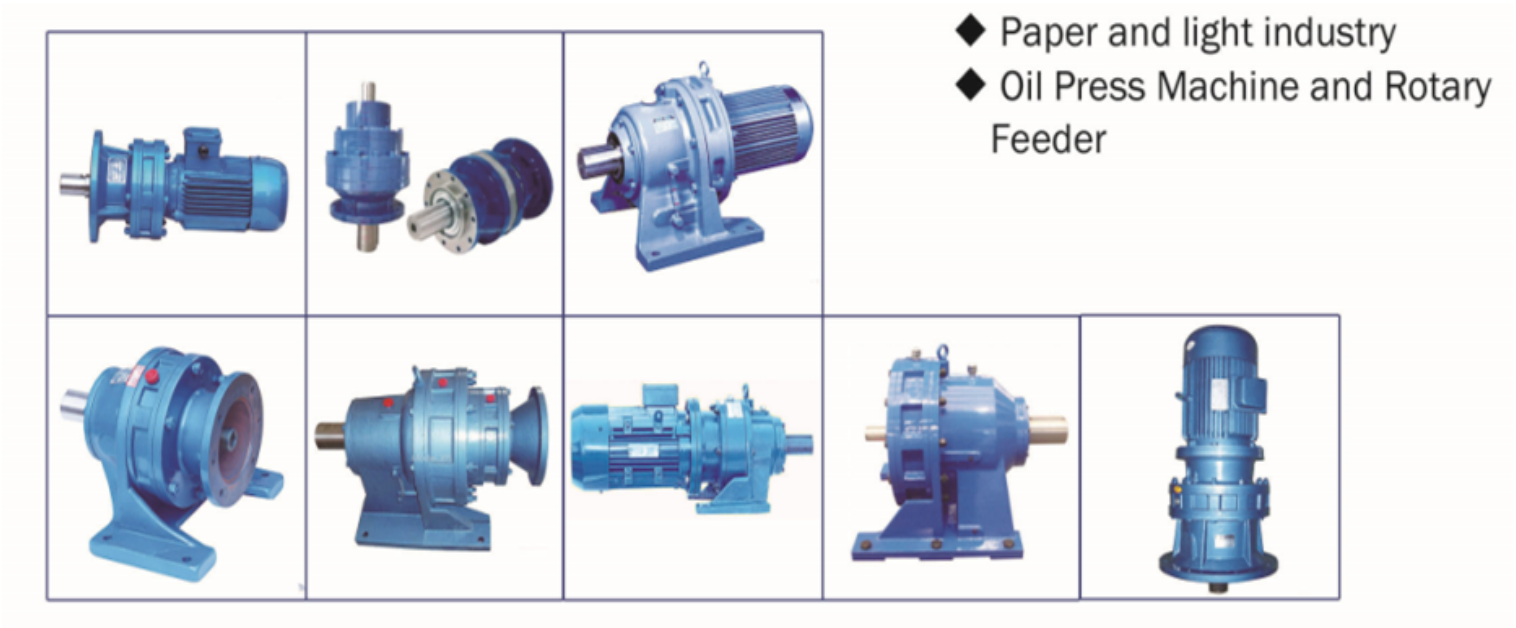
AERO
CYCLO DRIVE

CYCLO DRIVE®

Contents



I. Cycloidal Pinwheel Reducer

1.1 Preface

cycloidal pinwheel reducer, adopting the principle of planetary drive with small teeth difference as well as engagement of cycloid pin gear, is a kind of novelty transmission machinery and drive reducer widely used in the fields of textile printing, light and food industry, metallurgy mine, petrochemical industry, lifting and transport, and engineering machinery and so on.

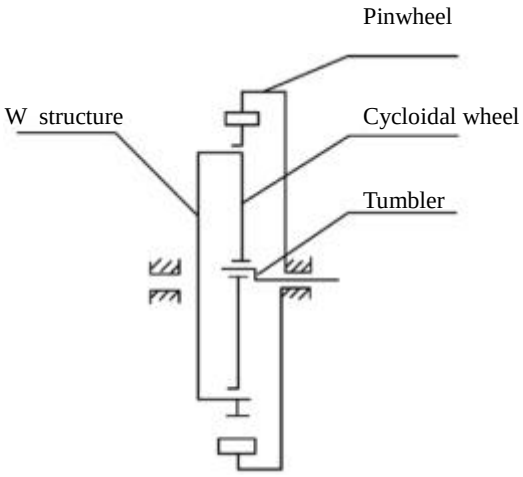
Our company manufactures cycloidal pinwheel reducers with excellent quality, reliable performance, complete specifications and reasonable price, which are awarded the title of “Quality Products of Jiangsu and Ministry of Machine Building”.

1.2 Structure Principle

Overall transmission device of planetary cycloidal pinwheel reducer is composed of three parts, input, speed reduction and output.

Early input shaft is equipped with a double-eccentric bushing with dislocation of 180°, and eccentric bushing is equipped with two roller bearings to form H structure. Center hole of two cycloidal wheels is the roller path of tumbler bearing on eccentric bushing, and a group of circular pinwheels are engaged in cycloidal wheel and pin wheel, so that inner gearing reducer structure with small teeth difference takes shape, (pin gear is equipped with pin gear set in the reducer with small speed ratio to reduce friction)

When input shaft moves a circle together with eccentric bushing, due to the characteristics of flank curve of cycloidal wheel and the restraint of gear pin of pin wheel, cycloidal wheel starts plane motion with revolution and autorotation. When input shaft moves forward a circle, so does eccentric bushing. And cycloidal wheels get through a teeth difference in the opposite direction, so that speed is reduced. By means of W output structure, low-speed autorotation motion of cycloidal wheel is transferred to output shaft through pin roll, so lower output speed is achieved



1.3 Characteristics

1.3.1High reduction ratio and efficiency

Single-stage transmission can produce the reduction ration of 1:87 and over 90% efficiency. Multi-stage transmission will offer higher reduction ratio.

1.3.2Compact structure and small volume

Due to the adoption of planetary transmission principle, input shaft and output shaft are at the same axis, so it has compact structure and small volume.

1.3.3Stable operation and low noise

Cycloidal gear pins have more engagement, bigger overlap coefficient and mechanism of stable machine parts, so

1.3.4Reliable operation and long service life

Major parts are manufactured with bearing steel, so they have excellent mechanical performance. The adoption of rolling friction makes them durable in use.

1.3.5Powerful overload capacity, strong resistance to impact, small moment of inertia, and applicable to occasions with frequent stars and positive and negative rotating.

1. Model No. **Chart 1**

First-stage	Second-stage	Third-stage
09	10	2009
0	20	310
1	31	420
2	41	531
3	42	631
4	52	742
5	53	852
6	63	953
7	74	
8	84	
9	85	
	95	

2. Transmission ratio **Chart 2**

First-stage	Second-stage		Third-stage
7	99(9×11)	1505(35×43)	Shown as Chart 7
9	121(11×11)	1849(43×43)	
11	187(11×17)	2065(35×59)	
17	289(17×17)	2537(43×59)	
23	391(17×23)	3481(59×59)	
29	493(17×29)	4189(59×71)	
35	595(17×35)	5133(59×87)	
43	731(17×43)	7569(87×87)	
59	841(29×29)		
71	1003(17×59)		
87	1225(35×35)		

Note: In line with structural style, it is grouped into horizontal type and vertical type; in line with the connecting way of driver, it is grouped into double-shaft type, motor connecting type and motor direct-coupled type

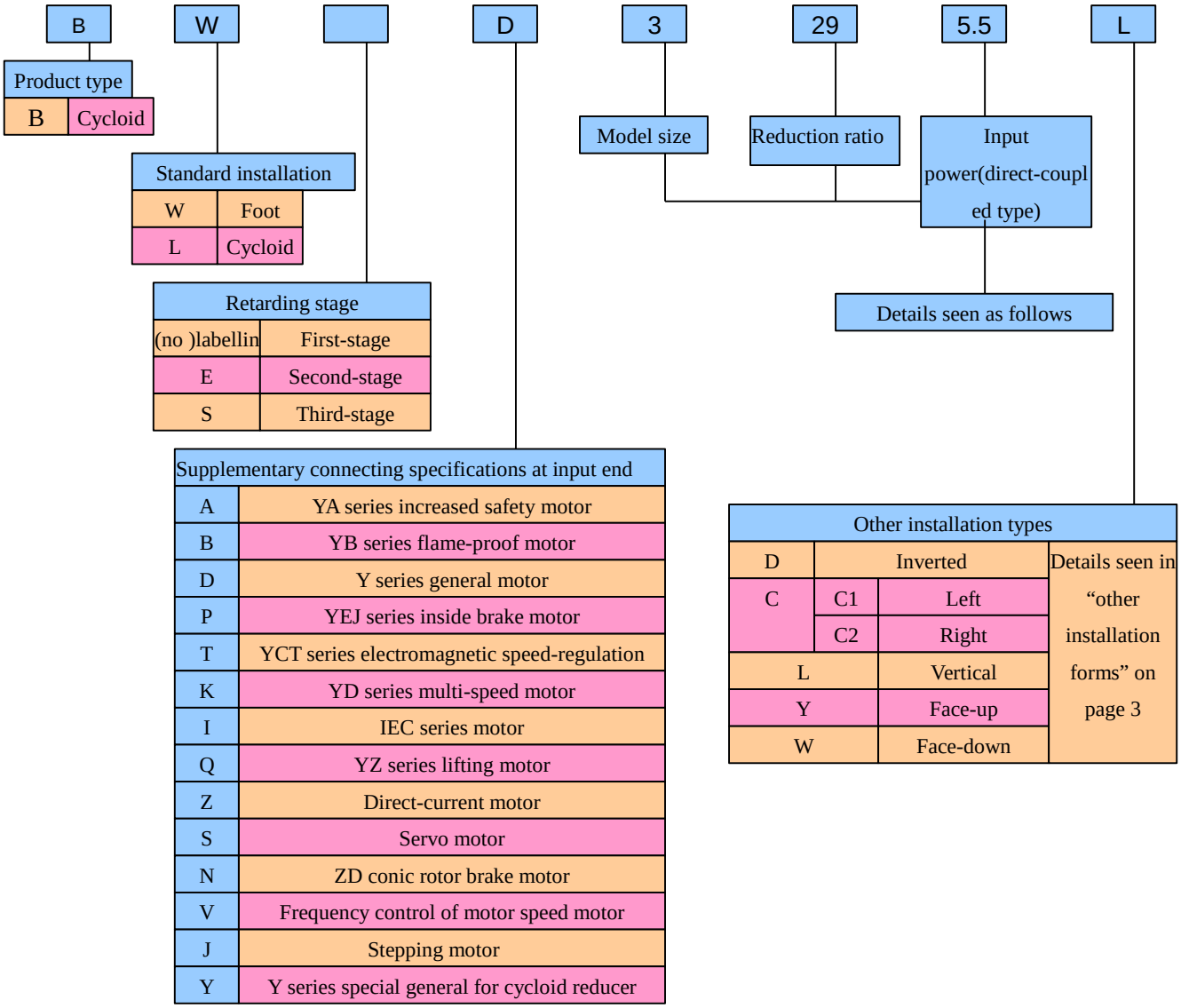
Note: Second-stage and third-stage type of machines can willfully combine the transmission ratio of first-stage type of machines. You'd better contact with our technical department if you need other transmission ratio.

