

PE & PTFE series pumps

Tapflo pumps made from polyethylene (PE) or PTFE are suitable for handling almost any kind of liquid whether it is viscous, chemically aggressive or with solids.



Polyethylene pumps

Polyethylene (PE HD) has a superior wear resistance which is 6 – 7 times better than for polypropylene (PP). This fact makes the pump suitable for handling abrasive slurries etc. PE is resistant to most kind of aggressive chemicals such as concentrated acids and alkalis. Maximum liquid temperature is 70°C. Tapflo uses different grades of PE depending on the part. For valve seats and ball stopers, which are most vulnerable to wear, we use UHMW PE1000 for best mechanical strength and abrasion resistance.

PTFE pumps

PTFE (virgin polytetrafluorethylene) is a thermoplastic polymer with superior chemical resistance. The PTFE pump will handle even the most aggressive acids, for instance concentrated nitric acid. Maximum liquid temperature is up to 100°C.

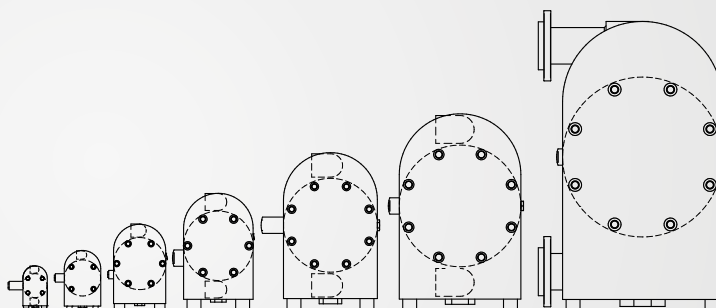


EN 10204



The PE & PTFE pump range

- » TR9 - 11 l/min, 1/4"
- » TR20 - 24 l/min, 3/8"
- » T50 - 60 l/min, 1/2"
- » T100 - 125 l/min, 1"
- » T200 - 330 l/min, 1 1/2"
- » T400 - 570 l/min, 2"
- » T800 - 820 l/min, 3"



Typical applications

Industry	Example of applications
» Chemistry	Acids, alkalis, alcohol, solvents, latex, emulsions
» Food	CIP fluid, flavouring, pigments
» Pulp & Paper	Glue, slurries, adhesives, dispersions, resins, sodium silicate, titanium oxide
» Surface conditioning	Electroplating baths, various acids, solvents, anodic sludge, varnish, enamels
» Water treatment	Sludge handling, filter press applications, neutralization and flocculants
» Electronics	Carrier fluids, ultra pure liquids, electroplating solutions, mercury, solvents
» Print & paint	Glue, additives, varnish, ink, paint, latex, acid, resins, pigments

The ingenious Tapflo design

Few components and a simple but ingenious design is peculiar for all Tapflo pumps. It is a compact pump, easy and quick to maintain, keeping your service costs and process down time to a minimum.

Flexible installations

The connections may be rotated 180°. Simply turn the connections to fit your piping system. Threaded BSP or NPT plastic connections is standard, AISI 316 or other connections types are also available.

Solid and strong

The pump body is machined from solid PE or PTFE. The solid design will stand against mechanical forces as well as aggressive chemicals.



Low air consumption

The air distribution system is designed with shortest possible air distribution ways. This eliminates "dead spaces", resulting in high efficiency and low air consumption.

Chemical design

The compound diaphragm has a completely smooth liquid side surface and with no metal in contact with the liquid. Ideal for a safe chemical handling.



PE pumps - suitable for most chemicals and abrasive medias



PTFE pumps - suitable for the most aggressive chemicals

Special versions



Drum pumps | TD series

It is fitted with a drum tube in polypropylene (PP) or PTFE and a handle in stainless steel AISI 316L.




The drum tube is delivered in any length up to 2 m.

Handle your liquids comfortable. You will easily move your Tapflo drum pump between drums and containers.

