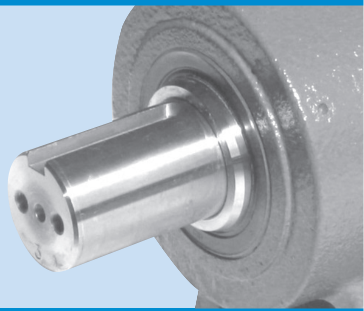
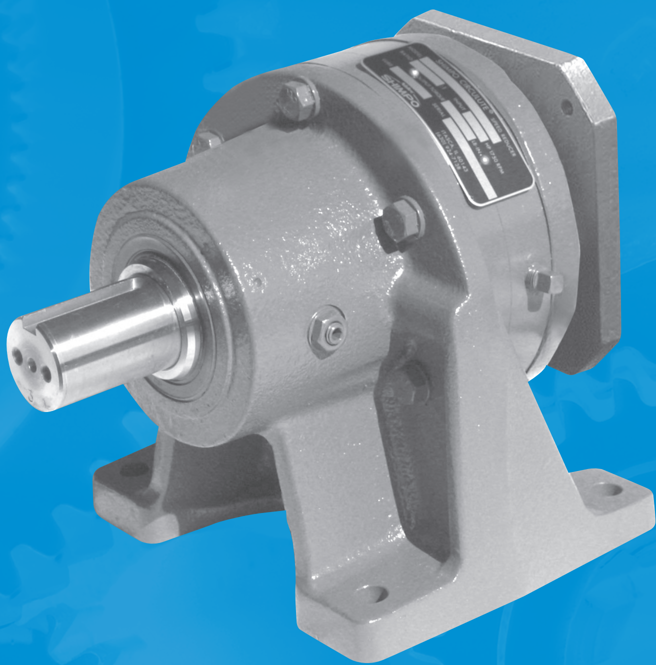
ERK Series

ERK

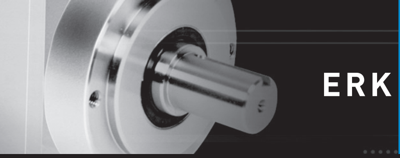


Coronet Speed Reduser



SHIMPO

All for dreams



서보모터 적용을 위한 감속기의 조건을 만나보세요

아래와 같은 적용 사항과 구동 유닛에 대한 뛰어난 기능을(성능)을 보여줍니다.

- 산업 로봇과 같은 중하중 정밀 구동
- 공작기계의 정밀이송 기구
- X-Y 테이블의 위치 결정
- 재료의 연속 절단, 마킹(종이, 강판, 인쇄 등)
- 콘베이어 라인의 동기제어
- 턴 테이블의 고정도 회전
- 압연 롤러 등의 충격 하중이 큰 구동부나 빈번한 정회전 운전

PART 1

서보모터 용량

80W ~ 15KW 모터 시리즈 가능

PART 2

감속비

- 1단 감속비 : 1/11 ~ 1/71
- 2단 감속비 : 1/121 ~ 1/5041
- 3단 감속비 : 1/5423 ~ 1/357911

PART 3

사양

- 낮은 백래쉬 타입의 1단 감속기
- 1단 감속 백래쉬 : 0.1° 이하
- 표준형

※ M프레임은 0.2° 이하

PART 4

적용 가능한 서보 모터 제조사

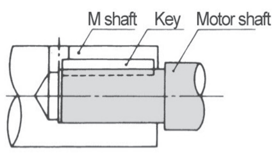
- Matsushita Electric Industrial Co.,Ltd.
- Fanuc Ltd.
- Shinko Electric Industries Co.,Ltd.
- Sanyo Electric Co.,Ltd.
- Miki Pulley
- Fuji Electric Co.,Ltd.
- Nihon Reliance
- Oriental Motor
- OMRON Corp.
- Sawamura Electric
- Tamagawa Seiki
- Mitsubishi Electric Corporation
- Nikki Denso
- Hitachi, Ltd.
- Daito Seisakusyo
- Yasukawa Electric Mfg. Co., Ltd.
- Nihon Surbo.
- Shinano Electric
- Showa Electric
- Takagaku Seisakusyo
- Toei Electric
- Wako Giken

PART 5

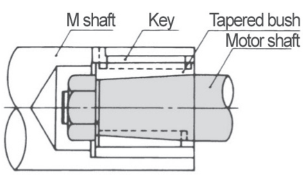
서보 모터 커플링

서보 모터의 샤프트에 따라 세가지 타입의 커플링 연결이 가능합니다.

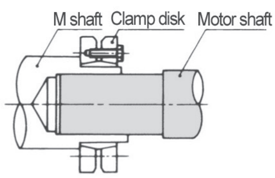
❶ Motor shaft with key way



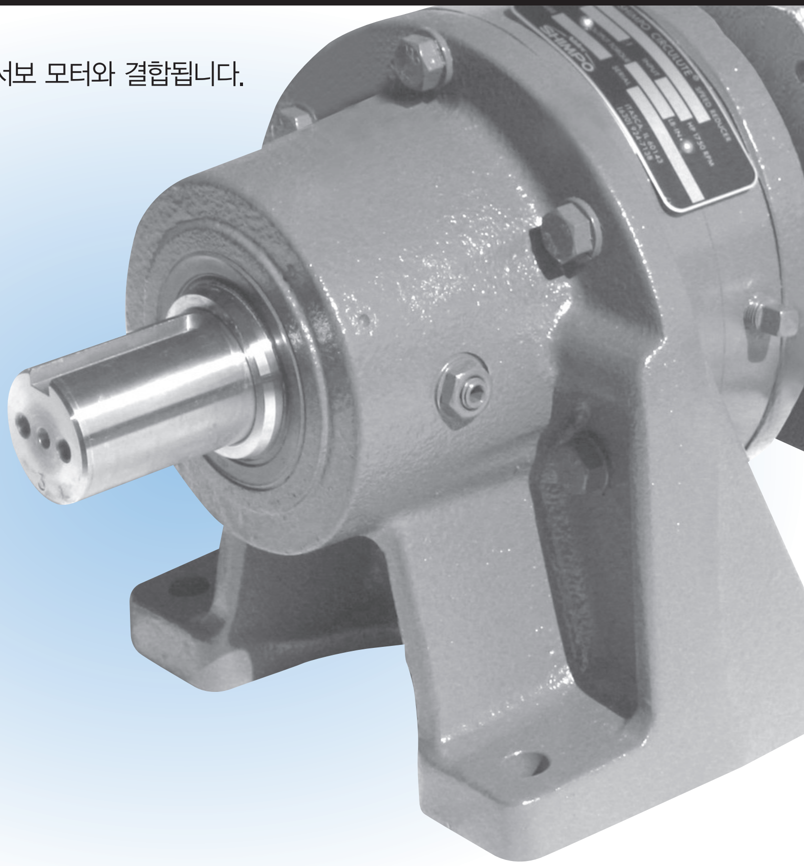
❷ Tapered motor shaft



❸ Straight motor shaft



※ 모든 제조사의 서보 모터와 결합됩니다.

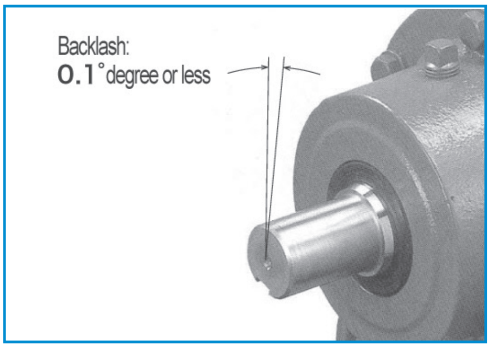


정밀한 위치 결정과 제어

0.1° 이하의 낮은 백래쉬

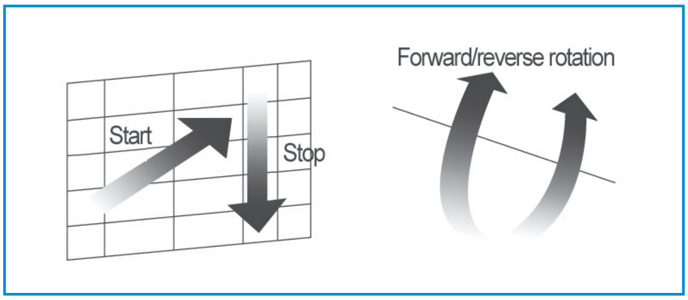
표준 감속기는 1/10° 이하의 백래쉬를 가집니다.
서보모터의 정밀한 위치 결정과 빠른 응답성에 대한 정밀한 위치 제어를 보증합니다.

※M 프레임의 백래쉬는 0.2° 이하입니다.



적은 내부 관성 모멘트는 서보 모터의 빠른 응답성을 제공합니다.

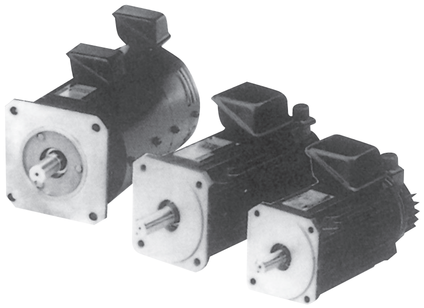
독특한 순환(원형)톱니 설계에 의해 내부 관성 모멘트가 매우 적습니다.
이것은 빈번한(주기적인)구동, 정지, 정/역회전 동작에 뛰어난 특성을 발휘합니다.



VRAL series
VRAS series
VRAF series
VRSF series
VRHF series
VRSF-A series
VRG series
NEV series
EVRG series
STH series
ERK series

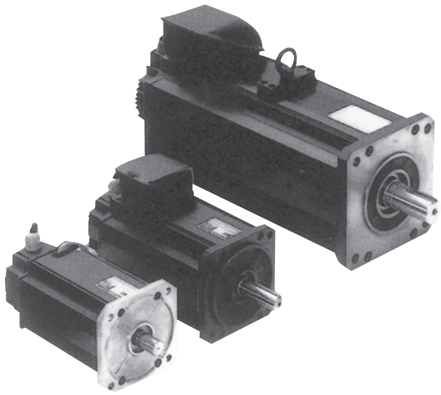
다양한 제조사의 서보 모터를 취부할 수 있습니다.

아래와 같은 대부분의 제조사의 서보 모터에 적용할 수 있는(알맞은) 규격 (표준)플렌지가 있습니다.
키, 테이퍼, 파워락 타입과 같은 어느 샤프트라도 사용(배치, 설치) 할 수 있습니다.



- Matsushita Electric Industrial Co.,Ltd.
- Fanuc Ltd.
- Shinko Electric Industries Co.,Ltd.
- Sanyo Electric Co.,Ltd.
- Miki Pulley
- Fuji Electric Co.,Ltd.
- Nihon Reliance
- Oriental Motor
- OMRON Corp.
- Sawamura Electric
- Tamagawa Seiki
- Mitsubishi Electric Corporation
- Nikki Denso
- Hitachi, Ltd.
- Daito Seisakusyo
- Yasukawa Electric Mfg. Co., Ltd.
- Nihon Surbo.
- Shinano Electric
- Showa Electric
- Takagaku Seisakusyo
- Toei Electric
- Wako Giken

Can be docked with major servo motors.



높은 비틀림 강성

높은 내부 비틀림 강성은 충격과 과부하로 부터 샤프트의 비틀림을 감소시킵니다.

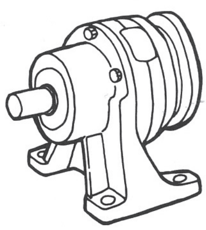
사용자에 맞는 취부 방향으로 베이스 부착형, 플렌지 부착형과 링 부착형을 선택할 수 있습니다.

M ~ NF프레임으로 시리즈화 되어 있습니다.
감속비는 1/11 ~1/5041로 표준화 되어 있습니다.
또한, 취부 방향(설치 배열)은 기본 타입으로 가능합니다. (※ 3단 감속은 1/5423 ~ 1/357911도 가능합니다.)

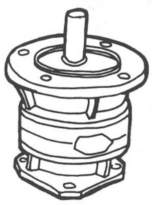
Extensive model series

M Frame ~ NF Frame

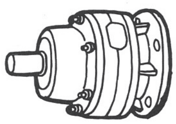
1/11 ~ 1/5041



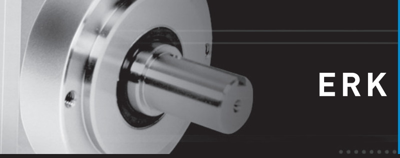
▲ Base mount



▲ Flange mount

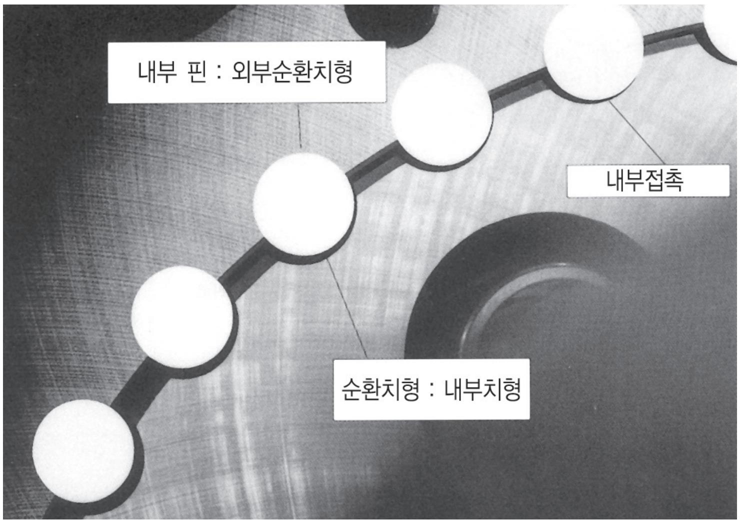


▲ Ring mount



독특한 **원형 치형**을 제공합니다.

- ▶ 긴수명
- ▶ 튼튼한 구조
- ▶ 고효율



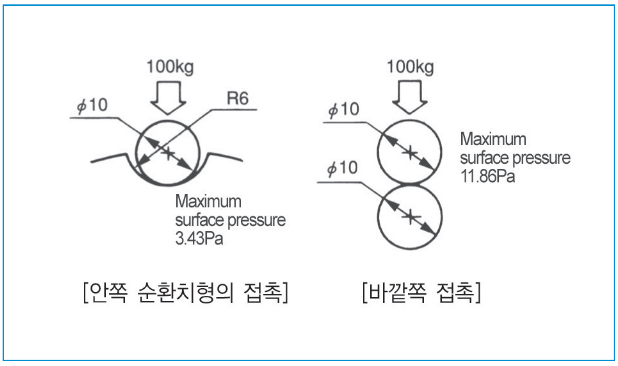
원형 치형은 심포(자체)기술로 설계되었으며, 진원의 단순 원형 치형으로 표현됩니다.

독보적인(뛰어난) 수명과 특성

뛰어난 수명

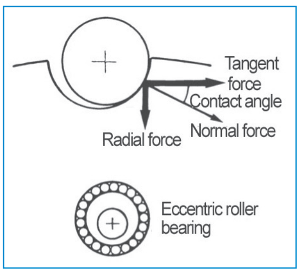
원형치형은 보여진 것과 같이 단일화된 일반적인 치형이며, 원을 가지고 있는 원이라고 표현되도록 설계되었다.

- 한계 타입 톱니와 달리 맞물려 있는 동안 접촉 표면이 증가합니다.
- 같은 표면 압력이 발생하더라도 몇배 적은 단위면적당의 접촉 압력(표면 압력)을 제공합니다. 따라서 마모 저항성은 치형 수명을 늘리기 위해 상당히 향상되었습니다.



※ 치형의 수명은 이론적으로 표면 압력의 간접적인 아홉 번 째 힘에 의해 다양해진다.
예를 들어 표면압력이 1/3일 경우 수명이 20,000배 증가한다.

맞물려 있는 동안은 작은 접촉각도는 샤프트의 축 하중을 감소시키고, 편심 베어링에 지나친 부하가 걸리지 않게 한다.

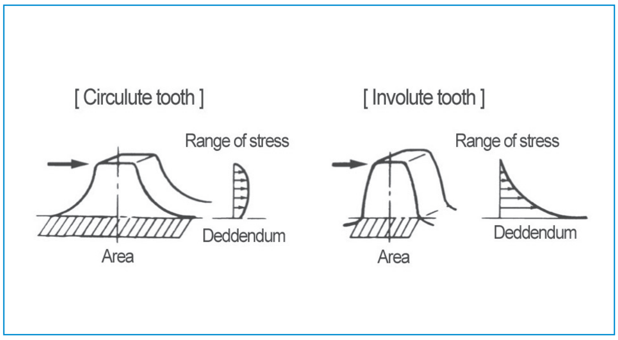


과부하 및 충격에 대한 강한 내구성

나선형 치형과 비교하여 원형 톱니는 :

- 치형 뿌리의 부분 면적이 더 넓으며
- 치형 뿌리에서 원형치형의 굽힘 응력이 최대가 되지 않기 때문에 과부하와 충격에 대해 강한 내구성을 갖는다.

모든 치형은 반 영구적 정밀도를 유지하는 고강도의 강철로 만들어 진다.

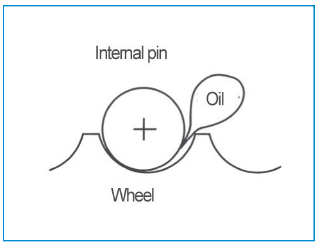


고효율을 제공하는 고정밀 치형

직경이 다른 단순한 원이 내부적으로 접촉해 있다.
표면 압력은 다른 톱니와 비교하면 눈의 띄게 작다.

- 적합한 윤활유
- 뛰어난 윤활 특성
- 낮은 발열

톱니 윤곽의 정밀도가 진동과 소음을 적게 만든다.
이러한 모든 것들이 최고의 감속 효율을 만들어 낸다.



모델 형식과 CODE 기입

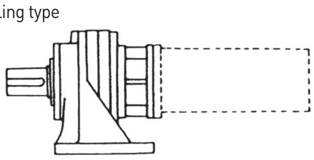
■ 형식 표시

ABLE 감속기부						서보 모터		
ER	K	V	NB	71	D			

- ER ● 에이블 감속기 호칭
- K ● 입력형식
- V ● 취부와 출력 방향
- NB ● 감속기 특징 : PB–고정도형, 백래쉬 0.05˚(3분)
- 71 ● 감속비율
- D ● 감속기 형
- ● 적용 서보 용량(W)
- ● 메이커명
- ● 형번

■ 입력모터

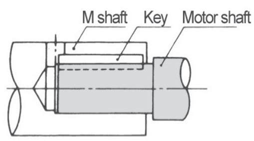
* ERK
Coupling type



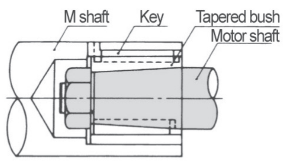
■ 커플링의 종류

* Three types of coupling are available depending on the servo motor shaft.

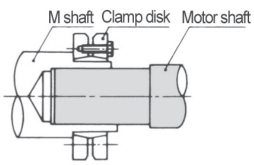
① For motor shaft with key



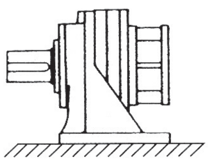
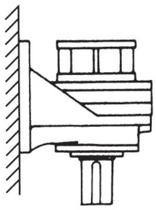
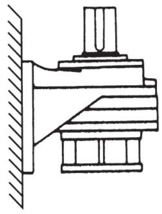
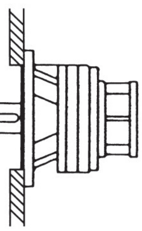
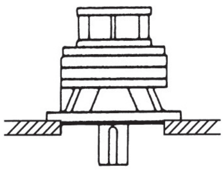
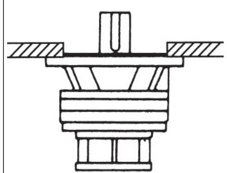
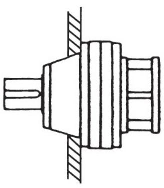
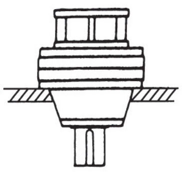
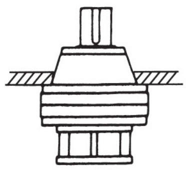
② For tapered motor shaft



③ For straight motor shaft



■ 취부 방향 / 출력 샤프트

	Horizontal	Vertical (Shaft down)	Vertical (Shaft up)
Base mount	ERK 	ERK-Y 	ERK-Z 
Flange mount	ERK-X 	ERK-V 	ERK-I 
Ring mount	ERK-R 	ERK-S 	ERK-T 

PERFORMANCE TABLE

Input Speed 1000rpm 입력회전수

■ Low backlash 사양 주의 : 일반 구동시에는 안전율이 1.2로 제공된 ( )에 있는 토크값을 사용하세요.

