

tapflo®

DRUM PUMPS

2018 | 1



» All about your flow

www.tapflo.com

All about your flow

Tapflo is a leading pump manufacturer with the ambition to provide a wide range of premium products for various industrial applications. We focus on delivering the best fluid processing solutions and support on all stages of the process, worldwide.



About Tapflo

Tapflo is an independent, Swedish, family owned manufacturer and global supplier of air operated diaphragm pumps, centrifugal pumps and other industrial process equipment. The company was founded in Kungälv, Sweden in 1980 and has since then been working with design and manufacture of thermoplastic, metal and sanitary series diaphragm pumps, as well as the complete range of centrifugal pumps and industrial equipment. After years of dynamic development, the company evolved into Tapflo Group with worldwide operations. Tapflo Group is represented by owned companies and independent distributors all over the world on 6 continents.

Quality certified

At Tapflo, we believe that quality is one of the highest values, both for our customers as well as our employees. As a result, we comply with various globally recognised certification and quality control institutions. Many of our products comply with EC ATEX directives for equipment intended for used in explosive and hazardous environments.

The aseptic series is EHEDG certified (European Hygienic Engineering & Design Group) and the pharmaceutical series has USP VI and EC 1935/2004 approval.

All of our products are clearly CE marked and followed by our comprehensive instruction manuals. Tapflo manufacturing process is certified according to ISO 9001:2015.



Our values

■ Long term engagement is our core

Our aim is to continuously provide premium products according to the evolving needs of our customers. That is why we see each customer relationship as a long term commitment.

■ Local means on your terms

Tapflo is your global partner providing local support. No matter where your plant is located, you can expect us to support you locally.

■ Flexibility the foundation of good service

We are prepared to deal with reality, knowing that in practice this means answering questions, offering solutions and supplying spare parts with a minimal loss of time.

■ Customising to bring the product to the needs

Our intention is always to help our clients find the most cost effective solutions to increase their company's efficiency.

If this means changing the design of the pump, we see it as a challenge - not a problem.

■ To produce is to develop

Being actively involved in the manufacturing of a product, it is almost impossible not to discover ways to improve it.

This allows us to frequently offer solutions that are even more sustainable and efficient.

Drum pumps

Electric or air operated drum and container pumps are light-weight, handy and very powerful devices for an economical and safe filling and transferring of thin to medium viscous media, neutral or aggressive, non-flammable or flammable substances out of drums and containers.

Our drum pumps can be used mobile in the field of drum and container emptying or stationary in the field of plant engineering or in filling processes and are designed for intermittent, short-term operation. The sophisticated, technically clear construction ensures an efficient and safe use.



■ Features & Benefits

✓ Wide range of application

✓ Compact & handy

✓ Many accessories available

✓ Low LCC (Life Cycle Cost)

✓ Available in food execution

✓ Comfortable to use

✓ Available in special executions

✓ Different materials and solutions available

✓ For low and high viscous media (to 100 000 cP)

✓ Available in executions for aggressive media



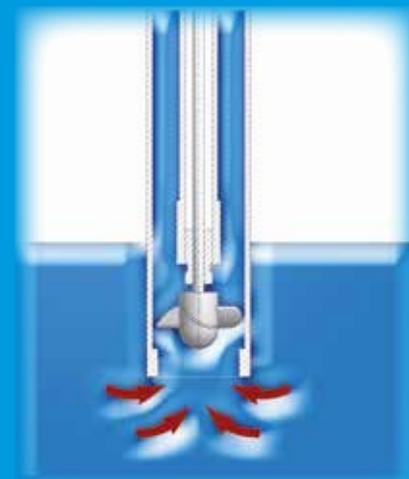
■ Working principle

Pump operation is very simple, assures non problematic operation

Pump is build with two main elements: pump tube and motor.

The main part is impeller or rotor, mounted at the bottom of pump tube.

The impeller is driven by long shaft mounted in pump tube driven by motor.



Typical applications



■ Examples of media:

- » Formic acid (50%)
- » Ammonia
- » Boric acid
- » Distilled water
- » Fertilizer solutions
- » Iron II and III-chloride
- » Acetic acid (80%)
- » Photo developer
- » Fruit acids
- » Potassium hydroxide solution
- » Copper chloride
- » Lactic acid
- » Sodium hydroxide solution
- » Phosphoric acid
- » Hydrochloric acid
- » Sulfuric acid up to (90%)
- » Hydrogen peroxide
- » Citric acid

Pump tubes

All the motors can be combined with 4 different executions of pump tubes: PP, PVDF, Stainless steel and aluminium.

Selection mostly depends on pumped media. Pump tube is attached to motor by mouting flange in very easy way.



Different type of impellers

Pump tubes with rotor are used when high capacities and low heads are required. If larger heads at lower flow rates are required, pump tubes with radial impellers are the right choice.

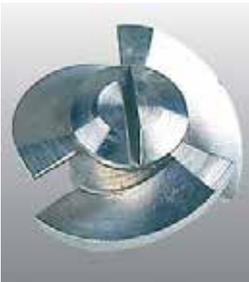


■ Axial (Rotor)

» Pump tubes with rotor are used when high capacities and low heads are required.

» A typical application is the decanting of drums and containers at same level.

» A rotor made of stainless steel 316 Ti is available as an option for stainless steel pump tubes.



■ Radial (Impeller)

» If larger heads at lower flow rates are required, pump tubes with radial impellers are the right choice.

» For this, a special pump foot is required. In any case, it was to be considered that the actual performance of a pump tube is depending on the power of the used motor.

» An impeller made of stainless steel 316 Ti is available as an option for stainless steel pump tubes.



Standard in all pump tubes!

Manual hand pumps

■ JP-02/JP-03

JP-02 Hand pump for acids, alkalis and water-based chemicals.

JP-03 Hand pump for oils, diesel, alcohol up to max. 50%, antifreeze liquid, water, etc.



Pump material: Polypropylene
Shaft: JP-02 Stainless steel 316 Ti; JP-03 Tool steel
Seals: JP-02 FKM ; JP-03 NBR
Flow rate: 0,3, 0,37 or 0,45 l/stroke* depending on lever position

The telescopic suction tube is adjustable from 340 to 900 mm and has a diameter of 40 mm. The pump housing has two threads G 2" and G 1½".

■ JP-04

Hand pump for various media.

Pump material: Polypropylene
Shaft: Polypropylene
Seals: depending on the media
Flow rate: ca. 0,3 l/stroke*
Hose connection: ¾"



CHEMICAL VERSION

The telescopic suction tube is adjustable from 480 to 950 mm and has a diameter of max. 34 mm.

The pump housing has a thread in 2" to be screwed in all standard steel drums. To compensate different threads we can offer appropriate threaded adapters.

■ JP-05

Stainless steel hand pump.

Pump tube made of stainless steel V4A (316 Ti), all gaskets made of PTFE. Therefore especially suitable for flammable liquids such as solvents (including acetone).
 Certified: risk analysis made by TUEV Munich

Suction tube lengths: 700 and 1,000 mm
Flow rate: 0,3–0,6 l/stroke *

Necessary accessories:
 Discharge arc with PTFE seal and wing nut;
 Hose connection made of stainless steel, with PTFE seal and wing nut made of brass, nickel plated; ¾"; 1";
 Drum adapter made of brass nickel plated R2" with fixing device;
 Anti-static set consisting of 4 copper cables (absolutely necessary when pumping flammable liquids)



■ JP-06

Suitable for water, slightly aggressive acids and alkalis.

Pump material: polyethylen and PVC
Suction tube length: 850 mm
Flow rate 0,08 l/pumping process and 20 l/min at an independent transferring*.

Hand pump complete with 130 cm long discharge hose and drum adapter G 2".

This hand pump is designed as a siphon pump. After the suction pipe and discharge hose arc had been filled manually the pump works independently.



