



# POMTAVA

METERING GEAR PUMPS

## Metering gear pumps and systems



**Products overview**

# Company profile

POMTAVA manufactures precision gear pumps and metering systems since 1986. Located in swiss Jura, the cradle of european machine-making and of the worldwide watch industry, POMTAVA carries on the tradition of precision and reliability. POMTAVA's highly qualified staff operates the latest machines. POMTAVA entirely controls development, production and assembly.

POMTAVA has built its own test facilities. Each pump undergoes testing in accordance with a standard procedure or one specified by the customer.

POMTAVA is also in a position to carry out tests with customers products and its technical department will be happy to advise you upon request.

- + ISO 9001:2008 certified
- + Fast repair service
- + Customized testing
- + Short delivery times
- + Maintenance courses for your staff
- + Fast response to your request
- + New developments in co-operation with our customers



**POMTAVA**

METERING GEAR PUMPS

**POMTAVA S.A.**, Nonceruz 2 CH-2732 Reconvilier  
Tel. +41 (0)32 481 15 14 / Fax. +41 (0)32 481 48 18  
[www.pomtava.com](http://www.pomtava.com) / [info@pomtava.com](mailto:info@pomtava.com)

# General overview

POMTAVA gear pumps are used everytime an accurate and pulsation free metering is needed, whether it is in a continuous or start and stop application. Their excellent repeatability guarantees a high reliability for your mono or multicomponent process. POMTAVA wide gear pumps range allows to work with material from really low to high viscosities. Pressures up to 250 bars (3630 psi).



POMTAVA gear pumps can be configured according to your needs: various connecting blocks, bypass blocks, surface treatments, adjustable drive shaft height, various sealing systems, etc.

POMTAVA is also able to deliver complete systems, with pumps, flowmeters, pressure sensors, temperature sensors, electrical driving motor, frequency converter and so on. Don't hesitate to ask our customer service about it.

The POMTAVA brand has a very good reputation worlwide. The quality of our products, our flexibility and short reaction time makes us the perfect partner for your metering applications.



## Overview

- + Continuous and pulsation-free metering from **0.0005 to 20 l/min**
- + Viscosity from **0.1 to 1'000'000 mPas**
- + Pressures up to **250 bars (3630 psi)**
- + Repeatability < 0.01 %
- + Flexible build configuration
- + Lifetime can be improved with surface treatments
- + Pump parts can be made in various stainless steel, titanium, PEEK, ...
- + ATEX version of our gear pumps on request



## Materials

- + Paints (solvent or waterbased)
- + UV paints
- + Resins (epoxy, polyester, polyurethane, etc.)
- + Polyols, Isocyanates, Peroxydes
- + Glues (mono or multicomponent)
- + Foams
- + Silicones
- + Oils, greases
- + Water
- + Solvents
- + And many more...

# Paint applications

## Metering gear pumps for paint applications

Gear pumps in stainless steel for all type of paint. Very high repeatability (<0.01%)

POMTAVA listens constantly to its customers technical needs and wishes. The environment protection is very important for us and takes a big place in the research and development of our products. POMTAVA gear pumps for paint are highly flushable without «dead zones» in order to minimize flushing product consumption. POMTAVA gear pumps are also maintenance friendly (high lifespan, easy assembly and disassembly).

### Outstanding flushability

- + No «dead zones»
- + ADLC surface treatment to reduce the friction coefficient of stainless steel and increase lifetime
- + Bypass block for a better and quicker flushing

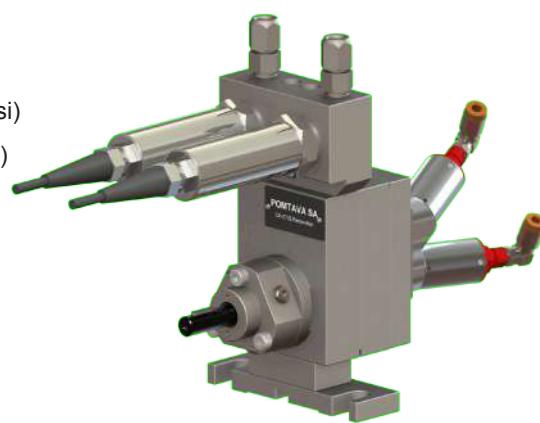
### Standard painting pumps

**Flowrate :** 3 to 4400 cc/min

**Pressure :** up to 15 bars (218 psi)

**Temperature :** up to 135 °C (275 °F)

**Connections :** G1/4" to G3/4"



### «Super flush» pump - allows short flushing time and flushing product savings (patented)

**Flowrate :** 12 to 2000 cc/min

**Pressure :** up to 15 bars (218 psi)

**Temperature :** up to 135 °C (275 °F)

**Connections :** G1/4" to G3/4"



### Robust gear pumps - for abrasive and/or highly viscous paint and hardener

**Flowrate :** 3 to 4400 cc/min

**Pressure :** up to 15 bars (218 psi)

**Temperature :** up to 135 °C (275 °F)

**Connections :** G1/4" to G3/4"



### Metered paints

- + water based
- + solvent based
- + filled paints
- + bi-components
- + Softfeel
- + PU
- + UV paint
- + hardener
- + solvents
- + water
- + other flushing products
- + etc.

