

## Product types choosing

Brand of Jofee	Center body material	Diaphragm material	Valve ball material	Valve seat material
MK=MORAK	PP= Polypropylene	TF= Teflon	TF= Teflon	TF= Teflon
<b>Pump size</b>	AL= Aluminum	ST= Santoprene	ST= Santoprene	ST= Santoprene
06= 1/4 inch	<b>Wetted body material</b>	EP= EPDM	EP= EPDM	EP= EPDM
10= 3/8 inch	PP= Polypropylene	HY= Hytrel	HY= Hytrel	HY= Hytrel
15= 1/2 inch	PM= POM	BN= Buna-N	BN= Buna-N	BN= Buna-N
20= 3/4 inch	KV= PVDF	GE= Geolast	GE= Geolast	GE= Geolast
25= 1 inch	AL= Aluminum	VT= Viton	VT= Viton	VT= Viton
40= 1.5 inch	SS= SS304	PU= Polyurethane	PC= PVC	PC= PVC
50= 2 inch	LL= SS316		SS= SS304	SS= SS304
80= 3 inch	AC= Cast iron		LL= SS316	LL= SS316
100= 4 inch	TF= Teflon		CM= Ceramic	PP= Polypropylene

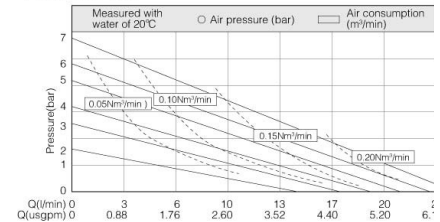
## Operating temperature limitation

Material	Maximum	Minimum
Viton:excellent corrosion resistance, resistance to various acids (including the medianconcentration of oxidizing acid),alkali, salt, petroleum 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
NUNA-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
PP: Medium abrasion resistance, good chemical resistance, good versatlity, especially for common acid-base.	150 F 65.5°C	40 F 4.4°C
POM: good solvent resistance, 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



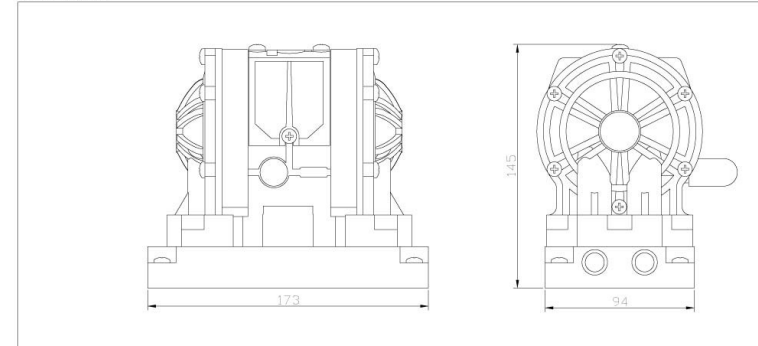
**MORAK  
MK06**

Performance curve



Technical parameters		Wetted body material
Suction lift[mwc]	dry 2.5 wet 4.4	PP, POM, PVDF
Max particle diameter[mm]	1.5	Different materials, the performance will be slightly different
Suction and discharge size[in]	1/4	
Air inlet size[in]	1/4	
Max flow[l/min]	18	
Max head[m]	70	
Max air inlet pressure[bar]	7	

