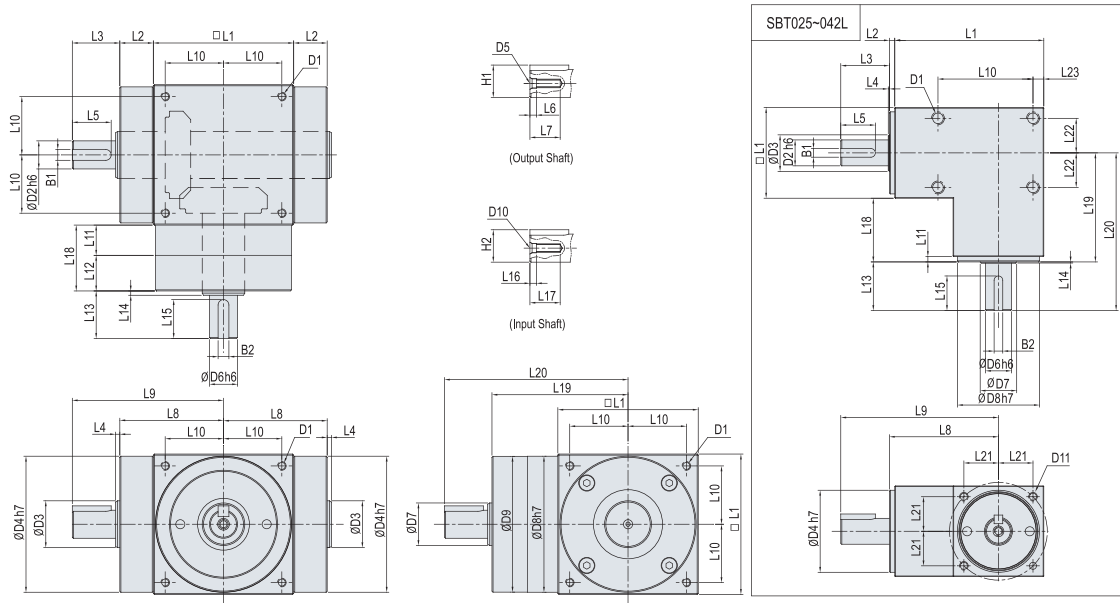


■ Dimensions (SBT 025/030/042/050/065/090/115/142L)



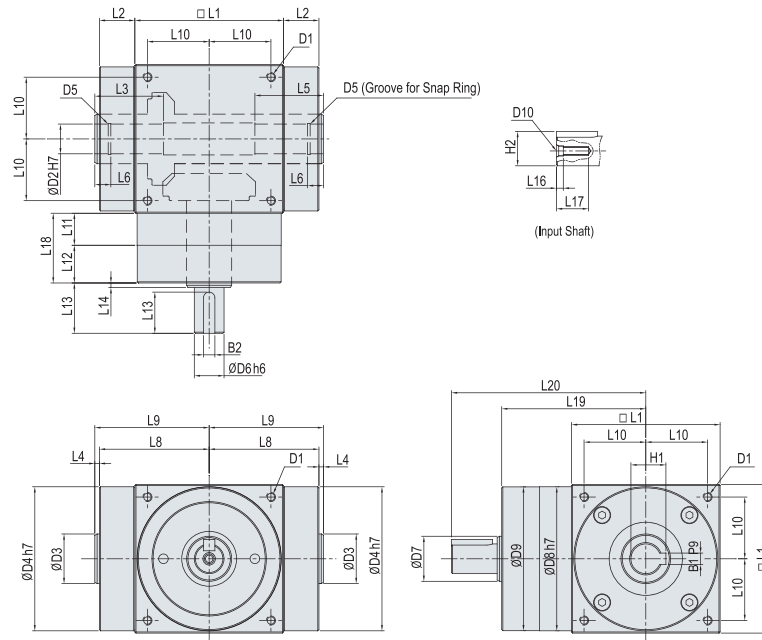
(Unit : mm)

