

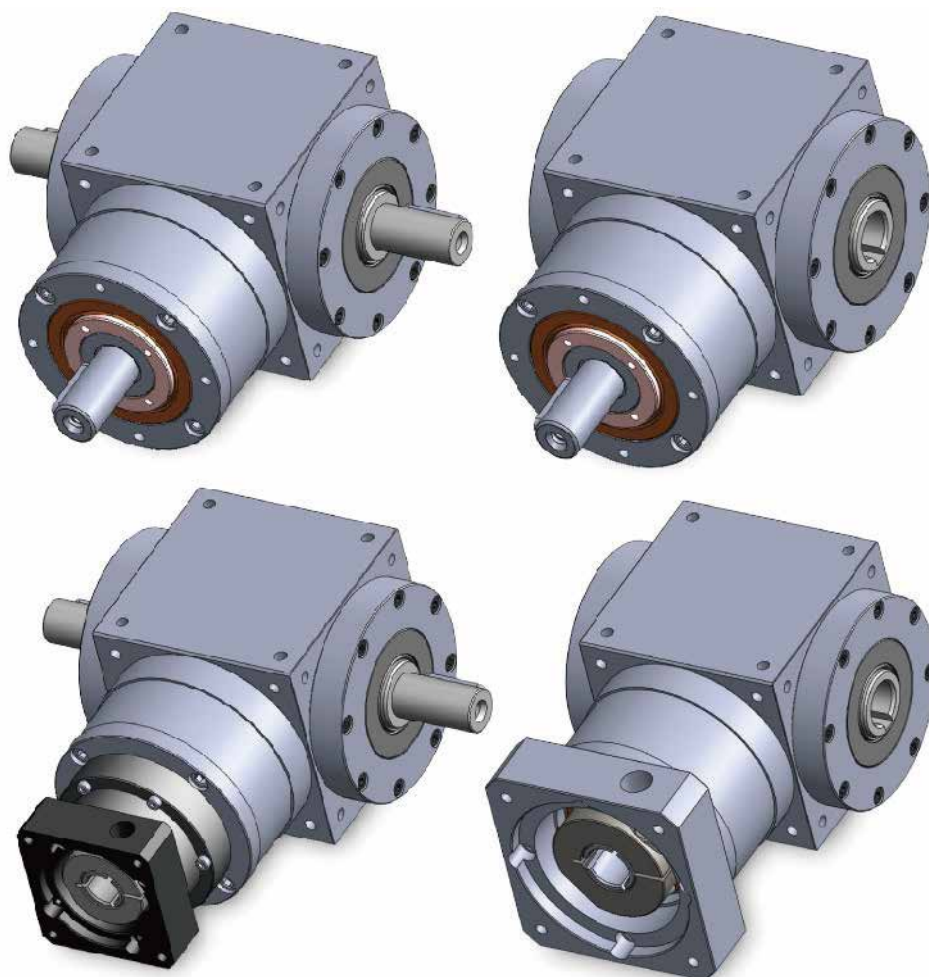
PT

Sesame servo spiral bevel speed reducers (gearboxes) are ideal for use in applications that require high dynamic motion control. Compact and rigid gearbox design ensure good performance with space and weight efficient at the same time. Low noise, low vibration, lubricated for life and IP65 sealing benefit virtually maintenance-free operation for 20,000 hours. They are provided in seven sizes with flange or shaft inputs/outputs. Servo motor input speed up to 8,000 rpm. Multi flange or shaft outputs in standard backlash less than 6 arc-minutes. Maximum gear ratio 500:1, maximum frame size 210 mm. A wide range of motor adapter are available for installation to virtually all servo motors.

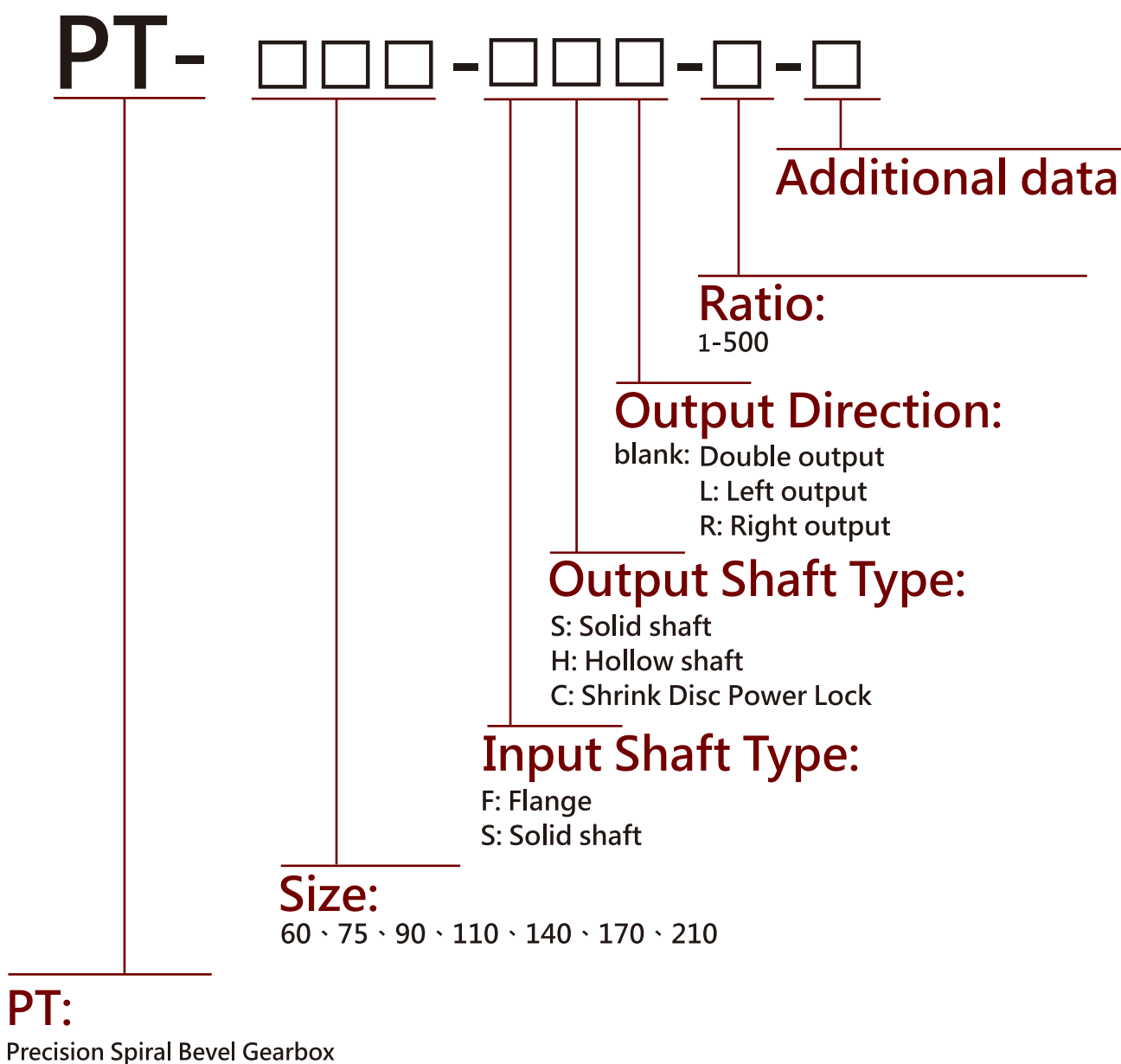


Features

- ▶ Compact and rigid design ensure performance within light and small gearbox size.
- ▶ High rigidity, low noise, low vibration.
- ▶ 7 Frame sizes, 22 ratios, 3 stages, multi configurations.
- ▶ Unique heat treatment alloy steel gears.
- ▶ High axial and radial load capacity.
- ▶ One-piece gearbox for high precision and high torque requirements.
- ▶ Lubricated for life and IP65 sealing.
- ▶ High operating efficiency more than 98%.



CODING SYSTEM

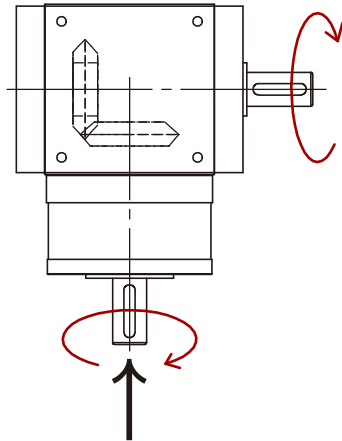


Note:

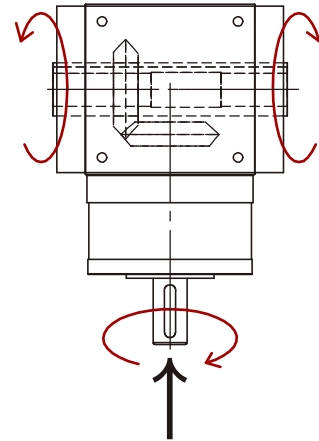
The additional data include mounting position, input speed, input torque and options. Please indicate the input shaft diameter, flange version and flange dimension when you order your SESAME servo gearbox.

PT Shaft Type Series Rotating Direction Drawing

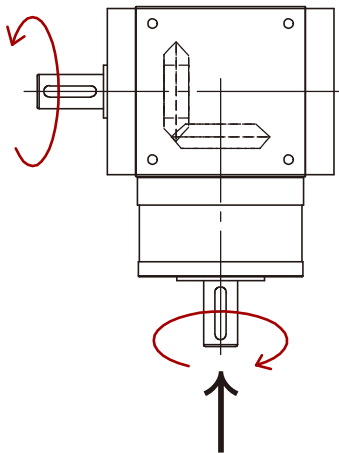
PT-SSR



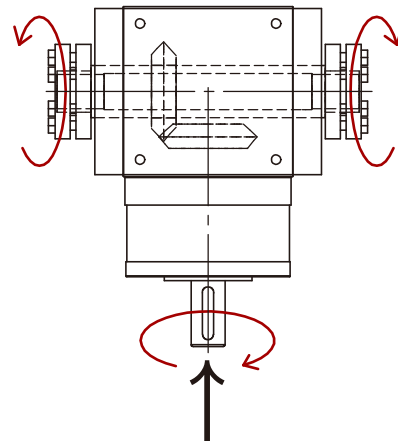
PT-SH



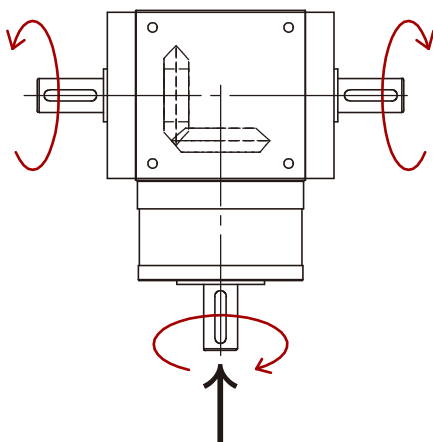
PT-SSL



PT-SC



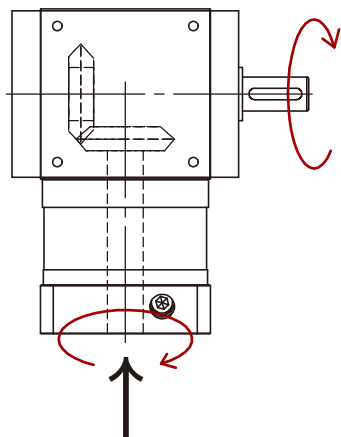
PT-SS



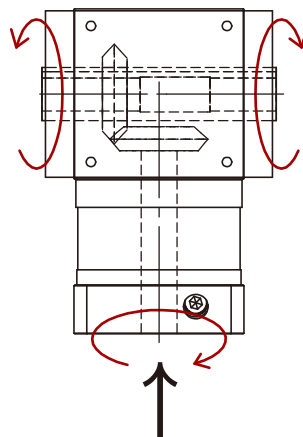
※Specification subject to change without notice

