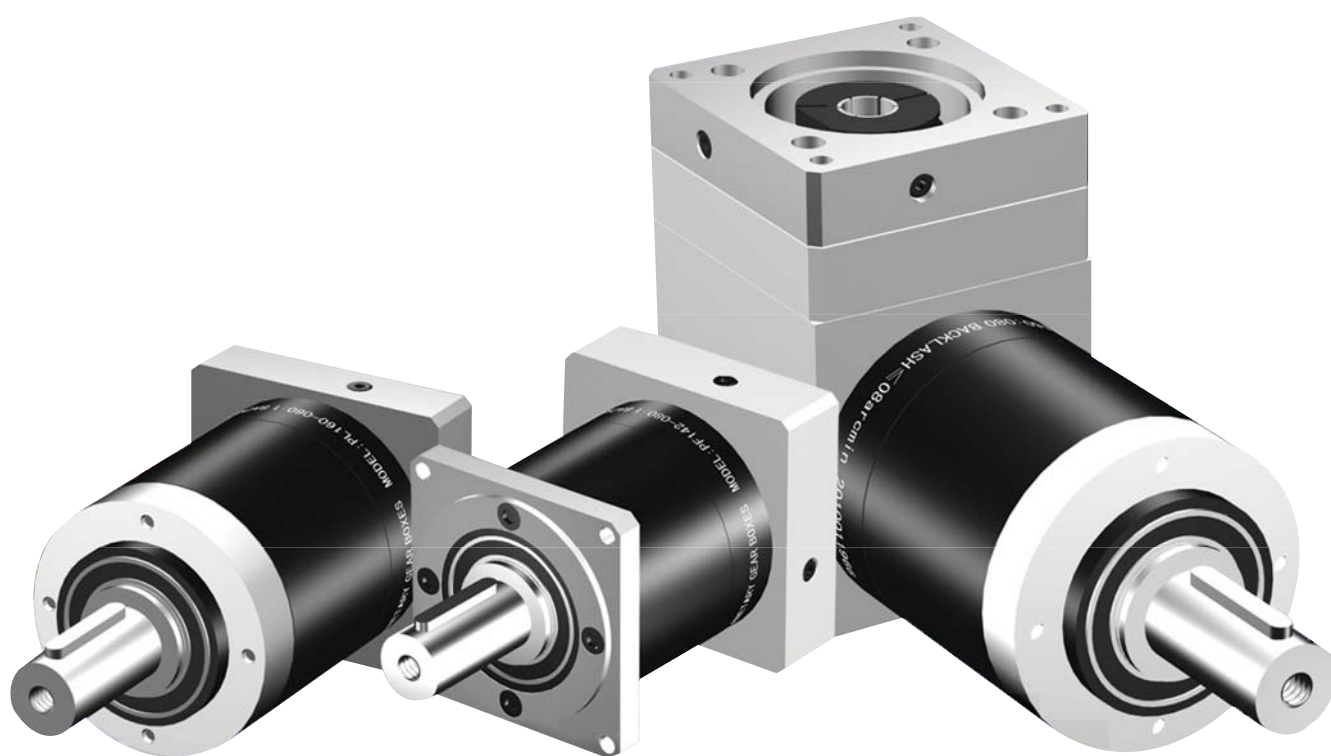




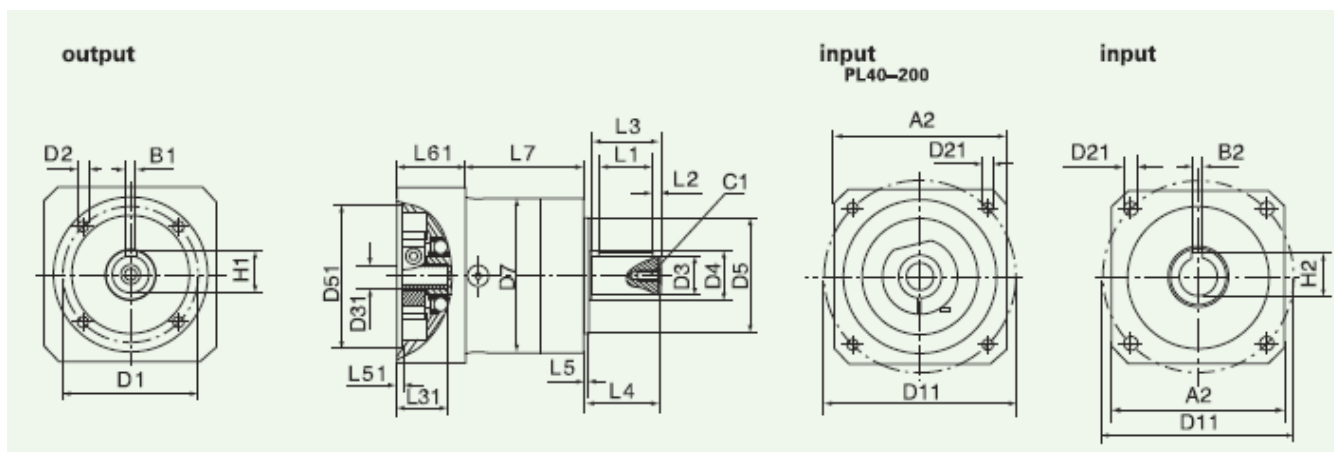
Gearbox Performance

Model Number		Stage	Ratio	WPL40	WPL60	WPL80	WPL120	WPL140	WPL160	WPL200
Nominal Output Torque T2N	Nm	1	3	17	28	50	115	210	400	1000
			4	20	44	120	260	450	800	1780
			5	18	40	110	200	400	700	1600
			6		25	75	120	260	650	1000
			8	6	18	50	100	210	450	950
			10		15	32	70	130	305	
		2	9	17	28	82	125	210	400	1000
			12	20	44	120	260	450	800	1780
			15	18	40	110	230	400	700	1600
			16	20	44	120	260	450	800	1000
			20	20	44	120	260	450	800	1780
			25	18	40	110	230	400	700	1600
			30		40	110	230	260	700	1600
			32	20	44	120	260	450	800	1780
			36		25	75	200	260	650	1000
			40	20	40	110	230	400	700	1600
			48		25	75	200	260	650	1000
			50		40	110	230	300	700	1250
			64	6	18	50	120	210	450	1000
			100		15	32	100	130	305	
Max. Output Torque	Nm	1,2		1.5 times of Nominal Torque						
Emergency Stop Torque T2NOT	Nm	1,2	3~100	3 times of Nominal Torque						
