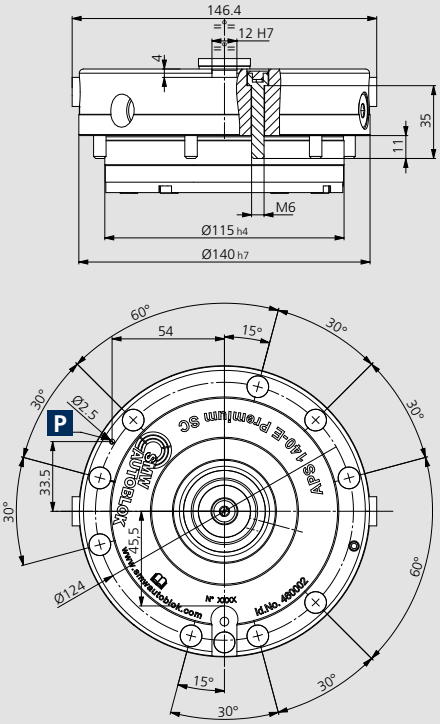
PREMIUM SC

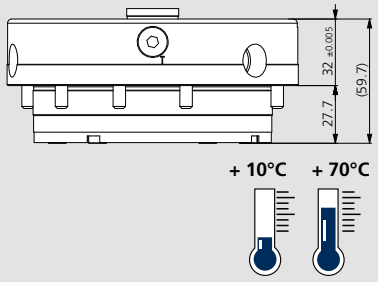
Zero point clamping module

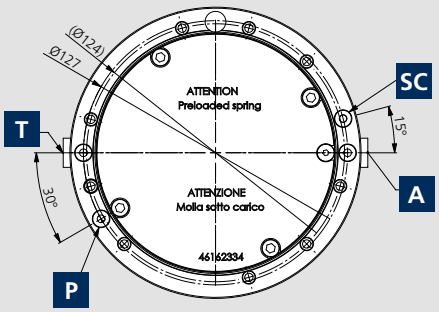


Technical features

- 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

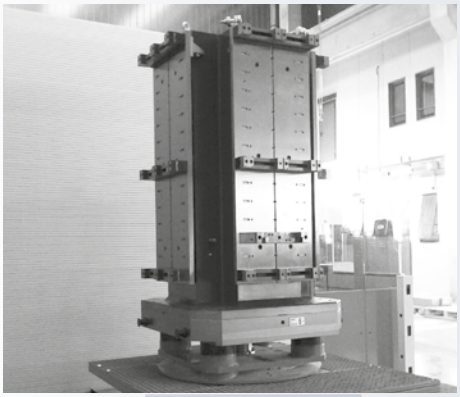
Subject to technical changes.

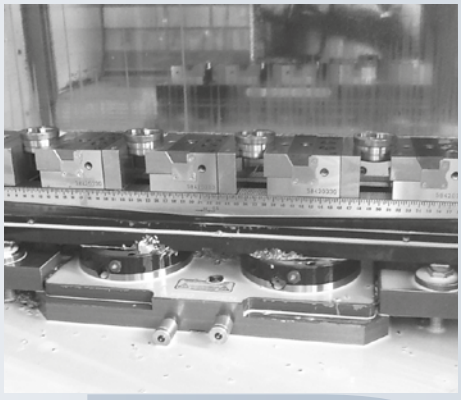
Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 140-E PREMIUM SC	460002	7.5 / 26**KN	35(M10) 50(M12) 75(M16) kN	6 bar	< 0,005 mm	4.5 kg

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



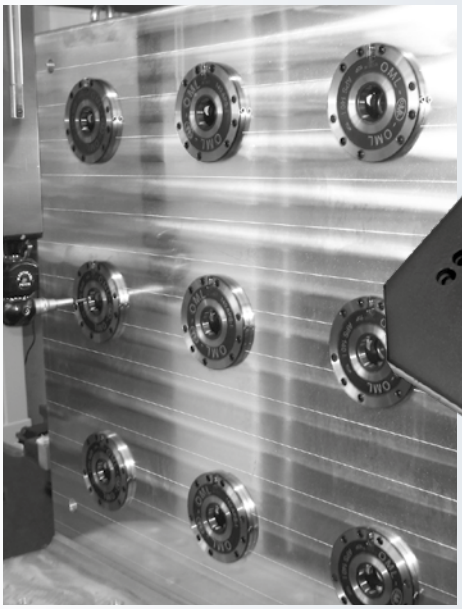
APPLICATION EXAMPLES

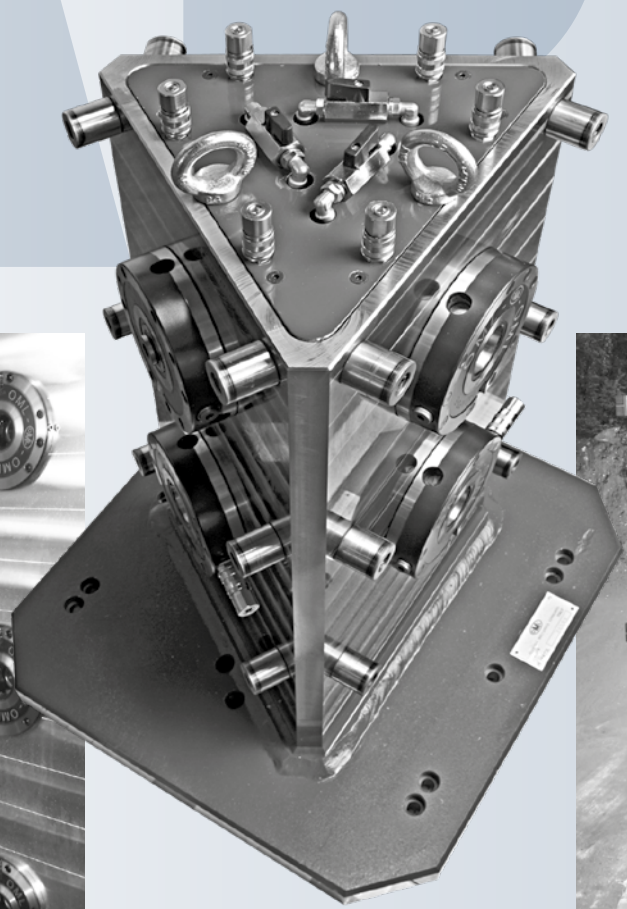


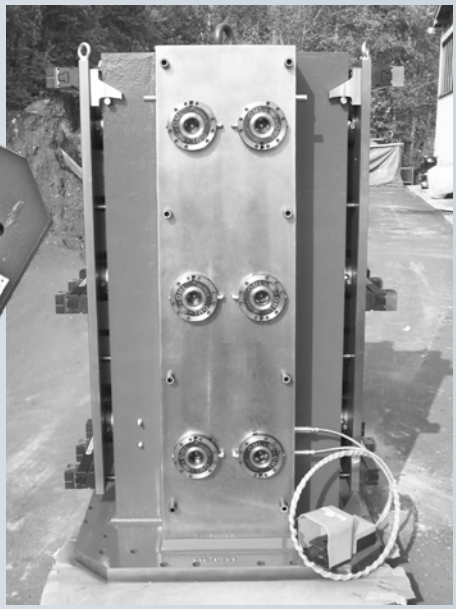




APS





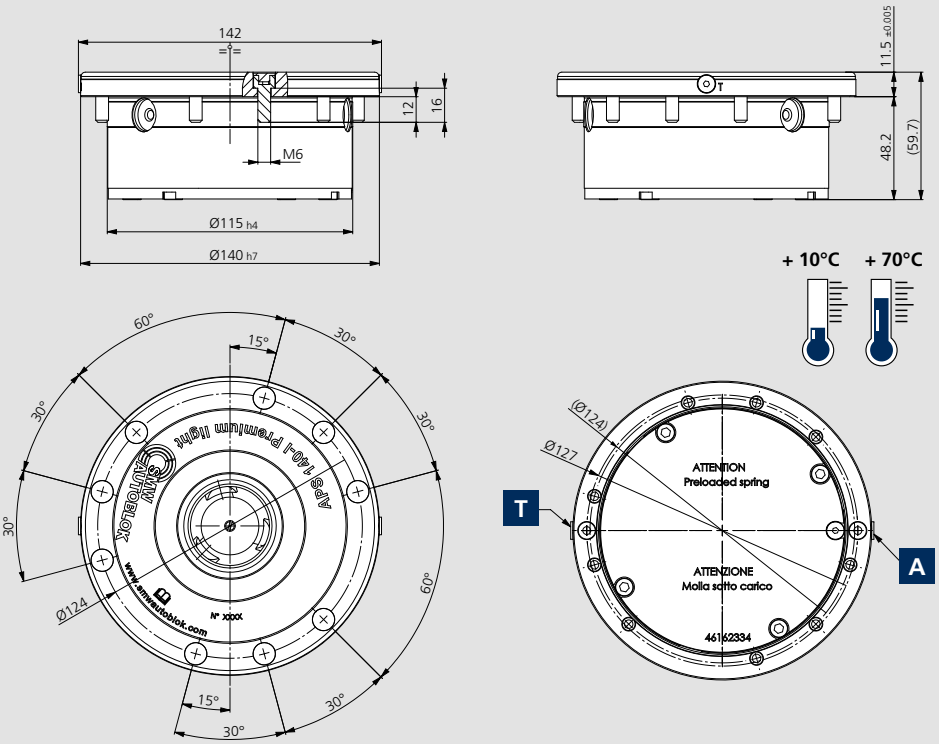


APS 140-I

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

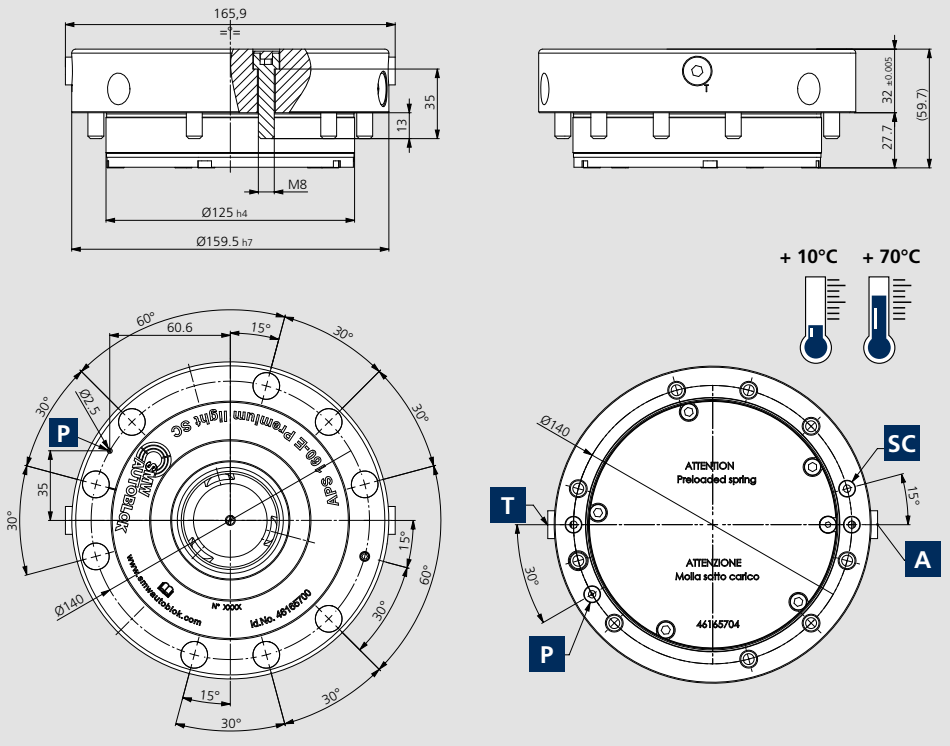
* With screws DIN EN ISO 4762 - 12.9 / ** With "Turbo effect"

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"

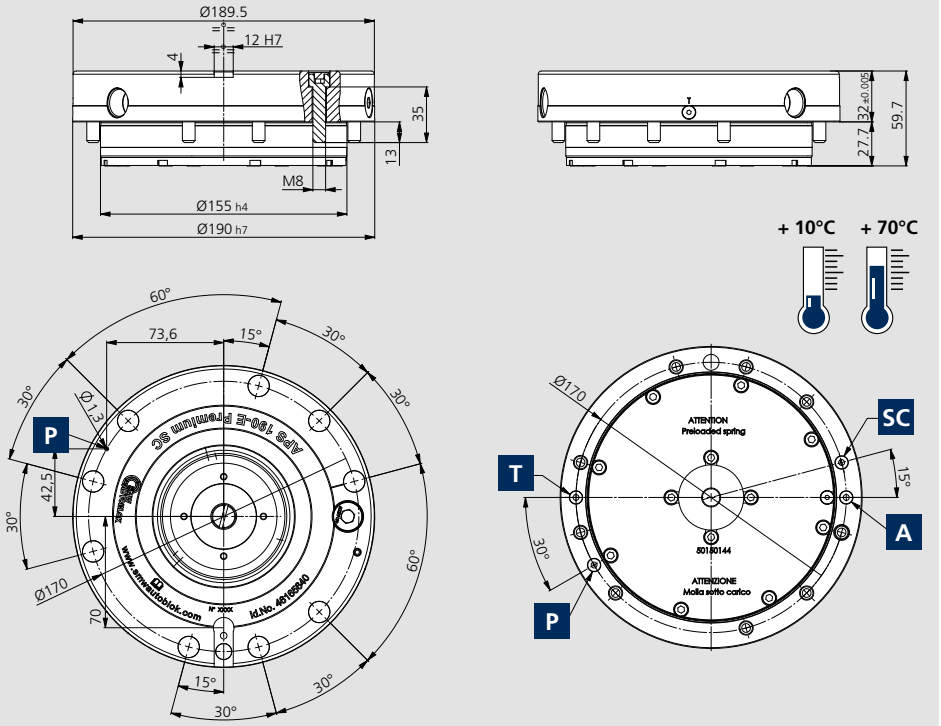
PREMIUM SC
Zero point clamping module

APS 190-E



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

Subject to technical changes.

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"

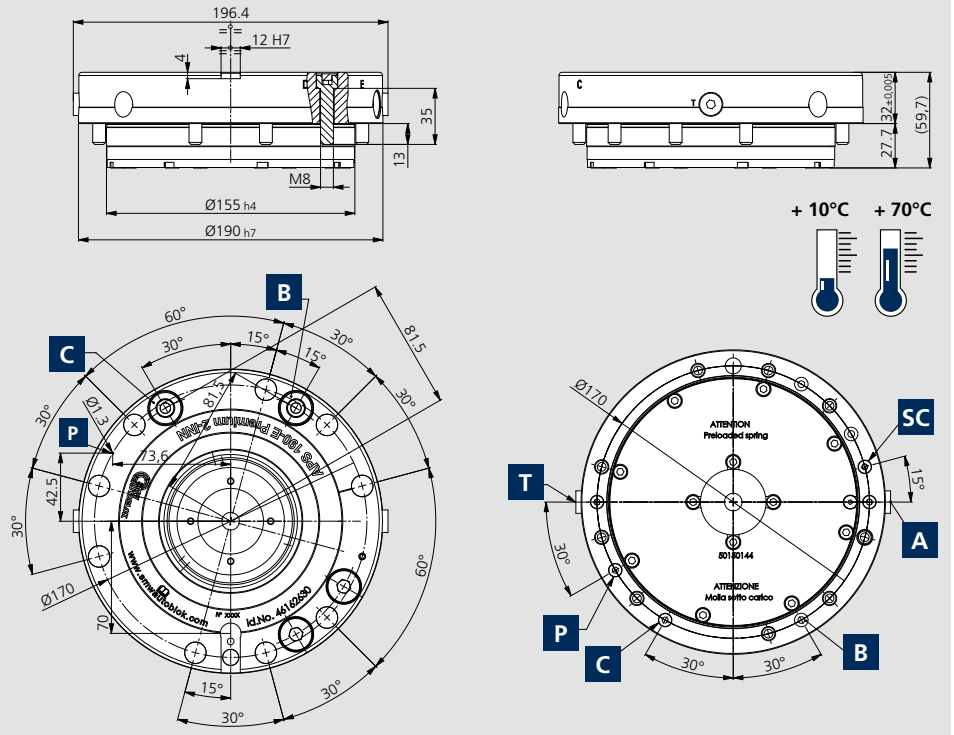
PREMIUM SC 2-INN
Zero point clamping module

APS 190-E



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

Subject to technical changes.

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"

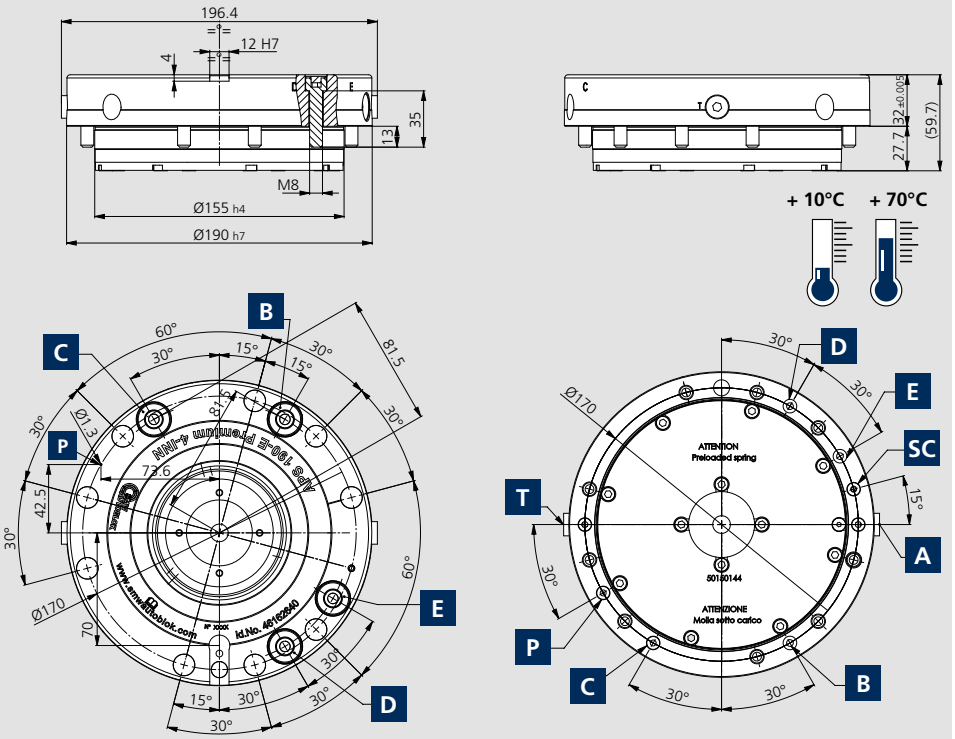
APS 190-E

PREMIUM SC 4-INN
Zero point clamping module



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.4 pneumatic / hydraulic feedings **B** **C** **D** **E**

See page 46



A = Open

Subject to technical changes.

Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 190-E PREMIUM SC 4-INN	46162640	13.5 / 45**KN	50(M12) 75(M16) 80(6xM6) 150(6xM8) kN	6 bar	< 0,005 mm	6.9 kg

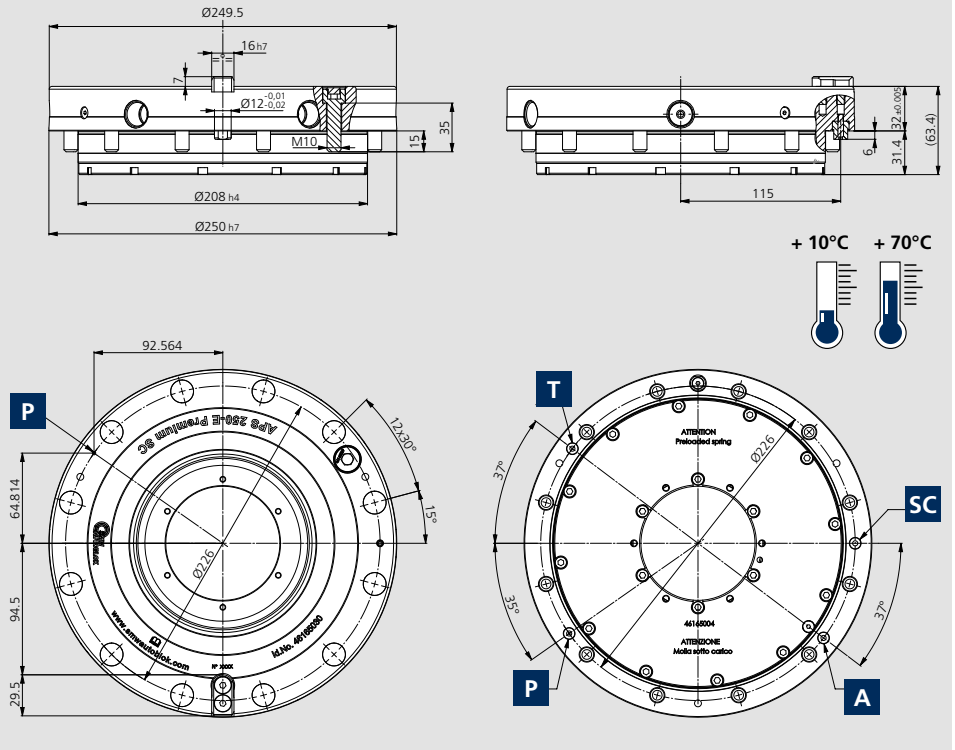
* With screws DIN EN ISO 4762 - 12.9 / ** With "Turbo effect"

APS 250-E

PREMIUM SC
Zero point clamping module



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



A = Open

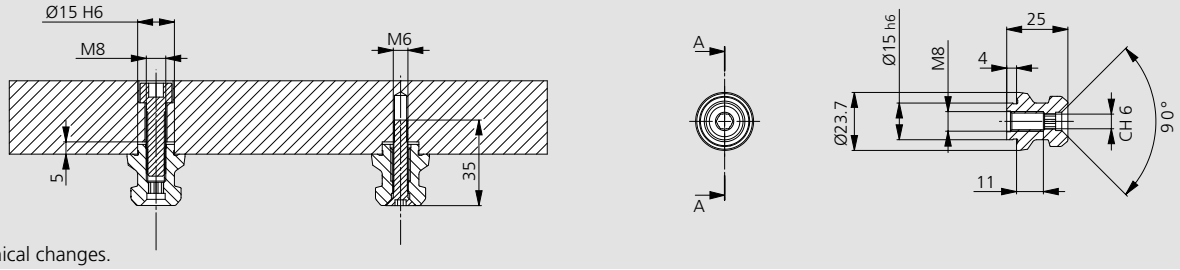
Subject to technical changes.

Type	Id. No.	Pull-down force	Holding force*	Unlocking pressure	Repeatability	Weight
APS 250-E PREMIUM SC	46165030	18 / 55**KN	300(6xM12) 210(6xM10) 375(15xM8) kN	6 bar	< 0,005 mm	15 kg

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

Pins

APS 100

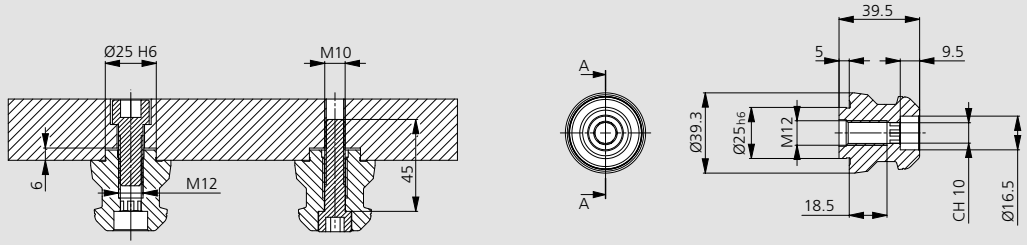


Subject to technical changes.

Id. No.	Type		Weight [kg]
46162155	A	M8	0.05
46162156	B	M8	0.05
46162157	C	M8	0.05

Pins - M12 thread

APS 140

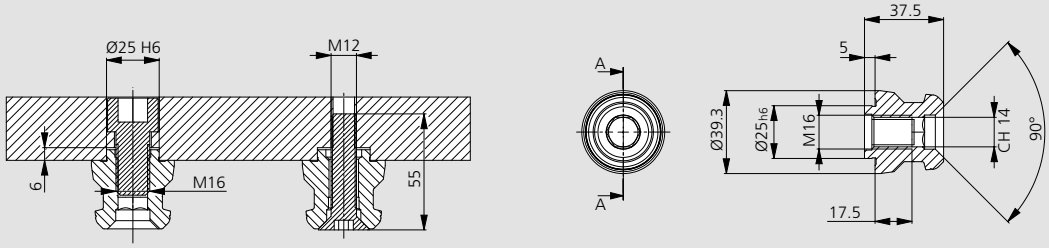


Subject to technical changes.

Id. No.	Type		Weight [kg]
46162355	A	M12	0.2
46162356	B	M12	0.2
46162357	C	M12	0.2

Pins - M16 thread

APS 140

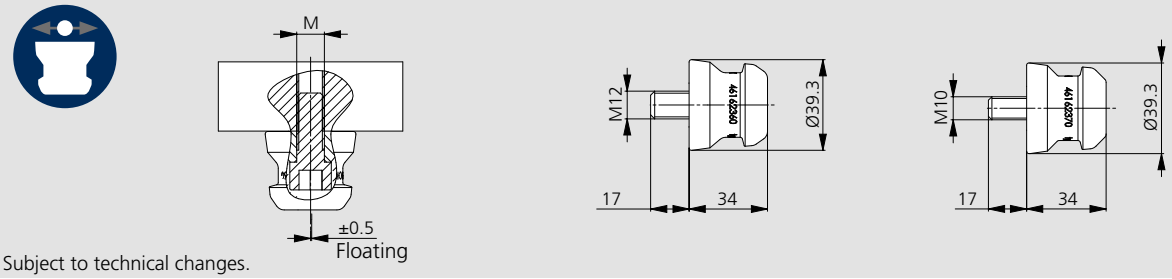


Subject to technical changes.

Id. No.	Type		Weight [kg]
46162455	A	M16	0.2
46162456	B	M16	0.2
46162457	C	M16	0.2

Pins type C floating

APS 140

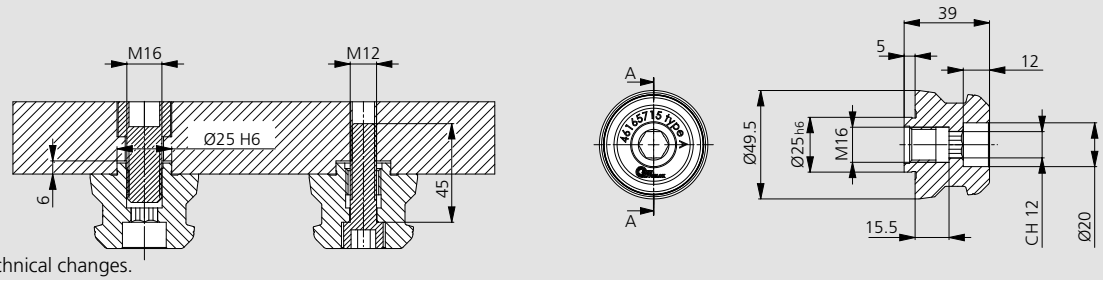


Subject to technical changes.

