

PEE

PEE series of economy Planetary Gearheads provide stable performance, a wide range of sizes up to 220 mm, in square flange and round housing, available ratios 3:1 to 100:1. High output torque and quiet operation with standard backlash 7-15 arc-min.

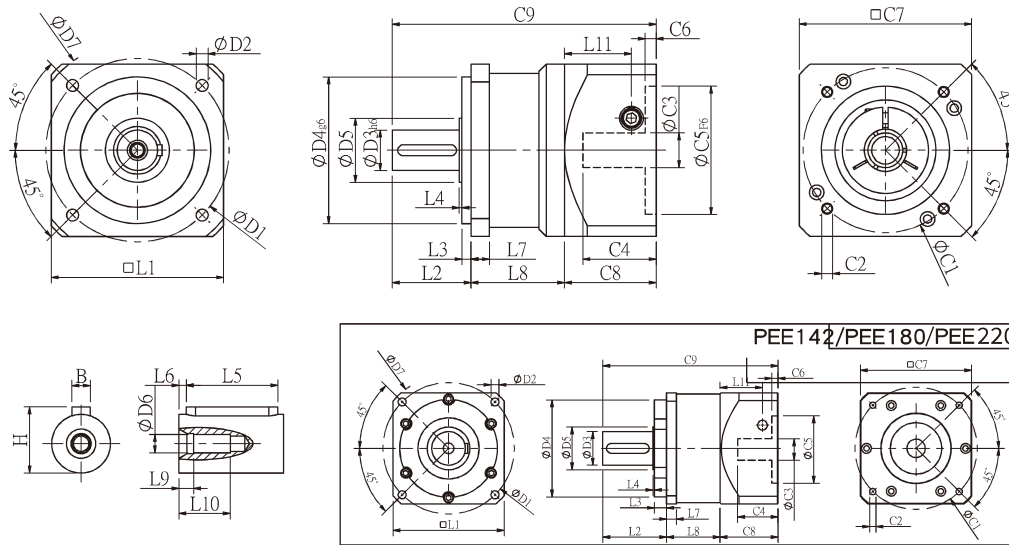


Frame Size (mm)	50, 70, 90, 120, 142, 180, 220
Ratio	3 : 1 - 100 : 1
Nominal Input Speed (rpm)	2,000 - 3,000
Max Input Speed (rpm)	4,000 - 6,000
Backlash (arc-min)	1 Stage : 7 - 12 2 Stages : 9 - 15
Noise Level (dBA / 1m)	65 - 80

Features

- ▶ In-line configuration with output shaft 13 mm through 75 mm diameter.
- ▶ Torque capacity range: 10 Nm through 1670 Nm.
- ▶ Solid performance, high efficiencies and low acoustics.
- ▶ Wide range of ratios up to 100:1.
- ▶ Output bearings deliver radial load capacity as high as 11120 N, and axial capacities up to 8560 N.
- ▶ Service life lubricant.

