

Streamline's New Schmid DES Line Guaranteed Quality Like Never Before

Streamline is known for its unparalleled quality in an ever-demanding PCB industry. The company is constantly investing in the latest and greatest equipment to keep up with its own time and technology standards. As of Labor Day weekend, Streamline is proud to begin utilizing its new [Schmid DES 1.7 mm/m in line](#). This is a machine that will make many quality errors in the design-etch-strip stage a thing of the past.

Develop

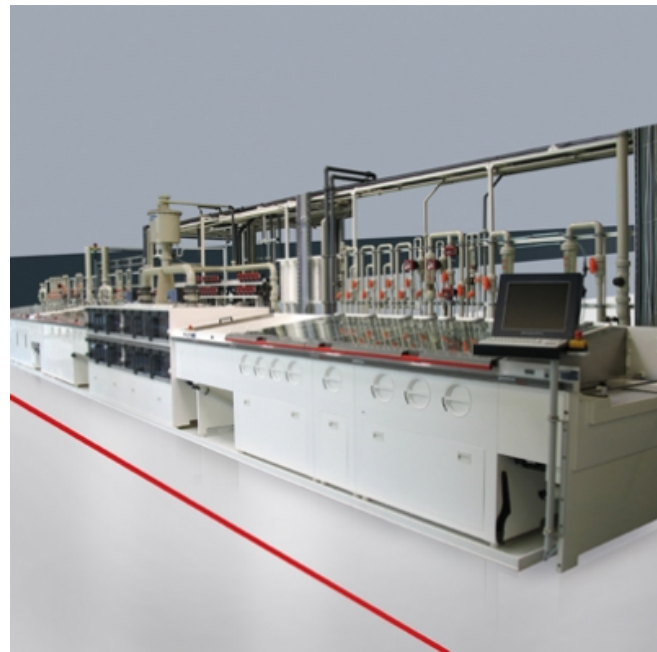
One of the ways PCB quality is more ensured due to this machine is the fully automated dosing system for all of the tanks throughout the process. This includes the controlled dosing of the developer solution in the post developer. This guarantees optimized development processes and reliable removal of unexposed resists. Previous models had the expected burden of creating foam from the churning. However, with the DES 1.7 mm/m's unique optimized bath guidance, development can be completed without de-foaming.

Etch

Another way quality is protected is through a consistent etching structure that prevents "puddle effects". This is thanks to intermittent etching with a high-tech single-nozzle control system. Using the FineLine spray system, the Schmid line achieves high etching quality with high etching factor.

Strip

To complete the process, the Schmid DES line has an innovative filter technology for the stripping process adjusted to the type of resist. This machine also has transport systems adaptable to all circuit board formats. Because of Streamline's very high mix of PCB requirements from its customers, essentially customizing the DES step based on the characteristics of the board, is extremely important.



Streamline Circuits is a leading manufacturer of high quality Printed Circuit Boards offering Rigid, Rigid Flex and Multilayer Flex. We are committed to providing our customers the most advanced technology, quality and engineering support available. The Schmid DES 1.7 mm/m line is yet another example of the company's unending quest for quality in each area of its PCB manufacturing process. Streamline's customers take advantage of these highly valued resources to develop a cost effective product in a time sensitive manner. These capabilities are critical for today's technology driven customers. Streamline services communications, military & aerospace, industrial electronics, instrumentation and medical equipment markets, who need to get their quality products to market first.

www.streamlinecircuits.com

1-877-264-0343

Etchtest

DES Etcher Bottom Side

Vertical Lines

Date: 1/27/11

Leading Edge = 24 inch															
	1	2	3	4	5	6	7	8	9	10	11	AVG			
1	2.88		3.09		3.09		3.09		3.23		3.16	3.09	0.11	PCB size	18x24
2		3.02		2.74		3.02		3.02		3.09		2.98	0.12	chemical	
3	2.95		2.81		2.81		2.88		3.23		2.95	2.94	0.14	Speed	120.0
4		3.02		3.02		2.81		3.02		3.09		2.99	0.09	pressure	"24/22"
5	2.81		2.88		2.53		2.88		2.81		3.02	2.82	0.15	pH	
6		2.95		2.95		3.02		3.02		3.16		3.02	0.08	Redox	
7	3.09		2.95		2.74		3.02		3.23		3.16	3.03	0.16	Temp	120
8		2.88		2.88		3.09		3.02		3.30		3.03	0.16		3.09
AVG	2.93	2.97	2.93	2.90	2.79	2.99	2.97	3.02	3.13	3.16	3.07				2.74
	0.10	0.06	0.10	0.10	0.20	0.11	0.09	0.00	0.18	0.09	0.09			AVG	2.99
Trailing Edge													STDEV	0.15	