The PE & PTFE drum pumps range

- » TRD20 - 24 l/min, 3/8"
- » TD50 - 60 l/min, 1/2"
- » TD100 - 125 l/min, 1" (available in PE only)

■ Features & Benefits

-  **No rotating parts**
 Gentle liquid handling – ideal for shear sensitive liquids or abrasive products.
 Adjustable suction pipe length.
-  **High pressure**
 Able to handle even high viscous products
-  **Infinitely variable flow**
 Easy to adjust the flow for a safe fluid handling



Integrated flanges| 3D/3A

Pumps with integrated flanges are a robust and solid design. When there is a risk of transferring of vibration from the installation to the pump, the solid manifolds provide better stability and sealing for the pump.

More material and robust construction is a perfect solution for most demanding applications such as in TF Filter press pumps where pump operates at higher pressures.

- » **Available for sizes:** T50, T100, T200, T400
- » **Available materials:** PE, PE cond., PTFE, PTFE cond.
- » **Flange standard 3A** = ANSI flanges **3D** = DIN flanges

Special versions



AT 

Explosion proof pumps | TX series

The ATEX directive 94/9/EC (also known as ATEX 100a) is applicable on products used in explosion hazardous zones.

Tapflo pumps made from conductive (carbon filled) plastics PE or PTFE are made for use in explosion hazardous environments. They can be used in Ex-zone 1. The conductive material ensures that no electrostatic loads will be accumulated in the pump. The conductive pigments in the material reduces the surface resistance to less than 10⁵W. Transfer of alcohol and solvents are examples of applications for the Tapflo TX pumps.

Pumps certified according to 94/9/EC (ATEX)

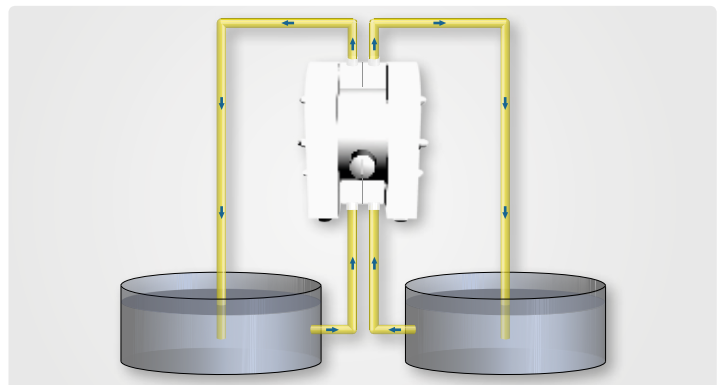
Group:	II
Category:	2G/2D
Apparatus group:	IIB
Temperature class:	T4 (other rating on request)



Twin pumps | TT series

Tapflo PE & PTFE series pumps may be fitted with double in/outlet to achieve "two pumps in one" for blending, mixing or recirculation of liquids.

The liquid in one pump chamber is separated from the other one.



