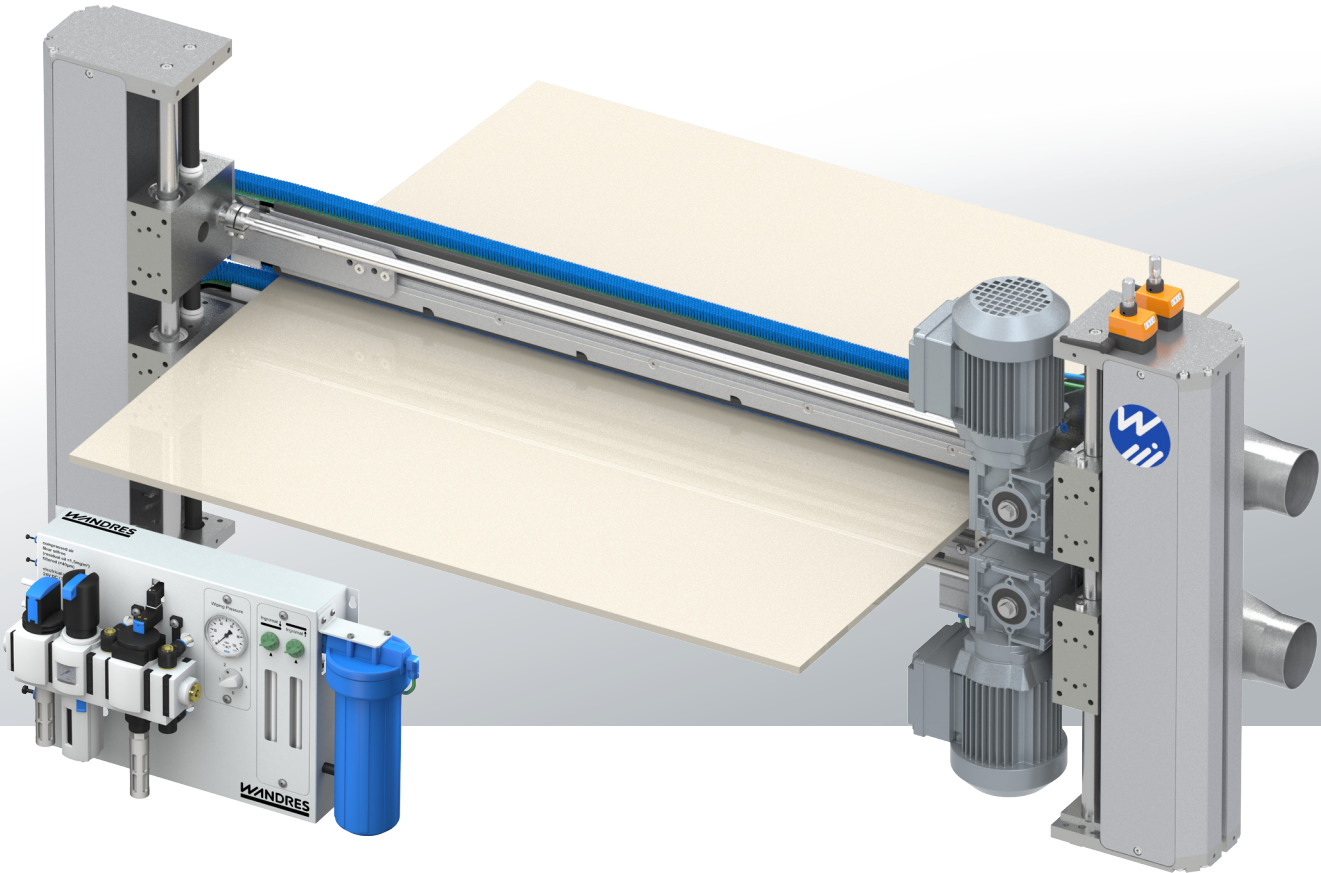




# Combi Sword Brush Una X 121.. / Una X 123..

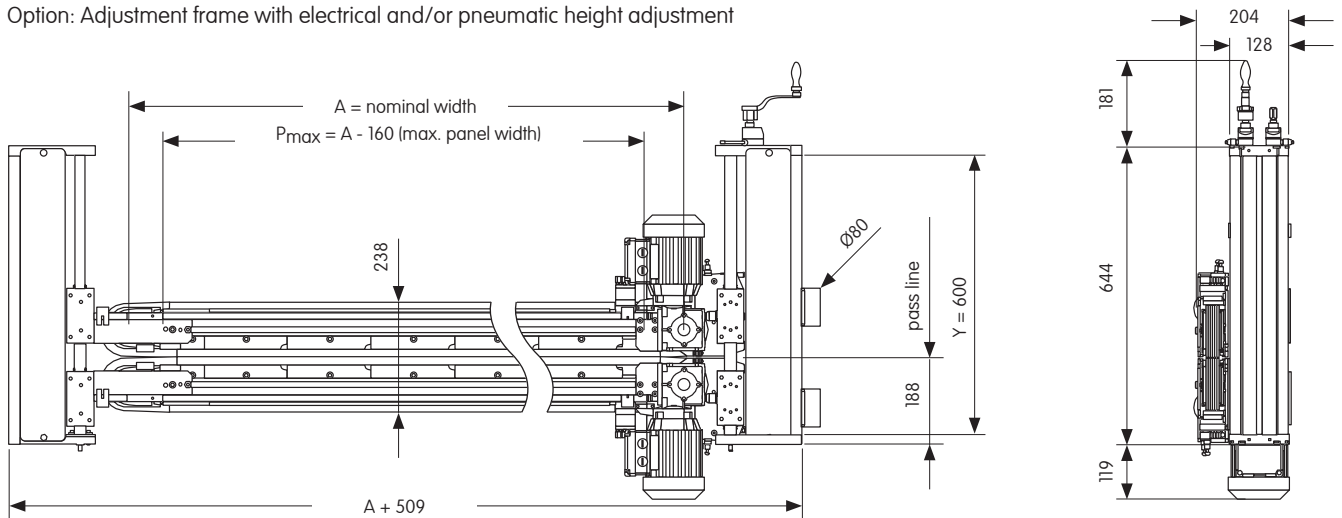


## Brief description

The Combi Sword Brush Una X 121.. / Una X 123.. is ideal to clean furniture panels, wooden boards, plastic and flat glass sheets from above and from below. These surfaces need to be cleaned before lacquering, converting, stacking or before camera inspection. Two Sword Brushes, type BIX 51, wipe transversally across the material surfaces. The micro-moistened brush filaments (Ingramat® system) remove even the most minute particles from the subject surface. The integrated pressure buffer provides for a constant wiping pressure and a premium cleaning result. The adjustment frame VEG 25.. allows a vertical adjustment of the Sword Brushes e.g. to adapt them to the material's thickness or to remove them from the material surface for maintenance purposes.

## Technical details

- 2 x Sword Brush BIX 51/1M/A with pressure buffer and Ingramat® system including an Ingramat® regulator and filter unit IR 100.. (standard) resp. control cabinet for pneumatic and electrical functions (option)
- Adjustment frame VEG 25/600 with mechanical height adjustment  
Option: Adjustment frame with electrical and/or pneumatic height adjustment



