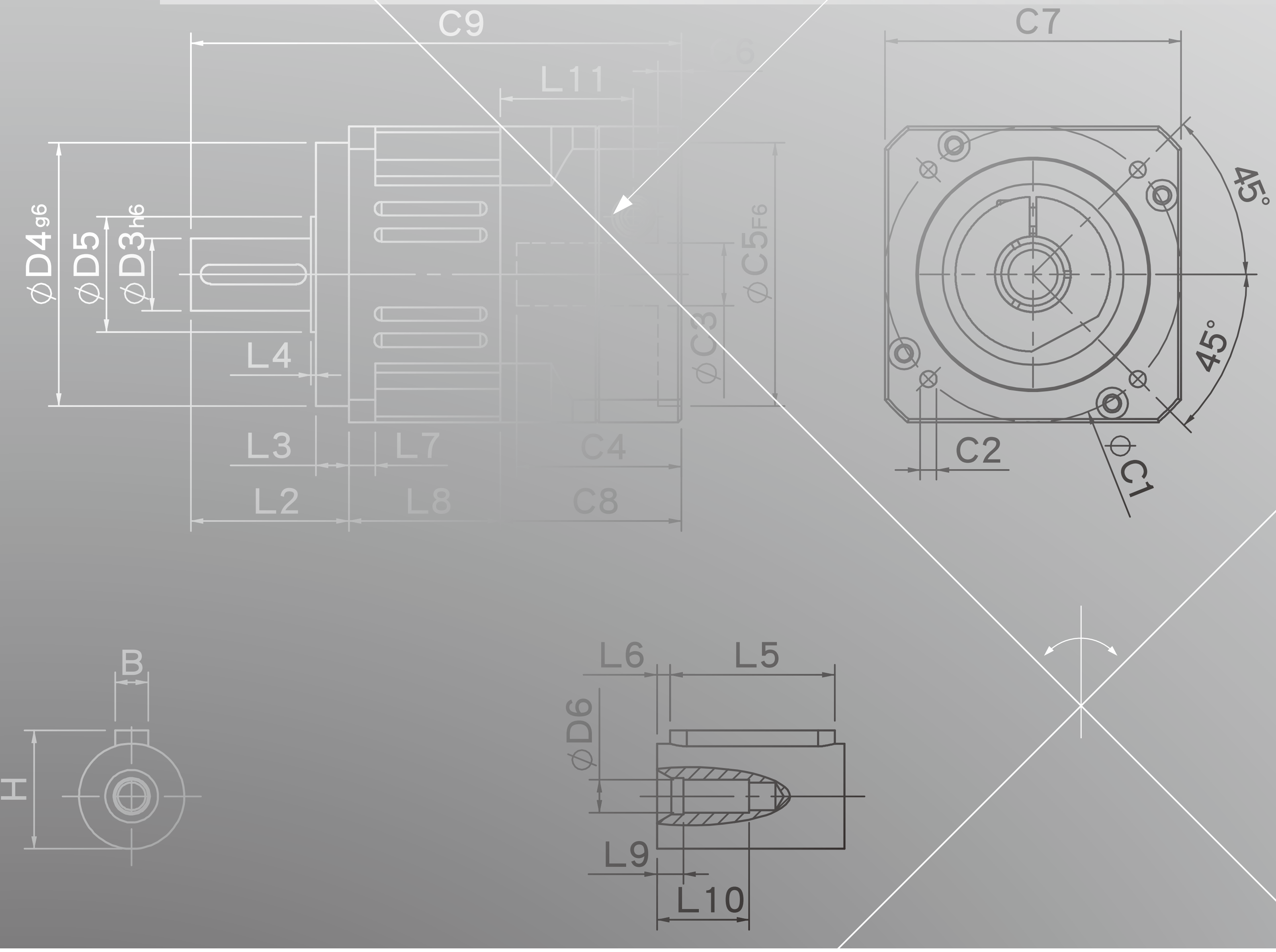
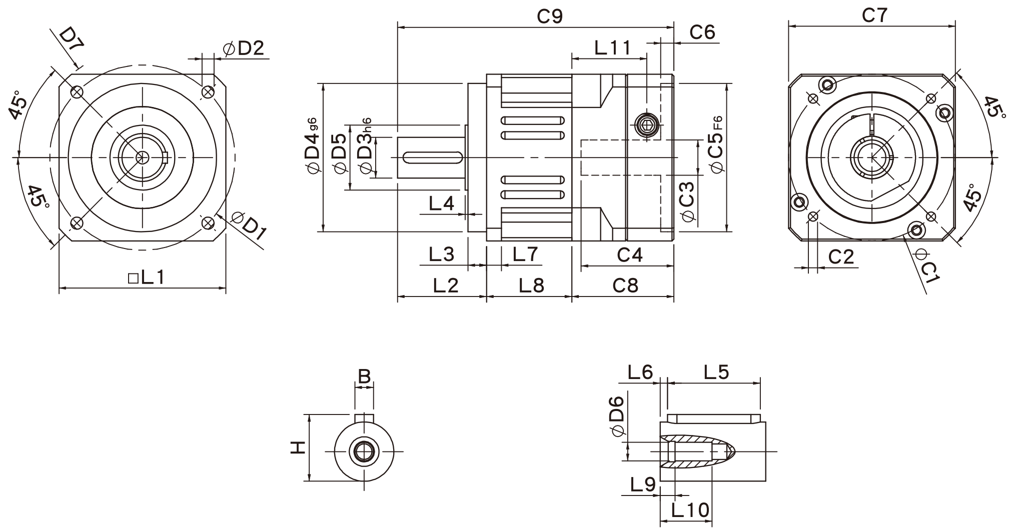
PHL SERIES


C9
L11
C7
ØD4g6
ØD5
ØD3h6
L4
ØC5F6
ØC3
45°
45°
L3
L7
C4
C2
ØC1
L2
L8
C8
B
H
L6
L5
ØD6
L9
L10


C9
C6
L11
C7
⌀D2
D7
45°
⌀D4g6
⌀D5
⌀D3h6
⌀C5F6
⌀C3
⌀D1
L4
L3
L7
C4
C2
⌀C1
□L1
L2
L8
C8
PHL60T/PHL90T/PHL115T
B
L6
L5
⌀D6
H
L9
L10
SESAME
PHL
SESAME MOTOR
PHL90-10

PHL Single Stage Dimensions



Specifications

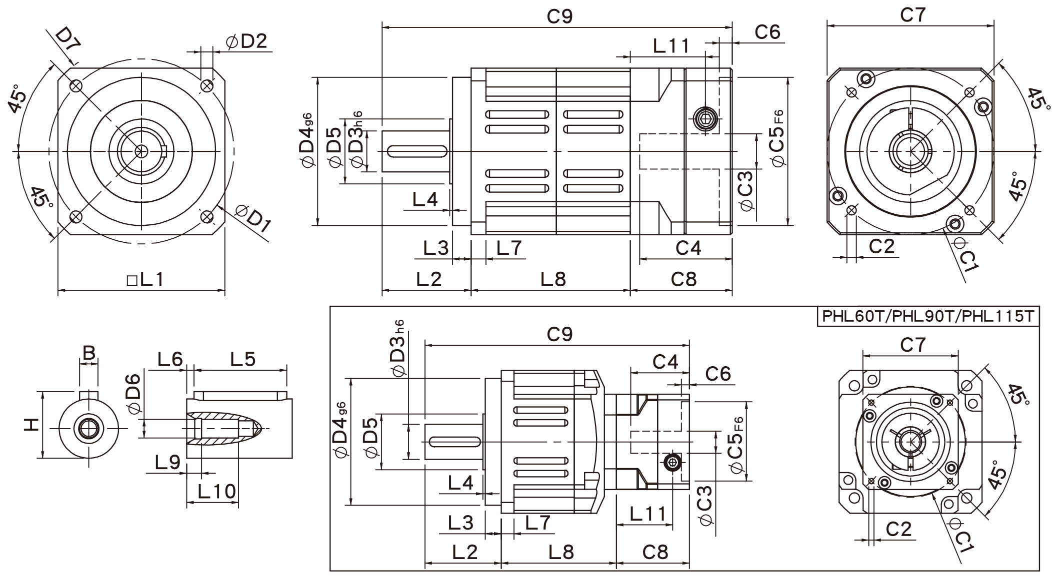
Unit:mm

Dimensions	PHL42	PHL60	PHL90
D1	50	70	100
D2	3.4	5.5	6.5
D3 h6	13	16	22
D4 g6	35	50	80
D5	15	25	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	1.5	1.5
L5	15	25	32
L6	2	2	3
L7	4	6	8
L8	28.3	37	46
L9	4	4	4.5
L10	14	16.5	20.5
L11	29	35.5	40.5
C1 ²	46	70	90
C2 ²	M4x0.7P	M5x0.8P	M6x1.0P
C3 ²	≦8/≦11	≦14	≦19/≦24
C4 ²	27	37	47
C5 ² F6	30	50	70
C6 ²	4	4	6
C7 ²	42.6	60	90
C8 ²	38.5	46	55
C9 ²	92.8	120	149
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.

PHL Double Stage Dimensions



Specifications

Unit:mm

<table>
<tr><th>Dimensions</th><th>PHL42</th><th>PHL60</th><th>PHL60T</th><th>PHL90</th><th>PHL90T</th></tr>
<tr><td>D1</td><td>50</td><td colspan="2">70</td><td colspan="2">100</td></tr>
<tr><td>D2</td><td>3.4</td><td colspan="2">5.5</td><td colspan="2">6.5</td></tr>
<tr><td>D3 h6</td><td>13</td><td colspan="2">16</td><td colspan="2">22</td></tr>
<tr><td>D4 g6</td><td>35</td><td colspan="2">50</td><td colspan="2">80</td></tr>
<tr><td>D5</td><td>15</td><td colspan="2">25</td><td colspan="2">35</td></tr>
<tr><td>D6</td><td>M4x0.7P</td><td colspan="2">M5x0.8P</td><td colspan="2">M8x1.25P</td></tr>
<tr><td>D7</td><td>56</td><td colspan="2">80</td><td colspan="2">118</td></tr>
<tr><td>L1</td><td>42.6</td><td colspan="2">60</td><td colspan="2">90</td></tr>
<tr><td>L2</td><td>26</td><td colspan="2">37</td><td colspan="2">48</td></tr>
<tr><td>L3</td><td>5.5</td><td colspan="2">7</td><td colspan="2">10</td></tr>
<tr><td>L4</td><td>1.5</td><td colspan="2">1.5</td><td colspan="2">1.5</td></tr>
<tr><td>L5</td><td>15</td><td colspan="2">25</td><td colspan="2">32</td></tr>
<tr><td>L6</td><td>2</td><td colspan="2">2</td><td colspan="2">3</td></tr>
<tr><td>L7</td><td>4</td><td colspan="2">6</td><td colspan="2">8</td></tr>
<tr><td>L8</td><td>55.3</td><td>70</td><td>65.5</td><td>86</td><td>78.5</td></tr>
<tr><td>L9</td><td>4</td><td colspan="2">4</td><td colspan="2">4.5</td></tr>
<tr><td>L10</td><td>14</td><td colspan="2">16.5</td><td colspan="2">20.5</td></tr>
<tr><td>L11</td><td>29</td><td>35.5</td><td>29</td><td>40.5</td><td>35.5</td></tr>
<tr><td>C1 [2]</td><td>46</td><td>70</td><td>46</td><td>90</td><td>70</td></tr>
<tr><td>C2 [2]</td><td>M4x0.7P</td><td>M5x0.8P</td><td>M5x0.8P</td><td>M6x1.0P</td><td>M5x0.8P</td></tr>
<tr><td>C3 [2]</td><td>≦8/≦11</td><td>≦14</td><td>≦8/≦11</td><td>≦19/≦24</td><td>≦14</td></tr>
<tr><td>C4 [2]</td><td>27</td><td>37</td><td>27</td><td>47</td><td>37</td></tr>
<tr><td>C5 [2] F6</td><td>30</td><td>50</td><td>30</td><td>70</td><td>50</td></tr>
<tr><td>C6 [2]</td><td>4</td><td>4</td><td>4</td><td>6</td><td>4</td></tr>
<tr><td>C7 [2]</td><td>42.6</td><td>60</td><td>42.6</td><td>90</td><td>60</td></tr>
<tr><td>C8 [2]</td><td>38.5</td><td>46</td><td>38.5</td><td>55</td><td>46</td></tr>
<tr><td>C9 [2]</td><td>119.8</td><td>153</td><td>141</td><td>189</td><td>172.5</td></tr>
<tr><td>B</td><td>5</td><td colspan="2">5</td><td colspan="2">6</td></tr>
<tr><td>H</td><td>15</td><td colspan="2">18</td><td colspan="2">24.5</td></tr>
</table>

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

★ Specification subject to change without notice.

PHL Specifications Table

Specifications		Stage	Ratio	PHL-42	PHL-60	PHL-90
Nominal Output Torque T_{2N}	N • m	1	3	19	53	145
			4	20	55	150
			5	17	54	140
			6	15	46	135
			7	14	44	125
			8	12	41	110
			9	11	37	95.0
			10	11	37	95.0
		Stage	Ratio	PHL-42	PHL-60(T)	PHL-90(T)
		2	15	19	53	145
			20	20	55	150
			25	17	54	140
			30	17	54	140
			35	17	54	140
			40	17	54	140
			45	17	54	140
			50	17	54	140
			60	15	46	135
			70	14	44	125
			80	12	41	110
			90	11	37	95
			100	11	37	95
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	5000	5000	4000
Max. Input Speed n_{1max}	rpm	1,2	3-100	10000	10000	8000
Micro Backlash P0	arcmin	1 2	3-10 15-100	≦1 ≦3	≦1 ≦3	≦1 ≦3
Precision Backlash P1	arcmin	1 2	3-10 15-100	≦3 ≦5	≦3 ≦5	≦3 ≦5
Standard Backlash P2	arcmin	1 2	3-10 15-100	≦5 ≦7	≦5 ≦7	≦5 ≦7
Torsional Rigidity	N • m /arcmin	1,2	3-100	2.5	6	12
Max. Radial Load F_{2rB} [1]	N	1,2	3-100	760	1570	2780
Max. Axial Load F_{2aB} [1]	N	1,2	3-100	410	750	1870
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 15-100	≧97% ≧94%		
Weight	kg	1 2	3-10 15-100	0.6 0.9	1.3 2.0/1.6	3.5 5.6/3.9
Mounting Position	-	1,2	3-100	Any direction		
Noise Level [2]	dBA/1m	1,2	3-100	56	58	60
Protection Class	-	1,2	3-100	IP65		
Lubrication	-	1,2	3-100	Synthetic Lubricant		

Inertia (J1)

Stage	Ratio	unit	PHL-42	PHL-60	PHL-90
1	3	Kg • cm^2	0.03	0.23	0.97
	4		0.02	0.18	0.67
	5		0.02	0.17	0.65
	6/7/8		0.02	0.14	0.60
	9/10		0.02	0.14	0.58
Stage	Ratio		PHL-42	PHL-60(T)	PHL-90(T)
2	15/20/25		0.02	0.17(0.02)	0.65(0.17)
	30/35/40		0.02	0.14(0.02)	0.60(0.14)
	45/50/60/70/80/90/100		0.02	0.14(0.02)	0.58(0.14)

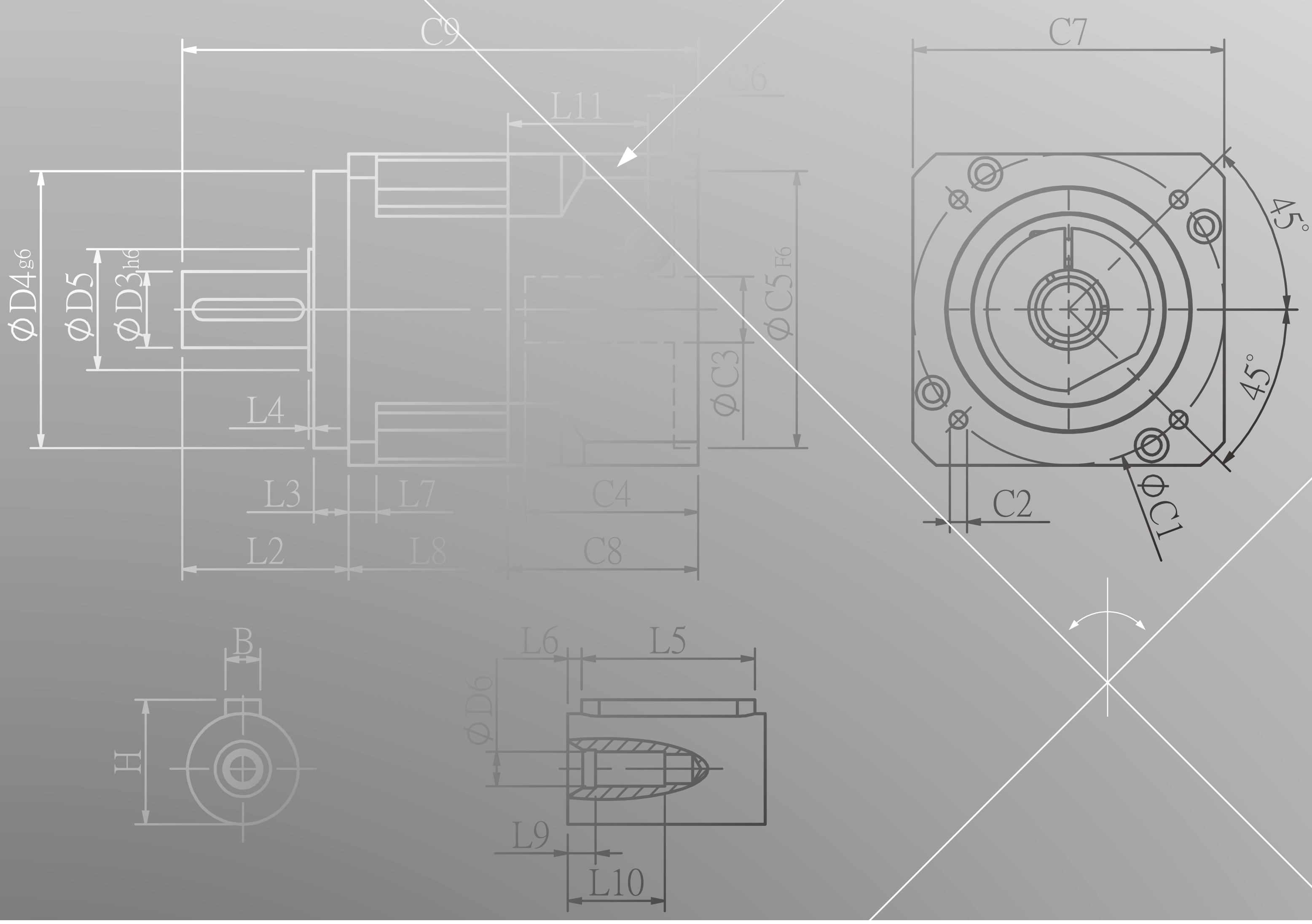
* 1. Applied to the output shaft center at 100 rpm.
* 2. Measured at 3000 rpm with no load. These values are measured by gearbox with ratio = 10 (1-stage) or ratio = 100 (2-stage) at nominal input speed or 3000 rpm (if nominal input speed is higher than 3000 rpm) with no load.

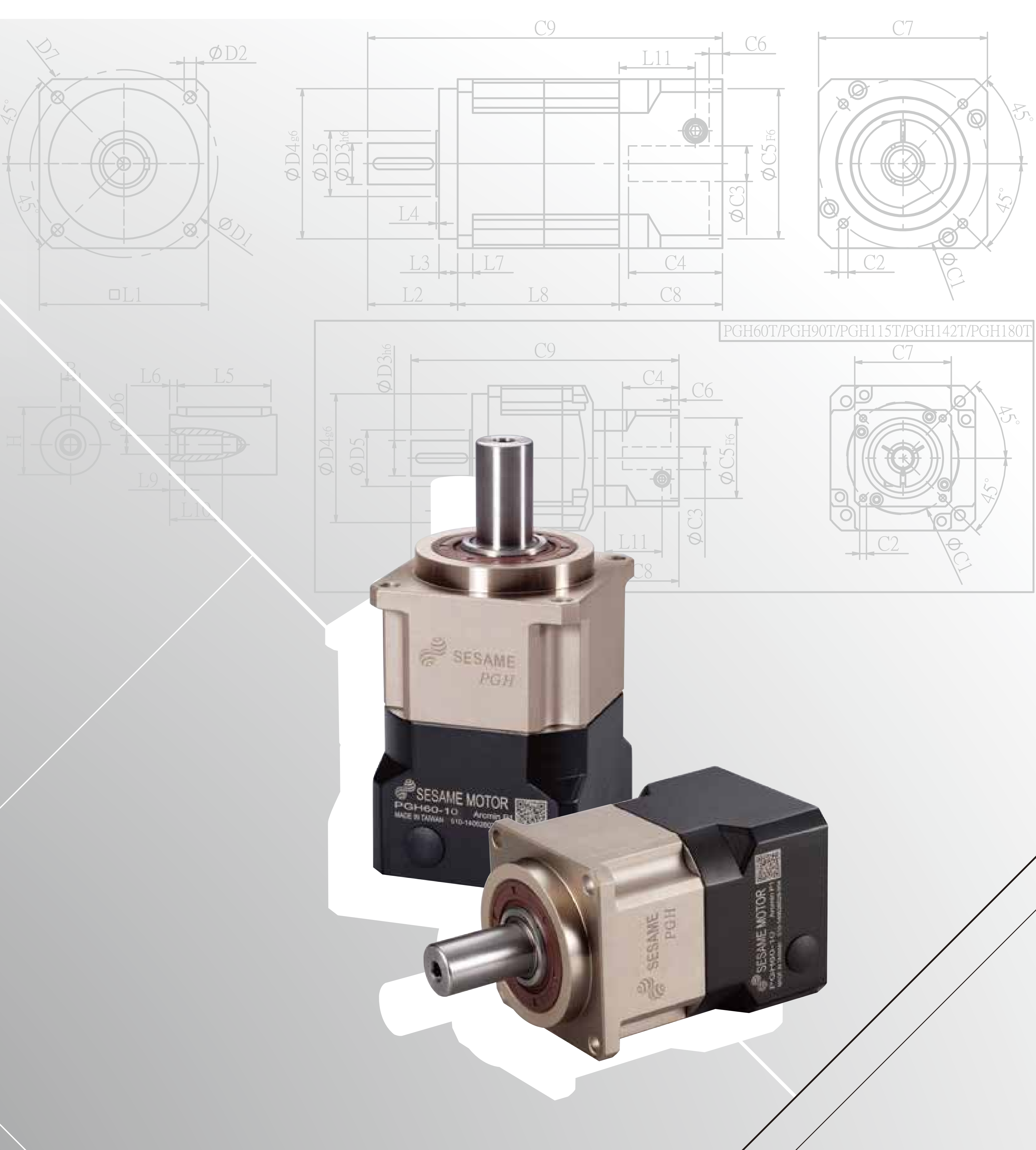
※ The above figures/specifications are subject to change without prior notice.

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

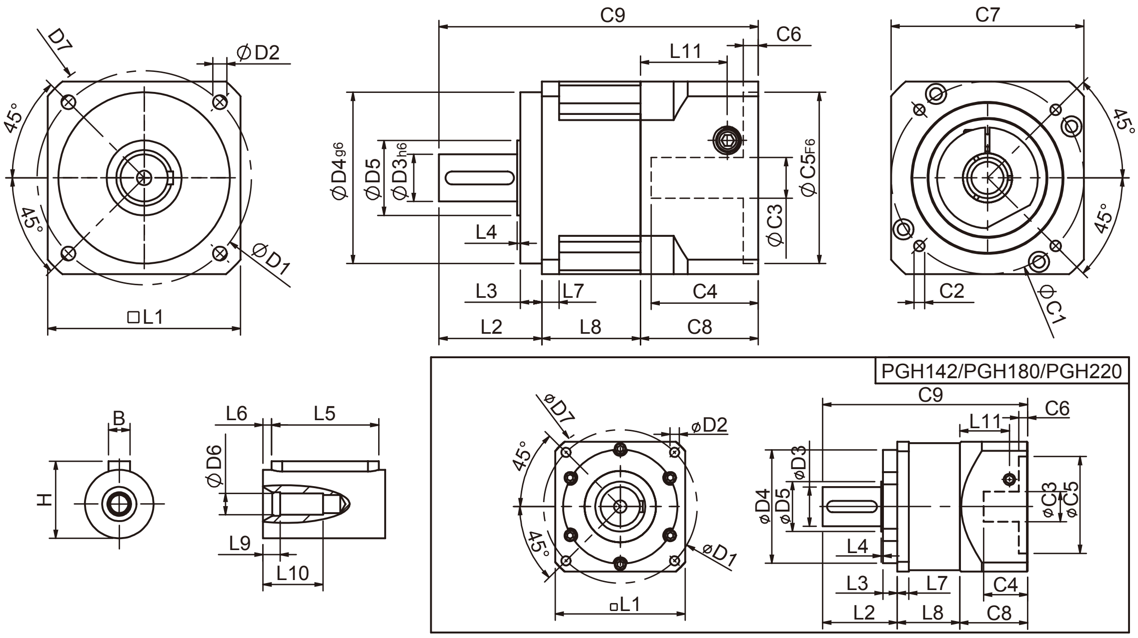

SESAME MOTOR
SESAME MOTOR
SESAME MOTOR

PGH SERIES


C9
C6
L11
C7
ØD4g6
ØD5
ØD3h6
ØC5F6
ØC3
45°
45°
L4
L3
L7
C4
C2
ØC1
L2
L8
C8
B
H
L6
L5
ØD6
L9
L10


PGH60T/PGH90T/PGH115T/PGH142T/PGH180T
C9
C6
C7
L11
C4
C8
C2
C3
C5
L1
L2
L3
L4
L5
L6
L7
L8
L9
L10
D1
D2
D3
D4
D5
D6
D7
H
45°
SESAME
PGH
SESAME MOTOR
PGH60-10
MADE IN TAIWAN

PGH Single Stage Dimensions



Specifications

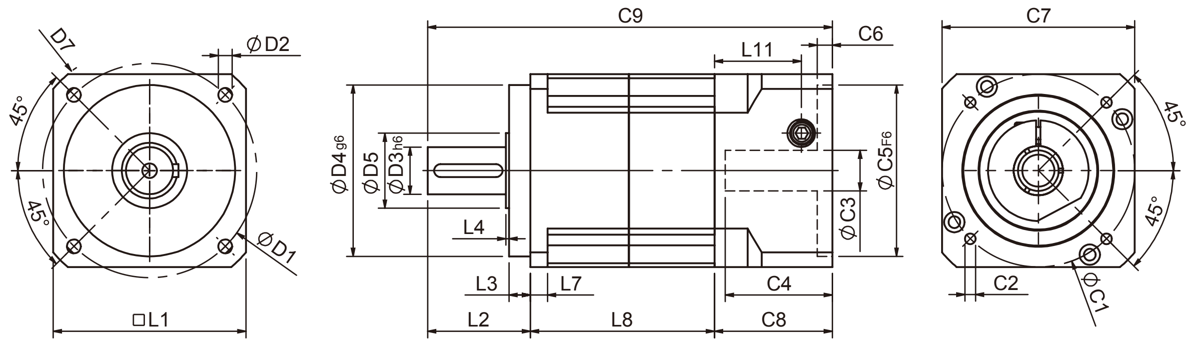
Unit:mm

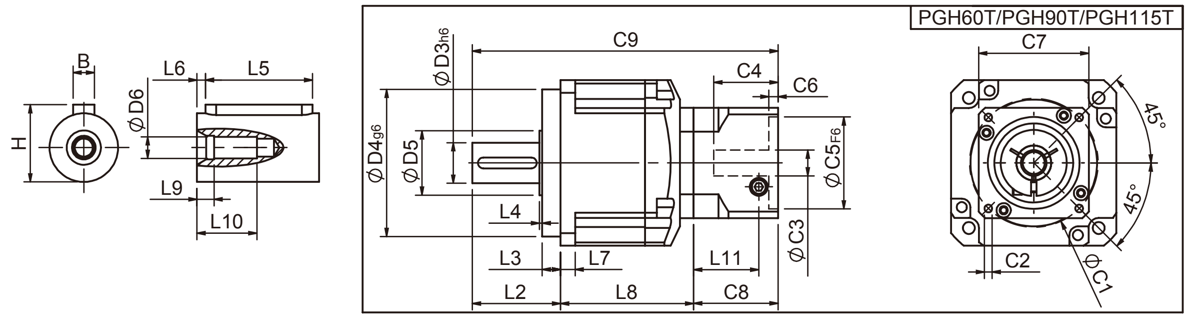
Dimensions	PGH42	PGH60	PGH90	PGH115	PGH142	PGH180	PGH220
D1	50	70	100	130	165	215	250
D2	3.4	5.5	6.5	8.5	10.5	13	17
D3 h6	13	16	22	32	40	55	75
D4 g6	35	50	80	110	130	160	180
D5	15	25	35	45	50	70	114.4
D6	M4x0.7P	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P	M20x2.5P	M20x2.5P
D7	56	80	118	148	186	239	292
L1	42.6	60	90	115	142	182	220
L2	26	37	48	63	91.5	100.5	138
L3	5.5	7	10	10	10	16	30
L4	1	1.5	1.5	3.5	2.5	2.5	3
L5	15	25	32	40	60	70	90
L6	2	2	3	5	5	6	7
L7	4	6	8	11	16	18	20
L8	28.3	37	46	57	75.5	94	111
L9	4	4	4.5	6	6	8	15
L10	14	16.5	20.5	30	38	48	42
L11	29	35.5	40.5	42	63	69.5	96
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/≦11	≦14/≦19	≦19/≦24	≦24/≦32/≦38	≦35/≦38	≦50	≦55
C4 [2]	27	37	47	56	66.5	82	112
C5 [2] F6	30	50	70	95	110	114.3	200
C6 [2]	4	4	6	10	6	13	6
C7 [2]	42.6	60	90	115	140	180	220
C8 [2]	38.5	46	55	63	80	95	120
C9 [2]	92.8	120	149	183	247	289.5	369
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 motor flange.

★ Specification subject to change without notice.

PGH Double Stage Dimensions-1





Specifications

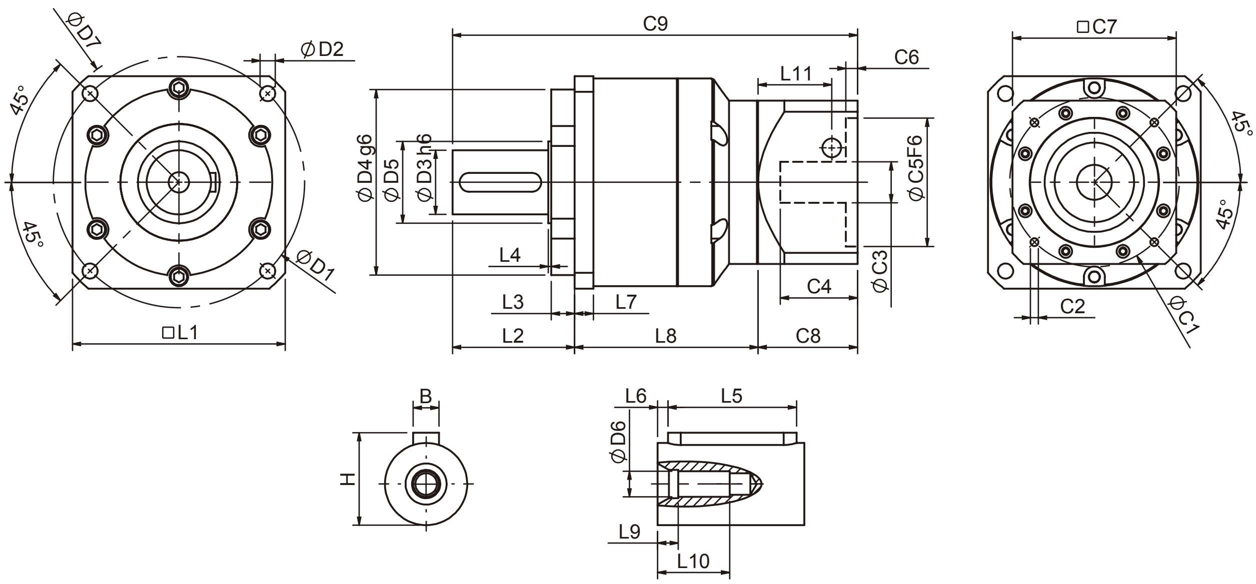
Unit:mm

Dimensions	PGH42	PGH60	PGH60T	PGH90	PGH90T	PGH115T
D1	50	70		100		130
D2	3.4	5.5		6.5		8.5
$D3_{h6}$	13	16		22		32
$D4_{g6}$	35	50		80		110
D5	15	25		35		45
D6	M4x0.7P	M5x0.8P		M8x1.25P		M12x1.75P
D7	56	80		118		148
L1	42.6	60		90		115
L2	26	37		48		63
L3	5.5	7		10		10
L4	1	1.5		1.5		3.5
L5	15	25		32		40
L6	2	2		3		5
L7	4	6		8		11
L8	55.3	70	65.5	86	78.5	99.5
L9	4	4		4.5		6
L10	14	16.5		20.5		30
L11	29	35.5	29	40.5	35.5	40.5
C1[2]	46	70	46	90	70	90
C2[2]	M4x0.7P	M5x0.8P	M4x0.7P	M6x1.0P	M5x0.8P	M6x1.0P
C3[2]	≦8/≦11	≦14/≦19	≦8/≦11	≦19/≦24	≦14	≦19/≦24
C4[2]	27	37	27	47	37	47
C5[2] $_{F6}$	30	50	30	70	50	70
C6[2]	4	4	4	6	4	6
C7[2]	42.6	60	42.6	90	60	90
C8[2]	38.5	46	38.5	55	46	55
C9[2]	119.8	153	141	189	172.5	217.5
B	5	5		6		10
H	15	18		24.5		35

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

★ Specification subject to change without notice.

PGH Double Stage Dimensions-2



Specifications

Unit:mm

Dimensions	PGH142T	PGH180T	PGH220T
D1	165	215	250
D2	10.5	13	17
D3h6	40	55	75
D4g6	130	160	180
D5	50	70	114.4
D6	M16x2.0P	M20x2.5P	M20x1.5P
D7	186	239	292
L1	142	182	220
L2	91.5	100.5	138
L3	10	16	30
L4	2.5	2.5	3
L5	60	70	90
L6	5	6	7
L7	16	18	20
L8	127.5	166	202
L9	6	8	15
L10	38	48	42
L11	42	63	74
C1 [2]	115	145	200
C2 [2]	M8x1.25P	M8x1.25P	M12x1.75P
C3 [2]	≦24/≦32/≦38	≦35/≦38	≦50
C4 [2]	56	66.5	81
C5 [2] F6	95	110	114.3
C6 [2]	10	6	6
C7 [2]	115	140	180
C8 [2]	63	80	93
C9 [2]	282	346.5	433
B	12	16	20
H	43	59	79.5

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

★ Specification subject to change without notice.

PGH Specifications Table

Specifications		Stage	Ratio	PGH-42	PGH-60	PGH-90	PGH-115	PGH-142	PGH-180	PGH-220
Nominal Output Torque T_{2N}	N • m	1	3	19	53	145	290	520	950	1100
			4	20	55	150	300	550	1050	1700
			5	22	60	160	330	600	1200	2000
			6	20	55	150	310	560	1100	1900
			7	19	50	140	300	530	1100	1800
			8	17	45	120	260	480	1000	1600
			9	14	40	100	230	450	900	1500
			10	14	40	100	230	450	900	1500
		Stage	Ratio	PGH-42	PGH-60 (T)	PGH-90(T)	PGH-115T	PGH-142T	PGH-180T	PGH-220T
		2	15	19	53	145	290	520	950	2000
			20	20	55	150	300	550	1050	2000
			25	22	60	160	330	600	1200	2000
			30	22	60	160	330	600	1200	2000
			35	22	60	160	330	600	1200	2000
			40	22	60	160	330	600	1200	2000
			45	22	60	160	330	600	1200	2000
			50	22	60	160	330	600	1200	2000
			60	20	55	150	310	560	1100	1900
			70	19	50	140	300	530	1100	1800
			80	17	45	120	260	480	1000	1600
			90	14	40	100	230	450	900	1500
			100	14	40	100	230	450	900	1500
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	5000	5000	4000	4000	3000	3000	2000
Max. Input Speed n_{1max}	rpm	1,2	3-100	10000	10000	8000	8000	6000	6000	4000
Micro Backlash P0	arcmin	1 2	3-10 15-100	≦2 ≦4	≦2 ≦4	≦2 ≦4	≦1 ≦3	≦1 ≦3	≦1 ≦3	≦1 ≦3
Precision Backlash P1	arcmin	1 2	3-10 15-100	≦4 ≦6	≦4 ≦6	≦4 ≦6	≦3 ≦5	≦3 ≦5	≦3 ≦5	≦3 ≦5
Standard Backlash P2	arcmin	1 2	3-10 15-100	≦6 ≦8	≦6 ≦8	≦6 ≦8	≦5 ≦7	≦5 ≦7	≦5 ≦7	≦5 ≦7
Torsional Rigidity	N • m /arcmin	1,2	3-100	3	7	14	25	50	145	225
Max. Radial Load F_{2rB} [1]	N	1,2	3-100	760	1570	3250	6620	9400	14500	33000
Max. Axial Load F_{2aB} [1]	N	1,2	3-100	410	750	1870	3310	4670	6460	18530
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 15-100	≧97% ≧94%						
Weight	kg	1 2	3-10 15-100	0.6 0.9	1.3 2.0/1.6	3.5 5.6/3.9	7.8 9.5	16.1 19	27 34	55 68.5
Mounting Position	-	1,2	3-100	Any direction						
Noise Level [2]	dBA/1m	1,2	3-100	56	58	60	63	65	67	70
Protection Class	-	1,2	3-100	IP65						
Lubrication	-	1,2	3-100	Synthetic Lubricant						

Inertia (J1)

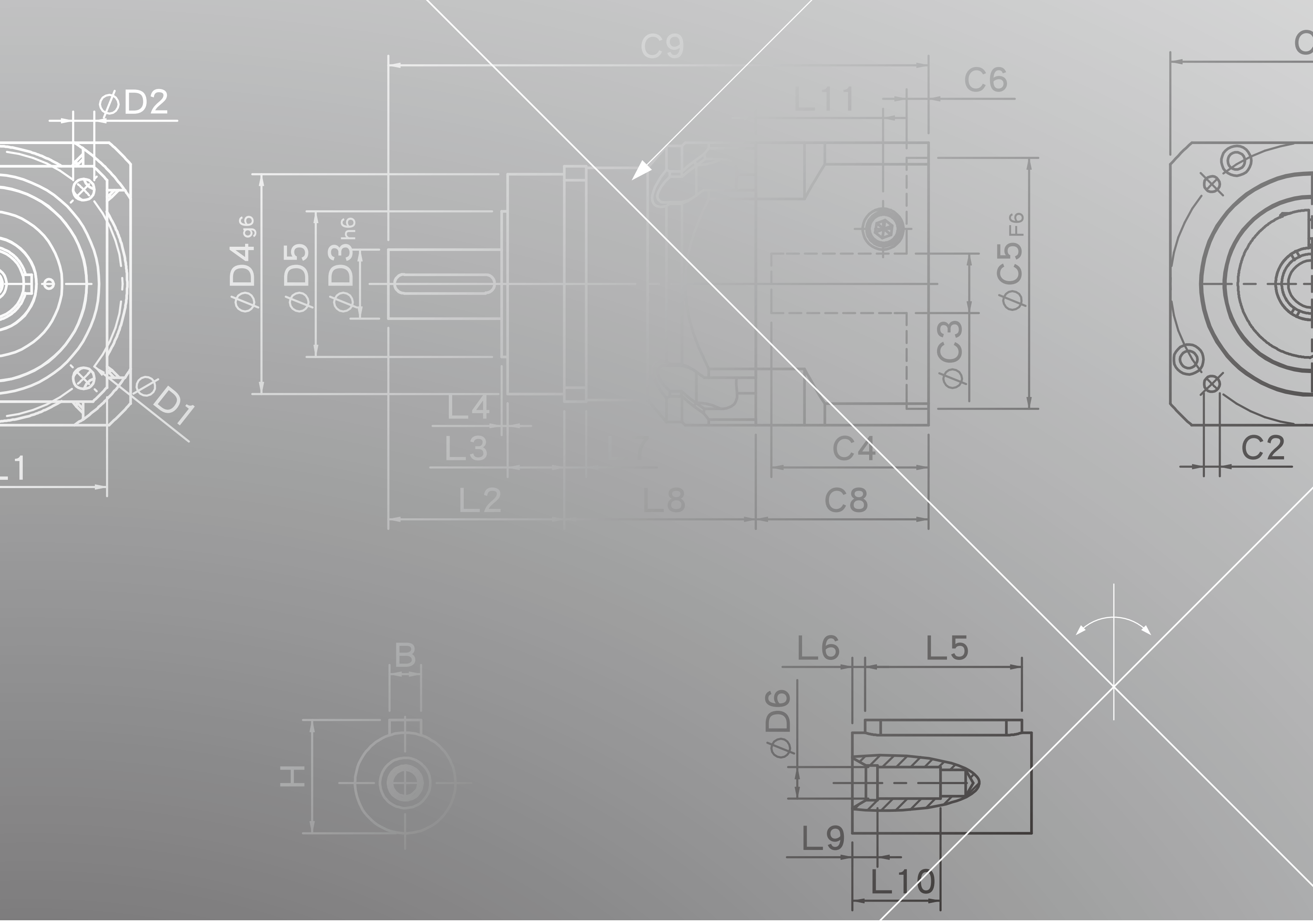
Stage	Ratio	unit	PGH-42	PGH-60	PGH-90	PGH-115	PGH-142	PGH-180	PGH-220
1	3	Kg • cm^2	0.03	0.23	0.97	2.35	10.00	30.50	79.50
	4		0.02	0.18	0.67	1.66	7.17	25.86	58.21
	5		0.02	0.17	0.65	1.50	6.52	23.63	54.36
	6/7/8		0.02	0.14	0.60	1.45	6.17	22.92	54.12
	9/10		0.02	0.14	0.58	1.41	6.10	22.73	53.98
Stage	Ratio		PGH-42	PGH-60(T)	PGH-90(T)	PGH-115T	PGH-142T	PGH-180T	PGH-220T
2	15/20/25		0.02	0.17(0.02)	0.65(0.17)	0.65	1.50	6.52	23.63
	30/35/40		0.02	0.14(0.02)	0.60(0.14)	0.60	1.45	6.17	22.92
	45/50/60/70/80/90/100		0.02	0.14(0.02)	0.58(0.14)	0.58	1.41	6.10	22.73

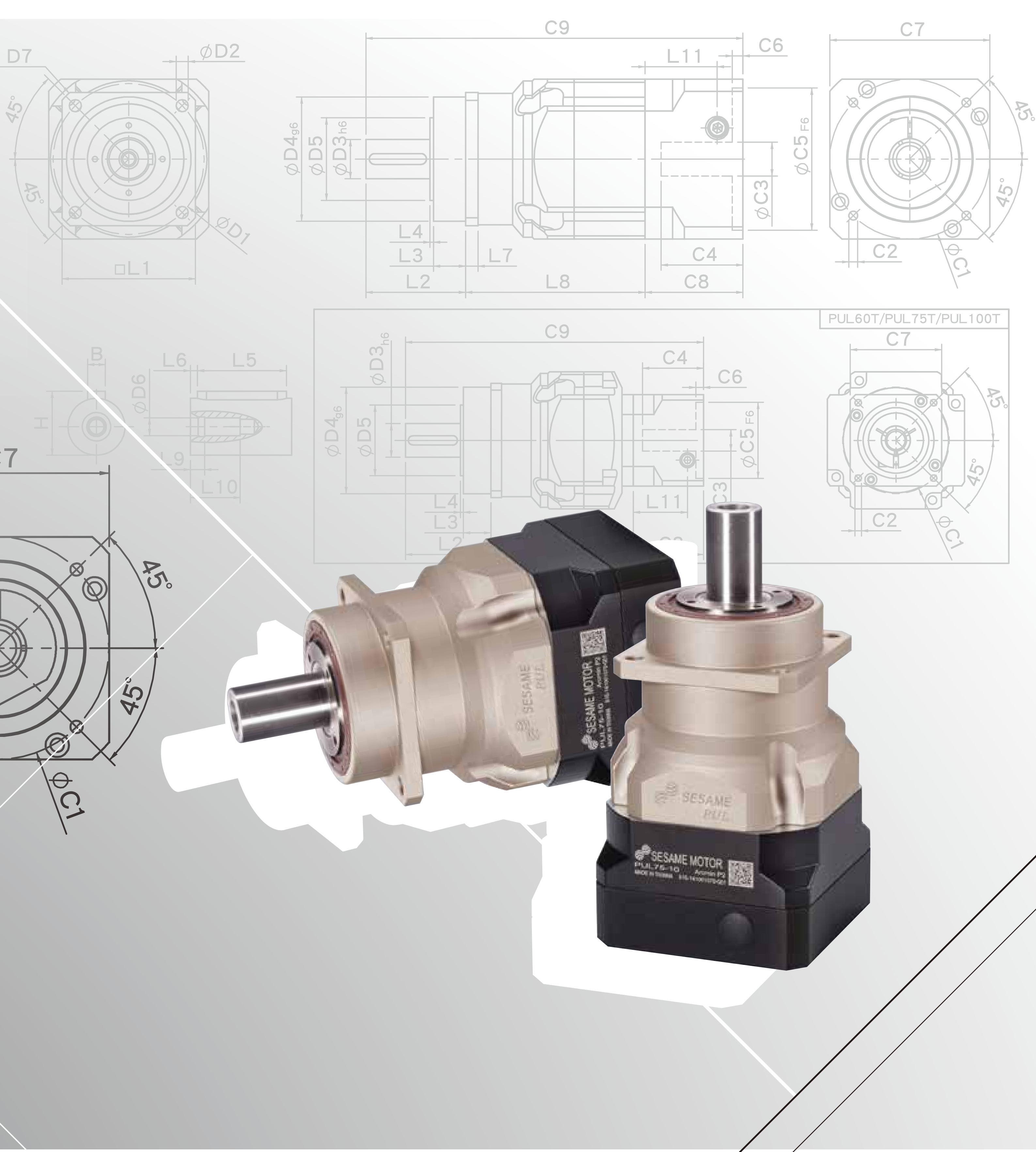
* 1. Applied to the output shaft center at 100 rpm.
* 2. Measured at 3000 rpm with no load. These values are measured by gearbox with ratio = 10 (1-stage) or ratio = 100 (2-stage) at nominal input speed or 3000 rpm (if nominal input speed is higher than 3000 rpm) with no load.

※ The above figures/specifications are subject to change without prior notice.

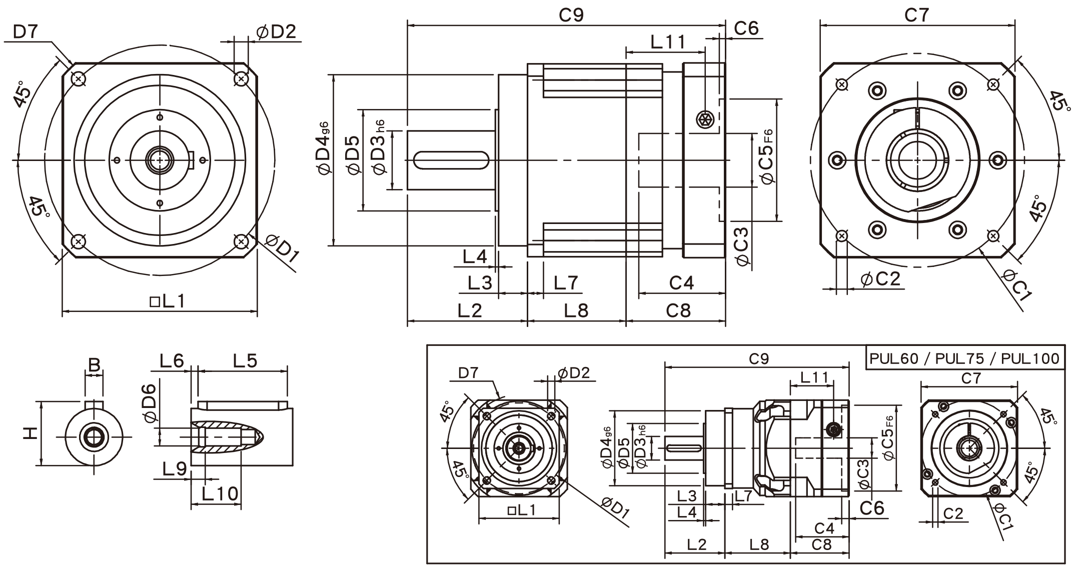
Products due to human error, natural disasters or other factors lead to poor or damaged, will not be covered under warranty.

