



**Industrial Consultancy & Sponsored Research (IC&SR)**

**SWIMMING POOL LIFT FOR PHYSICALLY CHALLENGED**  
**IITM Technology Available for Licensing**

**PROBLEM STATEMENT**

- **Hydrotherapy**, a form of **water exercise**, provides numerous health **benefits for physically challenged individuals**, especially those in wheelchairs.
- However, **swimming pools often have stairs** for entry and exit, which can be **challenging for these individuals**.
- **Pool-lifts can provide assistance** by allowing them to reach extreme positions with a horizontal seat at all times.
- This innovative solution significantly improves swimming pool accessibility.
- **Pool-lifts can provide additional assistance to help lower** and remove individuals from the pool, enhancing their overall experience.

**TECHNOLOGY CATEGORY/ MARKET**

**Technology:** Swimming pool lift for physically challenged  
**Category:** Assistive, Test Equipment & Design Manufacturing  
**Industry:** Manufacturers of Rehabilitation Aids for persons with disabilities and by promoting.  
**Application:** Assistive for physically challenged  
**Market:** The global market size was valued at **USD 15.12 Billion in 2022** and is poised to grow from **USD 16.04 Billion in 2023 to USD 25.76 Billion by 2031**, at a **CAGR of 6.10%** during the forecast period (2024-2031).

**INTELLECTUAL PROPERTY**

IITM IDF Ref. 1026  
 Patent No: IN 342114

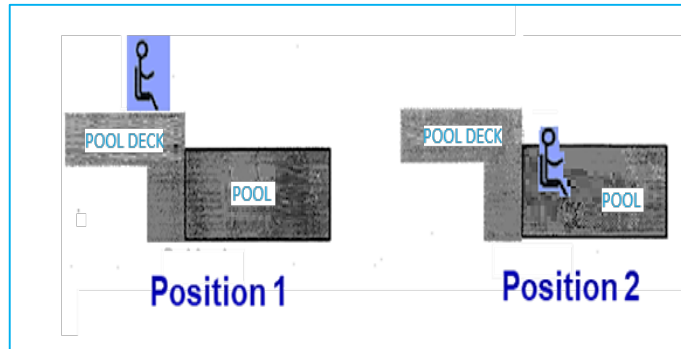
**TRL (Technology Readiness Level)**

TRL- 4, Experimentally validated in lab

**Research Lab**

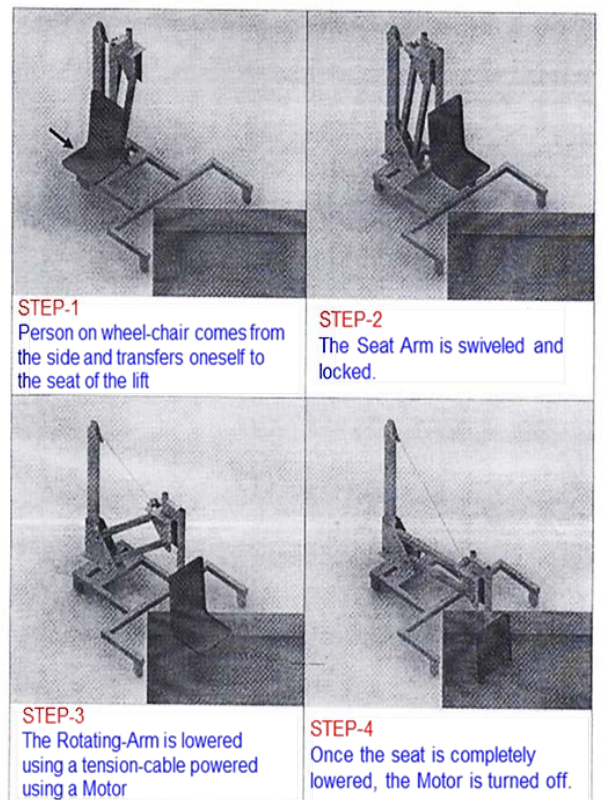
Prof. Sujatha Srinivasan,  
 Dept. of Mechanical Engineering

**TECHNOLOGY**



➤ Figure 1 illustrates the various positions that are expected during the motion of the person while introducing the person into the pool and while lifting the person of the pool