Motor capacity(kW) / Reduction ratio	0.2					0.3					0.4					0.6					0.8				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	B	17.9	1.83	58.8	6.00	B	28.3	2.89	58.8	6.00	B	37.8	3.86	58.8	6.00	C	56.7	5.79	127	13.0	C	75.6	7.71	127	13.0
17	B	27.8	2.84	80.4	8.20	B	43.8	4.47	80.4	8.20	B	58.4	5.96	80.4	8.20	C	87.6	8.94	186	19.0	C	117	11.9	186	19.0
29	B	47.4	4.84	80.4	8.20	B	(66.9)	(6.83)	80.4	8.20	C	94.8	9.67	186	19.0	C	150	15.3	186	19.0	D	188	19.2	431	44.0
35	B	57.2	5.84	80.4	8.20	C	81.0	8.27	186	19.0	C	115	11.7	186	19.0	C	(155)	(15.8)	186	19.0	D	226	23.1	431	44.0
47	B	(66.9)	(6.83)	80.4	8.20	C	109	11.1	186	19.0	C	154	15.7	186	19.0	C	215	21.9	431	44.0	D	305	31.1	431	44.0
59	B	80.3	8.19	186	19.0	C	136	13.9	186	19.0	C	157	16.0	431	44.0	D	270	27.5	431	44.0	D	(360)	(36.7)	431	44.0
71	B	96.5	9.85	186	19.0	C	(155)	(15.8)	186	19.0	C	189	19.3	431	44.0	D	324	33.1	431	44.0	NE	389	39.7	431	95.0
Manufactures: Matsushita																									
Mitsubishi																									
Nikki	NA100-20F-10										NA100-40F-10										NA100-75F-10				
Sanyo																									
Yasukawa						SGMG-03A□BB										SGMG-06A□BB									

Motor capacity(kW) / Reduction ratio	0.85					0.9					1.2					1.9					2.0				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	C	80.4	8.20	127	13.0	C	85.1	8.68	127	13.0	C	(106)	(10.8)	127	13.0	D	179	18.3	284	29.0	D	189	19.3	284	29.0
17	C	124	12.7	186	19.0	C	131	13.4	186	19.0	C	(155)	(15.8)	186	19.0	D	277	28.3	431	44.0	D	292	29.8	431	44.0
29	D	202	20.6	431	44.0	D	216	22.0	431	44.0	D	299	30.5	431	44.0	NE	464	47.3	1190	121	NE	491	50.1	1190	121
35	D	244	24.9	431	44.0	D	261	26.6	431	44.0	D	360	(36.7)	431	44.0	NE	560	57.1	1340	137	NE	593	60.5	1340	137
47	D	327	33.4	431	44.0	D	350	35.7	431	44.0	NE	437	44.6	1240	127	NE	750	76.6	1240	127	NE	796	81.2	1240	127
59	D	(360)	(36.7)	431	44.0	NE	380	38.8	1140	116	NE	549	56.0	1140	116	NE	943	96.2	1140	116	NE	(948)	(96.7)	1140	116
71	NE	423	43.2	931	95.0	NE	457	46.6	931	95.0	NE	661	67.4	930	95.0	NF	828	84.5	1870	191	NF	897	91.5	1870	191
Manufactures: Matsushita																									
Mitsubishi	HC-SF81K										HC-SF121K										HC-SF201K				
Nikki											NA100-100F-10					NA100-180F-10									
Sanyo																									
Yasukawa						SGMG-09A□BB					SGMG-12A□BB										SGMG-20A□BB				

Motor capacity(kW) / Reduction ratio	2.8					3.0					3.7					4.4					5.5				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	D	(237)	(24.2)	284	29.0	NE	283	28.9	657	67.0	NE	350	35.7	657	67.0	NE	416	42.4	657	67.0	NE	519	53.0	657	67.0
17	NE	409	41.7	960	98.0	NE	438	44.7	960	98.0	NE	540	55.1	960	98.0	NE	643	65.6	960	98.0	NE	(801)	(81.7)	960	98.0
29	NE	698	71.2	1190	121	NE	748	76.3	1190	121	NE	922	94.1	1190	121	NE	(990)	(101)	1190	121	NF	1330	136	2160	220
35	NE	842	85.9	1340	137	NE	902	92.0	1340	137	NE	1120	114	1340	137	NF	1240	127	2160	220	NF	1610	164	2160	220
47	NE	(1040)	(106)	1240	127	NF	(1040)	(106)	1240	127	NF	1350	138	2160	220	NF	1670	170	2160	220	-	-	-	-	-
59	NF	1200	122	2160	220	NF	1300	133	2160	220	NF	1710	174	2160	220	NF	1790	(183)	2160	220	-	-	-	-	-
71	NF	1440	147	1870	191	NF	(1560)	(159)	1870	191	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manufactures: Matsushita																									
Mitsubishi						HC-SF301K																			
Nikki	NA100-270F-10										NA100-370F-10										NA100-550F-10				
Sanyo																									
Yasukawa						SGMG-30A□BB										SGMG-44A□BB									

Motor capacity(kW) / Reduction ratio	6.0					7.5				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	NE	(547)	(55.8)	657	67.0	NF	709	72.3	1090	111
17	NE	(801)	(81.7)	960	98.0	NF	1100	112	1570	160
29	NF	1470	150	2160	220	NF	(1790)	(183)	2160	220
35	NF	1770	181	2160	220	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-
71	-	-	-	-	-	-	-	-	-	-
Manufactures: Matsushita										
Mitsubishi										
Nikki						NA100-750F-10				
Sanyo										
Yasukawa	SGMG-60A□BB									

주의 : 서보 모터 토크는 특성표의 서보 모터와 감속기가 결합되었을때의 표준(기본)값으로 사용됩니다. 물론 가속과 감속은 감속기의 수명에 문제를 일으킬 수 있습니다.

■ 표준 사양

주의 : 일반 구동시에는 안전율이 1.2로 제공된 (   )에 있는 토크값을 사용하세요.

Motor capacity(kW) / Reduction ratio	0.2					0.3					0.4					0.6					0.8				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	A	18.8	1.92	49.0	5.00	A	28.3	2.89	49.0	5.00	A	37.8	3.86	49.0	5.00	B	56.7	5.79	108	11.0	B	75.6	7.71	108	11.0
17	A	29.1	2.97	53.9	5.50	A	43.8	4.47	53.9	5.50	B	58.4	5.96	147	15.0	B	87.6	8.94	147	15.0	B	117	11.9	147	15.0
29	A	49.7	5.07	61.7	6.30	B	74.8	7.63	147	15.0	B	100	10.2	147	15.0	C	150	15.3	343	35.0	C	199	20.3	343	35.0
35	A	(57.1)	(5.83)	68.6	7.00	B	90.2	9.20	147	15.0	B	121	12.3	147	15.0	C	180	18.4	343	35.0	C	240	24.5	343	35.0
47	B	78.7	8.03	147	15.0	B	122	12.4	147	15.0	C	158	16.1	343	35.0	C	242	24.7	343	35.0	C	(286)	(29.2)	343	35.0
59	B	99.0	10.1	147	15.0	C	141	14.4	343	35.0	C	198	20.2	343	35.0	C	(286)	(29.2)	343	35.0	D	393	40.1	784	80.0
71	C	102	10.4	343	35.0	C	170	17.3	343	35.0	C	238	24.3	343	35.0	D	337	34.4	784	80.0	D	472	48.2	784	80.0
Manufactures Matsushita																									
Mitsubishi																									
Nikki	NA100-20F-10										NA100-40F-10										NA100-75F-10				
Sanyo																									
Yasukawa						SGMG-03A□BB										SGMG-06A□BB									

Motor capacity(kW) / Reduction ratio	0.85					0.9					1.2					1.9					2.0				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	B	80.4	8.20	108	11.0	B	85.1	8.68	108	11.0	C	114	11.6	245	25.0	C	179	18.3	245	25.0	C	189	19.3	245	25.0
17	B	(123)	(12.5)	147	15.0	B	(123)	(12.5)	147	15.0	C	175	17.9	343	35.0	C	277	28.3	343	35.0	C	(286)	(29.2)	343	35.0
29	C	212	21.6	343	35.0	C	224	22.9	343	35.0	C	(286)	(29.2)	343	35.0	D	473	48.3	784	80.0	D	498	50.8	784	80.0
35	C	256	26.1	343	35.0	C	270	27.6	343	35.0	D	361	36.8	784	80.0	D	571	58.3	784	80.0	D	602	61.4	784	80.0
47	D	335	34.2	784	80.0	D	358	36.5	784	80.0	D	484	49.4	784	80.0	NE	767	78.3	2260	231	NE	808	85.4	2260	231
59	D	421	43.0	784	80.0	D	449	45.8	784	80.0	D	609	62.1	784	80.0	NE	963	98.3	2080	212	NE	1010	103	2080	212
71	D	507	51.7	784	80.0	D	540	55.1	784	80.0	D	(654)	(66.7)	784	80.0	NE	1160	118	1710	174	NE	1220	124	1710	174
Manufactures Matsushita																									
Mitsubishi	HC-SF81K										HC-SF121K										HC-SF201K				
Nikki											NA100-100F-10					NA100-180F-10									
Sanyo																									
Yasukawa						SGMG-09A□BB					SGMG-12A□BB										SGMG-20A□BB				

Motor capacity(kW) / Reduction ratio	2.8					3.0					3.7					4.4					5.5				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	D	265	27.0	529	54.0	D	283	28.9	529	54.0	D	350	35.7	529	54.0	D	416	42.4	529	54.0	NE	519	53.0	1210	123
17	D	409	41.7	784	80.0	D	438	44.7	784	80.0	D	540	55.1	784	80.0	D	643	65.6	784	80.0	NE	804	82.0	1750	179
29	D	(654)	(66.7)	784	80.0	NE	748	76.3	2170	221	NE	922	94.1	2170	221	NE	1100	112	2170	221	NF	1370	140	2170	221
35	NE	842	85.9	2450	250	NE	902	92.0	2450	250	NE	1120	114	2450	250	NE	1320	135	2450	250	NE	1660	169	2450	250
47	NE	1130	115	2260	231	NE	1220	124	2260	231	NE	1490	152	2260	231	NE	1770	181	2260	231	NF	2220	227	3920	400
59	NE	1420	145	2080	212	NE	1520	155	2080	212	NE	(1730)	(177)	2080	212	NE	2230	228	3920	400	NF	2780	284	3920	400
71	NF	1620	165	3420	349	NF	1750	179	3420	349	NF	2220	227	3420	349	NF	2690	274	3420	349	-	-	-	-	-
Manufactures Matsushita																									
Mitsubishi						HC-SF301K																			
Nikki	NA100-270F-10										NA100-370F-10										NA100-550F-10				
Sanyo																									
Yasukawa						SGMG-30A□BB										SGMG-44A□BB									

Motor capacity(kW) / Reduction ratio	6.0					7.5					11.0				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	NE	567	57.9	1210	123	NE	709	72.3	1210	123	NE	(1010)	(103)	1210	123
17	NE	876	89.4	1750	179	NE	1100	112	1750	179	NF	1610	164	2850	291
29	NE	1500	153	2170	221	NE	(1800)	(184)	2170	221	NF	2740	280	3920	400
35	NE	1800	184	2450	250	NE	(2040)	(208)	2450	250	NF	(3260)	(333)	3920	400
47	NF	2420	247	3920	400	NE	3030	309	3920	400	-	-	-	-	-
59	NF	3040	310	3920	400	NF	-	-	-	-	-	-	-	-	-
71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manufactures Matsushita															
Mitsubishi															
Nikki						NA100-750F-10					NA100-1100F-10				
Sanyo															
Yasukawa	SGMG-60A□BB														

PERFORMANCE TABLE

Input Speed 1500rpm 입력회전수

■ Low backlash 사양 주의 : 일반 구동시에는 안전율이 1.2로 제공된 ( )에 있는 토크값을 사용하세요.

Motor capacity(kW) / Reduction ratio	0.15					0.2					0.3					0.4					0.45				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m
11	M	(3.23)	(0.33)	3.92	0.40	B	10.0	1.02	58.8	6.00	B	17.1	1.74	58.8	6.00	B	24.0	2.45	58.8	6.00	B	27.5	2.81	58.8	6.00
17	M	(5.10)	(0.52)	6.08	0.62	B	15.5	1.58	80.4	8.20	B	26.4	2.69	80.4	8.20	B	37.1	3.79	80.4	8.20	B	42.5	4.34	80.4	8.20
29	M	(5.19)	(0.53)	6.27	0.64	B	26.4	2.69	80.4	8.20	B	44.9	4.58	80.4	8.20	B	63.3	6.46	80.4	8.20	B	(66.9)	(6.83)	80.4	8.20
35	M	(5.39)	(0.55)	6.47	0.66	B	31.9	3.25	80.4	8.20	B	54.2	5.53	80.4	8.20	B	(66.9)	(6.83)	80.4	8.20	C	(76.2)	7.78	186	19.0
47	M	(5.39)	(0.55)	6.47	0.66	B	42.7	4.36	80.4	8.20	B	(66.9)	(6.83)	80.4	8.20	C	87.4	8.92	186	19.0	C	102	10.4	186	19.0
59	M	(5.39)	(0.55)	6.47	0.66	B	43.7	5.48	75.5	7.70	C	72.3	7.38	176	18.0	C	110	11.2	176	18.0	C	128	13.1	176	18.0
71	M	(5.39)	(0.55)	6.47	0.66	B	(49.0)	(5.00)	58.8	6.00	C	87.1	8.89	167	17.0	C	132	13.5	167	17.0	C	(139)	(14.2)	167	17.0
Manufactures: Matsushita																									
Mitsubishi																									
Nikki						NA30-13F-15										NA30-25F-15									
Sanyo																									
Yasukawa																					SGMG-05A□AB				

Motor capacity(kW) / Reduction ratio	0.75					0.8					0.85					1.0					1.3				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m
11	B	47.2	4.82	58.8	6.00	B	(49.0)	(5.00)	58.8	6.00	B	(49.0)	(5.00)	58.8	6.00	C	62.4	6.37	127	13.0	C	81.9	8.36	127	13.0
17	B	(66.9)	(6.83)	80.4	8.20	C	74.9	7.64	186	19.0	C	80.0	8.19	186	19.0	C	96.5	9.85	186	19.0	C	126	12.9	186	19.0
29	C	119	12.1	186	19.0	C	127	13.0	186	19.0	C	137	14.0	186	19.0	C	(155)	(15.8)	186	19.0	D	199	20.3	431	44.0
35	C	143	14.6	186	19.0	C	154	15.7	186	19.0	C	(155)	(15.8)	186	19.0	D	172	17.6	431	44.0	D	239	24.4	431	44.0
47	D	157	16.0	431	44.0	D	172	17.6	431	44.0	D	187	19.1	431	44.0	D	232	23.7	431	44.0	D	321	32.8	431	44.0
59	D	197	20.1	421	43.0	D	216	22.0	421	43.0	D	235	24.0	421	43.0	D	291	29.7	421	43.0	D	(351)	(35.8)	421	43.0
71	D	237	24.2	402	41.0	D	260	26.5	402	41.0	D	282	28.8	402	41.0	D	(335)	(34.2)	402	41.0	NE	380	38.8	823	84.0
Manufactures: Matsushita																									
Mitsubishi																									
Nikki						NA30-13F-15																			
Sanyo																									
Yasukawa											SGMG-09A□AB										SGMG-13A□AB				

Motor capacity(kW) / Reduction ratio	1.5					1.6					1.8					2.0					2.2				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m
11	C	94.5	9.64	127	13.0	C	101	10.3	127	13.0	C	(106)	(10.8)	127	13.0	D	124	12.7	255	26.0	D	138	14.1	255	26.0
17	C	146	14.9	186	19.0	C	155	15.8	186	19.0	C	(155)	(15.8)	19.6	19.0	D	192	19.6	392	40.0	D	214	21.8	392	40.0
29	D	235	24	431	44.0	D	254	25.9	431	44.0	D	291	29.7	33.4	44.0	D	327	33.4	431	44.0	D	(360)	(36.7)	431	44.0
35	D	284	29.0	431	44.0	D	307	31.3	431	44.0	D	351	35.8	(36.7)	44.0	D	(360)	(36.7)	431	44.0	NE	387	39.5	1210	123
47	D	(360)	(36.7)	431	44.0	D	(360)	(36.7)	431	44.0	NE	400	40.8	46.9	113	NE	460	46.9	1110	113	NE	519	53.0	1110	113
59	NE	390	39.8	1020	104	NE	427	43.6	1020	104	NE	503	51.3	58.9	104	NE	577	58.9	1020	104	NE	653	66.6	1020	104
71	NE	469	47.9	823	84.0	NE	515	52.5	823	81.0	NE	605	61.7	(70.0)	84.0	NE	(686)	(70.0)	823	84.0	NE	(686)	(70.0)	823	84.0
Manufactures: Matsushita																									
Mitsubishi																									
Nikki						NA30-110F-15																			
Sanyo																									
Yasukawa											SGMG-20A□AB														

Motor capacity(kW) / Reduction ratio	2.8					2.9					3.0					3.7					4.4				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m
11	D	176	18.0	255	26.0	D	182	18.6	255	26.0	D	189	19.3	255	26.0	D	(213)	(21.7)	255	26.0	NE	275	28.1	578	59.0
17	D	272	27.8	392	40.0	D	282	28.8	392	40.0	D	292	29.8	392	40.0	D	(326)	(33.3)	392	40.0	NE	426	43.5	853	87.0
29	NE	431	44.0	1050	107	NE	450	45.9	1050	107	NE	468	47.8	1050	107	NE	598	61.0	1050	107	NE	727	74.2	1050	107
35	NE	520	43.1	1210	123	NE	543	55.4	1210	123	NE	565	57.7	1210	123	NE	721	73.5	1210	123	NE	877	89.5	1210	123
47	NE	700	71.4	1110	113	NE	729	74.4	1110	113	NE	760	77.5	1110	113	NE	(923)	(94.2)	1110	113	NE	(923)	(94.2)	1110	113
59	NE	850	86.7	1020	104	NE	(850)	(86.7)	1020	104	NE	(850)	(86.7)	1020	104	NE	(850)	(86.7)	1020	104	NF	1060	108	2040	208
71	NE	(686)	(70.0)	823	84.0	NE	(686)	(70.0)	823	84.0	NE	(686)	(70.0)	823	84.0	NF	962	98.2	1680	171	NF	1270	130	1680	171
Manufactures: Matsushita																									
Mitsubishi																									
Nikki	NA30-180F-15																								
Sanyo																									
Yasukawa						SGMG-30A□AB															SGMG-44A□AB				

Motor capacity(kW) / Reduction ratio	5.5					7.5					11.0				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m		N·m	kgf·m	N·m	kgf·m
11	NE	347	35.4	578	59.0	NE	472	48.2	578	59.0	NF	661	67.4	970	99.0
17	NE	565	54.6	853	87.0	NE	(711)	(72.5)	853	87.0	NF	1020	104	1380	141
29	NE	(874)	(89.2)	1050	107	NF	1100	112	2100	214	NF	1740	178	2100	214
35	NE	(1010)	(103)	1210	123	NF	1320	135	2160	220	NF	(1790)	183	2160	220
47	NF	1180	120	2160	220	NF	1770	181	2160	220	-	-	-	-	-
59	NF	1480	151	2040	208	NF	-	-	-	-	-	-	-	-	-
71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manufactures: Matsushita															
Mitsubishi															
Nikki															
Sanyo															
Yasukawa	SGMG-55A□AB					SGMG-75A□AB					SGMG-1AA□AB				

주의 : 서보 모터 토크는 특성표의 서보 모터와 감속기가 결합되었을때의 표준(기본)값으로 사용됩니다. 물론 가속과 감속은 감속기의 수명에 문제를 일으킬 수 있습니다.

■ 표준 사양 주의 : 일반 구동시에는 안전율이 1.2로 제공된 ( )에 있는 토크값을 사용하세요.

Motor capacity(kW) / Reduction ratio	0.15					0.2					0.3					0.4					0.45				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	M	(6.08)	(0.62)	7.25	0.74	A	11.4	1.16	47.0	4.80	A	18.4	1.88	47.0	4.80	A	25.2	2.57	47.0	4.80	A	28.3	2.89	47.0	4.80
17	M	(9.02)	(0.92)	10.8	1.10	A	17.6	1.80	48.0	4.90	A	28.4	2.90	48.0	4.90	A	38.9	3.97	48.0	4.90	A	(40.0)	(4.08)	48.0	4.90
29	A	20.9	2.13	54.9	5.60	A	30.1	3.07	54.9	5.60	A	45.8	4.67	54.9	5.60	B	65.9	6.72	147	15.0	B	74.8	7.63	147	15.0
35	A	25.2	2.57	59.8	6.10	A	36.4	3.71	59.8	6.10	A	(49.8)	(5.08)	59.8	6.10	B	79.5	8.11	147	15.0	B	90.2	9.20	147	15.0
47	A	33.8	3.45	53.9	5.50	A	(44.9)	(4.58)	53.9	5.50	B	76.8	7.84	147	15.0	B	107	10.9	147	15.0	B	122	12.4	147	15.0
59	A	42.4	4.33	51.0	5.20	B	58.9	6.01	137	14.0	B	96.4	96.4	137	14.0	B	(115)	(11.7)	137	14.0	C	134	13.7	333	34.0
71	A	(33.5)	(3.42)	40.2	4.10	B	70.9	7.23	108	11.0	C	93.8	9.57	304	31.0	C	139	14.2	304	31.0	C	162	16.5	304	31.0
Manufactures Matsushita																									
Mitsubishi																									
Nikki						NA30-13F-15										NA30-25F-15									
Sanyo																									
Yasukawa																					SGMG-05A□AB				

Motor capacity(kW) / Reduction ratio	0.75					0.8					0.85					1.0					1.3				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	B	47.2	4.82	108	11.0	B	50.4	5.14	108	11.0	B	53.5	5.46	108	11.0	B	63.0	6.43	108	11.0	B	81.9	8.36	108	11.0
17	B	73.0	7.45	147	15.0	B	77.9	7.95	147	15.0	B	82.7	8.44	147	15.0	B	97.3	9.93	147	15.0	B	(123)	(12.5)	147	15.0
29	B	(123)	(12.5)	147	15.0	B	(123)	(12.5)	147	15.0	C	140	14.3	343	35.0	C	167	17.0	343	35.0	C	216	22.0	343	35.0
35	C	147	15.0	343	35.0	C	158	16.1	343	35.0	C	169	17.2	343	35.0	C	201	20.5	343	35.0	C	261	26.6	343	35.0
47	C	197	20.1	343	35.0	C	212	21.3	343	35.0	C	226	23.1	343	35.0	C	270	27.5	343	35.0	D	326	33.3	784	80.0
59	C	247	25.2	333	34.0	C	266	27.1	333	34.0	C	(277)	(28.3)	333	34.0	D	304	31.0	774	79.0	D	420	41.8	774	79.0
71	C	(253)	(25.8)	304	31.0	D	275	28.1	735	75.0	D	298	30.4	735	75.0	D	366	37.3	735	75.0	D	493	50.3	735	75.0
Manufactures Matsushita																									
Mitsubishi																									
Nikki						NA30-50F-15																			
Sanyo																									
Yasukawa											SGMG-09A□AB										SGMG-13A□AB				

Motor capacity(kW) / Reduction ratio	1.5					1.6					1.8					2.0					2.2				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	B	(89.9)	(9.17)	108	11.0	C	101	10.3	245	25.0	C	114	11.6	245	25.0	C	126	12.9	245	25.0	C	138	14.1	245	25.0
17	C	146	14.9	343	35.0	C	156	15.9	343	35.0	C	175	17.9	343	35.0	C	195	19.9	343	353.0	C	215	21.9	343	35.0
29	C	249	25.4	343	35.0	C	266	27.1	343	35.0	C	(286)	(29.2)	343	35.0	D	332	33.9	784	80.0	D	366	37.3	784	80.0
35	C	286	(29.2)	343	35.0	C	(286)	(29.2)	343	35.0	D	359	36.6	784	80.0	D	401	40.9	784	80.0	D	441	45.0	784	80.0
47	D	392	40.0	784	80.0	D	421	43.0	784	80.0	D	481	49.1	784	80.0	D	538	54.9	784	80.0	D	592	60.4	784	80.0
59	D	492	50.2	774	79.0	D	529	54.0	774	79.0	D	604	61.6	774	79.0	D	(645)	(65.8)	774	79.0	D	(645)	(65.8)	774	79.0
71	D	592	60.4	735	75.0	D	(613)	(62.5)	735	75.0	D	(613)	(62.5)	735	75.0	NE	715	73.0	1500	153	NE	807	82.3	1500	153
Manufactures Matsushita																									
Mitsubishi																									
Nikki						NA30-110F-15																			
Sanyo																									
Yasukawa											SGMG-20A□AB														

Motor capacity(kW) / Reduction ratio	2.8					2.9					3.0					3.7					4.4				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	C	176	18.0	245	25.0	C	182	18.6	245	25.0	C	189	19.3	245	25.0	D	233	23.8	470	48.0	D	277	28.3	470	48.0
17	C	272	27.8	343	35.0	C	282	28.8	343	35.0	C	(286)	(29.2)	343	35.0	D	361	36.8	725	74.0	D	428	43.7	725	74.0
29	D	466	47.5	784	80.0	D	482	49.2	784	80.0	D	498	50.8	784	80.0	D	614	62.7	784	80.0	NE	731	74.6	1910	195
35	D	562	57.3	784	80.0	D	581	59.3	784	80.0	D	602	61.4	784	80.0	D	(654)	(66.7)	784	80.0	NE	882	90.0	2210	225
47	D	(654)	(66.7)	784	80.0	NE	743	75.8	2020	206	NE	773	78.9	2020	206	NE	980	100	2020	206	NE	1190	121	2020	206
59	NE	895	91.3	1860	190	NE	933	95.2	1860	190	NE	970	99.0	1860	190	NE	1230	126	1860	190	NE	1490	152	1860	190
71	NE	1080	110	1500	153	NE	1130	115	1500	153	NE	1170	119	1500	153	NE	(1250)	(128)	1500	153	NF	1560	159	3050	311
Manufactures Matsushita																									
Mitsubishi																									
Nikki	NA30-180F-15																								
Sanyo																									
Yasukawa						SGMG-30A□AB															SGMG-44A□AB				

Motor capacity(kW) / Reduction ratio	5.5					7.5					11.0					15.0				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	D	347	35.4	470	48.0	NE	472	48.2	1070	109	NE	693	70.7	1070	109	NE	(890)	(90.8)	1070	109
17	D	535	54.6	725	74.0	NE	730	74.5	1560	159	NE	1070	109	1560	159	NF	1460	149	2520	257
29	NE	913	93.2	1910	195	NE	1240	127	1910	195	NF	1820	1820	3820	390	NF	2490	254	3820	390
35	NE	1110	113	2210	225	NE	1500	153	2210	225	NF	2210	225	3920	400	NF	3010	307	3920	400
47	NE	1480	151	2020	206	NF	1960	200	3920	400	NF	2960	302	3920	400	-	-	-	-	-
59	NF	1710	174	3710	379	NF	2460	251	3710	379	-	-	-	-	-	-	-	-	-	-
71	NF	2060	210	3050	311	NF	(2540)	(259)	3050	311	-	-	-	-	-	-	-	-	-	-
Manufactures Matsushita																				
Mitsubishi																				
Nikki																				
Sanyo																				
Yasukawa	SGMG-55A□AB					SGMG-75A□AB					SGMG-1AA□AB					SGMG-1EA□AB				

PERFORMANCE TABLE

Input Speed 2000rpm 입력회전수

■ Low backlash 사양 주의 : 일반 구동시에는 안전율이 1.2로 제공된 ( )에 있는 토크값을 사용하세요.

