



Consumer Water & Air Treatment Systems

US Industry Study with Forecasts for **2017 & 2022**

Study #3032 | May 2013 | \$5300 | 324 pages

www.freedoniagroup.com



The Freedonia Group

767 Beta Drive

Cleveland, OH • 44143-2326 • USA

Toll Free US Tel: 800.927.5900 or +1 440.684.9600

Fax: +1 440.646.0484

E-mail: info@freedoniagroup.com

Table of Contents

EXECUTIVE SUMMARY

MARKET ENVIRONMENT

General	4
Macroeconomic Trends	4
Demographic Trends	7
Consumer Spending Trends	11
Residential Building Construction	14
Housing Completions.....	16
Housing Stock.....	20
Improvements & Repairs.....	24
Historical Market Trends.....	25
Pricing Trends.....	27
Environmental & Regulatory Considerations.....	29
Water.....	30
Air	34
World Outlook	36
North America.....	38
Western Europe.....	39
Asia/Pacific	40
Other Regions	41

TECHNOLOGIES

General	42
Water.....	44
Conventional Filtration	49
Adsorptive	51
Mechanical.....	54
Reverse Osmosis & Other	
Membrane Separation	55
Technology.....	58
Configurations	61
Distillation	62
Technology.....	64
Configurations	65
Ion Exchange Salts	66
Technology.....	68
Configurations	69
Other Technologies	69
Ultraviolet Disinfection	71
Ozone Treatment	73
All Other.....	75
Air.....	76
Conventional Filtration	80
Electrostatic	82
Ionization	85
Other Technologies	87
Ultraviolet Treatment	88
Ozone Treatment	89

PRODUCTS

General	91
Water Treatment Systems.....	93

Whole-House.....	97
Point-of-Entry Water Purification	99
Systems.....	101
Suppliers	103
Water Conditioners.....	103
Systems	106
Suppliers	108
Point-of-Use	109
Under-the-Sink Units	114
Systems.....	116
Suppliers	117
Countertop Units.....	118
Systems.....	119
Suppliers	121
Faucet-Mounted Units	122
Systems.....	123
Suppliers	124
Flow-Through Units	125
Systems.....	127
Suppliers	128
Others	130
Systems.....	132
Suppliers	133
Market Share.....	135
By Volume.....	135
By Value	138
Air Treatment Systems	140
Whole-House Systems.....	144
Systems.....	147
Suppliers	148
Portable Systems	150
Systems.....	152
Suppliers	153
Market Share.....	154
Consumables	156
Replacement Water Filters.....	159
Replacement Air Filters.....	162
Replacement Membranes	164
Salt.....	166

REGIONAL MARKETS

General	168
Regional Demographic & Economic Trends.....	169
Population Patterns	169
Economic Outlook.....	172
Construction Activity.....	175
Housing Trends	177
Regional Demand for Treatment Systems.....	180
Northeast	184
New England	187
Middle Atlantic	188
Midwest	190
East North Central.....	194
West North Central	196
South	197
South Atlantic	200
East South Central.....	202
West South Central.....	203

West.....	205
Mountain	208
Pacific.....	210

INDUSTRY STRUCTURE

General	214
Industry Composition	215
Market Share	218
Systems	220
Consumables	222
Competitive Strategies.....	225
Research & Development.....	227
Marketing	229
Distribution	232
Acquisitions & Divestitures.....	234
Cooperative Agreements.....	236

COMPANY PROFILES

Air Systems Components	240
Aquion Incorporated.....	241
Austin Air Systems	245
Axel Johnson	247
Berkshire Hathaway.....	249
Blueair AB	252
CLARCOR Incorporated	254
Clorox Company	257
Culligan International.....	259
Essick Air Products	262
Flanders Corporation.....	263
General Electric	265
Helen of Troy.....	269
Honeywell International.....	272
Hunter Fan.....	275
Incen AG	277
Ingersoll-Rand plc.....	279
ITT Corporation.....	280
Jarden Corporation.....	281
K+S AG	283
LG Electronics.....	286
Move Collective	287
NACCO Industries	289
Panasonic Corporation	291
Pentair Limited.....	293
Procter & Gamble.....	299
Regal Ware.....	300
Research Products	301
3M Company	303
Tomkins Limited	307
United Technologies	309
WaterGroup Companies.....	311
Whirlpool Corporation.....	314
Xylem Incorporated	316
Additional Companies Profiled in Consumer Water & Air Treatment Systems.....	319-324

