



PGX – H Type

(Standard Helical Gear Type)

Single Stage Backlash \leq 8 arc-min
 Double Stage Backlash \leq 10 arc-min

Indication of Model Numbers

PGX	90	H	10	Key Type
Type	Model	Helical Gear	Ratio	Output Shaft Keyway
PGX	44 62 90 120 142 180 220		Single Stage 3, 4, 5, 6, 7, 8, 9, 10 Double Stage 15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100	□ : 무표기 Standard (Keyway) N : 표 기 Solid Output Shaft (No Keyway)



PGX-H

PBL

KFA

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KFE

KWE

Quality First & Customer's Satisfaction



Integrated Planetary Arm bracket

Planetary Arm bracket와 출력 Shaft는 일체형 구조입니다. 이는 비틀림 강성과 높은 정확도를 보장합니다.

The Planetary arm bracket and the output shaft are one-piece constructed to increase torsional rigidity and accuracy. The entire structure is one-time machined for controlling accuracy in the specified tolerance.



Collet chuck locking mechanism

감속기의 입력 부분과 Motor output shaft를 연결하기 위한 방식으로 역학적 확실한 체결력과 높은 속도에서 구동 할 때에도 백래쉬가 발생하지 않고 동력을 전달합니다.

The input end and the motor is couple through a collet chuck locking mechanism, It is dynamically balanced to assure concentricity and balance on the connection when running at high speed. No backlash for transmission.



Full Needle Bearing Design

Planetary 변속기에는 접촉면 증가를 위한 Retainer없는 Full Needle Bearing 구조입니다. 구조적 강도와 출력 회전력을 상승 시킨것입니다.

The Planetary gear transmission employs full needle bearings Without retainer to increase the contact surface, which greatly Upgrades structural rigidity and output torque.



One-Piece Gear Box Body

기어박스외 내부 링은 하나의 구조로 이루어져 있습니다. 헬리컬 기어로 되어 있으며 기어의 교합율은 일반 스퍼기어의 2배 이상이며 원활한 운전과 낮은 소음으로 높은 회전출력과 낮은 백래쉬를 특징으로 합니다.

The gear box and internal ring are one-piece constructed, two times of teeth profile engagement percentage when comparing with common spur gears. In addition, it also features extremely smooth running low nose, high torque output and low backlash.

PGX-H

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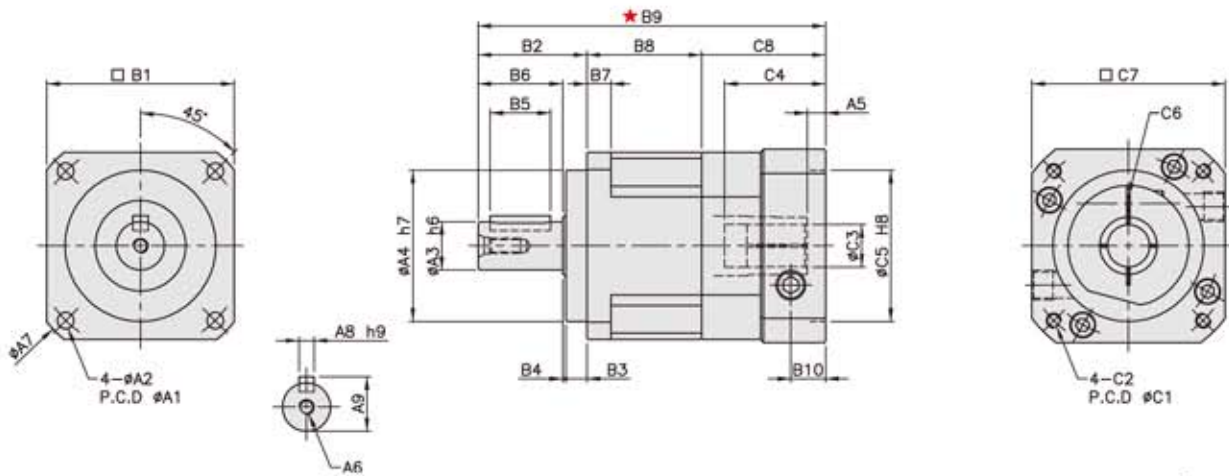
KWE

