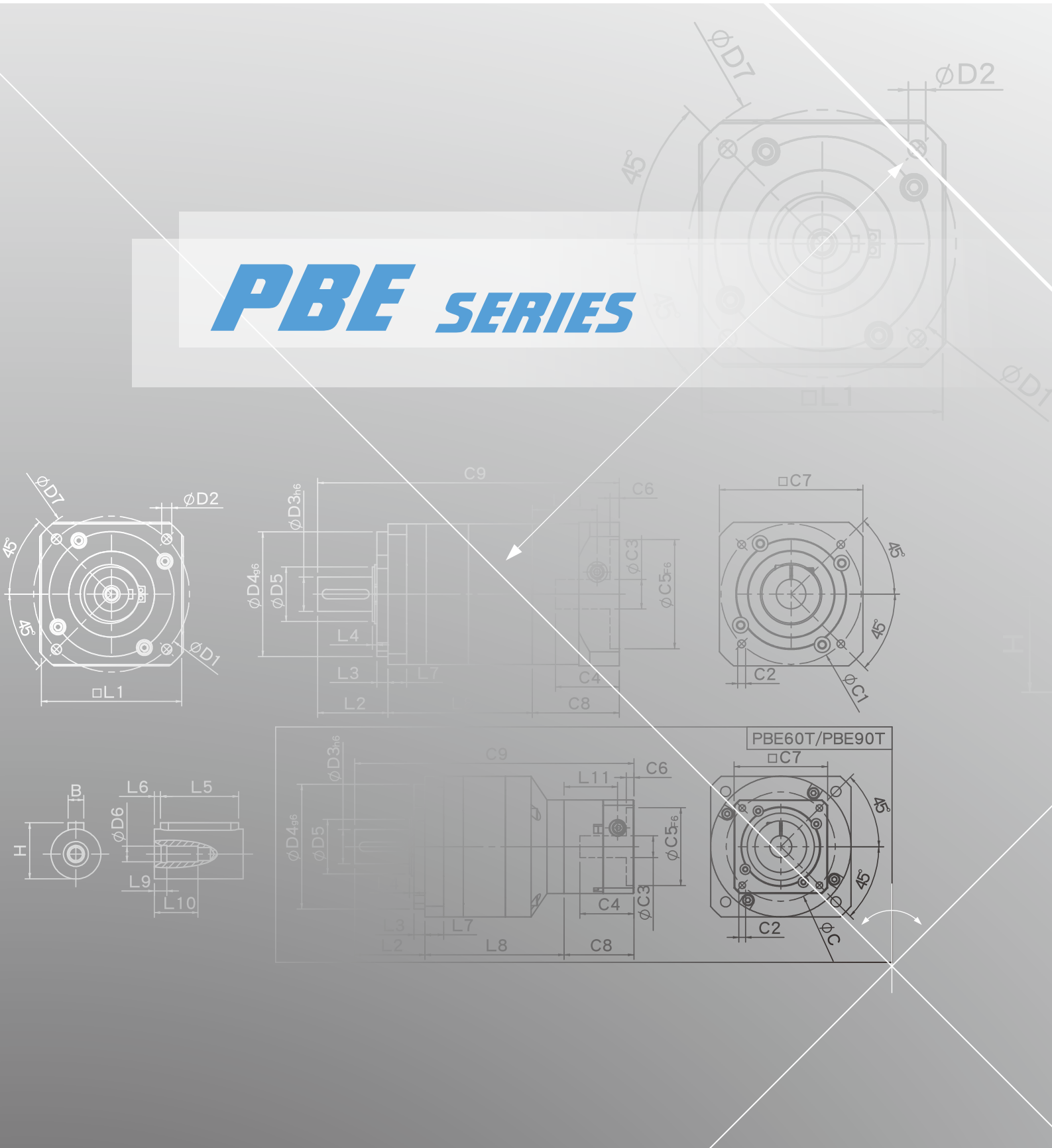
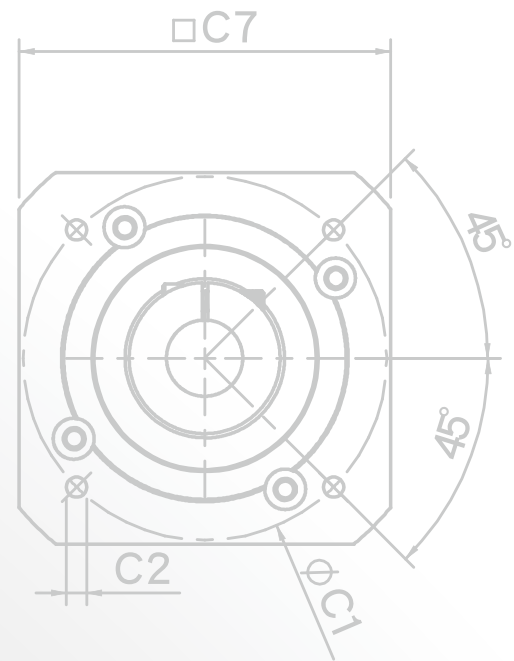
