

Global Heat Pump-Assisted Distillation Systems Supply, Demand and Key Producers, 2026-2032

<https://marketpublishers.com/r/G70800E1EF21EN.html>

Date: July 2026

Pages: 120

Price: US\$ 4,480.00 (Single User License)

ID: G70800E1EF21EN

Abstracts

The global Heat Pump-Assisted Distillation Systems market size is expected to reach \$ 240 million by 2032, rising at a market growth of 7.0% CAGR during the forecast period (2026-2032).

Industrial heat pump assisted distillation systems are integrated process systems designed to reduce energy consumption in industrial distillation operations. The research scope focuses on equipment and process packages that combine heat pump cycles, mechanical vapor recompression, thermal integration, overhead vapor recovery and reboiler heat reuse within distillation units. The main product forms include mechanical vapor recompression distillation systems, heat pump assisted distillation systems, internally heat integrated distillation systems, closed loop heat pump distillation systems, energy saving retrofit systems for distillation columns, and related compressors, heat exchangers, reboilers, condensers, control cabinets and process design packages. The core process principle is to recover low temperature vapor or condensation heat from the top of a distillation column, increase its temperature and pressure through compression or heat pump circulation, and reuse it as a heating source for the column bottom. Key specifications include processing capacity, column top pressure, temperature lift, compression ratio, reboiler duty, steam saving rate, coefficient of performance, continuous operating hours and control accuracy. These systems are mainly used in chemical solvent recovery, ethanol distillation, pharmaceutical solvent recovery, food grade alcohol separation, fine chemical separation and low carbon process retrofits. In 2025, global shipments of industrial heat pump assisted distillation systems were about 65 sets, with an industry average price of about USD 2.20 million per set.

Industrial heat pump assisted distillation systems sit in a specialized part of the

industrial energy efficiency value chain. The upstream segment covers high temperature compressors, vapor compressors, heat exchangers, column internals, valves, instruments, electrical control cabinets, process simulation tools and corrosion resistant materials. The midstream segment includes process design, system engineering, core equipment manufacturing, modular integration and commissioning. The downstream users are mainly chemical producers, pharmaceutical manufacturers, ethanol plants, food alcohol processors, solvent recovery operators and fine chemical companies. The product is not a conventional heat pump or a standalone distillation column, but a system level solution that recovers and reuses heat within energy intensive separation processes.

The competitive structure is shaped by a small number of international process system providers, core compressor manufacturers and regional MVR system suppliers. A strong supplier must combine process calculation, compressor selection, heat exchanger design, column retrofit capability and automated control integration. Manufacturing capability alone is not enough, because every distillation process has different feed composition, pressure, temperature, corrosion risk and operating stability requirements. As a result, the market remains project based and customized, with competition centered on engineering experience, operating references, energy saving guarantees and the ability to adapt the system to different materials and plant conditions.

Policy and investment trends are favorable for this market. Industrial energy saving, carbon reduction, process electrification, chemical park efficiency upgrades and steam system retrofits in pharmaceutical and food industries are gradually shifting demand from capacity expansion to energy efficiency improvement. Growth is expected to be steady rather than explosive, supported by the maturity of high temperature heat pumps, vapor compression equipment, digital controls and modular process packages. New installations can adopt heat integration more easily, while retrofits depend on shutdown windows, existing column conditions and payback economics. Overall, this is a specialized energy saving system market with high project value, strong technical barriers and room for further penetration.

This report studies the global Heat Pump-Assisted Distillation Systems production, demand, key manufacturers, and key regions.

This report is a detailed and comprehensive analysis of the world market for Heat Pump-Assisted Distillation Systems and provides market size (US\$ million) and Year-over-Year (YoY) Growth, considering 2025 as the base year. This report explores demand

trends and competition, as well as details the characteristics of Heat Pump-Assisted Distillation Systems that contribute to its increasing demand across many markets.

Highlights and key features of the study

Global Heat Pump-Assisted Distillation Systems total production and demand, 2021-2032, (Unit)

Global Heat Pump-Assisted Distillation Systems total production value, 2021-2032, (USD Million)

Global Heat Pump-Assisted Distillation Systems production by region & country, production, value, CAGR, 2021-2032, (USD Million) & (Unit), (based on production site)

Global Heat Pump-Assisted Distillation Systems consumption by region & country, CAGR, 2021-2032 & (Unit)

U.S. VS China: Heat Pump-Assisted Distillation Systems domestic production, consumption, key domestic manufacturers and share

Global Heat Pump-Assisted Distillation Systems production by manufacturer, production, price, value and market share 2021-2026, (USD Million) & (Unit)

Global Heat Pump-Assisted Distillation Systems production by Type, production, value, CAGR, 2021-2032, (USD Million) & (Unit)

Global Heat Pump-Assisted Distillation Systems production by Application, production, value, CAGR, 2021-2032, (USD Million) & (Unit)

This report profiles key players in the global Heat Pump-Assisted Distillation Systems market based on the following parameters - company overview, production, value, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include GEA Group Aktiengesellschaft, Sulzer Ltd, Toyo Engineering Corporation, Zhejiang Yaguang Technology Co., Ltd., Piller Blowers & Compressors GmbH, Atlas Copco AB, Shanghai Hanbell Precise Machinery Co., Ltd., EPCON Evaporation Technology AS, Hangzhou Enco Machinery Co., Ltd., Suzhou JoyFa Environmental Technology Co., Ltd., etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Stakeholders would have ease in decision-making through various strategy matrices used in analyzing the World Heat Pump-Assisted Distillation Systems market

Detailed Segmentation:

Each section contains quantitative market data including market by value (US\$

Millions), volume (production, consumption) & (Unit) and average price (K US\$/Unit) by manufacturer, by Type, and by Application. Data is given for the years 2021-2032 by year with 2025 as the base year, 2026 as the estimate year, and 2027-2032 as the forecast year.

