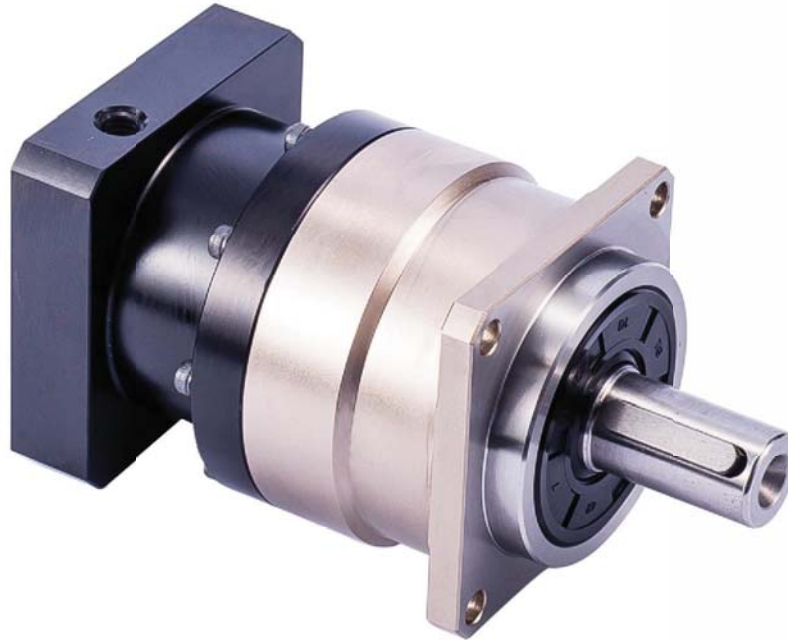


WVRB

 Series planetary gearbox

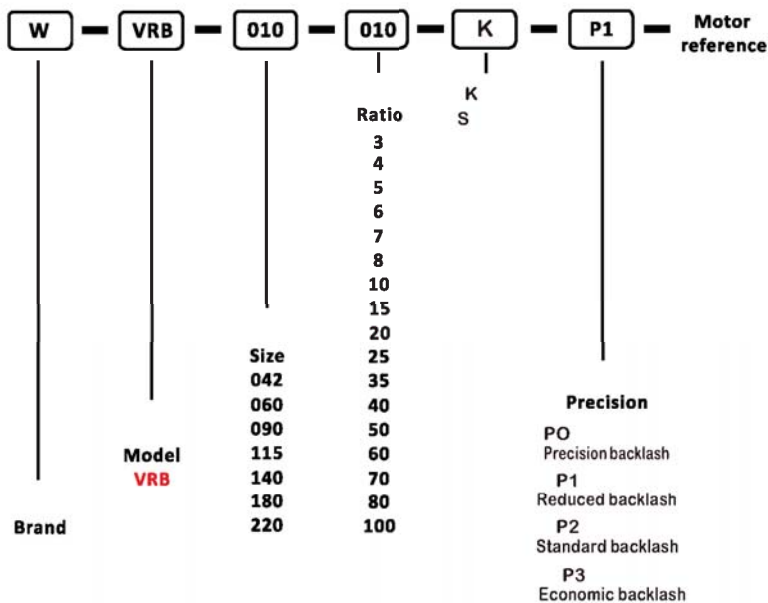
PRODUCT FEATURES

- » 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 increasing 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 are 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	WVRB042	WVRB060	WVRB090	WVRB115	WVRB140	WVRB180	WVRB220	
Rated output torque T_{2N}	Nm	1	3	20	55	130	208	342	588	1140	
			4	19	50	140	290	542	1050	1700	
			5	22	60	160	330	650	1200	2000	
			6	20	55	150	310	600	1100	1900	
		2	1	7	19	50	140	300	550	1100	1800
				8	17	45	120	260	500	1000	1600
				10	14	40	100	230	450	900	1500
				15	20	55	130	208	342	588	1140
	2		20	19	50	140	290	542	1050	1700	
			25	22	60	160	330	650	1200	2000	
			30	20	55	150	310	600	1100	1900	
			35	19	50	140	300	550	1100	1800	
	2	1	40	17	45	120	260	500	1000	1600	
			50	22	60	160	330	650	1200	2000	
			60	20	55	150	310	600	1100	1900	
			70	19	50	140	300	550	1100	1800	
2	1	80	17	45	120	260	500	1000	1600		
		100	14	40	100	230	450	900	1500		
Emergency stop torque T_{2NOT}	Nm	1,2	3 ~ 100	Triple rated output torque							
Rated input speed n_{1N}	rpm	1,2	3 ~ 100	5000	5000	4000	4000	3000	3000	2000	
