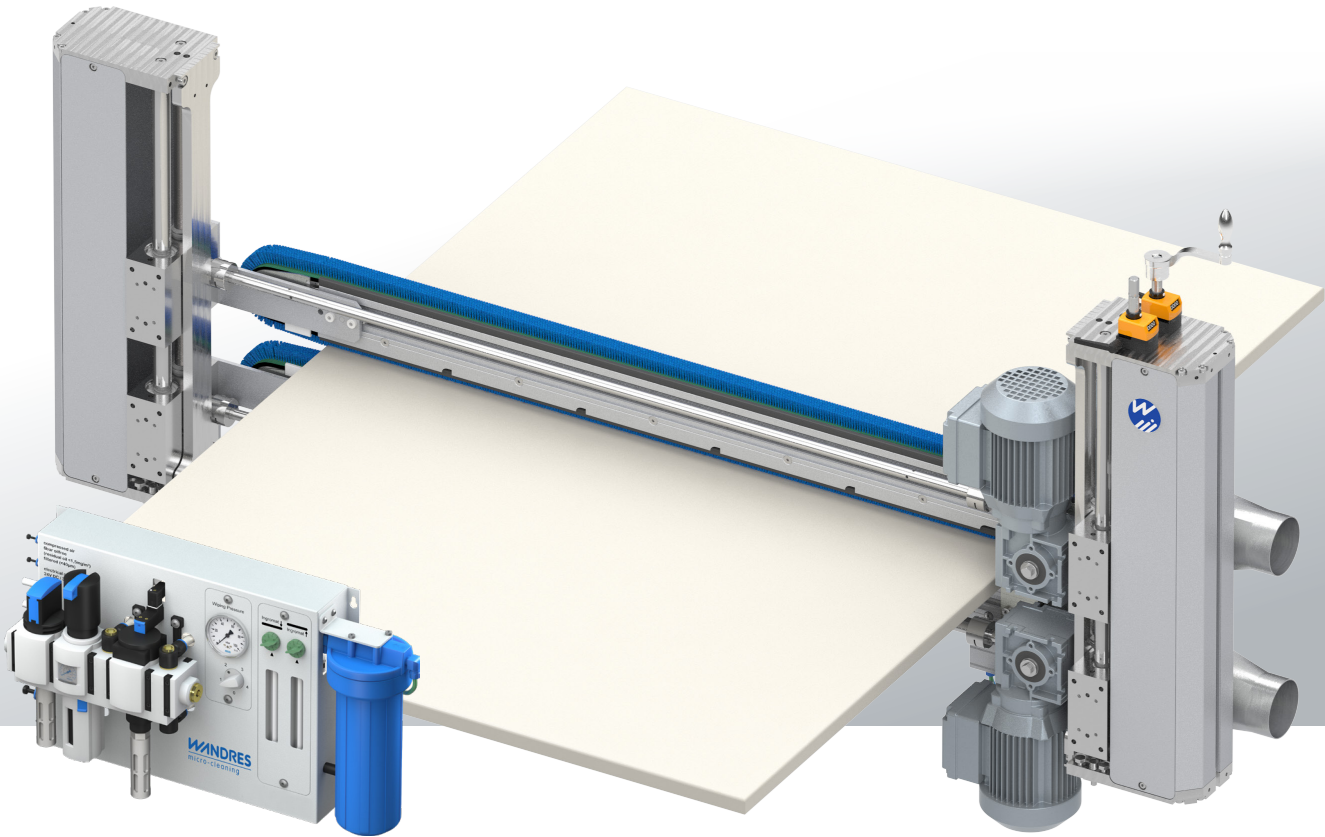


## Combi Sword Brush Una X 121.. / Una X 123..

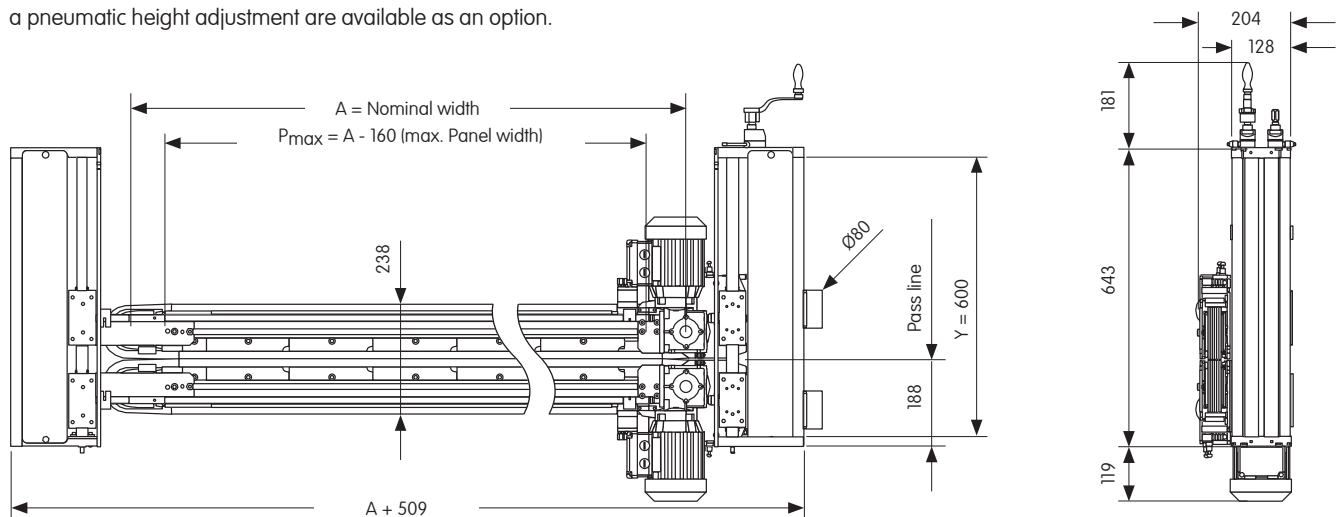


### Brief description

The Combi Sword Brush Una X 121../Una X 123.. is ideal to clean furniture panels, wooden boards, plastic and flat glass sheets as well as blanks from above and from below, e.g. before lacquering, converting, forming or before video inspection. Two Sword Brushes BIX 51 wipe the surface from edge to edge. They are micro-moistened with Ingromat® thus effectively removing even very tiny particles from the material surface. An integrated pressure buffer provides for a constant wiping force and a consistent high-quality cleaning result. The Sword Brushes may be adjusted in their vertical position via the adjustment frame VEG 25.. e.g. to adjust the module to the panel's thickness or for maintenance purposes.

