

# SAMYANG MAX GEARED MOTOR



MG

88

1/4HP

60

VS

N

R000

M001

1

형 변

|        |               |
|--------|---------------|
| 88     | 88형           |
| 105    | 105형          |
| 105C   | 105C형         |
| 135    | 135형          |
| 153    | 153형          |
| 153105 | 153과 105의 조합형 |
| 172    | 172형          |
| 172105 | 172와 105의 조합형 |
| 180    | 181형          |
| 181135 | 181과 135의 조합형 |
| 181153 | 181과 153의 조합형 |
| 205    | 205형          |
| 205153 | 205와 153의 조합형 |
| 235    | 235형          |
| 270    | 270형          |
| 270172 | 270과 172의 조합형 |

동 력

|       |               |
|-------|---------------|
| 1/4HP | 1/4HP = 0,2kW |
| 1/2HP | 1/2HP = 0,4kW |
| 1HP   | 1HP = 0,75kW  |
| 2HP   | 2HP = 1,5kW   |
| 3HP   | 3HP = 2,2kW   |
| 5HP   | 5HP = 3,7kW   |
| 7,5HP | 7,5HP = 5,2kW |
| 10HP  | 10HP = 7,5kW  |
| 15HP  | 15HP = 10,2kW |
| 20HP  | 20HP = 15,0kW |

비 율

|      |        |
|------|--------|
| 3    | 1:3    |
| 4    | 1:4    |
| 5    | 1:5    |
| 5,5  | 1:5,5  |
| 6    | 1:6    |
| 6,5  | 1:6,5  |
| 6    | 1:6    |
| 7    | 1:7    |
| 7,5  | 1:7,5  |
| 8    | 1:8    |
| 9    | 1:9    |
| 10   | 1:10   |
| 15   | 1:15   |
| 20   | 1:20   |
| 23   | 1:23   |
| 25   | 1:25   |
| 30   | 1:30   |
| 35   | 1:35   |
| 40   | 1:40   |
| 45   | 1:45   |
| 50   | 1:50   |
| 60   | 1:60   |
| 70   | 1:70   |
| 75   | 1:75   |
| 80   | 1:80   |
| 90   | 1:90   |
| 100  | 1:100  |
| 120  | 1:120  |
| 130  | 1:130  |
| 150  | 1:150  |
| 180  | 1:180  |
| 200  | 1:200  |
| 240  | 1:240  |
| 250  | 1:250  |
| 280  | 1:280  |
| 160  | 1:160  |
| 300  | 1:300  |
| 350  | 1:350  |
| 360  | 1:360  |
| 400  | 1:400  |
| 450  | 1:450  |
| 500  | 1:500  |
| 600  | 1:600  |
| 720  | 1:720  |
| 800  | 1:800  |
| 900  | 1:900  |
| 1000 | 1:1000 |
| 1200 | 1:1200 |

품 질 등 급

- N 일반
- D 직거래
- S 소음주의
- P 파쇄

감 속 기 옵션

모 터 옵션

모 터 제 조 사

케 이 스타 일

- HT 수평삼상(Horizontal-T)
- VT 수직삼상(Vertical-T)
- H 수평단상(Horizontal-S)
- S 수직단상(Vertical-S)
- VS 수평LP(Horizontal-LP)
- HL 수직LP(Vertical-LP)

# 21세기를 선도하는 최고의 기술 최고의 품질



# Best Engineered and High Quality MAX leads the 21st Century

## ■ 특징

### ○ 모듈라 시스템

표준화된 전 부품을 반제품화하여 재고를 확보해 됨으로써  
수용가의 어떠한 요구 조건에도 새로이 설계함이 없이 필  
요부품을 조립하여 신속하게 공급해 드립니다.

### ○ 제품의 표준화

최신의 폭넓은 지식과 기술정보를 바탕으로 조립하며, 연  
결부분 등 각 부품을 표준화하여 수명이 반영구적이고 또  
한 경제적입니다.

### ○ 고정도, 고효율의 높은 신뢰도

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

### ○ 소형, 경량

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

### ○ 저렴한 가격

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

## ■ Features

### ○ 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.

### ○ 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.

### ○ High Precision, High Efficiency and High Reliability

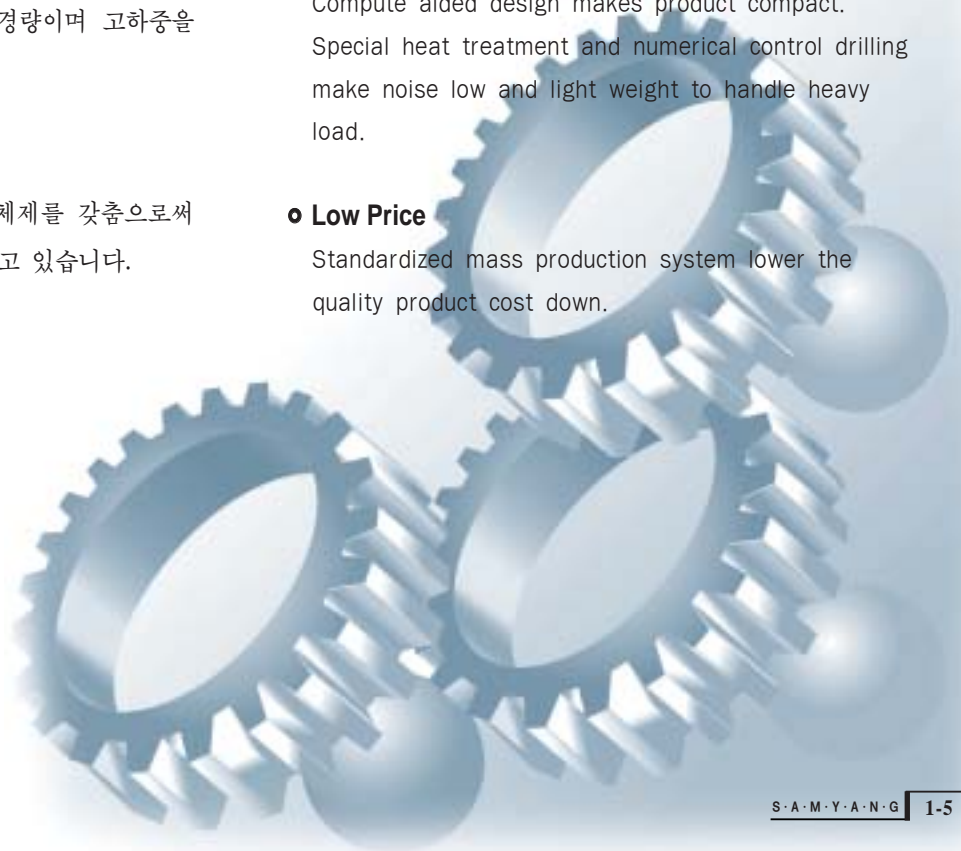
Newest high precision machines like shaving drill  
machine are used to ensure product precision,  
efficiency and reliability.

### ○ 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.

### ○ Low Price

Standardized mass production system lower the  
quality product cost down.

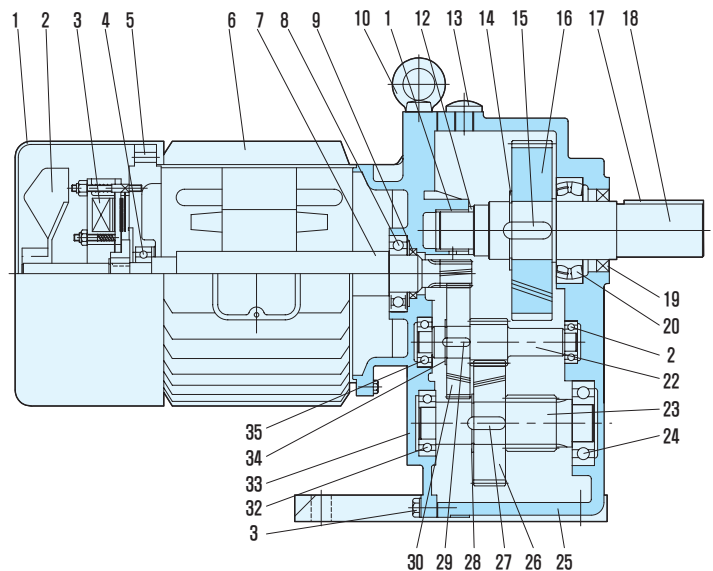
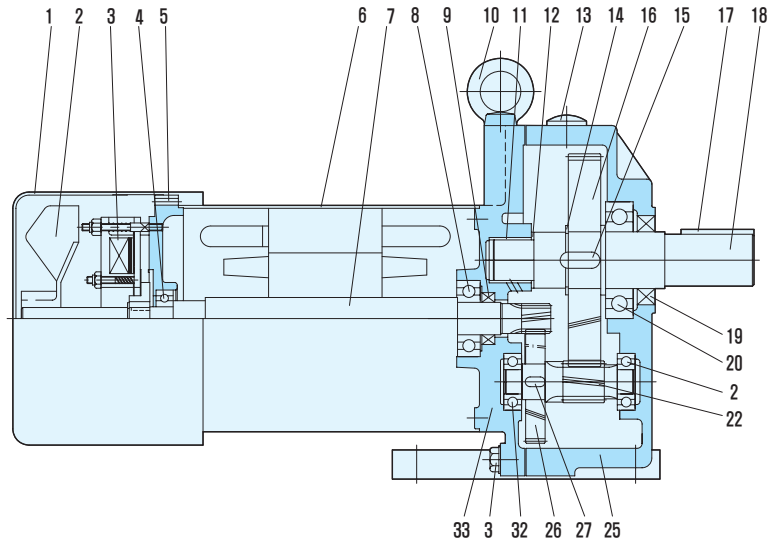
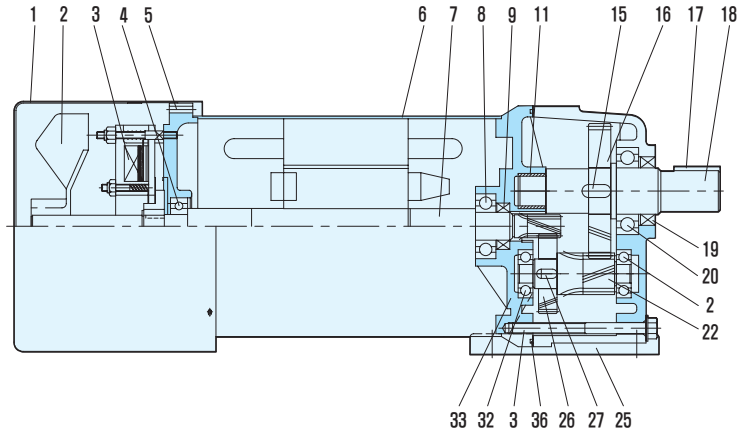




## 내부구조도

(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 결정하십시오.
- ② 부하 토오크  $T_1$ (kgf-m)에서 전달토오크 T(kgf-m)를 산출하십시오.  
 $T = T_1 \times S_f$   
 $S_f$  (서비스 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 주십시오.

(예)

출력수 회전수 :  $N = 60\text{RPM}$  (60Hz)

부하토오크 :  $T_1 = 20 \text{ kgf-m}$

피동기 : 콘베어 (균일하중)

운전시간 : 12시간 / 일

a. 감속비  $i = 60/1800 = 1/30$

b. 전달 토오크 T : 표2 및 표1에 의하여  $S_f = 1.25$

$$T = T_1 \times S_f = 20 \times 1.25 = 25 \text{ (kgf-m)}$$

c. 모터출력

부하 토오크  $T_1$ 에 의거  $N = 60$  과  $T_1 = 20$  의 교차점을 구하십시오.

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  
 $T = T_1 \times S_f$ ,  
 where  $S_f$  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 :  $N = 60 \text{ RPM}$  (60Hz)

Load torque  $T_1 = 20 \text{ kgf-m}$

Driven Machine : Conveyor

Operation Hours : 12 Hours/day

a. Reduction Ratio :  $i = 60 / 1800 = 1/30$

b. Transfer Torque : T

$S_f = 1.25$  from Table 2 and Table 1

$$T = T_1 \times S_f = 20 \times 1.25 = 25 \text{ (kgf-m)}$$

c. Motor Output

Point the crosspoint of  $T_1 (=20)$  and  $N (=60)$ .

The crosspoint is between 0.75K w and 1.5 K w.

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

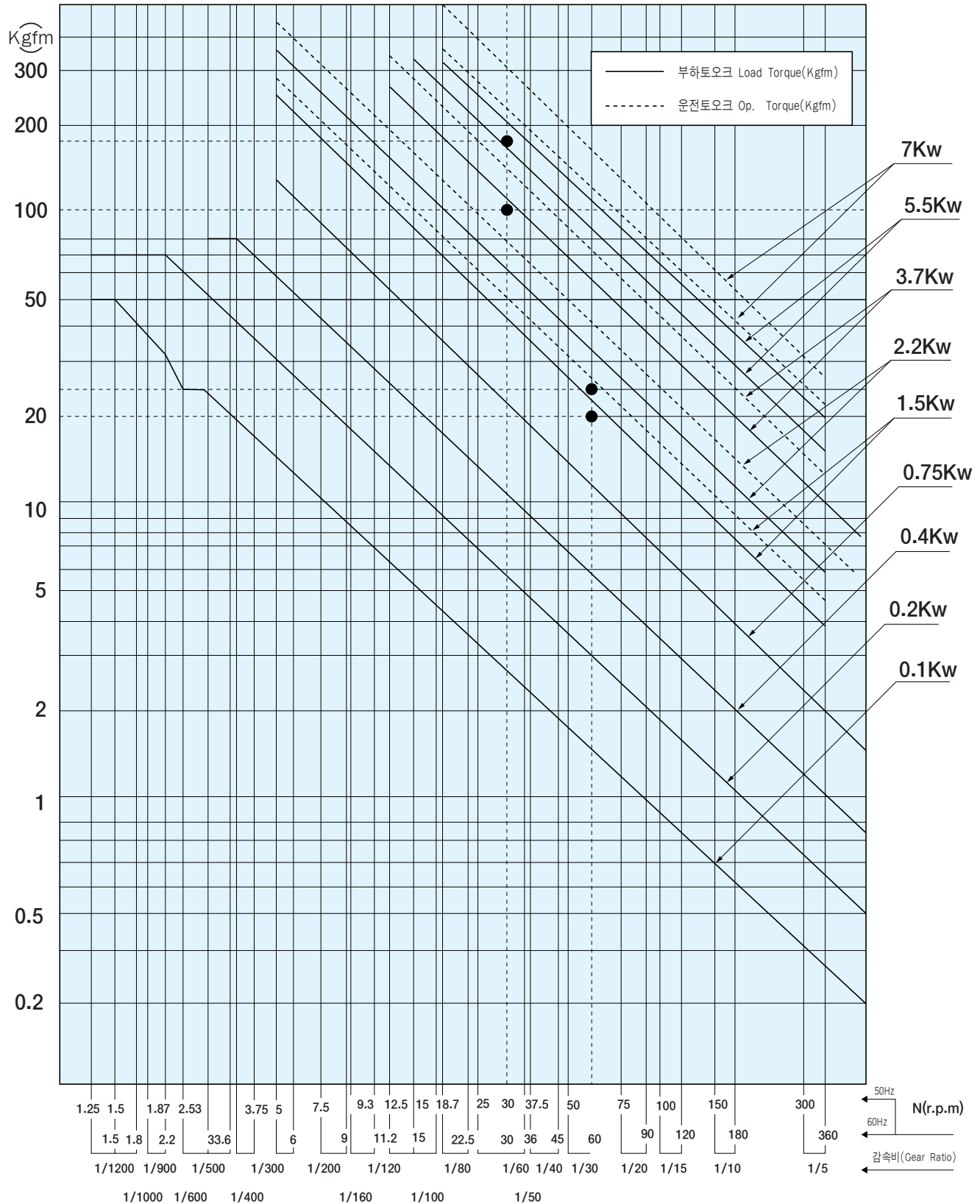
표1. 서비스 계수 Sf(Service Factor Sf)

| Operation Hr. / Load              | U    | M    | H    |
|-----------------------------------|------|------|------|
| 3시간 이하/일<br>(Less 3Hr/Day)        | 1    | 1    | 1.5  |
| 3~10시간/일<br>(3~10Hr/Day)          | 1    | 1.25 | 1.75 |
| 10시간 이상/일<br>(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(중부하) Ceramic Machine(M.Load) | M        | 턴푸라(텀블링 바렐) Tumbling Barrels     | H        |
| 요업기계(중부하) Ceramic Machine(H.Load) | H        | 믹서 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(중부하) Rubber Machine(M.Load) | M        |
| 준설용선박(중부하) Drainage(M.Load)       | M        | 고무기계(중부하) Rubber Machine(H.Load) | H        |
| 준설용선박(중부하) Drainage(H.Load)       | H        | 수처리기계(중부하) Water Cleaner(L.Load) | U        |
| 엘리베이터 Elevator                    | U        | 수처리기계(중부하) 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        |                                  |          |

그림 1. 출력 선정도 (Output Estimation Chart)



GEARED MOTORS



## 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.

$$O.H.L(kgf) = T_1 / R \times S_f \times E_f \times L_f \times 1000$$

$T_1(kg\cdot m)$  : 사용 토크

$R(mm)$  : 스프로킷, 기어, 풀리 등의 피치원반경

$E_f$  : 연결방법에 따른  $E_f$  값 (표3에서 구함)

$L_f$  : 작용거리에 따른  $L_f$  값 (표4에서 구함)

산출한 O.H.L은 사용 기어드 모터의 허용 O.H.L의 이하에서 R 및  $L_f$ 를 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 토크가 발생할 경우에 고장의 원인이 될 수가 있으므로 그림3에 의한 부하의 관성과 허용시동 회수를 확인하여 주십시오.

