JESSBERGER pumps and systems

Eccentric screw pumps JP-700

Vertical barrel- and container pumps

Horizontal eccentric screw pumps

Dosing pumps for high viscous media (respectively up to 100,000 mPas)

Barrel discharge unit for high viscous media without own flowability (up to 1,000,000 mPas)

Spare parts
Eccentric screw pumps for drums and containers

**JP-700 SR (speed reducer), particularly for intermittent operation,** for gentle and almost pulsation free transport of thin to high viscous, thixotropic, gaseous, solids and fibres containing, aggressive and neutral media.

**Standard-version suitable for:**
- **Chemical products:** dyes, varnishes, resins, latex, silicone masses, polymers
- **Mineral oil products:** oils, greases, cutting oils, coolants

**Pump tubes will be driven** by electric universal- or air motors

All pump parts are in stainless steel 316 Ti; stator materials are adapted to the pumped medium and available in NBR, NBR-food grade, Viton, Hypalon, EPDM or PTFE.

**Delivery rate** is selectively 12, 25 or 50 ltr/min (at JP-700 DR also dosing pumps are available!).

**Discharge pressure** is 6 bar at the single-stage pump and 12 bar at the twin-stage pump.

**Pump tubes**

<table>
<thead>
<tr>
<th>Diameter Ø 54 mm, discharge connection G 1½“</th>
<th>Pump connection 1“</th>
<th>1¼” oder 1½“</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td><strong>Flow-rate</strong></td>
<td><strong>Disch. pres.</strong></td>
</tr>
<tr>
<td>JP-700.12.1</td>
<td>1.000 mm</td>
<td>12 l/min</td>
</tr>
<tr>
<td>JP-700.12.2</td>
<td>1.100 mm</td>
<td>12 l/min</td>
</tr>
<tr>
<td>JP-700.25.1</td>
<td>1.000 mm</td>
<td>25 l/min</td>
</tr>
<tr>
<td>JP-700.25.2</td>
<td>1.100 mm</td>
<td>25 l/min</td>
</tr>
<tr>
<td>JP-700.50.1</td>
<td>1.100 mm</td>
<td>50 l/min</td>
</tr>
</tbody>
</table>

**SR-Version** (with planetary gear = speed reducer) approx 700 rpm.

* suitable for 200 l drum (other lengths see above)

**Electric motors:**
- **JP-180** (230/115 V, 50–60 Hz, IP 24, 600 W)
- **JP-280** (230/115 V, 50–60 Hz, IP 24, 825 W)

**AIR motors:**
- **JP-AIR 2** (700 W at 6 bar operating pressure)
- **JP-AIR 3** (400 W at 6 bar operating pressure)

**WARNING:**
The pumps have no ATEX approval.

They cannot be used for pumping flammable media or for use in hazardous areas. For the pump tube with PTFE stator ATEX certificate is applied since autumn 2009.

**Motors**

- **JP-AIR 2**
  - 700 W at max. 6 bar operating pressure
  - Compressed air motor with starting button on the handle.
  - The motor starts running and the pump is transferring liquid when the button is pressed.

- **JP-AIR 3**
  - 400 W at max. 6 bar operating pressure
  - Compressed air motor, stainless steel housing, with plug valve at air intake for compressed air control.
  - This regulates the motor speed and varies the pumping capacity.

- **JP-180**
  - 600 W Universal motor 230/115 V, 50–60 Hz
  - Double isolated, category II, Splash-proofing according to IP 24
  - On/off switch
  - Overload protection switch

- **JP-280**
  - 825 W Universal motor 230/115 V, 50–60 Hz
  - Double isolated, category II, Splash-proofing according to IP 24
  - On/off switch
  - Overload protection switch