■ JP-07

Manual filling and transfer pump.

Pump body made of polypropylene, internal parts also made of stainless steel, suitable for 20 liter canisters up to 200 liter barrels. Three adapters for bung hole diameters from 46,5 to 60 mm and a fourpiece suction tube are included.

Flow rate: Water: 20 l/min*
 Oil SAE 30: 9 l/min. at 20 °C*
Temperature: 40 °C*
Viscosity: 400 mPas*
 JP-07 BLUE seals: NBR
 For mineral oil products
 JP-07 RED seals: EPDM
 For alkaline solutions
 JP-07 GREEN seals: FKM

For slightly aggressive chemicals
 Accessories:
 transfer hose (1.5 m) with nozzle



■ JP-08

Hand-crank rotary pump for chemicals.

The pump is suitable for thin fluid, highly aggressive media such as acids and alkalis.

Pump material: PVDF
Seals: PTFE
Suction tube length: 3 x 35 cm
Flow rate: 0,3 l/rotation*

Pump complete with discharge arc and drum adapter G 2".
 Regular lubrication required.



Manual hand pumps

JP-11



Hand-crank rotary pump.

The pump is suitable for thin fluid, non-flammable liquids such as diesel, gear oil, heating oil, hydraulic oil, machine oil, mineral oil, motor oil, etc.

Material: Aluminium and zinc plated steel

Seals: NBR

Suction tube length: 1,080 mm

Flow rate: 1 l/rotation*

Changing from forward to reverse transferring possible. Thus results an optimal dosing.

Head: 15 m*

Horizontal distance: 50 m*

Pump complete with discharge hose and drum adapter G 2".

JP-12



Hand-crank rotary pump.

The pump is suitable for thin fluid, non-flammable liquids such as diesel, gear oil, heating oil, hydraulic oil, machine oil, mineral oil, motor oil, etc.

Material: Aluminium and zinc plated steel

Seals: NBR

Suction tube length: 1,080 mm

Flow rate: 1 l/rotation*

Changing from forward to reverse transferring possible. Thus results an optimal dosing.

Head: 15 m*

Horizontal distance: 50 m*

Pump complete with special mineral oil hose, discharge arc and drum adapter G 2".

JP-13



Metal hand crank rotary pump.

The pump is suitable for diesel, heating oil, oils (up to SAE 90) and all other self-lubricating, non-aggressive and non-flammable media.

Pump material: pump housing made of cast iron

Seals: NBR

Flow rate: 0,25 l/rotation*

Suction tube length: 980 mm; therefore suitable for smaller containers and 200 liter drums.

Pump complete with discharge arc and drum adapter G 2".

JP-15



Hand lever pump made of metal.

For transferring many thin fluid, non-flammable media such as diesel, oils, anti freezing liquid, etc.

Material: steel zinc plated

Seals: NBR

Flow rate: 0,35 l/stroke*

For drums and containers from 30 to 200 liters.

The telescopic suction tube enables an universal use for all barrel sizes.

G 1½" and G 2" drum adapter pump with discharge arc. The outlet has a ¾" - thread.

Therefore other connection options exist.

JP-16



Fire brigade hand pump.

ATEX compliant, single-acting hand pump that can be used for following media of hazard classes A I-III: diesel, heating oil, fuel, petroleum, anti freezing liquid for cooler (undiluted), thin fluid mineral oils and rapeseed methyl ester

Execution for fire brigade with flexible suction hose instead of a rigid tube.

Suction hose DN 19 x 4; 1,5 m

Discharge hose DN 19 x 4; 1,5 m

Flow rate: app. 0,25 l/stroke*

In pump housing integrated drum adapters with M 64x4 and G 2" enable an easy fixing in drum.

JP-111



Suitable for water, diesel, lightly oils, neutral, lightly aggressive and non flammable media.

Only suitable for short-term operation.

Pump material: PP, PE and ABS

Suction tube length: 46 cm

Discharge hose: 60 cm

Largest suction tube diameter: 31,7 mm

Flow rate: 10/min.*

Driven by 2 batteries, size D, 1,5 V (not included in price).

* All specified values are maximum values.
The flow rate of the pump refers to water at 18 ° C and free outlet.



When pumping flammable media or using in explosive environments only light pumps that hold an ignition source assessment are allowed. Furthermore it is mandatory to establish a potential equalization by grounding the hand pump and the drum.

Laboratory pumps

■ Electric universal motor JP-120 & JP-140



JP-120, 230V, 250 Wat, 50 Hz
(with hose and oval gear meter):

Weight: 2 kg
Flow rate: 20 l/min
Head: 5 m (Rotor)
Viscosity: 200 mPas
Density: 1,2 g/cm³

JP-140, 230V, 450 Wat, 50 Hz
(with hose and oval gear meter):

Weight: 2,3 kg
Flow rate: 48 l/min
Head: 10 m (Rotor)
Viscosity: 300 mPas
Density: 1,3 g/cm³

with a suction tube Ø from 25 or 32 mm

■ Air operated motor JP-AIR 1



300 Watt at max. 6 bar operating pressure, with silencer and brass ball valve for dosing the compressed air. Therefore the speed of the motor and flow rate of the pump can be adjusted

Weight: 2,6 kg

■ Features & Benefits

- ✓ Designed for a safe and easy transfer of fluids out of narrow-necked containers and canisters.
- ✓ Suitable for almost all thin fluid, neutral or corrosive media, except from flammable liquids (for stainless steel pump tube ATEX is in preparation).
- ✓ Handy and mobile due to the low weight.
- ✓ The pumps are driven by an electric or air operated motors.
- ✓ Ergonomically designed handle of high-performance electric motor for single-handed operation.
- ✓ Sealless pump tubes made of polypropylene (PP) and stainless steel 316 Ti with acid and alkali-resistant shaft made of stainless steel or hastelloy 2,4610.
- ✓ Optimal drum emptying through the availability of different suction tube lengths and suction tube diameters.
- ✓ Hose connection included in delivery; for PP-pump tube with Ø 25 mm: hose connection ½", for Ø 28 and 32 mm hose connection ¾"; for SS-pump tube for Ø 28 mm hose connection ¾", for Ø 32 mm hose connection 1".
- ✓ Wide range of accessories as barrel and threaded adapters, mediareistant hoses, nozzles, wall hanger or flow meters available on request.
- ✓ Quick disconnection of the drive from the pump tube through a threaded connection.
- ✓ Easy disassembly and easy cleaning of the pump tube.
- ✓ Consistent modular system.

Electric motors for drum pumps

Ø 41 mm

■ Electric universal motor JP-160

Available JP-164 for voltage 24V.

230 V, 50 Hz, 400 Watt, IP 24



double insulation protection class II, over load protection switch with integrated low voltage release. 5 m cable with plug. Speed control as option.

Weight: 3,1 kg
Flow rate: 82 l/min (rotor), 61 l/min (impeller)
Head: 9 m (rotor), 20 m (impeller)
Viscosity: 400 mPas
Density: 1,3 g/cm³

■ Electric universal motor JP-180

230/115 V, 50/60 Hz, 600 Watt, IP 24



double insulation protection class II, over load protection switch with integrated low voltage release. 5 m cable with plug. Also available in 115 volts, 60 Hz. Speed control as option.

Weight: 3,6 kg
Flow rate: 93 l/min (rotor), 74 l/min (impeller)
Head: 11 m (rotor), 26 m (impeller)
Viscosity: 600 mPas
Density: 1,5 g/cm³

■ Electric universal motor JP-280

230/115 V, 50/60 Hz, 825 Watt, IP 24



double insulation protection class II, over load protection switch with integrated low voltage release. 5 m cable with plug. Also available in 115 volts, 60 Hz.