List of Tables

EXECUTIVE SUMMARY

1 Summary Table..... 3

MARKET ENVIRONMENT

1 Macroeconomic Indicators 7
 2 Population & Households.....11
 3 Personal Consumption Expenditures14
 4 Residential Building Construction Expenditures16
 5 New Housing Indicators20
 6 Housing Stock by Type23
 7 Residential Improvement & Repair Expenditures25
 8 Consumer Water & Air Treatment System Market, 2002-201227
 9 Prices of Consumer Water & Air Treatment Systems29

TECHNOLOGIES

1 Consumer Water & Air Treatment System Demand44
 2 Consumer Water Treatment System Demand by Technology47
 3 Conventional Water Filtration System Demand51
 4 Reverse Osmosis & Other Membrane Separation Water Treatment System Demand58
 5 Distillation Water treatment System Demand64
 6 Ion Exchange Salt Water Conditioning System Demand68
 7 Other Water Treatment System Demand70
 8 Consumer Air Treatment System Demand by Technology78
 9 Conventional Air Filtration Treatment System Demand.....82
 10 Electrostatic Air Treatment System Demand85
 11 Ionization Air Treatment System Demand .87
 12 Other Air Treatment System Demand.....88

PRODUCTS

1 Consumer Water & Air Treatment System & Consumables Demand.....93
 2 Consumer Water Treatment System Demand by Type97

3 Whole-House Water Treatment System Demand99
 4 Point-of-Entry Water Treatment System Demand 101
 5 Water Conditioner System Demand 106
 6 Point-of-Use Water Treatment System Demand 112
 7 Under-the-Sink Water Treatment System Demand 116
 8 Countertop Water Treatment System Demand 119
 9 Faucet-Mounted Water Treatment System Demand 123
 10 Flow-Through Water Treatment System Demand 127
 11 Other Point-of-Use Water Treatment System Demand 132
 12 Consumer Air Treatment System Demand by Type 144
 13 Whole-House Air Treatment System Demand 147
 14 Portable Air Treatment System Demand.. 151
 15 Demand for Consumables for Consumer Water & Air Treatment Systems 159
 16 Replacement Water Filter Demand 162
 17 Replacement Air Filter Demand..... 164
 18 Replacement Membrane Demand 166
 19 Water Softening Salt Demand 167

REGIONAL MARKETS

1 Population by Region..... 172
 2 Gross Domestic Product by Region..... 175
 3 Construction Expenditures by Region..... 177
 4 Regional Housing Indicators 180
 5 Consumer Water & Air Treatment System Demand by Region & Type 183
 6 Northeast Water & Air Treatment System Demand 187
 7 Midwest Water & Air Treatment System Demand 194
 8 South Water & Air Treatment System Demand 200
 9 West Water & Air Treatment System Demand 208

INDUSTRY STRUCTURE

1 Consumer Water & Air Treatment System & Consumables Sales by Company, 2012..... 217
 2 Selected Acquisitions & Divestitures..... 235
 3 Selected Cooperative Agreements..... 238

List of Charts

MARKET ENVIRONMENT

1 Year of Construction of Housing Stock, 201223
 2 World Consumer Water & Air Treatment System Demand by Region, 2012.....37

TECHNOLOGIES

1 Consumer Water Treatment System Demand: Volume & Value, 201248
 2 Consumer Air Treatment System Demand: Volume & Value, 2012..... 79

PRODUCTS

1 Point-of-Use Water Treatment System Demand: Volume & Value, 2012 113
 2 Consumer Water Treatment System Market Share by Volume, 2012 138
 3 Consumer Water Treatment System Market Share by Value, 2012 140
 4 Consumer Air Treatment System Market Share, 2012 155

REGIONAL MARKETS

1 Consumer Water & Air Treatment System Demand by Region, 2012 184

INDUSTRY STRUCTURE

1 Consumer Water & Air Treatment System & Consumables Market Share, 2012 219
 2 Consumer Water & Air Treatment System Market Share, 2012 222
 3 Consumer Water & Air Treatment Systems' Consumables Market Share, 2012 224

A shift in product mix toward larger and more expensive whole-house systems, driven by a rebound in housing and consumer preferences, will boost gains in market value.

US demand to rise 6.9% annually through 2017

Demand in the US for consumer water and air treatment systems is projected to advance 6.9 percent per year to \$2.3 billion in 2017. Sales will show a marked improvement over the 2007-2012 period as the economy continues to recover, consumer confidence grows, and credit becomes easily available. In addition, a rebound in housing will further propel growth as many consumers purchase or upgrade water and air treatment systems when they move into a new home. A shift in product mix, particularly as the whole-house segments recover from the declines of the 2007-2012 period, will also impact growth. Whole-house systems are larger and more expensive than portable or point-of-use systems so a higher share of these items boosts market value.

