Technical datasheet: VERO-S NSA *plus* 120

Functional description:

The clamping operation is performed based on an integrated spring assembly. The resulting clamping of the centering ring is self-locking. The pull-down force can be increased by up to 300% 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 centering ring can be removed.

Characteristics	Description
Opening pressure	Min. 5 bar / Max. 7 bar
Weight	2.5 kg
Repeatability: with SRA 120	< 0.005 mm
Clamping slide monitoring and contact monitoring	Monitoring of the slide positions “open” and “clamped” via pressure sensing as well as contact monitoring with additional cleaning of the contact surfaces
Lifting function	While opening the module the pallet gets lifted additionally (1 kN)
Turbo function	Increasing of the pull-down force by an additional pressure impulse in the spring chamber
Hermetically sealed	Maintenance-free, IP 67 (DIN EN 60529)
Corrosion-resistant	All functional parts are made of hardened, stainless steel
Self-locking system	Clamping ring remains at 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
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
Can be used for milling and turning applications	It is mandatory that the max. permitted speed must be adjusted to the actual fastening situation

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Pull-down force in axial direction

without turbo function = $3\,000\ N$

with turbo function = $9\,000\ N$ (with 6 bar)

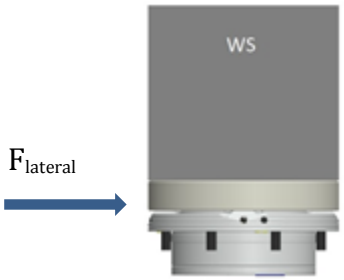
Lateral force with turbo-function

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

$$= 9\,000\ N * 0.1$$

$$F_{lateral} = 900\ N$$

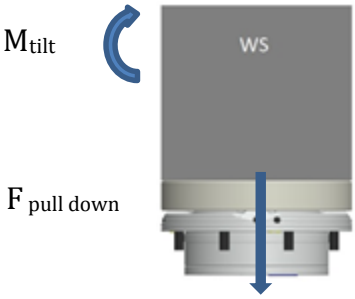
[Lateral force without relative movement]



Tilting moment clamping-station with turbo-function

1-way

$M_{tilt\ Module} = 500\ Nm\ (determined\ empirically)$



Tilting moment clamping station with turbo-function

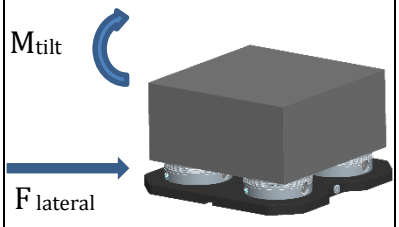
4-way

Pitch 200 mm x 200 mm

$M_{tilt} = 1\,800\ Nm$ $F_{lateral} = 3\,600\ N$

Pitch 300 mm x 300 mm

$M_{tilt} = 2\,600\ Nm$ $F_{lateral} = 3\,600\ N$



More details in quotation