



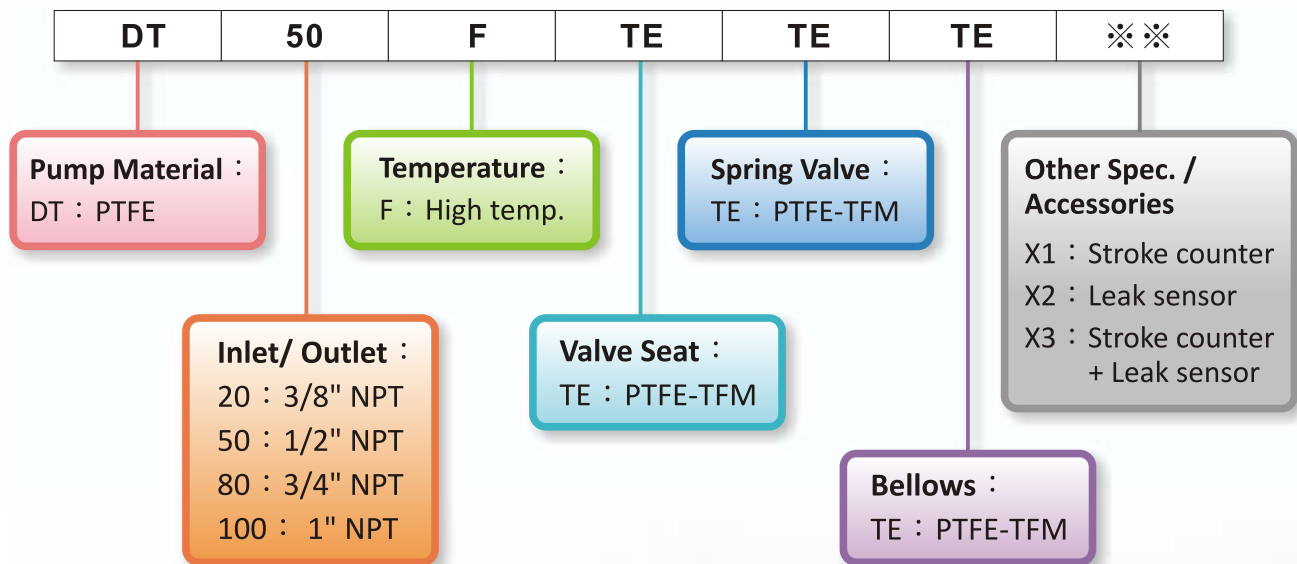
# Bellows Pumps



CE

In order to fulfill our valuable clients' requirement in PCB, LED, OPTO, PV, solar and other industries, DINO Technology Co., Ltd. manufactured high-class Bellows pump with PTFE material for construction. No metal design is key feature of Bellows pump. All assembly, testing and packing are conducted in class 100 cleanroom. Our goal is to manufacture a high purity, no pollution and electronic-grade pump. Bellows pump has been constantly improved and tested and now we have full confidence in the quality, performance and life span which are also the advantages that can compete with other brands. We have taken out two patents and CE certificate on 「 separable air valve and dry-run 」 designs. We are committed to providing you "high quality, competitive price, quick delivery, and good service" products.

### ■ Model & Material Indicate



### ■ Advantage

- DT and DT-F can be used in various application.
- No metal design, oil-free, lubricant-free and maintenance-free.
- Patent air valve: high anti-abrasion precise ceramic shuttle shaft.  
No thermal expansion and constraction.
- Wetted parts are composed of pure TEFLON and are high temperature- resistance, chemical-resistance and pollution-free.
- Max. temperature can reach up to 200°C.
- Assembly, testing and packing are conducted in Class 100 cleanroom.
- Allows 30 minutes dry-run.
- 1 bar low startup pressure allows to reduce air consumption and prolong pump's life span.
- Oring-free, special thread and leak-free designs.
- Firm pump body with characteristic of high pressure-resistance, anti-abrasion and high ductility.  
Bellows pump can operate over 200,000,000 times.

