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BSK Pneumatic
Diaphragm
Pump

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Product Line

Aluminum Alloy Pump

- + BA25AL
- + BA40AL
- + BA50AL
- + BA80AL



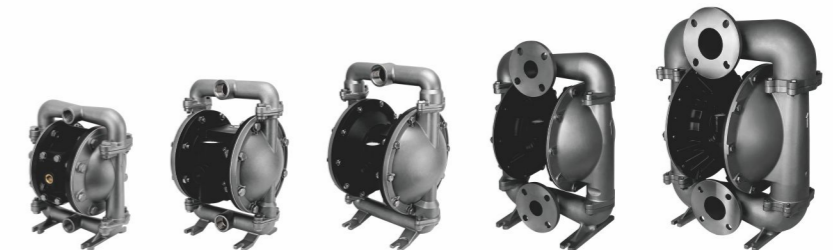
Plastic Pump

- + 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

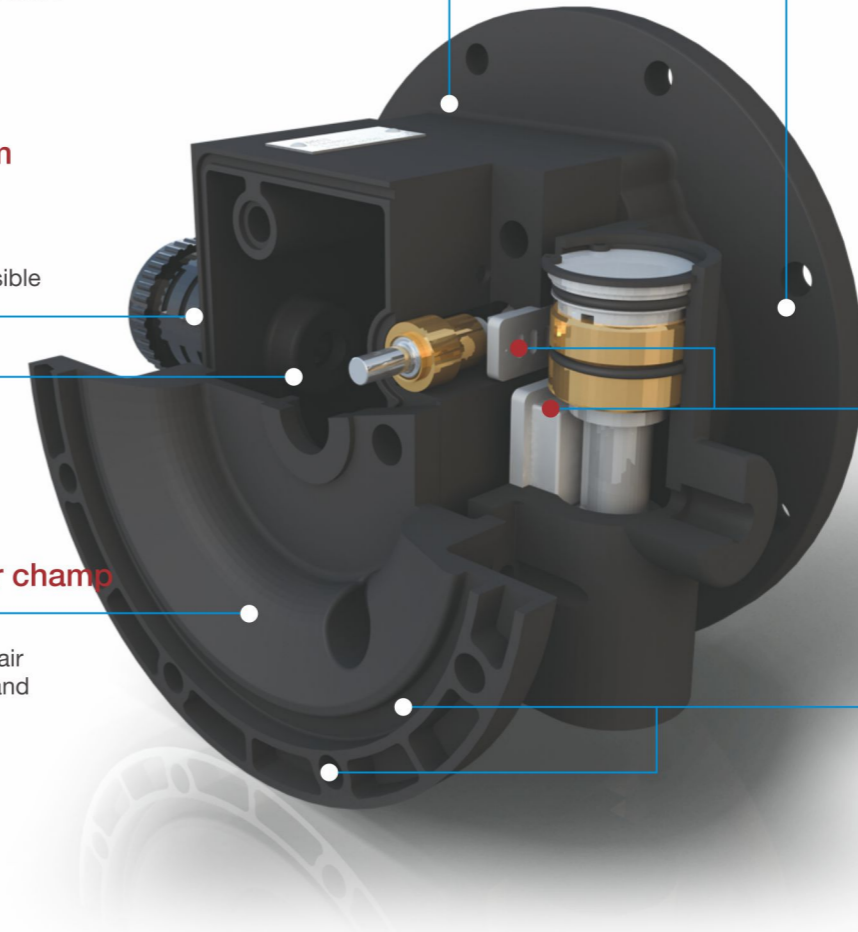
- + Commonly used
- + Less spare part & less cost

Chip valve, ceramic material

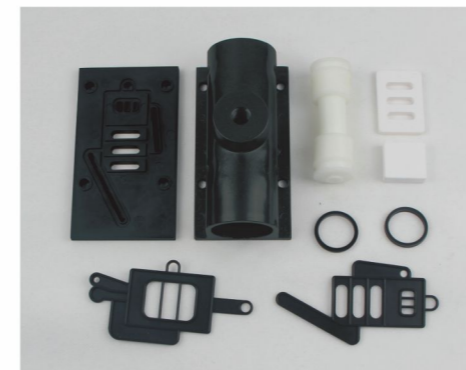
- + wear resistant
- + resistance soiling