Weight: 5,5 kg
Flow rate: 112 l/min (rotor), 83 l/min (impeller)
Head: 16 m (rotor), 36 m (impeller)
Viscosity: 1000 mPas
Density: 1,5 g/cm³

■ Electric universal motor JP-360

230V, 50Hz, 600W, IP55



protection class I, over load protection, low voltage release and speed control. 5 m cable with plug. Version in 115 Volt, 60 Hz in preparation.

Weight: 6 kg
Flow rate: 93 l/min (rotor), 74 l/min (impeller)
Head: 11 m (rotor), 26 m (impeller)
Viscosity: 600 mPas
Density: up to 1,5 g/cm³

■ Electric universal motor JP-380

230 Volt, 50 Hz, 825 Watt, IP 55



double insulation protection class II, over load protection, low voltage release and speed control. 5 m cable with plug. Version in 115 Volt, 60 Hz in preparation.

Weight: 5,5kg
Flow rate: do 112l/min
Head: 16m (rotor), 37m (impeller)
Viscosity: 1000mPas
Density: up to 1,9 g/cm³

■ Explosion-proof electric universal motor JP-400

230 Volt, 50 Hz, 550 Watt, IP 54



double insulated protection class II, with low voltage release. 5 m cable without plug.

Weight: 10 kg
Flow rate: 97 l/min (rotor), 71 l/min (impeller)
Head: 11 m (rotor), 20 m (impeller)
Viscosity: 600 mPas
Density: 1,5 g/cm³

■ Explosion-proof electric universal motor JP-440

230 Volt, 50/60 Hz, 460 Watt, IP 55



double insulation protection class II, with or without low voltage release. 5 m cable without plug. Optional with Ex-plug. Also available in 115 Volt, 60 Hz.

Weight: 5,5 kg
Flow rate: 82 l/min (rotor), 61 l/min (impeller)
Head: 9 m (rotor), 20 m (impeller)
Viscosity: 400 mPas
Density: 1,3 g/cm³

■ Explosion-proof electric universal motor JP-460

230 Volt, 50/60 Hz, 640 Watt, IP 55



double insulation protection class II, with or without low voltage release. 5 m cable without plug. Optional with Ex-plug. Also available in 115 Volt, 60 Hz.

Weight: 6 kg
Flow rate: 93 l/min (rotor), 74 l/min (impeller)
Head: 11 m (rotor), 26 m (impeller)
Viscosity: 600 mPas
Density: 1,5 g/cm³

■ Explosion-proof electric universal motor JP-480

230 Volt, 50/60 Hz, 825 Watt, IP 55



double insulation protection class II, with or without low voltage release. 5 m cable without plug. Optional with Ex-plug. Also available in 115 Volt, 60 Hz.

Weight: 6,5 kg
Flow rate: 112 l/min (rotor), 83 l/min (impeller)
Head: 16 m (rotor), 37 m (impeller)
Viscosity: 1000 mPas
Density: 1,9 g/cm³

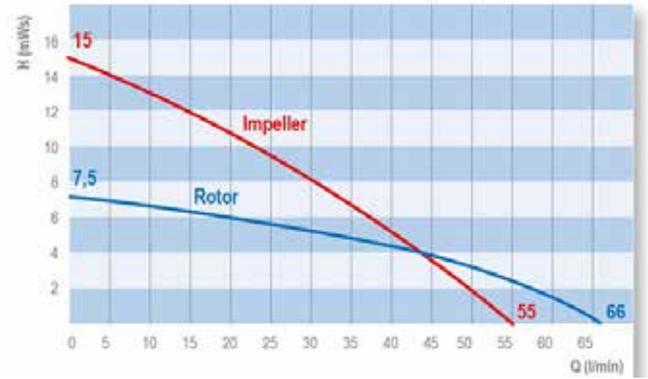
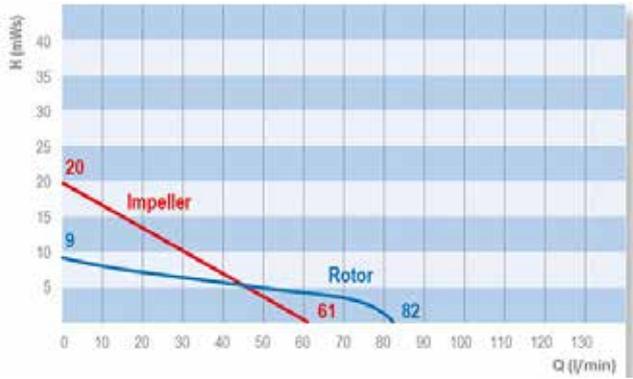
Flow curves

Test media water 20 ° C, pressure pipe 1", oval gear meter, measured values: ± 5%

» JP 160

» JP 440

» JP 164



» JP 180

» JP 200

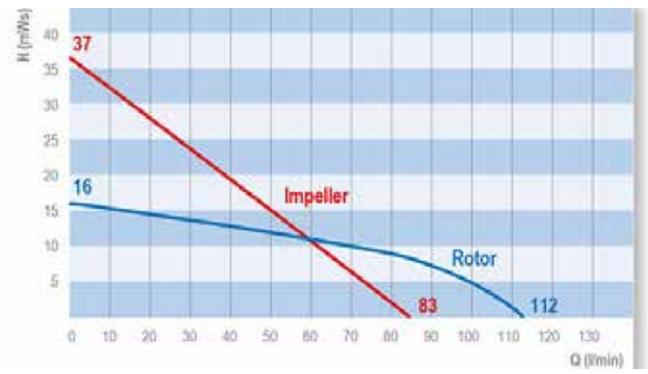
» JP 360

» JP 460

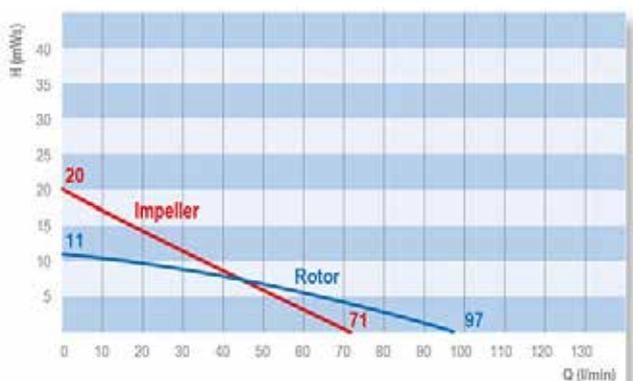
» JP 280

» JP 380

» JP 480



» JP 400 Ex



Options electric motors

Universal motors, which can be used with all the pump tubes outside the EX zone, are lightweight, handy and powerful for almost all liquids, including liquids with low viscosity. Portable and stationary drum pump motors are especially designed for periodic operation. The technical ease of installation of drum pumps guarantees economical and reliable operation. Different pumps for various fluids can be exchanged without problems and work with the same motor.

Electronic speed control JP-160, JP-180, JP-280

The flow rate of the media to be pumped can be regulated by a speed control that is integrated in a keyboard at the top of the motor handle.

By means of four speed steps flow rates of 50, 60, 80 and 100 percent can be selected. Therefore the flow rate can be adjusted to the needs of the user.



■ Features & Benefits

- ✓ Universal motors that can be combined with all pump tubes for outside hazardous areas are lightweight, handy and powerful devices for nearly all thin fluid and slightly viscous media.
- ✓ The non-stationary and stationary applicable drum pump motors are particularly suitable for intermittent operation.
- ✓ The sophisticated, technically clear structure of the drum pump ensures a rational and safe use.
- ✓ Quick disconnection of the drive from the pump tube through a few rotations enables the combination of an engine with various pump tubes for different media.
- ✓ Wide range of accessories such as drum and threaded adapters, media-resistant hoses, nozzles, wall hanger or flow meter is available on request.
- ✓ Easy disassembling and quick cleaning of the pump tubes.

* All specified values are maximum values. The flow rate of the pump refers to water at 18 ° C and free outlet.