3. Table of comparison for models of cycloidal pinwheel reducers

Standard of reducer	First-stage											
JB/T2982-94A	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12
JB/T2982-94B	B09	B0	B1	B2	B3	B4		B5	B6	B7	B8	B9
JB2982-81		B12	B15	B18	B22	B27		B33	B39	B45	B55	B65
Standard of reducer	Second-stage											
JB/T2982-94A	X32	X42	X53	X63	X64	X74	X84	X85	X95	X106	X118	X128
JB/T2982-94B	B10	B20	B31	B41	B42		B52	B53	B63	B74	B85	B95
JB2982-81		B1812	B2215	B2715	B2718		B3318	B3322	B3922	B4527	B5533	B6533

Note: Different standard models basically have the same performance index but a little difference in contour, installation and connecting dimensions, and users should select JB/T2982-94 A or B standard to the greatest extent.

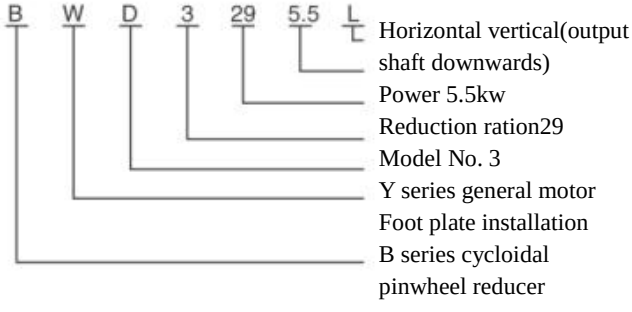
4. Model expressions

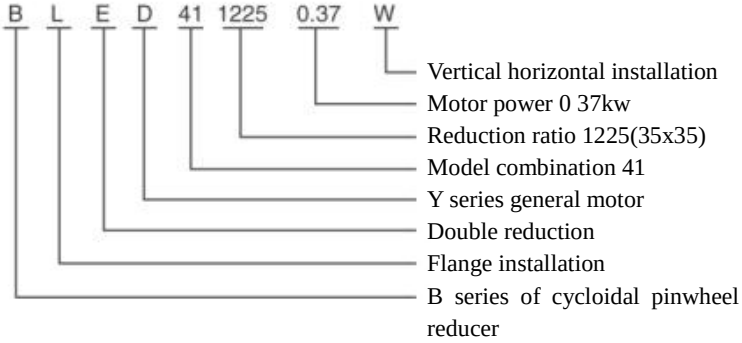


Input power

Input power – only applicable to direct-coupled motor (kw)																					
Power 4	0.18	0.25	0.37	0.55	0.75	1.1	1.5	2.2	3.0	4.0	5.5	7.5	11	15							
Power 6															18.5	22	30	37	45	55	75

5. Demonstration of models

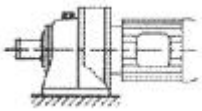
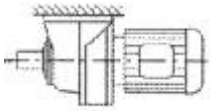
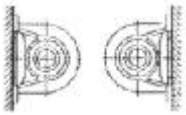
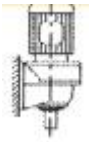
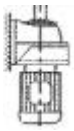
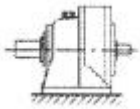
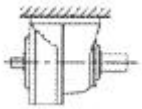
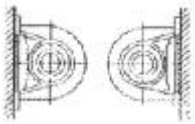
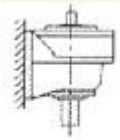
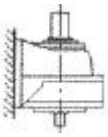
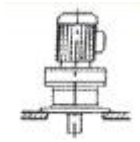
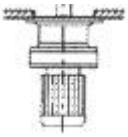
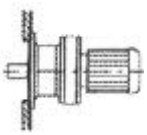
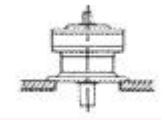
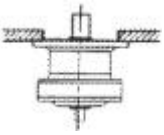
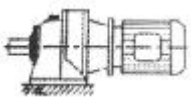
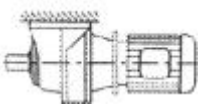
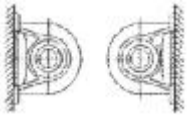
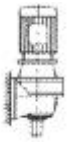
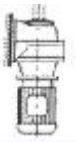


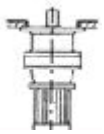
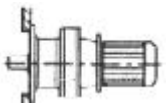


Note: In principle, combination of all levels of transmission ration takes the first-stage(high speed end) transmission ratio as the smaller one in the second-stage and third-stage reducer, the transmission ratio in the

first-stage or second-stage (low speed end) as the bigger transmission ratio

6. Installation types

Standard installation types	Other installation types				
	Inverted	Sided	Vertical	Face-up	Horizontal
BWY 	D 	C1 C2 	L 	Y 	
Horizontal direct-coupled	Horizontal direct-coupled inverted	Horizontal direct-coupled sided	Horizontal direct-coupled vertical	Horizontal direct-coupled face-up	
BW 	D 	C1 C2 	L 	Y 	
Horizontal double-shaft	Horizontal double-shaft inverted	Horizontal double-shaft sided	Horizontal double-shaft vertical	Horizontal double-shaft face-up	
BLY type 				Y 	W 
Vertical direct-coupled				Vertical direct-coupled face-up0	Vertical direct-coupled face-down
BL type 				Y 	W 
Vertical double-shaft				Vertical double-shaft face-up	Vertical double-shaft face-down
BWD type 	D 	C1 C2 	L 	Y 	
Horizontal general motor model	Horizontal general motor model Inverted installation	Horizontal general motor model Inverted installation	Horizontal general motor model Vertical Installation	Horizontal general motor model Face-up Installation	

BLD type 				Y 	W 
Vertical motor connecting type(with motor)				Vertical motor connecting type(with motor)face-up installation	Vertical motor connecting type(with motor)face-down installation

7. Bearing capacity

Allowable power and torque of single transmission reducer (bearing coefficient K=l.00) Chart 5

Model No.	Allowable input power Allowable output torque	Transmission ratio I										Scope of allowable power	
		9	10	17	23	29	35	43	59	71	87	Pmax	Pmin
Input speed n1		1500 (r/min)										NO. of motor poles 4P	
B09/×1	P(kW) T(N.m)	0.55 0.30	0.37 26	0.37 38	0.25 37	0.25 43	0.25 52	0.18 50				0.55	0.18
B0/×2	P(kW) T(N.m)	1.1 58	1.1 70	0.75 74	0.75 101	0.55 93	0.55 112	0.37 93	0.25 86			1.1	0.18
B1/×3	P(kW) T(N.m)	2.2 117	2.2 143	2.2 220	1.5 203	1.1 188	1.1 227	0.75 190	0.55 191	0.55 230		2.2	0.25
B2×4	P(kW) T(N.m)	4 210	4 260	4 400	3 400	2.2 373	1.5 307	1.5 377	1.1 380	0.75 315	0.75 380	4	0.55
B3/×5	P(kW) T(N.m)	11 580	7.5 485	7.5 750	5.5 745	5.5 935	4 820	4 1010	2.2 765	2.2 915	1.5 765	11	0.55
B4/×6/×7	P(kW) T(N.m)	11 580	11 713	11 1100	11 1485	7.5 1280	7.5 1540	5.5 1390	4 1390	4 1670	3 1530	11	2.2
B5/×8	P(kW) T(N.m)		18.5 1191	18.5 1842	18.5 2492	15 2547	15 3075	11 2770	7.5 2591	7.5 3119	5.5 2802	18.5	2.2
B6/×9	P(kW) T(N.m)								15 5183	11 4574	11 5605	15	5.5
B7/10	P(kW) T(N.m)										15 7643	15	11
Output speed n2 (r/min)		167	136	88	65	52	43	35	25	21	17	Input speed in the opposite direction	
Input speed n1		1000 (r/min)										NO. of motor poles 6P	
B09/×1	P(kW) T(N.m)	0.37 30	0.25 25	0.25 37	0.18 37	0.18 45	0.18 55	0.12 45				0.37	0.12
B0/×2	P(kW) T(N.m)	0.75 59	0.75 75	0.55 80	0.55 110	0.37 94	0.37 112	0.25 93	0.18 93			0.75	0.12
B1/×3	P(kW) T(N.m)	1.5 118	1.5 145	1.5 224	1.1 220	1.1 275	0.75 230	0.55 205	0.37 190	0.37 225		1.5	0.18

