

ADR Serie



Overview

- Special design for continuous (S1) or cyclic (S5) duty operation
- Stainless steel housing, black anodized aluminum right angle housing and motor adapter flange
- Stainless steel output shaft, flange ISO 9409
- Helical gear technology
- Nominal Torques:
 - T_{2N} : 14 Nm – 2000 Nm
- Ratios
 - 1-stage : 4 / 5 / 7 / 10 / 14 / 20
 - 2-stage : 20 / 25 / 35 / 40 / 50 / 70 / 100 / 140 / 200
 - *Only the ADR047 2-stage offers ratio 20 option.
- Low Backlash
 - 1-stage: ≤ 2 arcmin / ≤ 4 arcmin / ≤ 6 arcmin
 - 2-stage : ≤ 4 arcmin / ≤ 7 arcmin / ≤ 9 arcmin
- High Efficiency
 - 1-stage : $\geq 95\%$
 - 2-stage : $\geq 92\%$
- Easy mount
- low noise
- Compact structure
- Sizes available: ADR047 / ADR064 / ADR090 / ADR110 / ADR140 / ADR200 / ADR255

Specifications

Model No.	Stage	Ratio ¹	ADR047	ADR064	ADR090	ADR110	ADR140	ADR200	ADR255	
		4	19	48	130	270	560	1,100	1,700	
		5	22	60	160	330	650	1,200	2,000	
	1	7	19	50	140	300	550	1,100	1,800	
		10	14	40	100	230	450	900	1,500	
		14	-	42	140	300	550	1,100	1,800	
		20	-	40	100	230	450	900	1,500	
Nominal Output Torque T_{2N}	Nm									
		20	19	-	-	-	-	-	-	
		25	22	60	160	330	650	1,200	2,000	
	2	35	19	50	140	300	550	1,100	1,800	
		40	19	48	130	270	560	1,100	1,700	
		50	22	60	160	330	650	1,200	2,000	
		70	19	50	140	300	550	1,100	1,800	
		100	14	40	100	230	450	900	1,500	
		140	-	-	140	300	550	1,100	1,800	
		200	-	-	100	230	450	900	1,500	
Emergency Stop Torque T_{2NOT3}	Nm	1,2	4~200	3 times of nominal output torque T_{2N}						
Nominal Input Speed N_{1N}	rpm	1,2	4~200	5,000	5,000	4,000	4,000	3,000	3,000	2,000
Max. input Speed N_{1B}	rpm	1,2	4~200	10,000	10,000	8,000	8,000	6,000	6,000	4,000
Micro Backlash P0	arcmin	1	4~20	-	-	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2
		2	25~200	-	-	≤ 4	≤ 4	≤ 4	≤ 4	≤ 4
Reduced Backlash P1	arcmin	1	4~20	≤ 4	≤ 4	≤ 4	≤ 4	≤ 4	≤ 4	≤ 4
		2	25~200	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7
Standard Backlash P2	arcmin	1	4~20	≤ 6	≤ 6	≤ 6	≤ 6	≤ 6	≤ 6	≤ 6
		2	25~200	≤ 9	≤ 9	≤ 9	≤ 9	≤ 9	≤ 9	≤ 9
Torsional Rigidity	Nm/arcmin	1,2	4~200	7	13	31	82	151	440	1,006
Max. Bending moment F_{2kB2}	Nm	1,2	4~200	42.5	125	235	430	1,300	3,064	5,900
Max. Axial Load F_{2a2}	N	1,2	4~200	1,080	2,110	2,310	4,800	6,200	5,450	10,600
Service Life	hr	1,2	4~200	30,000 *						
Efficiency	%	1	4~20	≥ 95 %						
		2	25~200	≥ 92 %						
Weight	kg	1	4~20	1.1	2.1	5.9	10.5	21.9	50.9	85.4
		2	25~200	1.4	1.9	4.5	9.8	20.1	45.4	85.9
Operating Temperature	°C	1,2	4~200	-10°C ~+ 90°C						
Lubrication		1,2	4~200	synthetic gear grease (NYOGEL 792D)						
Degree of Gearbox Protection		1,2	4~200	IP65						

