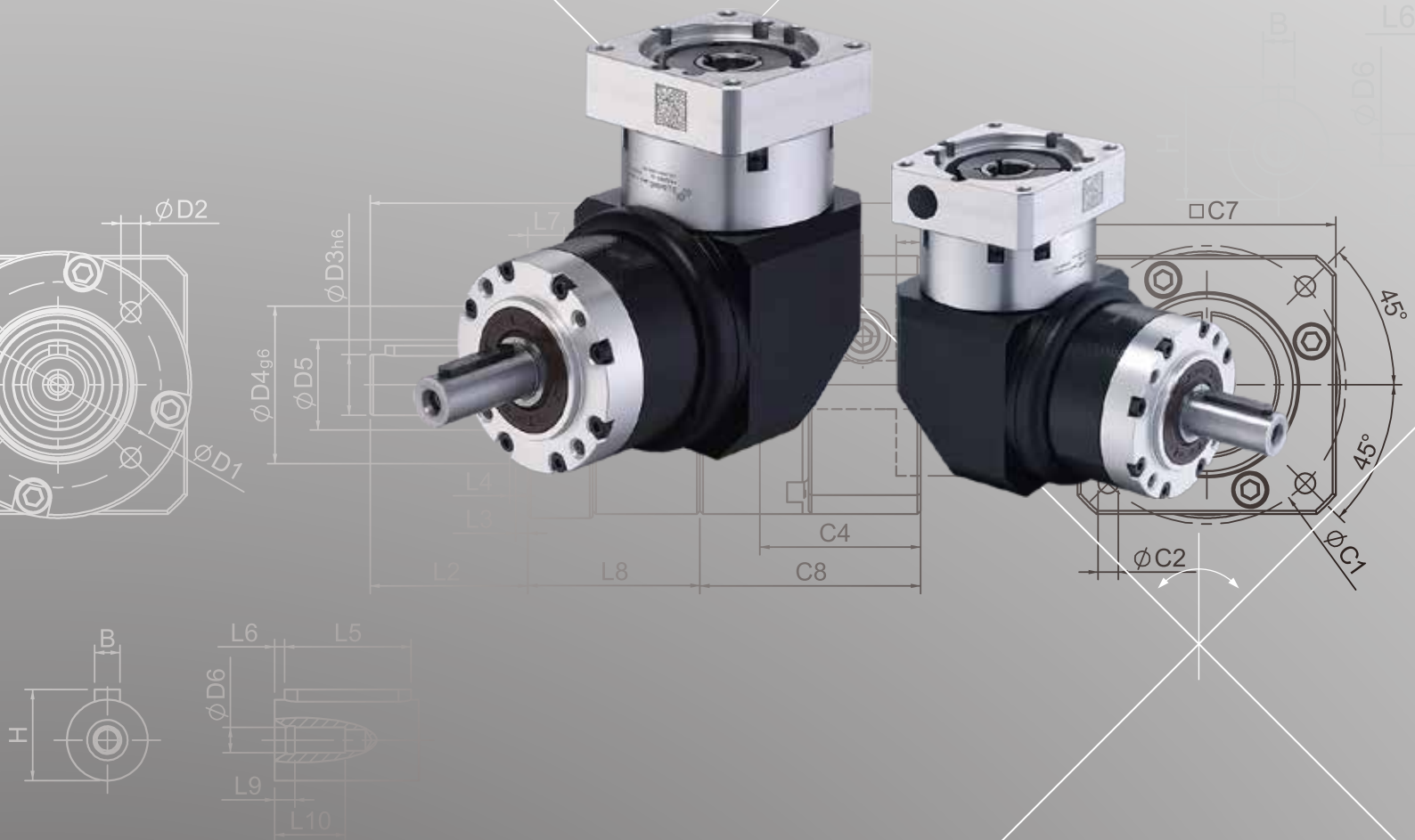
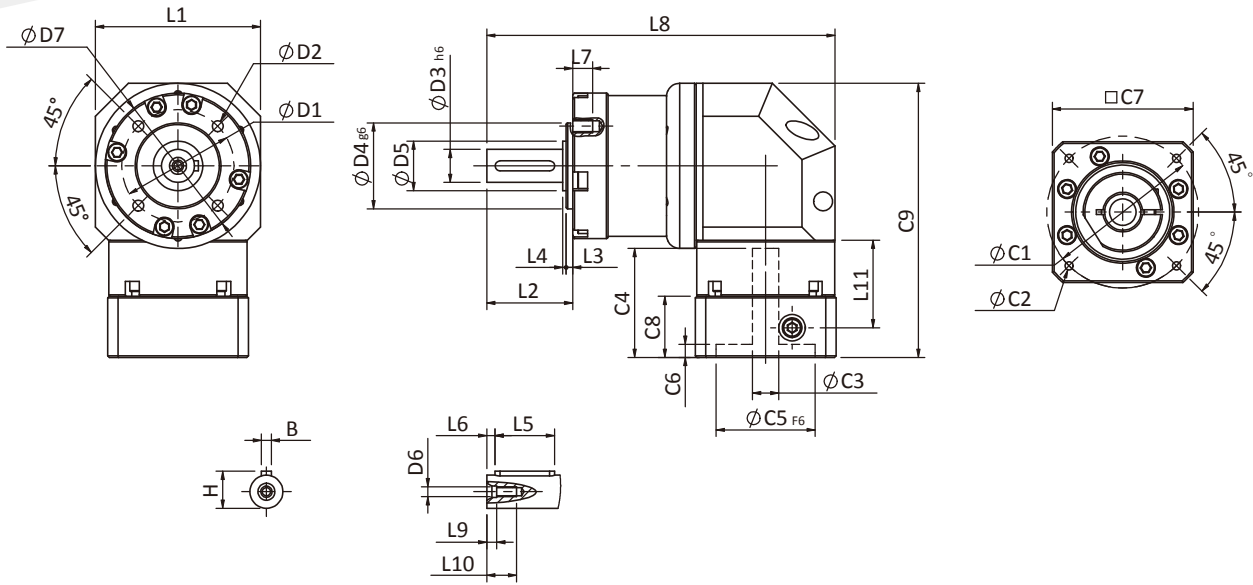