Motor capacity(kW) / Reduction ratio	0.1					0.2					0.4					0.5					0.75				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	M	(2.94)	(0.30)	3.53	0.36	B	6.08	0.62	52.9	5.40	B	16.6	1.69	52.9	5.40	B	21.9	2.23	52.9	5.40	B	35.0	3.57	52.9	5.40
17	M	(4.61)	(0.47)	5.49	0.56	B	9.41	0.96	72.3	7.38	B	25.6	2.61	72.3	7.38	B	33.7	3.44	72.3	7.38	B	54.0	5.51	72.3	7.38
29	M	(4.70)	(0.48)	5.69	0.58	B	16.1	1.64	72.3	7.38	B	43.7	4.46	72.3	7.38	B	57.5	5.87	72.3	7.38	C	80.0	8.16	168	17.1
35	M	(4.90)	(0.50)	5.78	0.59	B	19.3	1.97	72.3	7.38	B	52.7	5.38	72.3	7.38	B	(60.3)	(6.15)	72.3	7.38	C	96.4	9.84	168	17.1
47	M	(4.90)	(0.50)	5.78	0.59	B	26.0	2.65	72.3	7.38	B	(60.3)	(6.15)	72.3	7.38	C	73.5	7.50	168	17.1	C	129	132	168	17.1
59	M	(4.90)	(0.50)	5.78	0.59	B	32.6	3.33	67.9	6.93	C	64.1	6.54	159	16.2	C	92.2	9.41	159	16.2	C	(132)	(13.5)	159	16.2
71	M	(4.90)	(0.50)	5.78	0.59	B	39.2	4.00	52.9	5.40	C	77.1	7.87	150	15.3	C	111	11.3	150	15.3	C	131	13.4	362	36.9
Manufactures Matsushita																					MDM082				
Mitsubishi																HC-SF52K									
Nikki																									
Sanyo																P60B13050									
Yasukawa																									

Motor capacity(kW) / Reduction ratio	0.8					1.0					1.2					1.5					1.6				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	B	37.5	3.83	52.9	5.40	B	(44.1)	(4.50)	52.9	5.40	C	53.9	5.50	115	11.7	C	69.7	7.11	115	11.7	C	75.0	7.65	115	11.7
17	B	58.1	5.93	72.3	7.38	C	67.1	6.85	168	17.1	C	83.3	8.50	168	17.1	C	108	11.0	168	17.1	C	116	11.8	168	17.1
29	C	86.8	8.86	168	17.1	C	115	11.7	168	17.1	C	(140)	(14.3)	168	17.1	D	158	16.1	388	39.6	D	172	17.5	388	39.6
35	C	105	10.7	168	17.1	C	138	14.1	168	17.1	D	140	14.3	388	39.6	D	190	19.4	388	39.6	D	207	21.1	388	39.6
47	C	(140)	(14.3)	168	17.1	D	143	14.6	388	39.6	D	188	19.2	388	39.6	D	256	26.1	388	39.6	D	277	28.3	388	39.6
59	C	(132)	(13.5)	159	16.2	D	180	18.4	379	38.7	D	236	24.1	379	38.7	D	(317)	(32.3)	379	38.7	D	(317)	(32.3)	379	38.7
71	D	149	15.2	362	36.9	D	217	22.1	362	36.9	D	302	(30.8)	362	36.9	D	(302)	(30.8)	362	36.9	D	(302)	(30.8)	362	36.9
Manufactures Matsushita						MDM102										MDM152									
Mitsubishi						HC-SF102K										HC-SF152K									
Nikki	NA100-40F															NA100-75F									
Sanyo						P60B13100										P60B13150									
Yasukawa																									

Motor capacity(kW) / Reduction ratio	2.0					2.2					2.5					3.0					3.2				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	C	94.5	9.64	115	11.7	C	(95.6)	(9.75)	115	11.7	D	113	11.5	229	23.4	D	138	14.1	229	23.4	D	149	15.2	229	23.4
17	C	(140)	(14.3)	168	17.1	C	(140)	(14.3)	168	17.1	D	173	17.7	353	36.0	D	215	21.9	353	36.0	D	230	23.5	353	36.0
29	D	226	23.1	388	39.6	D	255	26.0	388	39.6	D	296	30.2	359	36.6	D	(323)	(33.0)	388	39.6	NE	329	33.6	944	96.3
35	D	273	27.9	388	39.6	D	307	31.3	388	39.6	D	(323)	(33.0)	388	39.6	NE	364	37.1	1090	111	NE	397	40.5	1090	111
47	D	(323)	(33.0)	388	39.6	D	(323)	(33.0)	388	39.6	NE	376	38.4	1000	102	NE	489	49.9	1000	102	NE	533	54.4	1000	102
59	NE	332	33.9	917	93.6	NE	388	39.6	917	93.6	NE	472	48.2	917	93.6	NE	613	62.6	917	93.6	NE	669	68.3	917	93.6
71	NE	400	40.8	741	75.6	NE	467	47.7	741	75.6	NE	568	58.0	741	75.6	NE	(617)	(63.0)	741	75.6	NE	(617)	(63.0)	741	75.6
Manufactures Matsushita	MDM202										MDM252					MDM302									
Mitsubishi	HC-SF20K																								
Nikki						NA100-110F																			
Sanyo	P60B13200/18200															P60B15300									
Yasukawa																					SGMG-32A□A				

Motor capacity(kW) / Reduction ratio	3.5					3.7					4.0					4.5					5.0				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	D	165	16.8	229	23.4	D	174	17.8	229	23.4	D	189	19.3	229	23.4	D	(191)	(19.5)	229	23.4	NE	220	22.4	520	53.1
17	D	255	26.0	353	36.0	D	270	27.6	353	36.0	D	292	29.8	353	36.0	D	(294)	(30.0)	353	36.0	NE	339	34.6	767	78.3
29	NE	370	37.8	944	96.3	NE	399	40.7	944	96.3	NE	440	44.9	944	96.3	NE	510	52.0	944	96.3	NE	578	59.0	944	96.3
35	NE	448	45.7	1090	111	NE	481	49.1	1090	111	NE	531	54.2	1090	111	NE	614	62.7	1090	111	NE	698	71.2	1090	111
47	NE	601	61.3	1000	102	NE	646	65.9	1000	102	NE	713	72.8	1000	102	NE	825	84.2	1000	102	NE	(831)	(84.8)	1000	102
59	NE	755	77.0	917	93.6	NE	(764)	(78.0)	917	93.6	NE	(764)	(78.0)	917	93.6	NE	(764)	(78.0)	917	93.6	NE	(764)	(78.0)	917	93.6
71	NE	(617)	(63.0)	741	75.6	NE	(617)	(63.0)	741	75.6	NE	(617)	(63.0)	741	75.6	NF	(617)	(63.0)	741	75.6	NE	(617)	(63.0)	741	75.6
Manufactures Matsushita	MDM352										MDM402					MDM452					MDM502				
Mitsubishi	HC-SF352K																				HC-SF502K				
Nikki						NA100-180F																			
Sanyo	P60B18350															P60B18450									
Yasukawa											SGMG-40A□AB														

Motor capacity(kW) / Reduction ratio	5.5					7.0					7.5					11.0					15.0				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	NE	246	25.1	520	53.1	NE	324	33.1	520	53.1	NE	351	35.8	520	53.1	NF	(434)	(44.3)	520	53.1	NF	637	65.0	873	89.1
17	NE	379	38.7	767	78.3	NE	502	51.2	767	78.3	NE	542	55.3	767	78.3	NF	660	67.3	1240	127	NF	980	100	1240	127
29	NE	648	66.1	944	96.3	NE	(787)	(80.3)	944	96.3	NE	(787)	(80.3)	944	96.3	NF	1130	115	1890	193	NF	(1580)	(161)	1890	193
35	NE	782	79.8	1090	111	NE	(907)	(92.5)	1090	111	NE	905	(92.3)	1090	111	NF	1360	139	1940	198	-	-	-	-	-
47	NE	(831)	(84.8)	1000	102	NE	925	94.4	1940	198	NF	1040	106	1940	198	NF	(1620)	(165)	1940	198	-	-	-	-	-
59	NE	(764)	(78.0)	917	93.6	NE	1170	119	1830	187	NF	1300	133	1830	187	-	-	-	-	-	-	-	-	-	-
71	NE	(617)	(63.0)	741	75.6	NE	1250	(128)	1510	154	NF	(1250)	(128)	1510	154	-	-	-	-	-	-	-	-	-	-
Manufactures Matsushita																									
Mitsubishi						HC-SF702K																			
Nikki	NA100-270F										NA100-370F					NA100-550F					HC-SF502K				
Sanyo																									
Yasukawa																									

주의 : 서보 모터 토크는 특성표의 서보 모터와 감속기가 결합되었을때의 표준(기본)값으로 사용됩니다. 물론 가속과 감속은 감속기의 수명에 문제를 일으킬 수 있습니다.

■ 표준 사양 주의 : 일반 구동시에는 안전율이 1.2로 제공된 ( )에 있는 토크값을 사용하세요.

Motor capacity(kW) / Reduction ratio	0.1					0.2					0.4					0.5					0.75				
	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m
11	M	3.92	0.40	6.57	0.67	A	7.74	0.79	42.3	4.32	A	18.2	1.86	42.3	4.32	A	23.4	2.39	42.3	4.32	A	(35.3)	(3.60)	42.3	4.32
17	M	6.08	0.62	9.70	0.99	A	11.9	1.21	43.2	4.41	A	28.1	2.87	43.2	4.41	A	36.1	3.68	43.2	4.41	B	54.8	5.59	132	13.5
29	M	(8.82)	(0.90)	10.6	1.08	A	20.3	2.07	49.4	5.04	A	(41.2)	(4.20)	49.4	5.04	B	60.1	6.13	132	13.5	B	93.4	9.53	132	13.5
35	M	(8.82)	(0.90)	10.6	1.08	A	24.5	2.50	53.8	5.49	B	55.9	5.70	132	13.5	B	72.5	7.40	132	13.5	B	(111)	(11.3)	132	13.5
47	M	(8.82)	(0.90)	10.6	1.08	A	32.9	3.36	48.5	4.95	B	75.0	7.65	132	13.5	B	97.4	9.94	132	13.5	C	136	13.9	309	31.5
59	M	(8.82)	(0.90)	10.6	1.08	A	(38.2)	(3.90)	45.9	4.68	B	94.2	9.61	123	12.3	B	(103)	(10.5)	123	12.6	C	171	17.4	300	30.6
71	M	(8.82)	(0.90)	10.6	1.08	B	45.5	4.64	97.0	9.90	C	86.8	8.86	270	27.6	C	121	12.3	273	27.9	C	206	21.0	273	27.9
Manufactures: Matsushita																					MDM082				
Mitsubishi																HC-SF52K									
Nikki																									
Sanyo																P60B13050									
Yasukawa																									

Motor capacity(kW) / Reduction ratio	0.8					1.0					1.2					1.5					1.6				
	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m
11	B	37.8	3.86	97.0	9.90	B	47.2	4.82	97.0	9.90	B	58.6	5.78	97.0	9.90	B	70.9	7.23	97.0	9.90	B	75.6	7.71	97.0	9.90
17	B	58.8	6.00	132	13.5	B	73.0	7.45	132	13.5	B	87.6	8.94	132	13.5	B	110	11.2	132	13.5	B	(110)	(11.2)	132	13.5
29	B	100	10.2	132	13.5	B	(111)	(11.3)	132	13.5	C	146	14.9	309	31.5	C	187	19.1	309	31.5	C	199	20.3	309	31.5
35	B	(111)	(11.3)	132	13.5	C	143	14.6	309	31.5	C	176	18.0	309	31.5	C	225	23.0	309	31.5	C	240	24.5	309	31.5
47	C	147	15.0	309	31.5	C	192	19.6	309	31.5	C	237	24.2	309	31.5	C	(258)	(26.3)	309	31.5	C	258	26.3	309	31.5
59	C	185	18.9	300	30.6	C	241	24.6	300	30.6	D	253	25.8	597	71.1	D	338	34.5	697	71.1	D	366	37.3	697	71.1
71	C	222	22.7	273	27.9	D	237	24.2	662	67.5	D	305	31.1	662	67.5	D	407	41.5	662	67.5	D	440	44.9	662	67.5
Manufactures: Matsushita						MDM102										MDM152									
Mitsubishi						HC-SF102K										HC-SF152K									
Nikki	NA100-40F															NA100-75F									
Sanyo						P60B13100										P60B13150									
Yasukawa																									

Motor capacity(kW) / Reduction ratio	2.0					2.2					2.5					3.0					3.2				
	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m
11	C	94.5	9.64	221	22.5	C	104	10.6	221	22.5	C	119	12.1	221	22.5	C	142	14.5	221	22.5	C	151	15.4	221	22.5
17	C	146	14.9	309	31.5	C	161	16.4	309	31.5	C	182	18.6	309	31.5	C	220	22.4	309	31.5	C	233	23.8	309	31.5
29	C	249	25.4	309	31.5	C	(258)	(26.3)	309	31.5	D	305	31.1	706	72.0	D	373	38.1	706	72.0	D	399	40.7	706	72.0
35	D	284	29.0	706	72.0	D	318	32.4	706	72.0	D	368	37.5	706	72.0	D	451	46.0	706	72.0	D	481	49.1	706	72.0
47	D	381	38.9	706	72.0	D	426	43.5	706	72.0	D	494	50.4	706	72.0	D	(588)	(60.0)	706	72.0	NE	552	56.3	1810	185
59	D	479	48.9	697	71.1	D	535	54.6	697	71.1	D	(581)	(59.3)	697	71.1	NE	637	65.0	1680	171	NE	693	70.7	1680	171
71	D	(552)	(56.3)	662	67.5	D	(552)	(56.3)	662	67.5	NE	597	60.9	1350	138	NE	766	78.2	1350	138	NE	834	85.1	1350	138
Manufactures: Matsushita	MDM202										MDM252					MDM302									
Mitsubishi	HC-SF202K					NA100-110F																			
Nikki																									
Sanyo	P60B13200/18200					SGMD022A□A										P60B15300									
Yasukawa																					SGMG-32A□A				

Motor capacity(kW) / Reduction ratio	3.5					3.7					4.0					4.5					5.0				
	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m
11	C	166	16.9	221	22.5	C	174	17.8	221	22.5	C	(184)	(18.8)	221	22.5	D	213	21.7	423	43.2	D	236	24.1	423	43.2
17	C	256	26.1	309	31.5	C	(258)	(26.3)	309	31.5	D	292	29.8	653	66.6	D	328	33.5	653	66.6	D	366	37.3	653	66.6
29	D	436	44.5	706	72.0	D	461	47.0	706	72.0	D	498	50.8	706	72.0	D	561	57.2	706	72.0	D	(588)	(60.0)	706	72.0
35	D	526	53.7	706	72.0	D	557	56.8	706	72.0	D	(588)	(60.0)	706	72.0	D	(588)	(60.0)	706	72.0	NE	711	72.6	706	203
47	NE	619	63.2	1810	185	NE	664	67.8	1810	185	NE	731	74.6	1810	185	NE	844	86.1	1810	185	NE	956	97.5	1810	185
59	NE	777	79.3	1680	171	NE	834	85.1	1680	171	NE	918	93.7	1680	171	NE	1060	108	1680	171	NE	1200	122	1680	171
71	NE	936	95.5	1350	138	NE	1000	102	1350	138	NE	1110	113	1350	138	NE	(1130)	(115)	1350	138	NF	(1130)	(115)	1350	138
Manufactures: Matsushita	MDM352										MDM402					MDM452					MDM502				
Mitsubishi	HC-SF352K																				HC-SF502K				
Nikki						NA100-180F																			
Sanyo	P60B18350															P60B18450									
Yasukawa											SGMD-40A□A														

Motor capacity(kW) / Reduction ratio	5.5					7.0					7.5					11.0					15.0				
	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m	Frame size	Output torque N·m	Output torque kgf·m	Allowable torque N·m	Allowable torque kgf·m
11	D	260	26.5	423	43.2	D	330	33.7	423	43.2	D	(353)	(36.0)	423	43.2	NE	519	53.0	961	98.1	NE	709	72.3	961	98.1
17	D	402	41.0	653	66.6	D	512	52.2	653	66.6	D	(544)	(55.5)	653	66.6	NE	804	82.0	1400	143	NE	1100	112	1400	143
29	NE	659	67.2	1720	176	NE	866	88.4	1720	176	NE	934	95.3	1720	176	NE	1370	140	1720	176	NF	1830	187	3440	351
35	NE	796	81.2	1990	203	NE	1050	107	1990	203	NE	1130	115	1990	203	NE	(1660)	(169)	1990	203	NF	2210	226	3530	360
47	NE	1070	109	1810	185	NE	1400	143	1810	185	NE	(1520)	(155)	1810	185	NF	2080	212	3530	360	NF	(2940)	(300)	3530	360
59	NE	1340	137	1680	171	NF	1480	151	3340	341	NF	1620	165	3340	341	NF	2610	266	3340	341	-	-	-	-	-
71	NF	1270	130	2740	280	NF	1780	182	2740	280	NF	1950	199	2740	280	-	-	-	-	-	-	-	-	-	-
Manufactures: Matsushita																									
Mitsubishi						HC-SF702K																			
Nikki	NA100-270F										NA100-370F					NA100-550F					NA100-750F				
Sanyo																									
Yasukawa																									

PERFORMANCE TABLE

Input Speed 3000rpm 입력회전수

■ Low backlash 사양 주의 : 일반 구동시에는 안전율이 1.2로 제공된 ( )에 있는 토크값을 사용하세요.

