



VERO-S NSE-S mini 90-25 IOL

**Sensory quick-change pallet
system based on
NSE mini 90-25**

Pneumatically actuated miniature clamping modules with fully integrated sensor system and IO-Link interface with identical dimensions

For years now, the VERO-S NSE mini 90-25 from SCHUNK has stood for high-performance modules with a small pitch of just 100 mm. With the new VERO-S NSE-S mini 90-25 IOL series, SCHUNK is going one step further: while retaining the same compact dimensions, the modules are now equipped with a fully integrated sensor system. With the help of this sensor system, the clamping slide positions, the pallet presence, and the pressure of the turbo function are recorded in real time – and transmitted directly to the machine control via the IO-Link interface. The result: maximum process reliability, end-to-end transparency and smart automation – all in one compact, high-performance module.

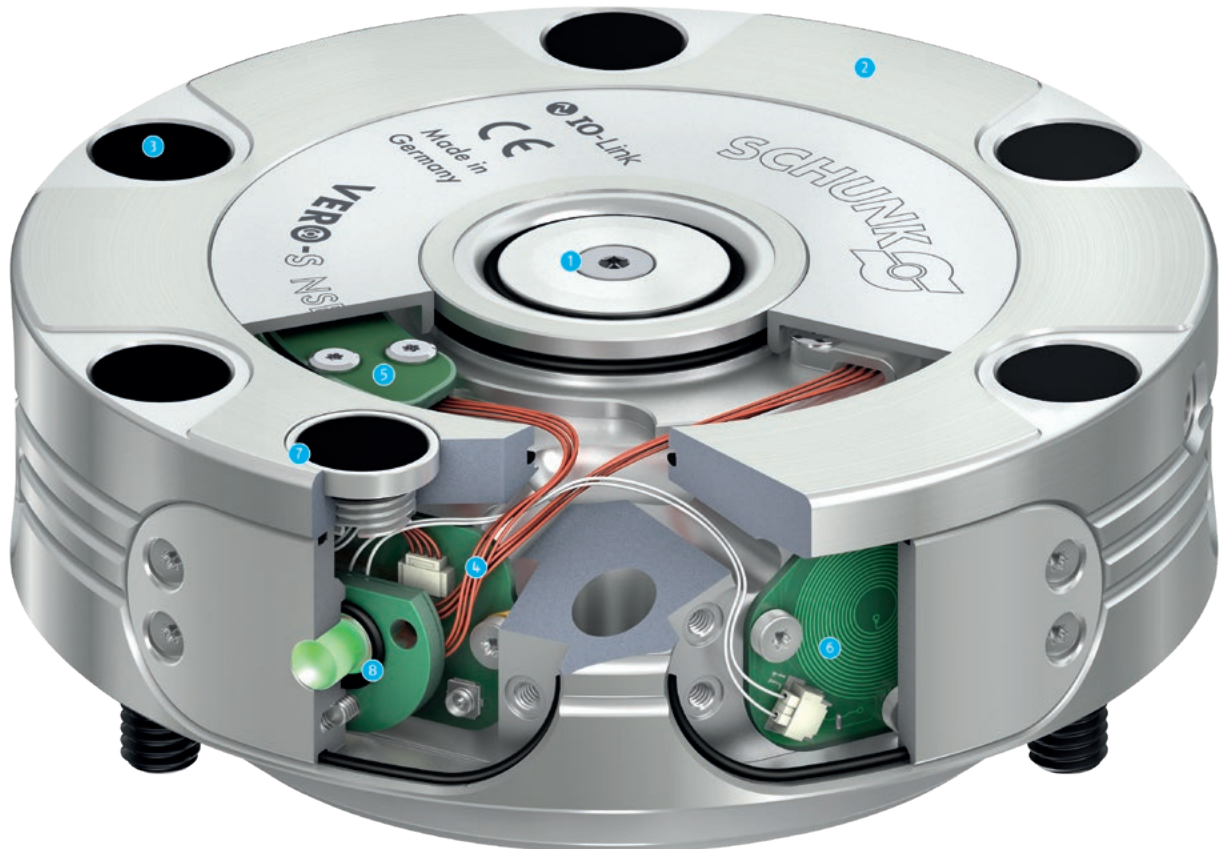


Advantages – Your benefits

- + All features from the NSE mini 90-25 series remain unchanged**
Tried-and-tested VERO-S technology, ideally suited for automation applications
- + Integrated monitoring of the clamping slide position**
For the statuses "Open", "Clamped with clamping pin" and "Closed without clamping pin"
- + Integrated monitoring of pallet presence**
Possible via inductive proximity switches
- + Integrated pressure sensor**
To clearly detect whether the turbo function is active
- + Electronics integrated in the clamping module**
Signal processing takes place exclusively in the clamping device, with identical dimensions to the standard version
- + Signal transmission via IO-Link**
For easy integration in commonly used fieldbus systems
- + Maximum process reliability**
Thanks to various query options and transmission of error messages
- + Optional cone seal**
For protecting the change interface from coolant, dust, and chips
- + One consistent clamping pin size for all NSE mini-modules**
Modules can be seamlessly integrated into existing processes
- + Form-fit, self-retained locking**
Full pull-down force is maintained even in the event of a pressure drop
- + The modules are corrosion-free and completely sealed**
Long life time and maximum process reliability

