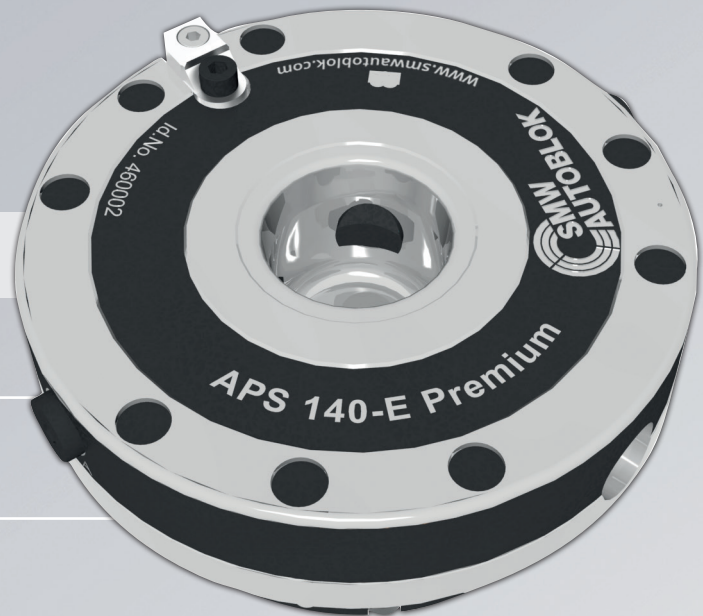
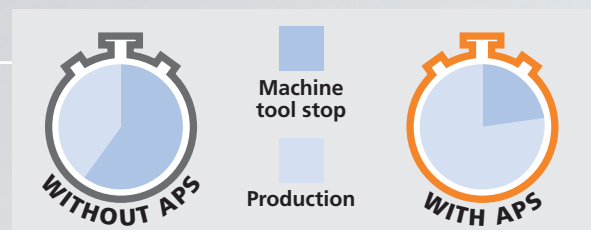


