

WADR

 Series planetary gearbox

PRODUCT FEATURES

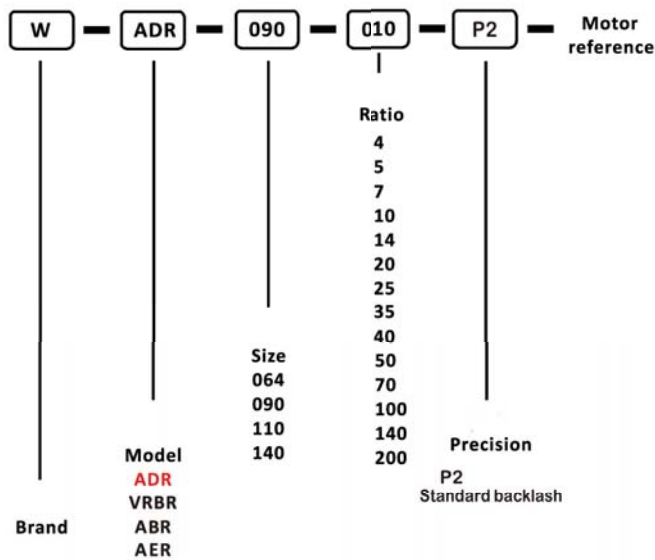
- » Planetary arm bracket and output shaft are one-piece constructed to ensure maximum torsional rigidity.
- » The gears adopt the full-needle design, in order to broaden the contact area and to increasing the structure rigidity and the output torque.
- » The mild-steel gears' hardness of adopting surface 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.
- » Adopt spiral bevel gear design, allow high output torque, more than 30% higher than straight bevel gear.
- » High tolerance input speed, more than 8 times higher than straight bevel gear input.
- » The meshing tooth imprint of spiral bevel gear has been optimized by optimum design, and the contact tooth surface load is uniform, and long running life.
- » Cochlear bevel gears are meshed by optimum motion error analysis and strict process control to ensure high precision running back clearance.



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	Unit	Stage	Ratio	WADR064	WADR090	WADR110	WADR140
Rated output torque T_{2N}	Nm	1	4	48	130	270	560
			5	60	160	330	650
			7	50	140	300	550
			10	40	100	230	450
			14	42	140	300	550
			20	40	100	230	450
		2	25	60	160	330	650
			35	50	140	300	550
			40	48	130	270	560
			50	60	160	330	650
			70	50	140	300	550
			100	40	100	230	450
			140	50	140	300	550
			200	40	100	230	450
Emergency stop torque T_{2NOT}	Nm	1,2	4~200	Triple rated output torque			
Rated input speed Ω_{1N}	rpm	1,2	4~200	5000	4000	4000	3000
Maximum input speed Ω_{1B}	rpm	1,2	4~200	10000	8000	8000	6000
Standard backlash P_2	arcmin	1	4~20	≤8	≤8	≤8	≤8
		2	25~200	≤11	≤11	≤11	≤11
Torsional rigidity	Nm/arcmin	1,2	4~200	13	31	82	151
Maximum bending torque M_{2KB}	Nm	1,2	4~200	125	235	430	1300
Allowable axial force F_{2aB}	N	1,2	4~200	1050	2850	2990	10590
Lifespan	hr	1,2	4~200	20000*			
Efficiency	%	1	4~20	≥95%			
		2	25~200	≥92%			
Weight	kg	1	4~20	2.1	5.9	10.5	21.9
		2	25~200	1.9	4.5	9.8	20.1
Working temperature	°C	1,2	4~200	(-10° C +90° C)			
Lubricating				Synthetic lubricating grease			
IP Grade		1,2	4~200	IP65			
Installation direction		1,2	4~200	In any direction			
Noise value ($n_1=3000$ rpm, off load)	dB(A)	1,2	4~200	≤63	≤65	≤68	≤70

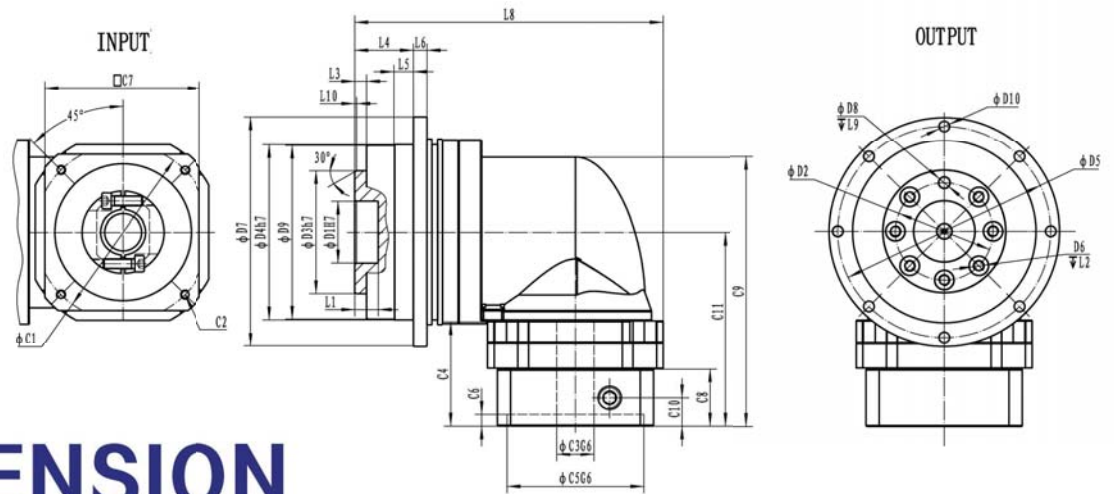
1. Ratio ($i=N_{in}/N_{out}$)

