



MODULAR CLAMPING SYSTEMS

APS

*Automatic
Positioning
System*





**Significant reduction
of set-up times**





Zero Point Clamping System



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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

Combi Units

- Ready to use combi module units
- Different heights



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APS

Clamping Unit

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



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APS

Spacers

- Adapt one or more combi unit



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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

Clamping Pins

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



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APS

Module Height Extensions

- Ready to use single module units
- Different heights



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APS

Accessories

- Protection covers
- Pins and keys for orientation (single use)



AUTOMATIC POSITIONING SYSTEM



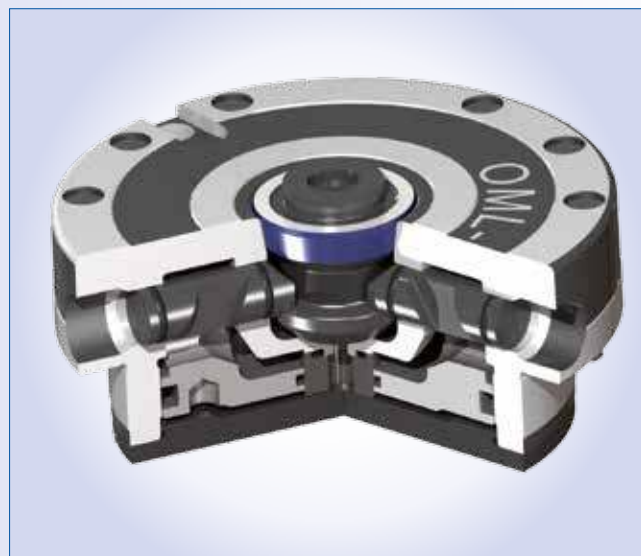
CLAMPING SYSTEM WITH 3 JAWS AT 120°

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!

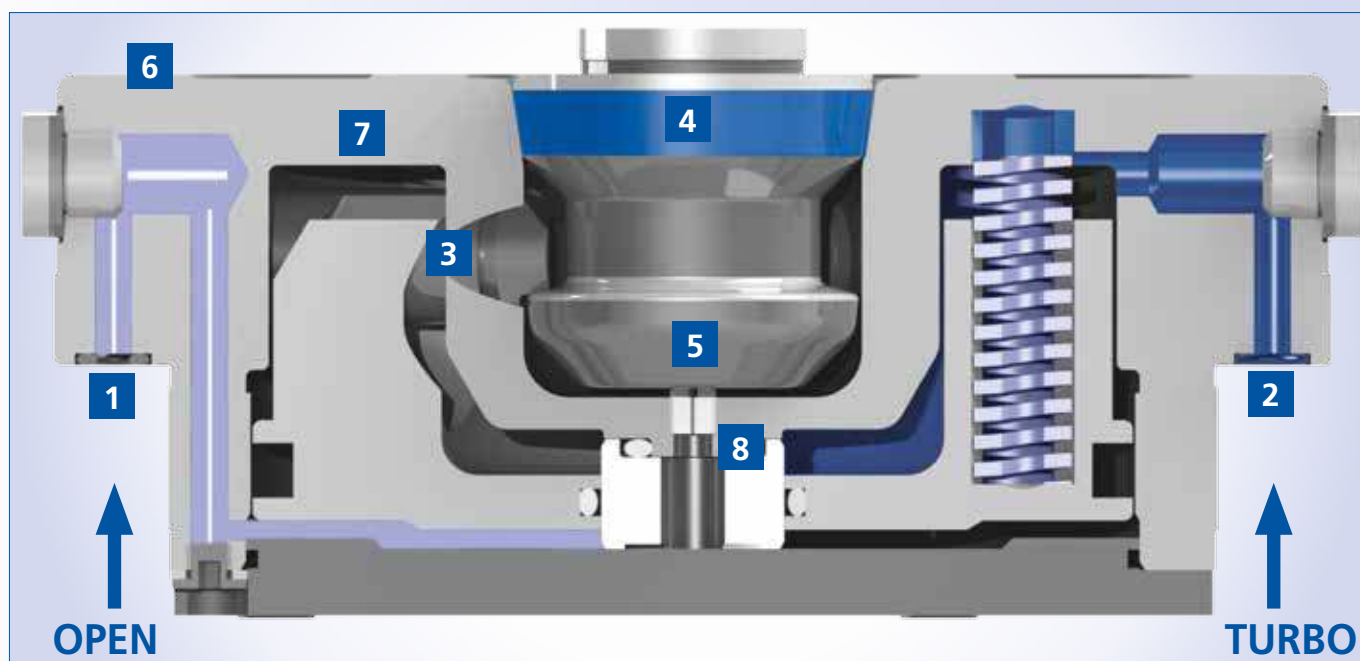
- Monolithic piston with inclined planes
- Jaws with double inclined plane which generates the "PULL DOWN" effect



MAXIMUM ACCURACY!

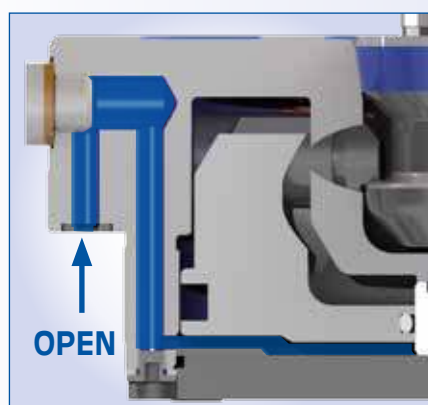
Maximum accuracy of the tapered coupling between the pin and the module

AUTOMATIC POSITIONING SYSTEM

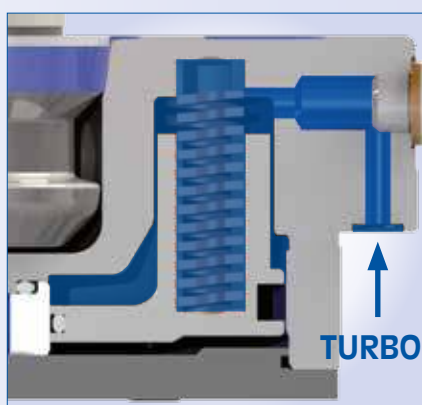


Functional Overview of the APS Zero Point Clamping System

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

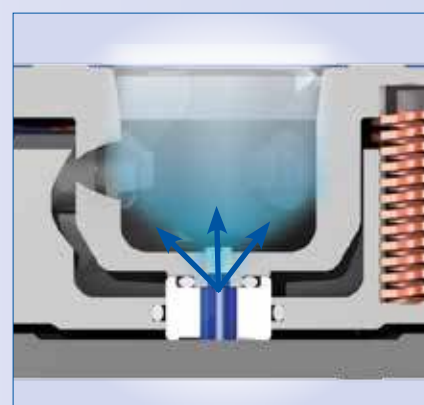


UNLOCKING FUNCTION
at 6 bar



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)

APS

ZERO POINT CLAMPING SYSTEM



INDUSTRY
4.0
Product

proofline® series
fully sealed – low maintenance

Customer Benefits

- Significantly reduced costs due to reduced set-up times
- Modular construction kit system: existing clamping systems can be modified very easy
- Low installation height due to the compact design
- Highest process reliability and repeat accuracy < 0.005 mm
- Wear-resistant and protected against rust (or stainless) due to heat treated elements and an extra hard protective coating
- Maximum pull-in forces until 45 kN (APS 190) thanks to turbo function
- Highest stiffness by means of 3 clamping slides (Premium / Top-Version)
- Fully sealed (proofline)



Overview APS Versions

BASIC



- Protective coating
- 2 Clamping slides
- Turbo function
- Rust protected
- Sealed

PREMIUM



- Protective coating
- 3 Clamping slides (not APS 100)
- Turbo function
- Monitoring via air control
- Anti rotating protection (not Premium Light)
- Air cleaning
- Rust protected
- Sealed

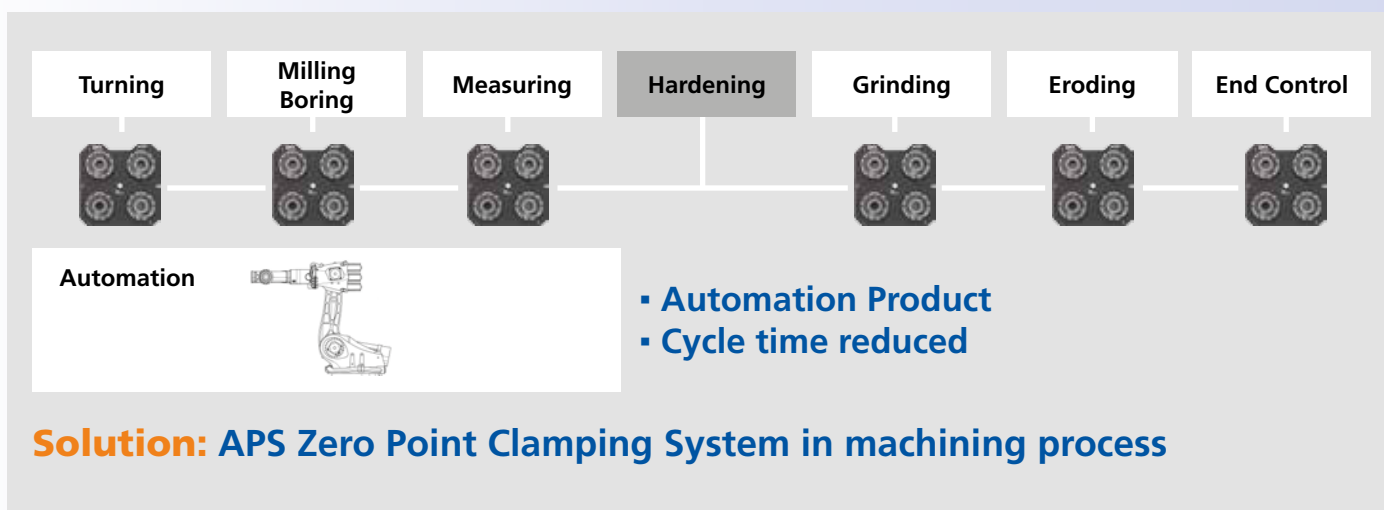
TOP



- Protective coating
- 3 Clamping slides
- Turbo function
- Monitoring via air control
- Anti rotating protection
- Air cleaning
- Stainless steel
- Rust free
- Sealed

Type	Clamping slides		Turbo	Pull-in forces with Turbo (without Turbo) kN	Anti rotating protection (for single use)	Air cleaning	Monitoring via air control	Protective coating
	3	2						
APS 100-E PREMIUM	-	●	●	15.0 (4)	●	●	●	●
APS 100-E BASIC	-	●	●	15.0 (4)	-	-	-	●
APS 140-E PREMIUM	●	-	●	26.0 (7.5)	●	●	●	●
APS 140-E PREMIUM LIGHT	●	-	●	26.0 (7.5)	-	●	-	●
APS 140-E PREMIUM INOX	●	-	●	26.0 (7.5)	●	●	●	●
APS 140-I PREMIUM	●	-	●	26.0 (7.5)	●	●	●	●
APS 140-E BASIC	-	●	●	26.0 (7.5)	-	-	-	●
APS 140-E BASIC INOX	-	●	●	26.0 (7.5)	-	-	-	●
APS 190-E PREMIUM	●	-	●	45.0 (13.5)	●	●	●	●

Machining Process with APS Zero Point Clamping System





APS

ZERO POINT CLAMPING SYSTEM

Clamping Pins

A: Centering Pin



- Type A is used for centering and clamping.

B: Sword Pin



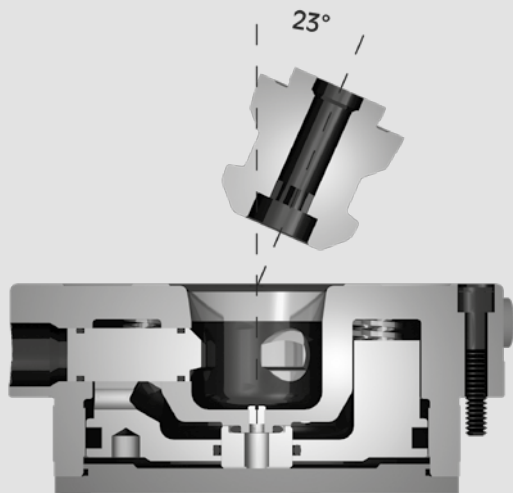
- Type B is used for reference and clamping.

C: Pull-down Pin

$\pm 0.05 \text{ mm}$



- Type C is only used for clamping.



- All clamping pins are wear-resistant and protected against rust. Large entry radii of the clamping pins ensure easy and safe loading.

Holding Forces (kN) with screw DIN EN ISO 4762 - 12.9

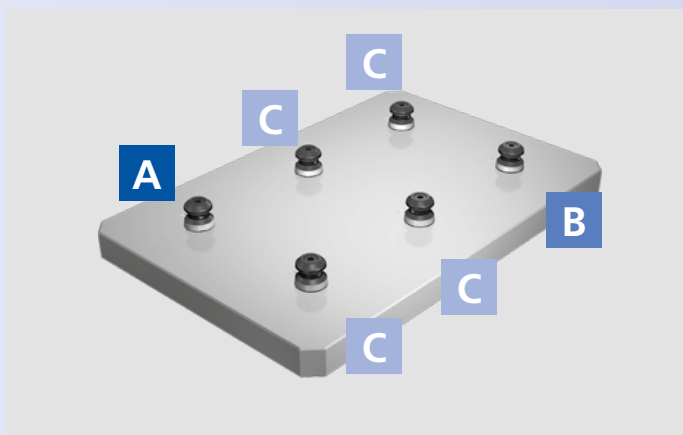
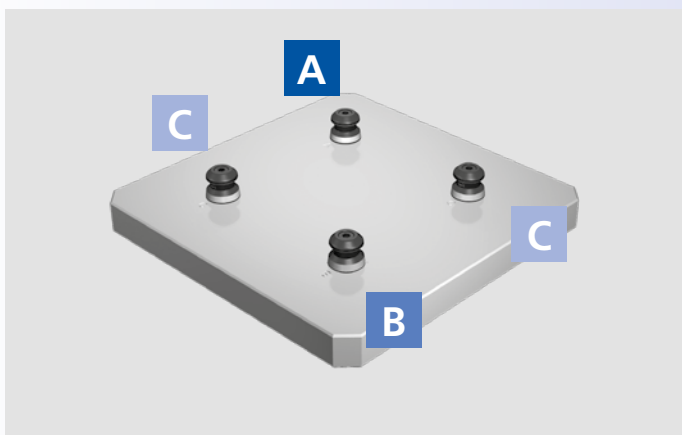
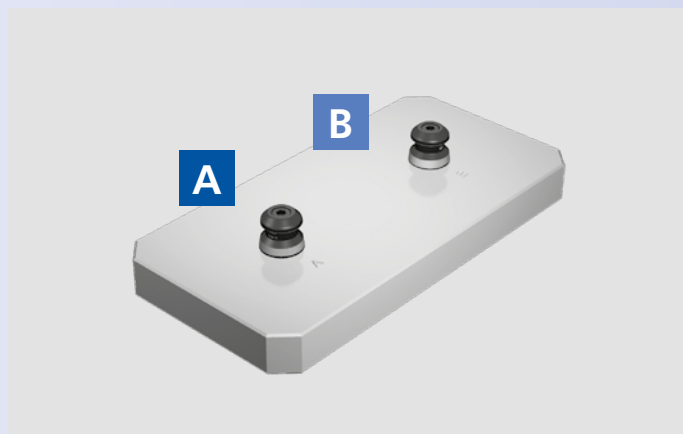
M6	M8	M10	M12	M16
15	25	35	50	75



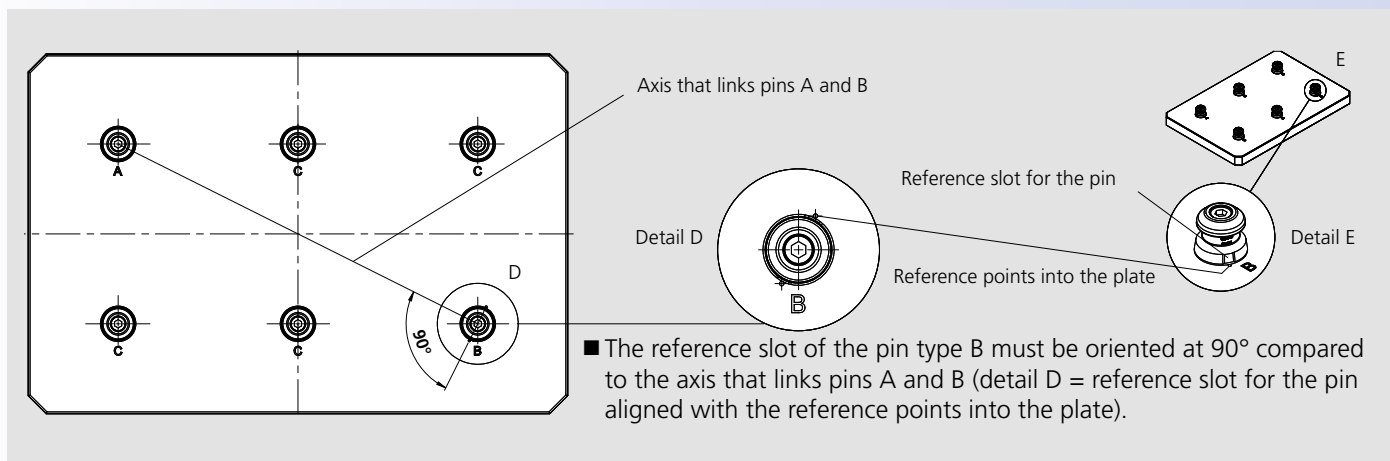
APS

ZERO POINT CLAMPING SYSTEM

Positions of the clamping pins



Positioning of the Sword Pin Type B



APS 100-E

PREMIUM

Zero Point Clamping Module

- 2 Clamping slides
- Turbo function



Application/customer benefits

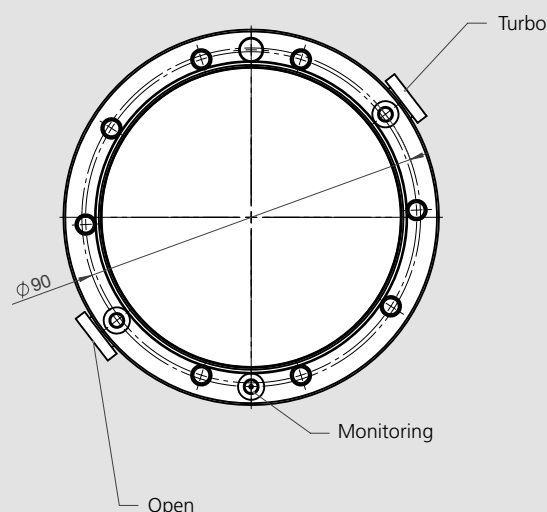
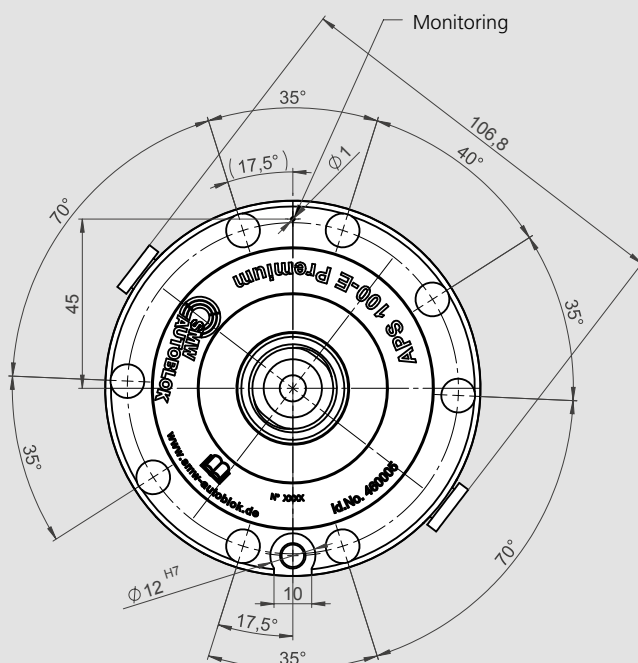
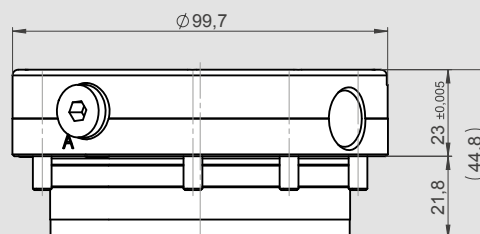
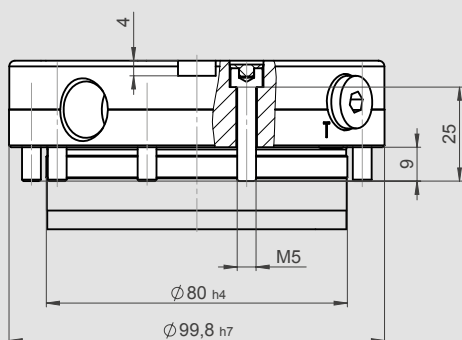
- Reduced set-up times
- Highest process reliability and repeat accuracy
- Wear-resistant and rust protected due to an extra hard protective coating
- Low maintenance
- Low installation height due to the compact design

Technical features

- 2 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 4 kN)
- Anti rotating protection
- Monitoring via air control
- Air cleaning
- Fully sealed (proofline)

Standard equipment

Zero Point Clamping Module with mounting screws



Type	Id. No.	Pull-in force with Turbo	Holding force M6/M8	Unlocking pressure	Repeatability	Weight
APS 100-E PREMIUM	460005	15 kN	15 / 25 kN	6 bar	< 0.005 mm	1.9 kg

- 2 Clamping slides
- Turbo function

BASIC

**Application/customer benefits**

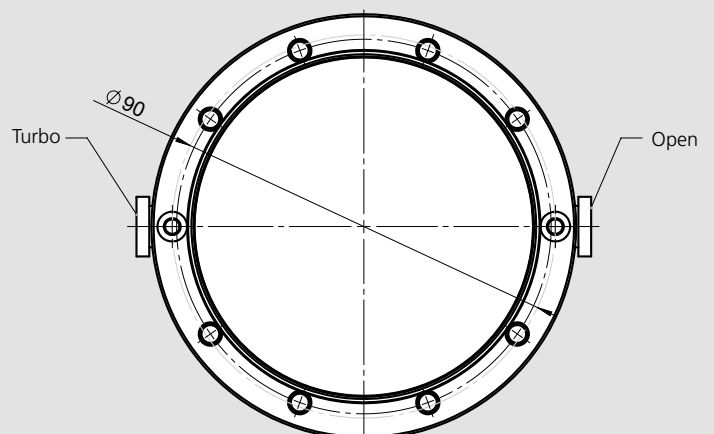
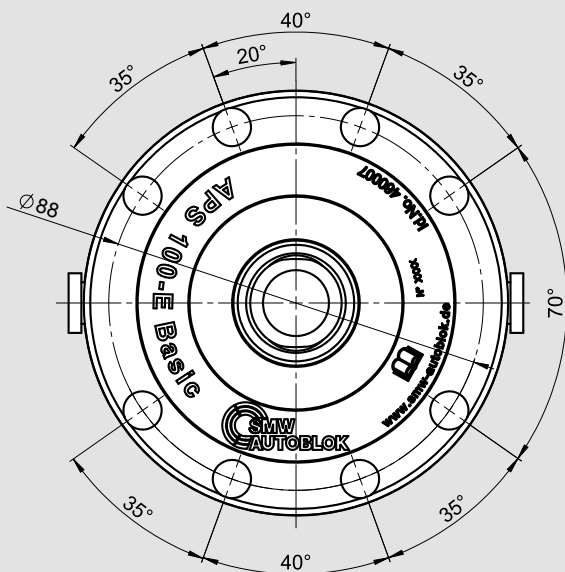
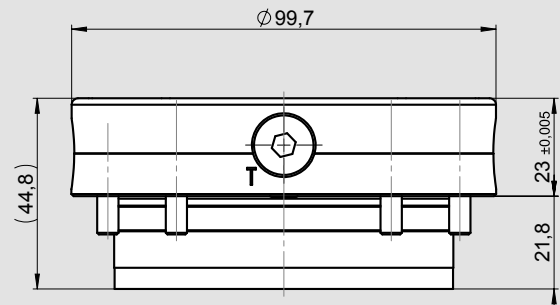
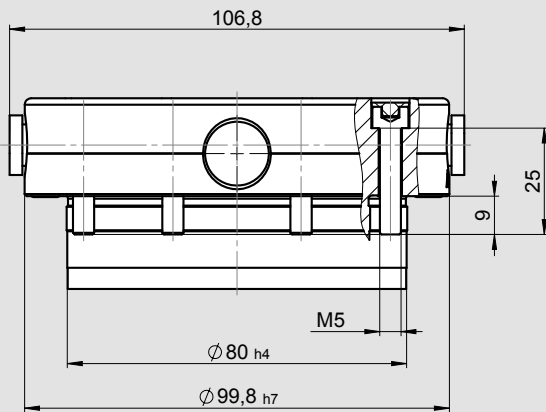
- Reduced set-up times
- Highest process reliability and repeat accuracy
- Wear-resistant and rust protected due to an extra hard protective coating
- Low maintenance
- Low installation height due to the compact design

