

Aseptic series pumps

Keeping your process clean



Tapflo Aseptic series pumps are designed for service in pharmaceutical-, biotech- and food industries where a clean process is the key.

Tapflo Aseptic series is EHEDG certified, has FDA and USP VI approved materials and conforms to the ATEX directive 2014/34/EU.

Typical applications

Industry	Example of applications
» Food & dairy	Soup, cream, syrup, dairy products, flavoring, alcohol, chocolate, paste
» Pharmaceuticals & cosmetics	Cream, paste, alcohol and filtration gel



EN 10204



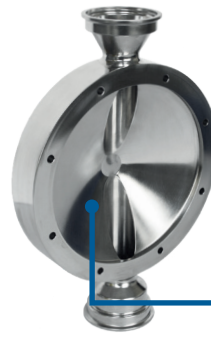
Features & Benefits

- ✓ **No bacteria growth**
no horizontal areas inside the pump
- ✓ **No leakage**
no rotating shaft seals
- ✓ **Easy cleaning and draining**
designed for CIP and SIP cleaning
- ✓ **Flexible installation**
self-priming
- ✓ **Gentle pumping**
no damage of sensitive products
- ✓ **Reliable in service**
can run dry and against closed valve without damage
- ✓ **Wide range of connection types**
TriClamp, sanitary threads (DIN, SMS) etc.
- ✓ **Environmental friendly**
lube free air valve
- ✓ **Hygienic surfaces**
 housings made from electro polished stainless steel AISI 316L, Ra < 0.8 (standard) or Ra < 0.5 (on request)
- ✓ **Hygienic diaphragms**
designed without any nuts or plates on the pumped side

The EHEDG certificate



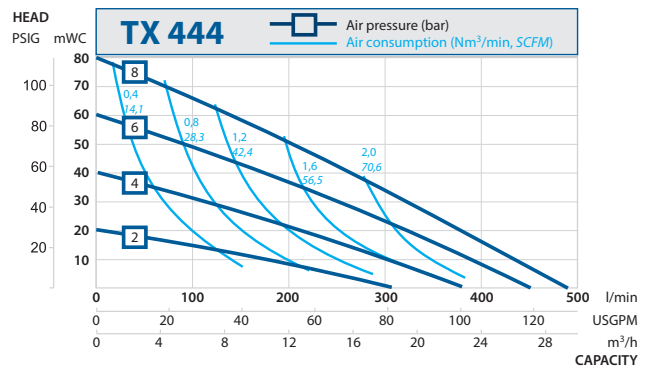
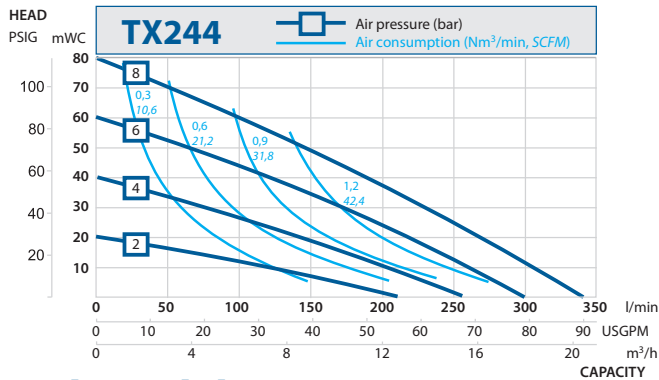
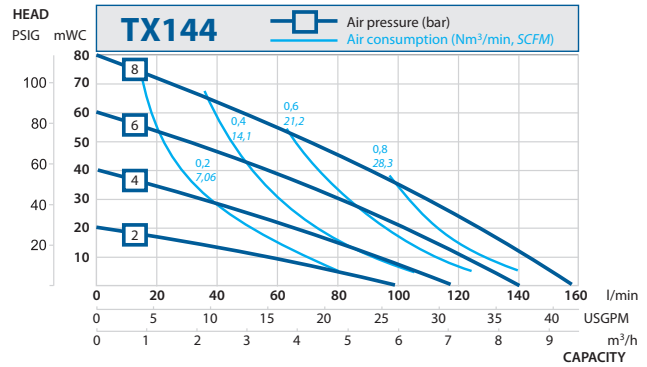
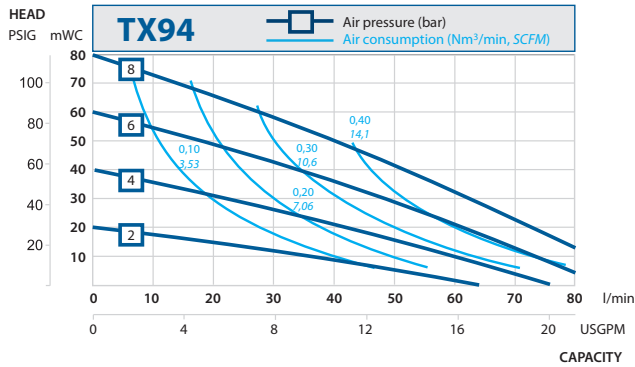
The EHEDG (European Hygienic Engineering & Design Group) certificate is your guarantee that the design is according to the hygienic guidelines. Furthermore the pump is cleanability tested, which means bacteria does not grow in the pump after cleaning and draining procedure.



