

Sanitary series pumps

Hygienic design - made from electropolished stainless steel AISI 316L to meet the requirements in hygienic installations.



The Tapflo sanitary series is particularly designed to meet the requirements of the food, beverage, pharmaceutical and cosmetic industries.

Lubrication free air distribution system, maintenance free ball check valve system and total visual inspection of the wetted parts are some of the major features for this pump series.

The materials used on certain models comply with the FDA guidelines.

Models with extra fine internal surface finish $Ra < 0.8$ and $Ra < 0.5$ are available upon request.



EN 10204

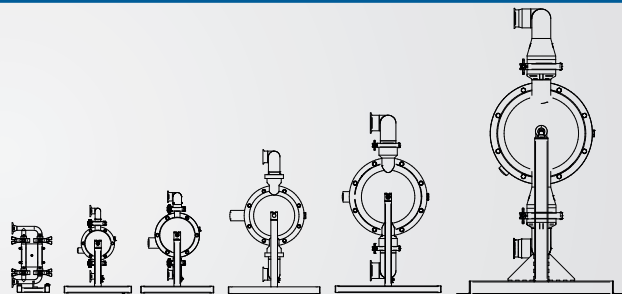


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The sanitary pump range

- » T30 - 28 l/min, 1"
- » T80 - 78 l/min, 1"
- » T125 - 155 l/min, 1 1/2"
- » T225 - 330 l/min, 2"
- » T425 - 570 l/min, 2 1/2"
- » T825 - 820 l/min, 3"



Typical applications

Sector	Example of applications
» Dairy products	Milk, cream, yogurt, cream cheese, melted cheese
» Grocery	Ketchup, mayonnaise, tomato products, mustard
» Beverages	Flavors, coloring, fruit juice
» Bakery	Dough, ingredients
» Brewery	Beer, flavors, coloring, wort
» Hygiene	Soap, shampoo
» Cosmetics	Cream, alcohols, perfume

The sanitary design

Made to be clean

Quick dismantling

The clamp system ensures quick and easy dismantling without any tools

Pollution free air valve

The sealing system is lubrication free, always keeping your product and environment free from oil contamination.

Variety of connection types

The pump is supplied as standard with SMS3017/ ISO2037 clamp connections. However, the pump may be equipped with almost any type of connection used in the hygienic field – DIN 11851 thread, SMS 1145 thread, DIN 11864 aseptic connections to mention a few.

Plain surface

The sandwich diaphragm has a completely plain surface, which eliminates bacteria growth problems. The diaphragm is available in food grade materials - PTFE, white EPDM or NBR FDA.

Superior finish

Both liquid side and outside is electropolished, to obtain superior finish and hygiene. Special surface finish may be done according to your requirements.

Easy draining

Drain the pump by turning the pump in its support (T80-T825)

Our design allows for total visual inspection of the wetted parts. There are no hidden areas where bacteria can grow. The manifold clamps and the housing screws are simply removed for complete disassembly and cleaning. The pump is also designed for cleaning and sterilization in place – C.I.P. and S.I.P. After such operations, the pump is easily turned in its support for drainage.



Special versions



Heating jacket

The heating jacket is used when the pumped product has to maintain a specific temperature, high or low, throughout the process. A heating or cooling medium is continuously circulated in the heating jacket. The jacket is covering all the wetted parts of the pump.

» Available for sizes: T80, T125, T225, T425



Flap valves for big solids

Flap valves are available for the sanitary pumps, ideal in applications with bigger size and delicate solids.

The gentle pumping principle will maintain solids without any destruction.

Models available with flap valves:

- » T80 (max 17 mm solids)
- » T125 (max 18 mm solids)
- » T225 (max 42 mm solids)
- » T425 (max 44 mm solids)
- » T825 (max 95 mm solids)

Magnetic ball lifters

» Available for sizes: T80, T125, T225

Magnetic ball lifters are implemented in Sanitary AODD pumps, to enable pump emptying without removing it from the installation when no other draining option is available. Rotating the pump is no longer needed.



