ASAHI SUNAC

PNEUMATIC DIAPHRAGM PUMP

PD SERIES

MODEL PD40 • PD40L • PD40S • PD40SW • PD160

Ec'Coater エコーター

Aiming at eco-friendly and human-friendly coating

"Ec'Coater" is formed from the words "Ecology" and "Coater(coating machine)".
"Ec'Coater" represents our concept born through our corporate principle.

PNEUMATIC DIAPHRAGM PUMP PD40 SERIES • PD40, PD40L, PD40S, PD40SW, PD160

PNEUMATIC DIAPHRAGM PUMP

PD SERIES

MODEL PD40 • PD40S • PD160
PD40L • PD40SW

Outstanding flushing efficiency significantly reduces the amount of detergents and wasted coating!

Diaphragm pump of outstanding flushability and high reliability, friendly to people and the environment

Contributes to resource saving and cost reduction!

FEATURES

●Superior Durability

For there are no packing to wear, the diaphragm pump is free from leakage of fluids.
The large diameter diaphragm brings outstanding durability compared to competitor's pumps.

●Easy maintenance

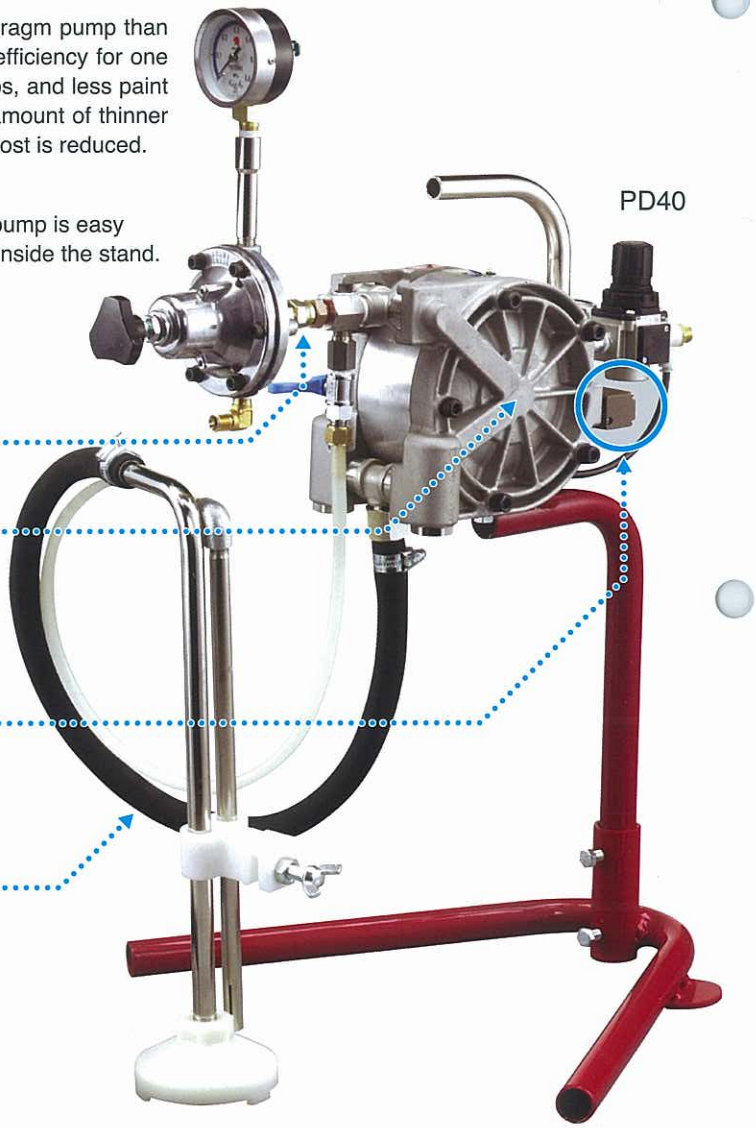
The diaphragm pump requires no packing exchanges.
The simple structure with the air switch valves located on the outside of the body makes maintenance easier.

●Cost Reduction

Color change is easier for suction type diaphragm pump than paint pressure feed tank. Since the transfer efficiency for one stroke is higher than other competitor's pumps, and less paint remains inside the diaphragm, only a small amount of thinner is necessary to flush the pump, and running cost is reduced.

●Space Saving Design

The lightweight, compact and well-balanced pump is easy to install or transfer. Paint-can can be stored inside the stand.



