

Metal series pumps

The compact, smooth and simple design is common for this series. Materials available are aluminium, cast iron, stainless steel and PTFE coated aluminium.



Aluminium and cast iron pumps

For transfer of pH-neutral fluids, both thin, thick, high solid content or abrasive. The aluminium and cast iron pumps are found in most fields; workshop and paint industries, purifying plants etc., to mention only a few.

AISI 316 stainless steel pumps

Made in lost wax cast method, ensuring great accuracy and finish. The stainless steel pumps combine great mechanical strength with good chemical features. AISI 316 is resistant to aggressive liquids like nitric acid and sodium hydroxide. The centre block, which is not in contact with liquid, is made from corrosive resistant polypropylene (PP) as standard (other materials upon request).



EN 10204



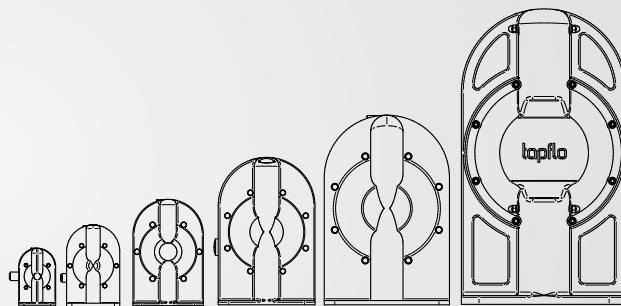
AT



The metal pump range

- » T25* - 26 l/min, 1/2"
- » T70 - 78 l/min, 3/4"
- » T120 - 158 l/min, 1"
- » T220 - 330 l/min, 1 1/2"
- » T420 - 570 l/min, 2"
- » T820 - 820 l/min, 3"

* = aluminium and cast iron only



Typical applications

Industry

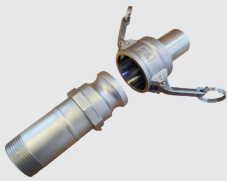
- » Workshop
- » Print & paint
- » Mining & construction
- » Ceramic industry
- » Chemistry

Example of applications

- Oils, fats, solvents, water, cooling fluids, lubricants
- Glues, additives, varnishes, inks, paints, latex, acids, resins, pigments
- Adhesives, sumps, dewatering, coal sludges, pastes
- Abrasives, glazes, water, enamels, clays
- Acids, alkalis, alcohols, solvents, latex, emulsions

The ingenious Tapflo design

You will discover and appreciate simplicity when you maintain the pump.
We use approximately **70% fewer parts compared with other brands.**



Optional Camlock connections

Metal series diaphragm pumps can be ordered with CAMLOCK connections. The coupling is connected by simply opening the coupler arms and inserting the adaptor into the coupler.

Durable valve seats

The valve seat is under constant stress from the movement of the valve ball. To obtain the best wear resistance, the integrated seat is made from AISI 316 stainless steel.



Flexible installations

The connections may be rotated 180°. Simply turn the connections to fit your piping system. Threaded BSP or NPT connections are standard. Twin connections are also available.

Low air consumption

The air distribution system is designed to ensure the shortest possible airflow path and eliminate dead volumes. This results in high efficiency and low air consumption.



Aluminium and cast iron - suitable for pH neutral liquids



Stainless steel - suitable for chemicals and food applications

Special versions



Drum pumps | TD series

Light and mobile solution for emptying drums and containers Tapflo TD pumps are irreplaceable in such applications.

The pumps are fitted with a drum tube in aluminium or stainless steel and a handle in AISI 316L stainless steel.

