

APS

ZERO POINT clamping system

CUSTOMER BENEFITS

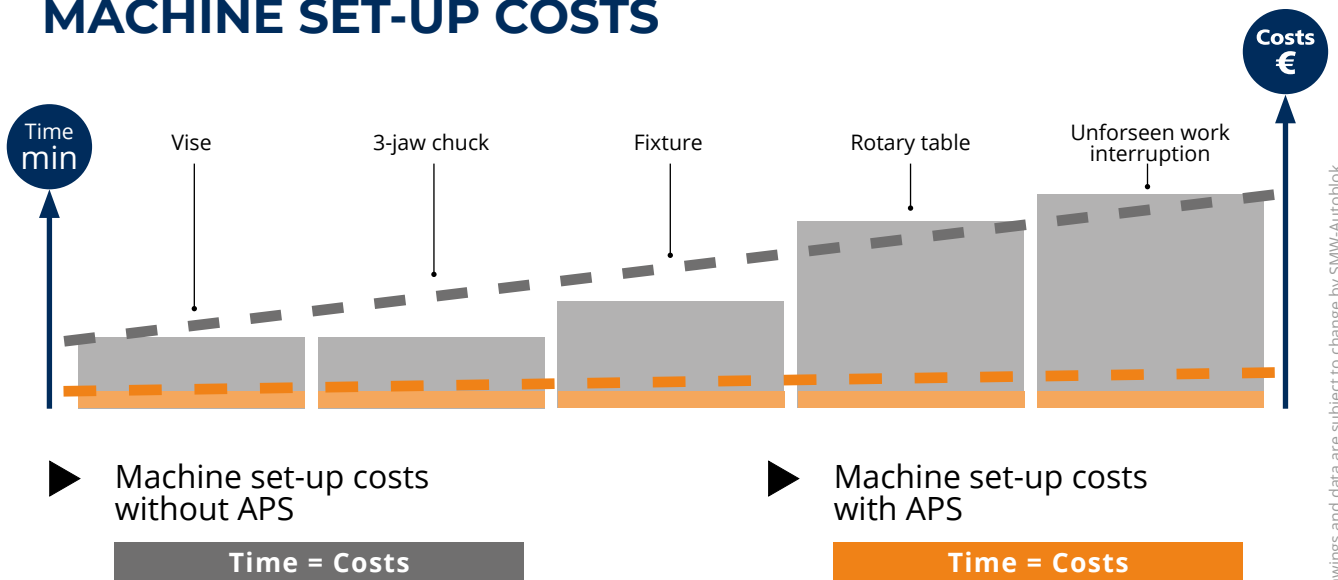
- Fully sealed (proofline)
- Highest stiffness by means of 3 clamping slides
- Low installation height due to the compact design
- Highest process reliability and repeat accuracy < 0.005 mm
- Modular construction kit system: Existing clamping systems can be modified very easy
- Significantly reduced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



Machine tool stop
Production



MACHINE SET-UP COSTS

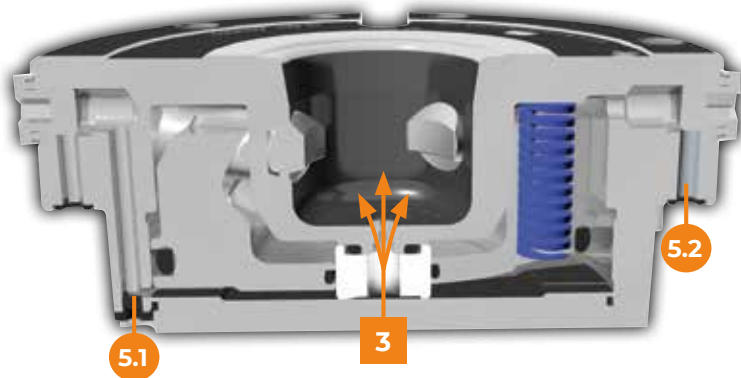


Drawings and data are subject to change by SMW-Autoblok.

APS

features

Ø 100-140-160-190-250



5. TURBO FUNCTION

5.1 UNLOCKING FUNCTION

at 6 bar.