Example of applications

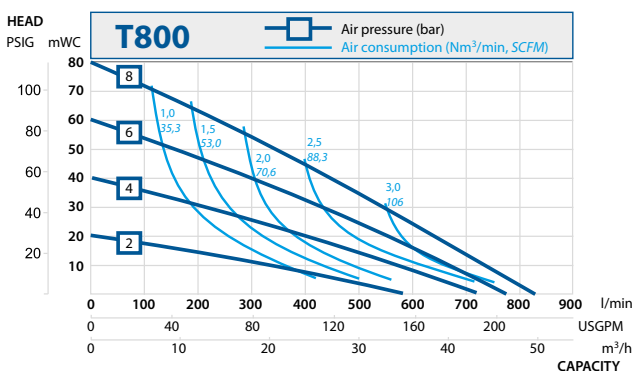
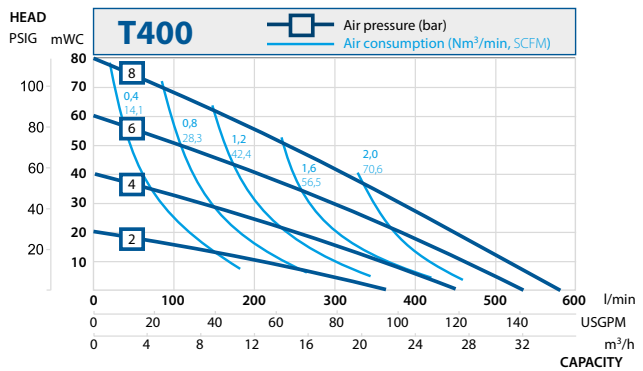
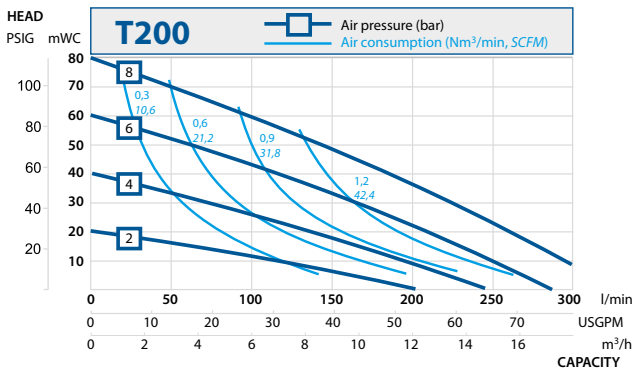
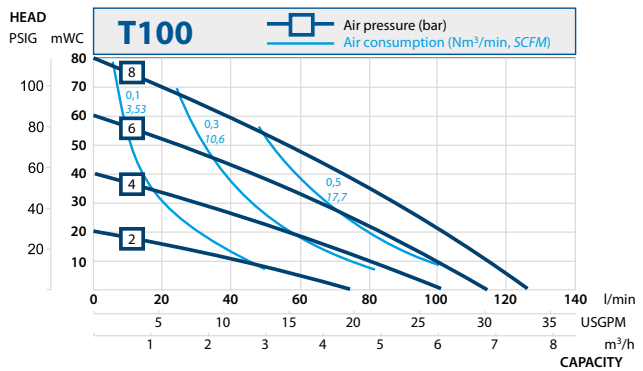
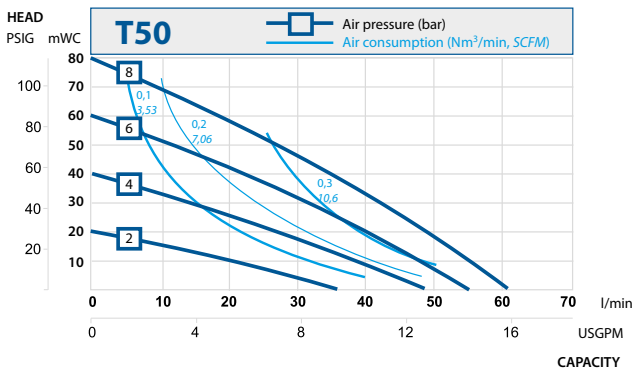
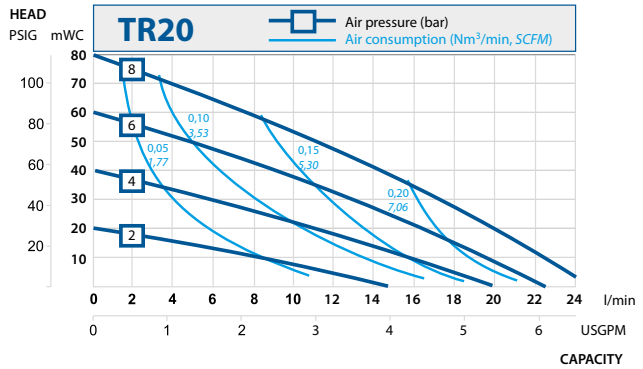
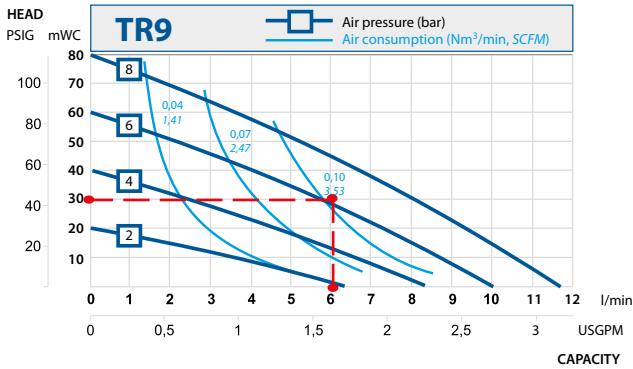
- » Transfer of two different liquids, two pumps in one (installation example above)
- » Mixing of two liquids with one pump (50/50 ratio)
- » Transfer and return of printing ink from storage to ink tray
- » Transfer and agitation of liquids with one pump

Performance curves

The performance curves are based on water at 20°C. Other circumstances might change the performance.