# Paint applications

## Systems for paint applications

### Pump for UV paints or shear sensitive paints

**Flowrate :** 30 to 600 cc/min  
**Pressure :** up to 6 bars (87 psi)  
**Temperature :** up to 135 °C (275 °F)  
**Connections :** G1/4" to G3/8"



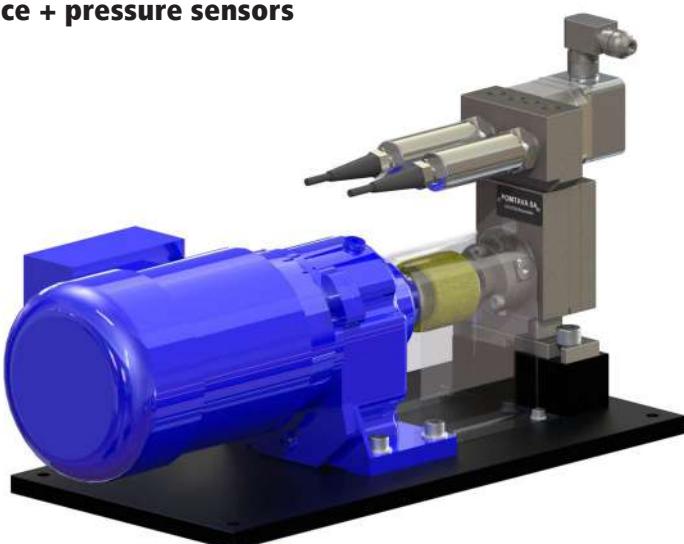
### Dispense Control Device (DCD) for close loop regulation and preventive maintenance

**Flowrate :** 3 to 4400 cc/min  
**Pressure :** up to 100 bars (1450 psi)  
**Temperature :** up to 135 °C (275 °F)  
**Connections :** G1/4" to G3/4"



### Complete systems : Dispense Control Device + pressure sensors + electrical motor drive

**Flowrate :** 3 to 4400 cc/min  
**Pressure :** up to 100 bars (1450 psi)  
**Temperature :** up to 135 °C (275 °F)  
**Connections :** G1/4" to G3/4"



# Paint applications

## Paint changers

POMTAVA paint changers are particularly well suited when we work with different paints and one gear pump. Pneumatic valves allow to select which paint we want to work with. A POMTAVA paint changer is entirely made in stainless steel. It is extremely well flushable, without any dead zones. The paint changers can be embedded directly on the robot arm in order to save paint and flushing product as well.

### Paint changer type 4003 - Standard version 1 channel

2 paints per block (up to 38 different paints)

1 emulsion block (air + flushing product)

Paint selection thanks to pneumatic valves

Valve air control pressure : 6 bars (87 psi)

Threadings Inputs / Output G1/8"

FFKM seal between each block

Option recirculation (straight or piloted)

Straight or elbow connections for different hose sizes

Also available with mounting brackets



### Paint changer type 4006 - Standard version 2 channels

This paint changer allows to work with a paint in channel 1, while channel 2 is being flushed and prepared with the next paint. 2 pumps are required.

Productivity gain - flushing as background task

2 paints per block (up to 38 different paints)

1 emulsion block (air + flushing product)

Paint selection thanks to pneumatic valves

Valve air control pressure : 6 bars (87 psi)

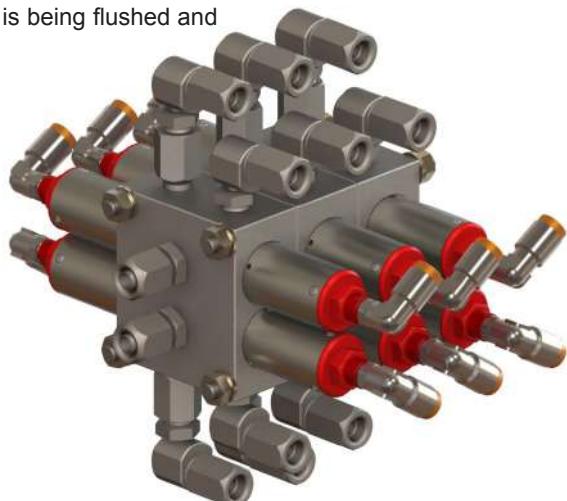
Threadings Inputs / Output G1/8"

FFKM seal between each block

Option recirculation (straight or piloted)

Straight or elbow connections for different hose sizes

Also available with mounting brackets



### Paint changer type 4020 - Ultra light version 1 channel

Designed to be embedded on a robot arm

2 paints per block (up to 38 different paints)

1 emulsion block (air + flushing product)

Paint selection thanks to pneumatic valves

Valve air control pressure : 6 bars (87 psi)