The Metal drum pumps range

- » TXD25 - 26 l/min, ½" suction and discharge
- » TXD70 - 78 l/min, ¾" suction and discharge
- » TXD120 - 158 l/min, 1" suction and discharge

Features & Benefits

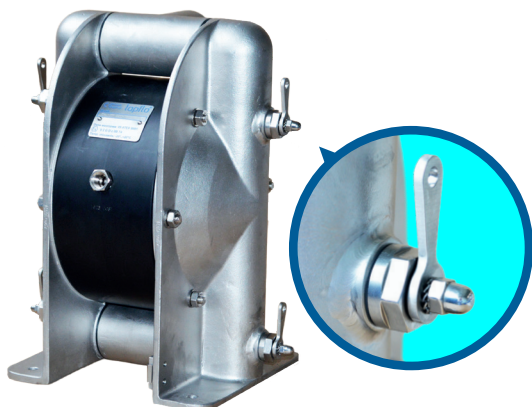
- ✓ **Customizable tube length**
The drum tube is delivered in any length up to 2 m
- ✓ **Highly mobile and versatile**
Pumps can be easily moved between different drums and containers
- ✓ **Handy and convenient**
Compact pump equipped with comfortable handle



Pneumatic drainage

To ensure process automation Tapflo has developed a pneumatic drainage system. Thanks to this feature, the pump can be drained without detaching from the installation.

» Available for sizes: T120 | T220 | T420



Ball lifters TL

This option is a great way to empty the pump of liquid if there is no possibility of pump disconnection from the installation.

With this easy solution you can simply raise the ball from the valve seat and allow the liquid to flow out of the pump.

» Available for sizes: T70 | T120 | T220 | T420

Special versions



Pump with built-on dampener | TK series

The built-on dampener is an ideal solution to eliminate pressure variations on the pumps discharge where space in the installation is limited.

» Available for sizes: TXK25, TXK70, TXK120, TXK220, TXK420;

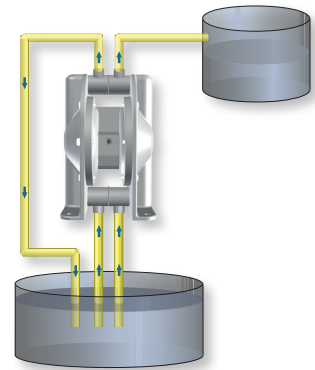


Twin pumps | TT series

Tapflo metal series pumps may be equipped with double in/outlet to achieve "two pumps in one" for blending, mixing or circulation of liquids. The liquid in one pump chamber is separated from the other one.

Examples of applications

- » Transfer of two different liquids, two pumps in one
- » 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 (installation example)



Explosion proof pumps | TX series

The ATEX directive 2014/34/EU (also known as ATEX 114) is applicable on products used in explosion hazardous zones. All aluminum and cast iron pumps are by standard ATEX approved and permitted to be used in Zone 1, having model names TX...

The standard stainless steel pumps are not allowed to operate in hazardous environments. Special conductive TX and TZ pumps are available for such applications. All plastic parts utilized in such pumps are made from conductive (carbon filled) materials thus made for use in explosion hazardous environments. What is more ATEX pump are equipped with a grounding connection.

The aluminium and cast iron pumps can be used in Ex-zone 1. Stainless steel pumps can be utilized in Ex-zone 1 and Ex-zone 0.

The conductive material ensures that no electrostatic loads will be accumulated in the pump.

Tapflo TX ATEX classification:
Ex II 2G Ex h IIC T6... T4 Gb
Ex II 2D Ex h IIIC T60°C... T125°C Db