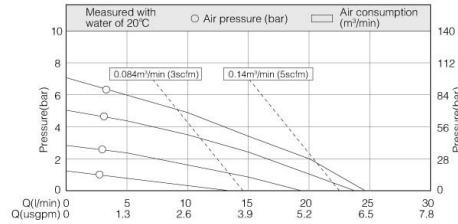
Installation size





## MORAK MK10

Performance curve



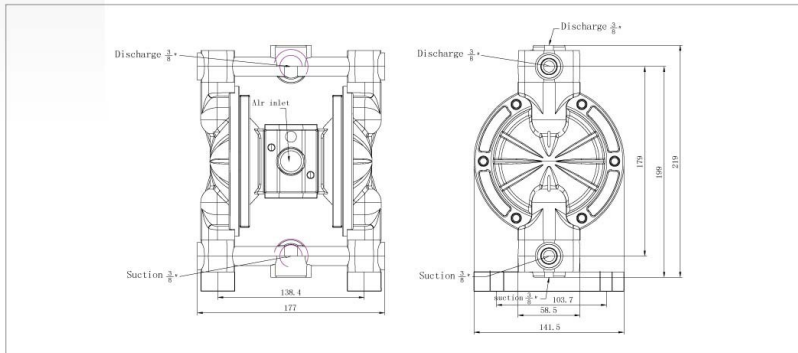
**Technical parameters**

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

**Wetted body material**

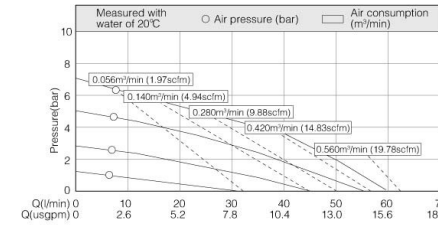
PP, POM, PVDF, AL  
Different materials, the performance will be slightly different

Installation size



## MORAK MK15/20 Plastic pump

Performance curve



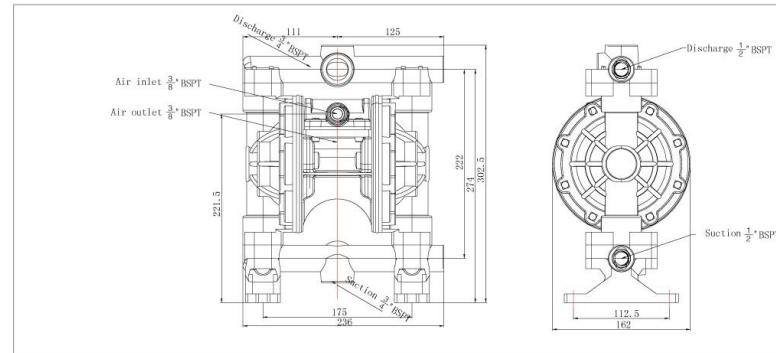
**Technical parameters**

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

**Wetted body material**

PP, POM, PVDF  
Different materials, the performance will be slightly different

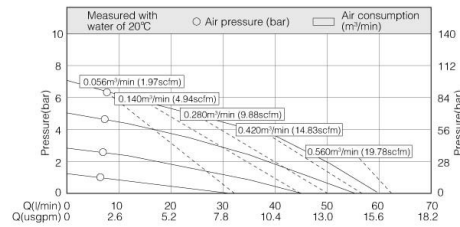
Installation size





## MORAK MK15/20 Metal pump

Performance curve



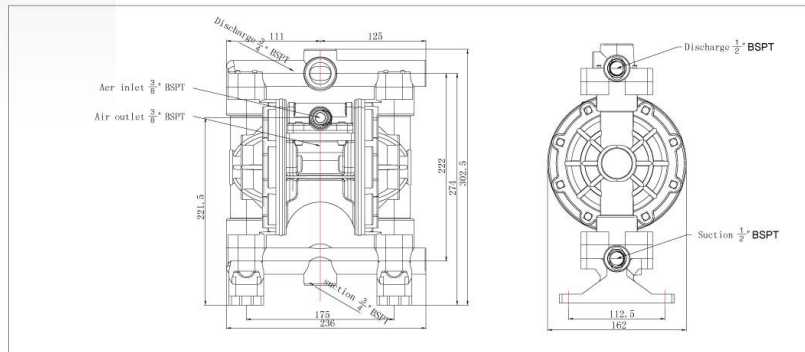
**Technical parameters**

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

**Wetted body material**

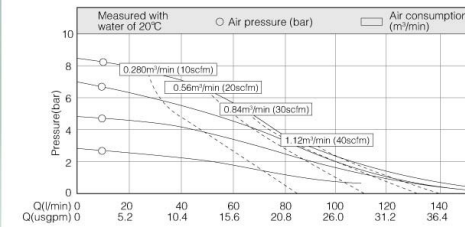
AL, SS, LL, CS  
Different materials, the performance will be slightly different