Counter-connections

In order to ease the pump connection with installation Tapflo has added a full range of counter-connections to sanitary pumps. They fit pumps with standard tri-clamp connection as well as optional DIN11851 and SMS 1145 connections.

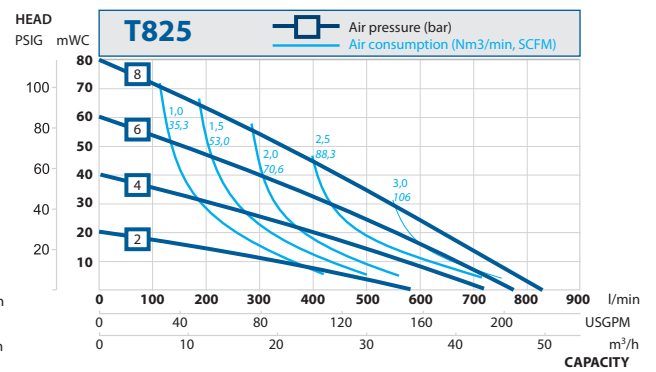
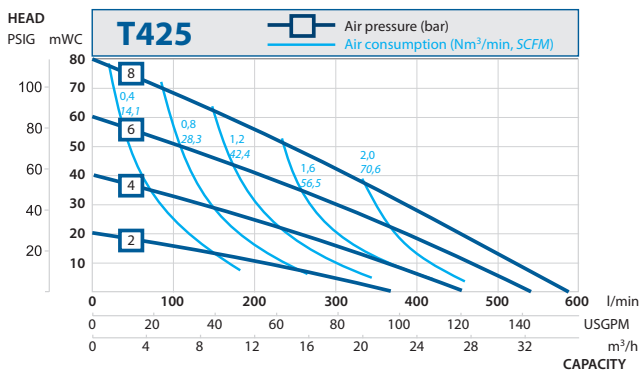
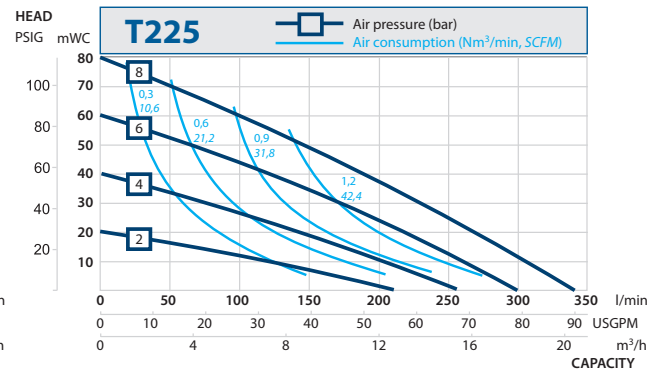
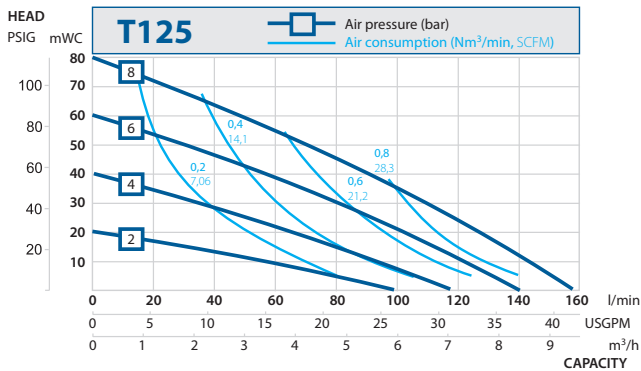
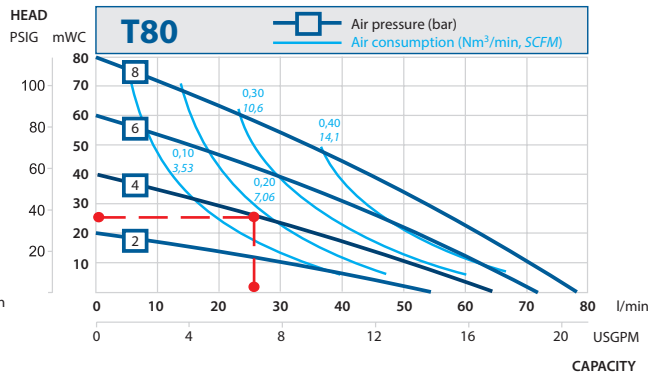
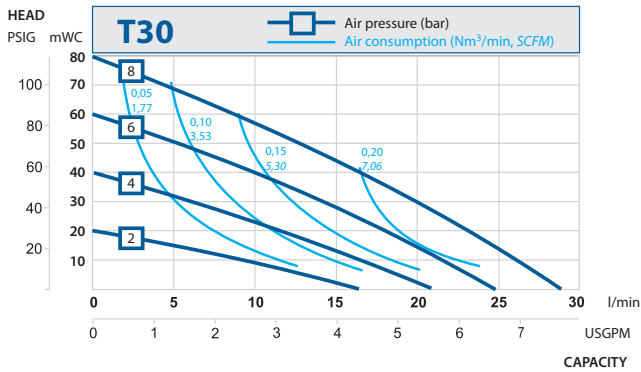
Performance curves