Id. No.	Type		Weight [kg]
46162370	C - Floating ± 0.5 mm	M10	0.2
46162360	C - Floating ± 0.5 mm	M12	0.2

APS 160

Pins - M16 thread

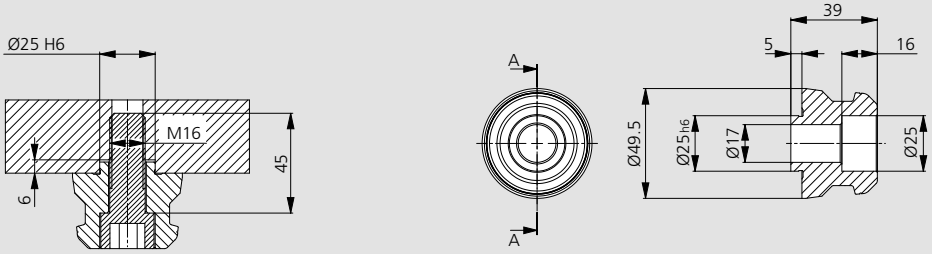


Subject to technical changes.

Id. No.	Type		Weight [kg]
46165715	A	M16	0.35
46165716	B	M16	0.35
46165717	C	M16	0.35

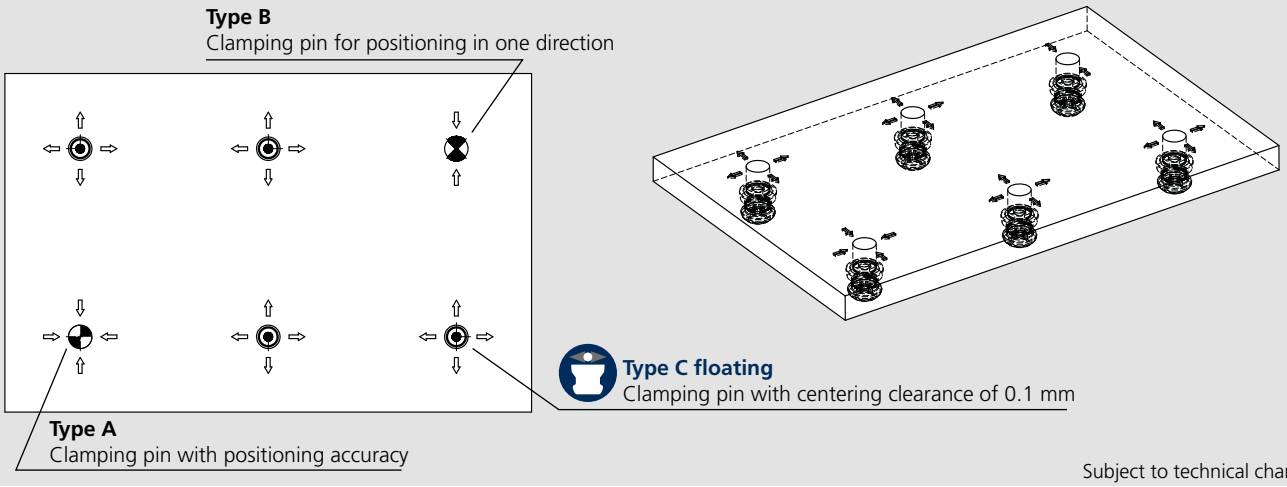
APS 160

Pins - D17 (for M16 screws 12.9)



Subject to technical changes.

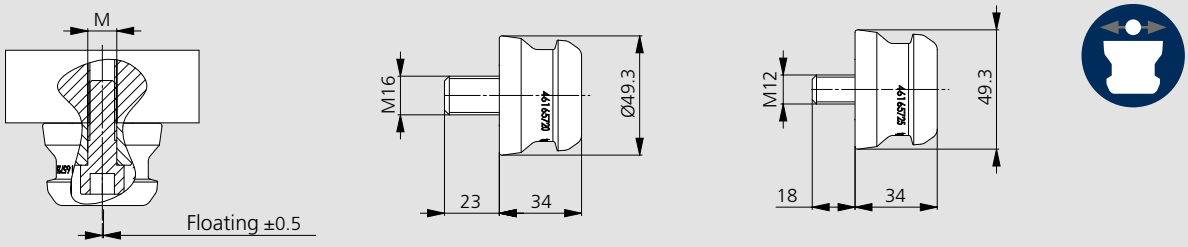
Id. No.	Type		Weight [kg]
46165705	A	D17	0.3
46165706	B	D17	0.3
46165707	C	D17	0.3



Subject to technical changes.

APS 160

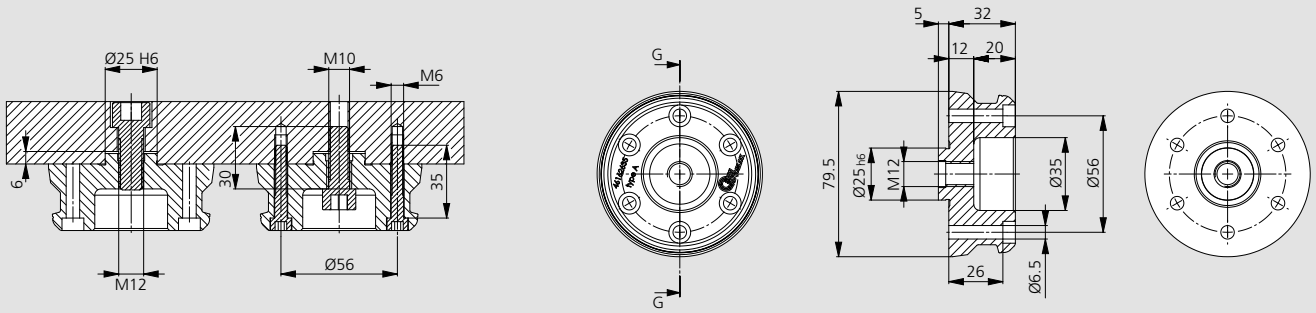
Pins type C floating



Subject to technical changes.

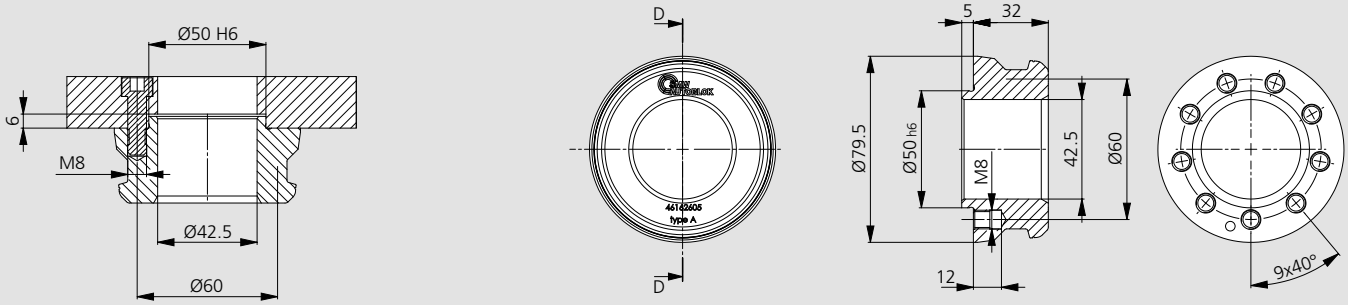
Id. No.	Type		Weight [kg]
46165720	C - Floating ± 0,5 mm	M16	0.4
46165725	C - Floating ± 0,5 mm	M12	0.35

APS 190 | Pins



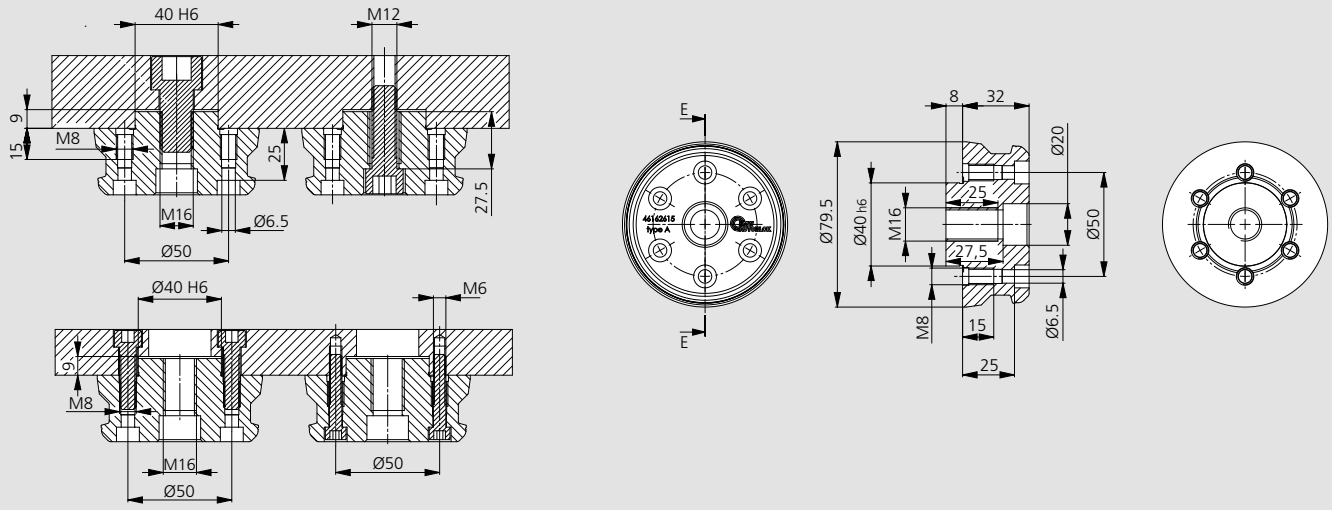
Subject to technical changes.

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
46162605	A	0.7	Pin with central hole Ø 42

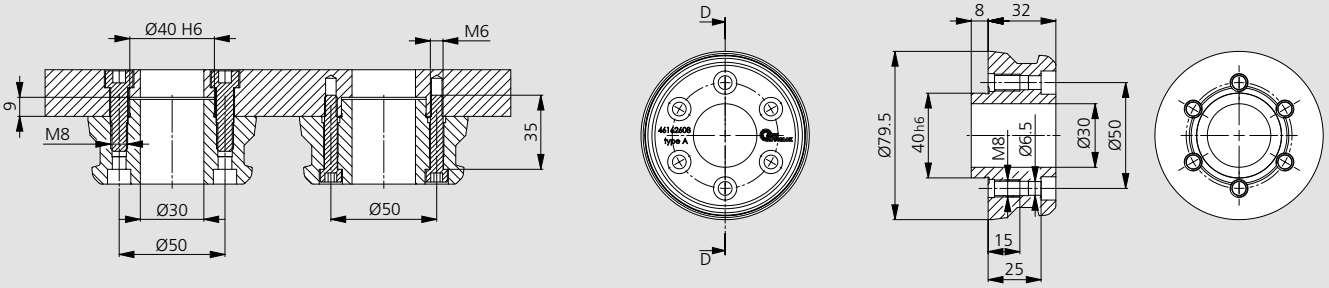


Subject to technical changes.

Id. No.	Type		Weight [kg]
46162615	A	M16	1
46162616	B	M16	1
46162617	C	M16	1

APS 190

Pins

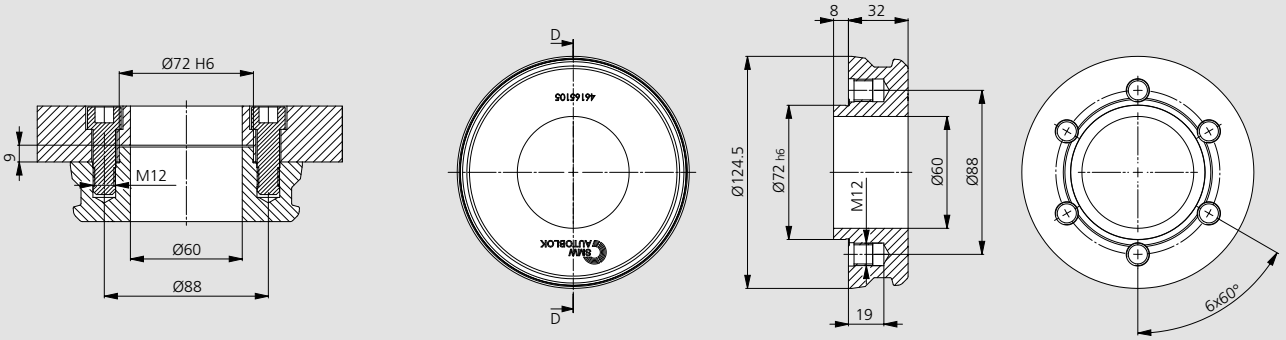


Subject to technical changes.

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

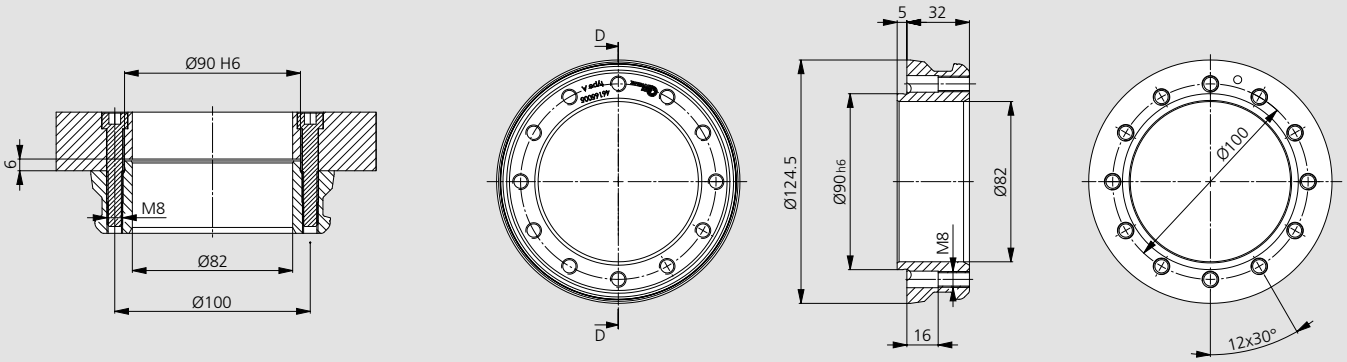
APS 250

Pins



Subject to technical changes.

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



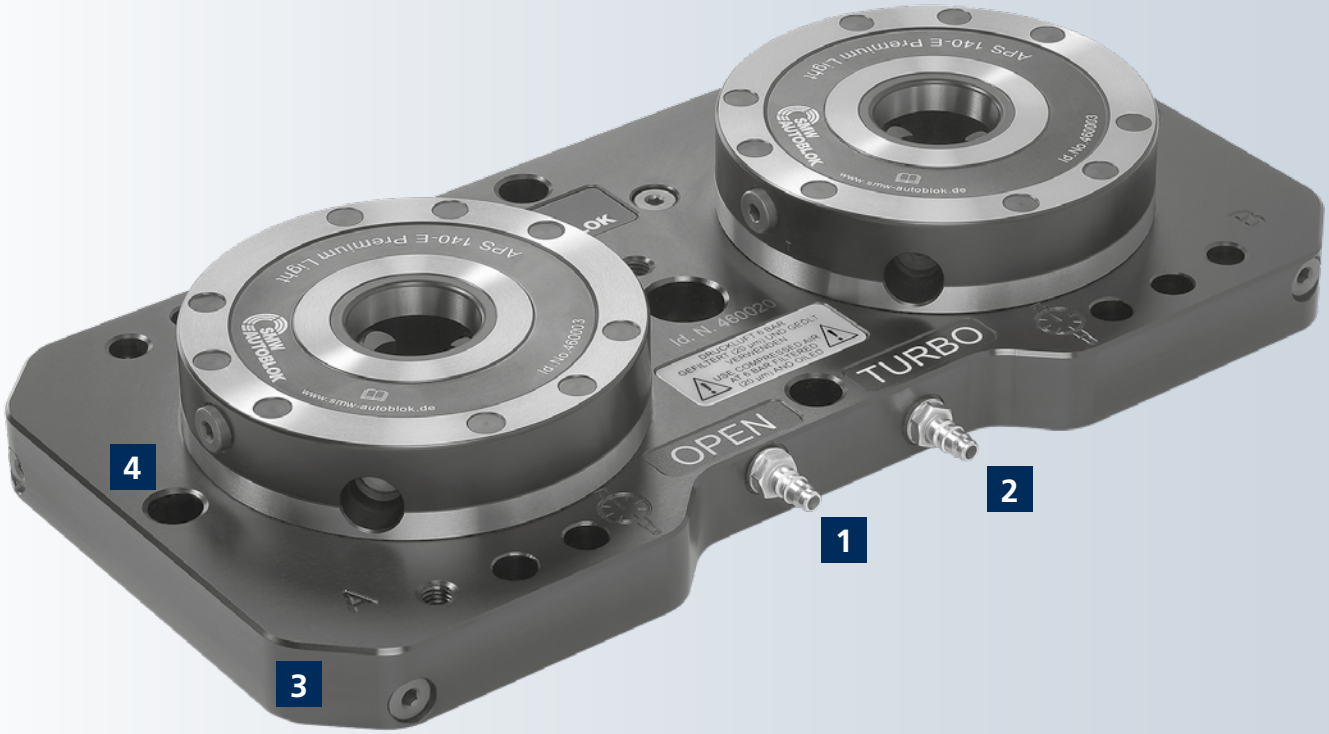
Subject to technical changes.

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

APS

Clamping unit fully assembled ready for use

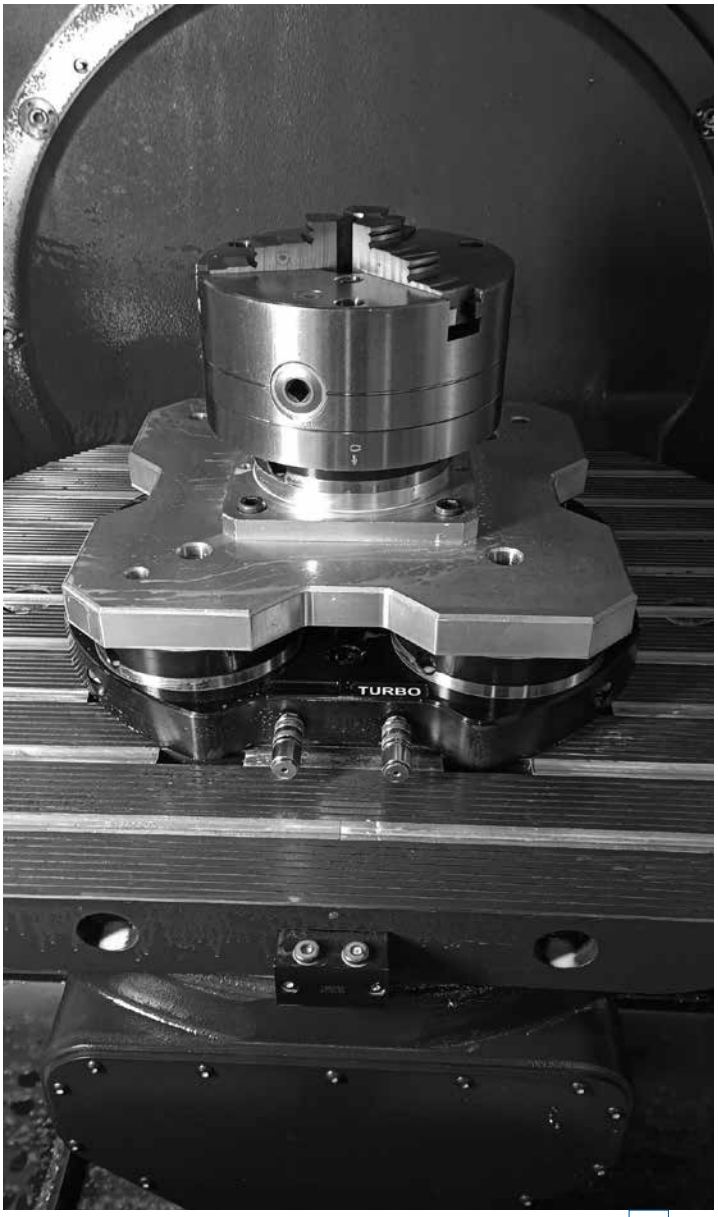
Industry 4.0 Product

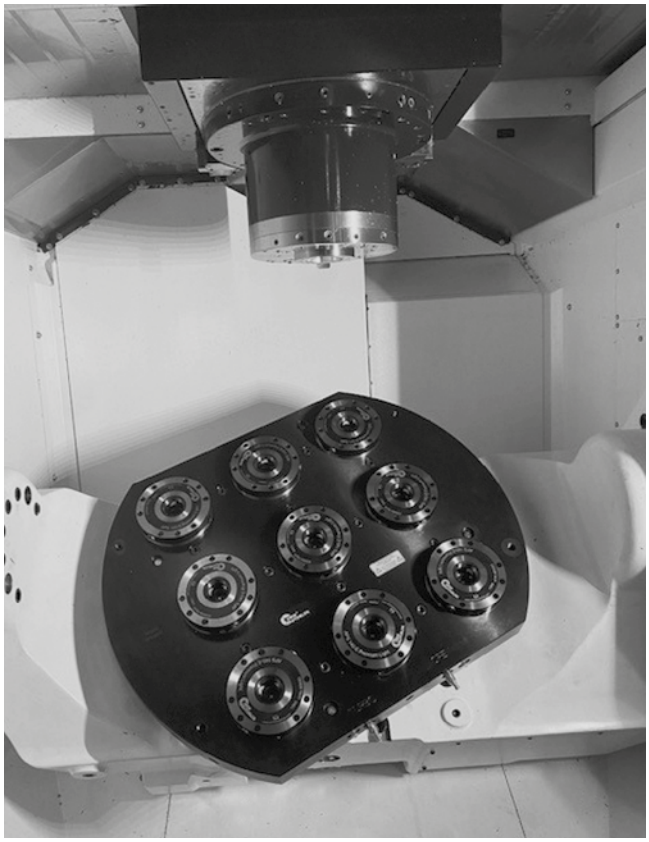


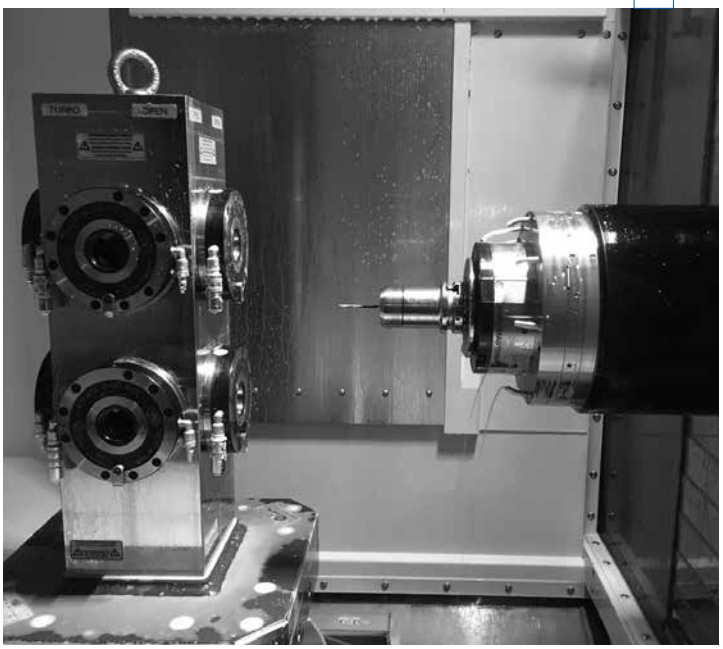
Functional Overview of the APS Clamping Units

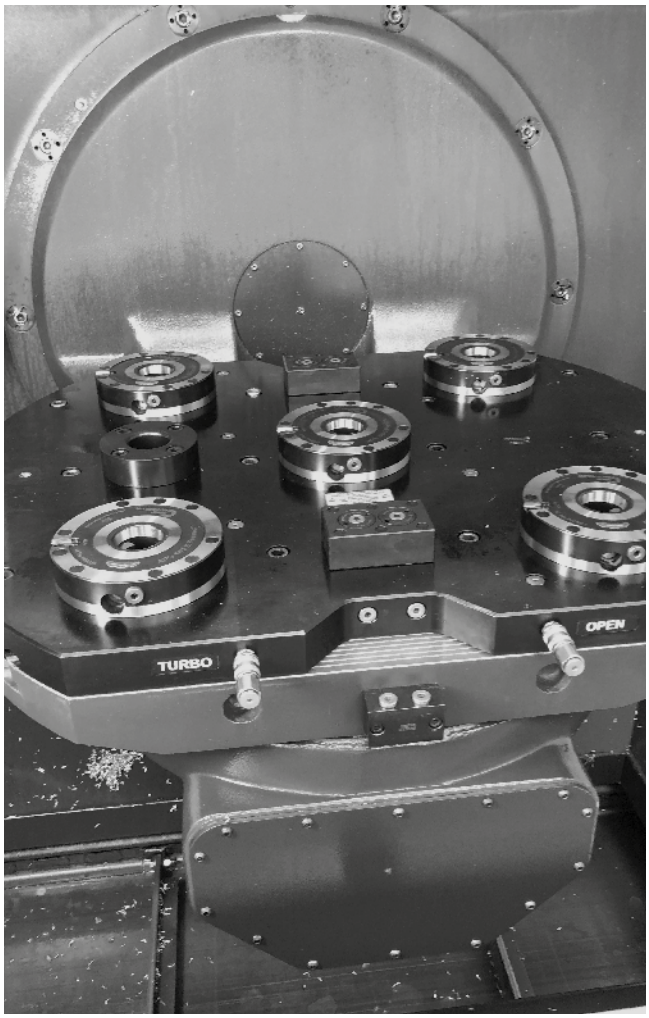
1	Pneumatic connections 1/8“
2	Turbo function for highest pull-in forces
3	Solid base plate (height 28 mm) for maximum stiftness at a total height of only 60 mm
4	Easy mounting on the machine table due to positioning holes

Application Examples









APS 140



Application/customer benefits

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

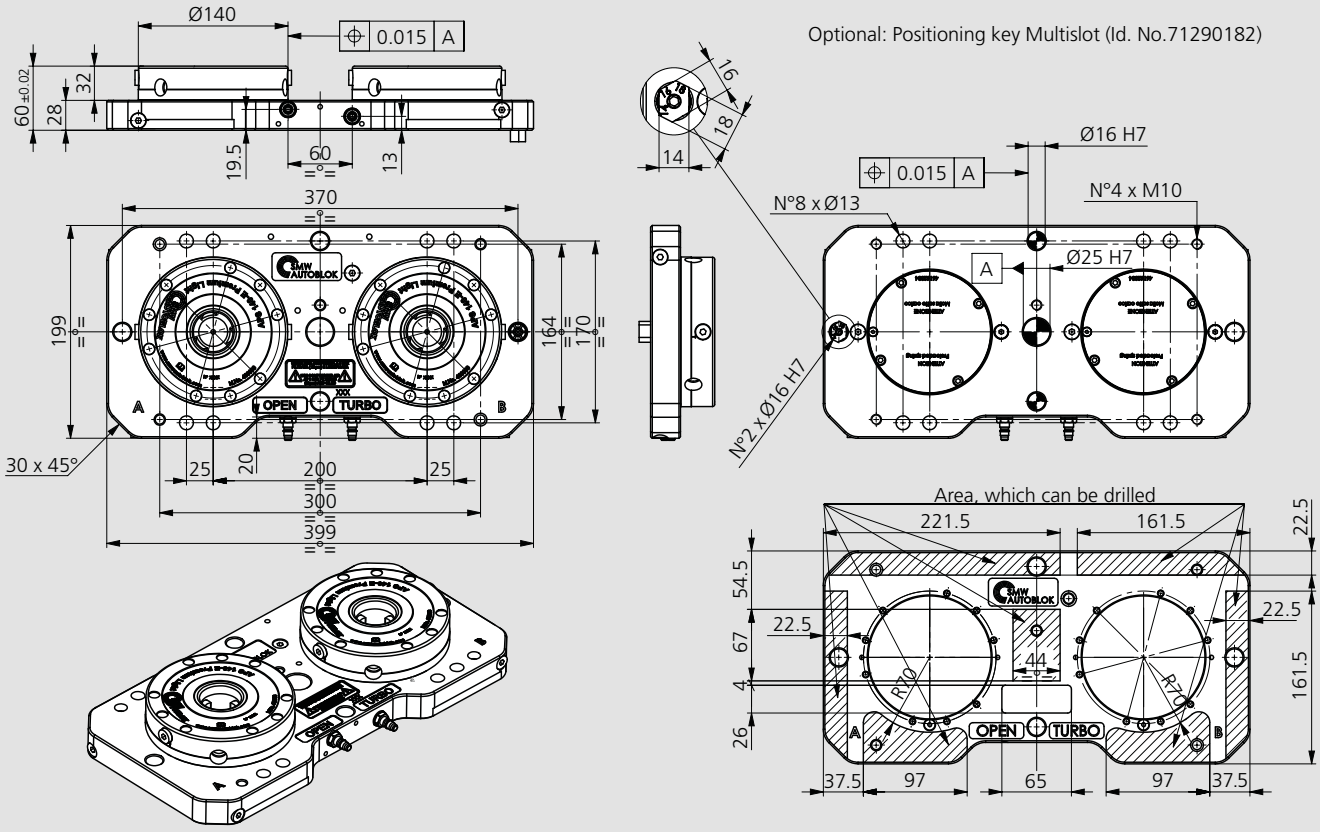
Technical features

- 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)
- Interaxis 200 mm

Standard equipment

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

For clamping pallets see next catalog pages



Subject to technical changes.

