

PSVX Series ---

Servo Planetary Gearbox



Processed and manufactured by the high precision German engineered gear grinding craft, the PSVX is one of the best servo planetary gearbox in the world.

Product Key Features

- ▶ Economic Type: High Quality with competitive price.
- ▶ Choosing low-carbon alloy forged steel as the raw material of the gear, the hardness can reach HRC60 by deepen harden of carburizing heat treatment to ensure gear strength and lifetime.
- ▶ Can be connected with any servo motor around the world.

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Servo Planetary Gearbox Technical Data

Model		PSVX65	PSVX85	PSVX115	PSVX142	PSVX180	PSVX220	Ratio	Stage		
Rated Output Torque	Nm	35	100	190	440	600	1000	3	1		
		42	110	240	544	1050	1600	4			
		44	115	245	585	1000	1850	5			
		40*	105*	240*	500*	800*	1650*	6			
		40*	100	235*	480	800	1550*	7			
		38	95	210	450	800	1350	8			
		36	90	200	415	710	1300*	9			
		32	81	196	400	710	1300	10			
		37	100	210	450	650	1000	12		2	
		44	110	230	450	1050	1600	16			
		44	110	230	564	1000	1850	20			
		44	110	255	608	1000	1850	25			
		44	110	255	608/35	1050/35	1800	32			
		44	110	250	608	1000	1850	40			
		38	95	210	450/63	800/63	1350	64			
		45	120	255	580	1000	1850	80			
		45	120	255	580	1000	1850	100			
		45	120	255	580	1000	1850	125			
		Emergency Stop Torque	Nm	Two and a half rated output torque							
				Max Radial Force ¹							
Max Axial Force ¹											
Full Loading Efficiency											
Average lifetime											
Weight											
Full Loading Efficiency	%	96							1		
		94							2		
		92							3		
Weight	kg	2.2	5.3	8.5	26	41	68		1		
		2.4	6.5	12	31	49	78		2		
		3.6	7.5	15	35	54	90		3		

The subscript "1" in the output speed of 100RPM, in the center of the output shaft position (L/2) permissible radial force and axial force,
 Note: with "*" is not commonly used speed ratio, in the form of 2 groups of digital representation of the torque corresponding to the actual ratio, the maximum acceleration torque is equal to 150% of the rated torque.

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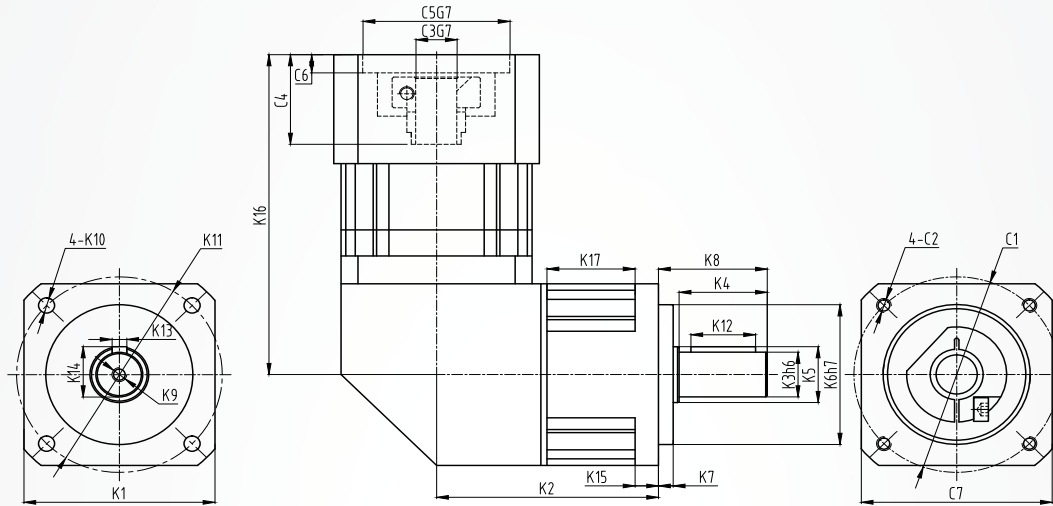
Servo Planetary Gearbox Technical Data