Air operated motors for drum pumps

Explosion-proof air operated motor JP-AIR 1



- » The air operated motor JP-AIR 1 is a compactly built, robust explosion-proof air operated motor in accordance with the latest explosion protection guidelines ATEX 100a (94/9/EC), category 2.
- » The handy and powerful device (2.1 kg) can be used as a drive for the laboratory pump tubes (not ex-certified) or in hazardous areas for the ATEX certified sealless pump tubes made of stainless steel (Ø 41 mm), the mixing pump tubes in stainless steel, the stainless steel pump tubes with mechanical seal or complete drum emptying function.
- » In combination with ATEX certified pump tubes, the drive is suitable for many low-viscous, neutral, slightly aggressive media and especially for highly flammable media with a flash point below 55 °C.
- » The drum pump motor is characterized in addition to its robustness by its elegant design and ease of use. The non-stationary and stationary usable drive is particularly suitable for intermittent operation. The construction of the motor guarantees an high operational safety and a long lifetime.
- » The very robust aluminium motor housing ensures a good chemical resistance when aggressive solvent vapours are present.
- » The air operated motor is supplied with a silencer and a ball valve at the air inlet for controlling the compressed air and thereby the motor speed.

Flow rate: do 78 l/min*
Head:
 9 m (rotor)*, 13 m (impeller) *
Viscosity: do 400 mPas*
Density: 1,3g/cm^{3*}
Air consumption under load: 13l/sec.

The pneumatic motor is explosion-protected according to Ex 2 GD c IIC T6 (80 °C) X and has a type-certificate IBEX U05 ATEX B007 X.

Explosion-proof air operated motor JP-AIR 2



- » The air operated motor JP-AIR 2 is a compactly built, robust explosion-proof air operated motor in accordance with the latest explosion protection guidelines ATEX 100a (94/9/EC), category 2.
- » The handy and powerful device (1,5 kg) can be used as a drive for the laboratory pump tubes (not ex-certified) or in hazardous areas for the ATEX certified sealless pump tubes made of stainless steel (Ø 41 mm), the mixing pump tubes in stainless steel, the stainless steel pump tubes with mechanical seal or complete drum emptying function and the eccentric screw pump tubes of series JP-700 SR PTFE ATEX.
- » In combination with ATEX certified pump tubes the drive is suitable for many low-viscous, neutral, slightly aggressive media and for highly flammable media with a flash point below 55 °C.
- » The drum pump motor is characterized in addition to its robustness by its elegant design and ease of use. The non-stationary and stationary usable drive is particularly suitable for intermittent operation. The construction of the motor guarantees an high operational safety and a long lifetime.
- » The very robust aluminium motor housing ensures a good chemical resistance when aggressive solvent vapours are present.
- » The air operated motor is supplied with a silencer. At the handle is an on/off starting button that can be fixed.

Flow rate: do 80 l/min*
Head:
 10 m (rotor)*, 15 m (impeller) *
Viscosity: do 600 mPas*
Density: 1,5g/cm^{3*}
Air consumption under load: 12 l/sec

The pneumatic motor is explosion-protected according to Ex 2 GD c IIC T6 (80 °C) X and has a type-certificate IBEX U05 ATEX B007 X.

Explosion-proof air operated motor JP-AIR 3



- » The air operated motor JP-AIR 3 is a compactly built, robust explosion-proof air operated motor in accordance with the latest explosion protection guidelines ATEX 100a (94/9/EC), category 2.
- » The handy and powerful device (1,9 kg) can be used as a drive for the laboratory pump tubes (not ex-certified) or in hazardous areas for the ATEX certified sealless pump tubes made of stainless steel (Ø 41 mm), the mixing pump tubes in stainless steel, the stainless steel pump tubes with mechanical seal or complete drum emptying function and the eccentric screw pump tubes of series JP-700 SR PTFE ATEX.
- » In combination with ATEX certified pump tubes the drive is suitable for many low-viscous, neutral, slightly aggressive media and for highly flammable media with a flash point below 55 °C.
- » The drum pump motor is characterized in addition to its robustness by its elegant design and ease of use. The non-stationary and stationary usable drive is particularly suitable for intermittent operation. The construction of the motor guarantees an high operational safety and a long lifetime.
- » The very robust stainless steel 316Ti motor housing ensures a good chemical resistance when aggressive solvent vapours are present.
- » The air operated motor is supplied with two silencers and a ball valve at the air inlet for controlling the compressed air and thereby the motor speed.

Flow rate: do 91 l/min*
Head:
 13 m (rotor), 25 m (impeller) *
Viscosity: do 600 mPas*
Density: 1,5g/cm^{3*}
Air consumption under load: 13 l/sec

The pneumatic motor is explosion-protected to Ex 2 GD c IIC T6 (80°C) X and has a type-certificate IBEX U05 ATEX B007 X.

Pump tubes

Ø 41 mm

■ Pump tubes made of polypropylene (PP) up to 50° C



- » Can be used for aggressive and hardly flammable media.
- » Especially suitable for aggressive media such as cleaning agents, acids and alkalis.
- » Drive shaft made of stainless steel 316 Ti or hastelloy 2,4610.
- » Hose connection 1" included (¾" or 1¼" also possible).
- » Maximum medium temperature 50 °C.

■ Pump tubes made of polyvinylidene-fluoride (PVDF) up to 90° C



- » Can be used for aggressive and hardly flammable media.
- » Especially suitable for aggressive media such as high concentrated acids and alkalis.
- » Drive shaft made of hastelloy 2,4610.
- » Hose connection 1" included (¾" or 1¼" also possible).
- » Maximum medium temperature 90 °C.

■ Pump tubes made of stainless steel (SS) up to 120° C



- » With SS-pump tubes all neutral, low viscous media as organic and inorganic diluted acids and alkalis are mainly pumped.
- » Suitable for flammable media up to temperature class 4 and use in ex-zone 0.
- » The pump tubes in stainless steel with a carbon bearing approved for the food sector are used since many years in the food industry and the beverage industry.
- » Drive shaft made of stainless steel 316 Ti.
- » Hose connection 1" included (¾" or 1¼" also possible).
- » EC type examination certificate number ZELM 09 ATEX 0424X.
- » Maximum medium temperature 90 °C (with PTFE rotor) or 120 °C (with SS rotor) outside ex areas.

■ Pump tubes made of Aluminium (ALU) up to 90° C



- » Suitable for neutral and hardly flammable media.
- » Especially suitable for mineral oil products up to 1,000 mPas.
- » Drive shaft made of stainless steel 316 Ti.
- » Hose connection 1" included (¾" or 1¼" also possible).
- » Maximum medium temperature 90 °C.

Pump tube length:

Polypropylene (PP)	700mm ,1000mm, 1200mm, 1500mm, 1800mm Special lengths from 200 to 3,000 mm are available on request.
Polyvinylidene fluoride (PVDF)	700mm, 1000mm, 1200mm, 1500mm Special lengths are available on request.
Stainless Steel (SS)	700mm, 1000mm, 1200mm, 1500mm, 1800mm, 2100mm, 2400mm, 2700mm, 3000mm
Aluminium (ALU)	700mm, 1000mm, 1200mm, 1500mm Special lengths up to 3,000 mm are available on request.

* Execution for EX zone only with special examined electric motors or with pneumatic motors.



Mixing pump tubes

■ Features & Benefits

- ✓ Mixing pump tubes are suitable for those applications where low viscous to slightly viscous media must be mixed in drums and other containers and after that pumped out.
- ✓ The mixing pump tubes made of polypropylene with a shaft of hastelloy are used especially for aggressive media like acids and alkalies.
- ✓ Mixing pump tubes made of stainless steel are used primarily for neutral, slightly aggressive and flammable media.
- ✓ The pump tubes are approved for use in ex-zone 0.

