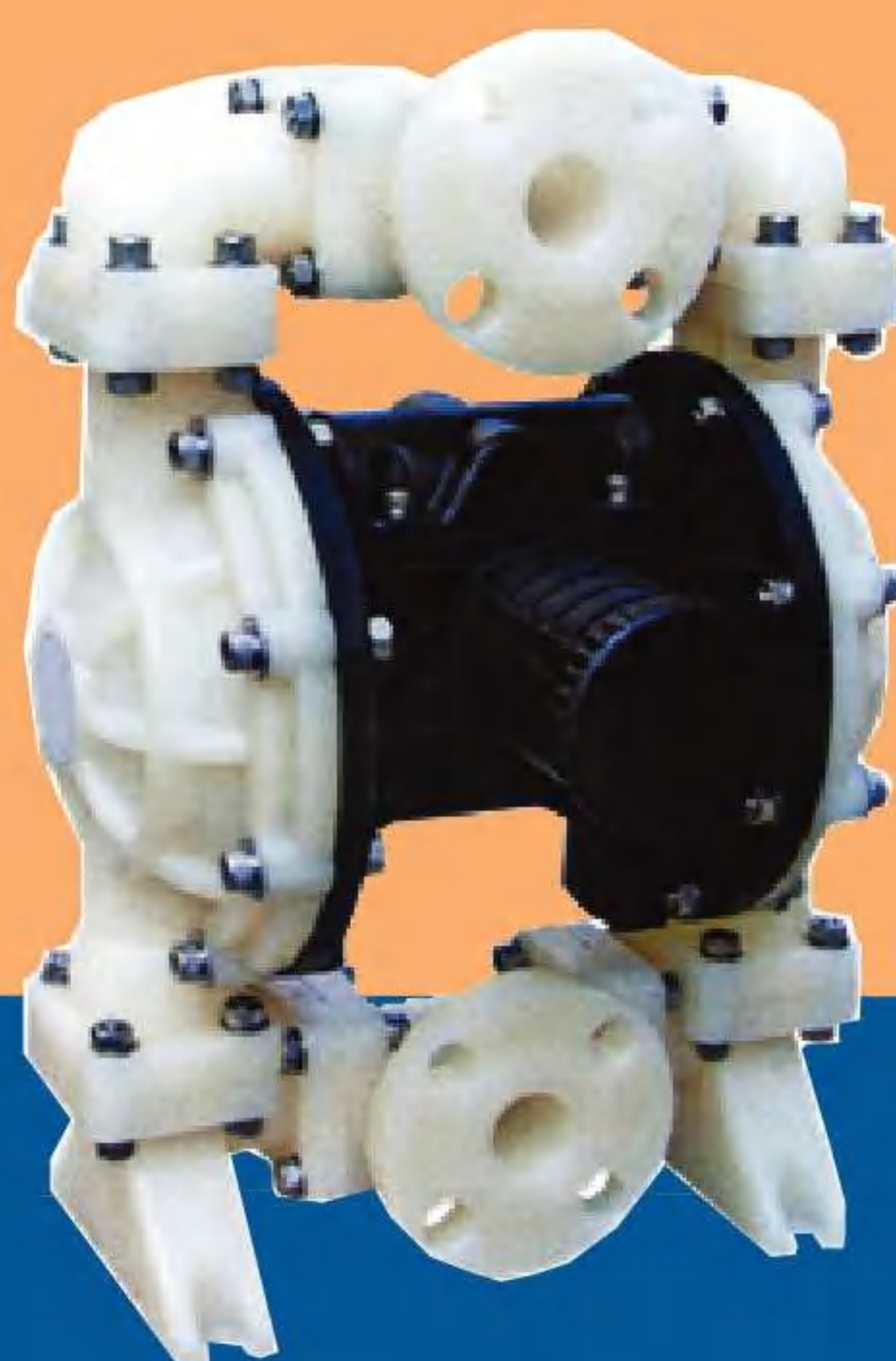


DIAPHRAGM PUMP AODD PUMP



AD Series



JAPAN QUALITY



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THE main application of diaphragm pump

- 1.) Food industry : Pumping peanut butter, pickles, mashed potatoes, small sausage, jam apple syrup, chocolate, perfume raw materials, hops and yeast slurry, syrup, molasses. etc.
- 2.) paint industry : Pumping a variety of paints, resin etc.
- 3.) Adhesives and industry : Pumping all kinds Adhesives. Glues etc.
- 4.) Ceramic industry : Pumping a variety of tile, porcelain, tiles and pottery glaze etc.
- 5.) Mining industry : After oil well drilling, pumping the water or mud of mines, trenches, tunnels, mineral processing, slag, cement grout, mortar etc.
- 6.) Chemical industry : Pumping a variety of emulsions and fillers, rubber paste, all kinds of abrasive, oil and mud, grease, A variety of toxic, flammable, volatile liquid, a variety of acids, alkalis, storing corrosive liquids.
- 7.) Environmental protection, wastewater treatment Industry : Filter pressure, pumping A variety of sewage, mud Slurry
- 8.) Shipping industry : Pumping a variety of sewage, oil for the oil tankers barges etc.
- 9.) pumping a variety of high-temperature liquid, the max temperature up to 150 C°

Pump Model and material code

Model = AD 25 AL - PP / TF / TF / PP

Pump Size :	Center Block :	Pumbody :	Diaphragm :	Valve Ball:	Valve Seat :
06=1/4 inch 10=3/8 inch 15=1/2 inch 20=3/4 inch 25=1 inch 40=1.5 inch 50=2 inch 80=3 inch 100=4 inch	AL=Aluminum PP=Polypropylene SS=Stanless steel	PP=Polypropylene KV=KVDF PM=POM AL=Aluminum SS=SS304 LL=SS306 AC=Cast iron TF=Teflon	TF=Teflon ST=Santopren HY=Hytrel VT=Viton BN=Buna-N EP=EPDM GE=Geolast PU=Polyurethane	TF=Teflon ST=Santopren HY=Hytrel VT=Viton BN=Buna-N EP=EPDM SS=SS304 LL=SS316 CM=Ceramic	TF=Teflon ST=Santopren HY=Hytrel VT=Viton BN=Buna-N EP=EPDM SS=SS304 LL=SS316 PP=Polypropylene



JAPAN QUALITY



General Characteristics

- ◆ Without electricity, explosion-proof, can convey flammable fluid
- ◆ No dynamic seals, even dry running without damage to the pump.
- ◆ No impeller, low shear, will not damage the material structure of fluid.
- ◆ Submersible, mobile, flexible installation, easy maintenance
- ◆ Can convey high-thick, high-viscosity fluid.
- ◆ Can convey acid, alkali, strong organic solvents and other fluid.
- ◆ Changing the inlet air and pressure, to adjust the flow rate and head.

AQUA Pump Characteristics

Manifold

Center port design, low pulse.
Three section manifold, flexible installation.

Four bolts connection

Good seal and excellent dry suction.
no leakage.

Fluid Chamber

Enhanced the chamber strength
has long-term durability.

Air motor

Can supply aluminum, stainless
steel and plastic air motor.

Hardware

Stainless steel hardaer, can avoid
rust and corrosion, easy maintenance.

Valve ball

Adopt special grinding machine to process in high
roundness and good seal.

Air valve

Modular design, low air consumption. No dead
sports and no need lubrication.

Diaphragm rod

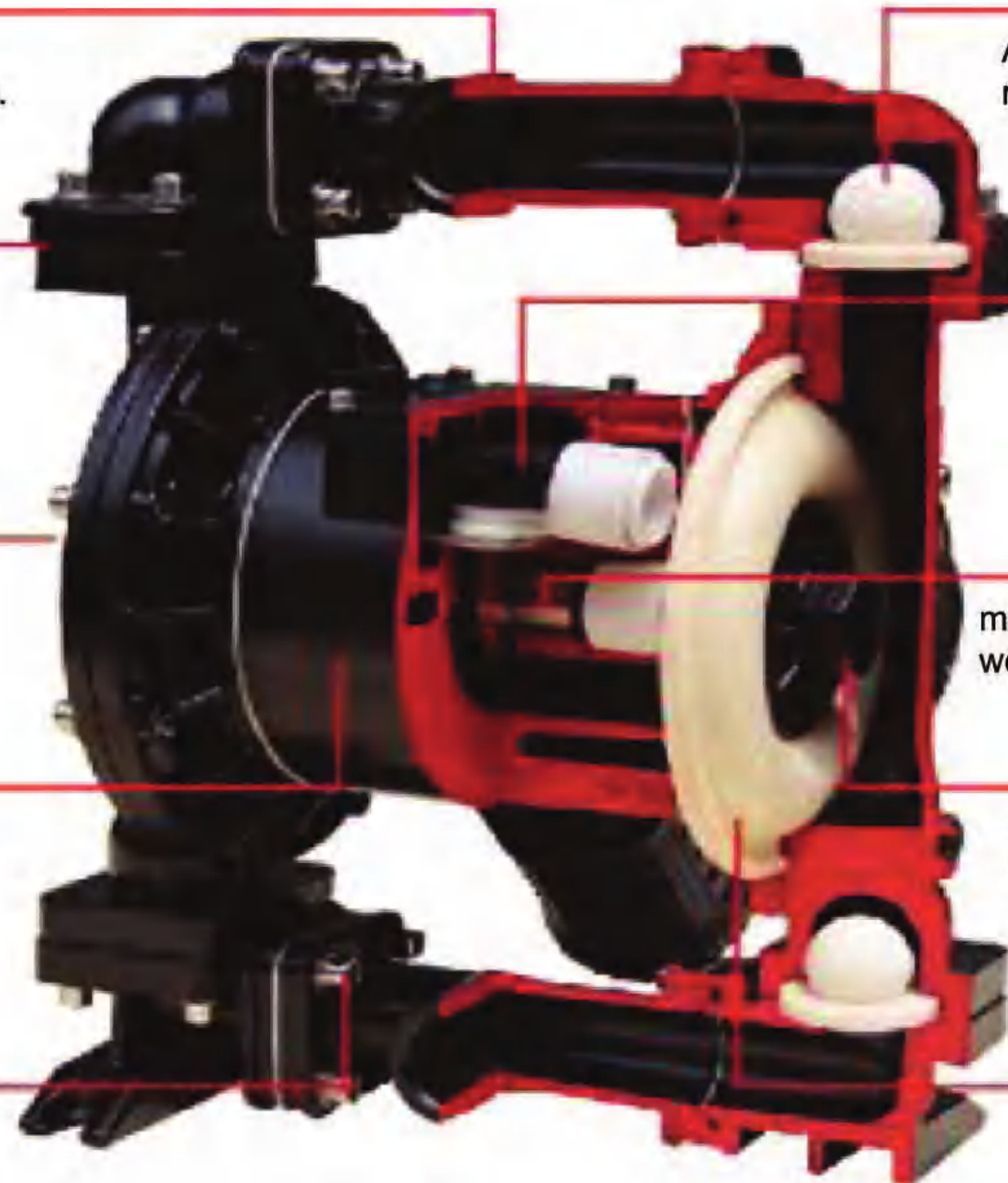
material to be Ss321, excellent chemical resistance,
wearing resistance, good self-lubricating.

Diaphragm plate

enhance the structural strength one-piece design,
high pressure resistance, no leakage.

Diaphragm

Accurately calculate the diaphragm moving
distance to reduce the force to diaphragm,
has excellent life time.



Operating temperature limitation

Diaphragm Material	Maximum	Minimum
Viton: excellent corrosion resistance to various acids (including the media concentration of oxidizing acid). alkali, saltpetroleum products, hydrocarbons. etc.	350 °F 176.6°C	-40 °F -40°C
PTFE (Teflon): excellen corrosion resistance. almost resistant to all chemical media (including concentrated nitric acid and aqua regia). Except melting of lithium, potassium, sodium, chlorine trifluoride, high-temperature oxygen trifluoride,sulfur-speed liquid fluorine.	350 °F 176.6°C	40 °F 4.4°C
Santoprene: good abrasion resistance. chemical resistance and heat resistance, suitable for general acid and alkali, not suitable solvent. Can replace the EPDM/ EPR material.	220 °F 104.4°C	-20 °F -28.9°C
Hytrel: good abrasion resistance, used in most of the neutral fluid. Can replace Bune-N materials.	220 °F 104.4°C	-20 °F -28.9°C
EPDM: abrasion resistance, aging resistance, ozone resistance, suitable for general acid and alkali.	250 °F 121.6°C	-40 °F 40°C
Buna-N: widely used in gasoline and other oil products. Suitable for use at room temperature.	212 °F 100°C	-40 °F 40°C
GE: better abrasion resistance than Hytrel. the same chemical resistance as Buna-N.	220 °F 104.4°C	-20 °F -28.9°C
Pumpbody material		
PP: Medium abrasion resistance, good chemical resisatnce, good versatility for common acid-base.	150 °F 65.5°C	40 °F 4.4°C
POM: good solvent resisatnce, abrasion resistance, Low friction low moisture absorption.	150 °F 65.5°C	40 °F 4.4°C
PVDF: strong chemical resistance, crush resistance, abrasion resistance. good corrosion resistance for acid,alkali and variety of organic solvents.	200 °F 93.3°C	40 °F 4.4°C

- Note : The maximum and minimum temperature is the limited operating temperature of these materials. Temperature and pressure will affect the diaphragm life. Operating under the maximum or minimum temperature. can not achieve maximum life.



JAPAN QUALITY



AD06 Plastic pump

Material quality

Pump body : PP,PVDF, POM

Diaphragm : Santoprene, Hytrel, Teflon, Viton, EPDM, Buna-N

Check Valve : PP, PVDF, POM

Center block : PP

Weight

PP Pump/POM pump : 1.5 Kgs.

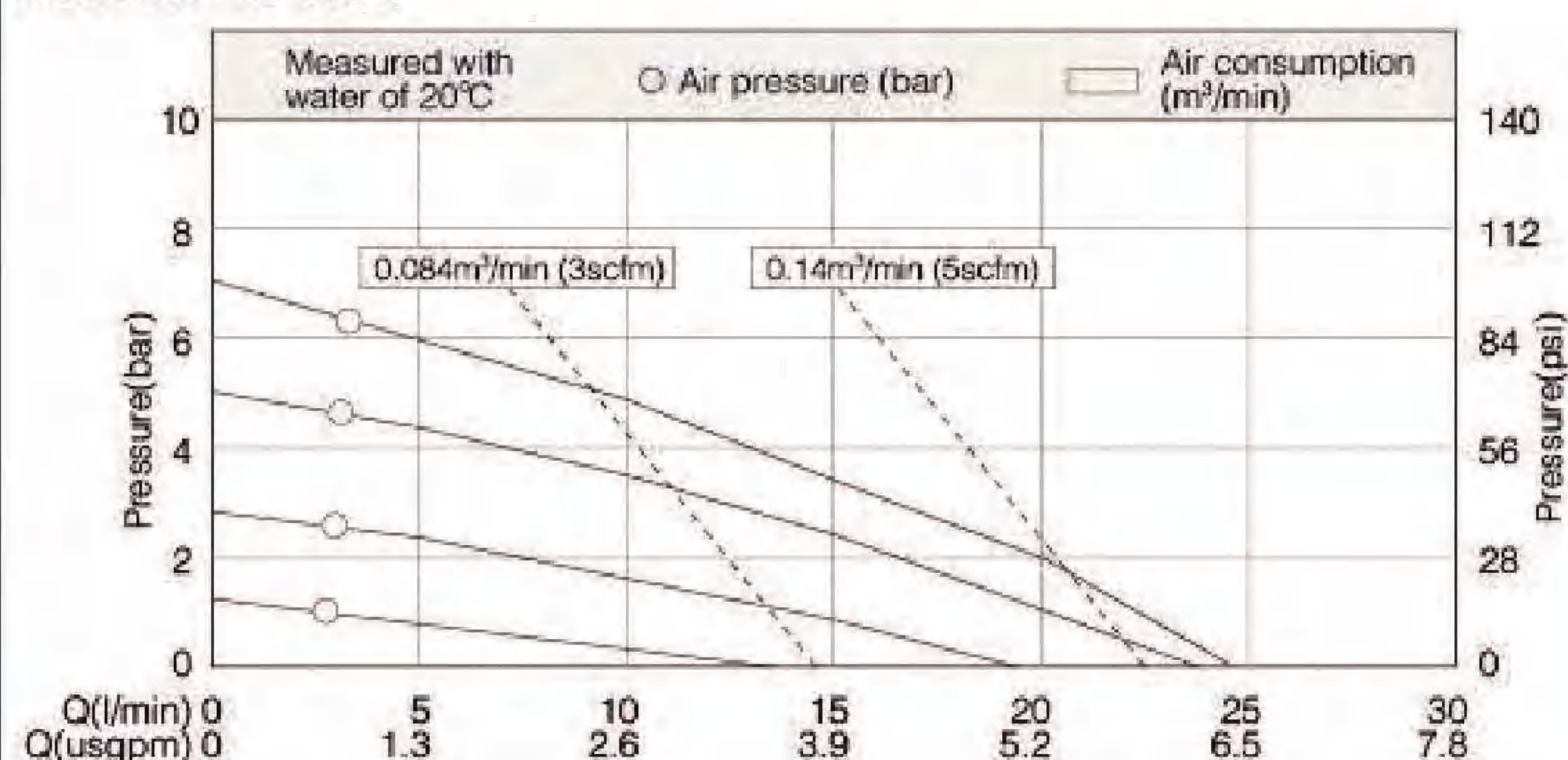
PVDF pump : 2 Kgs.



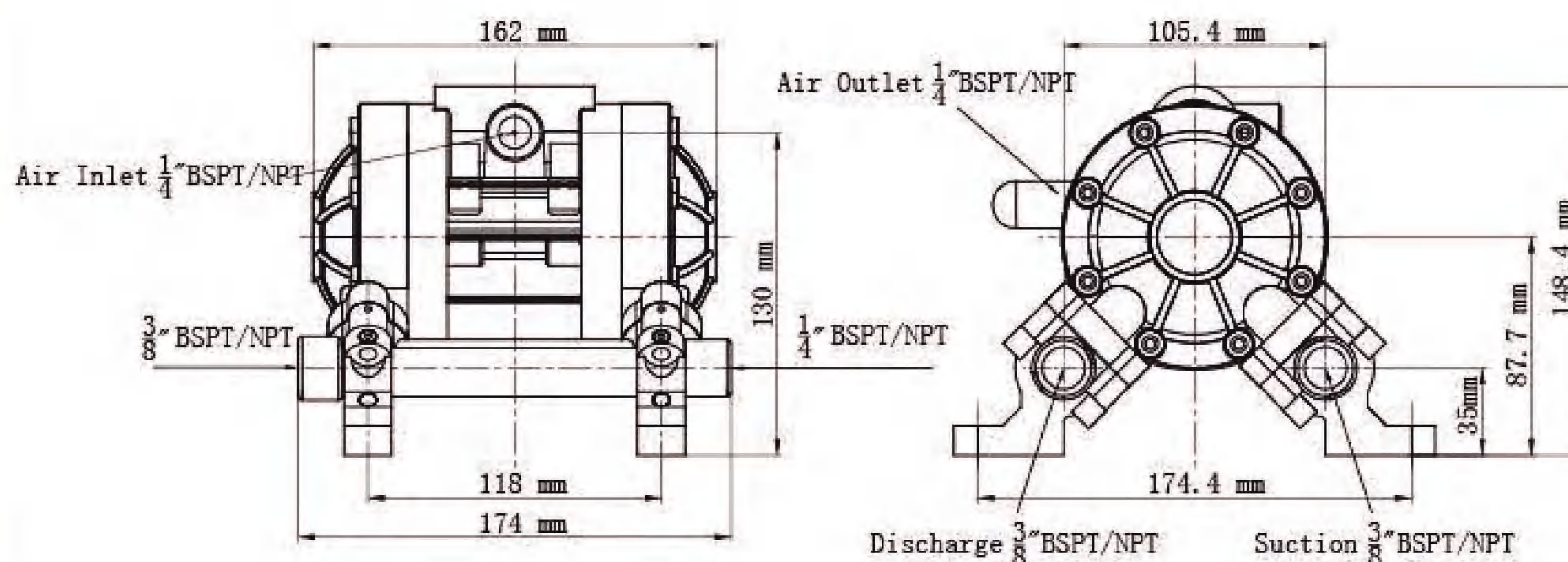
Technical Parameters

Suction lift [mwc]	dry	2.1
	wet	3.7 ~ 6.4
Max particle diameter [mm]	1.6	
Suction and discharge	1/4 3/8	
Size [in]		
Air inlet size [in]	1/4	
Max flow [l/min]	27	
Max head [m]	70	
Max air inlet pressure [bar]	7	

Performance curve



Installation size





JAPAN QUALITY



AD15 Aluminum pump

Material quality

Pump body : Aluminum

Diaphragm : Santoprene, Hytrel, Teflon, Viton, EPDM, Buna-N

Valve ball : Teflon, Stainless steel, Santoprene

Valve seat : SS304, SS316

Center Block : PP

Weight

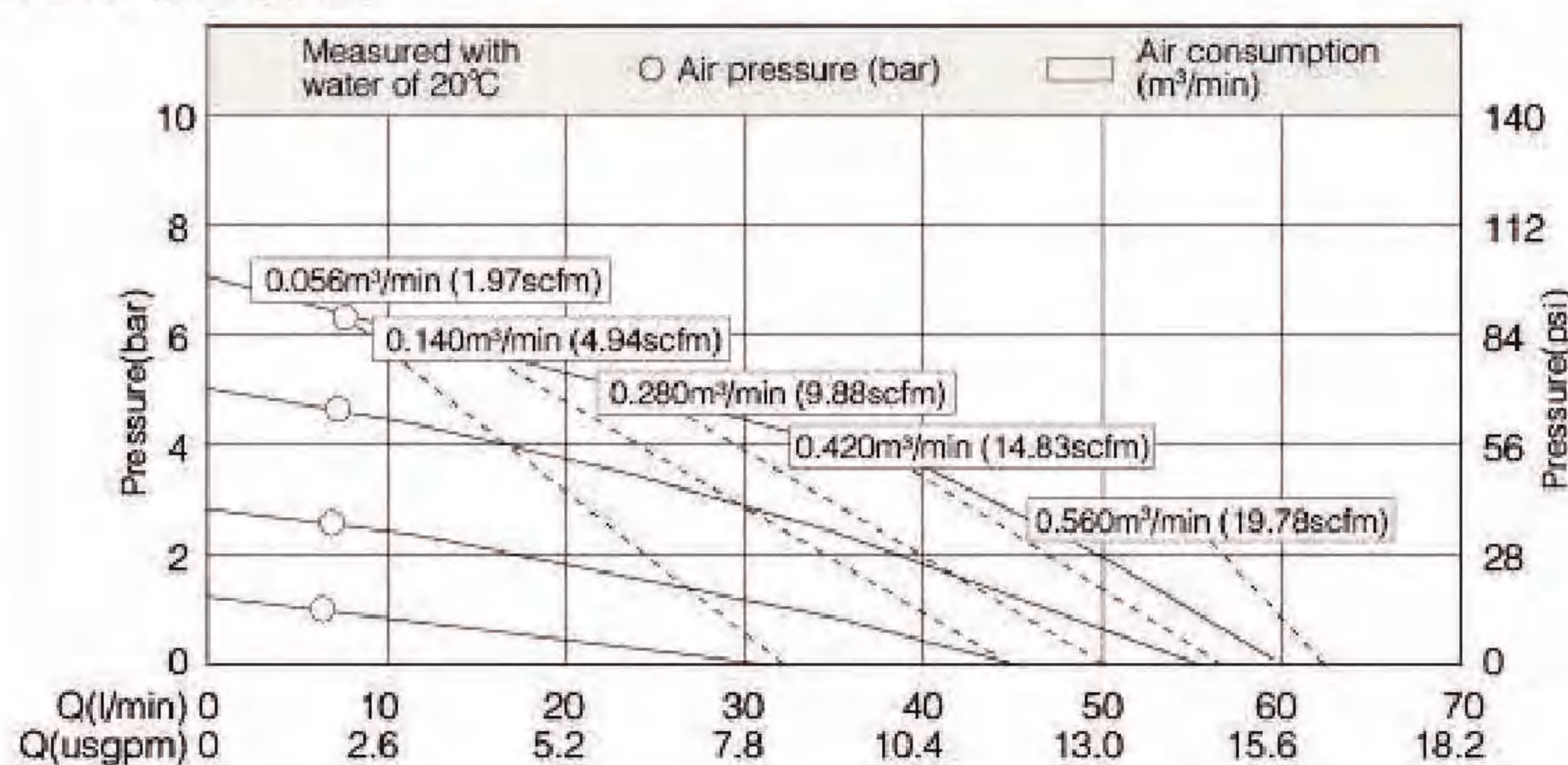
Aluminum pump: 4.5 Kgs.



