

# **JUKI®**

INDUSTRIAL SEWING MACHINE  
Attachment

MODEL

## **MP-G10-TH**

TECHNICAL MANUAL

Upper Thread-Holding Device





## 1. Features

Upper Thread-Holding Device will improve the quality of the sewing start point. By gripping the upper thread after thread trimming sewing end, to prevent the thread fall out at the sewing start point.

## 2. Applicable models

PLK-G1010

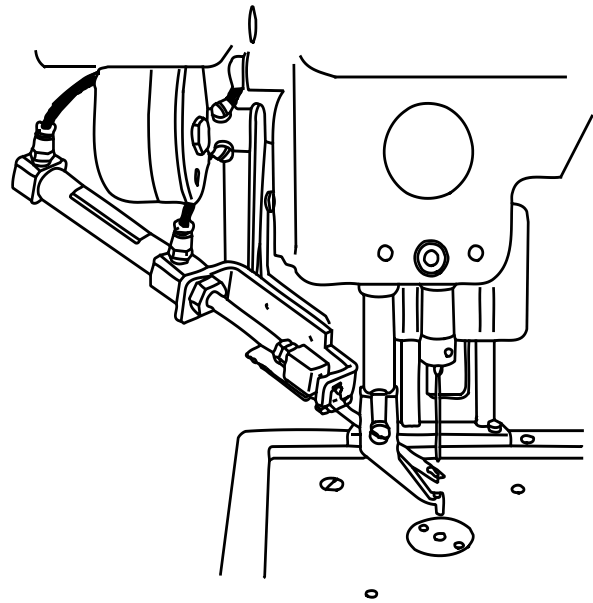


Fig.1

Mounting example of  
the upper thread holding mechanism

## 3. Specifications

Upper thread holding stroke		:	23mm
Control power supply		:	DC24V
Drive source air pressure	Primary side	:	0.5 MPa (5 kgf /cm <sup>2</sup> ) or more
	Secondary side	:	0.4 MPa (4 kgf /cm <sup>2</sup> )



### CAUTION

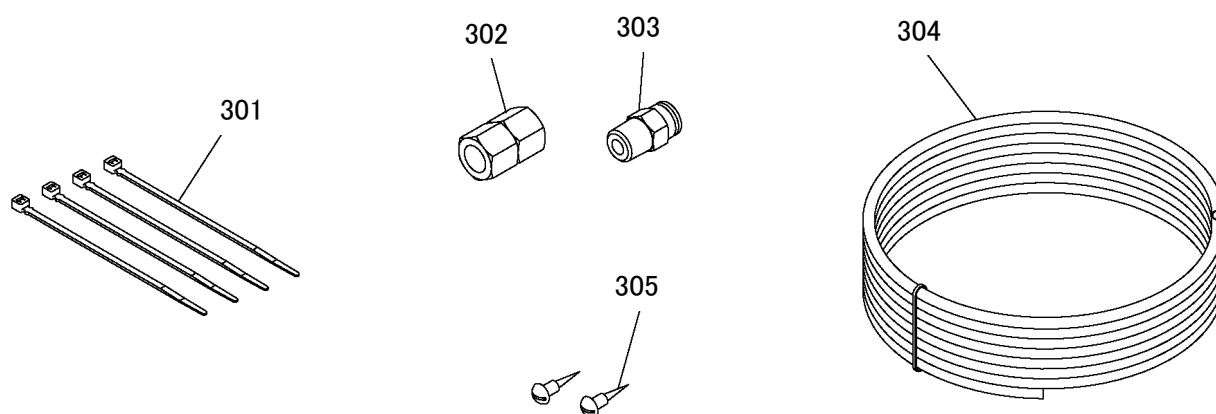
Trouble such as operation errors could occur if the secondary pressure is set too high.  
Use within the range of 0.4 MPa (4 kgf /cm<sup>2</sup>).