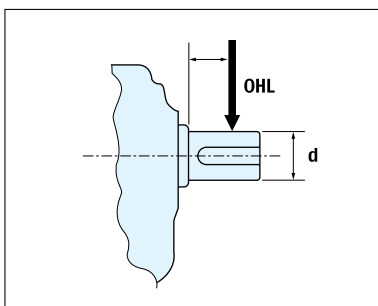
$$\text{모타축환산부하 } GD^2(GD^2_l) =$$

$$\text{출력축환산 } GD^2 \times (\text{속비})^2$$

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

$GD^2_M$  : (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.

$$O.H.L(kgf) = T_1 \times S_f \times E_f \times L_f \times 1000$$

$T_1(kg\cdot m)$  : Applied Torque

$R(mm)$  : Diameter of pitch in sprocket, gear or pulley

$E_f$  :  $E_f$  value according coupling method (Refer Table 3)

$L_f$  :  $L_f$  value according operation distance (Refer Table 4)

Obtained OHL should be lower than allowed OHL of selected gear motor, and R and  $L_f$  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 intermittently operated, momentarily occurred heavy torque may cause the reason of breakdown. Please make sure of load inertia and allowable starting number from Picture 3.

$$\text{Motor Shaft Conversion Load Inertia } (GD^2_l) =$$

$$\text{Output Shaft Conversion Inertia} \times (\text{Reduction Ratio})^2$$

where,

$$\text{Inertia Ratio}(R) = \frac{\text{Motor Shaft Conversion Load Inertia } (GD^2_l)}{\text{Geared Motor Inertia } (GD^2_M)}$$

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 Et)

|                         |      |
|-------------------------|------|
| 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 Lt)

| 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<sup>2</sup>(출력축환산) : 4.8 kg · m<sup>2</sup>

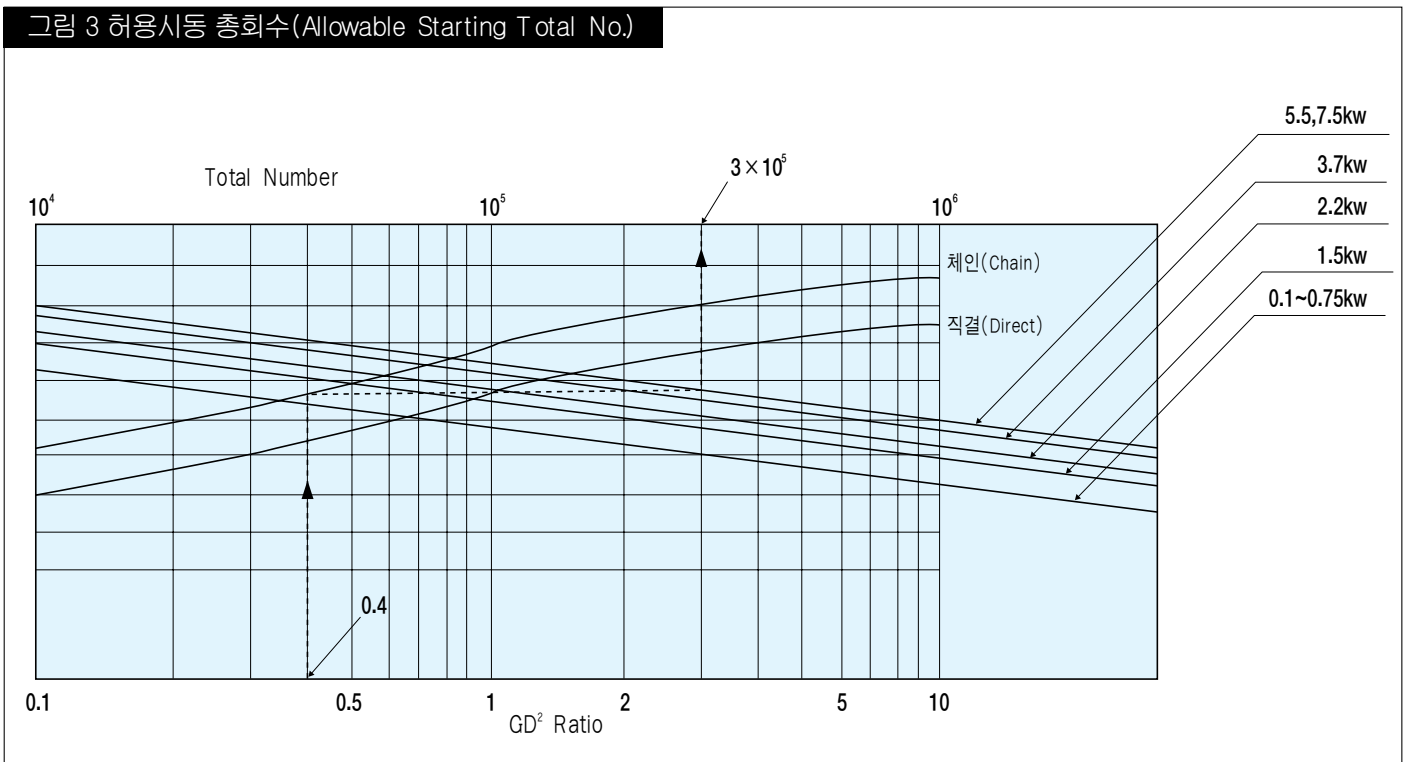
- 1)  $GD^2 l = 4.8 \times (1/10)^2 = 0.048 \text{Kg} \cdot \text{m}^2$
- 2)  $R = \frac{GD^2 l}{GD^2} = \frac{0.048}{0.12} = 0.4$
- 3) 그림 3에 의한 R = 0.4 의 수직선 체인의 선과 교점을 구하고 그점에 의한 수평선과 5.5Kw 선의 교점이 허용시동 총회수로 3 X 10<sup>5</sup> 회수가 됩니다.
- 4) 내구시간은  $\frac{\text{허용시동총회수}}{\text{기동정도}} = \frac{3 \times 10^5}{20} = 15,000 \text{시간}$

(EX)

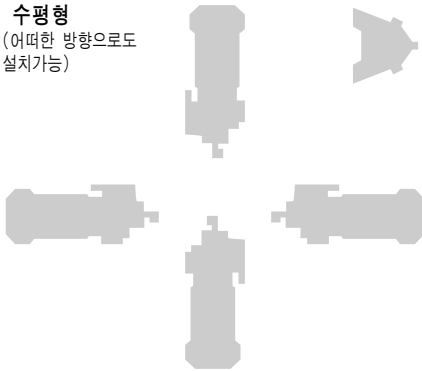
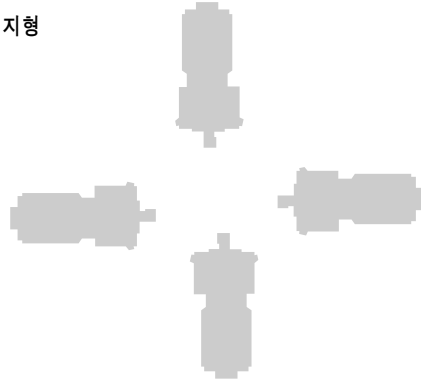
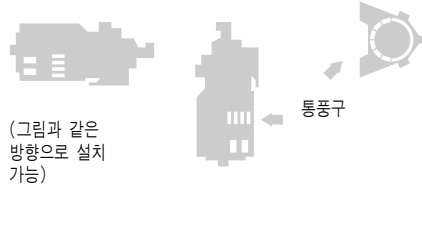

Motor Output : 5.5 kw, Reduction Ratio : 1/10  
 Load Inertia(Output shaft Conversion): 4.8 kg · m<sup>2</sup>  
 Coupling Method : Chain, Starting Coefficient : 20sw/h

- 1)  $GD^2 l = 4.8 \times (1/10)^2 = 0.048 \text{Kg} \cdot \text{m}^2$
- 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 x 10<sup>6</sup>.
- 4) Durable hours : Allowable starting total number / Starting Coefficient = 3 x 10<sup>5</sup>/20 = 15,000 hours

그림 3 허용시동 총회수(Allowable Starting Total No.)

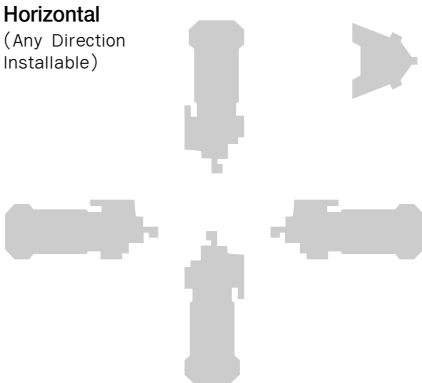
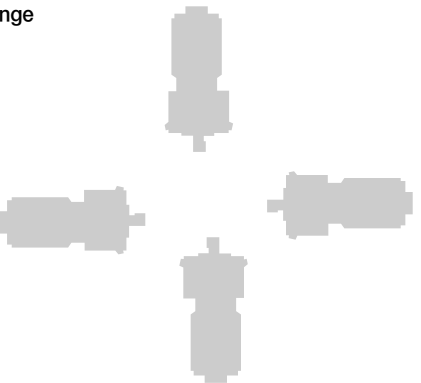

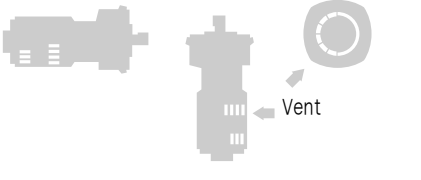


## 기어드 모터 형식별 설치방향

| 형 식         | 윤 활 | H 형   | V 형   |
|-------------|-----|---|---|
| MAX-H<br>3상 | 그리스 | 수평형<br>(어떠한 방향으로도<br>설치가능)<br> | 플랜지형<br> |
| MAX-H<br>단상 | 그리스 | (그림과 같은<br>방향으로 설치<br>가능)<br> |         |

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

## GEARED MOTOR INSTALLATION

| Type             | Lubricant | H Type  | V Type  |
|------------------|-----------|---|---|
| MAX-H<br>3-Phase | Grease    | Horizontal<br>(Any Direction<br>Installable)<br> | Flange<br> |
| MAX-H<br>1-Phase | Grease    | <br>(Specified Direction Only)                   |            |

- 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 |     |        |
|---------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-----|--------|
| 0.2 Kw  | 0.1  |      |      |      |      | 0.42 | -    | 0.42 |      |      |       |       | 0.7   |       |     | Grease |
| 0.4 Kw  | 0.1  |      | 0.3  |      |      | 0.7  |      |      |      |      | 1.5   |       |       |       |     |        |
| 0.75 Kw | 0.45 |      |      |      | 0.55 | 1.0  |      |      |      |      |       |       |       |       | OIL |        |
| 1.5 Kw  | 0.9  |      | 1.0  |      | 1.4  | 2.0  |      |      |      |      |       |       |       |       |     |        |
| 2.2 Kw  | 1.0  |      | 1.4  |      | 1.9  | 2.5  |      |      |      |      |       |       |       |       |     |        |
| 3.7 Kw  | 1.9  |      |      |      | 2.3  | 3.8  |      |      |      |      |       |       |       |       |     |        |
| 5.5 Kw  | 2.3  |      |      |      | 3.6  | 4.5  |      |      |      |      |       |       |       |       |     |        |
| 7.5 Kw  | 2.3  |      |      | 3.6  | 4.3  | 7.0  |      |      |      |      |       |       |       |       |     |        |

- 0.75kw VERTICAL Geared Motor에는 Grease윤활
- 공장 출하시에 0.2 ~ 0.4 Kw의 전기종에 그리이스를 0.75 ~ 7.5Kw 전기종에는 오일을 충전하여 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<sub>M</sub>(모터축 환산)

#### Geared Motor GD<sub>M</sub> (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 |
| 출력 (Kw)      | 0.4   | 62   | 62   | 62   | 62   | 62   | 62   | 62   | 62  |
|              | 0.75  | 65   | 65   | 65   | 65   | 65   | 66   | 66   | 66  |
|              | 1.5   | 70   | 70   | 70   | 70   | 70   | 70   | 71   | 71  |
| Out put      | 2.2   | 70   | 72   | 72   | 72   | 72   | 72   | 72   | 72  |
|              | 3.7   | 70   | 72   | 72   | 72   | 72   | 72   | 72   | 72  |
|              | 5.5   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72  |
|              | 7.5   |      | 74   | 73   | 73   | 74   | 75   | 75   | 75  |

## 삼상유도 전동기 참고 특성 DATA

### Three Phase Induction Motor Reference Characteristic Data

| 출력<br>KW(HP) | 극수<br>Pole | 정격전류<br>Regular Current |      | 기동전류<br>Starting Current |      | 효율<br>Efficiency<br>% | 역율<br>Power Factor<br>% | 전부하<br>Total Load<br>Torque(Kg-m) | Slip<br>% | R.P.M |
|--------------|------------|-------------------------|------|--------------------------|------|-----------------------|-------------------------|-----------------------------------|-----------|-------|
|              |            | 220V                    | 380V | 220V                     | 380V |                       |                         |                                   |           |       |
| 0.4<br>(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<br>(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<br>(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<br>(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<br>(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<br>(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<br>(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<br>(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<br>Type | 극수<br>Pole | 출력<br>Output<br>(KW) | 프레임<br>Frame<br>No. | 전압<br>Voltage<br>(V) | 전부하<br>Total Load  |                  |       | 기동<br>Starting |                  | 최대토크<br>Max.<br>Torque(%) | 효율<br>Efficiency<br>(%) | 컨덴서<br>Condenser<br>Capa.(µF) |
|------------|------------|----------------------|---------------------|----------------------|--------------------|------------------|-------|----------------|------------------|---------------------------|-------------------------|-------------------------------|
|            |            |                      |                     |                      | Torque<br>(kg · m) | 전류<br>Current(A) | R.P.M | Torque<br>(%)  | 전류<br>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

