Jessberger Drum & Container Pumps

Company Overview

Jessberger are a family owned business involved in the production of Drum & Container Pumps, as well as Eccentric Screw & Hand Pumps & Semi-Automatic Filling Machines since 2003. These are designed & produced at their Ottobrunn (Head Office) Factory where they have a total of 800 m^2 of Office Space, 500 m^2 Warehousing and 1100 m^2 of Production and Testing Space. A total of approx 40 personnel operate out of this location, covering Sales, Purchasing, Marketing, Production, Construction & Warehousing.

Due to their Family orientated business structure and model they pride themsleves on direct contact with their customers with a heavy emphasis on personal and expert advice whilst retaining high levels of flexibility, fast reaction times & optimal price to performance ratio.

Their turnover, as of 2022, was approx. €7.5 Million (~€4 Million from Local Market Sales). For comparision with their direct market competitors, Lutz turned over ~€23 Million & Flux turned over ~€27 Million, each with ~140...150 employees respectively. Jessberger's List Pricing is currently 25...40% less than Lutz & Flux (Apart from Laboratory Pumps)

Jessberger retains the ownership of ~150 Moulding Injection Tools, conventional Lathes & Milling Machines & CNC Machines to facilitate the production of their pump tubes, motors, pump shafts.

Individual testing of each pump, manual or automatic is carried out before dispatch with the following documenttation available:

- **Motors:** current consumption, output power, speed, temperature, noise level, etc.
- **Pumps:** flow rate, outlet pressure, leakproofness and functioning, noise level, etc.

They are certified according to ISO 9001, valid certificate compliant to ISO 9001:2015 and also according to ATEX 2014/34/EU and IECEx. They are also scheduled to gain UL and CSA certification, for the markets in US and Canada.

Key Customer References

Audi
BASF
BMW
Bosch
Coca Cola
Continental
Daimler AG
Diebels
EON
Fraunhofer Institute
Gaz France
Heineken
Innospec Fuel Specialists
Kaercher
KHS
Kraus-Maffei Wegmann
Liqui Moly
Linde
Lufthansa
MAN
Merck Pharma
Philips
Pirelli
Porsche
Prominent
Siemens
Sonax
Thyssen-Krupp
VW
Zeiss

Key Markets / Customers

Chemical Companies	~2000 Drum Pumps / Year
Car Manufacturers	~700 Drum Pumps / Year
Compressor Manufacturers	~250 Drum Pumps / Year
Producers of Wet Vacuum Cleaners	~200 Drum Pumps / Year
Oil Producers	~4000 Hand Pumps / Year
Other Pump Manufacturers	~€250'000 / Year on all pump types
Textile Industry	~400 Eccentric Screw Pumps / Year

Best Sellers

205 Litre Drum (1000 mm Length) & IBC / Container Pumps (1200 mm Length)

JP-132 PP (HC)1000 for standard chemicals
JP-132 PVDF 1000 for highly aggressive chemicals
JP-180 PP (HC) 1000 set for standard chemicals
JP-280 PVDF 1000 set for highly aggressive chemicals
JP-280 Alu 1000 set for mineral oil products up to 1.000 mPas
JP-Air 1 SS 1000 set for flammable media like gasoline or solvents
JP-440 SS 1000 set for flammable media like gasoline or solvents

Best Sellers

Hand Pumps

JP-04 for acids, alkalies, mineral oil products or thin fluid food
JP-05 for solvents or thin fluid food
JP-07 for lightly acids, alkalies or mineral oil products
JP-12 for mineral oil products

Drum & Container Pumps Technical Overview

A Drum or Container Pump is primarily used to evacuate liquids out of drums and containers. Drum pumps are designed for portable or stationary use and particularly suitable for intermittent operation. The maximum operation time is approx 1...2 hours of continuously.

The principle of a Drum or Container Pump has proved to be a highly successful and reliable design for decades and is suitable for most applications and industries. A Drum Pump or Barrel Pump belongs to the family of the Axially Acting Centrifugal (Rotodynamic) Pumps. They are also commonly known as Rod or Immersion pumps.

A Drum or Container Pump always consists of a drive unit / motor (Electric or Air Driven) and a Pump Tube or Tube Set that is constructed of materials suitable for the intended application. The Pump Tube is installed vertically into the 2" Bung Hole of a 205 Litre Drum or through the neck of a 1000 Litre IBC Container.

They are designed specifically for transferring of clean, low viscosity fluids such as acids, alkalies and cleaning agents (pump tube made of Polypropylene), highly aggressive chemicals (pump tube made of PVDF), mineral oil products up to 1.000 mPas (pump tube made of Aluminum) or flammable media as well as food products (pump tube made of Stainless steel 316Ti). Drive shafts are constructed from either Stainless Steel 316Ti or Hastelloy.

The motive element within these units is an Impeller or Rotor, which is the heart of the pump, and located approx 2 cm from the bottom of the Drum or Container and rotates at ~10'000 rpm. It is constantly immersed in the process mediium and pushes it Axially and Parallel to the Drive Shaft, between the Inner and Outer Tube, in the direction of the Discharge Port at the top of the tubeset.

Directly above the Rotor, features a highly chemically resistant Carbon or PTFE Bearing. This acts as a bearing for the shaft, as well as a seal, preventing ingress of the process fluid between the shaft and inner tube. The Carbon Bearing is Conductive, and like the PTFE variant, is suitable for use in the food and pharmaceutical industry because it is made of a natural resin. Some customers, in Safe Area applications, prefer the PTFE Bearing to the Carbon as it is Glass Filled and provides high reliability with Abrasive Fluids.

These units are generally Sealless, therefore, Stainless Steel units, with a Carbon Bearing, can also be run dry for a few minutes without damage. PP, PVDF & Aluminium Tubesets, with PTFE Bearings, are not allowed to run dry as the PTFE Bearing would be destroyed within a few seconds. Standard units always leave a small portion of fluid within the Drum or Container, thus preventing them from Dry-Running. Only when customer's are transferring sticky or crystallising fluids is the use of a Mechanically Sealed unit recommended, please verify with Jessberger if a Stainless Steel, Mechanically Sealed, Unit is suitable for the application. Mechanically Sealed units cannot Dry-Run.

With the exception of ATEX Rated units, all pump tubes can be quickly and easily combined to their chosen motor via the hand wheel located at the top of the tubeset, without the need of any tools, making them versatile to almost any operating environment. Therefore several pump tubes can be combined with the same drum pump motor if the customer has numerous families of fluids to transfer.

NOTE: the Jessberger Handwheel locking mechanism is interchangeable with that of Lutz, therefore, if a customer has an existing Lutz Tubeset or Motor, it can be combined with a Jessberger counterpart with no additional accessories or tooling requirements.

At the 1¼" BSP M Discharge Port, the customer can assemble the FOC supplied Hose Tail which can be attached to a PVC, Universal Chemical or Solvent Hose (made of EPDM; not resistant against oils and fuels), a Multi-Purpose Chemical
Hose, made of knitted Polyethylene (also available with FDA approval), or a Mineral Oil Hose, for the food industry. All these hoses we can supplied from stock.

In Europe, it is very common to supply Complete Drum Pumps Sets which include a 2 m Discharge Hose and Hand Nozzle for transferring into smaller vessels. When buying a Drum Pump Set, the customer has a ready made solution which they can use immediately and he can be sure that all parts are resistant against their intended process medium.

Furthermore, the Drum Pump Sets are normally a little bit cheaper in price than the combination of all singular items.

If pumping flammable media, with a flash point less than 55°C in an Ex-Zone 0, or for use in Potentially Explosive Environments (Ex-Zone 1 or 2), a Conductive Hose can be delivered, along with the necessary accessories.

Range Snap-Shot

- Electric Universal Motors in 230, 115 & 24 volts in different performance and protection classes
- Air Operated Motors (for max. 6 bar operating pressure)
- Flow rates up to 112 l/min. (with 1" hose)
- Head up to 3.7 bar (with impeller for high pressure applications)
- Max. density of 1.9 kg/m^3 & Max. viscosity up to 1000 mPas (with JP-280 motor)
- Pump Tube lengths in 700, 1000, 1200, 1500, 1800 mm, with custom lengths available from 200...3000 mm on request
- Mixing Pump Tubes or Complete Drum Emptying Pump Tubes are also available on request
- ATEX & FDA Certified units available on request
- Axial Rotor (High Flow, Low Head) or Radial Impeller (High Head, Lower Flow) optons available

Drum or Container Pump Set Structure

Item No.	Description
1	Motor
2	Handwheel
3	Barrel Adaptor
4	Hose Connection
5	Hand Nozzle
6	Delivery Hose
7	Pump Tube
8	Pump Foot

Choosing the correct Drum or Container Pump

The following information is imperative to accurately selecting the correct Drum or Container Pump.

