

PGCHR

Sesame Motor PGCHR right angle planetary gearheads provide integration between superior operating performance and cost effectiveness. One-piece planet carrier/output shaft and newly designed gear profile benefit higher output torque, precision, loading capacity and lower noise level. High quality gears and components are utilized to create compact and rigid unit with low backlash and maintenance-free operation. The highest ratio 300:1 is available with max frame size 120 mm. Adapters customized for all servo motors.

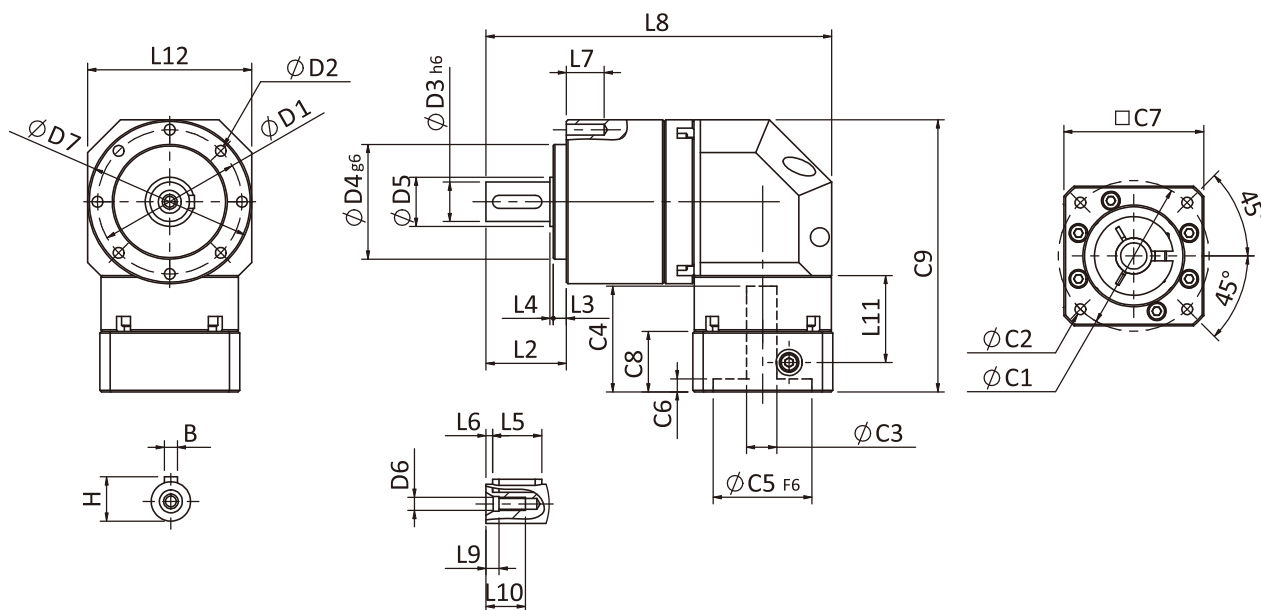


Frame Size (mm)	50, 70, 90, 120
Ratio	3 : 1 - 300 : 1
Nominal Input Speed (rpm)	4,000 - 5,000
Max Input Speed (rpm)	8,000 - 10,000
Backlash (arc-min)	1 Stage : 8 - 10 2 Stages : 10 - 12
Noise Level (dBA / 1m)	61 - 68

Features

- ▶ One-piece planet carrier/output shaft, high torsional rigidity and loading capacity.
- ▶ One-piece compact ring gear design, high precision and output torque.
- ▶ Alloy steel precision gears, low backlash, low noise, high wear resistance.
- ▶ Lubricated for life and IP65 sealing, maintenance free.
- ▶ Adapters for all servo motor.