Function of NSE-S mini 90-25 IOL

The clamping procedure for the module is carried out using an axial piston with an integrated spring assembly and patented drive kinematics. Clamping is carried out by two clamping slides and is self-retained. The module is opened pneumatically with a system pressure of 6 bar. The clamping slide positions, pallet presence and turbo function can be detected via the fully integrated electronic components. Thanks to the IO-Link interface, this information can then be passed on to the machine control.



- | | |
|--|---|
| <ul style="list-style-type: none"> 1 Optional cone seal
For protection of the changing interface 2 Large flat surface
For best support and highest rigidity 3 Lower-lying countersunk screws with cover plugs
For the easiest possible cleaning of the flat surface and to prevent the accumulation of coolant and chips 4 Integrated electronics
Signal processing is done exclusively in the clamping device | <ul style="list-style-type: none"> 5 Pressure sensor
To clearly detect whether the turbo function is active 6 Monitoring of the clamping slide position
For the statuses "Open", "Clamped with clamping pin" and "Closed without clamping pin" 7 Inductive proximity switch
For monitoring of the pallet presence 8 LED display
For visual inspection |
|--|---|

Sensory quick-change pallet module

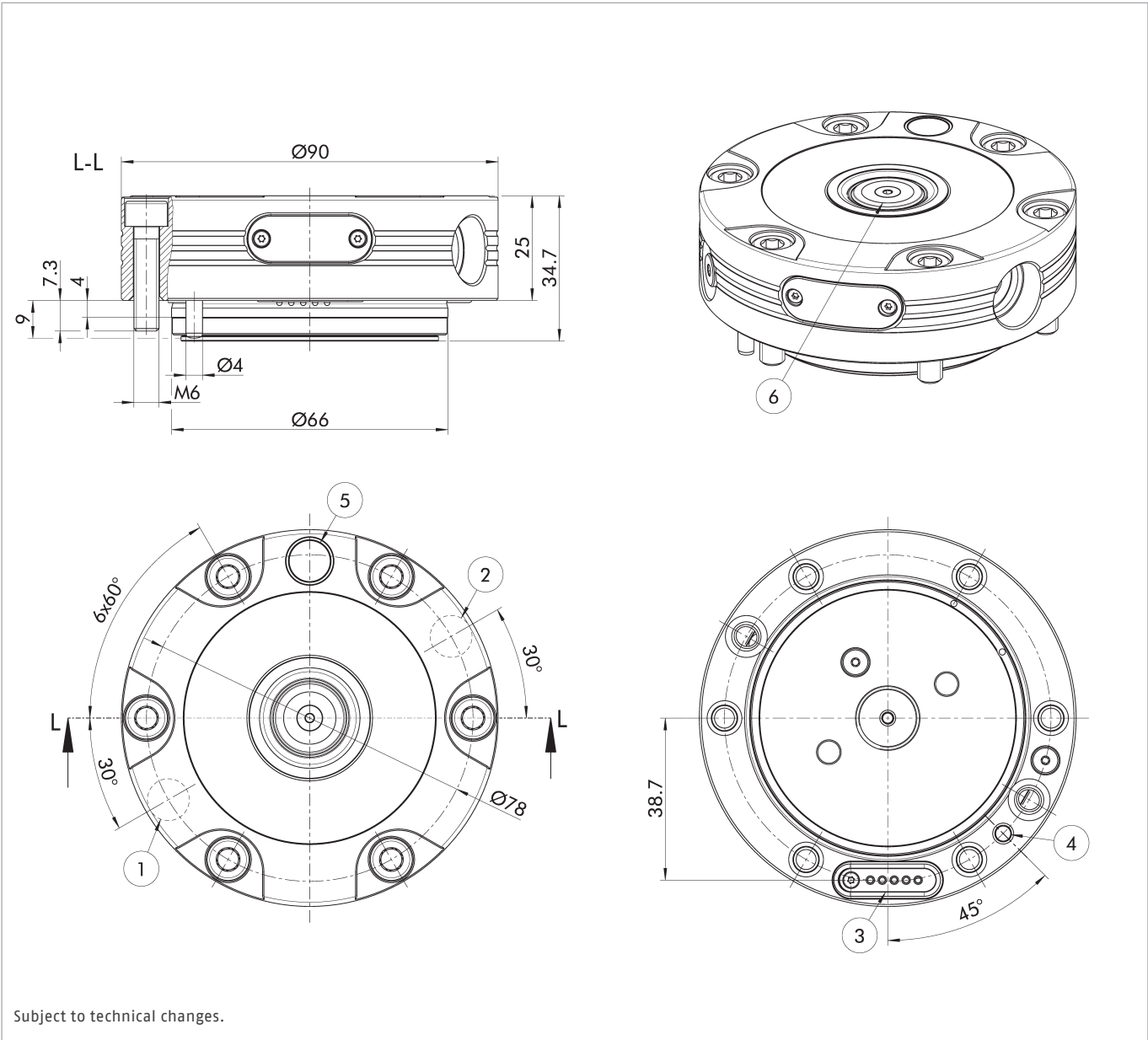
Pneumatically actuated quick-change pallet module
Integrated monitoring of clamping slide positions, pallet presence and the pressure in the turbo chamber via IO-Link

