

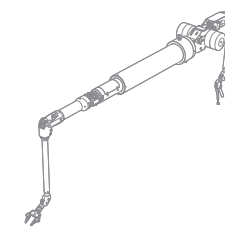


“인류의 미래를 위한 기술 혁신  
(주) 월성티엠펜피가 함께합니다”

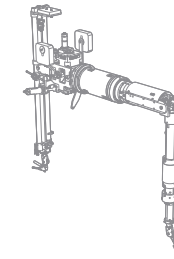


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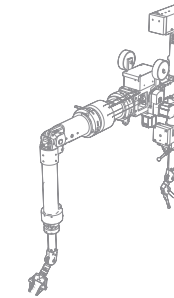
[www.wstmp.com](http://www.wstmp.com)



MASTER SLAVE MANIPULATOR WS-M200



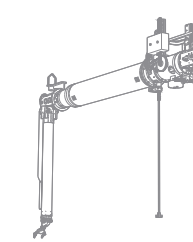
MASTER SLAVE MANIPULATOR WS-TA900



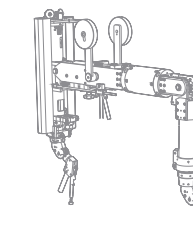
MASTER SLAVE MANIPULATOR WS-B450

## WOELSUNG TMP

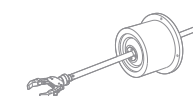
**BEST SPEED, BEST TECHNOLOGY, BEST QUALITY**  
Specialized in Telemanipulator for the nuclear  
power and radiopharmaceutical industries.



MASTER SLAVE MANIPULATOR WS-1500T



MASTER SLAVE MANIPULATOR WS-B300



GRIP TONG WS-GTG,H

(주)월성티엠피는 방사능 물질 취급용, 특수목적용 로봇개발 및 제조 전문기업으로서 현장에서 축적된 완성도 높은 설계기술과 고품질의 제품 제조 생산하며, 신속한 고객 대응과 서비스의 최상주의를 실현합니다.

Master Slave Manipulator는 사용자들이 위험한 환경에서 작업을 해야하는 상황에서 조작자의 안전과 사람의 손에 시작되는 정교한 작업을 원격으로 구현합니다.

이를 위하여 위험한 공간에서 사용자의 작업을 대행할 Slave Arm과 Slave Arm을 제어하는 Master Arm의 구조로 제작되었고, 서비스 구역의 조작자가 행하는 Master Arm 조작을 1 : 1 비율로 Slave Arm으로 동일하게 전달되고 Slave Arm에서 발생하는 감각을 Master Arm의 조작자가 직접 느끼도록 전달되어 누구라도 쉽게 조작할 수 있도록 제작됩니다.

사용자의 작업 환경에 따라 자사는 크게 2가지 Type의 제품을 공급합니다.

일체형 : Slave Arm과 Master Arm이 분리가 되지 않는 Type  
 분리형 : Slave Arm과 Master Arm이 Tube와 분리되는 Type

고객께서 특별한 크기, 디자인, 요구사항, 문의사항 등이 있는 경우에는 당사에 문의를 하시면 됩니다.

