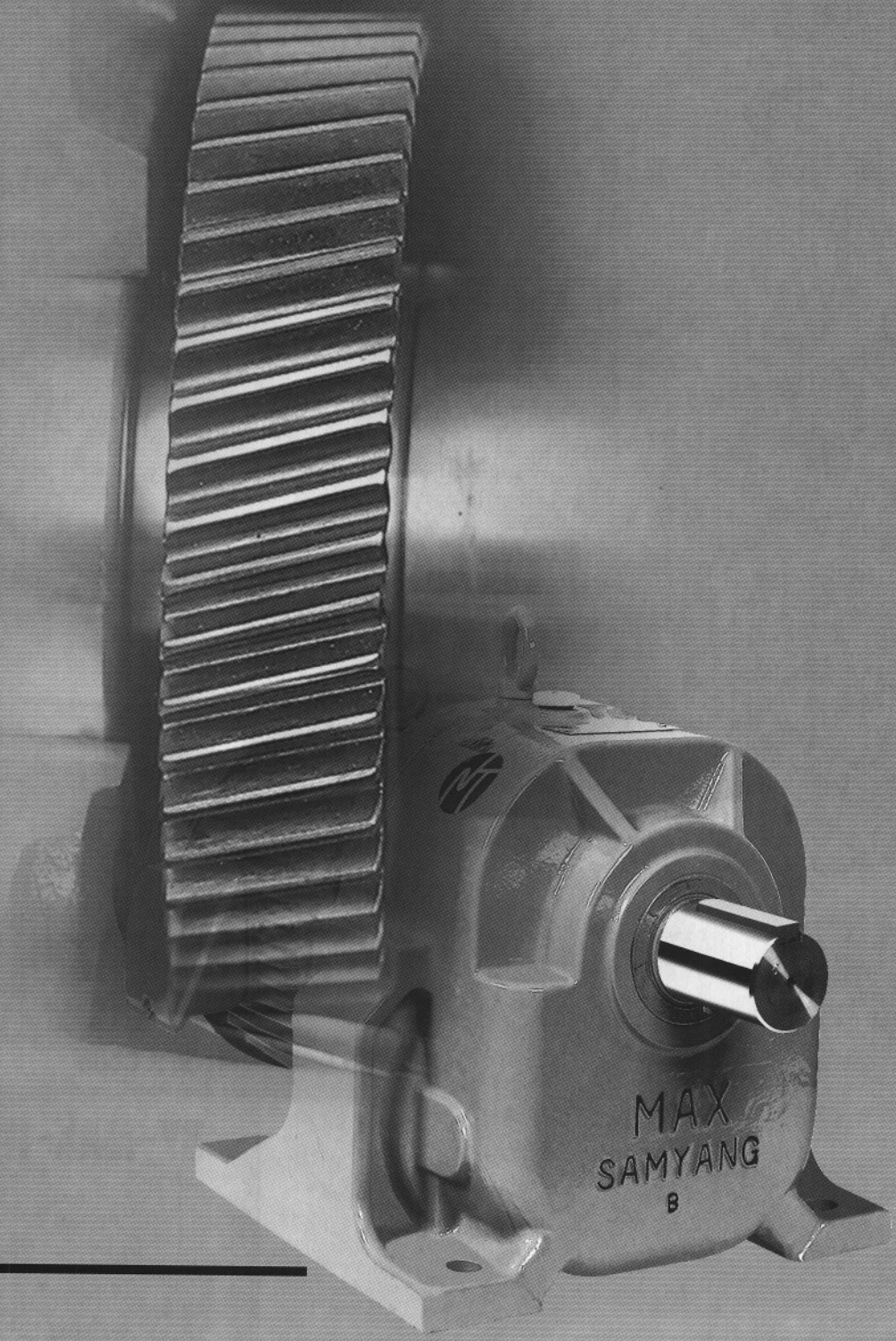
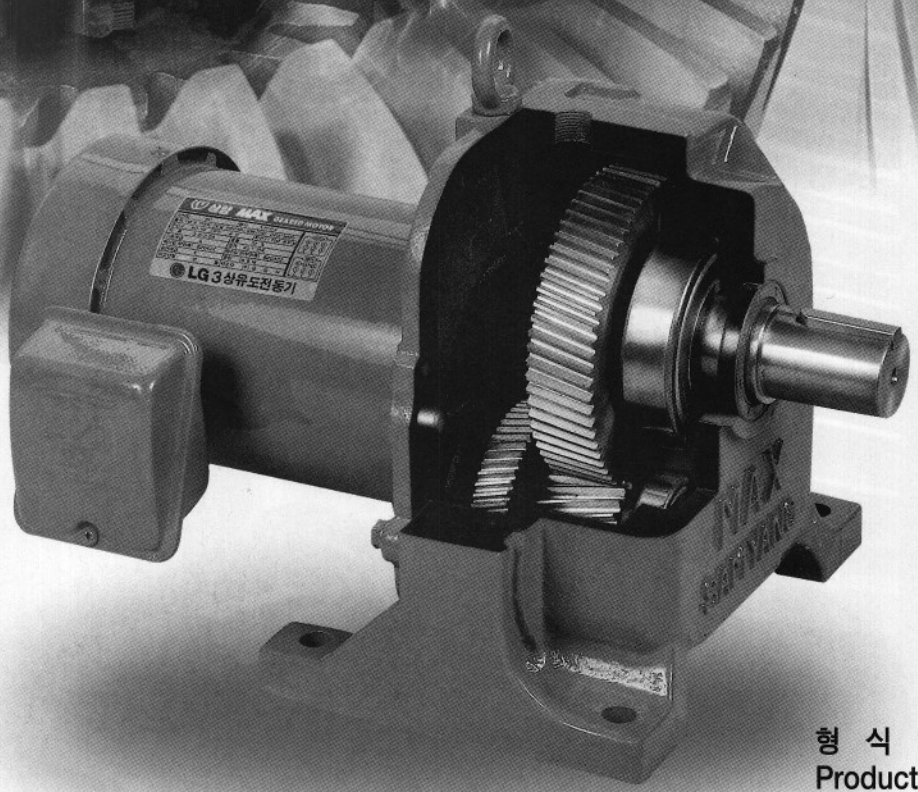
SAMYANG MAX
GEARED MOTOR



21세기를 선도하는
최고의 기술 최고의 품질



형 식 번 호
Product Code

SY-MAX-H002-30-F88

- SAMYANG
- H:Horizontal (수평형) V:Vertical (수직형) L:Line Power (라인파워)
- 0.2Kw (출력)
- Ratio (감속비)
- Frame No. (프레임 번호)

Best Engineered and High Quality MAX leads the 21st Century

■ 특 징

o 모듈라 시스템

표준화된 전 부품을 반제품화하여 재고를 확보해 둠으로써 수용가의 어떠한 요구 조건에도 새로이 설계함이 없이 필요부품을 조립하여 신속하게 공급해 드립니다.

o 제품의 표준화

최신의 폭넓은 지식과 기술정보를 바탕으로 조립하며, 연결부분 등 각 부품을 표준화하여 수명이 반영구적이고 또한 경제적입니다.

o 고정도, 고효율의 높은 신뢰도

세이빙, 연마기 등의 최신 정밀기계를 도입하여 제작하므로 고정도, 고효율의 높은 신뢰도를 갖고 있습니다.

o 소형, 경량

설계자료를 컴퓨터 처리함으로써 제품이 콤팩트하며, 특수한 열처리와 치형연마로 소음이 적고 경량이며 고하중을 전달할 수 있습니다.

o 저렴한 가격

모든 부품이 표준화에 의한 대량 생산체제를 갖춤으로써 우수한 제품을 저렴한 가격으로 공급하고 있습니다.

■ Features

o Modular System

All products are well standardized and modularized for stocking. We can promptly meet any customer's demand without re-designing the products through assembling modularized parts.

o Product Standardization

Based on new technology advance and long experience, we standardize every part such as coupling devices and make sure of long life and economy of products.

o High Precision, High Efficiency and High Reliability

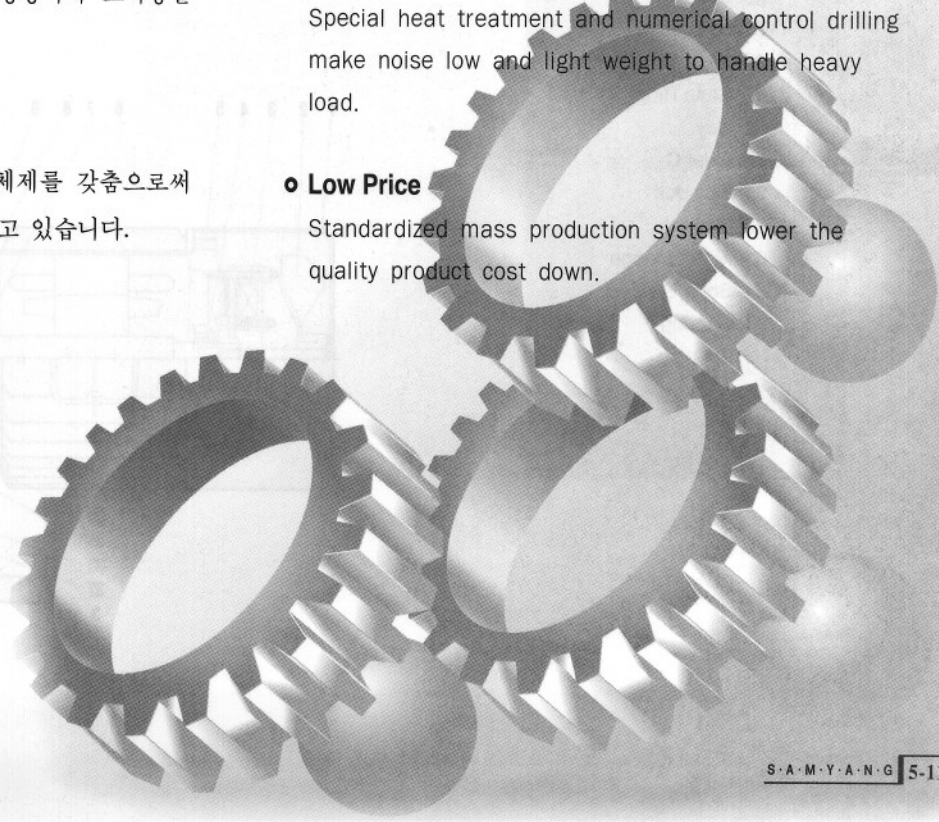
Newest high precision machines like shaving drill machine are used to ensure product precision, efficiency and reliability.

o Small Size and Light Weight

Compute aided design makes product compact. Special heat treatment and numerical control drilling make noise low and light weight to handle heavy load.

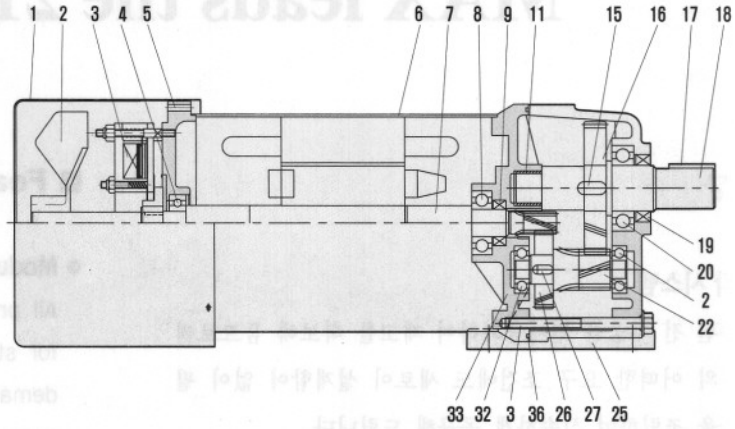
o Low Price

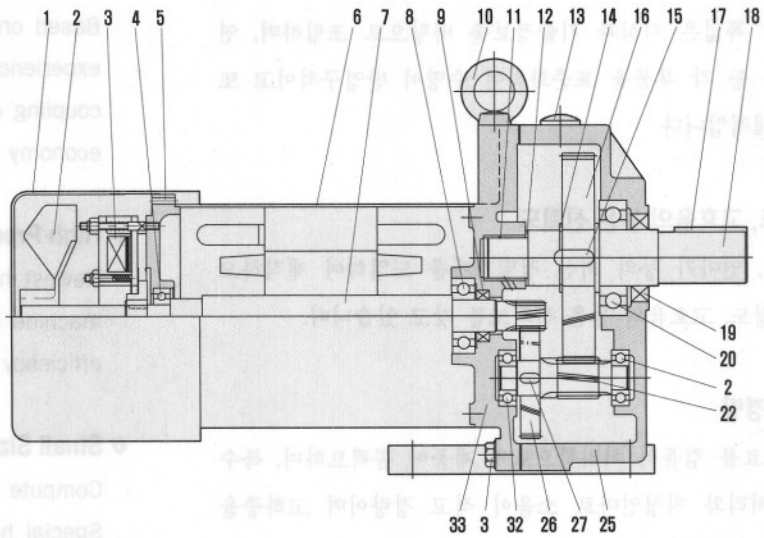
Standardized mass production system lower the quality product cost down.

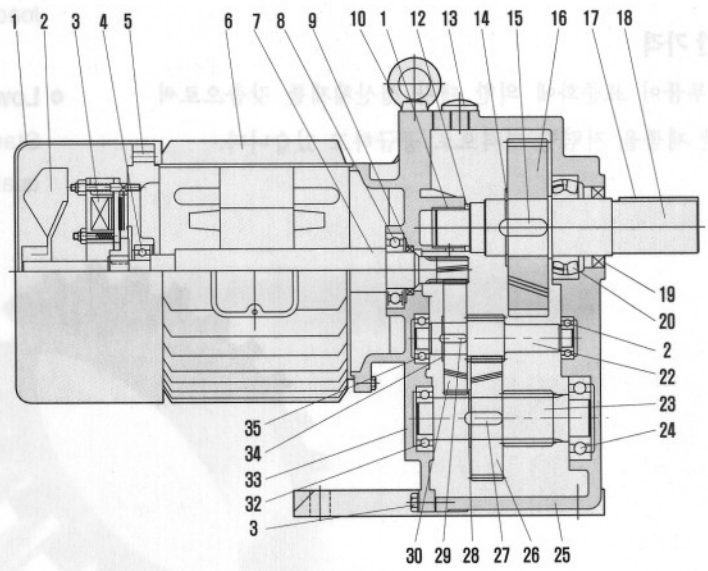


내부구조도
(Inside Structure)

1. Fan Cover
2. Fan
3. Brake
4. Bearing
5. Motor Bolt
6. Motor Frame
7. Motor Shaft
8. Bearing
9. Oil Seal
10. Eye Bolt
11. Dx Bush
12. Spacer
13. Air Vent
14. Snap Ring
15. Key
16. Gear A
17. Key
18. Output Shaft
19. Oil Seal
20. Bearing
21. Bearing
22. Pinion A
23. Pinion B
24. Bearing
25. Case
26. Gear B
27. Key
28. Snap Ring
29. Key
30. Gear C
31. Hex Bolt
32. Bearing
33. Motor Flange
34. Snap Ring
35. Bearing
36. O-ring







출력의 선정

① 필요한 출력축 회전수 N (RPM)에 따라 감속비를 결정하십시요.
② 부하 토오크 T_1(kgf-m)에서 전달토오크 T(kgf-m)를 산출하십시요.

$T = T_1 \times Sf$

Sf (써비스 계수) : 출력축에 작용하는 부하의 성질과 운전시간에 의하여 표1에 표시하였습니다.

③ 산출된 전달토오크 T(kgf-m) 및 부하 토오크 T_1(kgf-m)과 회전수 N(RPM)에 의하여 그림1의 출력선정도에 의하여 각각의 모터용량을 구하고 가능한 높은 쪽으로 선정하여 주십시요.

(예)

출력수 회전수 : N = 60RPM (60Hz)
부하토오크 : T_1 = 20 kgf-m
피동기 : 콘베어 (균일하중)
운전시간 : 12시간 / 일

a. 감속비 l = 60/1800 = 1/30
b. 전달 토오크 T : 표2 및 표1에 의하여 Sf = 1.25

$T = T_1 \times Sf = 20 \times 1.25 = 25$ (kgf-m)

c. 모터출력
부하 토오크 T_1에 의거 N = 60 과 T_1 = 20 의 교차점을 구하시요.
교차점은 0.75 Kw와 1.5 Kw의 사이

Power Estimation

1. According to required output shaft rotation N(RPM),calculate reduction ratio.
2. Calculate Transfer Load from load torque T_1(kgf-m) by

   $T = T_1 \times Sf$,

   where Sf is service factor. Types of service factor have been classified in Table 2 according to characteristics and operation hours.
3. Using obtained transfer torque T, load torque T_1 and rotation N,choose motor capacity from Tabel 1. If possible,choose higher one.

(EX)

Output shaft rotation : N = 60 RPM(60Hz)
Load torque T_1 = 20 kgf-m
Driven Machine : Conveyor
Operation Hours : 12 Hours/day
a. Reduction Ratio : l = 60 / 1800 = 1/30
b. Transfer Torque : T
Sf = 1.25 from Table 2 and Table 1
$T = T_1 \times Sf = 20 \times 1.25 = 25$ (kgf-m)
c. Motor Output
Point the crosspoint of T_1(=20) and N(=60).
The crosspoint is between 0.75Kw and 1.5 Kw.