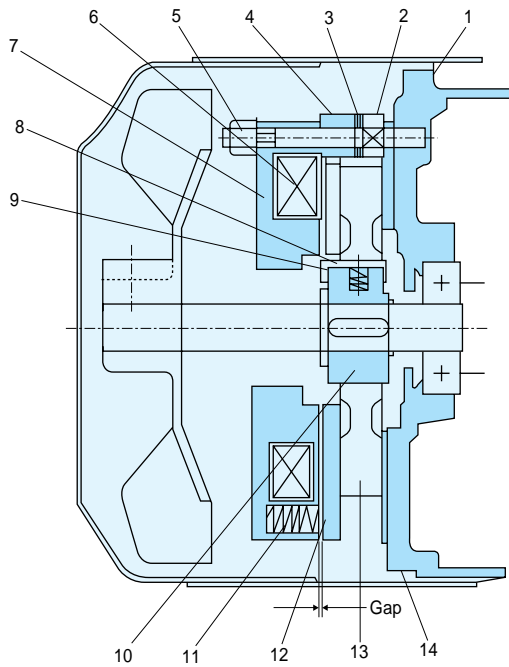
| 사양<br>Spec.  | 출력<br>Output(KW)<br>4p   | 0.1                   | 0.2                   | 0.4                   | 0.75                  | 1.5                   | 2.2                   | 3.7                   | 5.5                   | 7.5   |
|--|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------|
|  | 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 |
| 토크 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°C (A)   | 0.082                    | 0.27                  | 0.27                  | 0.25                  | 0.27                  | 0.3                   | 0.4                   | 0.4                   | 0.56                  |       |
| 용량 Capacity at 75°C(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<br>Allowable Heat Dissipation at<br>1500R.P.M 50% ED(kgf.m/min) | 100                      | 500                   | 500                   | 600                   | 800                   | 800                   | 1100                  | 1100                  | 1100                  |       |
| 총사사양 E.T (kgf · m)   | 9 X 10 <sup>5</sup>      | 2.2 X 10 <sup>7</sup> | 2.2 X 10 <sup>7</sup> | 3.6 X 10 <sup>7</sup> | 4.5 X 10 <sup>7</sup> | 4.5 X 10 <sup>7</sup> | 6.3 X 10 <sup>7</sup> | 8.4 X 10 <sup>7</sup> | 8.4 X 10 <sup>7</sup> |       |
| 개방시간<br>Amateur<br>Release<br>Time(sec)                                  | 동시절환<br>AC/DC Converting | 0.3                   | 0.225                 | 0.205                 | 0.298                 | 0.150                 | 0.135                 | 0.230                 | 1.20                  | 1.20  |
|  | 교류절환<br>AC Converting    | 0.17                  | 0.130                 | 0.075                 | 0.120                 | 0.054                 | 0.050                 | 0.070                 | 0.50                  | 0.45  |
|  | 직류절환<br>DC Converting    | -                     | 0.023                 | 0.012                 | 0.013                 | -                     | -                     | -                     | 0.075                 | 0.065 |



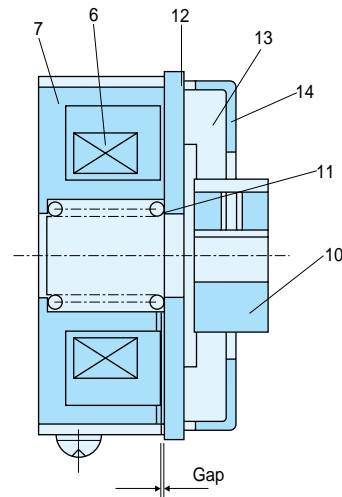
## 브레이크의 구조

### Brake Structure

SB-1.0 ~ 8.0



SB-0.2



| No. | 명 칭       | Name           |
|-----|-----------|----------------|
| 1   | 브라켓 실드    | Bracket shield |
| 2   | 스터드 볼트    | Stud Bolt      |
| 3   | 어드저스트 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        |

### GD<sup>2</sup>플라이 휠의 효과 계산법

### Calculation of Fly Wheel Inertia GD<sup>2</sup>

관성을 일반적인 관성모멘트  $I$  ( $Kg \cdot m \cdot sec^2$ )로 나타내고 있습니다만 공업용으로 실제 사용할 경우는  $GD^2(Kg \cdot m^2)$ 을 사용하는 것이 편리하다.

In general, inertia is represented by inertia momentum ( $Kg \cdot m \cdot sec^2$ ), however,  $GD^2$  is more widely used for industrial purpose.

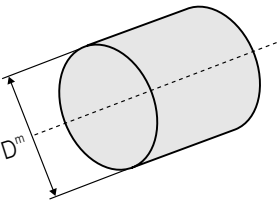
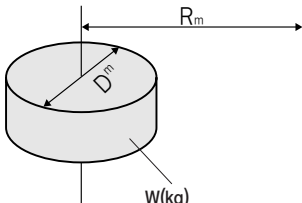
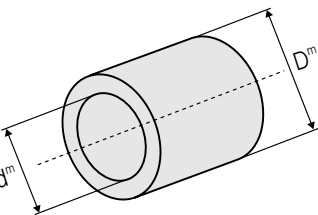
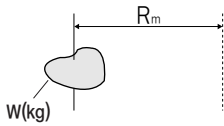
$$GD^2 = 4g I$$

여기서

- G ----- 중량 Weight(Kg)
- D ----- 회전직경 Rotation Diameter (m)
- g ----- 중력가속도 Gravity (9.8 m/sec<sup>2</sup>)
- I ----- 관성모멘트 Inertia Momentum (Kg.m.sec<sup>2</sup>)

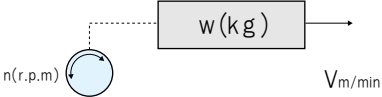
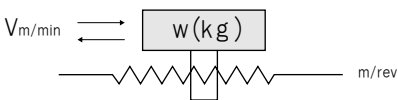
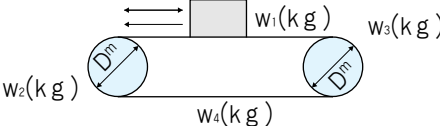
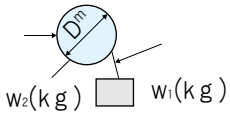
### 회전체의 GD<sup>2</sup>

### Inertia of Gyration Object

| 회전중심이 무게중심과 일치할 때<br>Rotation Center = Gravity Center   |  | 회전중심이 무게중심과 일치하지 않을 때<br>Rotation Center ≠ Gravity Center                            |  |
|---|--|--|--|
|  <p style="text-align: center;"><b>W(kg)</b></p> | $GD^2 = \frac{1}{2}WD_m^2$ <p style="text-align: center;">(Kg · m<sup>2</sup>)</p>           |  | $GD^2 = \frac{1}{2}WD_m^2 + 4WR_m^2$ <p style="text-align: center;">(Kg · m<sup>2</sup>)</p> |
|  <p style="text-align: center;"><b>W(kg)</b></p>  | $GD^2 = \frac{1}{2}W(D_m^2 + d_m^2)$ <p style="text-align: center;">(Kg · m<sup>2</sup>)</p> |  | $GD^2 = 4WR_m^2$ <p style="text-align: center;">(Kg · m<sup>2</sup>)</p>                     |

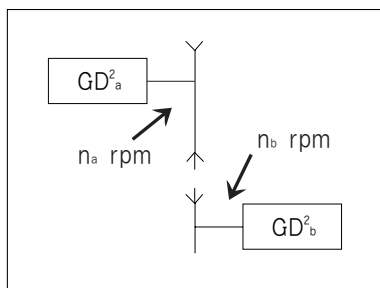
## 직선운동을 하는 경우의 GD<sup>2</sup>

### Inertia of Straightly Moving Object

|  |  |  |
|--|--|--|
| <p>일반적인 경우<br/>General Case</p>  |    | $GD^2 = W \cdot \left( \frac{V}{\pi n} \right)^2$ <p style="text-align: right;">(K g . m<sup>2</sup>)</p>  |
| <p>수평직선 운동인 경우<br/>Horizontal Straight Movement<br/>(리드스크류에 의한 물체의 이동)<br/>(Moved by Lead Screw)</p> |    | $GD^2 = W \cdot \left( \frac{P}{\pi} \right)^2$ $= W \cdot \left( \frac{V}{\pi n} \right)^2$ <p style="text-align: right;">(K g . m<sup>2</sup>)</p> |
| <p>수평직선 운동인 경우<br/>Horizontal Straight Movement<br/>(콘베어 등)<br/>(Conveyor...)</p>                    |  | $GD^2 = W_1 D_m^2 + \frac{1}{2} W_2 D_m^2$ $+ \frac{1}{2} W_3 D_m^2 + W_4 D_m^2$ <p style="text-align: right;">(K g . m<sup>2</sup>)</p>             |
| <p>수직 운동인 경우<br/>Vertical Straight Movement<br/>(크레인, 윈치 등)<br/>(Crane, Winch...)</p>                |   | $GD^2 = W_1 D_m^2 + \frac{1}{2} W_2 D_m^2$ <p style="text-align: right;">(K g . m<sup>2</sup>)</p>   |

## 회전비가 있는 경우의 GD<sup>2</sup>

### Inertia with Rotation Ratio



부하축의 GD<sup>2</sup><sub>b</sub>를 n<sub>a</sub>축에 환산할 경우  
Conversion of load shaft inertia to n<sub>a</sub> 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 스프로킷 사용시

- 입출력축에 체인, 스프로킷, 폴리 등을 취부하는 경우 아래의 공식에 의해서 스프로킷 및 기어의 직경을 선정해 주십시오.

체인스프로킷 기어의 피치원 직경  $\geq 3 \times$  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<br>그리스 | 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<br>기어드 모터 | 정하중  | 10°C 이하 | ISO VG 150 |    |
|                  |      | 10°C 이상 | ISO VG 220 |    |
| 웜                | 보통하중 | 10°C 이하 | ISO VG 220 |    |
|                  |      | 10°C 이상 | ISO VG 320 |    |
|                  | 중하중  | 10°C 이하 | ISO VG 320 |    |
|                  |      | 10°C 이상 | ISO VG 460 |    |

## Factory Charged Lubricant

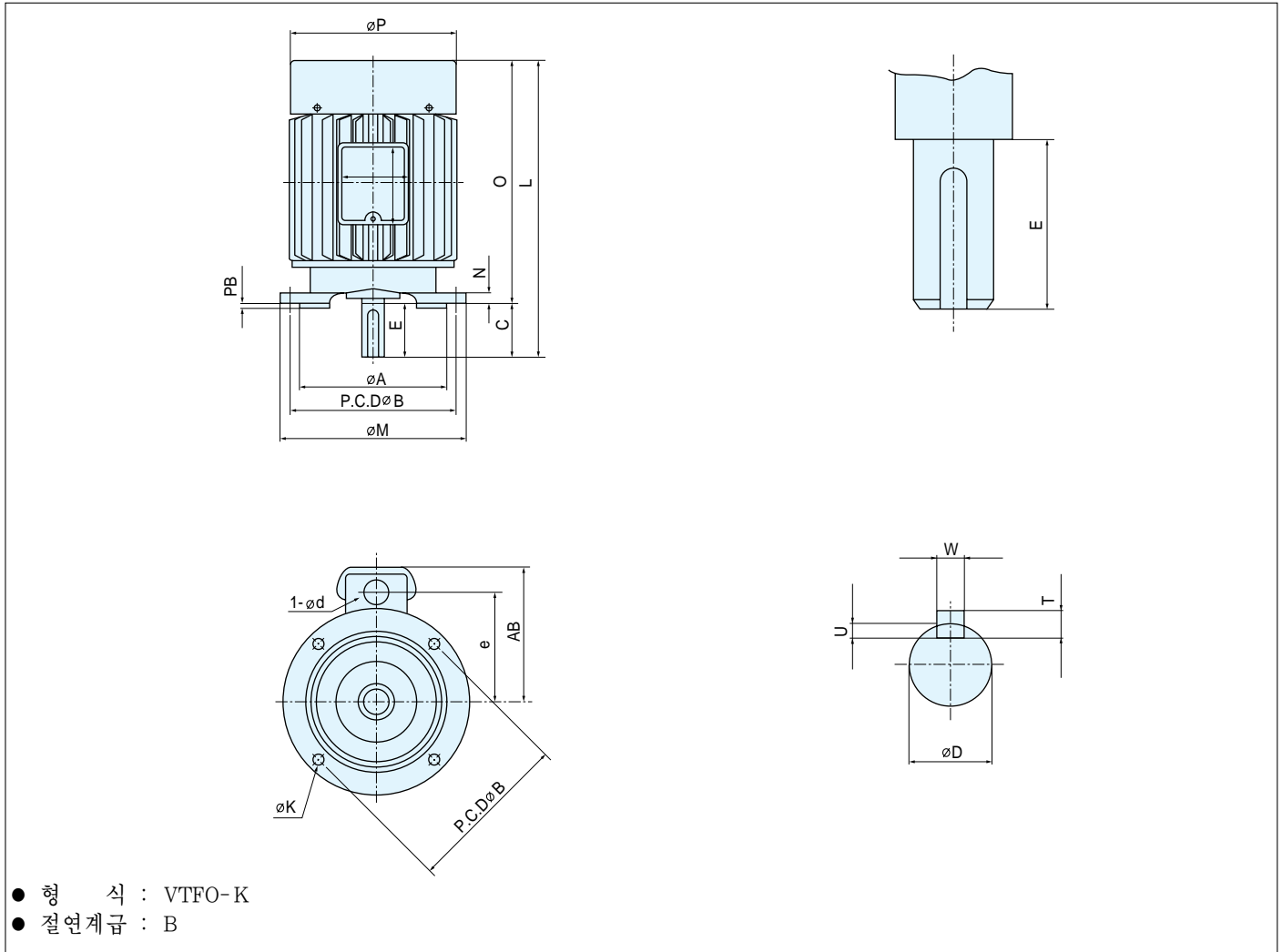
| Product                                | Load Status | Temperature | Charged Lubricant | Remarks |
|--|-------------|-------------|-------------------|---------|
| Planetary Gear Reducer<br>Geared Motor | Total Load  | 10°C below  | ISO VG 150        |         |
|  |             | 10°C up     | ISO VG 220        |         |
| Worm                                   | Normal Load | 10°C below  | ISO VG 220        |         |
|  |             | 10°C up     | ISO VG 320        |         |
|  | Heavy Load  | 10°C below  | ISO VG 320        |         |
|  |             | 10°C up     | ISO VG 460        |         |

- 매우 격심한 부하조건외의 표준형 감속기에는 한단계 높은 점도의 윤활유를 사용하는 것이 좋습니다.
- 그리스 전용 기어드모터에는 NLGI 0 을 사용하십시오.
- 주위온도가 40°C 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°C, 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



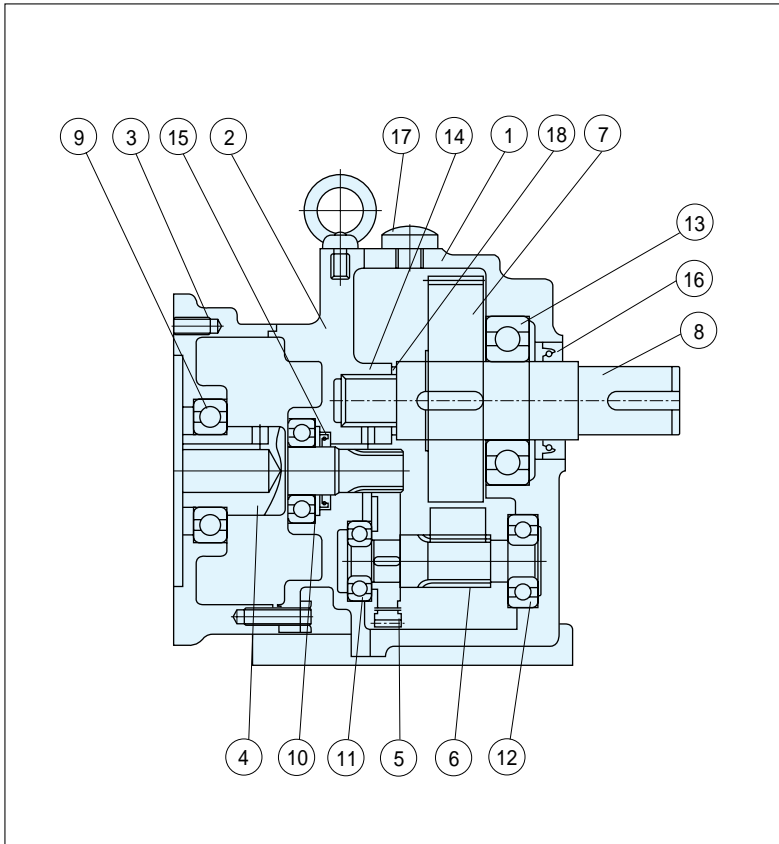
- 형 식 : VTFO-K
- 절연계급 : B

- Type : VTFO-K
- Insulation Class : B

| Frame 프레임 | 출력(KW)   |          | 치 수 표 (Dimension) |          |          |    |    |     |    |          |     |          |     |          | 축(Shaft) |    |          |   |
|-----------|----------|----------|-------------------|----------|----------|----|----|-----|----|----------|-----|----------|-----|----------|----------|----|----------|---|
|           |          |          | 전 동 기 (Motor)     |          |          |    |    |     |    |          |     |          |     |          |          |    |          |   |
|           | 4극       | 6극       | L                 | $\phi A$ | $\phi B$ | C  | E  | AB  | N  | $\phi M$ | o   | $\phi P$ | PB  | $\phi K$ | U        | W  | $\phi D$ | 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 |