Horizontal Lines

Leading Edge = 24 inch															
	1	2	3	4	5	6	7	8	9	10	11	AVG			
1		2.60		2.81		2.60		2.88		2.95		2.77	0.14		
2	2.53		2.46		2.74		2.60		2.81		2.81	2.66	0.14		
3		2.46		2.74		2.81		2.88		2.95		2.77	0.17		
4	2.88		2.74		2.60		2.81		2.88		2.95	2.81	0.11		
5		2.74		2.88		2.88		2.74		2.95		2.84	0.08		
6	2.81		2.81		2.74		2.67		2.74		3.09	2.81	0.13		
7		2.74		2.88		2.67		2.81		2.81		2.78	0.07		
8	2.81		2.74		2.81		2.95		2.74		3.09	2.86	0.13		
AVG	2.76	2.64	2.69	2.83	2.72	2.74	2.76	2.83	2.79	2.92	2.99				
	0.13	0.12	0.13	0.06	0.08	0.11	0.13	0.06	0.06	0.06	0.12			AVG	2.79
Trailing Edge													STDEV	0.14	

DES Etcher Top Side with Intermittent Etch

Vertical Lines

Date: 1/28/11

Leading Edge = 24 inch															
	1	2	3	4	5	6	7	8	9	10	11	AVG		PCB size	18x24
1	2.89		2.95		3.02		2.95		2.89		2.95	2.94	0.04	chemical	
2		2.95		3.09		3.02		2.95		3.02		3.01	0.05	Speed	100.0
3	3.02		3.02		3.02		2.89		2.95		3.09	3.00	0.06	pressure	"24/22"
4		3.09		3.09		2.95		3.09		3.02		3.05	0.06	pH	
5	3.09		3.09		3.02		3.02		3.10		3.09	3.07	0.03	Redox	
6		3.02		3.15		3.09		3.02		3.15		3.09	0.06	Temp	120
7	3.02		3.02		3.09		2.96		3.02		2.95	3.01	0.05	Max	3.15
8		3.02		3.02		3.09		3.09		3.09		3.06	0.03	Min	2.89
AVG	3.01	3.02	3.02	3.09	3.04	3.04	2.96	3.04	2.99	3.07	3.02		AVG	3.03	
	0.07	0.05	0.05	0.05	0.03	0.06	0.05	0.06	0.08	0.05	0.07		STDEV	0.07	

Horizontal Lines

Leading Edge = 24 inch															
	1	2	3	4	5	6	7	8	9	10	11	AVG			
1		2.95		2.82		2.82		2.95		2.89		2.89	0.06		
2	2.95		2.89		2.89		3.02		2.89		2.89	2.92	0.05		
3		2.89		2.95		2.89		2.95		3.02		2.94	0.05		
4	2.95		3.09		3.09		2.95		3.09		3.02	3.03	0.06		
5		3.02		2.95		3.02		3.15		3.02		3.03	0.06		
6	3.02		3.02		2.95		3.02		3.02		3.15	3.03	0.06		
7		3.02		3.02		3.02		3.09		3.15		3.06	0.05		
8	2.89		3.02		2.89		2.89		3.02		3.02	2.96	0.06		
AVG	2.95	2.97	3.01	2.94	2.96	2.94	2.97	3.04	3.01	3.02	3.02		AVG	2.98	
	0.05	0.05	0.07	0.07	0.08	0.09	0.05	0.09	0.07	0.09	0.09		STDEV	0.08	

Combined Lines, Vertical and Horizontal.

Date: 1/28/11

Leading Edge = 24 inch															
	1	2	3	4	5	6	7	8	9	10	11	AVG		PCB size	18x24
1	2.89	2.95	2.95	2.82	3.02	2.82	2.95	2.95	2.89	2.89	2.95	2.92	0.06	chemical	
2	2.95	2.95	2.89	3.09	2.89	3.02	3.02	2.95	2.89	3.02	2.89	2.96	0.07	Speed	100.0
3	3.02	2.89	3.02	2.95	3.02	2.89	2.89	2.95	2.95	3.02	3.09	2.97	0.06	pressure	"24/22"
4	2.95	3.09	3.09	3.09	3.09	2.95	2.95	3.09	3.09	3.02	3.02	3.04	0.06	pH	
5	3.09	3.02	3.09	2.95	3.02	3.02	3.02	3.15	3.10	3.02	3.09	3.05	0.05	Redox	
6	3.02	3.02	3.02	3.15	2.95	3.09	3.02	3.02	3.02	3.15	3.15	3.06	0.07	Temp	120
7	3.02	3.02	3.02	3.02	3.09	3.02	2.96	3.09	3.02	3.15	2.95	3.03	0.06	Max	3.15
8	2.89	3.02	3.02	3.02	2.89	3.09	2.89	3.09	3.02	3.09	3.02	3.00	0.08	Min	2.82
AVG	2.98	3.00	3.01	3.01	3.00	2.99	2.96	3.04	3.00	3.05	3.02		AVG	3.00	
	0.07	0.06	0.06	0.10	0.07	0.09	0.05	0.07	0.08	0.08	0.08		STDEV	0.08	