## ■ **Feature**

### **Patent Air Valve**

High density PE manufactured, no metal spare parts combination; better air tightness, low air consumption, no air clogged in low air supply; separable air valve can be adjusted according to installation space.



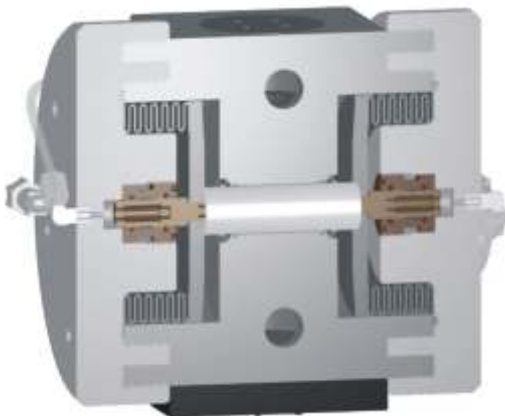
### **CERAMIC Shuttle Shaft**

Using high anti-abrasion ceramic, No thermal expansion and contraction ; shuttle shaft and sleeve fit closely for perfect sealing and precise stable operating system.



### **PTFE-TFM Spring Valve**

Better flexibility, ductility, and non-deformation; allows transferring liquid without horizontal installation; inner concave design, flat contact for better sealing and self-priming; protecting bellows from damage caused by back pressure.



### **PTFE-TFM Bellows**

Manufactured with high purity and high density PTFE. Better anti-abrasion and ductility. 8mm thick shielding on the top of the bellows to reduce damage caused by sharp particle; long life-span, over 200,000,000 times operation.



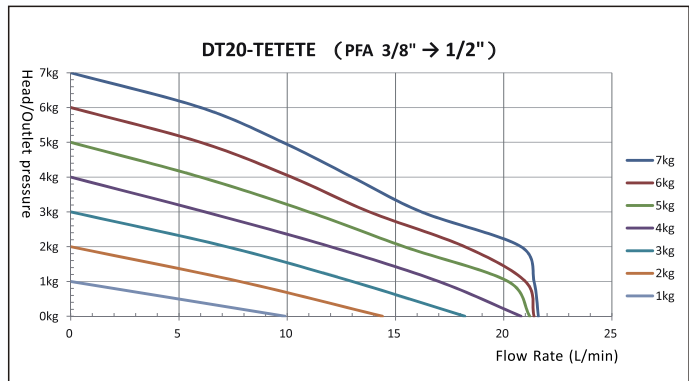
## 3/8" DT20, DT20F



### Technical Data

Inlet / Outlet (NPT)	3 / 8"	
Air connection (NPT)	3 / 8"	
Max. capacity (LPM)	21.6	
Operating pressure (Bar)	1 - 7	
Max. temperature PTFE	130°C	
	High-temp.PTFE	200°C
Max. particle	0.5mm	
Suction lift, dry	2mwc	
Suction lift, wet	6mwc	
Weight	PTFE	9.3kgs
	High-temp.PTFE	11.5kgs