# ***PNSR*** SERIES



## PNSR Single Stage Dimensions



## Specifications

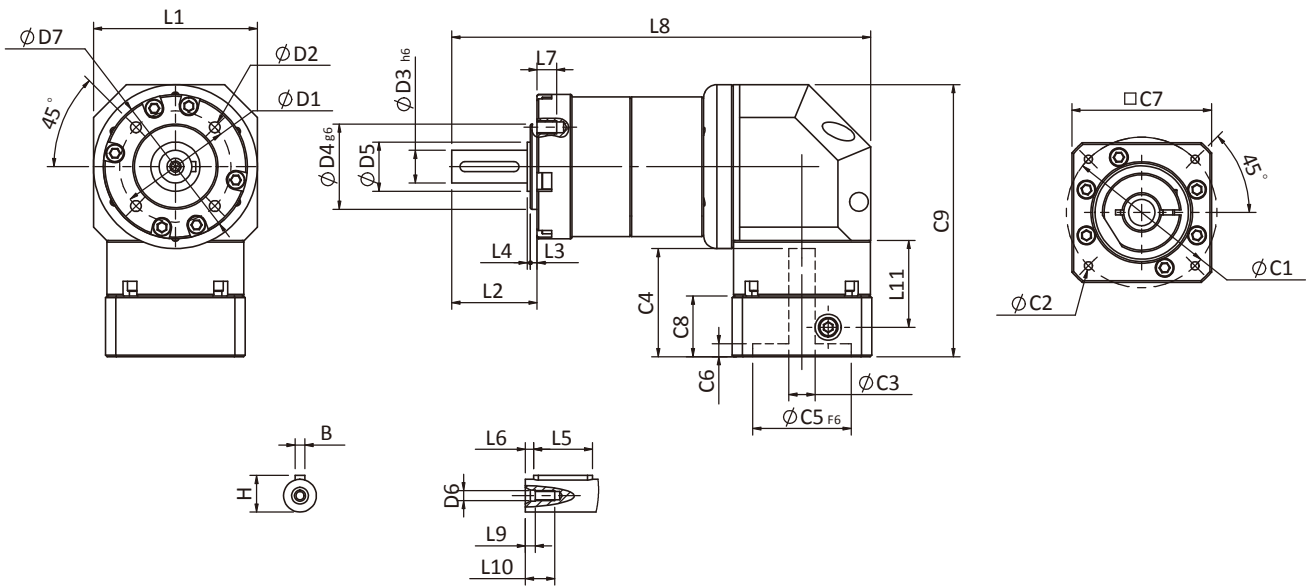
Unit: mm

Dimensions	PNSR40	PNSR60	PNSR80	PNSR120
D1	34	52	70	-
D2	M4x0.7P	M5x0.8P	M6x1.0P	-
D3 <sub>h6</sub>	10	14	20	-
D4 <sub>g6</sub>	26	40	60	-
D5	15	20	35	-
D6	M3x0.5P	M5x0.8P	M6x1.0P	-
D7	44	60	90	-
L1	50	70	-	-
L2	26	35	40	-
L3	2	3	3	-
L4	1	1	1	-
L5	18	25	28	-
L6	2.5	2.5	4	-
L7	6	8	10	-
L8	105.4	139.7	189.2	-
L9	3	4	4.5	-
L10	9	16.5	16.5	-
L11	26.5	36	40.7	-
C1 <sup>2</sup>	46	70	90	-
C2 <sup>2</sup>	M4x0.7P	M5x0.8P	M6x1.0P	-
C3 <sup>2</sup>	$\leq 8/\leq 11$	$\leq 14/\leq 19$	$\leq 19/\leq 24$	-
C4 <sup>2</sup>	33	44	57	-
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>	18.5	20	26	-
C9 <sup>2</sup>	83	111.4	150.2	-
B	3	5	6	-
H	11.2	16	22.5	-

\*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.

## PNSR Double Stage Dimensions-1



## Specifications

Unit: mm

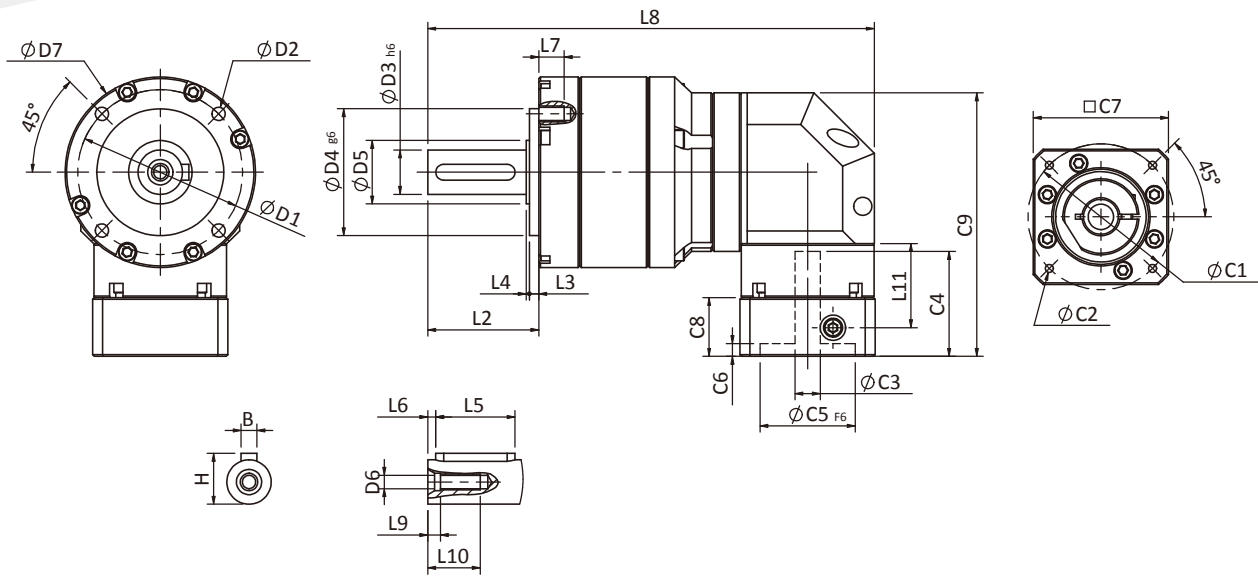
Dimensions	PNSR40	PNSR60	PNSR80	PNSR120
D1	34	52	70	-
D2	M4x0.7P	M5x0.8P	M6x1.0P	-
D3 <sub>h6</sub>	10	14	20	-
D4 <sub>g6</sub>	26	40	60	-
D5	15	20	35	-
D6	M3x0.5P	M5x0.8P	M6x1.0P	-
D7	44 (45)	60	90	-
L1	50	70	-	-
L2	26	35	40	-
L3	2	3	3	-
L4	1	1	1	-
L5	18	25	28	-
L6	2.5	2.5	4	-
L7	6	8	10	-
L8	127.9	166.7	223	-
L9	3	4	4.5	-
L10	9	16.5	16.5	-
L11	26.5	36	40.7	-
C1 <sup>2</sup>	46	70	90	-
C2 <sup>2</sup>	M4x0.7P	M5x0.8P	M6x1.0P	-
C3 <sup>2</sup>	$\leq 8/\leq 11$	$\leq 14/\leq 19$	$\leq 19/\leq 24$	-
C4 <sup>2</sup>	33	44	57	-
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>	18.5	20	26	-
C9 <sup>2</sup>	83	111.4	150.2	-
B	3	5	6	-
H	11.2	16	22.5	-

\*1. D7=45 when gear ratios are 100, 200, and 300.

