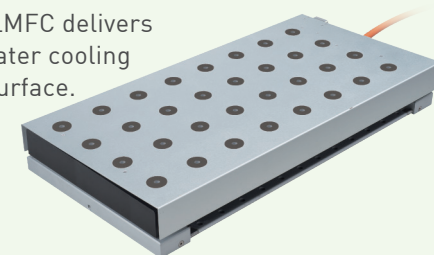


## Features

The LMFC precision cooling system supports the LMFA series of linear motors. The LMFC delivers high-precision motor control and provides precise insulation through a dual reflux water cooling system which keeps the temperature of the motor consistent within 2°C across the surface.



The precision cooling system can be directly installed with the LMFA forcer, and the precision cooling stator can be jointed without limit.

- Efficient water temperature management with less than 4°C inlet/outlet temperature difference.
- Effective at maintaining cooler temperatures from heat generated during linear motor cycling.

## LMFC Highlights

40%

Heat transfer resistance

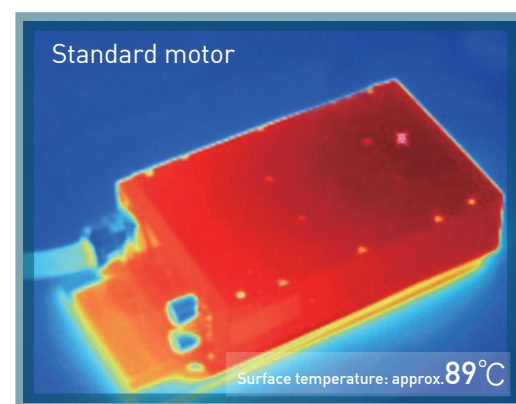
50%

Efficiency increase

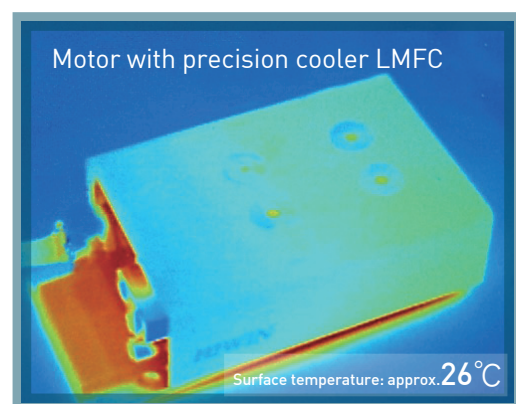
20%

Energy consumption reduction

The thermal imager shows that *the temperature of motor surface is significantly reduced.*



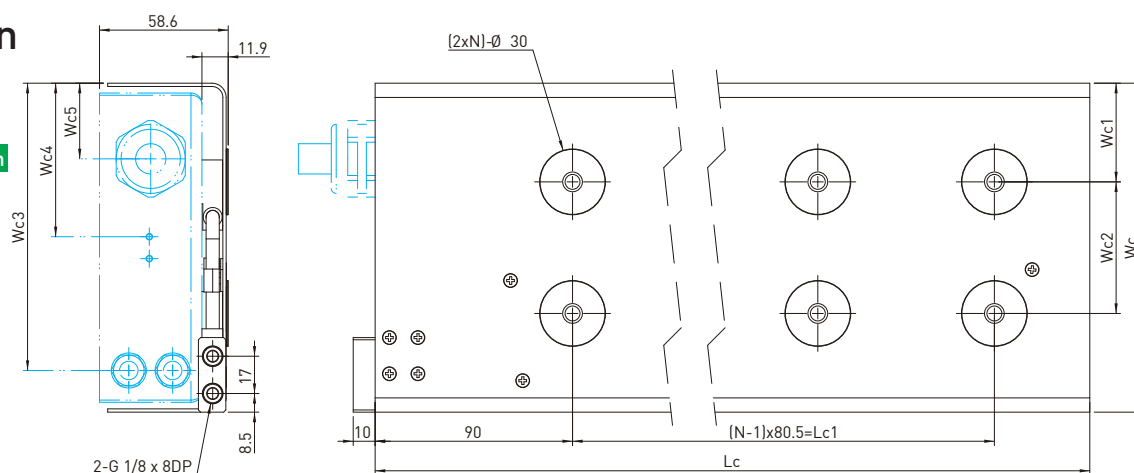
VS.



