

PANR

The PANR Primary Series are right angle configuration gearboxes equipped with a NEMA spec output flange and shaft, to offer exceptional torque ratings and capacity for many of present servo and stepper motion control applications. The gearboxes are drop-ins for most industry standards and available with ratios 3:1 up to 300:1. Adapters for all servo and stepper motors.

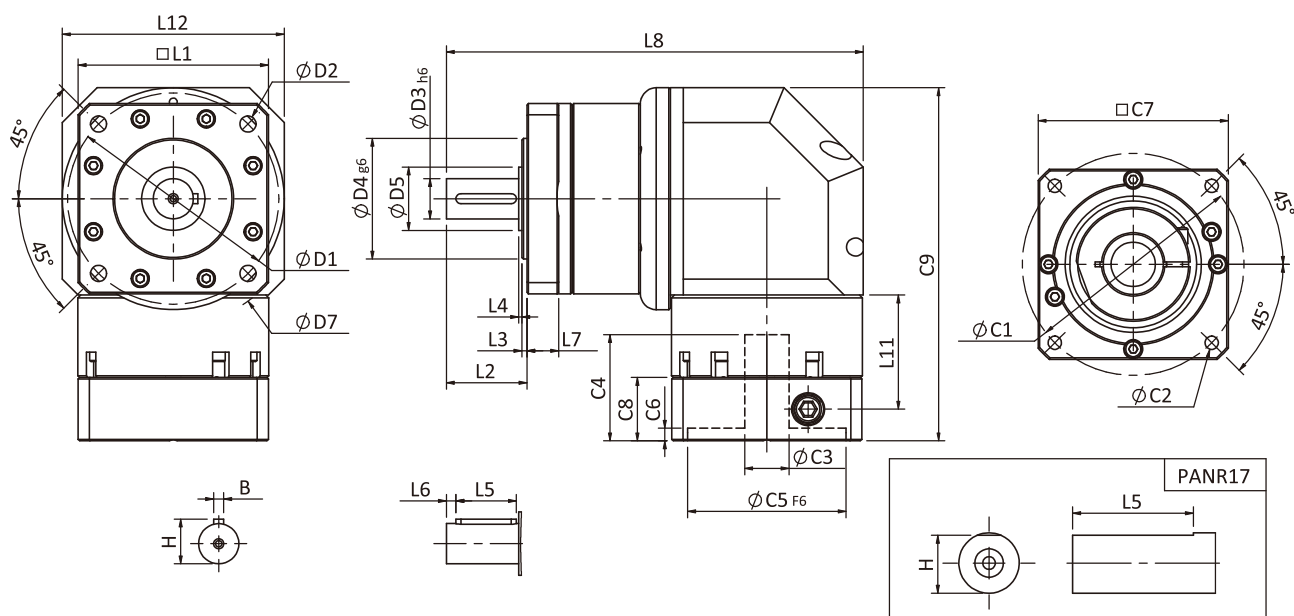


Frame Size (mm)	17, 23, 34, 42, 56
Ratio	3:1 - 300:1
Nominal Input Speed (rpm)	2,500 - 4,500
Max Input Speed (rpm)	5,000 - 7,500
Backlash (arc-min)	1 Stage: 11 - 18 2 Stages: 13 - 20
Noise Level (dBA / 1m)	66 - 73

Features

- ▶ NEMA spec flange.
- ▶ Torque capacity range: 8 Nm through 215 Nm.
- ▶ Caged planet carrier: with standard planet gear set.
- ▶ High performance, efficiencies and low acoustics.
- ▶ Wide range of ratios up to 300:1.
- ▶ Output bearings deliver radial load capacity as high as 4370 N, and axial capacities up to 2630 N.

