

JP-AIR1 Explosion-proof air operated motor

300 Watt at max. 6 bar operating pressure, Ex 2GD c IIC T6 (80 °C) X

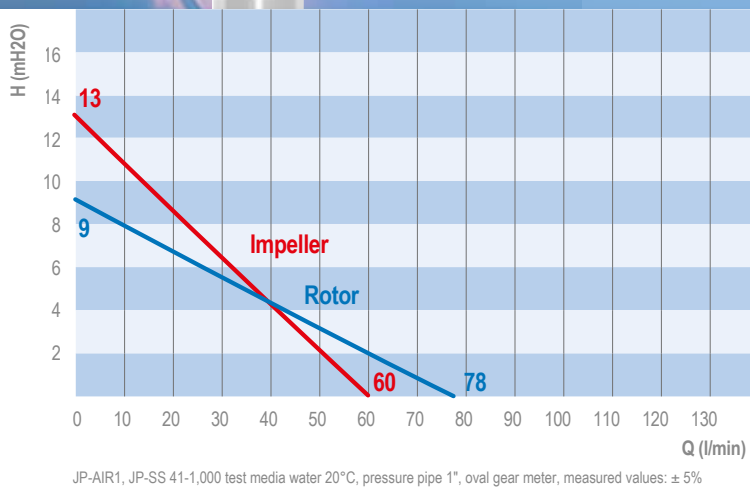
made of aluminium

Description

- 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 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. The motor JP-AIR 1 provides beside other air operated motors and the electric motor JP-400 maximum safety when pumping flammable media or for use in hazardous environments. At such applications for the drive motor and the pump tube separate approvals acc. to directive 94/9/EC (ATEX 100a) are required and a potential equalization has to be installed.
- 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. Its sophisticated, technically clear structure ensures an efficient and safe use when transferring the wide range of media.

- 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 a 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.
- The maximum density of the media is for the explosion-proof air operated motor JP-AIR 1 1.3, the maximum viscosity 400 mPas.



Air operated motor JP-AIR 1

300 Watt at max. 6 bar operating pressure, with silencer and a brass ball valve for control compressed air. This regulates speed of the motor and varies pumping capacity.

Operating data JP-AIR 1

Flow rate (with hose and oval gear meter): up to 78 l/min (Rotor)*
up to 60 l/min (Impeller)*

Head: up to 9 m (Rotor)*
up to 13 m (Impeller)*

Viscosity: up to 400 mPas*

Density: up to 1,3*

*Data obtained with a 1" pipe are indicated in the performance curve

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

Order No.:

JP-AIR 1 3001 0300
300 Watt at max. 6 bar operating pressure

Air consumption under load 13 l/sec.



Pump tubes made of polypropylene

for pumping aggressive media such as acids, alkalis and detergents, Ø 41 mm

Standard tube lengths (available from stock)

700 mm • 1,000 mm • 1,200 mm • 1,500 mm • 1,800 mm

Special lengths (available within 1-2 days)

from 200 mm up to 3,000 mm
(Depending on the pump tube material and the medium temperature)



Polypropylene = PP pump tubes 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.

Rotor/Impeller



Axial (Rotor)

Standard in all pump tubes.

- 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.



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.

Material of pump tube	Pump tube diameter	Pump tube length	Version	Order No.
Polypropylene (SS) Stainless steel drive shaft 316 Ti	Ø 41 mm	700 mm	Rotor	2641 0070
			Impeller	2641 0071
	Ø 41 mm	1,000 mm	Rotor	2641 0100
			Impeller	2641 0101
	Ø 41 mm	1,200 mm	Rotor	2641 0120
			Impeller	2641 0121
	Ø 41 mm	1,500 mm	Rotor	2641 0150
			Impeller	2641 0151
	Ø 41 mm	1,800 mm	Rotor	2641 0180
			Impeller	2641 0181
Polypropylene (HC) Hastelloy drive shaft 2,4610	Ø 41 mm	700 mm	Rotor	2141 0070
			Impeller	2141 0071
	Ø 41 mm	1,000 mm	Rotor	2141 0100
			Impeller	2141 0101
	Ø 41 mm	1,200 mm	Rotor	2141 0120
			Impeller	2141 0121
	Ø 41 mm	1,500 mm	Rotor	2141 0150
			Impeller	2141 0151
	Ø 41 mm	1,800 mm	Rotor	2141 0180
			Impeller	2141 0181

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
and many other media

- Special lengths from 200 to 3,000 mm are available on request with short delivery times.

