

Pharmaceutical Drying Equipment Market by Type (Freeze, Spray, Vacuum, Fluidized Bed), Scale of Operation (Industrial-scale, Pilot-scale, Lab-scale), End User (Pharmaceutical Companies, CDMOs, Research Universities) - Global Forecast to 2029

Market Report | 2024-10-24 | 227 pages | MarketsandMarkets

AVAILABLE LICENSES:

- Single User \$4950.00
- Multi User \$6650.00
- Corporate License \$8150.00
- Enterprise Site License \$10000.00

Report description:

The global Pharmaceutical Drying Equipment market is projected to reach USD 8.18 billion by 2029 from USD 5.80 billion in 2024, at a CAGR of 7.1% during the forecast period. This is due to growing prevalence of chronic diseases such as diabetes, cardiovascular diseases, cancer, is leading to increase in demand for the pharmaceutical drugs. To meet this increased demand for the medicines the pharmaceutical manufacturing facilities are expanding, consequently increasing the demand for the pharmaceutical equipment dryers. However, the increased demand for the refurbished dryers in pharmaceutical industry is major restraint to the market. Additionally, Higher maintenance of the pharmaceutical drying equipment is major challenge for the market growth. But, the increasing competition in pharmaceutical manufacturing industry due to loss of various drugs' market exclusivity and high growth potential of emerging markets is expected to present profitable growth opportunities for pharmaceutical drying equipment market players over the forecast period of 2024-2029.

"The spray dryer segment of pharmaceutical drying market to hold largest position forecast period."

Based on the type, the spray dryer segment is anticipated to hold largest share position during forecast period in pharmaceutical drying equipment market. This is due to its versatility, efficiency, and ability to enhance product quality. It offers improved bioavailability by producing dust-free, free-flowing, and easily re-dispersible powders, making it ideal for thermoplastic, hygroscopic, and heat-sensitive products. Spray dryers are essential for maintaining quality of active pharmaceutical ingredient. As spray dryers can handle a wide variety of product types, including granulated and agglomerated forms, without heat deterioration. Its popularity in the sector is also a result of its small size, which guarantees energy-efficient operations and makes it an affordable option for large-scale pharmaceutical production.

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

"The pilot-scale equipment segment is the fastest growing segment in pharmaceutical drying equipment market."

Based on scale of operation, the pharmaceutical drying equipment market is segmented into industrial-scale equipment, pilot-scale equipment, and laboratory-scale equipment. The pilot-scale equipment segment is expected to grow at the highest CAGR due to its pivotal role in pharmaceutical research and development (R&D). With increasing development of new medications, pilot-scale equipment allows manufacturers to test formulations and processes on a smaller, more cost-effective scale before full-scale industrial production. This affordability makes it an ideal choice during R&D, minimizing financial risk while optimizing production methods. Additionally, the growing trend of outsourcing manufacturing to Contract Development and Manufacturing Organizations (CDMOs) has further driven the demand for pilot-scale equipment. CDMOs use these systems to streamline the transition from R&D to large-scale production, ensuring efficient and scalable solutions for pharmaceutical companies. As more companies rely on CDMOs to bring new drugs to market, the need for pilot-scale equipment continues to rise, contributing to its rapid growth.

"Europe accounted for the second largest share of the pharmaceutical drying equipment market by region."

The global pharmaceutical drying equipment market is segmented into five major regions, namely, North America, Europe, Asia Pacific, Latin America, and Middle East & Africa. Europe is the second largest regional market for pharmaceutical drying equipment, whereas the Asia Pacific market is estimated to grow at the highest CAGR during the forecast period. Europe holds the second-largest position in the pharmaceutical drying equipment market. This is due to the presence of key industry players such as GEA Group (Germany), I.M.A. Industria Macchine Automatiche (Italy), Syntegon Technology GmbH (Germany), and Mechatech Systems Ltd (UK). These major European players are making significant investments in R&D to create cutting-edge, innovative equipment. Furthermore, the European region's strong pharmaceutical manufacturing base, established regulatory framework, and focus on technological advancements all contribute to its strong market position. In Europe, the need for pharmaceutical drying equipment is being driven by innovation and industry leadership.