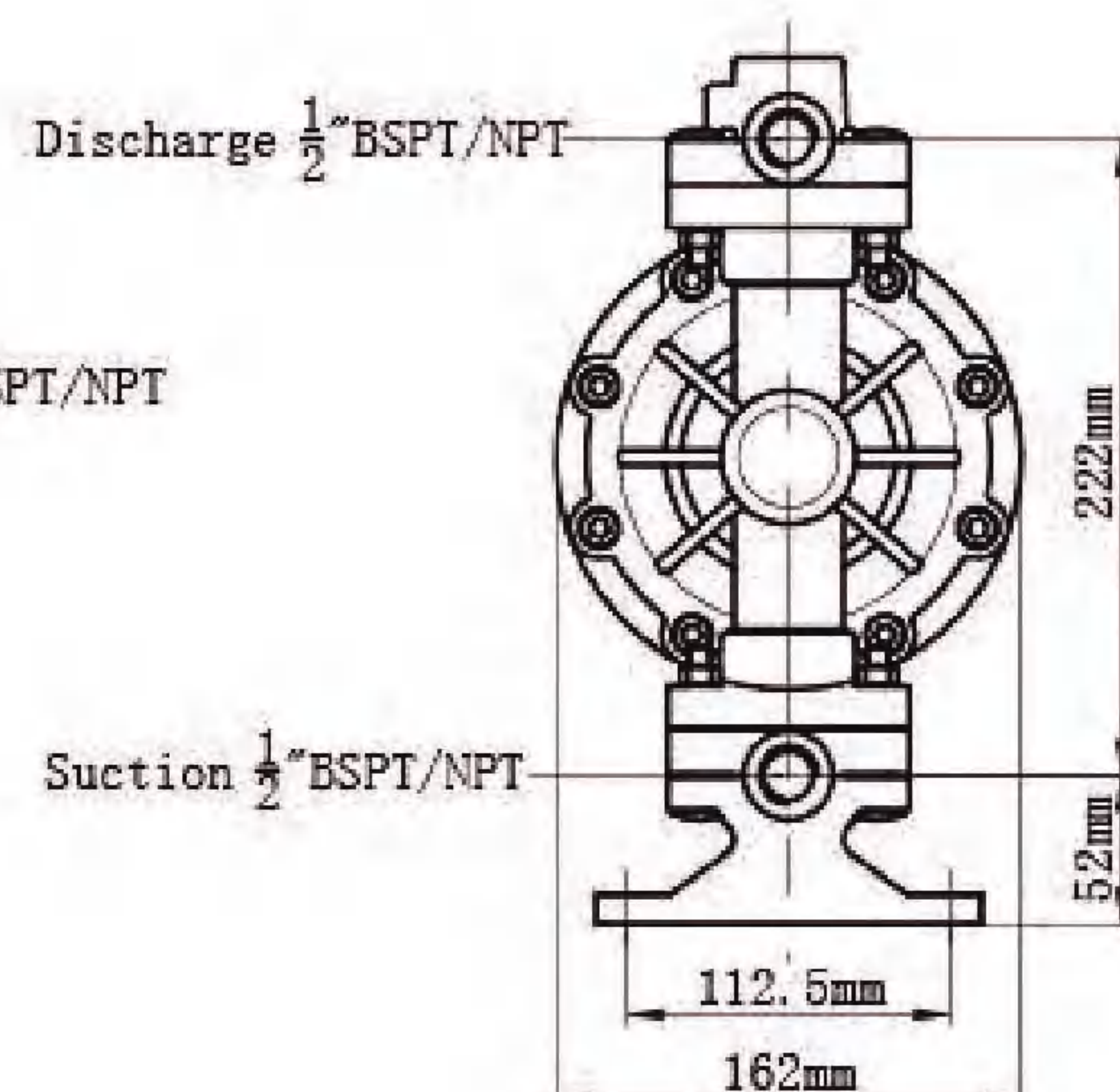
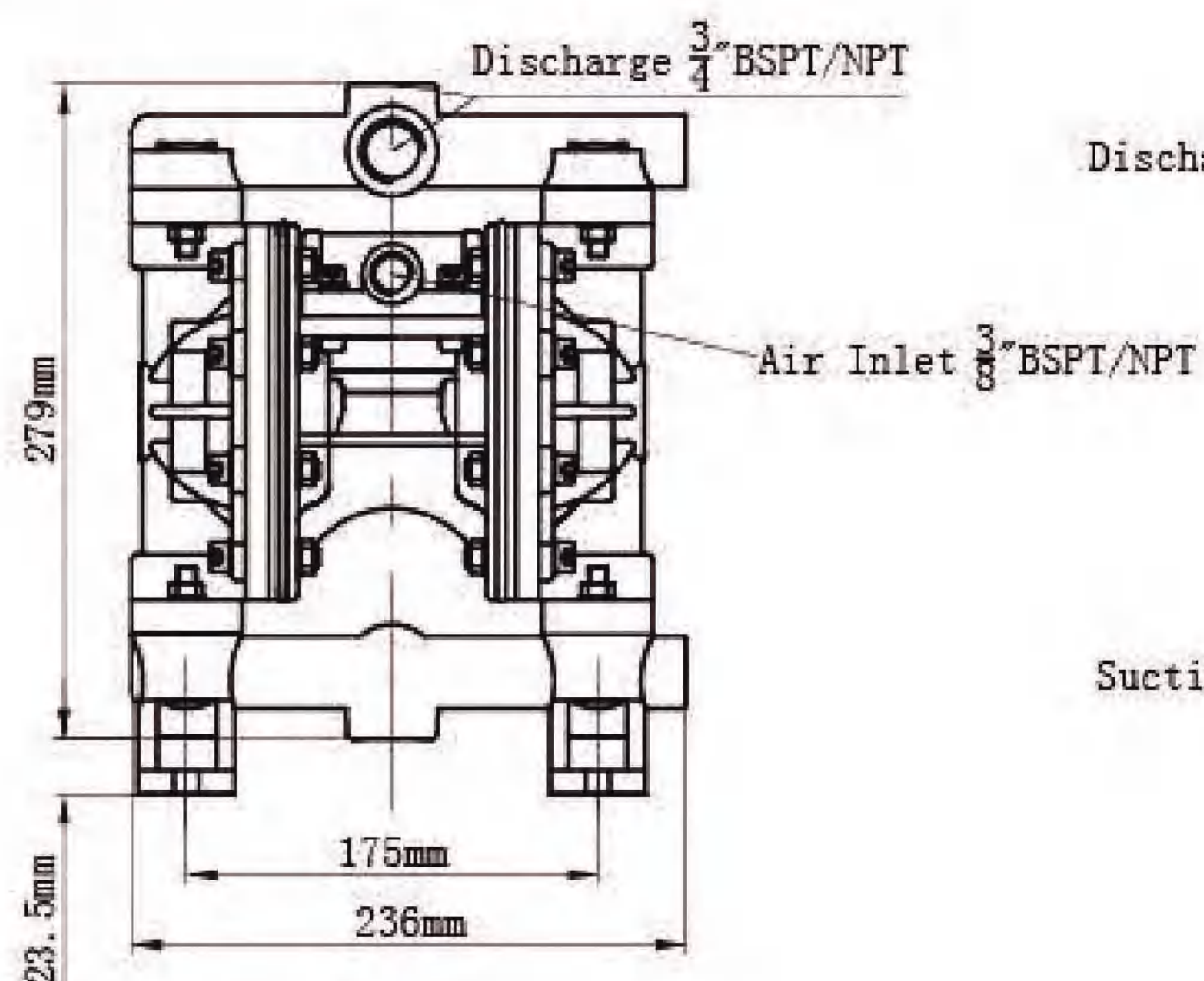
Technical Parameters

Suction lift [mwc]	dry	4
	wet	7.6
Max particle diameter [mm]	2.5	
Suction and discharge	1/2 3/4	
Size [in]		
Air inlet size [in]	3/8	
Max flow [l/min]	57	
Max head [m]	84	
Max air inlet pressure [bar]	8.4	

Performance curve



Installation size



AD15 Plastic pump



JAPAN QUALITY



Material quality

- Pump body : PP,PVDF, POM
- Diaphragm : Santoprene, Hytrel, Teflon, Viton, EPDM, Buna-N
- Valve ball : Teflon, Stainless steel, Santoprene
- Valve seat : PP,PVDF, POM
- Center Block : PP

Weight

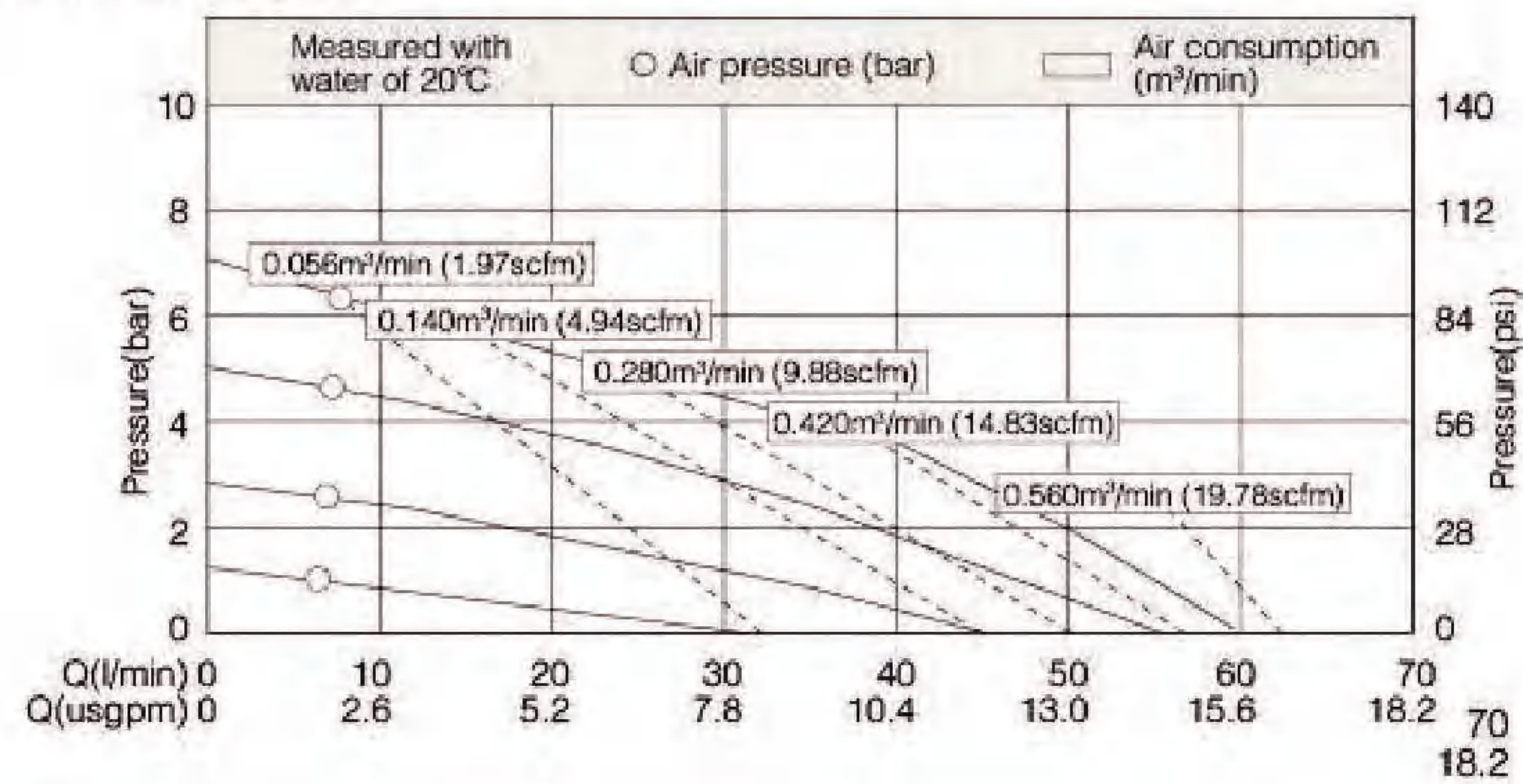
- PP pump/POM pump : 3.5 Kgs.
- PVDF pump : 4.5 Kgs.



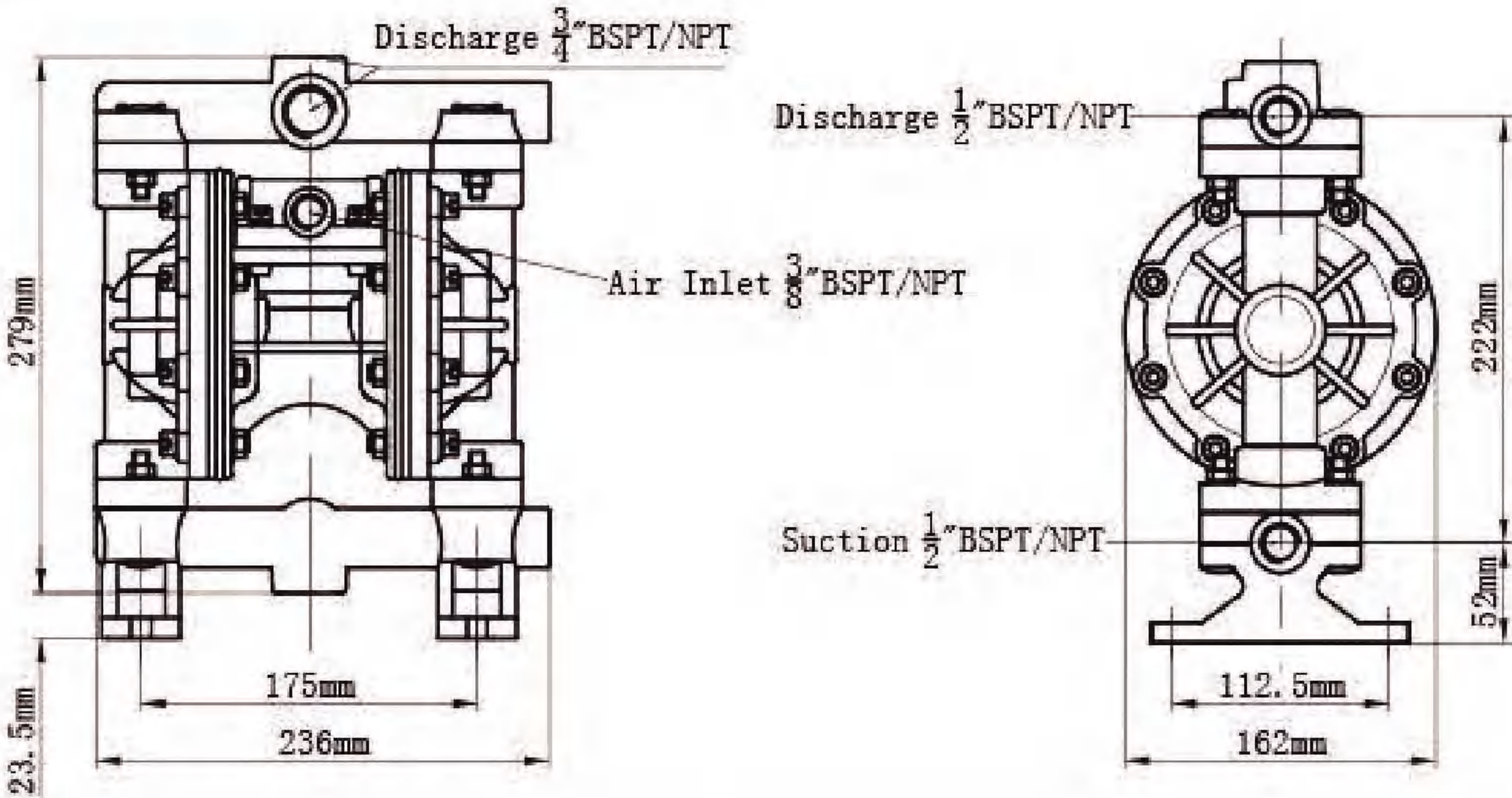
Technical Parameters

Suction lift [mwc]	dry	4
	Wet	7.6
Max particle diameter [mm]	2.5	
Suction and discharge	1/2	3/4
Size [in]		
Air inlet size [in]	3/8	
Max flow [l/min]	57	
Max head [m]	84	
Max air inlet pressure [bar]	8.4	

Performance curve



Installation size





AD15 Stainless steel pump

Material quality

- Pump body : SS304, SS316, SS316L
- Diaphragm : Santoprene, Hytrel, Teflon, Viton, EPDM, Buna-N
- Valve ball : Teflon, Stainless steel, Santoprene
- Valve seat : SS304, SS316, SS316L
- Center block : PP

Weight

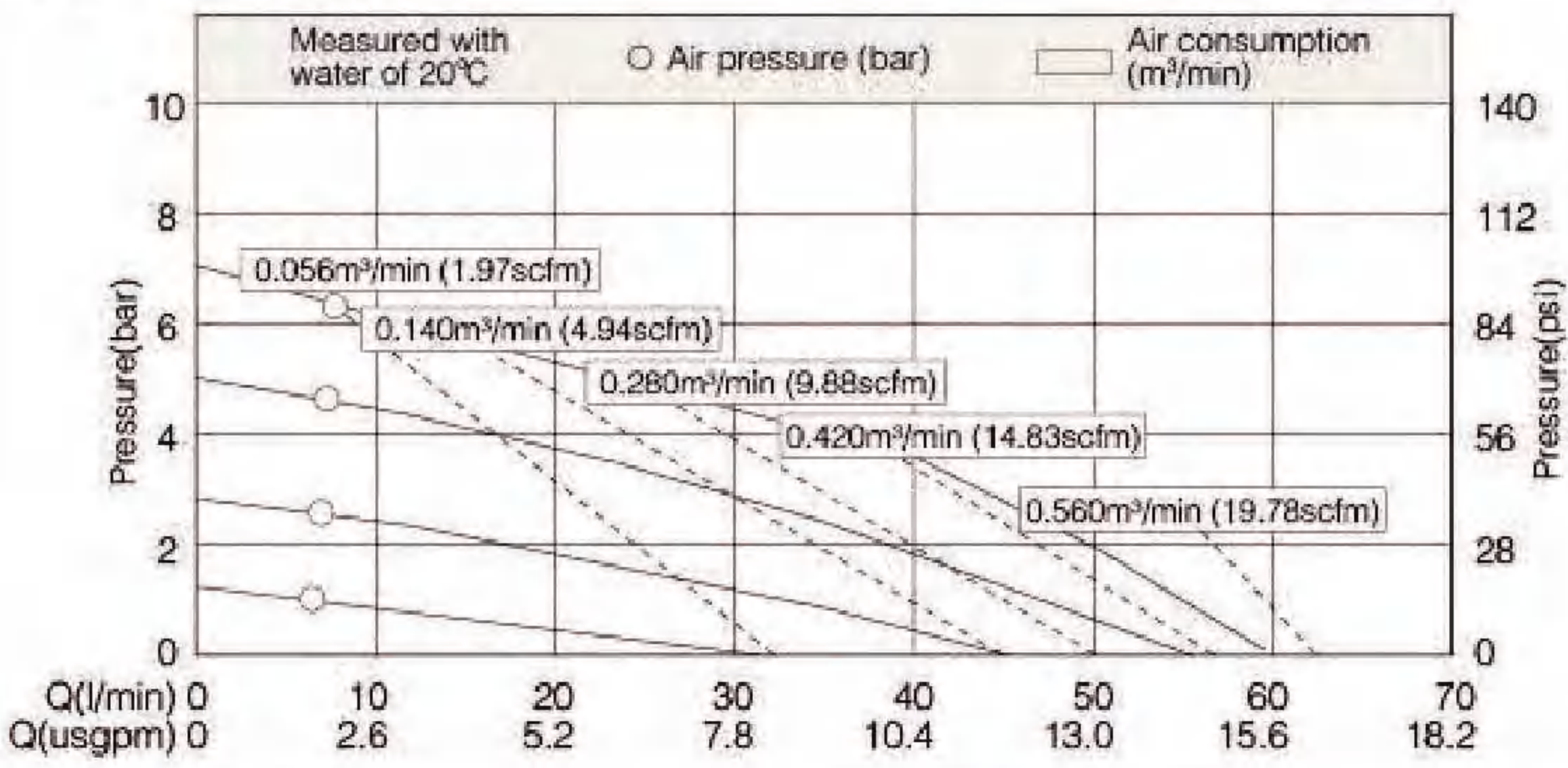
- SS304 pump: 7.5 Kgs.
- SS316 pump : 7.5 Kgs.



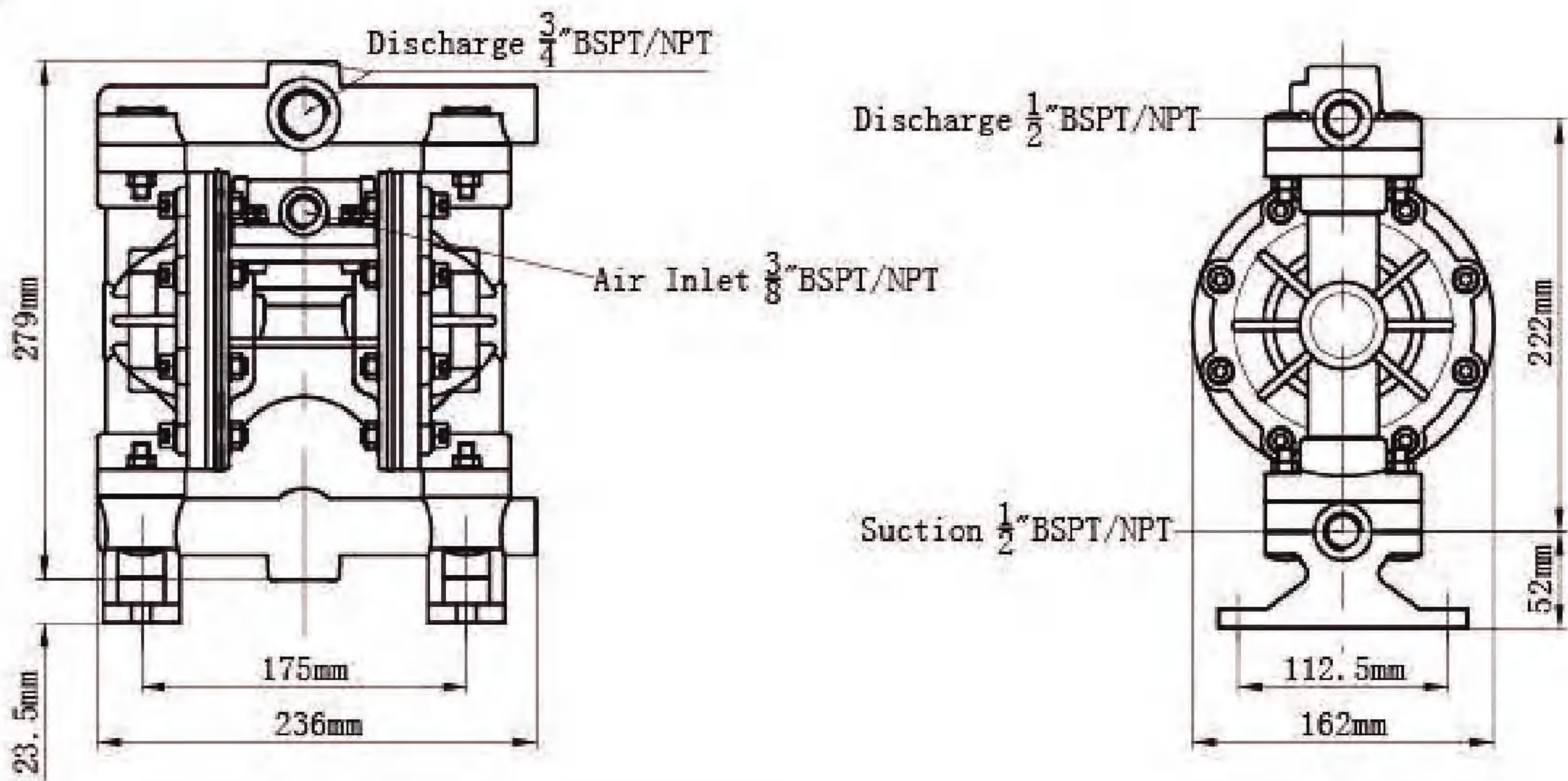
Technical Parameter

Suction lift [mwc]	dry	4
	Wet	7.6
Max particle diameter [mm]		2.5
Suction and discharge		1/2 3/4
Size [in]		
Air inlet size [in]		3/8
Max flow [l/min]		57
Max head [m]		84
Max air inlet pressure [bar]		8.4

Performance curve



Installation size





JAPAN QUALITY



AD25 Aluminum pump

Material quality

Pump body : Aluminum, Cast iron

Diaphragm : Santoprene, Hytrel, Teflon, Viton, EPDM, Buna-N

Valve ball : Santoprene, Hytrel, Teflon, Viton,

Stainless steel, Ceramic

Valve seat : Santoprene, Hytrel, Teflon, Viton, Stainless steel

Center block : PP, Aluminum, Stainless steel

Weight

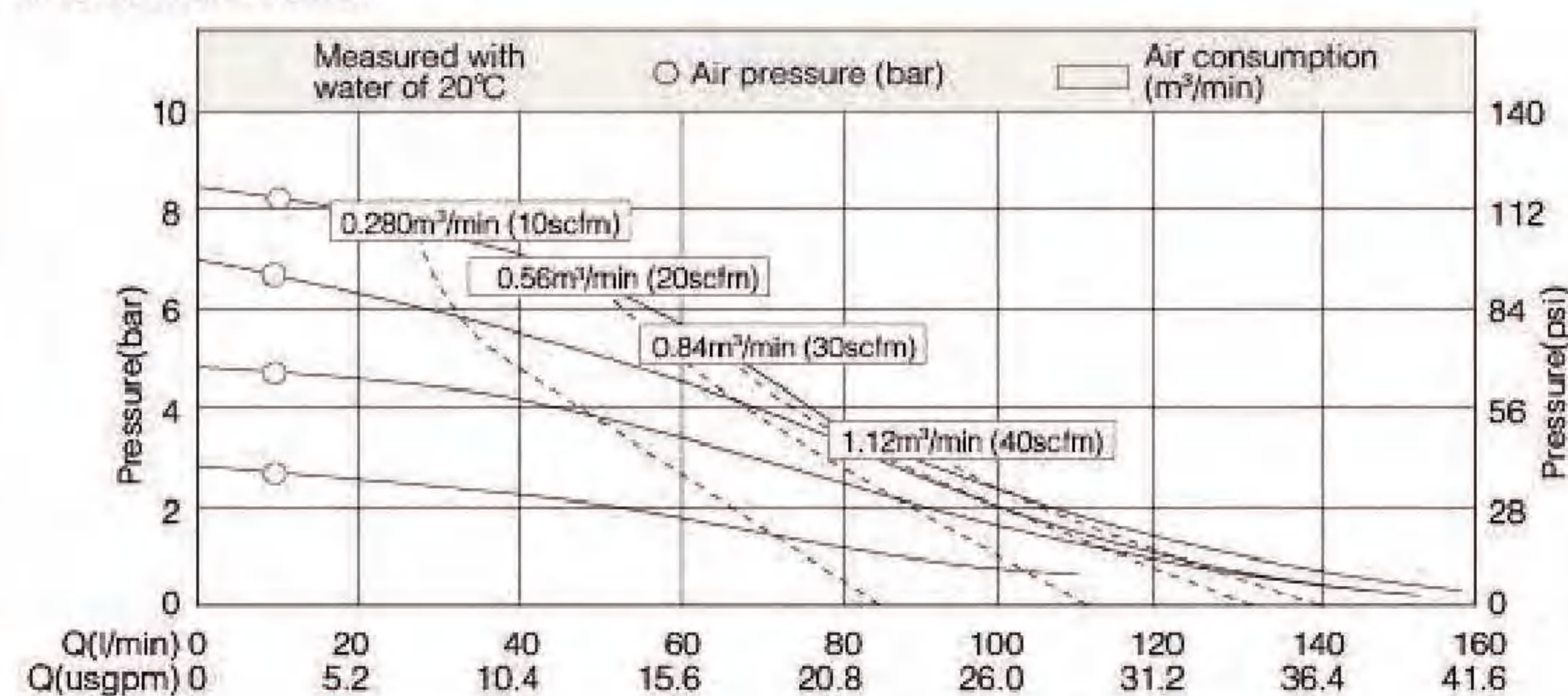
Aluminum pump: 11 Kgs.



