

Automatic Tube Cleaning System Market by Type (Automatic Ball Tube Cleaning System, Automatic Brush Tube Cleaning System), Industry (Power Generation, Oil & Gas, Commercial Spaces, and Hospitality), Application and Region - Global Forecast to 2028

Market Report | 2023-01-26 | 177 pages | MarketsandMarkets

AVAILABLE LICENSES:

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

Report description:

"Automatic tube cleaning system market to grow at a CAGR of 4% from 2023 to 2028 to reach USD 143.5 million by 2028"
The automatic tube cleaning system market size is expected to grow from USD 117.9 million in 2023 to USD 143.5 million by 2028; it is expected to grow at a CAGR of 4% from 2023 to 2028. Automatic tube cleaning systems are employed in premises wherein HVAC systems, such as boilers, condensers and heater exchangers, are installed. Periodic cleaning of these HVAC systems is necessary to avoid increasing power consumption. Hence, an increase in demand for automatic tube cleaning systems from HVAC systems is driving the market's growth.

"Automatic ball tube cleaning system to held largest market share in 2022"

The ball tube cleaning system has been proven effective in increasing heat transfer efficiency for large-scale condensers used in power plants. Increase in power generation performance through increased output accompanied by cost savings through lower fuel consumption. Sponge-ball tube cleaning system technology has been a widely-adopted best practice for optimizing condenser performance in the power generation industry for decades.

"Power Generation sector held largest market share in year 2022"

The power industry produces a significant amount of electricity with the help of water. It is vital in the industry's processes, from cooling condensers to steam generation. Fouling reduces the heat transfer efficiency of a condenser. It increases energy

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

consumption in the power plant, which can lead to a dramatic loss in unit output, unit availability, and revenue. Hence, automatic tube cleaning systems are installed to enable power plants to generate electricity at maximum efficiency by removing fouling automatically and continuously.

"Asia Pacific to hold the largest market share during the forecast period"

China and India are among the major countries in APAC having a significant number of coal-fired power plants. The easy availability of coal makes thermal power a preferred source of electricity generation. The growing electricity demand in Asia Pacific backed by rebounded growth in the economy is expected to establish more power plants, which, in turn, is expected to propel the demand for automatic tube cleaning systems in the power generation industry in the next few years

The break-up of the profiles of primary participants for the report has been given below:

- By Company Type: Tier 1 = 65%, Tier 2 = 20%, and Tier 3 = 15%
- By Designation: C-Level Executives = 57%, Directors = 27%, and Others= 16%
- By Region: North America = 24%, Europe = 24%, Asia Pacific = 46%, and RoW = 6%

Major players operating in the automatic tube cleaning system market include Taprogge GmbH (Germany) BEAUDREY(France), WesTech Engineering, LLC (U.S.), Ovivo (Canada), Balltech Energy Ltd.(Israel), Nijhuis Saur Industries (Netherland), Conco Service LLC (U.S.), Hydroball Technics Holdings PTE Ltd. (Singapore), WSA Engineered System (U.S.), Watco Group (Singapore), Thermax Ltd (India), Innovas Technologies LLC. (U.S.), Ecomax Solutions Pvt Ltd (India), NLB Corporation (U.S.), and CET Enviro Pvt Ltd (India) among others.

Research Coverage:

The research report on the global automatic tube cleaning system market covers the market based on type, industry and region. Based on type, the automatic tube cleaning system market is segregated into automatic ball tube cleaning system and automatic brush tube cleaning system. Based on industry, the automatic tube cleaning system market is segregated into power generation, oil & gas, commercial spaces, hospitality and others. The report covers four major regions, namely, North America, Europe, Asia Pacific (APAC), and Rest of the World (RoW).

Key Benefits of Buying the Report:

- This report segments the automatic tube cleaning system market comprehensively and provides the closest approximations of the overall market size, as well as that of the subsegments across different type, industry and region.
- The report helps stakeholders understand the pulse of the market, and expected market scenario and provides information on key market drivers, restraints, challenges, and opportunities.

Table of Contents:

1	INTRODUCTION	28
1.1	STUDY OBJECTIVES	28
1.2	MARKET DEFINITION AND SCOPE	29
1.3	INCLUSIONS AND EXCLUSIONS	29
1.4	STUDY SCOPE	29
1.4.1	MARKETS COVERED	29
1.4.2	YEARS CONSIDERED	30
1.5	CURRENCY CONSIDERED	30
1.6	LIMITATIONS	30
1.7	MARKET STAKEHOLDERS	30
1.8	SUMMARY OF CHANGES	31
2	RESEARCH METHODOLOGY	32
2.1	INTRODUCTION	32