PT Flange Type Series Rotating Direction Drawing

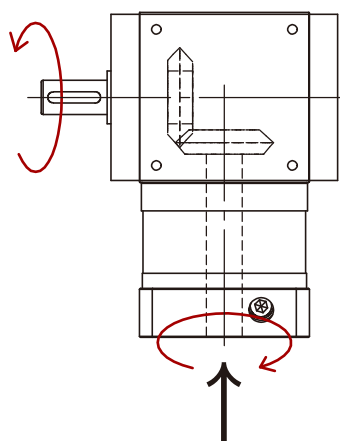
PT-FSR



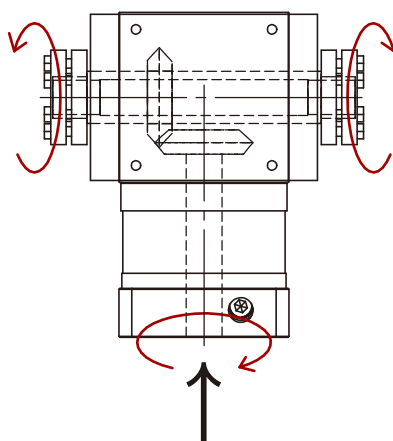
PT-FH



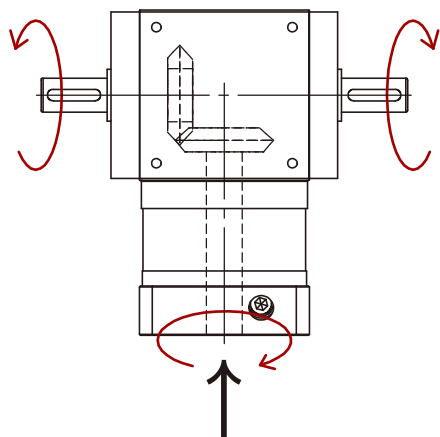
PT-FSL



PT-FC

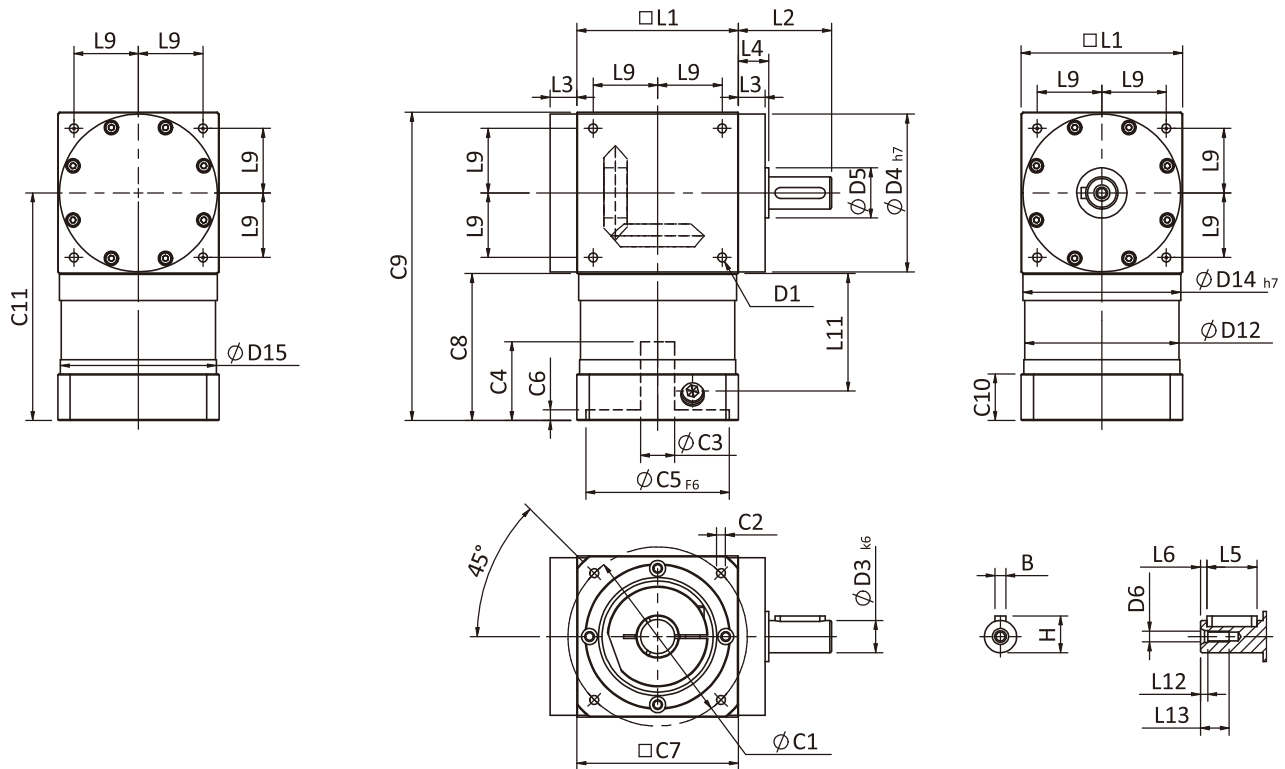


PT-FS



※Specification subject to change without notice

PT-FSR Single Stage Dimensions



Specifications

Unit:mm

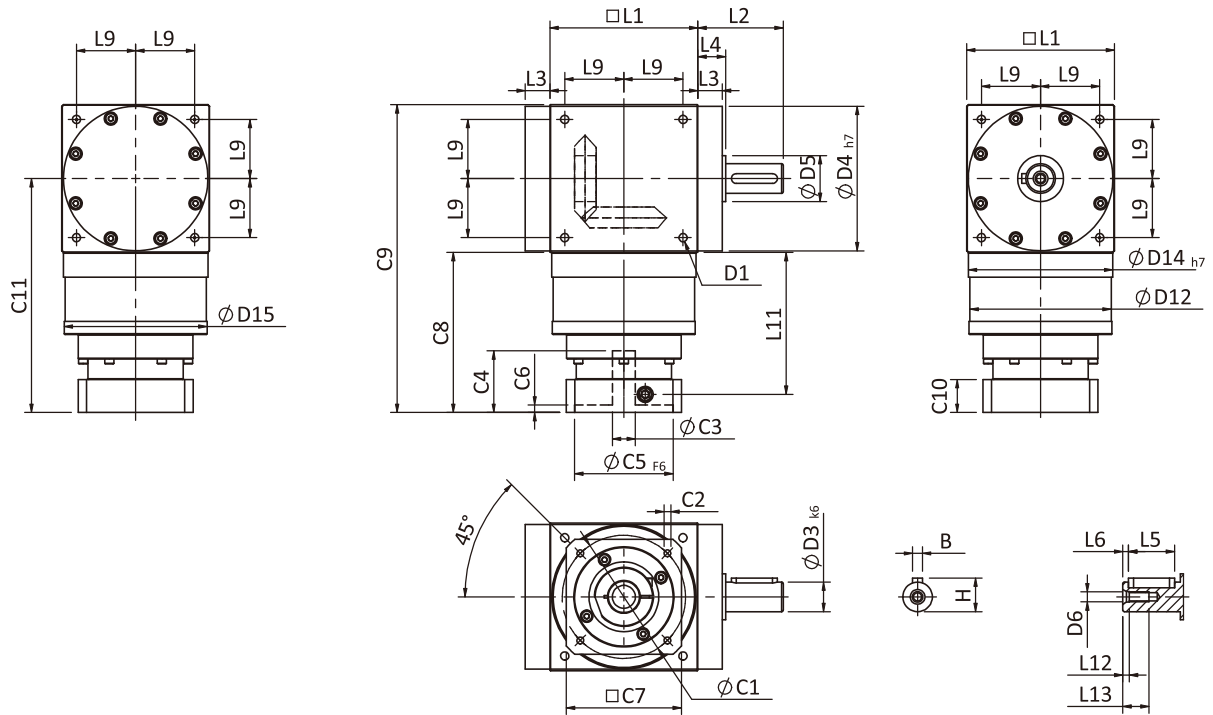
Dimensions	PT60-FSR	PT75-FSR	PT90-FSR	PT110-FSR	PT140-FSR	PT170-FSR	PT210-FSR
D1	24-M5x0.8P	24-M6x1.0P	24-M6x1.0P	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D3 _{k6}	13	16	18	22	32	40	50
D4 _{h7}	60	73	88	108	135	165	205
D5	20.6	21.5	27.5	32.3	46.4	54.4	74
D6	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M12x1.75P	M16x2.0P	M16x2.0P
D12	59.8	72	86	106	104	128	160
D14 _{h7}	60.2	73	88	108	135	165	205
D15	41.8	72.9	87	107	103	127	158
L1	60.8	75	90	110	140	170	210
L2	34.5	46.5	52	57	67	77	97
L3	13	14.5	15	15	15	15	20
L4	15	16.5	17	17	17	17	22
L5	16	25	28	32	45	50	70
L6	2	2.5	3.5	4	2.5	5	2.5
L9	24.75	30	36	44	55	67	85
L11	38.2	57.7	65.5	77	86.4	94.1	127
L12	4	4	4	4.5	6	6	6
L13	12	14	16	20.5	30	36	38
C1 ¹	46	66.67	100	100	130	165	200
C2 ¹	M4x0.7P	M4x0.7P	M6x1.0P	M6x1.0P	M8x1.25P	M10x1.5P	M12x1.75P
C3 ¹	≤11/≤14/≤19	≤14/≤19	≤19/≤24	≤24	≤32	≤38	≤42/≤48
C4 ¹	32	38	44	47	56.1	67	77
C5 ¹ _{F6}	30	38.15	80	80	110	130	114.3
C6 ¹	4	4	6	5	5	6	6
C7 ¹	42.6	60	90	90	115	140	180
C8 ¹	47.2	67.7	82	93	106	118	152
C9 ¹	108	142.7	172	203	246	288	362
C10 ¹	18.5	20	26	23	27	35	40
C11 ¹	77.6	105.2	127	148	176	203	257
B	5	5	6	6	10	12	14
H	15	18	20.5	24.5	35	43	53.5

*1. C1~C11 are motor specific dimensions (metric std shown), size may vary according to motor flange.

★ Specification subject to change without notice.



PT-FSR Double Stage Dimensions



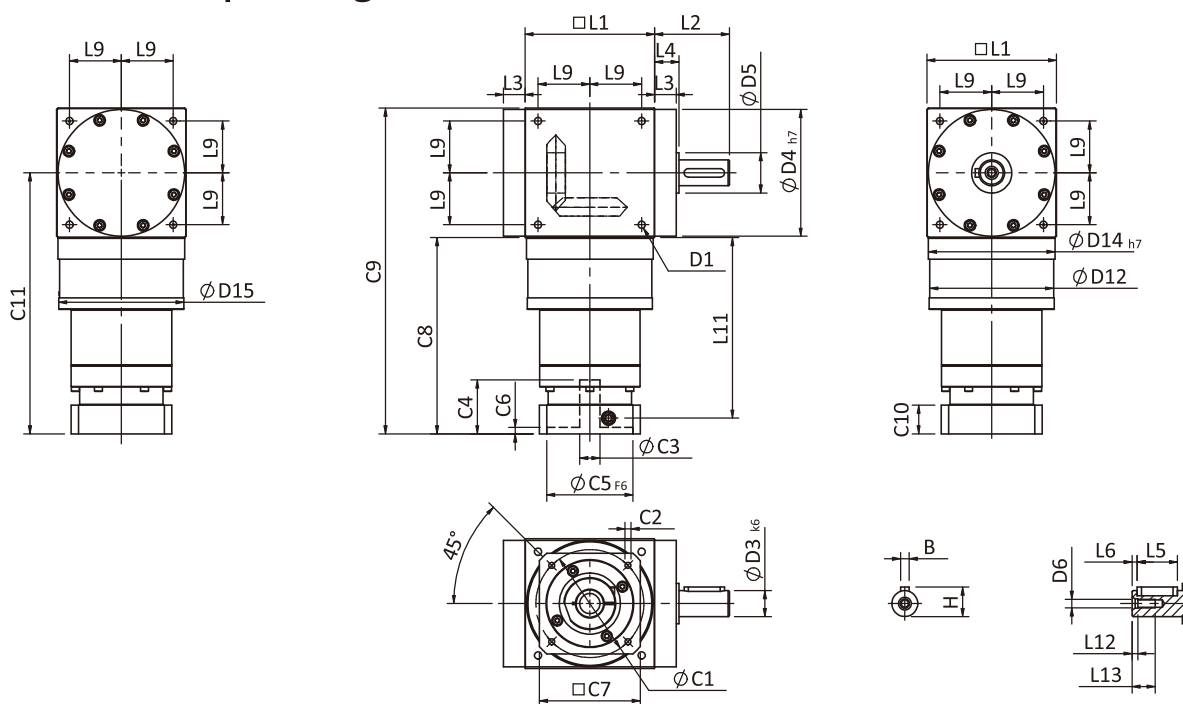
Specifications

Unit:mm

Dimensions	PT60-FSR	PT75-FSR	PT90-FSR	PT110-FSR	PT140-FSR	PT170-FSR	PT210-FSR
D1	24-M5x0.8P	24-M6x1.0P	24-M6x1.0P	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D3k6	13	16	18	22	32	40	50
D4h7	60	73	88	108	135	165	205
D5	20.6	21.5	27.5	32.3	46.4	54.4	74
D6	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M12x1.75P	M16x2.0P	M16x2.0P
D12	59.8	72	86	106	104	128	160
D14h7	60.2	73	88	108	135	165	205
D15	60	72.9	87	107	103	127	158
L1	60.8	75	90	110	140	170	210
L2	34.5	46.5	52	57	67	77	97
L3	13	14.5	15	15	15	15	20
L4	15	16.5	17	17	17	17	22
L5	16	25	28	32	45	50	70
L6	2	2.5	3.5	4	2.5	5	2.5
L9	24.75	30	36	44	55	67	85
L11	63.7	74.2	86.4	104.8	120.8	114.8	192.8
L12	4	4	4	4.5	6	6	6
L13	12	14	16	20.5	30	36	38
C1 ¹	46	63	70	90	90	90	165
C2 ¹	M4x0.7P	M4x0.7P	M5x0.8P	M6x1.0P	M6x1.0P	M6x1.0P	M10x1.5P
C3 ¹	≤8/≤11	≤8/≤11	≤14/≤19	≤24	≤24	≤24	≤35/≤38
C4 ¹	28.6	28.6	37.5	48.2	48.2	48.2	66.7
C5 ¹ _{F6}	30	40	50	70	70	70	130
C6 ¹	4.1	4.1	4.5	6	6	6	5.5
C7 ¹	42	60	60	90	90	90	140
C8 ¹	73.3	83.8	97.4	119.5	135.5	129.5	210
C9 ¹	134.1	158.8	187.4	229.5	275.5	299.5	420
C10 ¹	17	17	20	26	26	26	35
C11 ¹	103.7	121.3	142.4	174.5	205.5	214.5	315
B	5	5	6	6	10	12	14
H	15	18	20.5	24.5	35	43	53.5

*1. C1~C11 are motor specific dimensions (metric std shown), size may vary according to motor flange.

★ Specification subject to change without notice.