Dimension \ Model	SBT025L	SBT030L	SBT042L	SBT050L	SBT065L	SBT090L	SBT115L	SBT142L
D1	M4 DP6	M5 DP6	M6 DP7	M4 DP9	M4 DP9	M6 DP12	M8 DP16	M10 DP18
D2 h6	6	8	12	12	13	18	22	32
D3	9,9	11,9	16,9	14,7	21,7	31,8	34,8	49,8
D4 h7	22	27	38	48	63	88	108	135
D5	4	5	6	4,3	4,3	5,5	8,5	12,5
D6 h6	6	8	12	12	13	18	22	32
D7	9,9	11,9	16,9	14,7	19,7	29,8	44,8	54,8
D8 h7	23	28	38	48	63	88	108	135
D9	-	-	-	47,9	62,9	87	107	134
D10	4	5	6	4,3	4,3	5,5	8,5	12,5
D11	M3 DP7	M3 DP7	M4 DP8	-	-	-	-	-
L1	42	48,5	69	50	65	90	115	142
L2	2	2	2,5	11,5	15,5	16,5	16,5	16,5
L3	13	18	22,5	20	22	37	42	52
L4	0,5	0,5	0,5	1	2	2	2	2
L5	-	-	16	16	18	32	36	47
L6	1,4	1,5	1,6	3	3	4	6	10
L7	M3 DP6	M4 DP7	M5 DP9	M4 DP13	M4 DP14	M5 DP17	M8 DP25	M12 DP28
L8	31,5	35,5	50,5	36,5	48	61,5	74	87,5
L9	44,5	53,5	73	56,5	70	98,5	116	139,5
L10	23	27	44	20	27	36	44	55
L11	2	2	2,5	11	14	15	15	18
L12	-	-	-	13,5	16,5	18	27	32,5
L13	13	18	22,5	20	22	37	42	52
L14	0,5	0,5	0,5	1	2	2	2	2
L15	-	-	16	16	18	32	36	47
L16	1,4	1,5	1,6	3	3	4	6	10
L17	M3 DP6	M4 DP7	M5 DP9	M4 DP13	M4 DP14	M5 DP17	M8 DP25	M12 DP28
L18	19	20,5	29,5	24,5	30,5	37	42	50,5
L19	31,5	35,5	50,5	49,5	63	78	99,5	121,5
L20	44,5	53,5	73	69,5	85	115	141,5	173,5
L21	9,5	11,5	16	-	-	-	-	-
L22	9	11	16	-	-	-	-	-
L23	3,5	4	5	-	-	-	-	-
B1 h9	-	-	4	4	5	6	6	10
B2 h9	-	-	4	4	5	6	6	10
H1	-	-	13,5	13,5	15	20,5	24,5	35
H2	-	-	13,5	13,5	15	20,5	24,5	35

Note) 1. Specifications are subject to change without notice for improvement.
2. CAD files are available for download from our website at www.spg.co.kr.

Spiral Bevel Gearboxes

■ Dimensions (SBT 065/090/115/142H)



(Unit : mm)

Dimension \ Model	SBT065H	SBT090H	SBT115H	SBT142H
D1	M4 DP9	M6 DP12	M8 DP16	M10 DP18
D2 H7	13	18	22	32
D3	21,7	31,8	34,8	49,8
D4 h7	63	88	108	135
D5	1,15 * Ø13,6	1,15 * Ø19	1,15 * Ø23	1,35 * Ø33,7
D6 h6	13	18	22	32
D7	17,7	27,3	41,6	51,3
D8 h7	63	88	108	135
D9	62,9	87	107	134
D10	4,3	5,5	8,5	12,5
L1	65	90	115	142
L2	15,5	16,5	16,5	16,5
L3	30	35	40	50
L4	2	2	2	2
L5	30	35	40	50
L6	7	10	16	22
L8	48	61,5	74	87,5
L9	50	63,5	76	89,5
L10	27	36	44	55
L11	14	15	15	18
L12	16,5	18	27	32,5
L13	22	37	42	52
L14	2	2	2	2
L15	18	32	36	47
L16	3	4	6	10
L17	M4 DP14	M5 DP17	M8 DP25	M12 DP28
L18	30,5	37	42	50,5
L19	63	78	99,5	121,5
L20	85	115	141,5	173,5
B1 P9	5	6	6	10
B2 h9	5	6	6	10
H1	15,3	20,8	24,8	35,3
H2	15	20,5	24,5	35

- Note) 1. Specifications are subject to change without notice for improvement.
 2. CAD files are available for download from our website at www.spg.co.kr.



Spiral Bevel Gearboxes SBT- M Series (Motor Mount Type)

- ▶ Compact size
- ▶ High precision, High durability
- ▶ High efficiency
- ▶ Simple mounting for various servo and stepping motors

Spiral Bevel Gearboxes

Specifications

Description	Unit	Stage	Ratio (i)	Model No.							
				SBT025MT SBT025ML	SBT030MT SBT030ML	SBT042MT SBT042ML	SBT050MT SBT050ML	SBT065MT SBT065ML SBT065MH	SBT090MT SBT090ML SBT090MH	SBT115MT SBT115ML SBT115MH	SBT142MT SBT142ML SBT142MH
Nominal Output Torque $T_{2N}^{(1)}$	Nm	1	1	0.3	0.7	2.5	3.0	9.0	17	22	50
Max. Acceleration Torque T_{2B}	Nm	1	1	1.5 times of Nominal Output torque							
Nominal Input speed n_1	RPM	1	1	3,000	3,000	3,000	3,000	3,000	3,000	3,000	2,000
Max. Input speed N_i	RPM	1	1	5,000	5,000	5,000	5,000	5,000	5,000	5,000	3,000
Backlash (Standard class)	arcmin	1	1	≤ 25			≤ 20		≤ 15		
Max. Overhang Load Input $F_r \max^{(1)}$	N	1	1	7	12	24	70	140	390	60	400
Max. Overhang Load Output $F_a \max^{(1)}$	N	1	1	38	56	120	88	110	200	600	800
Max. Thrust Load Input $F_a \max^{(1)}$	N	1	1	3.5	6	12	35	70	195	30	200
Max. Thrust Load Output $F_a \max^{(1)}$	N	1	1	19	28	60	44	55	100	300	400
Service Life ⁽¹⁾	hr	1	1	20,000							
Noise Level ⁽²⁾	dB(A)	1	1	61	63	65	68	70	74	76	77
Weight	kg	1	1	0.2	0.35	0.9	0.9	2.0	4.8	10	20
Moment of Inertia ⁽³⁾	kg cm ²	1	1	0.01	0.04	0.23	0.15	0.75	3.63	10.25	32.61
Operating Temp. ⁽⁴⁾	°C	1	1	-10 ~ +90 °C							
Lubrication		1	1	High temperature & Extreme pressure Lubricant							
Efficiency η	%	1	1	≥ 95%							

