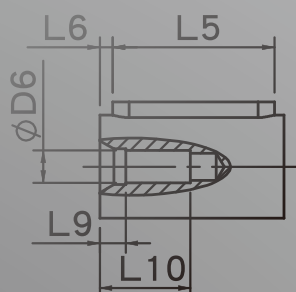
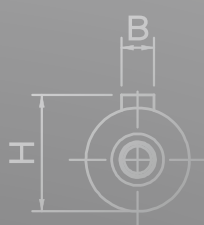
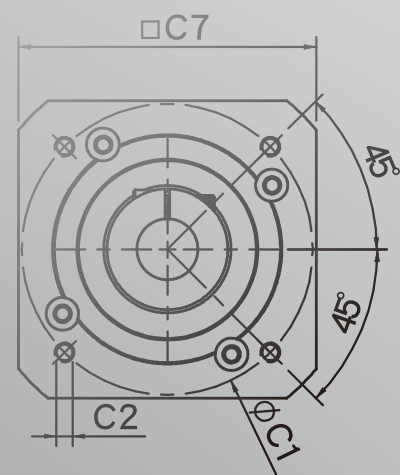
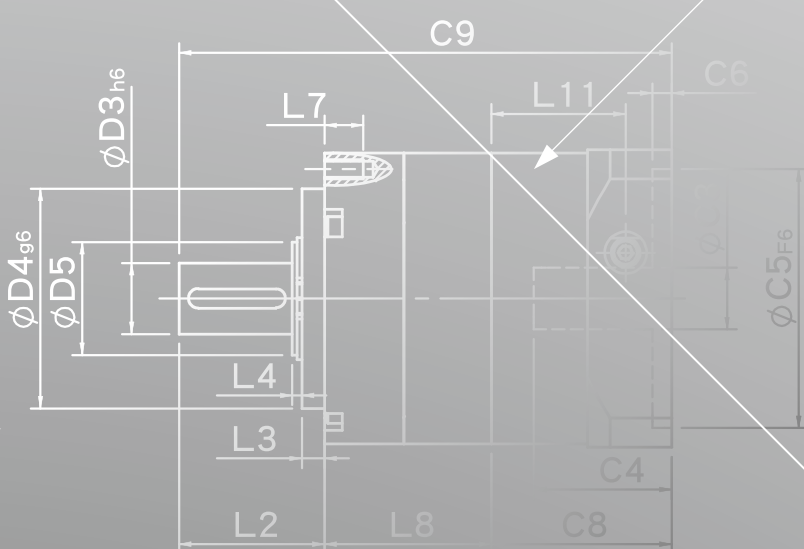
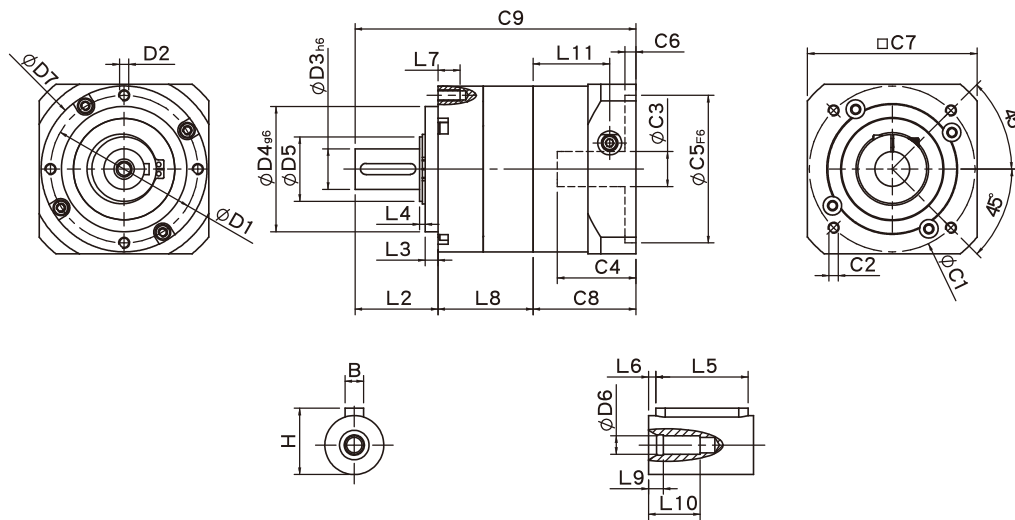