PANR Single Stage Dimensions



Specifications

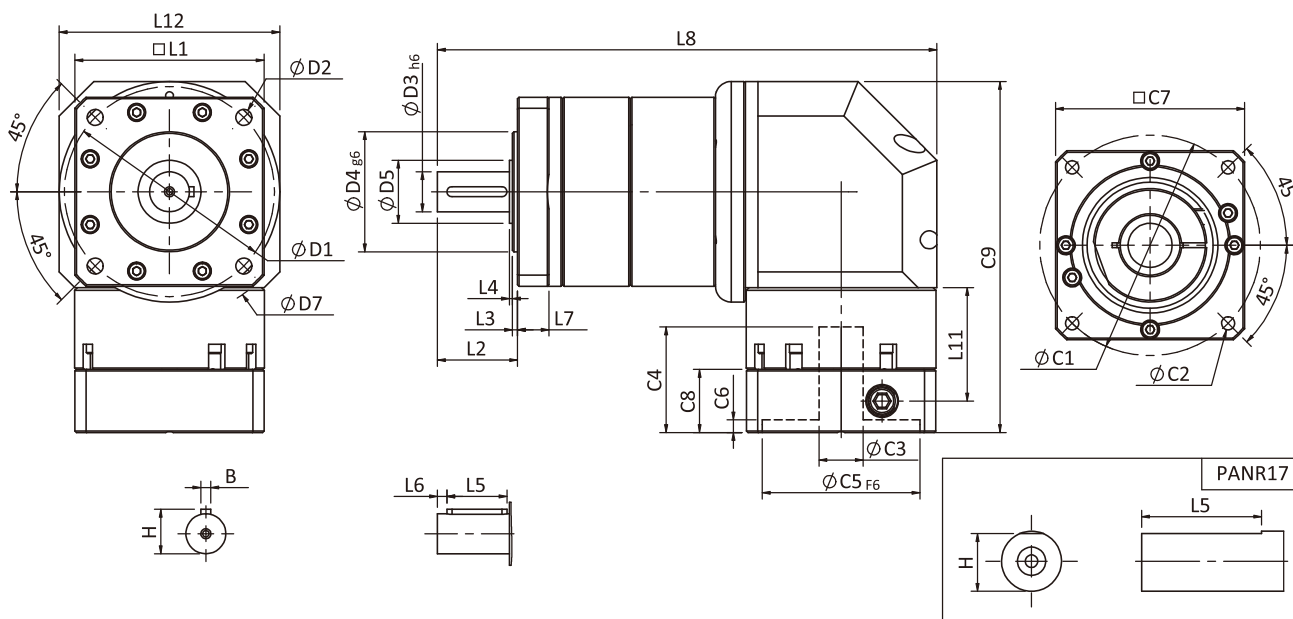
Unit:mm

Dimensions	PANR17	PANR23	PANR34	PANR42
D1	43.8	66.67	98.425	-
D2	3.25	5.1	5.6	-
D3 _{h6}	9.525	12.7	19.05	-
D4 _{g6}	21.97	38.1	73.025	-
D5	12	20	35	-
D7	56	80	118	-
L1	42.6	60	90	-
L2	25.4	25.4	31.75	-
L3	1.6	1.6	1.7	-
L4	1	1	1	-
L5	19.05	19.05	25.4	-
L6	-	3	3	-
L7	6.5	10	12	-
L8	105.2	131.5	182.25	-
L11	26.5	36	40.7	-
L12	50	70	98	-
C1 ²	46	70	90	-
C2 ²	M4x0.7P	M5x0.8P	M6x1.0P	-
C3 ²	≤8/≤11	≤14/≤19	≤19/≤24	-
C4 ²	33	44	57	-
C5 ² F ₆	30	50	70	-
C6 ²	4	4	6	-
C7 ²	42.6	60	90	-
C8 ²	18.5	20	26	-
C9 ²	83	111.4	149.2	-
B	-	3.175	4.763	-
H	9.14	14.1	21.1	-

★ C1~C9 are motor specific dimensions (metric std shown). Size may vary according to motor flange.

★ Specification subject to change without notice.

PANR Double Stage Dimensions-1



Specifications

Unit:mm

Dimensions	PANR17	PANR23	PANR34	PANR42
D1	43.8	66.67	98.425	-
D2	3.25	5.1	5.6	-
D3 _{h6}	9.525	12.7	19.05	-
D4 _{g6}	21.97	38.1	73.025	-
D5	12	20	35	-
D7	56	80	118	-
L1 ¹	42.6 (44) ¹	60	90	-
L2	25.4	25.4	31.75	-
L3	1.6	1.6	1.7	-
L4	1	1	1	-
L5	19.05	19.05	25.4	-
L6	-	3	3	-
L7	6.5	10	12	-
L8	127.65	158.5	216.05	-
L11	26.5	36	40.7	-
L12	50	70	98	-
C1 ²	46	70	90	-
C2 ²	M4x0.7P	M5x0.8P	M6x1.0P	-
C3 ²	≤8/≤11	≤14/≤19	≤19/≤24	-
C4 ²	33	44	57	-
C5 ² F ₆	30	50	70	-
C6 ²	4	4	6	-
C7 ²	42.6	60	90	-
C8 ²	18.5	20	26	-
C9 ²	83	111.4	149.2	-
B	-	3.175	4.763	-
H	9.14	14.1	21.1	-