B2/×4	P(kW) T(N.m)	3 235	3 290	3 448	2.2 445	1.5 385	1.1 340	1.1 415	0.75 388	0.55 343	0.55 420	3	0.37
B3/×5	P(kW) T(N.m)	7.5 593	5.5 531	5.5 820	4 810	4 1020	3 925	3 1135	1.5 775	1.5 935	1.1 840	7.5	0.37
B4/×6/×7	P(kW) T(N.m)	7.5 593	7.5 735	7.5 1125	7.5 1520	5.5 1405	5.5 1700	4 1515	3 1560	3 1870	2.2 1680	7.5	1.5
B5/×8	P(kW) T(N.m)		11 1063	11 1642	11 2222	11 2802	11 3382	7.5 2833	5.5 2851	5.5 3430	4 3057	11	1.5
B6/×9	P(kW) T(N.m)		22 2126	22 3285	22 4445	18.5 4713	18.5 5688	15 5666	11 5702	7.5 4678	7.5 5732	22	3
B7×10	P(kW) T(N.m)		37 3576	37 5526	37 7476	37 9427	30 9225	22 8311	18.5 9589	18.5 11540	15 11465	37	11
B8×11	P(kW) T(N.m)		55 5315	55 8214	55 11114	55 14013	45 13838	37 13978	30 15551	22 13723	22 16816	55	18.5
B9/×12	P(kW) T(N.m)				75 15155	75 19109	55 16913	55 20778	45 23326	37 23080	30 22931	75	30
Output speed n2 (r/min)		111	91	59	43	34	29	23	17	14	11	NO. of motor poles 6P	

Note: 1. In the formula of T:9550*P*i* ¦Çn1(N.m)P:T*n1／(9550*i*¦Ç(kW, first-stage transmission efficient ¦Çis defined as 0.925.

2. When motor direct-coupled reducer is selected for use，the actual allocated motor power should conform to the scope of allowable power. If the allocated motor power is more than allowable motor power, the reducer is only allowed to use in line with regulated allowable torque.

Allowable power and torque of double-staged transmission reducer(bearing coefficient K=l.00) Chart 6

Model No.	Allowable input power / Allowable output torque	Transmission ratio i										Scope of allowable power	
		99	121	187	289	391	493	595	731	841	1003	Pmax	Pmin
		11×9	11×11	17×11	17×17	23×17	29×17	35×17	43×17	29×29	59×17		
Input speed n1		1500 (r/min)										NO. of motor poles 4P	
B10/×32	P(kW) T(N.m)	0.3 175	0.27 175	0.18 175	0.12 175	0.08 175	0.07 175	0.06 175	0.05 175	0.04 175	0.03 175	0.37	0.18
B20/×42	P(kW) T(N.m)	1.12 600	0.92 600	0.59 600	0.38 600	0.28 600	0.22 600	0.19 600	0.15 600	0.13 600	0.11 600	1.1	0.18
B31/×53	P(kW) T(N.m)	2.2 1250	1.91 1250	1.24 1250	1.08 1250	0.59 1250	0.47 1250	0.39 1250	0.32 1250	0.27 1250	0.23 1250	2.2	0.25
B41×63	P(kW) T(N.m)	2.2 1179	2.2 1441	2.2 2226	1.6 2500	1.18 2500	0.94 2500	0.78 2500	0.63 2500	0.55 2500	0.46 2500	2.2	0.25
B42/×64	P(kW) T(N.m)	4 2143	3.82 2500	2.47 2500	1.6 2500	1.18 2500	0.94 2500	0.78 2500	0.63 2500	0.55 2500	0.46 2500	4	0.55
B52/×84	P(kW) T(N.m)	4.1 2143	4 2619	4 4048	3.2 5000	2.36 5000	1.87 5000	1.55 5000	1.26 5000	1.1 5000	0.92 5000	4	0.55
B53/×85	P(kW) T(N.m)	9.3 5000	7.5 4911	4.94 5000	3.2 5000	2.36 5000	1.87 5000	1.55 5000	1.26 5000	1.1 5000	0.92 5000	7.5	0.55
B63/×95	P(kW) T(N.m)	11 5893	7.5 4916	7.5 7590	5.64 8820	4.19 8820	3.32 8820	2.75 8820	2.24 8820	1.95 8820	1.62 8820	7.5	0.55
B74/106	P(kW) T(N.m)			11 11132	7.67 12000	5.67 12000	4.5 12000	3.73 12000	3.03 12000	2.64 12000	2.21 12000	11	2.2
B84/×117	P(kW) T(N.m)			11 11132	10.27 16000	7.59 16000	6 16000	5 16000	4 16000	3.53 16000	3 16000	11	2.2
B85/×118	P(kW) T(N.m)			15 16430	13.8 21560	10.2 21560	8.1 21560	6.7 21560	5.47 21560	4.75 21560	3.9 21560	15	2.2
B95/128	P(kW) T(N.m)					13.9 29400	11 29400	9.15 29400	7.46 29400	6.48 29400	5.43 29400	15	2.2
Output speed n2 (r/min)		14.5	11.9	8.02	5.19	3.84	3.04	2.52	2.05	1.78	1.5	Input speed in the same direction	
Model No.	Allowable input power / Allowable output torque	Transmission ratio i										Scope of allowable power	
		1225	1505	1849	2065	2537	3481	4189	5133	7569		Pmax	Pmin
		35×35	43×35	43×43	59×35	59×43	59×59	71×59	87×59	87×87			
Input speed n1		1500 (r/min)										NO. of motor poles 6P	
B10/×32	P(kW) T(N.m)	0.02 150	0.02 150	0.01 150	0.01 150	0.01 150	0.01 150	0.01 150				0.18	0.18
B20/×42	P(kW) T(N.m)	0.09 600	0.07 600	0.06 600	0.05 600	0.04 600	0.03 600	0.03 600	0.02 600			0.18	0.18
B31/×53	P(kW) T(N.m)	0.19 1250	0.15 1250	0.12 1250	0.11 1250	0.09 1250	0.07 1250	0.06 1250	0.04 1250			0.55	0.55
B41/×63	P(kW) T(N.m)	0.38 2500	0.31 2500	0.25 2500	0.22 2500	0.18 2500	0.13 2500	0.11 2500	0.09 2500			0.55	0.55
B52/×84	P(kW) T(N.m)	0.75 5000	0.61 5000	0.5 5000	0.45 5000	0.36 5000	0.27 5000	0.22 5000	0.18 5000	0.12 5000		1.1	0.55
B63/×95	P(kW) T(N.m)	1.33 8820	1.08 8820	0.88 8820	0.79 8820	0.64 8820	0.47 8820	0.39 8820	0.31 8820	0.21 8820		1.1	1.1
B74/×106	P(kW) T(N.m)	1.81 12000	1.47 12000	1.2 12000	1.07 12000	0.87 12000	0.64 12000	0.53 12000	0.43 12000	0.29 12000		2.2	2.2
B84/×117	P(kW)	2.42	1.97	1.6	1.43	1.17	0.85	0.7	0.57	0.39		3	2.2

	T(N.m)	16000	16000	16000	16000	16000	16000	16000	16000	16000			
B85×118	P(kW) T(N.m)	3.26 21560	2.67 21560	2.16 21560	1.95 21560	1.58 21560	1.15 21560	0.96 21560	0.77 21560	0.53 21560		4	4
B95×128	P(kW) T(N.m)	4.45 29400	3.62 29400	2.95 29400	2.64 29400	2.15 29400	1.56 29400	1.3 29400	1.06 29400	0.71 29400		5.5	4
Output speed n2 (r/min)		1.22	1	0.81	0.73	0.59	0.43	0.36	0.29	0.2		Input speed in the opposite direction	

Note: 1. In the formula of T:9550*P*i* ¦Çn1(N.m)P:T*n1／(9550*i*¦Ç(kW, first-stage transmission efficient ¦Çis defined as 0.925.

2. When motor direct-coupled reducer is selected for use，the actual allocated motor power should conform to the scope of allowable power. If the allocated motor power is more than allowable motor power, the reducer is only allowed to use in line with regulated allowable torque.