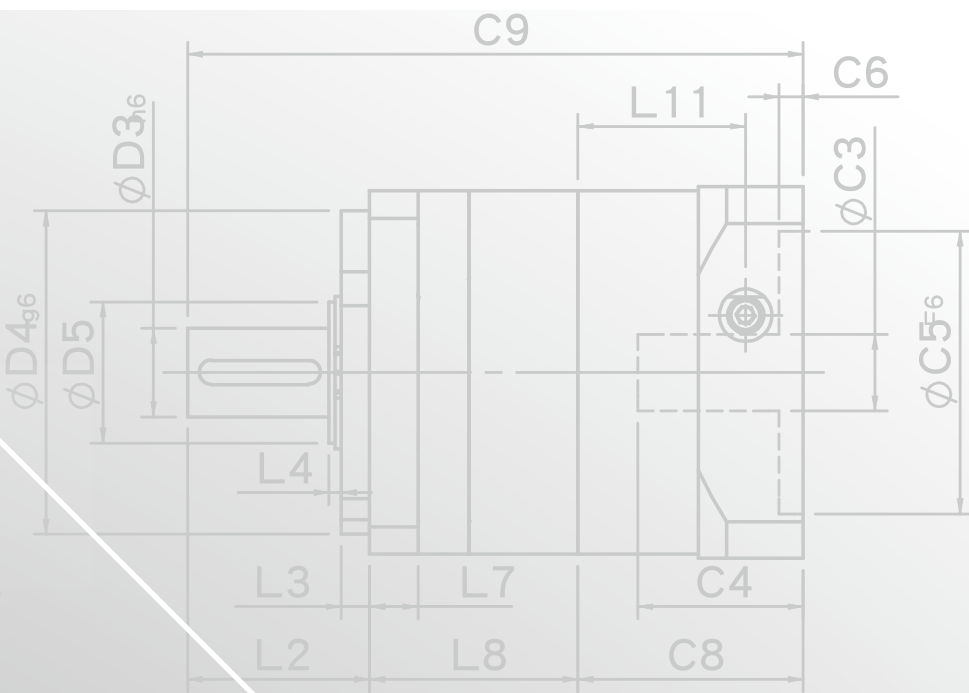
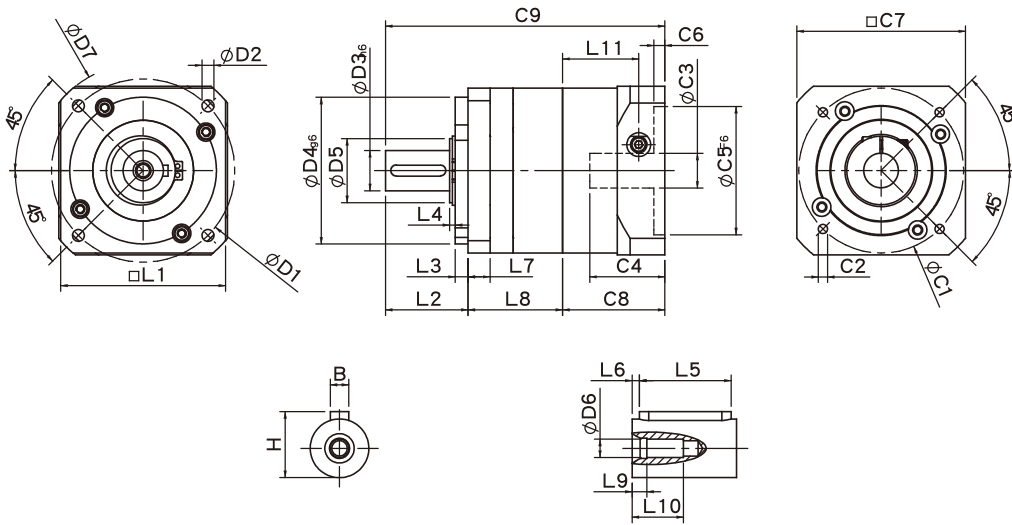