U : 균일 하중(Uniform Load)
M : 中 정도 충격(Medium Impact)
H : 中 정도 충격(Heavy Impact)

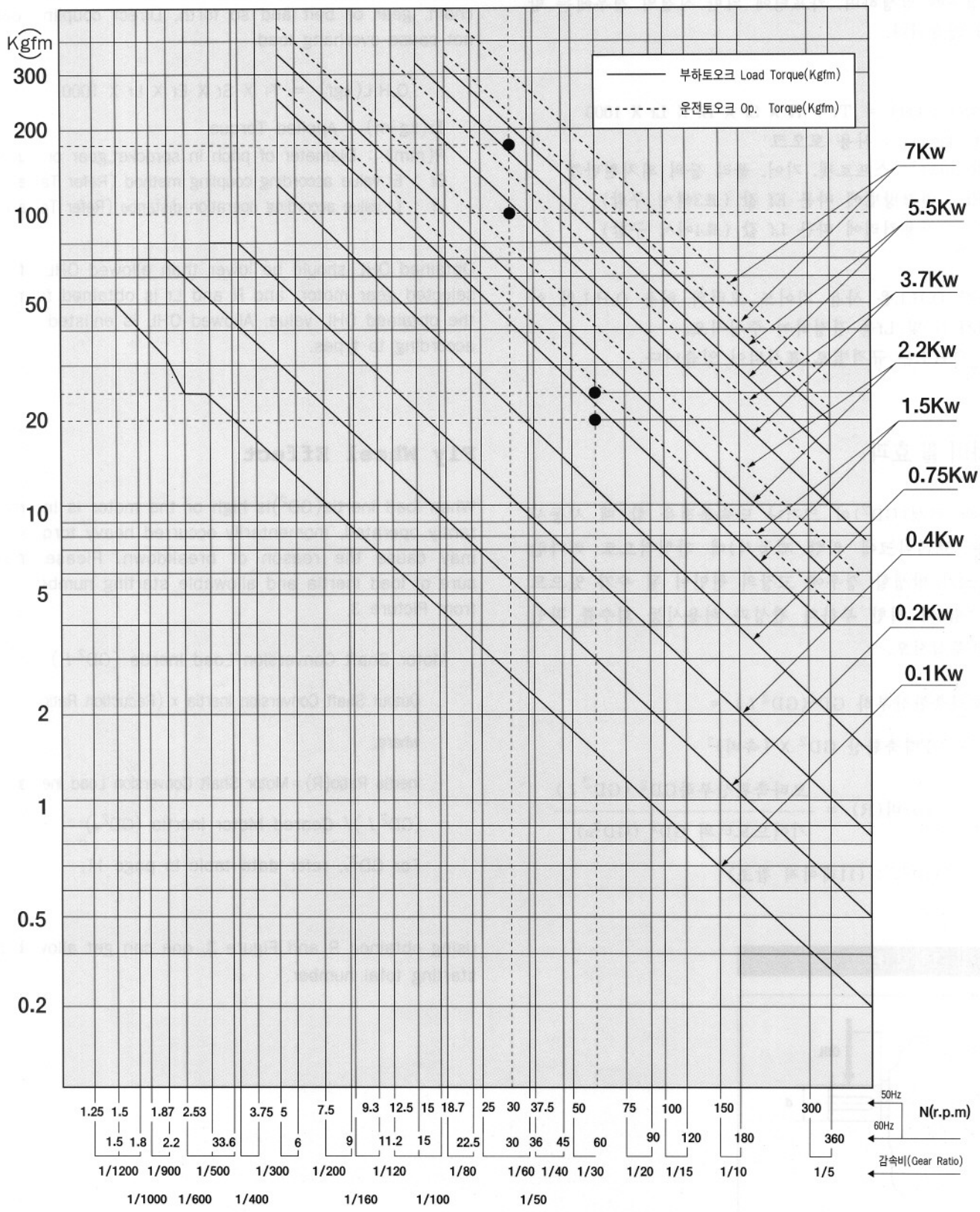
표1. 서비스 계수 Sf(Service Factor Sf)

Load / Operation Hr.	U	M	H
3시간 이하/일 (Less 3Hr/Day)	1	1	1.5
3~10시간/일 (3~10Hr/Day)	1	1.25	1.75
10시간 이상/일 (More than 10Hr/Day)	1.25	1.5	2

표2. 피동기계 부하 분류표(Driven Machine)

피동기계명(Driven Machine)	부하(Load)	피동기계명(Driven Machine)	부하(Load)
송풍기 Air Blower	U	호이스트 Hoist	M
주조 및 증류장치 Distillation	U	공작기계(주기동) Milling Machine(Main)	M
차량 Car	M	공작기계(보조기동) Milling Machine(Sub)	U
클라리 화이어(정제기) Clarifier	U	금속가공기계 Steel Process Machine	H
선별기 Sorter	M	회전밀 Turning Mill	M
요업기계(中부하) Ceramic Machine(M.Load)	M	턴푸라(텀블링 바렐) Tumbling Barrels	H
요업기계(重부하) Ceramic Machine(H.Load)	H	믹 서 Mixer	M
압축기 Compressor	M	유압정제기계 Oil Pressure Cleaner	M
콘베아(균일부하) Conveyor(Uniform)	U	제지기계 Paper Machine	M
콘베아(불균일부하) Conveyor(Non-uniform)	M	제재기계 Wood Cutter	H
크레인 Crane	U	펌프 Pump	M
크랏샤 Crusher	H	고무기계(中부하) Rubber Machine(M.Load)	M
준설용선박(中부하) Drainage(M.Load)	M	고무기계(重부하) Rubber Machine(H.Load)	H
준설용선박(重부하) Drainage(H.Load)	H	수처리기계(輕부하) Water Cleaner(L.Load)	U
엘리베이타 Elevator	U	수처리기계(重부하) Water Cleaner(H.Load)	M
압출기 Extruder	U	스크린(유체) Screen(Oil Based)	U
팬 Fan	U	제당기계 Sugar Machine	M
공급기 Supplier	M	섬유기계 Textile Machine	M
공급기(왕복동식) Supplier(Commuting)	H	제철기계(열간) Iron Works(Heat Treat)	H
식품기계 Food Machine	M	제철기계(냉간) Iron Works(Cold Treat)	U
햄머밀 Hammer Mill	H		

그림1. 출력 선정도 (Output Estimation Chart)



O.H.L (Overhang Load) 의 확인

O.H.L은 출력축에 작용하는 굽힘하중의 위치를 표시하고 있습니다. 상대기계와 체인, 기어, 벨트 등으로 연결한 경우에 발생하며, 카프링에 의한 직결의 경우에는 발생치 않습니다.

O.H.L(kgf) = T1 / R X Sf X Ef X Lf X 1000
T1(kg-m) : 사용 토오크
R(mm) : 스프로켓, 기어, 풀리 등의 피치원반경
Ef : 연결방법에 따른 Ef 값 (표3에서 구함)
Lf : 작용거리에 따른 Lf 값 (표4에서 구함)

산출한 O.H.L은 사용 기어드 모터의 허용 O.H.L의 이하에서 R 및 Lf을 결정하여 주십시오.
허용 O.H.L은 규격별로 표시되어 있습니다.

플라이 휠 효과

부하의 관성(GD^2)이 크거나 단속운전을 할 때 시동시(또는 브레이크에 의한 제동시)에 간헐적으로 커다란 토오크가 발생할 경우에 고장의 원인이 될 수가 있으므로 그림3에 의한 부하의 관성과 허용시동 회수를 확인하여 주십시오.

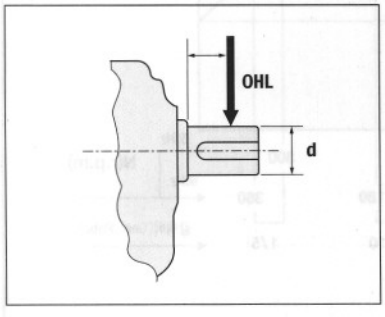
모타축환산부하 $GD^2(GD^2\,l)$ =

출력축환산 GD^2 X (속비)^2

$$GD^2\text{비}(R) = \frac{\text{모타축환산부하}GD^2\ (GD^2\,l)}{\text{기어드모터의 }GD^2\ (GD^2{}_M)}$$

$GD^2{}_M$: (11페이지 참조)

그림 2 (Figure 2)



Overhang Load

Overhang load indicates the position of side force occurred on output shaft. Overhang load is typically occurred when the motor has been coupled through chain, gear or belt and so forth. Direct coupling does not cause overhang load.

O.H.L(kgf) = T1 X Sf X Ef X Lf X 1000

T1(kg-m) : Applied Torque
R(mm) : Diameter of pitch in sprocket,gear or pulley
Ef : Ef value according coupling method (Refer Table 3)
Lf : Lf value according operation distance (Refer Table 4)

Obtained OHL should be lower than allowed OHL of selected gear motor, and R and Lf is obtained from the obtained OHL value. Allowed OHL is enlisted according to types.

Fly Wheel Effect

When load inertia(GD^2)is high or the motor is intermitantly operated, momentarily occurred heavy torque may cause the reason of breakdown. Please make sure of load inertia and allowable starting number from Picture 3.

Motor Shaft Conversion Load Inertia ($GD^2\,l$) =

Output Shaft Conversion Inertia x (Reduction Ratio)^2

where,

Inertia Ratio(R) = Motor Shaft Conversion Load Inertia ($GD^2\,l$)/ Geared Motor Inertia ($GD^2{}_M$)

For $GD^2{}_M$, refer data table in page 11.

Using obtained R and Figure 3, one can get allowable starting total number.

표3. 연결방법 (Coupling Ef)

단열체인 (Single Row Chain)	1.00
타이밍 벨트(Timing Belt)	1.00
복열체인 (Double Row Chain)	1.25
기어 (Gear)	1.25
벨트 (V-Belt)	1.50
평벨트 (Plain Belt)	2.50

표4. 작용위치 (Applied Point Lf)

l	Lf
0.25d	0.85
0.50d	0.90
0.75d	0.95
1.00d	1.00
1.25d	1.25
1.25d	1.50

R 수치와 그림3에 의한 허용시동시 총회수를 얻을 수 있습니다.

(예) 모터출력 : 5.5 kw　　연결방법 : 체인
속　　비 : 1/10　　기동정도 : 20 sw/h
부하 GD^2(출력축환산) : 4.8 kg · m^2

1) $GD^2 l = 4.8 \times (1/10)^2 = 0.048 Kg \cdot m^2$

2) $R = \frac{GD^2 l}{GD^2} = \frac{0.048}{0.12} = 0.4$

3) 그림 3에 의한 R = 0.4 의 수직선 체인의 선과 교점을 구하고 그점에 의한 수평선과 5.5Kw 선의 교점이 허용시동 총회수로 3×10^5 회수가 됩니다.

4) 내구시간은 $\frac{\text{허용시동총회수}}{\text{기동정도}} = \frac{3 \times 10^5}{20} = 15{,}000$시간

(EX)
Motor Output : 5.5 kw, Reduction Ratio : 1/10
Load Inertia(Output shaft Conversion): 4.8 kg · m^2
Coupling Method : Chain, Starting Coefficient : 20sw/h

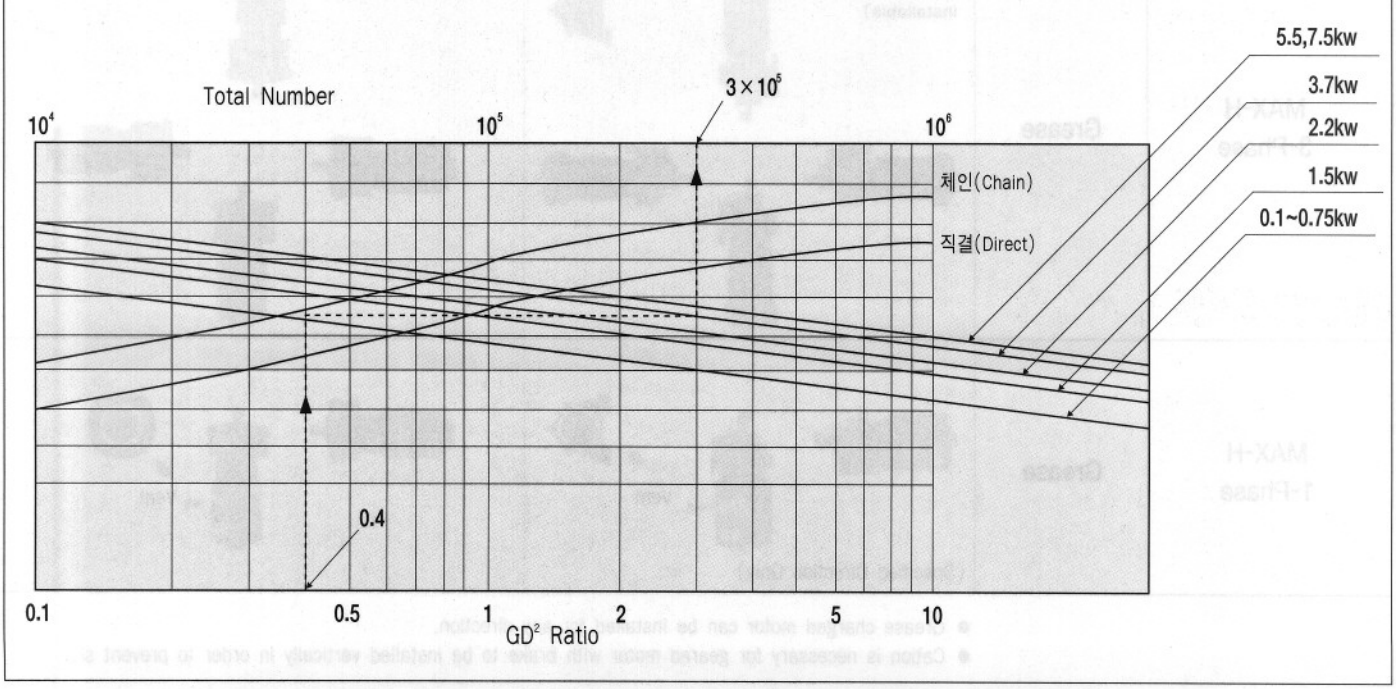
1) $GD^2 l = 4.8 \times (1/10)^2 = 0.048 Kg \cdot m^2$

2) $R = \frac{GD^2 l}{GD^2} = \frac{0.048}{0.12} = 0.4$

3) In Picture 3, find the crosspoint(A) of R = 0.5 and the curve of chain. Then the allowable starting total number is the crosspoint between horizontal line from(A) and the required power 5.5 Kw.In this example the allowable starting total number becomes 3×10^6.

4) Durable hours : Allowable starting total number / Starting Coefficient = $3 \times 10^5/20$ = 15,000 hours

그림 3 허용시동 총회수(Allowable Starting Total No.)



기어드 모터 형식별 설치방향

형 식	윤 활	H 형	V 형
MAX-H 3상	그리이스	수평형 (어떠한 방향으로도 설치가능)	플랜지형
MAX-H 단상	그리이스	(그림과 같은 방향으로 설치 가능) 통풍구	통풍구

- 그리이스 윤활의 경우는 위와 같이 자유로히 설치할 수 있음.
- 브레이크 부착형 기어드 모터의 경우 세워서 설치할 경우 슬립발생을 주의

GEARED MOTOR INSTALLATION

Type	Lubricant	H Type	V Type
MAX-H 3-Phase	Grease	Horizontal (Any Direction Installable)	Flange
MAX-H 1-Phase	Grease	Vent (Specified Direction Only)	Vent

- Grease charged motor can be installed for any direction.
- Cation is necessary for geared motor with brake to be installed vertically in order to prevent slip.

기어드 모터 규격별 그리이스 및 오일 주입량 (Grease or Oil Charging Quantity)

	1/5	1/10	1/15	1/20	1/30	1/40	1/45	1/50	1/60	1/80	1/100	1/120	1/160	1/200	
0.1 Kw	0.1						-	0.1	0.42						Grease
0.2 Kw	0.1					0.42	-	0.42				0.7			Grease
0.4 Kw	0.1		0.3			0.7						1.5			Grease
0.75 Kw	0.45				0.55	1.0									OIL
1.5 Kw	0.9		1.0		1.4	2.0									OIL
2.2 Kw	1.0		1.4		1.9	2.5									OIL
3.7 Kw	1.9				2.3	3.8									OIL
5.5 Kw	2.3				3.6	4.5									OIL
7.5 Kw	2.3			3.6	4.3	7.0									OIL

- 0.75kw VERTICAL Geared Motor에는 Grease윤활
- 공장 출하시에 0.2 ~ 0.4 Kw의 전기종에 그리이스를 0.75 ~7.5Kw 전기종에는 오일을 충진하여 출하하고 있습니다.
- 그리이스의 교환시기는 2,000시간마다 교환하여 주십시오.
- 오일의 교환시기는 500시간 가동 후 1회 교환 후 매 2,000시간 마다 교환하여 주십시오.
- 그리이스 및 오일 교환시 양은 상기표를 참조 하십시오.

- Geared motors powered between 0.2 and 0.4 Kw are charged with grease during factory shipment.Also, geared motor powered between 0.75 and 7.5 Kw are charged with oil.
- Grease should be re-charged at every 2,000 hours.
- Oil needs to be changed first 500 hours operation,and hereafter to be changed at every 2,000 hours.

기어드 모터의 GD^2_M(모터축 환산)

Geared Motor GD^2_M (Motor Shaft Conversion)

Kw	4P	
	일반형 General	브레이크 부착 With Brake
0.4	0.0056	0.0069
0.75	0.0099	0.0112
1.5	0.0271	0.0321
2.2	0.0301	0.0351
3.7	0.0456	0.0967
5.5	0.0633	0.114
7.5	0.106	0.167

MAX-GM 소음 수준

MAX Geared Motor Noise Level

Geared Ratio		1/120	1/90	1/60	1/45	1/30	1/20	1/15	1/10	1/5
RPM		15	20	30	40	50	90	120	180	360
(Kw) 출력 Output	0.4	62	62	62	62	62	62	62	62	62
	0.75	65	65	65	65	65	65	66	66	66
	1.5	70	70	70	70	70	70	70	71	71
	2.2	70	72	72	72	72	72	72	72	72
	3.7	70	72	72	72	72	72	72	72	72
	5.5	72	72	72	72	72	72	72	72	72
	7.5		74	73	73	74	75	75	74	75

삼상유도 전동기 참고 특성 DATA

Three Phase Induction Motor Reference Characteristic Data

출력 KW(HP)	극수 Pole	정격전류 Regular Current		기동전류 Starting Current		효율 Efficiency %	역율 Power Factor %	전부하 Total Load Torque(Kg-m)	Slip %	R.P.M
		220V	380V	220V	380V					
0.4 (1/2)	2	2.4	1.4	17.4	10	62.0	72		8.5	3294
	4	2.6	1.5	16.4	9.5	63.5	63		9.0	1638
	6	3.0	1.7	19	11	62.0	55		10	1080
0.75 (1)	2	3.6	2.1	28	16	68.0	77		7.5	3330
	4	3.8	2.2	25	15	69.5	70	0.42	8.0	1656
	6	4.4	2.5	29	17	63.0	63	0.65	8.5	1098
1.5 (1½)	2	4.4	2.5	34	20	71.5	79		7.0	3348
	4	4.6	2.6	30	17	72.0	73		7.5	1665
	6	5.2	3	33	19	71.5	66		8.0	1104
1.5 (2)	2	6.4	3.7	49	28	74.5	81		7.0	3348
	4	9.2	5.3	60	35	78.5	77	1.24	7.0	1674
	6	7.4	4.3	48	28	74.5	69	1.3	8.0	1104
2.2 (3)	2	8.3	5.1	68	39	77.0	81		6.5	3366
	4	9.2	5.3	60	35	78.5	77	1.24	7.0	1674
	6	10.4	6.0	66	38	77.0	71	1.91	7.0	1116
3.7 (5)	2	14	8.1	109	63	80.0	82		6.0	3384
	4	14.6	8.4	100	58	81.0	78	2.09	6.5	1683
	6	15.8	9.1	104	60	80.0	73	3.16	6.5	1122
5.5 (7½)	2	21	12	159	92	82.0	79		6.0	3384
	4	21.8	12.6	150	87	82.5	77	3.09	6.0	1692
	6	23.6	13.6	154	89	82.0	72	4.65	6.0	1128
7.5 (10)	2	28.2	16.3	209	121	83.0	80		6.0	3384
	4	29.2	16.8	191	110	83.5	78	4.2	6.0	1692
	6	31	17.9	205	118	83.0	73	6.3	6.0	1128

단상유도 전동기 참고 특성 DATA

Single Phase Induction Motor Reference Characteristic Data

형식 Type	극수 Pole	출력 Output (KW)	프레임 Frame No.	전압 Voltage (V)	전부하 Total Load			기동 Starting		최대토오크 Max. Torque(%)	효율 Efficiency (%)	컨덴서 Condenser Capa.(μF)
					Torque (kg · m)	전 류 Current(A)	R.P.M	Torque (%)	전 류 Current(A)			
EOUP	4	0.1	71	110	0.056	2.8/1.4	1750	260	15.0/7.5	260	51	100
		0.2	71		0.112	5.6/2.8	1750	260	23/11.5	260	55	180
		0.25	71		0.139	6.4/3.2	1745	260	29/15	260	58	200
		0.3	71		0.167	7.2/3.6	1740	260	33/17	260	60	200
		0.4	90		0.222	8.7/4.4	1750	265	38/19	250	59	200

특징

a) 무여자 작동형 (스프링 크로스식)으로서 정전시에는 자동적으로 작동하는 안전 브레이크입니다.
b) 전원장치가 있어 배선이 용이합니다.
c) 간단한 구조로 브레이크 갭 조정도 용이합니다.

Features

a) Cross spring type geared motor is automatically operational event at power failure.
b) Power connector makes easy wiring.
c) Simple structure makes brake gap adjustment easy.