Specifications

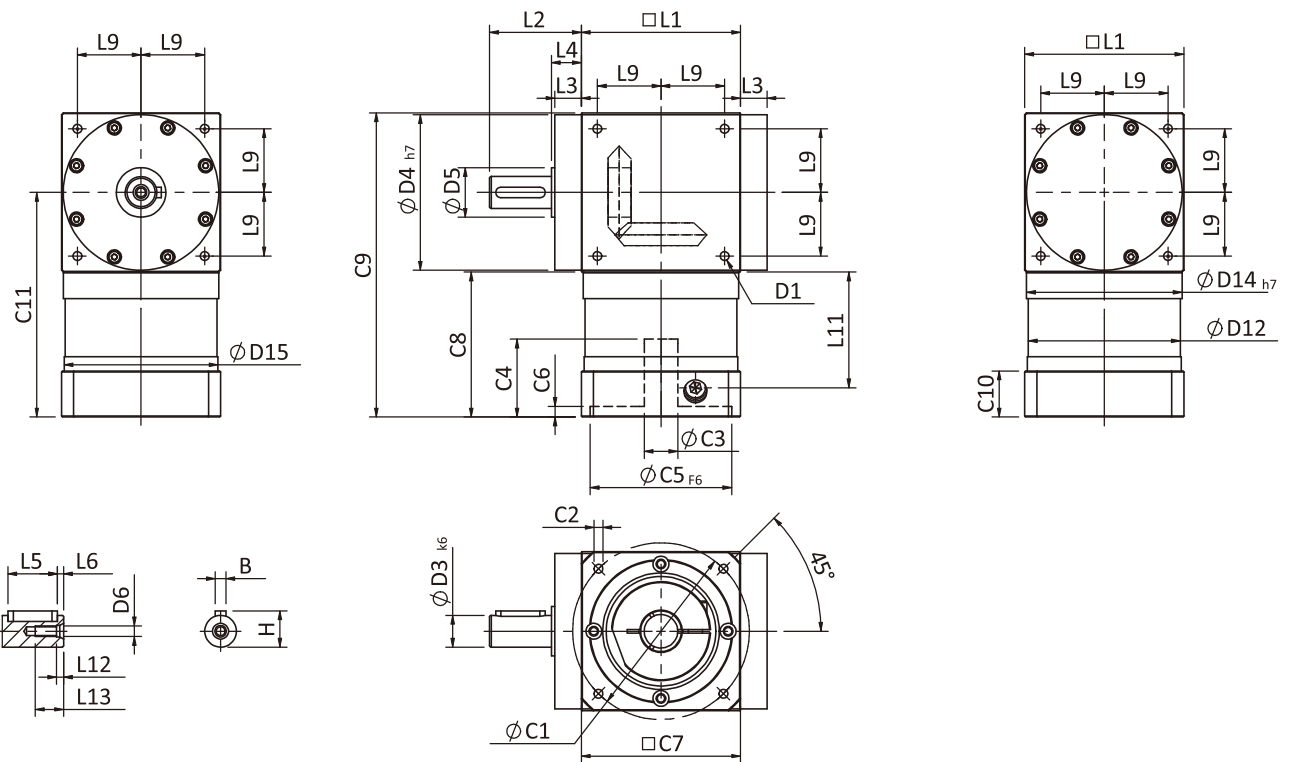
Unit:mm

Dimensions	PT110-FSR	PT140-FSR	PT170-FSR	PT210-FSR
D1	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D3 _{k6}	22	32	40	50
D4 _{h7}	108	135	165	205
D5	32.3	46.4	54.4	74
D6	M8x1.25P	M12x1.75P	M16x2.0P	M16x2.0P
D12	106	104	128	160
D14 _{h7}	108	135	165	205
D15	107	103	127	158
L1	110	140	170	210
L2	57	67	77	97
L3	15	15	15	20
L4	17	17	17	22
L5	32	45	50	70
L6	4	2.5	5	2.5
L9	44	55	67	85
L11	131	147	143.7	223.4
L12	4.5	6	6	6
L13	20.5	30	36	38
C1 ¹	70	70	90	130
C2 ¹	M5x0.8P	M5x0.8P	M6x1.0P	M8x1.25P
C3 ¹	≤14/≤19	≤14/≤19	≤19	≤24/≤32/≤38
C4 ¹	37.5	37.5	41.6	51.1
C5 ¹ F ₆	50	50	70	110
C6 ¹	4.5	4.5	6	6
C7 ¹	60	60	80	115
C8 ¹	142	158	157.8	239.5
C9 ¹	252	298	327.8	449.5
C10 ¹	20	20	25	30
C11 ¹	197	228	242.8	344.5
B	6	10	12	14
H	24.5	35	43	53.5

*1. C1~C11 are motor specific dimensions (metric std shown), sizse may vary according to motor flange.

★ Specification subject to change without notice.

PT-FSL Single Stage Dimensions



Specifications

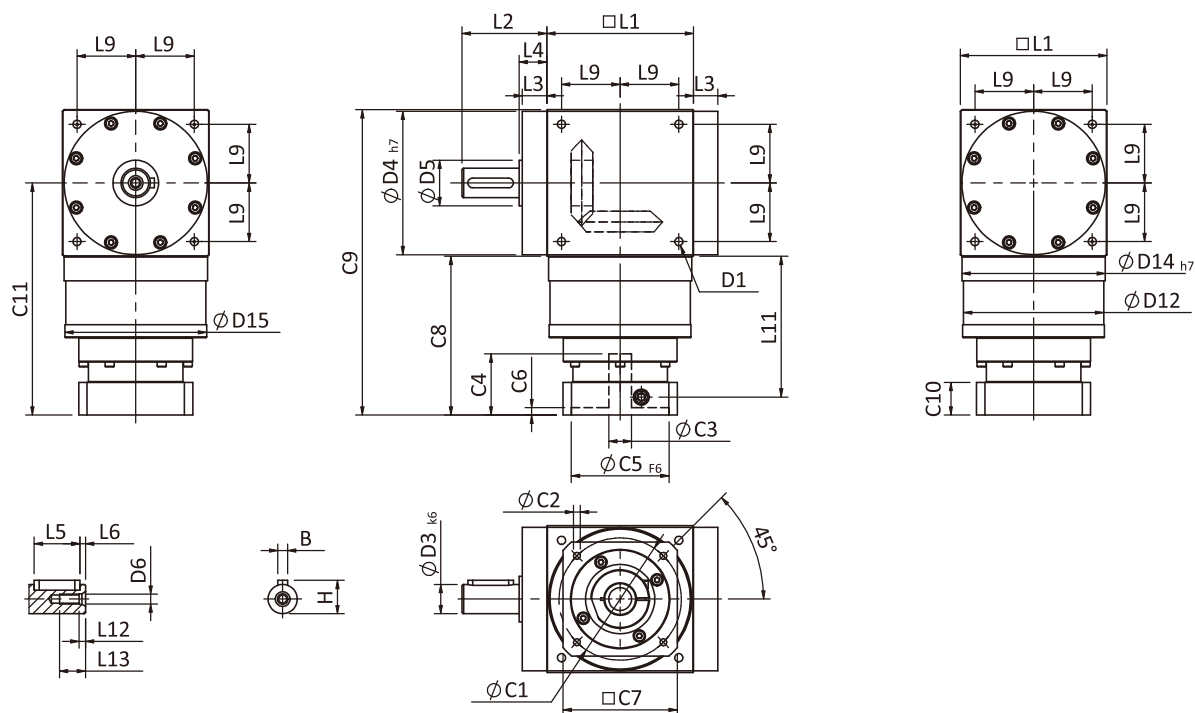
Unit:mm

Dimensions	PT60-FSL	PT75-FSL	PT90-FSL	PT110-FSL	PT140-FSL	PT170-FSL	PT210-FSL
D1	24-M5x0.8P	24-M6x1.0P	24-M6x1.0P	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D3 _{k6}	13	16	18	22	32	40	50
D4 _{h7}	60	73	88	108	135	165	205
D5	20.6	21.5	27.5	32.3	46.4	54.4	74
D6	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M12x1.75P	M16x2.0P	M16x2.0P
D12	59.8	72	86	106	104	128	160
D14 _{h7}	60.2	73	88	108	135	165	205
D15	41.8	72.9	87	107	103	127	158
L1	60.8	75	90	110	140	170	210
L2	34.5	46.5	52	57	67	77	97
L3	13	14.5	15	15	15	15	20
L4	15	16.5	17	17	17	17	22
L5	16	25	28	32	45	50	70
L6	2	2.5	3.5	4	2.5	5	2.5
L9	24.75	30	36	44	55	67	85
L11	38.2	57.7	65.5	77	86.4	94.1	127
L12	4	4	4	4.5	6	6	6
L13	12	14	16	20.5	30	36	38
C1 ¹	46	66.67	100	100	130	165	200
C2 ¹	M4x0.7P	M4x0.7P	M6x1.0P	M6x1.0P	M8x1.25P	M10x1.5P	M12x1.75P
C3 ¹	≤11/≤14/≤19	≤14/≤19	≤19/≤24	≤24	≤32	≤38	≤42/≤48
C4 ¹	32	38	44	47	56.1	67	77
C5 ¹ _{F6}	30	38.15	80	80	110	130	114.3
C6 ¹	4	4	6	5	5	6	6
C7 ¹	42.6	60	90	90	115	140	180
C8 ¹	47.2	67.7	82	93	106	118	152
C9 ¹	108	142.7	172	203	246	288	362
C10 ¹	18.5	20	26	23	27	35	40
C11 ¹	77.6	105.2	127	148	176	203	257
B	5	5	6	6	10	12	14
H	15	18	20.5	24.5	35	43	53.5

*1. C1~C11 are motor specific dimensions (metric std shown), sizse may vary according to motor flange.

★ Specification subject to change without notice.

PT-FSL Double Stage Dimensions



Specifications

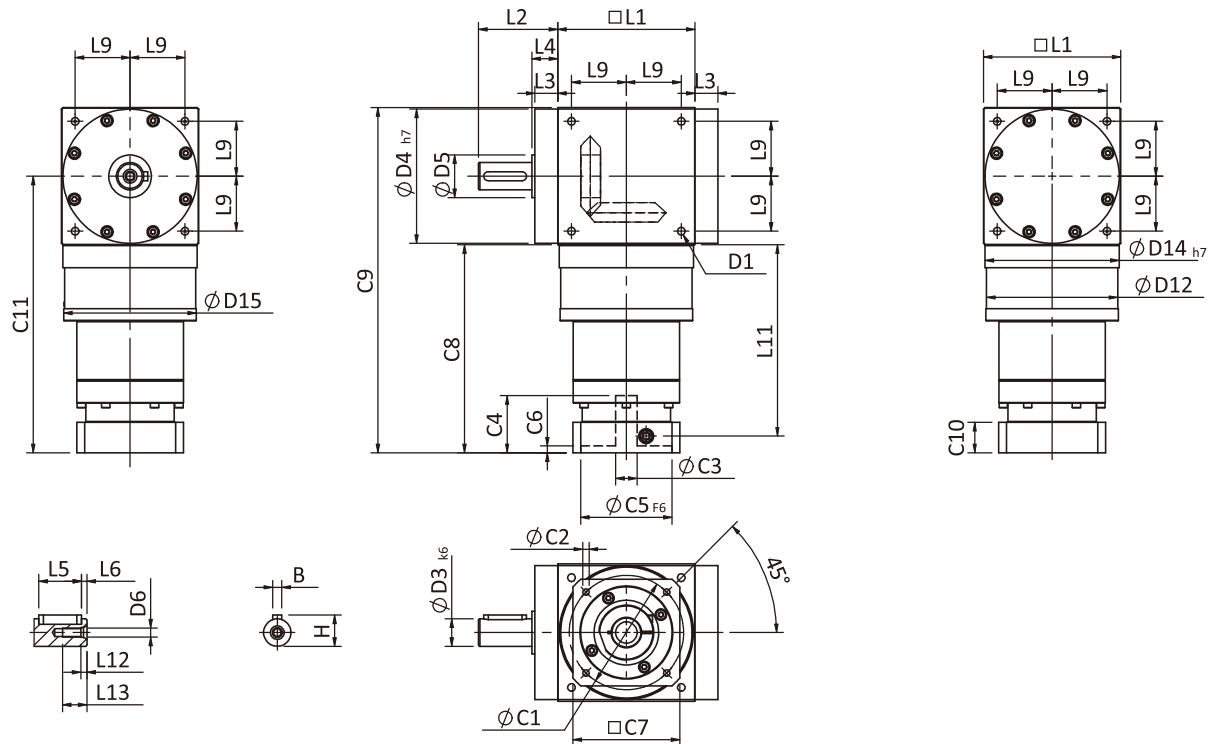
Unit:mm

Dimensions	PT60-FSL	PT75-FSL	PT90-FSL	PT110-FSL	PT140-FSL	PT170-FSL	PT210-FSL
D1	24-M5x0.8P	24-M6x1.0P	24-M6x1.0P	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D3 _{k6}	13	16	18	22	32	40	50
D4 _{h7}	60	73	88	108	135	165	205
D5	20.6	21.5	27.5	32.3	46.4	54.4	74
D6	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M12x1.75P	M16x2.0P	M16x2.0P
D12	59.8	72	86	106	104	128	160
D14 _{h7}	60.2	73	88	108	135	165	205
D15	60	72.9	87	107	103	127	158
L1	60.8	75	90	110	140	170	210
L2	34.5	46.5	52	57	67	77	97
L3	13	14.5	15	15	15	15	20
L4	15	16.5	17	17	17	17	22
L5	16	25	28	32	45	50	70
L6	2	2.5	3.5	4	2.5	5	2.5
L9	24.75	30	36	44	55	67	85
L11	63.7	74.2	86.4	104.8	120.8	114.8	192.8
L12	4	4	4	4.5	6	6	6
L13	12	14	16	20.5	30	36	38
C1 ¹	46	63	70	90	90	90	165
C2 ¹	M4x0.7P	M4x0.7P	M5x0.8P	M6x1.0P	M6x1.0P	M6x1.0P	M10x1.5P
C3 ¹	≤8/≤11	≤8/≤11	≤14/≤19	≤24	≤24	≤24	≤35/≤38
C4 ¹	28.6	28.6	37.5	48.2	48.2	48.2	66.7
C5 _{F6} ¹	30	40	50	70	70	70	130
C6 ¹	4.1	4.1	4.5	6	6	6	5.5
C7 ¹	42	60	60	90	90	90	140
C8 ¹	73.3	83.8	97.4	119.5	135.5	129.5	210
C9 ¹	134.1	158.8	187.4	229.5	275.5	299.5	420
C10 ¹	17	17	20	26	26	26	35
C11 ¹	103.7	121.3	142.4	174.5	205.5	214.5	315
B	5	5	6	6	10	12	14
H	15	18	20.5	24.5	35	43	53.5

*1. C1~C11 are motor specific dimensions (metric std shown), size may vary according to motor flange.