PUL SERIES


C9
C6
L11
ØD2
ØD4g6
ØD5
ØD3h6
ØC5F6
ØC3
ØD1
L4
L3
L2
L8
C4
C8
C2
B
H
L6
L5
ØD6
L9
L10


PUL60T/PUL75T/PUL100T
SESAME MOTOR
PUL75-10
SESAME
PUL

PUL Single Stage Dimensions



Specifications

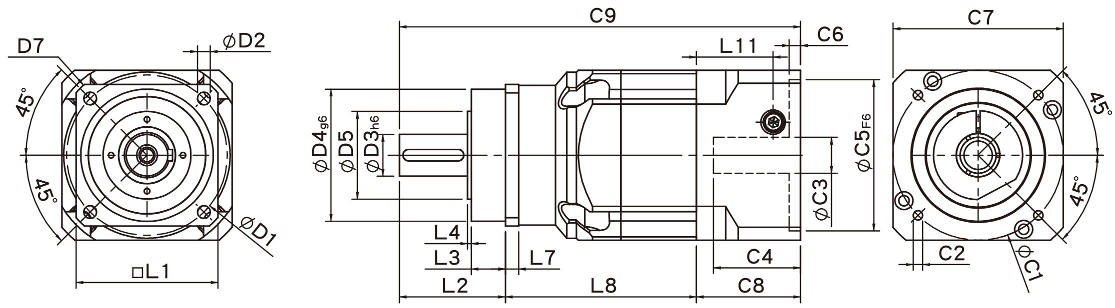
Unit:mm

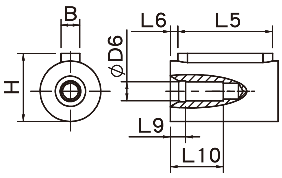
Dimensions	PUL60	PUL75	PUL100	PUL140	PUL180	PUL220
D1	68	85	120	165	215	250
D2	5.5	6.8	9	11	13	17
$D3_{h6}$	16	22	32	40	55	75
$D4_{g6}$	60	70	90	130	160	180
D5	34.6	46.4	59.6	79.2	94.5	114.4
D6	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P	M20x2.5P	M20x2.5P
D7	80	100	138	186	239	292
L1	62	76	105	142	180	220
L2	48.5	56	88	112	112	138
L3	18.5	18	28	27	27	30
L4	1.5	2	2	3	3	3
L5	25	32	40	60	70	90
L6	2	2	5	5	6	7
L7	6	7	10	12	15	20
L8	44	61	46	64.5	92	111
L9	4	4.5	6	6	8	15
L10	16.5	20.5	30	38	48	42
L11	35.5	40.5	41.8	70	74	96
C1[2]	70	90	115	165	200	235
C2[2]	M5x0.8P	M6x1P	M8x1.25P	M10x1.5P	M12x1.75P	M12x1.75P
C3[2]	≦14/≦19	≦19/≦24	≦24/≦32/≦38	≦35/≦38	≦50	≦55
C4[2]	37	47	51	66.7	81	112
C5[2] F6	50	70	95	130	114.3	200
C6[2]	4	6	6	5.5	6	6
C7[2]	60	90	115	140	182	220
C8[2]	46	55	58	87.2	93	120
C9[2]	138.5	172	192	263.7	297	369
B	5	6	10	12	16	20
H	18	24.5	35	43	59	79.5

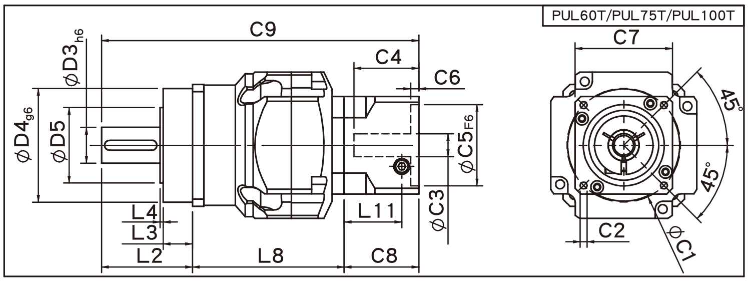
★ C1~C9 are motor specific dimensions (metric std shown). Size may vary according to motor flange.

★ Specification subject to change without notice.

PUL Double Stage Dimensions-1







Specifications

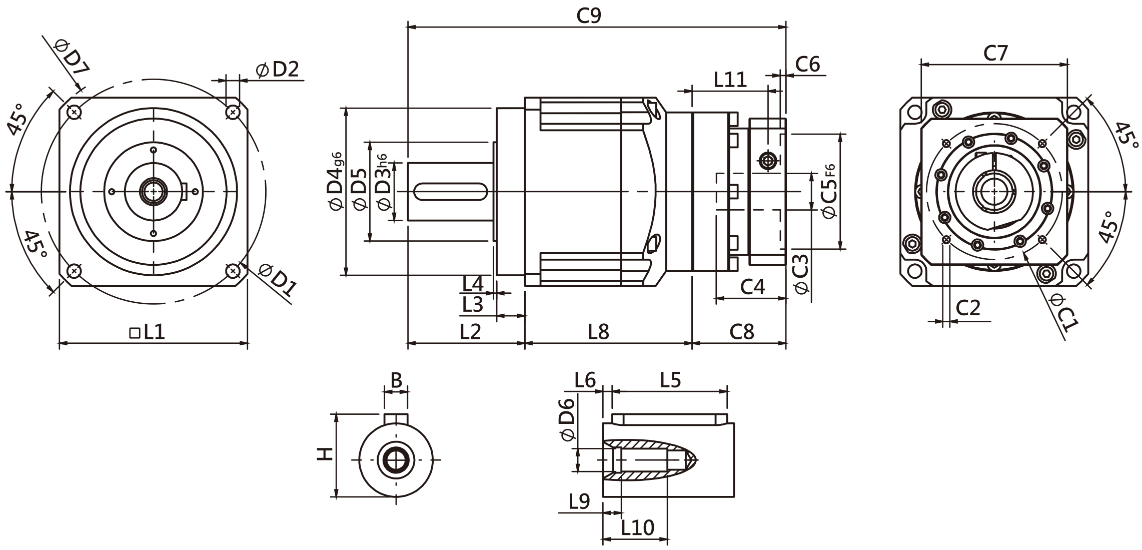
Unit:mm

Dimensions	PUL60/PUL60T		PUL75/PUL75T		PUL100T
D1	68		85		120
D2	5.5		6.8		9
$D3_{h6}$	16		22		32
$D4_{g6}$	60		70		90
D5	34.6		46.4		59.6
D6	M5x0.8P		M8x1.25P		M12x1.75P
D7	80		100		138
L1	62		76		105
L2	48.5		56		88
L3	18.5		18		28
L4	1.5		2		2
L5	25		32		40
L6	2		2		5
L7	6		7		10
L8	77	72.5	101	93.5	88.5
L9	4		4.5		6
L10	16.5		20.5		30
L11	35.5	29	40.5	35.5	40.5
C1 [2]	70	46	90	70	90
C2 [2]	M5x0.8P	M4x0.7P	M6x1P	M5x0.8P	M6x1P
C3 [2]	≦14/≦19	≦8/≦11	≦19/≦24	≦14/≦19	≦19/≦24
C4 [2]	37	27	47	37	47
$C5_{F6}$ [2]	50	30	70	50	70
C6 [2]	4	4	6	4	6
C7 [2]	60	42.6	90	60	90
C8 [2]	46	38.5	55	46	55
C9 [2]	171.5	159.5	212	195.5	231.5
B	5		6		10
H	18		24.5		35

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

★ Specification subject to change without notice.

PUL Double Stage Dimensions-2



Specifications

Unit:mm

Dimensions	PUL140T	PUL180T	PUL220T
D1	165	215	250
D2	11	13	17
D3 h6	40	55	75
D4 g6	130	160	180
D5	79.2	94.5	114.4
D6	M16x2.0P	M20x2.5P	M20x2.5P
D7	186	239	292
L1	142	180	220
L2	112	112	138
L3	27	27	30
L4	3	3	3
L5	60	70	90
L6	5	6	7
L7	12	15	20
L8	120	160.2	202
L9	6	8	15
L10	38	48	42
L11	41.8	72.6	74
C1 [2]	130	130	200
C2 [2]	M8x1.25P	M8x1.25P	M12x1.75P
C3 [2]	≦24/≦32/≦38	≦35/≦38	≦50
C4 [2]	51	66.7	81
C5 [2] F6	110	110	114.3
C6 [2]	6	5.5	6
C7 [2]	115	140	180
C8 [2]	58	89.8	93
C9 [2]	290	362	433
B	12	16	20
H	43	59	79.5

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

★ Specification subject to change without notice.

PUL Specifications Table

Specifications		Stage	Ratio	PUL-60	PUL-75	PUL-100	PUL-140	PUL-180	PUL-220
Nominal Output Torque T_{2N}	N • m	1	3	53	145	180	340	580	1100
			4	55	150	240	500	1100	1700
			5	54	140	290	600	1200	2000
			6	46	135	280	560	1100	1850
			7	44	125	270	530	1100	1750
			8	41	110	240	480	1000	1550
			9	37	95	220	430	900	1500
			10	37	95	220	430	900	1450
		Stage	Ratio	PUL-60 (T)	PUL-75(T)	PUL-100T	PUL-140T	PUL-180T	PUL-220T
		2	15	53	145	180	520	1200	2000
			20	55	150	240	600	1200	2000
			25	54	140	290	600	1200	2000
			30	54	140	290	600	1200	2000
			35	54	140	290	600	1200	2000
			40	54	140	290	600	1200	2000
			45	54	140	290	600	1200	2000
			50	54	140	290	600	1200	2000
			60	46	135	280	560	1200	1850
			70	44	125	270	530	1100	1750
			80	41	110	240	480	1000	1550
			90	37	95	220	430	900	1500
			100	37	95	220	430	900	1450
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	5000	4000	4000	3000	3000	2000
Max. Input Speed n_{1max}	rpm	1,2	3-100	10000	8000	8000	6000	6000	4000
Micro Backlash P0	arcmin	1 2	3-10 12-100	≦2 ≦4	≦2 ≦4	≦1 ≦3	≦1 ≦3	≦1 ≦3	≦1 ≦3
Precision Backlash P1	arcmin	1 2	3-10 12-100	≦4 ≦6	≦4 ≦6	≦3 ≦5	≦3 ≦5	≦3 ≦5	≦3 ≦5
Standard Backlash P2	arcmin	1 2	3-10 12-100	≦6 ≦8	≦6 ≦8	≦5 ≦7	≦5 ≦7	≦5 ≦7	≦5 ≦7
Torsional Rigidity	N • m /arcmin	1,2	3-100	7	14	25	50	150	220
Max. Radial Load F_{2rB} [1]	N	1,2	3-100	4130	5220	10650	17600	22000	27800
Max. Axial Load F_{2aB} [1]	N	1,2	3-100	2500	3300	5700	11300	14000	16200
Operating Temp.	°C		3-100	-10 °C ~+90 °C					
Service Life	hr		3-100	30,000 (15,000 Continuous operation)					
Efficiency	%	1 2	3-10 12-100	≧97% ≧94%					
Weight	kg	1 2	3-10 12-100	1.8 2.4/2.0	4.0 5.7/4.5	6.7 8.2	15.1 17.5	30.8 37.0	55 68.5
Mounting Position	-	1,2	3-100	Any direction					
Noise Level [2]	dBA/1m	1,2	3-100	58	60	63	65	67	70
Protection Class	-	1,2	3-100	IP65					
Lubrication	-	1,2	3-100	Synthetic Lubricant					

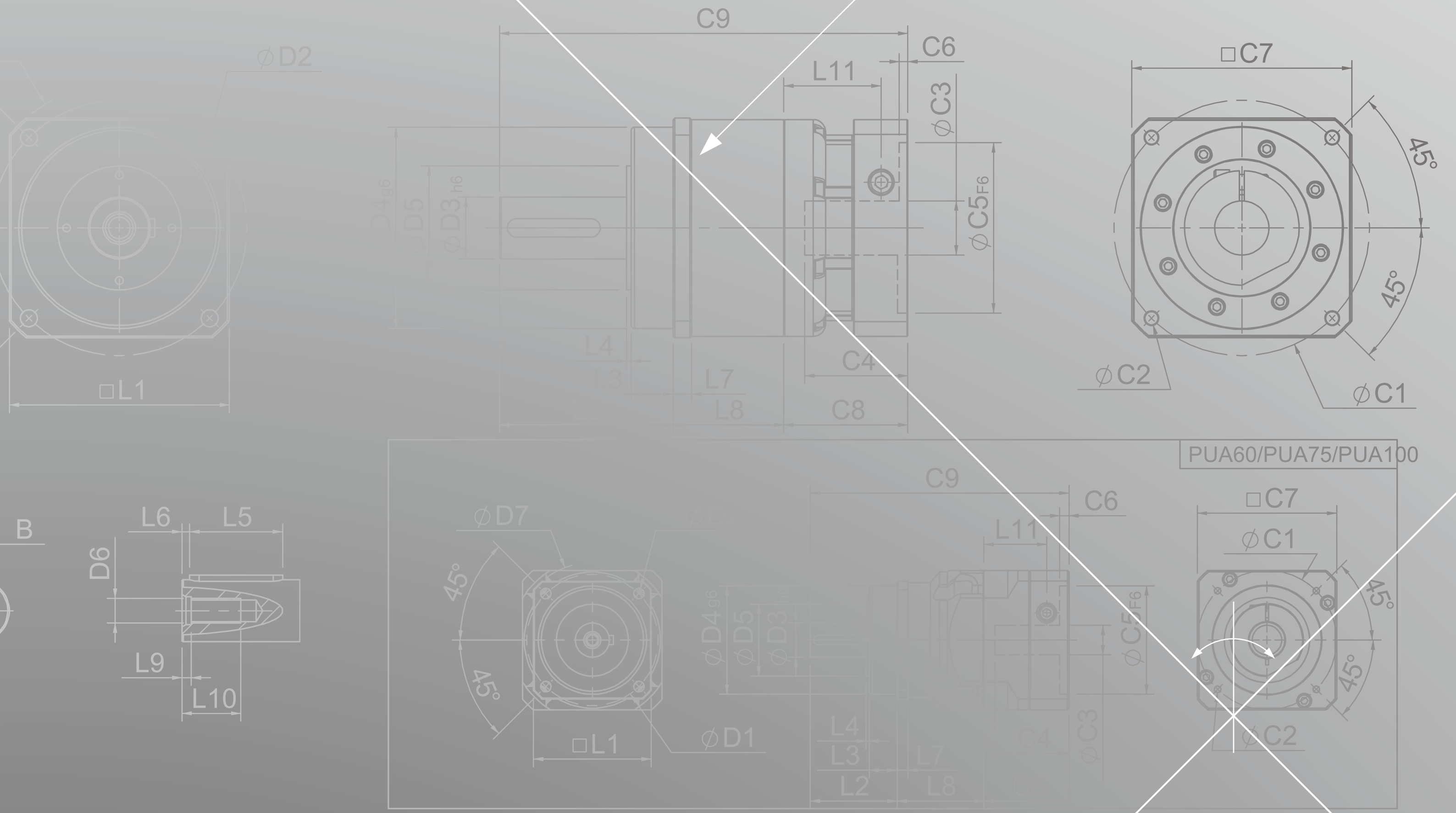
Inertia (J1)

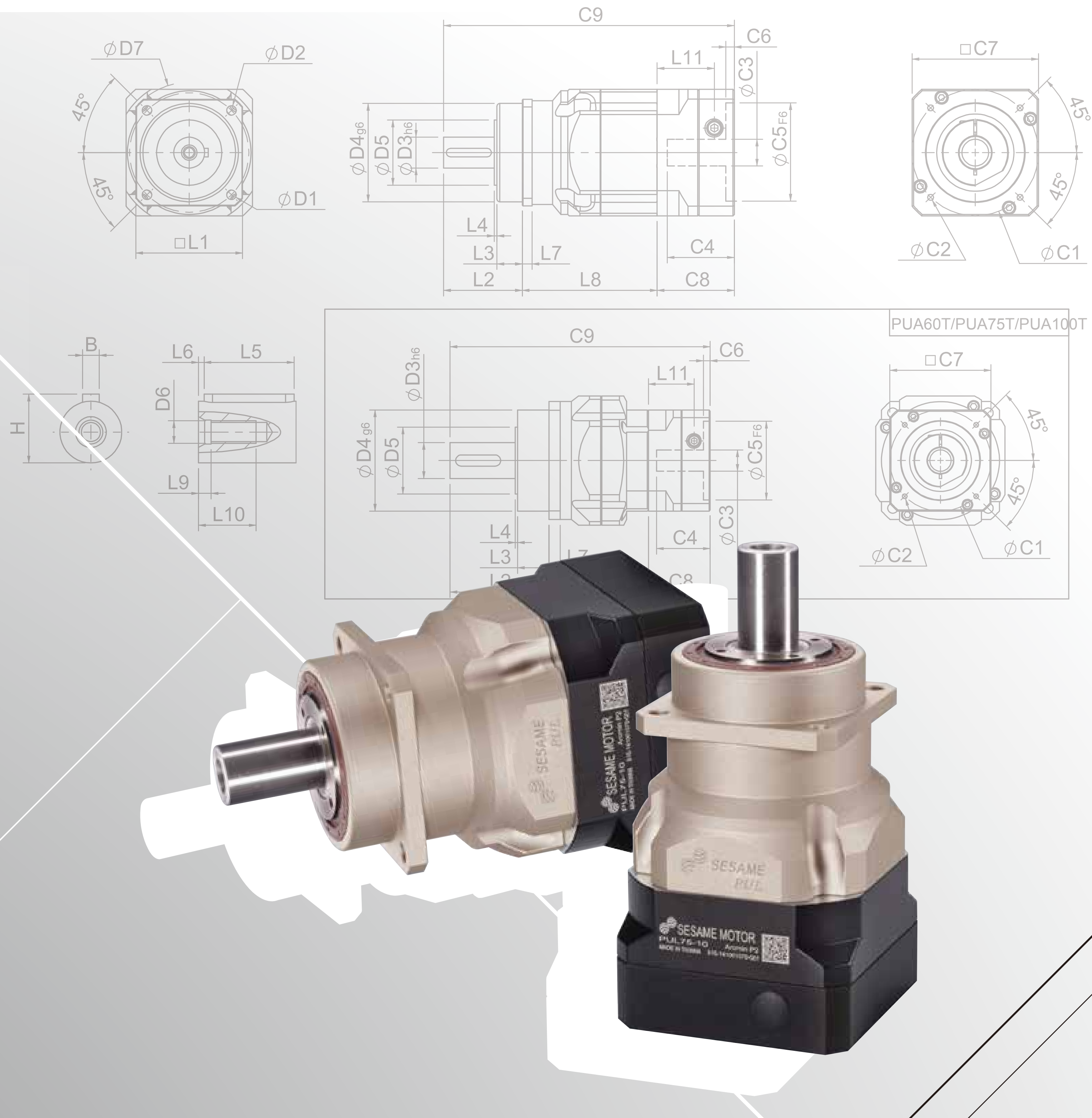
Stage	Ratio	unit	PUL-60	PUL-75	PUL-100	PUL-140	PUL-180	PUL-220
1	3	Kg • cm^2	0.23	0.97	2.35	10.00	30.50	79.50
	4		0.18	0.67	1.66	7.17	25.86	58.21
	5		0.17	0.65	1.50	6.52	23.63	54.36
	6/7/8		0.14	0.60	1.45	6.17	22.92	54.12
	9/10		0.14	0.58	1.41	6.10	22.73	53.98
Stage	Ratio		PUL-60(T)	PUL-75(T)	PUL-100T	PUL-140T	PUL-180T	PUL-220T
2	15/20		0.17(0.02)	0.65(0.17)	0.65	1.50	6.52	30.50
	25/30/35/40		0.14(0.02)	0.60(0.14)	0.60	1.45	6.17	22.92
	45/50/60/70/80/90/100		0.14(0.02)	0.58(0.14)	0.58	1.41	6.10	22.73

* 1. Applied to the output shaft center at 100 rpm.
* 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.

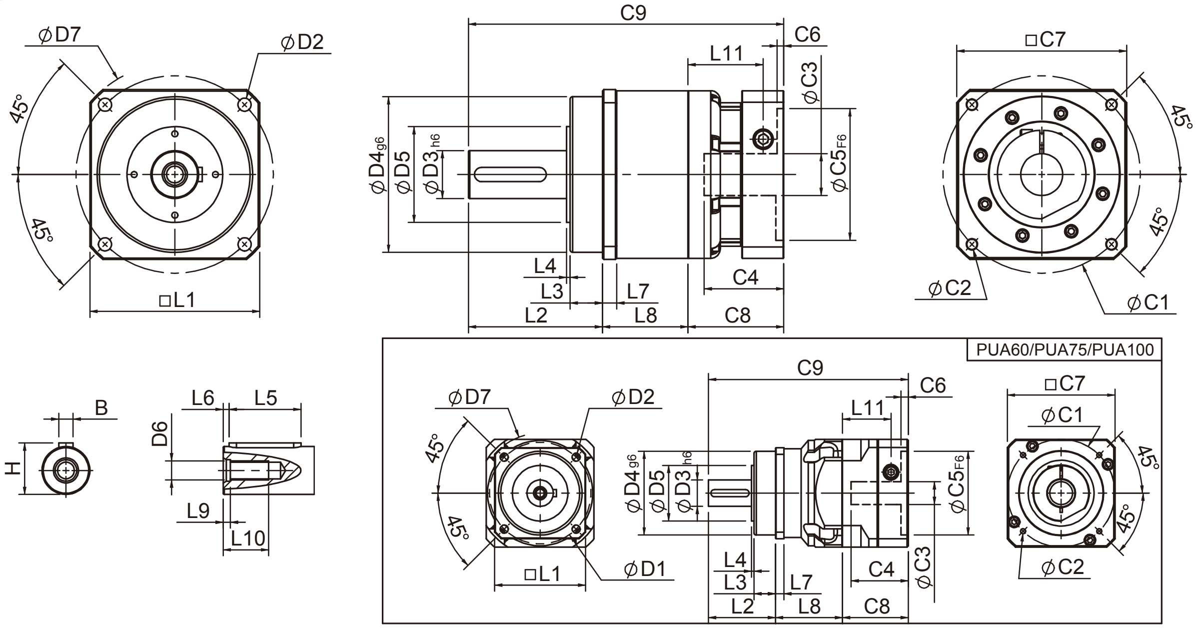
PUA SERIES


C9
C6
L11
□C7
45°
ϕC2
ϕC1
□L1
L6
L5
D6
L9
L10
ϕD7
ϕD1
PUA60/PUA75/PUA100



C9
C6
⌀D7
⌀D2
L11
⌀C3
□C7
45°
45°
⌀D4g6
⌀D5
⌀D3h6
⌀C5F6
⌀D1
□L1
L4
L3
L7
C4
L2
L8
C8
⌀C2
⌀C1
PUA60T/PUA75T/PUA100T
B
L6
L5
H
D6
L9
L10
SESAME MOTOR
PUL75-10
SESAME
PUL

PUA Single Stage Dimensions



Specifications

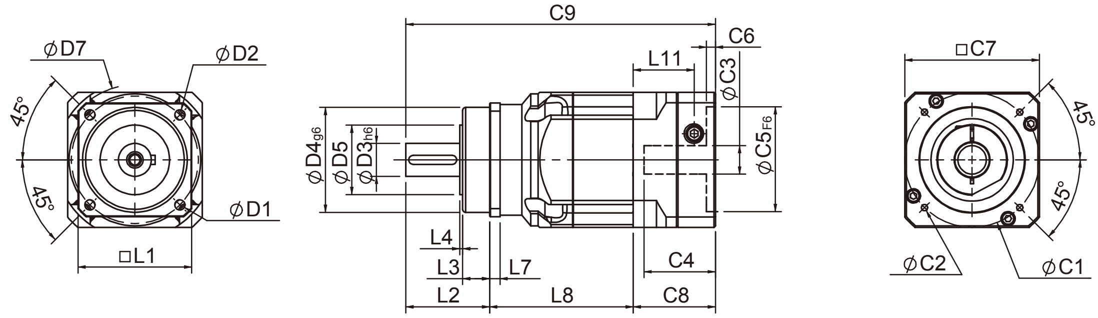
Unit:mm

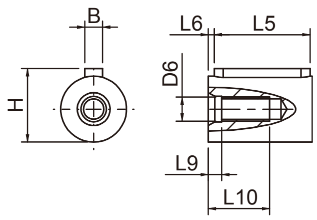
Dimensions	PUA60	PUA75	PUA100	PUA140
D1	68	85	120	165
D2	5.5	6.8	9	11
D3$_{h6}$	16	22	32	40
D4$_{g6}$	60	70	90	130
D5	34.4	46.4	59.6	79.2
D6	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P
D7	80	100	138	186
L1	62	76	105	142
L2	48.5	56	88	112
L3	18.5	18	28	27
L4	1.5	2	2	3
L5	25	32	40	60
L6	2	2	5	5
L7	6	7	10	12
L8	32.5	56	46	71.5
L9	4	4.5	6	6
L10	16.5	20.5	30	38
L11	35.5	40.5	41.8	62.8
C1[2]	70	90	115	165
C2[2]	M5x0.8P	M6x1P	M8x1.25P	M10x1.5P
C3[2]	≦14/≦19	≦19/≦24	≦24/≦32/≦38	≦35/≦38
C4[2]	37	47.8	51	66.5
C5[2]$_{F6}$	50	70	95	130
C6[2]	4	6	6	5.5
C7[2]	60	90	115	140
C8[2]	46	55	58	80
C9[2]	127	167	192	263.5
B	5	6	10	12
H	18	24.5	35	43

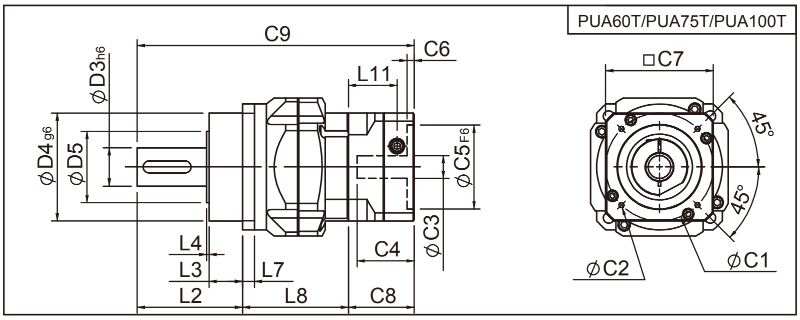
★ C1~C9 are motor specific dimensions (metric std shown). Size may vary according to motor flange.

★ Specification subject to change without notice.

PUA Double Stage Dimensions-1







Specifications

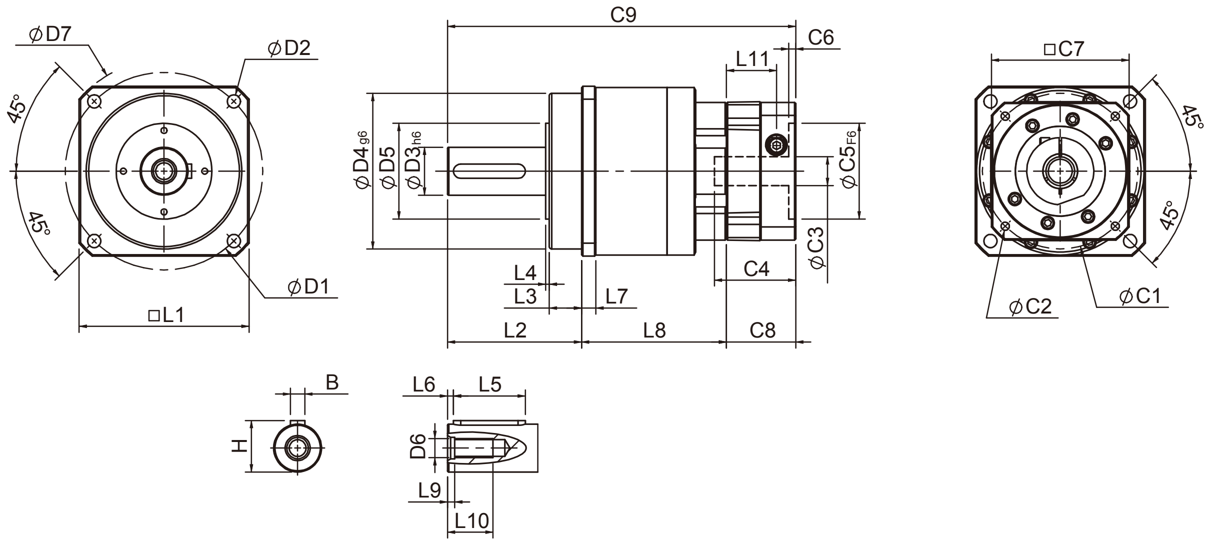
Unit:mm

Dimensions	PUA60	PUA60T	PUA75	PUA75T	PUA100T
D1	68		85		120
D2	5.5		6.8		9
$D3_{h6}$	16		22		32
$D4_{g6}$	60		70		90
D5	34.4		46.4		59.6
D6	M5x0.8P		M8x1.25P		M12x1.75P
D7	80		100		138
L1	62		76		105
L2	48.5		56		88
L3	18.5		18		28
L4	1.5		2		2
L5	25		32		40
L6	2		2		5
L7	6		7		10
L8	65.5	61	96	88.5	88.5
L9	4		4.5		6
L10	16.5		20.5		30
L11	35.5	29	40.5	35.5	40.5
$C1^2$	70	46	90	70	90
$C2^2$	M5x0.8P	M4x0.7P	M6x1P	M5x0.8P	M6x1P
$C3^2$	≦14/≦19	≦8/≦14	≦19/≦24	≦14/≦19	≦19/≦24
$C4^2$	37	27	47.8	37	47.8
$C5^2{}_{F6}$	50	30	70	50	70
$C6^2$	4	4	6	4	6
$C7^2$	60	42.6	90	60	90
$C8^2$	46	38.5	55	46	55
$C9^2$	160	148	207	190.5	231.5
B	5		6		10
H	18		24.5		35

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

★ Specification subject to change without notice.

PUA Double Stage Dimensions-2



Specifications

Unit:mm

Dimensions	PUA140T	-	-
D1	165	-	-
D2	11	-	-
$D3_{h6}$	40	-	-
$D4_{g6}$	130	-	-
D5	79.2	-	-
D6	M16x2.0P	-	-
D7	186	-	-
L1	142	-	-
L2	112	-	-
L3	27	-	-
L4	3	-	-
L5	60	-	-
L6	5	-	-
L7	12	-	-
L8	121	-	-
L9	6	-	-
L10	38	-	-
L11	41.8	-	-
$C1^{2}$	130	-	-
$C2^{2}$	M8x1.25P	-	-
$C3^{2}$	≦24/≦32/≦38	-	-
$C4^{2}$	51	-	-
$C5^{2}_{F6}$	110	-	-
$C6^{2}$	6	-	-
$C7^{2}$	115	-	-
$C8^{2}$	58	-	-
$C9^{2}$	291	-	-
B	12	-	-
H	43	-	-

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

★ Specification subject to change without notice.

PUA Specifications Table

Specifications		Stage	Ratio	PUA60	PUA-75	PUA-100	PUA-140
Nominal Output Torque T_{2N}	N · m	1	3	53	145	180	340
			4	55	150	240	500
			5	54	140	290	600
			6	46	135	280	560
			7	44	125	270	530
			8	41	110	240	480
			9	37	95	220	430
			10	37	95	220	430
		Stage	Ratio	PUA-60 / PUA-60T	PUA-75 / PUA-75T	PUA-100T	PUA-140T
		2	15	53	145	180	520
			20	55	150	240	600
			25	54	140	290	600
			30	54	140	290	600
			35	54	140	290	600
			40	54	140	290	600
			45	54	140	290	600
			50	54	140	290	600
			60	46	135	280	560
			70	44	125	270	530
			80	41	110	240	480
			90	37	95	220	430
			100	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	3500	3000	2500
Max. Input Speed n_{1max}	rpm	1,2	3-100	6000	6000	5000	4500
Micro Backlash P0	arcmin	1	3-10	≦ 2	≦ 2	≦ 1	≦ 1
		2	12-100	≦ 4	≦ 4	≦ 3	≦ 3
Precision Backlash P1	arcmin	1	3-10	≦ 4	≦ 4	≦ 3	≦ 3
		2	12-100	≦ 6	≦ 6	≦ 5	≦ 5
Standard Backlash P2	arcmin	1	3-10	≦ 6	≦ 6	≦ 5	≦ 5
		2	12-100	≦ 8	≦ 8	≦ 7	≦ 7
Torsional Rigidity	N · m /arcmin	1,2	3-100	7	14	25	50
Max. Radial Load F_{2rB} [1]	N	1,2	3-100	1900	5000	7410	11380
Max. Axial Load F_{2aB} [1]	N	1,2	3-100	1500	3080	4500	8830
Operating Temp.	℃		3-100	-10℃ ~ +90℃			
Service Life	hr		3-100	30,000 (15,000 Continuous operation)			
Efficiency	%	1	3-10	≧97%			
		2	12-100	≧94%			
Weight	kg	1	3-10	1.5	3.5	6.6	14.5
		2	12-100	2.0/1.7	5.2/4.0	8.1	17.5
Mounting Position	-	1,2	3-100	Any Direction			
Noise Level [2]	dBA/1m	1,2	3-100	58	60	63	65
Protection Class	-	1,2	3-100	IP65			
Lubrication	-	1,2	3-100	Synthetic Lubricant			

Inertia (J1)

Stage	Ratio	unit	PUA60	PUA-75	PUA-100	PUA-140
1	3	Kg · cm^2	0.23	0.97	2.35	10.00
	4		0.18	0.67	1.66	7.17
	5		0.17	0.65	1.50	6.52
	6/7/8		0.14	0.60	1.45	6.17
	9/10		0.14	0.58	1.41	6.10
Stage	Ratio		PUA-60(T)	PUA-75(T)	PUA-100T	PUA-140T
2	15/20		0.17(0.02)	0.65(0.17)	0.65	2.35
	25/30/35/40		0.14(0.02)	0.60(0.14)	0.60	1.45
	45/50/60/70/80/90/100		0.14(0.02)	0.58(0.14)	0.58	1.41

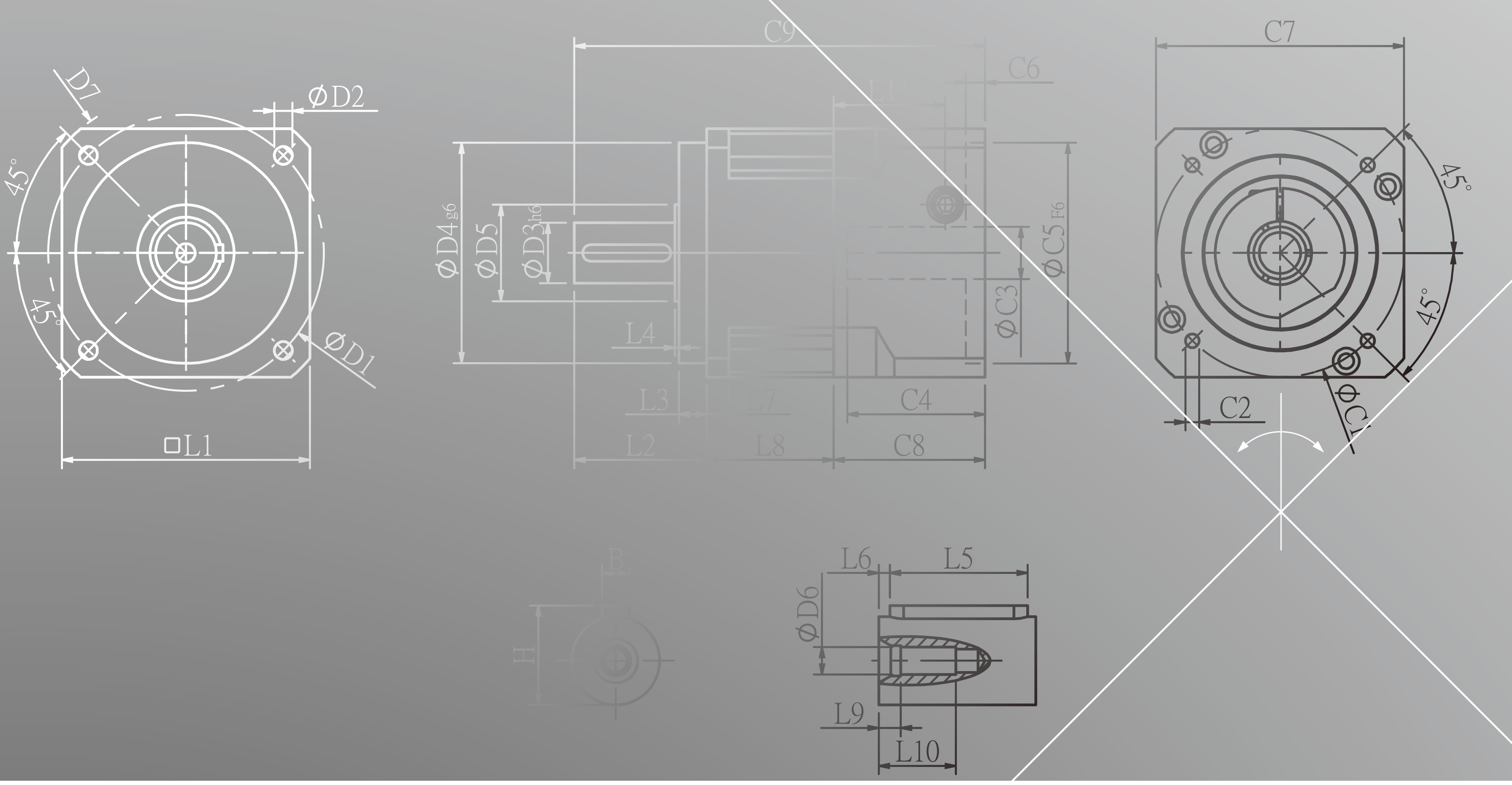
* 1. Applied to the output shaft center at 100 rpm.

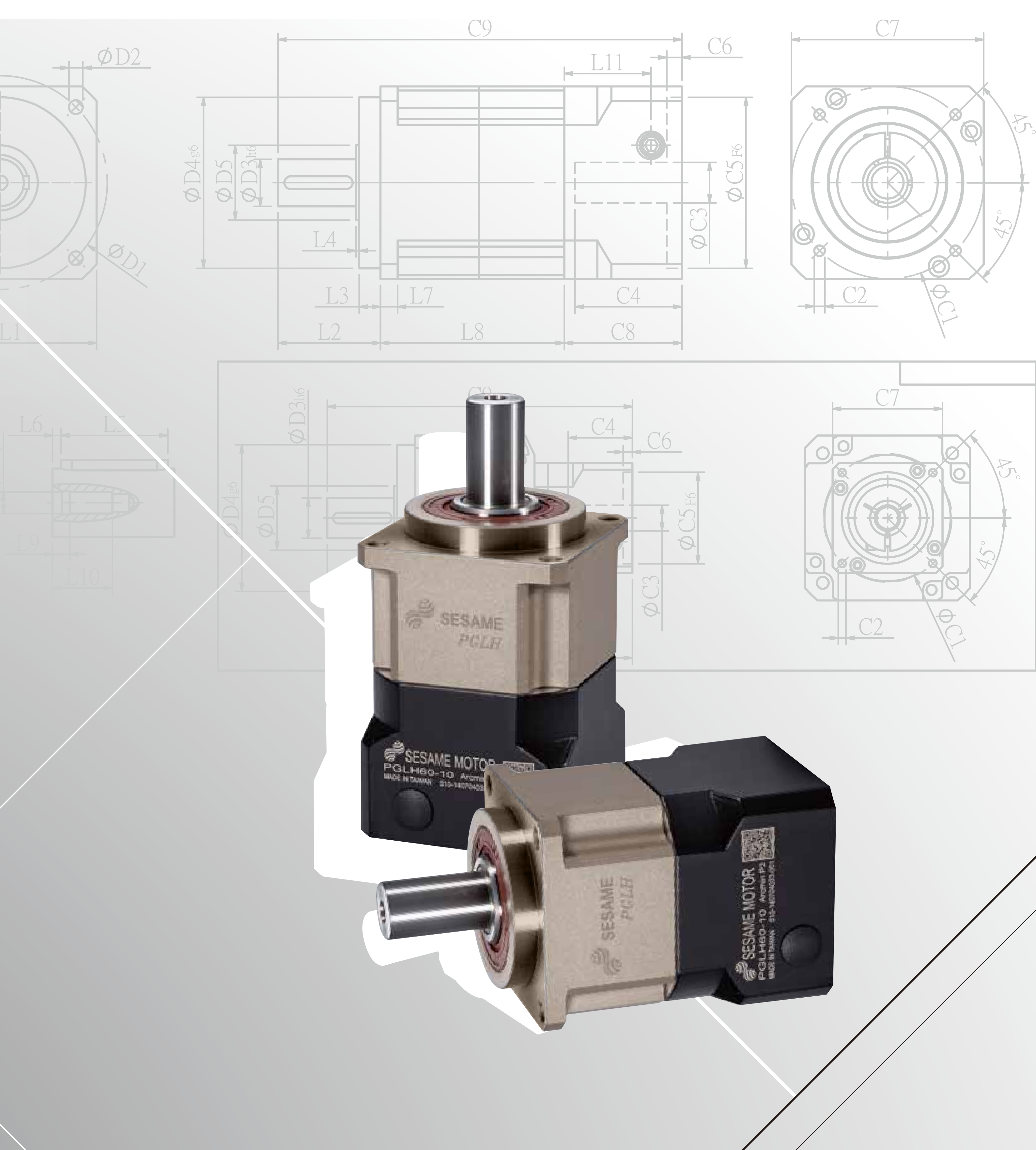
* 2. Measured at 3000 rpm with no load. These values are measured by gearbox with ratio = 10 (1-stage) or ratio = 100 (2-stage) at nominal input speed or 3000 rpm (if nominal input speed is higher than 3000 rpm) with no load.

※ The above figures/specifications are subject to change without prior notice.

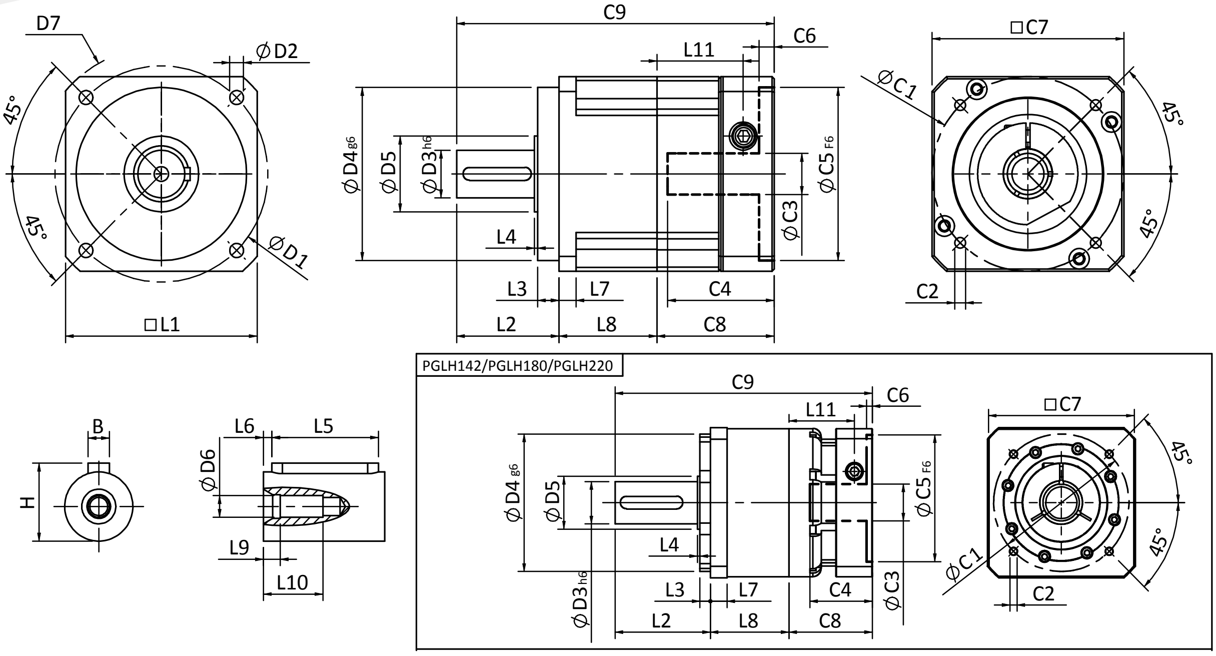
Products due to human error, natural disasters or other factors lead to poor or damaged, will not be covered under warranty.

PGLH SERIES


D7
ØD2
45°
45°
ØD1
□L1
C9
C6
L1
ØD4 g6
ØD5
ØD3 h6
ØC5 F6
ØC3
L4
L3
L7
C4
L2
L8
C8
C7
45°
45°
C2
ØC1
B
H
L6
L5
ØD6
L9
L10


C9
C6
L11
C7
ØD2
ØD4g6
ØD5
ØD3h6
ØC5F6
ØC3
ØD1
L4
L3
L7
C4
L2
L8
C8
C2
ØC1
45°
L6
L9
L10
SESAME
PGLH
SESAME MOTOR
PGLH60-10
MADE IN TAIWAN

PGLH Single Stage Dimensions



Specifications

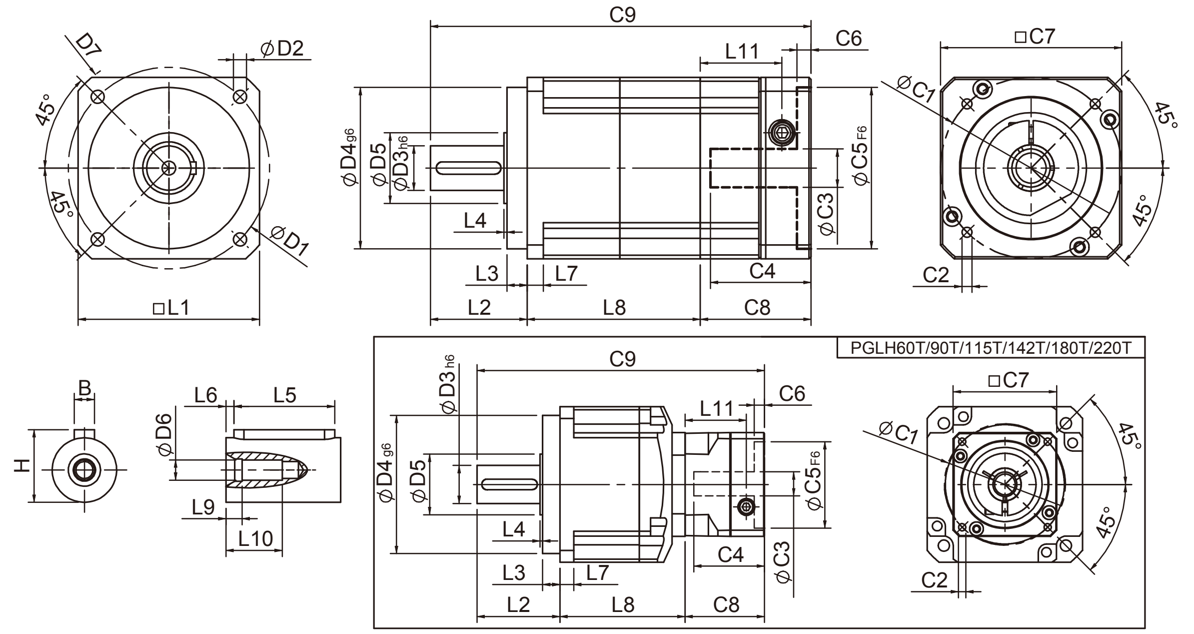
Unit:mm

Dimensions	PGLH42	PGLH60	PGLH90	PGLH115	PGLH142	PGLH180	PGLH220
D1	50	70	100	130	165	215	215
D2	3.4	5.5	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	114.4
D6	M4x0.7P	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P	M20x2.5P	M20x2.5P
D7	56	80	118	148	186	239	292
L1	42.6	60	90	115	142	182	220
L2	26	37	48	63	91.5	100.5	138
L3	5.5	7	10	10	10	16	30
L4	1	1.5	1.5	3.5	2.5	2.5	3
L5	15	25	32	40	60	70	90
L6	2	2	3	5	5	6	7
L7	4	6	8	11	16	20	20
L8	28.3	37	46	57	75.5	94	111
L9	4	4	4.5	6	6	8	15
L10	14	16.5	20.5	30	38	48	42
L11	29	35.5	40.5	53.7	63	69.5	96
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	≦14/≦19	≦19/≦24	≦24/≦32/≦38	≦35/≦38	≦50	≦55
C4[2]	27	37	41	56.3	66.5	82	112
C5[2]$_{F6}$	30	50	70	95	110	114.3	200
C6[2]	4	4	6	10	5.5	13	6
C7[2]	42.6	60	90	115	140	182	220
C8[2]	38.5	46	55	75	80	95	120
C9[2]	92.8	120	149	195	247	289.5	369
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 motor flange.

★ Specification subject to change without notice.

PGLH Double Stage Dimensions



Specifications

Unit:mm

Dimensions	PGLH42	PGLH60	PGLH60T	PGLH90	PGLH90T	PGLH115T	PGLH142T	PGLH180T	PGLH220T
D1	50	70		100		130	165	215	250
D2	3.4	5.5		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	114.4
D6	M4x0.7P	M5x0.8P		M8x1.25P		M12x1.75P	M16x2.0P	M20x2.5P	M20x2.5P
D7	56	80		118		148	186	239	292
L1	42.6	60		90		115	142	182	220
L2	26	37		48		63	91.5	100.5	138
L3	5.5	7		10		10	10	16	30
L4	1	1.5		1.5		3.5	2.5	2.5	3
L5	15	25		32		40	60	70	90
L6	2	2		3		5	5	6	7
L7	4	6		8		11	16	20	20
L8	55.3	70	65.5	90	78.5	99.5	127.5	166	202
L9	4	4		4.5		6	6	8	15
L10	14	16.5		20.5		30	38	48	42
L11	29	35.5	29	40.5	35.5	40.7	42	63	69.5
C1[2]	46	70	46	90	70	90	115	145	200
C2[2]	M4x0.7P	M5x0.8P	M4x0.7P	M6x1.0P	M5x0.8P	M6x1.0P	M8x1.25P	M8x1.25P	M8x1.25P
C3[2]	≦8/≦14	≦14/≦19	≦8/≦14	≦19/≦24	≦14/≦19	≦19/≦24	≦24/≦32/≦38	≦35/≦38	≦50
C4[2]	27	37	27	41	37	46	56	66.5	76
C5[2] F6	30	50	30	70	50	70	95	110	114.3
C6[2]	4	4	4	6	4	10	10	5.5	6
C7[2]	42.6	60	42.6	90	60	90	115	140	180
C8[2]	38.5	46	38.5	55	46	60	63	80	90
C9[2]	119.8	153	141	193	172.5	222.5	282	346.5	430
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 motor flange.