3. Allowable radial force of output shaft refers to first-stage transmission

Third-stage transmission Chart 7

Model No.	B2009	B310	B420	B531	B631	B742	B852	B953
Allowable radial force of output shaft(N)	10000	12000	15000	40000	60000	70000	100000	180000
Allowable output torque(N.m)	600	1250	2500	5000	8820	12000	21560	29400
Transmission ratio								
11×17×43=8041	9×43×43=16641		23×23×59=31211		11×59×87=56463		23×59×87=118059	
17×17×29=8381	17×23×43=16813		9×59×59=31329		23×35×71=57155		29×59×71=121401	
11×11×71=8591	17×17×59=17051		17×43×43=31433		23×29×87=58029		35×59×59=121835	
9×11×87=8613	17×29×35=17255		11×35×87=33495		23×43×59=58351		17×87×87=128673	
11×23×35=8855	11×23×71=17963		11×43×71=33583		17×59×59=59177		35×43×87=130935	
9×23×43=8901	9×23×87=18009		9×43×87=33669		29×29×71=59711		43×43×71=131279	
17×23×23=8993	23×23×35=18515		17×23×87=34017		29×35×59=59885		23×71×87=142071	
9×17×59=9027	9×29×71=18531		23×35×43=34615		17×43×87=63597		29×71×71=146189	
9×29×35=9135	9×35×59=18585		17×29×71=35003		35×43×43=64715		35×59×71=146615	
11×29×29=9251	11×29×59=18821		17×35×59=35105		11×71×87=67947		29×59×87=148857	
17×17×35=10115	23×29×29=19343		29×35×35=35525		9×87×87=68121		43×59×59=149683	
11×11×87=10527	11×43×43=20339		29×29×43=36163		23×35×87=70035		43×43×87=160863	
9×17×71=10863	17×17×71=20519		23×23×71=37559		23×43×71=70735		23×87×87=174087	
11×23×43=10879	17×35×35=20825		9×59×71=37701		17×59×71=71213		35×71×71=176435	
9×35×35=11025	17×29×43=21199		11×59×59=38291		29×35×71=72065		29×71×87=179133	
11×17×59=11033	11×23×87=22011		23×29×59=39353		35×35×59=72275		35×59×87=179655	
9×35×35=11027	9×35×71=22365		11×43×87=41151		29×29×87=73167		43×59×71=180127	
11×29×35=11165	11×29×71=22649		17×35×71=42245		29×43×59=73573		59×59×59=205379	
9×29×43=11223	9×29×87=22707		23×43×43=42527		43×43×43=79507		35×71×87=216195	
17×23×29=11339	11×35×59=22715		35×35×35=42875		23×59×59=80063		43×71×71=216763	
23×23×23=12167	23×23×43=22747		17×29×87=42891		11×87×87=83259		29×87×87=219501	
9×23×59=12213	9×43×59=22833		17×43×59=43129		17×71×71=85697		43×59×87=220719	
17×17×43=12427	17×23×59=23069		29×35×43=43645		23×43×87=86043		59×59×71=247151	
11×17×71=13277	23×29×35=23345		9×71×71=45369		35×35×71=86975		35×87×87=264915	
9×17×87=13311	29×29×29=24389		23×23×87=46023		17×59×87=87261		43×71×87=265611	
11×35×35=13475	17×17×87=25143		11×59×71=46079		29×35×87=88305		59×71×71=297419	
9×35×43=13545	17×35×43=25585		9×59×87=46179		29×43×71=88537		59×59×87=302847	

17×23×35=13685	11×35×71=27335	23×29×71=47357	35×43×59=88795	43×87×87=325467
11×29×43=13717	9×35×87=27405	23×35×59=47495	23×59×71=96347	71×71×71=357911
17×29×29=14297	9×43×71=27477	29×29×59=49619	9×59×59=100949	259×71×87=364443
9×23×71=14697	11×29×87=27753	17×35×87=51765	17×71×87=105009	71×71×87=438567
11×23×59=14927	17×23×71=27761	17×43×71=51901	35×35×87=106575	59×87×87=446571
23×23×29=15341	11×43×59=27907	35×35×43=52675	35×43×71=106855	71×87×87=537399
9×29×59=15399	23×35×35=28175	29×43×43=53621	29×43×87=108489	87×87×87=658503
11×17×87=16269	17×29×59=29087	11×71×71=55451	43×43×59=109091	
11×35×43=16555	29×29×35=29435	9×71×87=55593	23×71×71=115943	

Note: Third-stage type of machines can willfully combine the transmission ratio of first-stage type of machines. Please contact with corporate technical department if you need other transmission ratio.

Table of radial force of first-stage transmission output shaft Chart 8

Model No.	Transmission ratio	11	17	23	29	35	43	59	71	87
B09	Allowable radial force of output shaft(N)	700	800	800	1010	1010	1010			
B0		1660	1900	2040	2390	2390	2500	2500		
B1		2230	2550	2750	3210	3210	3620	4050	4360	
B2		3460	3960	4260	4980	4980	5630	6250	6770	6770
B3		4940	5660	6100	7130	7130	8050	8990	9690	9690
B4		6680	7650	8240	9630	9630	10870	12140	13080	13080
B5		12850	17460	18520	20900	22000	22000	23400	25200	27600
B6		27200	29100	33500	37300	39100	41300	41300	44100	44100
B7		34100	39800	39800	46800	49100	51800	55400	60400	60400
B8			50400	53700	59300	62100	65600	70100	76400	76400
B9				101000	101000	101000	125000	132000	132000	132000

8. Instruction for model selection

1. Select types of installation

a) Select standard types of installation；

b)Select all kinds of special installation types and confirm supplementary code。

2.Does motor direct-coupled reducer need special power force？

Select all kinds of power forces and confirm supplementary code。

3.Confirm bearing coefficient k=？

a) Check Chart 9 to confirm load category (load properties) in line with usage of supporting equipment；

b) Check Chart 10 to confirm load coefficient k in line with load category and work condition (use --- hours per day)

4. Confirm input speed of reducer n1=？

a) The maximum input speed of reducer is 1500r/min

b) Standard configuration of direct-coupled motor is 4-pole motor with synchronous speed 1500r/min，or 6-pole motor with synchronous speed 1000r/min ；

c) When adjustable motor or variable speed drive is adopted, constant power should be the lowest speed and constant torque should be the maximum speed.

5.Confirm transmission ratio of reducer i=？

a)Confirm output speed of reducer n2=？(r/min)in line with supporting equipment

b) Calculate transmission ratio i=n1/n2 and check Chart 5 or Chart 6 for sure.

6.Confirm input power of reducer P1=？or need output torque T2=？

Method one:P1=T2 n1/(9550i¦Ç) (kW)；

Method two:T2= 9550P1 i¦Ç／n1(N.m)

First-stage transmission efficiency ¦Çis 0.925， and second-stage transmission efficiency ¦Çis 0 85。

7.Calculate the model with equivalent input power Pd= ? or equivalent output torque Td= ?

method one:Calculate the model with equivalent input power Pd=KP1 (kW) in line with load coefficient K

method two:Calculate the model with equivalent output torque Td=KT2 (N.m) in line with load coefficient K

8. Select product series and seat No.= ? of reducer

On the basis of above comprehensive parameters, product series and seat No. can be selected by checking Chart 5 and Chart 6；

Method one:equivalent input power should be no more than allowable input power listed in the Chart, namely Pd¡Ψ；

Method two:Equivalent output torque should be no more than allowable output torque listed in the Chart, namely Td ¡Ü.

Example 1:

Known number:Belt conveyer with uneven feeding works 12 hours a day, with input power P_1=0.75kW and output speed n_2=35r/min, and motor direct-coupled reducer is installed in the foot-typed horizontal manner with 4-pole motor.

Model selection:

1. No. of installation type is WD;
2. Load classification of look-up table 9 is M and load coefficient of look-up table10 is K=1.35；
3. Input speed n_1=1500r/min；
4. Transmission ratio i=1500/35=42.86 is selected as 43;
5. Power of matching motor is 0.75kW;
6. Equivalent input power P_d=1.35×0.75=l.0l kW. , seat No. is 2 in look-up table 5，allowable input power P=1.5kW> Pd-l.0lkW, reducer is allowed to operate with full capacity of allocating power, and model selection is permitted.

Reducer model No.:BWD2-43-0.75

Example 2:

Known number:

Daily cosmetics stirrer, with mixed feeding and full-time work, needs output torque T_2=50N.m, output speed n_2=60r/min and input speed n_1=l000r/min; it is in stalled in flange-typed vertical manner, and double-shaft reducer is equipped with self-made motor.

Model selection:

1. No. of installation type is L;
2. Load classification of look-up table 9 is M and load coefficient of look-up table10 is K=1.35；
3. Input speed n1=l000r/min；
4. Transmission ratio i=1000/60=16.67 is selected as17;
5. Motor is not equipped;
6. Equivalent input torque Td =1.35×50=67.5N.m, seat No. is 0 in look-up table 5, allowable output torque T=74N.m> Td =67.5N.m, reducer is allowed to operate with output torque, and model selection is permitted.

Reducer model No.:BL0-17

Load classification Table 9

Usage		Load classification	Usage		Load classification
stirrer	pure liquid	U	petroleum industry	paraffin press	M
	liquid and solid	M		crystallization machine\condenser\rotary furnace	M
	liquid(variable density)	M	*plastic machinery	extruder(granule\ bar stock\tubing)	U
air blower	centrifugal＼vane	U		blow molding machine	M
	impeller	M	*rubber machinery	rubber crusher\mixing mill	H
compressor	centrifugal	U		desizing machine\ calender	M
	impeller＼ multi-cylinder reciprocating	M	textile machinery	loom\carding machine\mangle	M
	single cylinder reciprocating	H		spinning machine \rinsing machine \dyeing machine	M
transport machinery	uniform feeding	U	food machinery	bottler\packer	U
	uneven feeding	M		cane grinder\cut-off machine*presser	M
	reciprocating and vibrating	H		blender\ meat grinder	M
* Hoist(Winch)	heavy	H		puree bucket	M
	medium	M		scouring mill	U
*stone machinery	ball grinder\ cylindrical grinder	H		beet washing machine\cut-off machine	M
	grinder\crusher \converter	H	other machinery	Successive one-way revolving and stable load	U
general ceramics machinery		M		medium impact load	M
medical machinery		U		large impact load	H

Note:1.Load classification: U stands for stable load，M for medium impact load and H for large impact load；
2.*means bad working condition. Working condition of 24 hours per day should be selected when load coefficient K is confirmed in the following Chart.