브레이크 사양

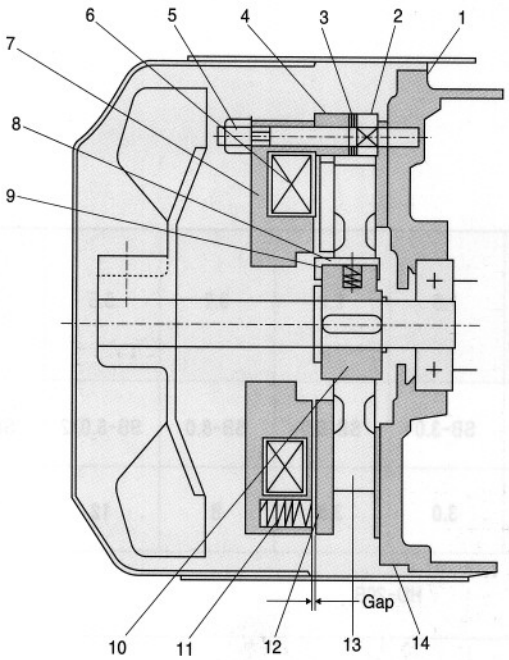
Brake specification

출력 Output(KW) 4p / 사양 Spec.		0.1	0.2	0.4	0.75	1.5	2.2	3.7	5.5	7.5
브레이크 Brake		SB-02	SB-1.0	SB-1.0	SB-2.0	SB-3.0	SB-6.0	SB-8.0	SB-8.0X2	SB-15
토오크 Torque (kg • m)		0.2	1.0	1.0	2.0	3.0	3.5	8	12	15
전원장치 Power Supplier		HD-10	HD-20B							
전압 Voltage		AC 220V (DC90V)								
전류 Current at 75℃ (A)		0.082	0.27	0.27	0.25	0.27	0.3	0.4	0.4	0.56
용량 Capacity at 75℃(W)		7.3	24	24	22	24	27	36	36	50
규정 틈새 Regular Gap (mm)		0.2	0.3					0.4		
한계 틈새 Limit Gap (mm)		0.8	0.8					1.5		
허용별 열발산량 Allowable Heat Dissipation at 1500R.P.M 50% ED(kgf.m/min)		100	500	500	600	800	800	1100	1100	1100
총사사양 E.T (kgf • m)		9×10^5	2.2×10^7	2.2×10^7	3.6×10^7	4.5×10^7	4.5×10^7	6.3×10^7	8.4×10^7	8.4×10^7
개방시간 Amateur Release Time(sec)	동시절환 AC/DC Converting	0.3	0.225	0.205	0.298	0.150	0.135	0.230	1.20	1.20
	교류절환 AC Converting	0.17	0.130	0.075	0.120	0.054	0.050	0.070	0.50	0.45
	직류절환 DC Converting	-	0.023	0.012	0.013	-	-	-	0.075	0.065

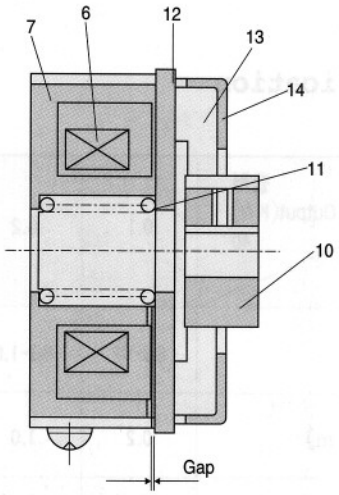
브레이크의 구조

Brake Structure

SB-1.0 ~ 8.0



SB-0.2



No.	명 칭	Name
1	브라켓 쉴드	Bracket shield
2	스터드 볼트	Stud Bolt
3	어드져스트 라이너	Adjust Liner
4	칼라	Collar
5	육각 너트	Hex - Nut
6	코일	Coil
7	자석	Magnet
8	소음 브라켓	Sound Bracket
9	소음 스프링	Sound Spring
10	호브	Hob
11	브레이크 스프링	Brake Spring
12	아마츄어	Armature
13	내부 디스크	Inner Disk
14	브라켓	Bracket

GD²플라이 휠의 효과 계산법
Calculation of Fly Wheel Inertia GD²

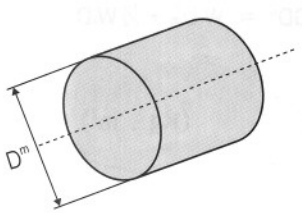
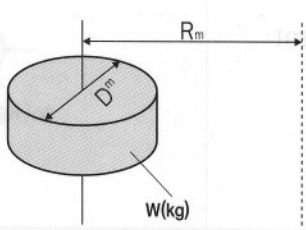
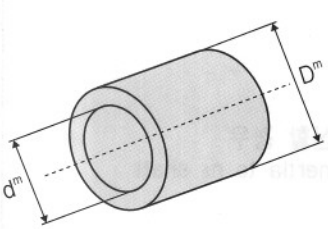
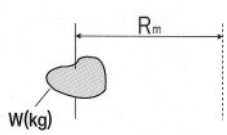
관성을 일반적인 관성모멘트 l (Kg · m · sec²)로 나타내고 있습니다만 공업용으로 실제 사용할 경우는 GD²(Kg-m²)을 사용하는 것이 편리하다.

In general,inertia is represented by inertia momentum (Kg.m.sec²),however,GD² is more widely used for industrial purpose.

$$GD^2 = 4g\,l$$

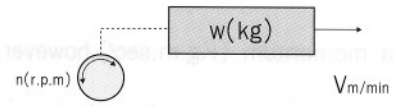
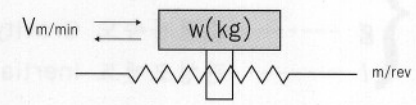
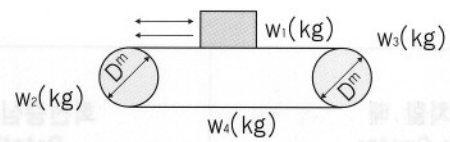
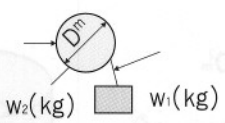
여기서
- G ------- 중량 Weight(Kg)
- D ------- 회전직경 Rotation Diameter (m)
- g ------- 중력가속도 Gravity (9.8 m/sec²)
- l ------- 관성모멘트 Inertia Momentum (Kg.m.sec²)

회전체의 GD²
Inertia of Gyration Object

회전중심이 무게중심과 일치할 때 Rotation Center = Gravity Center		회전중심이 무게중심과 일치하지 않을 때 Rotation Center ≠ Gravity Center	
 W(kg)	$GD^2 = \frac{1}{2}WD_m^2$ (Kg · m²)		$GD^2 = \frac{1}{2}WD_m^2 + 4WR_m^2$ (Kg . m²)
 W(kg)	$GD^2 = \frac{1}{2}W(D_m^2 + d_m^2)$ (Kg · m²)		$GD^2 = 4WR_m^2$ (Kg . m²)

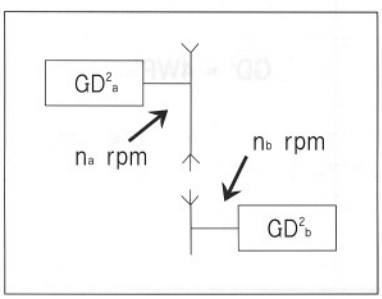
직선운동을 하는 경우의 GD^2

Inertia of Straightly Moving Object

일반적인 경우 General Case		$GD^2 = W \cdot (\frac{V}{\pi n})^2$ $(Kg \cdot m^2)$
수평직선 운동인 경우 Horizontal Straight Movement (리드스크류에 의한 물체의 이동) (Moved by Lead Screw)		$GD^2 = W \cdot (\frac{P}{\pi})^2$ $= W \cdot (\frac{V}{\pi n})^2$ $(Kg \cdot m^2)$
수평직선 운동인 경우 Horizontal Straight Movement (콘베어 등) (Conveyor...)		$GD^2 = W_1D_m^2 + \frac{1}{2}W_2D_m^2$ $+ \frac{1}{2}W_3D_m^2 + W_4D_m^2$ $(Kg \cdot m^2)$
수직 운동인 경우 Vertical Straight Movement (크레인, 윈치 등) (Crane, Winch...)		$GD^2 = W_1D_m^2 + \frac{1}{2}W_2D_m^2$ $(Kg \cdot m^2)$

회전비가 있는 경우의 GD^2

Inertia with Rotation Ratio



부하측의 GD^2_b를 n_a축에 환산할 경우
Conversion of load shaft inertia to n_a shaft

$$GD^2 = GD^2_a + (n_b/n_a)^2 GD^2_b$$

설치 및 사용상 주의사항

1.설치전의 점검

감속기는 당공장에서 철저한 검사 및 점검한 후 납품하지만, 수송 도중 진동이나 그외 악영향을 받는 경우가 있으므로 설치 전에 반드시 다음 사항을 점검하십시오.
① 누유되는 곳은 없는가 ② 파손된 부분은 없는가 ③ 명판은 주문 사항과 일치하는가

2.상대기계와 연결 방식

1) 직결방식
입출력축 모두 직결방식을 사용하는 것이 가장 좋으며 커플링은 가급적 가요성 커플링을 사용하시기 바랍니다.
2) 기어, 체인 스프로켓 사용시
- 입출력축에 체인, 스프로켓, 풀리 등을 취부하는 경우 아래의 공식에 의해서 스프로켓 및 기어의 직경을 선정해 주십시오.
  체인스프로켓 기어의 피치원 직경≧ 3×입출력축의 직경
- 입출력축의 선단에 하중이 작용하면 축에 무리한 힘이 걸려서 축이 파괴되거나 베어링이 손상될 우려가 있으므로 완전히 안쪽(카바쪽)으로 조립한 후 사용하십시오.

3.윤활유의 선정 및 보존

1) 주유 및 유량
윤활유는 반드시 추천 윤활유를 사용하고 유량은 완전 정지상태에서 유면계의 중심까지 오게 하십시오. 윤활유가 너무 많거나 적으면 기어와 베어링에 악영향을 미칠 우려가 있습니다.
2) 윤활유의 교환
처음 가동시에는 기어의 초기 마모분이 기름에 떨어지므로 운전개시 후 500시간 정도 사용후 새로운 윤활유로 교환하여 사용하고 그 후는 매 2000시간마다 교환하여 주십시오.
윤활유 교환시 내부를 깨끗하게 세척하여 마모분을 제거하십시오.

Cautions during Installation and Use

1. Before Installation

Products get through inspection prior to shipment,however, vibration during delivery or other improper treatment may cause problem. Please make sure of following check point prior to installation.
(1) Oil Leakage (2) Cracks (3) Order Specification

2. Coupling Method with Machine

(1) Direct Coupling : Direct coupling is the best for both input and output shaft coupling.
(2) Use with Gear,Sprocket or Chain
- When gear,sprocket or chain is connected with input or output shaft,please determine the diameter of sprocket or gear using following equation.
- If load is given to shaft end,excessive force harms to bearing and other parts.Make sure of coupling machine to deep side of shaft.

3. No Load Operation

After 6 hour no load run,actual load running is recommended.

4. Grease

(1) Charging and Quantity : One should use only recommended grease, and charge grease up to the center of oil gauge at fully stoped mode. Both more and less grease may cause problems to gear and bearing.
(2) Grease Change : For the first 500 hour run, there are excessive particles in grease. Hereafter, grease can be replaced at every 2,000 hours. Rinse inside to remove particles during grease change.
(3) Grease Type : The grease types used for standard geared motor are KS M 2127, ISO VG 150(10c below) and ISO VG 220(10c up). Local manufacturers are enlisted below.

추천 윤활유

Recommended Lubricant

Type \ Maker		호남정유 Honam Ref. CALTEX	유 공 Yukong GULF	극 동 Kuk Dong SHELL	MOBIL KOREA
ISO VG 68		Meropa Lubricant 68	EP LUBRICANT HD 68	Omala 68	Mobil gear 626
ISO VG 100		Meropa Lubricant 100	EP LUBRICANT HD 100	Omala 100	Mobil gear 627
ISO VG 150		Meropa Lubricant 150	EP LUBRICANT HD 150	Omala 150	Mobil gear 629
ISO VG 220		Meropa Lubricant 220	EP LUBRICANT HD 220	Omala 220	Mobil gear 630
ISO VG 320		Meropa Lubricant 320	EP LUBRICANT HD 320	Omala 320	Mobil gear 632
ISO VG 460		Meropa Lubricant 460	EP LUBRICANT HD 460	Omala 460	Mobil gear 634
ISO VG 680		Meropa Lubricant 680	EP LUBRICANT HD 680	Omala 680	Mobil gear 636
Grease 그리이스	NLGI 0	Multifak EP 0	Crown EP 0	Alvania EP 0	Mobilplex EP 0
	NLGI 1	Multifak EP 1	Crown EP 1	Alvania EP 1	Mobilplex EP 1
	NLGI 2	Multifak EP 2	Crown EP 1	Alvania EP 2	Mobilplex EP 2

사용 윤활유

제품종류	하중상태	주위온도	사용윤활유	비고
유성 감속기 기어드 모터	정하중	10℃ 이하	ISO VG 150	
		10℃ 이상	ISO VG 220	
웜	보통하중	10℃ 이하	ISO VG 220	
		10℃ 이상	ISO VG 320	
	중하중	10℃ 이하	ISO VG 320	
		10℃ 이상	ISO VG 460	

Factory Charged Lubricant

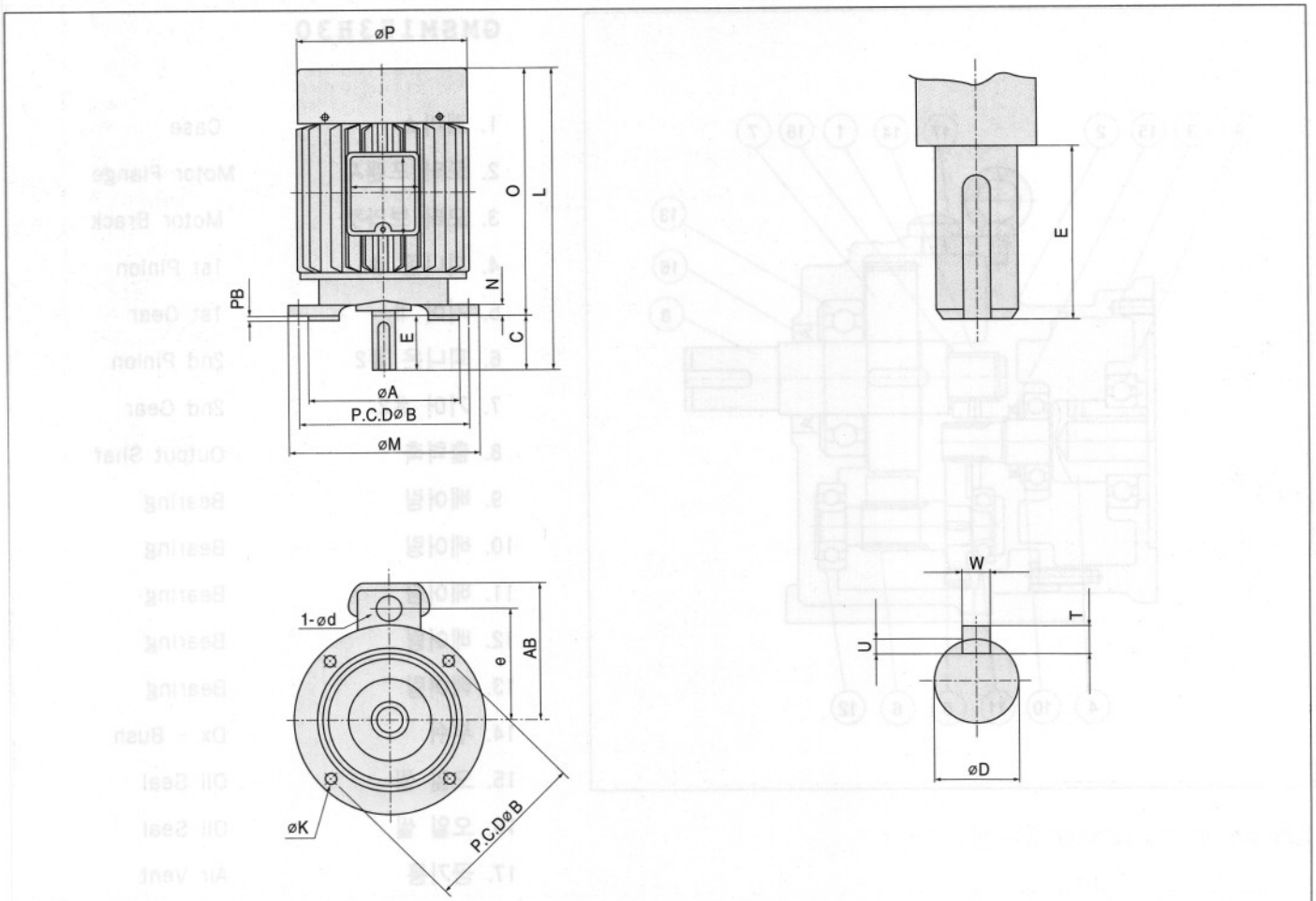
Product	Load Status	Temperature	Charged Lubricant	Remarks
Planetary Gear Reducer Geared Motor	Total Load	10℃ below	ISO VG 150	
		10℃ up	ISO VG 220	
Worm	Normal Load	10℃ below	ISO VG 220	
		10℃ up	ISO VG 320	
	Heavy Load	10℃ below	ISO VG 320	
		10℃ up	ISO VG 460	

- 매우 격심한 부하조건의 표준형 감속기에는 한단계 높은 점도의 윤활유를 사용하는 것이 좋습니다.
- 그리이스 전용 기어드모터에는 NLGI 0 을 사용하십시오.
- 주위온도가 40℃ 이상되는 경우에는 당사에 문의하여 주십시오.
- 사용온도가 높은 경우에는 한단계 높은 점도유를 선택하십시오.

- For severe load, It is recommended to use one-step up grease for standard geared motor.
- Greased motor needs to use NLGI 0.
- For use of motor at higher than 40℃, Please ask us for direction.
- When normal running temperature is high, choose a one-step up viscosity grease.

삼상 I.E.C 플랜지 모터

3-Phase I.E.C Flange Motor

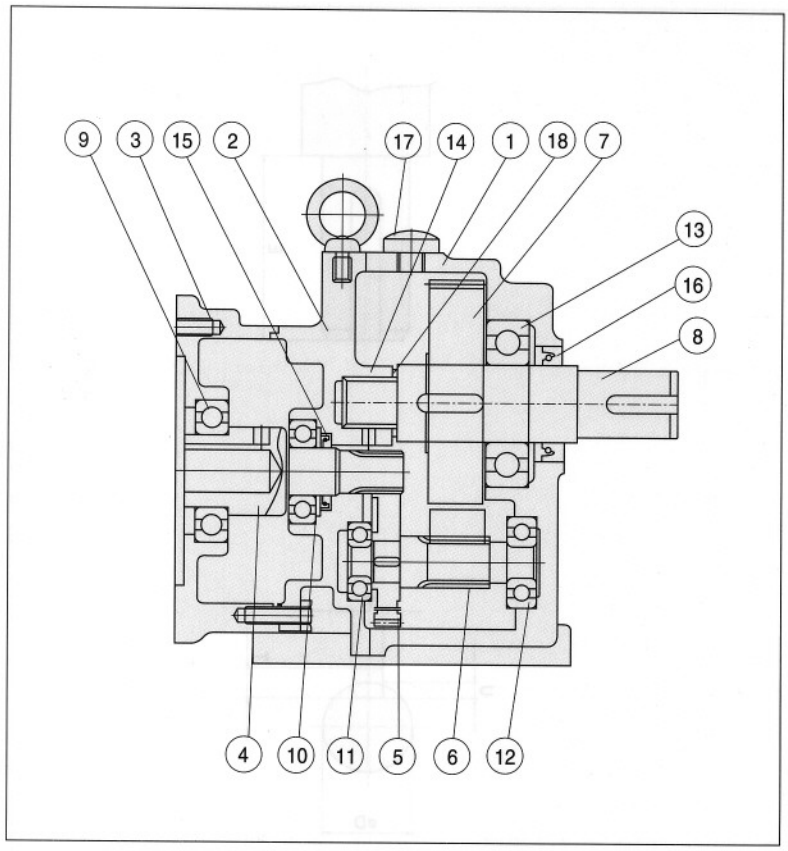


- 형 식 : VTFO-K
- 절연계급 : B

- Type : VTFO-K
- Insulation Class : B

Frame 프레임	출력(KW)		치 수 표 (Dimension) 전 동 기 (Motor)												축(Shaft)			
	4극	6극	L	ϕA	ϕB	C	E	AB	N	ϕM	o	ϕP	PB	ϕK	U	W	ϕD	T
63	0.2	-	230	110j6	130	23	23	-	8	-	207	132	3.5	10	1	-	11j6	-
71	0.4	-	225	110j6	130	30	30	134	10	160	225	132	3.5	10	3	5	14j6	5
80	0.4/0.75	0.4/0.75	293	130h7	165	40	40	140	12	200	253	175	4	12	3.5	6	19j6	6
90	1.5	0.75	356	130h7	165	50	50	161	12	200	306	192	4	12	4	8	24j6	7
100	2.2	1.5	368	180h7	215	60	60	168	16	250	308	196.5	4	15	4	8	28j6	7
112	2.2	1.5	389	180h7	215	60	60	182	16	250	327	235	4	15	4	8	28j6	7
112	3.7	2.2	412	180h7	215	60	60	182	16	250	352	235	4	15	4	8	28j6	7
132	5.5	3.7	458	230h7	265	80	80	213	20	300	378	274	4	15	5	10	38k6	8
132	7.5	5.5	498	230h7	265	80	80	213	20	300	418	274	4	15	5	10	38k6	8