★ Specification subject to change without notice.

PGLH Specifications Table

Specifications		Stage	Ratio	PGLH-42	PGLH-60	PGLH-90	PGLH-115	PGLH-142	PGLH-180	PGLH-220
Nominal Output Torque T_{2N}	N · m	1	3	19	53	145	290	520	950	1100
			4	20	55	150	300	550	1000	1700
			5	17	54	140	290	600	1050	2000
			6	15	46	135	280	560	1000	1850
			7	14	44	125	270	530	960	1750
			8	12	41	110	240	480	900	1550
			9	11	37	95	220	430	800	1500
			10	11	37	95	220	430	800	1450
		Stage	Ratio	PGLH-42	PGLH-60 / PGLH-60T	PGLH-90 / PGLH-90T	PGLH-115T	PGLH-142T	PGLH-180T	PGLH-220T
		2	15	19	53	145	290	520	950	2000
			20	20	55	150	300	550	1000	2000
			25	17	54	140	290	600	1050	2000
			30	17	54	140	290	600	1050	2000
			35	17	54	140	290	600	1050	2000
			40	17	54	140	290	600	1050	2000
			45	17	54	140	290	600	1050	2000
			50	17	54	140	290	600	1050	2000
			60	15	46	135	280	560	1000	1850
			70	14	44	125	270	530	960	1750
			80	12	41	110	240	480	900	1550
			90	11	37	95	220	430	800	1500
			100	11	37	95	220	430	800	1450
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	3000	3000	2500	2500	2000
Max. Input Speed n_{1max}	rpm	1,2	3-100	8000	8000	6000	6000	5000	4000	3000
Micro Backlash P0	arcmin	1 2	3-10 12-100	≦4 ≦6	≦4 ≦6	≦4 ≦6	≦3 ≦5	≦3 ≦5	≦3 ≦5	≦3 ≦5
Precision Backlash P1	arcmin	1 2	3-10 12-100	≦6 ≦8	≦6 ≦8	≦6 ≦8	≦5 ≦7	≦5 ≦7	≦5 ≦7	≦5 ≦7
Standard Backlash P2	arcmin	1 2	3-10 12-100	≦8 ≦10	≦8 ≦10	≦8 ≦10	≦7 ≦9	≦7 ≦9	≦7 ≦9	≦7 ≦9
Torsional Rigidity	N · m /arcmin	1,2	3-100	2.5	6	12	23	50	145	200
Max. Radial Load F_{2rB} [1]	N	1,2	3-100	640	1260	2230	4300	7140	11050	28000
Max. Axial Load F_{2aB} [1]	N	1,2	3-100	410	600	1500	3310	4670	6460	15000
Operating Temp.	℃		3-100	-10℃~+90℃						
Service Life	hr		3-100	20,000 (10,000 Continuous operation)						
Efficiency	%	1 2	3-10 12-100	≧97% ≧94%						
Weight	kg	1 2	3-10 12-100	0.6 0.9	1.3 2.0/1.6	3.5 5.6/3.9	7.8 9.5	16.1 19	27 34	55 68.5
Mounting Position	-	1,2	3-100	Any direction						
Noise Level [2]	dBA/1m	1,2	3-100	58	60	63	65	67	68	72
Protection Class	-	1,2	3-100	IP65						
Lubrication	-	1,2	3-100	Synthetic Lubricant						

Inertia (J1)

Stage	Ratio	unit	PGLH-42	PGLH-60	PGLH-90	PGLH-115	PGLH-142	PGLH-180	PGLH-220
1	3	Kg · cm^2	0.03	0.23	0.97	2.35	10.00	30.50	79.50
	4		0.02	0.18	0.67	1.66	7.17	25.86	58.21
	5		0.02	0.17	0.65	1.50	6.52	23.63	54.36
	6/7/8		0.02	0.14	0.60	1.45	6.17	22.92	54.12
	9/10		0.02	0.14	0.58	1.41	6.10	22.73	53.98
Stage	Ratio		PGLH-42	PGLH-60(T)	PGLH-90(T)	PGLH-115T	PGLH-142T	PGLH-180T	PGLH-220T
2	15/20/25		0.02	0.17(0.02)	0.65(0.17)	0.65	1.50	6.52	23.63
	30/35/40		0.02	0.14(0.02)	0.60(0.14)	0.60	1.45	6.17	22.92
	45/50/60/70/80/90/100		0.02	0.14(0.02)	0.58(0.14)	0.58	1.41	6.10	22.73

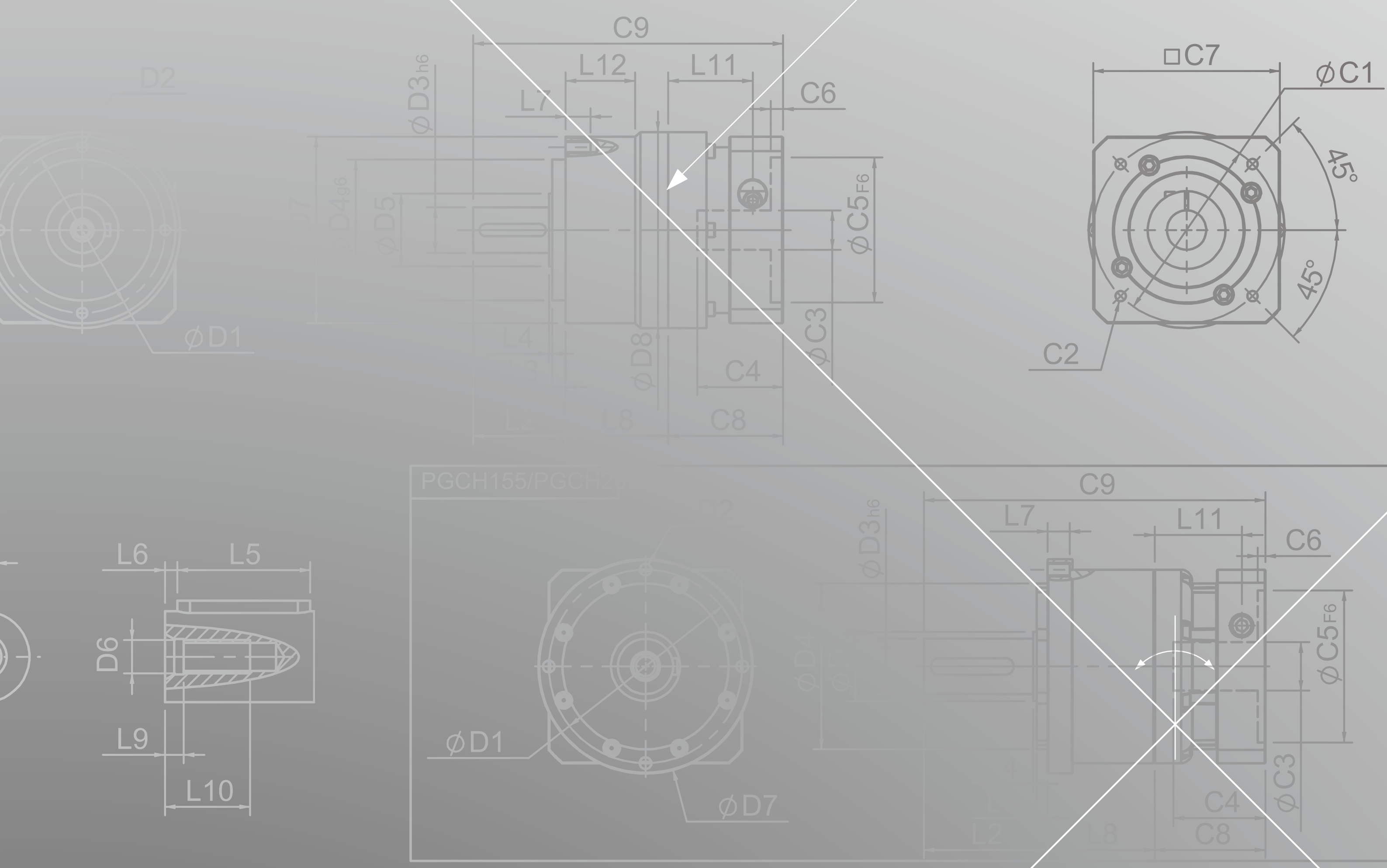
* 1. Applied to the output shaft center at 100 rpm.
* 2. Measured at 3000 rpm with no load. These values are measured by gearbox with ratio = 10 (1-stage) or ratio = 100 (2-stage) at nominal input speed or 3000 rpm (if nominal input speed is higher than 3000 rpm) with no load.

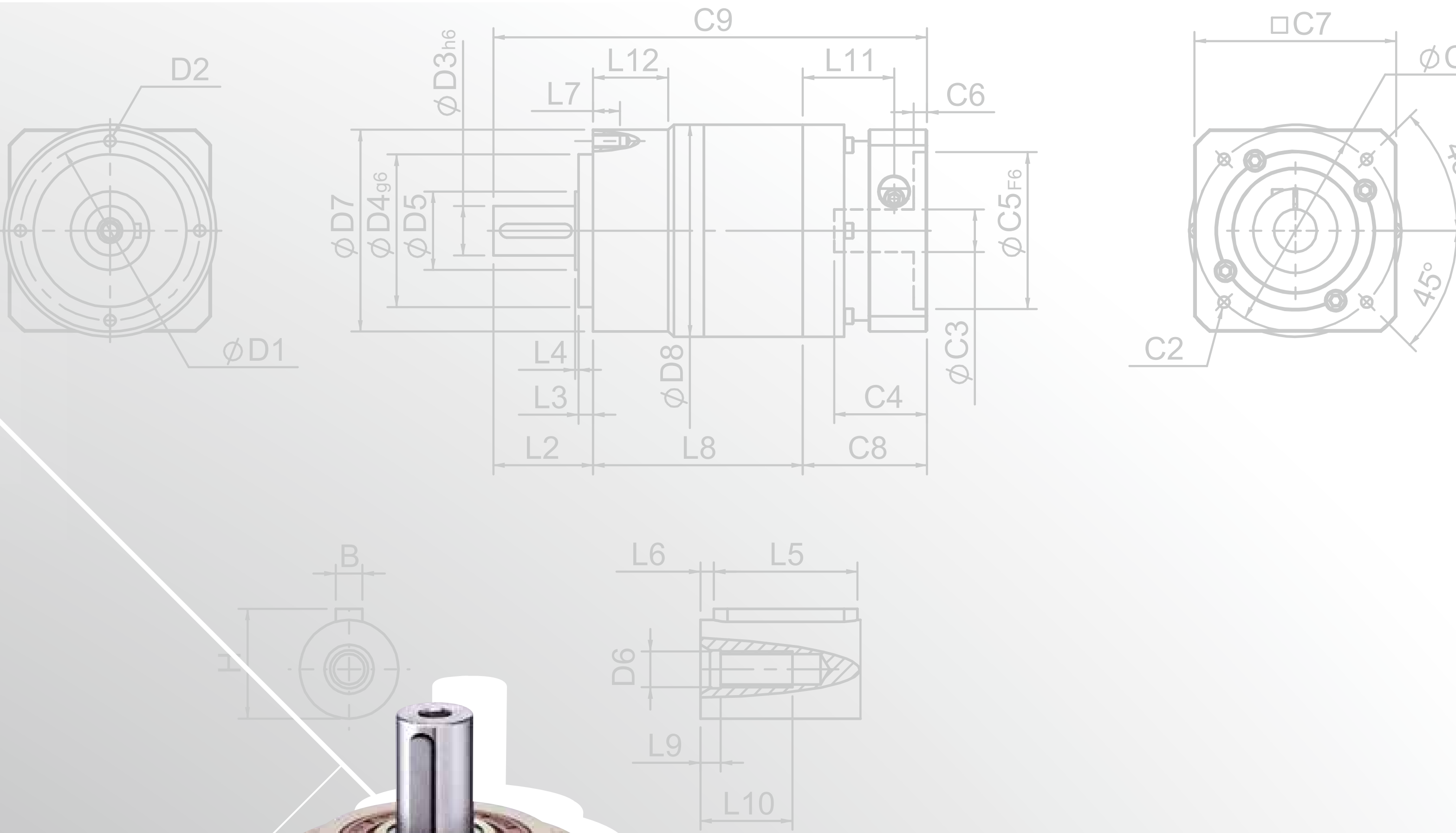
※ The above figures/specifications are subject to change without prior notice.

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

PLANETARY GEARHEADS

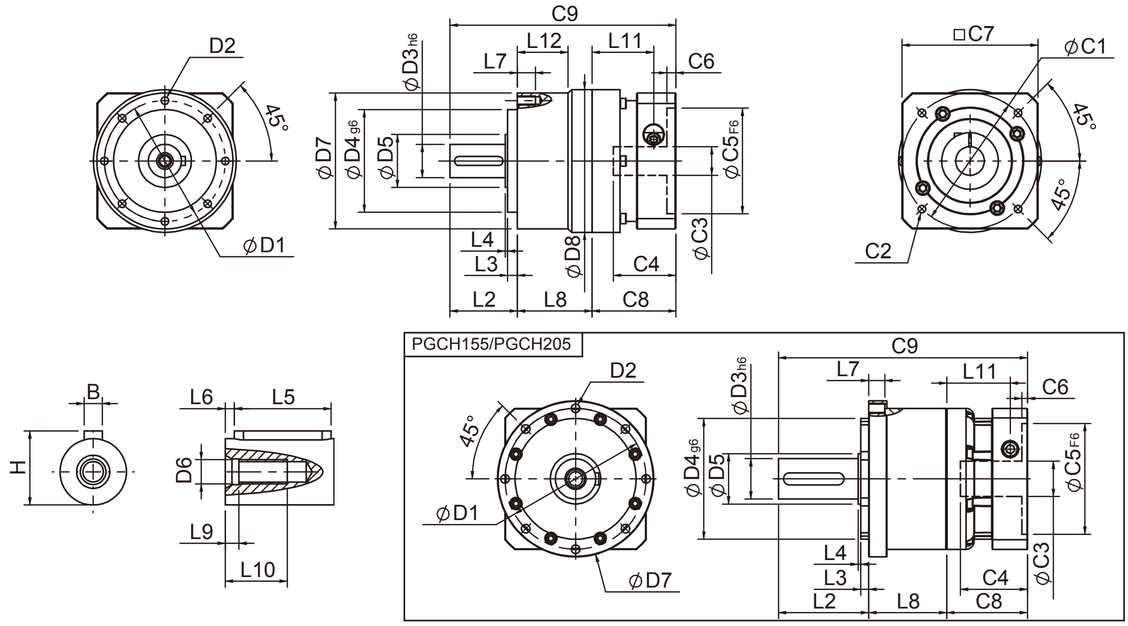
PGCH SERIES




D2
ØD1
ØD3h6
C9
L12
L7
L11
C6
ØD7
ØD4g6
ØD5
ØC5F6
L4
L3
ØD8
ØC3
C4
L2
L8
C8
□C7
C2
45°
B
H
L6
L5
D6
L9
L10


SESAME

PGCH Single Stage Dimensions



Specifications

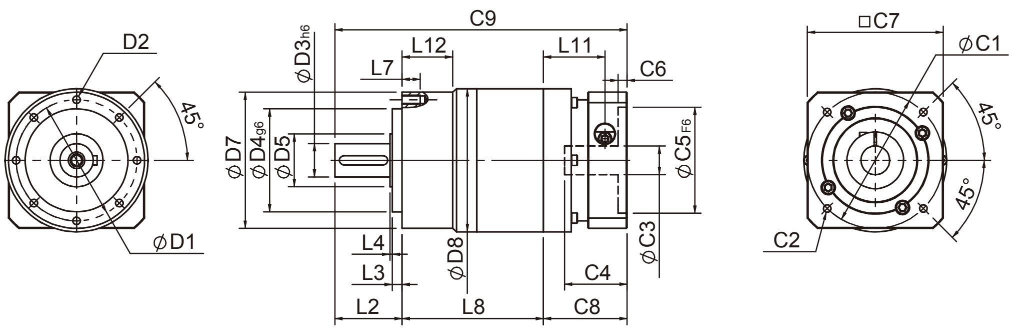
Unit:mm

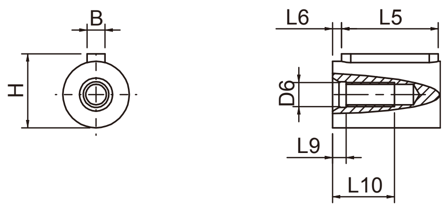
Dimensions	PGCH50	PGCH70	PGCH90	PGCH120	PGCH155	PGCH205	PGCH235
D1	44	62	80	108	140	184	210
D2	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M10x1.5P	M12x1.75P	M16x2.0P
D3$_{h6}$	12	16	22	32	40	55	75
D4$_{g6}$	35	52	68	90	120	160	180
D5	15	25	35	45	50	70	114.5
D6	M4x0.7P	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P	M20x2.5P	M20x2.5P
D7	50	70	90	120	155	205	235
D8	50	70	94.5	120	-	-	253
L2	24.5	36	44.5	60	89.5	96.5	126
L3	4	6	6.5	7	8	12	18
L4	1	1.5	1.5	3.5	2.5	2.5	3
L5	15	25	32	40	60	70	90
L6	2	2	3	5	5	6	7
L7	8	10	12	16	16	20	28
L8	29.8	38	49.5	60	77.5	98	124
L9	4	4	4.5	6	6	8	15
L10	12	16.5	20.5	30	38	48	42
L11	29	35.4	40.7	53.7	63	69.5	95
L12	-	-	33.5	-	-	-	70
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/≦11	≦14/≦19	≦19/≦24	≦24/≦32/≦38	≦35/≦38	≦50	≦55
C4 [2]	26.5	37.6	41.4	51.3	66.5	77	112
C5$_{F6}$ [2]	30	50	70	95	110	114.3	200
C6 [2]	4.1	4.5	6	6	5.5	6	6
C7 [2]	42	60	90	115	140	180	220
C8 [2]	38.1	46.5	55.4	70	80	90	120
C9 [2]	92.4	120.5	149.4	190	247	284.5	370
B	4	5	6	10	12	16	20
H	13.5	18	24.5	35	43	59	79.5

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

★ Specification subject to change without notice.

PGCH Double Stage Dimensions-1





Specifications

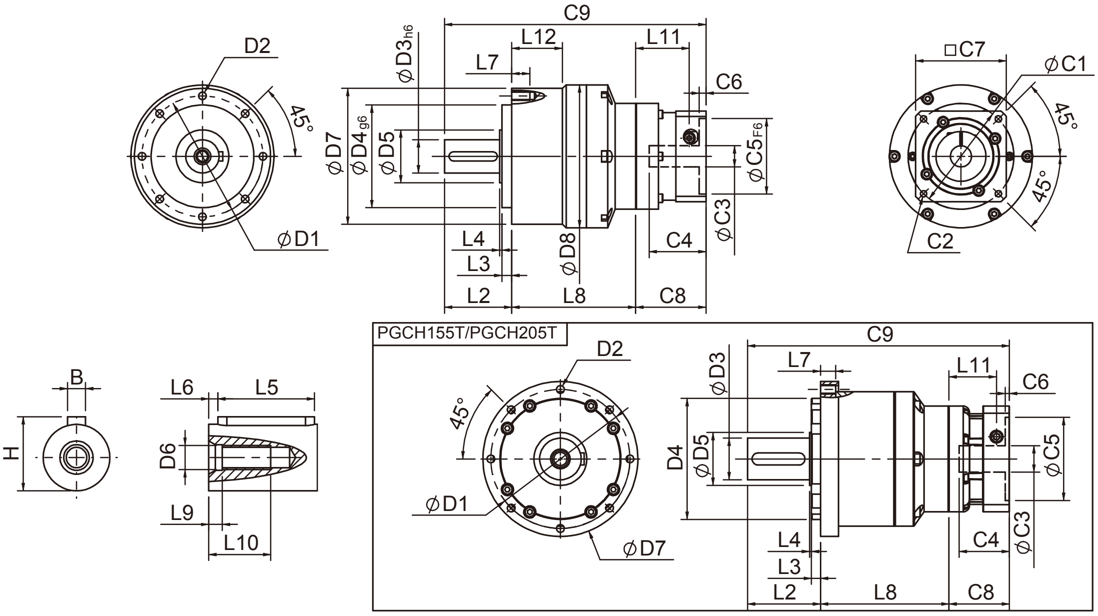
Unit:mm

Dimensions	PGCH50	PGCH70	PGCH90
D1	4	62	80
D2	M4x0.7P	M5x0.8P	M6x1.0P
$D3_{h6}$	12	16	22
$D4_{g6}$	35	52	68
D5	15	25	35
D6	M4x0.7P	M5x0.8P	M8x1.25P
D7	50	70	90
D8	50	70	94.5
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	56.8	71	93.5
L9	4	4	4.5
L10	12	16.5	20.5
L11	29	35.4	40.7
L12	-	-	33.5
C1[2]	46	70	90
C2[2]	M4x0.7P	M5x0.8P	M6x1.0P
C3[2]	≦8/≦11	≦14/≦19	≦19/≦24
C4[2]	26.5	37.6	41.4
C5[2]$_{F6}$	30	50	70
C6[2]	4.1	4.5	6
C7[2]	42	60	90
C8[2]	38.1	46.5	55.4
C9[2]	119.4	153.5	193.4
B	4	5	6
H	13.5	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.

PGCH Double Stage Dimensions-2



Specifications

Unit:mm

Dimensions	PGCH70T	PGCH90T	PGCH120T	PGCH155T	PGCH205T	PGCH235T
D1	62	80	108	140	184	210
D2	M5x0.8P	M6x1.0P	M8x1.25P	M10x1.5P	M12x1.75P	M16x2.0P
$D3_{h6}$	16	22	32	40	55	75
$D4_{g6}$	52	68	90	120	160	180
D5	25	35	45	50	70	114.5
D6	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P	M20x2.5P	M20x2.5P
D7	70	90	120	155	205	235
D8	70	94.5	120	-	-	253
L2	36	44.5	60	89.5	96.5	126
L3	6	6.5	7	8	12	18
L4	1.5	1.5	3.5	2.5	2.5	3
L5	25	32	40	60	70	90
L6	2	3	5	5	6	7
L7	10	12	16	16	20	28
L8	66.5	82	102.5	129.5	170	215
L9	4	4.5	6	6	8	15
L10	16.5	20.5	30	38	48	42
L11	29	35.4	40.7	53.7	63	68.9
L12	-	33.5	-	-	-	70
C1[2]	46	70	90	115	145	200
C2[2]	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M8x1.25P	M12x1.75P
C3[2]	≦8/≦11	≦14/≦19	≦19/≦24	≦24/≦32/≦38	≦35/≦38	≦50
C4[2]	26.5	37.6	41.4	51.3	66.5	77
C5[2] $_{F6}$	30	50	70	95	110	114.3
C6[2]	4.1	4.5	6	6	5.5	6
C7[2]	42	60	90	115	140	180
C8[2]	38.1	46.5	55.4	70	80	90
C9[2]	140.6	173	217.9	289	346.5	431
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 motor flange.

★ Specification subject to change without notice.

PGCH Specifications Table

Specifications		Stage	Ratio	PGCH-50	PGCH-70	PGCH-90	PGCH-120	PGCH-155	PGCH-205	PGCH-235
Nominal Output Torque T_{2N}	N · m	1	3	19	53	145	290	520	950	1100
			4	20	55	150	300	550	1000	1700
			5	17	54	140	330	600	1050	2000
			6	15	46	135	310	560	1000	1900
			7	14	44	125	300	530	960	1800
			8	12	41	110	260	480	900	1600
			9	11	37	95	230	430	800	1500
			10	11	37	95	230	430	800	1500
		Stage	Ratio	PGCH-50	PGCH-70 PGCH-70T	PGCH-90 PGCH-90T	PGCH-120T	PGCH-155T	PGCH-205T	PGCH-235T
		2	15	19	53	145	290	520	950	2000
			20	20	55	150	300	550	1000	2000
			25	17	54	140	330	600	1050	2000
			30	17	54	140	330	600	1050	2000
			35	17	54	140	330	600	1050	2000
			40	17	54	140	330	600	1050	2000
			45	17	54	140	330	600	1050	2000
			50	17	54	140	330	600	1050	2000
			60	15	46	135	310	560	1000	2000
			70	14	44	125	300	530	960	1900
			80	12	41	110	260	480	900	1800
			90	11	37	95	230	430	800	1600
			100	11	37	95	230	430	800	1500
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	5000	4000	4000	4000	3000	2500	2000
Max. Input Speed n_{1max}	rpm	1,2	3-100	10000	8000	8000	8000	5000	4000	3500
Micro Backlash P0	arcmin	1	3-10	≦4	≦4	≦4	≦3	≦3	≦3	≦3
		2	12-100	≦6	≦6	≦6	≦5	≦5	≦5	≦5
Precision Backlash P1	arcmin	1	3-10	≦6	≦6	≦6	≦5	≦5	≦5	≦5
		2	12-100	≦8	≦8	≦8	≦7	≦7	≦7	≦7
Standard Backlash P2	arcmin	1	3-10	≦8	≦8	≦8	≦7	≦7	≦7	≦7
		2	12-100	≦10	≦10	≦10	≦9	≦9	≦9	≦9
Torsional Rigidity	N · m /arcmin	1,2	3-100	3	7	14	25	50	145	300
Max. Radial Load F_{2rB} [1]	N	1,2	3-100	702	1377	2985	6100	7140	11050	28000
Max. Axial Load F_{2aB} [1]	N	1,2	3-100	410	765	1625	3350	4670	6460	15000
Operating Temp.	℃		3-100	-10℃~+90℃						
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	1.3	3.5	7.8	16.1	27	55
		2	12-100	0.9	2.0/1.6	5.6/3.9	9.5	19	34	67
Mounting Position	-	1,2	3-100	Any Direction						
Noise Level [2]	dBA/1m	1,2	3-100	58	58	60	63	65	67	70
Protection Class	-	1,2	3-100	IP65						
Lubrication	-	1,2	3-100	Synthetic Lubricant						

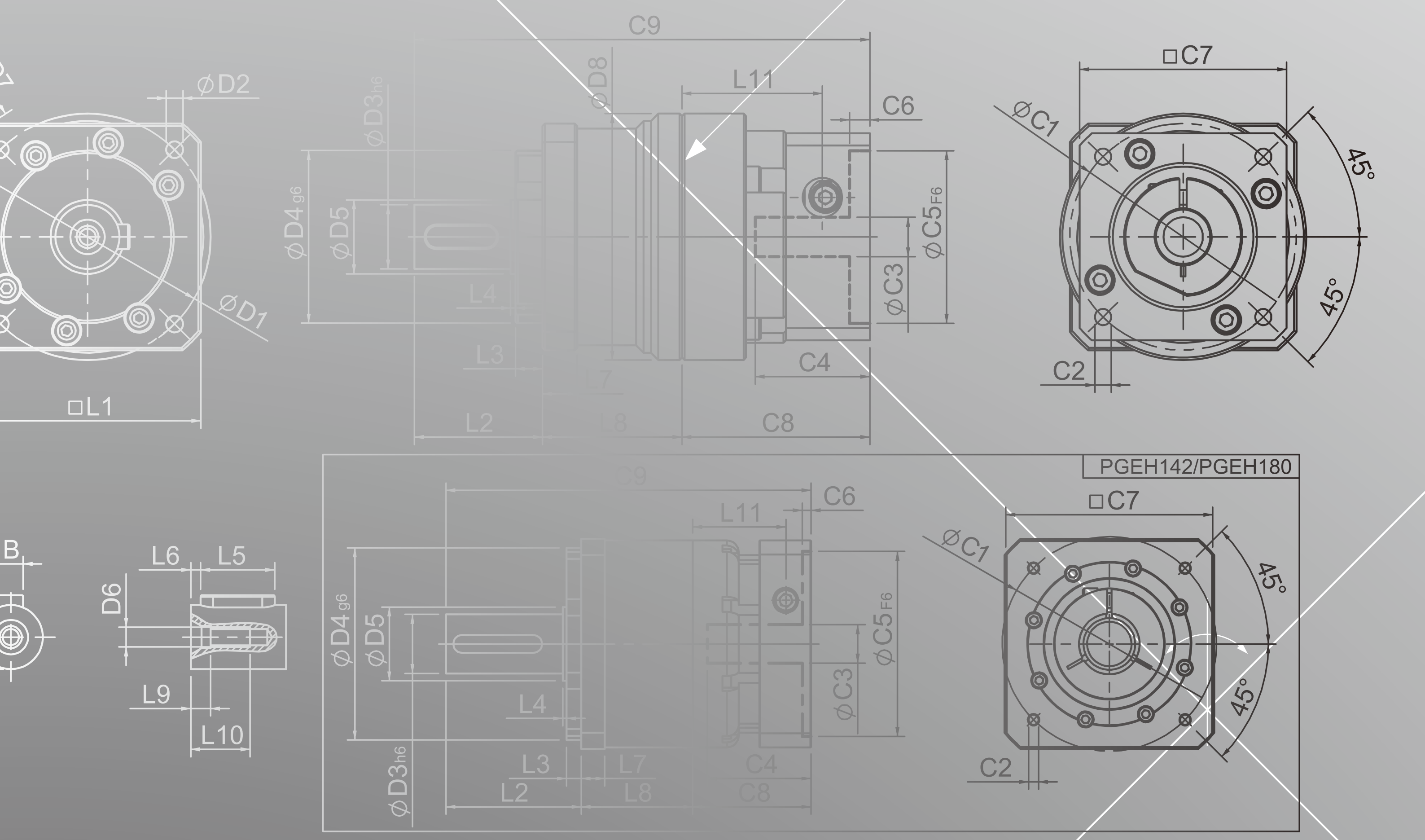
Inertia (J1)

Stage	Ratio	unit	PGCH-50	PGCH-70	PGCH-90	PGCH-120	PGCH-155	PGCH-205	PGCH-235
1	3	Kg · cm²	0.03	0.23	0.97	2.35	10.00	30.50	79.50
	4		0.02	0.18	0.67	1.66	7.17	25.86	58.21
	5		0.02	0.17	0.65	1.50	6.52	23.63	54.36
	6/7/8		0.02	0.14	0.60	1.45	6.17	22.92	54.12
	9/10		0.02	0.14	0.58	1.41	6.10	22.73	53.98
Stage	Ratio		PGCH-50	PGCH-70(T)	PGCH-90(T)	PGCH-120T	PGCH-155T	PGCH-205T	PGCH-235T
2	15/20/25		0.02	0.17(0.02)	0.65(0.17)	0.65	1.50	6.52	30.50
	30/35/40		0.02	0.14(0.02)	0.60(0.14)	0.60	1.45	6.17	22.92
	45/50/60/70/80/90/100		0.02	0.14(0.02)	0.58(0.14)	0.58	1.41	6.10	22.73

* 1. Applied to the output shaft center at 100 rpm.
* 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.

PGEH SERIES



C9
L11
C6
□C7
ØC1
45°
ØD8
ØD2
ØD3h6
ØD4g6
ØD5
ØC5F6
ØC3
ØD1
L4
L3
L2
L8
C4
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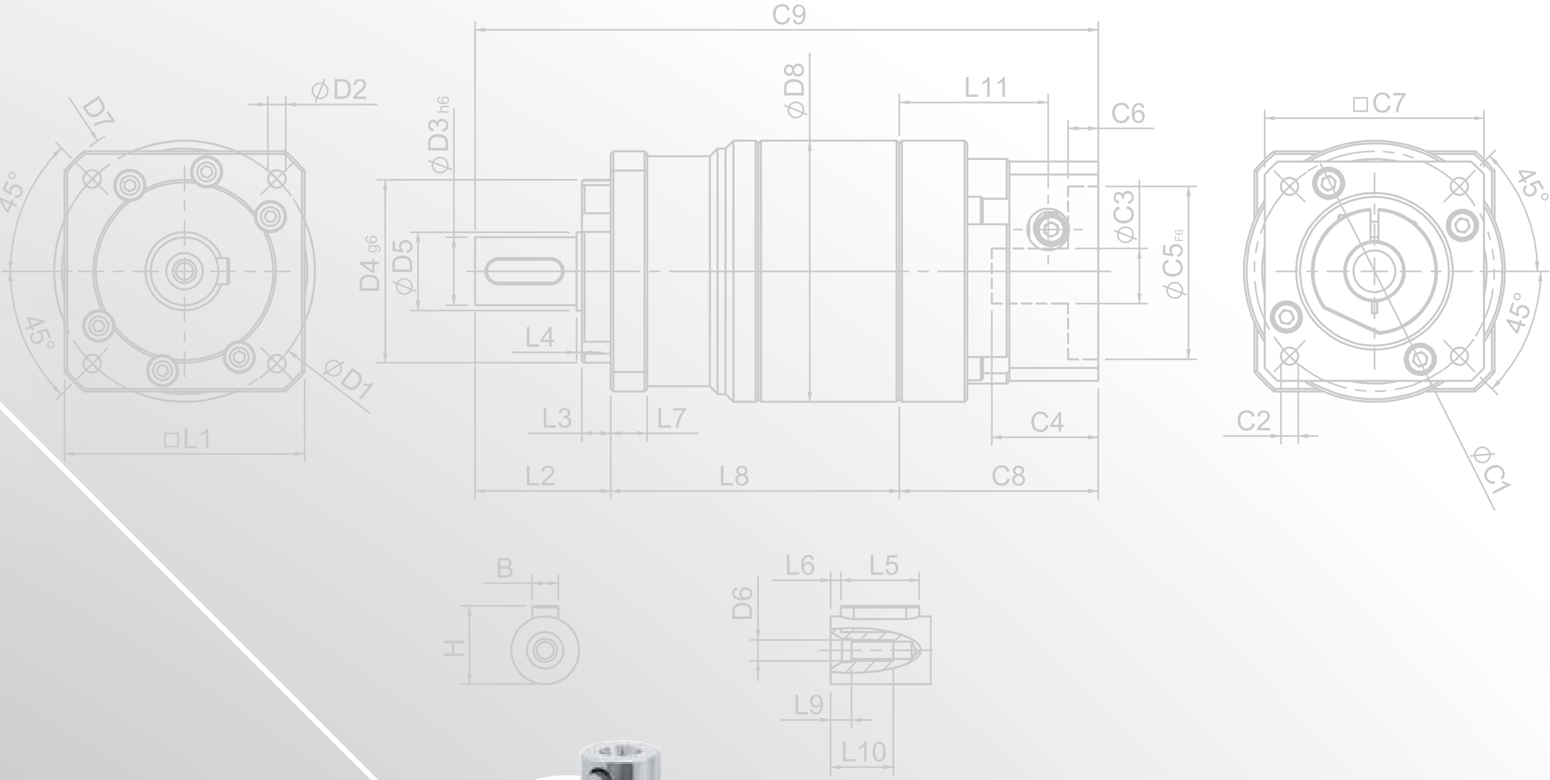
C2
□L1
PGEH142/PGEH180
B
L6
L5
D6
L9
L10
L7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⌀D2
D7
45°
⌀D3h6
⌀D8
L11
C6
□C7
D4g6
⌀D5
⌀C3
⌀C5F6
L4
⌀D1
□L1
L3
L7
C4
C2
L2
L8
C8
⌀C1
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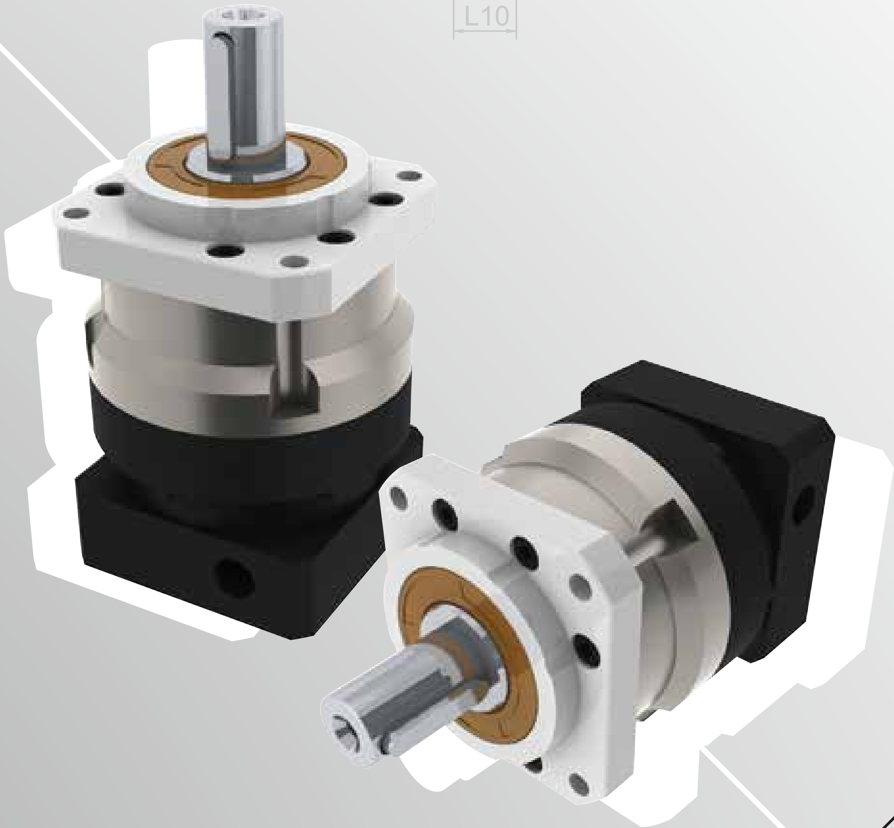
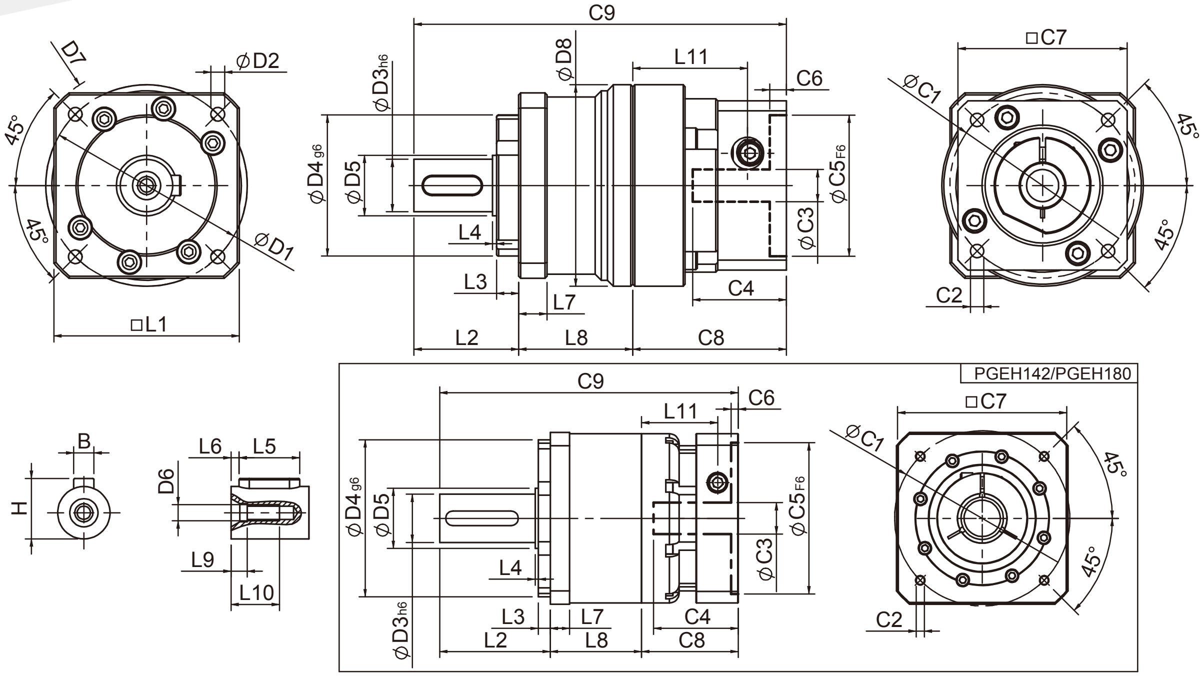
H
L6
L5
D6
L9
L10



PGEH Single Stage Dimensions



Specifications

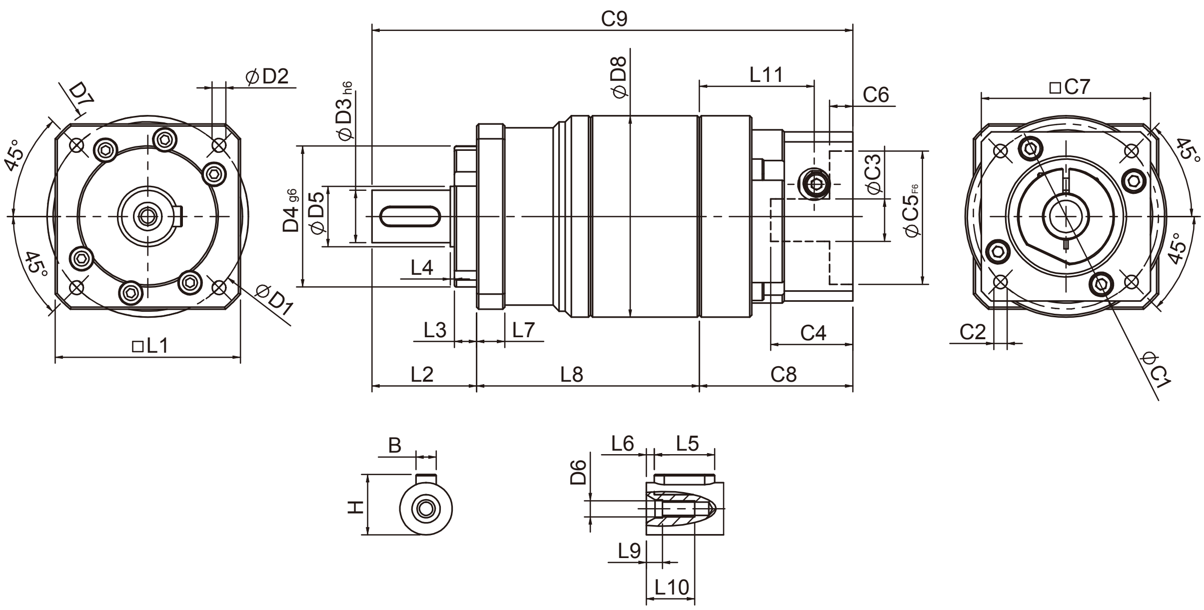
Unit:mm

Dimensions	PGEH50	PGEH70	PGEH90	PGEH120	PGEH142	PGEH180
D1	50	70	100	130	165	215
D2	3.4	5.5	6.8	9	10.5	13
D3 h6	13	16	22	32	40	55
D4 g6	35	50	80	110	130	160
D5	15	25	35	45	50	70
D6	M4x0.7P	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P	M20x2.5P
D7	60	82	118	148	186	239
D8	50	70	94.5	120	-	-
L1	46	64	90	118	142	182
L2	26	37	43	59	91.5	100.5
L3	5.5	7	5	6	10	16
L4	1	1.5	1.5	3.5	2.5	2.5
L5	15	25	32	40	60	70
L6	2	2	3	5	5	6
L7	7	9.7	13.5	15.7	16	20
L8	28.3	37	51	61	75.5	94
L9	4	4	4.5	6	6	8
L10	12	16.5	20.5	30	38	48
L11	28.5	35.5	40.7	53.8	62.8	70
C1 [2]	46	70	90	115	145	200
C2 [2]	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M8x1.25P	M12x1.75P
C3 [2]	≦8/≦11	≦14/≦19	≦19/≦24	≦24/≦32/≦38	≦35/≦38	≦50
C4 [2]	26.5	37.6	41.4	51.3	66.5	82
C5 [2] F6	30	50	70	95	110	114.3
C6 [2]	4.1	4.5	6	6	5.5	10
C7 [2]	42	60	90	115	140	180
C8 [2]	38.1	46.5	55.4	70	80	95
C9 [2]	92.4	120.5	149.4	190	247	289.5
B	5	5	6	10	12	16
H	15	18	24.5	35	43	59

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

★ Specification subject to change without notice.

PGEH Double Stage Dimensions-1



Specifications

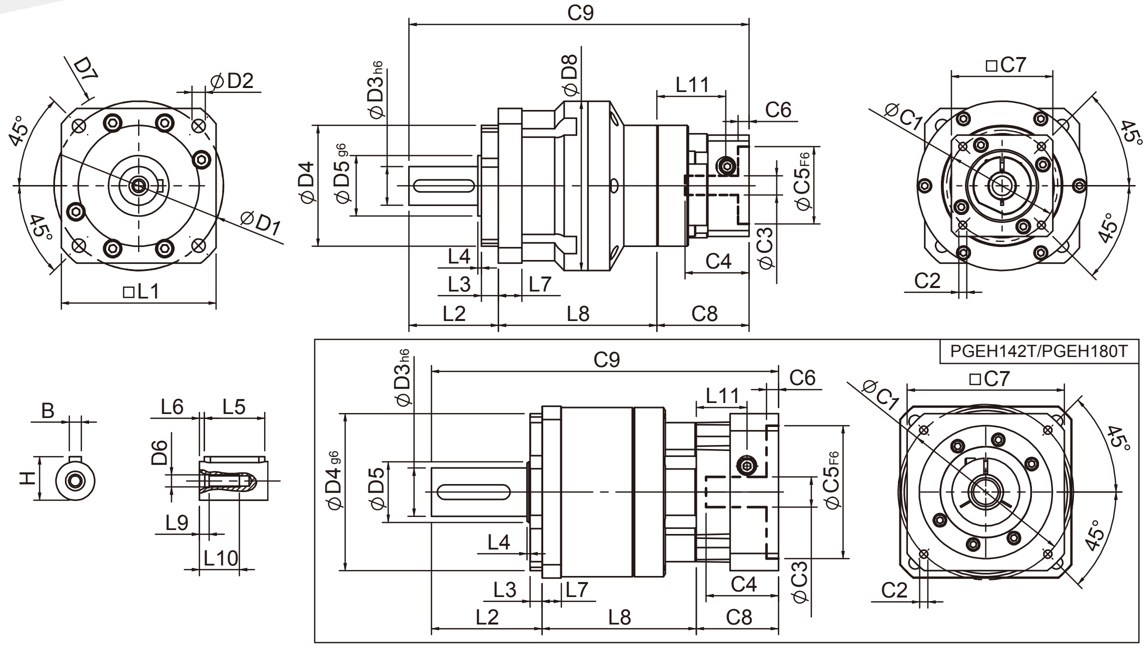
Unit:mm

Dimensions	PGEH50	PGEH70	PGEH90
D1	50	70	100
D2	3.4	5.5	6.8
D3 h6	13	16	22
D4 g6	35	50	80
D5	15	25	35
D6	M4x0.7P	M5x0.8P	M8x1.25P
D7	60	82	118
D8	50	70	94.5
L1	46	64	90
L2	26	37	43
L3	5.5	7	5
L4	1	1.5	1.5
L5	15	25	32
L6	2	2	3
L7	7	9.7	13.5
L8	55.3	70	95
L9	4	4	4.5
L10	12	16.5	20.5
L11	28.5	35.5	40.7
C1 [2]	46	70	90
C2 [2]	M4x0.7P	M5x0.8P	M6x1.0P
C3 [2]	≦8/≦11	≦14/≦19	≦19/≦24
C4 [2]	26.5	37.6	41.4
C5 [2] F6	30	50	70
C6 [2]	4.1	4.5	6
C7 [2]	42	60	90
C8 [2]	38.1	46.5	55.4
C9 [2]	119.4	153.5	193.4
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.

PGEH Double Stage Dimensions-2



Specifications

Unit:mm

Dimensions	PGEH70T	PGEH90T	PGEH120T	PGEH142T	PGEH180T
D1	70	100	130	165	215
D2	5.5	6.8	9	10.5	13
D3$_{h6}$	16	22	32	40	55
D4$_{g6}$	50	80	110	130	160
D5	25	35	45	50	70
D6	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P	M20x2.5P
D7	82	118	148	186	239
D8	70	94.5	120	-	-
L1	64	90	118	142	182
L2	37	43	59	91.5	100.5
L3	7	5	6	10	16
L4	1.5	1.5	3.5	2.5	2.5
L5	25	32	40	60	70
L6	2	3	5	5	6
L7	9.7	13.5	15.7	16	20
L8	65.5	83.5	103.5	127.5	166
L9	4	4.5	6	6	8
L10	16.5	20.5	30	38	48
L11	28.5	35.5	40.7	41.8	62.8
C1[2]	46	70	90	115	145
C2[2]	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M8x1.25P
C3[2]	≤8/≤11	≤14/≤19	≤19/≤24	≤24/≤32/≤38	≤35
C4[2]	26.5	37.6	41.4	56	66.5
C5[2]$_{F6}$	30	50	70	95	110
C6[2]	4.1	4.5	6	10	5.5
C7[2]	42	60	90	115	140
C8[2]	38.1	46.5	55.4	63	80
C9[2]	140.6	173	217.9	282	346.5
B	5	6	10	12	16
H	18	24.5	35	43	59

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

★ Specification subject to change without notice.