PGCHR Single Stage Dimensions



Specifications

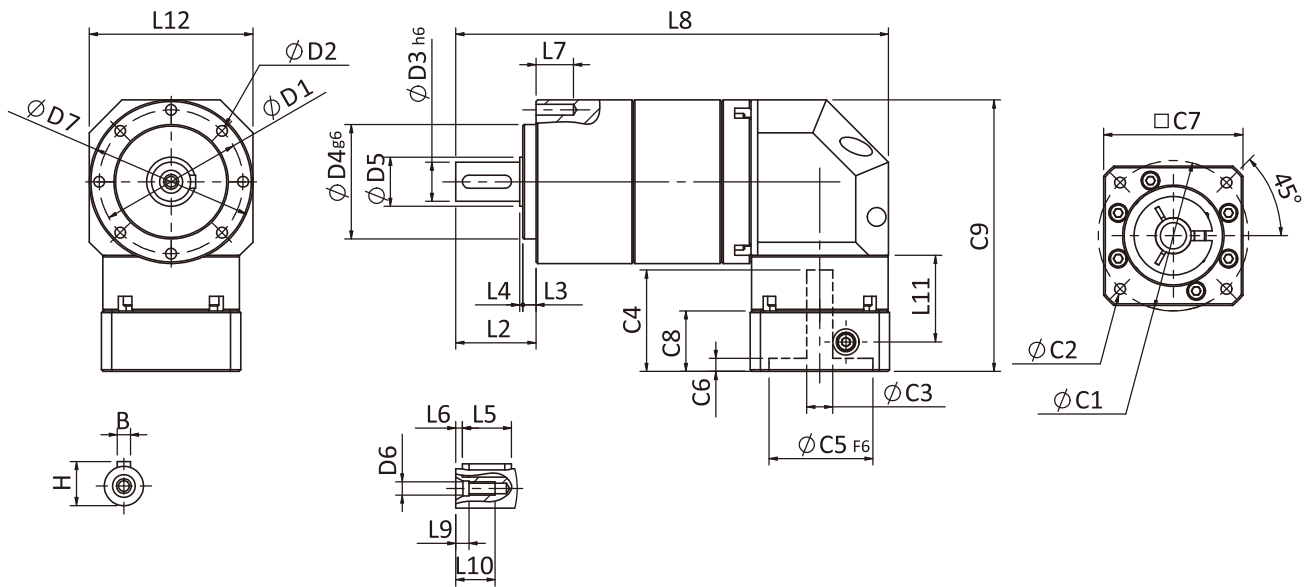
Unit:mm

Dimensions	PGCHR50	PGCHR70	PGCHR90
D1	44	62	80
D2	M4x0.7P	M5x0.8P	M6x1.0P
D3h6	12	16	22
D4g6	35	52	68
D5	15	25	35
D6	M4x0.7P	M5x0.8P	M8x1.25P
D7	50	70	90
L2	24.5	36	44.5
L3	4	6	6.5
L4	1	1.5	1.5
L5	15	25	32
L6	2	2	3
L7	8	10	12
L8	105.3	144.3	201
L9	4	4	4.5
L10	12	16.5	20.5
L11	26.5	36	41.2
L12	50	70	98
C1 ²	46	70	90
C2 ²	M4x0.7P	M5x0.8P	M6x1.0P
C3 ²	≤8/≤11	≤14/≤19	≤19/≤24
C4 ²	33	44	57
C5 ² F6	30	50	70
C6 ²	4	4	6
C7 ²	42.6	60	90
C8 ²	18.5	20	26
C9 ²	83	111.4	149.2
B	4	5	6
H	13.5	18	24.5

*2. C1~C9 are motor specific dimensions (metric std shown). Sizes may vary according to the motor flange chosen.

★ Specification subject to change without notice.