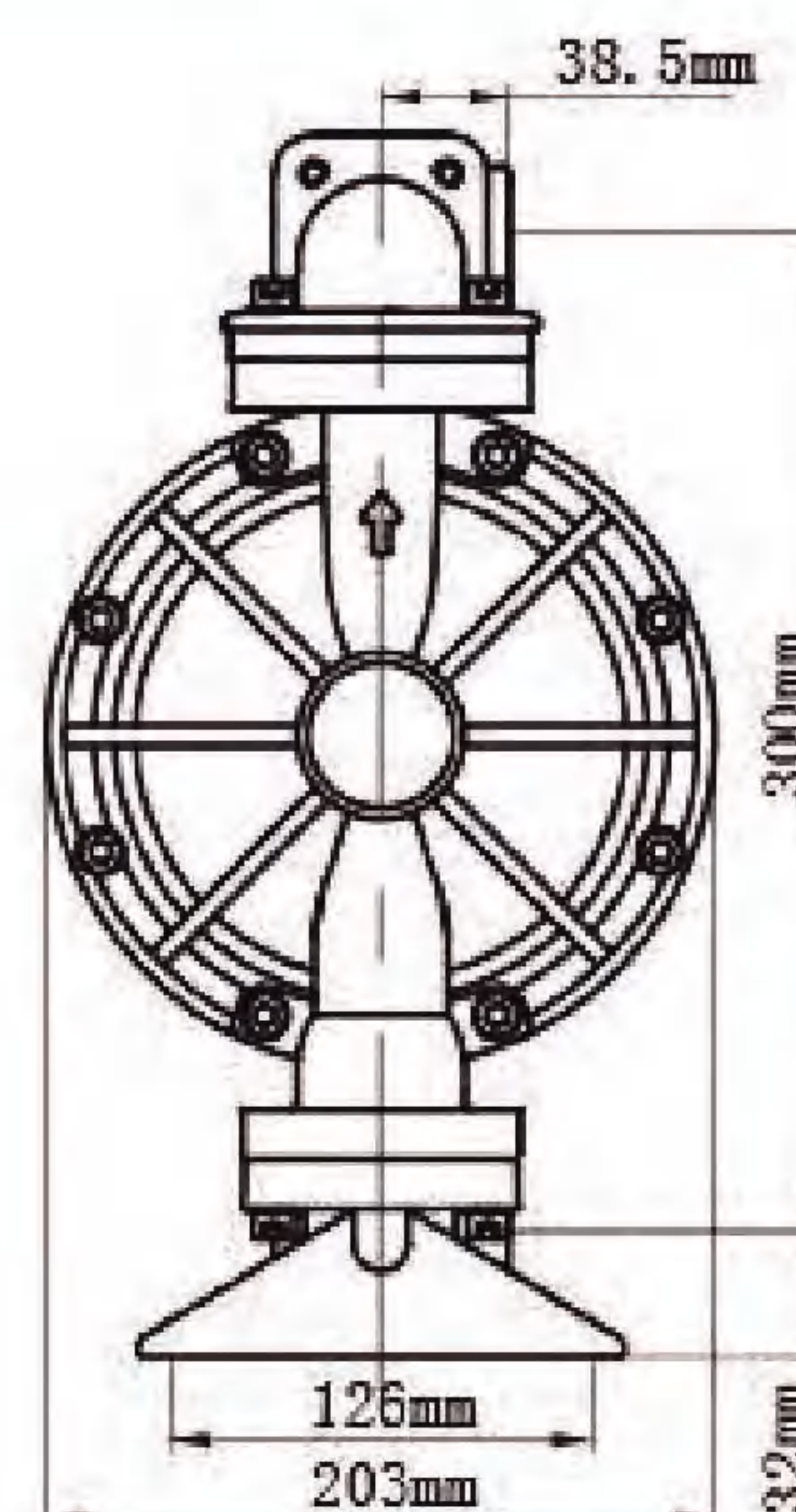
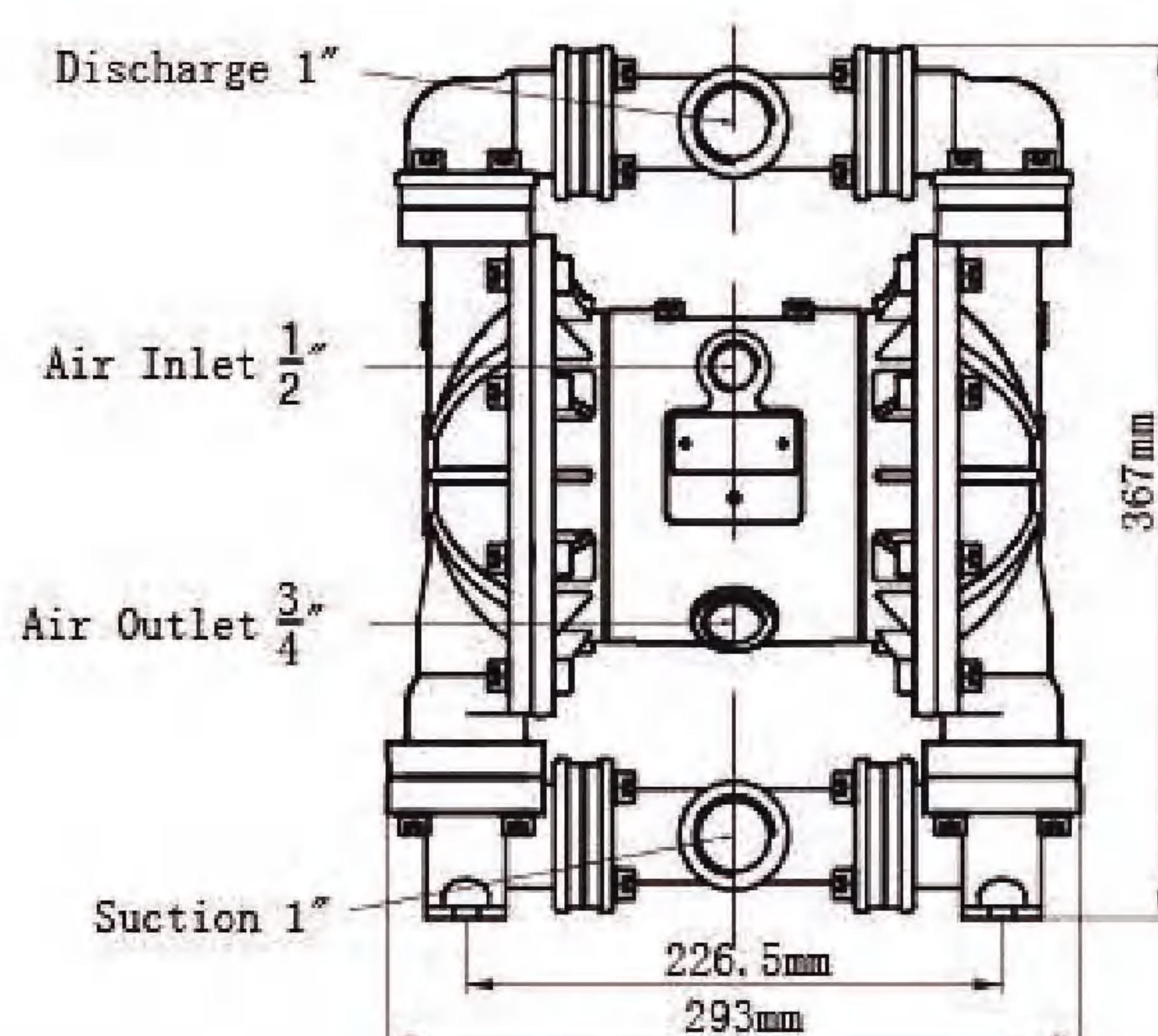
Technical Parameters

Suction lift [mwc]	dry	4
	Wet	8
Max particle diameter [mm]		4
Suction and discharge		1
Size [in]		
Air inlet size [in]		1/2
Max flow [l/min]		157
Max head [m]		84
Max air inlet pressure [bar]		8.4

Performance curve



Installation size



AD25 Plastic pump



JAPAN QUALITY



Material quality

Pump body : PP,PVDF, POM

Diaphragm : Santoprene, Hytrel, Teflon, Viton, EPDM, Buna-N

Valve ball : Teflon, Stainless steel, Santoprene, Hytrel, Viton, EPDM, Buna-N

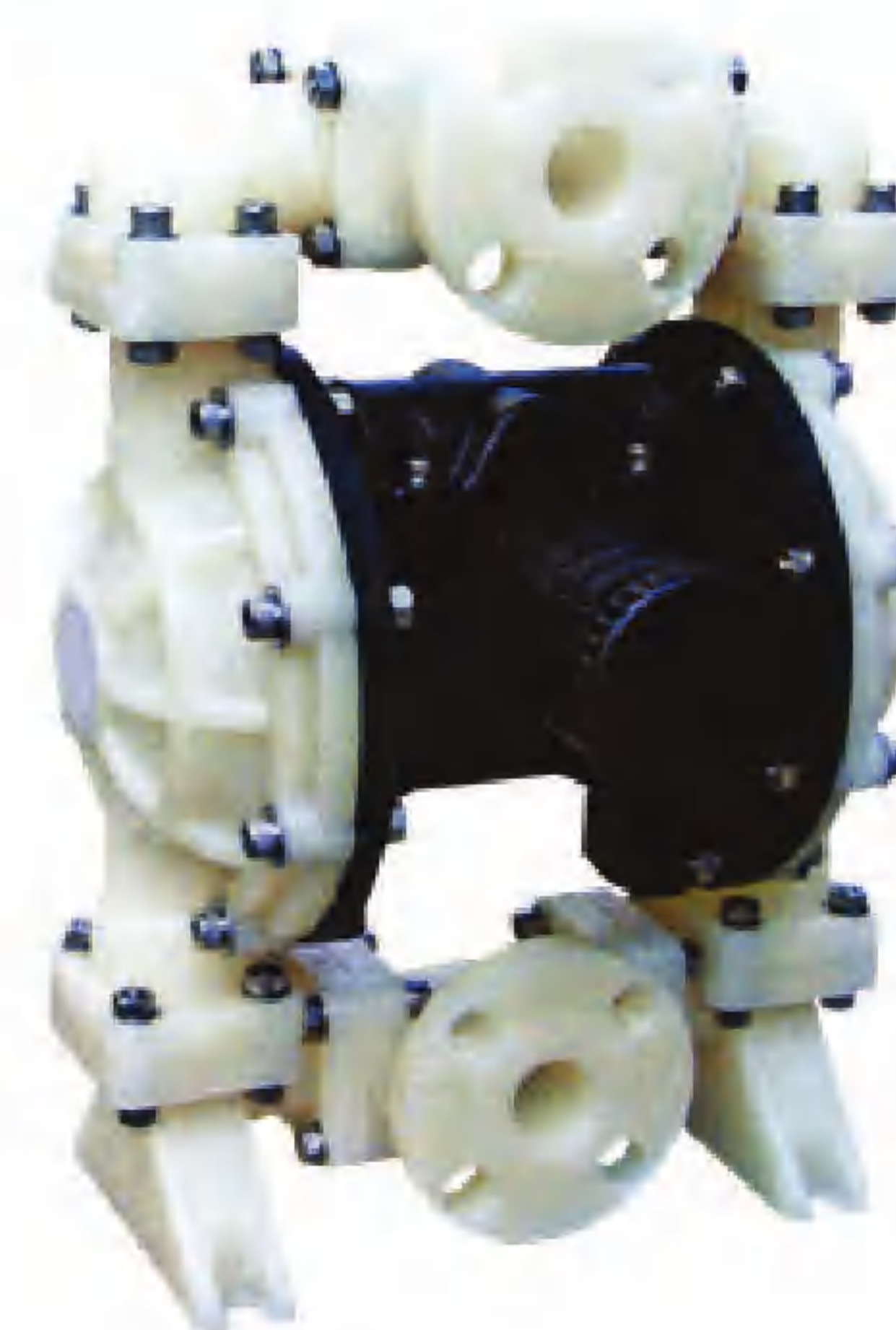
Valve seat : Teflon Santoprene, Hytrel, Viton, PP

Center block : PP, Aluminum, Stainless steel

Weight

PP pump/POM pump: 9 Kgs.

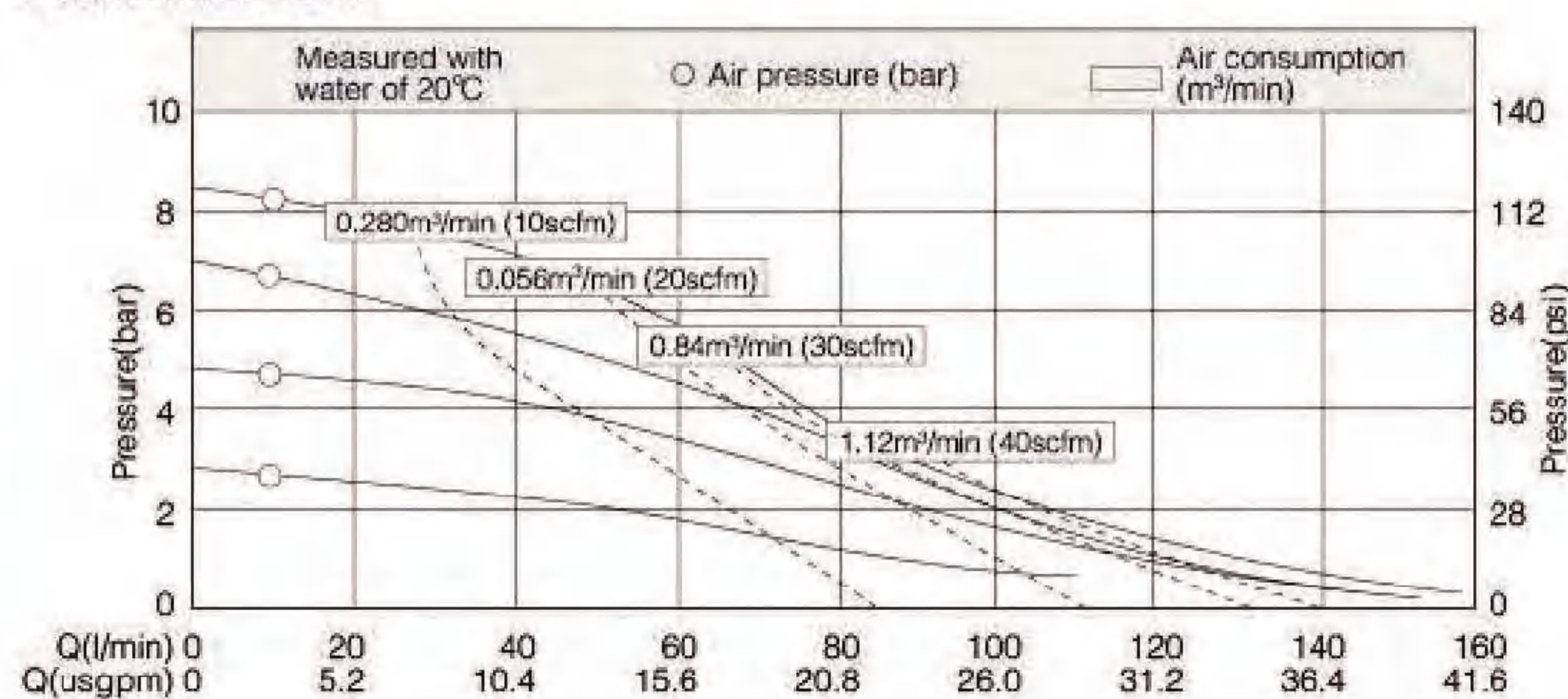
PVDF pump : 12 Kgs.



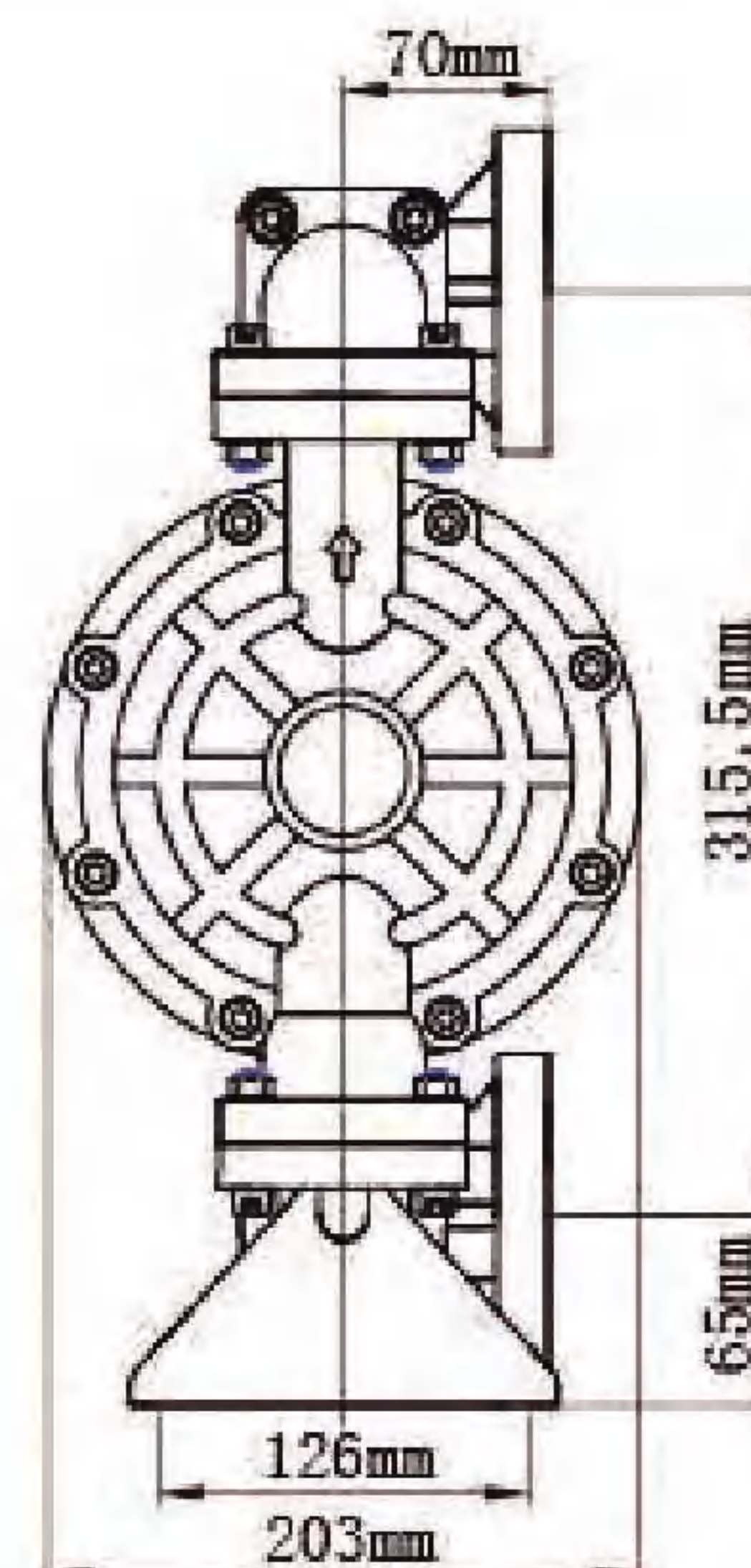
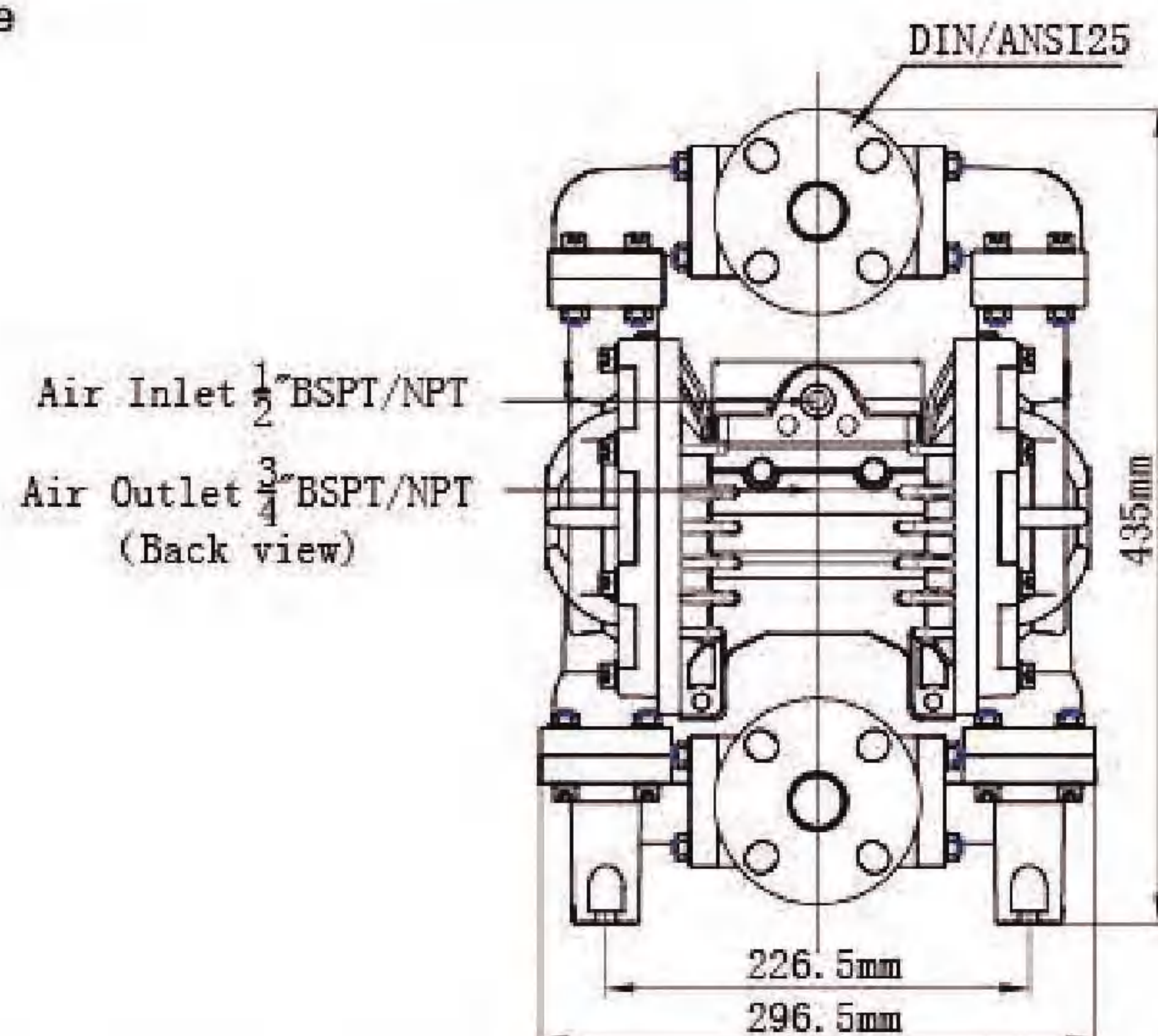
Technical Parameters