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.

APS 140

Clamping unit



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

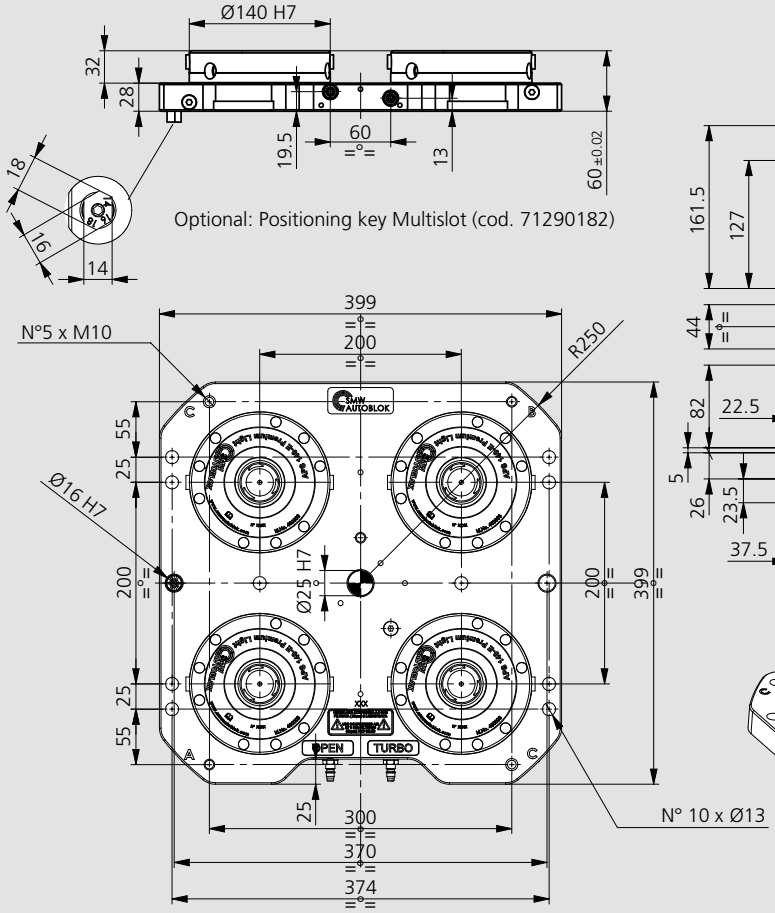
Technical features

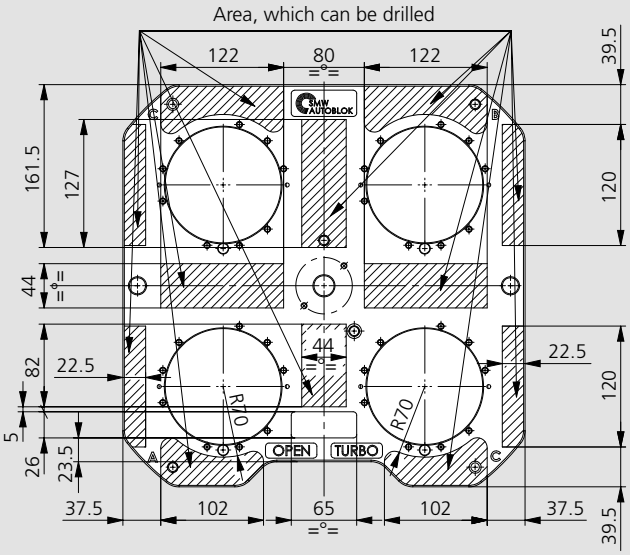
- 3 clamping slides (Basic: 2 clamping slides)
- Repeatability < 0.005 mm
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Air cleaning (only Premium Light)
- Interaxis 200 mm

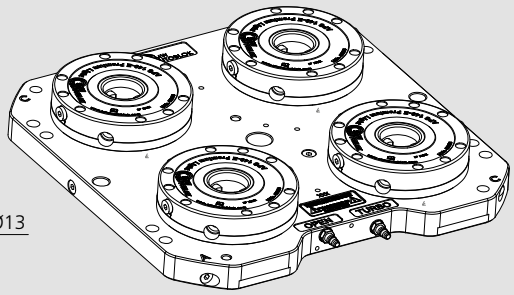
Standard equipment

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

For clamping pallets see next catalog pages







Subject to technical changes.

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.

Clamping unit

APS 140

■ 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

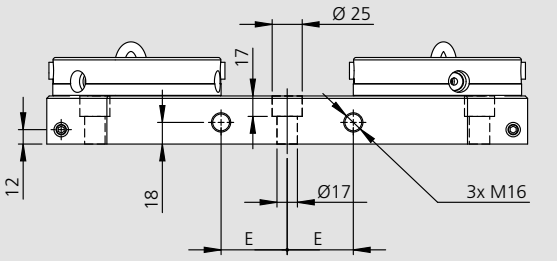
Technical features

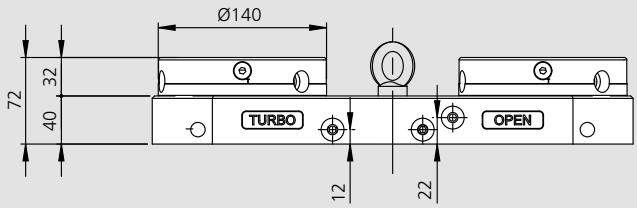
- 3 clamping slides (Basic: 2 clamping slides)
- Repeatability < 0.005 mm
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Air cleaning (only Premium Light)

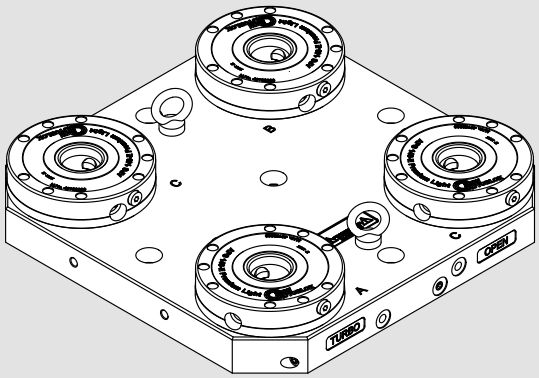
Standard equipment

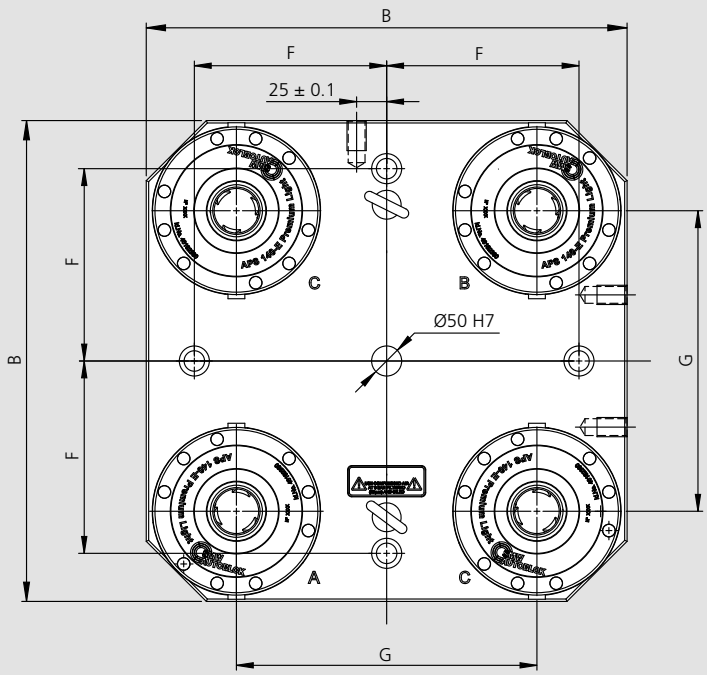
Clamping unit with 4 pieces APS 140 Premium Light or Basic
Quick pneumatic connections

For clamping pallets see next catalog pages









Subject to technical changes.

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.

APS 140

Clamping unit

READY TO GO



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

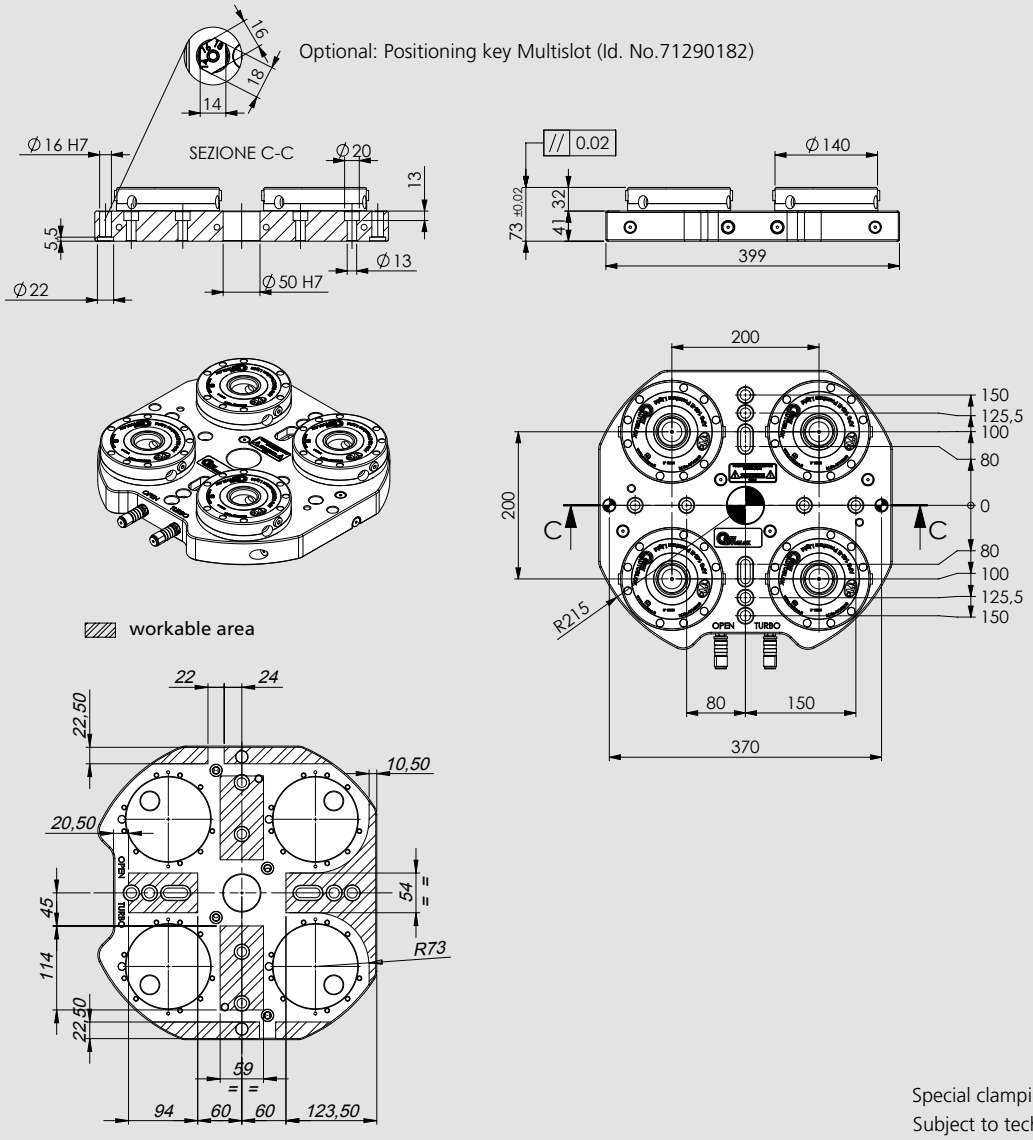
Technical features

- 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 see next catalog pages



Special clamping units on request.
Subject to technical changes.

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.

Clamping unit

■ For 5-axis machining center

APS 140

READY TO GO



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

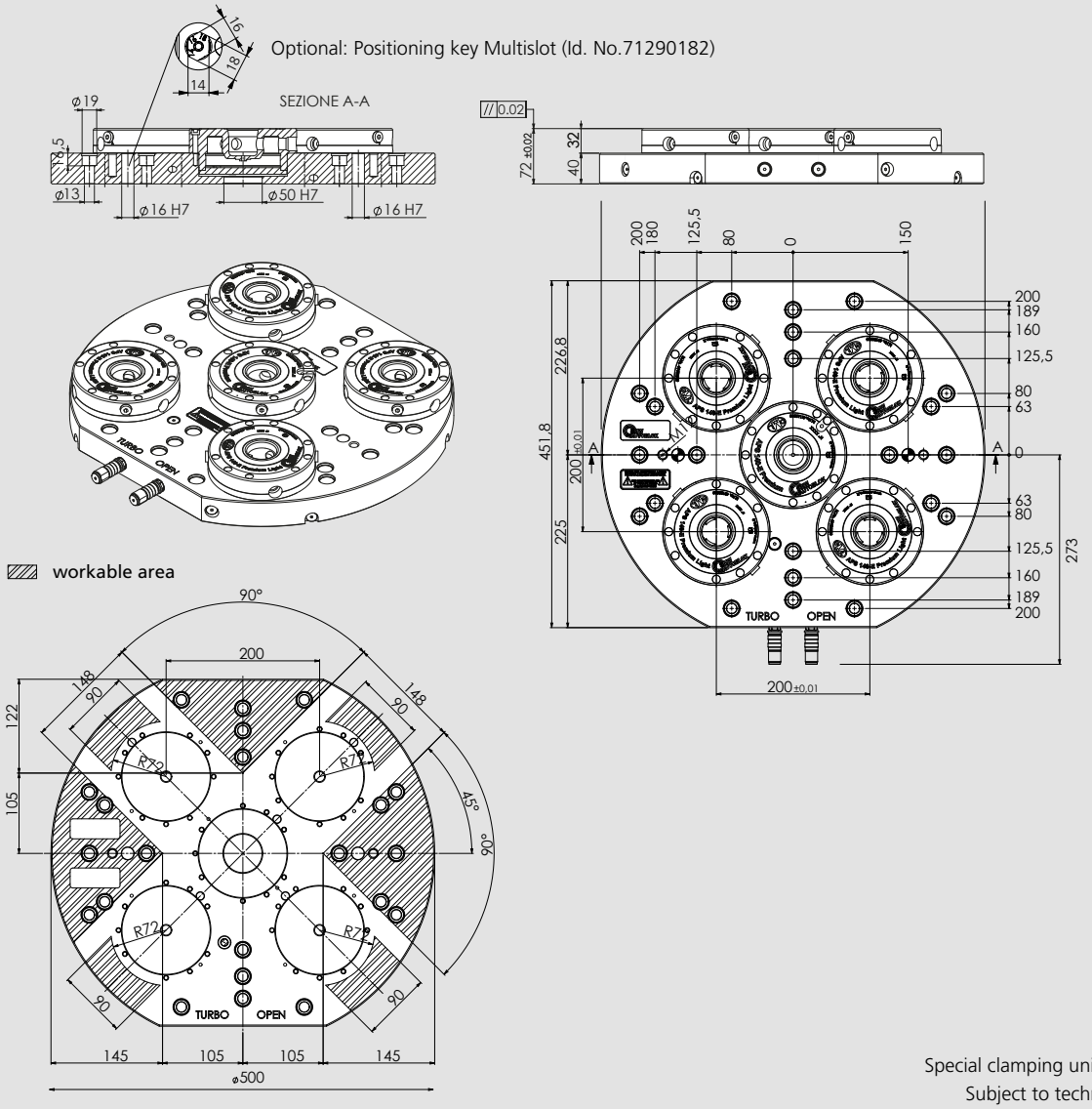
Technical features

- 3 Clamping slides (Basic: 2 Clamping slides)
- Repeatability < 0.005 mm
- Turbo function 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 modules APS 140-E Premium Light or Basic + 1 modules APS 140-E Premium

For clamping pallets please see next catalog pages



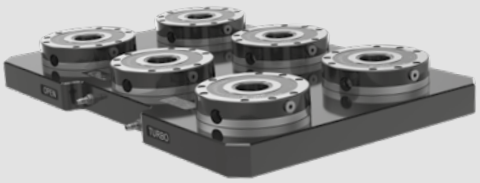
Special clamping units on request.
Subject to technical changes.

Type	Id. No.	Pull-in force with Turbo [kN]	Repeatability [mm]	Weight [kg]
Clamping unit with APS 140 Premium Light	46168040	26*	< 0.005	68
Clamping unit with con 5 APS 140 Basic	46168045	26*	< 0.005	67

* For each module.

APS 140

Clamping unit



Application/customer benefits

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

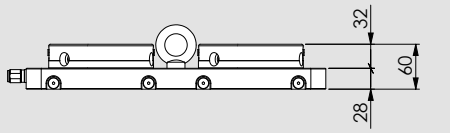
Technical features

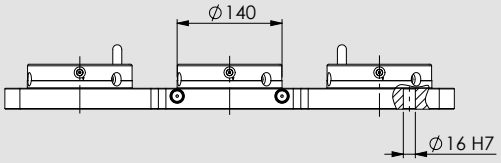
- 3 clamping slides (Basic: 2 clamping slides)
- Repeatability < 0.005 mm
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Air cleaning (only Premium Light)
- Interaxis 200 mm

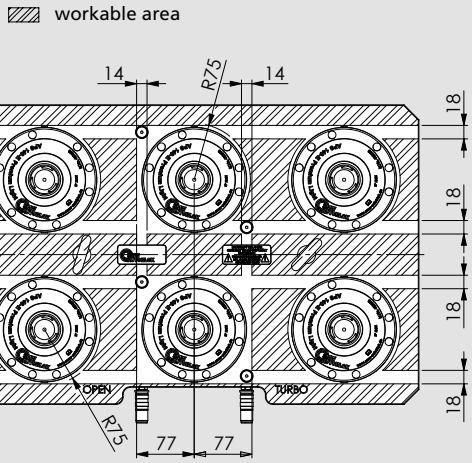
Standard equipment

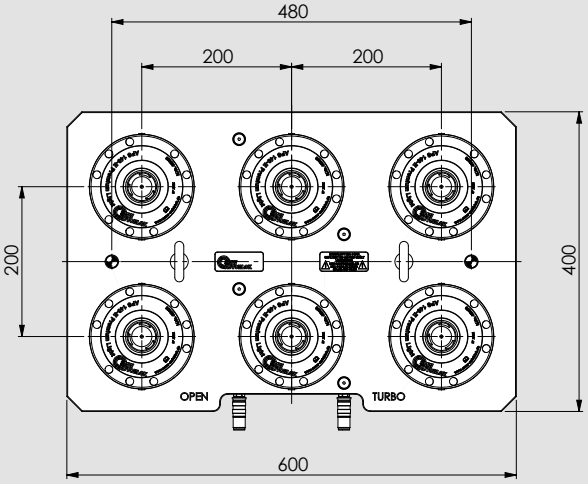
Clamping unit with 6 pieces APS 140 Premium Light or Basic
Quick pneumatic connections

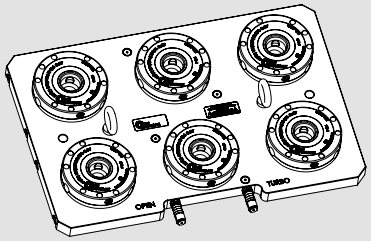
For clamping pallets see next catalog pages











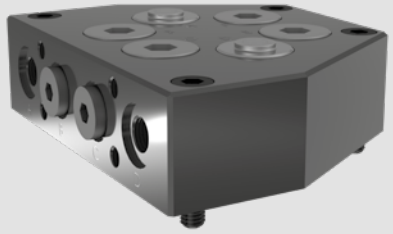
Special clamping units on request.
Subject to technical changes.

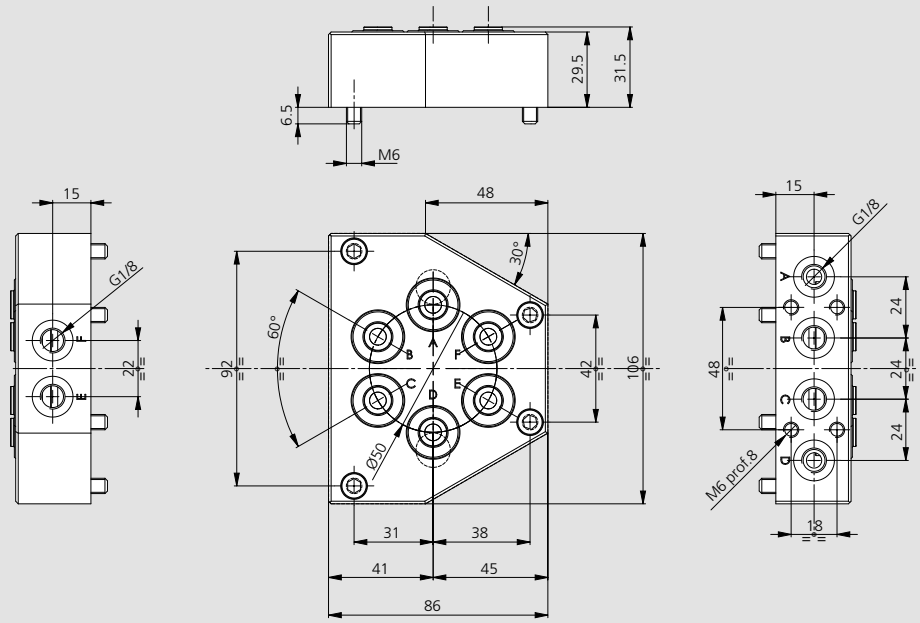
Type	Id. No.	Pull-in force with Turbo [kN]	Repeatability [mm]	Weight [kg]
Clamping unit with 6 APS 140 Premium Light	46168110	26*	< 0.005	83
Clamping unit with 6 APS 140 Basic	46168115	26*	< 0.005	84

* For each module.

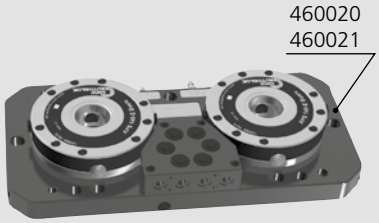
Media feed 3-axis zero feedings
■ For plate with 2 APS 140-E

APS 140-E





Example



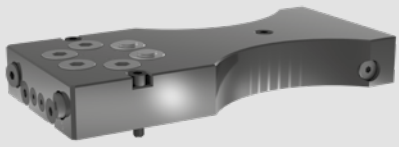
Subject to technical changes.

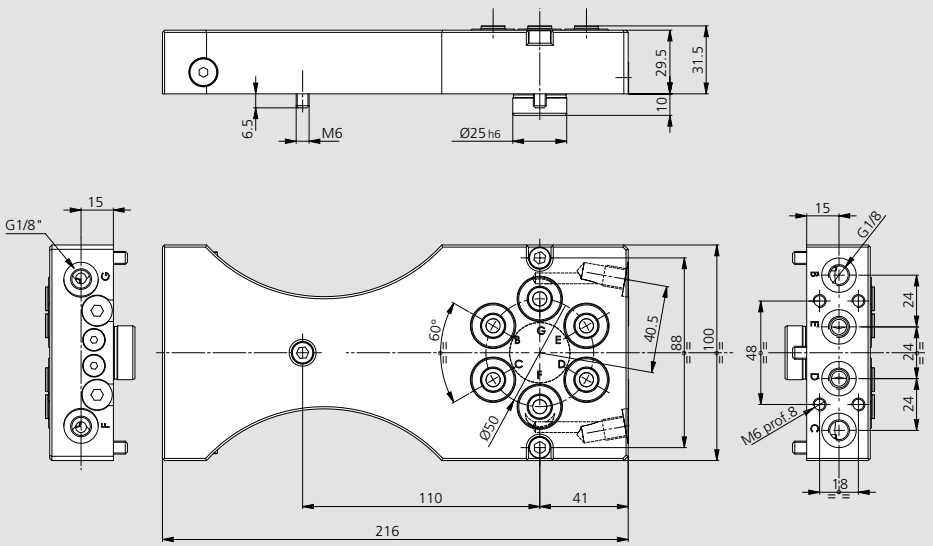
Media feed for plate with 2 APS 140	Id. No.	Possible feedings	Weight [kg]
Kit SUPP-2 INN PASCAL WVP-2FPL on plate with 2 APS 140 3-axis	46202040	A-D *	1.6
Kit SUPP-4 INN PASCAL WVP-2FPL on plate with 2 APS 140 3-axis	46202032	A-B-C-D *	1.6
Kit SUPP-6 INN PASCAL WVP-2FPL on plate with 2 APS 140 3-axis	46202033	A-B-C-D-E-F *	1.6

* See example page 43

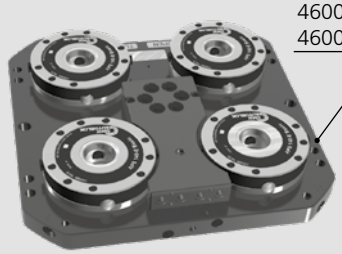
Media feed 3-axis zero feedings
■ For plate with 4 APS 140-E

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

* See example page 43

APS 140

Module height extension



Application/customer benefits

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

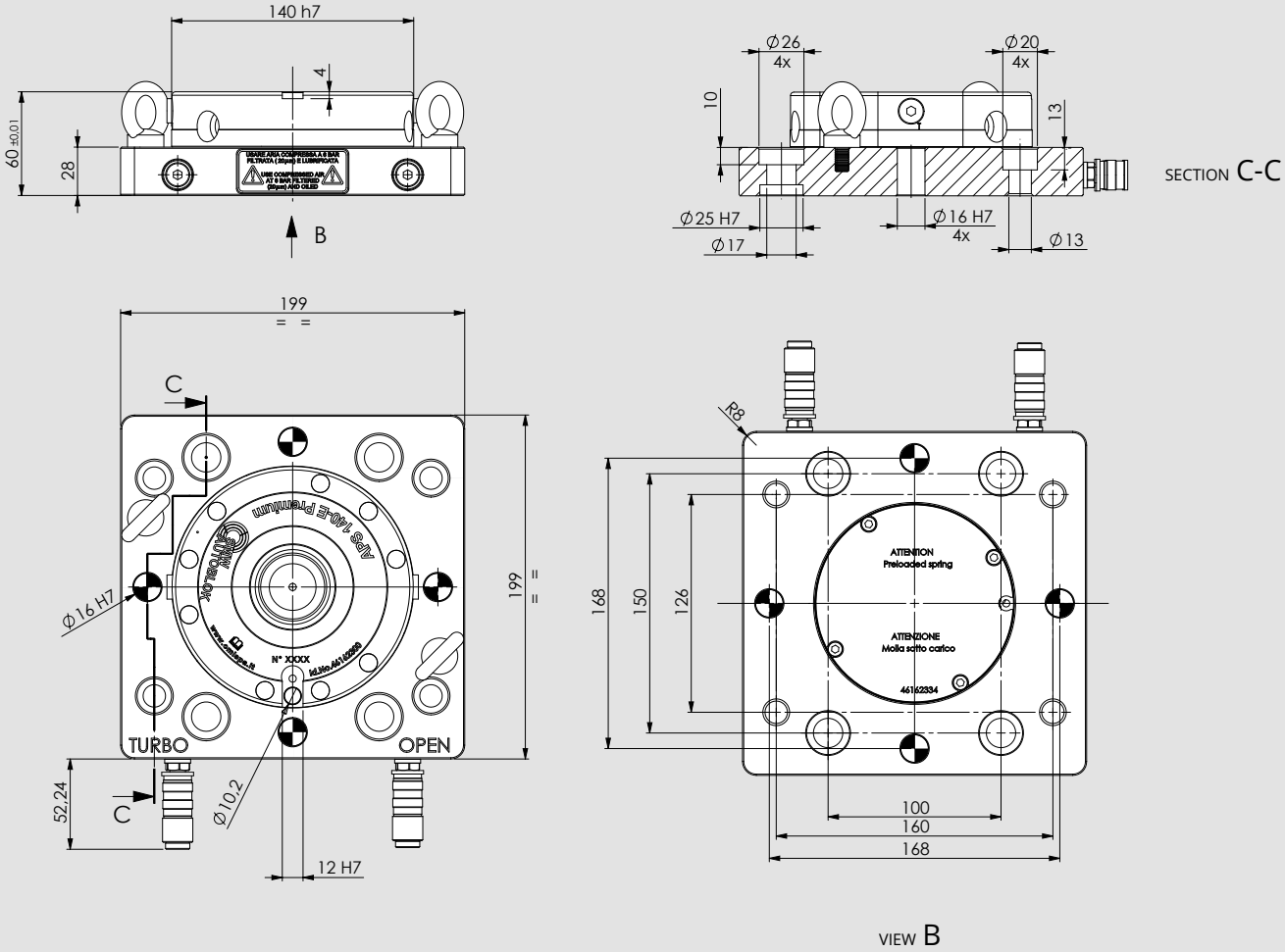
Technical features

- 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 see next catalog pages



Subject to technical changes.