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

FIGURE 1	AUTOMATIC TUBE CLEANING SYSTEM MARKET: RESEARCH DESIGN	32
2.1.1	SECONDARY DATA	33
2.1.1.1	List of major secondary sources	33
2.1.1.2	Key data from secondary sources	33
2.1.2	PRIMARY DATA	34
2.1.2.1	Breakdown of primaries	34
2.1.2.2	Key data from primary sources	34
2.1.3	SECONDARY AND PRIMARY RESEARCH	35
2.1.3.1	Key industry insights	36
2.2	MARKET SIZE ESTIMATION	36
FIGURE 2	MARKET SIZE ESTIMATION METHODOLOGY (SUPPLY SIDE): REVENUE FROM AUTOMATIC TUBE CLEANING SYSTEM MARKET	37
2.2.1	BOTTOM-UP APPROACH	37
2.2.1.1	Approach for arriving at market size using bottom-up approach	37
FIGURE 3	MARKET SIZE ESTIMATION METHODOLOGY: BOTTOM-UP APPROACH	38
2.2.2	TOP-DOWN APPROACH	38
2.2.2.1	Approach for arriving at market size using top-down approach	38
FIGURE 4	MARKET SIZE ESTIMATION METHODOLOGY: TOP-DOWN APPROACH	39
2.3	MARKET BREAKDOWN AND DATA TRIANGULATION	39
FIGURE 5	MARKET BREAKDOWN AND DATA TRIANGULATION	39
2.4	RESEARCH ASSUMPTIONS	40
FIGURE 6	ASSUMPTIONS FOR RESEARCH STUDY	40
2.5	APPROACH TO DETERMINE IMPACT OF RECESSION	40
2.6	RISK ASSESSMENT	41
TABLE 1	LIMITATIONS AND ASSOCIATED RISKS	41
3	EXECUTIVE SUMMARY	42
FIGURE 7	AUTOMATIC BALL TUBE CLEANING SYSTEM SEGMENT TO DOMINATE MARKET FROM 2023 TO 2028	43
FIGURE 8	POWER GENERATION INDUSTRY SEGMENT TO HOLD LARGEST MARKET SHARE FROM 2023 TO 2028	43
FIGURE 9	AUTOMATIC TUBE CLEANING SYSTEM MARKET IN APAC TO GROW AT HIGHEST CAGR DURING FORECAST PERIOD (2023-2028)	44
3.1	IMPACT OF RECESSION	44
FIGURE 10	GDP GROWTH PROJECTIONS FOR MAJOR ECONOMIES TILL 2023	45
FIGURE 11	IMPACT OF UPCOMING RECESSION ON GLOBAL AUTOMATIC TUBE CLEANING SYSTEM MARKET	45
4	PREMIUM INSIGHTS	46
4.1	ATTRACTIVE GROWTH OPPORTUNITIES FOR AUTOMATIC TUBE CLEANING SYSTEM MARKET	46
FIGURE 12	EXPANSION OF POWER GENERATION INDUSTRY TO CREATE LUCRATIVE OPPORTUNITIES FOR APAC AUTOMATIC TUBE CLEANING SYSTEM MARKET	46
4.2	AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE	47
FIGURE 13	AUTOMATIC BALL TUBE CLEANING SYSTEM SEGMENT TO GROW AT HIGHER CAGR DURING FORECAST PERIOD	47
4.3	AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY INDUSTRY	47
FIGURE 14	POWER GENERATION INDUSTRY TO DOMINATE AUTOMATIC TUBE CLEANING SYSTEM MARKET DURING FORECAST PERIOD (2023-2028)	47
4.4	AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY REGION	48
FIGURE 15	ASIA PACIFIC TO HOLD LARGEST SHARE OF AUTOMATIC TUBE CLEANING SYSTEM MARKET DURING FORECAST PERIOD (2023-2028)	48
4.5	AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY COUNTRY	48
FIGURE 16	US TO HOLD LARGEST SHARE OF AUTOMATIC TUBE CLEANING SYSTEM MARKET IN 2022	48

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

5	MARKET OVERVIEW	49
5.1	INTRODUCTION	49
5.2	MARKET DYNAMICS	49
FIGURE 17	AUTOMATIC TUBE CLEANING SYSTEM MARKET: DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES	49
5.2.1	DRIVERS	50
5.2.1.1	Improving operational efficiency of HVAC systems due to automatic tube cleaning system installation	50
FIGURE 18	DRIVERS FOR AUTOMATIC TUBE CLEANING SYSTEM MARKET AND THEIR IMPACT	51
5.2.2	RESTRAINTS	51
5.2.2.1	Design-related faults and limitations in some automatic tube cleaning systems	51
FIGURE 19	RESTRAINTS FOR AUTOMATIC TUBE CLEANING SYSTEM MARKET AND THEIR IMPACT	51
5.2.3	OPPORTUNITIES	52
5.2.3.1	Rise in desalination projects worldwide	52
FIGURE 20	OPPORTUNITIES FOR AUTOMATIC TUBE CLEANING SYSTEM MARKET AND THEIR IMPACT	52
5.2.4	CHALLENGES	52
5.2.4.1	Constant requirement to replace sponge balls in automatic tube cleaning systems	52
5.2.4.2	Low awareness about benefits of automatic tube cleaning systems	53
FIGURE 21	CHALLENGES FOR AUTOMATIC TUBE CLEANING SYSTEM MARKET AND THEIR IMPACT	53
5.3	VALUE CHAIN ANALYSIS	53
FIGURE 22	VALUE CHAIN ANALYSIS	53
5.4	ECOSYSTEM ANALYSIS	54
FIGURE 23	AUTOMATIC TUBE CLEANING SYSTEM MARKET: ECOSYSTEM	54
TABLE 2	COMPANIES AND THEIR ROLE IN AUTOMATIC TUBE CLEANING SYSTEM MARKET ECOSYSTEM	55
5.5	PRICING ANALYSIS	56
5.5.1	AVERAGE SELLING PRICE OF COMPONENTS PROVIDED BY MARKET PLAYERS, BY TYPE	56
FIGURE 24	AVERAGE SELLING PRICE OF COMPONENTS PROVIDED BY KEY PLAYERS, BY TYPE	56
TABLE 3	AVERAGE SELLING PRICE OF COMPONENTS PROVIDED BY KEY PLAYERS, BY TYPE (USD)	57
5.6	TRENDS/DISRUPTIONS IMPACTING CUSTOMERS' BUSINESSES	57
5.7	TECHNOLOGY ANALYSIS	58
5.7.1	SHELL AND TUBE EXCHANGER TECHNOLOGY	58
5.7.2	SPIRAL HEAT EXCHANGER TECHNOLOGY	58
5.7.3	REMOTE MONITORING	58
5.7.4	INTERNET OF THINGS	58
5.8	PORTER'S FIVE FORCES ANALYSIS	58
TABLE 4	PORTER'S FIVE FORCES ANALYSIS	59
5.8.1	THREAT OF NEW ENTRANTS	59
5.8.2	THREAT OF SUBSTITUTES	59
5.8.3	BARGAINING POWER OF SUPPLIERS	59
5.8.4	BARGAINING POWER OF BUYERS	59
5.8.5	INTENSITY OF COMPETITIVE RIVALRY	60
5.9	KEY STAKEHOLDERS AND BUYING CRITERIA	60
5.9.1	KEY STAKEHOLDERS IN BUYING PROCESS	60
FIGURE 25	INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS FOR TOP THREE END USERS	60
TABLE 5	INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS FOR TOP THREE END USERS	60
5.9.2	BUYING CRITERIA	61
FIGURE 26	KEY BUYING CRITERIA FOR TOP 3 END USERS	61
TABLE 6	KEY BUYING CRITERIA FOR TOP 3 END USERS	61
5.10	CASE STUDY	61