★ Specification subject to change without notice.

PT-FSL Triple Stage Dimensions



Specifications

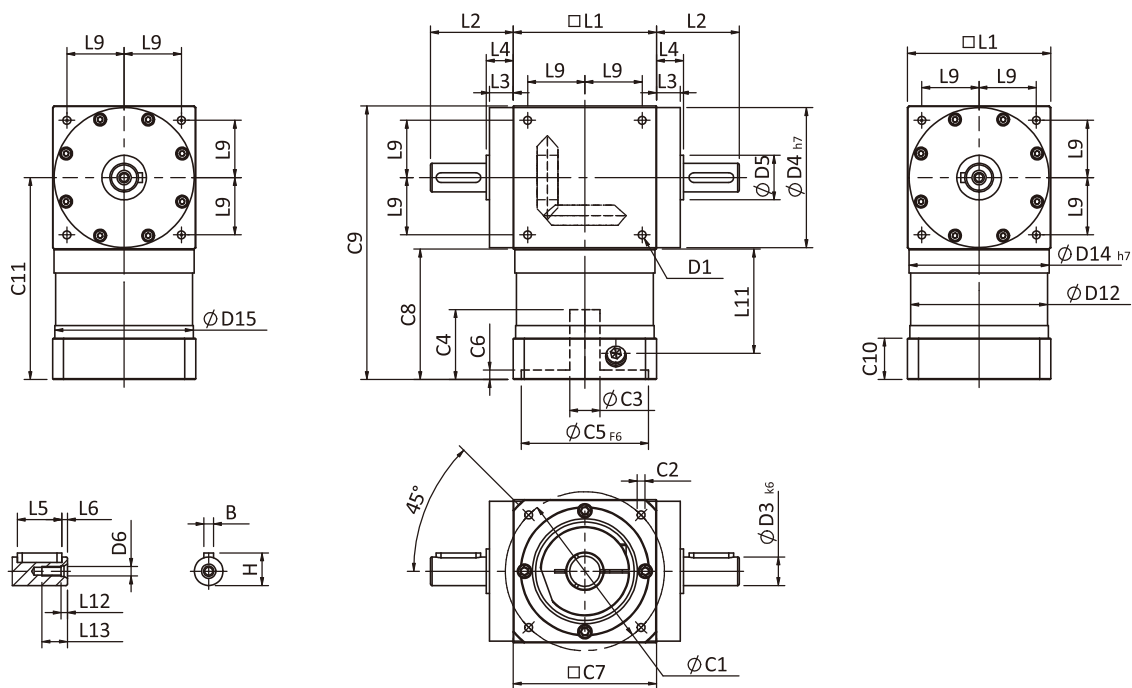
Unit:mm

Dimensions	PT110-FSL	PT140-FSL	PT170-FSL	PT210-FSL
D1	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D3k6	22	32	40	50
D4h7	108	135	165	205
D5	32.3	46.4	54.4	74
D6	M8x1.25P	M12x1.75P	M16x2.0P	M16x2.0P
D12	106	104	128	160
D14h7	108	135	165	205
D15	107	103	127	158
L1	110	140	170	210
L2	57	67	77	97
L3	15	15	15	20
L4	17	17	17	22
L5	32	45	50	70
L6	4	2.5	5	2.5
L9	44	55	67	85
L11	131	147	143.7	223.4
L12	4.5	6	6	6
L13	20.5	30	36	38
C1 ¹	70	70	90	130
C2 ¹	M5x0.8P	M5x0.8P	M6x1.0P	M8x1.25P
C3 ¹	≤14/≤19	≤14/≤19	≤19	≤24/≤32/≤38
C4 ¹	37.5	37.5	41.6	51.1
C5 ¹ F6	50	50	70	110
C6 ¹	4.5	4.5	6	6
C7 ¹	60	60	80	115
C8 ¹	142	158	157.8	239.5
C9 ¹	252	298	327.8	449.5
C10 ¹	20	20	25	30
C11 ¹	197	228	242.8	344.5
B	6	10	12	14
H	24.5	35	43	53.5

*1. C1~C11 are motor specific dimensions (metric std shown), sizse may vary according to motor flange.

★ Specification subject to change without notice.

PT



Specifications

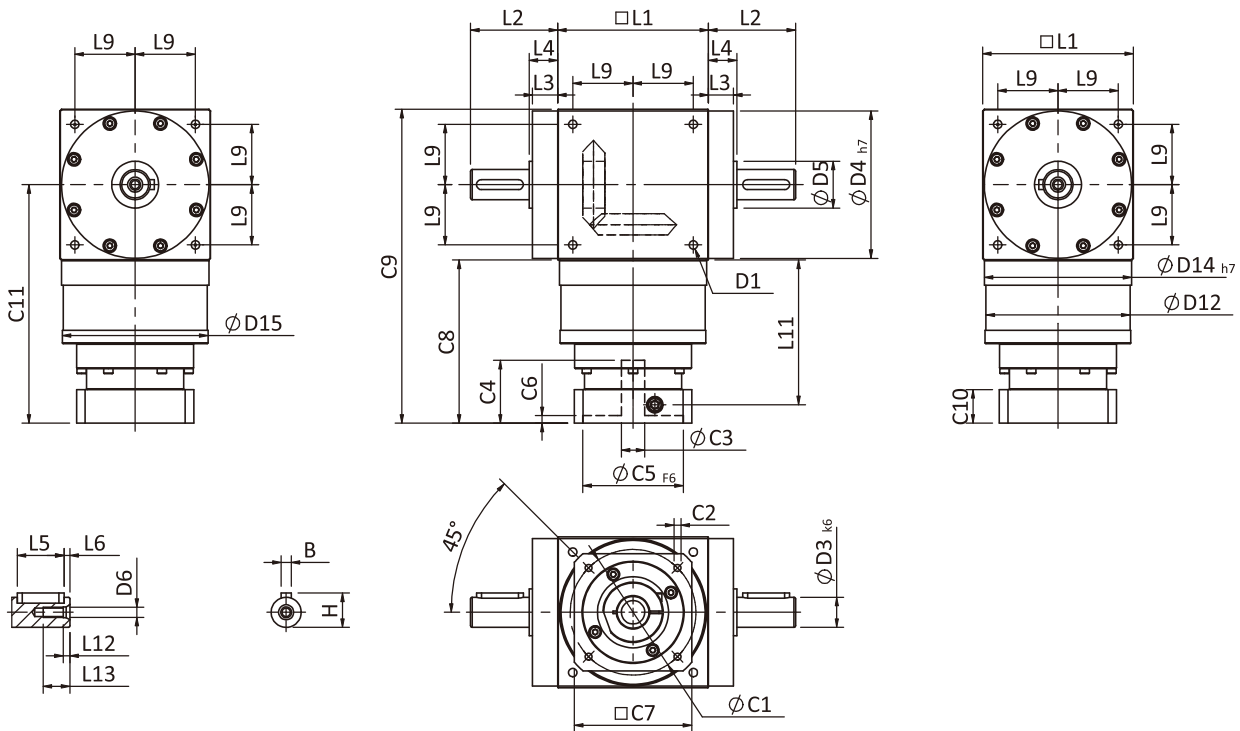
Unit:mm

Dimensions	PT60-FS	PT75-FS	PT90-FS	PT110-FS	PT140-FS	PT170-FS	PT210-FS
D1	24-M5x0.8P	24-M6x1.0P	24-M6x1.0P	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D3 _{k6}	13	16	18	22	32	40	50
D4 _{h7}	60	73	88	108	135	165	205
D5	20.6	21.5	27.5	32.3	46.4	54.4	74
D6	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M12x1.75P	M16x2.0P	M16x2.0P
D12	59.8	72	86	106	104	128	160
D14 _{h7}	60.2	73	88	108	135	165	205
D15	41.8	72.9	87	107	103	127	158
L1	60.8	75	90	110	140	170	210
L2	34.5	46.5	52	57	67	77	97
L3	13	14.5	15	15	15	15	20
L4	15	16.5	17	17	17	17	22
L5	16	25	28	32	45	50	70
L6	2	2.5	3.5	4	2.5	5	2.5
L9	24.75	30	36	44	55	67	85
L11	38.2	57.7	65.5	77	86.4	94.1	127
L12	4	4	4	4.5	6	6	6
L13	12	14	16	20.5	30	36	38
C1 ¹	46	66.67	100	100	130	165	200
C2 ¹	M4x0.7P	M4x0.7P	M6x1.0P	M6x1.0P	M8x1.25P	M10x1.5P	M12x1.75P
C3 ¹	≤11/≤14/≤19	≤14/≤19	≤19/≤24	≤24	≤32	≤38	≤42/≤48
C4 ¹	32	38	44	47	56.1	67	77
C5 ¹ _{F6}	30	38.15	80	80	110	130	114.3
C6 ¹	4	4	6	5	5	6	6
C7 ¹	42.6	60	90	90	115	140	180
C8 ¹	47.2	67.7	82	93	106	118	152
C9 ¹	108	142.7	172	203	246	288	362
C10 ¹	18.5	20	26	23	27	35	40
C11 ¹	77.6	105.2	127	148	176	203	257
B	5	5	6	6	10	12	14
H	15	18	20.5	24.5	35	43	53.5

*1. C1~C11 are motor specific dimensions (metric std shown), size may vary according to motor flange.

★ Specification subject to change without notice.

PT-FS Double Stage Dimensions



Specifications

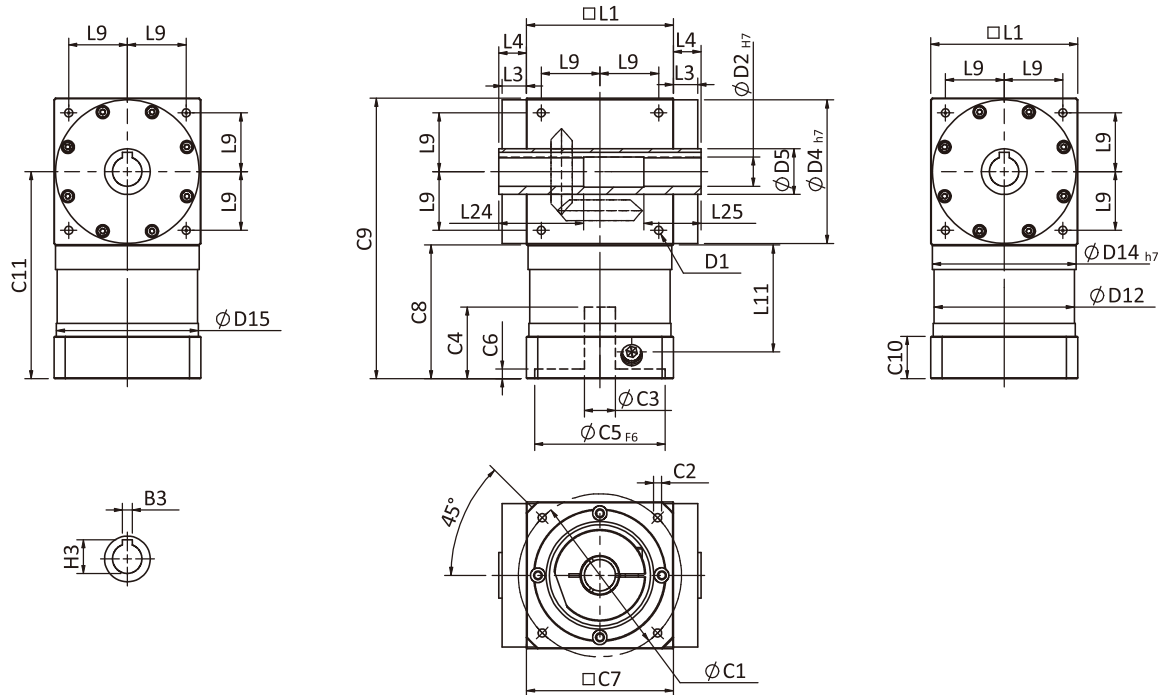
Unit:mm

Dimensions	PT60-FS	PT75-FS	PT90-FS	PT110-FS	PT140-FS	PT170-FS	PT210-FS
D1	24-M5x0.8P	24-M6x1.0P	24-M6x1.0P	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D3 _{k6}	13	16	18	22	32	40	50
D4 _{h7}	60	73	88	108	135	165	205
D5	20.6	21.5	27.5	32.3	46.4	54.4	74
D6	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M12x1.75P	M16x2.0P	M16x2.0P
D12	59.8	72	86	106	104	128	160
D14 _{h7}	60.2	73	88	108	135	165	205
D15	60	72.9	87	107	103	127	158
L1	60.8	75	90	110	140	170	210
L2	34.5	46.5	52	57	67	77	97
L3	13	14.5	15	15	15	15	20
L4	15	16.5	17	17	17	17	22
L5	16	25	28	32	45	50	70
L6	2	2.5	3.5	4	2.5	5	2.5
L9	24.75	30	36	44	55	67	85
L11	63.7	74.2	86.4	104.8	120.8	114.8	192.8
L12	4	4	4	4.5	6	6	6
L13	12	14	16	20.5	30	36	38
C1 ¹	46	63	70	90	90	90	165
C2 ¹	M4x0.7P	M4x0.7P	M5x0.8P	M6x1.0P	M6x1.0P	M6x1.0P	M10x1.5P
C3 ¹	≤8/≤11	≤8/≤11	≤14/≤19	≤24	≤24	≤24	≤35/≤38
C4 ¹	28.6	28.6	37.5	48.2	48.2	48.2	66.7
C5 ¹ _{F6}	30	40	50	70	70	70	130
C6 ¹	4.1	4.1	4.5	6	6	6	5.5
C7 ¹	42	60	60	90	90	90	140
C8 ¹	73.3	83.8	97.4	119.5	135.5	129.5	210
C9 ¹	134.1	158.8	187.4	229.5	275.5	299.5	420
C10 ¹	17	17	20	26	26	26	35
C11 ¹	103.7	121.3	142.4	174.5	205.5	214.5	315
B	5	5	6	6	10	12	14
H	15	18	20.5	24.5	35	43	53.5

*1. C1~C11 are motor specific dimensions (metric std shown), sizse may vary according to motor flange.