PBC SERIES



PBC Single Stage Dimensions



Specifications

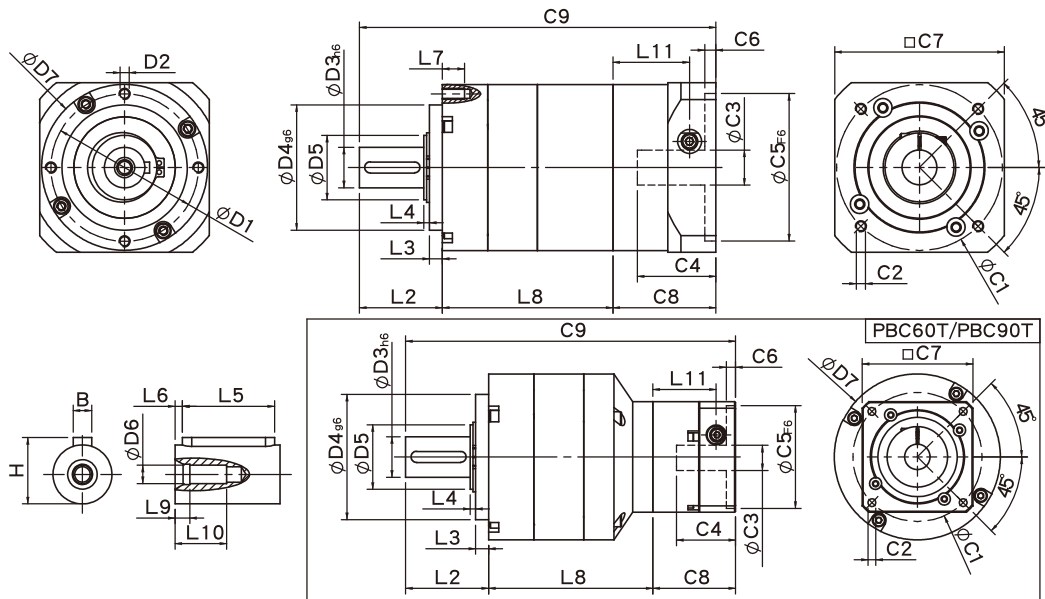
Unit:mm

Dimensions	PBC50	PBC70	PBC90
D1	44	62	80
D2	M4x0.7P	M5x0.8P	M6x1.0P
D3 _{h6}	12	16	22
D4 _{g6}	35	52	68
D5	15	20	35
D6	M4x0.7P	M5x0.8P	M8x1.25P
D7	50	70	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	41.55
C1 ²	46	70	90
C2 ²	M4x0.7P	M5x0.8P	M6x1.0P
C3 ²	≤8/≤11	≤14/≤19	≤19/≤24/≤28
C4 ²	26.5	33.5	41
C5 ² _{F6}	30	50	70
C6 ²	4	4	6
C7 ²	42.6	60	92
C8 ²	36.4	44.8	55.8
C9 ²	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.