Maximum input speed n_{1B}	rpm	1,2	3 ~ 100	10000	10000	8000	8000	6000	6000	4000	
Precision backlash P_0	arcmin	1	3 ~ 10	-	≤2	≤2	≤2	≤2	≤2	≤2	
Reduced backlash P_1	arcmin	1	3 ~ 10	-	≤3	≤3	≤3	≤3	≤3	≤3	
		2	15 ~ 100	-	≤5	≤5	≤5	≤5	≤5	≤5	
Standard backlash P_2	arcmin	1	3 ~ 10	≤5	≤5	≤5	≤5	≤5	≤5	≤5	
		2	15 ~ 100	≤8	≤8	≤8	≤8	≤8	≤8	≤8	
Economic backlash P_3	arcmin	1	3 ~ 10	≤9	≤9	≤9	≤9	≤9	≤9	≤9	
		2	15 ~ 100	≤12	≤12	≤12	≤12	≤12	≤12	≤12	
Torsional rigidity		1,2	3 ~ 100	3	7	14	25	50	145	225	
Allowable radial force F_{2aB}	N	1,2	3 ~ 100	780	1530	3250	6700	9400	14500	50000	
Allowable axial force F_{2tB}	N	1,2	3 ~ 100	390	765	1625	3350	4700	7250	25000	
Lifespan	hr	1,2	3 ~ 100	20000							
Efficiency	%	1	3 ~ 10	≥97%							
		2	15 ~ 100	≥94%							
Weight	kg	1	3 ~ 10	0.6	1.4	3.7	8	16	36	53	
		2	15 ~ 100	0.7	1.6	4.2	8.9	17	37	54	
Working temperature	°C	1,2	3 ~ 100	-10°C ~ 90°C							
Lubricating		1,2		Synthetic lubricating grease							
IP Grade		1,2	3 ~ 100	IP65							
Installation direction		1,2	3 ~ 100	In any direction							
Noise value ($n_1=3000rpm$, off load)	dB(A)	1,2	3 ~ 100	≤56	≤58	≤60	≤63	≤65	≤67	≤70	

