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**BSK** Pneumatic  
Diaphragm  
Pump

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## Product Line

### Aluminum Alloy Pump

-  BA25AL
-  BA40AL
-  BA50AL
-  BA80AL



### Plastic Pump

-  BP06PP
-  BP15PP
-  BA25PP
-  BA40PP
-  BA50PP



### Stainless Steel Pump

-  BP15SS
-  BA25SS
-  BA40SS
-  BA50SS
-  BA80SS



### Cast Iron or Carbon Steel Pump

-  BP15CS
-  BA25CS
-  BA40CS
-  BA50CI
-  BA80CI



# APPLICATION

## Machinery

Oil  
Cutting fluid  
Quenching oil  
Electroplate liquid  
Liquid waste

## Coal Mine

Waste water  
Water seepage  
Slush

## Chemical

Acid  
Caustic  
Solvent  
Paint  
Shear sensitive material

## Electron

Acid  
Alkali  
Waste water

## Food & medicine

Liquid material  
Additive  
Condiment

## Automobile

Oil  
Solvent  
Paint  
Aquaseal  
Waste water

## Air Motor

### Surface coating

- + Corrosion resistance

### Exhaust room plus muffler

- + Lower noise
- + Less iced possible

### Professional design for air champ

- + Less room for air consumption and less cost

### Module structure

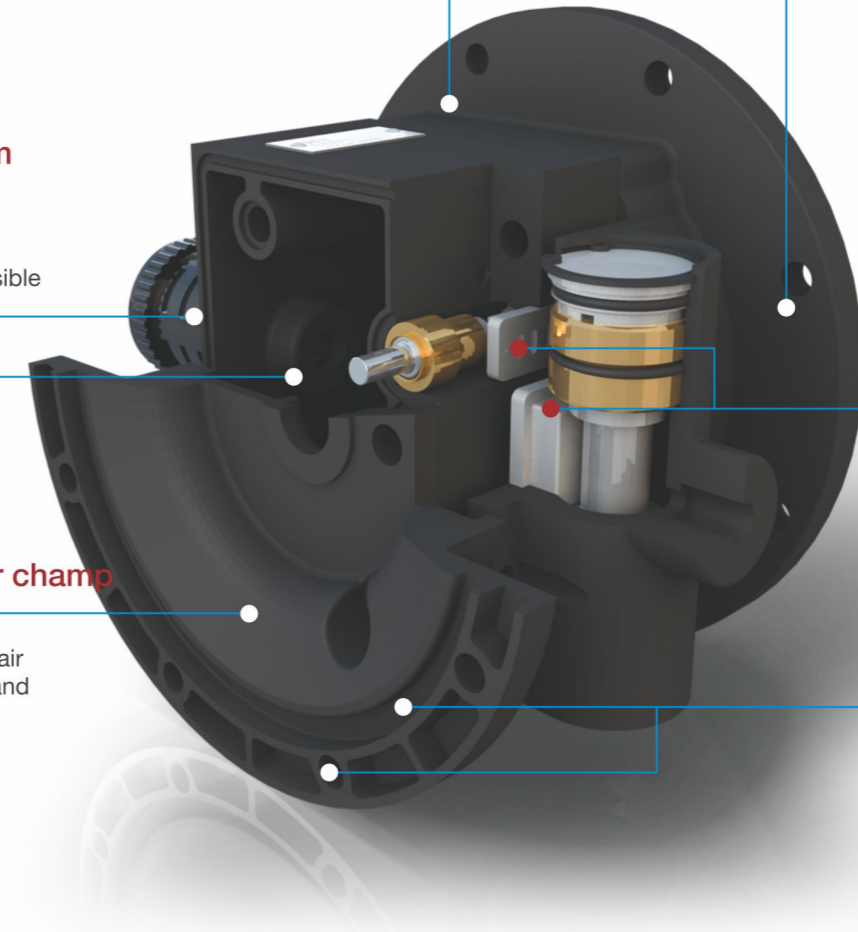
- + Commonly used
- + Less spare part & less cost