Example see the red line — — — — —

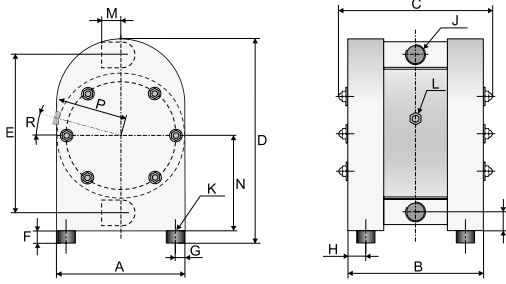
A flow of 6 liter/minute is desired. The discharge head is calculated to 30 mWC. We choose a TR9. It requires an air pressure of 6 bar and will consume approximately 0.10 Nm³ air per minute.



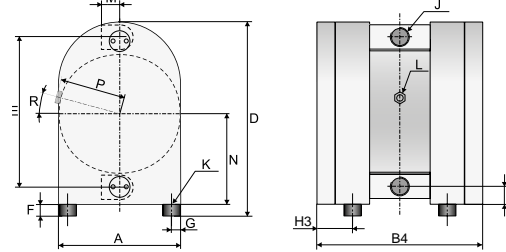
Changes reserved without notice

Dimensions

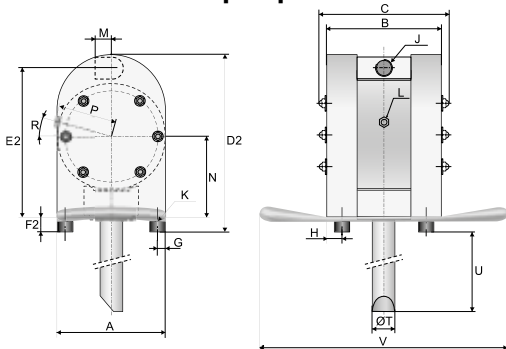
Standard PE pumps



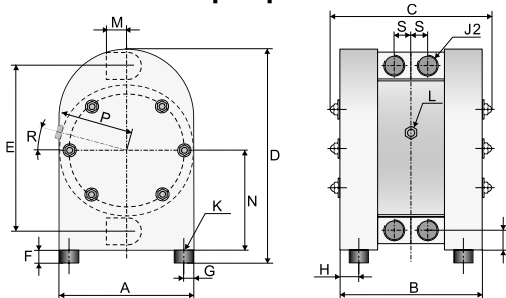
Standard PTFE pumps



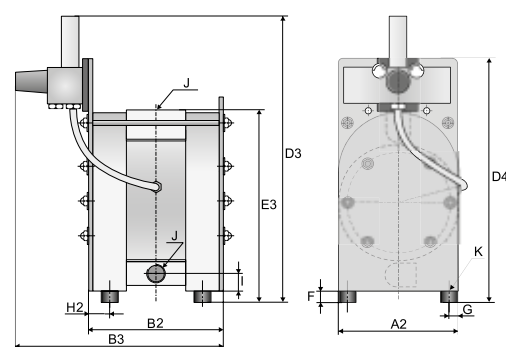
Drum pumps TD



Twin pumps TT



Filterpress pumps TF



Dimensions for PE & PTFE series

Dimensions in mm (where other is not indicated)

Dimensions in inch (where other is not indicated)