★ Specification subject to change without notice.

PT-FH Single Stage Dimensions



Specifications

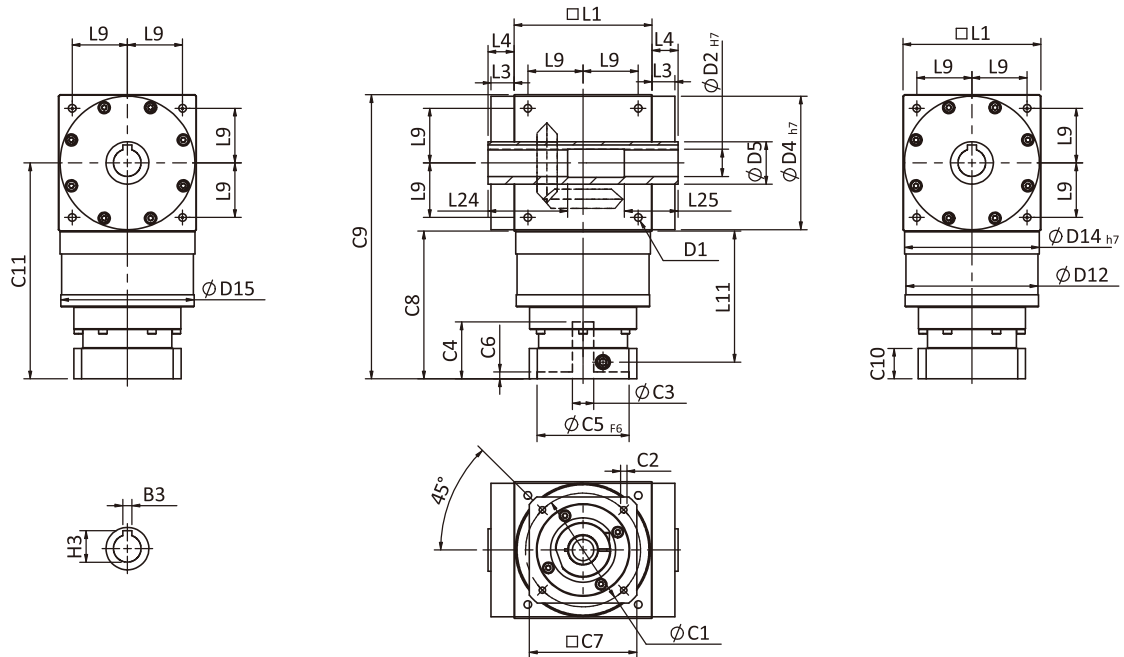
Unit:mm

Dimensions	PT60-FH	PT75-FH	PT90-FH	PT110-FH	PT140-FH	PT170-FH	PT210-FH
D1	24-M5x0.8P	24-M6x1.0P	24-M6x1.0P	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D2 _{h7}	13	14	18	22	32	40	50
D4 _{h7}	60	73	88	108	135	165	205
D5	20.6	21.5	27.5	32.3	46.4	54.4	74
D12	59.8	72	86	106	104	128	160
D14 _{h7}	60.2	73	88	108	135	165	205
D15	41.8	72.9	87	107	103	127	158
L1	60.8	75	90	110	140	170	210
L3	13	14.5	15	15	15	15	20
L4	15	16.5	17	17	17	17	22
L9	24.75	30	36	44	55	67	85
L11	38.2	57.7	65.5	77	86.4	94.1	127
L24	30	40	40	40	55	60	70
L25	30	32	35	35	50	55	65
C1 ¹	46	66.67	100	100	130	165	200
C2 ¹	M4x0.7P	M4x0.7P	M6x1.0P	M6x1.0P	M8x1.25P	M10x1.5P	M12x1.75P
C3 ¹	≤11/≤14/≤19	≤14/≤19	≤19/≤24	≤24	≤32	≤38	≤42/≤48
C4 ¹	32	38	44	47	56.1	67	77
C5 ¹ _{F6}	30	38.15	80	80	110	130	114.3
C6 ¹	4	4	6	5	5	6	6
C7 ¹	42.6	60	90	90	115	140	180
C8 ¹	47.2	67.7	82	93	106	118	152
C9 ¹	108	142.7	172	203	246	288	362
C10 ¹	18.5	20	26	23	27	35	40
C11 ¹	77.6	105.2	127	148	176	203	257
B3	5	5	6	6	10	12	14
H3	15.3	16.3	20.8	24.8	35.3	43.3	53.8

*1. C1~C11 are motor specific dimensions (metric std shown), size may vary according to motor flange.

★ Specification subject to change without notice.

PT-FH Double Stage Dimensions



Specifications

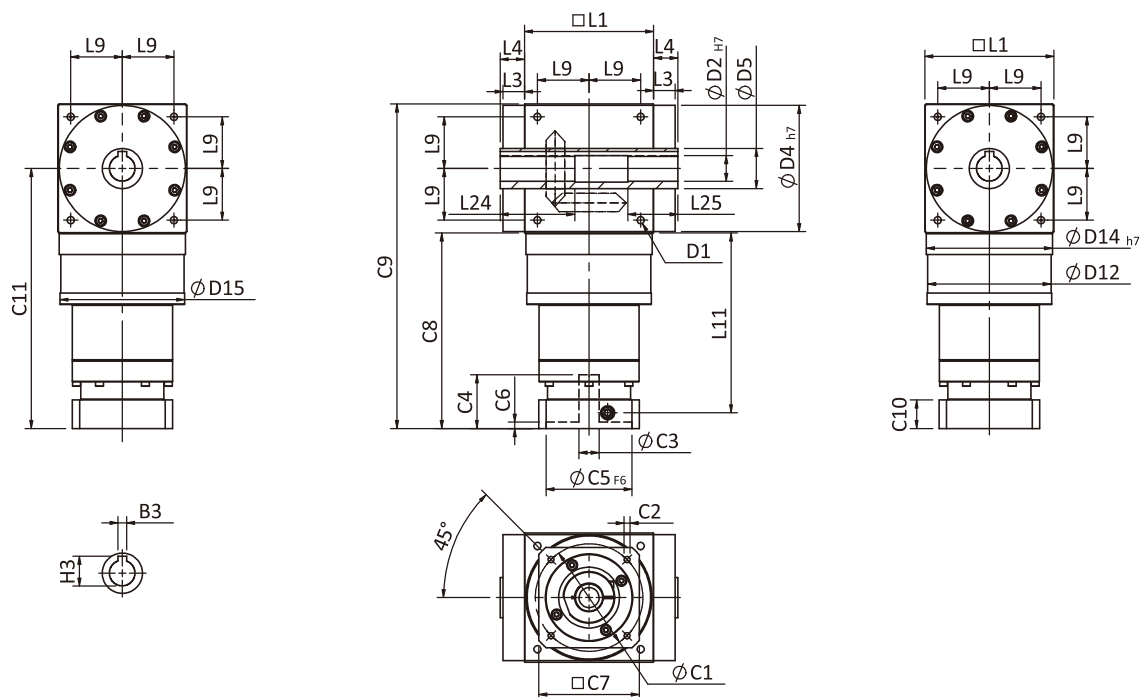
Unit:mm

Dimensions	PT60-FH	PT75-FH	PT90-FH	PT110-FH	PT140-FH	PT170-FH	PT210-FH
D1	24-M5x0.8P	24-M6x1.0P	24-M6x1.0P	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D3 _{K6}	13	14	18	22	32	40	50
D4 _{h7}	60	73	88	108	135	165	205
D5	20.6	21.5	27.5	32.3	46.4	54.4	74
D12	59.8	72	86	106	104	128	160
D14 _{h7}	60.2	73	88	108	135	165	205
D15	41.8	72.9	87	107	103	127	158
L1	60.8	75	90	110	140	170	210
L3	13	14.5	15	15	15	15	20
L4	15	16.5	17	17	17	17	22
L9	24.75	30	36	44	55	67	85
L11	63.7	74.2	86.4	104.8	120.8	114.8	192.8
L24	30	40	40	40	55	60	70
L25	30	32	35	35	50	55	65
C1 ¹	46	63	70	90	90	90	165
C2 ¹	M4x0.7P	M4x0.7P	M5x0.8P	M6x1.0P	M6x1.0P	M6x1.0P	M10x1.5P
C3 ¹	≤8/≤11	≤8/≤11	≤14/≤19	≤24	≤24	≤24	≤35/≤38
C4 ¹	28.6	28.6	37.5	48.2	48.2	48.2	66.7
C5 ¹ _{F6}	30	40	50	70	70	70	130
C6 ¹	4.1	4.1	4.5	6	6	6	5.5
C7 ¹	42	60	60	90	90	90	140
C8 ¹	73.3	83.8	97.4	119.5	135.5	129.5	210
C9 ¹	134.1	158.8	187.4	229.5	275.5	299.5	420
C10 ¹	17	17	20	26	26	26	35
C11 ¹	103.7	121.3	142.4	174.5	205.5	214.5	315
B3	5	5	6	6	10	12	14
H3	15.3	16.3	20.8	24.8	35.3	43.3	53.8

*1. C1~C11 are motor specific dimensions (metric std shown), size may vary according to motor flange.

★ Specification subject to change without notice.

PT-FH Triple Stage Dimensions



Specifications

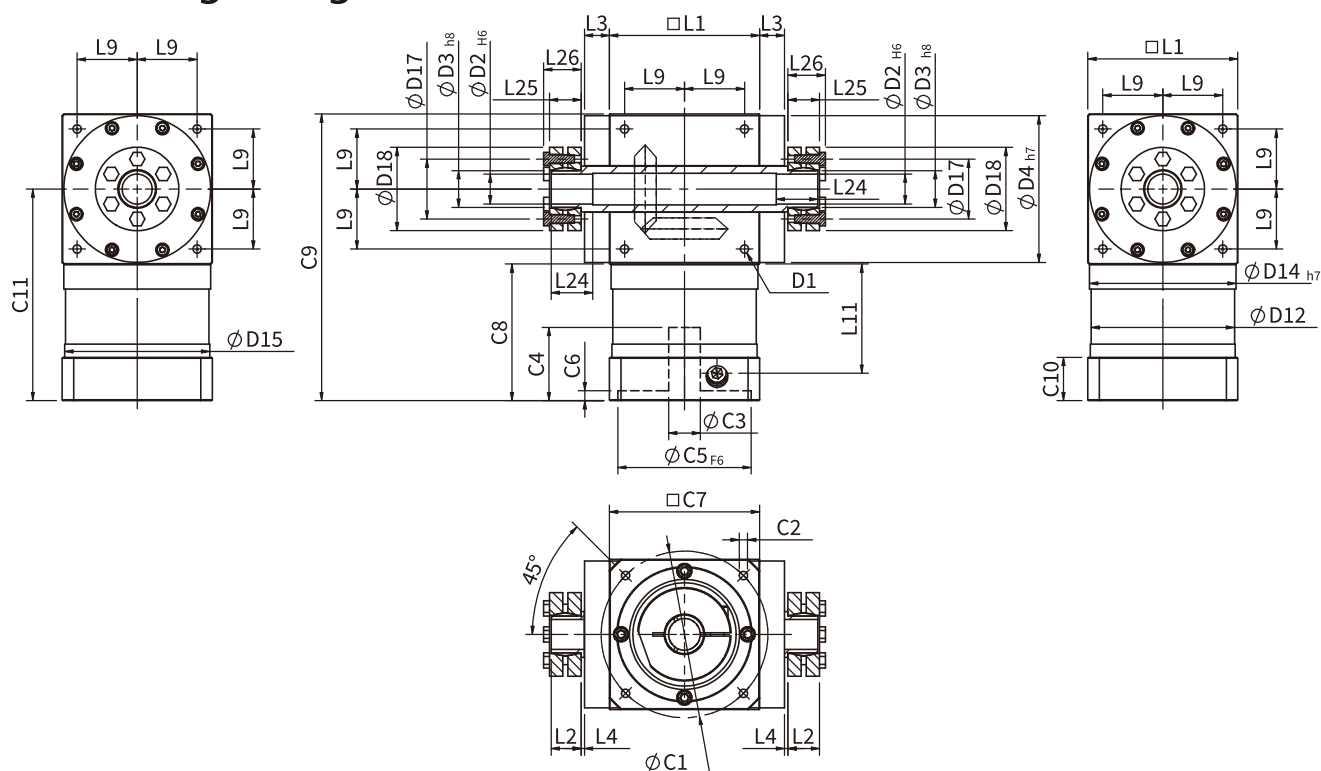
Unit:mm

Dimensions	PT110-FH	PT140-FH	PT170-FH	PT210-FH
D1	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D2 _{H7}	22	32	40	50
D4 _{H7}	108	135	165	205
D5	32.3	46.4	54.4	74
D12	106	104	128	160
D14 _{H7}	108	135	165	205
D15	107	103	127	158
L1	110	140	170	210
L3	15	15	15	20
L4	17	17	17	22
L9	44	55	67	85
L11	131	147	143.7	223.4
L24	40	55	60	70
L25	35	50	55	65
C1 ¹	70	70	90	115
C2 ¹	M5x0.8P	M5x0.8P	M6x1.0P	M8x1.25P
C3 ¹	≤14/≤19	≤14/≤19	≤19	≤24/≤32/≤38
C4 ¹	37.5	37.5	41.6	51.1
C5 ¹ _{F6}	50	50	70	95
C6 ¹	4.5	4.5	6	6
C7 ¹	60	60	80	115
C8 ¹	142	158	157.8	239.5
C9 ¹	252	298	327.8	449.5
C10 ¹	20	20	25	30
C11 ¹	197	228	242.8	344.5
B3	6	10	12	14
H3	24.5	35.3	43.3	53.8

