

WPL

Series planetary gearbox

PRODUCT FEATURES

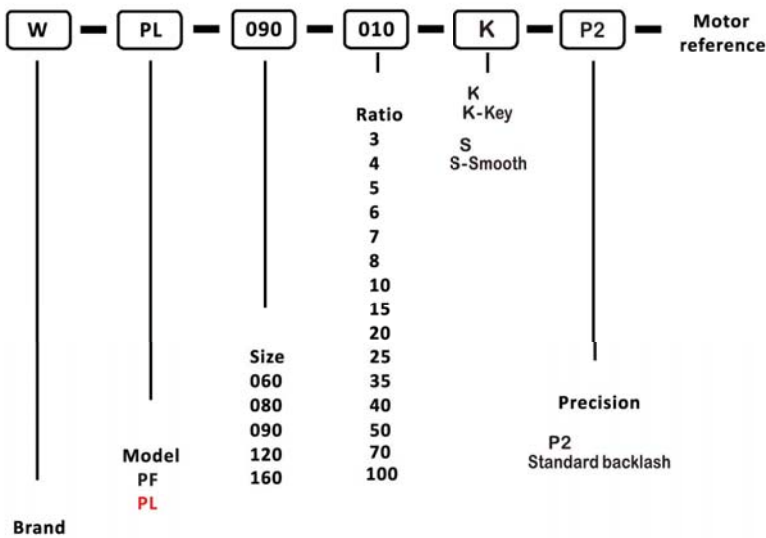
- » Planetary arm bracket and output shaft are one-piece constructed to ensure maximum torsional rigidity.
- » The gears adopt the full-needle design, in order to broaden the contact area and to increase the structure rigidity and the output torque.
- » The mild-steel gears' hardness of adopting surface hardening technology is HRC62, so that the abrasion resistance and impact toughness can achieve best.
- » Because adopting high technology to design the tooth profiles, the best gear tooth profiles are obtained and the noise is reduced.
- » In case to gain power transmission, the maximum clamping force and zero backlash (ultra-precision) are obtained by adopting double-locked method between the gearbox input side and the motor shaft.



INDICATION FOR MODEL

SELECTION

GENERAL NOTICES



- Type, model and torque
- Ratio or output speed
- Working conditions and connection methods
- Quantity and installed machine name
- Input mode and input speed
- Motor brand model or flange and motor shaft size

