Drum and container pumps

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Safe and economic emptying

of canisters, drums and containers

- Manual hand pumps
- Laboratory pumps
- Drum and container pumps
- Accessories for pumps
- Eccentric screw pumps for barrels and containers

AB Tergo

For oils, chemicals, flammable and high viscous media

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Introduction to AB Tergo hand pumps, laboratory pumps and drum pumps

Manual hand pumps

are always a useful and cost effective alternative to conventional electric or air operated drum pumps when only small quantities of media have to be removed out of canisters or drums or if the customer would use the drum pump only occasionally or rarely.

Depending on the medium different pump tube materials and gaskets are available. In principle the hand pump can be divided into three groups: for chemicals such as acids, alkalies and detergents for mineral oil products and for flammable liquids such as gasoline or solvents. The maximum viscosity of the pumped fluids for the hand pumps is 1,000 mPas.

Most hand pumps have a barrel thread of 2" (partially available with the optional accessory) and can therefore be screwed in all the 60 and 200 liter steel drums. For plastics drums and cans various thread adapters for compensation are available.

Electric or air operated laboratory pumps

are an economical and safe solution for the filling and transferring of small quantities of neutral or aggressive media and thin fluid food from cans, drums or containers.

The laboratory pumps consist of a light, handy and powerful electric motor or air operated motor and a pump tube that is suitable for the application and that is available in different materials, pump tube diameters and pump tube lengths. With the universal motor TP-140 the maximum density of the media is 1.4, and the maximum viscosity 400 mPas.

Because of their light weight and simplest operation the laboratory pumps are used everywhere where the transferring of small quantities of media is part of the daily business. They have proven themselves in addition to the industry also in laboratories or pharmacies.

With the universal motor TP-280 the maximum density of the media is 1.9 and the maximum viscosity is 1,000 mPas.

As drives universal motors and air operated motors are available.

Electric or air operated drum and container pumps

by AB Tergo are lightweight, 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.

Drum and container pumps consist of a high-performance, internally or externally ventilated universal motor, which is also available in an explosion-proof version and a pump tube that is suitable for the application. The pump tubes of drum pumps are available in polypropylene (for aggressive media as cleaning agents, acids and alkalies, up to 50 °C), PVDF (for highly aggressive media or when the medium temperature is between 50 and 90 °C), aluminium (for mineral oil products) or stainless steel 316Ti (for flammable liquids such as gasoline or solvents or thin liquid food) as well as in various versions (different immersion tube lengths, as mixing pump tube for simultaneous mixing and pumping, as sealless version or at the stainless steel pump tube also with mechanical seal or complete drum emptying function).

The various pump tube materials and their applications range in the overview

Pump tubes made of polypropylene (PP)

are suitable for neutral, aggressive and hardly combustible liquids. They are used specifically for pumping aggressive chemicals such as acids, alkalies or detergents.

Drive shaft: Stainless steel 316 Ti or hastelloy 2,4610
Media temperature: max. 50 °C
Media: Formic acid (50%), ammonia, boric acid, distilled water, liquid fertilizers, iron-II and III-chloride, acetic acid (80%), photo developers, fruit acids, potassium hydroxide, copper chloride, lactic acid, sodium hydroxide, phosphoric acid, hydrochloric acid, sulfuric acid (up to 90%), hydrogen peroxide, citric acid and many other media.

Pump tubes made of polyvinylidenfluorid (PVDF)

are especially suitable for highly aggressive liquids such as concentrated acids and bases.

Drive shaft:
Hastelloy 2,4610
Media temperature: max. 90 °C
Media: Hydrobromic acid, perchloric acid, chromic acid, hydrofluoric acid, sodium hypochlorite, nitric acid and sulfuric acid (> 90%).

Also all media that are listed at the pump tubes made of polypropylene can be handled.

Pump tubes made of aluminium (Alu)

are suitable for neutral and hardly combustible liquids. With these pump tubes particularly mineral oil products up to a maximum viscosity of 1,000 mPas will be transferred.

Drive shaft: Stainless steel 316 Ti
Media temperature: max. 90 °C
Media: Drilling emulsions, diesel, liquid soap, liquid wax, gear oils, heating oil, hydraulic oils, machine oils, mineral oils and motor oils.

Pump tubes made of stainless steel 316 Ti

are used for all neutral, slightly aggressive liquids such as diluted acids, alkalies or detergents and thin fluid food. In addition the pump tubes provide a special safety for conveying or transferring flammable liquids of different hazard classes (up to temperature class 4) in the Ex zone 0 and when pumping low-viscous neutral or slightly aggressive media in Ex zones 1 and 2.

Drive shaft: stainless steel 316 Ti
Media temperature:
max. 90 °C (with PTFE rotor),
max. 120 °C (with rotor made of stainless steel block)

Media: Acetone, alcohol, ammonia, gasoline, flammable solvents, caustic lye, nitrocellulose lacquers, perchlorethylene, phosphoric acid, sulfuric acid (up to 7.5% and over 90%), trichlorethylene, toluene.

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

We will be pleased to advice you regarding chemical resistance. Please ask us.

Manual hand pumps

Hand pump TP-02

Hand pump TP-02 for acids, alkalies and water-based chemicals

Pump material: Polypropylene
Shaft: Stainless steel 304
Seals: FKM
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".

Order No.: 6002 0000

Hand pump TP-03

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

Pump material: Polypropylene
Shaft: Tool steel
Seals: 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".

Order No.: 6003 0000

Hand pump TP-04

Hand pump for different media

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

The telescopic suction tube is adjustable from 500 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.

TP-04 **YELLOW** seals: FKM
For aggressive media such as acids and alkalies

TP-04 **BLUE** seals: NBR
For mineral oil products

TP-04 **RED** seals: EPDM
For alkaline solutions

TP-04 **BLUE/WHITE** seals: Fluorpolymer
For thin fluid food

Order No.: YELLOW: 6004 0000, BLUE: 6004 0001, RED: 6004 0002, BLUE/WHITE: 6004 0003

Manual hand pumps

Hand pump TP-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 (incl. 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	**Order No.:**
Discharge arc with PTFE seal and wing nut	
Ø 11 mm	**6510**
Ø 25 mm	**9074**
Hose connection made of stainless steel, with PTFE seal and wing nut made of brass, nickel plated	
Hose connection ¾"	**6520**
Hose connection 1"	**6530**
Drum adapter made of brass nickel plated R2" with fixing device	**6540**
Anti-static set consisting of 4 copper cables (absolutely necessary when pumping flammable liquids)	**9003**

Order No.: 700 mm: 6005 0700, 1,000 mm: 6005 1000 plus optional accessories

Plastic hand pump TP-06

Suitable for water, slightly aggressive acids and alkalies

Pump material: Polyethylen and PVC
Flow rate 0,08 l/pumping process and 20 l/min at an independent transferring*
Pump tube length: 850 mm
Pump tube diameter: 25 mm

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.

Order No.: 6006 0000

Hand pump TP-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 four-piece suction tube are included.

Flow rate: Water: 20 l/min*
Oil SAE 30: 9 l/min. at 20 °C*
Pump tube length: Suction pump consisting of four parts, each 250 mm
Pump tube diameter: max. 31 mm
Temperature: 40 °C*
Viscosity: 400 mPas*

TP-07 **BLUE** seals: NBR
For mineral oil products

TP-07 **RED** seals: EPDM
For alkaline solutions

TP-07 **GREEN** seals: FKM
For slightly aggressive chemicals

Accessories	Order No.:
Transfer hose (1.5 m) with nozzle:	
TP-07 **BLUE**	**6710**
TP-07 **RED**	**6720**
TP-07 **GREEN**	**6730**

Order No.: BLUE: 6007 0001, RED: 6007 0002, GREEN: 6007 0003 plus optional accessories

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

Manual hand pumps

Hand pump TP-08

Hand-crank rotary pump for chemicals

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

Pump material: PVDF
Seals: PTFE
Flow rate: 0.3 l/rotation*
Suction tube length: 3 x 35 cm

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

Regular lubrication required.

Order No.: 6008 0000

Hand pump TP-09

Suitable for almost all highly liquid and slightly aggressive media such as acids, alkalis and chemicals. Better resistance as TP-02 due PP-sheathed shaft.

Pump material: Polypropylene
Telescopic suction tube: 3 parts, polyethylen
Seals: FKM
Suction depth: for containers to 960 mm
Flow rate: 0,5 l/stroke*
Weight: 1.2 kg

PE hose 2 m

Thread G 2" for screwing in standard barrels.

Adapters available for plastics drums and cans of 60–220 l.

Outlet piece DN 19, 3/4".

The pump is not to be used for pumping media of hazard classes AI/AII, other flammable media or in an explosive environment.

Order No.: 6009 0000

Hand pump TP-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. up to 1,000 mPas.

The pump is not suitable for water.

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".

Order No: 6011 0000

Hand pump TP-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. up to 1,000 mPas.

The pump is not suitable for water.

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".

Order No.: 6012 0000

Manual hand pumps

Hand pump TP-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.

Material: pump housing made of cast iron
Seals: NBR
Flow rate: 0,25 l/rotation*
Pump tube diameter: 53 mm
Suction tube length: 1000 mm; therefore suitable for smaller containers and 200 liter drums

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

Order No.: 6013 0000

Hand pump TP-14

Hand lever pump made of metal

Pump is suitable for thin-liquid, non flammable media like diesel, machine oils, mineral oils, etc.

Material: zinc alloy
Seals: NBR
Flow rate: 0,5 l/stroke*

Pump tube length: 450–840 mm
Pump tube diameter: 40 mm
Thread adapter: G 2"

Telescopic suction tube enables an universal use for all sizes of drums.

Order No.: 6015 0000

Hand pump TP-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.

Order No.: 6015 0000

Hand pump TP-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 (undilated), 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.

Order No.: 6016 0000

* 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 use in explosive environments also in hand pump business only conductive pumps are allowed to be used that hold an ignition source assessment.

Furthermore it is mandatory to establish a potential equalization by grounding the hand pump and the drum.

Manual hand pumps

Battery driven pump TP-111

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

Only suitable for short-term operation.

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).

Order No.: 6111 0000

Thread adapters

Thread adapters

Thread adapters made of PE for equalization of different threads at canisters, drums, containers, etc. when fixing f.e. hand pumps.

All AB Tergo hand pumps have a bung adapter (2" BSP male thread) that is suitable for metal drums like S 60 or S 200.

Due to the big variety of different canisters, drums, containers, etc. that are available in the market there is often a need to use an adapter to fix the pump in the drum securely.

Material of adapter: PE (Polyethylene)

This plastic material is resistant to water, many alkalies, acids and salt solutions. It is only limited chemical resistant to oils, organic solvents and fuels. In contact with some of these substances (depending on concentration and density) PE tends to swell.

No.	Color	Thread 1	Thread 2	Order No.
1	Brown	2" BSP fine, internal*	DIN 71, internal thread	**6001**
2	Grey	2" BSP fine, internal*	DIN 61/31, external thread	**6002**
3	Black	2" BSP fine, external*	DIN 61/31, external thread	**6003**
4	Yellow	2" BSP fine, internal*	DIN 61/31, internal thread	**6004**
5	White	2" BSP fine, internal*	ASTM Ø 63 mm, int. thread	**6005**
6	Red	2" Mauser, internal thread	Trisure, external thread	**6006**
7	Orange	2" BSP fine, internal* thread*	Trisure, external thread	**6007**
8	Blue	2" BSP fine, internal* thread*	2" Mauser, external thread	**6008**
9	Green	2" BSP fine, internal* thread*	DIN 51, internal thread	**6009**
10	Set	All adapters No. 1-9		**6010**

Classification (without any obligations):

BLUE	External thread Mauser	for 200 liter plastic drums (coarse thread 69 mm)
ORANGE	External thread Trisure	for 200 liter plastic drums (fine thread 56 mm)
YELLOW	Internal thread DIN 61/31	for 30 liter plastic container (59 mm)
BROWN	Internal thread DIN 71	for 60 liter plastic container (71 mm)

We can send you a drawing of the adapters via e-mail.

*2" BSP (british standard pipe) corresponds to a diameter of 58 mm.

Laboratory pumps

Electric or air operated laboratory pumps with a suction tube made of polypropylene (Ø 25, 28 or 32 mm) or stainless steel 316 Ti (Ø 28 or 32 mm)

Electric motor

Laboratory pump tube

The economic and safe solution for the filling and transferring of small quantities of neutral and aggressive media like acids and alkalies means AB Tergo laboratory pumps.

The particular advantages in an overview:

- Designed for a safe and easy filling of low quantities out of narrow-necked containers and canisters.
- Suitable for almost all thin fluid, neutral or corrosive media, but not for flammable liquids (for stainless steel pump tube ATEX is in preparation).
- Handiness and good transportability due to the low weight.
- The pumps are driven by universal motors 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, media-resistant hoses, nozzles, wall hanger or flow meters available on request (see summary on page 22).
- Quick disconnection of the drive from the pump tube through a few rotations.
- Easy disassembling and easy cleaning of the pump tube.
- Consistent modular system.

With only 3 to 4 kg weight and easy operation laboratory pumps are used everywhere where the pumping of liquids out of small quantities is part of the daily business.

The pumps have proven themselves in pharmacies, laboratories and the chemical trading as economic and safe solution when filling and transferring of acids and alkalies.

Convince yourself of the quality and the optimal price/performance ratio of the AB Tergo laboratory pumps!

Air operated motor

Laboratory pump tube

Laboratory pump tubes

Pump tubes made of polypropylene with stainless steel drive shaft for neutral or slightly aggressive media or with hastelloy drive shaft for aggressive media such as acids and alkalies. Alternatively pump tube made of stainless steel 316Ti.

Suction tube diameter at polypropylene 25, 28 or 32 mm; at stainless steel tubes 28 or 32 mm

Standard suction tube lengths: 500, 700, 1,000 and 1,200 mm depending on the pump tube diameter (special lengths available)

Ø 25 mm: Flow rate 23 l/min, head 7 m*

Ø 28 mm: Flow rate 40 l/min, head 9 m*

Ø 32 mm: Flow rate 49 l/min, head 10 m*

Density: 1,3*

Viscosity: 400 mPas*

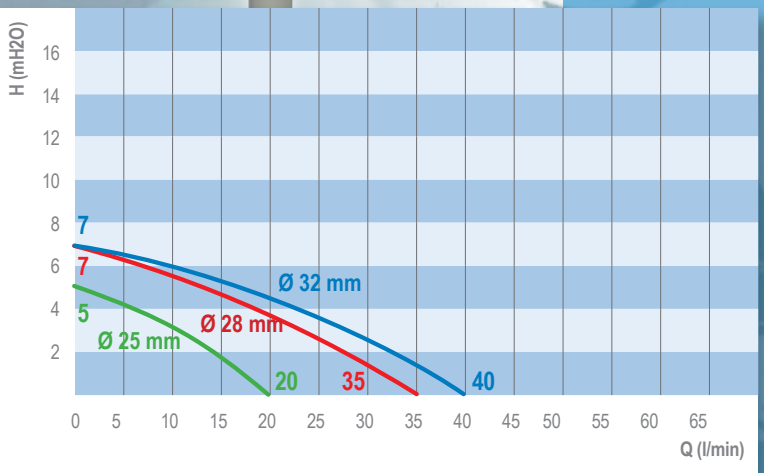
(with motor TP-140, 230 V, 450 W)

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

TP-120 Electric universal motor
TP-140 230 Volt, 50/60 Hz, 250 or 450 Watt, IP 24, alternatively 115 Volt, 60 Hz

Description

- The drives TP-120 and TP-140 are compactly built, not explosion-proof, internally ventilated universal motors in various power classes.
- The lightweight, handy and powerful devices can be used to drive the suction tubes of the laboratory pumps and drum pumps and are suitable in this combination for many thin liquid, neutral, aggressive and non-flammable media. Their sophisticated, technically clear structure ensures an efficient and safe use when transferring different media.
- The drum pump motors are characterized not only by their light weight (2 to 2,3 kg) but also by their elegant design and easy to use. The non-stationary and stationary usable drives are particularly suitable for intermittent operation. As internally ventilated motors they have an optimum air cooling, low noise level and ensure high operational safety and long life time.
- The motor housing made of polypropylene ensures high chemical resistance when aggressive vapours of acids and alkalies are present.
- The standard in the on/off switch integrated low voltage release is intended to prevent an uncontrolled start of the drum pump motor after a power failure or voltage drop and thus guarantees maximum safety. By the presence of a thermal protection the life time of the engine is significantly increased.
- The flow rate of the transferred media can be optionally regulated via a speed control that is mounted laterally in the motor housing, be throttled and therefore adapted to the needs of the user.
- The maximum density of the media is for the TP-120 universal motor 1.2, the maximum viscosity 200 mPas. The 450 watt motor TP-140 can be used up to a density of 1.3 and up to a viscosity of 400 mPas.



