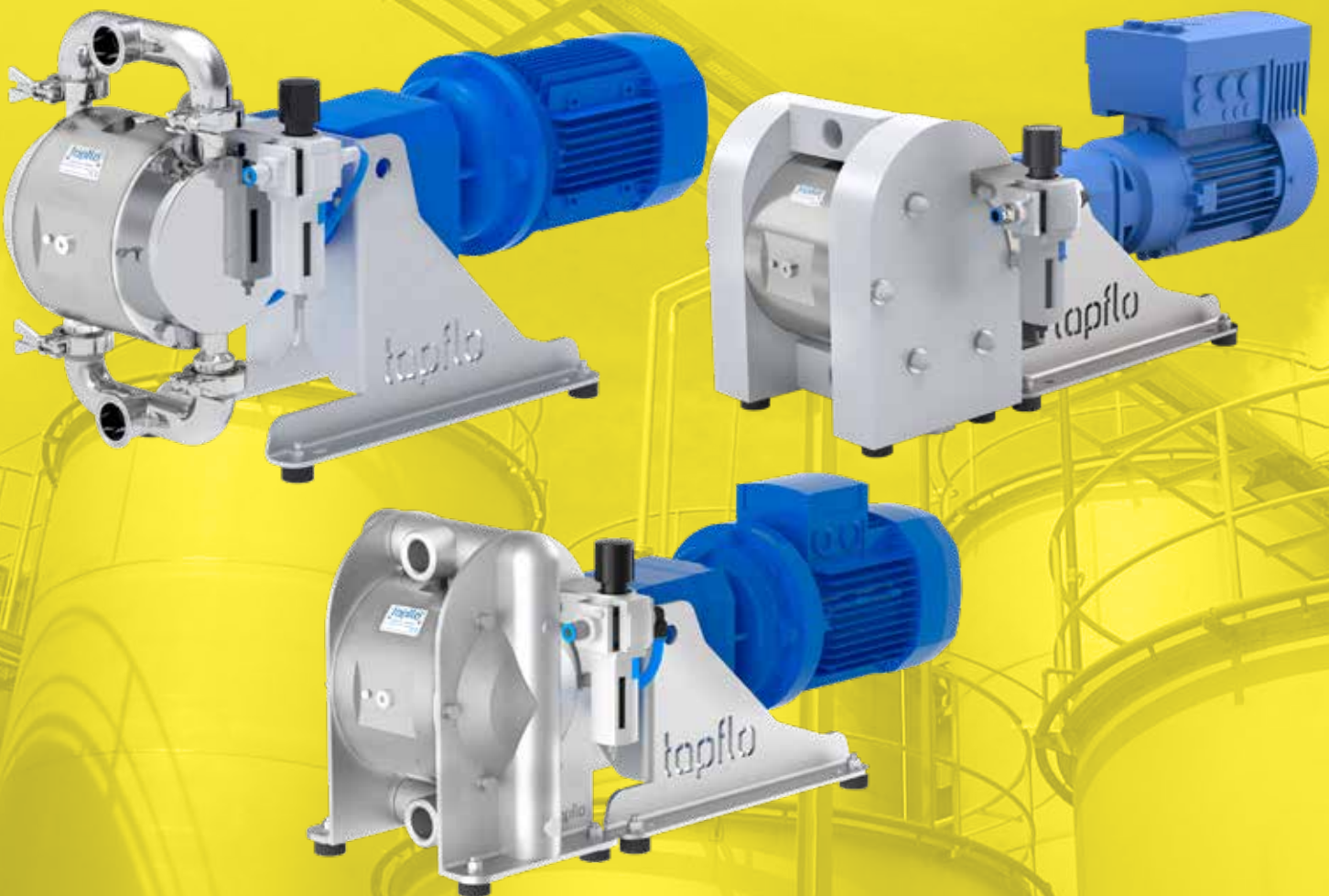


ELECTRICALLY OPERATED DOUBLE DIAPHRAGM PUMPS

2019 | 1



» All about your flow™

Since 1980, 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. We deliver the best solutions and support for a range of Hygienic, Sanitary and Industrial applications, while going above and beyond to provide excellent service to our customers worldwide.

Tapflo is a family-owned company, founded in Kungälv, Sweden. Over the years, the company has developed into a global Tapflo Group with branches and distributors present in nearly every region of the world.

