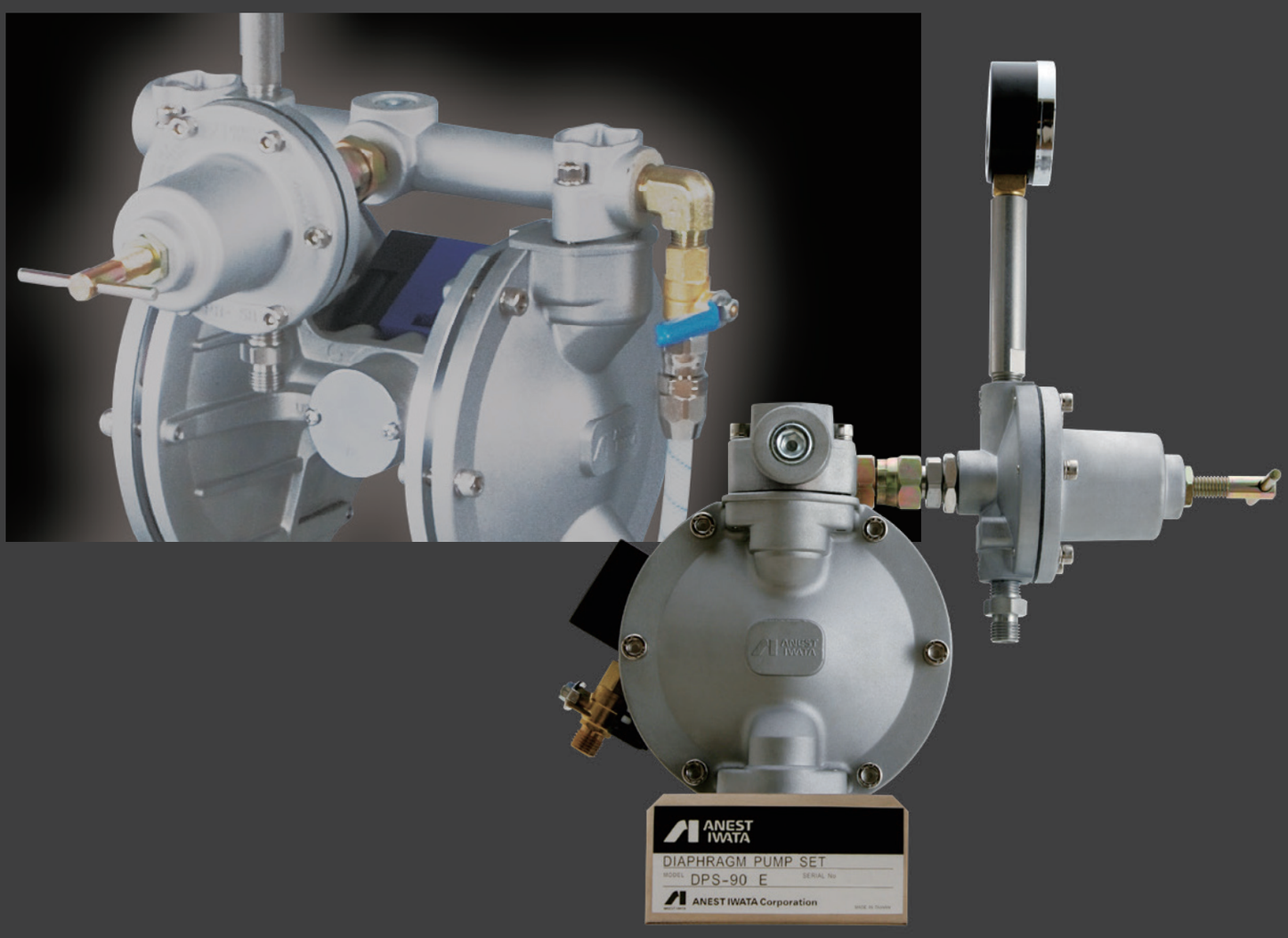
Paint Supply and Coating System Equipment

ANEST IWATA

Product Guide

PAINT SUPPLY & COATING SYSTEM EQUIPMENT



INDUSTRIAL EQUIPMENT SPECIALIST & COATING SOLUTION PROVIDER

Supply Pump Selection Guide

Points to note and comparisons of recommended paint pump products

① Select models from the chart below based on parameters such as Discharge rate and Applications.
② Select the pump discharge rate based on Discharge rate at 30 cycles/min. (See explanation below for more information.)
③ Recommended products are indicated by a star (“★”). (These products offer the greatest versatility and are likely the right choice for those in doubt.)

Diaphragm pumps

These are air-driven double diaphragm pumps that combine simple design with high durability. They are suitable for a wide range of applications, including low discharge rate spray painting, use with multiple spray guns, and paint transfer.

Bellows seal pumps

Bellows seal pumps are air-driven double-action piston pumps that use a bellows seal configuration for sliding parts. They offer high pressure ratios and high discharge performance to ensure stable paint supply even with high viscosity paints and multiple spray guns.

Plunger pumps

Plunger pumps are air-driven double-action plunger paint pumps. They can also be used for high-pressure supply and recirculation systems.

★ Recommendation No. 1
☆ Recommendation No. 2

Typical applications are listed here. Applications are also provided in the specifications tables for individual products. Refer to both when selecting products.

Pump type and size		Diaphragm pump							Diaphragm pump		Bellows seal pump	Plunger pump	Pump type and size
		Small		Medium		Large			Large		Large	Medium	
Pump model													Pump model
Recommended! ▶		DDP-70B	DDP-70BN	DDP-90E ★	DDP-90EN	DDP-120B ★	DDP-120BN		DDP-160D	DDP-160DN	BSP-A030C-N	PP-7021B	
Wetted parts material (pump body)*1		Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel		Aluminum	Stainless steel	Stainless steel	Aluminum/steel	Wetted parts material (pump body)*1
At 30 cycles/min	Discharge rate	0.6 L/min		1.5 L/min		4.5 L/min			10 L/min		17.1 L/min	2.7 L/min	Discharge rate / At 30 cycles/min
	Air consumption (0.7 MPa)	Approx. 25 L/min		Approx. 55 L/min		Approx. 80 L/min			Approx. 250 L/min		Approx. 625 L/min	Approx. 130 L/min	Air consumption (0.7 MPa)
Allowable viscosity (guideline values)*2		Max. 60 s / NK-2 Max. 190 mPa·s		Max. 100 s / NK-2 Max. 300 mPa·s		Max. 100 s / NK-2 Max. 300 mPa·s			– Max. 3,000 mPa·s		– Max. 10,000 mPa·s	Max. 100 s / NK-2 Max. 300 mPa·s	Allowable viscosity (guideline values)*2
Pressure ratio (paint:air)		1:1		1:1		1:1			1:1		3:1	2.3:1	Pressure ratio (paint:air)
Operating air pressure range		0.15 to 0.7 MPa		0.15 to 0.7 MPa		0.15 to 0.7 MPa			0.15 to 0.83 MPa		0.15 to 0.7 MPa	0 to 0.7 MPa	Operating air pressure range
Maximum paint pressure (theoretical values)		0.7 MPa		0.7 MPa		0.7 MPa			0.83 MPa		2.1 MPa	1.7 MPa	Maximum paint pressure (theoretical values)
Connector size	Air inlet	G1/4 male		G1/4 male		G1/4 male			G1/4 male		Rc3/8 female	G1/4 male (PPS-102C)	Air inlet / Connector size
	Paint inlet	Rc1/4 female		G1/2 male		G1/2 male			G3/4 male		Rp1 female	G1/4 male (PPS-102C)	Paint inlet / Connector size
	Paint outlet	Rc1/4 female		Rc3/8 female		Rc3/8 female			G3/4 male		Rp1 female	G1/4 male (PPS-102C)	Paint outlet / Connector size
Reference: Discharge rate per cycle		20 mL/cycle		50 mL/cycle		150 mL/cycle			330 mL/cycle		570 mL/cycle	90 mL/cycle	Discharge rate per cycle
Reference: Maximum cycles		300 cycles/min		200 cycles/min		200 cycles/min			200 cycles/min		70 cycles/min	50 cycles/min	Maximum cycles
Reference: Maximum discharge rate*3		6 L/min		10 L/min		30 L/min			66 L/min		40 L/min	4.5 L/min	Maximum discharge rate*3
Applications: Pump unit		DDP-70B	DDP-70BN	DDP-90E	DDP-90EN	DDP-120B	DDP-120BN		DDP-160D	DDP-160DN	BSP-A030C-N	–	Pump unit
Applications: Stand type		Customizable	Customizable	★DPS-90E	DPS-90EN	★DPS-120B	DPS-120BN		–	–	–	PPS-102C	Stand type
Applications: Wall-mounted type		☆DPS-704C	DPS-704CN	DPS-904E	DPS-904EN	DPS-1204B	DPS-1204BN		–	–	–	–	Wall-mounted type
Applications: Handy type with 5 L hopper		☆HDP-705C	HDP-705CN	–	–	–	–		–	–	–	–	Handy type with 5 L hopper
Applications: 18 L rectangular can	Direct-mounted type	☆DPS-70C	Customizable	–	–	–	–		–	–	–	–	Direct-mounted type / 18 L rectangular can
	Transfer pump	DPS-70TC	Customizable	–	–	–	–		–	–	–	–	Transfer pump / 18 L rectangular can
	Raising/lowering stand type	DPS-70LC	DPS-70LCN	☆DPS-90LE	DPS-90LEN	DPS-120LB	DPS-120LBN		–	–	–	–	Raising/lowering stand type / 18 L rectangular can
Applications: 20 L pail	Tank-mounted type	DPS-702C	DPS-702CN	DPS-902E	DPS-902EN	DPS-1202B	DPS-1202BN		–	–	–	–	Tank-mounted type / 20 L pail
	Raising/lowering stand type	DPS-70LPC	DPS-70LPCN	DPS-90LPE	DPS-90LPEN	DPS-120LPB	DPS-120LPBN		–	–	–	–	Raising/lowering stand type / 20 L pail

*1 Aluminum pumps use plated steel components for joints and other wetted parts. We recommend using stainless steel pumps for applications involving fluids that may cause corrosion.
*2 The allowable viscosity will vary depending on the inlet hose and discharge piping.
*3 Value at the paint outlet when using the pump on its own with no load and clean water as the fluid

Recommended product list


☆DPS-704C


☆HDP-705C


☆DPS-70C


★DPS-90E


☆DPS-90LE


★DPS-120B

* See pages 7 to 8 for specifications.