Technical features

- 2 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 4 kN)
- Fully sealed (proofline)

Standard equipment

Zero Point Clamping Module with mounting screws



Type	Id. No.	Pull-in force with Turbo	Holding force M6/M8	Unlocking pressure	Repeatability	Weight
APS 100-E BASIC	460007	15.0 kN	15 / 25 kN	6 bar	< 0.005 mm	1.9 kg

APS 140-E

PREMIUM

Zero Point Clamping Module

- 3 Clamping slides
- Turbo function

Application/customer benefits

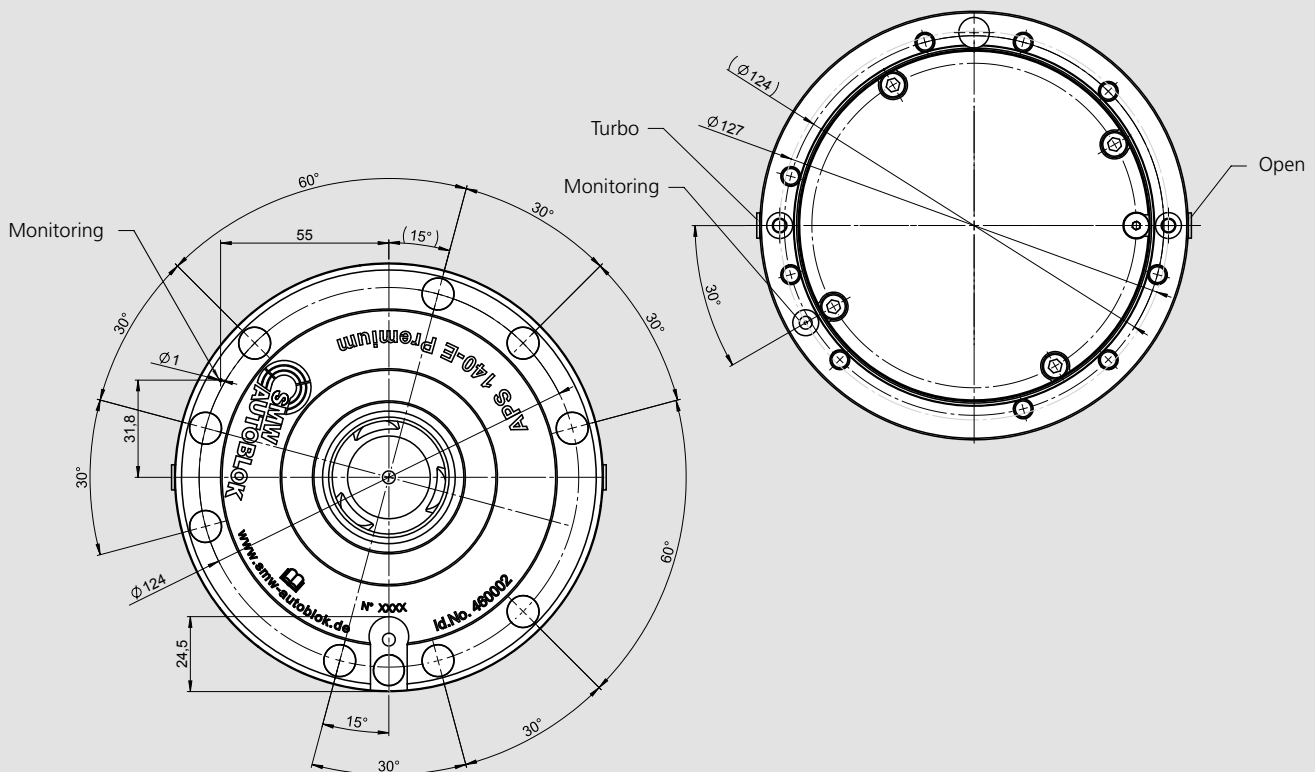
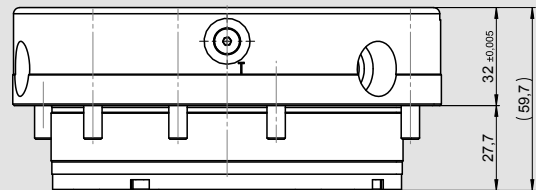
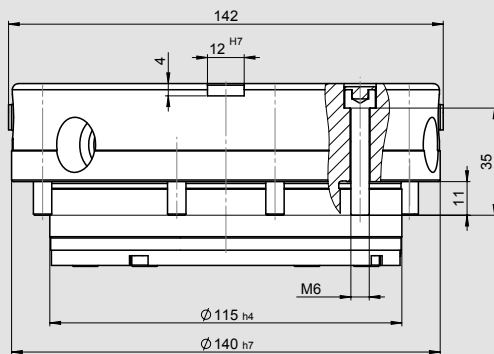
- Reduced set-up times
- Highest process reliability and repeat accuracy
- Wear-resistant and rust protected due to an extra hard protective coating
- Low maintenance
- Low installation height due to the compact design

Technical features

- 3 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Anti rotating protection
- Monitoring via air control
- Air cleaning
- Fully sealed (proofline)

Standard equipment

Zero Point Clamping Module with mounting screws



Type	Id. No.	Pull-in force with Turbo	Holding force M10/M12/M16	Unlocking pressure	Repeatability	Weight
APS 140-E PREMIUM	460002	26 kN	35/50/75 kN	6 bar	< 0.005 mm	4.5 kg

- 3 Clamping slides
- Turbo function

PREMIUM LIGHT

**Application/customer benefits**

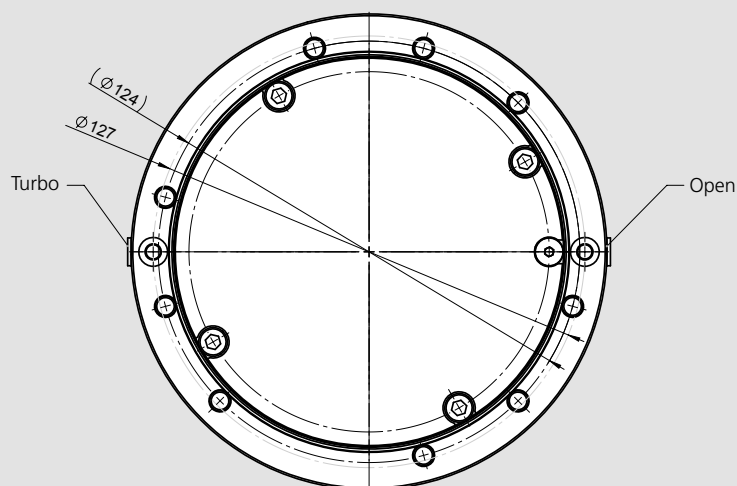
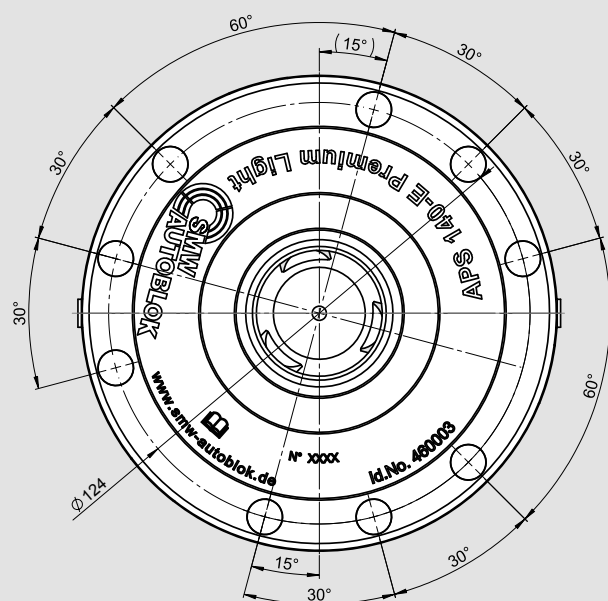
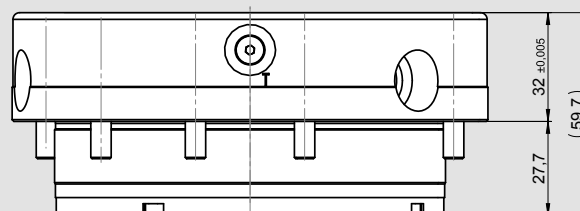
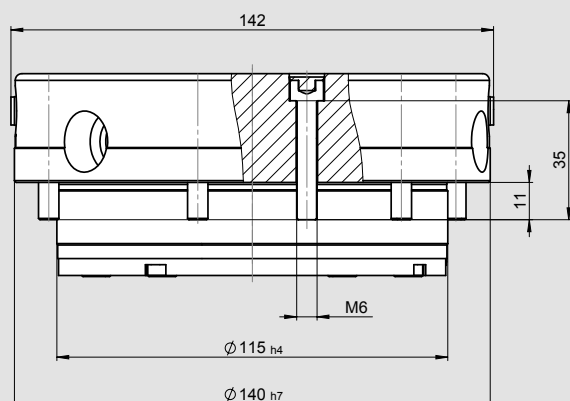
- Reduced set-up times
- Highest process reliability and repeat accuracy
- Wear-resistant and rust protected due to an extra hard protective coating
- Low maintenance
- Low installation height due to the compact design

Technical features

- 3 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Air cleaning
- Fully sealed (proofline)

Standard equipment

Zero Point Clamping Module with mounting screws



Type	Id. No.	Pull-in force with Turbo	Holding force M10/M12/M16	Unlocking pressure	Repeatability	Weight
APS 140-E PREMIUM LIGHT	460003	26 kN	35/50/75 kN	6 bar	< 0.005 mm	4.5 kg

APS 140-E

PREMIUM INOX

Zero Point Clamping Module

- 3 Clamping slides
- Turbo function

Application/customer benefits

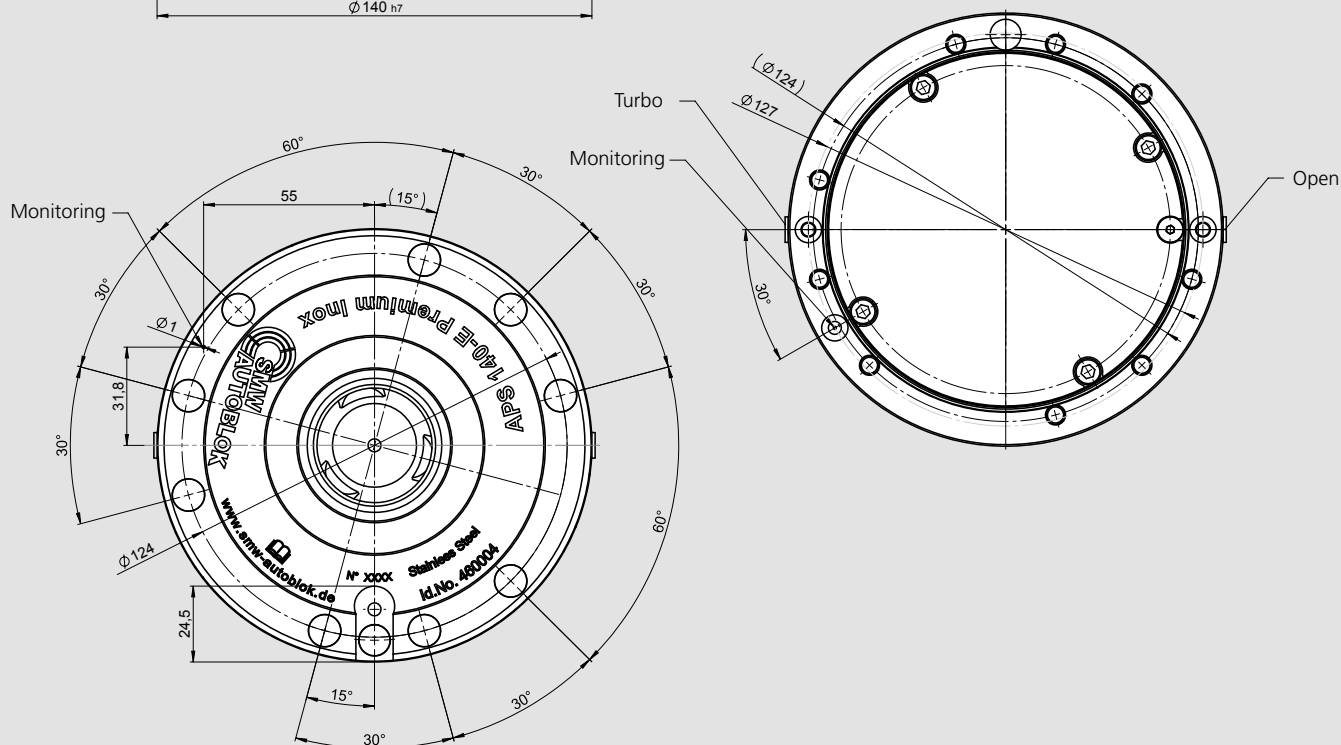
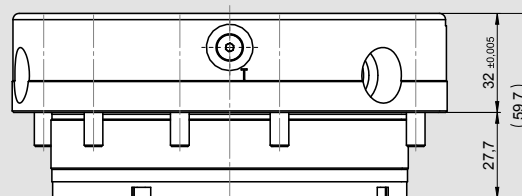
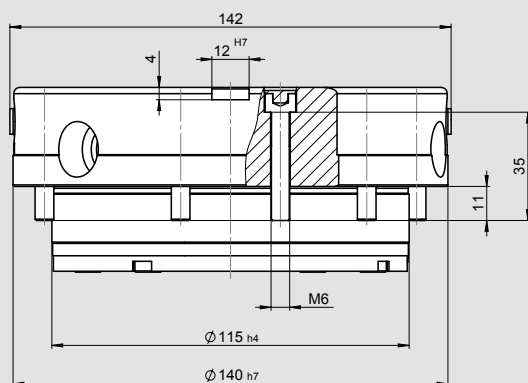
- Reduced set-up times
- Highest process reliability and repeat accuracy
- Wear-resistant and rust free due to an extra hard protective coating (stainless steel)
- Low maintenance
- Low installation height due to the compact design

Technical features

- 3 Clamping slides
- Repeatability < 0.005 mm
- Stainless steel version
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Anti rotating protection
- Monitoring via air control
- Air cleaning
- Fully sealed (proofline)

Standard equipment

Zero Point Clamping Module with mounting screws



Type	Id. No.	Pull-in force with Turbo	Holding force M10/M12/M16	Unlocking pressure	Repeatability	Weight
APS 140-E PREMIUM INOX	460004	26 kN	35/50/75 kN	6 bar	< 0.005 mm	4.5 kg

- 3 Clamping slides
- Turbo function

PREMIUM



Application/customer benefits

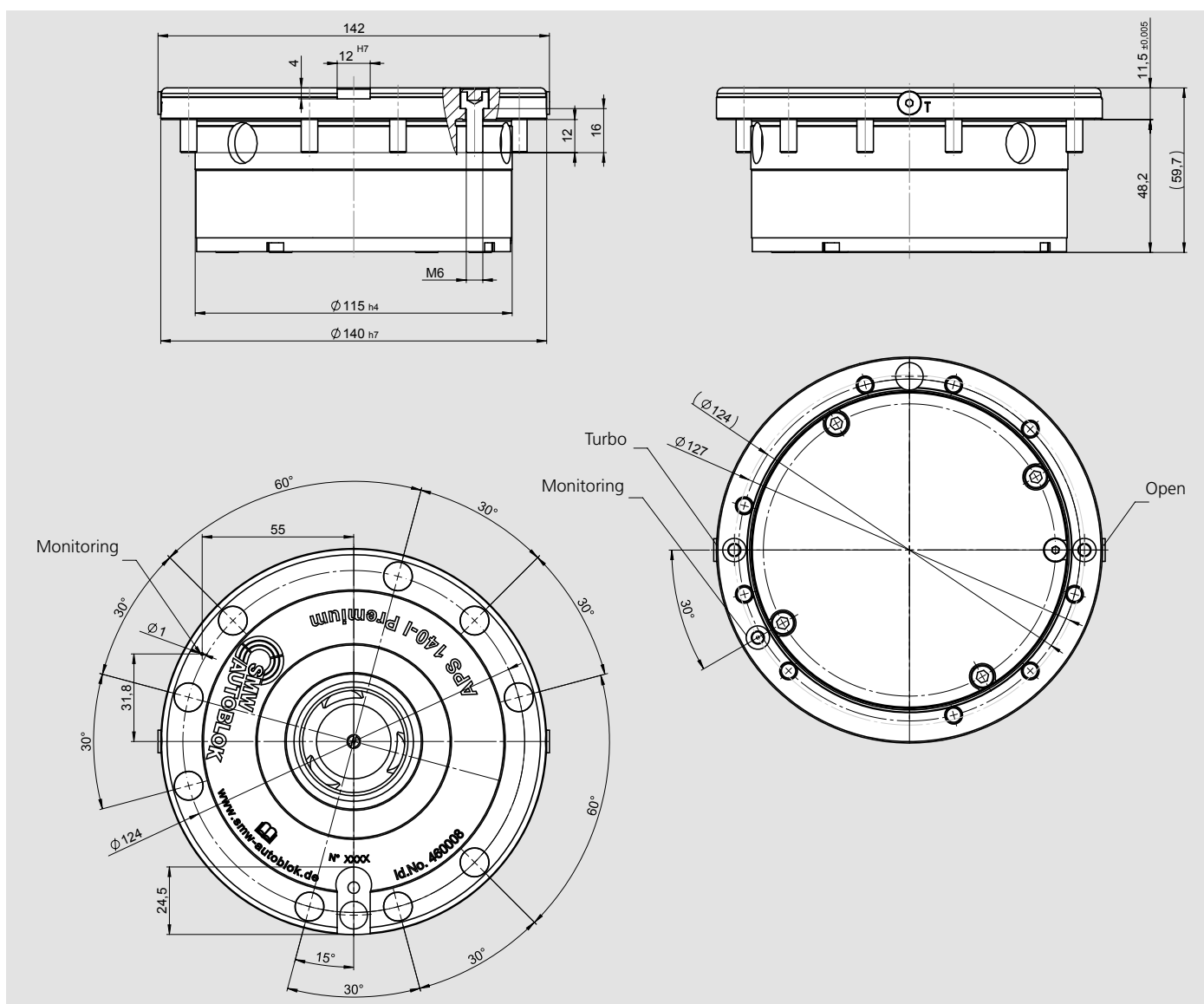
- Reduced set-up times
- Highest process reliability and repeat accuracy
- Wear-resistant and rust protected due to an extra hard protective coating
- Low maintenance
- Integration module for extra low installation height

Technical features

- 3 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Anti rotating protection
- Monitoring via air control
- Air cleaning
- Fully sealed (proofline)

Standard equipment

Zero Point Clamping Module with mounting screws



Type	Id. No.	Pull-in force with Turbo	Holding force M10/M12/M16	Unlocking pressure	Repeatability	Weight
APS 140-I PREMIUM	460008	26 kN	35/50/75 kN	6 bar	< 0.005 mm	4.5 kg

APS 140-E

BASIC

Zero Point Clamping Module

- 2 Clamping slides
- Turbo function

Application/customer benefits

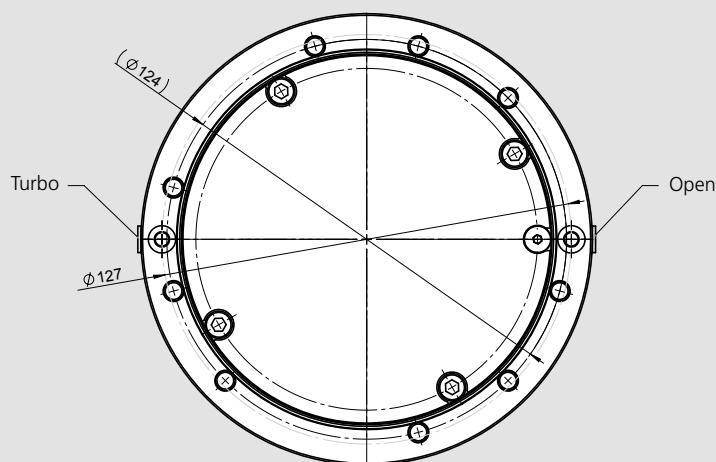
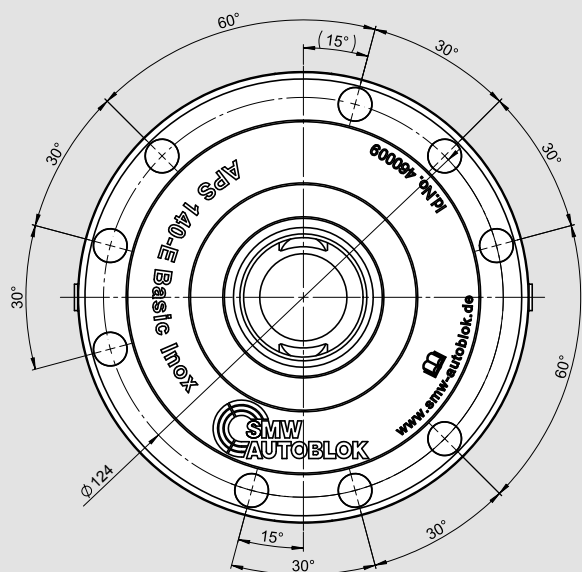
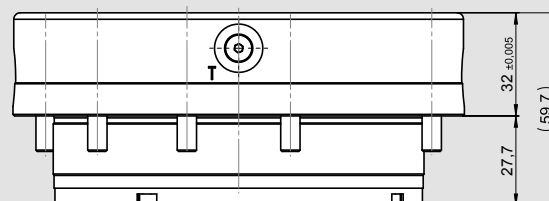
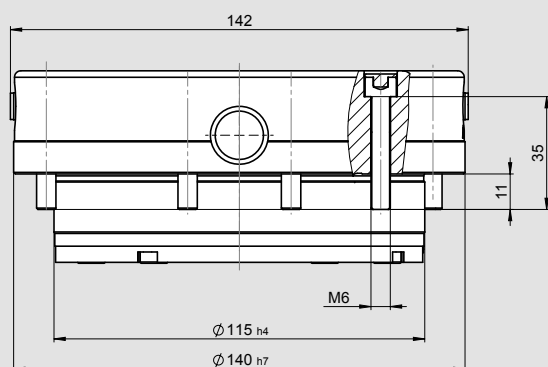
- Reduced set-up times
- Highest process reliability and repeat accuracy
- Wear-resistant and rust protected due to an extra hard protective coating
- Low maintenance
- Low installation height due to the compact design