APS zero point clamping system

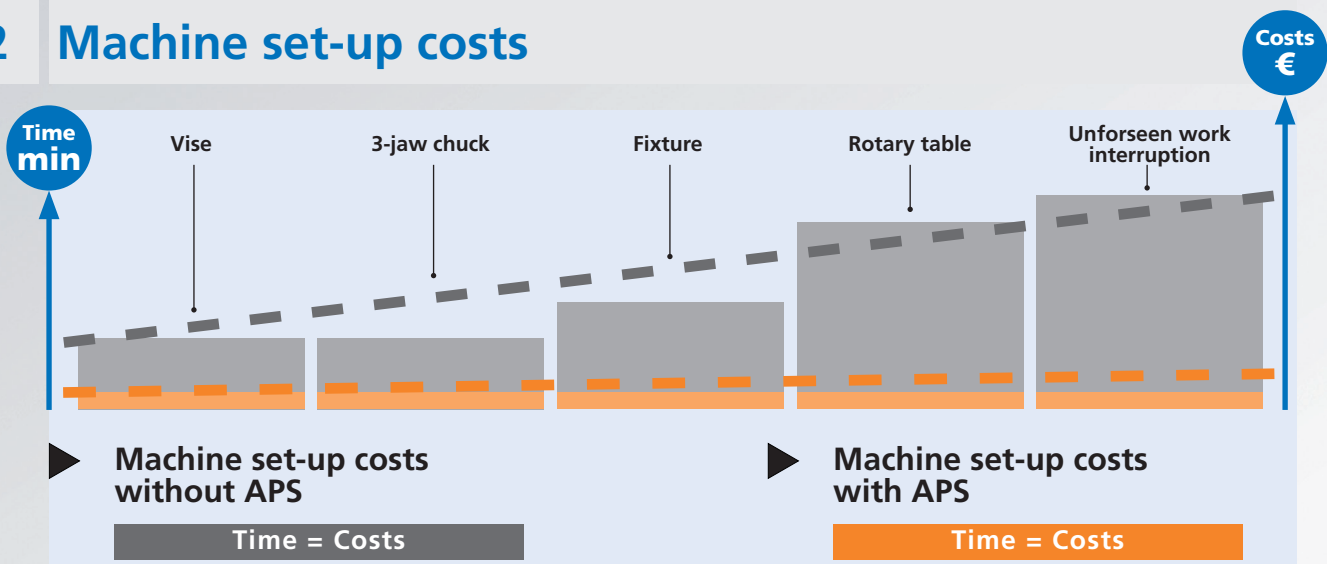


1 Customer benefits

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



2 Machine set-up costs





WATCH THE VIDEO



3 Overview APS versions

▶ BASIC

- 2 Clamping slides
- Turbo function
- Sealed

▶ PREMIUM LIGHT

- 3 Clamping slides
- Turbo function
- Air cleaning
- Sealed

▶ PREMIUM LIGHT SC

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

▶ PREMIUM

- 2-3-6 Clamping slides (based on sizes)
- Turbo function
- Air sensing
- Air cleaning (100-140 sizes)
- Sealed
- 2 or 4 feedings
- Key
- Stroke control system (except 100 size)
- 100 size no "SC Version" available

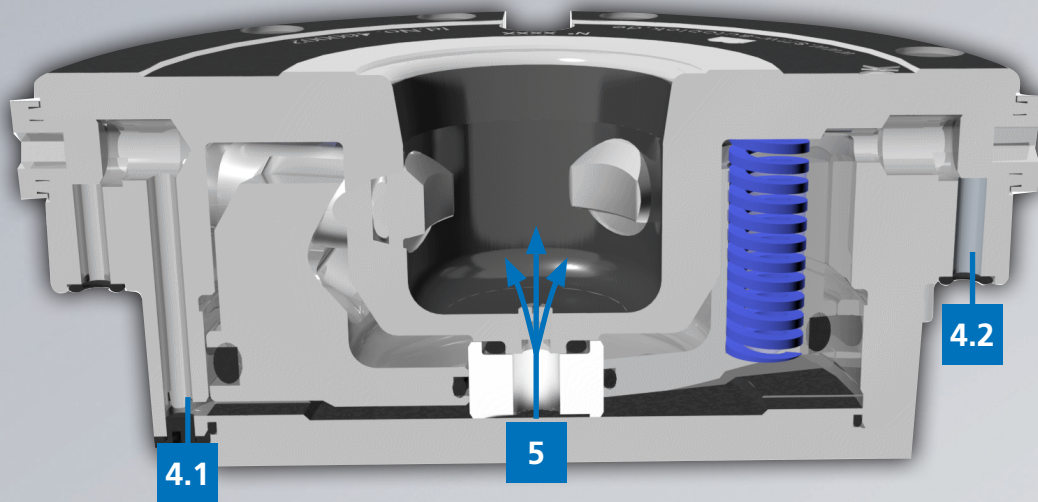
| Type | APS classification | Size | Clamping slides | Turbo | Air cleaning | Stroke control | Air sensing | Key | Feedings | +10°C + 70°C | |
|------------------|--------------------|---------------|-----------------|-------|--------------|----------------|-------------|-----|----------|--------------|---|
| 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 SC | PREMIUM SC | PREMIUM | 100 | 2 | ● | ● | ● | ● | | ● | |
| | | PREMIUM SC | 140 | 3 | ● | ● | ● | ● | ● | | ● |
| | | | 190 | 3 | ● | | ● | ● | ● | | ● |
| | | | 250 | 6 | ● | | ● | ● | ● | | ● |
| | | PREMIUM SC-65 | 190 | 3 | ● | | ● | ● | ● | ● | ● |

APS Features

SIZES 100-140-160-190-250



Industry 4.0
Product



1 Maximum rigidity

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

2 Maximum accuracy

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

3 Air sensing

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

4 Turbo function

▶ **4.1 Unlocking function**
at 6 bar

▶ **4.2 Turbo function**

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

5 Air cleaning

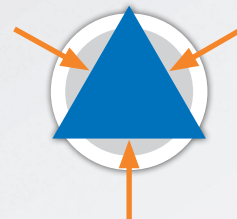
The built-in air cleaning function ensures that the clamping system’s supporting surface remains clean and free of chips while the modules are being opened.



