



# SHiFT<sup>®</sup>

## MODULUS

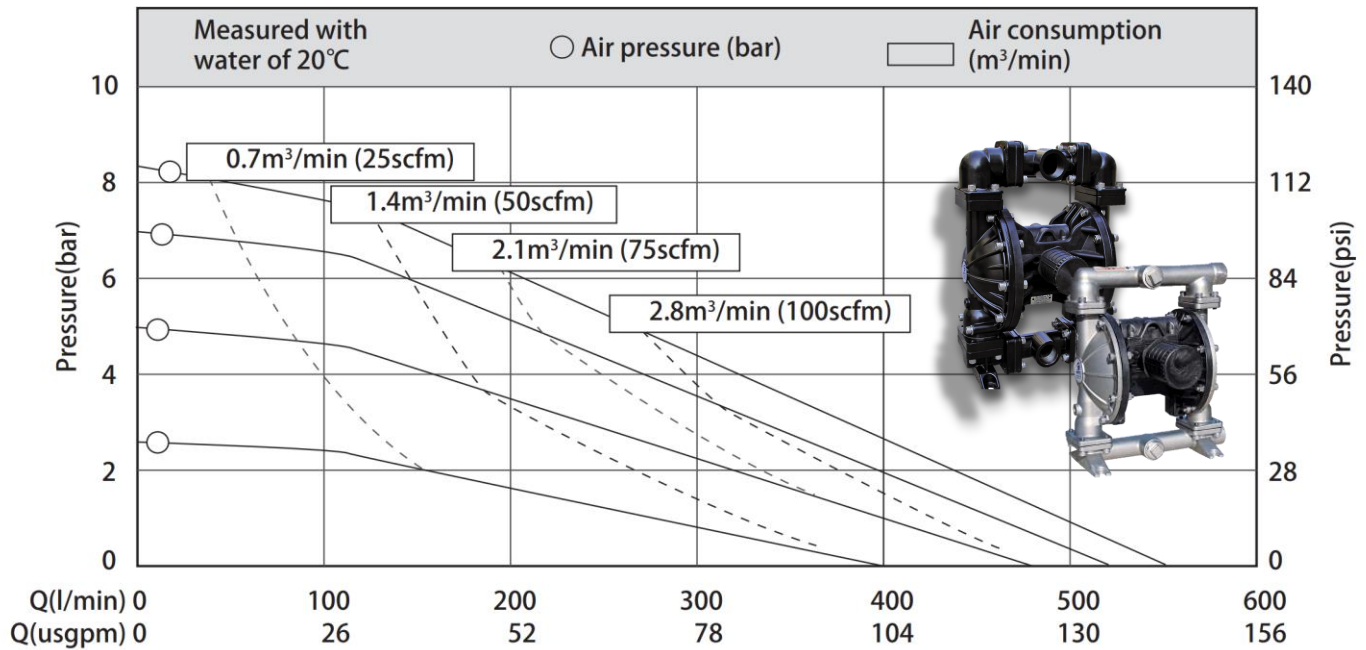
Care and Maintenance  
Manual

# M50

Bolted  
Metal  
Pumps



## Performance Curve



### Technical Parameters

Parameter	Unit	Value
Suction Lift - dry	mwc	5
Suction lift - wet	mwc	8
Solids size	mm	6
Air inlet	inch	1/2
Max air inlet pressure	bar	8.4

### Material of Construction

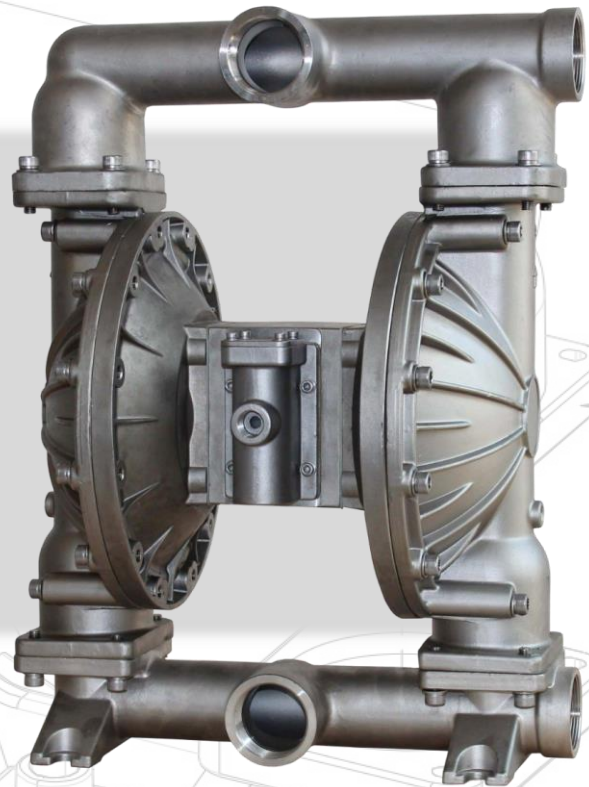
Pump Part	Material
Pump body	AL, SS
Diaphragm	Santoprene (ST), Teflon (TF), Hytrel
Seat	Santoprene (ST), Teflon (TF), Hytrel
Centre block	PP, AL

### Weight

Pump type	Weight
Aluminium	27kg
Stainless	48kg
Cast-iron	78kg



# Speciality Stainless Centre Bolted Pumps



## Three-section connection

The centre body is connected by three section high strength bolts, which reduces the difficulty maintenance.

## Modular air valve

The air valve is external for convenient installation and maintenance.

## Bolted design

The pump is bolted with high strength bolts to prevent leakage under pressure.

## Stainless construction

The full centre section is constructed in stainless offering chemical resistance and rigid

## Built-in buffer chamber

Energy saving and noise reduction, preventing icing, with reduced exhaust pressure and noise.

## Unbalance air valve spool

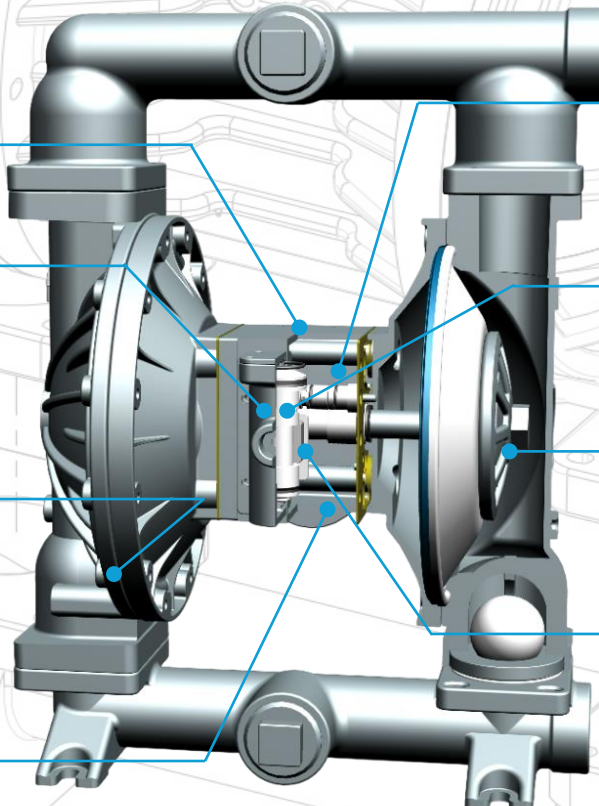
The spool has always got air pressure on the small head to prevent centralization.

