

Strategic Summary

Important Findings of the Market Worldreport

Pharmaceutical Plant Markets 2010

- Global Market Analyses and Forecasts until 2010 -

World market for plant-related products and external services in the Pharmaceutical Industry will grow at an average annual rate of 6.4% between 2000 and 2010.

2000:	\$ 16.6 billion
2005:	\$ 22.3 billion
2010:	\$ 30.9 billion

Markets: Highest demand for processing and packaging machinery, electrical equipment, building materials, software and external services for the formulation and packaging of conventionally produced drugs, followed by active agents production of these drugs. Strongest growth expected for biotechnology-based biologicals and diagnostics.

Countries: North America is the leading market for plant-related products and external services in the pharmaceutical industry, followed by Western Europe and Asia-Pacific. China is the fastest growing market, followed by India. Japan is the leading market in Asia.

Trends: Growing need of validation procedures and clean-rooms will further stimulate the market for pharmaceutical plants. Biotech-based pharmaceuticals as a major challenge for process engineering: special clean rooms will be required; automation of fermentation and separation processes.

PHARMACEUTICAL INDUSTRY HAS STRONGEST GROWTH FOR EQUIPMENT, SERVICES AND PLANTS IN THE PROCESS INDUSTRIES

The present market leaders have market shares of no more than 5% - 10%. **Structural changes** will lead to a further differentiation within the industry. In the future, a clear distinction will have to be made between the huge, globally operating pharmaceutical companies with research and development capability, the international niche specialists, and the system suppliers that combine the pharmaceuticals with other services. The global pharmaceutical industry has the ability to develop products to fight infectious diseases wherever they occur. The challenges are availability, affordability, and effectiveness. The stimulating factors for further growth of the pharmaceutical industry are: a growing world population, a change of the demographic structure, new types of diseases and great deficits of pharmaceutical supply in Eastern Europe, China, India, and other fast-developing countries.

According to the market report, "**Process Plant Markets 2010 for the Pharmaceutical Industries**" by INTECHNO CONSULTING (Basel, Switzerland), the **global production value** of the **pharmaceutical industries** is expected to grow from USD 370 billion in 2000 to about USD 660 billion by 2010. The respective global capital expenditures will grow from USD 19.6 billion in 2000 to nearly USD 35 billion by 2010. Between 2000 and 2005 the average annual growth of capital expenditures is 5.6% and between 2005 and 2010 it is expected to be 6.2%.

The world market for plant-related products and external services in the pharmaceutical industries, including **project and operation phases**, is expected to grow from USD 16.6 billion in 2000 to presumably USD 30.9 billion by 2010. The average annual growth rate is 6.0% between 2000 and 2005 and will be about 6.7% between 2005 and 2010. The average growth for the whole decade is 6.4%. The term "plant-related products and external services" covers the whole spectrum of processing and packaging machinery, transport & conveying machinery, storage & piping equipment, automation and electrical equipment, building materials, software and external open-market services such as engineering, execution, training, maintenance, demolition and overall plant services.

SEGMENTATION BY PLANT WORKS

The segmentation of the global market for plant-related products and external services in 2000 by types of works was as follows:

- | | |
|---|--------|
| <input type="checkbox"/> IT-MES (Manufacturing Execution Systems): | 4.4%; |
| <input type="checkbox"/> Automation (control & instrumentation): | 21.8%; |
| <input type="checkbox"/> Electrical works (drives, switchgear, cables): | 12.7%; |
| <input type="checkbox"/> Mechanical works: | 39.9%; |
| <input type="checkbox"/> Civil & structural works: | 15.3%; |
| <input type="checkbox"/> Overall plant services: | 5.9%. |

Until 2010, the shares of MES and automation works are expected to grow significantly. **MES** includes plant management functions, plant execution and process management as

well as data & information management. **Automation works** cover control systems and instrumentation as well as software and the related services such as engineering (basic, detail), execution (installation, assembly, commissioning), training and maintenance. **Mechanical works** represent the following items: process technological and packaging machinery, pumps, compressors and conveyors as well as storage tanks and systems, piping and valves. The machinery-related services, too, are included.

The **overall services** comprise activities such as feasibility studies (technical, economical, legal), conceptual planning, overall consulting, project management, process design, financial engineering and procurement as well as plant or utility-related outsourcing services.

SEGMENTATION BY PHARMACEUTICAL SECTORS

About 81% of the plant-related products and external services are for the **conventionally** produced pharmaceuticals and 17% for **biotechnology-based** pharmaceuticals. Another 2% are for outsourcing service providers.

SEGMENTATION BY REGIONS

The segmentation of the global market for processing and packaging machinery, electrical equipment, building materials, software and external services in 2000 by global regions was as follows:

<input type="checkbox"/> Western Europe:	35.2%;
<input type="checkbox"/> Eastern Europe:	2.5%;
<input type="checkbox"/> North America:	32.8%;
<input type="checkbox"/> South America:	2.8%;
<input type="checkbox"/> Asia-Pacific:	24.9%;
<input type="checkbox"/> Rest of the World:	1.8%.