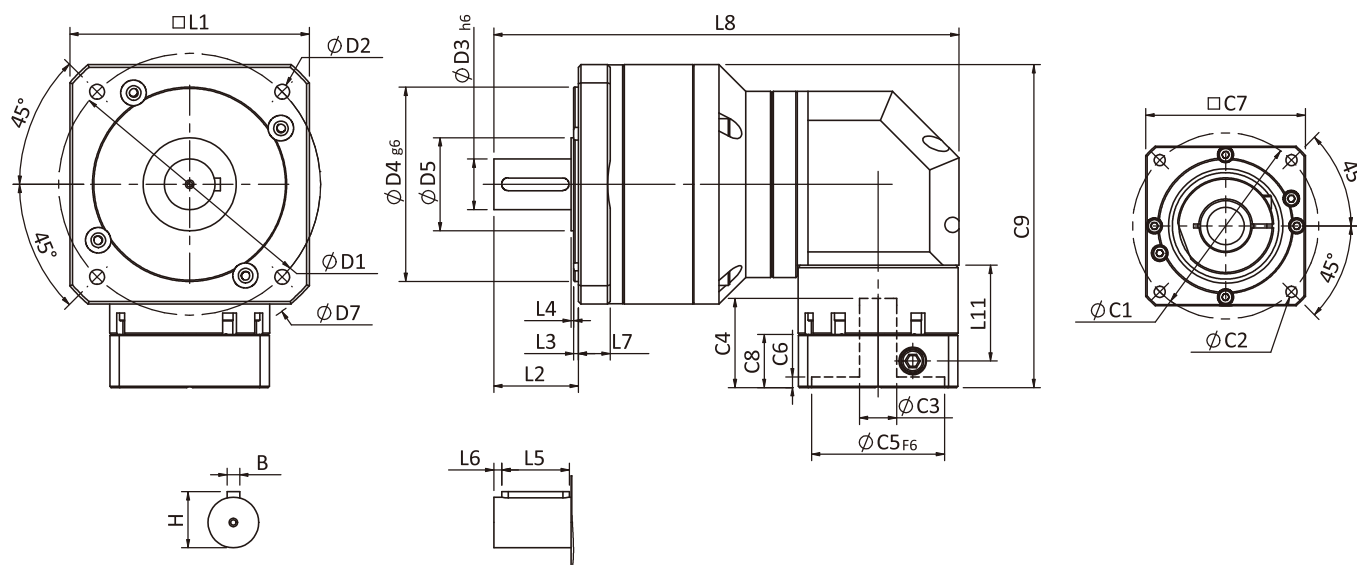
*1. L1=44 when gear ratios are 100, 200, and 300.

*2. C1~C9 are motor specific dimensions (metric std shown). Sizes may vary according to the motor flange chosen.

★ Specification subject to change without notice.



PANR Double Stage Dimensions-2



Specifications

Unit:mm

Dimensions	PANR23T	PANR34T	PANR42T	PANR56T
D1	66.67	98.425	125.73	177.8
D2	5.1	5.6	7.1	10.2
D3 _{h6}	12.7	19.05	25	25
D4 _{g6}	38.1	73.025	55.55	114.3
D5	20	35	32	-
D7	80	118	148	195
L1	60	90	115	145
L2	25.4	31.75	42	41
L3	1.6	1.7	2.4	4
L4	1	1	2	-
L5	19.05	25.4	32	32
L6	3	3	4	4
L7	10	12	19	20
L8	132.5	174.85	254.5	254.5
L11	26.5	36	40.7	40.7
C1 ²	46	70	90	90
C2 ²	M4x0.7P	M5x0.8P	M6x1.0P	M6x1.0P
C3 ²	≤8/≤11	≤14/≤19	≤19/≤24	≤19/≤24
C4 ²	33	44	57	57
C5 ² F6	30	50	70	70
C6 ²	4	4	6	6
C7 ²	42.6	60	90	90
C8 ²	18.5	20	26	26
C9 ²	88	121.4	157.7	157.7
B	3.175	4.763	8	8
H	14.1	21.093	28	28

*2. C1~C9 are motor specific dimensions (metric std shown). Sizes may vary according to the motor flange chosen.