TP-120, 230 VAC, TP-PP(HC)32,28,25-1,000 test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

Electric universal motor TP-120

230 Volt, 50/60 Hz, 250 Watt, IP 24, double insulation protection class II, over load protection switch with or without low voltage release. Thermal protection, 5 m cable with plug.

Speed control as option.

Operating data TP-120

Flow rate (with hose and oval gear meter):	Ø 25 mm up to 20 l/min*
	Ø 28 mm up to 35 l/min*
	Ø 32 mm up to 40 l/min*
Head:	Ø 25 mm up to 5 m*
	Ø 28 mm up to 7 m*
	Ø 32 mm up to 7 m*
Viscosity:	up to 200 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%

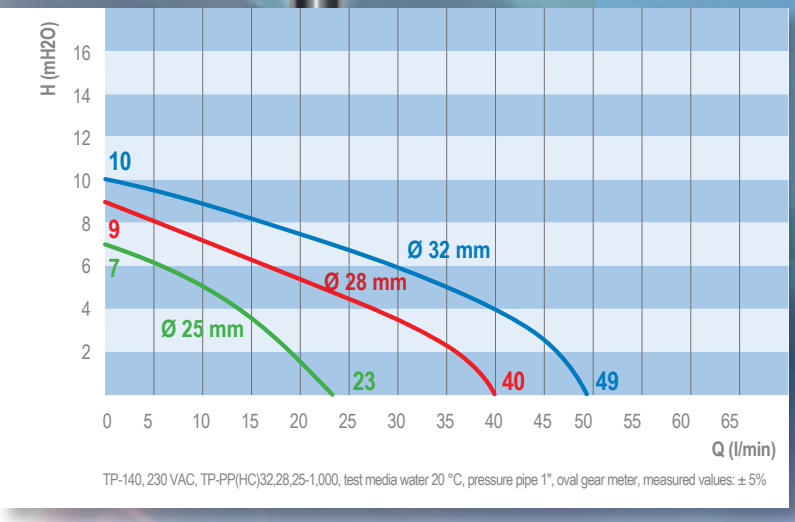
Electric universal motor TP-140

230 Volt, 50/60 Hz, 450 Watt, IP 24, double insulation protection class II, over load protection switch with or without low voltage release. Thermal protection, 5 m cable with plug.

Speed control as option.

Operating data TP-140

Flow rate (with hose and oval gear meter):	Ø 25 mm up to 23 l/min*
	Ø 28 mm up to 40 l/min*
	Ø 32 mm up to 49 l/min*
Head:	Ø 25 mm up to 7 m*
	Ø 28 mm up to 9 m*
	Ø 32 mm up to 10 m*
Viscosity:	up to 400 mPas*
Density:	up to 1,3*



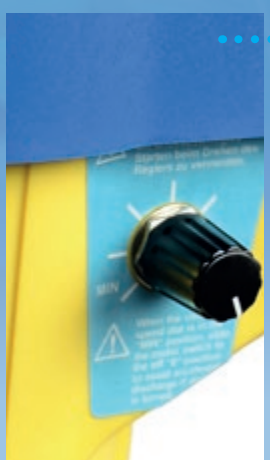
TP-140, 230 VAC, TP-PP(HC)32,28,25-1,000, test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

TP-120	Version	Voltage	Order No.
	without LVR	230 V 1~, 50/60 Hz, 250 W	1120 2300
		115 V 1~, 60 Hz, 250 W	1120 1150
	with LVR	230 V 1~, 50/60 Hz, 250 W	1120 2301
		115 V 1~, 60 Hz, 250 W	1120 1151
	without LVR, with SC	230 V 1~, 50/60 Hz, 250 W	1120 2302
		115 V 1~, 60 Hz, 250 W	1120 1152
	with LVR + SC	230 V 1~, 50/60 Hz, 250 W	1120 2303
		115 V 1~, 60 Hz, 250 W	1120 1153

LVR: Low voltage release
SC: Speed control

TP-140	Version	Voltage	Order No.
	without LVR	230 V 1~, 50/60 Hz, 450 W	1140 2300
		115 V 1~, 60 Hz, 450 W	1140 1150
	with LVR	230 V 1~, 50/60 Hz, 450 W	1140 2301
		115 V 1~, 60 Hz, 450 W	1140 1151
	without LVR, with SC	230 V 1~, 50/60 Hz, 450 W	1140 2302
		115 V 1~, 60 Hz, 450 W	1140 1152
	with LVR + SC	230 V 1~, 50/60 Hz, 450 W	1140 2303
		115 V 1~, 60 Hz, 450 W	1140 1153

LVR: Low voltage release
SC: Speed control



Electronic speed control

The speed of the drum pump motors TP-120, TP-140 can be controlled via a knob on the side of the motor housing electronically. This enables an adjustment of the flow rate.

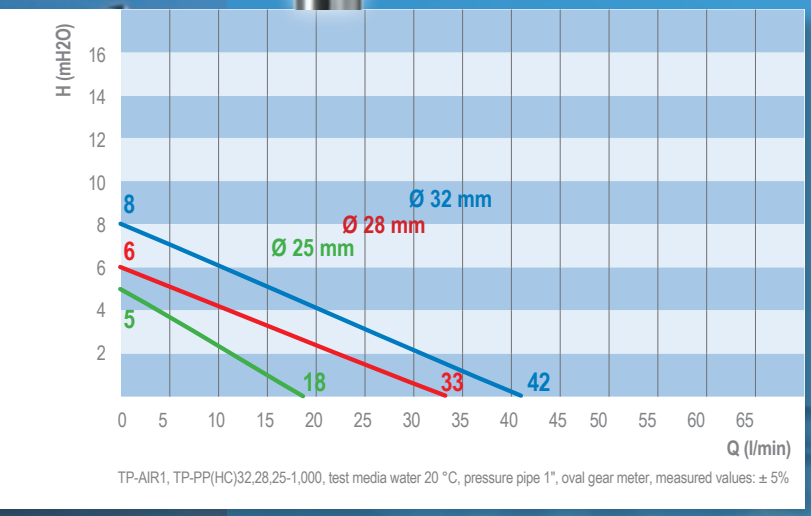
The electronic speed control is available as an option.

TP-AIR1 Air operated motor

300 Watt at max. 6 bar operating pressure

Description

- The drive TP-AIR 1 is a compactly built, elegant designed air motor with an aluminium housing.
- The lightweight, handy and powerful device can be used as drive for the laboratory and drum pump tubes and is suitable in this combination for many thin liquid, neutral and aggressive media. Flammable media are not allowed to be transferred with the laboratory pump tubes made of stainless steel cause of missing ATEX certification. The sophisticated, technically clear structure ensures an efficient and safe use when transferring various media.
- The air operated drum pump motor is characterized beside its light weight (2 kg) by its elegant design and ease of use. The non-stationary and stationary usable drive is particularly suitable for intermittent operation.
- Via the included ball valve the compressed air can be dosed at the air inlet, and thereby the rotational speed of the motor. Therefore the flow rate of the pumped media can be adjusted to the users requirements.
- The maximum operating pressure is 6 bar. The included silencer ensures a low noise level. The air consumption of the engine is under load 13 l/sec.
- The maximum density of the media for the air operated motor TP-AIR 1 is 1.3, the maximum viscosity 400 mPas.



TP-AIR1, TP-PP(HC)32,28,25-1,000, test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

Air operated motor TP-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.

Operating data TP-AIR 1

Flow rate (with hose and oval gear meter):	Ø 25 mm up to 18 l/min*
	Ø 28 mm up to 33 l/min*
	Ø 32 mm up to 42 l/min*
Head:	
	Ø 25 mm up to 5 m*
	Ø 28 mm up to 6 m*
	Ø 32 mm up to 8 m*
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%

► The laboratory pumps can also be combined with the air operated motors TP-AIR 2 or TP-AIR 3.

TP-AIR 1	Performance	Order No.
	300 W	3001 0300

300 Watt at max. 6 bar operating pressure
Air consumption under load 13 l/sec.

Pump tubes for laboratory pumps

made of polpypropylene or stainless steel

Pump tubes in sealless design for pumping small quantities of neutral and slightly aggressive (with stainless steel pump tube or polypropylene pump tube with stainless steel shaft) or aggressive (with polypropylene pump tube with hastelloy shaft) media out of containers with narrow neck.

Pump tube made of polypropylene or stainless steel, various suction tube diameters and lengths, complete with ½" hose connection (for PP Ø 25 mm) or ¾" (with PP for Ø 28 and 32 mm), SS Ø 28 ¾" or SS Ø 32 1" for stainless steel. The pump tubes can be combined with all electric motors (see page 25–32) and air operated motors (see page 37–39) outside hazardous area.

	Material of pump tube	Pump tube diameter	Pump tube length	Order No.
	Polypropylene (SS) Stainless steel drive shaft 316 Ti	Ø 25 mm	500 mm	**2625 0050**
		Ø 25 mm	700 mm	**2625 0070**
		Ø 25 mm	1,000 mm	**2625 0100**
		Ø 28 mm	500 mm	**2628 0050**
		Ø 28 mm	700 mm	**2628 0070**
		Ø 28 mm	1,000 mm	**2628 0100**
		Ø 32 mm	700 mm	**2632 0070**
		Ø 32 mm	1,000 mm	**2632 0100**
		Ø 32 mm	1,200 mm	**2632 0120**
	Polypropylene (HC) Hastelloy drive shaft 2,4610	Ø 25 mm	500 mm	**2125 0050**
		Ø 25 mm	700 mm	**2125 0070**
		Ø 25 mm	1,000 mm	**2125 0100**
		Ø 28 mm	500 mm	**2128 0050**
		Ø 28 mm	700 mm	**2128 0070**
		Ø 28 mm	1,000 mm	**2128 0100**
		Ø 32 mm	700 mm	**2132 0070**
		Ø 32 mm	1,000 mm	**2132 0100**
		Ø 32 mm	1,200 mm	**2132 0120**
	Stainless steel 316 Ti	Ø 28 mm	700 mm	**2228 0070**
		Ø 28 mm	1,000 mm	**2228 0100**
		Ø 28 mm	1,200 mm	**2228 0120**
		Ø 32 mm	700 mm	**2232 0070**
		Ø 32 mm	1,000 mm	**2232 0100**
		Ø 32 mm	1,200 mm	**2232 0120**

Laboratory pumps with electric motor TP-120

Laboratory pump tube made of polypropylene with a stainless steel drive shaft and a suction tube diameter of Ø 25 or 28 mm

For transferring and pumping small quantities of neutral or slightly aggressive media out of containers with narrow necks.

Universal motor TP-120, 230 V, 50/60 Hz, 250 W, IP 24, alternatively 115 V, 60 Hz, double insulated protection class II, on/off switch, thermal protection, 5 m cable with plug.

Material of Pump tube	Motor version	Pump tube diameter	Pump tube length	Order No.
	LVR: Low voltage release, SC: Speed control			
TP-125 Polypropylene (SS) Stainless steel drive shaft 316 Ti	without LVR	Ø 25 mm	500 mm	**1625 0050**
	with LVR	Ø 25 mm	500 mm	**1625 0051**
	without LVR, with SC	Ø 25 mm	500 mm	**1625 0052**
	with LVR + SC	Ø 25 mm	500 mm	**1625 0053**
	without LVR	Ø 25 mm	700 mm	**1625 0070**
	with LVR	Ø 25 mm	700 mm	**1625 0071**
	without LVR, with SC	Ø 25 mm	700 mm	**1625 0072**
	with LVR + SC	Ø 25 mm	700 mm	**1625 0073**
	without LVR	Ø 25 mm	1,000 mm	**1625 0100**
	with LVR	Ø 25 mm	1,000 mm	**1625 0101**
	without LVR, with SC	Ø 25 mm	1,000 mm	**1625 0102**
	with LVR + SC	Ø 25 mm	1,000 mm	**1625 0103**
TP-128 Polypropylene (SS) Stainless steel drive shaft 316 Ti	without LVR	Ø 28 mm	500 mm	**1628 0050**
	with LVR	Ø 28 mm	500 mm	**1628 0051**
	without LVR, with SC	Ø 28 mm	500 mm	**1628 0052**
	with LVR + SC	Ø 28 mm	500 mm	**1628 0053**
	without LVR	Ø 28 mm	700 mm	**1628 0070**
	with LVR	Ø 28 mm	700 mm	**1628 0071**
	without LVR, with SC	Ø 28 mm	700 mm	**1628 0072**
	with LVR + SC	Ø 28 mm	700 mm	**1628 0073**
	without LVR	Ø 28 mm	1,000 mm	**1628 0100**
	with LVR	Ø 28 mm	1,000 mm	**1628 0101**
	without LVR, with SC	Ø 28 mm	1,000 mm	**1628 0102**
	with LVR + SC	Ø 28 mm	1,000 mm	**1628 0103**

Hose connection included in delivery:

For pump tube made of PP with Ø 25 mm: hose connection ½",
for pump tube made of PP with Ø 28 and 32 mm: hose connection ¾".

For SS pump tube with Ø 28 mm: hose connection ¾",
for SS pump tube with Ø 32 mm: hose connection 1".

Laboratory pumps with electric motor TP-120

Laboratory pump tube made of polypropylene with a hastelloy drive shaft and a suction tube diameter of Ø 25 or 28 mm

For transferring and pumping small quantities of acids and alkaline media out of containers with narrow necks.

Universal motor TP-120, 230 V, 50/60 Hz, 250 W, IP 24, alternatively 115 V, 60 Hz, double insulated protection class II, on/off switch, thermal protection, 5 m cable with plug.

Material of Pump tube	Motor version	Pump tube diameter	Pump tube length	Order No.
	LVR: Low voltage release, SC: Speed control			
TP-125 Polypropylene (HC) Hastelloy drive shaft 2,4610	without LVR	Ø 25 mm	500 mm	**1125 0050**
	with LVR	Ø 25 mm	500 mm	**1125 0051**
	without LVR, with SC	Ø 25 mm	500 mm	**1125 0052**
	with LVR + SC	Ø 25 mm	500 mm	**1125 0053**
	without LVR	Ø 25 mm	700 mm	**1125 0070**
	with LVR	Ø 25 mm	700 mm	**1125 0071**
	without LVR, with SC	Ø 25 mm	700 mm	**1125 0072**
	with LVR + SC	Ø 25 mm	700 mm	**1125 0073**
	without LVR	Ø 25 mm	1,000 mm	**1125 0100**
	with LVR	Ø 25 mm	1,000 mm	**1125 0101**
	without LVR, with SC	Ø 25 mm	1,000 mm	**1125 0102**
	with LVR + SC	Ø 25 mm	1,000 mm	**1125 0103**
TP-128 Polypropylene (HC) Hastelloy drive shaft 2,4610	without LVR	Ø 28 mm	500 mm	**1128 0050**
	with LVR	Ø 28 mm	500 mm	**1128 0051**
	without LVR, with SC	Ø 28 mm	500 mm	**1128 0052**
	with LVR + SC	Ø 28 mm	500 mm	**1128 0053**
	without LVR	Ø 28 mm	700 mm	**1128 0070**
	with LVR	Ø 28 mm	700 mm	**1128 0071**
	without LVR, with SC	Ø 28 mm	700 mm	**1128 0072**
	with LVR + SC	Ø 28 mm	700 mm	**1128 0073**
	without LVR	Ø 28 mm	1,000 mm	**1128 0100**
	with LVR	Ø 28 mm	1,000 mm	**1128 0101**
	without LVR, with SC	Ø 28 mm	1,000 mm	**1128 0102**
	with LVR + SC	Ø 28 mm	1,000 mm	**1128 0103**

Hose connection included in delivery:

For pump tube made of PP with Ø 25 mm: hose connection ½",
for pump tube made of PP with Ø 28 and 32 mm: hose connection ¾".

For SS pump tube with Ø 28 mm: hose connection ¾",
for SS pump tube with Ø 32 mm: hose connection 1".

Laboratory pumps with electric motor TP-120

Laboratory pump tube made of stainless steel with a suction tube diameter of Ø 28 mm

For transferring and pumping small quantities of neutral or slightly aggressive media out of containers with narrow necks.

Universal motor TP-120, 230 V, 50/60 Hz, 250 W, IP 24, alternatively 115 V, 60 Hz, double insulated protection class II, on/off switch, thermal protection, 5 m cable with plug.

