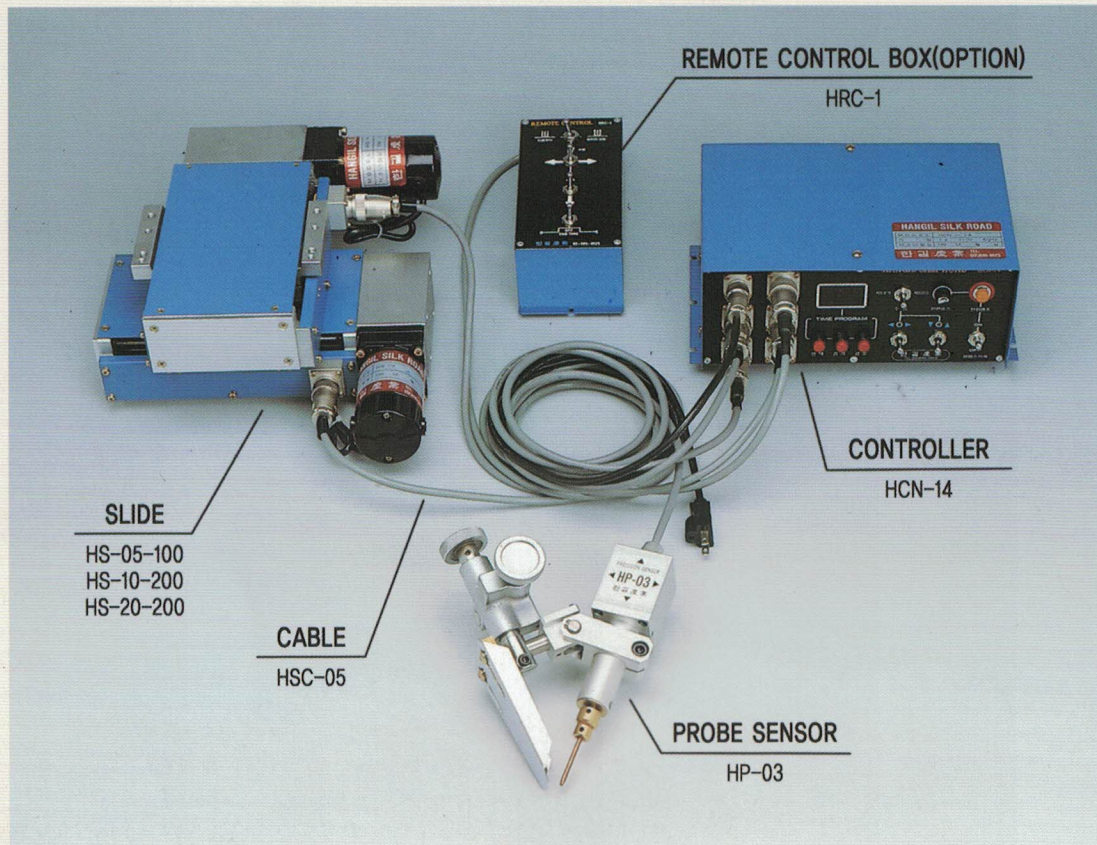


SEAM TRACKER



한길 AW의 SEAM TRACKER는

- 정밀 SENSOR가 용접선을 추적하며 용접모재의 변화값을 CONTROLLER에서 제어합니다.
- SLIDE의 구동으로 TORCH를 신속하고 정확하게 안내합니다.
- 모재의 자체 변형 및 열변형의 오차에 대한 자동 보정이 가능합니다.
- 박판 용접시 일어날 수 있는 탈선방지 기능과 탈선시 비상 STOP 기능이 있어 불량을 방지할 수 있습니다.
- SEAM TRACKER를 적용하면 무인화할 수 있는 장치를 간편하게 제작 가능하며 기존의 반 자동 설비에 간단히 부착하여 고급 용접장치를 구성할 수 있습니다.
- 정밀 추적이 가능하며, PROGRAM으로 제어하므로 어떤 조건에서도 완벽한 성능을 발휘합니다.