PGX-H

ATG SERVOBOX Planetary Reducers

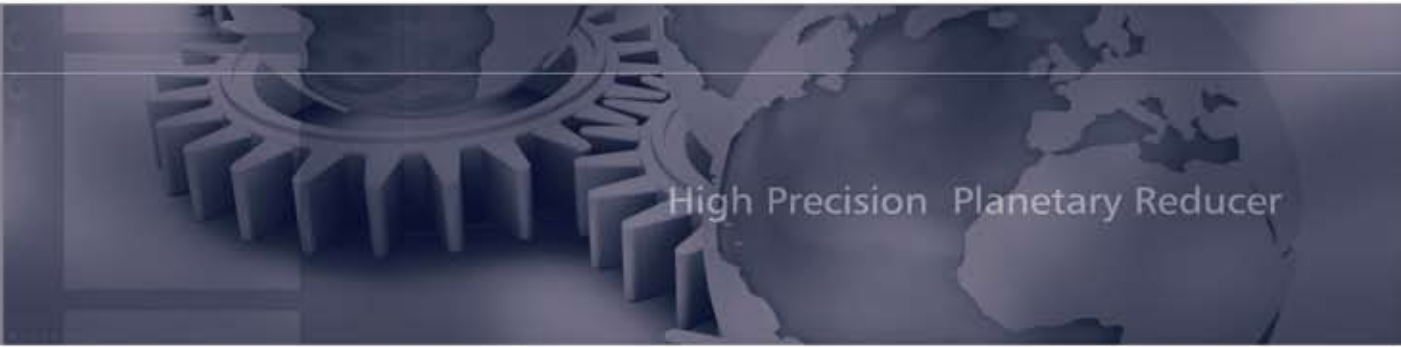


MODEL : PGX - H
Single Reduction
RATIO : 3.4.5.6.7.8.9.10



unit:mm

Model code	44	62	90	120	142	180	220
A A1	50	70	100	130	165	215	250
A2	4.5	5.5	6.8	9	11	13	17
A3	13	16	22	32	40	55	75
A4	35	50	80	110	130	160	180
A5	5	6	9	10	10	11.5	12.5
A6	M4×P0.7	M5×P0.8	M8×P1.25	M10×P1.5	M12×P1.75	M14×P2.0	M16×P2.0
A7	58	80	116	148	186	238	288
A8	5	5	6	10	12	16	20
A9	15	18	24.5	35	43	59	79.5
B B1	44	62	90	120	142	180	220
B2	26	36	48	65	92	106	139
B3	5	7	10	12	15	20	30
B4	1	1	2	3	3	4	5
B5	15	20	30	40	65	70	90
B6	20	28	36	50	74	82	104
B7	5	8	10	12	15	16	20
B8	31.5	38	49	61	70	85	93
B9	95	115, 123	151.5, 164.5	205	260.5	323.5	367.5
B10	9	11.5	16	19.5	20	23.5	23.5
C C1	46, 60, 63	70, 75, 90	90, 100, 115, 145	115, 145, 165	145, 165, 215	200, 215, 265	200, 265, 300
C2	M3, M4, M5	M4, M5, M6	M5, M6, M8	M6, M8, M10	M8, M10, M12	M10, M12	M12, M16
C3	8, (11)	14, (19)	19, (24)	24, (32)	35, (38)	38, 42, 48, 55	42, 48, 55
C4	26	33.5, 41.5	46, 59	67	84.5	114.5	117.5
C5	30, 40, 50	50, 60, 70	70, 80, 95, 110	95, 110, 130	110, 130, 180	114.3, 180, 230	114.3, 230, 250
C6	M3×P0.5	M5×P0.8	M6×P1.0	M8×P1.25	M10×P1.5	M10×P1.5	M10×P1.5
C7	46, 55	64, 70, 80	92, 110, 130	122, 130, 150	146, 150, 190	182, 200, 250	222, 250, 265
C8	37.5	41, 49	54.5, 67.5	79	98.5	132.5	135.5



