

KFB Series

Single Stage Backlash ≤ 8 arc/min

Double Stage Backlash ≤ 12 arc/min

Indication of Model Numbers

KFB	90	10	MOTOR
TYPE	MODEL	RATIO	MOTOR TYPE
KFB KFE	50 70 90 120 145	SINGLE STAGE 3, 4, 5, 7, 10 DOUBLE STAGE 15, 20, 25, 30, 35, 40, 50, 70, 100	MOTOR BRAND & MODEL NO.



Integrated planetary arm bracket

Planetary arm bracket과 출력 이동은 하나의 비틀림의 강도와 정확도를 상승시키는 구조입니다. 전체 구조는 최대 허용량에서 한번에 정확하게 컨트롤 할 수 있습니다.

Integrated Planetary Arm Bracket

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.



Full needle bearings design

Planetary 변속기어는 접촉면 증가를 위한 retainer 없는 full needle bearing입니다. 구조적 강도와 출력 회전력을 상승시킨 것입니다.

Full Needle Bearings Design

The planetary gear transmission employs full needle bearings without retainer to increase the contact surface, which greatly upgrades structural rigidity and output torque.

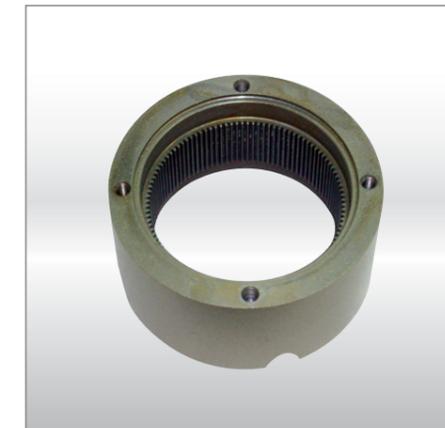


High precision gear machining

감속기 내부의 유성 기어와 선 기어는 높은 품질의 cr-mo 합금(SNCM415)으로 제조되어 있습니다. 기어의 강도는 57-60 HRC이며 grinding skiving으로 가공된 기어는 DIN 6 class 이내의 등급을 유지 합니다.

High Precision Gear Machining

The planetary gear and sun gear are manufactured from high quality Cr-Mo alloy steel (SNCM415), precision machined and carburized to hardness 57-60 HRC. Precision teeth grinding or Skiving assures gear accuracy reaches DIN6 class.



One-piece gearbox body

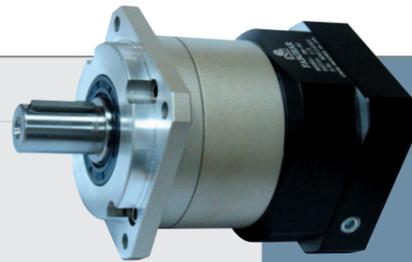
감속기와 내부 링은 일체형 구조로 되어 있습니다. 높은 품질의 기어는 DIN 6 standard 규격입니다.

One-piece Gearbox body

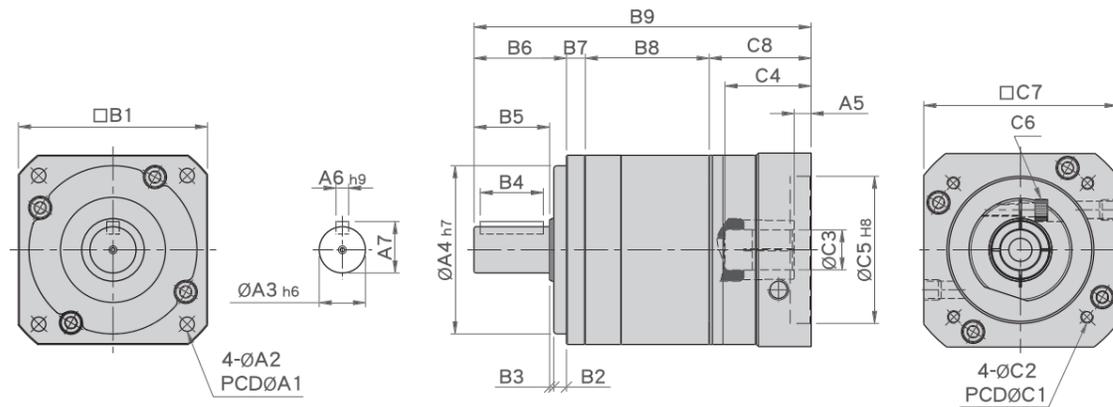
The gearbox and internal ring are one-piece constructed. High gear accuracy meets DIN6 class standard.

