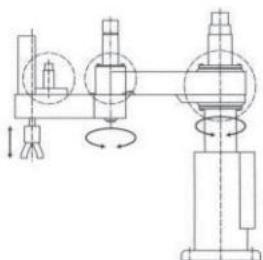
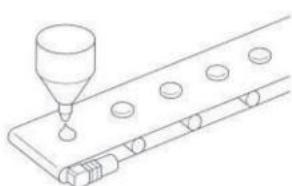


Applications

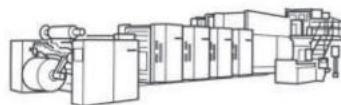
Scara Robot



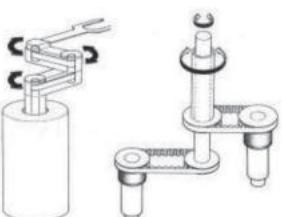
Belt Conveyor



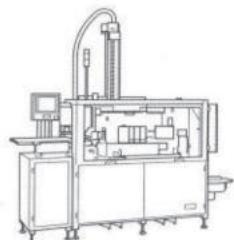
Printing Machine



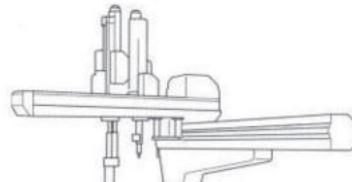
Wafer Transfer Robot



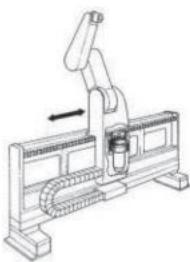
Automated Packing Machine



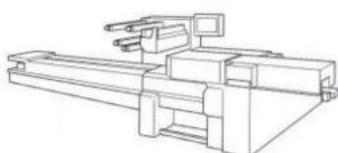
Gantry Robot



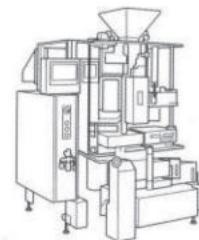
Robot의 주행축 (Rack&Pinion)



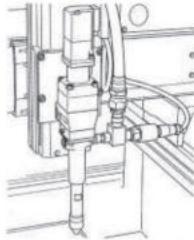
Fill Seal Machine(Horizontal Type)



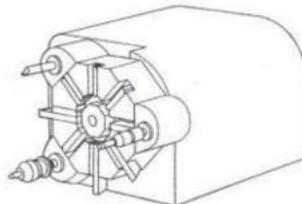
Fill Seal Machine(Vertical Type)



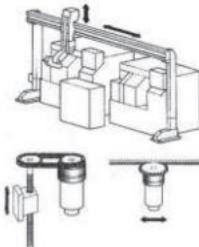
Dispenser Robot



Turret-Head



Loader Robot



- 이재 Robot (Parts Transfer Robot Systems)
- Robot 주변기기 (Robot peripherals)
- FA기기 (FA units)
- 액정 Glass 반송 Robot (Liquid glass return robots)
- 반도체 제조장치 (Semiconductor manufacturing devices)
- 공작기계 (Machine tools)
- Loader 주행축 (Loader drive shafts)

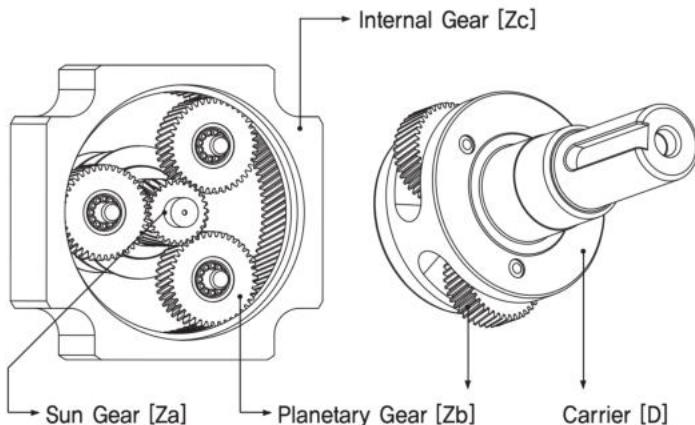
- 포장기계(제대기, Film 포장기) (Printing Machinery)
- 목공기계 (Woodworking machinery)
- Laser 가공기 (Laser processing machinery)
- 의료용기기 (Medical devices)(CT)
- 감시방범 카메라 (Monitoring & security cameras)
- Bending Machine (Bending Machinery)
- 검사장치 (Testing devices)