- Exact description of the application
- Medium & Concentration (liquid to be pumped)
- Viscosity and Specific Gravity of medium
- Temperature of medium, are particles inside medium?
- Requested flow rate @ requested head/ distances
- Size of drum or container and its head
- Operation hours per day and per day continuously
- Any other information about the application

In the first instance, it is recommended to verify whether the pump is required for use with a flammable liquid or use in a potentially explosive area / atmosphere. E.g..: Anti-Freeze Liquids or Brake Cleaning Fluids with a flash point <55°C or media that generate explosive medium / air mixtures. If you are in doubt, ask for a safety data sheet.

If your customer needs a Drum or Container Pump for such an application, you will have to offer an Ex-Protected Electric Motor, either JP-440/460/480 or the Pneumatically Driven Motors, JP-Air 1, 2 or 3, in combination with a Stainless Steel 316Ti Pump Tube. Only Stainless Steel Pump Tubes which are ATEX certified are allowed to be used for flammable liquids or in Ex-Areas.

If the medium is not flammable, you have to verify which of the following materials are suitable / chemically compatible: PP, PVDF, Aluminium, Stainless Steel AISI 316Ti, Carbon & PTFE.

Beside the process medium (chemical formula, concentration, viscosity, specific gravity, temperature, particles) you always should ask your customer which drum or container he has. The height of drum / container is important for selecting the correct pump tube length.

- For a 205 Litre Drum you have to offer a 1000 mm Pump Tube
- For a 1000 Litre IBC Container (1 m^3) you need a 1200 mm Pump Tube

The available Tube Set Lengths available from stock are 700, 1000, 1200, 1500 & 1800 mm. The Pump Tube length is always measured from end of pump foot to the middle of the discharge port. The Pump Tube Length cannot be adjusted or modified after it has been supplied, e.g. by cutting the tube or increasing length by adding a hose or tube to the end of the Tube Set.

On request, custom Tube Set lengths can be supplied ranging from 200...3000 mm. In PP, PVDF & Aluminium, these can be turned round within a couple of working days, however, for Stainless Steel units, these are on ~4...5 Weeks as they are externally welded.

For PP or PVDF Tubesets over 1800 mm, Jessberger have to review the application as to whether there is enough stability in the Pump Tube. As the rotor and shaft are operating at speeds up to 10'000 rpm, heat build-up (especially at the bearing) and vibration cannot be prevented. Therefore, they are not designed for continuous use or for emptying large tanks (E.g. 10'000 Litres) at once. For such applications, a Vertical Immersion Centrifugal Pump, slowly rotating Eccentric Screw Pump or a Air Operated Diaphragm Pump might be the correct choice.
Careful attention to the Outer Diameter of the Tube Set also needs to be considered vs the size of the orifice available on the Drum or Container to be evacuated. The OD of Standard Drum & Container Pumps is 41 mm ø, for Laboratory Pumps, 25, 28 & 32 mm are available in PP Execution, 32 mm for PVDF, 28 & 32 mm for Stainless Steel. Mixing Tube Sets in either PP or Stainless Steel are 50 mm and Eccentric Screw Pumps (JP-700.12.1...JP-700.500.2) are 54 mm ø.

Plastic Tube Set Options, PP or PVDF

The Plastic Tube Sets, made of Polypropylene and PVDF, are used for neutral, aggressive and non-flammable media and hereby especially for acids, alkalies and detergents.

A drum pump made of Polypropylene is mostly sold for all kind of standard chemicals in the chemical, galvanic or electroplating industry up to a temperature of 50°C. Drum pumps made of Polypropylene are intended for every day for media like caustic soda (EPDM seals), hydrochloric acid, lightly concentrated sulphuric acid, ferric chloride, phosphoric acid, etc... For highly aggressive media, like sulphuric acid over 90%, chromic acid, hydrofluoric acid or nitric acid the pump material has to be made of PVDF. This material is very similar to PTFE, it has best chemical properties and can be used up to 90°C.

Polypropylene Execution

Either Stainless Steel SS 316 Ti or Hastelloy (HC) shaft.

Suitable for neutral, aggressive and non- flammable liquids; especially used for aggressive chemicals like alkalis and acids.

Maximum temperature of Polypropylene: 50°C

PVDF Execution

Hastelloy (HC) shaft.

Suitable for highly aggressive media like chromic acid, hydrofluoric acid, nitric acid, sulphuric acid over 90%.
PVDF will be used if Polypropylene is not resistant or if the temperature of the medium is higher than 50°C.

Maximum temperature of PVDF: 90°C

Metallic Tube Set Options, Aluminium & AISI 316Ti (ATEX)

In the petroleum sector and the automotive industry mainly, pump tubes made of Aluminium are used. Typical applications are to pump diesel, gear oils, heating oils, hydraulic oils, machine oils, mineral oils and motor oils. With a barrel pump like JP-280 Alu 1000 all mineral oil products up to a maximum viscosity of 1.000 mPas can be handled. In large quantities we are selling to the automotive industry or oil trading companies also our hand pumps JP-03 or 04 blue.

Tube Sets in Stainless Steel AISI 316Ti are high quality and conductive (ATEX Rated) and have proven themselves when pumping flammable liquids, when used in explosive environments as well as in the food industry or in the pharmaceutical industry.

Please note that only Tube Sets in Stainless Steel are allowed for use with flammable media or for use in Ex-Zones.

It is not permitted to use Aluminium Tube Sets to transfer flammable media like gasoline or solvents. Also, it is prohibited to pump, for example, Hydrochloric Acid (Stainless Steel is not resistant) with an ex motor and Polypropylene pump tube in an Ex-Zone 2.

Aluminium Execution

With Stainless Steel 316 Ti shaft.

Suitable for neutral and non-flammable liquids. Especially used for diesel, gear oils, heating oils, hydraulic oils, machine oils and mineral oils up to a viscosity of 1.000 mPas.

Maximum temperature: 90°C

Stainless Steel AISI 316Ti Execution (ATEX Rated)

with Stainless Steel 316 Ti shaft.

Suitable for neutral, lightly aggressive and flammable media. Especially designed for transfer- ring flammable liquids (because Stainless Steel is conductive) and for the use in food or pharmaceutical industry.

Due to its conductivity and the ATEX certificate for ex-zone 0 the pump tube made of Stainless Steel is mainly used for pumping flammable media like alcohol (over 50%), gasoline/ fuel, sol- vents, thinner, thin-fluid paints based on solvents and varnishes

Maximum temperature: 90°C (with PTFE rotor)
Maximum temperature: 120°C (with SS rotor)

Specialist Application Tube Sets

Besides the ''Standard" Plastic and Metallic Tube Set options, Jessberger also offer the following 2 Specialised Variants, available in either 1000 or 1200 mm Lengths.

Stainless Steel AISI 316Ti Tube Set with Mechanical Seal for Complete Drum or Container Emptying

leaving only 0.1 Litres remaining. No leakage when moving the drum from on Container to the next. This is facilitated by a handle below the hand wheel the pump foot can be closed. This prevents that the medium can flow out of the hose and the suction tube back into the drum after motor has been switched off. This is particularly useful when operating with Hazardous fluids which cannot be washed away due to contamination issues or indeed when the process medium is particularly expensive. EC type examination certificate number ZELM 09 ATEX 0424X Ex II 1/2 G c IIB T4

Recommended Motors: JP-180, 280, 360 & 380 as well as ATEX Rated JP-400, 460 & 480

Mixing Tube Sets in either PP or Stainless Steel AISI 316Ti

Suitable for those applications where low viscous to slightly viscous media must be mixed in drums and other containers and after that pumped out. This reduces the requirement for a separate mixer and pump assembly, speeding up the process and reducing overall cost and complexity.