Our solutions are designed and manufactured in Europe and distributed globally to offer the best service and flow solutions to our customers for a variety of applications.

Our values of Commitment, Quality and Simplicity are reflected both in our product and business approach.



For fast and flexible service and high-quality products readily available worldwide, choose Tapflo.

Quality commitment

At Tapflo we are simply committed to quality. As a result, our production standards, as well as products quality, comply with various globally recognised certification and quality control standards. The Tapflo manufacturing process is certified according to ISO 9001:2015, confirming that our processes are appropriate, effective, customer-focused and continuously improved.



Tapflo values

Our culture is concluded in Our values

Commitment

We are different from our competitors because of our willingness to exceed the customers' expectations, move fast and be flexible. Our culture is based on the spirit of togetherness, enthusiasm and integrity. We come from all over the world but we share the same values and we respect each other. We are committed.

Quality

We understand that the quality in our work is never better than the weakest link, that's why we focus on every small detail. We share a common passion for continuously finding more efficient and effective ways to provide value to our customers. As a manufacturer we have control of the complete process both in terms of our products and the way we operate internally. That is why we manufacture the highest quality pumps in our segment.

Simplicity

We have a saying, "Simple is art" which means we try to find smooth and uncomplicated solutions in everything. By keeping it simple we can focus on the essential, like designing uncomplicated pumps with few components. For us it is a key to success; strive to simplify what is complex.

Electrically Operated Diaphragm pumps

Hygienic and Industrial



Features & Benefits

- ✓ **Low energy cost**
Electricity cost < compressed air cost, high efficient (IE3 class) drive
- ✓ **Long diaphragm lifetime**
Pneumatic and mechanical support of the diaphragm
- ✓ **Run dry without damage**
Easy to use, no need of guarding device
- ✓ **Low spare parts cost**
Pump has almost identical design of the wetted side as standard Tapflo air operated diaphragm pump therefore many spare parts are the same
- ✓ **Self-priming from dry suction pipe**
More options of installation
- ✓ **Clean & easy maintenance**
No hydraulic fluid required, no danger of leakage
- ✓ **Few components & long life design**
Low downtime and maintenance cost



Fast facts

Materials of wetted parts	Aluminium, PTFE coated aluminium, Stainless steel (industrial and hygienic), Plastic (PE & PTFE)
Diaphragm and ball materials	PTFE, TFM modified PTFE, EPDM, NBR, FKM
Max. capacity and pressure	Up to 220 l/min Up to 4 bar
Options	Pressure switch, Built-on frequency inverter

Wide range of applications

- » Chemical industry
- » Surface conditioning
- » Water treatment
- » Paint, print industry
- » Pulp and paper industry
- » Hygienic applications
- » Mechanical industry
- » Varnish industry

Options

Pressure switch

Device monitoring discharge pressure and protecting against closing of the discharge valve .

This is for protection against excessive rise of the pressure on the wet side which could result in damage of the pump.



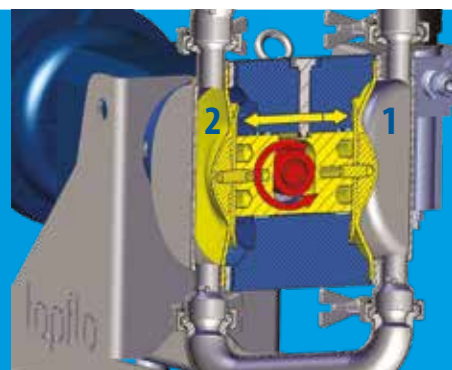
Inverter

Inverter allows full control over the operation of the pump by influencing motor speed. Changing motor speed affects capacity.



Working principle

The Tapflo electric diaphragm pump is driven by a gear-motor. In this type of pump there is a need to change rotary motion into reciprocating one. It is obtained by an eccentric shaft with a cam and piston. The rotary movement of the shaft (red part) is transferred to the reciprocating movement of the diaphragm shaft (yellow part).



Suction (chamber 1)

One diaphragm creates a suction action in one chamber (right side) when being pulled back from the housing.