Han Gil Seam Tracker is;

- The seam tracker is made up of a precision sensor, controller and slide.
The sensor does probe the weld seam and the controller does control the value of change on the work-piece.
- The welding torch is guided rapidly and exactly by moving the slides.
- The seam tracker can automatically calibrate the error occurred by the work-piece deformed itself or the welding heat.
- There is a stop function to prevent the deviation of the sensor from a thin work-piece.
So, the welding defect can be avoided.
- The seam tracker can be compatibly used with other automatic system or established semi-automatic system.
- All the controlling is done in digital and program, so the unit does show the good performance in the tough environments.

■ Features

- 가접 구간 검출기능
- 균일한 BEAD를 형성
- 모재 끝단을 검출하여 종료시간 설정기능
- 역추적 및 다양한 우선 동작기능
- 좌, 우 반전기능으로 쉬운 설치
- 탈선방지 및 탈선시 자동STOP기능
- REMOTE CONTROL 및 외부 CONNECTOR 설치
- 자동, 반자동 설비에 쉬운 일체화
- 모든 기능을 PROGRAM으로 제어하여 조작성 편리
- The seam tracker has the function for sensing the tack welding.
- A uniformed welding bead is produced.
- There is the function to make the time of weld end programmed because the tracker can sense the edge of work-piece.
- There are several priority functions as well as the reverse tracking.
- The tracker has the left/right reverse function for easy installation.
- The tracker has the function to prevent the deviation of the sensor from the welding seam. If the deviation occurs on the seam, the tracker stops automatically.
- The tracker can work on the other semi or full automatic system.
- All the functions are programmed for easy control.

■ Standard specification HMG-01~03

MODEL		HMG - 01	HMG - 02	HMG - 03
RATED LOADING CAPACITY		kgf	5	10
TRACKING RANGE		mm	X, Y Each 100	X, Y Each 140
TRACKING SPEED		mm/min	100	150
ACCURACY		mm	±0.125	±0.125
ALLOWABLE MOMENT		kg-cm	70	180
APPLICATION WELDING			GTAW	GTAW GMAW
DRIVING MOTOR		Stepping motor		
DRIVING METHOD		Motor drive → Reducer → Ball screw → Seam tracking		
FUNCTION OF CONTROL	MANUAL	Up, down, left, and right movement, pull-up movement		
	AUTOMATIC	Right/both/left, pull-up, tack detection, end-detection 1,2, remote control function, ok-out detection, em-out, forced difference, forced stop function of the detection, reverse function, left/right		
INPUT POWER		AC 110/220V, 1φ, 50/60Hz, 2A		
OPTION		Remote control (HRC-1), torch adjust (HTA-05, 10)		