Motor capacity(kW) / Reduction ratio	0.1					0.15					0.2					0.3					0.4				
	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m
11	M	0.88	0.09	3.14	0.31	M	(2.55)	(0.26)	3.14	0.32	M	(2.55)	(0.26)	3.14	0.32	B	5.59	0.57	46.5	4.74	B	9.02	0.92	46.5	4.74
17	M	1.37	0.14	4.80	0.49	M	(4.02)	(0.41)	4.80	0.49	M	(4.02)	(0.41)	4.80	0.49	B	8.53	0.87	63.5	6.48	B	14.0	1.43	63.5	6.48
29	M	2.45	0.25	5.00	0.51	M	(4.12)	(0.42)	5.00	0.51	M	(4.12)	(0.42)	5.00	0.51	B	14.6	1.49	63.5	6.48	B	23.8	2.43	63.5	6.48
35	M	2.94	0.30	5.10	0.52	M	(4.21)	(0.43)	5.10	0.52	M	(4.21)	(0.43)	5.10	0.52	B	17.6	1.80	63.5	6.486.	B	28.8	2.94	63.5	6.48
47	M	3.92	0.40	5.10	0.52	M	(4.21)	(0.43)	5.10	0.52	M	(4.21)	(0.43)	5.10	0.52	B	23.7	2.42	63.5	48	B	38.6	3.94	63.5	6.48
59	M	(4.21)	(0.43)	5.10	0.52	M	(4.21)	(0.43)	5.10	0.52	M	(4.21)	(0.43)	5.10	0.52	B	29.7	3.03	59.6	6.08	B	48.5	4.95	59.6	6.08
71	M	(4.21)	(0.43)	5.10	0.52	M	(4.21)	(0.43)	5.10	0.52	M	(4.21)	(0.43)	5.10	0.52	B	35.8	3.65	46.5	4.74	B	(38.7)	(3.95)	46.5	4.74
Manufactures Matsushita	MDM012										MDM022										MDM042				
Manufactures Mitsubishi																									
Manufactures Nikki	NA50-10										NA50-40										NA50-40				
Manufactures Sanyo	P50B05010										P50B07020					P50B07030					P50B07040				
Manufactures Yasukawa	SGM-01A										SGM-02A										SGM-04A				

Motor capacity(kW) / Reduction ratio	0.5					0.6					0.7					0.75					1.0				
	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m
11	B	12.5	1.28	46.5	4.74	B	16.1	1.64	46.5	4.74	B	19.5	1.99	46.5	4.74	B	21.3	2.17	46.5	4.74	B	30.1	3.07	46.5	4.74
17	B	19.4	1.98	63.5	6.48	B	24.8	2.53	63.5	6.48	B	30.2	3.08	63.5	6.48	B	32.9	3.36	63.5	6.48	B	46.5	4.74	63.5	6.48
29	B	33.0	3.37	63.5	6.48	B	42.3	4.32	63.5	6.48	B	51.5	5.26	63.5	6.48	B	(52.9)	(5.40)	63.5	6.48	C	90.5	6.17	147	15.0
35	B	39.9	4.07	63.5	6.48	B	51.1	5.21	63.5	6.48	B	(52.9)	(5.40)	63.5	6.48	B	(52.9)	(5.40)	63.5	6.48	C	72.9	7.44	147	15.0
47	B	(52.9)	(5.40)	63.5	6.48	B	(52.9)	(5.40)	63.5	6.48	C	53.1	5.42	147	15.0	C	60.6	6.18	147	15.0	C	98.0	10.0	147	15.0
59	B	(49.7)	(5.07)	59.6	6.08	B	(49.7)	(5.07)	59.6	6.08	C	66.6	6.80	139	15.2	C	76.0	7.76	139	14.2	C	(117)	(11.9)	139	14.2
71	B	(38.7)	(3.95)	46.5	4.74	B	(38.7)	(3.95)	46.5	4.74	C	80.2	8.18	131	13.4	C	91.5	9.34	131	13.4	C	(110)	(11.2)	131	13.4
Manufactures Matsushita																MSM082					MSM102				
Manufactures Mitsubishi	HC-SF53K																				HC-SF103K				
Manufactures Nikki																NA50-75					NA503-102				
Manufactures Sanyo	P50B08050															P50B08075					P50B08100				
Manufactures Yasukawa																SGMS-08A					SGMS-10A□A				

Motor capacity(kW) / Reduction ratio	1.5					2.0					2.5					3.0					3.5				
	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m
11	C	40.5	4.13	101	10.3	C	57.9	5.91	101	10.3	C	75.5	7.70	101	10.3	C	83.9	(8.56)	101	10.3	D	97.5	9.98	201	20.5
17	C	62.5	6.38	147	15.0	C	89.5	9.13	147	15.0	C	117	11.9	147	15.0	D	123	12.6	310	31.6	D	151	15.4	310	31.6
29	C	107	10.9	147	15.0	C	(123)	(12.5)	147	15.0	D	165	16.8	341	34.8	D	211	21.5	341	34.8	D	257	26.2	341	34.8
35	C	(123)	(12.5)	147	15.0	D	143	14.6	341	34.8	D	199	20.3	341	34.8	D	255	26.0	341	34.8	D	(284)	(29.0)	341	34.8
47	C	(123)	(12.5)	147	15.0	D	192	19.6	341	34.8	D	267	27.2	341	34.8	D	(284)	(29.0)	341	34.8	-	-	-	-	-
59	D	148	15.1	333	34.0	D	241	24.6	333	34.0	D	(277)	(28.3)	333	34.0	D	(277)	(28.3)	333	34.0	-	-	-	-	-
71	D	177	18.1	318	32.4	D	(265)	(27.0)	318	32.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manufactures Matsushita	MSM152					MSM202					MSM252					MSM302					MSM352				
Manufactures Mitsubishi	HC-SF153K					HC-SF203K															HC-SF353K				
Manufactures Nikki	NA503-152					NA503-202					NA503-252					NA503-302					NA503-352				
Manufactures Sanyo																									
Manufactures Yasukawa	SGMS-15A□A					SGMS-20A□A										SGMS-30A□A									

Motor capacity(kW) / Reduction ratio	4.0					4.5					5.0				
	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m	Frame size	Output torque N · m	Output torque kgf · m	Allowable torque N · m	Allowable torque kgf · m
11	D	115	11.7	201	20.5	D	132	13.5	201	20.5	D	150	15.3	201	20.5
17	D	177	18.1	310	31.6	D	205	20.9	310	31.6	D	232	23.7	310	31.6
29	D	(284)	(29.0)	341	34.8	-	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manufactures Matsushita	MSM402					MSM452					MSM502				
Manufactures Mitsubishi															
Manufactures Nikki	NA503-402					NA503-452					NA503-502				
Manufactures Sanyo															
Manufactures Yasukawa	SGMS-40A□A										SGMS-50A□A				

주의 : 서보 모터 토크는 특성표의 서보 모터와 감속기가 결합되었을때의 표준(기본)값으로 사용됩니다. 물론 가속과 감속은 감속기의 수명에 문제를 일으킬 수 있습니다.

■ 표준 사양 주의 : 일반 구동시에는 안전율이 1.2로 제공된 ( )에 있는 토크값을 사용하세요.

Motor capacity(kW) / Reduction ratio	0.1					0.15					0.2					0.3					0.4				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	M	1.96	0.20	5.68	0.58	M	3.72	0.38	5.68	0.58	M	4.80	(0.49)	5.68	0.58	B	6.37	0.65	85.2	8.69	B	9.90	1.01	85.2	8.69
17	M	3.04	0.31	8.53	0.87	M	5.78	0.59	8.53	0.87	M	7.06	(0.72)	8.53	0.87	B	9.90	1.01	117	11.9	B	15.3	1.56	117	11.9
29	M	5.29	0.54	9.31	0.95	M	(7.74)	(0.79)	9.31	0.95	-	-	-	-	-	B	16.9	1.72	117	11.9	B	26.1	2.66	117	11.9
35	M	6.37	0.65	9.31	0.95	-	-	-	-	-	-	-	-	-	-	B	20.4	2.08	117	11.9	B	31.6	3.22	117	11.9
47	M	(7.74)	(0.79)	9.31	0.95	-	-	-	-	-	-	-	-	-	-	B	27.3	2.79	117	11.9	B	42.3	4.32	117	11.9
59	M	(7.74)	(0.79)	9.31	0.95	-	-	-	-	-	-	-	-	-	-	B	34.3	3.50	109	11.1	B	53.1	5.42	109	11.1
71	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	B	41.4	4.22	89.2	8.69	B	63.9	6.52	85.2	8.69
Manufactures Matsushita	MSM012										MSM022										MSM042				
Manufactures Mitsubishi																									
Manufactures Nikki	NA50-10										NA50-20										NA50-40				
Manufactures Sanyo	P50B05010										P50B07020					P50B07030					P50B07040				
Manufactures Yasukawa	SGM-01A										SGM-02A										SGM-04A				

Motor capacity(kW) / Reduction ratio	0.5					0.6					0.7					0.75					1.0				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	B	13.4	1.37	85.2	8.69	B	16.9	1.72	85.2	8.69	B	20.4	2.08	85.2	8.69	B	22.1	2.26	85.2	8.69	B	30.9	3.15	85.2	8.69
17	B	20.7	2.11	117	11.9	B	26.2	2.67	117	11.9	B	31.6	3.22	117	11.9	B	34.2	3.49	117	11.9	B	47.7	4.87	117	11.9
29	B	35.4	3.61	117	11.9	B	44.6	4.55	117	11.9	B	53.8	5.49	117	11.9	B	59.4	5.96	117	11.9	B	81.4	8.31	117	11.9
35	B	42.6	4.35	117	11.9	B	53.8	5.49	117	11.9	B	64.9	6.62	117	11.9	B	70.5	7.19	117	11.9	B	(96.8)	(9.88)	117	11.9
47	B	57.2	5.84	117	11.9	B	72.2	7.37	117	11.9	B	87.2	8.90	117	11.9	B	94.7	9.66	117	11.9	C	108	11.0	117	11.9
59	B	71.9	7.34	109	11.1	B	(90.4)	(9.22)	109	11.1	B	(90.4)	(9.22)	109	11.1	B	(90.4)	(9.22)	109	11.1	C	136	13.9	264	26.9
71	B	(71.0)	(7.24)	85.2	8.69	C	72.9	7.44	240	24.5	C	95.6	9.75	240	24.5	C	107	10.9	240	24.5	C	164	16.7	240	24.5
Manufactures Matsushita																MSM082					MSM102				
Manufactures Mitsubishi	HC-SF53K																				HC-SF103K				
Manufactures Nikki																NA50-75					NA503-102				
Manufactures Sanyo	P50B08050															P50B08075					P50B08100				
Manufactures Yasukawa																SGMS-08A					SGMS-10A□A				

Motor capacity(kW) / Reduction ratio	1.5					2.0					2.5					3.0					3.5				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	B	47.2	4.82	85.2	8.69	B	63.0	6.43	85.2	8.69	C	77.8	7.94	194	19.8	C	94.5	9.64	194	19.8	C	110	11.2	194	19.8
17	B	73.0	7.45	117	11.9	B	(90.4)	(9.22)	117	11.9	C	121	12.3	271	27.7	C	156	14.9	271	27.7	C	171	17.4	271	27.76
29	C	113	11.5	271	27.7	C	159	16.2	271	27.7	C	205	20.9	271	27.7	C	(226)	(231)	271	27.7	D	268	27.3	619	63.2
35	C	136	13.9	271	27.7	C	192	19.6	271	27.7	C	(226)	(23.1)	271	27.7	D	268	27.3	619	63.2	D	323	33.0	619	63.2
47	C	183	18.7	271	27.7	C	(225)	(23.0)	271	27.7	D	284	29.0	619	63.2	D	360	36.7	619	63.2	D	434	44.3	619	63.2
59	C	(220)	(22.4)	264	26.9	D	264	26.9	612	62.4	D	357	36.4	612	62.5	D	451	46.0	612	62.4	D	(510)	(52.0)	612	62.4
71	D	204	20.8	581	59.3	D	317	32.3	581	59.3	D	430	43.9	581	59.3	D	(484)	(49.4)	581	59.3	-	-	-	-	-
Manufactures Matsushita	MSM152					MSM202					MSM252					MSM302					MSM352				
Manufactures Mitsubishi	HC-SF153K					HC-SF203K															HC-SF353K				
Manufactures Nikki	NA503-152					NA503-202					NA503-252					NA503-302					NA503-352				
Manufactures Sanyo																									
Manufactures Yasukawa	SGMS-215A□A					SGMS-20A□A										SGMS-30A□A									

Motor capacity(kW) / Reduction ratio	4.0					4.5					5.0				
	Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque		Frame size	Output torque		Allowable torque	
		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m		N · m	kgf · m	N · m	kgf · m
11	C	126	12.9	194	19.8	C	142	14.5	194	19.8	C	158	16.1	194	19.8
17	C	195	19.9	271	27.7	C	220	22.4	271	27.7	C	(225)	(23.0)	271	27.7
29	D	314	32.0	619	63.2	D	360	36.7	619	63.2	D	407	41.5	619	63.2
35	D	379	38.7	619	63.2	D	434	44.6	619	63.2	D	490	50.0	619	63.2
47	D	509	51.9	619	63.2	D	(516)	(52.7)	619	63.2	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manufactures Matsushita	MSM402					MSM452					MSM502				
Manufactures Mitsubishi															
Manufactures Nikki	NA503-402					NA503-452					NA503-502				
Manufactures Sanyo															
Manufactures Yasukawa	SGMS-40A□A										SGMS-50A□A				

Dimensioned drawing

■ Input speed 2000rpm

ERK type(Horizontal base mount)

A, B and C Frames

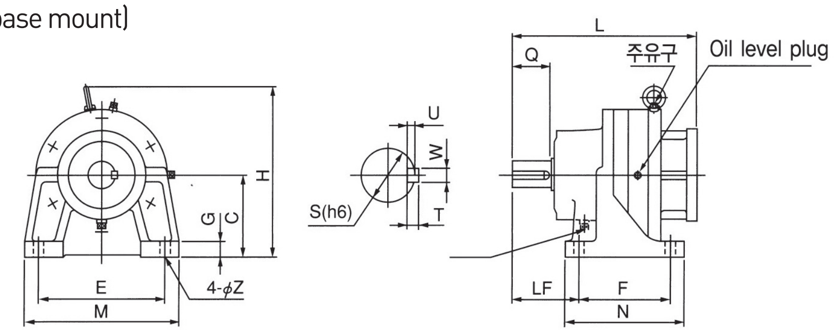
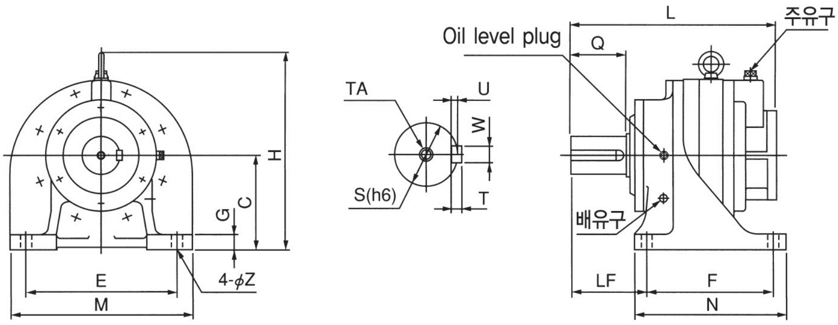


FIG.-1

D, NE Frames



Applicable servo motor type	motor capacity (kW)	Reducer model	Reducer frame size			Length	Output shaft end					Height		Horizontal base unit Fig-1 Base						
				NB	Standard	L	Q	S	W×U	T	-	H	C	N	F	LF	M	E	G	Z
MDM082	0.75	ERK-	A	○	○	213	30	22	6×3.5	6	-	196	90	120	90	65	175	145	16	12
			B	○	○	245	40	28	8×4	7	-	221	115	135	105	75	175	145	16	12
			C	○	–	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	334	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
MDM102	1.0	ERK-	B	○	○	223	40	28	8×4	7	-	221	115	135	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	10	130	95	220	180	22	15
			D	○	○	334	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
MDM152	1.5	ERK-	B	–	○	223	40	28	8×4	7	-	221	115	135	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	334	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
MDM202	2.0	ERK-	C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	334	80	55	16×6	0	M16×30	299	140	200	150	120	275	225	26	19
			NE	○	–	410	110	75	20×7.5	12	-	399	185	300	250	150	360	300	30	22
MDM252	2.5	ERK-	C	–	○	279	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	339	80	55	16×6	10	M16×30	299	140	200	150	120	275	225	26	19
			NE	○	○	410	110	75	20×7.5	12	-	399	185	300	250	150	360	300	30	22
MDM302	3.0	ERK-	C	–	○	279	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	339	80	55	16×6	10	M16×30	299	140	200	150	120	275	225	26	19
			NE	○	○	410	110	75	20×7.5	12	-	399	185	300	250	150	360	300	30	22
MDM352	3.5	ERK-	C	–	○	286	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	346	80	55	16×6	10	M16×30	299	140	200	150	120	275	225	26	19
			NE	○	○	408	110	75	20×7.5	12	-	399	185	300	250	150	360	300	30	22
MDM402	4.0	ERK-	C	–	○	286	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	346	80	55	16×6	10	M16×30	299	140	200	150	120	275	225	26	19
			NE	○	○	408	110	75	20×7.5	12	-	399	185	300	250	150	360	300	30	22
MDM452	4.5	ERK-	D	○	○	364	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	○	408	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22
MDM502	5.0	ERK-	D	–	○	364	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	○	408	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22

■ Low backlash specifications / Standard specifications　Common

Motor mounting flange unit

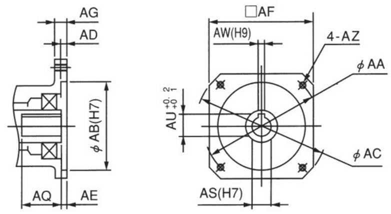


FIG.-3

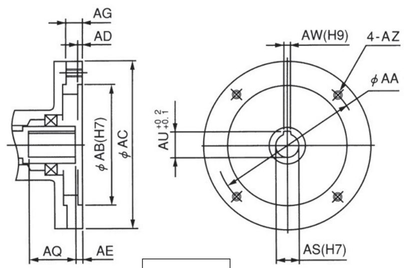
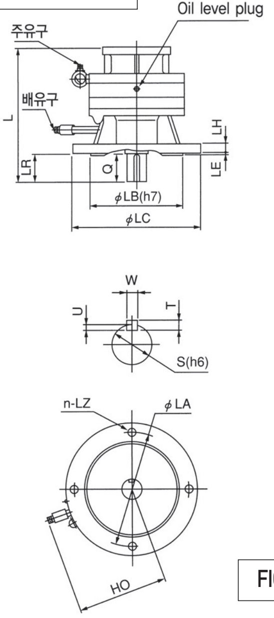


FIG.-4

ERK-V type(Vertical flange type)

A, B and C Frames



D, NE Frames

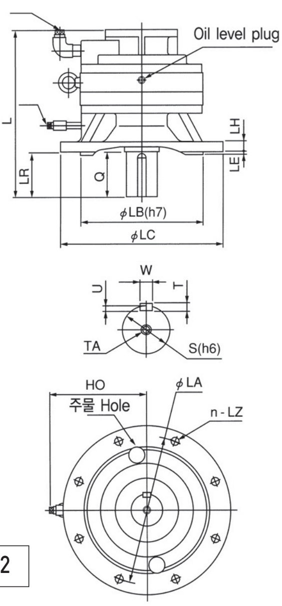


FIG.-2

Horizontal base unit Fig-2																								
Flange								Motor mounting flange unit												No. in Dwg.	Oil quantity(L)		Mass(kg)	
LC	LB	LA	LE	LH	n-LZ	LR	HO	AA	AB	AC	AD	AE	AF	AG	AZ	AQ	AS	AW	AU		Horizontal	Veritcal	Horizontal	Veritcal
160	110	130	4	14	4-12	30	115	145	110	165	7	7	130	15	M8	50	19	6	21.5	3	0.16	0.29	15	15
200	130	165	4	14	4-12	40	131	145	110	165	7	7	130	15	M8	50	19	6	21.5	3	0.22	0.4	17	17
250	180	215	4	18	4-15	55	168	130	110	150	6	7	120	15	M8	50	19	6	21.5	3	0.45	0.81	26	26
300	230	265	5	22	8-15	80	199	145	110	165	7	7	130	18	M8	50	19	6	21.5	3	0.9	1.5	47	47
200	130	165	4	14	4-12	40	131	145	110	165	7	8	130	15	M8	49	22	8	25	3	0.22	0.4	14	14
250	180	215	4	18	4-15	55	168	145	110	165	7	8	130	15	M8	49	22	8	25	3	0.45	0.81	26	26
300	230	265	5	22	8-15	80	199	145	110	165	7	10	130	18	M8	47	22	8	25	3	0.9	1.5	47	47
200	130	165	4	14	4-12	40	131	145	110	165	7	8	130	15	M8	49	22	8	25	3	0.22	0.4	14	14
250	180	215	4	18	4-15	55	168	145	110	165	7	8	130	15	M8	49	22	8	25	3	0.45	0.81	26	26
300	230	265	5	22	8-15	80	199	145	110	165	7	0	130	18	M8	47	22	8	25	3	0.9	1.5	47	47
250	180	215	4	18	4-15	55	168	145	110	165	7	8	130	15	M8	49	22	8	25	3	0.45	0.81	26	26
300	230	265	5	22	8-15	80	199	145	110	165	7	10	130	18	M8	47	22	8	25	3	0.9	1.5	47	47
400	300	350	8	25	8-19	110	232	145	110	250	7	8	-	22	M8	49	22	8	25	4	1.8	2.4	112	106
250	150	215	4	18	4-15	55	168	145	110	165	7	10	-	18	M8	57	24	8	27	4	0.45	0.81	28	28
300	230	265	5	22	8-15	80	199	145	110	200	7	10	-	15	M8	57	24	8	27	4	0.9	1.5	51	51
400	300	350	8	25	8-19	110	232	145	110	250	7	8	-	22	M8	59	24	8	27	4	1.8	2.4	112	106
250	180	215	4	18	4-15	55	168	145	110	165	7	10	-	18	M8	57	24	8	27	4	0.45	0.81	28	28
300	230	265	5	22	8-15	80	199	145	110	200	7	10	-	15	M8	57	24	8	27	4	0.9	1.5	51	51
400	300	350	8	25	8-19	110	232	145	110	250	7	8	-	22	M8	59	24	8	27	4	1.8	2.4	112	106
250	180	215	4	18	4-15	55	168	165	130	200	7	7	-	22	M10	60	28	8	31	4	0.45	0.81	31	31
300	230	265	5	22	8-15	80	199	165	130	200	5	6	-	22	M10	61	28	8	31	4	0.9	1.5	51	51
400	300	350	8	25	8-19	110	232	165	130	233	7	7	176	18	M10	60	28	8	31	3	1.8	2.4	102	96
250	180	215	4	18	4-15	55	168	165	130	200	7	7	-	22	M10	60	28	8	31	4	0.45	0.81	31	31
300	230.	265	5	22	8-15	80	199	165	130	200	5	6	-	22	M10	61	28	8	31	4	0.9	1.5	51	51
400	300	350	8	25	8-19	110	232	165	130	233	7	7	176	18	M10	60	28	8	31	3	1.8	2.4	102	96
300	230	265	5	22	8-15	80	199	200	114.3	233	7	11	176	18	M12	61	35	10	38	3	0.9	1.5	50	50
400	300	350	8	25	8-19	110	232	200	114.3	233	7	6	176	18	M12	66	35	10	38	3	1.8	2.4	102	96
300	230	265	5	22	8-15	80	199	200	114.3	233	7	11	176	18	M12	61	35	10	38	3	0.9	1.5	50	50
400	300	350	8	25	8-19	110	232	200	114.3	233	7	6	176	18	M12	66	35	10	38	3	1.8	2.4	102	96

Dimensioned drawing

■ Input speed 3000rpm

ERK type(Horizontal base mount)

M~C Frames

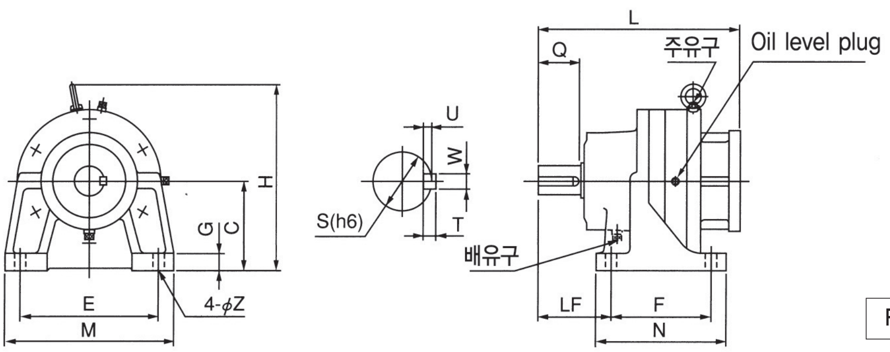
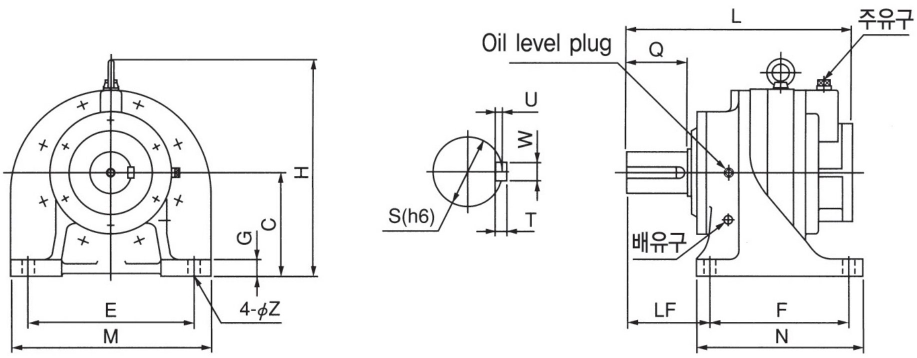