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



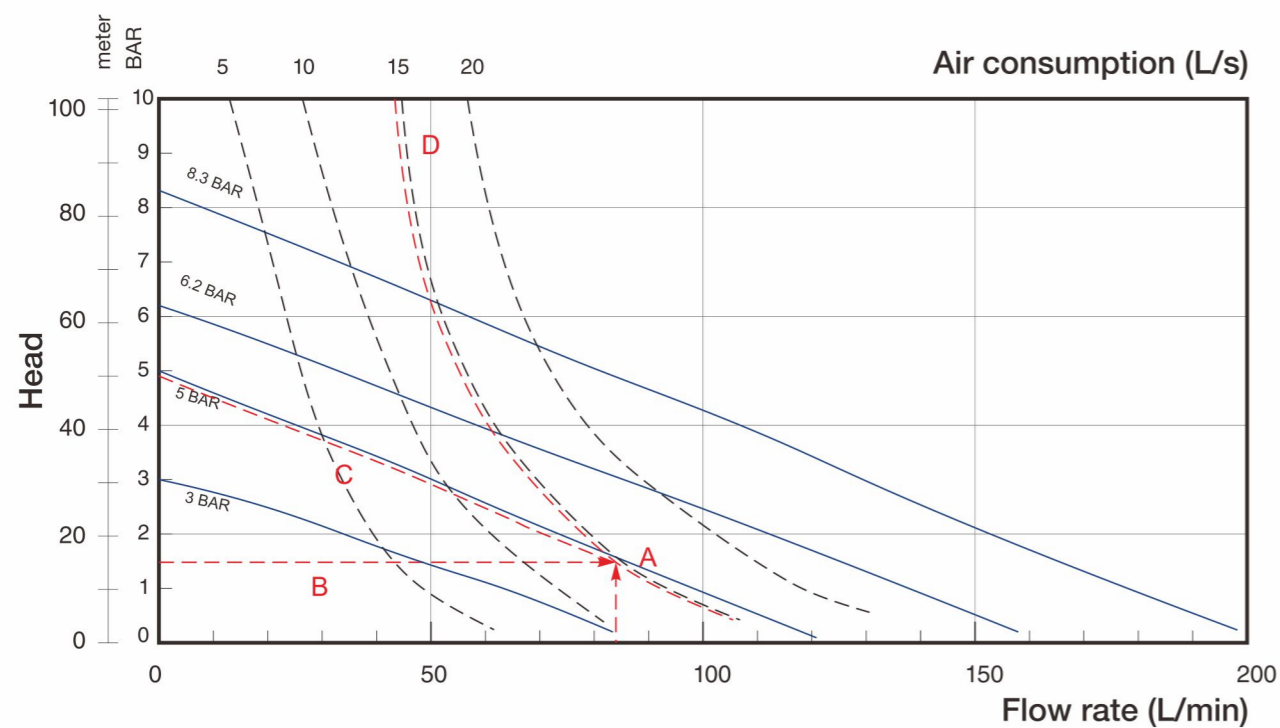
Model Chart

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) |



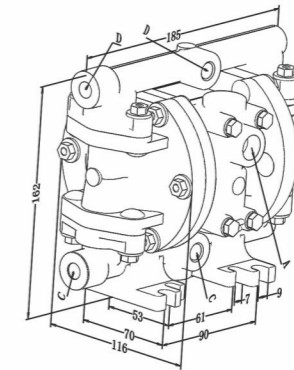
B P 06 XX - XXXX - X

| 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

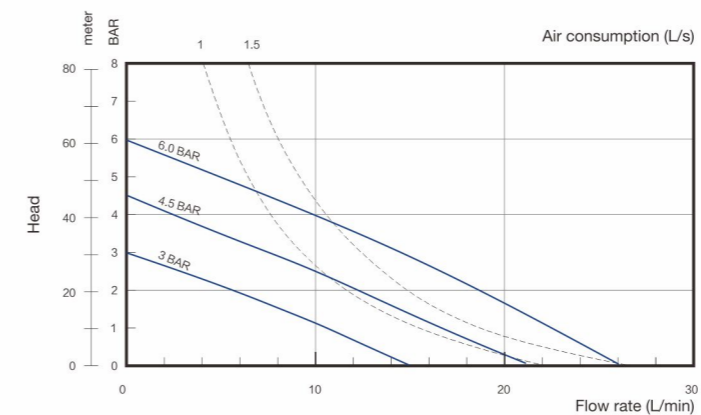
PUMP DATA

| | |
|-------------------------|---------------|
| 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

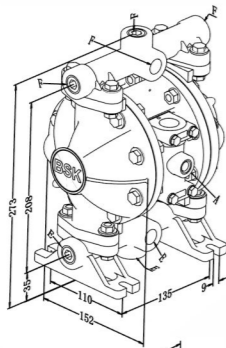
| Center body | Housing material | Seat material | Ball material | Diaphragm material | O-ring material | Port |
|---------------|---|--|---|---|----------------------------|-----------------------------|
| Polypropylene | PP - Polypropylene SS - Stainless steel CS - Carbon steel | P - Polypropylene 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