Major applications

- ○ Resin coating — Examples: automotive components, mobile phones, household appliances
- ○ Vehicle coating — Examples: automobiles, trucks, rail vehicles
- ○ Metal coating — Examples: construction machinery, machine tools, steel furniture, electrical distribution boards
- ○ Woodwork coating — Examples: furniture, musical instruments
- ○ Liquid application — Examples: adhesive, mold release agent, lubricant
- ○ Liquid feeding — Examples: paint, thinner

Reasons for selecting discharge rate for 30 cycles/min

Select a paint pump to suit the required discharge rate. Supplying paint using paint pumps with greater capacity than required is wasteful. While the maximum discharge rate (at zero load) is one indicator for determining paint pump performance, it is important to compare this to the discharge rate per paint pump cycle based on the discharge rate required for actual painting work. Fewer operating cycles will increase pump durability and help prevent pulsation. Typically, the ideal setting will not exceed 30 cycles/min. Start with this figure when selecting a paint pump.

Pressurized stainless steel tanks


COT-3M　COT-10HL　COT-20B

Features

The tank interior has a mirror finish to minimize paint or solution adhesion and facilitate cleaning.

- **COT-3M**
- **COT-10/10M/10HL**
- **COT-20B/20BM/20BHL**

The range consists of tanks with actual capacities of 3 L, 10 L, 25 L, and 31 L. Also available are models with agitators and level gauges.

Diaphragm Pumps

1. Stable paint supply

All current models feature modified air control valves with double-spool construction originally designed by ANEST IWATA and used on previous models to eliminate malfunctions (switching failures) during pump operation. This results in a highly reliable diaphragm pump resistant to stoppages for use in lines and automated machinery.

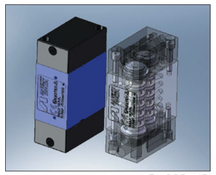
2. Reduced color changeover and washing time

All models feature a mirror-finish inside the paint chamber (lid inner face) for even faster color changeovers and washing. These models also reduce the amount of cleaning solution needed and wasted fluid.

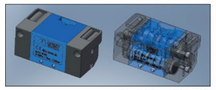
3. Wide range of variations

A total of eight different pumps are available to suit the required discharge rate and paint type.
We can also suggest optimal applications to suit specific working environments.

Air control valves



For DDP-70B

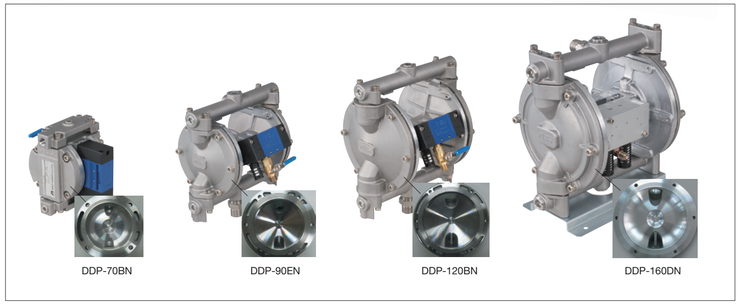


For DDP-90E/-120B

NEW!!

The air control valves for use with the DDP-70B and the DDP-90E/-120B now include a reset button to reset the unit if a pump stops due to component wear or other reason.

Lid inner face



DDP-70BN DDP-90EN DDP-120BN DDP-160DN

Operating principles of double diaphragm pumps

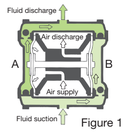


Figure 1

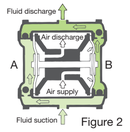
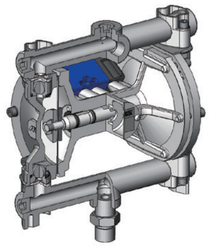


Figure 2

- Pumping and discharging of fluid is based on an extremely simple design utilizing the movement of two diaphragms attached to the ends of a rod.
- Compressed air entering the air chamber on side A in Figure 1 pushes the diaphragm to the left, pushing out the fluid.
- This also causes the diaphragm on side B connected by the rod to move to the left, drawing in fluid.
- When the rod moves fully to the left side, the air valve switches.
- Compressed air then enters the air chamber on side B in Figure 2, pushing the diaphragm to the right and pushing out the fluid.
- At the same time, fluid is drawn in on side A.
- This process is repeated, producing continuous suction and discharge to ensure stable discharge free of pulsations.



DDP cross-sectional view

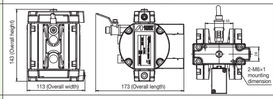
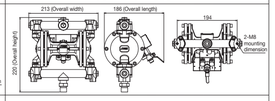
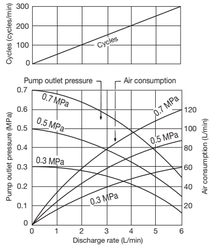
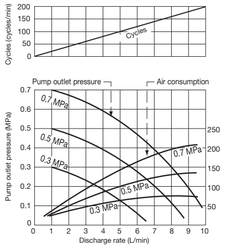
Diaphragm Pump Series

DDP-70B

DDP-70BN

DDP-90E

DDP-90EN

Pump model	DDP-70B	DDP-70BN	DDP-90E	DDP-90EN
Wetted parts material (pump body)*1	Aluminum	Stainless steel	Aluminum	Stainless steel
Pressure ratio	1:1		1:1	
Operating air pressure range	0.15 to 0.7 MPa		0.15 to 0.7 MPa	
Discharge rate per cycle	20 mL/cycle		50 mL/cycle	
Maximum cycles	300 cycles/min		200 cycles/min	
Maximum discharge rate*2	6 L/min		10 L/min	
Discharge rate at 30 cycles/min	0.6 L/min		1.5 L/min	
Allowable viscosity (guideline values)*3	Max. 60 s / NK-2 Max. 190 mPa·s		Max. 100 s / NK-2 Max. 300 mPa·s	
Operating temperature range	5 to 40 °C		5 to 40 °C	
Air inlet	G1/4B		G1/4B	
Paint inlet	Rc1/4		G1/2B	
Paint outlet	Rc1/4		Rc3/8	
Mass	2 kg	3.2 kg	3.1 kg	5 kg
Overall length × width × height	173 × 113 × 143 mm		186 × 213 × 220 mm	
Mounting dimensions				
Performance curves				
Compressor requirements (for pump operation)	0.4 to 0.75 kW		0.4 to 0.75 kW	

* 0.3/0.5/0.7 MPa on the graph indicate air pressure.
* The oil used in testing is turpentine oil.

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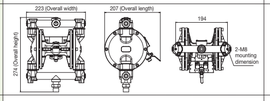
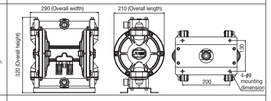
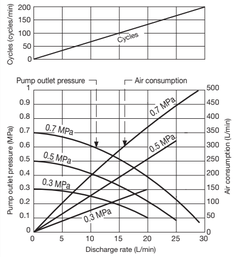
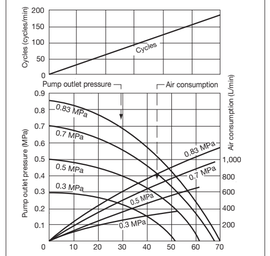
*1 Aluminum pumps use plated steel components for joints and other wetted parts.
We recommend using stainless steel pumps for applications involving fluids that may cause corrosion.
*2 Value at the paint outlet when using the pump on its own with no load and clean water as the fluid
*3 The allowable viscosity will vary depending on the inlet hose and discharge piping.

DDP-120B

DDP-120BN

DDP-160D

DDP-160DN

Pump model	DDP-120B	DDP-120BN	DDP-160D	DDP-160DN
Wetted parts material (pump body)*1	Aluminum	Stainless steel	Aluminum	Stainless steel
Pressure ratio	1:1		1:1	
Operating air pressure range	0.15 to 0.7 MPa		0.15 to 0.83 MPa	
Discharge rate per cycle	150 mL/cycle		330 mL/cycle	
Maximum cycles	200 cycles/min		200 cycles/min	
Maximum discharge rate*2	30 L/min		66 L/min	
Discharge rate at 30 cycles/min	4.5 L/min		10 L/min	
Allowable viscosity (guideline values)*3	Max. 100 s / NK-2 Max. 300 mPa·s		— Max. 3,000 mPa·s	
Operating temperature range	5 to 40 °C		5 to 40 °C	
Air inlet	G1/4B		G1/4B	
Paint inlet	G1/2B		G3/4B	
Paint outlet	Rc3/8		G3/4B	
Mass	4 kg	7.2 kg	11 kg	16.5 kg
Overall length × width × height	207 × 223 × 274 mm		210 × 290 × 320 mm	
Mounting dimensions				
Performance curves				
Compressor requirements (for pump operation)	0.4 to 1.5 kW		1.5 to 3.7 kW	

* 0.3/0.5/0.7 MPa on the graph indicate air pressure.
* The oil used in testing is turpentine oil.

* 0.3/0.5/0.7 MPa on the graph indicate air pressure.
* The oil used in testing is turpentine oil.

* When used as a fluid transfer pump for non-paint fluids such as lubricants or chemicals, check the pH, viscosity, and fluid properties. Contact your nearest ANEST IWATA sales office if you have any questions.