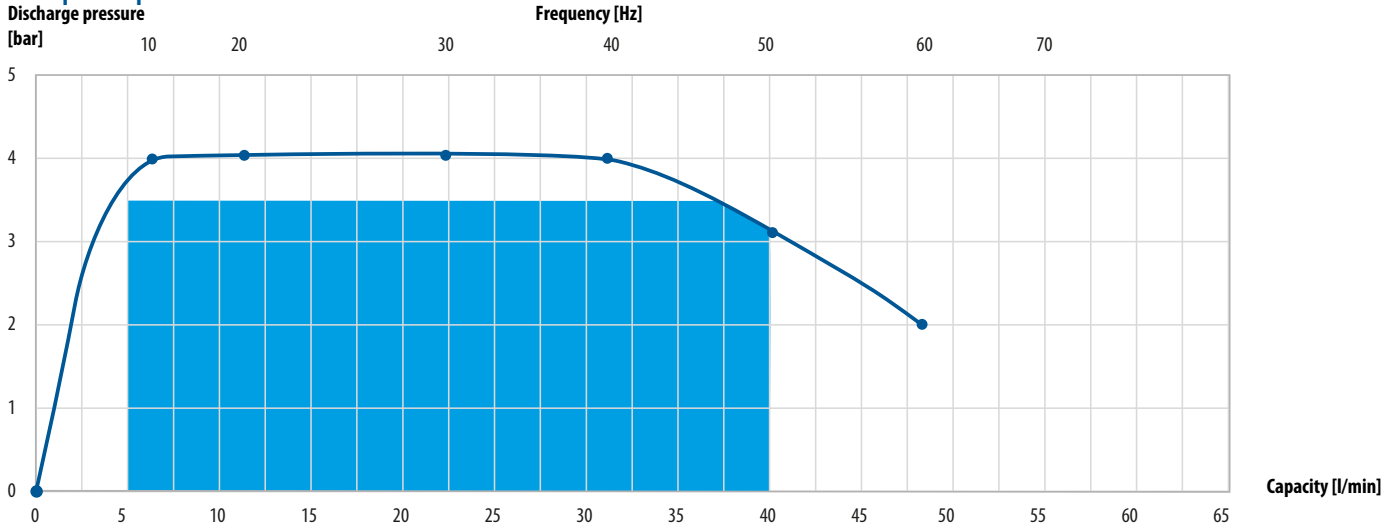
Discharge (chamber 2)

The other diaphragm simultaneously transmits the air pressure to the liquid in the second chamber (left side) of the housing, pushing it towards the discharge port.