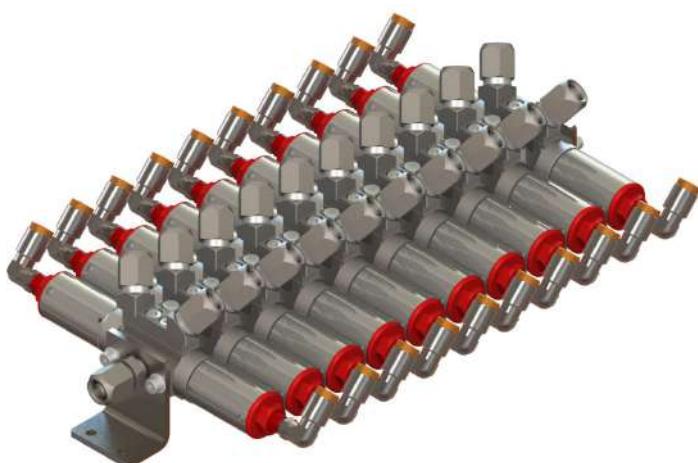
PTFE guiding seal between each block

Option recirculation

Connection for ø6/8mm hoses

Other connection types possible on demand

Also available with mounting brackets



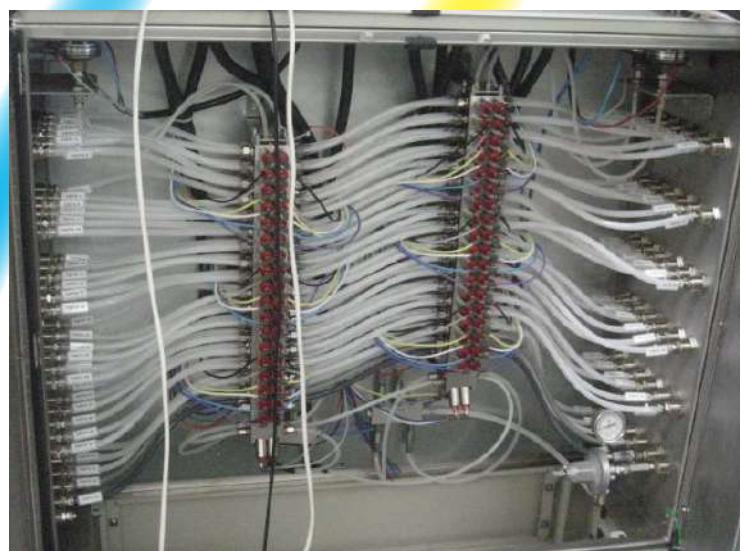
# Paint applications

## Paint changers

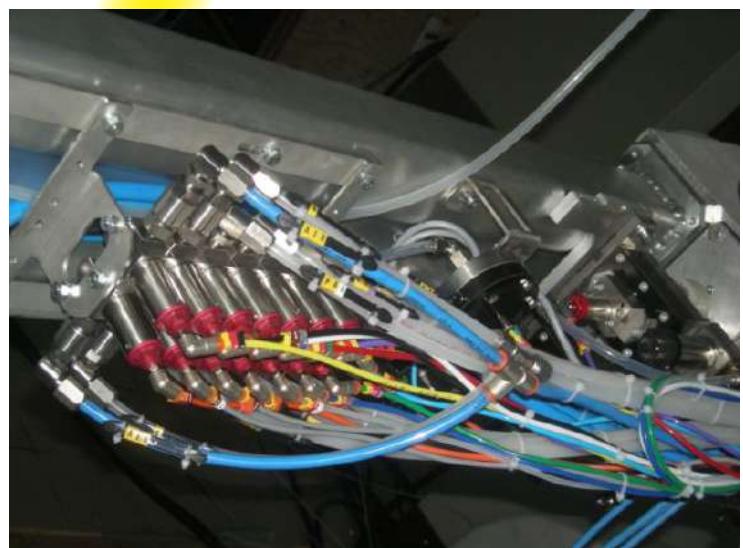
- + Modular system, customizable according to your needs
- + Ultra light embedded version
- + Entirely made in stainless steel
- + Fittings for hoses don't require any seal
- + Highly flushable, without any dead zones
- + Each block available with or without recirculation
- + Straight or piloted recirculation
- + Available with 1 or 2 channels
- + Valves air control pressure : 6 bars (87 psi)
- + Input pressure : up to 20 bars (290 psi)
- + Can be mounted on a gear pump to save space



2 pumps on a robot arm



2 paint changers externalized in a rack



Embedded system (pumps + paint changer)

