

# Johnson Pump brand

INDUSTRIAL PUMP PRODUCT OVERVIEW



# Welcome to a World of Pumps

For more than 75 years Johnson Pump brand pumps have been developed, manufactured and marketed for industrial use. This experience and expertise, combined with our wide product range, makes us one of the most reliable pump producers world wide

At SPX we believe in 'life cycle economy'. Buying a pump is not just a one-off transaction – the pump has to keep running for a long time. Service and maintenance is therefore as important to us as it is to provide our customers with a suitable solution to each and every unique application. SPX is therefore much more than a Johnson Pump brand manufacturer – We are your solution provider!

Based in Charlotte, North Carolina, SPX Corporation (NYSE: SPW) is a global Fortune 500 multi-industry manufacturing leader. The company's highly-specialized, engineered products and technologies serve customers in three primary strategic growth markets: infrastructure, process solutions and diagnostic systems. Many of SPX's innovative solutions are playing a role in helping to meet rising global demand; particularly in emerging markets for electricity, processed foods & beverages and vehicle services. The company's products include thermal heat transfer equipment for power plants; power transformers for utility companies; process equipment for the food & beverage industry; and diagnostic tools and equipment for the vehicle service industry. For more information, please visit <http://www.spx.com>

## Johnson Pump brand models

### CENTRIFUGAL PUMPS

- According to ISO, EN, API
- Multistage
- Magnetic Drive
- Self-priming

### POSITIVE DISPLACEMENT PUMPS

- Internal Gear pumps
- Rotary Lobe pumps
- Flexible Impeller pumps
- Diaphragm pumps

### QUALITY

SPX's research departments are busy experimenting with new raw materials, refining pumping principles and developing new products. The efforts of our R&D are put into production at our plants where we assure the quality of our work in accordance with ISO9001.



### WORLDWIDE DISTRIBUTION

With our worldwide network of SPX affiliates and independent distributors we are working closely with you to provide the best solution for your liquid transport needs.

#### Europe

- Belgium
- Denmark
- Finland
- France
- Germany
- Italy
- the Netherlands
- Norway
- Spain
- Sweden
- Switzerland
- United Kingdom



#### Africa

#### Americas

#### Asia

#### Australia

#### India

#### Middle East

#### Distributors

- See our web page for a detailed list [www.johnson-pump.com](http://www.johnson-pump.com), [www.spx.com](http://www.spx.com)

# It's all about Finding Solutions

Every customer's process is in some way unique; it's that something extra that places you ahead of all the rest. Your unique process may require a non-standard solution. We here at SPX are keen listeners to the special requirements of our customers. With our wide range of Johnson Pump brand standard product offerings to build on we can offer that little extra in the form of materials and design solutions to keep you ahead.

From our sales, support and application personnel to R&D, we pride ourselves in working together with you on an affordable, working solution for your special needs. In addition to pumps, through SPX you will have access to a variety of flow technologies; from valves and mixers to heat exchangers and entire systems.

Contact your local Johnson Pump brand representative for an investment in your future today!

## ABRASION RESISTANT COATINGS

Lime slurries, paper fillers, dirty sump water and the like can unnecessarily wear out a pump. Coatings such as Wolfram or plasma nitriding on pump housing, rotors and impellers can greatly increase the service life of your pumps.



## NOISE REDUCTION

With a specially designed impeller we were able to reduce noise levels in tank farm applications where large numbers of our FreFlow self-priming centrifugal pumps are in use.



## SAFE HANDLING OF HOT WATER

For a hospital hot water recirculation project we combined a modified pump casing with externally mounted heat exchanger on the mechanical seal to ensure reliable, safe operation.



## ULTRA PURE WATER TREATMENT PLANT

SPX collaborated with the plant owners on the design of pressure pumps to be used in reverse osmosis in an innovative enterprise where waste water is purified and used as steam injection for residual oil extraction from mature oil fields.



## IMPROVED FLOW CHARACTERISTICS

Development of new multilobe rotors for uniform flow of sausage meats and even less pulsation and resonance in the pipeworks when pumping thin liquids.



## Typical product applications

### PHARMACEUTICAL



### FOOD & BEVERAGE



### HORTICULTURE



### CHEMICAL

### GENERAL INDUSTRY



### PETROCHEMICAL

### BUILDING WATER SERVICES



### WASTE WATER TREATMENT



### PULP & PAPER

### SHIPBUILDING



# Johnson Pump Centrifugal Pumps



**Centrifugal Pumps** are the most common and well-established pumps on the market. They come in many different models and can transfer fluids with high efficiency over a wide range of flows and pressures. Johnson Pump brand offers several series of centrifugal pumps, many of which comply with ISO, DIN and API standards.

