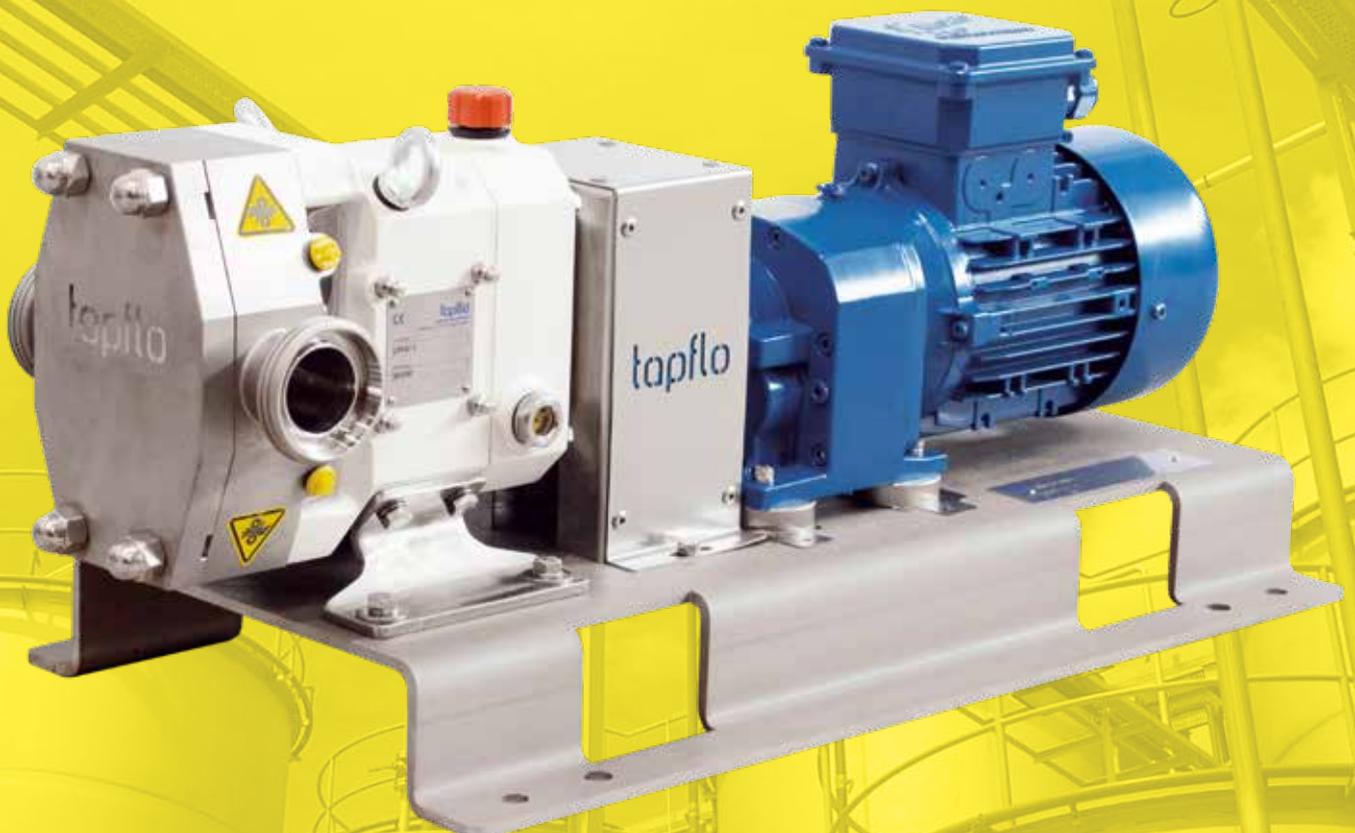


tapflo®

# LPX TAPFLO LOBE PUMPS

2023 | 1



» All about your flow®

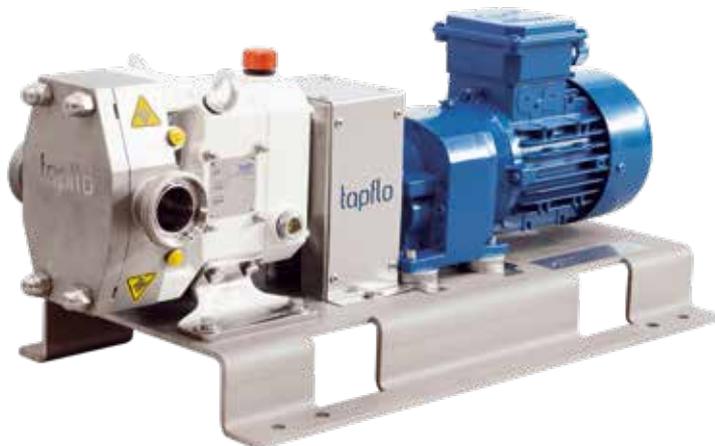
[www.tapflo.com](http://www.tapflo.com)

# Lobe Pumps

reliable performance with low noise, robust and gentle fluid transfer

Rotary lobe pumps are positive displacement pumps that utilize two synchronized lobes to move fluid. The lobes are propelled independently via their own shafts, ensuring they don't touch each other or other components of the pump.

This unique construction makes lobe pumps suitable for transferring dense and viscous fluids with fragile structures, and they offer dependable operation with low noise levels and gentle fluid transfer. Additionally, they are optimized for energy efficiency.

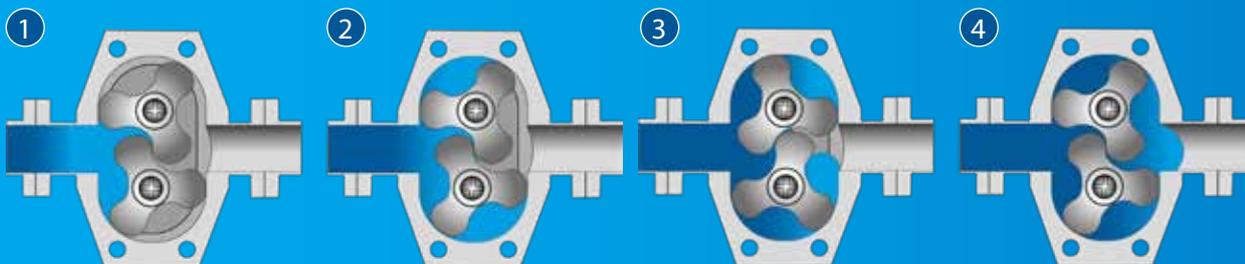


## Features & Benefits

- ✓ Bi-directional flow, horizontal or vertical mounting.
- ✓ Easy to disassemble and reassemble 316L stainless steel pump body and cover.
- ✓ Versatile 4-way mounting of the gear case which also allows vertical positioning of ports.
- ✓ Pumps are energy efficient and easily cleaned, maintained and repaired.
- ✓ Large fluid cavities allow pumping liquids with solids of significant size.
- ✓ No cross-contamination of the product from lubricating oil due to unique gear case design.
- ✓ Single mechanical seals as a standard. Optional double mechanical available on request.

## Working principle

The working principle of a lobe pump is to displace a certain amount of liquid from the suction area, by rotating the working elements (lobes), to the discharge area. The lobes are mounted on shafts, which are seated on bearings in an external synchronizer. Shafts equipped with gears, located inside the synchronizer, transfer the drive from the drive shaft to the intermediate shaft. The lobes are synchronized in such a way that they do not contact each other during operation.



As the lobes rotate, they increase the volume of the space between them, causing a pressure drop on the suction port side (fig. 1). This causes fluid to flow into the pump body. The pumped liquid is transported inside the casing (fig. 2 and fig. 3) to the discharge side of the pump (fig. 4). When the volume of the space between the lobes decreases, it causes an increase in pressure on the discharge side, and consequently the liquid is pushed out of the pump body.