# PBE SERIES





## PBE Single Stage Dimensions



## Specifications

Unit:mm

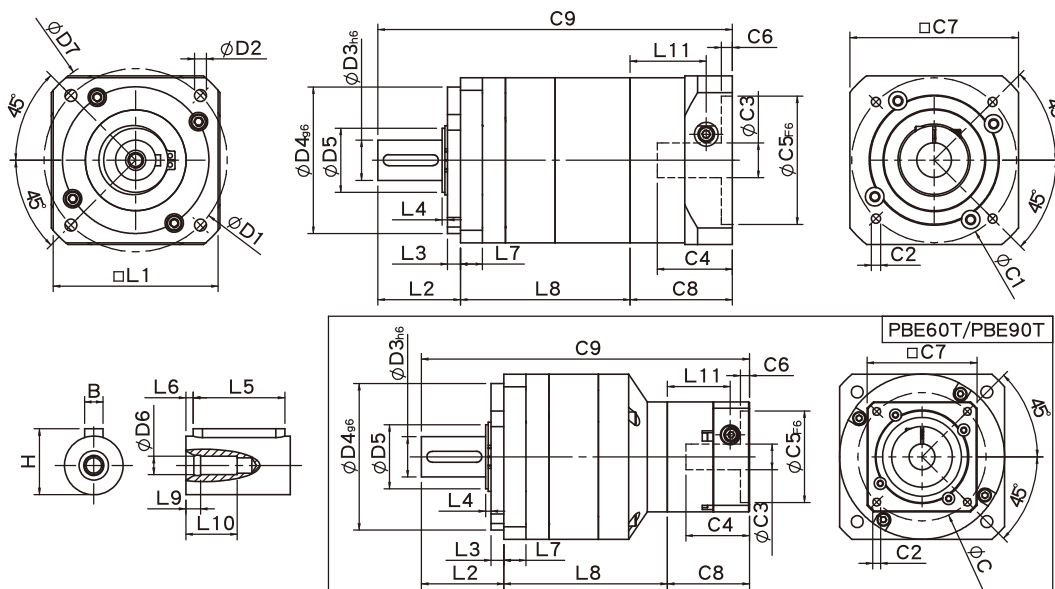
Dimensions	PBE42	PBE60	PBE90
D1	50	70	100
D2	3.4	5.5	6.5
D3 <sub>h6</sub>	13	16	22
D4 <sub>g6</sub>	35	50	80
D5	15	20	35
D6	M4x0.7P	M5x0.8P	M8x1.25P
D7	56	80	118
L1	42.6(44) <sup>1</sup>	60	90
L2	26	36	45
L3	5.5	5	7
L4	2.6	2.7	3
L5	15	25	30
L6	2	2	3
L7	8	10	12
L8	32.4	49.6	54.4
L9	4	4	4.5
L10	14	16.5	20.5
L11	26.9	34.3	41.5
C1 <sup>2</sup>	46	70	90
C2 <sup>2</sup>	M4x0.7P	M5x0.8P	M6x1.0P
C3 <sup>2</sup>	≤8/≤11	≤14/≤19	≤19/≤24/≤28
C4 <sup>2</sup>	26.5	33.5	41
C5 <sup>2</sup> <sub>F6</sub>	30	50	70
C6 <sup>2</sup>	4	4	6
C7 <sup>2</sup>	42.6	60	92
C8 <sup>2</sup>	36.4	44.8	55.8
C9 <sup>2</sup>	94.8	130.4	155.2
B	5	5	6
H	15	18	24.5

★ C1~C9 are motor specific dimensions(metric std shown ), Size may vary according to motor flange.

★ Specification subject to change without notice.

★ L1=44 when gear ratio is 10.

