

Combi Sword Brush Una HZ-BB 121..

Cleaning of automotive body blanks and tailored blanks (steel, aluminium)

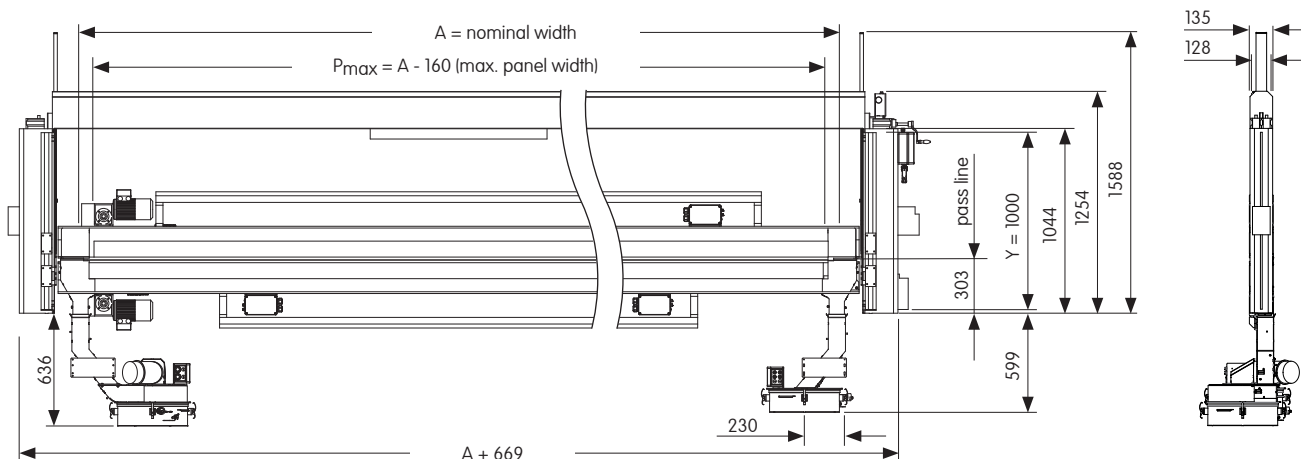


Brief description

The Combi Sword Brush Una HZ-BB is ideal for cleaning steel or aluminium blanks from above and from below, for instance before entering the press line. Switching from oily blanks to non-oily blanks poses no difficulty due to the self-cleaning mechanism. Particles and surplus lubricants are detached from the filaments of the brush and extracted through heated channels for collection in a container. Aerosols containing lubricants are separated from the suction air flow via a cyclone separator.

Technical details

- 2 x Sword Brush BIP 155/1/A wiping direction 1: upper and lower brushes wipe in the same direction
- 1 x adjustment frame VEG 400 for parallel adjustment of the brushes in height
- 1 x Ingromat regulator and filter unit
- Thermal-mechanical separation system comprising: cyclone, collection container, heated suction connections



values in mm

Ordering example

The subject blank has a max. width of

$P_{\max} = 2000$ mm.

The most suitable Combi Sword Brush

Una HZ-BB 121/1000/A

therefore has a nominal width of $A = 2200$ mm

Order code 3180-014

Order code

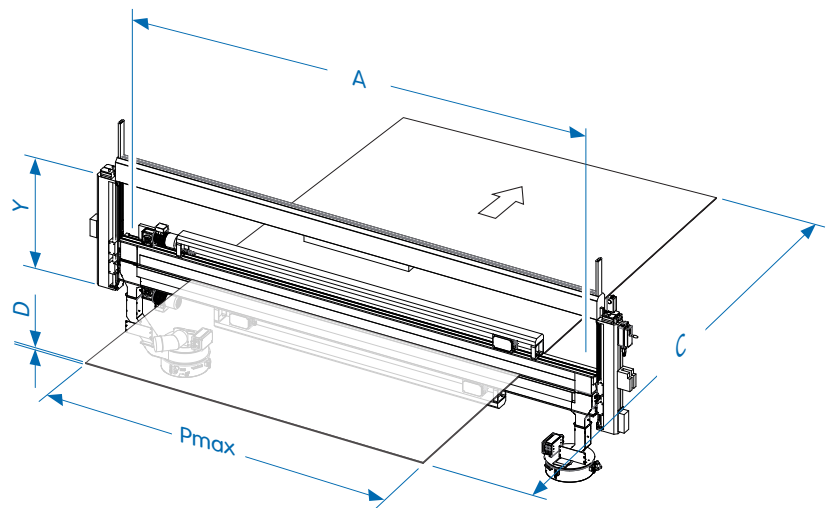
Una HZ-BB 121/1000

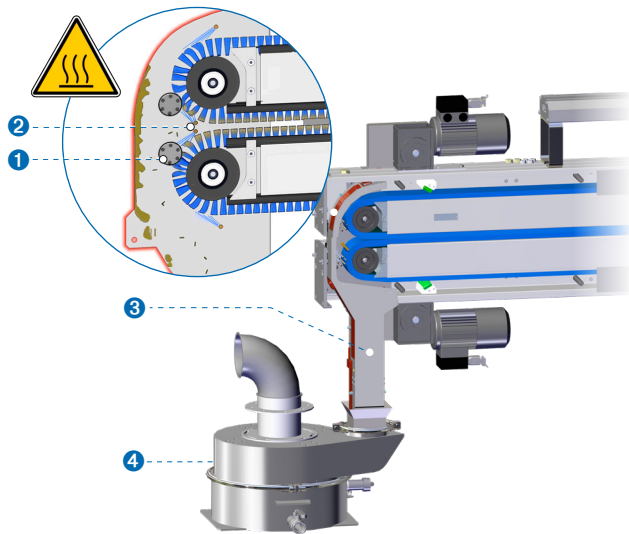
3180-	Nominal width A in mm	Nominal width A in inch
-009	1300	51.18
-010	1500	59.06
-011	1650	64.96
-012	1750	68.89
-013	2000	78.74
-014	2200	86.61
-015	2500	98.43
-016	2750	108.26
-017	3000	118.11
-018	3200	125.98
-019	3500	137.79
-020	3750	147.64
-021	4000	157.48
-022	4300	169.29
-023	4500	177.17

