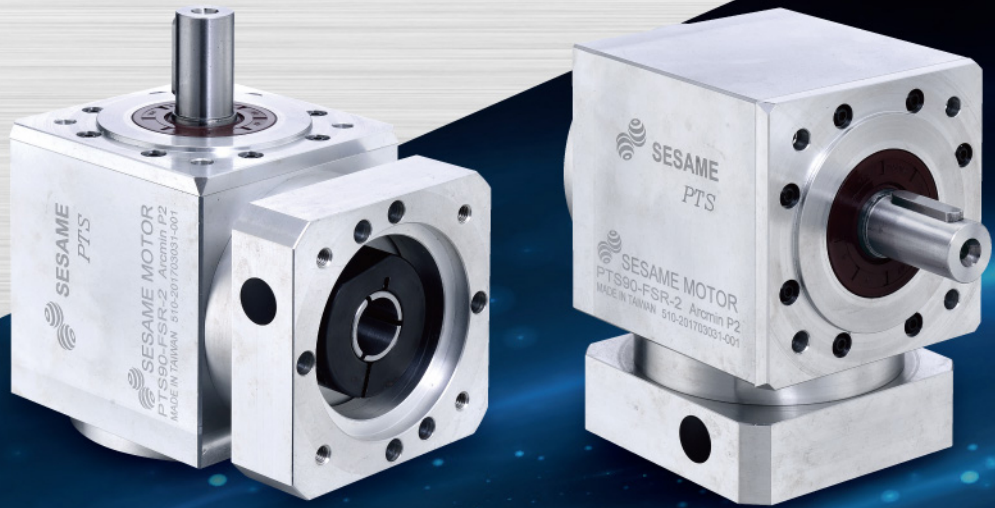




Spiral Bevel Gearbox **PTS series**



**PTS
SERIES**





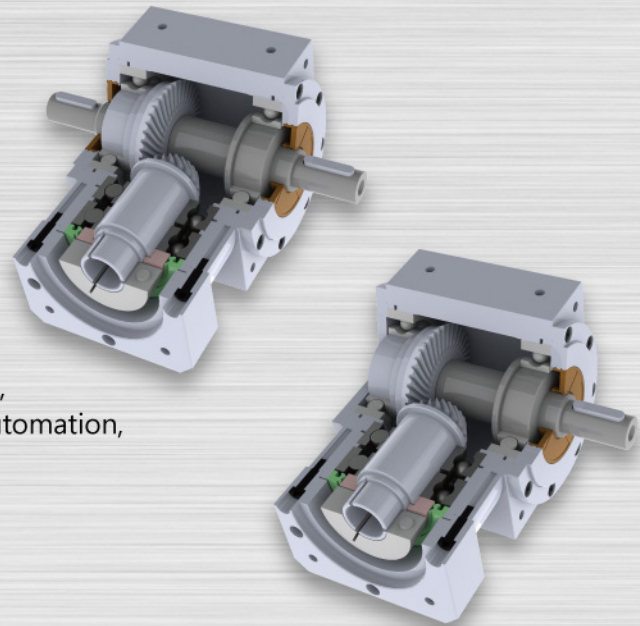
Servo Spiral Bevel Gearbox

Sesame servo spiral bevel gearboxes are ideal for use in applications that require high dynamic and positioning motion control. The compact and rigid design ensure good performance with space and weight efficient at the same time. Lubricated for life and IP65 sealing benefit virtually maintenance-free under normal operating conditions for 20,000 hours. They are provided in five sizes with input speed up to 8,500 rpm and standard backlash less than 9 arc-minutes. A wide range of motor adapter are available for installation to virtually all servo motors.