## Specification

### LMFC3,4

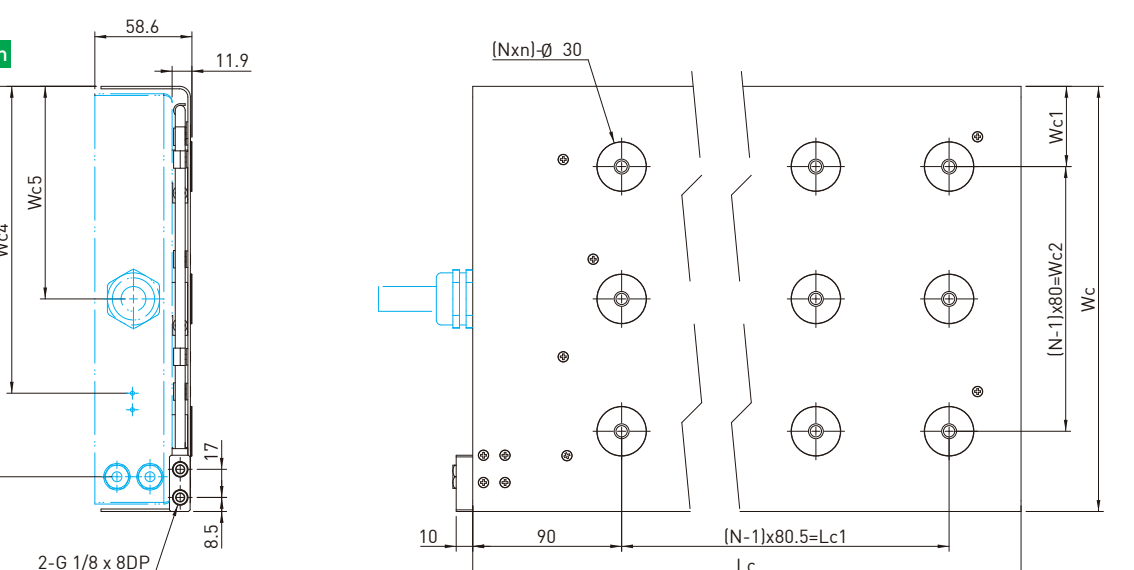
Series Forcer Dimension



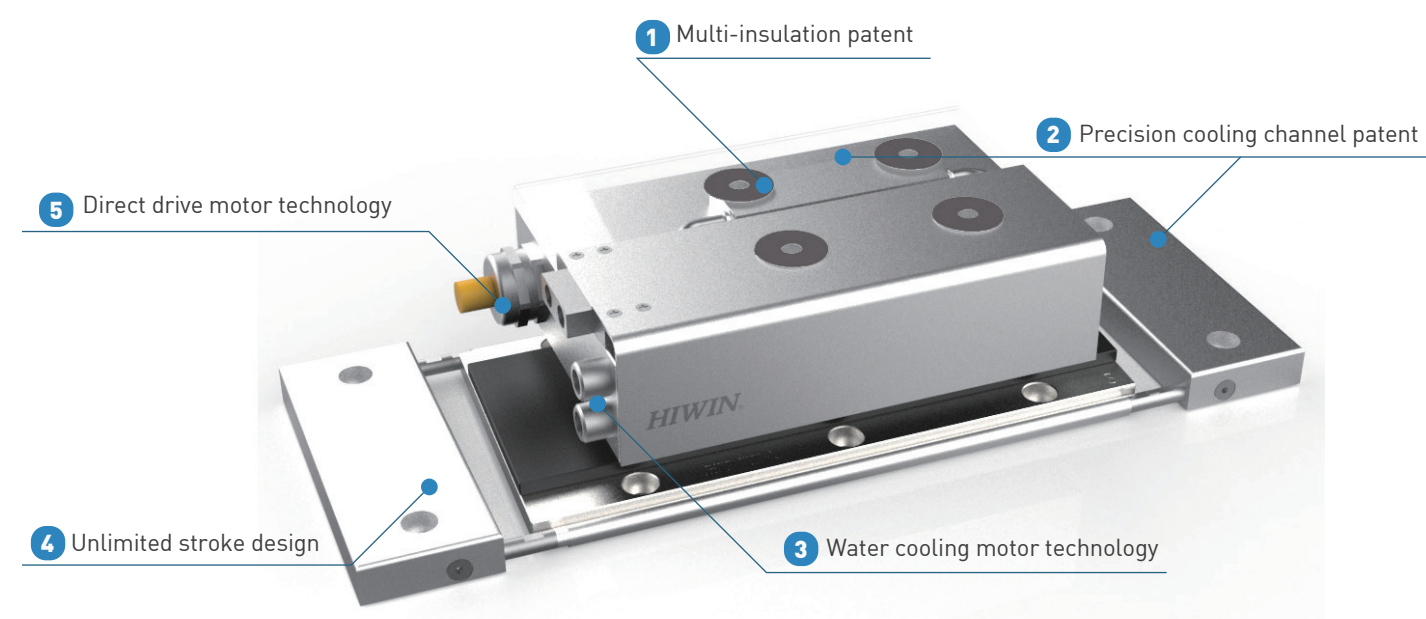
Type	Motor	Lc	Lc1	Wc	Wc1	Wc2	Wc3	Wc4	Wc5	N
LMFC31	LMFA31	214	80.5	150	45	60	131	70	34.5	2
LMFC32	LMFA32	375	241.5	150	45	60	131	70	34.5	4
LMFC33	LMFA33	536	402.5	150	45	60	131	70	34.5	6
LMFC34	LMFA34	697	563.5	150	45	60	131	70	34.5	8
LMFC41	LMFA41	214	80.5	197	58.5	80	178	93.5	34.5	2
LMFC42	LMFA42	375	241.5	197	58.5	80	178	93.5	34.5	4
LMFC43	LMFA43	563	402.5	197	58.5	80	178	93.5	34.5	6
LMFC44	LMFA44	697	563.5	197	58.5	80	178	93.5	34.5	8

### LMFC5,6

Series Forcer Dimension



Type	Motor	Lc	Lc1	Wc	Wc1	Wc2	Wc3	Wc4	Wc5	N	n
LMFC52	LMFA52	375	241.5	257	48.5	160	236	185.5	128.5	3	4
LMFC53	LMFA53	536	402.5	257	48.5	160	236	185.5	128.5	3	6
LMFC54	LMFA54	697	563.5	257	48.5	160	236	185.5	128.5	3	8
LMFC62	LMFA62	375	241.5	351	55.5	240	330	249.5	175.5	4	4
LMFC63	LMFA63	536	402.5	351	55.5	240	330	249.5	175.5	4	6
LMFC64	LMFA64	697	563.5	351	55.5	240	330	249.5	175.5	4	8