Global Heat Pump-Assisted Distillation Systems Market, By Region:

United States

China

Europe

Japan

South Korea

ASEAN

India

Rest of World

Global Heat Pump-Assisted Distillation Systems Market, Segmentation by Type:

Mechanical Vapor Recompression (MVR) Distillation

Heat Integrated Distillation Column (HIDiC)

Closed-loop Heat Pump Distillation

Multi-effect + Heat Pump Hybrid

Others

Global Heat Pump-Assisted Distillation Systems Market, Segmentation by Temperature:

Low Temperature Lift (
Medium Temperature Lift (20-40°C)

High Temperature Lift (> 40°C)

Global Heat Pump-Assisted Distillation Systems Market, Segmentation by Processing Capacity:

Small Scale Systems

Medium Scale Systems

Large Scale Systems

Others

Global Heat Pump-Assisted Distillation Systems Market, Segmentation by Application:

Chemical Industry

Pharmaceutical Industry

Biofuel and Ethanol Industry

Food and Beverage Industry

Environmental and Resource Recovery Industry

Others

Companies Profiled:

GEA Group Aktiengesellschaft

Sulzer Ltd

Toyo Engineering Corporation

Zhejiang Yaguang Technology Co., Ltd.

Piller Blowers & Compressors GmbH

Atlas Copco AB

Shanghai Hanbell Precise Machinery Co., Ltd.

EPCON Evaporation Technology AS

Hangzhou Enco Machinery Co., Ltd.

Suzhou JoyFa Environmental Technology Co., Ltd.

Shandong Bozhong Vacuum Technology Co., Ltd.

Key Questions Answered:

1. How big is the global Heat Pump-Assisted Distillation Systems market?
2. What is the demand of the global Heat Pump-Assisted Distillation Systems market?
3. What is the year over year growth of the global Heat Pump-Assisted Distillation Systems market?
4. What is the production and production value of the global Heat Pump-Assisted Distillation Systems market?
5. Who are the key producers in the global Heat Pump-Assisted Distillation Systems market?
6. What are the growth factors driving the market demand?

Contents

1 SUPPLY SUMMARY

1.1 Heat Pump-Assisted Distillation Systems Introduction

1.2 World Heat Pump-Assisted Distillation Systems Supply & Forecast

1.2.1 World Heat Pump-Assisted Distillation Systems Production Value (2021 & 2025 & 2032)

1.2.2 World Heat Pump-Assisted Distillation Systems Production (2021-2032)

1.2.3 World Heat Pump-Assisted Distillation Systems Pricing Trends (2021-2032)

1.3 World Heat Pump-Assisted Distillation Systems Production by Region (Based on Production Site)

1.3.1 World Heat Pump-Assisted Distillation Systems Production Value by Region (2021-2032)

1.3.2 World Heat Pump-Assisted Distillation Systems Production by Region (2021-2032)

1.3.3 World Heat Pump-Assisted Distillation Systems Average Price by Region (2021-2032)

1.3.4 North America Heat Pump-Assisted Distillation Systems Production (2021-2032)

1.3.5 Europe Heat Pump-Assisted Distillation Systems Production (2021-2032)

1.3.6 China Heat Pump-Assisted Distillation Systems Production (2021-2032)

1.3.7 Japan Heat Pump-Assisted Distillation Systems Production (2021-2032)

1.4 Market Drivers, Restraints and Trends

1.4.1 Heat Pump-Assisted Distillation Systems Market Drivers

1.4.2 Factors Affecting Demand

1.4.3 Heat Pump-Assisted Distillation Systems Major Market Trends

2 DEMAND SUMMARY

2.1 World Heat Pump-Assisted Distillation Systems Demand (2021-2032)

2.2 World Heat Pump-Assisted Distillation Systems Consumption by Region

2.2.1 World Heat Pump-Assisted Distillation Systems Consumption by Region (2021-2026)

2.2.2 World Heat Pump-Assisted Distillation Systems Consumption Forecast by Region (2027-2032)

2.3 United States Heat Pump-Assisted Distillation Systems Consumption (2021-2032)

2.4 China Heat Pump-Assisted Distillation Systems Consumption (2021-2032)

2.5 Europe Heat Pump-Assisted Distillation Systems Consumption (2021-2032)

2.6 Japan Heat Pump-Assisted Distillation Systems Consumption (2021-2032)

2.7 South Korea Heat Pump-Assisted Distillation Systems Consumption (2021-2032)

2.8 ASEAN Heat Pump-Assisted Distillation Systems Consumption (2021-2032)

2.9 India Heat Pump-Assisted Distillation Systems Consumption (2021-2032)

3 WORLD MANUFACTURERS COMPETITIVE ANALYSIS

3.1 World Heat Pump-Assisted Distillation Systems Production Value by Manufacturer (2021-2026)

3.2 World Heat Pump-Assisted Distillation Systems Production by Manufacturer (2021-2026)

3.3 World Heat Pump-Assisted Distillation Systems Average Price by Manufacturer (2021-2026)

3.4 Heat Pump-Assisted Distillation Systems Company Evaluation Quadrant

3.5 Industry Rank and Concentration Rate (CR)

3.5.1 Global Heat Pump-Assisted Distillation Systems Industry Rank of Major Manufacturers

3.5.2 Global Concentration Ratios (CR4) for Heat Pump-Assisted Distillation Systems in 2025

3.5.3 Global Concentration Ratios (CR8) for Heat Pump-Assisted Distillation Systems in 2025

3.6 Heat Pump-Assisted Distillation Systems Market: Overall Company Footprint Analysis

3.6.1 Heat Pump-Assisted Distillation Systems Market: Region Footprint

3.6.2 Heat Pump-Assisted Distillation Systems Market: Company Product Type Footprint

3.6.3 Heat Pump-Assisted Distillation Systems Market: Company Product Application Footprint

3.7 Competitive Environment

3.7.1 Historical Structure of the Industry

3.7.2 Barriers of Market Entry

3.7.3 Factors of Competition

3.8 New Entrant and Capacity Expansion Plans

3.9 Mergers, Acquisition, Agreements, and Collaborations

4 UNITED STATES VS CHINA VS REST OF THE WORLD

4.1 United States VS China: Heat Pump-Assisted Distillation Systems Production Value Comparison

4.1.1 United States VS China: Heat Pump-Assisted Distillation Systems Production

Value Comparison (2021 & 2025 & 2032)

4.1.2 United States VS China: Heat Pump-Assisted Distillation Systems Production

Value Market Share Comparison (2021 & 2025 & 2032)