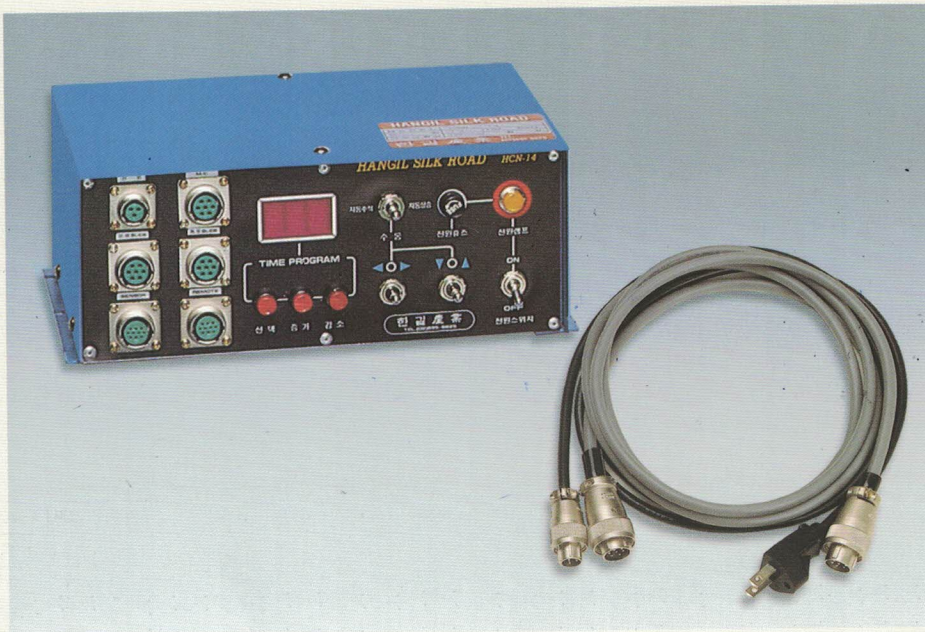
■ Standard specification HMG-05~20

MODEL		HMG - 05	HMG - 10	HMG - 20
RATED LOADING CAPACITY		kgf	25	50
TRACKING RANGE		mm	X, Y Each 100	X, Y Each 200
TRACKING SPEED		mm/min	250	170
ACCURACY		mm	±0.25	±0.25
ALLOWABLE MOMENT		kg-cm	700	1,400
APPLICATION WELDING			GMAW	SUBMERGED TANDEM
DRIVING MOTOR		DC Precision motor		
DRIVING METHOD		Motor drive → Reducer → Ball screw → Seam tracking		
FUNCTION OF CONTROL	MANUAL	Up, down, left, and right movement, pull-up movement		
	AUTOMATIC	Right/both/left, pull-up, tack detection, end-detection 1,2, remote control function, ok-out detection, em-out, forced difference, forced stop function of the detection, reverse function, left/right		
INPUT POWER		AC 110/220V, 1φ, 50/60Hz, 2A		
OPTION		Remote control (HRC-1), torch adjust (HTA-05, 10)		

* 상기 사양은 성능개선을 위하여 예고 없이 변경될 수 있습니다.
The above mentioned specification may be changed for better function without any warning.

→ SEAM TRACKER

CONTROL UNIT



■ Features

- SENSOR로부터 입력된 신호를 정리하여 상, 하, 좌, 우, SLIDE에 적합한 신호를 출력한다.
- 관련 설비와 INTERFACE를 위한 INPUT, OUTPUT CONNECTOR 및 REMOTE CONTROL용 CONNECTOR를 설치하였습니다.
- 모든 기능을 PROGRAM화 하여 CONTROL하므로 원하는 조건을 쉽고 일정하게 얻을 수 있습니다.
- PROGRAM 보호기능 ⇒ PROGRAM LOCK 기능을 내장하였습니다.
- NOISE 방지 회로를 적용하여 완벽한 신뢰성을 보장합니다.
- The control does arrange the sensed signal from the probe sensor and then put the suitable response out such as up/down/left/right.
- The connectors for input/output and remote control are attached for interface to a related equipment or system.
- All the functions are programmed so as to easily get the welding parameters the customer wants.
- For protection of programmed functions, there is the lock function integrated in the control.
- It is a highly reliable unit to adopt a noise protection circuit.