### Performance Curve



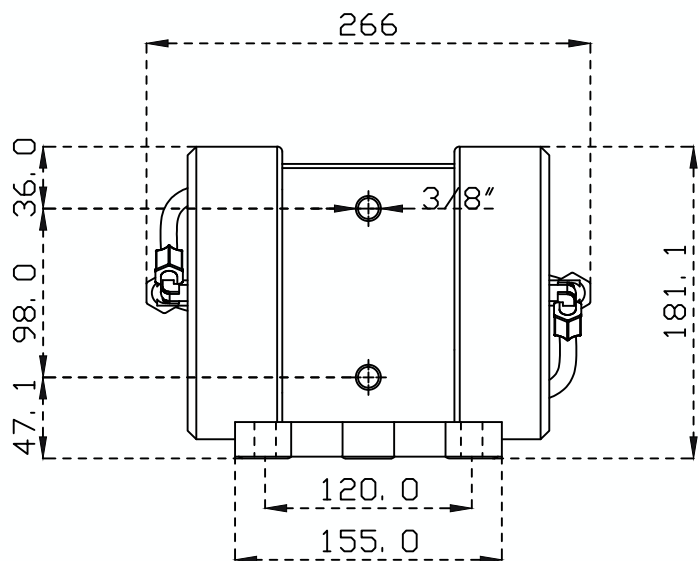
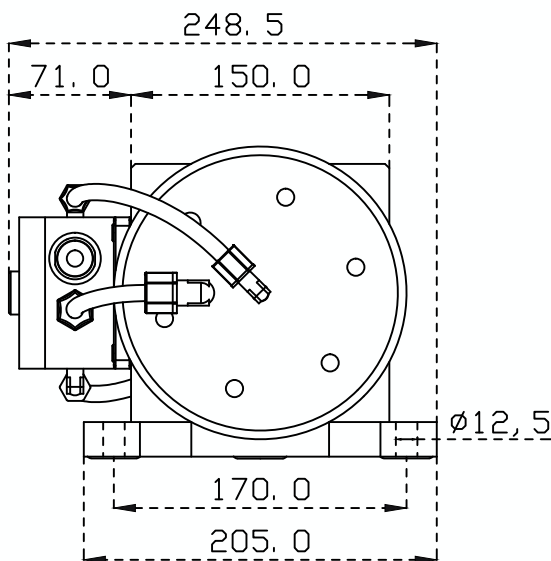
\*Test condition: Pure water at room temperature, Fully open fluid inlet/outlet 1/2" PFA tube with inside diameter 9.53mm, air pipe(ID:4mm)

\*Performance curves may vary based on application.

Head Discharge pressure	1kg	2kg	3kg	4kg	5kg	6kg	7kg
Flow rate	5.2	7.8	9.4	9.4	9.6	9.6	9.6

\*Test condition: Fully open fluid inlet/outlet 3/8" PFA tube with inside diameter 6.35mm, air pipe(ID:4mm)

### Outline Dimension



Unit:mm

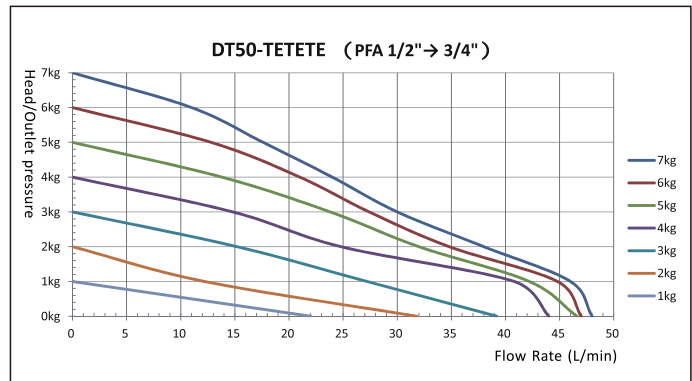
# 1/2" DT50, DT50F



## Technical Data

Inlet / Outlet (NPT)		1 / 2"
Air connection (NPT)		3 / 8"
Max. capacity (LPM)		48
Operating pressure (Bar)		1 - 7
Max. temperature PTFE		130°C
	High-temp.PTFE	200°C
Max. particle		0.5mm
Suction lift, dry		2mwc
Suction lift, wet		6mwc
Weight	PTFE	12.5kgs
	High-temp.PTFE	15.5kgs