PBC Double Stage Dimensions



Specifications

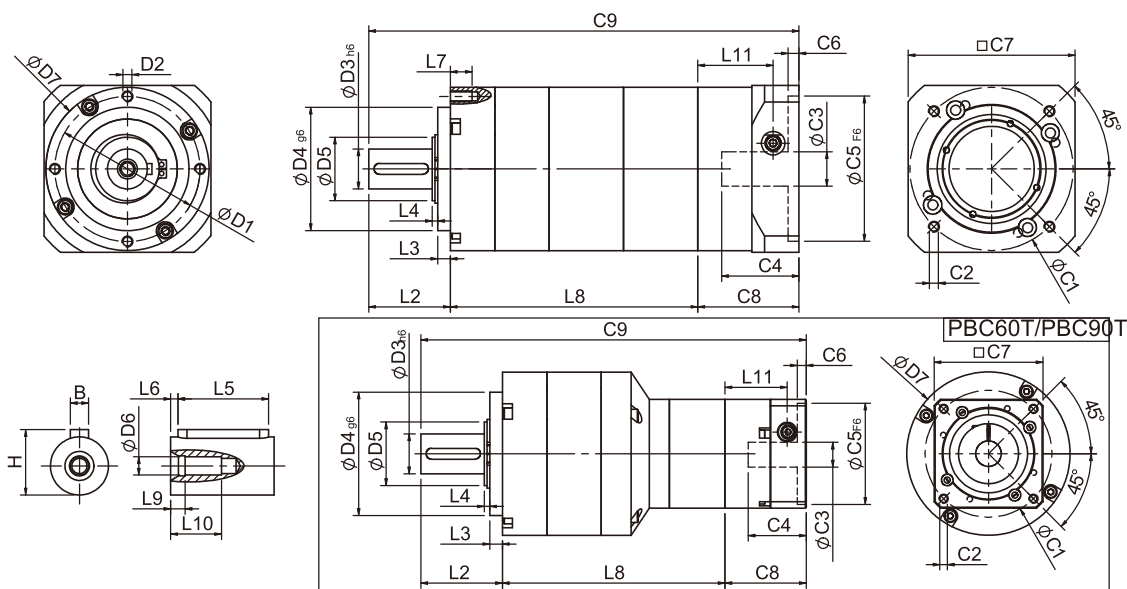
Unit:mm

Dimensions	PBC50	PBC70	PBC70T	PBC90	PBC90T
D1	44	62		80	
D2	M4x0.7P	M5x0.8P		M6x1.0P	
D3 _{h6}	12	16		22	
D4 _{g6}	35	52		68	
D5	15	20		35	
D6	M4x0.7P	M5x0.8P		M8x1.25P	
D7	50	70		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 ²	46	70	46	90	70
C2 ²	M4x0.7P	M5x0.8P	M4x0.7P	M6x1.0P	M5x0.8P
C3 ²	$\leq 8/\leq 11$	$\leq 14/\leq 19$	$\leq 8/\leq 11$	$\leq 19/\leq 24/\leq 28$	$\leq 14/\leq 19$
C4 ²	26.5	33.5	26.5	41	33.5
C5 ² _{F6}	30	50	30	70	50
C6 ²	4	4	4	6	4
C7 ²	42.6	60	42.6	92	60
C8 ²	36.4	44.8	36.4	55.8	44.8
C9 ²	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.

PBC Triple Stage Dimensions



Specifications

Unit:mm

Dimensions	PBC50	PBC70T	PBC90T
D1	44	62	80
D2	M4x0.7P	M5x0.8P	M6x1.0P
D3 _{h6}	12	16	22
D4 _{g6}	35	52	68
D5	15	20	35
D6	M4x0.7P	M5x0.8P	M8x1.25P
D7	50	70	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 ²	46	46	70
C2 ²	M4x0.7P	M4x0.7P	M5x0.8P
C3 ²	≤8/≤11	≤8/≤11	≤14/≤19
C4 ²	26.5	26.5	33.5
C5 ² _{F6}	30	30	50
C6 ²	4	4	4
C7 ²	42.6	42.6	60
C8 ²	36.4	36.4	44.8
C9 ²	144.6	173.2	212.5
B	4	5	6
H	13.5	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.

