



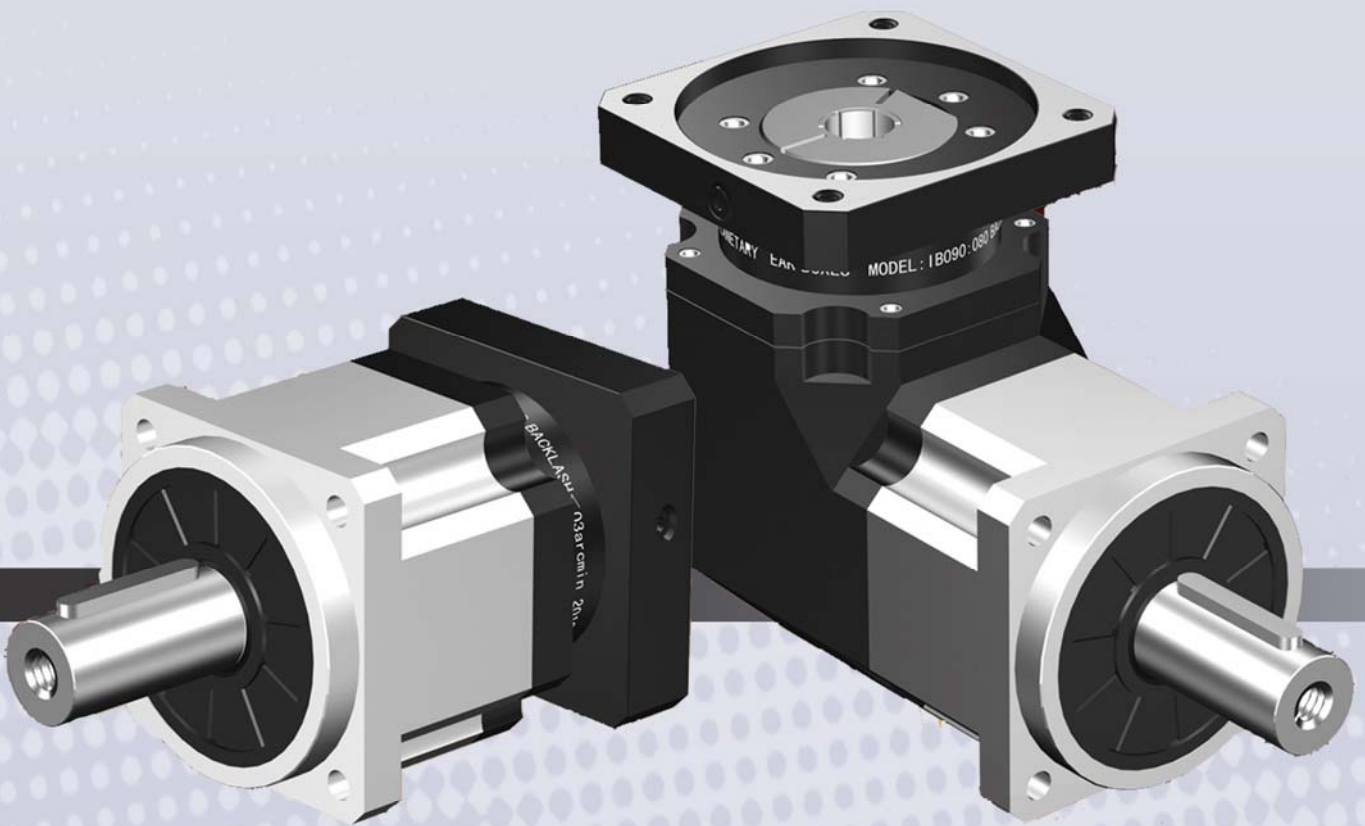
纽星机电  
NIUXINGJIDIAN



NEWSTART<sup>®</sup>

# AB Series

HIGH PRECISION PLANETARY GEARBOXES





# AB SERIES Specifications



## Gearbox Performance

Model Number		Stage	Ratio	AB42	AB60	AB90	AB115	AB142	AB180	AB220
Nominal Output Torque T <sub>2N</sub>	Nm	1	3	19	50	130	208	342	588	1140
			4	20	55	140	290	542	1050	1700
			5	22	60	160	330	650	1200	2000
			6	20	55	150	310	600	1100	1900
			7	19	50	140	300	550	1100	1800
			8	17	45	120	260	500	1000	1600
		2	10	14	40	100	230	450	900	1500
			15	20	55	130	290	542	1050	1700
			16	22	60	140	330	650	1200	2000
			20	22	60	160	330	650	1200	2000
			25	22	60	160	330	650	1200	2000
			32	19	50	140	290	542	1050	1700
			40	17	45	120	260	500	1000	1600
			64	17	45	120	260	500	1000	1600
100	14	40	100	230	450	900	1500			
Max. Output Torque	Nm	1,2		1.5 times of Nominal Torque						
Emergency Stop Torque T <sub>2NOT</sub>	Nm	1,2	3~100	3 times of Nominal Torque						
Nominal Input Speed n <sub>1N</sub>	rpm	1,2	3~100	4000	4000	3500	3000	2500	2500	2000
Max. Input Speed n <sub>1B</sub>	rpm	1,2	3~100	6000	6000	4500	4500	4500	4000	4000
Micro Backlash P <sub>0</sub>	arcmin	1	3~10	--	--	--	2	2	2	2
		2	9~100	--	--	--	4	4	4	4
Reduced Backlash P <sub>1</sub>	arcmin	1	3~10	3	3	3	3	3	3	3