Nominal Input Speed n1N	rpm	1,2	3~100	4500	4000	3500	3500	3000	3000	2500
Max. Input Speed n1B	rpm	1,2	3~100	10000	8000	6000	6000	4500	4500	4000
Micro Backlash P0	arcmin	1	3~10			3	3	3	3	3
		2	9~100			5	5	5	5	5
Reduced Backlash P1	arcmin	1	3~10	12	5	5	5	5	5	5
		2	9~100	14	7	7	7	7	7	7
Standard Backlash P2	arcmin	1	3~10	14	10	8	8	8	8	8
		2	9~100	16	12	10	10	10	10	10
Torsional Rigidity	Nm/arcmin	1,2	3~100	0.7	1.8	4.8	11	22	35	50
Max. Radial Load F2rB	N	1,2	3~100	185	265	400	1240	2250	3700	3300
Max. Axial Load F2aB	N	1,2	3~100	150	220	420	1000	1500	3500	7500
Service Life	hr	1,2	3~100	25000						
Efficiency η	%	1	3~10	≥96% ≥94%						
		2	9~100							
Weight	kg	1	3~10	0.37	0.93	2.35	6.15	11.3	19	31
		2	9~100	0.45	1.15	2.7	8	13.5	24	42
Operating Temp	°C	1,2	3~100	-10 °C ~90 °C						
Lubrication		1,2	3~100	Synthetic lubrication Grease						
Degree of Gearbox Protection		1,2	3~100	IP64						
Mounting Position		1,2	3~100	All Directions						
Noise Level	dB(A)	1,2	3~100	56	58	60	65	68	70	70