# LPX Tapflo Lobe Pumps

- » **8 pump sizes** available
- » Capacity up to **82 m<sup>3</sup>/h** and maximum pressure of **10 bar**
- » No internal rotor contact
- » Pumps with **flushed double mechanical seals** can **run dry intermittently**
- » Service kits available for rapid replacement of routine service items



Certificates may vary depending on material execution of particular product.

## Technical data

Model	Displacement [litre/rev]	Nominal connection size	Differential pressure rating [bar]	Maximum pump speed [RPM]	Input shaft diameter [mm]	Maximum torque [Nm]	Maximum capacity [l/min]
LPX25-1	0.04	25	10	1200	19	108	48
LPX25-2	0.10	25	10	900	19	108	90
LPX40-1	0.14	40	10	900	19	108	125
LPX40-2	0.23	40	10	900	19	108	208
LPX50-1	0.30	50	10	900	19	108	268
LPX50-2	0.67	50	10	700	38	400	469
LPX80-1	0.94	80	10	700	38	400	660
LPX100-1	2.29	100	10	600	55	1200	1371

## Wide range of applications

### Industries:

- » **bakery**
- » **beverage**
- » **canning**
- » **confectionery**
- » **cosmetics**
- » **dairy**
- » **chocolate**
- » **meat packing**
- » **pharmaceutical**
- » **chemical**

### Applications:

batters, flavours, frostings, fruit fillings, fats & oils, sweeteners, yeast slurry  
 beer, wort, yeast, soft drinks, fruit concentrates, fruit drinks  
 baby foods, soups, stews, tomato paste, fruit puree, vegetables, diced, slurries, puddings, jams, jellies, salad dressings, mayonnaise  
 syrups, cream fillings, chocolate  
 face creams & lotions, hair styling gels & liquids, essential oils, dyes & alcohols  
 cream, milk, cheese curd & whey, cottage cheese, yoghurt  
 cocoa butter, condensed milk, lecithin, finished chocolate, emulsifiers, sorbitol, aromas, marmalades, toffee, glucose syrups  
 meat emulsions, ground meats, pet foods, animal fats  
 pill pastes, syrups, extracts, emulsions, slurries  
 solvents, fuels, oils & lubricants, paints, resins & polymers, soaps