6 Clamping system with 3 clamping slides at 120°

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

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

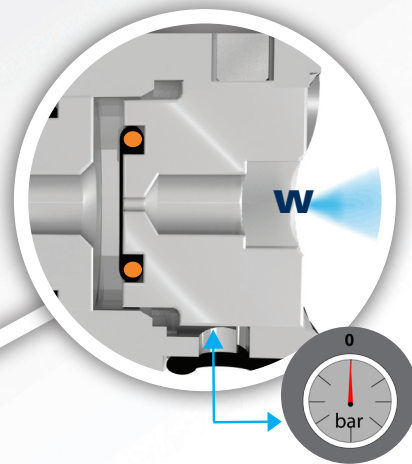
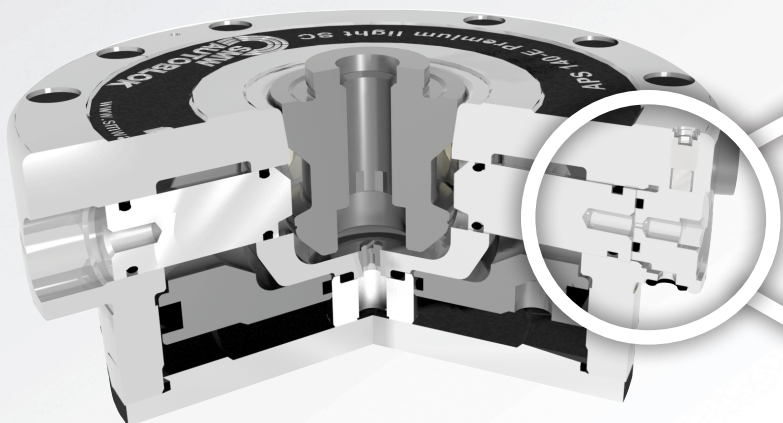


7 Stroke control system

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

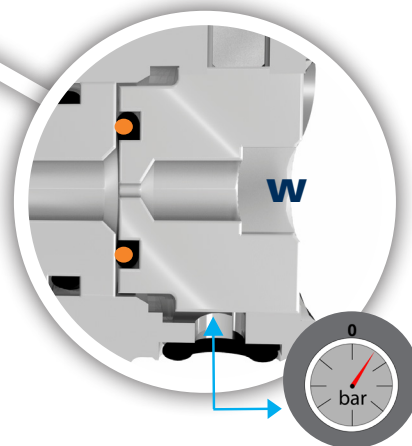
7.1 Locking position

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



7.2 Unlocking position

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



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

APS 140 I

FOR INTERNAL MOUNTING

Ø140 ZERO POINT MODULE

- for built-in mounting - 3 clamping slides
- TURBO function to increase the clamping force
- proofline® chucks = fully sealed - low maintenance