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

5.10.1 USE CASE 1: A PARTNERSHIP STORY-ICICI BANK 61

5.10.2 USE CASE 2: SUCCESS STORY WITH RENAISSANCE HOTEL (MUMBAI, INDIA) 62

5.10.3 USE CASE 3: DOMINION POWER CASE STUDY 62

5.10.4 USE CASE 4: XCEL ENERGY CASE STUDY 62

5.11 TRADE ANALYSIS 63

FIGURE 27 IMPORTS DATA FOR PARTS OF REFRIGERATING OR FREEZING EQUIPMENT AND HEAT PUMPS, 2017-2021 (USD MILLION) 63

FIGURE 28 EXPORTS DATA FOR PARTS OF REFRIGERATING OR FREEZING EQUIPMENT AND HEAT PUMPS, 2017-2021 (USD MILLION) 64

5.12 PATENTS ANALYSIS 64

FIGURE 29 NUMBER OF PATENTS GRANTED PER YEAR FROM 2012 TO 2021 64

FIGURE 30 TOP 10 COMPANIES WITH HIGHEST NUMBER OF PATENT APPLICATIONS IN LAST 10 YEARS 65

TABLE 7 TOP PATENT OWNERS IN LAST 10 YEARS (US) 65

5.12.1 LIST OF MAJOR PATENTS 66

5.13 KEY CONFERENCES AND EVENTS IN 2022-2023 68

TABLE 8 AUTOMATIC TUBE CLEANING SYSTEM MARKET: DETAILED LIST OF CONFERENCES AND EVENTS 68

5.14 REGULATIONS AND STANDARDS 69

5.14.1 REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS 69

TABLE 9 NORTH AMERICA: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS 69

TABLE 10 EUROPE: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS 70

TABLE 11 ASIA PACIFIC: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS 70

TABLE 12 REST OF THE WORLD: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS 71