High Precision Planetary Reducer

■ Mass Moments of Inertia (kg · cm²)

Ratio	44	62	90	120	142	180	220
3	0.03	0.16	0.61	3.25	9.21	28.98	59.61
4	0.03	0.14	0.48	2.74	7.54	23.67	54.37
5	0.03	0.13	0.47	2.74	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

Model No		Unit	Ratio	44	62	90	120	142	180	220
Rated Output Torque (Nominal Output Torque)	T_{2N}	Nm	3	17	54	145	301	553	1,067	1,786
			4	15	48	128	269	491	940	1,587
			5	14	45	132	278	510	1,050	1,770
			6	13	41	125	252	466	985	1,680
			7	13	41	123	258	473	975	1,645
			8	12	39	115	241	442	942	1,605
			9	11	40	120	227	412	875	1,490
			10	12	40	116	246	452	930	1,565
Max. Acceleration Torque	T_{2B}	Nm	3~10	1.8 Times of Rated Output Torque						
Max. Output Torque Emergency Stop Torque	T_{2NOT}	Nm	3~10	3 Times of Rated Output Torque						
Rated Input Speed	n_{IN}	rpm	3~10	3,000	3,000	3,000	3,000	3,000	3,000	2,000
Max. Input Speed	n_{IB}	rpm	3~10	6,000	6,000	6,000	5,000	5,000	4,000	3,000
Torsional Rigidity		Nm/arcmin	3~10	3	6	14	27	60	140	240
Max. Radial Force	F_{2rB}	N	3~10	720	1,120	3,040	6,460	8,830	14,820	48,450
Max. Axial Force	F_{2aB}	N	3~10	360	560	1,520	3,230	4,410	7,410	24,225
Service Life	L_{H1}	hr	3~10	20,000(Continuous Operation 10,000hrs)						
Efficiency	η	%	3~10	≥ 97						
Operating Temperature		°C	3~10	-25°C~ +90°C						
Lubrication			3~10	VIGO GREASE RE #0						
Protection Class			3~10	IP65						
Mounting Position			3~10	ANY						
Noise Level		dB	3~10	≤ 56	≤ 58	≤ 60	≤ 63	≤ 65	≤ 67	≤ 70
Weight $\pm 3\%$		Kg	3~10	0.58	1.35	3.69	8.63	14.55	28.3	42.5

* 연속운전 사용시 본사와 상담후 선정바랍니다.

PGX-H

ATG SERVOBOX Planetary Reducers



MODEL : PGX - H

Double Reduction

RATIO : 15.20.25.30.35.40.50.60.70.80.90.100

PGX-H

PBL

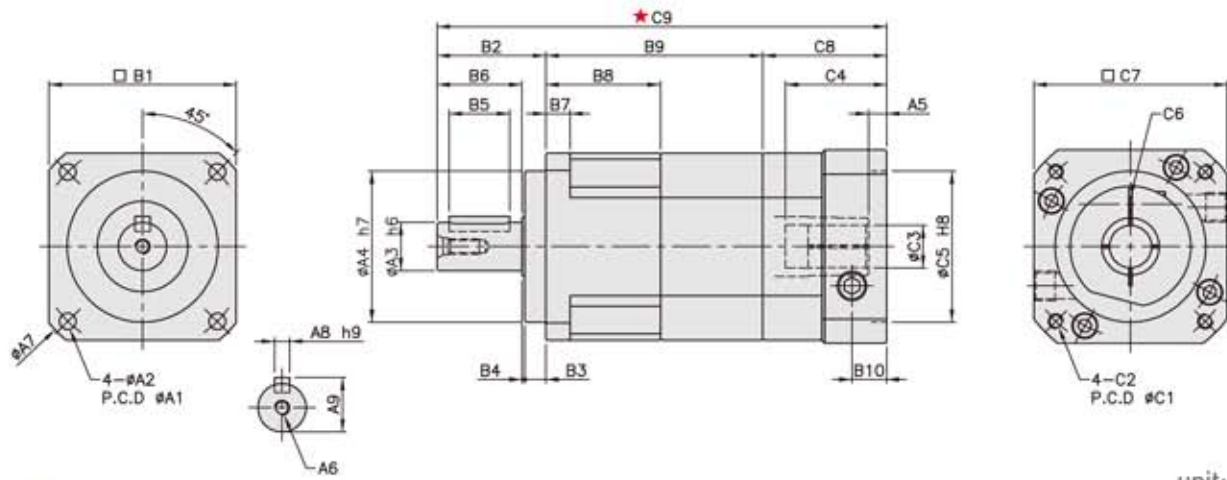
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KSN

