

**A compact metering pump offers the best solution for strong acid transfer.**



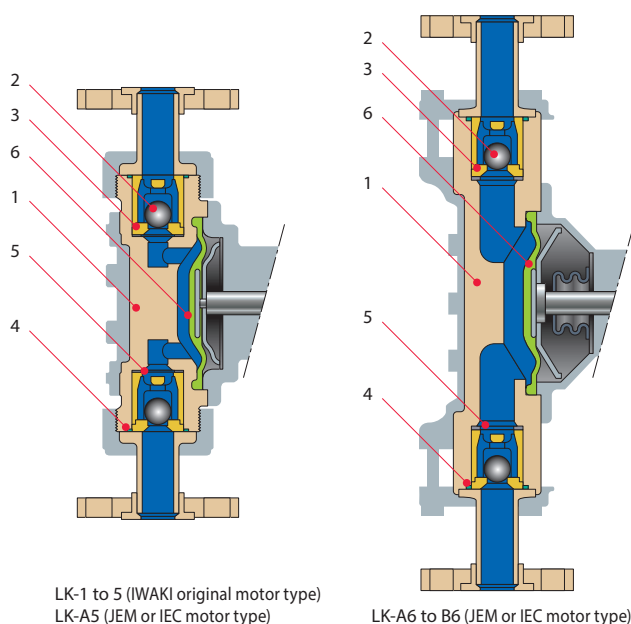
# A compact metering pump offers the best solution for strong acid transfer.

The LK-TC type with fluorine wet ends is optimum for strong acid transfer. The pump head consists of PVDF, ceramics, PTFE, FKM and other high grade materials. 0.2kW special motor type (9 models) and general-purpose motor type (4 models) are available to satisfy a wide flow range.

- Use of PVDF offers lasting durability for strong acid transfer.
- Accurate discharge capacity of  $\pm 2\%$ FS.
- Total 13 models from 0.2 to 0.75kW are available.
- Simple structure and easy maintenance.



## Construction and materials



Application	Strong acids
Type	TC
1 : Pump head	PVDF
2 : Valve ball	High purity ceramic
3 : Valve seat	Type 11 to 32 Type 45 to 87
4 : O ring	FKM
5 : Valve gasket	PTFE
6 : Diaphragm	PTFE+EPDM
Material symbols	
PVDF : PolyVinylidene DiFluoride FKM : Fluoro rubber	
PTFE : Polytetrafluoro Ethylene EPDM : Ethylene Propylene rubber	

Note:1 As for the connection, which is different in some models from standard.  
Note:2 The other materials are available. Please contact us for details.

## Pump identification

**2** **LK** - **A** **47** **TC** - **04** **F** **E** **S**

1 2 3 4 5 6 7 8 9

- 1** Simplex / Duplex  
LK (IWAKI original motor type) No mark : Simplex  
2 : Duplex  
(Special drive section : LK-11 to 47)
- 2** Series name  
L series : Mechanical driven diaphragm type
- 3** Drive section  
LK (IWAKI original motor type) No mark : 0.2/0.25kW  
LK-F/A/B (JEM or IEC motor type) F : 0.25 or 0.37kW (for IEC), 0.4kW  
A : 0.4kW  
B : 0.75kW
- 4** Type No.  
First digit : Diaphragm (Pump head size)  
Second digit : Speed-reducing gear ratio 1•5 : 1/30  
2•7 : 1/15
- 5** Material symbol  
TC : Fluoric resin
- 6** Motor output  
LK (IWAKI original motor type) 02 : 0.2kW  
03 : 0.25kW (Single phase)  
LK-F/A/B (JEM or IEC motor type) 02 : 0.4kW  
07 : 0.75kW
- 7** Special motor  
LK-F/A/B (JEM or IEC motor type) F : Inverter motor  
(No mark : General-purpose motors have no explosion-ploof symbol.)
- 8** Servo unit  
E : With electric servo unit
- 9** Special symbol  
S : Special specification other than standard.

Note : This table dose not introduce the standard combination. Please contact us for details.

## Specification

Model	Capacity L/min <sup>Note1</sup>		Max. Pressure MPa <sup>Note2</sup>	Stroke speed spm		Efective dia-phragm dia. mm	Max. Stroke length mm	Connection Flange (JIS10K) mm	Motor output kW <sup>Note3</sup>	Approx net weight kg <sup>Note4</sup>		
	50Hz	60Hz		50Hz	60Hz							
LK-11	0.020	0.024	1.0	48	58	Ø22	1.5	15A	0.2 (Three phase) or 0.25 (Single phase)	12		
LK-21	0.050	0.060									Ø30	2.0
LK-22	0.10	0.12										
LK-31	0.25	0.30				Ø60	2.5					
LK-32	0.50	0.60										
LK-45	0.85	1.00				Ø72	6.0					
LK-47	1.7	2.0	0.8	96	116							
LK-55	2.8	3.3	0.5	48	58	Ø100	10	25A	0.4	16		
LK-57	6.0	7.2	0.3	96	116							
LK-A55	2.8	3.3	1.0	48	58	Ø100	10	25A	0.4	63		
LK-A57	6.0	7.2	0.7	96	116							
LK-A65	9.0	10.8	0.3	48	58	Ø138	17.5	40A	0.75	100		
LK-B65			0.5									

Note 1: The capacity is the value when maximum discharge pressure is applied (with pure water at room temperature). The value may be larger than indicated in the table if the discharge pressure is lower. As for the liquid conditions pumped and performance. Please contact us for details.

Note 2: The maximum discharge pressure of LK-A models are restricted to 0.7MPa for A55, 0.5MPa for A57 and 0.2MPa for A65 when IEC standard 0.37kW motor is adopted.