## One piece outer plate

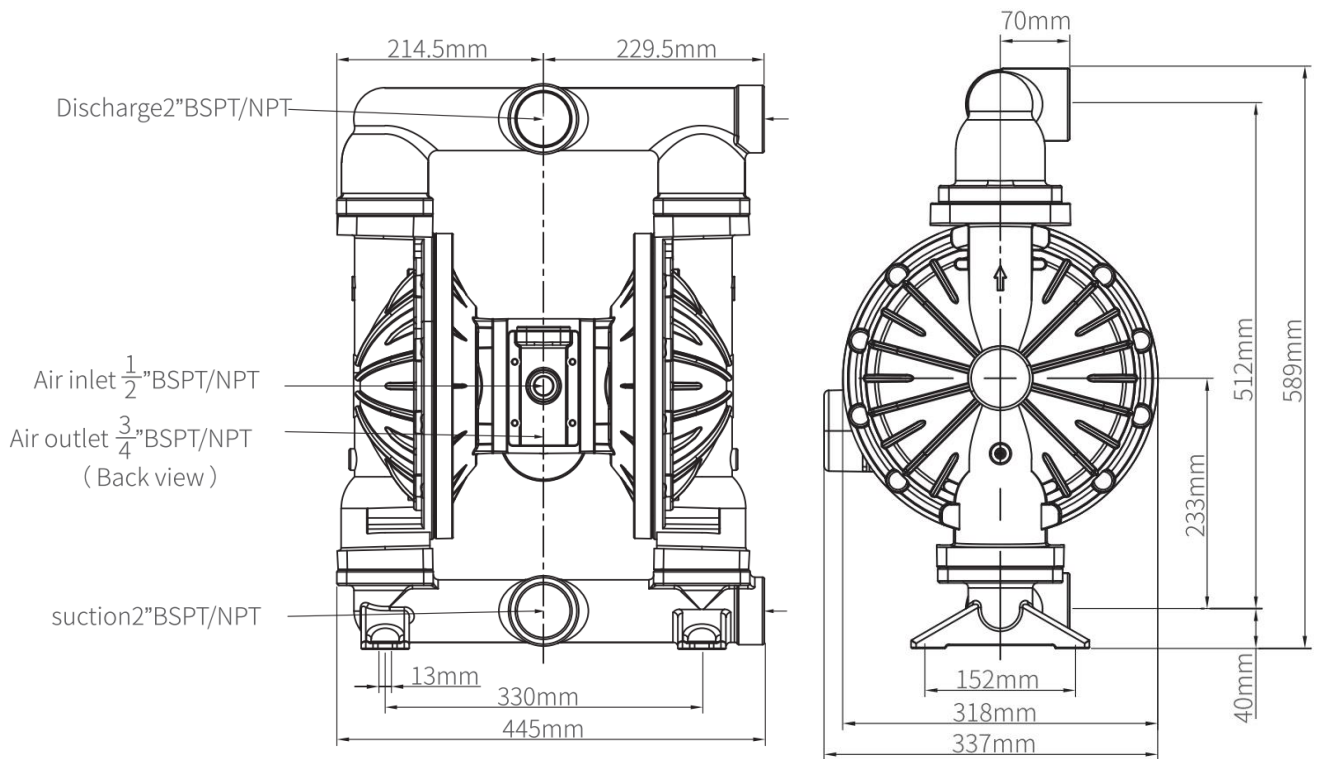
The outer plate has an oring groove to seal on diaphragm to prevent leakage.

## Double ceramic dynamic seal

Provides high wear resistance and self sealing to maximize efficacy.



## Dimensional Data: Stainless Centre



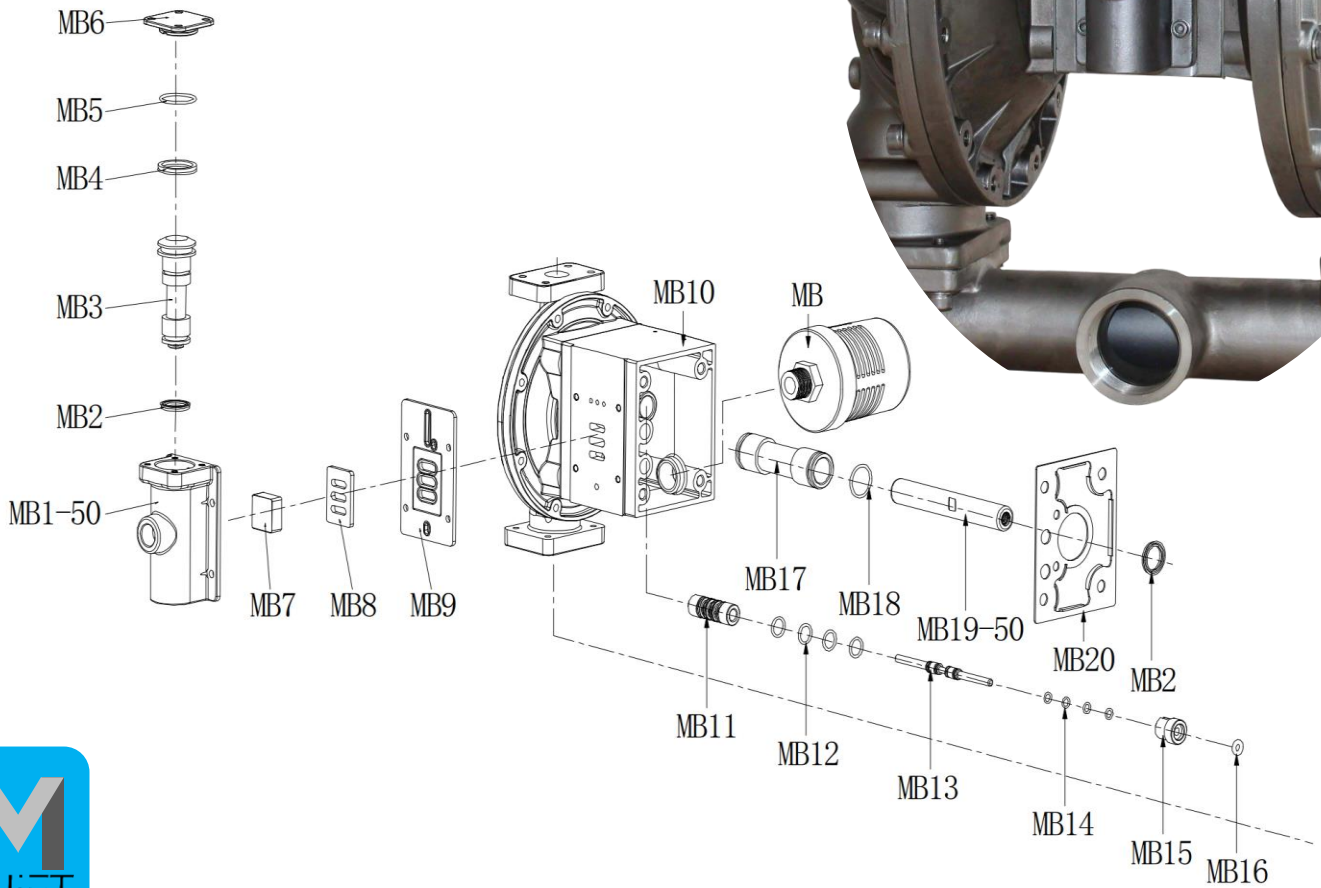
## Material of Construction

Pump Part	Material
Pump body	AL, SS, PP, CI
Diaphragm	Santoprene (ST), Teflon (TF), Hytrel
Seat	Santoprene (ST), Teflon (TF), Hytrel
Centre block	SS

