The World Markets
and
Manufacturers of Transformers

2005 - 2010

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3.1 FORECAST WORLD MARKET 2005 - 2010

Table 13

The Forecast World Market for Transformers, by Region, 2005 - 2010 (US$ Million)

Region	2005	2006	2007	2008	2009	2010
Western Europe						
Eastern Europe						
Former USSR						
North Africa						
West Africa						
Central Africa						
East Africa						
Southern Africa						
Middle East						
South Asia						
Far East						
South America						
Central America & Caribbean						
North America						
Oceania						
Total						

Source: Goulden Reports

Table 14

The Forecast World Market for Transformers, by Region, 2005 - 2010 (MVA Demand)

Region	2005	2006	2007	2008	2009	2010
Western Europe						
Eastern Europe						
Former USSR						
North Africa						
West Africa						
Central Africa						
East Africa						
Southern Africa						
Middle East						
South Asia						
Far East						
South America						
Central America & Caribbean						
North America						
Oceania						
Total						

Source: Goulden Reports

4. THE WORLD'S MAJOR TRANSFORMER MANUFACTURERS

The tables in the following section give estimates of the sales of Transformers by the leading manufacturers. The figures are calculated from published annual company reports, sales breakdowns, regional sales figures and other official sources. The figures are, however, designed to serve as a general overview – inaccuracies may occur as a result of exchange rate fluctuations or insufficient primary data.

Table 15

Leading Manufacturers' Sales of Transformers
2004 (US$ Million)

Company	Country	Total Company Sales 2004	Transformer Sales 2004	Transformer % Of Sales 2004	Estimated World Market Share %
ABB	Switzerland				
Alstom	France				
Siemens	Germany				
Mitsubishi	Japan				
GE	USA				
Hitachi	Japan				
Toshiba	Japan				
VA Tech	Austria				
Daihen	Japan				
Nissin	Japan				
Takaoka	Japan				
Schneider	France				
Pauwels	Belgium				
Fuji	Japan				
Cooper	USA				
BHEL	India				
Aichi	Japan				
Meidensha	Japan				
Sub-Total					
Other					
Total					

Source: Goulden Reports

Table 16

Leading Manufacturers' Sales of Transformers, per Region, 2002 (US$ Million)

Company	Western Europe	Eastern Europe & Former USSR	Africa	Middle East
ABB				
Alstom				
Siemens				
Mitsubishi				
GE				
Hitachi				
Toshiba				
VA Tech				
Daihen				
Nissin				
Takaoka				
Schneider				
Pauwels				
Fuji				
Cooper				
Bharat Heavy Electrical				
Aichi				
Meidensha				
Sub-Total				
Others				
Total				

continued...

Table 17

Leading Manufacturers' Sales of Transformers, per Region, 2002 (US$ Million) - continued

Company	Asia-Pacific	North America	South & Central America & Caribbean	Total
ABB				
Alstom				
Siemens				
Mitsubishi				
GE				
Hitachi				
Toshiba				
VA Tech				
Daihen				
Nissin				
Takaoka				
Schneider				
Pauwels				
Fuji				
Cooper				
Bharat Heavy Electrical				
Aichi				
Meidensha				
Sub-Total				
Others				
Total				

Source: Goulden Reports

4.1 Contact Details For Major Manufacturers

5. REGIONAL MARKETS

5.1 WESTERN EUROPE

Table 18

Western Europe: The Market for Transformers, by Country, 1999 - 2004 (US$ Million)

Country	1999	2000	2001	2002	2003	2004
Austria						
Belgium						
Cyprus						
Denmark						
Finland						
France						
Germany						
Greece						
Iceland						
Ireland						
Italy						
Luxembourg						
Malta						
Netherlands						
Norway						
Portugal						
Spain						
Sweden						
Switzerland						
UK						
Total						

Source: Goulden Reports and United Nations

Table 19

Western Europe: The Market for Transformers, by Country, 1999 - 2004 (% Change)

