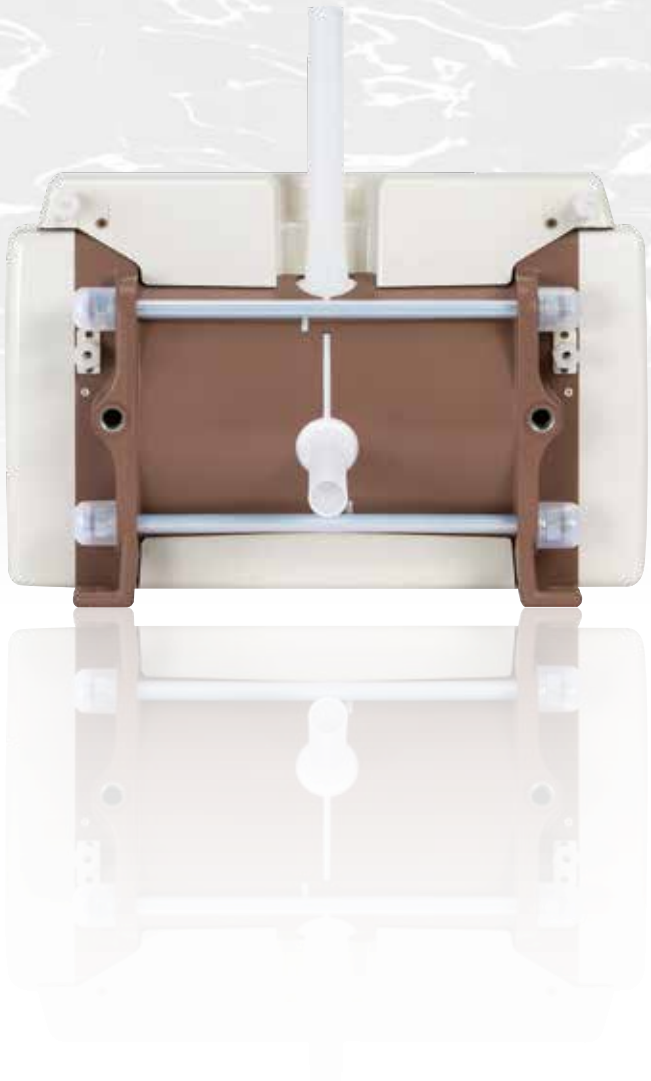
IWAKI

Pneumatic Drive Low Pulsation Bellows Pump

FLP



Low Pulsation Realized Without Damper Contributes to Total Cost Reduction

Patent
JAPAN / CHINA / KOREA / TAIWAN

The Heart of Industry

Low Pulsation Realized Without Damper Contributes to Total Cost Reduction

The unique design of the FLP bellows pump achieves low pulsation and high pressure sustaining capability.
This produces a stable discharge capacity and pressure without the use of a dampener.
Reduced air consumption up to 30% compared to our previous models is also achieved.

Low Pulsation

The unique drive mechanism of the system determines and maintains optimum movement of the bellows and supply-air switching to give minimum discharge pulsation. (PAT.)

