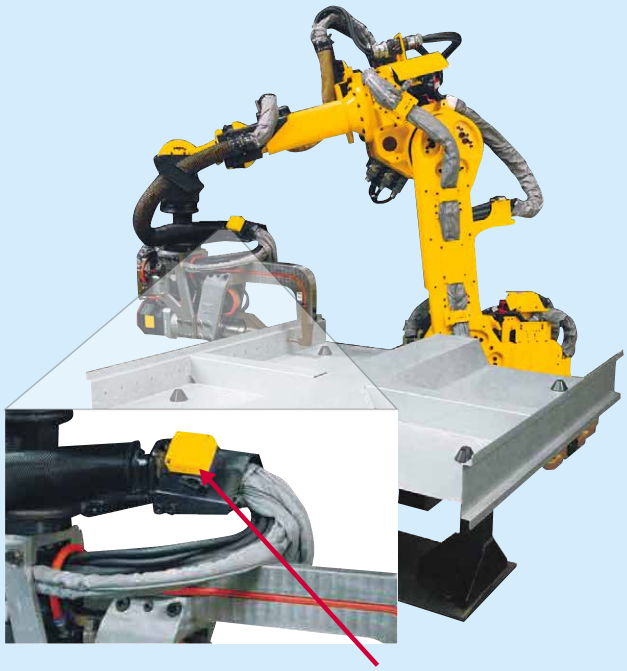
The world's first practical learning robot

FANUC Learning Robot

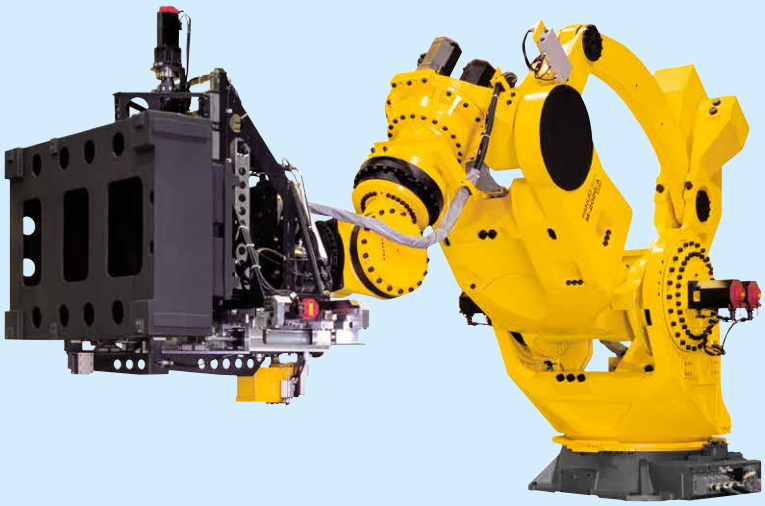
FEATURES

- Learning robot realizes smooth and high speed motion by the suppression of the robot vibration.
- Learning robot enhances the productivity of a unit robot and can reduce required robot quantity for spot welding line and robot system cost.
- Learning robot enhances the performance of handling a heavy jig and a heavy work-piece, which causes the vibration of a robot. It suppress the vibration from the jig and the work-piece and can increase the robot motion speed for the handling.
- Learning robot can automatically speed up robot motion. The procedure for the speeding up does not require special measurement system and operation. Only thing needed for it is to mount accelerometer on the part of a robot desired to be controlled and execute the target robot program repeatedly.
- Learning robot can maintain high speed motion against small touch-up done after learning is completed. Even if large touch-up is done in a robot program, learning robot can maintain high speed motion except in that touch-up part.

Learning Robot application example



High speed spot welding with light servo-gun



Dai-robot's loading super heavy work-piece (1350kg) to machining jig.

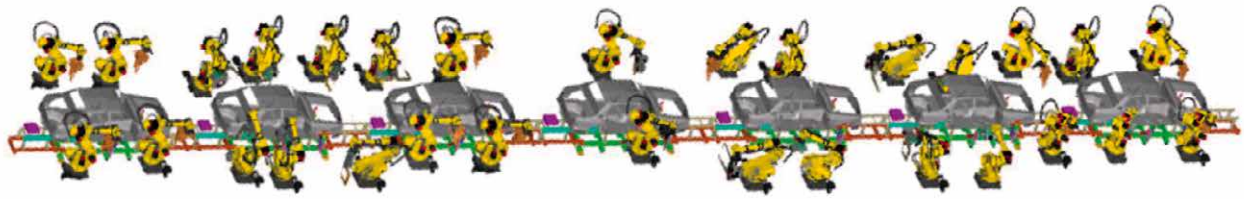
Handling of heavy load by suppressing the vibration

Learning Robot Effect

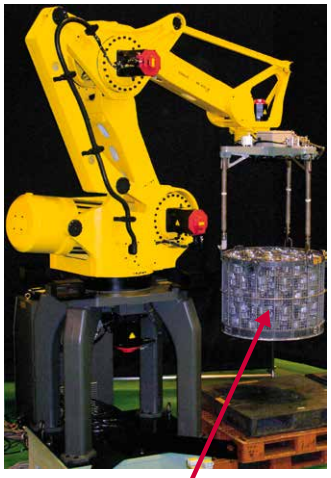
Learning robot can speed up robot motion and improve productivity efficiency. As a result, learning robot reduces cycle time for an entire spot welding line and increases production volume per day.

Existing car body spot welding example

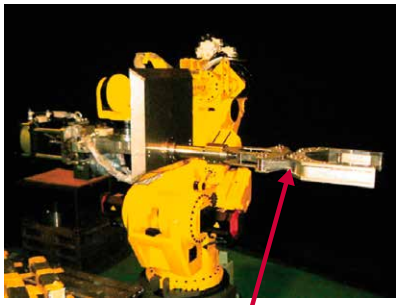
7 processes / robot 30 units



w/o	w/	CT Reduction
45.1 (sec)	39.6 (sec)	10.2%



Heavy work-piece for Handling



Off-set large hand

Handling of heavy work-piece and with off-set hand causes the robot vibration. Therefore, robot motion speed needs to be reduced for avoiding the vibration, which results in the productivity degradation.

However, learning robot can maintain the motion speed with vibration suppression. It contributes to the productivity improvement.

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