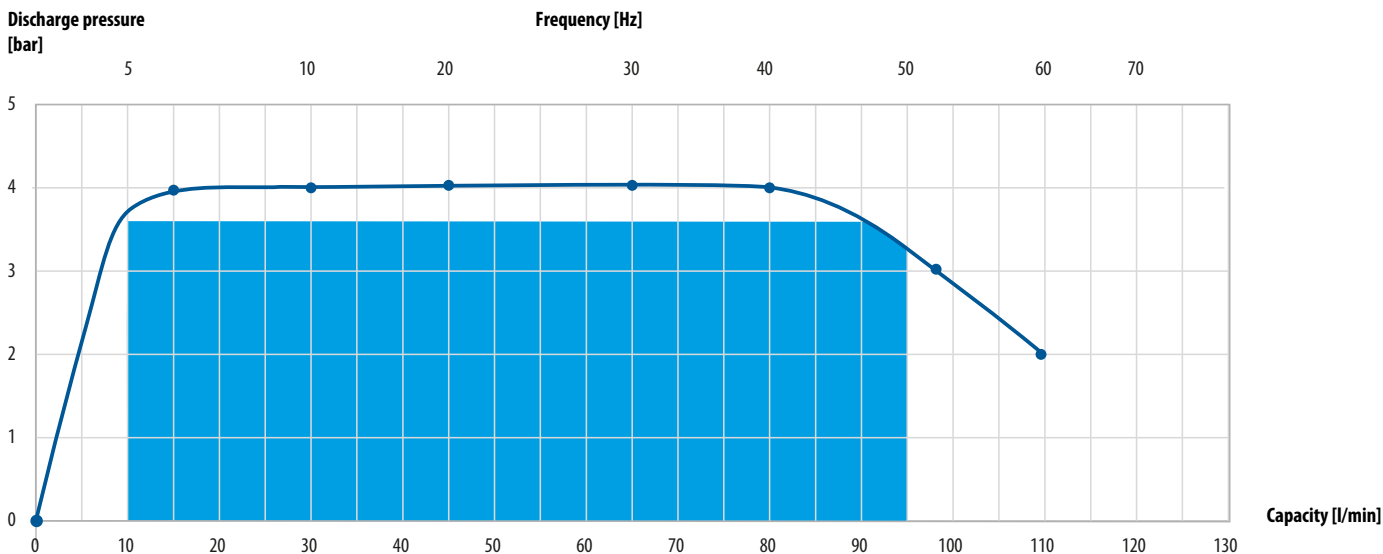
Performance curves

Blue area is recommended for continuous operation

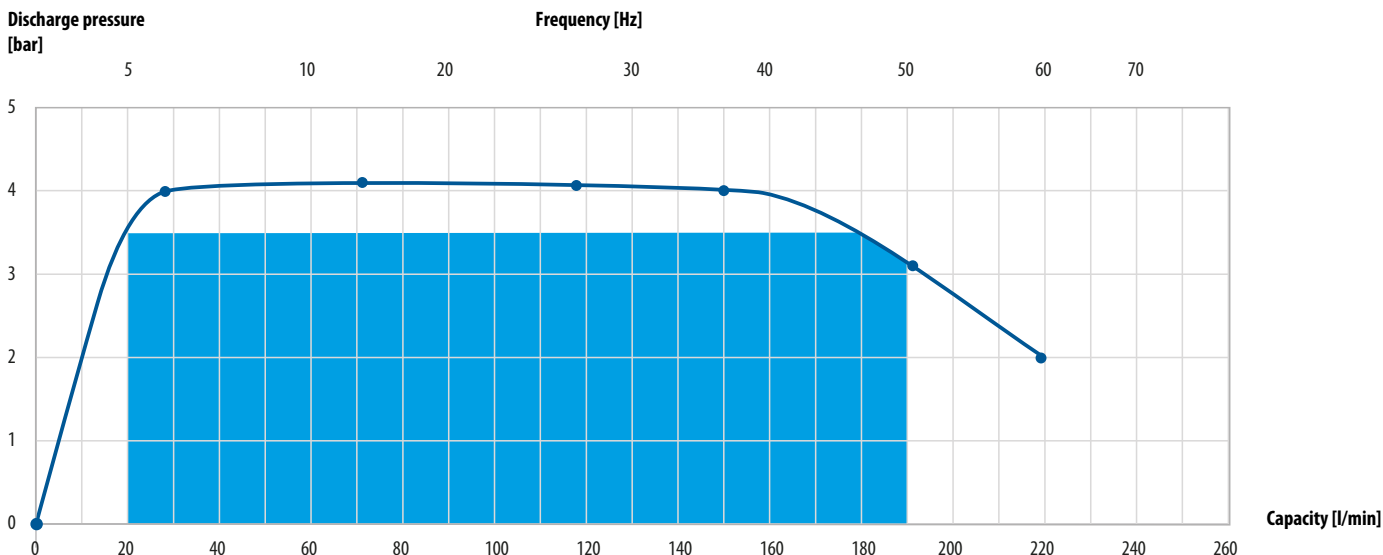
T50 | T70 | T80



T100 | T120 | T125



T200 | T220 | T225



Technical data

Technical data	PE & PTFE					
	TE50 P	TE100 P	TE200 P	TE50 T	TE100 T	TE200 T
Max capacity* [l/min] / [US GPM]	48 / 12.7	110 / 29.1	220 / 58.1	48 / 12.7	110 / 29.1	220 / 58.1
Volume per stroke** [ml] / [cu in]	116 / 7.1	280 / 17.1	854 / 52.1	116 / 7.1	515 / 31.4	854 / 52.1
Max air pressure [bar] / [psi]	1.5 / 22	1.5 / 22	1.5 / 22	1.5 / 22	1.5 / 22	1.5 / 22
Max discharge pressure [bar] / [psi]	4 / 58	4 / 58	4 / 58	4 / 58	4 / 58	4 / 58
Max suction lift dry*** [m] / [Ft]	3.5 / 11	3 / 9.8	3.5 / 11	3.5 / 11	3 / 9.8	3.5 / 11
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]	4 / 0.16	6 / 0.24	10 / 0.39	4 / 0.16	6 / 0.24 18 / 0.7****	10 / 0.39
Maximum pump speed [cycles per minute]	172 @50Hz 206 @60Hz		164 @50Hz 200 @60Hz	172 @50Hz 206 @60Hz		164 @50Hz; 200 @60Hz
Max liquid temp. with EPDM/NBR [°C] / [°F]	70 / 158	70 / 158	70 / 158	80 / 176	80 / 176	80 / 176
Max liquid temp. with PTFE [°C] / [°F]	70 / 158	70 / 158	70 / 158	110 / 230	110 / 230	110 / 230
Connection standard	1/2" BSP female thread (G)	1" BSP female thread (G)	1 1/2" BSP female thread (G)	1/2" BSP female thread (G)	1" BSP female thread (G)	1 1/2" BSP female thread (G)

