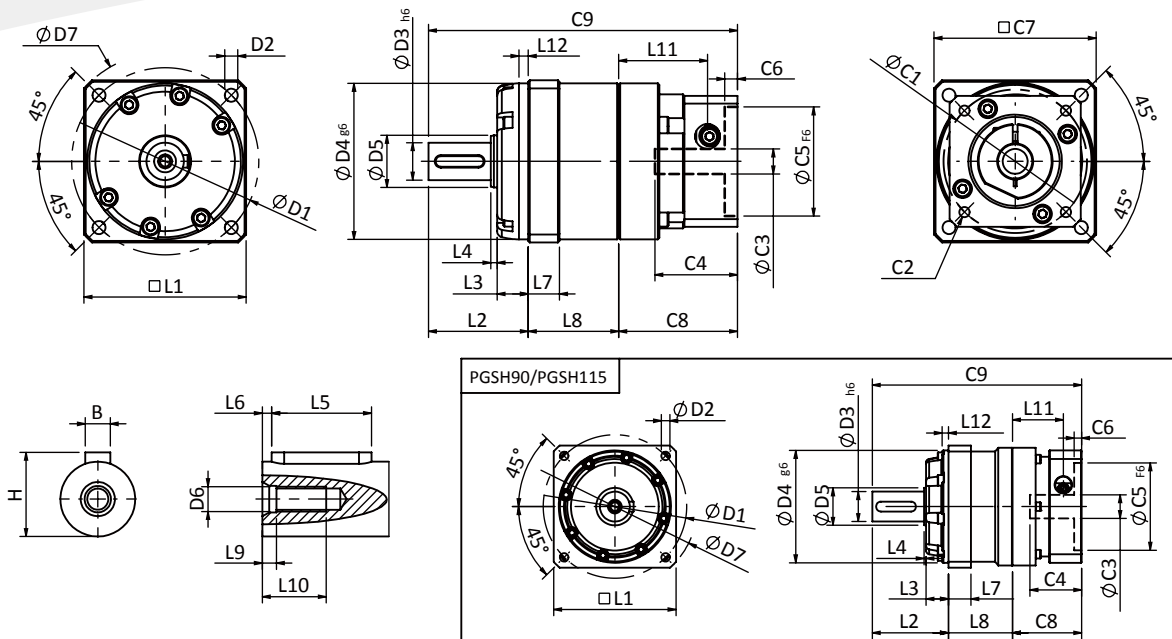


# PGSH SERIES



## PGSH Single Stage Dimensions



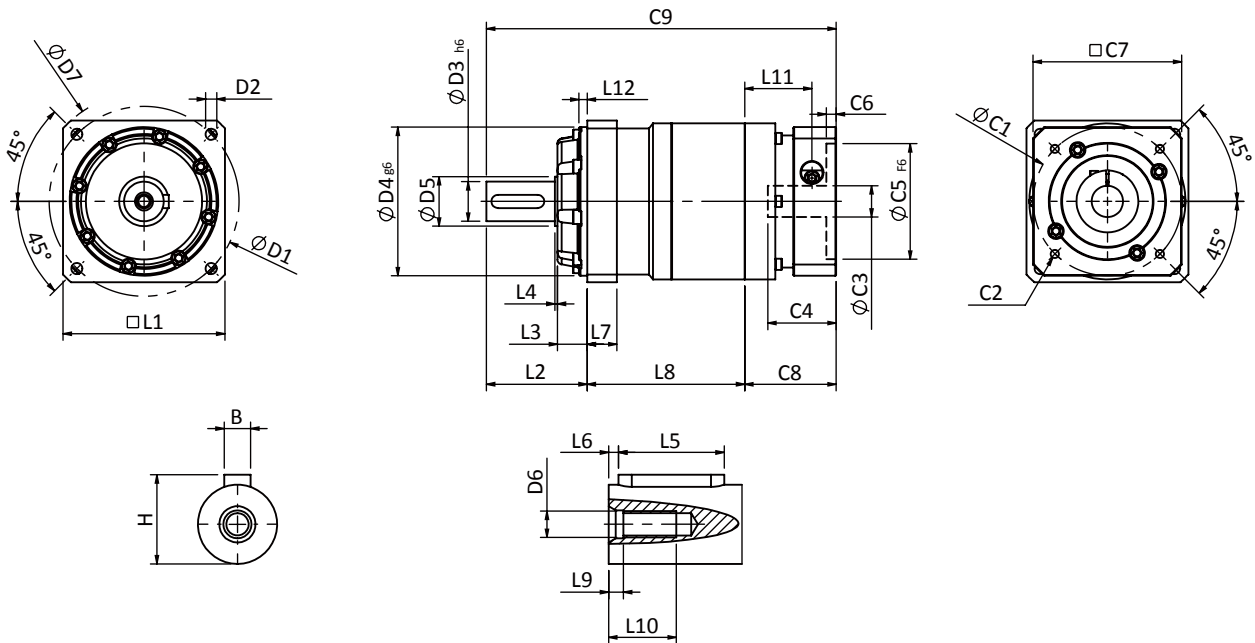
## Specifications

Unit:mm

Dimensions	PGSH42	PGSH60	PGSH90	PGSH115
D1	60	90	115	135
D2	M5x0.8P	M6x1.0P	M8x1.25P	M10x1.5P
D3 <sup>h6</sup>	12	19	24	32
D4 <sup>g6</sup>	50	70	90	110
D5	16.7	20	30	45
D6	M4x0.7P	M6x1.0P	M8x1.25P	M12x1.75P
D7	70	104	132	164
L1	52	78	98	120
L2	32	50	61	75
L3	10	17	18	14.5
L4	2	3	1.5	5.5
L5	16	25	32	40
L6	2	3	3	5
L7	10	12	18	18.5
L8	29	37.8	51.4	63.8
L9	4	4	4.5	6
L10	12	16.5	20.5	30
L11	28.5	35.5	40.7	53.8
L12	3	4	5	5
C1 <sup>2</sup>	46	70	90	115
C2 <sup>2</sup>	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P
C3 <sup>2</sup>	≤8/≤11	≤14/≤19	≤19/≤24	≤24/≤32/≤38
C4 <sup>2</sup>	26.5	37.6	41.4	51.3
C5 <sup>2 F6</sup>	30	50	70	95
C6 <sup>2</sup>	4.1	4.5	6	6
C7 <sup>2</sup>	42	60	90	115
C8 <sup>2</sup>	38.1	46.5	55.4	70
C9 <sup>2</sup>	99.1	134.3	167.8	208.8
B	4	6	8	10
H	13.5	21.5	27	35

- ★ C1~C9 are motor specific dimensions(metric std shown ), Size may vary according to the motor flange chosen.
- ★ Specification subject to change without notice.