Diaphragm Pump Applications


DPS-90E

DPS-120B


DPS-120B
With PR-5B-S1
2-output kit mounted


DPS-70LC
• The AMM-721B agitator is optional.

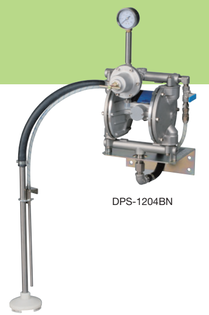

DPS-90LE
• The paint can is not included.
• The AMM-721B agitator is optional.


DPS-120LB

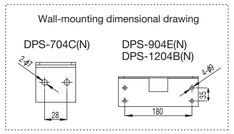

With pump raised


DPS-704C


DPS-904E


DPS-1204BN

Wall-mounting dimensional drawing




DPS-902E
• The pail is not included.
• The AMM-721B agitator is optional.


DPS-1202B
• The pail is not included.
• The AMM-721B agitator is optional.


HDP-705C
• The AMM-722B agitator is optional.


DPS-70C


DPS-70TC

Type		18 L rectangular can mounted type	18 L rectangular can transfer pump	Stand type				Wall-mounted type						Hopper type	
Set model		DPS-70C	DPS-70TC	DPS-90E	DPS-90EN	DPS-120B	DPS-120BN	DPS-704C	DPS-704CN	DPS-904E	DPS-904EN	DPS-1204B	DPS-1204BN	HDP-705C	HDP-705CN
Pump	Model	DDP-70B		DDP-90E	DDP-90EN	DDP-120B	DDP-120BN	DDP-70B	DDP-70BN	DDP-90E	DDP-90EN	DDP-120B	DDP-120BN	DDP-70B	DDP-70BN
	Wetted parts material (body)*1	Aluminum		Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel
	Discharge rate at 30 cycles/min	0.6 L/min		1.5 L/min		4.5 L/min		0.6 L/min		1.5 L/min		4.5 L/min		0.6 L/min	0.6 L/min
	Maximum discharge rate*2	6.0 L/min		10.0 L/min		30 L/min		6.0 L/min		10.0 L/min		30 L/min		6.0 L/min	6.0 L/min
	Operating air pressure range	0.15 to 0.7 MPa		0.15 to 0.7 MPa				0.15 to 0.7 MPa						0.15 to 0.7 MPa	0.15 to 0.7 MPa
Paint regulator	Model	PR-5B	N/A	PR-5B	PR-5BN	PR-5B	PR-5BN	PR-5B	PR-5BN	PR-5B	PR-5BN	PR-5B	PR-5BN	PR-5B	PR-5BN
	Wetted parts material (body)*1	Aluminum	–	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel
	Paint pressure adjustment range	0 to 0.6 MPa	–	0 to 0.6 MPa				0 to 0.6 MPa						0 to 0.6 MPa	0 to 0.6 MPa
	Maximum flow rate	2.0 L/min	–	2.0 L/min				2.0 L/min						2.0 L/min	2.0 L/min
Allowable viscosity (guideline values)*3		Max. 60 s / NK-2 Max. 190 mPa·s		Max. 100 s / NK-2 Max. 300 mPa·s				Max. 60 s / NK-2 Max. 190 mPa·s		Max. 100 s / NK-2 Max. 300 mPa·s				Max. 60 s / NK-2 Max. 190 mPa·s	Max. 60 s / NK-2 Max. 190 mPa·s
Operating temperature range		5 to 40 °C		5 to 40 °C				5 to 40 °C						5 to 40 °C	5 to 40 °C
Air inlet/paint outlet		G1/4B		G1/4B				G1/4B						G1/4B	G1/4B
Paint inlet filter		50 mesh	N/A	50 mesh				50 mesh						50 mesh	50 mesh
Options	Paint intermediate filter	TF-7: 100 mesh	–	TF-7: 100 mesh	–	TF-7: 100 mesh	–	TF-7: 100 mesh	–	TF-7: 100 mesh	–	TF-7: 100 mesh	–	TF-7: 100 mesh	TF-7: 100 mesh
	Paint agitator	–	–	–	–	–	–	–	–	–	–	–	–	AMM-722B	AMM-722B
	2-output kit	PR-5B-S1	–	PR-5B-S1	PR-5BN-S1	PR-5B-S1	PR-5BN-S1	PR-5B-S1	PR-5BN-S1	PR-5B-S1	PR-5BN-S1	PR-5B-S1	PR-5BN-S1	PR-5B-S1	PR-5BN-S1
Overall length × width × height		173 × 393 × 663 mm	173 × 213 × 515 mm	360 × 348 × 781 mm		366 × 357 × 823 mm		173 × 307 × 364 mm		356 × 269 × 449 mm		356 × 269 × 491 mm		410 × 226 × 446 mm	410 × 226 × 446 mm
Mass		4 kg	3 kg	7 kg	9 kg	8 kg	11 kg	4 kg	5 kg	6 kg	7 kg	6 kg	10 kg	8 kg	9 kg
Compressor requirements (for pump operation)		0.4 to 0.75 kW	0.75 to 1.5 kW	0.4 to 0.75 kW		0.4 to 1.5 kW		0.4 to 0.75 kW				0.4 to 1.5 kW		0.4 to 0.75 kW	0.4 to 0.75 kW

*1 Aluminum pumps use plated steel components for joints and other wetted parts. We recommend using stainless steel pumps for applications involving fluids that may cause corrosion.
*2 Value at the paint outlet when using the pump on its own with no load and clean water as the fluid
*3 The allowable viscosity will vary depending on the inlet hose and discharge piping.

Type	Raising/lowering stand type (for 18 L rectangular can)						Raising/lowering stand type (for 20 L pail)						Tank-mounted type (for 20 L pail)					
Set model	DPS-70LC	DPS-70LCN	DPS-90LE	DPS-90LEN	DPS-120LB	DPS-120LBN	DPS-70LPC	DPS-70LPCN	DPS-90LPE	DPS-90LPEN	DPS-120LPB	DPS-120LPBN	DPS-702C	DPS-702CN	DPS-902E	DPS-902EN	DPS-1202B	DPS-1202BN
Pump Model	DDP-70B	DDP-70BN	DDP-90E	DDP-90EN	DDP-120B	DDP-120BN	DDP-70B	DDP-70BN	DDP-90E	DDP-90EN	DDP-120B	DDP-120BN	DDP-70B	DDP-70BN	DDP-90E	DDP-90EN	DDP-120B	DDP-120BN
Wetted parts material (body)*1	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel
Discharge rate at 30 cycles/min	0.6 L/min		1.5 L/min		4.5 L/min		0.6 L/min		1.5 L/min		4.5 L/min		0.6 L/min		1.5 L/min		4.5 L/min	
Maximum discharge rate*2	6.0 L/min		10.0 L/min		30 L/min		6.0 L/min		10.0 L/min		30 L/min		6.0 L/min		10.0 L/min		30 L/min	
Operating air pressure range	0.15 to 0.7 MPa						**0.15 to 0.7 MPa**						0.15 to 0.7 MPa					
Paint regulator Model	PR-5B	PR-5BN	PR-5B	PR-5BN	PR-5B	PR-5BN	PR-5B	PR-5BN	PR-5B	PR-5BN	PR-5B	PR-5BN	PR-51B	PR-51BN	PR-5B	PR-5BN	PR-5B	PR-5BN
Wetted parts material (body)*1	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel	Aluminum	Stainless steel
Paint pressure adjustment range	0 to 0.6 MPa						**0 to 0.6 MPa**						**0 to 0.6 MPa**					
Maximum flow rate	2.0 L/min						**2.0 L/min**						**2.0 L/min**					
Allowable viscosity (guideline values)*3	Max. 60 s / NK-2 Max. 190 mPa·s		Max. 100 s / NK-2 Max. 300 mPa·s				Max. 60 s / NK-2 Max. 190 mPa·s		Max. 100 s / NK-2 Max. 300 mPa·s				Max. 60 s / NK-2 Max. 190 mPa·s		Max. 100 s / NK-2 Max. 300 mPa·s			
Operating temperature range	5 to 40 °C						5 to 40 °C						5 to 40 °C					
Air inlet/paint outlet	G1/4B						G1/4B						G1/4B					
Paint inlet filter	50 mesh						50 mesh						50 mesh					
Options Paint intermediate filter	TF-7: 100 mesh	–	TF-7: 100 mesh	–	TF-7: 100 mesh	–	TF-7: 100 mesh	–	TF-7: 100 mesh	–	TF-7: 100 mesh	–	TF-7: 100 mesh	–	TF-7: 100 mesh	–	TF-7: 100 mesh	–
Paint agitator	AMM-721B		AMM-721B		AMM-721B		AMM-721B		AMM-721B		AMM-721B		AMM-721B		AMM-721B		AMM-721B	
2-output kit	PR-5B-S1	PR-5BN-S1	PR-5B-S1	PR-5BN-S1	PR-5B-S1	PR-5BN-S1	**PR-5B-S1**	**PR-5BN-S1**	**PR-5B-S1**	**PR-5BN-S1**	**PR-5B-S1**	**PR-5BN-S1**	**PR-5B-S1**	**PR-5BN-S1**	**PR-5B-S1**	**PR-5BN-S1**	**PR-5B-S1**	**PR-5BN-S1**
Overall length × width × height	390 × 260 × 823 mm (Overall height 1,120 mm when fully raised)		390 × 260 × 823 mm (Overall height 1,174 mm when fully raised)		390 × 260 × 823 mm (Overall height 1,211 mm when fully raised)		410 × 300 × 823 mm (Overall height 1,120 mm when fully raised)		410 × 300 × 823 mm (Overall height 1,174 mm when fully raised)		410 × 300 × 823 mm (Overall height 1,211 mm when fully raised)		308 × 307 × 718 mm		307 × 325 × 750 mm		307 × 325 × 729 mm	
Mass	16 kg	18 kg	17 kg	19 kg	18 kg	22 kg	**18 kg**	**19 kg**	**18 kg**	**21 kg**	**19 kg**	**23 kg**	**5 kg**	**6 kg**	**6 kg**	**8 kg**	**7 kg**	**11 kg**
Compressor requirements (for pump operation)	0.4 to 0.75 kW				0.4 to 1.5 kW		**0.4 to 0.75 kW**				**0.4 to 1.5 kW**		**0.4 to 0.75 kW**				**0.4 to 1.5 kW**	

*1 Aluminum pumps use plated steel components for joints and other wetted parts. We recommend using stainless steel pumps for applications involving fluids that may cause corrosion.
*2 Value at the paint outlet when using the pump on its own with no load and clean water as the fluid
*3 The allowable viscosity will vary depending on the inlet hose and discharge piping.