4.2 United States VS China: Heat Pump-Assisted Distillation Systems Production Comparison

4.2.1 United States VS China: Heat Pump-Assisted Distillation Systems Production Comparison (2021 & 2025 & 2032)

4.2.2 United States VS China: Heat Pump-Assisted Distillation Systems Production Market Share Comparison (2021 & 2025 & 2032)

4.3 United States VS China: Heat Pump-Assisted Distillation Systems Consumption Comparison

4.3.1 United States VS China: Heat Pump-Assisted Distillation Systems Consumption Comparison (2021 & 2025 & 2032)

4.3.2 United States VS China: Heat Pump-Assisted Distillation Systems Consumption Market Share Comparison (2021 & 2025 & 2032)

4.4 United States Based Heat Pump-Assisted Distillation Systems Manufacturers and Market Share, 2021-2026

4.4.1 United States Based Heat Pump-Assisted Distillation Systems Manufacturers, Headquarters and Production Site (States, Country)

4.4.2 United States Based Manufacturers Heat Pump-Assisted Distillation Systems Production Value (2021-2026)

4.4.3 United States Based Manufacturers Heat Pump-Assisted Distillation Systems Production (2021-2026)

4.5 China Based Heat Pump-Assisted Distillation Systems Manufacturers and Market Share

4.5.1 China Based Heat Pump-Assisted Distillation Systems Manufacturers, Headquarters and Production Site (Province, Country)

4.5.2 China Based Manufacturers Heat Pump-Assisted Distillation Systems Production Value (2021-2026)

4.5.3 China Based Manufacturers Heat Pump-Assisted Distillation Systems Production (2021-2026)

4.6 Rest of World Based Heat Pump-Assisted Distillation Systems Manufacturers and Market Share, 2021-2026

4.6.1 Rest of World Based Heat Pump-Assisted Distillation Systems Manufacturers, Headquarters and Production Site (State, Country)

4.6.2 Rest of World Based Manufacturers Heat Pump-Assisted Distillation Systems Production Value (2021-2026)

4.6.3 Rest of World Based Manufacturers Heat Pump-Assisted Distillation Systems Production (2021-2026)

5 MARKET ANALYSIS BY TYPE

5.1 World Heat Pump-Assisted Distillation Systems Market Size Overview by Type:
2021 VS 2025 VS 2032

5.2 Segment Introduction by Type

5.2.1 Mechanical Vapor Recompression (MVR) Distillation

5.2.2 Heat Integrated Distillation Column (HIDiC)

5.2.3 Closed-loop Heat Pump Distillation

5.2.4 Multi-effect + Heat Pump Hybrid

5.2.5 Others

5.3 Market Segment by Type

5.3.1 World Heat Pump-Assisted Distillation Systems Production by Type (2021-2032)

5.3.2 World Heat Pump-Assisted Distillation Systems Production Value by Type
(2021-2032)

5.3.3 World Heat Pump-Assisted Distillation Systems Average Price by Type
(2021-2032)

6 MARKET ANALYSIS BY TEMPERATURE

6.1 World Heat Pump-Assisted Distillation Systems Market Size Overview by
Temperature: 2021 VS 2025 VS 2032

6.2 Segment Introduction by Temperature

6.2.1 Low Temperature Lift (6.2.2 Medium Temperature Lift (20-40°C)

6.2.3 High Temperature Lift (> 40°C)

6.3 Market Segment by Temperature

6.3.1 World Heat Pump-Assisted Distillation Systems Production by Temperature
(2021-2032)

6.3.2 World Heat Pump-Assisted Distillation Systems Production Value by
Temperature (2021-2032)

6.3.3 World Heat Pump-Assisted Distillation Systems Average Price by Temperature
(2021-2032)

7 MARKET ANALYSIS BY PROCESSING CAPACITY

7.1 World Heat Pump-Assisted Distillation Systems Market Size Overview by
Processing Capacity: 2021 VS 2025 VS 2032

7.2 Segment Introduction by Processing Capacity

7.2.1 Small Scale Systems

7.2.2 Medium Scale Systems

7.2.3 Large Scale Systems

7.2.4 Others

7.3 Market Segment by Processing Capacity

7.3.1 World Heat Pump-Assisted Distillation Systems Production by Processing Capacity (2021-2032)

7.3.2 World Heat Pump-Assisted Distillation Systems Production Value by Processing Capacity (2021-2032)

7.3.3 World Heat Pump-Assisted Distillation Systems Average Price by Processing Capacity (2021-2032)

8 MARKET ANALYSIS BY APPLICATION

8.1 World Heat Pump-Assisted Distillation Systems Market Size Overview by Application: 2021 VS 2025 VS 2032

8.2 Segment Introduction by Application

8.2.1 Chemical Industry

8.2.2 Pharmaceutical Industry

8.2.3 Biofuel and Ethanol Industry

8.2.4 Food and Beverage Industry

8.2.5 Environmental and Resource Recovery Industry

8.2.6 Others

8.3 Market Segment by Application

8.3.1 World Heat Pump-Assisted Distillation Systems Production by Application (2021-2032)

8.3.2 World Heat Pump-Assisted Distillation Systems Production Value by Application (2021-2032)

8.3.3 World Heat Pump-Assisted Distillation Systems Average Price by Application (2021-2032)

9 COMPANY PROFILES

9.1 GEA Group Aktiengesellschaft

9.1.1 GEA Group Aktiengesellschaft Details

9.1.2 GEA Group Aktiengesellschaft Major Business

9.1.3 GEA Group Aktiengesellschaft Heat Pump-Assisted Distillation Systems Product and Services

9.1.4 GEA Group Aktiengesellschaft Heat Pump-Assisted Distillation Systems Production, Price, Value, Gross Margin and Market Share (2021-2026)