5.14.2 STANDARDS 71

TABLE 13 GLOBAL STANDARDS FOR AUTOMATIC TUBE CLEANING SYSTEMS 71

6 AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE 73

6.1 INTRODUCTION 74

FIGURE 31 AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE 74

FIGURE 32 AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION) 74

6.2 AUTOMATIC BALL TUBE CLEANING SYSTEM 75

TABLE 14 AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION) 75

TABLE 15 AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION) 75

6.2.1 INCREASE IN DEMAND FROM POWER GENERATION INDUSTRY 75

TABLE 16 AUTOMATIC BALL TUBE CLEANING SYSTEM MARKET, BY INDUSTRY, 2019-2022 (USD MILLION) 76

TABLE 17 AUTOMATIC BALL TUBE CLEANING SYSTEM MARKET, BY INDUSTRY, 2023-2028 (USD MILLION) 76

TABLE 18 AUTOMATIC BALL TUBE CLEANING SYSTEM MARKET, BY REGION, 2019-2022 (USD MILLION) 76

TABLE 19 AUTOMATIC BALL TUBE CLEANING SYSTEM MARKET, BY REGION, 2023-2028 (USD MILLION) 77

TABLE 20 AUTOMATIC BALL TUBE CLEANING SYSTEM MARKET IN ROW, BY REGION, 2019-2022 (USD MILLION) 77

TABLE 21 AUTOMATIC BALL TUBE CLEANING SYSTEM MARKET IN ROW, BY REGION, 2023-2028 (USD MILLION) 77

6.3 AUTOMATIC BRUSH TUBE CLEANING SYSTEM 78

6.3.1 GROWING ADOPTION OF BRUSHES FOR CONDENSER TUBE CLEANING 78

TABLE 22 AUTOMATIC BRUSH TUBE CLEANING SYSTEM MARKET, BY INDUSTRY, 2019-2022 (USD MILLION) 78

TABLE 23 AUTOMATIC BRUSH TUBE CLEANING SYSTEM MARKET, BY INDUSTRY, 2023-2028 (USD MILLION) 78

TABLE 24 AUTOMATIC BRUSH TUBE CLEANING SYSTEM MARKET, BY REGION, 2019-2022 (USD MILLION) 79

TABLE 25 AUTOMATIC BRUSH TUBE CLEANING SYSTEM MARKET, BY REGION, 2023-2028 (USD MILLION) 79

TABLE 26 AUTOMATIC BRUSH TUBE CLEANING SYSTEM MARKET IN ROW, BY REGION, 2019-2022 (USD MILLION) 79

TABLE 27 AUTOMATIC BRUSH TUBE CLEANING SYSTEM MARKET IN ROW, BY REGION, 2023-2028 (USD MILLION) 80

7 AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY APPLICATION 81

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

7.1	INTRODUCTION	81
	FIGURE 33	AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY APPLICATION
7.2	BOILERS	81
7.2.1	INCREASING USE OF BOILERS IN MANUFACTURING INDUSTRY	81
7.3	CHILLERS	82
7.3.1	INCREASE IN DEMAND FOR CHILLERS IN HOTELS AND RESTAURANTS	82
7.4	COOLING TOWERS	82
7.4.1	COOLING TOWERS PROVIDE COST-EFFECTIVE AND ENERGY-EFFICIENT OPERATION OF SYSTEMS IN NEED OF COOLING	82
7.5	OTHER APPLICATIONS	82
8	AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY INDUSTRY	83
8.1	INTRODUCTION	84
	FIGURE 34	AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY INDUSTRY
	FIGURE 35	AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY INDUSTRY, 2023-2028 (USD MILLION)
	TABLE 28	AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY INDUSTRY, 2019-2022 (USD MILLION)
	TABLE 29	AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY INDUSTRY, 2023-2028 (USD MILLION)
8.2	POWER GENERATION	86
8.2.1	GROWING ADOPTION OF COOLING SYSTEMS DUE TO INCREASING PRODUCTION OF ELECTRICITY	86
	FIGURE 36	SNAPSHOT OF GLOBAL ELECTRICITY GENERATION (2016-2021)
	TABLE 30	POWER GENERATION: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION)
	TABLE 31	POWER GENERATION: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION)
	TABLE 32	POWER GENERATION: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY REGION, 2019-2022 (USD MILLION)
	TABLE 33	POWER GENERATION: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY REGION, 2023-2028 (USD MILLION)
8.3	OIL & GAS	87
8.3.1	RAPID ADOPTION OF HEAT EXCHANGERS AND SHELL AND TUBE CONDENSERS BY OIL & GAS INDUSTRY	88
	TABLE 34	OIL & GAS: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION)
	TABLE 35	OIL & GAS: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION)
	TABLE 36	OIL & GAS: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY REGION, 2019-2022 (USD MILLION)
	TABLE 37	OIL & GAS: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY REGION, 2023-2028 (USD MILLION)
8.4	COMMERCIAL SPACES	89
8.4.1	INCREASING DEMAND FOR COOLING UNITS IN COMMERCIAL SPACES	89
	TABLE 38	COMMERCIAL SPACES: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION)
	TABLE 39	COMMERCIAL SPACES: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION)
	TABLE 40	COMMERCIAL SPACES: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY REGION, 2019-2022 (USD MILLION)
	TABLE 41	COMMERCIAL SPACES: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY REGION, 2023-2028 (USD MILLION)
8.5	HOSPITALITY	91
8.5.1	INCREASE IN TOURISM ACTIVITIES WORLDWIDE	91
	TABLE 42	HOSPITALITY: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION)
	TABLE 43	HOSPITALITY: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION)
	TABLE 44	HOSPITALITY: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY REGION, 2019-2022 (USD MILLION)
	TABLE 45	HOSPITALITY: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY REGION, 2023-2028 (USD MILLION)
8.6	OTHER INDUSTRIES	92
	TABLE 46	OTHER INDUSTRIES: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION)
	TABLE 47	OTHER INDUSTRIES: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION)
	TABLE 48	OTHER INDUSTRIES: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY REGION, 2019-2022 (USD MILLION)
	TABLE 49	OTHER INDUSTRIES: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY REGION, 2023-2028 (USD MILLION)
9	AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY REGION	94
9.1	INTRODUCTION	95

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

FIGURE 37 AUTOMATIC TUBE CLEANING SYSTEM MARKET SEGMENTATION, BY REGION 95

FIGURE 38 CHINA TO REGISTER HIGHEST CAGR DURING FORECAST PERIOD 95

FIGURE 39 ASIA PACIFIC TO DOMINATE GLOBAL MARKET DURING FORECAST PERIOD (2023-2028) 96

TABLE 50 AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY REGION, 2019-2022 (USD MILLION) 96

TABLE 51 AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY REGION, 2023-2028 (USD MILLION) 96

9.2 NORTH AMERICA 97

FIGURE 40 NORTH AMERICA: AUTOMATIC TUBE CLEANING SYSTEM MARKET SNAPSHOT 97

TABLE 52 NORTH AMERICA: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY COUNTRY, 2019-2022 (USD MILLION) 98

TABLE 53 NORTH AMERICA: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY COUNTRY, 2023-2028 (USD MILLION) 98

TABLE 54 NORTH AMERICA: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION) 98

TABLE 55 NORTH AMERICA: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION) 98