# General applications

## Group 1

### Output (cc/rev)

0.05 / 0.1 / 0.3 / 0.6  
1.2 / 1.8 / 2.4 / 3.0

**Input / Output  
rear**



1610-1-1

**Input / Output  
on the top**



1610-4-1

1610-4-2

**Rear Input  
Side output  
(Following plate)**



1610-2-1

**Input / Output  
on the side  
(Inline)**

## Group 2

### Output (cc/rev)

1.2 / 2.4 / 3.0 / 6.0 / 10.0



2610-1-1



2610-4-1

2610-4-2



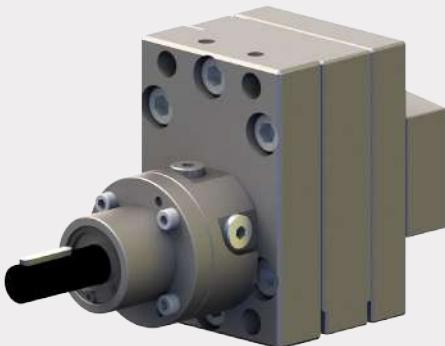
2610-2-1

# POMTAVA pump series overview

## Group 3

### Output (cc/rev)

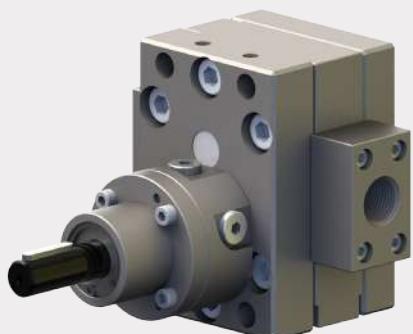
6.0 / 10.0 / 16.0 / 22.0



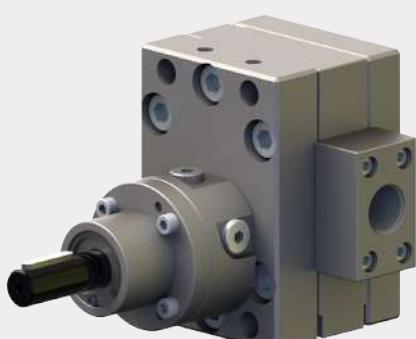
3610-1-1



3610-4-1  
3610-4-2



3610-2-1



3610-3-1

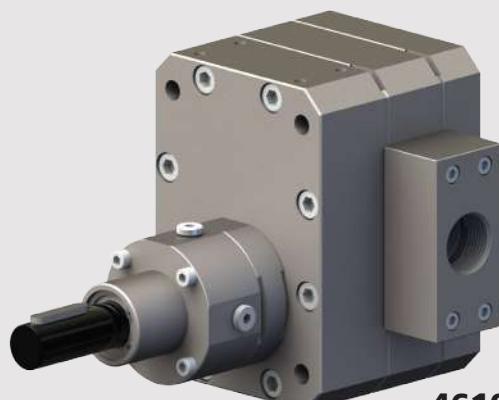
## Group 4

### Output (cc/rev)

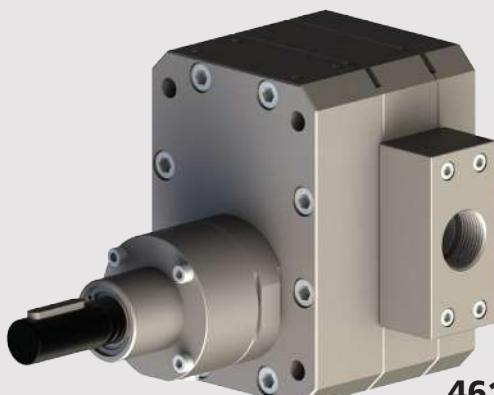
35.0 / 50.0 / 70.0 / 100.0



4610-1-1



4610-2-1



4610-3-1

# General applications

## Precision metering gear pumps

POMTAVA metering gear pumps are used in mono or multicomponents machines in the automotive, aeronautic, PUR, plastic, chemical and many more industry.

They are strong, robust and accurate, which makes them the perfect solution for the metering of a wide range of products, from water to highly filled and viscous materials. Some specific clearance and teeth geometries allow the pumps to meter very tough materials and increase their lifespan.

POMTAVA also manufactures a range of pumps especially designed to meter extremely low viscous and/or chemically aggressive materials.

- + 100% stainless steel
- + PEEK gears for low viscous materials
- + Repeatability < 0.01% on the whole viscosity range
- + Maintenance friendly
- + Various configuration of I/O location (behind, lateral, on top, ...)

### Metering gear pump for materials with medium to high viscosity

Flowrate :	0.5 to 20'000 cc/min
Speed :	10 to 200 rpm
Pressure :	up to 100 bars (1450 psi)
Temperature :	up to 135 °C (275 °F)
Connections :	G1/4" to G1"
Viscosity :	20 to 1'000'000 mPas



### Metering gear pumps for very low viscosity materials

Flowrate :	6 to 1'500 cc/min
Speed :	10 to 150 rpm
Pressure :	up to 20 bars (290 psi)
Temperature :	up to 40 °C (104 °F)
Connections :	G1/4" to G3/8"
Viscosity :	0.1 to 5 mPas



### Materials metered

- + Epoxy resins
- + Polyester
- + Silicones
- + Polyol
- + Isocyanate
- + Peroxydes
- + Additives
- + Water
- + Catalysts
- + Greases
- + Polymers
- + Glues
- + Metacrylates
- + Elastomers
- + Air balls filled materials
- + Mastics
- + Oils
- + Pigments
- + etc.

### High pressure metering gear pump

Flowrate :	60 to 4400 cc/min
Speed :	10 to 200 rpm
Pressure :	up to 250 bars (3630 psi)
Temperature :	up to 135 °C (275 °F)
Connections :	G1/4" to G3/4"
Viscosity :	up to 1'000'000 mPas



# General applications

## Precision metering gear pumps

### Gear pumps for following plates

This pump type is designed for materials with high viscosities. The pump is mounted on the following plate which is installed on the barrel. The material gets into the pump by the conical inlet, helped by the pressure generated by the following plate.