Installation size



## MORAK MK25 Metal pump

Performance curve



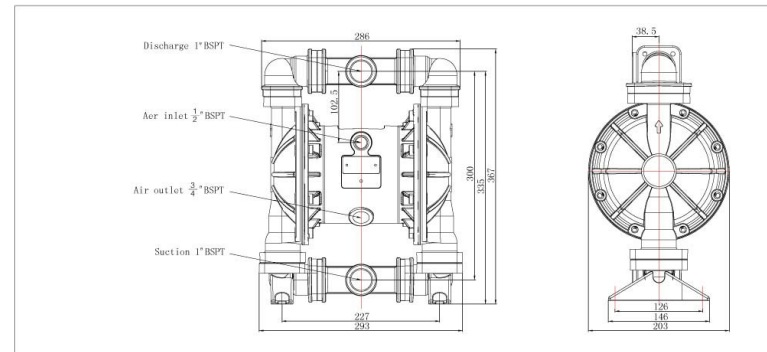
**Technical parameters**

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

**Wetted body material**

AL, SS, LL, CS  
Different materials, the performance will be slightly different

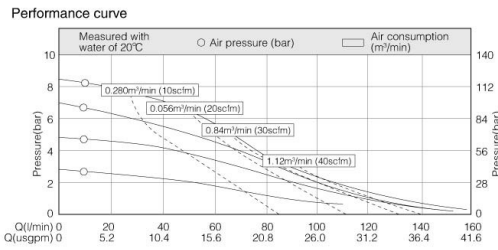
Installation size





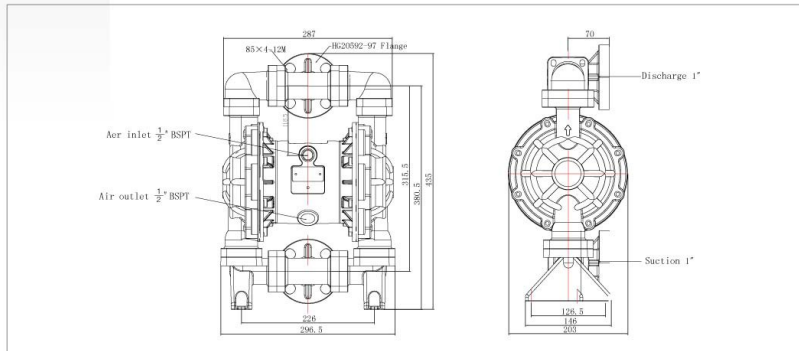
## MORAK MK25

### Plastic pump



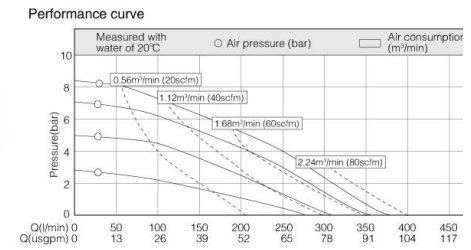
Technical parameters			Wetted body material	
Suction lift[mwc]	dry	4	PP, POM, PVDF	
	wet	8	Different materials, the performance will be slightly different	
Max particle diameter[mm]		4		
Suction and discharge size[in]		1		
Air inlet size[in]		1/2		
Max flow[l/min]		157		
Max head[m]		84		
Max air inlet pressure[bar]		8.4		

#### Installation size



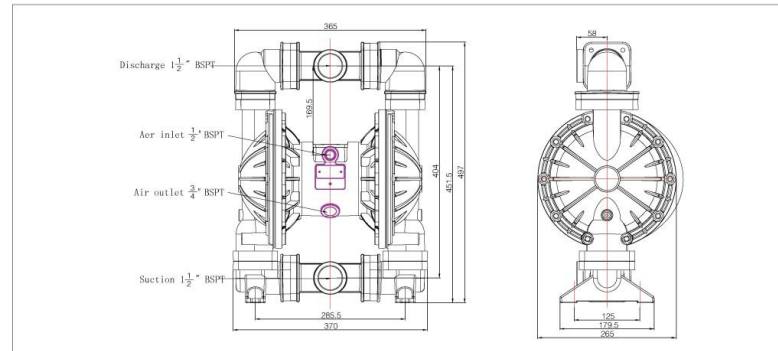
## MORAK MK40

### Metal pump



Technical parameters			Wetted body material	
Suction lift[mwc]	dry	5	AL, SS, LL, CS	
	wet	8	Different materials, the performance will be slightly different	
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		