**Viscosity** for the SR-version up to 20.000 mPas.

**Max. temperature of the liquid** up to 150 °C.

**Pump tube lengths** are 700, 1.000 and 1.200 mm. Special lengths up to 2.000 mm.

**Diameter of pump tube** 54 mm, therefore suitable for all 200 liter drums with 2“ bung hole.

**Easy disassembling and therefore easy cleaning.**

**Shaft seal** by single-acting mechanical seal or stuffing box.

**Weight** 12 kg.

**Special version for food, cosmetic and pharmaceutical products:**

Polished surfaces, alternatively open or totally enclosed joint pins, no dead rooms inside pump, easy disassembling and therefore easy cleaning, milk thread connection DN 11851, CIP connections as an option, stators and seals conform to FDA food grade quality, also PTFE stators available.
Eccentric screw pumps for drums and containers

JP-700 DR
are versatile, robust and extremely powerful pumps. They are suitable for the transport of fluid to high viscous substances such as muds, pastes, soaps, shampoos, honey, sirup, marmelade, ketchup, etc. up to 100,000 mPas – particularly for stationary use or continuous operation.

All parts of the pump that will get in contact with medium are made of stainless steel SS 316 Ti.

Stators are adapted to the medium and available in NBR (Buna), NBR light (Food grade), VITON (FKM), Hypalon (CSM), EPDM or PTFE.

Shaft seal by mechanical seal or gland.

The weight of the pumps is depending on the pump tube length and the drive 25–35 kg.

The pump can be delivered also in a food grade version (please see at JP-700 SR version) or as a dosing drum pump (smaller flow rate, smaller pump tube diameter).

**Pump tubes, Ø 54 mm, discharge connection G 1½”**
Hose connection 1”, 1¼” oder 1½”

<table>
<thead>
<tr>
<th>Type</th>
<th>Pump tube in mm</th>
<th>Flow rate</th>
<th>Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>JP-700.12.1 DR</td>
<td>700/1.000/1.200</td>
<td>12 l/min</td>
<td>6 bar</td>
</tr>
<tr>
<td>JP-700.12.2 DR</td>
<td>800/1.100/1.300</td>
<td>12 l/min</td>
<td>12 bar</td>
</tr>
<tr>
<td>JP-700.25.1 DR</td>
<td>700/1.000/1.200</td>
<td>25 l/min</td>
<td>6 bar</td>
</tr>
<tr>
<td>JP-700.25.2 DR</td>
<td>800/1.100/1.300</td>
<td>25 l/min</td>
<td>12 bar</td>
</tr>
<tr>
<td>JP-700.50.1 DR</td>
<td>800/1.100/1.300</td>
<td>50 l/min</td>
<td>6 bar</td>
</tr>
</tbody>
</table>

**Motors**

<table>
<thead>
<tr>
<th>Type</th>
<th>Voltage</th>
<th>Frequency</th>
<th>Power</th>
<th>Other remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three-phase motor</td>
<td>230/400 V, 50 Hz</td>
<td>0,37–2,2 kW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three-phase gear motor</td>
<td>230/400 V, 50 Hz</td>
<td>0,37–2,2 kW</td>
<td></td>
<td>reduced speed at high viscosities or for abrasive media, optimal speed for requested flow rate</td>
</tr>
<tr>
<td>Pneumatic motor</td>
<td>0,5–1,5 kW, 900 rpm at 6 bar</td>
<td></td>
<td></td>
<td>JP-AIR 4 (0,5 kW)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>JP-AIR 6 (1,0 kW)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>JP-AIR 8 (1,5 kW)</td>
</tr>
</tbody>
</table>

**WARNING:**
The pumps have no ATEX approval.

They can not be used for pumping flammable media or for use in hazardous areas. For pump tube with PTFE-stator ATEX certificate is applied since autumn 2009.
Container pumps

**JP-700.80.1, 80.2, 200.1, 200.2, 300.1 and 300.2**

Gentle, almost pulsation free transport of fluid to high viscous, thixotropic, gaseous, solids and fibres containing, aggressive and neutral media.

