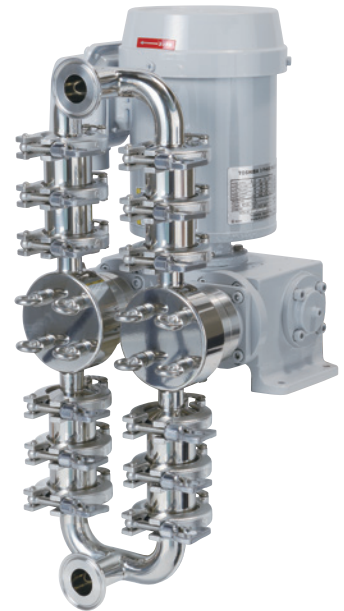


## FDA Compliant Pumps

Optimized for food and beverage, pharmaceutical, and cosmetic manufacturing processes.



### Materials:

- Elastomer: PTFE  
(Front diaphragms, O-rings, Ferrule packing)  
\* Raw materials conform to FDA 177.1550
- Metal: Equivalent to ANSI 304,316,316L  
\* JIS standard materials.  
For ASTM materials, please contact Tacmina.



FDA Compliant Elastomer

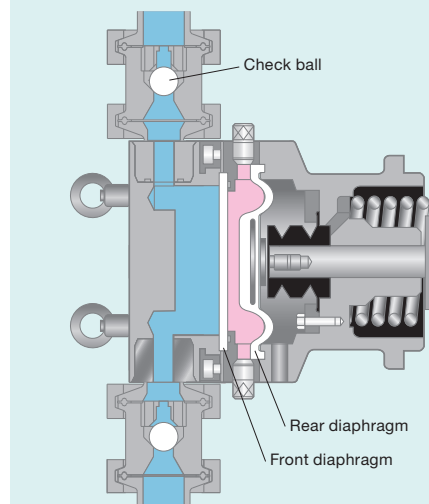
### Surface finish:

- Pump heads / Attachments: RA<8μinch
- Valve seats / Joints: RA<32μinch

### Connection Method:

- Ferrule Fittings: ISO, IDF, Sanitary Fittings

■ Structural drawing: PL Direct-Driven Type Model



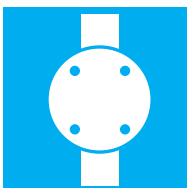
### No contamination

No risk of contamination caused by mechanical parts that rotate or rub against each other.



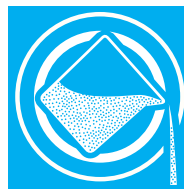
### No fluid leakage

No mechanical seals to wear means no risk of leakage or contamination.



### Dry running possible

Since there are no mechanical parts that come into contact with each other, diaphragm pumps do not overheat or malfunction even during dry running.



### Designed for optimal slurry transferability

Diaphragm pumps apply little or no shear to the fluid, therefore critical components are not damaged even by the most aggressive slurries.



### Prevents fluid deterioration

Unlike other pumps, diaphragm pumps never apply excessive pressure to a single location, so there is no risk of fluid deterioration or characteristic changes.



### Easy maintenance and cleaning

Compatible with CIP cleaning. Since the liquid-end section is small, maintenance such as disassembly and cleaning can be performed very quickly and easily.

# TPL

Hydraulic type

High-precision

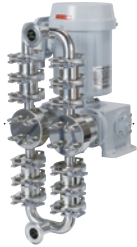


Specification		Model	TPL1ME				TPL2ME			
			008	014	018	028	028	032	040	056
Max. discharge volume	L/min		0.1	0.3	0.5	1.2	2.6	3.4	5.3	10.5
	L/h		6	18	30	72	156	204	318	630
	US G/h		1.58	4.75	7.92	19	41.18	53.85	83.95	166.32
Max. discharge pressure	MPa		0.5							
	bar		5							
	psi		72.5							
Transferable viscosity			Max. 20mPa·s / Max. 1000mPa·s (for high-viscosity specifications)							
Transferable temperature			15 to 60°C (no freezing allowed)							