\*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.

## PNSR Double Stage Dimensions-2



## Specifications

Unit: mm

Dimensions	PNSR60T	PNSR80T	PNSR120T
D1	52	70	100
D2	M5x0.8P	M6x1.0P	M10x1.5P
D3 <sub>h6</sub>	14	20	25
D4 <sub>g6</sub>	40	60	80
D5	20	35	40
D6	M5x0.8P	M6x1.0P	M10x1.5P
D7	60	90	116
L1	-	-	-
L2	35	40	55
L3	3	3	4
L4	1	1	1
L5	25	28	40
L6	2.5	4	5
L7	8	10	15
L8	140.7	181.8	268.9
L9	4	4.5	6
L10	16.5	16.5	26
L11	26.5	36	40.7
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
C4 <sup>2</sup>	33	44	57
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>	18.5	20	26
C9 <sup>2</sup>	83	111.4	150.2
B	5	6	8
H	16	22.5	28

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

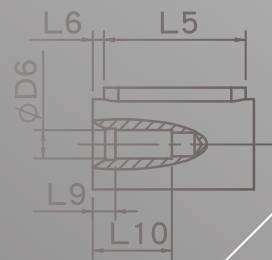
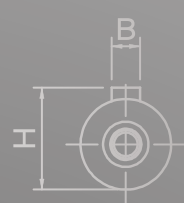
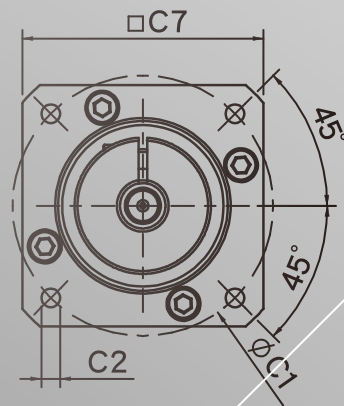
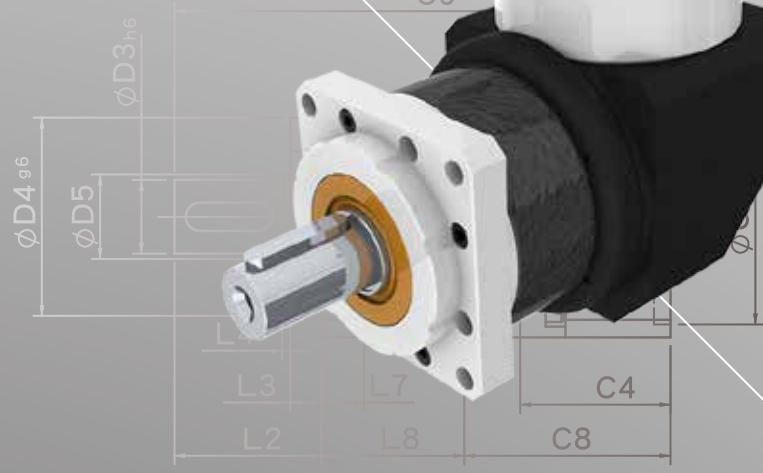
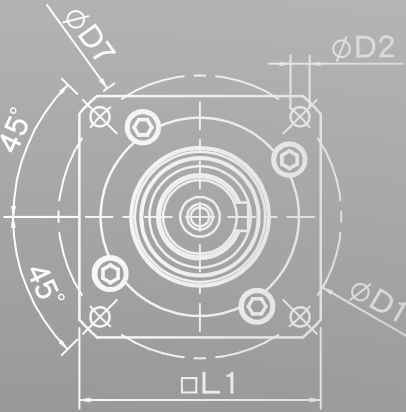
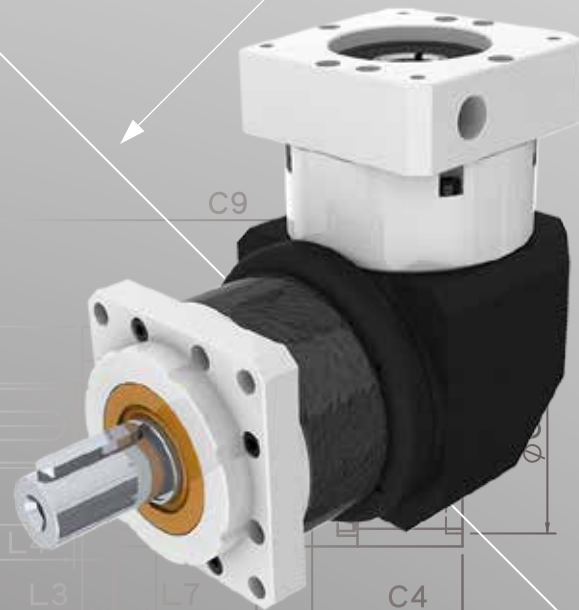
★ Specification subject to change without notice.