Scope of delivery

Clamping module, mounting screws, O-rings, cover plugs, operating manual; without clamping pins, without electrical fixed contact interface

Technical data

Description	ID	Pull-down force [kN]	Pull-down force with turbo [kN]	Unlocking pressure [bar]	Repeat accuracy [mm]	Operating voltage [V DC]	Weight [kg]
NSE-S mini 90-25 IOL	1528088	1.5	6	6	< 0.005	24	1.1



- ① Unlocking connection

② Turbo connection

③ IO-Link interface via spring contacts
- ④ Positioning pin for correct module alignment

⑤ Proximity sensor for pallet presence monitoring

⑥ Optional: Cone seal

Sensory quick-change pallet module

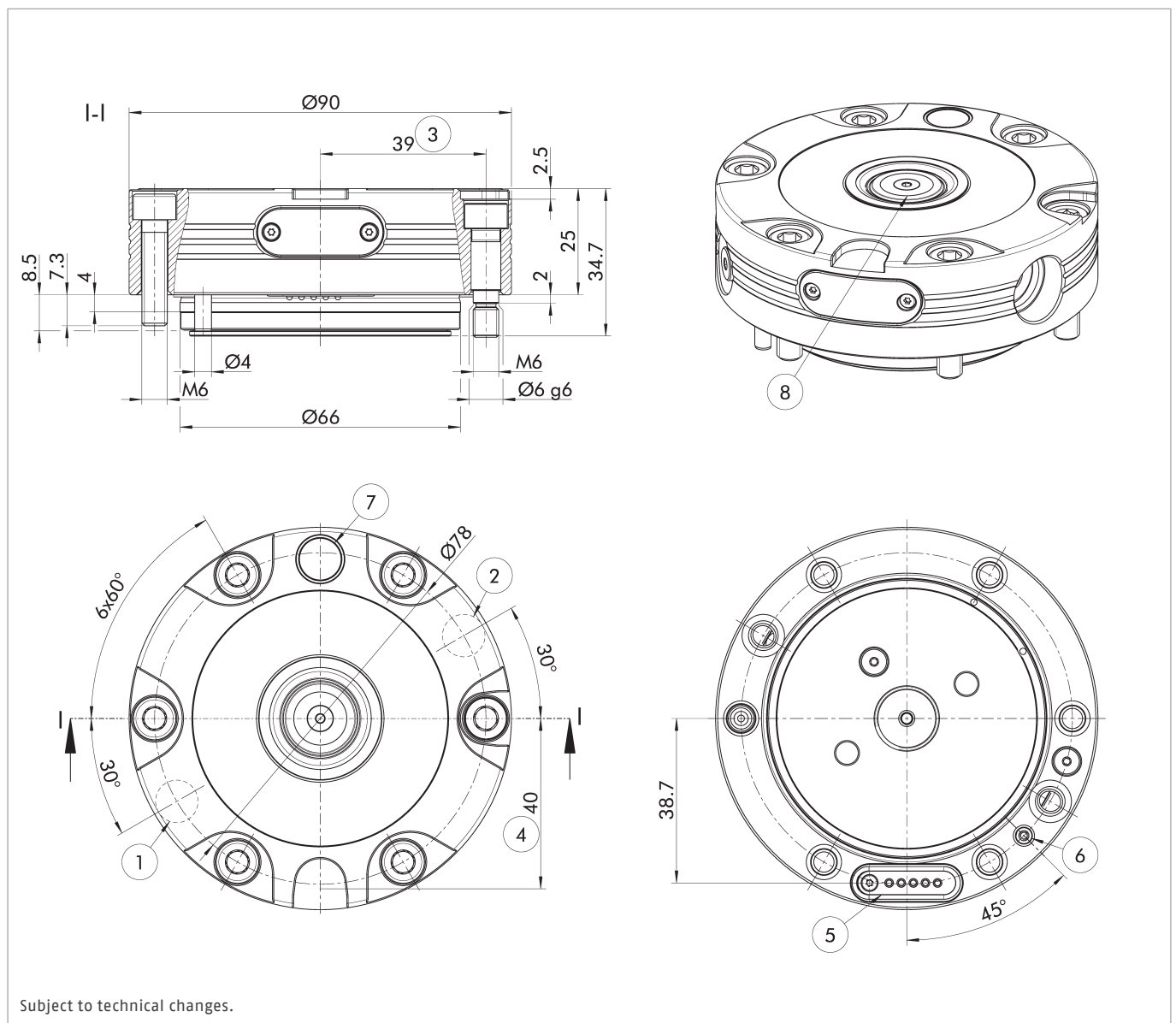
Pneumatically actuated quick-change pallet module with anti-rotation protection V1
Integrated monitoring of clamping slide positions, pallet presence and the pressure in the turbo chamber via IO-Link