- 측정기기 (Measuring devices)
- Pallet Stacker
- Conveyor
- 사출기 취출장치 etc.
- (Extrusion machinery, blow-down devices etc., blow-down device etc.)

SPG의 정밀 유성감속기는 다양한 형태의 기계 및 장치에 적용 가능합니다.

(The precision planetary gearheads series meet most of specifications which servo applications require.)

■ 유성기어 기구 구조 (Planetary gear structure)



유성기어 기구는 주요구성부품으로
(The major components of
Planetary gearheads are)

- ① Sun Gear
- ② Planetary Gear
- ③ Internal Gear
- ④ Carrier가 기본 Unit로 구성됩니다.
(Composes of carriers as a basic unit.)

콤팩트하면서도 큰 감속비를 얻을 수 있을 뿐만 아니라 동력전달 효율이 높고, 정밀한 제어에 유리한 특징을 가진 기어장치입니다.
It is gear equipment with such advantageous features that it cannot only obtain a large reduction ratio but also high efficiency and precise control of power transfer while it is in a compact style.

Type 종류 (Type)	고정요소 (Fixed component)	입력 (Input)	출력 (Output)	* 감속비 계산식 * Calculation formula of reduction ratio	감속비 범위 (Reduction ratio range)	** Planetary Gear
Planetary Gear	Internal Gear	Sun Gear	Carrier	$\frac{1}{Z_c + 1}$	1/3 ~ 1/12	자전과 공전 동시 수행 (Performance of simultaneous rotation and revolution)
Star	Carrier	Sun Gear	Internal Gear	$-\frac{1}{Z_c}$	1/2 ~ 1/11	자전만 수행 (Performance of revolution only)
Solar	Sun Gear	Internal Gear	Carrier	$\frac{1}{Z_a + 1}$	1/1.2~1/1.7	자전과 공전 동시 수행 (Performance of simultaneous rotation and revolution)

* 계산식의 Z는 각 구성기어의 잇수를 표시하고, (-) 기호는 입력회전과 반대의 출력 방향을 의미합니다.

(Z in a calculation formula indicates the number of teeth in each component gear, and the sign (-) means the output direction opposite to that of input.)