### Chip valve, ceramic material

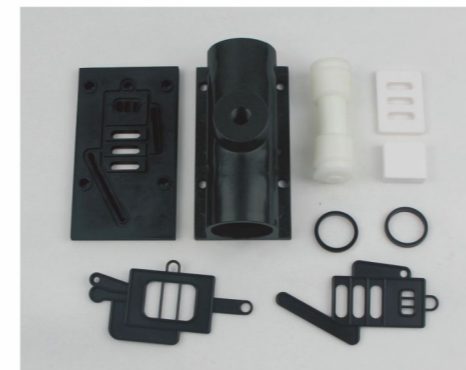
- + wear resistant
- + resistance soiling

### Groove seal structure and bolt clamping

- + good for seal reliability



## Main Air Valve



Main air valve concise, but not simple

- + Less components
- + Good for maintain



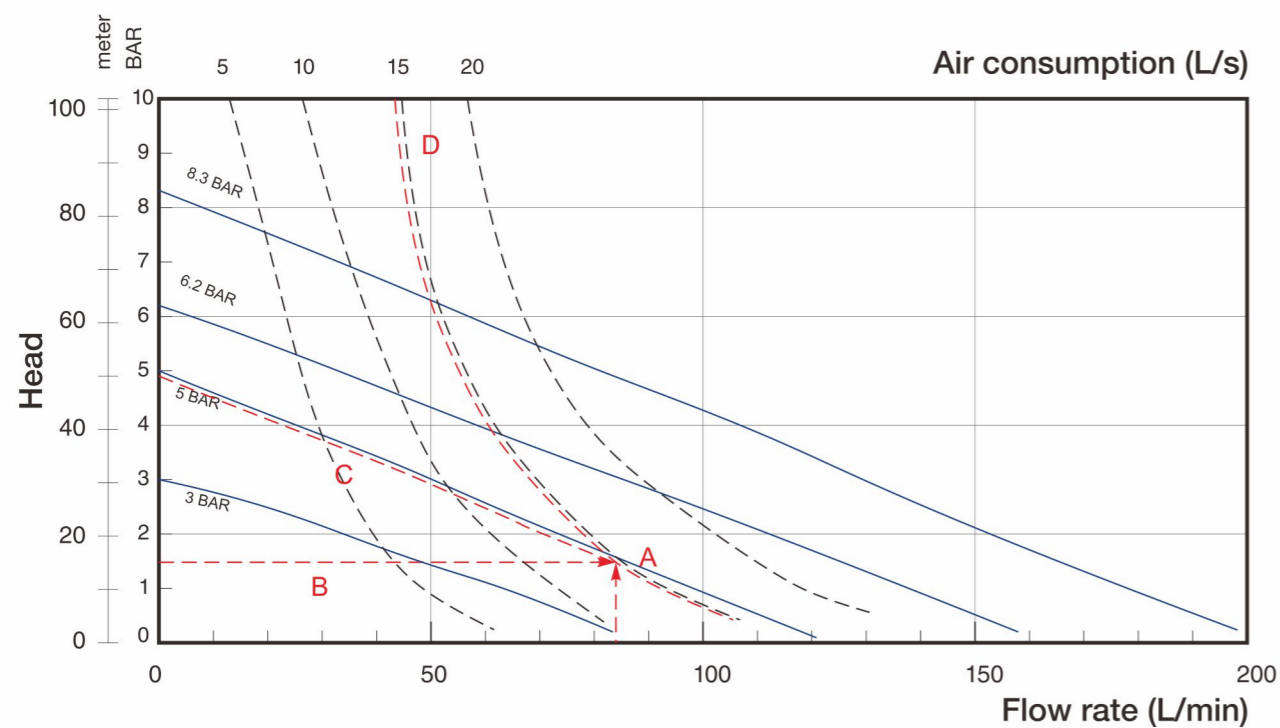
## Model Chart

B X 00 XX - XXXX - X (- XX)