Note 3: The LK type is equipped with Iwaki original flange motor. The standard is 200V 3-phase, totally enclosed fan-cooled outdoor type.

Other motors for different voltages, explosion-proof motors, or single-phase motors are available.

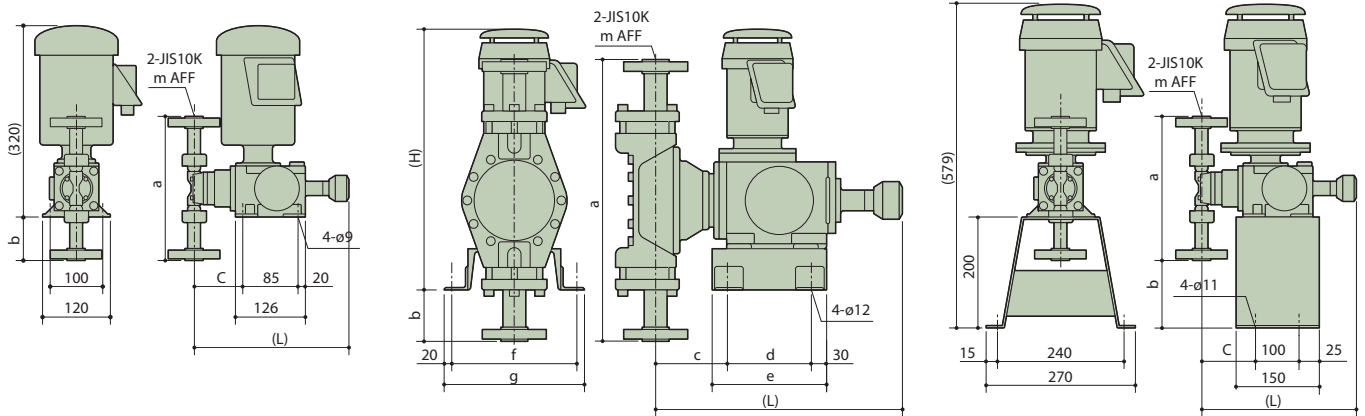
LK-F, LK-A and B are to be installed with general purpose flange motors.

Note 4: The weight is the value when installed with a totally enclosed fan-cooled outdoor motor.

• Coating color : H37-60D (JPMA) (However, the motors for LK-F/A/B/C use the maker's standard color.)

• Duplex type : LK-11 to 47 type include duplex types with a special-use integrated drive section.

Dimension in mm



LK-1 to 5 (IWAKI original motor type)

Model	L	a	b	c	m
LK-1	275	256	78	119	15
LK-2		273	86	154	
LK-3	277	332	116	164	25
LK-4	282	353	126	167	
LK-5	298	325	113		

LK-A5 to B6 (JEM or IEC motor type)

Model	L	a	b	c	H	d	e	f	g	m
LK-A5	478	325	29	113	547	180	240	260	300	25
LK-A6	523	590	103	154		240	300	310	350	
LK-B6	595		85	164	594	240	300	310	350	40

LK-F1 to F5 (JEM or IEC motor type)

Model	L	a	b	c	m
LK-F1	275	256	122	87	15
LK-F2		273	113		
LK-F3	277	332	84	89	
LK-F4	282	353	74	92	
LK-F5	298	325	87	167	

• The pump base is optional.

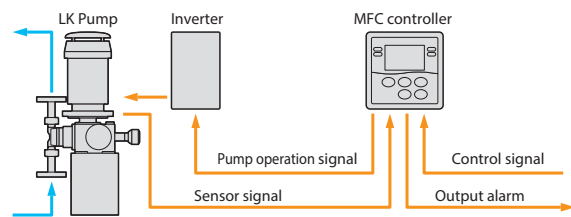
Optional accessories

Pump controller MFC

Multifunction pump controller for LK-F series metering pumps



- Capable of analogue input (4~20mA) and pulse input (Dividing/Multiply) operation
- Operating functions of the pump can be monitored via external output signal.
- Easy key touch operation and a large LCD display give good control legibility.
- Display preference of flow rate (L/min) or stroke rate (SPM) is user-selectable.
- Combination of stroke length adjustment with stroke rate enables flow volume control over a wide range of 1:480.



Relief valve (PVDF)



Model	Max. Capacity L/min	Setting pressure MPa	Connection Nominal size JIS 10K flange	Weight kg
RV-1T□-15	1.0	0.3 to 0.8	15A	0.5
RV-3T□-15	3.0	0.3 to 1.0		0.7
RV-7T□-15	7.5	0.3 to 0.8	25A	5.0
RV-7T□-25				
RV-25T□-25	25	0.3 to 0.8	40A	5.5
RV-25T□-40				

- □ : Symbol for material of O-ring ("V" for FKM, "E" for EPDM)
- Material for diaphragm is PTFE. RV-1T type is made of the same material as the O-ring.

Back pressure valve (PVDF)



Model	Max. Capacity L/min	Setting pressure MPa	Connection Nominal size JIS 10K flange	Weight kg
BV-1T□L-15	0.005 to 1.0	0.05 to 0.2	15A	0.5
BV-1T□-15		0.2 to 0.8		0.7
BV-3T□-15	0.000125 to 3.0	0.1 to 0.8	25A	5.0
BV-7T□-25		0.2 to 7.5		
BV-25T□-25	2 to 25	0.1 to 0.8	40A	5.5
BV-25T□-40				

- □ : Symbol for material of O-ring ("V" for FKM, "E" for EPDM)
- Material for diaphragm is PTFE. BV-1T type and BV-3T type are made of the same material as the O-ring.
- The back pressure valve can not curb the residual flow completely when the pump stops. Use the solenoid valve in order to shut out the residual flow.

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

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