Mounting Position		1,2	4-200	all directions					
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Noise Level ($n_1=3000$ rpm, No Load)	dB(A)	1,2	4-200	≤ 61	≤ 63	≤ 65	≤ 68	≤ 70	≤ 72	≤ 74
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1. Ratio ($i=N$ in / N out)
 2. Applied to output flange @ 100 rpm
 3. Maximum acceleration torque $T_{2B} = 60\%$ van T_{2NOT}
- * S1 service life 15,000 hrs.

Inertia

Model No.	StageRatio ¹	ADR047	ADR064	ADR090	ADR110	ADR140	ADR200	ADR255	
	4~10	0.09	0.35	2.25	6.84	23.4	68.9	135.4	
	14	-	0.07	1.87	6.25	21.8	65.6	119.8	
Mass Moments of inertia J ₁	kg*cm ²	20	0.09	0.07	1.87	6.25	21.8	65.6	119.8
		20	0.09	0.07	1.87	6.25	21.8	65.6	119.8
	2	25~100	0.09	0.09	0.35	2.25	6.84	23.4	68.9
		140~200-	-	0.31	1.87	6.25	21.8	65.6	

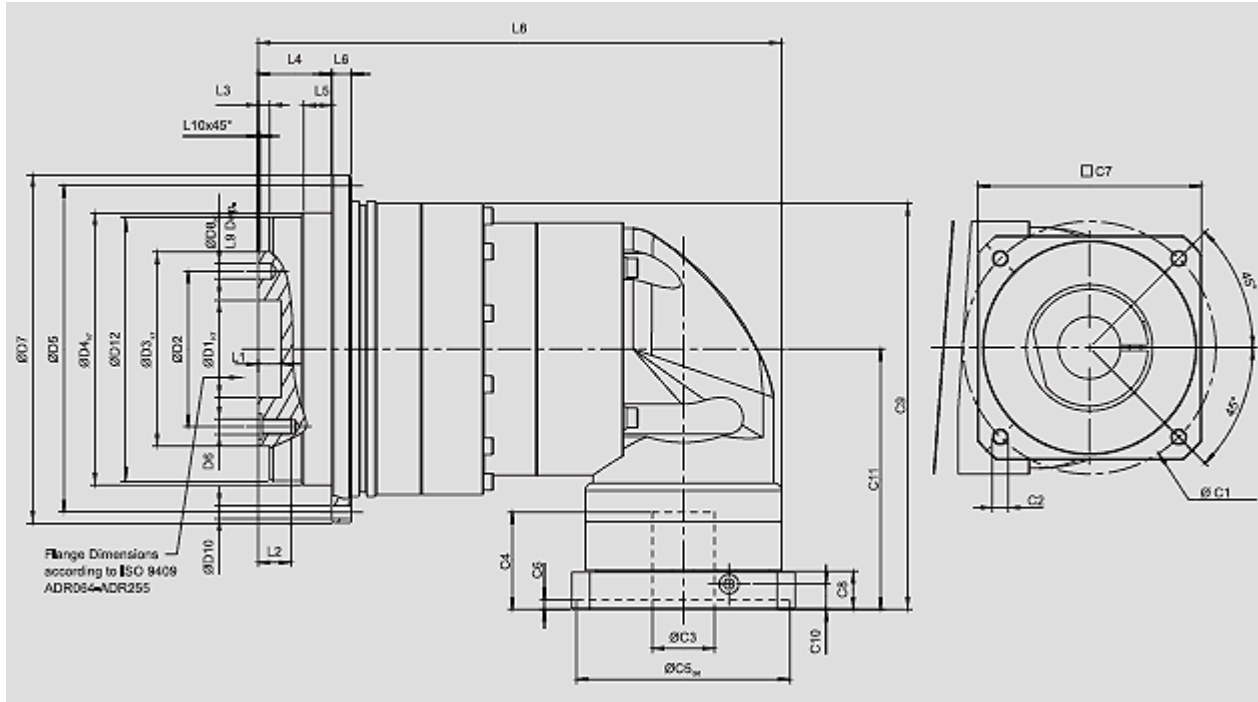
C11 ³	74	81.5	107.5	134	164.5	213.5	268.5
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3. C1~C10 are motor specific dimensions.