#### Installation size

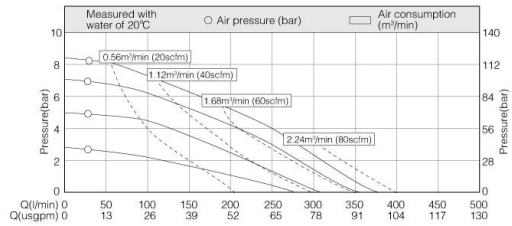




## MORAK MK40

### Plastic pump

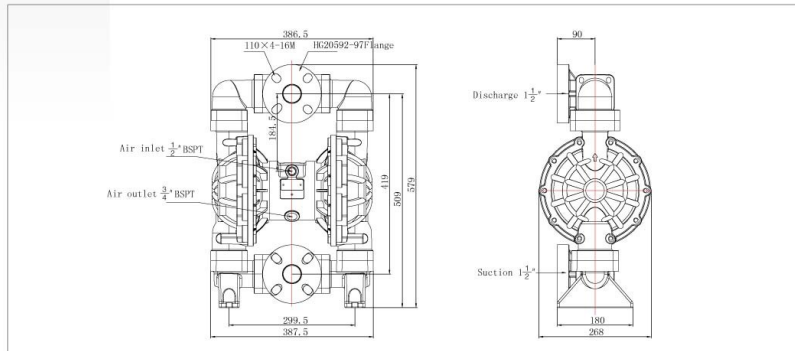
Performance curve



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

Wetted body material	
PP, POM, PVDF	
Different materials, the performance will be slightly different	

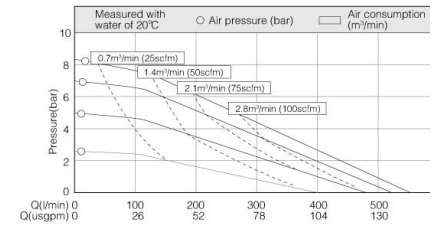
Installation size



## MORAK MK50

### Metal pump

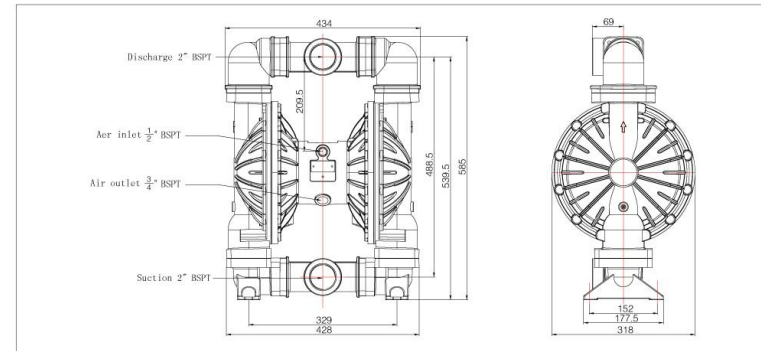
Performance curve



Technical parameters	
Suction lift[mwc]	dry 5 wet 8
Max particle diameter[mm]	6
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

Wetted body material	
AL, SS, LL, CS	
Different materials, the performance will be slightly different	

