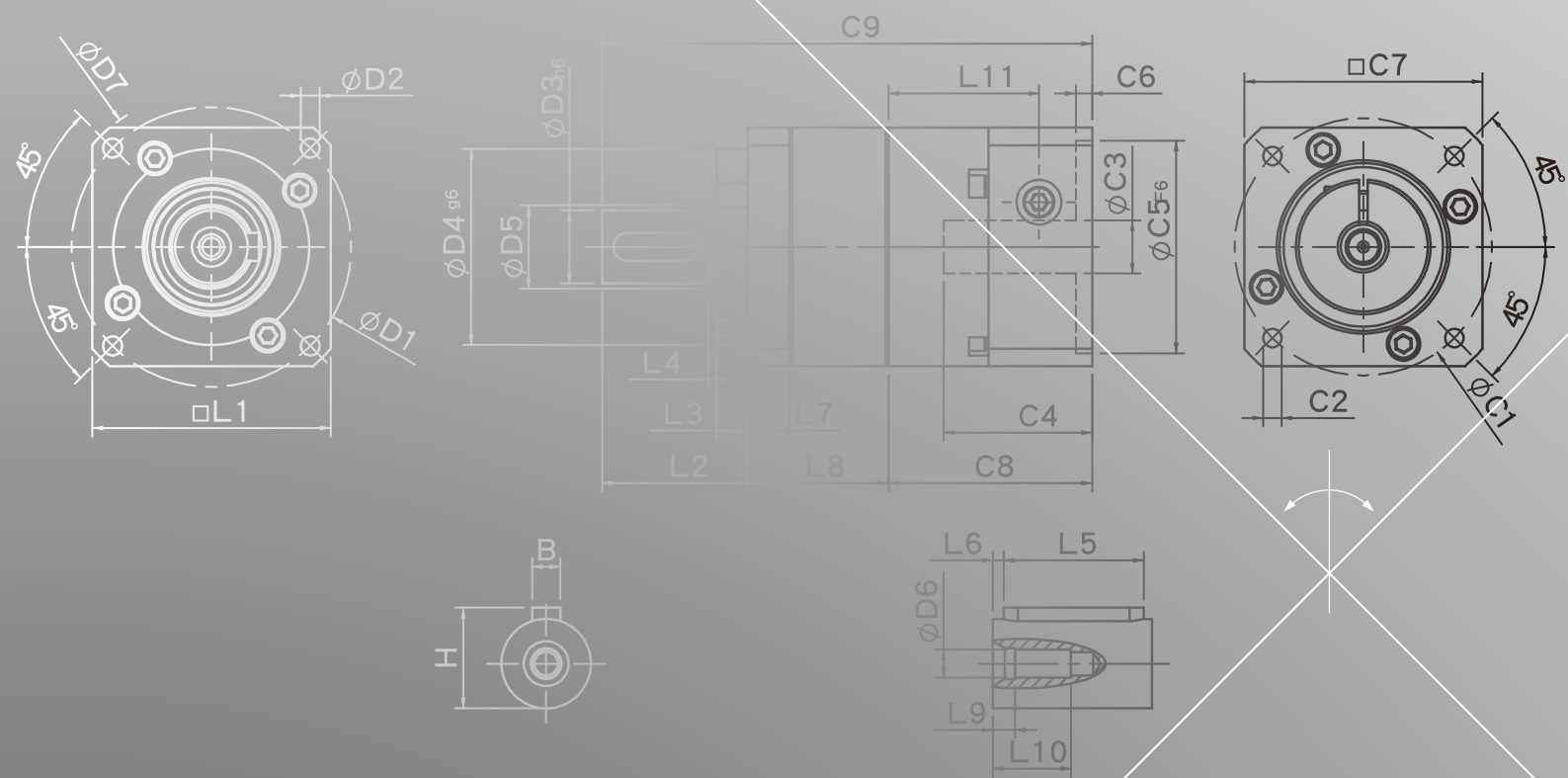


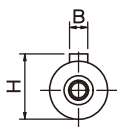
# ***PAE SERIES***



# SERVO MOTOR GEARHEADS



PHL  
PHFR  
PHF  
PGH  
PUR  
PUL  
PGLH  
PGL  
PGC  
PGE  
PGRH  
PGR  
PGRF  
PGF  
PBC  
PBE  
PAE  
PAC  
PAN  
PGS  
PNS

