

감속기어 PGHA Series

모터뱅크

모델명 : PGHA060B



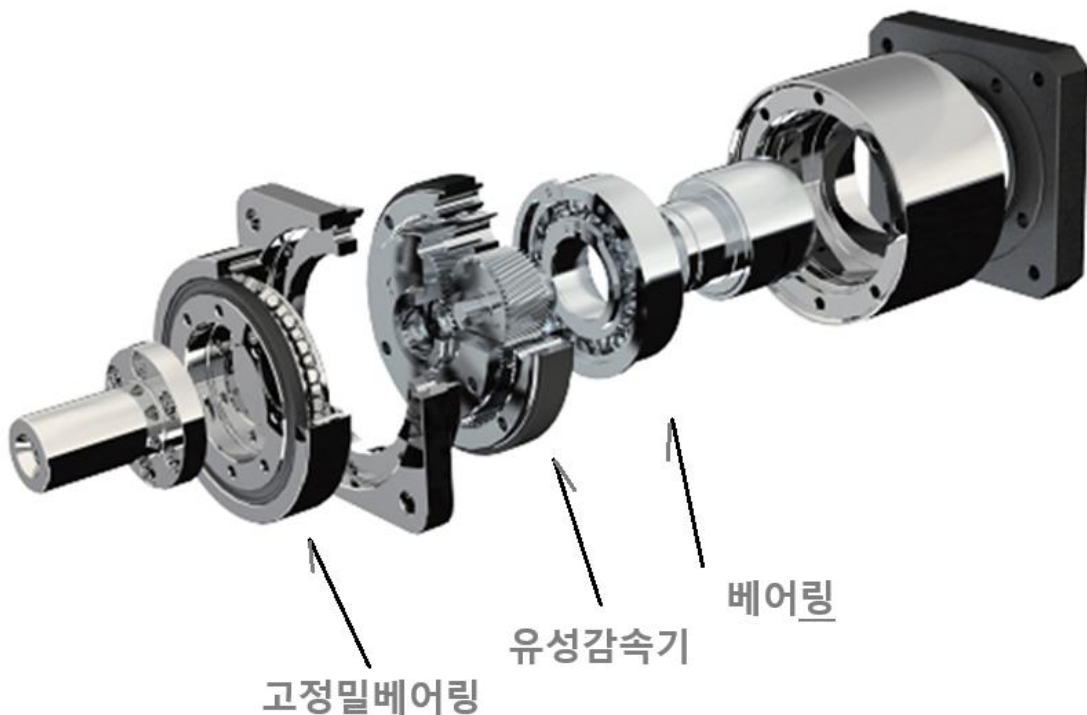
제품설명

PGHA060B 는
60 각 Motor 에 적용하는 유성감속기
어로 감속비는 다양하게 있고 고정밀
베어링과 고성능 유성기어를 사용하
는 감속기어입니다
HA 시리즈는 다양한데 60 각사이즈는
BL60S 시리즈 모터와 많이 사용됩니
다.

PGHA060B 상세구성

- 1) 유성감속기를 사용한 60각 감속기어.
- 2) 고정밀,고성능의 베어링적용.
- 3) 감속비는 타입별 3~100까지 구성제공.
- 4) PGHA060C(60~100), **PGHA060B(15~50)**, PGHA060A(3~10) 에서
감속비가 1/5~1/50 까지 해당되는 모델입니다

감속기 구조:



SPEC:

시리즈별 세부스펙:

Specifications		Stage	Ratio	HA042	HA060	HA090	HA115	HA142	HA180	HA220
Nominal Output Torque T_{2N}	Nm	1	3	20	55	130	208	342	588	1,140
			4	19	50	140	290	542	1,050	1,700
			5	22	60	160	330	650	1,200	2,000
			6	20	55	150	310	600	1,100	1,900
			7	19	50	140	300	550	1,100	1,800
			8	17	45	120	260	500	1,000	1,600
			9	14	40	100	230	450	900	1,500
			10	14	40	100	230	450	900	1,500
		2	15	20	55	130	208	342	588	1,140
			20	19	50	140	290	542	1,050	1,700
			25	22	60	160	330	650	1,200	2,000
			30	20	55	150	310	600	1,100	1,900
			35	19	50	140	300	550	1,100	1,800
			40	17	45	120	260	500	1,000	1,600
			45	14	40	100	230	450	900	1,400
			50	22	60	160	330	650	1,200	2,000
			60	20	55	150	310	600	1,100	1,900
			70	19	50	140	300	550	1,100	1,800
			80	17	45	120	260	500	1,000	1,600
			90	14	40	100	230	450	900	1,500
			100	14	40	100	230	450	900	1,500
Emergency Stop Torque T_{2NOT}	Nm	1,2	3~100			3times of Nominal Output Torque				
Nomial Input Speed n_1N	rpm	1,2	3~100	5,000	5,000	4,000	4,000	3,000	3,000	2,000
Max. Input Speed n_1N	rpm	1,2	3~100	10,000	10,000	8,000	8,000	6,000	6,000	4,000
Micro Backlash P_0	arcmin	1	3~10	—	—	≤1	≤1	≤1	≤1	≤1
		2	15~100	—	—	—	≤3	≤3	≤3	≤3
Precision Backlash P_1	arcmin	1	3~10	≤3	≤3	≤3	≤3	≤3	≤3	≤3
		2	15~100	≤5	≤5	≤5	≤5	≤5	≤5	≤5
Standard Backlash P_2	arcmin	1	3~10	≤5	≤5	≤5	≤5	≤5	≤5	≤5
		2	15~100	≤7	≤7	≤7	≤7	≤7	≤7	≤7
Torsional Rigidity	Nm/arcmin	1,2	3~100	6	14	28	50	100	290	450
Max Radial Load F_{2R1}^C	N	1,2	3~100	1,120	3,060	6,500	13,400	18,800	29,000	60,000
Max Axial Load F_{2A1}^C	N	1,2	3~100	560	1,025	2,300	3,750	5,900	12,500	30,000
Service Life	hr	1,2	3~100			25,000				
Efficiency	%	1	3~10			≥97%				
		2	15~100			≥94%				
Weight	kg	1	3~10	0.4	0.9	2.6	5.5	10.15	21	33.6
		2	15~100	0.56	1.1	2.9	6.3	12.3	22.9	42
Operating Temp	°C	1,2	3~100			-10°C~90°C				
Lubrication						Synthetic Lubricant				
Protection Class		1,2	3~100			IP65				
Mounting Position		1,2	3~100			Any direction				
Noise Level ¹⁾ ($n_1=3000\text{rpm}$, $i=10$, J^E)	dB(A)	1,2	3~100	≤56	≤58	≤60	≤63	≤65	≤67	≤70

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

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

3. When the output speed is 100rpm, it acts on the center of the output shaft

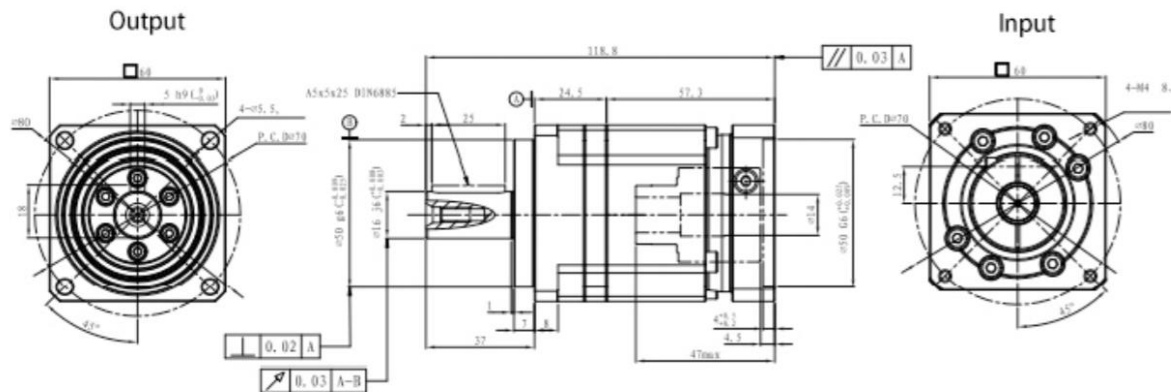
4. Connecting and running, the service life is 10,000hrs