- 9.1.5 GEA Group Aktiengesellschaft Recent Developments/Updates
- 9.1.6 GEA Group Aktiengesellschaft Competitive Strengths & Weaknesses
- 9.2 Sulzer Ltd
 - 9.2.1 Sulzer Ltd Details
 - 9.2.2 Sulzer Ltd Major Business
 - 9.2.3 Sulzer Ltd Heat Pump-Assisted Distillation Systems Product and Services
 - 9.2.4 Sulzer Ltd Heat Pump-Assisted Distillation Systems Production, Price, Value, Gross Margin and Market Share (2021-2026)
 - 9.2.5 Sulzer Ltd Recent Developments/Updates
 - 9.2.6 Sulzer Ltd Competitive Strengths & Weaknesses
- 9.3 Toyo Engineering Corporation
 - 9.3.1 Toyo Engineering Corporation Details
 - 9.3.2 Toyo Engineering Corporation Major Business
 - 9.3.3 Toyo Engineering Corporation Heat Pump-Assisted Distillation Systems Product and Services
 - 9.3.4 Toyo Engineering Corporation Heat Pump-Assisted Distillation Systems Production, Price, Value, Gross Margin and Market Share (2021-2026)
 - 9.3.5 Toyo Engineering Corporation Recent Developments/Updates
 - 9.3.6 Toyo Engineering Corporation Competitive Strengths & Weaknesses
- 9.4 Zhejiang Yaguang Technology Co., Ltd.
 - 9.4.1 Zhejiang Yaguang Technology Co., Ltd. Details
 - 9.4.2 Zhejiang Yaguang Technology Co., Ltd. Major Business
 - 9.4.3 Zhejiang Yaguang Technology Co., Ltd. Heat Pump-Assisted Distillation Systems Product and Services
 - 9.4.4 Zhejiang Yaguang Technology Co., Ltd. Heat Pump-Assisted Distillation Systems Production, Price, Value, Gross Margin and Market Share (2021-2026)
 - 9.4.5 Zhejiang Yaguang Technology Co., Ltd. Recent Developments/Updates
 - 9.4.6 Zhejiang Yaguang Technology Co., Ltd. Competitive Strengths & Weaknesses
- 9.5 Piller Blowers & Compressors GmbH
 - 9.5.1 Piller Blowers & Compressors GmbH Details
 - 9.5.2 Piller Blowers & Compressors GmbH Major Business
 - 9.5.3 Piller Blowers & Compressors GmbH Heat Pump-Assisted Distillation Systems Product and Services
 - 9.5.4 Piller Blowers & Compressors GmbH Heat Pump-Assisted Distillation Systems Production, Price, Value, Gross Margin and Market Share (2021-2026)
 - 9.5.5 Piller Blowers & Compressors GmbH Recent Developments/Updates
 - 9.5.6 Piller Blowers & Compressors GmbH Competitive Strengths & Weaknesses
- 9.6 Atlas Copco AB
 - 9.6.1 Atlas Copco AB Details

- 9.6.2 Atlas Copco AB Major Business
- 9.6.3 Atlas Copco AB Heat Pump-Assisted Distillation Systems Product and Services
- 9.6.4 Atlas Copco AB Heat Pump-Assisted Distillation Systems Production, Price, Value, Gross Margin and Market Share (2021-2026)
- 9.6.5 Atlas Copco AB Recent Developments/Updates
- 9.6.6 Atlas Copco AB Competitive Strengths & Weaknesses
- 9.7 Shanghai Hanbell Precise Machinery Co., Ltd.
 - 9.7.1 Shanghai Hanbell Precise Machinery Co., Ltd. Details
 - 9.7.2 Shanghai Hanbell Precise Machinery Co., Ltd. Major Business
 - 9.7.3 Shanghai Hanbell Precise Machinery Co., Ltd. Heat Pump-Assisted Distillation Systems Product and Services
 - 9.7.4 Shanghai Hanbell Precise Machinery Co., Ltd. Heat Pump-Assisted Distillation Systems Production, Price, Value, Gross Margin and Market Share (2021-2026)
 - 9.7.5 Shanghai Hanbell Precise Machinery Co., Ltd. Recent Developments/Updates
 - 9.7.6 Shanghai Hanbell Precise Machinery Co., Ltd. Competitive Strengths & Weaknesses
- 9.8 EPCON Evaporation Technology AS
 - 9.8.1 EPCON Evaporation Technology AS Details
 - 9.8.2 EPCON Evaporation Technology AS Major Business
 - 9.8.3 EPCON Evaporation Technology AS Heat Pump-Assisted Distillation Systems Product and Services
 - 9.8.4 EPCON Evaporation Technology AS Heat Pump-Assisted Distillation Systems Production, Price, Value, Gross Margin and Market Share (2021-2026)
 - 9.8.5 EPCON Evaporation Technology AS Recent Developments/Updates
 - 9.8.6 EPCON Evaporation Technology AS Competitive Strengths & Weaknesses
- 9.9 Hangzhou Enco Machinery Co., Ltd.
 - 9.9.1 Hangzhou Enco Machinery Co., Ltd. Details
 - 9.9.2 Hangzhou Enco Machinery Co., Ltd. Major Business
 - 9.9.3 Hangzhou Enco Machinery Co., Ltd. Heat Pump-Assisted Distillation Systems Product and Services
 - 9.9.4 Hangzhou Enco Machinery Co., Ltd. Heat Pump-Assisted Distillation Systems Production, Price, Value, Gross Margin and Market Share (2021-2026)
 - 9.9.5 Hangzhou Enco Machinery Co., Ltd. Recent Developments/Updates
 - 9.9.6 Hangzhou Enco Machinery Co., Ltd. Competitive Strengths & Weaknesses
- 9.10 Suzhou JoyFa Environmental Technology Co., Ltd.
 - 9.10.1 Suzhou JoyFa Environmental Technology Co., Ltd. Details
 - 9.10.2 Suzhou JoyFa Environmental Technology Co., Ltd. Major Business
 - 9.10.3 Suzhou JoyFa Environmental Technology Co., Ltd. Heat Pump-Assisted Distillation Systems Product and Services

9.10.4 Suzhou JoyFa Environmental Technology Co., Ltd. Heat Pump-Assisted Distillation Systems Production, Price, Value, Gross Margin and Market Share (2021-2026)

9.10.5 Suzhou JoyFa Environmental Technology Co., Ltd. Recent Developments/Updates

9.10.6 Suzhou JoyFa Environmental Technology Co., Ltd. Competitive Strengths & Weaknesses

9.11 Shandong Bozhong Vacuum Technology Co., Ltd.

9.11.1 Shandong Bozhong Vacuum Technology Co., Ltd. Details

9.11.2 Shandong Bozhong Vacuum Technology Co., Ltd. Major Business

9.11.3 Shandong Bozhong Vacuum Technology Co., Ltd. Heat Pump-Assisted Distillation Systems Product and Services

9.11.4 Shandong Bozhong Vacuum Technology Co., Ltd. Heat Pump-Assisted Distillation Systems Production, Price, Value, Gross Margin and Market Share (2021-2026)