# Performance and long life through



Heavy-duty tapered roller bearings



316L stainless lobes, body and cover



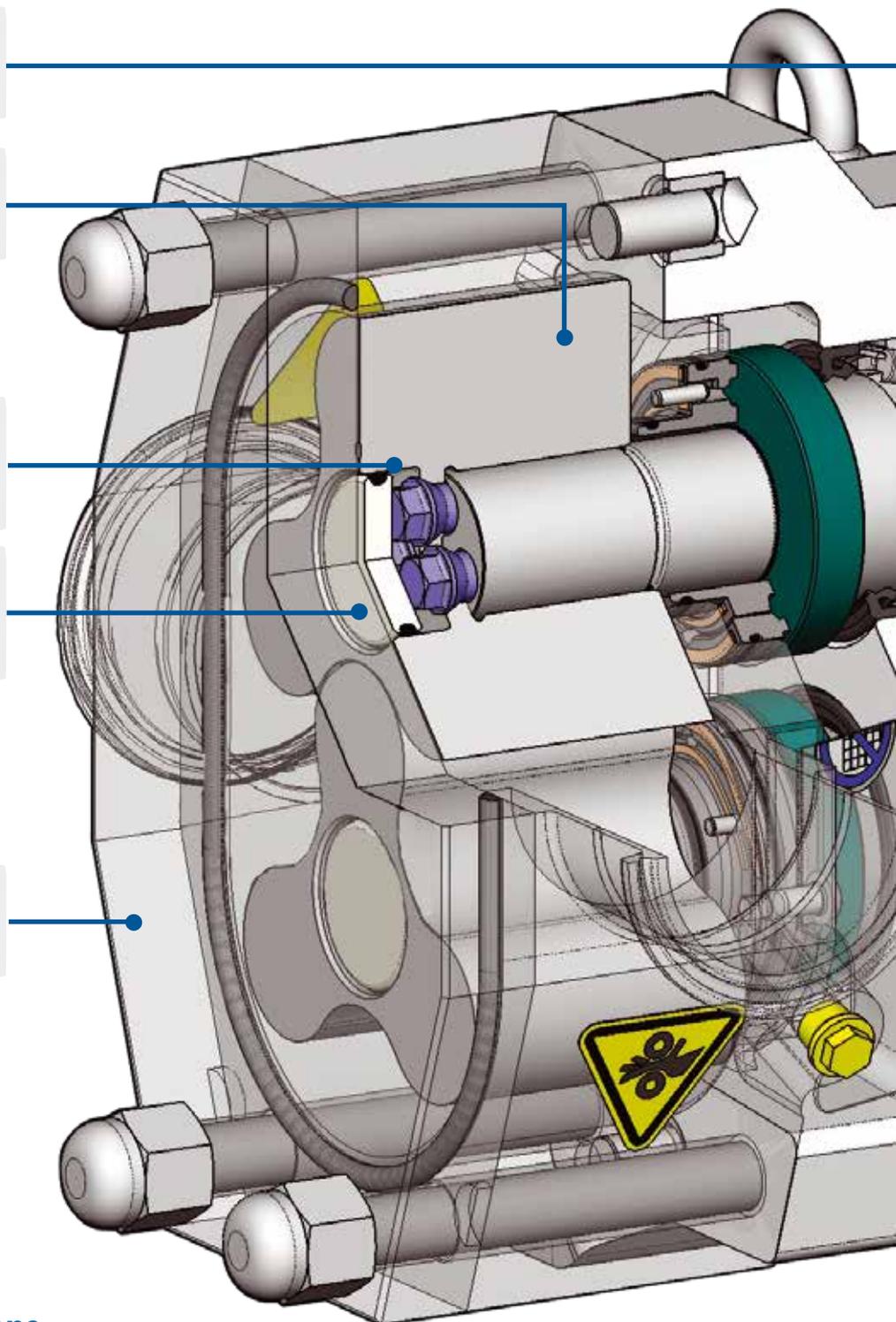
Unique rotor attachment combines accurate rotor positioning and ease of service



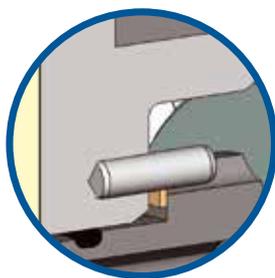
Rotor attachment sealed from product zone



Flat cover for easy cleaning

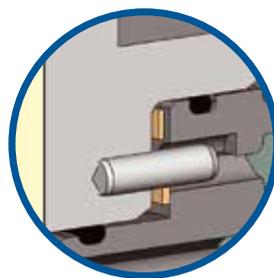


## Options and special executions



### SINGLE MECHANICAL SEAL

Silicon carbide vs. silicon carbide provides long life and protection against abrasive wear.