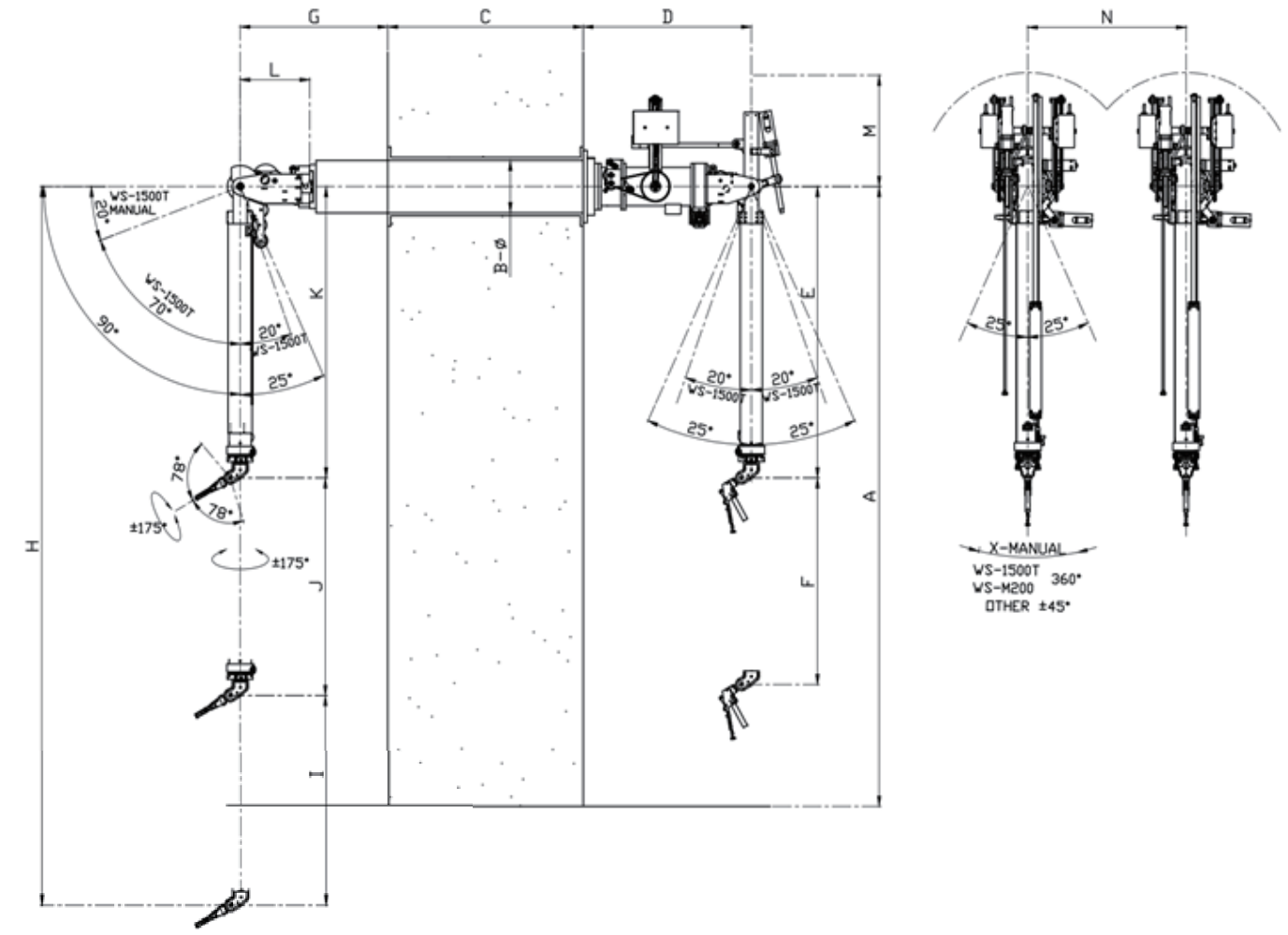
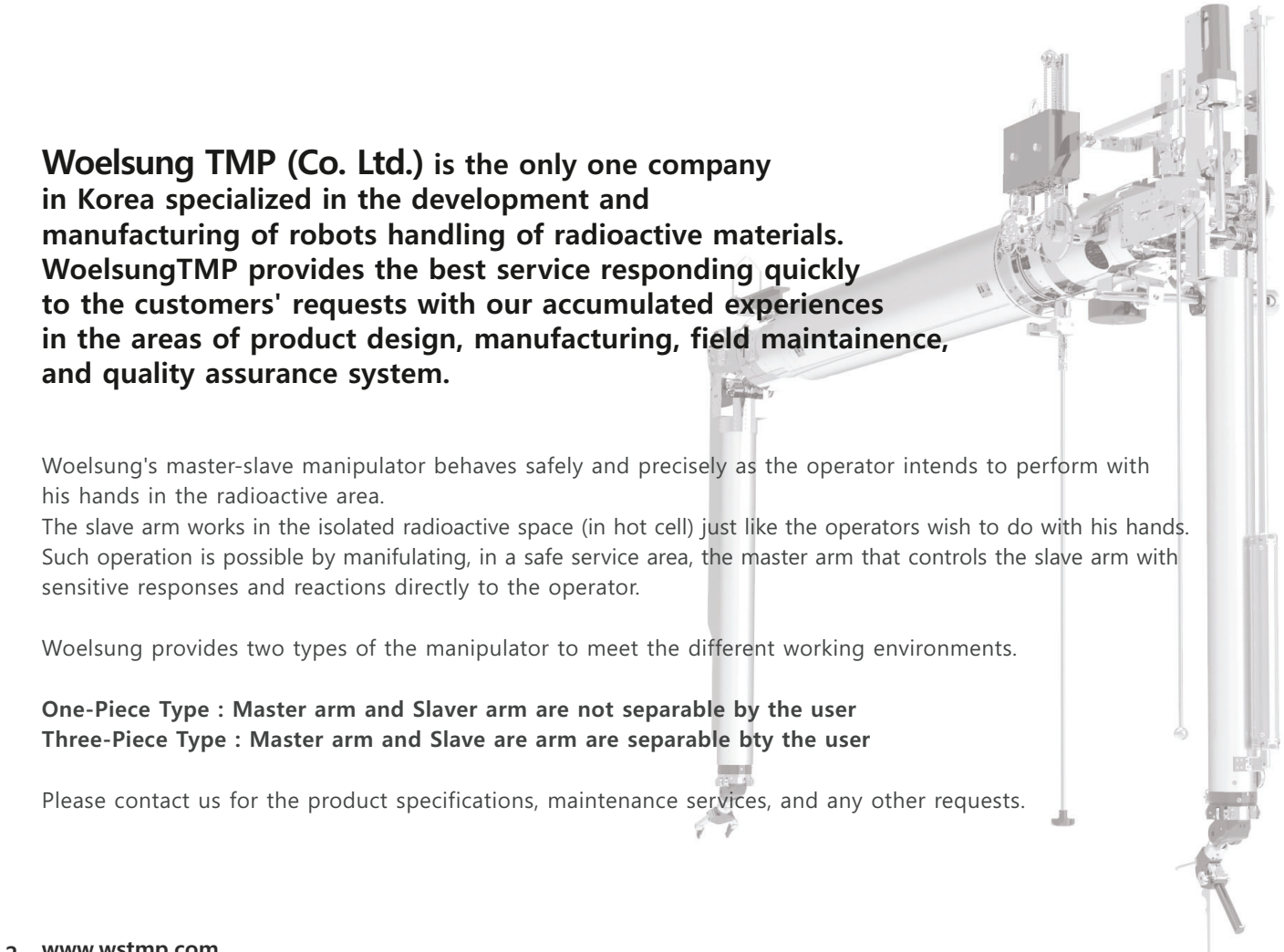
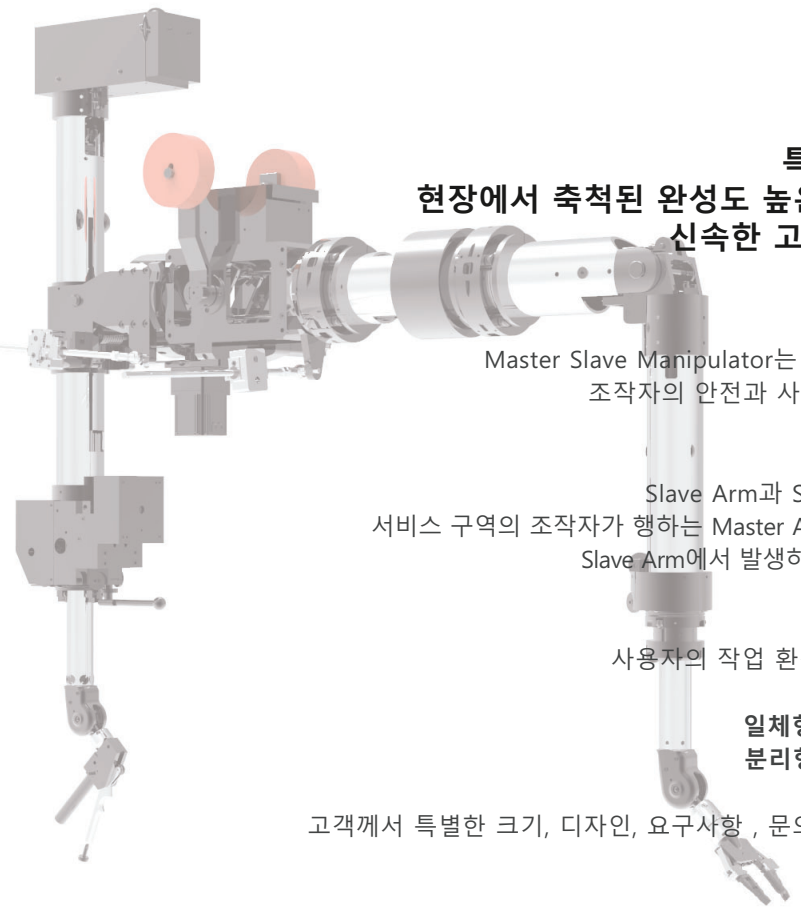
**Woelsing TMP (Co. Ltd.) is the only one company in Korea specialized in the development and manufacturing of robots handling of radioactive materials. WoelsingTMP provides the best service responding quickly to the customers' requests with our accumulated experiences in the areas of product design, manufacturing, field maintainence, and quality assurance system.**