FIG.-1

D Frames



Applicable servo motor type	motor capacity (kW)	Reducer model	Reducer frame size			Length	Output shaft end					Height		Horizontal base unit Fig-1 Base						
				NB	Standard	L	Q	S	W×U	T	TA	H	C	N	F	LF	M	E	G	Z
MSM012	0.1	ERK-	M	○	○	159	25	14	5×3	5	-	110	60	75	55	45	110	90	9	9
MSM022	0.2	ERK-	M	○	○	149	25	14	5×3	5	-	110	60	75	55	45	110	90	9	9
MSM042	0.4	ERK-	B	○	○	213	40	28	8×4	7	-	196	90	135	105	75	175	145	16	12
MSM082	0.75	ERK-	B	○	○	223	40	28	8×4	7	-	196	90	135	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
MSM102	1.0	ERK-	B	○	○	225	40	28	8×4	7	-	196	90	135	105	75	175	145	16	12
			C	○	○	271	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
MSM152	1.5	ERK-	B	–	○	223	40	28	8×4	7	-	221	115	135	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	339	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
MSM202	2.0	ERK-	B	–	○	223	40	28	8×4	7	-	221	115	135	105	75	175	145	26	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	339	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
MSM252	2.5	ERK-	C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	339	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
MSM302	3.0	ERK-	C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	334	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
MSM352	3.5	ERK-	C	–	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	334	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
MSM402	4.0	ERK-	C	–	○	279	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	339	80	55	16×6	10	-	299	140	200	150	120	278	225	26	19
MSM452	4.5	ERK-	C	–	○	279	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	339	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
MSM502	5.0	ERK-	C	–	○	279	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	339	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19

■ Low backlash specifications / Standard specifications Common

Motor mounting flange unit

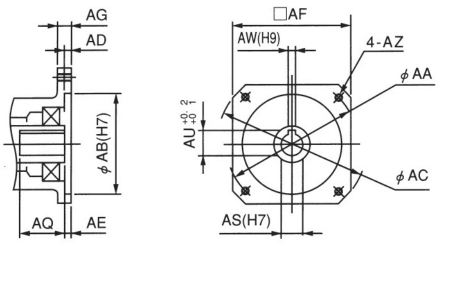


FIG.-3

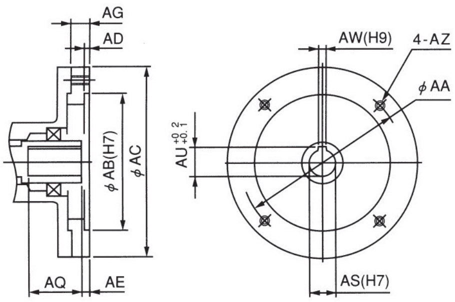


FIG.-4

ERK-V type (Vertical flange type)

M~ C Frames

D Frames

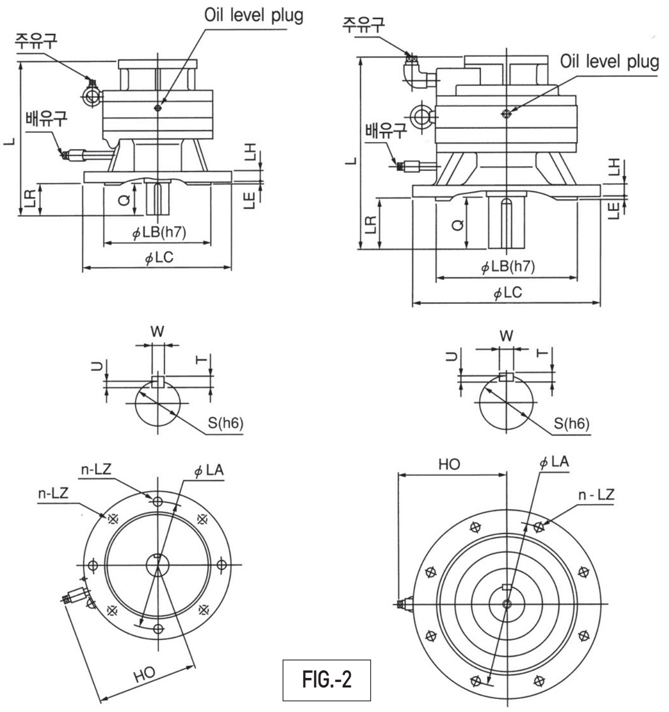


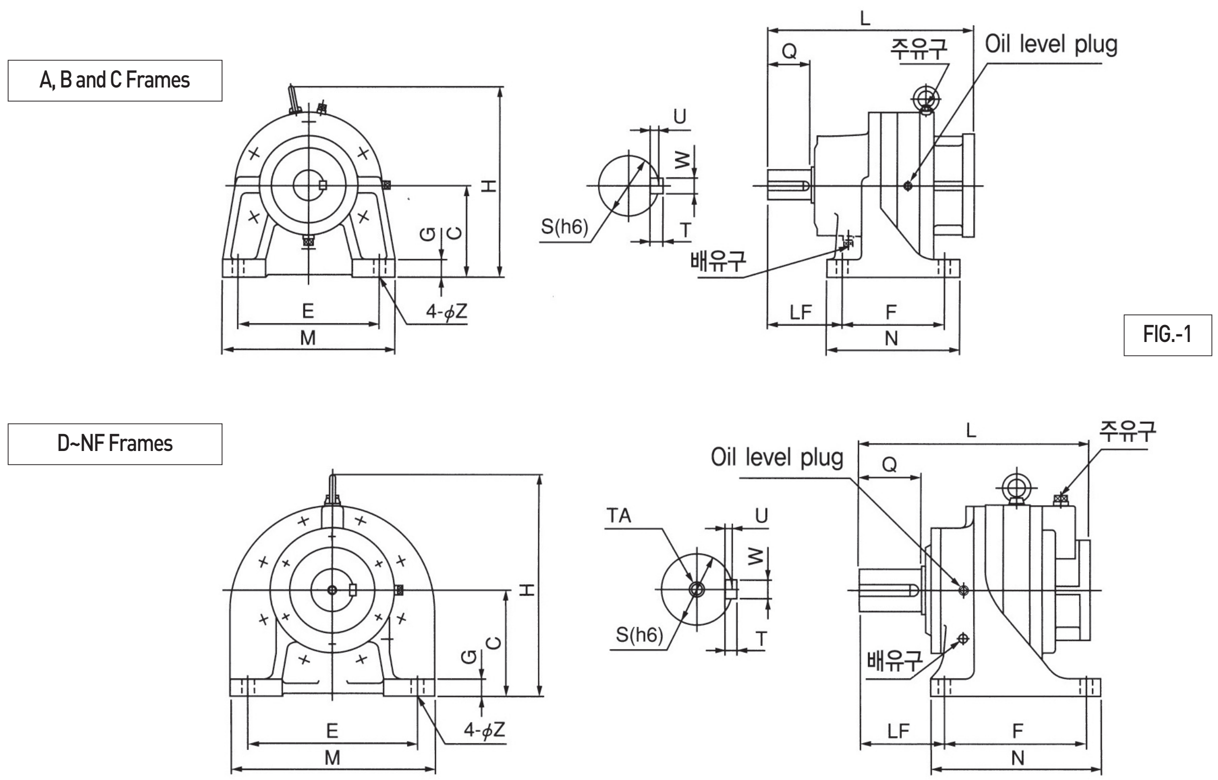
FIG.-2

Horizontal base unit Fig-2																									
Flange								Motor mounting flange unit													No. in Dwg.	Oil quantity(L)		Mass(kg)	
LC	LB	LA	LE	LH	n-LZ	LR	HO	AA	AB	AC	AD	AE	AF	AG	AZ	AQ	AS	AW	AU		Horizontal	Veritcal	Horizontal	Veritcal
100	70	85	4	8	4-7	25	-	45	30	80	5	5	60	10	M3	22	8	3	9.2	3	Grease	Grease	4	4
100	70	85	4	8	4-7	25	-	70	50	110	5	7	80	10	M4	25	11	4	12.5	3	Grease	Grease	3	3
200	130	165	4	14	4-12	40	131	70	50	120	5	5	-	10	M4	27	14	5	16	4	0.22	0.4	13	13
200	130.	165	4	14	4-12	40	131	90	70	135	5	5	100	15	M5	32	19	6	21.5	3	0.22	0.4	14	14
250	180	215	4	18	4-15	55	168	90	70	160	7	7	-	15	M5	30	19	6	21.5	4	0.45	0.81	26	26
200	130	165	4	14	4-12	40	131	100	80	120	7	7	-	22	M6	50	19	6	21.5	4	0.22	0.4	14	14
250	180	215	4	18	4-15	55	168	100	80	120	5	7	-	22	M6	50	19	6	21.5	4	0.45	0.81	26	26
200	130	165	4	14	4-12	40	131	115	95	135	5	7	100	15	M8	50	19	6	21.5	3	0.22	0.4	14	14
250	180	215	4	18	4-15	55	168	115	95	165	7	7	130	15	M8	50	19	6	21.5	3	0.45	0.81	26	26
300	230	265	5	22	8-15	80	199	115	95	200	5	7	-	15	M8	50	19	6	21.5	4	09	1.5	4	4
200	130	165	4	14	4-12	40	131	115	95	135	5	7	100	15	M8	50	19	6	21.5	3	0.22	0.4	14	14
250	180	215	4	18	4-15	55	168	115	95	165	7	7	130	15	M8	50	19	6	21.5	3	0.45	0.8	26	26
300	230	265	5	22	8-15	80	199	115	95	200	5	7	-	15	M8	50	19	6	21.5	4	0.9	1.5	49	49
250	180	215	4	18	4-15	55	168	115	95	165	7	7	130	15	M8	50	19	6	21.5	3	0.45	0.81	26	26
300	230	265	5	22	8-15	80	199	115	95	200	5	7	-	15	M8	50	19	6	21.5	4	0.9	1.5	49	49
250	180	215	4	18	4-15	55	168	145	110	165	7	8	130	15	M8	49	22	8	25	3	0.45	0.81	26	26
300	230	265	5	22	8-15	80	199	145	110	165	7	10	130	18	M8	47	22	8	25	3	0.9	1.5	47	47
250	180	215	4	18	4-15	55	168	145	110	165	7	8	130	15	M8	49	22	8	25	3	0.45	0.81	26	26
300	230	265	5	22	8-15	80	199	145	110	165	7	10	130	18	M8	47	22	8	25	3	0.9	1.5	47	47
250	180	215	4	18	4-15	55	168	145	110	165	7	10	-	18	M8	57	24	8	27	4	0.45	0.81	28	28
300	230	265	5	22	8-15	80	199	145	110	200	7	10	-	15	M8	57	24	8	27	4	0.9	1.5	51	51
250	180	215	4	18	4-15	55	168	145	110	165	7	10	-	18	M8	57	24	8	27	4	0.45	0.81	28	28
300	230	265	5	22	8-15	80	199	145	110	200	7	10	-	15	M8	57	24	8	27	4	0.9	1.5	51	51
250	180	215	4	18	4-15	55	168	145	110	165	7	10	-	18	M8	57	24	8	27	4	0.45	0.81	28	28
300	230	265	5	22	8-15	80	199	145	110	200	7	10	-	15	M8	57	24	8	27	4	0.9	1.5	51	51

Dimensioned drawing

■ Input speed 1000rpm

ERK type(Horizontal base mount)



Applicable servo motor type	motor capacity (kW)	Reducer model	Reducer frame size			Length	Output shaft end					Height		Horizontal base unit Fig-1 Base						
				NB	Standard	L	Q	S	W×U	T	TA	H	C	N	F	LF	M	E	G	Z
HC-SF81K	0.85	ERK-	B	–	○	223	40	28	8×4	7	-	221	115	135	105	75	175	145	16	12
			C	○	○	264	55	38	10×2	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	334	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	–	410	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22
HC-SF121K	1.2	ERK-	C	○	○	299	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	364	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	–	408	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22
HC-SF201K	2.0	ERK-	C	–	○	299	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	364	80	55	16×6	10	-	29	140	200	150	120	275	225	26	19
			NE	○	○	408	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22
			NF	○	–	542	140	95	25×9	14	M16×30	454	210	365	295	195	425	350	35	25
HC-SF301K	3.0	ERK-	D	–	○	364	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			N	○	○	408	110	75	20×7.5	12	-	399	185	300	250	150	360	300	30	22
			NF	○	○	542	140	95	25×9	14	M16×30	454	210	365	295	195	425	350	35	25

■ Low backlash specifications / Standard specifications Common

Motor mounting flange unit

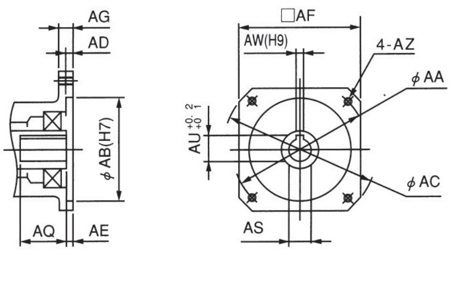


FIG.-4

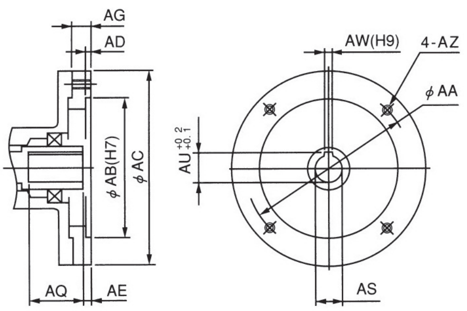
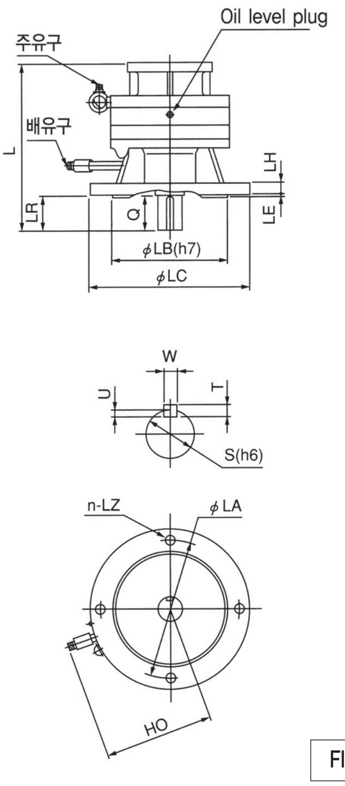


FIG.-4

ERK-V type(Vertical flange type)

A, B and C Frames



D~NF Frames

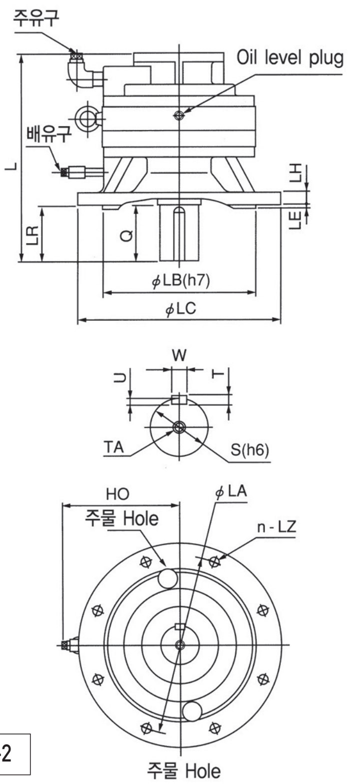


FIG.-2

Horizontal base unit Fig-2																								
Flange								Motor mounting flange unit												No. in Dwg.	Oil quantity(L)		Mass(kg)	
LC	LB	LA	LE	LH	n-LZ	LR	HO	AA	AB	AC	AD	AE	AF	AG	AZ	AQ	AS	AW	AU		Horizontal	Veritcal	Horizontal	Veritcal
200	130	165	4	14	4-12	40	131	145	110	165	7	7	130	15	M8	50	24H7	8	27	3	0.22	0.4	14	14
250	180	215	4	18	4-15	55	168	145	110	165	7	7	130	15	M8	50	24G7	8	27	3	0.45	0.81	26	26
300	230	265	5	22	8-15	80	199	145	110	165	7	7	130	18	M8	50	24G7	8	27	3	0.9	1.5	47	47
400	300	350	8	25	8-19	110	232	145	110	250	7	7	-	22	M8	50	24H7	8	27	4	1.8	2.4	112	106
250	180	215	4	18	4-15	55	168	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	0.45	0.81	30	30
300	230	265	5	22	8-15	80	199	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	0.9	1.5	50	50
400	300	350	8	25	8-19	110	232	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	1.8	2.4	102	96
250	180	215	4	18	4-15	55	168	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	0.45	0.81	30	30
300	230	265	5	22	8-15	80	199	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	0.9	1.5	50	50
400	300	350	8	25	8-19	110	232	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	1.8	2.4	102	96
450	350	400	8	25	8-19	140	261	200	114.3	300	10	11	-	30	M12	71	35G7	10	38	4	3.2	4.3	203	190
300	230	265	5	22	8-15	80	199	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	0.9	1.5	50	50
400	300	350	8	25	8-19	110	232	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	1.8	2.4	102	96
450	350	400	8	25	8-19	140	261	200	114.3	300	10	11	-	30	M12	71	35G7	10	38	4	3.2	4.3	203	190

Dimensioned drawing

■ Input speed 2000rpm

ERK type(Horizontal base mount)

A, B and C Frames

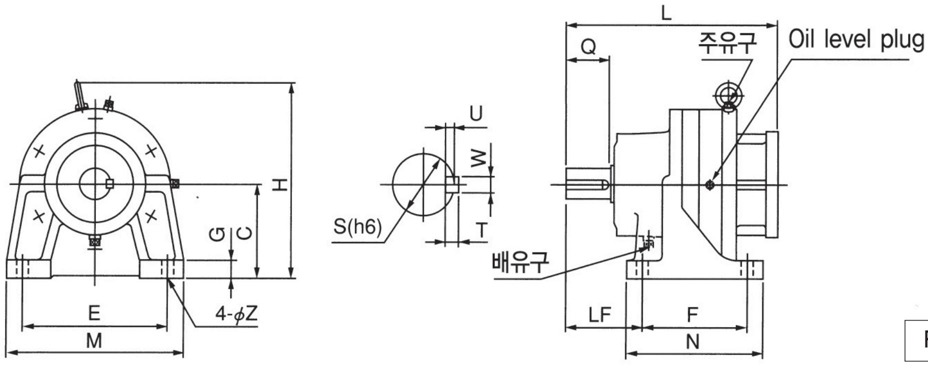
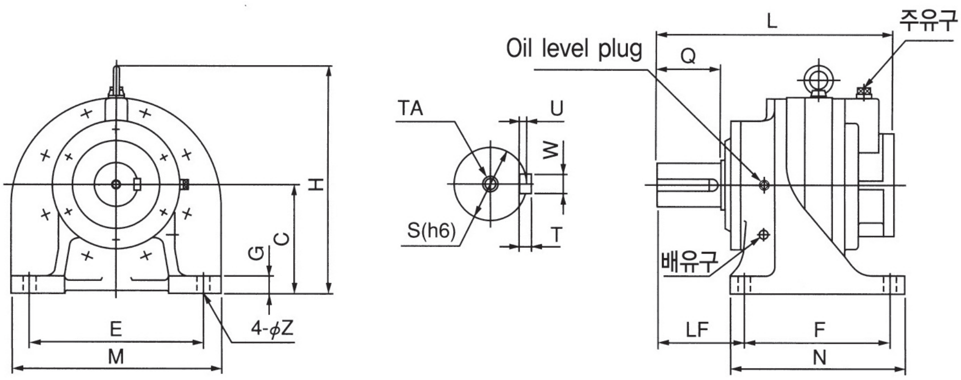


FIG.-1

D~NF Frames



Applicable servo motor type	motor capacity (kW)	Reducer model	Reducer frame size			Length	Output shaft end					Height		Horizontal base unit Fig-1 Base							
				NB	Standard	L	Q	S	W×U	T	TA	H	C	N	F	LF	M	E	G	Z
HC-SF52K	0.5	ERK-	A	–	○	195	30	22	6×3.5	6	-	196	90	120	90	65	175	145	16	12
			B	○	○	223	40	28	8×4	7	-	221	115	135	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
HC-SF102K	1.0	ERK-	B	○	○	223	40	28	8×4	7	-	221	115	135	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	334	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
HC-SF152K	1.5	ERK-	B	–	○	223	40	28	8×4	7	-	221	115	135	105	75	175	145	26	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	334	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
HC-SF202K	2.0	ERK-	C	○	○	299	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	364	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	–	–	408	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22
HC-SF352K	3.5	ERK-	C	○	○	299	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	364	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	○	408	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22
HC-SF502K	5.0	ERK-	D	–	○	364	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	○	408	110	75	20×7.5	12	-	399	185	300	250	150	360	300	30	22
HC-SF702K	7.0	ERK-	D	–	○	364	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	○	408	110	75	20×7.5	12	-	399	185	300	250	150	360	300	30	22
			NF	○	○	542	140	95	25×9	14	M16×30	454	210	365	295	195	425	350	35	25

■ Low backlash specifications / Standard specifications Common

Motor mounting flange unit

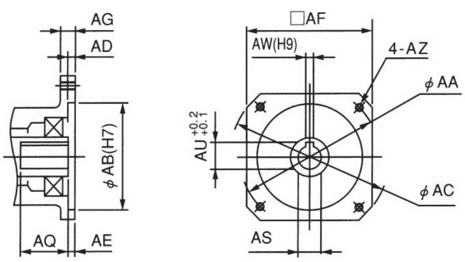


FIG.-4

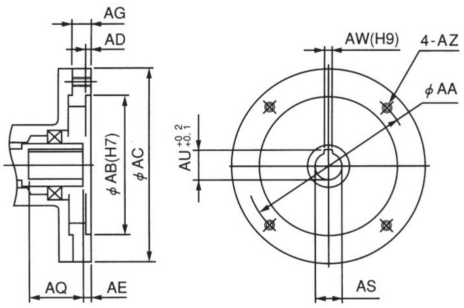
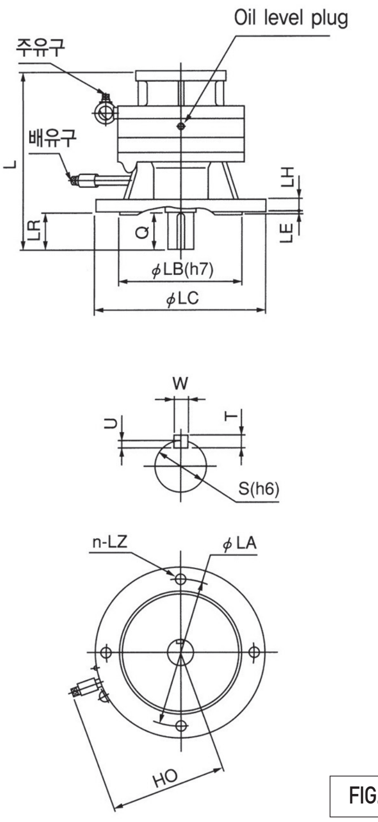


FIG.-4

ERK-V type(Vertical flange type)