I.E.C FLANGE TYPE

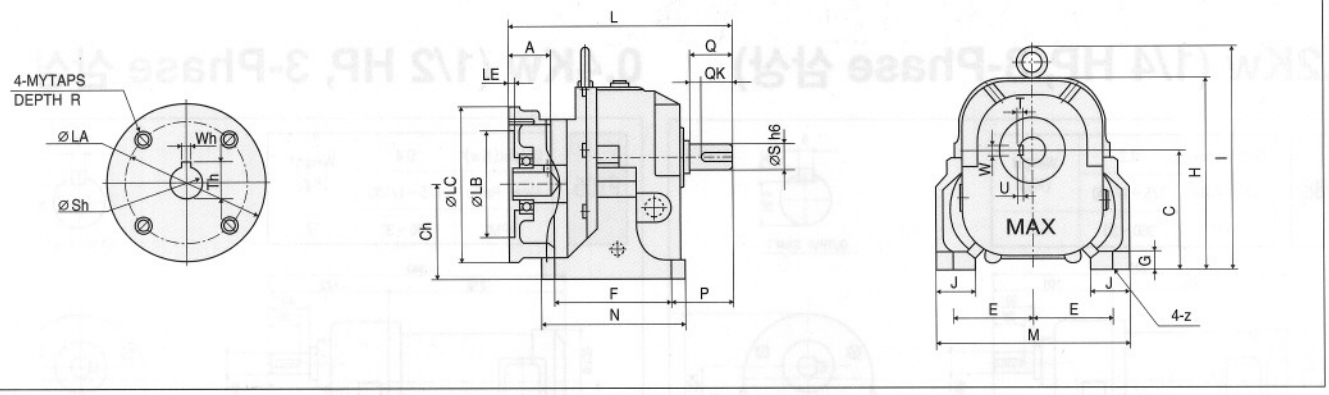


GMSM153H30

1.	케이스	Case
2.	모터 프랜지	Motor Flange
3.	모터 브라켓	Motor Bracket
4.	피니온 #1	1st Pinion
5.	기어 #1	1st Gear
6.	피니온 #2	2nd Pinion
7.	기어 #2	2nd Gear
8.	출력축	Output Shaft
9.	베어링	Bearing
10.	베어링	Bearing
11.	베어링	Bearing
12.	베어링	Bearing
13.	베어링	Bearing
14.	부쉬	Dx - Bush
15.	오일 씰	Oil Seal
16.	오일 씰	Oil Seal
17.	공기통	Air Vent
18.	스페이서	Spacer

규 격 (Specification)

Motor (60Hz) KW		FRAME NO.	RATIO	MOTOR SIDE										C	Ch	E	F	G	H	I	J	L	M	N	P	Q	QK	S	T	U	W	Z	APPR. Weight (Kg)
4P	6P			LA	LB	LC	LE	Sh	Wh	Th	A	Y	R																				
0.4	-	F105	1/5	130	110	160	4	14	5	16.3	33	8	15	105	83	67.5	90	12	160	-	35	196	175	120	60	40	35	28	7	4	7	12	7
			1/10																														
			1/20																														
			1/30																														
			1/40																														
			1/50																														
			1/60																														
0.75	0.4	F135	1/5	165	130	200	4.5	19	6	21.8	43	10	15	135	99	90	135	18	218	244	45	237	210	165	73	55	45	32	8	5	10	15	22
			1/10																														
			1/20																														
			1/30																														
		F153	1/40											153	117.1	107.5	150	20	246	288	50	274	250	185	79.5	55	45	38	8	5	10	15	27
			1/50																														
			1/60																														



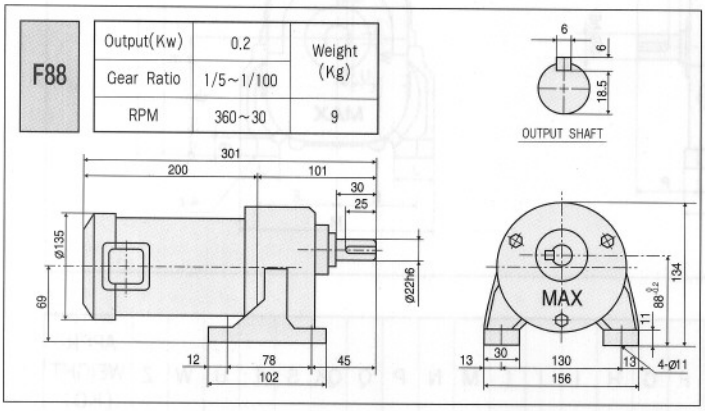
MOTOR (60Hz) KW		FRAME No.	RATIO	Motor Side										C	Ch	E	F	G	H	I	J	L	M	N	P	Q	QK	S	T	U	W	Z	APPR. WEIGHT (KG)
4P	6P			LA	LB	LC	LE	Sh	Wh	Th	A	Y	R																				
1.5	0.75	F153	1/5	165	130	200	4.5	24	8	27.3	54	10	20	153	117.1	107.5	150	20	246	288	50	288	250	185	79.5	55	45	38	8	5	10	15	27
			1/10																														
			1/20																														
			1/30																														
		F172	1/40											172	130.1	116	172	25	282	324	60	340 — 345	276	216	113.5	82	75	45	9	5.5	14	19	59
			1/50																														
			1/60																														
2.2	1.5	F172	1/5																														
			1/10																														
			1/20																														
			1/30																														
		F181	1/40											181	140.3	120	245	25	293	344	70	369	310	295	115	82	75	50	9	5.5	14	19	65
			1/50																														
		F205	1/60	215	180	250	4.5	28	8	31.3	63	12	20	205	156.3	135	290	30	340	390	75	392	350	340	115	82	75	55	10	6	16	24	78
3.7	2.2	F172	1/5											172	130.1	116	172	25	282	324	60	345	276	216	113.5	82	75	45	9	5.5	14	19	59
			1/10																														
			1/20																														
		F181	1/30											181	140.3	120	245	25	293	344	70	369	310	295	115	82	75	50	9	5.5	14	19	65
		F205	1/40											205	156.3	135	290	30	340	390	75	392	350	340	115	82	75	55	10	6	16	24	78
			1/50																														
		F235	1/60											235	165.6	150	320	35	379	440	80	432	390	370	135	105	63	65	11	7	18	24	110
5.5	3.7	F181	1/5											181	140.3	120	245	25	293	344	70	396	310	295	115	82	75	50	9	5.5	14	19	65
			1/10																														
			1/20																														
		F205	1/30											205	156.3	135	290	30	340	390	75	416	350	340	115	82	75	55	10	6	16	24	78
		F235	1/40											235	165.6	150	320	35	379	440	80	460	390	370	135	105	63	65	11	7	18	24	110
			1/50																														
		F270	1/60	265	230	300	4.5	38	10	41.3	84	14	25	270	175.9	180	350	40	436	496	80	470	440	410	140	105	80	70	12	7.5	20	28	140
7.5	5.5	F181	1/5											181	140.3	120	245	25	293	344	70	396	310	295	115	82	75	50	9	5.5	14	19	65
			1/10																														
		F205	1/20											205	156.3	135	290	30	340	390	75	416	350	340	115	82	75	55	10	6	16	24	78
		F235	1/30											235	165.6	150	320	35	379	440	80	460	390	370	135	105	63	65	11	7	18	24	110
		F270	1/40											270	175.9	180	350	40	436	496	80	470	440	410	140	105	80	70	12	7.5	20	28	140
			1/50																														

GEARED MOTOR

0.2Kw (1/4 HP, 3-Phase 삼상)

F88

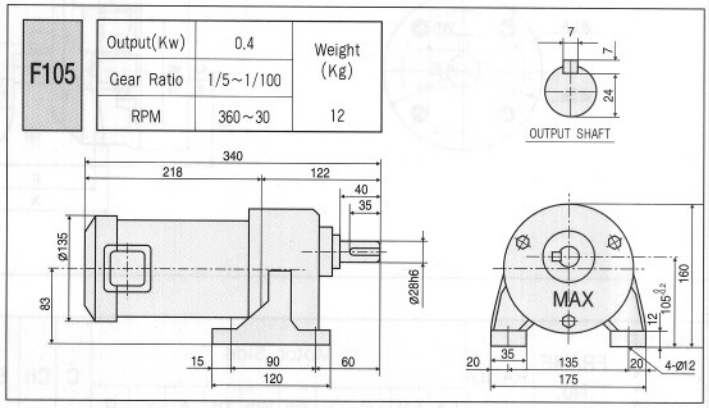
Output(Kw)	0.2	Weight (Kg)
Gear Ratio	1/5~1/100	
RPM	360~30	9



0.4Kw (1/2 HP, 3-Phase 삼상)

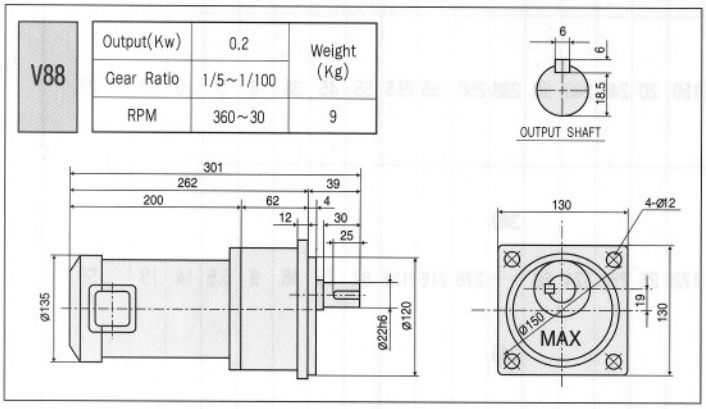
F105

Output(Kw)	0.4	Weight (Kg)
Gear Ratio	1/5~1/100	
RPM	360~30	12



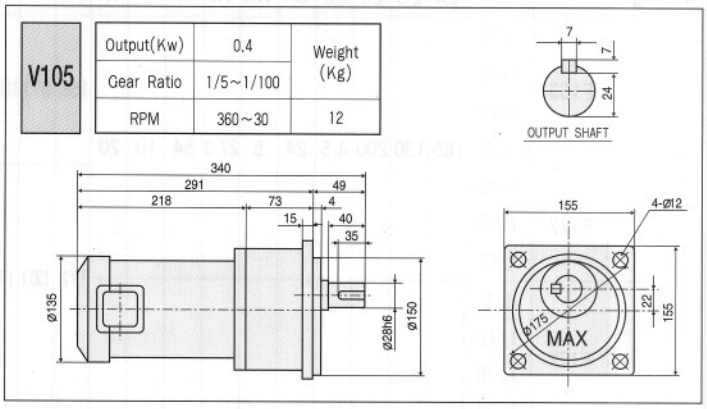
V88

Output(Kw)	0.2	Weight (Kg)
Gear Ratio	1/5~1/100	
RPM	360~30	9



V105

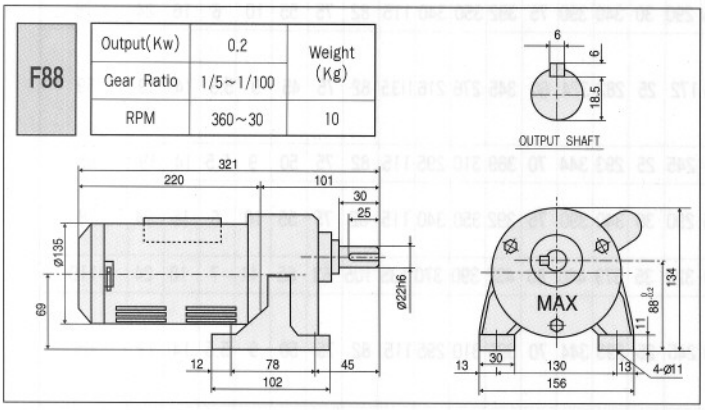
Output(Kw)	0.4	Weight (Kg)
Gear Ratio	1/5~1/100	
RPM	360~30	12



0.2Kw (1/4 HP, 1-Phase 단상)

F88

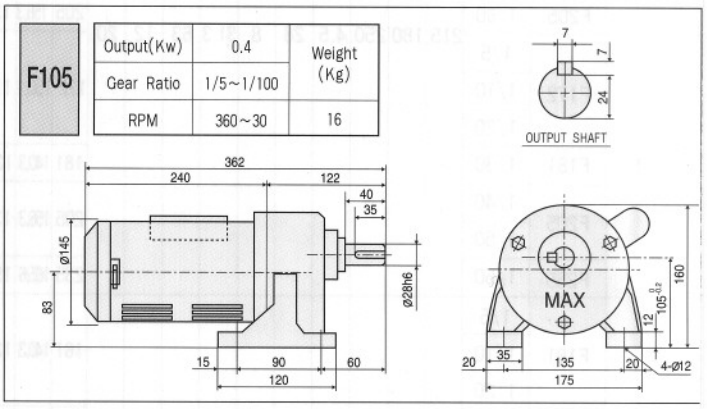
Output(Kw)	0.2	Weight (Kg)
Gear Ratio	1/5~1/100	
RPM	360~30	10



0.4Kw (1/2 HP, 1-Phase 단상)

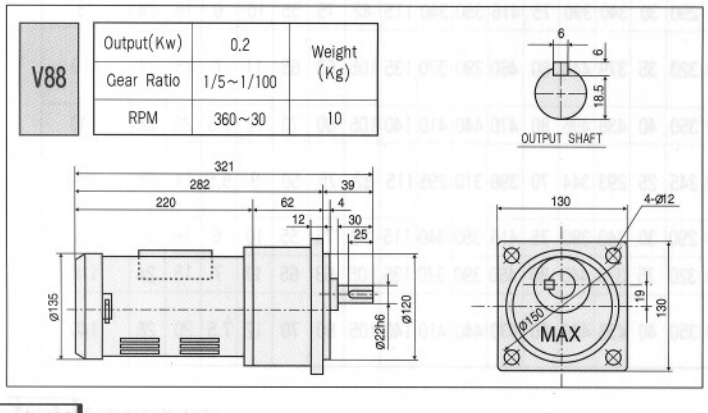
F105

Output(Kw)	0.4	Weight (Kg)
Gear Ratio	1/5~1/100	
RPM	360~30	16



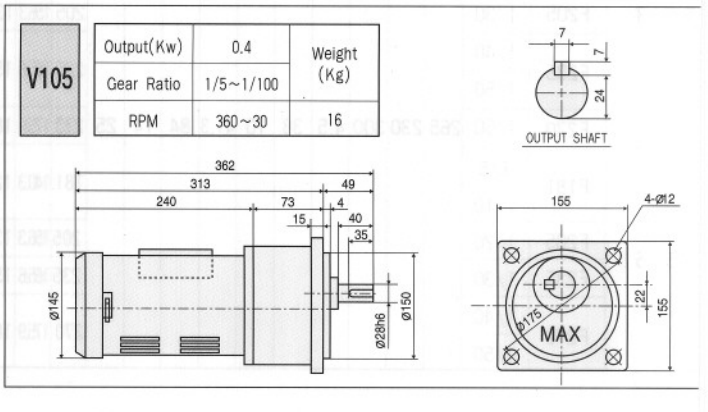
V88

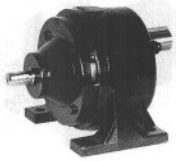
Output(Kw)	0.2	Weight (Kg)
Gear Ratio	1/5~1/100	
RPM	360~30	10



V105

Output(Kw)	0.4	Weight (Kg)
Gear Ratio	1/5~1/100	
RPM	360~30	16

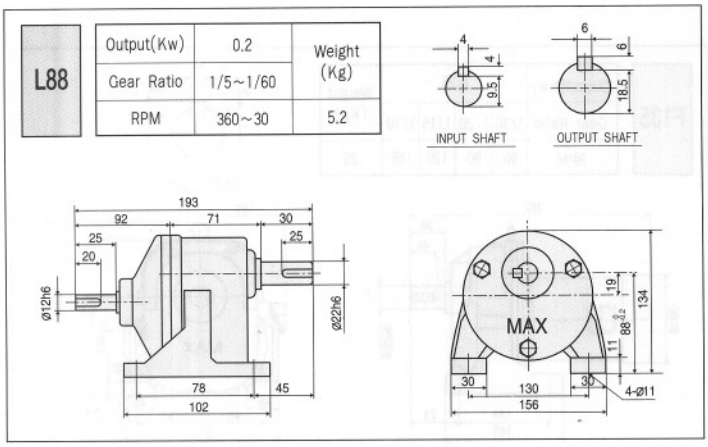




0.2Kw (1/4 HP) Line Power

L88

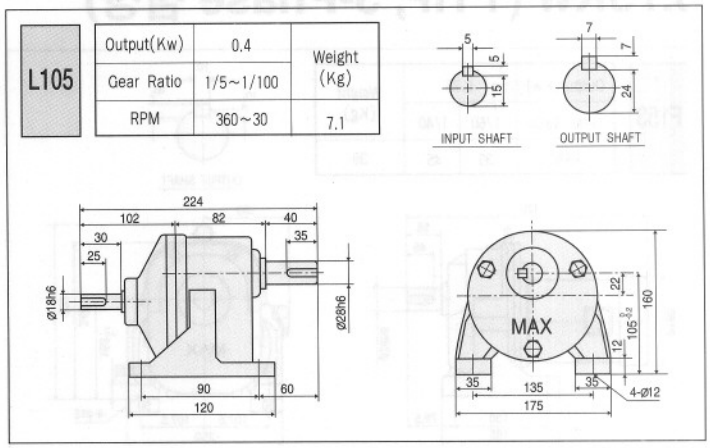
Output(Kw)	0.2	Weight (Kg)
Gear Ratio	1/5~1/60	
RPM	360~30	5.2



0.4Kw (1/2 HP) Line Power

L105

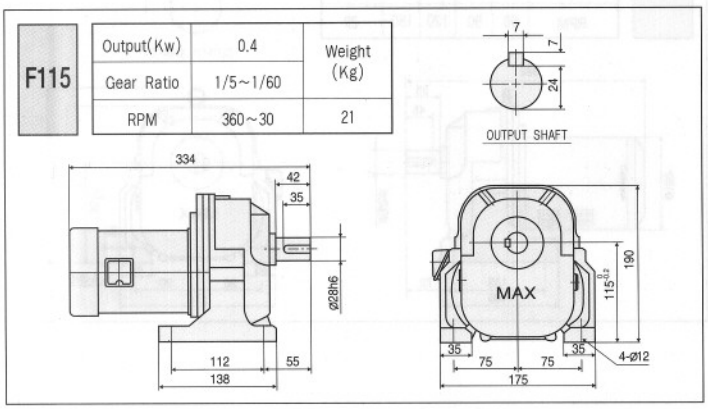
Output(Kw)	0.4	Weight (Kg)
Gear Ratio	1/5~1/100	
RPM	360~30	7.1



M-TYPE GEARED MOTOR
0.4Kw (1/2 HP, 3-Phase 삼상)

F115

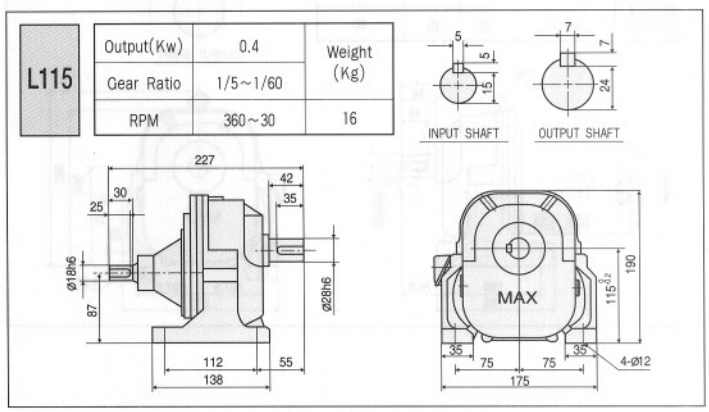
Output(Kw)	0.4	Weight (Kg)
Gear Ratio	1/5~1/60	
RPM	360~30	21