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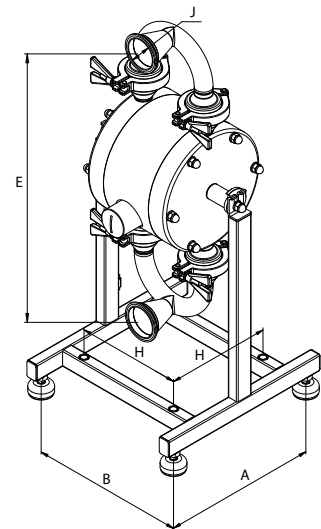
Smooth surfaces and cleanability are important keys for the EHEDG certification

Performance curves



Technical data

Data	Pump size			
	TX94	TX144	TX244	TX444
General characteristics				
Max flow (l/min) / (US gpm)	94 / 25	144 / 38	270 / 71	360 / 95
*Volume per stroke (ml) / (cu in)	95 / 5.80	256 / 15.62	796 / 48.57	1922 / 117.29
Max discharge pressure (bar) / (psi)	8 / 16	8 / 16	8 / 16	8 / 16
Max air pressure (bar) / (psi)	8 / 16	8 / 16	8 / 16	8 / 16
**Max suction lift dry (m) / (Ft)	2 / 6.6	3 / 9.8	4.4 / 14.4	5 / 16
Max size of solids (ø in mm) / (in)	6 / 0.24	6 / 0.24	10 / 0.39	15 / 0.6
Max temperature (°C) / (°F)	-20° +110°C (temporarily higher)			
Weight (kg) / (lb)	15 / 33	22 / 48.5	50 / 110	107 / 236
Connections	DIN 32676 (standard), DIN 11864, DIN 11851			
ATEX details	TX pumps: Ex II 2G Ex h IIC T6...T4 Gb Ex II 2D Ex h IIIC T60°C...T125°C Db		TZ pumps: Ex II 1G Ex h IIC T6...T4 Ga	
Material of components				
Housing, manifolds	AISI 316L, Ra < 0.8, Ra < 0.5 on request			
Diaphragms	PTFE (FDA & USP VI), PTFE 1705B (solvents, FDA & USP VI)			
Valves (ball type)	PTFE (FDA), PTFE (USP VI & FDA), AISI 316L			
O-rings	EPDM (FDA), EPDM (USP VI & FDA), FEP/FKM (FDA), FKM			
Options	Backup diaphragm system, Magnetic ball lifters			

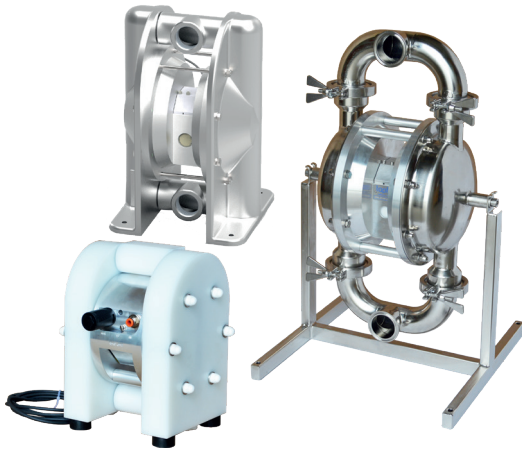


Dim	Pump size			
	TX94	TX144	TX244	TX444
A	278	278	360	433
B	278	278	360	433
E	457	488	700	885
H	188	188	270	331
J	DN 40	DN 50	DN 65	DN80

*= 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. Dimensions in mm (where other is not indicated)

Intelligent pumps - TC series



TC Intelligent pumps are fitted with ingenious LEAP® technology developed by Tapflo.