■ Mixing pump tubes made of polypropylene

Mixing pump tube made of polypropylene (Mix PP), sealless construction with double function mixing and pumping.

- » Suction tube length 1,000/1,200 mm, suction tube diameter 50/41 mm.
- » Drive shaft in hastelloy 2,4610.
- » Hose connection 1" included ($\frac{3}{4}$ " or $1\frac{1}{4}$ " also possible).
- » The suction tube length of 1,000 mm is suitable for mixing and transferring media out of 200-liter drums.
- » The suction tube length of 1,200 mm is the right choice for circulating media in containers and to empty the containers.
- » The motors JP-180, JP-280, JP-360 and JP-380 and the air operated motors have proven themselves well as drives for the mixing pump tubes.



■ Mixing pump tubes made of stainless steel

Mixing pump tube made of stainless steel 316 Ti (Mix SS) sealless construction with the double function mixing and pumping.

- » Suction tube length 1,000/1,200 mm, suction tube diameter 50/41 mm.
- » Drive shaft in stainless steel 316 Ti
- » Hose connection 1" included ($\frac{3}{4}$ " or $1\frac{1}{4}$ " also possible).
- » The suction tube length of 1,000 mm is suitable for mixing and transferring media out of 200-liter drums.
- » The suction tube length of 1,200 mm is the right choice for circulating media in containers and to empty the containers.
- » The motors JP-180, JP-280, JP-360 and JP-380 as well as in hazardous areas the electric motor JP-400 and the air operated motors have proven well themselves as drives for the mixing pump tubes.



EC type examination certificate number ZELM 09 ATEX 0424X

Normally sealless pump tubes can be used for almost all applications. Only with sticky, crystallizing, heavily polluted media or when the container is pre-pressurized pump tubes with mechanical seal are necessarily preferable. **These tubes are not allowed to run dry.**

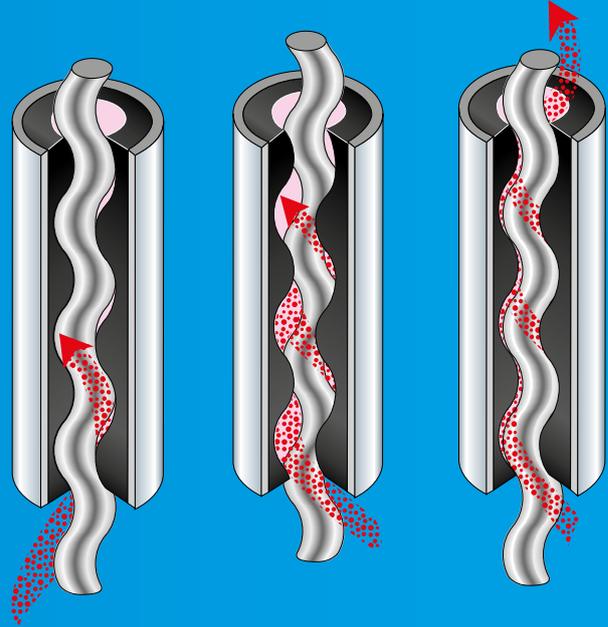
Eccentric screw drum pumps

Eccentric screw drum pumps are available in two versions SR and DR. SR is driven by 1-phase high speed JP motors and DR is driven by 1-phase or 3-phase IEC motors.

■ Working principle

The rotor is a moving part of the pump that rotates in order to make the fluid flow, whereas the stator is the stationary part within which rotor makes oscillations.

This movement creates a number of cavities that make it convenient for the fluid to transfer from a low pressure spot to high pressure spot.



Typical applications

Screw-type drum pumps are primarily used for pouring barrels and containers of media with high viscosity. They are used to pump such media as paints, varnishes, resins, latexes, silicones, polymers, and in the lubricant and oil industries such as oils, fats, cooling lubricants, refrigerants.



Pumps are easy to clean and easy to disassemble.



DR pumps can be used in the food industry to dispense containers such as concentrates.

Pumps are approved for FDA certified food for o-rings and stator.

JP-700 SR



Eccentric screw drum and container pumps

- » Particularly for intermittent operation.
 - » For gentle and almost pulsation free transferring of low viscous to highly viscous, thixotropic, gassy, solids and fibres containing, aggressive and neutral media.
 - » Pump tube will be driven by electric universal or air operated motors.
 - » All pump parts are made of stainless steel 316 Ti.
 - » The stators are adapted to the medium and available in NBR, NBR light, FKM, EPDM, EPDM light, PTFE.
 - » The maximum viscosity of the medium is 20,000 mPas at the SR version.
 - » Medium temperature up to 150 °C.
 - » Suction tube diameter 54 mm, therefore for all 200 liter drums with a 2" bung hole.
- Easy disassembling and therefore optimal cleaning.
- » Shaft seal by single-acting mechanical seal or stuffing box packing.
 - » Special version for food, cosmetic and pharmaceutical products can be delivered: polished surfaces, either open or encapsulated pin joints, no dead spaces in the pump, easy disassembling and therefore easy cleaning, milk thread connection DN 11851, CIP connections as an option, stator and sealing materials in food grade FDA, also PTFE stators available. Dostępne również statory z PTFE.

Technical data

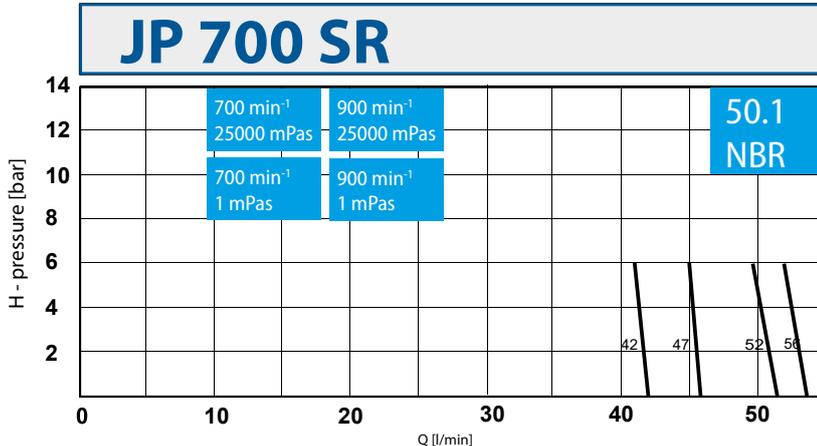
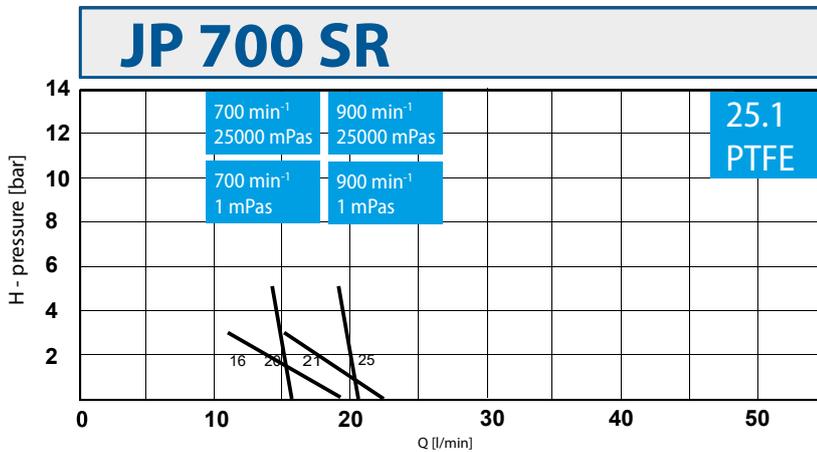
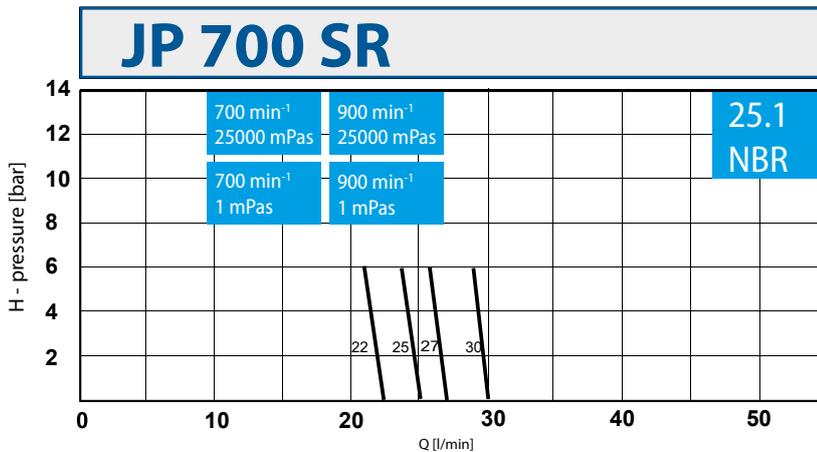
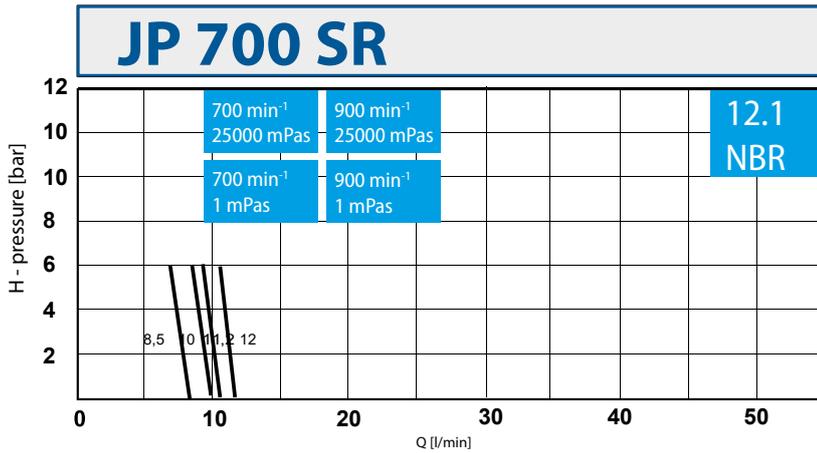
Pump parts	SS 316 Ti
Flow rate	12 / 25 /50 [l/min] (at JP-700 DR also dosing pumps are available!).
Discharge pressure	6 bar, 12 bar
Maximum viscosity	20 000 mPas
Tube diameter	54 mm
Tube lengths	Standard tube: 700, 1,000 and 1,200 mm. Special lengths up to 2,000 mm on request.
Engine	825 Watt or pneumatic
Weight	6-14 kg