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 sanitary pumps.

Example see the red line

A flow of 25 litre/minute is desired.

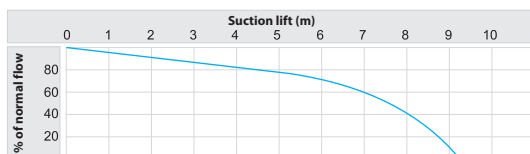
The discharge head is calculated to 25 mWC. We choose a T80. It requires an air pressure of 4 bar and will consume approximately 0.20 Nm³/minute.



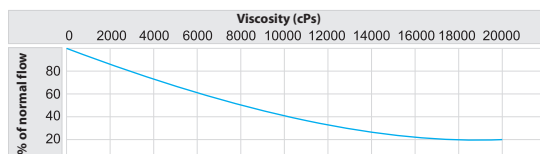
Recommended flow is half of the max flow, i.e. recommended flow for a T80 is 40 l/min (10.6 US gpm).

Capacity changes

Capacity changes at different suction lifts



Capacity changes at different viscosities



Changes reserved without notice

Dimensions

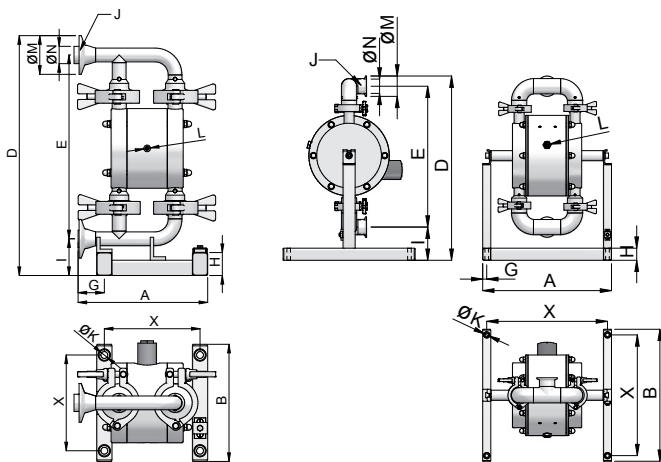
Dimensions for sanitary series

Dimensions in mm (where other is not indicated)

Dimensions in inch (where other is not indicated)

T30

T80-T825



* = Dimensions for standard clamp connections only

1 = Clamp connections/pipes according to SMS3017/ ISO2037 (T425, T825)