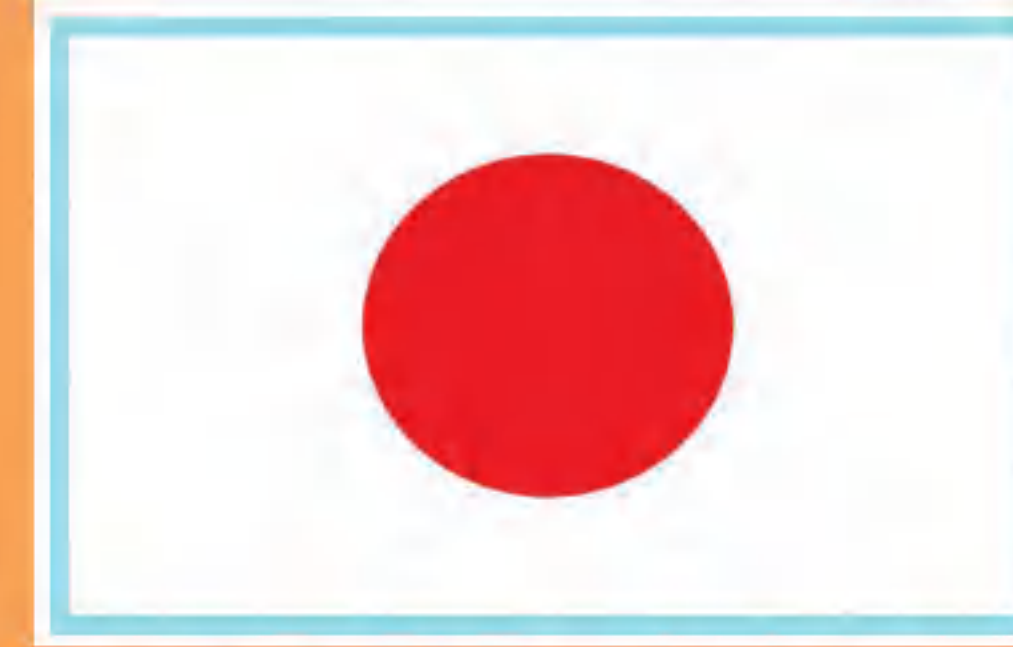
Suction lift [mwc]	dry	4
	Wet	8
Max particle diameter [mm]		4
Suction and discharge		1
Size [in]		
Air inlet size [in]		1/2
Max flow [l/min]		157
Max head [m]		84
Max air inlet pressure [bar]		8.4

Performance curve



Installation size





JAPAN QUALITY



AD25 Stainless steel pump

Material quality

Pump body : SS304,SS316,SS316L

Diaphragm : Santoprene, Hytrel, Teflon, Viton, EPDM, Buna-N

Valve ball : Santoprene, Hytrel, Teflon,Viton,

Stainless steel, Ceramic

Valve seat : Santoprene, Hytrel Teflon,Viton, Stainless steel

Center Block : PP, Aluminum, Stainless steel

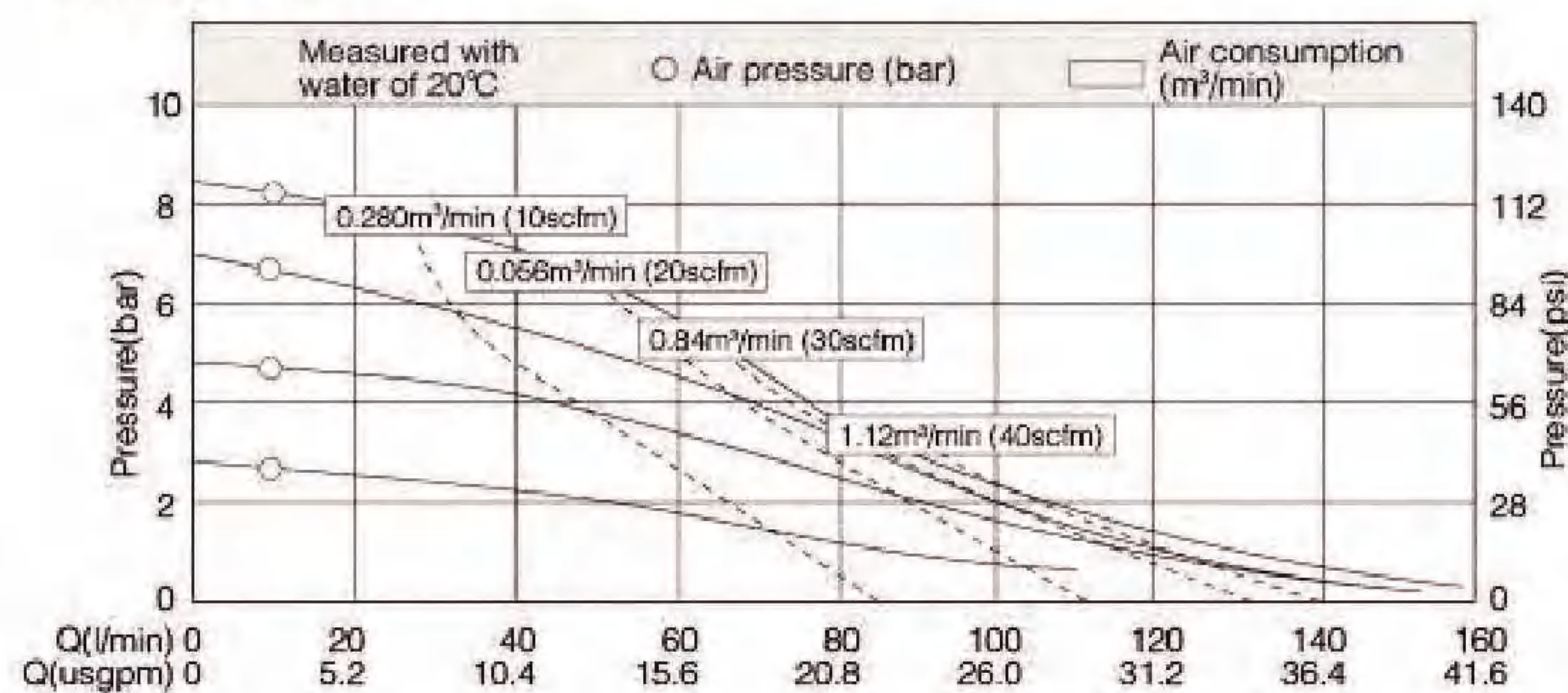
Weight

SS304 Pump : 16 Kgs.

SS316 pump : 16 Kgs.



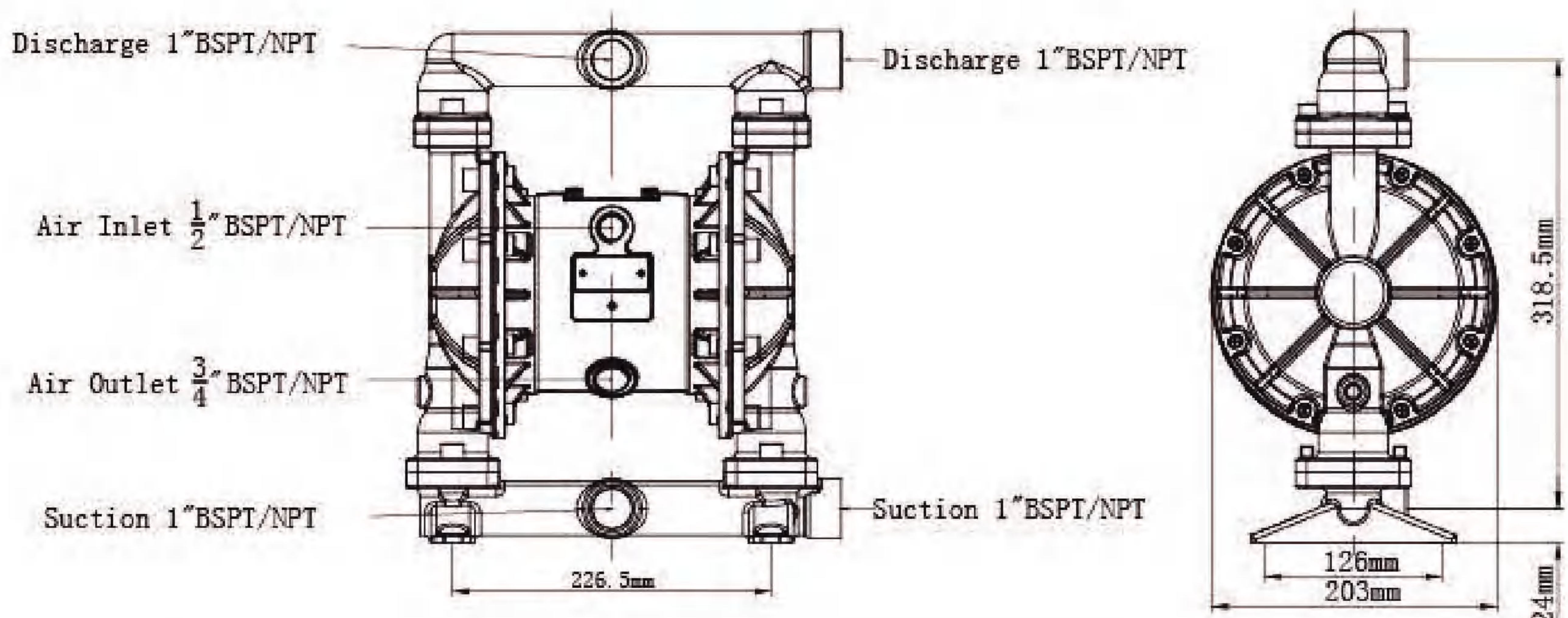
Performance curve



Technical Parameters

Suction lift [mwc]	dry	4
	Wet	8
Max particle diameter [mm]		4
Suction and discharge		1
Size [in]		
Air inlet size [in]		1/2
Max flow [l/min]		157
Max head [m]		84
Max air inlet pressure [bar]		8.4

Installation size



AD40 Aluminum pump

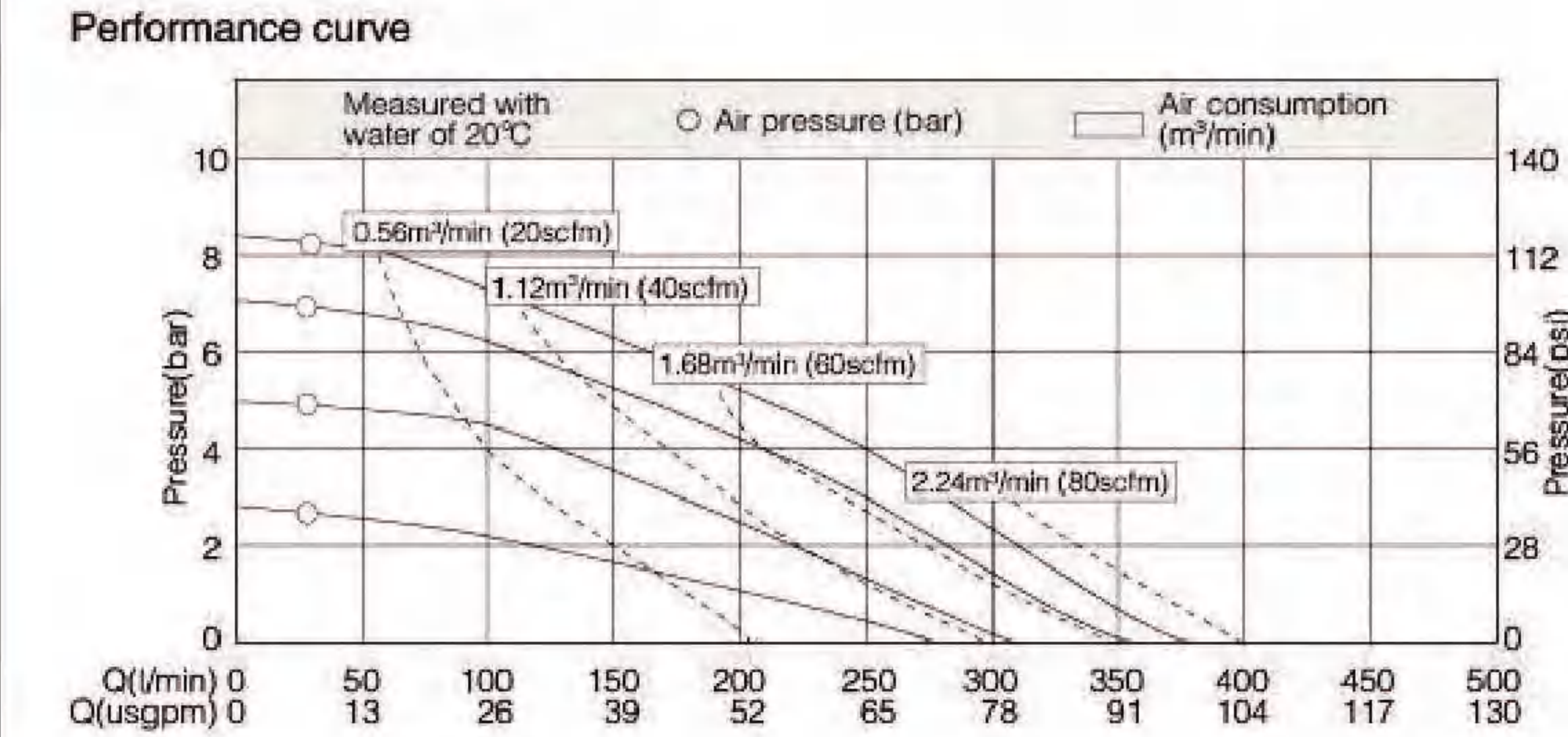


Material quality

- Pump body : Aluminum, Cast iron
- Diaphragm : Santoprene, Hytrel, Teflon, Viton, EPDM, Buna-N
- Valve ball : Santoprene, Hytrel, Teflon , Viton, Stainless steel, Ceramic
- Valve seat : Santoprene, Hytrel, Teflon , Viton, Stainless steel
- Center block : PP, Aluminum, Stainless steel

Weight

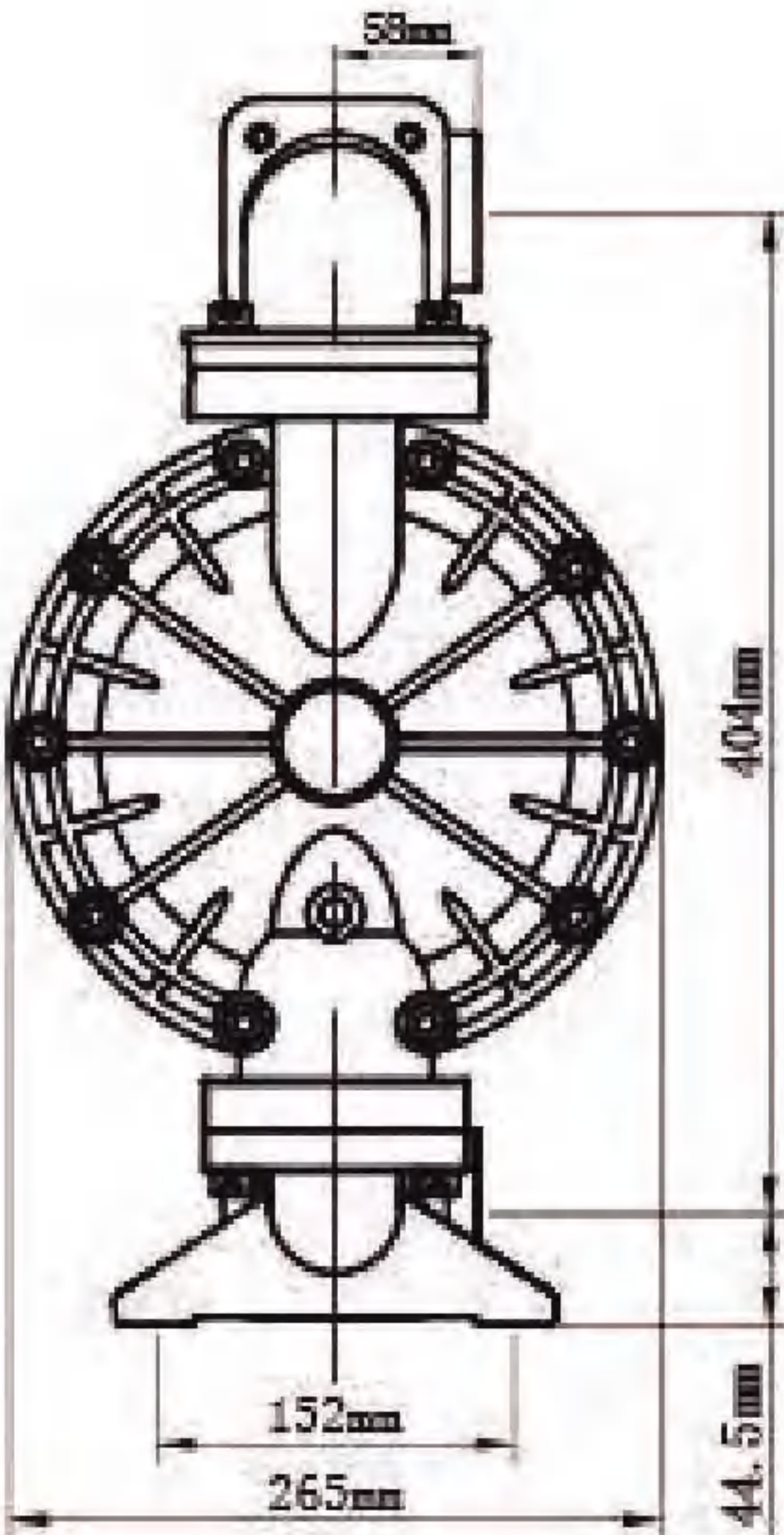
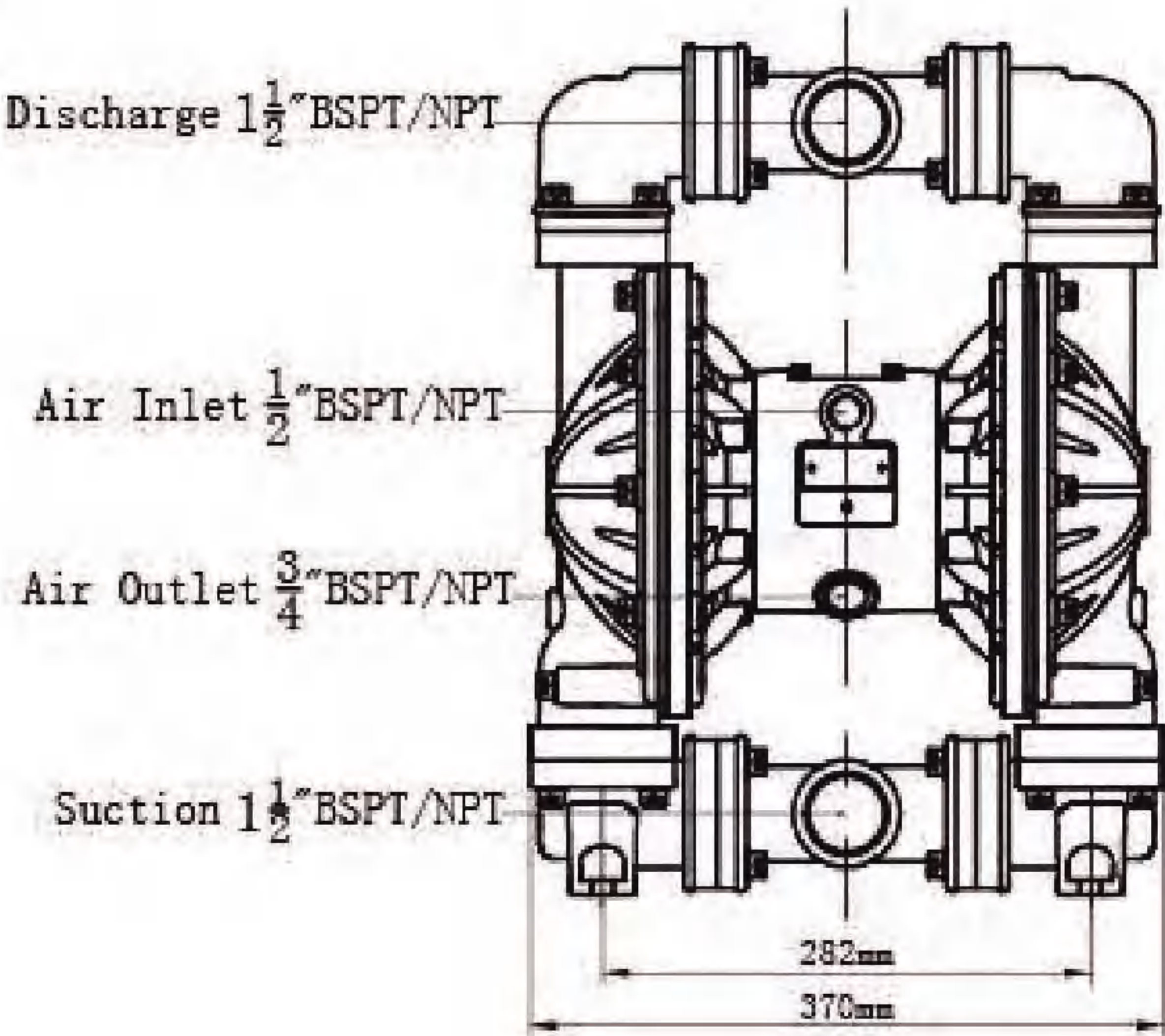
Aluminum pump : 20 Kgs.



Technical Parameters

Suction lift [mwc]	dry	5
	Wet	8
Max particle diameter [mm]		5
Suction and discharge		11 / 2
Size [in]		
Air inlet size [in]		1/2
Max flow [l/min]		358
Max head [m]		84
Max air inlet pressure [bar]		8.4

Installation size





JAPAN QUALITY



AD40 Plastic pump

Material quality

Pump body : PP, PVDF

Diaphragm : Santoprene, Hytrel, Teflon, Viton, EPDM, Buna-N

Valve ball : Santoprene, Hytrel, Teflon , Viton,

Stainless steel, Ceramic

Valve seat : Santoprene, Hytrel, Teflon , Viton, Stainless steel

Center block : PP, Aluminum, Stainless steel

Weight

PP pump : 17 Kgs.

