



# Drum pump range



## Introduction



Techniflo drum pumps are lightweight, handy and extremely powerful devices suitable for transferring thin to low viscous, neutral or corrosive liquids.

Designed for portable and static use, the pumps are particularly suitable for intermittent operation. The combination of both electric powered and compressed air powered state-of-the-art motors are simple — yet have a high technical design which will assure sound and reliable operation.

Because of their modular concept, every motor can be combined with every pump tube. The delivery rate can be regulated in accordance with your needs. An electronic power regulator is available for this purpose. Air pressure/volume can be adjusted to reduce flow rate or pressure.

Pumps fitted with compressed air motors and stainless steel pump tubes provide a particularly high level of safety when pumping flammable liquids of various danger classes from one container to another.

## **Examples of liquids**



Sodium hypochlorite (hypo, chlorine), sulphuric acid, sodium hydroxide (caustic), phosphoric acid, nitric acid, hydrofluoric acid, solvent, alcohol, water, potassium carbonate (potash), calcium hydroxide (lime), acetic acid, lactic acid, boric acid, plating chemicals, food acids, bleach solutions, food acids, soap solutions, ink, glue/adhesive.

For flammable liquids and for use in explosive surroundings, explosion-proof drum pumps with necessary accessories can be supplied.

Motor and pump tube require ATEX approval for flammable liquids.

## **Examples of drums**



Techniflo has different pump tube lengths to transfer from any container. For example, in order to pump from a 200 L drum (44 gallon drum), you would need a length of 1000 mm (1 m), or for a 1000 L/IBC container, we would recommend a length of 1200 mm (1.2 m). See page 6 for more information on pump tubes.

# Pump sets – Laboratory pumps

Pump type	TP-140 PP (HC) 1000	TP 140 PVDF 700	TP-140 PVDF 1000
Flow rate (L/min) rotor/impeller	87/70	87/70	87/70
Head (m) rotor/impeller	10/23	10/23	10/23
Viscosity (cP)	400 max	400 max	400 max
Density (SG)	1.3	1.3	1.3
Motor power (W)	450 (universal)	450 (universal)	450 (universal)
Motor (V/Hz)	230/50	230/50	230/50
Weight (kg)	~7	~7	~7
Tube type (outer/shaft)	PP/HC	PVDF	PVDF
Tube diameter (mm)	41	41	41
Tube length (mm)	1000	700	1000
Features	<ul> <li>drum pump set with electric motor for light acids and alkalis</li> <li>protection class IP 24</li> <li>double insulated category II</li> <li>overload protection switch with low voltage release</li> <li>5 m cable and plug</li> <li>optional discharge hose and nozzle set</li> </ul>	<ul> <li>drum pump set with electric motor for light acids and alkalis</li> <li>protection class IP 24</li> <li>double insulated category II</li> <li>overload protection switch with low voltage release</li> <li>5 m cable and plug</li> <li>optional discharge hose and nozzle set</li> </ul>	<ul> <li>drum pump set with electric motor for light acids and alkalis</li> <li>protection class IP 24</li> <li>double insulated category II</li> <li>overload protection switch with low voltage release</li> <li>5 m cable and plug</li> <li>optional discharge hose and nozzle set</li> </ul>

# Pump sets – Drum pumps

Pump type	TP-180 PP (HC) 1000	TP-280 PVDF 1000	TP-280 PVDF 1200
Flow rate (L/min) rotor/impeller	93/74	112/83	112/83
Head (m) rotor/impeller	11/26	16/37	16/37
Viscosity (cP)	600 max	1000 max	1000 max
Density (SG)	1.5	1.9	1.9
Motor power (W)	640 (universal)	825 (universal)	825 (universal)
Motor (V/Hz)	230/50	230/50	230/50
Tube type (outer/shaft)	PP/HC	PVDF	PVDF
Tube diameter (mm)	41	41	41
Tube length (mm)	1000	1000	1200
Features	<ul> <li>drum pump set with electric motor for light acids and alkalis</li> <li>protection class IP 24</li> <li>double insulated category II</li> <li>overload protection switch with low voltage release</li> <li>5 m cable and plug</li> <li>optional discharge hose and nozzle set</li> </ul>	<ul> <li>drum pump set with electric motor for light acids and alkalis</li> <li>protection class IP 24</li> <li>double insulated category II</li> <li>overload protection switch with low voltage release</li> <li>5 m cable and plug</li> <li>optional discharge hose and nozzle set</li> </ul>	<ul> <li>drum pump set with electric motor for light acids and alkalis</li> <li>protection class IP 24</li> <li>double insulated category II</li> <li>overload protection switch with low voltage release</li> <li>5 m cable and plug</li> <li>optional discharge hose and nozzle set</li> </ul>