## GEAR HEAD(I.E.C FLANGE TYPE)

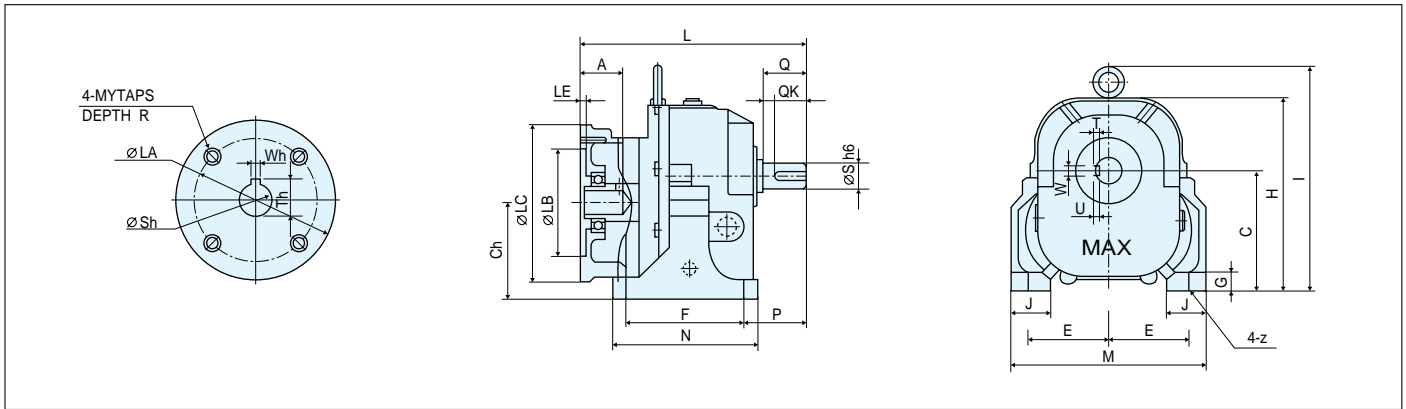


### GMSM153H30

- |           |               |
|-----------|---------------|
| 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        |

### 규격 (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   |            |     |     |    |    |      |      |    |    |     |     |    |      |    |     |     |    |     |     |     |     |    |    |    |    |    |    |    |    |   |   |                   |  |  |  |
|                |     |           | 1/10  |            |     |     |    |    |      |      |    |    |     |     |    |      |    |     |     |    |     |     |     |     |    |    |    |    |    |    |    |    |   |   |                   |  |  |  |
|                |     |           | 1/20  |            |     |     |    |    |      |      |    |    |     |     |    |      |    |     |     |    |     |     |     |     |    |    |    |    |    |    |    |    |   |   |                   |  |  |  |
|                |     |           | 1/30  | 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 |   |                   |  |  |  |
|                |     |           | 1/40  |            |     |     |    |    |      |      |    |    |     |     |    |      |    |     |     |    |     |     |     |     |    |    |    |    |    |    |    |    |   |   |                   |  |  |  |
|                |     |           | 1/50  |            |     |     |    |    |      |      |    |    |     |     |    |      |    |     |     |    |     |     |     |     |    |    |    |    |    |    |    |    |   |   |                   |  |  |  |
|                |     |           | 1/60  |            |     |     |    |    |      |      |    |    |     |     |    |      |    |     |     |    |     |     |     |     |    |    |    |    |    |    |    |    |   |   |                   |  |  |  |
| 0.75           | 0.4 | F135      | 1/5   |            |     |     |    |    |      |      |    |    |     |     |    |      |    |     |     |    |     |     |     |     |    |    |    |    |    |    |    |    |   |   |                   |  |  |  |
|                |     |           | 1/10  |            |     |     |    |    |      |      |    |    |     |     |    |      |    |     |     |    |     |     |     |     |    |    |    |    |    |    |    |    |   |   |                   |  |  |  |
|                |     |           | 1/20  |            |     |     |    |    |      |      |    |    |     |     |    |      |    |     |     |    |     |     |     |     |    |    |    |    |    |    |    |    |   |   |                   |  |  |  |
|                |     | 1/30      | 165   | 130        | 200 | 3.5 | 19 | 6  | 21.8 | 42   | 10 | 15 | 135 | 99  | 90 | 135  | 18 | 218 | 244 | 45 | 236 | 210 | 165 | 72  | 55 | 45 | 32 | 8  | 5  | 10 | 15 | 22 |   |   |                   |  |  |  |
|                |     | 1/40      |       |            |     |     |    |    |      |      |    |    |     |     |    |      |    |     |     |    |     |     |     |     |    |    |    |    |    |    |    |    |   |   |                   |  |  |  |
|                |     | 1/50      |       |            |     |     |    |    |      |      |    |    |     |     |    |      |    |     |     |    |     |     |     |     |    |    |    |    |    |    |    |    |   |   |                   |  |  |  |
|                |     | 1/60      |       |            |     |     |    |    |      |      |    |    |     |     |    |      |    |     |     |    |     |     |     |     |    |    |    |    |    |    |    |    |   |   |                   |  |  |  |
|                |     | F153      |       |            |     |     |    |    |      |      |    |    |     |     |    |      |    |     |     |    |     |     |     |     |    |    |    |    |    |    |    |    |   |   |                   |  |  |  |
|                |     |           | 1/50  |            |     |     |    |    |      |      |    |    |     |     |    |      |    |     |     |    |     |     |     |     |    |    |    |    |    |    |    |    |   |   |                   |  |  |  |
|                |     |           | 1/60  |            |     |     |    |    |      |      |    |    |     |     |    |      |    |     |     |    |     |     |     |     |    |    |    |    |    |    |    |    |   |   |                   |  |  |  |
|                |     |           |       |            |     |     |    |    |      |      |    |    |     |     |    |      |    |     |     |    |     |     |     |     |    |    |    |    |    |    |    |    |   |   |                   |  |  |  |

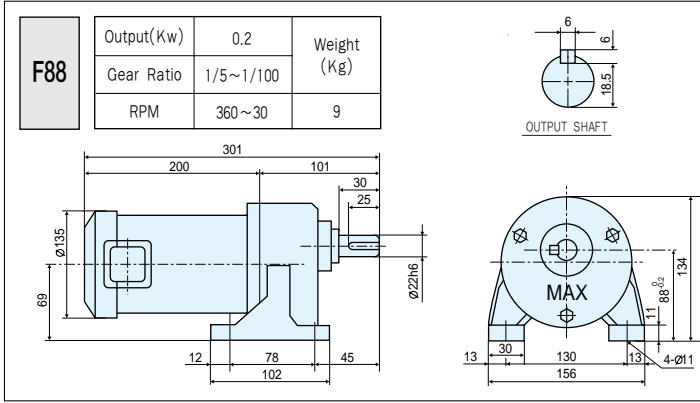


| MOTOR<br>(60Hz)KW | FRAME<br>No. |      | RATIO | Motor Side |       |     |     |     |     |      |     |     |     |     |       |       | C   | Ch  | E   | F   | G   | H     | I   | J   | L     | M   | N   | P  | Q   | QK  | S  | T   | U   | W   | Z     | APPR.<br>WEIGHT<br>(KG) |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
|-------------------|--------------|------|-------|------------|-------|-----|-----|-----|-----|------|-----|-----|-----|-----|-------|-------|-----|-----|-----|-----|-----|-------|-----|-----|-------|-----|-----|----|-----|-----|----|-----|-----|-----|-------|-------------------------|-----|----|-----|-----|----|-----|-----|-----|-------|----|----|----|----|-----|----|----|----|
|                   | 4P           | 6P   |       | LA         | LB    | LC  | LE  | Sh  | Wh  | Th   | A   | Y   | R   |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
| 1.5               | 0.75         | F153 | 1/5   | 165        | 130   | 200 | 4   | 24  | 8   | 27.3 | 52  | 10  | 20  | 153 | 117.1 | 107.5 | 150 | 20  | 246 | 288 | 50  | 286.5 | 250 | 185 | 78    | 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 | 276 | 216 | 113.5 | 82 | 75 | 45 | 9  | 5.5 | 14 | 19 | 59 |
|                   |              |      | 1/50  |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
| 1/60              |              |      |       |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
| 2.2               | 1.5          | F172 | 1/5   | 215        | 180   | 250 | 4   | 28  | 8   | 31.3 | 62  | 12  | 20  | 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  |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
|                   |              | 1/30 |       |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
|                   |              | F181 | 1/40  |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     | 181 | 140.3 | 120                     | 245 | 25 | 293 | 344 | 70 | 365 | 310 | 295 | 111   | 82 | 75 | 50 | 9  | 5.5 | 14 | 19 | 65 |
|                   |              |      | 1/50  |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
| 1/60              |              |      |       |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
| 3.7               | 2.2          | F205 | 1/5   | 205        | 156.3 | 135 | 290 | 30  | 340 | 390  | 75  | 391 | 350 | 340 | 114   | 82    | 75  | 55  | 10  | 6   | 16  | 24    | 78  |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
|                   |              |      | 1/60  |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
|                   |              |      | 1/50  |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
|                   |              | F235 | 1/5   |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     | 235 | 165.6 | 150 | 320 | 35 | 379 | 440 | 80 | 432 | 390 | 370 | 135   | 105                     | 63  | 65 | 11  | 7   | 18 | 24  | 110 |     |       |    |    |    |    |     |    |    |    |
|                   |              |      | 1/10  |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
|                   |              |      | 1/20  |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
| 5.5               | 3.7          | F181 | 1/5   | 265        | 230   | 300 | 4   | 38  | 10  | 41.3 | 82  | 14  | 25  | 181 | 140.3 | 120   | 245 | 25  | 293 | 344 | 70  | 392   | 310 | 295 | 111   | 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 | 415 | 350 | 340 | 114   | 82 | 75 | 55 | 10 | 6   | 16 | 24 | 78 |
|                   |              |      | 1/40  |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
|                   |              |      | 1/50  |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
| F270              | 1/60         | 270  | 175.9 | 180        | 350   | 40  | 436 | 496 | 80  | 470  | 440 | 410 | 140 | 105 | 80    | 70    | 12  | 7.5 | 20  | 28  | 140 |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
|                   | 1/50         |      |       |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
|                   | 1/60         |      |       |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
| 7.5               | 5.5          | F181 | 1/5   | 265        | 230   | 300 | 4   | 38  | 10  | 41.3 | 82  | 14  | 25  | 181 | 140.3 | 120   | 245 | 25  | 293 | 344 | 70  | 392   | 310 | 295 | 111   | 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 | 415 | 350 | 340 | 114   | 82 | 75 | 55 | 10 | 6   | 16 | 24 | 78 |
|                   |              |      | 1/40  |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
|                   |              |      | 1/50  |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
| F270              | 1/60         | 270  | 175.9 | 180        | 350   | 40  | 436 | 496 | 80  | 470  | 440 | 410 | 140 | 105 | 80    | 70    | 12  | 7.5 | 20  | 28  | 140 |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
|                   | 1/50         |      |       |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |
|                   | 1/60         |      |       |            |       |     |     |     |     |      |     |     |     |     |       |       |     |     |     |     |     |       |     |     |       |     |     |    |     |     |    |     |     |     |       |                         |     |    |     |     |    |     |     |     |       |    |    |    |    |     |    |    |    |

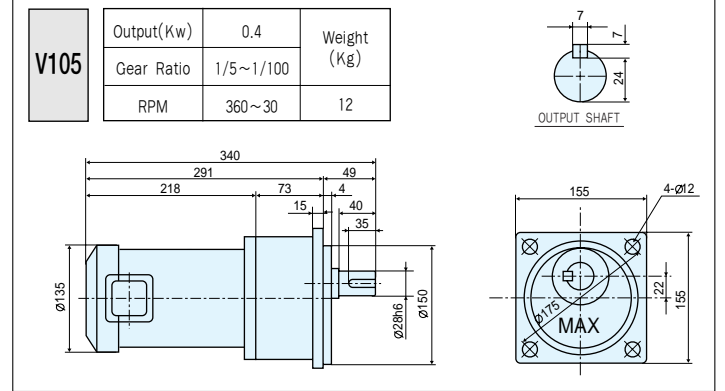
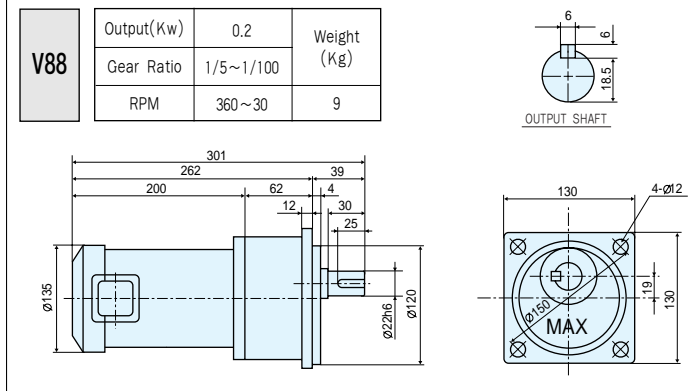
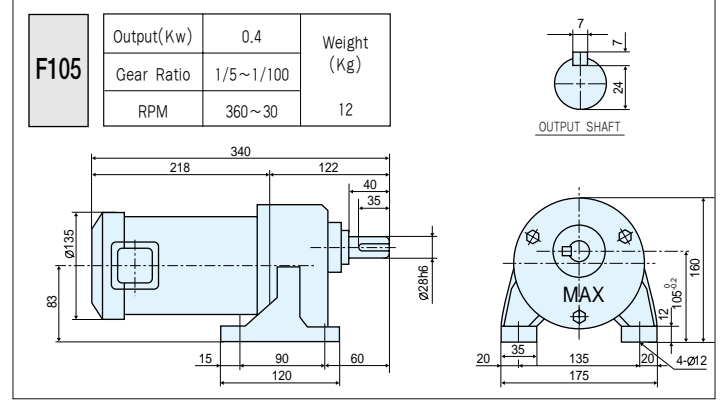
GEARED  
MOTORS

## GEARED MOTOR

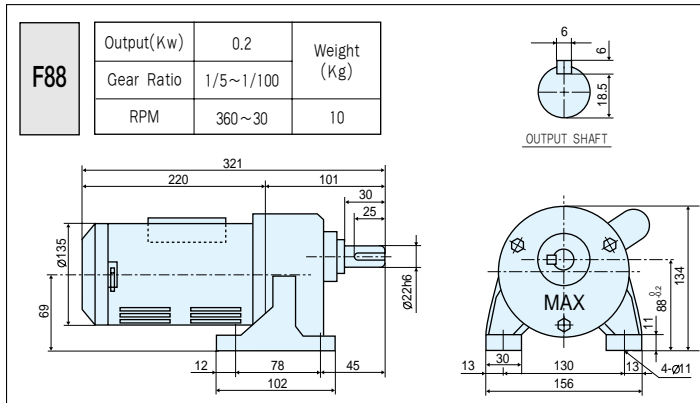
### 0.2Kw (1/4 HP, 3-Phase 삼상)