The Mixing Tube Set in Polypropylene with Hastelloy shaft are used especially for aggressive media like acids and alkalis. The Stainless Steel AISI 316Ti variant are used primarily for neutral, slightly aggressive and flammable media. The pump tubes are approved for use in Ex-zone 0. They fulfill all national and international standards for pumping flammable media, EC type examination certificate number ZELM 09 ATEX 0424X.

Recommended Motors: JP-180, 280, 360 & 380 as well as ATEX Rated JP-400, 460 & 480

Best Selling Drum & Container Pump Sets

With following pump sets, you can handle nearly all applications. They are Jessberger's top sellers worldwide. Other Pump Set combinated are readily available, for further details please see the Price List.

Set JP-180-PP (HC) 1000

Electrically Operated Drum Pump Set in PP x 1000 mm Length for all standard Chemicals such as Acids, Alkalis, Ad-Blue & Detergents up to a Max Temp of 50ºC.

640W / 230 or 115 V / 50...60 Hz, splash protection to IP 24, double insulated class II, overload protection switch with low voltage release, 5 m cable with plug.

Pump Tube: Polypropylene, outer-Ø 41 mm, HC-shaft 2.4610, connection thread G 1¼", hose connection 1" (DN 25)
2 m PVC-Hose 1" (DN 25)
2 Hose Clamps Stainless steel
1 Nozzle Polypropylene, 1"

Max Flow: 93 l/min (Rotor) / 74 l/min (Impeller)
Max Head: 11 m (Rotor) / 26 m (Impeller)
Max Viscosity: 600 mPas
Max Density: 1.5 kg/m

Set JP-280 ALU 1000

Electrically Operated Drum Pump Set in Aluminium x 1000 mm Length for Mineral Oils, Diesels, Heating Oils, Hydraulic, Gear & Machine Oils up to a Max Temp of 90ºC.

825W / 230 or 115 V / 50...60 Hz, splash protection to IP 24, double insulated class II, over load protection switch with low voltage release, 5 m cable with plug.

Pump Tube: Aluminium, outer-Ø 41 mm, shaft stainless steel, connection thread G 1¼", hose connection 1" (DN 25)
2 m Mineral Oil Hose 1" (DN 25)
2 Hose Clamps Stainless steel
1 Nozzle Aluminium, 1"

Max Flow: 112 l/min (Rotor) / 83 l/min (Impeller)
Max Head: 16 m (Rotor) / 37 m (Impeller)
Max Viscosity: 1000 mPas
Max Density: 1.9 kg/m³

Set JP-280 PVDF 1000

Electrically Operated Drum Pump Set in PVDF x 1000 mm Length for Highly Aggressive & Concentrated Chemicals such as Chromic, Hydrofluoric, Nitric & Sulphuric Acids up to a Max Temp of 90ºC.

825W / 230 or 115 V / 50...60 Hz, splash protection to IP 24, double insulated class II, overload protection switch with low voltage release, 5 m cable with plug.

Pump Tube: PVDF outer-Ø 41 mm, HC-shaft 2.4610, connection thread G 1¼", hose
connection 1" (DN 25)
2 m Multi-Purpose Chemical Hose 1" (DN 25)
2 Hose Clamps Stainless steel
1 Nozzle PVDF, 1"

Max Flow: 112 l/min (Rotor) / 83 l/min (Impeller)
Max Head: 16 m (Rotor) / 37 m (Impeller)
Max Viscosity: 1000 mPas
Max Density: 1.9 kg/m³

Set JP-AIR 1 SS 1000 ATEX

Air Operated, ATEX Rated Drum Pump Set in Stainless Steel AISI 316Ti x 1000 mm for Flammable Fluids such as Gasoline / Petrol, Solvents or fluids with a Flash Point of <55ºC

300W Air Operated Motor JP-AIR 1, max. 6 bar Operating Pressure, Motor with Brass
Valve and Muffler for Compressed Air Control, Ex II 2 GD c IIC (80 °C) X. Certificate number **IBEx U05 ATEX B007 X**

Pump tube: Stainless steel 316 Ti, outer-Ø 41 mm, connection thread G 1¼". Certificate number **ZELM 09 ATEX 0424 X**
2 m Multi-Purpose Hose 1" (DN 25)
2 Hose Connectors Stainless steel, IG 1¼" or IG 1"
1 Nozzle Brass nickel plated
1 Bonding Ground Set

Max Flow: 78 l/min (Rotor) / 60 l/min (Impeller)
Max Head: 9 m (Rotor) / 13 m (Impeller)
Max Viscosity: 400 mPas
Max Density: 1.3 kg/m³

Best Selling Electric Universal Motors

Jessberger's top selling Electric Motors are currently their IP24 Rated Internally Ventilated Motors which are totally open to the atmosphere (Indoor & Ventilated Operation). They have a good cooling capability (suction of cold air at the blue motor cap, discharge of hot air at the blue lower housing of motor) and an excellent price to performance ratio.

For 90% of all applications the JP-180 and JP-280 are specified. For 205 Litre Drums, and densities up to 1.5, the JP-180 is used. For IBC's the JP-280 is generally used as this is provides a powerful 825 Watt in power and can be used for nearly all kinds of non-flammable media (max. viscosity 1.000 mPas, for specific gravities from 1.5 to 1.9) and also for longer operating times (max. 1...2 hours).

JP-160 Universal Motor (IP24)

400 Watt / 230V / 50...60 Hz / IP24 with Double Insulation Protection Class II. Overload Protection Switch w/ Integrated No-Volt Release, 5 m Cable & Plug. Speed Control on request.

Max Flow: 82 l/min (Rotor) / 61 l/min (Impeller)
Max Head: 9 m (Rotor) / 20 m (Impeller)
Max Viscosity: 400 mPas
Max Density: 1.3 kg/m³

JP-180 Universal Motor (IP24)

600 Watt / 230V / 50...60 Hz / IP24 with Double Insulation Protection Class II. Overload Protection Switch w/ Integrated No-Volt Release, 5 m Cable & Plug. 115V / 60 Hz & Speed Control on request.

Max Flow: 93 l/min (Rotor) / 74 l/min (Impeller)
Max Head: 11 m (Rotor) / 26 m (Impeller)
Max Viscosity: 600 mPas
Max Density: 1.5 kg/m³

JP-280 Universal Motor (IP24)

825 Watt / 230V / 50...60 Hz / IP24 with Double Insulation Protection Class II. Overload Protection Switch w/ Integrated No-Volt Release, 5 m Cable & Plug. 115V / 60 Hz & Speed Control on request.

Max Flow: 112 l/min (Rotor) / 83 l/min (Impeller)
Max Head: 16 m (Rotor) / 37 m (Impeller)
Max Viscosity: 1000 mPas
Max Density: 1.9 kg/m³

Extra Universal Electric Motors

For those Safe Area applications where the JP-160, 180 or 280 are not suitable from a Capacity or IP Rating perspective, the following additional Universal Electric Motors are available. The externally ventilated motors JP-360 and JP-380 are mostly used in wet areas or when a lot of aggressive fumes are present.

JP-120 Universal Motor (IP24)

250 Watt / 230V / 50...60 Hz / IP24 with Double Insulation Protection Class II. Overload Protection Switch w/ Integrated No-Volt Release, 5 m Cable & Plug. 115V / 60 Hz & Speed Control on request.

Max Flow: 71 l/min (Rotor) / 55 l/min (Impeller)
Max Head: 7 m (Rotor) / 16 m (Impeller)
Max Viscosity: 200 mPas
Max Density: 1.2 kg/m³

JP-140 Universal Motor (IP24)

450 Watt / 230V / 50...60 Hz / IP24 with Double Insulation Protection Class II. Overload Protection Switch w/ Integrated No-Volt Release, 5 m Cable & Plug. 115V / 60 Hz & Speed Control on request.

Max Flow: 87 l/min (Rotor) / 70 l/min (Impeller)
Max Head: 10 m (Rotor) / 23 m (Impeller)
Max Viscosity: 400 mPas
Max Density: 1.3 kg/m³

JP-164 Universal Motor (IP24)

400 Watt / 24V DC / IP24 with Double Insulation Protection Class II. Overload Protection Switch w/ Integrated No-Volt Release, 5 m Cable with 2 Pole Battery Connection. For use by firefighters, police or army a 2-pole plug in screw connection according to DIN 14690 is available on request.