Woelsing's master-slave manipulator behaves safely and precisely as the operator intends to perform with his hands in the radioactive area. The slave arm works in the isolated radioactive space (in hot cell) just like the operators wish to do with his hands. Such operation is possible by manipulating, in a safe service area, the master arm that controls the slave arm with sensitive responses and reactions directly to the operator.

Woelsing provides two types of the manipulator to meet the different working environments.

**One-Piece Type : Master arm and Slaver arm are not separable by the user**  
**Three-Piece Type : Master arm and Slave are arm are separable bty the user**

Please contact us for the product specifications, maintenance services, and any other requests.



**STANDARD DIMENSIONS**

	WS B300	WS B450	WS TA900	WS 1500T
A Mounting Height	1910	2150	2400	3000
B Tube dia.	140	186.5	254.5	254.5
C Wall Thickness	200	420	500	500
D Master Arm overhang	510	715	750	860
E M/A collapsed length	455	660	1100	1410
F M/A Z lift	355	470	1200	1050
G Slave Arm overhang	200	390	580	600
H S/A extended length	810	1120	2300	3310
I S/A Z lift	355	545	Elec or Manual	1000
J S/A Elec Z lift	-	-	1200	900
K S/A collapsed length	455	575	1100	1410
L S/A Disconnect point	-	-	487	356
M Height Clearance	min.400	min.500	min.700	min.600
N Distance Between Manipulators	610	810	810	810

※ Dimensions and specifications can be changed according to the demand of the customer.