PGEH Specifications Table

Specifications	Unit	Stage	Ratio	PGEH-50	PGEH-70	PGEH-90	PGEH-120	PGEH-142	PGEH-180
Nominal Output Torque T_{2N}	N · m	1	3	19	53	145	290	520	950
			4	20	55	150	300	550	1000
			5	17	54	140	290	600	1050
			6	15	46	135	280	560	1000
			7	14	44	125	270	530	960
			8	12	41	110	240	480	900
			9	11	37	95	220	430	800
			10	11	37	95	220	430	800
		Stage	Ratio	PGEH-50	PGEH-70(T)	PGEH-90(T)	PGEH-120T	PGEH-142T	PGEH-180T
		2	15	19	53	145	290	520	950
			20	20	55	150	300	550	1000
			25	17	54	140	290	600	1050
			30	17	54	140	290	600	1050
			35	17	54	140	290	600	1050
			40	17	54	140	290	600	1050
			45	17	54	140	290	600	1050
			50	17	54	140	290	600	1050
			60	15	46	135	280	560	1000
			70	14	44	125	270	530	960
			80	12	41	110	240	480	900
			90	11	37	95	220	430	800
			100	11	37	95	220	430	800
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	3000	3000	2500	2500
Max. Input Speed n_{1max}	rpm	1,2	3-100	8000	8000	6000	6000	5000	4000
Micro Backlash P0	arcmin	1	3-10	≦4	≦4	≦4	≦3	≦3	≦3
		2	12-100	≦6	≦6	≦6	≦5	≦5	≦5
Precision Backlash P1	arcmin	1	3-10	≦6	≦6	≦6	≦5	≦5	≦5
		2	12-100	≦8	≦8	≦8	≦7	≦7	≦7
Standard Backlash P2	arcmin	1	3-10	≦8	≦8	≦8	≦7	≦7	≦7
		2	12-100	≦10	≦10	≦10	≦9	≦9	≦9
Torsional Rigidity	N · m /arcmin	1,2	3-100	2.5	6	12	23	50	145
Max. Radial Load F_{2rB} [1]	N	1,2	3-100	640	1260	2230	4300	7140	11050
Max. Axial Load F_{2aB} [1]	N	1,2	3-100	410	600	1500	3310	4670	6460
Operating Temp.	℃		3-100	-10℃~+90℃					
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	1.3	3.5	7.8	16.1	27
		2	12-100	0.9	2.0/1.6	5.6/3.9	9.5	19	34
Mounting Position	-	1,2	3-100	Any Direction					
Noise Level [2]	dBA/1m	1,2	3-100	58	60	63	65	67	68
Protection Class	-	1,2	3-100	IP65					
Lubrication	-	1,2	3-100	Synthetic Lubricant					

Inertia (J1)

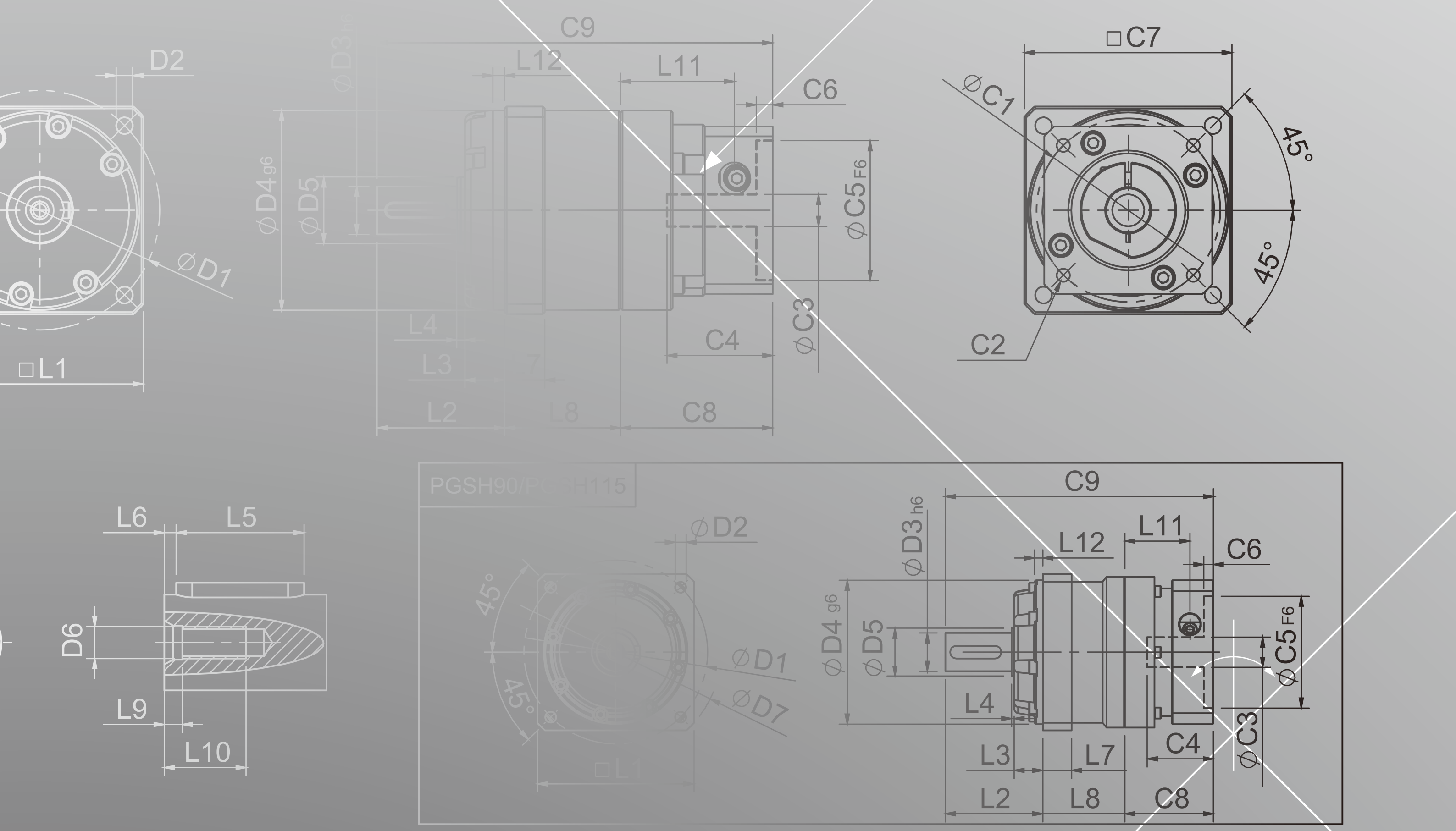
Stage	Ratio	unit	PGEH-50	PGEH-70	PGEH-90	PGEH-120	PGEH-142	PGEH-180
1	3	$Kg \cdot cm^2$	0.03	0.23	0.97	2.35	10.00	30.50
	4		0.02	0.18	0.67	1.66	7.17	25.86
	5		0.02	0.17	0.65	1.50	6.52	23.63
	6/7/8		0.02	0.14	0.60	1.45	6.17	22.92
	9/10		0.02	0.14	0.58	1.41	6.10	22.73
Stage	Ratio		PGEH-50	PGEH-70(T)	PGEH-90(T)	PGEH-120T	PGEH-142T	PGEH-180T
2	15/20/25		0.02	0.17(0.02)	0.65(0.17)	0.65	1.50	6.52
	30/35/40		0.02	0.14(0.02)	0.60(0.14)	0.60	1.45	6.17
	45/50/60/70/80/90/100		0.02	0.14(0.02)	0.58(0.14)	0.58	1.41	6.10

* 1. Applied to the output shaft center at 100 rpm.
* 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.

PGSH SERIES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C9
L12
L11
C6
□C7
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45°
ØD4 g6
ØD5
ØD1
ØC5 F6
ØC3
C4
C2
□L1
L4
L3
L2
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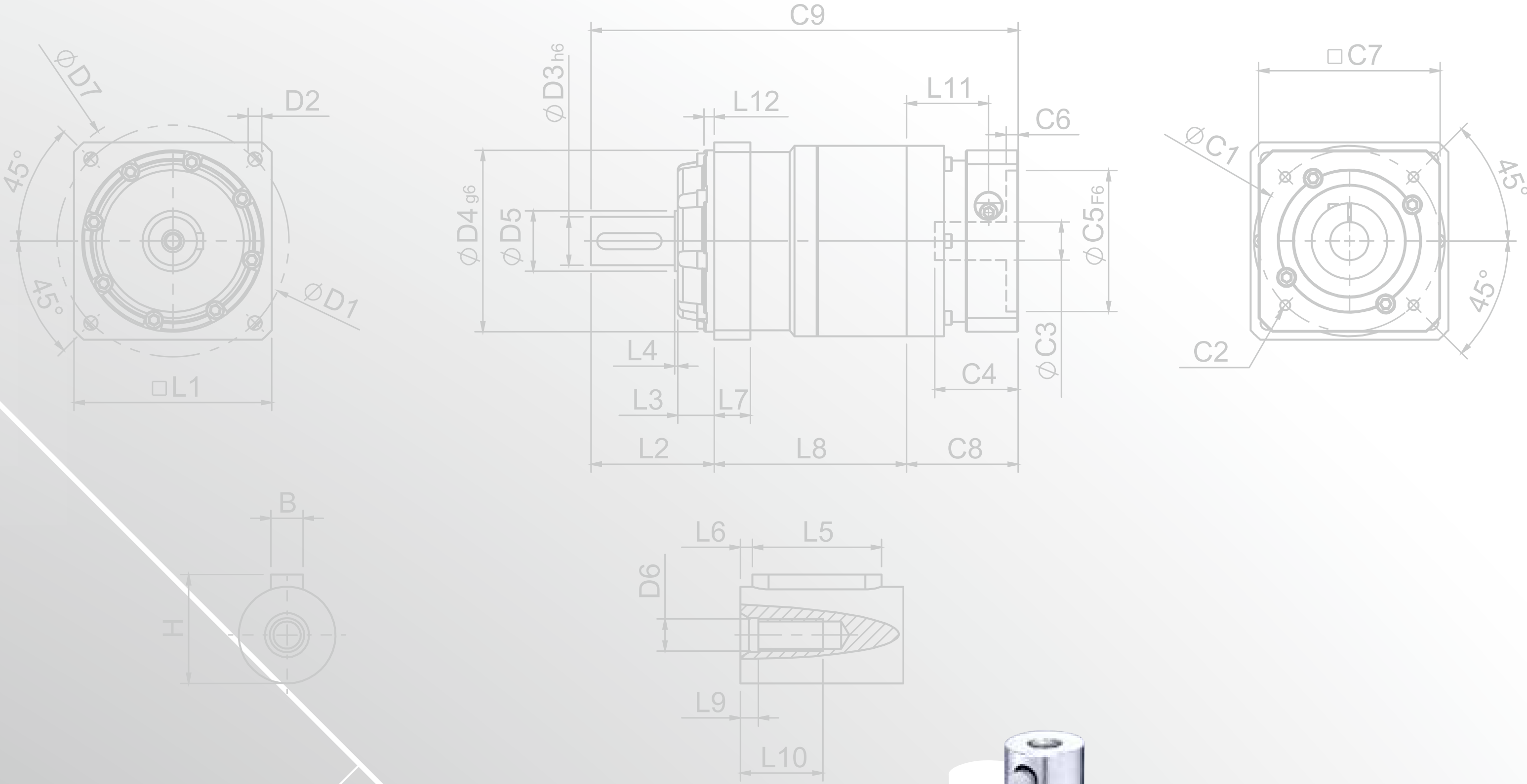
L5
D6
L9
L10
PGSH90/PGSH115
ØD3 h6
ØD7
L7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45°
ØD1
ØC3
C2
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L6
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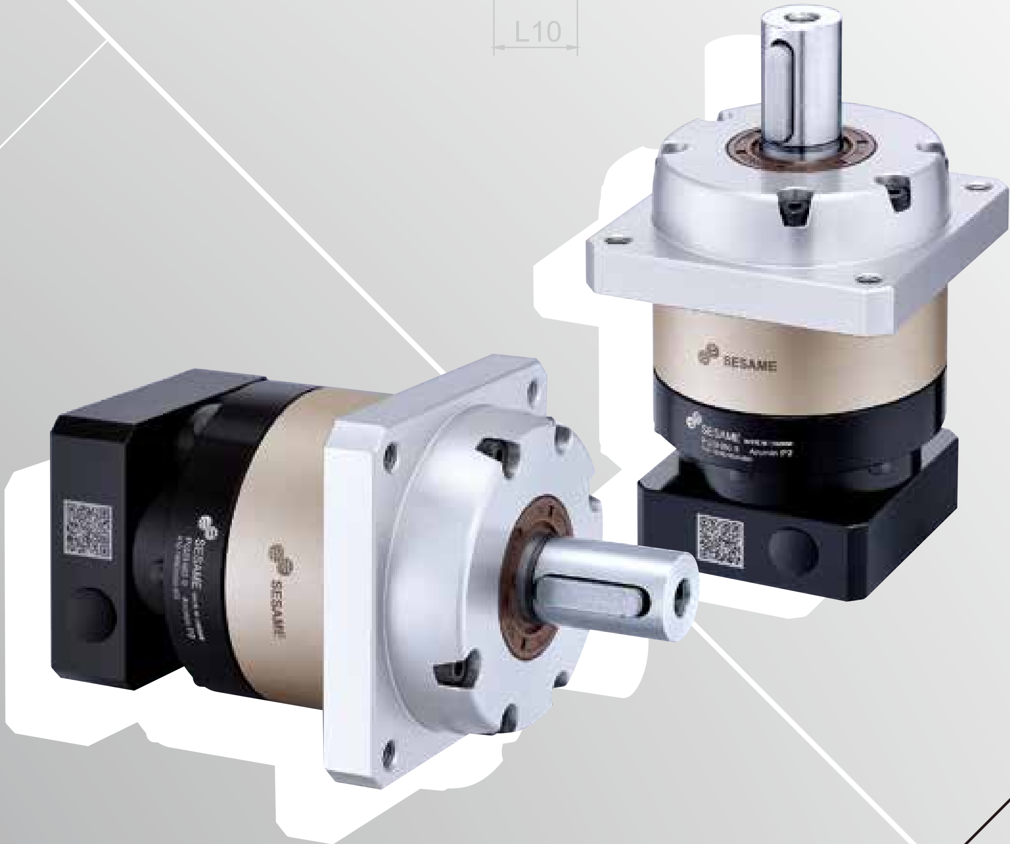
H
L9
L10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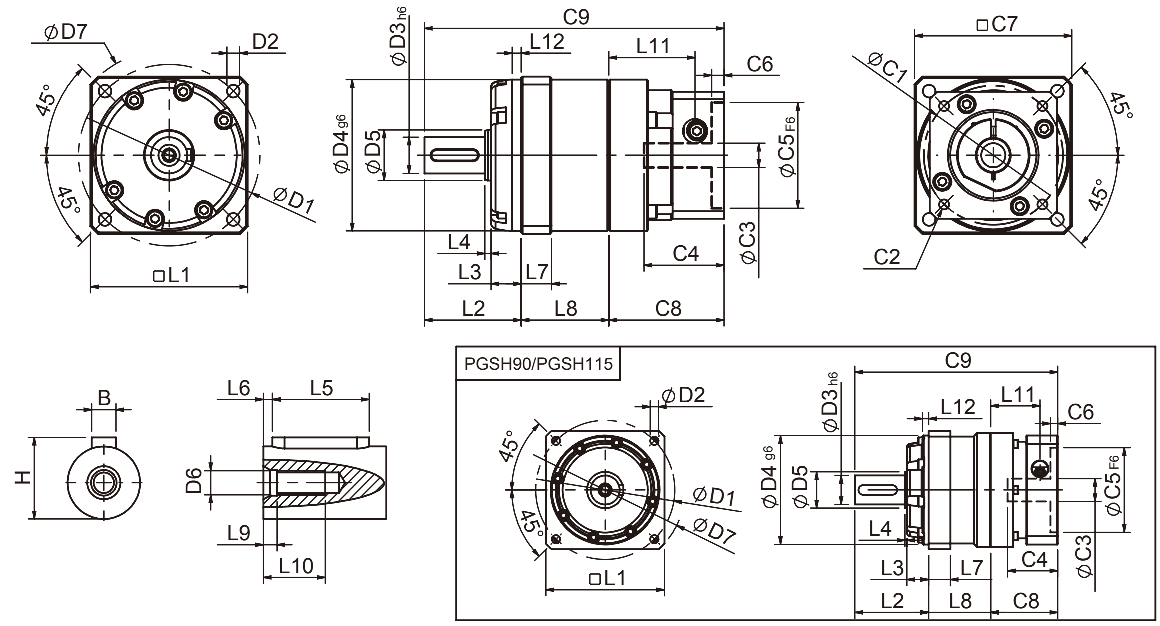
SESAME

PGSH Single Stage Dimensions



Specifications

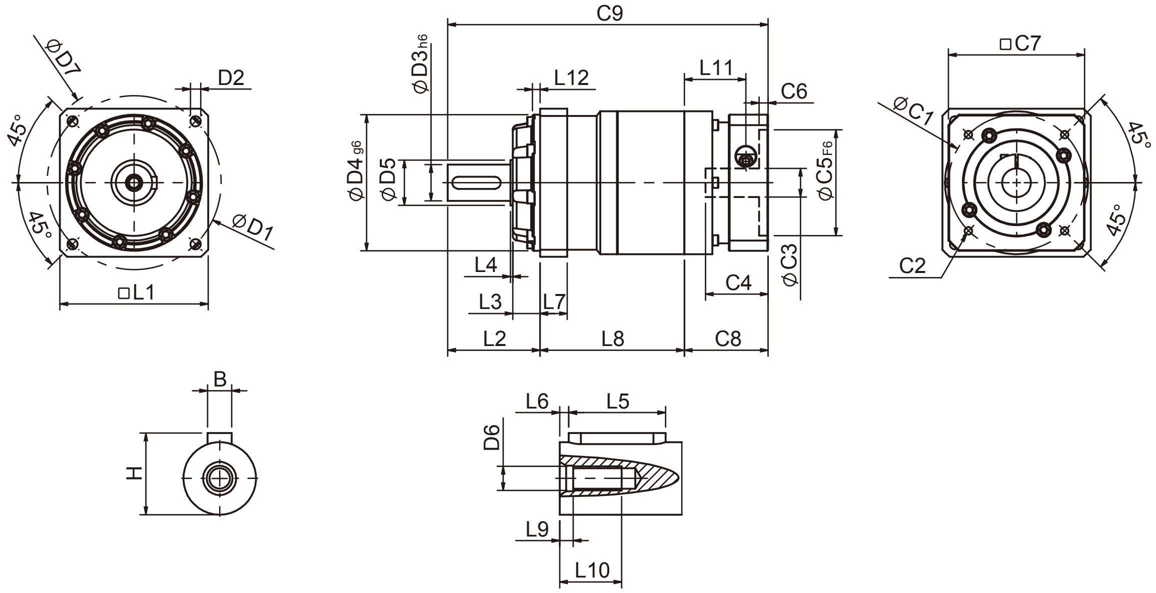
Unit:mm

Dimensions	PGSH42	PGSH60	PGSH90	PGSH115
D1	60	90	115	135
D2	M5x0.8P	M6x1.0P	M8x1.25P	M10x1.5P
D3 h6	12	19	24	32
D4 g6	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 [2]	46	70	90	115
C2 [2]	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P
C3 [2]	≦8/≦11	≦14/≦19	≦19/≦24	≦24/≦32/≦38
C4 [2]	26.5	37.6	41.4	51.3
C5 [2] F6	30	50	70	95
C6 [2]	4.1	4.5	6	6
C7 [2]	42	60	90	115
C8 [2]	38.1	46.5	55.4	70
C9 [2]	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 motor flange.

★ Specification subject to change without notice.

PGSH Double Stage Dimensions-1



Specifications

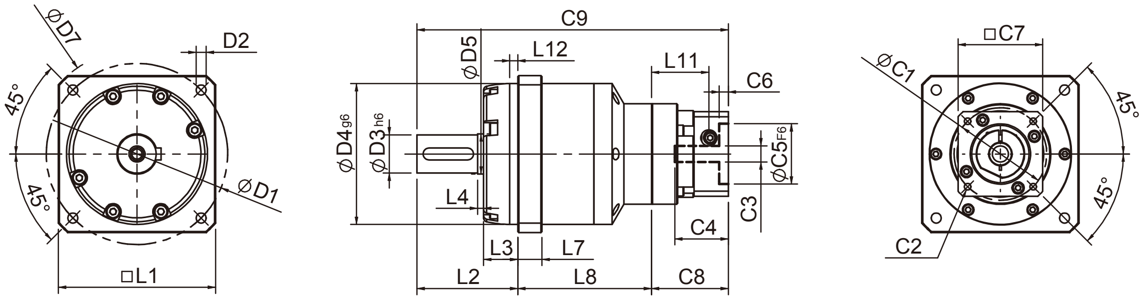
Unit:mm

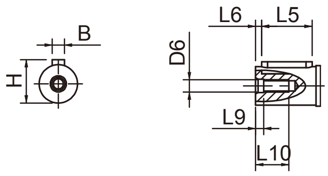
Dimensions	PGSH42	PGSH60	PGSH90
D1	60	90	115
D2	M5x0.8P	M6x1.0P	M8x1.25P
$D3_{h6}$	12	19	24
$D4_{g6}$	50	70	90
D5	16.7	20	30
D6	M4x0.7P	M6x1.0P	M8x1.25P
D7	70	104	132
L1	52	78	98
L2	32	50	61
L3	10	17	18
L4	2	3	1.5
L5	16	25	32
L6	2	3	3
L7	10	12	18
L8	56	70.8	95.4
L9	4	4	4.5
L10	12	16.5	20.5
L11	28.5	35.5	40.7
L12	3	4	5
$C1^2$	46	70	90
$C2^2$	M4x0.7P	M5x0.8P	M6x1.0P
$C3^2$	≦8/≦11	≦14/≦19	≦19/≦24
$C4^2$	26.5	37.6	41.4
$C5^2_{F6}$	30	50	70
$C6^2$	4.1	4.5	6
$C7^2$	42	60	90
$C8^2$	38.1	46.5	55.4
$C9^2$	126.1	167.3	211.8
B	4	6	8
H	13.5	21.5	27

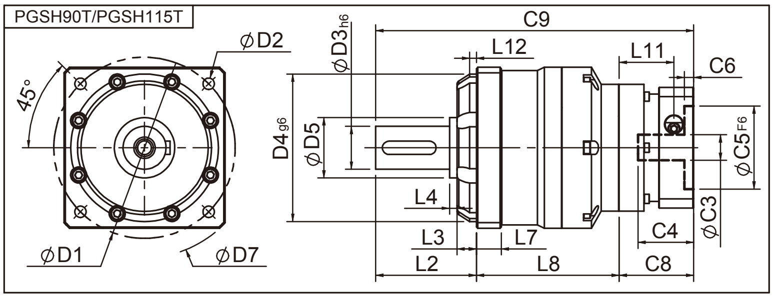
★ C1~C9 are motor specific dimensions (metric std shown). Size may vary according to motor flange.

★ 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$_{h6}$	19	24	32
D4$_{g6}$	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	18.6
L8	66.3	83.9	106.5
L9	4	4.5	6
L10	16.5	20.5	30
L11	28.5	35.5	40.7
L12	4	5	5
C1[2]	46	70	90
C2[2]	M4x0.7P	M5x0.8P	M6x1.0P
C3[2]	≤8/≤11	≤14/≤19	≤19/≤24
C4[2]	26.5	37.6	41.4
C5[2]$_{F6}$	30	50	70
C6[2]	4.1	4.5	6
C7[2]	42	60	90
C8[2]	38.1	46.5	55.4
C9[2]	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 motor flange.

★ Specification subject to change without notice.

PGSH Specifications 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.	℃		3-100	-10℃~+90℃					
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 [2]	dBA/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					

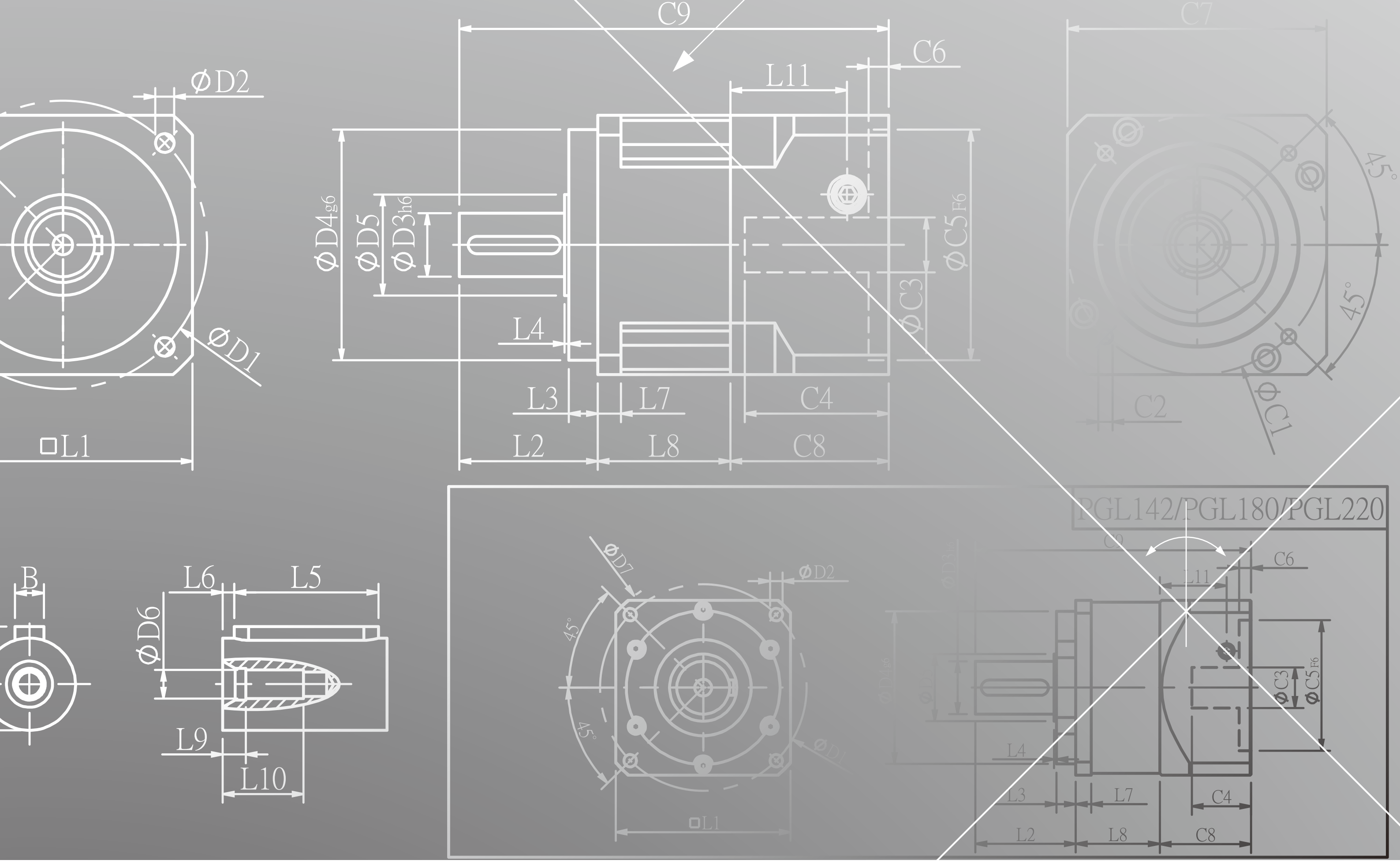
Inertia (J1)

Stage	Ratio	unit	PGSH-42A	PGSH-42	PGSH-60	PGSH-90	PGSH-115	PGSH-142
1	3	Kg · cm^2	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(T)	PGSH-90(T)	PGSH-115T	PGSH-142T
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 at 100 rpm.
* 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.

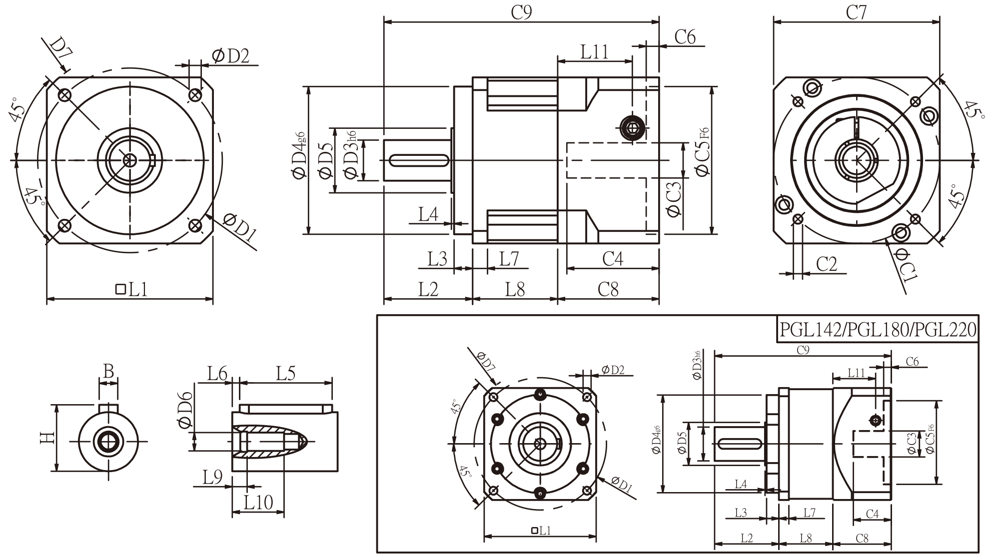
※ The above figures/specifications are subject to change without prior notice.

PGL SERIES


C9
C6
L11
C7
ØD2
ØD4g6
ØD5
ØD3h6
ØC5F6
ØC3
L4
ØD1
45°
45°
ØC1
C2
L3
L7
C4
□L1
L2
L8
C8
B
L6
L5
ØD6
L9
L10
ØD7
PGL142/PGL180/PGL220


C9
C6
L11
C7
D7
ØD2
45°
ØD4g6
ØD5
ØD3h6
ØC5F6
ØC3
ØD1
L4
L3
L7
C4
□L1
L2
L8
C8
C2
ØC1
PGL142/PGL180/PGL220
L6
L5
ØD6
H
L10
SESAME
PGL
SESAME MOTOR
PGL60-10

PGL Single Stage Dimensions



Specifications

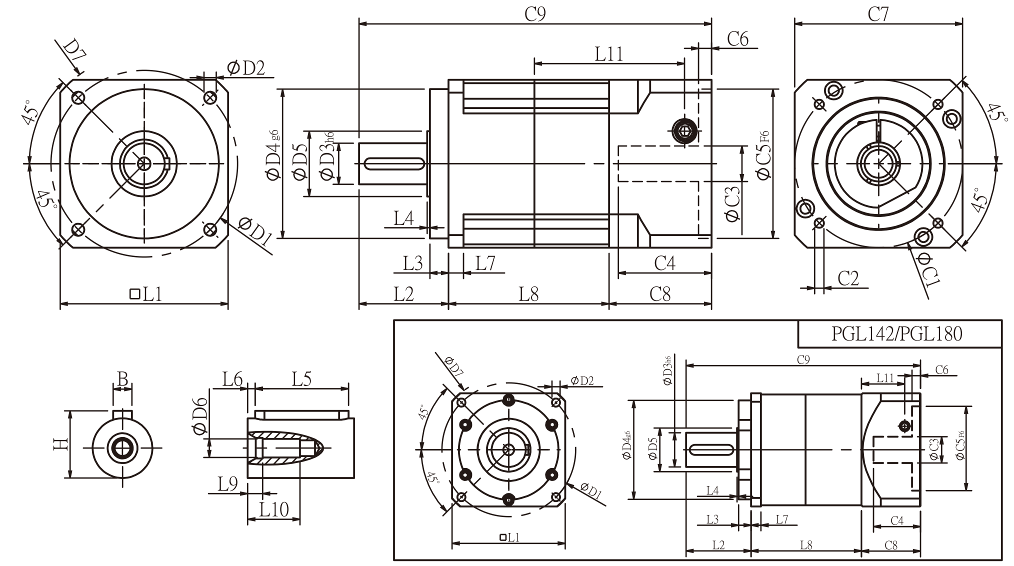
Unit:mm

Dimensions	PGL42	PGL60	PGL90	PGL115	PGL142	PGL180	PGL220
D1	50	70	100	130	165	215	250
D2	3.4	5.5	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	56	80	118	148	186	239	292
L1	42.6	60	90	115	142	182	220
L2	26	37	48	62	93	104.5	138
L3	5.5	7	10	8	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	4	6	8	12	18	16	20
L8	28.3	36	46	59	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	29	35.5	40.5	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	37	47	58	66	82	98
C5 [2] F6	30	50	70	95	110	114.3	200
C6 [2]	4	4	6	10	6	13	12
C7 [2]	42.6	60	90	115	140	182	220
C8 [2]	38.5	46	55	63	80	95	130
C9 [2]	92.8	119	149	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 motor flange.

★ Specification subject to change without notice.

PGL Double Stage Dimensions-1



Specifications

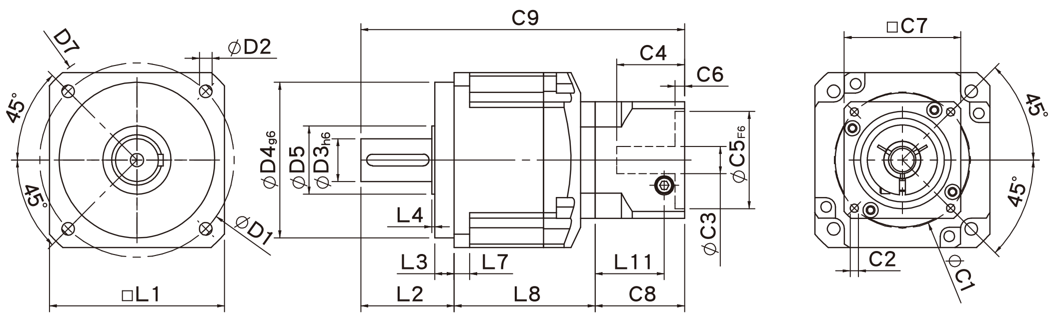
Unit:mm

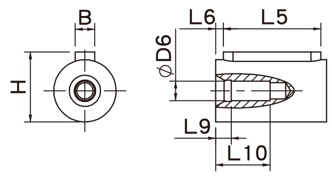
Dimensions	PGL42	PGL60	PGL90	PGL115	PGL142	PGL180
D1	50	70	100	130	165	215
D2	3.4	5.5	6.5	8.5	10.5	13
D3 h6	13	16	22	32	40	55
D4 g6	35	50	80	110	130	160
D5	15	25	35	45	50	70
D6	M4x0.7P	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P	M20x2.5P
D7	56	80	118	148	186	239
L1	42.6	60	90	115	142	182
L2	26	37	48	62	93	104.5
L3	5.5	7	10	8	8	20
L4	1.5	1.5	1.5	3	6	2.5
L5	15	25	32	40	60	70
L6	2	2	3	5	5	6
L7	4	6	8	12	18	16
L8	54.3	64	86	107	140	177.5
L9	4	4	4.5	6	6	8
L10	14	16.5	20.5	30	38	48
L11	29	35.5	40.5	42	63	69.5
C1 ★	46	70	90	115	145	200
C2 ★	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M8x1.25P	M12x1.75P
C3 ★	≤8	≤14	≤19/≤24	≤24/≤28	≤35	≤50
C4 ★	27	37	47	58	66	82
C5 ★ F6	30	50	70	95	110	114.3
C6 ★	4	4	6	10	6	13
C7 ★	42.6	60	90	115	140	182
C8 ★	38.5	46	55	63	80	95
C9 ★	118.8	147	189	232	313	377
B	5	5	6	10	12	16
H	15	18	24.5	35	43	59

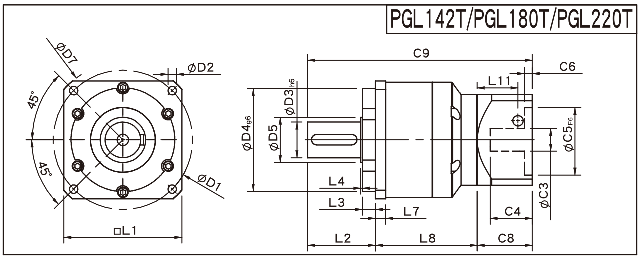
★ C1~C9 are motor specific dimensions (metric std shown). Size may vary according to motor flange.

★ Specification subject to change without notice.

PGL Double Stage Dimensions-2







Specifications

Unit:mm

Dimensions	PGL60T	PGL90T	PGL115T	PGL142T	PGL180T	PGL220T
D1	70	100	130	165	215	250
D2	5.5	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	80	118	148	186	239	292
L1	60	90	115	142	182	220
L2	37	48	62	93	104.5	138
L3	7	10	8	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	8	12	18	16	20
L8	58.8	72.5	97.4	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]	46	70	90	115	145	200
C2 [2]	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M8x1.25P	M12x1.75P
C3 [2]	≦8	≦14	≦19/≦24	≦24/≦28	≦35	≦50
C4 [2]	27	37	47	58	66	82
C5 [2] $_{F6}$	30	50	70	95	110	114.3
C6 [2]	4	4	6	10	6	13
C7 [2]	42.6	60	90	115	140	182
C8 [2]	38.5	46	55	63	80	95
C9 [2]	134.3	166.5	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 motor flange.

★ Specification subject to change without notice.

PGL Specifications Table

Specifications		Stage	Ratio	PGL-42	PGL-60	PGL-90	PGL-115	PGL-142	PGL-180	PGL-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
			6	12.5	39.4	90.9	266	436	1055	1574
			7	11.9	36.0	85.6	219	400	1055	1574
			8	10.9	32.4	85.0	216	363	860	1184
			9	9.8	28.7	80.0	210	320	764	1185
			10	10.1	25.0	75.0	210	320	763	1184
		Stage	Ratio	PGL-42	PGL-60 / 60T	PGL-90 / 90T	PGL-115 / 115T	PGL-142 / 142T	PGL-180 / 180T	PGL-220 / 220T
		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
			45	13.8	43.0	95.2	283	473	1151	1670
			50	13.8	43.0	95.2	283	473	1151	1670
			60	12.5	39.4	90.9	266	436	1055	1574
			70	11.9	36.0	85.6	219	400	1055	1574
			80	10.9	32.4	85.0	216	363	860	1184
			90	9.8	28.7	80.0	210	320	764	1185
			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
Micro Backlash P0	arcmin	1	3-10	-	-	-	≦3	≦3	≦3	≦3
		2	12-100	-	-	-	≦5	≦5	≦5	≦5
Precision Backlash P1	arcmin	1	3-10	-	≦6	≦6	≦5	≦5	≦5	≦5
		2	12-100	-	≦9	≦9	≦7	≦7	≦7	≦7
Standard Backlash P2	arcmin	1	3-10	≦12	≦9	≦9	≦7	≦7	≦7	≦7
		2	12-100	≦15	≦12	≦12	≦9	≦9	≦9	≦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	450	1200	2050	4250	7680	9080	13500
Max. Axial Load F_{2aB} [1]	N	1,2	3-100	320	900	1420	2930	4680	5100	7300
Operating Temp.	℃		3-100	-10℃ ~ +90℃						
Service Life	hr		3-100	20,000 (10,000 Continuous operation)						
Efficiency	%	1	3-10	≧96%						
		2	12-100	≧92%						
Weight	kg	1	3-10	0.6	1.2	3.2	7.5	15.6	26	56
		2	12-100	0.8	1.9/1.5	5.3/3.6	12/8.8	20.7/17.2	36/31	80/62
Mounting Position	-	1,2	3-100	Any direction						
Noise Level [2]	dBA/1m	1,2	3-100	60	62	65	65	70	70	75
Protection Class	-	1,2	3-100	IP65						
Lubrication	-	1,2	3-100	Synthetic Lubricant						

Inertia (J1)

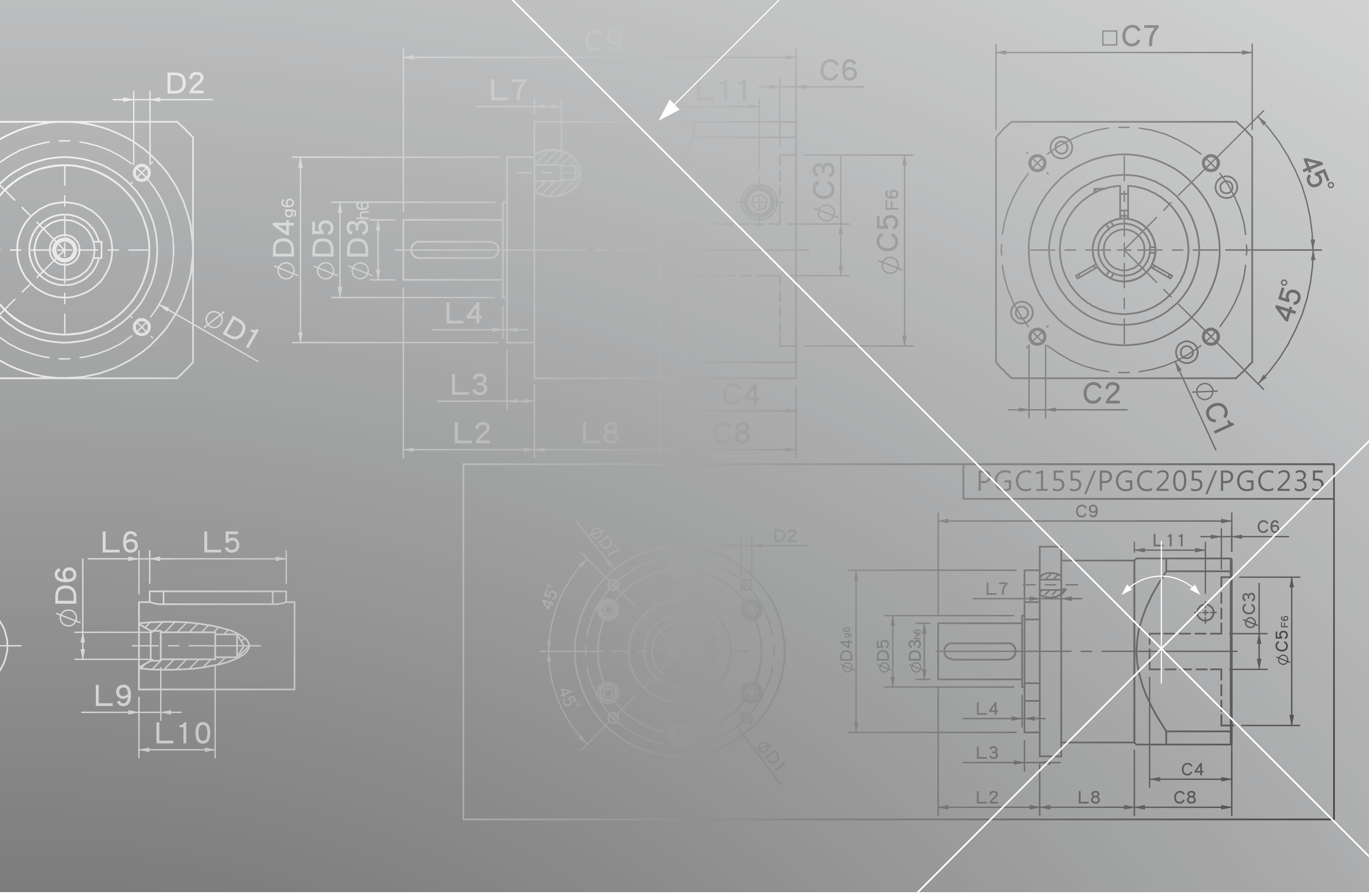
Stage	Ratio	unit	PGL-42	PGL-60	PGL-90	PGL-115	PGL-142	PGL-180	PGL-220
1	3	Kg • cm^2	0.03	0.20	0.81	2.20	7.89	25.2	77.9
	4		0.02	0.16	0.65	1.80	5.83	19.8	56.5
	5		0.02	0.15	0.62	1.61	5.38	18.3	53.3
	6/7/8		0.02	0.14	0.60	1.55	5.22	17.8	53.0
	9/10		0.02	0.14	0.60	1.53	5.20	17.6	52.9
Stage	Ratio		PGL-42	PGL-60(T)	PGL-90(T)	PGL-115(T)	PGL-142(T)	PGL-180(T)	PGL-220T
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)
	45/50/60/70/80/90/100		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 100 rpm.
* 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.

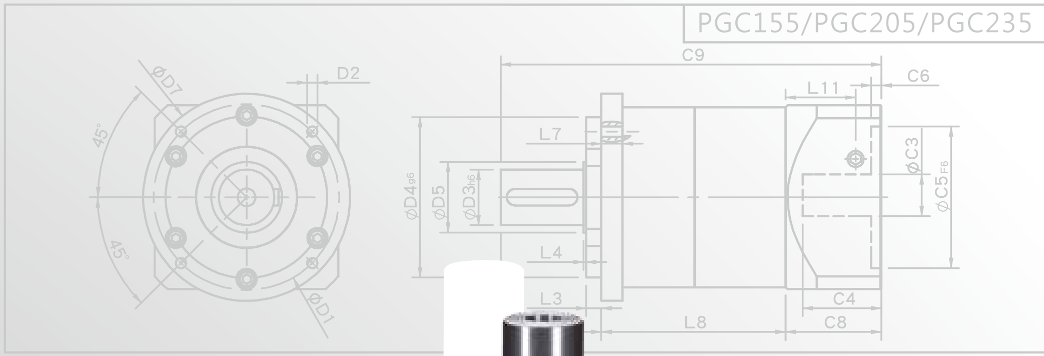
Products due to human error, natural disasters or other factors lead to poor or damaged, will not be covered under warranty.

PGC SERIES


□C7
C6
C9
L7
L11
D2
ΦD4g6
ΦD5
ΦD3h6
ΦC3
ΦC5F6
ΦD1
L4
L3
L2
L8
C4
C8
45°
45°
C2
ΦC1
L6
L5
ΦD6
L9
L10
PGC155/PGC205/PGC235

C9
□C7
ØD7
D2
L7
L11
C6
45°
ØD4g6
ØD5
ØD3h6
ØC3
ØC5F6
L4
ØD1
L3
C4
C2
ØC1
L2
L8
C8

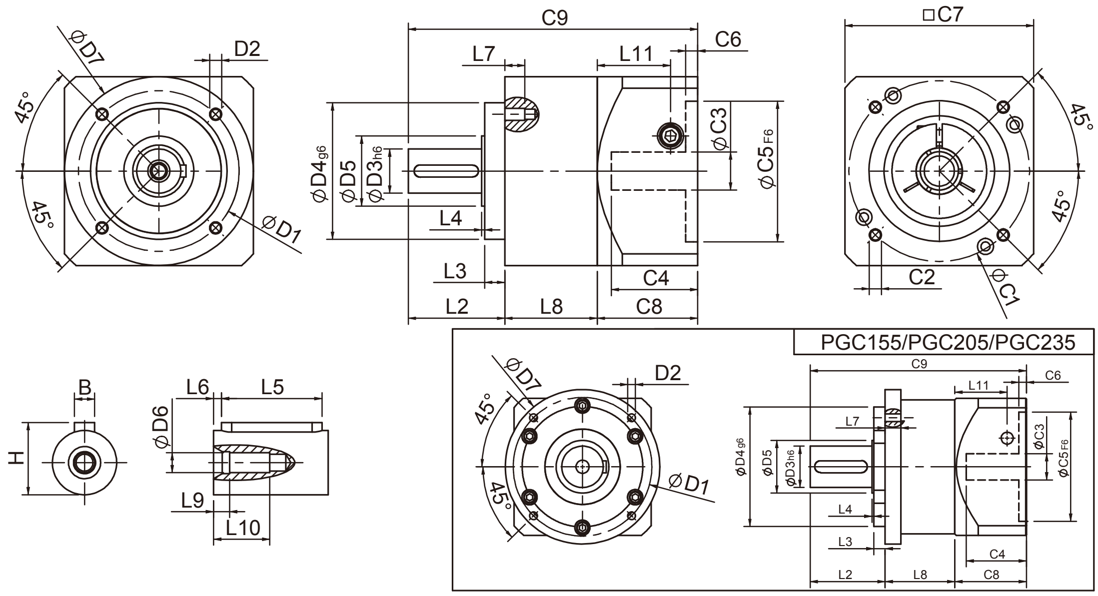
B
L6
L5
H
ØD6
L9
L10



PGC155/PGC205/PGC235
C9
ØD7
D2
L11
C6
L7
45°
ØD4g6
ØD5
ØD3h6
ØC3
ØC5F6
L4
L3
C4
ØD1
L8
C8

SESAME
PGC
SESAME MOTOR
PGC90-4
Arcmin P2
MADE IN TAIWAN

PGC Single Stage Dimensions



Specifications

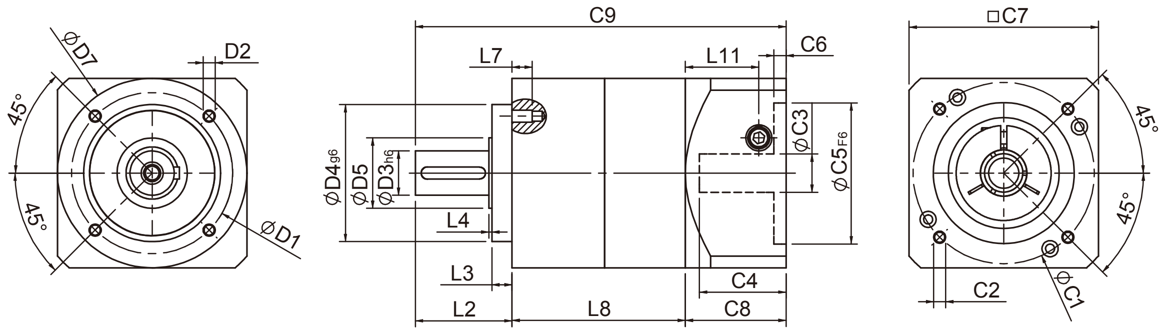
Unit:mm

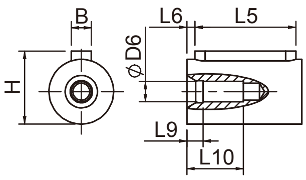
Dimensions	PGC50	PGC70	PGC90	PGC120	PGC155	PGC205	PGC235
D1	44	62	80	108	140	184	210
D2	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M10x1.5P	M12x1.75P	M16x2.0P
D3 h6	13	16	22	32	40	55	75
D4 g6	35	52	68	90	120	160	180
D5	15	25	35	45	50	70	90
D6	M4x0.7P	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P	M20x2.5P	M20x2.5P
D7	50	70	94	120	155	205	235
L2	24.5	35	48	60	93	99.5	126
L3	4	5	10	6	8	15	18
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	8	10	10	15	18	21	32
L8	30	38	46	61	79	92.5	129.5
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] 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]	93	119	149	184	252	287	385.5
B	5	5	6	10	12	16	20
H	15	18	24.5	35	43	59	79.5

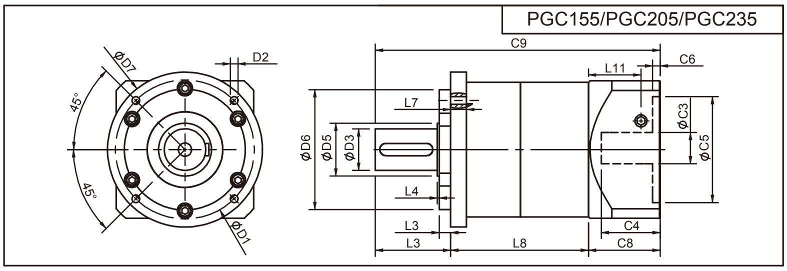
★ C1~C9 are motor specific dimensions (metric std shown). Size may vary according to motor flange.