Pump type	TP-AIR 1 SS 1000	TP-480 SS 1000
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Flow rate (L/min) rotor/impeller	78/60	112/83
Head (m) rotor/impeller	9/13	16/37
Viscosity (cP)	400 max	1000 max
Density (SG)	1.3	1.5
Motor power (W)	300	825 (universal)
Motor (V/Hz)	Pneumatic	230/50
Tube type (outer/shaft)	SS 316Ti	SS 316Ti
Tube diameter (mm)	41	41
Tube length (mm)	1000	1000
Features	<ul> <li>motor with brass valve and muffler for compressed air</li> <li>Ex II 2 GD c IIC (80 °C)</li> </ul>	<ul> <li>protection class II 2G Ex db IIC T6 Gb</li> <li>IP 55</li> <li>overload protection with low voltage release</li> <li>5 m cable without plug, optional with Ex plug</li> </ul>

## **Electric motors**

Pump type	TP-140	TP-160	TP-180
Flow rate (L/min) rotor/impeller	71/55	82/61	93/74
Head (m) rotor/impeller	7/16	9/20	11/26
Viscosity (cP)	200 max	400 max	600 max
Density (SG)	1.2	1.3	1.5
Motor power (W)	250 (universal)	460 (universal)	640 (universal)
Motor (V/Hz)	230/50	230/50	230/50
Weight (kg)	2.9	2.9	3.6
Tube types	PP/PVDF/SS 316Ti	PP/PVDF/SS 316Ti	PP/PVDF/SS 316Ti
Tube diameters (mm)	41	41	41
Tube lengths (mm)	500/700/1000/1200	700/1000/1200+	700/1000/1200+
Features	<ul> <li>electronic speed control available as an option</li> <li>Class II, splash proof (IP24)</li> <li>on/off switch with low voltage release as standard</li> <li>overload protection switch</li> </ul>	<ul> <li>electronic speed control available as an option</li> <li>Class II, splash proof (IP24)</li> <li>on/off switch with low voltage release as standard</li> <li>overload protection switch</li> </ul>	<ul> <li>ideal laboratory pump</li> <li>Class II, splash proof (IP24)</li> <li>on/off switch with thermal protection</li> <li>pump tube can be combined with an air motor or any other Techniflo motor</li> </ul>

Pump type	TP-280	TP-360	TP-380
Flow rate (L/min) rotor/impeller	112/83	93/74	112/83
Head (m) rotor/impeller	16/37	11/26	16/37
Viscosity (cP)	1000 max	600 max	1000 max
Density (SG)	1.9	1.5	1.9
Motor power (W)	825 (universal)	640 (universal)	825 (universal)
Motor (V/Hz)	230/50	230/50	230/50
Weight (kg)	5	5.5	4.5
Tube types	PP/PVDF/SS 316Ti	PP/SS 316Ti	PP/PVDF/SS 316Ti
Tube diameters (mm)	41	41	41
Tube lengths (mm)	700/1000/1200+	700/1000/1200+	700/1000/1200+
Features	<ul> <li>industrial grade</li> <li>electronic speed control available as an option</li> <li>Class II, splash proof (IP24)</li> <li>on/off switch with low voltage release as standard</li> <li>overload protection switch</li> </ul>	<ul> <li>suitable for pumping fluid acids and bases, neutral, aggressive and non-flammable liquids</li> <li>electronic speed control and soft start</li> <li>Class II, splash proof (IP55)</li> <li>on/off switch with low voltage release as standard</li> <li>overload protection switch</li> </ul>	<ul> <li>suitable for pumping fluid acids and bases, neutral, aggressive and non-flammable liquids</li> <li>electronic speed control and soft start</li> <li>Class II, splash proof (IP55)</li> <li>on/off switch with low voltage release as standard</li> <li>overload protection switch</li> </ul>

