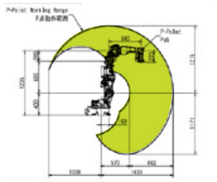
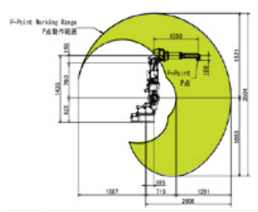
# 7-AXIS ULTRA-FLEX WELDING ROBOT



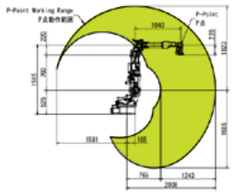
**FD-B4S**

| | |
|---|---|
| Reach | 1435mm |
| Payload | 4 Kg |
| Axes | 7 |
| Repeatability | ±0.08mm |



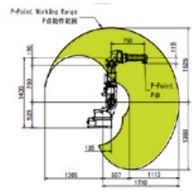
**FD-V6LS**

| | |
|---|---|
| Reach | 2006mm |
| Payload | 6 Kg |
| Axes | 7 |
| Repeatability | ±0.08mm |



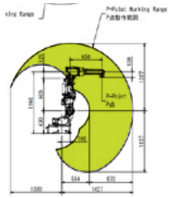
**FD-B4LS**

| | |
|---|---|
| Reach | 2008mm |
| Payload | 4 Kg |
| Axes | 7 |
| Repeatability | ±0.08mm |



**FD-V20S**

| | |
|---|---|
| Reach | 1710mm |
| Payload | 20 Kg |
| Axes | 7 |
| Repeatability | ±0.08mm |



**FD-V6S**

| | |
|---|---|
| Reach | 1427mm |
| Payload | 6 Kg |
| Axes | 7 |
| Repeatability | ±0.08mm |

**FD TEACHING PENDANT**

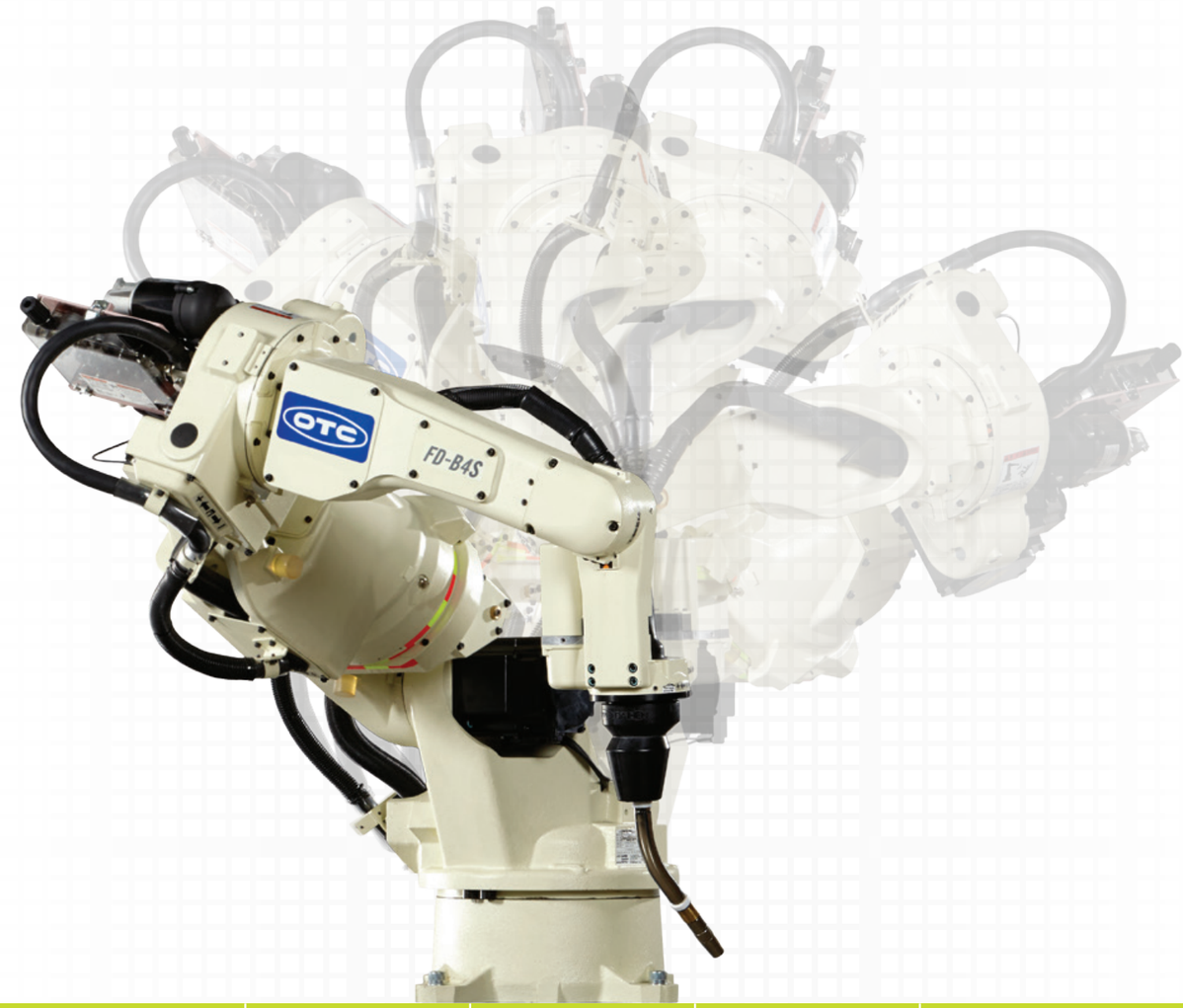
*Small And Light*
The FD Teaching Pendant is 27% lighter and 40% smaller than our previous model, making tight spaces a non-issue and teaching sessions easier.