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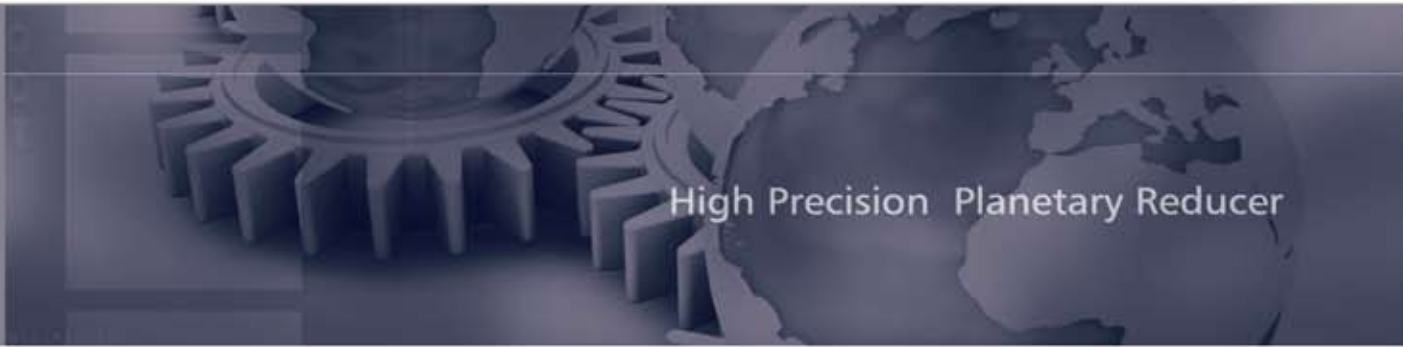
KFE

KWE



unit:mm

Model code	44	62	90	120	142	180	220
A							
A1	50	70	100	130	165	215	250
A2	4.5	5.5	6.8	9	11	13	17
A3	13	16	22	32	40	55	75
A4	35	50	80	110	130	160	180
A5	5	6	9	10	10	11.5	12.5
A6	M4×P0.7	M5×P0.8	M8×P1.25	M10×P1.5	M12×P1.75	M14×P2.0	M16×P2.0
A7	58	80	116	148	186	238	288
A8	5	5	6	10	12	16	20
A9	15	18	24.5	35	43	59	79.5
B							
B1	44	62	90	120	142	180	220
B2	26	36	48	65	92	106	139
B3	5	7	10	12	15	20	30
B4	1	1	2	3	3	4	5
B5	15	20	30	40	65	70	90
B6	20	28	36	50	74	82	104
B7	5	8	10	12	15	16	20
B8	31.5	38	49	61	70	85	93
B9	57.5	71.8	92.5	117	136.5	166	186
B10	9	11.5	16	19.5	20	23.5	23.5
C							
C1	46, 60, 63	70, 75, 90	90, 100, 115, 145	115, 145, 165	145, 165, 215	200, 215, 265	200, 265, 300
C2	M3, M4, M5	M4, M5, M6	M5, M6, M8	M6, M8, M10	M8, M10, M12	M10, M12	M12, M16
C3	8, (11)	14, (19)	19, (24)	24, (32)	35, (38)	38, 42, 48, 55	42, 48, 55
C4	26	33.5, 41.5	46, 59	67	84.5	114.5	117.5
C5	30, 40, 50	50, 60, 70	70, 80, 95, 110	95, 110, 130	110, 130, 180	114.3, 180, 230	114.3, 230, 250
C6	M3×P0.5	M5×P0.8	M6×P1.0	M8×P1.25	M10×P1.5	M10×P1.5	M10×P1.5
C7	46, 55	64, 70, 80	92, 110, 130	122, 130, 150	146, 150, 190	182, 200, 250	222, 250, 265
C8	37.5	41, 49	54.5, 67.5	79	98.5	132.5	135.5
C9	121	148.8, 156.8	195, 208	261	327	404.5	460.5