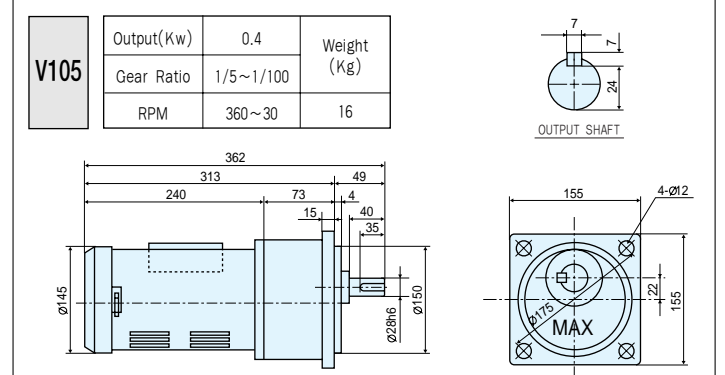
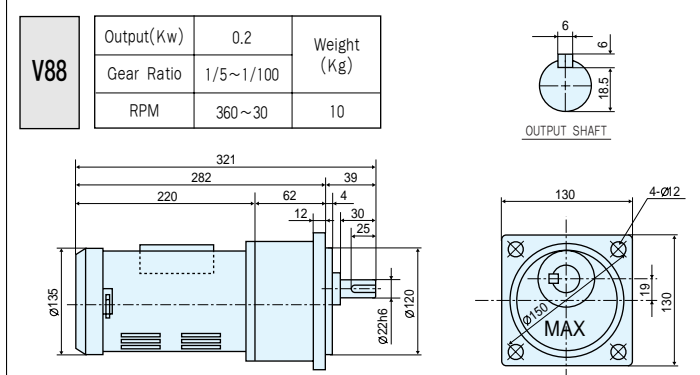
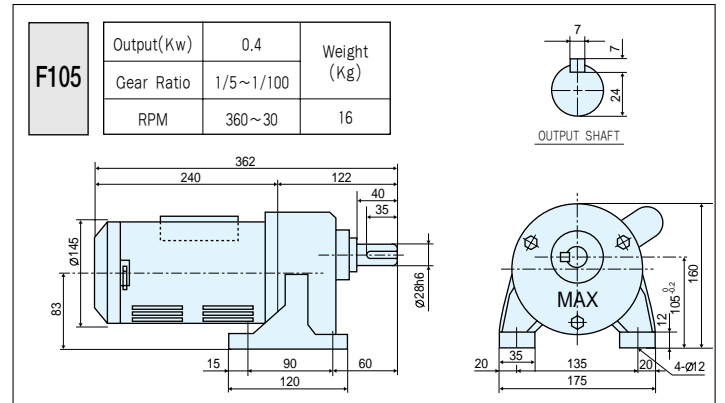
### 0.4Kw (1/2 HP, 3-Phase 삼상)



### 0.2Kw (1/4 HP, 1-Phase 단상)



### 0.4Kw (1/2 HP, 1-Phase 단상)



# LINE POWER

## 0.2Kw (1/4 HP) Line Power

|            |            |          |             |     |
|------------|------------|----------|-------------|-----|
| <b>L88</b> | Output(Kw) | 0.2      | Weight (Kg) | 5.2 |
|            | Gear Ratio | 1/5~1/60 |             |     |
|            | RPM        | 360~30   |             |     |

INPUT SHAFT      OUTPUT SHAFT

## 0.4Kw (1/2 HP) Line Power

|             |            |           |             |     |
|-------------|------------|-----------|-------------|-----|
| <b>L105</b> | Output(Kw) | 0.4       | Weight (Kg) | 7.1 |
|             | Gear Ratio | 1/5~1/100 |             |     |
|             | RPM        | 360~30    |             |     |

INPUT SHAFT      OUTPUT SHAFT

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

|             |            |          |             |    |
|-------------|------------|----------|-------------|----|
| <b>F115</b> | Output(Kw) | 0.4      | Weight (Kg) | 21 |
|             | Gear Ratio | 1/5~1/60 |             |    |
|             | RPM        | 360~30   |             |    |

OUTPUT SHAFT

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

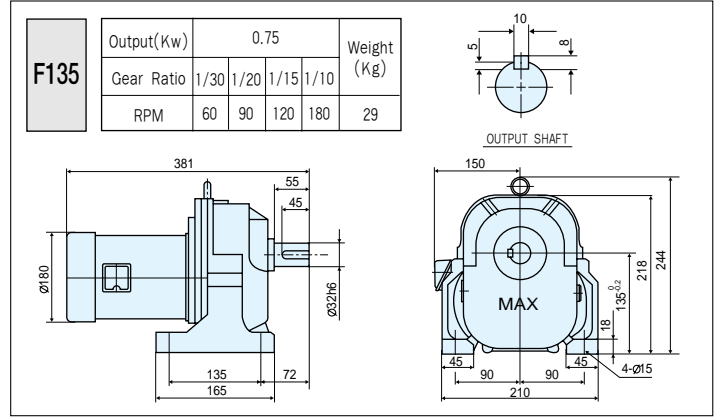
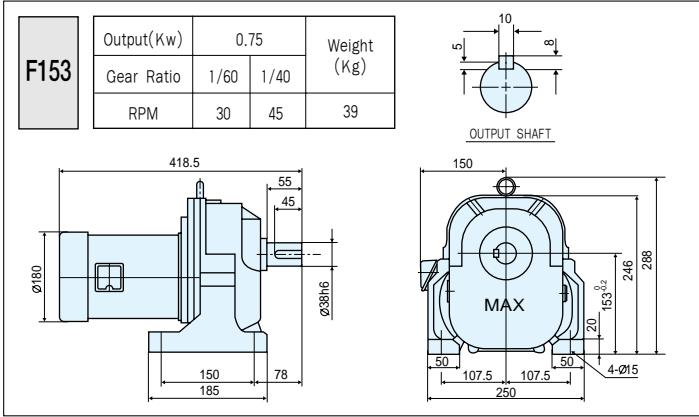
|             |            |          |             |    |
|-------------|------------|----------|-------------|----|
| <b>L115</b> | Output(Kw) | 0.4      | Weight (Kg) | 16 |
|             | Gear Ratio | 1/5~1/60 |             |    |
|             | RPM        | 360~30   |             |    |

INPUT SHAFT      OUTPUT SHAFT

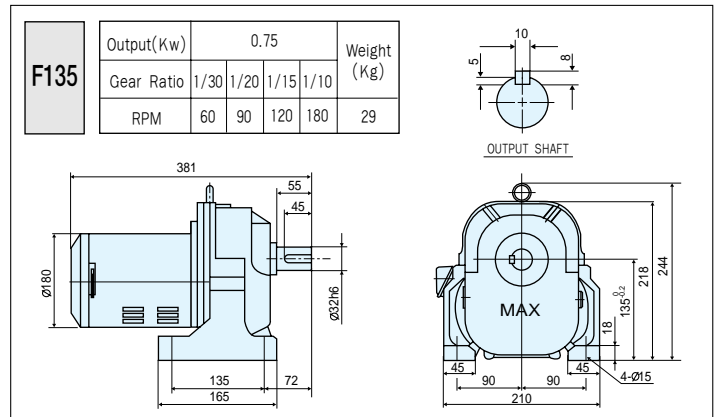
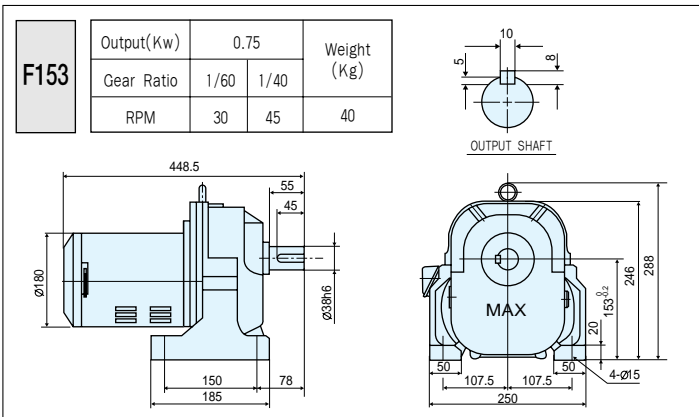
GEARED MOTORS

## GEARED MOTOR

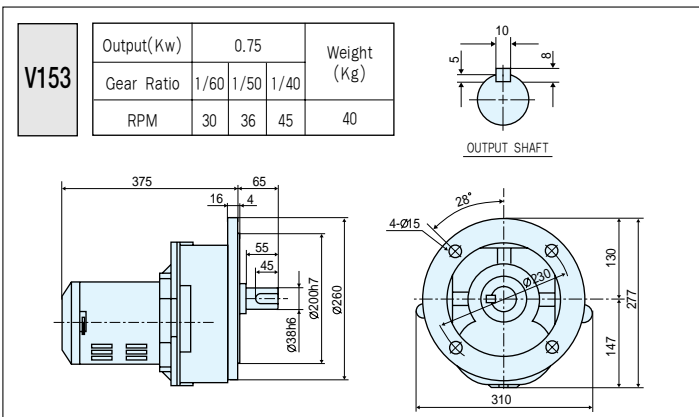
### 0.75Kw (1 HP, 3-Phase 삼상)



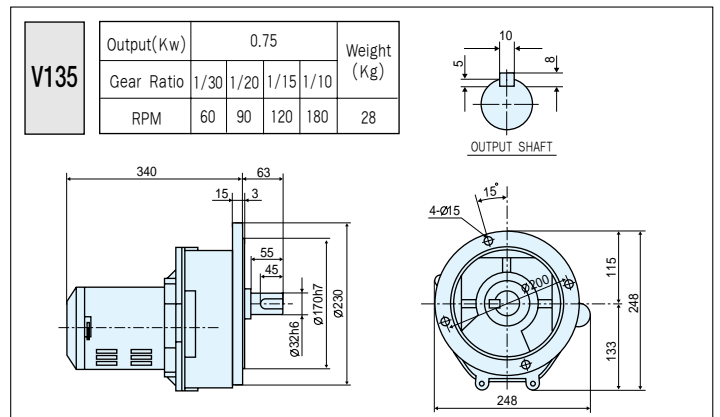
### 0.75Kw (1 HP, 1-Phase 단상)



### 0.75Kw (1 HP, 1-Phase 단상)

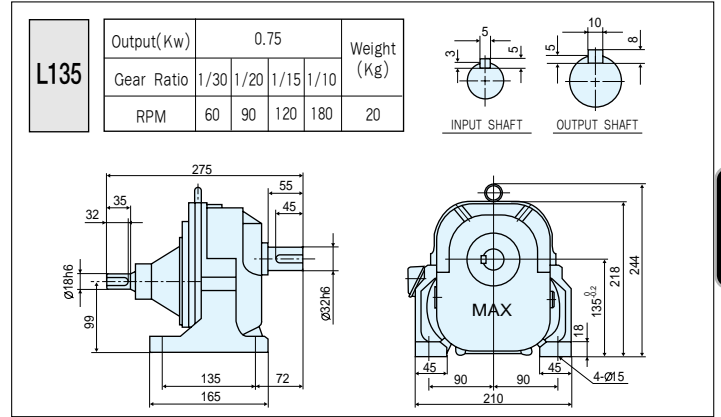
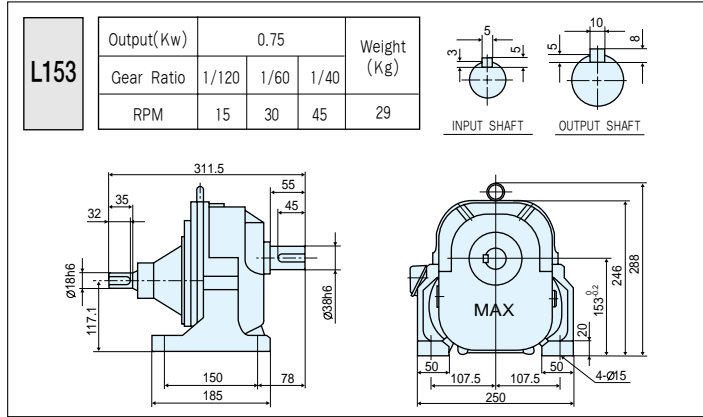


### V.T GEARED MOTOR



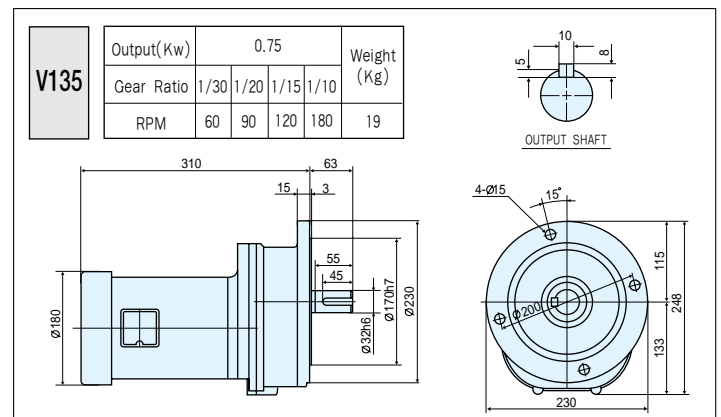
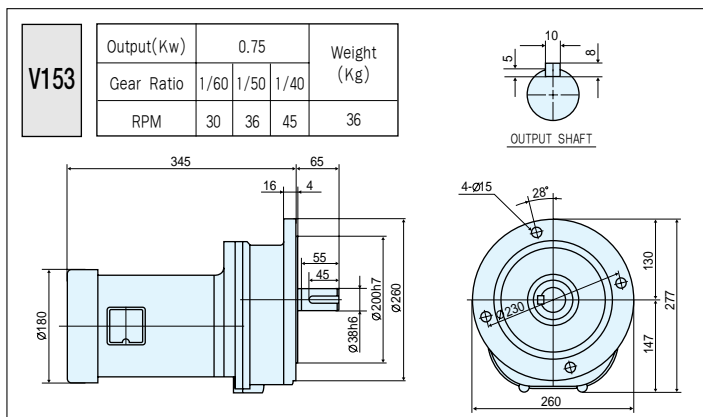
# LINE POWER

## 0.75Kw (1 HP)



# V.T GEARED MOTOR

## 0.75Kw (1 HP, 3-Phase 삼상)



GEARED MOTORS



## GEARED MOTOR

### 1.5Kw (2 HP, 3-Phase 삼상)

|             |            |       |     |             |
|-------------|------------|-------|-----|-------------|
| <b>F235</b> | Output(Kw) | 1.5   |     | Weight (Kg) |
|             | Gear Ratio | 1/120 |     |             |
|             | RPM        | 15    | 132 |             |

OUTPUT SHAFT

|             |            |      |      |      |             |
|-------------|------------|------|------|------|-------------|
| <b>F172</b> | Output(Kw) | 1.5  |      |      | Weight (Kg) |
|             | Gear Ratio | 1/60 | 1/50 | 1/45 |             |
|             | RPM        | 30   | 36   | 45   | 65          |

OUTPUT SHAFT

|             |            |      |    |             |
|-------------|------------|------|----|-------------|
| <b>F205</b> | Output(Kw) | 1.5  |    | Weight (Kg) |
|             | Gear Ratio | 1/90 |    |             |
|             | RPM        | 20   | 98 |             |

OUTPUT SHAFT

|             |            |      |      |      |      |             |
|-------------|------------|------|------|------|------|-------------|
| <b>F153</b> | Output(Kw) | 1.5  |      |      |      | Weight (Kg) |
|             | Gear Ratio | 1/30 | 1/20 | 1/15 | 1/10 |             |
|             | RPM        | 60   | 90   | 120  | 180  | 51          |

OUTPUT SHAFT

## V.T GEARED MOTOR

### 1.5Kw (2 HP, 3-Phase 삼상)

|             |            |      |      |      |      |             |
|-------------|------------|------|------|------|------|-------------|
| <b>V153</b> | Output(Kw) | 1.5  |      |      |      | Weight (Kg) |
|             | Gear Ratio | 1/30 | 1/20 | 1/15 | 1/10 |             |
|             | RPM        | 60   | 90   | 120  | 180  | 50          |

OUTPUT SHAFT

|             |            |      |      |      |             |
|-------------|------------|------|------|------|-------------|
| <b>V172</b> | Output(Kw) | 1.5  |      |      | Weight (Kg) |
|             | Gear Ratio | 1/60 | 1/50 | 1/45 |             |
|             | RPM        | 30   | 36   | 45   | 81          |

OUTPUT SHAFT

# LINE POWER

## 1.5Kw (2 HP)

|             |            |       |             |     |
|-------------|------------|-------|-------------|-----|
| <b>L235</b> | Output(Kw) | 1.5   | Weight (Kg) | 114 |
|             | Gear Ratio | 1/120 |             |     |
|             | RPM        | 15    |             |     |

|             |            |      |      |      |             |    |
|-------------|------------|------|------|------|-------------|----|
| <b>L172</b> | Output(Kw) | 1.5  |      |      | Weight (Kg) | 43 |
|             | Gear Ratio | 1/60 | 1/50 | 1/45 |             |    |
|             | RPM        | 30   | 36   | 45   |             |    |

|             |            |      |             |    |
|-------------|------------|------|-------------|----|
| <b>L205</b> | Output(Kw) | 1.5  | Weight (Kg) | 78 |
|             | Gear Ratio | 1/90 |             |    |
|             | RPM        | 20   |             |    |

|             |            |      |      |      |      |             |    |
|-------------|------------|------|------|------|------|-------------|----|
| <b>L153</b> | Output(Kw) | 1.5  |      |      |      | Weight (Kg) | 27 |
|             | Gear Ratio | 1/30 | 1/20 | 1/15 | 1/10 |             |    |
|             | RPM        | 60   | 90   | 120  | 180  |             |    |