TABLE 56 NORTH AMERICA: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY INDUSTRY, 2019-2022 (USD MILLION) 99

TABLE 57 NORTH AMERICA: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY INDUSTRY, 2023-2028 (USD MILLION) 99

9.2.1 US 99

9.2.1.1 Increasing oil production expected to drive growth 99

TABLE 58 US: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION) 100

TABLE 59 US: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION) 100

9.2.2 CANADA 100

9.2.2.1 Increasing demand for electricity to drive growth 100

TABLE 60 CANADA: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION) 100

TABLE 61 CANADA: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION) 101

9.2.3 MEXICO 101

9.2.3.1 Increasing reliance on nuclear power to support growth 101

TABLE 62 MEXICO: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION) 101

TABLE 63 MEXICO: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION) 101

9.3 EUROPE 102

FIGURE 41 EUROPE: AUTOMATIC TUBE CLEANING SYSTEM MARKET SNAPSHOT 103

TABLE 64 EUROPE: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY COUNTRY, 2019-2022 (USD MILLION) 103

TABLE 65 EUROPE: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY COUNTRY, 2023-2028 (USD MILLION) 104

TABLE 66 EUROPE: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION) 104

TABLE 67 EUROPE: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION) 104

TABLE 68 EUROPE: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY INDUSTRY, 2019-2022 (USD MILLION) 104

TABLE 69 EUROPE: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY INDUSTRY, 2023-2028 (USD MILLION) 105

9.3.1 GERMANY 105

9.3.1.1 Growing hospitality industry to propel growth 105

TABLE 70 GERMANY: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION) 105

TABLE 71 GERMANY: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION) 106

9.3.2 FRANCE 106

9.3.2.1 Increasing demand for nuclear power to drive growth 106

TABLE 72 FRANCE: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION) 106

TABLE 73 FRANCE: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION) 106

9.3.3 REST OF EUROPE 107

TABLE 74 REST OF EUROPE: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION) 107

TABLE 75 REST OF EUROPE: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION) 107

9.4 ASIA PACIFIC 107

FIGURE 42 ASIA PACIFIC: AUTOMATIC TUBE CLEANING SYSTEM MARKET SNAPSHOT 108

TABLE 76 ASIA PACIFIC: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY COUNTRY, 2019-2022 (USD MILLION) 108

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

TABLE 77	ASIA PACIFIC: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY COUNTRY, 2023-2028 (USD MILLION)	109
TABLE 78	ASIA PACIFIC: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION)	109
TABLE 79	ASIA PACIFIC: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION)	109
TABLE 80	ASIA PACIFIC: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY INDUSTRY, 2019-2022 (USD MILLION)	110
TABLE 81	ASIA PACIFIC: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY INDUSTRY, 2023-2028 (USD MILLION)	110
9.4.1	CHINA	110
9.4.1.1	Growing adoption of renewable energy to drive growth	110
TABLE 82	CHINA: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION)	111
TABLE 83	CHINA: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION)	111
9.4.2	JAPAN	111
9.4.2.1	Growing installation of coal-fired power plants to support growth	111
TABLE 84	JAPAN: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION)	111
TABLE 85	JAPAN: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION)	112
9.4.3	REST OF ASIA PACIFIC	112
TABLE 86	REST OF ASIA PACIFIC: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION)	112
TABLE 87	REST OF ASIA PACIFIC: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION)	112
9.5	REST OF THE WORLD	113
FIGURE 43	AUTOMATIC TUBE CLEANING SYSTEM MARKET IN ROW, BY REGION, 2023 VS. 2028 (USD MILLION)	113
TABLE 88	ROW: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY REGION, 2019-2022 (USD MILLION)	114
TABLE 89	ROW: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY REGION, 2023-2028 (USD MILLION)	114
TABLE 90	ROW: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2023 (USD MILLION)	114
TABLE 91	ROW: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION)	114
TABLE 92	ROW: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY INDUSTRY, 2019-2022 (USD MILLION)	115
TABLE 93	ROW: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY INDUSTRY, 2023-2028 (USD MILLION)	115
9.5.1	MIDDLE EAST & AFRICA	115
9.5.1.1	Increasing number of desalination plants to drive growth	115
TABLE 94	MIDDLE EAST & AFRICA: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION)	116
TABLE 95	MIDDLE EAST & AFRICA: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION)	116
9.5.2	SOUTH AMERICA	116
9.5.2.1	Increase in oil production through refineries to propel growth	116
TABLE 96	SOUTH AMERICA: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2019-2022 (USD MILLION)	116
TABLE 97	SOUTH AMERICA: AUTOMATIC TUBE CLEANING SYSTEM MARKET, BY TYPE, 2023-2028 (USD MILLION)	117
10	COMPETITIVE LANDSCAPE	118
10.1	INTRODUCTION	118
TABLE 98	KEY DEVELOPMENTS IN AUTOMATIC TUBE CLEANING SYSTEM MARKET (2021-2022)	118
10.2	REVENUE ANALYSIS OF TOP 5 COMPANIES	119
FIGURE 44	AUTOMATIC TUBE CLEANING SYSTEM MARKET: REVENUE ANALYSIS (2022)	119
10.3	MARKET SHARE ANALYSIS OF TOP PLAYERS, 2022	120
TABLE 99	AUTOMATIC TUBE CLEANING SYSTEM MARKET: DEGREE OF COMPETITION	120
10.4	COMPETITIVE EVALUATION QUADRANT, 2022	121
10.4.1	STARS	121
10.4.2	EMERGING LEADERS	121
10.4.3	PERVASIVE PLAYERS	121
10.4.4	PARTICIPANTS	122
FIGURE 45	AUTOMATIC TUBE CLEANING SYSTEM MARKET: GLOBAL COMPANY EVALUATION QUADRANT, 2022	122
10.5	SMALL AND MEDIUM-SIZED ENTERPRISES (SME) EVALUATION QUADRANT, 2022	122
10.5.1	PROGRESSIVE COMPANIES	122