Gearbox Inertial

Model Number		Stage	Ratio	WPL40	WPL60	WPL80	WPL120	WPL140	WPL160	WPL200
Mass Moments of Inertia J	Kg.cm2	1	3	0.031	0.135	0.77	2.63	5.83	12.14	28.98
			4	0.022	0.093	0.52	1.79	3.21	7.78	23.67
			5	0.019	0.078	0.45	1.53	3.10	6.07	23.29
			6		0.075	0.42	1.40	2.85	5.24	22.75
			8	0.017	0.065	0.39	1.30	2.10	4.63	20.51
			10		0.063	0.39	1.28	1.95	4.60	20.51
		2	9	0.032	0.136	0.78	2.65	3.17	12.21	29.02
			12	0.027	0.128	0.68	2.58	2.96	12.09	28.75
			15	0.015	0.039	0.72	2.40	2.87	7.47	16.50
			16	0.020	0.089	0.47	1.68	2.43	7.69	23.59
			20	0.007	0.049	0.35	1.60	2.32	6.95	9.35
			25	0.007	0.039	0.25	1.40	2.21	6.65	9.00
			30		0.038	0.20	1.35	2.10	6.59	8.78
			32	0.007	0.038	0.18	1.40	2.23	5.81	8.75
			36		0.036	0.15	1.38	2.30	5.75	8.67
			40	0.005	0.027	0.18	1.30	2.07	5.81	8.75
			50		0.025	0.16	1.28	2.05	5.77	8.70
			64	0.005	0.027	0.16	1.30	2.00	5.28	8.10
			100		0.025	0.16	1.30	2.01	5.28	8.10

Dimensions



Model			WPL40	WPL60	WPL80	WPL120	WPL140	WPL160	WPL200
OUTPUT	B1		3	5	6	8	10	12	14
	C1		M4x10	M5x12	M6x15	M10x22	M12x25	M12x25	M20x42
	H1		11.2	16	22.5	28	35	43	53.5
	D1	Ø	34	52	70	100	120	145	185
	D2	4-	M4x6	M5x8	M6x10	M10x15	M10x15	M12x20	M12x25
	D3	Øh6	10	14	20	25	32	40	50
	D4	Ø	12	17	25	35	45	55	70
	D5	Øh7	26	40	60	80	100	130	160
	D7		40	60	80	115	140	162	215
	L1		15	25	25	40	55	65	70
	L2		2.5	2.5	4	5	6	8	8
	L3		23	30	36	50	70	80	85
	L4		36	35	40	55	75	85	100
	L5		2	3	3	4	5	5	15
	L7	1stage	36.6	44.3	60	65.5	78	94.5	128
		2stage	50.5	59	77.5	88	107.5	133	167.5
INPUT	A2	MOTOR DIMENSION	45	60	80	120	140	160	200
	D11		46	70	90	145	165	200	225
	D21		M4x10	M5x12	M6x15	M8x20	M8x20	M12x25	M12x25
	D31		8	14	19	22	22	35	42
	D51		30	50	70	110	114.3	114.3	180
	L41		25	30	40	55	79	80	80
	L51		3	4	5	5	6	6	8
	L61		29	22	32	41	25	63	78