Module height extensions (APS included)	Id. No.	Height [mm]	Weight [kg]
Module extention with 1 APS 140 Premium	46168410	60	11

Module height extension with APS 100 E PREMIUM

APS 100



Application/customer benefits

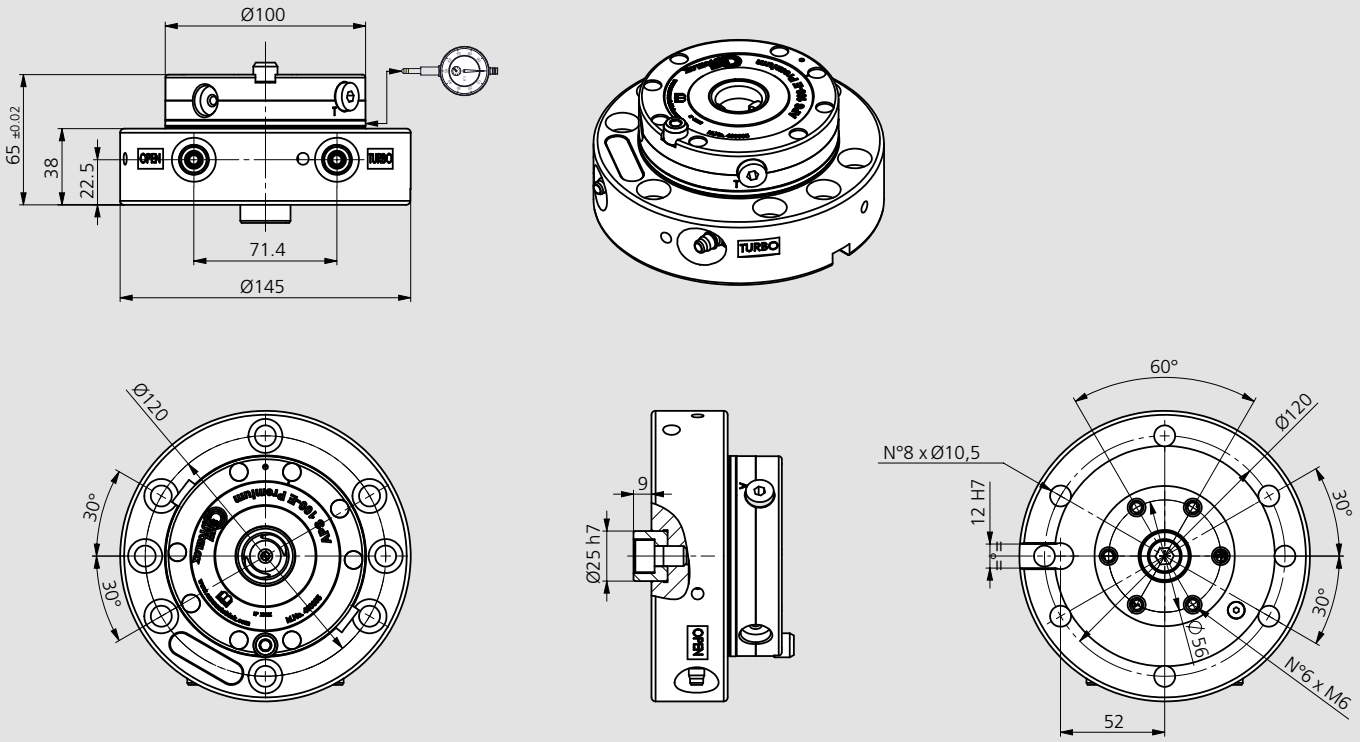
- Pre-assembled module extension unit with 1 piece APS 100 Premium
- Universal applicable
- Fast and easy set-up

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.

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: T-nuts sets: see page 64.
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.

APS 140

Module height extension with APS 140 E PREMIUM



Application/customer benefits

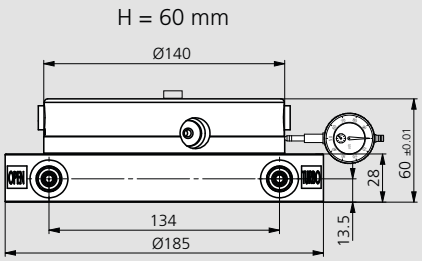
- Pre-assembled clamping unit with 1 piece APS 140 Premium
- Universal applicable
- Fast and easy set-up

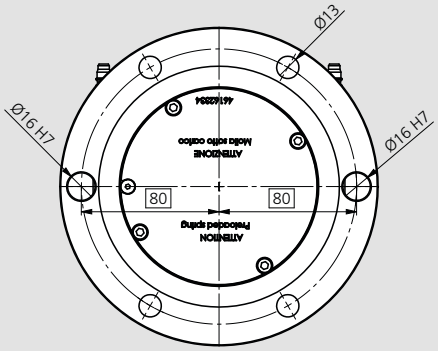
Technical features

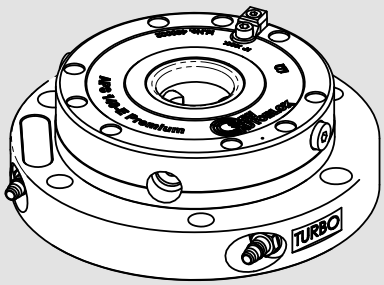
- 3 clamping slides
- Repeatability < 0.005 mm
- Turbo function to increase the pull-in forces (pull-in force without Turbo 7.5 kN)
- Anti rotating protection
- Air cleaning

Standard equipment

Module height extension with 1 piece APS 140 Premium







Subject to technical changes.

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: T-nuts sets: see page 64.

Module height extension for indexing tables

APS 140



Application/customer benefits

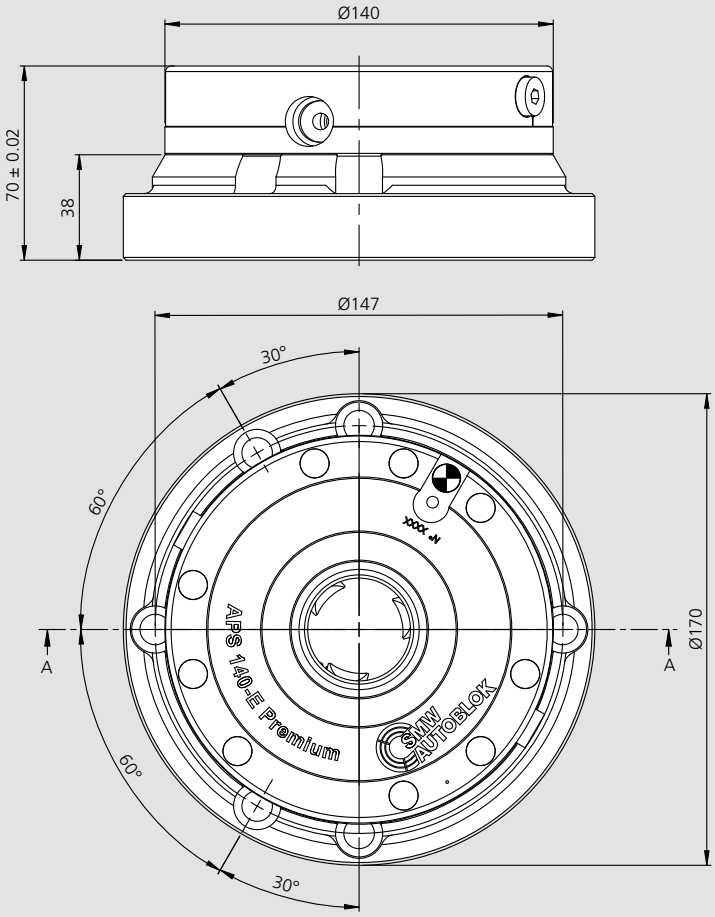
- Flange for indexing tables and CNC indexing tables with T-slots flange

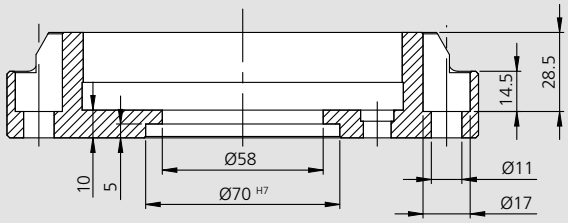
Technical features

- 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.

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

APS 140

Module height extension with APS 140 E PREMIUM



Application/customer benefits

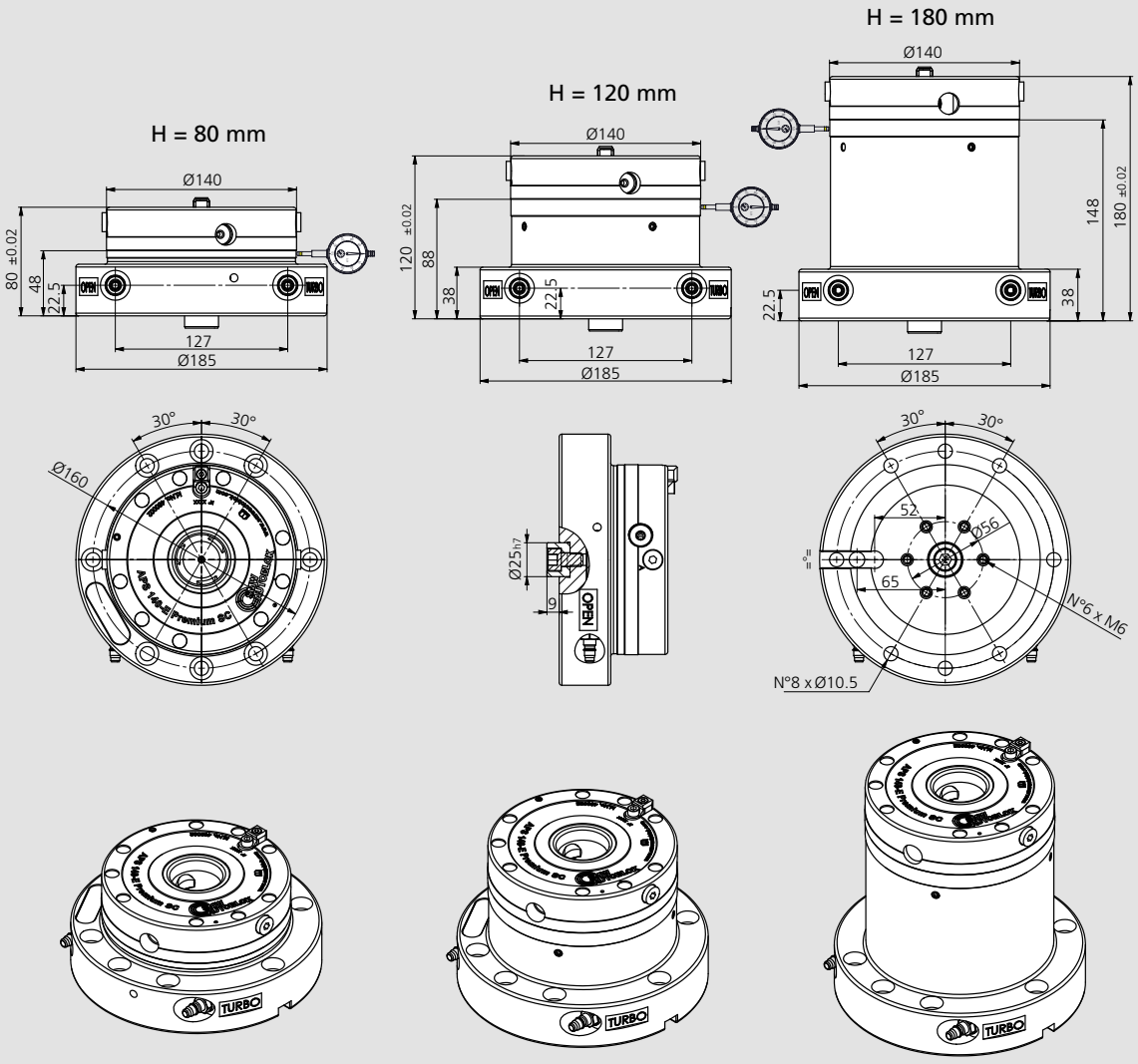
- Pre-assembled module extension unit with 1 piece APS 140 Premium
- Universal applicable
- Fast and easy set-up

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: T-nuts sets: see page 64.
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

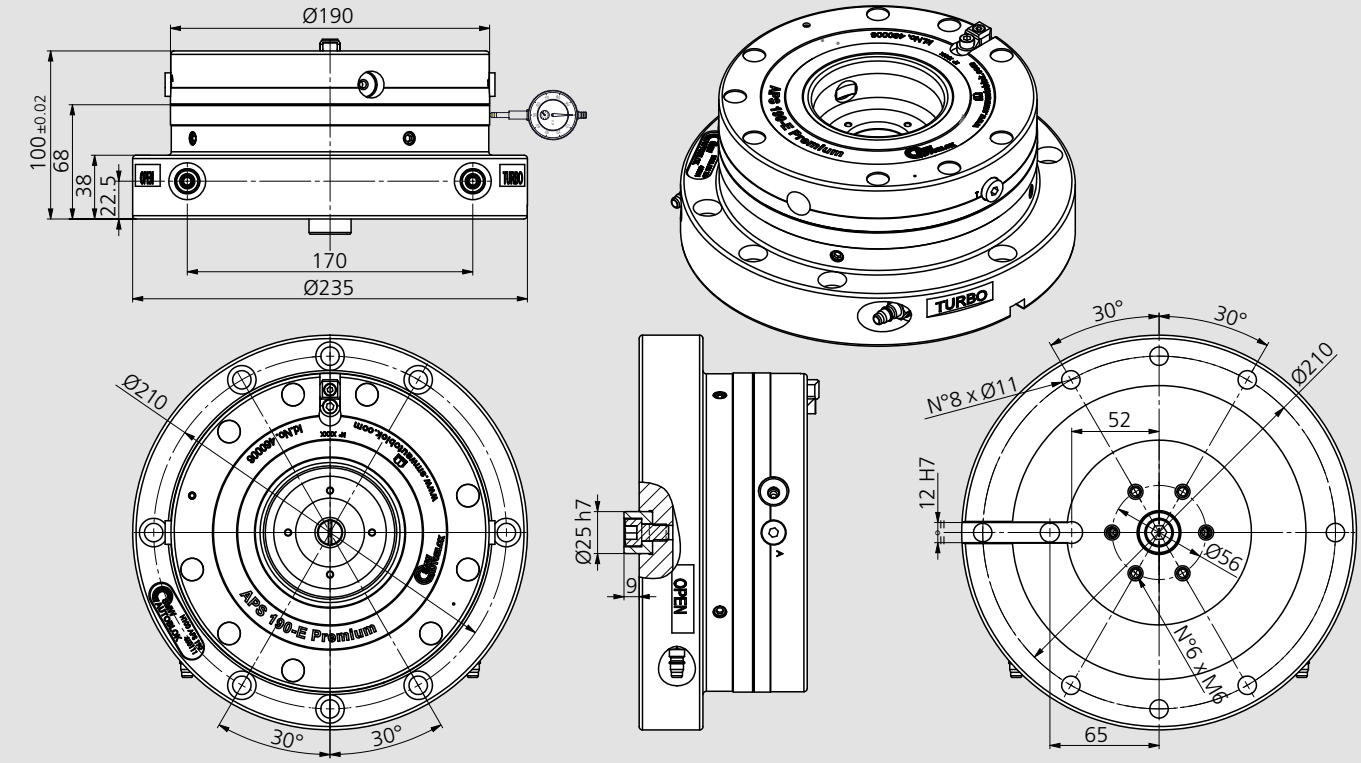
- Pre-assembled module extension unit with 1 piece APS 190 Premium
- Universal applicable
- Fast and easy set-up

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.

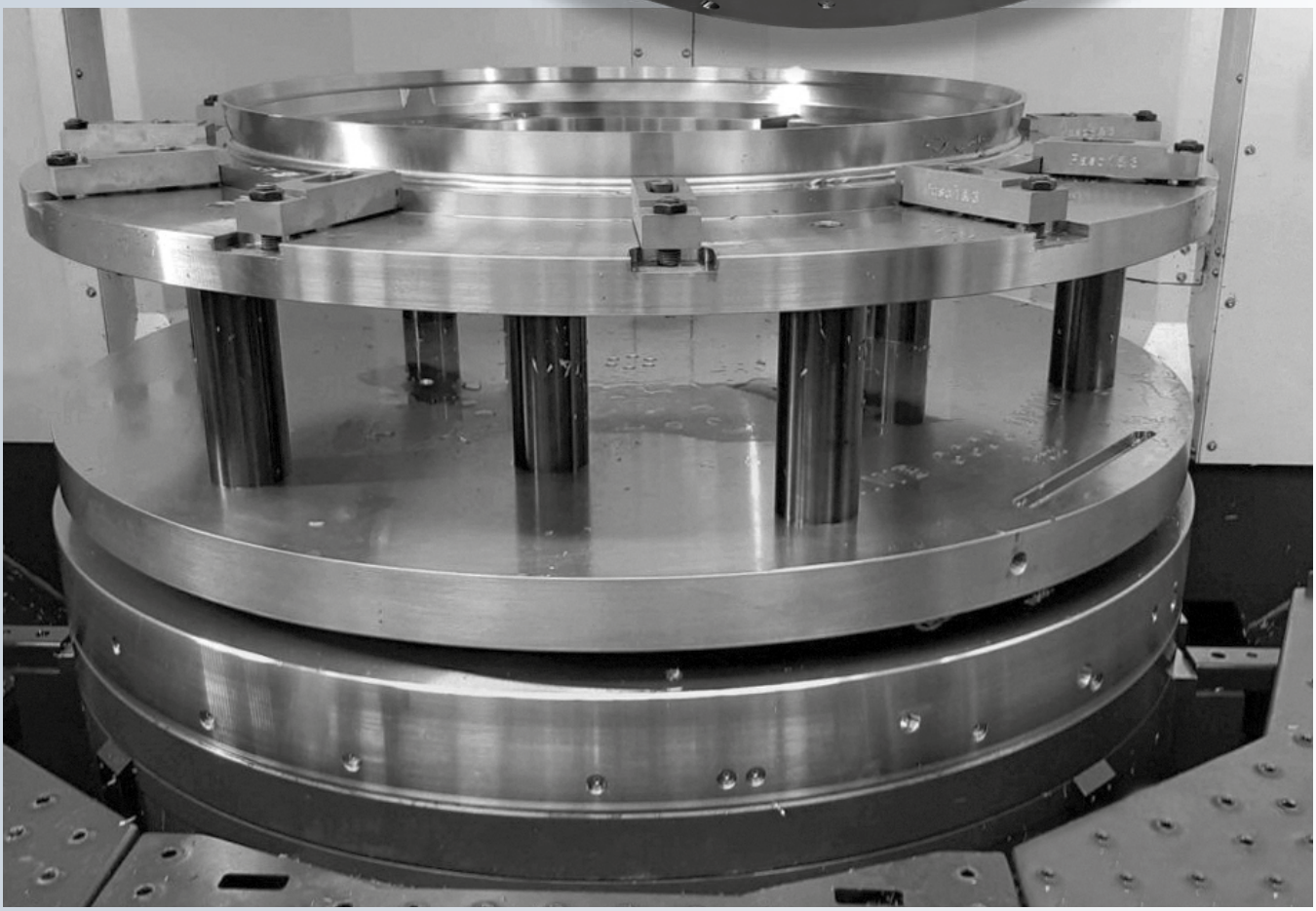
Module height extension (APS included)	Id. No.	Height [mm]	Weight [kg]
Module extension APS 190 PREMIUM H100	460111	100	20.5

Note 1: For every unit the key (Id. No. 46162133) is included
Note 2: T-nuts sets: see page 64.
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.

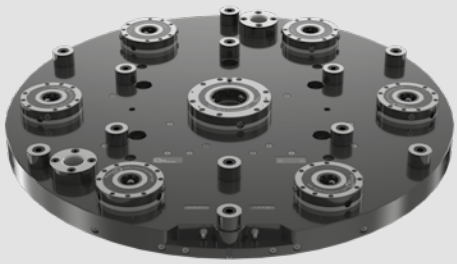
APS
Clamping units
for vertical turning lathes

Industry 4.0
Product





APS 190 - 140



Application/customer benefits

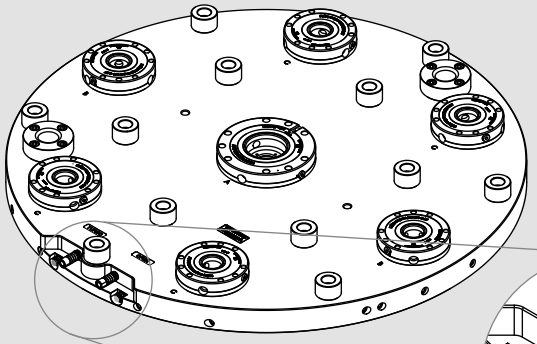
- Pre-assembled clamping unit with APS 190 Premium and APS 140 Premium Light
- For vertical turning machining center
- Universal applicable with ASA flanges or directly on the spindle nose
- Fast and easy set-up

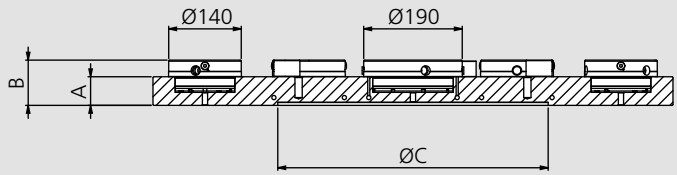
Technical features

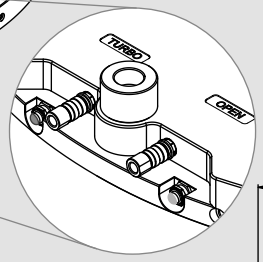
- 3 clamping slides
- Repeatability < 0.005 mm
- Turbo function to increase the pull-in forces (pull-in force without Turbo 13.5 kN for APS 190 and 7.5 kN for APS 140)
- Visual control for open and turbo
- Air cleaning

Standard equipment

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

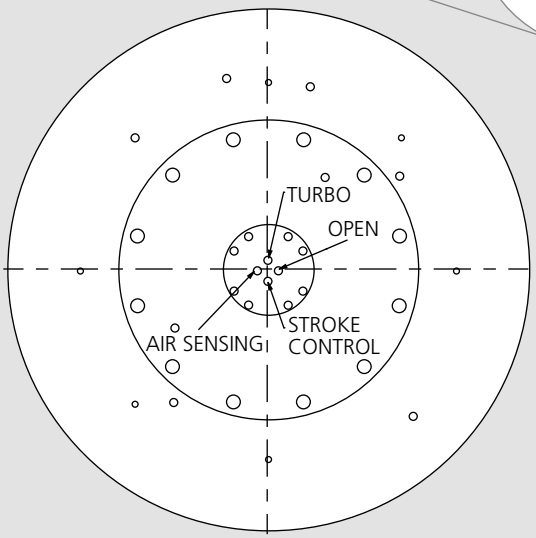


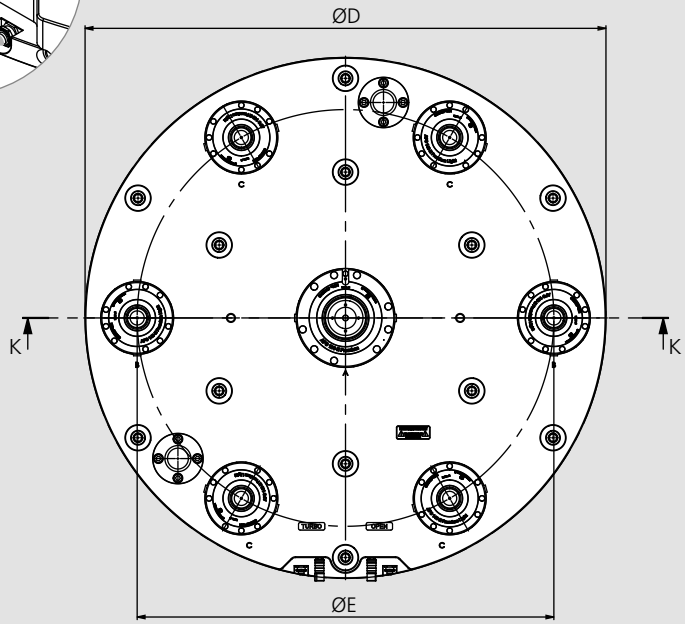




Visual control

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

APS 190 - 140

Top plate for clamping unit



Application/customer benefits

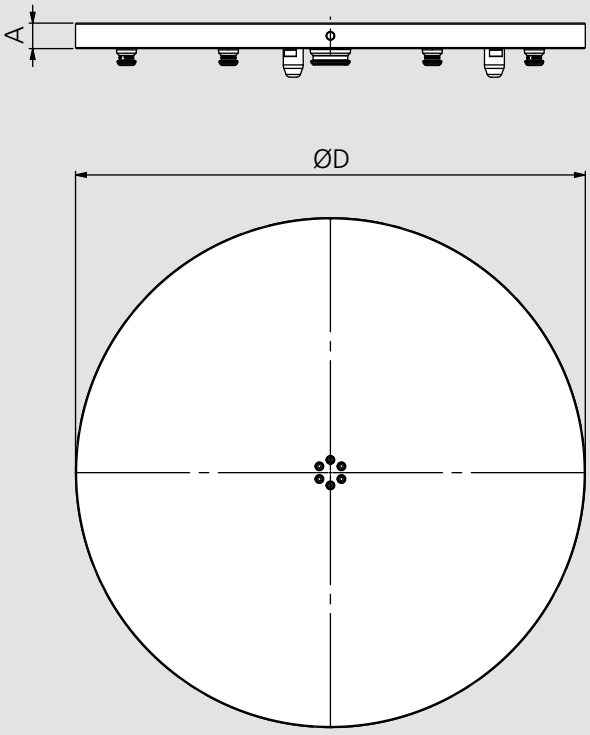
- Pre-assembled clamping pallet for APS turning plates
- Universal applicable
- Ready to use

Technical features

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

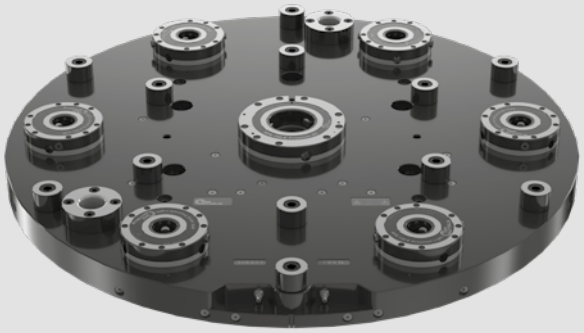
Standard equipment

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



Subject to technical changes.