- Compact and rigid design ensure performance within light and small gearbox size
- The highest input speed up to 8,500 rpm
- Lubricated for life and IP65 sealing
- High operating efficiency more than 98%
- Low noise, low vibration, maintenance-free under normal operating conditions

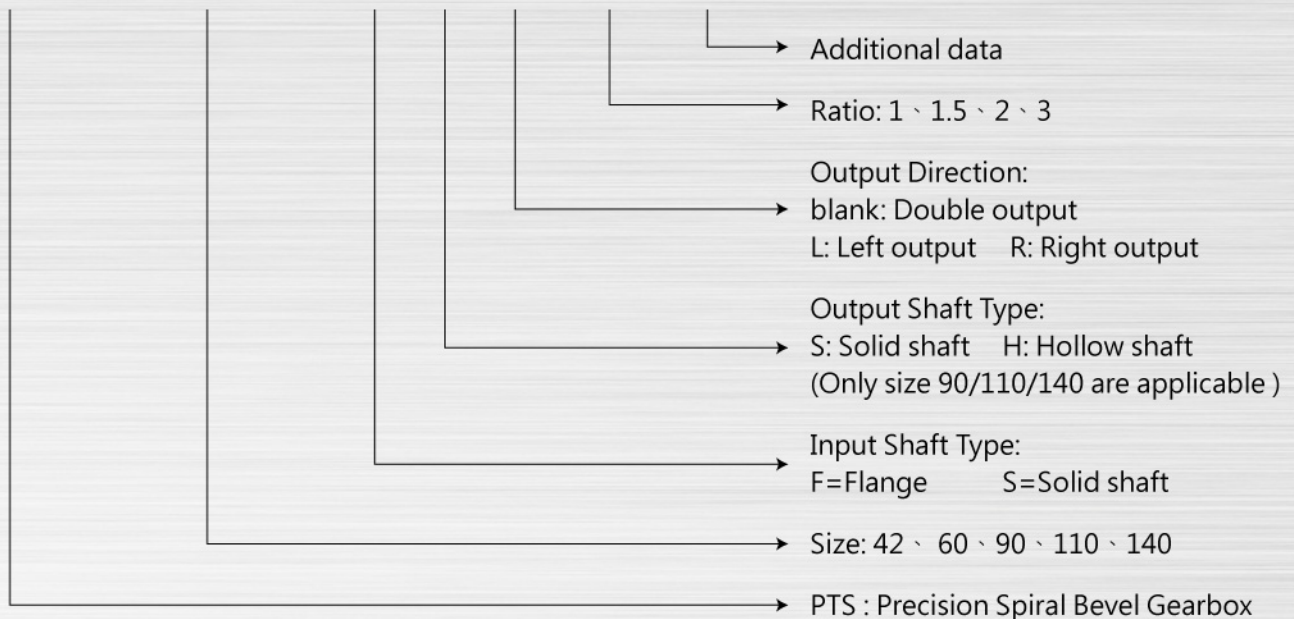
Typical applications:

precision rotary axis drives, travel gantry and columns, material handling axis drives and industrial areas in automation, aerospace, machine tool and robotics.



