

Smart Pendant

Quick and easy programming



The YASKAWA Smart Pendant is an innovative teach pendant with a large 10-inch touch screen and offers a newly thought-out operator control concept.

The tablet-based graphical user interface (GUI) enables the guided entry of commands, parameters, functions and program sequences. The central interface comprises the main and navigation menus, where entries are listed and switched in a specific, easily comprehensible order.

The Smart Pendant has a revolutionary patented coordinate system – the “Smart Frame” – that also supports rotation and inclination of the Smart Pendant. This means that the operator no longer has to convert motions or break them down into a coordinate space (X,Y,Z) when teaching them, and his line of vision relative to the robot is automatically taken into consideration by the system.

In the case of collaborative robots, the “Hand Guiding” function – guiding the robot manually to a desired position – is also supported.

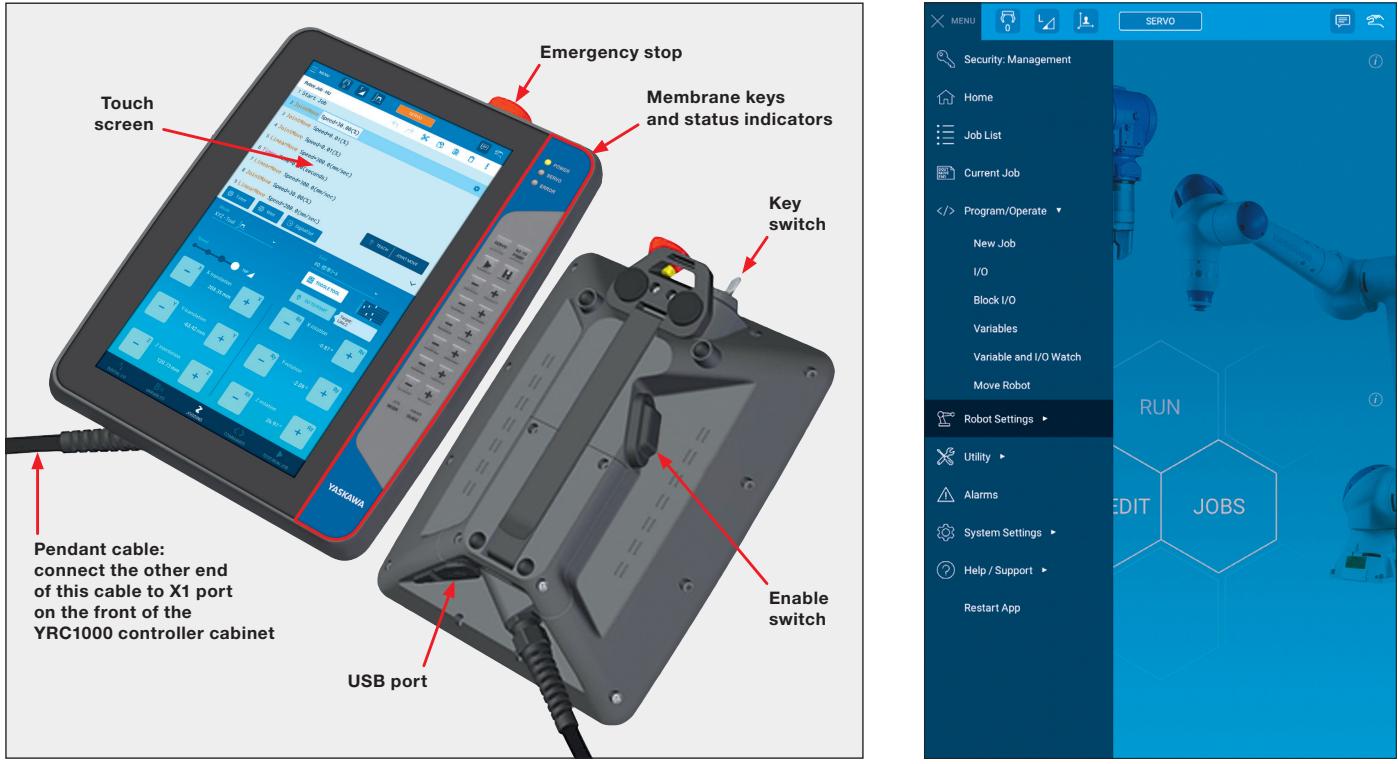
The Smart Pendant is available for the following MOTOMAN robots with the YRC1000 and YRC1000micro controller generations:

- **MOTOMAN YRC1000:**
HC10, HC10DT, GP7 to GP600
- **MOTOMAN YRC1000micro:**
MotoMINI, HC10DT, GP7, GP8, GP12

KEY BENEFITS

- Large touch screen (10")
- Ergonomic design with low weight, diagonal side cable entry and integrated Emergency Stop
- Simple and intuitive operator control, short learning curve
- Ideal for users who need to carry out frequent reprogramming and thus appreciate simple operator control
- Supports many powerful functions of the MOTOMAN YRC1000
- Context-sensitive help and help menu offer many explanations