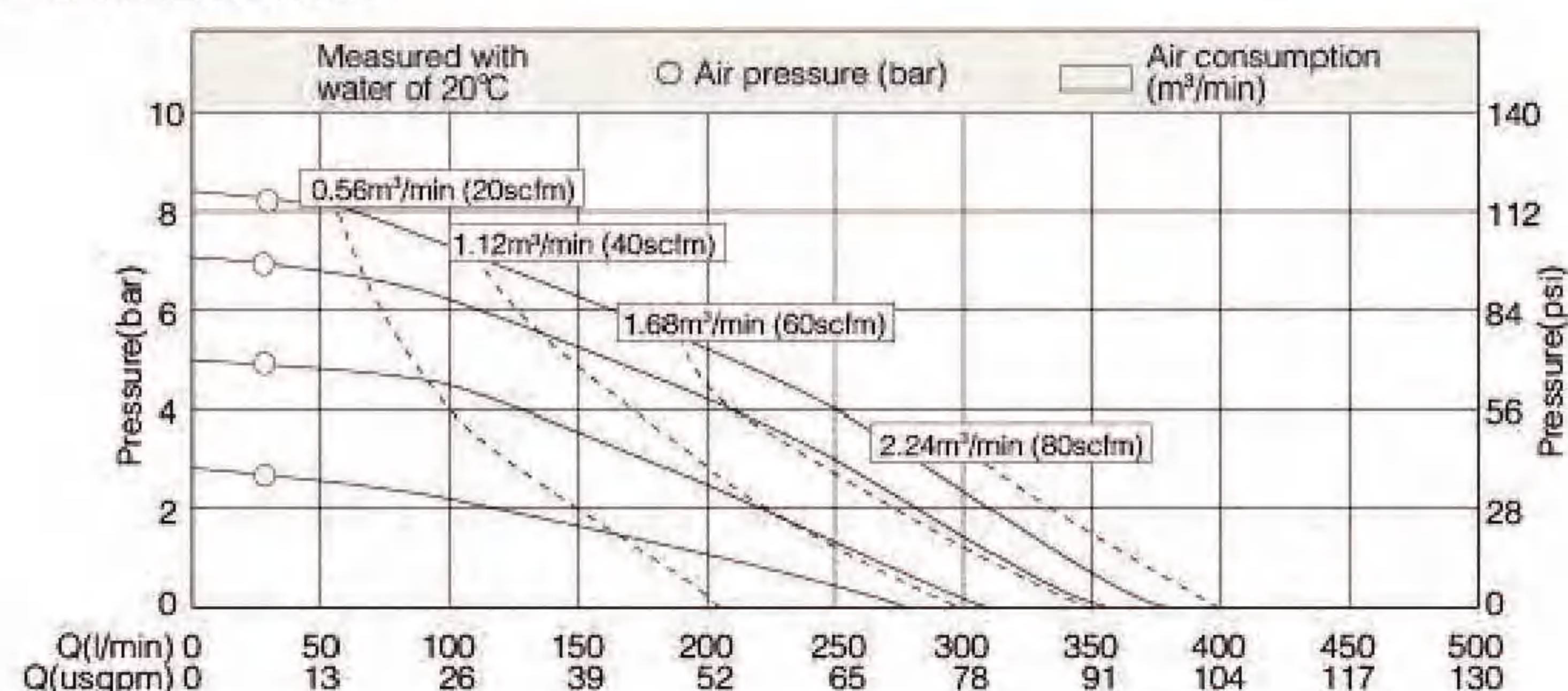
PVDF pump : 24 Kgs.



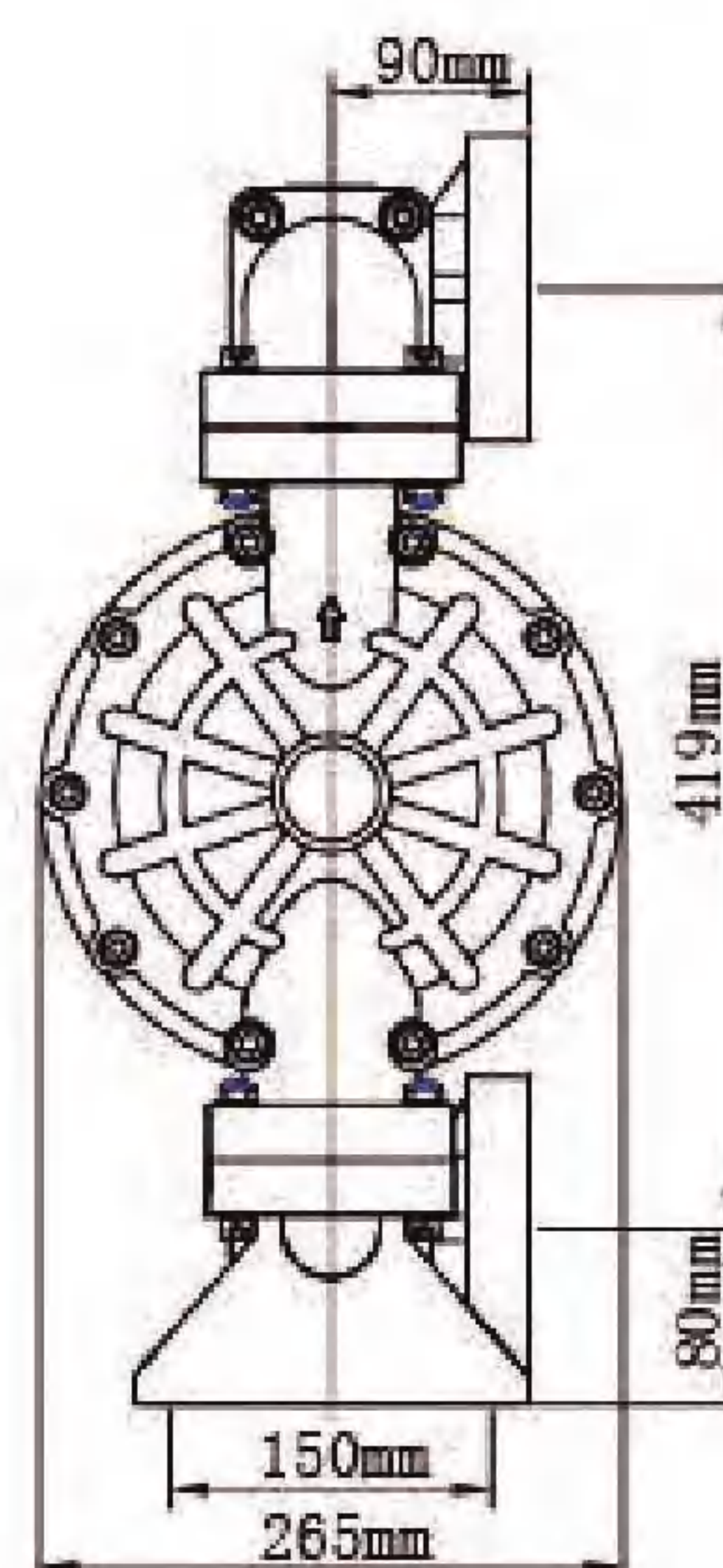
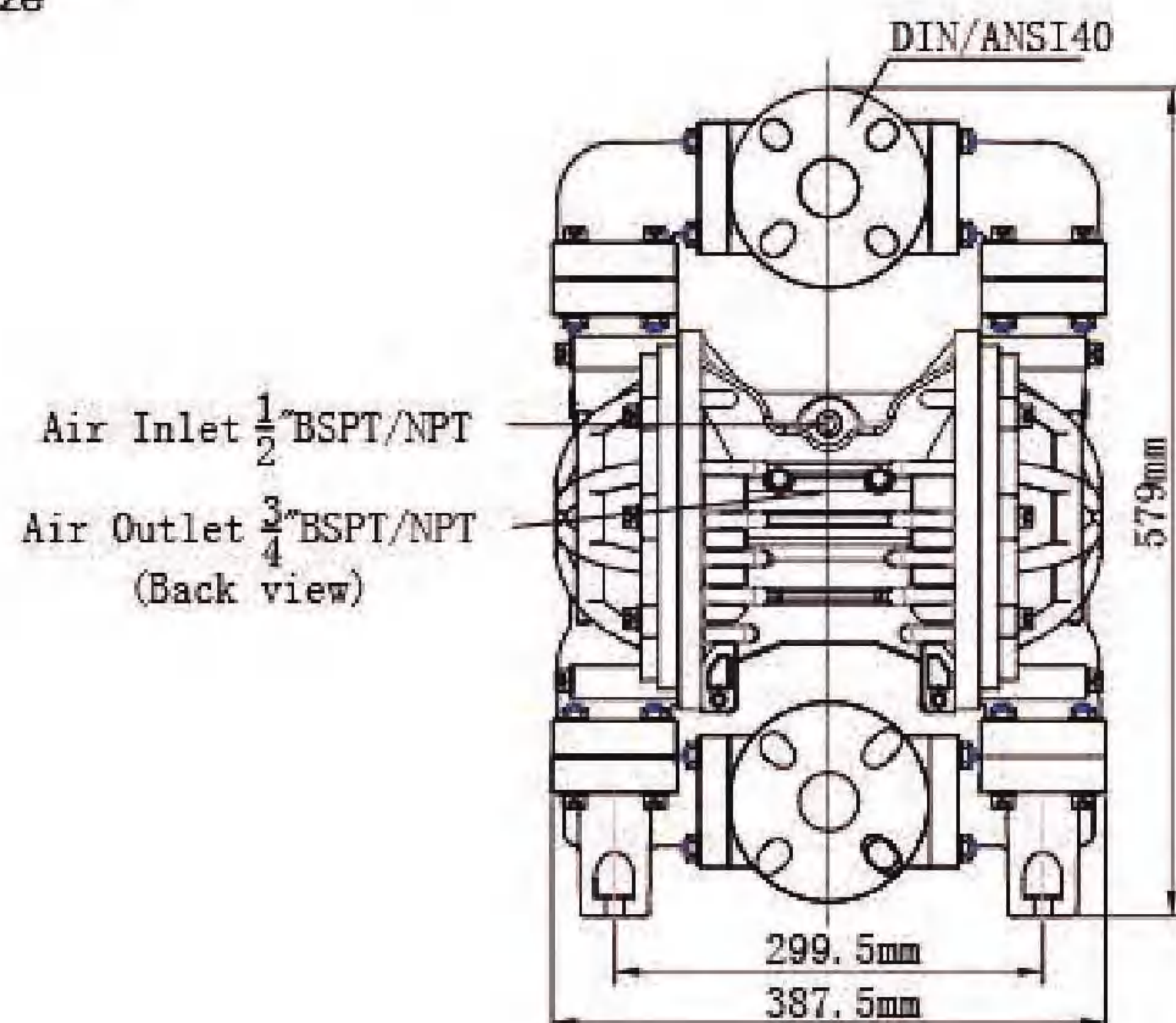
Technical Parameters

Suction lift [mwc]	dry	5
	Wet	8
Max particle diameter [mm]		5
Suction and discharge		1 1/2
Size [in]		
Air inlet size [in]		1/2
Max flow [l/min]		358
Max head [m]		84
Max air inlet pressure [bar]		8.4

Performance curve



Installation size





JAPAN QUALITY



AD40 Stainless steel pump

Material quality

Pump body : SS304, SS316, SS316L

Diaphragm : Santoprene, Hytrel, Teflon, Viton, EPDM, Buna-N

Valve ball : Santoprene, Hytrel, Teflon , Viton,

Stainless steel, Ceramic

Valve seat : Santoprene, Hytrel, Teflon , Viton, Stainless steel

Center block : PP, Aluminum, Stainless steel

Weight

SS304 pump : 31 Kgs.

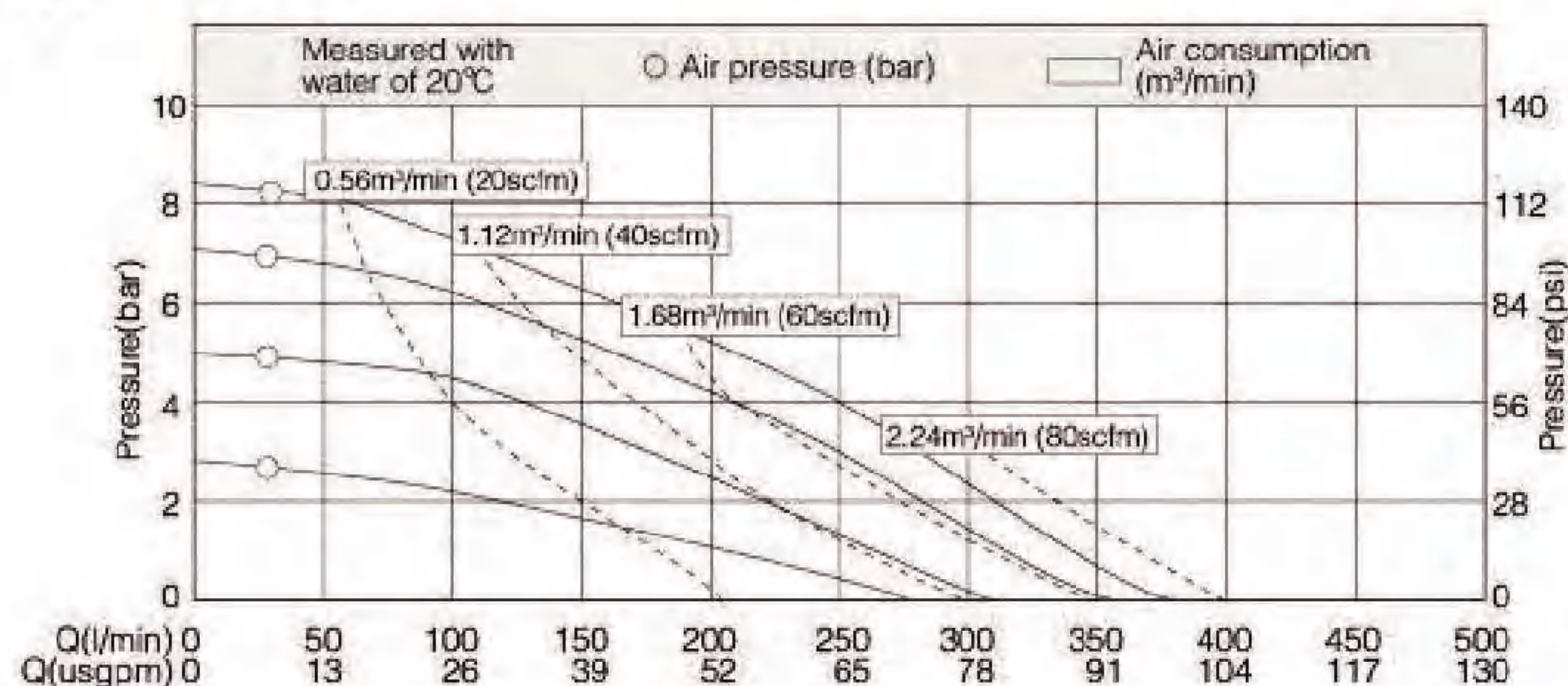
SS316 pump : 31 Kgs.



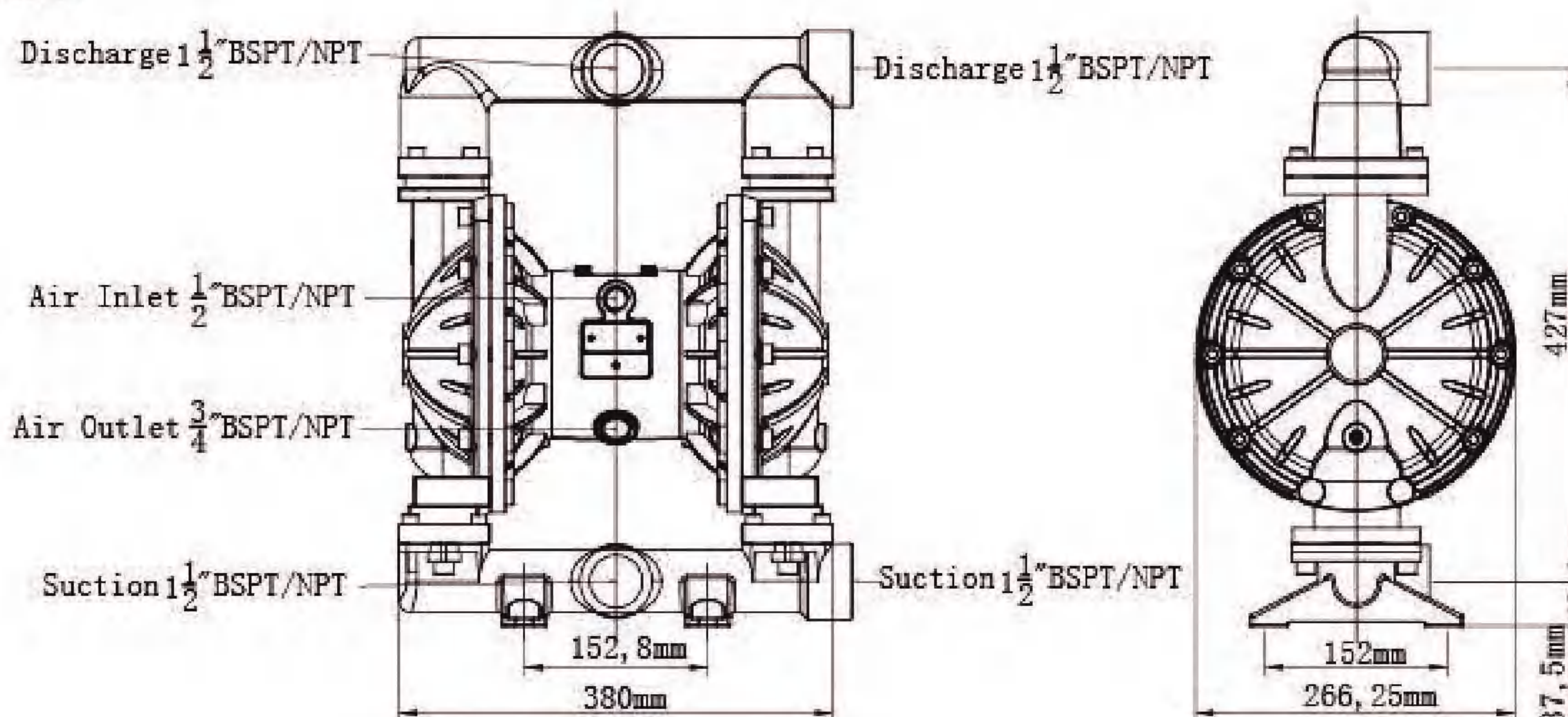
Technical Parameters

Suction lift [mwc]	dry	5
	Wet	8
Max particle diameter [mm]		5
Suction and discharge Size [in]		1 1 / 2
Air inlet size [in]		1/2
Max flow [l/min]		358
Max head [m]		84
Max air inlet pressure [bar]		8.4

Performance curve



Installation size





JAPAN QUALITY



AD50 Aluminum pump

Material quality

Pump body : Aluminum, Cast iron

Diaphragm : Santoprene, Hytrel, Teflon, Viton, EPDM, Buna-N

Valve ball : Santoprene, Hytrel, Teflon , Viton,

Stainless steel, Ceramic

Valve seat : Santoprene, Hytrel, Teflon , Viton, Stainless steel

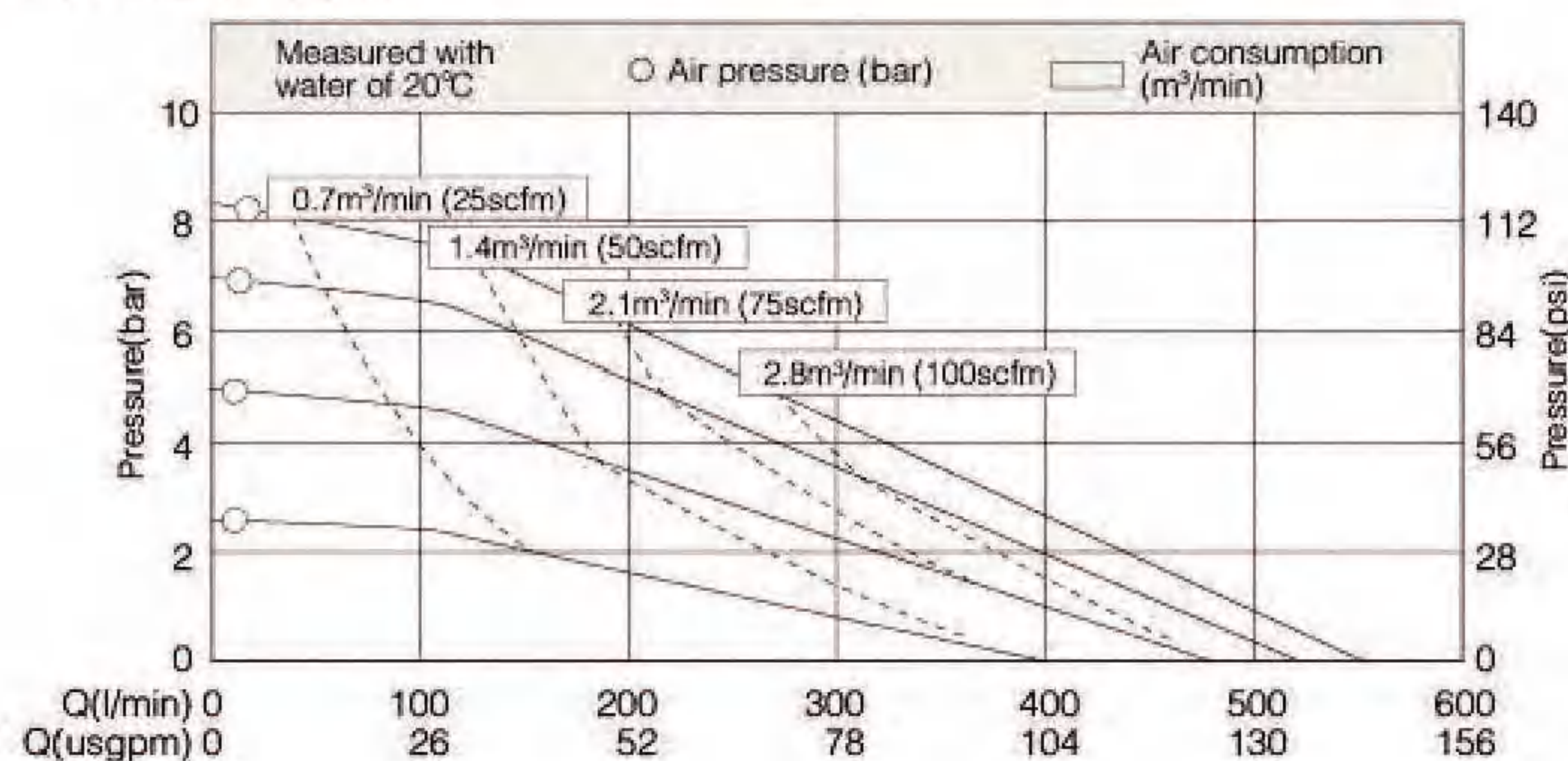
Center block : PP, Aluminum, Stainless steel

Weight

Aluminum pump : 27 Kgs.