PBC Specifications Table

Specifications		Stage	Ratio	PBC-50	PBC-70	PBC-90
Nominal Output Torque T_{2N}	$N \cdot m$	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	PBC-50	PBC-70(T)	PBC-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	PBC-50	PBC-70(T)	PBC-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}	$N \cdot m$		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	$N \cdot m$ / arcmin	1,2,3	3-729	0.8	2.0	7.0
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	$\geq 95\%$		
		2	15-81	$\geq 90\%$		
		3	125-729	$\geq 85\%$		
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 ²	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		

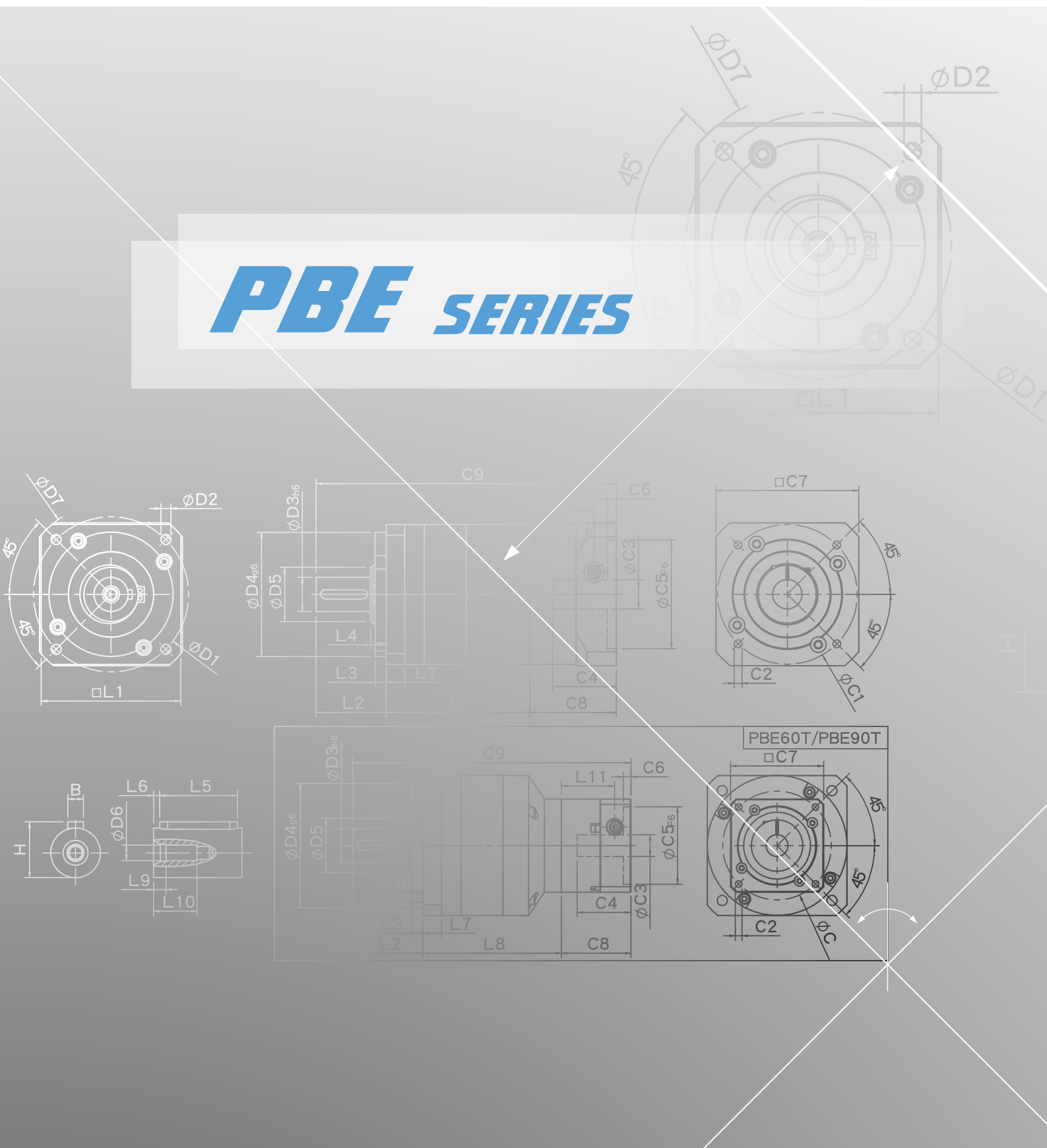
* 1. Applied to the output shaft center @100rpm.