A breakdown of the primary participants referred to for this report is provided below:

-□By Company Type: Tier 1-40%, Tier 2-30%, and Tier 3- 30%

-□By Designation: C-level-50%, Director-level-30% and Others-20%

-□By Region: North America-38%, Europe-26%, Asia Pacific-15%, Latin America- 11%, and Middle east and Africa-10%

Note 1: Note: Companies are classified into tiers based on their total revenue. As of 2023, Tier 1 = >USD 10.00 billion, Tier 2 = USD 1.00 billion to USD 10.00 billion, and Tier 3 = <USD 1.00 billion.

Note 2: C-level primaries include CEOs, CFOs, COOs, and VPs.

Note 3: Others include sales managers, marketing managers, business development managers, product managers, distributors, and suppliers.

The major players operating in the pharmaceutical drying equipment market are GEA Group (Germany), ATS Corporation (US), Hosokawa Micron Group (Japan), Freund Corporation (Japan), I.M.A. Industria Macchine Automatiche S.p.A. (Italy), Syntegon Technology GmbH (Germany), BUCHI Labortechnik AG (Switzerland), OPTIMA packaging group GmbH (Germany), Mechatech Systems Ltd (Netherlands), and BEW Engineering Limited (India).

Research Coverage

This report studies the pharmaceutical drying equipment market based on type, scale of operation, end user and region. The report also studies factors (such as drivers, restraints, opportunities, and challenges) affecting market growth and provides details of the competitive landscape for market leaders. Furthermore, the report analyzes micro markets with respect to their individual growth trends and forecasts the revenue of the market segments with respect to five major regions (and the respective countries in these regions).

Reasons to Buy the Report

The report will enable established firms as well as entrants/smaller firms to gauge the pulse of the market, which, in turn, would

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

help them to garner a larger market share. Firms purchasing the report could use one or a combination of the below-mentioned strategies for strengthening their market presence.

This report provides insights on the following pointers:

- Analysis of Key drivers (The expansion of pharmaceutical manufacturing facilities to drive market growth, The increased demand for biopharmaceuticals to drive market, The rapid growth of the contract manufacturing companies to drive market), restraints (The demand for refurbished drying equipment is restraining the market) , Challenge (Higher maintenance of the pharmaceutical drying equipment is major challenge for the market), opportunity (Increasing competition in pharmaceutical manufacturing industry due to loss of various drugs' market exclusivity, High growth potential of emerging markets)
- Market Penetration: Comprehensive information on the product portfolios offered by the top players in the pain management devices market
- Product Development/Innovation: Detailed insights on the upcoming trends, R&D activities, and product launches in the pharmaceutical drying equipment market
- Market Development: Comprehensive information on lucrative emerging regions
- Market Diversification: Exhaustive information about new products, growing geographies, and recent developments in the pain management devices market
- Competitive Assessment: In-depth assessment of market segments, growth strategies, revenue analysis, and products of the leading market players.

Table of Contents:

1□INTRODUCTION□	23
1.1□STUDY OBJECTIVES□	23
1.2□MARKET DEFINITION□	23
1.3□STUDY SCOPE□	24
1.3.1□SEGMENTS AND REGIONS COVERED□	24
1.3.2□INCLUSIONS & EXCLUSIONS□	25
1.3.3□YEARS CONSIDERED□	25
1.3.4□CURRENCY CONSIDERED□	26
1.4□STAKEHOLDERS□	26
1.5□SUMMARY OF CHANGES□	26
2□RESEARCH METHODOLOGY□	28
2.1□RESEARCH DATA□	28
2.1.1□SECONDARY DATA□	28
2.1.1.1□Key objectives of secondary research□	29
2.1.1.2□Key secondary sources□	29
2.1.1.3□Key data from secondary sources□	30
2.1.2□PRIMARY DATA□	30
2.1.2.1□Key primary sources□	31
2.1.2.2□Key objectives of primary research□	31
2.1.2.3□Key data from primary sources□	32
2.1.2.4□Key industry insights□	32
2.2□MARKET SIZE ESTIMATION□	33
2.2.1□SUPPLY-SIDE ANALYSIS (REVENUE SHARE ANALYSIS)□	33
2.2.2□TOP-DOWN APPROACH□	34
2.2.3□COMPANY PRESENTATIONS AND PRIMARY INTERVIEWS□	34
2.2.4□DEMAND-SIDE ANALYSIS (USING PHARMACEUTICAL DRYING EQUIPMENT ADOPTION)□	34
2.3□DATA TRIANGULATION□	37

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

2.4	MARKET RANKING ANALYSIS	38
2.5	STUDY ASSUMPTIONS	39
2.6	RISK ASSESSMENT	39
2.7	RESEARCH LIMITATIONS	39
3	EXECUTIVE SUMMARY	40
?		
4	PREMIUM INSIGHTS	43
4.1	PHARMACEUTICAL DRYING EQUIPMENT MARKET OVERVIEW	43
4.2	NORTH AMERICA: PHARMACEUTICAL DRYING EQUIPMENT MARKET, BY END USER, 2023	44
4.3	GEOGRAPHIC SNAPSHOT OF PHARMACEUTICAL DRYING EQUIPMENT MARKET, 2024-2029	45
4.4	PHARMACEUTICAL DRYING EQUIPMENT MARKET: REGIONAL MIX, 2022-2029	46
4.5	PHARMACEUTICAL DRYING EQUIPMENT MARKET: DEVELOPED VS. EMERGING MARKETS, 2024 VS. 2029 (USD MILLION)	46
5	MARKET OVERVIEW	47
5.1	INTRODUCTION	47
5.2	MARKET DYNAMICS	47
5.2.1	DRIVERS	48
5.2.1.1	Expansion of pharmaceutical manufacturing facilities	48
5.2.1.2	High demand for biopharmaceuticals	48
5.2.1.3	Rapid growth of contract manufacturing and development companies	48
5.2.2	RESTRAINTS	49
5.2.2.1	Increased demand for refurbished drying equipment	49
5.2.3	OPPORTUNITIES	49
5.2.3.1	Increased market competition and high demand for generic and biosimilar drugs	49
5.2.3.2	High growth potential in emerging economies	50
5.2.4	CHALLENGES	50
5.2.4.1	Need for regular maintenance and high associated costs	50
5.3	INDUSTRY TRENDS	50
5.3.1	AUTOMATION AND DIGITALIZATION	50
5.3.2	ENVIRONMENTAL SUSTAINABILITY	50
5.4	TECHNOLOGY ANALYSIS	51
5.4.1	KEY TECHNOLOGIES	51
5.4.1.1	Automation and control systems	51
5.4.1.2	Heat transfer technology	51
5.4.1.3	Vacuum technology	51
5.4.2	COMPLEMENTARY TECHNOLOGIES	51
5.4.2.1	High-efficiency particulate air (HEPA) filtration technology	51
5.4.2.2	Temperature control systems	52
5.4.2.3	Desorption technology	52
5.4.3	ADJACENT TECHNOLOGIES	52
5.4.3.1	Moisture sensors and monitoring systems	52
5.4.3.2	Air distribution systems	52
5.4.3.3	Particle size analysis technology	52
?		
5.5	PORTER'S FIVE FORCE ANALYSIS	53
5.5.1	INTENSITY OF COMPETITIVE RIVALRY	54