#### 4.2 Pneumatic pressure control unit (Parts list)

Fig No.	部品コード Parts No.	品名	Description	数量 Amt. Req.
201	MH25A1601	デンジベントリツケイタ	Valve mounting plate	1
202	M91066004	SW-PW プラマイナベネジ M4X25	Screw M4X25	4
203	ME10X0599	デンジベソクミタテ	Solenoid valve assy	1
204	M90511050	サガネ 5	Washer 5	2
205	M95003017	セフティソケット M5X8	Safety socket bolt M5X8	2
206	MH10A8508	セツゾクデソクミタテ	Cable assy	1
207	MB10K4567	エアチューブミタテ(A)	Air tube assy (A)	1
208	MB10K5567	エアチューブミタテ(B)	Air tube assy (B)	1
209	M91035089	サイレンサ	Muffler	2
210	MB20P1567	エアチューブ	Air tube	1
211	ME40A0963	フィルタレギュレータ	Filter regulator	1
212	MA20A8571	L ガタワンタッチツギテ	L-type quick joint	3
213	MA30A0964	レジューサ	Reducer	2

#### 4.3 Accessories



#### 4.3 Accessories (Parts list)

Fig No.	部品コード Parts No.	品名	Description	数量 Amt. Req.
301	MF06A1620	ケツゾクバンド	Cable tie	4
302	M91010089	ロツカクソケット	Socket	1
303	MA30A0571	ワンタッチツギテ	Quick joint	1
304	MS06A0567	エアチューブ	Air tube	1
305	M90409041	マルモクネジ 4.5X20	Screw 4.5X20	2

## 5. Assembly procedures



### CAUTION

- ★ To work in the presence of residual pressure in the pneumatic circuit It is dangerous. Please work after you remove the residual pressure always. The method of removing the residual pressure, and pull up the handle of the pressure regulating filter regulator, can be done by turning counter-clockwise until the pressure gauge shows 0.
- ★ When installing removal of parts, please go to turn off the power before. In addition, qualified personnel of electrical work, please be performed by wiring work.

### 5.1 Installing the upper thread holding mechanism

- (1) Make a bracket for mounting the upper thread holding mechanism.

(Shows an example in Figure 2.)

- ★ Please consult sewing machine shop for the fabrication of bracket.

The mounting of the upper thread holding mechanism, you can use the mounting holes of the wiper mechanism, to or attached to the face cover. Attach a position that does not interfere with the holding jig to position the sewing material, consider including the sewing pattern and workability.

- (2) Remove the wiper mechanism from the machine arm. Is not only part of the wiper drive, please remove the connection wires from the sewing machine.

- ★ Can not be shared with the wiper mechanism and Upper Thread-Holding Device.

- (3) Attach the upper thread holding mechanism to the machine arm. Please adjust the position of the upper thread holding mechanism so that the thread distributor Fig.No.106 scoop a thread between the presser foot and the needle, as shown in Figure 1.

### 5.2 Installing the pneumatic pressure control related parts and piping

Please connect the pipes so that the state of the air cylinder rod is returned when the power is turned off. If the rod is advanced, please replace the pipe to the joint A and B of the solenoid valve after the removal of the air pressure to stop the air.

- (1) Please fix with two wood screws provided the pneumatic pressure control unit of sewing machine table underside as shown in Figure 3.

- (2) Insert to match the symbols A and B of the air tubes "Fig.No.207 and 208" into the ports "Fig.No.107A and 107B" of the upper thread holding mechanism.

- (3) Pass the air tubes through the notched section on the side of the sewing machine unit's motor cover, and lead the tubes to the bottom of the table from the square hole on the table.

- (4) Insert to match the symbols A and B of the air tubes into the ports "A and B" of the solenoid valve.

- (5) Bind the air tubes appropriately with the enclosed Fig.No.301 Cable ties.

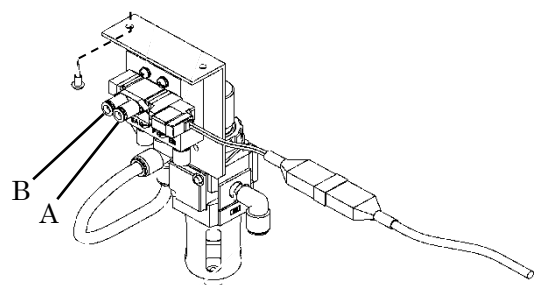


Fig.3

### 5.3 How to setup and cable connection

- (1) Remove the circuit board cover on the back of the sewing machine.
- (2) Disconnect the cable connector of the wiper connected to CON11 on the circuit board.
- (3) Connect the connector of Fig.No.203 cable assy to CON11 on the circuit board.
- (4) Connect the connector of sensor of the air cylinder to CON9 on the circuit board.
- (5) Install the circuit board cover removed.