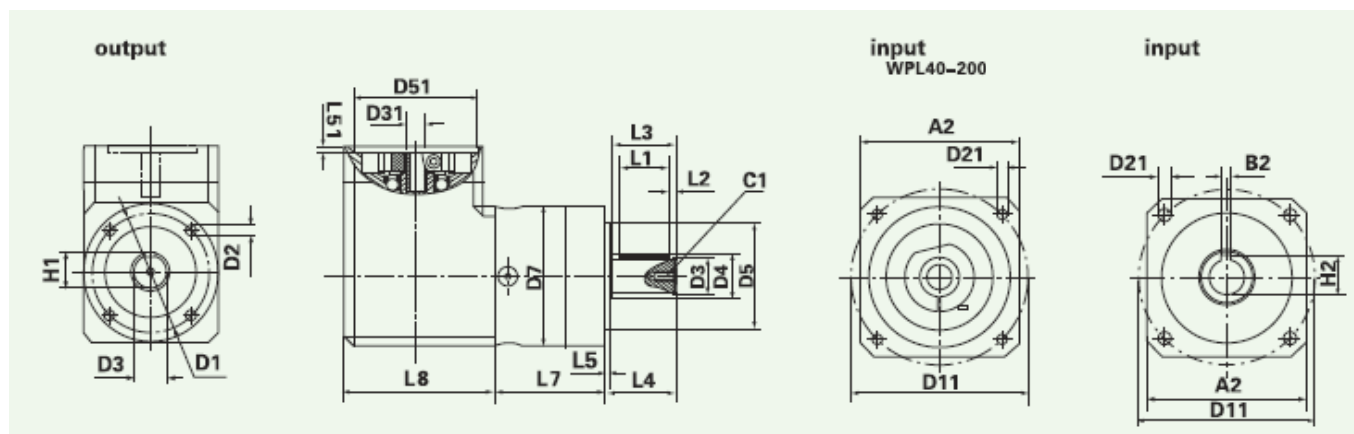
Gearbox Performance

Model Number		Stage	Ratio	WWPL40	WWPL60	WWPL80	WWPL120	WWPL140	WWPL160	WWPL200
Nominal Output Torque T2N	Nm	1	4	20	44	120	260	450	800	1780
			5	18	40	110	200	400	700	1600
			6		25	75	120	260	650	1000
			8	6	18	50	100	210	450	950
			10		15	32	70	130	305	
		2	9	17	28	82	125	210	400	1000
			12	20	44	120	260	450	800	1780
			15	18	40	110	230	400	700	1600
			16	20	44	120	260	450	800	1000
			20	20	44	120	260	450	800	1780
			25	18	40	110	230	400	700	1600
			30		40	110	230	260	700	1600
			32	20	44	120	260	450	800	1780
			36		25	75	200	260	650	1000
			40	20	40	110	230	400	700	1600
			48		25	75	200	260	650	1000
			50		40	110	230	300	700	1250
			64	6	18	50	120	210	450	1000
			100		15	32	100	130	305	
Max. Output Torque	Nm	1,2		1.5 times of Nominal Torque						
Emergency Stop Torque T 2NOT	Nm	1,2	3~100	3 times of Nominal Torque						
Nominal Input Speed n1N	rpm	1,2	3~100	4500	4000	3500	3500	3000	3000	2500
Max. Input Speed n1B	rpm	1,2	3~100	10000	8000	6000	6000	4500	4500	4000
Micro Backlash P0	arcmin	1	3~10			5	5	5	5	5
		2	9~100			7	7	7	7	7
Reduced Backlash P1	arcmin	1	3~10	16	7	7	7	7	7	7
		2	9~100	18	9	9	9	9	9	9
Standard Backlash P2	arcmin	1	3~10	22	16	10	10	10	10	10
		2	9~100	26	18	12	12	12	12	12
Torsional Rigidity	Nm/arcmin	1,2	3~100	0.7	1.8	4.8	11	22	35	50
Max. Radial Load F2rB	N	1,2	3~100	185	265	400	1240	2250	3700	3300
Max. Axial Load F2aB	N	1,2	3~100	150	220	420	1000	1500	3500	7500
Service Life	hr	1,2	3~100	25000						
Efficiency η	%	1	3~10	≥95%						
		2	9~100	≥93%						
Weight	kg	1	3~10	0.51	1.7	4.4	12	17	26	50
		2	9~100	0.61	1.9	5.0	14	19	30	61
Operating Temp	°C	1,2	3~100	-10 °C ~90 °C						
Lubrication		1,2	3~100	Synthetic lubrication Grease						
Degree of Gearbox Protection		1,2	3~100	IP64						
Mounting Position		1,2	3~100	All Directions						
Noise Level	dB(A)	1,2	3~100	60	61	63	68	70	75	75