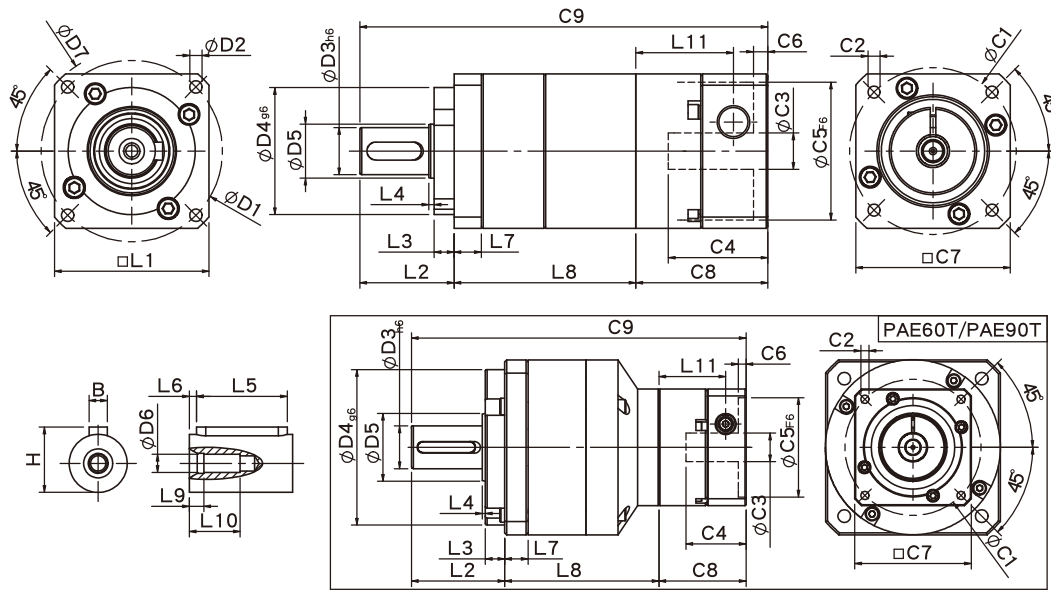


Unit:mm

Dimensions	PAE42	PAE60	PAE90	PAE115
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	37	48	-
L3	5.5	7	10	-
L4	1.5	1.5	1.5	-
L5	15	25	32	-
L6	2	2	3	-
L7	7.5	10	12	-
L8	25.2	36.3	41.8	-
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>	87.6	118.1	145.6	-
B	5	5	6	-
H	15	18	24.5	-

★ Specification subject to change without notice.

## PAE Double Stage Dimensions



## Specifications

Unit:mm

Dimensions	PAE42	PAE60/PAE60T		PAE90/PAE 90T		PAE115T
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	37		48		-
L3	5.5	7		10		-
L4	1.5	1.5		1.5		-
L5	15	25		32		-
L6	2	2		3		-
L7	7.5	10		12		-
L8	50.1	67	62.6	82.8	79.4	-
L9	4	4		4.5		-
L10	14	16.5		20.5		-
L11	26.9	34.3	26.9	41.5	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> <sub>F6</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>	112.5	148.8	136	186.6	172.2	-
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.

## PAE Specifications Table

Specifications		Stage	Ratio	PAE-42	PAE-60	PAE-90	PAE-115
Nominal Output Torque T <sub>2N</sub>	N • m	1	3	9	28	85	250
			4	10	32	80	240
			5	11	35	95	270
			7	10	28	85	220
			9	8	23	75	210
			10	8	21	65	190
		Stage	Ratio	PAE-42	PAE-60(T)	PAE-90(T)	PAE-115T
		2	15	11	34	90	250
			20	10	32	80	240
			25	11	35	95	270
			35	11	35	95	270
			45	11	35	95	270
			49	10	28	85	220
			63	10	28	85	220
			81	8	23	75	210
		100	8	21	65	190	
Emergency Stop Torque T <sub>2NOT</sub>	N • m		3.0 times of Nominal Output Torque (* Max. Output Torque T <sub>2B</sub> =60% of Emergency Stop Torque)				
Nominal Input Speed n <sub>1N</sub>	rpm	1,2	3-100	4000	4000	3000	2500
Max. Input Speed n <sub>1max</sub>	rpm	1,2	3-100	8000	6000	6000	5000
Standard Backlash P2	arcmin	1	3-10	≤ 9	≤ 8	≤ 7	≤ 6
		2	12-100	≤ 12	≤ 10	≤ 9	≤ 8
Torsional Rigidity	N • m /arcmin	1,2	3-100	1.5	4	8.5	17
Max. Radial Load F <sub>2rB</sub> <sup>1</sup>	N	1,2	3-100	760	1250	2030	4200
Max. Axial Load F <sub>2aB</sub> <sup>1</sup>	N	1,2	3-100	410	700	1200	2600
Operating Temp.	°C		3-100	-10 °C ~ +90 °C			
Service Life	hr		3-100	20,000 (10,000/Continuous operation)			
Efficiency	%	1	3-10	≥ 95%			
		2	12-100	≥ 90%			
Weight	kg	1	3-10	0.6	1.3	3.2	7.5
		2	12-100	0.8	1.8/1.6	4.8/3.7	9.2
Mounting Position	-	1,2	3-100	Any direction			
Noise Level <sup>2</sup>	dBA/1m	1,2	3-100	61	63	66	67
Protection Class	-	1,2	3-100	IP65			
Lubrication	-	1,2	3-100	Synthetic Lubricant			
Inertia(J1)							
Stage	Ratio	unit		PAE-42	PAE-60	PAE-90	PAE-115
1	3	Kg • cm <sup>2</sup>		0.04	0.23	0.77	2.30
	4			0.03	0.21	0.67	1.92
	5			0.03	0.21	0.61	1.71
	7			0.03	0.21	0.60	1.65
	9			0.03	0.21	0.60	1.63
	10			0.03	0.21	0.60	1.61
Stage	Ratio			PAE-42	PAE-60(T)	PAE-90(T)	PAE-115T
2	15/20/25			0.03	0.21(0.03)	0.61(0.21)	0.61
	35/49			0.03	0.21(0.03)	0.60(0.21)	0.60
	45/63/81/100			0.03	0.21(0.03)	0.60(0.21)	0.60

\* 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.