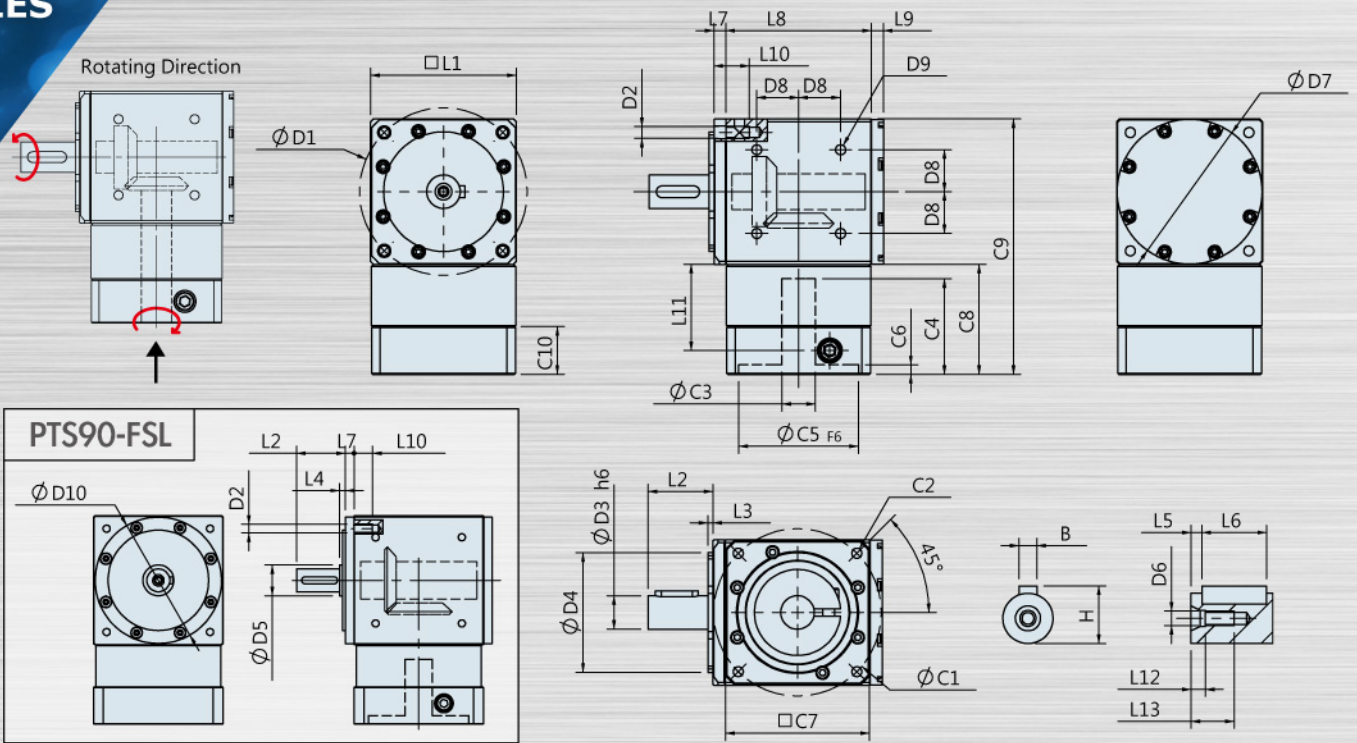
Coding System

PTS - □□□ - □□□ - □ - □



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 ordering.