Technical data	Metal					
	TE70 S	TE120 S	TE220 S	TE70 A/C	TE120 A/C	TE220 A/C
Max capacity* [l/min] / [US GPM]	48 / 12.7	110 / 29.1	220 / 58.1	48 / 12.7	110 / 29.1	220 / 58.1
Volume per stroke** [ml] / [cu in]	87.5 / 5.3	420 / 25.6	933 / 56.9	87.5 / 5.3	420 / 25.6	933 / 56.9
Max air pressure [bar] / [psi]	1.5 / 22	1.5 / 22	1.5 / 22	1.5 / 22	1.5 / 22	1.5 / 22
Max discharge pressure [bar] / [psi]	4 / 58	4 / 58	4 / 58	4 / 58	4 / 58	4 / 58
Max suction lift dry*** [m] / [Ft]	3 / 9.8	3.5 / 11	3.5 / 11	3 / 9.8	3.5 / 11	4 / 13
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]	4 / 0.16	6 / 0.24		4 / 0.16	6 / 0.24	10 / 0.39
Maximum pump speed [cycles per minute]	172 @50Hz 206 @60Hz		164 @50Hz 200 @60Hz	172 @50Hz 206 @60Hz		164 @50Hz 200 @60Hz
Max liquid temp. with EPDM/NBR [°C] / [°F]	80 / 176	80 / 176	80 / 176	80 / 176	80 / 176	80 / 176
Max liquid temp. with PTFE [°C] / [°F]	110 / 230	110 / 230	110 / 230	110 / 230	110 / 230	110 / 230
Connection standard	3/4" BSP female thread (G)	1" BSP female thread (G)	1 1/2" BSP female thread (G)	3/4" BSP female thread (G)	1" BSP female thread (G)	1 1/2" BSP female thread (G)

Technical data	Sanitary		
	TE80	TE125	TE225
Max capacity* [l/min] / [US GPM]	48 / 12.7	110 / 29.1	220 / 58.1
Volume per stroke** [ml] / [cu in]	320 / 19.5	515 / 31.4	1415 / 86.4
Max air pressure [bar] / [psi]	1.5 / 22	1.5 / 22	1.5 / 22
Max discharge pressure [bar] / [psi]	4 / 58	4 / 58	4 / 58
Max suction lift dry*** [m] / [Ft]	3 / 9.8	3.5 / 11	4 / 13
Max suction lift wet [m] / [Ft]	8 / 26	8 / 26	8 / 26
Max size of solids ø in [mm] / [in]	4 / 0.16 18 / 0.7****	6 / 0.24 18 / 0.7****	10 / 0.39 51 / 2****
Maximum pump speed [cycles per minute]	172 @50Hz 206 @60Hz		164 @50Hz 200 @60Hz
Max liquid temp. with EPDM/NBR [°C] / [°F]	80 / 176	80 / 176	80 / 176
Max liquid temp. with PTFE [°C] / [°F]	110 / 230	110 / 230	110 / 230
Connection standard	DN 25 SMS 3017 tri-clamp	DN 38 SMS 3017 tri-clamp	DN 51 SMS 3017 tri-clamp