PEE Single Stage Dimensions



Specifications

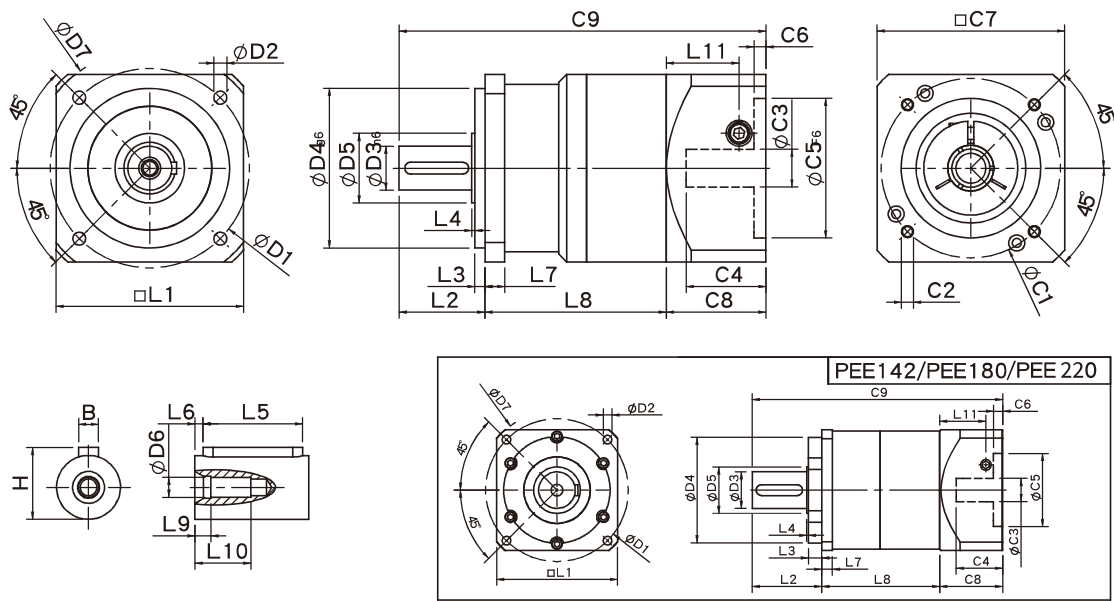
Unit:mm

Dimensions	PEE50	PEE70	PEE90	PEE120	PEE142	PEE180	PEE220
D1	50	70	100	130	165	215	250
D2	3.4	6	6.5	8.5	10.5	13	17
D3 _{h6}	13	16	22	32	40	55	75
D4 _{g6}	35	50	80	110	130	160	180
D5	15	25	35	45	50	70	90
D6	M4x0.7P	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P	M20x2.5P	M20x2.5P
D7	64	90	120	152	186	239	292
L1	50	70	94	120	142	182	220
L2	24.5	37	43	60	93	104.5	138
L3	4	7	5	6	8	20	30
L4	1.5	1.5	1.5	3	6	2.5	3
L5	15	25	32	40	60	70	90
L6	2	2	3	5	5	6	7
L7	5	6	10	12	18	16	20
L8	30	36	51	61	79	87.5	117.5
L9	4	4	4.5	6	6	8	7
L10	14	16.5	20.5	30	38	48	42
L11	24.4	31.5	36.5	42	63	69.5	102.2
C1 ²	46	70	90	115	145	200	235
C2 ²	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M8x1.25P	M12x1.75P	M12x1.75P
C3 ²	≤8	≤14	≤19/≤24	≤24/≤28	≤35	≤50	≤55
C4 ²	27	35	43	58	66	82	98
C5 ² F ₆	30	50	70	95	110	114.3	200
C6 ²	4	5	5	8	6	13	12
C7 ²	50	70	94	120	140	182	220
C8 ²	34	44	50	63	80	95	130
C9 ²	88.5	117	144	184	252	287	385.5
B	5	5	6	10	12	16	20
H	15	18	24.5	35	43	59	79.5

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

★ Specification subject to change without notice.