## Performance Curve



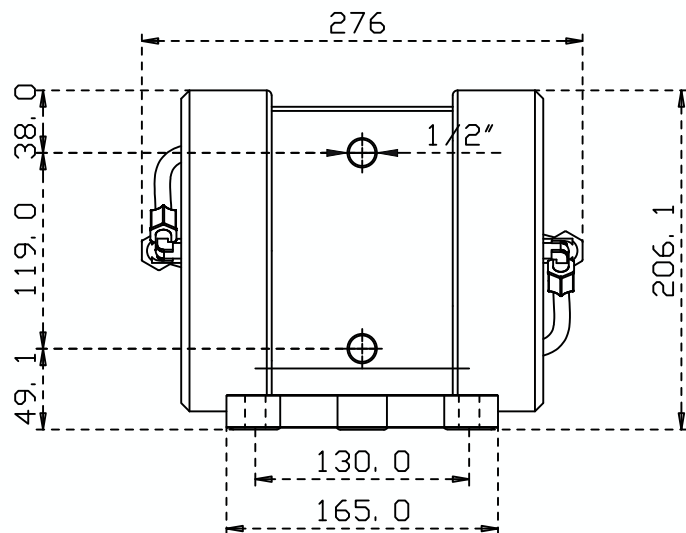
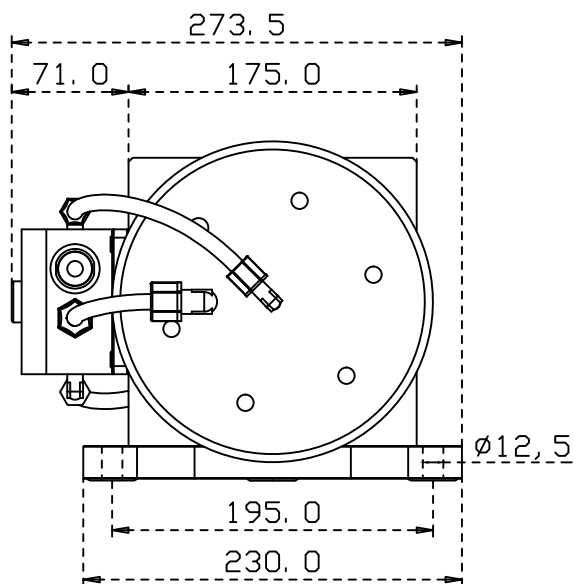
\*Test condition: Pure water at room temperature, Fully open fluid inlet/outlet 3/4" PFA tube with inside diameter 15.88mm, air pipe(ID:4mm)

\*Performance curves may vary based on application.

Head Discharge pressure	1kg	2kg	3kg	4kg	5kg	6kg	7kg
Flow rate	12.8	19.8	22.6	22.8	22.8	22.8	23

\*Test condition: Fully open fluid inlet/outlet 1/2" PFA tube with inside diameter 9.53mm, air pipe(ID:4mm)

## Outline Dimension



Unit:mm

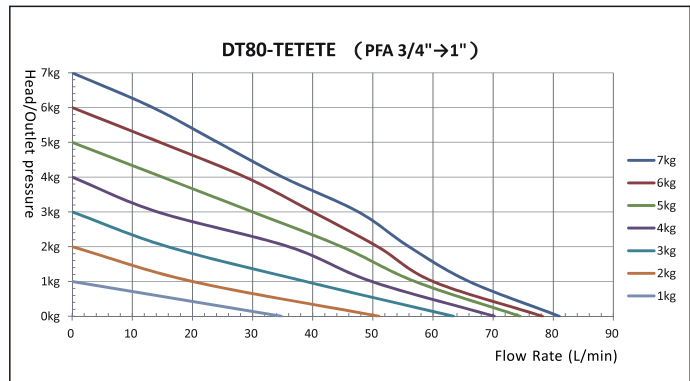
## 3/4" DT80, DT80F



### Technical Data

Inlet / Outlet (NPT)	3 / 4"	
Air connection (NPT)	3 / 8"	
Max. capacity (LPM)	81	
Operating pressure (Bar)	1 - 7	
Max. temperature PTFE	130°C	
	High-temp.PTFE	200°C
Max. particle	0.5mm	
Suction lift, dry	2mwc	
Suction lift, wet	6mwc	
Weight	PTFE	17kgs
	High-temp.PTFE	21kgs

