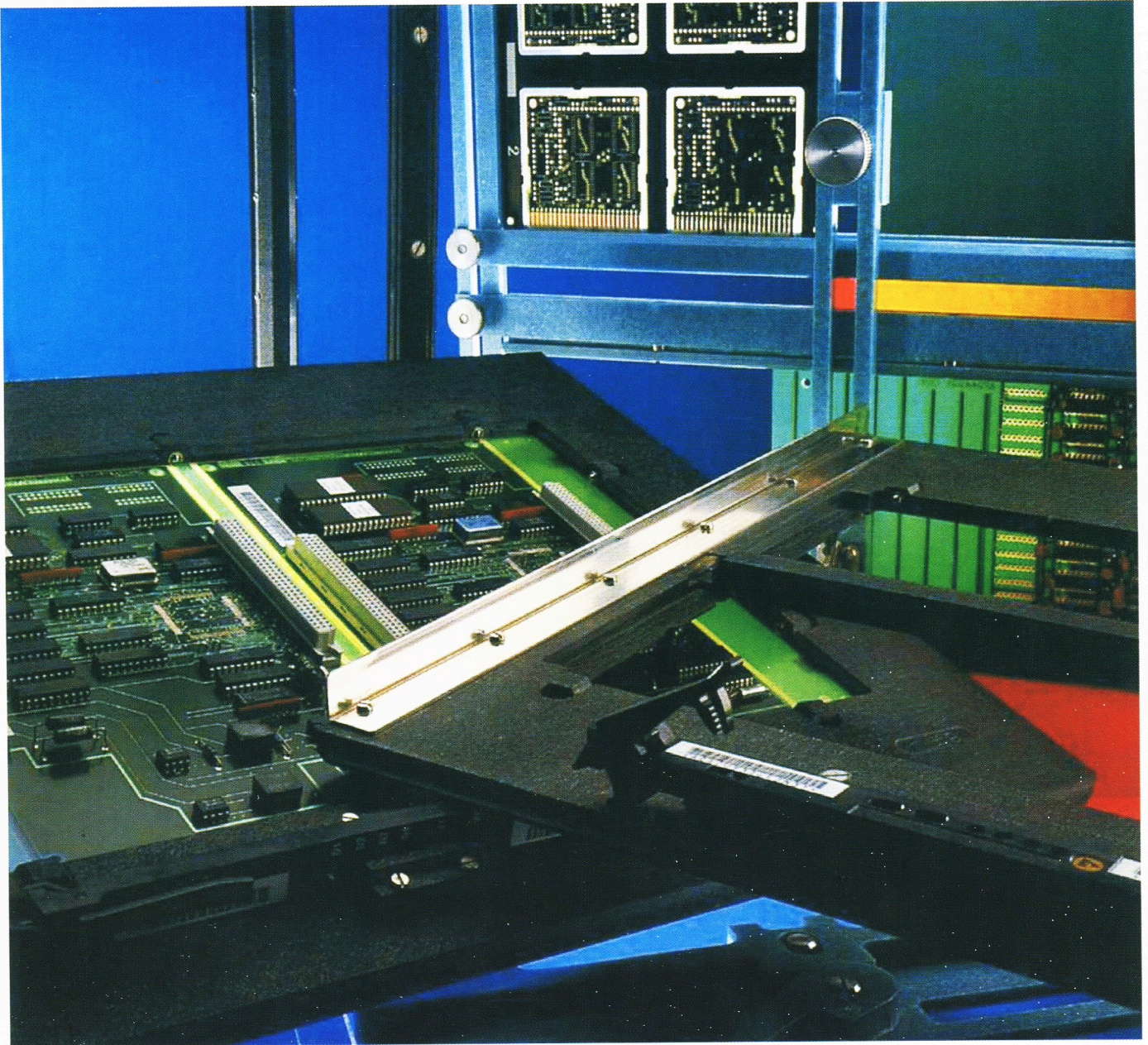


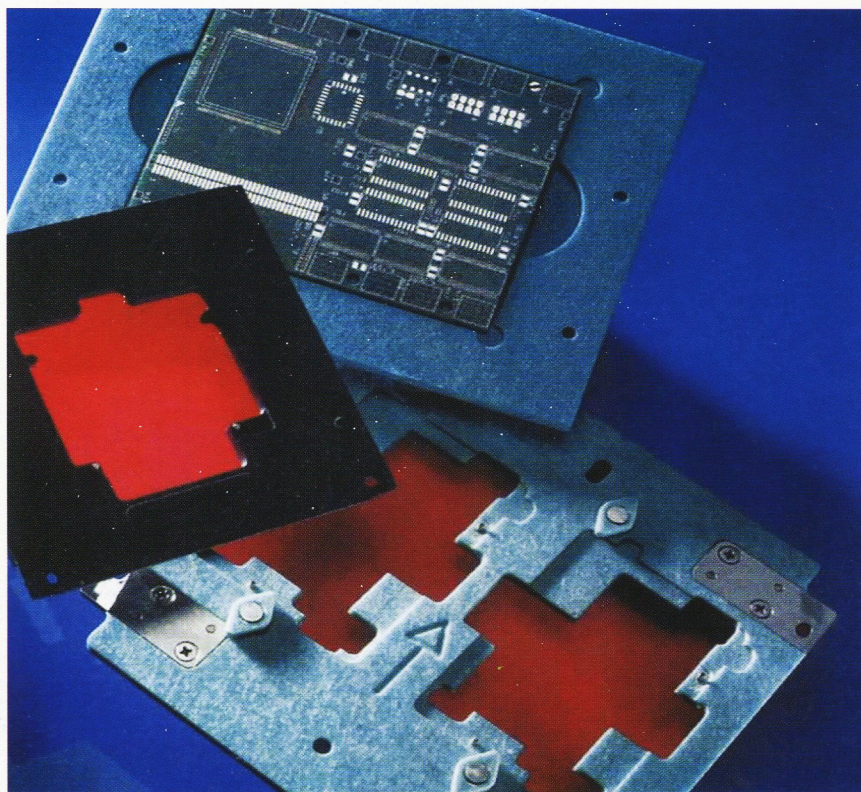
CDM[®] : Composite for PCB Assembly.