**MASTER SLAVE MANIPULATOR WS-B300**

Standard Technical Data

One-piece

Handling capacity: 4.5kg

Lift capacity with load hook : 15kg

Installation and removal : thru wall

Shielding : PB

Containment possibility : Booting

Mounting height : 1910mm

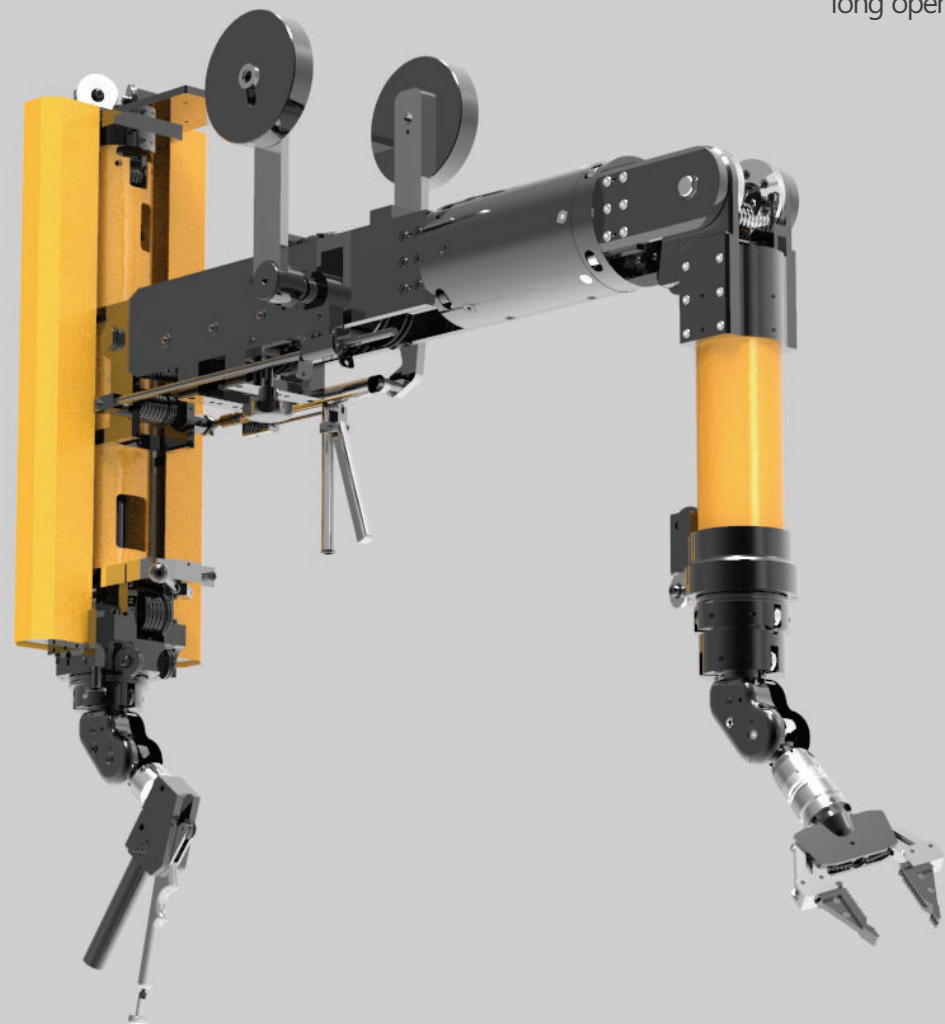
Through tube Dia. : min. 140mm

Wall thickness : min. 200mm

Slave arm collapsed length : 455mm

Slave arm extended length : 810mm

Tong opening : 60mm



※ Dimensions and specifications can be changed according to the demand of the customer.