HIWIN MIKROSYSTEM New Generation Linear Motor

HIWIN®

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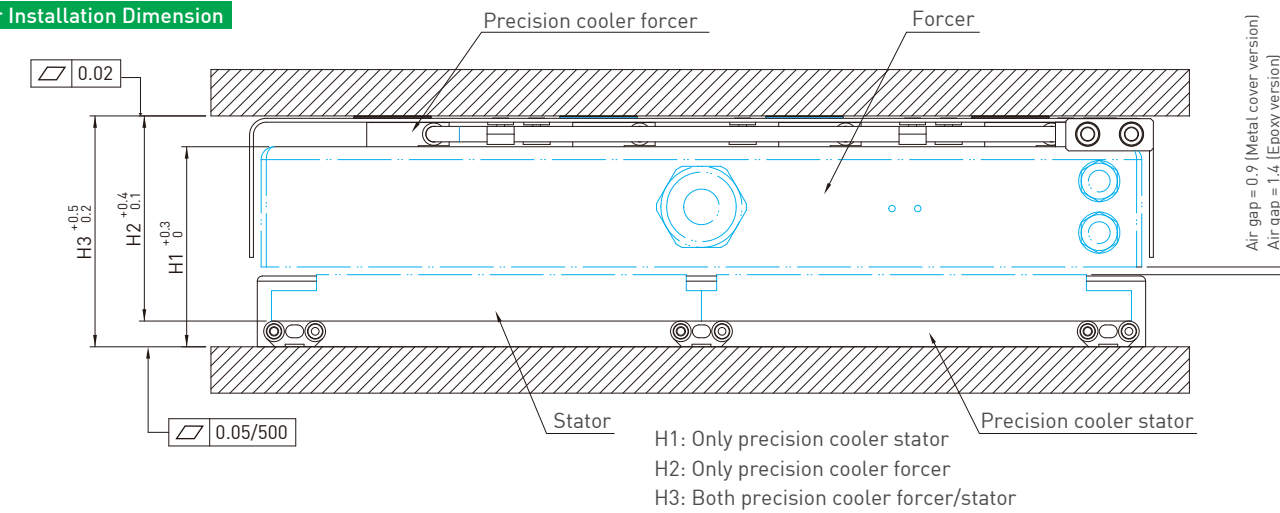
# LMFC

## Precision Cooling System for LMFA Series Linear Motors

# Specification

## LMFC

### Forcer Installation Dimension



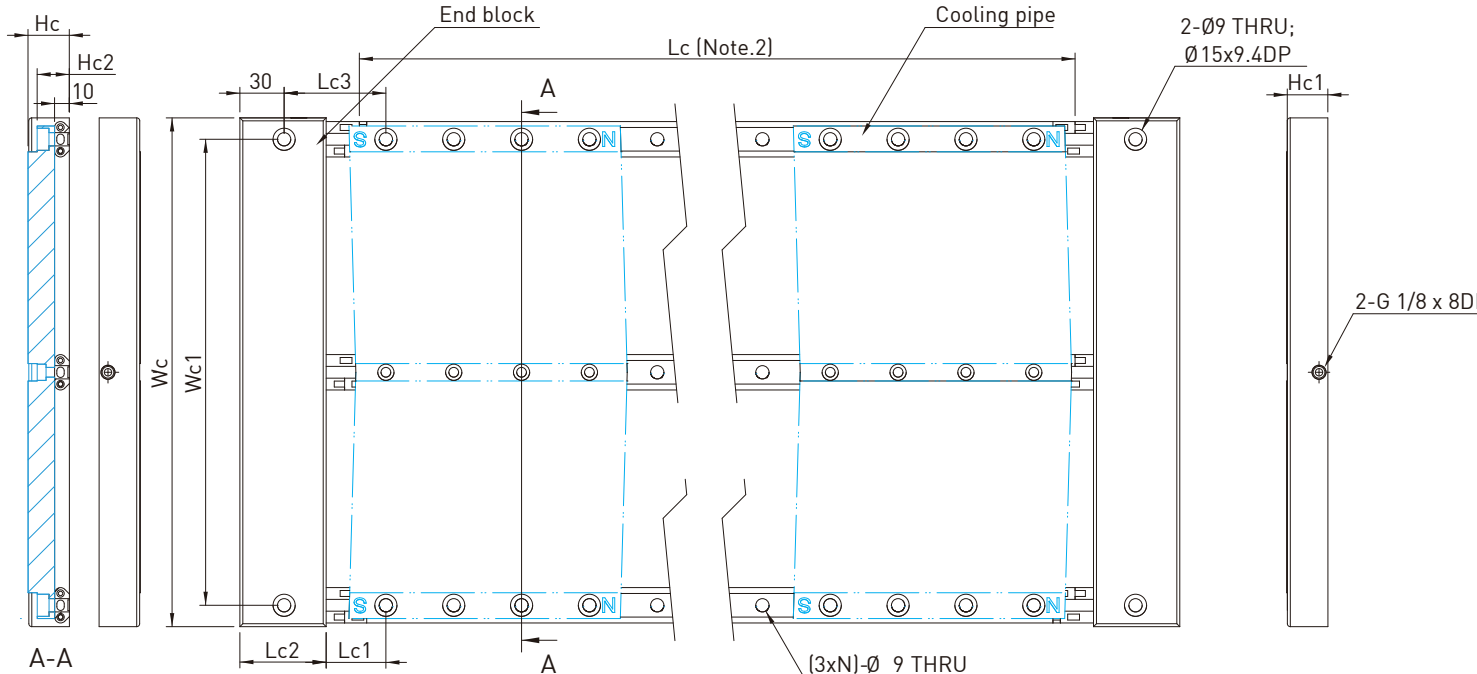
H1: Only precision cooler stator  
 H2: Only precision cooler forcer  
 H3: Both precision cooler forcer/stator