Gearbox Inertial

Model Number		Stage	Ratio	WWPL40	WWPL60	WWPL80	WWPL120	WWPL140	WWPL160	WWPL200
Mass Moments of Inertia J	Kg.cm2	1	3	0.031	0.135	0.77	2.63	5.83	12.14	28.98
			4	0.022	0.093	0.52	1.79	3.21	7.78	23.67
			5	0.019	0.078	0.45	1.53	3.10	6.07	23.29
			6		0.075	0.42	1.40	2.85	5.24	22.75
			8	0.017	0.065	0.39	1.30	2.10	4.63	20.51
			10		0.063	0.39	1.28	1.95	4.60	20.51
		2	9	0.032	0.136	0.78	2.65	3.17	12.21	29.02
			12	0.027	0.128	0.68	2.58	2.96	12.09	28.75
			15	0.015	0.039	0.72	2.40	2.87	7.47	16.50
			16	0.020	0.089	0.47	1.68	2.43	7.69	23.59
			20	0.007	0.049	0.35	1.60	2.32	6.95	9.35
			25	0.007	0.039	0.25	1.40	2.21	6.65	9.00
			30		0.038	0.20	1.35	2.10	6.59	8.78
			32	0.007	0.038	0.18	1.40	2.23	5.81	8.75
			36		0.036	0.15	1.38	2.30	5.75	8.67
			40	0.005	0.027	0.18	1.30	2.07	5.81	8.75
			50		0.025	0.16	1.28	2.05	5.77	8.70
			64	0.005	0.027	0.16	1.30	2.00	5.28	8.10
			100		0.025	0.16	1.30	2.01	5.28	8.10

Dimensions



Model			WWPL40	WWPL60	WWPL80	WWPL120	WWPL140	WWPL160	WWPL200
OUTPUT	B1		3	5	6	8	10	12	14
	C1		M4x10	M5x12	M6x15	M10x22	M12x25	M12x25	M20x42
	H1		11.2	16	22.5	28	35	43	53.5
	D1	Ø	34	52	70	100	120	145	185
	D2	4-	M4x6	M5x8	M6x10	M10x15	M10x15	M12x20	M12x25
	D3	Øh6	10	14	20	25	32	40	50
	D4	Ø	12	17	25	35	45	55	70
	D5	Øh7	26	40	60	80	100	130	160
	D7		40	60	80	115	140	162	215
	L1		15	25	25	40	55	65	70
	L2		2.5	2.5	4	5	6	8	8
	L3		23	30	36	50	70	80	85
	L4		36	35	40	55	75	85	100
	L5		2	3	3	4	5	5	15
	L7	1stage	36.6	44.3	60	65.5	78	94.5	128
		2stage	50.5	59	77.5	88	107.5	133	167.5
	L8		49	75	103.6	125.5	140	151.2	205
	A2	MOTOR DIMENSION	45	60	80	120	140	160	200
	D11		46	70	90	145	165	200	225
	D21		M4x10	M5x12	M6x15	M8x20	M8x20	M12x25	M12x25
	D31		8	14	19	22	22	35	42
	D51		30	50	70	110	114.3	114.3	180
	L41		25	30	40	55	79	80	80
	L51		3	4	5	5	6	6	8
	L61		29	22	32	41	25	63	78