5.2 TURBO FUNCTION

The **TURBO** function is always integrated in **APS** 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

1. MAXIMUM RIGIDITY

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

2. MAXIMUM ACCURACY

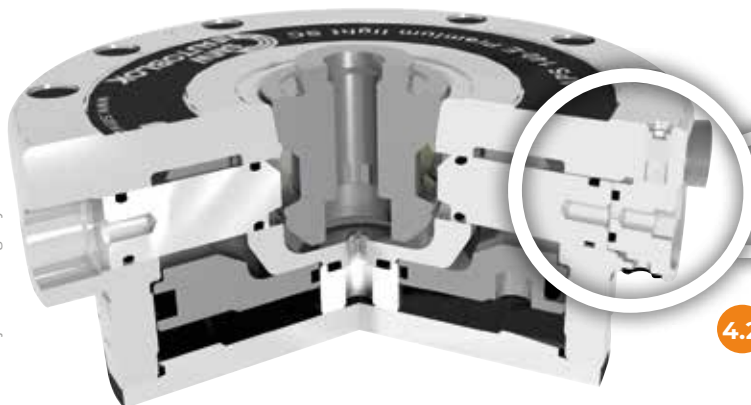
Maximum accuracy of the tapered coupling between the pin and the module.

3. AIR SENSING

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

4. 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.



6. CLAMPING SYSTEM WITH 3 JAWS at 120°

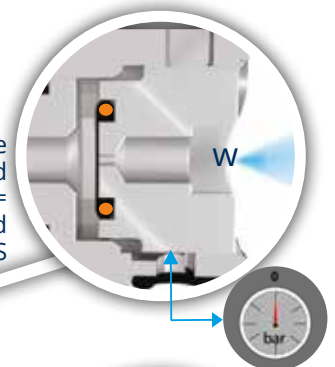
APS is the only one ZERO POINT clamping system with 3 jaws at 120° and thanks to special treatments of the clamping jaws further improves its durability.

7. 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.

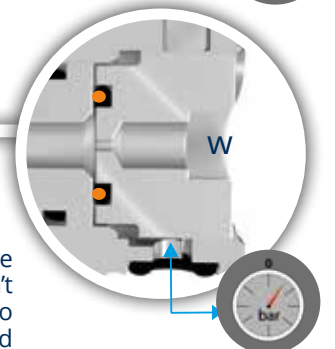
4.1 LOCKING POSITION

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.



4.2 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 160 E PREMIUM LIGHT SC - ID.N. 46165700 for external mounting