MODEL : KFB

Single Reduction
RATIO : 3.4.5.7.10



High Precision Planetary Reducer



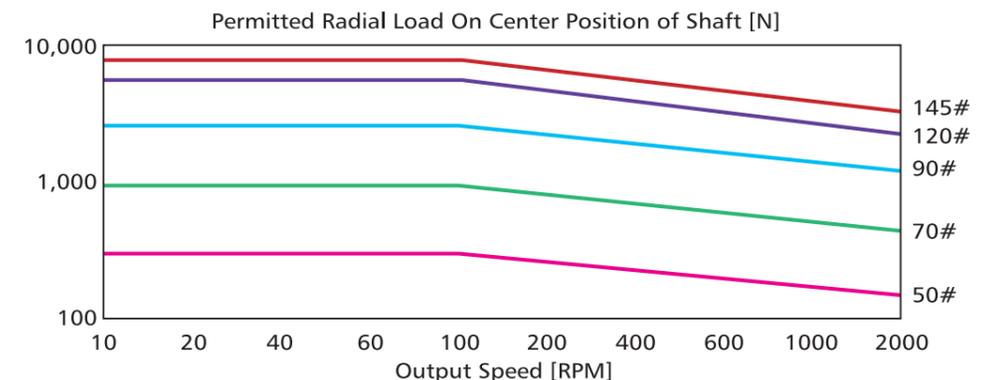
unit:mm

Model Code	50	70	90	120	145
A A1	Ø50	Ø70	Ø100	Ø130	Ø165
A2	Ø4.5	Ø6	Ø6.8	Ø9	Ø11
A3	Ø13	Ø16	Ø22	Ø32	Ø40
A4	Ø35	Ø50	Ø80	Ø110	Ø130
A5	5	6	8, 22	10, 20	10
A6	5	5	6	10	12
A7	15	18	24.5	35	45
B B1	50	70	90	120	145
B2	4	5	6	8	10
B3	1	1	2	2	3
B4	15	20	30	40	65
B5	20	28	36	50	74
B6	25	34	44	60	87
B7	6	8	9	12	15
B8	37.5	49.5	59	86	95
B9	100.5	132.5	160.5, 175	227.5, 237.5	291
C C1	46, 60, 63, 90	70,75,90	90,100,115,165	145, 165	145, 200, 215
C2	M4 x P0.7 M5 x P0.8 M5 x P0.8	M4 x P0.7 M5 x P0.8 M6 x P1.0	M6 x P1.0 M8 x P1.25 M10 x P1.5	M6 x P1.0 M8 x P1.25 M10 x P1.5	M8 x P1.25 M10 x P1.5 M12 x P1.75
C3	5.65, 6, 8	6.35,8,10,11,12,14	14, 16, 19	19,22,24, (28, 32-주문형)	22,24,28,32,35
C4	26	33.5, 41.5	59, 73.5	67, 77	84.5
C5	30, 40, 50, 70	50, 60, 70	70,80,110,130	110, 130	110,114.3,180
C6	M3 x P0.5	M4 x P0.7 M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5
C7	46, 55, 60, 76	64, 70, 80	92,110,130,142	130, 150	146, 180, 190
C8	32	41	48.5, 63	69.5, 79.5	94