Tapflo TZ ATEX classification:
Ex II 1G Ex h IIC T6... T4 Ga

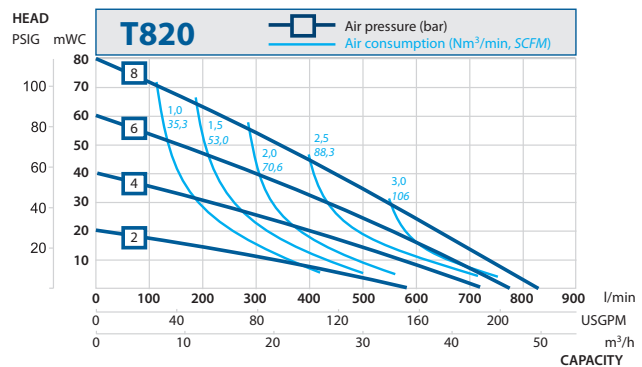
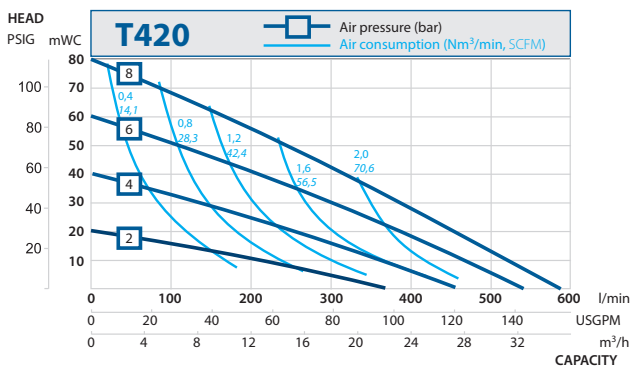
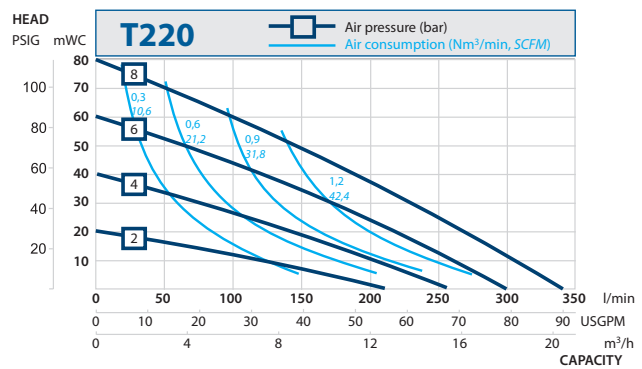
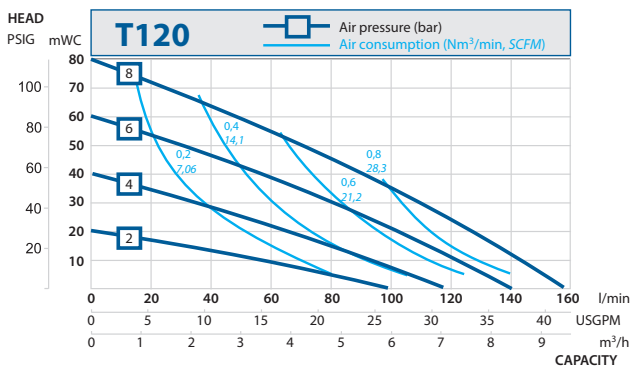
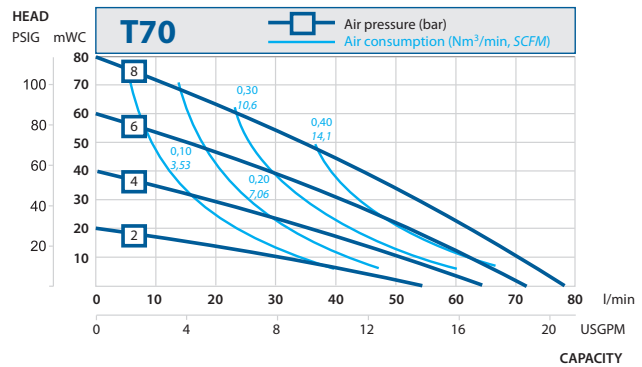
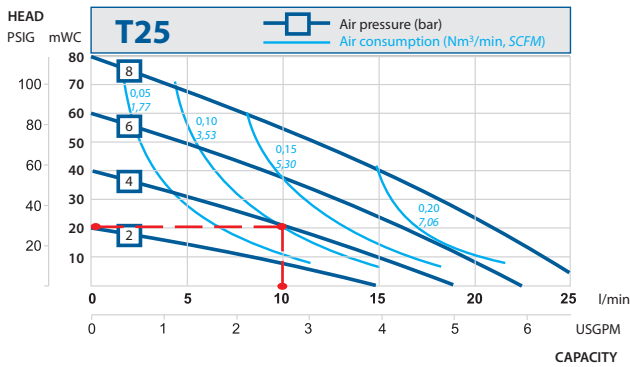


Performance curves

The performance curves are based on water at 20°C. Other circumstances might change the performance. See below how the capacity will change at different viscosities and suction lifts. These curves are valid for all metal pumps.