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PANR Specifications

Specifications		Stage	Ratio	PANR17	PANR23	PANR34	PANR42 PANR56
Nominal Output Torque T _{2N}	N•m	1	3	9	28	85	135
			4	10	32	80	180
			5	11	35	95	215
			7	10	28	85	200
			8	10	32	80	195
			9	9	25	75	195
			10	11	35	95	210
			12	10	32	80	-
			14	10	28	85	200
		15	11	35	95	-	
		16	8	23	75	195	
		Stage	Ratio	PANR17	PANR23 PANR23T	PANR34 PANR34T	PANR42T PANR56T
		2	20	11	35/31	95/95	215
			25	11	35/30	95/95	215
			30	11	35/30	95/95	215
			35	11	35/28	95/95	215
			40	11	35/31	95/95	215
			50	11	35/30	95/95	215
			60	11	35/30	95/95	215
			70	11	35/28	95/95	215
			80	11	35/27	95/92	215
			100	8	35/27	95/82	205
			120	11	35/27	95/92	215
			160	-	23/23	75/75	195
			200	8	21/21	65/65	180
			243	8	23/23	75/75	195
			300	8	21/21	65/65	180
Emergency Stop Torque T _{2NOT}	N•m	(2.5 times of Nominal Output Torque) (*Max. Output Torque T _{2B} =60% of Emergency Stop Torque)					
Nominal Input Speed n _{1N}	rpm	1,2	3-300	4500	4000	3000	2500
Max. Input Speed n _{1max}	rpm	1,2	3-300	7500	7000	6000	5000
Standard Backlash P2	arcmin	1 2	3-16 20-300	≤ 18 ≤ 20	≤ 15 ≤ 17	≤ 13 ≤ 15	≤ 11 ≤ 13
Torsional Rigidity	N•m /arcmin	1,2	3-300	1.2	3.5	8.5	17
Max. Radial Load F _{2rB} ⁻¹	N	1,2	3-300	580	890	2050	4370
Max. Axial Load F _{2aB} ⁻¹	N	1,2	3-300	410	430	1100	2630
Operating Temp.	°C	1,2	3-300	-10°C ~ +90°C			
Service Life	hr	1,2	3-300	20,000(10,000 Continuous Operation)			
Efficiency	%	1	3-16	≥ 95%			
		2	20-300	≥ 90%			
Weight	kg	1	3-16	1.0	2.4	6.1	12.2/12.5
		2	20-300	1.2	2.9/2.7	8.1/6.5	13.8/14.1
Mounting Position	-	1,2	3-300	Any Direction			
Noise Level ²	dBA/1m	1,2	3-300	66	68	70	73
Protection Class	-	1,2	3-300	IP65			
Lubrication	-	1,2	3-300	Synthetic Lubricant			
Inertia (J1)							
Stage	Ratio	unit		PANR17(φ8)	PANR23(φ14)	PANR34(φ19)	PANR42(φ24) PANR56(φ24)
1	3, 4, 5, 7	kg•cm ²		0.07	0.40	2.00	2.7
	Other Ratios			0.05	0.30	1.50	2.2
Stage	Ratio			PANR17(φ8)	PANR23(φ14) PANR23T(φ8)	PANR34(φ19) PANR34T(φ19)	PANR42T(φ19) PANR56T(φ19)
2	20, 25, 35			0.07	0.40/0.07	2.0/0.40	2.0
	Other Ratios			0.05	0.30/0.05	1.5/0.30	1.5
* 1. Applied to the output shaft center at 100 rpm.							
* 2. Measured at 3000 rpm with no load. These values are measured by gearbox with ratio = 10 (1-stage) or ratio = 100 (2-stage) at nominal input speed or 3000 rpm (if nominal input speed is higher than 3000 rpm) with no load.							
※ The above figures/specifications are subject to change without prior notice.							

Products due to human error, natural disasters or other factors lead to poor or damaged, will not be covered under warranty.