### Technical details

- 2 Sword Brushes BIX 51/1M/A with pressure buffer and Ingromat® system including an Ingromat® regulator and filter unit IR 100.. (standard) as well as a control and pneumatic cabinet (option)
- Adjustment frame VEG 25/600 with mechanical height adjustment (standard). An electrical and/or a pneumatic height adjustment are available as an option.

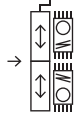
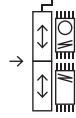


Una X 121.. Values in mm

### Ordering example

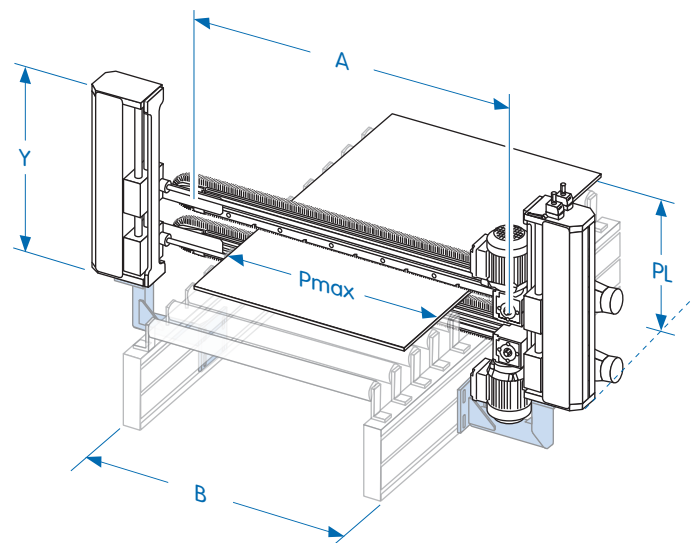
The subject panel has a max. width of  
 $P_{\max} = 1500$  mm.  
 Minimum nominal width of Combi Sword Brush  
 $A_{\min} = P_{\max} + 160 \text{ mm} = 1660 \text{ mm}$ .  
 The most suitable Combi Sword Brush  
 has a nominal width of  $A = 1700$  mm.  
**Order code 2250-059**  
 describes Combi Sword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