Center body	Port size	Housing material	Seat material	Ball material	Diaphragm material	O-ring material	Port	Code for special order
P - Polypropylene A - Aluminum alloy	06 - 1/4" 15 - 1/2" 25 - 1" 40 - 1.5" 50 - 2" 80 - 3"	PP - Polypropylene SS - Stainless steel CS - Carbon steel AL - Aluminum CI - Cast Iron	P - Polypropylene S - Stainless steel C - Carbon steel 0 - Aluminum 7 - Nylon 9 - Santoprene® D - POM	9 - Santoprene® H - Hytrel® T - PTFE S - Stainless steel 7 - Nylon 8 - Santoprene® w/steel core P - UPE	9 - Santoprene® B - NBR H - Hytrel® T - PTFE/Santoprene®	0 - Non 1 - NBR 3 - PTFE(FULL) 4 - PTFE(COVER) 5 - FKM	A - BSP (thread) B - NPT C - Flange	

## Performance Curve

A	B	C	D
Select the fluid rate (for example: 87 l.p.m)	Select the head of delivery (for example: 28 m)	Check the inlet air pressure (for example: 6.2 bar)	To get the air consumption rate (for example: 19 l.p.s)



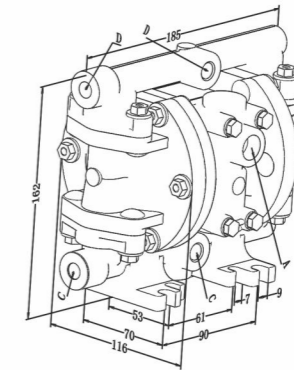
B P 06 XX - XXXX - X

Center body	Housing material	Seat material	Ball material	Diaphragm material	O-ring material	Port
Polypropylene	PP - Polypropylene	P - polypropylene	9 - Santoprene® T - PTFE S - Stainless steel P - UPE	9 - Santoprene® T - PTFE	1-NBR 4-PTFE(COVE)	B-NPT

- ★ Small size, less room request for installation.
- ★ Side port design. Middle port is possible

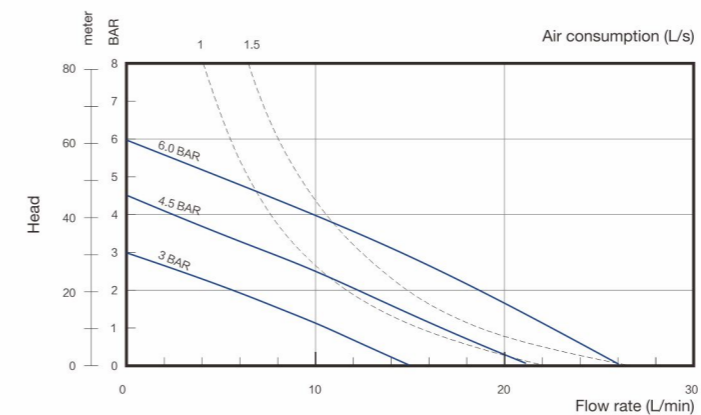
### PUMP DATA

Working air pressure	0.09-0.60 Mpa
Maximum outlet pressure	0.60 Mpa
Maximum flow rate	26.1 lpm
Maximum particle size	1 mm
Maximum dry suction	4.2 m
Noise level @70psi	68 dB
Weight	1.3 kg



Plastic pump

### PERFORMANCE CURVE



Port size	A	B	C	D
Air Inlet	Exhaust	Inlet	Outlet	
1/4" NPT	1/4" NPT	1/4" NPT	1/4" NPT	

B P 15 XX - XXXX - X

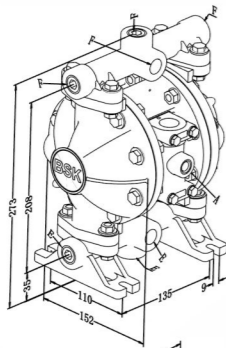
Center body	Housing material	Seat material	Ball material	Diaphragm material	O-ring material	Port
Polypropylene	PP - Polypropylene SS - Stainless steel CS - Carbon steel	P - Polypropylene S - Stainless steel	9 - Santoprene® T - PTFE S - Stainless steel P - UPE	9 - Santoprene® T - PTFE/Santoprene®	1 - NBR 4 - PTFE(COVER)	A - BSP (thread) B - NPT