★ Specification subject to change without notice.

PGC Double Stage Dimensions-1







Specifications

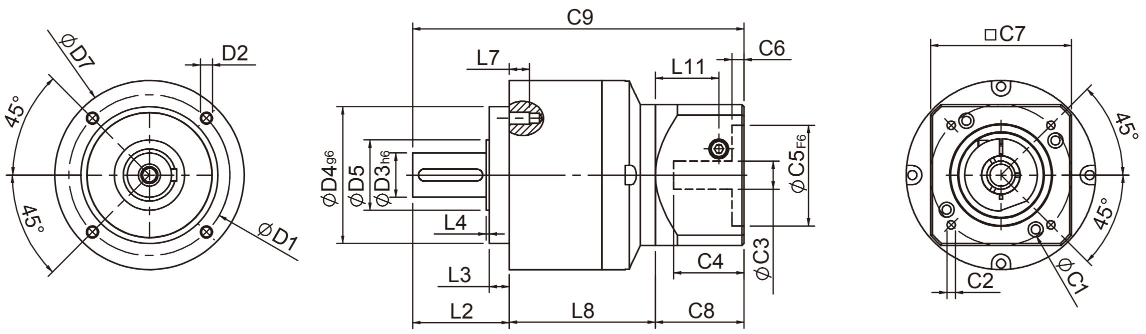
Unit:mm

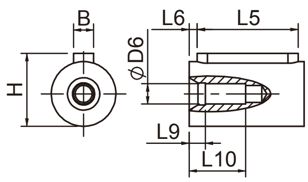
Dimensions	PGC50	PGC70	PGC90	PGC120	PGC155	PGC205	PGC235
D1	44	62	80	108	140	184	210
D2	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M10x1.5P	M12x1.75P	M16x2.0P
$D3_{h6}$	12	16	22	32	40	55	75
$D4_{g6}$	35	52	68	90	120	160	180
D5	15	25	35	45	50	70	90
D6	M4x0.7P	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P	M20x2.5P	M20x2.5P
D7	50	70	94	120	155	205	235
L2	24.5	35	48	60	93	99.5	126
L3	4	5	10	6	8	15	18
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	8	10	10	15	18	21	32
L8	56	66	86	109	140	182.5	244
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] 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]	34	44	50	63	80	95	130
C9[2]	114.5	145	184	232	313	377	500
B	5	5	6	10	12	16	20
H	15	18	24.5	35	43	59	79.5

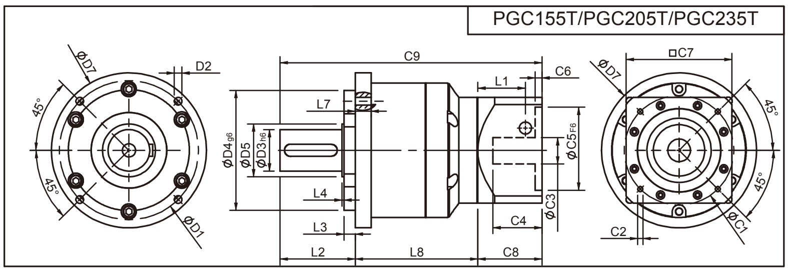
★ C1~C9 are motor specific dimensions (metric std shown). Size may vary according to motor flange.

★ Specification subject to change without notice.

PGC Double Stage Dimensions-2







Specifications

Unit:mm

Dimensions	PGC70T	PGC90T	PGC120T	PGC155T	PGC205T	PGC235T
D1	62	80	108	140	184	210
D2	M5x0.8P	M6x1.0P	M8x1.25P	M10x1.5P	M12x1.75P	M16x2.0P
D3$_{h6}$	16	22	32	40	55	75
D4$_{g6}$	52	68	90	120	160	180
D5	25	35	45	50	70	90
D6	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P	M20x2.5P	M20x2.5P
D7	70	94	120	155	205	235
L2	35	48	60	93	99.5	126
L3	5	10	6	8	15	18
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	10	10	15	18	21	32
L8	60.8	72.5	99.4	127	162	211.5
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]	46	70	90	115	145	200
C2 [2]	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M8x1.25P	M12x1.75P
C3 [2]	≦8	≦14	≦19/≦24	≦24/≦28	≦35	≦50
C4 [2]	28.5	41	47.75	58	66	82
C5 [2] $_{F6}$	30	50	70	95	110	114.3
C6 [2]	5.5	8	6	8	6	13
C7 [2]	50	70	94	120	140	182
C8 [2]	40	50	55	63	80	95
C9 [2]	135.8	170.5	214.4	283	341.5	432.5
B	5	6	10	12	16	20
H	18	24.5	35	a43	59	79.5

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

★ Specification subject to change without notice.

PGC Specifications Table

Specifications		Stage	Ratio	PGC-50	PGC-70	PGC-90	PGC-120	PGC-155	PGC-205	PGC-235
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	PGC-50	PGC-70(T)	PGC-90(T)	PGC-120(T)	PGC-155(T)	PGC-205(T)	PGC-235T
		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
Micro Backlash P0	arcmin	1 2	3-10 12-100	- -	- -	- -	≦3 ≦5	≦3 ≦5	≦3 ≦5	≦3 ≦5
Precision Backlash P1	arcmin	1 2	3-10 12-100	- -	≦6 ≦9	≦6 ≦9	≦5 ≦7	≦5 ≦7	≦5 ≦7	≦5 ≦7
Standard Backlash P2	arcmin	1 2	3-10 12-100	≦12 ≦15	≦9 ≦12	≦9 ≦12	≦7 ≦9	≦7 ≦9	≦7 ≦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	450	1200	2050	4250	7680	9080	13500
Max. Axial Load F_{2aB} [1]	N	1,2	3-100	320	900	1420	2930	4680	5100	7300
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	≧96% ≧92%						
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]	dBA/1m	1,2	3-100	60	62	65	65	70	70	75
Protection Class	-	1,2	3-100	IP65						
Lubrication	-	1,2	3-100	Synthetic Lubricant						

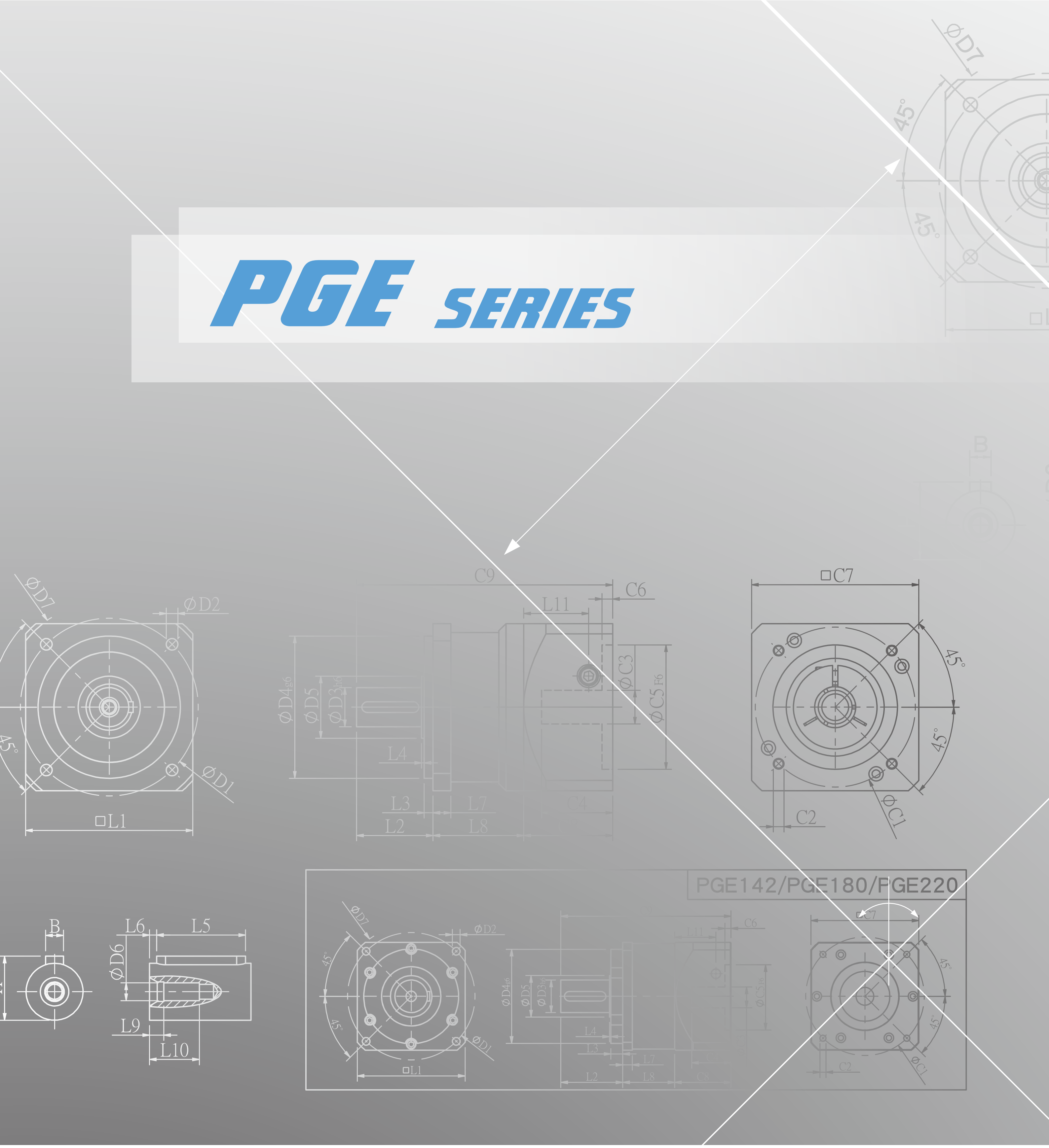
Inertia (J1)

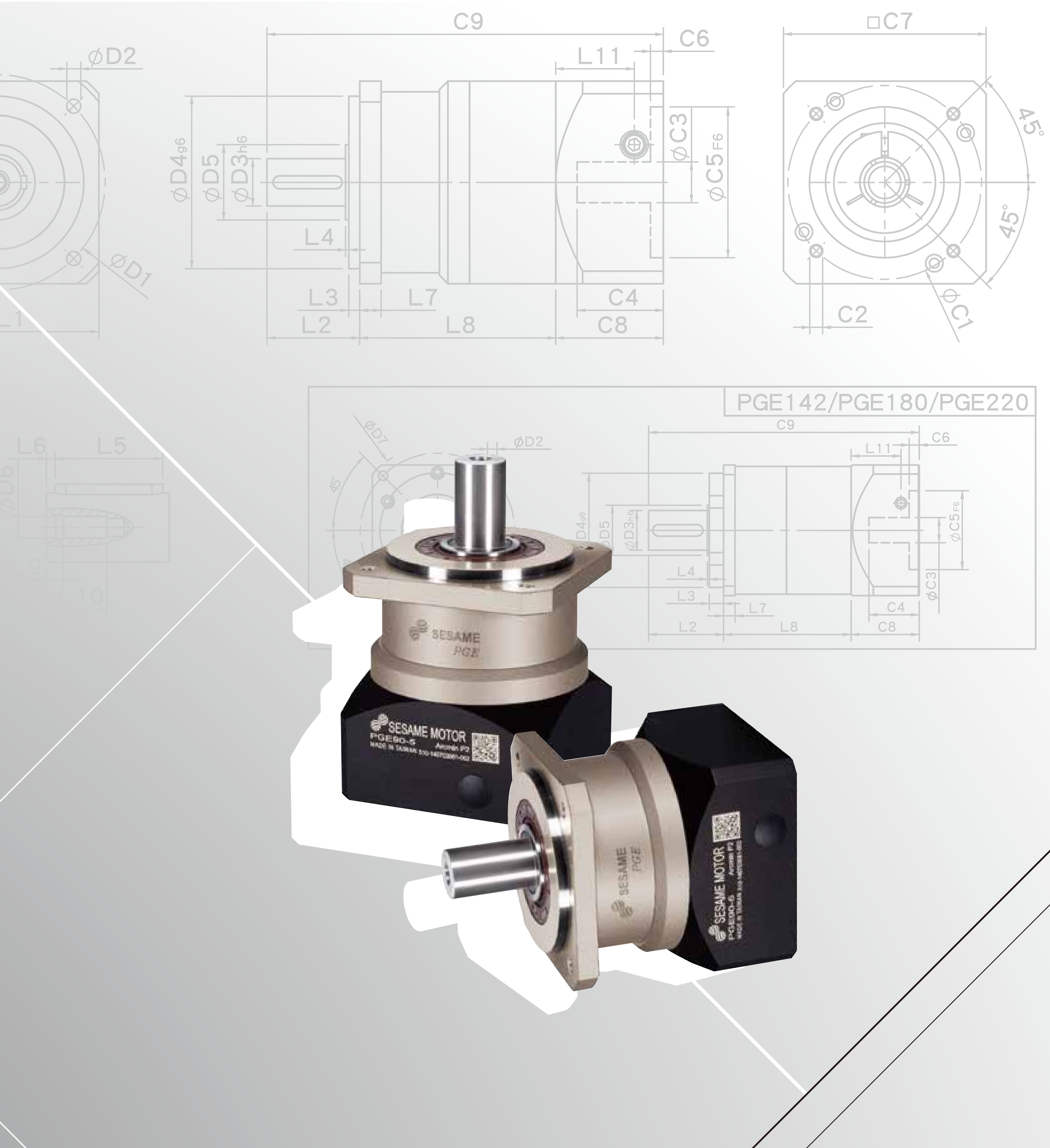
Stage	Ratio	unit	PGC-50	PGC-70	PGC-90	PGC-120	PGC-155	PGC-205	PGC-235
1	3	$Kg \cdot cm^2$	0.03	0.20	0.81	2.20	7.89	25.2	77.9
	4		0.02	0.16	0.65	1.80	5.83	19.8	56.5
	5		0.02	0.15	0.62	1.61	5.38	18.3	53.3
	7		0.02	0.14	0.60	1.55	5.22	17.8	53.0
	10		0.02	0.14	0.60	1.53	5.20	17.6	52.9
Stage	Ratio		PGC-50	PGC-70(T)	PGC-90(T)	PGC-120(T)	PGC-155(T)	PGC-205(T)	PGC-235T
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 100 rpm.
* 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.

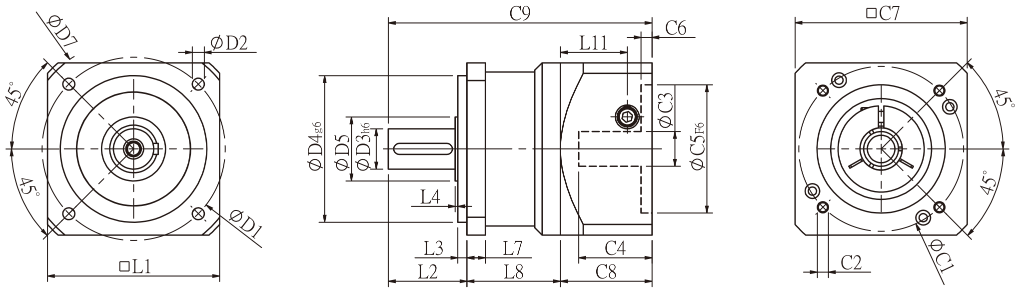
PGE SERIES

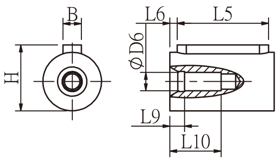




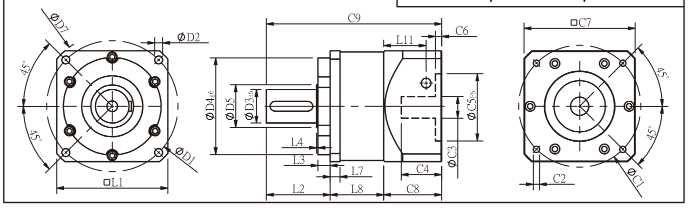
C9
C6
L11
□C7
øD2
øD4g6
øD5
øD3h6
øC3
øC5F6
L4
øD1
45°
L3
L7
C4
L2
L8
C8
C2
øC1
PGE142/PGE180/PGE220
L6
L5
øD7
L9
L10
SESAME
PGE
SESAME MOTOR
PGE90-5
Arcmin P2
MADE IN TAIWAN

PGE Single Stage Dimensions





PGE142/PGE180/PGE220



Specifications

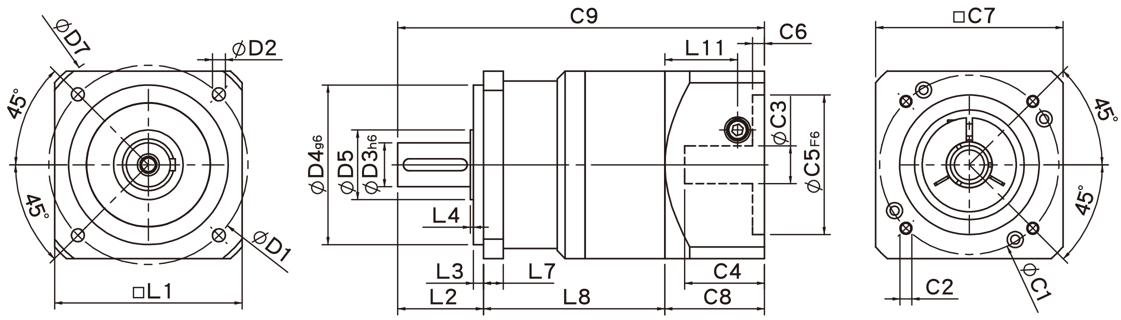
Unit:mm

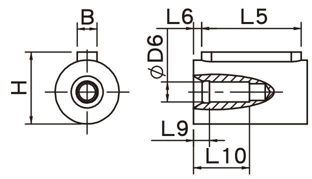
Dimensions	PGE50	PGE70	PGE90	PGE120	PGE142	PGE180	PGE220
D1	50	70	100	130	165	215	250
D2	3.4	6	6.5	8.5	10.5	13	17
D3$_{h6}$	13	16	22	32	40	55	75
D4$_{g6}$	35	50	80	110	130	160	180
D5	15	25	35	45	50	70	90
D6	M4x0.7P	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P	M20x2.5P	M20x2.5P
D7	64	90	120	152	186	239	292
L1	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] $_{F6}$	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]	93	119	149	184	252	287	385.5
B	5	5	6	10	12	16	20
H	15	18	24.5	35	43	59	79.5

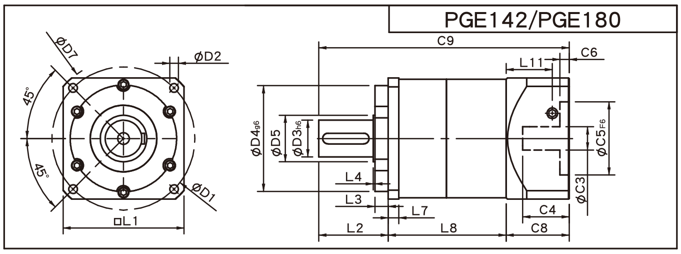
★ C1~C9 are motor specific dimensions (metric std shown). Size may vary according to motor flange.

★ Specification subject to change without notice.

PGE Double Stage Dimensions-1







Specifications

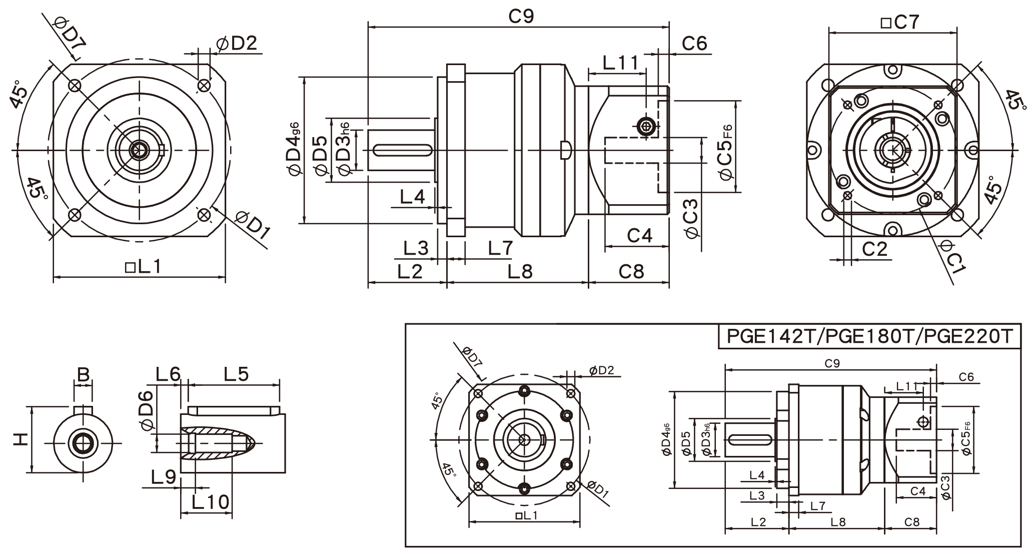
Unit:mm

Dimensions	PGE50	PGE70	PGE90	PGE120	PGE142	PGE180
D1	50	70	100	130	165	215
D2	3.4	6	6.5	8.5	10.5	13
D3 h6	13	16	22	32	40	55
D4 g6	35	50	80	110	130	160
D5	15	25	35	45	50	70
D6	M4x0.7P	M5x0.8P	M8x1.25P	M12x1.75P	M16x2.0P	M20x2.5P
D7	64	90	120	152	186	239
L1	50	70	94	120	142	182
L2	24.5	37	43	60	93	104.5
L3	4	7	5	6	8	20
L4	1.5	1.5	1.5	3	6	2.5
L5	15	25	32	40	60	70
L6	2	2	3	5	5	6
L7	5	6	10	12	18	16
L8	56	64	91	109	140	177.5
L9	4	4	4.5	6	6	8
L10	14	16.5	20.5	30	38	48
L11	24.4	31.5	36.5	42	63	69.5
C1 [2]	46	70	90	115	145	200
C2 [2]	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M8x1.25P	M12x1.75P
C3 [2]	≦8	≦14	≦19/≦24	≦24/≦28	≦35	≦50
C4 [2]	27	35	43	58	66	82
C5 [2] F6	30	50	70	95	110	114.3
C6 [2]	4	5	5	8	6	13
C7 [2]	50	70	94	120	140	182
C8 [2]	38.5	46	55	63	80	95
C9 [2]	119	147	189	232	313	377
B	5	5	6	10	12	16
H	15	18	24.5	35	43	59

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

★ Specification subject to change without notice.

PGE Double Stage Dimensions-2



Specifications

Unit:mm

Dimensions	PGE70T	PGE90T	PGE120T	PGE142T	PGE180T	PGE220T
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
$C5_{F6}$ [2]	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 motor flange.

★ Specification subject to change without notice.

PGE Specifications Table

Specifications		Stage	Ratio	PGE-50	PGE-70	PGE-90	PGE-120	PGE-142	PGE-180	PGE-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	PGE-50	PGE-70(T)	PGE-90(T)	PGE-120(T)	PGE-142(T)	PGE-180(T)	PGE-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
Micro Backlash P0	arcmin	1	3-10	-	-	-	≦3	≦3	≦3	≦3
		2	15-100	-	-	-	≦5	≦5	≦5	≦5
Precision Backlash P1	arcmin	1	3-10	-	≦6	≦6	≦5	≦5	≦5	≦5
		2	15-100	-	≦9	≦9	≦7	≦7	≦7	≦7
Standard Backlash P2	arcmin	1	3-10	≦12	≦9	≦9	≦7	≦7	≦7	≦7
		2	15-100	≦15	≦12	≦12	≦9	≦9	≦9	≦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	450	1200	2050	4250	7680	9080	13500
Max. Axial Load F_{2aB} [1]	N	1,2	3-100	320	900	1420	2930	4680	5100	7300
Operating Temp.	°C		3-100	-10 °C ~+90 °C						
Service Life	hr		3-100	20,000 (10,000 Continuous operation)						
Efficiency	%	1	3-10	≧96%						
		2	15-100	≧92%						
Weight	kg	1	3-10	0.7	1.4	3.0	7.3	15.6	26	56
		2	15-100	0.9	2.2(1.7)	5.0(3.4)	11.5(8.5)	20.7(17.2)	36(31)	80(62)
Mounting Position	-	1,2	3-100	Any direction						
Noise Level [2]	dBA/1m	1,2	3-100	60	62	65	65	70	70	75
Protection Class	-	1,2	3-100	IP65						
Lubrication	-	1,2	3-100	Synthetic Lubricant						

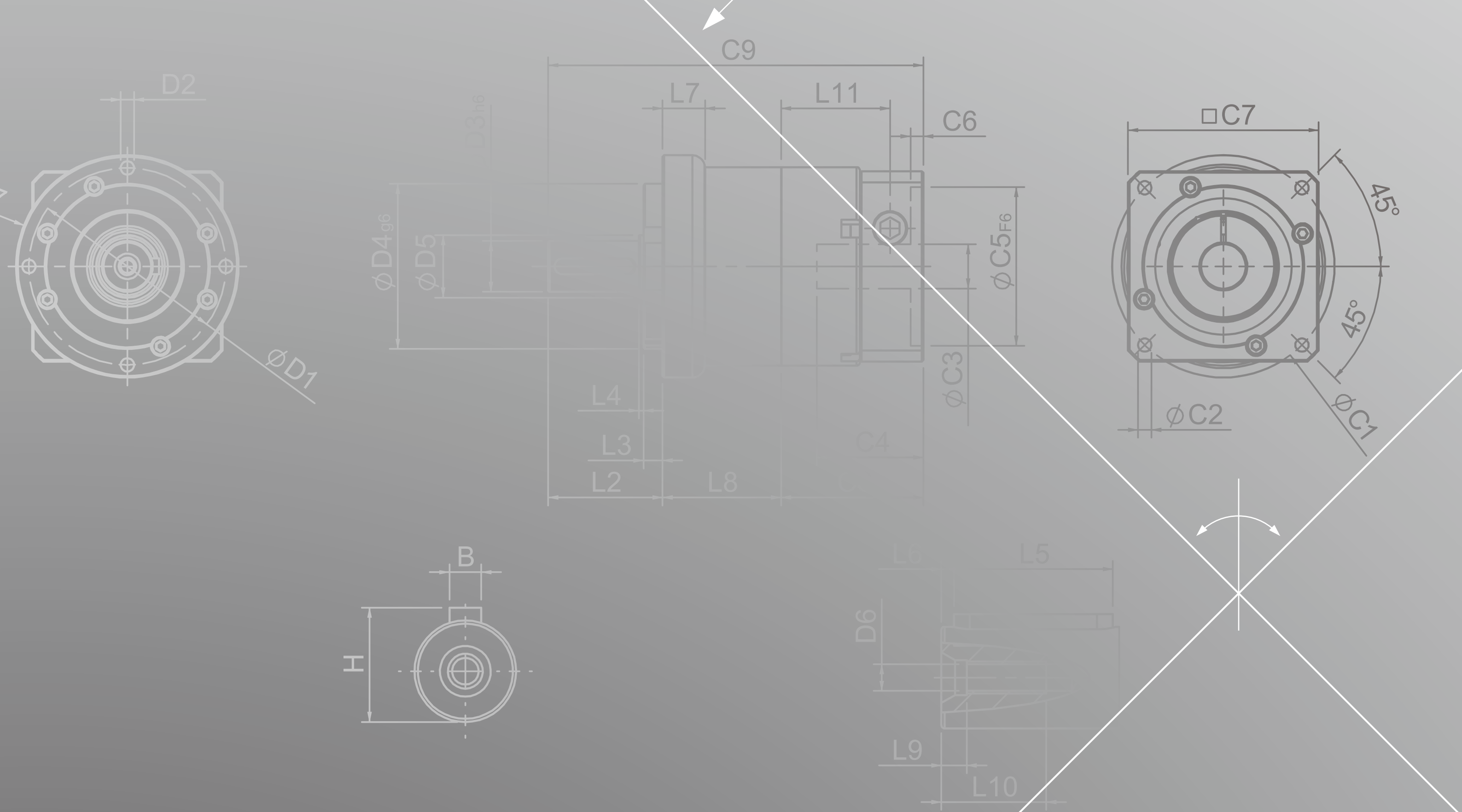
Inertia (J1)

Stage	Ratio	unit	PGE-50	PGE-70	PGE-90	PGE-120	PGE-142	PGE-180	PGE-220
1	3	Kg • cm^2	0.03	0.20	0.81	2.20	7.89	25.2	77.9
	4		0.02	0.16	0.65	1.80	5.83	19.8	56.5
	5		0.02	0.15	0.62	1.61	5.38	18.3	53.3
	7		0.02	0.14	0.60	1.55	5.22	17.8	53.0
	10		0.02	0.14	0.60	1.53	5.20	17.6	52.9
Stage	Ratio		PGE-50	PGE-70(T)	PGE-90(T)	PGE-120(T)	PGE-142(T)	PGE-180(T)	PGE-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 100 rpm.
* 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.

SGC SERIES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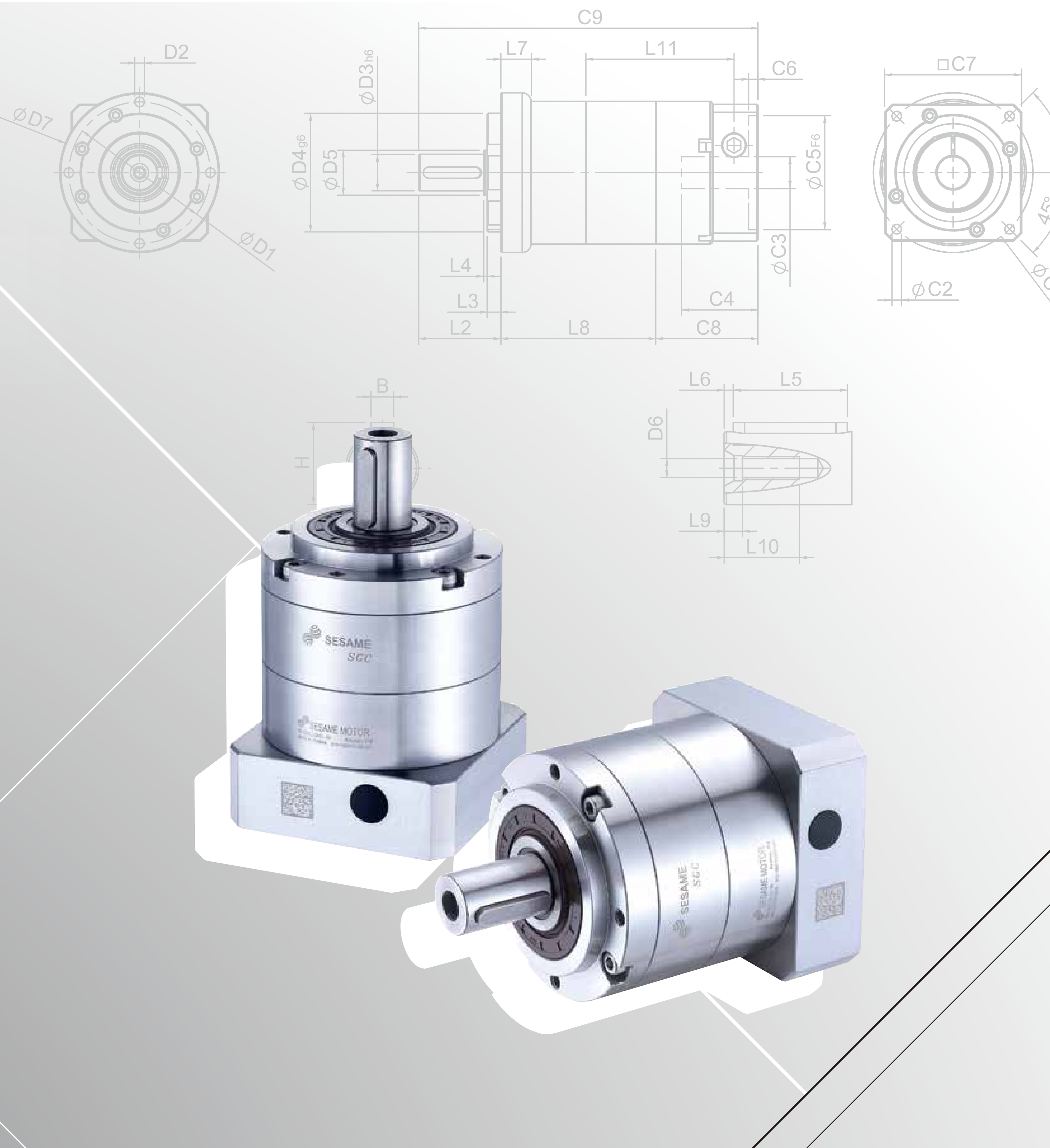
C9
L7
L11
C6
□C7
45°
ØD4g6
ØD5
ØC5F6
ØD1
ØC3
ØC2
ØC1
L4
L3
L2
L8
C4
B
H
L5
D6
L9
L10


C9
D2
L7
L11
C6
□C7
ϕD7
ϕD3h6
ϕD4g6
ϕD5
ϕC5F6
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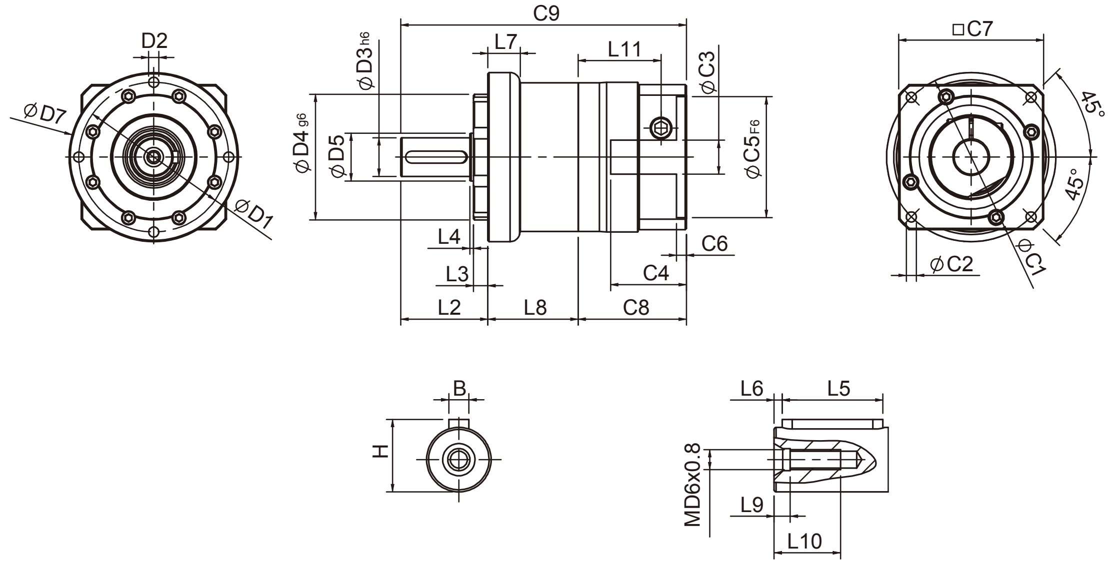
L4
ϕC3
ϕC2
45°
L3
C4
L2
L8
C8
L6
L5
B
D6
H
L9
L10
SESAME
SGC
SESAME MOTOR

SGC Single Stage Dimensions



Specifications

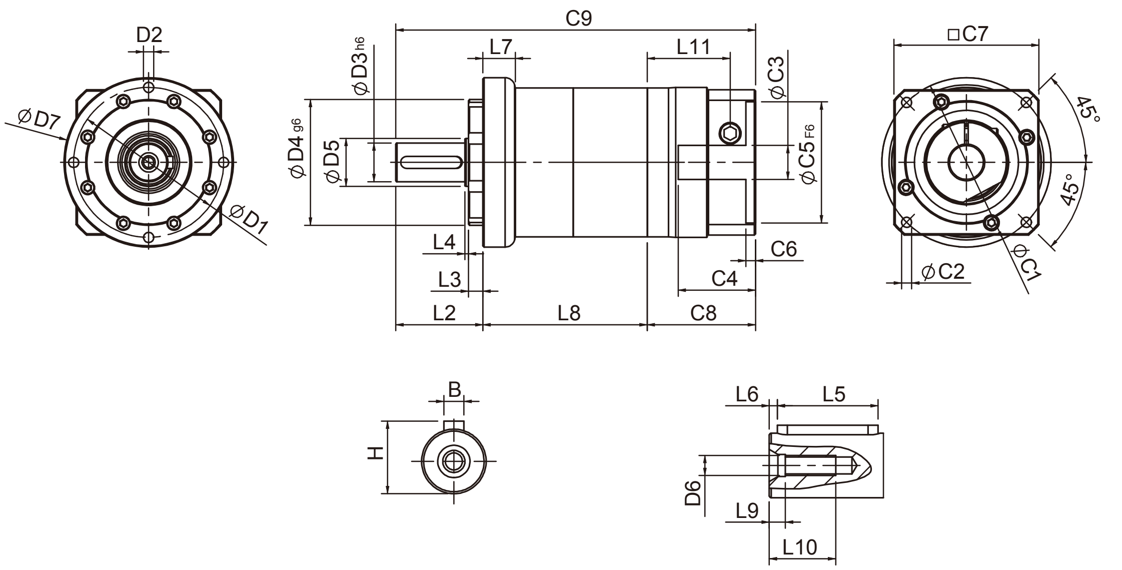
Unit:mm

Dimensions	SGC50	SGC70	SGC90
D1	-	62	80
D2	-	M5x0.8P	M6x1.0P
$D3_{h6}$	-	16	22
$D4_{g6}$	-	52	68
D5	-	20	35
D6	-	M5x0.8P	M8x1.25P
D7	-	70	90
L2	-	36	46
L3	-	6	7
L4	-	1.5	2.5
L5	-	25	32
L6	-	2	3
L7	-	13.4	14.1
L8	-	37.3	43.8
L9	-	4	4.5
L10	-	16.5	20.5
L11	-	34.3	41.5
C1 [2]	-	70	90
C2 [2]	-	M5x0.8P	M6x1.0P
C3 [2]	-	≦14/≦19	≦19/≦24/≦28
C4 [2]	-	33.5	41
$C5_{F6}$ [2]	-	50	70
C6 [2]	-	4	6
C7 [2]	-	60	90
C8 [2]	-	44.8	55.8
C9 [2]	-	118.1	145.6
B	-	5	6
H	-	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.

SGC Double Stage Dimensions



Specifications

Unit:mm

Dimensions	SGC50	SGC70	SGC90
D1	-	62	80
D2	-	M5x0.8P	M6x1.0P
$D3_{h6}$	-	16	22
$D4_{g6}$	-	52	68
D5	-	20	35
D6	-	M5x0.8P	M8x1.25P
D7	-	70	90
L2	-	36	46
L3	-	6	7
L4	-	1.5	2.5
L5	-	25	32
L6	-	2	3
L7	-	13.4	14.1
L8	-	67.9	84.7
L9	-	4	4.5
L10	-	16.5	20.5
L11	-	34.3	41.5
C1[2]	-	70	90
C2[2]	-	M5x0.8P	M6x1.0P
C3[2]	-	≦14/≦19	≦19/≦24/≦28
C4[2]	-	33.5	41
C5[2] $_{F6}$	-	50	70
C6[2]	-	4	6
C7[2]	-	60	90
C8[2]	-	44.8	55.8
C9[2]	-	148.7	186.5
B	-	5	6
H	-	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.

SGC Specifications Table

Specifications		Stage	Ratio	SGC-50	SGC-70	SGC-90	SGC-120
Nominal Output Torque T_{2N}	N · m	1	3	9	28	85	220
			4	10	32	80	240
			5	11	35	95	270
			7	10	28	85	220
			9	8	23	75	210
			10	8	21	65	190
		Stage	Ratio	SGC-50	SGC-70(T)	SGC-90(T)	SGC-120T
		2	15	11	34	90	250
			20	10	32	80	240
			25	11	35	95	270
			35	11	35	95	270
			45	11	35	95	270
			49	10	28	85	220
			63	10	28	85	220
			81	8	23	75	210
			100	8	21	65	190
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	3000	2500
Max. Input Speed n_{1max}	rpm	1,2	3-100	6000	6000	6000	5000
Standard Backlash P2	arcmin	1	3-10	≦9	≦8	≦7	≦6
		2	15-100	≦12	≦10	≦9	≦8
Torsional Rigidity	N · m /arcmin	1,2	3-100	1.5	4.0	8.5	17
Max. Radial Load F_{2rB} [1]	N	1,2	3-100	760	1250	2030	4200
Max. Axial Load F_{2aB} [1]	N	1,2	3-100	410	700	1200	2600
Operating Temp.	℃	1,2	3-100	-10℃ ~ +90 ℃			
Service Life	hr	1,2	3-100	20,000 (10,000 Continuous operation)			
Efficiency	%	1	3-10	≧95%			
		2	15-100	≧90%			
Weight	kg	1	3-10	0.9	1.9	4.8	11.5
		2	15-100	1.1	2.4(2.2)	6.5(5.4)	13.5
Mounting Position	-	1,2	3-100	Any Direction			
Noise Level [2]	dBA/1m	1,2	3-100	61	63	66	67
Protection Class	-	1,2	3-100	IP65 (Optional : IP67)			
Lubrication	-	1,2	3-100	Synthetic Lubricant (Optional: Food Grade Grease)			

Inertia (J1)

Stage	Ratio	unit	SGC-50(ψ8)	SGC-70(ψ14)	SGC-90(ψ19)	SGC-120(ψ24)
1	3	Kg · cm^2	0.04	0.23	0.77	2.30
	4		0.03	0.21	0.67	1.92
	5		0.03	0.21	0.61	1.71
	7		0.03	0.21	0.60	1.65
	9/10		0.03	0.21	0.60	1.63
Stage	Ratio		SGC-50(ψ8)	SGC-70(ψ14)/ SGC-70T(ψ8)	SGC-90(ψ19)/ SGC-90T(ψ14)	SGC-120T(ψ19)
2	15/20/25		0.03	0.21(0.03)	0.61(0.21)	0.61
	35/49		0.03	0.21(0.03)	0.60(0.21)	0.60
	45/63/81/100		0.03	0.21(0.03)	0.60(0.21)	0.60

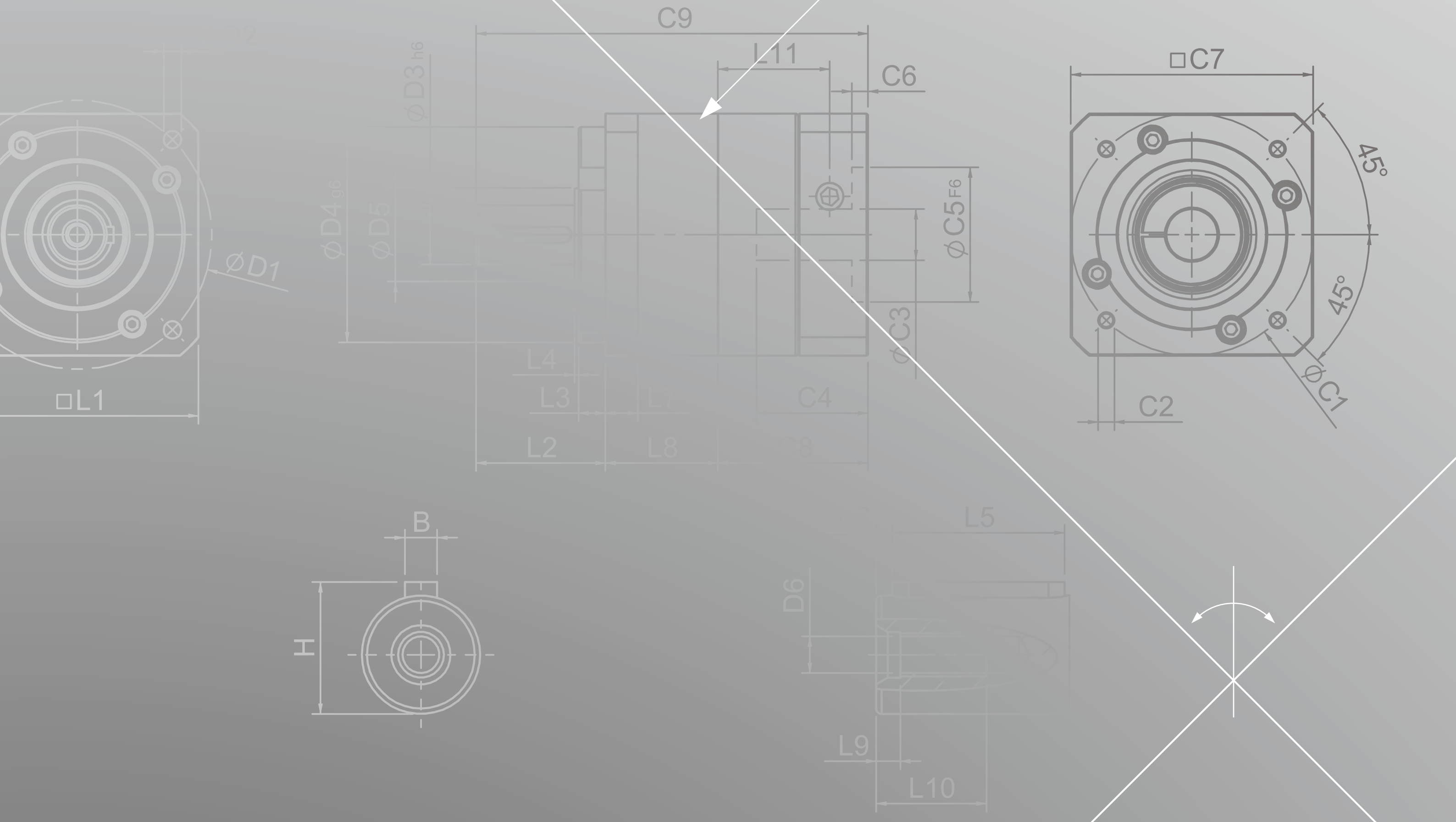
* 1. Applied to the output shaft center at 100 rpm.