Material of Pump tube	Motor version	Pump tube diameter	Pump tube length	Order No.
	LVR: Low voltage release, SC: Speed control			
TP-128 Stainless steel 316 Ti	without LVR	Ø 28 mm	700 mm	**1228 0070**
	with LVR	Ø 28 mm	700 mm	**1228 0071**
	without LVR, with SC	Ø 28 mm	700 mm	**1228 0072**
	with LVR + SC	Ø 28 mm	700 mm	**1228 0073**
	without LVR	Ø 28 mm	1,000 mm	**1228 0100**
	with LVR	Ø 28 mm	1,000 mm	**1228 0101**
	without LVR, with SC	Ø 28 mm	1,000 mm	**1228 0102**
	with LVR + SC	Ø 28 mm	1,000 mm	**1228 0103**
	without LVR	Ø 28 mm	1,200 mm	**1228 0120**
	with LVR	Ø 28 mm	1,200 mm	**1228 0121**
	without LVR, with SC	Ø 28 mm	1,200 mm	**1228 0122**
	with LVR + SC	Ø 28 mm	1,200 mm	**1228 0123**

Hose connection included in delivery:

For pump tube made of PP with Ø 25 mm: hose connection ½",
for pump tube made of PP with Ø 28 and 32 mm: hose connection ¾".

For SS pump tube with Ø 28 mm: hose connection ¾",
for SS pump tube with Ø 32 mm: hose connection 1".

Laboratory pumps with electric motor TP-140

Laboratory pump tube made of polypropylene with a stainless steel or hastelloy drive shaft and a suction tube diameter of Ø 32 mm

For transferring and pumping small quantities of neutral or slightly aggressive media out of containers with narrow necks.

Universal motor TP-140, 230 V, 50/60 Hz, 450 W, IP 24, alternatively 115 V, 60 Hz, double insulated protection class II, on/off switch, thermal protection, 5 m cable with plug.

Material of Pump tube	Motor version	Pump tube diameter	Pump tube length	Order No.
	LVR: Low voltage release, SC: Speed control			
TP-132 Polypropylene (SS) Stainless steel drive shaft 316 Ti	without LVR	Ø 32 mm	700 mm	**1632 0070**
	with LVR	Ø 32 mm	700 mm	**1632 0071**
	without LVR, with SC	Ø 32 mm	700 mm	**1632 0072**
	with LVR + SC	Ø 32 mm	700 mm	**1632 0073**
	without LVR	Ø 32 mm	1,000 mm	**1632 0100**
	with LVR	Ø 32 mm	1,000 mm	**1632 0101**
	without LVR, with SC	Ø 32 mm	1,000 mm	**1632 0102**
	with LVR + SC	Ø 32 mm	1,000 mm	**1632 0103**
	without LVR	Ø 32 mm	1,200 mm	**1632 0120**
	with LVR	Ø 32 mm	1,200 mm	**1632 0121**
	without LVR, with SC	Ø 32 mm	1,200 mm	**1632 0122**
	with LVR + SC	Ø 32 mm	1,200 mm	**1632 0123**
TP-132 Polypropylene (HC) Hastelloy drive shaft 2,4610	without LVR	Ø 32 mm	700 mm	**1132 0070**
	with LVR	Ø 32 mm	700 mm	**1132 0071**
	without LVR, with SC	Ø 32 mm	700 mm	**1132 0072**
	with LVR + SC	Ø 32 mm	700 mm	**1132 0073**
	without LVR	Ø 32 mm	1,000 mm	**1132 0100**
	with LVR	Ø 32 mm	1,000 mm	**1132 0101**
	without LVR, with SC	Ø 32 mm	1,000 mm	**1132 0102**
	with LVR + SC	Ø 32 mm	1,000 mm	**1132 0103**
	without LVR	Ø 32 mm	1,200 mm	**1132 0120**
	with LVR	Ø 32 mm	1,200 mm	**1132 0121**
	without LVR, with SC	Ø 32 mm	1,200 mm	**1132 0122**
	with LVR + SC	Ø 32 mm	1,200 mm	**1132 0123**

Hose connection included in delivery:

For pump tube made of PP with Ø 25 mm: hose connection ½",
for pump tube made of PP with Ø 28 and 32 mm: hose connection ¾".

For SS pump tube with Ø 28 mm: hose connection ¾",
for SS pump tube with Ø 32 mm: hose connection 1".

Laboratory pumps with electric motor TP-140

Laboratory pump tube made of stainless steel and a suction tube diameter of Ø 32 mm

For transferring and pumping small quantities of neutral or slightly aggressive media out of containers with narrow necks.

Universal motor TP-140, 230 V, 50/60 Hz, 450 W, IP 24, alternatively 115 V, 60 Hz, double insulated protection class II, on/off switch, thermal protection, 5 m cable with plug.

Material of Pump tube	Motor version	Pump tube diameter	Pump tube length	Order No.
	LVR: Low voltage release, SC: Speed control			
TP-132 Stainless steel 316 Ti	without LVR	Ø 32 mm	700 mm	**1232 0070**
	with LVR	Ø 32 mm	700 mm	**1232 0071**
	without LVR, with SC	Ø 32 mm	700 mm	**1232 0072**
	with LVR + SC	Ø 32 mm	700 mm	**1232 0073**
	without LVR	Ø 32 mm	1,000 mm	**1232 0100**
	with LVR	Ø 32 mm	1,000 mm	**1232 0101**
	without LVR, with SC	Ø 32 mm	1,000 mm	**1232 0102**
	with LVR + SC	Ø 32 mm	1,000 mm	**1232 0103**
	without LVR	Ø 32 mm	1,200 mm	**1232 0120**
	with LVR	Ø 32 mm	1,200 mm	**1232 0121**
	without LVR, with SC	Ø 32 mm	1,200 mm	**1232 0122**
	with LVR + SC	Ø 32 mm	1,200 mm	**1232 0123**

Hose connection included in delivery:

For pump tube made of PP with Ø 25 mm: hose connection ½",
for pump tube made of PP with Ø 28 and 32 mm: hose connection ¾".

For SS pump tube with Ø 28 mm: hose connection ¾",
for SS pump tube with Ø 32 mm: hose connection 1".

Laboratory pumps with air operated motor TP-AIR1

Laboratory pump tube made of polypropylene or stainless steel and with a suction tube diameter of Ø 25, 28 and 32 mm

Modular system:
Motors TP-AIR 2 and TP-AIR 3 are also useable

For transferring and pumping small quantities of neutral and slightly aggressive (with stainless steel pump tube or polypropylene pump tube with stainless steel shaft) or aggressive (with polypropylene pump tube and hastelloy drive shaft) media out of containers with narrow necks.

Air operated motor TP-AIR 1, 300 W at max. 6 bar, with ball valve and silencer, air consumption under load 13 l/sec.

	Material of pump tube		Pump tube diameter	Pump tube length	Order No.
	Polypropylene (SS) Stainless steel drive shaft 316 Ti	TP-325	Ø 25 mm	500 mm	**3625 0050**
			Ø 25 mm	700 mm	**3625 0070**
			Ø 25 mm	1,000 mm	**3625 0100**
		TP-328	Ø 28 mm	500 mm	**3628 0050**
			Ø 28 mm	700 mm	**3628 0070**
			Ø 28 mm	1,000 mm	**3628 0100**
		TP-332	Ø 32 mm	700 mm	**3632 0070**
			Ø 32 mm	1,000 mm	**3632 0100**
			Ø 32 mm	1,200 mm	**3632 0120**
	Polypropylene (HC) Hastelloy drive shaft 2,4610	TP-325	Ø 25 mm	500 mm	**3125 0050**
			Ø 25 mm	700 mm	**3125 0070**
			Ø 25 mm	1,000 mm	**3125 0100**
		TP-328	Ø 28 mm	500 mm	**3128 0050**
			Ø 28 mm	700 mm	**3128 0070**
			Ø 28 mm	1,000 mm	**3128 0100**
		TP-332	Ø 32 mm	700 mm	**3132 0070**
			Ø 32 mm	1,000 mm	**3132 0100**
			Ø 32 mm	1,200 mm	**3132 0120**
	Stainless steel 316 Ti	TP-328	Ø 28 mm	700 mm	**3228 0070**
			Ø 28 mm	1,000 mm	**3228 0100**
			Ø 28 mm	1,200 mm	**3228 0120**
		TP-332	Ø 32 mm	700 mm	**3232 0070**
			Ø 32 mm	1,000 mm	**3232 0100**
			Ø 32 mm	1,200 mm	**3232 0120**

Hose connection included in delivery:

For pump tube made of PP with Ø 25 mm: hose connection ½",
for pump tube made of PP with Ø 28 and 32 mm: hose connection ¾".

For SS pump tube with Ø 28 mm: hose connection ¾",
for SS pump tube with Ø 32 mm: hose connection 1".

Accessories for laboratory pumps

			Order No.
	**Nozzle made of polypropylene** for a safe filling and transferring of low quantities with hose connection ½" (NW 13)"	½"	**9016**
	**Nozzle made of polypropylene** Housing and internal parts made of polypropylene, valve seat and o-rings made of FKM or EPDM, rotatable hose connection **Flow rate:** 80 l/min* **Viscosity:** 800 mPas **Operating pressure:** 3 bar* **Weight:** 210 g	½" ¾"	**9101** **9102**
	**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"	Ø 25 Ø 28 Ø 32	**9078** **9079** **9080**
	**Barrel adapter made of stainless steel** for secure fixing of drum pump in bung-hole of a drum Diameter of pump tube 32 mm, G 2"	Ø 32	**9081**
	The barrel adapters fit due to their 2" thread in 60 and 200 liter steel drums. For use in plastic drums or plastic canisters they can be combined with the thread adapters on page 10.		
	**Wall hanger for laboratory pump** for a secure storage of barrel pump when out of operation and for protection against damages		**9007**
	**PVC-hose** crystal clear with fabric lining, suitable for non flammable, neutral and aggressive media **Operating pressure:** 10 bar* **Temperature:** -35 °C up to +60 °C*	½" ¾"	**9049** **9050**
	**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 **Operating pressure:** 16 bar* **Temperature:** -40 °C up to +90 °C*	½" ¾"	**9054** **9055**
	**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 **Operating pressure:** 10 bar* **Temperature:** -25 °C up to +90 °C*	½" ¾"	**9059** **9060**

Laboratory pump sets

Laboratory pump sets TP-120/TP-140	Order No.

Laboratory pump set TP-120 PP (HC) 700, Ø 28 mm — **1121 2807**

Universal motor TP-120, 230 Volt, 50/60 Hz, 250 Watt, IP 24 internally ventilated universal motor, splash protection to IP 24, thermal protection, on/off switch, 5 m cable with plug, double isolated class II, over load protection switch with low voltage release

Pump tube: Polypropylene, sealless, 700 mm, outer-Ø 28 mm, HC-shaft 2,4610, connection thread G 1", hose connection ¾" (NW 19)

2 m PVC hose ¾" (NW 19)
2 Hose clamps Stainless steel
1 Nozzle Polypropylene FKM ¾"

Flow rate: up to 35 l/min*, **Head:** up to 7 m*, **Density:** up to 1.2*, **Medium temperature:** up to 50 °C, **Viscosity:** up to 200 mPas*

Laboratory pump set TP-120 PP (HC) 1000, Ø 28 mm — **1121 2810**

Universal motor TP-120, 230 Volt, 50/60 Hz, 250 Watt, IP 24 internally ventilated universal motor, splash protection to IP 24, thermal protection, on/off switch, 5 m cable with plug, double isolated class II, over load protection switch with low voltage release

Pump tube: Polypropylene, sealless, 1,000 mm, outer-Ø 28 mm, HC-shaft 2,4610, connection thread G 1", hose connection ¾" (NW 19)

2 m PVC hose ¾" (NW 19)
2 Hose clamps Stainless steel
1 Nozzle Polypropylene FKM ¾"

Flow rate: up to 35 l/min*, **Head:** up to 7 m*, **Density:** up to 1.2*, **Medium temperature:** up to 50 °C, **Viscosity:** up to 200 mPas*

Laboratory pump set TP-140 SS 1000, Ø 32 mm — **1141 3210**

Universal motor TP-140, 230 Volt, 50/60 Hz, 450 Watt, IP 24 internally ventilated universal motor, splash protection to IP 24, thermal protection, on/off switch, 5 m cable with plug, double isolated class II, over load protection switch with low voltage release

Pump tube: Stainless steel 316 Ti, sealless, 1,000 mm, outer-Ø 32 mm, connection thread G 1", hose connection ¾" (NW 19)

2 m Universal chemical hose ¾" (NW 19)
2 Hose clamps Stainless steel
1 Nozzle Brass nickel plated ¾"

Flow rate: up to 49 l/min*, **Head:** up to 10 m*, **Density:** up to 1.3*, **Medium temperature:** up to 90 °C, **Viscosity:** up to 400 mPas*

Laboratory pump set TP-AIR 1

Laboratory pump set TP-AIR 1 SS 1000, Ø 32 mm — **3012 3210**

Air operated motor TP-AIR 1, 300 W at max. 6 bar operating pressure. Motor with brass ball valve and muffler for compressed air control. This regulates the motor speed and varies the pumping capacity.

Pump tube: Stainless steel 316 Ti, sealless, 1,000 mm, outer-Ø 32 mm, connection thread G 1", hose connection ¾" (NW 19)

2 m Universal chemical hose ¾" (NW 19)
2 Hose clamps Stainless steel
1 Nozzle Brass nickel plated ¾"

Flow rate: up to 42 l/min*, **Head:** up to 8 m*, **Density:** up to 1.3*, **Medium temperature:** up to 90 °C, **Viscosity:** up to 400 mPas*

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

Drum and container pumps for pumping thin fluid media such as acids, alkalies and detergents (with polypropylene pump tube), highly aggressive chemicals (with PVDF pump tube), mineral oil products up to 1,000 mPas (with aluminium pump tube) or flammable media and food (with stainless steel 316 Ti pump tube)

Electric motor

Pump tube

► The flow rate of a drum pump depends initially on the speed of the motor and then on motor power.

► For flammable media and for use in hazardous environments explosion proof drum pumps with accessories are available. The electric and air operated engines and pump tubes of conductive stainless steel need an ATEX approval. When pumping flammable media a potential equalization is mandatory.

The particular advantages in an overview:

- The AB Tergo universal motors that can be combined with all pump tubes on pages 40 to 45 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 (see page 46 et seq.).
- Easy disassembling and quick cleaning of the pump tubes.

Axial (rotor)
For higher flow rates

Radial (impeller)
For larger heads

Air operated motor

Pump tube

Media
depending on pump tube

Pump tube made of polypropylene:
For aggressive media such as acids, alkalies and detergents.
Maximum temperature 50 °C.

Pump tube made of PVDF:
For highly aggressive media such as chlorine bleach, chromic acid, hydrofluoric acid, nitric acid, sulfuric acid > 90%.
Maximum temperature 90 °C.

Pump tube made of Aluminium:
For mineral oil products such as diesel, heating oil, hydraulic oils, gear oils, engine oils, mineral oils and motor oils up to 1,000 mPas.

Pump tube made of stainless steel:
For neutral, slightly aggressive media and specifically for lightly flammable media and food.

For more details see the introduction on page 5.

Please ask us regarding the chemical resistance.

Electronic speed control

The speed of the drum pump motors can be controlled electronically via a knob on the handle. This enables an adjustment of the flow rate.

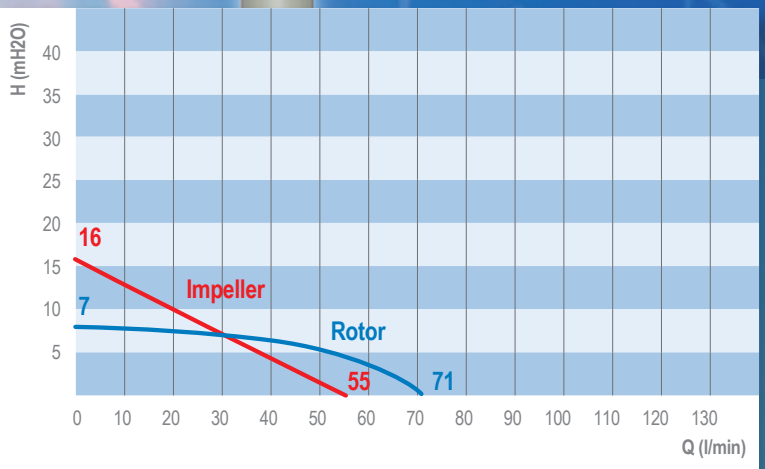
The electronic speed control is available as an option.

TP-120 Electric universal motor

230 Volt, 50/60 Hz, 250 Watt, IP 24, alternatively 115 Volt, 60 Hz

Description

- The drive TP-120 is a compactly built, not explosion-proof, internally ventilated universal motor.
- The lightweight, handy and powerful device can be used as drive for the pump tubes of the laboratory and drum pumps and is useful in this combination for many thin fluid, neutral, aggressive and non-flammable media. Its sophisticated, technically clear structure ensures an efficient and safe use when transferring a variety of water-like liquids.
- The drum pump motor is characterized not only by its light weight (2 kg) but also by its elegant design and ease of use. The non-stationary and stationary usable drive is particularly suitable for intermittent operation. As internally ventilated motor it has an optimal air cooling, low noise level and ensures high operational safety and long time life.
- The motor housing made of polypropylene ensures high chemical resistance when aggressive vapours of acids and alkalies are present.
- The standard in the on/off switch integrated low voltage release is intended to prevent an uncontrolled start of the drum pump motor after a power failure or voltage drop and thus guarantees maximum safety. By the presence of a thermal protection the life of the engine is significantly increased.
- The flow rate of the media that will be pumped can be adjusted by the optionally available speed control that is mounted laterally in the motor housing and therefore adapted to the needs of the user.
- The maximum density of the media is for the TP-120 universal motor 1.2, the maximum viscosity 200 mPas.