		2	9~100	5	5	5	5	5	5	5
Standard Backlash P <sub>2</sub>	arcmin	1	3~10	5	5	5	5	5	5	5
		2	9~100	7	7	7	7	7	7	7
Torsional Rigidity	Nm/arcmin	1,2	3~100	3	7	14	25	50	145	225
Max. Radial Load F <sub>2rB</sub>	N	1,2	3~100	702	1377	2985	6100	8460	13050	8700
Max. Axial Load F <sub>2aB</sub>	N	1,2	3~100	350	630	1300	2400	4000	6200	4800
Service Life	hr	1,2	3~100	25000						
Efficiency η	%	1	3~10	≥96%						
		2	9~100	≥94%						
Weight	kg	1	3~10	0.6	1.4	3.3	6.9	13	31	63
		2	9~100	0.9	1.6	4.7	8.7	17	35	66
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	70	70	70

## Gearbox Inertial

Model Number		Stage	Ratio	AB42	AB60	AB90	AB115	AB142	AB180	AB220
Mass Moments of Inertia J	kg·cm <sup>2</sup>	1	3	0.03	0.16	0.51	3.25	28.98	28.98	69.61
			4	0.03	0.14	0.48	2.74	23.67	23.67	54.37
			5	0.03	0.13	0.47	2.71	23.29	23.29	53.27
			8	0.03	0.13	0.44	2.56	22.59	22.59	50.84
			10	0.03	0.13	0.44	2.57	22.51	22.51	50.56
			12	0.03	0.03	0.13	0.47	7.42	7.42	23.29
		2	15	0.03	0.03	0.13	0.47	7.42	7.42	23.29
			16	0.03	0.03	0.13	0.47	7.42	7.42	23.29
			20	0.03	0.03	0.13	0.47	7.42	7.42	23.29
			25	0.03	0.03	0.13	0.47	7.42	7.42	23.29
			32	0.03	0.03	0.13	0.47	7.42	7.42	23.29
			40	0.03	0.03	0.13	0.47	7.42	7.42	23.29
			64	0.03	0.03	0.13	0.44	7.03	7.03	23.51
			100	0.03	0.03	0.13	0.44	7.03	7.03	23.51