B A 25 XX - XXXX - X

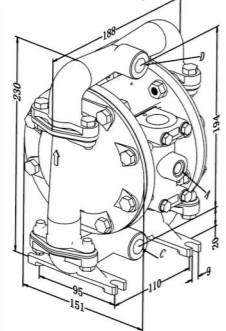
Center body	Housing material	Seat material	Ball material	Diaphragm material	O-ring material	Port
Aluminum alloy	PP - Polypropylene SS - Stainless steel CS - Carbon steel AL - Aluminum	P - Polypropylene S - Stainless steel C - Carbon steel O - Aluminum 9 - Santoprene® D - POM	9 - Santoprene® H - Hytrel® T - PTFE S - Stainless steel 7 - Nylon 8 - Santoprene® w/steel core P - UPE	9 - Santoprene® B - NBR H - Hytrel® T - PTFE/Santoprene®	1 - NBR 3 - PTFE(FULL) 4 - PTFE(COVER) 5 - FKM	A-BSP (thread) C-Flange



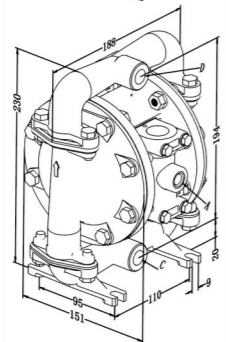
Plastic pump



Stainless steel pump



Carbon steel pump

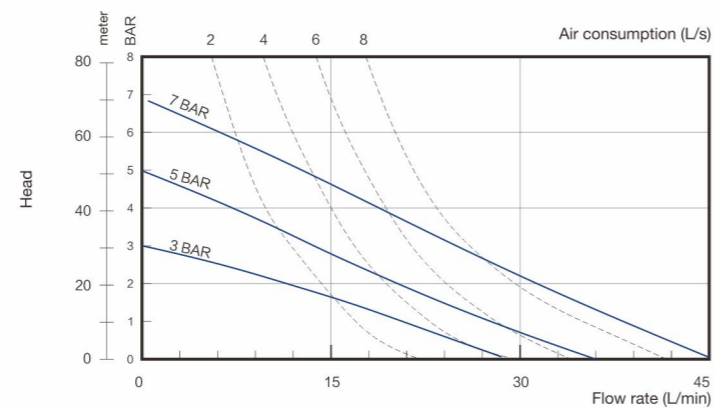


- ★ Small size, less room request for installation.
- ★ Multiple port for selection

### PUMP DATA

Working air pressure	0.15 - 0.69 Mpa
Maximum outlet pressure	0.69 Mpa
Maximum flow rate	45.3 lpm
Maximum particle size	2.5 mm
Maximum dry suction	4.1 m
Noise level @70psi	75 dB
Weight	Plastic 2.4 kg
	Stainless steel 5.5 kg
	Carbon steel 5.5 kg

### PERFORMANCE CURVE



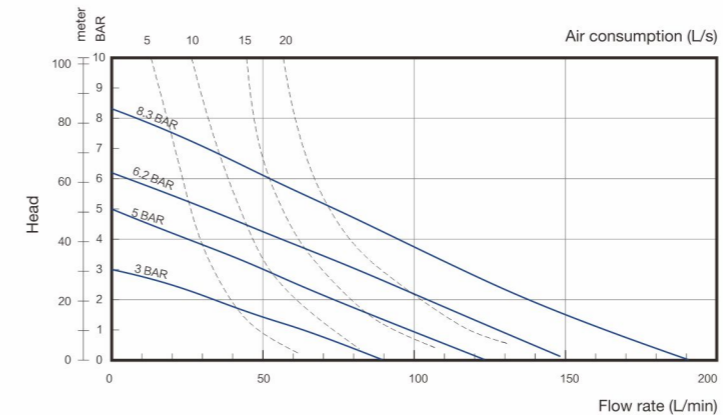
Port size	A	B	C	D	E	F
Air Inlet	Exhaust	Inlet	Outlet	Inlet	Outlet	
1/4" NPT	3/8" NPT	1/2-14 BSP Rp	1/2-14 BSP Rp	1/2" NPT	1/2" NPT	