9.11.5 Shandong Bozhong Vacuum Technology Co., Ltd. Recent Developments/Updates

9.11.6 Shandong Bozhong Vacuum Technology Co., Ltd. Competitive Strengths & Weaknesses

10 INDUSTRY CHAIN ANALYSIS

10.1 Heat Pump-Assisted Distillation Systems Industry Chain

10.2 Heat Pump-Assisted Distillation Systems Upstream Analysis

10.2.1 Heat Pump-Assisted Distillation Systems Core Raw Materials

10.2.2 Main Manufacturers of Heat Pump-Assisted Distillation Systems Core Raw Materials

10.3 Midstream Analysis

10.4 Downstream Analysis

10.5 Heat Pump-Assisted Distillation Systems Production Mode

10.6 Heat Pump-Assisted Distillation Systems Procurement Model

10.7 Heat Pump-Assisted Distillation Systems Industry Sales Model and Sales Channels

10.7.1 Heat Pump-Assisted Distillation Systems Sales Model

10.7.2 Heat Pump-Assisted Distillation Systems Typical Distributors

11 RESEARCH FINDINGS AND CONCLUSION

12 APPENDIX

12.1 Methodology

12.2 Research Process and Data Source

12.3 Disclaimer

List Of Tables

LIST OF TABLES

Table 1. World Heat Pump-Assisted Distillation Systems Production Value by Region (2021, 2025 and 2032) & (USD Million)

Table 2. World Heat Pump-Assisted Distillation Systems Production Value by Region (2021-2026) & (USD Million)

Table 3. World Heat Pump-Assisted Distillation Systems Production Value by Region (2027-2032) & (USD Million)

Table 4. World Heat Pump-Assisted Distillation Systems Production Value Market Share by Region (2021-2026)

Table 5. World Heat Pump-Assisted Distillation Systems Production Value Market Share by Region (2027-2032)

Table 6. World Heat Pump-Assisted Distillation Systems Production by Region (2021-2026) & (Unit)

Table 7. World Heat Pump-Assisted Distillation Systems Production by Region (2027-2032) & (Unit)

Table 8. World Heat Pump-Assisted Distillation Systems Production Market Share by Region (2021-2026)

Table 9. World Heat Pump-Assisted Distillation Systems Production Market Share by Region (2027-2032)

Table 10. World Heat Pump-Assisted Distillation Systems Average Price by Region (2021-2026) & (K US\$/Unit)

Table 11. World Heat Pump-Assisted Distillation Systems Average Price by Region (2027-2032) & (K US\$/Unit)

Table 12. Heat Pump-Assisted Distillation Systems Major Market Trends

Table 13. World Heat Pump-Assisted Distillation Systems Consumption Growth Rate Forecast by Region (2021 & 2025 & 2032) & (Unit)

Table 14. World Heat Pump-Assisted Distillation Systems Consumption by Region (2021-2026) & (Unit)

Table 15. World Heat Pump-Assisted Distillation Systems Consumption Forecast by Region (2027-2032) & (Unit)

Table 16. World Heat Pump-Assisted Distillation Systems Production Value by Manufacturer (2021-2026) & (USD Million)

Table 17. Production Value Market Share of Key Heat Pump-Assisted Distillation Systems Producers in 2025

Table 18. World Heat Pump-Assisted Distillation Systems Production by Manufacturer (2021-2026) & (Unit)

Table 19. Production Market Share of Key Heat Pump-Assisted Distillation Systems Producers in 2025

Table 20. World Heat Pump-Assisted Distillation Systems Average Price by Manufacturer (2021-2026) & (K US\$/Unit)

Table 21. Global Heat Pump-Assisted Distillation Systems Company Evaluation Quadrant

Table 22. World Heat Pump-Assisted Distillation Systems Industry Rank of Major Manufacturers, Based on Production Value in 2025

Table 23. Head Office and Heat Pump-Assisted Distillation Systems Production Site of Key Manufacturer

Table 24. Heat Pump-Assisted Distillation Systems Market: Company Product Type Footprint

Table 25. Heat Pump-Assisted Distillation Systems Market: Company Product Application Footprint

Table 26. Heat Pump-Assisted Distillation Systems Competitive Factors

Table 27. Heat Pump-Assisted Distillation Systems New Entrant and Capacity Expansion Plans

Table 28. Heat Pump-Assisted Distillation Systems Mergers & Acquisitions Activity

Table 29. United States VS China Heat Pump-Assisted Distillation Systems Production Value Comparison, (2021 & 2025 & 2032) & (USD Million)

Table 30. United States VS China Heat Pump-Assisted Distillation Systems Production Comparison, (2021 & 2025 & 2032) & (Unit)

Table 31. United States VS China Heat Pump-Assisted Distillation Systems Consumption Comparison, (2021 & 2025 & 2032) & (Unit)

Table 32. United States Based Heat Pump-Assisted Distillation Systems Manufacturers, Headquarters and Production Site (States, Country)

Table 33. United States Based Manufacturers Heat Pump-Assisted Distillation Systems Production Value, (2021-2026) & (USD Million)

Table 34. United States Based Manufacturers Heat Pump-Assisted Distillation Systems Production Value Market Share (2021-2026)

Table 35. United States Based Manufacturers Heat Pump-Assisted Distillation Systems Production (2021-2026) & (Unit)

Table 36. United States Based Manufacturers Heat Pump-Assisted Distillation Systems Production Market Share (2021-2026)

Table 37. China Based Heat Pump-Assisted Distillation Systems Manufacturers, Headquarters and Production Site (Province, Country)

Table 38. China Based Manufacturers Heat Pump-Assisted Distillation Systems Production Value, (2021-2026) & (USD Million)

Table 39. China Based Manufacturers Heat Pump-Assisted Distillation Systems

Production Value Market Share (2021-2026)

Table 40. China Based Manufacturers Heat Pump-Assisted Distillation Systems Production, (2021-2026) & (Unit)

Table 41. China Based Manufacturers Heat Pump-Assisted Distillation Systems Production Market Share (2021-2026)