Pump tubes

Model	Suction tube length	Flow rate	Pressure
JP-700.12.1	1000 mm	12 l/min	6 bar
JP-700.12.2	1100 mm	12 l/min	12 bar
JP-700.25.1	1000 mm	25 l/min	6 bar
JP-700.25.2	1100 mm	25 l/min	12 bar
JP-700.50.1	1100 mm	50 l/min	6 bar

Suction tube Ø 54 mm, at discharge connection male thread G 1½" Optional hose connection 1", 1¼" or 1½"

Flow curves



Selection of stators (valid for all pumps)

» **NBR** black, max 90 °C, suitable for oily and greasy media, alcohol and aqueous solutions. Not resistant to acids, alkalis and solvents.

» **NBR** White Nitrile, max 90 °C, suitable for oily and greasy media, alcohol and food. Not resistant to acids, alkalis and solvents.

» **Viton (FKM)** max 160 °C, high chemical resistance.

» **PTFE (Teflon)** max 200 °C, high chemical resistance, suitable for food, pharmaceutical and cosmetic products.

» **EPDM** max. 110 °C, good resistance to alkalis (undiluted and diluted), acids (diluted), ketones, alcohols. Food-safe (corresponding to BGVV recommendations and in the composition of the positive list of FDA). Not resistant to oils and fats when transferring milk (3.5% fat) a sufficient resistance is given.

Changes reserved without notice

JP-700 DR E



Drive with three-phase or air operated motor directly coupled with extended motor shaft.



Drive with three-phase or air operated motor is directly coupled with flexible coupling, beared shaft ball.

Eccentric screw drum and container pumps with three-phase-, gear-, single-phase- or air operated motor

The pumps of the series JP-700 DR are versatile, robust and powerful pumps. They are used for pumping thin fluid to highly viscous substances up to 100,000 mPas, preferably used stationary and in continuous operation.

- » JP-700 DR-Version drive through three-phase-, gear-, single-phase- or air operated motors.
- » All pumps that get in contact with the media are made of stainless steel 316 Ti
- » The stators are available in NBR, NBR light, FKM, EPDM, EPDM light or PTFE depending on the medium.
- » The pump tube sealing is designed as a mechanical seal or stuffing box.
- » The weight of the pump depends on suction tube length and the drive 25-35 kg.
- » The pump is also available as a food version (see JP-700 SR version) or as a dosing pump (lower flow rate, smaller suction tube diameter).

ATEX

The JP-700 DR with PTFE stator and a special ATEX mechanical seal has a type-examination certificate and can be used for flammable liquids and in explosive environments. II ½ G c IIA T4

Technical data

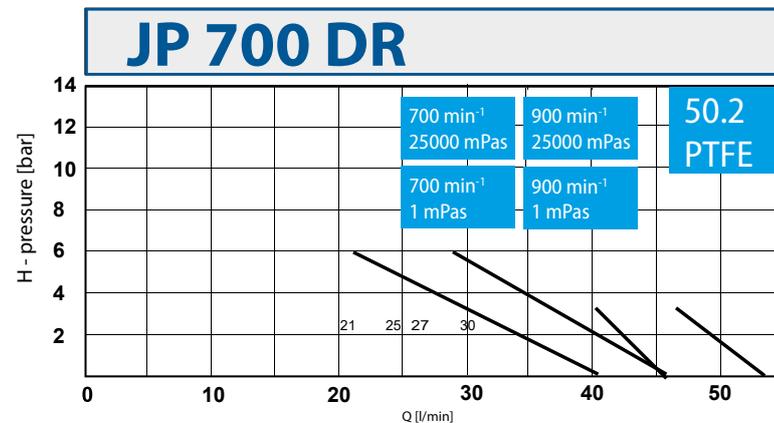
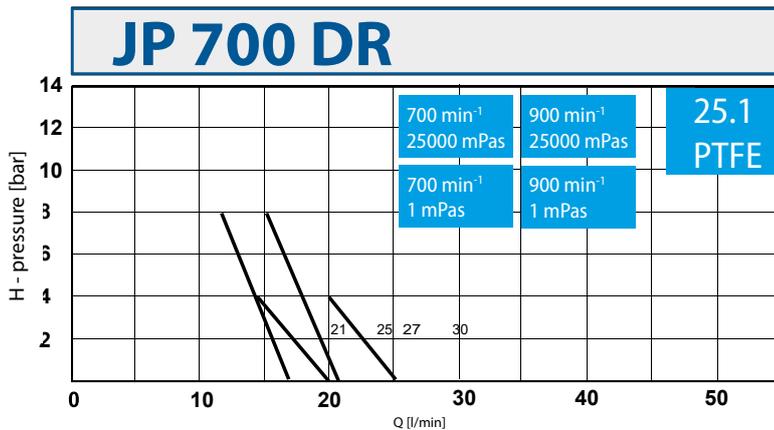
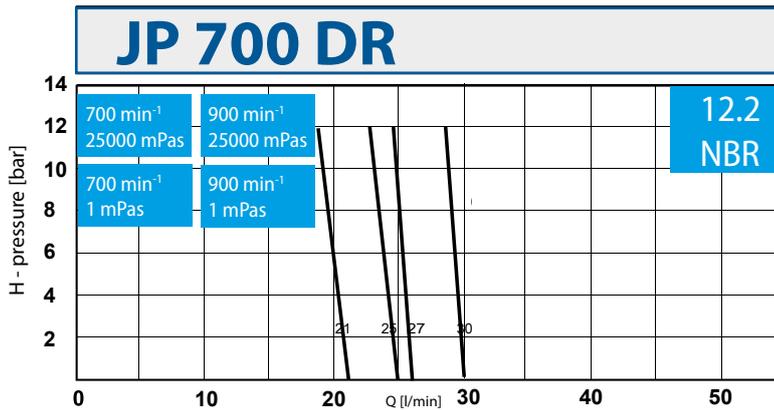
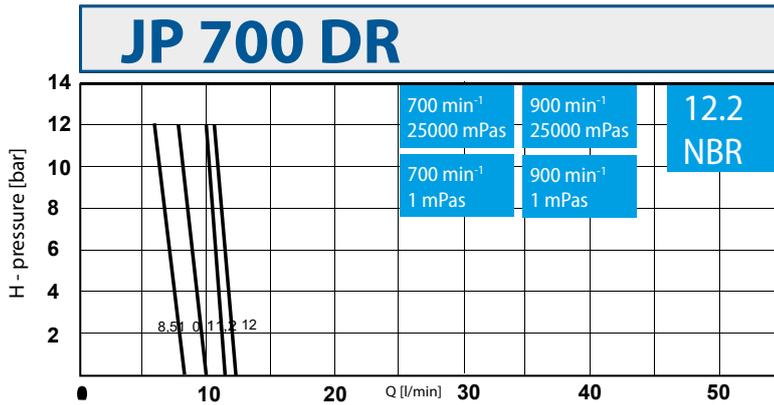
Pump parts	SS 316L
Flow rate	12 / 25 / 50 [l/min]
Discharge pressure	6 bar, 12 bar
Maximum viscosity	100 000 mPas
Tube diameter	54 mm
Tube lengths	Standard tube: 700 / 1000 / 1200 / 1500 / 1800 mm, others on request.
Engine	0,37 - 1,5 kW
Weight	25-35 kg