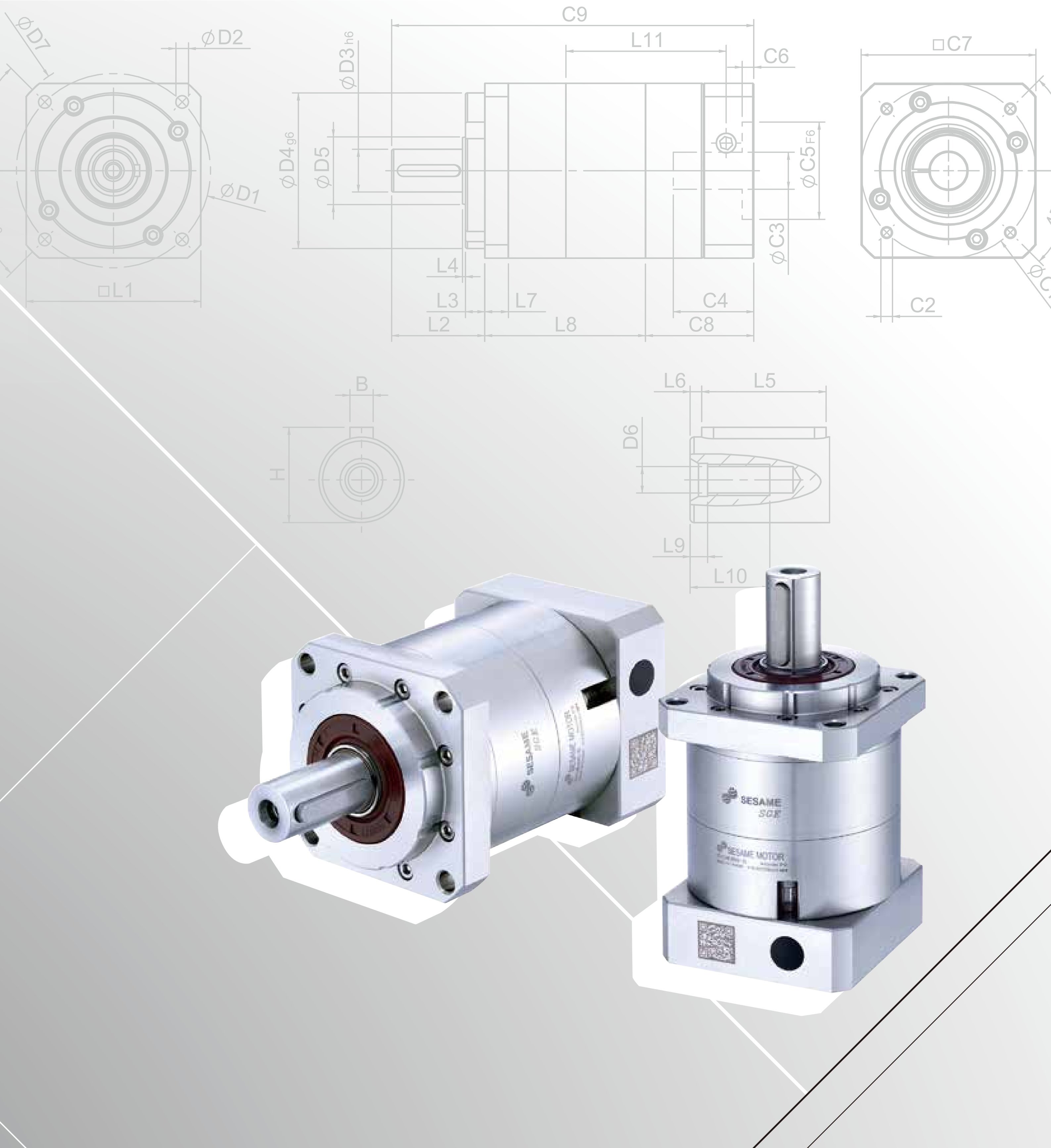
* 2. Measured at 3000 rpm with no load. These values are measured by gearbox with ratio = 10 (1-stage) or ratio = 100 (2-stage) at nominal input speed or 3000 rpm (if nominal input speed is higher than 3000 rpm) with no load.

※ The above figures/specifications are subject to change without prior notice.

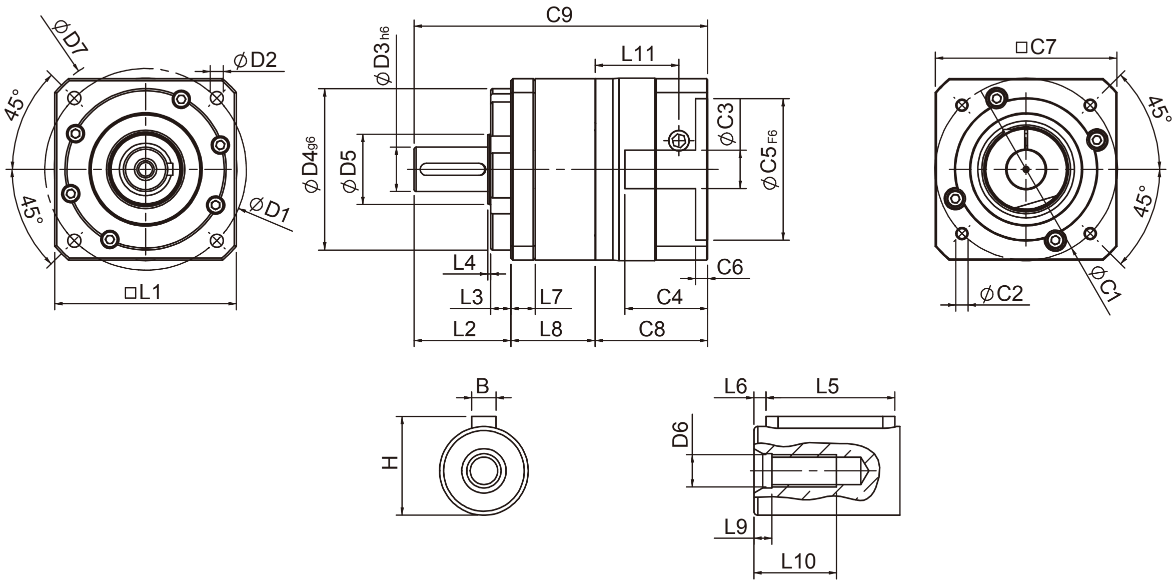

SESAME
SGC
SESAME MOTOR

SGE SERIES


C9
L11
C6
□C7
45°
45°
ØC1
C2
ØC5F6
ØC3
C4
ØD3h6
ØD4
ØD5
ØD1
□L1
L4
L3
L2
L8
B
H
L5
D6
L9
L10


ØD7
ØD2
ØD1
□L1
ØD3h6
ØD4g6
ØD5
C9
L11
C6
ØC5F6
ØC3
L4
L3
L7
C4
L2
L8
C8
□C7
C2
B
H
L6
L5
D6
L9
L10
SESAME
SGE
SESAME MOTOR

SGE Single Stage Dimensions



Specifications

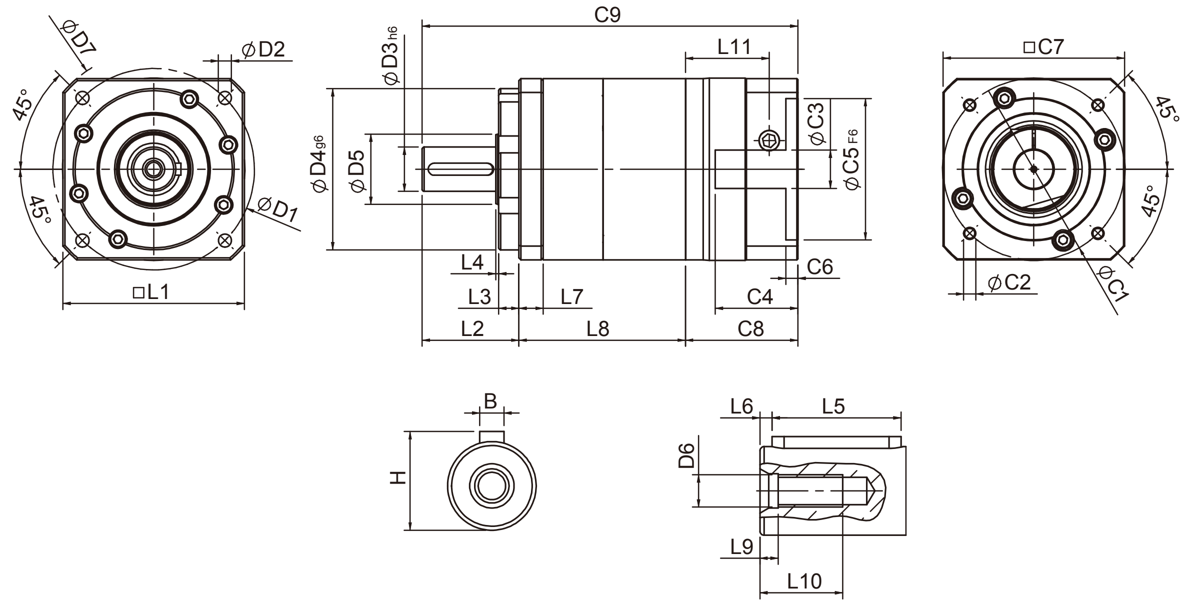
Unit:mm

Dimensions	SGE42	SGE60	SGE90
D1	-	70	100
D2	-	5.5	6.5
$D3_{h6}$	-	16	22
$D4_{g6}$	-	50	80
D5	-	20	35
D6	-	M5x0.8P	M8x1.25P
D7	-	80	118
L1	-	62.5	90
L2	-	37	48
L3	-	7	10
L4	-	1.5	1.5
L5	-	25	32
L6	-	2	3
L7	-	10	12.1
L8	-	36.3	41.8
L9	-	4	4.5
L10	-	16.5	20.5
L11	-	34.3	41.5
C1 [2]	-	70	90
C2 [2]	-	M5x0.8P	M6x1.0P
C3 [2]	-	≦14/≦19	≦19/≦24/≦28
C4 [2]	-	33.5	41
C5 [2] F6	-	50	70
C6 [2]	-	4	6
C7 [2]	-	60	90
C8 [2]	-	44.8	55.8
C9 [2]	-	118.1	145.6
B	-	5	6
H	-	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.

SGE Double Stage Dimensions



Specifications

Unit:mm

Dimensions	SGE42	SGE60	SGE90
D1	-	70	100
D2	-	5.5	6.5
D3 h6	-	16	22
D4 g6	-	50	80
D5	-	20	35
D6	-	M5x0.8P	M8x1.25P
D7	-	80	118
L1	-	62.5	90
L2	-	37	48
L3	-	7	10
L4	-	1.5	1.5
L5	-	25	32
L6	-	2	3
L7	-	10	12.1
L8	-	66.9	82.7
L9	-	4	4.5
L10	-	16.5	20.5
L11	-	34.3	41.5
C1[2]	-	70	90
C2[2]	-	M5x0.8P	M6x1.0P
C3[2]	-	≦14/≦19	≦19/≦24/≦28
C4[2]	-	33.5	41
C5[2] F6	-	50	70
C6[2]	-	4	6
C7[2]	-	60	90
C8[2]	-	44.8	55.8
C9[2]	-	148.7	186.5
B	-	5	6
H	-	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.

SGE Specifications Table

Specifications		Stage	Ratio	SGE-42	SGE-60	SGE-90	SGE-115
Nominal Output Torque T_{2N}	N · m	1	3	9	28	85	220
			4	10	32	80	240
			5	11	35	95	270
			7	10	28	85	220
			9	8	23	75	210
			10	8	21	65	190
		Stage	Ratio	SGE-42	SGE-60(T)	SGE-90(T)	SGE-115T
		2	15	11	34	90	250
			20	10	32	80	240
			25	11	35	95	270
			35	11	35	95	270
			45	11	35	95	270
			49	10	28	85	220
			63	10	28	85	220
			81	8	23	75	210
			100	8	21	65	190
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	3000	2500
Max. Input Speed n_{1max}	rpm	1,2	3-100	6000	6000	6000	5000
Standard Backlash P2	arcmin	1	3-10	≦9	≦8	≦7	≦6
		2	15-100	≦12	≦10	≦9	≦8
Torsional Rigidity	N · m /arcmin	1,2	3-100	1.5	4.0	8.5	17
Max. Radial Load F_{2rB} [1]	N	1,2	3-100	760	1250	2030	4200
Max. Axial Load F_{2aB} [1]	N	1,2	3-100	410	700	1200	2600
Operating Temp.	℃	1,2	3-100	-10℃ ~ +90 ℃			
Service Life	hr	1,2	3-100	20,000 (10,000 Continuous operation)			
Efficiency	%	1	3-10	≧95%			
		2	15-100	≧90%			
Weight	kg	1	3-10	0.9	1.9	4.8	11.5
		2	15-100	1.1	2.4(2.2)	6.5(5.4)	13.5
Mounting Position	-	1,2	3-100	Any Direction			
Noise Level [2]	dBA/1m	1,2	3-100	61	63	66	67
Protection Class	-	1,2	3-100	IP65 (Optional : IP67)			
Lubrication	-	1,2	3-100	Synthetic Lubricant (Optional: Food Grade Grease)			

Inertia (J1)

Stage	Ratio	unit	SGE-42(ψ8)	SGE-60(ψ14)	SGE-90(ψ19)	SGE-115(ψ24)
1	3	$Kg \cdot cm^2$	0.04	0.23	0.77	2.30
	4		0.03	0.21	0.67	1.92
	5		0.03	0.21	0.61	1.71
	7		0.03	0.21	0.60	1.65
	9/10		0.03	0.21	0.60	1.63
Stage	Ratio		SGE-42(ψ8)	SGE-60(ψ14)/ SGE-60T(ψ8)	SGE-90(ψ19)/ SGE-90T(ψ14)	SGE-115T(ψ19)
2	15/20/25		0.03	0.21(0.03)	0.61(0.21)	0.61
	35/49		0.03	0.21(0.03)	0.60(0.21)	0.60
	45/63/81/100		0.03	0.21(0.03)	0.60(0.21)	0.60

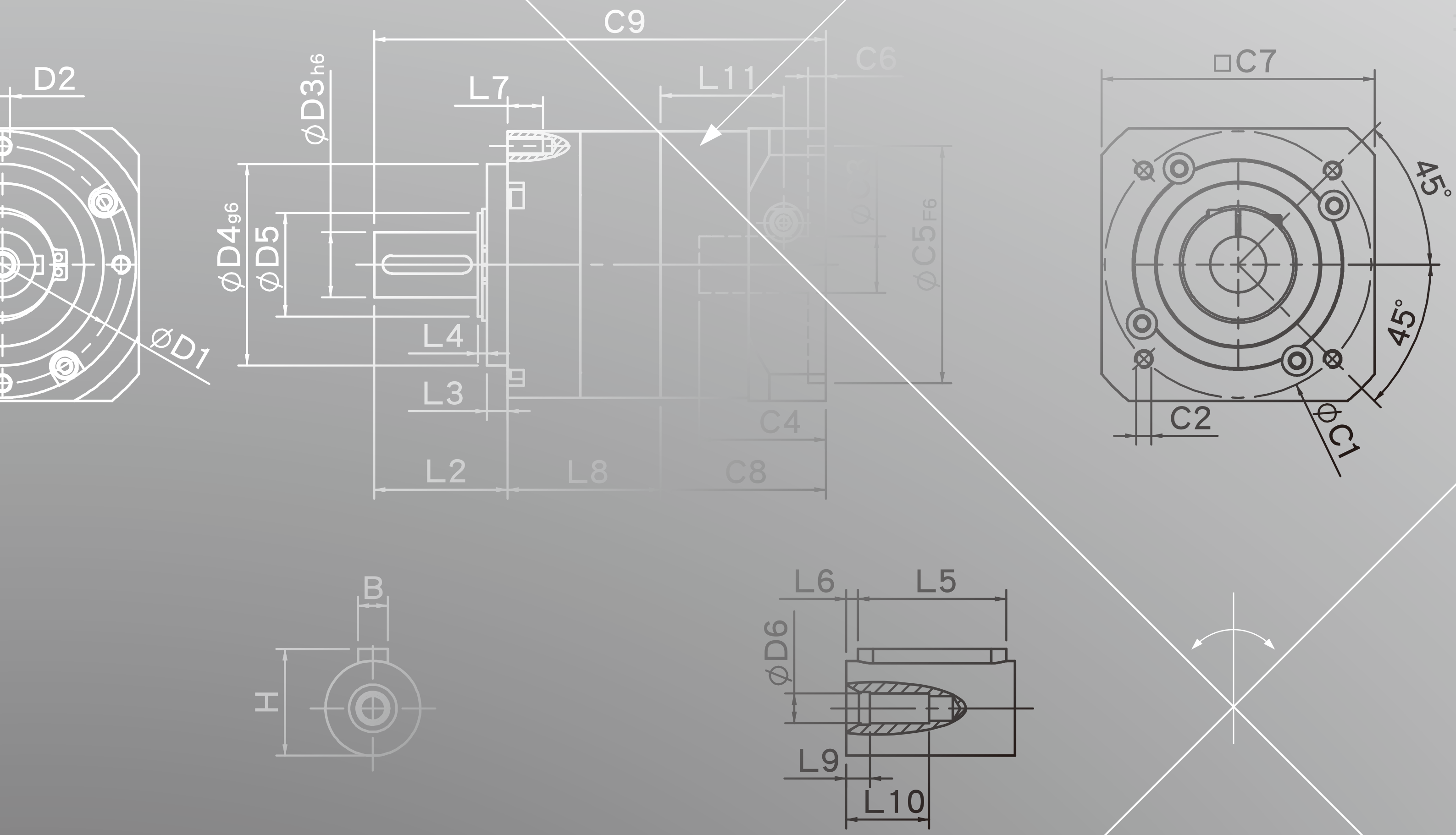
* 1. Applied to the output shaft center at 100 rpm.
* 2. Measured at 3000 rpm with no load. These values are measured by gearbox with ratio = 10 (1-stage) or ratio = 100 (2-stage) at nominal input speed or 3000 rpm (if nominal input speed is higher than 3000 rpm) with no load.

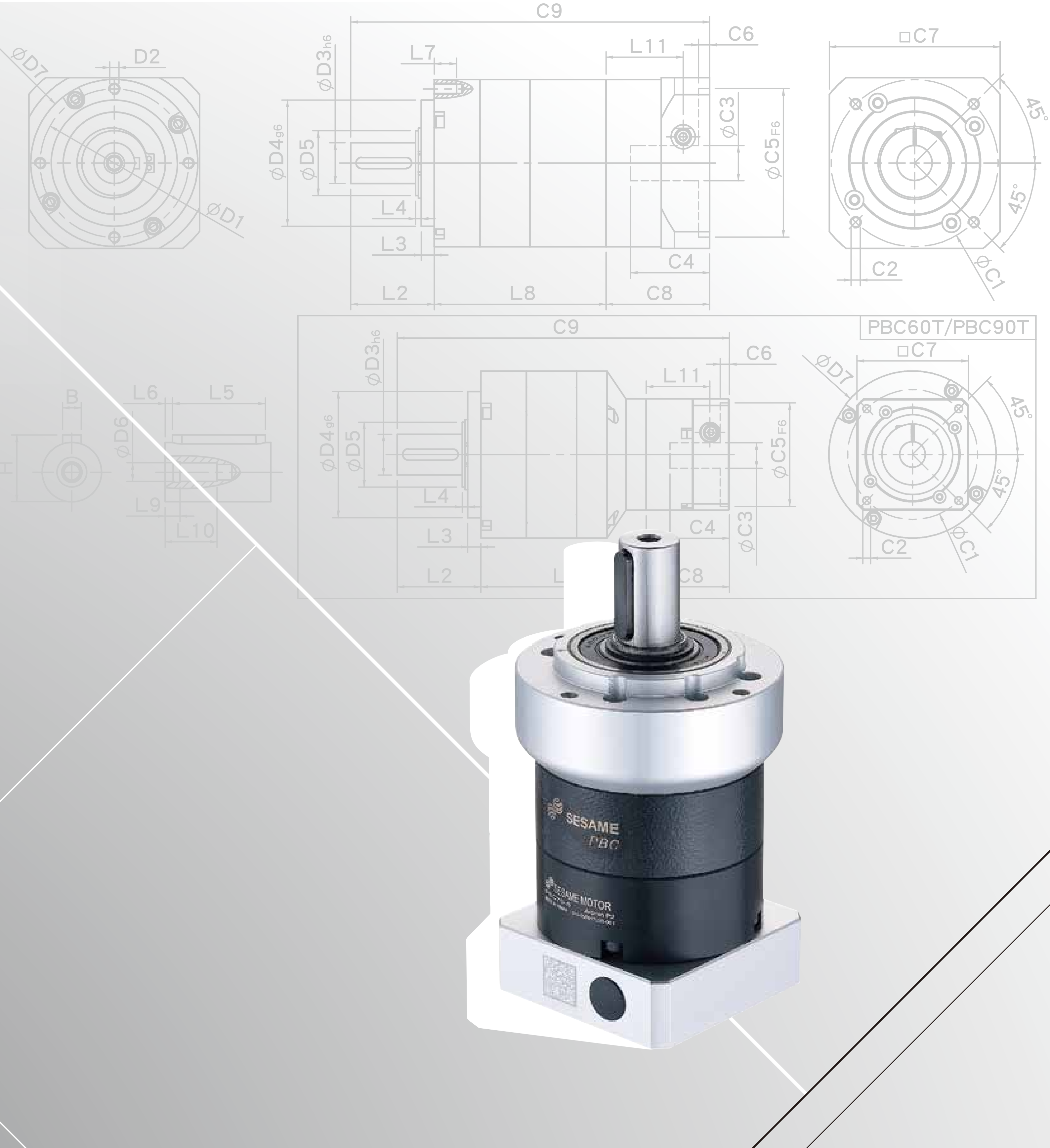
※ The above figures/specifications are subject to change without prior notice.

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

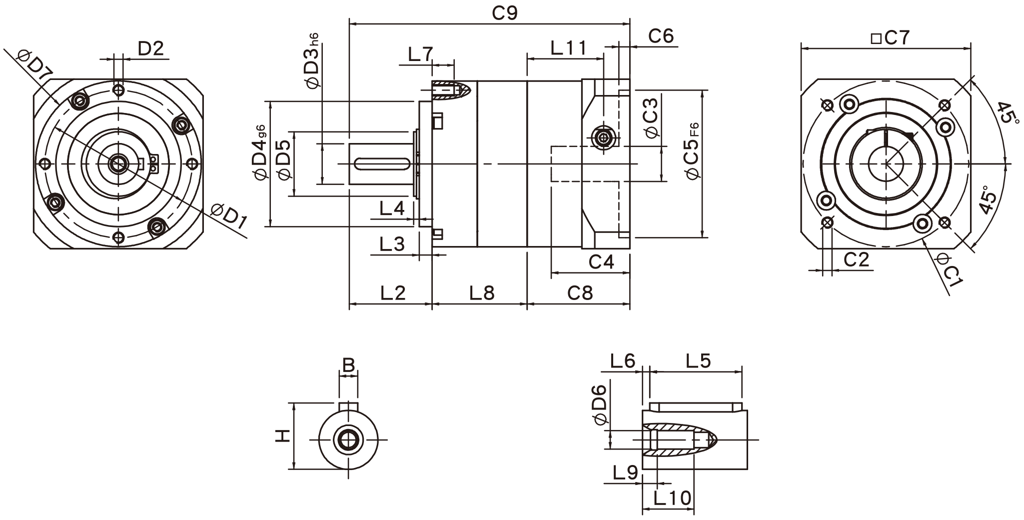

SESAME
SGE
SESAME MOTOR

PBC SERIES


C9
D2
L7
L11
C6
⌀D3h6
⌀D4g6
⌀D5
⌀D1
L4
L3
L2
L8
C8
C4
⌀C5F6
□C7
45°
45°
C2
⌀C1
B
H
L6
L5
⌀D6
L9
L10


PBC60T/PBC90T
C9
C6
L11
L7
□C7
45°
ØD3h6
ØD4g6
ØD5
ØC3
ØC5F6
ØD7
D2
ØD1
L4
L3
L2
L8
C4
C8
C2
ØC1
B
L6
L5
ØD6
L9
L10
SESAME
PBC
SESAME MOTOR

PBC Single Stage Dimensions



Specifications

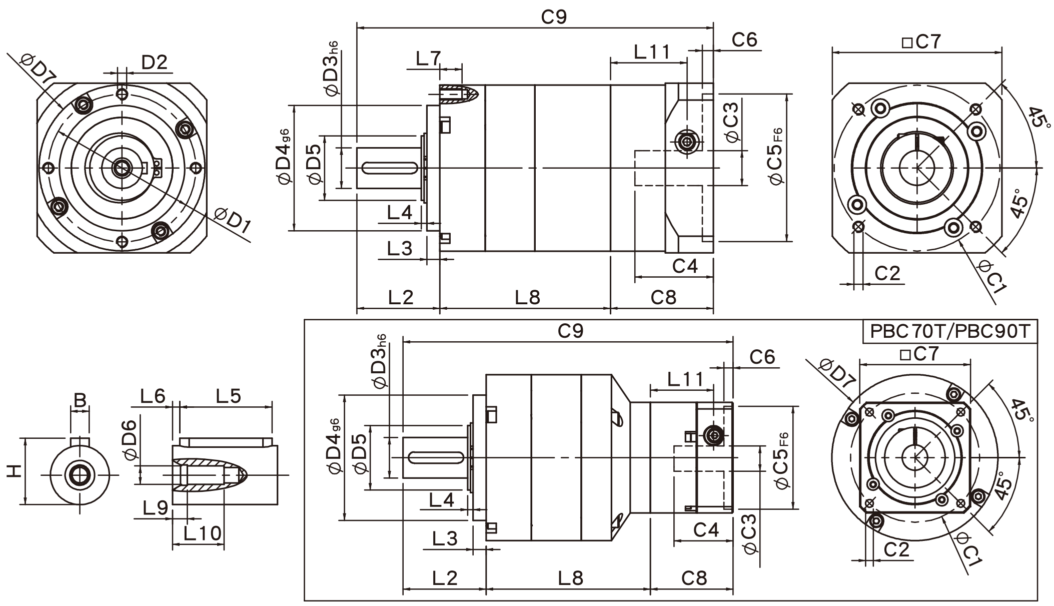
Unit:mm

Dimensions	PBC50	PBC70	PBC90
D1	44	62	80
D2	M4x0.7P	M5x0.8P	M6x1.0P
$D3_{h6}$	12	16	22
$D4_{g6}$	35	52	68
D5	15	20	35
D6	M4x0.7P	M5x0.8P	M8x1.25P
D7	50	70	90
L2	26	36	45
L3	5.5	5	7
L4	2.6	2.7	3
L5	15	25	30
L6	2	2	3
L7	8	10	12
L8	32.4	49.6	54.4
L9	4	4	4.5
L10	14	16.5	20.5
L11	26.9	34.3	41.55
C1 [2]	46	70	90
C2 [2]	M4x0.7P	M5x0.8P	M6x1.0P
C3 [2]	≦8/≦11	≦14/≦19	≦19/≦24/≦28
C4 [2]	26.5	33.5	41
C5 [2] $_{F6}$	30	50	70
C6 [2]	4	4	6
C7 [2]	42.6	60	92
C8 [2]	36.4	44.8	55.8
C9 [2]	94.8	130.4	155.2
B	4	5	6
H	13.5	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.

PBC Double Stage Dimensions



Specifications

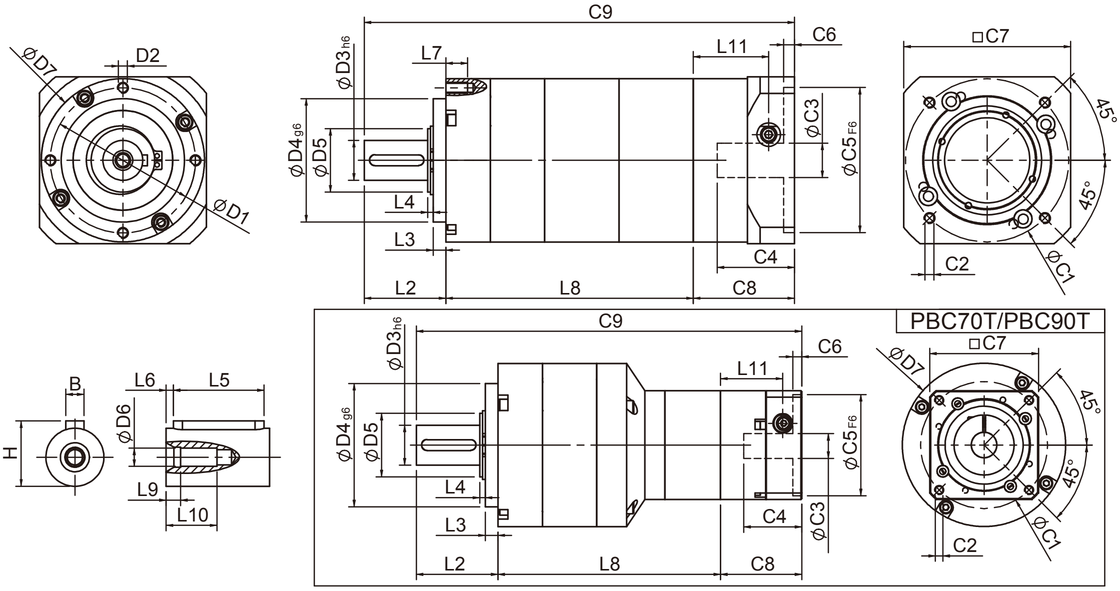
Unit:mm

Dimensions	PBC50	PBC70	PBC70T	PBC90	PBC90T
D1	44	62		80	
D2	M4x0.7P	M5x0.8P		M6x1.0P	
D3 h6	12	16		22	
D4 g6	35	52		68	
D5	15	20		35	
D6	M4x0.7P	M5x0.8P		M8x1.25P	
D7	50	70		90	
L2	26	36		45	
L3	5.5	5		7	
L4	2.6	2.7		3	
L5	15	25		30	
L6	2	2		3	
L7	8	10		12	
L8	57.3	80.3	75.9	95.4	92
L9	4	4		4.5	
L10	14	16.5		20.5	
L11	26.9	34.3	26.9	41.55	34.3
C1[2]	46	70	46	90	70
C2[2]	M4x0.7P	M5x0.8P	M4x0.7P	M6x1.0P	M5x0.8P
C3[2]	≦8/≦11	≦14/≦19	≦8/≦11	≦19/≦24/≦28	≦14/≦19
C4[2]	26.5	33.5	26.5	41	33.5
C5[2] F6	30	50	30	70	50
C6[2]	4	4	4	6	4
C7[2]	42.6	60	42.6	92	60
C8[2]	36.4	44.8	36.4	55.8	44.8
C9[2]	119.7	161.1	148.3	196.2	181.8
B	4	5		6	
H	13.5	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.

PBC Triple Stage Dimensions



Specifications

Unit:mm

Dimensions	PBC50	PBC70T	PBC90T
D1	44	62	80
D2	M4x0.7P	M5x0.8P	M6x1.0P
$D3_{h6}$	12	16	22
$D4_{g6}$	35	52	68
D5	15	20	35
D6	M4x0.7P	M5x0.8P	M8x1.25P
D7	50	70	90
L2	26	36	45
L3	5.5	5	7
L4	2.6	2.7	3
L5	15	25	30
L6	2	2	3
L7	8	10	12
L8	82.2	100.8	122.7
L9	4	4	4.5
L10	14	16.5	20.5
L11	26.9	26.9	34.3
C1[2]	46	46	70
C2[2]	M4x0.7P	M4x0.7P	M5x0.8P
C3[2]	≦8/≦11	≦8/≦11	≦14/≦19
C4[2]	26.5	26.5	33.5
C5[2] $_{F6}$	30	30	50
C6[2]	4	4	4
C7[2]	42.6	42.6	60
C8[2]	36.4	36.4	44.8
C9[2]	144.6	173.2	212.5
B	4	5	6
H	13.5	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.

PBC Specifications Table

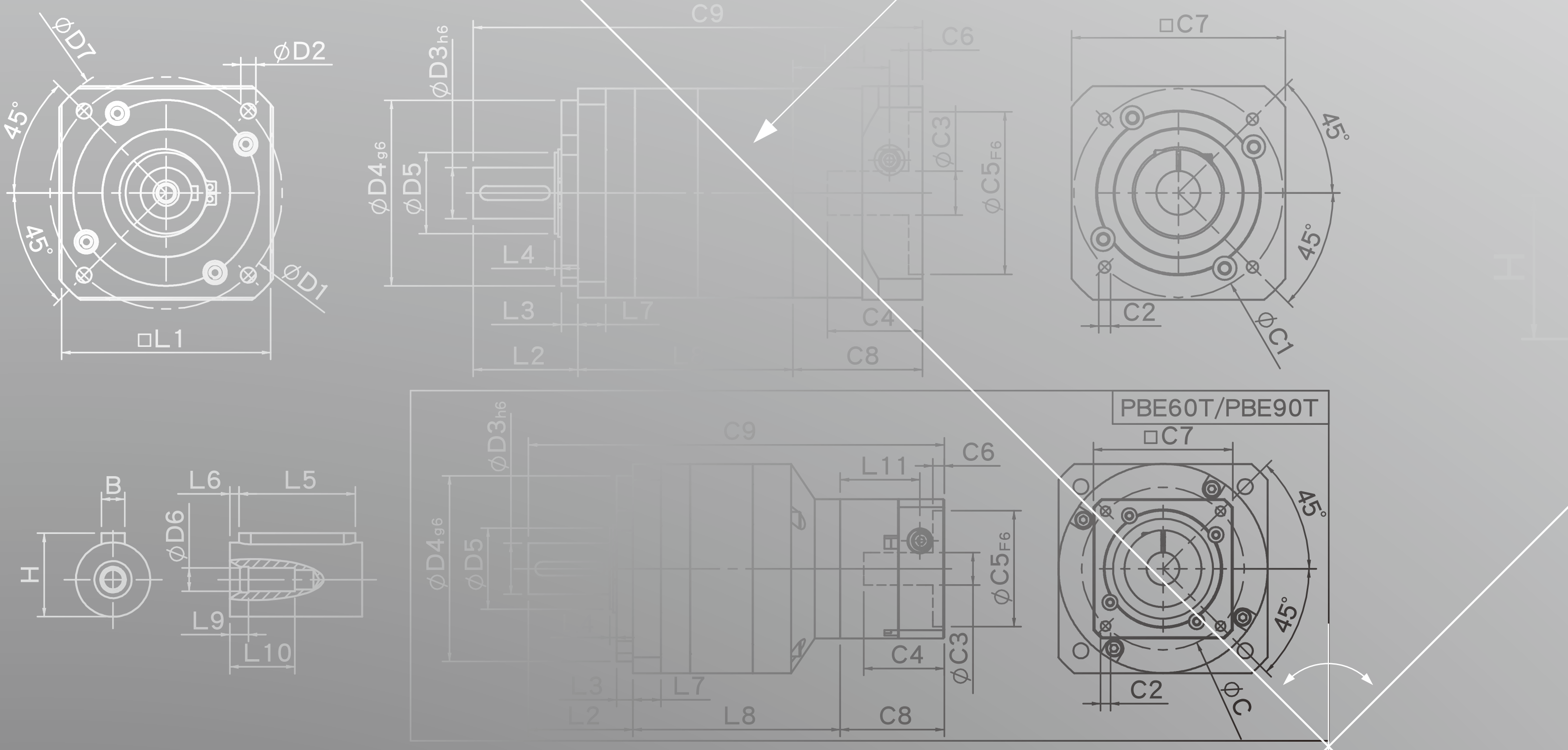
Specifications		Stage	Ratio	PBC-50	PBC-70	PBC-90
Nominal Output Torque T_{2N}	N • m	1	3	4.8	13.6	33.5
			4	6.3	21.6	58.6
			5	6.0	20.5	55.1
			7	5.6	19.2	51.8
			9	5.4	18.5	50.0
			10	5.4	17.0	48.0
		Stage	Ratio	PBC-50	PBC-70(T)	PBC-90(T)
		2	15	4.8	13.6	33.5
			20	6.3	21.6	58.6
			25	6.0	20.5	55.1
			35	6.0	20.5	55.1
			45	6.0	20.5	55.1
			49	5.6	19.2	51.8
			63	5.6	19.2	51.8
			81	5.4	18.5	50.0
		Stage	Ratio	PBC-50	PBC-70(T)	PBC-90(T)
		3	125	6.0	20.5	55.1
			175	6.0	20.5	55.1
			225	6.0	20.5	55.1
			245	6.0	20.5	55.1
			315	6.0	20.5	55.1
			405	6.0	20.5	55.1
			567	5.6	19.2	51.8
			729	5.4	18.5	50.0
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	3-729	4000	4000	3000
Max. Input Speed n_{1max}	rpm	1,2,3	3-729	8000	6000	6000
Backlash	arcmin	1 2 3	3-10 15-81 125-729	≦9 ≦12 ≦15	≦8 ≦10 ≦12	≦7 ≦9 ≦12
Torsional Rigidity	N • m /arcmin	1,2,3	3-729	0.8	2.0	7.0
Max. Radial Load F_{2rB} [1]	N	1,2,3	3-729	540	1040	1700
Max. Axial Load F_{2aB} [1]	N	1,2,3	3-729	360	720	735
Operating Temp.	°C	1,2,3	3-729	-10 °C ~+90 °C		
Service Life	hr	1,2,3	3-729	20,000 (10,000/Continuous operation)		
Efficiency	%	1 2 3	3-10 15-81 125-729	≧95% ≧90% ≧85%		
Weight	kg	1 2 3	3-10 15-81 125-729	0.5 0.7 0.9	1.2 1.7/1.5 2.0/1.8	3.1 4.7/3.6 5.3/4.0
Mounting Position	-	1,2,3	3-729	Any direction		
Noise Level [2]	dBA/1m	1,2,3	3-729	≦62	≦64	≦67
Protection Class	-	1,2,3	3-729	IP64		
Lubrication	-	1,2,3	3-729	Synthetic Lubricant		

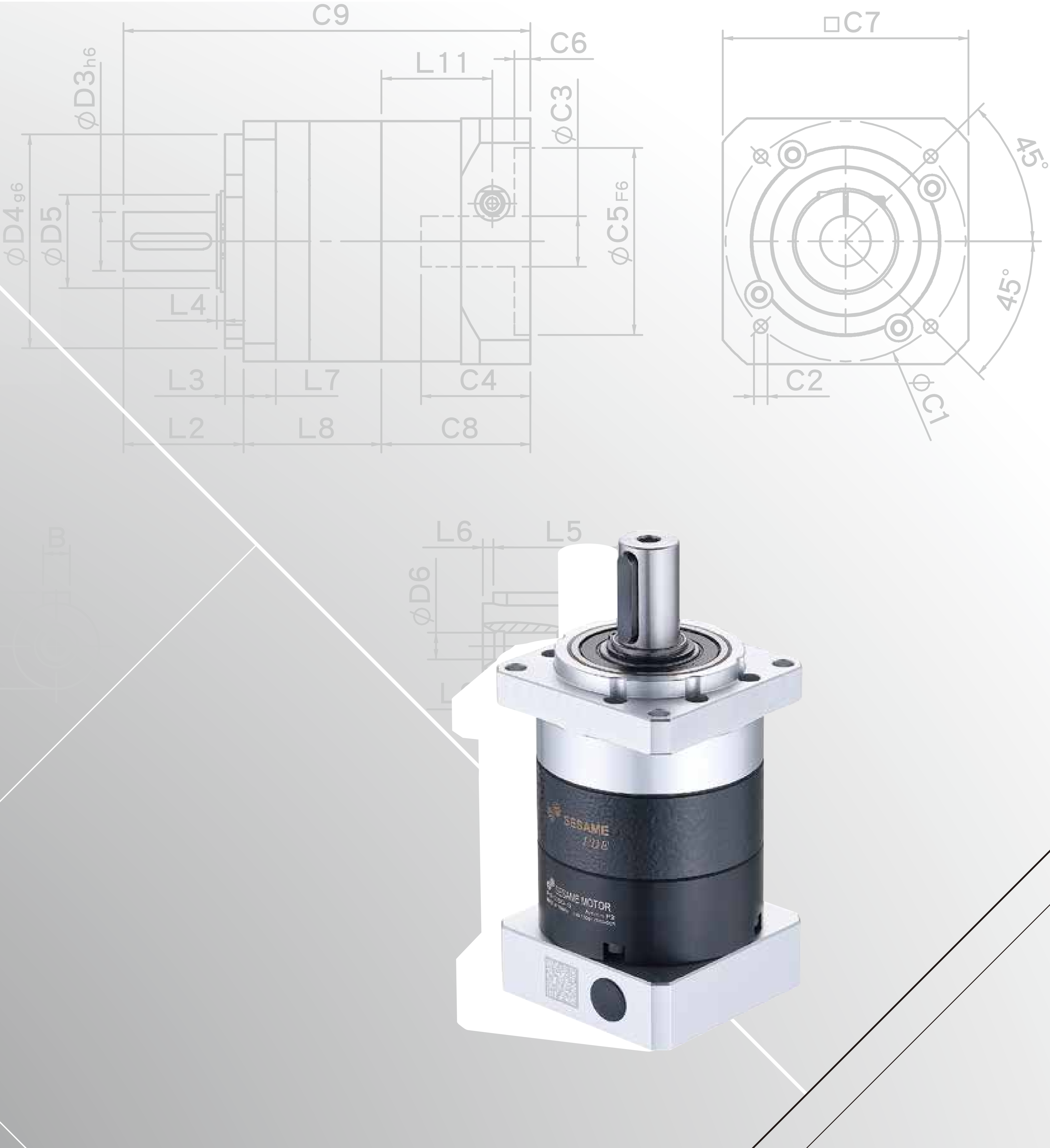
* 1. Applied to the output shaft center at 100 rpm.
* 2. Measured at 3000 rpm with no load. These values are measured by gearbox with ratio = 10 (1-stage) or ratio = 100 (2-stage) at nominal input speed or 3000 rpm (if nominal input speed is higher than 3000 rpm) with no load.
* 3. The inertia value of input shaft is same as that of the PAE series.

※ The above figures/specifications are subject to change without prior notice.

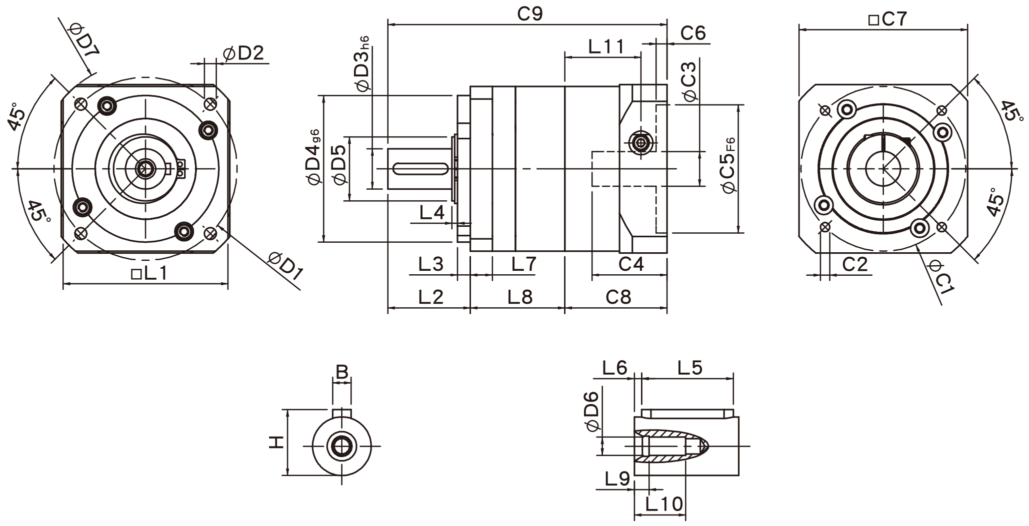
Products due to human error, natural disasters or other factors lead to poor or damaged, will not be covered under warranty.

PBE SERIES


ØD7
ØD2
45°
45°
ØD1
□L1
C9
C6
ØD3h6
ØD4g6
ØD5
L4
L3
L7
L2
ØC3
ØC5F6
C4
C8
□C7
45°
45°
C2
ØC1
B
H
L6
L5
ØD6
L9
L10
PBE60T/PBE90T
C9
ØD3h6
L11
C6
ØD4g6
ØD5
ØC5F6
C4
ØC3
L3
L7
L2
L8
C8
□C7
45°
45°
C2
ØC


C9
C6
L11
ØD3h6
ØC3
ØC5F6
ØD4g6
ØD5
L4
L3
L7
C4
L2
L8
C8
□C7
45°
45°
C2
ØC1
L6
L5
ØD6
B
SESAME
SESAME MOTOR

PBE Single Stage Dimensions



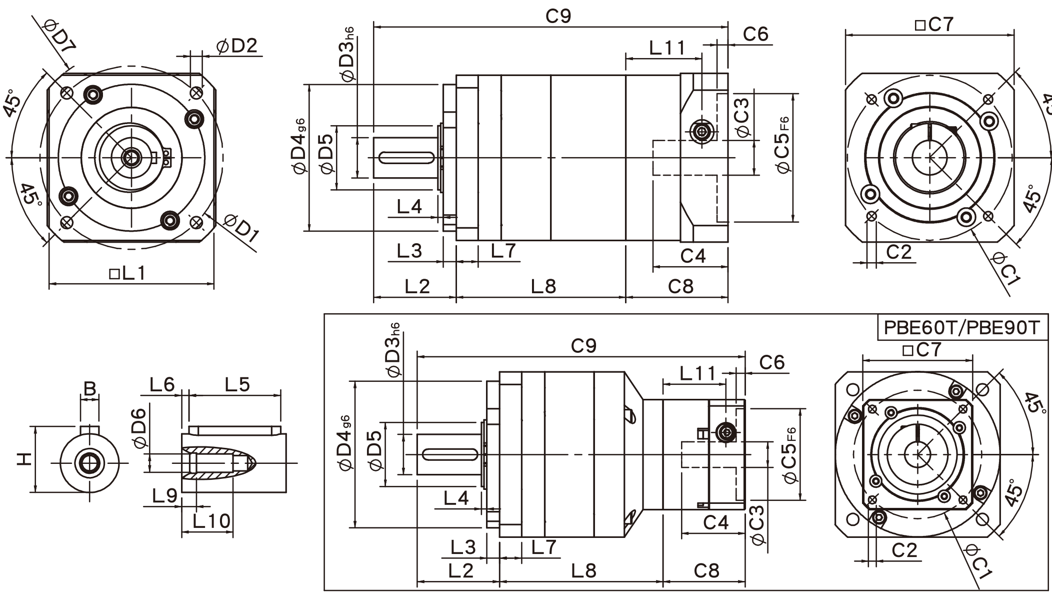
Specifications

Unit:mm

Dimensions	PBE42	PBE60	PBE90
D1	50	70	100
D2	3.4	5.5	6.5
$D3_{h6}$	13	16	22
$D4_{g6}$	35	50	80
D5	15	20	35
D6	M4x0.7P	M5x0.8P	M8x1.25P
D7	56	80	118
L1	42.6(44)[1]	60	90
L2	26	36	45
L3	5.5	5	7
L4	2.6	2.7	3
L5	15	25	30
L6	2	2	3
L7	8	10	12
L8	32.4	49.6	54.4
L9	4	4	4.5
L10	14	16.5	20.5
L11	26.9	34.3	41.5
C1[2]	46	70	90
C2[2]	M4x0.7P	M5x0.8P	M6x1.0P
C3[2]	≦8/≦11	≦14/≦19	≦19/≦24/≦28
C4[2]	26.5	33.5	41
C5[2] F6	30	50	70
C6[2]	4	4	6
C7[2]	42.6	60	92
C8[2]	36.4	44.8	55.8
C9[2]	94.8	130.4	155.2
B	5	5	6
H	15	18	24.5

★ L1=44 when gear ratio is 10.
★ C1~C9 are motor specific dimensions (metric std shown). Size may vary according to motor flange.
★ Specification subject to change without notice.

PBE Double Stage Dimensions



Specifications

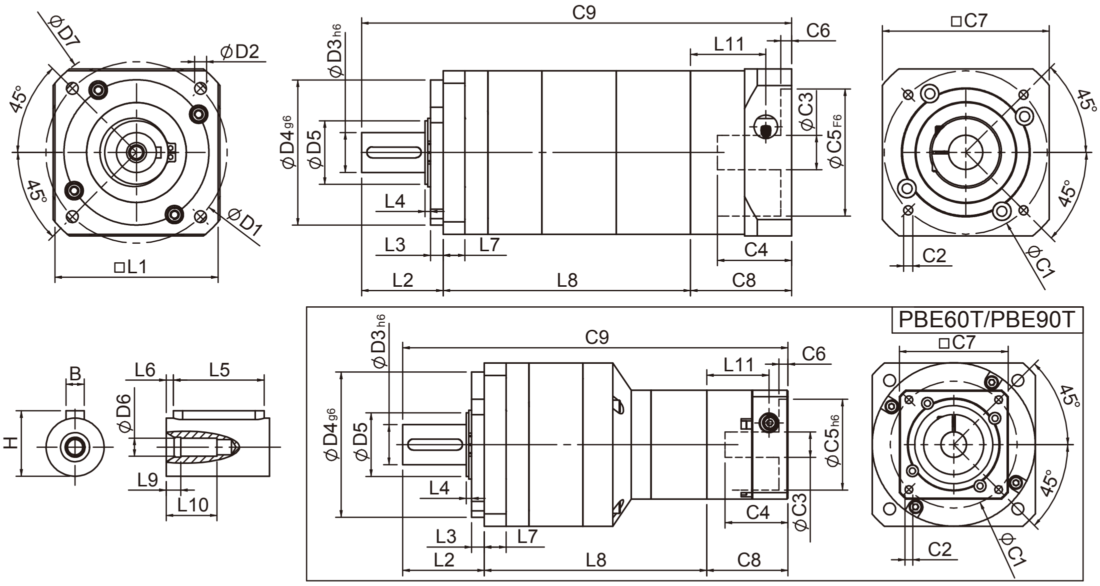
Unit:mm

Dimensions	PBE42	PBE60/PBE60T		PBE90/PBE 90T	
D1	50	70		100	
D2	3.4	5.5		6.5	
D3 h6	13	16		22	
D4 g6	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	36		45	
L3	5.5	5		7	
L4	2.6	2.7		3	
L5	15	25		30	
L6	2	2		3	
L7	8	10		12	
L8	57.3	80.3	75.9	95.4	92
L9	4	4		4.5	
L10	14	16.5		20.5	
L11	26.9	34.3	26.9	41.55	34.3
C1[2]	46	70	46	90	70
C2[2]	M4x0.7P	M5x0.8P	M4x0.7P	M6x1.0P	M5x0.8P
C3[2]	≦8/≦11	≦14/≦19	≦8/≦11	≦19/≦24/≦28	≦14/≦19
C4[2]	26.5	33.5	26.5	41	33.5
C5[2] F6	30	50	30	70	50
C6[2]	4	4	4	6	4
C7[2]	42.6	60	42.6	92	60
C8[2]	36.4	44.8	36.4	55.8	44.8
C9[2]	119.7	161.1	148.3	196.2	181.8
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.