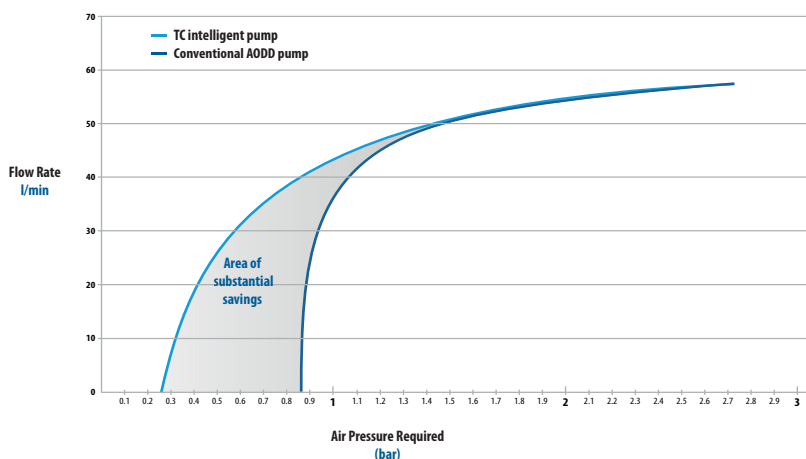
LEAP® or 'Low Energy Air Pump' is a patented technology used in AODD pumps to reduce the minimum operating air pressure by reducing internal losses and friction found in conventional AODD pumps.

LEAP uses a unique indirect system to detect the position of the diaphragm shaft controlling the diaphragm movement automatically.

Features & Benefits

- ✓ Available in Plastic, Metal and Sanitary series AODD pumps
TC50 - TC425 (T50 - T425 equivalent)
- ✓ Noise Reduction
ability to utilise lower air pressure reduces the noise of the pump
- ✓ Retrofit
Leap can be fitted to any existing Tapflo Air Operated Diaphragm Pumps
- ✓ Electrical feedback
signal allows for external monitoring of the pump process.
- ✓ Batch Dispensing
allowing the pump to automatically stop after the required volume has been dispensed.
- ✓ Improved Maintenance
main air valve can be changed in under two minutes without the removal of the pump from the process line.
- ✓ Improved Lifespan
the TC series uses an air valve that has a significantly longer life expectancy over rubber seal technology.
- ✓ Control Simplification
no need for an external pneumatic solenoid valve, reducing costs and simplifying control.
- ✓ Dry Running
by analysing the frequency of pulses, the pump can analyse when it is running dry.
- ✓ Dead Heading
as with dry running, the frequency of pulses can be monitored, alerting if the pump has a blockage.

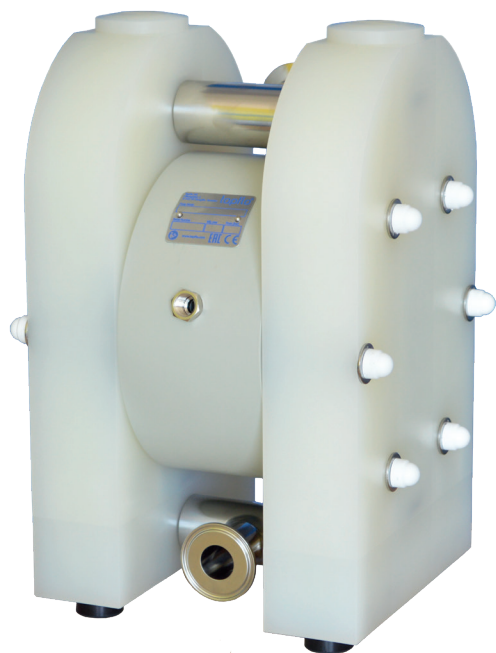
Graph showing fluid flow against air pressure required



The pump fitted with LEAP® Technology is able to **start pumping at 0.3 bar without stalling**, in test the pump was already achieving flow rates of **70% of its maximum open end flow before other pumps had even started.**

Pharmaceutical pumps - 5UVI series

USP VI approved pharmaceutical series air driven pump for pharmaceutical and biotech industries



This pump series was developed in co-operation with one of the world leading supplier to the biotech market. It serves the biotech- and pharmaceutical industries in numerous applications.

Our unique USP approved (United States Pharmacopoeia) hygienic PTFE or PP pump, features all wetted parts in USP class VI certified materials.

Simplicity

Pump housing with only three parts makes it extremely easy to maintain.

Superior finish

High finish and hygienic approved materials.



EN 10204



AT



REACH Compliant



ROHS Compliant



The Pharmaceutical series pumps

» T53	60 l/min; ¾"
» T103	125 l/min; 1"
» T203	330 l/min; 1 ½"
» T403	570 l/min; 2"

Features & Benefits



Sanitary design
smooth internal surfaces



USP class VI
approved materials



Inert materials
no contamination of the
pumped product



Extremely easy to maintain
pump housing with very few
components