* ADR064M1 offers C3 ≤16 option.

* ADR090M1 offers C3 ≤24 option.

ADR series 2-stage, ratio i= 25~200



	ADR047	ADR064	ADR090	ADR110	ADR140	ADR200	ADR255
D1 _{H7}	12	20	31.5	40	50	80	100
D2	20	31.5	50	63	80	125	140
D3 _{H7}	28	40	63	80	100	160	180
D4 _{H7}	47	64	90	110	140	200	255
D5	67	79	109	135	168	233	280
D6	4 X M3 X 0.5P	7 X M5 X 0.8P	7 X M6 X 1P	11 X M6 X 1P	11 X M8 X 1.25P	11 X M10 X 1.5P	12 X M16 X 2P
D7	72	86	118	145	179	247	300
D8 _{H7}	3	5	6	6	8	10	12
D10	8 X 3.4	8 X 4.5	8 X 5.5	8 X 5.5	12 X 6.6	12 X 9	16 X 13.5
D12	46.2	63.2	89.2	109.2	139.2	199.2	254.2
L1	4	8	12	12	12	16	20
L2	6.5	8	13.5	13.5	17	22.5	30.5
L3	3	3	6	6	6	8	12
L4	19.5	19.5	30	29	38	50	66
L5	7	7	10	10	14.6	15	20
L6	4	4	7	8	10	12	18
L8	122	132.5	163	217.5	269.5	333.5	403
L9	4	6	7	7	7	10	10
L10	0.5	0.5	1	1	1	1	1
C1 ³	46	46	70	100	130	165	200
C2 ³	M4 X 0.7P	M4 X 0.7P	M4 X 0.7P	M6 X 1P	M8 X 1.25P	M10 X 1.5P	M12 X 1.75P
C3 ³	≤11	≤11 / ≤12	≤14 / ≤15.875 / ≤16	≤ 19 / ≤ 24	≤32	≤38	≤48

C4 ³	30	30	30	40	50	60	85
C5 ³ _{GG}	30	30	50	80	110	130	180
C6 ³	3.5	3.5	8	4	5	6	6
C7 ³	48	48	60	90	115	142	190
C8 ³	19.5	19.5	19	17	19.5	22.5	29
C9 ³	103.25	108.25	128.25	166.5	209	269.5	340
C10 ³	13.25	13.25	13.5	10.75	13	15	20.75
C11 ³	74	74	81.5	107.5	134	164.5	213.5