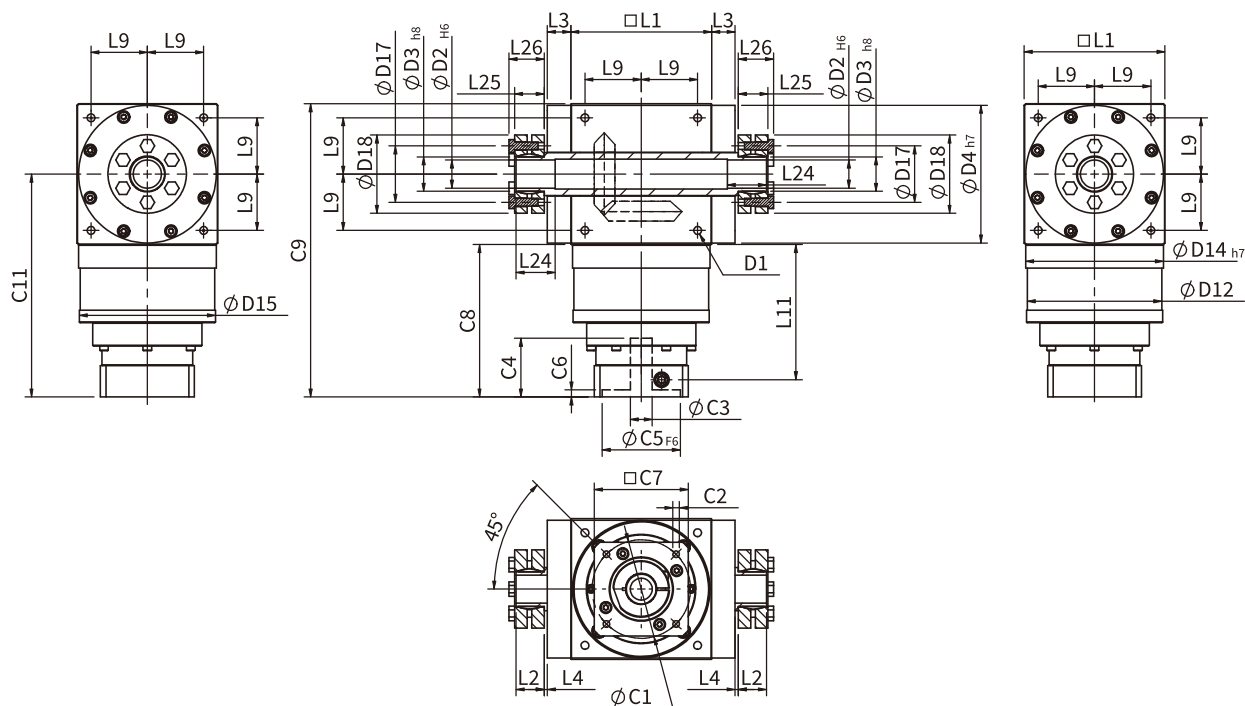
*1. C1~C11 are motor specific dimensions (metric std shown), size may vary according to motor flange.

★ Specification subject to change without notice.

PT



PT-FC Double Stage Dimensions



Specifications

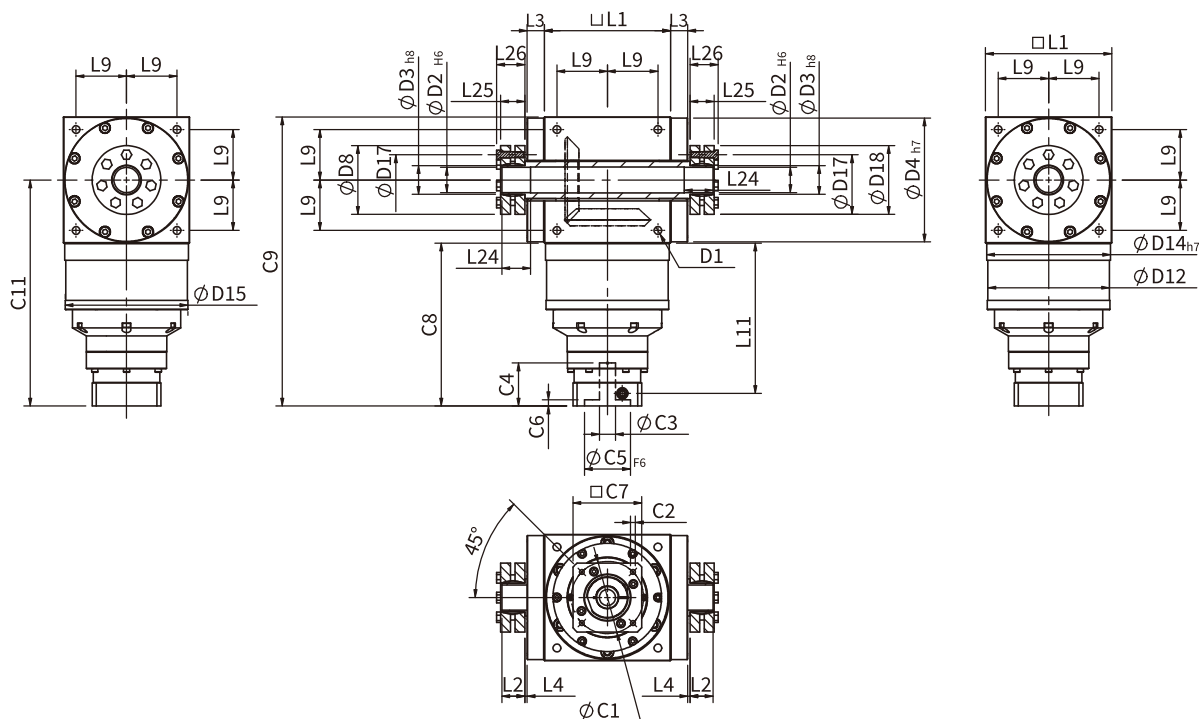
Unit:mm

Dimensions	PT60-FC	PT75-FC	PT90-FC	PT110-FC	PT140-FC	PT170-FC	PT210-FC
D1	24-M5x0.8P	24-M6x1.0P	24-M6x1.0P	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D2H6	8	14	18	22	32	40	50
D3h8	16	16	22	25	44	50	62
D4h7	60	73	88	108	135	165	205
D12	59.8	72	86	106	104	128	160
D14h7	60.2	73	88	108	135	165	205
D15	60	72.9	87	107	103	127	158
D17	26	26	36	44	61	70	86
D18	41	41	50	60	80	90	110
L1	60.8	75	90	110	140	170	210
L2	15	14	18	20	25	27	29
L3	13	14.5	15	15	15	15	20
L4	2	2	2	2	2	2	2
L9	24.75	30	36	44	55	67	85
L11	63.7	74.2	86.4	104.8	120.8	114.8	192.8
L24	18	18	25	25	30	32	31
L25	15	15	19	21	25	27	30
L26	18.5	18.5	22.5	24.5	29	31	34
C1 ¹	46	63	70	90	90	90	165
C2 ¹	M4x0.7P	M4x0.7P	M5x0.8P	M6x1.0P	M6x1.0P	M6x1.0P	M10x1.5P
C3 ¹	≤8/≤11	≤8/≤11	≤14/≤19	≤24	≤24	≤24	≤35/≤38
C4 ¹	28.6	28.6	37.5	48.2	48.2	48.2	66.7
C5 ¹ F6	30	40	50	70	70	70	130
C6 ¹	4.1	4.1	4.5	6	6	6	5.5
C7 ¹	42	60	60	90	90	90	140
C8 ¹	73.3	83.8	97.4	119.5	135.5	129.5	210
C9 ¹	134.1	158.8	187.4	229.5	275.5	299.5	420
C10 ¹	17	17	20	26	26	26	35
C11 ¹	103.7	121.3	142.4	174.5	205.5	214.5	315

*1. C1~C11 are motor specific dimensions (metric std shown), size may vary according to motor flange.

★ Specification subject to change without notice.

PT



Specifications

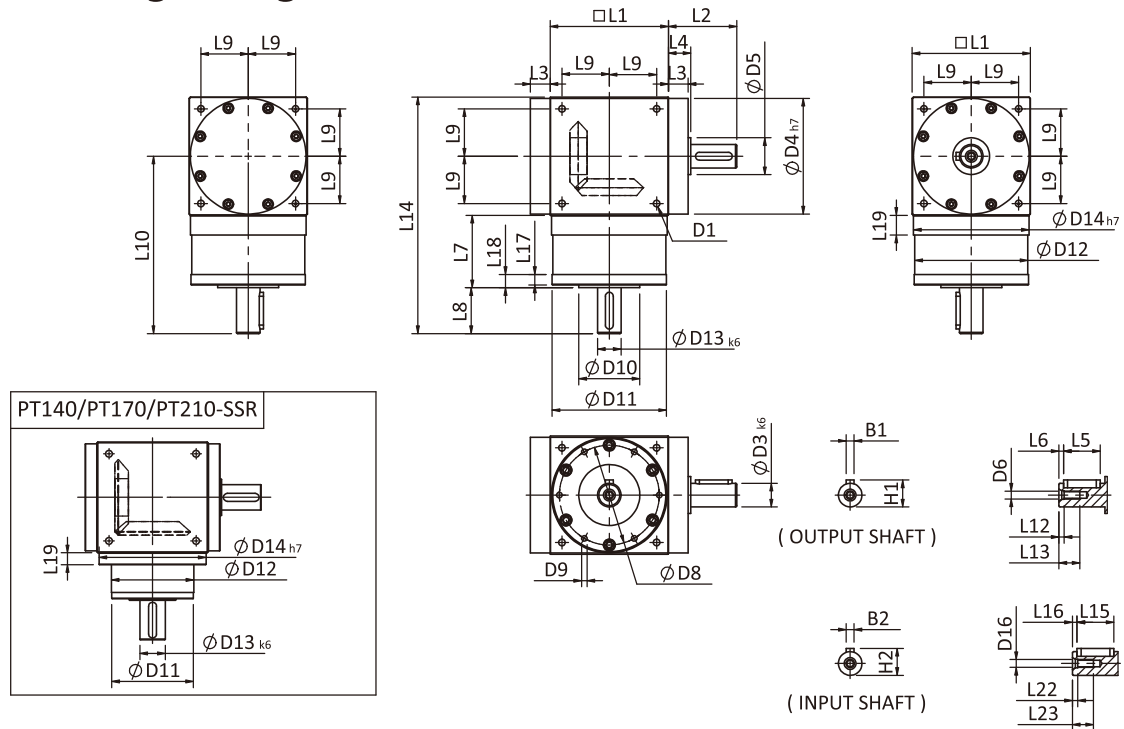
Unit:mm

Dimensions	PT110-FC	PT140-FC	PT170-FC	PT210-FC
D1	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D2 _{H6}	22	32	40	50
D3 _{h8}	25	44	50	62
D4 _{h7}	108	135	165	205
D12	106	104	128	160
D14 _{h7}	108	135	165	205
D15	107	103	127	158
D17	44	61	70	86
D18	60	80	90	110
L1	110	140	170	210
L2	20	25	27	29
L3	15	15	15	20
L4	2	2	2	2
L9	44	55	67	85
L11	131	147	143.7	223.4
L24	25	30	32	31
L25	21	25	27	30
L26	24.5	29	31	34
C1 ¹	70	70	90	130
C2 ¹	M5x0.8P	M5x0.8P	M6x1.0P	M8x1.25P
C3 ¹	≤14/≤19	≤14/≤19	≤19	≤24/≤32/≤38
C4 ¹	37.5	37.5	41.6	51.1
C5 ¹ _{F6}	50	50	70	110
C6 ¹	4.5	4.5	6	6
C7 ¹	60	60	80	115
C8 ¹	142	158	157.8	239.5
C9 ¹	252	298	327.8	449.5
C10 ¹	20	20	25	30
C11 ¹	197	228	242.8	344.5

★ C1~C10 are motor specific dimensions (metric std shown). Size may vary according to motor flange.

★ Specification subject to change without notice.