TP-120, 230 VAC, TP-PP(HC)41-1,000, test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

Electric universal motor TP-120

230 Volt, 50/60 Hz, 250 Watt, IP 24, double insulation protection class II, over load protection switch with integrated low voltage release. Thermal protection, 5 m cable with plug.

Speed control as option.

Operating data TP-120

Flow rate (with hose and oval gear meter):	up to 71 l/min (Rotor)*
	up to 55 l/min (Impeller)*
Head:	up to 7 m (Rotor)*
	up to 16 m (Impeller)*
Viscosity:	up to 200 mPas*
Density:	up to 1,2*

*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%

TP-120	Version	Voltage	Order No.
without LVR		230 V 1 ~, 50/60 Hz, 250 W	1120 2300
		115 V 1 ~, 60 Hz, 250 W	1120 1150
with LVR		230 V 1 ~, 50/60 Hz, 250 W	1120 2301
		115 V 1 ~, 60 Hz, 250 W	1120 1151
without LVR, with SC		230 V 1 ~, 50/60 Hz, 250 W	1120 2302
		115 V 1 ~, 60 Hz, 250 W	1120 1152
with LVR + SC		230 V 1 ~, 50/60 Hz, 250 W	1120 2303
		115 V 1 ~, 60 Hz, 250 W	1120 1153

LVR: Low voltage release
SC: Speed control

Electronic speed control

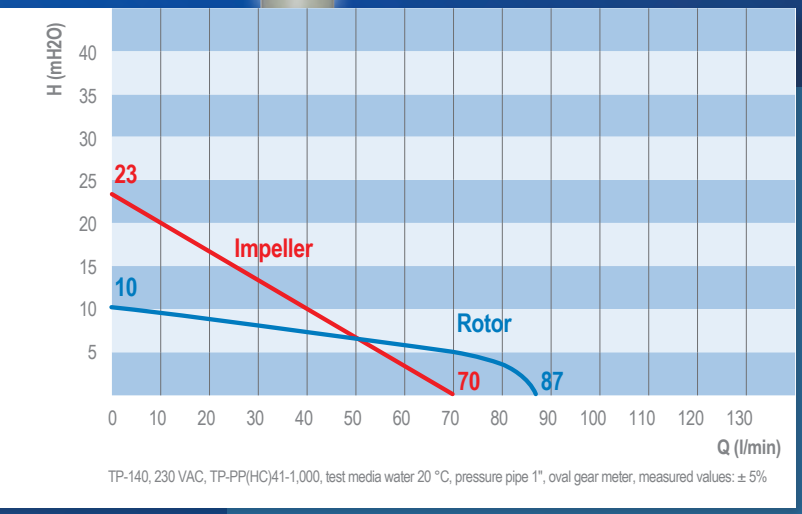
The speed of the drum pump motor TP-120 can be controlled via a knob on the side of the motor housing electronically. This enables an adjustment of the flow rate. The electronic speed control is available as an option.

TP-140 Electric universal motor

230 Volt, 50/60 Hz, 450 Watt, IP 24, alternatively 115 Volt, 60 Hz

Description

- The drive TP-140 is a compactly built, not explosion-proof, internally ventilated universal motor.
- The lightweight, handy and powerful device can be used as drive for the pump tubes of the laboratory and drum pumps and is useful in this combination for many thin fluid, neutral, aggressive and non-flammable media. Its sophisticated, technically clear structure ensures an efficient and safe use when transferring a variety of water-like liquids.
- The drum pump motor is characterized not only by its light weight (2,3 kg) but also by its elegant design and ease of use. The non-stationary and stationary usable drive is particularly suitable for intermittent operation. As internally ventilated motor it has an optimal air cooling, low noise level and ensures high operational safety and long lifetime.
- The motor housing made of polypropylene ensures high chemical resistance when aggressive vapours of acids and alkalies are present.
- The standard in the on/off switch integrated low voltage release is intended to prevent an uncontrolled start of the drum pump motor after a power failure or voltage drop and thus guarantees maximum safety. By the presence of a thermal protection the life of the engine is significantly increased.
- The flow rate of the media that will be pumped can be adjusted by the optionally available speed control that is mounted laterally in the motor housing and therefore adapted to the needs of the user.
- The maximum density of the media is for the TP-140 universal motor 1.3, the maximum viscosity 400 mPas.



TP-140, 230 VAC, TP-PP(HC)41-1,000, test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

Electric universal motor TP-140

230 Volt, 50/60 Hz, 450 Watt, IP 24, double insulation protection class II, over load protection switch with integrated low voltage release. Thermal protection, 5 m cable with plug.

Speed control as option.

Operating data TP-140

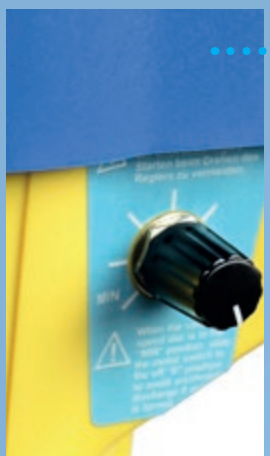
Flow rate (with hose and oval gear meter):	up to 87 l/min (Rotor)*
	up to 70 l/min (Impeller)*
Head:	up to 10 m (Rotor)*
	up to 23 m (Impeller)*
Viscosity:	up to 400 mPas*
Density:	up to 1,3*

*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%

TP-140	Version	Voltage	Order No.
	without LVR	230 V 1 ~, 50/60 Hz, 450 W	1140 2300
		115 V 1 ~, 60 Hz, 450 W	1140 1150
	with LVR	230 V 1 ~, 50/60 Hz, 450 W	1140 2301
		115 V 1 ~, 60 Hz, 450 W	1140 1151
	without LVR, with SC	230 V 1 ~, 50/60 Hz, 450 W	1140 2302
		115 V 1 ~, 60 Hz, 450 W	1140 1152
	with LVR + SC	230 V 1 ~, 50/60 Hz, 450 W	1140 2303
		115 V 1 ~, 60 Hz, 450 W	1140 1153

LVR: Low voltage release
SC: Speed control



Electronic speed control

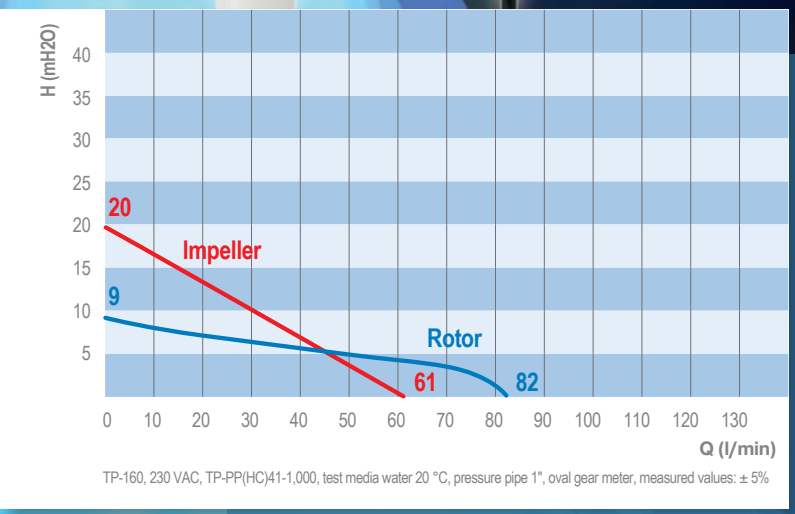
The speed of the drum pump motor TP-140 can be controlled via a knob on the side of the motor housing electronically. This enables an adjustment of the flow rate. The electronic speed control is available as an option.

TP-160 Electric universal motor

230 Volt, 50/60 Hz, 460 Watt, IP 24

Description

- The drive TP-160 is a compactly built, not explosion-proof, internally ventilated universal motor that has proven itself in very large numbers for low viscous media such as the urea solution AdBlue.
- This handy, very robust and powerful motor can be used to drive the suction tubes of drum pumps. In this combination it is suitable for many thin fluid and slightly viscous, neutral, aggressive and non-flammable liquids (max. 400 mPas). Its sophisticated, technically clear structure ensures an efficient and safe use when transferring a wide range of media.
- The drum pump motor is characterized not only by its light weight (2,9 kg) but also by its elegant design and ease of use. The non-stationary and stationary usable drive is particularly suitable for intermittent operation. As internally ventilated motor it has an optimal air cooling, low noise and ensures high operational safety and long lifetime.
- The motor housing made of polypropylene ensures a high chemical resistance when aggressive vapours of acids and alkalies are present.
- The standard in the on/off switch integrated low voltage release is intended to prevent an uncontrolled start of the drum pump motor after a power failure or voltage drop and thus guarantees maximum safety.
- The flow rate of the media to be pumped can be regulated by an optionally available speed control that is integrated in the motor handle. Therefore the flow rate can be adjusted to the needs of the user.
- The maximum density of the media is for the TP-160 universal motor 1.3, the maximum viscosity 400 mPas.



TP-160, 230 VAC, TP-PP(HC)41-1,000, test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

Electric universal motor TP-160

230 Volt, 50/60 Hz, 460 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.

Operating data TP-160

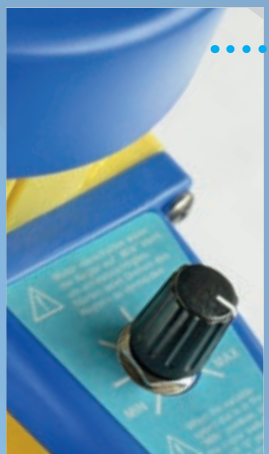
Flow rate (with hose and oval gear meter):	up to 82 l/min (Rotor)*
	up to 61 l/min (Impeller)*
Head:	up to 9 m (Rotor)*
	up to 20 m (Impeller)*
Viscosity:	up to 400 mPas*
Density:	up to 1,3*

*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%

TP-160	Version	Voltage	Order No.
	without LVR	230 V 1 ~, 50/60 Hz, 460 W	1160 2300
	with LVR	230 V 1 ~, 50/60 Hz, 460 W	1160 2301
	without LVR, with SC	230 V 1 ~, 50/60 Hz, 460 W	1160 2302
	with LVR + SC	230 V 1 ~, 50/60 Hz, 460 W	1160 2303

LVR: Low voltage release
SC: Speed control



Electronic speed control

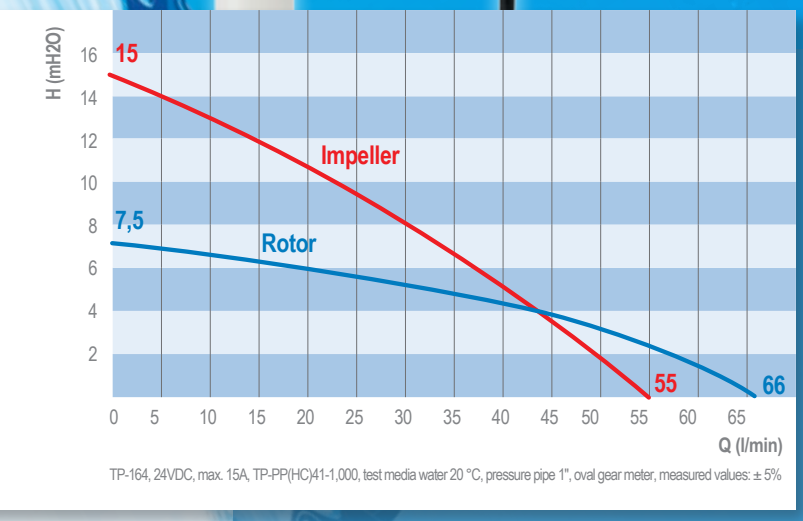
The speed of the drum pump motor TP-160 can be controlled electronically via a knob on the handle. This enables an adjustment of the flow rate.
The electronic speed control is available as an option.

TP-164 Electric universal motor

24 Volt, DC, 400 Watt, IP 24

Description

- The drum pump motor TP-164 is a compactly built, not explosion-proof, internally ventilated universal motor, that has proven itself for slightly viscous media as diesel in agricultural field and at fire brigades foaming agents.
- This handy, very robust and powerful engine can be used as a 24 Volt engine for the suction tubes of drum pumps and is in this combination suitable for many thin fluid and slightly viscous, neutral, aggressive and non-flammable liquids (max. 300 mPas). Its sophisticated, technically clear structure ensures an efficient and safe use when transferring a wide range of media.
- The drum pump motor is characterized not only by its light weight (2,9 kg) but also by its elegant design and ease of use. The non-stationary and stationary usable drive is particularly suitable for intermittent operation. As internally ventilated motor it has an optimal air cooling, low noise and ensures high operational safety and long lifetime.
- An overload circuit breaker prevents overloading of the drum pump motor.
- The motor is supplied at the end of the 5 meter cable as standard with two battery poles. For use by firefighters, police or army a 2-pole plug in screw connection according to DIN 14690 can be mounted alternatively.
- The motor housing made of polypropylene ensures a high chemical resistance when aggressive vapours of acids and alkalies are present.
- The maximum density of the media is for the TP-164 universal motor 1.3, the maximum viscosity 300 mPas.



TP-164, 24VDC, max. 15A, TP-PP(HC)41-1,000, test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

Electric universal motor TP-164

24 volts DC, 400 Watt, IP 24, double insulated protection class II, overload protection, 5 m cable with battery clamps.

Operating data TP-164

Flow rate (with hose and oval gear meter):	up to 66 l/min (Rotor)*
	up to 55 l/min (Impeller)*
Head:	up to 7,5 m (Rotor)*
	up to 15 m (Impeller)*
Viscosity:	up to 300 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%

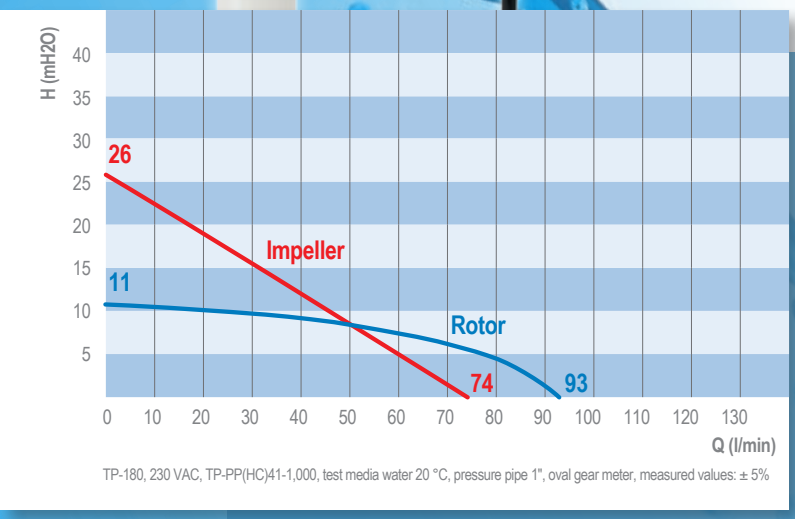
TP-164	Voltage	Order No.
	24 V DC, 400 W	1164 0240

TP-180 Electric universal motor

230 Volt, 50/60 Hz, 640 Watt, IP 24, alternatively 115 Volt, 60 Hz

Description

- The drive TP-180 is a compactly built, not explosion-proof, internally ventilated universal motor that is our top seller for aggressive media in the chemical and the galvanic industry beside TP-280.
- This handy, very robust and powerful motor can be used to drive the suction tubes of drum pumps. In this combination it is suitable for many thin liquid and slightly viscous, neutral, aggressive and non-flammable liquids (max. 600 mPas). Its sophisticated, technically clear structure ensures an efficient and safe use when transferring a wide range of media.
- The drum pump motor is characterized not only by its light weight (3,6 kg) but also by its elegant design and ease of use. The non-stationary and stationary usable drive is particularly suitable for intermittent operation. As internally ventilated motor it has an optimal air cooling, low noise and ensures high operational safety and long lifetime.
- The motor housing made of polypropylene ensures a high chemical resistance when aggressive vapours of acids and alkalies are present.
- The standard in the on/off switch integrated low voltage release is intended to prevent an uncontrolled start of the drum pump motor after a power failure or voltage drop and thus guarantees maximum safety.
- The flow rate of the media to be pumped can be regulated by an optionally available speed control that is integrated in the motor handle. Therefore the flow rate can be adjusted to the needs of the user.
- The maximum density of the media is for the TP-180 universal motor 1.5, the maximum viscosity 600 mPas.