PGCHR Double Stage Dimensions-1



Specifications

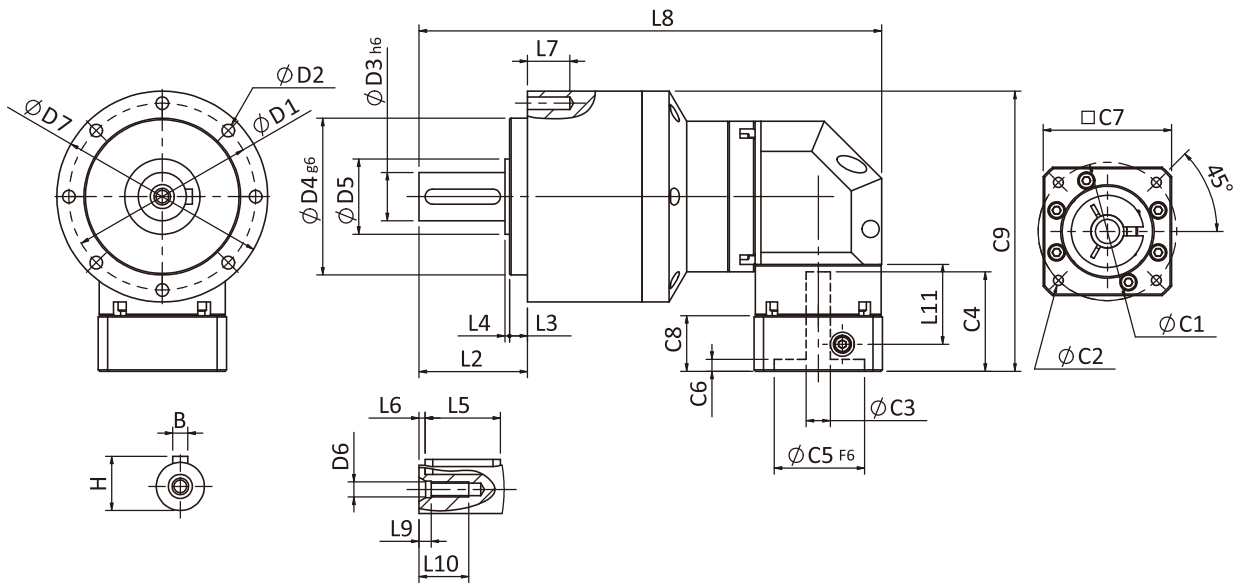
Unit:mm

Dimensions	PGCHR50	PGCHR70	PGCHR90
D1	44	62	80
D2	M4x0.7P	M5x0.8P	M6x1.0P
D3h6	12	16	22
D4g6	35	52	68
D5	15	25	35
D6	M4x0.7P	M5x0.8P	M8x1.25P
D7	50	70	90
L2	24.5	36	44.5
L3	4	6	6.5
L4	1	1.5	1.5
L5	15	25	32
L6	2	2	3
L7	8	10	12
L8	132.3	177.3	245
L9	4	4	4.5
L10	12	16.5	20.5
L11	26.5	36	41.2
L12	50	70	98
C1 ²	46	70	90
C2 ²	M4x0.7P	M5x0.8P	M6x1.0P
C3 ²	≤8/≤11	≤14/≤19	≤19/≤24
C4 ²	33	44	57
C5 ² F6	30	50	70
C6 ²	4	4	6
C7 ²	42.6	60	90
C8 ²	18.5	20	26
C9 ²	83	111.4	149.2
B	4	5	6
H	13.5	18	24.5

*2. C1~C9 are motor specific dimensions (metric std shown). Sizes may vary according to the motor flange chosen.

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PGCHR Double Stage Dimensions-2



Specifications

Unit:mm

Dimensions	PGCHR70T	PGCHR90T	PGCHR120T
D1	62	80	108
D2	M5x0.8P	M6x1.0P	M8x1.25P
D3h6	16	22	32
D4g6	52	68	90
D5	25	35	45
D6	M5x0.8P	M8x1.25P	M12x1.75P
D7	70	90	120
L2	36	44.5	60
L3	6	6.5	7
L4	1.5	1.5	3.5
L5	25	32	40
L6	2	3	5
L7	10	12	16
L8	153.5	196.8	269.5
L9	4	4.5	6
L10	16.5	20.5	30
L11	26.5	36	41.2
C1 ²	46	70	90
C2 ²	M4x0.7P	M5x0.8P	M6x1.0P
C3 ²	≤8/≤11	≤14/≤19	≤19/≤24
C4 ²	33	44	57
C5 ² _{F6}	30	50	70
C6 ²	4	4	6
C7 ²	42.6	60	90
C8 ²	18.5	20	26
C9 ²	93	123.65	160.2
B	5	6	10
H	18	24.5	35

*2. C1~C9 are motor specific dimensions (metric std shown). Sizes may vary according to the motor flange chosen.