Application examples





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

Mounting flanges on short taper spindle noses

- Direct and indirect mounting
- Reduction and increase mounting

Chuck flanges

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

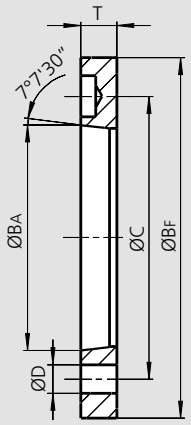
Technical features

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

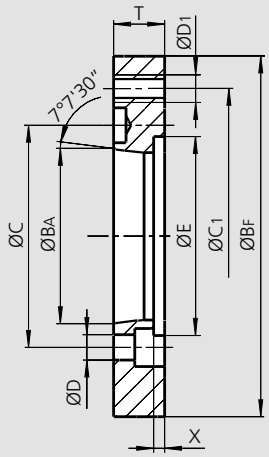
Standard equipment

Fixing bolts of the indirect mounting flange on the spindle nose

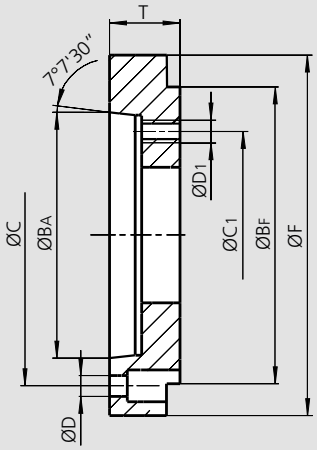
Type FF 1
ISO-A mounting direct



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

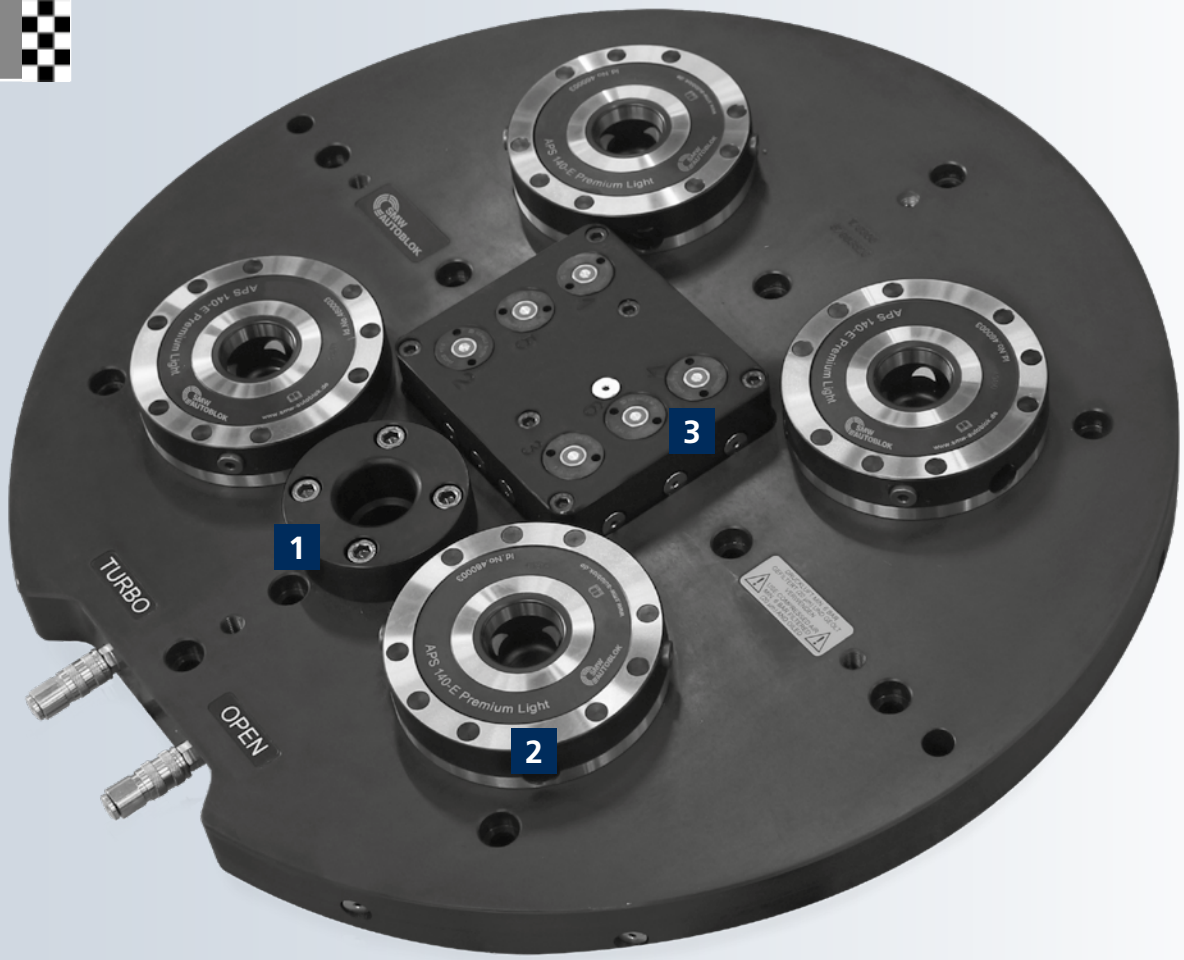
Flange type FF 3

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

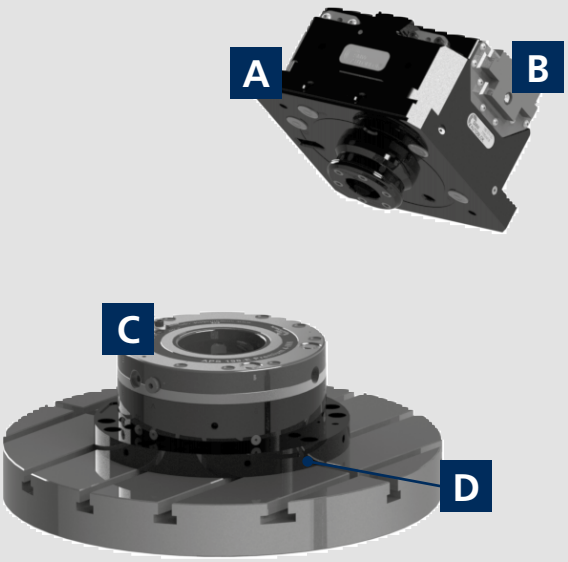


Functional Overview of the APS Clamping Units

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

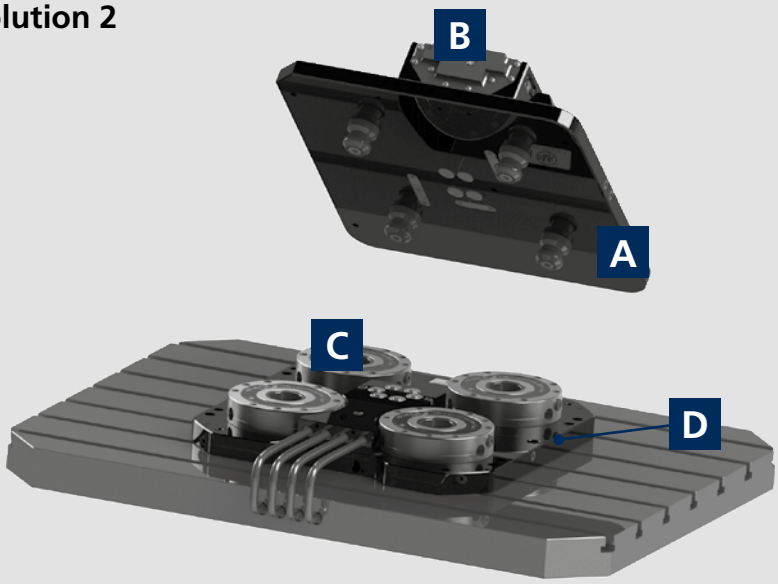
Application examples

Solution 1

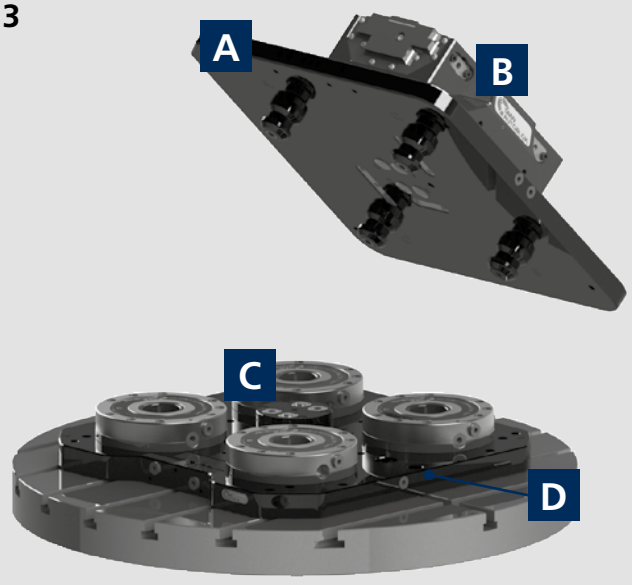


Id. No.	Solution 1	Solution 2	Solution 3
A	46200103	46201111	46201111
B	77904418	77904418	77904418
C	46162640	46202028	46202024
D	46203000	460022	46202000

Solution 2



Solution 3



Hydraulic power chuck







APS
Clamping units
for automation

Industry 4.0 Product

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

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

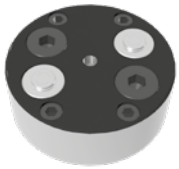
1 Feedings - for 5-axis machines

Protection cover



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

2 feedings + Open Turbo



Id. No. 46202025

4 feedings + Open Turbo

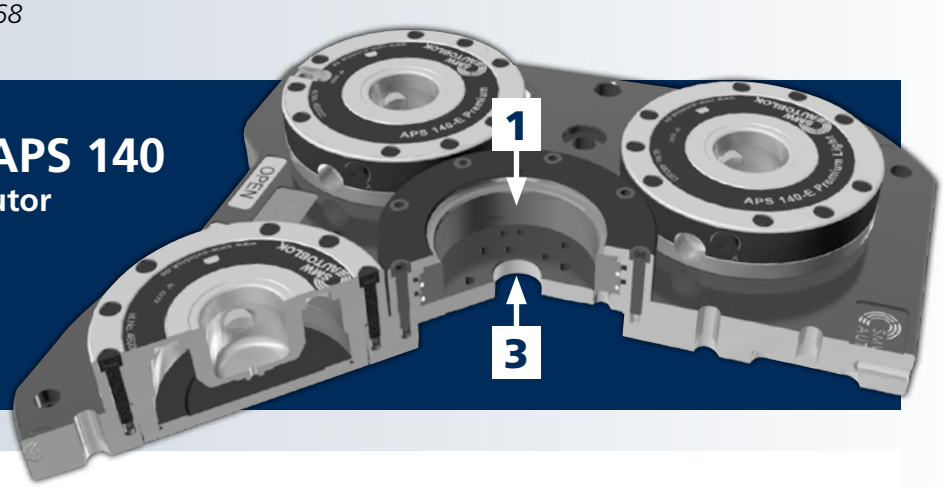


Id. No. 46202024

See application example page 68

2 Plate with 4 APS 140
with central distributor

- **Prepared for 4 feedings + Open Turbo Id. No. 46202000**



3 Distributor

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

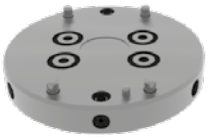
2 feedings



4 feedings



6 feedings



4 T-nuts set

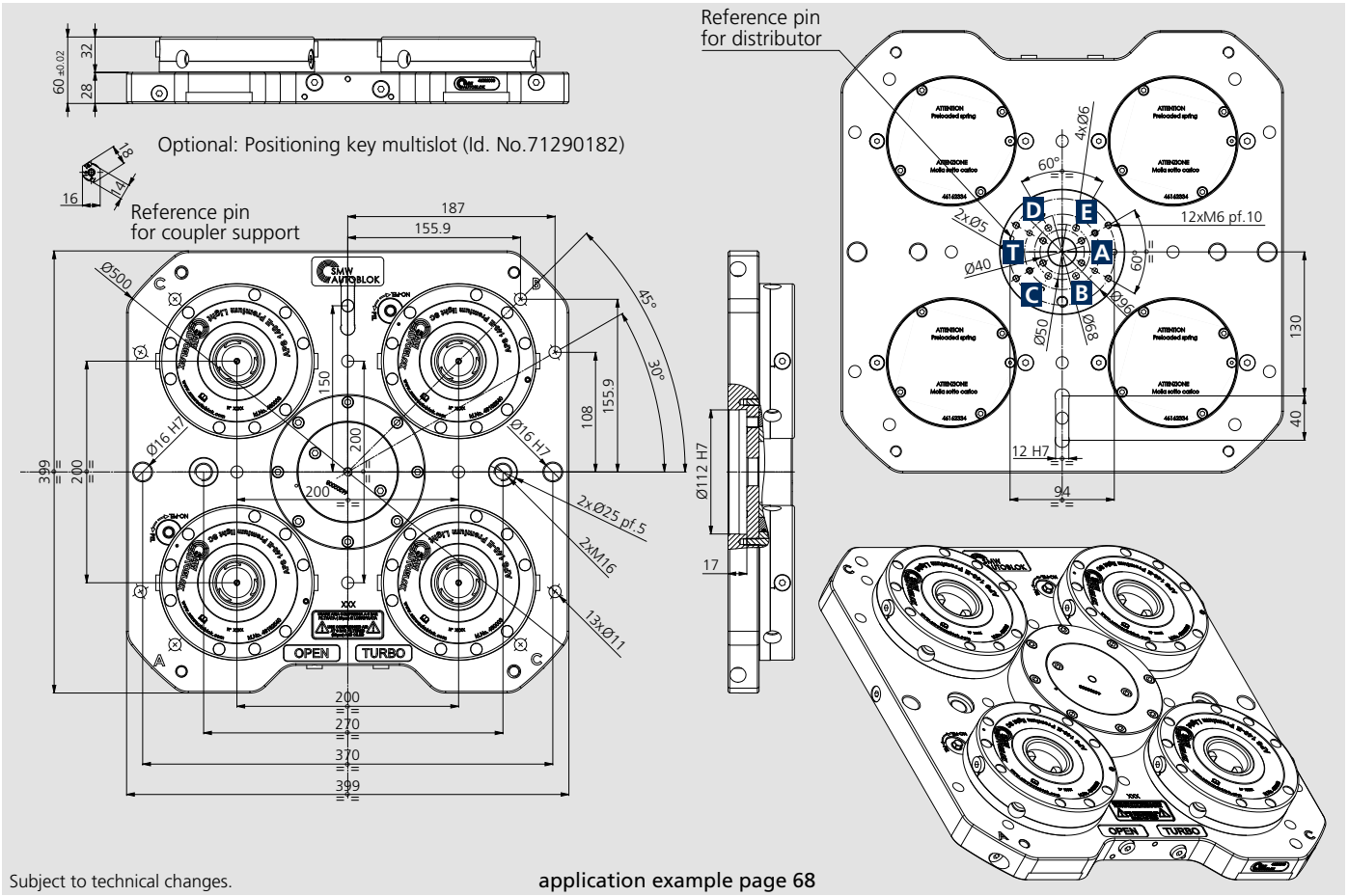
Optional



Order guide:
1. Plate group with n.4 APS 140 Id. No. 46202000
2. Feedings
3. Distributor
4. T-nuts set

Clamping unit for automation 5-axis 2 / 4 / 6 feedings

4 APS 140-E



Subject to technical changes.

application example page 68

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 **B C D E** 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

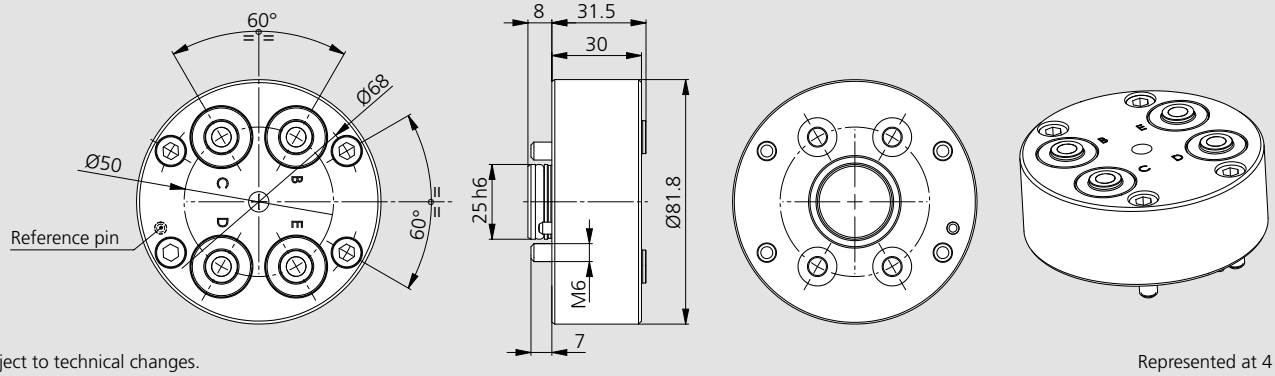
D Stroke control valve Twin Vise

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

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

Industry 4.0 Product

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

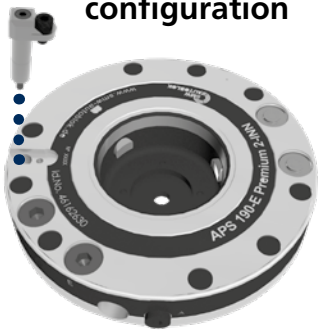
1 APS 190

▶ **Only Open Turbo configuration**

* 

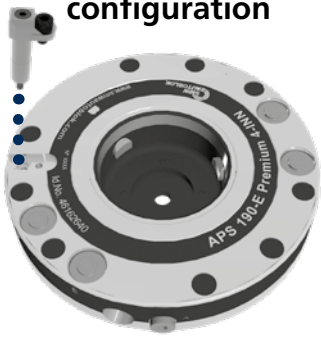
APS 190 E PREMIUM
46165640

▶ **2 feedings + Open Turbo configuration**

* 

APS 190 2 INN
46162630

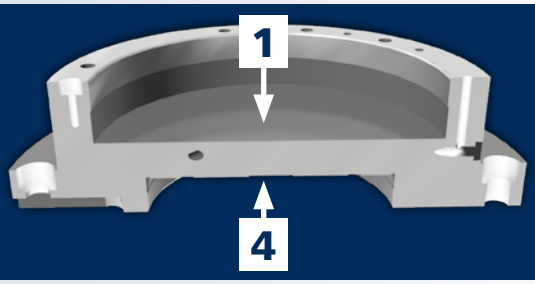
▶ **4 feedings + Open Turbo configuration**

* 

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 definied in case of order).**

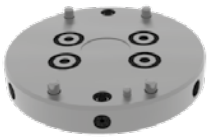
▶ **2 feedings**



▶ **4 feedings**



▶ **6 feedings**



5 T-nuts set

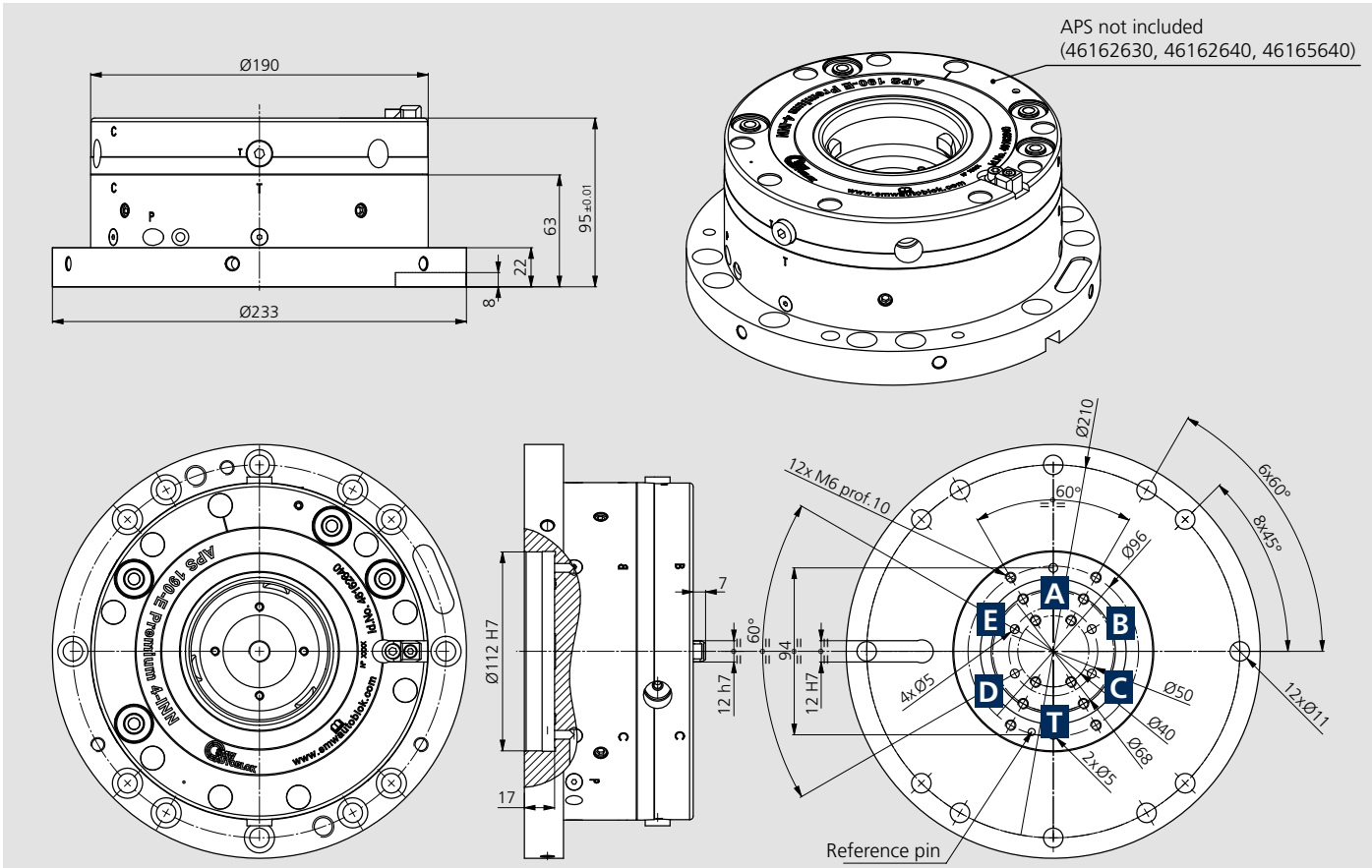
Optional



Order guide:
1. Module height extension group Id. No. 46203000
2. APS 190 Premium
3. Key Id. No. 46162333
4. Distributor
5. T-nuts set

Module height extension one APS prepared for 5-axis machines until 6 feedings

For automation



Subject to technical changes.

application example page 69

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

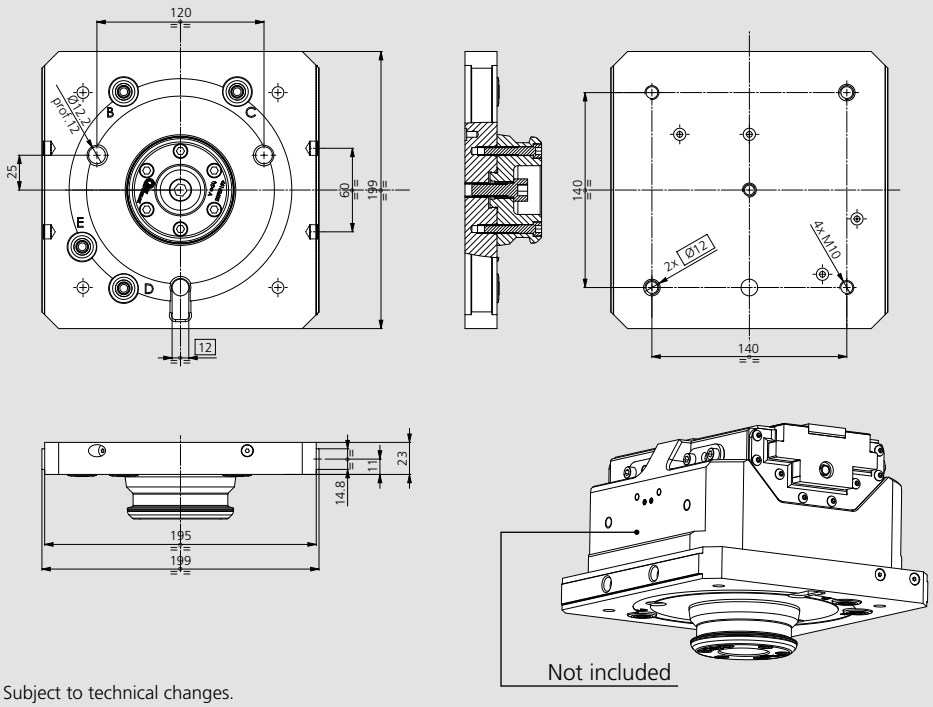
Pallet holder with 2 - 4 feedings

■ **Prepared for robot loading**

The pallet is prepared for loading with robots.