Johnson Pump brand's Combi system is a modular programme of centrifugal pumps with a high degree of interchangeability of parts between the different pump constructions.

The modular design makes it possible to construct many design variants and it also provides a large degree of interchangeability of components between various pump types and even between the different pump families. This, together with the wide range of materials available, makes it easy to supply the correct design for each specific application; allowing customers to be served in an optimal way.

SPX supplies you with a full range of documentation for our pumps:

- ATEX
- 3A
- EHEDG
- FDA, USP VI
- Material traceability & certification 2.1, 2.2 and 3.1
- QHP tests
- Vibration tests
- Noise level tests

## Standardized pumps



### COMBINORM

utility or general purpose pump according to EN733

|               |                                      |
|---------------|--------------------------------------|
| Max. capacity | 1500 m <sup>3</sup> /h (6600 GPM)    |
| Max. head     | 100 m (328 ft)                       |
| Max. pressure | 10 bar (145 psi)                     |
| Max. temp     | 200 °C (392 °F)                      |
| Max. speed    | 3600 rpm                             |
| Materials:    | cast iron, nodular cast iron, bronze |



### COMBI-CHEM

heavy duty chemical pump according to ISO 5199 and EN 22858

|               |   |
|---------------|---|
| Max. capacity | 800 m <sup>3</sup> /h (3520 GPM)                      |
| Max. head     | 160 m (525 ft)  |
| Max. pressure | 16 bar (232 psi)                                      |
| Max. temp     | 200 °C (392 °F)                                       |
| Max. speed    | 3600 rpm  |
| Materials:    | cast iron, nodular cast iron, bronze, stainless steel |

## Self-priming pumps



### COMBI-PRIME H & V

horizontal & vertical (variable position suction bend), hydraulics according to EN733

|               |  |
|---------------|--|
| Max. capacity | 500 m <sup>3</sup> /h (2200 GPM) [H]<br>800 m <sup>3</sup> /h (3520 GPM) [V] |
| Max. head     | 100 m (328 ft)   |
| Max. pressure | 10 bar (145 psi)   |
| Max. temp     | 80 °C (176 °F)   |
| Max. speed    | 3600 rpm   |
| Materials:    | cast iron, bronze  |



### FReFLOW

horizontal, handles gas and particle content

|               |                                    |
|---------------|------------------------------------|
| Max. capacity | 350 m <sup>3</sup> /h (1540 GPM)   |
| Max. head     | 80 m (262 ft)                      |
| Max. pressure | 9 bar (131 psi)                    |
| Max. temp     | 95 °C (203 °F)                     |
| Max. speed    | 3600 rpm                           |
| Materials:    | cast iron, bronze, stainless steel |

## Magnetic Drive pumps



### COMBI-MAG

heavy duty seal-less pump according to ISO 5199 and EN 22858

|               |  |
|---------------|--|
| Max. capacity | 550 m <sup>3</sup> /h (2420 GPM)   |
| Max. head     | 160 m (525 ft)   |
| Max. pressure | 16 bar (232 psi)   |
| Max. temp     | 300 °C (572 °F)  |
| Max. speed    | 3600 rpm   |
| Materials:    | cast iron, nodular cast iron, stainless steel, duplex, Alloy 20, Hastelloy C |



### COMBI-MAG-BLOC

heavy duty seal-less close-coupled pump according to ISO 5199 and EN 22858

|               |  |
|---------------|--|
| Max. capacity | 280 m <sup>3</sup> /h (1230 GPM)   |
| Max. head     | 140 m (459 ft)   |
| Max. pressure | 16 bar (232 psi)   |
| Max. temp     | 200 °C (392 °F)  |
| Max. speed    | 3600 rpm   |
| Materials:    | cast iron, nodular cast iron, stainless steel, duplex, Alloy 20, Hastelloy C |



### COMBIPRO

heavy duty process pump according to API610, API682 and API685

|               |   |
|---------------|---|
| Max. capacity | 350 m <sup>3</sup> /h (1540 GPM)                  |
| Max. head     | 160 m (525 ft)                                    |
| Max. pressure | 35 bar (508 psi)                                  |
| Max. temp     | 350 °C (662 °F)                                   |
| Max. speed    | 3600 rpm  |
| Materials:    | carbon steel, 13% Cr-steel, stainless steel (316) |