**MASTER SLAVE MANIPULATOR WS-B450**

Standard Technical Data

One-piece

Handling capacity: 4.5kg

Lift capacity with load hook : 20kg

Installation and removal : thru wall

Shielding : PB

Containment possibility : Booting

Mounting height : 2150mm

Through tube Dia. : min. 186.5mm

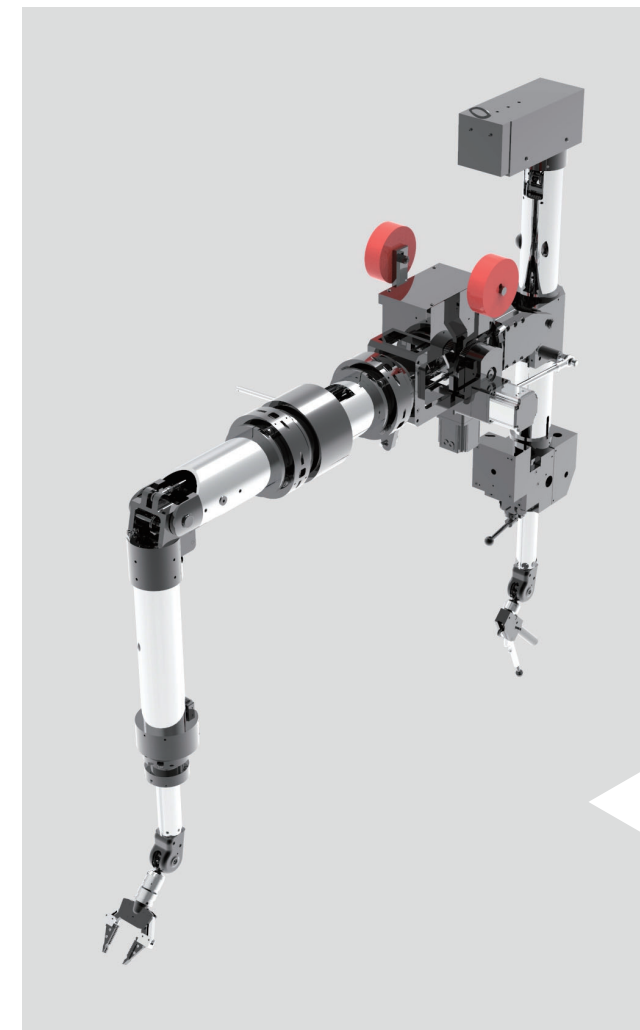
Wall thickness : min. 420mm

Slave arm collapsed length : 575mm

Slave arm extended length : 1120mm

Tong opening : 60mm

※ Dimensions and specifications can be changed according to the demand of the customer.

**MASTER SLAVE MANIPULATOR WS-TA900**

Standard Technical Data

Three-piece

Handling capacity: 9kg

Lift capacity with load hook :20kg

Installation and removal : thru wall

Shielding : PB

Containment possibility : Booting, Sealed

Mounting height : 2400mm

Through tube Dia. : min. 254.5mm

Wall thickness : min. 500mm

Slave arm collapsed length : 1100mm

Slave arm extended length : 2300mm

Tong opening : 60mm

※ Dimensions and specifications can be changed according to the demand of the customer.