Reduction of Air Consumption

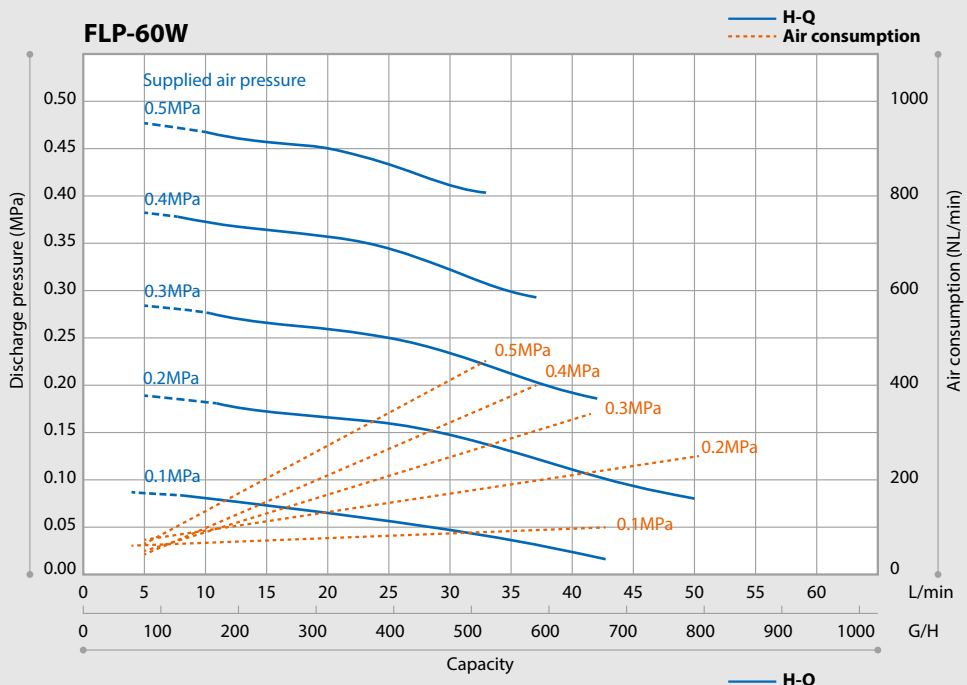
Reduced air consumption up to 30% compared to our previous models is achieved with no reduction of pump performance.

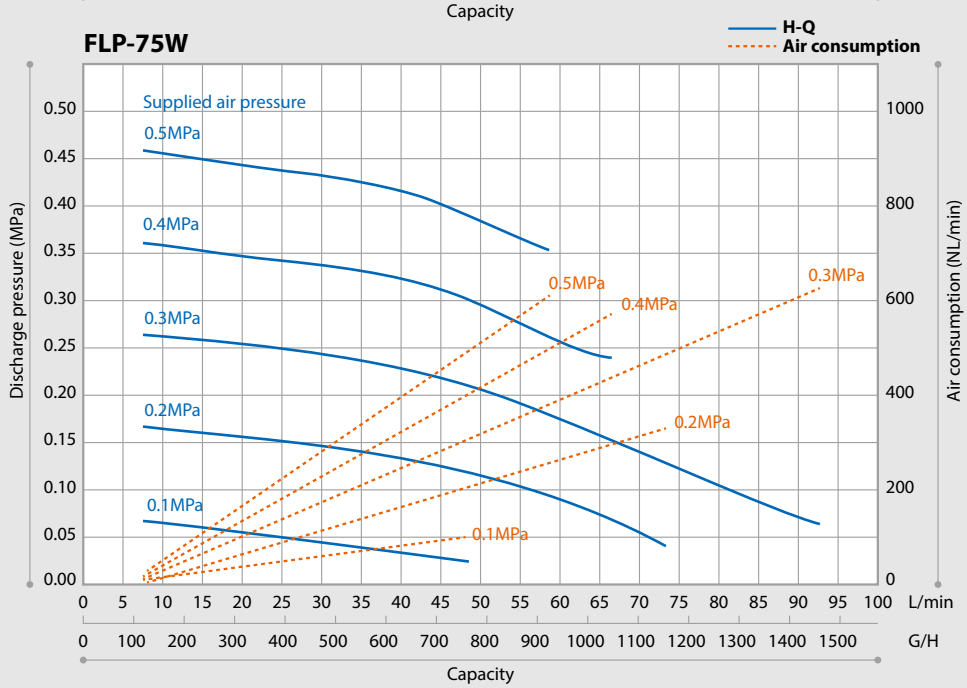
High Sustained Pressure Capability

The optimum bellows movement improves pressure sustaining capability to maintain stable discharge capacity and pressure under frequent load change, especially in single wafer processing.