Technical features

- 2 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Fully sealed (proofline)

Standard equipment

Zero Point Clamping Module with mounting screws



Type	Id. No.	Pull-in force with Turbo	Holding force M10/M12/M16	Unlocking pressure	Repeatability	Weight
APS 140-E BASIC	460001	26 kN	35/50/75 kN	6 bar	< 0.005 mm	4.5 kg

- 2 Clamping slides
- Turbo function

BASIC INOX



Application/customer benefits

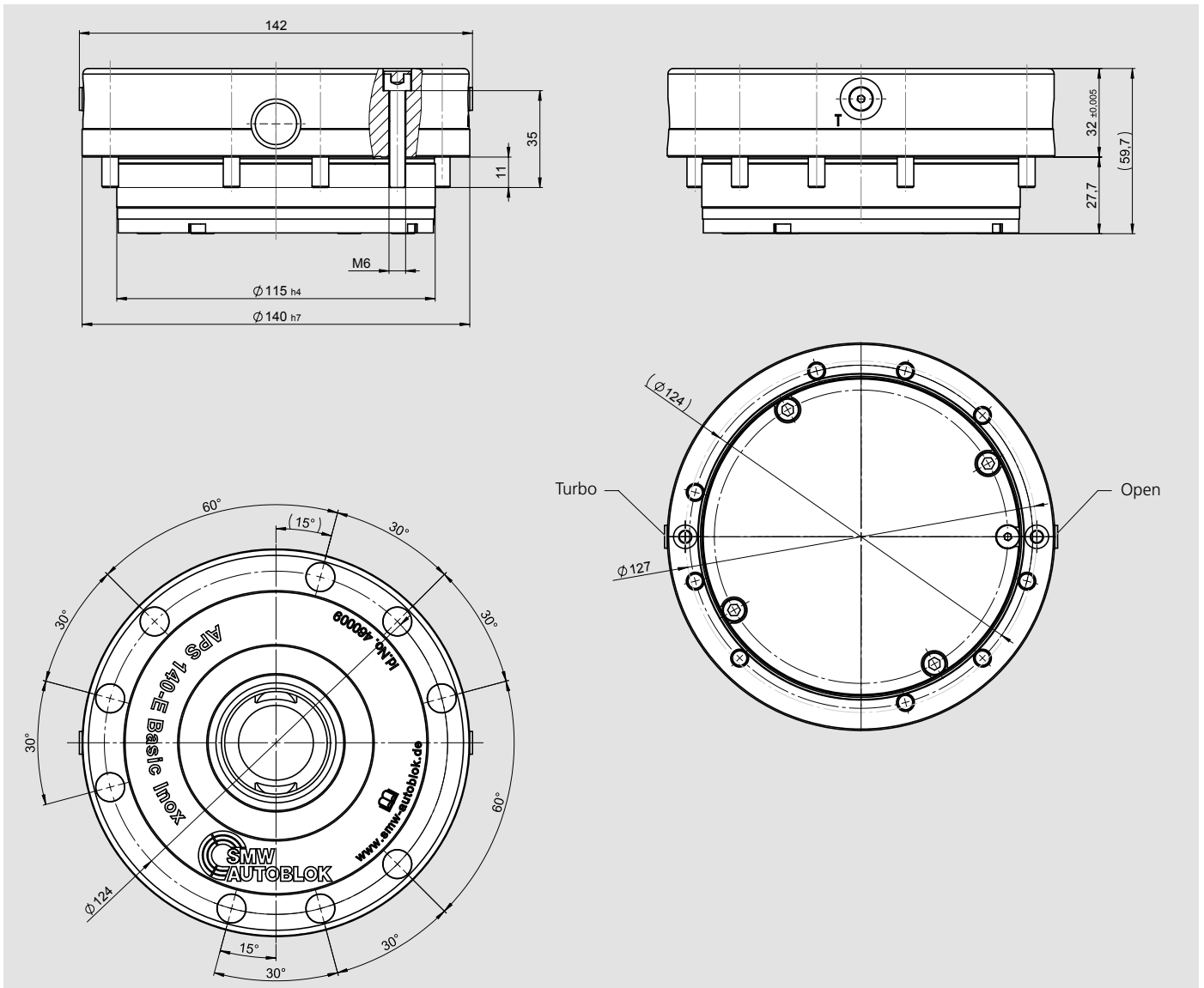
- Reduced set-up times
- Highest process reliability and repeat accuracy
- Wear-resistant and rust free due to an extra hard protective coating (stainless steel)
- Low maintenance
- Low installation height due to the compact design

Technical features

- 2 Clamping slides
- Repeatability < 0.005 mm
- Stainless steel version
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Fully sealed (proofline)

Standard equipment

Zero Point Clamping Module with mounting screws



Type	Id. No.	Pull-in force with Turbo	Holding force M10/M12/M16	Unlocking pressure	Repeatability	Weight
APS 140-E BASIC INOX	460009	26 kN	35/50/75 kN	6 bar	< 0.005 mm	4.5 kg

APS 190-E

PREMIUM

Zero Point Clamping Module

- 3 Clamping slides
- Turbo function

Application/customer benefits

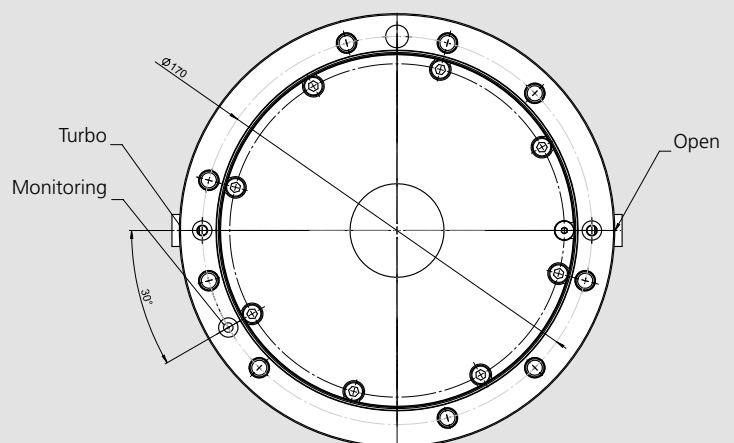
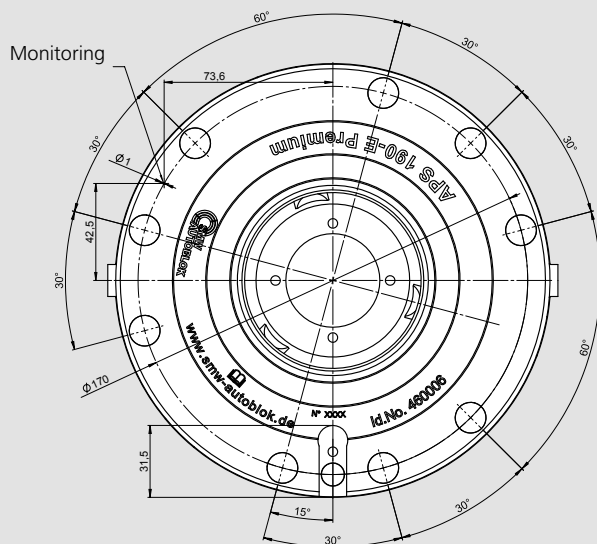
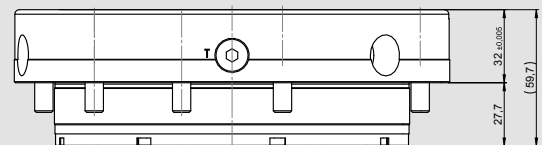
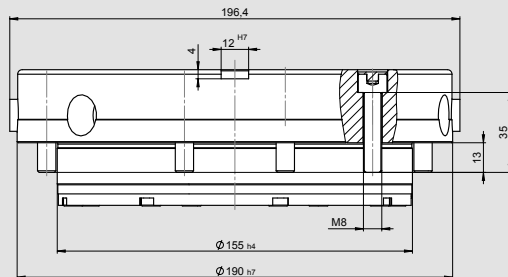
- Reduced set-up times
- Highest process reliability and repeat accuracy
- Wear-resistant and rust protected due to an extra hard protective coating
- Low maintenance
- Low installation height due to the compact design

Technical features

- 3 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 13.5 kN)
- Anti rotating protection
- Monitoring via air control
- Air cleaning
- Fully sealed (proofline)

Standard equipment

Zero Point Clamping Module with mounting screws

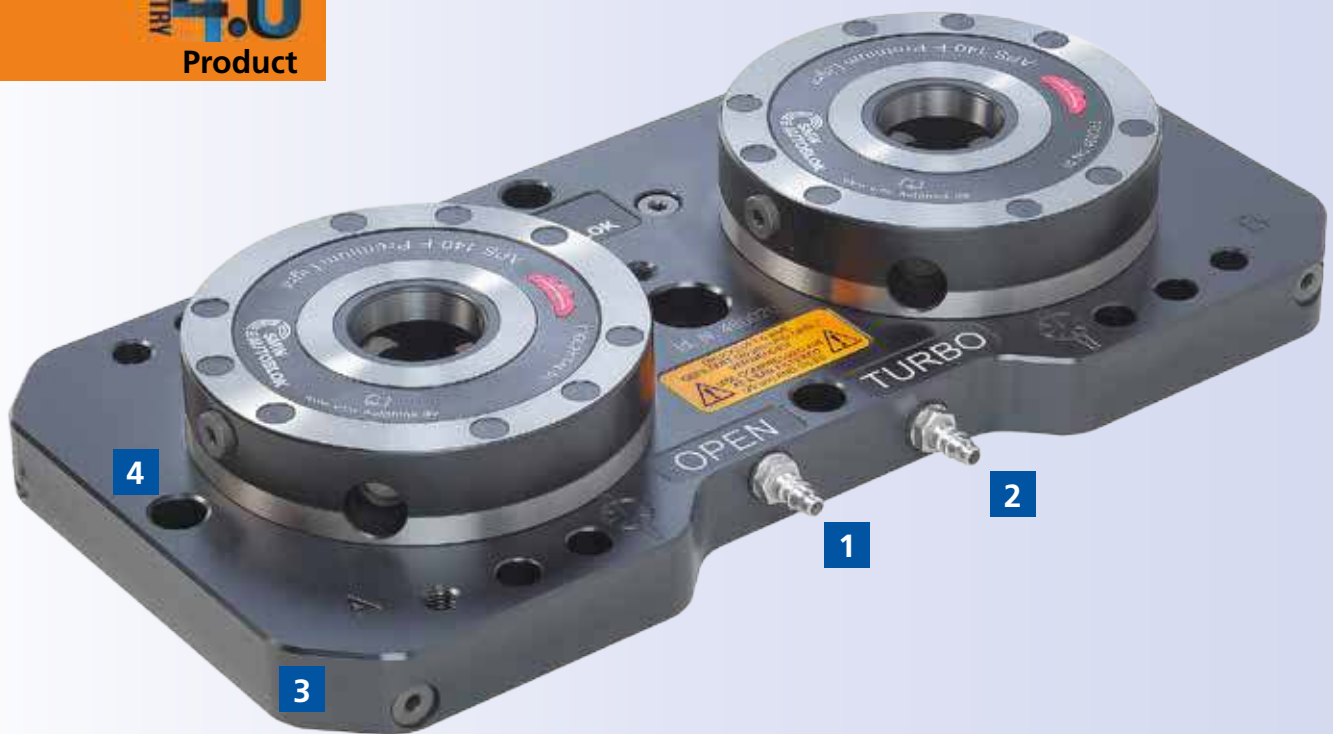


Type	Id. No.	Pull-in force with Turbo	Holding force M12/M16	Unlocking pressure	Repeatability	Weight
APS 190-E PREMIUM	460006	45 kN	50/75 kN	6 bar	< 0.005 mm	6.9 kg

APS

Clamping unit fully assembled ready for use

INDUSTRY
4.0
Product



Functional Overview of the APS Clamping Units

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



Application/customer benefits

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

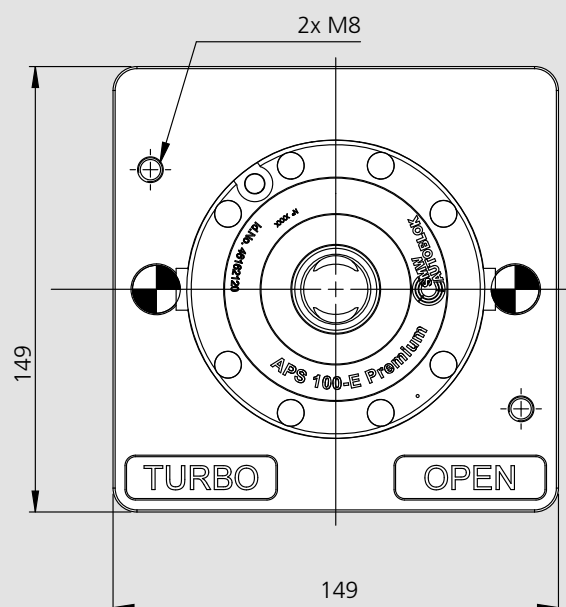
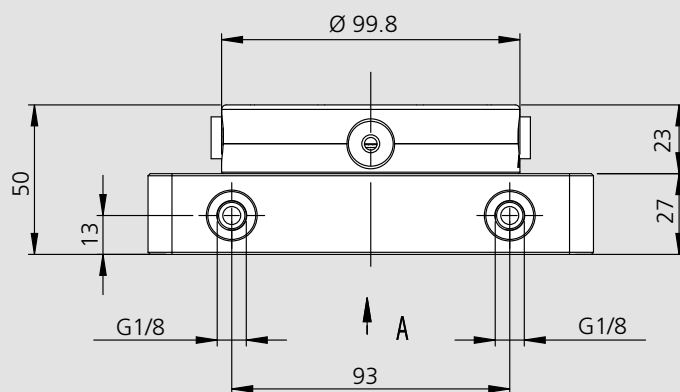
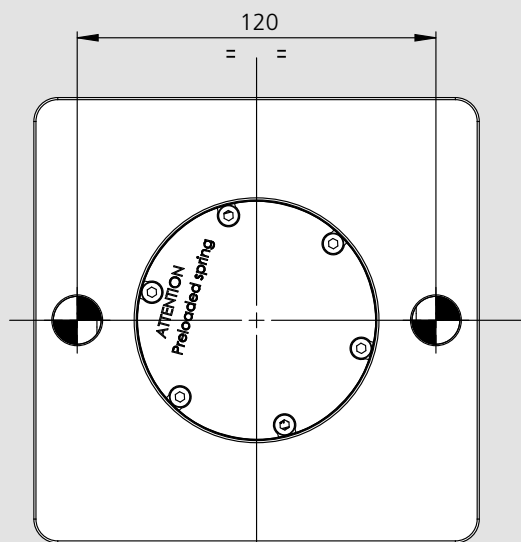
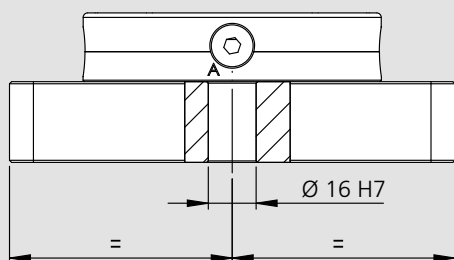
Technical features

- 2 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 4 kN)
- Anti rotating protection
- Air cleaning

Standard equipment

Clamping unit with APS 100 Premium

For clamping pallets please see next catalog pages



Type	Id. No.	Pull-in force with Turbo kN	Holding force M6/M8 kN	Repeatability mm	Weight kg
Clamping unit with 1 APS 100 Premium	46168280	15	15/25	< 0.005	5.5



Application/customer benefits

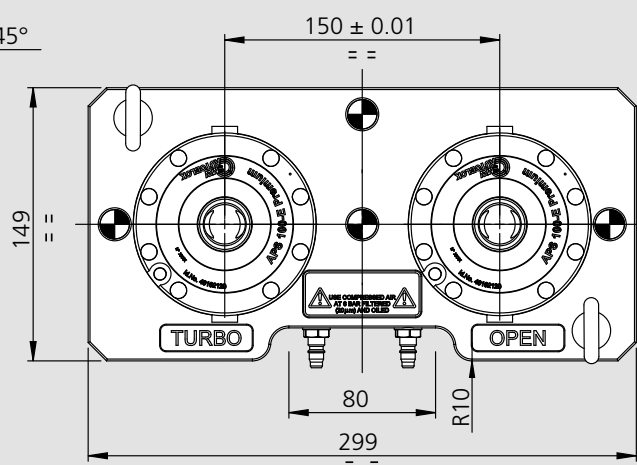
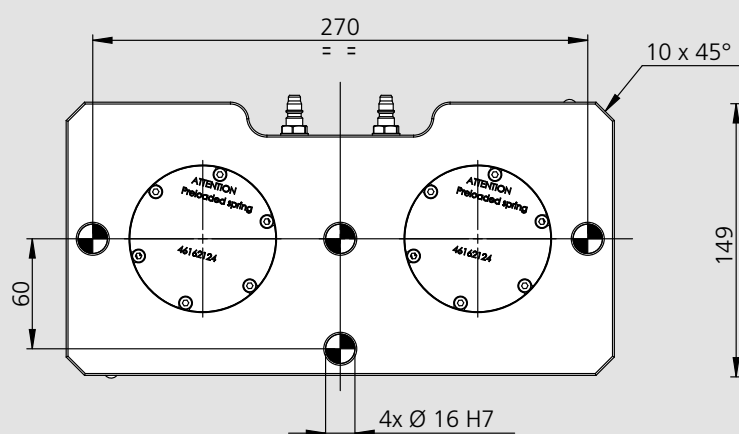
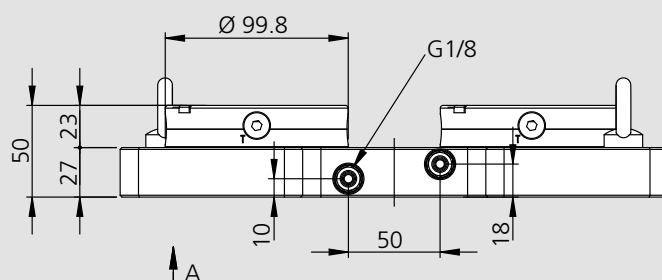
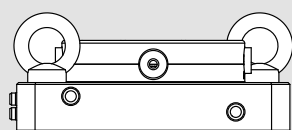
- Pre-assembled clamping unit with 2 pieces APS 100 Premium or Basic
- Universal applicable
- Fast and easy set-up

Technical features

- 2 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 4 kN)
- Air cleaning (only Premium)
- Anti rotating protection (only Premium)
- Grid dimension 150 mm

Standard equipment

Clamping unit with 2 pieces APS 100 Premium or Basic
For clamping pallets please see next catalog pages



Type	Id. No.	Pull-in force with Turbo kN	Holding force M6/M8 kN	Repeatability mm	Weight kg
Clamping unit with 2 APS 100 Premium	46168290	15	15/25	< 0.005	10.5
Clamping unit with 2 APS 100 Basic	46168295	15	15/25	< 0.005	10.5



Application/customer benefits

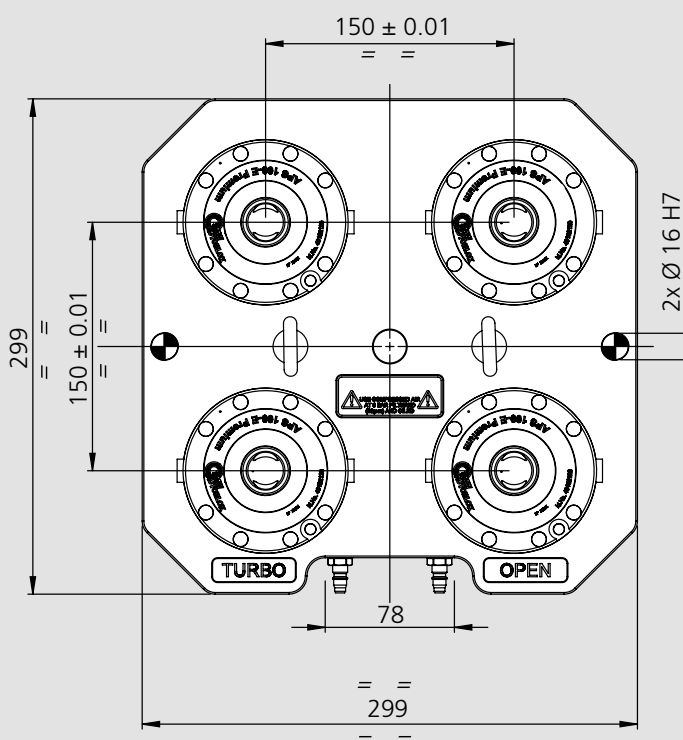
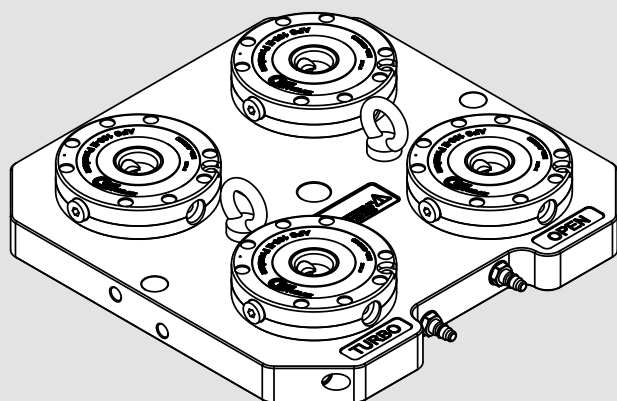
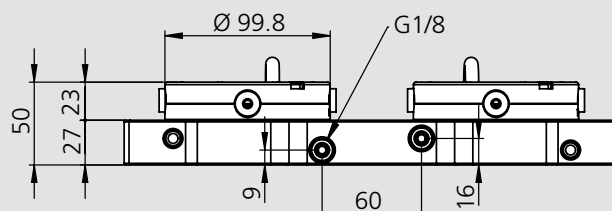
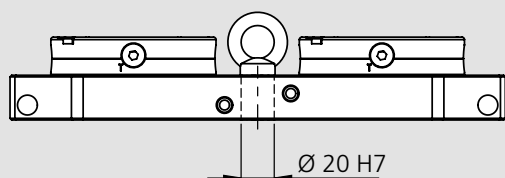
- Pre-assembled clamping unit with 4 pieces APS 100 Premium or Basic
- Universal applicable
- Fast and easy set-up

Technical features

- 2 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 4 kN)
- Air cleaning (only Premium)
- Anti rotating protection (only Premium)
- Grid dimension 150 mm

Standard equipment

Clamping unit with 4 pieces APS 100 Premium or Basic
For clamping pallets please see next catalog pages



Type	Id. No.	Pull-in force with Turbo kN	Holding force M6/M8 kN	Repeatability mm	Weight kg
Clamping unit with 4 APS 100 Premium	46168250	15	15/25	< 0.005	20.5
Clamping unit with 4 APS 100 Basic	46168255	15	15/25	< 0.005	20.5