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

10.5.2	RESPONSIVE COMPANIES	123
10.5.3	DYNAMIC COMPANIES	123
10.5.4	STARTING BLOCKS	123
FIGURE 46	AUTOMATIC TUBE CLEANING SYSTEM MARKET: GLOBAL SME EVALUATION QUADRANT, 2022	123
10.6	AUTOMATIC TUBE CLEANING SYSTEM MARKET: COMPANY FOOTPRINT	124
TABLE 100	AUTOMATIC TUBE CLEANING SYSTEM TYPE FOOTPRINT OF COMPANIES	124
TABLE 101	INDUSTRY FOOTPRINT OF COMPANIES	125
TABLE 102	REGIONAL FOOTPRINT OF COMPANIES	126
TABLE 103	OVERALL FOOTPRINT OF COMPANIES	127
10.7	COMPETITIVE BENCHMARKING	128
10.7.1	AUTOMATIC TUBE CLEANING SYSTEM MARKET: DETAILED LIST OF KEY START-UPS/SMES	128
TABLE 104	KEY START-UPS/SMES	128
10.7.2	AUTOMATIC TUBE CLEANING SYSTEM MARKET: COMPETITIVE BENCHMARKING OF KEY START-UPS/SMES, BY TYPE	129
TABLE 105	COMPETITIVE BENCHMARKING OF KEY START-UPS/SMES, BY TYPE	129
10.7.3	AUTOMATIC TUBE CLEANING SYSTEM MARKET: COMPETITIVE BENCHMARKING OF KEY START-UPS/SMES, BY INDUSTRY	129
TABLE 106	COMPETITIVE BENCHMARKING OF KEY START-UPS/SMES, BY INDUSTRY	129
10.7.4	AUTOMATIC TUBE CLEANING SYSTEM MARKET: COMPETITIVE BENCHMARKING OF KEY START-UPS/SMES, BY REGION	130
TABLE 107	COMPETITIVE BENCHMARKING OF KEY START-UPS/SMES, BY REGION	130
10.8	COMPETITIVE SITUATIONS AND TRENDS	130
10.8.1	PRODUCT LAUNCHES	130
TABLE 108	AUTOMATIC TUBE CLEANING SYSTEM MARKET: PRODUCT LAUNCHES, JANUARY 2021-NOVEMBER 2022	130
?		
11	COMPANY PROFILES	131
	(Business Overview, Products/Solutions/Services Offered, Recent Developments, MnM view (Key strengths/Right to win, Strategic choices made, Weakness/competitive threats)*	
11.1	KEY PLAYERS	131
11.1.1	TAPROGGE GMBH	131
TABLE 109	TAPROGGE GMBH: BUSINESS OVERVIEW	131
TABLE 110	TAPROGGE GMBH: PRODUCTS/SOLUTIONS/SERVICES OFFERED	131
11.1.2	BEAUDREY	133
TABLE 111	BEAUDREY: BUSINESS OVERVIEW	133
TABLE 112	BEAUDREY: PRODUCTS/SOLUTIONS/SERVICES OFFERED	133
11.1.3	WSA ENGINEERED SYSTEMS	135
TABLE 113	WSA ENGINEERED SYSTEMS: BUSINESS OVERVIEW	135
TABLE 114	WSA ENGINEERED SYSTEMS: PRODUCTS/SOLUTIONS/SERVICES OFFERED	135
11.1.4	WESTECH ENGINEERING, LLC	137
TABLE 115	WESTECH ENGINEERING, LLC: BUSINESS OVERVIEW	137
TABLE 116	WESTECH ENGINEERING, LLC: PRODUCTS/SOLUTIONS/SERVICES OFFERED	137
11.1.5	OVIVO	138
TABLE 117	OVIVO: BUSINESS OVERVIEW	138
TABLE 118	OVIVO: PRODUCTS/SOLUTIONS/SERVICES OFFERED	139
11.1.6	BALLTECH ENERGY LTD.	140
TABLE 119	BALLTECH ENERGY LTD.: BUSINESS OVERVIEW	140
TABLE 120	BALLTECH ENERGY LTD.: PRODUCTS/SOLUTIONS/SERVICES OFFERED	140
11.1.7	NIJHUIS SAUR INDUSTRIES	141
TABLE 121	NIJHUIS SAUR INDUSTRIES: BUSINESS OVERVIEW	141
TABLE 122	NIJHUIS SAUR INDUSTRIES: PRODUCTS/SOLUTIONS/SERVICES OFFERED	141