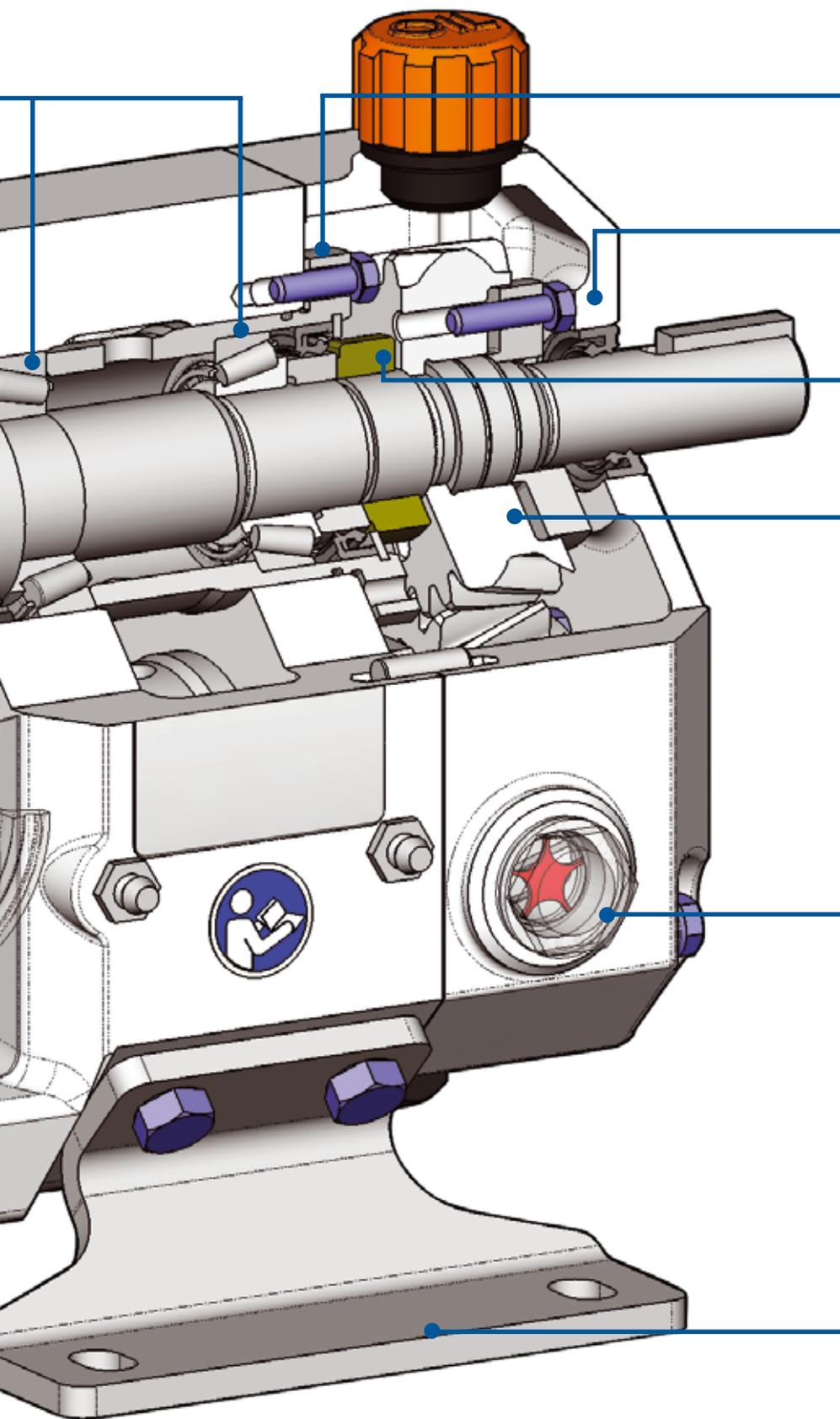


### DOUBLE CONCENTRIC MECHANICAL SEAL

Used with flushing fluid to cool, lubricate, and rinse away residue. Best arrangement for severe service.

- Elastomer choice for O-rings:
- Fluoroelastomer (FKM) FDA standard
  - EPDM FDA optionally

# engineering



✓ Easy access to shims for rotor clearance adjustment

✓ Easy to set and maintain rotor timing

✓ Robust bearing arrangement - pre-loaded tapered roller bearings require no shimming

✓ Helical gears provide for smooth power transmission

✓ Sight glass allows easy indication of oil level

✓ Versatile mounting capabilities

## Application examples



**Pumped liquid** - SLES 70%; 3 bar; 6 m<sup>3</sup>/h  
**Pump** - LPX50-2



**Pumped liquid** - glucose Syrup 80 °Bx  
**Pump** - LPX50-1 with heated cover and double mechanical seal



**Pumped liquid** - cookie fillings, confectionery products  
**Pump** - LPX80-1 with heated cover, installed vertically to save space