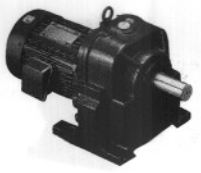


M-TYPE LINE POWER
0.4Kw (1/2 HP)

L115

Output(Kw)	0.4	Weight (Kg)
Gear Ratio	1/5~1/60	
RPM	360~30	16



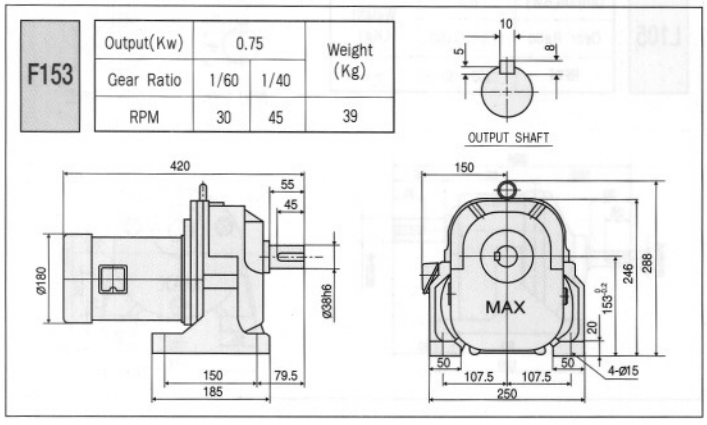


GEARED MOTOR

0.75Kw (1 HP, 3-Phase 삼상)

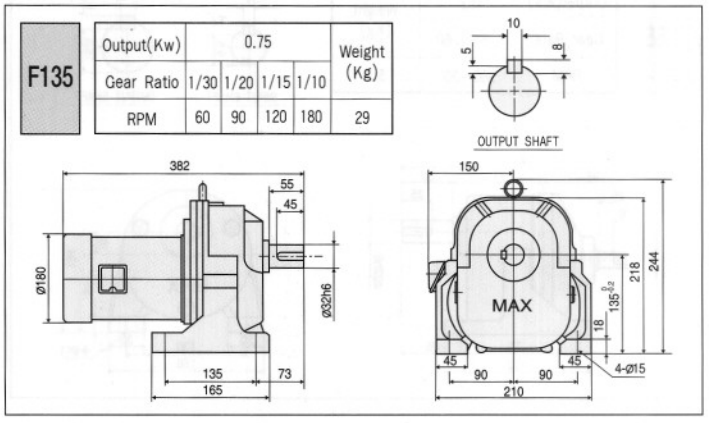
F153

Output(Kw)	0.75		Weight (Kg)
Gear Ratio	1/60	1/40	
RPM	30	45	39



F135

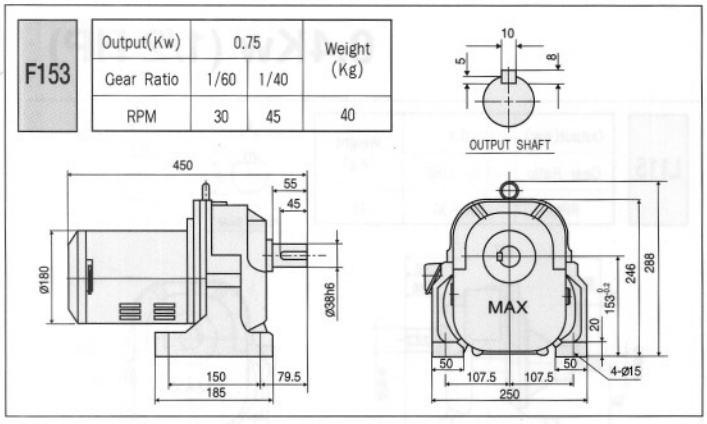
Output(Kw)	0.75				Weight (Kg)
Gear Ratio	1/30	1/20	1/15	1/10	
RPM	60	90	120	180	29



0.75Kw (1 HP, 1-Phase 단상)

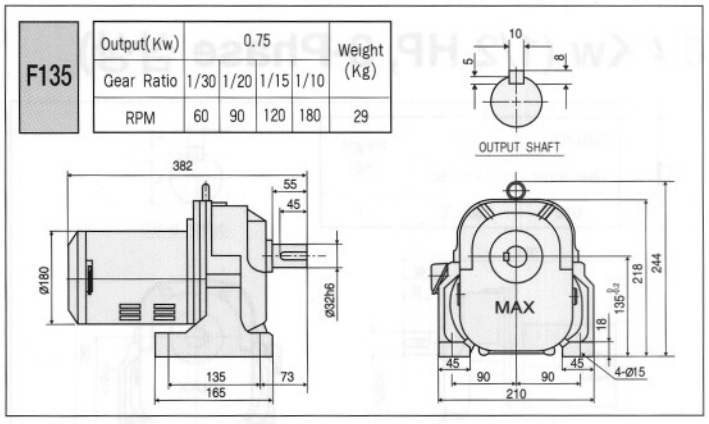
F153

Output(Kw)	0.75		Weight (Kg)
Gear Ratio	1/60	1/40	
RPM	30	45	40



F135

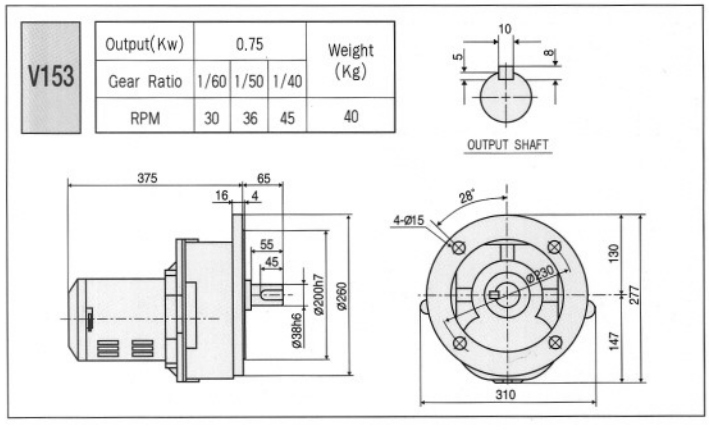
Output(Kw)	0.75				Weight (Kg)
Gear Ratio	1/30	1/20	1/15	1/10	
RPM	60	90	120	180	29



0.75Kw (1 HP, 1-Phase 단상)

V153

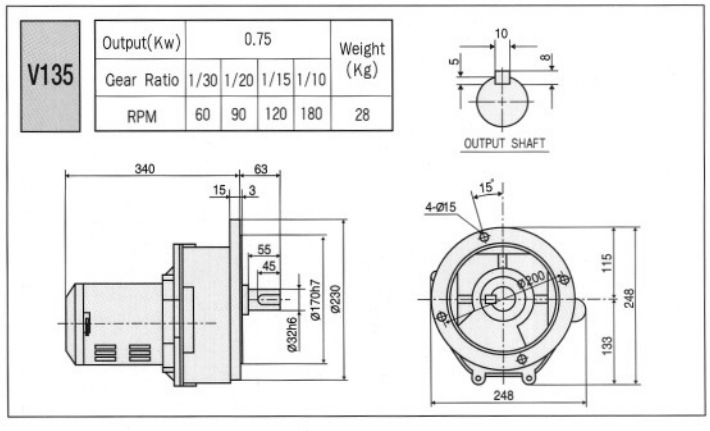
Output(Kw)	0.75			Weight (Kg)
Gear Ratio	1/60	1/50	1/40	
RPM	30	36	45	40



V.T GEARED MOTOR

V135

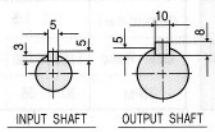
Output(Kw)	0.75				Weight (Kg)
Gear Ratio	1/30	1/20	1/15	1/10	
RPM	60	90	120	180	28

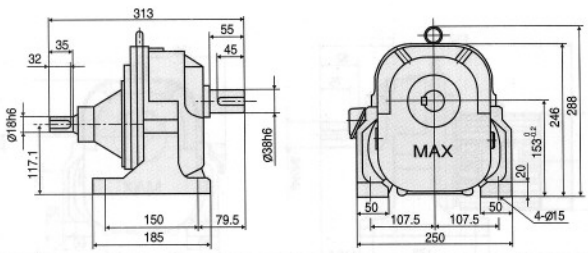


0.75Kw (1 HP)

L153

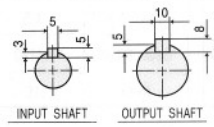
Output(Kw)	0.75			Weight (Kg)
Gear Ratio	1/120	1/60	1/40	
RPM	15	30	45	29

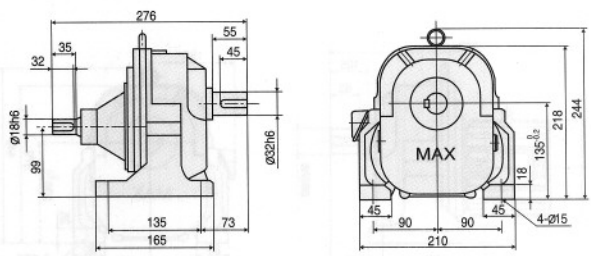




L135

Output(Kw)	0.75				Weight (Kg)
Gear Ratio	1/30	1/20	1/15	1/10	
RPM	60	90	120	180	20



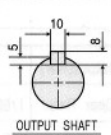


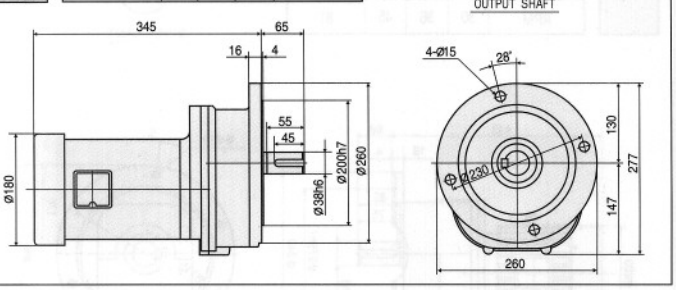
V.T GEARED MOTOR

0.75Kw (1 HP, 3-Phase 삼상)

V153

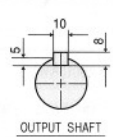
Output(Kw)	0.75			Weight (Kg)
Gear Ratio	1/60	1/50	1/40	
RPM	30	36	45	36

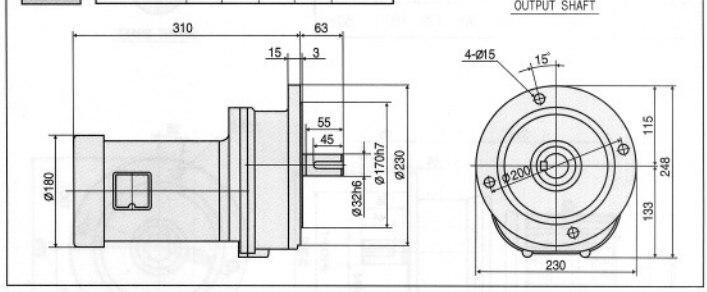




V135

Output(Kw)	0.75				Weight (Kg)
Gear Ratio	1/30	1/20	1/15	1/10	
RPM	60	90	120	180	19



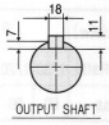


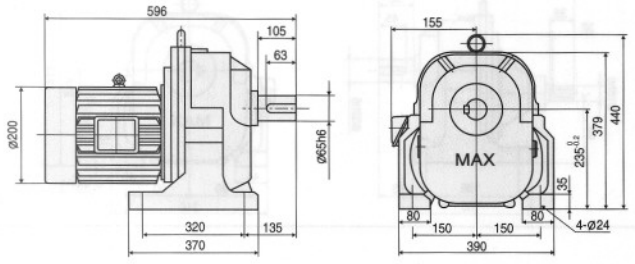
GEARED MOTOR

1.5Kw (2 HP, 3-Phase 삼상)

F235

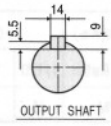
Output(Kw)	1.5	Weight (Kg)
Gear Ratio	1/120	
RPM	15	132

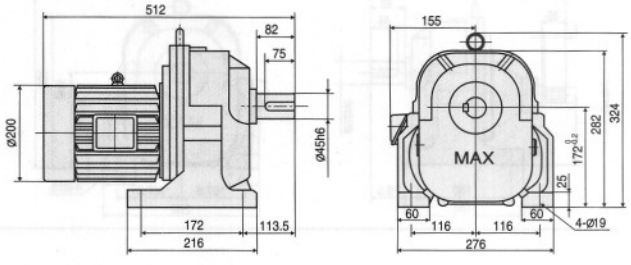




F172

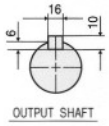
Output(Kw)	1.5			Weight (Kg)
Gear Ratio	1/60	1/50	1/45	
RPM	30	36	45	65

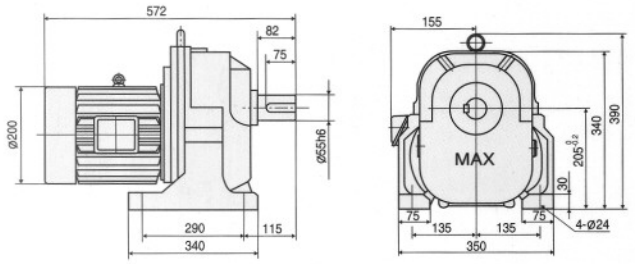




F205

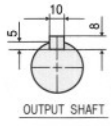
Output(Kw)	1.5	Weight (Kg)
Gear Ratio	1/90	
RPM	20	98

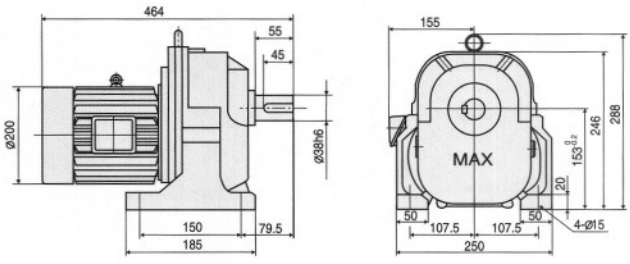




F153

Output(Kw)	1.5				Weight (Kg)
Gear Ratio	1/30	1/20	1/15	1/10	
RPM	60	90	120	180	51



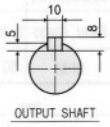


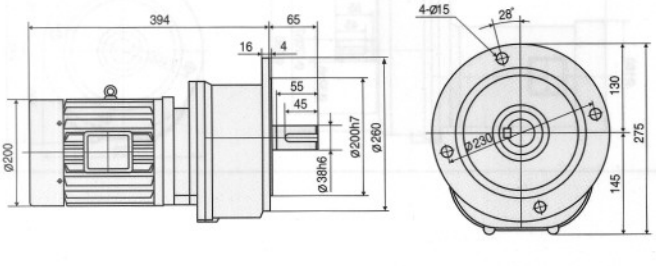
V.T GEARED MOTOR

1.5Kw (2 HP, 3-Phase 삼상)

V153

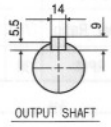
Output(Kw)	1.5				Weight (Kg)
Gear Ratio	1/30	1/20	1/15	1/10	
RPM	60	90	120	180	50

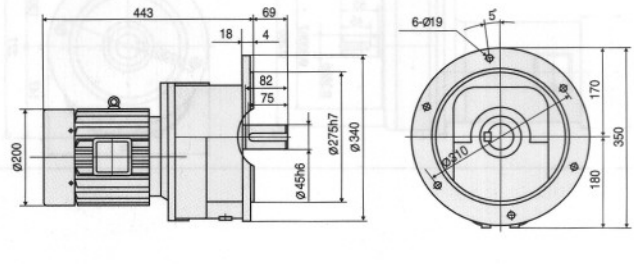




V172

Output(Kw)	1.5			Weight (Kg)
Gear Ratio	1/60	1/50	1/45	
RPM	30	36	45	81

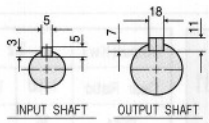


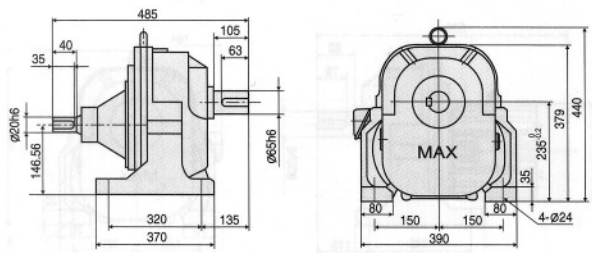


1.5Kw (2 HP)

L235

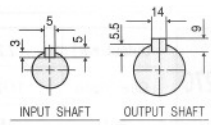
Output(Kw)	1.5	Weight (Kg)
Gear Ratio	1/120	
RPM	15	114

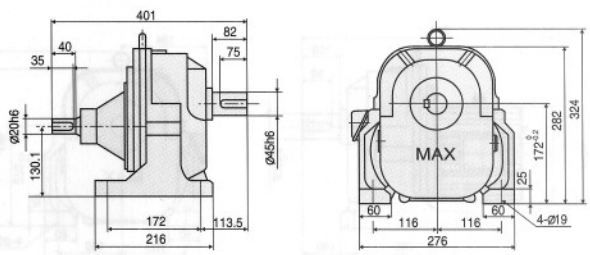




L172

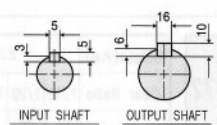
Output(Kw)	1.5			Weight (Kg)
Gear Ratio	1/60	1/50	1/45	
RPM	30	36	45	43

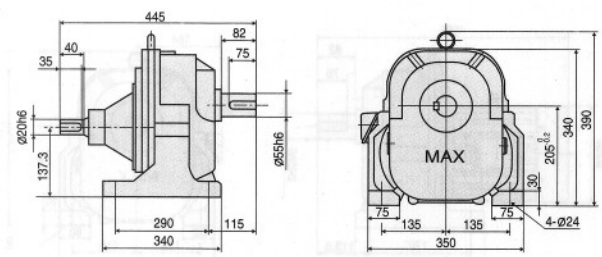




L205

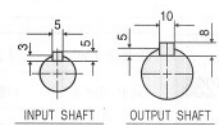
Output(Kw)	1.5	Weight (Kg)
Gear Ratio	1/90	
RPM	20	78

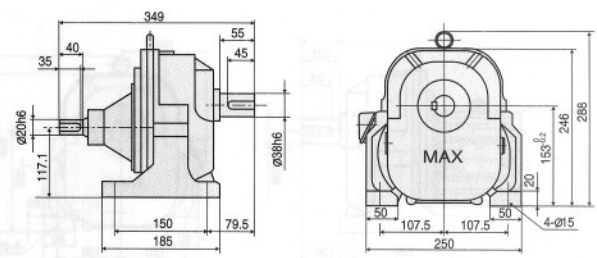




L153

Output(Kw)	1.5				Weight (Kg)
Gear Ratio	1/30	1/20	1/15	1/10	
RPM	60	90	120	180	27



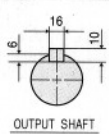


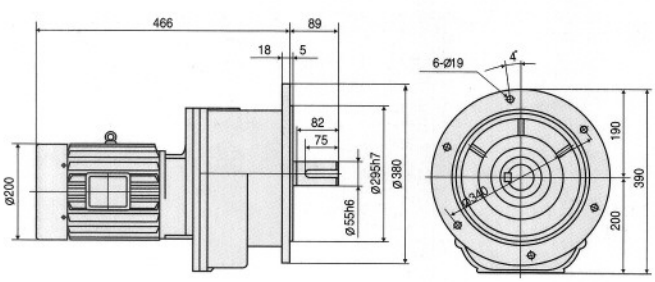
V.T GEARED MOTOR

1.5Kw (2 HP, 3-Phase 삼상)