Model		PSVX65	PSVX85	PSVX115	PSVX142	PSVX180	PSVX220	Ratio	Stage
Rotational Inertia	kgcm ²	0.135	0.77	2.63	12.1	28.98	69.61	3	1
		0.093	0.52	1.79	7.75	23.67	54.37	4	
		0.078	0.45	1.53	6	22.75	53.27	5	
		0.07	0.42	1.5	5.52	22.48	50.84	6	
		0.069	0.4	1.4	5.1	22.48	50.84	7	
		0.065	0.39	1.32	3.74	22.59	50.84	8	
		0.065	0.39	1.32	3.62	22.59	50.84	9	
		0.065	0.39	1.32	3.62	22.55	50.56	10	
		0.105	0.67	1.63	10.1	18.98	59.61	12	2
		0.088	0.5	1.75	7.47	7.54	23.67	16	
		0.075	0.44	1.53	6.65	7.42	22.75	20	
		0.075	0.44	1.49	5.81	7.54	22.75	25	
		0.064	0.39	1.32	6.34	7.14	22.59	32	
		0.064	0.39	1.32	5.36	7.14	22.59	40	
		0.064	0.39	1.32	4.08	7.54	22.59	64	
		0.075	0.5	1.53	7.4	7.54	22.75	80	
		0.064	0.44	1.49	7.3	7.42	22.59	100	3
		0.064	0.7	2.57	7.3	7.42	22.75	125	
		0.064	0.39	1.3	6.5	7.14	22.75	160	
		0.064	0.39	1.3	6.5	7.14	22.75	200	
0.064	0.39	1.3	6.5	7.14	22.75	256			
0.064	0.39	1.3	6.5	7.14	22.75	320			
0.064	0.39	1.3	6.5	7.14	22.59	512			
Backlash	arcmin	≤10	≤10	≤10	≤10	≤10	≤10		
		≤12	≤12	≤12	≤12	≤12	≤12		2
		≤15	≤15	≤15	≤15	≤15	≤15		3
Torsional Rigidity	Nm/arcmin	3	4.8	10	28.7	120	200		
Noise ²	dB(A)	58	60	62	68	70	72		
Max Input Speed ¹	min ⁻¹	6000	6000	6000	6000	4000	3000		
Rated Input Speed ¹	min ⁻¹	4000	3000	3000	3000	2000	1500		

The subscript "1" the environment temperature is 20°C.
The subscript "2" sound in n1 < 3000min⁻¹, measured at 1 m.

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Servo Planetary Gearbox Standard Size



Model	PSVX65			PSVX85			PSVX115			PSVX142			PSVX180			PSVX220		
Stage	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
K1	65			85			110			142			180			220		
K2	75.5	93	116.7	95	113.7	145	119.5	154	195.8	141	202	263	202	234	266.5	241	285.5	315
K3	φ16			φ22			φ32			φ40			φ55			φ75		
K4	30			36			50			80			82			105		
K5	φ20			φ25			φ40			φ50			φ60			φ85		
K6	φ50			φ80			φ110			φ130			φ160			φ180		
K7	5			10			12			15			20			30		
K8	37			48			65			97			105			138		
K9	M5X12			M6X16			M10X22			M12X26			M20X40			M20X40		
K10	φ5.5			φ6.5			φ9			φ11			φ13			φ17		
K11	φ70			φ100			φ130			φ165			φ215			φ250		
K12	22			28			40			70			70			90		
K13	5			6			10			12			16			20		
K14	18			24.5			35			43			59			79.5		
K15	8			10			14			15			20			25		
K16	114.5			150			194			246.5			170	145		220	170	145
K17	30	31	54.7	37.5	46.2	77.5	42.5	63	104.8	55	101	149.5	62.5	62.5	62.5	76	76	76
C1	φ70			φ90			φ145			φ200			φ215	φ200		φ235	φ215	φ200
C2	M5X12			M6X15			M8X20			M12X12			M12X25	M12X25		M12X25	M12X25	M12X25
C3	φ14			φ19			φ24			φ35			φ42	φ35		φ55	φ42	φ35
C4	32.1			41.3			61.3			81.3			82.5	81.3		116	82.5	81.3
C5	φ50			φ70			φ110			φ114.3			φ180	φ114.3		φ200	φ180	φ114.3
C6	6.5			6.5			8			6.5			8	8		8	8	8
C7	65			85			120			175			190	175		220	190	175