## Weight

Pump type	Weight
Aluminium	34kg
Stainless	55kg
Cast-iron	85kg

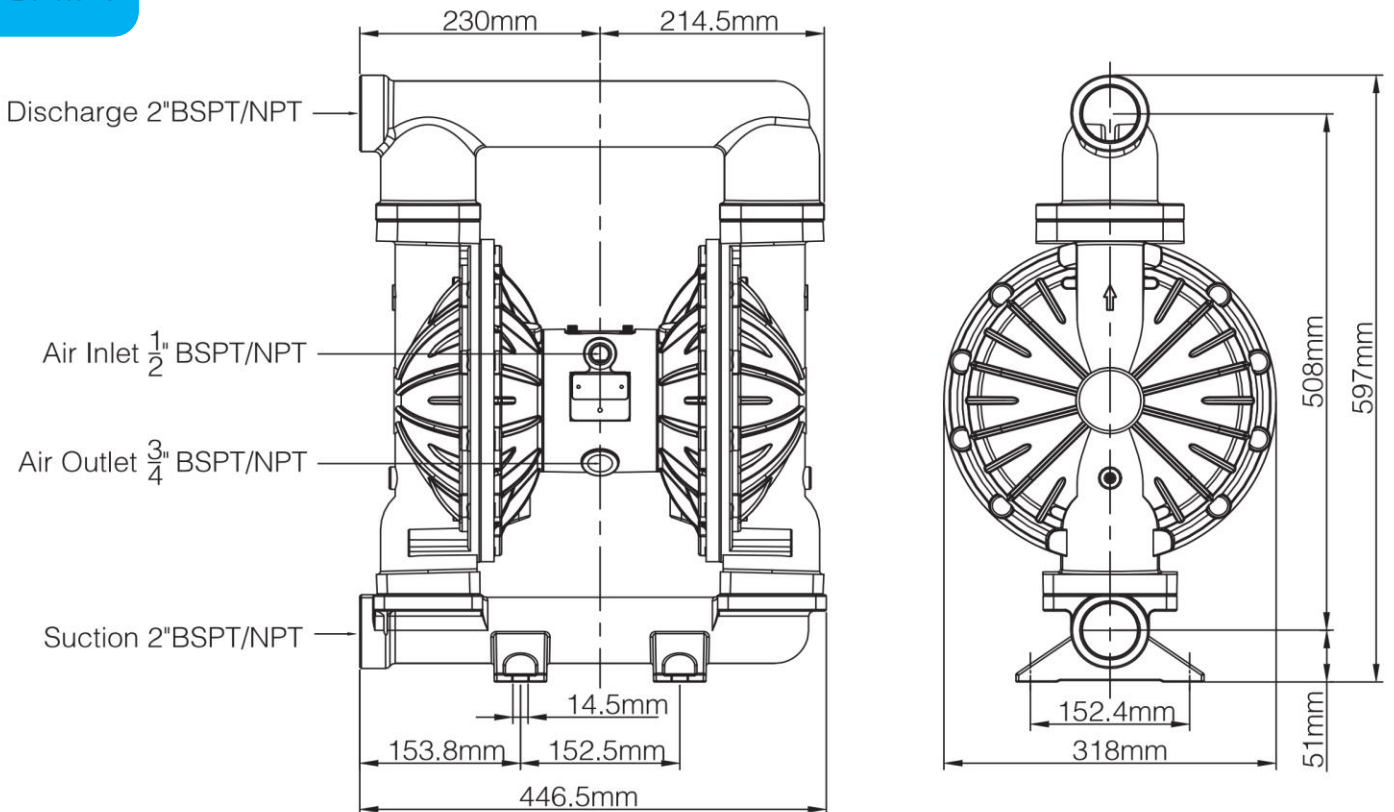
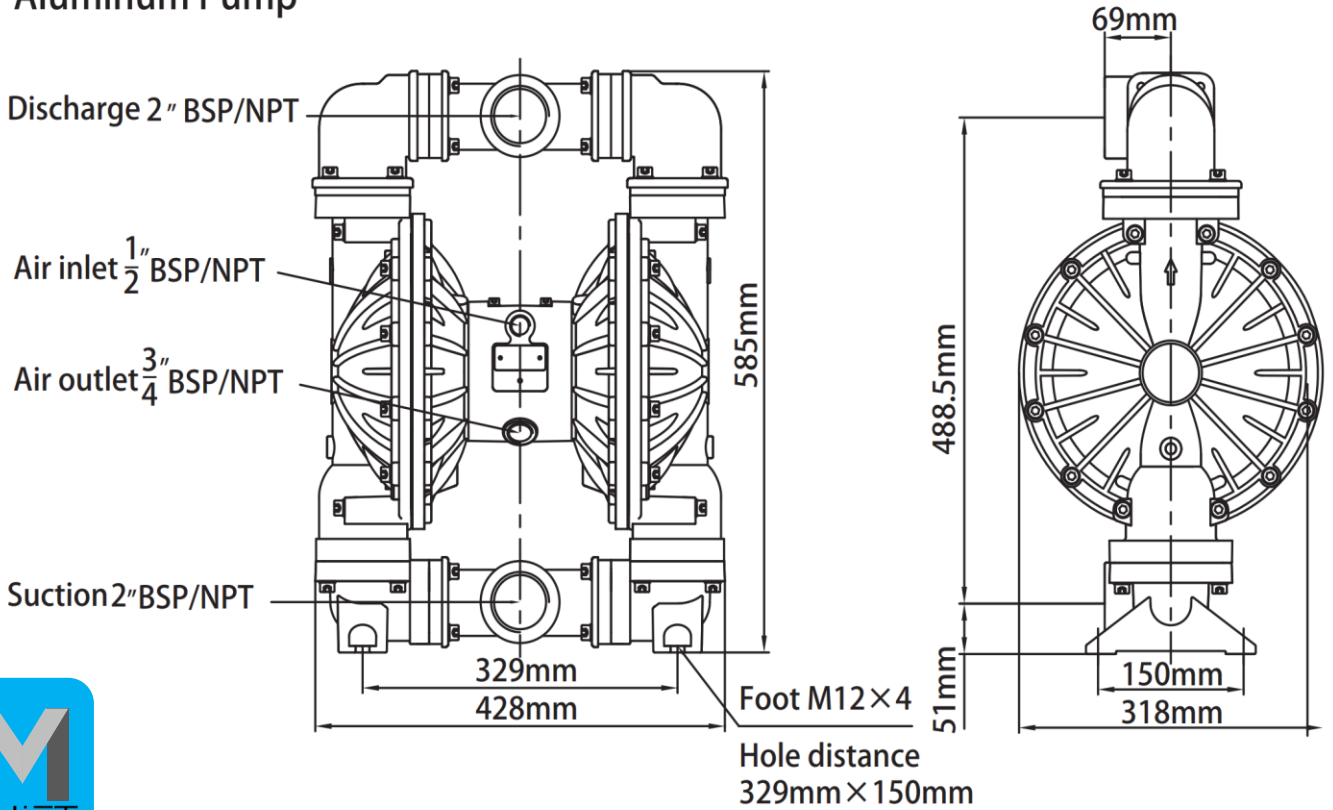
## Part Numbers: Stainless centre