Model No.	Unit	Ratio	#50	#70	#90	#120	#145
Rated Output Torque	Nm	3	17	50	125	268	482
		4	15	45	111	238	426
		5	14	42	104	223	401
		7	13	39	98	208	373
		10	12	37	92	198	356
Max. Output Torque	Nm	3~10	3 Times of Rated Output Torque				
Rated Input Speed	rpm	3~10	5,000	4,800	4,000	3,600	3,000
Max. Input Speed	rpm	3~10	8,000	6,000	6,000	4,800	3,600
Backlash	arcmin	3~10	≤8	≤8	≤8	≤8	≤8
Torsional Rigidity	Nm/arcmin	3~10	2.3	5	15	45	69
Max. Radial Load	N	3~10	750	1,180	3,200	6,800	9,300
Max. Axial Load	N	3~10	325	590	1,600	3,400	4,650
Service Life	hr	3~10	20,000				
Efficiency	%	3~10	≥97%				
Operating Temperature	°C	3~10	-25°C ~ +90°C				
Lubrication		3~10	Synthetic oil (SHC 629)				
Degree of Gearbox Protection		3~10	IP65				
Mounting Position		3~10	Any				
Noise Level	dB	3~10	≤62	≤62	≤65	≤68	≤70
Weight ±3%	Kg	3~10	0.63	1.57	3.22	8	16

■ Mass Moments of Inertia (Kg · cm²)

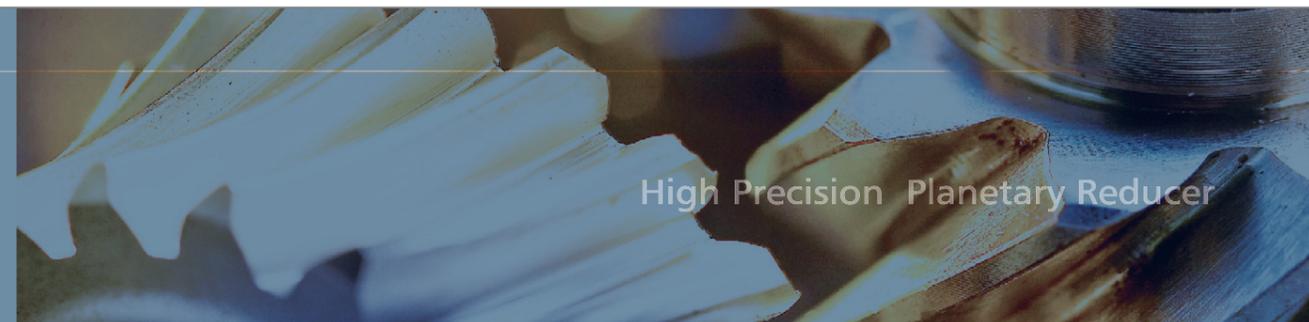
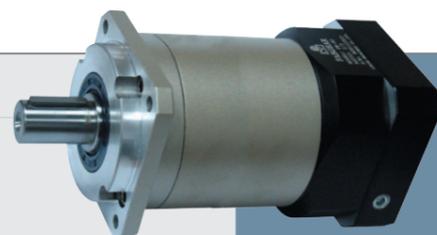
Ratio	#50	#70	#90	#120	#145
3	0.03	0.15	0.57	2.99	8.84
4	0.03	0.13	0.45	2.52	7.23
5	0.03	0.12	0.44	2.49	7.12
7	0.03	0.12	0.42	2.41	6.85
10	0.03	0.12	0.41	2.36	6.74