**Flowrate :** 6 to 20'000 cc/min

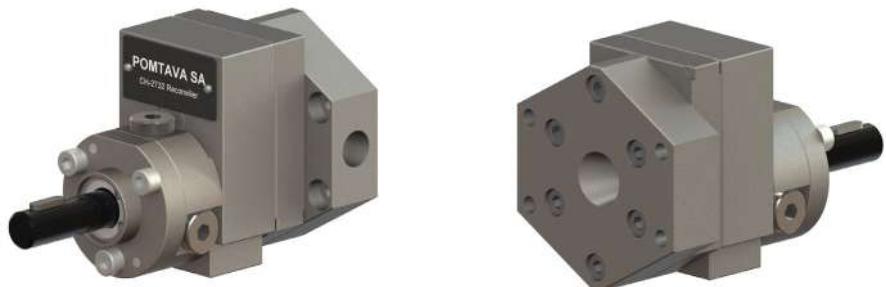
**Speed :** 10 to 200 rpm

**Pressure :** up to 100 bars (1450 psi)

**Temperature :** up to 135 °C (275 °F)

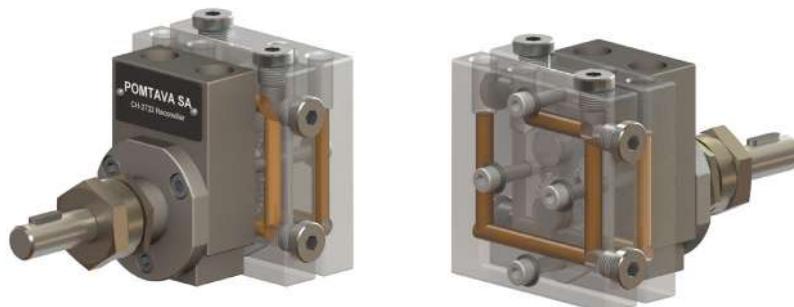
**Connections :** G1/4" to G1"

**Viscosity :** 20 to 1'000'000 mPas



### Heating pumps - Hydraulic heating version

Some POMTAVA metering gear pumps can be equipped with plates especially machined to have warm oil or water going through them, allowing to heat the pump to the required temperature. Temperature up to 135°C/275°F (higher temperature on demand).



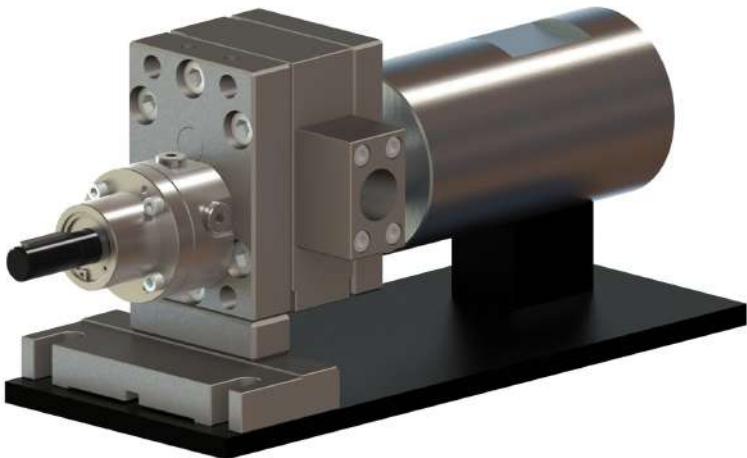
### Heating pumps - Electrical heating version

Each POMTAVA gear pump can be equipped with special plates, allowing the adding of heating cartridges and temperature sensors, in order to maintain it to the required temperature. For further information, please ask our customer service. Temperature up to 135 °C/275°F (higher temperature on demand).