Type	H1	H2	H3
LMFA31	74.1	76	86
LMFA32	74.1	76	86
LMFA33	74.1	76	86
LMFA34	74.1	76	86
LMFA41	76.1	78	88
LMFA42	76.1	78	88
LMFA43	76.1	78	88
LMFA44	76.1	78	88

Type	H1	H2	H3
LMFA52	74.1	76	86
LMFA53	74.1	76	86
LMFA54	74.1	76	86
LMFA62	76.1	78	88
LMFA63	76.1	78	88
LMFA64	76.1	78	88

## LMFC5,6

### Series stator dimension: Standard type

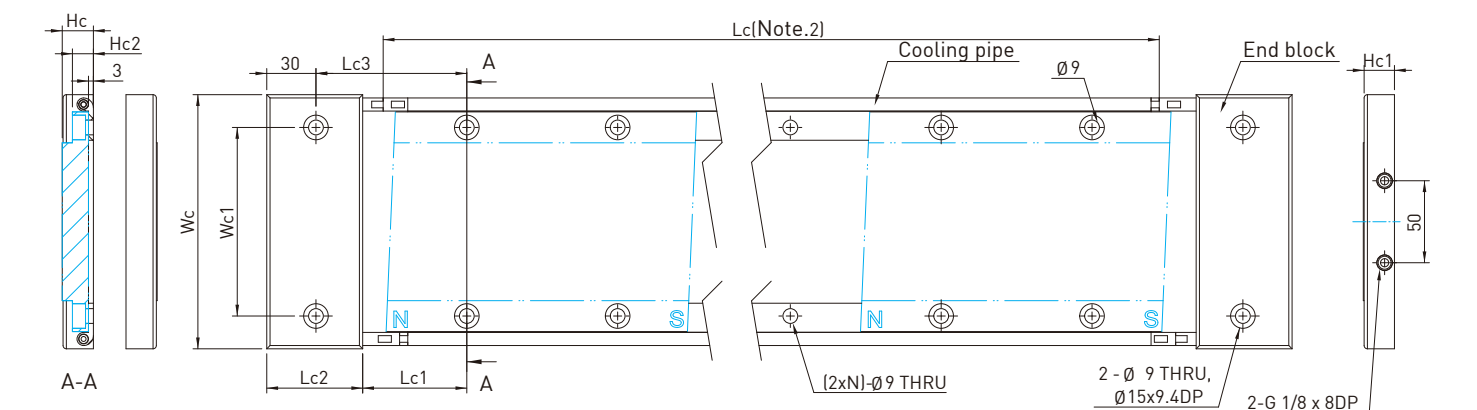


Type	Lc	Lc1	Lc2	Lc3	Wc	Wc1	Hc	Hc1	Hc2
LMFC5	-	40.5	58.5	69	251	222	26	25.5	19.8
LMFC6	-	40.5	58.5	69	345	316	28	27.5	21.8