## ○ PNSR Specifications Table

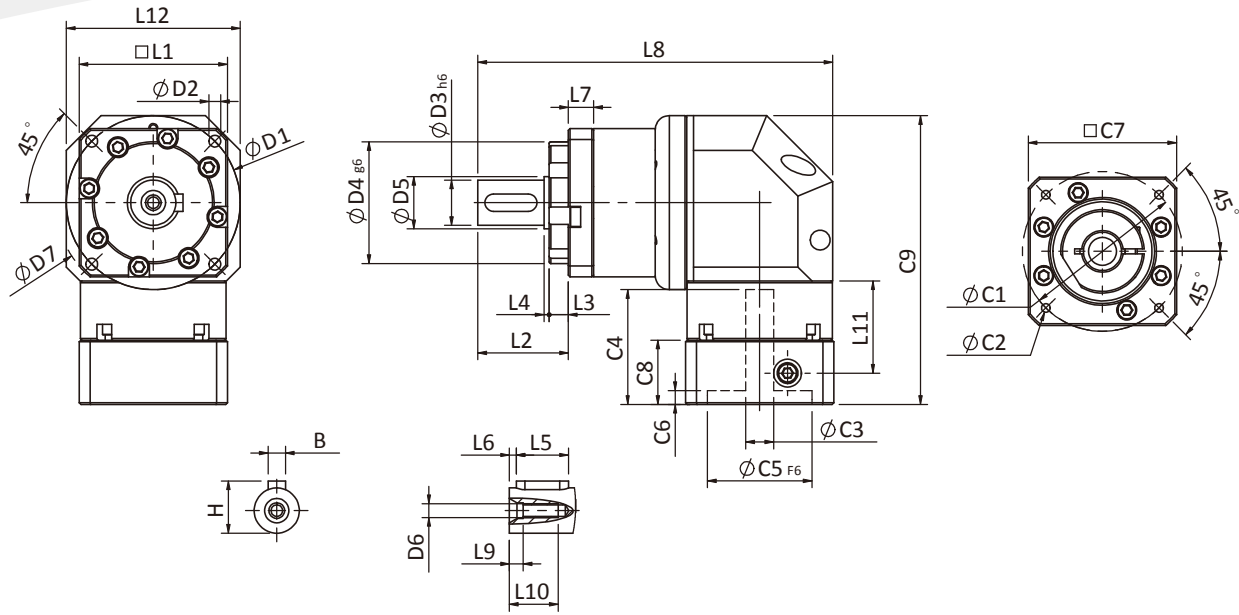
Specifications		Stage	Ratio	PNSR-40	PNSR-60	PNSR-80	PNSR-120	
Nominal Output Torque $T_{2N}$	N • m	1	3	9	28	85	200	
			4	10	32	80	215	
			5	11	35	95	215	
			7	10	28	85	200	
			8	10	32	80	215	
			9	9	28	85	200	
			10	11	35	95	215	
			12	10	32	80	215	
			14	10	28	85	200	
			15	11	35	95	215	
		16	8	23	75	195		
		Stage	Ratio	PNSR-40	PNSR-60/ PNSR-60T	PNSR-80/ PNSR-80T	PNSR-120T	
		2	20	11	35/31	95/95	215	
			25	11	35/30	95/95	215	
			30	11	35/30	95/95	215	
			35	11	35/28	95/95	215	
			40	11	35/31	95/95	215	
			50	11	35/30	95/95	215	
			60	11	35/30	95/95	215	
			70	10	35/28	95/95	215	
80	11		35/27	95/92	215			
98	10		-	-	-			
100	-	35/27	95/82	205				
120	11	35/27	95/92	215				
160	-	23/23	75/75	195				
200	8	21/21	65/65	180				
243	8	23/23	75/75	195				
300	8	21/21	65/65	180				
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	4500	4000	3000	2500	
Max. Input Speed $n_{1max}$	rpm	1,2	3-300	7500	7000	6000	5000	
Standard Backlash P2	arcmin	1 2	3-16 20-300	$\leq 18$ $\leq 20$	$\leq 15$ $\leq 17$	$\leq 13$ $\leq 15$	$\leq 11$ $\leq 13$	
Torsional Rigidity	N • m /arcmin	1,2	3-300	1.2	3.5	8.5	17	
Max. Radial Load $F_{2B}^1$	N	1,2	3-300	580	890	2050	4370	
Max. Axial Load $F_{2aB}^1$	N	1,2	3-300	410	430	1100	2630	
Operating Temp.	°C	1,2	3-300	-10°C ~ +90°C				
Service Life	hr	1,2	3-300	20,000 (10,000 Continuous operation)				
Efficiency	%	1 2	3-16 20-300	$\geq 95\%$ $\geq 90\%$				
Weight	kg	1 2	3-16 20-300	1.0 1.2	2.4 2.9/2.7	6.1 8.1/6.5	12.2 13.8	
Mounting Position	-	1,2	3-300	Any direction				
Noise Level <sup>2</sup>	dBA/1m	1,2	3-300	66	68	70	73	
Protection Class	-	1,2	3-300	IP 65				
Lubrication	-	1,2	3-300	Synthetic Lubricant				
Inertia (J1)								
Stage	Ratio	unit		PNSR-40 ( $\phi 8$ )	PNSR-60 ( $\phi 14$ )	PNSR-80 ( $\phi 19$ )	PNSR-120 ( $\phi 24$ )	
1	3, 4, 5, 7	Kg • cm <sup>2</sup>		0.07	0.40	2.30	6.80	
	Other ratios			0.05	0.30	1.50	4.70	
Stage	Ratio	Kg • cm <sup>2</sup>		PNSR-40 ( $\phi 8$ )	PNSR-60 ( $\phi 14$ ) PNSR-60T ( $\phi 8$ )	PNSR-80 ( $\phi 19$ ) PNSR-80T ( $\phi 14$ )	PNSR-120T ( $\phi 19$ )	
2	20, 25, 35			0.07	0.40/0.07	2.30/0.40	2.30	
	Other ratios	0.05	0.30/0.05	1.50/0.30	1.50			
<p>* 1. Applied to the output shaft center @100rpm.</p> <p>* 2. Measured at 3000 rpm with no load. These values are measured by gearbox with ratio = 10 (1-stage) or ratio = 100 (2-stage) at nominal input speed or 3000 rpm (if nominal input speed is higher than 3000 rpm) with no load.</p> <p>※The above figures/specifications are subject to change without prior notice.</p>								