High Flushability

- Flushability has been improved by adopting smooth joints that prevent paint from remaining inside.
- Due to the specially-treated flange inner surface, flushing efficiency has been dramatically improved compared to conventional machines.

Easy Maintenance

Adoption of an external air selector valve enables easier maintenance.

Triple Structure Suction Hose

By adopting a resin tube on the inner surface, solvent resistance, flushability, and durability has been improved.

APPLICATIONS

- Supply of paint to automatic coating systems such as reciprocators and painting robots.
- Supply of paint to mass application spray guns used for metal, wood, and plastic.
- Supply of paint to spray guns used for construction components top coating (metallic etc).
- Transfer of chemicals (Except strong acids and strong alkalis).

PD40 series variation

PD40

Standard type

Successor to the best seller model

This is the new model that inherits PD30. Its superior flushing efficiency and outstanding stability is highly praised by the market.

PD40L

Fine flushing type

No.1 Color changing workability

Adoption of a small diameter suction hose reduces consumption of thinner and wasted coating, and also contributes to cost saving and VOC reduction.

PD40S

Stainless type

Best suited for waterborne paint

The stainless steel pathway for coating prevents corrosion caused by waterborne paint and realizes high reliability.

PD40SW

Stainless, enlarged pressure type

For waterborne and high viscosity coatings

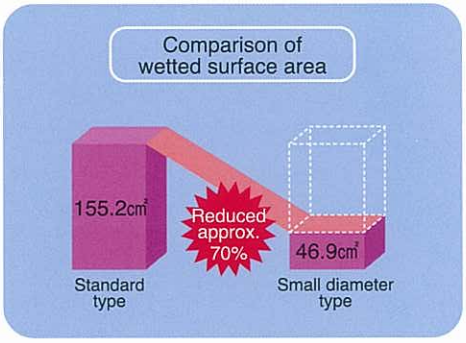
This model has adopted a booster valve. It is perfect for pressure feeding thick coatings such as waterborne and high solid coatings.

Adoption of a small diameter suction hose (PD40L)

In order to reduce the amount of coating wasted at color change and the amount of thinner used for flushing, a small diameter hose has been adopted. This reduces the flushing time at the same time.

Standard type (Inner diameter ϕ12.7)

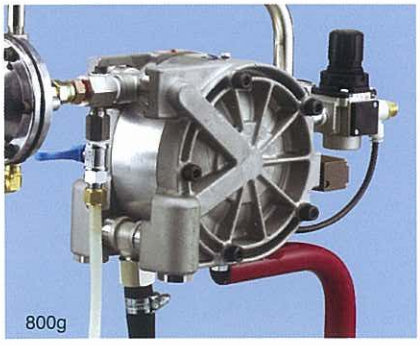
Small diameter type (Inner diameter ϕ6)



Reduction of flange weight

Through intensity analysis using a computer simulation, we drastically reduced flange weight (by 46%) and increased intensity compared to the conventional model.

PD30 (Conventional model)



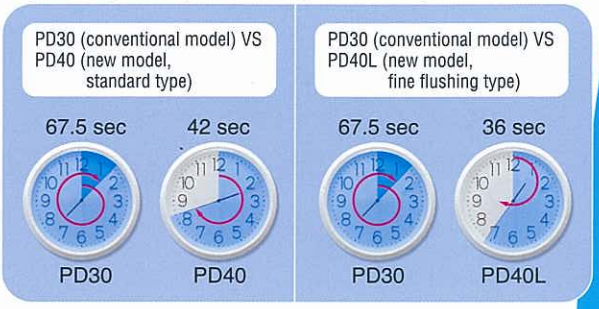
PD40 (New model)

Comparison of flushing efficiency

*The amount of thinner required to achieve transmittance of 50% is compared here.

•The amount of detergent consumed.

•Time required for flushing (When thinner flow volume (discharge rate) for flashing is 4ℓ/min)



PD Series Calculation of flushing cost reduction

Condition •The amount of thinner consumed is the quantity required to achieve transmittance of 50%.
•Coating: Melamine coating •Thinner: Lacquer thinner

	PD30	PD40	PD40L	Approximation
① Thinner price	JPY150 / ℓ	JPY150 / ℓ	JPY150 / ℓ	
② Number of operating days per month	22 days / month	22 days / month	22 days / month	
③ Number of color changes and flushing	10 times / day	10 times / day	10 times / day	
④ Amount of thinner used	4.3 ℓ / time	2.7 ℓ / time	2.4 ℓ / time	
Monthly flushing thinner cost calculating formula	① × ② × ③ × ④			
Approximate amount	**JPY141,900**	**JPY89,100**	**JPY79,200**	

In addition to the above •Waste coating cost •Waste liquid treatment cost •Flushing labor cost } shall be taken into consideration.