Application/customer benefits

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

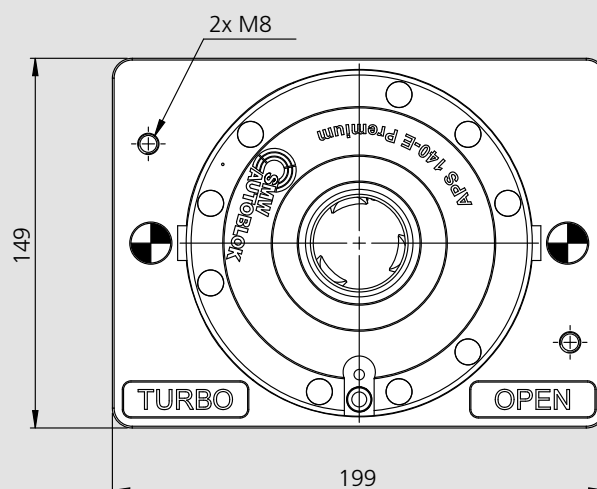
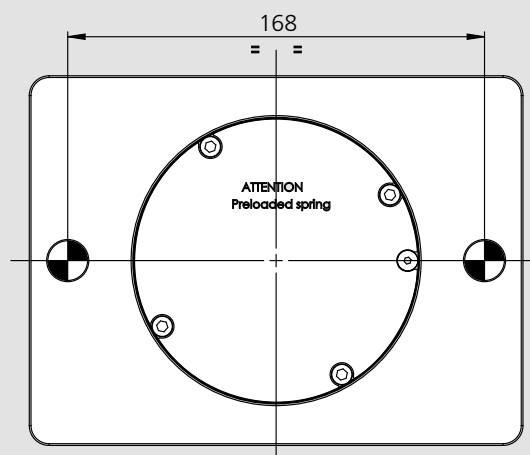
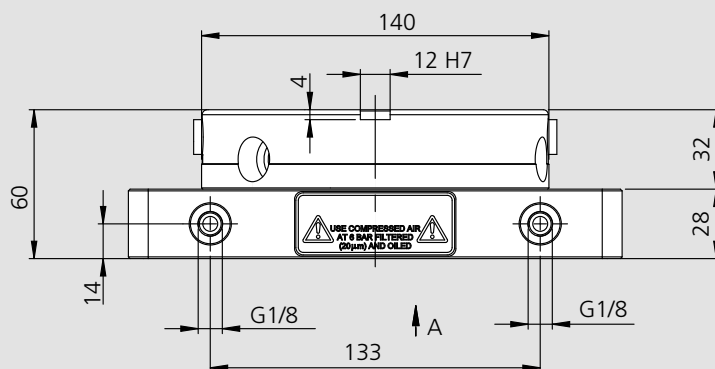
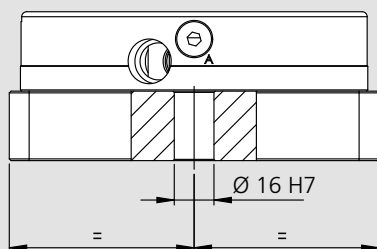
Technical features

- 3 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Anti rotating protection
- Air cleaning

Standard equipment

Clamping unit with APS 140 Premium

For clamping pallets please see next catalog pages



Type	Id. No.	Pull-in force with Turbo kN	Holding force M10/M12/M16 kN	Repeatability mm	Weight kg
Clamping unit with 1 APS 140 Premium	46168260	26	35/50/75	< 0.005	11



Application/customer benefits

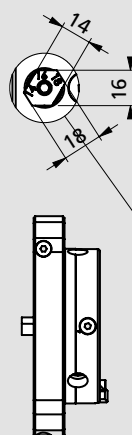
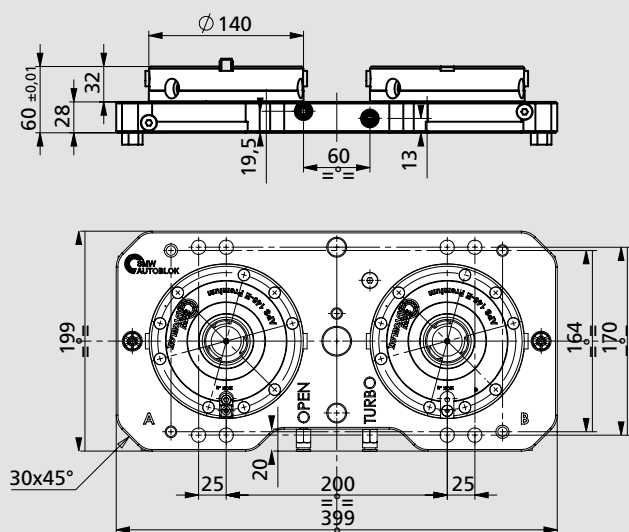
- Pre-assembled clamping unit with 2 pieces APS 140 Premium Light, Basic or Premium
- Universal applicable
- Fast and easy set-up

Technical features

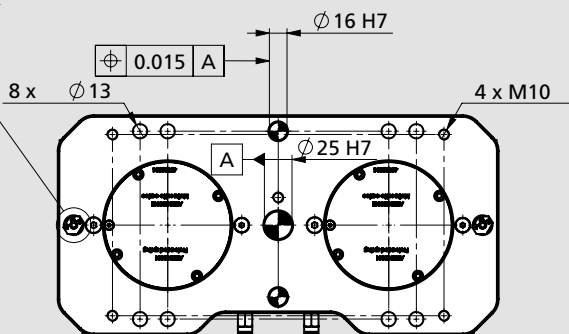
- 3 Clamping slides (Basic: 2 Clamping slides)
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Air cleaning (only Premium Light)
- Grid dimension 200 mm

Standard equipment

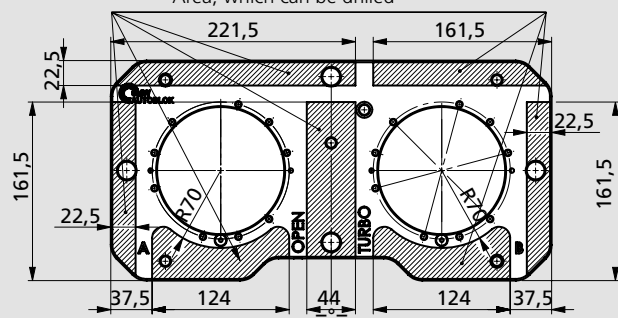
Clamping unit with 2 pieces APS 140 Premium Light, Basic or Premium
For clamping pallets please see next catalog pages



Optional: Multi-Slot screw for the positioning of clamping units
(Id.-No. 71290182)



Area, which can be drilled



Type	Id. No.	Pull-in force with Turbo kN	Holding force M10/M12/M16 kN	Repeatability mm	Weight kg
Clamping unit with 2 APS 140 Premium Light	460020	26	35/50/75	< 0.005	28
Clamping unit with 2 APS 140 Basic	460021	26	35/50/75	< 0.005	28
Clamping unit with 2 APS 140 Premium	460116	26	30/50/75	< 0.005	28



Application/customer benefits

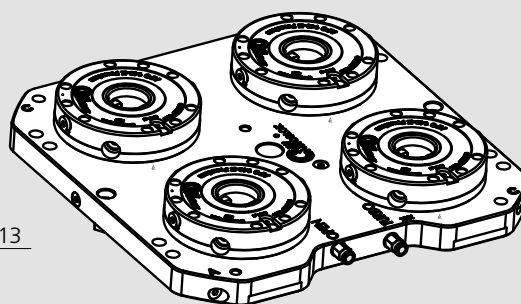
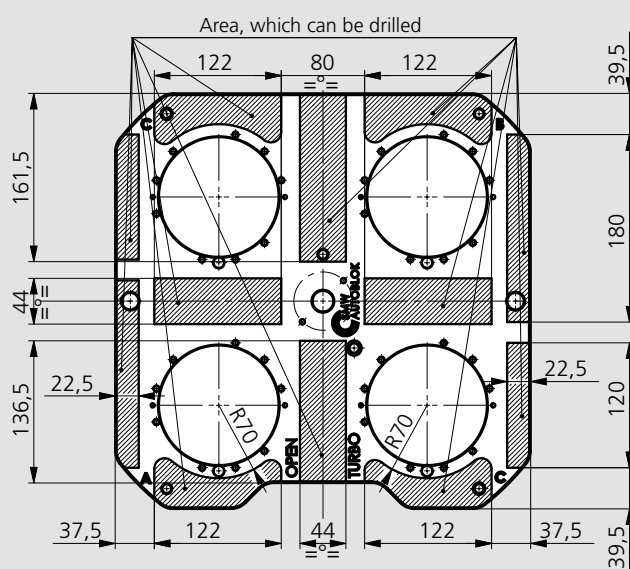
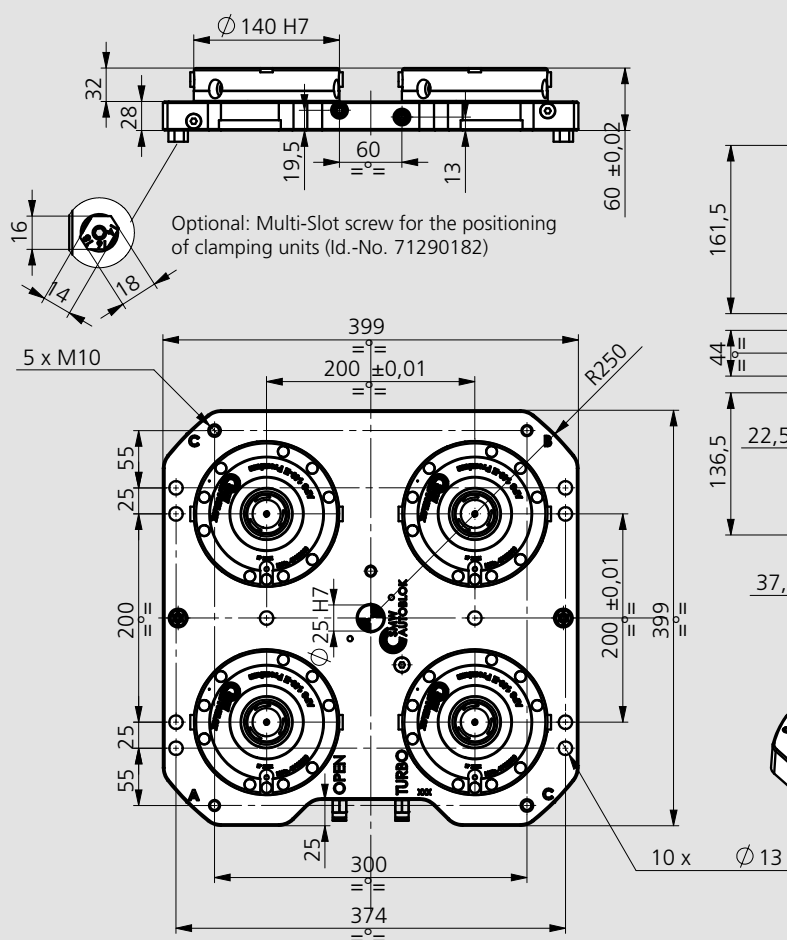
- Pre-assembled clamping unit with 4 pieces APS 140 Premium Light or Basic
- Universal applicable
- Fast and easy set-up

Technical features

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

Standard equipment

Clamping unit with 4 pieces APS 140 Premium Light or Basic
For clamping pallets please see next catalog pages



Type	Id. No.	Pull-in force with Turbo kN	Holding force M10/M12/M16 kN	Repeatability mm	Weight kg
Clamping unit with 4 APS 140 Premium Light	460022	26	35/50/75	< 0.005	56
Clamping unit with 4 APS 140 Basic	460023	26	35/50/75	< 0.005	56



Application/customer benefits

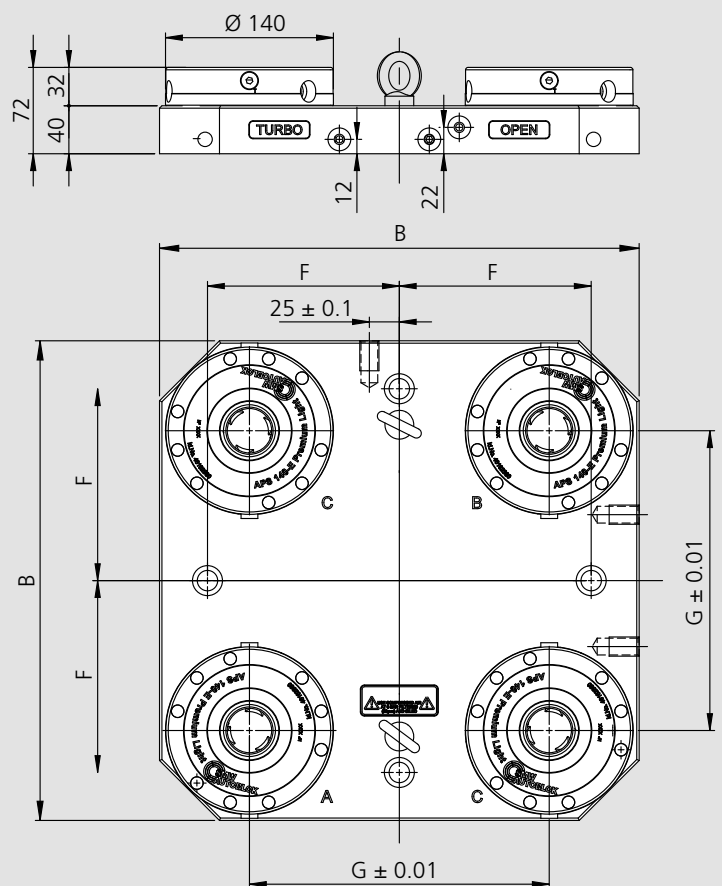
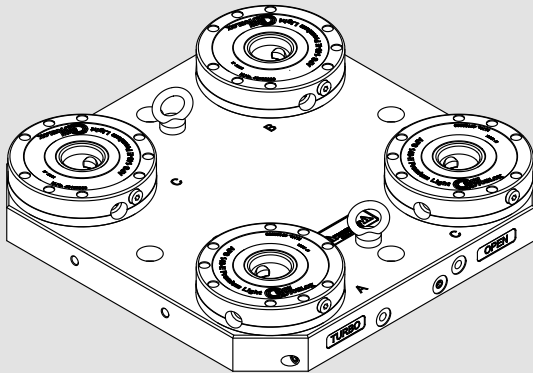
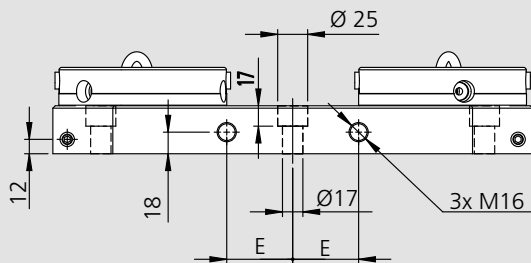
- Pre-assembled clamping unit with 4 pieces APS 140 Premium Light or Basic
- Suitable also for standard machine pallets type JIS 6337-1980
- Universal applicable
- Fast and easy set-up

Technical features

- 3 Clamping slides (Basic: 2 Clamping slides)
- Repeatability < 0.005 mm
- Protective coating
- 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
For clamping pallets please see next catalog pages



Type	Id. No.	B mm	E mm	F mm	G mm	Pull-in force with Turbo kN	Holding force M10/M12/M16 kN	Repeatability mm	Weight kg
Clamping unit with 4 APS 140 Premium Light	46167040	400	55	160	250	26	35/50/75	< 0.005	57
Clamping unit with 4 APS 140 Basic	46167045	400	55	160	250	26	35/50/75	< 0.005	57
Clamping unit with 4 APS 140 Premium Light	46167050	500	75	200	300	26	35/50/75	< 0.005	85
Clamping unit with 4 APS 140 Basic	46167055	500	75	200	300	26	35/50/75	< 0.005	85
Clamping unit with 4 APS 140 Premium Light	46167060	630	100	250	420	26	35/50/75	< 0.005	130
Clamping unit with 4 APS 140 Basic	46167065	630	100	250	420	26	35/50/75	< 0.005	130



Application/customer benefits

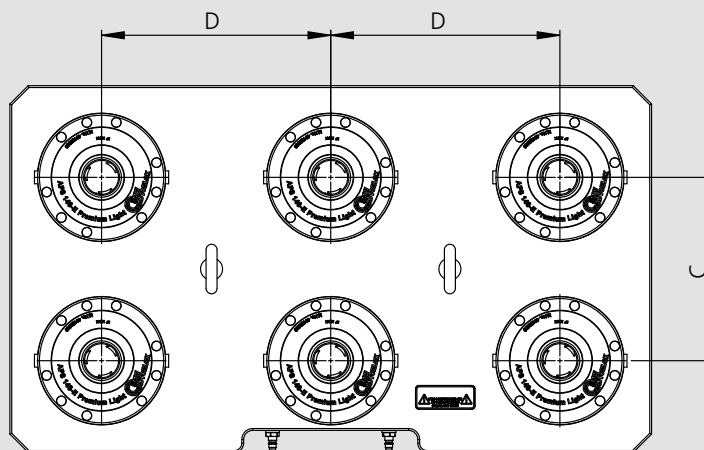
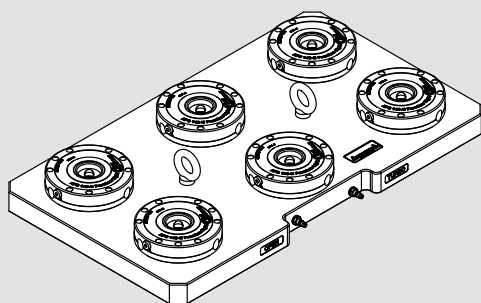
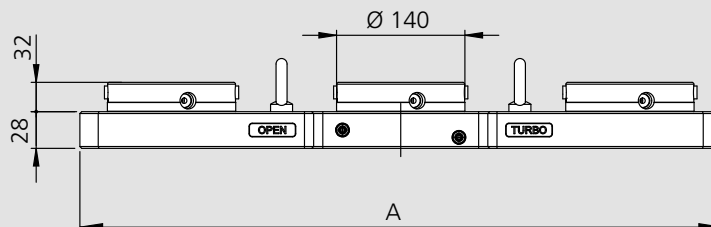
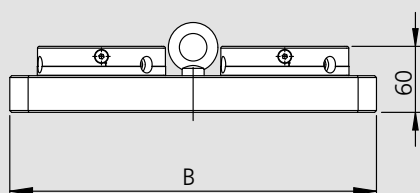
- Pre-assembled clamping unit with 6 pieces APS 140 Premium Light or Basic
- Universal applicable
- Fast and easy set-up

Technical features

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

Standard equipment

Clamping unit with 6 pieces APS 140 Premium Light or Basic
For clamping pallets please see next catalog pages



Type	Id. No.	A mm	B mm	C mm	D mm	Pull-in force with Turbo kN	Holding force M10/M12/M16 kN	Repeatability mm	Weight kg
Clamping unit with 6 APS 140 Premium Light	46168110	600	400	200	200	26	35/50/75	< 0.005	83
Clamping unit with 6 APS 140 Basic	46168115	600	400	200	200	26	35/50/75	< 0.005	84

Special clamping units on request.

■ For 5-axis machining center

Application/customer benefits

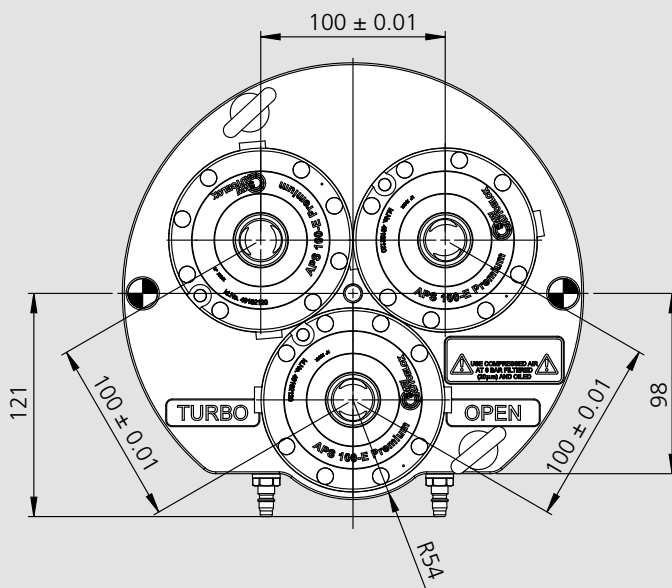
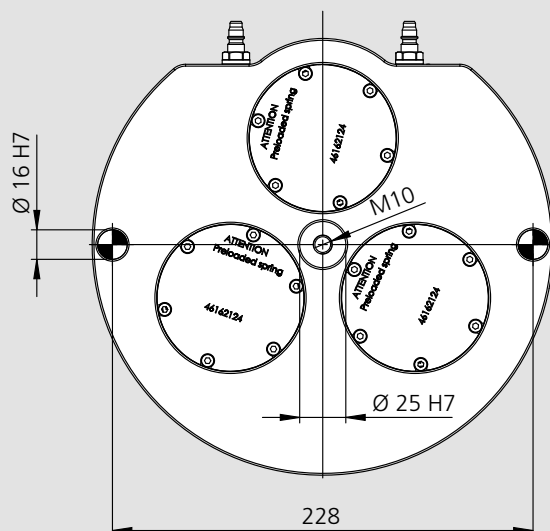
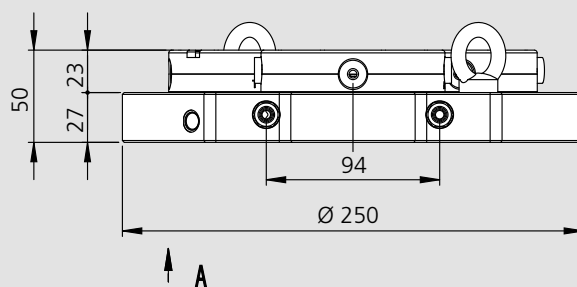
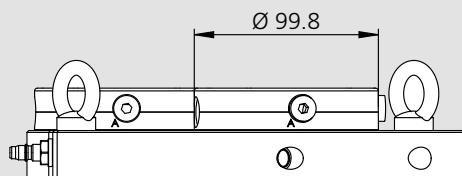
- Pre-assembled clamping unit with 3 pieces APS 100 Premium or Basic
- For 5-axis machining center
- Universal applicable
- Fast and easy set-up

Technical features

- 2 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 4 kN)
- Air cleaning (only Premium)
- Anti rotating protection (only Premium)
- Grid dimension 100 mm

Standard equipment

Clamping unit with 3 pieces APS 100 Premium or Basic
For clamping pallets please see next catalog pages



Type	Id. No.	Pull-in force with Turbo kN	Holding force M10/M12/M16 kN	Repeatability mm	Weight kg
Clamping unit with 3 APS 100 Premium	46168010	15	15/25	< 0.005	37
Clamping unit with 3 APS 100 Basic	46168015	15	15/25	< 0.005	36

■ For 5-axis machining center

**Application/customer benefits**

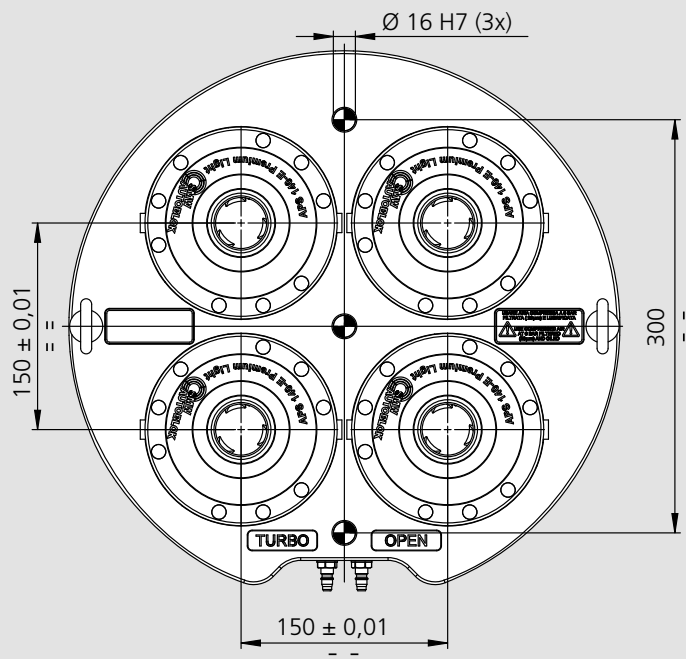
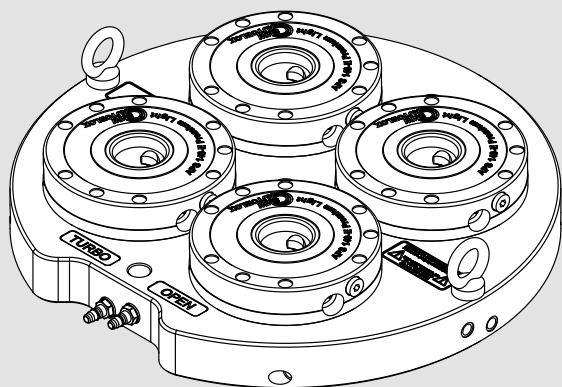
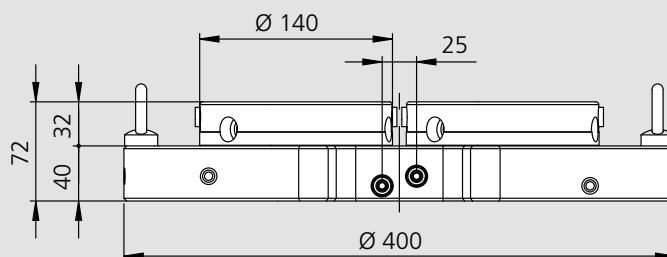
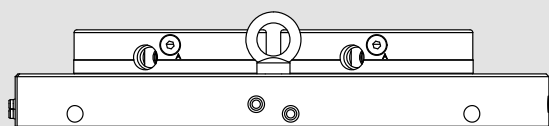
- Pre-assembled clamping unit with 4 pieces APS 140 Premium Light or Basic
- For 5-axis machining center
- Universal applicable
- Fast and easy set-up

Technical features

- 3 Clamping slides (Basic: 2 Clamping slides)
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Air cleaning (only Premium Light)
- Grid dimension 150 mm

Standard equipment

Clamping unit with 4 pieces APS 140 Premium Light or Basic
For clamping pallets please see next catalog pages



Type	Id. No.	Pull-in force with Turbo kN	Holding force M10/M12/M16 kN	Repeatability mm	Weight kg
Clamping unit with 4 APS 140 Premium Light	46168020	26	35/50/75	< 0.005	45
Clamping unit with 4 APS 140 Basic	46168025	26	35/50/75	< 0.005	45

Special clamping units on request.

