Technical datasheet: VERO-S NSE-M _mini_ 90

Functional description:

The clamping operation is performed based on an integrated spring assembly. The resulting clamping of the pin is self-locking. To open the module the tangentially positioned drive piston is actuated through a 120° counterclockwise rotation – closing is then executed in the clockwise direction via spring support.

Characteristics	Description
Unlocking torque	10 Nm
Weight	1 kg
Repeatability: with SPA mini 20	< 0.005 mm
Corrosion-resistant	All functional parts are made of hardened, stainless steel
Self-locking system	Clamping pin remains in the module
Short taper centering	Precise centering by quick and easy joining via entry radii
Application of proven and fundamental safety principles in terms of DIN 13849-2: technical attachment A	Is applied for example by using of reliable springs, using of proper materials and manufacturing processes, proper dimensioning, etc. ….
Patented dual stroke system	Therefore highest pull-down forces
Patented drive concept	Ensure an extremely flat height of only 20 mm
Definition of the clamping module in terms of MRL Directive 2006/42/EC	Incomplete machine
PL (Performance Level)	Not applicable because the module is no safety component
Elimination of errors	Release of the clamped quick-change pallet system without adjacent unlocking signal

Technical datasheet: VERO-S NSE-M $_{mini}$ 90

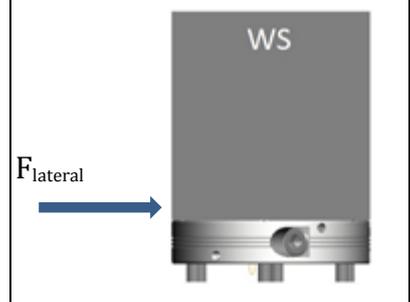## Pull-down force in axial direction

without turbo function =   1000 N

Lateal forcewith turbo-function

$$F_{lateral} = F_{pulldown\ force} * \mu$$

$$= 1\,000\ N * 0.1$$

$$F_{lateral} = 100\ N$$

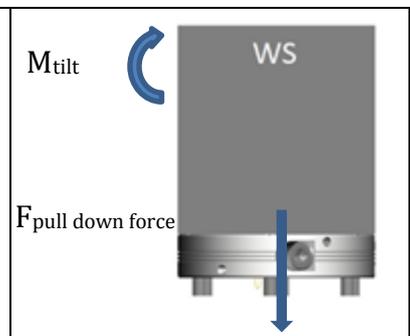*[Lateral force without relative movement]*

$F_{lateral}$

Tilting moment clamping-station with turbo-function

__1-way__

$$M_{tilt\ module} = 5\ Nm\ (determined\ empirically)$$

M_{tilt}

$F_{pull\ down\ force}$

Tilting moment clamping station with turbo-function

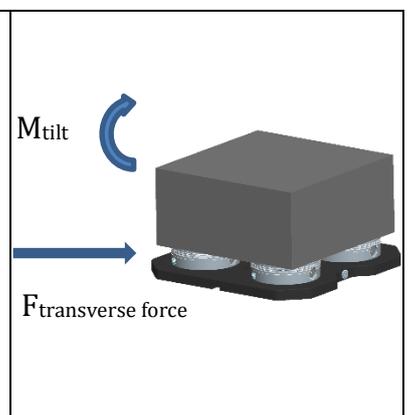__4-way__

Pitch 200 mm x 200 mm

$$M_{tilt} = 190\ Nm \qquad F_{lateral} = 400\ N$$

Pitch 300 mm x 300 mm

$$M_{tilt} = 280\ Nm \qquad F_{lateral} = 400\ N$$

M_{tilt}

$F_{transverse\ force}$

More details in quotation