*The actual value may differ according to the coating, thinner used by the customer. The above formula is only a rough indication.
*JPY90 ≒ USD1.00 (2009.OCT)

The optimum paint supply pump for worksites that require a large discharge capacity

PNEUMATIC DIAPHRAGM PUMP

PD160

The PD160, featuring outstanding discharge performance and distinguished flushability,

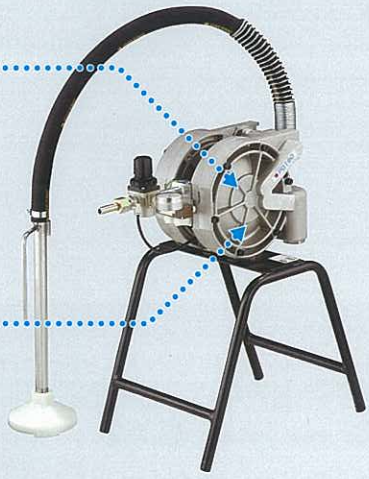
makes a contribution to both improved productivity and reduced VOC emissions!

Outstanding durability

Adopting specially treated Teflon, the PD160 shows outstanding durability.

Distinguished flushability

The paint chamber of a minimum capacity pumps out an almost full amount of paint in each shot.
This structure prevents paint from remaining inside the pump and makes the PD160 very easy to flush.



FEATURES

- **Outstanding discharge performance**
  With a maximum discharge capacity of 60 liters/minute, the PD160 is the optimum selection for worksites where circulation pumps or plural painting guns are used.
- **Contribution to reduced VOC emissions**
  The design of the PD160, which focuses on the minimization of areas where paint collects or remains, helps reduce the flushing solvent used in color changing and waste paint significantly.
- **Distinguished flushability**
  The unique internal shape and the spiral flow of paint inside the paint path prevent paint from remaining inside the PD160. It is, therefore, very easy to flush.
- **High reliability**
  For the air switching valve, a valve of the same type as the "PD40 series," which is highly reputed in the market, is adopted. This valve provides the PD160 with high reliability against intermediate stops.
- **Simple structure**
  Since the air circuit is incorporated into the body, the PD160 uses no complicated air tubes and is simple in structure.

PAINT REGULATOR SERIES

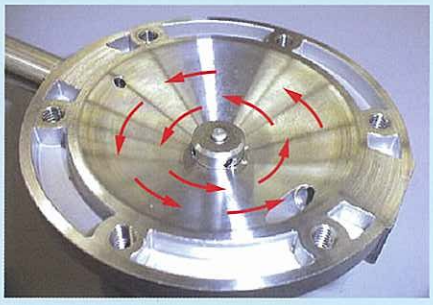
This device stabilizes the paint pressure by controlling the paint pressure that is supplied from the pressure feed pump line using the spring pressure due to rotating the handle (manual type) or the control air pressure (air operated type).

AR30

FEATURES

- Paint pressure and flow rate are stable even at small delivery. It is capable of highly accurate paint supply.
- Extrusion of paint which occurs at the beginning of spray has been eliminated. Coating quality has been improved, and waste of paint has been reduced.
- The regulator is capable of supplying a constant amount of paint by reducing the peculiar pulse of transfer pump. As a result, dispersion of the coating quality has been reduced.
- Less pressure drops at large delivery which improves the workability.
- High flushability and shorter color change time due to the centrifugal structure that centrifugally (cyclonically) flushes the detergents used for flushing.

Cyclone Spiral Flow Paint Regulator



The spiral flow spreads through the paint room, and does not allow remaining paint.