# V.T GEARED MOTOR

## 1.5Kw (2 HP, 3-Phase 삼상)

|             |            |      |             |     |
|-------------|------------|------|-------------|-----|
| <b>V205</b> | Output(Kw) | 1.5  | Weight (Kg) | 102 |
|             | Gear Ratio | 1/90 |             |     |
|             | RPM        | 20   |             |     |

|             |            |       |             |     |
|-------------|------------|-------|-------------|-----|
| <b>V235</b> | Output(Kw) | 1.5   | Weight (Kg) | 140 |
|             | Gear Ratio | 1/120 |             |     |
|             | RPM        | 15    |             |     |

GEARED MOTORS

## GEARED MOTOR

### 2.2Kw (3 HP, 3-Phase 삼상)

|             |            |       |             |     |
|-------------|------------|-------|-------------|-----|
| <b>F270</b> | Output(Kw) | 2.2   | Weight (Kg) | 181 |
|             | Gear Ratio | 1/120 |             |     |
|             | RPM        | 15    |             |     |

OUTPUT SHAFT

|             |            |      |      |             |    |
|-------------|------------|------|------|-------------|----|
| <b>F181</b> | Output(Kw) | 2.2  |      | Weight (Kg) | 88 |
|             | Gear Ratio | 1/50 | 1/40 |             |    |
|             | RPM        | 36   | 45   |             |    |

OUTPUT SHAFT

|             |            |      |             |     |
|-------------|------------|------|-------------|-----|
| <b>F235</b> | Output(Kw) | 2.2  | Weight (Kg) | 142 |
|             | Gear Ratio | 1/90 |             |     |
|             | RPM        | 20   |             |     |

OUTPUT SHAFT

|             |            |      |      |      |             |    |      |
|-------------|------------|------|------|------|-------------|----|------|
| <b>F172</b> | Output(Kw) | 2.2  |      |      | Weight (Kg) | 73 |      |
|             | Gear Ratio | 1/30 | 1/20 | 1/15 |             |    | 1/10 |
|             | RPM        | 60   | 90   | 120  |             |    | 180  |

OUTPUT SHAFT

|             |            |      |             |     |
|-------------|------------|------|-------------|-----|
| <b>F205</b> | Output(Kw) | 2.2  | Weight (Kg) | 113 |
|             | Gear Ratio | 1/60 |             |     |
|             | RPM        | 30   |             |     |

OUTPUT SHAFT

# V.T GEARED MOTOR

## 2.2Kw (3 HP, 3-Phase 삼상)

|             |            |       |             |
|-------------|------------|-------|-------------|
| <b>V270</b> | Output(Kw) | 2.2   | Weight (Kg) |
|             | Gear Ratio | 1/120 |             |
|             | RPM        | 15    | 185         |

OUTPUT SHAFT

Dimensions: 530, 24, 115, 5, 105, 80, 70h6, 435h7, 260, 518.5, 258.5, 6-Ø19, 10, 20, 17.5, 12.

|             |            |      |      |             |
|-------------|------------|------|------|-------------|
| <b>V181</b> | Output(Kw) | 2.2  |      | Weight (Kg) |
|             | Gear Ratio | 1/50 | 1/40 |             |
|             | RPM        | 36   | 45   | 92          |

OUTPUT SHAFT

Dimensions: 482, 89, 18, 5, 82, 75, 275h7, 340, 170, 350, 180, 390, 6-Ø19, 5, 14, 15.5, 9.

|             |            |      |             |
|-------------|------------|------|-------------|
| <b>V235</b> | Output(Kw) | 2.2  | Weight (Kg) |
|             | Gear Ratio | 1/90 |             |
|             | RPM        | 20   | 145         |

OUTPUT SHAFT

Dimensions: 522, 24, 113, 5, 105, 63, 65h6, 355h7, 440, 220, 450, 230, 6-Ø19, 8, 18, 7, 11.

|             |            |      |      |      |      |             |
|-------------|------------|------|------|------|------|-------------|
| <b>V172</b> | Output(Kw) | 2.2  |      |      |      | Weight (Kg) |
|             | Gear Ratio | 1/30 | 1/20 | 1/15 | 1/10 |             |
|             | RPM        | 60   | 90   | 120  | 180  | 85          |

OUTPUT SHAFT

Dimensions: 482, 69, 18, 4, 82, 75, 275h7, 340, 170, 350, 180, 6-Ø19, 5, 14, 15.5, 9.

|             |            |      |             |
|-------------|------------|------|-------------|
| <b>V205</b> | Output(Kw) | 2.2  | Weight (Kg) |
|             | Gear Ratio | 1/60 |             |
|             | RPM        | 30   | 115         |

OUTPUT SHAFT

Dimensions: 508, 89, 18, 5, 82, 75, 295h7, 380, 190, 390, 200, 6-Ø19, 4, 16, 6, 10.

GEARED MOTORS

## LINE POWER

### 2.2Kw (3 HP)

|             |            |       |                |
|-------------|------------|-------|----------------|
| <b>L270</b> | Output(Kw) | 2.2   | Weight<br>(Kg) |
|             | Gear Ratio | 1/120 |                |
|             | RPM        | 15    |                |

INPUT SHAFT      OUTPUT SHAFT

|             |            |      |      |                |
|-------------|------------|------|------|----------------|
| <b>L181</b> | Output(Kw) | 2.2  |      | Weight<br>(Kg) |
|             | Gear Ratio | 1/50 | 1/40 |                |
|             | RPM        | 36   | 45   |                |

INPUT SHAFT      OUTPUT SHAFT

|             |            |      |                |
|-------------|------------|------|----------------|
| <b>L235</b> | Output(Kw) | 2.2  | Weight<br>(Kg) |
|             | Gear Ratio | 1/90 |                |
|             | RPM        | 20   |                |

INPUT SHAFT      OUTPUT SHAFT

|             |            |      |      |      |                |
|-------------|------------|------|------|------|----------------|
| <b>L172</b> | Output(Kw) | 2.2  |      |      | Weight<br>(Kg) |
|             | Gear Ratio | 1/30 | 1/20 | 1/10 |                |
|             | RPM        | 60   | 90   | 180  |                |

INPUT SHAFT      OUTPUT SHAFT

|             |            |      |                |
|-------------|------------|------|----------------|
| <b>L205</b> | Output(Kw) | 2.2  | Weight<br>(Kg) |
|             | Gear Ratio | 1/60 |                |
|             | RPM        | 30   |                |

INPUT SHAFT      OUTPUT SHAFT

# GEARED MOTOR

## 3.7Kw (5HP, 3-Phase 삼상)

|             |            |      |             |     |
|-------------|------------|------|-------------|-----|
| <b>F270</b> | Output(Kw) | 3.7  | Weight (Kg) | 184 |
|             | Gear Ratio | 1/90 |             |     |
|             | RPM        | 20   |             |     |

OUTPUT SHAFT

|             |            |      |             |    |
|-------------|------------|------|-------------|----|
| <b>F181</b> | Output(Kw) | 3.7  | Weight (Kg) | 98 |
|             | Gear Ratio | 1/30 |             |    |
|             | RPM        | 60   |             |    |

OUTPUT SHAFT

|             |            |      |             |     |
|-------------|------------|------|-------------|-----|
| <b>F235</b> | Output(Kw) | 3.7  | Weight (Kg) | 150 |
|             | Gear Ratio | 1/60 |             |     |
|             | RPM        | 30   |             |     |

OUTPUT SHAFT

|             |            |      |             |    |      |      |
|-------------|------------|------|-------------|----|------|------|
| <b>F172</b> | Output(Kw) | 3.7  | Weight (Kg) | 80 |      |      |
|             | Gear Ratio | 1/20 |             |    | 1/15 | 1/10 |
|             | RPM        | 90   |             |    | 120  | 180  |
|             |            |      |             |    |      |      |

OUTPUT SHAFT

|             |            |      |             |     |      |
|-------------|------------|------|-------------|-----|------|
| <b>F205</b> | Output(Kw) | 3.7  | Weight (Kg) | 118 |      |
|             | Gear Ratio | 1/50 |             |     | 1/40 |
|             | RPM        | 36   |             |     | 45   |
|             |            |      |             |     |      |

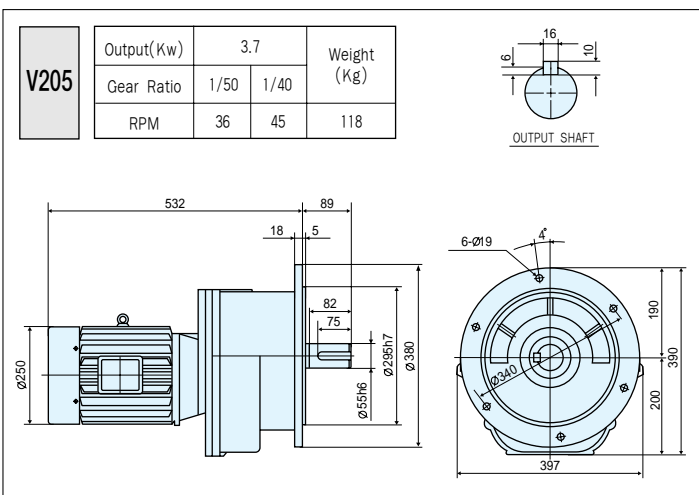
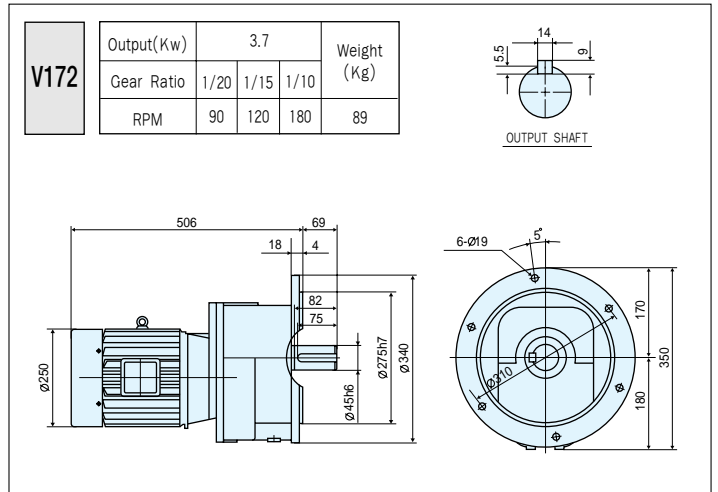
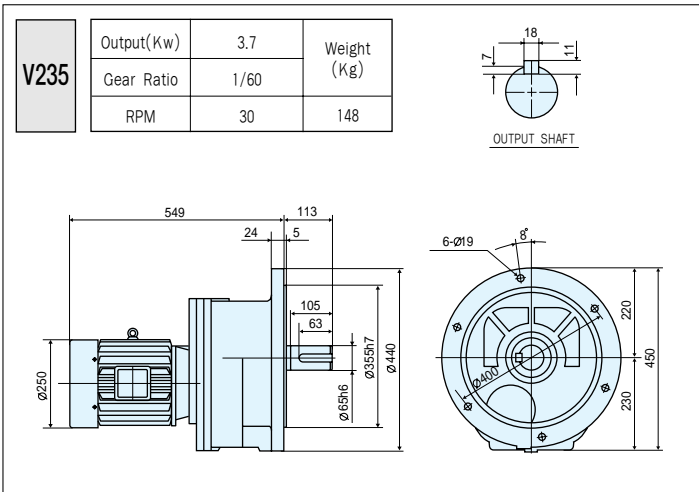
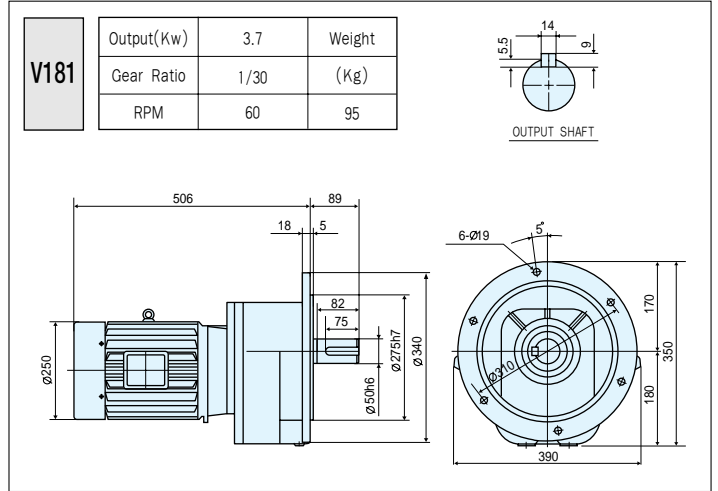
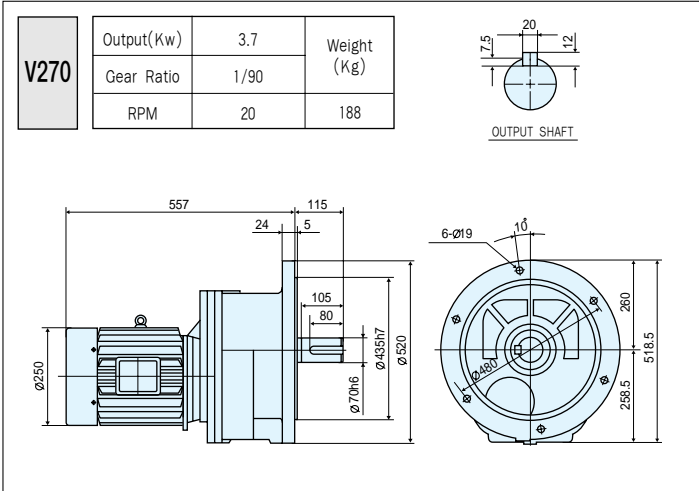
OUTPUT SHAFT

GEARED MOTORS



## V.T GEARED MOTOR

### 3.7Kw (5 HP, 3-Phase 삼상)



# LINE POWER

## 3.7Kw (5HP)

|             |            |      |  |             |     |
|-------------|------------|------|--|-------------|-----|
| <b>L270</b> | Output(Kw) | 3.7  |  | Weight (Kg) | 155 |
|             | Gear Ratio | 1/90 |  |             |     |
|             | RPM        | 20   |  |             |     |

INPUT SHAFT      OUTPUT SHAFT

|             |            |      |  |             |    |
|-------------|------------|------|--|-------------|----|
| <b>L181</b> | Output(Kw) | 3.7  |  | Weight (Kg) | 88 |
|             | Gear Ratio | 1/30 |  |             |    |
|             | RPM        | 60   |  |             |    |

INPUT SHAFT      OUTPUT SHAFT

|             |            |      |  |             |     |
|-------------|------------|------|--|-------------|-----|
| <b>L235</b> | Output(Kw) | 3.7  |  | Weight (Kg) | 121 |
|             | Gear Ratio | 1/60 |  |             |     |
|             | RPM        | 30   |  |             |     |

INPUT SHAFT      OUTPUT SHAFT

|             |            |      |      |      |             |    |
|-------------|------------|------|------|------|-------------|----|
| <b>L172</b> | Output(Kw) | 3.7  |      |      | Weight (Kg) | 50 |
|             | Gear Ratio | 1/20 | 1/15 | 1/10 |             |    |
|             | RPM        | 90   | 120  | 180  |             |    |