(1) Value for this specification table indicates that service factor is 1 at uniformed load for nominal input speed. Make sure to use it within the allowable limit from specification table. In case of data for Torque, Overhang Load and Thrust Load in continuous operation (S1 ≈ 10,000 hrs), allowable load location for shaft is the central part of the shaft based on 1-Output Shaft. In case of 2-Output Shaft, it's required to take into account sum of load given to each shaft and its value should be within range of the above data.

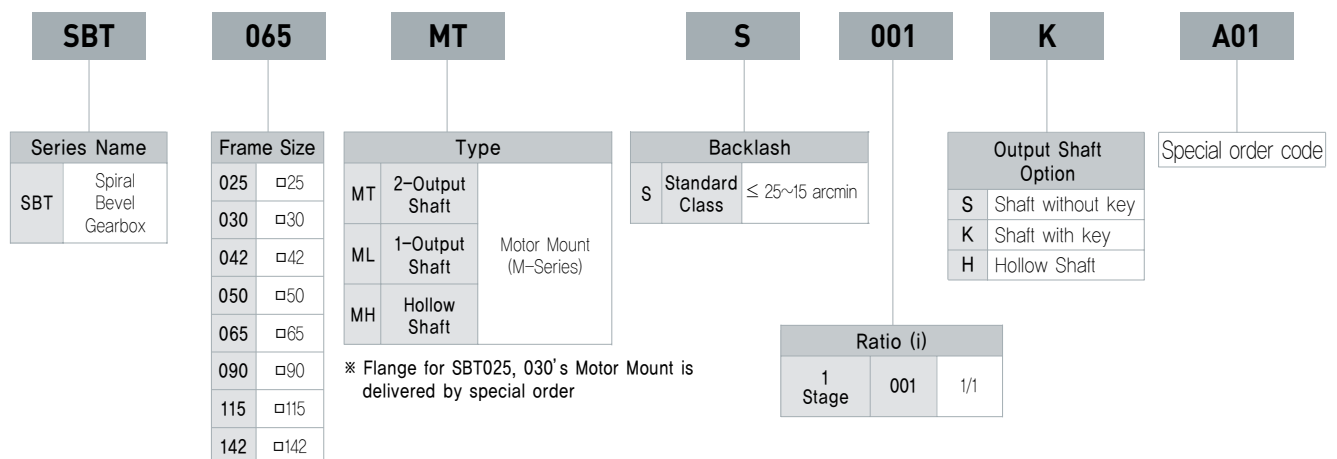
(2) Noise should be measured at 1 m of distance from mounting surface of reducer while a reducer is running at 1,500 rpm without load (Noise 21dB(A))

(3) IBased on Input Shaft and representative model (T Type).

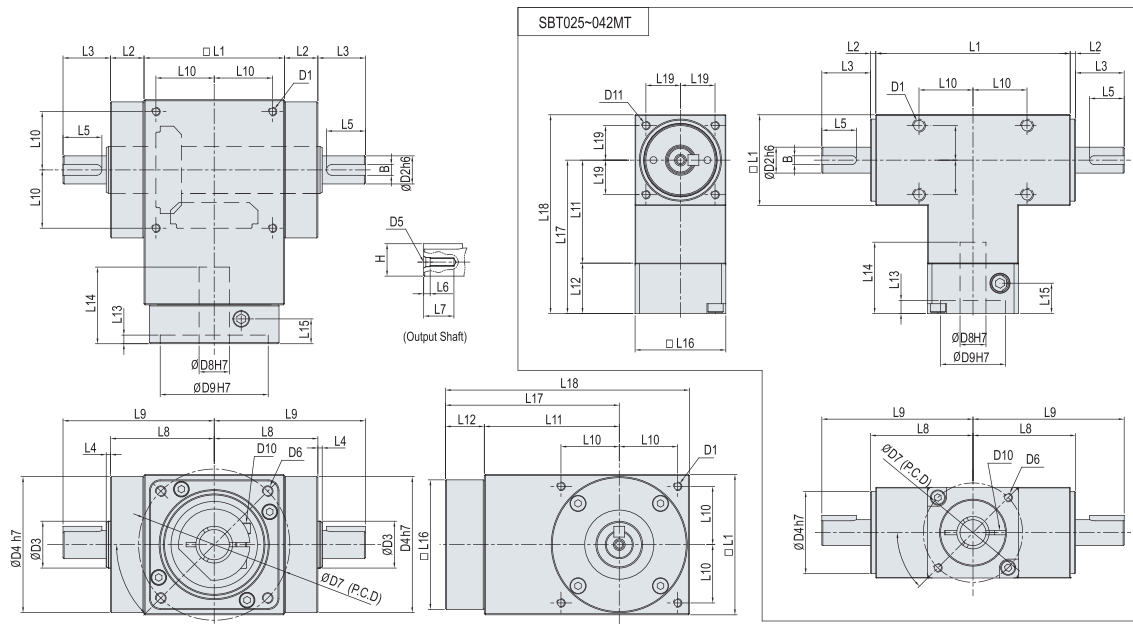
(4) Make sure to use reducer at temperature range of -10°C ~ +40°C and within its surface temperature of 90°C.