A, B and C Frames



D~NF Frames

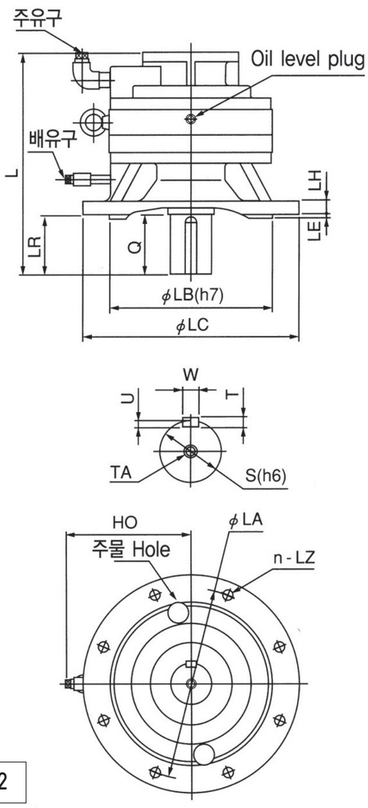


FIG.-2

Horizontal base unit Fig-2																								
Flange								Motor mounting flange unit												No. in Dwg.	Oil quantity(L)		Mass(kg)	
LC	LB	LA	LE	LH	n-LZ	LR	HO	AA	AB	AC	AD	AE	AF	AG	AZ	AQ	AS	AW	AU		Horizontal	Veritcal	Horizontal	Veritcal
160	110	130	4	14	4-12	30	115	145	110	165	7	7	130	15	M8	50	24H7	8	27	3	0.16	0.29	12	12
200	130	165	4	14	4-12	40	131	145	110	165	7	7	130	15	M8	50	24H7	8	27	3	0.22	0.4	14	14
250	180	215	4	18	4-15	55	168	145	110	165	7	7	130	15	M8	50	24G7	8	27	3	0.45	0.81	26	26
200	130	165	4	14	4-12	40	131	145	110	165	7	7	130	15	M8	50	24H7	8	27	3	0.22	0.4	14	14
250	180	215	4	18	4-15	55	168	145	110	165	7	7	130	15	M8	50	24G7	8	27	3	0.45	0.81	26	26
300	230	265	5	22	8-12	80	199	145	110	165	7	7	130	18	M8	50	24G7	8	27	3	0.9	1.5	47	47
200	130	165	4	14	4-12	40	131	145	110	165	7	7	130	15	M8	50	24H7	8	27	3	0.22	0.4	14	14
250	180	215	4	18	4-15	55	168	145	110	165	7	7	130	15	M8	50	24G7	8	27	3	0.45	0.81	26	26
300	230	265	5	22	8-12	80	199	145	110	165	7	7	130	18	M8	50	24G7	8	27	3	0.9	1.5	47	47
250	180	215	4	18	4-15	55	168	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	0.45	0.81	30	30
300	230	265	5	22	8-15	80	199	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	0.9	1.5	50	50
400	300	350	8	25	8-19	110	232	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	1.8	2.4	102	96
250	180	215	4	18	4-15	55	168	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	0.45	0.81	30	30
300	230	265	5	22	8-15	80	199	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	0.9	1.5	50	50
400	300	350	8	25	8-19	110	232	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	1.8	2.4	102	96
300	230	265	5	22	8-15	80	199	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	0.9	1.5	50	50
400	300	350	8	25	8-19	110	232	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	1.8	2.4	102	96
300	230	265	5	22	8-15	80	199	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	0.9	1.5	50	50
400	300	350	8	25	8-19	110	232	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	1.8	2.4	102	96
450	350	400	8	25	8-19	140	261	200	114.3	300	10	11	176	30	M12	71	35G7	10	38	4	3.2	4.3	203	190

Dimensioned drawing

■ Input speed 3000rpm

ERK type(Horizontal base mount)

A, B and C Frames

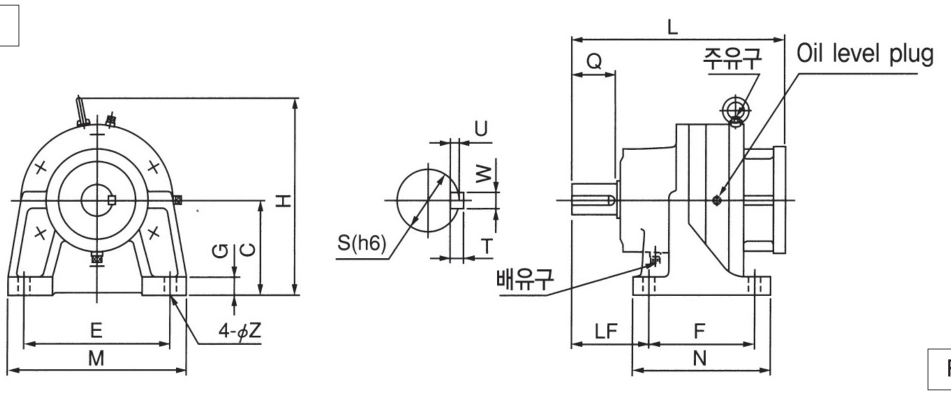
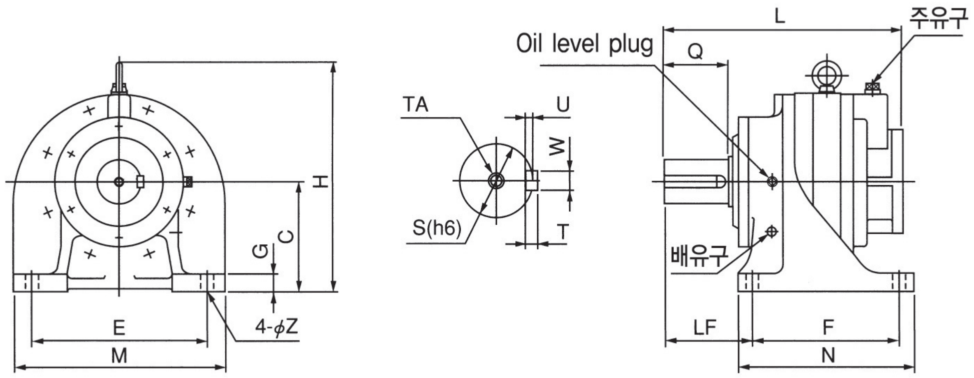


FIG.-1

D~NF Frames



Applicable servo motor type	motor capacity (kW)	Reducer model	Reducer frame size			Length	Output shaft end					Height		Horizontal base unit Fig-1 Base						
				NB	Standard	L	Q	S	W×U	T	TA	H	C	N	F	LF	M	E	G	Z
HC-SF53K	0.5	ERK-	B	○	○	223	40	28	8×4	7	-	221	115	135	105	75	175	145	16	12
HC-SF103K	1.0	ERK-	B	○	○	223	40	28	8×4	7	-	221	115	170	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	200	130	95	220	180	22	15
HC-SF153K	1.5	ERK-	B	–	○	223	40	25	8×4	7	-	221	115	300	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	334	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
HC-SF203K	2.0	ERK-	B	–	○	263	40	28	8×4	7	-	221	115	300	105	75	175	145	16	12
			C	○	○	299	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	364	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
HC-SF353K	3.5	ERK-	C	–	○	299	55	38	10×5	8	-	266	140	300	130	95	220	180	22	15
			D	○	○	364	80	55	16×6	10	-	299	140	365	150	120	275	225	26	19

Low backlash specifications / Standard specifications Common

Motor mounting flange unit

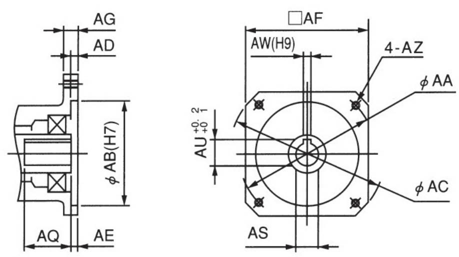


FIG.-4

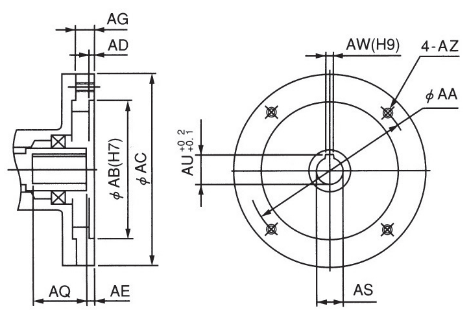


FIG.-4

ERK-V type(Vertical flange type)

A, B and C Frames

D~NF Frames

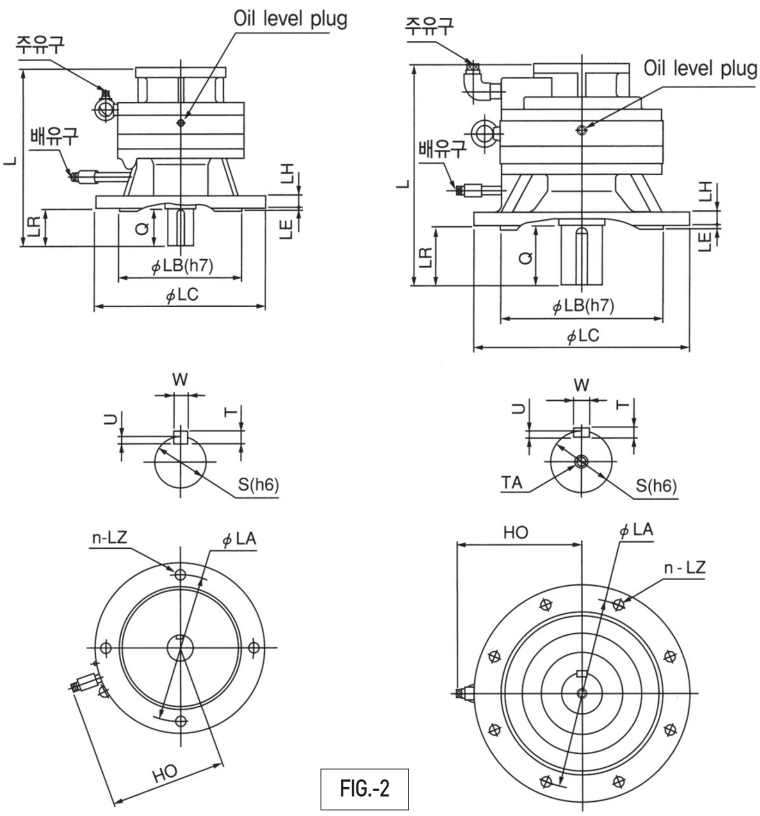


FIG.-2

Horizontal base unit Fig-2																									
Flange								Motor mounting flange unit												No. in Dwg.	Oil quantity(L)		Mass(kg)		
LC	LB	LA	LE	LH	n-LZ	LR	HO	AA	AB	AC	AD	AE	AF	AG	AZ	AQ	AS	AW	AU		Horizontal	Veritcal	Horizontal	Veritcal	
200	130	165	4	14	4-12	40	131	145	110	165	7	7	130	15	M8	50	24H7	8	27	3	0.22	0.4	14	14	
200	130	165	4	14	4-12	40	131	145	110	165	7	7	130	15	M8	50	24H7	8	27	3	0.22	0.4	14	14	
250	180	215	4	18	4-15	55	168	145	110	165	7	7	130	15	M8	50	24G7	8	27	3	0.45	0.81	26	26	
200	130	165	4	14	4-12	40	131	145	110	165	7	7	130	15	M8	50	24H7	8	27	3	0.22	0.4	14	14	
250	180	215	4	18	415	55	168	145	110	165	7	7	130	15	M8	50	24G7	8	27	3	0.45	0.81	26	26	
300	230	265	5	22	8-15	80	199	145	110	165	7	7	130	18	M8	50	24G7	8	27	3	0.9	1.5	47	47	
200	130	165	4	14	4-12	40	131	200	114.3	230	5	7	180	15	M12	75	35G7	10	38	3	0.22	0.4	20	20	
250	180	215	4	18	4-15	55	168	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	0.45	0.81	30	30	
300	230	265	5	22	815	80	199	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	0.9	1.5	50	50	
250	180	215	4	18	4-15	55	168	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	0.45	0.81	30	30	
300	230	265	5	22	8-15	80	199	200	114.3	233	7	11	176	18	M12	71	35G7	10	38	3	0.9	1.5	50	50	

Dimensioned drawing

■ Input speed 1000rpm

ERK type(Horizontal base mount)

A, B and C Frames

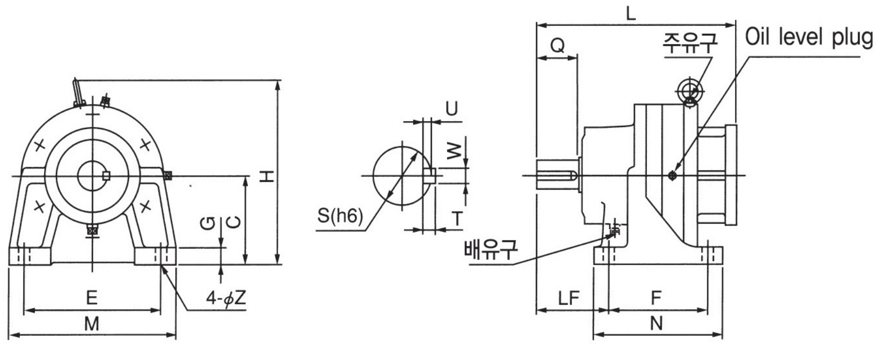
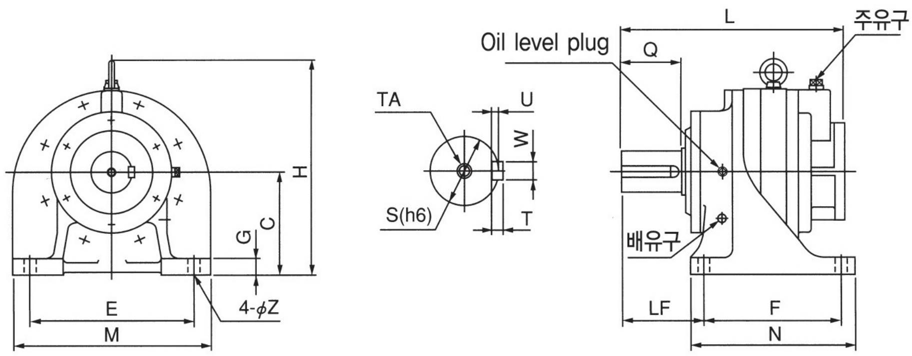


FIG.-1

D, NE Frames



Applicable servo motor type	motor capacity (kW)	Reducer model	Reducer frame size			Length	Output shaft end					Height		Horizontal base unit Fig-1 / Base						
				NB	Standard	L	Q	S	W×U	T	TA	H	C	N	F	LF	M	E	G	Z
SGMG-03A□BB	0.3	ERK-	A	–	○	217	30	22	6×3.5	6	-	196	90	120	90	65	175	145	16	12
			B	○	○	245	40	28	8×4	7	-	221	115	135	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
SGMG-06A□BB	0.6	ERK-	B	–	○	245	40	28	8×4	7	-	221	115	135	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	334	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
SGMG-09A□BB	0.9	ERK-	B	–	○	245	40	28	8×4	7	-	221	115	135	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	334	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	–	410	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22
SGMG-12A□BB	1.2	ERK-	C	○	○	299	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	364	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	–	408	110	75	20×7.5	12	M16×30	399	185	300	250	150	36	300	30	22
SGMG-20A□BB	2.0	ERK-	C	–	○	299	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	364	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	○	408	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22
			NF	○	–	542	140	95	25×9	14	M16×30	454	210	365	295	195	425	350	35	25
SGMG-30A□BB	3.0	ERK-	D	–	○	364	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	○	408	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22
			NF	○	○	542	140	95	25×9	14	M16×30	454	210	365	295	195	425	350	35	25
SGMG-44A□BB	4.4	ERK-	D	–	○	392	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	○	498	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22
			NF	○	○	565	140	95	25×9	14	M16×30	454	210	365	295	195	425	350	35	25
SGMG-60A□BB	6.0	ERK-	NE	○	○	498	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22
			NF	○	○	565	140	95	25×9	14	M16×30	454	210	365	295	195	425	350	35	25

■ Low backlash specifications / Standard specifications Common

Motor mounting flange unit

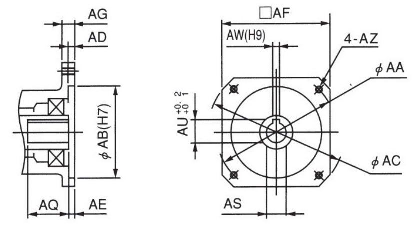
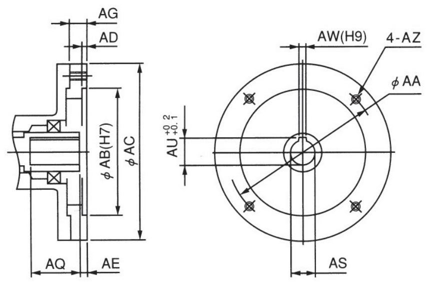


FIG.-3



축 지름에 따른 공차규격
Ø24, Ø28 : G7
Ø38 ~Ø48 : F7

FIG.-4

ERK-V type(Vertical flange type)

A, B and C Frames

D, NE Frames

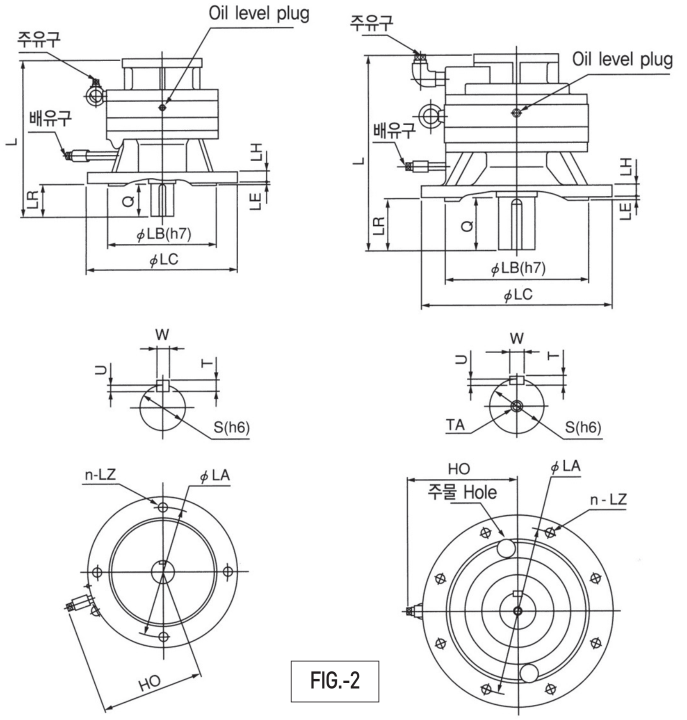
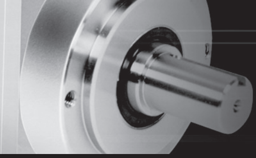


FIG.-2

Horizontal base unit Fig-2																								
Flange								Motor mounting flange unit												No. in Dwg.	Oil quantity(L)		Mass(kg)	
LC	LB	LA	LE	LH	n-LZ	LR	HO	AA	AB	AC	AD	AE	AF	AG	AZ	AQ	AS	AW	AU		Horizontal	Veritcal	Horizontal	Veritcal
160	110	130	4	14	4-12	30	101	145	110	165	5	20	130	15	M8	40	19	5	21	3	0.16	0.29	15	15
200	130	165	4	14	4-12	40	135	145	110	165	7	20	130	15	M8	40	19	5	21	3	0.22	0.4	17	17
250	180	215	4	18	4-15	55	171	145	110	165	7	20	130	15	M8	40	19	5	21	3	0.45	0.81	26	26
200	130	165	4	14	4-12	40	135	145	110	165	7	20	130	15	M8	40	19	5	21	3	0.22	0.4	17	17
250	180	215	4	18	4-15	55	171	145	110	165	7	20	130	15	M8	40	19	5	21	3	0.45	0.81	26	26
300	230	265	5	22	8-15	80	185	145	110	165	7	20	130	18	M8	40	19	5	21	3	0.9	1.5	46	46
200	130	165	4	14	4-12	40	135	145	110	165	7	20	130	15	M8	40	22	6	24.5	3	0.22	0.4	17	17
250	180	215	4	18	4-15	55	171	145	110	165	7	20	130	15	M8	40	22	6	24.5	3	0.45	0.81	26	26
300	230	265	5	22	8-15	80	185	145	110	165	7	20	130	18	M8	40	22	6	24.5	3	0.9	1.5	46	46
400	300	350	8	25	8-19	110	230	145	110	250	7	20	-	22	M8	40	22	6	24.5	4	1.8	2.4	116	103
250	180	215	4	18	4-15	55	171	200	114.3	233	7	11	176	18	M12	71	35	10	38	3	0.45	0.81	30	30
300	23	265	5	22	8-15	80	185	200	114.3	233	7	11	176	18	M12	71	35	10	38	3	0.9	1.5	50	50
400	300	350	8	25	8-19	110	230	200	114.3	233	7	11	176	18	M12	71	3.5	10	38	3	1.8	2.4	102	96
250	180	215	4	18	4-15	55	171	200	114.3	233	7	11	176	18	M12	71	35	10	38	3	0.45	0.81	30	30
300	230	265	5	22	8-15	80	185	200	114.3	233	7	11	176	18	M12	71	35	10	38	3	0.9	1.5	50	50
400	300	350	8	25	8-19	110	230	200	114.3	233	7	11	176	18	M12	71	35	10	38	3	1.8	2.4	102	96
450	350	400	8	25	8-19	140	260	200	114.3	300	7	11	-	30	M12	70	35	10	38	4	3.2	4.3	202	189
300	230	265	5	22	8-15	80	185	200	114.3	233	7	11	176	18	M12	71	35	10	38	3	0.9	1.5	50	50
400	300	350	8	25	8-19	110	230	200	114.3	233	7	11	176	18	M12	71	35	10	38	3	1.8	2.4	102	96
450	350	400	8	25	8-19	140	260	200	114.3	30	7	11	-	30	M12	70	35	10	38	4	3.2	4.3	202	189
300	230	265	5	22	8-15	80	185	200	114.3	300	5	20	-	30	M12	92	42	12	45	4	0.9	1.5	63	63
400	300	350	8	25	8-19	110	230	200	114.3	350	5	40	-	25	M12	74	42	12	45	4	1.8	2.4	131	126
450	350	400	8	25	8-19	140	260	200	114.3	350	5	40	-	25	M12	74	42	12	45	4	3.2	4.3	211	198
400	300	350	8	25	8-19	110	230	200	114.3	350	5	40	-	25	M12	74	42	12	45	4	1.8	2.4	131	126
450	350	400	8	25	8-19	140	260	200	114.3	350	5	40	-	25	M12	74	42	12	45	4	3.2	4.3	211	198



Dimensioned drawing

■ Input speed 1500rpm

ERK type(Horizontal base mount)