# General application

## Multicomponents systems

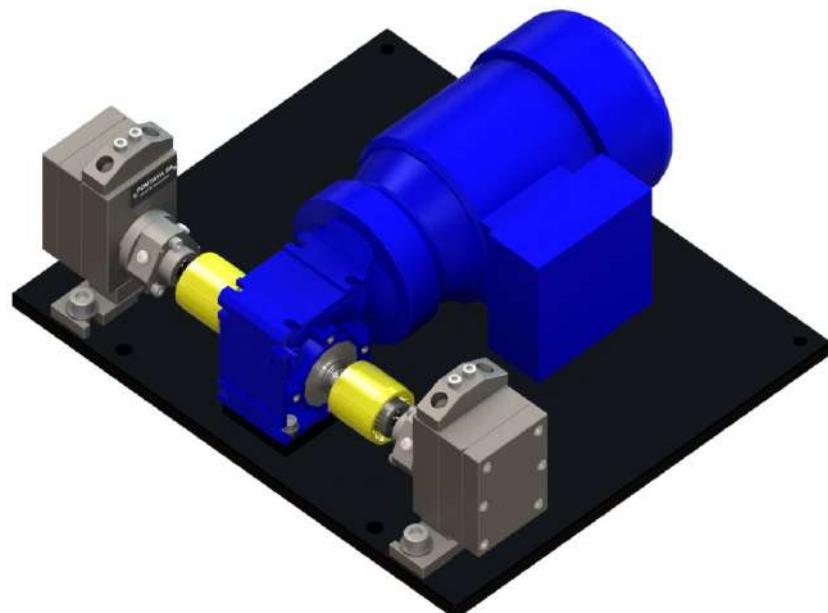


### Dispense Control Device for multicomponents applications

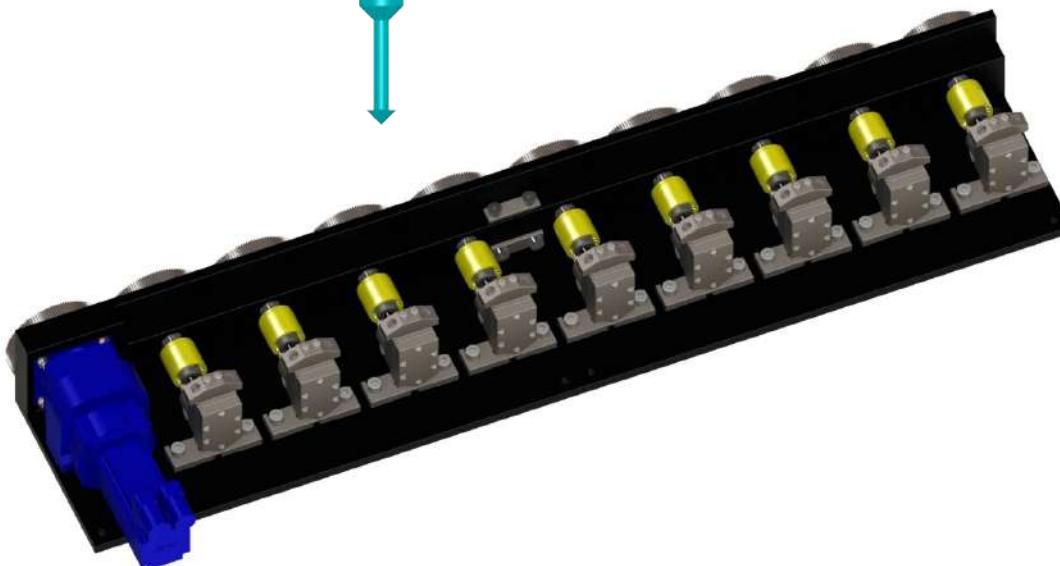
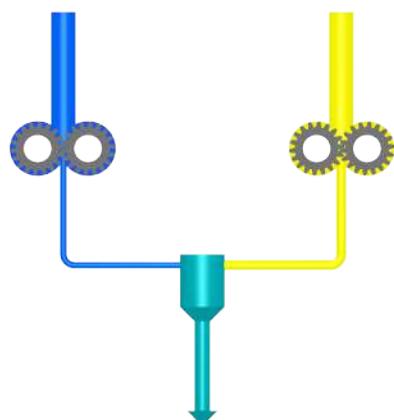
**Flowrate :** 3 to 20'000 cc/min  
**Pressure :** up to 100 bars (1450 psi)  
**Temperature :** up to 135 °C (275 °F)  
**Connections :** G1/4" to G1"  
**Viscosity :** up to 1'000'000 mPas

## Complete systems

**Flowrate :** 0.5 to 20'000 cc/min  
**Pressure :** up to 100 bars (1450 psi)  
**Temperature :** up to 135 °C (275 °F)  
**Connections :** G1/4" to G1"  
**Viscosity :** up to 1'000'000 mPas



Exemple of 2-components system



9 pumps - 1 motor system

# Accessories

POMTAVA can deliver you accessories for your gear pumps and metering systems.  
Don't hesitate to ask our customer service.



Pressure sensors



Connecting blocks for pressure sensors



Straight fittings



Elbowed fittings



Spec. fittings

- + Straight fittings
- + Elbowed fittings
- + Pneumatic valves
- + Level gauges
- + Connecting blocks
- + Bypass block
- + Various o-rings
- + Lip seals
- + Pressure sensors
- + Temperature sensors
- + Heating cartridge
- + Couplings
- + Filtering cartridge
- + Non Return Valves
- + etc.