### Order code

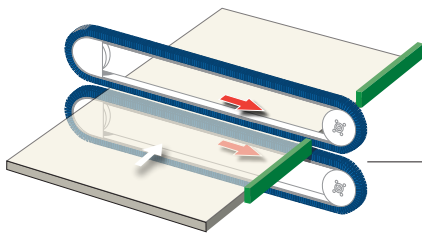
UNA X 121..		UNA X 123..		Nominal width A	
				in mm	in inches
2250-		2251-			
-003	-003	400	15.75		
-004	-004	520	20.47		
-005	-005	650	25.59		
-058	-058	700	27.56		
-006	-006	850	33.46		
-045	-045	900	35.43		
-007	-007	1000	39.37		
-008	-008	1100	43.31		
-031	-031	1200	47.24		
-009	-009	1300	51.18		
-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		

### Explanation

- A** Nominal width of Sword Brush = distance between deviation roller shafts
- B** Width of roller conveyor =  $A - 300 (-40/+25)$  mm (with mounting kit 4160483 for Homag roller conveyor)
- PL** Pass line = distance between screw down area and lower surface of panel = 188 mm (standard, other measures available)
- $P_{\max}$**  Max. panel width =  $A - 160$  mm
- Y** Nominal size of adjustment frame



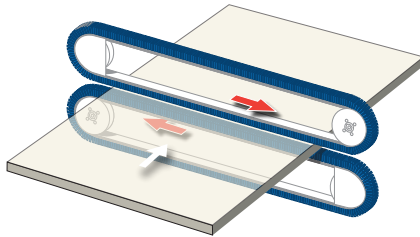
Una X 121..



### Wiping direction

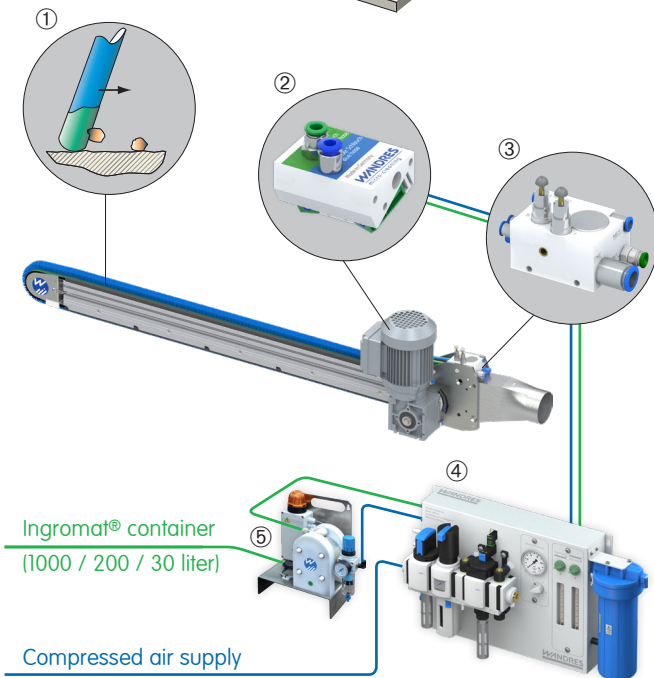
#### Una X 121..