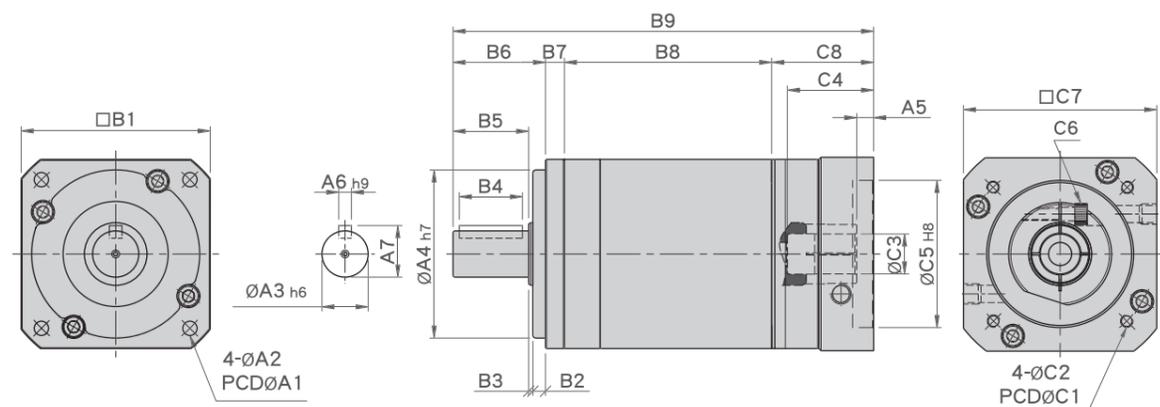
MODEL : KFB

Double Reduction

RATIO : 15.20.25.30.35.40.50.70.100



High Precision Planetary Reducer



unit:mm

Model Code	50	70	90	120	145
A A1	∅50	∅70	∅100	∅130	∅165
A2	∅4.5	∅6	∅6.8	∅9	∅11
A3	∅13	∅16	∅22	∅32	∅40
A4	∅35	∅50	∅80	∅110	∅130
A5	5	6	8, 22	10, 20	10
A6	5	5	6	10	12
A7	15	18	24.5	35	45
B B1	50	70	90	120	145
B2	4	5	6	8	10
B3	1	1	2	2	3
B4	15	20	30	40	65
B5	20	28	36	50	74
B6	25	34	44	60	87
B7	6	8	9	12	15
B8	63.7	83.5	98.7	140	158.7
B9	126.7	166.5	200.2, 214.5	281.5, 291.5	354.7
C C1	46, 60, 63, 90	70, 75, 90	90, 100, 115, 165	145, 165	145, 200, 215
C2	M4 x P0.7 M5 x P0.8	M4 x P0.7 M5 x P0.8 M6 x P1.0	M6 x P1.0 M8 x P1.25 M10 x P1.5	M6 x P1.0 M8 x P1.25 M10 x P1.5	M8 x P1.25 M10 x P1.5 M12 x P1.75
C3	5.65, 6, 8	6.35, 8, 10, 11, 12, 14	14, 16, 19	19, 22, 24, (28, 32-주문형)	22, 24, 28, 32, 35
C4	26	33.5, 41.5	59, 73.5	67, 77	84.5
C5	30, 40, 50, 70	50, 60, 70	70, 80, 110, 130	110, 130	110, 114.3, 180
C6	M3 x P0.5	M4 x P0.7 M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5
C7	46, 55, 60, 76	64, 70, 80	92, 110, 130, 142	130, 150	146, 180, 190