Point-of-use, portable systems to remain dominant

Point-of-use (POU) water and portable air treatment systems will continue to account for the larger share of value demand than whole-house counterparts. In POU water treatment systems, faster growth will be registered by reverse osmosis and other membranes and distillation systems. Among portable air cleaners, faster gains will be realized for electrostatic technologies. Although sales of POU water and portable air treatment systems are expected to achieve good growth through 2017,

US Consumer Water & Air Treatment System Demand, 2017 (\$2.3 billion)



housing trends are favoring whole-house systems and a larger share of households are installing these systems. Sales of whole-house water and air treatment systems declined along with the significant contraction in single-family housing completions during the 2007-2012 period, since these units are often installed in newly built homes. The improving housing market will contribute significantly to growth in sales of whole-house systems through 2017.

Aftermarket consumables to grow 4.2% annually

The aftermarket plays a very important role in the industry, with sales of consumables (i.e., filters, membranes, and

salts) forecast to grow 4.2 percent annually, reaching \$3.3 billion in 2017. Gains will be driven by rising system penetration rates, as well as the increasingly common incorporation of performance indicators meant to improve replacement compliance. Consumers upgrading to systems that use more advanced filters and membranes, such as carbon block cartridges, reverse osmosis or other membranes, HEPA filters, and electrostatic filters, will also provide growth. Systems incorporating permanent filtration media that do not need to be replaced will continue to account for a greater share of sales, restricting further growth. An increasingly competitive pricing environment will also limit value gains.

Copyright 2013 The Freedonia Group, Inc.

[Click here to purchase online](#)

Sample Text, Table & Chart

TECHNOLOGIES

Conventional Filtration

Sales of conventional water filtration systems are projected to increase from 1.1 million units in 2012, to 1.3 million units in 2017, and 1.5 million units in 2022. This growth is slower than that of most other system categories, but will make up for the lower volume of units sold. Conventional filtration-based systems typically employ other technologies, hence sales did not decline as did sales of expensive systems during the recession and therefore will not see as strong a recovery.

These systems use adsorptive or mechanical filtration methods, or a combination of the two, as the primary or only means of water treatment. These systems are generally inexpensive, although they are available in a range of prices, and are often found at mass merchandisers, drugstores, and other locations that are easily accessed by most segments of the population. Additionally, conventional filtration-based systems are able to treat the most common water quality issues. Their ability to remove chlorine, sediment, and contaminants that cause foul odors in water, combined with their relatively low prices and accessibility, has made them appealing to a broad range of consumers. Furthermore, competition from bottled water has lessened as consumers have become increasingly environmentally conscious. Due to the relatively higher cost of bottled water, the 2007-2009 recession boosted sales of conventional water treatment systems.

Growth of conventional filtration systems will be restrained as existing owners of these systems upgrade to systems that incorporate advanced treatment technologies, such as reverse osmosis and membrane separation. Additionally, the performance limitations of

Copyright 2013 The Freedonia Group, Inc.

**SAMPLE
TEXT**

TABLE III-2

CONSUMER WATER TREATMENT SYSTEM DEMAND BY TECHNOLOGY (million dollars)

Item	2002	2007	2012	2017	2022
Households (million)	100	100	100	100	100
units/000 households	11	13	15	17	19
\$ systems/household	110	130	150	170	190
Consumer Water Treat Systems (000)	110	130	150	170	190
\$/unit	110	130	150	170	190
Consumer Water Treatment Systems					
Conventional Filtration	110	130	150	170	190
Ion Exchange	10	10	10	10	10
Reverse Osmosis/Other Membrane	10	10	10	10	10
Distillation	10	10	10	10	10
Other Technologies	10	10	10	10	10
% water	10	10	10	10	10
Consumer Water & Air Treat Systems	110	130	150	170	190

**SAMPLE
TABLE**

CHART VI-2

CONSUMER WATER & AIR TREATMENT SYSTEM MARKET SHARE (\$1.6 billion, 2012)



**SAMPLE
CHART**

Sample Profile, Table & Forecast

COMPANY PROFILES

Hunter Fan Company

7130 Goodlett Farms Parkway, Suite 400
 Memphis, TN
 901-744-1200
<http://www.hunterfan.com>

Annual Sales:
 Employment:

Key Products: _____ ers

Hunter Fan manufactures air purifiers, humidifiers, ceiling and portable fans, and thermostats for residential and commercial use. The Company is owned by MidOcean Partners LP (New York, New York), a private investment firm.