4. C1~C10 are motor specific dimensions.

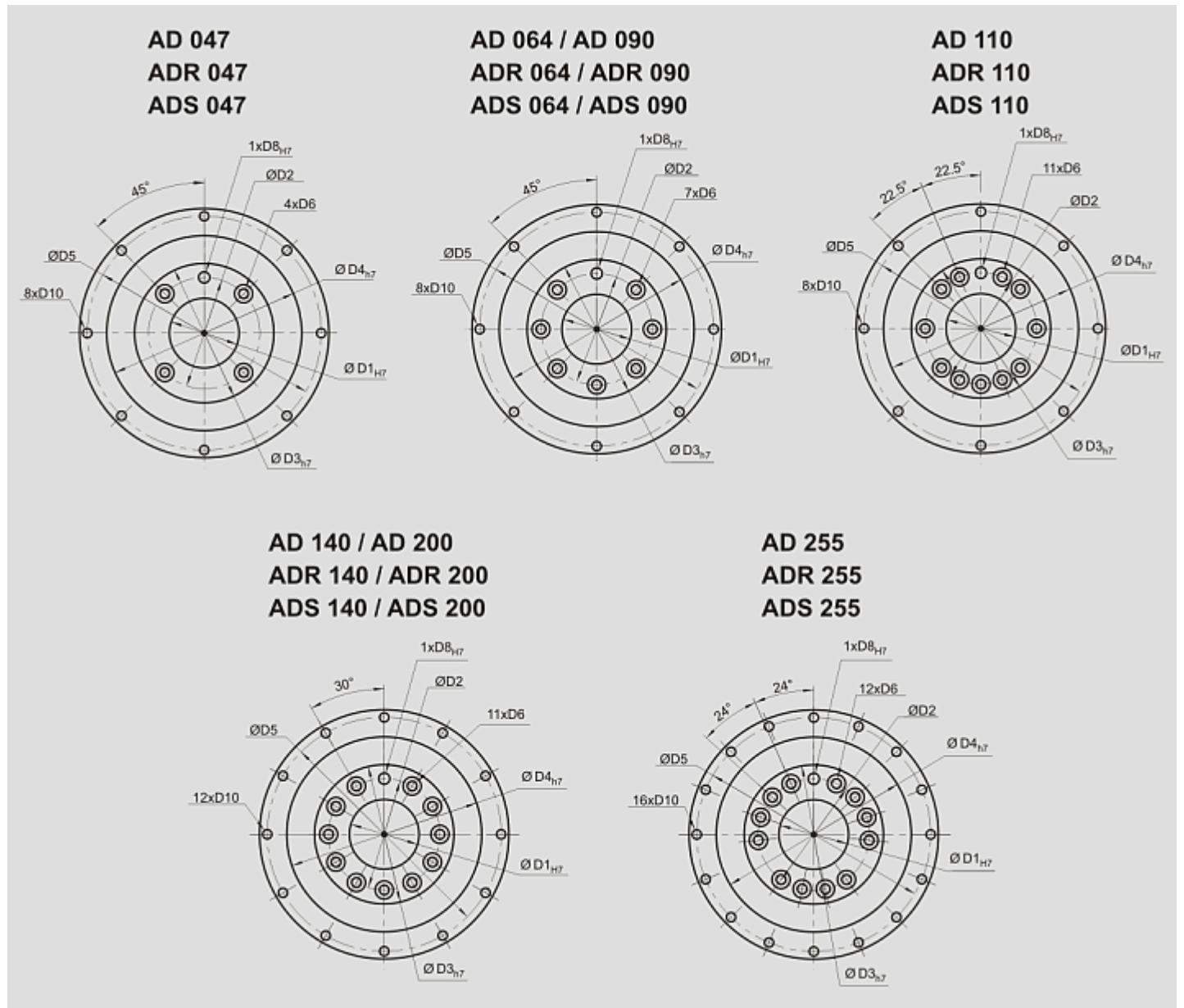
* ADR064M1 offers C3 ≤12 option.

* ADR090M1 offers C3 ≤16 option.

* ADR090M2 offers C3 =15,875 option.

* ADR110M1 offers C3 ≤24 option.

Dimensions Output Flange (ISO 9409)



	AD047	AD064	AD090	AD110	AD140	AD200	AD255
Dimension	ADR047	ADR064	ADR090	ADR110	ADR140	ADR200	ADR255
	ADS047	ADS064	ADS090	ADS110	ADS140	ADS200	ADS255
D1_{H7}	12	20	31.5	40	50	80	100
D2	20	31.5	50	63	80	125	140
D3_{H7}	28	40	63	80	100	160	180
D4_{H7}	47	64	90	110	140	200	255
D5	67	79	109	135	168	233	280
D6	M3 x 0.5P	M5 x 0.8P	M6 x 1P	M6 x 1P	M8 x 1.25P	M10 x 1.5P	M16 x 2P
D8_{H7}	3	5	6	6	8	10	12
D10	3.4	4.5	5.5	5.5	6.6	9	13.5