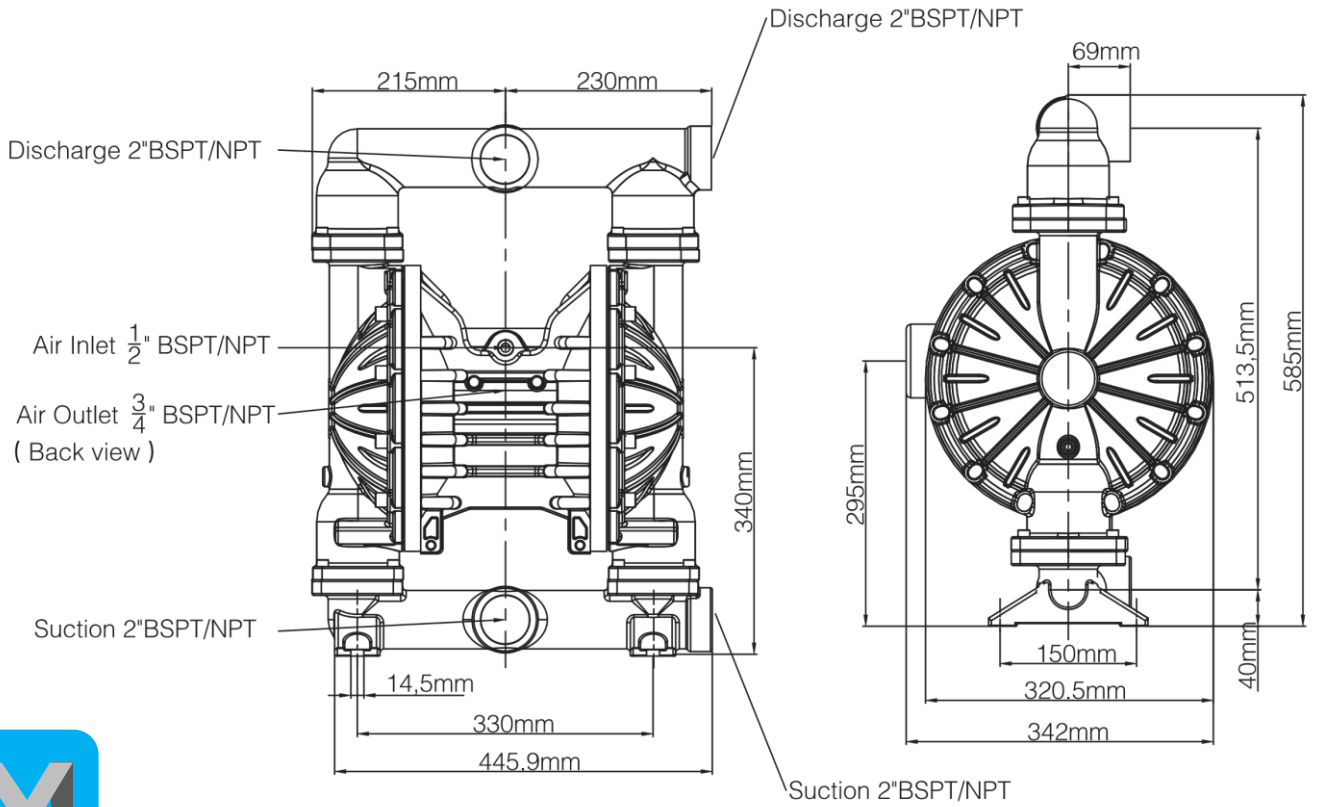
Part code	Name	Part code	Name
MB1-50-SS	Air valve housing	MB12-VT	Reversing valve O-Ring
MB2-VT	V-ring (Piston and rod)	MB13-SS	Reversing shaft
MB3-PM	Piston	MB14-PU	Shaft O-Ring
MB4-VT	Piston V-ring	MB15-PM	Locking plate
MB5-VT	Cap O-Ring	MB16-VT	Plate O-Ring
MB6-SS	Air valve cap	MB17-PM	Rod Bushing
MB7-CM	Pilot valve	MB18-VT	Rod bushing O-ring
MB8-CM	Valve plate	MB19-50-SS	Diaphragm Rod
MB9-ST	Air valve gasket	MB20-ST	Air chamber gasket
MB10-SS	Center block	MB-PP	Muffler
MB11-PM	Reversing valve		