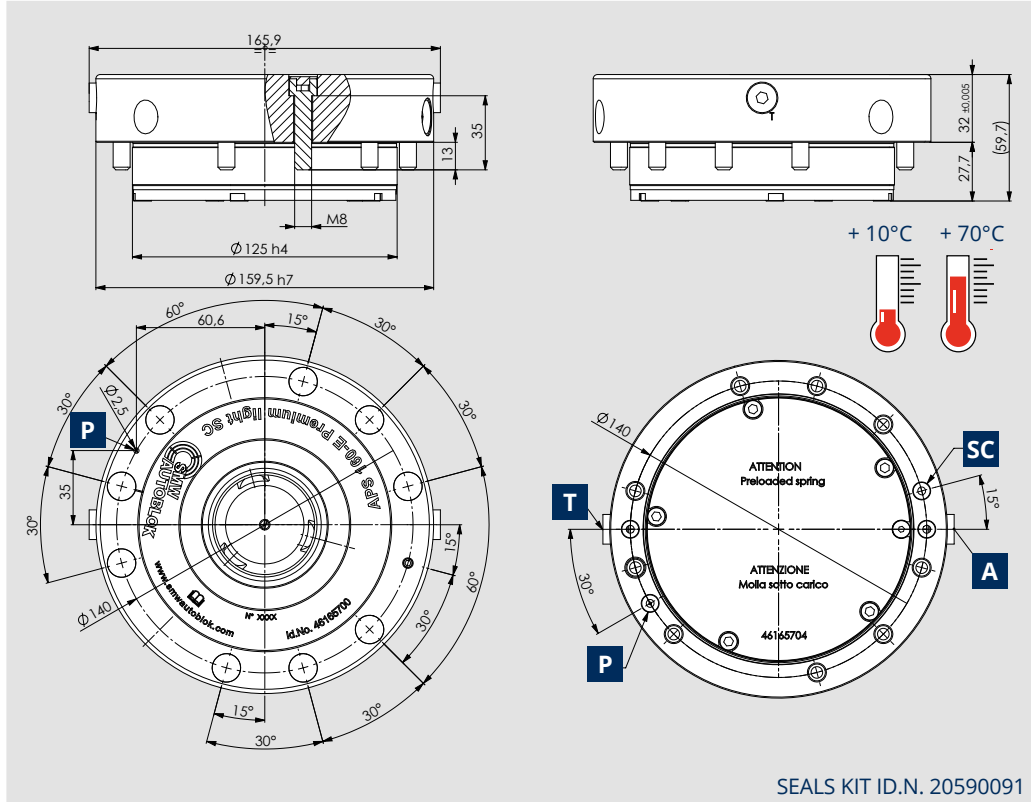


Zero Point Clamping Module

Technical features

- 3 Clamping slides
- TURBO function **T** to increase the clamping force
- Air sensing **P**
- Air cleaning
- Pneumatic stroke control **SC**

A = Open



SEALS KIT ID.N. 20590091

ID.No.	Pull down force	Holding force (*)	Unlocking pressure	Repeatability	Weight
46165700	9 / 30**kN	50(M12) 75(M16) kN	6 bar	<0,005mm	5,9 Kg

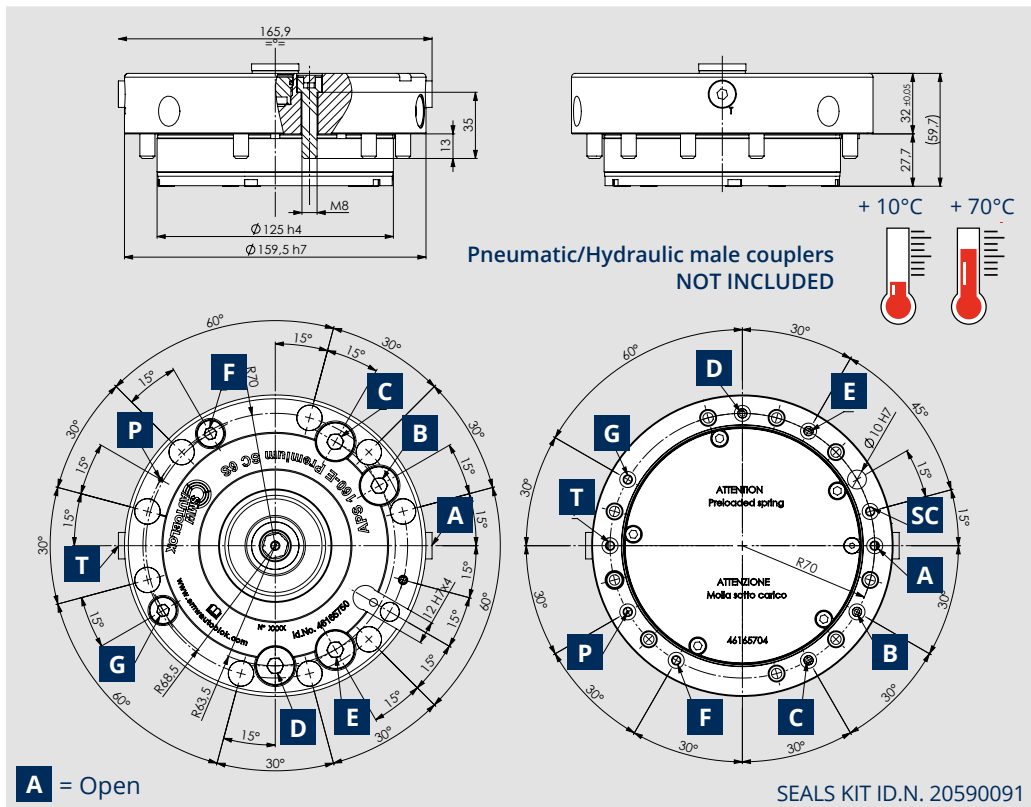
APS 160 E PREMIUM SC-6S - ID.N. 46165750 prepared for maximum 6 couplers



Zero Point Clamping Module

Technical features

- 3 Clamping slides
- TURBO function **T** to increase the clamping force
- Anti-rotation key seat
- Air sensing **P**
- Pneumatic stroke control **SC**
- n.4 seats **B C D E** prepared to mount pneumatics/hydraulics couplers (71718106)
- n.2 seats **F G** prepared to mount pneumatic couplers (71483010)
- Air cleaning



Pneumatic/Hydraulic male couplers
NOT INCLUDED

A = Open

SEALS KIT ID.N. 20590091

ID.No.	Pull down force	Holding force (*)	Unlocking pressure	Repeatability	Weight
46165750	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"