Load coefficient K Chart 10

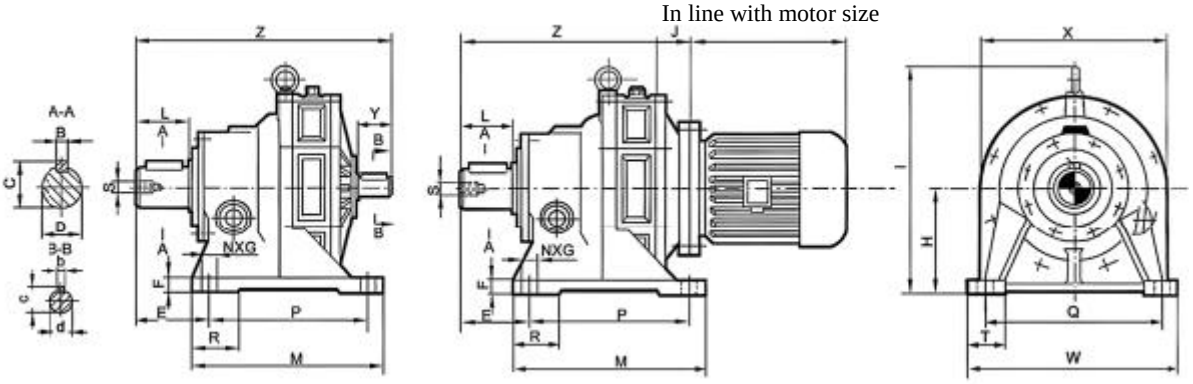
Working condition (use～hours／day)		Load classification(load properties)	
	U	M	H
	Stable	Medium impact	Large impact
Interrupted ¡Ü	0.80	1.00	1.35
¡Ü10	1.00	1.20	1.50
Successive > 10-24	1.20	1.35	1.60

Note:1. Our reducers are designed for the working requirement that reducer can work for 10 hours per day under stable load with load coefficient k=l.00；
2. Due to different working conditions of supporting equipments, amendment of load coefficient should refer to this Chart when models are selected.

1.4 Contour and Installation Dimensions of Cycloidal Pinwheel Reducer

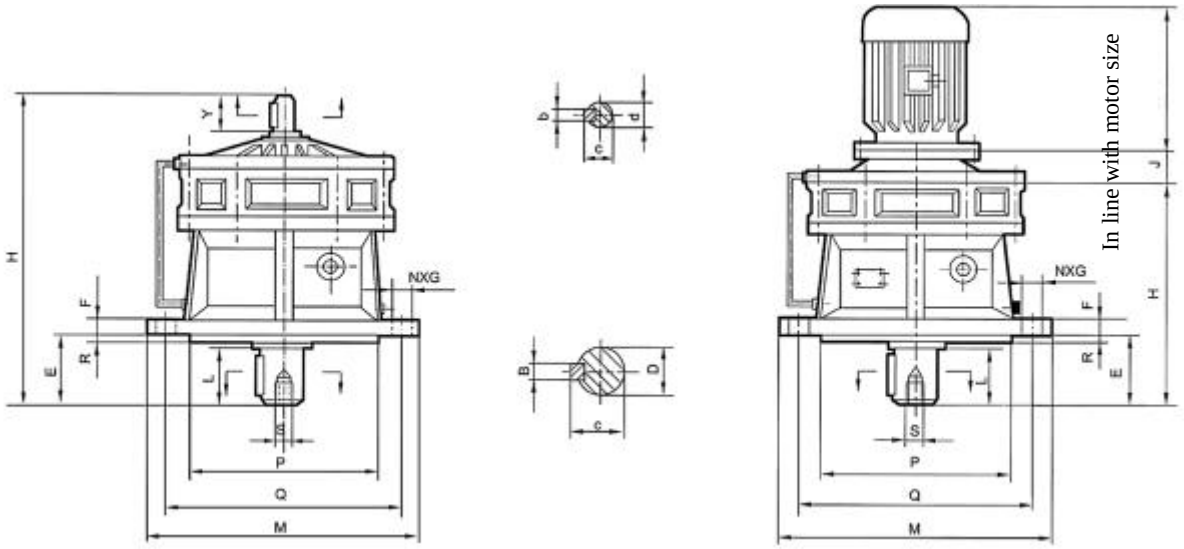
Model BW. BWD. XW. XWD(Single reduction) Contour And Installation Dimensions

In line with motor size



size	Contour Dimension							Installation Dimensions										Size of Shaft End								Weight(kg)	
	M	W	Z		I	X	J	H	E	F	P	Q	R	S	T	N	G	B	C	D	L	b	c	d	y	BW	BWD About
			BW	BWD																							
BW.BWD09-9																											
B09	100	144	192	142	155	140	Chart 11	80	47	12	76	120		M5	35	4	11	6	25	22	30	5	17	15	22	8.5	BW Weight + motor weight
B0	120	185	214	165	190	168		100	93	15	90	150		M8	35	4	11	8	33	30	35	5	17	15	22	15	
B1	160	280	263	194	250	200		120	125	15	110	240		M10	55	4	13	10	38	35	56	6	20.5	18	35	22	
B2	200	320	320	246	296	240		140	144	20	150	280	65	M10	60	4	13	14	48.5	45	71	6	24.5	22	40	40	
B3	250	390	390	294	355	300		160	159	25	200	340	100	M12	75	4	17	16	59	55	80	8	33	30	55	73	
B4	380	400	479	370	430	340		200	155	25	320	340	150	M12	80	4	22	20	74.5	70	102	10	38	35	62	120	
B5	440	470	564	438	513	400		240	159	32	380	420		M16	80	4	22	25	95	90	120	14	48.5	45	70	185	
B6	520	560	668	528	605	500		280	199	35	440	500		M20	90	4	26	28	106	100	139	14	53.5	50	80	380	
B7	600	690	775	578	706	575		325	230	40	500	630		M24	105	6	26	28	116	110	150	16	59	55	90	580	
B8	810	880	1061	814	880	700		420	324	50	660	800		M30	160	6	32	32	137	130	202	20	74.5	70	120	1200	
B9	1040	1160	1462	1151	1160	1000		540	485	60	840	1050		M42	200	6	45	45	190	180	330	25	95	90	150	2500	
XW.XWD1-12																											
X1	120	180	197	147	175	140	Chart 11	100	60	12	90	150		M35	35	4	12	8	28	25	35	5	17	15	22	8.5	XW Weight + motor weight
X2	120	210	216	164	190	168		100	101	15	90	180		M45	45	4	12	8	28	25	34	5	17	15	22	15	
X3	150	290	263	194	270	200		140	151	20	100	250		M55	55	4	16	10	38	35	56	6	20.5	18	35	30	
X4	195	330	320	246	316	240		150	169	22	145	290		M65	65	4	16	14	48.5	45	74	6	24.5	22	40	43	
X5	260	410	401	305	356	300		160	206	25	150	370		M75	75	4	16	16	59	55	91	8	33	30	55	85	
X6	335	430	466	359	425	340		200	125	30	275	380		M12	75	4	22	18	69	65	89	10	38	35	62	125	
X7	380	470	484	377	484	340		220	145	30	320	420		M12	95	4	22	22	85	80	109	12	43	40	65	190	
X8	440	530	564	438	514	400		250	155	35	380	480		M16	120	4	22	25	95	90	120	14	48.5	45	70	240	
X9	560	620	691	528	514	500		290	186	40	480	560		M20	120	4	26	28	106	100	141	14	53.5	50	80	390	
X10	600	690	775	578	706	575		325	230	40	500	630		M24	105	6	26	28	116	110	150	16	59	55	90	580	
X11	810	880	1061	814	880	700		420	324	50	660	800		M30	160	6	32	32	137	130	202	20	74.5	70	120	1200	
X12	1040	1160	1462	1151	1160	1000		540	485	60	840	1050		M42	200	6	45	45	190	180	330	25	95	90	150	2500	