# Flame proof/ATEX – Electric

Pump type	TP-480EX, ATEX approved
Density	1.9 max
Flow rate rotor/impeller (L/min)	112/83
Head rotor/impeller (m)	16/37
Viscosity (cP)	1000 max
Motor power (W)	825 (universal)
Motor voltage (V/Hz)	230/50
Weight (kg)	6.5
IP rating	55
Tube type	SS 316Ti
Tube diameter (mm)	41
Tube lengths (mm)	500/700/1000
Features	<ul> <li>Ex protected pump, suitable for flammable liquids</li> <li>EC-type examination certificates 17 ATEX 1 088 X and IECEx EPS 17.0045 X</li> <li>double insulated protection Class II</li> <li>on/off and overload protection switch</li> </ul>

# Air powered motors

Pump type	TP-AIR 1	TP-AIR 2	TP-AIR 3
Flow rate (L/min) rotor/impeller	78/61	80/66	91/71
Head (m) rotor/impeller	9/13	10/15	13/25
Viscosity (cP)	400	600	600
Density (SG)	11.3	1.5	1.5
Motor power (W)	400 max at max 6 bar operating pressure	600 W at max 6 bar operating pressure	400 W at max 6 bar operating pressure
Weight (kg)	2.1	1.5	1.9
Tube types	PP/PVDF/SS 316Ti	PP/PVDF/SS 316Ti	PP/PVDF/SS 316Ti
Tube diameters (mm)	41	41	41
Tube lengths (mm)	700/1000/1200+	700/1000/1200+	700/1000/1200+
Features	<ul> <li>aluminium housing</li> <li>compressed air motor with ball valve for compressed air control regulates the motor speed and varies the pumping capacity</li> <li>EC Type Examination</li> <li>cert. no. IBEX U05 ATEX B007 X</li> </ul>	<ul> <li>compressed air motor</li> <li>aluminium housing</li> <li>start button on the handle, pump starts transferring liquids when the button is pressed</li> <li>an ATEX version with 600 W is also available</li> <li>cert. no. IBEX U05 ATEX B007 X</li> <li>lockable on/off switch</li> </ul>	<ul> <li>compressed air motor</li> <li>stainless steel housing, with plug valve at air intake for compressed air control regulates the motor speed and varies the pumping capacity</li> <li>EC Type Examination</li> <li>cert no. IBEX U05 ATEX B007 X</li> </ul>

# High viscosity options

Pump type	TP-700 SR	TP-700 DRE	TP-700 DRA
Flow rate (L/min)	12/25/50	12/25/50	12/25/50
Head (m)	60 single stage 120 double stage	60 single stage 120 double stage	60 single stage 120 double stage
Viscosity (cP)	10,000	100,000	100,000
Motor power	825 W	0.37-2.2 kW	0.5–1.5 kW
Motor (V/Hz)	400/50	400/50	-
Weight (kg)	6-14	15-30	15-25
Tube types	NBR, NBR-Lite, Hypalon, Viton, EPDM and PTFE	NBR, NBR-Lite, Hypalon, Viton, EPDM and PTFE	NBR, NBR-Lite, Hypalon, Viton, EPDM and PTFE
Tube diameters (mm)	54	54	54
Tube lengths (mm)	700/1000/1200+	700/1000/1200+	700/1000/1200+
Features	<ul> <li>suitable for liquids with specific gravity up to 1.3</li> <li>aluminium housing</li> <li>compressed air motor with ball valve for compressed air control regulates the motor speed and varies the pumping capacity</li> <li>EC Type Examination</li> <li>cert. no. IBEX U05 ATEX B007 X</li> </ul>	<ul> <li>powerful, high-viscosity pump for permanent operation</li> <li>for pumping highly viscous substances such as latex based paint, glue, cream, paste, gel, chocolate mass, honey, etc.</li> <li>driven by 3-phase with 0.37/0.55/0.75 or 1.1 kW at 700 RPM or 900 RPM</li> <li>with pump hanger, flexible or rigid coupling</li> </ul>	<ul> <li>versatile, solidly built and powerful eccentric screw pump for highly viscous media such as sediment, pastes, soap, shampoo, honey, syrup, jam, sauce, etc.</li> <li>driven by compressed air motors TP-AIR 4 (0.5 kW), 6 (1.0 kW), 8 (1.5 kW)</li> <li>with pump hanger, flexible or rigid coupling</li> </ul>

## **Pump tubes**

Each pump tube is interchangeable with any air or electric motor. Suitable for many thin liquids to viscous, neutral, slightly aggressive and flammable media.