## PGSH Double Stage Dimensions-1



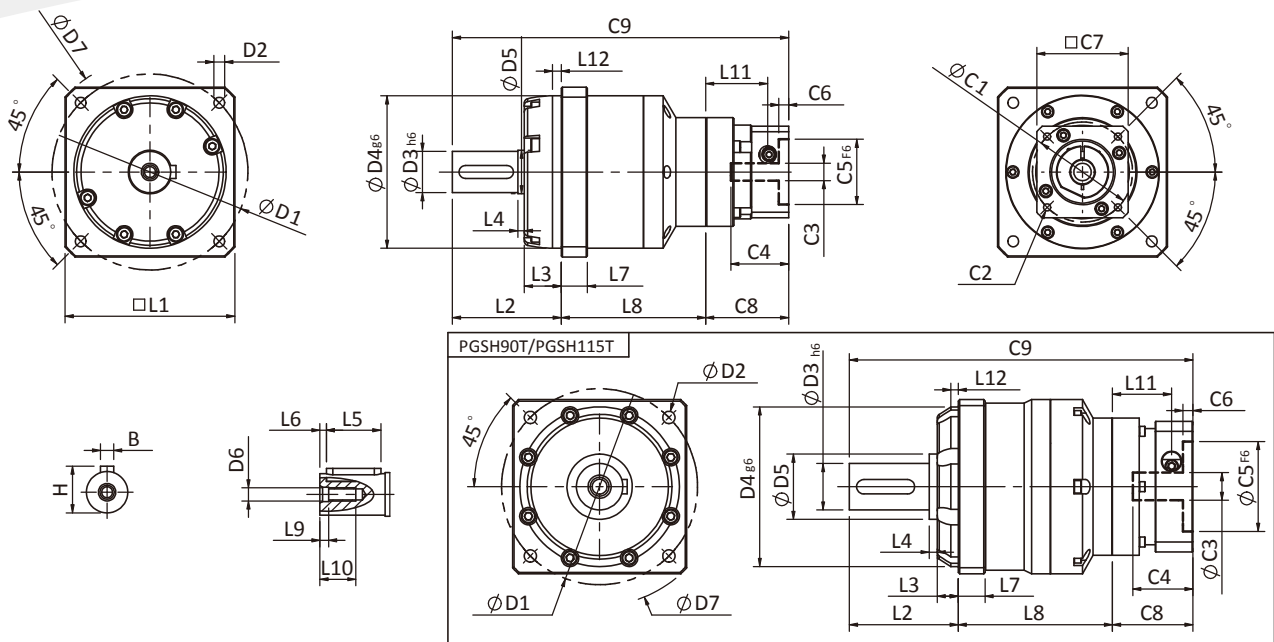
## Specifications

Unit:mm

Dimensions	PGSH42	PGSH60	PGSH90
D1	60	90	115
D2	M5x0.8P	M6x1.0P	M8x1.25P
D3 <sub>h6</sub>	12	19	24
D4 <sub>g6</sub>	50	70	90
D5	16.7	20	30
D6	M4x0.7P	M6x1.0P	M8x1.25P
D7	70	104	132
L1	52	78	98
L2	32	50	61
L3	10	17	18
L4	2	3	1.5
L5	16	25	32
L6	2	3	3
L7	10	12	18
L8	56	70.8	95.4
L9	4	4	4.5
L10	12	16.5	20.5
L11	28.5	35.5	40.7
L12	3	4	5
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>	26.5	37.6	41.4
C5 <sup>2</sup> <sub>F6</sub>	30	50	70
C6 <sup>2</sup>	4.1	4.5	6
C7 <sup>2</sup>	42	60	90
C8 <sup>2</sup>	38.1	46.5	55.4
C9 <sup>2</sup>	126.1	167.3	211.8
B	4	6	8
H	13.5	21.5	27

\* C1~C9 are motor specific dimensions(metric std shown ),Size may vary according to the motor flange chosen.  
 \* Specification subject to change without notice.

## PGSH Double Stage Dimensions-2



## Specifications

Unit:mm

Dimensions	PGSH60T	PGSH90T	PGSH115T
D1	90	115	135
D2	M6x1.0P	M8x1.25P	M10x1.5P
D3 <sub>h6</sub>	19	24	32
D4 <sub>g6</sub>	70	90	110
D5	20	30	45
D6	M6x1.0P	M8x1.25P	M12x1.75P
D7	104	132	164
L1	78	98	120
L2	50	61	75
L3	17	18	14.5
L4	3	1.5	5.5
L5	25	32	40
L6	3	3	5
L7	12	18	18.5
L8	66.3	83.9	106.3
L9	4	4.5	6
L10	16.5	20.5	30
L11	28.5	35.5	40.7
L12	4	5	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
C4 <sup>2</sup>	26.5	37.6	41.4
C5 <sup>2</sup> <sub>F6</sub>	30	50	70
C6 <sup>2</sup>	4.1	4.5	6
C7 <sup>2</sup>	42	60	90
C8 <sup>2</sup>	38.1	46.5	55.4
C9 <sup>2</sup>	154.4	191.4	236.7
B	6	8	10
H	21.5	27	35

★ C1~C9 are motor specific dimensions(metric std shown), Size may vary according to the motor flange chosen.  
 ★ Specification subject to change without notice.

