Technical datasheet: VERO-S NSE *mikro* 49

Functional description:

The clamping operation is performed based on an integrated spring assembly. The resulting clamping of the pin is self-locking. The pull-down force can be increased by up to 260% by actuating of the standardized integrated turbo function, which occurs due to an additional short pressurization of the piston surface. By pressurization (> 5 bar) of the module the clamping slides open and the clamping pin can be removed.

Characteristics	Description
Opening pressure	Min. 5 bar / Max. 7 bar
Weight	0.2 kg
Repeatability: with SPA mikro 10	< 0.005 mm
Clamping slide monitoring	Monitoring of the clamping slide position “open” via pressure sensing
Turbo function	Increasing of the pull-down force by an additional pressure impulse in the spring chamber
Corrosion-resistant	All functional parts are made of hardened, stainless steel
Self-locking system	Clamping pin remains in the module in case of a pressure drop
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 12 mm (the world’s flattest quick-change pallet module)
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

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Pull-down force in axial direction

without turbo function = $150\ N$

with turbo function = $400\ N$ (with 6 bar)

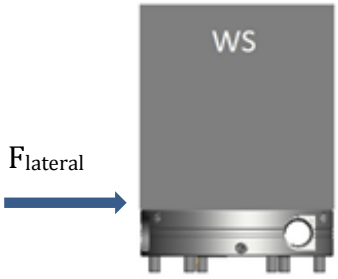
Lateral force with turbo-function

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

$$= 400\ N * 0.1$$

$$F_{lateral} = 40\ N$$

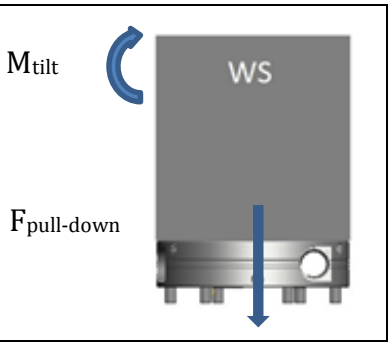
[Lateral force without relative movement]



Tilting moment clamping-station with turbo-function

1-way

$M_{tilt\ Module} = 2\ Nm\ (determined\ empirically)$



Tilting moment clamping station with turbo-function

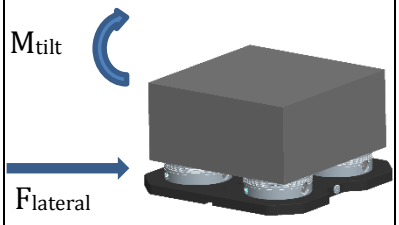
4-way

Pitch 200 mm x 200 mm

$M_{tilt} = 29\ Nm \quad F_{lateral} = 160\ N$

Pitch 300 mm x 300 mm

$M_{tilt} = 42\ Nm \quad F_{lateral} = 160\ N$



More details in quotation