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

5.5.2	BARGAINING POWER OF SUPPLIERS	54
5.5.3	BARGAINING POWER OF BUYERS	54
5.5.4	THREAT OF SUBSTITUTES	54
5.5.5	THREAT OF NEW ENTRANTS	54
5.6	KEY STAKEHOLDERS AND BUYING CRITERIA	55
5.6.1	KEY STAKEHOLDERS IN BUYING PROCESS	55
5.6.2	KEY BUYING CRITERIA	56
5.7	REGULATORY LANDSCAPE	56
5.7.1	REGULATORY ANALYSIS	57
5.7.1.1	North America	57
5.7.1.1.1	US	57
5.7.1.1.2	Canada	57
5.7.1.2	Europe	57
5.7.1.3	Asia Pacific	57
5.7.1.4	Latin America	58
5.7.1.5	Middle East & Africa	58
5.7.2	REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS	58
5.8	PATENT ANALYSIS	61
5.8.1	PATENT PUBLICATION TRENDS IN PHARMACEUTICAL DRYING EQUIPMENT MARKET	61
5.8.2	INSIGHTS: JURISDICTION AND TOP APPLICANT ANALYSIS	61
5.9	TRADE ANALYSIS	64
5.9.1	IMPORT DATA FOR HS CODE 8419	64
5.9.2	EXPORT DATA FOR HS CODE 8419	65
5.10	PRICING ANALYSIS	65
5.10.1	INDICATIVE SELLING PRICE OF DRYERS, BY PRODUCT	66
5.10.2	INDICATIVE SELLING PRICE OF DRYERS, BY REGION	66
5.11	KEY CONFERENCES AND EVENTS, 2024-2025	68
5.12	UNMET NEEDS	69
5.13	END-USER EXPECTATIONS	70
5.14	IMPACT OF AI/GENERATIVE AI ON PHARMACEUTICAL DRYING EQUIPMENT MARKET	71
5.14.1	KEY USE CASES	72
5.15	ECOSYSTEM ANALYSIS	72
5.16	CASE STUDY ANALYSIS	73
5.16.1	CASE STUDY 1: IMPROVED VACUUM PRESSURE TO REDUCE DRYING TIME, INCREASE QUALITY, AND SAVE PRODUCTION COSTS	73
5.16.2	CASE STUDY 2: OPTIMIZED PARTICLE SIZE DISTRIBUTION FOR HIGH-POTENCY API PRODUCTION	74
5.16.3	CASE STUDY 3: INNOVATIVE CONTAINMENT SOLUTIONS FOR HIGH-POTENCY APIS TO ENHANCE NUTSCHE FILTER DRYER PERFORMANCE	74
5.17	SUPPLY CHAIN ANALYSIS	75
5.18	ADJACENT MARKET ANALYSIS	76
5.18.1	SPRAY DRYING EQUIPMENT MARKET	76
5.19	TRENDS/DISRUPTIONS IMPACTING CUSTOMER BUSINESS	77
5.20	INVESTMENT AND FUNDING SCENARIO	77
6	PHARMACEUTICAL DRYING EQUIPMENT MARKET, BY TYPE	79
6.1	INTRODUCTION	80
6.2	SPRAY DRYERS	80