High Precision Planetary Reducer

■ Mass Moments of Inertia (kg · cm²)

Ratio	44	62	90	120	142	180	220
15	0.03	0.14	0.46	2.63	7.30	22.79	56.98
20	0.03	0.14	0.46	2.63	7.30	22.79	56.98
25	0.03	0.14	0.46	2.63	7.10	22.79	56.98
30	0.03	0.14	0.46	2.43	7.10	22.59	56.48
35	0.03	0.14	0.44	2.43	7.10	22.59	56.48
40	0.03	0.14	0.44	2.43	6.92	22.59	56.48
50	0.03	0.14	0.44	2.43	6.92	22.59	56.48
60	0.03	0.14	0.43	2.39	6.72	21.83	54.58
70	0.03	0.14	0.43	2.39	6.72	21.83	54.58
80	0.03	0.14	0.43	2.39	6.72	21.83	54.58
90	0.03	0.14	0.40	2.39	6.72	21.60	54.00
100	0.03	0.14	0.40	2.39	6.72	21.60	54.00

Model No.	Unit	Ratio	44	62	90	120	142	180	220	
Rated Output Torque (Nominal Output Torque)	T_{2N}	Nm	15	17	54	145	301	553	1,067	1,786
			20	15	48	128	269	491	940	1,587
			25	14	45	132	278	510	1,050	1,770
			30	13	41	125	252	466	985	1,680
			35	13	41	123	258	473	975	1,645
			40	12	39	115	241	442	942	1,605
			50	14	45	132	278	510	1,050	1,770
			60	13	41	125	252	466	985	1,680
			70	13	41	123	258	473	975	1,645
			80	12	39	115	241	442	942	1,605
			90	11	40	120	227	412	875	1,490
100	12	40	116	246	452	930	1,565			
Max. Acceleration Torque	T_{2B}	Nm	15~100	1.8 Times of Rated Output Torque						
Max. Output Torque Emergency Stop Torque	T_{2NOT}	Nm	15~100	3 Times of Rated Output Torque						
Rated Input Speed	n_{iN}	rpm	15~100	3,000	3,000	3,000	3,000	3,000	3,000	2,000
Max. Input Speed	n_{iB}	rpm	15~100	6,000	6,000	6,000	5,000	5,000	4,000	3,000
Torsional Rigidity		Nm/arcmin	15~100	3	6	14	27	60	140	240
Max. Radial Force	F_{2R}	N	15~100	720	1,120	3,040	6,460	8,830	14,820	48,450
Max. Axial Force	F_{2aB}	N	15~100	360	560	1,520	3,230	4,410	7,410	24,225
Service Life	L_{H1}	hr	15~100	20,000(Continuous Operation 10,000hrs)						
Efficiency	η	%	15~100	≥94						
Operating Temperature		°C	15~100	-25°C ~ +90°C						
Lubrication			15~100	VIGO GREASE RE#0						
Protection Class			15~100	IP65						
Mounting Position			15~100	ANY						
Noise Level		dB	15~100	≤56	≤58	≤60	≤63	≤65	≤67	≤70
Weight ±3%		Kg	15~100	0.86	2	5.48	10	21.4	42	59

* 연속운전 사용시 본사와 상담후 선정바랍니다.