Dimensional Drawings: Aluminium

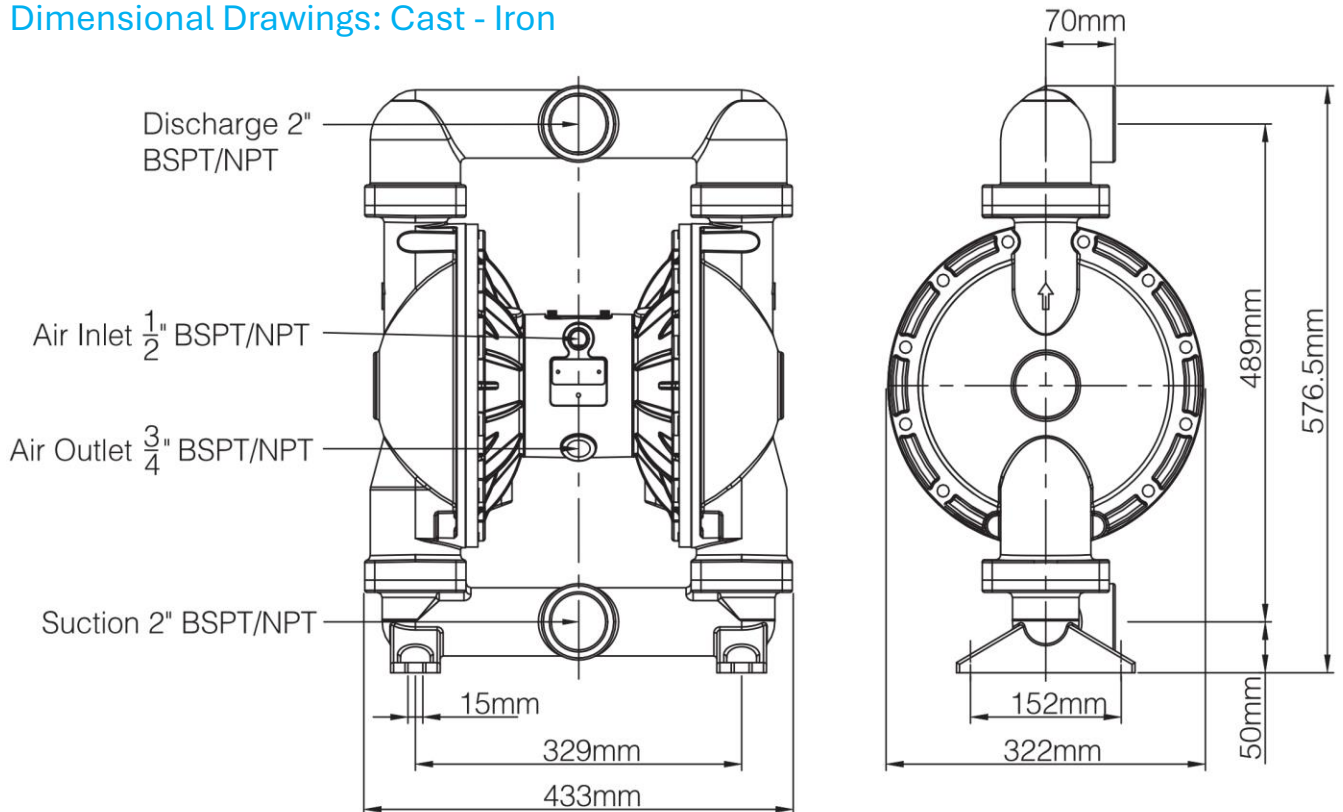
Aluminum Pump



## Dimensional Drawings: Stainless



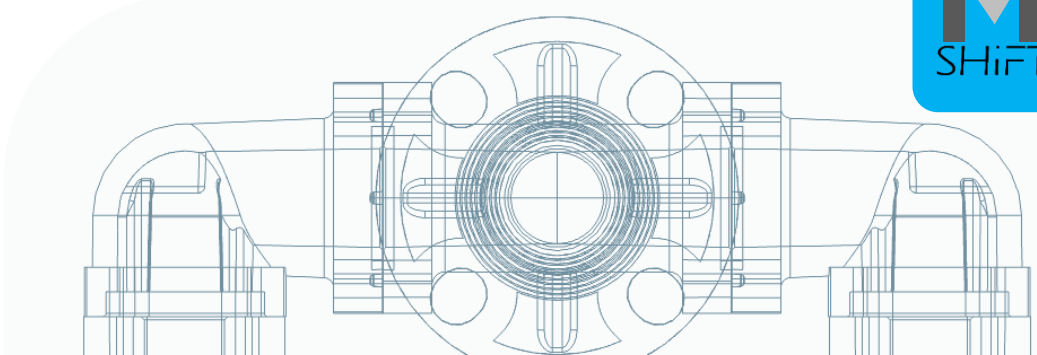
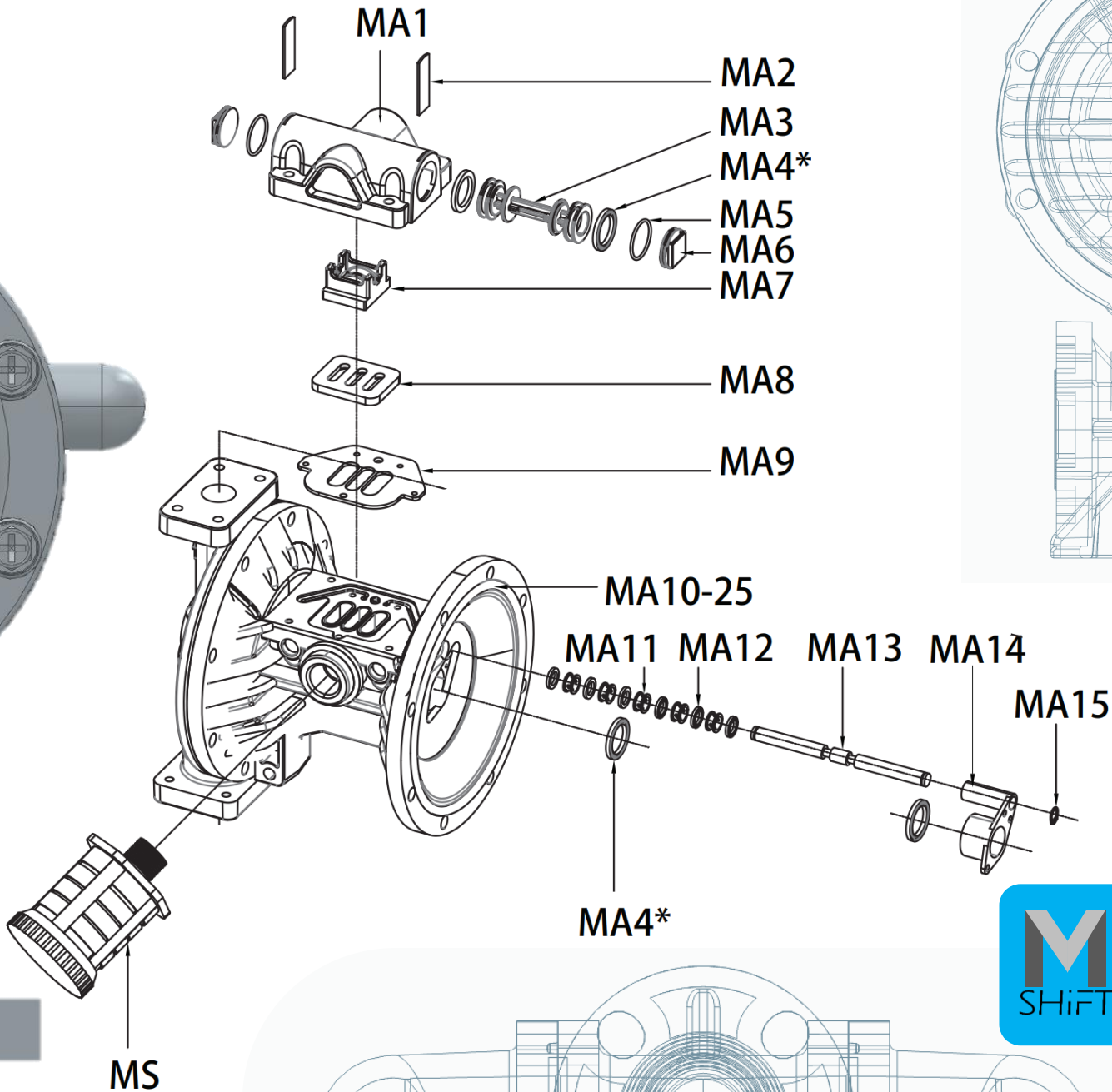
## Dimensional Drawings: Cast - Iron



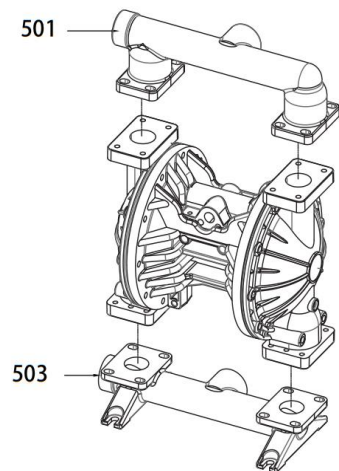
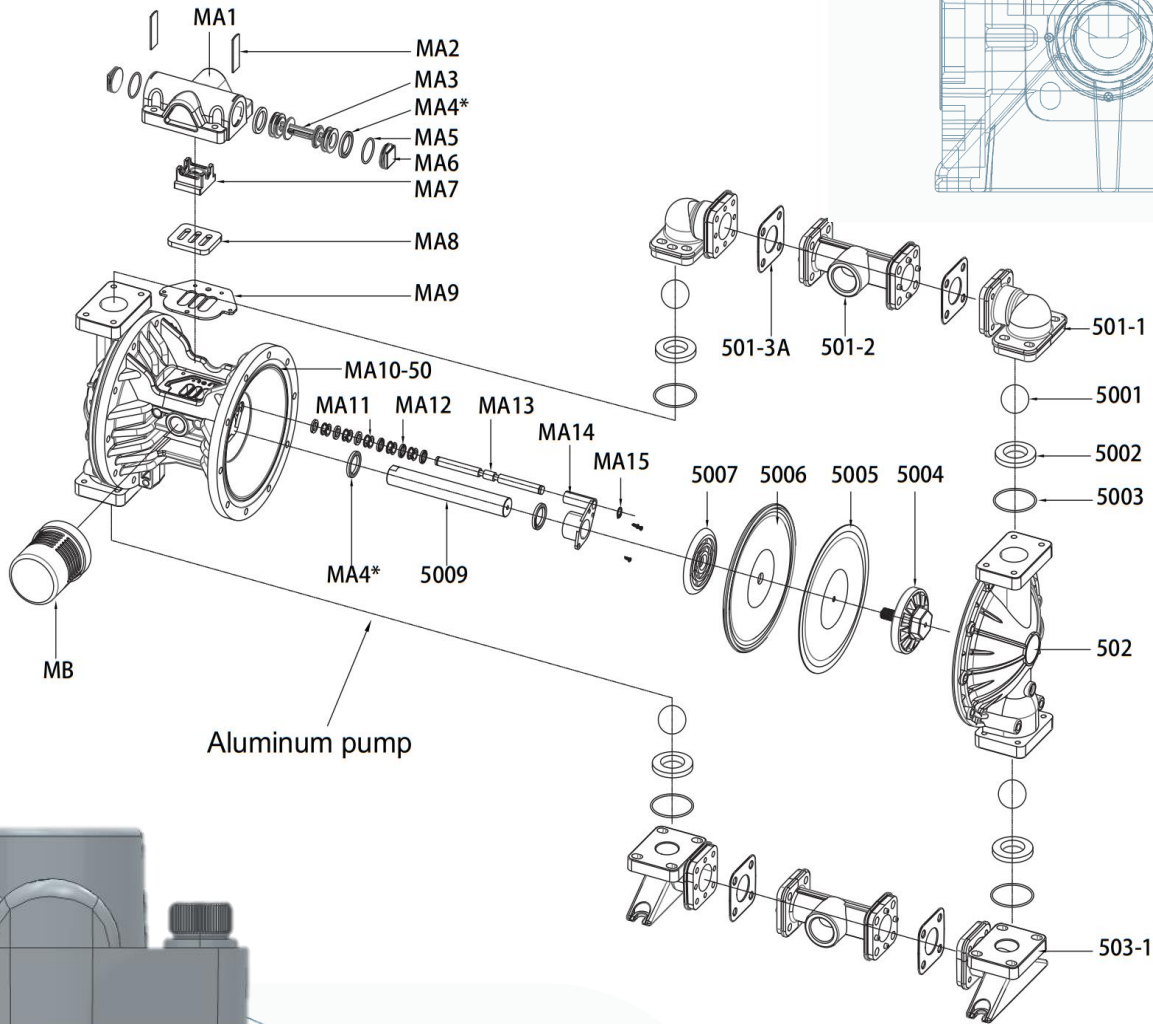
Part Numbers: Poly Centre