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

6.2.1	ABILITY TO MAINTAIN STABILITY OF THERMALLY SENSITIVE COMPOUNDS THROUGH RAPID DRYING TO PRESERVE DRUG EFFICACY	80
6.3	FREEZE DRYERS	82
6.3.1	RIISING DEMAND FOR LYOPHILIZED PRODUCTS TO DRIVE MARKET	82
6.4	FLUIDIZED BED DRYERS	84
6.4.1	COST-EFFECTIVENESS AND UNIFORM DRYING TO SPUR DEMAND IN PHARMACEUTICAL MANUFACTURING FACILITIES	84
6.5	VACUUM DRYERS	86
6.5.1	VACUUM DRYERS TO MINIMIZE THERMAL DEGRADATION AND PROVIDE STABILITY TO HEAT-SENSITIVE MATERIALS	86
6.6	OTHER DRYERS	87
7	PHARMACEUTICAL DRYING EQUIPMENT MARKET, BY SCALE OF OPERATION	90
7.1	INTRODUCTION	91
7.2	INDUSTRIAL-SCALE EQUIPMENT	91
7.2.1	RIISING INVESTMENTS IN HIGH-QUALITY MANUFACTURING TO AUGMENT MARKET GROWTH	91
7.3	PILOT-SCALE EQUIPMENT	92
7.3.1	INCREASED PHARMACEUTICAL R&D INVESTMENTS AND FOCUS ON EFFECTIVE QUALITY CONTROL IN LARGER OPERATIONS TO DRIVE MARKET	92
7.4	LABORATORY-SCALE EQUIPMENT	94
7.4.1	COST-EFFECTIVENESS, EASY OPERATION, AND LOW MAINTENANCE NEEDS TO FUEL MARKET GROWTH	94
8	PHARMACEUTICAL DRYING EQUIPMENT MARKET, BY END USER	95
8.1	INTRODUCTION	96
8.2	PHARMACEUTICAL AND BIOTECH COMPANIES	96
8.2.1	INCREASED INVESTMENTS FOR BETTER PRODUCTION EFFICIENCY IN PHARMACEUTICAL INDUSTRY TO DRIVE MARKET	96
8.3	CONTRACT DEVELOPMENT AND MANUFACTURING ORGANIZATIONS	97
8.3.1	INCREASED OUTSOURCING OF RESEARCH AND MANUFACTURING PROCESSES BY PHARMA COMPANIES TO PROPEL MARKET GROWTH	97
8.4	RESEARCH ACADEMIES AND UNIVERSITIES	98
8.4.1	RIISING DEMAND FOR ADVANCED LABORATORY AND RESEARCH FACILITIES IN ACADEMIC SETTINGS TO DRIVE MARKET	98
9	PHARMACEUTICAL DRYING EQUIPMENT MARKET, BY REGION	100
9.1	INTRODUCTION	101
9.2	NORTH AMERICA	102
9.2.1	MACROECONOMIC OUTLOOK FOR NORTH AMERICA	105
9.2.2	US	105
9.2.2.1	US to dominate North American pharmaceutical drying equipment market during forecast period	105
9.2.3	CANADA	107
9.2.3.1	Robust pharmaceutical sector and advancements in drug development to aid market growth	107
9.3	EUROPE	109
9.3.1	MACROECONOMIC OUTLOOK FOR EUROPE	111
9.3.2	GERMANY	112
9.3.2.1	Increased R&D investments by key players and technological advancements to support market growth	112
9.3.3	FRANCE	114
9.3.3.1	Rising investments in bioproduction capacities to spur market growth	114
9.3.4	ITALY	116
9.3.4.1	Growing demand for biologics and biopharmaceuticals to boost market growth	116
9.3.5	UK	118
9.3.5.1	Increased government investments in pharmaceuticals and clinical trials to propel market growth	118
9.3.6	SPAIN	120
9.3.6.1	Increasing collaborations between drying equipment manufacturing companies to aid market growth	120