Explanation

- A nominal width = distance between deviation roller shafts of the linear brushes
- C Blank length in transport direction
- D Blank thickness
- P_{\max} max. width of blank to be cleaned,
 $P_{\max} = A - 160$ mm
- Y nominal measure of adjustment frame
= 1000 mm (with pneumatic quick-adjustment)
Type HVP 130/O stroke 100 mm (upper module)
Type HVP 130/U stroke 25 mm (lower module)

The height adjustment range varies in versions with optional electrical actuator HVE or pneumatic quick adjustment HVP.

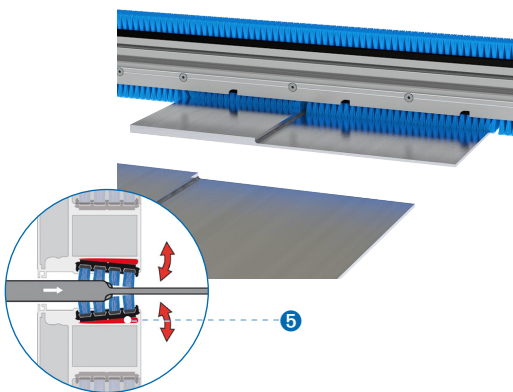




Self-cleaning mechanism

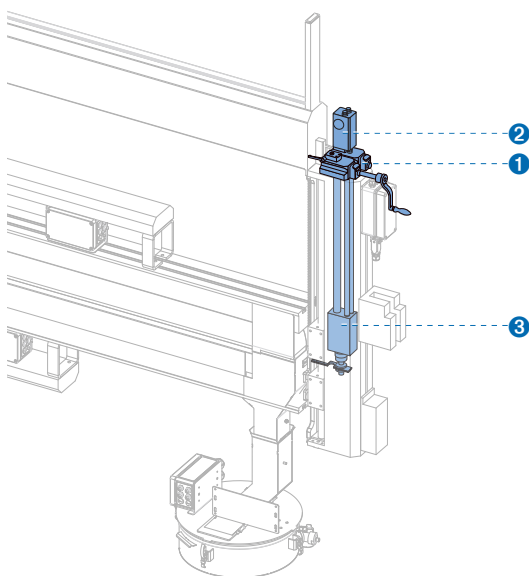
Particles and surplus lubricants are detached from the brush filaments by a **rotating rack ①** and **compressed air nozzles ②** and removed through **heated suction connections ③**.

Aerosols containing lubricants are separated from the air flow via a **cyclone separator ④** and collected in an easily accessible receptacle.



Cleaning of tailored blanks

A **pressure buffer ⑤** provides for the flexible bedding of the linear brush. This compensates variations in material thickness and guarantees a constant wiping pressure of brush filaments on the surface of the blank.



Height adjustment

To adjust the cleaning module to the thickness of the blank which is to be cleaned, the Sword Brushes are mounted on an adjustment frame.

- ① HVM: in the standard version, adjustment takes place manually via a crank.
- ② HVE: optionally, an electrical actuator provides for a fully automatic thickness adjustment in combination with the overall control of the line.
- ③ HVP: an additional option allows the cleaning module to be rapidly removed from the surface with the help of a pneumatic cylinder (e.g. in case of crash situations). Both the mechanical and the electrical height adjustment may be combined with the pneumatic quick adjustment.

Technical details

Una HZ-BB 121..

Electrical details

Brush drive motor	2 x 0.55 kW, IP 54, UL-compatible 50 Hz; 400 - 415 V; 3 PH + PE 60 Hz; 400 - 460 V; 3 PH + PE
Heating elements	15 x 75 W; 24 V DC
Main valve Sword Brushes	1 x 2/2 directional valve: 24 V DC; 2.5 W
Pneumatic quick adjustment (optional)	1 x 5/3 directional valve: 24 V DC; 1.5 W
Electrical height adjustment (optional)	35 W; 24 V DC

Pneumatic details

Compressed air quality	filtered (particle size < 40µm), oil free (residual oil < 1.5 mg/m ³ at 24° C)
Compressed air connection	1 x 3/4" 6 bar
Compressed air consumption Sword Brush	640 l/min

Fluidics

Ingromat® hose connection	1 x Ø 8 mm
Ingromat® consumption	0.2 – 0.4 l/h per Sword Brush

Suction requirements

Suction connection	collective suction connections 1 x Ø 125 mm
Required suction capacity	ca. 1140 – 1500 m ³ /h
Vacuum	min. -500 Pa
Flow velocity	min. 28 m/s

Acoustic emission

Acoustic emission level	approx. 85 dB(A)
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Linear brush

Filament length	4 x twin brushes, upper module; 4 x twin brushes, lower module 19 mm
Filament diameter Ø	0.127 mm; 0.5 mm; 0.2 mm

Dimensions of subject blank

Max. blank width P _{max}	nominal width A – 160 mm
Min. blank length C _{min} (in transport direction)	400 mm

Technical data are subject to change.

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