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

11.1.8	CONCO SERVICES LLC	142
	TABLE 123	CONCO SERVICES LLC: BUSINESS OVERVIEW
	TABLE 124	CONCO SERVICES LLC: PRODUCTS/SOLUTIONS/SERVICES OFFERED
11.1.9	HYDROBALL TECHNICS HOLDINGS PTE LTD.	143
	TABLE 125	HYDROBALL TECHNICS HOLDINGS PTE LTD.: BUSINESS OVERVIEW
	TABLE 126	HYDROBALL TECHNICS HOLDINGS PTE LTD.: PRODUCTS/SOLUTIONS/ SERVICES OFFERED
11.1.10	THERMAX LIMITED	144
	TABLE 127	THERMAX LIMITED: BUSINESS OVERVIEW
	FIGURE 47	THERMAX LIMITED: COMPANY SNAPSHOT
	TABLE 128	THERMAX LIMITED: PRODUCTS/SOLUTIONS/SERVICES OFFERED
11.1.11	WATCO GROUP	146
	TABLE 129	WATCO GROUP: BUSINESS OVERVIEW
	TABLE 130	WATCO GROUP: PRODUCTS/SOLUTIONS/SERVICES OFFERED
11.1.12	INNOVAS TECHNOLOGIES, LLC.	147
	TABLE 131	INNOVAS TECHNOLOGIES, LLC.: BUSINESS OVERVIEW
	TABLE 132	INNOVAS TECHNOLOGIES, LLC.: PRODUCTS/SOLUTIONS/SERVICES OFFERED
	TABLE 133	INNOVAS TECHNOLOGIES, LLC.: PRODUCT LAUNCHES AND DEVELOPMENTS
11.1.13	ECOMAX SOLUTIONS PVT. LTD.	149
	TABLE 134	ECOMAX SOLUTIONS PVT. LTD.: BUSINESS OVERVIEW
	TABLE 135	ECOMAX SOLUTIONS PVT. LTD.: PRODUCTS/SOLUTIONS/SERVICES OFFERED
11.1.14	NLB CORPORATION	150
	TABLE 136	NLB CORPORATION: BUSINESS OVERVIEW
	TABLE 137	NLB CORPORATION: PRODUCTS/SOLUTIONS/SERVICES OFFERED
11.1.15	CET ENVIRO PVT. LTD.	151
	TABLE 138	CET ENVIRO PVT. LTD.: BUSINESS OVERVIEW
	TABLE 139	CET ENVIRO PVT. LTD.: PRODUCTS/SOLUTIONS/SERVICES OFFERED
11.2	OTHER KEY PLAYERS	152
11.2.1	WTR ENGINEERING	152
	TABLE 140	WTR ENGINEERING: COMPANY OVERVIEW
11.2.2	ENERGEO	152
	TABLE 141	ENERGEO: COMPANY OVERVIEW
11.2.3	NYKK ENGINEERING GROUP	153
	TABLE 142	NYKK ENGINEERING GROUP: COMPANY OVERVIEW
11.2.4	VULCAN INDUSTRIES	153
	TABLE 143	VULCAN INDUSTRIES: COMPANY OVERVIEW
11.2.5	SUNJIN ENVIRONMENT CO., LTD.	154
	TABLE 144	SUNJIN ENVIRONMENT CO., LTD.: COMPANY OVERVIEW
11.2.6	POWER WISE CONVEYOR CO., LTD.	154
	TABLE 145	POWER WISE CONVEYOR CO., LTD.: COMPANY OVERVIEW
11.2.7	JIANGSU YLD WATER PROCESSING EQUIPMENT CO. LTD.	155
	TABLE 146	JIANGSU YLD WATER PROCESSING EQUIPMENT CO. LTD.: COMPANY OVERVIEW
11.2.8	DYNNARO TECHNOLOGIES	155
	TABLE 147	DYNNARO TECHNOLOGIES: COMPANY OVERVIEW
11.2.9	ACMV PTE. LTD.	156
	TABLE 148	ACMV PTE. LTD.: COMPANY OVERVIEW
11.2.10	WATER TECHNOLOGY OF PENSACOLA INC. (ATB SYSTEM)	156
	TABLE 149	WATER TECHNOLOGY OF PENSACOLA INC. (ATB SYSTEM): COMPANY OVERVIEW

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

Details on Business Overview, Products/Solutions/Services Offered, Recent Developments, MnM view (Key strengths/Right to win, Strategic choices made, Weakness/competitive threats) might not be captured in case of unlisted companies.

12 ADJACENT AND RELATED MARKETS 157

12.1 INTRODUCTION 157

12.2 LIMITATIONS 157

12.3 INDUSTRIAL REFRIGERATION MARKET, BY COMPONENT 157

12.3.1 INTRODUCTION 157

TABLE 150 INDUSTRIAL REFRIGERATION SYSTEM MARKET, BY COMPONENT, 2017-2020 (USD MILLION) 158

TABLE 151 INDUSTRIAL REFRIGERATION SYSTEM MARKET, BY COMPONENT, 2021-2026 (USD MILLION) 158

12.4 COMPRESSORS 159

TABLE 152 INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR COMPRESSORS, BY TYPE, 2017-2020 (USD MILLION) 159

TABLE 153 INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR COMPRESSORS, BY TYPE, 2021-2026 (USD MILLION) 159

TABLE 154 INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR COMPRESSORS, BY REGION, 2017-2020 (USD MILLION) 160

TABLE 155 INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR COMPRESSORS, BY REGION, 2021-2026 (USD MILLION) 160

TABLE 156 INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR COMPRESSORS, BY APPLICATION, 2017-2020 (USD MILLION) 161

TABLE 157 INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR COMPRESSORS, BY APPLICATION, 2021-2026 (USD MILLION) 161