## PGSH Specification Table

Specifications		Stage	Ratio	PGSH-42A	PGSH-42	PGSH-60	PGSH-90	PGSH-115	PGSH-142
Nominal Output Torque $T_{2N}$	N • m	1	3	8	15	53	145	290	520
			4	10	17	55	150	300	550
			5	10	16	54	140	290	600
			6	10	15	46	135	280	560
			7	10	14	44	125	270	530
			8	9	12	41	110	240	480
			9	9	11	37	95	220	430
		10	9	11	37	95	220	430	
		Stage	Ratio	PGSH-42A	PGSH-42	PGSH-60/ PGSH-60T	PGSH-90/ PGSH-90T	PGSH-115T	PGSH-142T
		2	15	8	15	53	145	290	520
			20	10	17	55	150	300	550
			25	10	16	54	140	290	600
			30	10	16	54	140	290	600
			35	10	16	54	140	290	600
			40	10	16	54	140	290	600
			45	10	16	54	140	290	600
			50	10	16	54	140	290	600
			60	10	15	46	135	280	560
			70	10	14	44	125	270	530
80	9		12	41	110	240	480		
90	9		11	37	95	220	430		
100	9	11	37	95	220	430			
Emergency Stop Torque $T_{2NOT}$	N • 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	3-100	4000	4000	4000	3000	3000	2500
Max. Input Speed $n_{1max}$	rpm	1,2	3-100	8000	8000	8000	6000	6000	5000
Precision Backlash P1	arcmin	1	3-10	≤6	≤6	≤6	≤6	≤5	≤5
		2	12-100	≤8	≤8	≤8	≤8	≤7	≤7
Standard Backlash P2	arcmin	1	3-10	≤8	≤8	≤8	≤8	≤7	≤7
		2	12-100	≤10	≤10	≤10	≤10	≤9	≤9
Torsional Rigidity	N • m /arcmin	1,2	3-100	2.5	2.5	6	12	23	50
Max. Radial Load $F_{2rB}^1$	N	1,2	3-100	1120	1120	1720	2800	4600	8300
Max. Axial Load $F_{2aB}^1$	N	1,2	3-100	520	520	830	1730	2950	4670
Operating Temp.	°C		3-100	-10 °C ~ +90 °C					
Service Life	hr		3-100	20,000 (10,000/ Continuous operation)					
Efficiency	%	1	3-10	≥ 97%					
		2	12-100	≥ 94%					
Weight	kg	1	3-10	0.6	0.6	1.3	3.5	7.8	16.1
		2	12-100	0.9	0.9	2.0/1.6	5.6/3.9	9.5	19
Mounting Position	-	1,2	3-100	Any direction					
Noise Level <sup>2</sup>	dB(A)/1m	1,2	3-100	58	58	60	63	65	67
Protection Class	-	1,2	3-100	IP65					
Lubrication	-	1,2	3-100	Synthetic Lubricant					
Inertia(J1)									
Stage	Ratio	unit		PGSH-42A	PGSH-42	PGSH-60	PGSH-90	PGSH-115	PGSH-142
1	3	Kg • cm <sup>2</sup>		0.03	0.03	0.23	0.97	2.35	10.00
	4			0.02	0.02	0.18	0.67	1.66	7.17
	5			0.02	0.02	0.17	0.65	1.50	6.52
	6/7/8			0.02	0.02	0.14	0.60	1.45	6.17
	9/10			0.02	0.02	0.14	0.58	1.41	6.10
Stage	Ratio			PGSH-42A	PGSH-42	PGSH-60 PGSH-60T	PGSH-90 PGSH-90T	PGSH-115T	PGSH-142
2	15/20/25			0.02	0.02	0.17(0.02)	0.65(0.17)	0.65	1.50
	30/35/40			0.02	0.02	0.14(0.02)	0.60(0.14)	0.60	1.45
	45/50/60/70/80/90/100			0.02	0.02	0.14(0.02)	0.58(0.14)	0.58	1.41

\* 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.

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PBE  
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PAC  
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PGS  
PNS