INPUT SHAFT      OUTPUT SHAFT

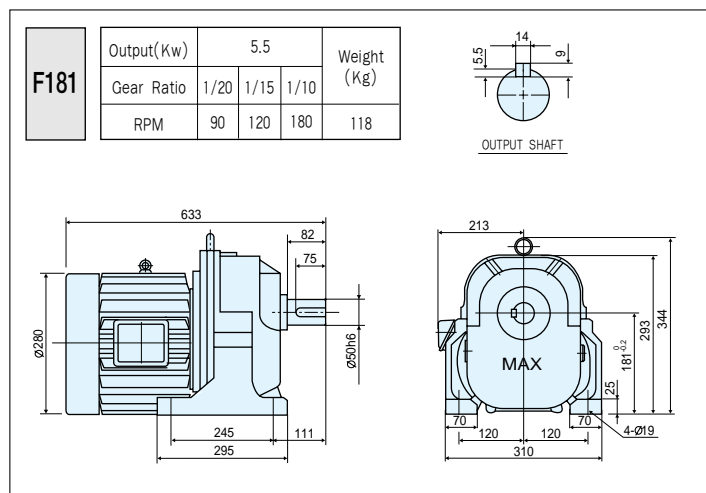
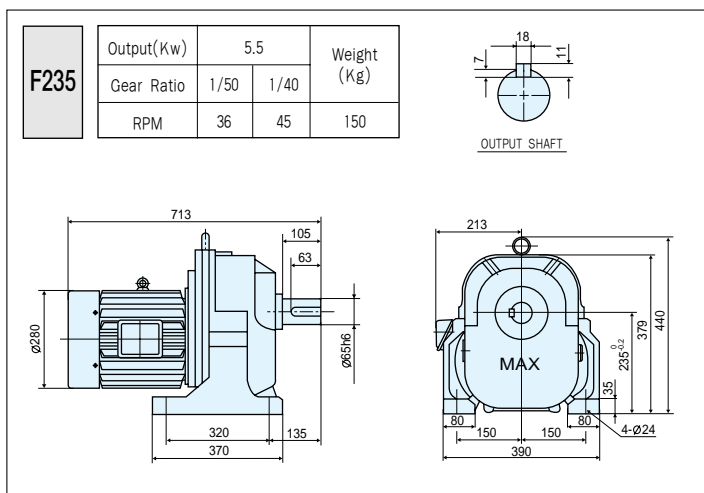
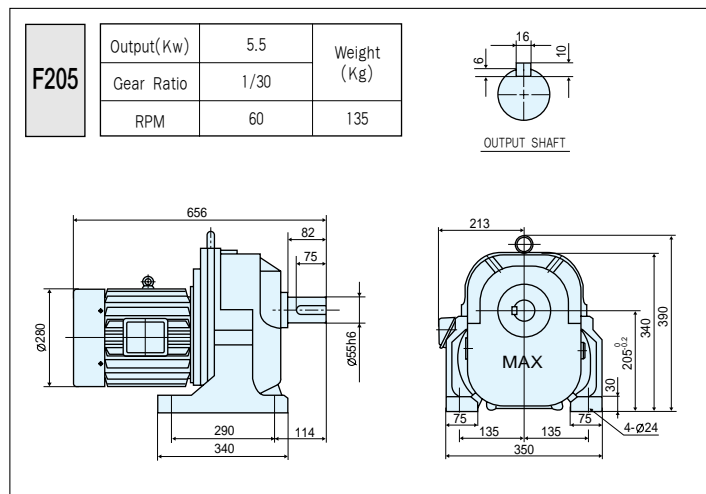
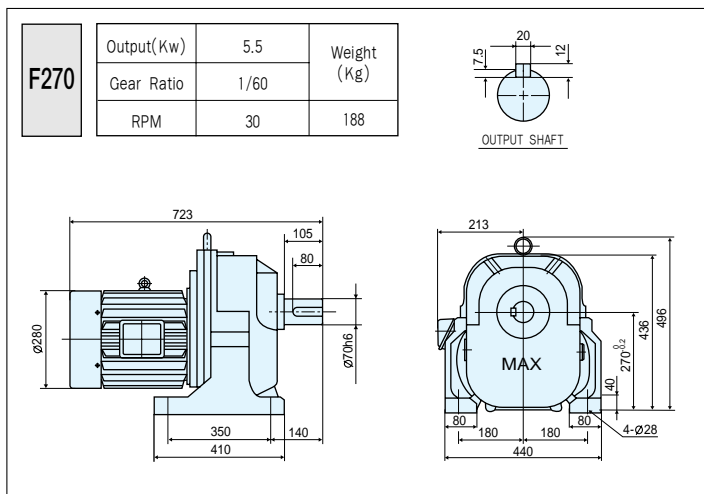
|             |            |      |      |             |    |
|-------------|------------|------|------|-------------|----|
| <b>L205</b> | Output(Kw) | 3.7  |      | Weight (Kg) | 86 |
|             | Gear Ratio | 1/50 | 1/40 |             |    |
|             | RPM        | 36   | 40   |             |    |

INPUT SHAFT      OUTPUT SHAFT

GEARED MOTORS

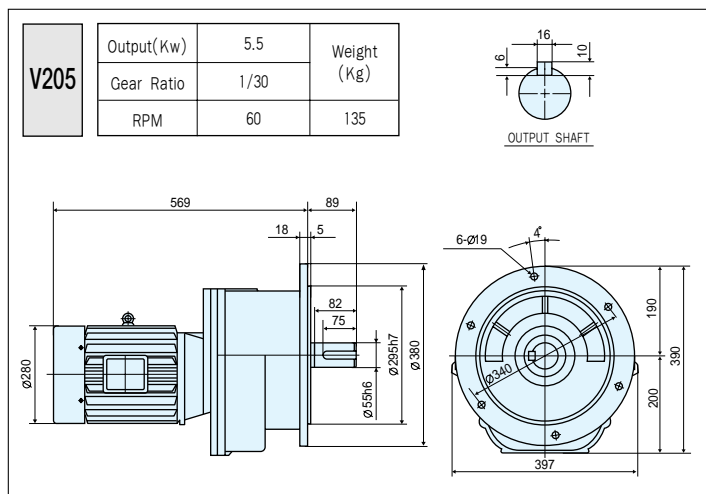
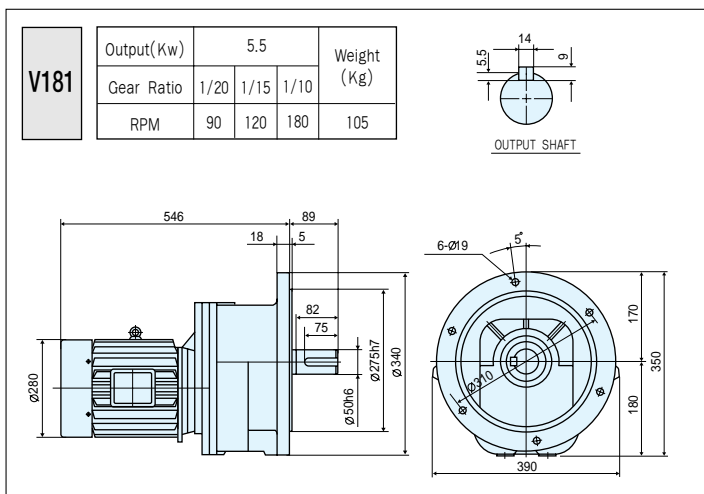
## GEARED MOTOR

### 5.5Kw (7.5HP, 3-Phase 삼상)



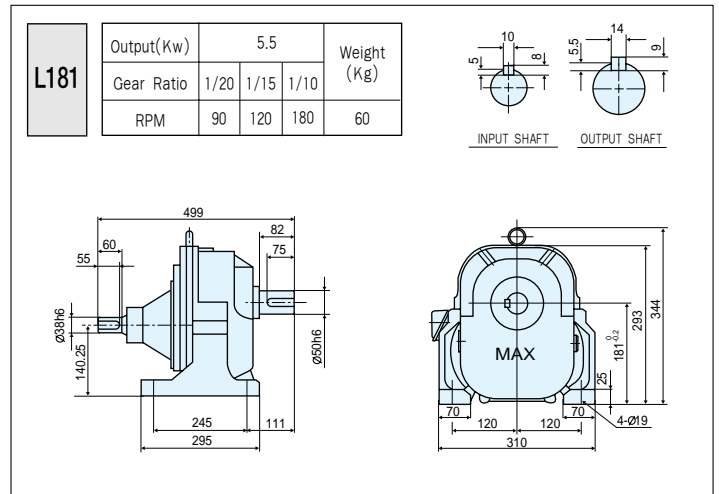
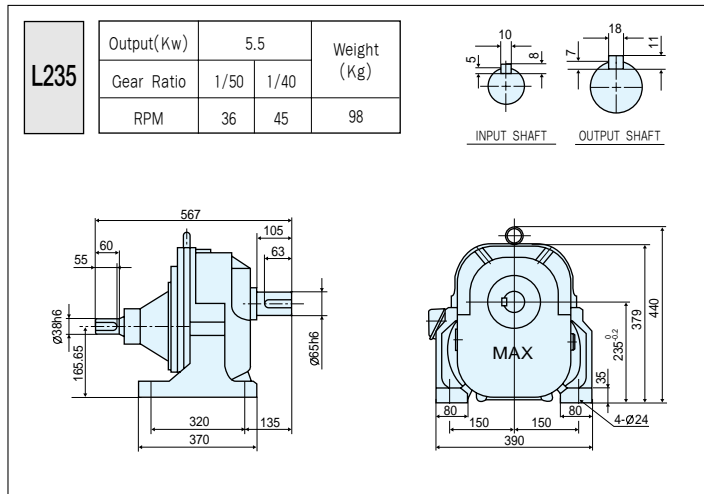
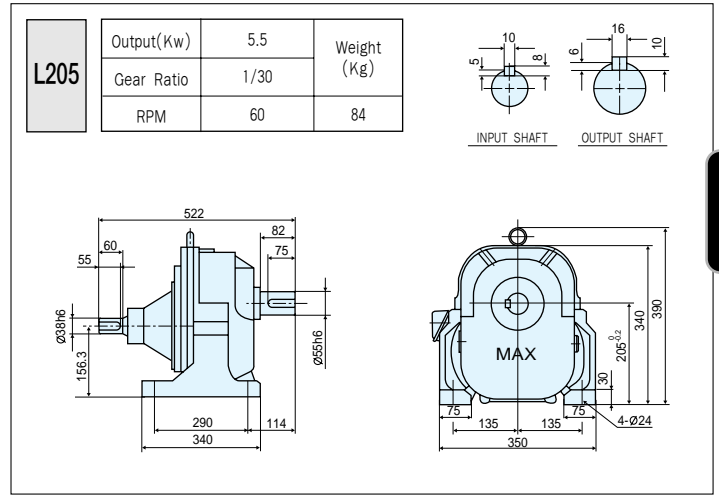
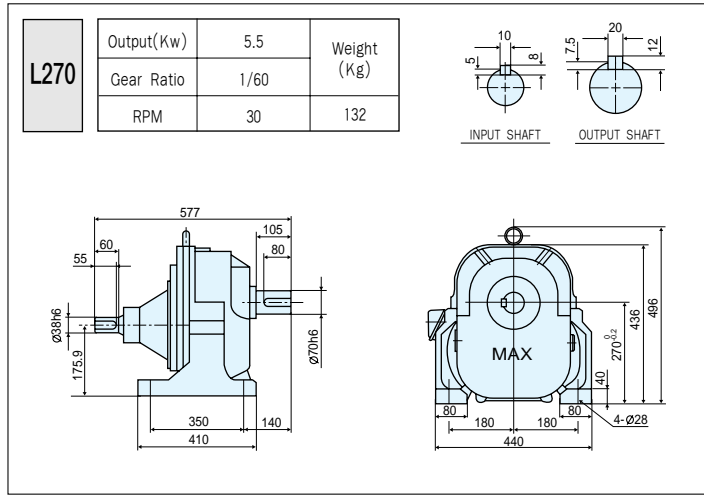
## V,T GEARED MOTOR

### 5.5Kw (7.5 HP, 3-Phase 삼상)



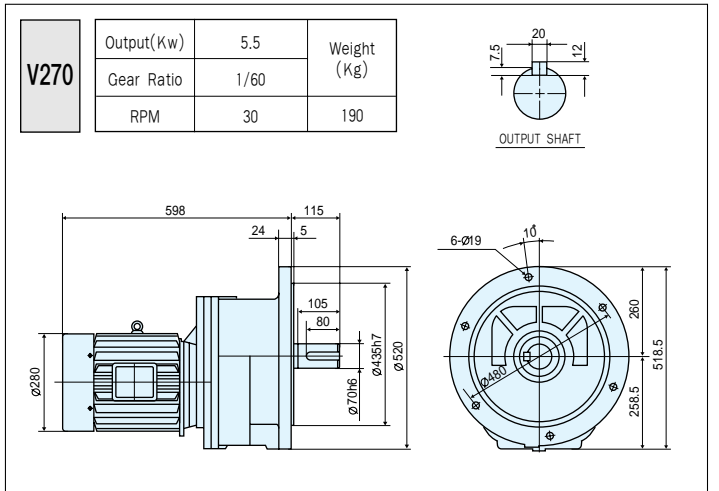
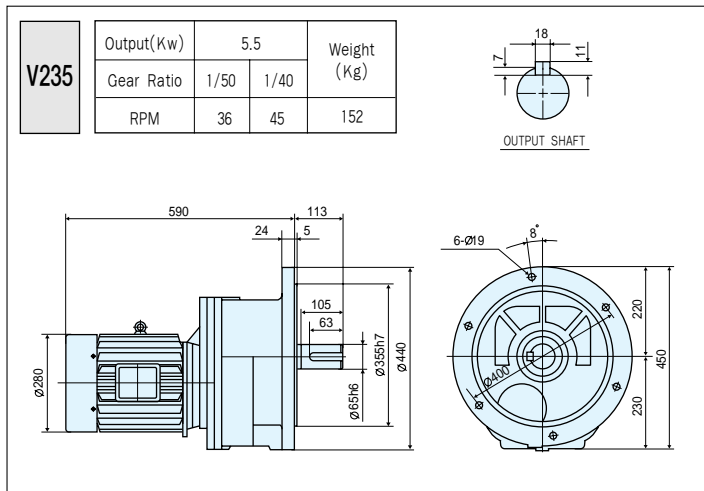
# LINE POWER

## 5.5Kw (7.5HP)



## V,T GEARED MOTOR

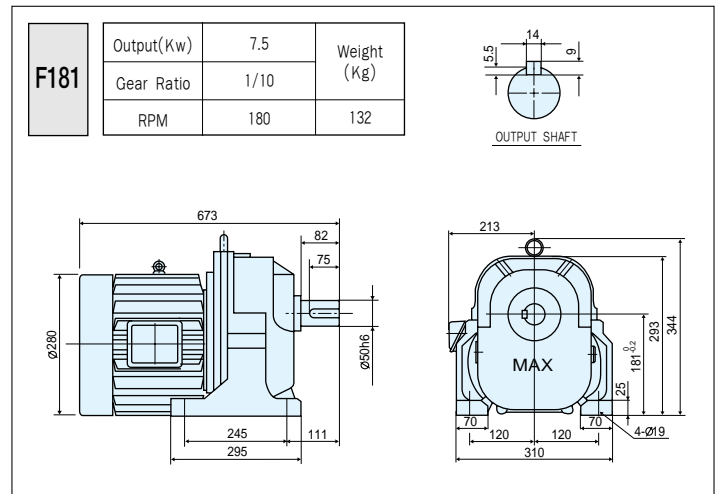
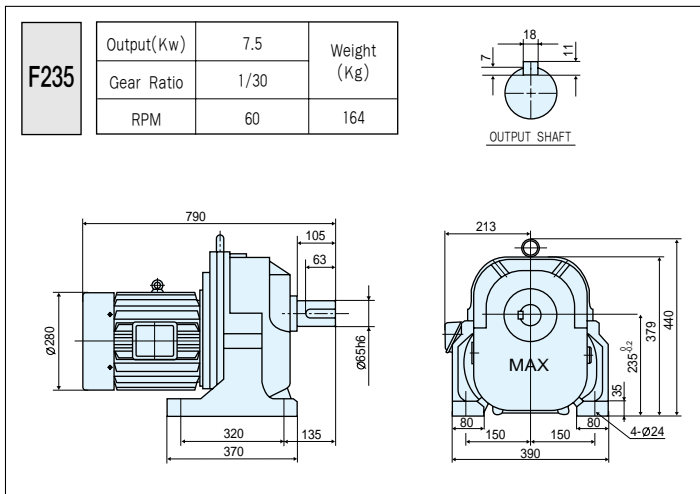
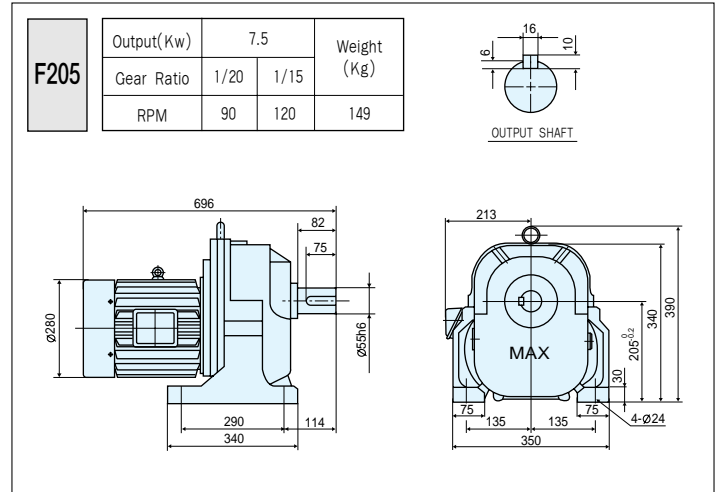
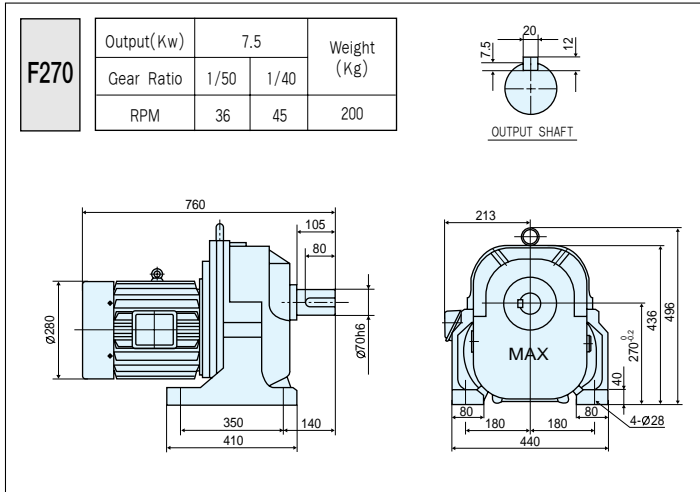
### 5.5Kw (7.5 HP, 3-Phase 삼상)