Dim	Pump size						
	9	20	50	100	200	400	800
A	70 2.76	105 4.13	150 5.91	200 7.87	270 10.63	350 13.78	460 18.11
A2	-	-	150 5.91	300 11.81	300 11.81	404 15.91	-
B	94 3.70	112 4.41	160 6.30	214 8.43	310 12.20	380 14.96	589 23.19
B2	-	-	168 6.61	221 8.70	320 12.60	390 15.35	-
B3	-	-	277 10.91	391 15.39	490 19.29	598 23.54	-
B4	134 5.28	152 5.98	200 7.87	254 10.00	350 13.78	420 16.54	-
C	115 4.53	135 5.31	190 7.48	250 9.84	345 13.58	425 16.73	637 25.08
D	123 4.84	168 6.61	243 9.57	320 12.60	450 17.72	563 22.17	830 32.68
D2	-	175 6.89	250 9.84	325 12.80	-	-	-
D3	-	-	385 15.16	550 21.65	700 27.56	770 30.31	-
D4	-	-	343 13.50	477 18.78	630 24.80	690 27.17	-
E	92 3.62	132 5.20	190 7.48	252 9.92	345 13.58	440 17.32	650 25.59
E2	-	147 5.79	210 8.27	280 11.02	-	-	-
E3	-	-	250 9.84	333 13.11	467 18.39	588 23.15	-
F	8 0.31	8 0.31	15 0.59	15 0.59	30 1.18	30 1.18	30 1.18
F2	-	15 0.59	21 0.83	21 0.83	-	-	-
G	9 0.35	15 0.59	17 0.67	30 1.18	30 1.18	30 1.18	30 1.18
H	10 0.39	15 0.59	16 0.63	30 1.18	30 1.18	30 1.18	15 0.59
H2	-	-	19 0.75	33 1.30	35 1.38	35 1.38	-
I	12 0.47	15 0.59	20 0.79	28 1.10	38 1.50	48 1.89	80 3.15
J	1/4"	3/8"	1/2"	1"	1 1/2"	2"	3"
J2	1/4	3/8	1/2	1	1 1/2	2	3"
J2	1/4"	3/8"	1/2"	3/4"	1"	1 1/2"	-
K	M4x20 M4	M4x20 M4	M8x25 M8	M8x25 M8	M8x25 M8	M8x25 M8	M8x25 M8
L	1/8"	1/8"	1/4"	1/4"	1/2"	1/2"	1/2"
M	15 0.59	17 0.67	25 0.98	38 1.50	54 2.13	70 2.76	95 3.74
N	58 2.28	81 3.19	115 4.53	154 6.06	211 8.31	268 10.55	410 16.14
P	35 1.38	52 2.05	80 3.15	105 4.13	143 5.63	183 7.20	238 9.37
R	0°	0°	15°	15°	0°	0°	0°
S	13 0.51	15 0.59	21 0.83	27 1.06	35 1.38	42 1.65	-
ØT	-	20 0.79	33 1.30	33 1.30	-	-	-
U	-	1270* 50.0*	1270* 50.0*	1270* 50.0*	-	-	-
V	-	285 11.22	360 14.17	400 15.75	-	-	-

* = Any length up to 2000 mm upon request

* = Any length up to 79" upon request

General dimensions only, ask us for detailed drawings.
Changes reserved without notice