※ Above data in the specification indicates the representative data and the specification may be changed to improve performance without prior notification.

Coding System



■ Dimensions (SBT 025/030/042/050/065/090/115/142MT)



(Unit : mm)

Dimension \ Model	SBT025MT	SBT030MT	SBT042MT	SBT050MT	SBT065MT	SBT090MT	SBT115MT	SBT142MT
D1	M4 DP6	M5 DP6	M6 DP7	M4 DP9	M4 DP9	M6 DP12	M8 DP16	M10 DP18
D2 h6	6	8	12	12	13	18	22	32
D3	-	-	-	14.7	21.7	31.8	34.8	49.8
D4 h7	22	27	38	48	63	88	108	135
D5	4	5	6	4.3	4.3	5.5	8.5	12.5
D6	A	∅ 3.4 DP5	∅ 2.9 DP5.5	M4 DP7	M4 DP8	M5 DP12	M6 DP12	M8 DP20
	B	-	-	-	M3 DP6	M4 DP12	M5 DP12	-
D7	A	24.5	32.5	46	46	70	90	145
	B	-	-	-	45	70	90	-
D8 H7	6	8	12	8	14	19	32	38
D9 H7	20	22	30	30	50	70	110	114.3
D10	M2.5	M3	M5	M3	M5	M5	M8	M8
D11	M3 DP7	M3 DP7	M4 DP8	-	-	-	-	-
L1	57	65	90	50	65	90	115	142
L2	2	2	2.5	11.5	15.5	16.5	16.5	16.5
L3	13	18	22.5	20	22	37	42	52
L4	-	-	-	1	2	2	2	2
L5	-	-	16	16	18	32	36	47
L6	1.4	1.5	1.6	3	3	4	6	10
L7	M3 DP6	M4 DP7	M5 DP9	M4 DP13	M4 DP14	M5 DP17	M8 DP25	M12 DP28
L8	30.5	34.5	47.5	36.5	48	61.5	74	87.5
L9	43.5	52.5	70	56.5	70	98.5	116	139.5
L10	16.5	17.5	25	20	27	36	44	55
L11	29.5	33.5	48	48.5	62.5	78	97.5	120
L12	19	19	22.5	13.5	18	18	42	46
L13	8	8	6	3.5	4	4	7	7
L14	25	29	33	27	35.5	42.5	73	84
L15	13.25	12.75	14	8.25	11.5	11.5	27.5	33.5
L16	25	30	42	42	60	90	130	180
L17	48.5	52.5	70.5	62	80.5	96	139.5	166
L18	61	67.5	91.5	87	113	141	197	237
L19	9.5	11.5	16	-	-	-	-	-
L20	9	11	16	-	-	-	-	-
B h9	-	-	4	4	5	6	6	10
H	-	-	13.5	13.5	15	20.5	24.5	35

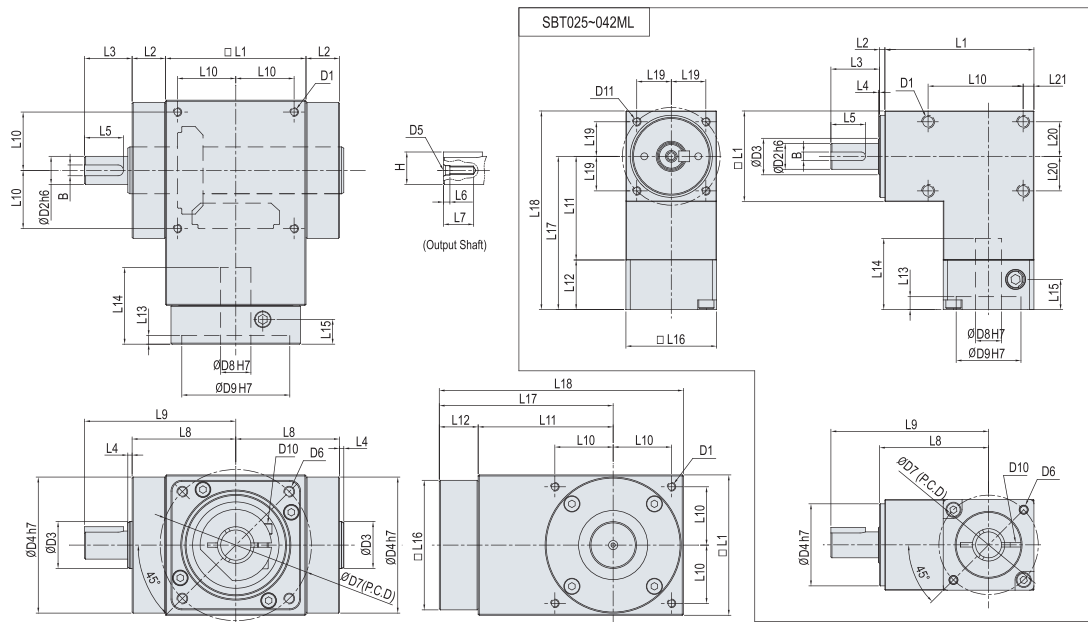
Note) 1. Specifications are subject to change without notice for improvement.

