# Ministry of Health, Labour and Welfare Award

Mobility Support Robot - Hug T1-02
Fuji Corporation

## Support for mobility by standing using equipment



### **Mobility Support Robot - Hug overview**

Fuji Corporation developed the Mobility Support Robot - Hug to reduce the burden on caregivers through the "Project to Promote the Development and Standardization of Robotic Devices for Nursing Care" conducted by the Ministry of Economy, Trade and Industry and AMED. This helps those receiving care who have difficultly standing to be more mobile by aiding in the transfer from beds to wheelchairs and other locations.

When transferring, the care receiver leans against the Hug and a caregiver pushes the stand button to move the care receiver to the raised position.

The Hug T1-02 has been redesigned while retaining the original development concepts, to make it even better for both care receivers and caregivers.

Not only does it reduce the burden on caregivers, but it can also be used as an assistive device to help care receivers to live with a greater degree of independence.

## Practicality in care facilities

Using to help maintain the strength that care receivers have

Hug guides the care receiver as they lean forward and helps them to stand up by supporting the chest while raising the hips. By the coordinated movement of the two axis motors, the holding section supporting the chest follows the trajectory of a person standing up. Standing up with a Hug uses a similar motion to a person standing

up, with the center of gravity shifting to the soles of the feet. With the caregiver's encouragement, the care receiver is able to be an active participant in "standing" using the Hug.

- 2. Reducing loads and changing awareness
  By letting Hug do the heavy lifting, caregivers can focus
  more energy into caring for the care receiver. From the
  care receiver's point of view, they will change from
  "being lifted by a caregiver" to "standing using a device,"
  and their thinking of caregivers will also change from
  "someone who lifts them" to "someone who takes care
  of them". This eliminates the concerns of physical strain
  on caregivers when moving care receivers.
- 3. Makes it easier to use the toilet
  While the care receiver is maintaining a standing
  posture, the caregiver can easily perform toileting
  assistance such as putting on and taking off pants,
  wiping buttocks, and changing diapers. The unit is
  compact and lightweight, making it easy to maneuver in
  the toilet area. After sitting, leaning on the Hug can make
  bowel movements easier by applying abdominal
  pressure.

#### 4. Easy to use

The operation has been simplified with just "Stand" and "Sit" buttons, making it easy to use without having to be an expert on robots. It is easy to introduce and establish in nursing homes, and allows for quick and efficient assistance without interfering with operations. Family members who care for care receivers at home can use the Hug easily without having to worry about how to use it.

#### 5. Reduces the risk of falls

Regardless of the caregiver's skill or strength, the Hug can lift the care receiver stably with constant movement, reducing the risk of falls. Because it lowers slowly, the risk of compression fractures is also reduced.

#### Spreading usage

Since the start of sales, approximately 200 units of the Hug T1-02 have been shipped, with a total of more than 1,000 units being shipped in the Hug series.

It is a very physically demanding task to lift one person, move them to another place, and provide toileting assistance. We hope that the Hug will be introduced and used in more situations so that the burden on caregivers can be reduced and the care receivers can live comfortably for a long time.



Example of use in a toilet

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The 9th ROBOT AWARD

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