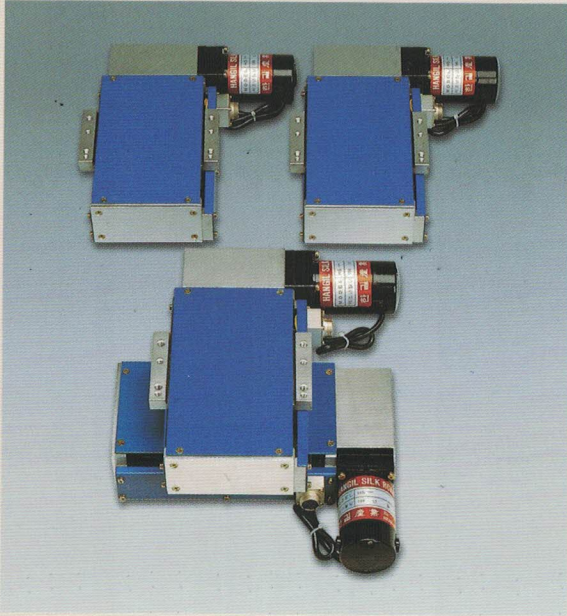
■ Specification

MODEL	HCN - 14	FUNCTION	MANUAL, AUTOMATIC, TACK DETECTION, END DETECTION 1,2, SETTING WELDING TIME, FORCED DIFFERENCE, SETTING DIRECTION FUNCTION OF LEFT/BOTH/RIGHT, PRIORITY DOWN, SELECTING FUNCTION ,LEFT/RIGHT PRIORITY RIGHT/LEFT SELECTION FUNCTION, LEFT/RIGHT REVERSE FUNCTION, REVERSE TRACKING FUNCTION, DETECTION OF WELDING DEVIATION & STOP, OK-OUT SIGNAL DETECTION FUNCTION, EM STOP-OUT, REMOTE CONTROL FUNCTIONS, PROGRAM CONTROL OF ALL FUNCTION & PROGRAM PROTECTION FUNCTION
POWER	AC 110/220V, 1φ 50/60Hz, 2A		
WEIGHT	7kg		
CONNECTING CABLE	2m × 4pcs		
SIZE	(W × H × D) 295 × 115 × 200		

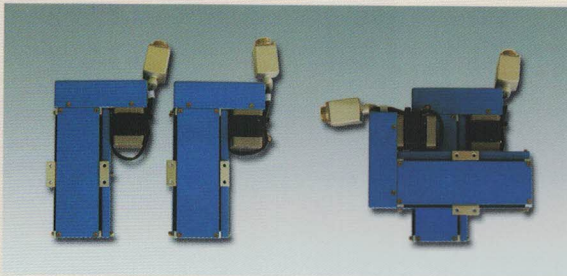
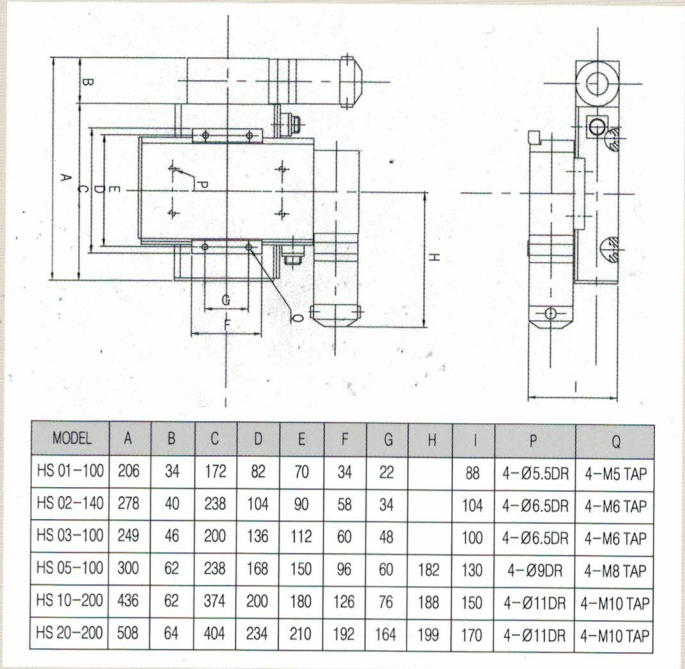
* 상기 사양은 성능개선을 위하여 예고 없이 변경될 수 있습니다.
The above mentioned specification may be changed for better function without any warning.

→ SEAM TRACKER

SLIDE UNIT



< HS 05-100, HS 10-200, HS 20-200 >



< HS 01-100, HS 02-140, HS 03-100 >

■ Features

- 용접선의 변화에 따라 TORCH를 대응 시켜주는 X, Y 축의 TABLE로서 정밀급 DC MOTOR와 BALL SCREW를 사용하여 미세한 변화에도 신속하고 정확하게 작동합니다.
- BODY는 Al 합금 주물을 사용하여 경량화하였습니다.
- The unit is manufactured with precise geared DC motors and ball screws so it does respond correctly to minute change.
- The body of the slide is cast into Al alloys for reduction of the weight.