Scope of delivery

Clamping module, mounting screws, O-rings, cover plugs, operating manual; without clamping pins, without electrical fixed contact interface

Technical data

Description	ID	Pull-down force [kN]	Pull-down force with turbo [kN]	Unlocking pressure [bar]	Repeat accuracy [mm]	Operating voltage [V DC]	Weight [kg]
NSE-S mini 90-25-V1 IOL	1455855	1.5	6	6	< 0.005	24	1.1



- ① Unlocking connection
- ② Turbo connection
- ③ Clearance 39 ± 0.01 mm for fitting screw PSC mini V1 (ID 0435921) in the clamping station
- ④ Clearance 40 ± 0.01 mm for IXB V1 mini in the clamping pallet
- ⑤ IO-Link interface via spring contacts
- ⑥ Positioning pin for correct module alignment
- ⑦ Proximity sensor for pallet presence monitoring
- ⑧ Optional: Cone seal

Accessories

Clamping pins SPx mini

Clamping pin for positive connection with NSE mini clamping modules.



Suitable for	Description	ID
NSE-S mini 90-25 IOL		
NSE-S mini 90-25-V1 IOL	SPA mini 20	0435610
NSE-S mini 90-25 IOL		
NSE-S mini 90-25-V1 IOL	SPB mini 20	0435620
NSE-S mini 90-25 IOL		
NSE-S mini 90-25-V1 IOL	SPC mini 20	0435630

Clamping pin extension

For lifting the workpiece from the machine table, and for improving the accessibility of the machine spindle.



Suitable for	Description	ID
NSE-S mini 90-25 IOL		
NSE-S mini 90-25-V1 IOL	SP-VL mini 30-6-SPA	0435640
NSE-S mini 90-25 IOL		
NSE-S mini 90-25-V1 IOL	SP-VL mini 60-6-SPA	0435650

Indexing pin

Used as an anti-rotation protection for VERO-S modules with anti-rotation protection V1.



Suitable for	Description	ID
NSE-S mini 90-25-V1 IOL	IXB V1 mini	0435930

Cone seal

For quick and easy retrofitting of existing NSE3 mini 90-25 modules without cone seal to protect the change interface.



Suitable for	Description	ID
NSE-S mini 90-25 IOL		
NSE-S mini 90-25-V1 IOL	KVS mini 20	1541908

Electrical fixed contact interface

Electrical fixed contact interface without pre-assembled cable as a counterpart for the spring contact on the adapter plate side.



Suitable for	Description	ID
NSE-S mini 90-25 IOL		
NSE-S mini 90-25-V1 IOL	SFC-5P-0C	1521278

Protection covers

Used to close the changing interface and to cover the contact surface.



Suitable for	Description	ID
NSE-S mini 90-25 IOL		
NSE-S mini 90-25-V1 IOL	SDE mini 90	0435670

Protection covers

For closing the changing interface.



Suitable for	Description	ID
NSE-S mini 90-25 IOL		
NSE-S mini 90-25-V1 IOL	SDE mini 20	0435660

Cover caps

Used to cover the mounting screws and to avoid the accumulation of chips.



Suitable for	Description	ID
NSE-S mini 90-25 IOL	ADK M6-SW5	9985503
NSE-S mini 90-25-V1 IOL	ADK M6-SW4	0435911



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