## PBE Double Stage Dimensions



## Specifications

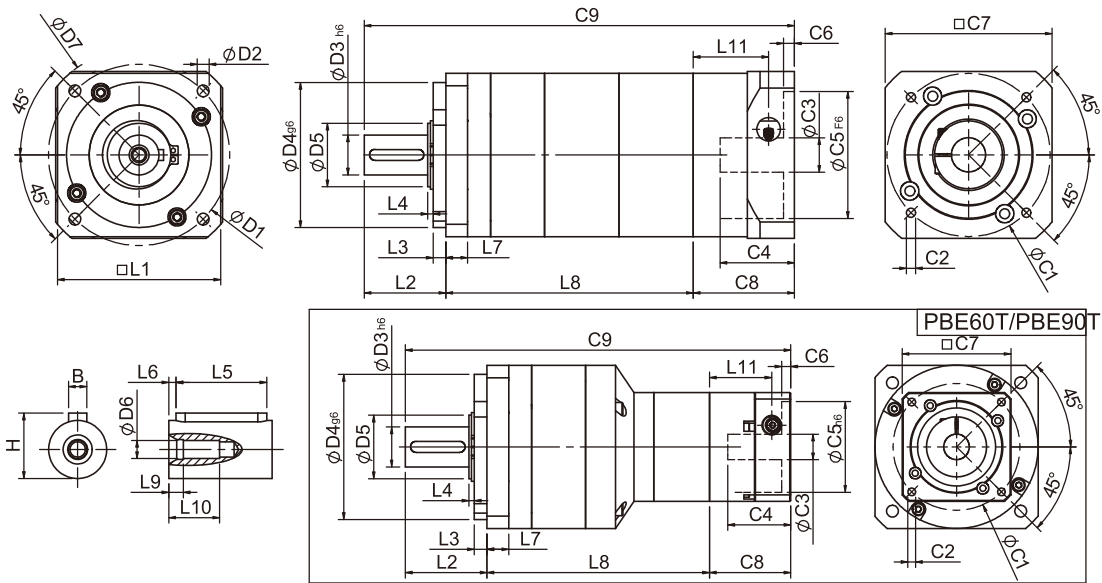
Unit:mm

Dimensions	PBE42	PBE60/PBE60T		PBE90/PBE 90T	
D1	50	70		100	
D2	3.4	5.5		6.5	
D3 <sub>h6</sub>	13	16		22	
D4 <sub>g6</sub>	35	50		80	
D5	15	20		35	
D6	M4x0.7P	M5x0.8P		M8x1.25P	
D7	56	80		118	
L1	42.6	60		90	
L2	26	36		45	
L3	5.5	5		7	
L4	2.6	2.7		3	
L5	15	25		30	
L6	2	2		3	
L7	8	10		12	
L8	57.3	80.3	75.9	95.4	92
L9	4	4		4.5	
L10	14	16.5		20.5	
L11	26.9	34.3	26.9	41.55	34.3
C1 <sup>2</sup>	46	70	46	90	70
C2 <sup>2</sup>	M4x0.7P	M5x0.8P	M4x0.7P	M6x1.0P	M5x0.8P
C3 <sup>2</sup>	≤8/≤11	≤14/≤19	≤8/≤11	≤19/≤24/≤28	≤14/≤19
C4 <sup>2</sup>	26.5	33.5	26.5	41	33.5
C5 <sup>2</sup> F <sub>6</sub>	30	50	30	70	50
C6 <sup>2</sup>	4	4	4	6	4
C7 <sup>2</sup>	42.6	60	42.6	92	60
C8 <sup>2</sup>	36.4	44.8	36.4	55.8	44.8
C9 <sup>2</sup>	119.7	161.1	148.3	196.2	181.8
B	5	5		6	
H	15	18		24.5	

\* C1~C9 are motor specific dimensions(metric std shown ), Size may vary according to motor flange.

\* Specification subject to change without notice.