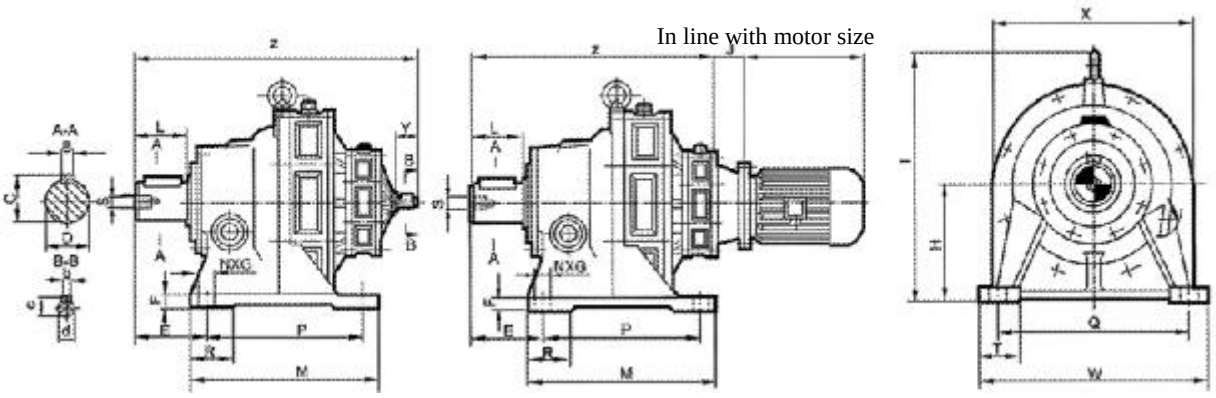
Model BL, BLD, XL and XLD (Single reduction) Contour and Installation Dimensions



Size	Contour Dimension				Installation Dimensions								Size of Shaft End								Weight(kg)	
	H		M	J	E	F	G	N	P	Q	R	S	B	C	D	L	b	c	d	y	BL	BLD About
	BL	BLD																				
BL.BLD09-9																						
B09	192	142	160		35	10	11	4	110	134	3	M5	6	24.5	22	30	5	17	15	22	8	
B0	214	165	190		39	10	11	4	140	160	3	M8	8	33	30	35	5	17	15	22	15	
B1	263	194	230		61	12	11	6	170	200	4	M10	10	38	35	46	6	20.5	18	35	22	
B2	320	246	260		70	15	11	6	200	230	4	M10	14	48.5	45	61	6	24.5	22	40	43	
B3	390	294	340		80	20	13	6	270	310	5	M12	16	59	55	74	8	33	30	55	79	BL Weight + motor weight
B4	477	370	400		100	22	15	8	320	360	5	M12	20	74.5	70	92	10	38	35	62	127	
B5	564	438	490	Chart 11	115	30	18	12	400	450	5	M16	25	95	90	108	14	48.5	45	70	200	
B6	668	528	580		139	35	22	12	460	520	8	M20	28	106	100	130	14	53.5	50	80	400	
B7	775	578	650		182	40	22	12	520	590	10	M24	28	116	110	142	16	59	55	90	620	
B8	1061	814	880		210	50	38	12	680	800	10	M30	32	137	130	202	20	74.5	70	120	1220	
B9	1462	1151	1160		370	60	39	8	900	1020	10	M42	45	190	180	320	25	95	90	150	2500	
XL.XLD1-12																						
X1	197	147	160		48	9	12	4	110	134	3	M5	8	28	25	35	5	17	15	22	8.5	
X2	216	164	180		42	12	12	6	130	160	3	M8	8	28	25	34	6	17	15	22	15	
X3	263	194	230		51	15	12	6	170	200	4	M10	10	28	35	46	6	20.5	18	35	22	
X4	324	250	260		79	15	12	6	200	230	4	M10	14	48.5	45	63	6	24.5	22	40	43	
X5	401	305	340		93	20	13	6	270	310	4	M12	16	59	55	85	8	33	30	55	88	XL Weight + motor weight
X6	466	359	400	Chart 11	92	22	16	8	316	360	5	M12	18	69	65	80	10	38	35	62	130	
X7	484	377	430		114	22	18	8	345	390	5	M12	22	85	80	96	12	43	40	65	145	
X8	564	438	490		115	30	18	12	400	450	6	M16	25	95	90	110	14	48.5	45	70	195	
X9	691	551	580		170	35	22	12	455	520	8	M20	28	106	100	132	14	53.5	50	80	395	
X10	775	578	650		182	40	22	12	520	590	10	M24	28	116	110	142	16	59	55	90	620	
X11	1061	814	880		210	50	38	12	680	800	10	M30	32	137	130	202	20	74.5	70	120	1220	
X12	1462	1151	1160		370	60	39	8	900	1020	10	M42	45	190	180	320	25	95	90	150	2500	

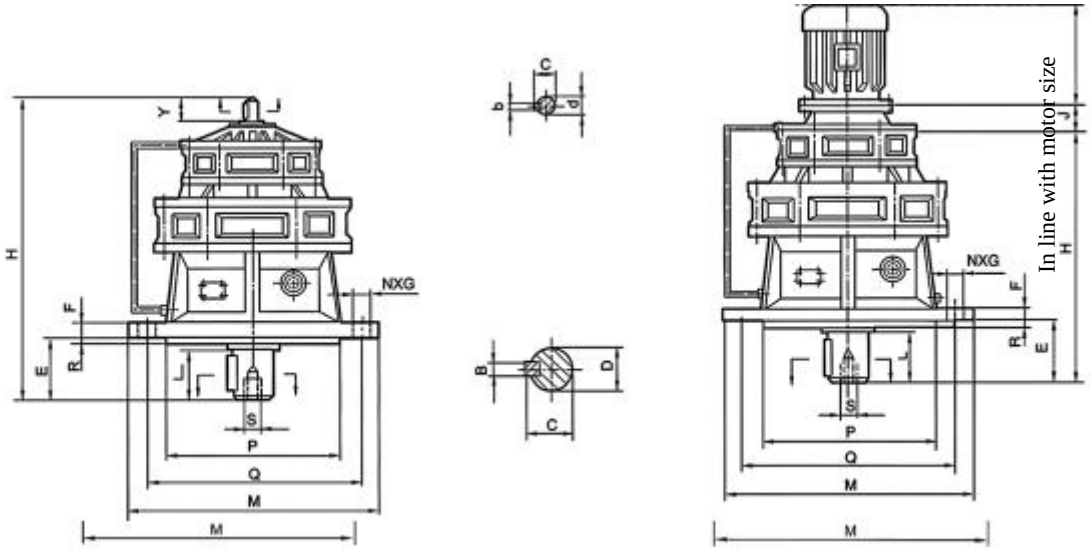
Model BWE, BWED, XWE and XWED (Double reduction) Contour and Installation Dimensions

In line with motor size



size	Contour Dimension							Installation Dimensions										Size of Shaft End								Weight(kg)	
	M	W	Z		I	X	J	H	E	F	P	Q	R	S	T	N	G	B	C	D	L	b	c	d	y	BWE	BWED About
			BWE	BWED																							
BWE.BWED10-95																											
B10	160	280	317	267	250	200	Chart 11	120	124	15	110	240		M10	55	4	13	10	38	35	56	5	17	15	22	43	BWE Weight + motor weight
B20	200	320	364	315	306	240		140	144	20	150	280		M10	60	4	13	14	48.5	45	71	5	17	15	22	50	
B31	250	390	446	376	356	300		160	159	25	200	340	65	M12	75	4	17	16	59	55	80	6	20.5	18	35	90	
B41	380	400	523	454	425	340		200	155	25	320	340	65	M12	80	4	22	20	74.5	70	102	6	20.5	18	35	140	
B42	380	400	554	479	425	340		200	155	25	320	340	100	M12	80	4	22	20	74.5	70	102	6	24.5	22	40	155	
B52	440	470	623	548	504	400		240	158	32	380	420		M16	80	4	22	25	95	90	120	6	24.5	22	40	240	
B53	440	470	657	561	504	400		240	158	32	380	420		M16	80	4	22	25	95	90	120	8	33	30	55	260	
B63	520	560	741	645	605	500		280	199	35	440	500		M20	90	4	26	28	106	100	139	8	33	30	55	460	
B74	600	690	832	725	706	575		325	230	40	500	630		M24	105	6	26	28	116	110	150	10	38	35	62	680	
B84	810	880	1071	962	880	700		420	324	50	660	800		M30	160	6	32	32	137	130	202	10	38	35	62	1320	
B85	810	880	1095	970	880	700		420	324	50	660	800		M30	160	6	32	32	137	130	202	14	48.5	45	70	1350	
B95	1040	1160	1502	1350	1160	1000		540	485	60	840	1050		M42	200	6	45	45	190	180	330	14	48.5	45	70	2750	
XWE.XWE42-12																											
X32	150	290	314	364	270	200	Chart 11	140	151	20	100	250		M10	55	4	16	16	38	35	56	5	17	15	22	40	XWE Weight + motor weight
X42	195	330	370	315	316	240		150	169	22	145	290		M10	65	4	16	16	48.5	45	72	5	17	15	22	50	
X53	260	410	457	387	356	300		160	206	25	150	370		M12	75	4	16	16	59	55	91	6	20.5	18	35	110	
X63	335	430	510	441	425	340		200	125	30	275	380		M12	75	4	22	18	69	65	89	6	20.5	18	35	150	
X64	335	430	541	466	425	340		200	125	30	275	380		M12	75	4	22	18	69	65	89	6	24.5	22	40	160	
X74	380	470	561	486	484	340		220	145	30	320	420		M12	95	4	22	22	85	80	109	6	24.5	22	40	230	
X84	440	530	623	548	514	400		250	155	35	380	480		M16	120	4	22	25	95	90	120	6	24.5	22	40	260	
X85	440	530	682	586	514	400		250	155	35	380	480		M16	120	4	22	25	95	90	120	8	33	30	55	290	
X95	560	620	762	667	614	500		290	186	40	480	560		M20	120	4	26	28	106	100	141	8	33	30	55	470	
X106	600	690	832	725	706	575		325	230	40	500	630		M24	105	6	26	28	116	110	150	10	38	35	62	680	
X117	810	880	1071	962	880	700		420	324	50	660	800		M30	160	6	32	32	137	130	202	12	43	40	62	1320	
X118	810	880	1095	970	880	700		420	324	50	660	800		M30	160	6	32	32	137	130	202	14	48.5	45	70	1350	
X128	1040	1160	1445	1320	1160	1000		540	485	60	840	1050		M42	200	6	45	45	190	180	330	14	48.5	45	70	2750	