A, B and C Frames

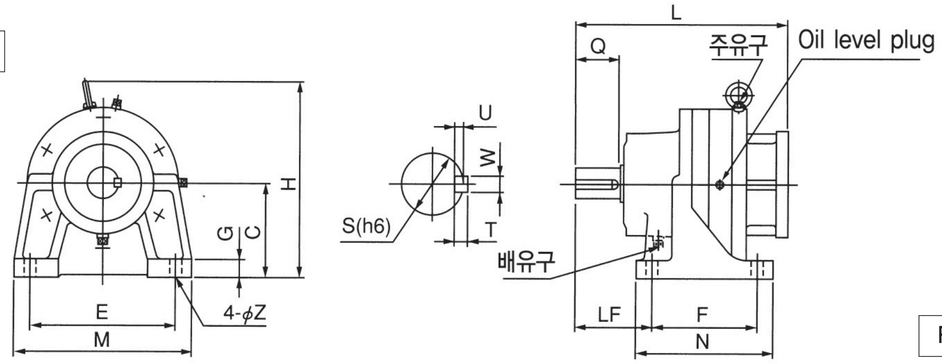
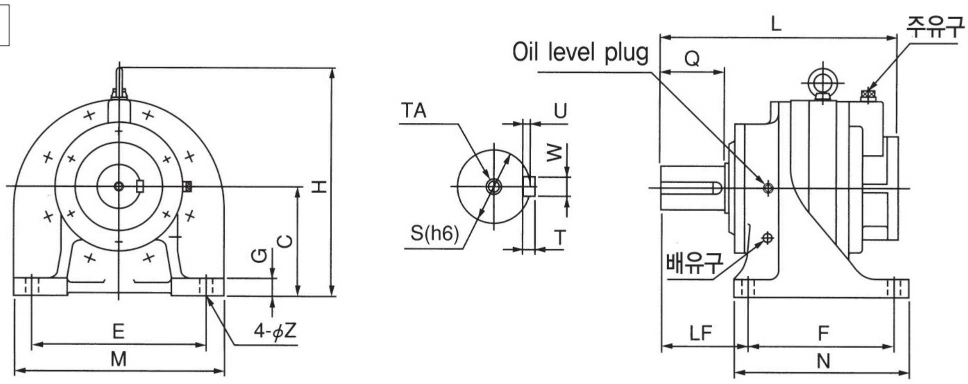


FIG.-1

D~NF Frames



Applicable servo motor type	motor capacity (kW)	Reducer model	Reducer frame size			Length	Output shaft end					Height		Horizontal base unit Fig-1 Base						
				NB	Standard	L	Q	S	W×U	T	TA	H	C	N	F	LF	M	E	G	Z
SGMG-05A□AB	0.45	ERK-	A	–	○	217	30	22	6×3.5	6	-	196	90	120	90	65	175	145	16	12
			B	○	○	245	40	28	8×4	7	-	221	115	135	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
SGMG-09A□AB	0.85	ERK-	B	○	○	245	40	28	8×4	7	-	224	115	135	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	334	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
SGMG-13A□AB	1.3	ERK-	B	–	○	245	40	28	8×4	7	-	221	115	135	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	334	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	–	410	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22
SGMG-20A□AB	1.8	ERK-	C	○	○	299	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	364	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	–	408	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22
SGMG-30A□AB	2.9	ERK-	C	–	○	299	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	364	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	○	408	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22
SGMG-44A□AB	4.4	ERK-	D	–	○	364	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	○	408	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22
			NF	○	○	542	140	95	25×9	14	M16×30	454	210	365	295	195	425	350	35	25

■ Low backlash specifications / Standard specifications Common

Motor mounting flange unit

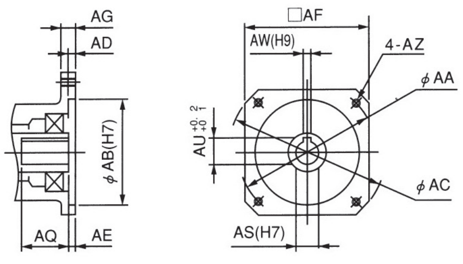


FIG.-3

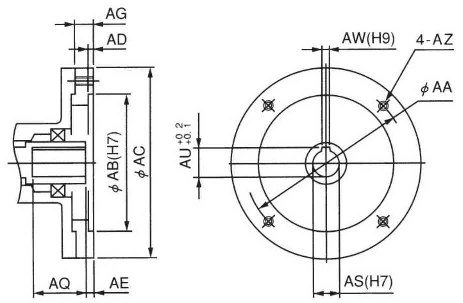


FIG.-4

ERK-V type(Vertical flange type)

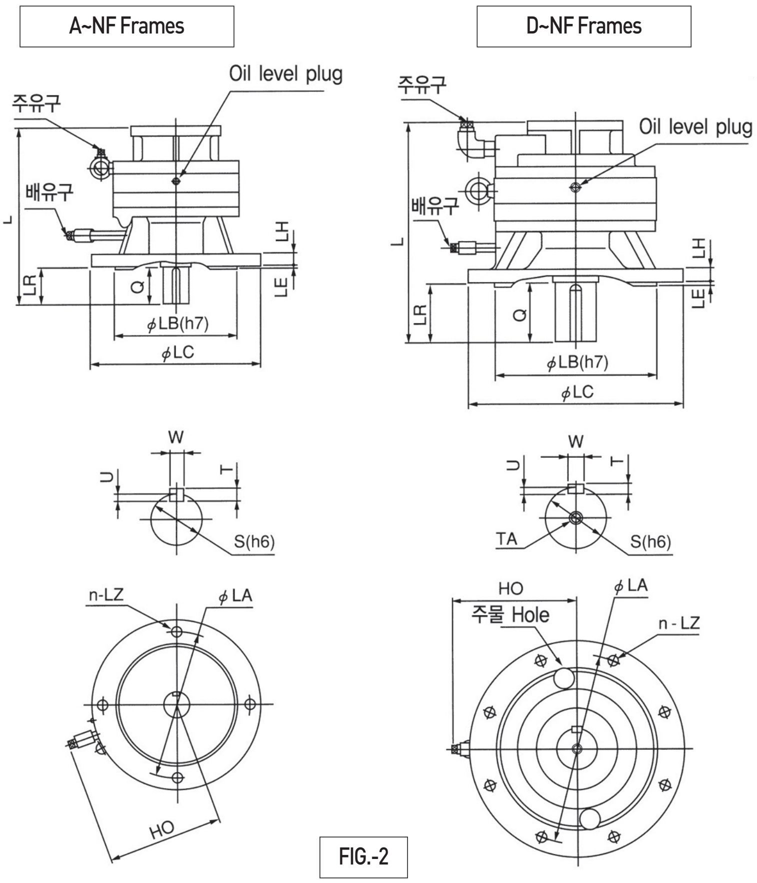


FIG.-2

Horizontal base unit Fig-2																												
Flange								Motor mounting flange unit												No. in Dwg.	Oil quantity(L)		Mass(kg)	
LC	LB	LA	LE	LH	n-LZ	LR	HO	AA	AB	AC	AD	AE	AF	AG	AZ	AQ	AS	AW	AU		Horizontal	Veritcal	Horizontal	Veritcal
160	110	130	4	14	4-12	30	101	145	110	165	7	20	130	15	M8	40	19	5	21	3	0.16	0.29	14	14
200	130	165	4	14	4-12	40	135	145	110	165	7	20	130	15	M8	40	19	5	21	3	0.22	0.4	16	16
250	180	215	4	18	4-15	55	171	145	110	165	7	20	130	15	M8	40	19	5	21	3	0.45	0.81	26	26
200	130	165	4	14	4-12	40	135	145	110	165	7	20	130	15	M8	40	19	5	21	3	0.22	0.4	16	16
250	180	215	4	18	4-15	55	171	145	110	165	7	20	130	15	M8	40	19	5	21	3	0.45	0.81	26	26
300	230	265	5	22	8-15	80	185	145	110	165	7	20	130	18	M8	40	19	6	21	3	0.9	1.5	46	46
200	130	165	4	14	4-12	40	135	145	110	165	7	20	130	15	M8	40	22	6	24.5	3	0.22	0.4	14	14
250	180	215	4	18	4-15	55	171	145	110	165	7	20	130	15	M8	40	22	6	24.5	3	0.45	0.81	26	26
300	230	265	5	22	8-15	80	185	145	110	165	7	20	130	18	M8	40	22	6	24.5	3	0.9	1.5	46	46
400	300	350	8	25	8-19	110	230	145	110	250	7	20	-	22	M8	40	22	10	24.5	4	1.8	2.4	102	102
250	180	215	4	18	4-15	55	171	200	114.3	233	7	11	176	18	M12	71	35	10	38	3	0.45	0.81	30	30
300	230	265	5	22	8-15	80	185	200	114.3	233	7	11	176	18	M12	71	35	10	38	3	0.9	1.5	50	50
400	300	350	8	25	8-19	110	230	200	114.3	233	7	11	176	18	M12	71	35	10	38	3	1.8	2.4	102	96
250	180	215	4	18	4-15	55	171	200	114.3	233	7	11	176	18	M12	71	35	10	38	3	0.45	0.81	30	30
300	230	265	5	22	8-15	80	185	200	114.3	233	7	11	176	18	M12	71	35	10	38	3	0.9	1.5	50	50
400	300	350	8	25	8-19	110	230	200	114.3	233	7	11	176	18	M12	71	35	10	38	3	1.8	2.4	102	96
300	230	265	5	22	8-15	80	185	200	114.3	233	7	11	176	18	M12	71	35	10	38	3	0.9	1.5	50	50
400	300	350	8	25	8-19	110	230	200	114.3	233	7	11	176	18	M12	71	35	10	38	3	1.8	2.4	102	96
450	350	400	8	25	8-19	140	260	200	114.3	300	7	11	-	30	M12	71	35	10	38	3	3.2	4.3	202	189

Dimensioned drawing

■ Input speed 2000rpm

ERK type(Horizontal base mount)

C Frames

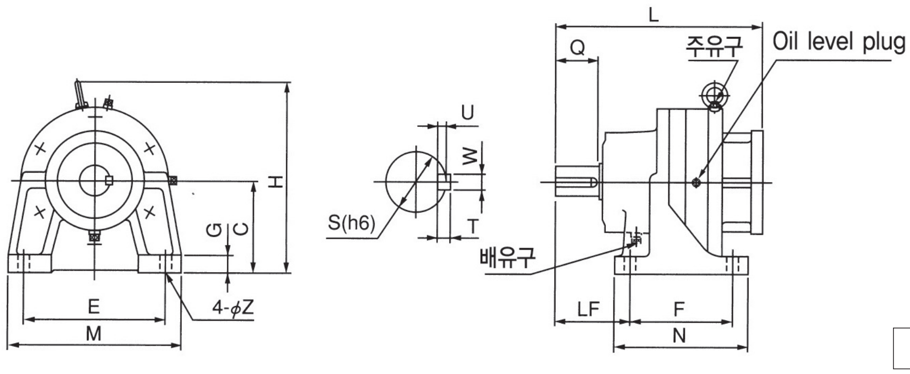
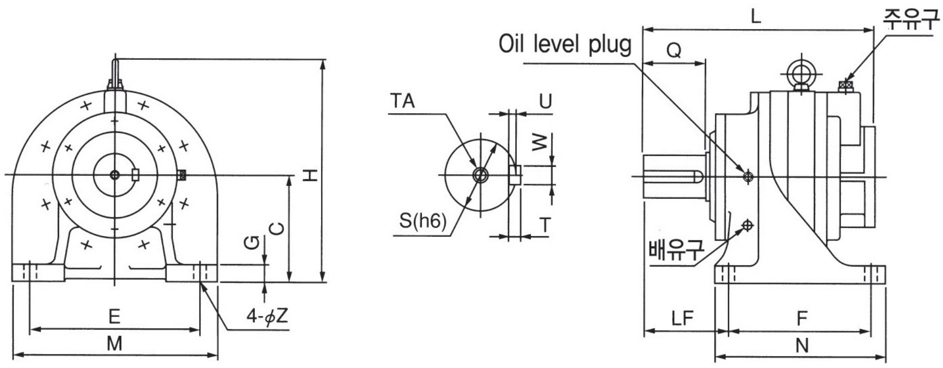


FIG.-1

D, NE Frames



Applicable servo motor type	motor capacity (kW)	Reducer model	Reducer frame size			Length	Output shaft end					Height		Horizontal base unit Fig-1 Base						
				NB	Standard	L	Q	S	W×U	T	TA	H	C	N	F	LF	M	E	G	Z
SGMD-22A□A	2.2	ERK-	C	○	○	296	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	366	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	–	410	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22
SGMD-32A□A	3.2	ERK-	C	–	○	296	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	366	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	○	420	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22
SGMD-40A□A	4.0	ERK-	C	–	○	296	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	366	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
			NE	○	○	410	110	75	20×7.5	12	M16×30	399	185	300	250	150	360	300	30	22

■ Low backlash specifications / Standard specifications Common

Motor mounting flange unit

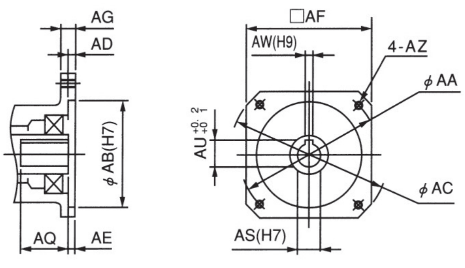


FIG.-3

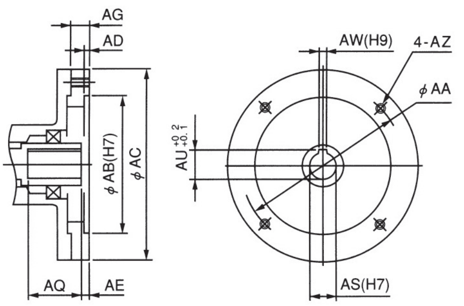


FIG.-4

ERK-V type(Vertical flange type)

C Frames

D, NE Frames

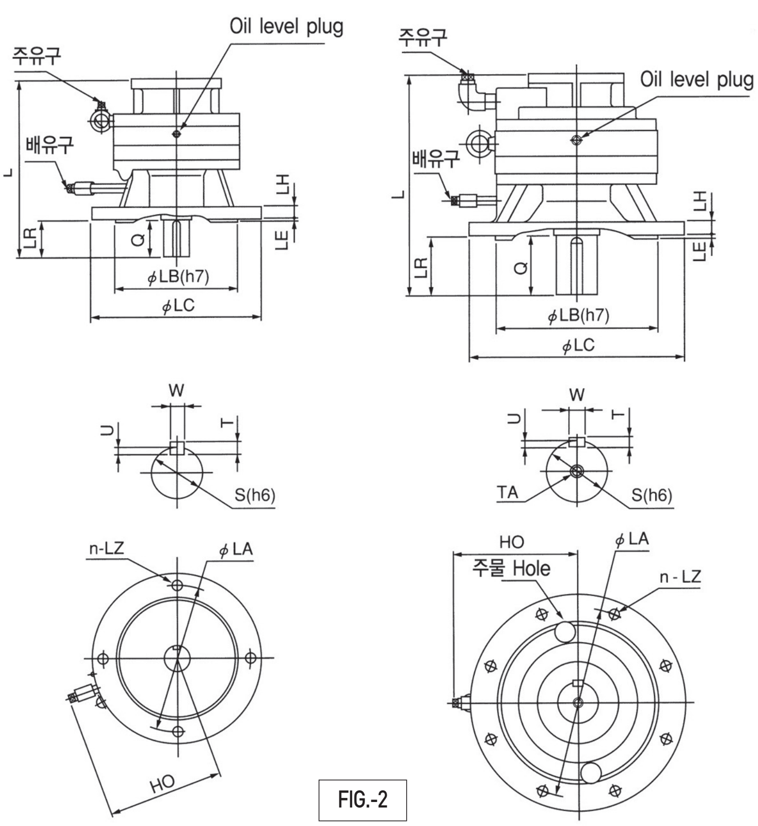


FIG.-2

LC	LB	LA	LE	LH	n-LZ	LR	HO	AA	AB	AC	AD	AE	AF	AG	AZ	AQ	AS	AW	AU	No. in Dwg.	Oil quantity(L) Horizontal	Oil quantity(L) Veritcal	Mass(kg) Horizontal	Mass(kg) Veritcal
Horizontal base unit Fig-2																								
Flange								Motor mounting flange unit																
250	180	215	4	18	4-15	55	168	235	200	270	7	7	-	22	M12	50	28	8	31	4	0.45	0.81	37	37
300	230	265	5	22	8-15	80	199	235	200	270	7	7	-	22	M12	50	28	8	31	4	0.9	1.5	57	57
400	300	350	8	25	8-19	110	232	235	200	270	7	7	-	22	M12	50	28	8	31	4	1.8	2.4	112	106
250	180	215	4	18	4-15	55	168	235	200	270	7	7	-	22	M12	50	28	8	31	4	0.45	0.81	37	37
300	230	265	5	22	8-15	80	199	235	200	270	7	7	-	22	M12	50	28	8	31	4	0.9	1.5	57	57
400	300	350	8	25	8-19	110	232	235	200	270	7	7	-	22	M12	50	28	8	31	4	1.8	2.4	112	106
250	180	215	4	18	4-15	55	168	235	200	270	7	7	-	22	M12	60	32	10	35	4	0.45	0.81	37	37
300	230	265	5	22	8-15	80	199	235	200	270	7	7	-	22	M12	60	32	10	35	4	0.9	1.5	57	57
400	300	350	8	25	8-19	110	232	235	200	270	7	7	-	22	M12	60	32	10	35	4	1.8	2.4	112	106

Dimensioned drawing

■ Input speed 3000rpm

ERK type(Horizontal base mount)

M~C Frames

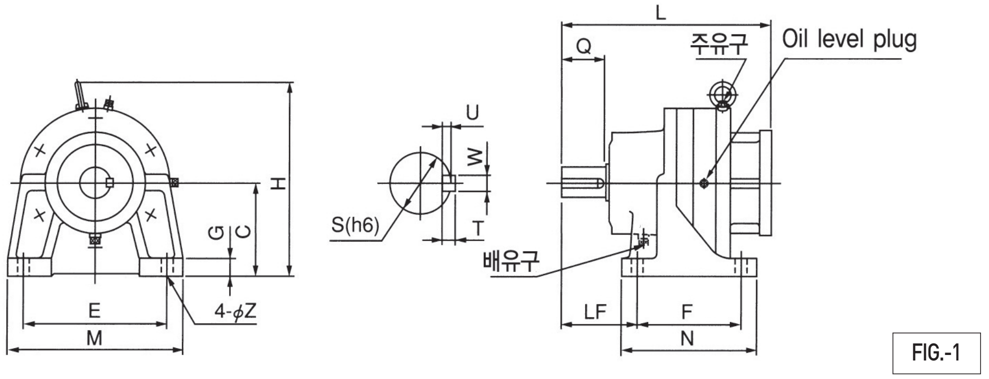
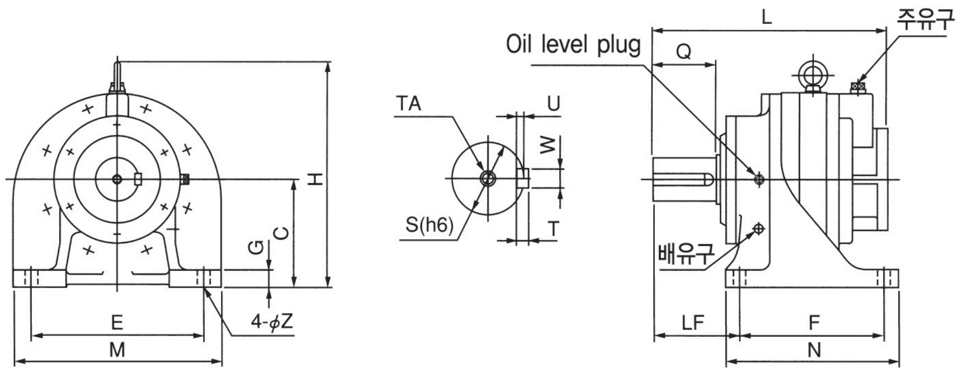


FIG.-1

D Frames



Applicable servo motor type	motor capacity (kW)	Reducer model	Reducer frame size			Length	Output shaft end					Height		Horizontal base unit Fig-1 / Base						
				NB	Standard	L	Q	S	W×U	T	TA	H	C	N	F	LF	M	E	G	Z
SGM-01A	0.1	ERK-	M	○	○	159	25	14	5×3	5	-	110	60	75	55	45	110	90	9	9
SGM-02A	0.2	ERK-	M	○	○	149	25	14	4×3	5	-	110	60	75	55	45	110	90	9	9
SGM-04A	0.4	ERK-	B	○	○	213	40	28	8×4	7	-	196	90	135	105	75	175	145	16	12
SGM-08A	0.75	ERK-	B	○	○	218	40	28	8×4	7	-	196	90	135	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
SGMS-10A□A	1.0	ERK-	B	○	○	245	40	28	8×4	7	-	221	115	135	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
SGMS-15A□A	1.5	ERK-	B	–	○	245	40	28	8×4	7	-	221	115	135	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	339	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
SGMS-20A□A	2.0	ERK-	B	–	○	245	40	28	8×4	7	-	221	115	135	105	75	175	145	16	12
			C	○	○	264	55	38	10×5	8	-	241	115	170	130	95	220	180	22	15
			D	○	○	339	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
SGMS-30A□A	3.0	ERK-	C	○	○	279	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	339	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
SGMS-40A□A	4.0	ERK-	C	–	○	279	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	339	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19
SGMS-50A□A	5.0	ERK-	C	–	○	279	55	38	10×5	8	-	266	140	170	130	95	220	180	22	15
			D	○	○	339	80	55	16×6	10	-	299	140	200	150	120	275	225	26	19

Low backlash specifications / Standard specifications Common

Motor mounting flange unit

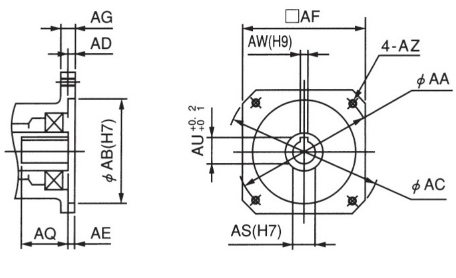


FIG.-3

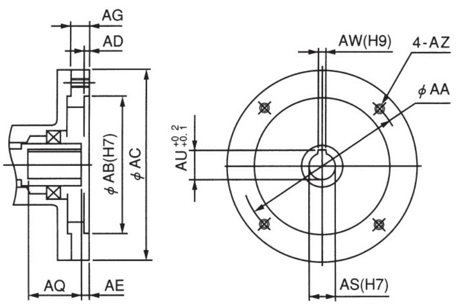


FIG.-4

ERK-V type(Vertical flange type)