5. The noise value will vary with the ratio of the reducer

Inertia

Specifications		Stage	Ratio	HA042	HA060	HA090	HA115	HA142	HA180	HA220
Inertia J_i	kg · cm ²	1	3	0.03	0.16	0.61	3.25	9.21	28.98	69.61
			4	0.03	0.14	0.48	2.74	7.54	23.67	54.37
			5	0.03	0.13	0.47	2.71	7.42	23.29	53.27
			6	0.03	0.13	0.45	2.65	7.25	22.75	51.72
			7	0.03	0.13	0.45	2.62	7.14	22.48	50.97
			8	0.03	0.13	0.44	2.58	7.07	22.59	50.84
			9	0.03	0.13	0.44	2.57	7.04	22.53	50.63
			10	0.03	0.13	0.44	2.57	7.03	22.51	50.56
		2	15	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			20	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			25	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			30	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			35	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			40	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			45	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			50	0.03	0.03	0.13	0.44	2.57	7.03	22.51
			60	0.03	0.03	0.13	0.44	2.57	7.03	22.51
			70	0.03	0.03	0.13	0.44	2.57	7.03	22.51
			80	0.03	0.03	0.13	0.44	2.57	7.03	22.51
			90	0.03	0.03	0.13	0.44	2.57	7.03	22.51
			100	0.03	0.03	0.13	0.44	2.57	7.03	22.51

제품치수(Dimension Drawing) :



Basic matching size of reducer

(mm)

Size	HA042	HA060	HA090	HA115	HA142	HA180	HA220
D1	50	70	100	130	165	215	250
D2	3.4	5.5	6.6	9	11	13	17
D3 _{j6}	13	16	22	32	40	55	75
D4 _{g6}	35	50	80	110	130	160	180
D5	22	45	65	95	75	95	115
D6	M4 x 0.7P	M5 x 0.8P	M8 x 1.25P	M12 x 1.75P	M16 x 2P	M20 x 2.5P	M20 x 2.5P
D7	56	80	110	165	185	240	292
L1	42	60	90	115	142	180	220
L2	26	37	48	83.5	97	105	138
L3	5.5	7	10	12	15	20	30
L4	1	1	1	0.5	3	3	3
L5	16	25	32	40	63	70	90
L6	2	2	3	5	5	6	7
L7	4	14	18	26	12	15	20
L8	31	57.3	48	97	119.5	154	163.5
L9	4.5	4.5	27.75	13	12	15	15
L10	10	12.5	23.2	23	36	42	42
C1 ¹	46	24.5	130	65	165	215	235
C2 ¹	M4 x 0.7P	M5 x 0.8P	M6 x 1P	M8 x 1.25P	M10 x 1.5P	M12 x 1.75P	M12 x 1.75P
C3 ¹	≤11 / ≤12 ¹	≤14 / ≤16 ²	≤19 / ≤24	≤32	≤38	≤48	≤55
C4 ¹	25	34	60.4	65	60	85	116
C5 ¹	30	4.2~4.5	59.3	110	130	180	200
C6 ¹	3.5	8	4	33	6	6	6
C7 ¹	42	47	165	73	142	190	220
C8 ¹	29.5	19	160.9	32	22.5	29	63
C9 ¹	86.5	118.8	145	213	239	288	364.5
C10 ¹	8.75	13.5	15.5	145	15	20.75	53
B1 _{h9}	5	5	6	10	12	16	20
H1	15	18	24.5	35	43	59	79.5

1,C1~C10 is the metric standard motor connection board size

2. HA042 5,10 reduction ratio provides $C3 \leq 12$ optional, HA060 5,10 reduction ratio provides $C3 \leq 16$ optional

사용예 :

