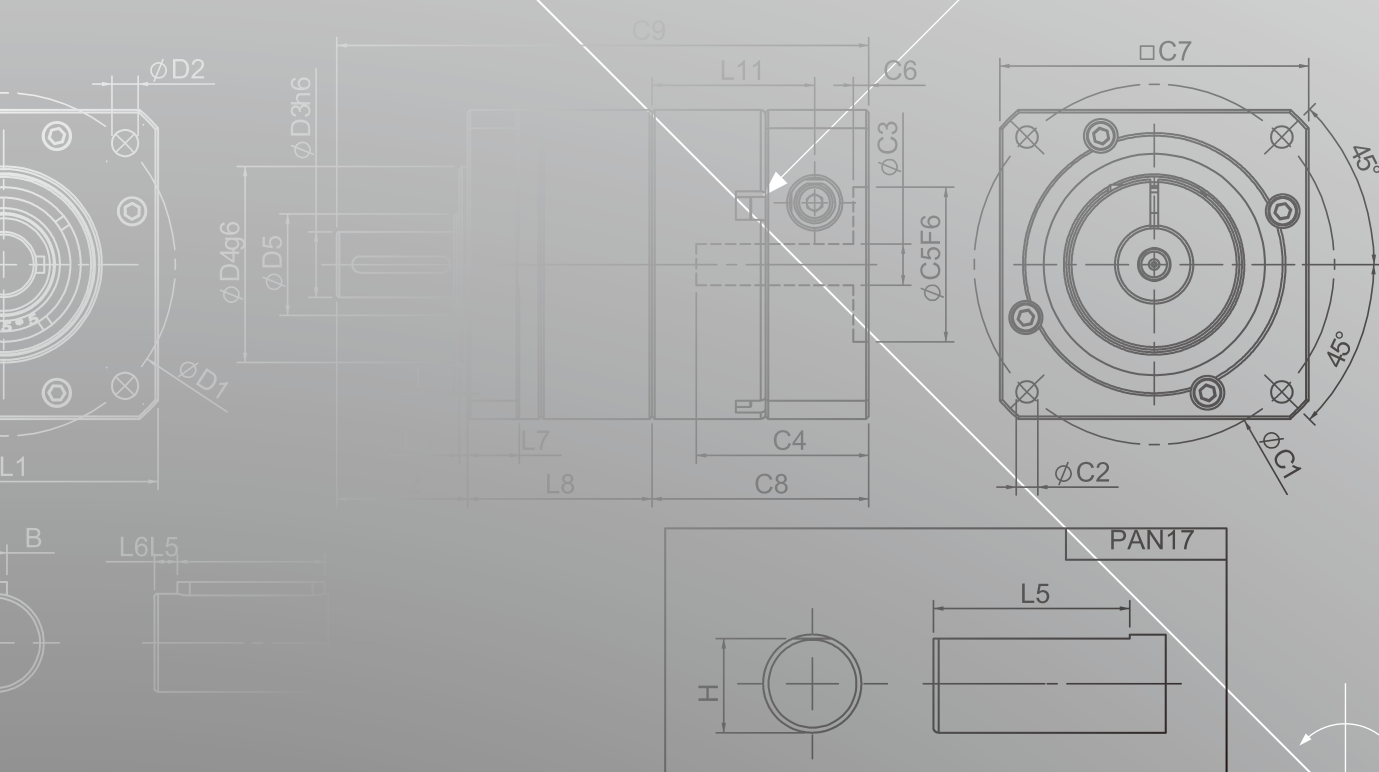


# ***PAN** SERIES*

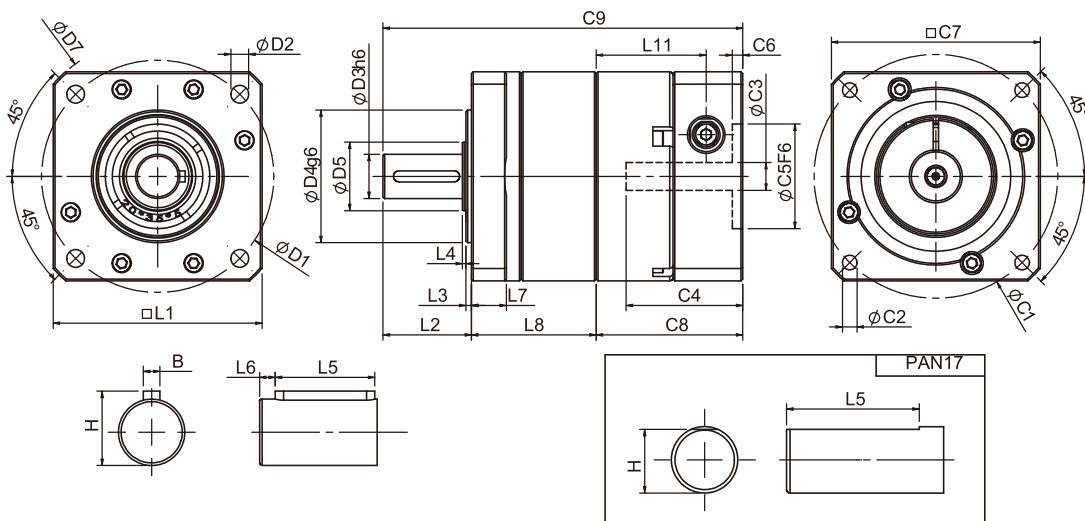


# SERVO MOTOR GEARHEADS



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

## PAN Single Stage Dimensions



## Specifications

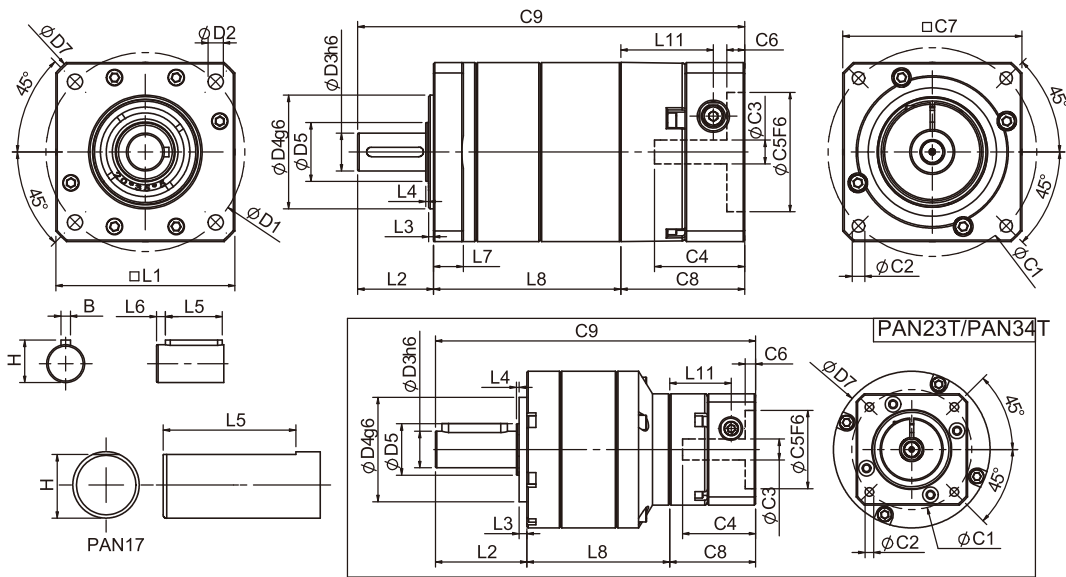
Unit:mm

Dimensions	PAN17	PAN23	PAN34
D1	43.8	66.67	98.425
D2	3.25	5.1	5.6
D3 <sub>h6</sub>	9.525	12.7	19.05
D4 <sub>g6</sub>	21.97	38.1	73.025
D5	12	20	35
D7	56	80	118
L1	44(42.6)	60	90
L2	25.4	25.4	31.75
L3	1.6	1.6	1.7
L4	1	1	1
L5	19.05	19.05	25.4
L6	-	3	3
L7	6.5	10	12
L8	28.8	35.8	43.5
L11	26.9	31.6	37.25
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	90
C8 <sup>2</sup>	36.4	42.1	51.5
C9 <sup>2</sup>	90.6	103.3	126.75
B	-	3.175	4.763
H	9.14	14.22	21.25

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

★ Specification subject to change without notice.

## PAN Double Stage Dimensions



## Specifications

Unit:mm

Dimensions	PAN17	PAN23	PAN23T	PAN34	PAN34T
D1	43.8	66. 67		98. 425	
D2	3.25	5. 1		5. 6	
D3 <sub>h6</sub>	9.525	12. 7		19. 05	
D4 <sub>g6</sub>	21.97	38. 1		73. 025	
D5	12	20		35	
D7	56	80		118	
L1	44(42.6)	60		90	
L2	25.4	25. 4		31. 75	
L3	1.6	1. 6		1. 7	
L4	1	1		1	
L5	19.05	19. 05		25. 4	
L6	-	3		3	
L7	6.5	10		12	
L8	51.25	62.8	56.1	77.3	72.8
L11	23.4	31	23.4	37.25	31
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	90	60
C8 <sup>2</sup>	32.9	41.5	32.9	51.5	41.5
C9 <sup>2</sup>	109.55	129.7	114.4	160.55	146.05
B	-	3. 175		4. 763	
H	9.14	14. 22		21. 25	

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

★ Specification subject to change without notice.