VONROLL

TOTAL CUSTOMER SERVICE FOR HIGH PERFORMANCE CARRIERS

- > Our engineering and design departments specialise in the design and manufacture of carriers & pallets
- > CAD - CAM equipment linked to CNC machining centres



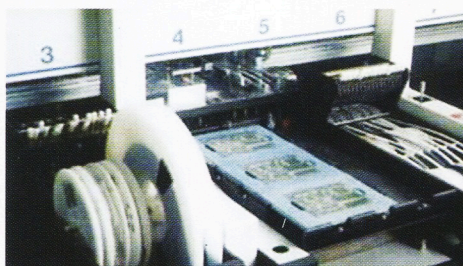
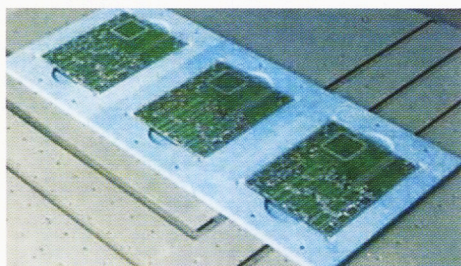
A UNIQUE MATERIAL:

CDM is a composite material specially developed to meet the exacting requirements of fast and accurate PCB assembly. A composite adaptable to production application:

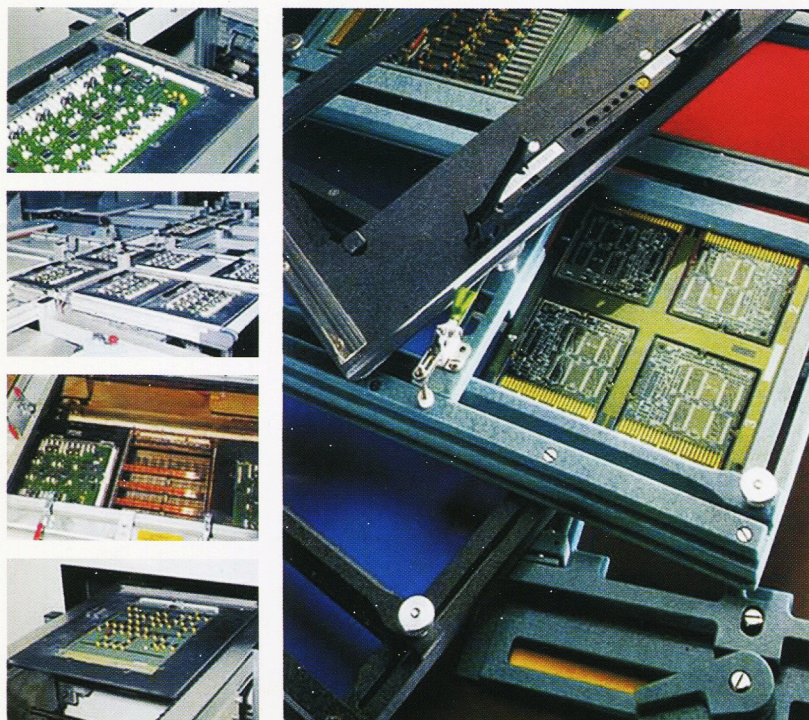
- automatic component insertion,
- manual assembly,
- flow soldering,
- silk screen printing of solder paste,
- surface mount placement,
- infra-red reflow,
- cleaning.

Main benefits:

- lightweight,
- low heat absorption,
- low thermal conductivity,
- optimal soldering,
- no tin lead adhesion,
- high thermal and dimensional stability at elevated temperatures,
- good chemical resistance.