V205

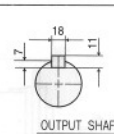
Output(Kw)	1.5	Weight (Kg)
Gear Ratio	1/90	
RPM	20	102

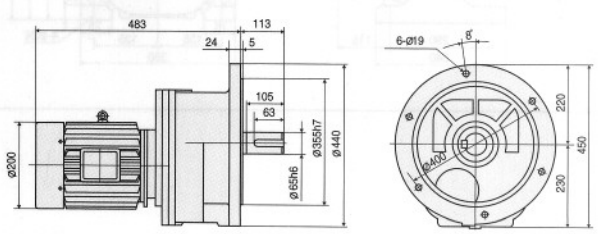


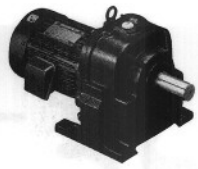


V235

Output(Kw)	1.5	Weight (Kg)
Gear Ratio	1/120	
RPM	15	140





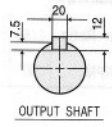


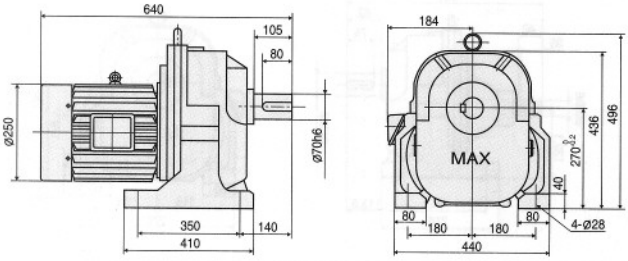
GEARED MOTOR

2.2Kw (3 HP, 3-Phase 삼상)

F270

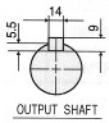
Output(Kw)	2.2	Weight (Kg)
Gear Ratio	1/120	
RPM	15	181

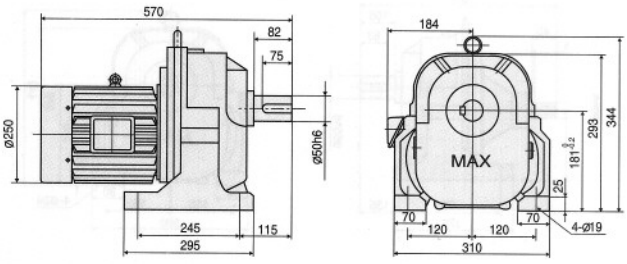




F181

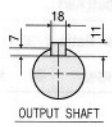
Output(Kw)	2.2		Weight (Kg)
Gear Ratio	1/50	1/40	
RPM	36	45	88

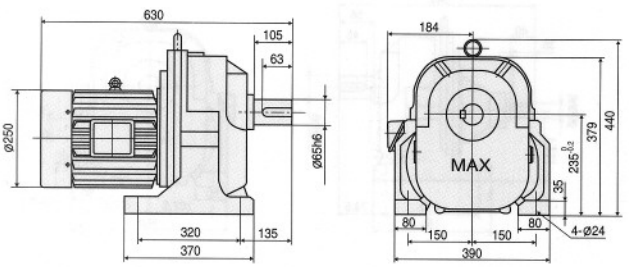




F235

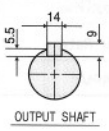
Output(Kw)	2.2	Weight (Kg)
Gear Ratio	1/90	
RPM	20	142

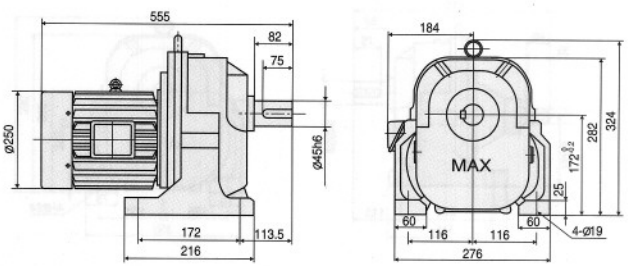




F172

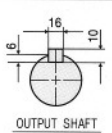
Output(Kw)	2.2				Weight (Kg)
Gear Ratio	1/30	1/20	1/15	1/10	
RPM	60	90	120	180	73

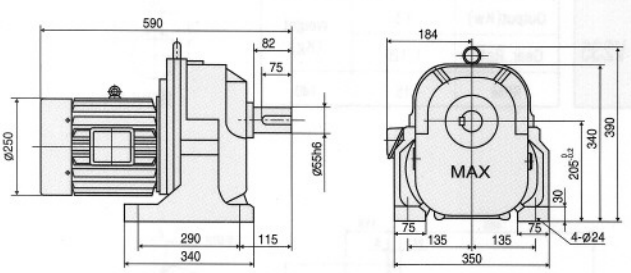




F205

Output(Kw)	2.2	Weight (Kg)
Gear Ratio	1/60	
RPM	30	113

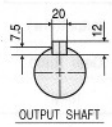


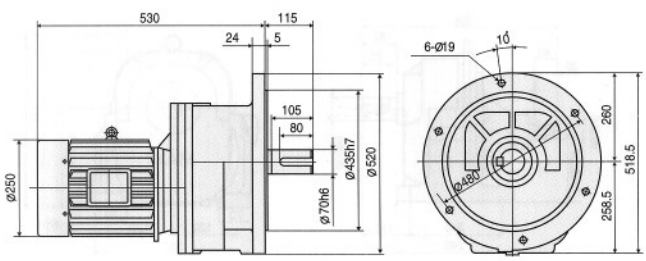


2.2Kw (3 HP, 3-Phase 삼상)

V270

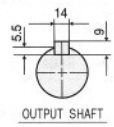
Output(Kw)	2.2	Weight (Kg)
Gear Ratio	1/120	
RPM	15	185

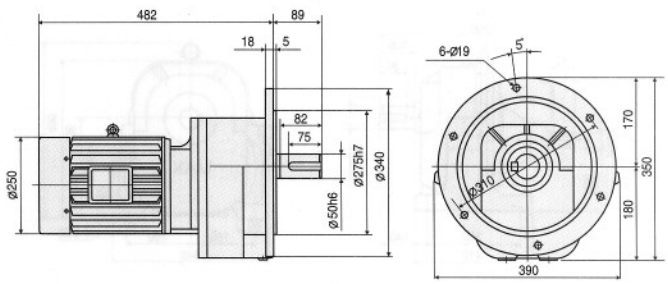




V181

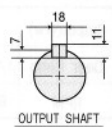
Output(Kw)	2.2		Weight (Kg)
Gear Ratio	1/50	1/40	
RPM	36	45	92

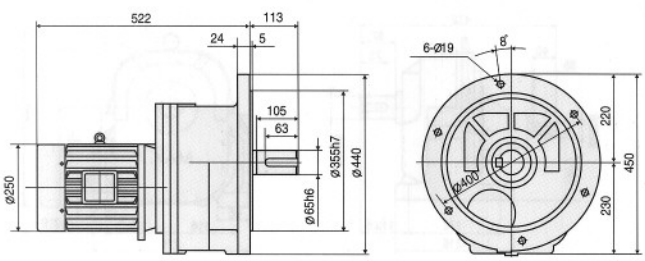




V235

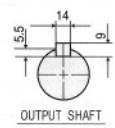
Output(Kw)	2.2	Weight (Kg)
Gear Ratio	1/90	
RPM	20	145

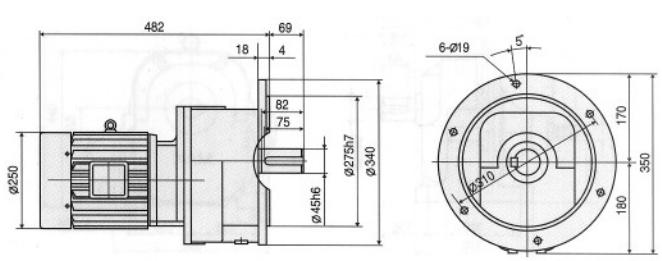




V172

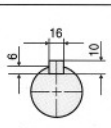
Output(Kw)	2.2				Weight (Kg)
Gear Ratio	1/30	1/20	1/15	1/10	
RPM	60	90	120	180	85

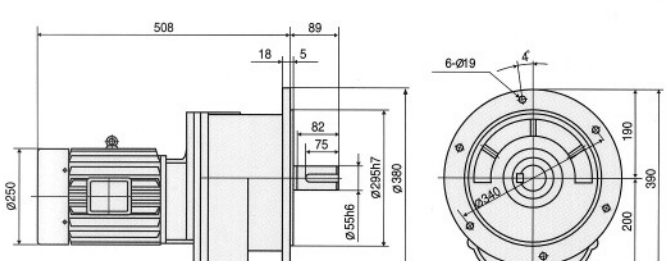


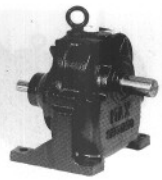


V205

Output(Kw)	2.2	Weight (Kg)
Gear Ratio	1/60	
RPM	30	115



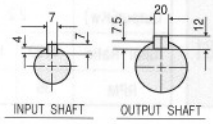


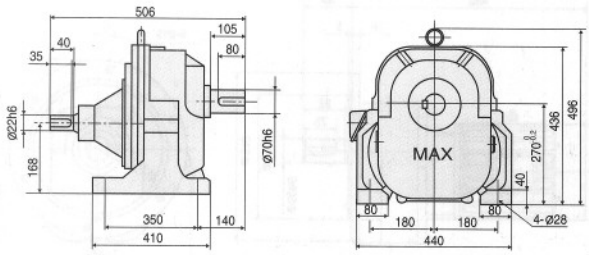


2.2Kw (3 HP)

L270

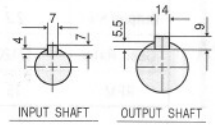
Output(Kw)	2.2	Weight (Kg)
Gear Ratio	1/120	
RPM	15	153

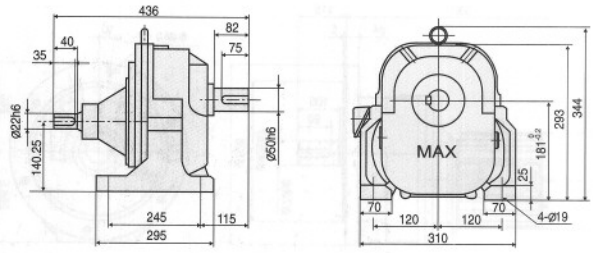




L181

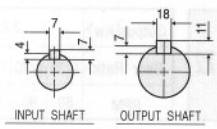
Output(Kw)	2.2		Weight (Kg)
Gear Ratio	1/50	1/40	
RPM	36	45	59

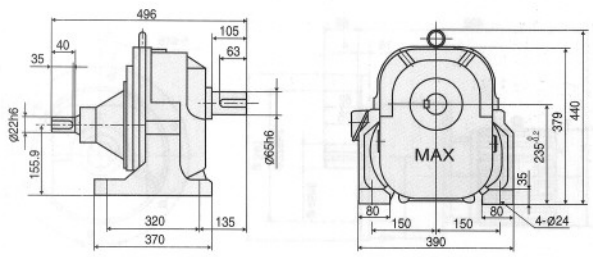




L235

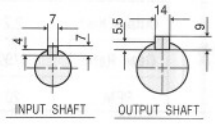
Output(Kw)	2.2	Weight (Kg)
Gear Ratio	1/90	
RPM	20	135

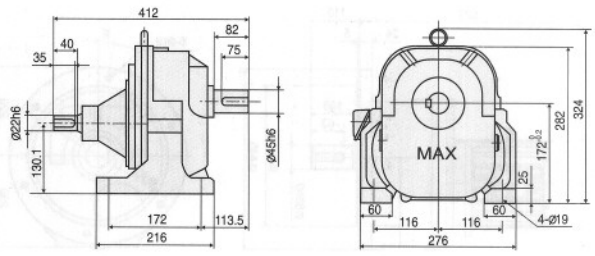




L172

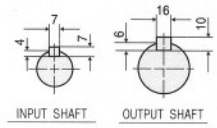
Output(Kw)	2.2			Weight (Kg)
Gear Ratio	1/30	1/20	1/10	
RPM	60	90	180	45

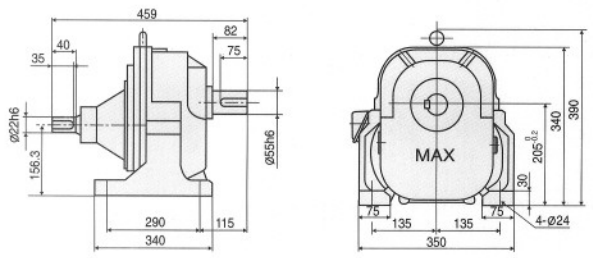


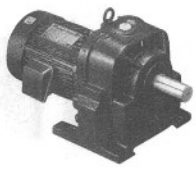


L205

Output(Kw)	2.2	Weight (Kg)
Gear Ratio	1/60	
RPM	30	83



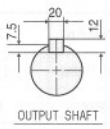


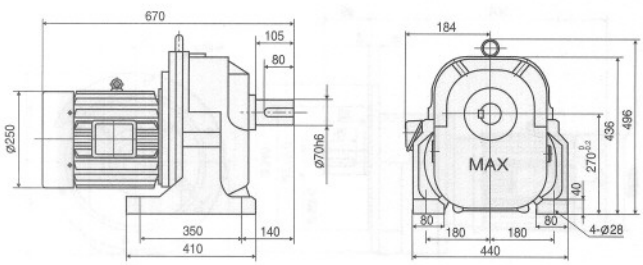


3.7Kw (5HP, 3-Phase 삼상)

F270

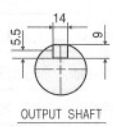
Output(Kw)	3.7	Weight (Kg)
Gear Ratio	1/90	
RPM	20	184

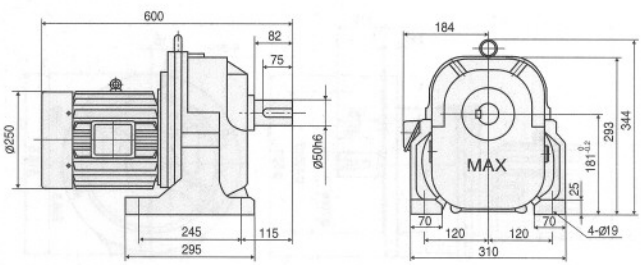




F181

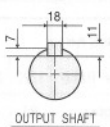
Output(Kw)	3.7	Weight (Kg)
Gear Ratio	1/30	
RPM	60	98

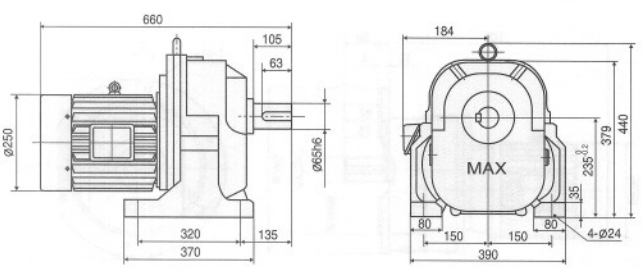




F235

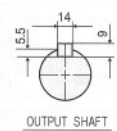
Output(Kw)	3.7	Weight (Kg)
Gear Ratio	1/60	
RPM	30	150

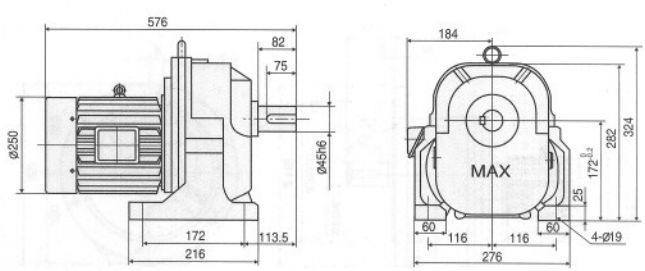




F172

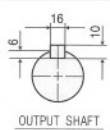
Output(Kw)	3.7			Weight (Kg)
Gear Ratio	1/20	1/15	1/10	
RPM	90	120	180	80

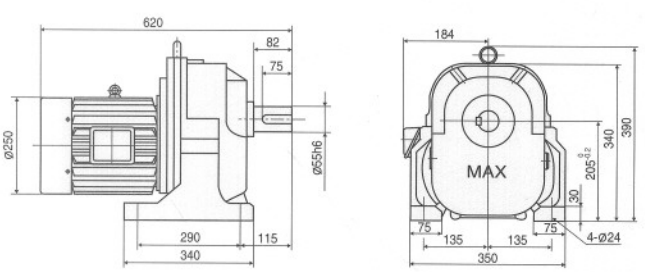




F205

Output(Kw)	3.7		Weight (Kg)
Gear Ratio	1/50	1/40	
RPM	36	45	118



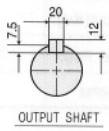


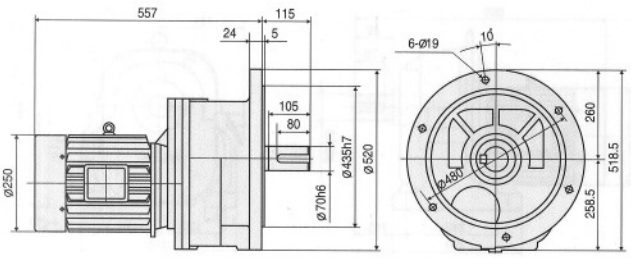
V.T GEARED MOTOR

3.7Kw (5 HP, 3-Phase 삼상)

V270

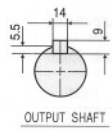
Output(Kw)	3.7	Weight (Kg)
Gear Ratio	1/90	
RPM	20	188

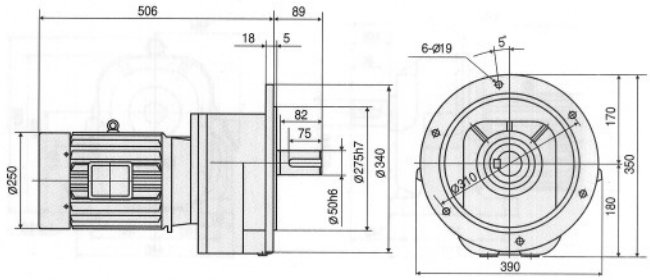




V181

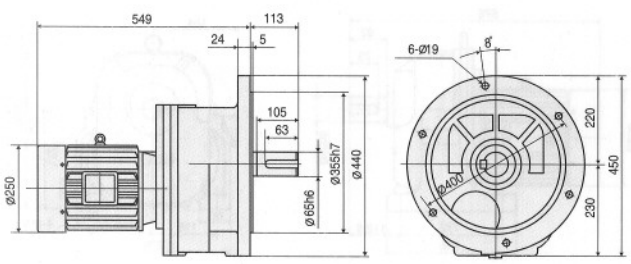
Output(Kw)	3.7	Weight (Kg)
Gear Ratio	1/30	
RPM	60	95





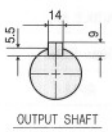
V235

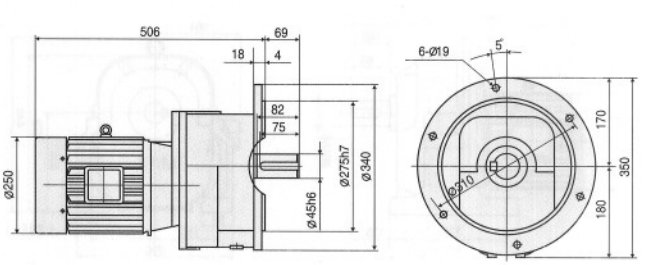
Output(Kw)	3.7	Weight (Kg)
Gear Ratio	1/60	
RPM	30	148



V172

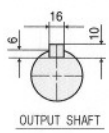
Output(Kw)	3.7			Weight (Kg)
Gear Ratio	1/20	1/15	1/10	
RPM	90	120	180	89