* Specification subject to change without notice.

PGCHR Specifications

Specifications	Stage	Ratio	PGCHR-50	PGCHR-70	PGCHR-90	PGCHR-120	
Nominal Output Torque T_{2N}	1	3	16	36	105	135	
		4	18	48	140	180	
		5	17	54	140	225	
		7	14	44	125	300	
		8	18	48	140	260	
		9	16	35	95	230	
		10	17	50	140	210	
		12	18	40	120	-	
		14	14	44	125	300	
		15	17	45	135	-	
	20	11	37	95	230		
	2	Stage	Ratio	PGCHR-50	PGCHR-70/ PGCHR-70T	PGCHR-90/ PGCHR-90T	PGCHR-120T
		20	20	55	150	300	
		25	17	54	140	330	
		30	19	53	145	330	
		35	17	54	140	330	
		40	20	55	150	300	
		50	17	54	140	330	
		60	17	54	140	330	
		70	17	54	140	330	
80		17	54	140	330		
100	17	54	140	330			
120	17	54	140	330			
140	14	44	125	300			
200	11	37	95	230			
300	11	37	95	230			
Emergency Stop Torque T_{2NOT}	N · 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	3-300	5000	4000	4000	4000
Max. Input Speed n_{1max}	rpm	1,2	3-300	10000	8000	8000	8000
Standard Backlash P2	arcmin	1	3-16	≤ 10	≤ 10	≤ 9	≤ 8
		2	20-300	≤ 12	≤ 12	≤ 11	≤ 10
Torsional Rigidity	N · m /arcmin	1,2	3-300	3	7	14	25
Max. Radial Load F_{2rB}^1	N	1,2	3-300	702	1377	2985	6100
Max. Axial Load F_{2aB}^1	N	1,2	3-300	410	765	1625	3350
Operating Temp.	°C		3-300	-10°C ~ +90°C			
Service Life	hr		3-300	20,000 (10,000 Continuous Operation)			
Efficiency	%	1	3-16	$\geq 95\%$			
		2	20-300	$\geq 92\%$			
Weight	kg	1	3-16	1.1	2.2	6.0	10.5
		2	20-300	1.4	2.8/2.0	8.0/5.0	12.0
Mounting Position	-	1,2	3-300	Any Direction			
Noise Level ²	dB(A)/1m	1,2	3-300	61	63	65	68
Protection Class	-	1,2	3-300	IP65			
Lubrication	-	1,2	3-300	Synthetic Lubricant			
Inertia (J1)							
Stage	Ratio	unit	PGCHR-50 ($\psi 8$)	PGCHR-70 ($\psi 14$)	PGCHR-90 ($\psi 19$)	PGCHR-120 ($\psi 24$)	
1	3, 4, 5, 7	Kg · cm ²	0.07	0.40	2.0	2.7	
	Other Ratios		0.05	0.30	1.5	2.2	
Stage	Ratio		PGCHR-50 ($\psi 8$)	PGCHR-70 ($\psi 14$)/ PGCHR-70T ($\psi 8$)	PGCHR-90 ($\psi 19$)/ PGCHR-90T ($\psi 14$)	PGCHR-120T ($\psi 19$)	
2	20, 25, 35		0.07	0.40/0.07	2.0/0.40	2.0	
	Other Ratios		0.05	0.30/0.05	1.5/0.30	1.5	

* 1. Applied to the output shaft center at 100 rpm.
* 2. Environment noise level 30 dB; distance 1m; measured under free loading with input speed 3000 rpm; ratio = 10 (1-stage) or ratio = 100 (2-stage).
※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.