TP-180, 230 VAC, TP-PP(HC)41-1,000, test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

Electric universal motor TP-180

230 Volt, 50/60 Hz, 640 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.

Operating data TP-180

Flow rate (with hose and oval gear meter):	up to 93 l/min (Rotor)*
	up to 74 l/min (Impeller)*
Head:	up to 11 m (Rotor)*
	up to 26 m (Impeller)*
Viscosity:	up to 600 mPas*
Density:	up to 1,5*

*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%

TP-180	Version	Voltage	Order No.
	without LVR	230 V 1 ~, 50/60 Hz, 640 W	1180 2300
		115 V 1 ~, 60 Hz, 640 W	1180 1150
	with LVR	230 V 1 ~, 50/60 Hz, 640 W	1180 2301
		115 V 1 ~, 60 Hz, 640 W	1180 1151
	without LVR, with SC	230 V 1 ~, 50/60 Hz, 640 W	1180 2302
		115 V 1 ~, 60 Hz, 640 W	1180 1152
	with LVR + SC	230 V 1 ~, 50/60 Hz, 640 W	1180 2303
		115 V 1 ~, 60 Hz, 640 W	1180 1153

LVR: Low voltage release
SC: Speed control

Electronic speed control

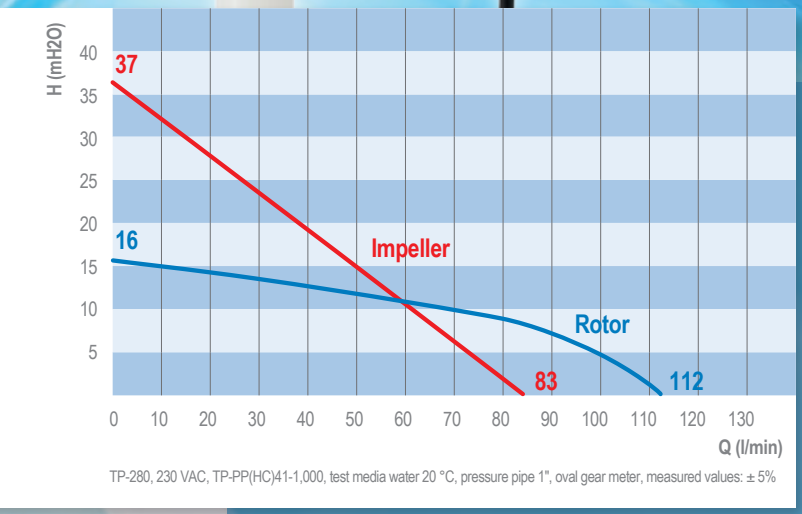
The speed of the drum pump motor TP-180 can be controlled electronically via a knob on the handle. This enables an adjustment of the flow rate.
The electronic speed control is available as an option.

TP-280 Electric universal motor

230 Volt, 50/60 Hz, 825 Watt, IP 24, alternatively 115 Volt, 60 Hz

Description

- The drive TP-280 is a compactly built, not explosion-proof, internally ventilated universal motor that is our top seller for aggressive media in the chemical and the galvanic industry beside TP-180.
- This handy, very robust and powerful motor can be used to drive the suction tubes of drum pumps. In this combination it is suitable for many thin liquid and slightly viscous, neutral, aggressive and non-flammable liquids (max 1,000 mPas). Its sophisticated, technically clear structure ensures an efficient and safe use when transferring a wide range of media.
- The drum pump motor is characterized not only by its light weight (3,8 kg) but also by its elegant design and ease of use. The non-stationary and stationary usable drive is particularly suitable for intermittent operation. As internally ventilated motor it has an optimal air cooling, low noise and ensures high operational safety and long lifetime.
- The motor housing made of polypropylene ensures a high chemical resistance when aggressive vapours of acids and alkalies are present.
- The standard in the on/off switch integrated low voltage release is intended to prevent an uncontrolled start of the drum pump motor after a power failure or voltage drop and thus guarantees maximum safety.
- The flow rate of the media to be pumped can be regulated by an optionally available speed control that is integrated in the motor handle. Therefore the flow rate can be adjusted to the needs of the user.
- The maximum density of the media is for the TP-280 universal motor 1.9, the maximum viscosity 1,000 mPas.



TP-280, 230 VAC, TP-PP(HC)41-1,000, test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

Electric universal motor TP-280

230 Volt, 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.

Speed control as option.

Operating data TP-280

Flow rate (with hose and oval gear meter):	up to 112 l/min (Rotor)*
	up to 83 l/min (Impeller)*
Head:	up to 16 m (Rotor)*
	up to 37 m (Impeller)*
Viscosity:	up to 1,000 mPas*
Density:	up to 1,9*

*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%

TP-280	Version	Voltage	Order No.
	without LVR	230 V 1 ~, 50/60 Hz, 825 W	1280 2300
		115 V 1 ~, 60 Hz, 825 W	1280 1150
	with LVR	230 V 1 ~, 50/60 Hz, 825 W	1280 2301
		115 V 1 ~, 60 Hz, 825 W	1280 1151
	without LVR, with SC	230 V 1 ~, 50/60 Hz, 825 W	1280 2302
		115 V 1 ~, 60 Hz, 825 W	1280 1152
	with LVR + SC	230 V 1 ~, 50/60 Hz, 825 W	1280 2303
		115 V 1 ~, 60 Hz, 825 W	1280 1153

LVR: Low voltage release
SC: Speed control

Electronic speed control

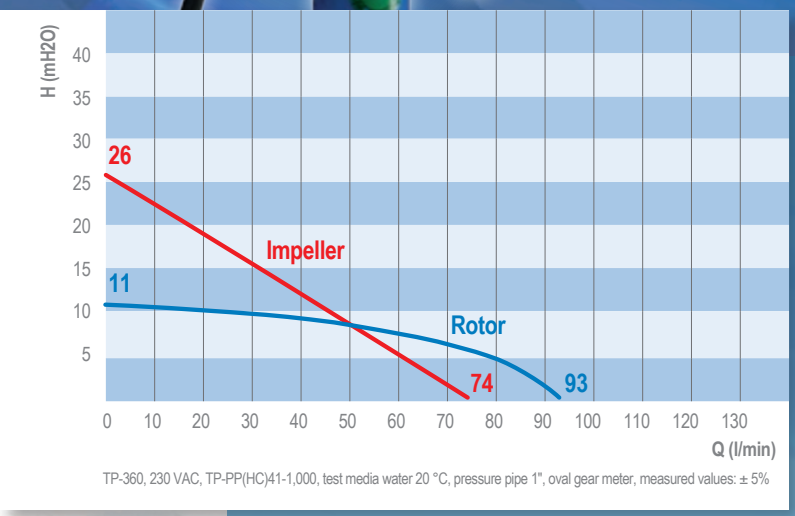
The speed of the drum pump motor TP-280 can be controlled electronically via a knob on the handle. This enables an adjustment of the flow rate.
The electronic speed control is available as an option.

TP-360 Electric universal motor

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

Description

- The drive TP-360 is a compactly built, not explosion-proof, externally ventilated universal motor.
- This handy, very robust and powerful motor can be used to drive the suction tubes of drum pumps. In this combination it is suitable for many thin liquid and slightly viscous, neutral, aggressive and non-flammable liquids (max. 600 mPas). Its sophisticated, technically clear structure ensures an efficient and safe use when transferring a wide range of media.
- The drum pump motor is characterized not only by its light weight (5,5 kg) but also by its elegant design and ease of use. The non-stationary and stationary usable drive is particularly suitable for intermittent operation. As externally ventilated motor it has an optimal air cooling, low noise and ensures high operational safety and long lifetime.
- The coated motor housing made of aluminium ensures a high chemical resistance when aggressive vapours of acids and alkalies are present.
- The standard integrated low voltage release is intended to prevent an uncontrolled start of the drum pump motor after a power failure or voltage drop and thus guarantees maximum safety.
- 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.
- The maximum density of the media is for the TP-360 universal motor 1.5, the maximum viscosity 600 mPas.



TP-360, 230 VAC, TP-PP(HC)41-1,000, test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

Electric universal motor TP-360

230 Volt, 50/60 Hz, 640 Watt, IP 55, with integrated low voltage release and integrated speed control.
5 m cable with plug.

Operating data TP-360

Flow rate (with hose and oval gear meter):	up to 93 l/min (Rotor)*
	up to 74 l/min (Impeller)*
Head:	up to 11 m (Rotor)*
	up to 26 m (Impeller)*
Viscosity:	up to 600 mPas*
Density:	up to 1,5*

*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%

TP-360	Version	Voltage	Order No.
	without LVR, with SC	230 V 1 ~, 50/60 Hz, 640 W	1360 2302
	with LVR + SC	230 V 1 ~, 50/60 Hz, 640 W	1360 2303

LVR: Low voltage release
SC: Speed contro

Integrated electronic speed control

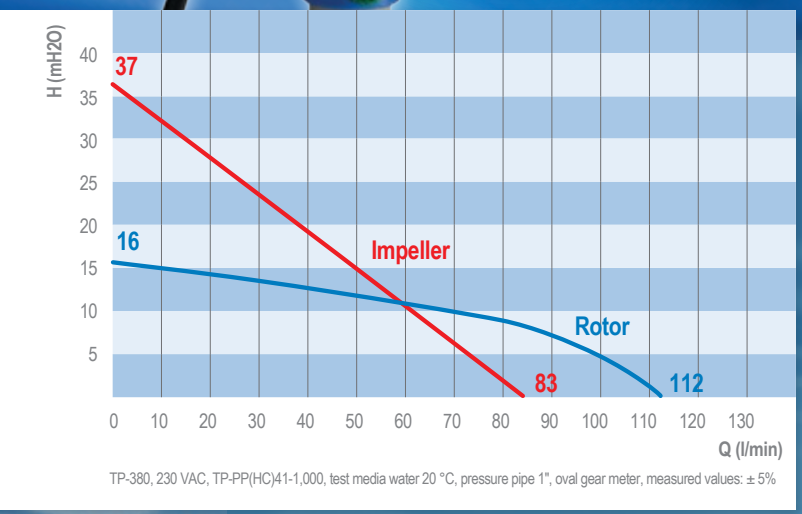
The speed of the drum pump motor TP-360 can be controlled electronically via an integrated display on the handle. This enables an easy adjustment of the flow rate by the user.

TP-380 Electric universal motor

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

Description

- The drive TP-380 is a compactly built, not explosion-proof, externally ventilated universal motor.
- This handy, very robust and powerful motor can be used to drive the suction tubes of drum pumps. In this combination it is suitable for many thin liquid and slightly viscous, neutral, aggressive and non-flammable liquids (max. 1,000 mPas). Its sophisticated, technically clear structure ensures an efficient and safe use when transferring a wide range of media.
- The drum pump motor is characterized not only by its light weight (6 kg) but also by its elegant design and ease of use. The non-stationary and stationary usable drive is particularly suitable for intermittent operation. As externally ventilated motor it has an optimal air cooling, low noise and ensures high operational safety and long lifetime.
- The coated motor housing made of aluminium ensures a high chemical resistance when aggressive vapours of acids and alkalies are present.
- The standard integrated low voltage release is intended to prevent an uncontrolled start of the drum pump motor after a power failure or voltage drop and thus guarantees maximum safety.
- 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.
- The maximum density of the media is for the TP-380 universal motor 1.9, the maximum viscosity 1,000 mPas.



TP-380, 230 VAC, TP-PP(HC)41-1,000, test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

Electric universal motor TP-380

230 Volt, 50/60 Hz, 825 Watt, IP 55, with integrated low voltage release and integrated speed control. 5 m cable with plug.

Operating data TP-380

Flow rate (with hose and oval gear meter):	up to 112 l/min (Rotor)*
	up to 83 l/min (Impeller)*
Head:	up to 16 m (Rotor)*
	up to 37 m (Impeller)*
Viscosity:	up to 1,000 mPas*
Density:	up to 1,9*

*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%

TP-380	Version	Voltage	Order No.
	without LVR, with SC	230 V 1 ~, 50/60 Hz, 825 W	1380 2302
	with LVR + SC	230 V 1 ~, 50/60 Hz, 825 W	1380 2303

LVR: Low voltage release
SC: Speed control

Integrated electronic speed control

The speed of the drum pump motor TP-380 can be controlled electronically via an integrated display on the handle.

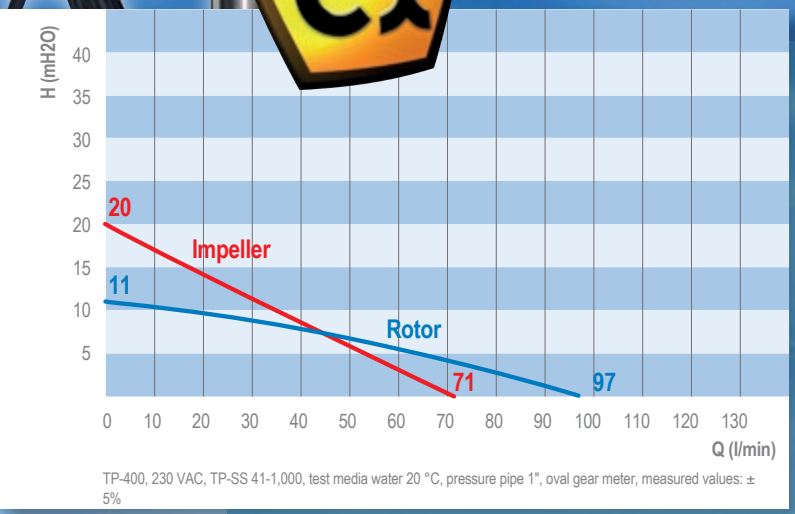
This enables an easy adjustment of the flow rate by the user.

TP-400 Explosion-proof electric universal motor

230 Volt, 50/60 Hz, 550 Watt, IP 54, Ex de II A T6

Description

- The drive TP-400 is a compactly built, robust explosion-proof universal motor that is 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. The electric motor Ex-TP-400 offers in addition to the air operated motors maximum protection when pumping flammable media or for use in hazardous environments. At such applications separate authorizations for the drive motor and the pump tube acc. directives ATEX 2014/34/EC are required.
- The handy and powerful device can be used as a drive for the ATEX certified sealless pump tubes made of stainless steel (Ø 41 mm), the mixing pump tubes in stainless steel, the pump tubes in stainless steel with mechani-cal seal or complete drum emptying function and the eccentric screw pump tubes series TP-700 SR PTFE ATEX. In this combination the drive is suitable for many thin liquid to viscous, neutral, slightly aggressive and easily 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. As externally ventilated motor it has an optimal air cooling, low noise and ensures high operational safety and long lifetime.
- The standard in the on/off switch integrated low voltage release is intended to prevent an uncontrolled start of the drum pump motor after a power failure or voltage drop. Thus guarantees maximum safety.
- The maximum density of the media is for the TP-400 universal motor 1,5, the maximum viscosity 600 mPas.