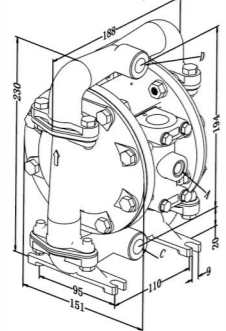
| Center body | Housing material | Seat material | Ball material | Diaphragm material | O-ring material | Port |
|----------------|--|--|---|---|---|----------------------------|
| Aluminum alloy | PP - Polypropylene SS - Stainless steel CS - Carbon steel AL - Aluminum | P - Polypropylene S - Stainless 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 |



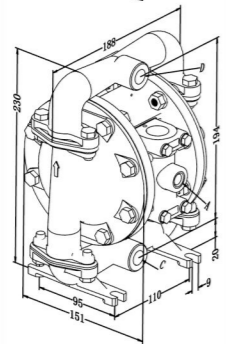
Plastic pump



Stainless steel pump



Carbon steel pump

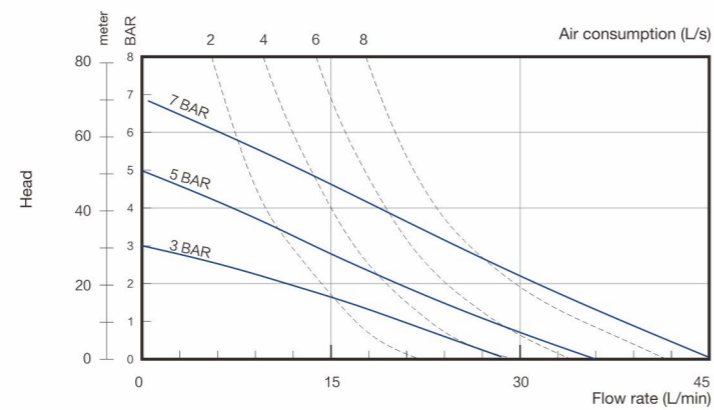


- ★ Small size, less room request for installation.
- ★ Multiple port for selection

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



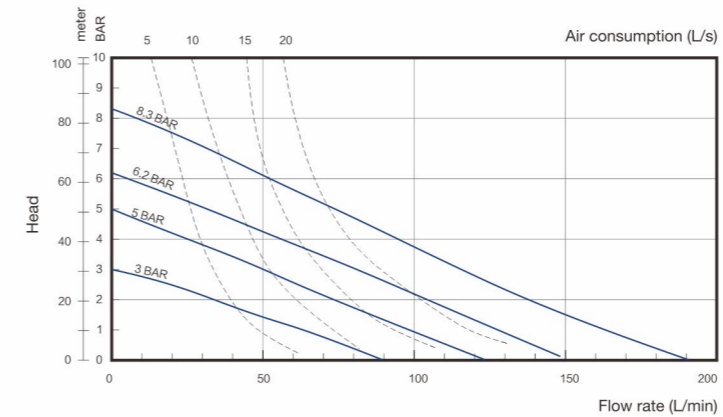
| Port size | A | B | C | D | E | F |
|-----------|----------|---------------|---------------|----------|----------|---|
| Air Inlet | Exhaust | Inlet | Outlet | Inlet | Outlet | |
| 1/4" NPT | 3/8" NPT | 1/2-14 BSP Rp | 1/2-14 BSP Rp | 1/2" NPT | 1/2" NPT | |

- ★ Flange size meet both ANSI and DIN

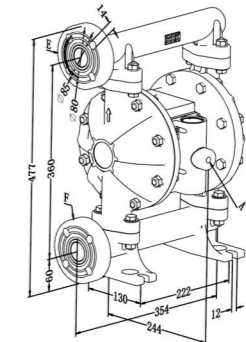
PUMP DATA

| | |
|-------------------------|--|
| 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 |

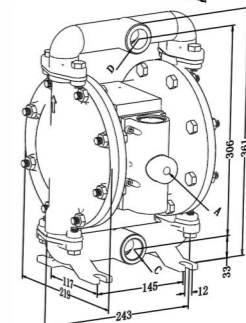
PERFORMANCE CURVE



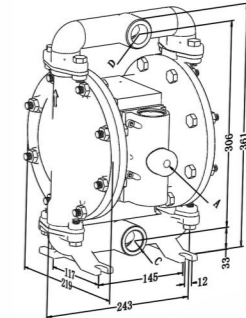
| Port size | A | B | C | D | E | F |
|-----------|----------|--------|--------|-----------|-----------|---|
| Air Inlet | Exhaust | Inlet | Outlet | Inlet | Outlet | |
| 1/4" NPT | 3/8" NPT | 1" BSP | 1" BSP | 1" FLANGE | 1" FLANGE | |