Max Flow: 66 l/min (Rotor) / 55 l/min (Impeller)
Max Head: 7.5 m (Rotor) / 15 m (Impeller)
Max Viscosity: 300 mPas
Max Density: 1.3 kg/m³

JP-360 Universal Motor (IP55)

640 Watt / 230V / 50...60 Hz / IP55 with External Ventilation. With or Without No-Volt Release, 5 m Cable & Plug. Speed Control on request.

Max Flow: 93 l/min (Rotor) / 74 l/min (Impeller)
Max Head: 11 m (Rotor) / 26 m (Impeller)
Max Viscosity: 600 mPas
Max Density: 1.5 kg/m³

JP-380 Universal Motor (IP55)

825 Watt / 230V / 50...60 Hz / IP55 with External Ventilation. With or Without No-Volt Release, 5 m Cable & Plug. Speed Control on request.

Max Flow: 112 l/min (Rotor) / 83 l/min (Impeller)
Max Head: 16 m (Rotor) / 37 m (Impeller)
Max Viscosity: 1000 mPas
Max Density: 1.9 kg/m³

No / Low-Volt Release Protection

All Universal Electric Motors can be delivered with or without low voltage release (LVR). This is a security protection device fitted to the motor whereby, when there is a loss of power, this relay prevents the motor starting by itself when the power to it is reactivated.

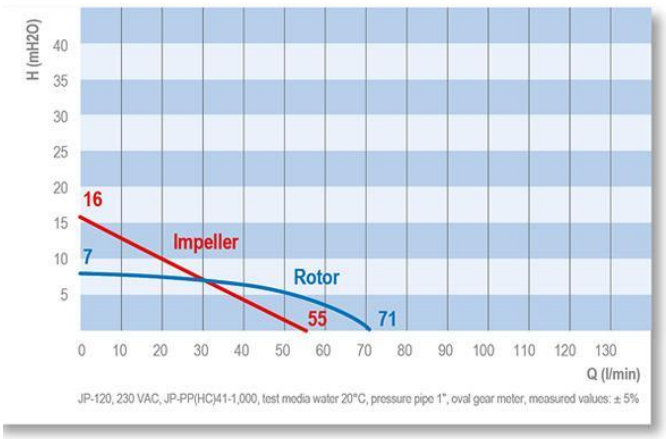
Speed Control Option

All 230V / 1 Ph / 50 Hz Universal Electric Motors are available with or without Speed Control. The speed, and therefore capacity, the Drum or Container Pump can be regulated via a knob on the motor handle, facilitating a reduction by as low as 50%.

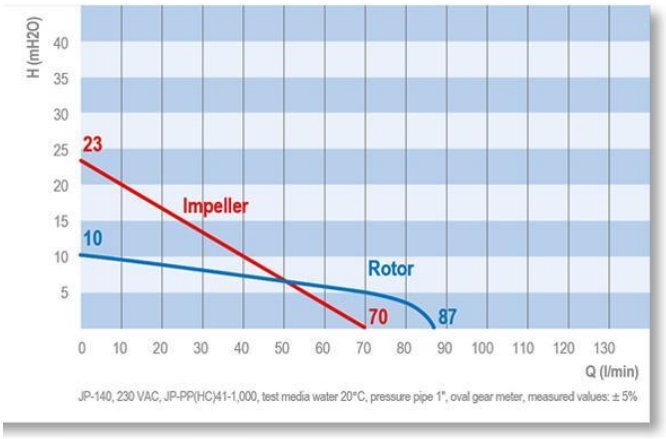
Universal Electric Motor Performance Curves

Test medium water 20°C, 2 m pressure pipe 1", oval gear meter 1", measured values: ± 5%

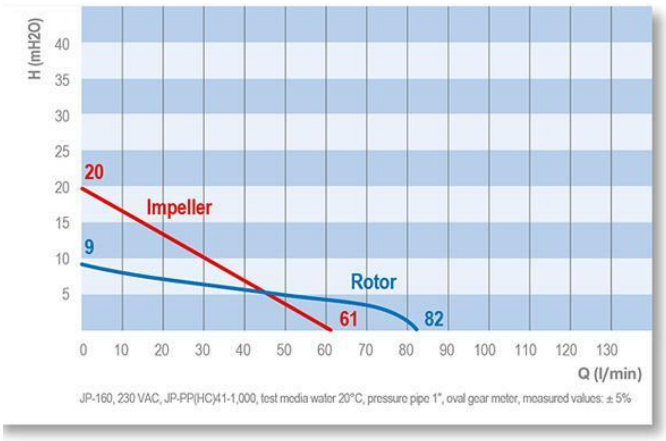
JP-120 (IP24)



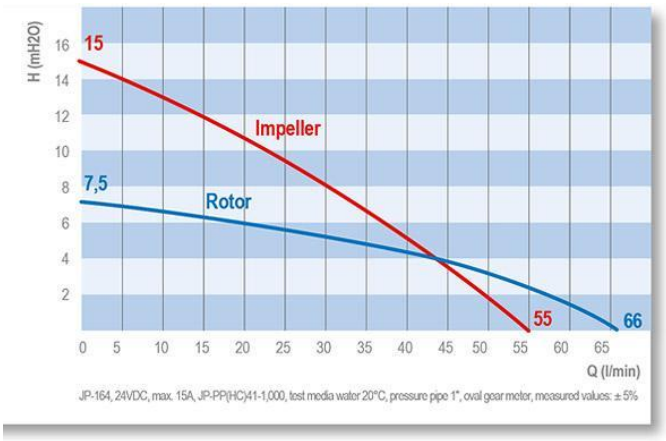
JP-140 (IP24)



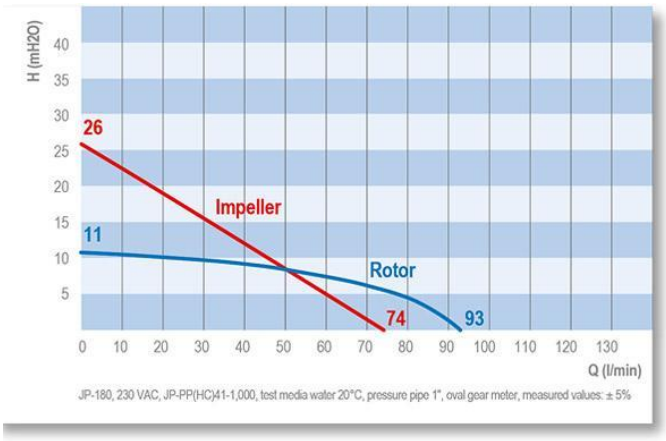
JP-160 (IP24)



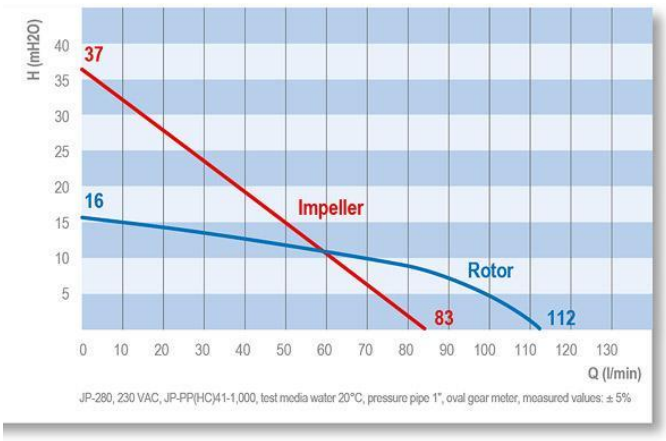
JP-164 (IP24 / 24V DC)



JP-180 (IP24)

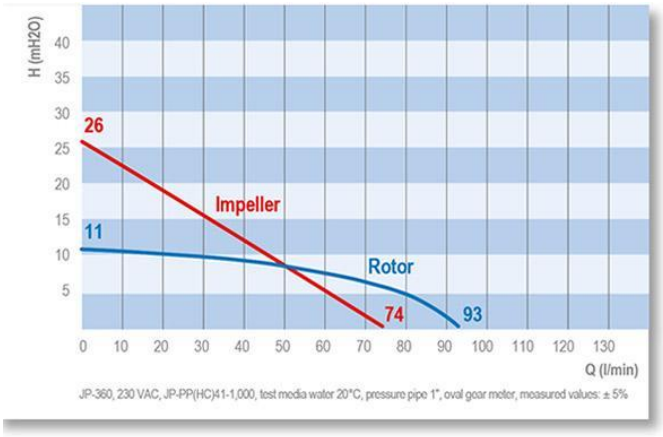


JP-280 (IP24)