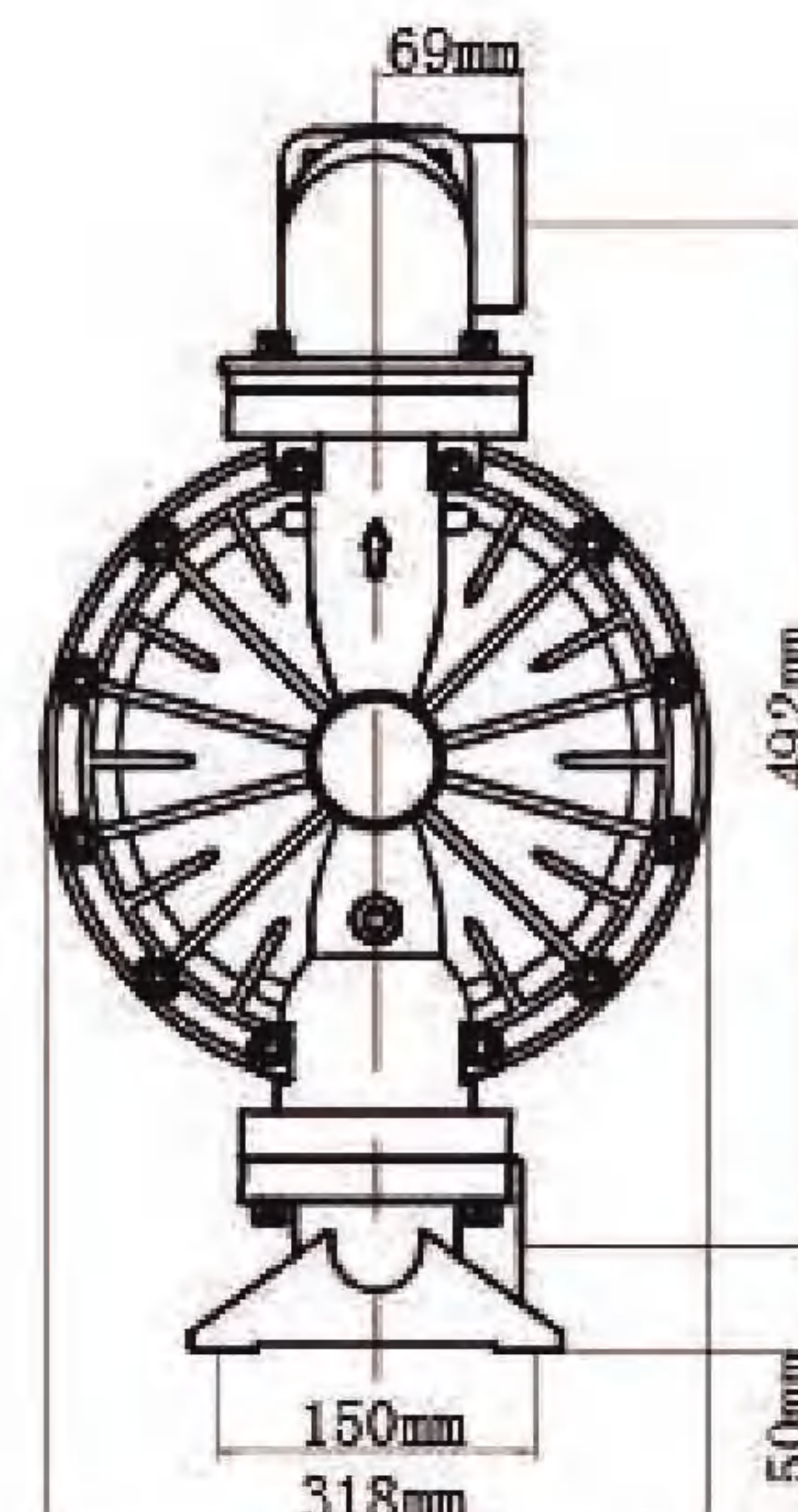
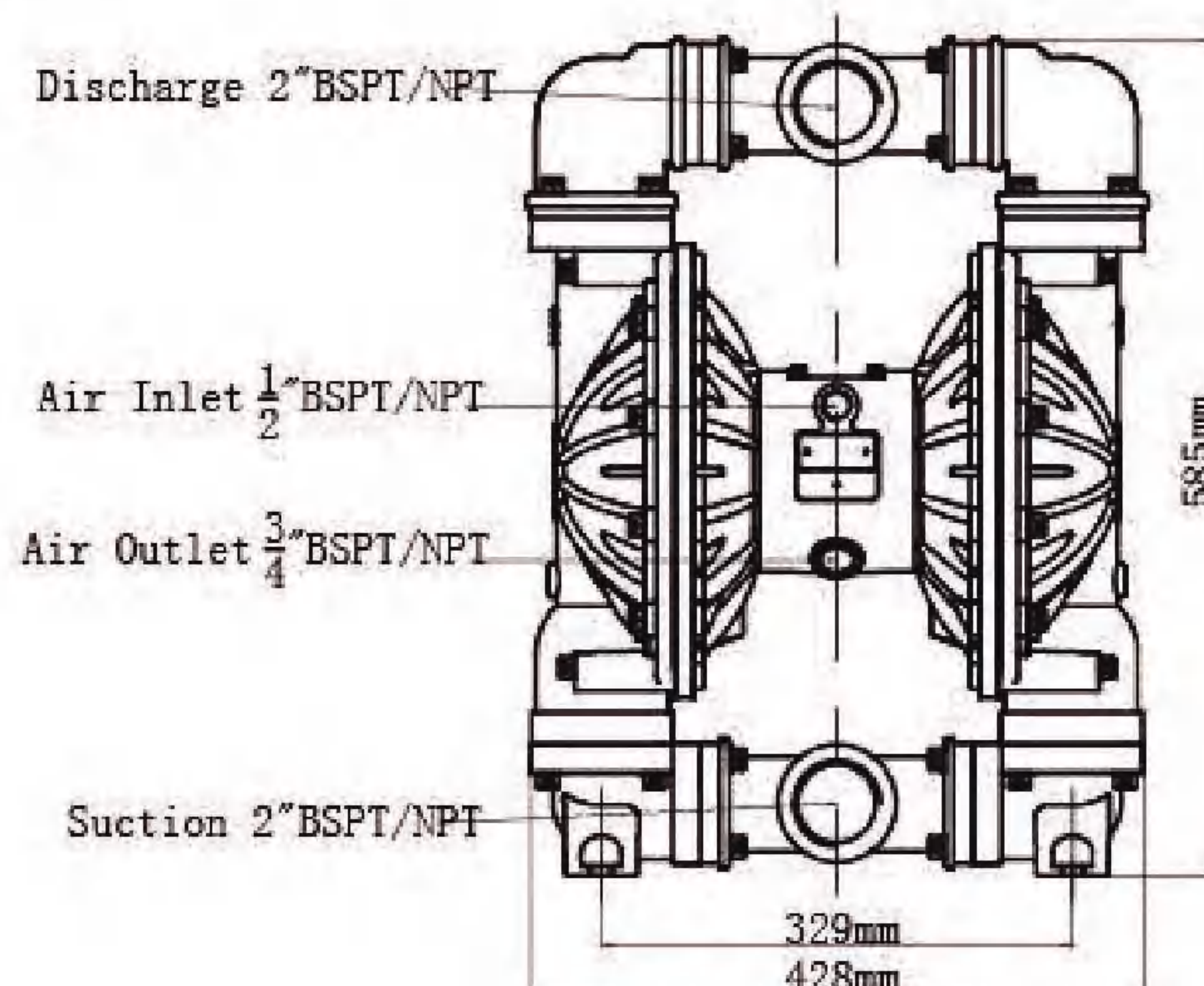
Performance curve



Technical Parameters

Suction lift [mwc]	dry	5
	Wet	8
Max particle diameter [mm]		5
Suction and discharge		2
Size [in]		
Air inlet size [in]		1/2
Max flow [l/min]		587
Max head [m]		84
Max air inlet pressure [bar]		8.4

Installation size





JAPAN QUALITY



AD50 Plastic pump

Material quality

Pump body : PP, PVDF

Diaphragm : Santoprene, Hytrel, Teflon, Viton, EPDM, Buna-N

Valve ball : Teflon, Stainless steel, Santoprene, Hytrel,
Viton, Ceramic

Valve seat : Teflon, Santoprene, hytrel, Viton, PP

Center block : PP, Aluminum, Stainless steel

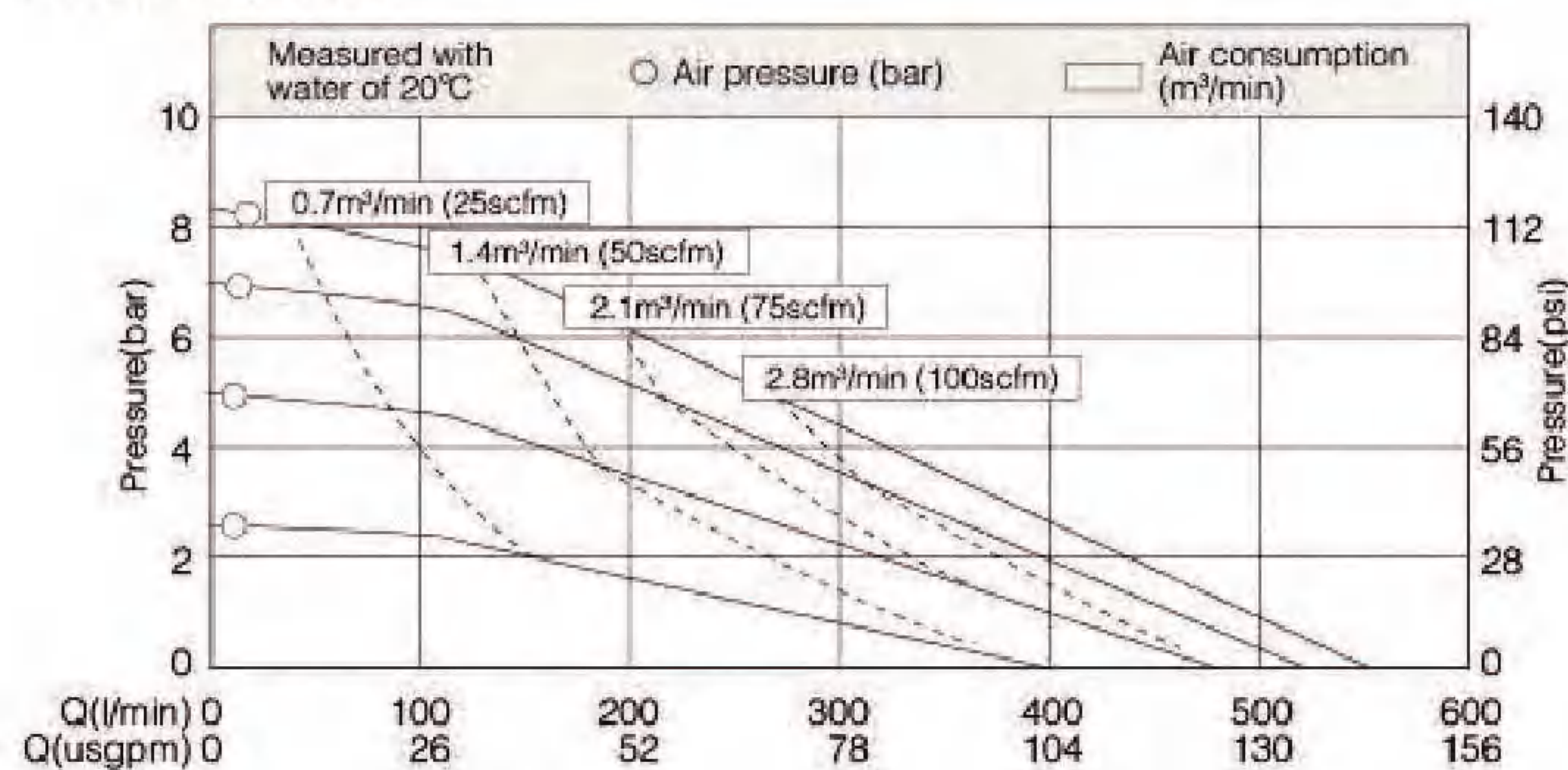
Weight

PP pump : 25 Kgs.

PVDF pump : 34 Kgs.



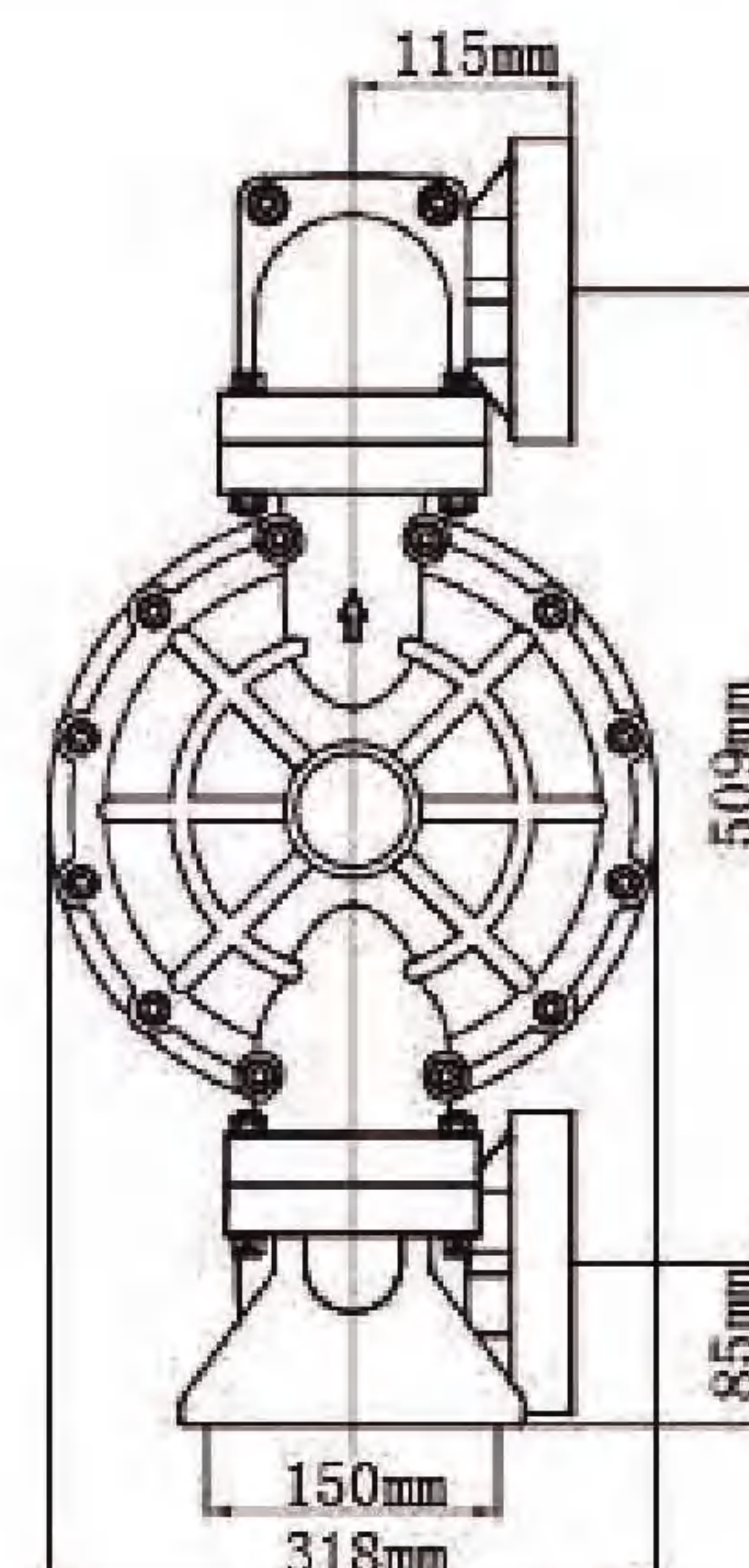
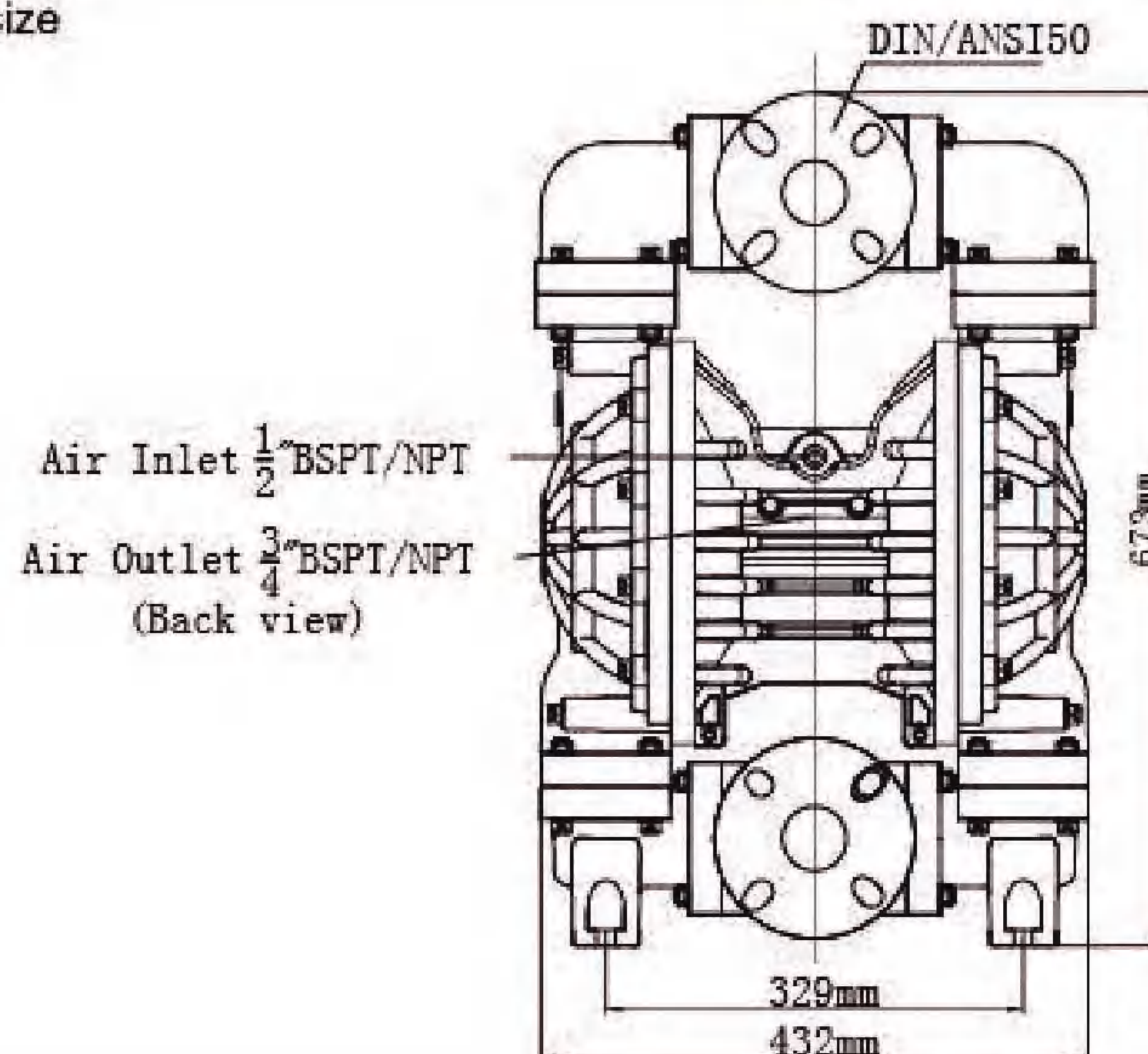
Performance curve



Technical Parameters

Suction lift [mwc]	dry	5
	Wet	8
Max particle diameter [mm]		5
Suction and discharge		2
Size [in]		
Air inlet size [in]		1/2
Max flow [l/min]		587
Max head [m]		84
Max air inlet pressure [bar]		8.4

Installation size





JAPAN QUALITY



AD50 Stainless steel pump

Material quality

Pump body : SS304, SS316, SS316L

Diaphragm : Santoprene, Hytrel, Teflon, Viton, EPDM, Buna-N

Valve ball : Santoprene, Hytrel, Teflon , Viton,

Stainless steel, Ceramic

Valve seat : Santoprene, Hytrel, Teflon , Viton, Stainless steel

Center block : PP, Aluminum, Stainless steel

Weight

SS304 Pump : 48 Kgs.

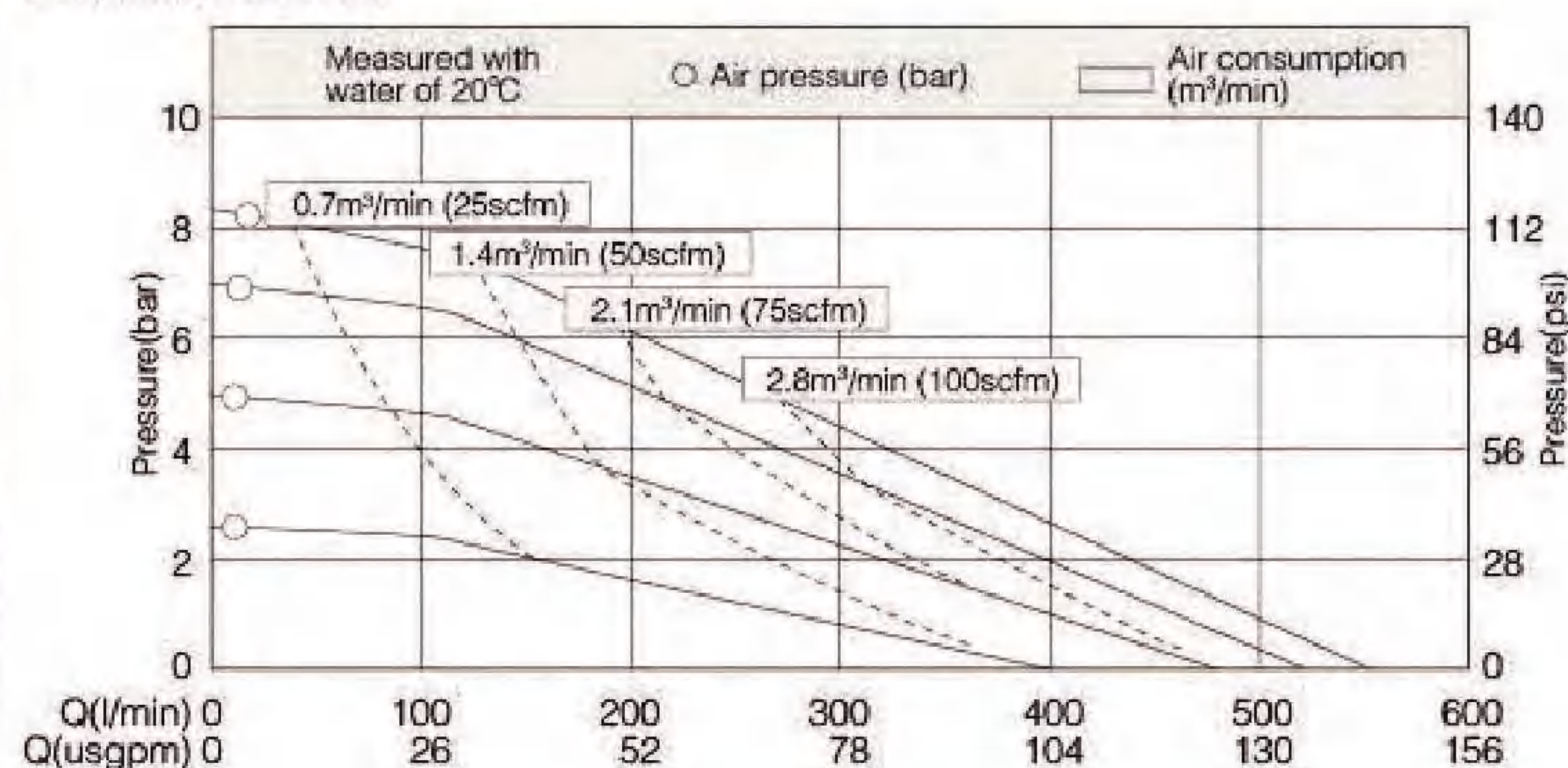
SS316 pump : 48 Kgs.