Lc: Total jointing length of stator

## LMFC3,4(R)

### Series stator dimension: Reverse type

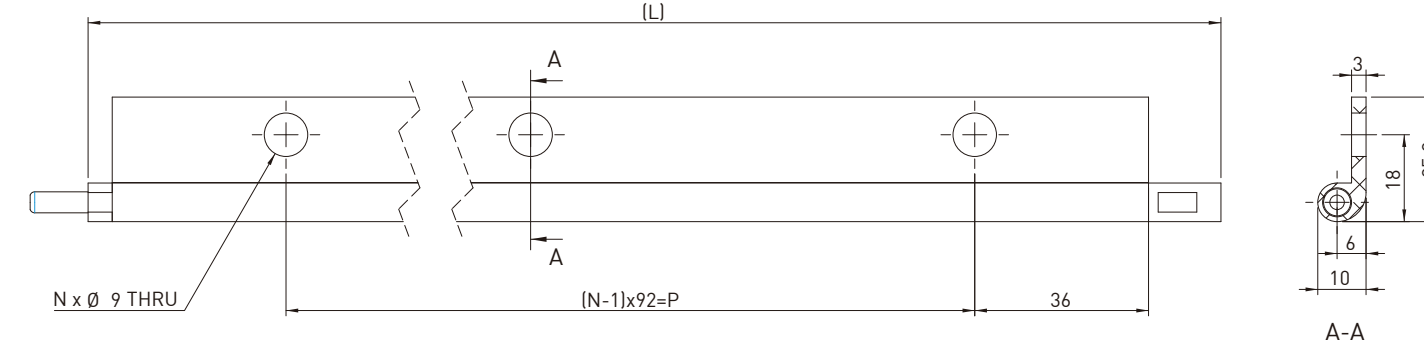


Type	Lc	Lc1	Lc2	Lc3	Wc	Wc1	Hc	Hc1	Hc2
LMFC3	-	63.5	58.5	92	155	115	19	18.5	13
LMFC4	-	63.5	58.5	92	201	161	21	20.5	15

1. Dimension of LMFC3&4(S) is the same as LMFC3&4 (R). The only difference is the in/outlet position.  
 2. Lc: Total jointing length of stator

## LMFC3,4

### Series cooling pipe

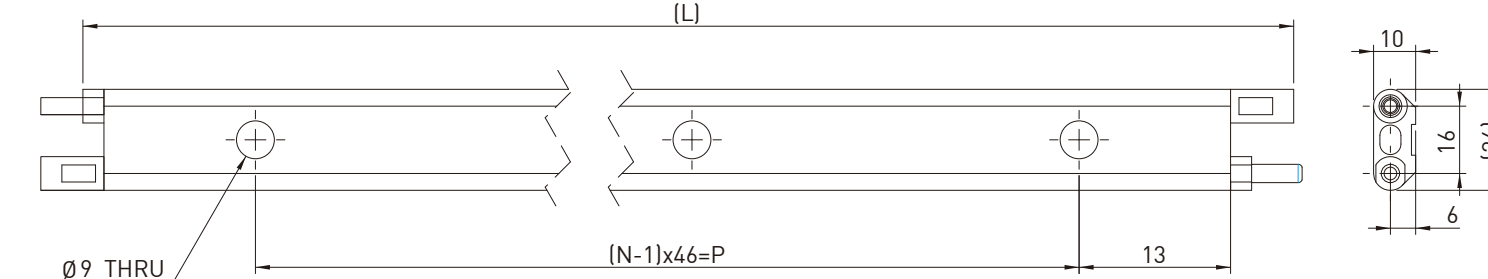


Specifications	L(mm)	N	P(mm)	Weight(g/pc)	For stator
LMFC3-P-0092	92	1	0	17	LMF3,4S□E
LMFC3-P-0184	184	2	92	32	
LMFC3-P-0276	276	3	184	47	
LMFC3-P-0368	368	4	276	61	
LMFC3-P-0460	460	5	368	76	
LMFC3-P-0552	552	6	460	91	
LMFC3-P-0644	644	7	552	105	
LMFC3-P-0736	736	8	644	120	
LMFC3-P-0828	828	9	736	135	
LMFC3-P-0920	920	10	828	149	
LMFC3-P-1012	1012	11	920	164	
LMFC3-P-1104	1104	12	1012	179	
LMFC3-P-1196	1196	13	1104	193	
LMFC3-P-1288	1288	14	1196	208	
End block weight of LMFC3&4 (S&R)					
LMFC3(g/set)					960
LMFC4(g/set)					1040