See example nr. 1 page 42

Hardened and tempered material



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

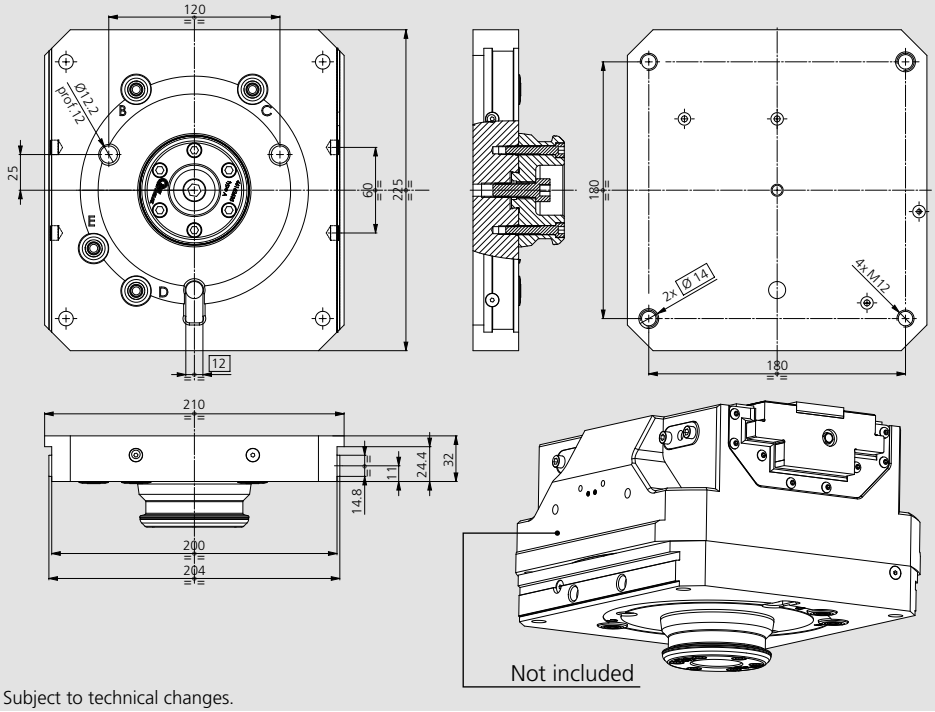
Pallet holder with 2 - 4 feedings

■ **Prepared for robot loading**

The pallet is prepared for loading with robots.

See example nr. 1 page 42

Hardened and tempered material



Subject to technical changes.

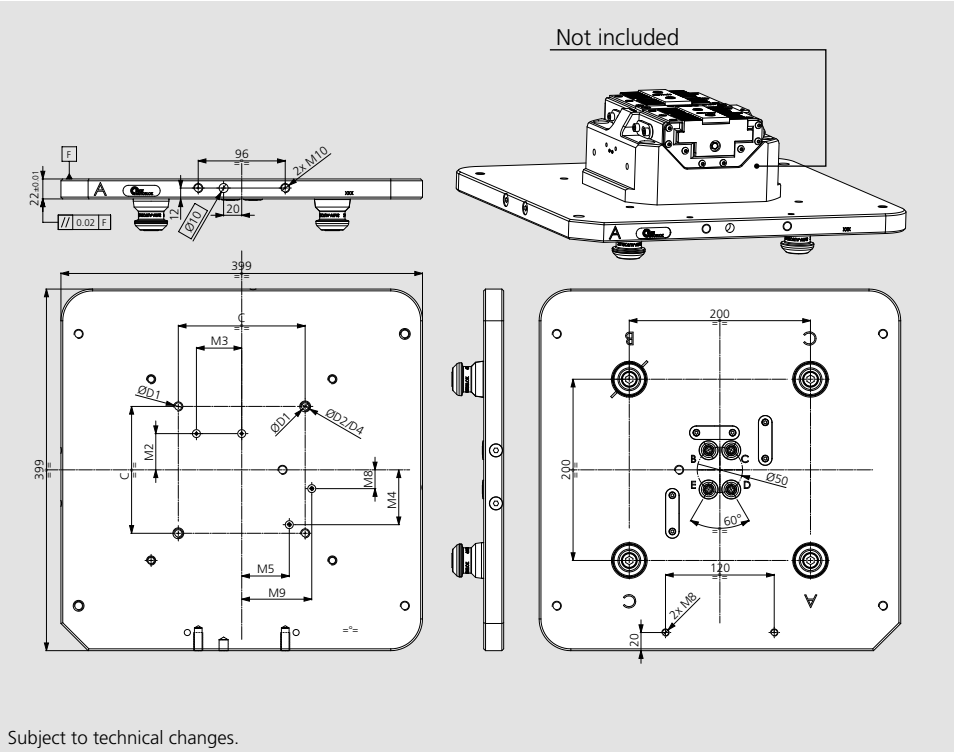
Type pallet (without vise)	Id. No.	Feedings to be used	Weight [kg]
Pallet holder 225STV 2-3 jaws with 4 feedings APS 190 loading robot	46200106	B-C-D-E	12
Pallet holder 225STV 2-3 jaws with 2 feedings APS 190 loading robot	46200108	B-C	12

4 APS 140 pallet STV holder

■ Pallet with n.4 feedings

The pallet is prepared for handling with robots.

See example nr. 3 page 42



Subject to technical changes.

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

APS 100

Zero Point clamping system

■ Combi unit



Application/customer benefits

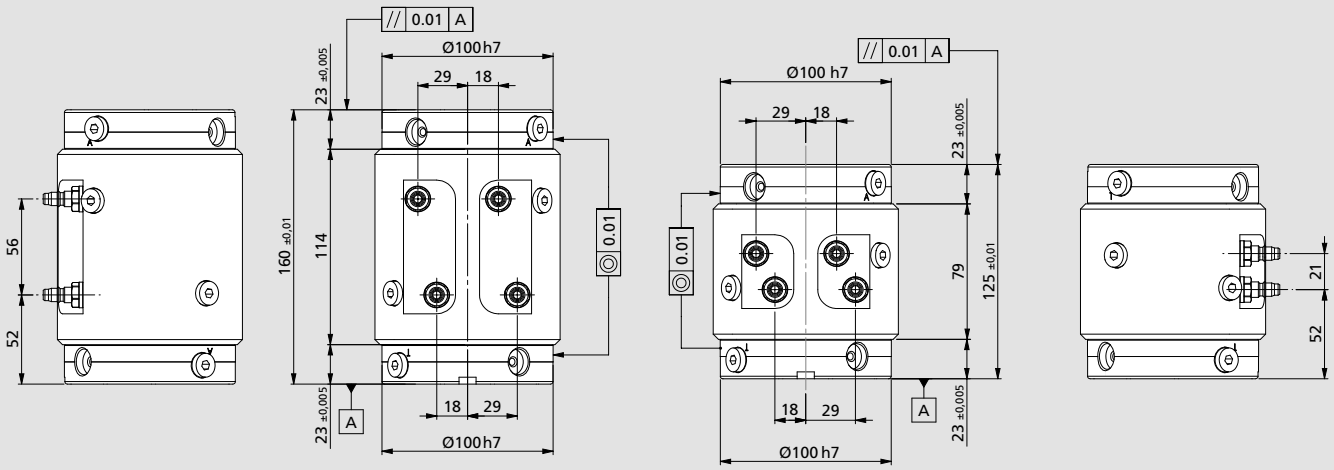
- Pre-assembled clamping unit with 2 pieces APS 100 Premium
- Universal applicable
- Fast and easy set-up

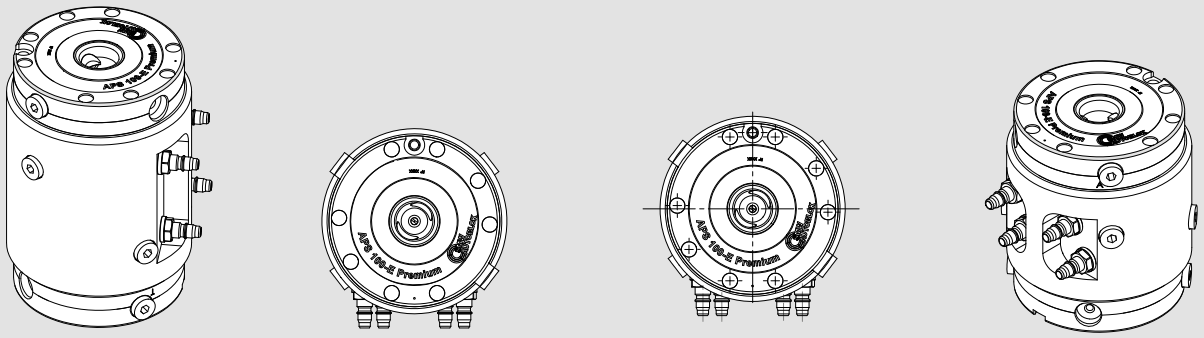
Technical features

- 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.

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

APS 140



Application/customer benefits

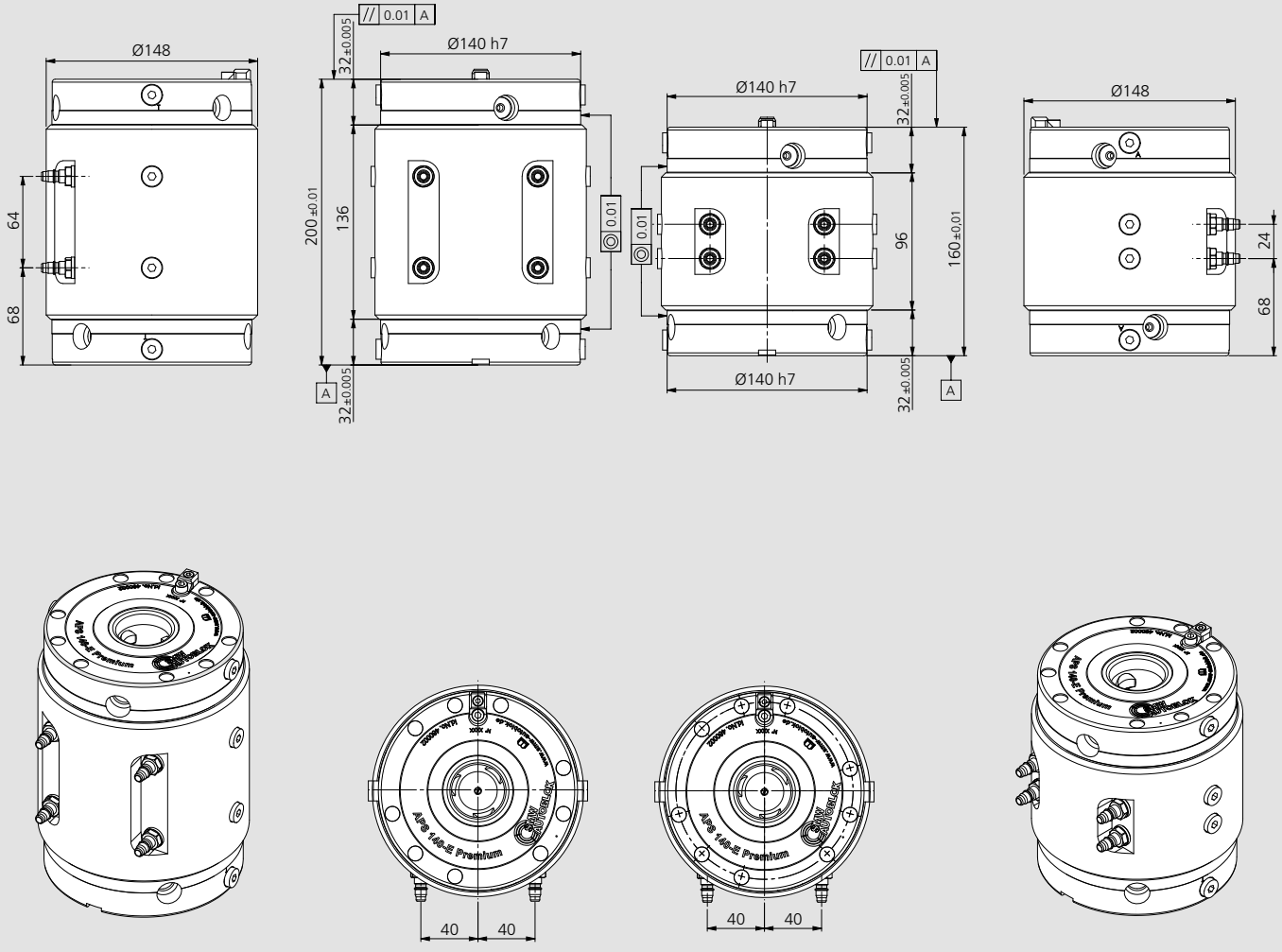
- Pre-assembled clamping unit with 2 pieces APS 140 Premium
- Universal applicable
- Fast and easy set-up

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.

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

APS 100 / 140

Standard clamping pallets



Application/customer benefits

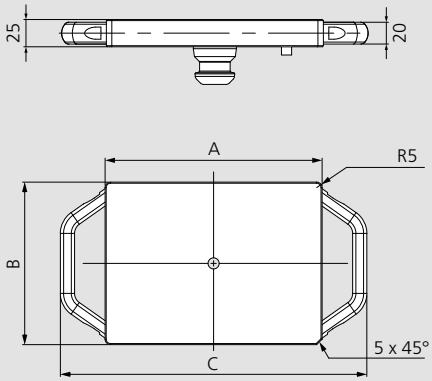
- Pre-assembled clamping pallet for APS 100 / 140
- Universal applicable
- Ready to use

Technical features

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

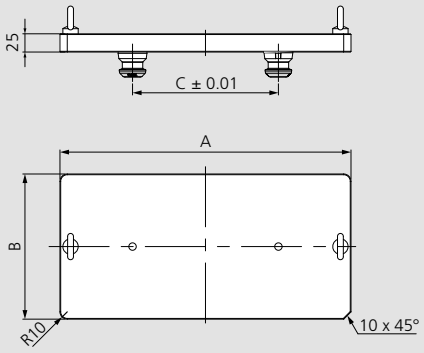
Standard equipment

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 pins (Type C)
Rounded pallet: Fully assembed with with 1 clamping pin (Type A), 2 clamping pins (Type B), 2 clamping pins (Type C)



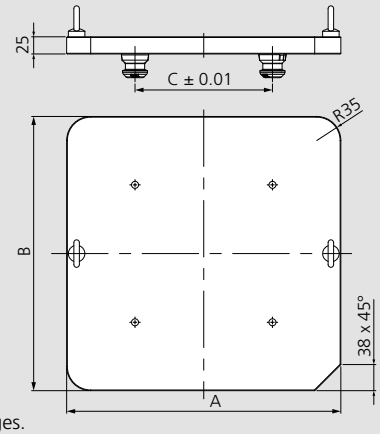
Subject to technical changes.

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



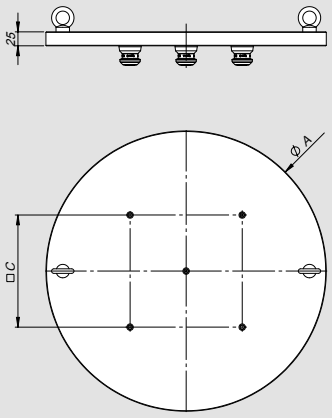
Subject to technical changes.

Type	Id. No.	A mm	B mm	C mm
Clamping pallet APS 140	46167724	399	199	200



Subject to technical changes.

Type	Id. No.	A mm	B mm	C mm
Clamping pallet APS 140	46167726	399	399	200



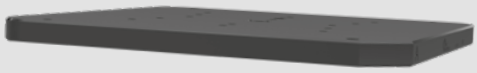
Subject to technical changes.

Type	Id. No.	A (ø) mm	C mm
Clamping pallet APS 140	46167728	500	200

Customer request data

■ required for the preparation of the offer
■ Simply fill in and send to: omlspa@omlspa.it

APS



Application/customer benefits

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

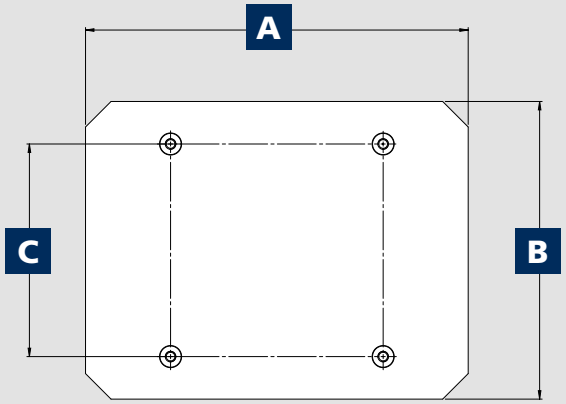
Technical features

- High quality steel (1.1730)

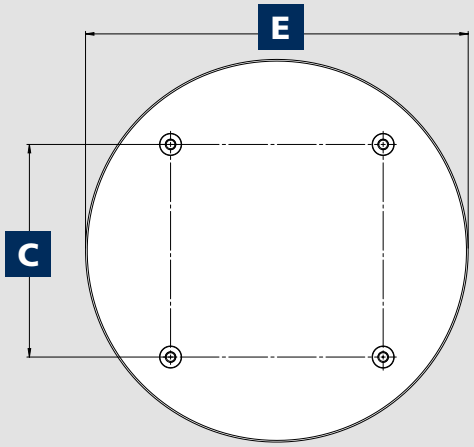
Standard equipment

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

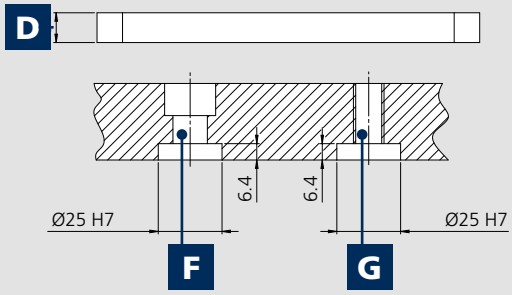
Customized clamping pallets



Dimensions	
A	
B	
C	



Dimensions	
C	
ØE	



Dimensions		
D		
F	☐ M12	☐ M16
G	☐ M10	☐ M12

APS 140

High quality clamping pallet

■ Basic
■ Premium



Application/customer benefits

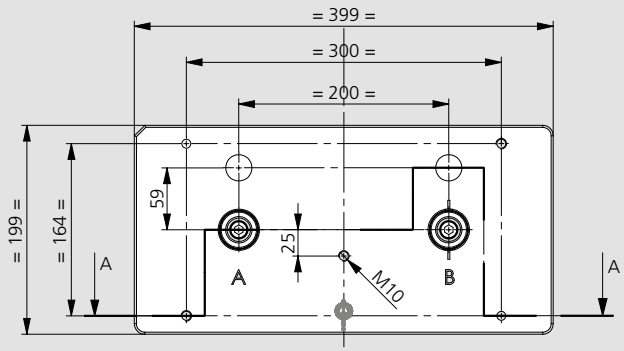
- Pre-assembled clamping pallet for APS 140
- Universal applicable
- 2 Versions: Premium and Basic

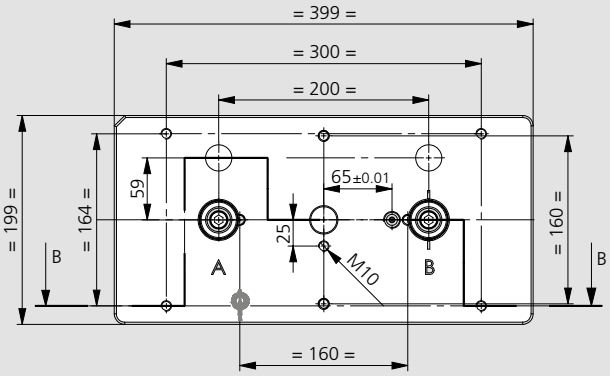
Technical features

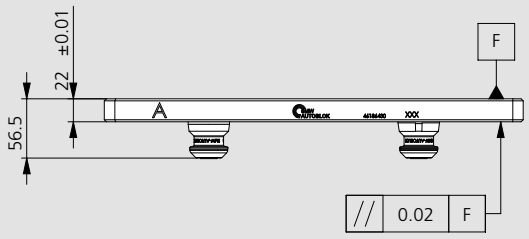
- Grid dimension 200 mm
- Fully assembled including clamping pins
- Premium version with additional adaption for module units
- Rust protected

Standard equipment

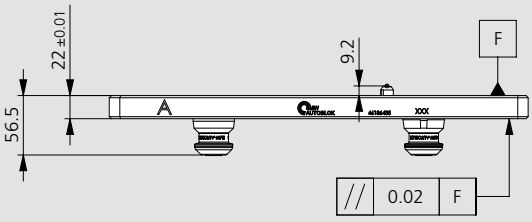
Clamping pallet fully assembled with
1 centering pin (type A),
1 reference pin (type B)



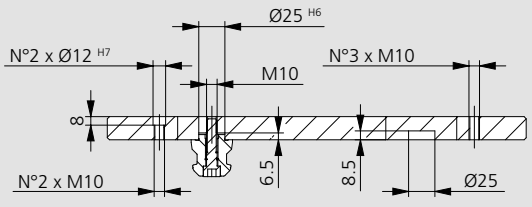




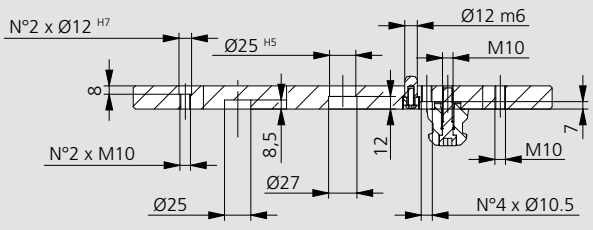
A-A



B-B



BASIC VERSION



PREMIUM VERSION

Subject to technical changes.

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

High quality clamping pallet

■ Basic
■ Premium

APS 140



Application/customer benefits

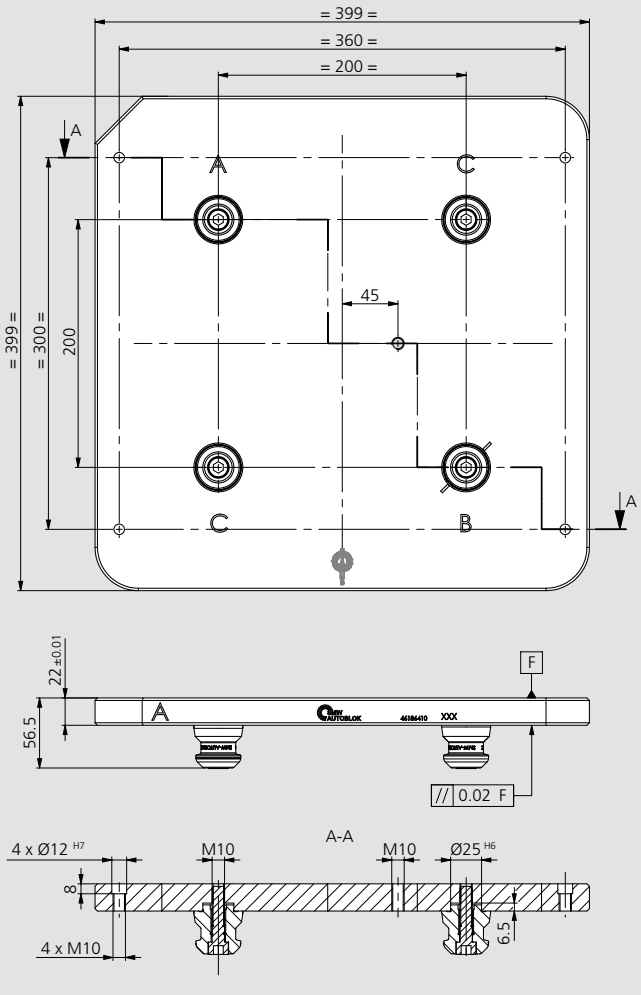
- Pre-assembled clamping pallet for APS 140
- Universal applicable
- 2 Versions: Premium and Basic

Technical features

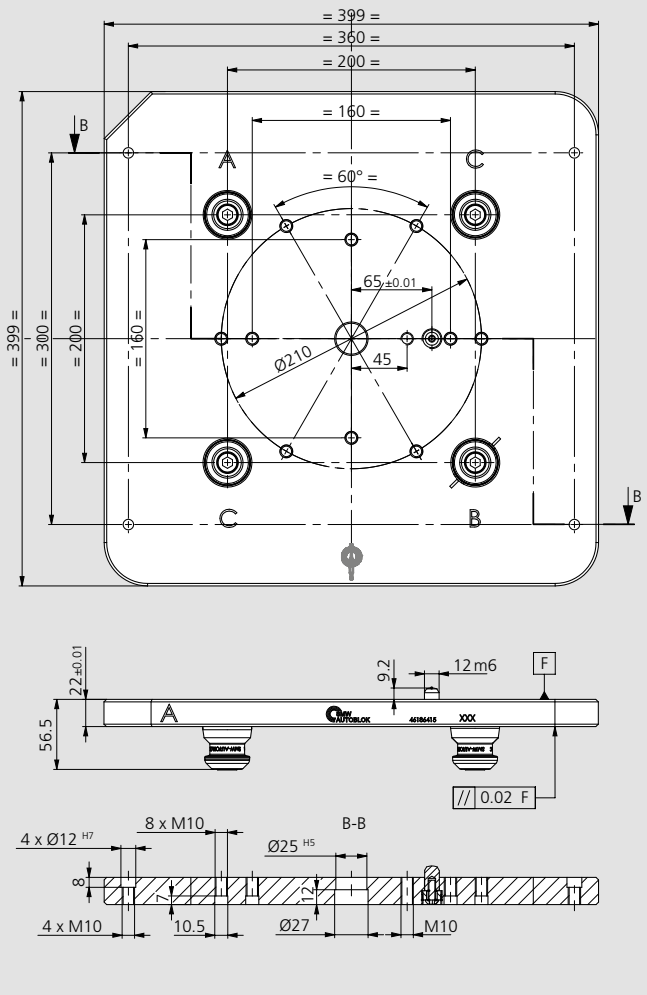
- Grid dimension 200 mm
- Fully assembled including clamping pins
- Premium version with additional adaption for module units
- Rust protected

Standard equipment

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



BASIC VERSION



PREMIUM VERSION

Subject to technical changes.

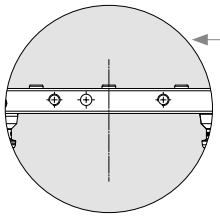
Type	Id. No.
Clamping pallet APS 140 Premium	46186415
Clamping pallet APS 140 Basic	46186410

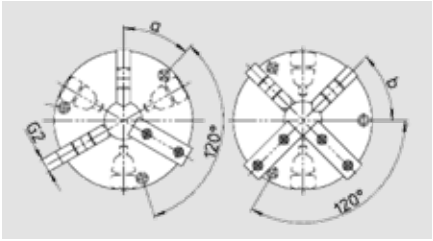
Q400

Clamping Pallet Q400

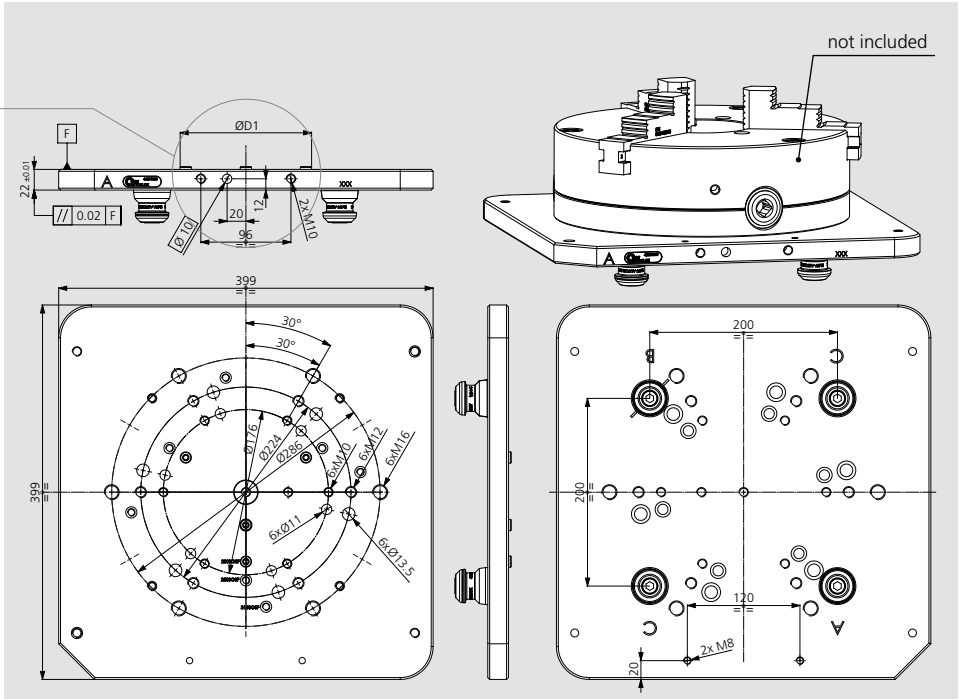
■ Pallet prepared for mounting SGSF chuck

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.