PBE Triple Stage Dimensions



Specifications

Unit:mm

Dimensions	PBE42	PBE60T	PBE90T
D1	50	70	100
D2	3.4	5.5	6.5
D3 h6	13	16	22
D4 g6	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	36	45
L3	5.5	5	7
L4	2.6	2.7	3
L5	15	25	30
L6	2	2	3
L7	8	10	12
L8	82.2	100.8	122.7
L9	4	4	4.5
L10	14	16.5	20.5
L11	26.9	26.9	34.3
C1[2]	46	46	70
C2[2]	M4x0.7P	M4x0.7P	M5x0.8P
C3[2]	≦8/≦11	≦8/≦11	≦14/≦19
C4[2]	26.5	26.5	33.5
C5[2] F6	30	30	50
C6[2]	4	4	4
C7[2]	42.6	42.6	60
C8[2]	36.4	36.4	44.8
C9[2]	144.6	173.2	212.5
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.

PBE Specifications Table

Specifications		Stage	Ratio	PBE-42	PBE-60	PBE-90
Nominal Output Torque T_{2N}	N • m	1	3	4.8	13.6	33.5
			4	6.3	21.6	58.6
			5	6.0	20.5	55.1
			7	5.6	19.2	51.8
			9	5.4	18.5	50.0
			10	5.4	17.0	48.0
		Stage	Ratio	PBE-42	PBE-60(T)	PBE-90(T)
		2	15	4.8	13.6	33.5
			20	6.3	21.6	58.6
			25	6.0	20.5	55.1
			35	6.0	20.5	55.1
			45	6.0	20.5	55.1
			49	5.6	19.2	51.8
			63	5.6	19.2	51.8
			81	5.4	18.5	50.0
		Stage	Ratio	PBE-42	PBE-60(T)	PBE-90(T)
		3	125	6.0	20.5	55.1
			175	6.0	20.5	55.1
			225	6.0	20.5	55.1
			245	6.0	20.5	55.1
			315	6.0	20.5	55.1
			405	6.0	20.5	55.1
			567	5.6	19.2	51.8
			729	5.4	18.5	50.0
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	3-729	4000	4000	3000
Max. Input Speed n_{1max}	rpm	1,2,3	3-729	8000	6000	6000
Backlash	arcmin	1 2 3	3-10 15-81 125-729	≦9 ≦12 ≦15	≦8 ≦10 ≦12	≦7 ≦9 ≦12
Torsional Rigidity	N • m /arcmin	1,2,3	3-729	0.8	2.0	7
Max. Radial Load F_{2rB} [1]	N	1,2,3	3-729	540	1040	1700
Max. Axial Load F_{2aB} [1]	N	1,2,3	3-729	360	720	735
Operating Temp.	°C	1,2,3	3-729	-10 °C ~+90 °C		
Service Life	hr	1,2,3	3-729	20,000 (10,000/Continuous operation)		
Efficiency	%	1 2 3	3-10 15-81 125-729	≧95% ≧90% ≧85%		
Weight	kg	1 2 3	3-10 15-81 125-729	0.5 0.7 0.9	1.2 1.7/1.5 2.0/1.8	3.1 4.7/3.6 5.3/4.0
Mounting Position	-	1,2,3	3-729	Any direction		
Noise Level [2]	dBA/1m	1,2,3	3-729	≦62	≦64	≦67
Protection Class	-	1,2,3	3-729	IP64		
Lubrication	-	1,2,3	3-729	Synthetic Lubricant		

* 1. Applied to the output shaft center at 100 rpm.
* 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.
* 3. The inertia value of input shaft is same as that of the PAE series.

※ The above figures/specifications are subject to change without prior notice.

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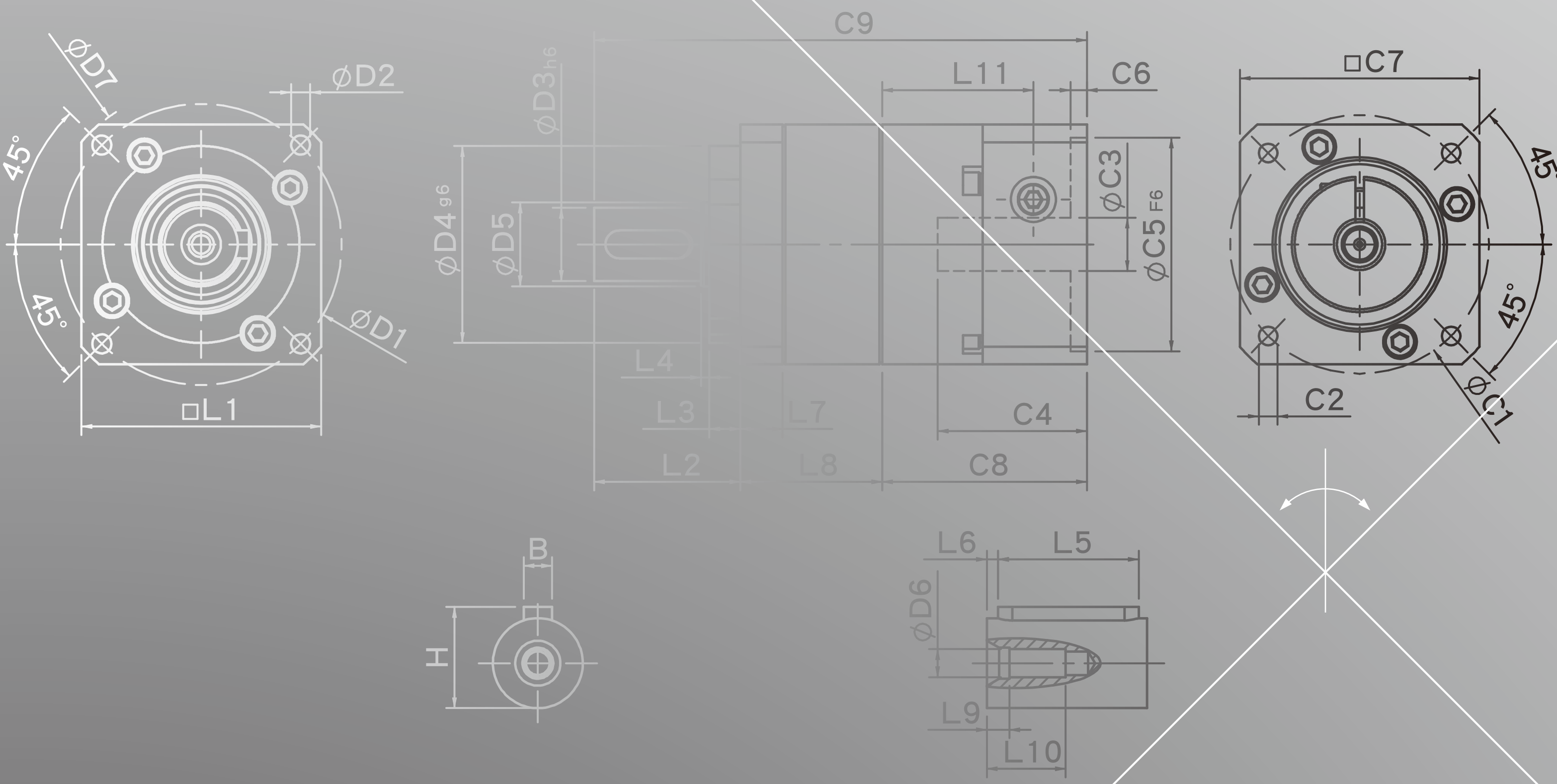
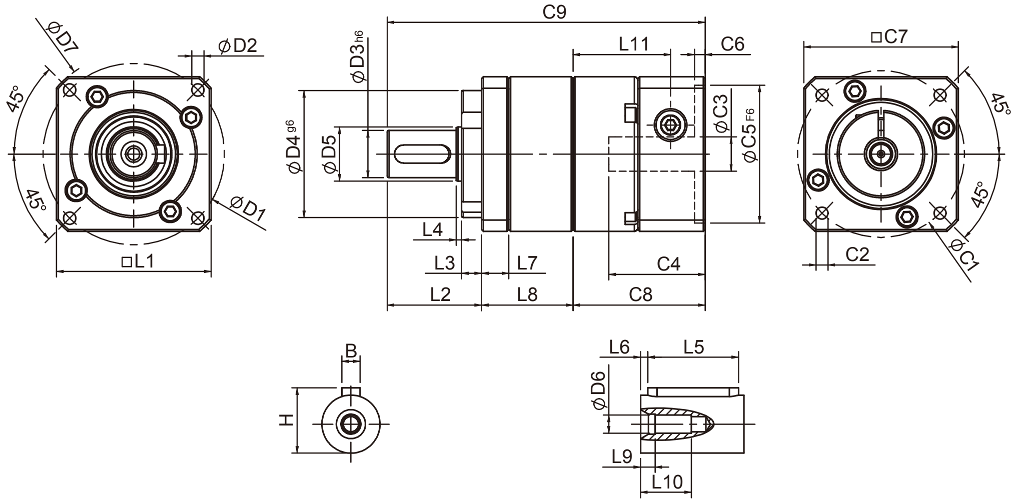
PAE SERIES


ØD7
ØD2
45°
45°
ØD1
□L1
ØD3h6
ØD4g6
ØD5
C9
L11
C6
ØC3
ØC5F6
L4
L3
L7
L2
L8
C4
C8
□C7
45°
45°
C2
ØC1
B
H
L6
L5
ØD6
L9
L10


C9
L11
C6
C2
ØD7
ØD2
ØD3h6
ØD4g6
ØD5
ØC3
ØC5F6
ØC1
ØD1
45°
L4
L3
L7
C4
□L1
L2
L8
C8
□C7
PAE60T/PAE90T
L6
L5
D6
H
L9
L10
SESAME
PAE
SESAME MOTOR

PAE Single Stage Dimensions



Specifications

Unit:mm

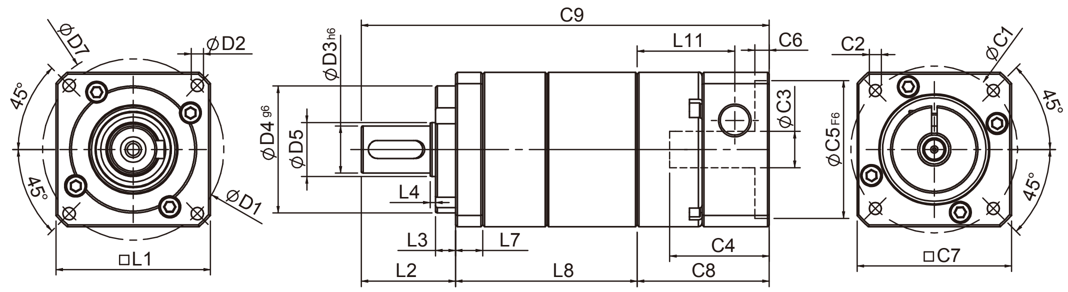
Dimensions	PAE42	PAE60	PAE90	PAE115
D1	50	70	100	130
D2	3.4	5.5	6.5	9
D3 h6	13	16	22	32
D4 g6	35	50	80	110
D5	15	20	35	45
D6	M4x0.7P	M5x0.8P	M8x1.25P	M12x1.75P
D7	56	80	118	148
L1	42.6(44)	60	90	115
L2	26	37	48	65
L3	5.5	7	10	12
L4	1.5	1.5	1.5	2
L5	15	25	32	40
L6	2	2	3	5
L7	7.3	10	12	16
L8	25	36.3	41.8	60.3
L9	4	4	4.5	6
L10	14	16.5	20.5	30
L11	26.9	34.3	41.5	51.5
C1 [2]	46	70	90	145
C2 [2]	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P
C3 [2]	≦8/≦11	≦14/≦19	≦19/≦24/≦28	≦24/≦32/≦38
C4 [2]	26.5	33.5	41	51.5
C5 [2] F6	30	50	70	110
C6 [2]	4	4	6	6
C7 [2]	42.6	60	90	130
C8 [2]	36.4	44.8	55.8	68
C9 [2]	87.4	118.1	145.6	193.3
B	5	5	6	10
H	15	18	24.5	35

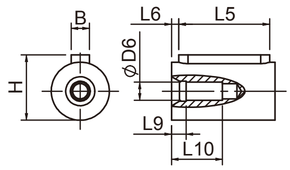
★ L1=44 when gear ratio is 10.

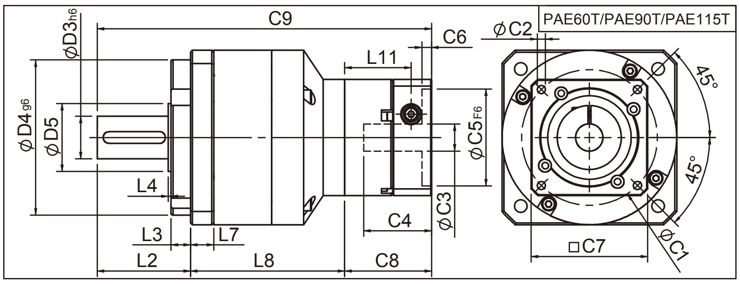
★ C1~C9 are motor specific dimensions (metric std shown). Size may vary according to motor flange.

★ Specification subject to change without notice.

PAE Double Stage Dimensions







Specifications

Unit:mm

Dimensions	PAE42	PAE60	PAE60T	PAE90	PAE 90T	PAE115T
D1	50	70		100		130
D2	3.4	5.5		6.5		9
D3 h6	13	16		22		32
D4 g6	35	50		80		110
D5	15	20		35		45
D6	M4x0.7P	M5x0.8P		M8x1.25P		M12x1.75P
D7	56	80		118		148
L1	42.6 (44)	60		90		115
L2	26	37		48		65
L3	5.5	7		10		12
L4	1.5	1.5		1.5		2
L5	15	25		32		40
L6	2	2		3		5
L7	7.3	10		12		16
L8	49.9	67	62.6	82.8	72.3	98.4
L9	4	4		4.5		6
L10	14	16.5		20.5		30
L11	26.9	34.3	26.9	41.5	34.3	41.5
C1 [2]	46	70	46	90	70	90
C2 [2]	M4x0.7P	M5x0.8P	M4x0.7P	M6x1.0P	M5x0.8P	M6x1.0P
C3 [2]	≦8/≦11	≦14/≦19	≦8/≦11	≦19/≦24/≦28	≦14/≦19	≦19/≦24/≦28
C4 [2]	26.5	33.5	26.5	41	33.5	41
C5 [2] F6	30	50	30	70	50	70
C6 [2]	4	4	4	6	4	6
C7 [2]	42.6	60	42.6	90	60	90
C8 [2]	36.4	44.8	36.4	55.8	44.8	55.8
C9 [2]	112.3	148.8	136	186.6	165.1	219.2
B	5	5		6		10
H	15	18		24.5		35

★ L1=44 when gear ratio is 10.

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

★ Specification subject to change without notice.

PAE Specifications Table

Specifications		Stage	Ratio	PAE-42	PAE-60	PAE-90	PAE-115
Nominal Output Torque T_{2N}	N · m	1	3	9	28	85	210
			4	10	32	80	240
			5	11	35	95	260
			7	10	28	85	220
			9	8	23	75	210
			10	8	21	65	190
		Stage	Ratio	PAE-42	PAE-60/ PAE-60T	PAE-90/ PAE-90T	PAE-115T
		2	15	11	34	90	230
			20	10	32	80	240
			25	11	35	95	260
			30	-	-	-	260
			35	11	35	95	260
			40	-	-	-	260
			45	11	35	95	260
			49	10	-	-	-
			50	-	35	95	260
			63	10	-	-	-
			70	-	28	85	220
			100	8	21	65	190
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	3000	2500
Max. Input Speed n_{1max}	rpm	1,2	3-100	8000	6000	6000	5000
Standard Backlash P2	arcmin	1 2	3-10 15-100	≦ 9 ≦ 12	≦ 8 ≦ 10	≦ 7 ≦ 9	≦ 6 ≦ 8
Torsional Rigidity	N · m /arcmin	1,2	3-100	1.5	4.0	8.5	17
Max. Radial Load F_{2rB} [1]	N	1,2	3-100	760	1250	2030	4200
Max. Axial Load F_{2aB} [1]	N	1,2	3-100	410	700	1200	2600
Operating Temp.	℃		3-100	-10℃ ~ +90℃			
Service Life	hr		3-100	20,000 (10,000/Continuous operation)			
Efficiency	%	1 2	3-10 15-100	≧ 95% ≧ 90%			
Weight	kg	1 2	3-10 15-100	0.6 0.8	1.3 1.8/1.6	3.2 4.8/3.7	7.5 9.2
Mounting Position	-	1,2	3-100	Any direction			
Noise Level [2]	dBA/1m	1,2	3-100	61	63	66	67
Protection Class	-	1,2	3-100	IP65			
Lubrication	-	1,2	3-100	Synthetic Lubricant			

Inertia (J1)

Stage	Ratio	unit	PAE-42(ψ8)	PAE-60(ψ14)	PAE-90(ψ19)	PAE-115(ψ24)
1	3	Kg · cm^2	0.04	0.23	0.77	2.30
	4		0.03	0.21	0.67	1.92
	5		0.03	0.21	0.61	1.71
	7		0.03	0.21	0.60	1.65
	9/10		0.03	0.21	0.60	1.63
Stage	Ratio		PAE-42(ψ8)	PAE-60(ψ14)/ PAE-60T(ψ8)	PAE-90(ψ19)/ PAE-90T(ψ14)	PAE-115T (ψ19)
2	15/20/25		0.03	0.21(0.03)	0.61(0.21)	0.61
	30/35/49		0.03	0.21(0.03)	0.60(0.21)	0.60
	40/45/50/63/70/100		0.03	0.21(0.03)	0.60(0.21)	0.60

* 1. Applied to the output shaft center at 100 rpm.
* 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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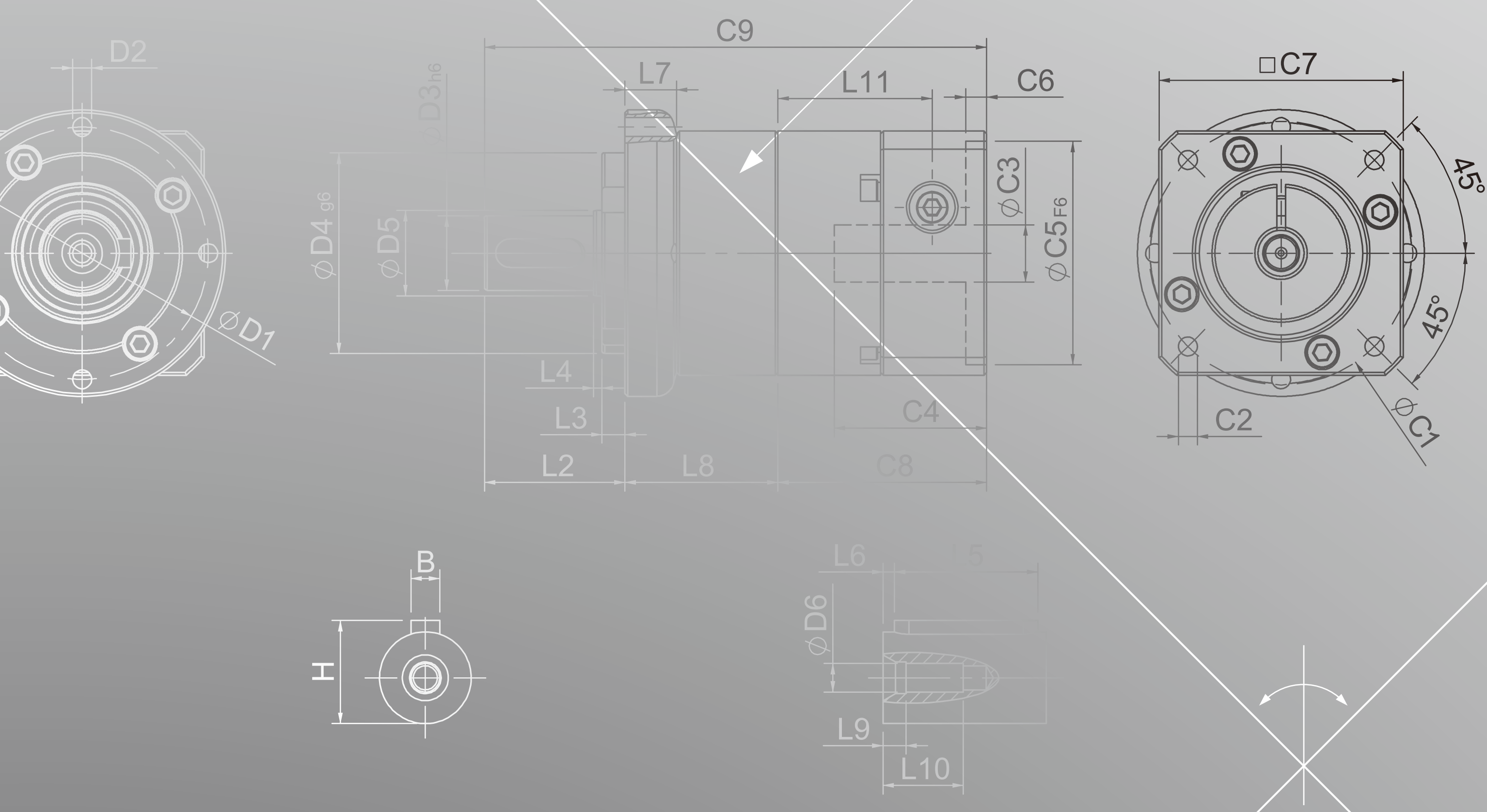
PAC SERIES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L7
L11
C6
□C7
45°
45°
D2
ΦD3h6
ΦD4 g6
ΦD5
ΦC3
ΦC5F6
ΦD1
L4
L3
L2
L8
C8
C4
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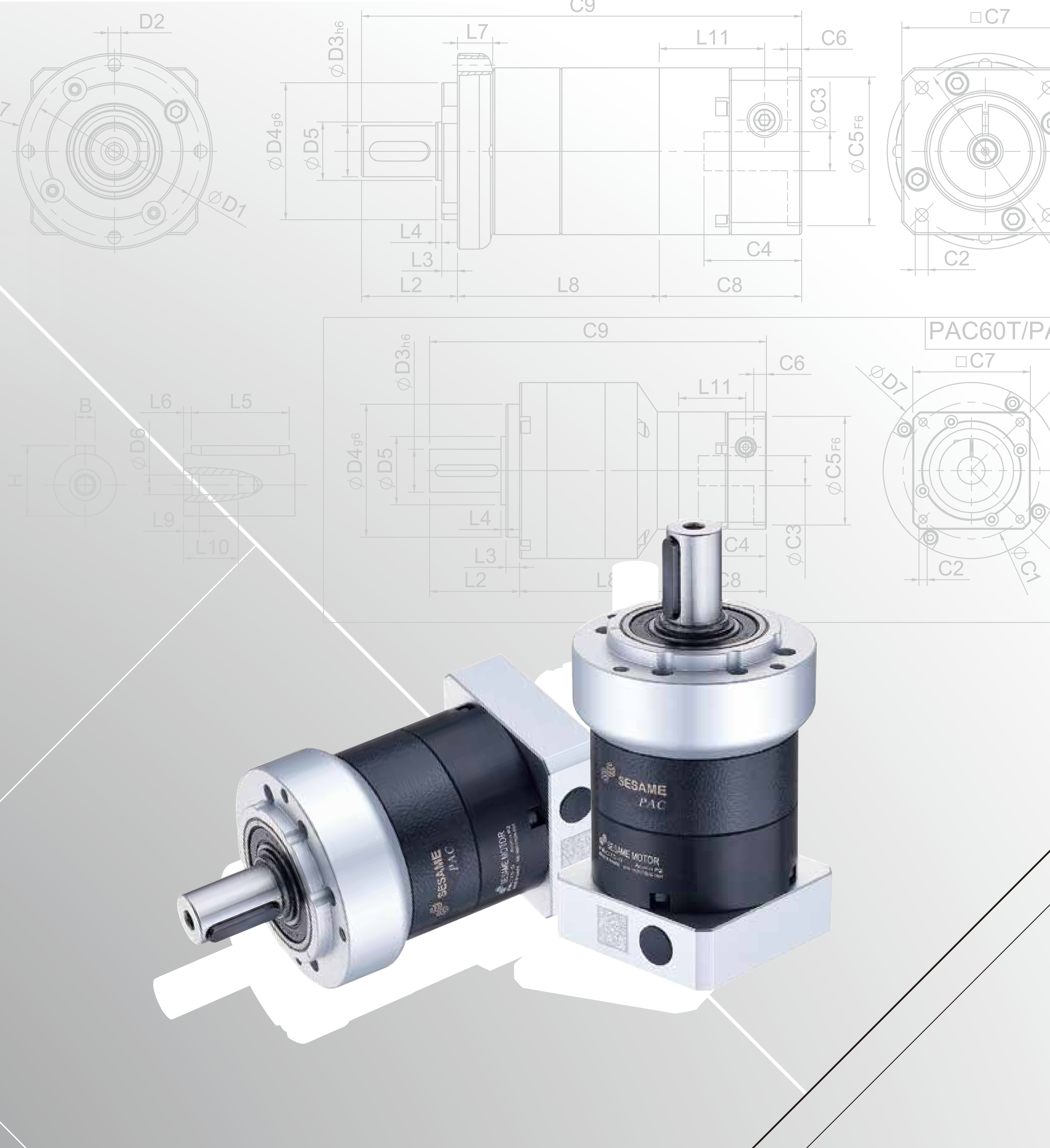
B
H
L6
ΦD6
L9
L10


D2
C9
L7
L11
C6
□C7
ØD3h6
ØD4g6
ØD5
ØC3
ØC5F6
ØD1
L4
L3
L2
L8
C8
C4
C2
B
L6
L5
ØD6
H
L9
L10
ØD7
SESAME
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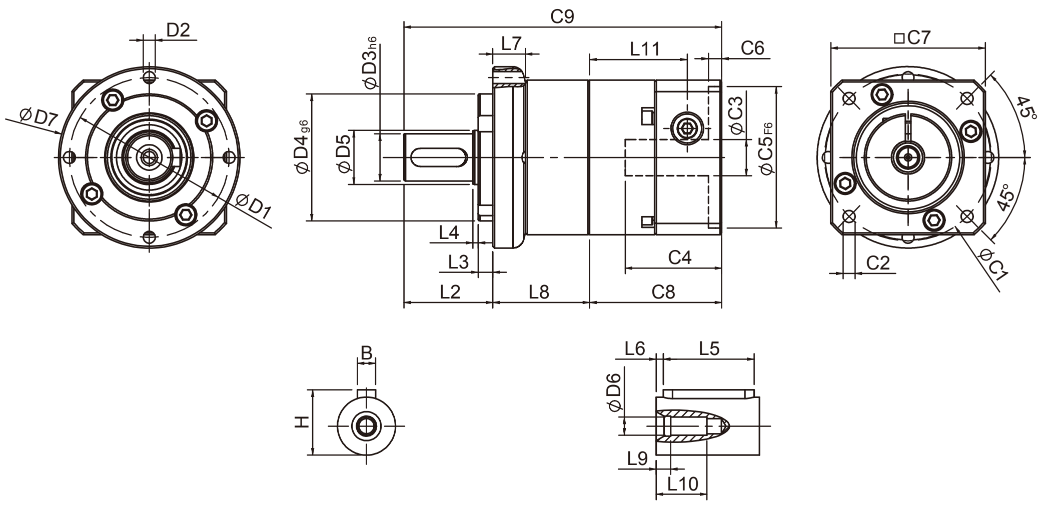
PAC Single Stage Dimensions



Specifications

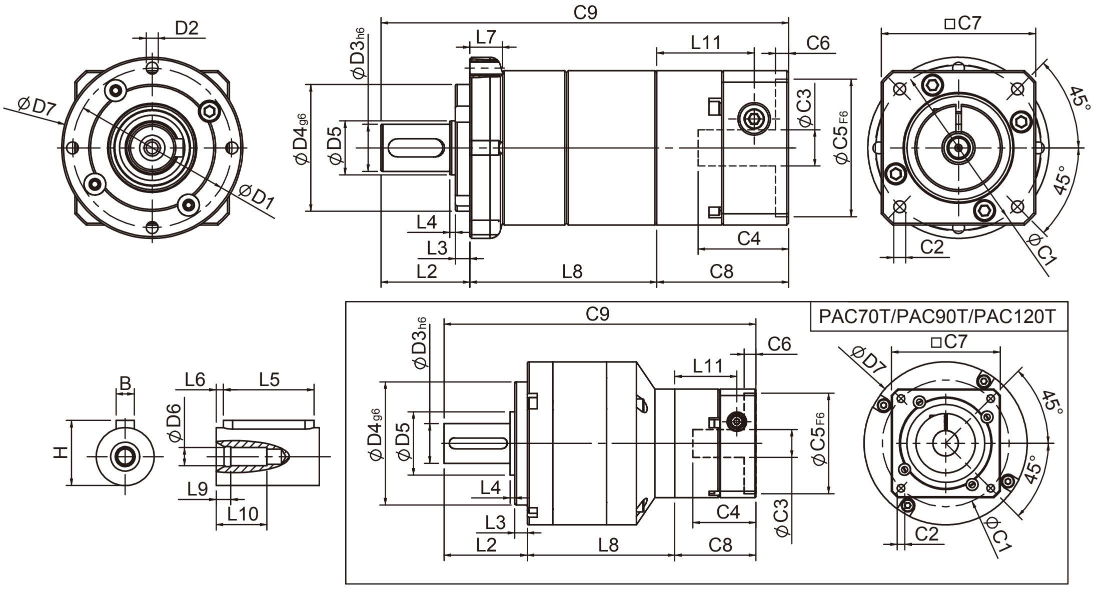
Unit:mm

Dimensions	PAC50	PAC70	PAC90	PAC120
D1	44	62	80	108
D2	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P
D3$_{h6}$	12	16	22	32
D4$_{g6}$	35	52	68	90
D5	15	20	35	45
D6	M4x0.7P	M5x0.8P	M8x1.25P	M12x1.75P
D7	50	70	90	120
L2	24.5	36	46	60
L3	4	6	7	7
L4	1.5	1.5	2.5	2
L5	15	25	32	40
L6	2	2	3	5
L7	8.8	13.3	14	15
L8	26.5	37.3	43.8	65.3
L9	4	4	4.5	6
L10	14	16.5	20.5	30
L11	26.9	34.3	41.5	51.5
C1[2]	46	70	90	145
C2[2]	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P
C3[2]	≦8/≦11	≦14/≦19	≦19/≦24/≦28	≦24/≦32/≦38
C4[2]	26.5	33.5	41	51.5
C5[2]$_{F6}$	30	50	70	40
C6[2]	4	4	6	6
C7[2]	42.6	60	90	130
C8[2]	36.4	44.8	55.8	68
C9[2]	87.4	118.1	145.6	193.3
B	4	5	6	10
H	13.5	18	24.5	35

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

★ Specification subject to change without notice.

PAC Double Stage Dimensions



Specifications

Unit:mm

Dimensions	PAC50	PAC70	PAC70T	PAC90	PAC90T	PAC120T
D1	44	62		80		108
D2	M4x0.7P	M5x0.8P		M6x1.0P		M8x1.25P
D3 h6	12	16		22		32
D4 g6	35	52		68		90
D5	15	20		35		45
D6	M4x0.7P	M5x0.8P		M8x1.25P		M12x1.75P
D7	50	70		90		120
L2	24.5	36		46		60
L3	4	6		7		7
L4	1.5	1.5		2.5		2
L5	15	25		32		40
L6	2	2		3		5
L7	8.8	13.3		14		15
L8	51.4	68	63.6	84.8	74.3	103.4
L9	4	4		4.5		6
L10	14	16.5		20.5		30
L11	26.9	34.3	26.9	41.5	34.3	41.5
C1[2]	46	70	46	90	70	90
C2[2]	M4x0.7P	M5x0.8P	M4x0.7P	M6x1.0P	M5x0.8P	M8x1.25P
C3[2]	≦8/≦11	≦14/≦19	≦8/≦11	≦19/≦24/≦28	≦14/≦19	≦19/≦24/≦28
C4[2]	26.5	33.5	26.5	41	33.5	41
C5[2] F6	30	50	30	70	50	70
C6[2]	4	4	4	6	4	6
C7[2]	42.6	60	42.6	90	60	90
C8[2]	36.4	44.8	36.4	55.8	44.8	55.8
C9[2]	112.3	148.8	136	186.6	165.1	219.2
B	4	5		6		10
H	13.5	18		24.5		35

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

★ Specification subject to change without notice.

PAC Specifications Table

Specifications		Stage	Ratio	PAC-50	PAC-70	PAC-90	PAC-120
Nominal Output Torque T_{2N}	N · m	1	3	9	28	85	210
			4	10	32	80	240
			5	11	35	95	260
			7	10	28	85	220
			9	8	23	75	210
			10	8	21	65	190
		Stage	Ratio	PAC-50	PAC-70/ PAC-70T	PAC-90/ PAC-90T	PAC-120T
		2	15	11	34	90	230
			20	10	32	80	240
			25	11	35	95	260
			30	-	-	-	260
			35	11	35	95	260
			40	-	-	-	260
			45	11	35	95	260
			49	10	-	-	-
			50	-	35	95	260
			63	10	-	-	-
			70	-	28	85	220
			100	8	21	65	190
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	3000	2500
Max. Input Speed n_{1max}	rpm	1,2	3-100	8000	6000	6000	5000
Standard Backlash P2	arcmin	1 2	3-10 15-100	≦ 9 ≦ 12	≦ 8 ≦ 10	≦ 7 ≦ 9	≦ 6 ≦ 8
Torsional Rigidity	N · m /arcmin	1,2	3-100	1.5	4.0	8.5	17
Max. Radial Load F_{2rB} [1]	N	1,2	3-100	760	1250	2030	4200
Max. Axial Load F_{2aB} [1]	N	1,2	3-100	410	700	1200	2600
Operating Temp.	℃		3-100	-10℃ ~ +90℃			
Service Life	hr		3-100	20,000 (10,000/Continuous operation)			
Efficiency	%	1 2	3-10 15-100	≧ 95% ≧ 90%			
Weight	kg	1 2	3-10 15-100	0.6 0.8	1.3 1.8/1.6	3.2 4.8/3.7	7.5 9.2
Mounting Position	-	1,2	3-100	Any direction			
Noise Level [2]	dBA/1m	1,2	3-100	61	63	66	67
Protection Class	-	1,2	3-100	IP65			
Lubrication	-	1,2	3-100	Synthetic Lubricant			

Inertia (J1)

Stage	Ratio	unit	PAC-50(ψ8)	PAC-70(ψ14)	PAC-90(ψ19)	PAC-120(ψ24)
1	3	Kg · cm²	0.04	0.23	0.77	2.30
	4		0.03	0.21	0.67	1.92
	5		0.03	0.21	0.61	1.71
	7		0.03	0.21	0.60	1.65
	9/10		0.03	0.21	0.60	1.63
Stage	Ratio		PAC-50(ψ8)	PAC-70(ψ14)/ PAC-70T(ψ8)	PAC-90(ψ19)/ PAC-90T(ψ14)	PAC-120T (ψ19)
2	15/20/25		0.03	0.21(0.03)	0.61(0.21)	0.61
	30/35/49		0.03	0.21(0.03)	0.60(0.21)	0.60
	40/45/50/63/70/100		0.03	0.21(0.03)	0.60(0.21)	0.60

* 1. Applied to the output shaft center at 100 rpm.
* 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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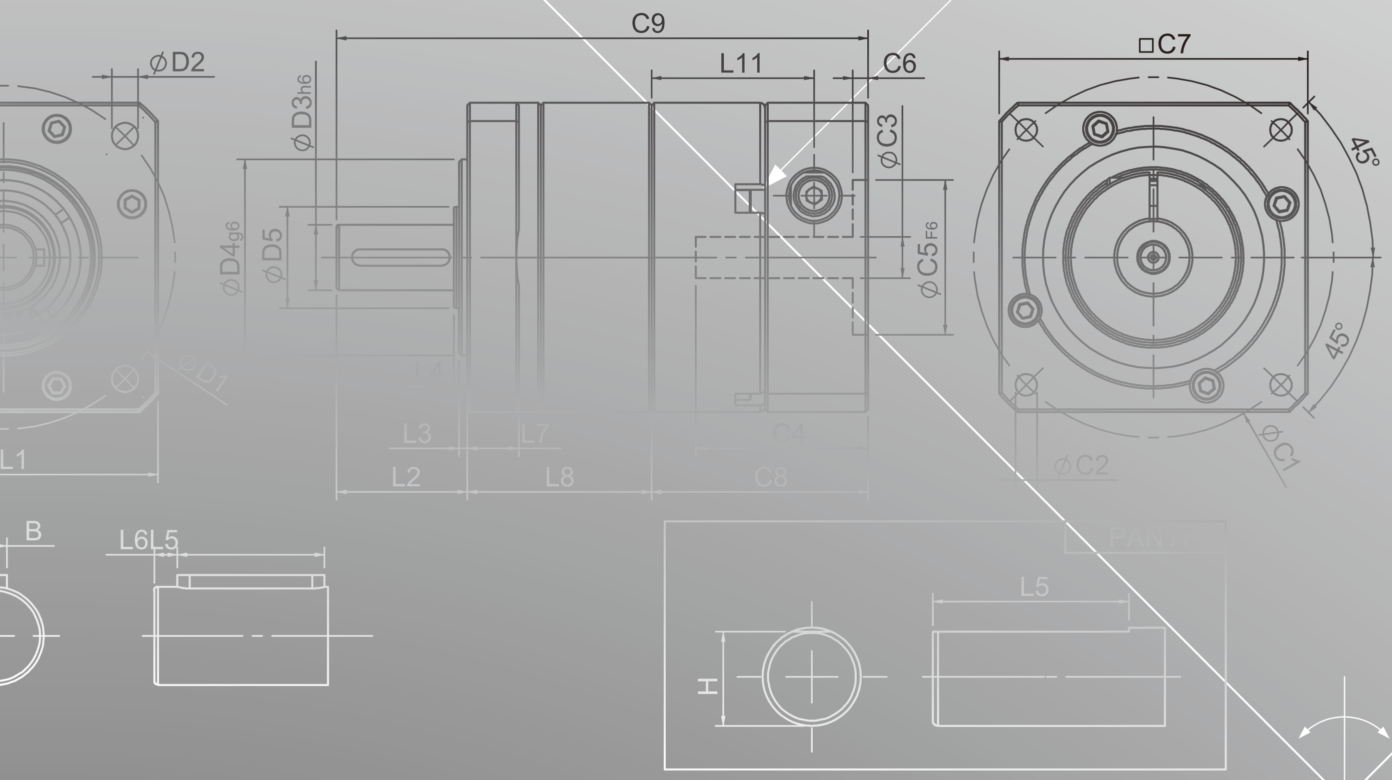
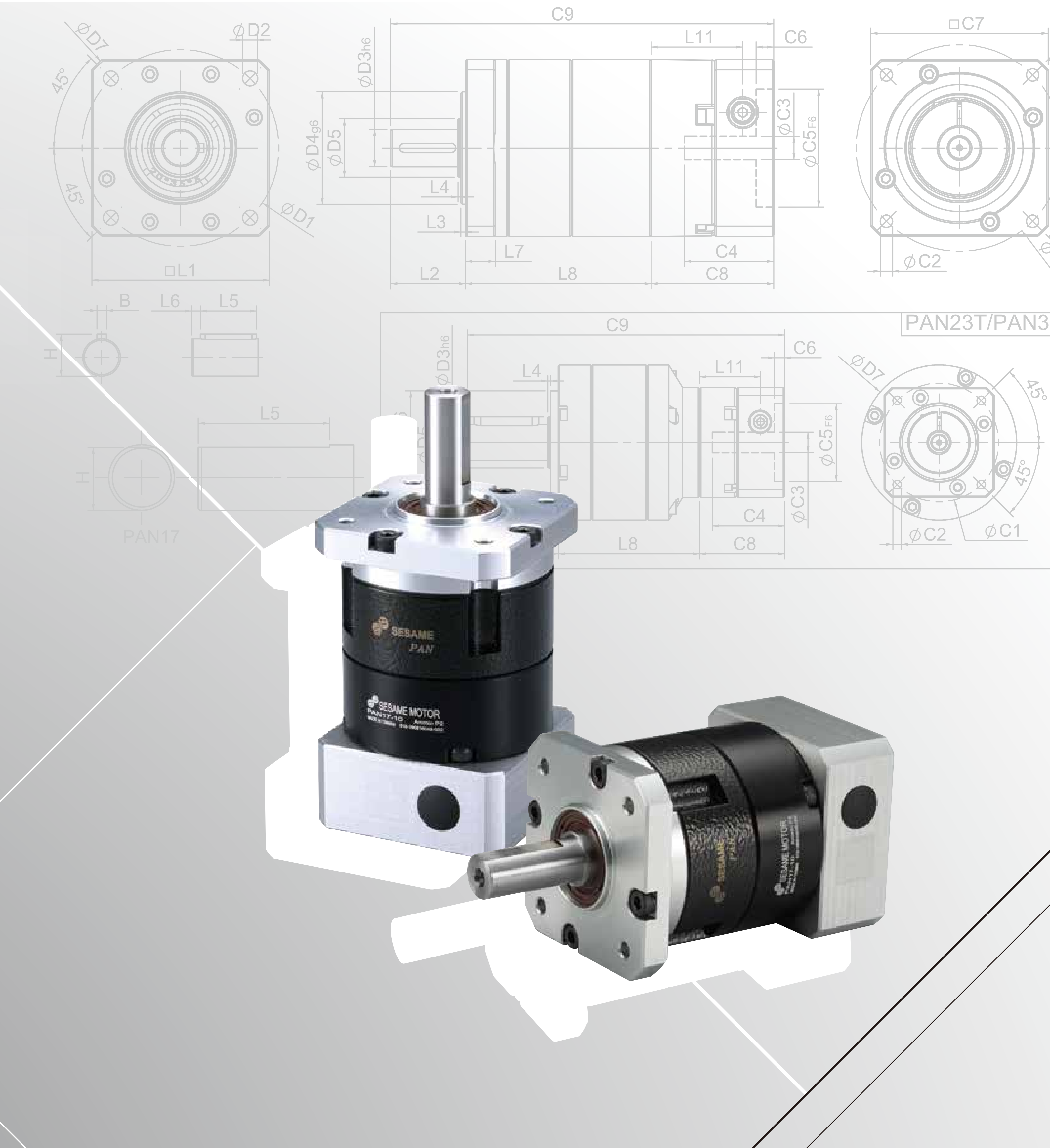
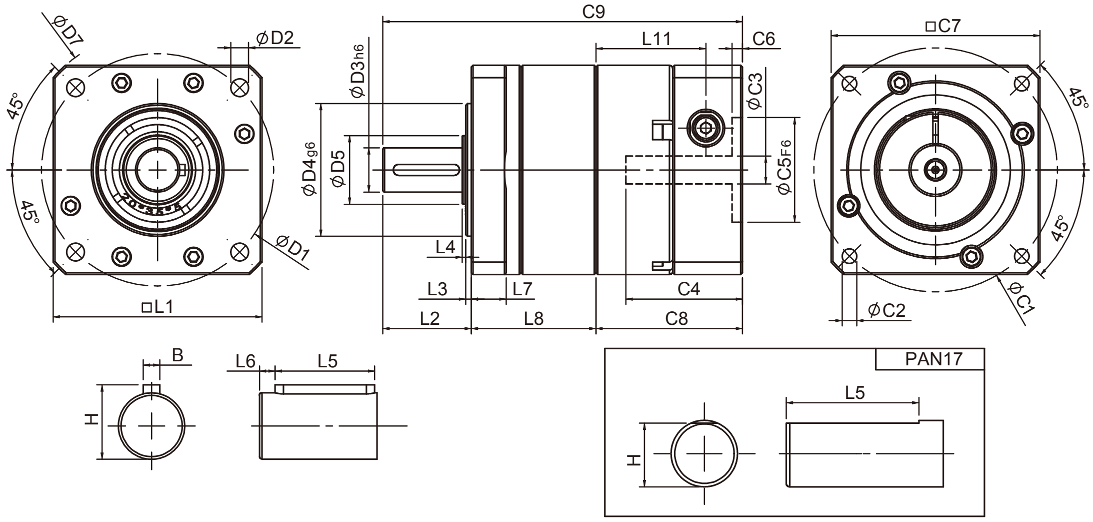
PAN SERIES




C9
L11
C6
□C7
φD7
φD2
φD3h6
φD4g6
φD5
φC3
φC5F6
45°
L4
L3
φD1
L7
C4
□L1
L2
L8
C8
φC2
B
L6
L5
H
PAN17
L4
L11
φC1
SESAME
PAN
SESAME MOTOR
PAN17-10

PAN Single Stage Dimensions



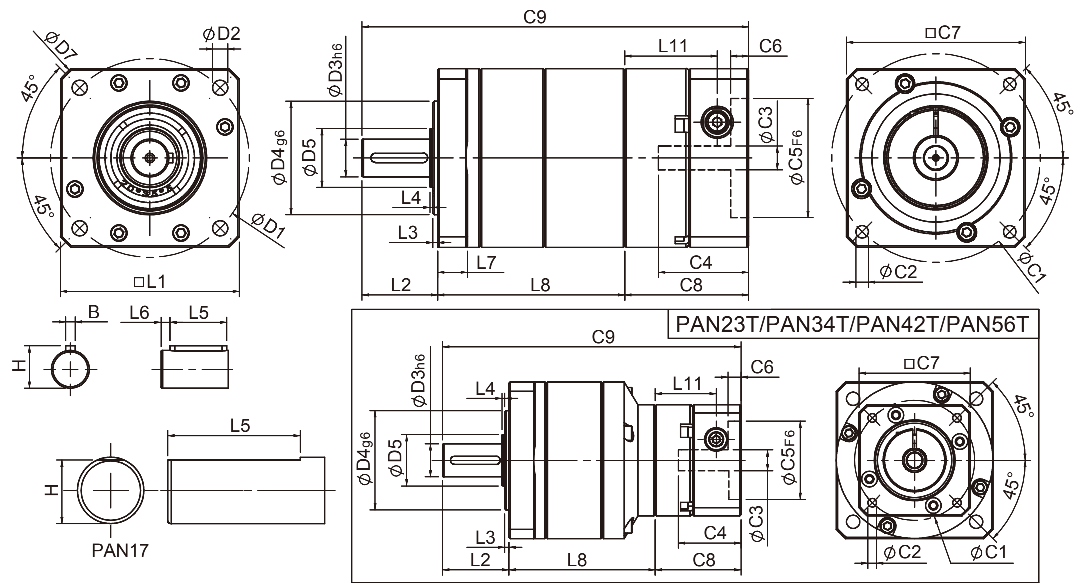
Specifications

Unit:mm

Dimensions	PAN17	PAN23	PAN34	PAN42	PAN56
D1	43.8	66.67	98.425	125.73	177.8
D2	3.25	5.1	5.6	7.1	10.2
$D3_{h6}$	9.525	12.7	19.05	25	25
$D4_{g6}$	21.97	38.1	73.025	55.55	114.3
D5	12	20	35	32	-
D7	56	80	118	148	195
L1	42.6(44)	60	90	115	145
L2	25.4	25.4	31.75	42	41
L3	1.6	1.6	1.7	2.4	4
L4	1	1	1	2	-
L5	19.05	19.05	25.4	32	32
L6	-	3	3	4	4
L7	6.5	10	12	19	20
L8	28.8	35.8	43.5	67.4	68.4
L11	26.9	31.6	37.3	51.8	51.8
C1[2]	46	70	90	145	145
C2[2]	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M8x1.25P
C3[2]	≦8/≦11	≦14/≦19	≦19/≦24/≦28	≦24/≦32/≦38	≦24/≦32/≦38
C4[2]	26.5	33.5	41	51.5	51.5
C5[2] $_{F6}$	30	50	70	110	110
C6[2]	4	4	6	6	6
C7[2]	42.6	60	90	130	130
C8[2]	36.4	42.1	51.5	68	68
C9[2]	90.6	103.3	126.75	177.4	177.4
B	-	3.175	4.763	8	8
H	9.14	14.1	21.1	28	28

★ L1=44 when gear ratio is 10.
★ 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



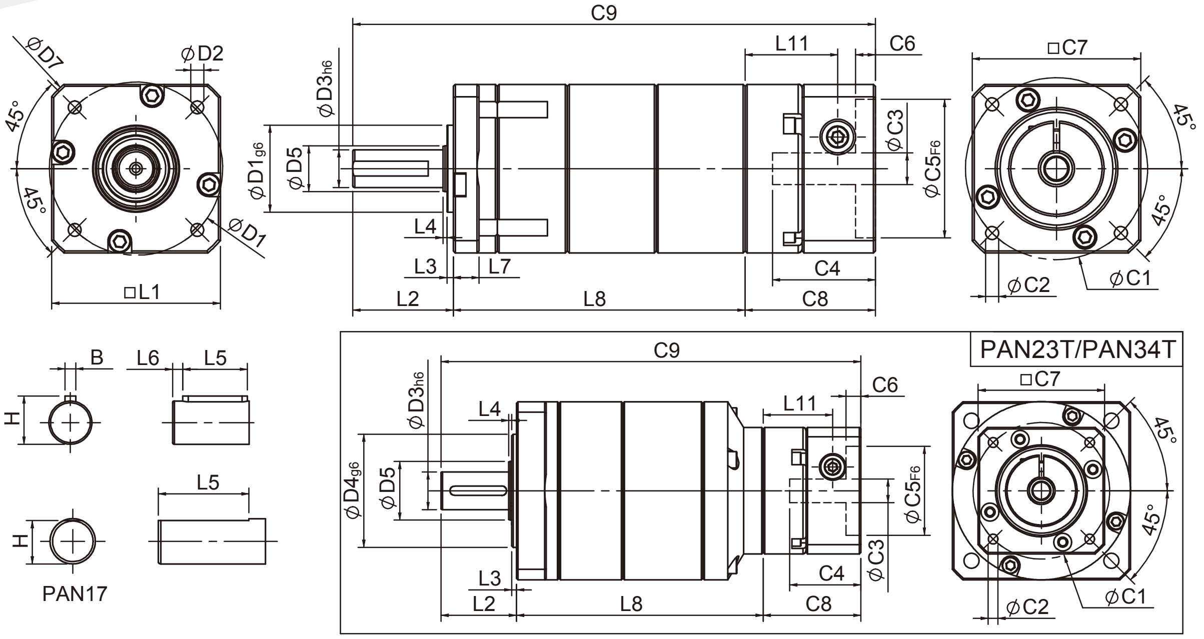
Specifications

Unit:mm

Dimensions	PAN17	PAN23	PAN23T	PAN34	PAN34T	PAN42T	PAN56T
D1	43.8	66.67		98.425		125.73	177.8
D2	3.25	5.1		5.6		7.1	10.2
$D3_{h6}$	9.525	12.7		19.05		25	25
$D4_{g6}$	21.97	38.1		73.025		55.55	114.3
D5	12	20		35		32	-
D7	56	80		118		148	195
L1	42.6(44)	60		90		115	145
L2	25.4	25.4		31.75		42	41
L3	1.6	1.6		1.7		2.4	4
L4	1	1		1		2	-
L5	19.05	19.05		25.4		32	32
L6	-	3		3		4	4
L7	6.5	10		12		19	20
L8	51.25	62.8	56.1	77.3	72.8	105.5	106.5
L11	23.4	31	23.4	37.3	31	37.3	37.3
C1[2]	46	70	46	90	70	90	90
C2[2]	M4x0.7P	M5x0.8P	M4x0.7P	M6x1.0P	M5x0.8P	M6x1.0P	M6x1.0P
C3[2]	≦8/≦11	≦14/≦19	≦8/≦11	≦19/≦24/≦28	≦14/≦19	≦19/≦24/≦28	≦19/≦24/≦28
C4[2]	26.5	33.5	26.5	41	33.5	41	41
$C5_{F6}$[2]	30	50	30	70	50	70	70
C6[2]	4	4	4	6	4	6	6
C7[2]	42.6	60	42.6	90	60	90	90
C8[2]	32.9	41.5	32.9	51.5	41.5	51.5	51.5
C9[2]	109.55	129.7	114.4	160.55	146.05	199	199
B	-	3.175		4.763		8	8
H	9.14	14.1		21.1		28	28

★ L1=44 when gear ratio is 100.
★ C1~C9 are motor specific dimensions (metric std shown). Size may vary according to motor flange.
★ Specification subject to change without notice.