Table 42. Rest of World Based Heat Pump-Assisted Distillation Systems Manufacturers, Headquarters and Production Site (State, Country)

Table 43. Rest of World Based Manufacturers Heat Pump-Assisted Distillation Systems Production Value, (2021-2026) & (USD Million)

Table 44. Rest of World Based Manufacturers Heat Pump-Assisted Distillation Systems Production Value Market Share (2021-2026)

Table 45. Rest of World Based Manufacturers Heat Pump-Assisted Distillation Systems Production, (2021-2026) & (Unit)

Table 46. Rest of World Based Manufacturers Heat Pump-Assisted Distillation Systems Production Market Share (2021-2026)

Table 47. World Heat Pump-Assisted Distillation Systems Production Value by Type, (USD Million), 2021 & 2025 & 2032

Table 48. World Heat Pump-Assisted Distillation Systems Production by Type (2021-2026) & (Unit)

Table 49. World Heat Pump-Assisted Distillation Systems Production by Type (2027-2032) & (Unit)

Table 50. World Heat Pump-Assisted Distillation Systems Production Value by Type (2021-2026) & (USD Million)

Table 51. World Heat Pump-Assisted Distillation Systems Production Value by Type (2027-2032) & (USD Million)

Table 52. World Heat Pump-Assisted Distillation Systems Average Price by Type (2021-2026) & (K US\$/Unit)

Table 53. World Heat Pump-Assisted Distillation Systems Average Price by Type (2027-2032) & (K US\$/Unit)

Table 54. World Heat Pump-Assisted Distillation Systems Production Value by Temperature, (USD Million), 2021 & 2025 & 2032

Table 55. World Heat Pump-Assisted Distillation Systems Production by Temperature (2021-2026) & (Unit)

Table 56. World Heat Pump-Assisted Distillation Systems Production by Temperature (2027-2032) & (Unit)

Table 57. World Heat Pump-Assisted Distillation Systems Production Value by Temperature (2021-2026) & (USD Million)

Table 58. World Heat Pump-Assisted Distillation Systems Production Value by Temperature (2027-2032) & (USD Million)

Table 59. World Heat Pump-Assisted Distillation Systems Average Price by Temperature (2021-2026) & (K US\$/Unit)

Table 60. World Heat Pump-Assisted Distillation Systems Average Price by Temperature (2027-2032) & (K US\$/Unit)

Table 61. World Heat Pump-Assisted Distillation Systems Production Value by Processing Capacity, (USD Million), 2021 & 2025 & 2032

Table 62. World Heat Pump-Assisted Distillation Systems Production by Processing Capacity (2021-2026) & (Unit)

Table 63. World Heat Pump-Assisted Distillation Systems Production by Processing Capacity (2027-2032) & (Unit)

Table 64. World Heat Pump-Assisted Distillation Systems Production Value by Processing Capacity (2021-2026) & (USD Million)

Table 65. World Heat Pump-Assisted Distillation Systems Production Value by Processing Capacity (2027-2032) & (USD Million)

Table 66. World Heat Pump-Assisted Distillation Systems Average Price by Processing Capacity (2021-2026) & (K US\$/Unit)

Table 67. World Heat Pump-Assisted Distillation Systems Average Price by Processing Capacity (2027-2032) & (K US\$/Unit)

Table 68. World Heat Pump-Assisted Distillation Systems Production Value by Application, (USD Million), 2021 & 2025 & 2032

Table 69. World Heat Pump-Assisted Distillation Systems Production by Application (2021-2026) & (Unit)

Table 70. World Heat Pump-Assisted Distillation Systems Production by Application (2027-2032) & (Unit)

Table 71. World Heat Pump-Assisted Distillation Systems Production Value by Application (2021-2026) & (USD Million)

Table 72. World Heat Pump-Assisted Distillation Systems Production Value by Application (2027-2032) & (USD Million)

Table 73. World Heat Pump-Assisted Distillation Systems Average Price by Application (2021-2026) & (K US\$/Unit)

Table 74. World Heat Pump-Assisted Distillation Systems Average Price by Application (2027-2032) & (K US\$/Unit)

Table 75. GEA Group Aktiengesellschaft Basic Information, Manufacturing Base and Competitors

Table 76. GEA Group Aktiengesellschaft Major Business

Table 77. GEA Group Aktiengesellschaft Heat Pump-Assisted Distillation Systems Product and Services

Table 78. GEA Group Aktiengesellschaft Heat Pump-Assisted Distillation Systems Production (Unit), Price (K US\$/Unit), Production Value (USD Million), Gross Margin

and Market Share (2021-2026)

Table 79. GEA Group Aktiengesellschaft Recent Developments/Updates

Table 80. GEA Group Aktiengesellschaft Competitive Strengths & Weaknesses

Table 81. Sulzer Ltd Basic Information, Manufacturing Base and Competitors

Table 82. Sulzer Ltd Major Business

Table 83. Sulzer Ltd Heat Pump-Assisted Distillation Systems Product and Services

Table 84. Sulzer Ltd Heat Pump-Assisted Distillation Systems Production (Unit), Price (K US\$/Unit), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 85. Sulzer Ltd Recent Developments/Updates

Table 86. Sulzer Ltd Competitive Strengths & Weaknesses

Table 87. Toyo Engineering Corporation Basic Information, Manufacturing Base and Competitors

Table 88. Toyo Engineering Corporation Major Business

Table 89. Toyo Engineering Corporation Heat Pump-Assisted Distillation Systems Product and Services

Table 90. Toyo Engineering Corporation Heat Pump-Assisted Distillation Systems Production (Unit), Price (K US\$/Unit), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 91. Toyo Engineering Corporation Recent Developments/Updates

Table 92. Toyo Engineering Corporation Competitive Strengths & Weaknesses

Table 93. Zhejiang Yaguang Technology Co., Ltd. Basic Information, Manufacturing Base and Competitors

Table 94. Zhejiang Yaguang Technology Co., Ltd. Major Business

Table 95. Zhejiang Yaguang Technology Co., Ltd. Heat Pump-Assisted Distillation Systems Product and Services