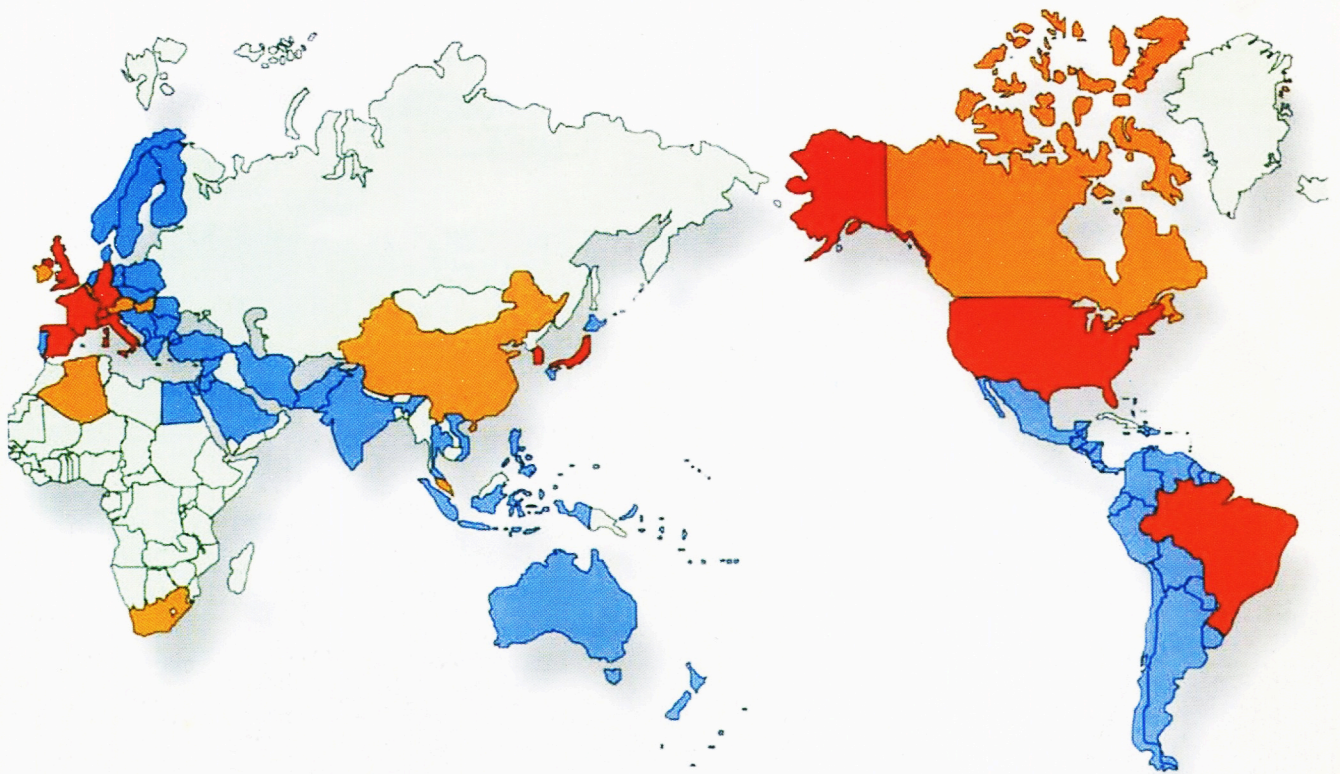
TOTAL QUALITY MANUFACTURING



- > Allows the development of fully automated PCB assembly lines.
- > Protects the PCB during all stages of production.
- > Decreases the proportion of defects and control Operations.
- > Complies with all requirements thanks to a complete range of products - including CDM[®] ESD dissipator, the most suitable material for the discharge of static flow.

Due to the resistivity of 10^5 to $10^9 \Omega$ /square of CDM[®] ESD, the static discharge is very slow thus ensuring that the components are not damaged during the process.

Properties	Test Method	Unit	Test Conditions	CDM-ESD 68.910	CDM-ESD 68.940 Improved detection by infra red cells	CDM 68650 RAL 5001
Type				Anti-Static	Anti-Static	Standard
Colour				Black	Grey	Blue
Density	ISO 1183method A	g/cm ³	R:M/23°C/50%	1.9	1.9	1.9
Flexural strength at 23°C	ISO 178	MPa	R:M/23°C/50%	400	300-400	400
Flexural Strength at 200°C	ISO 178	MPa	R:M/200°C/<20%	<200	<200	<200
Modulus of Elasticity in flexure at 23°C	ISO 178	MPa	R:M/23°C/50%	20000	15000-16000	20000
Modulus of Elasticity in flexure at 200°C	ISO 178	MPa	R:M/200°C/<20%	12000	12000	12000
Surface Resistivity	Ω	IEC60093	1hr/105°C/<20% M/23°C/50%	10^5 to 10^9	10^5 to 10^9	10^{12}
Water Absorption	ISO62 method 1	%	24h/23°C/water M/23°C/50%	<0.20	<0.10	<0.20
Coefficient of Linear expansion//		10-6K	R:M/20-200°C	10	10	10
Thermal Conductivity		W/m.K	R:M/20-200°C	0.3	0.3	0.3
Temperature Resistance(Max., For 10-20 sec.)		°C		360	360	360
Temperature Resistance (cotinuuous use)		°C		300	300	300
Sheet Size		mm		1335×2350	1335×2350	1460×1335
Thickness		mm		3.4.5.6.8.10.12.14		
Thickness Tolerance		mm		+/-0.10	+/-0.10	+/-0.10



- VonRoll Factory
- Distributors
- Agents

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