Bellows Seal Pumps

1. Long maintenance intervals

Deploying bellows seals to separate the paint chamber from the air chamber increases maintenance intervals for sliding parts.

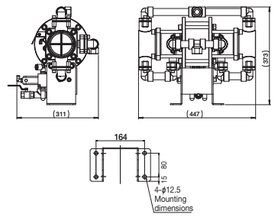
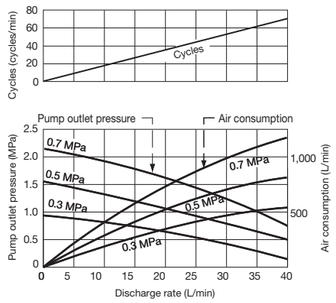
2. Compatible with eco-friendly paints

High pressure ratios ensure stable paint supply even with high viscosity eco-friendly paints such as high-solid and water-based paints.

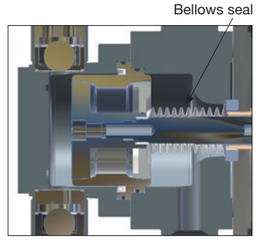
3. Supports multiple spray gun use

The high discharge rate per cycle ensures a stable paint supply even when using multiple spray guns.

BSP-A030C-N Bellows Seal Pump

Pump model	BSP-A030C-N
Wetted parts material (pump body)	Stainless steel
Pressure ratio (fluid:air)	3:1
Operating air pressure range	0.15 to 0.7 MPa
Maximum paint pressure	2.1 MPa
Discharge rate per cycle	570 mL/cycle
Maximum cycles	70 cycles/min
Maximum discharge rate*1	40 L/min
Discharge rate at 30 cycles/min	17.1 L/min
Allowable viscosity (guideline values)*2	10,000 mPa·s
Operating temperature range	5 to 40 °C
Air inlet	Rc3/8
Paint inlet	Rp1
Paint outlet	Rp1
Mass	27 kg
Overall length × width × height	311 × 447 × 373 mm
Mounting dimensions	
Performance curves	
Compressor requirements (for pump operation)	3.7 to 7.5 kW

BSP-A030C-N



Cross-sectional diagram

*1 Value at the paint outlet when using the pump on its own with no load and clean water as the fluid
*2 The allowable viscosity will vary depending on the inlet hose and discharge piping.
* When used as a fluid transfer pump for non-paint fluids such as lubricant or chemicals, check the pH, viscosity, and fluid properties. Contact your nearest ANEST IWATA sales office if you have any questions.

Plunger Paint Pumps

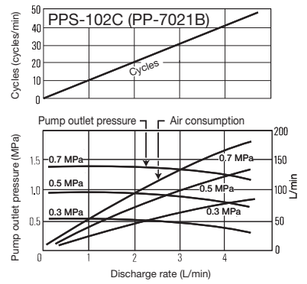
1. Paint regulator fitted as standard

A paint regulator is fitted as standard, allowing paint to be sprayed simply by connecting a spray gun.

2. Also usable as a paint supply pump for cell-type spraying facilities

The pump can also be used as a mini paint recirculation system by combining with a back pressure valve.

PPS Series Plunger Paint Pumps

Set model		PPS-102C
Type		Single-output specifications
Pump model		PP-7021B
Wetted parts material (pump body)		Aluminum Steel
Pressure ratio (fluid:air)		2.3:1
Air regulator model		RR-55B
Operating air pressure range		0 to 0.7 MPa
Discharge rate at 30 cycles/min		2.7 L/min
Paint regulator model		Special PR-51B
Wetted parts material (regulator body)		Aluminum
Paint pressure adjustment range		0 to 0.6 MPa
Maximum flow rate		2.0 L/min
Allowable paint viscosity (guideline values)*1		Max. 100 s / NK-2 Max. 300 mPa·s
Operating temperature range		60 °C or less
Air inlet		G1/4
Paint outlet		G1/4B × 1 outlet
Paint inlet filter		50 mesh
Paint intermediate filter		60 mesh
Options	Paint intermediate filter	TF-71: 100 mesh
	Paint agitator	AMM-711/AMM-611
Overall length × width × height		380 × 360 × 695 mm
Mass		13.6 kg
Compressor requirements (for pump operation)		0.4 to 0.75 kW
Performance curves		

PPS-102C

* 0.3/0.4/0.5/0.6/0.7 MPa on the graph indicate air pressure.

*1 The allowable viscosity will vary depending on the inlet hose and discharge piping.

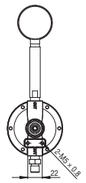
Paint Control Equipment

PR-5B Series Paint Regulators

The products in the PR-5B Series are diaphragm type paint regulators that help maintain constant paint pressure and discharge rates to ensure uniform paint film thickness and paint quality control. The line of products includes two types to suit the required pressure adjustment range.
As with diaphragm pumps, the wetted parts have a mirror finish to facilitate cleaning.

Model	PR-5B	PR-5BN	PR-51B	PR-5BL	PR-5BLN
Type	General purpose		Vertical type	Low flow-rate/low pressure discharge type	
Wetted parts material (body)*	Aluminum	Stainless steel	Aluminum	Aluminum	Stainless steel
Pressure adjustment range	0 to 0.6 MPa			0 to 0.3 MPa	
Maximum flow rate	2.0 L/min			1.5 L/min	
Maximum primary pressure	2.5 MPa			0.7 MPa	
Paint inlet	G3/8B				
Paint outlet	G1/4B				
Overall length × width × height	84 × 165 × 260 mm		84 × 141 × 220 mm	84 × 165 × 260 mm	
Mass	850 g	1,020 g	900 g	850 g	1,020 g
Mounting dimensions	2-M5 × 0.8, thread depth 8 mm, separation 22 mm				


PR-5B



PR-5B Series mounting dimensions


PR-51B

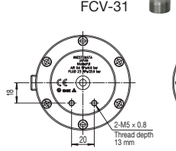
FCV-3 and FCV-5 Series Flow Control Valves

Products in the FCV-3 and FCV-5 Series are air-operated paint regulators that allow paint pressure and discharge rate to be adjusted remotely. In spray environments involving robots or reciprocators, they can be mounted close to automatic spray guns to eliminate discharge rate variations due to height differences.
The FCV-31-R4/R8 and FCV-5-R1/R4/R8 have different pressure bearing areas for the diaphragm air and paint chambers, making them ideal for low discharge rate adjustments.

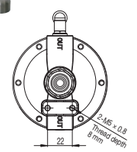
Model	FCV-3/3N	FCV-31/31N	FCV-31-R4/31N-R4	FCV-31-R8/31N-R8
Type	General purpose	With dump valve function	With dump valve function; for low flow-rate/low pressure discharge	
Wetted parts material (body)	Aluminum/Stainless steel			
Diaphragm pressure bearing diameter ratio*	1:1		1:4	1:8
Guideline discharge rate	1,100 mL/min or greater		35 to 100 mL/min	20 to 50 mL/min
Maximum air pressure	0.6 MPa			
Maximum flow rate	2.0 L/min			
Maximum paint primary pressure	2.5 MPa			
Air inlet	Rc1/8 With ϕ6 tube joint			
Paint inlet	G3/8B			
Paint outlet	Rc1/4 × 2 outlets			
Overall length × width × height	84 × 84 × 106 mm	84 × 112 × 112 mm		
Mass	570 g/720 g	750 g/900 g		
Mounting dimensions (front)	2-M5 × 0.8, thread depth 13 mm, separation 20 mm	N/A		
Mounting dimensions (rear)	2-M5 × 0.8, thread depth 8 mm, separation 22 mm			


FCV-3


FCV-31



Mounting dimensions (front)
FCV-3/3N



Mounting dimensions (rear)
Same for all models

* This diaphragm pressure bearing diameter ratio will differ from the ratio between the air adjustment pressure and secondary paint pressure (after pressure adjustment).
Note that while a larger diaphragm pressure bearing diameter ratio allows greater secondary paint pressure adjustment, the maximum pressure will be lower.

FCV-5 Features

1. Paint passage interiors with springless construction

This eliminates faulty operation caused by material adhering to pressure adjustment springs.