2. The values of D6 through D10 and L12 through L18 from the above table may vary in accordance with the type of the servo motor.

3. CAD files are available for download from our website at www.spg.co.kr.

Spiral Bevel Gearboxes

■ Dimensions (SBT 025/030/042/050/065/090/115/142ML)



(Unit : mm)

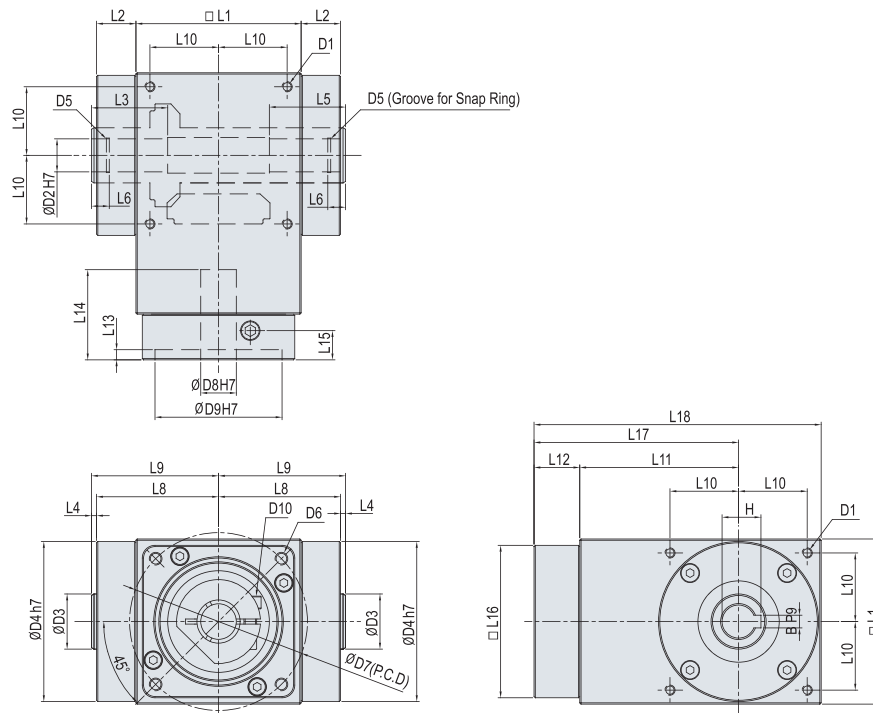
Dimension \ Model	SBT025ML	SBT030ML	SBT042ML	SBT050ML	SBT065ML	SBT090ML	SBT115ML	SBT142ML
D1	M4 DP6	M5 DP6	M6 DP7	M4 DP9	M4 DP9	M6 DP12	M8 DP16	M10 DP18
D2 h6	6	8	12	12	13	18	22	32
D3	9,9	11,9	16,9	14,7	21,7	31,8	34,8	49,8
D4 h7	22	27	38	48	63	88	108	135
D5	4	5	6	4,3	4,3	5,5	8,5	12,5
D6	A	M3 DP6	M3 DP6	M4 DP7	M4 DP8	M5 DP12	M6 DP12	M8 DP20
	B	-	-	-	M3 DP6	M4 DP12	M5 DP12	-
D7	A	28	28	46	46	70	90	145
	B	-	-	-	45	70	90	-
D8 H7	6	8	12	8	14	19	32	38
D9 H7	20	22	30	30	50	70	110	114,3
D10	M2,5	M3	M5	M3	M5	M5	M8	M8
D11	M3 DP7	M3 DP7	M4 DP8	-	-	-	-	-
L1	42	48,5	69	50	65	90	115	142
L2	2	2	2,5	11,5	15,5	16,5	16,5	16,5
L3	13	18	22,5	20	22	37	42	52
L4	0,5	0,5	0,5	1	2	2	2	2
L5	-	-	16	16	18	32	36	47
L6	1,4	1,5	1,6	3	3	4	6	10
L7	M3 DP6	M4 DP7	M5 DP9	M4 DP13	M4 DP14	M5 DP17	M8 DP25	M12 DP28
L8	31,5	35,5	50,5	36,5	48	61,5	74	87,5
L9	44,5	53,5	73	56,5	70	98,5	116	139,5
L10	23	27	44	20	27	36	44	55
L11	29,5	33,5	48	48,5	62,5	78	97,5	120
L12	19	19	22,5	13,5	18	18	42	46
L13	8	8	6	3,5	4	4	7	7
L14	25	29	33	27	35,5	42,5	73	84
L15	13,25	12,75	14	8,25	11,5	11,5	27,5	33,5
L16	25	30	42	42	60	90	130	180
L17	48,5	52,5	70,5	62	80,5	96	139,5	166
L18	61	67,5	91,5	87	113	141	197	237
L19	9,5	11,5	16	-	-	-	-	-
L20	9	11	16	-	-	-	-	-
L21	3,5	4	5	-	-	-	-	-
B h9	-	-	4	4	5	6	6	10
H	-	-	13,5	13,5	15	20,5	24,5	35

Note) 1. Specifications are subject to change without notice for improvement.