2 = Threaded connections according to DIN 11851

3 = Threaded connections according to SMS 1145

Dim	Pump size						
	30	80	125	225	425	825	
A	169	295	320	404	468	750	
	6.7	11.6	12.6	15.9	18.4	29.5	
B	153	303	328	412	476	760	
	6.0	11.9	12.9	16.2	18.7	29.9	
D	313	393	458	647	808	1288	
	12.3	15.5	18.0	25.5	31.8	50.7	
E	240	294	350	528	664	1034.5	
	9.4	11.6	13.8	20.8	26.1	40.7	
G	34	10	10	10	10	20	
	1.3	0.4	0.4	0.4	0.4	0.8	
H	30	30	30	30	30	60	
	1.2	1.2	1.2	1.2	1.2	2.4	
I	48	74.5	82.5	86.5	98.5	206.5	
	1.9	2.9	3.2	3.4	3.9	8.1	
J	TC ¹	DN25	DN25	DN38	DN51	DN70	DN76.1
	DIN ²	DN20	DN25	DN40	DN50	DN65	DN80
	SMS ³	25	25	38	51	63.5	76.1
	RJT	3/4"	1"	1 1/2"	2"	3"	3 1/2"
ØK	9	9	9	9	9	25x13	
	0.4	0.4	0.4	0.4	0.4	1x0.5	
L	1/8"	1/4"	1/4"	1/2"	1/2"	1/2"	
ØM*	50.5	50.5	50.5	64	91	98	
	2.0	2.0	2.0	2.5	3.6	3.9	
ØN*	22.6	22.6	35.6	48.6	66.8	72.9	
	0.9	0.9	1.4	1.9	2.6	2.9	
X	125	275	300	384	448	710	
	4.92	10.83	11.81	15.12	17.64	27.95	

General dimensions only, ask us for detailed drawings.

Flap valve pumps are not shown here, ask us for drawings.

Technical data

Technical data	Pump size					
	30	80	125	225	425	825
Max capacity (l/min) / (US gpm)	28 / 7.4	78 / 20.6	155 / 40.9	330 / 87.2	570 / 150.6	820 / 216.6
*Volume per stroke (ml) / (cu in)	40 / 2.4	135 / 8.2	314 / 19.2	1000 / 61	2300 / 140.3	3281 / 200.2
Max discharge pressure (bar) / (psi)	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
**Max suction lift dry (m) / (Ft)	2 / 6.6	3 / 9.8	4 / 13	5 / 16	5 / 16	4 / 13
Max suction lift wet (m) / (Ft)	8 / 26	8 / 26	9 / 29.5	9 / 29.5	9 / 29.5	9 / 29.5
Max size of solids (ø in mm) / (in)	3 / 0.12	4 / 0.16	6 / 0.24	10 / 0.39	15 / 0.59	20 / 0.59
Max temperature (°C) / (°F)	110 / 230	110 / 230	110 / 230	110 / 230	110 / 230	110 / 230
Weight (kg) / (lb)	4 / 9	8 / 18	11 / 24	21 / 46	35 / 77	133 / 293

Wetted metal details Stainless steel AISI 316L electro polished

Centre block (not wetted) PP, PE conductive

Diaphragms PTFE, PTFE with white back, EPDM, white EPDM, white NBR PTFE EPDM

Valve balls PTFE, AISI 316, PU, Ceramic, PE1000

Air valve Brass (std.), stainless steel AISI 316L or PET with NBR (std.), EPDM or FKM O-rings

Gaskets PTFE or EPDM

Housing pin screws Stainless steel

Diaphragm shaft Stainless steel AISI 316L (T30, T825) / 304L (T80 -T425)

* = 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.

*** = Flap valve version. Theoretical max solid size, the actual size may vary depending on the shape. For more information contact us.

Pump code

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

I. II. III. IV. V. VI.
T J 80 S T T

I. T = Tapflo diaphragm pump

II. Basic options:

B = Backup diaphragm system

J = Pump with heating jacket

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

S = stainless steel AISI 316L

V. Material of diaphragms:

B = PTFE 1705B (solvents)

E = EPDM

W = White food grade EPDM

N = NBR (nitrile rubber)

T = PTFE

Z = PTFE with white back (food grade)

VI. Material of valve balls:

E = EPDM

N = NBR (nitrile rubber)

T = PTFE

S = AISI 316L

P = PU (polyurethane)

K = Ceramic

B = PTFE TFM 1635

blank = flap valve version

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