C8	32	41	48.5, 63	69.5, 79.5	94

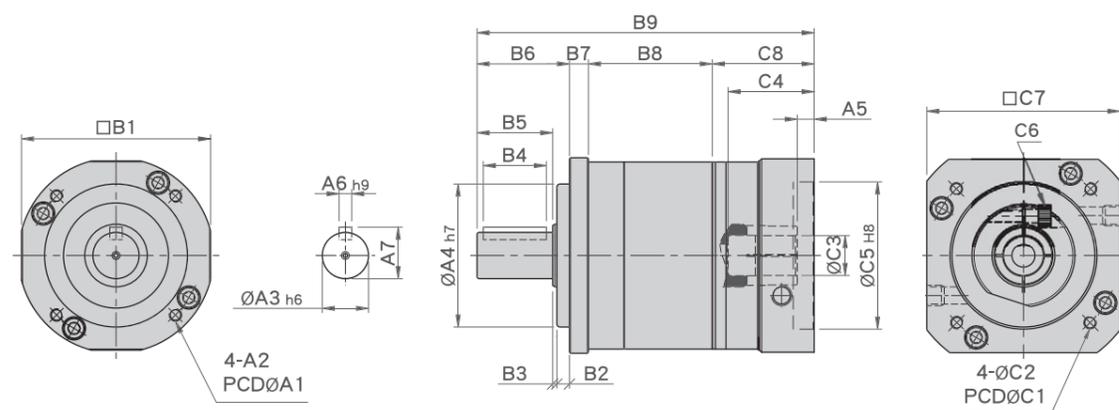
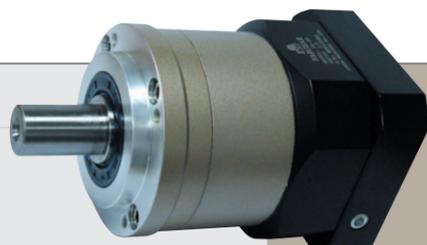
Model No.	Unit	Ratio	#50	#70	#90	#120	#145
Rated Output Torque	Nm	15	17	50	125	268	482
		20	15	45	111	238	426
		25	14	42	104	223	401
		30	17	50	125	268	482
		35	13	39	98	208	373
		40	15	45	111	238	427
		50	14	42	104	223	402
		70	13	40	98	208	373
		100	12	37	92	198	357
Max. Output Torque	Nm	15~100	3 Times of Rated Output Torque				
Rated Input Speed	rpm	15~100	5,000	4,800	4,000	3,600	3,000
Max. Input Speed	rpm	15~100	8,000	6,000	6,000	4,800	3,600
Backlash	arcmin	15~100	≤ 12	≤ 12	≤ 12	≤ 12	≤ 12
Torsional Rigidity	Nm/arcmin	15~100	2.3	5	15	45	69
Max. Radial Load	N	15~100	750	1,180	3,200	6,800	9,300
Max Axial Load	N	15~100	325	590	1,600	3,400	4,650
Service Life	hr	15~100	20,000				
Efficiency	%	15~100	≥ 94%				
Operating Temperature	°C	15~100	-25°C ~ +90°C				
Lubrication		15~100	Synthetic oil (SHC 629)				
Degree of Gearbox Protection		15~100	IP65				
Mounting Position		15~100	Any				
Noise Level	dB	15~100	≤ 65	≤ 65	≤ 68	≤ 70	≤ 72
Weight ±3%	Kg	15~100	0.9	2.24	4.59	11.22	22.5