The Company is active in the US consumer water and air treatment system industry via the production of portable air purifiers and replacement filters. Hunter Fan operates a global distribution center in Byhalia, Mississippi. Products are sold through a network of authorized dealers and retailers, including Lowe's Companies Incorporated (Mooresville, North Carolina) and Home Depot Incorporated (Atlanta, Georgia).

Hunter Fan's air purifiers include PERMALIFE, QUIETFLO, HEPATECH, and 4-IN-1 TOTAL AIR PROTECTION systems designed to clean small-, medium-, or large-sized rooms. PERMALIFE air purifiers utilize permanent, cleanable high efficiency particulate are (HEPA) filters to remove 99.5 percent of dust, smoke, and other particles as small as .5 micron in diameter from the air. Furthermore, these purifiers incorporate separate ionizers engineered to distribute negatively charged ions throughout a room to enhance the cleansing

SAMPLE PROFILE

TABLE IV-6

POINT-OF-USE WATER TREATMENT SYSTEM DEMAND (million dollars)

Item	2002	2007	2012	2017	2022
Households (million) units/000 households	1				3
POU Water Treatment Systems (000)					0
\$/unit					0
Point-of-Use Water Treatment Systems					0
Under-the-Sink					0
Countertop					0
Faucet-Mounted					0
Flow-Through					0
Other POU Systems					0
% point-of-use Water Treatment System Demand					0

SAMPLE TABLE

"Sales of water treatment systems in the Mountain subregion are driven in part by the number of large rural areas where many households must rely on private wells for their water supplies. Contaminants such as arsenic, fluoride, nitrates, and uranium, among others, occur naturally in the soil in areas throughout much of this subregion. Homeowners using private water sources in this subregion therefore purchase point-of-entry (POE) and point-of-use (POU) systems to treat their water for these contaminants, which can leach into groundwater sources from which private wells draw water."
 --Section V, pg. 210

ONLINE: www.freedoniagroup.com

MAIL: Print out and complete the order form and send to The Freedonia Group (see address at the bottom of this form)

PHONE: Call toll free, 800.927.5900 (US) or + 1 440.684.9600

FAX: + 1 440.646.0484 (US)

EMAIL: info@freedoniagroup.com

Free Handling & Shipping

There is NO charge for handling or UPS shipping in the US. Expect delivery in 3 to 5 business days. Outside the US, Freedonia provides free airmail service. Express delivery is available at cost.

Orders Outside of the US

Checks must be made payable in US funds, drawn against a US bank and mailed directly to The Freedonia Group. For wire transfers please contact our customer service department at info@freedoniagroup.com. Credit cards accepted.

Credit Card Orders

For convenience, Freedonia accepts American Express, MasterCard or Visa. Credit card purchases must include account number, expiration date and authorized signature.

Save 15%

If you order three (3) different titles at the same time, you can receive a 15% discount. If your order is accompanied by a check or wire transfer, you may take a 5% cash discount (discounts do not apply to Corporate Use Licenses).

Corporate Use License

Now every decision maker in your organization can act on the key intelligence found in all Freedonia studies. For an additional \$2600, companies receive unlimited use of an electronic version (PDF) of the study. Place it on your intranet, e-mail it to coworkers around the world, or print it as many times as you like,

[Click here to learn more about the Corporate Use License](#)

ORDER FORM

F-WEB.3032

Consumer Water & Air Treatment Systems.. \$5300

- Corporate Use License (add to study price) * + \$2600
 - Additional Print Copies @ \$600 each *
- Total (including selected option) \$_____

Enclosed is my check (5% discount) drawn on a US bank and payable to The Freedonia Group, Inc., in US funds (Ohio residents add 7.75% sales tax)

- Bill my company
- American Express
- MasterCard
- Visa

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Credit Card #

MM	YY		

Expiration Date

Signature _____

Name _____

Title _____

Company _____

Division _____

Street _____
(No PO Box please)

City/State/Zip _____

Country _____

Phone _____ Fax _____

Email _____

* Please check appropriate option and sign below to order an electronic version of the study.

Corporate Use License Agreement

The above captioned study may be stored on the company's intranet or shared directory, available to company employees. Copies of the study may be made, but the undersigned represents that distribution of the study will be limited to employees of the company.