2. The values of D6 through D9 and L12 through L18 from the above table may vary in accordance with the type of the servo motor.

3. CAD files are available for download from our website at www.spg.co.kr.

■ Dimensions (SBT 065/090/115/142MH)



(Unit : mm)

Dimension \ Model	SBT065MH	SBT090MH	SBT115MH	SBT142MH
D1	M4 DP9	M6 DP12	M8 DP16	M10 DP18
D2 H7	13	18	22	32
D3	21,7	31,8	34,8	49,8
D4 h7	63	88	108	135
D5	1,15 * \varnothing 13,6	1,15 * \varnothing 19	1,15 * \varnothing 23	1,35 * \varnothing 33,7
D6	A	M5 DP12	M8 DP20	M12 DP21
	B	M4 DP12	–	–
D7	A	70	90	145
	B	70	90	–
D8 H7	14	19	32	38
D9	50	70	110	114,3
D10	M5	M5	M8	M8
L1	65	90	115	142
L2	15,5	16,5	16,5	16,5
L3	30	35	40	50
L4	2	2	2	2
L5	30	35	40	50
L6	7	10	16	22
L8	48	61,5	74	87,5
L9	50	63,5	76	89,5
L10	27	36	44	55
L11	62,5	78	97,5	120
L12	18	18	42	46
L13	4	4	7	7
L14	35,5	42,5	73	84
L15	11,5	11,5	27,5	33,5
L16	60	90	130	180
L17	80,5	96	139,5	166
L18	113	141	197	237
B P9	5	6	6	10
H	15,3	20,8	24,8	35,3

- Note) 1. Specifications are subject to change without notice for improvement.
 2. The values of D6 through D9 and L12 through L18 from the above table may vary in accordance with the type of the servo motor.
 3. CAD files are available for download from our website at www.spg.co.kr.



Spiral Bevel Gearboxes SBT-P Series (Motor Mount Type)

- ▶Applying helical gear for planetary gearheads
- ▶Compact size
- ▶High precision, High durability
- ▶High efficiency
- ▶Simple mounting for various servo and stepping motors

Specifications

Description	Unit	Stage	Ratio ⁽¹⁾	Model No.				
				SBT050PT SBT050PL	SBT065PT SBT065PL SBT065PH	SBT090PT SBT090PL SBT090PH	SBT115PT SBT115PL SBT115PH	SBT142PT SBT142PL SBT142PH
Nominal Output Torque T_{2N} ⁽²⁾	Nm	2	3~10	6	16	34	54	100
Max. Acceleration Torque T_{2B}	Nm	2	3~10	1.5 times of Nominal Output torque				
Nominal Input speed n_1	RPM	2	3~10	3,000	3,000	3,000	3,000	2,000
Max. Input speed N_1	RPM	2	3~10	5,000	5,000	5,000	5,000	3,000
Backlash (Standard class)	arcmin	2	3~10	≤ 23			≤ 18	
Max. Overhang Load Input F_r max ⁽²⁾	N	2	3~10	88	110	200	600	800
Max. Overhang Load Output F_a max ⁽²⁾	N	2	3~10	44	55	100	300	400
Service Life ⁽²⁾	hr	2	3~10	20,000				
Noise Level ⁽³⁾	dB(A)	2	3~10	68	70	74	76	77
Weight	kg	2	3~10	1.2	2.5	7	15	25
Moment of Inertia ⁽⁴⁾	kg cm ²	2	3~10	0.07	0.38	2.13	6.33	24.7
Operating Temp. ⁽⁵⁾	°C	2	3~10	-10 ~ +90 °C				
Lubrication		2	3~10	High temperature & Extreme pressure Lubricant				
Mounting		2	3~10	All directions				
Efficiency η	%	2	3~10	≥ 93				

(1) Value for this specification table indicates that service factor is 1 at uniformed load for nominal input speed. Make sure to use it within the allowable limit from specification table. In case of data for Torque, Overhang Load and Thrust Load in continuous operation ($S_1 \approx 10,000$ hrs), allowable load location for shaft is the central part of the shaft based on 1-Output Shaft. In case of 2-Output Shaft, it's required to take into account sum of load given to each shaft and its value should be within range of above the data.