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

9.3.7	REST OF EUROPE	122
9.4	ASIA PACIFIC	124
9.4.1	MACROECONOMIC OUTLOOK FOR ASIA PACIFIC	127
9.4.2	CHINA	127
9.4.2.1	Technological advancements and strategic expansions by key international players to augment market growth	127
9.4.3	JAPAN	129
9.4.3.1	High investments in manufacturing capabilities and increased geriatric population to aid market growth	129
9.4.4	INDIA	132
9.4.4.1	Increasing investments in manufacturing facilities to propel market growth	132
9.4.5	AUSTRALIA	134
9.4.5.1	Rising demand for pharmaceuticals and increasing advancements in drug formulations to drive market	134
9.4.6	SOUTH KOREA	136
9.4.6.1	Increased popularity of CDMOs for pharmaceutical production to fuel market growth	136
9.4.7	REST OF ASIA PACIFIC	138
9.5	LATIN AMERICA	140
9.5.1	MACROECONOMIC OUTLOOK FOR LATIN AMERICA	142
9.5.2	BRAZIL	142
9.5.2.1	Advanced biologics sector and increased demand for biosimilars to drive market	142
9.5.3	MEXICO	144
9.5.3.1	Burgeoning pharmaceutical industry and favorable trade agreements to propel market growth	144
9.5.4	REST OF LATIN AMERICA	146
9.6	MIDDLE EAST & AFRICA	148
9.6.1	MACROECONOMIC OUTLOOK FOR MIDDLE EAST & AFRICA	150
9.6.2	GCC COUNTRIES	150
9.6.2.1	Expansion of pharmaceutical manufacturing companies to drive market	150
9.6.3	REST OF MIDDLE EAST & AFRICA	152
10	COMPETITIVE LANDSCAPE	156
10.1	INTRODUCTION	156
10.2	KEY PLAYER STRATEGY/RIGHT TO WIN	156
10.2.1	OVERVIEW OF STRATEGIES ADOPTED BY KEY PLAYERS IN PHARMACEUTICAL DRYING EQUIPMENT MARKET	156
10.3	REVENUE ANALYSIS, 2021-2023	157
10.4	MARKET SHARE ANALYSIS, 2023	158
10.5	COMPANY EVALUATION MATRIX: KEY PLAYERS, 2023	160
10.5.1	STARS	160
10.5.2	EMERGING LEADERS	160
10.5.3	PERVASIVE PLAYERS	160
10.5.4	PARTICIPANTS	161
10.5.5	COMPANY FOOTPRINT: KEY PLAYERS, 2023	162
10.5.5.1	Company footprint	162
10.5.5.2	Type footprint	163
10.5.5.3	Scale of operation footprint	163
10.5.5.4	End-user footprint	164
10.5.5.5	Region footprint	165
10.6	COMPANY EVALUATION MATRIX: STARTUPS/SMES, 2023	166
10.6.1	PROGRESSIVE COMPANIES	166
10.6.2	RESPONSIVE COMPANIES	166
10.6.3	DYNAMIC COMPANIES	166

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

10.6.4	STARTING BLOCKS	166
10.6.5	COMPETITIVE BENCHMARKING: STARTUPS/SMES, 2023	168
	?	
10.7	COMPANY VALUATION AND FINANCIAL METRICS	170
10.7.1	FINANCIAL METRICS	170
10.7.2	COMPANY VALUATION	170
10.8	BRAND/PRODUCT COMPARISON	171
10.9	COMPETITIVE SCENARIO	171
10.9.1	PRODUCT LAUNCHES	172
10.9.2	DEALS	172
10.9.3	EXPANSIONS	173
11	COMPANY PROFILES	174
11.1	KEY PLAYERS	174
11.1.1	GEA GROUP AKTIENGESELLSCHAFT	174
11.1.1.1	Business overview	174
11.1.1.2	Products offered	175
11.1.1.3	Recent developments	177
11.1.1.3.1	Deals	177
11.1.1.4	MnM view	177
11.1.1.4.1	Right to win	177
11.1.1.4.2	Strategic choices	177
11.1.1.4.3	Weaknesses and competitive threats	178
11.1.2	IMA INDUSTRIA MACCHINE AUTOMATICHE SPA	179
11.1.2.1	Business overview	179
11.1.2.2	Products offered	180
11.1.2.3	MnM view	181
11.1.2.3.1	Right to win	181
11.1.2.3.2	Strategic choices	181
11.1.2.3.3	Weaknesses and competitive threats	181
11.1.3	ATS CORPORATION	182
11.1.3.1	Business overview	182
11.1.3.2	Products offered	184
11.1.3.3	Recent developments	185
11.1.3.3.1	Product launches	185
11.1.3.3.2	Deals	185
11.1.3.3.3	Expansions	185
11.1.3.4	MnM view	186
11.1.3.4.1	Right to win	186
11.1.3.4.2	Strategic choices	186
11.1.3.4.3	Weaknesses and competitive threats	186
11.1.4	HOSOKAWA MICRON GROUP	187
11.1.4.1	Business overview	187
11.1.4.2	Products offered	188
11.1.4.3	MnM view	189
11.1.4.3.1	Right to win	189
11.1.4.3.2	Strategic choices	189
11.1.4.3.3	Weaknesses and competitive threats	189