PLANETARY GEARBOX

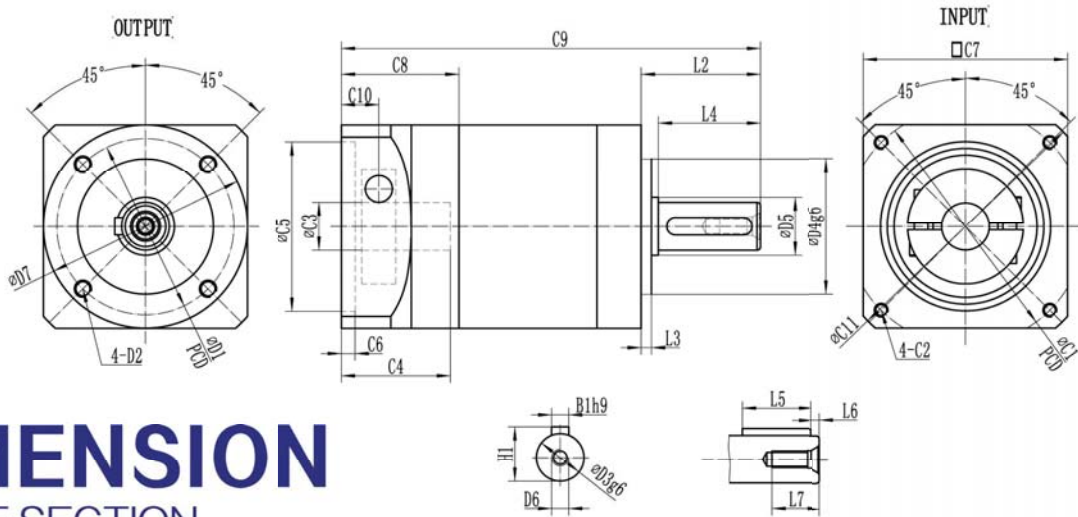
● Performance

Specification		Stage	Ratio	WPF042	WPF060	WPF080	WPF090	WPL120	WPL160
Rated output torque T_{2N}	Nm	1	3	11	18	40	50	125	290
			4	15	36	90	110	230	460
			5	14	40	110	125	260	550
			6	8.5	20	40	50	90	340
			7	8.5	20	40	50	90	340
			8	6	12	22	32	70	210
			10	5	12	22	32	70	210
			12	20	36	90	110	230	460
			15	18	40	110	125	260	550
			16	20	36	90	110	230	460
		2	20	20	40	110	125	260	550
			25	18	40	110	125	260	550
			28	15	36	90	110	230	460
			30	14	18	40	50	125	290
			35	20	40	110	125	260	550
			40	18	36	90	110	230	460
			50	14	40	110	125	260	550
			60	8.5	20	40	50	90	340
			70	8.5	20	40	50	90	340
			80	6	12	22	32	70	210
100	5	12	22	32	70	210			
Motor shaft size	mm	1,2	3-100	6-10	6-14	14-19	14-19	16-24	19-35
Maximum output torque	Nm	1,2	3-100	Double rated output torque					
Rated input speed n_{1N}	rpm	1,2	3-100	5000	4000	3500	3500	3500	2500
Backlash	arcmin	1	3-10	≤15	≤10	≤10	≤10	≤10	≤10
		2	12-100	≤19	≤12	≤12	≤12	≤12	≤12
Torsional rigidity	Nm/arcmin	1,2	3-100	0.7	1.8	4.7	4.85	11	55
Allowable radial force F_{2aB}	N	1,2	3-100	160	220	400	430	1000	4500
Allowable axial force F_{2aB}	N	1,2	3-100	160	240	420	450	1240	4800
Lifespan	hr	1,2	3-100	10000					
Efficiency	%	1	3-10	≥94					
		2	12-100	≥91					
Weight	kg	1	3-10	0.35	1.7	3.5	4.4	12	26.5
		2	12-100	0.45	1.9	4	5	14	29.6
Working temperature	°C	1,2	3-100	-10°C~80°C					
IP Grade		1,2	3-100	IP65					
Lubricating		Synthetic lubricating grease							
Installation direction		1,2	3-100	In any direction					
Noise value ($n_1=3000\text{rpm, off load}$)	dB(A)	1,2	3-100	≤60	≤61	≤63	≤63	≤68	≤75