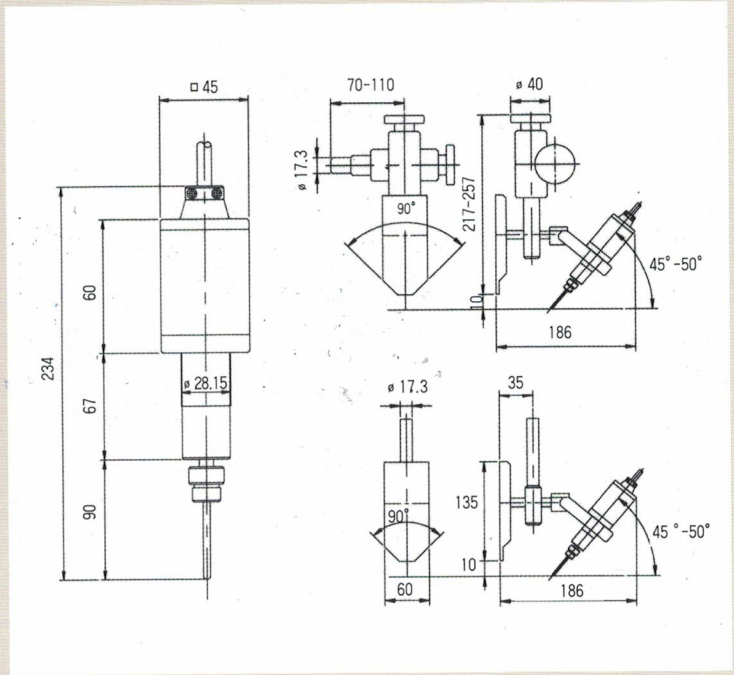
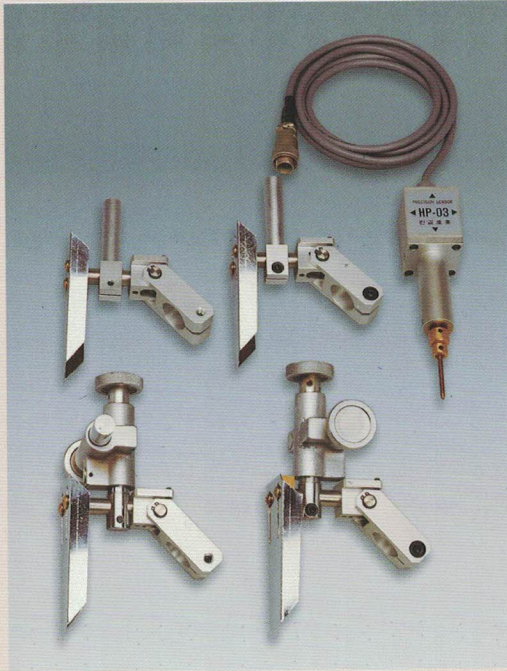
■ Specification

MODEL	LOADING CAPACITY	STROKE	SPEED	MOMENT	WEIGHT
HS 01-100	5 kgf	100 mm	100 mm/min	70 kg-cm	3.6 kg
HS 02-140	10 kgf	140 mm	150 mm/min	180 kg-cm	5.4 kg
HS 03-100	15 kgf	100 mm	150 mm/min	300 kg-cm	8 kg
HS 05-100	25 kgf	100 mm	250 mm/min	700 kg-cm	12 kg
HS 10-200	50 kgf	200 mm	250 mm/min	1,400 kg-cm	18 kg
HS 20-200	100 kgf	200 mm	170 mm/min	3,700 kg-cm	29 kg

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→ SEAM TRACKER

PROBE SENSOR



■ Features

- 용접선에 직접 접촉하여 추적 검출하여 변화에 대한 신호를 CONTROL UNIT에 송출합니다.
- 상, 하, 좌, 우, 가접, 끝단을 동시에 검출하므로 어떤 조건에서도 훌륭한 품질을 얻을 수 있습니다.
- 터치용 TIP을 안내할 홈이나 모서리가 있는 FILLET, GROOVE가 있는 BUTT, 1.2t 이상의 LAP용접에서 완벽하게 적용됩니다.
- The sensor of touch type does probe the seam conditions and send the sensed signals out to the control unit.
- The operator can get a good quality of welding under the hard seam conditions, because, at the same time, the sensor can probe all the directions: up, down, left, right and the edge of work-piece.
- The sensor can work perfectly on fillet weld, butt weld, and 1.2mm thickness of lap joint welding.