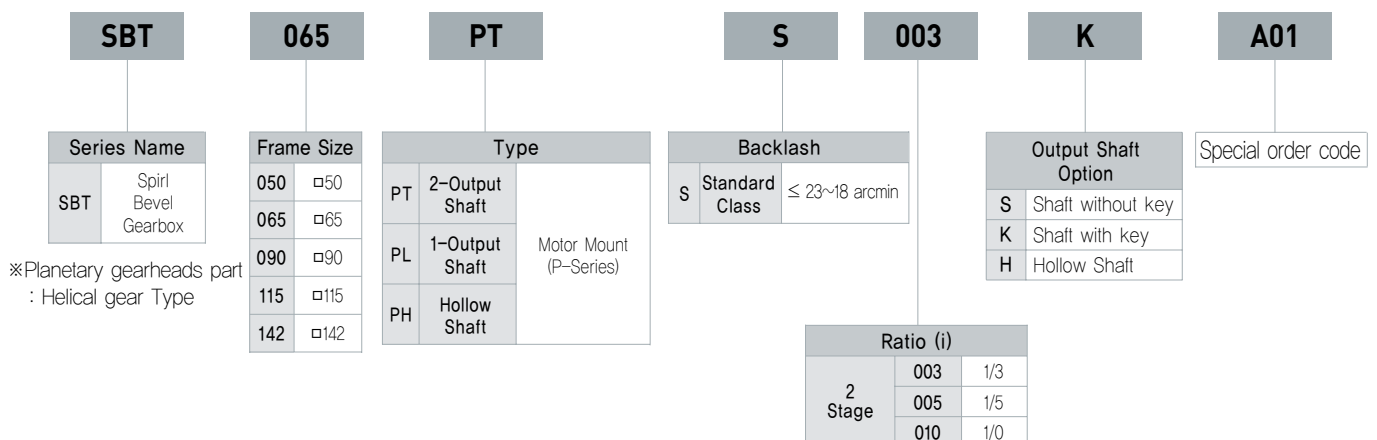
(2) Noise should be measured at 1 m of distance from mounting surface of reducer while a reducer is running at 1,500 rpm without load (Noise 21dB(A))

(3) Based on Input Shaft and representative model (T Type).

(4) Make sure to use reducer at temperature range of -10°C ~ +40°C and within its surface temperature of 90°C.

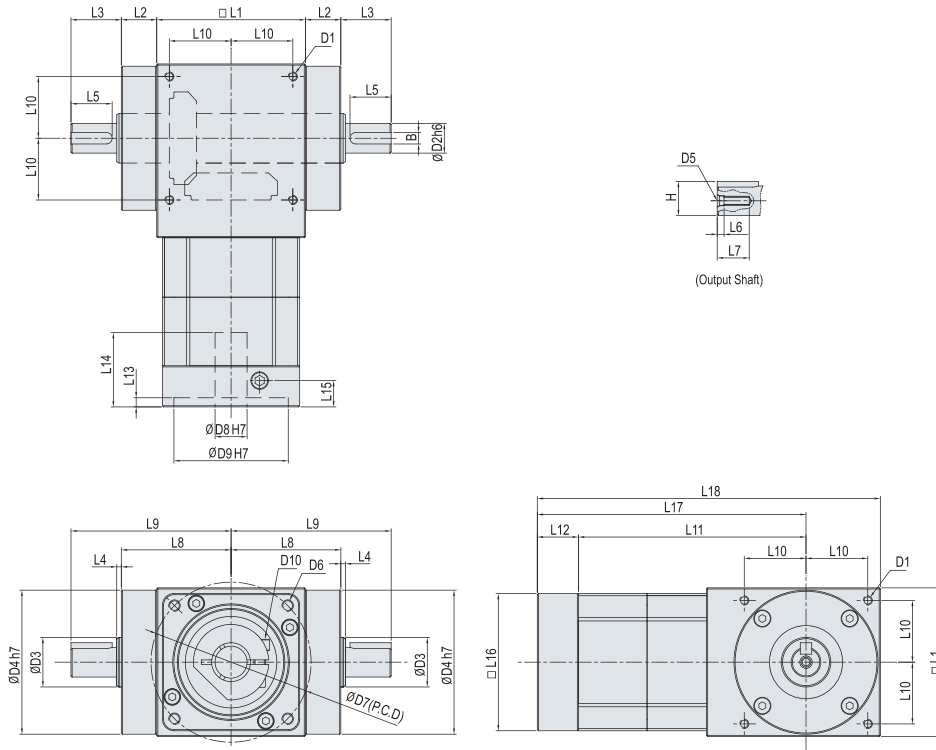
※ Above data in the specification indicates the representative data and the specification may be changed to improve performance without prior notification.

Coding System



Spiral Bevel Gearboxes

■ Dimensions (SBT 050/065/090/115/142PT) 2-Stage, Ratio $i = 3\sim 10$



(Unit : mm)

Dimension \ Model	SBT050PT	SBT065PT	SBT090PT	SBT115PT	SBT142PT
D1	M4 DP9	M4 DP9	M6 DP12	M8 DP16	M10 DP18
D2 h6	12	13	18	22	32
D3	14,7	21,7	31,8	34,8	49,8
D4 h7	48	63	88	108	135
D5	4,3	4,3	5,5	8,5	12,5
D6	A	M4 DP8	M5 DP12	M6 DP12	M8 DP20
	B	M3 DP6	M4 DP12	M5 DP12	-
D7	A	46	70	90	145
	B	45	70	90	-
D8 H7	8	14	19	32	38
D9 H7	30	50	70	110	114,3
D10	M3	M5	M5	M8	M8
L1	50	65	90	115	142
L2	11,5	15,5	16,5	16,5	16,5
L3	20	22	37	42	52
L4	1	2	2	2	2
L5	16	18	32	36	47
L6	3	3	4	6	10
L7	M4 DP13	M4 DP14	M5 DP17	M8 DP25	M12 DP28
L8	36,5	48	61,5	74	87,5
L9	56,5	70	98,5	116	139,5
L10	20	27	36	44	55
L11	84,5	99,5	138	175,5	215,5
L12	13,5	18	18	42	42,5
L13	3,5	4	4	7	7
L14	27	32,5	42,5	73	84
L15	8,25	11,5	11,5	27,5	33,5
L16	42	60	90	130	180
L17	98	117,5	156	217,5	258
L18	123	150	201	275	329
B h9	4	5	6	6	10
H	13,5	15	20,5	24,5	35