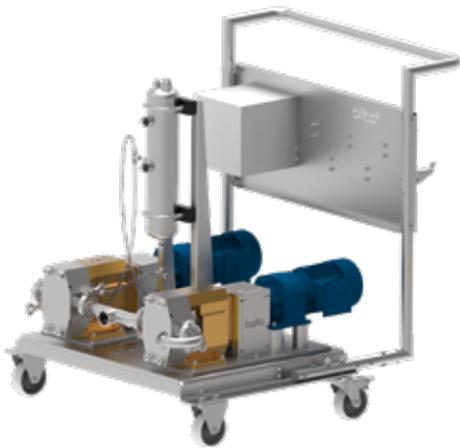


**Pumped liquid** - toothpaste, body scrubs, lotions creams  
**Pump** - LPX50-1 delivering 2 m<sup>3</sup>/h at 5 bar differential pressure



**Pumped liquid** - transporting syrups, chocolate, etc.  
**Pump** - LPX80-1 installed on a truck cistern

## Accessories



**Mobile tailor made solutions** for special customer needs



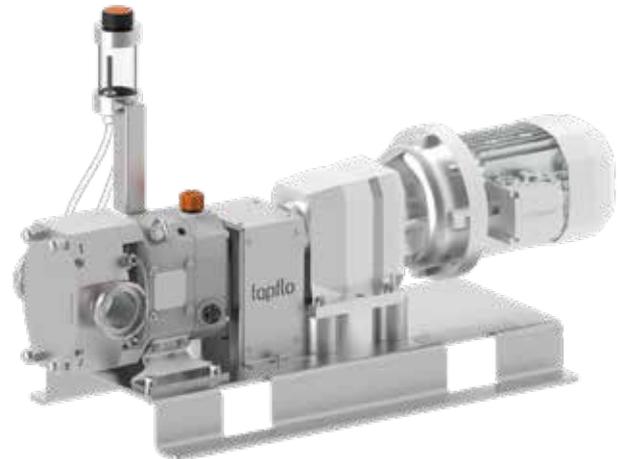
**Standard Tapflo trolleys** with fast delivery time and **IP66 frequency inverters**



**Tank** using thermosyphon effect on heavy duty applications



**Vertical inlet/outlet set up** for pump drainability and easier flow into the suction connection



**AISI 304L stainless steel baseplates** as a standard for all pump sizes



**Lubrication tank** for media crystallising on contact with air



**IP66 inverters** available in stock with fast delivery times



Covers with **heating jackets**

## Sweden

Filaregatan 4 | S-442 34 Kungälv

Tel: +46 303 63390

Fax: +46 303 19916

E-mail addresses:

Commercial questions: [sales@tapflo.com](mailto:sales@tapflo.com)

Orders: [order@tapflo.com](mailto:order@tapflo.com)

Tech support: [support@tapflo.com](mailto:support@tapflo.com)

*We began our journey in 1980 in Kungälv, a small town on the Swedish west coast, as a family company with an ambition to one day become a global player on the pump market.*

*Since the foundation, we have taken pride in delivering a wealth of knowledge and passion for pumps to the industry, whilst supplying a wide range of premium products for various industrial applications.*

*Over the years, the company has developed into a global Tapflo Group with branches and distributors present in nearly every region of the world.*

*One thing did not change - we are still a family company.*

## Tapflo products and services are available worldwide.

Tapflo is represented by own Tapflo Group Companies and carefully selected distributors assuring highest Tapflo service quality for our customers' convenience.

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## Tapflo Group Companies

### Australia

Tapflo Oceania (Pty) Ltd.  
Tel: +61 1800303633  
[sales@tapflo.com.au](mailto:sales@tapflo.com.au)

### Austria

Tapflo GmbH  
Tel: +43 73227292910  
[sales@tapflo.at](mailto:sales@tapflo.at)

### Baltic States

Tapflo SIA  
Tel: +371 67472205  
[sales@tapflo.lv](mailto:sales@tapflo.lv)

### Belgium

Tapflo Benelux B.V.  
Tel: +31 (0)850074300  
[info@tapflo.nl](mailto:info@tapflo.nl)