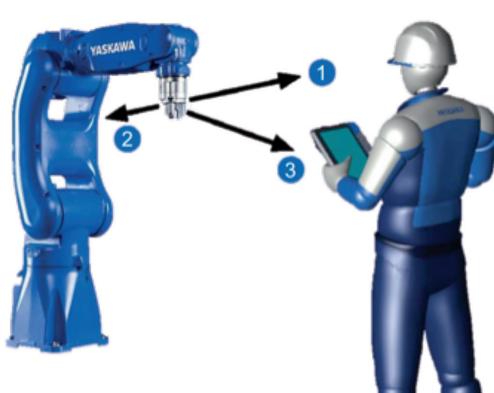
Smart Pendant



Main menu

Smart Frame

The patented technology of the "Smart Frame" determines the user's orientation relative to the robot. This eliminates the use of conventional coordinates (X, Y, Z) frames. The intuitive robot jogging by tilting the smart pendant makes it also easy to use.



Simplified Programming

Command Builder function enables various editing possibilities.

The screenshot shows the 'COMMAND BUILDER' tab selected in a software interface. A command 'Set B001 1' is entered in the main input field. Below it, there are four radio button options:

- Set a Variable to a Constant Value: Variable: B001, Constant: 1
- Set a Variable to Another Variable
- Set a Digital Output to ON/OFF
- Set a Digital Output ON for a specified Time

Configuration enables fast TCP setup

This screenshot shows the 'TCP' setup section. It includes a diagram of a tool with coordinate axes (X_F, Y_F, Z_F) and the TCP point. Input fields for X_F, Y_F, and Z_F are set to 0.000 mm, while Z_F is explicitly set to 10.000 mm. A checkbox 'Show without tool' is present. Below this, 'Advanced Tool Settings (improves performance)' are listed with fields for Center of Gravity (X_G, Y_G, Z_G), Moment of Inertia (I_x, I_y, I_z), and Orientation of Tool Tip (R_x, R_y, R_z).

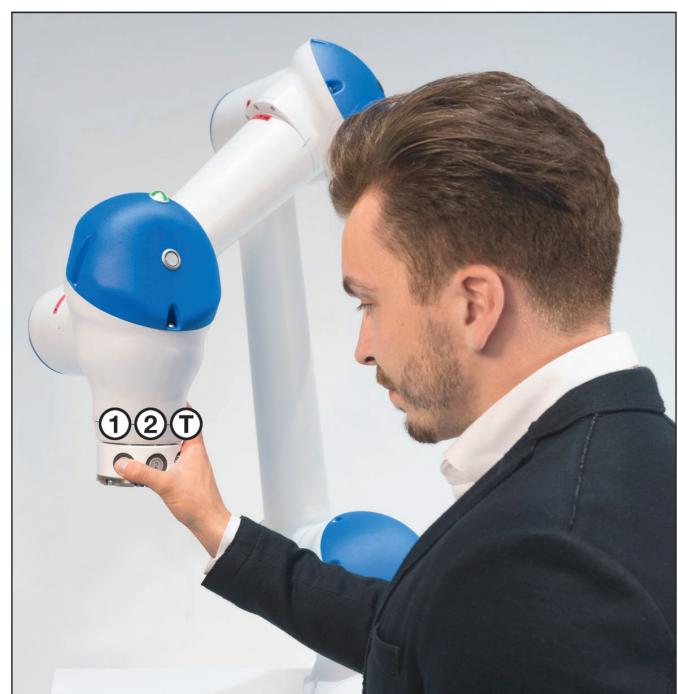
Simple tool

Hand Guiding

This function enables manual guidance of the robot to a desired position by hand.

The screenshot shows the 'Mode' dropdown set to 'Hand Guiding'. The 'Tool' dropdown is set to '#3: GRIPPER & PART'. Under 'ALL JOINTS', it says 'You can move any robot joint shown in green by hand'. A diagram of a robotic arm with green circular highlights on its joints is shown. To the right, a table lists joint names and their current angles:

(S)wing	-1.41°
(L)ower Arm	7.68°
(U)pper Arm	89.40°
(R)otate	-7.02°
(B)end	-83.96°
(T)wist	37.08°



- ① Button replaces deadman switch
- ② Button is freely programmable (i.e. Open/Close gripper)
- ③ Teach button to program current position

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All drawing dimensions in mm.
Technical data may be subject to change without previous notice.
Please request detailed drawings at robotics@yaskawa.eu.com.

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