#### **PVDF Stainless steel (316Ti) Polypropylene** • ø41 mm • ø41 mm • ø41 mm Iengths (mm): Iengths (mm): Iengths (mm): 700/1000/1200 700/1000/1200 /1500/1800 /1500 shaft: SS 316Ti or shaft: Hastelloy C Hastelloy C shaft: SS 316Ti outlet: 1<sup>1</sup>/<sub>4</sub>" BSP • outlet: 11/4" BSP male, 1" hose barb • outlet: 11/4" BSP male, 1" hose barb weight: 3.5 kg • weight: 5.5 kg • weight: 3 kg • max. 90 °C • max. 50 °C • max. 90 °C or special tube 120 °C with SS special tube lengths up to 3 m impeller lengths up to 3 m available available special tube available **Rotor (standard)** Impeller



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

SS 316Ti rotor is available as an option for stainless steel pump tubes.



- 700/1000/1200 /1500/1800/2100 /2400/2700/3000
- male, 1" hose barb
- lengths up to 3 m

Suitable for larger heads at lower flow rates.

SS 316Ti version available for use with stainless steel pump tube.

# Hand pumps

Pump type	TP-02	TP-03	TP-04
Pump material	Polypropylene	Polypropylene	Polypropylene
Shaft	SS 304	Tool Steel	Polypropylene
Seal	Viton	NBR	Viton
Flow rates* (L/stroke)	0.3, 0.37, 0.45	0.3, 0.37, 0.45	0.3
Tube lengths (mm)	340-900	340-900	500-900
Tube diameter (mm)	40	40	34
Housing threads	2" and 11⁄2" BSPM	2" and 11/2" BSPM	2" BSPM

\*Depending on lever position

Pump type	TP-05	TP-07	TP-08
Pump material	SS 316Ti	Polypropylene	PVDF
Seal	PTFE	EPDM/FKM/NBR	PTFE
Flow rates	0.3-0.6 (L/stroke)	20 L/min	0.3 (L/stroke)
Tube lengths (mm)	700/1000	250	350
Tube diameter (mm)	32	40 (max)	30
Housing threads	Hose, discharge arc	_	-
Hose connection	Stainless steel, with PTFE seal and brass wing nut, nickel plated	-	-
Container size	20 L-205 L (44 gallon)	20 L-205 L (44 gallon)	-

## Accessories

	Nozzle: Nickel plated brass	Nozzle: Polypropylene	Nozzle: PVDF	Electronic flowmeter
	E			
Working pressure	4 bar max	3 bar max	3 bar max	-
Viscosity (cP)	900	800	800	20
Flow rate (L/min)	80	80	100	20-120
Liquid temperature	80 °C max	-	-	-
Weight (kg)	1	0.21	0.21	0.26
Material	Nickel plated brass/ stainless steel 316	PP	PVDF	PP/PVDF
Seal	PTFE	FKM	FKM	-

#### **Strainer: Polypropylene, Stainless steel**



Recommended when pumping dirty or contaminated liquids with abrasive particles.

#### Wall hanger



For secure storage of your drum pump when not in operation.

#### **Drum adaptors**



### Polypropylene

- ø41 mm
- ø32 mm
- 2" BSPM thread

#### **Stainless steel**

- ø41 mm
- ø32 mm
- 2" BSPM thread



**Chemical and solvent hose** 

Suitable for alkalies, acids, acetates, aldehydes, amines, esters, ethers and ketones.

- ø1"
- EPDM
- temperature -25 °C to 90 °C

#### **PVC** hose



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

- ø1"
- temperature -35 °C to 60 °C

#### Screw cap



For IBC DN 225. Includes adapter PP ø41 mm.

### Emission-proof drum adaptor

- polypropylene
- brass
- SS 316Ti

The adaptor prevents emission of harmful gases and vapours out of the drum.

#### Earth grounding set



Recommended when pumping flammable liquids.





# Drum pump range

#### Stock availability

A comprehensive range of pumps and spares are held in stock to meet immediate requirements.

#### Expertise

Trained and experienced product specialists with expertise in handling the complete range of Techniflo products.

#### **Technical support**

Full technical information covering all aspects of pump performance including compatibility with materials and systems design.

#### Advice

Reliable advice regarding pump unit assembly, installation, operation, preventative maintenance programming and spare parts inventory.

#### Service support

Full repair and service capabilities including scheduled servicing.

#### **Quality control**

Techniflo pumps are manufactured strictly in accordance with the requirements of ISO 9001:2008 to ensure the highest levels of product quality.

#### For more information

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