# PL

Direct-driven double diaphragm type

Flexible

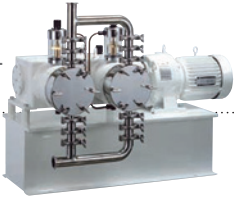


Specification		Model	PLFXW2·PLFYW2				PLFXW2			
			06	08	1	2	3P	6	14	
Max. discharge volume	L/min		1.44	2	2.4	3.6	6	13.2	28	
	L/h		86.4	120	144	216	360	792	1680	
	US G/h		22.8	31.68	38.01	57.02	95.04	209.08	443.52	
Max. discharge pressure	MPa		1			0.5		0.7		0.5
	bar		10			5		7		5
	psi		145			72.5		101.5		72.5
Transferable viscosity	Standard type		50mPa·s or less				100mPa·s or less		50mPa·s or less	
	High-viscosity type		2000mPa·s or less		1000mPa·s or less		3000mPa·s or less		-	
Transferable temperature			0 to 80°C (no freezing allowed)							

# PL

Hydraulic double diaphragm type

High Pressure



Specification		Model	PLFXMW2·PLFYMW2				PLFXMW2								
			01	02	06	08	08P	1	1P	3	4P	8	8P	15	15P
Max. discharge volume	L/min		0.23	0.47	1.2	1.6		3.3		6.4	7.8	15.8		31	
	L/h		13.8	28.2	72	96		198		384	468	948		1860	
	US G/h		3.64	7.44	19	25.34		52.27		101.37	123.55	250.27		491.04	
Max. discharge pressure	MPa		2.5	1.5	1.6	2.5	1.6	2.5	1.2	2.5	1	2	0.8	1.5	
	bar		25	15	16	25	16	25	12	25	10	20	8	15	
	psi		362.5	217.5	232	362.5	232	362.5	174	362.5	145	290	116	217.6	
Transferable viscosity			50mPa·s or less												
Transferable temperature			0 to 80°C (no freezing allowed)												

# F

Direct-driven double diaphragm type

Flexible



Specification		Model	FXW·FYW				FXW					
			06	1	2	3	4	3P	6	8	10	10P
Max. discharge volume	L/min		0.6/0.72	1/1.2	1.5/1.8	2.5/3	3/3.6	3/3.6	5.6/6.8	7.2/8.6	10/12	10/12
	L/h		36/43.2	60/72	90/108	150/180	180/216	180/216	336/408	432/516	600/720	600/720
	US G/h		9.5/11.4	15.8/19	23.8/28.5	39.6/47.5	47.5/57	47.5/57	88.7/107.7	114/136.2	158.4/190.1	158.4/190.1
Max. discharge pressure	MPa		1	0.5	0.3	0.25	0.7	0.5	0.5	0.3	0.5	
	bar		10	5	3	2.5	7	5	5	3	5	
	psi		145	72.5	43.5	36.2	101.5	72.5	72.5	43.5	72.5	
Transferable viscosity	Standard type		50mPa·s or less				Ceramic check ball: 100 mPa·s					
	High-viscosity type		2000mPa·s or less		1000mPa·s or less		Stainless steel check ball: 3000 mPa·s (2000 mPa·s on the 30 type)					
Transferable temperature			0 to 80°C (no freezing allowed)									

# F

Hydraulic double diaphragm type

High Pressure



Specification		Model	FXMW·FYMW				FXMW								
			01	02	06	08	1	3	6	10	08P	1P	3P	6P	10P
Max. discharge volume	L/min		0.097/0.115	0.195/0.235	0.5/0.6	0.67/0.8	1.37/1.65	2.7/3.2	5.5/6.5	8.5/10	0.67/0.8	1.37/1.65	2.5/3	5.5/6.5	8.5/10
	L/h		5.82/6.9	11.7/14.1	30/36	40.2/48	82.2/99	162/192	330/390	510/600	40.2/48	82.2/99	150/180	330/390	510/600
	US G/h		1.54/1.82	3.09/3.72	7.9/9.5	10.6/12.7	21.7/26.1	42.8/50.7	87.1/103	134.6/158.4	10.6/12.7	21.7/26.1	39.6/47.5	87.1/103	134.6/158.4
Max. discharge pressure	MPa		2.5	2	1.6	1.2	0.7	0.6	0.6	0.6	2.5	2	1.2		
	bar		25	20	16	12	7	6	6	6	25	20	12		
	psi		362.6	290.1	232.1	174	101.5	87	87	87	362.6	290.1	174		
Transferable viscosity			50mPa·s or less												
Transferable temperature			0 to 80°C (no freezing allowed)												

\* The above performance specifications are examples for typical models. For details, see the catalog of each model.  
\* The PL is for duplex models. For details on triplex models, contact your dealer or TACMINA.

Product designs and specifications are subject to change without notice for product improvement.

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