PT-SSR Single Stage Dimensions

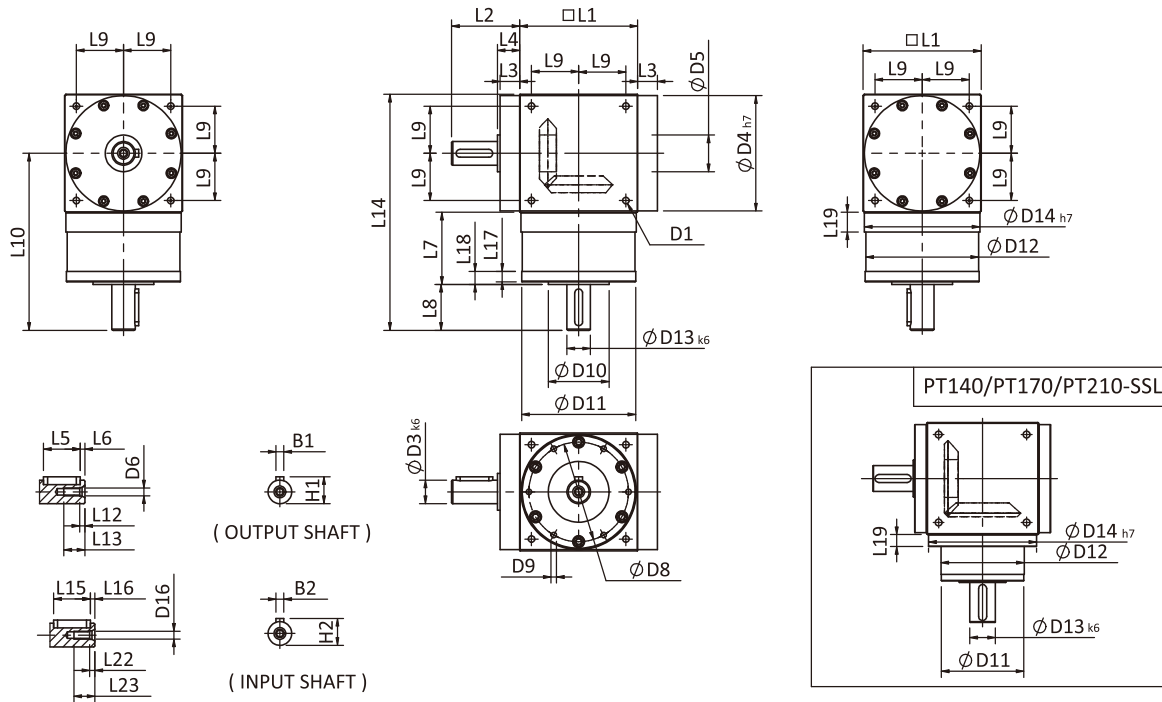


Specifications

Unit:mm

Dimensions	PT60-SSR	PT75-SSR	PT90-SSR	PT110-SSR	PT140-SSR	PT170-SSR	PT210-SSR
D1	24-M5x0.8P	24-M6x1.0P	24-M6x1.0P	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D3k6	13	16	18	22	32	40	50
D4h7	60	73	88	108	135	165	205
D5	20.6	21.5	27.5	32.3	46.4	54.4	74
D6	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M12x1.75P	M16x2.0P	M16x2.0P
D8	53	62	76	95	92	114	142
D9	4-M4x0.7P	4-M5x0.8P	4-M5x0.8P	6-M6x1.0P	6-M6x1.0P	6-M8x1.25P	6-M8x1.25P
D10	34	34	46	59	59	74	90
D11g6	60	72.9	87	107	103	127	158
D12	59.8	72	86	106	104	128	160
D13k6	13	16	18	22	32	40	50
D14h7	60.2	73	88	108	135	165	205
D16	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M12x1.75P	M16x2.0P	M16x2.0P
L1	60.8	75	90	110	140	170	210
L2	34.5	46.5	52	57	67	77	97
L3	13	14.5	15	15	15	15	20
L4	15	16.5	17	17	17	17	22
L5	16	25	28	32	45	50	70
L6	2	2.5	3.5	4	2.5	5	2.5
L7	43	52.5	55	60	60	70	90
L8	19.5	30	35	40	50	60	75
L9	24.75	30	36	44	55	67	85
L10	92.9	120	135	155	180	215	270
L12	4	4	4	4.5	6	6	6
L13	12	14	16	20.5	30	36	38
L14	123.3	157.5	180	210	250	300	375
L15	16	25	28	32	45	50	70
L16	2	2.5	3.5	4	2.5	5	2.5
L17	6	8	8	8	10	10	10
L18	8	10	10	10	12	12	12
L19	13	15	15	15	15	15	20
L22	4	4	4	4.5	6	6	6
L23	12	14	16	20.5	30	36	38
B1	5	5	6	6	10	12	14
B2	5	5	6	6	10	12	14
H1	15	18	20.5	24.5	35	43	53.5
H2	15	18	20.5	24.5	35	43	53.5

PT-SSL Single Stage Dimensions



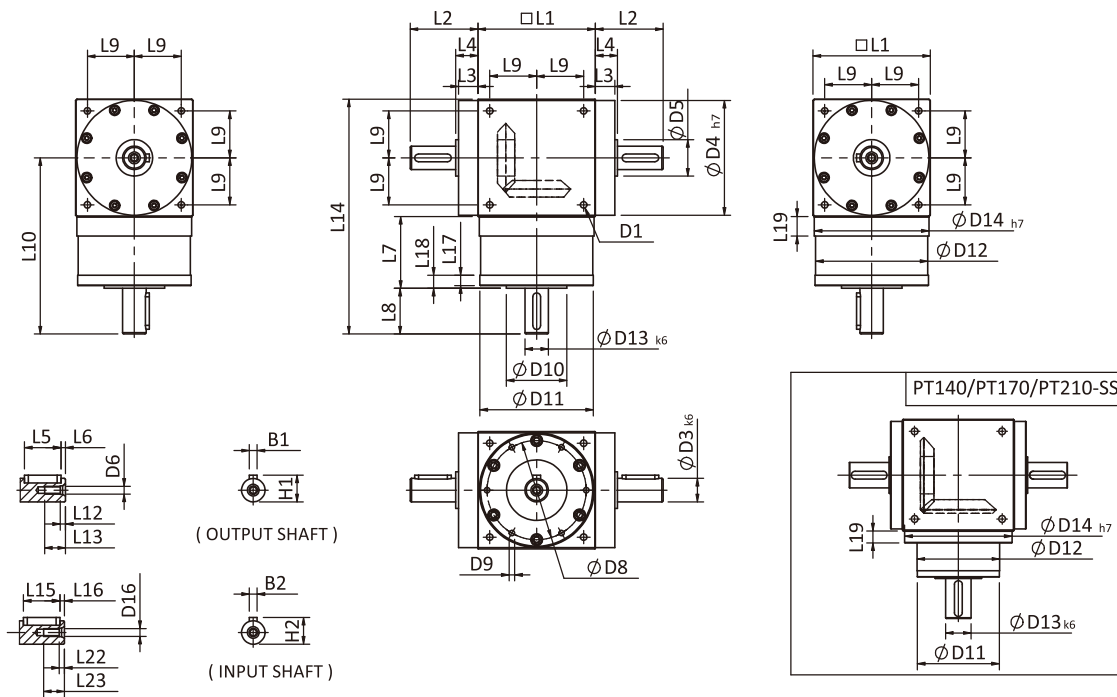
Specifications

Unit:mm

Dimensions	PT60-SSL	PT75-SSL	PT90-SSL	PT110-SSL	PT140-SSL	PT170-SSL	PT210-SSL
D1	24-M5x0.8P	24-M6x1.0P	24-M6x1.0P	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D3 _{k6}	13	16	18	22	32	40	50
D4 _{h7}	60	73	88	108	135	165	205
D5	20.6	21.5	27.5	32.3	46.4	54.4	74
D6	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M12x1.75P	M16x2.0P	M16x2.0P
D8	53	62	76	95	92	114	142
D9	4-M4x0.7P	4-M5x0.8P	4-M5x0.8P	6-M6x1.0P	6-M6x1.0P	6-M8x1.25P	6-M8x1.25P
D10	34	34	46	59	59	74	90
D11 _{g6}	60	72.9	87	107	103	127	158
D12	59.8	72	86	106	104	128	160
D13 _{k6}	13	16	18	22	32	40	50
D14 _{h7}	60.2	73	88	108	135	165	205
D16	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M12x1.75P	M16x2.0P	M16x2.0P
L1	60.8	75	90	110	140	170	210
L2	34.5	46.5	52	57	67	77	97
L3	13	14.5	15	15	15	15	20
L4	15	16.5	17	17	17	17	22
L5	16	25	28	32	45	50	70
L6	2	2.5	3.5	4	2.5	5	2.5
L7	43	52.5	55	60	60	70	90
L8	19.5	30	35	40	50	60	75
L9	24.75	30	36	44	55	67	85
L10	92.9	120	135	155	180	215	270
L12	4	4	4	4.5	6	6	6
L13	12	14	16	20.5	30	36	38
L14	123.3	157.5	180	210	250	300	375
L15	16	25	28	32	45	50	70
L16	2	2.5	3.5	4	2.5	5	2.5
L17	6	8	8	8	10	10	10
L18	8	10	10	10	12	12	12
L19	13	15	15	15	15	15	20
L22	4	4	4	4.5	6	6	6
L23	12	14	16	20.5	30	36	38
B1	5	5	6	6	10	12	14
B2	5	5	6	6	10	12	14
H1	15	18	20.5	24.5	35	43	53.5
H2	15	18	20.5	24.5	35	43	53.5



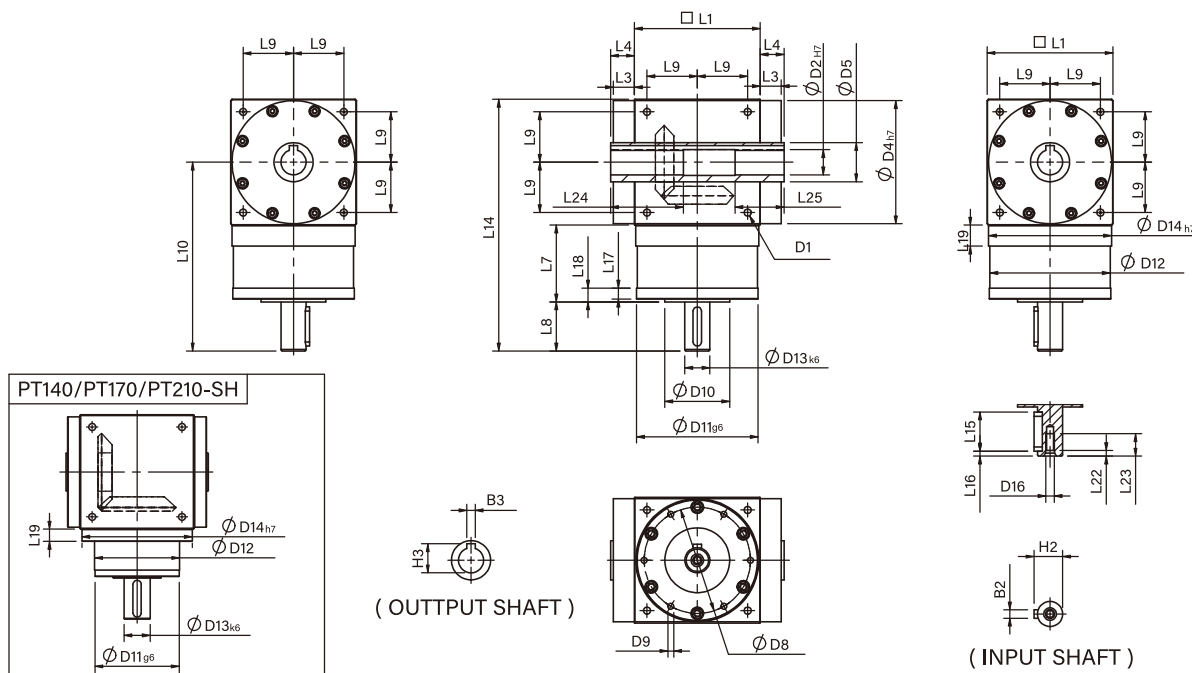
PT-SS Single Stage Dimensions



Specifications

Unit:mm

Dimensions	PT60-SS	PT75-SS	PT90-SS	PT110-SS	PT140-SS	PT170-SS	PT210-SS
D1	24-M5x0.8P	24-M6x1.0P	24-M6x1.0P	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D3 _{k6}	13	16	18	22	32	40	50
D4 _{h7}	60	73	88	108	135	165	205
D5	20.6	21.5	27.5	32.3	46.4	54.4	74
D6	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M12x1.75P	M16x2.0P	M16x2.0P
D8	53	62	76	95	92	114	142
D9	4-M4x0.7P	4-M5x0.8P	4-M5x0.8P	6-M6x1.0P	6-M6x1.0P	6-M8x1.25P	6-M8x1.25P
D10	34	34	46	59	59	74	90
D11 _{g6}	60	72.9	87	107	103	127	158
D12	59.8	72	86	106	104	128	160
D13 _{k6}	13	16	18	22	32	40	50
D14 _{h7}	60.2	73	88	108	135	165	205
D16	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M12x1.75P	M16x2.0P	M16x2.0P
L1	60.8	75	90	110	140	170	210
L2	34.5	46.5	52	57	67	77	97
L3	13	14.5	15	15	15	15	20
L4	15	16.5	17	17	17	17	22
L5	16	25	28	32	45	50	70
L6	2	2.5	3.5	4	2.5	5	2.5
L7	43	52.5	55	60	60	70	90
L8	19.5	30	35	40	50	60	75
L9	24.75	30	36	44	55	67	85
L10	92.9	120	135	155	180	215	270
L12	4	4	4	4.5	6	6	6
L13	12	14	16	20.5	30	36	38
L14	123.3	157.5	180	210	250	300	375
L15	16	25	28	32	45	50	70
L16	2	2.5	3.5	4	2.5	5	2.5
L17	6	8	8	8	10	10	10
L18	8	10	10	10	12	12	12
L19	13	15	15	15	15	15	20
L22	4	4	4	4.5	6	6	6
L23	12	14	16	20.5	30	36	38
B1	5	5	6	6	10	12	14
B2	5	5	6	6	10	12	14
H1	15	18	20.5	24.5	35	43	53.5
H2	15	18	20.5	24.5	35	43	53.5