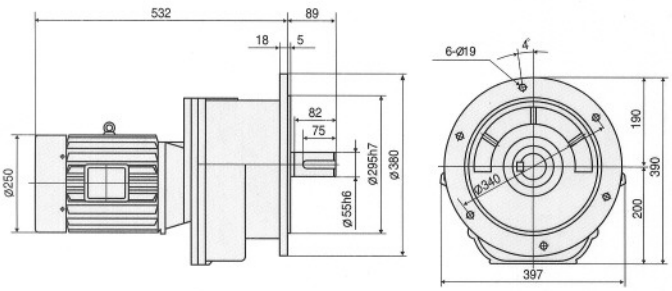




V205

Output(Kw)	3.7		Weight (Kg)
Gear Ratio	1/50	1/40	
RPM	36	45	118

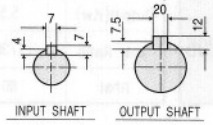


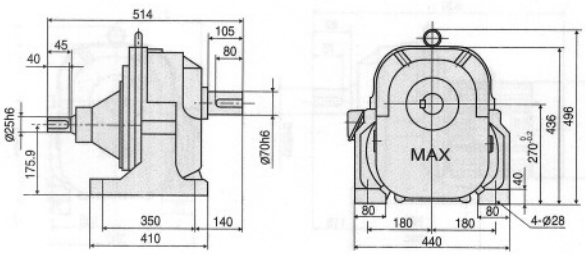


3.7Kw (5HP)

L270

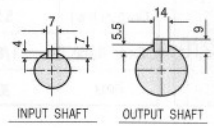
Output(Kw)	3.7	Weight (Kg)
Gear Ratio	1/90	
RPM	20	155

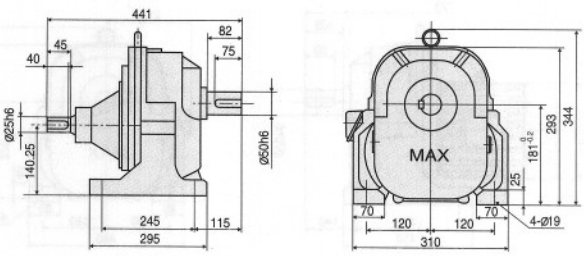




L181

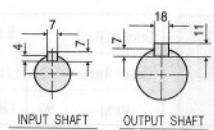
Output(Kw)	3.7	Weight (Kg)
Gear Ratio	1/30	
RPM	60	88

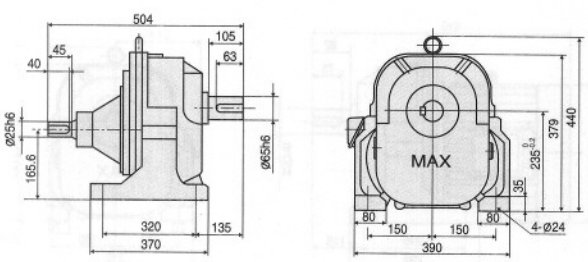




L235

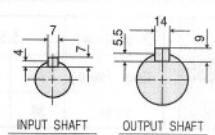
Output(Kw)	3.7	Weight (Kg)
Gear Ratio	1/60	
RPM	30	121

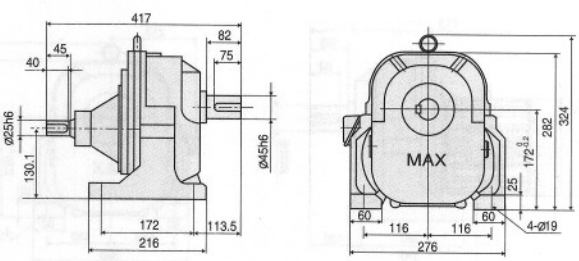




L172

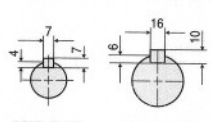
Output(Kw)	3.7			Weight (Kg)
Gear Ratio	1/20	1/15	1/10	
RPM	90	120	180	74

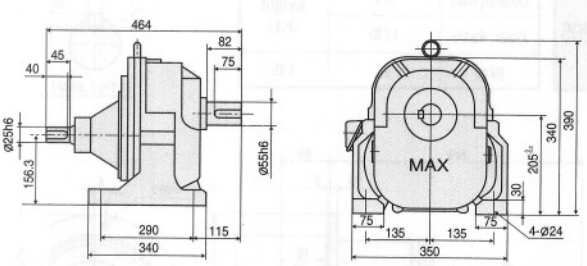




L205

Output(Kw)	3.7		Weight (Kg)
Gear Ratio	1/50	1/40	
RPM	36	40	86



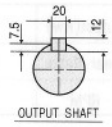


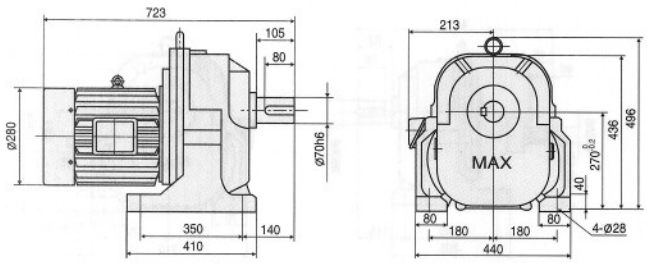
GEARED MOTOR

5.5Kw (7.5HP, 3-Phase 삼상)

F270

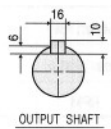
Output(Kw)	5.5	Weight (Kg)
Gear Ratio	1/60	
RPM	30	188

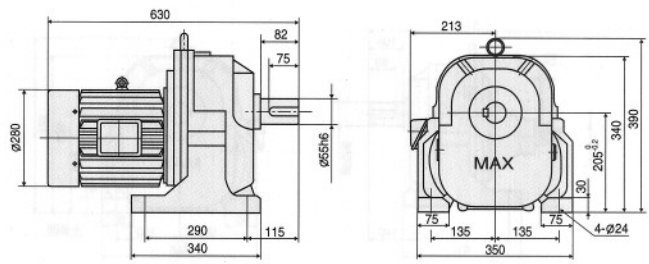




F205

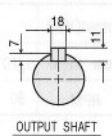
Output(Kw)	5.5	Weight (Kg)
Gear Ratio	1/30	
RPM	60	135

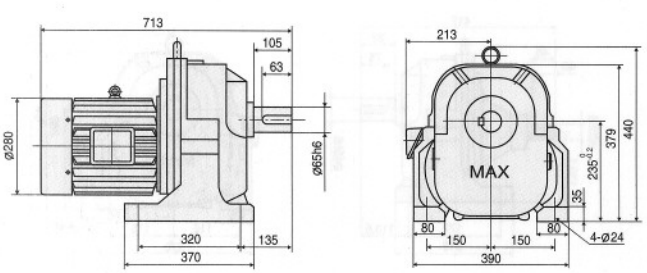




F235

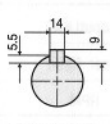
Output(Kw)	5.5		Weight (Kg)
Gear Ratio	1/50	1/40	
RPM	36	45	150

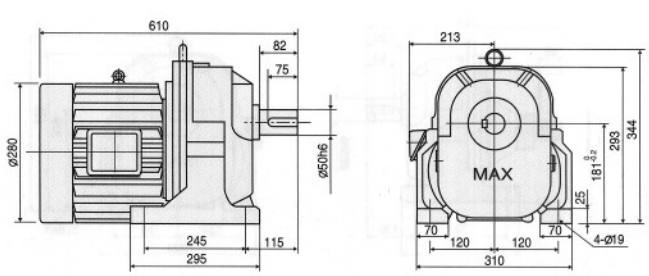




F181

Output(Kw)	5.5			Weight (Kg)
Gear Ratio	1/20	1/15	1/10	
RPM	90	120	180	118



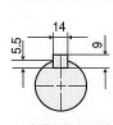


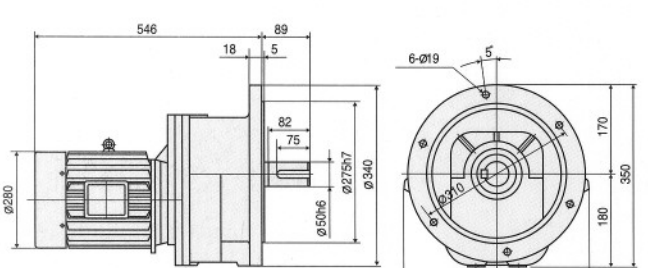
V.T GEARED MOTOR

5.5Kw (7.5 HP, 3-Phase 삼상)

V181

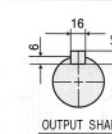
Output(Kw)	5.5			Weight (Kg)
Gear Ratio	1/20	1/15	1/10	
RPM	90	120	180	105

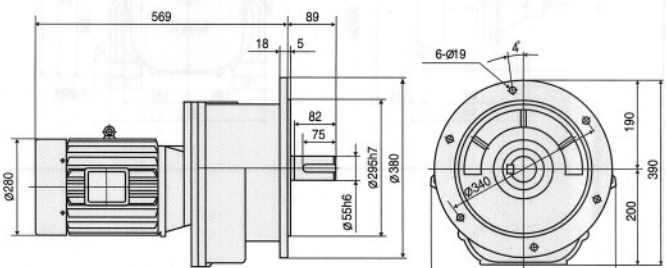


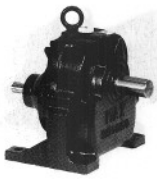


V205

Output(Kw)	5.5	Weight (Kg)
Gear Ratio	1/30	
RPM	60	135



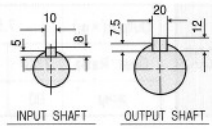


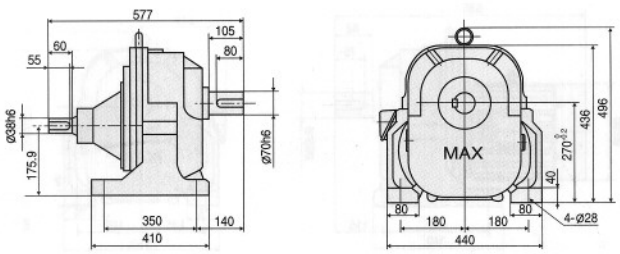


5.5Kw (7.5HP)

L270

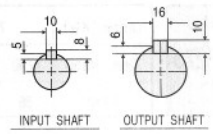
Output(Kw)	5.5	Weight (Kg)
Gear Ratio	1/60	
RPM	30	132

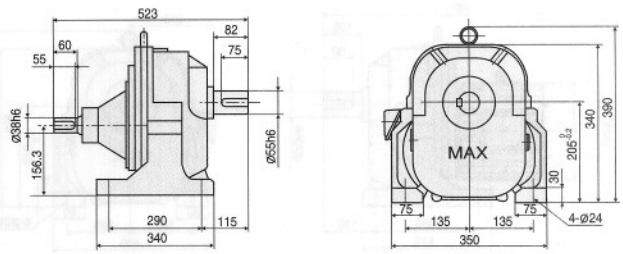




L205

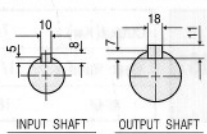
Output(Kw)	5.5	Weight (Kg)
Gear Ratio	1/30	
RPM	60	84

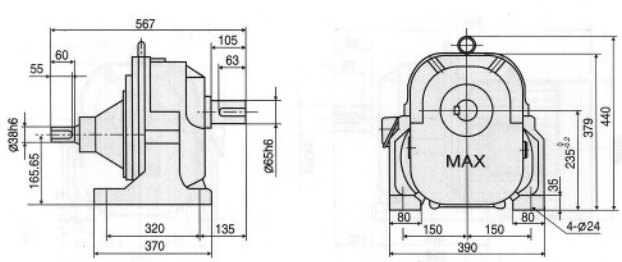




L235

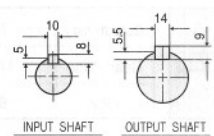
Output(Kw)	5.5		Weight (Kg)
Gear Ratio	1/50	1/40	
RPM	36	45	98

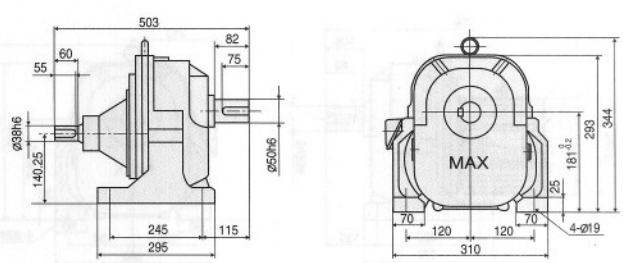




L181

Output(Kw)	5.5			Weight (Kg)
Gear Ratio	1/20	1/15	1/10	
RPM	90	120	180	60



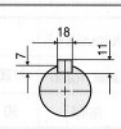


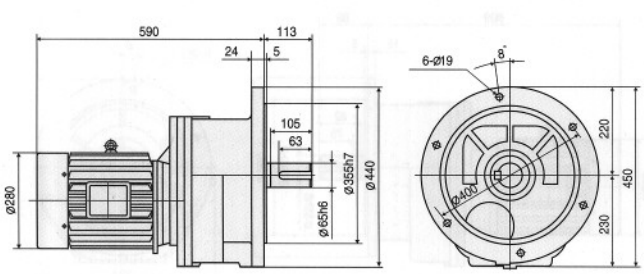
V.T GEARED MOTOR

5.5Kw (7.5 HP, 3-Phase 삼상)

V235

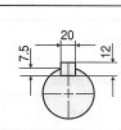
Output(Kw)	5.5		Weight (Kg)
Gear Ratio	1/50	1/40	
RPM	36	45	152

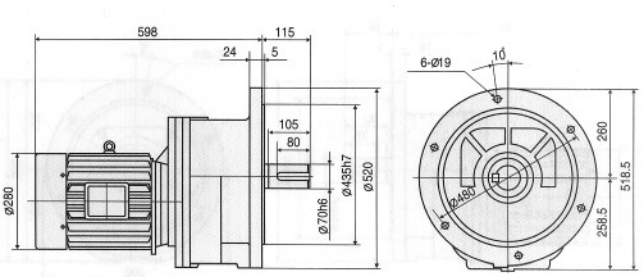




V270

Output(Kw)	5.5	Weight (Kg)
Gear Ratio	1/60	
RPM	30	190



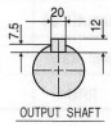


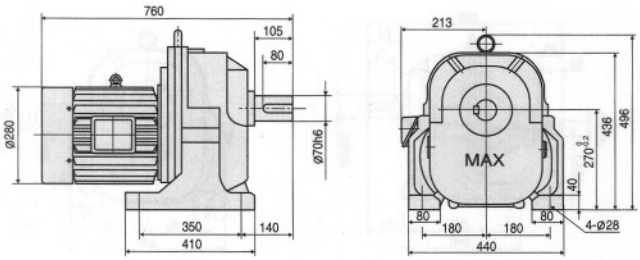
GEARED MOTOR

7.5Kw (10HP, 3-Phase 삼상)

F270

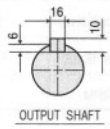
Output(Kw)	7.5		Weight (Kg)
Gear Ratio	1/50	1/40	
RPM	36	45	200

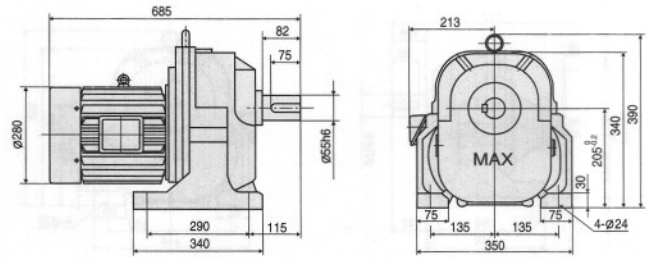




F205

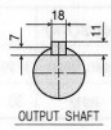
Output(Kw)	7.5		Weight (Kg)
Gear Ratio	1/20	1/15	
RPM	90	120	149

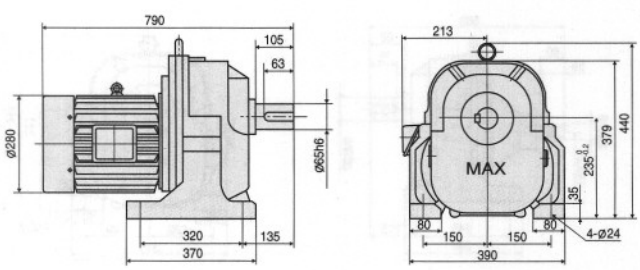




F235

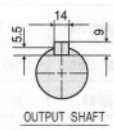
Output(Kw)	7.5	Weight (Kg)
Gear Ratio	1/30	
RPM	60	164

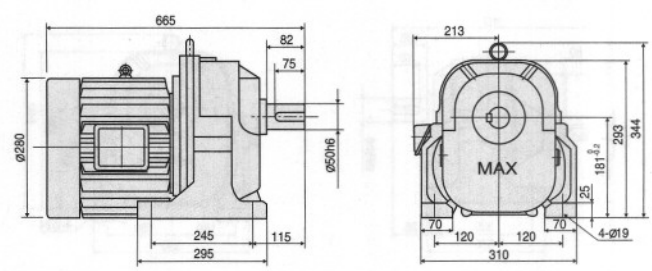




F181

Output(Kw)	7.5	Weight (Kg)
Gear Ratio	1/10	
RPM	180	132



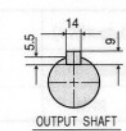


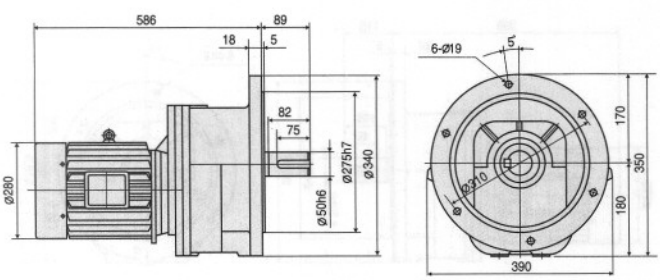
V.T GEARED MOTOR

7.5Kw (10HP, 3-Phase 삼상)

V181

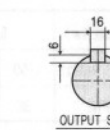
Output(Kw)	7.5	Weight (Kg)
Gear Ratio	1/10	
RPM	180	132

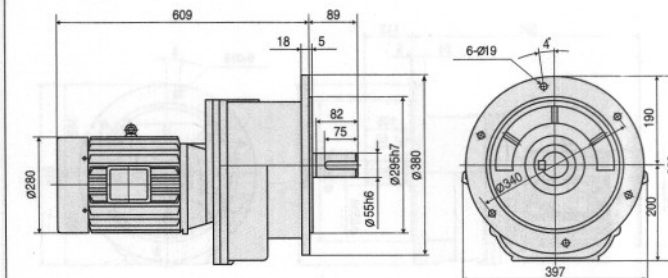




V205

Output(Kw)	7.5		Weight (Kg)
Gear Ratio	1/20	1/15	
RPM	90	120	149

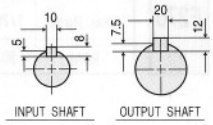


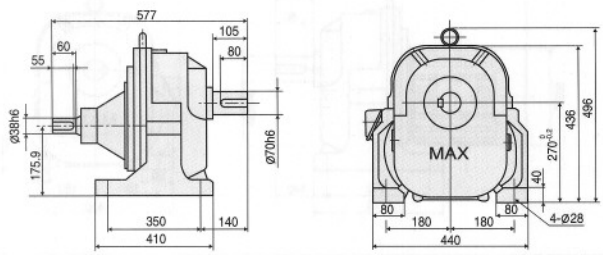


7.5Kw (10HP)

L270

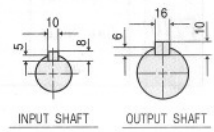
Output(Kw)	7.5		Weight (Kg)
Gear Ratio	1/50	1/40	
RPM	36	45	132

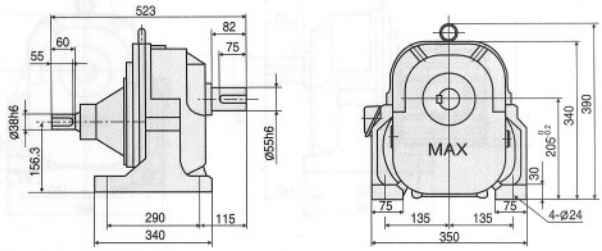




L205

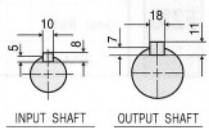
Output(Kw)	7.5		Weight (Kg)
Gear Ratio	1/20	1/15	
RPM	90	120	84