Model BLE, BLED, XLE and XLED (Double reduction) Contour and Installation Dimensions



Size	Contour Dimension				Installation Dimensions								Size of Shaft End								Weight(kg)	
	H		M	J	E	F	G	N	P	Q	R	S	B	C	D	L	b	c	d	y	BLE	BLED About
	BL	BLD																				
BLE.BLED10-95																						
B10	317	267	230		61	12	11	6	170	200	4	M10	10	38.5	35	49	5	17	15	22	38	
B20	368	318	260		70	15	11	6	200	230	4	M10	14	48.5	45	61	5	17	15	22	50	
B31	446	376	340		80	20	13	6	270	310	5	M12	16	59	55	74	6	20.5	18	35	95	
B41	521	454	400		100	22	15	8	320	360	5	M12	20	74.5	70	92	6	20.5	18	35	145	
B42	554	479	400		100	22	15	8	320	360	5	M12	20	74.5	70	92	6	24.5	22	40	160	BLE
B52	623	548	490		115	30	18	12	400	450	5	M16	25	95	90	108	6	24.5	22	40	240	Weight +
B53	657	561	490	Chart	115	30	18	12	400	450	5	M16	25	95	90	108	8	33	30	55	260	motor
B63	741	645	580	11	139	35	22	12	460	520	8	M20	28	106	100	130	8	33	30	55	460	weight
B74	832	725	650		182	40	22	12	520	590	10	M24	28	116	110	142	10	38	35	62	690	
B84	1071	962	880		210	50	38	12	680	800	10	M30	32	137	130	202	10	38	35	62	1340	
B85	1095	970	880		210	50	38	12	680	800	10	M30	32	137	130	202	14	48.5	45	70	1370	
B95	1502	1350	1160		370	60	39	8	900	1020	10	M42	45	190	180	320	14	48.5	45	70	2750	
XLE.XLE42-128																						
X32	314	264	230		51	15	12	6	170	200	4	M10	10	38	35	46	5	17	15	22	38	
X42	370	320	260		79	20	12	6	200	230	4	M10	14	48.5	45	63	5	17	15	22	50	
X53	457	389	340		93	22	13	6	270	310	4	M12	16	59	55	85	6	20.5	18	35	110	
X63	510	441	400		92	22	16	8	316	360	5	M12	18	69	65	80	6	20.5	18	35	155	
X64	541	466	400		92	22	16	8	316	360	5	M12	18	69	65	80	6	24.5	22	40	170	XLE
X74	561	486	430	Chart	114	22	18	8	345	390	5	M12	22	85	80	96	6	24.5	22	40	230	Weight +
X84	623	548	490	11	115	30	18	12	400	450	6	M16	25	95	90	110	6	24.5	22	40	260	motor
X85	658	588	490		115	30	18	12	400	450	6	M16	25	95	90	110	8	33	30	55	280	weight
X95	762	667	580		170	35	22	12	455	520	8	M20	28	106	100	132	8	33	30	55	480	
X106	832	725	650		182	40	22	12	520	590	10	M24	28	116	110	142	10	38	35	62	690	
X117	1108	983	880		210	50	38	12	680	800	10	M30	32	137	130	202	12	43	40	65	1340	
X118	1095	970	880		210	50	38	12	680	800	10	M30	32	137	130	202	14	48.5	45	70	1370	
X128	1445	1320	1160		370	60	39	8	900	1020	10	M42	45	190	180	320	14	48.5	45	70	2750	

Chart of size of connecting flange for assembling Y series motor

Motor connecting type

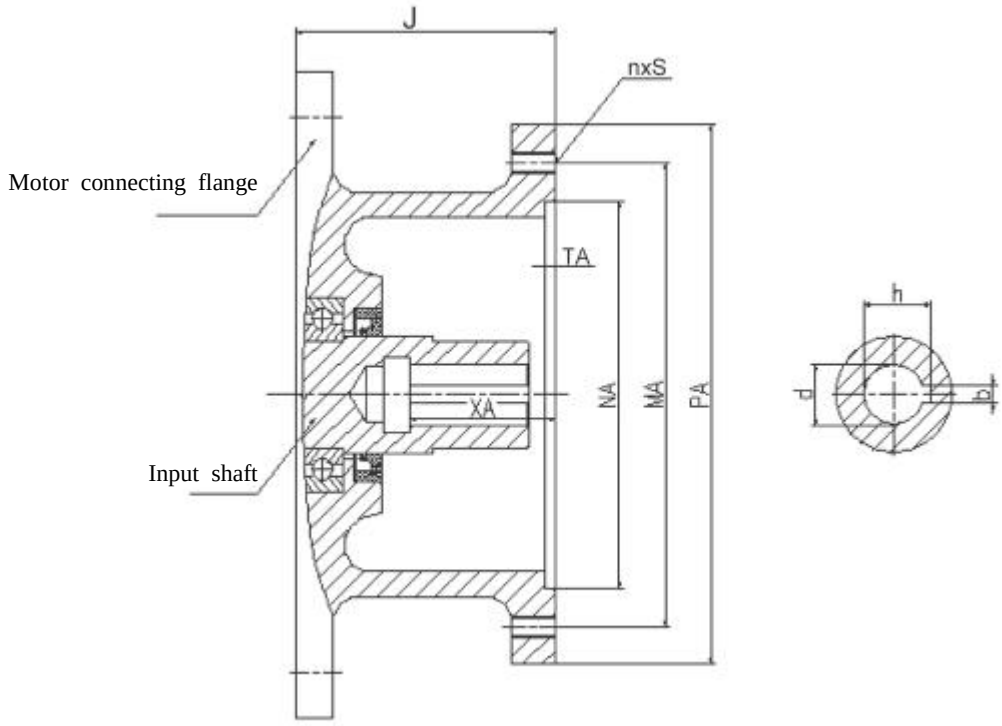


Chart 11

Model No.	Click			Size									
	Kw	Seat No.	No. of poles	NA	MA	PA	J	TA	n×S	XA	d	b	h
B09	0.18	Y63	4P	95	115	140	57.5	4	4×M8	23	11	4	12.8
	0.25、0.37	Y71		110	130	160	74.5	4	4×M8	30	14	5	16.3
	0.55	Y801		130	165	200	74.5	4	4×M10	40	19	6	21.8
B0 B10 B20	0.18	Y63		95	115	140	54.5	4	4×M8	23	11	4	12.8
	0.25、0.37	Y71		110	130	160	74.5	4	4×M8	30	14	5	16.3
	0.55、0.75	Y80		130	165	200	74.5	4	4×M10	40	19	6	21.8
	1.1	Y90S		130	165	200	83.5	4	4×M10	50	24	8	27.3
B1 B31 B41	0.25、0.37	Y71		110	130	160	83.5	4	4×M8	30	14	5	16.3
	0.55、0.75	Y80		130	165	200	83.5	4	4×M10	40	19	6	21.8
	1.1、1.5	Y90		130	165	200	83.5	4	4×M10	50	24	8	27.3
	2.2	Y100L1		180	215	250	90.5	4.5	4×M12	60	28	8	31.3
B2 B42 B52	0.55、0.75	Y80		130	165	200	93.5	5	4×M10	40	19	6	21.8
	1.1、1.5	Y90		130	165	200	93.5	5	4×M10	50	24	8	27.3
	2.2、3	Y100		180	215	250	93.5	5	4×M12	60	28	8	31.3
	4	Y112M		180	215	250	93.5	5	4×M12	60	28	8	31.3

Chart of size of connecting flange for assembling Y series motor

Motor connecting type

Chart 11

Model No.	Click			Size									
	Kw	Seat No.	No. of poles	NA	MA	PA	J	TA	n×S	XA	d	b	h
B3 B53 B63	0.55、0.75	Y80		130	165	200	118	5	4×M10	40	19	6	21.8
	1.1、1.5	Y90		130	165	200	118	5	4×M10	50	24	8	27.3
	2.2、3	Y100L		180	215	250	118	5	4×M12	60	28	8	31.3
	4	Y112M		180	215	250	118	5	4×M12	60	28	8	31.3
	5.5、7.5	Y132		230	265	300	118	5	4×M12	80	38	10	41.3
	11	Y160M		250	300	350	151	5	4×M16	110	42	12	45.3
B4 B74 B84	2.2、3	Y100L		180	215	250	125	5	4×M12	60	28	8	31.3
	4	Y112M		180	215	250	125	5	4×M12	60	28	8	31.3
	5.5、7.5	Y132	4P	230	265	300	125	5	4×M12	80	38	10	41.3
	11	Y160M		250	300	350	151	5	4×M16	110	42	12	45.3
B5 B85 B95	2.2、3	Y100L		180	215	250	142	6	4×M12	60	28	8	31.3
	4	Y112M		180	215	250	142	6	4×M12	60	28	8	31.3
	5.5、7.5	Y132		230	265	300	142	6	4×M12	80	38	10	41.3
	11、15	Y160M		250	300	350	142	6	4×M16	110	42	12	45.3
	18.5	Y180M		250	300	350	142	6	4×M16	110	48	14	51.8
B6	5.5、7.5	Y132		230	265	300	144	6	4×M12	80	38	10	41.3
	11、15	Y160		250	300	350	144	6	4×M16	110	42	12	45.3
	18.5、22	Y200L	6P	300	350	400	144	6	4×M16	110	55	16	59.3
B7	11、15	Y160	4P	250	300	350	129	7	4×M16	110	42	12	45.3
	18.5、22	Y200L		300	350	400	129	7	4×M16	110	55	16	59.3
	30	Y225M		350	400	450	161	7	4×M16	140	60	18	64.4
	37	Y250M		450	500	550	161	7	4×M16	140	65	18	69.4
B8	18.5、22	Y200L		300	350	400	204	7	4×M16	110	55	16	59.3
	30	Y225M		350	400	450	234	7	4×M16	140	60	18	64.4
	37	Y250M	6P	450	500	550	234	7	4×M16	140	65	18	69.4
	45、55	Y280		450	500	550	234	7	4×M16	140	75	20	79.9
B9	30	Y225M		350	400	450	239	7	4×M16	140	60	18	64.4
	37	Y250M		450	500	550	236	7	4×M16	140	65	18	69.4
	45、55	Y280		450	500	550	236	7	4×M16	140	75	20	79.9
	75	Y315S		550	600	660	236	7	4×M16	170	80	22	85.4

Note: Changes may occur when other series of motors are assembled.