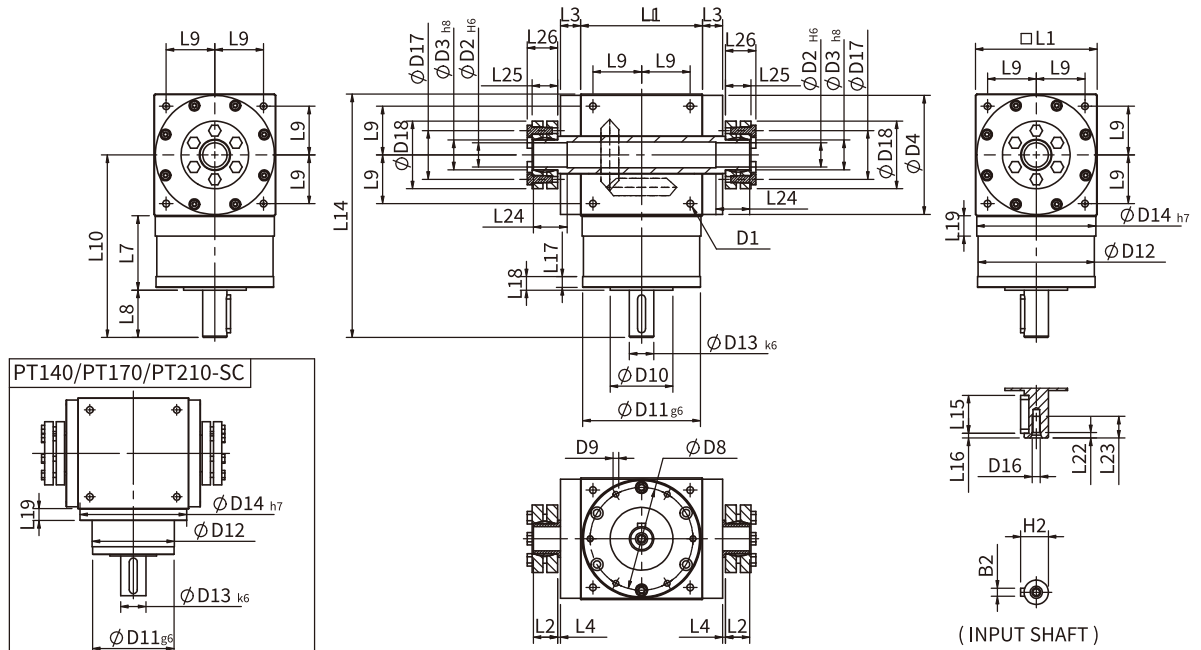


Unit:mm

Dimensions	PT60-SH	PT75-SH	PT90-SH	PT110-SH	PT140-SH	PT170-SH	PT210-SH
D1	24-M5x0.8P	24-M6x1.0P	24-M6x1.0P	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D2H7	13	14	18	22	32	40	50
D4h7	60	73	88	108	135	165	205
D5	20.6	21.5	27.5	32.3	46.4	54.4	74
D8	53	62	76	95	92	114	142
D9	4-M4x0.7P	4-M5x0.8P	4-M5x0.8P	6-M6x1.0P	6-M6x1.0P	6-M8x1.25P	6-M8x1.25P
D10	34	34	46	59	59	74	90
D11g6	60	72.9	87	107	103	127	158
D12	59.8	72	86	106	104	128	160
D13k6	13	16	18	22	32	40	50
D14h7	60.2	73	88	108	135	165	205
D16	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M12x1.75P	M16x2.0P	M16x2.0P
L1	60.8	75	90	110	140	170	210
L3	13	14.5	15	15	15	15	20
L4	15	16.5	17	17	17	17	22
L7	43	52.5	55	60	60	70	90
L8	19.5	30	35	40	50	60	75
L9	24.75	30	36	44	55	67	85
L10	92.9	120	135	155	180	215	270
L14	123.3	157.5	180	210	250	300	375
L15	16	25	28	32	45	50	70
L16	2	2.5	3.5	4	2.5	5	2.5
L17	6	8	8	8	10	10	10
L18	8	10	10	10	12	12	12
L19	13	15	15	15	15	15	20
L22	4	4	4	4.5	6	6	6
L23	12	14	16	20.5	30	36	38
L24	30	40	40	40	55	60	70
L25	30	32	35	35	50	55	65
B2	5	5	6	6	10	12	14
B3	5	5	6	6	10	12	14
H2	15	18	20.5	24.5	35	43	53.5
H3	15.3	16.3	20.8	24.8	35.3	43.3	53.8

★ Specification subject to change without notice.

PT-SC Single Stage Dimensions



Specifications

Unit:mm

Dimensions	PT60-SC	PT75-SC	PT90-SC	PT110-SC	PT140-SC	PT170-SC	PT210-SC
D1	24-M5x0.8P	24-M6x1.0P	24-M6x1.0P	24-M8x1.25P	24-M10x1.5P	24-M12x1.75P	24-M16x2.0P
D2 _{H6}	13	14	18	22	32	40	50
D3 _{h8}	16	16	22	25	44	50	62
D4 _{h7}	60	73	88	108	135	165	205
D8	53	62	76	95	92	114	142
D9	4-M4x0.7P	4-M5x0.8P	4-M5x0.8P	6-M6x1.0P	6-M6x1.0P	6-M8x1.25P	6-M8x1.25P
D10	34	34	46	59	59	74	90
D11 _{g6}	60	72.9	87	107	103	127	158
D12	59.8	72	86	106	104	128	160
D13 _{k6}	13	16	18	22	32	40	50
D14 _{h7}	60.2	73	88	108	135	165	205
D16	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M12x1.75P	M16x2.0P	M16x2.0P
D17	26	26	36	44	61	70	86
D18	41	41	50	60	80	90	110
L1	60.8	75	90	110	140	170	210
L2	15	14	18	20	25	27	29
L3	13	14.5	15	15	15	15	20
L4	2	2	2	2	2	2	2
L7	43	52.5	55	60	60	70	90
L8	19.5	30	35	40	50	60	75
L9	24.75	30	36	44	55	67	85
L10	92.9	120	135	155	180	215	270
L14	123.3	157.5	180	210	250	300	375
L15	16	25	28	32	45	50	70
L16	2	2.5	3.5	4	2.5	5	2.5
L17	6	8	8	8	10	10	10
L18	8	10	10	10	12	12	12
L19	13	15	15	15	15	15	20
L22	4	4	4	4.5	6	6	6
L23	12	14	16	20.5	30	36	38
L24	18	18	25	25	30	32	31
L25	15	15	19	21	25	27	30
L26	18.5	18.5	22.5	24.5	29	31	34
B2	5	5	6	6	10	12	14
H2	15	18	20.5	24.5	35	43	53.5

PT-(FS/FSL/FSR/FH/FC Hollow Shaft Input Spec.) Specifications

Specifications		Stage	Ratio	PT60	PT75	PT90	PT110	PT140	PT170	PT210	
Nominal Output Torque T_{2N}	$N \cdot m$	1	1	25	45	78	150	360	585	1300	
			1.5	25	45	78	150	360	585	1300	
			2	24	42	68	150	330	544	1220	
			3	18	33	54	120	270	450	1020	
			4	13	28	48	100	224	376	860	
		5	12	25	40	85	196	320	740		
		2	7	13	13	40	100	100	100	450	
			9	-	33	54	120	250	250	750	
			10	24	42	68	150	208	208	950	
			15	18	33	54	120	270	312	1020	
			20	13	28	48	100	224	376	860	
			25	12	25	40	85	196	320	740	
			35	12	25	40	85	196	320	740	
			50	12	25	40	85	196	320	740	
		3	75	-	-	-	120	270	312	1020	
			100	-	-	-	100	224	376	860	
			125	-	-	-	85	196	320	740	
			150	-	-	-	120	270	312	1020	
			200	-	-	-	100	224	376	860	
			250	-	-	-	85	196	320	740	
			350	-	-	-	85	196	320	740	
		500	-	-	-	85	196	320	740		
Emergency Stop Torque T_{2NOT}		$N \cdot m$	2.0 Times of Nominal Output Torque) (* Max. Output Torque T_{2B} =1.5 Times of Nominal Output Torque)								
Nominal Input Speed n_{1N}		rpm	1	1	2500	2000	1700	1400	1100	1000	800
				1.5, 2	3000	2500	2000	1600	1400	1300	1050
				3, 4, 5	3500	3000	2500	2100	2000	1800	1600
			2	7-50	5000	5000	4000	4000	4000	3500	3000
Max. Input Speed n_{1max}	rpm	3	75-500	-	-	-	5000	4500	4000	3500	
		1	1-5	7500	6500	5500	4500	3500	3000	2200	
		2	7-50	8000	8000	6000	6000	6000	6000	4800	
		3	75-500	-	-	-	8000	8000	6000	6000	
Standard Backlash P2		arcmin	1	1-5	≤6	≤6	≤6	≤6	≤6	≤6	
			2	7-50	≤8	≤8	≤8	≤8	≤8	≤8	≤8
			3	75-500	-	-	-	≤10	≤10	≤10	≤10
Max. Radial Load F_{2rB} ¹		N	1,2,3	1-500	900	1100	1700	2700	4800	6600	11500
Max. Axial Load F_{2aB} ¹		N	1,2,3	1-500	450	550	850	1350	2400	3300	5750
Operating Temp.		°C	1,2,3	-10°C ~ +90°C							
Service Life		hrs	1,2,3	20,000 (10,000 Continuous Operation)							
Efficiency		%	1	≥ 98%							
			2	≥ 94%							
			3	≥ 94%							
Weight	FS/FSL/FSR	kg	1	1-5	2.8	4.6	7.5	12.8	21.8	38.3	72.6
			2	7-50	3.2	5.2	8.5	15.3	25.1	40.7	77.3
			3	75-500	-	-	-	16.1	25.9	42.0	79.2
	FH	kg	1	1-5	2.6	4.3	7.1	12.1	20.0	34.9	66.1
			2	7-50	3.1	4.9	8.1	14.6	23.5	37.3	70.8
			3	75-500	-	-	-	15.4	24.3	38.5	72.4
Mounting Position		-	1,2,3	Any Direction							
Noise Level ²		dBA/1m	1,2,3	1-500	68	70	74	75	76	77	79
Protection Class		-	1,2,3	IP65							
Lubrication		-	1,2,3	Synthetic Lubricant							
Inertia (J1)											
Stage	Ratio	unit	PT60	PT75	PT90	PT110	PT140	PT170	PT210		
1	1	$Kg \cdot cm^2$	0.51	1.35	3.21	7.82	25.1	61.5	198.9		
	1.5		0.46	1.18	2.9	6.85	20.3	51.2	158.2		
	2		0.44	1.15	2.75	6.52	18.7	47.3	142.5		
	3-5		0.43	1.11	2.71	6.21	18.1	45.2	136.5		
2	7-50		0.04	0.07	0.32	1.0	1.6	3.1	9.8		
3	75-500	-	-	-	0.23	0.26	0.75	1.0			
1. Applied to the output shaft center at 400 rpm. 2. Measured at 1500 rpm with no load. ※ The above figures/specifications are subject to change without prior notice.											

PT-(SS/SSL/SSR/SH/SC) Solied Shaft Input Specs.

Specifications		Stage	Ratio	PT60	PT75	PT90	PT110	PT140	PT170	PT210	
Nominal Output Torque T_{2N}	N · m	1	1	25	45	78	150	360	585	1300	
			1.5	25	45	78	150	360	585	1300	
			2	24	42	68	150	330	544	1220	
			3	18	33	54	120	270	450	1020	
			4	13	28	48	100	224	376	860	
			5	12	25	40	85	196	320	740	
Emergency Stop Torque T_{2NOT}		N · m	2.0 Times of Nominal Output Torque (*Max. Output Torque T_{2B} = 1.5 Times of Nominal Output Torque)								
Nominal Input Speed n_{1N}	rpm	1	1	2500	2000	1700	1400	1100	1000	800	
		1	1.5, 2	3000	2500	2000	1600	1400	1300	1050	
		1	3, 4, 5	3500	3000	2500	2100	2000	1800	1600	
Max. Input Speed n_{1max}		rpm	1	1-5	7500	6500	5500	4500	3500	3000	2200
Standard Backlash P2		arcmin	1	1-5	≤6	≤6	≤6	≤6	≤6	≤6	≤6
Max. Radial Load on Output Shaft F_{2rB}^1		N	1	1-5	900	1100	1700	2700	4800	6600	11500
Max. Axial Load on Output Shaft F_{2aB}^1		N	1	1-5	450	550	850	1350	2400	3300	5750
Max. Radial Load on Input Shaft F_{1rB}^2		N	1	1-5	700	950	1450	2100	2700	3800	7800
Max. Axial Load on Input Shaft F_{1aB}^2		N	1	1-5	350	425	725	1050	1350	1900	3900
Operating Temp.		℃	-10℃ ~ +90℃								
Service Life		hrs	20,000 (10,000 Continuous Operation)								
Efficiency		%	≥98%								
Weight	SS	kg	1	1-5	2.6	4.4	7.2	12.2	20.8	36.5	69.2
	SSL	kg	1	1-5	2.5	4.3	7.1	12.1	20.5	35.9	68.1
	SSR	kg	1	1-5	2.5	4.3	7.1	12.1	20.5	35.9	68.1
	SH	kg	1	1-5	2.4	4.1	6.8	11.6	19.1	33.3	63.0
Mounting Position		-	1	1-5	Any Direction						
Noise Level ²		dBA/1m	1	1-5	66	68	72	74	75	76	78
Protection Class		-	1	1-5	IP65						
Lubrication		-	1	1-5	Synthetic Lubricant						
Inertia (J1)											
Stage	Ratio		unit		PT60	PT75	PT90	PT110	PT140	PT170	PT210
1	1		Kg · cm ²		0.51	1.35	3.21	7.82	25.1	61.5	198.9
	1.5				0.46	1.18	2.9	6.85	20.3	51.2	158.2
	2				0.44	1.15	2.75	6.52	18.7	47.3	142.5
	3-5				0.43	1.11	2.71	6.21	18.1	45.2	136.5
* 1. Applied to the output shaft center @400rpm. * 2. Measured at 1500rpm 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.