** Planetary Gear만의 구동상태를 의미합니다. (It means an operation condition of planetary gears only.)

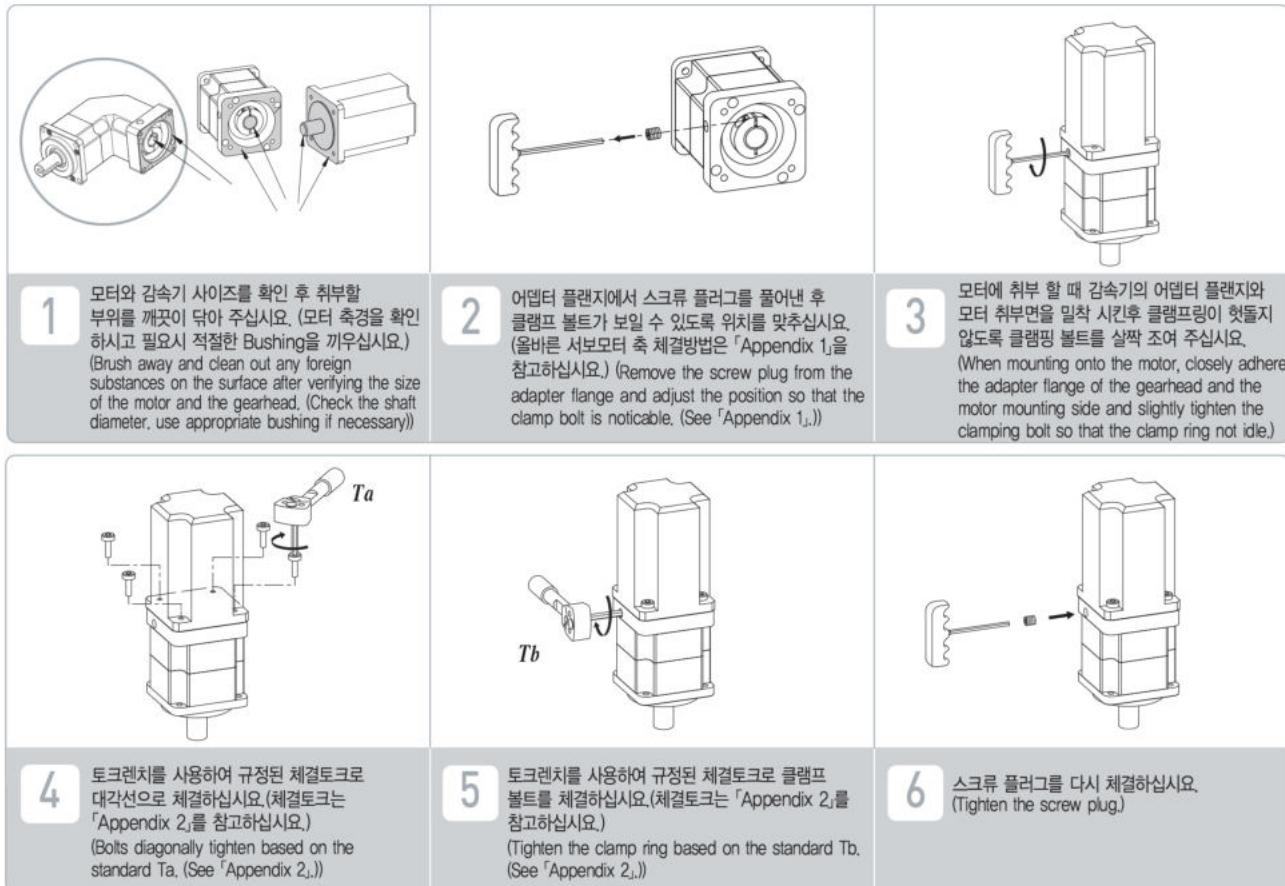
■ 유성감속기 일반적 용도 분류 (Backlash 등급별)
(Classification of general uses of a planetary gearheads (by Backlash grade))

구 분	Backlash (arcmin)	용 도 (Applications)	제어방식 (Control method)
고정밀급 (High precision class)	3' 이하 (3' or less)	<ul style="list-style-type: none"> 로봇 주변장비 (robot peripheral equipment) (Positioner, Slider etc.) 검사장비, 정밀 FA 기기, 의료용기기, Index 장비 (Inspection equipment, precision FA machinery, medical equipment, Index equipment) 포장 기계, 섬유기계, 공작기계 (packing machinery, textile machinery, machine tool) 	위치제어 (Position control)
정밀급 (Precision class)	5' 이하 (5' or less)	<ul style="list-style-type: none"> 정밀 Conveyor (이송, 구분, 적재) (precision Conveyor (transfer, division, loading)) 반송물류 시스템 (AGV, 자동창고) (*logistics conveyance system (AGV, automated warehouse)) 사출기 축출장비 (injection machinery extracting equipment) 	속도제어 (Speed control)
일반급(표준급) (General class (standard class))	10'~30'	<ul style="list-style-type: none"> Conveyor, Bending Machine, Pallet Slacker (Conveyor, Bending Machine, Pallet Slacker) 인쇄기계, 식품기계, 필름 권취기 (printing machinery, food processing machinery, film winding machine) 각종시험기 (various kinds of testing instruments) 	토크제어 (Torque control)