- ★ Flange size meet both ANSI and DIN

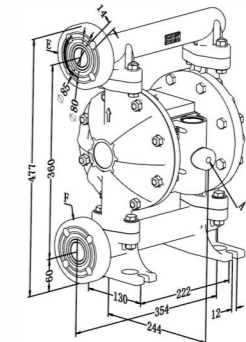
### PUMP DATA

Working air pressure	0.10-0.83 Mpa
Maximum outlet pressure	0.83 Mpa
Maximum flow rate	192 lpm
Maximum particle size	3 mm
Maximum dry suction	6.7 m
Noise level @70psi	75 dB
Weight	Plastic 9.5 kg
	Stainless steel 14.5 kg
	Carbon steel 14.5 kg
	Aluminum 9.5 kg

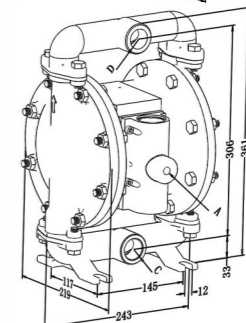
### PERFORMANCE CURVE



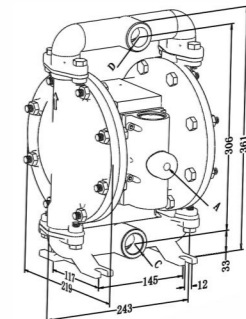
Port size	A	B	C	D	E	F
Air Inlet	Exhaust	Inlet	Outlet	Inlet	Outlet	
1/4" NPT	3/8" NPT	1" BSP	1" BSP	1" FLANGE	1" FLANGE	



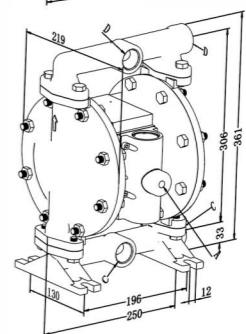
Plastic pump



Stainless steel pump



Carbon steel pump



Aluminum alloy pump

B A 40 XX - XXXX - X

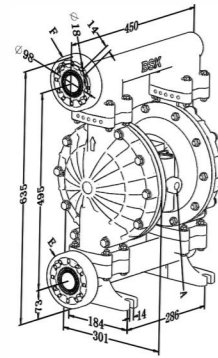
Center body	Housing material	Seat material	Ball material	Diaphragm material	O-ring material	Port
Aluminum alloy	PP - Polypropylene SS - Stainless steel CS - Carbon steel AL - Aluminum	P - Polypropylene S - Stainless steel C - Carbon steel 0 - Aluminum 9 - Santoprene®	9 - Santoprene® H - Hytrel® T - PTFE 8 - Santoprene® w/steel core P - UPE	9 - Santoprene® H - Hytrel® T - PTFE/Santoprene®	0 - Non 1 - NBR 3 - PTFE(FULL) 4 - PTFE(COVER)	A - BSP (thread) C - Flange

B A 50 XX - XXXX - X

Center body	Housing material	Seat material	Ball material	Diaphragm material	O-ring material	Port
Aluminum alloy	PP - Polypropylene SS - Stainless steel CS - Carbon steel AL - Aluminum	P - Polypropylene S - Stainless steel C - Carbon steel 0 - Aluminum 9 - Santoprene® D - POM	9 - Santoprene® H - Hytrel® T - PTFE 8 - Santoprene® w/steel core P - UPE	9 - Santoprene® H - Hytrel® T - PTFE/Santoprene®	0 - Non 1 - NBR 3 - PTFE(FULL) 4 - PTFE(COVER)	A - BSP (thread) C - Flange