**MASTER SLAVE MANIPULATOR WS-1500T**

Standard Technical Data

Three-piece

Handling capacity: 15kg, max .25kg

Lift capacity with load hook : 45kg, max.80kg

Installation and removal : thru wall, Disconnect

Shielding : PB

Containment possibility : Booting, Sealed

Mounting height : 3000mm

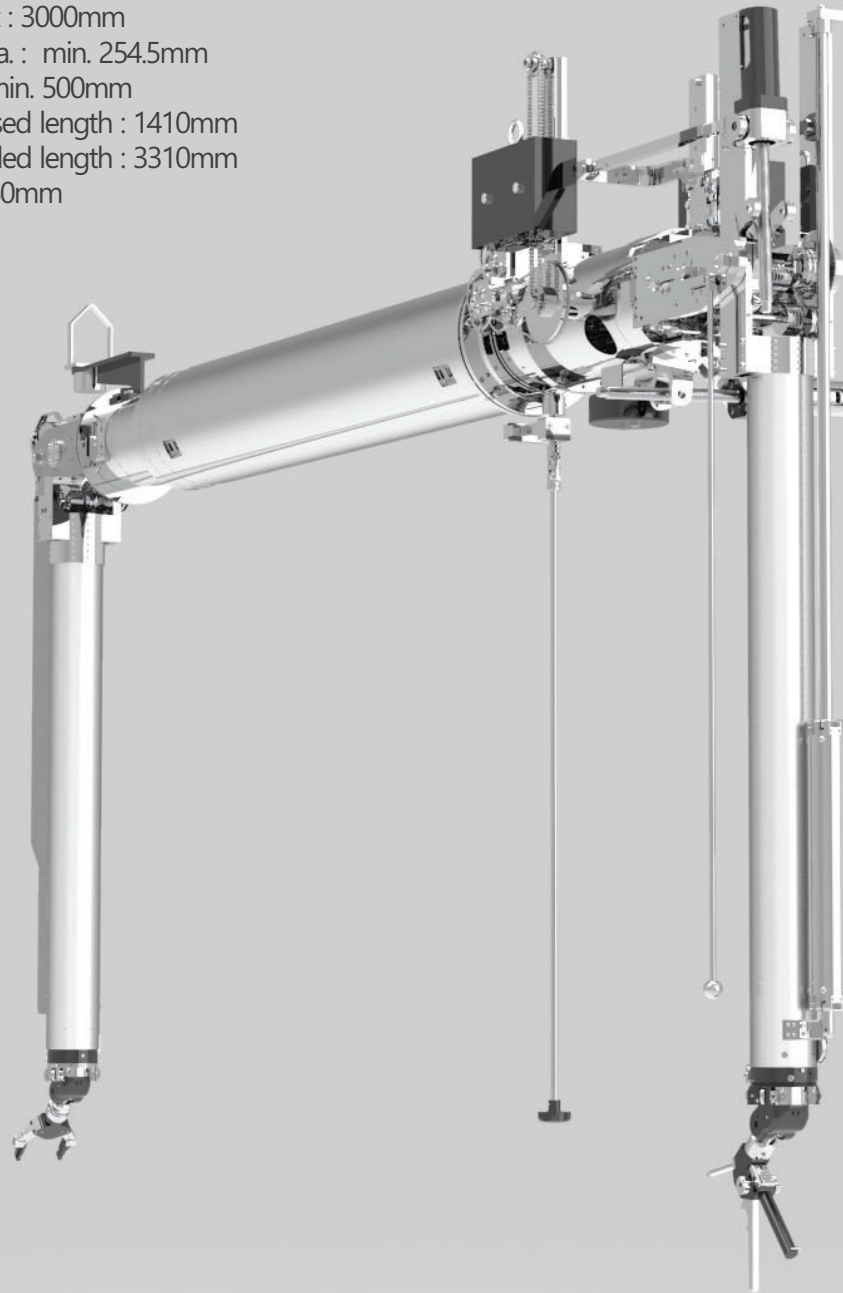
Through tube Dia. : min. 254.5mm

Wall thickness : min. 500mm

Slave arm collapsed length : 1410mm

Slave arm extended length : 3310mm

Tong opening : 80mm



※ Dimensions and specifications can be changed according to the demand of the customer.

**MASTER SLAVE MANIPULATOR WS-M200**

Standard Technical Data

One-piece

Handling capacity: 4.5kg

Lift capacity with load hook : 9kg

Installation and removal : thru wall

Shielding : PB

Containment possibility : Booting

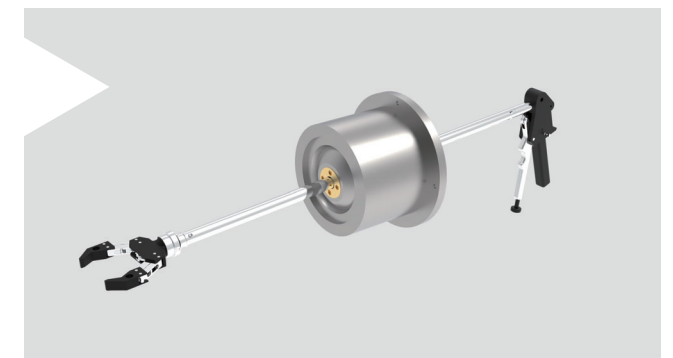
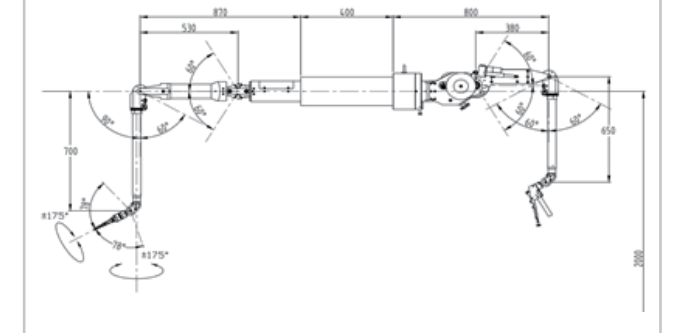
Mounting height : 2000mm

Through tube Dia. : min. 170mm

Wall thickness : min. 400mm

Tong opening : 60mm

※ Dimensions and specifications can be changed according to the demand of the customer.



**GRIP TONG WS-GTG,H**

Standard Technical Data

Through tube Dia. : min. 140mm

Wall thickness : min. 115mm

Tong opening : 60mm

Installation and removal : thru wall

Shielding : PB

Containment possibility : Booting

※ Dimensions and specifications can be changed according to the demand of the customer.