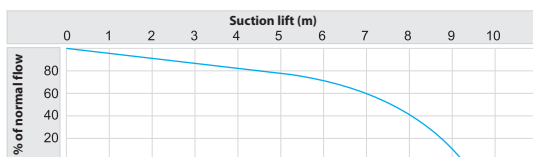
Example see the red line — — — — —

A flow of 10 litre/minute is desired. The discharge head is calculated to 20 mWC. We choose a T25. It requires an air pressure of 4 bar and will consume approximately 0.10 Nm³/min.

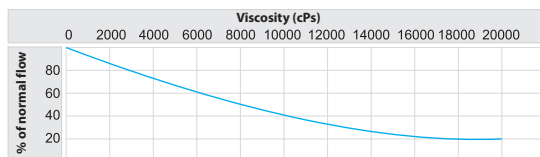


Capacity changes

Capacity changes at different suction lifts



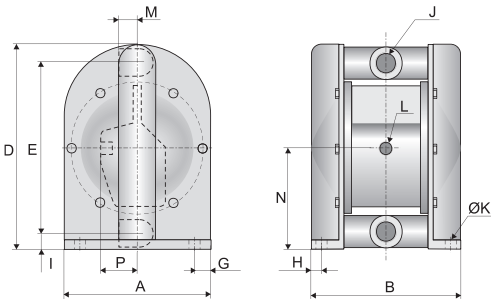
Capacity changes at different viscosities



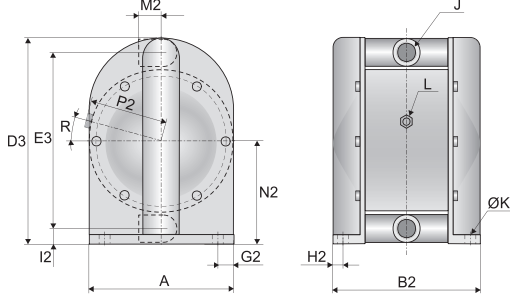
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Dimensions

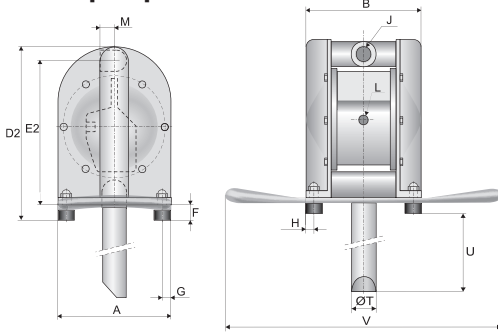
Aluminium and cast iron pumps T



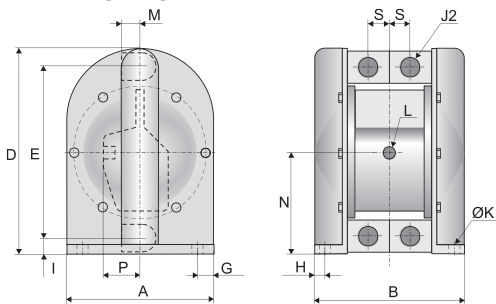
Stainless steel pumps T



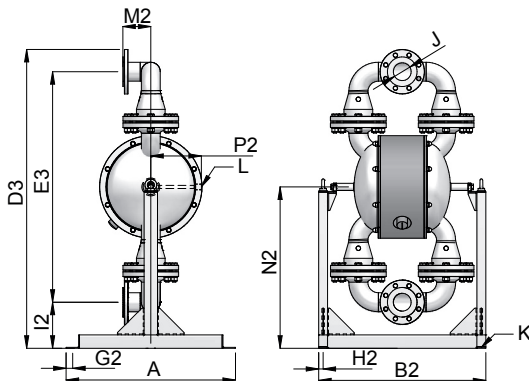
Drum pumps TD



Twin pumps TT



T820S



Dimensions for metal series

Dimensions in mm (where other is not indicated)