### Monobloc pumps



### COMBIBloc

compact close-coupled pump

|               |                                    |
|---------------|------------------------------------|
| Max. capacity | 850 m <sup>3</sup> /h (3740 GPM)   |
| Max. head     | 105 m (344 ft)                     |
| Max. pressure | 10 bar (145 psi)                   |
| Max. temp     | 120 °C (248 °F)                    |
| Max. speed    | 3600 rpm                           |
| Materials:    | cast iron, bronze, stainless steel |

### Vortex-type pumps



### COMBIDIRT

horizontal or vertical pump utilizing vortex principle, handles particles and gaseous content

|                   |   |
|-------------------|---|
| Max. capacity     | 420 m <sup>3</sup> /h (1850 GPM)                            |
| Max. head         | 40 m (130 ft)   |
| Max. pressure     | 10 bar (145 psi)  |
| Max. temp         | 80 °C (176 °F)  |
| Max. speed        | 1800 rpm  |
| Max. free passage | 100 mm (3.94")  |
| Materials:        | cast iron, nodular cast iron, stainless steel, super duplex |



### KGE

horizontal, handles gas and particle content

|               |                                 |
|---------------|---------------------------------|
| Max. capacity | 100 m <sup>3</sup> /h (440 GPM) |
| Max. head     | 60 m (197 ft)                   |
| Max. pressure | 8 bar (116 psi)                 |
| Max. temp     | 95 °C (203 °F)                  |
| Max. speed    | 3600 rpm                        |
| Materials:    | cast iron                       |

### Multistage pumps



### MCH & MCV

horizontal & vertical

|               |  |
|---------------|--|
| Max. capacity | 100 m <sup>3</sup> /h (440 GPM)                |
| Max. head     | 340 m (1120 ft)                                |
| Max. pressure | 40 bar (580 psi)                               |
| Max. temp     | 150 °C (302 °F) [MCH]<br>120 °C (248 °F) [MCV] |
| Max. speed    | 3600 rpm                                       |
| Materials:    | cast iron, bronze                              |



### MCHZ

horizontal, self-priming

|               |                                 |
|---------------|---------------------------------|
| Max. capacity | 100 m <sup>3</sup> /h (440 GPM) |
| Max. head     | 340 m (1120 ft)                 |
| Max. pressure | 40 bar (580 psi)                |
| Max. temp     | 120 °C (248 °F)                 |
| Max. speed    | 3600 rpm                        |
| Materials:    | cast iron                       |



### MDR

Close-coupled seal-less pump

|               |                                |
|---------------|--------------------------------|
| Max. capacity | 30 m <sup>3</sup> /h (130 GPM) |
| Max. head     | 24 m (78 ft)                   |
| Max. pressure | 3 bar (43 psi)                 |
| Max. temp     | 100 °C (212 °F)                |
| Max. speed    | 2800 rpm                       |
| Materials:    | PP, PVDF                       |

### InLine pumps



### COMBI LINE

close-coupled circulation pump on extended shaft motor

|               |                                  |
|---------------|----------------------------------|
| Max. capacity | 500 m <sup>3</sup> /h (2200 GPM) |
| Max. head     | 35 m (115 ft)                    |
| Max. pressure | 10 bar (145 psi)                 |
| Max. temp     | 140 °C (284 °F)                  |
| Max. speed    | 1800 rpm                         |
| Materials:    | cast iron                        |



### COMBI LINE BLOC

close-coupled circulation pump on stub shaft to IEC motor

|               |                                  |
|---------------|----------------------------------|
| Max. capacity | 450 m <sup>3</sup> /h (1980 GPM) |
| Max. head     | 100 m (328 ft)                   |
| Max. pressure | 10 bar (145 psi)                 |
| Max. temp     | 120 °C (248 °F)                  |
| Max. speed    | 3600 rpm                         |
| Materials:    | cast iron, bronze                |

### Vertical pumps



### COMBI FLEX, -UNIVERSAL, -BLOC

variable position suction bend, hydraulics according to EN733

|               |                                   |
|---------------|-----------------------------------|
| Max. capacity | 1500 m <sup>3</sup> /h (6600 GPM) |
| Max. head     | 140 m (459 ft)                    |
| Max. pressure | 10 bar (145 psi)                  |
| Max. temp     | 200 °C (392 °F)                   |
| Max. speed    | 3600 rpm                          |
| Materials:    | cast iron, bronze                 |