Note:  
 1. LMFC3&4 Series includes end blocks and dual cooling pipes.  
 2. [Lc] is defined by total jointing length of stators. If the length is longer than 1288mm, mult cooling pipes will be connected to cover the total length.  
 3. Take Lc=3312mm for example, 3312mm = 1288mm\*2+736mm\*1. Therefore, LMFC3-P-1288\*2 and LMFC3-P-0736\*1 will be utilized.  
 4. All connectors of precision cooler stator are connected with special adhesive, turning it will cause manual damage and responsibility will be taken by the user.

## LMFC6

### Series cooling pipe

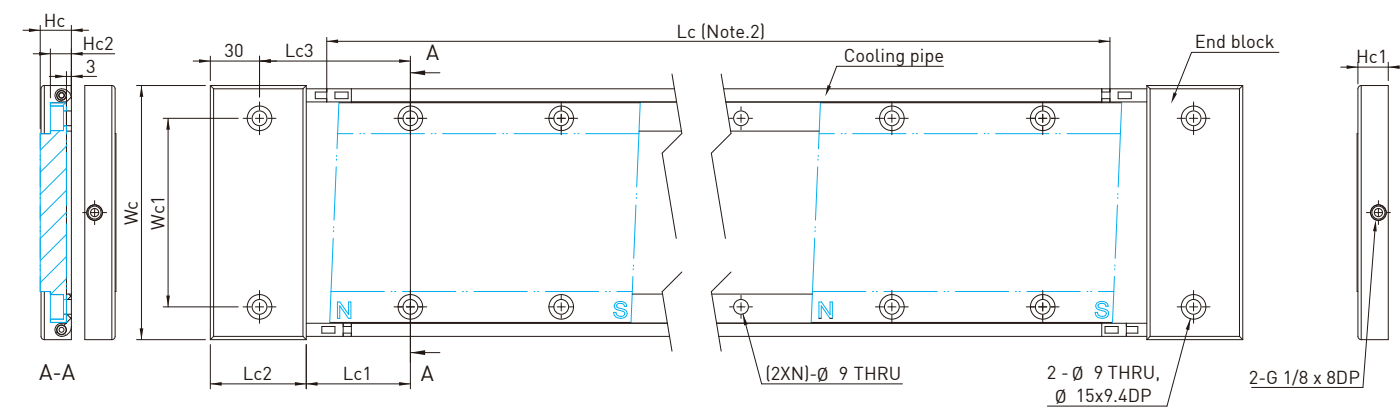


Specifications	L(mm)	N	P(mm)	Weight(g/pc)	For stator
LMFC6-P-0184	184	4	138	62	LMF6S1E
LMFC6-P-0368	368	8	322	125	
LMFC6-P-0552	552	12	506	190	
LMFC6-P-0736	736	16	690	247	
LMFC6-P-0920	920	20	874	301	
LMFC6-P-1104	1104	24	1058	365	
LMFC6-P-1288	1288	28	1242	428	
End block weight of LMFC6(S)					
LMFC6(g/set)					2908

Note:  
 1. LMFC6 Series includes end blocks and triple cooling pipes.  
 2. [Lc] is defined by total jointing length of stators. If the length is longer than 1288mm, mult cooling pipes will be connected to cover the total length.  
 3. Take Lc=3312mm for example, 3312mm = 1288mm\*2+736mm\*1. Therefore, LMFC3-P-1288\*2 and LMFC3-P-0736\*1 will be utilized.  
 4. All connectors of precision cooler stator are connected with special adhesive, turning it will cause manual damage and responsibility will be taken by the user.