**Sequence of Operation**



NOTE: The reverse sequence will take the person out of the pool

**CONTACT US**

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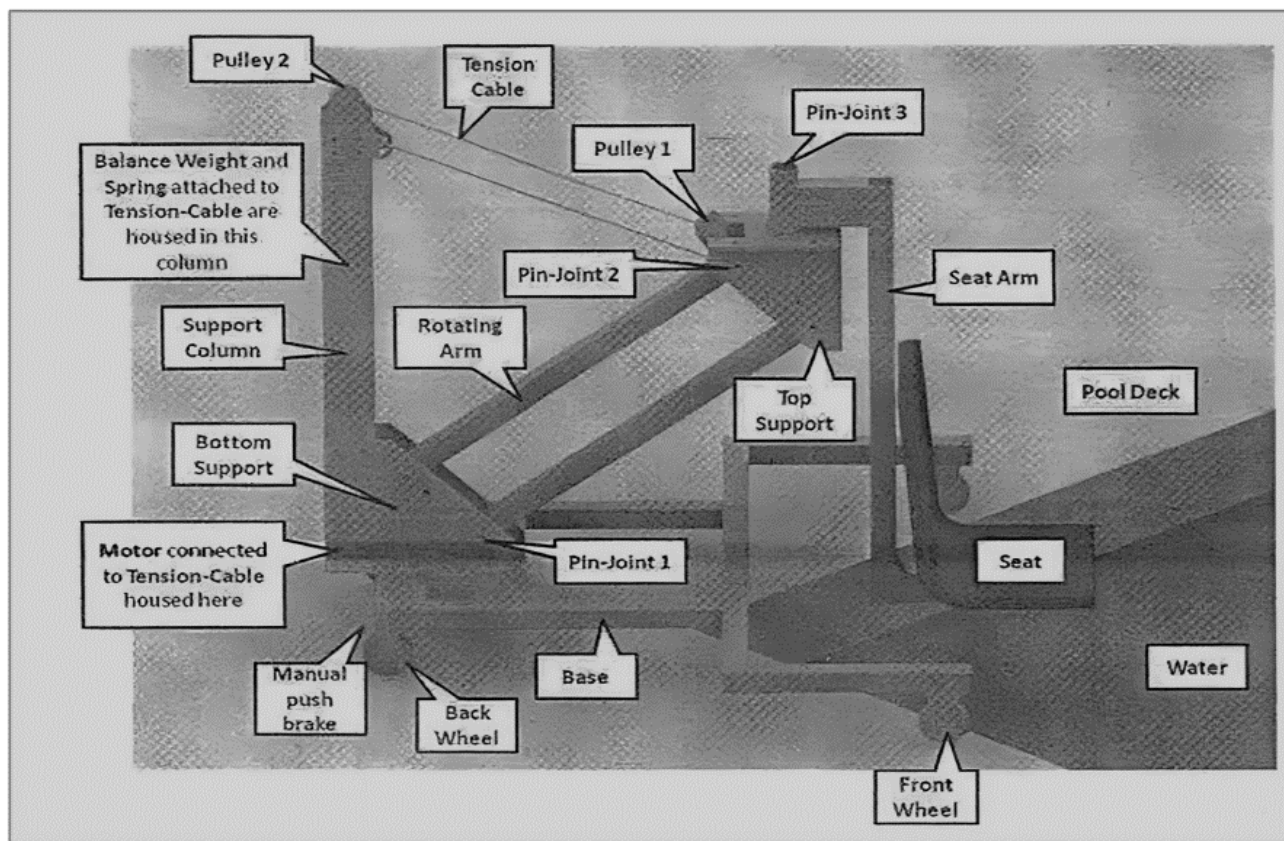
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Figure 2 illustrates the **arrangements of various components that together arranged physically and arranged operationally make the invention work**



### Key Features / Value Proposition

#### □ Safety

- ❖ It can also be **safely transferred to the device from a distance**,
  - ❖ such as **near the changing room**, and **then moved or rolled to the pool-corner**,
  - ❖ where the **person can sit on the device, acting as mobile equipment**.

#### □ Primacy

- ❖ **Lift can be positioned and used at Corner of Pool** without creating any obstruction at Pool Edge
- ❖ **Actuator system** is easy to maintain and can be adapted to various arm lengths
- ❖ **The device allows the person to reach and be lifted from the pool**, acting as stationary equipment.

#### □ Design

- ❖ The lift-design is of the category which **DOES NOT** require **any fixture to pool deck**.
- ❖ For lifts under this category, **low counter-weights are used to avoid toppling into the water**.
- ❖ **Reduced Force** to be applied while **lowering or raising** the person out of the pool, **swiveling the person** after he is seated either **manually or by a powered actuator**
- ❖ Lift can act **both as Stationary and Mobile equipment**.

#### □ Cost

- ❖ **Low cost** for design and manufacturing.

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