Una X 121.. Values in mm

Order code

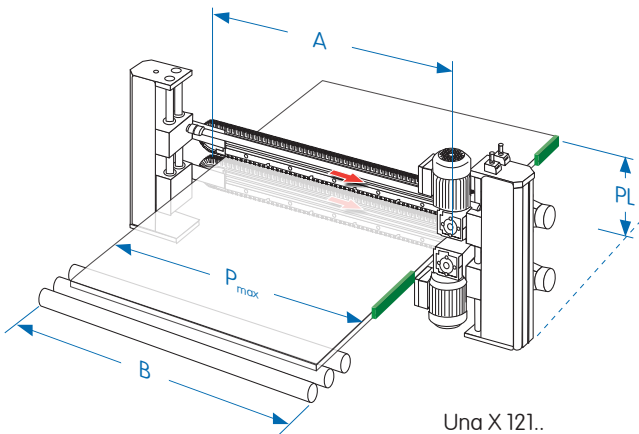
UNA X 121..		UNA X 123..			
2250-		2251-			
				Nominal width A	
				in mm	
				Nominal width A	
				in inches	
-003	-003	400	15,75		
-004	-004	520	20,47		
-005	-005	650	25,59		
-058	-058	700	27,56		
-006	-006	850	33,46		
-045	-045	900	35,43		
-007	-007	1000	39,37		
-008	-008	1100	43,31		
-031	-031	1200	47,24		
-009	-009	1300	51,18		
-030	-030	1400	55,11		
-010	-010	1500	59,06		
-011	-011	1650	64,96		
-059	-059	1700	66,93		
-012	-012	1750	68,89		
-032	-032	1900	74,80		
-013	-013	2000	78,74		
-033	-033	2100	82,68		
-014	-014	2200	86,61		

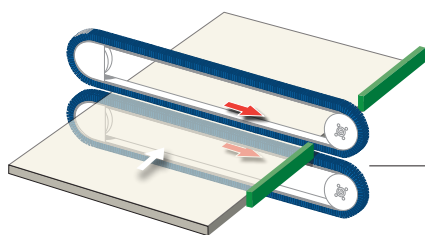
**Ordering example**

The subject panel has a max. width of  $P_{max} = 1500$  mm.  
 Min. nominal width of Combi Sword Brush is  
 $A_{min} = P_{max} + 160$  mm = 1660 mm.  
 The most suitable Combi Sword Brush has a nominal width of  $A = 1700$  mm.  
 Order code 2250-059 describes Combi Sword Brush Una X 121/600/1700 with wiping direction 1

**Explanation**

- A nominal width of Sword Brush = distance between axes of deviation rollers
- B width of roller conveyor  $\approx A - 300$  mm
- PL pass line = distance between screw down area and lower surface of panel = 188 mm (standard, other possible)
- $P_{max}$  max. panel width =  $A - 160$  mm

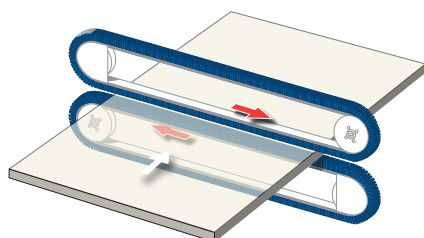




### Wiping direction

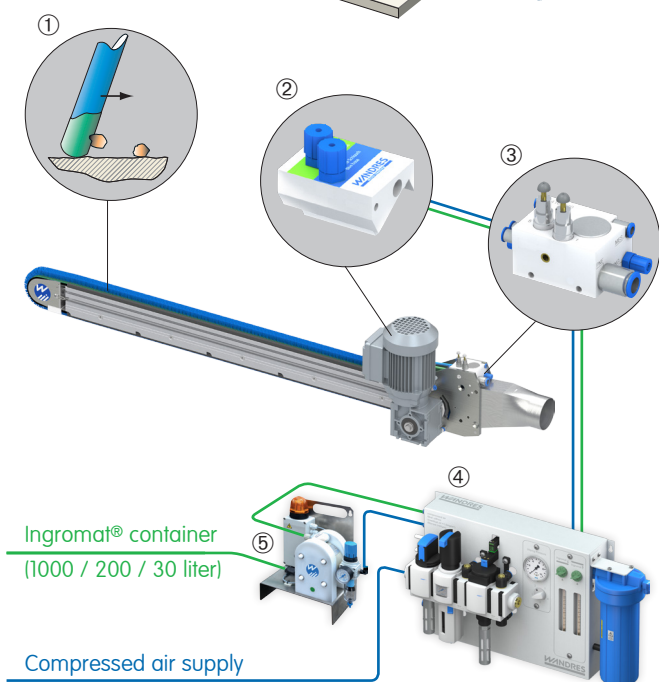
#### Una X 121..

Wiping direction 1  
linear brushes wipe in the same direction towards the guide rail.