PEE Double Stage Dimensions-1



Specifications

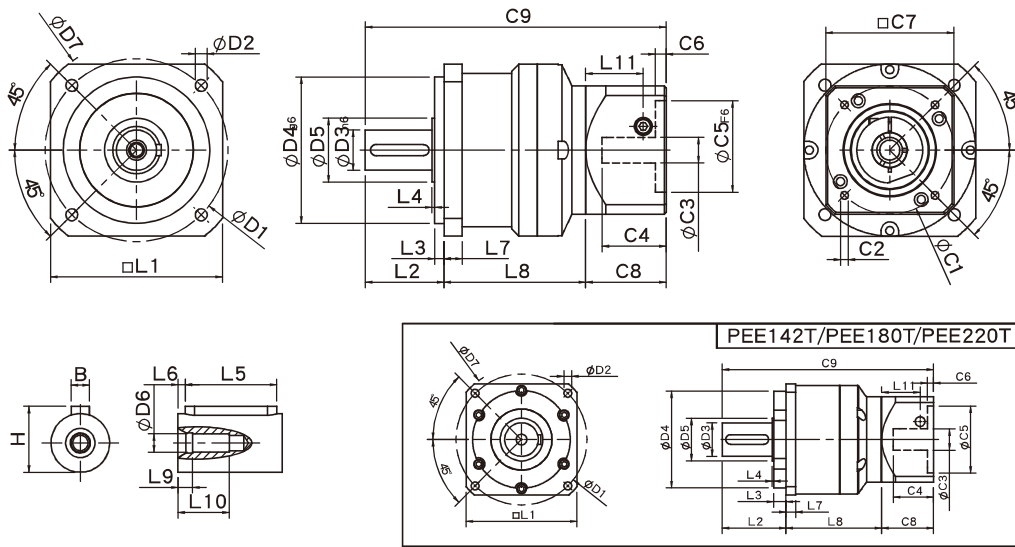
Unit:mm

Dimensions	PEE50	PEE70	PEE90	PEE120	PEE142	PEE180	PEE220
D1	50	70	100	130	165	215	250
D2	3.4	6	6.5	8.5	10.5	13	17
D3 _{h6}	13	16	22	32	40	55	75
D4 _{g6}	35	50	80	110	130	160	180
D5	15	25	35	45	50	70	90
D6	M4x0.7P	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P	M20x2.5P	M20x2.5P
D7	64	90	120	152	186	239	292
L1	50	70	94	120	142	182	220
L2	24.5	37	43	60	93	104.5	138
L3	4	7	5	6	8	20	30
L4	1.5	1.5	1.5	3	6	2.5	3
L5	15	25	32	40	60	70	90
L6	2	2	3	5	5	6	7
L7	5	6	10	12	18	16	20
L8	56	64	91	109	140	177.5	232
L9	4	4	4.5	6	6	8	7
L10	14	16.5	20.2	30	38	48	42
L11	24.4	31.5	36.5	42	63	69.5	102.2
C1 ²	46	70	90	115	145	200	235
C2 ²	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M8x1.25P	M12x1.75P	M12x1.75P
C3 ²	≤8	≤14	≤19/≤24	≤24/≤28	≤35	≤50	≤55
C4 ²	27	35	43	58	66	82	98
C5 ² _{F6}	30	50	70	95	110	114.3	200
C6 ²	4	5	5	8	6	13	12
C7 ²	50	70	94	120	140	182	220
C8 ²	38.5	46	55	63	80	95	130
C9 ²	119	147	189	232	313	377	500
B	5	5	6	10	12	16	20
H	15	18	24.5	35	43	59	79.5

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

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PEE Double Stage Dimensions-2



Specifications

Unit:mm

Dimensions	PEE70T	PEE90T	PEE120T	PEE142T	PEE180T	PEE220T
D1	70	100	130	165	215	250
D2	6	6.5	8.5	10.5	13	17
D3 _{h6}	16	22	32	40	55	75
D4 _{g6}	50	80	110	130	160	180
D5	25	35	45	50	70	90
D6	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P	M20x2.5P	M20x2.5P
D7	90	120	152	186	239	292
L1	70	94	120	142	182	220
L2	37	43	60	93	104.5	138
L3	7	5	6	8	20	30
L4	1.5	1.5	3	6	2.5	3
L5	25	32	40	60	70	90
L6	2	3	5	5	6	7
L7	6	10	12	18	16	20
L8	58.8	77.5	99.4	127	157	199.5
L9	4	4.5	6	6	8	7
L10	16.5	20.5	30	38	48	42
L11	29	35.5	40.5	42	63	69.5
C1 ²	66.67	70	90	115	145	200
C2 ²	M5x0.8P	M5x0.8P	M6x1.0P	M8x1.25P	M8x1.25P	M12x1.75P
C3 ²	≤8	≤14	≤19/≤24	≤24/≤28	≤35	≤50
C4 ²	27	41	47.75	58	66	82
C5 ² F ₆	38.1	50	70	95	110	114.3
C6 ²	4	8	6	8	6	13
C7 ²	60	70	94	120	140	182
C8 ²	38.5	50	55	63	80	95
C9 ²	134.3	170.5	214.4	283	341.5	432.5
B	5	6	10	12	16	20
H	18	24.5	35	43	59	79.5