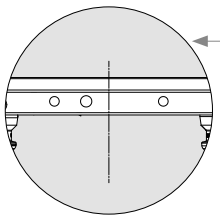
Type pallet (without chuck)	Id. No.	Weight [kg]	Manual chucks SGSF (optional)	
			Ø D1	Chuck model
Pallet Q400 prepared for chucks 200-250-315 SGSF handling robot	46201020	28	159.9	200 SGSF
			199.9	250 SGSF
			259.9	315 SGSF

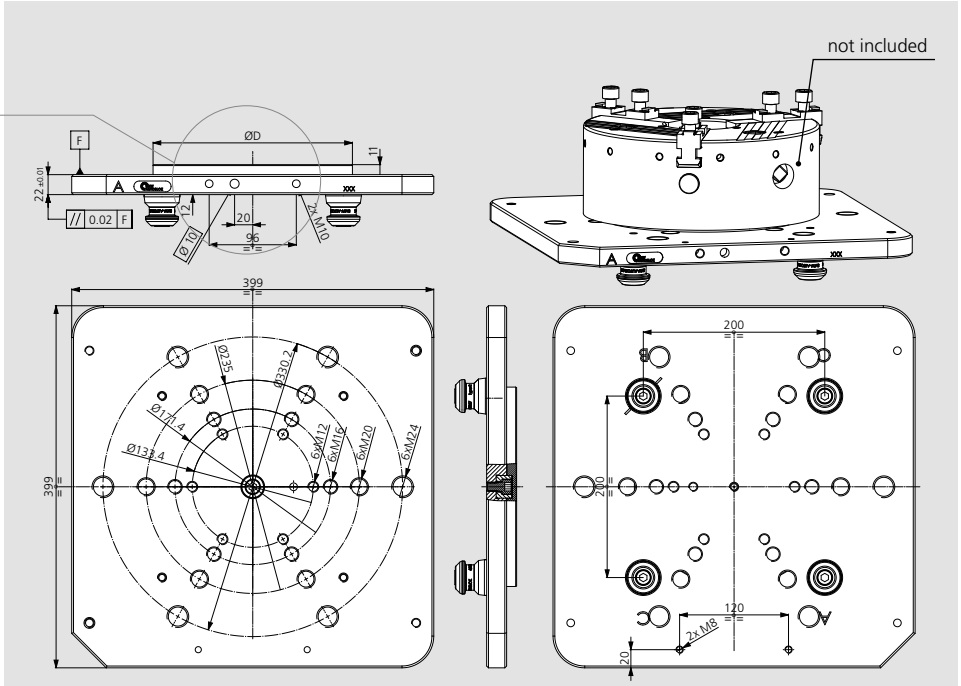
Q400

Clamping Pallet Q400

■ Pallet prepared for mounting HG-N chucks

This pallet is prepared
for loading with robots.





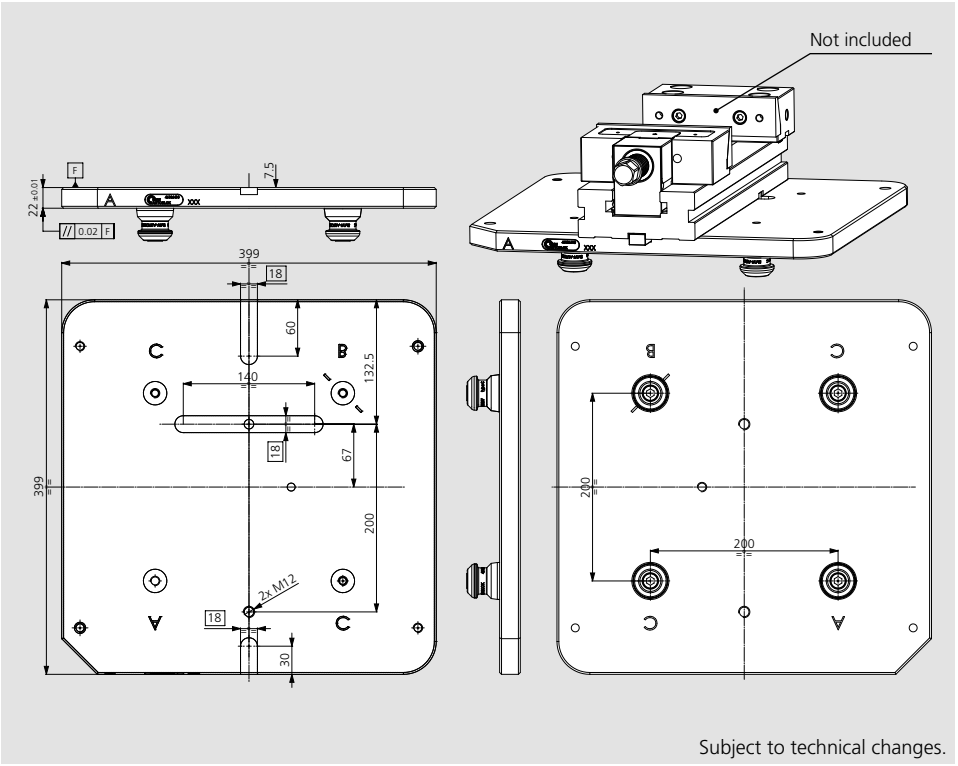
Subject to technical changes.

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

This pallet is **not** prepared for handling with robots.



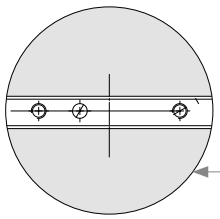
Subject to technical changes.

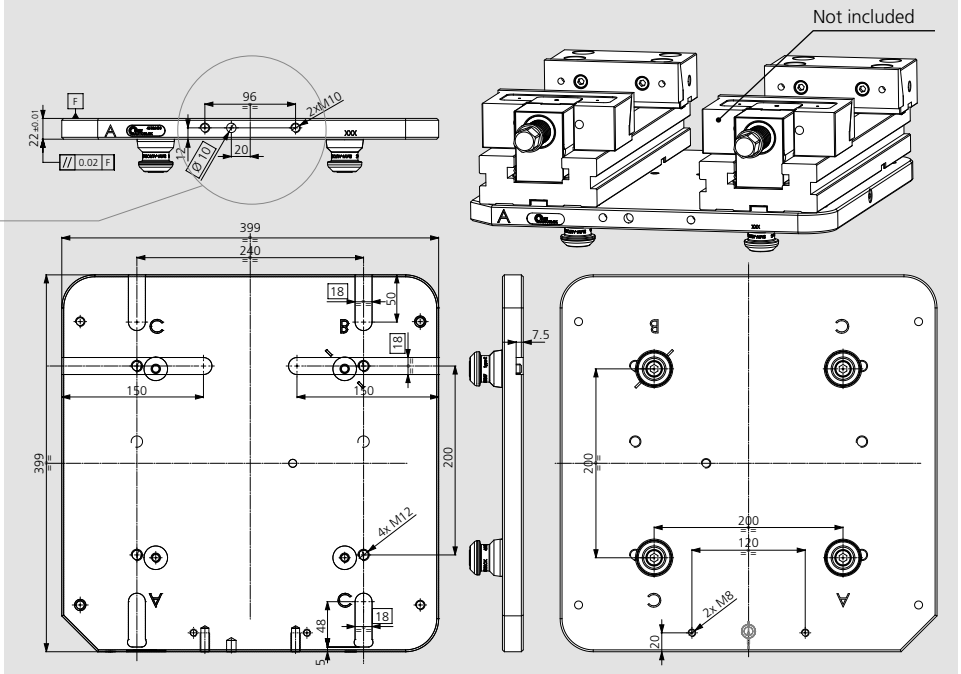
Type pallet (without vise)	Id. No.	Weight [kg]
Pallet Q400 prepared for 1 vise MC150x200 manual loading	41702271	28

Clamping pallet for automation with MC150x200 vises
■ **Pallet prepared for mounting 2 vises**

4 APS 140

This pallet is prepared for handling with robots.





Subject to technical changes.

Type pallet (without vise)	Id. No.	Weight [kg]
Pallet Q400 prepared for 2 vises MC150x200 robot loading	41702261	28

APS 100 / 140

Zero Point clamping system

■ Spacer for Combi units



Application/customer benefits

- Spacers to adapt more different module units
- Universal use

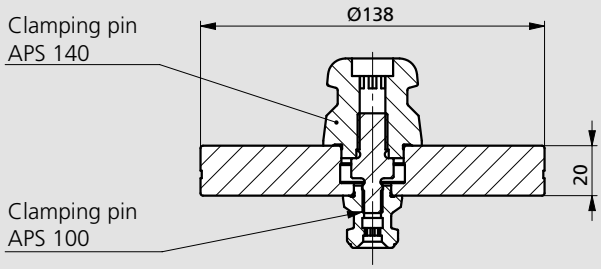
Technical features

- Height 20 mm

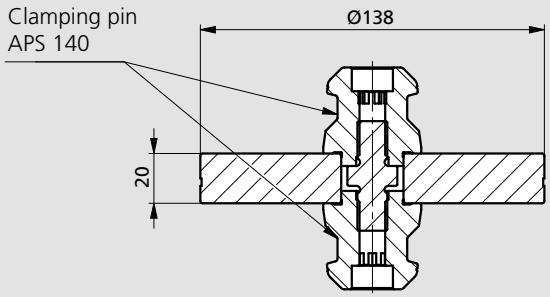
Standard equipment

Spacer without clamping pin

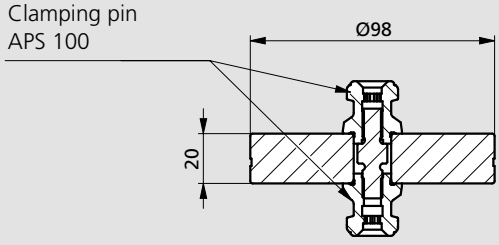
46168371



46168366

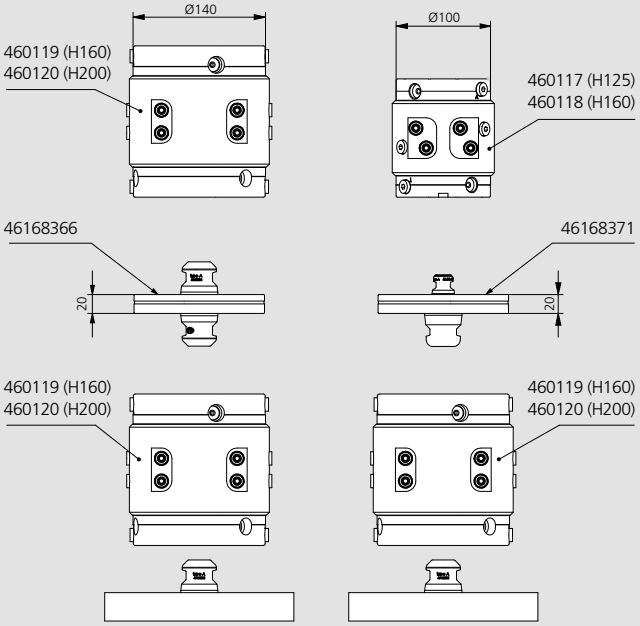


46168370



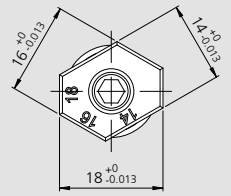
Type	Id. No.	Height [mm]	Weight [kg]
Spacer H20 APS 140-100	46168371	20	2.2
Spacer H20 APS 140-140	46168366	20	2.3
Spacer H20 APS 100-100	46168370	20	1.1

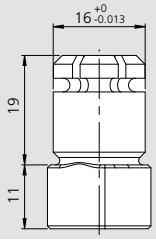
Application examples

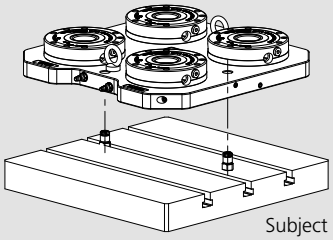


Subject to technical changes.

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

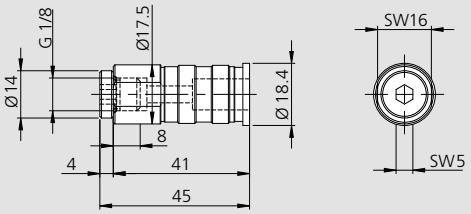


Subject to technical changes.

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“

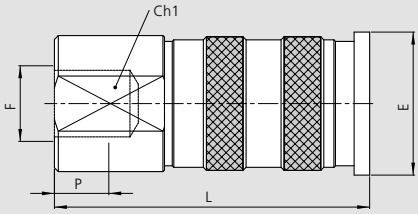


Subject to technical changes.

Type	Id. No.
APS 100 / 140	46167019*

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

Air connection - Quick fitting female 1/8“

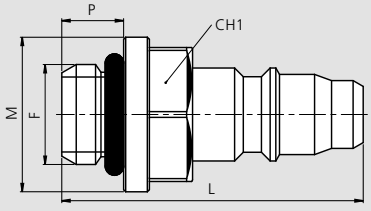


Subject to technical changes.

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“



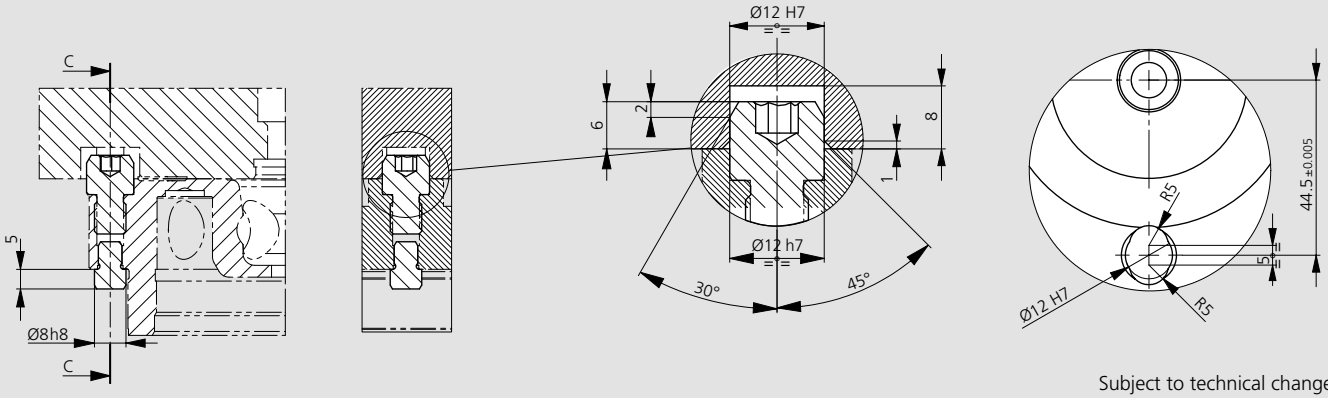
Subject to technical changes.

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

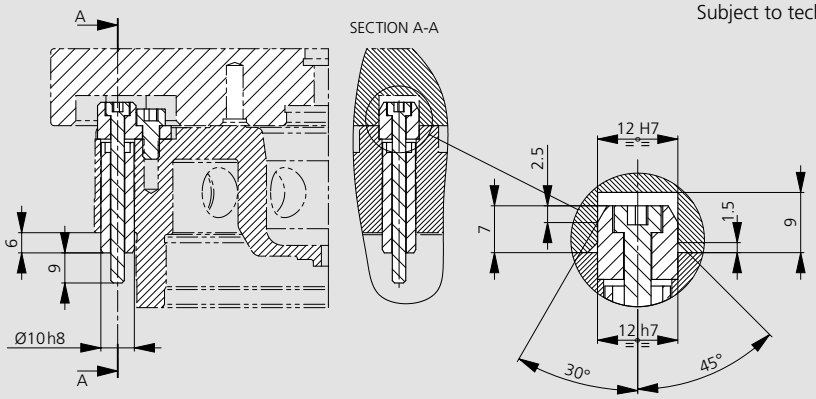


Subject to technical changes.

Id. No.
46162133 - Key kit for APS 100



Subject to technical changes.

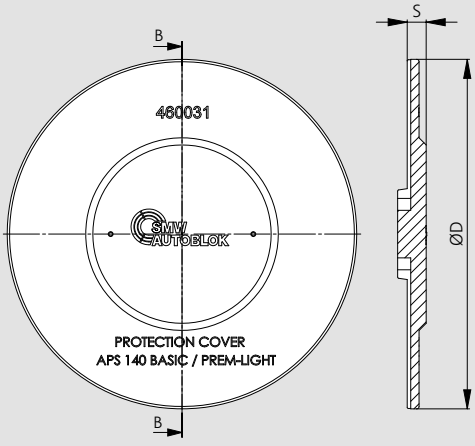


Id. No.
46162333 - Key kit for APS 140E / APS 190E
46162335 - Key kit SMF 12,5 APS 140E / APS 190E

Covers

Magnet protection covers for all APS models

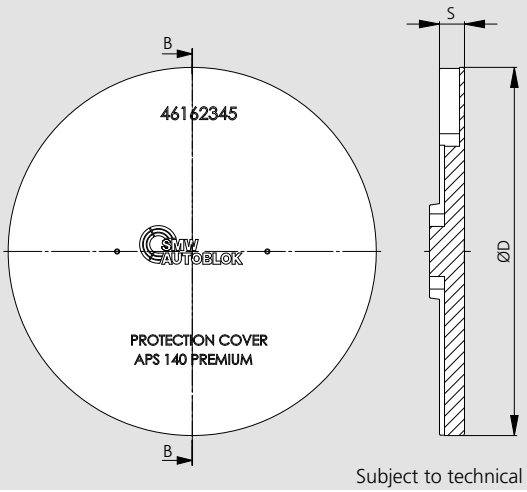
For Basic / Premium Light module



Subject to technical changes.

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

For Premium module



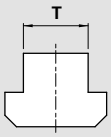
Subject to technical changes.

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 plates on the machine table from lateral sides)

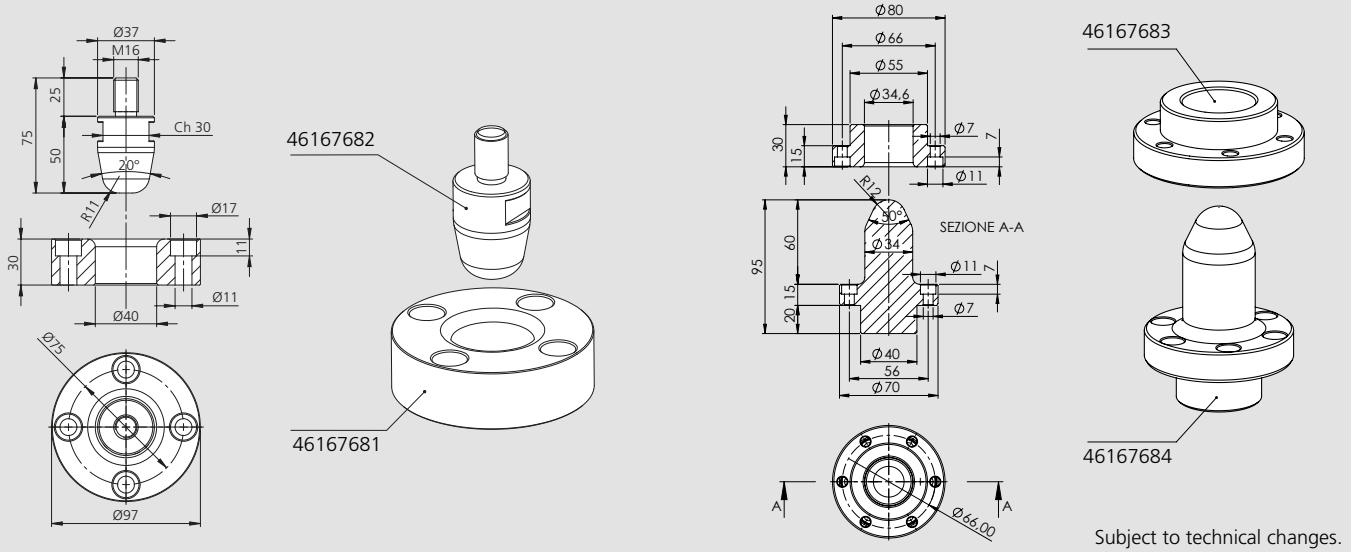




Consisting of:
Pair of clamps incl. T-nut and screw

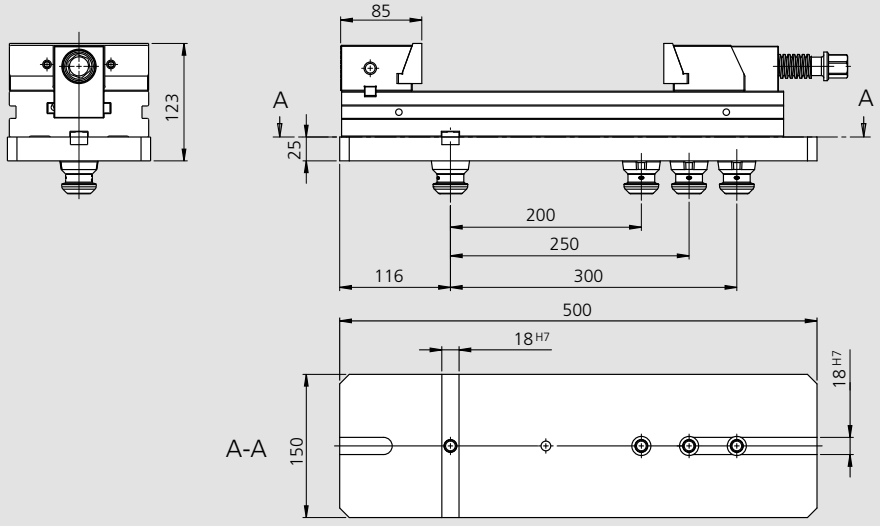
Type	Id. No.					
T	12 mm	14 mm	16 mm	18 mm	20 mm	22 mm
APS	58042792	58042793	58042794	58042795	58042796	58042797

Pre-centering



Subject to technical changes.

Interface plate for TCi / MCi 150 on APS 140

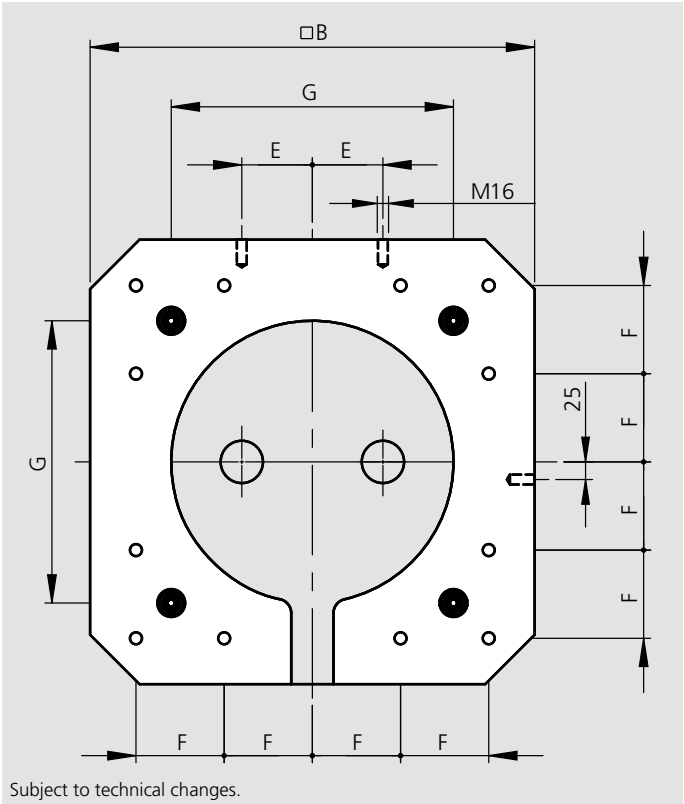


Subject to technical changes.

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.

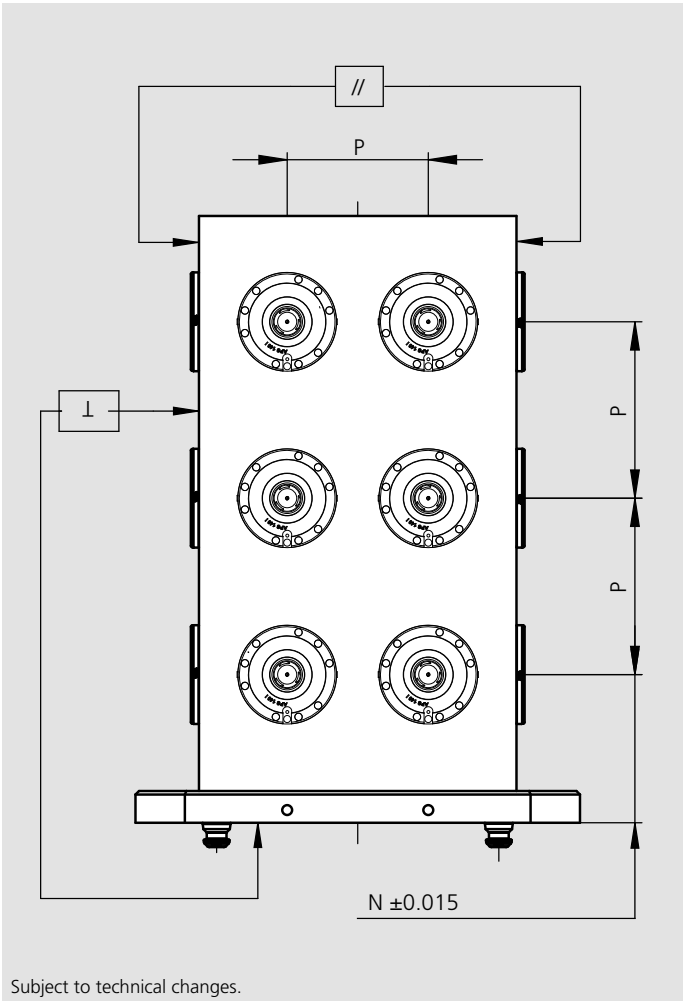
Dimensions of standard adaptation for machine tools pallet



Subject to technical changes.

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

Manufacturing tolerances

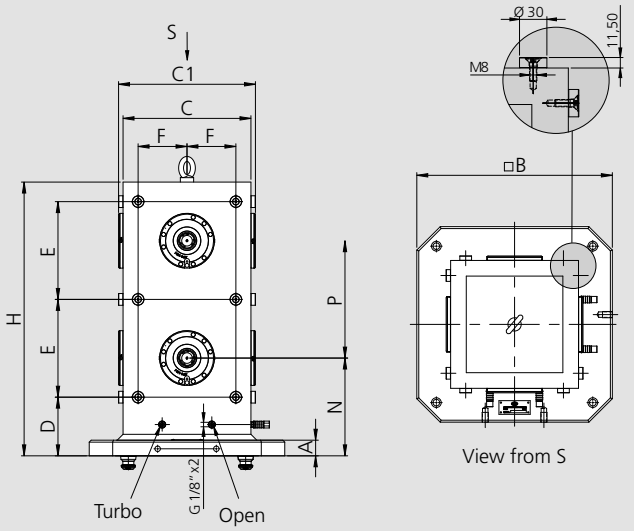


Subject to technical changes.