PGX-H

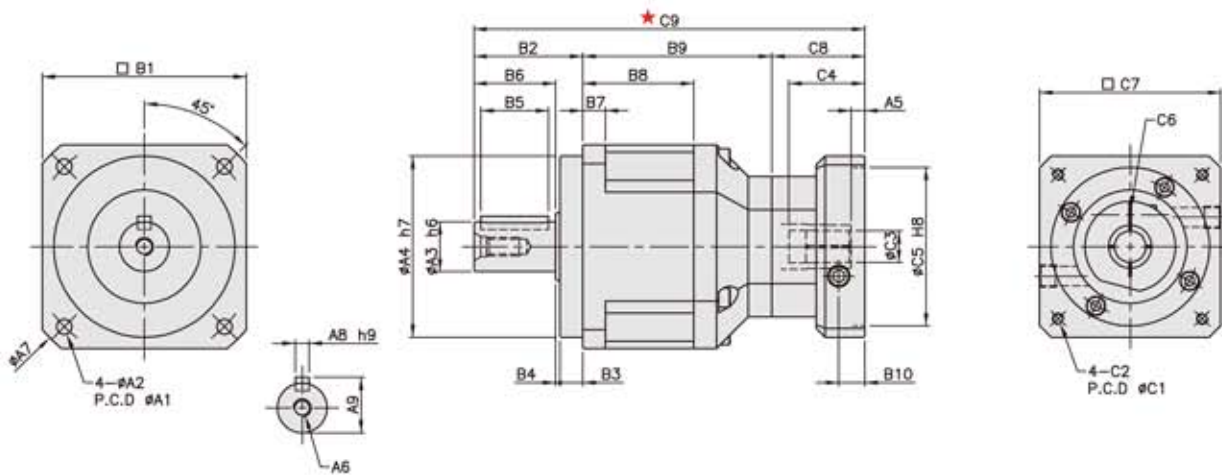
ATG SERVOBOX Planetary Reducers



MODEL : PGX - S - H

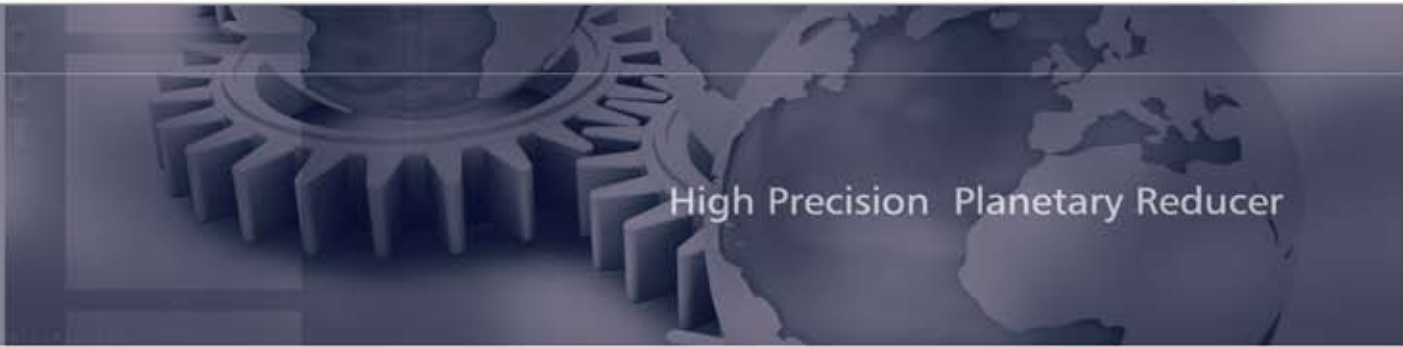
Double Reduction

RATIO : 15.20.25.30.35.40.50.60.70.80.90.100



unit:mm

Model code	62S	90S	120S	142S	180S	220S
A A1	70	100	130	165	215	250
A2	5.5	6.8	9	11	13	17
A3	16	22	32	40	55	75
A4	50	80	110	130	160	180
A5	5	6	9	10	10	11.5
A6	M5×P0.8	M8×P1.25	M10×P1.5	M12×P1.75	M14×P2.0	M16×P2.0
A7	80	116	148	186	238	288
A8	5	6	10	12	16	20
A9	18	24.5	35	43	59	79.5
B B1	62	90	120	142	180	220
B2	36	48	65	92	106	139
B3	7	10	12	15	20	30
B4	1	2	3	3	4	5
B5	20	30	40	65	70	90
B6	28	36	50	74	82	104
B7	8	10	12	15	16	20
B8	38	49	61	70	85	93
B9	66	83.5	108.5	127.5	154	175
B10	9	11.5	16	19.5	20	23.5
C C1	46, 60, 63	70, 75, 90	90, 100, 115, 145	115, 145, 165	145, 165, 200	200, 215, 265
C2	M4, M5	M4, M5, M6	M6, M8, M10	M6, M8, M10	M8, M10, M12	M10, M12
C3	8	14	19	24	35	38, 42, 48, 55
C4	26	33.5	46	67	84.5	114.5
C5	30, 40, 50	50, 60, 70	70, 80, 95, 110	95, 110, 130	110, 114.3, 130	114.3, 180, 230
C6	M3×P0.5	M5×P0.8	M6×P1.0	M8×P1.25	M10×P1.5	M10×P1.5
C7	46, 55	64, 70, 80	92, 110, 130	122, 130, 150	146, 150	182, 200, 250
C8	37.5	41	54.5	79	98.5	132.5
C9	139.5	172.5	228	298.5	358.5	446.5



High Precision Planetary Reducer

■ Mass Moments of Inertia (kg · cm²)

Ratio	62S	90S	120S	142S	180S	220S
15	0.03	0.14	0.46	2.63	7.30	22.79
20	0.03	0.14	0.46	2.63	7.30	22.79
25	0.03	0.14	0.46	2.63	7.10	22.79
30	0.03	0.14	0.46	2.43	7.10	22.59
35	0.03	0.14	0.44	2.43	7.10	22.59
40	0.03	0.14	0.44	2.43	6.92	22.59
50	0.03	0.14	0.44	2.43	6.92	22.59