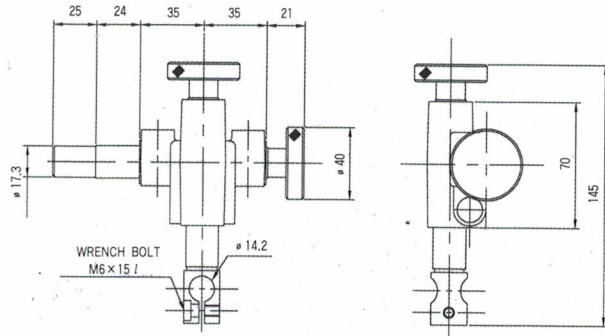
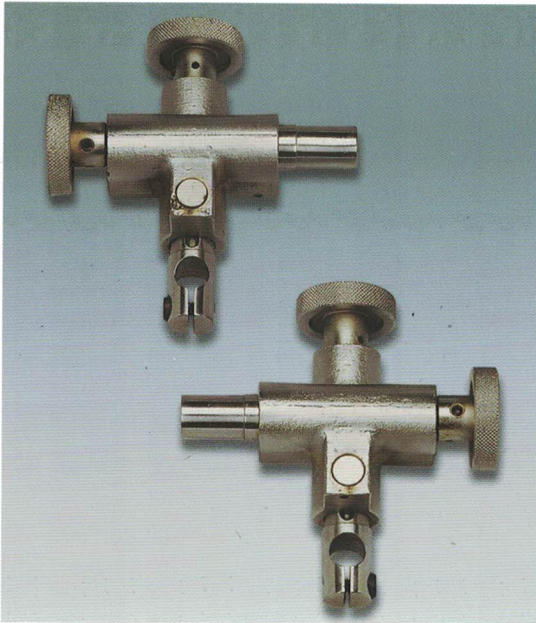
■ Specification

MODEL	HP - 03
ACCURACY	±0.25mm (±0.1mm)
APPLICATION WELDING	GMAW, SAW (GTAW)
WEIGHT	520g

* 상기 사양은 성능개선을 위하여 예고 없이 변경될 수 있습니다.
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→ SEAM TRACKER

SENSOR ADJUST



Specification

MODEL	THL / THR
STROKE	X, Y Each 40mm
WEIGHT	0.58 kg
LOADING CAPACITY	3.0 kgf

* 상기 사양은 성능개선을 위하여 예고 없이 변경될 수 있습니다.
The above mentioned specification may be changed for better function without any warning.

Features

- SENSOR를 상, 하, 좌, 우 미세 이동하는 장치로 설치 방향에 따라 RH/LH가 대칭으로 되어 있습니다.
- SENSOR를 기준으로 ZERO POINT를 결정하므로 SENSOR ADJUST를 조작하면 TORCH는 반대방향으로 이동합니다.
- This is a kind of device moving the sensor finely to up, down, left and right, being manufactured symmetrically according to the direction of the installation.
- Since the zero point of the torch is based on the sensor, the torch does move to the other direction when the adjust works.

REMOTE CONTROL



Features

- CONTROL UNIT로부터 인출한 휴대용 OPERATING MANUAL BOX입니다.
- 협소한 공간이나, 대형 장비에 SEAM TRACKER 설치시 원거리 제어가 가능합니다.
- This is a portable operating box connecting to the control unit.
- The remote control can be used to operate the seam tracker installed at a narrow space, a long distance and a heavy & large equipment.