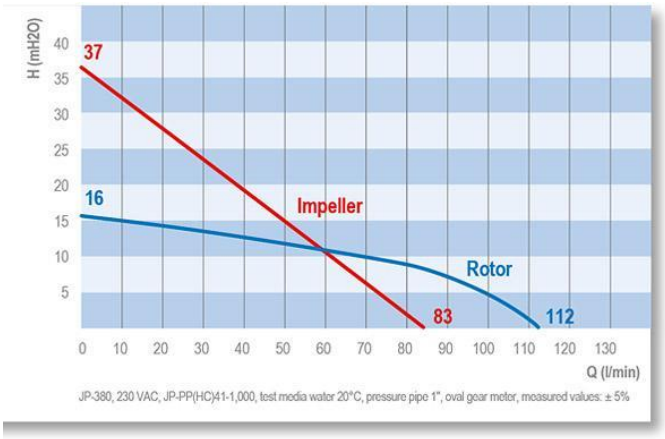


Tapflo UK | 3 Mayflower Close | Southampton | SO53 4AR | United Kingdom
www.tapflopumps.co.uk | **Tel:** 02380 252 325 | **Email:** sales@tapflopumps.co.uk

JP-360 (IP55)



JP-380 (IP55)



ATEX Rated Universal Electric Motors

Compactly built, robust Explosion-Proof Universal Electric Motors which are built and approved in accordance with the latest explosion protection guidelines ATEX 2014/34/EC. The collector motor is Explosion-Proof **according to II 2G Ex de IIA T6** and has an EC-type examination certificate ZELM 09 ATEX 0425 X.

These units, in addition to the Air Operated Motors, provide maximum protection when pumping flammable media or for use in hazardous environments. for such applications, separate certificates for the Drive Motor and the Pump Tube acc. directives ATEX 2014/34/EU are required.

In addition to their robust design, they are characterised by their elegant design and ease of use. The non-stationary and stationary usable drive is particularly suitable for intermittent operation. They feature Externally Ventilation which provides optimal air cooling, low noise and ensures high operational safety and a long service life.

JP-400 Universal Motor (IP54 / Ex-Proof)

550 Watt / 230 V / 50...60 Hz, protection II 2G Ex de IIA T6, IP54, double insulated protection class II, overload protection switch with integrated low voltage release. 5 m cable **without plug.** EC type examination certificate no. **ZELM 09 ATEX 0425 X**

Max Flow: 97 l/min (Rotor) / 71 l/min (Impeller)
Max Head: 11 m (Rotor) / 20 m (Impeller)
Max Viscosity: 600 mPas
Max Density: 1.5 kg/m³

JP-440 Universal Motor (IP55 / Ex-Proof)

400 Watt / 230 V / 50...60 Hz, protection class II 2G Ex db IIC T6 Gb, IP 55, overload protection with integrated low voltage release, 5 m cable **without plug.** Optional with Ex-plug. EC type examination certificate Bureau Veritas **EPS 17 ATEX 1 088 X** & IECEx Certificate of Conformity **IECEx EPS 17.0045X**

Max Flow: 82 l/min (Rotor) / 61 l/min (Impeller)
Max Head: 9 m (Rotor) / 20 m (Impeller)
Max Viscosity: 400 mPas
Max Density: 1.3 kg/m³

JP-460 Universal Motor (IP55 / Ex-Proof)

640 Watt / 230 V / 50...60 Hz, protection class II 2G Ex db IIC T6 Gb, IP 55, overload protection with integrated low voltage release, 5 m cable **without plug.** Optional with Ex-plug. EC type examination certificate Bureau Veritas **EPS 17 ATEX 1 088 X** & IECEx Certificate of Conformity **IECEx EPS 17.0045X**

Max Flow: 93 l/min (Rotor) / 74 l/min (Impeller)
Max Head: 11 m (Rotor) / 26 m (Impeller)
Max Viscosity: 600 mPas
Max Density: 1.5 kg/m³

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JP-480 Universal Motor (IP55 / Ex-Proof)

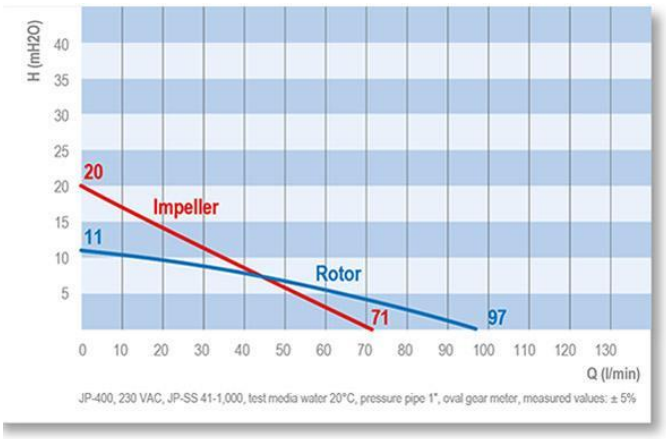
825 Watt / 230 V / 50...60 Hz, protection class II 2G Ex db IIC T6 Gb, IP 55, overload protection with integrated low voltage release, 5 m cable **without plug.** Optional with Ex-plug. EC type examination certificate Bureau Veritas **EPS 17 ATEX 1 088 X** & IECEx Certificate of Conformity **IECEx EPS 17.0045X**

Max Flow: 112 l/min (Rotor) / 83 l/min (Impeller)
Max Head: 16 m (Rotor) / 37 m (Impeller)
Max Viscosity: 1000 mPas
Max Density: 1.9 kg/m³

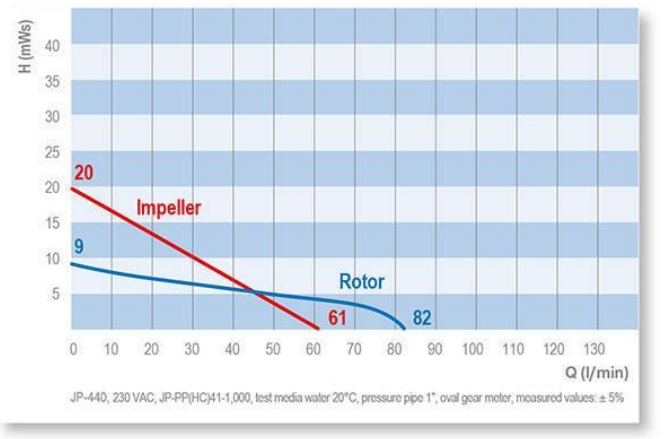
ATEX Rated Universal Electric Motor Performance Curves

Test medium water 20°C, 2 m pressure pipe 1", oval gear meter 1", measured values: ± 5%

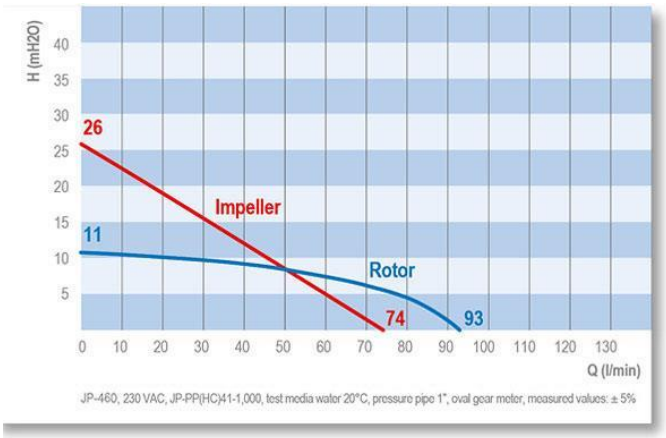
JP-400 (IP54 / Ex-Proof)