PAN Triple Stage Dimensions



Specifications

Unit:mm

Dimensions	PAN17	PAN23T	PAN34T
D1	43.8	66.67	98.425
D2	3.25	5.1	5.6
$D3_{h6}$	9.525	12.7	19.05
$D4_{g6}$	21.97	38.1	73.025
D5	12	20	35
D7	56	80	118
L1	42.6(44)	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	73.7	83.1	106.6
L11	23.4	23.4	31
C1[2]	46	46	70
C2[2]	M4x0.7P	M4x0.7P	M5x0.8P
C3[2]	≦8/≦11	≦8/≦11	≦14/≦19
C4[2]	26.5	26.5	33.5
C5[2] $_{F6}$	30	30	50
C6[2]	4	4	4
C7[2]	42.6	42.6	60
C8[2]	32.9	32.9	41.5
C9[2]	132	141.4	179.85
B	-	3.175	4.763
H	9.14	14.1	21.1

★ L1=44 when gear ratio is 1000.
★ 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 • 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	(Ratio 49) : 10	35/27	95/82	205	205
			70	(Ratio 63) : 10	28/28	85/85	200	200
			90	(Ratio 81) : 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 • 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 • 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	4760	4760
Max. Axial Load F_{2aB} [1]	N	1,2,3	3-1000	410	430	1100	2630	2630
Operating Temp.	℃	1,2,3	3-1000	-10℃ ~ +90℃				
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	6.3	6.6
		2	15-100	0.7	1.5/1.3	4.2/3.1	7.9	8.2
		3	125~1000	0.8	1.7	4.5	9.3	9.6
Mounting Position	-	1,2,3	3-1000	Any direction				
Noise Level [2]	dBA/1m	1,2,3	3-1000	60	63	66	67	67
Protection Class	-	1,2,3	3-1000	IP65				
Lubrication	-	1,2,3	3-1000	Synthetic Lubricant				

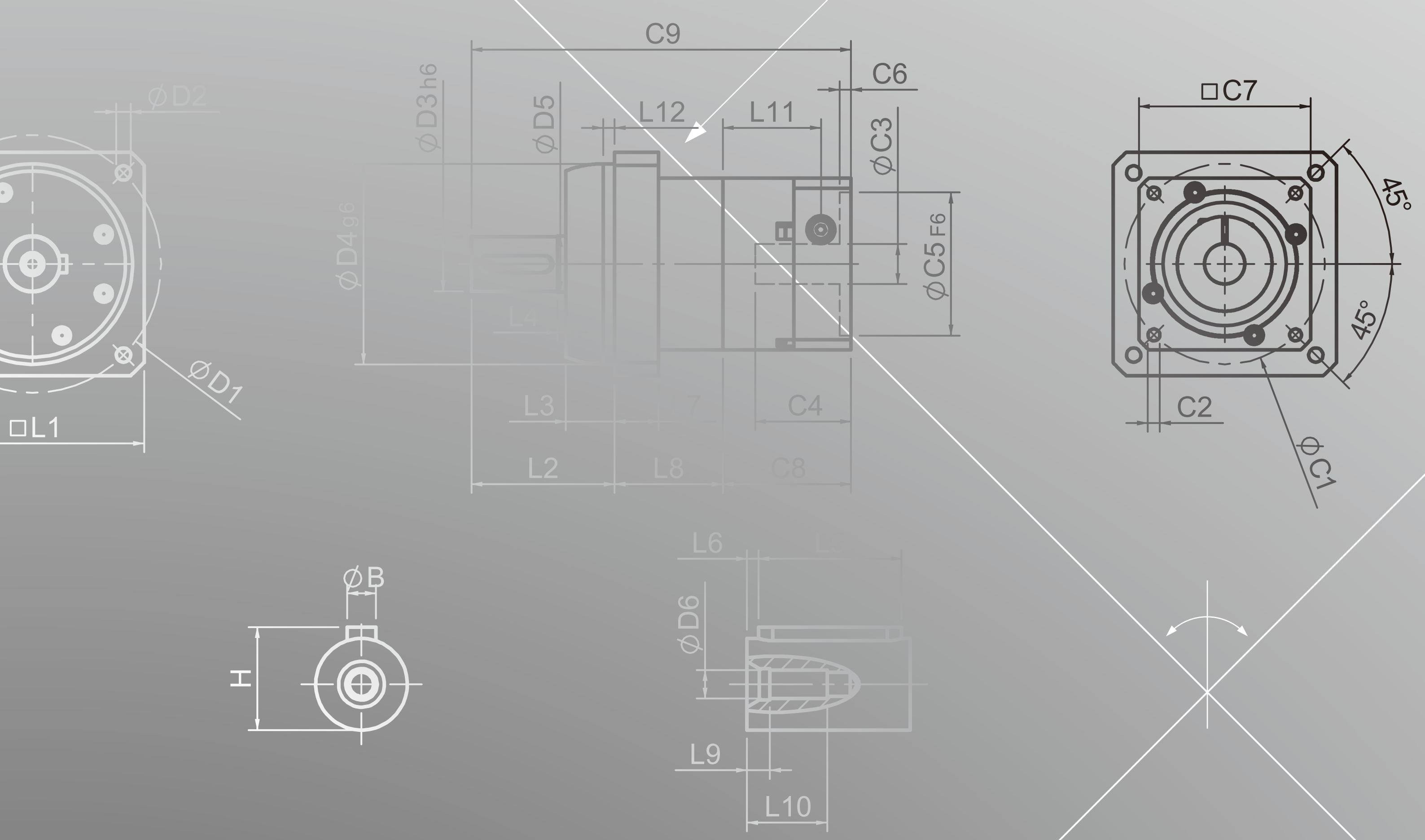
Inertia (J1)

Stage	Ratio	unit	PAN-17(ψ8)	PAN-23(ψ14)	PAN-34(ψ19)	PAN-42(ψ24)	PAN-56(ψ24)
1	3	Kg • cm^2	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(ψ 14)	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 at 100 rpm.
* 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.

PGS SERIES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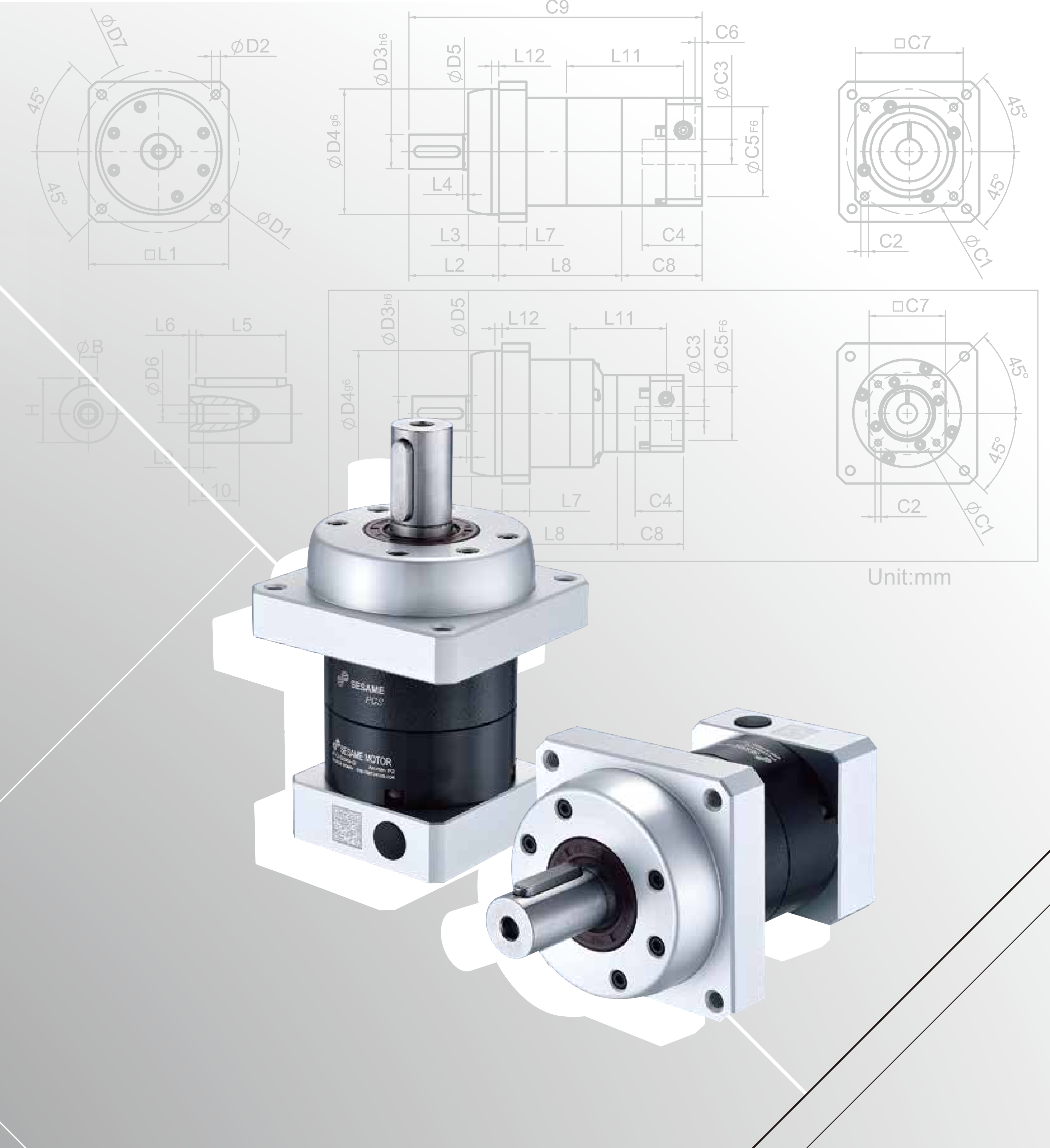
C6
L12
L11
ØD3h6
ØD5
ØC3
ØD4g6
ØC5 F6
□C7
45°
45°
ØD2
ØD1
□L1
L4
L3
C4
L2
L8
C8
C2
ØC1
ØB
H
L6
ØD6
L9
L10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ØD1
□L1
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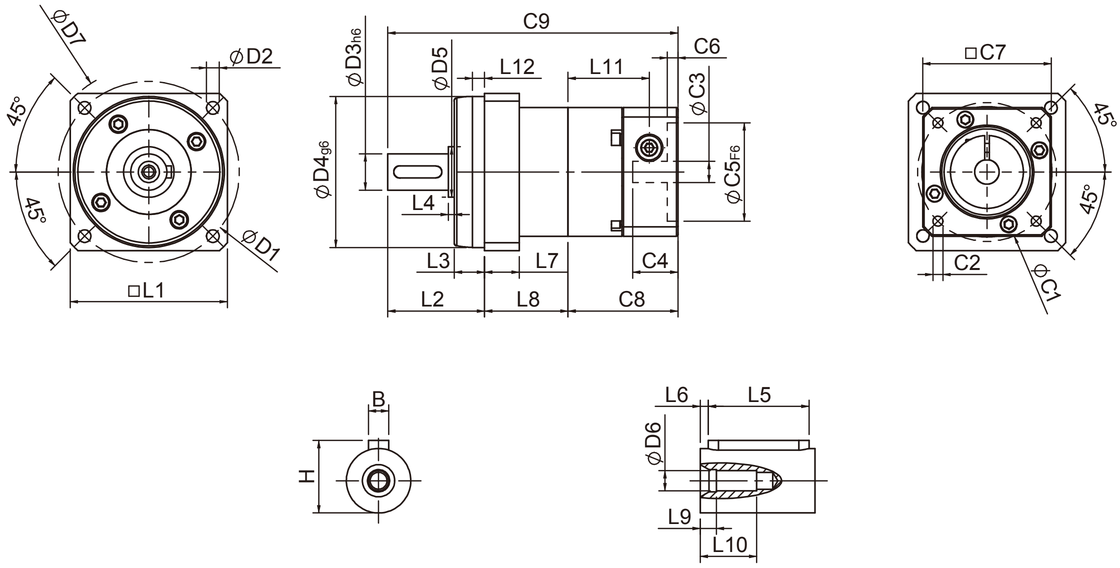
ØD4g6
ØC5F6
L4
L3
L7
C4
L2
L8
C8
□C7
45°
45°
C2
ØC1
L6
L5
ØB
ØD6
H
10
ØD3h6
ØD5
L12
L11
ØC3
ØC5F6
ØD4g6
□C7
45°
45°
L7
C4
L8
C8
C2
ØC1
SESAME
SESAME MOTOR

Unit:mm

PGS Single Stage Dimensions



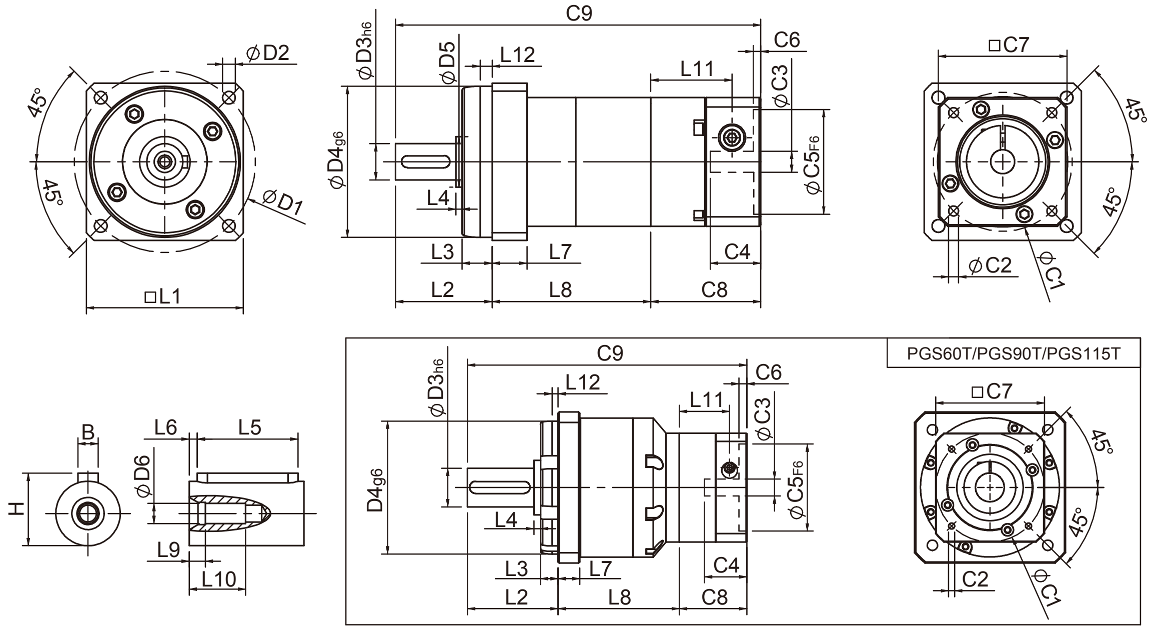
Specifications

Unit:mm

Dimensions	PGS42	PGS60	PGS90	PGS115
D1	60	90	115	135
D2	M5x0.8P	M6x1.0P	M8x1.25P	M10x1.5P
$D3_{h6}$	12	19	24	32
$D4_{g6}$	50	70	90	110
D5	17	20	30	45
D6	M4x0.7P	M6x1.0P	M8x1.25P	M12x1.75P
D7	70	104	132	165
L1	52	78	98	125
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	11.5	15.4	18	18
L8	27.6	37.8	46.2	62.3
L9	4	4	4.5	6
L10	14	16.5	20.5	30
L11	26.9	34.3	41.55	51.5
L12	3	4	5	5
C1 [2]	46	70	90	145
C2 [2]	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P
C3 [2]	≦8/≦11	≦14/≦19	≦19/≦24/≦28	≦24/≦32/≦38
C4 [2]	26.5	33.5	41	51.5
C5 [2] $_{F6}$	30	50	70	110
C6 [2]	4	4	6	6
C7 [2]	42.6	60	90	130
C8 [2]	36.4	44.8	55.8	68
C9 [2]	96	132.6	163	205.3
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 motor flange.
★ Specification subject to change without notice.

PGS Double Stage Dimensions



Specifications

Unit:mm

Dimensions	PGS42	PGS60	PGS60T	PGS90	PGS90T	PGS115T
D1	60	90		115		135
D2	M5x0.8P	M6x1.0P		M8x1.25P		M10x1.5P
D3 h6	12	19		24		32
D4 g6	50	70		90		110
D5	17	20		30		45
D6	M4x0.7P	M6x1.0P		M8x1.25P		M12x1.75P
D7	70	104		132		165
L1	52	78		98		125
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	11.5	15.4		18		18
L8	52.5	68.5	64.1	87.2	76.7	100.4
L9	4	4		4.5		6
L10	14	16.5		20.5		30
L11	51.8	34.3	26.9	41.55	34.3	41.55
L12	3	4		5		5
C1[2]	46	70	46	90	70	90
C2[2]	M4x0.7P	M5x0.8P	M4x0.7P	M6x1.0P	M5x0.8P	M6x1.0P
C3[2]	≦8/≦11	≦14/≦19	≦8/≦11	≦19/≦24/≦28	≦14/≦19	≦19/≦24/≦28
C4[2]	26.5	33.5	26.5	41	33.5	41
C5[2] F6	30	50	30	70	50	70
C6[2]	4	4	4	6	4	6
C7[2]	42.6	60	42.6	90	60	90
C8[2]	36.4	44.8	36.4	55.8	44.8	55.8
C9[2]	120.9	163.3	-	204	182.5	231.2
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 motor flange.
★ Specification subject to change without notice.

PGS Specifications Table

Specifications		Stage	Ratio	PGS-42	PGS-60	PGS-90	PGS-115
Nominal Output Torque T_{2N}	N • m	1	3	9	28	85	210
			4	10	32	80	240
			5	11	35	95	260
			7	10	28	85	220
			9	8	23	75	210
			10	8	21	65	190
		Stage	Ratio	PGS-42	PGS-60/ PGS-60T	PGS-90/ PGS-90T	PGS-115T
		2	15	11	34	90	230
			20	10	32	80	240
			25	11	35	95	260
			35	11	35	95	260
			45	11	35	95	260
			49	10	28	85	260
			63	10	28	85	220
			81	8	23	75	210
			100	8	21	65	190
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	3000	2500
Max. Input Speed n_{1max}	rpm	1,2	3-100	8000	6000	6000	5000
Standard Backlash P2	arcmin	1 2	3-10 15-100	≦ 9 ≦ 12	≦ 8 ≦ 10	≦ 7 ≦ 9	≦ 6 ≦ 8
Torsional Rigidity	N • m /arcmin	1,2	3-100	1.5	4.0	8.5	17
Max. Radial Load F_{2rB} [1]	N	1,2	3-100	1120	1720	2800	4600
Max. Axial Load F_{2aB} [1]	N	1,2	3-100	520	830	1730	2950
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 15-100	≧ 95% ≧ 90%			
Weight	kg	1 2	3-10 15-100	0.6 0.9	1.5 2.0/1.8	3.4 5.1/4.0	7.8 9.5
Mounting Position	-	1,2	3-100	Any direction			
Noise Level [2]	dBA/1m	1,2	3-100	61	63	66	67
Protection Class	-	1,2	3-100	IP65			
Lubrication	-	1,2	3-100	Synthetic Lubricant			

Inertia (J1)

Stage	Ratio	unit	PGS-42(ψ8)	PGS-60(ψ14)	PGS-90(ψ19)	PGS-115(ψ24)
1	3	Kg • cm^2	0.04	0.23	0.77	2.30
	4		0.03	0.21	0.67	1.92
	5		0.03	0.21	0.61	1.71
	7		0.03	0.21	0.60	1.65
	9/10		0.03	0.21	0.60	1.63
Stage	Ratio		PGS-42(ψ8)	PGS-60(ψ14)/ PGS-60T(ψ8)	PGS-90(ψ19)/ PGS-90T(ψ14)	PGS-115T(ψ19)
2	15/20/25		0.03	0.21(0.03)	0.61(0.21)	0.61
	35/49		0.03	0.21(0.03)	0.60(0.21)	0.60
	45/63/81/100		0.03	0.21(0.03)	0.60(0.21)	0.60

* 1. Applied to the output shaft center at 100 rpm.
* 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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PGS
SESAME MOTOR

SESAME
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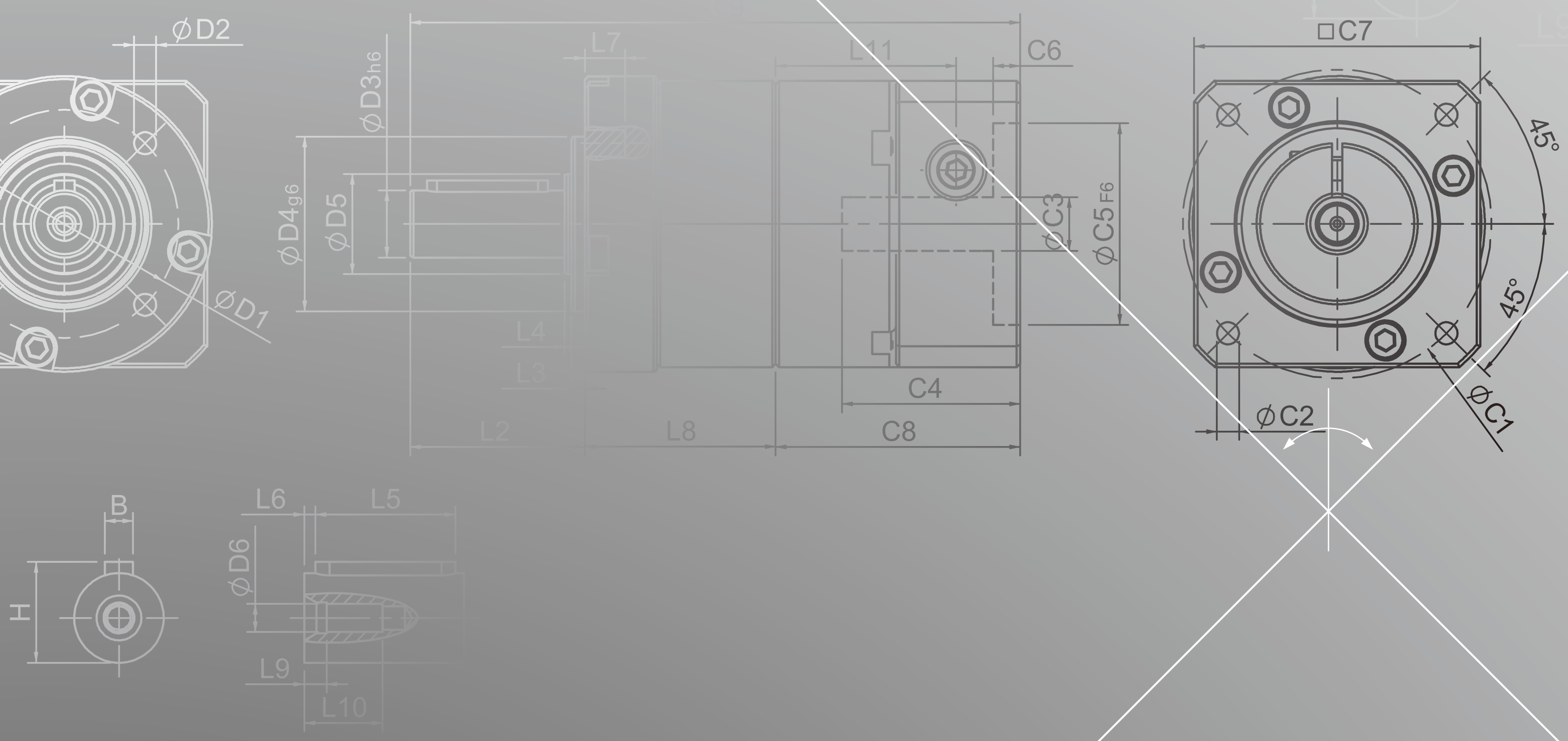
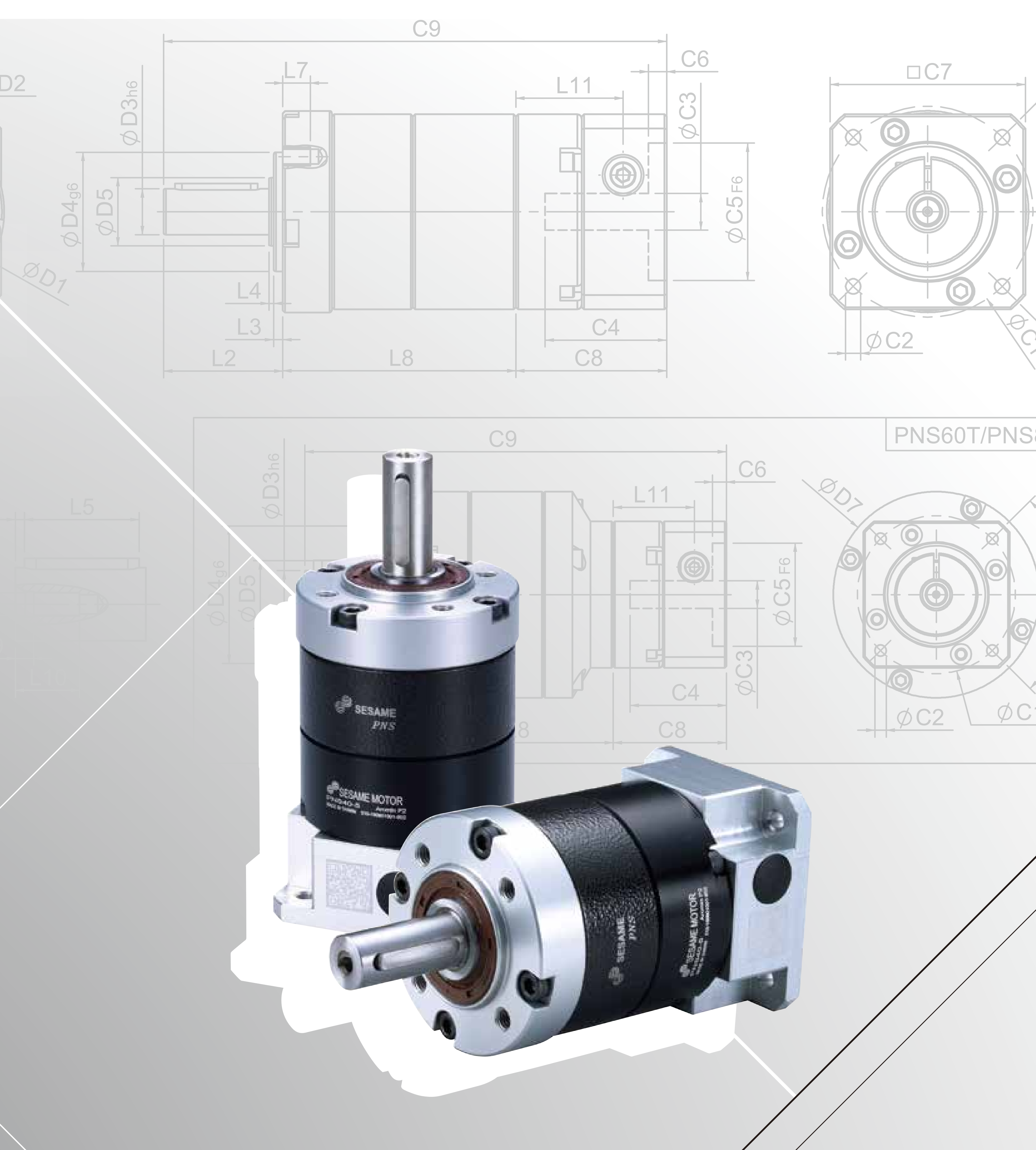
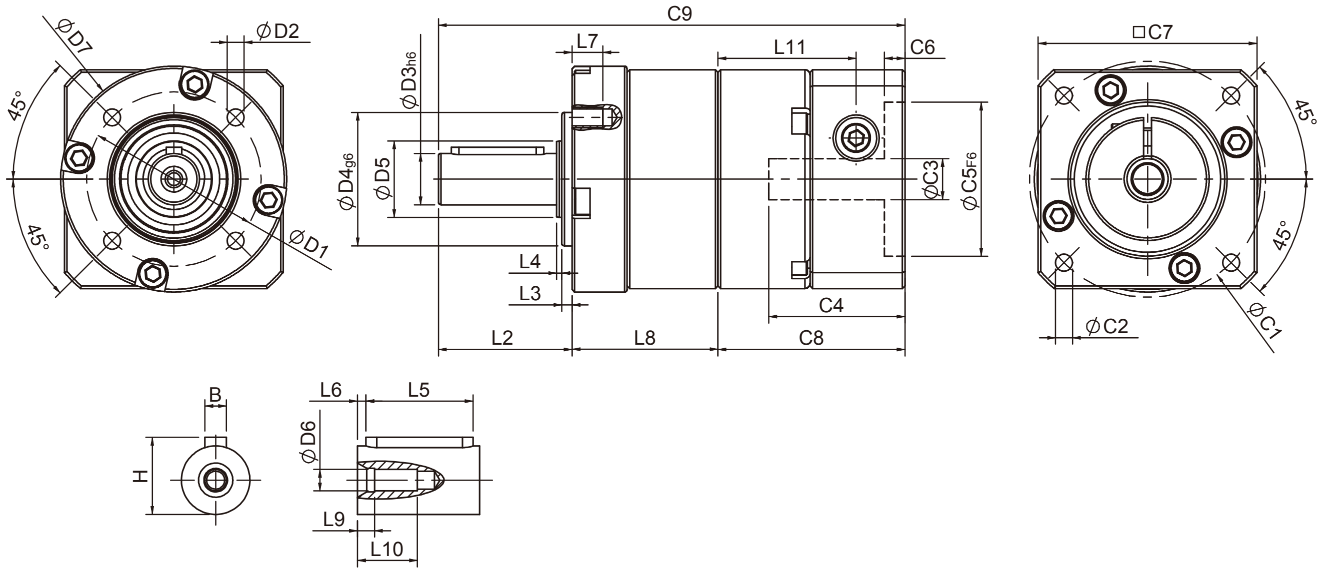
PNS SERIES




C9
C6
L7
L11
□C7
ϕD2
ϕD3h6
ϕC3
ϕD4g6
ϕD5
ϕC5F6
ϕD1
L4
L3
C4
ϕC2
L2
L8
C8
PNS60T/PNS
ϕD7
L5
SESAME
PNS
SESAME MOTOR

PNS Single Stage Dimensions



Specifications

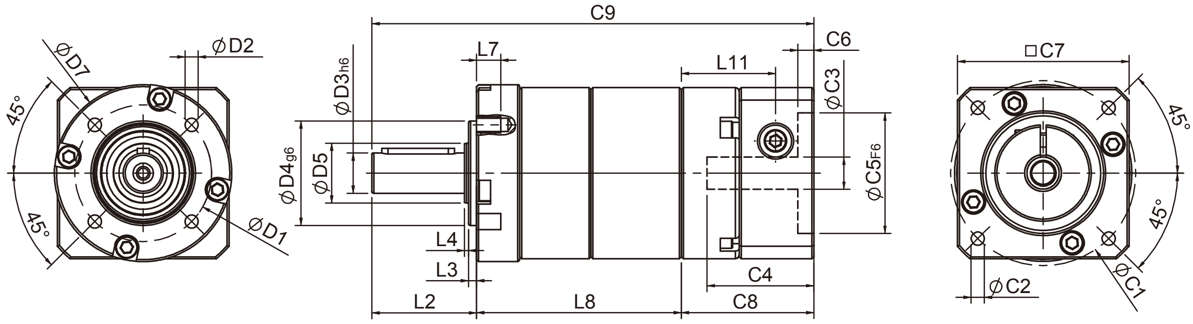
Unit:mm

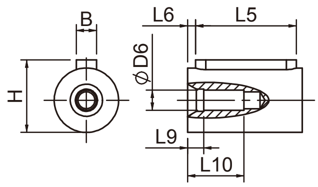
Dimensions	PNS40	PNS60	PNS80	PNS120	PNS160
D1	34	52	70	100	145
D2	M4x0.7P	M5x0.8P	M6x1.0P	M10x1.5P	M12x1.75P
D3$_{h6}$	10	14	20	25	40
D4$_{g6}$	26	40	60	80	130
D5	15	20	35	40	50
D6	M3x0.5P	M5x0.8P	M6x1.0P	M10x1.5P	M16x2.0P
D7	44	60	90	116	160
L2	26	35	40	55	87
L3	2	3	3	4	5
L4	1	1	1	1	2
L5	18	25	28	40	65
L6	2.5	2.5	4	5	8
L7	6	8	10	15	20
L8	28.4	34.4	42.2	68.8	81
L9	3	4	4.5	6	6
L10	9	16.5	16.5	26	38
L11	26.9	31.6	37.3	51.8	63
C1 [2]	46	70	90	145	130
C2 [2]	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M8x1.25P
C3 [2]	≤8/≤11	≤14/≤19	≤19/≤24/≤28	≤24/≤32/≤38	≤35/≤38
C4 [2]	26.5	33.5	41	51.5	66.5
C5 [2] $_{F6}$	30	50	70	110	110
C6 [2]	4	4	6	6	5.5
C7 [2]	42.6	60	90	130	140
C8 [2]	36.4	42.1	51.5	68	80
C9 [2]	90.8	111.5	133.7	191.8	248
B	3	5	6	8	12
H	11.2	16	22.5	28	43

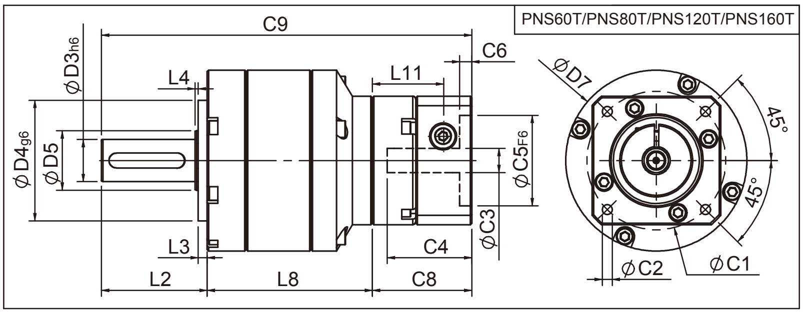
★ C1~C9 are motor specific dimensions (metric std shown). Size may vary according to motor flange.

★ Specification subject to change without notice.

PNS Double Stage Dimensions







Specifications

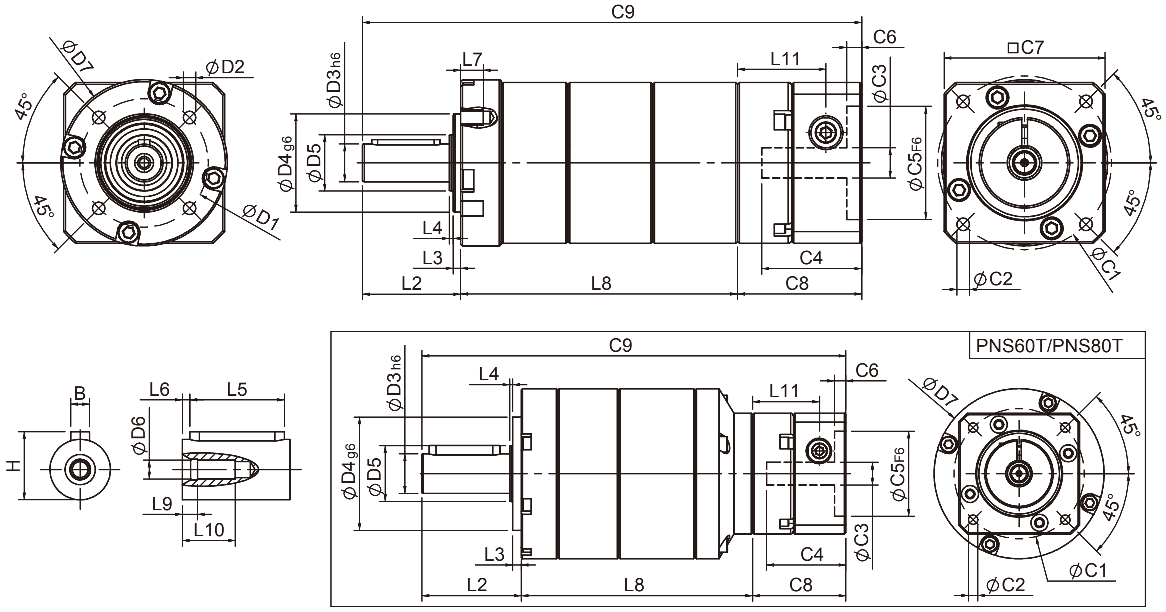
Unit:mm

Dimensions	PNS40	PNS60	PNS60T	PNS80	PNS80T	PNS120T	PNS160	PNS160T
D1	34	52		70		100	145	
D2	M4x0.7P	M5x0.8P		M6x1.0P		M10x1.5P	M12x1.75P	
$D3_{h6}$	10	14		20		25	40	
$D4_{g6}$	26	40		60		80	130	
D5	15	20		35		40	50	
D6	M3x0.5P	M5x0.8P		M6x1.0P		M10x1.5P	M16x2.0P	
D7	44	60		90		116	160	
L2	26	35		40		55	87	
L3	2	3		3		4	5	
L4	1	1		1		1	2	
L5	18	25		28		40	65	
L6	2.5	2.5		4		5	8	
L7	6	8		10		15	20	
L8	50.85	61.4	54.7	76	71.5	106.9	142	129
L9	3	4		4.5		6	6	
L10	9	16.5		16.5		26	38	
L11	23.4	31	23.4	37.3	31	37.3	63	42
C1 [2]	46	70	46	90	70	90	130	115
C2 [2]	M4x0.7P	M5x0.8P	M4x0.7P	M6x1.0P	M5x0.8P	M6x1.0P	M8x1.25P	M8x1.25P
C3 [2]	≦8/≦11	≦14/≦19	≦8/≦11	≦19/≦24/≦28	≦14/≦19	≦19/≦24/≦28	≦35/≦38	≦24/≦28
C4 [2]	26.5	33.5	26.5	41	33.5	41	66.5	53.5
$C5_{F6}$ [2]	30	50	30	70	50	70	110	95
C6 [2]	4	4	4	6	4	6	5.5	5.5
C7 [2]	42.6	60	42.6	90	60	90	140	120
C8 [2]	32.9	41.5	32.9	51.5	41.5	51.5	80	58
C9 [2]	109.75	137.9	122.6	167.5	153	213.4	309	274
B	3	5		6		8	12	
H	11.2	16		22.5		28	43	

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

★ Specification subject to change without notice.

PNS Triple Stage Dimensions-1



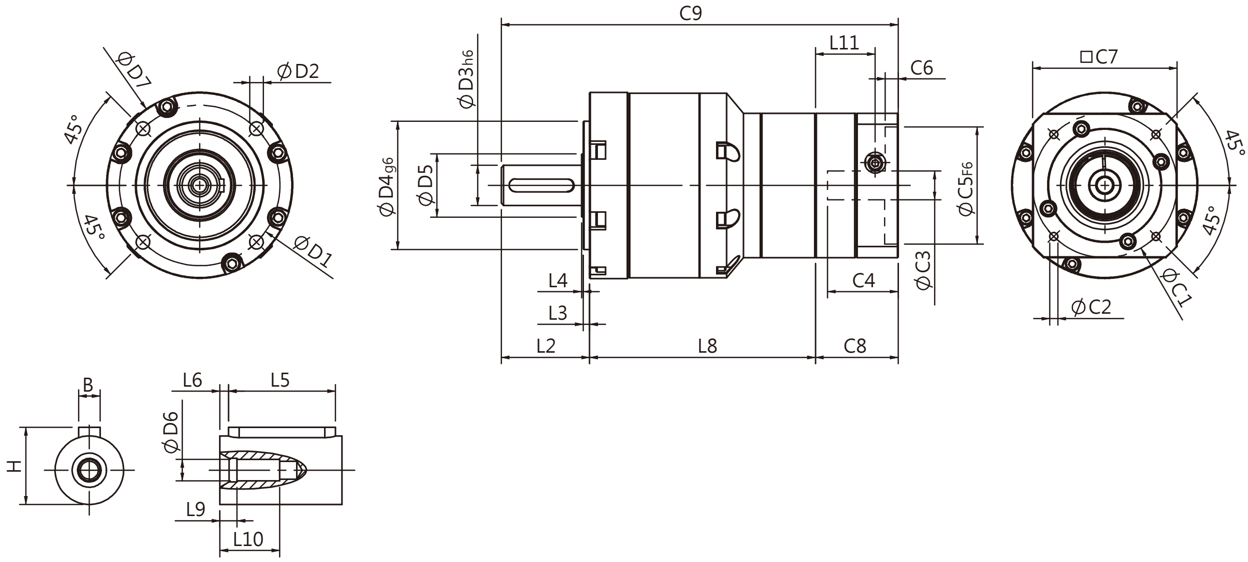
Specifications

Unit:mm

Dimensions	PNS40	PNS60T	PNS80T
D1	34	52	70
D2	M4x0.7P	M5x0.8P	M6x1.0P
$D3_{h6}$	10	14	20
$D4_{g6}$	26	40	60
D5	15	20	35
D6	M3x0.5P	M5x0.8P	M6x1.0P
D7	44	60	90
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	73.3	81.7	105.3
L9	3	4	4.5
L10	9	16.5	16.5
L11	23.4	23.4	31
$C1^{2}$	46	46	70
$C2^{2}$	M4x0.7P	M4x0.7P	M5x0.8P
$C3^{2}$	≦8/≦11	≦8/≦11	≦14/≦19
$C4^{2}$	26.5	26 5	33.5
$C5^{2}_{F6}$	30	30	50
$C6^{2}$	4	4	4
$C7^{2}$	42.6	42.6	60
$C8^{2}$	32.9	32.9	41.5
$C9^{2}$	132.2	149.6	186.8
B	3	5	6
H	11.2	16	22.5

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

PNS Triple Stage Dimensions-2



Specifications

Unit:mm

Dimensions	PNS120T	PNS160T
D1	100	145
D2	M10x1.5P	M12x1.75P
$D3_{h6}$	25	40
$D4_{g6}$	80	130
D5	40	50
D6	M10x1.5P	M16x2.0P
D7	116	160
L2	55	87
L3	4	5
L4	1	2
L5	40	65
L6	5	8
L7	15	20
L8	140.7	177
L9	6	6
L10	26	38
L11	37.3	42
C1[2]	90	115
C2[2]	M6x1.0P	M8x1.25P
C3[2]	≦19/≦24/≦28	24/≦28
C4[2]	41	53.5
C5[2] $_{F6}$	70	95
C6[2]	6	5.5
C7[2]	90	120
C8[2]	51.5	58
C9[2]	247.2	322
B	8	12
H	28	43

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

PNS Specifications Table

Specifications		Stage	Ratio	PNS-40	PNS-60	PNS-80	PNS-120	PNS-160
Nominal Output Torque T_{2N}	N · m	1	3	9	28	85	200	420
			4	10	32	80	215	490
			5	11	35	95	215	473
			7	10	28	85	200	400
			9	8	23	75	195	320
			10	8	21	65	180	320
		Stage	Ratio	PNS-40	PNS-60/ PNS-60T	PNS-80/ PNS-80T	PNS-120T	PNS-160/ PNS-160T
		2	15	11	35/24	95/68	168	420
			20	11	35/31	95/95	215	490
			25	11	35/30	95/95	215	473
			35	11	35/28	95/95	215	473
			45	11	35/27	95/92	215	473
			50	(Ratio 49) : 10	35/27	95/82	205	473
			70	(Ratio 63) : 10	28/28	85/85	200	400
			90	(Ratio 81) : 8	23/23	75/75	195	320
			100	8	21/21	65/65	180	320
		Stage	Ratio	PNS-40	PNS-60T	PNS-80T	PNS-120T	PNS-160T
		3	125	11	35	95	215	473
			175	11	35	95	215	473
			225	11	35	95	215	473
			245	11	35	95	215	(Ratio 250) : 473
			315	11	35	95	215	(Ratio 350) : 473
			405	11	35	95	215	(Ratio 400) : 473
			567	10	28	85	200	(Ratio 500) : 473
			729	8	23	75	195	(Ratio 700) : 400
			1000	8	21	65	180	320
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	3-1000	4000	4000	3000	2500	2500
Max. Input Speed n_{1max}	rpm	1,2,3	3-1000	6000	6000	6000	5000	4000
Standard Backlash P2	arcmin	1	3-10	≦9	≦8	≦7	≦6	≦5
		2	15-100	≦12	≦10	≦9	≦8	≦7
		3	125~1000	≦15	≦12	≦12	≦12	≦10
Torsional Rigidity	N · m /arcmin	1,2,3	3-1000	1.2	3.5	8.5	17	30
Max. Radial Load F_{2rB} [1]	N	1,2,3	3-1000	580	890	2050	4370	6720
Max. Axial Load F_{2aB} [1]	N	1,2,3	3-1000	410	430	1100	2630	4200
Operating Temp.	℃	1,2,3	3-1000	-10℃ ~ +90℃				
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	6.3	15.6
		2	15-100	0.7	1.5/1.3	4.2/3.1	7.9	20.7/17.2
		3	125~1000	0.8	1.7	4.5	9.3	22.4
Mounting Position	-	1,2,3	3-1000	Any direction				
Noise Level [2]	dBA/1m	1,2,3	3-1000	60	63	66	67	68
Protection Class	-	1,2,3	3-1000	IP65				
Lubrication	-	1,2,3	3-1000	Synthetic Lubricant				

Inertia (J1)

Stage	Ratio	unit	PNS-40(ψ8)	PNS-60(ψ14)	PNS-80(ψ19)	PNS-120(ψ24)	PNS-160(ψ35)
1	3	Kg · cm²	0.04	0.23	0.77	2.30	7.89
	4		0.03	0.21	0.67	1.92	5.83
	5~10		0.03	0.21	0.61	1.71	5.38
Stage	Ratio		PNS-40(ψ8)	PNS-60(ψ14)/ PNS-60T(ψ8)	PNS-80(ψ19) / PNS-80T(ψ14)	PNS-120T(ψ19)	PNS-160(ψ35)/ PNS-160T(ψ24)
2	15		0.04	0.23/(0.04)	0.77/(0.23)	0.77	5.38/(1.61)
	Other ratios		0.03	0.21/(0.03)	0.61/(0.21)	0.61	5.38/(1.61)
Stage	Ratio		PNS-40(ψ8)	PNS-60T(ψ8)	PNS-80T(ψ14)	PNS-120T(ψ19)	PNS-160T(ψ24)
3	All ratios		0.03	0.03	0.21	0.61	1.61

* 1. Applied to the output shaft center at 100 rpm.

* 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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