Table 96. Zhejiang Yaguang Technology Co., Ltd. Heat Pump-Assisted Distillation Systems Production (Unit), Price (K US\$/Unit), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 97. Zhejiang Yaguang Technology Co., Ltd. Recent Developments/Updates

Table 98. Zhejiang Yaguang Technology Co., Ltd. Competitive Strengths & Weaknesses

Table 99. Piller Blowers & Compressors GmbH Basic Information, Manufacturing Base and Competitors

Table 100. Piller Blowers & Compressors GmbH Major Business

Table 101. Piller Blowers & Compressors GmbH Heat Pump-Assisted Distillation Systems Product and Services

Table 102. Piller Blowers & Compressors GmbH Heat Pump-Assisted Distillation Systems Production (Unit), Price (K US\$/Unit), Production Value (USD Million), Gross

Margin and Market Share (2021-2026)

Table 103. Piller Blowers & Compressors GmbH Recent Developments/Updates

Table 104. Piller Blowers & Compressors GmbH Competitive Strengths & Weaknesses

Table 105. Atlas Copco AB Basic Information, Manufacturing Base and Competitors

Table 106. Atlas Copco AB Major Business

Table 107. Atlas Copco AB Heat Pump-Assisted Distillation Systems Product and Services

Table 108. Atlas Copco AB Heat Pump-Assisted Distillation Systems Production (Unit), Price (K US\$/Unit), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 109. Atlas Copco AB Recent Developments/Updates

Table 110. Atlas Copco AB Competitive Strengths & Weaknesses

Table 111. Shanghai Hanbell Precise Machinery Co., Ltd. Basic Information, Manufacturing Base and Competitors

Table 112. Shanghai Hanbell Precise Machinery Co., Ltd. Major Business

Table 113. Shanghai Hanbell Precise Machinery Co., Ltd. Heat Pump-Assisted Distillation Systems Product and Services

Table 114. Shanghai Hanbell Precise Machinery Co., Ltd. Heat Pump-Assisted Distillation Systems Production (Unit), Price (K US\$/Unit), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 115. Shanghai Hanbell Precise Machinery Co., Ltd. Recent Developments/Updates

Table 116. Shanghai Hanbell Precise Machinery Co., Ltd. Competitive Strengths & Weaknesses

Table 117. EPCON Evaporation Technology AS Basic Information, Manufacturing Base and Competitors

Table 118. EPCON Evaporation Technology AS Major Business

Table 119. EPCON Evaporation Technology AS Heat Pump-Assisted Distillation Systems Product and Services

Table 120. EPCON Evaporation Technology AS Heat Pump-Assisted Distillation Systems Production (Unit), Price (K US\$/Unit), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 121. EPCON Evaporation Technology AS Recent Developments/Updates

Table 122. EPCON Evaporation Technology AS Competitive Strengths & Weaknesses

Table 123. Hangzhou Enco Machinery Co., Ltd. Basic Information, Manufacturing Base and Competitors

Table 124. Hangzhou Enco Machinery Co., Ltd. Major Business

Table 125. Hangzhou Enco Machinery Co., Ltd. Heat Pump-Assisted Distillation Systems Product and Services

Table 126. Hangzhou Enco Machinery Co., Ltd. Heat Pump-Assisted Distillation Systems Production (Unit), Price (K US\$/Unit), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 127. Hangzhou Enco Machinery Co., Ltd. Recent Developments/Updates

Table 128. Hangzhou Enco Machinery Co., Ltd. Competitive Strengths & Weaknesses

Table 129. Suzhou JoyFa Environmental Technology Co., Ltd. Basic Information, Manufacturing Base and Competitors

Table 130. Suzhou JoyFa Environmental Technology Co., Ltd. Major Business

Table 131. Suzhou JoyFa Environmental Technology Co., Ltd. Heat Pump-Assisted Distillation Systems Product and Services

Table 132. Suzhou JoyFa Environmental Technology Co., Ltd. Heat Pump-Assisted Distillation Systems Production (Unit), Price (K US\$/Unit), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 133. Suzhou JoyFa Environmental Technology Co., Ltd. Recent Developments/Updates

Table 134. Suzhou JoyFa Environmental Technology Co., Ltd. Competitive Strengths & Weaknesses

Table 135. Shandong Bozhong Vacuum Technology Co., Ltd. Basic Information, Manufacturing Base and Competitors

Table 136. Shandong Bozhong Vacuum Technology Co., Ltd. Major Business

Table 137. Shandong Bozhong Vacuum Technology Co., Ltd. Heat Pump-Assisted Distillation Systems Product and Services

Table 138. Shandong Bozhong Vacuum Technology Co., Ltd. Heat Pump-Assisted Distillation Systems Production (Unit), Price (K US\$/Unit), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 139. Shandong Bozhong Vacuum Technology Co., Ltd. Recent Developments/Updates

Table 140. Shandong Bozhong Vacuum Technology Co., Ltd. Competitive Strengths & Weaknesses

Table 141. Global Key Players of Heat Pump-Assisted Distillation Systems Upstream (Raw Materials)

Table 142. Global Heat Pump-Assisted Distillation Systems Typical Customers

Table 143. Heat Pump-Assisted Distillation Systems Typical Distributors

List Of Figures

LIST OF FIGURES

Figure 1. Heat Pump-Assisted Distillation Systems Picture

Figure 2. World Heat Pump-Assisted Distillation Systems Production Value: 2021 & 2025 & 2032, (USD Million)

Figure 3. World Heat Pump-Assisted Distillation Systems Production Value and Forecast (2021-2032) & (USD Million)

Figure 4. World Heat Pump-Assisted Distillation Systems Production (2021-2032) & (Unit)

Figure 5. World Heat Pump-Assisted Distillation Systems Average Price (2021-2032) & (K US\$/Unit)

Figure 6. World Heat Pump-Assisted Distillation Systems Production Value Market Share by Region (2021-2032)

Figure 7. World Heat Pump-Assisted Distillation Systems Production Market Share by Region (2021-2032)

Figure 8. North America Heat Pump-Assisted Distillation Systems Production (2021-2032) & (Unit)

Figure 9. Europe Heat Pump-Assisted Distillation Systems Production (2021-2032) & (Unit)

Figure 10. China Heat Pump-Assisted Distillation Systems Production (2021-2032) & (Unit)