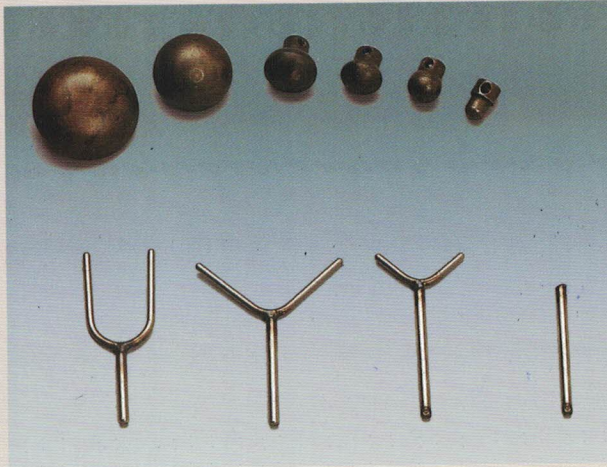
Specification

MODEL	HRC - 1
WEIGHT	550 g
CABLE	2m (standard) or longer on request
SIZE	W × H × D = 100 × 120 × 45

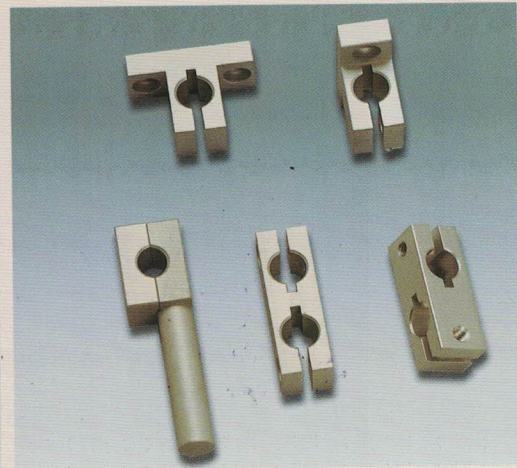
* 상기 사양은 성능개선을 위하여 예고 없이 변경될 수 있습니다.
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→ SEAM TRACKER

ACCESSORIES



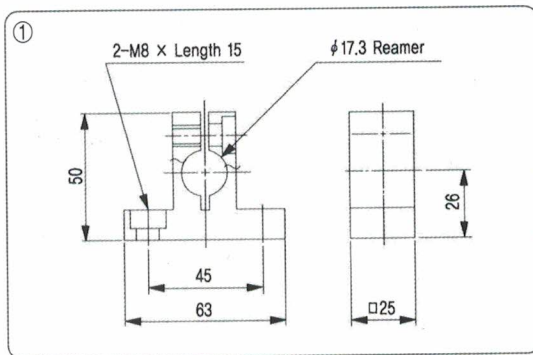
< PROBE SENSOR CAP & TIP >



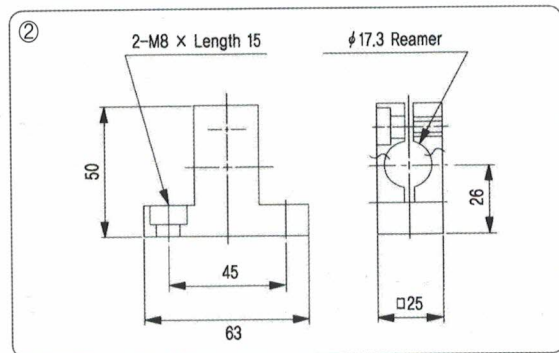
< ACCESSORIES (OPTION) >

■ Features

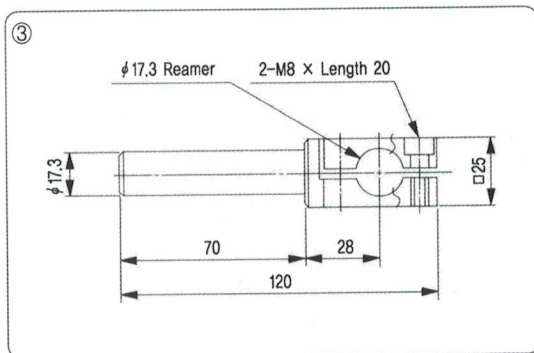
- 하기 도면은 설치용 부품으로서 ALUMINUM합금으로 되어 있으며 $\phi 17.3\text{mm} \times t2.0\text{mm}$ 의 SUS PIPE를 설치자재로 사용합니다.
- The following drawings are regarding the parts for installation, which are made from aluminum alloys, and stainless pipe $\phi 17.3\text{mm} \times t2.0\text{mm}$ is additionally needed.