5. Maintenance (Disassembly and Assembly)

Our company manufactures all kinds of cycloidal reducers with same internal structure, whose disassembly and assembly basically have the same order. Lubrication oil should firstly be run out before disassembly, and oil pump of vertical reducer should be firstly disassembled. Order of disassembly is shown as Chart 4.

5.1. Disassembly: First loosen attachment bolt, and disassemble 4 and 10, and then successively disassemble parts of 6, 7 and 8. Assembly adopts the opposite order.

5.2. Assembly

Following attentions should be paid to assembly:

1) Clean all parts before assembly.

2) Lubricate rolling and sliding surface to form the condition of preliminary lubrication.

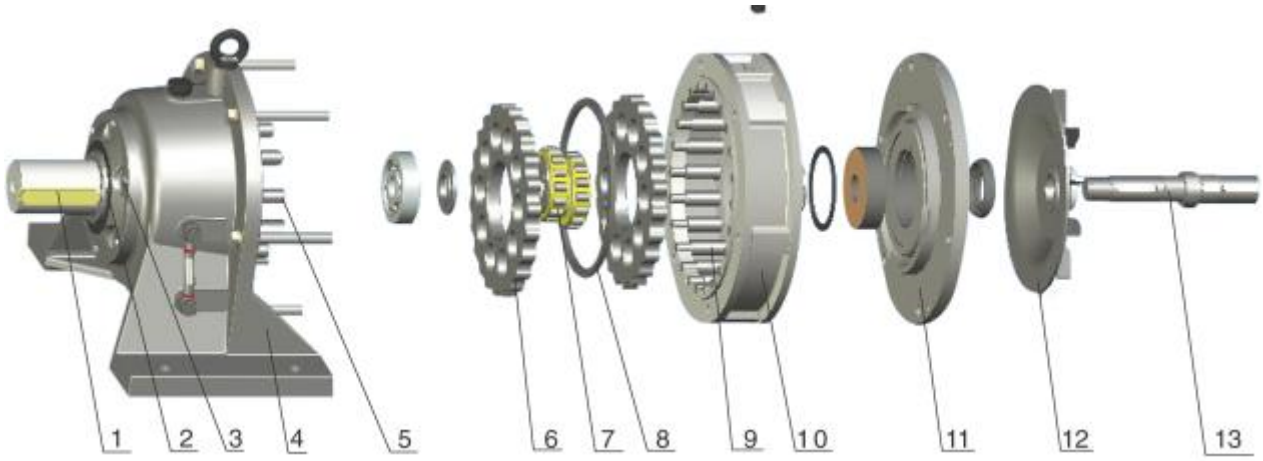
3) Tags of two cycloidal wheel must be kept 180°.

4) Carefully adjust the elasticity of spring in rubber oil seal and lubricate grease.

5) Inject lubricating oil or lubricating grease after assembly with horizontal oil level up to red line of oil pointer and vertical oil level up to middle line of oil pointer.

6) Manually turn high speed shaft, and make open drive if check is OK. Check the working condition of oil pump of vertical reducer, and put it into use if check is OK.

7) Strictly conform to requirements to disassemble direct-coupled motor, and it is forbidden to start disassembly from motor flange.



1. output shaft	2. tight ring of output shaft	3.small end cap	4.engine base
5.pin bush of pin roll	6. cycloidal wheel	7.eccentric bearing	8.spacer ring
9. set of pin gear	10.shell of pin gear	11.big end cap	12.fan cover
13.input shaft			

Chart of first-stage transmission oil seal

Model No.	Output end			Input end		
	Specification	Quantity		Double-shaft	Motor connecting	Motor direct-coupled
		Horizontal type	Vertical type	Specification	Specification	Specification
B09	30×52×10	1	1	20×35×10	30×60×10(0.18Kw) 35×60×12	15×35×10
B0	45×65×12	1	1	20×35×10	35×60×12 40×65×12(1.1kW)	15×35×10
B1	50×72×12	1	2	35×62×12	45×62×12	30×50×10
B2	65×90×12	1	2	40×65×12	50×72×12	40×65×12
B3	80×105×12	1	2	50×72×12	55×80×12 65×90×12(11kW)	40×65×12
B4	100×130×12	1	2	60×85×12	65×90×12	55×80×12
B5	115×140×14	1	2	80×105×12	80×105×12	70×95×12
B6	130×160×15	1	2	100×130×12	80×105×12	No-click direct-coupled type
B7	150×180×16	2	2	90×120×12	Please contact	
B8	170×200×18	2	2	130×160×15	130×160×15	
B9	220×260×18	2	2	160×190×16	140×170×15	

Chart of second-stage transmission oil seal

Model No.	Output end			Input end		
	Specification	Quantity		Double-shaft	Motor connecting	Motor direct-coupled
		Horizontal type	Vertical type	Specification	Specification	Specification
B10	50×72×12	1	2	35×62×12	35×60×12	15×35×10
B20	65×90×12	1	2	20×35×10	35×60×12 40×65×12 (1.1Kw)	15×35×10
B31	80×105×12	1	2	35×62×12	45×62×12	30×50×10
B41	100×130×12	1	2	35×62×12	45×62×12	30×50×10
B42	100×130×12	1	2	40×62×12	50×72×12	40×65×12
B52	115×140×14	1	2	40×65×12	50×72×12	40×65×12
B53	115×140×14	1	2	50×72×12	55×80×12 65×90×12 (11kW)	40×65×12
B63	130×160×15	1	2	50×72×12	55×80×12 65×90×12(11kW)	40×65×12
B74	150×180×16	2	2	60×85×12	65×90×12	55×80×12
B84	170×200×18	2	2	60×85×12	65×90×12	55×80×12
B85	170×200×18	2	2	80×105×12	80×105×12	70×95×12
B95	220×260×18	2	2	80×105×12	80×105×12	70×95×12

Note: 1 is selected without special indication.

Chart of first-stage drive bearing

Model No.	Output end		Input end				eccentric bearing (×2)
	Bearing a	Bearing b	Double-shaft		Motor connecting	Motor direct-coupled	
			Bearing c	Bearing d	Bearing e		
B09	6205	6108	6201	6302	6205	Bearing c	502205
B0	6207	6207	6201	6302	6205		502205
B1	6208N	6208	6302	6304	6207		502206
B2	6211N	6213	6403	6404	6209		502307
B3	6213N	6215	6405	6406	6210		502309
					6212		
B4	6217N	6218	6406	6407	6212		502312
B5	6220N	6221	6407	6410	6215		502219
B6	23122	6224	6409	6413	6215	No-click direct-coupled type	502222
B7	23124	6226	NJ410	6415	Please contact		502228
B8	23128	6232	NJ414	6420	6322		502328
B9	23136	6340	NJ417	6426	6324		502336

Chart of second-stage drive bearing

Model No.	Output end		Input end				Mishap shaft bearing		Eccentric bearing (X2)	
	Bearing a	Bearing b	Double-shaft		Motor connecting	Motor direct-coupled				
			Bearing c	Bearing d	Bearing e		Bearing f	Bearing g	Low speed end	High speed end
B10	6208N	6208	6201	6302	6205	Bearing c	6302	6207	502206	502205
B20	6211N	6213	6201	6302	6205		6403	6207	202307	502205
B31	6213N	6215	6302	6304	6207		6405	6208	502309	502206
B41	6217N	6218	6302	6304	6207		6406	6208	502312	502206
B42	6217N	6218	6403	6404	6209		6406	6212	502312	502307
B52	6220N	6221	6403	6404	6209		6407	6213	502219	502307
B53	6220N	6221	6405	6406	6210		6407	6215	502219	502309
B63	23122	6224	6405	6406	6210		6409	6215	502222	502309
B74	23124	6226	6406	6407	6212		NJ410	6218	502228	502312
B84	23128	6232	6406	6407	6212		NJ414	6218	502328	502312
B85	23128	6232	6407	6410	6215		NJ414	6218	502328	502219
B95	23136	6340	6407	6410	6215		NJ417	6222	502336	502219

Note: 1 is selected without special indication.

Always chase the first since 1995