### Performance Curve



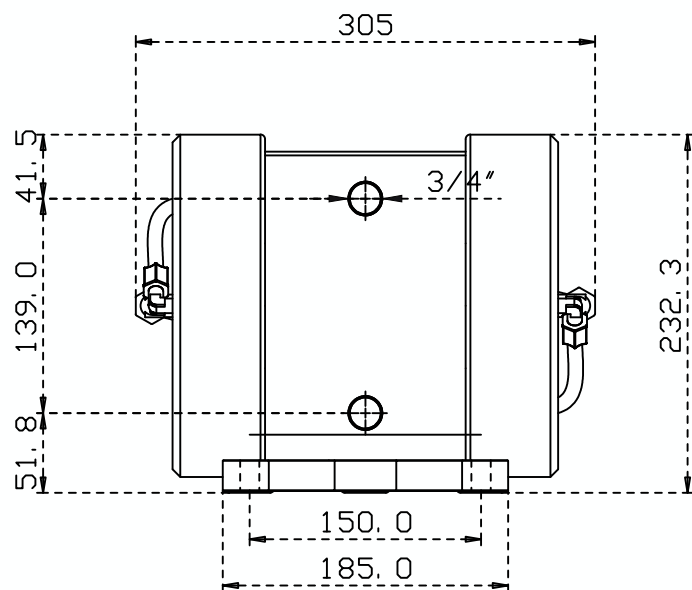
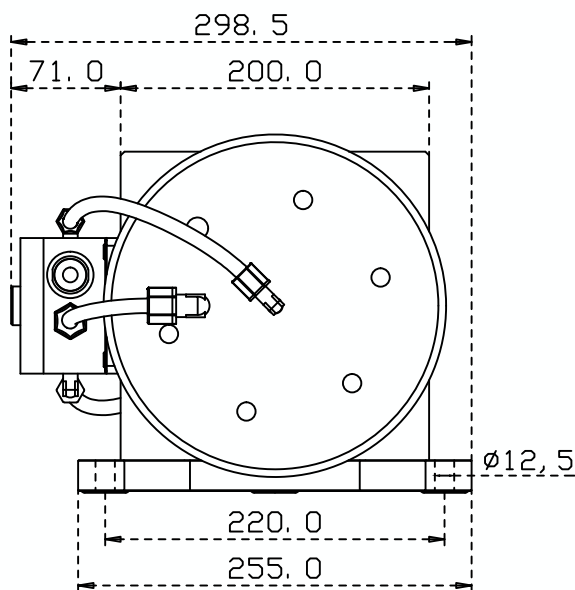
\*Test condition: Pure water at room temperature, Fully open fluid inlet/outlet 1" PFA tube with inside diameter 22.23mm, air pipe(ID:4mm)

\*Performance curves may vary based on application.

Head Discharge pressure	1kg	2kg	3kg	4kg	5kg	6kg	7kg
Flow rate	27	42	49.8	55	60	62.8	65

\*Test condition: Fully open fluid inlet/outlet 3/4" PFA tube with inside diameter 15.88mm, air pipe(ID:4mm)

### Outline Dimension



Unit:mm



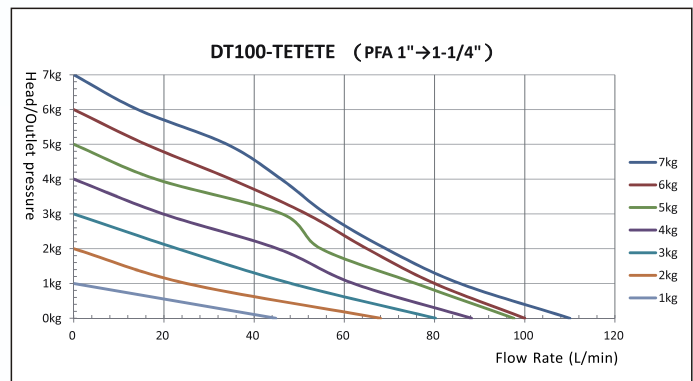
## 1" DT100, DT100F



### ■ Technical Data

Inlet / Outlet (NPT)	1"	
Air connection (NPT)	3 / 8"	
Max. capacity (LPM)	110	
Operating pressure (Bar)	1 - 7	
Max. temperature PTFE	PTFE	130°C
	High-temp.PTFE	200°C
Max. particle	0.5mm	
Suction lift, dry	2mwc	
Suction lift, wet	6mwc	
Weight	PTFE	20kgs
	High-temp.PTFE	25kgs