GEARED MOTORS

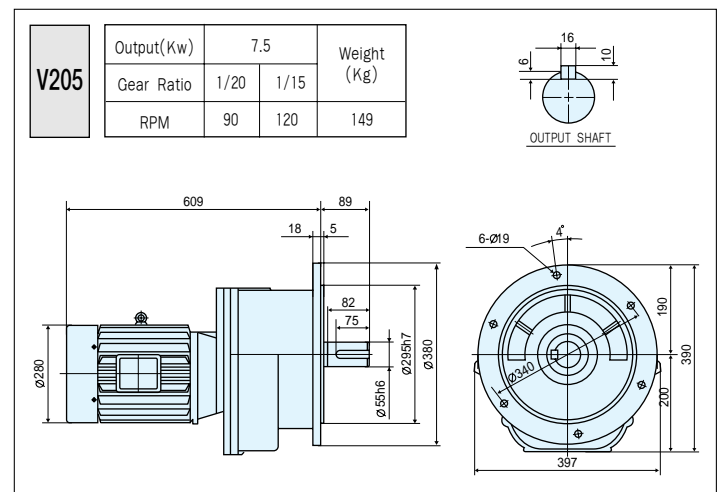
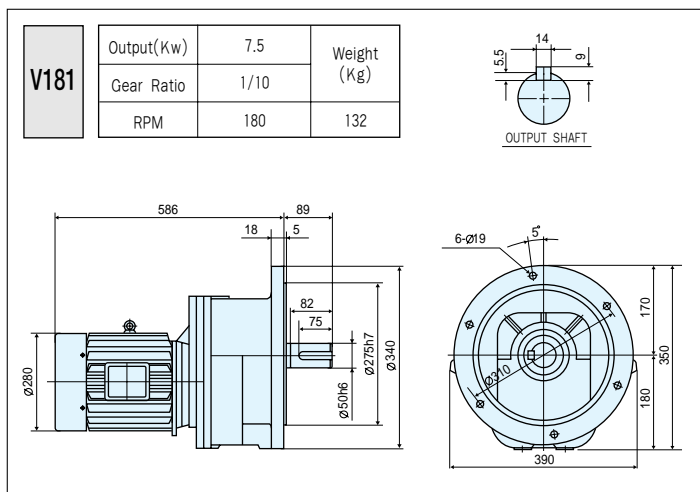
## GEARED MOTOR

### 7.5Kw (10HP, 3-Phase 삼상)



## V.T GEARED MOTOR

### 7.5Kw (10HP, 3-Phase 삼상)



# LINE POWER

## 7.5Kw (10HP)

|             |            |      |      |             |
|-------------|------------|------|------|-------------|
| <b>L270</b> | Output(Kw) | 7.5  |      | Weight (Kg) |
|             | Gear Ratio | 1/50 | 1/40 |             |
|             | RPM        | 36   | 45   |             |

INPUT SHAFT      OUTPUT SHAFT

|             |            |      |      |             |
|-------------|------------|------|------|-------------|
| <b>L205</b> | Output(Kw) | 7.5  |      | Weight (Kg) |
|             | Gear Ratio | 1/20 | 1/15 |             |
|             | RPM        | 90   | 120  |             |

INPUT SHAFT      OUTPUT SHAFT

|             |            |      |  |             |
|-------------|------------|------|--|-------------|
| <b>L235</b> | Output(Kw) | 7.5  |  | Weight (Kg) |
|             | Gear Ratio | 1/30 |  |             |
|             | RPM        | 60   |  |             |

INPUT SHAFT      OUTPUT SHAFT

|             |            |      |  |             |
|-------------|------------|------|--|-------------|
| <b>L181</b> | Output(Kw) | 7.5  |  | Weight (Kg) |
|             | Gear Ratio | 1/10 |  |             |
|             | RPM        | 180  |  |             |

INPUT SHAFT      OUTPUT SHAFT

## V.T GEARED MOTOR

### 7.5Kw (10HP, 3-Phase 삼상)

|             |            |      |  |             |
|-------------|------------|------|--|-------------|
| <b>V235</b> | Output(Kw) | 7.5  |  | Weight (Kg) |
|             | Gear Ratio | 1/30 |  |             |
|             | RPM        | 60   |  |             |

OUTPUT SHAFT

|             |            |      |      |             |
|-------------|------------|------|------|-------------|
| <b>V270</b> | Output(Kw) | 7.5  |      | Weight (Kg) |
|             | Gear Ratio | 1/50 | 1/40 |             |
|             | RPM        | 36   | 45   |             |

OUTPUT SHAFT

GEARED MOTORS

## GEARED MOTOR

### 11Kw (15HP, 3-Phase 삼상)

|             |            |      |             |
|-------------|------------|------|-------------|
| <b>F270</b> | Output(Kw) | 11   | Weight (Kg) |
|             | Gear Ratio | 1/30 |             |
|             | RPM        | 60   | 220         |

OUTPUT SHAFT

### 15Kw (20HP, 3-Phase 삼상)

|             |            |           |             |
|-------------|------------|-----------|-------------|
| <b>F270</b> | Output(Kw) | 15        | Weight (Kg) |
|             | Gear Ratio | 1/20 1/15 |             |
|             | RPM        | 90 120    | 240         |

OUTPUT SHAFT

|             |            |           |             |
|-------------|------------|-----------|-------------|
| <b>F235</b> | Output(Kw) | 11        | Weight (Kg) |
|             | Gear Ratio | 1/20 1/15 |             |
|             | RPM        | 90 120    | 197         |

OUTPUT SHAFT

|             |            |      |             |
|-------------|------------|------|-------------|
| <b>F235</b> | Output(Kw) | 15   | Weight (Kg) |
|             | Gear Ratio | 1/10 |             |
|             | RPM        | 180  | 225         |

OUTPUT SHAFT

|             |            |      |             |
|-------------|------------|------|-------------|
| <b>F205</b> | Output(Kw) | 11   | Weight (Kg) |
|             | Gear Ratio | 1/10 |             |
|             | RPM        | 180  | 180         |

OUTPUT SHAFT

(모터가 바닥보다 4mm낮음)

# V.T GEARED MOTOR

## 11Kw (15HP, 3-Phase 삼상)

|             |            |      |     |             |
|-------------|------------|------|-----|-------------|
| <b>V270</b> | Output(Kw) | 11   |     | Weight (Kg) |
|             | Gear Ratio | 1/30 |     |             |
|             | RPM        | 60   | 220 |             |

OUTPUT SHAFT

## 15Kw (20HP, 3-Phase 삼상)

|             |            |      |      |             |
|-------------|------------|------|------|-------------|
| <b>V270</b> | Output(Kw) | 15   |      | Weight (Kg) |
|             | Gear Ratio | 1/20 | 1/15 |             |
|             | RPM        | 90   | 120  | 240         |

OUTPUT SHAFT

|             |            |      |      |             |
|-------------|------------|------|------|-------------|
| <b>V235</b> | Output(Kw) | 11   |      | Weight (Kg) |
|             | Gear Ratio | 1/20 | 1/15 |             |
|             | RPM        | 90   | 120  | 197         |

OUTPUT SHAFT

|             |            |      |  |             |
|-------------|------------|------|--|-------------|
| <b>V235</b> | Output(Kw) | 15   |  | Weight (Kg) |
|             | Gear Ratio | 1/10 |  |             |
|             | RPM        | 180  |  | 225         |

OUTPUT SHAFT

|             |            |      |  |             |
|-------------|------------|------|--|-------------|
| <b>V205</b> | Output(Kw) | 11   |  | Weight (Kg) |
|             | Gear Ratio | 1/10 |  |             |
|             | RPM        | 180  |  | 180         |

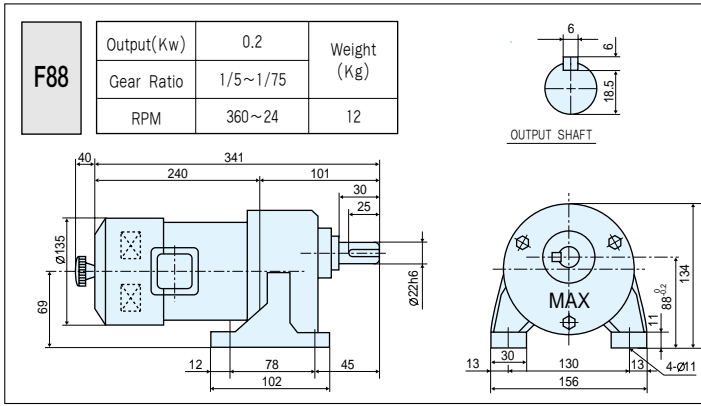
OUTPUT SHAFT

GEARED MOTORS

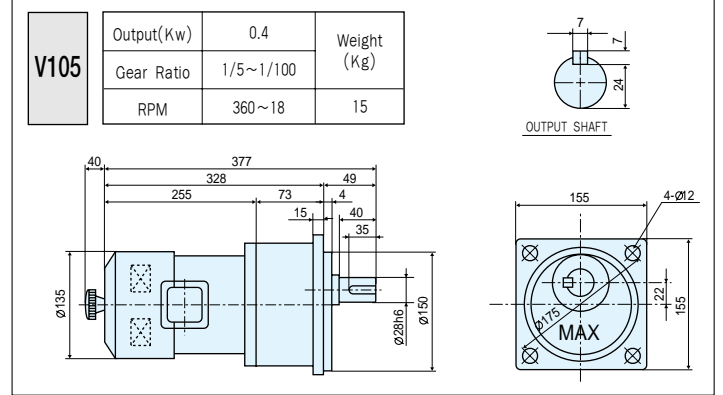
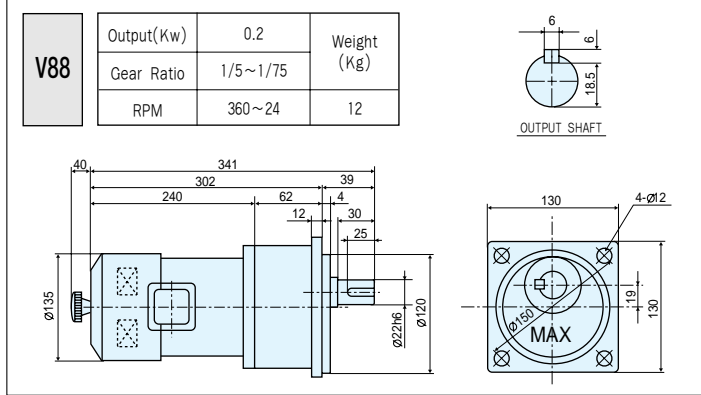
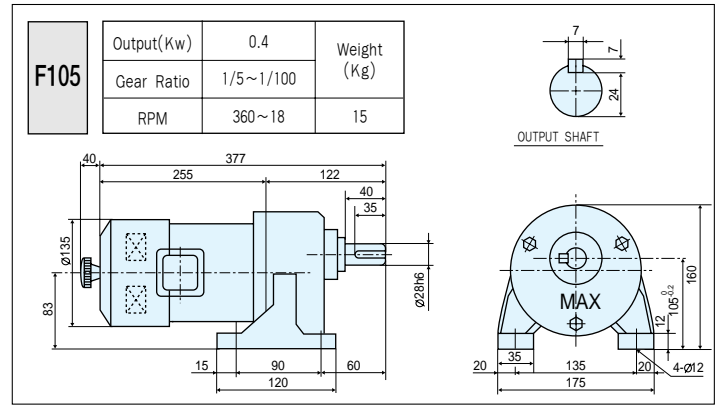


## GEARED MOTOR (주차기 전용 BRAKE 부착형)

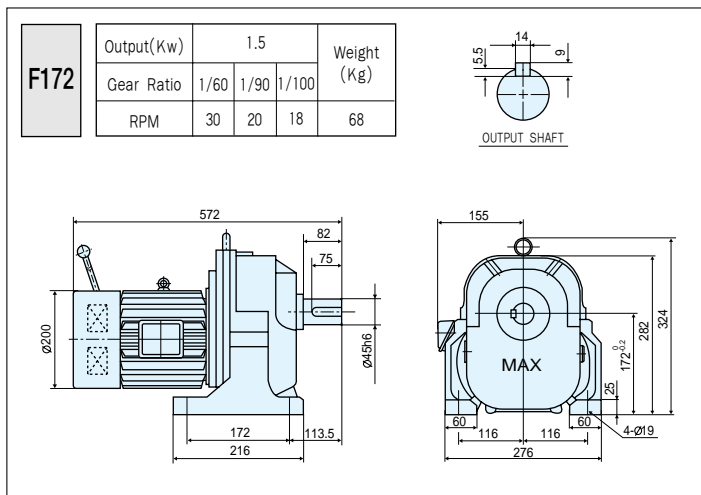
### 0.2Kw (1/4 HP, 3-Phase 삼상)



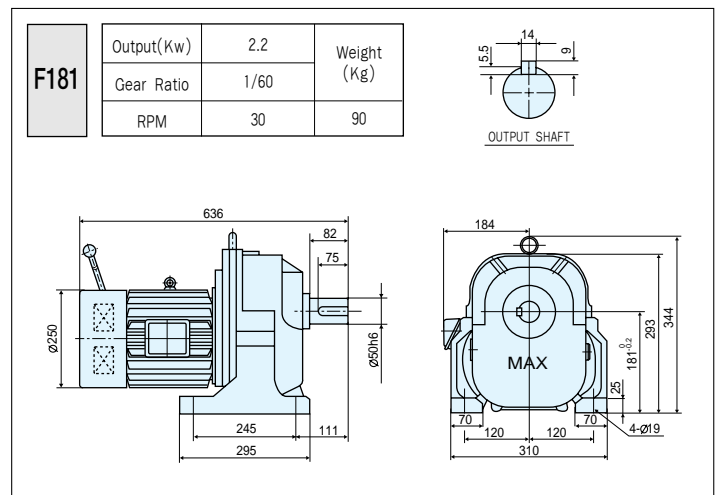
### 0.4Kw (1/2 HP, 3-Phase 삼상)



### 1.5Kw (2HP, 3-Phase 삼상)



### 2.2Kw (3HP, 3-Phase 삼상)



\* 총기장 치수는 DC-브레이크 취부시 적용한 것입니다.  
AC-브레이크 취부시는 본사에 문의 바랍니다.

# SAMYANG MAX GEARED MOTOR