■ For 5-axis machining center



Application/customer benefits

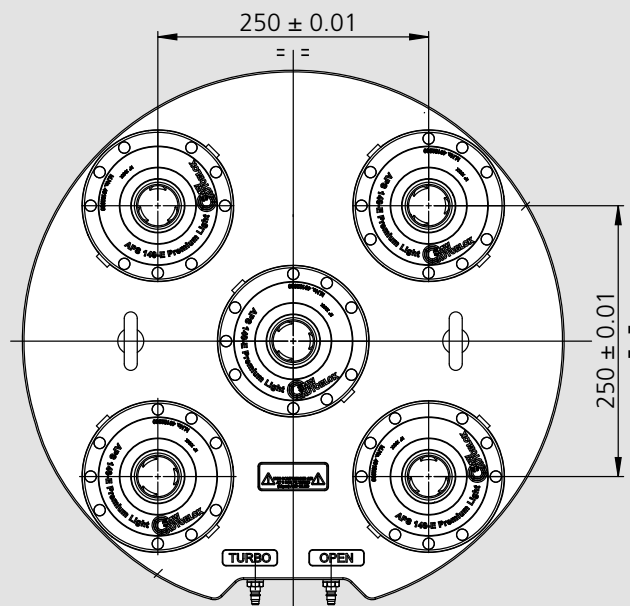
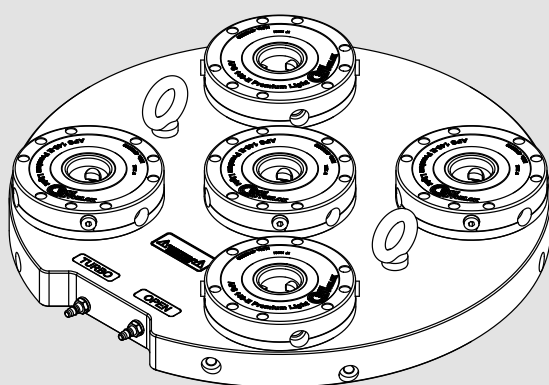
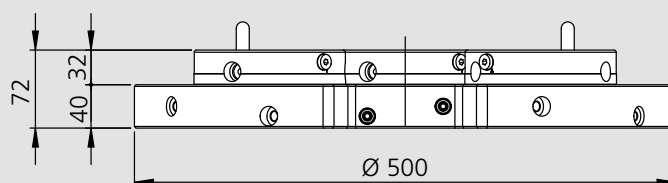
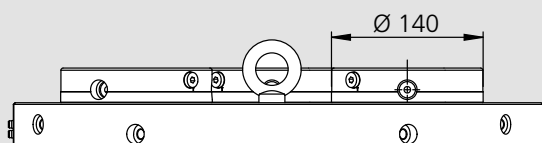
- Pre-assembled clamping unit with 5 pieces APS 140 Premium Light or Basic
- For 5-axis machining center
- Universal applicable
- Fast and easy set-up

Technical features

- 3 Clamping slides (Basic: 2 Clamping slides)
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Air cleaning (only Premium Light)
- Grid dimension 250 mm

Standard equipment

Clamping unit with 5 pieces APS 140 Premium Light or Basic
For clamping pallets please see next catalog pages



Type	Id. No.	Pull-in force with Turbo kN	Holding force M10/M12/M16 kN	Repeatability mm	Weight kg
Clamping unit with 5 APS 140 Premium Light	46168030	26	35/50/75	< 0.005	68
Clamping unit with 5 APS 140 Basic	46168035	26	35/50/75	< 0.005	67

Special clamping units on request.



Application/customer benefits

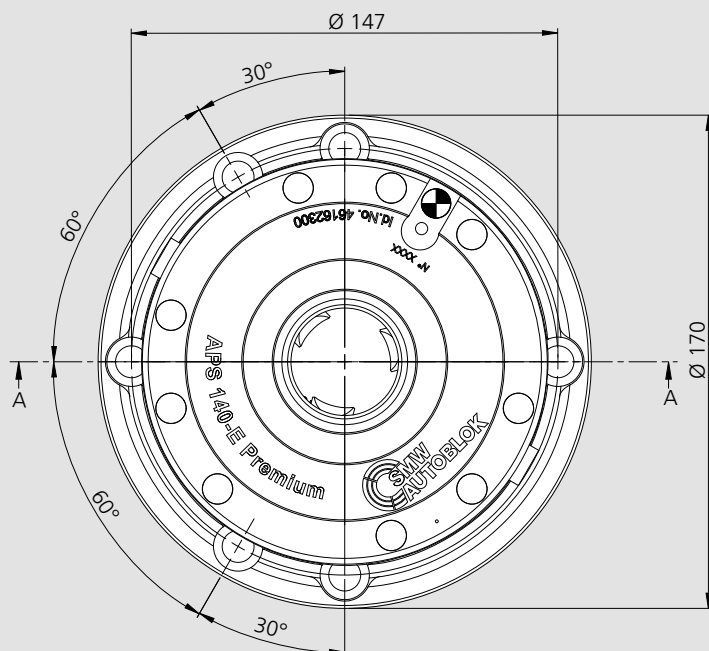
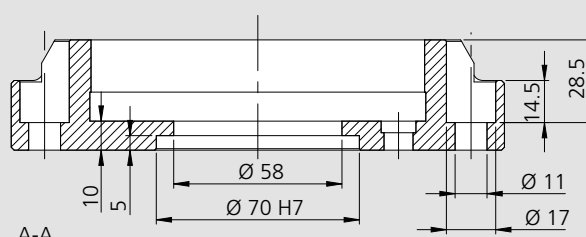
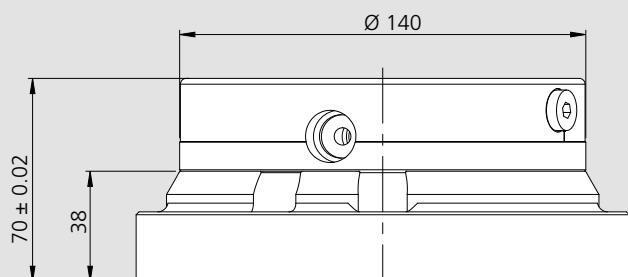
- Flange for indexing tables and CNC indexing tables with T-slots flange
- Including 1 APS 140 Premium Module

Technical features

- 3 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 7.5 kN)
- Anti rotating protection
- Monitoring via air control
- 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



Type	Id. No.	Weight kg
Flange	46167620	17

Application/customer benefits

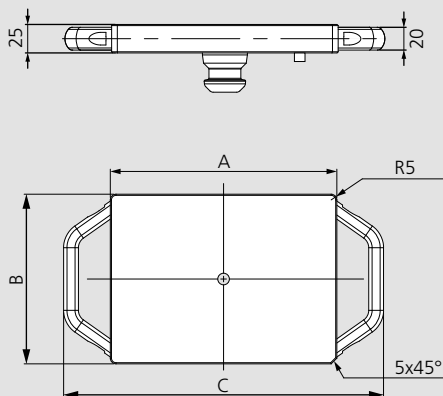
- Pre-assembled clamping pallet for APS 100 / 140
- Universal applicable
- Ready to use

Technical features

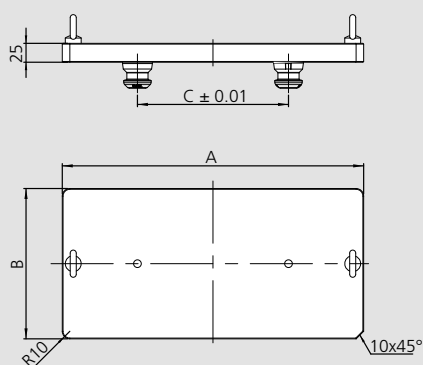
- Fully assembled
- Rust protected
- High quality steel (1.1730)

Standard equipment

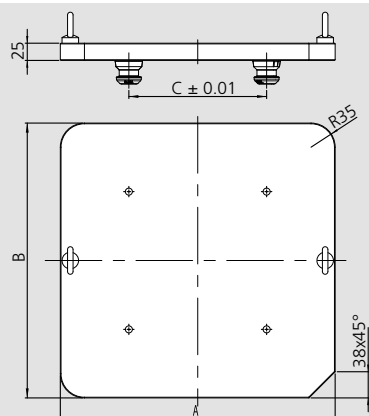
- 1 Clamping pallet: fully assembled with 1 clamping pin (Type A), anti rotation key and hand grips
- 2 Clamping pallet: fully assembled with 1 clamping pin (Type A) and 1 clamping pin (Type B)
- 4 Clamping pallet: fully assembled with 1 clamping pin (Type A), 1 clamping pin (Type B), 2 clamping pin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



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



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



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

- Request form
- Simply fill in and send to: omlspa@omlspa.it



Application/customer benefits

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

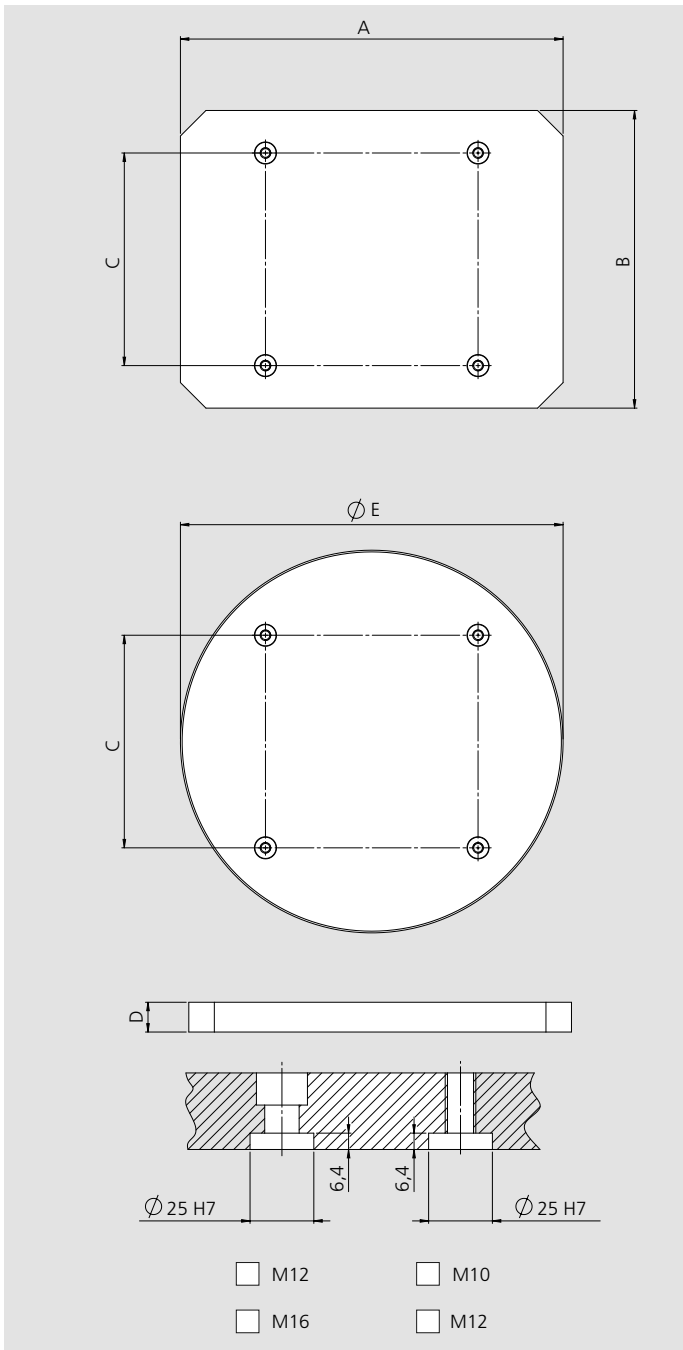
Technical features

- High quality steel (1.1730)

Standard equipment

Customized clamping pallet
Fully assembled with APS clamping pins on request

Customized clamping pallets



Dimensions	
A	
B	
C	
D	
E	

- Basic
- Premium

Application/customer benefits

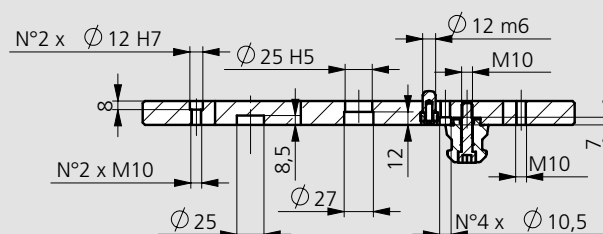
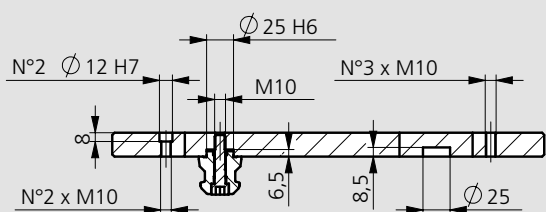
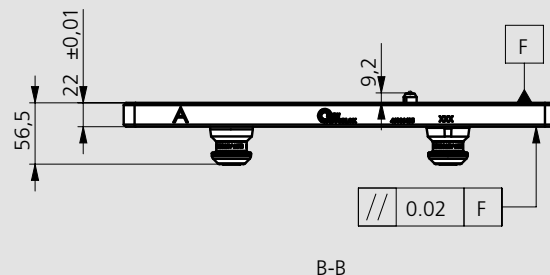
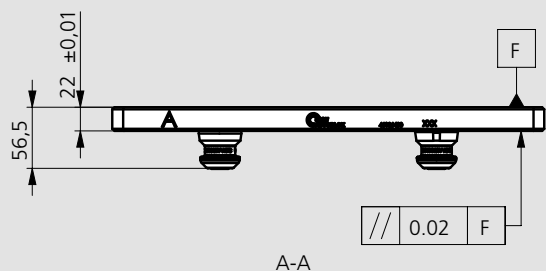
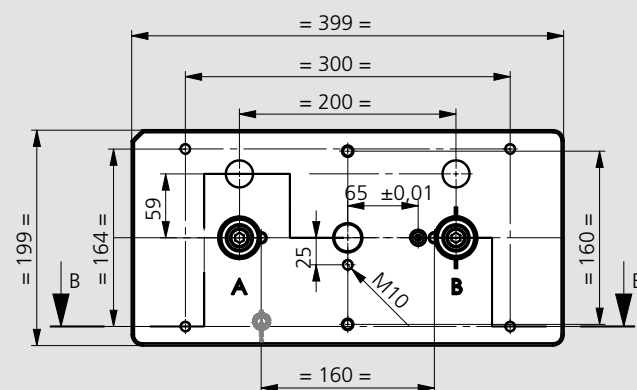
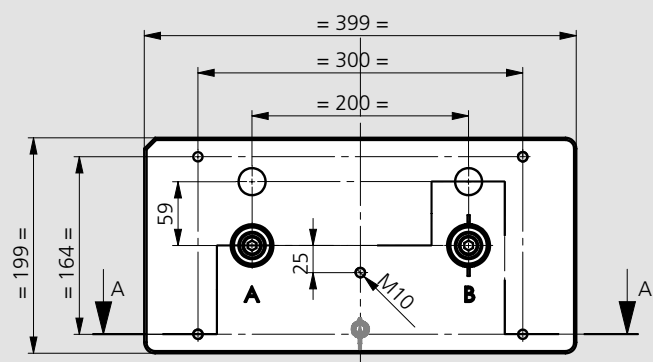
- Pre-assembled clamping pallet for APS 140
- Universal applicable
- 2 Versions: Premium and Basic

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) and 1 sword pin (Type B)



BASIC VERSION

PREMIUM VERSION

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

- Basic
- Premium



Application/customer benefits

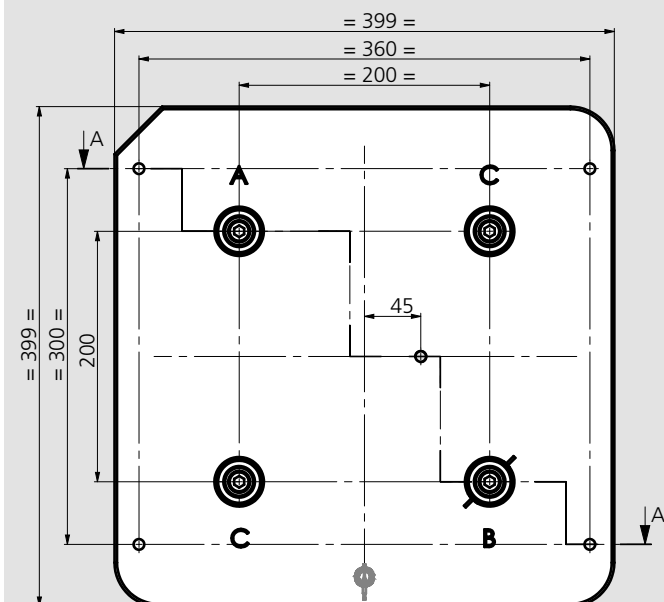
- Pre-assembled clamping pallet for APS 140
- Universal applicable
- 2 Versions: Premium and Basic

Technical features

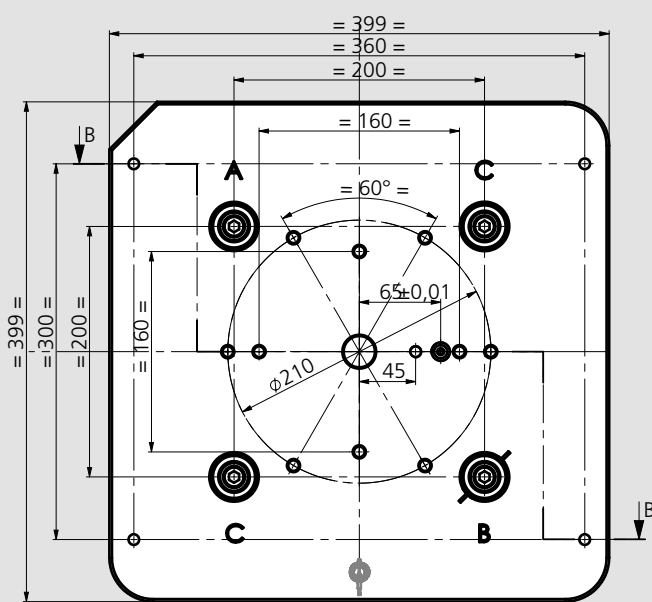
- Grid dimension 200 mm
- Fully assembled including clamping pins
- Premium Version with additional adaption for module units
- Rust protected

Standard equipment

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



BASIC VERSION



PREMIUM VERSION

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



Application/customer benefits

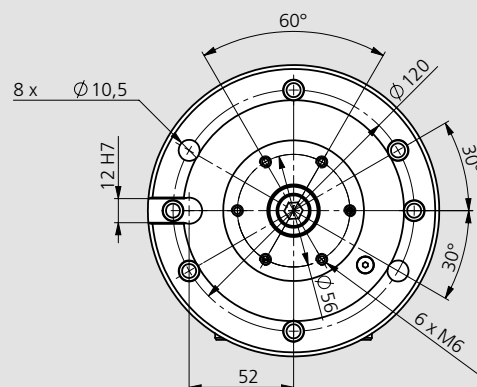
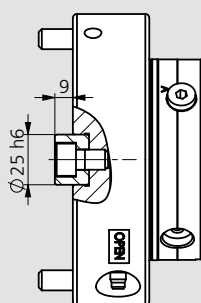
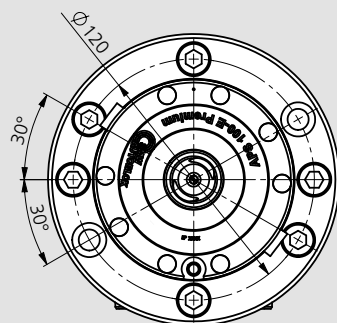
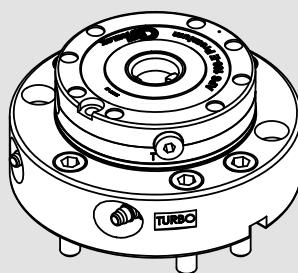
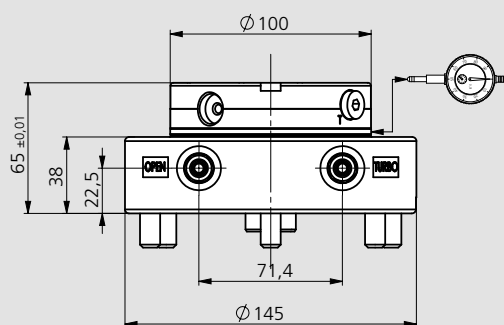
- Pre-assembled module extension unit with 1 piece APS 100 Premium
- Universal applicable
- Fast and easy set-up

Technical features

- 2 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 4 kN)
- Anti rotating protection
- Air cleaning