Pump tubes made of PVDF for pumping aggressive media such as highly concentrated acids and alkalies, Ø 41 mm



Polyvinylidene fluoride = PVDF pump tubes up to 90 °C

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

Examples of media

Hydrobromic acid
Chloric acid
Chromic acid
Hydrofluoric acid
Sodium hypochlorite
Nitric acid and
Sulfuric acid > 90 °C

All media, mentioned at the polypropylene pump tubes can be pumped also.

Material of pump tube	Pump tube diameter	Pump tube length	Version	Order No.
Polyvinylidene-fluoride (PVDF)	Ø 41 mm	700 mm	Rotor	2341 0070
			Impeller	2341 0071
	Ø 41 mm	1,000 mm	Rotor	2341 0100
			Impeller	2341 0101
	Ø 41 mm	1,200 mm	Rotor	2341 0120
			Impeller	2341 0121
	Ø 41 mm	1,500 mm	Rotor	2341 0150
			Impeller	2341 0151

- Special lengths are available on request with short delivery times.

Pump tubes made of Aluminium

for transferring mineral oil products up to 1,000 mPas, Ø 41 mm



Aluminium = Alu pump tubes 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.

Examples of media

Drilling emulsions
Diesel
Liquid soap
Liquid wax
Transmission oils
Fuel oil
Hydraulic oils
Machine oils
Mineral oils
and motor oils

Material of pump tube	Pump tube diameter	Pump tube length	Version	Order No.
Aluminium (ALU)	Ø 41 mm	700 mm	Rotor	2441 0070
			Impeller	2441 0071
	Ø 41 mm	1,000 mm	Rotor	2441 0100
			Impeller	2441 0101
	Ø 41 mm	1,200 mm	Rotor	2441 0120
			Impeller	2441 0121
	Ø 41 mm	1,500 mm	Rotor	2441 0150
			Impeller	2441 0151

- Special lengths up to 3,000 mm are available on request with short delivery times.

Pump tubes made of stainless steel 316 Ti

for transferring neutral, slightly aggressive media and especially flammable media like solvents and for use in food industry, Ø 41 mm

Stainless steel = SS pump tubes with Ex approval, outside ex-areas max. 90 and 120 °C

- With SS-pump tubes all neutral, low viscous media as organic and inorganic diluted acids and alkalies are mainly pumped. In addition these ATEX compliant pump tubes are used specifically for pumping highly combustible media such as solvents or gasoline and for use in explosive environments.
- 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 or 120 °C (with SS rotor) outside ex areas.

Examples of media

Acetone
 Alcohol
 Ammonia
 Gasoline
 Flammable solvents
 Potassium hydroxide solution
 Sodium hydroxide solution
 Nitrovarnishes
 Perchloroethylene
 Phosphoric acid
 Sulfuric acid (up to 7.5% and over 90%)
 Trichloroethylene
 Toluene

In addition the stainless steel pump tubes are suitable for transferring thin fluid food such as fruit juices, milk, edible oils and all other at aluminium pump tubes mentioned media.



Material of pump tube	Pump tube diameter	Pump tube length	Version	Order No.
Stainless Steel 316 Ti Stainless steel shaft EC type-certificate ZELM 09 ATEX 0424 X Ex II1/2 G c II B T4	Ø 41 mm	700 mm	Rotor	2241 0070
			Impeller	2241 0071
	Ø 41 mm	1,000 mm	Rotor	2241 0100
			Impeller	2241 0101
	Ø 41 mm	1,200 mm	Rotor	2241 0120
			Impeller	2241 0121
	Ø 41 mm	1,500 mm	Rotor	2241 0150
			Impeller	2241 0151
	Ø 41 mm	1,800 mm	Rotor	2241 0180
			Impeller	2241 0181
	Ø 41 mm	2,100 mm	Rotor	2241 0210
			Impeller	2241 0211
	Ø 41 mm	2,400 mm	Rotor	2241 0240
			Impeller	2241 0241
	Ø 41 mm	2,700 mm	Rotor	2241 0270
			Impeller	2241 0271
Ø 41 mm	3,000 mm	Rotor	2241 0300	
		Impeller	2241 0301	
Rotor or impeller made of stainless steel full material for stainless steel pump tubes Ø 41 mm			Rotor	2710
			Impeller	2725