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

# PAER SERIES



## PAER Single Stage Dimensions



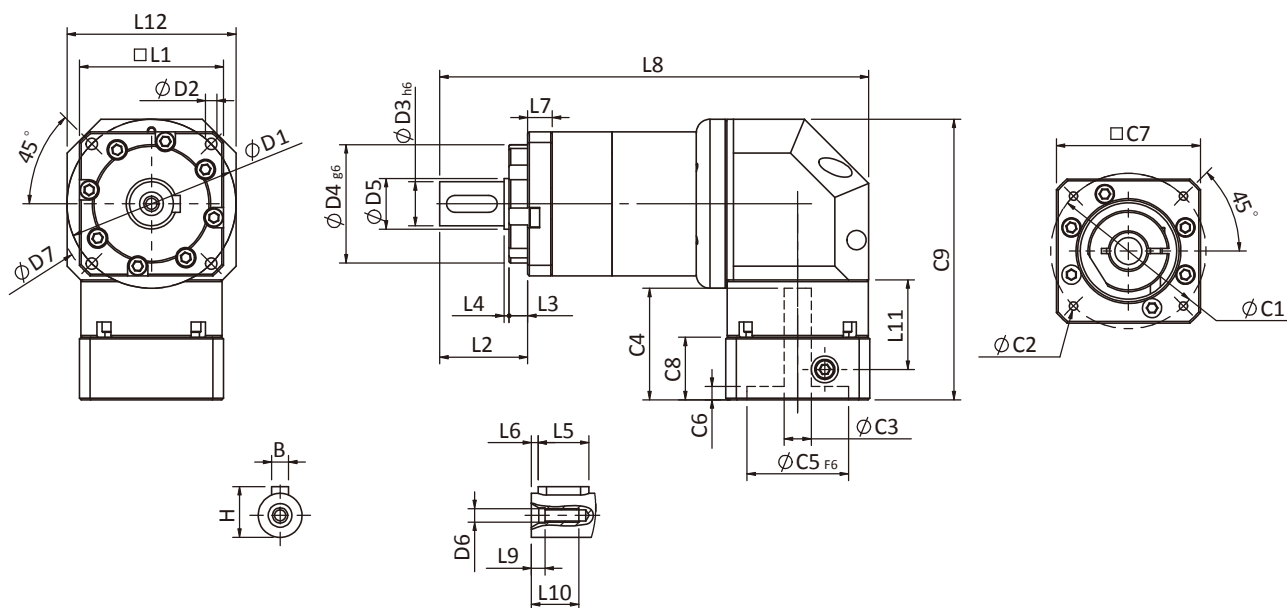
## Specifications

Unit:mm

尺寸 Dimensions	PAER42	PAER60	PAER90	PAER115
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	7.3	10	12	-
L8	102	143.6	194.5	-
L9	4	4	4.5	-
L10	14	16.5	20.5	-
L11	26.5	36	40.7	-
L12	50	70	98	-
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	-
C4 <sup>2</sup>	33	44	57	-
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>	18.5	20	26	-
C9 <sup>2</sup>	83	111.4	149.2	-
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.

## PAER Double Stage Dimensions-1



## Specifications

Unit:mm

尺寸 Dimensions	PAER42	PAER60	PAER90	PAER115
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 <sup>1</sup>	42.6 (44)	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	7.3	10	12	-
L8	126.9	174.3	235.5	-
L9	4	4	4.5	-
L10	14	16.5	20.5	-
L11	26.5	36	40.7	-
L12	50	70	98	-
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	-
C4 <sup>2</sup>	33	44	57	-
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>	18.5	20	26	-
C9 <sup>2</sup>	83	111.4	149.2	-
B	5	5	6	-
H	15	18	24.5	-

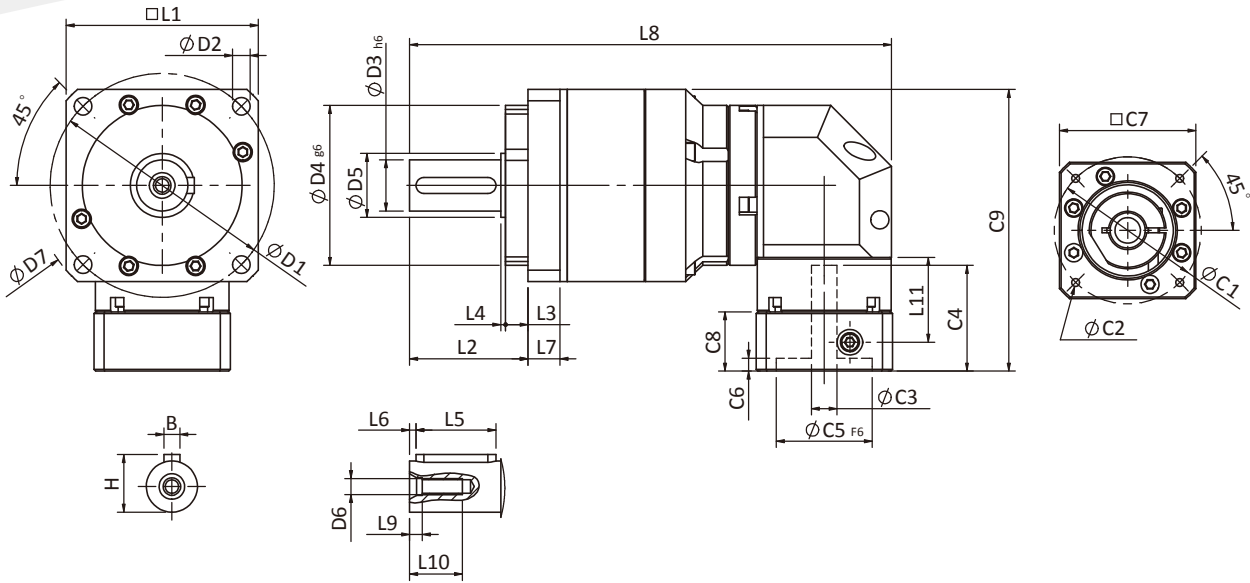
\*1. L1=44 when gear ratios are 100, 200, and 300.

\*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.



## PAER Double Stage Dimensions-2



## Specifications

Unit:mm

尺寸 Dimensions	PAER60T	PAER90T	PAER115T
D1	70	100	130
D2	5.5	6.5	9
D3 <sub>h6</sub>	16	22	32
D4 <sub>g6</sub>	50	80	110
D5	20	35	44
D6	M5x0.8P	M8x1.25P	M12x1.75P
D7	80	118	148
L1	60	90	115
L2	37	48	65
L3	7	10	12
L4	1.5	1.5	2
L5	25	32	40
L6	2	3	5
L7	10	12	16
L8	150.6	190.6	268.1
L9	4	4.5	6
L10	16.5	20.5	30
L11	26.5	36	40.7
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
C4 <sup>2</sup>	33	44	57
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>	18.5	20	26
C9 <sup>2</sup>	88	121.4	157.7
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.