Spec. fittings



Non return valve



Filtering cartridge



Filters



Pneumatic valves



Pneumatic fittings



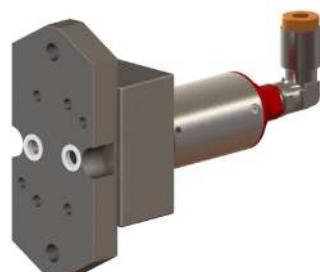
Level gauge



Bypass 2 valves, with solvent injection



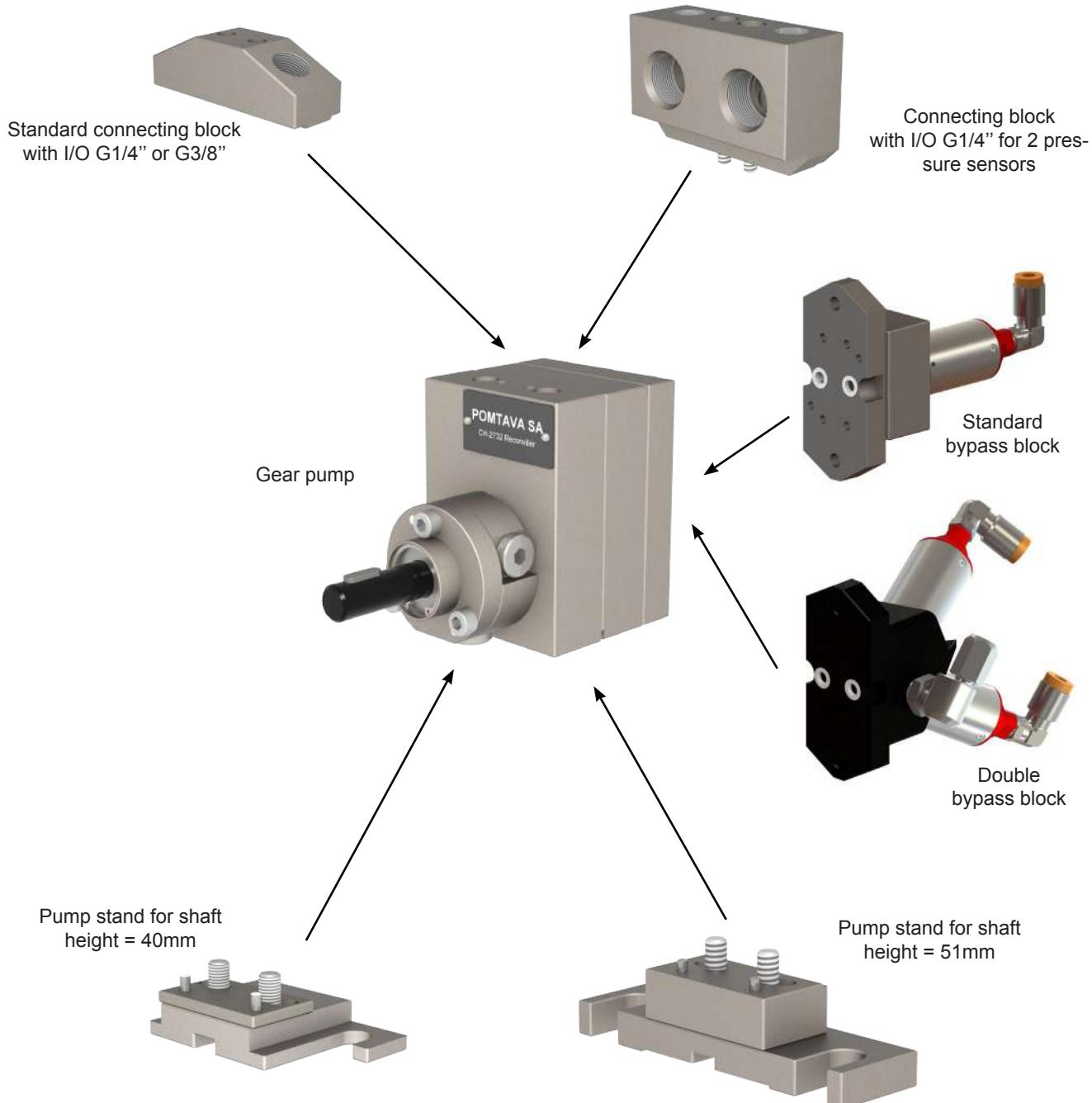
Bypass 2 valves, with drive shaft flushing