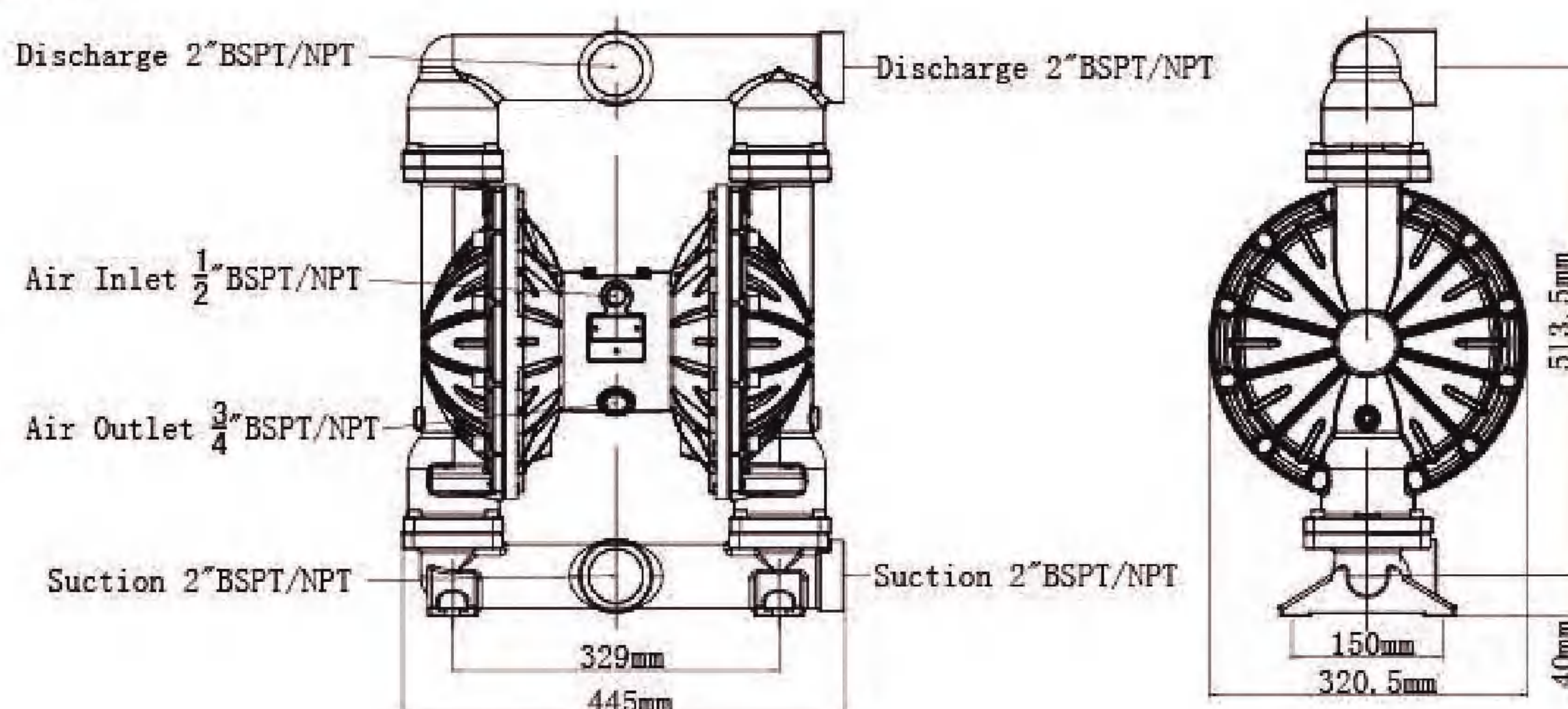
Technical Parameters

Suction lift [mwc]	dry	5
	Wet	8
Max particle diameter [mm]		5
Suction and discharge Size [in]		2
Air inlet size [in]		1/2
Max flow [l/min]		587
Max head [m]		84
Max air inlet pressure [bar]		8.4

Performance curve



Installation size



AD80 Aluminum pump



JAPAN QUALITY



Material quality

- Pump body : SS304, SS316, SS316L
- Diaphragm : Santoprene, Hytrel, Teflon, Viton, EPDM, Buna-N
- Valve ball : Santoprene, Hytrel, Teflon,Viton, Stainless steel, Ceramic
- Valve seat : Santoprene, Hytrel, Teflon,Viton, Stainless steel
- Center block : PP, Aluminum, Stainless steel

Weight

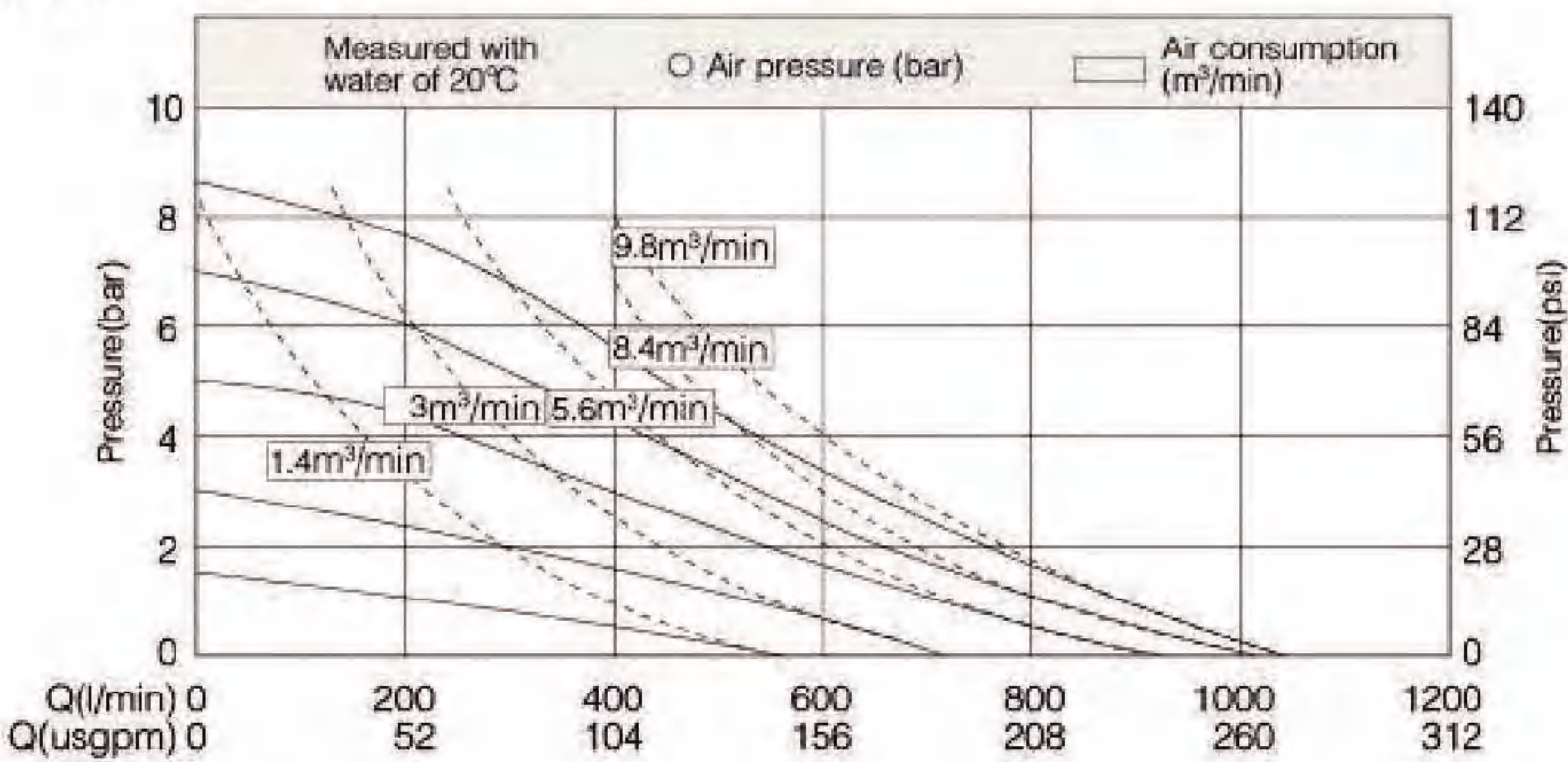
- PP pump : 120 Kgs.
- PVDF pump : 120 Kgs.



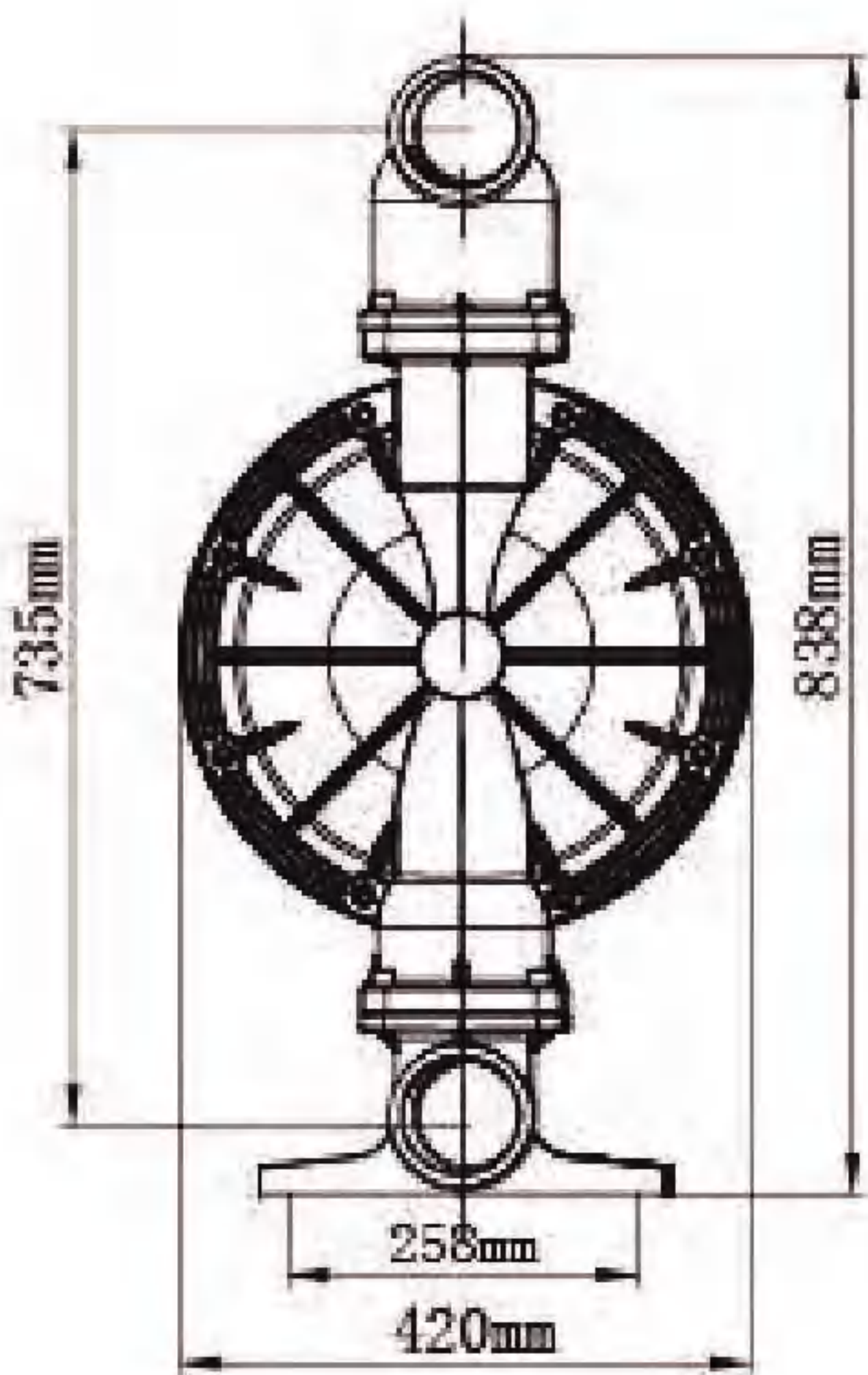
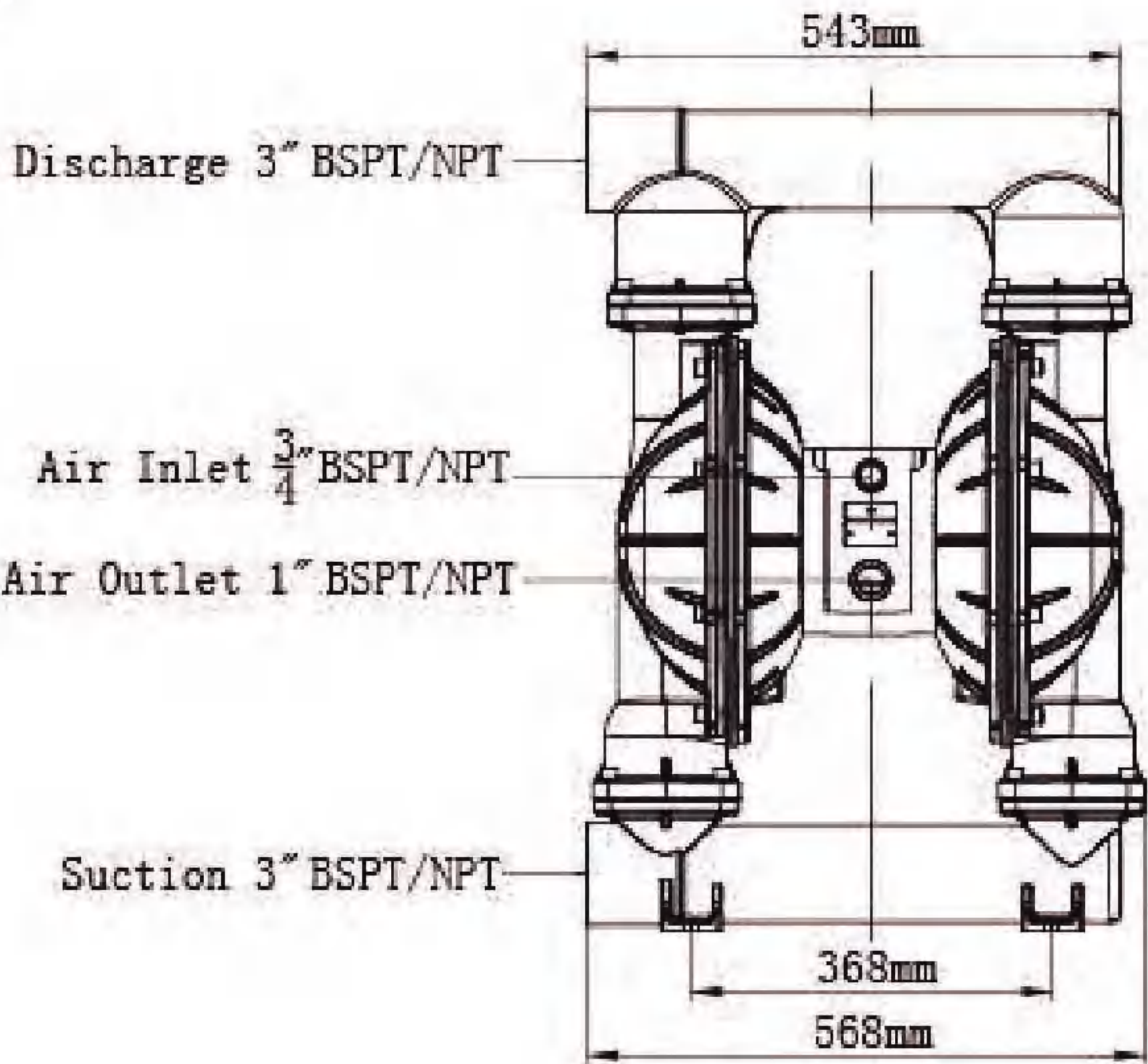
Technical Parameters

Suction lift [mwc]	dry	5
	Wet	8
Max particle diameter [mm]		9.4
Suction and discharge		3
Size [in]		
Air inlet size [in]		3/4
Max flow [l/min]		1060
Max head [m]		84
Max air inlet pressure [bar]		8.4

Performance curve



Installation size





JAPAN QUALITY



AD80 Plastic pump

Material quality

Pump body : PP, PVDF

Diaphragm : Santoprene, Hytrel, Teflon, Viton, EPDM, Buna-N

Valve ball : Teflon, Stainless steel, Santoprene, Hytrel,
Viton, Ceramic

Valve seat : Teflon, Santoprene, Hytrel, Viton, PP

Center block : PP, Aluminum, Stainless steel

Weight

PP pump : 50 Kgs.

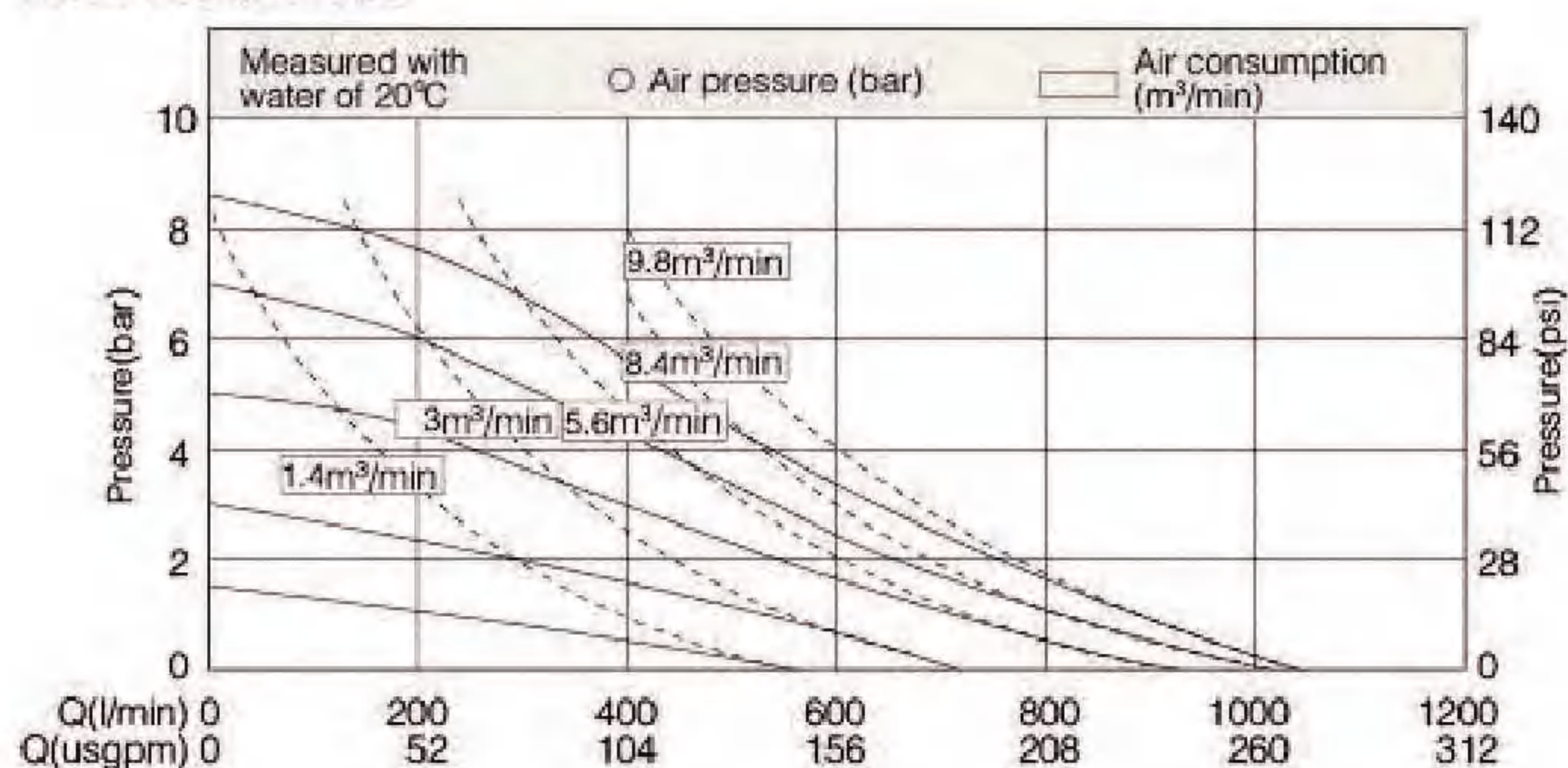
PVDF pump : 90 Kgs.



Technical Parameters

Suction lift [mwc]	dry	5
	Wet	8
Max particle diameter [mm]	9.4	
Suction and discharge	3	
Size [in]		
Air inlet size [in]	3/4	
Max flow [l/min]	1060	
Max head [m]	84	
Max air inlet pressure [bar]	8.4	

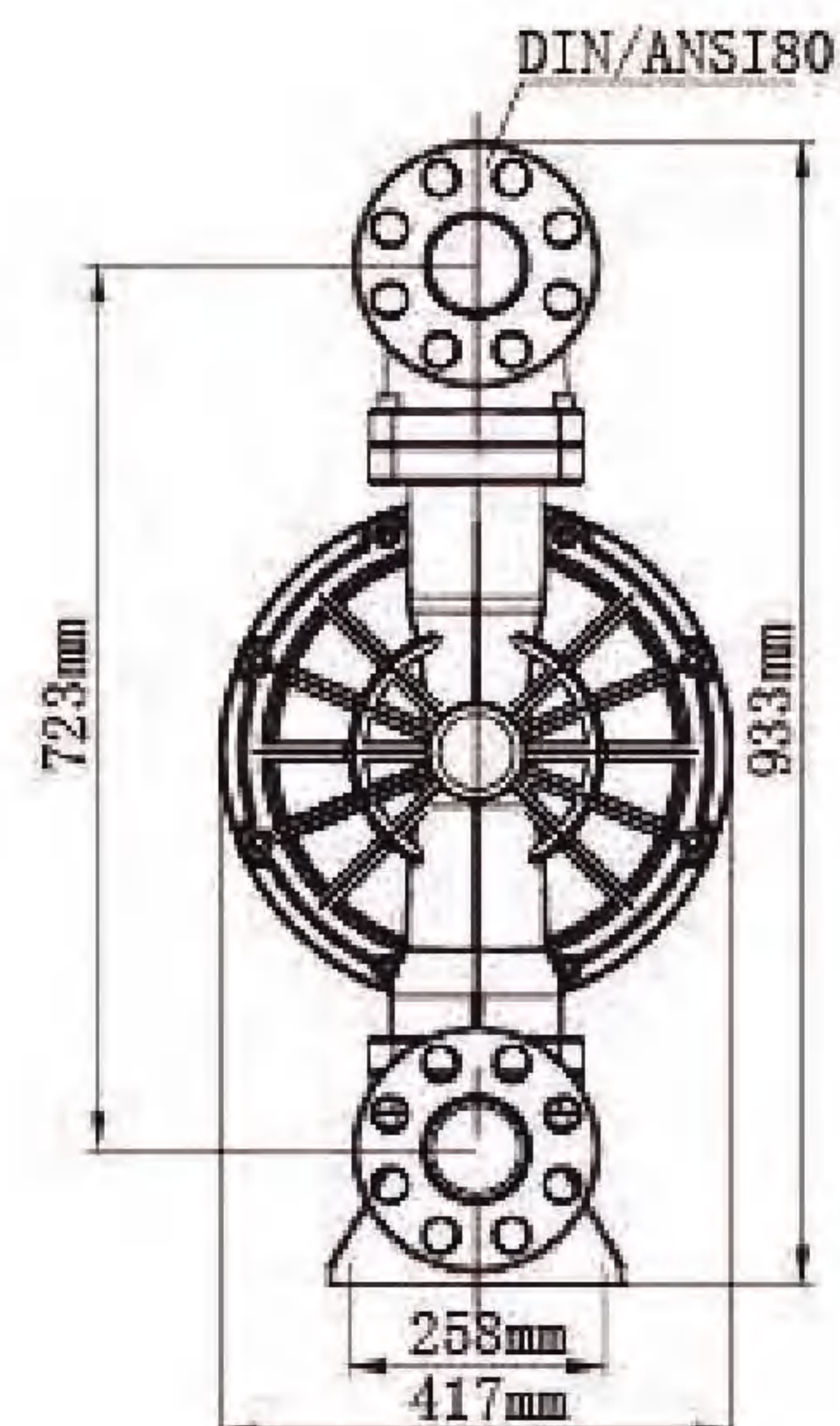
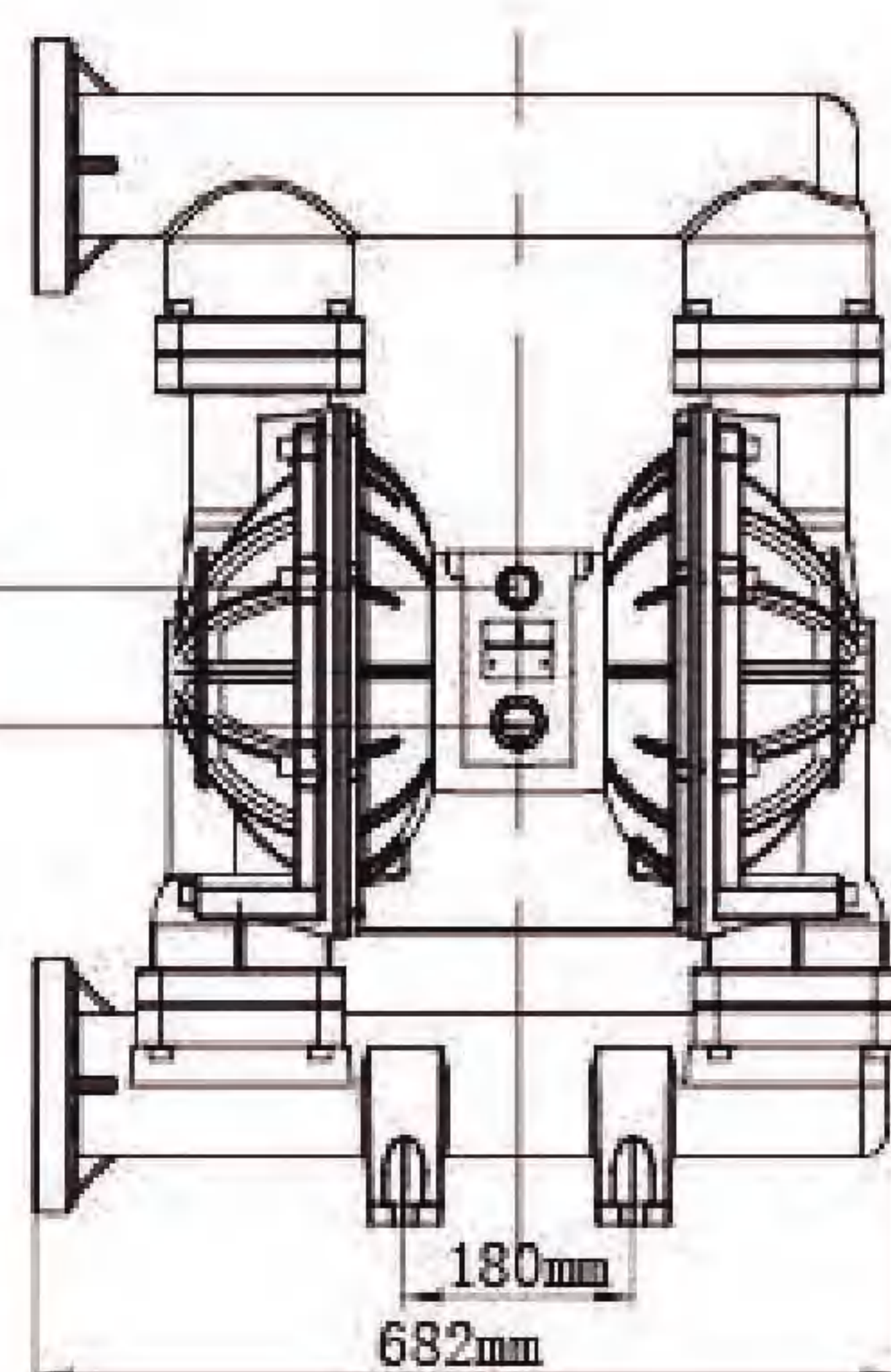
Performance curve