Plastic pump

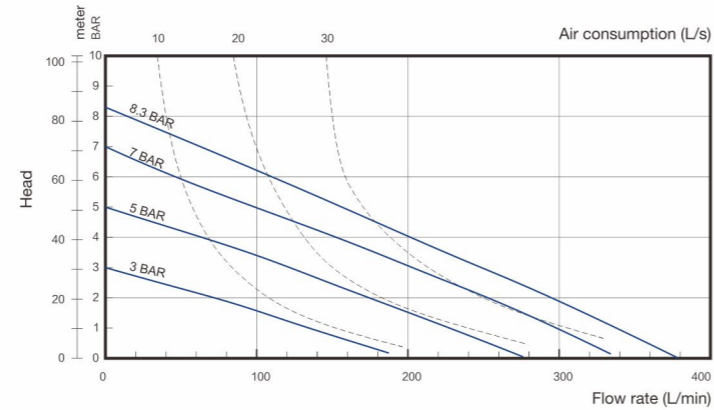


★ Flange size meet both ANSI and DIN

### PUMP DATA

Working air pressure	0.10-0.83 Mpa	
Maximum outlet pressure	0.83 Mpa	
Maximum flow rate	378.5 lpm	
Maximum particle size	6 mm	
Maximum dry suction	6.7 m	
Noise level @70psi	75 dB	
Weight	Plastic	19 kg
	Stainless steel	30 kg
	Carbon steel	30 kg
	Aluminum	18 kg

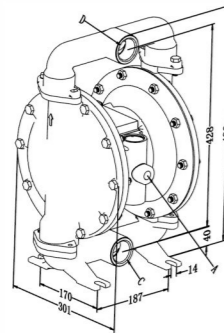
### PERFORMANCE CURVE



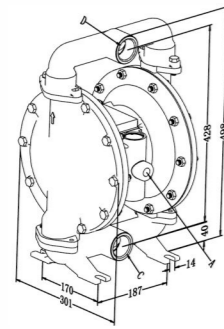
Port size	A	B	C	D	E	F
Air Inlet	Exhaust	Inlet	Outlet	Inlet	Outlet	
1/2" NPT	3/4" NPT	1 1/2" BSP	1 1/2" BSP	1 1/2" FLANGE	1 1/2" FLANGE	



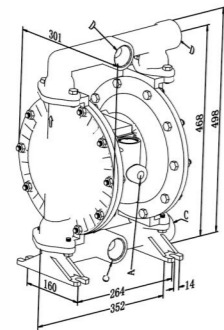
Stainless steel pump



Carbon steel pump



Aluminum alloy pump



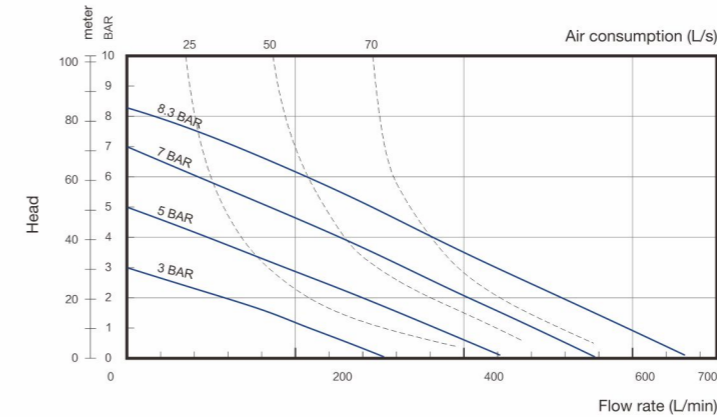
★ Flange size meet both ANSI and DIN

★ Cast iron pump: BSP thread port optional

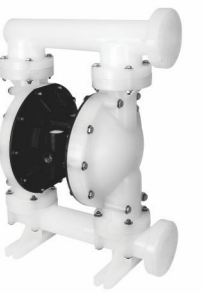
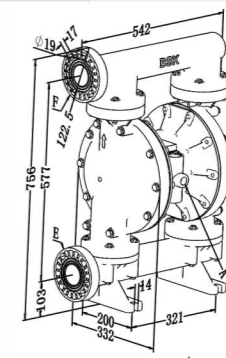
### PUMP DATA