Standard equipment

Module height extension with 1 piece APS 100 Premium



Type	Id. No.	Height mm	Weight kg
Module extension APS 100 Premium	460110	65	6



Application/customer benefits

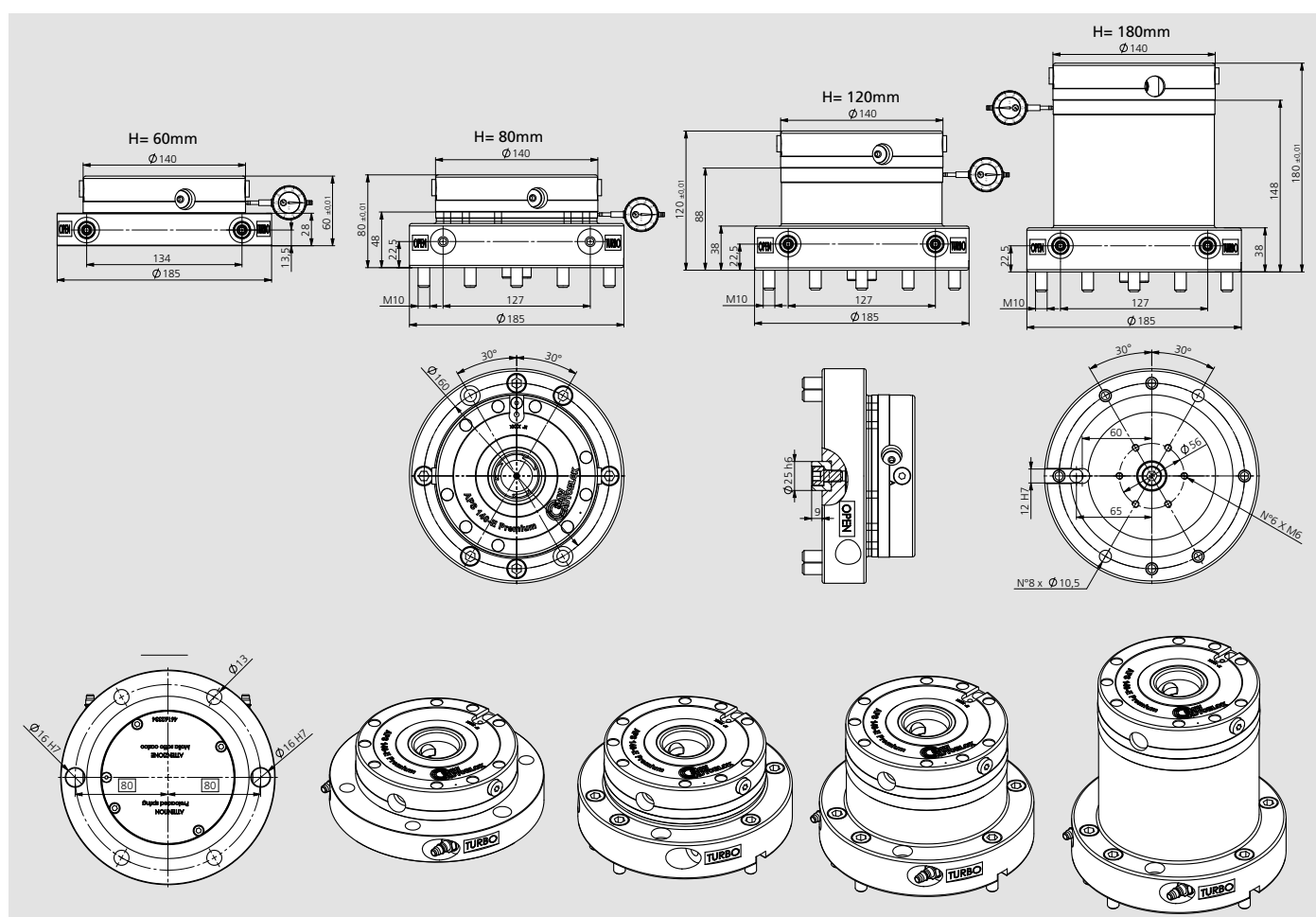
- Pre-assembled module extension unit with 1 piece APS 140 Premium
- Universal applicable
- Fast and easy set-up

Technical features

- 3 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing 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



Type	Id. No.	Height mm	Weight kg
Module extension APS 140 Premium	460112	60	8
Module extension APS 140 Premium	460113	80	11.5
Module extension APS 140 Premium	460114	120	14.5
Module extension APS 140 Premium	460115	180	18.5



Application/customer benefits

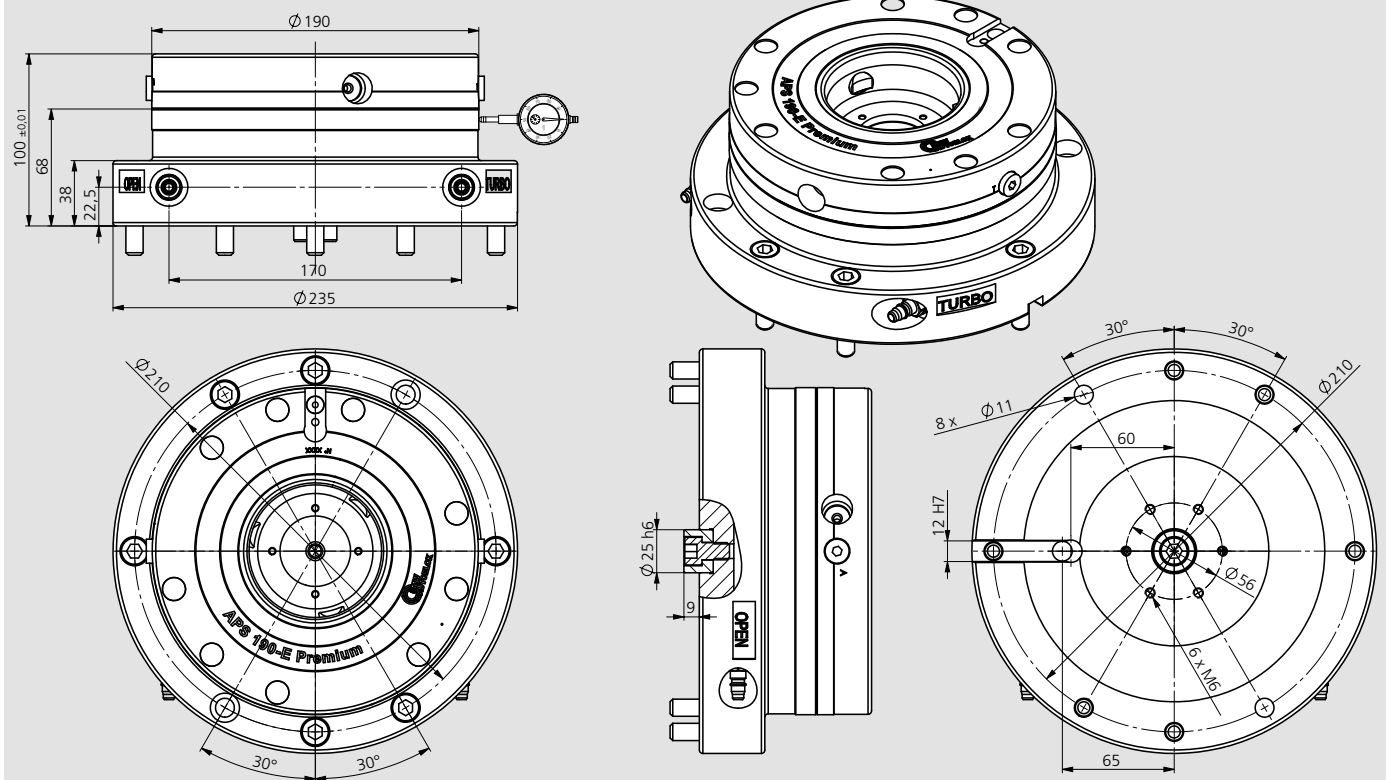
- Pre-assembled module extension unit with 1 piece APS 190 Premium
- Universal applicable
- Fast and easy set-up

Technical features

- 3 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces (pull-in force without Turbo 13.5 kN)
- Anti rotating protection
- Air cleaning

Standard equipment

Module height extension with 1 piece APS 190 Premium

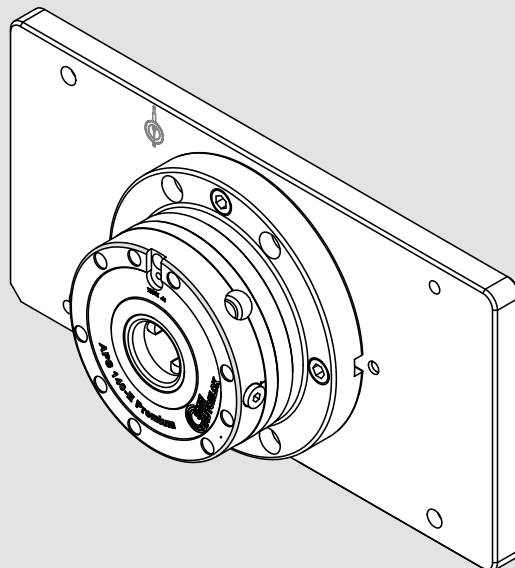
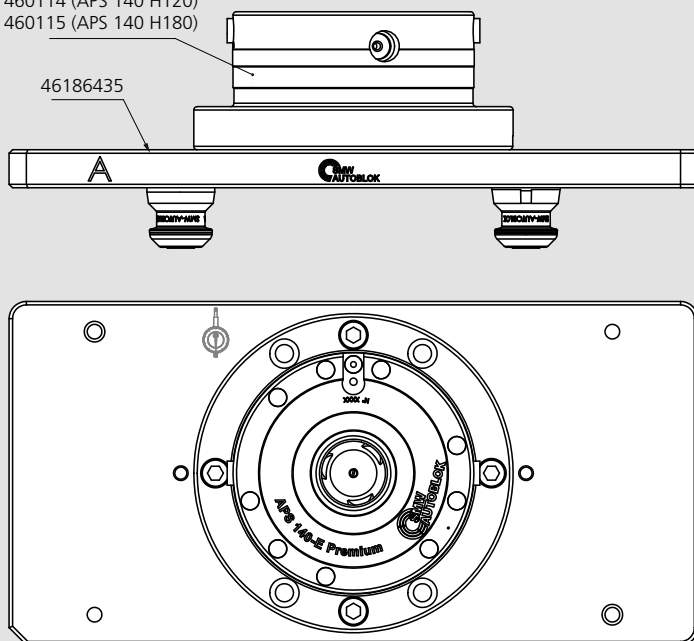


Type	Id. No.	Height mm	Weight kg
Module extension APS 190 Premium	460111	100	21

Clamping pallets with module height extensions

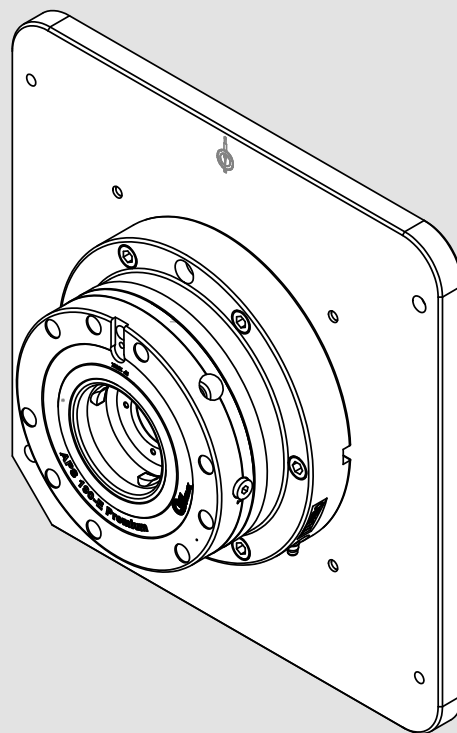
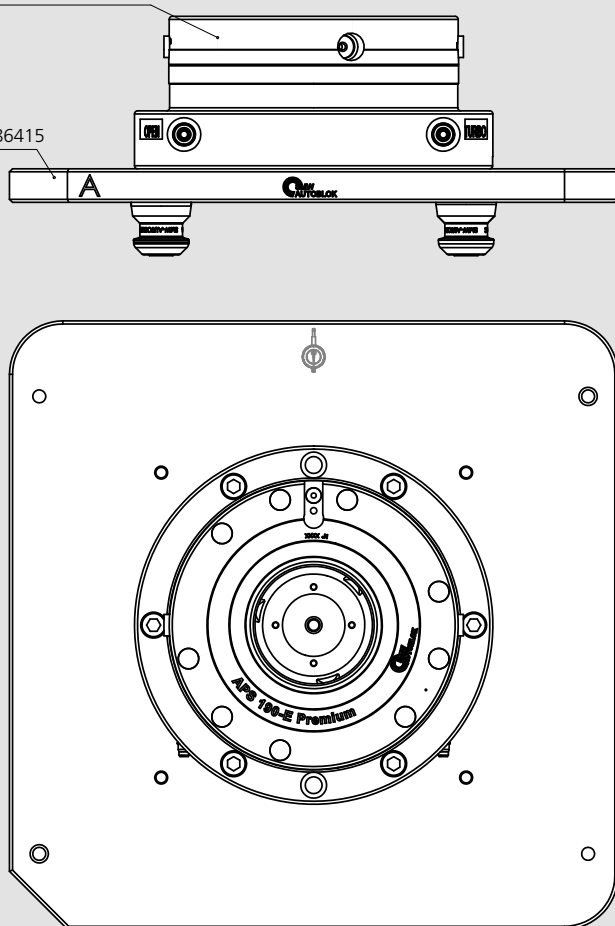
460112 (APS 140 H60)
460113 (APS 140 H80)
460114 (APS 140 H120)
460115 (APS 140 H180)

46186435



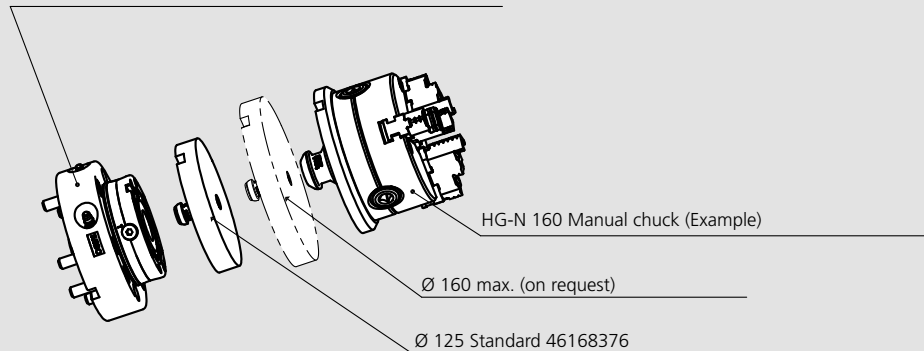
460112 (APS 140 H60)
460113 (APS 140 H80)
460114 (APS 140 H120)
460115 (APS 140 H180)
460111 (APS 190 H100)

46186415

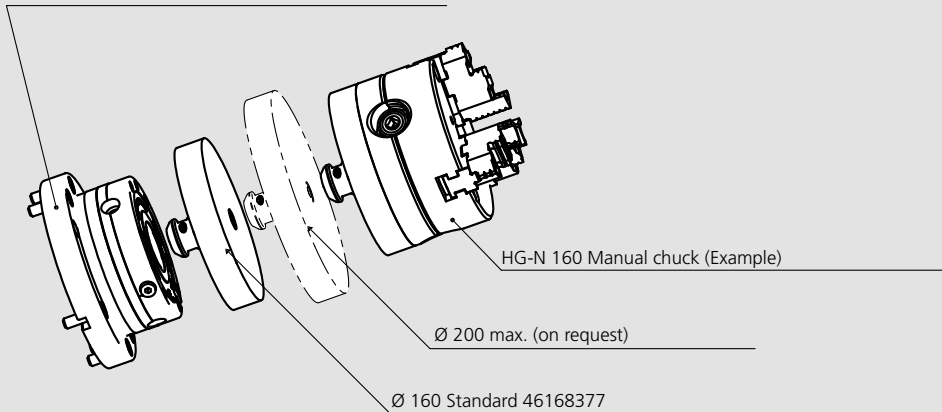


Module height extensions and clamping devices

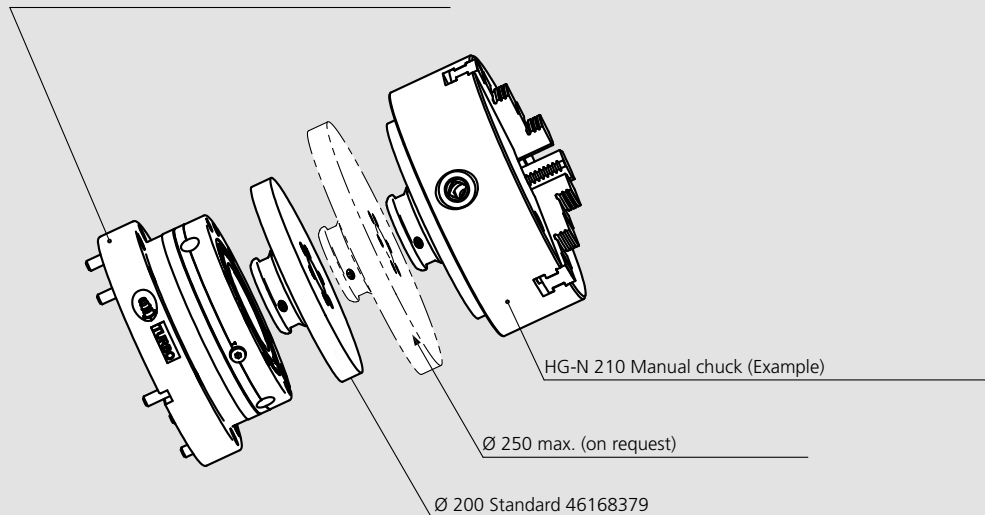
460110 Module unit H65 APS 100 Premium



460112 Module unit H60-180 APS 140 Premium



460111 Module unit H100 APS 190 Premium



■ Combi unit

**Application/customer benefits**

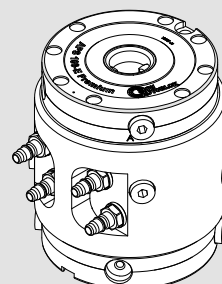
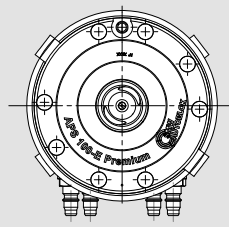
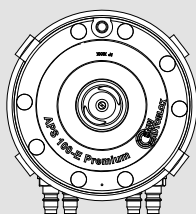
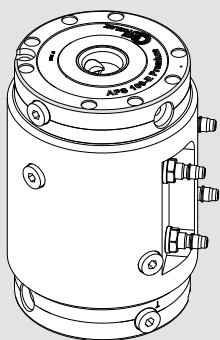
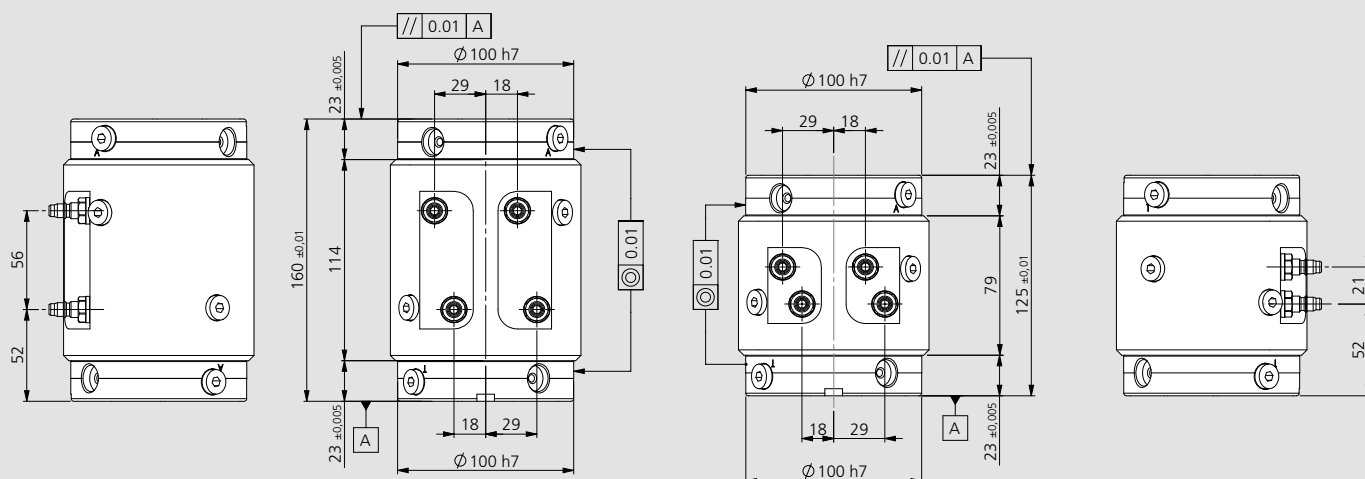
- Pre-assembled clamping unit with 2 pieces APS 100 Premium
- Universal applicable
- Fast and easy set-up

Technical features

- 2 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing 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



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

■ Combi unit

Application/customer benefits

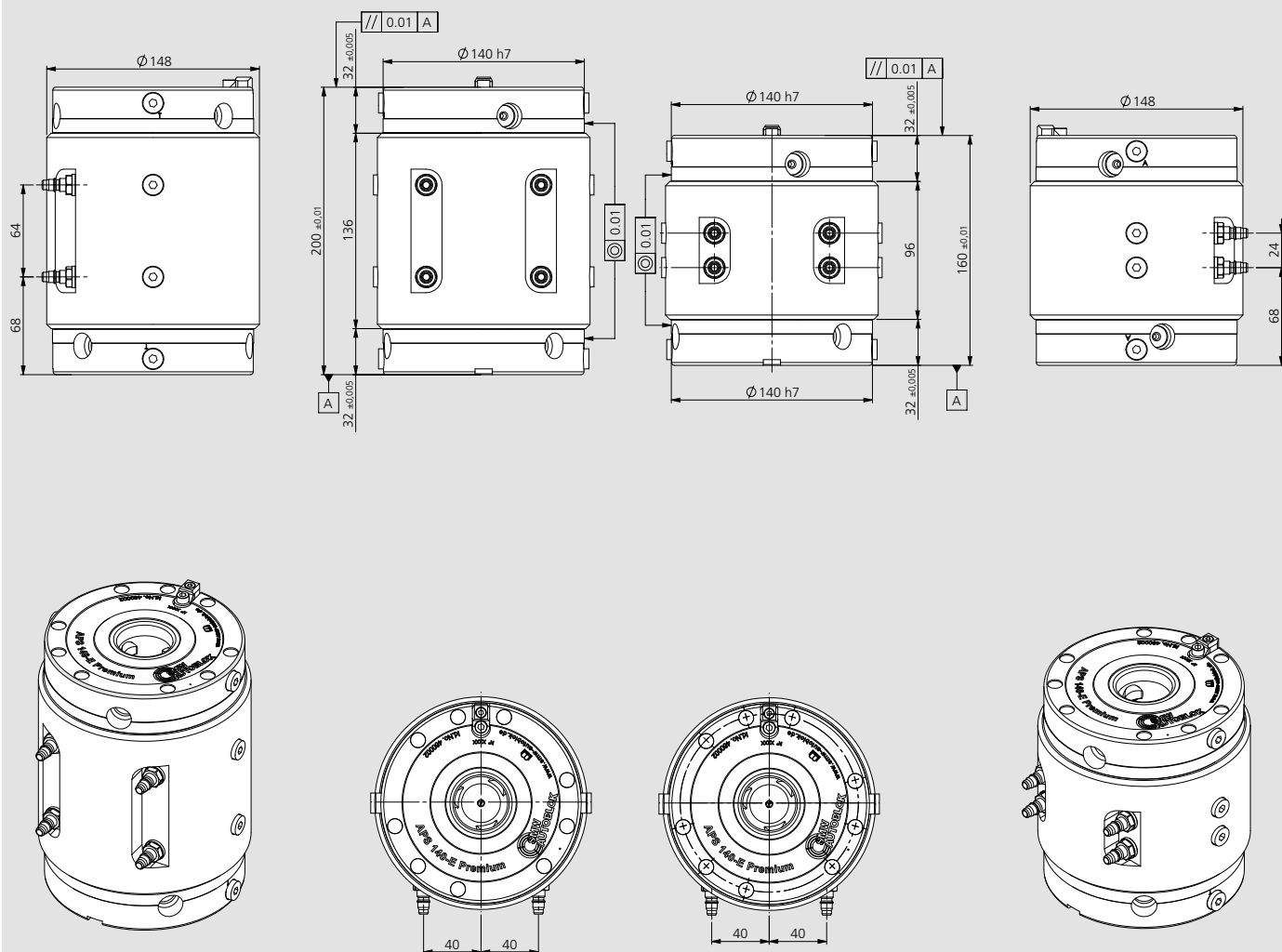
- Pre-assembled clamping unit with 2 pieces APS 140 Premium
- Universal applicable
- Fast and easy set-up