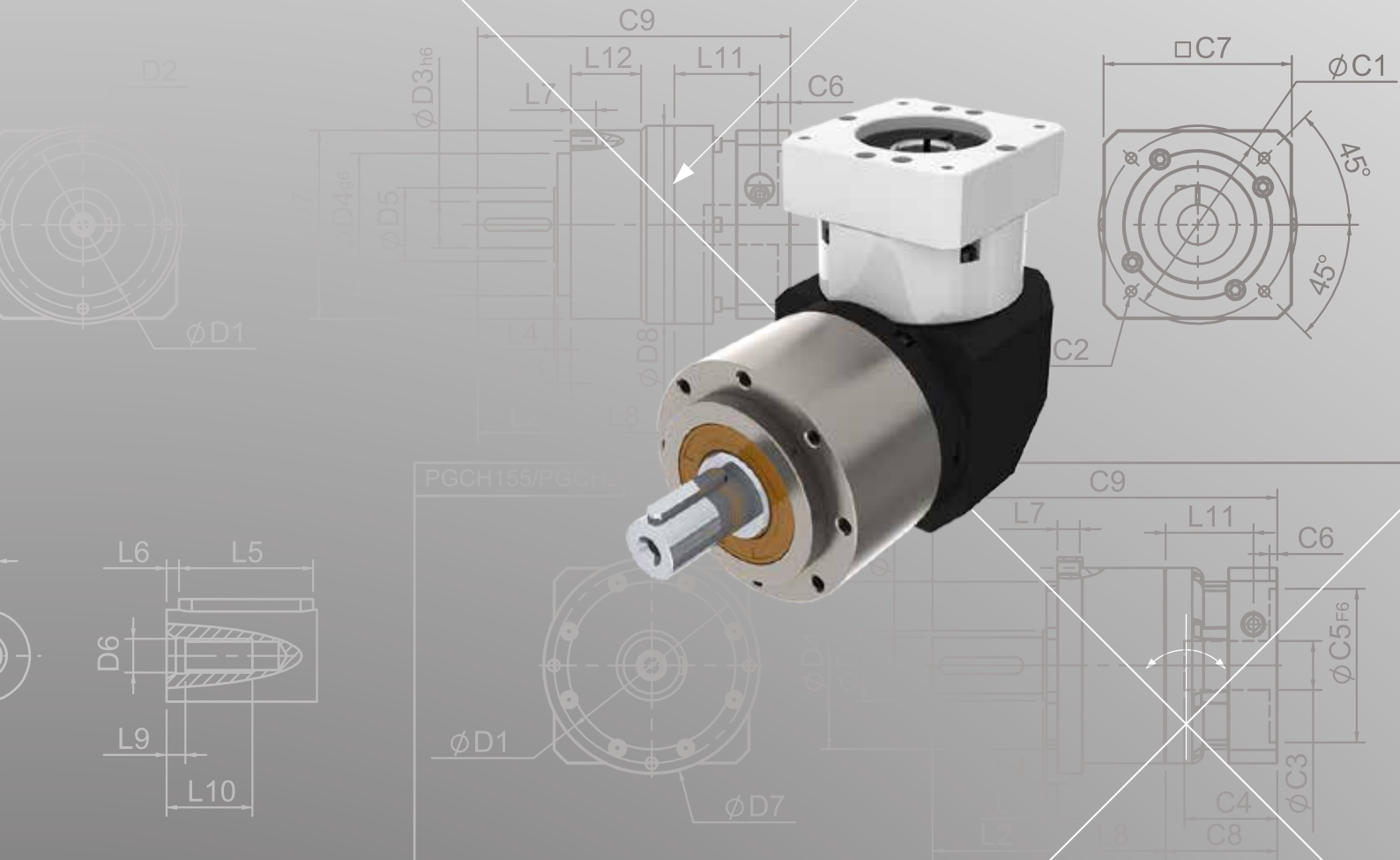
★ Specification subject to change without notice.