Dimensions in inch (where other is not indicated)

Dim	Pump size						
	25	70	120	220	420	820A**	820S***
A	105 4.13	150 5.91	200 7.87	275 10.83	356 14.02	470 18.50	760 29.92
B	117 4.61	167 6.57	198 7.80	267 10.51	342 13.46	488 19.21	-
B2	-	157 6.18	200 7.87	282 11.10	347 13.66	488 19.21	750 29.53
D	162 6.38	233 9.17	302 11.89	419 16.50	539 21.22	840 33.07	-
D2	173 6.81	249 9.80	322 12.68	-	-	-	-
D3	-	229 9.02	310 12.20	422 16.61	529 20.83	840 33.07	1341 52.80
E	132 5.20	190 7.48	252 9.92	346 13.62	448 17.64	688 27.09	-
E2	147 5.79	216 8.50	279 10.98	-	-	-	-
E3	-	192 7.56	257 10.12	348 13.70	443 17.44	-	1035 40.75
F	13 0.51	20 0.79	20 0.79	-	-	-	-
G	11 0.43	18 0.671	20 0.79	26 1.02	38 1.50	50 1.97	-
G2	-	17 0.67	20 0.79	31 1.22	36 1.42	-	25 0.98
H	12 0.47	19 0.75	20 0.79	29 1.14	30 1.18	53 2.09	-
H2	-	13.5 0.53	23.5 0.93	34 1.34	32 1.26	-	13 0.51
I	16 0.63	22 0.87	27 1.06	34 1.34	47 1.85	82 3.23	-
I2	-	19 0.75	27 1.06	38 1.50	44 1.73	-	206 8.11
J	1/2" 1/2	3/4" 3/4	1" 1	1 1/2" 1 1/2	2" 2	DN80(3") DN80(3")	-
J2	3/8" 3/8	1/2" 1/2	3/4" 3/4	1" 1	2" 2	-	-
ØK	6.5 0.26	10 0.39	10 0.39	10 0.39	10 0.39	12.5 0.49	25x13 1x0.5
L	1/8" 1/8	1/4" 1/4	1/4" 1/4	1/2" 1/2	1/2" 1/2	3/4" 3/4	3/4" 3/4
M	19 0.75	29 1.14	33 1.30	45 1.77	57 2.24	84.5 3.33	-
M2	-	40 1.57	52 2.05	70 2.76	90 3.54	-	126 4.96
N	82 3.23	117 4.61	153 6.02	207 8.15	274 10.79	356 14.02	-
N2	-	115 4.53	155 6.10	212 8.35	266 10.47	-	724 28.50
P	30 1.18	47 1.85	39 1.54	59 2.32	59 2.32	72.5 2.85	-
P2	-	82 3.23	105 4.13	143 5.63	183 7.20	-	238 9.37
R	-	15° 15°	15° 15°	0° 0°	0° 0°	-	0° 0°
S	12.5 0.49	21 0.83	26 1.02	35 1.38	420 1.57	-	-
ØT	20 0.79	30 1.18	30 1.18	-	-	-	-
U	1170* 46.06*	1170* 46.06*	1170* 46.06*	-	-	-	-
V	286 11.26	374 14.72	400 15.75	-	-	-	-