Technical features

- 3 Clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces up to 26 kN (pull-in force without Turbo 7.5 kN)
- Anti rotating protection
- Air cleaning

Standard equipment

Clamping unit with 2 pieces APS 140 Premium



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

■ Spacers for Combi Units

**Application/customer benefits**

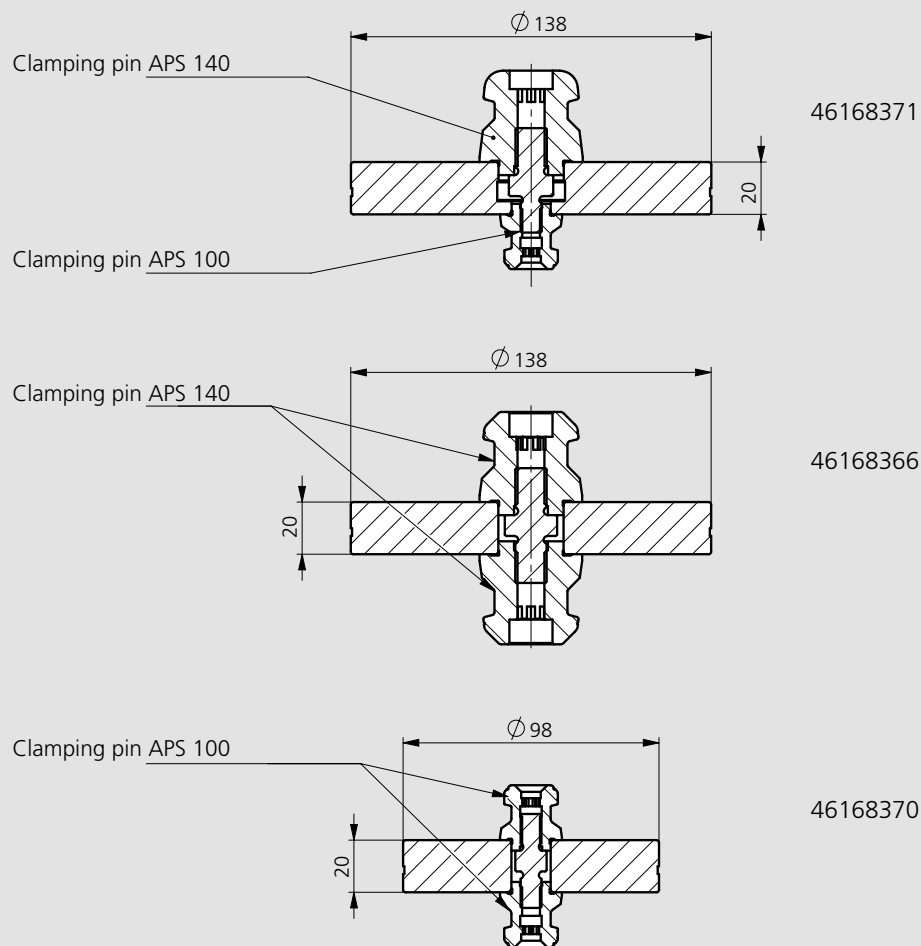
- Spacers to adapt more different module units
- Universal use

Technical features

- Height 20 mm

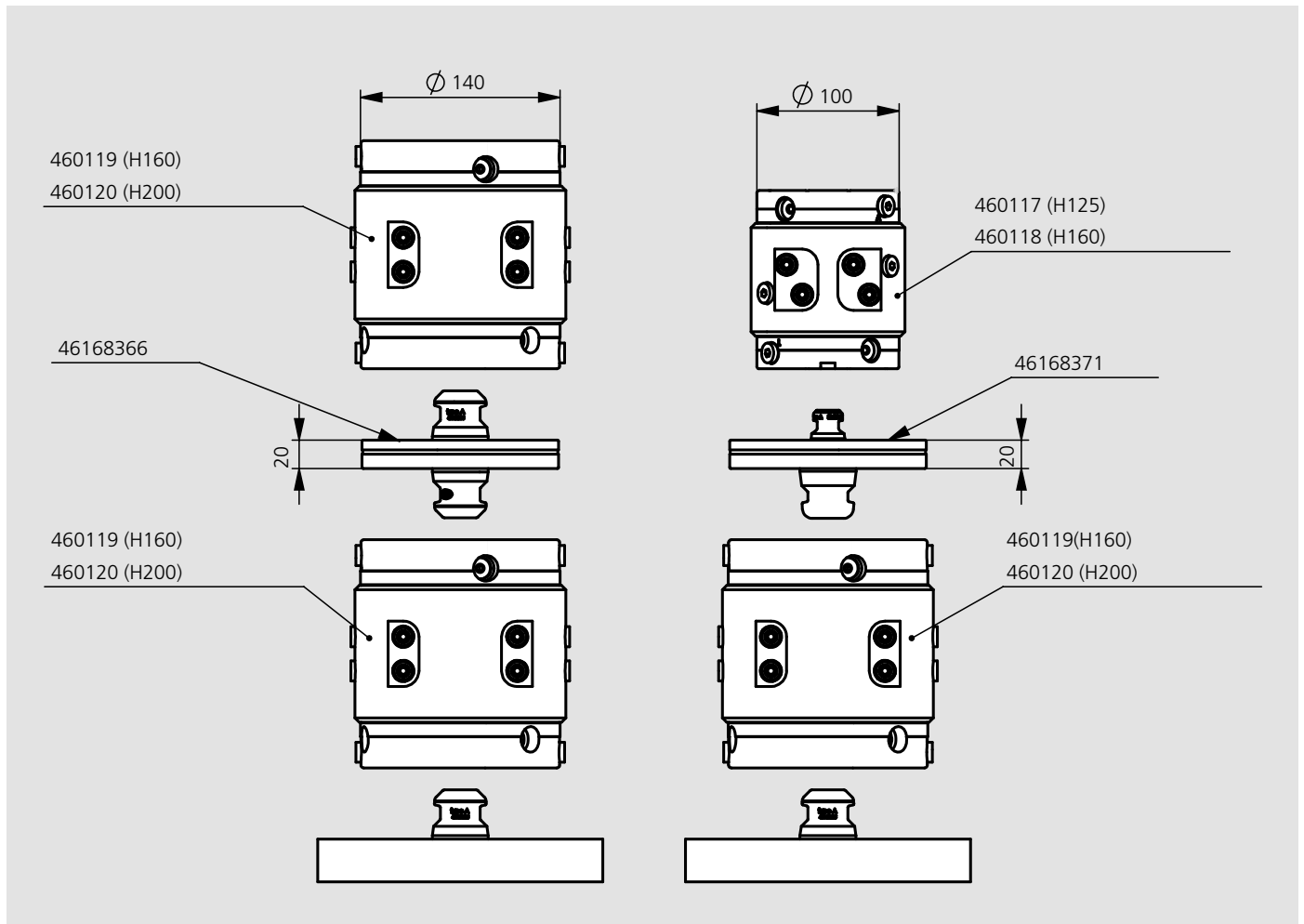
Standard equipment

Spacer without clamping pin



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

Combi Units and Spacers



■ Clamping pins

Accessories



Type A

Type B

Type C

Application/customer benefits

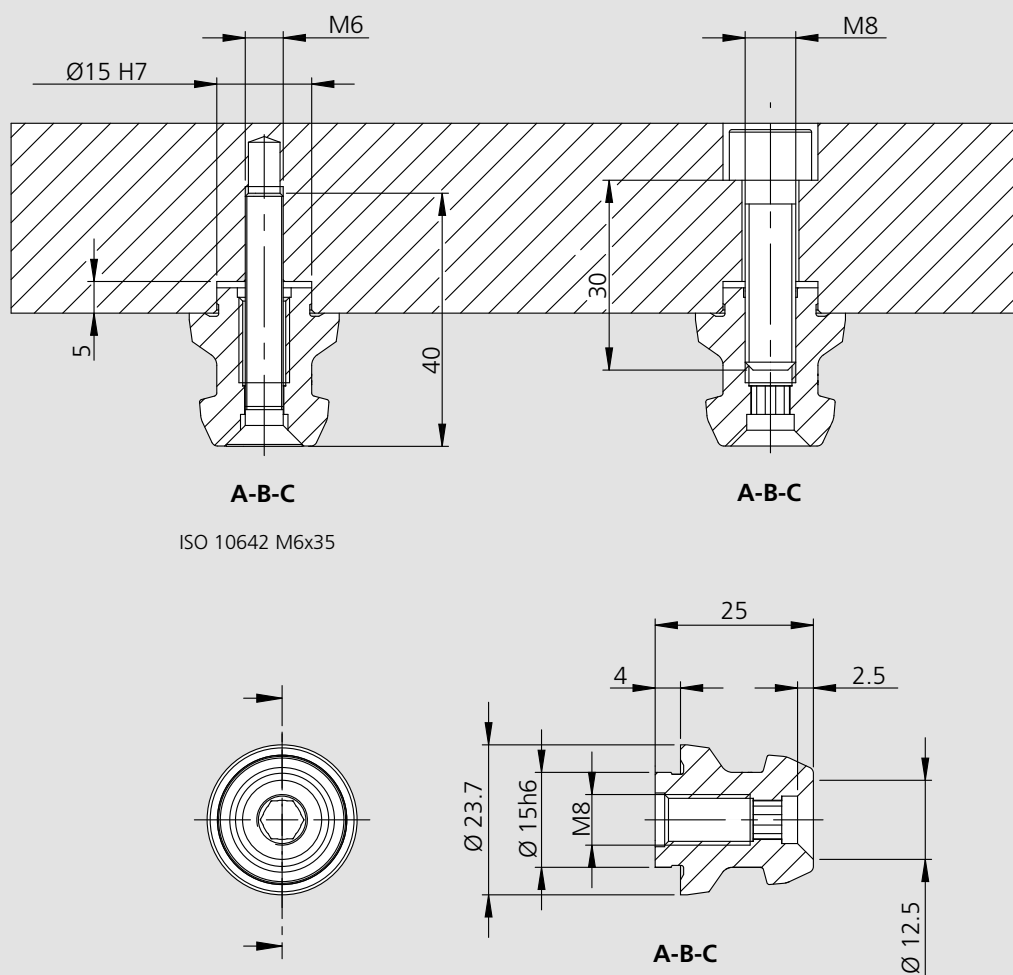
- Fixation and positioning on the clamping systems APS 100
- Wear-resistant due to an extra hard protective coating
- Large entry radii of the clamping pins for easy and safe loading

Technical features

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

Standard equipment

Clamping pin with mounting screw M6x35



ISO 10642 M6x35

Type	Thread	Type A Id. No.	Type B Id. No.	Type C Id. No.	Weight kg
Clamping pin APS 100	M8	46162155	46162156	46162157	0.3



Type A

Type B

Type C

Application/customer benefits

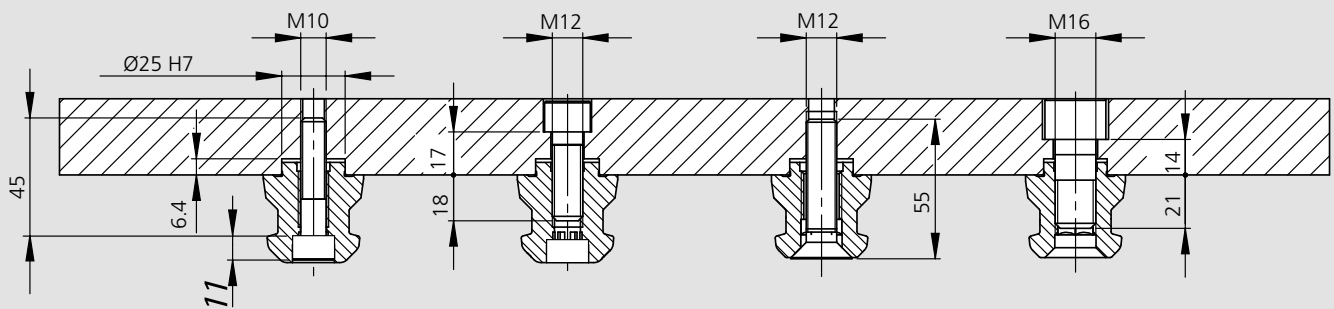
- Fixation and positioning on the clamping systems APS 140
- Wear-resistant due to an extra hard protective coating
- Large entry radii of the clamping pins for easy and safe loading

Technical features

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

Standard equipment

Clamping pin with mounting screw M10x45



A-B-C

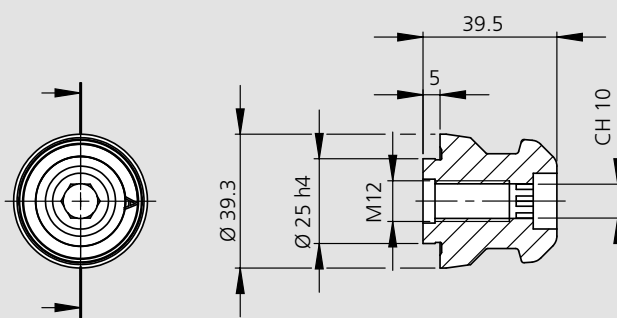
ISO 4762 M10x45

A-B-C

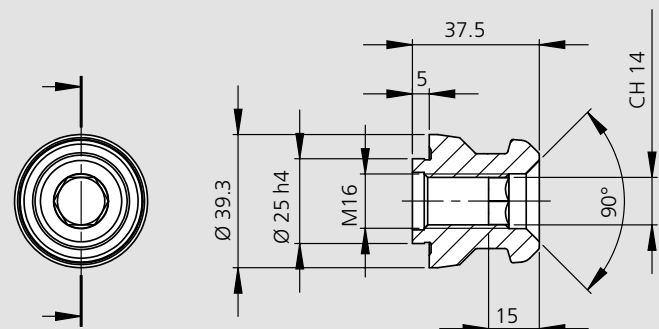
A-B-C

ISO 10642 M12x55

A-B-C



A-B-C



A-B-C

Type	Thread	Type A Id. No.	Type B Id. No.	Type C Id. No.	Weight kg
Clamping pin APS 140	M12	46162355	46162356	46162357	0.3
Clamping pin APS 140	M16	46162455	46162456	46162457	0.3

■ Clamping pins

Accessories



Application/customer benefits

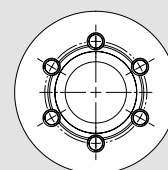
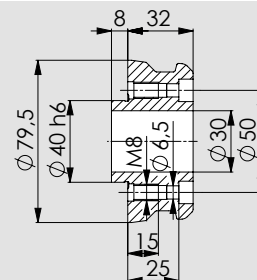
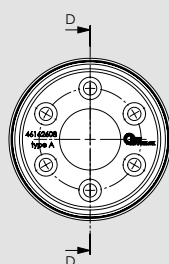
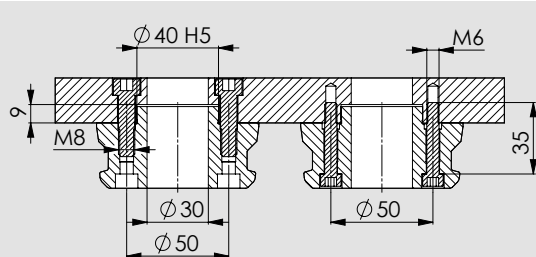
- Fixation and positioning on the clamping systems APS 190
- Large entry radii of the clamping pins for easy and safe loading

Technical features

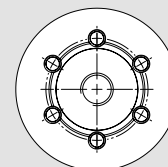
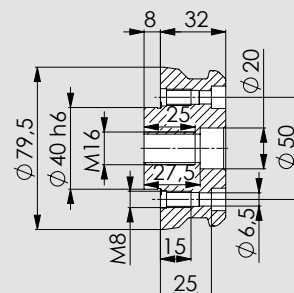
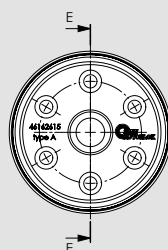
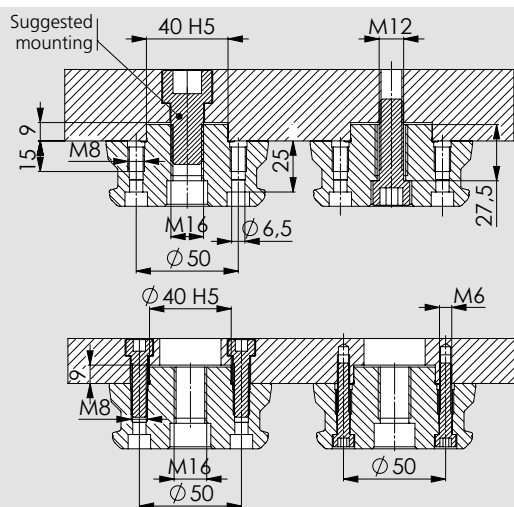
- Centering pin Type A (Standard)

Standard equipment

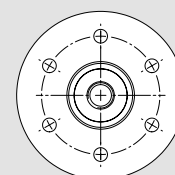
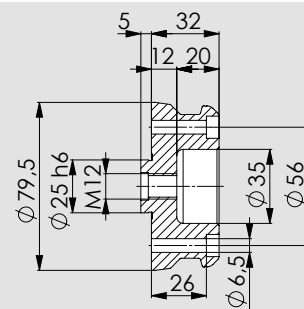
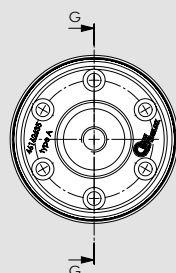
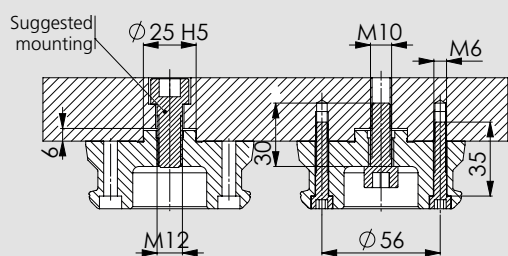
Clamping pin with mounting screw M8x40 (6 pieces)



Id. No.	Type	Weight	Notes
46 16 26 08	A	0,85 Kg	Pin with central hole Ø 30



Id. No.	Type	Weight
46 16 26 15	A	M16 1 Kg
46 16 26 16	B	M16 1 Kg
46 16 26 17	C	M16 1 Kg



Id. No.	Type	Weight
46 16 26 35	A	Ø 25 = pin APS-140 M12 0,85Kg

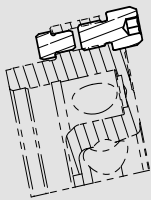
Protection cover



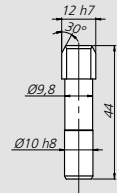
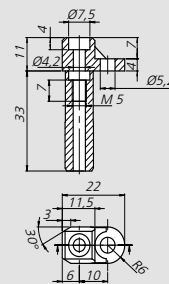
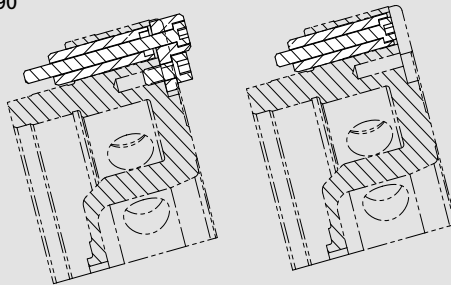
Type	Id. No.
APS 100	460030
APS 140	460031
APS 190	46162625

Anti rotation kit for APS Premium

APS 100

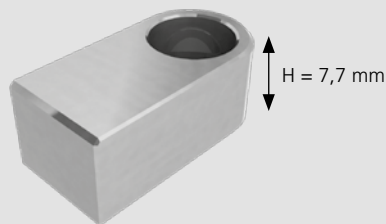


APS 140/190



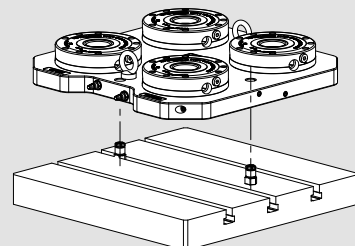
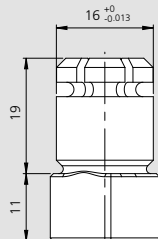
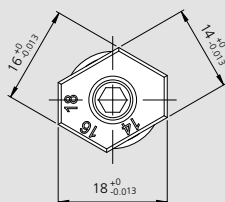
Type	Id. No.
APS 100	46162133
APS 140/190	46162333

Key for orientation (single use)



Type	Id. No.
APS 140 (f7) for clamping plate	46162328
APS 140 (h7) for module	46162329

Multi-Slot screw for the positioning of clamping units



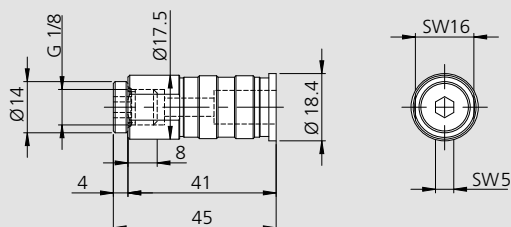
Type	Id. No.
Multi-Slot 14/16/18	71290182

Protection cover for screws for APS modules



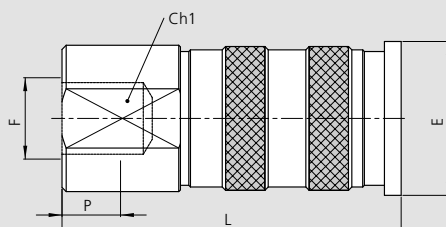
Type	Id. No.
APS 100	46162129
APS 140	46162309
APS 190	46162609

Protection cover quick connection 1/8"



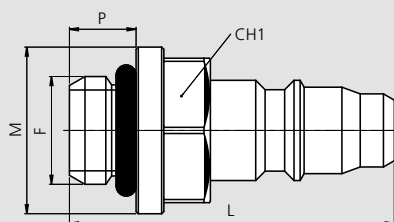
Type	Id. No.
APS 100/140	46167019

Quick fitting female 1/8"



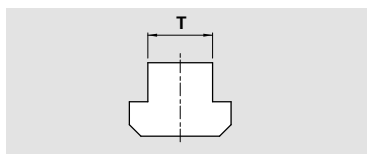
Type	Id. No.	Ø E	F	L	P
APS 100/140	71612801	18.8	G1/8	42	7

Quick fitting male 1/8"