## PAER Specifications Table

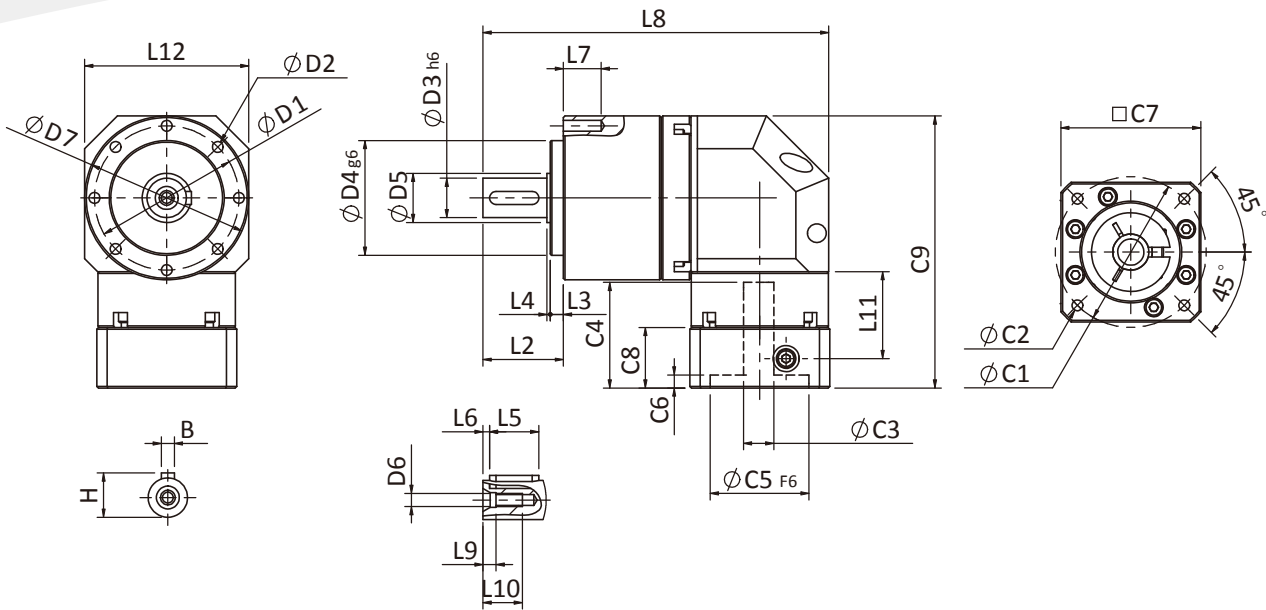
Specifications	Stage	Ratio	PAER-42	PAER-60	PAER-90	PAER-115	
Nominal Output Torque $T_{2N}$	1	3	9	28	85	135	
		4	10	32	80	180	
		5	11	35	95	215	
		7	10	28	85	220	
		8	10	32	80	210	
		9	9	25	75	210	
		10	11	35	95	210	
		12	10	32	80	-	
		14	10	28	85	220	
		15	11	35	95	-	
		Stage	Ratio	PAER-42	PAER-60/ PAER-60T	PAER-90/ PAER-90T	PAER-115T
		2	20	10	32	80	240
			25	11	35	95	240
			30	11	34	90	230
			35	11	35	95	240
	40		10	32	80	240	
	50		11	35	95	240	
	60		11	35	95	240	
	70		11	35	95	240	
	80		11	35	95	240	
100	8		35	95	240		
120	11		35	95	240		
140	-		28	85	220		
200	8		21	65	190		
300	8		21	65	190		
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	4500	4000	3000	2500
Max. Input Speed $n_{1max}$	rpm	1,2	3-300	7500	7000	6000	5000
Standard Backlash P2	arcmin	1 2	3-16 20-300	$\leq 18$ $\leq 20$	$\leq 15$ $\leq 17$	$\leq 13$ $\leq 15$	$\leq 11$ $\leq 13$
Torsional Rigidity	N • m /arcmin	1,2	3-300	1.5	4.0	8.5	17
Max. Radial Load $F_{2RB}^1$	N	1,2	3-300	760	1250	2030	4200
Max. Axial Load $F_{2AB}^1$	N	1,2	3-300	410	700	1200	2600
Operating Temp.	°C	1,2	3-300	-10°C ~ +90°C			
Service Life	hr	1,2	3-300	20,000 (10,000 Continuous operation)			
Efficiency	%	1 2	3-16 20-300	$\geq 95\%$ $\geq 90\%$			
Weight	kg	1 2	3-16 20-300	1.1 1.3	2.6 3.2/3.0	6.5 8.7/7.1	13.4 15.1
Mounting Position	-	1,2	3-300	Any direction			
Noise Level <sup>2</sup>	dBA/1m	1,2	3-300	66	68	70	73
Protection Class	-	1,2	3-300	IP 65			
Lubrication	-	1,2	3-300	Synthetic Lubricant			
Inertia (J1)							
Stage	Ratio	unit	PAER-42 ( $\phi 8$ )	PAER-60 ( $\phi 14$ )	PAER-90 ( $\phi 19$ )	PAER-115 ( $\phi 24$ )	
1	3, 4, 5, 7	Kg • cm <sup>2</sup>	0.07	0.40	2.0	2.7	
	Other ratios		0.05	0.30	1.5	2.2	
Stage	Ratio		PAER-42 ( $\phi 8$ )	PAER-60 ( $\phi 14$ ) PAER-60T ( $\phi 8$ )	PAER-90 ( $\phi 19$ ) PAER-90T ( $\phi 14$ )	PAER-115T ( $\phi 19$ )	
2	20, 25, 35		0.07	0.40/0.07	2.30/0.40	2.2	
	Other ratios	0.05	0.30/0.05	1.50/0.30	1.5		
* 1. Applied to the output shaft center @100rpm.							
* 2. Measured at 3000 rpm with no load. These values are measured by gearbox with ratio = 10 (1-stage) or ratio = 100 (2-stage) at nominal input speed or 3000 rpm (if nominal input speed is higher than 3000 rpm) with no load.							
※The above figures/specifications are subject to change without prior notice.							

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# PGCHR SERIES



## PGCHR Single Stage Dimensions



## Specifications

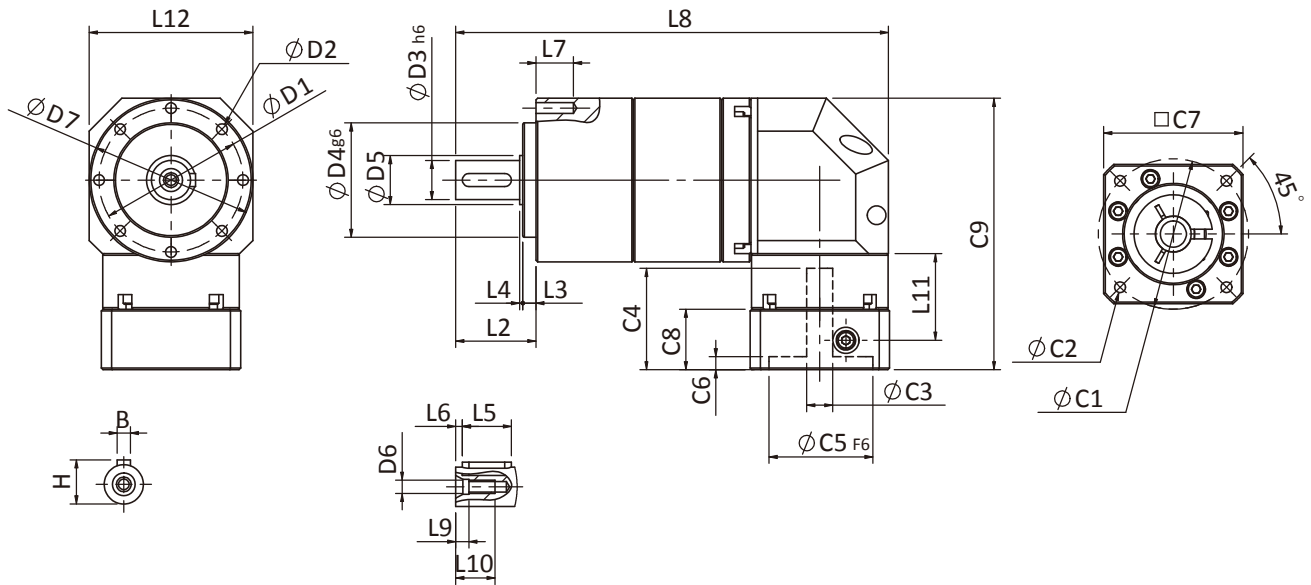
Unit: mm

Dimensions	PGCHR50	PGCHR70	PGCHR90
D1	44	62	80
D2	M4x0.7P	M5x0.8P	M6x1.0P
D3 <sub>h6</sub>	12	16	22
D4 <sub>g6</sub>	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 <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
C4 <sup>2</sup>	33	44	57
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>	18.5	20	26
C9 <sup>2</sup>	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