2. Unidirectional interior construction

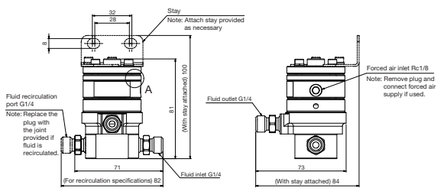
The interior paint flow is limited to one direction, eliminating paint stagnation and improving paint buildup to facilitate cleaning. * 50 % reduction in cleaning fluid compared to previous ANEST IWATA models

Model	FCV-5-R1	FCV-5-R4	FCV-5-R8
Type	With dump valve function	With dump valve function; for low flow-rate/low pressure discharge	
Wetted parts material (body)	Stainless steel/fluorine resin		
Diaphragm pressure bearing diameter ratio*	1:1	1:4	1:8
Guideline discharge rate	100 mL/min or greater	35 to 100 mL/min	20 to 50 mL/min
Maximum air pressure	0.6 MPa		
Maximum flow rate	2.0 L/min		
Maximum paint primary pressure	1.0 MPa		
Air inlet	Rc1/8		
Paint inlet	G1/4B		
Paint outlet	G1/4B		
Overall length × width × height	73 × 71 × 81 mm (main unit only)		
Mass	580 g		
Mounting dimensions (front)	See drawings at right.		
Mounting dimensions (rear)	With primary side (before pressure adjustment) recirculation port		


FCV-5-R1


FCV-5-R4

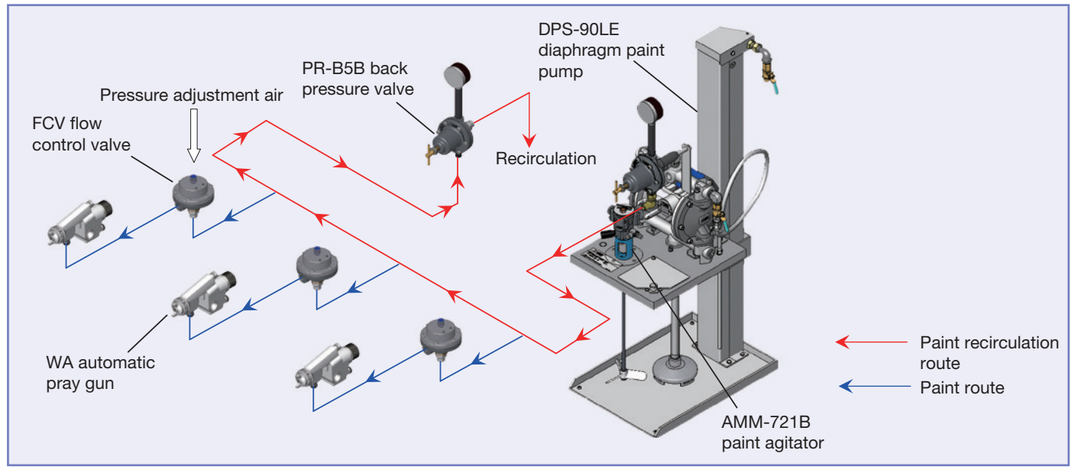

FCV-5-R8



* This diaphragm pressure bearing diameter ratio will differ from the ratio between the air adjustment pressure and secondary paint pressure (after pressure adjustment).
Note that while a larger diaphragm pressure bearing diameter ratio allows greater secondary paint pressure adjustment, the maximum pressure will be lower.

Piping Example for Paint Recirculation

* Aluminum models use plated steel components for joints and other wetted parts.
We recommend using stainless steel models for applications involving fluids that may cause corrosion.

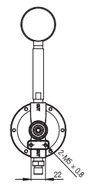


PR-B5B Series Back Pressure Valves

Integrating these valves together with a paint regulator into the paint piping makes it possible to set up a paint recirculation system.
They prevent precipitation of paints susceptible to precipitation, such as metallic paints, as well as ensure stable paint pressure when connected to multiple spray guns.
They can be mounted on the paint return side of the paint recirculation system to allow fixed-quantity control.

Model	PR-B5B	PR-B5BN
Wetted parts material (body)*	Aluminum	Stainless steel
Pressure adjustment range	0 to 0.6 MPa	
Maximum flow rate	2.0 L/min	
Maximum primary pressure	0.6 MPa	
Paint inlet	G1/4B	
Paint outlet	G3/8B	
Overall length × width × height	84 × 165 × 260 mm	
Mass	850 g	1,020 g
Mounting dimensions	2-M5 × 0.8, thread depth 8 mm, separation 22 mm	


PR-B5B



PR-5B Series mounting dimensions

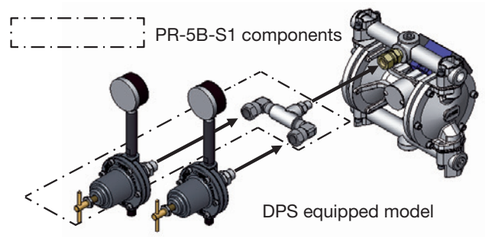
TJU Series Paint Recirculation System Joints

These joints can be attached to paint joints on manual spray guns and general-purpose automatic spray guns to allow positioning of paint recirculation piping close to the spray guns.

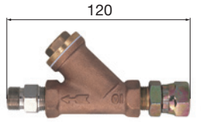
Model	TJU-221B	TJU-321B
Wetted parts material (body)	Stainless steel	
Spray gun connector	G1/4 cap nut	G3/8 cap nut
Paint inlet (supply side)	G1/4B (PF1/4 male)	
Paint outlet (recirculation side)	G1/4B (PF1/4 male)	
Maximum operating pressure	0.69 MPa	
Suitable spray gun models	W-101/LPH-101/W-61/71 WA-101/LPA-101	W-200/LPH-200/W-77 WA-200/LPA-200
Remarks	With flow rate adjustment function	

Options

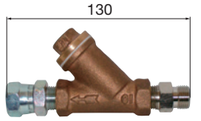
Adding one paint regulator kit (PR-5B-S1) allows two spray guns to be connected.
A stainless steel model is also available. (PR-5BN-S1)



Paint intermediate filter to remove debris



OUT G1/4B — IN G1/4 — TF-7 (See Page 20.)



OUT G3/8 — IN G3/8B — TF-71 (See Page 20.)

Pressurized Paint Tanks

PT Series Pressurized Paint Tank

Ideal for continuous spray work using a constant paint color
Equipped with an agitator as standard to prevent paint precipitation. Both manual agitator and automatic agitator types are available.

Manual agitator type

Type		General purpose				
Model		PT-10D	PT-20D	PT-40D	PT-60D	PT-80D
Tank capacity (normal upper/lower limits)		10 L (8.4 L/2.6 L)	20 L (18.8 L/4.9 L)	40 L (35.6L/10.7 L)	60 L (52.6 L/10.7 L)	80 L (68.8 L/10.9 L)
Maximum operating pressure		0.34 MPa		0.18 MPa		
Operating temperature range		5 to 40 °C				
Air inlet		G1/4B				
Air outlet		G1/4B				
Paint outlet		G3/8B × 1 outlet		G3/8B × 2 outlets		
Paint inlet filter		60 mesh				
Overall length × width × height		315 × 315 × 547 mm	310 × 390 × 652 mm	460 × 465 × 700 mm	500 × 465 × 885 mm	500 × 465 × 1,045 mm
Mass		13 kg	20 kg	27 kg	35 kg	39 kg
Air regulator model		RR-56B				
Options	Internal container (actual capacity)	PTC-10W (6 L)	PTC-20W (14 L)	PTC-40W (28 L)	PTC-60W (46 L)	PTC-80W (62 L)
	Paint intermediate filter	TF-71: 100 mesh				

Automatic agitator type

Type		General purpose				
Model		PT-10DM	PT-20DM	PT-40DM	PT-60DM	PT-80DM
Tank capacity (normal upper/lower limits)		10L (8.4L/2.6L)	20L (18.8L/4.9L)	40L (35.6L/10.7L)	60L (52.6L/10.7L)	80 (68.8L/10.9L)
Maximum operating pressure		0.34 MPa		0.18 MPa		
Operating temperature range		5 to 40 °C				
Air inlet		G1/4B				
Air outlet		G1/4B				
Paint outlet		G3/8B × 1 outlet		G3/8B × 2 outlets		
Paint inlet filter		60 mesh				
Overall length × width × height		315 × 315 × 470 mm	310 × 390 × 590 mm	460 × 465 × 648 mm	500 × 465 × 828 mm	500 × 465 × 1,000 mm
Mass		14 kg	23 kg	31 kg	38 kg	42 kg
Air regulator model		RR-56B				
Air motor model		AM-5C	AM-3C			
Options	Internal container (actual capacity)	PTC-10W (6 L)	PTC-20W (14 L)	PTC-40W (28 L)	PTC-60W (46 L)	PTC-80W (62 L)
	Paint intermediate filter	TF-71: 100 mesh				

PT-10DM

PT-20DMW

PT-40D

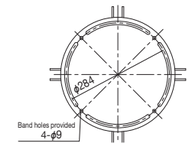
For water-based paints	
PT-10DW	PT-20DW
10L (8.4 L/2.6 L)	20L (18.8 L/4.9 L)
0.34 MPa	
5 to 40 °C	
G1/4B	
G1/4B	
G3/8B × 1 outlet	
60 mesh	
315 × 315 × 547 mm	310 × 390 × 652 mm
13 kg	20 kg
RR-56B	
PTC-10W (6 L)	PTC-20W (14 L)
–	

Pressurized tank for water-based paints

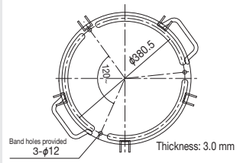
1. Wetted parts use different materials or have been subjected to surface treatment compared to general-purpose pressurized tanks.
   - Parts changed to stainless steel: Agitator spindle, suction pipe, bolts (wetted parts)
   - Parts subjected to electroless nickel plating: Suction filter unit, support bands, clamping bands, turbulence plates
2. Use together with an internal container (stainless steel).
3. Cannot be used with solvent-based paints.
4. We recommend pressurized stainless steel tanks when using fluids likely to cause corrosion.