Country	1999/2000	2000/2001	2001/2002	2002/2003	2003/2004	Cagr
Austria						
Belgium						
Cyprus						
Denmark						
Finland						
France						
Germany						
Greece						
Iceland						
Ireland						
Italy						
Luxembourg						
Malta						
Netherlands						
Norway						
Portugal						
Spain						
Sweden						
Switzerland						
UK						
Total						

Source: Goulden Reports and United Nations

Table 20

Western Europe: The Market for Transformers, by Country, by Type 2004 (US$ Million)

Country	Generation Transformer	Transmission Transformer	Distribution Transformer	Of Which Pole Top	Total
Austria					
Belgium					
Cyprus					
Denmark					
Finland					
France					
Germany					
Greece					
Iceland					
Ireland					
Italy					
Luxembourg					
Malta					
Netherlands					
Norway					
Portugal					
Spain					
Sweden					
Switzerland					
UK					
Total					

Source: Goulden Reports and United Nations

Table 21

Western Europe: The Market for Transformers, by Country, 2004 (MVA)

Country	Generation Transformers	Transmission Transformers	Distribution Transformers	Total
Austria				
Belgium				
Cyprus				
Denmark				
Finland				
France				
Germany				
Greece				
Iceland				
Ireland				
Italy				
Luxembourg				
Malta				
Netherlands				
Norway				
Portugal				
Spain				
Sweden				
Switzerland				
United Kingdom				
Total				

Source: Goulden Reports and United Nations

Table 22

Western Europe: The Market for Transformers, by Country, by Insulation 2004 (US$ Million)

Country	Oil Filled	Of Which Synthetic Fluid	Cast Resin & Dry Types	Total
Austria				
Belgium				
Cyprus				
Denmark				
Finland				
France				
Germany				
Greece				
Iceland				
Ireland				
Italy				
Luxembourg				
Malta				
Netherlands				
Norway				
Portugal				
Spain				
Sweden				
Switzerland				
United Kingdom				
Total				

Source: Goulden Reports and United Nations

Table 23

Western Europe: The Market for Transformers, by Country, by Size of Transformer 2004 (US$ Million)

Country	5kVA to 50kVA	50kVA to 500kVA	500kVA to 5MVA	5MVA to 50MVA	50MVA to 150MVA	Over 150MVA
Austria						
Belgium						
Cyprus						
Denmark						
Finland						
France						
Germany						
Greece						
Iceland						
Ireland						
Italy						
Luxembourg						
Malta						
Netherlands						
Norway						
Portugal						
Spain						
Sweden						
Switzerland						
United Kingdom						
Total						

Source: Goulden Reports and United Nations

Table 24

Western Europe: The Market for Transformers, by Country, by End Use Customer 2004 (US$ Million)

Country	Utility Organisations	Construction & Industry	Rail & Transport	Mining, Marine & Offshore	Total
Austria					
Belgium					
Cyprus					
Denmark					
Finland					
France					
Germany					
Greece					
Iceland					
Ireland					
Italy					
Luxembourg					
Malta					
Netherlands					
Norway					
Portugal					
Spain					
Sweden					
Switzerland					
United Kingdom					
Total					

Source: Goulden Reports and United Nations

Table 25

Western Europe: The Market for Transformers, by Country, 2005 to 2010 (US$ Million)

Country	2005	2006	2007	2008	2009	2010
Austria						
Belgium						
Cyprus						
Denmark						
Finland						
France						
Germany						
Greece						
Iceland						
Ireland						
Italy						
Luxembourg						
Malta						
Netherlands						
Norway						
Portugal						
Spain						
Sweden						
Switzerland						
United Kingdom						
Total						

Source: Goulden Reports and United Nations

Table 26

Western Europe: The Market for Transformers, by Country, 2005 to 2010 (MVA Demand)