TP-400, 230 VAC, TP-SS 41-1,000, test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

Electric universal motor TP-400

230 Volt, 50/60 Hz, 550 Watt, protection II 2G Ex de IIA T6, IP54, double insulated protection class II, with integrated low voltage release. 5 m cable **without plug.**

Operating data TP-400

Flow rate (with hose and oval gear meter):	up to 97 l/min (Rotor)*
	up to 71 l/min (Impeller)*
Head:	up to 11 m (Rotor)*
	up to 20 m (Impeller)*
Viscosity:	up to 600 mPas*
Density:	up to 1,5*

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

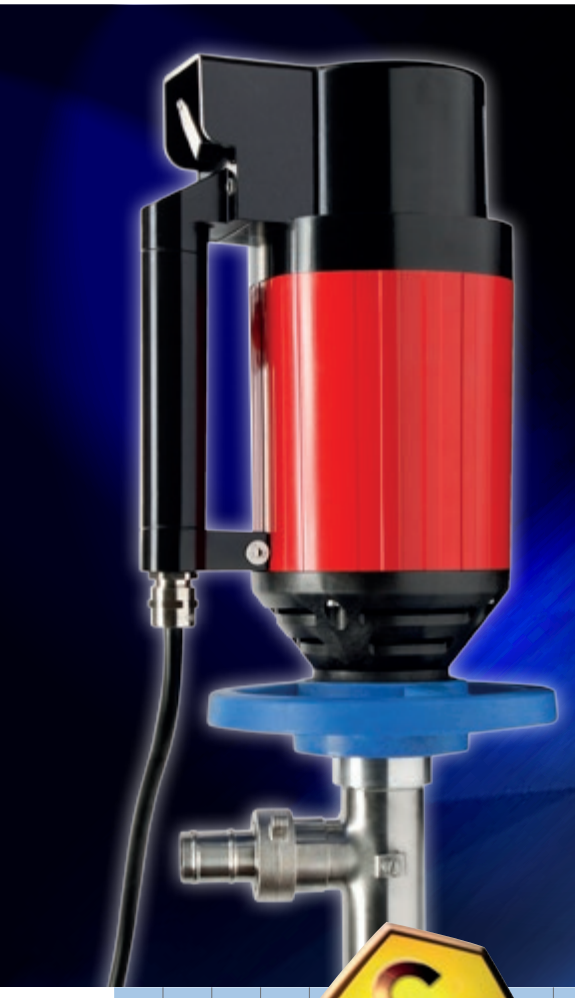
*Test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

TP-400	Version	Voltage	Order No.
	without LVR	230 V 1~, 50/60 Hz, 550 W	1400 2300
	with LVR	230 V 1~, 50/60 Hz, 550 W	1400 2301

LVR: Low voltage release

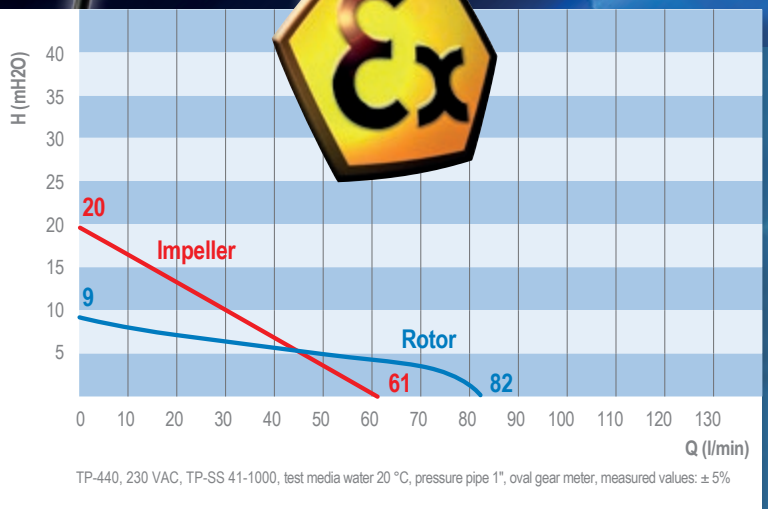
TP-440 Explosion-proof electric universal motor

230 Volt, 50/60 Hz, 400 Watt, IP 55, II 2G Ex db IIC T6 Gb



Description

- The drive TP-440 is a compactly built, robust explosion-proof universal motor that is built and approved in accordance with the latest explosion protection guidelines (ATEX 2014/34/EC) and IECEx . The collector motor is explosion-proof according to II 2G Ex db IIC T6 Gb and has an EC-type examination certificate BUREAU VERITAS 17 ATEX 1 088 X and IECEx EPS 17.0045 X. The electric motor Ex-TP-440 offers in addition to the air operated motors maximum protection when pumping flammable media or for use in hazardous environments. At such applications separate authorizations for the drive motor and the pump tube acc. directives ATEX 2014/34/EC are required.
- The handy and powerful device (5,5 kg) can be used as a drive for the ATEX certified sealless pump tubes made of stainless steel (Ø 41 mm), the mixing pump tubes in stainless steel, the pump tubes in stainless steel with mechanical seal or complete drum emptying function and the eccentric screw pump tubes series TP-700 SR PTFE ATEX. In this combination the drive is suitable for many thin liquid to viscous, neutral, slightly aggressive and easily 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. As externally ventilated motor it has an optimal air cooling, low noise and ensures high operational safety and long lifetime.
- The standard in the on/off switch integrated low voltage release is intended to prevent an uncontrolled start of the drum pump motor after a power failure or voltage drop. Thus guarantees maximum safety.
- The maximum density of the media is for the TP-440 universal motor 1,3, the maximum viscosity 400 mPas.



TP-440, 230 VAC, TP-SS 41-1000, test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

Electric universal motor TP-440

230 Volt, 50/60 Hz, 400 Watt, protection class II 2G Ex db IIC T6 Gb, IP 55, with integrated low voltage release, 5 m cable **without plug.** Optional with Ex-plug.

Operating data TP-440

Flow rate (with hose and oval gear meter):	up to 82 l/min (Rotor)*
	up to 61 l/min (Impeller)*
Head:	up to 9 m (Rotor)*
	up to 20 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%

TP-440	Version	Voltage	Order No.
	without LVR	230 V 1~, 50/60 Hz, 400 W	1440 2300
		115 V 1~, 60 Hz, 400 W	1440 1150
	with LVR	230 V 1~, 50/60 Hz, 400 W	1440 2301
		115 V 1~, 60 Hz, 400 W	1440 1151

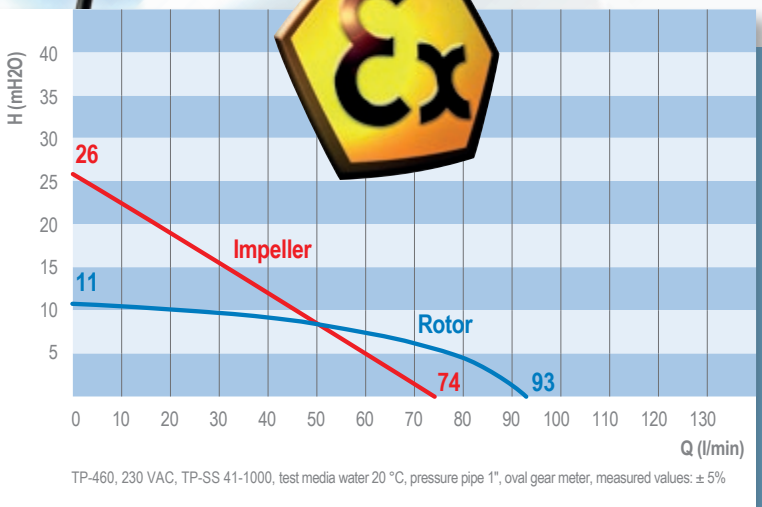
LVR: Low voltage release

TP-460 Explosion-proof electric universal motor

230 Volt, 50/60 Hz, 640 Watt, IP 55, II 2G Ex db IIC T6 Gb

Description

- The drive TP-460 is a compactly built, robust explosion-proof universal motor that is built and approved in accordance with the latest explosion protection guidelines (ATEX 2014/34/EC) and IECEx . The collector motor is explosion-proof according to II 2G Ex db IIC T6 Gb and has an EC-type examination certificate BUREAU VERITAS 17 ATEX 1 088 X and IECEx EPS 17.0045 X. The electric motor Ex-TP-460 offers in addition to the air operated motors maximum protection when pumping flammable media or for use in hazardous environments. At such applications separate authorizations for the drive motor and the pump tube acc. directives ATEX 2014/34/EC are required.
- The handy and powerful device **(6 kg)** can be used as a drive for the ATEX certified sealless pump tubes made of stainless steel (Ø 41 mm), the mixing pump tubes in stainless steel, the pump tubes in stainless steel with mechanical seal or complete drum emptying function and the eccentric screw pump tubes series TP-700 SR PTFE ATEX. In this combination the drive is suitable for many thin liquid to viscous, neutral, slightly aggressive and easily 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. As externally ventilated motor it has an optimal air cooling, low noise and ensures high operational safety and long lifetime.
- The standard in the on/off switch integrated low voltage release is intended to prevent an uncontrolled start of the drum pump motor after a power failure or voltage drop. Thus guarantees maximum safety.
- The maximum density of the media is for the TP-460 universal motor 1,5, the maximum viscosity 600 mPas.



TP-460, 230 VAC, TP-SS 41-1000, test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

Electric universal motor TP-460

230 Volt, 50/60 Hz, 640 Watt, protection class II 2G Ex db IIC T6 Gb, IP 55, with integrated low voltage release, 5 m cable without plug. Optional with Ex-plug.

Operating data TP-460

Flow rate (with hose and oval gear meter):	up to 93 l/min (Rotor)*
	up to 74 l/min (Impeller)*
Head:	up to 11 m (Rotor)*
	up to 26 m (Impeller)*
Viscosity:	up to 600 mPas*
Density:	up to 1,5*

*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%

TP-460	Version	Voltage	Order No.
	without LVR	230 V 1~, 50/60 Hz, 640 W	1460 2300
		115 V 1~, 60 Hz, 640 W	1460 1150
	with LVR	230 V 1~, 50/60 Hz,640 W	1460 2301
		115 V 1~, 60 Hz, 640 W	1460 1151

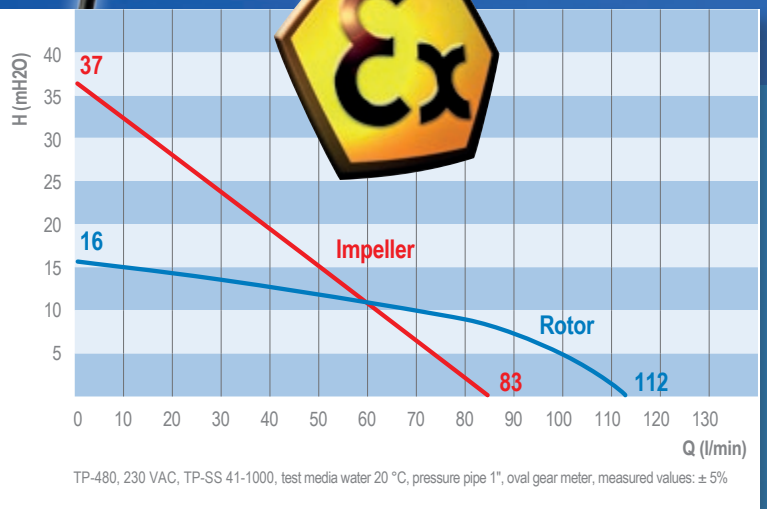
LVR: Low voltage release

TP-480 Explosion-proof electric universal motor

230 Volt, 50/60 Hz, 825 Watt, IP 55, II 2G Ex db IIC T6 Gb

Description

- The drive TP-480 is a compactly built, robust explosion-proof universal motor that is built and approved in accordance with the latest explosion protection guidelines (ATEX 2014/34/EC) and IECEx . The collector motor is explosion-proof according to II 2G Ex db IIC T6 Gb and has an EC-type examination certificate BUREAU VERITAS 17 ATEX 1 088 X and IECEx EPS 17.0045 X. The electric motor Ex-TP-480 offers in addition to the air operated motors maximum protection when pumping flammable media or for use in hazardous environments. At such applications separate authorizations for the drive motor and the pump tube acc. directives ATEX 2014/34/EC are required.
- The handy and powerful device (6,5 kg) can be used as a drive for the ATEX certified sealless pump tubes made of stainless steel (Ø 41 mm), the mixing pump tubes in stainless steel, the pump tubes in stainless steel with mechanical seal or complete drum emptying function and the eccentric screw pump tubes series TP-700 SR PTFE ATEX. In this combination the drive is suitable for many thin liquid to viscous, neutral, slightly aggressive and easily 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. As externally ventilated motor it has an optimal air cooling, low noise and ensures high operational safety and long lifetime.
- The standard in the on/off switch integrated low voltage release is intended to prevent an uncontrolled start of the drum pump motor after a power failure or voltage drop. Thus guarantees maximum safety.
- The maximum density of the media is for the TP-480 universal motor 1,9, the maximum viscosity 1000 mPas.



TP-480, 230 VAC, TP-SS 41-1000, test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

Electric universal motor TP-480

230 Volt, 50/60 Hz, 825 Watt, protection class II 2G Ex db IIC T6 Gb, IP 55, with integrated low voltage release, 5 m cable without plug. Optional with Ex-plug.

Operating data TP-480

Flow rate (with hose and oval gear meter):	up to 112 l/min (Rotor)*
	up to 83 l/min (Impeller)*
Head:	up to 16 m (Rotor)*
	up to 37 m (Impeller)*
Viscosity:	up to 1,000 mPas*
Density:	up to 1,9*

*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%

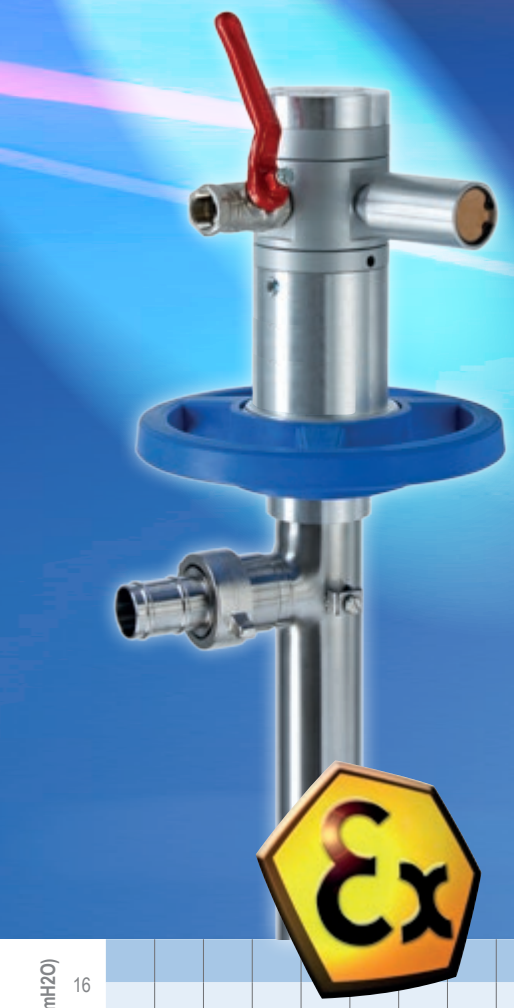
TP-480	Version	Voltage	Order No.
	without LVR	230 V 1~, 50/60 Hz, 825 W	1480 2300
		115 V 1~, 60 Hz, 825 W	1480 1150
	with LVR	230 V 1~, 50/60 Hz, 825 W	1480 2301
		115 V 1~, 60 Hz, 825 W	1480 1151

LVR: Low voltage release

TP-AIR1 Explosion-proof air operated motor

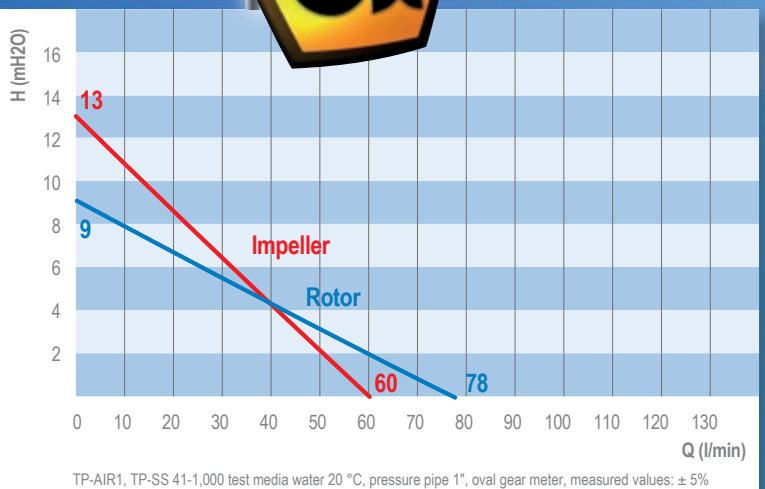
300 Watt at max. 6 bar operating pressure, Ex 2GD c IIC T6 (80 °C) X

made of aluminium



Description

- The air operated motor TP-AIR 1 is a compactly built, robust explosion-proof air operated motor in accordance with the latest explosion protection guidelines ATEX 2014/34/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 TP-AIR 1 provides beside other air operated motors and the electric motors TP-400, TP-440, TP-460, TP-480 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 ATEX 2014/34/EC 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 TP-AIR 1 1.3, the maximum viscosity 400 mPas.



TP-AIR1, TP-SS 41-1,000 test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

Air operated motor TP-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 TP-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%

TP-AIR 1	Performance	Order No.
	300 W	3001 0300

300 Watt at max. 6 bar operating pressure
Air consumption under load 13 l/sec.

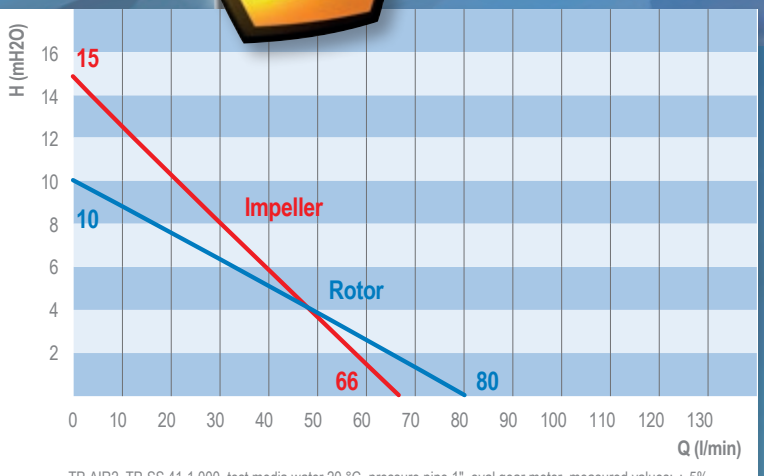
TP-AIR2 Explosion-proof air operated motor

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

made of aluminium

Description

- The air operated motor TP-AIR 2 is a compactly built, robust explosion-proof air operated motor in accordance with the latest explosion protection guidelines ATEX 2014/34/EC, category 2. The pneumatic motor is explosion-protected according Ex 2 GD c IIC T6 (80 °C) X and has a type-certificate IBEX U05 ATEX B007 X. The motor TP-AIR 2 provides beside other air operated motors and the electric motors TP-400, TP-440, TP-460, TP-480 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 ATEX 2014/34/EC are required and a potential equalization has to be installed.
- 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 TP-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. 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. At the handle is an on/off starting button that can be fixed.
- The maximum density of the media is for the explosion-proof air operated motor TP-AIR 2 1.5, the maximum viscosity 600 mPas.