Internal container (stainless steel)

Used inside pressurized paint tanks; ideal for work requiring frequent color changeovers
* Optional item



PT-20 hole positions



PT-40/60/80 hole positions


Internal container

For water-based paints				
PT-10DMW	PT-20DMW	PT-40DMW	PT-60DMW	PT-80DMW
10L (8.4 L/2.6 L)	20L (18.8 L/4.9 L)	40L (35.6 L/10.7 L)	60L (52.6 L/10.7 L)	80L (68.8 L/10.9 L)
0.34 MPa		0.18 MPa		
5 to 40 °C				
G1/4B				
G1/4B				
G3/8B × 1 outlet		G3/8B × 2 outlets		
60 mesh				
315 × 315 × 470 mm	310 × 390 × 590 mm	460 × 465 × 648 mm	500 × 465 × 828 mm	500 × 465 × 1,000 mm
14 kg	23 kg	31 kg	38 kg	42 kg
RR-56B				
AM-5C	AM-3C			
PTC-10W (6 L)	PTC-20W (14 L)	PTC-40W (28 L)	PTC-60W (46 L)	PTC-80W (62 L)
–				

Pressurized Stainless Steel Tanks (Paint Tank Type)

COT-3M

COT-10HL

COT-20B

Features

●COT-3M
●COT-10/10M/10HL
●COT-20B/20BM/20BHL

The tank interior has a mirror finish to minimize adhesion and facilitate cleaning.
* Maximum operating pressure: 0.40 MPa

* For more information, refer to the general catalog for liquid application equipment.

Pressurized Stainless Steel Tank (Vessel Type)


COT-100

Features

* Maximum operating pressure: 0.40 MPa

* For more information, refer to the general catalog for liquid application equipment.

Multi-spray Unit

The multi-spray unit is a hybrid spray unit that utilizes the advantages of air spray guns and airless spray guns.

1. Effective in reducing paint use

The basic atomizing mechanism is the same as that in airless spray guns for lower paint splashback and scattering than air spray guns. The mechanism also improves the spraying environment by reducing paint use and reducing paint exposure for workers and contamination of spray booths.

2. Allows beautiful thick-coat spraying

A medium-pressure plunger pump is used, ensuring sufficient atomization even with high viscosity paints. Atomization is also promoted by blowing compressed air from the air cap in the same way as a spray gun, ensuring a beautiful paint finish with thick coats.

3. Good paint spraying characteristics

The spray air pressure is lower than that for air spray guns, improving the ability to spray paint on inner faces and corners of box-shape items.

MSU-2000C

The NH-35100 paint hose features a guard spring.

MSU-2000C Multi-spray Unit

Unit model		MSU-2000C
Pump model		PP-1171C
Wetted parts material (pump body)		Aluminum/steel
Pressure ratio		17:1
Operating air pressure range		0 to 0.49 MPa
Maximum paint pressure		9.8 MPa
Maximum discharge rate*1		3.5 L/min
Allowable paint viscosity (guideline values)*2		Max. 50 s / NK-2 Max. 160 cP
Operating temperature range		5 to 40 °C
Air inlet		G1/4B
Paint outlet		G1/4B
Paint inlet filter		50 mesh
Paint intermediate filter (TF-8)		100 mesh
Overall length × width × height		500 × 500 × 895 mm
Mass (excluding accessories)		23.5 kg
Compressor requirements (for pump operation)		2.2 kW
Accessories	Spray gun	MSG-200
	Paint hose	10 m (NH-35100)
	Air hose	10 m (EAHU-6 type)

*1 Value at the paint outlet when using the pump on its own with no load and clean water as the fluid
*2 The allowable viscosity will vary depending on the inlet hose and discharge piping.

Nozzle tip (for MSG-200/MSA-200 only)

Model	Paint discharge rate		Pattern width
	mL/sec	L/min	
NT-1502CMU	3.0	0.18	13 to 18 cm
NT-1503CMU	4.5	0.27	
NT-2002CMU	4.0	0.24	18 to 23 cm
NT-2003CMU	6.0	0.36	
NT-2004CMU	8.0	0.48	
NT-2005CMU	10.0	0.60	
NT-2503CMU	7.5	0.45	23 to 28 cm
NT-2504CMU	10.0	0.60	
NT-2505CMU	12.5	0.75	
NT-3003CMU	9.0	0.54	28 to 33 cm
NT-3004CMU	12.0	0.72	
NT-3005CMU	15.0	0.90	
NT-3006CMU	18.0	1.08	
NT-3503CMU	10.5	0.63	33 to 38 cm
NT-3504CMU	14.0	0.84	
NT-3505CMU	17.5	1.05	
NT-3506CMU	21.0	1.26	

* The paint discharge rate and pattern width figures are for melamine 20-second NK-2 paint with 4.9 MPa paint pressure and horizontal spraying at a distance of 200 mm.

Multi-spray gun

Type	Hand spray gun	Automatic spray gun
Model	MSG-200	MSA-200
Maximum operating paint pressure	9.8 MPa	
Normal paint pressure	4.9 MPa	
Normal spraying air pressure	0.15 MPa	
Paint hose connection	G1/4B	
Air hose connection	G1/4B	
Spray gun filter (internal)	200 mesh	
Nozzle tip (accessory)	NT-2004CMU	
Mass	525 g	710 g

* Paint viscosity range 10 to 50-second NK-2

MSG-200

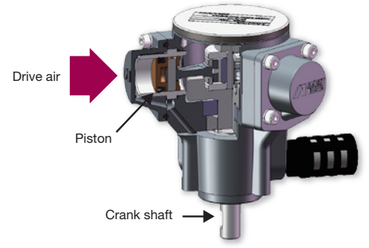
MSA-200

Paint Agitators

Mazeco AMM Series Mazeco Paint Agitator Features

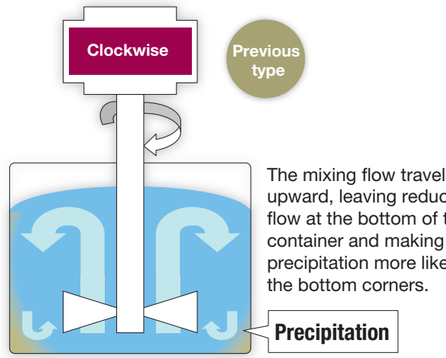
ANEST IWATA's Mazeco Series paint agitators use a radial piston air motor. They offer the following advantages over traditional vane-type air motors:

1. **Capable of low-speed rotation even without a reduction gear**
2. **Streamlined design without reduction gear (fewer replaceable parts)**
3. **Minimal fluctuations in rotation speed (stable rotation speed)**
4. **Dramatically lower air consumption (high energy savings)**

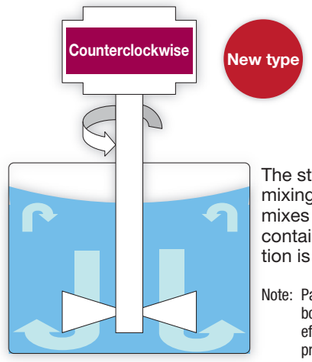


The range includes the AMM-6 Series with a medium AM-6B air motor and the AMM-7 Series with a small AM-7B air motor to suit the paint to be mixed and the equipment.

Mixing flow direction differences (For AMM-7 Series)



The mixing flow travels upward, leaving reduced flow at the bottom of the container and making precipitation more likely in the bottom corners.

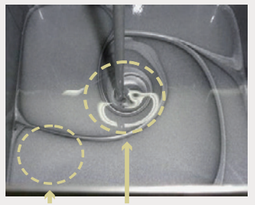


The strong downward axial mixing flow effectively mixes the bottom of the container where precipitation is likely to occur.

Note: Paint containers with rounded bottom corners will allow effective mixing without precipitation in the corners even with upward mixing flows.

Mixing differences due to rotation speed — "Mixing" rather than "stirring"

Insufficient mixing
100 min^{-1} or less

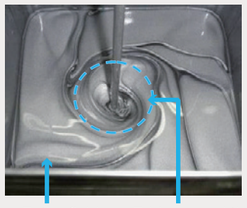


No flow movement at edges of container

Only the fluid around the shaft is moving.

Slow

Optimal
150 to 250 min^{-1}

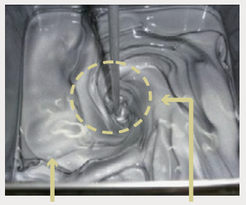


Entire fluid surface flows slowly.

Eddy around the shaft is depressed by 10 to 20 mm.

Fast

Air mixed in
300 min^{-1} or greater



Entire fluid surface flows violently.

Eddy around the shaft is depressed by 30 mm or more; air is mixed in.

Agitator Applications

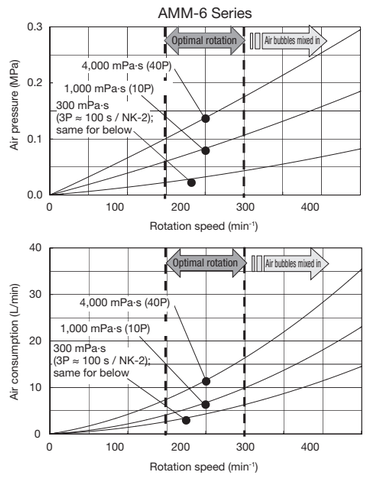
AMM-6 Series Medium Air Motor

AMM-6B

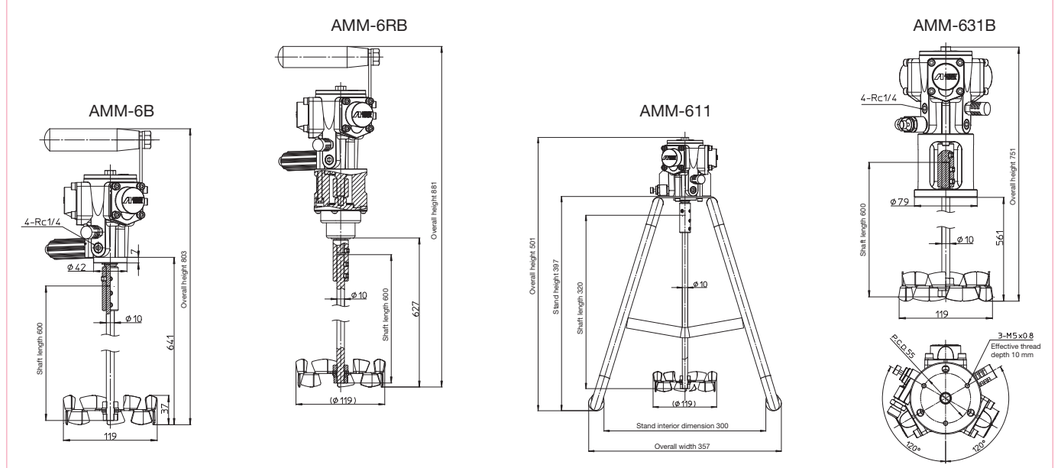
AMM-6RB

AMM-611

AMM-631B



Dimensional Drawings



Agitator model	AMM-6B	AMM-6RB	AMM-611	AMM-631B
Type	Handheld type		Stand type	For integration
Air motor model	AM-6B			
Speed reduction ratio	1:1	1:5	1:1	
Allowable viscosity range (guideline values)	1,000 mPa·s or less	4,000 mPa·s or less	1,000 mPa·s or less	
Compressed air connector	G1/4″ (BSP1/4″ male)			
Blade material	SUS304			
Shaft material	SUS303			
Mass	2.3 kg	3.0 kg	4.6 kg	2.3 kg