Working air pressure	0.10-0.83 Mpa	
Maximum outlet pressure	0.83 Mpa	
Maximum flow rate	667 lpm	
Maximum particle size	7 mm	
Maximum dry suction	6.2 m	
Noise level @70psi	75 dB	
Weight	Plastic	26 kg
	Stainless steel	53 kg
	Carbon steel	48.5 kg
	Aluminum	24.5 kg

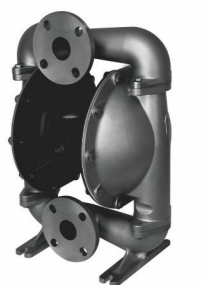
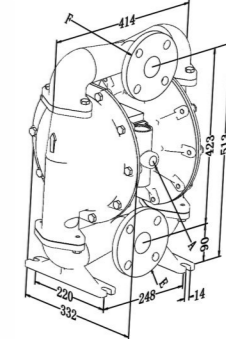
### PERFORMANCE CURVE



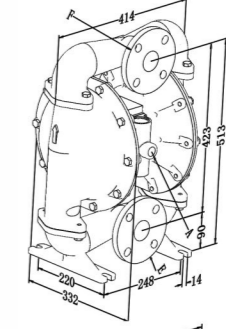
Port size	A	B	C	D	E	F
Air Inlet	Exhaust	Inlet	Outlet	Inlet	Outlet	
3/4" NPT	3/4" NPT	2" BSP	2" BSP	2" FLANGE	2" FLANGE	



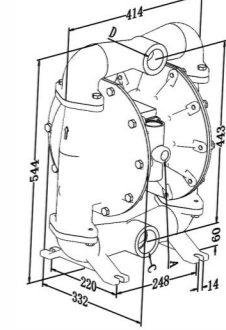
Plastic pump



Stainless steel pump



Carbon steel pump

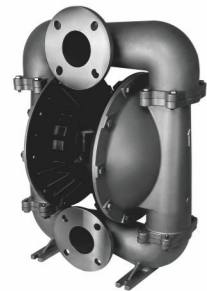


Aluminum alloy pump

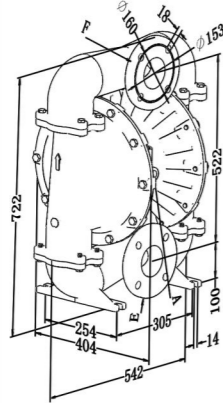
# 3" Pump

B A 80 XX - XXXX - X

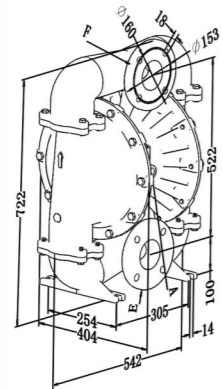
Center body	Housing material	Seat material	Ball material	Diaphragm material	O-ring material	Port
Aluminum alloy	SS - Stainless steel CS - Carbon steel CI - Cast Iron	S - Stainless steel C - Carbon steel 0 - Aluminum 9 - Santoprene® D - POM	9 - Santoprene® H - Hytrel® T - PTFE P - UPE	9 - Santoprene® H - Hytrel® T - PTFE/Santoprene®	0 - Non 1 - NBR 3 - PTFE(FULL)	A - BSP (thread) C - Flange



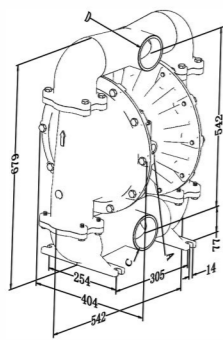
Stainless steel pump



Carbon steel pump



Aluminum alloy pump

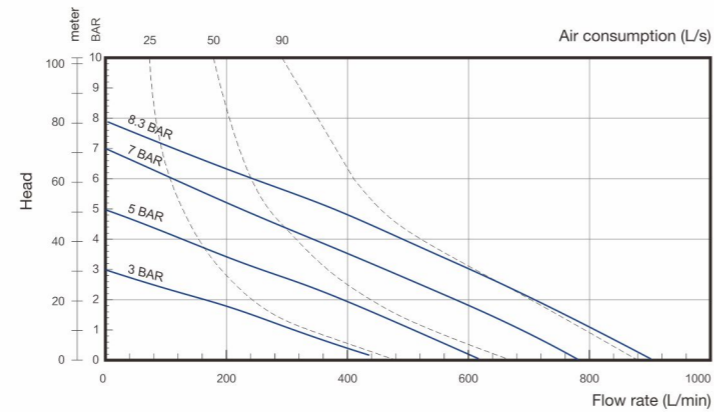


- ★ Flange size meet both ANSI and DIN
- ★ Cast iron pump: BSP thread port optional