12.4.1 RECIPROCATING COMPRESSORS 161

12.4.1.1 Advantages such as low cost and high efficiency of reciprocating compressors to accelerate market growth 161

TABLE 158 INDUSTRIAL REFRIGERATION RECIPROCATING COMPRESSOR MARKET, BY TYPE, 2017-2020 (USD MILLION) 162

TABLE 159 INDUSTRIAL REFRIGERATION RECIPROCATING COMPRESSOR MARKET, BY TYPE, 2021-2026 (USD MILLION) 162

12.4.1.2 Semi-hermetic type 163

12.4.1.3 Hermetic type 163

12.4.1.4 Open type 163

12.4.2 SCREW COMPRESSORS 163

12.4.2.1 Characteristics such as higher capacity output, larger compression ratios, and smoother control to deliver energy savings to propel growth of screw compressors 163

12.4.2.2 Single-screw compressors 164

12.4.2.3 Twin-screw compressors 164

12.5 CONDENSERS 164

TABLE 160 INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR CONDENSERS, BY TYPE, 2017-2020 (USD MILLION) 165

TABLE 161 INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR CONDENSERS, BY TYPE, 2021-2026 (USD MILLION) 165

TABLE 162 INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR CONDENSERS, BY REGION, 2017-2020 (USD MILLION) 165

TABLE 163 INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR CONDENSERS, BY REGION, 2021-2026 (USD MILLION) 166

TABLE 164 INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR CONDENSERS, BY APPLICATION, 2017-2020 (USD MILLION) 166

TABLE 165 INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR CONDENSERS, BY APPLICATION, 2021-2026 (USD MILLION) 167

12.5.1 AIR-COOLED CONDENSERS 167

12.5.1.1 Air-cooled condensers offer easy installation and low/less water consumption 167

12.5.2 WATER-COOLED CONDENSERS 167

12.5.2.1 Benefits such as higher efficiency and smaller space requirement to propel market growth 167

12.5.3 EVAPORATIVE CONDENSERS 168

12.5.3.1 Evaporative condensers to continue to dominate industrial refrigeration condenser market during forecast period 168

12.6 EVAPORATORS 168

12.6.1 APAC TO GROW AT HIGHEST CAGR FOR EVAPORATORS DURING FORECAST PERIOD 168

12.6.2 BY COOLING TYPE 169

12.6.2.1 Air-cooled evaporators 169

12.6.3 BY DESIGN TYPE 169

12.6.3.1 Bare tube evaporators 169

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

12.6.3.2	Plate type evaporators	169
12.6.3.3	Finned evaporators	169
12.6.3.4	Shell and tube-type evaporators	169
TABLE 166	INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR EVAPORATORS, BY REGION, 2017-2020 (USD MILLION)	170
TABLE 167	INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR EVAPORATORS, BY REGION, 2021-2026 (USD MILLION)	170
TABLE 168	INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR EVAPORATORS, BY APPLICATION, 2017-2020 (USD MILLION)	171
TABLE 169	INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR EVAPORATORS, BY APPLICATION, 2021-2026 (USD MILLION)	171
12.7	CONTROLS	172
12.7.1	CONTROL SYSTEMS HELP REMOTELY MONITOR INDUSTRIAL REFRIGERATION SYSTEMS, THEREBY LOWERING OPERATING & MAINTENANCE COSTS	172
12.7.2	COMPRESSOR CONTROLS	172
12.7.3	CONDENSER CONTROLS	172
12.7.4	EVAPORATOR CONTROLS	172
TABLE 170	INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR CONTROLS, BY REGION, 2017-2020 (USD MILLION)	173
TABLE 171	INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR CONTROLS, BY REGION, 2021-2026 (USD MILLION)	173
TABLE 172	INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR CONTROLS, BY APPLICATION, 2017-2020 (USD MILLION)	174
TABLE 173	INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR CONTROLS, BY APPLICATION, 2021-2026 (USD MILLION)	174
12.8	VESSELS, PUMPS, VALVES, AND AUXILIARY EQUIPMENT	175
12.8.1	REFRIGERATED WAREHOUSE & FOOD PROCESSING INDUSTRY TO CREATE NEW MARKET OPPORTUNITIES FOR VESSELS, PUMPS, VALVES, AND AUXILIARY EQUIPMENT	175
TABLE 174	INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR VESSELS, PUMPS, VALVES, & AUXILIARY EQUIPMENT, BY REGION, 2017-2020 (USD MILLION)	175
TABLE 175	INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR VESSELS, PUMPS, VALVES, & AUXILIARY EQUIPMENT, BY REGION, 2021-2026 (USD MILLION)	176
TABLE 176	INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR VESSELS, PUMPS, VALVES, & AUXILIARY EQUIPMENT, BY APPLICATION, 2017-2020 (USD MILLION)	176
TABLE 177	INDUSTRIAL REFRIGERATION SYSTEM MARKET FOR VESSELS, PUMPS, VALVES, & AUXILIARY EQUIPMENT, BY APPLICATION, 2021-2026 (USD MILLION)	177
13	APPENDIX	178
13.1	INSIGHTS OF INDUSTRY EXPERTS	178
13.2	DISCUSSION GUIDE	178
13.3	KNOWLEDGESTORE: MARKETSandMARKETS' SUBSCRIPTION PORTAL	181
13.4	CUSTOMIZATION OPTIONS	183
13.5	RELATED REPORTS	183
13.6	AUTHOR DETAILS	184

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com

Automatic Tube Cleaning System Market by Type (Automatic Ball Tube Cleaning System, Automatic Brush Tube Cleaning System), Industry (Power Generation, Oil & Gas, Commercial Spaces, and Hospitality), Application and Region - Global Forecast to 2028

Market Report | 2023-01-26 | 177 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*

Country*

Date

2025-05-20

Signature

Scotts International. EU Vat number: PL 6772247784

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

www.scotts-international.com