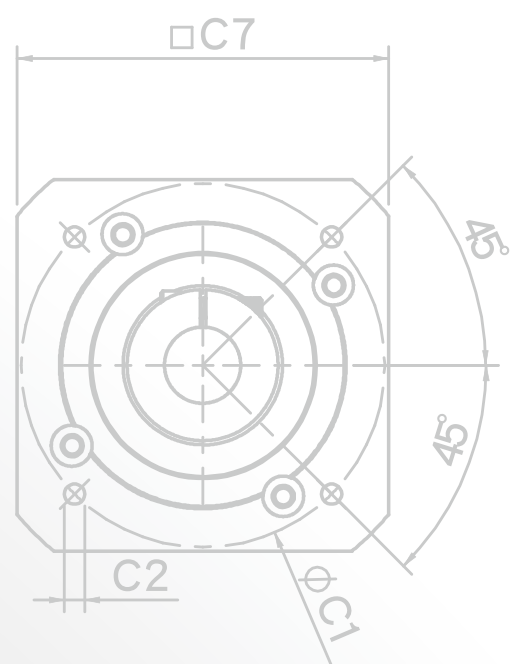
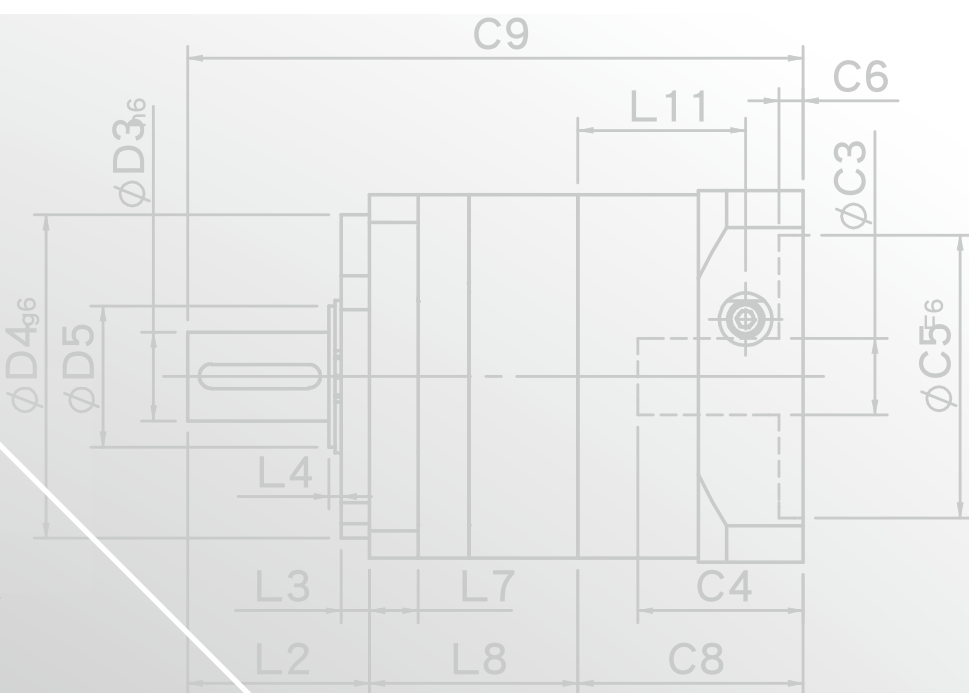
* 2. Measured at 3000rpm with no load

※ The above figures/specifications are subject to change without prior notice.

