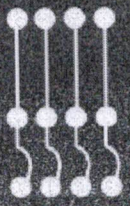


• **manual**

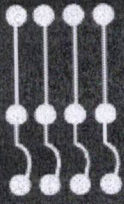




1. Introduction

1.2 Technical Data Sheet

General	Machine Type:	Desmear (Shipley)/ Touch Screen +PLC Version	
	Delivery Date:	March 2006	
Dimensions	Machine Length	[mm]:	6875
	Machine Width	[mm]:	1450/1175/960
	Machine Height	[mm]:	1090
	Max. Working Width	[mm]:	650
	Working Height	[mm]:	900
	Working Direction:		right-left
Electric Supply	Operation Voltage	[V/Hz]:	400/50
	Special Voltage	[V]:	—
	Control Voltage	[V]:	24 DC
	Tot. Connected Power	[kW]:	93
	Tot. Connected Ampere	[A]:	174
Emission	Sound Level (measured in accordance with DIN 45635 at a free-standing machine)	[dB(A)]:	72
Drive	Conveyor Speed	[m/min]:	0,2 - 6,0



1. Introduction

1.3 General Description

The *combi-posit* desmear line is used as a fully automatic system to clean bore holes of double-sided and multilayer PCBs before the boards enter a chemical or galvanic copper deposit line. This includes removal of all bore hole deposits, epoxy smudge and texturing of epoxy surfaces. The PCBs pass through the machine horizontally during the cleaning process.

The modular construction of a desmear system typically consists of:

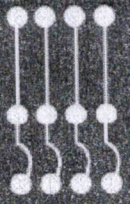
- Input (EM)
- Ultrasonic Swelling (WTM-US)
- Rinse (KSM)
- Desmear Permanganate Process (WTM-US)
- Rinse (KSM)
- Neutralize (WTM)
- Rinse (KSM)
- Dry (TQS/TQG)
- Runout (AM)
- Separate control cabinet

The control cabinet is located directly next to the line. The transport speed can be infinitely regulated by a potentiometer between 0,2 and 6 m/min. and is monitored by a digital display which is included. The line accepts boards with a thickness between 0,2 and 5 mm.

The desmear-system of the *combi-posit* type can be completely integrated into any line manufactured by Gebr. SCHMID if the working width is the same. It can be loaded and unloaded by all handling systems produced by Gebr. SCHMID (*Vacumat + Vaculine*). Module lengths between 375 and 2725 mm allow for fittings according to customer's preference and capacity demands. Additional extensions, changes and modifications to the line can be implemented at any time.

The wet processes swelling, desmearing and neutralizing take place in process modules with standing waves. In addition, the modules for swelling and permanganate can also be equipped with ultrasonics and suction nozzles. Slanted slot flood boxes and double suction nozzles are used in the neutralizing module.

All process and rinse modules are equipped with filter systems with corresponding dimensions. The usual equipment such as pumps, heaters, coolers etc. is designed to resist wear due to temperature and chemicals.



1. Introduction

An area calculator is used to control pump dosage of supplementary solutions. This instrument allows the corresponding replenishment of spent chemicals of the base and dosage stations.

The rinses are uniformly equipped as cascades with flood nozzle pipes below and spray pipes above for better rinsing of drill holes and board surfaces.

Dryers are equipped with suction nozzles above and below the bore holes as well as vacuum pumps and air knives. In addition, large dryers have one or more high-powered blowers. The hot air output is thermostatically regulated and therefore is suitable for high feeding speed.

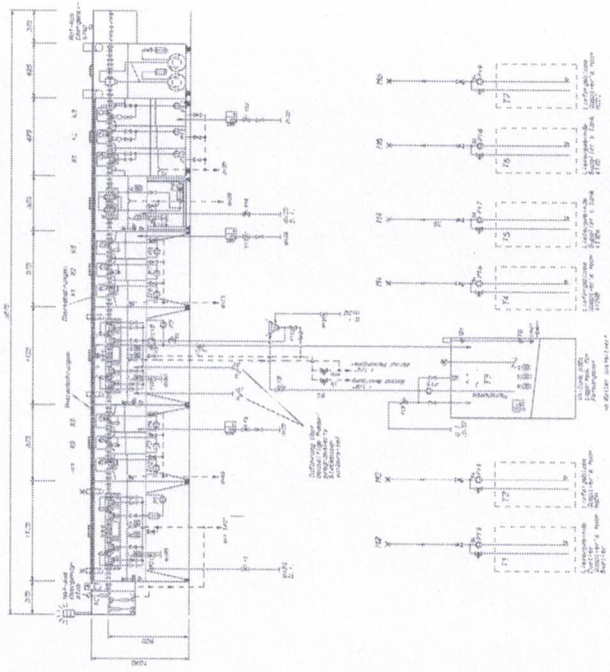
All modules can be delivered in either direction of operation. The following working widths are available:

- 400 mm
- 650 mm
- 1320 mm

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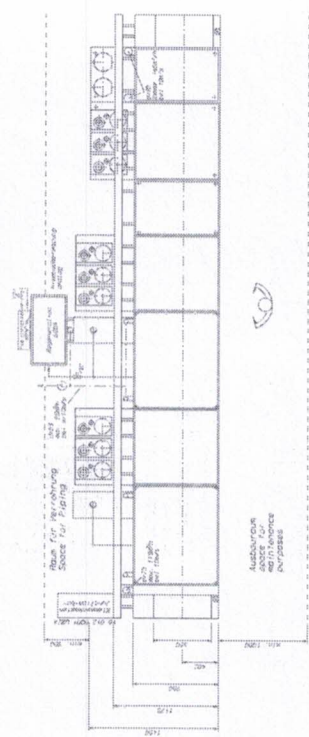
NO.	REV.	DATE	BY	CHKD.	DESCRIPTION
1					ISSUED FOR PERMIT
2					ISSUED FOR CONSTRUCTION
3					ISSUED FOR AS-BUILT
4					ISSUED FOR RECORD
5					ISSUED FOR MAINTENANCE
6					ISSUED FOR REVISION
7					ISSUED FOR CORRECTION
8					ISSUED FOR AMENDMENT
9					ISSUED FOR SUPPLEMENT
10					ISSUED FOR CANCELLATION

NO.	REV.	DATE	BY	CHKD.	DESCRIPTION
11					ISSUED FOR PERMIT
12					ISSUED FOR CONSTRUCTION
13					ISSUED FOR AS-BUILT
14					ISSUED FOR RECORD
15					ISSUED FOR MAINTENANCE
16					ISSUED FOR REVISION
17					ISSUED FOR CORRECTION
18					ISSUED FOR AMENDMENT
19					ISSUED FOR SUPPLEMENT
20					ISSUED FOR CANCELLATION



PROPOSED LINE OF WORK
 1. TO BE CONSTRUCTED
 2. TO BE MAINTAINED
 3. TO BE REPAIRED
 4. TO BE REPLACED
 5. TO BE REMOVED
 6. TO BE PRESERVED
 7. TO BE PROTECTED
 8. TO BE DEMOLISHED
 9. TO BE REINSTALLED
 10. TO BE RECONSTRUCTED

DESIGNED BY: [Name]
 CHECKED BY: [Name]
 APPROVED BY: [Name]
 DATE: [Date]



ASSEMBLY AND INSTALLATION

01-18753-5-A1
 DESMEAR LINE