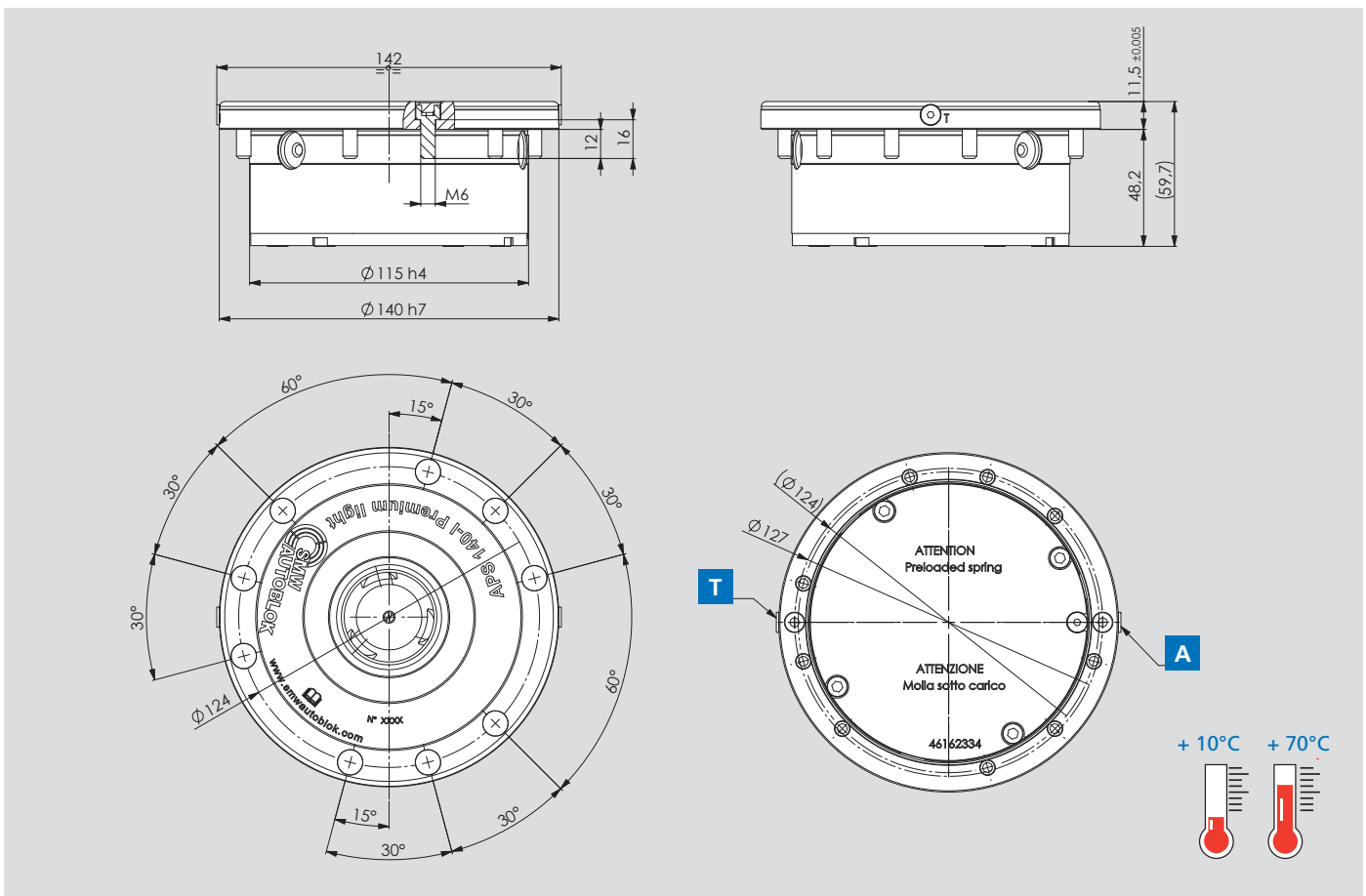


Application/customer benefits

- Increase in economic efficiency of all machine types due to significantly reduced setup times
- Repeatable positioning
- Highest pull-down and holding forces for maximum machine performance
- Optional air sensing and stroke monitoring for automation
- Modular system: extensive standard program for a wide range of machines and applications

Technical features

- Wear-resistant case hardened components
- Highest repeatability < 0.005 mm
- Clamping by spring force, additional increase of pull-in force by turbo function
- 3 Clamping slides for secure locking of the clamping bolt
- Air sensing control for automation applications
- Integrated air purge function for cleaning clamping bolts contact surfaces
- Bottom or side actuation for flexible installation



Technical data

| Type | APS 140I PREMIUM LIGHT |
|-------------------------------|----------------------------|
| Id.No. | 46162480 |
| Pull down force | 7,5 / 26**kN |
| Holding force (*) | 35 (M10) 50 (M12) 75 (M16) |
| Unlocking pressure | 6 bar |
| Repeatability | < 0,005 mm |
| Weight | 4,5 kg |
| Anti-rotation key seat | NO |
| Clamping slides | 3 |
| Air cleaning | YES |
| Pneumatic stroke control [SC] | NO |
| Air sensing [P] | NO |

Turbo function [T] to increase the pull-down force / [A]= Open (*) with screws DIN EN ISO 4762-12.9 / (***) with TURBO function