* = @ 60 Hz

** = Based on pumps with EPDM diaphragms. Pumps with PTFE diaphragms have about 15% less volume.

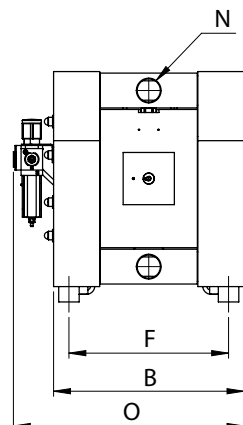
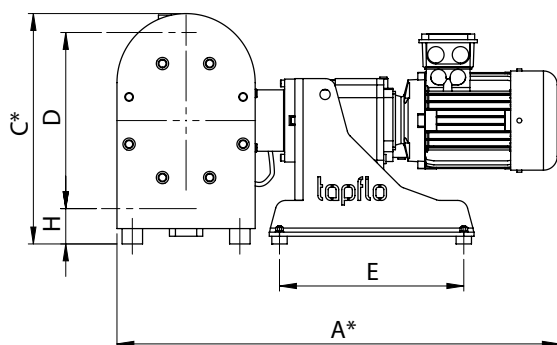
*** = With stainless steel valve balls, other materials may reduce suction. Please consult us in this matter.

**** = Flap valve version

Dimensions

Dimensions in mm (where other is not indicated)

Dimensions in inch (where other is not indicated)



		Pump size								
		PE& PTFE			Metal			Sanitary		
		TE50	TE100	TE200	TE70	TE120	TE220	TE80	TE125	TE225
A*		653 / 25.71	780 / 30.71	864 / 34.02	653 / 25.71	781 / 30.75	865 / 34.06	653 / 25.71	804 / 31.65	864 / 34.02
B		244 / 9.61	256 / 10.08	372 / 14.65	244 / 9.61	246 / 9.69	351 / 13.82	244 / 9.61	234 / 9.21	351 / 13.82
C*		246 / 9.69	322 / 12.68	450 / 17.72	275 / 10.83	325 / 12.80	453 / 17.83	370.6 / 14.57	434 / 17.09	639 / 25.16
D		190 / 7.48	252 / 9.92	345 / 13.58	192 / 7.56	257 / 10.12	348 / 13.70	294 / 11.57	350 / 13.78	528 / 20.79
E		290 / 11.42	330 / 12.99	360 / 14.17	290 / 11.42	330 / 12.99	360 / 14.17	290 / 11.42	390 / 15.35	450 / 17.72
F		214 / 8.43	214 / 8.43	311 / 12.24	214 / 8.43	214 / 8.43	311 / 12.24	214 / 8.43	204 / 8.03	311 / 12.24
H		38 / 1.5	45 / 1.77	69 / 2.72	37 / 1.46	42 / 1.65	68 / 2.68	52 / 2.05	62 / 2.44	79 / 3.11
N	TC ¹	½"	1"	1 ½"	¾"	1"	1 ½"	1"	1 ½"	2"
	DIN ²		-	-	-	-	-	DN25	DN40	DN50
	SMS ³		-	-	-	-	-	25	38	51
	RJT		-	-	-	-	-	1"	1 1/2"	2"
O		312 / 12.28	335 / 13.19	450 / 17.72	300 / 11.81	305 / 12.01	406 / 15.98	298 / 11.73	310 / 12.20	398 / 15.67

¹ SMS3017 ² DIN 11851 ³ SMS 1145 *Max height and length may vary depending on motor type

Pump code

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

Tapflo electric double diaphragm pump

Pump size

50; 100; 200 = Plastic series
70; 120; 220 = Metal series
80; 125; 225 = Hygienic series

Material of wetted parts:

P = PE
T = PTFE
S = Stainless steel AISI316L
A = Aluminium
C = Cast Iron

Material of diaphragms:

E = EPDM
N = NBR (nitrile rubber)
T = PTFE
B = PTFE TFM 1705b
V = FKM
W = White EPDM
Z = PTFE with white EPDM back
H = HNBR
O = NBR FDA (grey)



Basic options:

B = Backup diaphragm pump
J = Heating jacket (sanitary series only)
K = Built-on dampener (plastic series only)
L = Valve lifting system (metal series only)
T = Twin inlet/outlet pump
X = ATEX approved, group II, cat. 2
Y = High lift valve seats (plastic series only)



Material of valve balls:

E = EPDM
N = NBR (nitrile rubber)
T = PTFE
S = AISI 316 stainless steel
U = PU (polyurethane)
K = Ceramic
V = FKM
B = PTFE TFM 1635
P = PE1000
C = SiC

Motor power:

T50:
074 = 0.75 kW
054 = 0.55 kW
024 = 0.25 kW
T100:
154 = 1.5 kW
114 = 1.1 kW
054 = 0.55 kW
T200:
304 = 3 kW
224 = 2.2 kW
114 = 1.1 kW

Changes reserved without notice

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

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