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

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PEE Specifications

Specifications		Stage	Ratio	PEE-50	PEE-70	PEE-90	PEE-120	PEE-142	PEE-180	PEE-220
Nominal Output Torque T_{2N}	N • m	1	3	13.8	44.2	95.2	283	482	1151	1670
			4	11.9	35.9	74.6	249	490	1055	1574
			5	13.8	43.0	95.2	283	473	1151	1670
			7	11.9	36.0	85.6	219	400	1055	1574
			10	10.1	25.0	75.0	210	320	763	1184
		Stage	Ratio	PEE-50	PEE-70(T)	PEE-90(T)	PEE-120(T)	PEE-142(T)	PEE-180(T)	PEE-220(T)
		2	15	13.8	44.2	95.2	283	482	1151	1670
			20	11.9	35.9	74.6	249	490	1055	1574
			25	13.8	43.0	95.2	283	473	1151	1670
			30	13.8	43.0	95.2	283	473	1151	1670
			35	13.8	43.0	95.2	283	473	1151	1670
			40	13.8	43.0	95.2	283	473	1151	1670
			50	13.8	43.0	95.2	283	473	1151	1670
			70	11.9	36.0	85.6	219	400	1055	1574
100	10.1	25.0	75.0	210	320	763	1184			
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	3000	3000	3000	2500	2000	2000	2000
Max. Input Speed n_{1max}	rpm	1,2	3-100	6000	6000	6000	5000	4000	4000	4000
Standard Backlash P2	arcmin	1 2	3-10 12-100	≤12 ≤15	≤9 ≤12	≤9 ≤12	≤7 ≤9	≤7 ≤9	≤9 ≤9	≤7 ≤9
Torsional Rigidity	N • m /arcmin	1,2	3-100	1.0	2.8	7.5	15.5	30	57	110
Max. Radial Load F_{2RB}^1	N	1,2	3-100	350	960	1630	3380	6150	7260	11120
Max. Axial Load F_{2aB}^1	N	1,2	3-100	320	900	1420	2930	5510	5550	8560
Operating Temp.	°C		3-100	-10°C ~ +90°C						
Service Life	hr		3-100	20,000 (10,000 Continuous Operation)						
Efficiency	%	1 2	3-10 12-100	≥ 95% ≥ 90%						
Weight	kg	1 2	3-10 12-100	0.7 0.9	1.4 2.2/1.7	3.0 5.0/3.4	7.3 11.5/8.5	15.6 20.7/17.2	26 36/31	56 80/62
Mounting Position	-	1,2	3-100	Any Direction						
Noise Level ²	dB(A)/1m	1,2	3-100	≤65	≤67	≤70	≤70	≤75	≤75	≤80
Protection Class	-	1,2	3-100	IP65						
Lubrication	-	1,2	3-100	Urea Derivatives						
Inertia(J1)										
Stage	Ratio	unit		PEE-50	PEE-70	PEE-90	PEE-120	PEE-142	PEE-180	PEE-220
1	3	Kg • cm ²		0.03	0.20	0.81	2.20	7.89	25.2	77.9
	4			0.03	0.16	0.65	1.80	5.83	19.8	56.5
	5			0.03	0.15	0.62	1.61	5.38	18.3	53.3
	7			0.03	0.14	0.60	1.55	5.22	17.8	53.0
	10			0.03	0.14	0.60	1.53	5.20	17.6	52.9
Stage	Ratio			PEE-50	PEE-70(T)	PEE-90(T)	PEE-120(T)	PEE-142(T)	PEE-180(T)	PEE-220(T)
2	15/20/25			0.02	0.15(0.02)	0.62(0.15)	1.61(0.62)	5.38(1.61)	18.3(5.38)	53.9(18.3)
	30/35/40			0.02	0.14(0.02)	0.60(0.14)	1.55(0.60)	5.22(1.55)	17.8(5.22)	53.0(17.8)
	50/70/100			0.02	0.14(0.02)	0.60(0.14)	1.53(0.60)	5.20(1.53)	17.6(5.20)	52.9(17.6)

1. Applied to the output shaft center at 400 rpm.

2. Measured at 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.