### Submersible pumps



### COMBI SUMP

vertical pump with dry motor EN 733, EN 22858 and API 610

|               |   |
|---------------|---|
| Max. capacity | 1500 m <sup>3</sup> /h (6600 GPM)   |
| Max. head     | 160 m (525 ft)  |
| Max. pressure | 16 bar (232 psi)<br>[35 bar (508 psi) API 610]                                    |
| Max. temp     | 160 °C (320 °F)   |
| Max. speed    | 3600 rpm  |
| Materials:    | cast iron, nodular cast iron, bronze, stainless steel, carbon steel, 13% Cr-steel |



### COMBI WELL

vertical pump with dry motor for paint/solvent degreasing spray units

|               |                                  |
|---------------|----------------------------------|
| Max. capacity | 300 m <sup>3</sup> /h (1320 GPM) |
| Max. head     | 45 m (148 ft)                    |
| Max. pressure | 10 bar (145 psi)                 |
| Max. temp     | 80 °C (176 °F)                   |
| Max. speed    | 3000 rpm                         |
| Materials:    | cast iron, stainless steel       |

# Johnson Pump

## Positive Displacement

### Pumps

**Rotary Lobe Pumps** are easy to clean and have gentle product-handling characteristics. They contain few cavities, which reduces the risk of bacterial growth and makes them particularly suitable for the transport of sensitive fluids – from glue to whole strawberries.

**Impeller Pumps** have good suction characteristics and the ability to pump solid particles. Impeller pumps have a wide range of applications in all types of industries.

**Air Operated Double Diaphragm Pumps** are used in all types of industries for transporting a wide variety of liquids. Clean or polluted, thin or viscous, abrasive or aggressive.

**Internal Gear Pumps** can be used in all types of manufacturing applications for the transportation of both thin and thick materials, from chocolate to diesel fuel.

SPX supplies you with a full range of documentation depending on need and local regulations:

- ATEX certification 2.1, 2.2 and 3.1
- 3A
- EHEDG
- FDA, USP VI
- Material traceability &
- QHP tests
- Vibration tests
- Noise level tests

#### Flexible Impeller pumps



##### **F-19 12/24V DC**

self-priming extra heavy duty bronze pumps

|               |   |
|---------------|---|
| Max. capacity | 55ℓ/min (14.5 GPM)                          |
| Max. pressure | 1.2 bar (17.4 psi)                          |
| Max. temp     | 55°C (130°F)                                |
| Materials:    | PTMT (thermoplastic polyester)<br>or bronze |

#### Internal Gear pumps, self-priming



##### **TOPGEAR TG L**

for low viscosity liquids

|                |                              |
|----------------|------------------------------|
| Max. capacity  | 8 m <sup>3</sup> /h (35 GPM) |
| Max. pressure  | 30 bar (435 psi)             |
| Max. temp      | 250°C (480°F)                |
| Max. viscosity | 60 000 mPas / cP             |
| Materials:     | nodular cast iron            |

## Protect your valuable process equipment from debris damage

A filter with appropriate strainer upstream from your equipment can effectively protect your investments from potentially damaging solids. Downstream a filter can ensure product homogeneity and recover valuable solids. **TopFilter** is our range of single and dual filters for cost-effective protection of pipeline equipment, liquid cleaning or salvaging valuable solids.

**Single filters** for applications where the flow can be temporarily shut down for cleaning of the filter basket.

**Dual filters** for applications requiring uninterrupted flow with minimal loss of pressure. The flow is diverted to a second basket while the first basket is cleaned.

**Multiple basket filters** are of a space saving construction, providing a large filter area with low pressure drops in a compact, easy to service unit

Mesh sizes 20–300 mesh, pleated elements giving filtration down to 10 µm are also available

## Rotary Lobe pumps



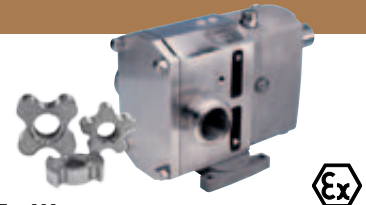
**TOPLOBEPLUS**  
hygienic tri-lobe rotors

Max. capacity 124 m<sup>3</sup>/h (547 GPM)  
Max. pressure 10 bar (145 psi)  
Max. temp 100 °C (212 °F)  
Max. viscosity 100 000 mPas / cP  
Materials: stainless steel (316L)