### ■ Performance Curve



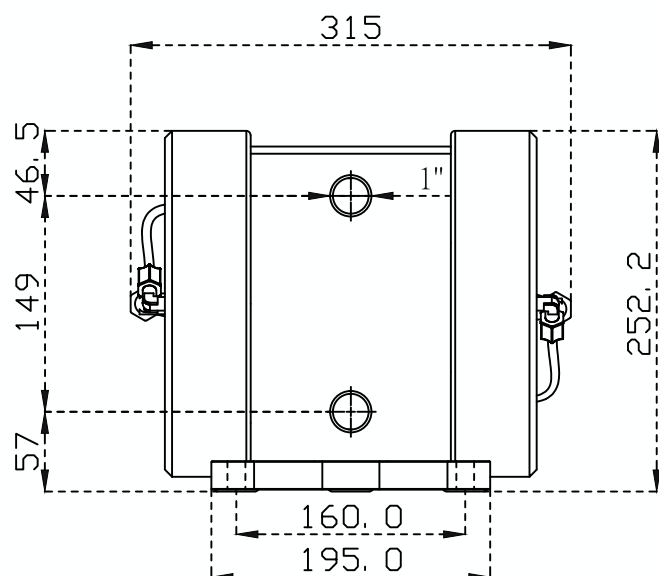
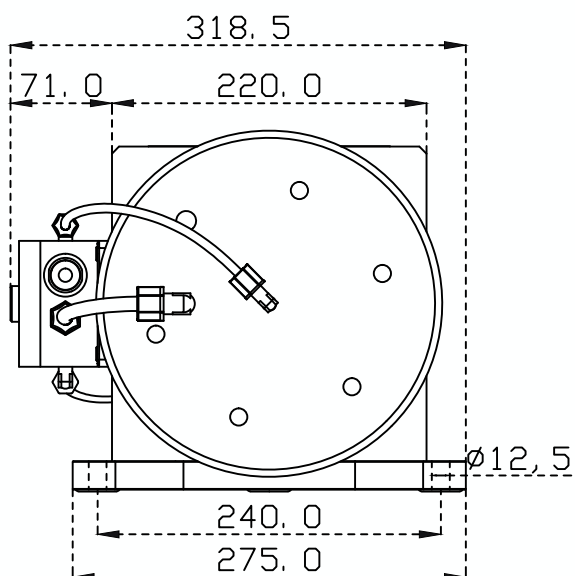
\*Test condition: Pure water at room temperature, Fully open fluid inlet/outlet 1-1/4" PFA tube with inside diameter 27.55mm, air pipe(ID:4mm)

\*Performance curves may vary based on application.

Head Discharge pressure	1kg	2kg	3kg	4kg	5kg	6kg	7kg
Flow rate	43.8	64	76.2	84.8	90.2	94	97.8

\*Test condition: Fully open fluid inlet/outlet 1" PFA tube with inside diameter 22.23mm, air pipe(ID:4mm)

### ■ Outline Dimension



Unit:mm

## Optional Accessories



### Pulsation Dampener

No metal, directly install on the pump, auto-adjustable for effective decrease pulsation to smooth flow speed. Each size have suitable dampener.

## NPT

American National Pipe Taper Threads

Pipe size	Threads per Inch TPI-pitch	Nominal outside Pipe Diameter OD		Thread angle	Thread Pitch length	
		(in)	(mm)		(in)	(mm)
1/4"	NPT 18	0.54	13.7	60	0.0556	1.412
3/8"	NPT 18	0.675	17.1	60	0.0556	1.412
1/2"	NPT 14	0.84	21.3	60	0.0714	1.814
3/4"	NPT 14	1.05	26.7	60	0.0714	1.814
1"	NPT 11 1/2	1.315	33.4	60	0.087	2.21
1 1/4"	NPT 11 1/2	1.66	42.2	60	0.087	2.21



### Stroke Counter

Install on the air pipeline of pump, a sensor detect differential pressure in pipeline, and send out the signal.



### Leak Sensor

Precision absorbent ceramic absorb leaked liquid, let sensor detect liquid and send out signal.



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