with wiping direction 1: upper and lower Sword Brush wipe in the same direction towards a guide rail (shown in green)



#### Una X 123..

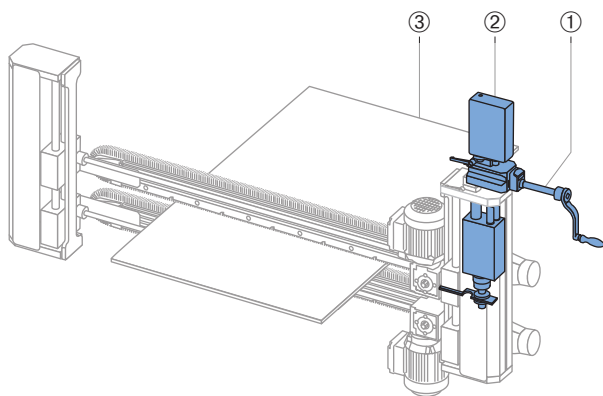
with wiping direction 3: upper and lower Sword Brush wipe in opposite directions. Wiping forces cancel each other.



### Ingromat® system

Ingromat® is an anti-static cleaning agent. The brush filaments are micro-moistened with Ingromat® and effectively remove even the finest dust particles.

- ① Micro-moistened brush filament 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



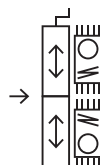
### Height adjustment

To adjust a cleaning module to the panel's thickness, the Sword Brushes are mounted at an adjustment frame.

- ① HVM: Normally, adjustment takes place manually via a crank.
  - ② HVE: An electrical actuator (option) provides for an automatic thickness adjustment in combination with the overall control of the line.
  - ③ HVP: This is an additional feature where pneumatic cylinders rapidly lift the cleaning module from the surface e.g. in crash situations.
- 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; $\Upsilon$ 380 - 415 V; 0.66 A 60 Hz; $\Delta$ 240 - 266 V; 1.03 A; $\Upsilon$ 415 - 480 V; 0.6 A
Main valve	2/2 control valve: 1 x 24 V DC; 1.5 W
Electrical height adjustment (HVE)	24 V DC; 160 W (AG04); 150 W (AG02); 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 (particle size < 40 $\mu$ m), oil free (residual oil < 1.5 mg/m <sup>3</sup> at 24°C)
Compressed air connection	1 x 1/2" female thread; 6 bar
Compressed air consumption	470 l/min (with standard self-cleaning nozzles), 570 l/min (with reinforced self-cleaning nozzles)

#### Fluidics

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

#### Suction

Suction	2 x $\varnothing$ 80 mm
Suction volume	2 x 9 m <sup>3</sup> /min
Operating parameters	min. -500 Pa vacuum; min. 28 m/s (measured at suction connection)

#### Acoustic emission

approx. 82 dB(A)  
depends on surface features and the dimensions of the subject panel.

#### Linear brush

Linear brush type	Quadro R6
Filament material	Polyamide 6.12
Filament length	17 mm
Filament $\varnothing$	0.127 mm

#### Transport speed

Max. transport speed	100 m/min.
----------------------	------------

#### Dimensions of subject panel

Min. panel length	$L_{\min}$ = 240 mm
Panel width	$P_{\min}$ = 60 mm (upon request); $P_{\max}$ = A - 160 mm

Technical data are subject to change.

#### Germany

Wandres GmbH micro-cleaning  
Im Gewerbepark 8  
79252 Stegen  
Tel. + 49 (0)7661-9330-0  
sales@wandres.com  
**www.wandres.com**

#### USA

Wandres Corporation  
719 W. Ellsworth Rd., Suite 7  
USA-Ann Arbor, MI 48108  
Tel. +1-734-214-9903  
sales@wandresusa.com

#### China

万喆清洁设备（上海）有限公司  
Wandres Cleaning Machinery (Shanghai) Co., Ltd.  
755B, Tower 3, No. 88 Keyuan Road  
Pudong, Shanghai, China 201203  
Tel. + 8621 68520069  
china@wandres.com

**WANDRES**  
micro-cleaning