* = Any length up to 2000 mm on request

* = Any length up to 79" on request

** = Available in aluminium only

*** = Available in Stainless Steel only

Technical data

Data	Pump size										
	25	70A	70S	120A	120S	220A	220S	420A	420S	820 A	820 S
General characteristics											
*Max capacity (l/min) / (US gpm)	26 / 6.8	78 / 20		158 / 41		330 / 87		570 / 150		820 / 216	
**Volume per stroke (ml) / (cu in)	45 / 2.8	105 / 6.4	101 / 6.2	272 / 16.6	304 / 18.6	884 / 53.9	962 / 58.7	2440 / 148.9	2480 / 151.3	4897 / 298.8	3452 / 210.7
Max discharge pressure (bar) / (psi)	8 / 116										
Max air pressure (bar) / (psi)	8 / 116										
*** Max suction lift dry (m) / (Ft)	1.5 / 5	3 / 9.8		4 / 13		4 / 13		4 / 13		5 / 16	
Max suction lift wet (m) / (Ft)	8 / 26	8 / 26		8 / 26		8 / 26		8 / 26		8 / 26	
Max size of solids (ø in mm) / (in)	3 / 0.12	4 / 0.16		6 / 0.24		10 / 0.39		15 / 0.59		13 / 0.51	
Max temp with EPDM/NBR (°C) / (°F)	80 / 176										
Max temp with PTFE (°C) / (°F)	110 / 230										
Weight											
Standard pump in alu (kg) / (lb)	2 / 4.4	5 / 11		8.65 / 19.1		18.1 / 39.9		36.8 / 81.1		101.5 / 223.8	
Standard pump cast iron (kg) / (lb)	4.1 / 9	9.9 / 21.8		17.6 / 38.8		33.4 / 73.6		71.4 / 157.4		-	
Standard pump in AISI 316 (kg) / (lb)	-	6.8 / 15		15.5 / 34.2		35.9 / 79.2		66.1 / 145.7		137 / 302	
Drum pump TD in alu (kg) / (lb)	3 / 6.6	7 / 15		10 / 22		-		-		-	
Drum pump TD in AISI 316 (kg) / (lb)	-	7.5 / 16.53		16 / 35.27		-		-		-	
Material of components											
Pump housing and all wetted metal details	aluminium and cast iron	aluminium, cast iron or stainless steel AISI 316L								aluminium or AISI 316L	
Centre block, alu and cast iron pumps	aluminium (standard) or cast iron										
Centre block, AISI 316L pumps	-	PP (standard), conductive PE or aluminium									
Diaphragms	NBR, FKM, PTFE, PTFE 1705B or EPDM										
Valve balls	NBR, PTFE, AISI 316L****, EPDM, polyurethane or ceramic*****										
Air valve	Brass / NBR (standard) or AISI 316L / FKM or PET / NBR (standard on TX820), PET/FKM										
Gaskets	Klingerseal/NBR (standard), Klingerseal/EPDM, Klingerseal/FKM, FEP/FKM (stainless steel pumps)										
Housing screws	Steel on aluminium and cast iron pumps, A4-80 on stainless steel pumps										
Diaphragm shaft	Stainless steel AISI 316L (TX25, T820) / 304L (T70 -T420)										
Drum handle (TD pumps)	Stainless steel AISI 316										

* = Recommended flow is half of the max flow, i.e. recommended flow for a T120 is 79 l/min (20.8 US gpm).

** = The value is based on pumps with PTFE diaphragms (other materials - please contact Tapflo). It should be remembered that the volume per stroke may vary depending on the pump's operating parameters.

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

**** = Not available on TX820.

Pump code

The pump code details the specification, maximum capacity and materials of the major components.



I. T = Tapflo diaphragm pump

II. Basic options:

B = Backup diaphragm system

D = Drum pump

F = Filter press pump

L = Valve lift system (drain system)

P = Powder pump

T = Twin pump (double in/outlet)

X = ATEX approved, group II, cat 2 (zone 1)

Z = ATEX approved, group II, cat 1 (zone 0)

III. Pump size

IV. Material of wetted metal parts:

A = Aluminium

C = Cast iron

S = Stainless steel AISI 316

X = PTFE coated aluminium

V. Material of diaphragms:

B = PTFE TFM 1705B (solvents)

E = EPDM

N = NBR (nitrile rubber)

T = PTFE

V = FKM

W = White (food grade) EPDM

Z = PTFE with white back (food grade)

VI. Material of valve balls:

B = PTFE TFM 1635

E = EPDM

N = NBR (nitrile rubber)

T = PTFE

S = AISI 316 stainless steel

P = PU (polyurethane)

K = Ceramic

V = FKM

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