Until 2010, the share of Asia-Pacific will grow up to 25.8%. China's share will expand from 3.3% in 2000 to 4.8% by 2010 and India's share is expected to grow from 1.9% in 2000 to 2.7% by 2010.

THE REPORT AS A SUPPORT FOR YOUR STRATEGIC DECISIONS

Whereas the report "**Process Plant Markets 2010**" covers all process industries, the **pharmaceutical section of this report** shows the equipment, software and services market development of the pharmaceutical industries only. This report serves as a strategic tool for all those pharmaceutical equipment and plant service suppliers who want to diversify or penetrate into new pharmaceutical market sectors. Companies who intend to internationalize or who are already active on a global level are a further target group for this report. The pharmaceutical industries section of this report is based on international expert interviews plus analysis of more than 200 statistics and reports on the relevant industries. A priority has been the well-founded assessment of pharmaceutical production volumes, shipments and capital expenditures for each of these industries.

The report "Process Plant Markets 2010" was published in May 2003 and only sold as a whole. INTECHNO CONSULTING is now offering the pharmaceutical section of this report as a special module and at **special prices** for all those plant builders, machinery, electrical and automation manufacturers, who are focused on the pharmaceutical industries solely.

THE REPORT IS PUBLISHED IN 2 VERSIONS:

Version 1 = General Version - Net Price EUR 2'400:

The report "**Pharmaceutical Plant Markets 2010 - Version 1**" represents the overall version and is identical with chapters 1, 2, 3 and 14 of the report "**Process Plant Markets 2010**". It contains about 142 pages including 75 pages of highly concentrated and strategically valuable market information. About 89 pages refer to the pharmaceutical industries as such and 53 pages refer to basic definitions, assumptions and overall economic trends. It is published as a CD-ROM version and contains all data as pdf-files. All tables are shown in Excel-format, too.

Countries published:

About 80 countries have been analyzed in detail of which the following 21 countries / regions are published:

Germany, France, United Kingdom, Italy, Spain & Portugal, Benelux, Scandinavia, Rest Western Europe, Russia, FSU - other countries, Rest Eastern Europe, USA, Rest North America, Brazil, Rest South America, Japan, Australia & New Zealand, China, India, Rest of Asia-Pacific, Rest of the World.

The report shows and discusses the **global production values of the pharmaceutical industries** and the **capital expenditures by type and value**. The plant markets are segmented by **core, packaging and auxiliary processes**.

Works published, segmented by project and operation phases:

Manufacturing Execution Systems: MES hardware, MES software, MES services (engineering, execution, training, maintenance, demolition). **Automation:** Automation hardware (control & instrumentation), automation software, automation-related services (engineering, execution, training, maintenance, demolition). **Electrical works:** Switchgears, drives, cables, electrical works services (engineering, execution, training, maintenance, demolition)

Mechanical works: Process & packaging machinery, transport & conveying machinery, storage & piping equipment, mechanical works services (engineering, execution, training, maintenance, demolition). **Civil & structural works:** Building materials, building works services (planning, execution, training, maintenance, demolition) **Overall plant services:** Feasibility studies, conceptual planning, overall consulting, project management, process design, financial engineering, procurement, outsourcing.

Version 2 = Detailed Version - Net Price EUR 4'500:

The report "Pharmaceutical Plant Markets 2010 - Version 2" comprises all data of version 1 in pdf- and Excel-format **plus additional pages and Excel tables for each of the 8 pharmaceutical categories. These additional pages and Excel tables were not published within the report "Process Plant Markets 2010"**. They cover data about pharmaceutical production, capital expenditures, production investments, MES, automation, electrical works, mechanical works, civil & structural works and overall plant services for each of the following pharmaceutical industries (years 2000, 2005 and 2010):

A. Conventional Pharmaceuticals:

- Formulation & packaging by countries;
- Active agents (open and closed markets) by countries;
- Diagnostics by countries by countries;
- Biologicals by countries.

B. Conventional Pharmaceuticals:

- Formulation & packaging by countries;
- Active agents (open and closed markets) by countries;
- Diagnostics by countries by countries;
- Biologicals by countries.

All in all version 2 contains about 291 more pages than version 1 including 264 tables (pdf and Excel) and another 162 additional market tables which are shown in Excel-format only. All in all version 2 contains about 426 additional market tables in Excel-format compared to version 1.

We believe that the data of this report, although the basic research was conducted already in 2003, are still quite valid. The reason: The pharmaceutical industry is an industry, which is not fluctuating much and which is undergoing a strong and steady growth in the long run; the same should be true for the pharmaceutical equipment, plant and plant-related services industries.

In case of interest, this study is available at:

INTECHNO CONSULTING, Steinenbachgaesslein 49, CH-4051 Basel, Switzerland;
Phone: ++41-61-281 18 30; Fax.: ++41-61-281 18 22.

Our e-Mail is: info@intechnoconsulting.com.

Our homepage is: www.intechnoconsulting.com.

The price of this report is EUR 2'400 for version 1 and EUR 4'500 for version 2.

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