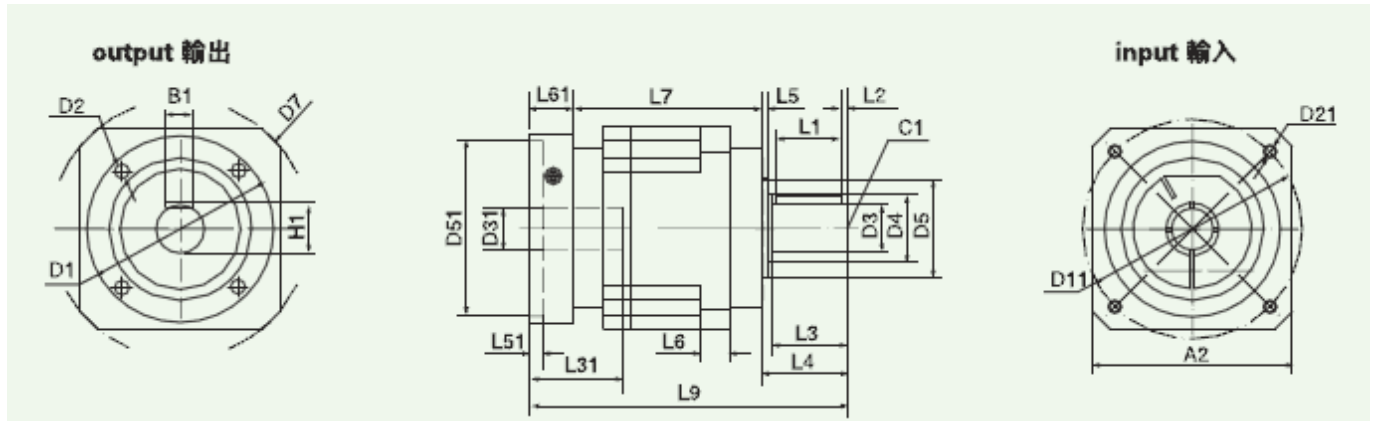


# AB SERIES

## Specifications



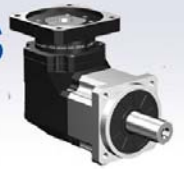
### Dimensions



Model		AB42	AB60	AB90	AB115	AB142	AB180	AB220	
OUTPUT	A1	42	60	90	115	142	180	220	
	B1	5	5	6	10	12	16	20	
	C1	M4x8	M5x12	M8X19	M12X28	M16X36	M20x42	M20x42	
	H1	15	18	24.5	35	43	59	79.5	
	D1	∅	50	70	100	130	165	215	250
	D2	4-∅	3.4	5.5	6.6	9	11	13	17
	D3	∅h7	13	16	22	32	40	55	75
	D4	∅	22	45	60	80	75	95	115
	D5	∅h7	35	50	80	110	130	160	180
	D7		56	80	116	152	185	240	292
	L1		15	25	30	40	65	70	90
	L2		3	2	5	5	3	6	7
	L3		19.5	28.5	36.5	61	79	82	105
	L4		26	37	48	65	97	105	138
	L5		5.5	7	10	12	15	20	30
L6		4	6	8	10	12	15	20	
L7	1stage	31	61	78.5	102	119.5	154	163.5	
	2stage	58.5	98	126.5	143.5	176	209.5	248	
L9	1stage	86.5	117	143.5	186.5	239	288	364.5	
	2stage	114	154	191.5	225.5	292.5	337	415	
INPUT	A2	42	60	90	115	142	190	220	
	D11	46	70	100	130	165	215	235	
	D21	M4x10	M5x12	M6x15	M8x20	M12x25	M12x25	M12x25	
	D31	10	14	19	32	35	45	55	
	D51	30	50	80	110	130	180	200	
	L31	25	30	40	55	60	80	110	
	L51	3.5	8	4	5	6	6	6	
L61	29	22	17	20	25	29	63		



# ABR SERIES Specifications



## Gearbox Performance

Model Number		Stage	Ratio	ABR42	ABR60	ABR90	ABR115	ABR142	ABR180	ABR220
Nominal Output Torque T <sub>2N</sub>	Nm	1	3	19	50	130	208	342	588	1140
			4	20	55	140	290	542	1050	1700
			5	22	60	160	330	650	1200	2000
			8	17	45	120	260	500	1000	1600
			10	14	40	100	230	450	900	1500
		2	15	20	55	130	290	542	1050	1700
			16	22	60	140	330	650	1200	2000
			20	22	60	160	330	650	1200	2000
			25	22	60	160	330	650	1200	2000
			32	19	50	140	290	542	1050	1700
			40	17	45	120	260	500	1000	1600
			64	17	45	120	260	500	1000	1600
			100	14	40	100	230	450	900	1500
			Max. Output Torque	Nm	1,2		1.6 times of Nominal Torque			
Emergency Stop Torque T <sub>2NOT</sub>	Nm	1,2	3-100	3 times of Nominal Torque						
Nominal Input Speed n <sub>1N</sub>	rpm	1,2	3-100	4000	4000	3500	3000	2500	2500	2000
Max. Input Speed n <sub>1B</sub>	rpm	1,2	3-100	6000	6000	4500	4500	4500	4000	4000
Micro Backlash P <sub>0</sub>	arcmin	1	3-10		2	2	2	2	2	2
		2	9-100		4	4	4	4	4	4
Reduced Backlash P <sub>1</sub>	arcmin	1	3-10	5	5	5	5	5	5	5
		2	9-100	7	7	7	7	7	7	7
Standard Backlash P <sub>2</sub>	arcmin	1	3-10	10	10	10	10	10	10	10
		2	9-100	14	14	14	14	14	14	14
Torsional Rigidity	Nm/arcmin	1,2	3-100	3	7	14	25	50	145	225
Max. Radial Load F <sub>2rB</sub>	N	1,2	3-100	702	1377	2985	6100	8460	13050	8700
Max. Axial Load F <sub>2aB</sub>	N	1,2	3-100	350	630	1300	2400	4000	6200	4800
Service Life	hr	1,2	3-100	25000						
Efficiency η	%	1	3-10	>95%						
		2	9-100	>92%						
Weight	kg	1	3-10	1.0	2.0	4.6	11.1	21.8	43.8	78.0
		2	9-100	1.3	2.1	5.8	12.1	22.4	46.8	81.9
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	61	63	65	68	70	70	75