Bypass 1 valve

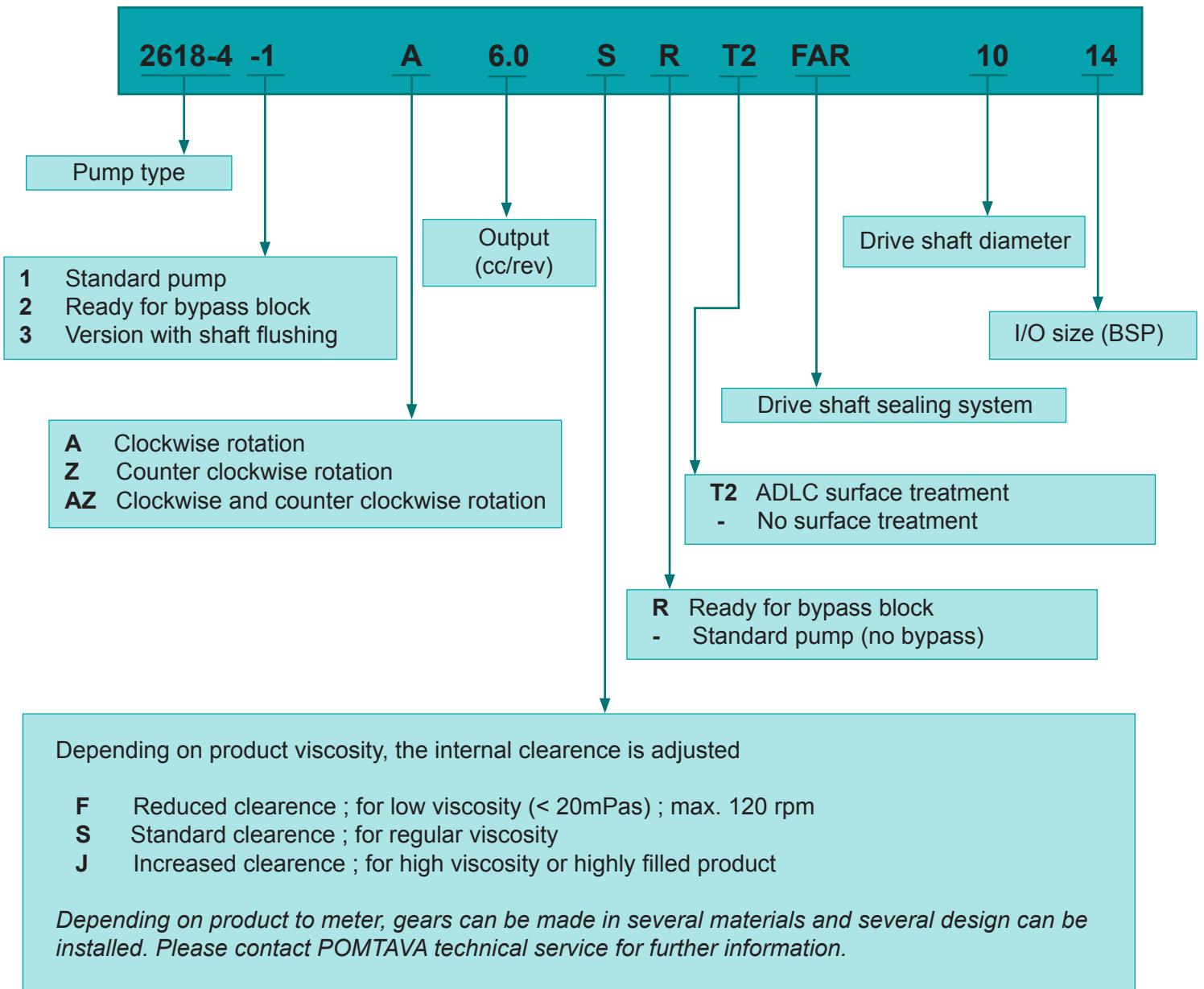
# Pump modularity

All POMTAVA metering gear pumps can be configured with different connecting blocks, and several drive shaft heights. For gear pumps prepared for bypass function (1611-4-2, 2611-4-2, 3611-4-2, 1618-4-2, 2618-4-2), two kinds of bypass block can be installed, standard or with solvent injection.

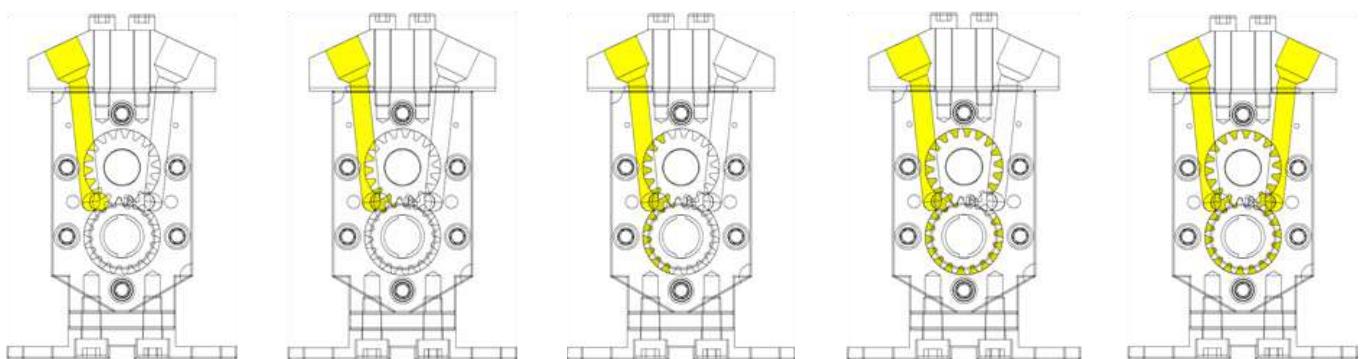


- Connecting blocks can be chosen in stainless steel or in anodized aluminium
- Pump stands can be customized depending on your needs

# Definition of a POMTAVA gear pump



## Gear pump principle



## **Switzerland**

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### **POMTAVA S.A.**

Nonceruz 2  
CH-2732 Reconvilier  
Tel +41 32 481 15 14  
Fax +41 32 481 48 18  
info@pomtava.com  
www.pomtava.com



# **POMTAVA**

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**METERING GEAR PUMPS**

## **POMTAVA Worldwide**

### **Spain**

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#### **POMTAVA España S.L.**

Calle Chabas y Bordehore 3  
Bl. 1, Esc.2, Puerta 18  
E - 46019 Valencia  
Tel +34 96 368 04 97  
Mobile +34 620 959 436  
Fax +34 96 368 04 97  
f.klose@pomtava.com  
www.pomtava.com

### **North America**

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#### **AW-Lake Company**

8809 Industrial Drive  
USA - Franksville, WI 53126  
Tel 800-850-6110  
www.aw-lake.com

### **China**

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#### **Chongqing Paco Co., Ltd.**

Room 1, 7th Floor, C Block  
West-Mall Building  
No 15, the Shiyang Road  
Shiqiaopu, Jilongpo District  
Chongqing, China  
ZIP: 400039  
Tel +86-23-6879 5340  
Mobile +86-13-5940-00884  
Fax +86-23-6879 5489  
cqpaco@hotmail.com  
http://www.chinacqpaco.com

### **Germany**

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#### **POMTAVA Deutschland**

Theodor Gugel Str. 08  
D - 73765 Neuhausen a. d. F.  
Tel +49 (0) 7158 98 79 717  
Mobile +49 (0) 152 53 14 31 76  
Fax +49 (0) 7158 98 79 718  
m.cisse@pomtava.com  
www.pomtava.com

### **Italy**

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#### **VICOM s.r.l.**

P. le Segrino 6/A  
I - 20159 Milano  
Tel +39 0266 88 202  
Mobile +39 0335 64 111 88  
Fax +39 0260 72 600  
vicom@vigocova.eu

### **Poland**

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#### **TechniLAK**

Marcyporeba 388 (Bachorowice)  
PL - 34-114 Brzeznica  
Tel +48 518 674 687  
Fax +48 33 487 11 89  
technilak@gmx.eu  
www.technilak.pl