*Simple Backup*
With this feature, you can now back up all data directly from the teaching pendant. A USB memory slot makes backing up data quick and easy.

**FD11 Robot Controller**

- Windows XP based open architecture
- Large memory capacity and 40 Input / 40 Output control signals
- Advanced PLC functions allow for ladder diagram editing directly through the teaching pendant
- Network capabilities – connects to Ethernet, DeviceNet, and PROFIBUS connections (may require additional hardware)

# 7-AXIS ULTRA-FLEX WELDING ROBOT




**888-OTC-ROBO**

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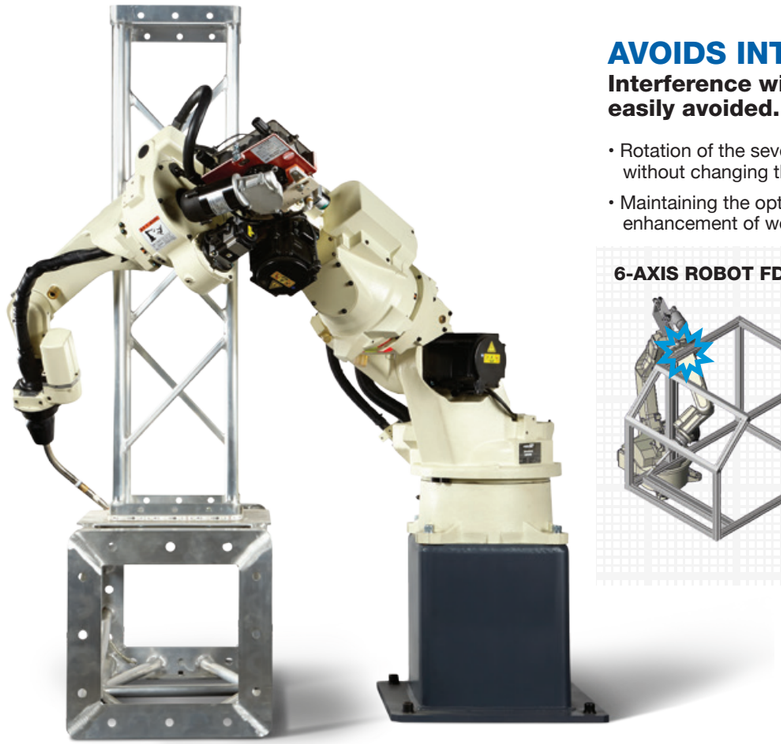
# THE 7-AXIS ROBOT PROVIDES UNMATCHED FREEDOM OF MOVEMENT

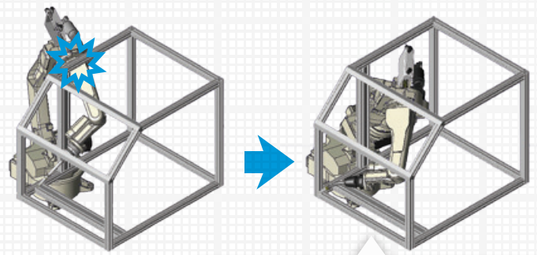


## AVOIDS INTERFERENCE

**Interference with tooling and/or work is easily avoided.**

- Rotation of the seventh axis enables interference avoidance without changing the position and/or attitude of the tool.
- Maintaining the optimum attitude at all times results in the enhancement of weld quality.