Installation size

Air Inlet $\frac{3}{4}$ " BSPT/NPT

Air Outlet 1" BSPT/NPT





JAPAN QUALITY



AD80 Stainless steel pump

Material quality

Pump body : SS304, SS316, SS316L

Diaphragm : Santoprene, Hytrel, Teflon, Viton, EPDM, Buna-N

Valve ball : Santoprene, Hytrel, Teflon, Viton, Stainless steel, Ceramic

Valve seat : Santoprene, Hytrel, Teflon, Viton, Stainless steel

Center block : PP, Aluminum, Stainless steel

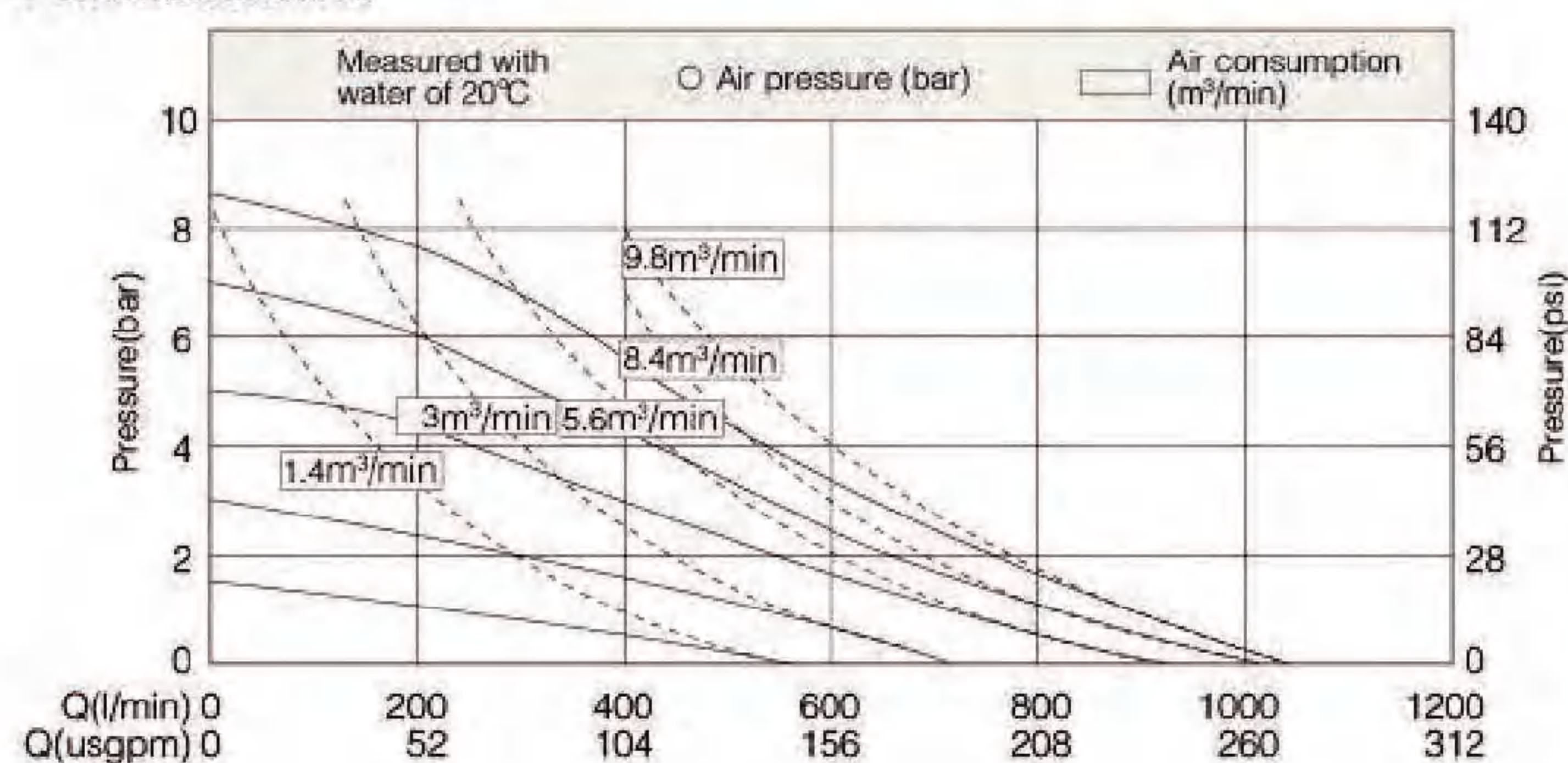
Weight

PP pump : 120 Kgs.

PVDF pump : 120 Kgs.



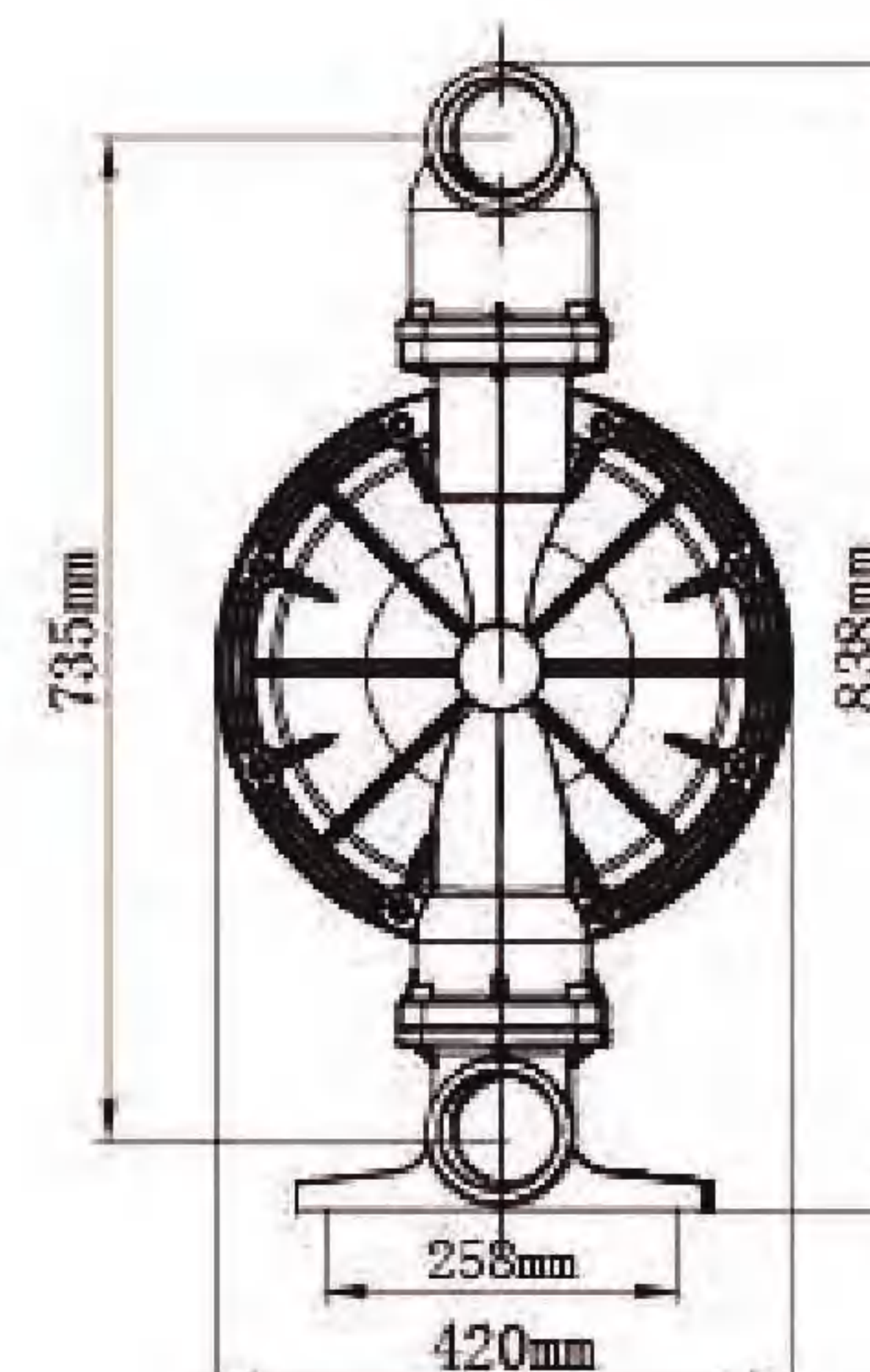
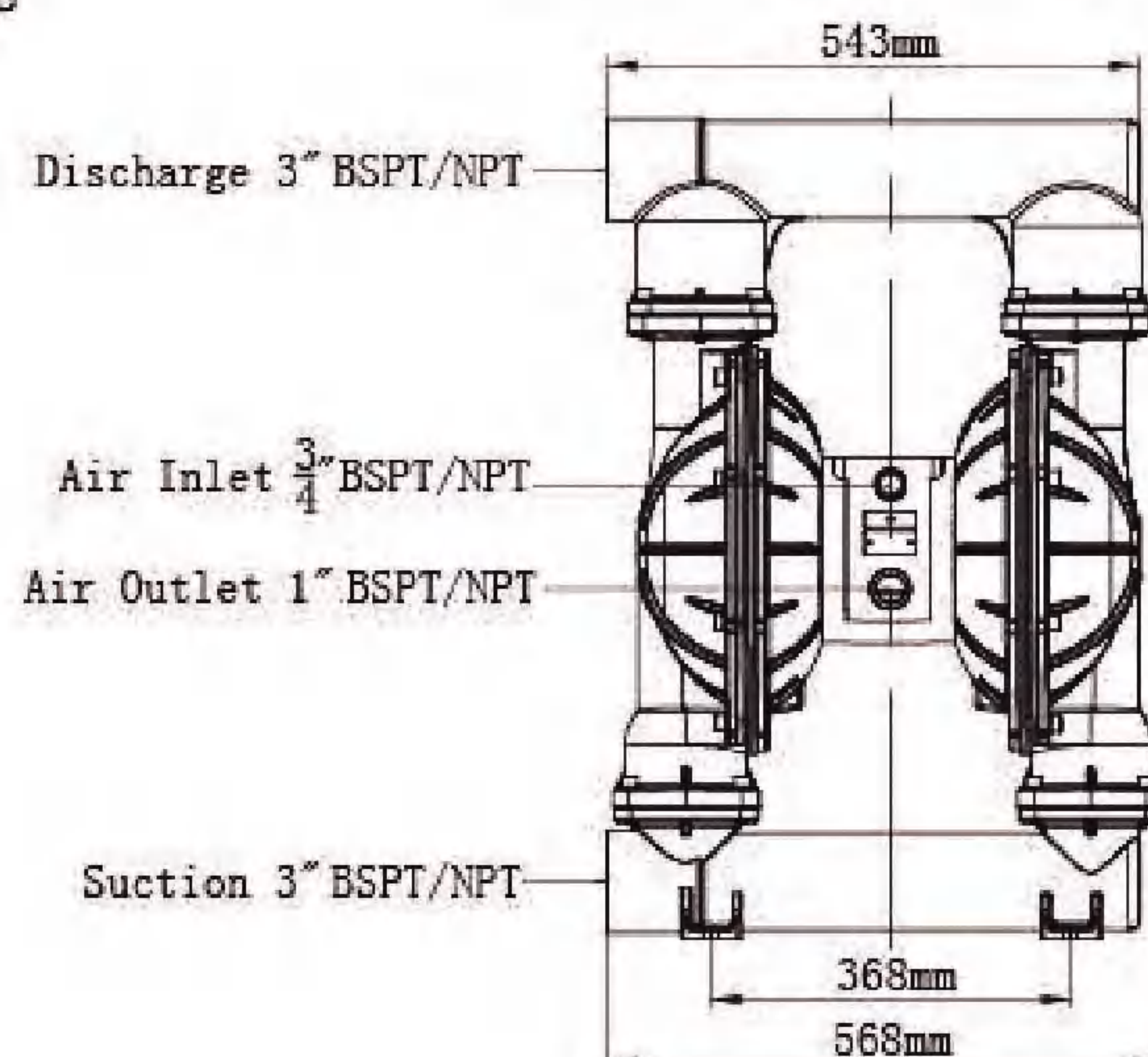
Performance curve



Technical Parameters

Suction lift [mwc]	dry	5
	Wet	8
Max particle diameter [mm]		9.4
Suction and discharge		3
Size [in]		
Air inlet size [in]		3/4
Max flow [l/min]		1060
Max head [m]		84
Max air inlet pressure [bar]		8.4

Installation size





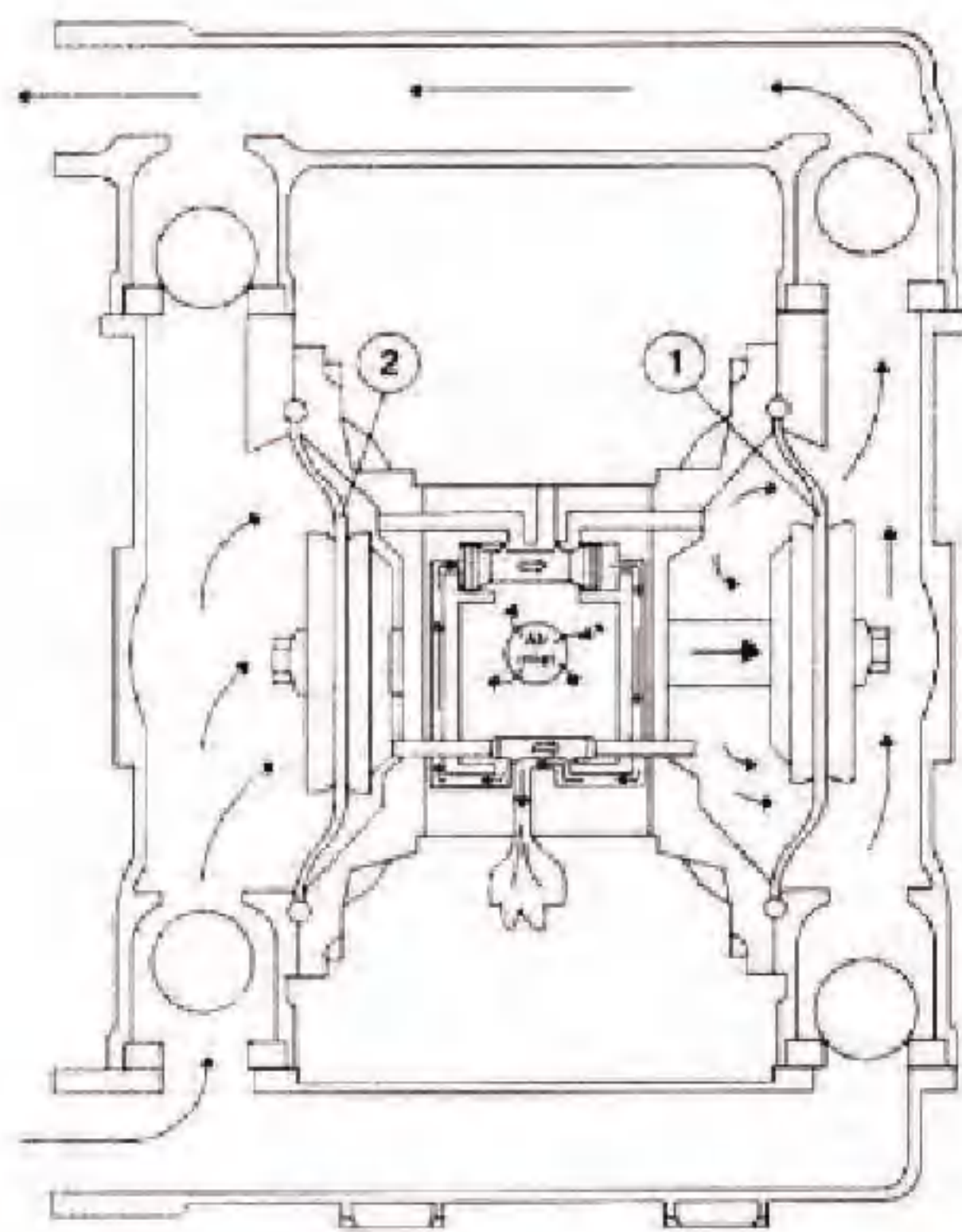
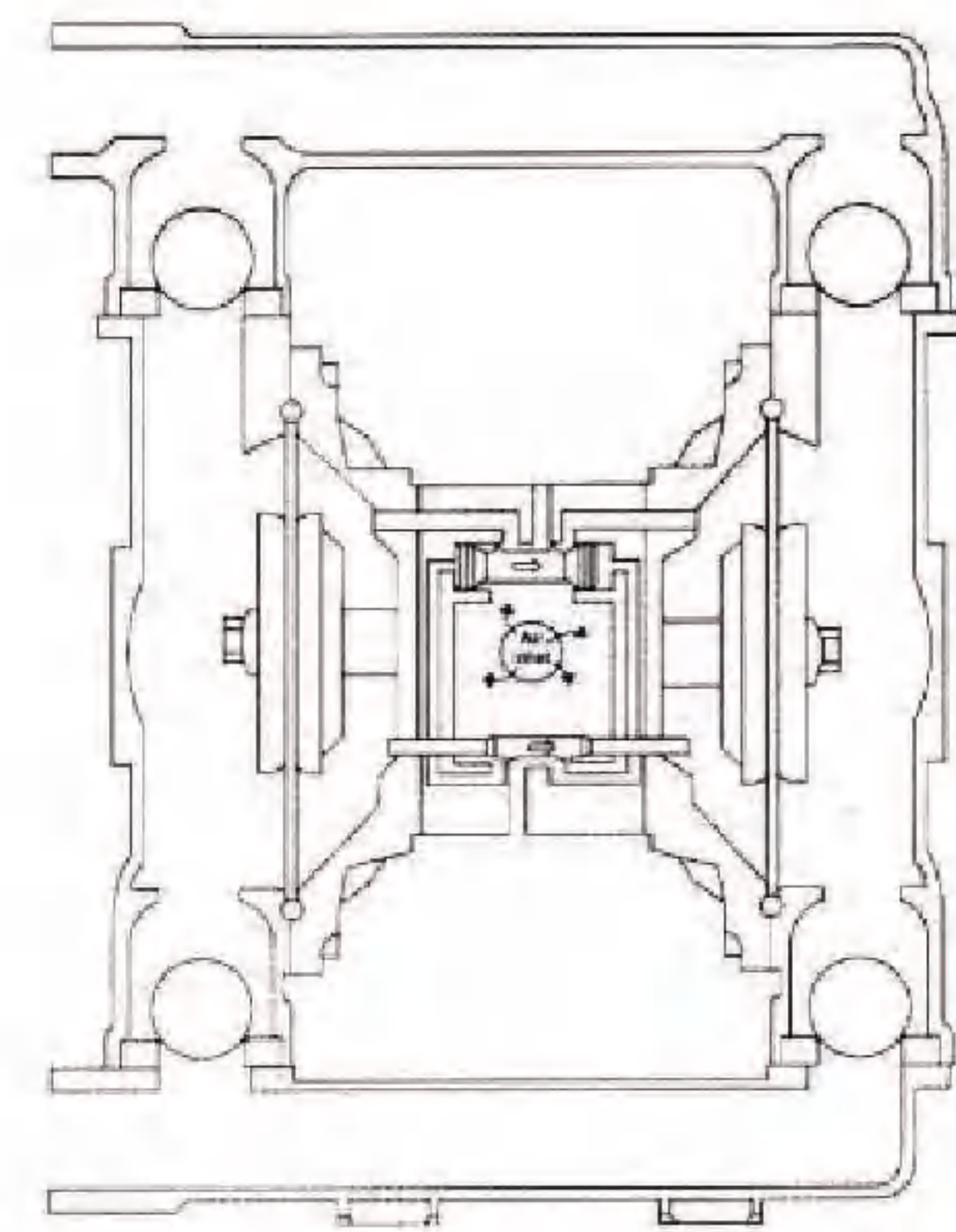
JAPAN QUALITY



OPERATING PRINCIPLE

After connecting the compressed air, air valve control the compressed air impels diaphragm 1 moves toward right, meanwhile the diaphragm 1 also extrude medium and cause it out of chamber.

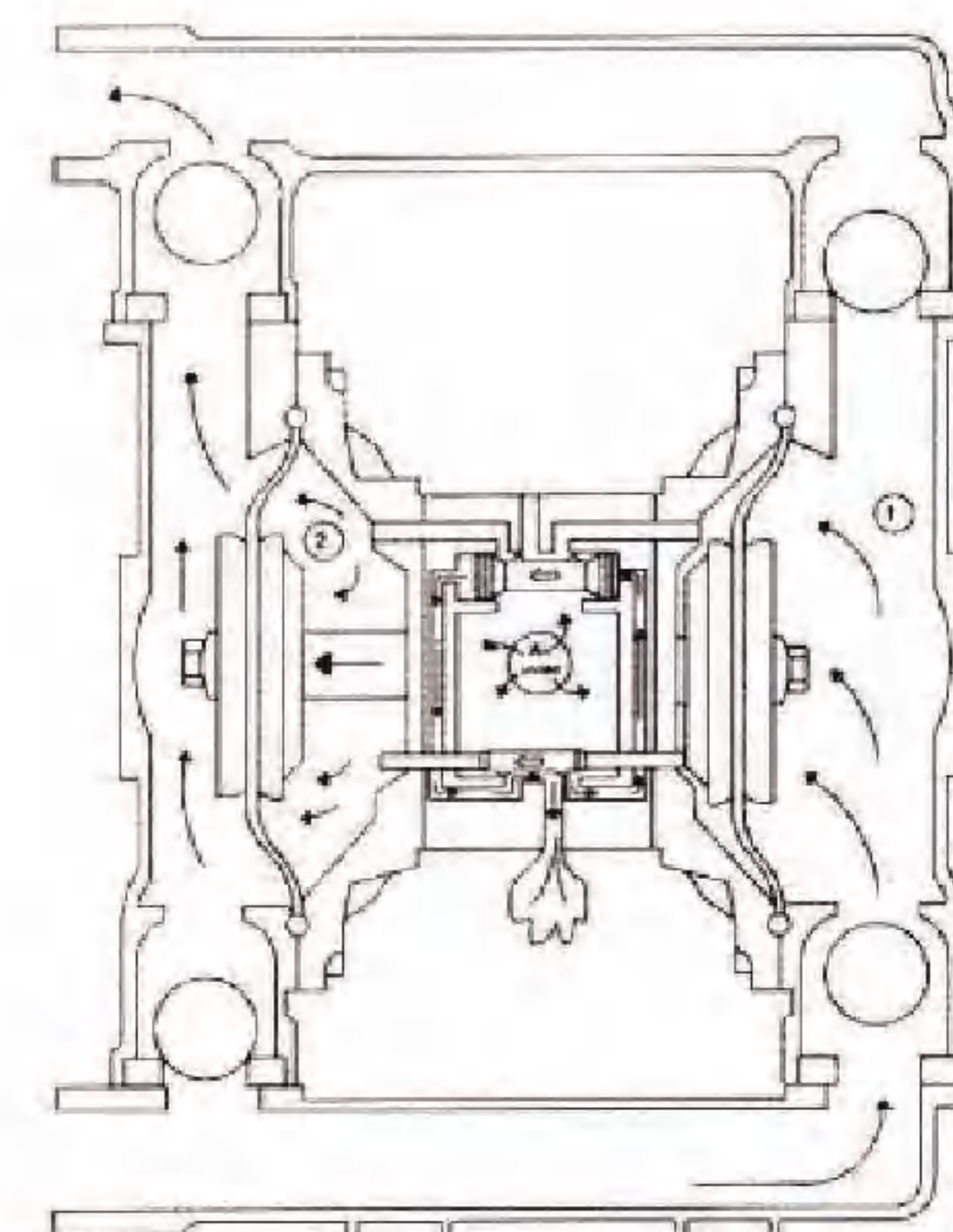
Diaphragm not only convey medium, also isolate compressed air and from the center body, another diaphragm will moves toward center body for these two diaphragms are connected by one rod. When diaphragm 2 moves toward center body, the following high pressure compressed air will be discharged out through the muffler, meanwhile, The pump inlet side will creates a vacuum, then atmospheric pressure will push the medium into suction pipeline. The pump entry valve bell will be raised and leaves the valve seat, the medium will enter into pump chamber.



2 When the diaphragm 1 under high pressure, will slowly move to maximum position of the stroke Meanwhile, the compressed air will slowly enter into diaphragm 2 following space and impels the diaphragm 2 away the center body, the diaphragm 1 also will moves toward center body for these two diaphragms are connected by one Rod. The diaphragm 2 will extrude the medium and function on entry valve ball and seal up the suction pipeline through the water power. The water power also will function on exit valve ball and open the discharge pipeline. Meanwhile, exit valve ball of pump another side will shut down for pressure function, entry valve ball will open, then the medium will enter into the pump chamber.

When one stroke finish. The compressed air will enter into diaphragm 1 following space again through reversing valve. Simultaneously diaphragm 2 following compressed air will discharge out through muffler.

3





JAPAN QUALITY



Spare parts and accessories



Air chamber gasket



Air reducing valve



Diaphragm



Diaphragm plate



Diaphragm rod



Flange



Flow controller



Muffler



Pulsation damper



Pulsation damper



Seat O-ring



Valve ball



Valve plate



Valve seat