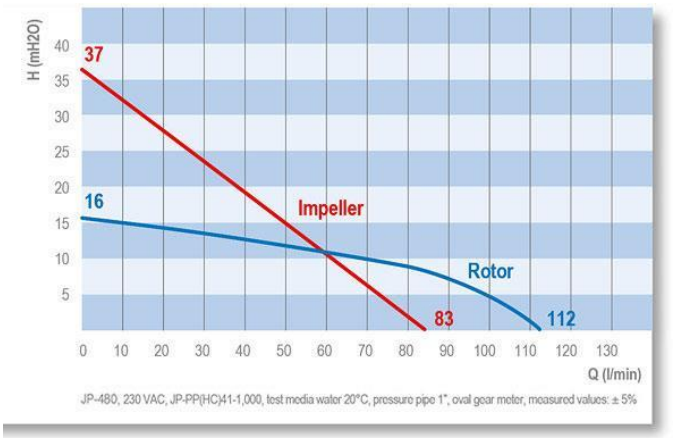
JP-440 (IP55 / Ex-Proof)



JP-460 (IP55 / Ex-Proof)



JP-480 (IP55 / Ex-Proof)



ATEX Rated Air Operated Motors

The Jessberger ATEX Rated Air Operated Motors are lightweight, powerful devices for almost all thin and lightly viscous liquid. The clear construction of the drum pump guarantees a rational and safe use. Suitable for Portable & Stationary use, they are particularly suitable for intermittent, short-term operation times. Outside of Ex-Areas these motors can be combined with Lutz's Pump Tubes.

When combined with Conductive Stainless Steel Pump Tubes, they guarantee absolute safety when pumping or transferring flammable media of different hazard classes or for use in hazardous environments. Built in accordance with the latest explosion protection guidelines ATEX 2014/34/EC, category 2. These Pneumatic Motors are Explosion-Protected according to Ex 2 GD c IIC T6 (80°C) X and has a Type-Certificate IBEX U05 ATEX B007 X.

The very robust Aluminium Motor Housing ensures a good chemical resistance when aggressive solvent vapours are present. The speed of the motor can be controlled by means of a ball valve, which regulates the air supply and thus adjusts the flow rate according to the requirements of the user.

JP-AIR1 Air Motor (Ex-Proof)

300 Watt at max. 6 bar Operating Pressure, with silencer and a brass ball valve for air flow control. This regulates speed of the motor and varies pumping capacity. Type-certificate **IBEX U05 ATEX B007 X.** Air Consumption under load ~13 l/sec.

Max Flow: 78 l/min (Rotor) / 60 l/min (Impeller)
Max Head: 9 m (Rotor) / 13 m (Impeller)
Max Viscosity: 400 mPas
Max Density: 1.3 kg/m³

JP-AIR2 Air Motor (Ex-Proof)

600 Watt at max. 6 bar Operating Pressure, with silencer and lockable on-off switch. Type-certificate **IBEx U07 ATEX B014 X.** Air Consumption under load ~15 l/sec.

Max Flow: 80 l/min (Rotor) / 66 l/min (Impeller)
Max Head: 10 m (Rotor) / 15 m (Impeller)
Max Viscosity: 600 mPas
Max Density: 1.5 kg/m³

JP-AIR3 Air Motor (Ex-Proof)

400 Watt at max. 6 bar Operating Pressure, stainless steel housing with silencer and a brass ball valve for air flow control. This regulates speed of the motor and varies pumping capacity. Type-certificate **IBEX U05 ATEX B007 X.** Air Consumption under load ~12 l/sec.

Max Flow: 91 l/min (Rotor) / 71 l/min (Impeller)
Max Head: 13 m (Rotor) / 25 m (Impeller)
Max Viscosity: 600 mPas
Max Density: 1.5 kg/m³

Air Supply / Installation Requirement

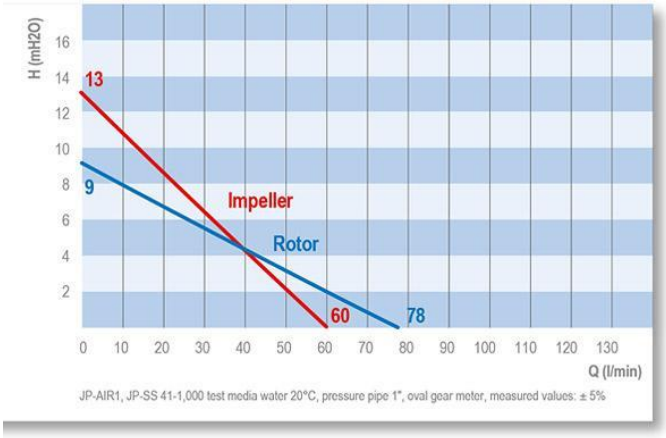
For safe & reliable operation, Jessberger offer 2 sizes of Compressed Air Treatment & Control Sets (3/8" for JP-AIR1 & ¼" for JP-AIR2 & 3) which facilitate the suitable Filtration & Lubrication requirements for the JP-AIR1, 2 & 3 Air Operated Motors. The lubricating device supplied ensures that the motors are supplied with exactly the right amount of oil for lubrication. Without lubrication, air operated motors wear out much faster and maintenance costs increase. Pressure control of the pump is facilitated by the supplied Pressure Regulator.

All Air Motors can be operated with or without lubricated air. It however, is always advised to use oiled air. If you do not use any oil the internal parts could get blocked after a few weeks. The best performance is achieved by adding 1-2 drops of oil per 1 m3 of air consumption. When operating the motors with oil-free air, a performance reduction of up to 20% can be expected.

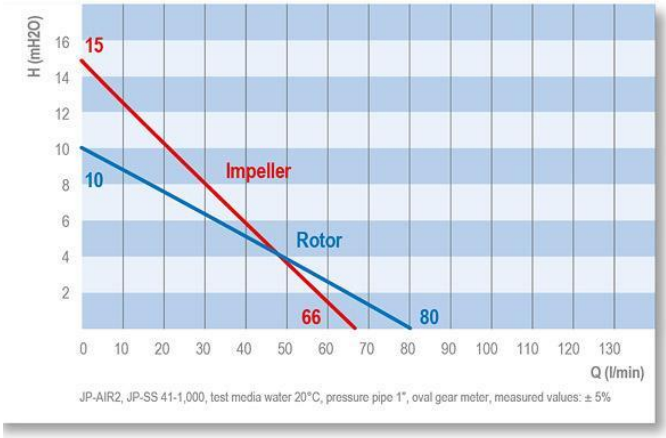
ATEX Rated Air Operated Motor Performance Curves

Test medium water 20°C, 2 m pressure pipe 1", oval gear meter 1", measured values: ± 5%

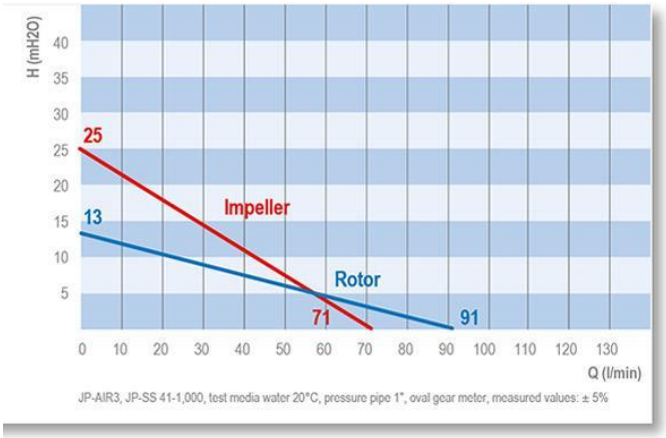
JP-AIR1 (Ex-Proof)



JP-AIR2 (Ex-Proof)