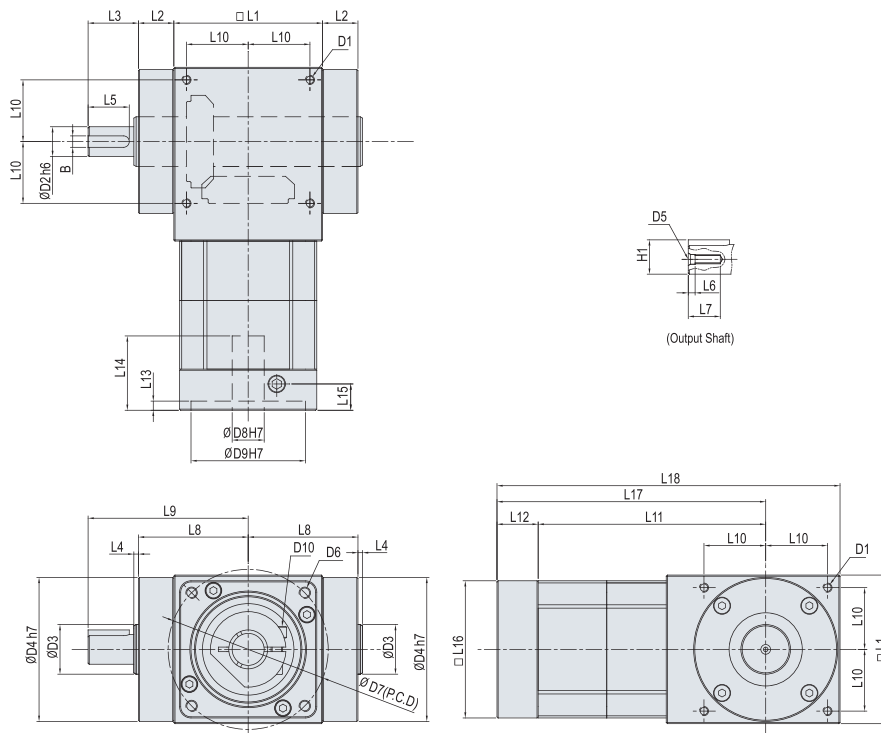
Note) 1. Specifications are subject to change without notice for improvement.

2. The values of D6 through D9 and L12 through L18 from the above table may vary in accordance with the type of the servo motor.

3. CAD files are available for download from our website at www.spg.co.kr.

SBT-P Series

■ Dimensions (SBT 050/065/090/115/142PL) 2-Stage, Ratio $i = 3 \sim 10$



(Unit : mm)

Dimension \ Model	SBT050PL	SBT065PL	SBT090PL	SBT115PL	SBT142PL
D1	M4 DP9	M4 DP9	M6 DP12	M8 DP16	M10 DP18
D2 h6	12	13	18	22	32
D3	14,7	21,7	31,8	34,8	49,8
D4 h7	48	63	88	108	135
D5	4,3	4,3	5,5	8,5	12,5
D6	A	M4 DP8	M5 DP12	M6 DP12	M8 DP20
	B	M3 DP6	M4 DP12	M5 DP12	M12 DP21
D7	A	46	70	90	145
	B	45	70	90	—
D8 H7	8	14	19	32	38
D9 H7	30	50	70	110	114,3
D10	M3	M5	M5	M8	M8
L1	50	65	90	115	142
L2	11,5	15,5	16,5	16,5	16,5
L3	20	22	37	42	52
L4	1	2	2	2	2
L5	16	18	32	36	47
L6	3	3	4	6	10
L7	M4 DP13	M4 DP14	M5 DP17	M8 DP25	M12 DP28
L8	36,5	48	61,5	74	87,5
L9	56,5	70	98,5	116	139,5
L10	20	27	36	44	55
L11	84,5	99,5	138	175,5	215,5
L12	13,5	18	18	42	42,5
L13	3,5	4	4	7	7
L14	27	32,5	42,5	73	84
L15	8,25	11,5	11,5	27,5	33,5
L16	42	60	90	130	180
L17	98	117,5	156	217,5	258
L18	123	150	201	275	329
B h9	4	5	6	6	10
H	13,5	15	20,5	24,5	35

Note) 1. Specifications are subject to change without notice for improvement.

2. The values of D6 through D9 and L12 through L18 from the above table may vary in accordance with the type of the servo motor.

3. CAD files are available for download from our website at www.spg.co.kr.