Mass Moments of Inertia (Kg · cm²)

Ratio	#50	#70	#90	#120	#145
15	0.03	0.02	0.13	0.42	2.52
20	0.03	0.02	0.13	0.42	2.52
25	0.03	0.02	0.13	0.42	2.52
30	0.03	0.02	0.13	0.42	2.33
35	0.03	0.02	0.13	0.40	2.33
40	0.03	0.02	0.13	0.40	2.33
50	0.03	0.02	0.13	0.40	2.33
70	0.03	0.02	0.13	0.39	2.29
100	0.03	0.02	0.13	0.36	2.29

MODEL : KFE

Single Reduction
RATIO : 3.4.5.7.10



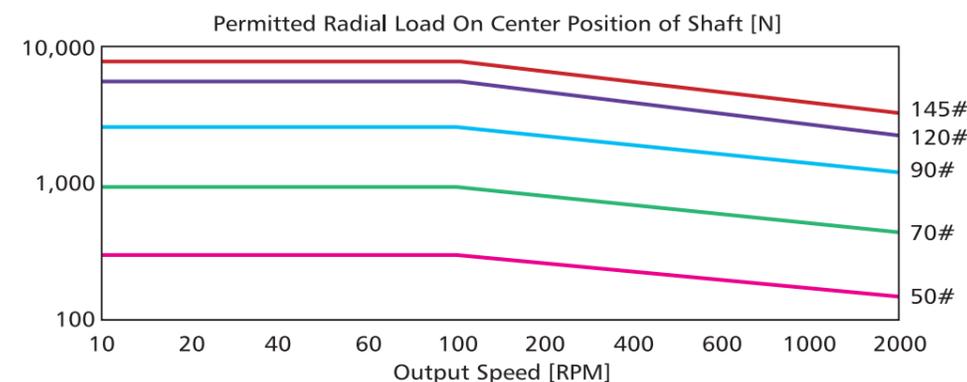
unit:mm

Model Code	50	70	90	120	145
A					
A1	Ø42	Ø60	Ø80	Ø105	Ø130
A2	M4 x P0.7	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5
A3	Ø13	Ø16	Ø22	Ø32	Ø40
A4	Ø35	Ø50	Ø68	Ø90	Ø110
A5	5	6	8, 22	10, 20	10
A6	5	5	6	10	12
A7	15	18	24.5	35	45
B					
B1	50	70	90	120	145
B2	4	5	6	8	10
B3	1	1	2	2	3
B4	15	20	30	40	65
B5	20	28	36	50	74
B6	25	34	44	60	87
B7	6	8	9	12	15
B8	37.5	49.5	59	86	95
B9	100.5	132.5	160.5, 175	227.5, 237.5	291
C					
C1	46, 60, 63, 90	70, 75, 90	90, 100, 115, 165	145, 165	145, 200, 215
C2	M4 x P0.7 M5 x P0.8	M4 x P0.7 M5 x P0.8 M6 x P1.0	M6 x P1.0 M8 x P1.25 M10 x P1.5	M6 x P1.0 M8 x P1.25 M10 x P1.5	M8 x P1.25 M10 x P1.5 M12 x P1.75
C3	5.65, 6, 8	6.35, 8, 10, 11, 12, 14	14, 16, 19	19, 22, 24, (28, 32-주문형)	22, 24, 28, 32, 35
C4	26	33.5, 41.5	59, 73.5	67, 77	84.5
C5	30, 40, 50, 70	50, 60, 70	70, 80, 110, 130	110, 130	110, 114.3, 180
C6	M3 x P0.5	M4 x P0.7 M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5
C7	46, 55, 60, 76	64, 70, 80	92, 110, 130, 142	130, 150	146, 180, 190
C8	32	41	48.5, 63	69.5, 79.5	94

Model No.	Unit	Ratio	#50	#70	#90	#120	#145
Rated Output Torque	Nm	3	17	50	125	268	482
		4	15	45	111	238	426
		5	14	42	104	223	401
		7	13	39	98	208	373
		10	12	37	92	198	356
Max. Output Torque	Nm	3~10	3 Times of Rated Output Torque				
Rated Input Speed	rpm	3~10	5,000	4,800	4,000	3,600	3,000
Max. Input Speed	rpm	3~10	8,000	6,000	6,000	4,800	3,600
Backlash	arcmin	3~10	≤8	≤8	≤8	≤8	≤8
Torsional Rigidity	Nm/arcmin	3~10	2.3	5	15	45	69
Max Radial Load	N	3~10	750	1,180	3,200	6,800	9,300
Max. Axial Load	N	3~10	325	590	1,600	3,400	4,650
Service Life	hr	3~10	20,000				
Efficiency	%	3~10	≥97%				
Operating Temperature	°C	3~10	-25°C ~ +90°C				
Lubrication		3~10	Synthetic oil (SHC 629)				
Degree of Gearbox Protection		3~10	IP65				
Mounting Position		3~10	Any				
Noise Level	dB	3~10	≤62	≤62	≤65	≤68	≤70
Weight ±3%	Kg	3~10	0.63	1.57	3.22	8	16

Mass Moments of Inertia (Kg · cm²)

Ratio	#50	#70	#90	#120	#145
3	0.03	0.15	0.57	2.99	8.84
4	0.03	0.13	0.45	2.52	7.23
5	0.03	0.12	0.44	2.49	7.12
7	0.03	0.12	0.42	2.41	6.85
10	0.03	0.12	0.41	2.36	6.74