Pump tubes

Model	Suction tube length	Flow rate	Pressure
JP-700.12.1 DR	700/1000/1.200	12 l/min	6 bar
JP-700.12.2 DR	800/1100/1.300	12 l/min	12 bar
JP-700.25.1 DR	700/1000/1.200	25 l/min	6 bar
JP-700.25.2 DR	800/1100/1.300	25 l/min	12 bar
JP-700.50.1 DR	800/1100/1.300	50 l/min	6 bar

Suction tube Ø 54 mm, at discharge connection male thread G 1½" Optional hose connection 1", 1¼" or 1½"

Flow curves



Selection of stators (valid for all pumps)

» **NBR** black, max 90 °C, suitable for oily and greasy media, alcohol and aqueous solutions. Not resistant to acids, alkalis and solvents.

» **NBR** White Nitrile, max 90 °C, suitable for oily and greasy media, alcohol and food. Not resistant to acids, alkalis and solvents.

» **Viton (FKM)** max 160 °C, high chemical resistance.

» **PTFE (Teflon)** max 200 °C, high chemical resistance, suitable for food, pharmaceutical and cosmetic products.

» **EPDM** max. 110 °C, good resistance to alkalis (undiluted and diluted), acids (diluted), ketones, alcohols. Food-safe (corresponding to BGVV recommendations and in the composition of the positive list of FDA). Not resistant to oils and fats when transferring milk (3.5% fat) a sufficient resistance is given.

The pump is also available as a food version (see JP-700 SR version) or as a dosing pump (lower flow rate, smaller suction tube diameter).

Eccentric screw container pumps

JP-700.80.1, 80.2, 200.1, 200.2, 300.1 i 300.2

80- 300 l/min



WARNING:

Pumps are currently not ATEX approved. Therefore, it is not allowed to expel flammable liquids or to use pumps in potentially explosive atmospheres.

- » Gentle and nearly pulsation free pumping of low to high viscous, thixotropic, gaseous, solids and fibers containing, aggressive and neutral media.
- » Suction tube and pump parts of 316 Ti, rotor made of stainless steel 316 Ti.
- » Pump and motor directly coupled.
- » Encapsulated pin joints or joint-free.
- » Easy disassembly.
- » Various discharge connections.
- » Hose connection DN 40, DN 50–65, DN 65–80.
- » Materials of the shaft seal: mechanical seal SS / Carbon / FKM or SiC / SiC / FKM. O-rings made of FKM or FEP. Alternatively stuffing box made of PTFE.
- » Driven by three-phase, gear- or air operated motors.
- » Special features of the food version:
Polished surfaces, easy disassembly and thus easy to clean at the discharge milk thread DIN 11851, stator and seals in food grade version according to FDA, PTFE stators also available.

Technical data

Pump parts	SS 316L
Flow rates	80 / 200 /300 [l/min]
Discharge pressure	6 bar, 12 bar
Max. lepkość	100 000 mPas
Tube diameter	89mm (JP-700.80), 105mm (JP-700.200),130mm (JP-700.300)
Tube lengths	1000 / 1200 / 1400 mm, (special lengths available).
Engine	Driven by three-phase, gear- or air operated motors.