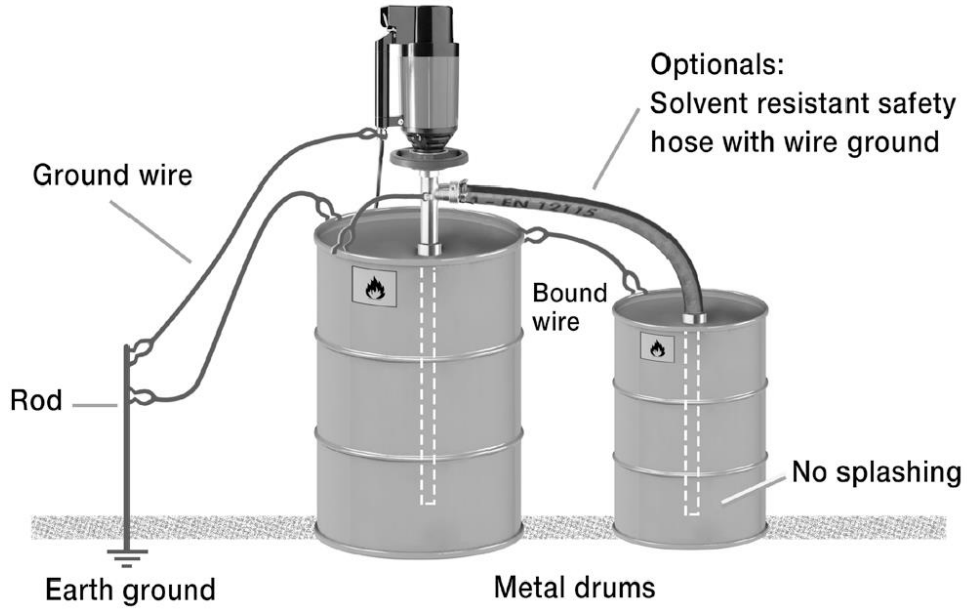


JP-AIR3 (Ex-Proof)

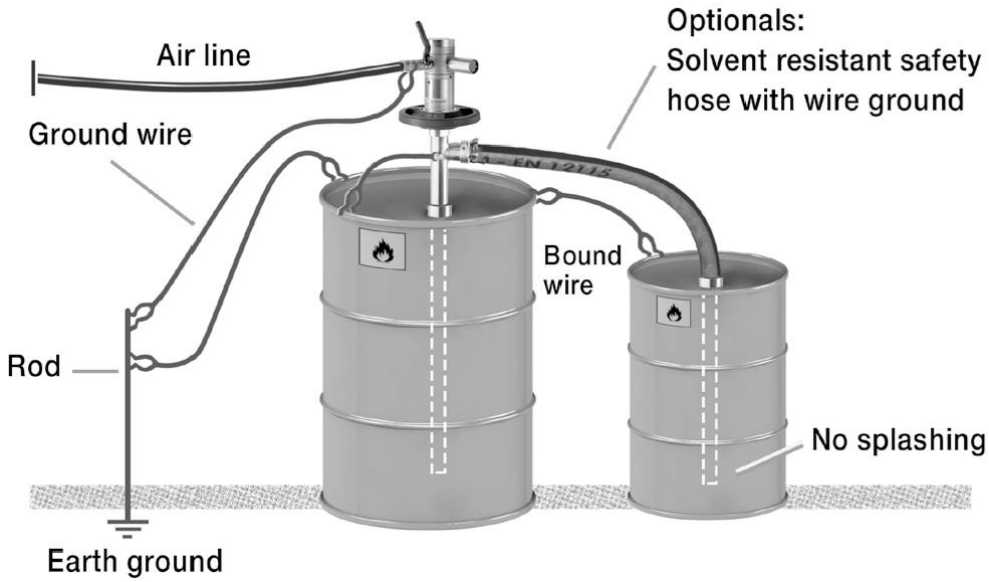


Recommended Installation for ATEX Rated Pump Sets

Pump Tube: JP-SS
Motors: JP-400, 440, 460 & 480



Pump Tube: JP-SS
Motors: JP-AIR1, 2 & 3



Drum Pump Accessories

Jessberger off an extensive range of accessories for their Drum & Container Pumps which offers you everything you need to get the most out of the Drum or Container Pump system. Adapters, hoses, foot strainers, nozzles, flow meters and other accessories improve the efficiency and safety of your drum pump.

PP & SS Barrel Adaptors

For secure fixing of a drum pump in bung hole of a 2" Bung Hole in a 60 or 200 Litre Steel Drums.

For use with plastic drums or plastic containers they can be combined with the numerous available thread adapters.

Barrel Adaptors with Ring Adjustment

For secure fixing of a drum pump in bung hole of a 2" Bung Hole in a 60 or 200 Litre Steel Drums.

The adjustable ring enables the adjustment of immersion depth of the drum pump in the container. E.g. to prevent the pumping of any sedimentation at the bottom of the container.

For use with plastic drums or plastic containers they can be combined with the numerous available thread adapters.

Hose Connectors

In stainless steel with clamps made of aluminium (connection to pump tube female thread 1¼" and connection to nozzle female thread 1").

Bonding Grounding Set

Absolutely necessary when pumping flammable liquids or in hazardous areas. Serves as an electrically conductive connection between the drum pump and the container, as well as equipotetial bonding.

Available as a set of 4 cables (0.5, 1, 2 & 3 m Lengths) or in individual lengths.

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PVC Hoses

Clear PVC with Fabric Reinforcement, suitable for non-flammable, neutral and aggressive media.

Available Sizes: ¾", 1", 1¼" & 1½"
Max Operating pressure: 10 bar
Temperature Range: –35°C...+60°C

Universal, Conductive, Chemical & Solvent Hoses

Smooth Walled Conductive EPDM suitable for many alkalies, acids, acetates, aldehydes, amines, esters, ethers and ketones, not suitable for carbonic gassy products and their derivates as well as for oils and gasoline.

Available Sizes: ¾", 1", 1¼" & 1½"
Max Operating pressure: 16 bar
Temperature Range: –40°C...+90°C

Multi-Purpose, Conductive, Chemical Hoses

Smooth Walled Conductive UHMWPE suitable for nearly all chemicals, oils and gasoline. Not suitable for oleum, bromine and chlorsulfon acide.

Available Sizes: ¾", 1", 1" (FDA), 1¼" & 1½"
Max Operating pressure: 10 bar
Temperature Range: –25°C...+90°C

Mineral Oil Hoses

½" PN10 with fabric lining
¾" PN10 with fabric lining
1" PN10 with fabric lining
1¼" PN16 TW-hose
1½" PN16 TW-hose

NBR, FDA Approved Hoses

Suitable for animal and vegetable fat and oils, milk products, mineral water, fruit juice and alcohol up to 92%.

Available Sizes: ¾", 1", 1¼" & 1½"
Max Temperature: +120ºC

PTFE, FDA Approved Hoses

FDA Approved PTFE Inner Liner with Conductive EPDM Cover

Available Sizes: ¾" & 1", Temperature Range: -40ºC...+150ºC

Discharge Spout

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.

Stainless Steel Hose Clamps

For secure fixing of Hose Tails into Hoses.

Available Sizes: DN12...20, DN16...25, DN20...32, DN25...40 & DN40...60

Barrel / Container Safety Clamp

For securely fixing a Drum or Container Pump into an Open Topped Container, Drum or Vessel.

Emission Proof Drum Adaptors

Suitable for Drum or Container Pumps with a Tube Set ø of 41 mm, they prevent the emission of harmful gases and vapours out of the drum. Any vacuum inside the drum is equalized by an integral valve. They feature a 2" BSP M thread for connection to 60 or 200 Litre Steel Drums.

For use with plastic drums or plastic containers they can be combined with the numerous available thread adapters.

Available in either PP or Stainless Steel AISI 316Ti w/ FKM Seals

Screwed IBC Lids with Optional Barrel Adaptor

Black, Red or Green IBC Lids with 2" BSP F Threaded Centre Connection with optional PP Barrel Adaptor for 41 mm ø Tube Sets.

Available Sizes:

IBC DN225 (Black)
IBC DN150 (Red)
IBC DN225 (Green)
IBC DN150 (Green)

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Pump Wall Hanger / Mounting Bracket

For securely stowing a Drum or Container Pump, when not in use, to protect against damage.

PP Hand Nozzles with Swivel Connection

Housing and internal parts made of polypropylene, valve seat and O-Rings made of **FKM** or **EPDM,** spring in Hastelloy 2.4610, Swivel Hose Connection.

Available Sizes: ½", ¾", 1", 1" (Internal Thread)
Max Flow Rate: 80 l/min
Max Viscosity: 800 mPas
Max Operating Pressure: 3 bar
Weight: 210 g

PP Hand Nozzles with 25 mm ø Spout

Housing and internal parts made of white polypropylene, valve seat and O-rings made of **NBR,** spring made of stainless steel.

Available Sizes: ¾" & 1"
Max Flow Rate: 100 l/min
Max Viscosity: 800 mPas
Max Operating Pressure: 2 bar

PVDF Hand Nozzles with Swivel Connection

Housing and internal parts made of PVDF, valve seat and O-Rings made of **FKM**, **EPDM** or **FFKM,** spring in Hastelloy 2.4610, Swivel Hose Connection.