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

11.1.5	FREUND CORP.	190
11.1.5.1	Business overview	190
11.1.5.2	Products offered	192
11.1.6	SYNTEGON TECHNOLOGY GMBH	193
11.1.6.1	Business overview	193
11.1.6.2	Products offered	193
11.1.6.3	Recent developments	194
11.1.6.3.1	Deals	194
11.1.7	BUCHI LABORTECHNIK AG	195
11.1.7.1	Business overview	195
11.1.7.2	Products offered	195
11.1.7.3	Recent developments	196
11.1.7.3.1	Product launches	196
11.1.8	OPTIMA	197
11.1.8.1	Business overview	197
11.1.8.2	Products offered	197
11.1.9	MECHATECH SYSTEMS LTD.	199
11.1.9.1	Business overview	199
11.1.9.2	Products offered	200
11.1.10	BEW ENGINEERING	201
11.1.10.1	Business overview	201
11.1.10.2	Products offered	202
11.2	OTHER PLAYERS	203
11.2.1	ZIRBUS TECHNOLOGY GMBH	203
11.2.2	SPX FLOW, INC.	204
11.2.3	EUROPEAN SPRAYDRY TECHNOLOGIES	205
11.2.4	YAMATO SCIENTIFIC CO., LTD.	206
11.2.5	SAKA	207
11.2.6	ILSHIN BIOBASE	208
11.2.7	OKAWARA MFG. CO., LTD.	209
11.2.8	CHANGZHOU CHANGJIANG DRYING EQUIPMENT CO., LTD.	210
11.2.9	BACHILLER	211
11.2.10	MILLROCK TECHNOLOGY, INC.	212
11.2.11	MARTIN CHRIST GEFRIERTROCKNUNGSANLAGEN GMBH	213
11.2.12	LABCONCO	214
11.2.13	O'HARA TECHNOLOGIES	215
11.2.14	COOLVACUUM TECHNOLOGIES, SL	216
11.2.15	SHACHI ENGINEERING PVT. LTD.	217
12	APPENDIX	218
12.1	DISCUSSION GUIDE	218
12.2	KNOWLEDGESTORE: MARKETSandMARKETS' SUBSCRIPTION PORTAL	223
12.3	CUSTOMIZATION OPTIONS	225
12.4	RELATED REPORTS	225
12.5	AUTHOR DETAILS	226

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Pharmaceutical Drying Equipment Market by Type (Freeze, Spray, Vacuum, Fluidized Bed), Scale of Operation (Industrial-scale, Pilot-scale, Lab-scale), End User (Pharmaceutical Companies, CDMOs, Research Universities) - Global Forecast to 2029

Market Report | 2024-10-24 | 227 pages | MarketsandMarkets

To place an Order with Scotts International:

- ☐ - Print this form
- ☐ - Complete the relevant blank fields and sign
- ☐ - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User	\$4950.00
	Multi User	\$6650.00
	Corporate License	\$8150.00
	Enterprise Site License	\$10000.00
		VAT
		Total

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*	<input type="text"/>	Phone*	<input type="text"/>
First Name*	<input type="text"/>	Last Name*	<input type="text"/>
Job title*	<input type="text"/>		
Company Name*	<input type="text"/>	EU Vat / Tax ID / NIP number*	<input type="text"/>
Address*	<input type="text"/>	City*	<input type="text"/>

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Zip Code*	<input type="text"/>	Country*	<input type="text"/>
		Date	2025-05-20
		Signature	<div></div>