Specifications

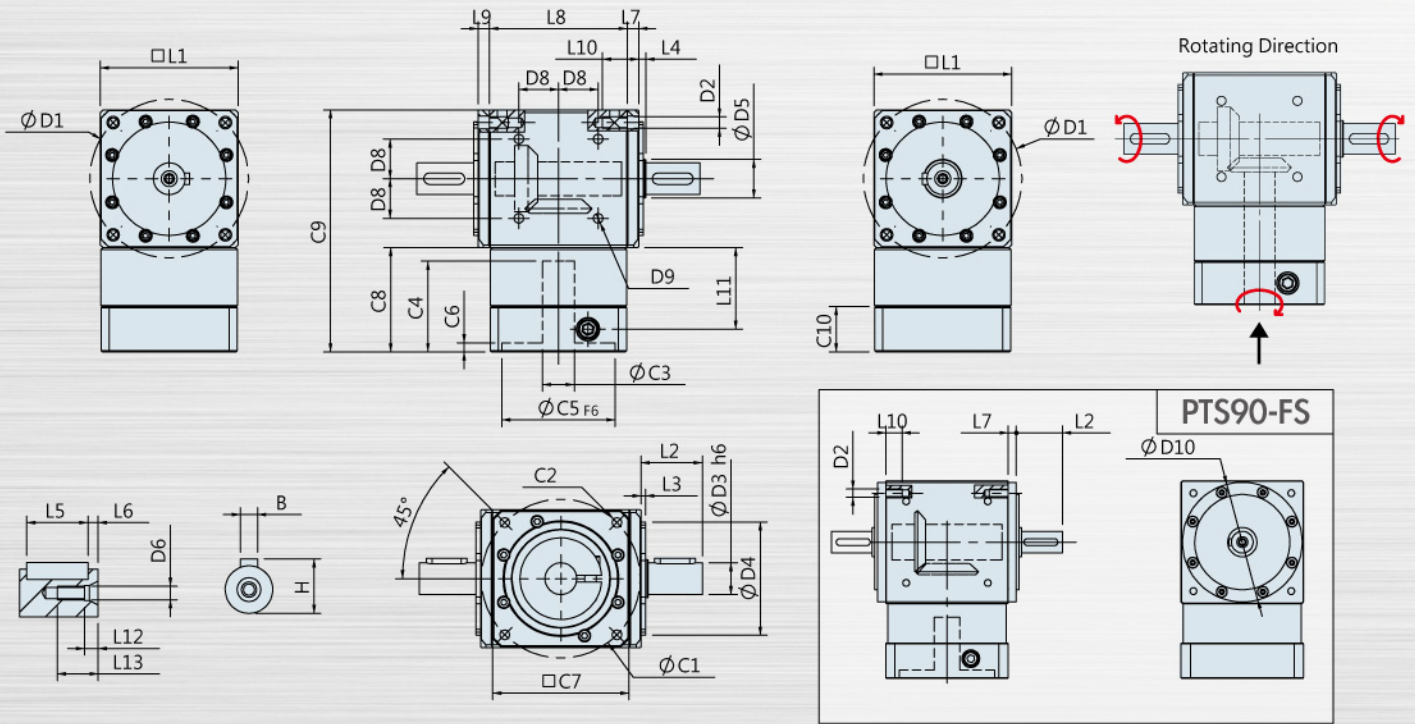
Unit:mm

Size	PTS42-FSL	PTS60-FSL	PTS90-FSL
D1	46	70	101.8
D2	M4x0.7P	M5x0.8P	M6x1.0P
D3 _{h6}	10	14	16
D4	30 ⁺⁰ _{-0.035}	50 ⁺⁰ _{-0.04}	70 ⁺⁰ _{-0.04}
D5	-	-	22
D6	-	M4x0.7P	M5x0.8P
D7	44.7	60.5	88
D8	-	24.75	36
D9	-	M5x0.8Px10L	M6x1.0Px12L
D10	-	-	88 _{h7}
L1	45	60.8	90
L2	22.5	27	36
L3	1.5	2	2
L4	-	-	4
L5	15	18	25
L6	2	3	3.5
L7	6	5	6
L8	42	60.8	90
L9	5	5	6
L10	14	15	12
L11	26.5	36	40.7
L12	-	4	4
L13	-	12	14
C1 ²	46	70	90
C2 ²	M4x0.7P	M5x0.8P	M6x1.0P
C3 ²	≤8	≤14	≤19
C4 ²	33	44	57
C5 ² F ₆	30	50	70
C6 ²	4	4	6
C7 ²	42.6	60	90
C8 ²	35.5	46	55.2
C9 ²	80.5	106.8	145.2
C10 ²	18.5	20	26
B	4	5	5
H	11.5	16	18

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

★ Specification subject to change without notice.