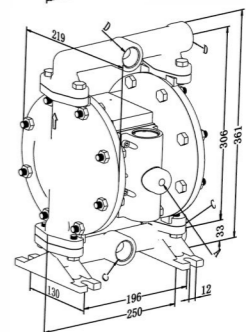
Plastic pump



Stainless steel pump



Carbon steel pump



Aluminum alloy pump

B A 40 XX - XXXX - X

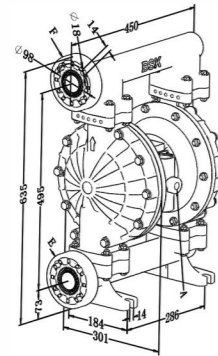
| Center body | Housing material | Seat material | Ball material | Diaphragm material | O-ring material | Port |
|----------------|--|---|---|--|---|--------------------------------|
| Aluminum alloy | PP - Polypropylene SS - Stainless steel CS - Carbon steel AL - Aluminum | P - Polypropylene S - Stainless 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

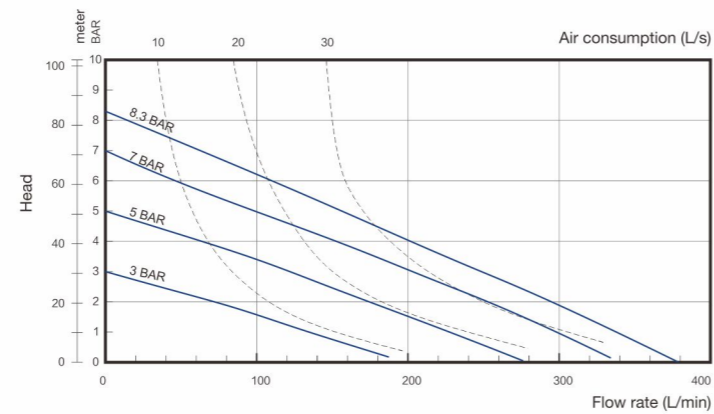


★ Flange size meet both ANSI and DIN

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 |

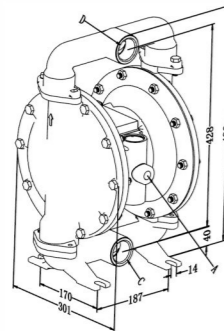
PERFORMANCE CURVE



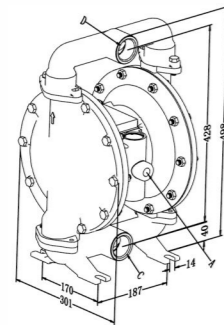
| Port size | A | B | C | D | E | F |
|-----------|----------|------------|------------|---------------|---------------|---|
| Air Inlet | Exhaust | Inlet | Outlet | Inlet | Outlet | |
| 1/2" NPT | 3/4" NPT | 1 1/2" BSP | 1 1/2" BSP | 1 1/2" FLANGE | 1 1/2" FLANGE | |



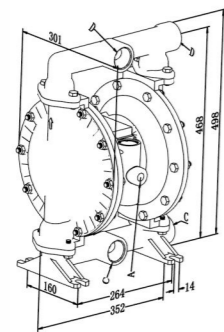
Stainless steel pump



Carbon steel pump



Aluminum alloy pump



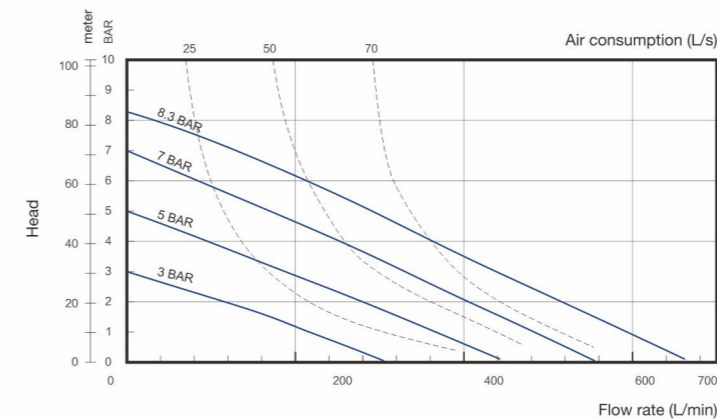
★ Flange size meet both ANSI and DIN

★ Cast iron pump: BSP thread port optional

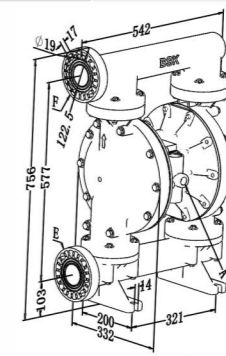
PUMP DATA

| | |
|-------------------------|--|
| 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 |