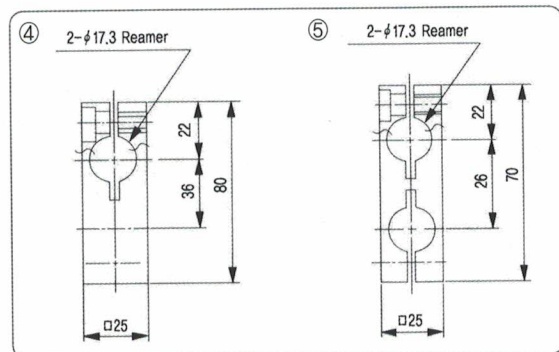
① T-HOLDER (T17-1)



② T-HOLDER (T17-2)



③ TORCH CLAMP (TC 17-1)

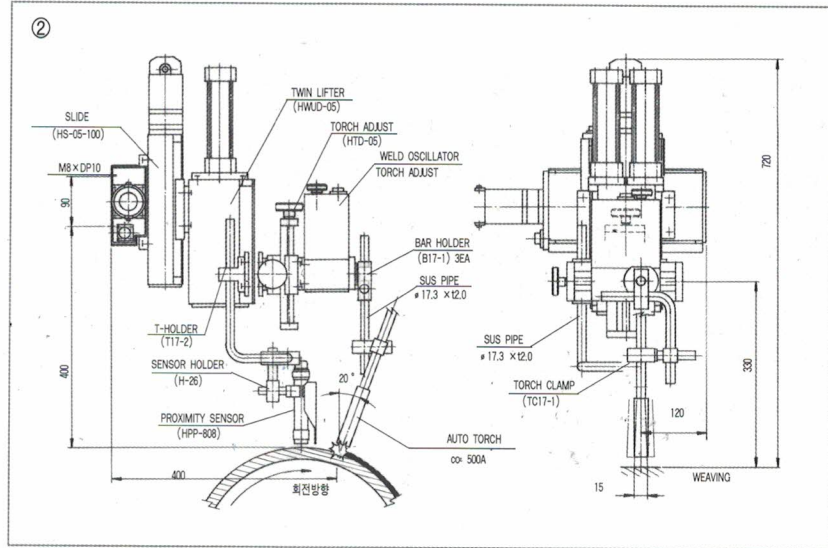
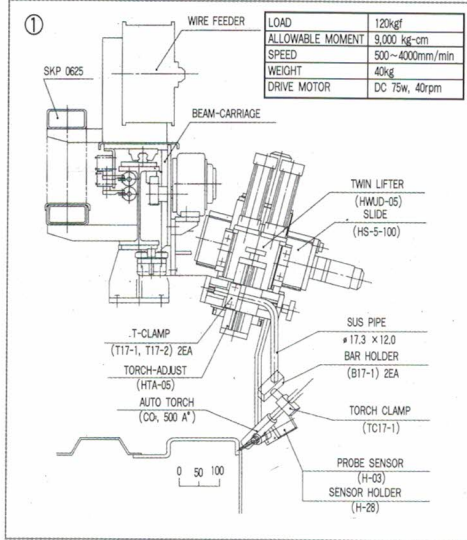


④ BAR HOLDER (B17-1)

⑤ BAR HOLDER (B17-2)

→ SEAM TRACKER

DIMENSION



- ① Assembly
- Straight lap welding : GMAW
- ② Assembly
- Orbital welding : GMAW
- ③ Assembly
- Submerged arc welding
- ④ Assembly
- Fillet welding with two torches