**TOPLOBE**  
hygienic tri-lobe rotors

Max. capacity 125 m<sup>3</sup>/h (550 GPM)  
Max. pressure 22 bar (319 psi)  
Max. temp 70 °C (158 °F)  
Max. viscosity 100 000 mPas / cP  
Materials: stainless steel (316L), duplex



**TOPWING**  
high hygienic bi-wing & multilobe rotors

Max. capacity 156 m<sup>3</sup>/h (687 GPM)  
Max. pressure 15 bar (218 psi)  
Max. temp 150 °C (300 °F)  
Max. viscosity 80 000 mPas / cP  
Materials: stainless steel (316L), duplex

## FIP & FB

self-priming pumps, industry / hygienic stainless steel and bronze versions

Max. capacity 37.5 m<sup>3</sup>/h (165 GPM)  
Max. pressure 4 bar (58 psi)  
Max. temp 55 °C (130 °F)  
Materials: bronze, stainless steel, polished stainless steel

## Air Operated Double Diaphragm pumps



**TOPAIR**  
self-priming multipurpose pump with peripheral flow

Max. capacity 48 m<sup>3</sup>/h (211 GPM)  
Max. pressure 7 bar (102 psi)  
Max. temp 120 °C (248 °F)  
Max. viscosity 10 000 mPas / cP  
Materials: PP, aluminium, cast iron, stainless steel, PTFE, PVDF, PVC



**OPTIFLO**  
self-priming multipurpose pump with central flow

Max. capacity 8 m<sup>3</sup>/h (36 GPM)  
Max. pressure 7 bar (102 psi)  
Max. temp 85 °C (185 °F)  
Max. viscosity 6 000 mPas / cP  
Materials: PP, aluminium, stainless steel



**TOPGEAR TG G**  
for general purpose heavy duty

Max. capacity 250 m<sup>3</sup>/h (1100 GPM)  
Max. pressure 16 bar (230 psi)  
Max. temp 300 °C (570 °F)  
Max. viscosity 80 000 mPas / cP  
Materials: cast iron



**TOPGEAR TG H**  
for high demanding heavy duty

Max. capacity 130 m<sup>3</sup>/h (570 GPM)  
Max. pressure 16 bar (230 psi)  
Max. temp 300 °C (570 °F)  
Max. viscosity 80 000 mPas / cP  
Materials: stainless steel, cast steel, ductile iron



**TOPGEAR MAG**  
seal-less, with magnetic drive

Max. capacity 80 m<sup>3</sup>/h (350 GPM)  
Max. pressure 16 bar (230 psi)  
Max. temp 250 °C (480 °F)  
Max. viscosity 10 000 mPas / cP  
Materials: cast iron, stainless steel

## TopFilter – Filters and strainers



### TOPFILTER TFOV

Single filter  
Pipe sizes 20 – 150 mm (¾" – 6")  
Max. pressure 50 bar (725 psi)  
Connections  
Threaded: BSP, NPT  
Flange: BS10, BS4504, ANSI, DIN  
Max. temp 200 °C (392 °F)  
Materials: cast iron, cast steel, gunmetal, stainless steel



### TOPFILTER TFOVM

Single, multibasket filter  
Pipe sizes 200 – 250 mm (8" – 10")  
Max. pressure 13.8 bar (200 psi)  
Connections  
Threaded: BSP, NPT  
Flange: BS10, BS4504, ANSI, DIN  
Max. temp 200 °C (392 °F)  
Materials: cast iron, cast steel, gunmetal, stainless steel



### TOPFILTER TFOV

Dual filter  
Pipe sizes 20 – 200 mm (¾" – 8")  
Max. pressure 50 bar (725 psi)  
Connections  
Threaded: BSP, NPT  
Flange: BS10, BS4504, ANSI, DIN  
Max. temp 200 °C (392 °F)  
Materials: cast iron, cast steel, gunmetal, stainless steel



**CENTRIFUGAL PUMPS**

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**FLEXIBLE IMPELLER PUMPS, ROTARY  
LOBE PUMPS**

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**INTERNAL GEAR PUMPS, AODD PUMPS,  
FILTERS**

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**COMPONENTS, CENTRIFUGAL PUMPS,  
INTERNAL GEAR PUMPS**

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For more information about our worldwide locations, approvals, certifications, and local representatives, please visit [www.johnson-pump.com](http://www.johnson-pump.com) and [www.spx.com](http://www.spx.com).

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