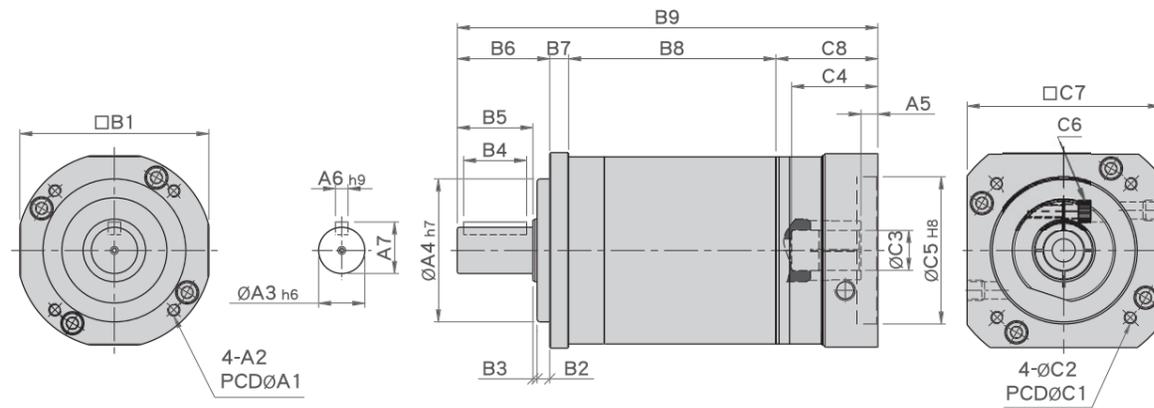
MODEL : KFE

Double Reduction

RATIO : 15.20.25.30.35.40.50.70.100



High Precision Planetary Reducer



unit:mm

Model Code	50	70	90	120	145
A					
A1	Ø42	Ø60	Ø80	Ø105	Ø130
A2	M4 x P0.7	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5
A3	Ø13	Ø16	Ø22	Ø32	Ø40
A4	Ø35	Ø50	Ø68	Ø90	Ø110
A5	5	6	8, 22	10, 20	10
A6	5	5	6	10	12
A7	15	18	24.5	35	45
B					
B1	50	70	90	120	145
B2	4	5	6	8	10
B3	1	1	2	2	3
B4	15	20	30	40	65
B5	20	28	36	50	74
B6	25	34	44	60	87
B7	6	8	9	12	15
B8	63.7	83.5	98.7	140	158.7
B9	126.7	166.5	200.2, 214.7	281.5, 291.5	354.7
C					
C1	46, 60, 63, 90	70, 75, 90	90, 100, 115, 165	145, 165	145, 200, 215
C2	M4 x P0.7 M5 x P0.8	M4 x P0.7 M5 x P0.8 M6 x P1.0	M6 x P1.0 M8 x P1.25 M10 x P1.5	M6 x P1.0 M8 x P1.25 M10 x P1.5	M8 x P1.25 M10 x P1.5 M12 x P1.75
C3	5.65, 6, 8	6.35, 8, 10, 11, 12, 14	14, 16, 19	19, 22, 24, (28.32-주문형)	22, 24, 28, 32, 35
C4	26	33.5, 41.5	59, 73.5	67, 77	84.5
C5	30, 40, 50, 70	50, 60, 70	70, 80, 110, 130	110, 130	110, 114.3, 180
C6	M3 x P0.5	M4 x P0.7 M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5
C7	46, 55, 60, 76	64, 70, 80	92, 110, 130, 142	130, 150	146, 180, 190
C8	32	41	48.5, 63	69.5, 79.5	94

Model No.	Unit	Ratio	#50	#70	#90	#120	#145
Rated Output Torque	Nm	15	17	50	125	268	482
		20	15	45	111	238	426
		25	14	42	104	223	401
		30	17	50	125	268	482
		35	13	39	98	208	373
		40	15	45	111	238	427
		50	14	42	104	223	402
		70	13	40	98	208	373
		100	12	37	92	198	357
Max. Output Torque	Nm	15~100	3 Times of Rated Output Torque				
Rated Input Speed	rpm	15~100	5,000	4,800	4,000	3,600	3,000
Max. Input Speed	rpm	15~100	8,000	6,000	6,000	4,800	3,600
Backlash	arcmin	15~100	≤ 12	≤ 12	≤ 12	≤ 12	≤ 12
Torsional Rigidity	Nm/arcmin	15~100	2.3	5	15	45	69
Max. Radial Load	N	15~100	750	1,180	3,200	6,800	9,300
Max. Axial Load	N	15~100	325	590	1,600	3,400	4,650
Service Life	hr	15~100	20,000				
Efficiency	%	15~100	≥ 94%				
Operating Temperature	°C	15~100	-25°C ~ +90°C				
Lubrication		15~100	Synthetic oil (SHC 629)				
Degree of Gearbox Protection		15~100	IP65				
Mounting Position		15~100	Any				
Noise Level	dB	15~100	≤ 65	≤ 65	≤ 68	≤ 70	≤ 72
Weight ±3%	Kg	15~100	0.9	2.24	4.59	11.22	22.5

■ Mass Moments of Inertia (Kg · cm²)

Ratio	#50	#70	#90	#120	#145
15	0.03	0.02	0.13	0.42	2.52
20	0.03	0.02	0.13	0.42	2.52
25	0.03	0.02	0.13	0.42	2.52
30	0.03	0.02	0.13	0.42	2.33
35	0.03	0.02	0.13	0.40	2.33
40	0.03	0.02	0.13	0.40	2.33
50	0.03	0.02	0.13	0.40	2.33
70	0.03	0.02	0.13	0.39	2.29
100	0.03	0.02	0.13	0.36	2.29