**Standard-version for:**
Chemicals: dyes, varnishes, resins, latex, silicones, polymers
Mineral oil products: oils, greases, cutting oils, coolants

Pump tube, pump parts and rotor made of SS 316 Ti
Pump and drive directly coupled
Totally enclosed pin joints or without any pin joints
Easy disassembling
Flow rates 80, 200 or 300 l/min.
Pressure stages 6 and 12 bar
Tube lengths 1.000, 1.200, 1.500 mm (special lengths available)
Max. Ø 105 mm (JP-700.80, 200) and max. 130 mm (JP-700.300)
Different sizes of delivery connections
Hose connection DN 40, DN 50–65, DN 65–80
Material of shaft seal:
Mechanical seal made of Chrome/Carbon/Viton or SiC/SiC.
O-rings made of Viton or FEP. Alternatively gland made of PTFE.

Driven by three-phase motors, gear motors or air motors
Stators:
NBR, NBR food-grade, Viton (FKM), Hypalon, EPDM or PTFE (Teflon). Pump lantern made of aluminium.

**Differences at food grade version:**
For examples of media see at dosing pumps
Polished surfaces, easy to disassemble and therefore to clean,
pressure socket milk thread connection DIN 11851, stators and seals in food grade quality FDA, also PTFE stators available.

**Selection of stators**
(valid for all pumps)

- **NBR black** (Perbunan), max. 100 °C, suitable for liquids containing oils and fats, alcohol and aqueous solutions. *Not resistant to acids, caustic solutions and solvents.*
- **NBR white** (Food grade), max. 100 °C, suitable for liquids containing oils and fats, alcohol and food. *Not resistant to acids, caustic solutions and solvents.*
- **CSM** (Hypalon), max. 110 °C, suitable for liquids containing acid- and caustic solutions. *Not resistant to oils, fats and solvents.*
- **Viton** (FKM), max. 150 °C, high chemical resistance.
- **PTFE** (Teflon), max. 150 °C, high chemical resistance, for food, pharmaceutical and cosmetic products.
- **EPDM** max. 110 °C, high resistance to caustic solutions (diluted or undiluted), acids (diluted), ketones, alcohols. Food grade conform (according to BGVV recommendations and in its composition to positiv list of FDA). Not resistant to oils and fats, at transport of milk (3,5% fat) a sufficient resistance is given.

**Information needed to select the right high viscosity pump**

- Spezification of the liquid
  Viscosity and operating temperature of the liquid
  Density
  Required delivery rate
  Delivery head (incl. pipeline losses)
  Content as well as type and size of solids
  Operating hours per day
  Will the pump be used mobile or stationary, vertical or horizontal?

**WARNING:**
The pumps have no ATEX approval. They can not be used for flammable media or for use in hazardous areas.
Horizontal eccentric screw pumps

JP-700 H (space saving design)
These lightly eccentric screw pumps enable a gentle, almost pulsation free transport of thin to high viscous, thixotropic, gaseous, solids and fibres containing, aggressive and neutral media.

Stainless steel execution SS 316 Ti
Pump and drive directly coupled
Pressure stages 6 and 12 bar
Flow rates up to 3,000 l/h
Connections male thread G 1½” on suction and female thread G 1¼” on discharge side
Totally enclosed pin joints, Rotor SS 316 Ti
Stator material adapted to the pumped medium (NBR, NBR food grade, Viton, Hypalon, EPDM and PTFE are available)
Shaft seal by single-acting mechanical seal or stuffing box
Base plate as an option (in steel or stainless steel)
Driven by three-phase motor, gear motor or variable gear motor, IP 55
Also air motors can be supplied

Type | Delivery rate | Pressure | Dimensions in mm | L1 | L2 | L3 | L4 | D1 | D2
---- | -------------- | -------- | ----------------- |----|----|----|----|----|----
JP-700 H 12.1 | 12 l/min | 6 bar | 448 | 800 | G 1½” | G 1¼”
JP-700 H 12.2 | 12 l/min | 12 bar | 184 | 343 | 548 | 900 | G 1½” | G 1¼”
JP-700 H 25.1 | 25 l/min | 6 bar | 448 | 800 | G 1½” | G 1¼”
JP-700 H 25.2 | 25 l/min | 12 bar | 184 | 343 | 548 | 900 | G 1½” | G 1¼”
JP-700 H 50.1 | 50 l/min | 6 bar | 448 | 800 | G 1½” | G 1¼”

WARNING:
The pumps have no ATEX approval.
They can not be used for pumping flammable media or for use in hazardous areas.