Technical data

Data	Pump size						
	9	20	50	100	200	400	800
General characteristics							
*Max capacity (l/min) / (US gpm)	11 / 2.9	24 / 6.3	60 / 15.8	125 / 33	330 / 87	570 / 150	820 / 216
**Volume per stroke (ml) / (cu in)	13 / 0.80	50 / 3.05	87.5 / 5.34	280 / 17.1	933 / 56.9	2300 / 140.3	5125 / 312.7
Max discharge pressure (bar) / (psi)	8 / 116	8 / 116	8 / 116	8 / 116	8 / 116	8 / 116	8 / 116
Max air pressure (bar) / (psi)	8 / 116	8 / 116	8 / 116	8 / 116	8 / 116	8 / 116	8 / 116
****Max suction lift dry (m) / (Ft)	1.6 / 5	2.5 / 8	2.5 / 8	3.5 / 11	4 / 13	4 / 13	5 / 16
Max suction lift wet (m) / (Ft)	8 / 26	8 / 26	9 / 29.5	9 / 29.5	9 / 29.5	9 / 29.5	9 / 29.5
Max size of solids (ø in mm) / (in)	2 / 0.08	3 / 0.12	4 / 0.16	6 / 0.24	10 / 0.39	15 / 0.59	15 / 0.59
Max temp, pump in PE (°C) / (°F)	70 / 158	70 / 158	70 / 158	70 / 158	70 / 158	70 / 158	70 / 158
Max temp, pump in PTFE (°C) / (°F)	100 / 212	100 / 212	100 / 212	100 / 212	100 / 212	100 / 212	-
Min temperature (°C) / (°F)	-20 / -4	-20 / -4	-20 / -4	-20 / -4	-20 / -4	-20 / -4	-20 / -4
Weight							
Standard pump T in PE (kg) / (lb)	1 / 2.2	1,5 / 3.3	5 / 11	10 / 22	24 / 53	44 / 97	140 / 309
Standard pump T in PTFE (kg) / (lb)	1.5 / 3.3	2.5 / 5.5	7 / 15	17 / 38	44 / 97	90 / 199	-
Drum pump TD in PE (kg) / (lb)	-	2 / 4.4	6 / 13	11 / 24	-	-	-
Drum pump TD in PTFE (kg) / (lb)	-	3.5 / 7	9 / 19	-	-	-	-
Filterpress pump TF in PE (kg) / (lb)	-	-	8 / 17	18 / 40	37 / 82	66 / 146	-
Material of components							
Pump housing and all wetted thermoplastic details	PE or PTFE						PE
Centre block (not wetted)	PP						
Diaphragms	PTFE, FKM	PTFE, PTFE 1705B, EPDM or NBR					
Valve balls	-	-	PTFE, EPDM, NBR, AISI 316L****, PU, Ceramic***				
Rod valves (TR9 and TR20)	PTFE		-	-	-	-	-
Air valve	Brass (standard), stainless steel AISI 316L, PET with NBR (standard), EPDM or FKM o-rings						
O-rings (wetted)	FEP/FKM (standard on pumps with PTFE diaphragms), EPDM, NBR or FKM						
Housing pin screws	Stainless steel AISI 316L						
Diaphragm shaft	Stainless steel AISI 316L						
Drum handle (TD pumps)	-	Stainless steel AISI 316L			-	-	-
Reinforcement plates (TF pumps)	-	-	Stainless steel AISI 316L				-

* = Recommended flow is half of the the max flow, i.e. recommended flow for a T100 is 50 l/min (13.2 US gpm)

** = The value is based on pumps with EPDM diaphragms. Pumps with PTFE diaphragms have about 15% less volume

*** = Not available on T800

**** = This is max value with stainless steel valve balls, other valve ball materials may reduce the suction. Please consult us

Pump code

The model number on the pump tells the pump size and material of the pump components

Tapflo diaphragm pump **Max capacity (l/min)** **Material of wetted thermoplastic parts:** **Material of diaphragms:**

P = PE (polyethylene) B = PTFE 1705B (solvents)
T = PTFE E = EPDM
N = NBR (nitrile rubber)
T = PTFE
V = FKM (TR9-T50 only)

Basic options: **Material of valve balls:** **Special executions*:**

B = Backup diaphragm system E = EPDM 1 = Optional material in/outlet
D = Drum pump N = NBR (nitrile rubber) 2 = Valve seat insert (PE, PTFE, PU or AISI 316L)
F = Filterpress pump T = PTFE 3 = Optional connection type
L = Draining system S = AISI 316 stainless steel 4 = Backup diaphragm system configuration
Q = Special sealed pump P = PU (polyurethane) 5 = Other special executions*
R = Rod valves K = Ceramic 6 = Optional material of centerblock
T = Twin pump V = FKM 7 = Optional material of air valve
V = AISI 316L valve seat / spacer Material of rod valves (TR9 and TR20 only) 8 = Optional material of pos 18 seals
X = ATEX approved, group II, cat 2 T = PTFE 9 = Optional material of housing pin screws
Y = High suction lift version 11 = Housing reinforcement plates
Z = Semiconductor industry pump 14 = Optional pump feet

* = Ask us for complete pump code with all available options and executions. Changes reserved without notice