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

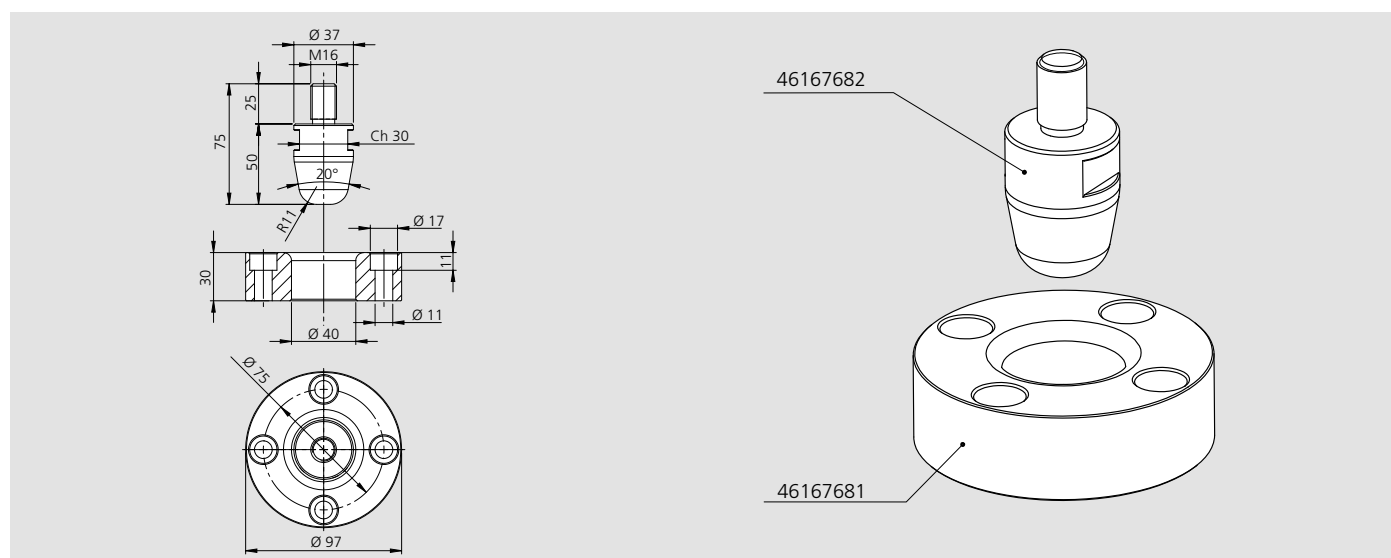
Pair of clamps



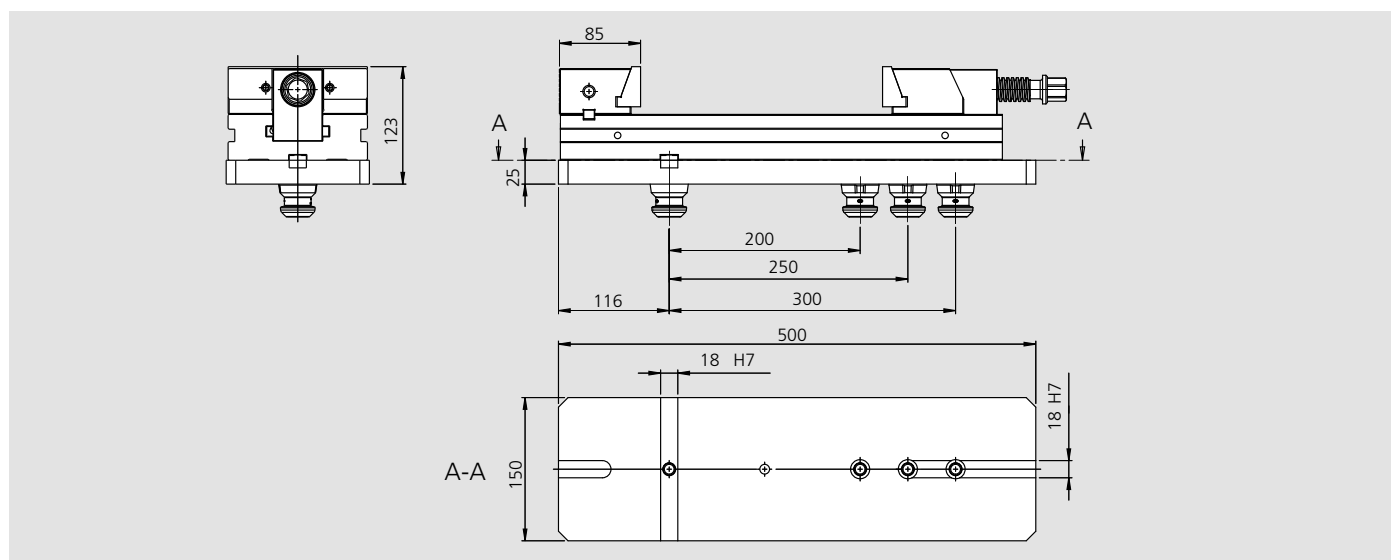
Consisting of:
Pair of clamps
incl. T-nut and
screw

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

Pre-centering



Interface plate for TCi/MCi 150 on APS 140



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

■ Connection system for multiple large plates

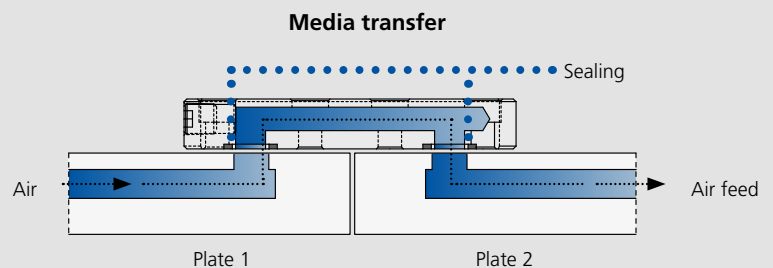
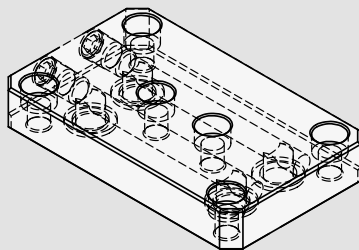
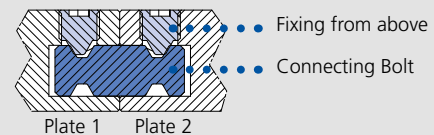
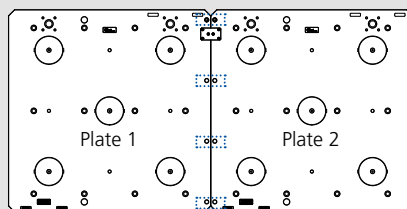
Accessories

**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 radii of the clamping pins for easy and safe loading

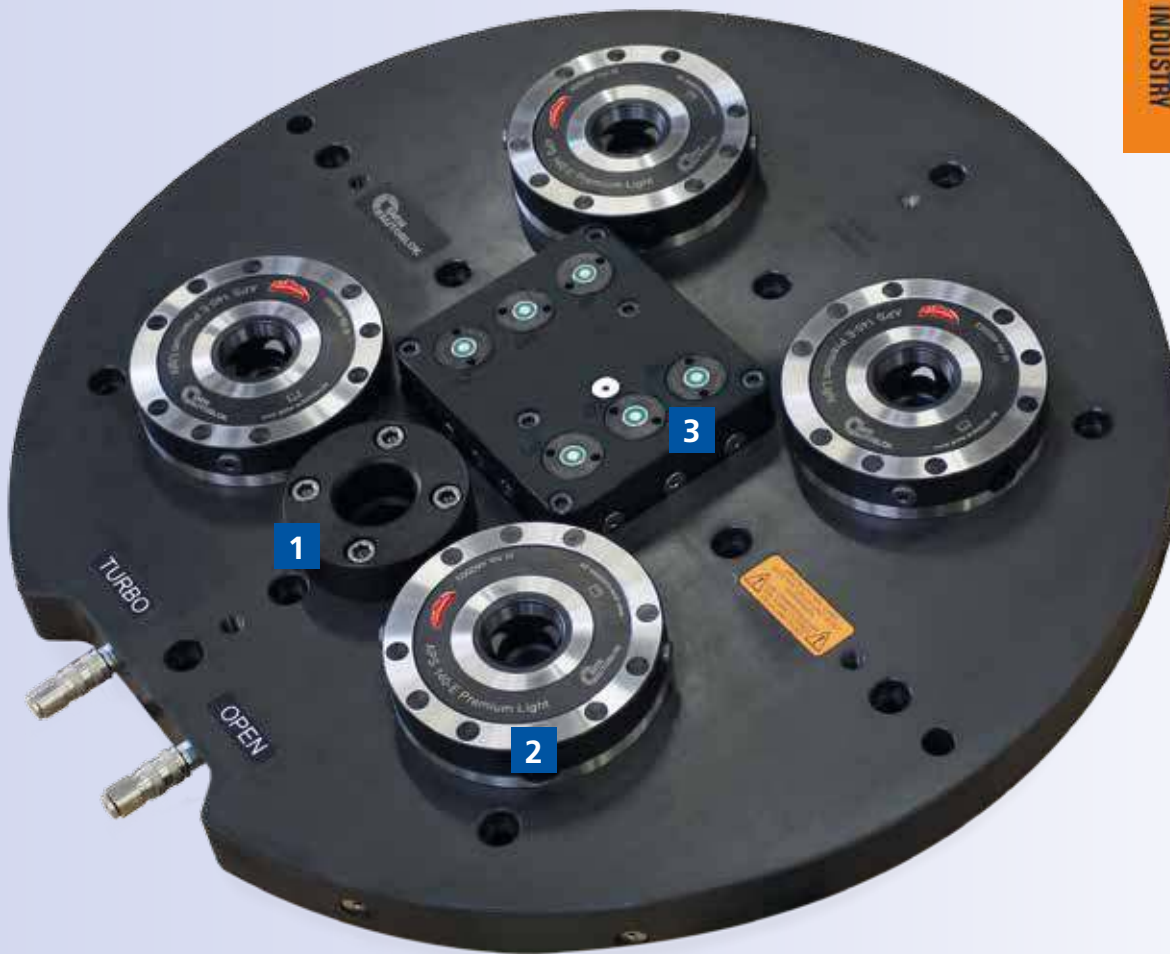
Technical features

- Sealed connecting elements
- Media feed through the connecting elements

Connecting element for media transfer**Mechanical connection**

APS Clamping unit

customized solutions for automation



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

■ Media feed through the pallet

Application examples



Pneumatic/ Hydraulic Power Vice

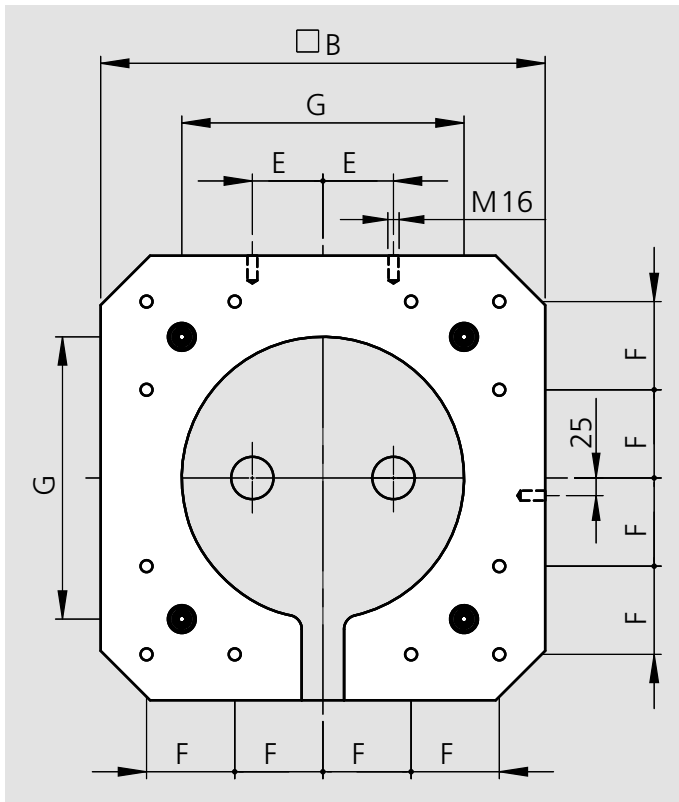


Hydraulic Power Chuck



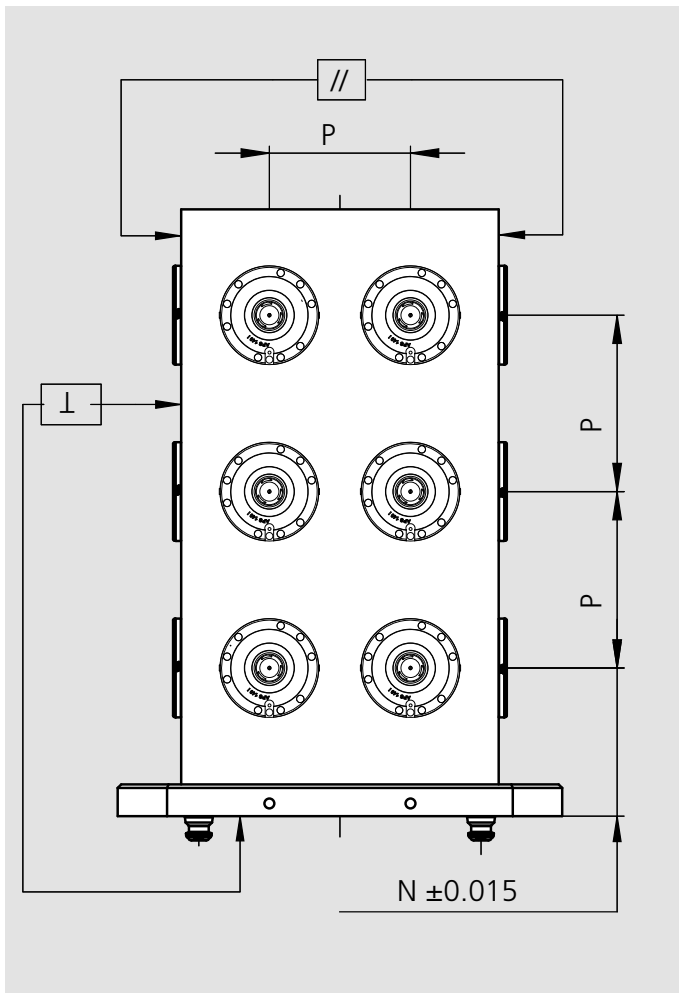
- Dimensions of standard adaptation
- Manufacturing tolerances

Dimensions of standard adaption for machine tools pallet



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

Manufacturing tolerances

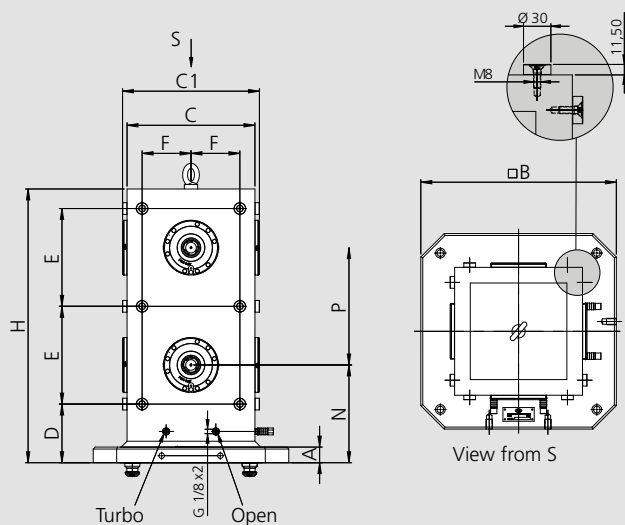


L	P	N
0.02 / 0.035	0.03 / 0.05	± 0.01 / ± 0.02
500 / 1000	500 / 1000	200 / 300

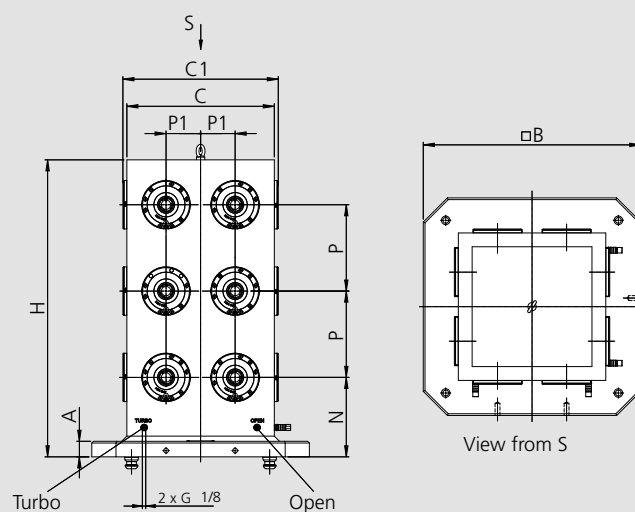
■ Tombstones, Crankwebs, Plates

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

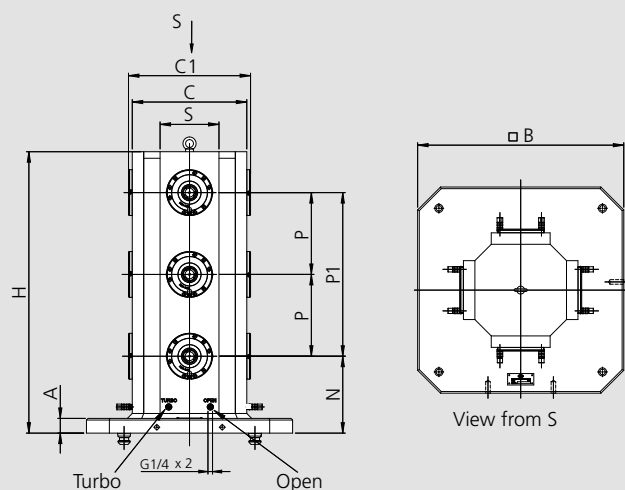
Tombstone with 8 APS modules



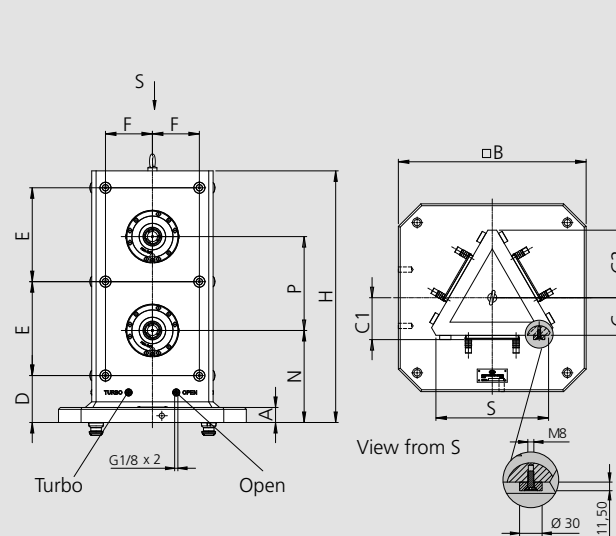
Tombstone with 24 APS modules



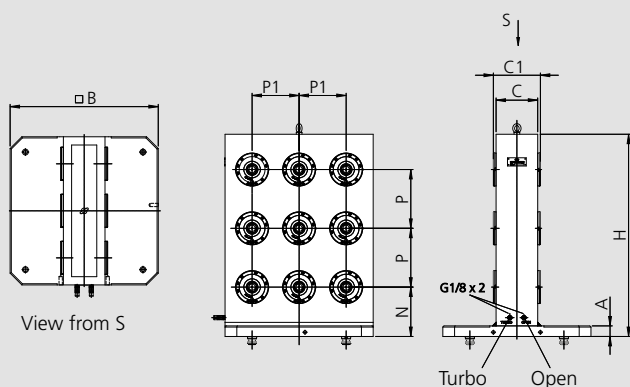
Tombstone with 12 APS modules



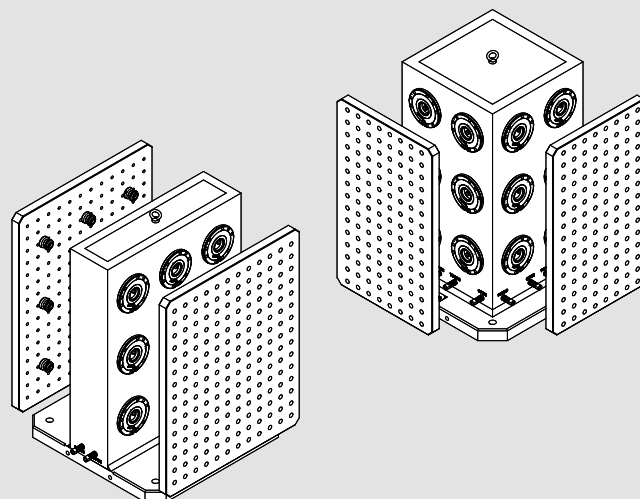
Tombstone with 6 APS modules



Crankweb with 18 APS modules

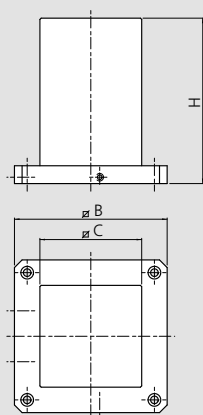


Plates



- Request form
- Simply fill in and send to: omlspa@omlspa.it

Tombstones



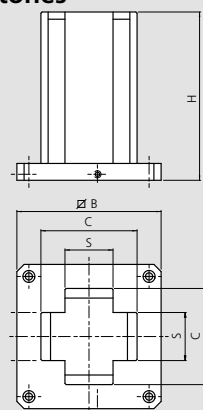
Technical data

B		mm
C		mm
H		mm

Numbers of modules	
Modules type	

Premium E open turbo	
Premium I open turbo	
Premium Light open turbo	
Basic open	

Cross Tombstones



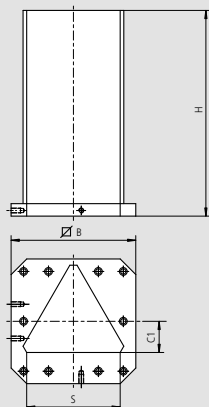
Technical data

B		mm
C		mm
S		mm
H		mm

Numbers of modules	
Modules type	

Premium E open turbo	
Premium I open turbo	
Premium Light open turbo	
Basic open	

Triangular Tombstones



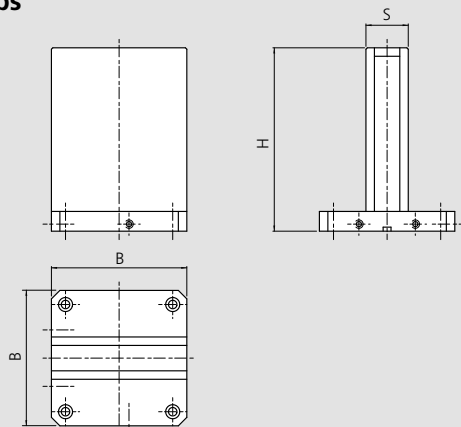
Technical data

B		mm
C1		mm
S		mm
H		mm

Numbers of modules	
Modules type	

Premium E open turbo	
Premium I open turbo	
Premium Light open turbo	
Basic open	

Crankwebs



Technical data

B		mm
S		mm
H		mm

Numbers of modules	
Modules type	

Premium E open turbo	
Premium I open turbo	
Premium Light open turbo	
Basic open	







MODULAR CLAMPING SYSTEMS



Technical characteristics and dimensions are not obliged. OML S.r.l. may give in every time some modifications.



MODULAR CLAMPING SYSTEMS



SINTERGRIP



APS



FMS



TC



MC



LC



CLAK SYSTEM



GENIUS



CIVI 2000



CAM SYSTEM



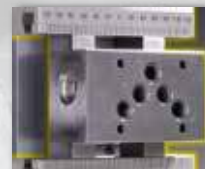
HOLDING CLAMPS



VARI CLAMP



DUO - LOCK



JAWS



SC



ST5-2G



FAST CLAMPS



TWIN VISE



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