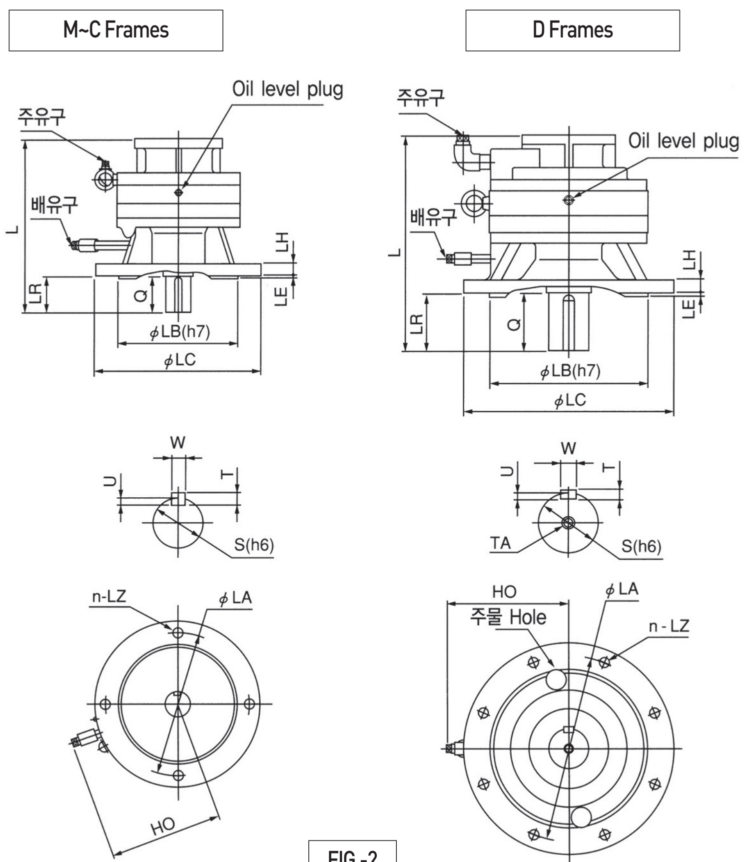
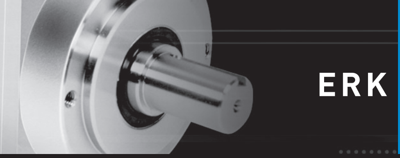


FIG.-2

Horizontal base unit Fig-2																								
Flange								Motor mounting flange unit												No. in Dwg.	Oil quantity(L)		Mass(kg)	
LC	LB	LA	LE	LH	n-LZ	LR	HO	AA	AB	AC	AD	AE	AF	AG	AZ	AQ	AS	AW	AU		Horizontal	Veritcal	Horizontal	Veritcal
100	70	85	4	8	4-7	25	-	46	30	80	5	5	60	10	M4	22	8	3	9.2	3	Grease	Grease	4	4
100	70	85	4	8	4-7	25	-	70	50	110	5	7	80	10	M5	25	14	5	16	3	Grease	Grease	3	3
200	130	165	4	14	4-12	40	131	70	50	120	10	5	-	10	M5	27	14	5	16	4	0.22	0.4	13	13
200	130	165	4	14	4-12	40	131	90	70	120	4	7	-	15	M6	35	16	5	18	4	0.22	0.4	13	13
250	180	215	4	18	4-15	55	168	90	70	160	7	7	-	15	M6	35	16	5	18	4	0.45	0.81	26	26
200	130	165	4	14	4-12	40	131	115	95	165	7	7	130	15	M6	40	24	8	27	3	0.22	0.4	17	17
250	180	215	4	18	4-15	55	168	115	95	165	7	7	130	15	M6	40	24	8	27	3	0.45	0.81	26	26
200	130	165	4	14	4-12	40	131	115	95	165	7	7	130	15	M6	40	24	8	27	3	0.22	0.4	17	17
250	180	215	4	18	4-15	55	168	115	95	165	7	7	130	15	M6	40	24	8	27	3	0.45	0.81	26	26
300	230	265	5	22	8-15	80	199	115	95	200	5	7	-	15	M6	45	24	8	27	4	0.9	1.5	50	50
200	130	165	4	14	4-12	40	131	115	95	165	7	7	130	15	M6	40	24	8	27	3	0.22	0.4	17	17
250	180	215	4	18	4-15	55	168	115	95	165	7	7	130	15	M6	40	24	8	27	3	0.45	0.81	26	26
300	230	265	5	22	8-15	80	199	115	95	200	5	7	-	15	M6	45	24	8	27	4	0.9	1.5	51	51
250	180	215	4	18	4-15	55	168	145	110	165	7	10	-	18	M8	55	28	8	31	4	0.45	0.81	28	28
300	230	265	5	22	8-15	80	199	145	110	200	7	10	-	15	M8	55	28	8	31	4	0.9	1.5	51	51
250	180	215	4	18	4-15	55	168	145	110	165	7	10	-	18	M8	55	28	8	31	4	0.45	0.81	28	28
300	230	265	5	22	8-15	80	199	145	110	200	7	10	-	15	M8	55	28	8	31	4	0.9	1.5	51	51
250	180	215	4	18	4-15	55	168	145	110	165	7	10	-	18	M8	55	28	8	31	4	0.45	0.81	28	28
300	230	265	5	22	8-15	80	199	145	110	200	7	10	-	15	M8	55	28	8	31	4	0.9	1.5	51	51



제품 선정

VRAL series
VRAS series
VRAF series
VRSF series
VRHF series
VRSF-A series
VRG series
NEV series
EVRG series
STH series
ERK series

STEP 1 감속비 선정

■ 감속비 선정 시 아래 공식 도입

$$감속비 = \frac{필요한\ 출력\ 속도}{서보\ 모터의\ 입력\ 속도}$$

• 계산된 감속비를 충족시키는 CORONET 감속기의 감속비를 선정하세요.

선정 예제 ▶

• 서보 모터 속도 : 2000rpm
• 서보 모터 용량 : 2.2kW
• 필요한 최고 출력 속도 : 65rpm
• 낮은 백래쉬 사양

▶ $감속비 = \frac{65}{2000} \fallingdotseq \frac{1}{9}$

STEP 2 잠정적인 감속 선정

■ 일반적인 상황일 경우

• 입력 속도와 모터용량에 따라 프레임 사이즈를 선정하세요
• 사용된 안전율은 1.2입니다.

선정 예제 1 ▶

• 감속기 : 1/29
• 구동되는 기구 : 운반기
• 사용환경 : 1일 15시간 구동
• 안전율 : 1.4
• 낮은 백래쉬 사양

▶ **특성 차트로 부터**

• 프레임 사이즈 : D프레임
• 출력 토크 : 255N • m(26.0kgf • m)
• 허용 토크 : 388N • m(26.0kgf • m)

• $안전율 = \frac{388}{255} = 1.52 > 1.4$

■ 특성 차트 예제

2000rpm의 입력속도와 낮은 백래쉬 사양

Motor capacity(kW) / Reduction ratio	2.2				
	Frame size	Output torque		Allowable torque	
		N • m	kgf • m	N • m	kgf • m
11	C	(95.6)	(95.6)	115	11.7
17	C	(140)	(14.3)	168	17.1
29	D	255	26.0	388	39.6
35	D	307	31.3	388	39.6
47	D	(323)	(33.0)	388	39.3
59	NE	388	39.6	917	93.6
71	NE	467	47.7	741	75.6

※ 출력토크 / 모터 토크가 적용되었을때 감속기의 출력샤프트에 토크가 발생됨.
※ 허용 토크 / 감속기 허용 토크

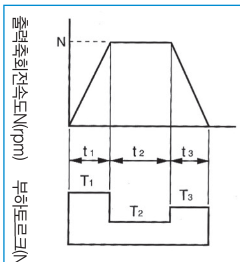
■ 엄격한 사용 상황일 경우

급격한 가속 및 감속은 감속기의 수명을 줄일 수 있으므로 허용 토크의 1.5배 초과의 가속 및 감속 토크는 허용되지 않는다.
평균 토크가 허용 토크 내에 있더라도 프레임 사이즈는 사용 상황에 대한 안전율을 고려하여 선정해야 한다.

Note1. 공식에 대입하기 위해 모터의 한계 토크를 설정하라 ;
모터 한계 토크(현재 한계)×감속비, 허용 감속 토크×1.5

Note2. 모터의 한계 토크가 위의 공식보다 클 경우 감속기의 프레임 사이즈를 높여야 한다.

■ 평균 토르크식



Tav : 평균 토크
T1 : 가속 토크
T2 : 고정 토크
T3 : 감속 토크
t1 : 가속 시간
t2 : 고정 구동 시간
T3 : 감속 시간

$$Tav = \sqrt[10/3]{\frac{T_1^{10/3} \cdot t_1 + T_2^{10/3} \cdot t_2 + T_3^{10/3} \cdot t_3}{t_1 + t_2 + t_3}}$$

선정 예제 2 ▶

• 감속기 : 1/29
• 구동되는 기구 : 운반기
• 사용환경 : 1일 15시간 구동
• 안전율 : 1.4
• 낮은 백래쉬 사양

▶ **특성 차트로 부터**

• 프레임 사이즈 : D프레임
• 출력 토크 : 255N • m(26.0kgf • m)
• 허용 토크 : 388N • m(26.0kgf • m)

• $안전율 = \frac{388}{255} = 1.52 > 1.4$

$$Tav = \sqrt[\frac{10}{3}]{\frac{568^{\frac{10}{3}} \times 0.2 + 196^{\frac{10}{3}} \times 4 - 176^{\frac{10}{3}} \times 0.2}{0.5+4+0.2}}$$

= 258N • m < 388N • m

▶ T_1=568N • m(58kgf • m) t_1=0.2sec
T_2=196N • m(20kgf • m) t_2=4sec
T_3=176N • m(18kgf • m) t_3=0.2sec

$※Service\ factor = \frac{388}{255} = 1.52 > 1.4$

※For acceleration and deceleration
= 388N • m • 1.5=582N • m > 568N • m

STEP 3 Overhung Load 계산

- 출력 샤프트와 입력 샤프트 위의 Trust 와 Radial 부하에 대해 카탈로그에 있는 허용치를 초과하지 않도록 프레임 사이즈를 선정하세요.

- 연결과 부하의 종류
  - 커플링 : 회전력이 아닌 무부하
  - 풀리 : Radial 부하
  - 체인 : Radial 부하
  - 스퍼 기어 : Radial 부하
  - 헬리컬 기어 : Radial + Thrust
  - 베벨 기어 : Radial + Thrust

- 허용 Overhung Load
  과도한 축 방향 부하는 감속기의 수명을 상당히 단축시킨다.
  모델을 선정할 때 9페이지의 허용된 축 방향 부하를 확실하게 검토해야 한다.
  부하 토크에 의해 걸리는 샤프트의 축방향 부하를 구할 경우 아래의 공식을 사용한다.

$$P = \frac{T \times f}{R}$$

P : 축 방향 부하
T : 적절한 토크(적절한 토크×안전율)
R : 풀리 등의 반지름
f : 전송율

Type of connection	Transmission factor
Chain and sprocket	1.00
Gear	1.05 ~ 1.30
Pulley and belt	2.00 ~ 2.50

선정 예제 ▶
- Corrected torque : 265N • m×1.4 = 371N • m(27.0kgf • m×1.4 = 37.8kgf • m)
- Gear radius R = 0.09m
- Transmission factor f = 1.05

※ Calculate the radial load from the following formula :

$$P = \frac{370N \cdot m \times 1.05}{0.09} = 4320N \text{ or } P = \frac{37.8kgf \cdot m \times 1.05}{0.09} = 441kgf$$

※ D프레임의 허용된 축 방향 부하는 4410N(450kgf)은 허용된 축 방향 부하 목록에 의해 설정되었으며 허용치 이하입니다.
※ 실제 축 방향 부하가 카탈로그 상의 허용치보다 클 경우 프레임을 한 사이즈 높이거나 당사에 문의 바랍니다.

■ Service factor 또는 CORONET 감속기

※ 카탈로그 상의 토크는 부하 상태가 1일 10시간 이하로 일정하게 구동되었을 경우에 대해 설정되었다.
그러므로 부하의 일반적인 적용은 이러한 경우 일때 선정될 것이다. 부하의 구동 싸이클(주기)가 다르거나 충격이 빈번하게 가해지는 경우라면 안전율을 고려하여 필요한 토크를 수정해야 한다.

Duration of service		Less than 10hours of continuous operations	Between 10and 24hours continuous operations
Load classification	Uniform(U)	1.0	1.2
	Moderate shock(M)	1.2	1.4
	High shock(H)	1.4	1.6

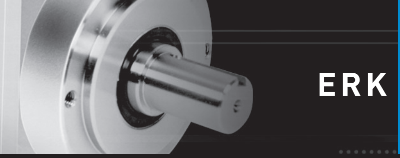
U : Uniform load M : Moderate shock load H : High shock load

■ 주요 구동 기구(적용 부분)과 부하의 유형

Application	Loda nature
Conveyor(under even load)	
Belt conveyor	U
Bucket conveyor	U
Chain conveyor	U
Screw conveyor	U
Oven conveyor	U
Conveyor(under large shock)	
Belt conveyor	M
Bucket conveyor	M
Chain conveyor	M
Screw conveyor	M
Oven conveyor	M
Reciprocating conveyor	H
Crane and hoist	
Traveling conveyor	M
Hoist	U
Traction machine	M
Loading/unloading elevator	M

Application	Loda nature
Metal working and machine tools	
Bender	M
Punching press	H
Plate planer	H
Tapping machine	H
For main spindle of other machine	M
For feeding of other machine	U
Steel making machines	
For drawing carrier	M
Forming machine	H
Slitter	M
Table conveyor	M
Wire draw bench	M

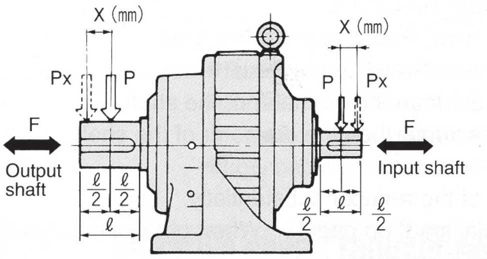
Application	Loda nature
Printing machine	U
Textile and dyeing machine	
Weaving machine	M
Spining machine	M
Drying machine	M
Dyeing machine	M
Burnishing machine	M
Stentering machine	M
Winding machine	M
Generator	U



제품 선정

■ 낮은 백래쉬 타입

※ CORONET 감속기에 기어나 풀리를 연결할 경우, 축 방향 부하가 오른쪽 표에 있는 허용치를 초과하지 않는 범위 내에서 사용하세요.



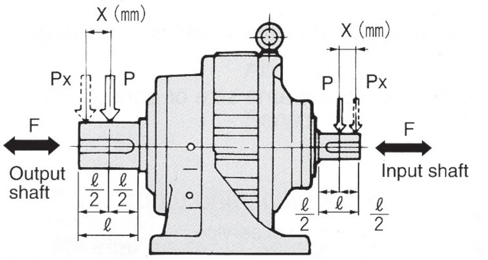
P : Allowable radial load(N)　K : Constantmm)
F : Allowable thrust load(N)　X : mm

$$Px=(\frac{K}{K+X})P$$

Allowable overhung load	Output shaft Frame size( ) indicates double reduction type	Constant K	Allowable overhung load (Total reduction ratio)	Input shaft Frame size( ) indicates double reduction type	Constant K	Allowable overhung load (Total reduction ratio)
P	M	48mm	323N(33kgf)	M	52mm	39.2N(4kgf)
F			157N(16kgf)			0N(0kgf)
P	B (N□B)	74mm	1180N(120kgf)	B (B□)	119mm	196N(20kgf)
F			588N(60kgf)			98N(10kgf)
P	C (N□C)	94mm	2450N(250kgf)	C (C□)	141mm	294N(30kgf)
F			1230N(125kgf)			147N(15kgf)
P	D (N□D)	196mm	4410N(450kgf)	D (D□)	162mm	490N(50kgf)
F			2210N(225kgf)			245N(25kgf)
P	NE (N□E)	247mm	6860N(700kgf)	NE (NE□)	235mm	882N(90kgf)
F			3430N(350kgf)			441N(45kgf)
P	NF (N□F)	295mm	10800N(1100kgf)	NF	281mm	1080N(110kgf)
F			5370N(550kgf)			539N(55kgf)

■ 일반 타입

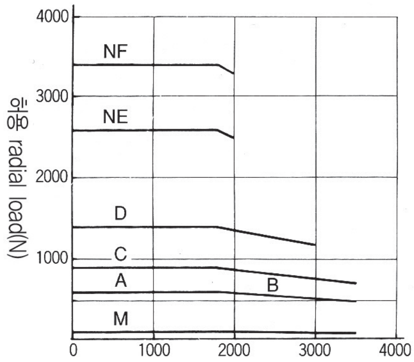
※ CORONET 감속기에 기어나 풀리를 연결할 경우, O•H•L 은 그래프에 있는 허용치를 초과하지 않는 범위 내에서 사용하세요.
※ 허용된 추진 부하는 그래프의 수치에 1/2입니다.



P : Allowable radial load(N)　K : Constantmm)
F : Allowable thrust load(N)　X : mm

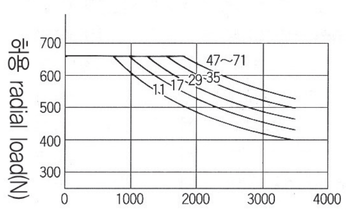
$$Px=(\frac{K}{K+X})P$$

Output shaft Frame size( ) indicates double reduction type	Constant K	Input shaft Frame size( ) indicates double reduction type	Constant K
M	48mm	M	52mm
A (A)	64mm	A (A□)	119mm
B (N□B)	74mm	B (B□)	119mm
C (N□C)	94mm	C (C□)	141mm
D (N□D)	196mm	D (D□)	162mm
NE (N□E)	247mm	NE (NE□)	235mm
NF (N□F)	295mm	NF	281mm

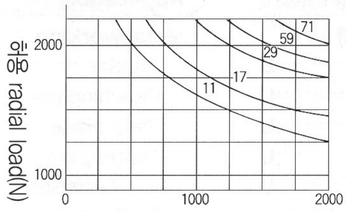


출력축

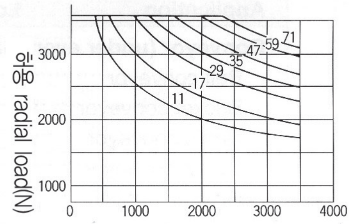
M



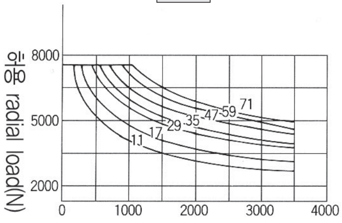
A



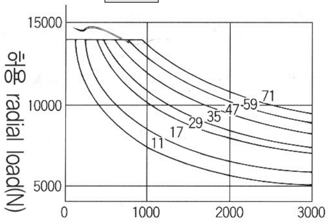
B



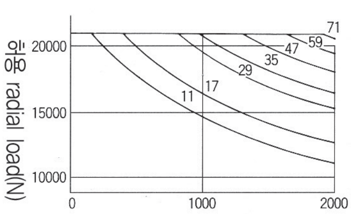
C



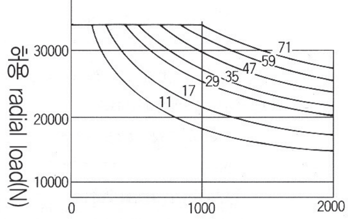
D



NE



NF



■ 내부 관성 모멘트 J(입력 샤프트에서의 값)

[kg・㎡]

Frame size \ Reduction ratio	11	17	29	35	47	59	71
M	0.000018	0.000017	0.000016	0.000016	0.00001576	0.00001575	0.00001575
A	0.000055	0.0000675	0.000065	0.0000625	0.0000625	0.0000625	0.0000625
B	0.00007	0.0000975	0.0000925	0.0000925	0.00009	0.00009	0.00009
C	0.00031	0.0003425	0.0004175	0.000415	0.00041	0.00041	0.0004075
D	0.000775	0.0011	0.0012	0.001175	0.001175	0.00115	0.00115
NE	0.00315	0.00525	0.00495	0.00485	0.00485	0.004825	0.0048
NF	0.00875	0.0075	0.013	0.01275	0.001275	0.0125	0.0125

※ NE, NF 및 1단 감속기는 제외되었음.

■ 윤활유

● 윤활유 리스트

• For grease lubrication type

Consistency/ viscosity	NLGI-No.00
Kyodo Yushi	GM grease S*

• Oil lubrication type

Frame size	A, B and C Frames	D, NE and NF Frames
Consistency viscosity	Grade 2 JIS K2219 industrial gear oil ISO VG100	Grade 2 JIS K2219 industrial gear oil ISO VG220
Idemitsu	Daphne Super Gear Oil 100*	Daphne Super Gear Oil 220*
General	SP Gear Roil 100	SP Gear Roil 220
Nippon	Bonnoc M100	Bonnoc M220
Mitsubishi Oil	GEARLUB SP100	GEARLUB SP220
Mobil	Mobilgear629	Mobilgear630
Esso	Spartan EP150	Spartan EP220
Showa Shell	Omaia Oil100	Omaia Oil220
JOMO	Reductus100	Reductus220
Cosmo	Cosmo Gear SE100	Cosmo Gear SE220

※ A, B, C 프레임의 수직형 링 마운트는 그리스 윤활을 사용하세요.
※ *표시는 기본(표준)사양이 윤활유가 채워져 있음을 의미합니다.

■ 윤활 타입과 윤활유

대부분의 적합한 윤활 시스템과 특수윤활유는 CORONET 감속기의 기능을 발휘하기 위해 결정된 것입니다.
특수 윤활유는 반드시 오른쪽 표에 있는 제품을 사용해야 합니다.
CORONET 감속기는 선적되기 전에 적절한 윤활유로 채워집니다.

※ 오일 수량은 도면 차트에 있습니다.

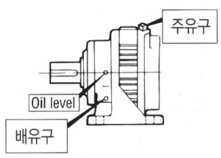
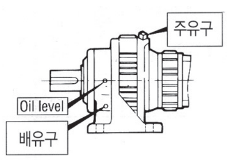
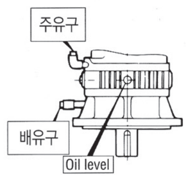
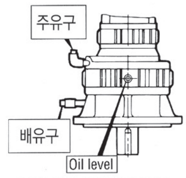
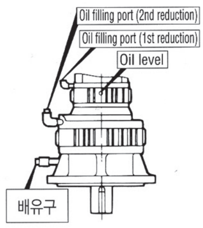
■ 윤활유와 주변(주위)온도

CORONET 감속기는 주변 온도가 0 ~ 40℃인 환경에 설치합니다. 이와 다른 온도(높거나 낮은 경우)에서는 사용하기 전에 윤활유와 부품을 교체해야 합니다. 본사에 문의하십시오.

■ 교환(교체) 간격(시간)

그리스 : 20,000시간(점검 시) 또는 4 ~ 5년에 한번
오　일 : 매 3,000시간 마다

※ 윤활 시스템에서 프레임 사이즈 정보(내용) : 윤활유 주입구 및 배출구의 위치는 오른쪽 그림을 참고하세요.

	Single reduction type	Double reduction type
Horizontal type		
Vertical type		 [NAD, NBD, NBE, NCE, NCF Frame]  [NDF, NDG, NEG Frame]

※ 수직형 2단 감속기는 A, B, C 프레임의 1단(첫번째 단) 감속에 그리스 윤활을 사용합니다.

VRAL series
VRAS series
VRAF series
VRSF series
VRHF series
VRSF-A series
VRG series
NEV series
EVRG series
STH series
ERK series