60	0.03	0.14	0.43	2.39	6.72	21.83
70	0.03	0.14	0.43	2.39	6.72	21.83
80	0.03	0.14	0.43	2.39	6.72	21.83
90	0.03	0.14	0.40	2.39	6.72	21.60
100	0.03	0.14	0.40	2.39	6.72	21.60

Model No.	Unit	Ratio	62S	90S	120S	142S	180S	220S	
Rated Output Torque (Nominal Output Torque)	T_{2N}	Nm	15	54	145	301	553	1,067	1,786
			20	48	128	269	491	940	1,587
			25	45	132	278	510	1,050	1,770
			30	41	125	252	466	985	1,680
			35	41	123	258	473	975	1,645
			40	39	115	241	442	942	1,605
			50	45	132	278	510	1,050	1,770
			60	41	125	252	466	985	1,680
			70	41	123	258	473	975	1,645
			80	39	115	241	442	942	1,605
			90	40	120	227	412	875	1,490
100	40	116	246	452	930	1,565			
Max. Acceleration Torque	T_{2B}	Nm	15~100	1.8 Times of Rated Output Torque					
Max. Output Torque Emergency Stop Torque	T_{2NOT}	Nm	15~100	3 Times of Rated Output Torque					
Rated Input Speed	n_{IN}	rpm	15~100	3,000	3,000	3,000	3,000	3,000	2,000
Max. Input Speed	n_{IM}	rpm	15~100	6,000	6,000	5,000	5,000	4,000	3,000
Torsional Rigidity		Nm/arcmin	15~100	6	14	27	60	140	240
Max. Radial Force	F_{2R}	N	15~100	1,120	3,040	6,460	8,830	14,820	48,450
Max. Axial Force	F_{2A}	N	15~100	560	1,520	3,230	4,410	7,410	24,225
Service Life	L_{H1}	hr	15~100	20,000(Continuous Operation 15,000hrs)					
Efficiency	η	%	15~100	≥ 94					
Operating Temperature		°C	15~100	-25°C~ +90°C					
Lubrication			15~100	VIGO GREASE RE#0					
Protection Class			15~100	IP65					
Mounting Position			15~100	ANY					
Noise Level		dB	15~100	≤ 58	≤ 60	≤ 63	≤ 65	≤ 67	≤ 70
Weight $\pm 3\%$		Kg	15~100	1.6	4.04	9.49	17	34.1	57.3

* 연속운전 사용시 본사와 상담후 선정바랍니다.