PTS-FS Single Stage Dimensions



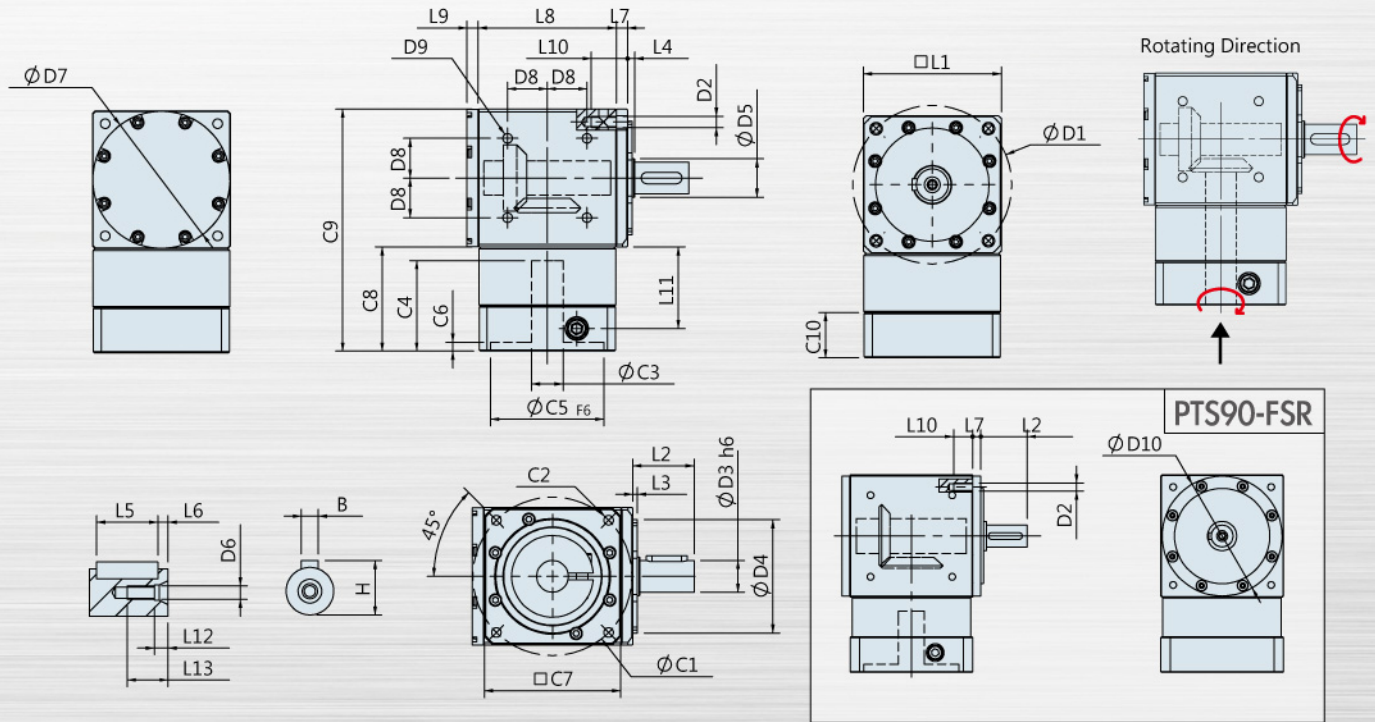
Specifications

Unit:mm

Size	PTS42-FS	PTS60-FS	PTS90-FS
D1	46	70	101.8
D2	M4x0.7P	M5x0.8P	M6x1.0P
D3 _{h6}	10	14	16
D4	30 ⁺⁰ _{-0.035}	50 ⁺⁰ _{-0.04}	70 ⁺⁰ _{-0.04}
D5	12	17	22
D6	-	M4x0.7P	M5x0.8P
D7	-	-	-
D8	-	24.75	36
D9	-	M5x0.8Px10L	M6x1.0Px12L
D10	-	-	88 _{h7}
L1	45	60.8	90
L2	22.5	27	36
L3	1.5	2	2
L4	2.5	3.2	4
L5	15	18	25
L6	2	3	3.5
L7	6	5	6
L8	42	60.8	90
L9	6	5	6
L10	14	15	12
L11	26.5	36	40.7
L12	-	4	4
L13	-	12	14
C1 ²	46	70	90
C2 ²	M4x0.7P	M5x0.8P	M6x1.0P
C3 ²	≤8	≤14	≤19
C4 ²	33	44	57
C5 ² F6	30	50	70
C6 ²	4	4	6
C7 ²	42.6	60	90
C8 ²	35.5	46	55.2
C9 ²	80.5	106.8	145.2
C10 ²	18.5	20	26
B	4	5	5
H	11.5	16	18

C1~C10 are motor specific dimensions(metric std shown), Size may vary according to motor flange.
 ★ Specification subject to change without notice.