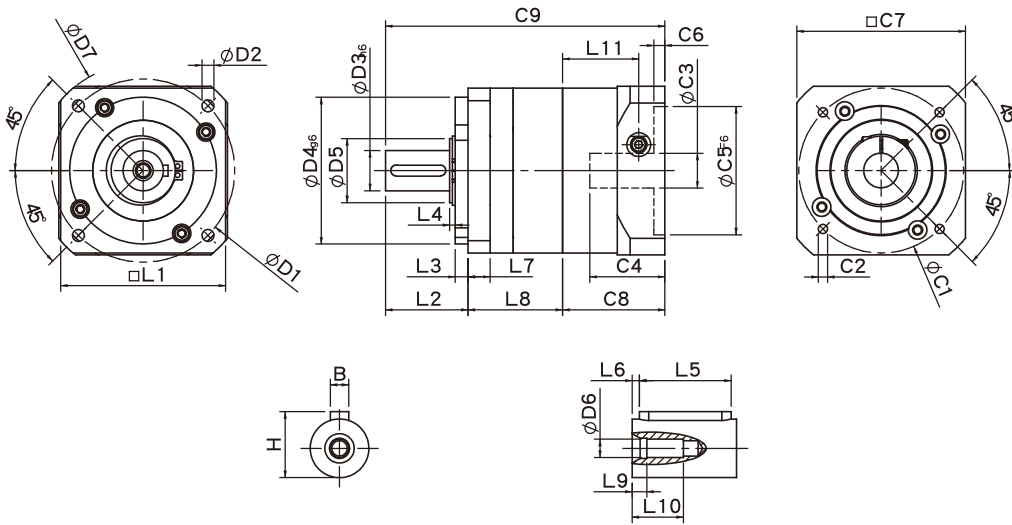
Products due to human error, natural disasters or other factors lead to poor or damaged, will not be covered under warranty.

PBE SERIES





PBE Single Stage Dimensions



Specifications

Unit:mm

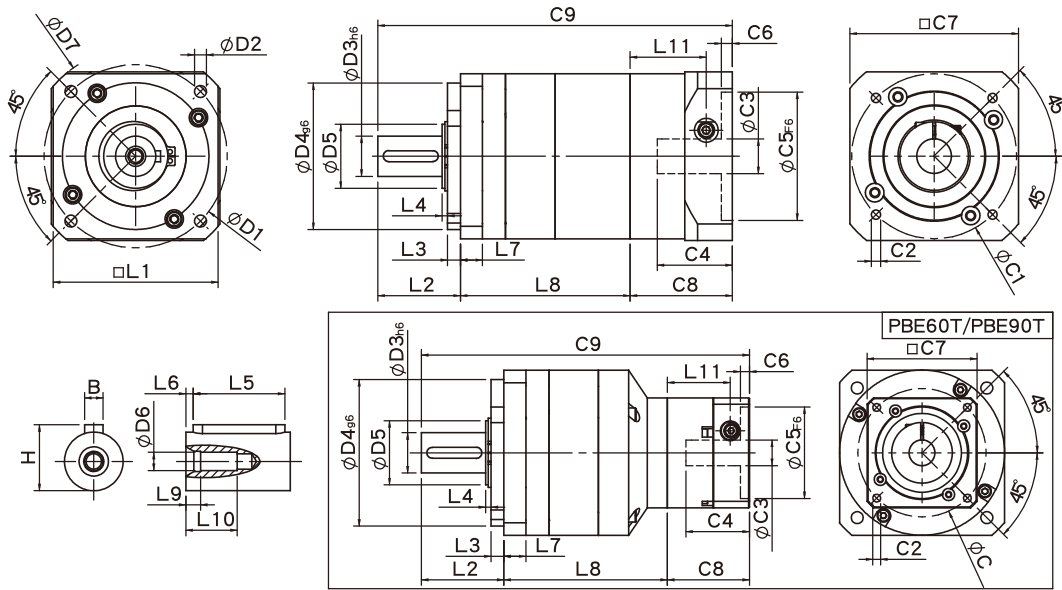
Dimensions	PBE42	PBE60	PBE90
D1	50	70	100
D2	3.4	5.5	6.5
D3 _{h6}	13	16	22
D4 _{g6}	35	50	80
D5	15	20	35
D6	M4x0.7P	M5x0.8P	M8x1.25P
D7	56	80	118
L1	42.6(44) ¹	60	90
L2	26	36	45
L3	5.5	5	7
L4	2.6	2.7	3
L5	15	25	30
L6	2	2	3
L7	8	10	12
L8	32.4	49.6	54.4
L9	4	4	4.5
L10	14	16.5	20.5
L11	26.9	34.3	41.5
C1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