1. Ratio ($i=N_{in}/N_{out}$)

2. Maximum acceleration torque $T_{2B} = 60\%$ of T_{2NCT}

3. Output speed 100rpm, acting on the center of the output shaft

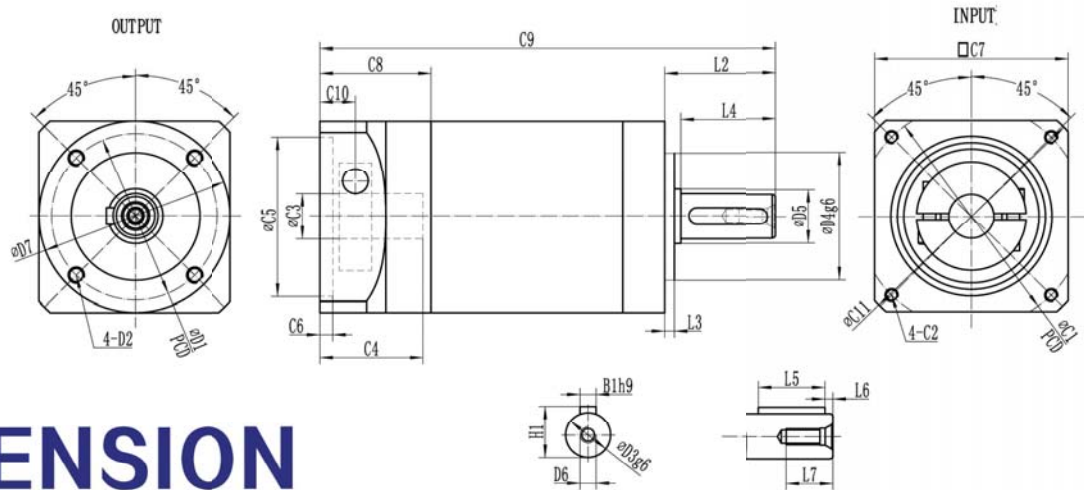


DIMENSION

SINGLE SECTION

- Dimension(single stage,Ratio i=3~10)

Dimension	WPL042-L1	WPL060-L1	WPL080-L1	WPL090-L1	WPL120-L1	WPL160-L1
※D1	34	52	70	80	100	145
※D2	M4	M5	M6	M6	M10	M12
※D3	10	14	20	22	25	40
※D4	26	40	60	68	80	130
D5	12	17	25	30	35	55
D6	M4	M5	M6	M6	M10	M12
D7	58	60	80	90	115	162
L1	42	-	-	-	-	-
※L2	26	35	40	46	55	87
※L3	2	3	3	5	4	5
L4	22.5	30	36	36	50	80
※L5	16	25	25	32	40	70
L6	2.5	2.5	5	2	5	5
L7	10	12.5	18	18	23	25
L8	-	-	-	-	-	-
*C1	46	70	90	90	145	200
*C2	M4	M4	M5	M5	M8	M12
*C3	5-8	6-14	14-19	14-19	19-24	24-35
*C4	26	32	41	41	60	83
*C5	30	50	70	70	110	114.3
*C6	4	4	5	5	8	10
C7	42	60	80	80	130	180
C8	29.5	34.5	46.5	46.5	81.2	107
C9	88	123	160	166	210.2	268.5
C10	10.5	11	16.5	16.5	20	26
C11	56	80	105	105	165	235
※B1	3	5	6	6	8	12
※H1	11.2	16	22.5	24.5	28	43



DIMENSION

DOUBLE SECTION

- Dimension(double stage,Ratio i=15~100)

Dimension	WPL042-L2	WPL060-L2	WPL080-L2	WPL090-L2	WPL120-L2	WPL160-L2
※D1	34	52	70	80	100	145
※D2	M4	M5	M6	M6	M10	M12
※D3	10	14	20	22	25	40
※D4	26	40	60	68	80	130
D5	12	17	25	30	35	55
D6	M4	M5	M6	M6	M10	M12
D7	58	60	80	90	115	162
L1	42	-	-	-	-	-
※L2	26	35	40	46	55	87
※L3	2	3	3	5	4	5
L4	22.5	30	36	36	50	80
※L5	16	25	25	32	40	70
L6	2.5	2.5	5	2	5	5
L7	10	12.5	18	18	23	25
L8	-	-	-	-	-	-
*C1	46	70	90	90	145	200
*C2	M4	M4	M5	M5	M8	M12
*C3	5-8	6-14	14-19	14-19	19-24	24-35
*C4	26	32	41	41	60	83
*C5	30	50	70	70	110	114.3
*C6	4	4	5	5	8	10
C7	42	60	80	80	130	180
C8	29.5	34.5	46.5	46.5	81.2	107
C9	104	142	184.5	190.5	243.7	313.5
C10	10.5	11	16.5	16.5	20	26
C11	56	80	105	105	165	235
※B1	3	5	6	6	8	12
※H1	11.2	16	22.5	24.5	28	43