Figure 11. Japan Heat Pump-Assisted Distillation Systems Production (2021-2032) & (Unit)

Figure 12. Heat Pump-Assisted Distillation Systems Market Drivers

Figure 13. Factors Affecting Demand

Figure 14. World Heat Pump-Assisted Distillation Systems Consumption (2021-2032) & (Unit)

Figure 15. World Heat Pump-Assisted Distillation Systems Consumption Market Share by Region (2021-2032)

Figure 16. United States Heat Pump-Assisted Distillation Systems Consumption (2021-2032) & (Unit)

Figure 17. China Heat Pump-Assisted Distillation Systems Consumption (2021-2032) & (Unit)

Figure 18. Europe Heat Pump-Assisted Distillation Systems Consumption (2021-2032) & (Unit)

Figure 19. Japan Heat Pump-Assisted Distillation Systems Consumption (2021-2032) & (Unit)

Figure 20. South Korea Heat Pump-Assisted Distillation Systems Consumption (2021-2032) & (Unit)

Figure 21. ASEAN Heat Pump-Assisted Distillation Systems Consumption (2021-2032) & (Unit)

Figure 22. India Heat Pump-Assisted Distillation Systems Consumption (2021-2032) & (Unit)

Figure 23. Producer Shipments of Heat Pump-Assisted Distillation Systems by Manufacturer Revenue (\$MM) and Market Share (%): 2025

Figure 24. Global Four-firm Concentration Ratios (CR4) for Heat Pump-Assisted Distillation Systems Markets in 2025

Figure 25. Global Four-firm Concentration Ratios (CR8) for Heat Pump-Assisted Distillation Systems Markets in 2025

Figure 26. United States VS China: Heat Pump-Assisted Distillation Systems Production Value Market Share Comparison (2021 & 2025 & 2032)

Figure 27. United States VS China: Heat Pump-Assisted Distillation Systems Production Market Share Comparison (2021 & 2025 & 2032)

Figure 28. United States VS China: Heat Pump-Assisted Distillation Systems Consumption Market Share Comparison (2021 & 2025 & 2032)

Figure 29. United States Based Manufacturers Heat Pump-Assisted Distillation Systems Production Market Share 2025

Figure 30. China Based Manufacturers Heat Pump-Assisted Distillation Systems Production Market Share 2025

Figure 31. Rest of World Based Manufacturers Heat Pump-Assisted Distillation Systems Production Market Share 2025

Figure 32. World Heat Pump-Assisted Distillation Systems Production Value by Type, (USD Million), 2021 & 2025 & 2032

Figure 33. World Heat Pump-Assisted Distillation Systems Production Value Market Share by Type in 2025

Figure 34. Mechanical Vapor Recompression (MVR) Distillation

Figure 35. Heat Integrated Distillation Column (HIDiC)

Figure 36. Closed-loop Heat Pump Distillation

Figure 37. Multi-effect + Heat Pump Hybrid

Figure 38. Others

Figure 39. World Heat Pump-Assisted Distillation Systems Production Market Share by Type (2021-2032)

Figure 40. World Heat Pump-Assisted Distillation Systems Production Value Market Share by Type (2021-2032)

Figure 41. World Heat Pump-Assisted Distillation Systems Average Price by Type (2021-2032) & (K US\$/Unit)

Figure 42. World Heat Pump-Assisted Distillation Systems Production Value by Temperature, (USD Million), 2021 & 2025 & 2032

Figure 43. World Heat Pump-Assisted Distillation Systems Production Value Market Share by Temperature in 2025

Figure 44. Low Temperature Lift (Figure 45. Medium Temperature Lift (20-40°C)

Figure 46. High Temperature Lift (> 40°C)

Figure 47. World Heat Pump-Assisted Distillation Systems Production Market Share by Temperature (2021-2032)

Figure 48. World Heat Pump-Assisted Distillation Systems Production Value Market Share by Temperature (2021-2032)

Figure 49. World Heat Pump-Assisted Distillation Systems Average Price by Temperature (2021-2032) & (K US\$/Unit)

Figure 50. World Heat Pump-Assisted Distillation Systems Production Value by Processing Capacity, (USD Million), 2021 & 2025 & 2032

Figure 51. World Heat Pump-Assisted Distillation Systems Production Value Market Share by Processing Capacity in 2025

Figure 52. Small Scale Systems

Figure 53. Medium Scale Systems

Figure 54. Large Scale Systems

Figure 55. Others

Figure 56. World Heat Pump-Assisted Distillation Systems Production Market Share by Processing Capacity (2021-2032)

Figure 57. World Heat Pump-Assisted Distillation Systems Production Value Market Share by Processing Capacity (2021-2032)

Figure 58. World Heat Pump-Assisted Distillation Systems Average Price by Processing Capacity (2021-2032) & (K US\$/Unit)

Figure 59. World Heat Pump-Assisted Distillation Systems Production Value by Application, (USD Million), 2021 & 2025 & 2032

Figure 60. World Heat Pump-Assisted Distillation Systems Production Value Market Share by Application in 2025

Figure 61. Chemical Industry

Figure 62. Pharmaceutical Industry

Figure 63. Biofuel and Ethanol Industry

Figure 64. Food and Beverage Industry

Figure 65. Environmental and Resource Recovery Industry

Figure 66. Others

Figure 67. World Heat Pump-Assisted Distillation Systems Production Market Share by Application (2021-2032)

Figure 68. World Heat Pump-Assisted Distillation Systems Production Value Market

Share by Application (2021-2032)

Figure 69. World Heat Pump-Assisted Distillation Systems Average Price by Application (2021-2032) & (K US\$/Unit)

Figure 70. Heat Pump-Assisted Distillation Systems Industry Chain

Figure 71. Heat Pump-Assisted Distillation Systems Procurement Model

Figure 72. Heat Pump-Assisted Distillation Systems Sales Model

Figure 73. Heat Pump-Assisted Distillation Systems Sales Channels, Direct Sales, and Distribution

Figure 74. Methodology

Figure 75. Research Process and Data Source

I would like to order

Product name: Global Heat Pump-Assisted Distillation Systems Supply, Demand and Key Producers, 2026-2032

Product link: <https://marketpublishers.com/r/G70800E1EF21EN.html>

Price: US\$ 4,480.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/G70800E1EF21EN.html>