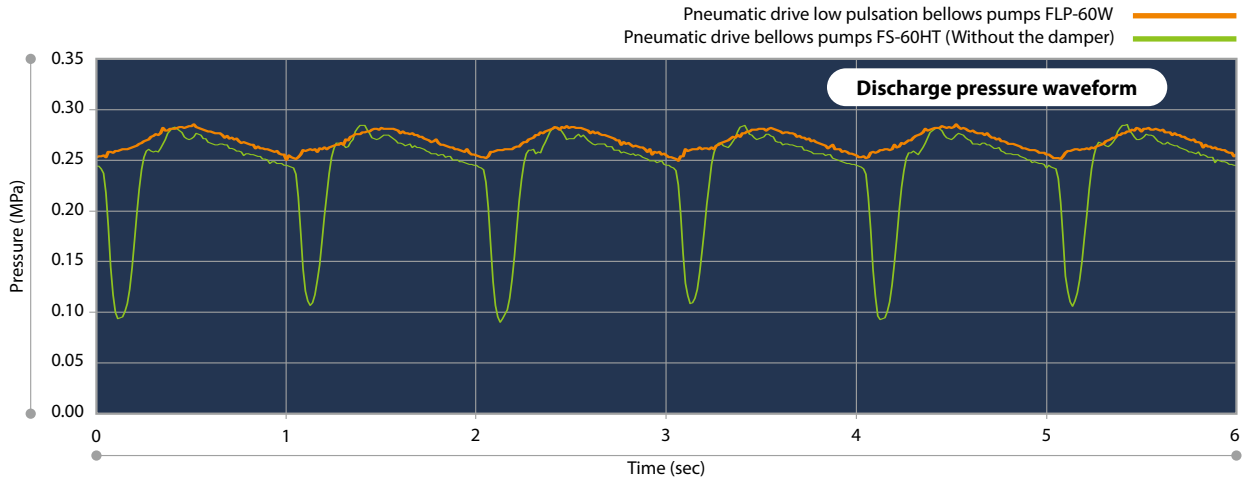
Elimination of a Dampener

The pump works without the use of a dampener, saving space inside equipment & installation costs such as fluoroplastic joints. The total weight/size of the equipment is also minimized.





Compared to Existing Pumps



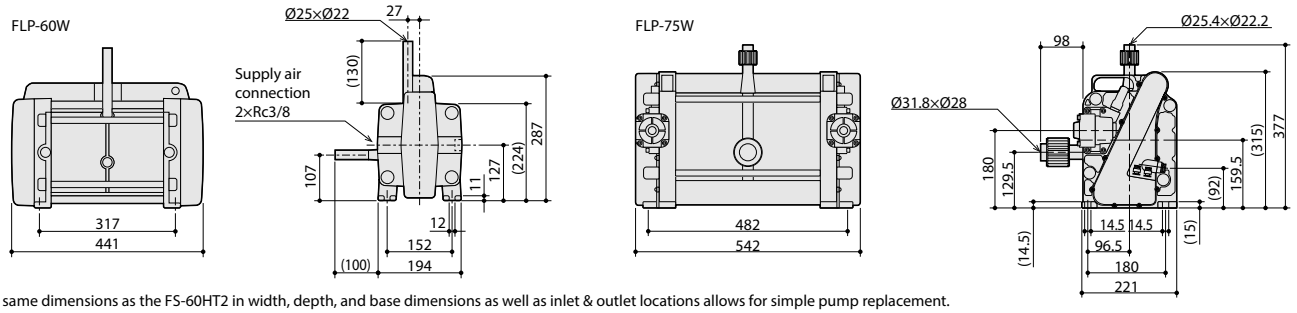
•Sharp drops of discharge pressure are minimized, reducing the pulsation compared to existing pumps,Suction pressure drops are at the same level as existing pumps, but the pulsation width has been reduced.