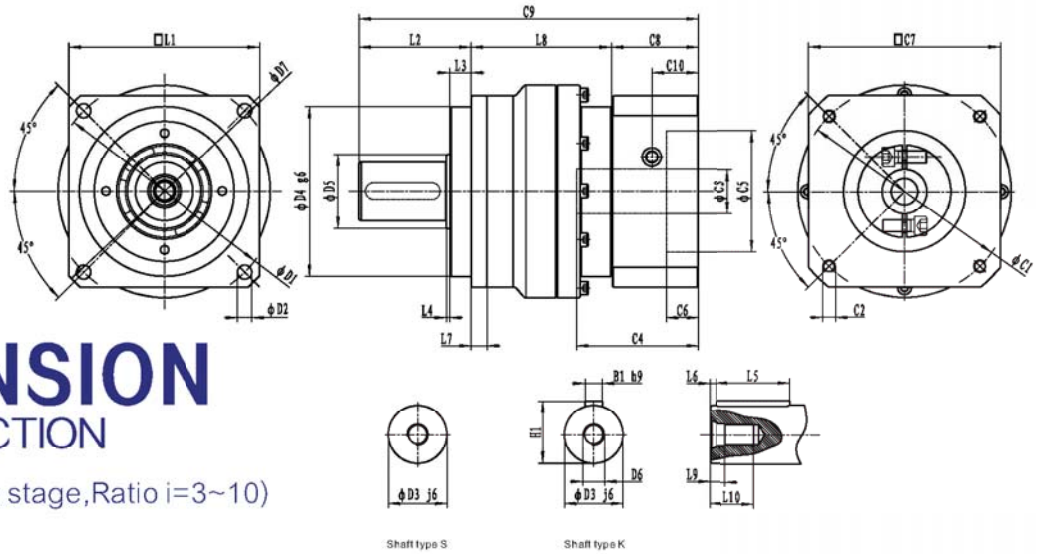
ROTATIONAL INERTIA OF REDUCER

Specification	Unit	Stage	Ratio	WVRB042	WVRB060	WVRB090	WVRB115	WVRB140	WVRB180	WVRB220
Rotational inertia J1	kg · cm ²	1	3	0.053	0.22	1.2	5.3	20	44	90
			4	0.041	0.17	0.95	4.1	15	28	62
			5	0.036	0.16	0.86	3.6	14	22	52
			6	0.034	0.15	0.82	3.3	13	18	47
			7	0.032	0.14	0.79	3.2	12	16	42
			8	0.031	0.14	0.77	3.1	12	15	40
		2	10	0.03	0.14	0.75	3	11	14	38
			15	0.035	0.14	0.72	2.8	11	12	36
			20	0.034	0.13	0.72	2.8	11	12	35
			25	0.034	0.13	0.71	2.8	11	12	35
			30	0.03	0.13	0.7	2.7	10	11	34
			35	0.034	0.13	0.71	2.7	11	12	35
			40	0.03	0.13	0.7	2.7	10	11	33
			50	0.03	0.13	0.69	2.7	10	11	33
			60	0.03	0.13	0.69	2.7	10	11	33
			70	0.03	0.13	0.69	2.7	10	11	33
			80	0.03	0.13	0.69	2.7	10	11	33
			100	0.03	0.13	0.69	2.7	10	11	33

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

2. Maximum acceleration torque T_{2B} =60% of T_{2NOT}

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

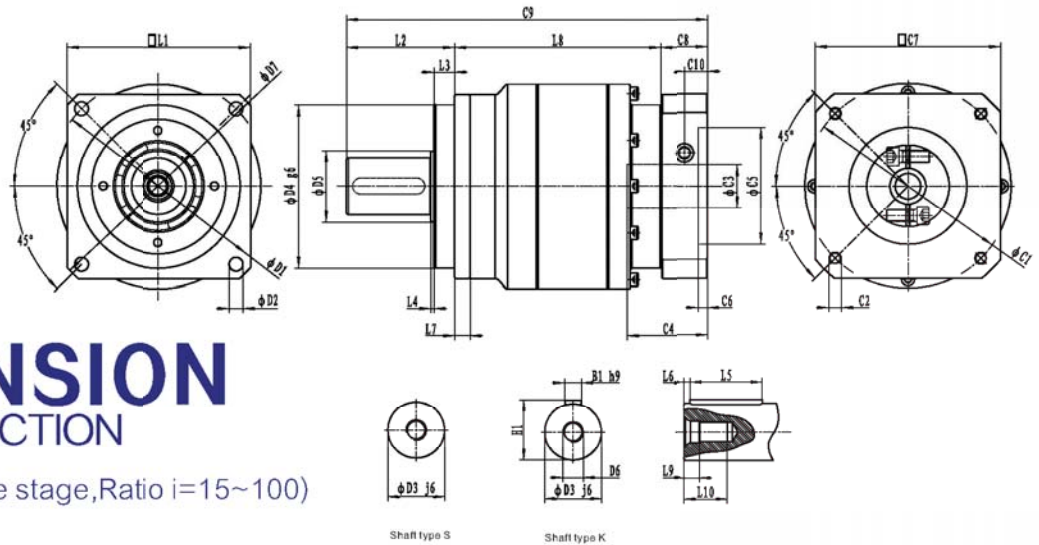


DIMENSION

SINGLE SECTION

- Dimension(single stage, Ratio $i=3\sim 10$)