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

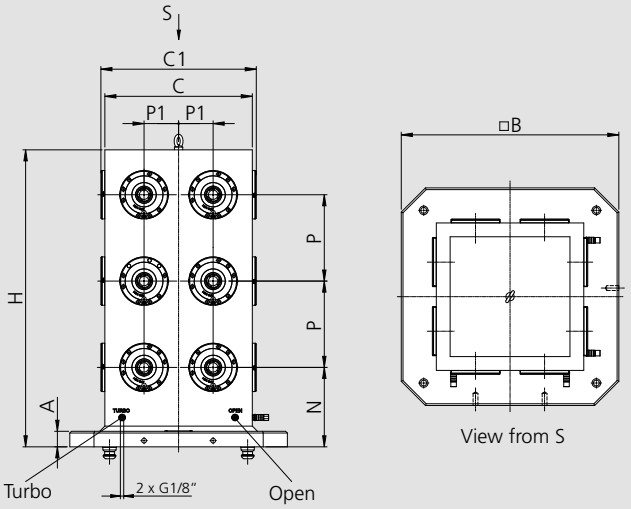
Application examples (Tombstone dimensions, type and number of modules are made according to customer specifications)

Tombstone with 8 APS modules



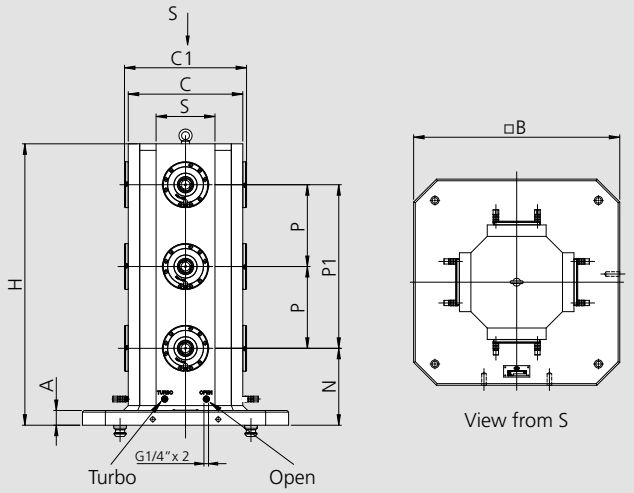
Subject to technical changes.

Tombstone with 24 APS modules



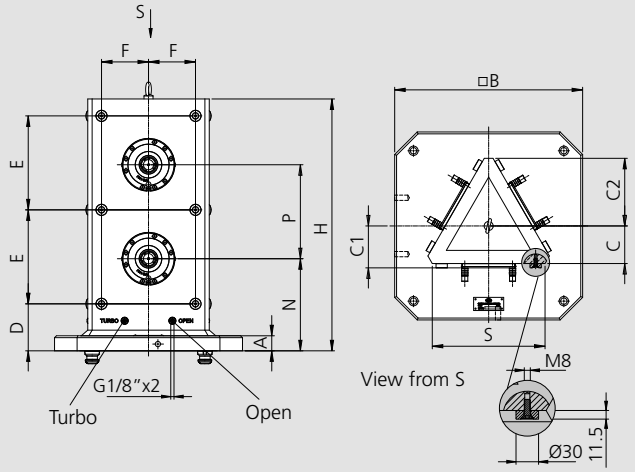
Subject to technical changes.

Tombstone with 12 APS modules



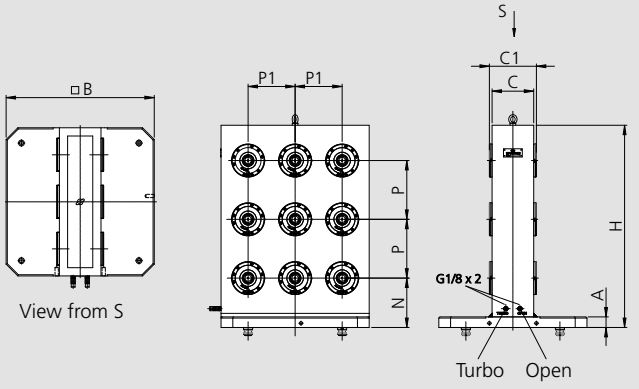
Subject to technical changes.

Tombstone with 6 APS modules



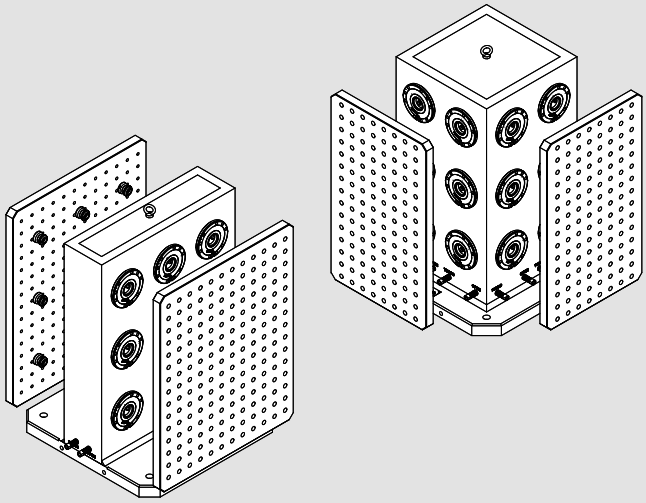
Subject to technical changes.

Crankweb with 8 APS modules



Subject to technical changes.

Tombstones



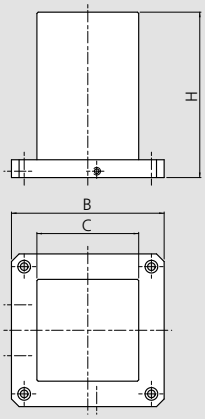
Subject to technical changes.

APS

Tombstones and crankwebs on customer request

■ Request form
■ Simply fill in and send to Sales Dept.: omlspa@omlspa.it

Tombstones

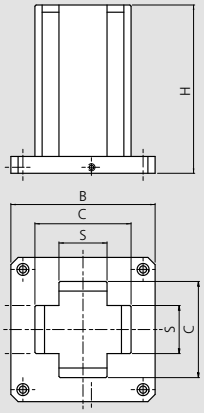


Technical data	
B	mm
C	mm
H	mm

Number of modules	
Modules type	

PREMIUM E open - Turbo	
PREMIUM LIGHT I open - Turbo	
BASIC open	

Cross Tombstones

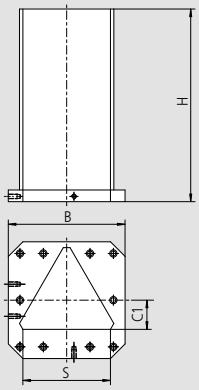


Technical data	
B	mm
C	mm
S	mm
H	mm

Number of modules	
Modules type	

PREMIUM E open - Turbo	
PREMIUM LIGHT I open - Turbo	
BASIC open	

Triangular Tombstones

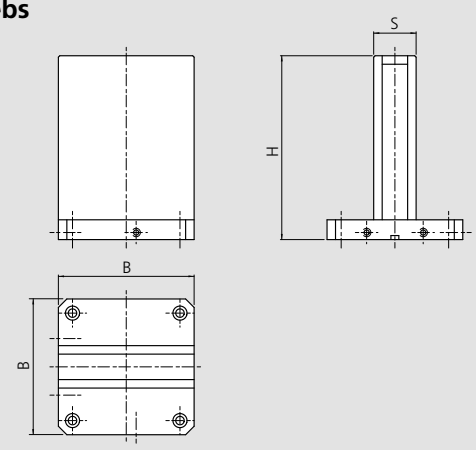


Technical data	
B	mm
C1	mm
S	mm
H	mm

Number of modules	
Modules type	

PREMIUM E open - Turbo	
PREMIUM LIGHT I open - Turbo	
BASIC open	

Crankwebs



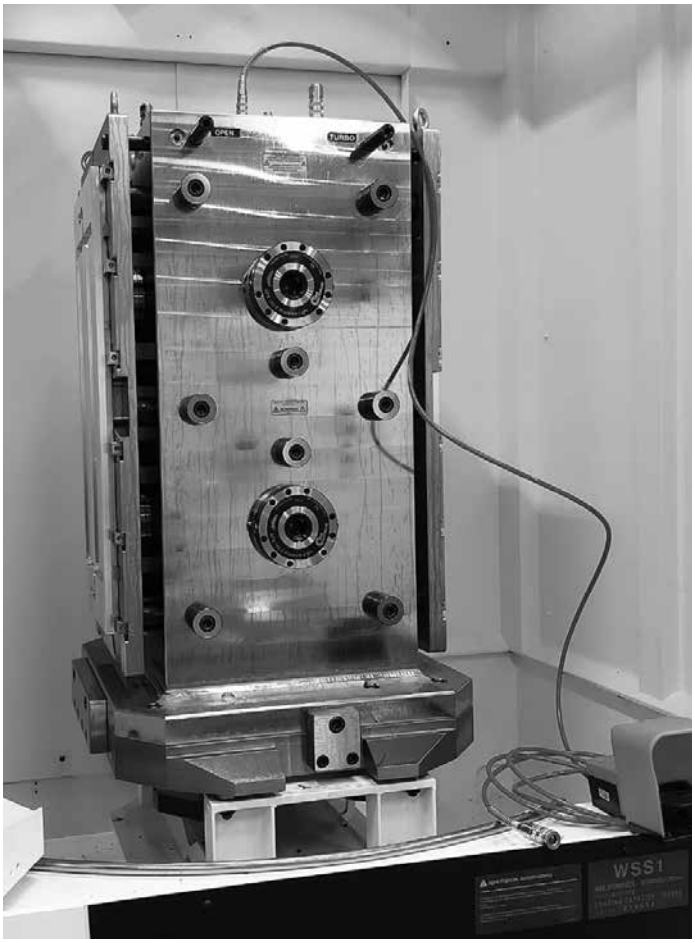
Technical data	
B	mm
S	mm
H	mm

Number of modules	
Modules type	

PREMIUM E open - Turbo	
PREMIUM LIGHT I open - Turbo	
BASIC open	

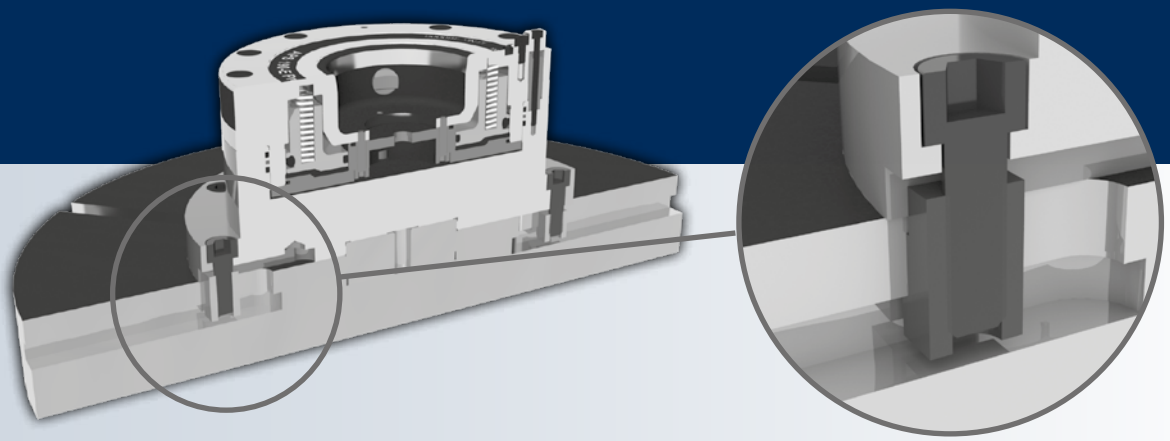





WSS1

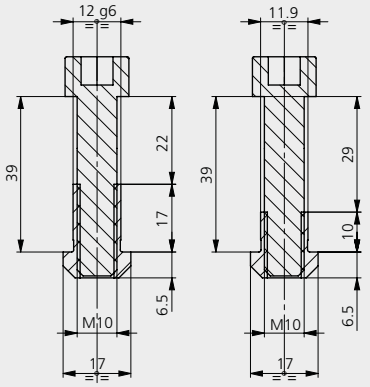
T-nuts set

for clamping unit APS and height extension APS

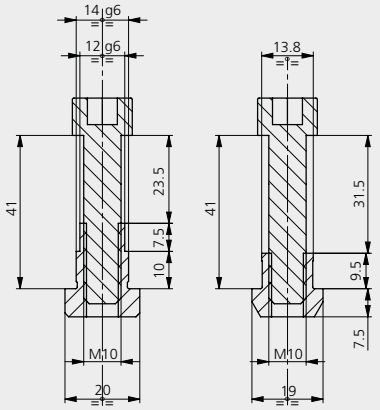


1 Set 9 T-nuts - 12-M10 for clamping unit 4 APS 140

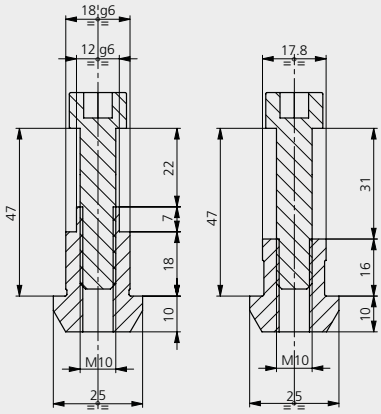
▶ T-SLOT 12
46204100



▶ T-SLOT 14
46204101

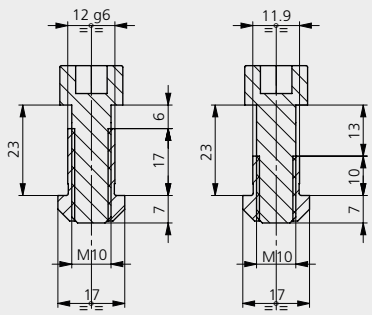


▶ T-SLOT 18
46204102

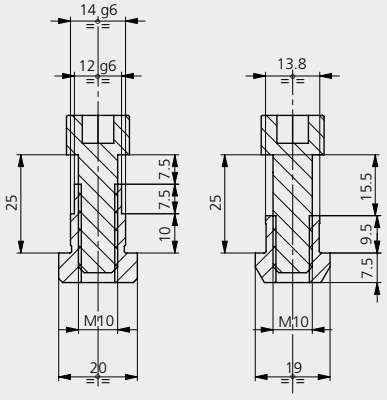


2 Set 8 T-nuts - 12-M10 for height extension APS

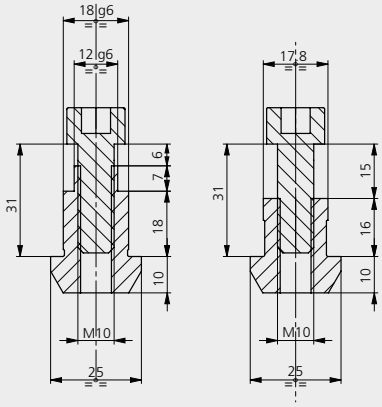
▶ T-SLOT 12
46204103



▶ T-SLOT 14
46204104



▶ T-SLOT 18
46204105



Multi plate system

■ Connection system for multiple large plates

MPS

Accessories



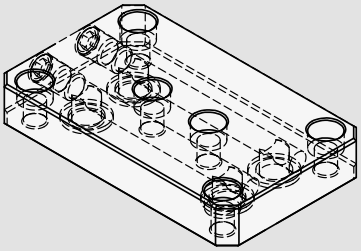
Application/customer benefits

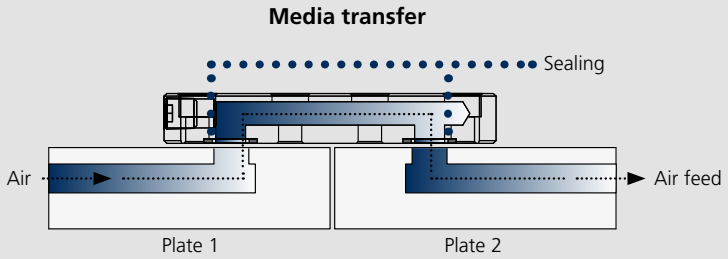
- Smart, easy and accurate solution for large plates
- Any dimension of plates for machine tool tables possible
- Safe and reliable connection between the plates
- Maintenance free
- Large entry radius of the clamping pins for easy and safe loading

Technical features

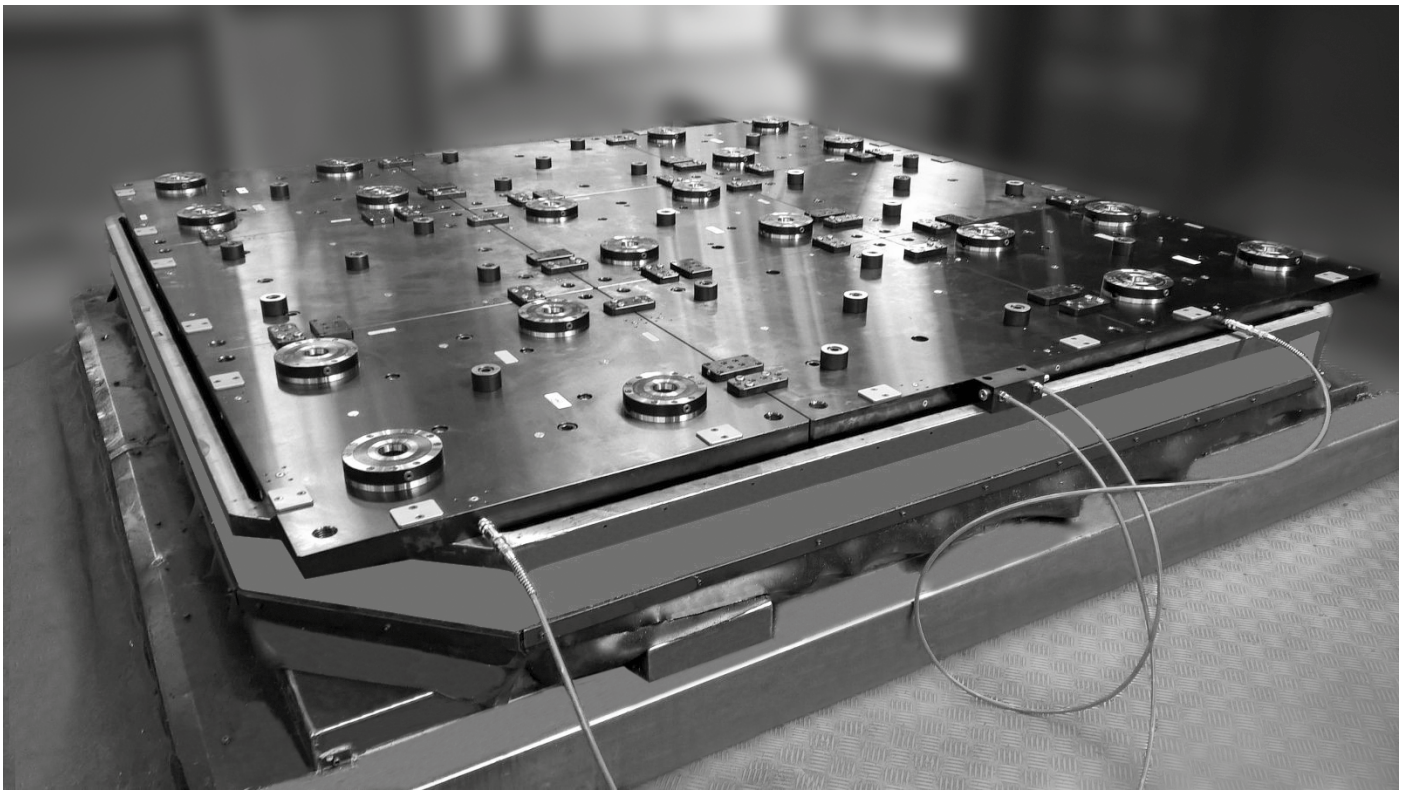
- Sealed connecting element
- Media feed trough the connecting element

Connecting element for media transfer





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

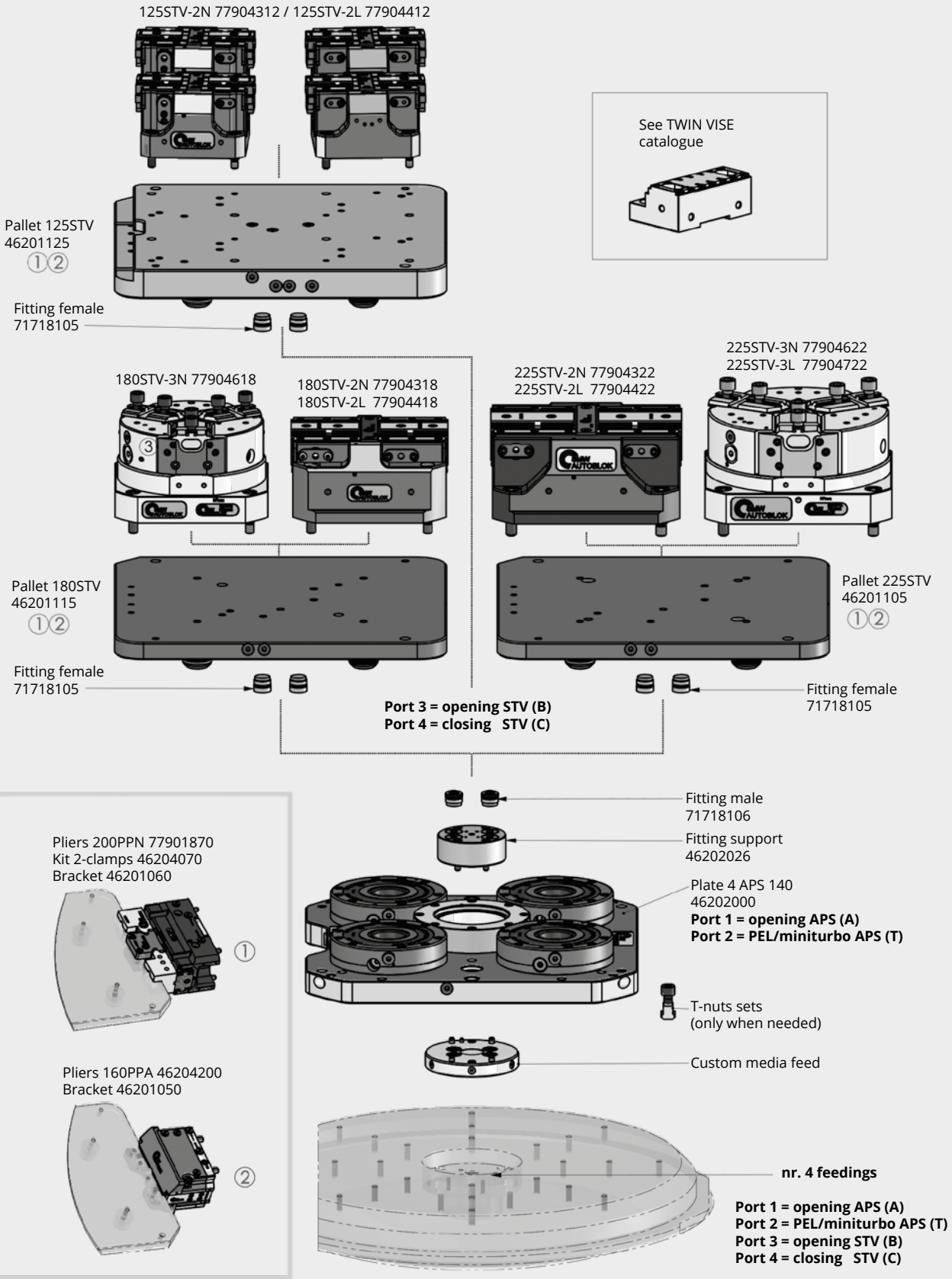
Customized setting tables
for fixture & fixture to machine

SERIES 1200

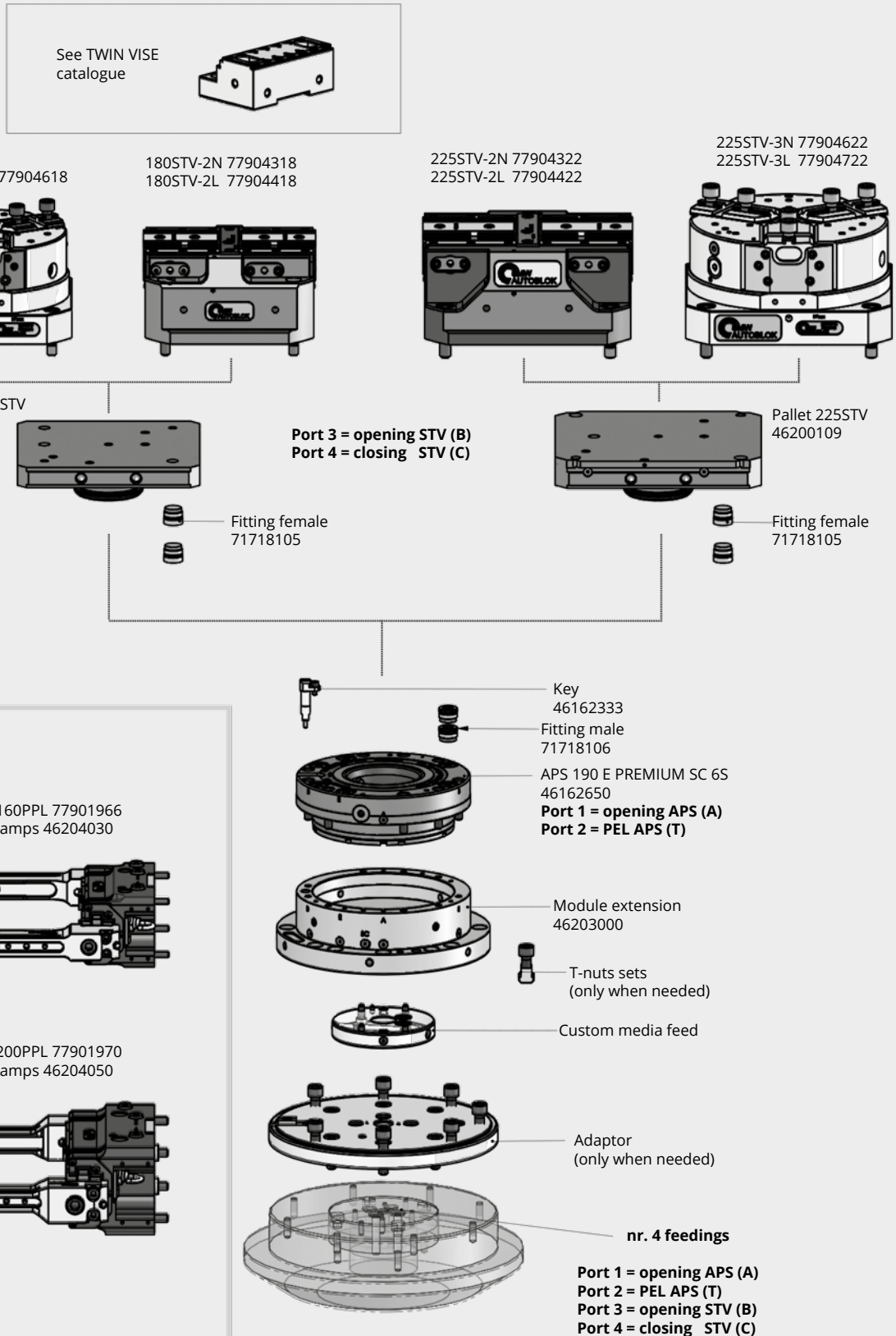


Model	Table sizes	Max. swing	Max. weight of fixture plate & component	r.p.m.	Voltage
SERIES 800	Ø 800	Ø 1100	1500 kg	0 - 3	220, 240, 380 - 480V
SERIES 1200	Ø 1200	Ø 1700	2000 kg	0 - 3	220, 240, 380 - 480V

Manual pallet exchange or with robot



Manual pallet exchange or with robot



NOTES