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

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

减速机转动惯量 / Rotational inertia

规格 Specification	单位 Unit	节数 Stage	减速比 Ratio	WADR064	WADR090	WADR110	WADR140
转动惯量 J_1 Rotational inertia J_1	kg.cm ²	1	4~10	0.35	2.25	6.84	23.4
			14	0.07	1.87	6.25	21.8
			20	0.07	1.87	6.25	21.8
		2	25~100	0.09	0.35	2.25	6.84
			140~200	0.007	0.31	1.87	6.25

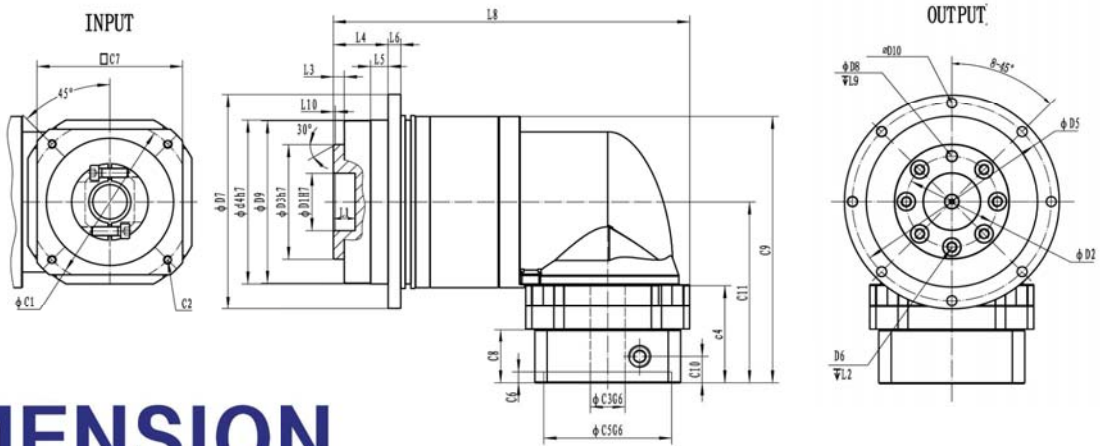


DIMENSION

SINGLE SECTION

- Dimension(single stage, Ratio i=4~20)

Dimension	WADR064	WADR090	WADR11C	WADR140
D1H7	20	31.5	40	50
D2	31.5	50	63	80
D3h7	40	63	80	100
D4h7	64	90	110	140
D5	79	109	135	168
D6	7×M5	7×M6	11×M6	11×M8
D7	86	118	145	179
D8H7	5	6	6	8
D9	63.2	89.2	109.2	139.2
D10	8×4.5	8×5.5	8×5.5	12×6.6
L1	8	12	12	12
L2	9	12	15	17
L3	3	6	6	6
L4	19.5	30	29	38
L5	7	10	10	14.6
L6	4	7	8	10
L8	114.5	158	190	248
L9	6	7	7	7
L10	0.5	1	1	1
C1	70	90	145	200
C2	4×M4	4×M5	4×M8	4×M12
C3G6	≅14	≅19/≅24	≅24	≅35/≅42
C4	35	54	81	81
C5G6	50	70	110	114.3
C6	3.5	6	14	19
C7	60	80	130	180
C8	24.2	29.5	45	57
C9	104.5	147	194.5	250.5
C10	9.5	14.5	27	32
C11	70	100	132	175.5



DIMENSION

DOUBLE SECTION

- Dimension(double stage,Ratio i=25~200)

Dimension	WADR064	WADR090	WADR110	WADR140
D1H7	20	31.5	40	50
D2	31.5	50	63	80
D3h7	40	63	80	100
D4h7	64	90	110	140
D5	79	109	135	168
D6	7×M5	7×M6	11×M6	11×M8
D7	86	118	145	179
D8H7	5	6	6	8
D9	63.2	89.2	109.2	139.2
D10	8×4.5	8×5.5	8×5.5	12×6.6
L1	8	12	12	12
L2	9	12	15	17
L3	3	6	6	6
L4	19.5	30	29	38
L5	7	10	10	14.6
L6	4	7	8	10
L8	146.5	195.5	219.5	325.5
L9	6	7	7	7
L10	0.5	1	1	1
C1	70	90	145	200
C2	4×M4	4×M5	4×M8	4×M12
C3G6	≅14	≅19/≅24	≅24	≅35/≅42
C4	35	54	67	81
C5G6	50	70	110	114.3
C6	3.5	6	11.5	19
C7	60	80	130	180
C8	24.2	29.5	42.5	57
C9	104.5	147	160	250.5
C10	9.5	14.5	27	32
C11	70	100	113	175.5