## PBE Triple Stage Dimensions



## Specifications

Unit:mm

Dimensions	PBE42	PBE60T	PBE90T
D1	50	70	100
D2	3.4	5.5	6.5
D3 <sub>h6</sub>	13	16	22
D4 <sub>g6</sub>	35	50	80
D5	15	20	35
D6	M4x0.7P	M5x0.8P	M8x1.25P
D7	56	80	118
L1	42.6	60	90
L2	26	36	45
L3	5.5	5	7
L4	2.6	2.7	3
L5	15	25	30
L6	2	2	3
L7	8	10	12
L8	82.2	100.8	122.7
L9	4	4	4.5
L10	14	16.5	20.5
L11	26.9	26.9	34.3
C1 <sup>2</sup>	46	46	70
C2 <sup>2</sup>	M4x0.7P	M4x0.7P	M5x0.8P
C3 <sup>2</sup>	≤8/≤11	≤8/≤11	≤14/≤19
C4 <sup>2</sup>	26.5	26.5	33.5
C5 <sup>2</sup> <sub>F6</sub>	30	30	50
C6 <sup>2</sup>	4	4	4
C7 <sup>2</sup>	42.6	42.6	60
C8 <sup>2</sup>	36.4	36.4	44.8
C9 <sup>2</sup>	144.6	173.2	212.5
B	5	5	6
H	15	18	24.5

★ C1~C9 are motor specific dimensions(metric std shown ), Size may vary according to motor flange.

★ Specification subject to change without notice.

★ L1=44 when gear ratio is 10.

## PBE Specifications Table

Specifications		Stage	Ratio	PBE-42	PBE-60	PBE-90		
Nominal Output Torque $T_{2N}$	N • m	1	3	4.8	13.6	33.5		
			4	6.3	21.6	58.6		
			5	6.0	20.5	55.1		
			7	5.6	19.2	51.8		
			9	5.4	18.5	50.0		
			10	5.4	17.0	48.0		
		Stage	Ratio	PBE-42	PBE-60(T)	PBE-90(T)		
		2	15	4.8	13.6	33.5		
			20	6.3	21.6	58.6		
			25	6.0	20.5	55.1		
			35	6.0	20.5	55.1		
			45	6.0	20.5	55.1		
			49	5.6	19.2	51.8		
			63	5.6	19.2	51.8		
			81	5.4	18.5	50.0		
		Stage	Ratio	PBE-42	PBE-60(T)	PBE-90(T)		
		3	125	6.0	20.5	55.1		
			175	6.0	20.5	55.1		
			225	6.0	20.5	55.1		
			245	6.0	20.5	55.1		
			315	6.0	20.5	55.1		
			405	6.0	20.5	55.1		
			567	5.6	19.2	51.8		
			729	5.4	18.5	50.0		
		Emergency Stop Torque $T_{2NOT}$	N • m		3.0 times of Nominal Output Torque (* Max. Output Torque $T_{2B}$ = 60% of Emergency Stop Torque)			
		Nominal Input Speed $n_{1N}$	rpm	1,2,3	3-729	4000	4000	3000
		Max. Input Speed $n_{1max}$	rpm	1,2,3	3-729	8000	6000	6000
		Backlash	arcmin	1	3-10	≤ 9	≤ 8	≤ 7
2	15-81			≤ 12	≤ 10	≤ 9		
3	125-729			≤ 15	≤ 12	≤ 12		
Torsional Rigidity	N • m / arcmin	1,2,3	3-729	0.8	2.0	7		
Max. Radial Load $F_{2rB}^1$	N	1,2,3	3-729	540	1040	1700		
Max. Axial Load $F_{2aB}^1$	N	1,2,3	3-729	360	720	735		
Operating Temp.	°C	1,2,3	3-729	-10 °C ~ +90 °C				
Service Life	hr	1,2,3	3-729	20,000 (10,000/ Continuous operation)				
Efficiency	%	1	3-10	≥ 95%				
		2	15-81	≥ 90%				
		3	125-729	≥ 85%				
Weight	kg	1	3-10	0.5	1.2	3.1		
		2	15-81	0.7	1.7/1.5	4.7/3.6		
		3	125-729	0.9	2.0/1.8	5.3/4.0		
Mounting Position	-	1,2,3	3-729	Any direction				
Noise Level <sup>2</sup>	dBA/1m	1,2,3	3-729	≤ 62	≤ 64	≤ 67		
Protection Class	-	1,2,3	3-729	IP64				
Lubrication	-	1,2,3	3-729	Synthetic Lubricant				

\* 1. Applied to the output shaft center @100rpm.  
 \* 2. Measured at 3000rpm with no load  
 ※ The above figures/specifications are subject to change without prior notice.