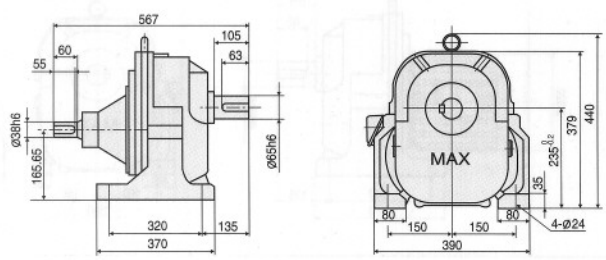




L235

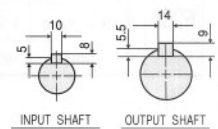
Output(Kw)	7.5	Weight (Kg)
Gear Ratio	1/30	
RPM	60	98

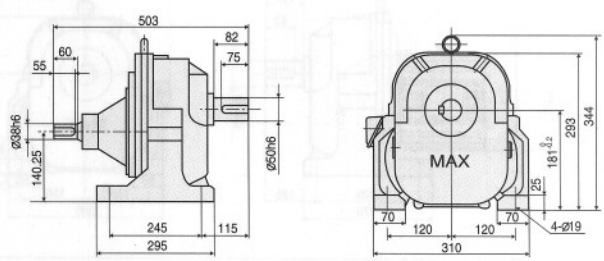




L181

Output(Kw)	7.5	Weight (Kg)
Gear Ratio	1/10	
RPM	180	60



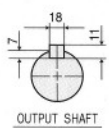


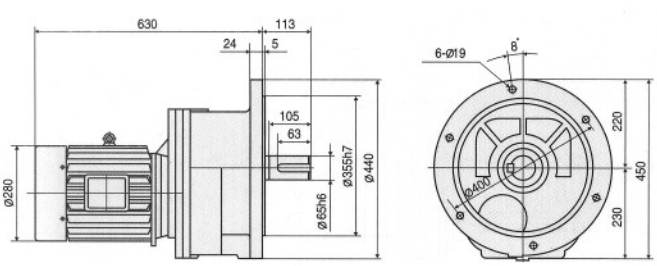
V.T GEARED MOTOR

7.5Kw (10HP, 3-Phase 삼상)

V235

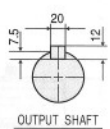
Output(Kw)	7.5	Weight (Kg)
Gear Ratio	1/30	
RPM	60	164

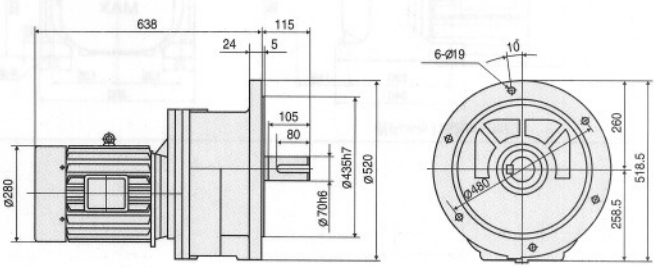




V270

Output(Kw)	7.5		Weight (Kg)
Gear Ratio	1/50	1/40	
RPM	36	45	200





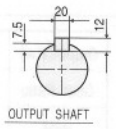
SAMYANG

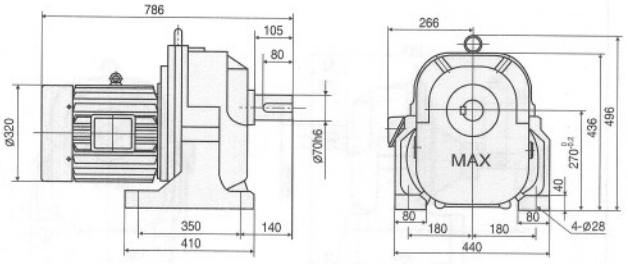
GEARED MOTOR

11Kw (15HP, 3-Phase 삼상)

F270

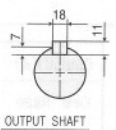
Output(Kw)	11	Weight (Kg)
Gear Ratio	1/30	
RPM	60	220

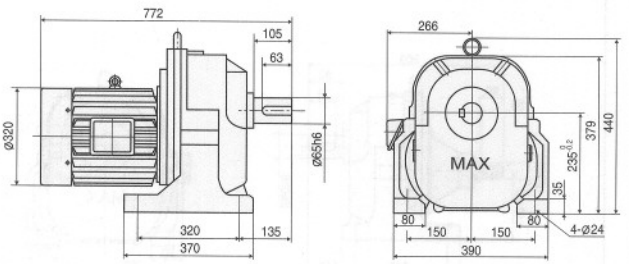




F235

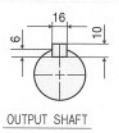
Output(Kw)	11		Weight (Kg)
Gear Ratio	1/20	1/15	
RPM	90	120	197

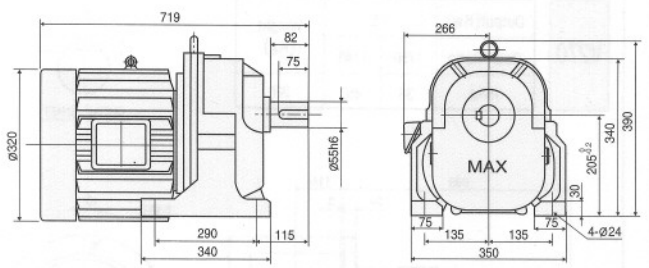




F205

Output(Kw)	11	Weight (Kg)
Gear Ratio	1/10	
RPM	180	180



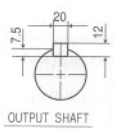


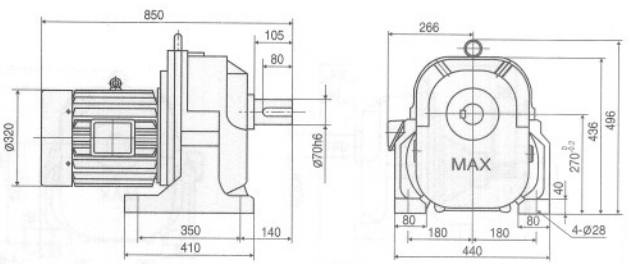
(모터가 바닥보다 4mm낮음)

15Kw (20HP, 3-Phase 삼상)

F270

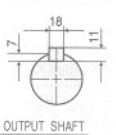
Output(Kw)	15		Weight (Kg)
Gear Ratio	1/20	1/15	
RPM	90	120	240

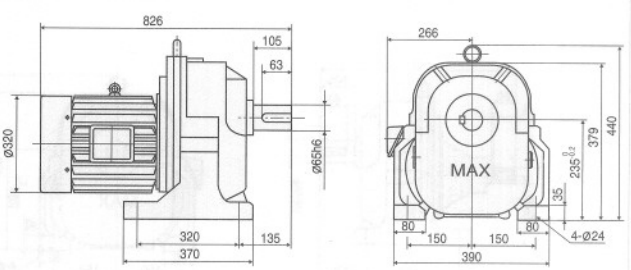




F235

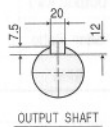
Output(Kw)	15	Weight (Kg)
Gear Ratio	1/10	
RPM	180	225

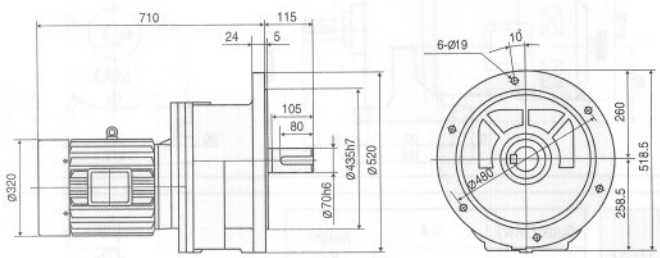




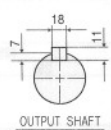
11Kw (15HP, 3-Phase 삼상)

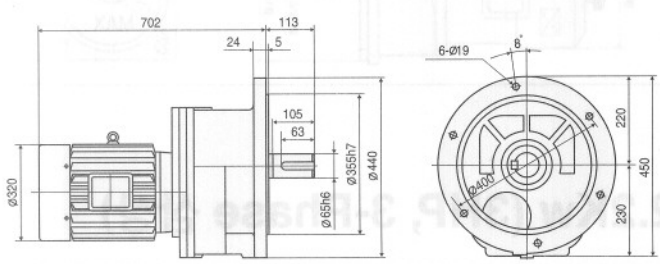
V270	Output(Kw)	11	Weight (Kg)
	Gear Ratio	1/30	
	RPM	60	220



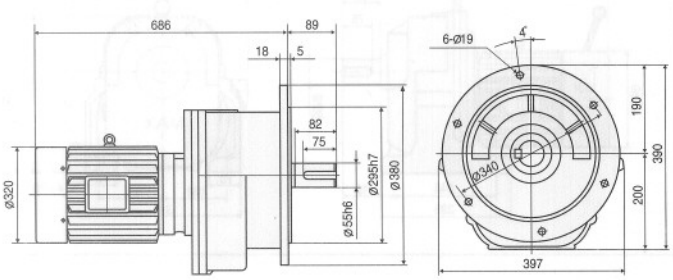


V235	Output(Kw)	11		Weight (Kg)
	Gear Ratio	1/20	1/15	
	RPM	90	120	197



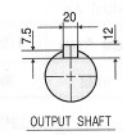


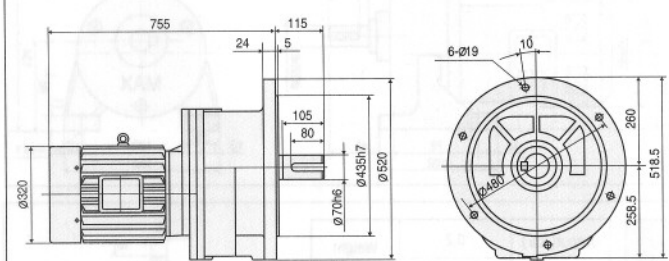
V205	Output(Kw)	11	Weight (Kg)
	Gear Ratio	1/10	
	RPM	180	180



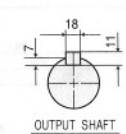
15Kw (20HP, 3-Phase 삼상)

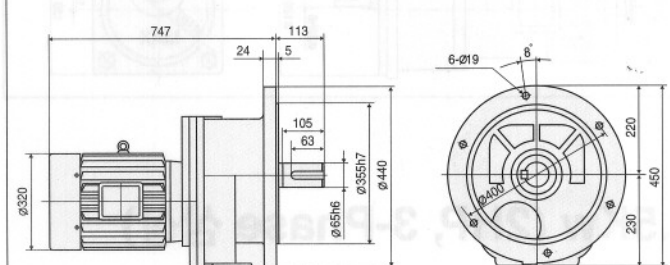
V270	Output(Kw)	15		Weight (Kg)
	Gear Ratio	1/20	1/15	
	RPM	90	120	240





V235	Output(Kw)	15	Weight (Kg)
	Gear Ratio	1/10	
	RPM	180	225

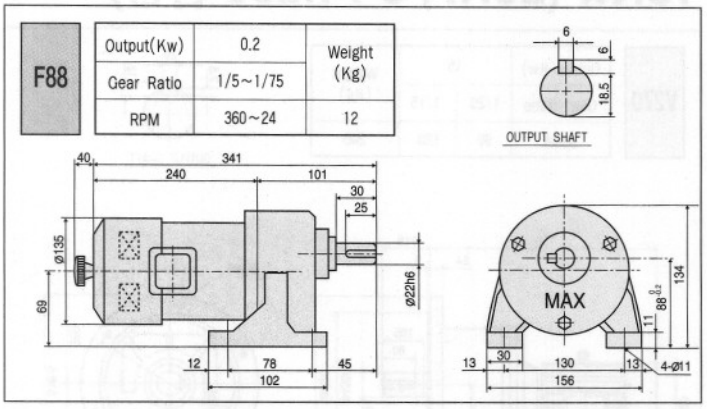




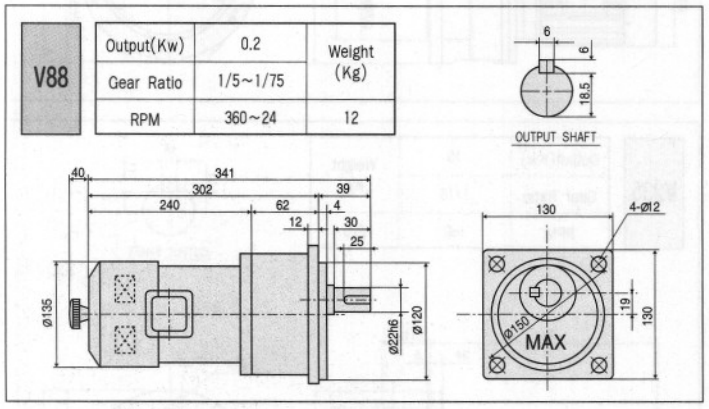
GEARED MOTOR (주차기 전용 BRAKE 부착형)

0.2Kw (1/4 HP, 3-Phase 삼상)

F88	Output(Kw)	0.2	Weight (Kg)
	Gear Ratio	1/5~1/75	
	RPM	360~24	12

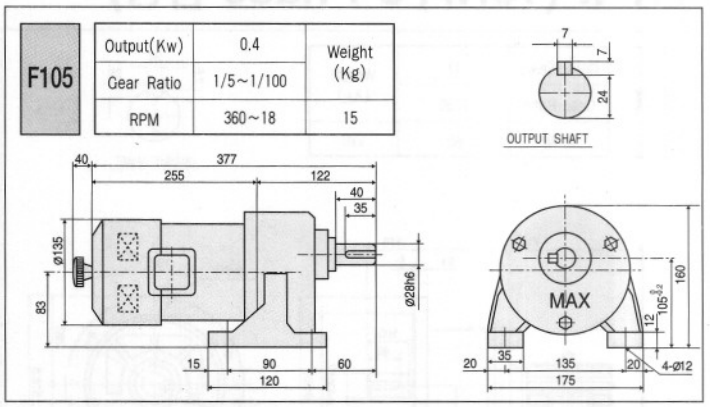


V88	Output(Kw)	0.2	Weight (Kg)
	Gear Ratio	1/5~1/75	
	RPM	360~24	12

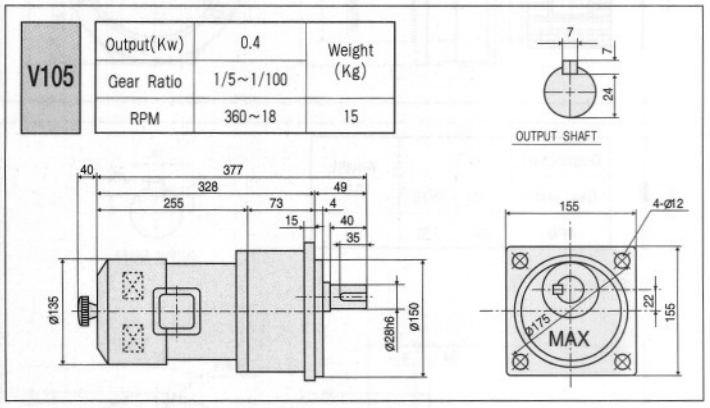


0.4Kw (1/2 HP, 3-Phase 삼상)

F105	Output(Kw)	0.4	Weight (Kg)
	Gear Ratio	1/5~1/100	
	RPM	360~18	15

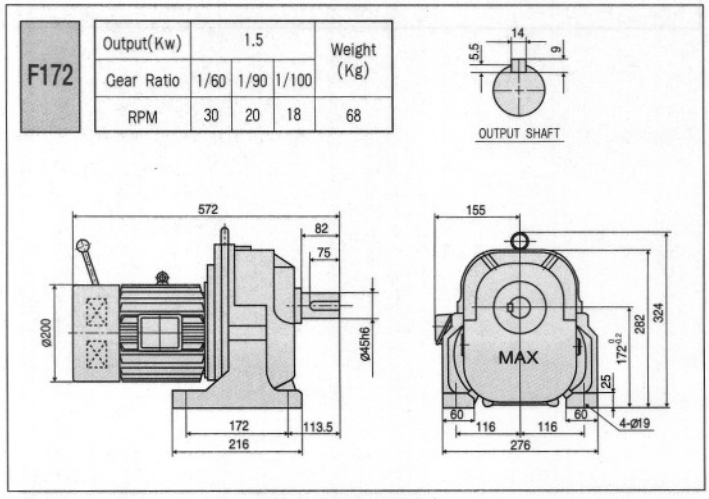


V105	Output(Kw)	0.4	Weight (Kg)
	Gear Ratio	1/5~1/100	
	RPM	360~18	15



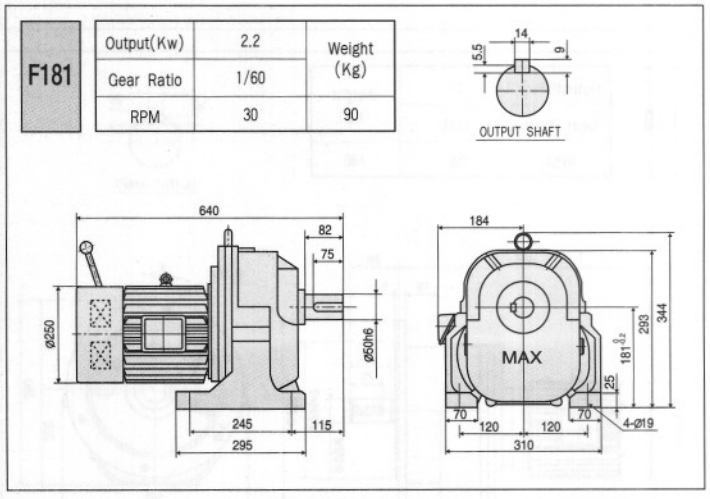
1.5Kw (2HP, 3-Phase 삼상)

F172	Output(Kw)	1.5			Weight (Kg)
	Gear Ratio	1/60	1/90	1/100	
	RPM	30	20	18	68



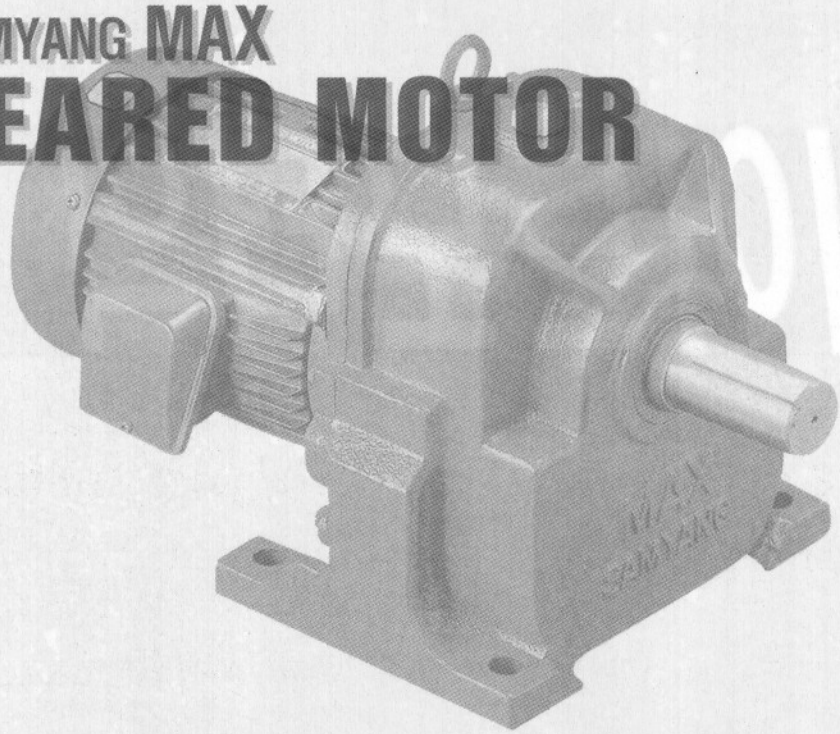
2.2Kw (3HP, 3-Phase 삼상)

F181	Output(Kw)	2.2	Weight (Kg)
	Gear Ratio	1/60	
	RPM	30	90



※ 총기장 치수는 DC-B브레이크 취부시 적용한 것입니다.
AC-B브레이크 취부시는 본사에 문의 바랍니다.

SAMYANG MAX
GEARED MOTOR




기어드모터의 강자