TP-AIR2, TP-SS 41-1,000, test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

Air operated motor TP-AIR 2

600 Watt at max. 6 bar working pressure, with silencer and on/off switch.

Operating data TP-AIR 2

Flow rate (with hose and oval gear meter):	up to 80 l/min (Rotor)*
	up to 66 l/min (Impeller)*
Head:	up to 10 m (Rotor)*
	up to 15 m (Impeller)*
Viscosity:	up to 600 mPas*
Density:	up to 1,5*

*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%

TP-AIR 2	Performance	Order No.
	600 W	3002 0600

600 Watt at max. 6 bar operating pressure
Air consumption under load 15 l/sec.

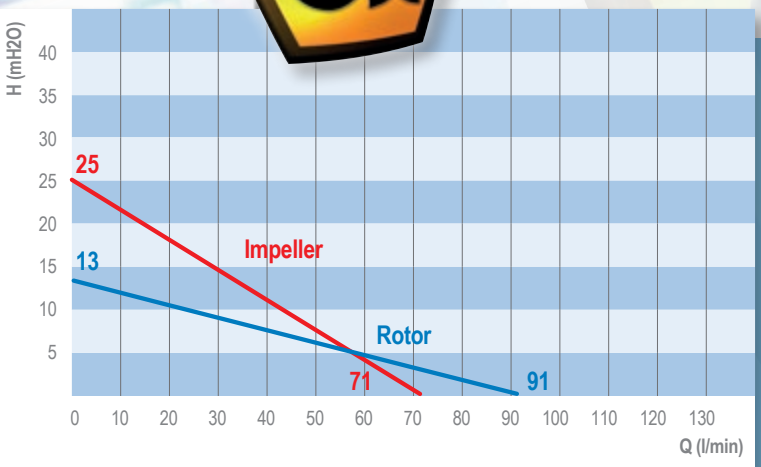
TP-AIR3 Explosion-proof air operated motor

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

made of stainless steel

Description

- The air operated motor TP-AIR 3 is a compactly built, robust explosion-proof air operated motor in accordance with the latest explosion protection guidelines ATEX 2014/34/EC, category 2. 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. The motor TP-AIR 3 provides beside other air operated motors and the electric motors TP-400, TP-440, TP-460, TP-480 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 ATEX 2014/34/EC are required and a potential equalization has to be installed.
- 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 TP-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. 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 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.
- The maximum density of the media is for the explosion-proof air operated motor TP-AIR 3 at 1.5, the maximum viscosity 600 mPas.



TP-AIR3, TP-SS 41-1,000, test media water 20 °C, pressure pipe 1", oval gear meter, measured values: ± 5%

All motors can be combined outside hazardous areas with all pump tubes over the hand wheel. Suitable pump tubes can be found on pages 40 to 45.

Air operated motor TP-AIR 3

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

Operating data TP-AIR 3

Flow rate (with hose and oval gear meter):	up to 91 l/min (Rotor)*
	up to 71 l/min (Impeller)*
Head:	up to 13 m (Rotor)*
	up to 25 m (Impeller)*
Viscosity:	up to 600 mPas*
Density:	up to 1,5*

*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%

TP-AIR 3	Performance	Order No.
	400 W	3003 0400

400 Watt at max. 6 bar operating pressure
Air consumption under load 12 l/sec.

Pump tubes made of polypropylene

for pumping aggressive media such as acids, alkalies 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 alkalies.
- 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.

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**

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 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.**

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.

Material of pump tube	Pump tube diameter	Pump tube length	Version	Order No.
Polyvinylidene-fluoride (PVDF) Hastelloy drive shaft 2,4610	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**

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.

- 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.

Material of pump tube	Pump tube diameter	Pump tube length	Version	Order No.
Aluminium (ALU) Stainless steel drive shaft 316 Ti	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**

Examples of media

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

- 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 (with SS rotor) outside Ex areas.

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**

Examples of media

Acetone
Alcohol
Ammonia
Gasoline
Flammable solvents
Potassium hydroxide solution
Sodium hydroxide solution
Nitrovarnishes
Perchlorethylene
Phosphoric acid
Sulfuric acid (up to 7.5% and over 90%)
Trichlorethylene
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.

Mixing pump tubes made of polypropylene or stainless steel

for mixing or emptying drums and IBCs

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. They fullfill all national and international standards for pumping flammable media and here especially the ATEX directives.

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 (¾" or 1¼" 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 TP-180, TP-280, TP-360 and TP-380 and the air operated motors have proven themselves well as drives for the mixing pump tubes.

Material of pump tube	Pump tube diameter	Pump tube length	Order No.
Polypropylene (PP) Drive shaft Hastelloy 2,4610	Ø 50/41 mm	1,000 mm	**2141 0102**
	Ø 50/41 mm	1,200 mm	**2141 0122**

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

Approved for pumping flammable liquids as paints and varnishes!

- 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 (¾" or 1¼" 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 TP-180, TP-280, TP-360 and TP-380 as well as in hazardous areas the electric motors TP-400, TP-440, TP-460, TP-480 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.

Material of pump tube	Pump tube diameter	Pump tube length	Order No.
Stainless steel 316 Ti Drive shaft Stainless steel	Ø 50/41 mm	1,000 mm	**2241 0102**
	Ø 50/41 mm	1,200 mm	**2241 0122**

Pump tube made of stainless steel with mechanical seal

for pumping sticky or crystallizing media

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.

EC type examination certificate number ZELM 09 ATEX 0424X Ex II 1/2 G c IIB T4.

Stainless steel 316 Ti = SS pump tubes with mechanical seal

- Suitable for pumping thin fluid to middle viscous media, whether neutral, slightly aggressive or flammable.
- The use of a mechanical seal is mandatory when pumping sticky or crystallizing and heavily soiled or solid containing media that prevent the use of a sealless pump tube with carbon bearing.
- The mechanical seal used in the pump housing prevents that the pumped medium can flow in the inner tube.
- After pumping the sticky or crystallizing media the pump must be absolutely flushed and cleaned (medium temperature up to 90 °C with PTFE-rotor).

- In contrast to the sealless pump tubes that can be used in 95% of all applications and where dry running because of the construction is not a problem drum pumps with mechanical seal are not allowed to run dry.

Examples of media

For special applications with sticky, crystallizing, dirty or solids-containing fluids at which no medium is allowed to flow into inner tube.

Attention: the pump tubes with mechanical seal are not allowed to run dry.

Material of pump tube	Pump tube diameter	Pump tube length	Order No.
Stainless steel 316 Ti Drive shaft Stainless steel	Ø 41 mm	700 mm	**2741 0070**
	Ø 41 mm	1,000 mm	**2741 0100**
	Ø 41 mm	1,200 mm	**2741 0120**
	Ø 41 mm	1,500 mm	**2741 0150**
	Ø 41 mm	1,800 mm	**2741 0180**
	Ø 41 mm	2,100 mm	**2741 0210**
	Ø 41 mm	2,400 mm	**2741 0240**
	Ø 41 mm	2,700 mm	**2741 0270**
	Ø 41 mm	3,000 mm	**2741 0300**

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

Pump tubes made of stainless steel

for complete emptying of drums or containers

With a complete drum emptying pump tube in stainless steel neutral, slightly aggressive, dangerous and economically valuable liquids can be transferred nearly completely out of drums and containers.

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.

EC type examination certificate number ZELM 09 ATEX 0424X Ex II 1/2 G c IIB T4.

Cause of the fact that with a remaining quantity of 0.1 l only minimal residues remain inside the drums and containers the medium can be used optimally. Especially no additional costs or time incur required for emptying the containers in another way.

Pump tube in stainless steel 1,4571 with complete drum emptying function and mechanical seal

- The motors TP-180, TP-280, TP-460 and TP-480 and the air operated motors have proven themselves as drives for the complete drum emptying pump tubes.
- The pump tube length 1,000 mm is used when emptying 200 liter drums.
- The pump tube length 1,200 mm is used when emptying containers.
- In contrast to the sealless pump tubes that can be used in 95% of all applications and that can run dry cause of its construction, drum pumps with mechanical seal are not allowed to run dry.

Applications

Optimal container emptying and product use.

Remaining quantity of 0.1 liters per barrel.

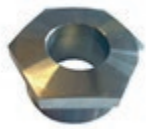
No leakage when moving the pump to another drum.

No additional costs incur when emptying the drums in another way.

Attention:
The pump tubes with mechanical seal are not allowed to run dry.

Material of pump tube	Pump tube diameter	Pump tube length	Order No.
Stainless steel 316 Ti Drive shaft Stainless steel	Ø 41 mm	1,000 mm	**2841 0100**
	Ø 41 mm	1,200 mm	**2841 0120**

Accessories for drum and container pumps

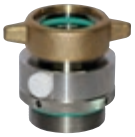
		Order No.
	**Barrel adapter made of polypropylene** (PP and PVDF pump tube) for fixing the barrel pump in the bung hole of a drum, diameter of pump tube 41 mm, G 2"	Ø 41	**9001**
	**Barrel adapter made of stainless steel** for secure fixing of drum pump in bung hole of a drum, diameter of pump tube 41 mm, G 2"	Ø 41	**9002**
	The barrel adapters fit due to their 2 "thread in 60 and 200 liter steel drums. For use with plastic drums or plastic containers they can be combined with the thread adapters on page 10.		
	**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.	 0,5 m 1 m 2 m 3 m	**9003** **9003/1** **9003/2** **9003/3** **9003/4**
	**Stainless steel hose clamp ½" or ¾" or 1" or 1¼"** for secure fixing of hose at hose barb Please specify when ordering the nominal width.		**9004**
	**Safety clamp made of tool steel** for secure fixing of barrel pump in open containers and open drums.		**9005**
	**Wall hanger for barrel pump Ø 41 mm** for a secure storage of barrel pump if out of operation and for protection against damages.		**9006**
	**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		 **9011** **9012**

Accessories for drum and container pumps

			Order No.
	**Nozzle made of polypropylene** Housing and internal parts made of polypropylene, valve seat and o-rings made of **FKM** or **EPDM** rotatable hose connection **Flow rate:** 80 l/min **Viscosity:** 800 mPas **Operating pressure:** 3 bar **Weight:** 210 g	FKM FKM FKM FKM EPDM EPDM EPDM EPDM	½" ¾" 1" IG 1" ½" ¾" 1" IG 1"	**9101** **9102** **9103** **9120** **9104** **9105** **9106** **9121**
	**Nozzle made of PVDF** Housing and internal parts made of PVDF, valve seat and o-rings made of **FKM** or **EPDM** rotatable hose connection **Flow rate:** 80 l/min **Viscosity:** 800 mPas **Operating pressure:** 3 bar **Weight:** 210 g	FKM FKM FKM FKM EPDM EPDM EPDM EPDM FFKM FFKM FFKM FFKM	½" ¾" 1" IG 1" ½" ¾" 1" IG 1" ½" ¾" 1" IG 1"	**9107** **9108** **9109** **9122** **9110** **9111** **9112** **9123** **9113** **9114** **9115** **9116**
	**Manual nozzle made of polypropylene for AdBlue, with outlet spout in Ø 19 mm made of stainless steel** Housing and internal parts made of white polypropylene, valve seat and o-rings made of **FKM,** spring made of stainless steel **Flow rate:** 40 l/min **Operating pressure:** max. 3,4 bar	FKM FKM	¾" 1"	**9015** **9015b**
	**Automatic nozzle made of stainless steel for AdBlue, with a outlet spout in Ø 19 mm, swivel hose connection** **Flow rate:** 80 l/min **Operating pressure:** max. 3,4 bar		¾" 1"	**9124** **9125**
	**Nozzle made of nickel-plated brass, PTFE seals, rotatable hose 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 **Flow rate:** 80 l/min **Viscosity:** 900 mPas **Operating pressure:** 4 bar **Medium temperature:** max. 80 °C **Weight:** 1 kg Various connection options (Hose connection, thread)		¾" 1" 1¼" AG 1" AG 1¼" IG1"	**9041** **9042** **9043** **9044** **9045** **9046**

IG: female thread AG: male thread

Accessories for drum and container pumps

		Order No.
	**Nozzle made of stainless steel 316Ti** for use in chemical, pharmaceutical and food-industry. **Flow rate:** 80 l/min **Viscosity:** 900 mPas **Operating pressure:** 4 bar **Medium temperature:** max. 80 °C **Weight:** 1 kg	1" AG 1"	**9013** **9013a**
	**Nozzle made of aluminium** for diesel, female thread, suitable to discharge hose male thread. **Flow rate:** 60 l/min* Hose connection ALU Hose connection ALU	 ¾" 1"	**9032** **9032a** **9032b**
	**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. **made of polypropylene** **made of brass** **made of stainless steel 316 Ti**		 **9024** **9025** **9026**
	**PVC-hose** crystal clear with fabric lining, suitable for non flammable, neutral and aggressive media. **Operating pressure:** 10 bar **Medium temperature:** -35 °C up to +60 °C	¾" 1" 1¼" 1½"	**9050** **9051** **9052** **9053**
	**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 for oils and gasoline. **Operating pressure:** 16 bar **Temperature:** -40 °C up to +90 °C	¾" 1" 1¼" 1½"	**9055** **9056** **9057** **9058**
	**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 acide **Operating pressure:** 10 bar **Temperature:** -25 °C bis +90 °C (also available in a food grade version)	¾" 1" 1¼" 1½"	**9060** **9061** **9062** **9063**
	**Mineral oil hose** PN10 with fabric lining PN10 with fabric lining PN16 TW-hose PN16 TW-hose	¾" 1" 1¼" 1½"	**9065** **9066** **9067** **9068**
	**Rubber hose food grade BUTYL/BUTYL** suitable for animal and vegetable fat and oils, milk products, mineral water, fruit juice and alcohol up to 92% **Temperature:** up to 120 °C	¾" 1"	**9069a** **9069**

AG: male thread

Accessories for drum and container pumps

		Order No.
	**Hose connectors** in stainless steel with clamps made of aluminium (connection to pump tube female thread 1¼", connection to nozzle female thread 1")	**9010**
	**Clamping flange made of polypropylene** for IBC-Container (to fix a pump with Ø 40/41mm), Ø 140 mm, 4-holes, screw-hole circle 115 mm	**9070**
	**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	PP **9072** ALU **9073** SS **9074**
	**Explosion proof plug - Explosion proof socket** Ex de IIC T6, protection class IP 65, 16 Ampere CEE round plug 3-pole 5-pole CEE socket 3-pole 5-pole	 **5055** **5056** **5057** **5058**
	**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.	

Accessories of air operated motors

Service unit
For cleaning and lubrication of air. With manometer to adjust operating pressure (max. 10 bar).

Slot socket
Brass, G ¾" male thread, for hose NW 9

Air pressure hose
PVC-hose internally knitted NW 9, 3/8",
Max. operating pressure: 10 bar, temperature: -35 °C until +60 °C

Ball valve
Brass chrom plated, to control air pressure and hereby speed of the air operated motors, both sides female thread R 3/8"

Drum pump sets

Further versions on request

Drum pump sets for chemicals and mineral oil products		Order No.
		