PTS-FSR Single Stage Dimensions



Specifications

Unit:mm

Size	PTS42-FSR	PTS60-FSR	PTS90-FSR
D1	46	70	101.8
D2	M4x0.7P	M5x0.8P	M6x1.0P
D3 _{h6}	10	14	16
D4	30 ⁺⁰ _{-0.035}	50 ⁺⁰ _{-0.04}	70 ⁺⁰ _{-0.04}
D5	12	17	22
D6	-	M4x0.7P	M5x0.8P
D7	44.7	60.5	88
D8	-	24.75	36
D9	-	M5x0.8Px10L	M6x1.0Px12L
D10	-	-	88 _{h7}
L1	45	60.8	90
L2	22.5	27	36
L3	1.5	2	2
L4	2.5	3.2	4
L5	15	18	25
L6	2	3	3.5
L7	6	5	6
L8	42	60.8	90
L9	5	5	6
L10	14	15	12
L11	26.5	36	40.7
L12	-	4	4
L13	-	12	14
C1 ²	46	70	90
C2 ²	M4x0.7P	M5x0.8P	M6x1.0P
C3 ²	≤8	≤14	≤19
C4 ²	33	44	57
C5 ² F6	30	50	70
C6 ²	4	4	6
C7 ²	42.6	60	90
C8 ²	35.5	46	55.2
C9 ²	80.5	106.8	145.2
C10 ²	18.5	20	26
B	4	5	5
H	11.5	16	18

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

★ Specification subject to change without notice.

PTS Specifications Table

Specifications		Stage	Ratio	PTS-42 (FS/FSL/FSR)	PTS-60 (FS/FSL/FSR)	PTS-90 (FS/FSL/FSR)	PTS-110 (FS/FSL/FSR)	PTS-140 (FS/FSL/FSR)	
T _{2N} Nominal Output Torque	N · m	1	1	8	15	45	78	150	
			1.5	8	15	45	78	150	
			2	7	12	42	68	150	
			3	5.5	10	33	54	120	
T _{2NOT} Emergency Stop Torque	N · m	2.0 times of Nominal Output Torque * Max. Output Torque T _{2B} =1.5 times of Nominal Output Torque							
n _{1N} Nominal Input Speed	rpm	1	1~3	4000	3500	3000	2800	2500	
n _{1max} Max. Input Speed	rpm	1	1~3	8500	7500	7000	6000	5000	
Precision Backlash P1	arcmin	1	1~3	≤ 6	≤ 6	≤ 6	≤ 6	≤ 6	
Standard Backlash P2	arcmin	1	1~3	≤ 9	≤ 9	≤ 9	≤ 9	≤ 9	
F _{2rB} ¹ Max. Radial Load	N	1	1~3	400	600	1200	-	-	
F _{2aB} ¹ Max. Axial Load	N	1	1~3	200	300	600	-	-	
Operating Temp.	°C	-10 °C ~ +90 °C							
Service Life	hr	20,000 (10,000/Continuous operation)							
Efficiency	%	≥ 98%							
Weight	FS	kg	1	1~3	0.65	1.5	4.4	-	-
	FSL	kg	1	1~3	0.6	1.4	4.2	-	-
	FSR	kg	1	1~3	0.6	1.4	4.2	-	-
Mounting Position	-	1	1~3	Any Direction					
Noise Level ²	dBA/1m	1	1~3	66	68	72	74	76	
Protection Class	-	1	1~3	IP 65					
Lubrication	-	1	1~3	Synthetic Lubricant					

Inertia(J1)

Stage	Ratio	unit	PTS-42(φ 8)	PTS-60(φ 14)	PTS-90(φ 19)	PTS-110(φ 24)	PTS-140(φ 32)
1	1	Kg · cm ²	0.07	0.40	2.30	-	-
	1.5		0.06	0.33	1.82	-	-
	2		0.05	0.30	1.51	-	-
	3		0.05	0.29	1.48	-	-

* 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.

AGENT



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