SPECIFICATION

AR30

AR30P

MR30 (MRB30B*)

MR40 (MRB40B*)

MR41-2 (MRB41-2*)

*Support bar included (Support bar is attached on product indicated in the picture)

●Specification

*Support bar included

Model	AR30	AR30S	AR30SW	AR30P	MR30 (MRB30B*)	MR40 (MRB40B*)	MR41-2 (MRB41-2*)
Part No.	0740	0751	0753	0741	0742 (0743)	0744 (0745)	0746 (0747)
Pressure range	0.01~0.5MPa		0.1~1.0MPa	0.01~0.5MPa			
Viscosity of coating	10~300mPa・s						
Max paint flow rate	8 ℓ/min (17sec/viscosity FC#4)		5 ℓ/min (17sec/viscosity FC#4)	8 ℓ/min (17sec/viscosity FC#4)			16 ℓ/min (17sec/viscosity FC#4)
Dimensions	φ100×150mm					φ107×140mm	φ100×215mm
Weight	810g	910g	950g	810g	780g	790g	1150g

●Application

Model	Type	Application
AR30	Standard manual type	Pressure feed pump / Pressure feed piping delivery outlet installation PD40,40L standard
AR30S	Manual type for waterborne paint	Pressure feed pump / Pressure feed piping delivery outlet installation PD40S standard
AR30SW	1.0MPa Manual type for waterborne pain	Pressure feed pump / Pressure feed piping delivery outlet installation PD40SW standard
AR30P	Manual type for waterborne paint (made by plastic)	Pressure feed pump / Pressure feed piping delivery outlet installation (Available for Waterborne paint)
MR30 (MRB30B)	Air operation remote control type	Automatic (electrostatic) coating
MR40 (MRB40B)	Air operation remote control type	Automatic electrostatic coating (Available for conductive paint)
MR41-2 (MRB41-2)	Air operation remote control type (2 steps)	Twin head air electrostatic gun (Available for conductive paint)

PNEUMATIC DIAPHRAGM PUMP

PD SERIES

SPECIFICATION


PD40


PD40L


PD40S


PD40SW

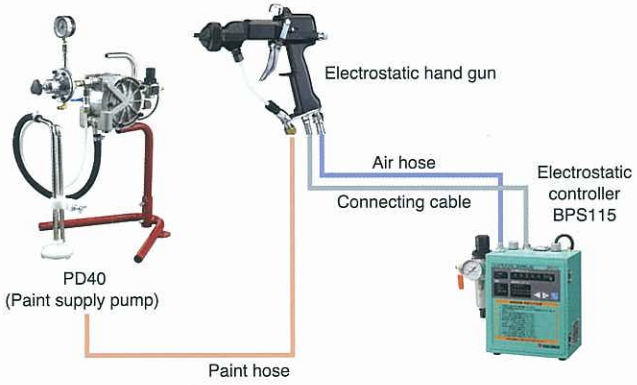

PD160

Model	PD40 (Standard)	PD40L (Fine flushing type)	PD40S (Stainless type)	PD40SW (Stainless, enlarged pressure type)	PD160
Pressure ratio	1 : 1			1 : 2	1 : 1
Max paint flow rate *1	20ℓ/min	10ℓ/min	20ℓ/min	15ℓ/min	60ℓ/min
Max air pressure	0.7MPa			1.0MPa	0.7MPa
Max paint pressure	0.7 MPa (Pump outlet)			1.0MPa	0.7MPa
Max fluid temperature	60℃				
Air inlet bore	G1/4 (PF1/4)				G1/2 (PF1/2)
Paint outlet bore	Rc3/8 (PT3/8)		G3/8 (PF3/8)		Rc3/4 (PT3/4)
	(Low pressure regulator outlet bore G1/4 (PF1/4)		(Low pressure regulator outlet bore G3/8 (PF3/8)		—
Dimensions (W×D×H)	470×540×690 (mm)			470×650×690 (mm)	320×620×620 (mm)*2
Weight	8.5kg		13.5kg	15.0kg	13.0kg

*1 Fluid: Water, Pump *2 Pump without suction hose

EXAMPLE OF USE

Components	Model	Part No.	Comments
Electrostatic hand gun	HB2020S	127C	For 60 kV
Electrostatic controller	BPS115	—	—
Paint supply pump	PD40	40362	—
Paint hose	DH28-10	3421-2	Hose length: 10m
Air hose	AH22-10	3403-1	Hose length: 10m
Connecting cable	—	2545	Cable length: 10m



Cautions for Safety For correct and safe use of the equipment, please refer to Operation manual provided for it.

*Appearances and specifications of the equipment shown on this booklet are subject to be changed for the purpose of its improvement, without pre-announcement.

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