Food-grade execution:
For pulsation free and gentle transport of food, cosmetic and pharmaceutical products
For examples of media see at dosing pumps
Polished surfaces
Easy to dismantle
No dead spaces inside pump, therefore easy to clean
Milk thread connections DIN 11851
CIP-connections (as an option)
Alternatively totally enclosed or open pin joints
Stator and material of seals in food grade quality FDA, also PTFE stators are available

WARNING:
The pumps have no ATEX approval.
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Dosing pumps for high viscous media

Type JP-7032 up to JP-7115.2
Almost pulsation free transport and small quantity dosing of thin to high viscous, thixotropic, gaseous, solids and fibres containing, aggressive and neutral media in nearly all industries.

High dosing precision
Flow rate adjustable by the speed of the motor
Stainless steel execution SS 316 Ti
Pump and motor directly coupled
Space-saving design
Flow rates from 0,6 up to 600 l/h
Pressure stages 6 und 12 bar
Thread connections on suction side G ¾” and G ½” on discharge side G ¾”
Totally enclosed pin joints
Rotor SS 316 Ti
Stator material adapted to the pumped medium (NBR, NBR-light, Viton, Hypalon and EPDM; PTFE is only available at types JP-7115.1 and JP-7115.2)
Shaft seal by single-acting mechanical seal or stuffing box

Drives:
Type series JP-7032 to 7115.2 is supplied with two different drives:

Gear motor, suitable for use with frequency inverter
between 12 and 100 Hz, 230/400 V, 50 Hz, IP 55, B3/BS, flange 120 mm, Iso class F, thermo sensors 3 x 155 °C
Fix speed at 50 Hz optionally 107, 120, 134, 150, 165, 181, 197, 214, 233, 251, 392, 426, 462, 498, 538, 578 or 624 rpm, can be operated by frequency inverter.
Power 0,25 kW, 0,37 kW and 0,55 kW
Frequency inverter for installation in switchboard incl. line filter and operating terminal, single phase AC connection 1 x 230 V, 50/60 Hz
Frequency inverter on gear motor, speed control by potentiometer 3 x 400 V, 50/60 Hz

Gear motor, adjustable via hand
0,25 kW, 0,37 kW and 0,55 kW
Stepless variable from 0 to 1200 rpm

Chemical products:
Colours, synthetic resins, coatings, latex, polymers and silicons

Mineral oil products:
Oils, fats, cutting oils, coolants

Cosmetic and pharmaceutical products:
Cleaning agent, liquid soaps, glycerin

Food:
Tomato puree, ketchup, marmelade, honey, fruit juices and concentrates, wine grapes, marshes, fruit pulps, milk products, chocolate masses, dough, pectin

WARNING:
The pumps have no ATEX approval. They can not be used for pumping flammable media or for use in hazardous areas.
Further program of eccentric screw pumps

Industrial pumps in horizontal mounting form
In addition to the shown standard pumps we can quote further sizes:

Flow rate: up to 200 m³/h
Pressure stages: 6, 12, 18 and 24 bar

Special pump executions
Based on the usual types we can quote many special pump versions. Especially for industry that converts fruits or the viniculture we can deliver pumps with hopper housing and feed screw.

Block pump in horizontal mounting form
A low priced alternative are pumps in block construction. These pumps are directly flanged to the drive. Due to economisation of bearing pedestal, elastic coupling and if necessary also base plate briefer mounting forms and cheaper versions can be realised.

Flow rate: up to 200 m³/h
Pressure stages: 6 and 12 bar

Barrel discharge unit
For a clean and fast emptying of barrels with high viscous up to pasty liquids that can not flow by itself into the pump.
At this barrel discharge unit a vertical eccentric screw pump with flanged follower plate will be dropped down into the barrel. This procedure can be realized by two double acting pneumatic cylinders. During this pump process the pump will dive further on into the drum.