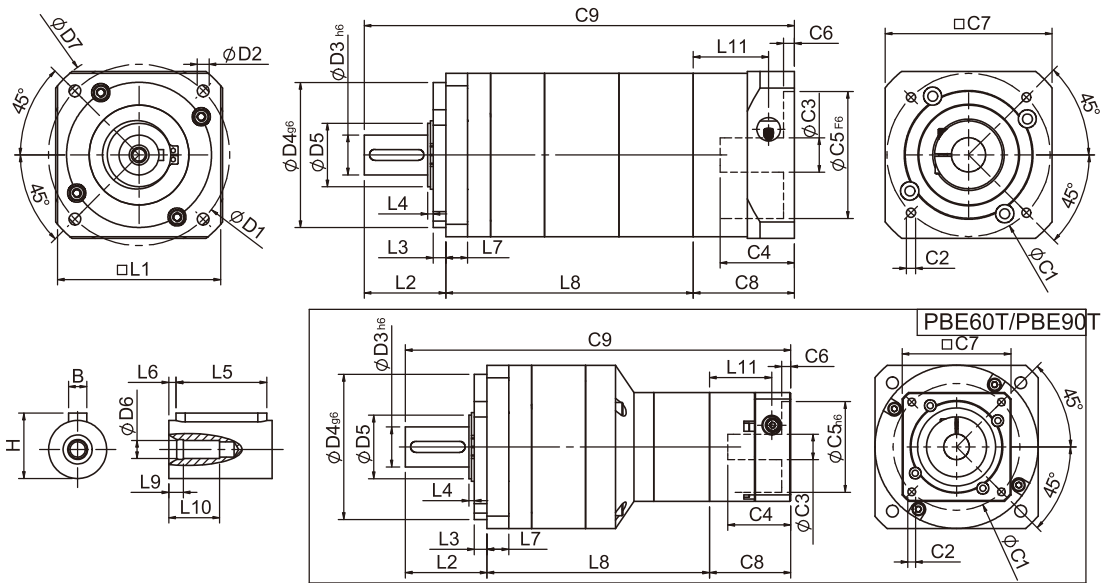
Unit:mm

Dimensions	PBE42	PBE60/PBE60T		PBE90/PBE 90T	
D1	50	70		100	
D2	3.4	5.5		6.5	
D3 _{h6}	13	16		22	
D4 _{g6}	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 ²	46	70	46	90	70
C2 ²	M4x0.7P	M5x0.8P	M4x0.7P	M6x1.0P	M5x0.8P
C3 ²	≤8/≤11	≤14/≤19	≤8/≤11	≤19/≤24/≤28	≤14/≤19
C4 ²	26.5	33.5	26.5	41	33.5
C5 ^{2 F6}	30	50	30	70	50
C6 ²	4	4	4	6	4
C7 ²	42.6	60	42.6	92	60
C8 ²	36.4	44.8	36.4	55.8	44.8
C9 ²	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 _{h6}	13	16	22
D4 _{g6}	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 ²	46	46	70
C2 ²	M4x0.7P	M4x0.7P	M5x0.8P
C3 ²	≤8/≤11	≤8/≤11	≤14/≤19
C4 ²	26.5	26.5	33.5
C5 ² _{F6}	30	30	50
C6 ²	4	4	4
C7 ²	42.6	42.6	60
C8 ²	36.4	36.4	44.8
C9 ²	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}	$N \cdot m$	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}	$N \cdot m$		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	$N \cdot m$ / 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	$\geq 95\%$		
		2	15-81	$\geq 90\%$		
		3	125-729	$\geq 85\%$		
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 ²	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.