## PAN Specifications Table

Specifications		Stage	Ratio	PAN-17	PAN-23	PAN-34	PAN-42	PAN-56
Nominal Output Torque $T_{2N}$	$N \bullet m$	1	3	9	28	85	200	200
			4	10	32	80	215	215
			5	11	35	95	215	215
			7	10	28	85	200	200
			9	8	23	75	195	195
		10	8	21	65	180	180	
		Stage	Ratio	PAN-17	PAN-23 / PAN-23T	PAN-34 / PAN-34T	PAN-42T	PAN-56T
		2	15	11	35/24	95/68	168	168
			20	11	35/31	95/95	215	215
			25	11	35/30	95/95	215	215
			35	11	35/28	95/95	215	215
			45	11	35/27	95/92	215	215
			50	11	35/27	95/82	205	205
			70	10	28/28	85/85	200	200
			90	8	23/23	75/75	195	195
		100	8	21/21	65/65	180	180	
		Stage	Ratio	PAN-17	PAN-23T	PAN-34T	PAN-42T	PAN-56T
		3	125	11	35	95	215	215
			175	11	35	95	215	215
			225	11	35	95	215	215
			245	11	35	95	215	215
			315	11	35	95	215	215
			405	11	35	95	215	215
			567	10	28	85	200	200
			729	8	23	75	195	195
		1000	8	21	65	180	180	
Emergency Stop Torque $T_{2NOT}$	$N \bullet m$	2.5 times of Nominal Output Torque (* Max. Output Torque $T_{2B}$ =60% of Emergency Stop Torque)						
Nominal Input Speed $n_{1N}$	rpm	1,2,3	3-1000	4000	4000	3000	2500	2500
Max. Input Speed $n_{1max}$	rpm	1,2,3	3-1000	6000	6000	6000	5000	5000
Standard Backlash P2	arcmin	1	3-10	≤ 9	≤ 8	≤ 7	≤ 6	≤ 6
		2	15-100	≤12	≤10	≤ 9	≤ 8	≤ 8
		3	125~1000	≤15	≤12	≤12	≤12	≤12
Torsional Rigidity	$N \bullet m$ /arcmin	1,2,3	3-1000	1.2	3.5	8.5	17	17
Max. Radial Load $F_{2rB}^1$	N	1,2,3	3-1000	580	960	2160	-	-
Max. Axial Load $F_{2aB}^1$	N	1,2,3	3-1000	410	430	790	-	-
Operating Temp.	°C	1,2,3	3-1000	-10°C ~ +90°C				
Service Life	hr	1,2,3	3-1000	20,000(10,000 / Continuous operation)				
Efficiency	%	1	3-10	≥ 95%				
		2	15-100	≥ 90%				
		3	125~1000	≥ 85%				
Weight	kg	1	3-10	0.5	1.1	2.8	-	-
		2	15-100	0.7	1.5/1.3	4.2/3.1	-	-
		3	125~1000	-	-	-	-	-
Mounting Position	-	1,2,3	3-1000	Any direction				
Noise Level <sup>2</sup>	dBA/1m	1,2,3	3-1000	60	63	66	67	67
Protection Class	-	1,2,3	3-1000	IP 65				
Lubrication	-	1,2,3	3-1000	Synthetic Lubricant				
Inertia (J1)								
Stage	Ratio	unit		PAN-17(ψ8)	PAN-23(ψ14)	PAN-34(ψ19)	PAN-42(ψ24)	PAN-56(ψ24)
1	3	Kg • cm <sup>2</sup>		0.04	0.23	0.77	2.30	2.30
	4			0.03	0.21	0.67	1.92	1.92
	5~10			0.03	0.21	0.61	1.71	1.71
Stage	Ratio			PAN-17(ψ8)	PAN-23(ψ14) / PAN-23T(ψ8)	PAN-34(ψ19) / PAN-34T(ψ14)	PAN-42T(ψ19)	PAN-56T(ψ19)
2	15			0.04	0.23(0.04)	0.77(0.23)	0.77	0.77
	Other ratios			0.03	0.21(0.03)	0.61(0.21)	0.61	0.61
Stage	Ratio			PAN-17(ψ8)	PAN-23T(ψ8)	PAN-34T(ψ14)	PAN-42T(ψ19)	PAN-56T(ψ19)
3	All ratios			0.03	0.03	0.21	0.61	0.61
* 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.