**6-AXIS ROBOT FD-B4** | **7-AXIS ROBOT FD-B4S**



**Interference with the work can be avoided while maintaining the most suitable torch attitude for welding**

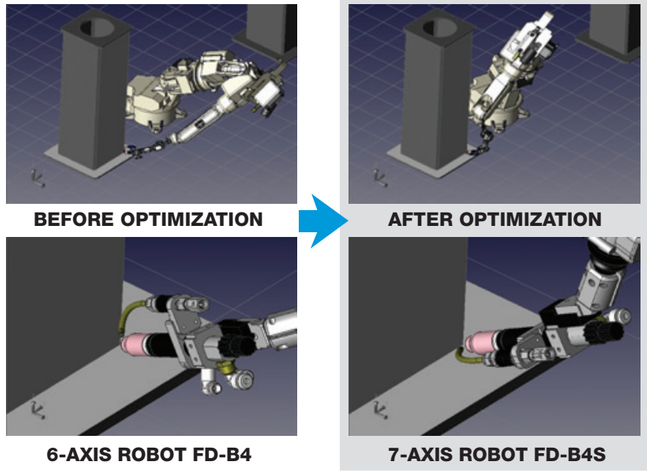
## OPTIMUM TEACHING

**Easy teaching, even for a two-electrode torch.**

Teaching a welding line only to the leading torch **automatically corrects the position and attitude** of the robot so the following torch will also follow the same welding line.

Changing the torch attitude without changing the arm attitude provides freedom from interference even after the automatic correction.

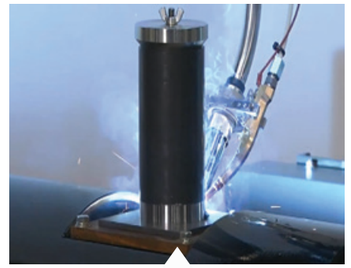
Example of optimum attitude teaching with a two-electrode torch



**BEFORE OPTIMIZATION** | **AFTER OPTIMIZATION**

**6-AXIS ROBOT FD-B4** (TIG electrode + wire filler)

**7-AXIS ROBOT FD-B4S** (TIG electrode + wire filler)



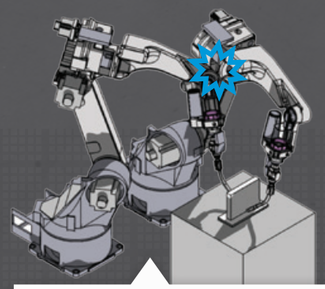
**(Cold Tandem GMAW)**

## HIGH-DENSITY INSTALLATION

**Multiple 7-axis robots create a compact production line.**

Thanks to **flexible attitude changes** by using the seventh axis, robots can easily move around obstructions.

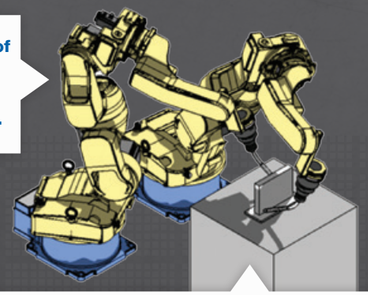
Placing multiple robots in close proximity allows for efficient integration and can shorten the manufacturing process.



- **One arm interferes with another, making it necessary to separate the welding process, which increases the tack time.**

**6-AXIS ROBOT FD-B4**

**The motion of the seventh axis avoids interference.**



- **Interference between arms can be avoided, while maintaining the most suitable torch attitude for welding.**
- **Welding process need not be separated, which shortens the tack time.**

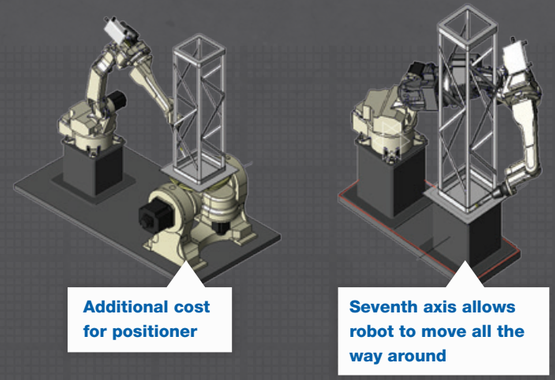
**7-AXIS ROBOT FD-B4S**

## SPACE & COST SAVING

**The seventh axis may eliminate the need for additional positioners.**

Rotation of the seventh axis enables a **flexible attitude change** when moving around obstructions.

Access to a proper welding position is possible without using a positioner, **reducing installation area and costs** compared with a conventional 6-axis system.



**Additional cost for positioner**

**Seventh axis allows robot to move all the way around**

**6-AXIS ROBOT FD-B4** | **7-AXIS ROBOT FD-B4S**

## BUILT-IN CABLES

**Weld cables are housed in the J7-axis to avoid interference.**

Both internal robot cables and **weld cables are built into the J7-axis**, making it possible to **use the movable full range** without interference affecting peripheral devices due to the irregular movement of externally wired cables.