APV
AN SPX BRAND

# DW Pumps

## Value for money

SPX

# The DW Range

The DW pump from APV is designed for ultra hygienic applications. The range consists of 31 models with capacities ranging from 3 litres /100 revs to 1,016 /100 revs and pressures up to 30 bar. All product wetted parts are made from AISI 316L stainless steel and all elastomers comply with FDA-requirements.

**The most versatile rotary pump on the market**
The DW range reflects latest technology in the development of rotary positive displacement pumps. No equivalent pump on the market offers such a wide range of features incorporated in a single pump.

**Features and benefits**

**High volumetric efficiency**
The DW range is designed for out-standing efficiency. Internal clearances have been minimised so that a smaller pump size can be selected for medium viscosity applications. This reduces both the initial investment and running costs.

**Ultra-hygienic, accommodates harsh CIP-cycles**
All DW models are CIP/SIP cleanable. The pumps are designed to withstand rapid temperature changes and can therefore accommodate very harsh CIP-cycles.

**Patented rotor design**
A patented rotor design means that the DW runs completely pulse-free and without internal cavitation when handling high viscous products. This ensures a consistent process flow e.g. in connection with filling machines. It also safeguards valves and other equipment that is liable to damage through pressure surges.

**Low NPSH-requirement**
The highly improved suction capability of the DW pump considerably reduces the NPSH-requirement. This, in combination with the absence of pressure pulsations, makes the DW pumps ideal for many applications, such as ultra-filtration.

**Gentle product handling**
The rotor designs available ensure maximum product integrity and minimise risk of potential damage to sensitive products.

**Self-drainable pump**
Contrary to most lobe pumps on the market, the DW pump is completely self-drainable when vertically ported. This reduces the risk of cross contamination by minimising retention in the pump head.

**Easy maintenance**
The easy access front loaded mechanical seals reduce maintenance time considerably. All shaft seal O-rings are identical and access to the shaft seal is achieved by simply removing the front cover and the rotors. Likewise, the timing of rotors is an equally uncomplicated operation.

**Low noise levels**
The patented rotor design practically eliminates hydraulic noise and the helical gears minimise gearbox noise.

**High standards of hygiene**
All pumps are ultra-hygienic and they are 3A and EHEDG approved.

**High capacity**
The DW 6 and DW 7 high capacity pumps are unique in the field of positive displacement pumps in that they are capable of running up to 800 rpm and pumping up to 1016 L/100 revs. (approximately 370 $m^3$/h).

The DW7 is the largest positive displacement pump available in today's marketplace.


*The largest positive displacement pumps in the world.*

# Pump construction and options

**Flexible design**
The construction of the DW pump is as simple as possible in order to ensure quick and easy maintenance. It can be changed from a horizontally to a vertically ported version without a special gearcase. The feet are simply moved on the pump and thus the port orientation can be changed within minutes.

Standard elastomer material is EPDM. FPM (Fluorocarbon) and Isolast® (perfluoroelastomer) are standard options.

**Drive options**
Various drive options can be supplied to suit your requirements:

- Fixed speed drive
- Manually variable speed drive
- Electronically variable speed drive

Pumps and drives can be mounted on our stainless steel baseplates and if needed the pumps can be supplied with a stainless steel motor shroud.

**Rotor options**
The rotors for the DW pump are available as bi-lobe and circumferential piston rotors. The patented piston rotors are especially suitable for high viscous products as it runs completely pulse-free and without internal cavitation.

The standard material is stainless steel 316 L, but NGA (Non Galling Alloy) can be supplied as an option. NGA rotors can be used when low tolerances are required, hence the rotors can touch the pump housing without galling.

*EHEDG certified DW Relief Valve.*

*Two different rotor designs are available: bi-lobe and circumferential piston rotors.*

The two rotor types come in four versions – Multi Duty, High Efficiency, Super Tight and High Temperature. A table on the overleaf shows the various rotor options.

**Options**
For special applications we have designed the following options:

**Rectangular inlet** for extremely high viscosity products. By applying a rectangular inlet the inlet conditions are considerably improved.