Dimension	WVRB042	WVRB060	WVRB090	WVRB115	WVRB140	WVRB180	WVRB220
D1	-	70	100	130	165	215	250
D2	-	5.5	6.6	9	11	13.5	17
D3 j6	-	16	22	32	40	55	75
D4 g6	-	50	80	110	130	160	180
D5	-	18	30	40	50	70	85
D6	-	M5*0.8P	M8*1.25P	M12*1.75P	M16*2.0P	M20*2.5P	M20*2.5P
D7	-	80	116	152	185	240	290
L1	-	60	90	115	140	180	220
L2	-	37	48	60	95	105	138
L3	-	7	10	7	13	20	30
L4	-	1.5	1.5	2	3	3	3
L5	-	25	32	40	63	70	90
L6	-	2	3	5	5	6	7
L7	-	6	8	10	12	15	20
L8	-	39.5	78.5	102	124.5	131.5	151.5
L9	-	4.8	7.2	10	12	15	15
L10	-	12.5	19	28	36	42	42
C1	-	70	90	145	200	200	235
C2	-	M4*0.7P	M5*0.8P	M8*1.25P	M12*1.75P	M12*1.75P	M12*1.75P
C3	-	≤14/≤16	≤19/≤24	≤28	≤35/≤42	≤42	≤42/≤55
C4	-	35	46.5	67	81	114	117
C5	-	50	70	110	114.3	114.3	200
C6	-	3.5	6	14	19	24	20
C7	-	60	80	130	180	180	220
C8	-	46	30	45.5	57.5	81.5	87.5
C9	-	122.5	156.5	212.5	279	318	378
C10	-	10.5	14.5	25.5	32	43.5	49.5
B1 h9	-	5	6	10	12	16	20
H1	-	18	24.5	35	43	59	79.5



DIMENSION

DOUBLE SECTION

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

Dimension	WVRB042	WVRB060	WVRB090	WVRB115	WVRB140	WVRB180	WVRB220
D1	-	70	100	130	165	215	250
D2	-	5.5	6.6	9	11	13.5	17
D3 j6	-	16	22	32	40	55	75
D4 g6	-	50	80	110	130	160	180
D5	-	18	30	40	50	70	85
D6	-	M5*0.8P	M8*1.25P	M12*1.75P	M16*2.0P	M20*2.5P	M20*2.5P
D7	-	30	116	152	185	240	290
L1	-	50	90	115	140	180	220
L2	-	37	48	60	95	105	138
L3	-	6	10	7	13	20	30
L4	-	1.5	1.5	2	3	3	3
L5	-	25	32	40	63	70	90
L6	-	2	3	5	5	6	7
L7	-	7	8	10	12	15	20
L8	-	71.5	116	147	185.5	200	220
L9	-	4.8	7.2	10	12	15	15
L10	-	12.5	19	28	36	42	42
C1	-	70	90	145	145	200	200
C2	-	M4*0.7P	M5*0.8P	M8*1.25P	M8*1.25P	M12*1.75P	M12*1.75P
C3	-	≤14/≤16	≤16/≤19	≤19/≤24	≤24/≤28	≤35	≤42
C4	-	35	46.5	67	66	80	114
C5	-	50	70	110	110	114.3	114.3
C6	-	3.5	6	14	10	9	30
C7	-	60	80	130	130	180	180
C8	-	48	30	45.5	42.5	47.5	84.5
C9	-	154.5	194	257.5	325	352.5	441.5
C10	-	10.5	14.5	25.5	27	22.5	43.5
B1 h9	-	5	6	10	12	16	20
H1	-	18	24.5	35	43	59	79.5