Installation size

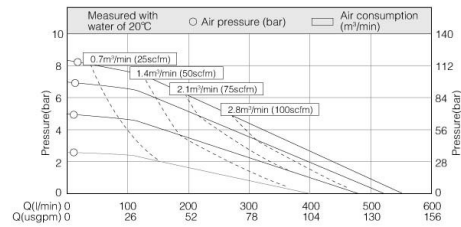






## MORAK MK50 Plastic pump

Performance curve



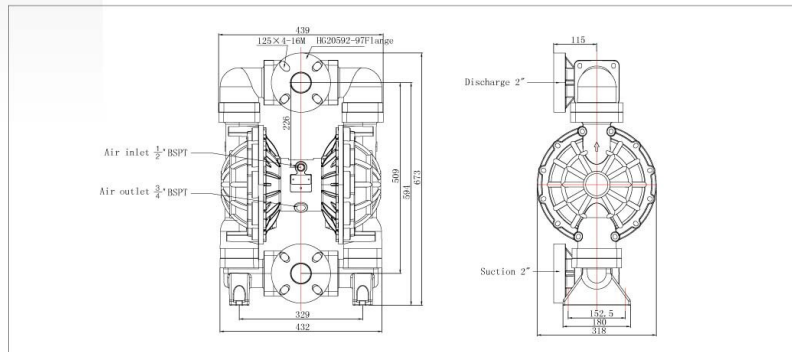
**Technical parameters**

Suction lift[mwc]	dry	5
	wet	8
Max particle diameter[mm]		6
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

**Wetted body material**

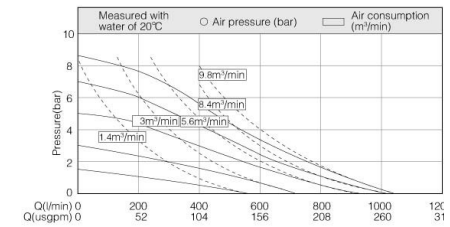
PP, POM, PVDF  
Different materials, the performance will be slightly different

Installation size



## MORAK MK80

Performance curve



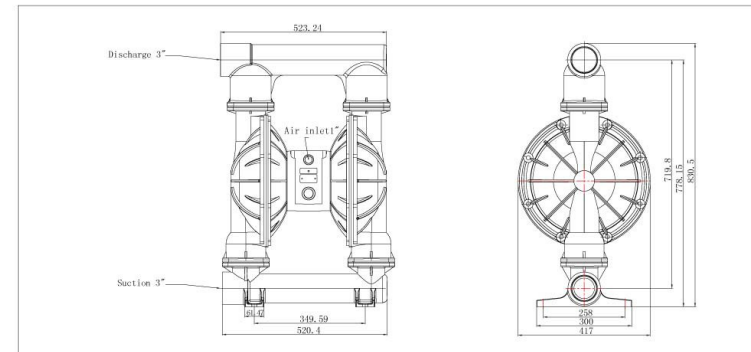
**Technical parameters**

Suction lift[mwc]	dry	5
	wet	8
Max particle diameter[mm]		9.4
Suction and discharge size[in]		3
Air inlet size[in]		1
Max flow[l/min]		1060
Max head[m]		84
Max air inlet pressure[bar]		8.4

**Wetted body material**

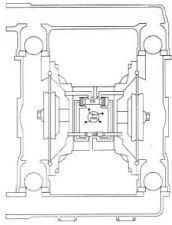
AL, SS, LL, CS, PP  
Different materials, the performance will be slightly different

Installation size



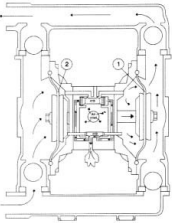
## Operating principle

1



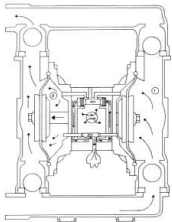
After connecting the compressed air, air valve control the compressed air impels diaphragm 1 moves toward right, meanwhile, the diaphragm 1 also extrude medium and cause it out of chamber. Diaphragm not only convey medium, also isolate compressed air and medium in the pump chamber. When one diaphragm is pushed away 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 create a vacuum, then atmospheric pressure will push the medium into suction pipeline. The pump entry valve ball 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.

3



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



MK06

MK10-AL

MK15-AL

MK15-PP

MK15-SS



MK25-AL

MK25-PP

MK25-SS

MK40-AL

MK40-PP



MK40-SS

MK50-AL

MK50-PP

MK50-SS

MK80



Pump parts

Flow meter

Pulsating regulator