Available Sizes: ½", ¾", 1", 1" (Internal Thread)
Max Flow Rate: 80 l/min
Max Viscosity: 800 mPas
Max Operating Pressure: 3 bar
Weight: 210 g

PP Hand Nozzles for Adblue with 19 mm ø Spout

Housing and internal parts made of white polypropylene, valve seat and O-rings made of **FKM,** spring & spout made of stainless steel.

Available Sizes: ¾" & 1"
Max Flow Rate: 100 l/min
Max Viscosity: 800 mPas
Max Operating Pressure: 2 bar

SS Hand Nozzles for Adblue with 19 mm ø Spout for Vehicle Filling & Swivel Connection

Housing and internal parts made of stainless steel, valve seat and O-rings of **FKM,** spring of stainless steel.

Available Sizes: ¾" & 1"
Max Flow Rate: 60 l/min
Max Viscosity: low
Max Operating Pressure: 3.4 bar

Nickel Plated Brass Hand Nozzles with PTFE Seal & Swivel Connection

For filling and transferring neutral and aggressive media and liquids, also in the field of pharmaceutical and the food industry. Housing and internal parts are made, of nickel-plated brass. Seals made of PTFE.

Available Sizes: ¾" & 1", 1" Internal Thread, 1" External Thread, 1¼", 1¼" External Thread
Max Flow Rate: 80 l/min
Max Viscosity: 750 mPas
Max Operating Pressure: 4 bar
Max Temperature: +80ºC

AISI 316Ti Hand Nozzles with PTFE Seal

For use in chemical, pharmaceutical and food-industry. Housing and inner parts of stainless steel AISI 316Ti, seals of PTFE.

Available Sizes: ¾" External Thread, 1" Internal Thread, 1" External Thread
Max Flow Rate: 80 l/min
Max Viscosity: 750 mPas
Max Operating Pressure: 4 bar
Max Temperature: +80ºC

Aluminium Hand Nozzles

For diesel & oil transfer applications.

Available Sizes: ¾" Hose Tail, 1" Internal Thread & 1" Hose Tail
Max Flow Rate: 60 l/min

PP Clamping Flange for IBCs

For clamping a Drum or Container Pump with a 40/41 mm ø Tube Set to an IBC-Container. Ø 135 mm, 4-holes, screw-hole circle 115 mm

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Suction Strainers

Available in PP, AISI 316Ti & PVDF to protect Drum & Container Pumps when abrasive particles are present in the process medium.

PP: size of slots 1.5 x 12 mm, tube-Ø 40, 41 or 42 mm
AISI 316Ti: size of slots 1.5 x 20 mm, tube-Ø 41 mm
PVDF: size of slots 1.5 x 12 mm, tube-Ø 41 mm

Ex-Proof Plugs & Sockets

Ex de IIC T6, protection class IP 65, 16 Ampere
Available in 3 or 5 Pole with CEE-Round Plug & Socket

1" AISI 316, ATEX Rated, Digital Turbine Flow Meter

Battery Operated Electronic Turbine Flowmeter with Resettable Display for Subset, Flow Volume in l/min, Non-Resettable Total Amount.

AISI 316 Housing with PVDF, Carbon Ceramic & FKM Internals.

Flow Range: 19 l/min...190 l/min
Battery Lifespan: ~2000 hrs
Accuracy: ± 1%

Aluminium Oval Gear Flow Meters with Digital Display

Uncalibrated Aluminium Oval Gear Flow Meter with Digital Display.

Available Units:

Oil, 6...60 l/min, ¾" Internal Thread, 70 Bar Rated
Diesel, 10...100 l/min, 1" Internal Thread, 30 Bar Rated
Oil & Diesel, 50...150 l/min, 1½" Internal Thread, 20 Bar Rated

Available with various AISI 316 Hex Nipples and Reducing Nipples

K33 / K44 Aluminium Oval Gear Flow Meters with Mechanical Display

Made of Aluminium & Plastic for lubricants, heating oil/diesel, anti freezing liquid (undiluted) and vegetable oils.

Connections: 1" BSP F
Flow Range: 20...120 l/min
Max Operating Pressure: 10 bar
Viscosity Range: 30...2000 mPas

ORZ-I Oval Gear Flow Meter with Digital Display

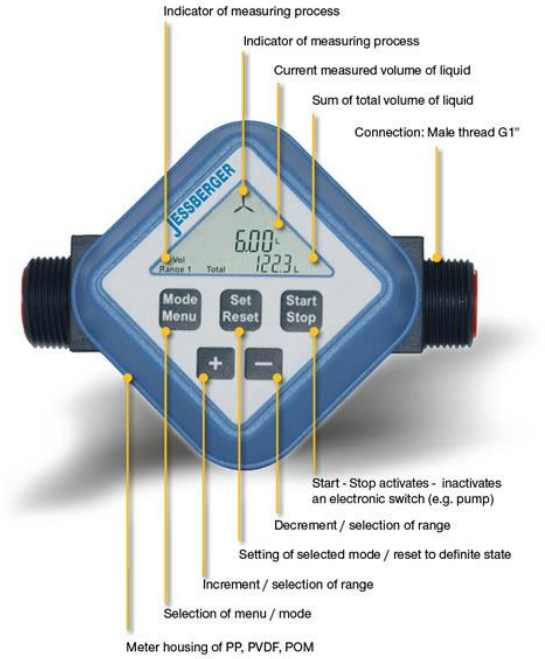
Made of Aluminium & Plastic for motor oils (S.A.E. 5-50), gear oils (S.A.E. 80-240), transmission fluid, coolents (ethylene glycol), brake fluids and wiper fluids.

The electronic register contains a microprocessor, which is powered by a lithium battery whose operating time depends on application with 5 years or more. The counter can be programmed in liters, pints, quarts or gallons and totaled in liters or gallons. The calibration factor, and a measuring unit are programmed at the factory. If necessary, the meter can be electronically recalibrated locally.

A 5-digit LCD display shows the dispensed volume of fluid. The counter module is a robust, glass fiber reinforced, impact-proofed nylon housing very wear.

Connections: ½", ¾" & 1" BSP F
Flow Ranges: 1...35 l/min (½"), 3...60 l/min (¾"), 3...115 l/min (1")
Max Operating Pressure: 100 Bar (½") & 140 Bar (¾" & 1")
Viscosity Range: 8...5000 cPs
Temperature Range: -5°C...50°C (½"), -5°C...+80°C (¾" & 1")
Accuracy: +/-0.5%
Seal: Viton

FM120 Electronic Turbine Flow Meters



Housing made of either PP or PVDF with FKM Seal. Precalibrated for Water, however, can be 3 additional calibration ranges are available. The counter is set by default to liters and can be changed by a few keystrokes on gallons.

In an optimal installation, both inlet and outlet sections are at least 75 cm with a tube diameter of 1". Recommended to be installed in the upright (display above keys down), position of the measuring system up, the flow should be in the direction of arrow.

Connections: 1" ISO G Male
Flow Range: 20...120 l/min
Minimum Volume: 20 Litres
Max Operating Pressure: 6 bar
Viscosity Range: ~20 mPas
Temperature Range: +5°...+50°C
Accuracy: +/- 1%
Repeatability: +/-0.5%
Measuring Resolution: 0.03 L
Display Resolution: 0.05 L
Display: LCD, two 6-digit 7-segment displays and 28 graphic symbols
Controls: 5 short-stroke keys, foil IP65
Power Supply: Lithium battery (<3 Year Lifespan), 3,6 V, type AA, 2300 mAh, alternatively 24 V supply possible.

3 Different versions are available:

FM120: Standard Version with Digital Display of Flow Rate (Non-Resettable & Resettable Totals)

FM120 M01: Same as standard, however, with **Batch Quantity Present** and switch output (open drain) included. Comes with 1 m cable with three-pole diode plug for controlling a pump or for opening and closing of a magnetic valve. This counter can be combined either with a special Drum Pump Motor, or the Remote Control Switch (Item 9028).

FM120 I: Same as standard, however, with pulse output, incl. 1 m three-wire cable without a plug. Quadrature signal, open drain.