### Bulgaria

Tapflo EOOD  
Tel: +359 (0)29741854  
[office@tapflo.bg](mailto:office@tapflo.bg)

### Canada

Tapflo Canada  
Tel: +1 5148135754  
[canada@tapflo.com](mailto:canada@tapflo.com)

### China

Tapflo (Wuxi) Pumps Co. Ltd.  
Tel: +86 51082417072  
[sales@tapflo.cn](mailto:sales@tapflo.cn)

### Croatia

Tapflo d.o.o.  
Tel: +385 914884666  
[sales@tapflo.hr](mailto:sales@tapflo.hr)

### Czech Republic

Tapflo s.r.o.  
Tel: +420 513033924  
[tapflo@tapflo.cz](mailto:tapflo@tapflo.cz)

### Denmark

Tapflo Danmark ApS  
Tel: +45 36454600  
[info@tapflo.dk](mailto:info@tapflo.dk)

### France

Sarl Tapflo France  
Tel: +33188788240  
[info@tapflo.fr](mailto:info@tapflo.fr)

### Hungary

Tapflo Kft.  
Tel: +36 30148 8551  
[office@tapflo.hu](mailto:office@tapflo.hu)

### India

Tapflo Fluid Handling India Pvt Ltd.  
Tel: +91 2065000215  
[ac@tapflo.in](mailto:ac@tapflo.in)

### Ireland

Tapflo Ireland Ltd.  
Tel: +353 12011911  
[info@tapflo.ie](mailto:info@tapflo.ie)

### Italy

Tapflo Italia S.r.l.  
Tel: +39 0362306528  
[info@tapfloitalia.com](mailto:info@tapfloitalia.com)

### Japan

Tapflo Japan K.K.  
Tel: +81 362403510  
[tapflojp@tapflo.co.jp](mailto:tapflojp@tapflo.co.jp)

### Kazakhstan

Tapflo LLP  
Tel: +7 7273278347  
[sales@tapflo.kz](mailto:sales@tapflo.kz)

### Netherlands

Tapflo Benelux B.V.  
Tel: +31 (0)850074300  
[info@tapflo.nl](mailto:info@tapflo.nl)

### Poland

Tapflo Sp. z o.o.  
Tel: +48 585304212  
[info@tapflo.pl](mailto:info@tapflo.pl)

### Romania

S.C. Tapflo Rom. S.r.l.  
Tel: +40 213451255  
[sales@tapflo.ro](mailto:sales@tapflo.ro)

### Serbia

Tapflo d.o.o.  
Tel: +381 21445808  
[sales@tapflo.rs](mailto:sales@tapflo.rs)

### Slovakia

Tapflo s.r.o.  
Tel: +421 911137883  
[tapflo@tapflo.sk](mailto:tapflo@tapflo.sk)

### Slovenia

Tapflo d.o.o.  
Tel: +386 68613474  
[sales@tapflo.hr](mailto:sales@tapflo.hr)

### Spain

Tapflo Ibérica S.L.  
Tel: +34 918093182  
[avives@tapfloiberica.es](mailto:avives@tapfloiberica.es)

### South Africa

Tapflo (Pty) Ltd.  
Tel: +27 317015255  
[sales@tapflo.co.za](mailto:sales@tapflo.co.za)

### Sweden

Tapflo AB  
Tel: +46 (0)30314050  
[info@tapflo.com](mailto:info@tapflo.com)

### Turkey

Tapflo Makina Ltd.  
Tel: +90 2164673311  
[sales@tapflo.com.tr](mailto:sales@tapflo.com.tr)

### Ukraine

Tapflo LLC  
Tel: +380 442226844  
[sales@tapflo.ua](mailto:sales@tapflo.ua)

### Uzbekistan

Tapflo Uzbekistan  
Tel: +998 712370940  
[sales@tapflo.uz](mailto:sales@tapflo.uz)

### United Kingdom

Tapflo (UK) Ltd.  
Tel: +44 2380252325  
[sales@tapflo pumps.co.uk](mailto:sales@tapflo pumps.co.uk)



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