## Gearbox Inertial

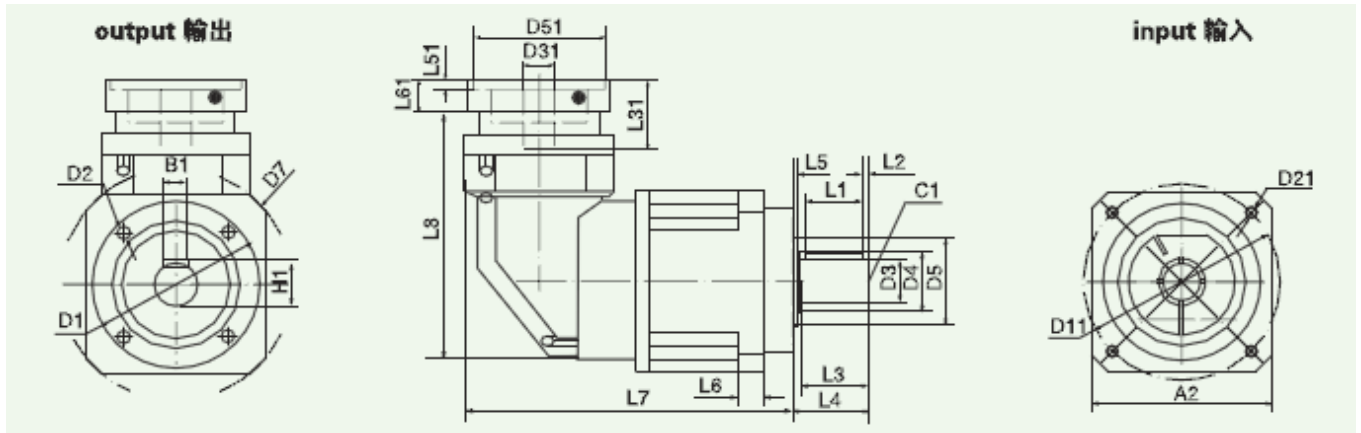
Model Number		Stage	Ratio	ABR42	ABR60	ABR90	ABR115	ABR142	ABR180	ABR220
Mass Moments of Inertia J	kg·cm <sup>2</sup>	1	3	0.71	1.521	5.956	28.7	186	197	220.5
			4	0.654	1.331	5.924	27.6	183	195.5	218.5
			5	0.6	1.168	5.441	26.6	178	194.5	214.5
			8	0.352	1.004	4.989	25.8	173	191.5	197.7
			10	0.516	0.966	4.883	18	90.4	102.5	107.2
		2	12	0.697	0.705	1.519	6.218	89.8	101.3	105.1
			15	0.655	0.666	1.443	6.136	88.3	99.9	103.8
			16	0.639	0.642	1.366	6.082	87.2	99.4	102.1
			20	0.591	0.593	1.190	6.016	85.1	98.9	101.5
			25	0.590	0.591	1.186	5.5	29.6	97.2	99.4
			32	0.528	0.529	1.013	5.028	27.8	95.3	98.0
			40	0.528	0.528	1.011	5.012	27.5	94.8	97.0
			64	0.528	0.528	1.01	5.004	20.6	92.9	95.8
			100	0.514	0.514	0.97	4.892	17.7	91.7	93.6



# ABR SERIES Specifications



## Dimensions



Model		ABR42	ABR60	ABR90	ABR115	ABR142	ABR180	ABR220	
OUTPUT	A1	42	60	90	115	142	180	220	
	B1	5	5	6	10	12	16	20	
	C1	M4x8	M5x12	M8X19	M12X28	M16X36	M20x42	M20x42	
	H1	15	18	24.5	35	43	59	79.5	
	D1	∅	50	70	100	130	165	215	250
	D2	4-∅	3.4	5.5	6.6	9	11	13	17
	D3	∅h7	13	16	22	32	40	55	75
	D4	∅	22	45	60	80	75	95	115
	D5	∅h7	35	50	80	110	130	160	180
	D7		56	80	116	152	185	240	292
	L1		15	25	30	40	65	70	90
	L2		3	2	5	5	3	6	7
	L3		19.5	28.5	36.5	61	79	82	105
	L4		26	37	48	65	97	105	138
	L5		5.5	7	10	12	15	20	30
	L6		4	6	8	10	12	15	20
L7	1stage	85.5	108	155	194	236	289	346	
	2stage	113	126.5	158.5	220	268	326	383	
L8	1stage	61	92.5	135.5	172	213	274.5	315.5	
	2stage	61	70	107.5	148	185.5	232	294.5	
INPUT	A2	42	60	90	115	142	190	220	
	D11	46	70	100	130	165	215	235	
	D21	M4x10	M5x12	M6x15	M8x20	M12x25	M12x25	M12x25	
	D31	10	14	19	32	35	45	55	
	D51	30	50	80	110	130	180	200	
	L31	25	30	40	55	60	80	110	
	L51	3.5	8	4	5	6	6	6	
	L61	29	22	17	20	25	29	63	