Drum pump set TP-180 PP (HC) 1000 **Electric universal motor TP-180,** 230 V, 50/60 Hz, 640 W internally ventilated motor, splash protection to IP 24, on/off switch, 5 m cable with plug, double isolated class II, over load protection switch with low voltage release **Pump tube:** Polypropylene, sealless, 1,000 mm, outer-Ø 41 mm, HC-shaft 2,4610, connection thread G 1¼", hose connection 1" (NW 25) **2 m PVC hose** 1" (NW 25) **2 Hose clamps** Stainless steel **1 Nozzle** Polypropylene **Flow rate:** up to 93 l/min (Rotor)*, up to 74 l/min (Impeller)* **Head:** up to 11 m (Rotor)*, up to 26 m (Impeller)*, **Medium temperature:** up to 50 °C, **Viscosity:** up to 600 mPas*, **Density:** up to 1.5*	230 V 115 V	**1181 4110** **1182 4110**
		
Drum pump set TP-280 PVDF 1000 **Electric universal motor TP-280,** 230 V, 50/60 Hz, 825 W internally ventilated motor, splash protection to IP 24, on/off switch, 5 m cable with plug, double isolated class II, over load protection switch with low voltage release **Pump tube:** PVDF, sealless, 1,000 mm, outer-Ø 41 mm, HC-shaft 2,4610, connection thread G 1¼", hose connection 1" (NW 25) **2 m Multi purpose chemical hose** 1" (NW 25) **2 Hose clamps** Stainless steel **1 Nozzle** PVDF **Flow rate:** up to 112 l/min (Rotor)*, up to 83 l/min (Impeller)* **Head:** up to 16 m (Rotor)*, up to 37 m (Impeller)*, **Medium temperature:** up to 80 °C, **Viscosity:** up to 1,000 mPas*, **Density:** up to 1.9*	230 V 115 V	**1281 4112** **1282 4112**
		
Drum pump set TP-280 ALU 1000 **Electric universal motor TP-280,** 230 V, 50/60 Hz, 825 W internally ventilated motor, splash protection to IP 24, on/off switch, 5 m cable with plug, double isolated class II, over load protection switch with low voltage release **Pump tube:** Aluminium, sealless, 1,000 mm, outer-Ø 41 mm, shaft stainless steel, connection thread G 1¼", hose connection 1" (NW 25) **2 m Mineral oil hose** 1" (NW 25) **2 Hose clamps** Stainless steel **1 Nozzle** Aluminium **Flow rate:** up to 112 l/min (Rotor)*, up to 83 l/min (Impeller)* **Head:** up to 16 m (Rotor)*, up to 37 m (Impeller)*, **Medium temperature:** up to 80 °C, **Viscosity:** up to 1,000 mPas*, **Density:** up to 1.9	230 V 115 V	**1281 4111** **1282 4111**

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

Drum pump sets

Further versions on request

Drum pump sets for flammable media and solvents		Order No.
	230 V	**1402 4110**
	230 V	**1442 4110**
	230 V	**1482 4120**

Drum pump set TP-400 SS 1000
Electric universal motor TP-400, 230 Volt, 50/60 Hz, 550 Watt, protection II 2G Ex de IIA T6, IP54, double insulated protection class II, with integrated low voltage release. 5 m cable **without plug.**

EC type examination certificate number **ZELM 09 ATEX 0425 X**

Pump tube: Stainless steel 316 Ti, sealless, 1,000 mm, outer-Ø 41 mm, connection thread G 1¼", EC type examination certificate number **ZELM 09 ATEX 0424 X**

2 m Solvent hose, conductive 1" (NW 25) made of EPDM
2 Hose connectors Stainless steel, clamps made of aluminium
1 Nozzle Brass nickel plated
1 Bonding ground set

Flow rate: up to 97 l/min (Rotor)*, up to 71 l/min (Impeller)*
Head: up to 11 m (Rotor)*, up to 20 m (Impeller)*,
Medium temperature: see Ex-certificate,
Viscosity: up to 600 mPas*, **Density:** up to 1.5*

Drum pump set TP-440 SS 1000
Electric universal motor TP-440, 230 V, 50/60 Hz, 400 W, protection class II 2G Ex db IIC T6 Gb, IP 55, 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**

Pump tube: Stainless steel 316 Ti, sealless, 1,000 mm, outer-Ø 41 mm, connection thread G 1¼", EC type examination certificate number **ZELM 09 ATEX 0424 X**

2 m Multi purpose hose, conductive 1" (NW 25)
2 Hose connectors Stainless steel
1 Nozzle Brass nickel plated
1 Bonding ground set

Flow rate: up to 82 l/min (Rotor)*, up to 61 l/min (Impeller)*
Head: up to 9 m (Rotor)*, up to 20 m (Impeller)*,
Medium temperature: see Ex-certificate,
Viscosity: up to 400 mPas*, **Density:** up to 1.3*

Drum pump set TP-480 SS 1200
Electric universal motor TP-480, 230 V, 50/60 Hz, 825 W, protection class II 2G Ex db IIC T6 Gb, IP 55, 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**

Pump tube: Stainless steel 316 Ti, sealless, 1,200 mm, outer-Ø 41 mm, connection thread G 1¼", EC type examination certificate number **ZELM 09 ATEX 0424 X**

2 m Multi purpose hose, conductive 1" (NW 25)
2 Hose connectors Stainless steel
1 Nozzle Brass nickel plated
1 Bonding ground set

Flow rate: up to 112 l/min (Rotor)*, up to 83 l/min (Impeller)*
Head: up to 16 m (Rotor)*, up to 37 m (Impeller)*,
Medium temperature: see Ex-certificate,
Viscosity: up to 1000 mPas*, **Density:** up to 1.9*

Note: The multi purpose chemical and solvent hose is not resistant for

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

Drum pump sets

Further versions on request

Drum pump sets for chemicals and mineral oil products	Order No.

Drum pump set TP-AIR 1 SS 1000

Air operated motor TP-AIR 1, 300 W
at max. 6 bar operating pressure, Motor with brass valve and muffler for compressed air control.

EC type examination certificate number **IBEx U05 ATEX B007 X**

Pump tube: Stainless steel 316 Ti, sealless 1,000 mm, outer-Ø 41 mm, connection thread G 1¼",
EC type examination certificate number **ZELM 09 ATEX 0424 X**

2 m Solvent hose, conductive 1" (NW 25)
2 Hose connectors Stainless steel, clamps made of aluminium
1 Nozzle Brass nickel plated
1 Bonding ground set

Flow rate: up to 78 l/min (Rotor)*, up to 60 l/min (Impeller)*
Head: up to 9 m (Rotor)*, up to 13 m (Impeller)*,
Medium temperature: see Ex-certificate,
Viscosity: up to 400 mPas*, **Density:** up to 1.3*

3012 4110

Drum pump set TP-AIR 3 SS 1000

Air operated motor TP-AIR 3, 400 W
at max. 6 bar operating pressure, Motor with brass valve and muffler for compressed air control.

EC type examination certificate number **IBEx U05 ATEX B007 X**

Pump tube: Stainless steel 316 Ti, sealless 1,000 mm, outer-Ø 41 mm, connection thread G 1¼",
EC type examination certificate number **ZELM 09 ATEX 0424 X**

2 m Solvent hose, conductive 1" (NW 25) made of EPDM
2 Hose connectors Stainless steel, clamps made of aluminium
1 Nozzle Brass nickel plated
1 Bonding ground set

Flow rate: up to 91 l/min (Rotor)*, up to 71 l/min (Impeller)*
Head: up to 13 m (Rotor)*, up to 25 m (Impeller)*,
Medium temperature: see Ex-certificate,
Viscosity: up to 600 mPas*, **Density:** up to 1.5*

Note: The multi purpose chemical and solvent hose is not resistant for gasoline and oils. The multi-purpose chemical hose must be used.

3032 4110

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

Eccentric screw drum and container pumps

TP-700 SR (speed reducer)

► **Drive with electric or air operated motor and planetary gearbox.**

► **ATEX**

The TP-700 SR 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

Description

- 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.
- Flow rate 12, 25 or 50 l/min (at TP-700 DR also dosing pumps are available!).
- Discharge pressure 6 bar at the single-stage and 12 bar with the two-stage pump tubes.
- The maximum viscosity of the medium is 10,000 mPas at the SR version.
- Medium temperature up to 150 °C.
- Standard pump tube lengths are 700, 1,000 and 1,200 mm. Special lengths up to 2,000 mm on request.
- Suction tube diameter 54 mm, therefore for all 200 liter drums with a 2" bung hole.
- Easy disassembling and therefore optimal cleaning. Weight 12 kg.
- 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.

Examples of media

Standard version suitable for:

Chemical products

Paints	Latex
Varnishes	Silicone compounds
Resins	Polymers

Petroleum products

Oils	Cutting oils
Fats	Refrigerant

In addition a special version for use in hazardous areas as well as a version for the food industry is available.

PUMP TUBES

Suction tube Ø 54 mm, at discharge male thread connection G 1½"

Optional hose connection 1", 1¼" or 1½"

SR-Version (with planetary gear = speed reducer) ca. 700 U/min.

*suitable for 200 liter drum (other lengths on request)

Model	Suction tube length*	Flow rate	Pressure
TP-700.12.1	1,000 mm	12 l/min	6 bar
TP-700.12.2	1,100 mm	12 l/min	12 bar
TP-700.25.1	1,000 mm	25 l/min	6 bar
TP-700.25.2	1,100 mm	25 l/min	12 bar
TP-700.50.1	1,100 mm	50 l/min	6 bar

MOTORS

TP-AIR2
600 W at max. 6 bar operating pressure, ATEX

Air operated motor, with starting button on the handle. The motor starts running and the pump is transferring media when the button is pressed.

TP-AIR3
400 W at max. 6 bar operating pressure, ATEX

Air operated motor, stainless steel housing with plug valve at air intake for compressed air control. This regulates the motor speed and varies the pumping capacity.

TP-280
825 W Electric motor 230 V, 50/60 Hz

Double insulated class II, splash proofing acc. IP 24. On/off switch, over load protection switch

TP-480
825 W Electric motor, Ex proof 230 V, 50/60 Hz

Protection class II 2G Ex db IIC T6 Gb, IP 55. On/off switch, over load protection, 5 m cable without plug.

Eccentric screw drum and container pumps

with three-phase-, gear-, single-phase- or air operated motor

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

Description

- The pumps of the series **TP-700 DR, -FK** 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.**
- **TP-700 DR, -FK - Version** drive through three-phase-, gear-, single-phase- or air operated motors.
- All pumps thats 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 TP-700 SR version) or as a dosing pump (lower flow rate, smaller suction tube diameter).

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

► **ATEX**

The TP-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

Examples of media

Standard version suitable for:

Sludges	Honey
Pastes	Syrup
Soap	Jams
Shampoos	Ketchup, etc.

In addition, a special version for use in hazardous areas as well as a version for the food industry is available.

PUMP TUBES

Suction tube Ø 54 mm, at discharge connection male thread G 1½"

Optional hose connection 1", 1¼" or 1½"

TP-700 DR version driven by three-phase, gear-, single-phase- or air operated motors.

Wide range of accessories such as pump hanger, double-sided carrying handle, bypass or dry running protection available as an option.

MOTORS

Model	Suction tube length	Flow rate	Pressure
TP-700.12.1 DR	700/1,000/1,200 mm	12 l/min	6 bar
TP-700.12.2 DR	800/1,100/1,300 mm	12 l/min	12 bar
TP-700.25.1 DR	700/1,000/1,200 mm	25 l/min	6 bar
TP-700.25.2 DR	800/1,100/1,300 mm	25 l/min	12 bar
TP-700.50.1 DR	800/1,100/1,300 mm	50 l/min	6 bar

Three-phase motor	Three-phase gear motor	Air operated lamellar motor
230/400 V, 50 Hz 0,37–2,2 kW	230/400 V, 50 Hz 0,37–2,2 kW	0,5–1,5 kW, 900 rpm at 6 bar
Other flow rates and voltages on request. Single-phase motor 230 V optional.	Reduced speed at high viscosities or for abrasive media, optimal speed for requested flow rate.	TP-AIR 4 (0,5 KW) TP-AIR 6 (1,0 kW) TP-AIR 8 (1,5 KW)

Eccentric screw container pumps

TP-700.80.1, 80.2, 200.1, 200.2, 300.1 and 300.2

Description

- 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.
- Flow rates 80, 200 or 300 l/min.
- Discharge pressure 6 and 12 bar.
- Pump tube lengths 1,000, 1,200 and 1,400 mm (special lengths available).
- Suction tube diameter 89 mm (TP-700.80), 105 mm (TP-700.200) and 130 mm (TP-700.300).
- 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.

Examples of media

Standard version suitable for:

Chemical products:

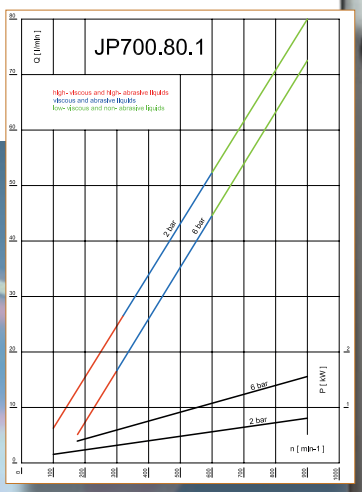
Paints	Latex
Varnishes	Silicone compounds
Resins	Polymers

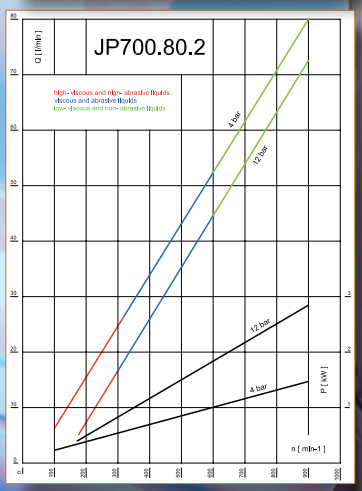
Petroleum products:

Oils	Cutting oils
Fats	Refrigerant

Food:

Fruit juices	Tomato paste
Concentrates	Syrup/Honey





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, 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.

Information needed to select the right high viscosity pump

Based on your specific applications we need:

- Specification of the liquid
- Viscosity and medium temperature
- Density
- Required flow rate
- Head including pipe losses
- Content as well as type and size of solids
- Will the pump be used mobile or stationary, vertical or horizontal?
- Operating hours per day

Electric and pneumatic driven drum and container pumps

AB Tergo pump technology with internal and external cooled electric motors or pneumatic motors (also ex-protected) in different engine-power classes. Sealless pump tubes in Polypropylene, PVDF, ALU and Stainless Steel SS 316. Pump tube lengths 700, 1,000, 1,200, 1,500 and 1,800 mm. Special lengths up to 3,000 mm on request.

Eccentric screw pumps TP-700 for drums and containers with electric or pneumatic motor

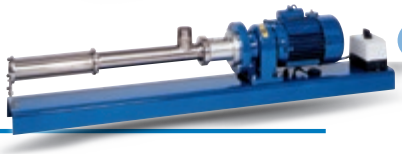
are suitable for transferring thin to high viscous substances (max. 100,000 mPas) and will be used particularly stationary or for continuous work. All pump parts are made of Stainless Steel SS 316, stators are available in NBR, NBR light, FKM, EPDM, EPDM light or PTFE.

High viscosity dosing pumps

for thin fluid, viscous, neutral and aggressive media with or without 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.



Manual hand operated drum pumps

are lightweight, handy devices for almost any fluid liquids.

- **TP-02** Telescopic suction tube made of PP, **340–900 mm** for **acids, alkaline solutions and chemicals** (on water basis because shaft is made of AISI 304).
- **TP-03** Telescopic suction tube made of PP, **340–900 mm** for **oils, diesel, alcohol (max. 50%), anti freeze liquid, soap solutions, shampoo, water, etc.**
- **TP-04** Telescopic suction tube made of PP, **500–950 mm,** for thin fluid liquids. Particularly suitable for **acids and lyes.**
- **TP-05** Pump tube made of Stainless Steel SS 316 with seals made of PTFE, pump tube lengths **700 or 1,000 mm**. Especially suitable for **flammable media like solvents.**

Electronic flowmeter

Housing made of PP. Volume preset, signal-check for further data processing as an option. Other materials: PVDF and SS

Air-operated diaphragm pumps

AB Tergo 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 of 5 l/min to 1050 l/min.

Sealless magnetic driven pumps

Available in various sizes, state-of-the-art construction, sealless and environmentally friendly, suitable for a variety of uses.
Low noise level, long life, easy to maintain.

Vertical centrifugal pumps serie TP-820

Executions in Polypropylene and PVDF.

Horizontal centrifugal pumps serie TP-840

Executions in Polypropylene and PVDF.

Mixers for drums and containers

AB Tergo offers solutions for almost every mixing application for drums and containers.

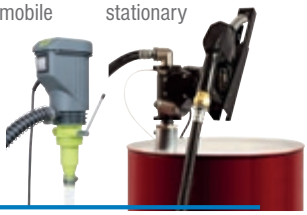
Dosing pumps

Diaphragm or plunger metering pump.

Electric diesel and heating oil pumps

for refueling the motors of vehicles that are driven with diesel or heating oil of hazard class A III like tractors, agricultural machines and machines for construction work, trucks and motor boats.

protank 30 mobile
protank 50 stationary



Hoses

Universal- and special hoses for chemical substances, PVC-hoses, PTFE-hoses, hoses for mineral oil and solvents, tissue-reinforced or conductive, hoses for food.

Please ask for details.

Please require detailed information about the individual product groups of the AB Tergo delivery program.

Please make a cross next to the requested products and fax or e-mail this page to us with your address.

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