**Thermal jacket** to provide a constant temperature level within the pump. Covers the front cover and the rotor casing.

This may be the solution for handling temperature-sensitive products such as chocolate.

**Relief valve** to avoid too high pressure within the pump.

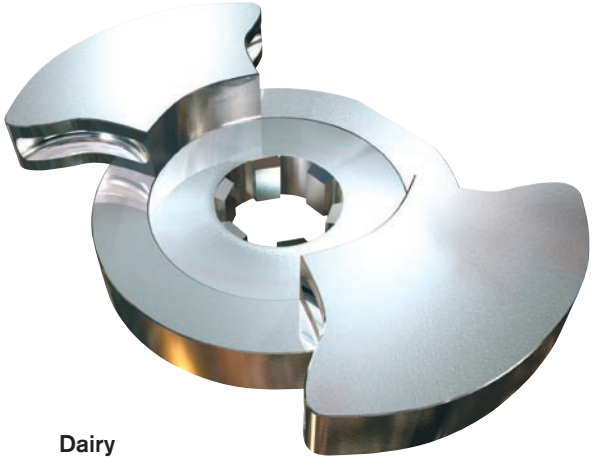
APV's relief valve is EHEDG certified as the only one on the market. It is necessary when no other safety devices are installed.

# Pump Performance

| Models | Max. revolutions | Rotor type | Max. displacement (litres per 100 revs.) | Max. pressure bar |
|---|---|---|---|---|
| DW1/003/7.5 | 1400 | Piston | 3 | 7.5 |
| DW1/004/15 | 1400 | Bi-lobe | 4 | 15 |
| DW1/007/7 | 1400 | Bi-lobe | 7 | 7 |
| DW1/007/15 | 600 | Bi-lobe | 7 | 15 |
| DW2/006/10 | 1400 | Piston | 6 | 10 |
| DW2/007/20 | 1400 | Bi-lobe | 7 | 20 |
| DW2/013/10 | 1400 | Bi-lobe | 13 | 10 |
| DW2/013/15 | 600 | Bi-lobe | 13 | 20 |
| DW3/014/10 | 1400 | Piston | 14 | 10 |
| DW3/017/20 | 1400 | Bi-lobe | 17 | 15 |
| DW3/030/10 | 1400 | Bi-lobe | 30 | 10 |
| DW3/030/15 | 600 | Bi-lobe | 30 | 15 |
| DW3/050/5 | 1400 | Bi-lobe | 50 | 15 |
| DW4/033/10 | 1200 | Piston | 33 | 10 |
| DW4/0039/20 | 1200 | Bi-lobe | 39 | 20 |
| DW4/073/10 | 1200 | Bi-lobe | 73 | 10 |
| DW4/073/15 | 600 | Bi-lobe | 73 | 15 |
| DW4/125/5 | 1200 | Bi-lobe | 125 | 5 |
| DW4/125/7 | 600 | Bi-lobe | 125 | 7 |
| DW5/080/12.5 | 1000 | Piston | 80 | 12,5 |
| DW5/093/25 | 1000 | Bi-lobe | 93 | 25 |
| DW5/142/15 | 1000 | Bi-lobe | 142 | 15 |
| DW5/256/7 | 1000 | Bi-lobe | 256 | 7 |
| DW6/172/12.5 | 800 | Piston | 172 | 12,5 |
| DW6/198/30 | 800 | Bi-lobe | 198 | 30 |
| DW6/308/15 | 800 | Bi-lobe | 308 | 15 |
| DW6/519/7 | 800 | Bi-lobe | 519 | 7 |
| DW7/370/10 | 600 | Piston | 370 | 10 |
| DW7/420/30 | 600 | Bi-lobe | 420 | 30 |
| DW7/725/15 | 600 | Bi-lobe | 725 | 15 |
| DW7/1016/7 | 600 | Bi-lobe | 1016 | 7 |

| Rotor Types | Design | | Features | | | | |
|---|---|---|---|---|---|---|---|
| | Material | Clearance | Max. operating temperature | Max. temperature shock | Fully positive | Max. diff. pressure (% of pump max.) | Vulnerability towards foreign matter bigger than clearance |
| Multi Duty | 316 L | Medium | 130°C | 110°C | 500 cp | 100% | High |
| High Efficiency | 316 L | Small | 110°C | 50°C | 300 cp | 100% | High |
| High Efficiency | NGA | Small | 180°C | 80°C | 300 cp | 100% | Low |
| Super Tight | NGA | Very small | 180°C | 80°C | 100 cp | 80% | Low |
| High Temperature | 316 L | Large | 180°C | 120°C | 700 cp | 100% | High |
| High Temperature | NGA | Large | 210°C | 180°C | 700 cp | 100% | Low |