Signature _____

Individual Use License Agreement

The undersigned hereby represents that the above captioned study will be used by only ___ individual(s) who are employees of the company and that the study will not be loaded on a network for multiple users. In the event that usage of the study changes, the Company will promptly notify Freedonia of such change and will pay to Freedonia the appropriate fee based on Freedonia's standard fee schedule then in effect. Note: Entire company corporate use license, add \$2600; one additional user, add \$600; two additional users, add \$1200; three additional users, add \$1800.

Signature _____

OTHER STUDIES

Water Treatment Equipment

This study analyzes the US market for water treatment equipment. It presents historical demand data (2002, 2007 and 2012) and forecasts for 2017 and 2022 by type (conventional filtration, membrane systems, disinfection equipment), market (municipal, manufacturing, power generation, resource extraction, commercial and residential), and application (desalination, process water, ultrapurification, wastewater). The study also considers market environment factors, evaluates company market share, and profiles industry players.

#3052 July 2013..... \$5100

World Membrane Separation Technologies

World demand for membranes will rise 9.2 percent yearly to \$25.7 billion in 2017. Water treatment will remain the top market and will benefit from expansions or upgrades of water treatment infrastructures and a rebound in manufacturing. BRIC and other countries with large, developing industrial bases and stressed water resources will lead gains. This study analyzes the \$16.5 billion global membrane industry, with forecasts for 2017 and 2022 by product, market, world region and for 21 countries. The study also evaluates company market share and profiles industry players.

#3006 May 2013..... \$6300

World Water Disinfection Products

World demand for water disinfection products will rise 5.5 percent annually to \$7.7 billion in 2016. China and the Asia/Pacific and Africa/Mideast regions will be the fastest growing markets. A shift in the product mix from elemental chlorine towards higher value chemicals and advanced technologies will continue. This study analyzes the \$5.9 billion world water disinfection product industry, with forecasts for 2016 and 2021 by product, market, world region and for 16 countries. The study also evaluates company market share and profiles industry participants.

#2992 March 2013..... \$6100

Nonwovens

Demand for nonwovens is forecast to rise 5.7% per year to \$7.1 billion in 2016. The fastest market gains will occur in the nondisposables market, especially construction. Disposables will remain the dominant market, where filtration will lead gains. Spunmelt nonwovens will continue as the largest product segment and carded will be the second largest. This study analyzes the \$5.4 billion US nonwoven fabric industry, with forecasts for 2016 and 2021 by material, process and market. The study also evaluates company market share and profiles industry players.

#2983 January 2013 \$5200

World Filters

Global demand for filters is projected to increase 7.6 percent annually to \$65.9 billion in 2015. China, India, Indonesia and other countries with large, developing industrial bases and nascent regulatory schemes will see the fastest growth. Manufacturing will be the fastest growing market, while transportation equipment remains the largest. This study analyzes the \$45.6 billion world filter industry, with forecasts for 2015 and 2020 by product, market, world region and for 23 countries. The study also evaluates company market shares and profiles industry players.

#2856 March 2012..... \$6300

About The Freedonia Group

The Freedonia Group, Inc., is a leading international industry market research company that provides its clients with information and analysis needed to make informed strategic decisions for their businesses. Studies help clients identify business opportunities, develop strategies, make investment decisions and evaluate opportunities and threats. Freedonia research is designed to deliver unbiased views and reliable outlooks to assist clients in making the right decisions. Freedonia capitalizes on the resources of its proprietary in-house research team of experienced economists, professional analysts, industry researchers and editorial groups. Freedonia covers a diverse group of industries throughout the United States, the emerging China market, and other world markets. Industries analyzed by Freedonia include:

- Chemicals • Plastics • Life Sciences • Packaging • Building Materials • Security & Electronics • Industrial Components & Equipment • Automotive & Transportation Equipment • Household Goods • Energy/Power Equipment

[Click here to learn more about Freedonia](#)

Freedonia Custom Research

Freedonia Custom Research delivers the same high quality, thorough and unbiased assessment of an industry or market as an industry study. Since the research initiative is based upon a company's specific needs, companies harness Freedonia's research capabilities and resources to answer unique questions. When you leverage the results of a Freedonia Custom Research engagement, you are able to obtain important answers to specific questions and issues associated with: mergers and acquisitions, new product launches/development, geographic expansion, entry into new markets, strategic business planning, and investment and funding decisions.

Freedonia Custom Research is ideal for companies seeking to make a strategic difference in the status quo and focus on future business growth. Working side by side with clients, Freedonia's team is able to define a research project that is custom-tailored to answer specific questions and provide the basis from which a company can make informed business decisions.

[Click here to learn more about Custom Research](#)



[Click here for complete title list](#)



[Click here to visit freedoniagroup.com](http://www.freedoniagroup.com)