Output (CON 11)

Printed character	Signal		Pin No.
W	O2	Upper thread holding	1
	-	-	2
	+24V	DC24V	3

Input (CON 9)

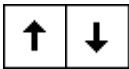





Printed character	Signal		Pin No.
FSW	+12V	DC12V	1
	I7	S6 (Thread trimming protection signal)	2
	GND	Ground	3

### 5.4 How to setup and cable connection

- (1) Press the  on the standard screen to open the MENU mode.
- (2) Press the  in the menu icon. The Input/Output setting mode screen is displayed.
- (3) Press the  on the Input/Output setting mode, and enter a password.

Please ask the dealer about a password.

Input Customize Setting screen, press the button on the lower side of the physical input RAM "I7".( Input signal is displayed on the button, the default is "NO".) The Function Section screen will open.

- (4) Select input signal "S6" by pressing the button  .
- (5) Press the  and display the screen of the Detailed Setting.
- (6) Change the "reversed" from the "normal" a logical setting by pressing the button  ,  
press the button  .
- (7) Press the  .
- (8) Press the  and return to standard screen.

The settings will be changed to the table shown next by the above operation.

For details, refer to the clause [14] Input/output setting mode of the technical manual "Operation Panel".



	Default value	After changing the setting
Input signal	NO	S6
Signal name	--	Thread trimming protection signal
Logical setting	normal	reversed

## 6. Operation



### CAUTION

Assembly of this device is completed, please check your work once again.

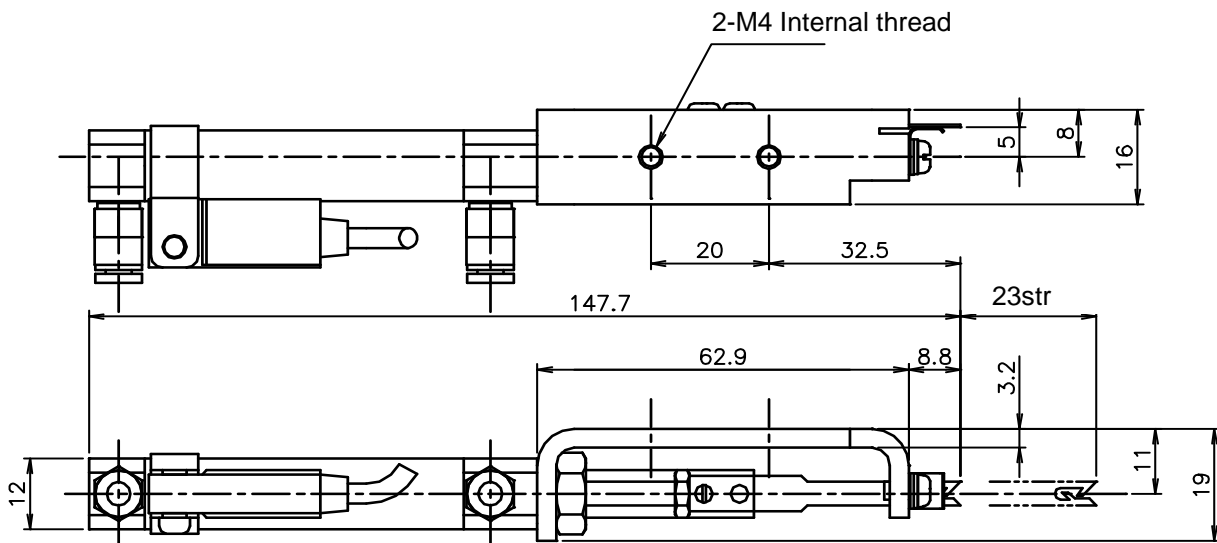
Because there is a case to unexpected behavior, please away from the sewing machine when the power is turned on and the air pressure.

(1) Pull up on the handle of the filter regulator, adjust to 0.4MPa(4kgf/cm<sup>2</sup>) air pressure by turning in a clockwise direction.

(2) Upper Thread-Holding Device will work in the program of the wiper.

For the timing adjustment of the operation, refer to the clause of the technical manual "Control Unit".

## 7. Upper thread holding mechanism outline drawing



MEMO

A large rectangular area with a solid border, containing 25 horizontal dashed lines for writing.



**JUKI CORPORATION**

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