AMM-7 Series Small Air Motor

AMM-712

AMM-724

AMM-721B

AMM-731B

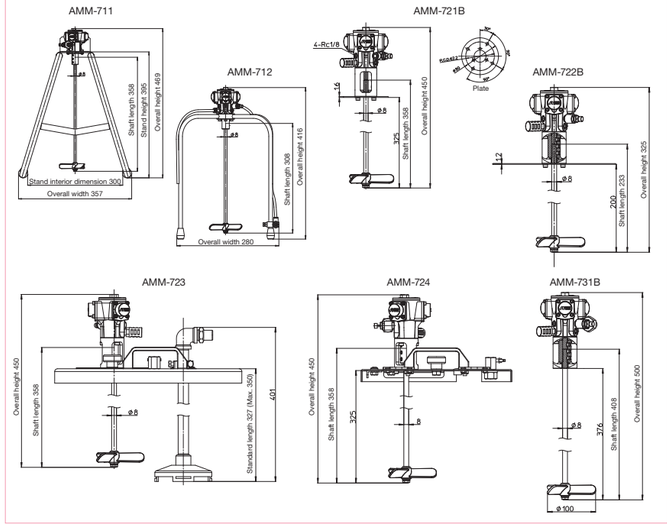
AMM-722B

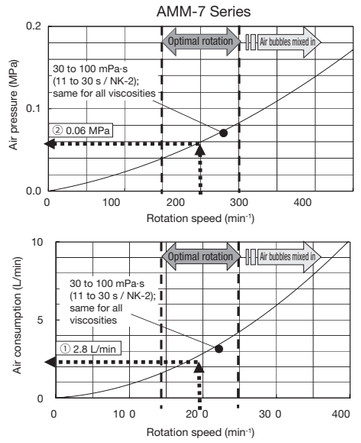
Mounted on
HDP-705C

AMM-711

AMM-723

Dimensional Drawings





● Explanation of graphs
When the agitator is set to turn at 200 min⁻¹,
① Air consumption is 2.8 L/min
② The air pressure required to drive the agitator is 0.06 MPa

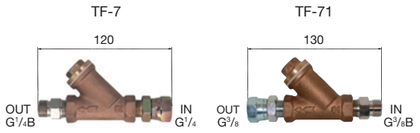
Agitator model	AMM-711	AMM-712	AMM-721B	AMM-722B	AMM-723	AMM-724	AMM-731B
Type	Stand type (for 18 L rectangular can)	Stand type (for 4 kg round can)	Raising/lowering type for DPS pump	For HDP pump	For 20 L pail	For 18 L rectangular can	For integration
Air motor model	AM-7B						
Speed reduction ratio	1:1						
Allowable viscosity range (guideline values)	60 mPa·s (20 s / NK-2) or less						
Compressed air connector	G1/4B		ϕ6 quick type		G1/4B		
Blade material	POM (polyacetal)						
Shaft material	SUS303						
Mass	2.7 kg	2.7 kg	1.0 kg	1.1 kg	3.5 kg	2.9 kg	0.8 kg

Paint Filters

TF-7 Series Intermediate Paint Filters

Eliminates debris that can cause painting defects. This is used attached to the paint outlet of diaphragm pumps or paint tanks or between paint hoses.

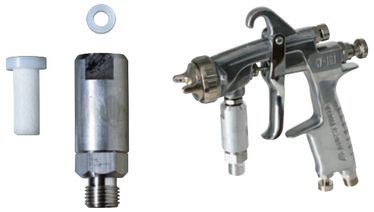
Filter model	TF-7	TF-71
Body material	Bronze casting	
Paint inlet	G1/4 cap nut	G3/8 cap nut
Paint outlet	G1/4B	G3/8B
Paint filter	100 mesh	
Optional filter	150/200 mesh	
Maximum operating paint pressure	1.27 MPa	



SFX-179 Series Spray Gun Paint Filters

These filters are used attached to spray gun paint joints.

Filter model	SFX-179-150	SFX-179-200	SFX-179-300
Body material	Aluminum		
Spray gun connector	G1/4		
Paint hose connector	G1/4B		
Paint filter	Equivalent to 150 mesh (resin)	Equivalent to 200 mesh (resin)	Equivalent to 300 mesh (resin)
Maximum operating paint pressure	0.7 MPa		
Compatible spray gun models	W-101/LPH-101/W-61/W-71/WA-101/LPA-101/LW-10B/ LW-18B		



Air Transformer

Integrated air regulator and air cleaner

RR-A Series Air Transformers

Model	RR-A	RR-AS	RR-AT
Type	Single-side pressure adjustment type	Double-side pressure adjustment type	Single-side pressure adjustment type
Allowable primary pressure	1.0 MPa		1.4 MPa
Pressure adjustment range	0.05 to 0.78 MPa		0.05 to 1.13 MPa
Air flow rate	780 L/min		
Maximum operating temperature (fluid temperature)	80 °C		
Air inlet	G3/8B		
Air outlet	G1/4B × 2		
Air discharge left/right	Pressure adjusted air / Original pressure air	Pressure adjusted air / Pressure adjusted air	Pressure adjusted air / Original pressure air
Filter mesh size	20 μ		
Drain type	Manual		
Remarks	Pressure drop of 0.03 MPa for secondary pressure of 0.49 MPa		

RR-A

Air Regulators

RR-55B/56B/57B Air Regulators

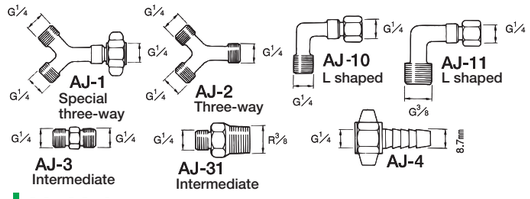
Model	RR-55B	RR-56B	RR-57B
Allowable primary pressure	1.37 MPa		
Pressure adjustment range	0.05 to 0.69 MPa	0.05 to 0.34 MPa	0.05 to 0.69 MPa
Air flow rate*1	580 L/min		
Maximum operating temperature (fluid temperature)	100 °C		
Air inlet	Rc1/4		
Air outlet	Rc1/4		

*1 Air flow rate for secondary adjusted pressure of 0.49 MPa

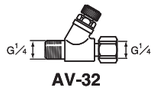
RR-56B

Joints and Hoses

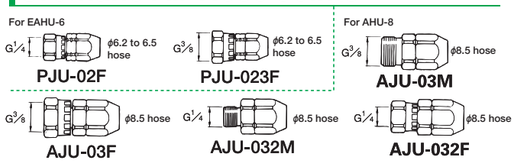
Air Joints



Air Valve

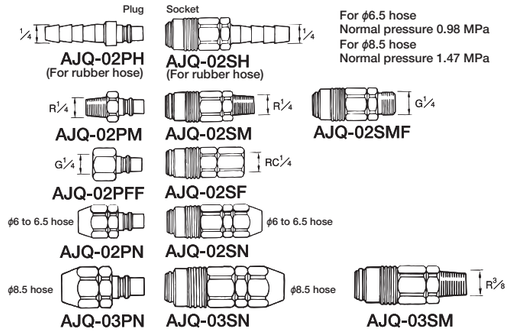


Urethane Air Hose Joints



* Use AJU-02F/AJU-02M joints for former AHU-6 urethane air hoses.

Quick Joints for Air (*1)



For ϕ6.5 hose
Normal pressure 0.98 MPa
For ϕ8.5 hose
Normal pressure 1.47 MPa

(*1)
- For use with air hoses only. Never use with paint hoses.
- If a ground wire is not used, the joint can be connected in a conventional manner without drawing out the ground wire. However, hoses should be labeled appropriately to avoid mistaken use of hoses with a ground wire and hoses without a ground wire.