### PUMP DATA

Working air pressure	0.10-0.83 Mpa
Maximum outlet pressure	0.83 Mpa
Maximum flow rate	903 lpm
Maximum particle size	9 mm
Maximum dry suction	5.3 m
Noise level @70psi	75 dB
Weight	Plastic 95 kg
	Stainless steel 91 kg
	Carbon steel 42 kg

### PERFORMANCE CURVE



Port size	A	B	C	D	E	F
Air Inlet	Exhaust	Inlet	Outlet	Inlet	Outlet	
	3/4" NPT	3/4" NPT	3" BSP	3" BSP	3" FLANGE	3" FLANGE

# How to choose a pump?

Flow rate

First, make sure the pump size according to the flow rate request

Wet side material

Second, select appropriate wet side components according to material chemical characteristics

## Pump Data



Pump size	BP06	BP15	BA25	BA40	BA50	BA80
Working air pressure(bar)	0.9-6.0	1.5-6.9	1.0-8.3	1.0-8.3	1.0-8.3	1.0-8.3
Port size	1/4"	1/2"	1"	1.5"	2"	3"
Maximum flow rate (L/min)	26.1	45.3	192	378.5	667	903
Displacement per cycle (L)	0.06	0.14	0.87	2.83	3.78	7.67
Maximum head of delivery (m)	60	70	60	80	80	80
Maximum dry suction (m)	4.2	4.1	6.7	6.7	6.2	5.3
Maximum particle size	1	2.5	3	6	7	9

## Diaphragm Selection

+=Excellent ✓=Good !=Fair ×=Poor

Diaphragm material	Lifespan	Wear Resistant	Chemical Compatibility	Thermal endurance	Temperature (minimum)	Temperature (maximum)
PTFE	+	+	+	+	40°F/4.4°C	220°F/104°C
Santoprene®	+	+	✓	✓	-40°F/-40°C	225°F/107.2°C
Hytrel®	+	+	✓	✓	32°F/0°C	175°F/79.4°C
FKM	×	!	+	+	-40°F/-40°C	350°F/176.6°C
NBR	+	✓	!	!	10°F/-12°C	180°F/82°C

## Wet component selection

+=Excellent ✓=Good !=Fair ×=Poor

Wet side part	Material	Chemical corrosion resistant				Abrasion resistance		Thermal endurance	Adhere resistant
		Non	Slight	Middle	Serious	Slight	Serious		
HOUSING	AL	+	×	×	×	✓	×	+	
	SS	+	+	✓	✓	+	+	+	
	CI	+	×	×	×	+	+	+	
	PP	+	+	✓	✓	✓	×	✓	
	PVDF	+	+	+	+	+	✓	✓	
SEAT	AL	+	×	×	×	✓	×	+	
	SS	+	+	✓	✓	+	+	+	
	CI	+	×	×	×	+	+	+	
	PP	+	+	✓	✓	✓	×	✓	
	PVDF	+	+	+	+	+	✓	✓	
BALL	Santoprene®	+	✓	!	!	+	+	✓	
	Hytrel®	+	+	✓	!	+	✓	✓	
	SS	+	+	+	✓	✓	+	+	+
	Santoprene®	+	✓	!	!	+	+	✓	!
	Hytrel®	+	+	✓	!	+	✓	✓	!
	UPE	+	+	+	+	+	+	✓	+
VALVE SEALING	PTFE	+	+	+	+	+	✓	✓	+
	NBR	+	✓	!	×	✓	✓	✓	+
	PTFE	+	+	+	+	+	✓	✓	+