Part code	Name
MA1-KV	Air valve housing
MA2-SS	Plug locking plate
MA3-PM	Piston
MA4-VT	V-ring
MA5-VT	Plug O-ring
MA6-KV	Plug
MA7-PM	Pilot valve
MA8-SS	Valve plate

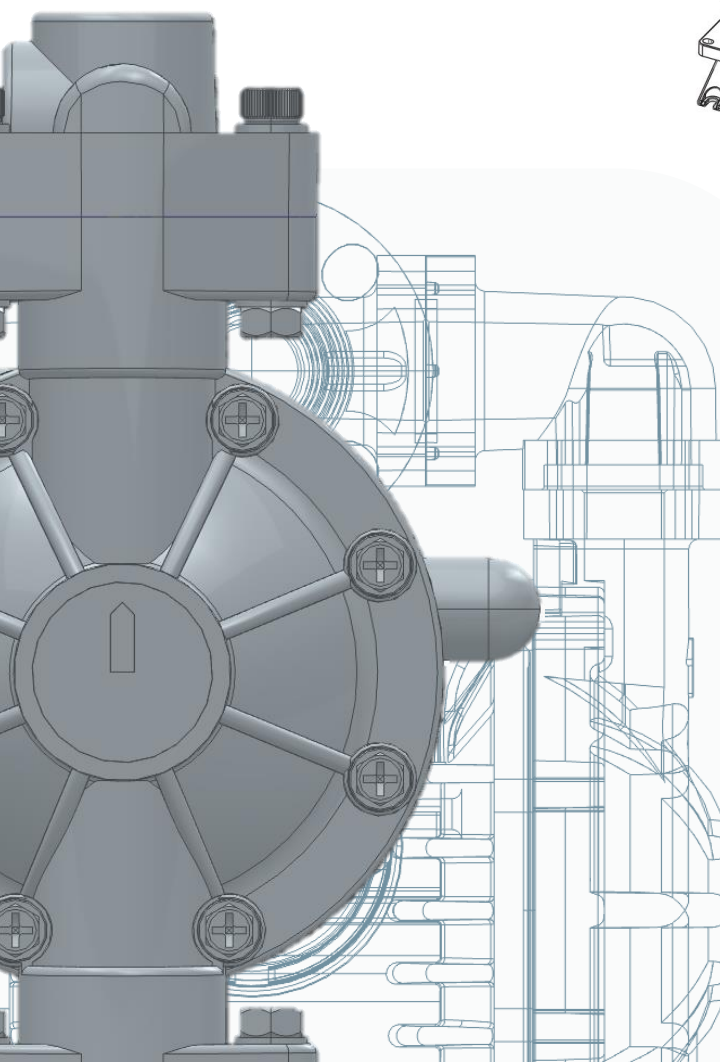
Part code	Name
MA9-ST	Air valve gasket
MA10-25-PP	Centre block
MA11-PM	Reversing valve
MA12-VT	Shaft O-ring
MA13-SS	Shaft
MA14-PM	Rod locking plate
MA15-SS	Snap ring
MS-PP	Muffler



# Part Numbers: Poly Centre



**Stainless steel pump  
Cast iron pump**



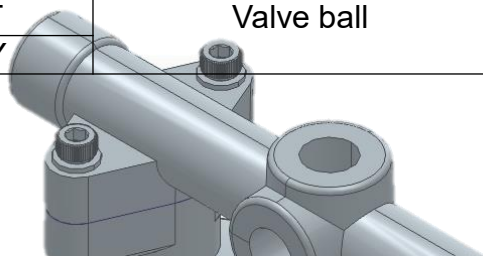
## Part Numbers: Poly Centre

Part code	Name
MA1-KV	Air valve housing
MA2-SS	Plug locking plate
MA3-PM	Piston
MA4-VT	V-ring
MA5-VT	Plug O-ring
MA6-KV	Plug
MA7-PM	Pilot valve
MA8-SS	Valve plate

Part code	Name
MA9-ST	Air valve gasket
MA10-25-PP	Centre block
MA11-PM	Reversing valve
MA12-VT	Shaft O-ring
MA13-SS	Shaft
MA14-PM	Rod locking plate
MA15-SS	Snap ring
MS-PP	Muffler

Part code	Name
501-SS	Discharge Manifold
501-LL	
501-PP	
501-KV	
501-AC	
501-1-PP	Upper Elbow
501-1-AL	
501-1-KV	
501-2-PP	TEE
501-2-AL	
501-2-KV	
501-3P-HY	
501-3P-ST	
501-3P-TF	TEE Gasket (Plastic pump)
501-3A-HY	
501-3A-ST	
501-3A-TF	TEE Gasket (AL pump)
503-SS	
503-LL	
503-PP	Suction Manifold
503-KV	
503-AC	
503-1-PP	
503-1-AL	Bottom Elbow
503-1-KV	
502-KV	Fluid chamber
502-PP	
502-AL	
502-SS	
502-LL	
502-AC	
504-AL	Air chamber
5001-TF	Valve ball
5001-ST	
5001-HY	