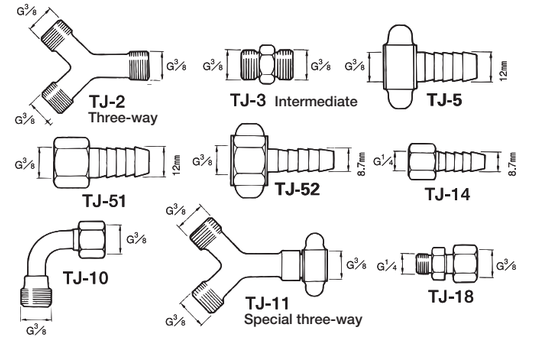
Air Hoses (*2)

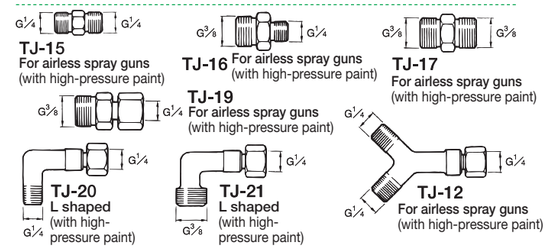
Model	Material	Inner dia. × Outer dia. × Length	Max. operating pressure
EAHU-620	Urethane with ground wire	ϕ6.2 × ϕ9.3 × 20 m	1.47 MPa
EAHU-630		ϕ6.2 × ϕ9.3 × 30 m	
EAHU-650		ϕ6.2 × ϕ9.3 × 50 m	
EAHU-6100		ϕ6.2 × ϕ9.3 × 100 m	
EAHU-820		ϕ8.5 × ϕ12 × 20 m	
EAHU-8100		ϕ8.5 × ϕ12 × 100 m	
AHU-820B	Urethane	ϕ8.5 × ϕ12 × 20 m	
AHU-830B		ϕ8.5 × ϕ12 × 30 m	
AHU-850B		ϕ8.5 × ϕ12 × 50 m	
AHU-8100B		ϕ8.5 × ϕ12 × 100 m	

⚠ CAUTION Precautions when using air hoses with ground wire(*2)

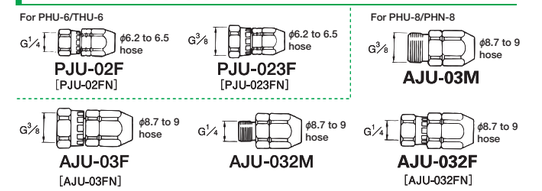
- These hoses include a ground wire, but the connected devices must be grounded.
- Never use as air hoses for supply pumps used with low-resistance paint static spraying units or insulated bases whether or not the ground wire is used. In such cases, use a urethane air hose (AHU-8) or paint hose (PHU/PHN) as the air hose.
- When using the ground wire, ground in accordance with the instruction manual and periodically check conductivity using a tester. Never use hoses if they are degraded or have broken wires; replace immediately with a new hose.
- For use as air hoses only. Never use as paint hoses.
- If a ground wire is not used, the joint can be connected in a conventional manner without drawing out the ground wire. However, hoses should be labeled appropriately to avoid mistaken use of hoses with a ground wire and hoses without a ground wire.

Paint Joints





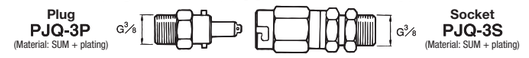
Paint Hose Joints



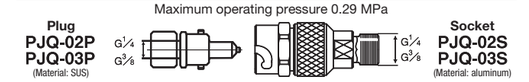
* Models in brackets are stainless steel models.

Paint Quick Joints

(Plug and socket set) **PJQ-3** Maximum operating pressure 0.49 MPa



Maximum operating pressure 0.29 MPa



Paint Hoses (*3)

Model	Material	Inner dia. × Outer dia. × Length	Max. operating pressure
PHU-620	Urethane	ϕ6.2 × ϕ9.3 × 20 m	0.69 MPa
PHU-6100		ϕ6.2 × ϕ9.3 × 100 m	
PHU-820		ϕ8.7 × ϕ12 × 20 m	
PHU-8100		ϕ8.7 × ϕ12 × 100 m	
PHN-620	Nylon	ϕ6.5 × ϕ9.5 × 20 m	0.69 MPa
PHN-6100		ϕ6.5 × ϕ9.5 × 100 m	
PHN-820		ϕ8.9 × ϕ12.1 × 20 m	
PHN-8100		ϕ8.9 × ϕ12.1 × 100 m	
PHF-620	Urethane with fluorine-based inner lining	ϕ6.5 × ϕ9.5 × 20 m	0.69 MPa
PHF-6100		ϕ6.5 × ϕ9.5 × 100 m	
PHF-820		ϕ8.9 × ϕ12.1 × 20 m	
PHF-8100		ϕ8.9 × ϕ12.1 × 100 m	
THU-620	Urethane (twin)	ϕ6.2 × ϕ9.3 × 2 × 20 m	0.69 MPa
THU-6100		ϕ6.2 × ϕ9.3 × 2 × 100 m	

* The THU-6 Series twin hoses for air feature orange threads and have the model printed on them.

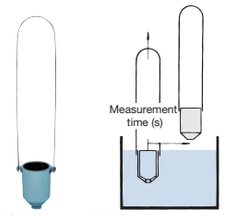
⚠ CAUTION Precautions on paint hose selection(*3)

- Do not use urethane paint hoses (PHU/THU) with highly-dissolving or reactive paints or thinners such as ketone-based solvents, two-pack reaction paints, or urethane-based paints. These products may cause the hose to split, allow paint to spray out, and generate various hazards. Use nylon paint hoses (PHN) instead.

Viscosity Conversion Table

Class	Pa·s	dPa·s (P)	mPa·s (cps)	ANEST IWATA NK-2 (s)	Ford (s)		Zahn (s)		Krebs KU	Example viscosity	Optimal viscosity for paint agitator (guide)			Optimal viscosity for supply equipment (guide)				
					#4 (s)	#3 (s)	#4 (s)	#2 (s)			AMM-7 Series (60 mPa·s or less)	AMM-6 Series (1,000 mPa·s or less)	AMM-6RB (4,000 mPa·s or less)	DDP/DPS-70 Series (190 mPa·s or less)	DDP/DPS-90/120 Series (300 mPa·s or less)	DDP/DPS-160 Series (3,000 mPa·s or less)	PPS (300 mPa·s or less)	BSP (10,000 mPa·s or less)
	0.01	0.1	10		5			16										
			15		8			17										
Low viscosity	0.02	0.2	20	5	10	12		18										
			25	8	12	15		19		Acetone								
	0.03	0.3	30	11	15	19		20										
	0.04	0.4	40	14	17	25		22		Urethane resin-based metallic paint for resin moldings								
Medium viscosity	0.05	0.5	50	16	19	29		24	30									
	0.06	0.6	60	19	21	33		27	33									
	0.07	0.7	70	21	23	36		30	35									
	0.08	0.8	80	25	26	41		34	37	Cooking oil								
	0.09	0.9	90	29	29	45		37	38	Olive oil (20 °C)								
	0.10	1.0	100	31	31	50	10	41	40									
	0.12	1.2	120	38	36	58	11	49	43									
	0.14	1.4	140	44	41	66	13	53	46									
	0.16	1.6	160	49	45	67	14	56	48									
	0.18	1.8	180	56	51		16	74	50									
	0.20	2.0	200	63	56		17	82	52									
	0.22	2.2	220	69	61		18		54									
	0.24	2.4	240	76	67		20		56									
	0.26	2.6	260	83	72		21		58									
	0.28	2.8	280	88	76		22		59									
	0.30	3.0	300	96	83		24		60									
	0.40	4.0	400				30		64	FRP boat hull paint								
	0.50	5.0	500				37		68									
	0.60	6.0	600				44		71									
High viscosity	0.70	7.0	700				51		74	Lacquer paint (undiluted)								
	0.80	8.0	800				58		77									
	0.90	9.0	900				64		81									
	1	10	1,000						85	Brown sauce								
	2	20	2,000						103	Ketchup (24 °C)								
	3	30	3,000						121	Gel coat paint								
	4	40	4,000						133									
	5	50	5,000															
	8	80	8,000							Mayonnaise (23 °C)								
	10	100	10,000															
	30	300	30,000															
	50	500	50,000															
	80	800	80,000															
	100	1,000	100,000															
	130	1,300	130,000															
	150	1,500	150,000															
	180	1,800	180,000															
	200	2,000	200,000															
	1,000 or greater	10,000	1,000,000															

* The data provided above is representative. * Use this conversion table only as a guide. * VG (Viscosity Grade) is the ISO symbol used to indicate viscosity grade.



Viscosity cup

NK-2 viscosity cup drop time measurement method

Viscosity units: Correlation between SI and CGS unit systems

1 Pa·s = 1,000 mPa·s = 10 P	Pa·s (pascal seconds)	
1 dPa·s = 0.1 Pa·s = 1 P	dPa·s (decipascal seconds)	P (poise)
1 mPa·s = 0.001 Pa·s = 1 cps	mPa·s (millipascal seconds)	cps (centipoise)

* The NK-2 viscosity cup is a viscosity measuring device that uses the drop time measurement method.
* The NK-2 viscosity cup is a device for easily determining the viscosity of a fluid, but is not a measuring instrument, and the values determined cannot be used for other purposes.
* The values determined using the NK-2 viscosity cup are reference figures. They are not guaranteed.
* The values obtained may vary depending on factors such as type of fluid measured, environmental factors, and methods used. Note that the margin of error increases for measurements of 100 s / NK-2 or greater.
* Viscosity conversions comply with JS-10/20/50/100/200 as specified in JIS 8809-78 “Standard liquids for calibrating viscometers.”
* The viscosity conversion table provides summary values obtained from viscosity cup measurements. The conversion figures obtained from this table are reference values. They are not guaranteed.
* 1 P = 100 cP = 0.1 Pa·s

⚠ Safety Precautions

■ Use Precautions

1. Do not use the products shown in this catalog for the following purposes:
   ① Manufacture of orally-administered products such as food or medicine
   ② Applications for which product internal corrosion may cause harm to humans, animals, or wildlife
2. Carefully read the relevant instruction manuals before use.
3. Do not attempt to modify products. Modification may impair performance or result in failure.

- The products described in this catalog are intended for use in Japan. When exporting products purchased in Japan overseas, check in advance to confirm that they comply with applicable regulations and safety standards within the corresponding country.
- The specifications provided in this catalog are subject to change without notice to reflect product improvements.
- The photos and information provided in this catalog may differ from the actual products due to specification changes.

■ Inquiries

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