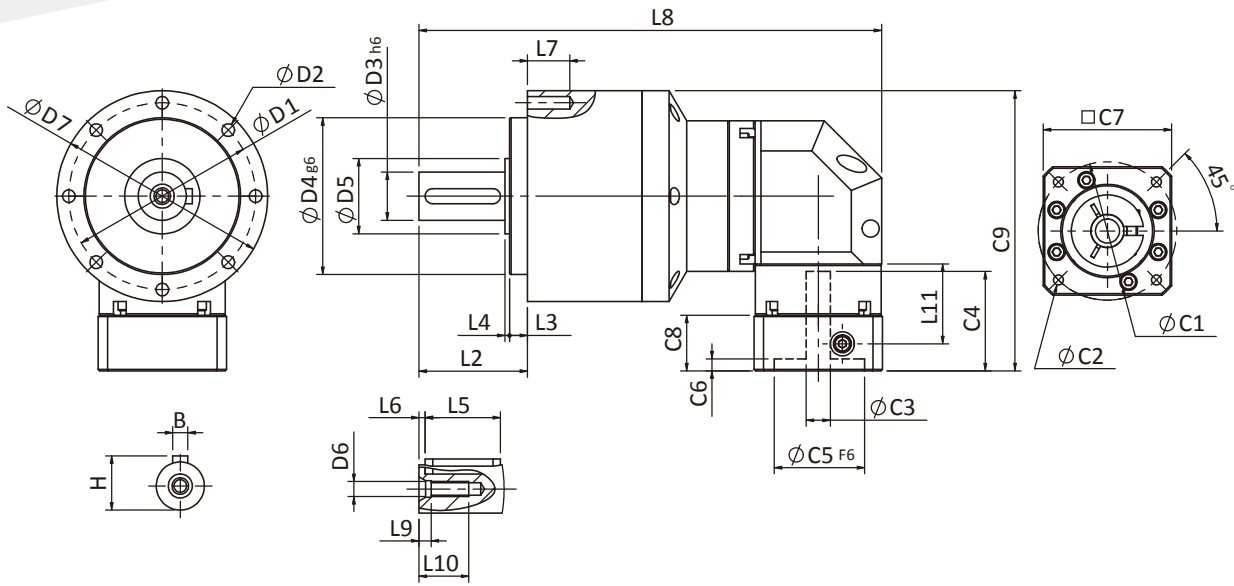
Unit: mm

Dimensions	PGCHR50	PGCHR70	PGCHR90
D1	44	62	80
D2	M4x0.7P	M5x0.8P	M6x1.0P
D3 <sub>h6</sub>	12	16	22
D4 <sub>g6</sub>	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 <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
C4 <sup>2</sup>	33	44	57
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>	18.5	20	26
C9 <sup>2</sup>	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-2



## Specifications

Unit: mm

Dimensions	PGCHR70T	PGCHR90T	PGCHR120T
D1	62	80	108
D2	M5x0.8P	M6x1.0P	M8x1.25P
D3 <sub>h6</sub>	16	22	32
D4 <sub>g6</sub>	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 <sup>2</sup>	46	70	90
C2 <sup>2</sup>	M4x0.7P	M5x0.8P	M6x1.0P
C3 <sup>2</sup>	$\leq 8/\leq 11$	$\leq 14/\leq 19$	$\leq 19/\leq 24$
C4 <sup>2</sup>	33	44	57
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>	18.5	20	26
C9 <sup>2</sup>	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 Table

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	270	
		8	18	48	140	240	
		9	16	35	95	220	
		10	17	50	140	210	
		12	18	40	120	-	
		14	14	44	125	270	
		15	17	45	135	-	
	20	11	37	95	220		
	2	Stage	Ratio	PGCHR-50	PGCHR-70/ PGCHR-70T	PGCHR-90/ PGCHR-90T	PGCHR-120T
		20	20	55	150	300	
		25	17	54	140	290	
		30	19	53	145	290	
		35	17	54	140	290	
		40	20	55	150	290	
		50	17	54	140	290	
		60	17	54	140	290	
		70	17	54	140	290	
80		17	54	140	290		
100	17	54	140	290			
120	17	54	140	290			
140	14	44	125	270			
200	11	37	95	220			
300	11	37	95	220			
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	4500	4000	3600	3600
Max. Input Speed $n_{1max}$	rpm	1,2	3-300	7500	8000	6000	6000
Standard Backlash P2	arcmin	1 2	3-16 20-300	$\leq 10$ $\leq 12$	$\leq 10$ $\leq 12$	$\leq 9$ $\leq 11$	$\leq 8$ $\leq 10$
Torsional Rigidity	N • m /arcmin	1,2	3-300	2.5	6	12	23
Max. Radial Load $F_{2RB}^1$	N	1,2	3-300	640	1260	2030	4200
Max. Axial Load $F_{2aB}^1$	N	1,2	3-300	410	600	1200	2600
Operating Temp.	°C	1,2	3-300	-10°C ~ +90°C			
Service Life	hr	1,2	3-300	20,000 (10,000 Continuous operation)			
Efficiency	%	1 2	3-16 20-300	$\geq 95\%$ $\geq 92\%$			
Weight	kg	1 2	3-16 20-300	1.1 1.4	2.6 3.3/3.0	6.8 9.5/7.3	14.9 16.7
Mounting Position	-	1,2	3-300	Any direction			
Noise Level <sup>2</sup>	dBA/1m	1,2	3-300	62	64	66	68
Protection Class	-	1,2	3-300	IP 65			
Lubrication	-	1,2	3-300	Synthetic Lubricant			
Inertia (J1)							
Stage	Ratio	unit	PGCHR-50 ( $\phi 8$ )	PGCHR-70 ( $\phi 14$ )	PGCHR-90 ( $\phi 19$ )	PGCHR-120 ( $\phi 24$ )	
1	3, 4, 5, 7	Kg • cm <sup>2</sup>	0.07	0.40	2.0	2.7	
	Other ratios		0.05	0.30	1.5	2.2	
2	20, 25, 35		0.07	0.40/0.07	2.30/0.40	2.0	
	Other ratios		0.05	0.30/0.05	1.50/0.30	1.5	

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

\* 2. Measured at 3000 rpm with no load. These values are measured by gearbox with ratio = 10 (1-stage) or ratio = 100 (2-stage) at nominal input speed or 3000 rpm (if nominal input speed is higher than 3000 rpm) 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.