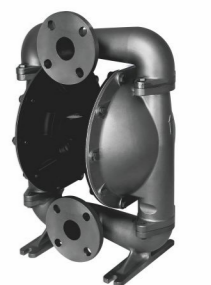
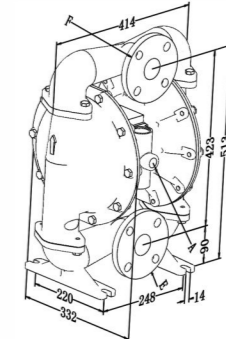
PERFORMANCE CURVE



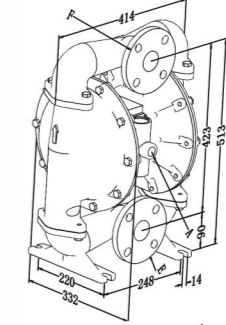
| Port size | A | B | C | D | E | F |
|-----------|----------|--------|--------|-----------|-----------|---|
| Air Inlet | Exhaust | Inlet | Outlet | Inlet | Outlet | |
| 3/4" NPT | 3/4" NPT | 2" BSP | 2" BSP | 2" FLANGE | 2" FLANGE | |



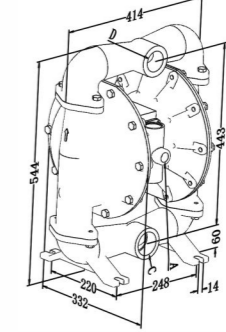
Plastic pump



Stainless steel pump



Carbon steel pump



Aluminum alloy pump

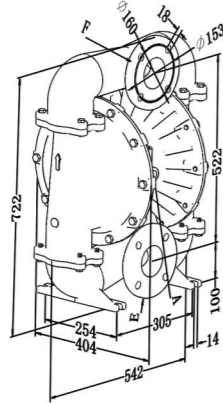
3" Pump

B A 80 XX - XXXX - X

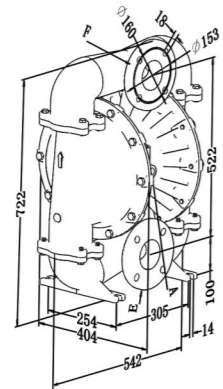
| Center body | Housing material | Seat material | Ball material | Diaphragm material | O-ring material | Port |
|----------------|---|---|---|--|--------------------------------------|--------------------------------|
| Aluminum alloy | SS - Stainless steel CS - Carbon steel CI - Cast Iron | S - Stainless 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 |



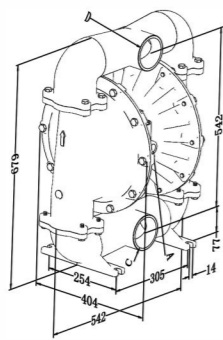
Stainless steel pump



Carbon steel pump



Aluminum alloy pump

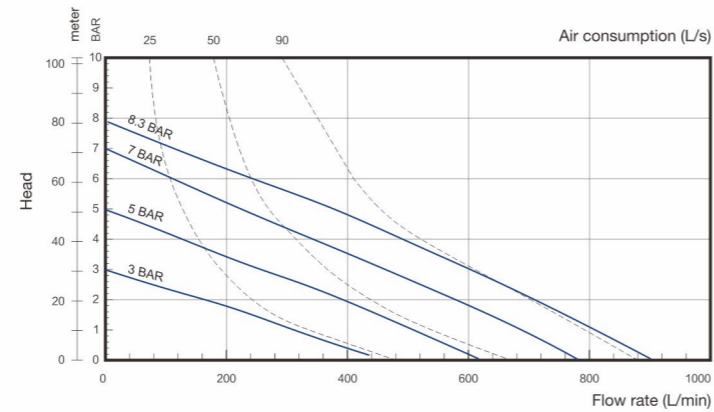


- ★ Flange size meet both ANSI and DIN
- ★ Cast iron pump: BSP thread port optional

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 | + | + | + | + | + | + | ✓ | + |
| | PTFE | + | + | + | + | + | ✓ | ✓ | + |
| VALVE SEALING | NBR | + | ✓ | ! | × | ✓ | ✓ | ✓ | + |
| | PTFE | + | + | + | + | + | ✓ | ✓ | + |