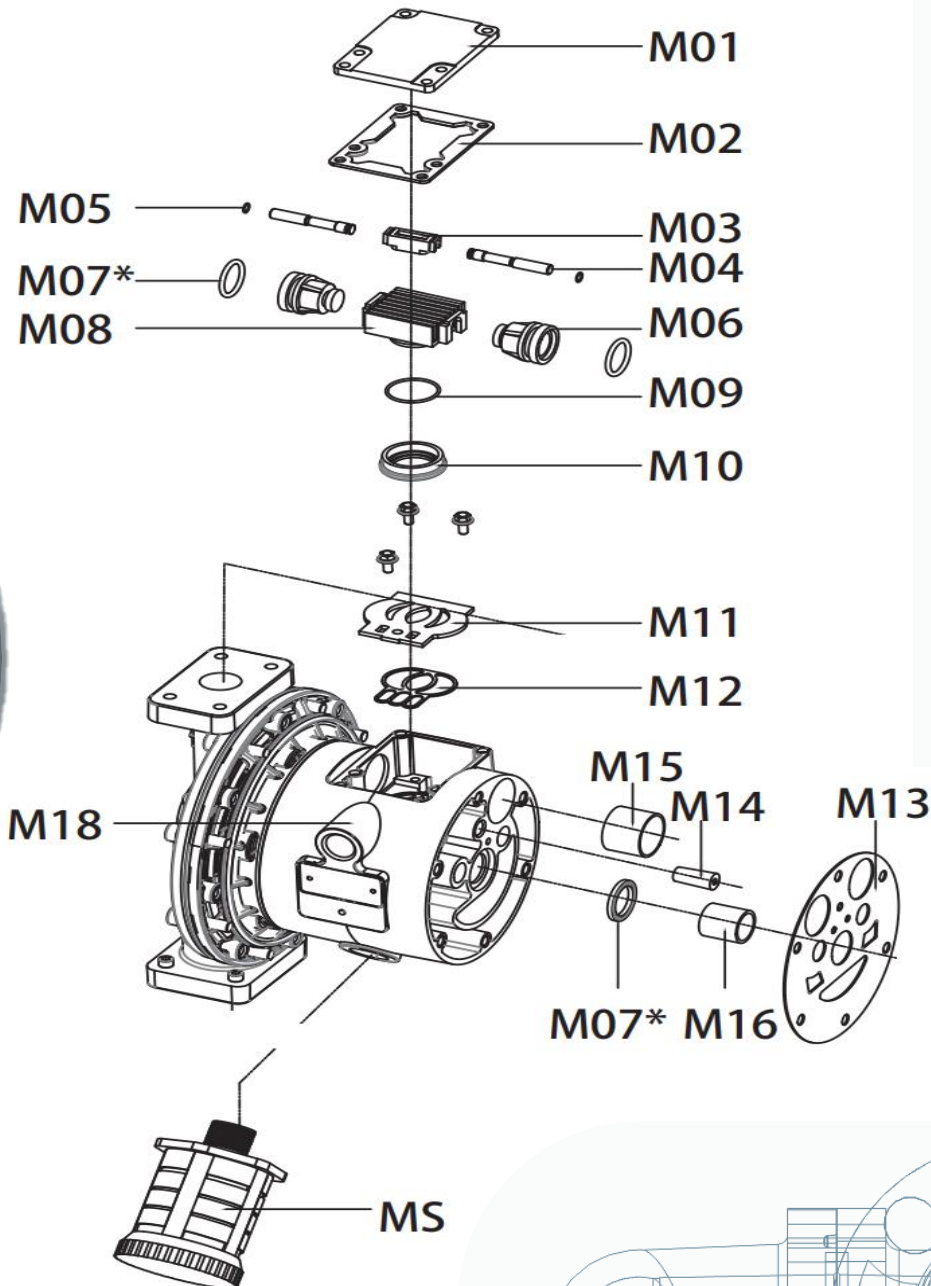
Part code	Name
5001-BN	Valve ball
5001-EP	
5001-SS	
5001-LL	
5001-CM	
5002-PP	Valve seat
5002-AL	
5002-TF	
5002-ST	
5002-HY	
5002-BN	
5002-EP	
5002-VT	
5002-SS	
5002-LL	
5003-TF	Seat O-ring
5003-BN	
5003-EP	
5003-VT	
5004-KV	Plate
5004-PP	
5004-AL	
5004-SS	
5004-LL	Teflon diaphragm
5005-TF	
5006-ST	Rubber diaphragm
5006-HY	
5006-BN	
5006-EP	
5006-GE	
5006-VT	
5007-AL	Inner plate
5009-SS	Diaphragm Rod



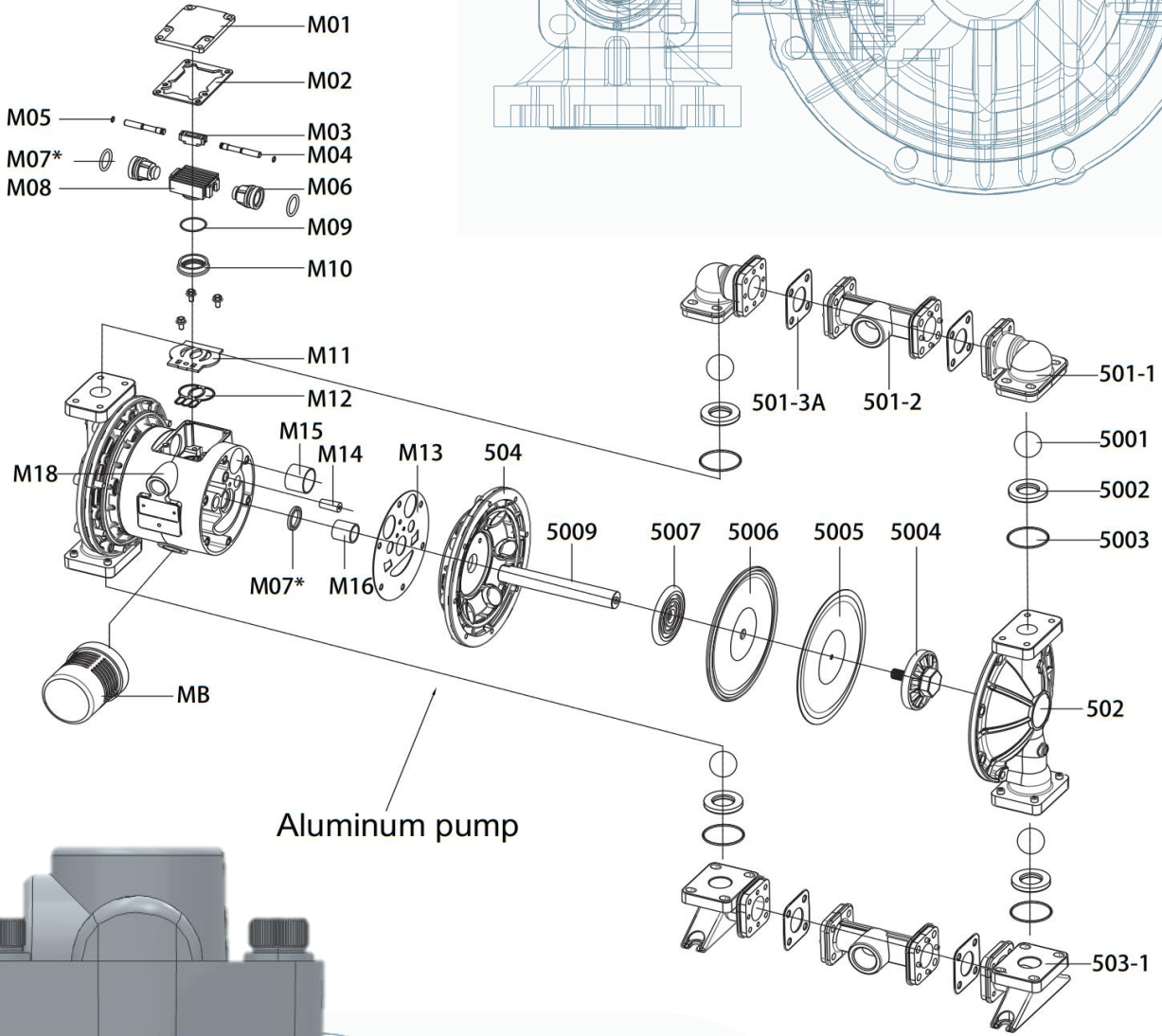
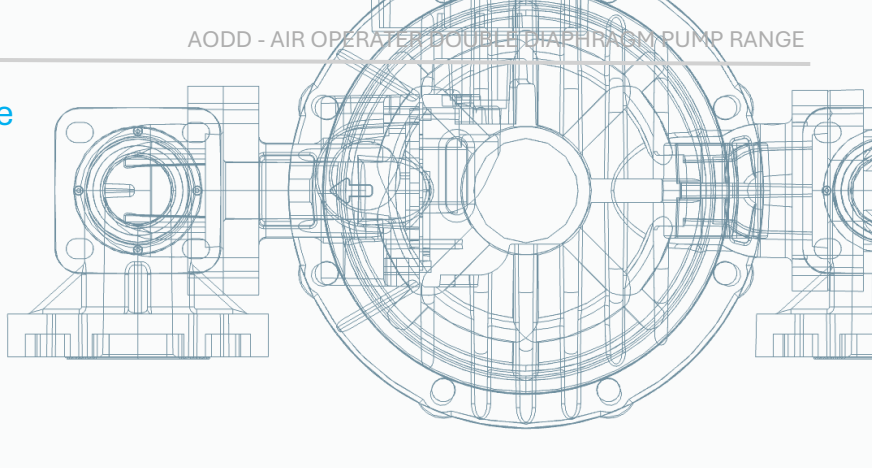
## Part Numbers: Aluminium Centre