서보모터 취부방법

How to mount the servo motor

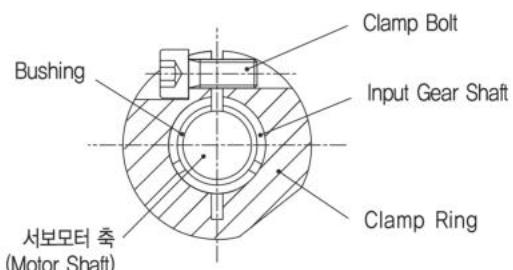
■ 서보모터 취부방법 서보모터와의 취부는 아래의 순서에 따라 하여 주십시오.



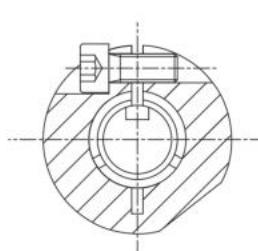
■ Appendix 1 올바른 서보모터 축 체결방법 (Proper servo motor shaft fixation method)

서보모터축이 원형이 아닌 Keyhole이 있는 경우, Key를 제거 후 서보모터축의 Keyhole과 감속기 입력축 Clamp Bolt가 그림 B와 같이 수직이 되도록 취부 하십시오. 또한 높은 체결력을 얻기 위해서는 조립시 Clamp Ring, Input Gear Shaft, Bushing 각각의 Slot 위치를 일렬로 정렬하십시오.

(If the servo motor shaft does not have a round shape but key way, remove the key and make sure that the key way of the servo motor shaft and the clamp bolt of the gearbox input shaft can be perpendicular as shown in Fig. B at mounting. Also, arrange each slot position of the Clamp Ring, the Input Gear Shaft, and the Bushing in a line to get higher tightening power.)



(그림 A) 환축일 경우
((Figure A) Motor shaft without key)



(그림 B) Key홀일 경우
((Figure B) Motor shaft with key)

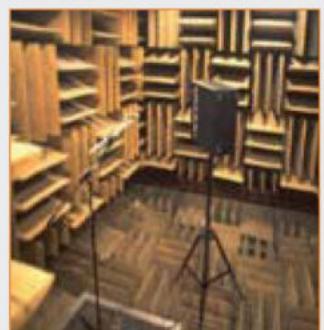
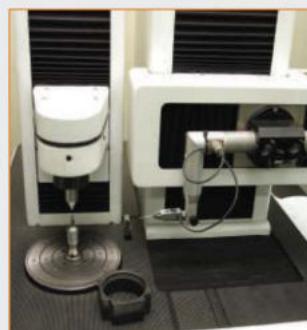
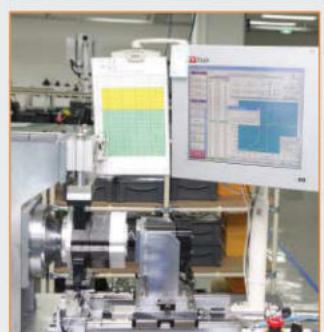
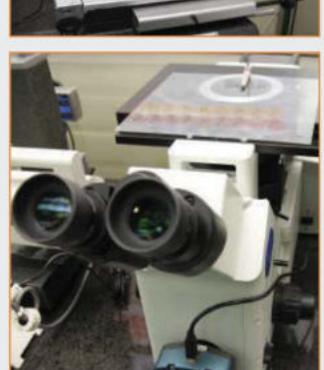
Equipment

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Manufacturing with full range of Automatic processing equipments and Comprehensive quality control equipments.

◆ Processing



◆ Quality Control