Specification of Pumps

Model		FLP-60W					FLP-75W				
Max. discharge capacity Note1	L/min	50					92				
Max. pulsation width	MPa	0.06					0.06				
Liquid temperature range (Max. supply air pressure)	˚C (MPa)	5 - 100 (0.5), 101 - 150 (0.4), 151 - 180 (0.3)					5 - 100 (0.5), 101 - 150 (0.4), 151 - 180 (0.3)				
Supply air pressure range	MPa	0.41 - 0.5	0.31 - 0.4	0.21 - 0.3	0.11 - 0.2	0.1	0.41 - 0.5	0.31 - 0.4	0.21 - 0.3	0.11 - 0.2	0.1
Max. stroke rate	spm	120	140	155	160		90	105	150	125	65
Max. air consumption	NL/min	464	419	338	252	116	647	608	615	355	99
Max. viscosity	mPa•s	50					50				
Suction lift Note2	m	1					1				
Main materials		PTFE, PFA									
Ambient temperature/humidity	˚C /%RH	0 - 40 (non-condensing) / 30 - 60 (non-condensing)					0 - 60 (non-condensing) / 30 - 60 (non-condensing)				
Storage temperature/humidity	˚C /%RH	-10 - 60 (non-condensing) / 20 - 70 (non-condensing)					-10 - 60 (non-condensing) / 20 - 70 (non-condensing)				
Installation location		Do not install the pump (Out of doors / In a dusty environment)					Do not install the pump (Out of doors / In a dusty environment)				
Liquid line connection bore	IN	Ø25×Ø22mm tube					Ø31.8×Ø28.0mm (PFA) 1-1/4 inch union nut and sleeve (SUPER 300-type PILLAR FITTING manufactured by Nippon Pillar Packaging Co., Ltd.)				
	OUT						Ø25.4×Ø22.2mm (PFA) 1" inch union nut and sleeve (SUPER 300-type PILLAR FITTING manufactured by Nippon Pillar Packaging Co., Ltd.)				
Supply air connection size		Rc3/8					Rc1/2				
Purge air port		Ø4 one touch joint					Ø6 one touch joint				
Mass	kg	22					42				

Note1: The max. discharge capacity is based on pumping clean water at an ambient temperature and the supply air pressure of FLP-60W: 0.2MPa, FLP-75W: 0.3MPa.
Note2: The suction lift is based on pumping clean water at an ambient temperature and the maximum spm.

Dimensions in mm



•The same dimensions as the FS-60HT2 in width, depth, and base dimensions as well as inlet & outlet locations allows for simple pump replacement.

Pump Controller

LPC-1

Specification

Power voltage	24VDC (-5% to +10%)
Max. power consumption	0.11A
Ambient temperature / humidity	0 to 50°C (non-condensing) / 5 to 90%RH (non-condensing)
Storage temperature / humidity	-10 to 60°C (non-condensing) / 5 to 90%RH (non-condensing)
Installaition location	Do not install the controller Out of doors. / In a dusty environment. / Under vibration or impact. Where the controller catn get wet with water or oil. / In a corrosive atmosphere.
Explosion proof	This product is not explosion-proof (Do not install the controller under flammable explosive atmosphere)
Mass	1.3kg
Alarm	Leak alarm/Time up alarm/First alarm Electro pneumatic regulator alarm
Other function	In addition to normal operation, constant flow control is also possible. In addition, low pulsation is maintained even during constant flow control.

•European Norm (EMC directive): This product conforms to EN61326-1: 2006 Class A. Observe the EMC requirement, or malfunction or damage of the product may result.

Quick Exhaust Valve

QEV

Specification

Model	QEV-15V
Connection bore	Rc1/2
Supply air pressure range	0.1 - 0.5 MPa
Ambient temperature	5 - 40°C
Fluid name	Compressed air
Fluid temperature	5 - 40°C
Effective cross-section area (CV value)	IN→OUT 69mm^2 (3.8) OUT→EXH 82mm^2 (4.6)
Oil supply	N/A
Mounting position	N/A

- The QEV installed in between the pump and solenoid valve prevents corrosion of the solenoid valve by return air.
- The QEV reduces the resistance of air exhaust to smooth the bellows motion.

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( )Country codes

Caution for safety use:
Before use of pump, read instruction manual carefully to use the product correctly.

Actual pumps may differ from the photos. Specifications and dimensions are subject to change without prior notice. For further details please contact us.

Legal attention related to export.

Our products and/or parts of products fall in the category of goods contained in control list of international regime for export control. Please be reminded that export license could be required when products are exported due to export control regulations of countries.