# Customer industries and product applications



**Dairy**
Yoghurt
Cream
Curds and whey
Butter
Processed cheese

**Drinks**
Fruit juice
Yeast
Liquid sugar and glucose
Cider and wine

**Food**
Fruit preserves
Baby food
Soup
Meat sauces
Chocolate
Animal feed

**Pharmaceutical and toiletries**
Antibiotics
Cough mixture
Toothpaste
Shampoo

**Chemical**
Latex
Paint
Resins
Photographic film coatings
Oil additives

- and many more!

The figures included in this brochure are for guidance only.

Please use the DW Pump Sizing Programme or contact your local APV office for sizing and selecting a DW Pump.

*DW pumps for all industries.*

# APV Fluid Handling

Hygienic handling of fluids is a demanding task. But APV has the expertise and know-how to manufacture components that match any process requirements.

APV has highly specialised manufacturing facilities, where we develop components designed to meet the highest hygienic standards.
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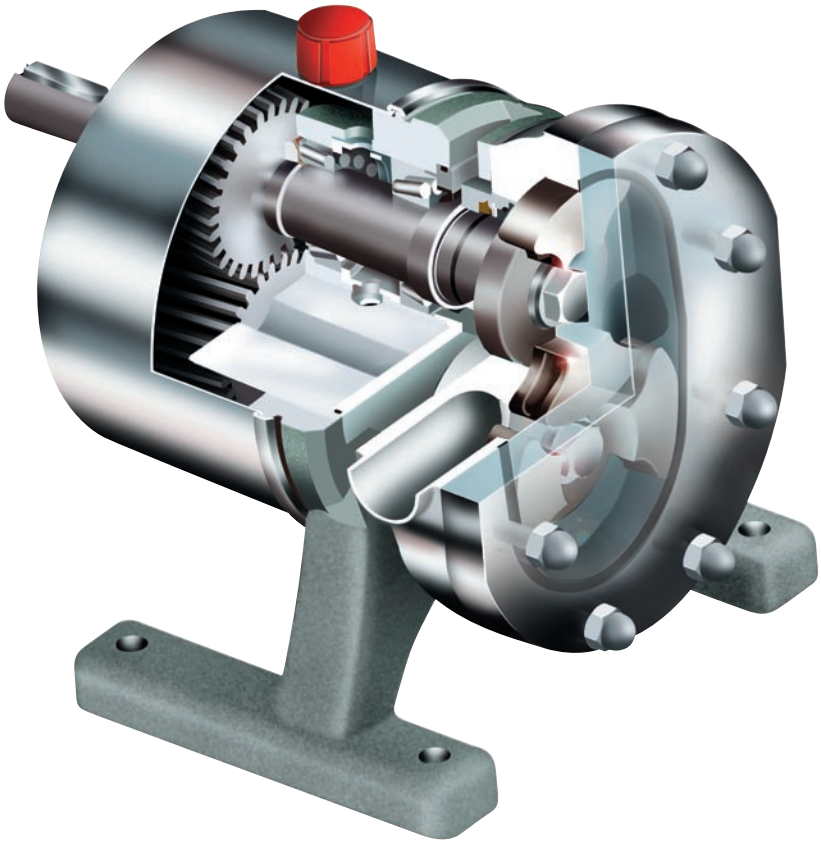
And because APV focuses on improving and sustaining our customers' profitability, our products are to be found in the food, dairy, brewery, pharmaceutical, personal care, and chemical industries throughout the world.

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For more information about our worldwide locations, approvals, certifications, and local representatives, please visit www.apv.com.



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