The elastic lip seal of the follower plate strips the inner wall of the drum and enables an optimal emptying. The residue of liquid inside the drum is less then 1% of barrel capacity.

Spare parts
We are pleased to support you by your purchase of spare and wear parts for eccentric screw pumps. At this procurement transaction a short delivery time is important as well as quality and price. Due to our good contacts in pump business we can deliver original spare parts from a lot of reputable manufacturers. If you prefer we can deliver also alternatives that are nearly equivalent in quality – but they are explicitly no original parts.

Our product range of spare parts enfoldes:

Rotors
Stainless steel rotors, e.g. SS 316 Ti, SS 304, eventually with hard chrome plating or ductile coating if necessary. Also hardened tool steel or lower alloy steels.

Stators
in all popular elastomers, e.g. NBR (Nitrile), BR (Buna CB), NR (Natural Rubber), CSM (Hypalon), EPDM, FKM (Viton). Also solid stators are available, e.g. PTFE (Teflon) and grey cast iron.

Seals
like mechanical seals, glands or o-rings.

Pump parts
Drive shafts (with or without hard chrome plating) and coupling rods, as well as other turning work pieces for pumps in various materials.
Our program:

**Electric and pneumatic drum and container pumps**
JESSBERGER pump technology with internal and external cooled motors in different flow capacity ranges.
Seal-less pump tubes in Polypropylene, PVDF, ALU and stainless steel. Tube lengths 700, 1,000, 1,200, 1,500 and 1,800 mm. Also in special lengths up to 3,000 mm. Please ask us.

**High viscosity pumps JP-700 for drums and containers**
are suitable for the use of a big number of liquids. Particularly suitable for highly viscous, neutral, aggressive liquids also with or without solids up to 100,000 mPas. All pump parts are in stainless-steel, stators are available in NBR, NBR light, Viton, Hypalon, EPDM or PTFE.

**Dosing pumps for viscous liquids** for fluid, viscose, aggressive, neutral media with or without solids or fibres particles.

**Horizontal eccentric screw pumps**
are suitable for liquids with low or high viscosity, whether neutral or aggressive, with or without solids or fibres particles.

**Hand-barrel pumps**
are lightweight, powerful pumps for almost any fluid liquids.

**Telescopic suction tube of PP, 340–900 mm**
JP-02 for acids, alkaline solutions and water based chemicals.
JP-03 for Oil, Diesel, Alcohol (max. 50%), Anti freeze liquid, Soap solutions, Shampoo, Water, etc.

**Telescopic suction tube of PP, 480–950 mm**
for fluid liquids.

**Pump tube INOX 700 or 1,000 mm, for fluid media.**
Suitable particularly for flammable liquids like solvents.

**Electronic flowmeter No. 9020**
Housing made of PP. Volume preset, signal-check for further data processing as an option. Other materials: PVDF and SS.

**Air-operated diaphragm pumps JP-800**
JESSBERGER diaphragm pumps are suitable for nearly all areas of use. They are capable of pumping aggressive and flammable substances, high viscous liquids also with solids or fibre particles and media containing gas.

**Seal-less magnetic driven pumps**
Available in various sizes, state-of-the-art construction, seal-less and environmentally friendly, suitable for a variety of uses, low noise level, long life, easy to maintain.

**Vertical centrifugal pumps SERIE JP-820**
executed in Polypropylene and PVDF

**Horizontal centrifugal pumps SERIE JP-840**
executed in Polypropylene and PVDF

**Mixers for drums and containers**
JESSBERGER offers solutions for almost every mixing application for drums and containers.

**Electric diesel- and fuel oil pumps**
are intended mainly for the refueling of agricultural machines, tractors, machines for construction work, trucks, motorboats and all vehicles with diesel or light fuel (hazard class A III) engines.

**The following hoses can be supplied:**
Universal- and special hoses for chemical substances, PVC-hoses, PTFE-hoses, hoses for mineral oil and solvents, tissue-reinforced or conductive. Please ask for details.

Please ask for detailed information about the individual product groups of the JESSBERGER delivery program. Please make a cross next to the requested product and e-mail or fax this page to us with your address.

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