Part code	Name
M01-AL	Air valve cap
M02-ST	Air valve cap gasket
M03-PM	Reversing switch
M04-SS	Reversing pin
M05-VT	Pin O-ring
M06-PM	Piston
M07-VT	V-ring
M08-AL	Upper pilot valve
M09-VT	Pilot valve O-ring

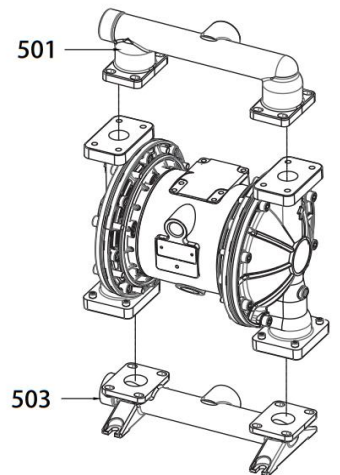
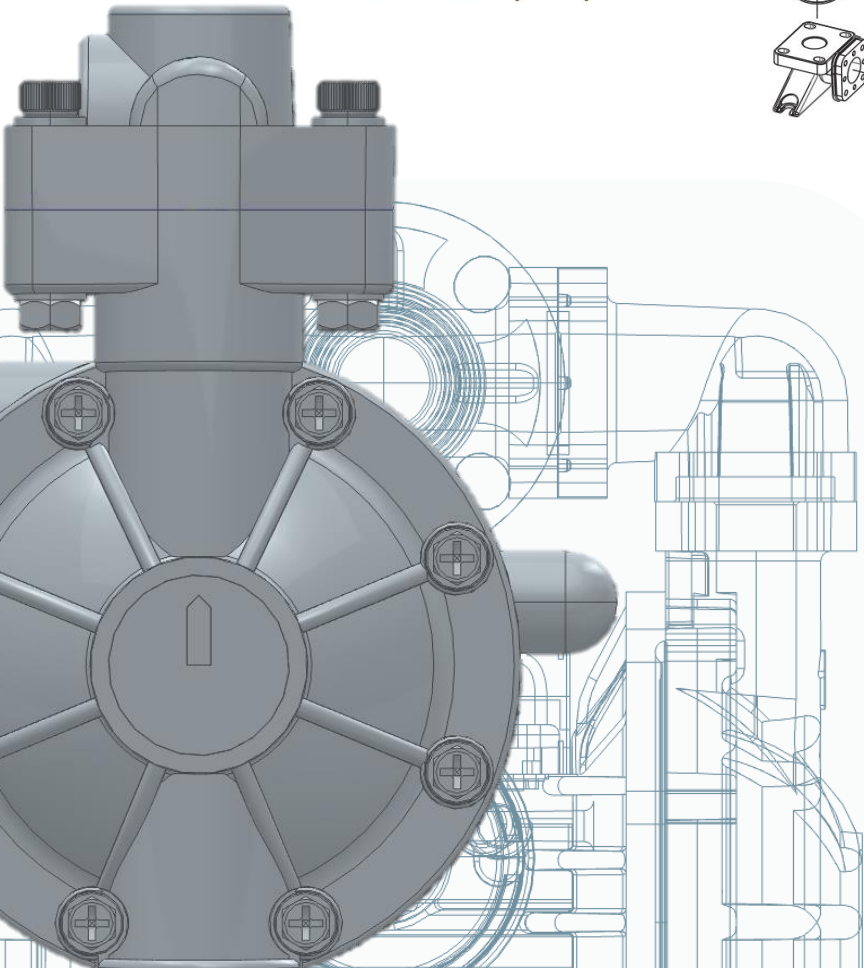
Part code	Name
M10-PM	Bottom Pilot valve
M11-SS	Valve plate
M12-ST	Valve plate gasket
M13-ST	Air chamber gasket
M14-PM	Pin bushing
M15-PM	Piston bushing
M16-PM	Rod bushing
M18-AL	Center block
MS-PP	Muffler



### Part Numbers: Aluminium Centre



Aluminum pump



Stainless steel pump  
Cast iron pump

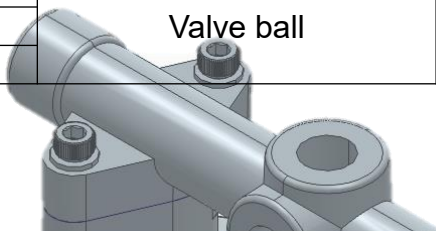
## Part Numbers: Alumium Centre

Part code	Name
M01-AL	Air valve cap
M02-ST	Air valve cap gasket
M03-PM	Reversing switch
M04-SS	Reversing pin
M05-VT	Pin O-ring
M06-PM	Piston
M07-VT	V-ring
M08-AL	Upper pilot valve
M09-VT	Pilot valve O-ring

Part code	Name
M10-PM	Bottom Pilot valve
M11-SS	Valve plate
M12-ST	Valve plate gasket
M13-ST	Air chamber gasket
M14-PM	Pin bushing
M15-PM	Piston bushing
M16-PM	Rod bushing
M18-AL	Centre block
MS-PP	Muffler

Part code	Name
501-SS	Discharge Manifold
501-LL	
501-PP	
501-KV	
501-AC	
501-1-PP	Upper Elbow
501-1-AL	
501-1-KV	
501-2-PP	TEE
501-2-AL	
501-2-KV	
501-3P-HY	
501-3P-ST	TEE Gasket (Plastic pump)
501-3P-TF	
501-3A-HY	
501-3A-ST	TEE Gasket (AL pump)
501-3A-TF	
503-SS	
503-LL	
503-PP	
503-KV	
503-AC	
503-1-PP	Bottom Elbow
503-1-AL	
503-1-KV	
502-KV	Fluid chamber
502-PP	
502-AL	
502-SS	
502-LL	
502-AC	
504-AL	Air chamber
5001-TF	Valve ball
5001-ST	
5001-HY	

Part code	Name
5001-BN	Valve ball
5001-EP	
5001-SS	
5001-LL	
5001-CM	
5002-PP	Valve seat
5002-AL	
5002-TF	
5002-ST	
5002-HY	
5002-BN	
5002-EP	
5002-VT	
5002-SS	
5002-LL	
5003-TF	Seat O-ring
5003-BN	
5003-EP	
5003-VT	
5004-KV	Plate
5004-PP	
5004-AL	
5004-SS	
5004-LL	
5005-TF	Teflon diaphragm
5006-ST	Rubber diaphragm
5006-HY	
5006-BN	
5006-EP	
5006-GE	
5006-VT	
5007-AL	Inner plate
5009-SS	Diaphragm Rod



The background of the entire page is a technical line drawing of a complex mechanical assembly, likely a pump or motor. The drawing is rendered in a light blue color and is centered on the page. It shows various components such as a central shaft, bearings, housing, and mounting feet. The drawing is a combination of a top-down view and a side cross-section view, providing a detailed look at the internal and external structure of the machine.

# MODULUS

RANGE

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