#### Una X 123..

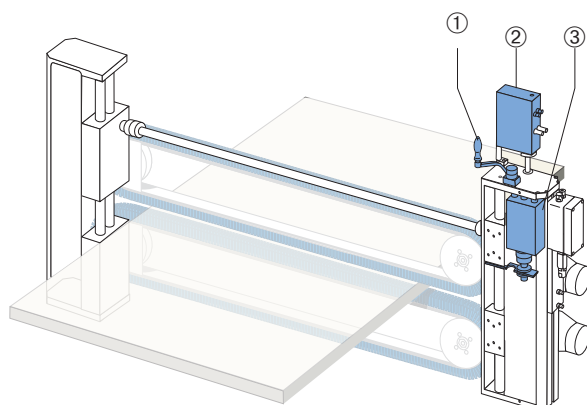
Wiping direction 3  
linear brushes wipe in opposite directions  
Wiping forces cancel each other.



### Ingromat®system

Ingromat® is an antistatic cleaning agent. The brush filaments are micro-moistened with Ingromat® thus providing an effective removal of even very fine dust particles

- ① Individual brush filament micro-moistened with Ingromat® (shown in green)
- ② Ingromat®-sprayer SQL 51..
- ③ Distributor block VTB 100..
- ④ Ingromat® regulator and filter unit IR 100..  
Ingromat® filter, dosage and display of inner pressure of pressure buffer
- ⑤ Option: Ingromat® central supply pump e.g. IS 102.



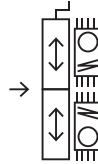
### Height adjustment

To adjust a Sword Brush cleaning module to the thickness of the panel, these modules are mounted at an adjustment frame.

- ① HVM: Normally, adjustment takes place manually via a crank.
- ② HVE: Option: An electrical actuator provides for an automatic thickness adjustment in combination with the overall control of the line.
- ③ HVP: Additionally, the cleaning module may be rapidly removed from the surface with the help of a pneumatic cylinder (e.g. for crash situations). Different versions with different strokes are available. Both the mechanical and the electrical height adjustment may be combined with the pneumatic quick adjustment.

## Technical details

### Una X 121..



### Una X 123..



## Electrical details

Brush drive motor	2 x 0.25 kW SEW motor, IP 54, UL-compatible 50 Hz; $\Delta$ 220 - 240 V; 1.14 A; $Y$ 380 - 415 V; 0.66 A 60 Hz; $\Delta$ 240 - 266 V; 1.03 A; $Y$ 415 - 480 V; 0.6 A
Main valve	2/2 directional valve: 1 x 24 V DC; 1.5 W
Electrical height adjustment (HVE)	24 V DC; 160 W; control via PLC
Pneumatic quick adjustment (HVP)	5/3 directional valve: 2 x 24 V DC; 1.08 W

## Pneumatic details

Compressed air quality	filtered (max. particle size < 40 $\mu$ m), oil free (residual oil < 1.5 mg/Nm <sup>3</sup> at 24°C)
Compressed air connection	1 x 1/2" female thread; 6 bar
Compressed air consumption	0.466 Nm <sup>3</sup> /min (with standard self-cleaning nozzle), 0.566 Nm <sup>3</sup> /min (with reinforced self-cleaning nozzle)

## Details regarding antistatic liquid

Ingromat® hose connection	1 x $\varnothing$ 8 mm
Ingromat® consumption	2 x 0.2 - 0.8 l/h

## Suction requirements

Suction connection/capacity	2 x $\varnothing$ 80 mm; 2 x 8 m <sup>3</sup> /min
Vacuum	min. -500 Pa
Flow velocity	min. 25 m/s

## Acoustic emission

approx. 82 dB(A)  
depends on the surface structure and the geometry of the subject material.

## Linear brush

Type of linear brush	Quadro R6
Filament material	Polyamid 6.12
Filament length	17 mm
Filament diameter $\varnothing$	0.127 mm

## Transport speed

Max. transport speed	100 m/min
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## Dimensions of subject panel

Min. panel length	$L_{\min} = 240$ mm
Min. panel width	$P_{\min} = 60$ mm
Max. panel width	$P_{\max} = A - 160$ mm

Technical information is subject to changes.

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