Country	2005	2006	2007	2008	2009	2010
Austria						
Belgium						
Cyprus						
Denmark						
Finland						
France						
Germany						
Greece						
Iceland						
Ireland						
Italy						
Luxembourg						
Malta						
Netherlands						
Norway						
Portugal						
Spain						
Sweden						
Switzerland						
United Kingdom						
Total						

Source: Goulden Reports and United Nations

5.2 EASTERN EUROPE

8.3 EXCHANGE RATES

Table 27

Exchange Rates for Major Currencies against US Dollar 1997-2002

Currency	1997*	1998*	1999*	2000*	2001†	2002†
Argentinean Peso	1.00	1.00	1.00	1.00	1.00	3.6
Australian Dollar	1.35	1.63	1.55	1.72	1.91	1.75
Austrian Schilling	12.20	11.80	12.92	14.93	15.12	See €
Belgian Franc	35.78	34.69	37.87	43.77	44.32	See €
Brazilian Real	1.09	1.21	1.81	1.83	2.09	2.78
British Pound	0.61	0.62	0.62	0.66	0.69	0.67
Canadian Dollar	1.38	1.48	1.48	1.48	1.54	1.53
Chinese Yuan	8.29	8.28	8.28	8.28	8.28	8.29
Czech Koruna	31.71	32.23	34.60	38.63	38.12	32.56
Danish Kroner	6.61	6.39	6.98	8.09	8.20	7.70
Dutch Guilder	1.95	1.89	2.07	2.39	2.42	See €
Egyptian Pound	3.39	3.41	3.41	3.55	3.88	4.66
Euro	0.89	0.86	0.94	1.08	1.10	1.04
Finnish Markka	5.19	5.11	5.58	6.45	6.53	See €
French Franc	5.84	5.62	6.16	7.12	7.21	See €
German Mark	1.73	1.68	1.84	2.12	2.15	See €
Greek Drachma	273.09	282.84	305.73	366.26	374.39	See €
Hong Kong Dollar	7.74	7.75	7.76	7.79	7.80	7.80
Indian Rupee	36.34	42.49	43.04	44.95	46.69	49.00
Indonesian Rupiah	2,904.46	8,005.00	7,817.46	8,415.79	10,321.92	8,621.8
Irish Punt	0.66	0.68	0.74	0.85	0.86	See €
Israeli Shekel	3.45	3.81	4.14	4.09	4.15	4.98
Italian Lira	1,703.02	1,660.00	1,817.62	2,100.85	2,127.27	See €
Japanese Yen	120.94	113.70	113.74	107.86	120.08	123.52
Malaysian Ringgit	2.82	3.80	3.80	3.80	3.80	3.80
Mexican Peso	8.07	9.03	9.54	9.46	9.54	9.92
New Zealand Dollar	1.51	1.89	1.89	2.20	2.35	2.03
Nigerian Naiar	76.12	89.80	95.13	105.14	117.71	124.19
Norwegian Kroner	7.08	7.63	7.80	8.80	8.96	7.65
Polish Zloty	3.28	3.51	3.96	4.35	4.06	4.02
Portuguese Escudo	175.34	172.16	188.20	217.52	220.26	See €
Russian Rouble	5,770.89	10.02	24.83	28.17	28.72	31.43
Saudi Riyal	3.75	3.75	3.75	3.75	3.75	3.75
South African Rand	4.61	5.88	6.11	6.94	7.90	10.47
South Korean Won	952.77	1,397.77	1,188.87	1,131.16	1,289.12	1,220.1
Spanish Peseta	146.45	142.66	156.19	180.53	182.80	See €
Swedish Kroner	7.64	8.14	8.26	9.17	9.92	9.39
Swiss Franc	1.45	1.38	1.50	1.69	1.68	1.52
Taiwanese Dollar	28.69	33.43	32.22	31.26	32.71	34.02
Thai Baht	31.04	41.17	37.82	40.20	44.12	42.08
Turkish Lira	152,751	262,204	420,648	624,753	934,904	1,585,170

*Average rates January to December †Average Rates January to June

Source: OANDA, HSBC Library and Goulden Reports