## LMFC3,4(S)

### Series stator dimension: Standard type

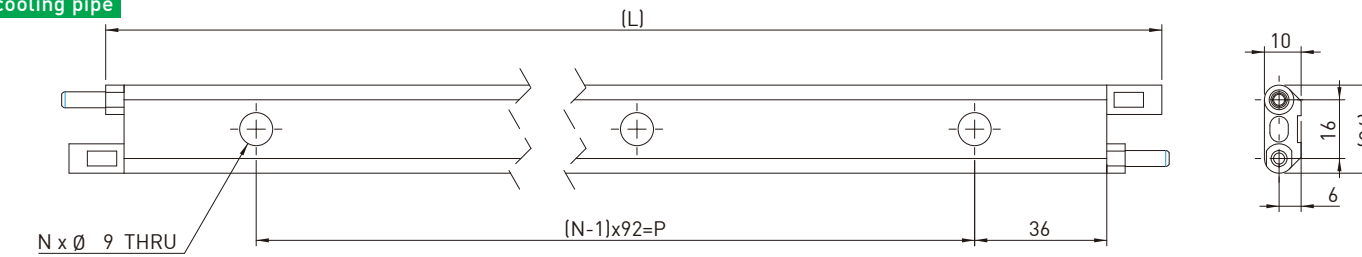


Type	Lc	Lc1	Lc2	Lc3	Wc	Wc1	Hc	Hc1	Hc2
LMFC3	-	63.5	58.5	92	155	115	19	18.5	13
LMFC4	-	63.5	58.5	92	201	161	21	20.5	15

1. Dimension of LMFC3&4(S) is the same as LMFC3&4 (R). The only difference is the in/outlet position.  
 2. Lc: Total jointing length of stator

## LMFC5

### Series cooling pipe



Specifications	L(mm)	N	P(mm)	Weight(g/pc)	For stator
LMFC5-P-0092	92	1	0	35	LMF5S□E
LMFC5-P-0184	184	2	92	65	
LMFC5-P-0276	276	3	184	96	
LMFC5-P-0368	368	4	276	132	
LMFC5-P-0460	460	5	368	167	
LMFC5-P-0552	552	6	460	200	
LMFC5-P-0644	644	7	552	227	
LMFC5-P-0736	736	8	644	260	
LMFC5-P-0828	828	9	736	291	
LMFC5-P-0920	920	10	828	317	
LMFC5-P-1012	1012	11	920	350	
LMFC5-P-1104	1104	12	1012	384	
LMFC5-P-1196	1196	13	1104	415	
LMFC5-P-1288	1288	14	1196	451	
End block weight of LMFC5(S)					
LMFC5(g/set)					2030

Note:  
 1. LMFC5 Series includes end blocks and triple cooling pipes.  
 2. [Lc] is defined by total jointing length of stators. If the length is longer than 1288mm, mult cooling pipes will be connected to cover the total length.  
 3. Take Lc=3312mm for example, 3312mm = 1288mm\*2+736mm\*1. Therefore, LMFC3-P-1288\*2 and LMFC3-P-0736\*1 will be utilized.  
 4. All connectors of precision cooler stator are connected with special adhesive, turning it will cause manual damage and responsibility will be taken by the user.

## Specification code

	Series	Type	Width of precision cooler forcer	Length of precision cooler forcer
Precision cooler forcer series	LM	FC	3	1
			3 : LMFA 3 Series 4 : LMFA 4 Series 5 : LMFA 5 Series 6 : LMFA 6 Series	1 : LMFA□1 2 : LMFA□2 3 : LMFA□3 4 : LMFA□4
	Series	Type	Width of precision cooler stator	End block type
End block	LM	FC	3	- S
			3 : LMFA 3 Series 4 : LMFA 4 Series 5 : LMFA 5 Series 6 : LMFA 6 Series	S: Standard type R: Reverse type
	Series	Type	Precision cooler stator series	Length of cooling pipe (Pls. refer to length table of each series)
Cooling pipe	LM	FC	3 - P	- □□□□ L
			3 : LMFA3 & 4 Series 5 : LMFA5 Series 6 : LMFA6 Series	