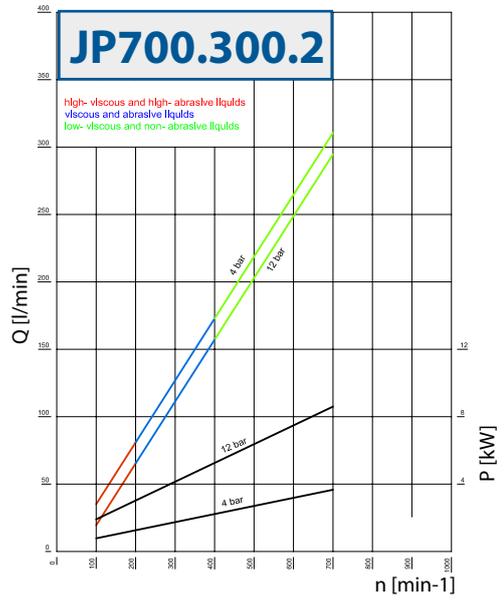
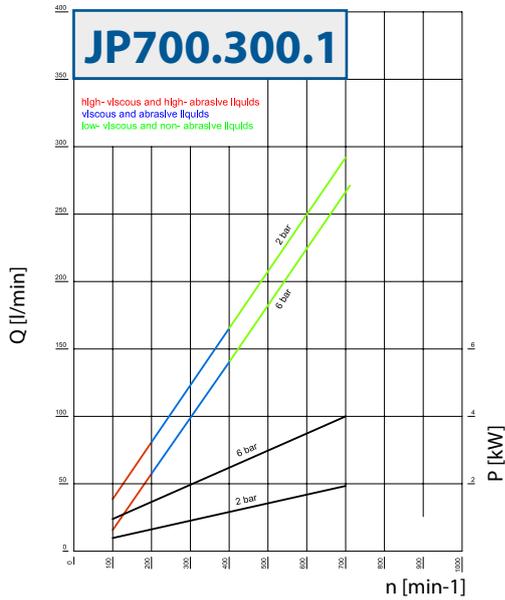
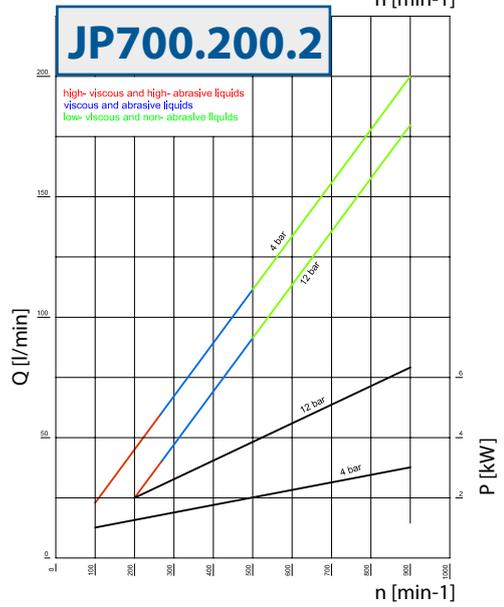
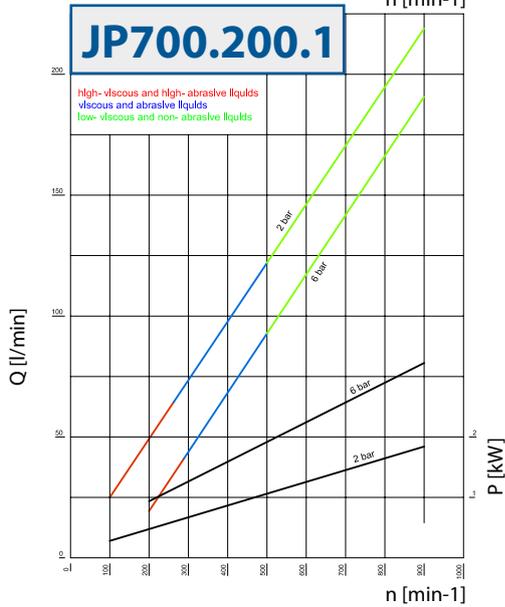
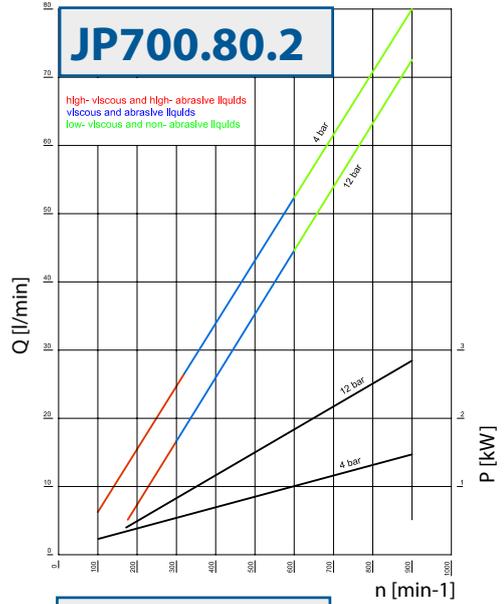
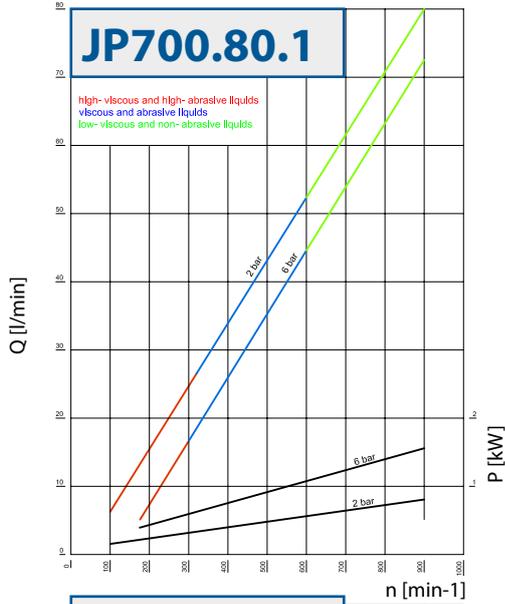
Selection of stators (valid for all pumps)

Model	Max. temp.	Properties
NBR black	max. 90°C	Suitable for oily and greasy media, alcohol and aqueous solutions. Not resistant to acids, alkalies and solvents.
NBR White Nitrile	max. 90°C	Suitable for oily and greasy media, alcohol and food. Not resistant to acids, alkalies and solvents.
FKM	max. 160°C	High chemical resistance.
PTFE	max. 200°C	High chemical resistance, suitable for food, pharmaceutical and cosmetic products.
EPDM	max. 110°C	Good resistance to alkalies (undiluted and diluted), acids (diluted), ketones, alcohols. Food-safe (corresponding to BGVV recommendations and in the composition of the positive list of FDA). Not resistant to oils and fats when transferring milk (3.5% fat) a sufficient resistance is given.

Flow curves

The performance curves are based on water at 20°C and NBR stators.

With PTFE stators the flow rates and the delivery pressures are lower and depend largely on the viscosity.



Changes reserved without notice



Barrel adapter made of polypropylene
for secure fixing of drum pump in bung-hole of a drum. Diameter of pump tube 25, 28 or 32 mm, G 2". The barrel adapters fit due to their 2" thread in 60 and 200 liter steel drums.



Emission proof drum adapter
for pump tube diameter 41 mm, FKM-seals prevent emission of harmful gases and vapours out of the drum. A vacuum in drum is equalized by a valve.

Bounding ground set

Set consisting of 4 cables with connection clamps. These ground wires with connection clamps are absolute necessary when pumping flammables or for use in hazardous areas.

This set can be used as an electric conductive connection between the drum pump and the container for earthing and balancing out the energy resources.



Safety clamp made of tool steel
for secure fixing of barrel pump in open containers and open drums.



Wall hanger for laboratory pump
for a secure storage of barrel pump when out of operation and for protection against damages.



Strainer
for protection the barrel pump when abrasive particles are present.
Polypropylene
Size of slots 1,5 x 12 mm, tube-Ø 40, 41 or 42 mm
Stainless steel 316 Ti
Size of slots 1,5 x 20 mm, tube-Ø 41 mm



Discharge arc
for transferring and filling liquids directly into other vessels. They are available in PP, Alu and stainless steel 316Ti and can be connected directly at the discharge side of a drum pump via a wing nut



Nozzle
For filling and transferring all of kinds of media. Made of polypropylene, PVDF, polypropylene, stainless steel, PTFE.



Electronic flow meter
to measure a big variety of media.

Turbine gear meter
are suitable for low viscous, water-like media and are available in PP, PVDF and stainless steel.

Oval gear meter
measure the flow of viscous media and are also available in different materials. Volume setting or impulse output as an option.



Stainless steel hose clamp 1/2" or 3/4" or 1" or 1 1/4"

for secure fixing of hose at hose barb. Please specify when ordering the nominal width.



PVC-hose

crystal clear with fabric lining, suitable for non flammable, neutral and aggressive media.

Operating pressure: 16 bar
Temperature: -40 °C up to +90 °C

Universal chemical- and solvent hose, conductive

inner wall homogeneous, smooth, EPDM (Ethylene Propylene Rubber) conductive, suitable for many alkalies, acids, acetates, aldehydes, amines, esters, ethers and ketones, not suitable for carbonic gassy products and their derivates, as well as oils and gasoline



Multi purpose chemical hose, conductive

inner wall homogeneous, smooth, PE-X (knitted polyethylene), conductive, suitable for nearly all chemicals. Not suitable for oleum, brom and chlorsulfon acid



Clamping flange made of polypropylene
for IBC-Container (to fix a pump with Ø 40/41 mm), Ø 140 mm, 4-holes, screw-hole circle 115 mm

Product range

Diaphragm pumps & accessories



PE & PTFE pumps



Metal pumps



Pharmaceutical pumps



Sanitary pumps



TC Intelligent pumps



Powder pumps



TF Filter press pumps



EHEDG aseptic pumps



Active pulsation dampeners



Systems & accessories



Trolleys



Centrifugal pumps, filter units & accessories



CTI & CTH centrifugal pumps



CTP plastic centrifugal pumps



CTM magdrive centrifugal pumps



CTV vertical centrifugal pumps



CTS self-priming centrifugal pumps



Trolleys



FT Filter units

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