

CYBATHLON 2024

Exoskeleton Race



Points

Pilots can achieve 10 points per tasks with a maximum of 100 points per run.

Scoring

Pilots with the highest score and best time are rank best.

Competition rule

Crutches or canes are allowed, except in the Free Walking task.

Inclusion criteria

Pilots with a spinal cord injury which results in a complete loss of the motor function in the lower limbs

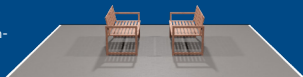


Tasks

1. TRAIN COMPARTMENT

Task: Take a seat and get up again.

Test: Ability to sit down and stand up by controlling knee and hip joint movements.



2. STAIRS

Task: Ascend and descend a flight of stairs without using a handrail.

Test: Ability to climb a stair in an exoskeleton while maintaining body balance.



3. MOVING PARCEL

Task: Carry a box to a targeted location while walking in their exoskeleton.

Test: Ability to carry objects while walking in an exoskeleton.



4. TILTED PATH

Task: Negotiate a tilted path.

Test: Ability to maintain balance and control ankle movements on a tilted path.

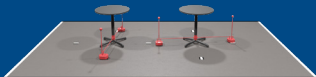


5. FREE WALKING

Task: Walk a predefined distance without the use of their crutches.

Test: Ability to use hands for other tasks or gestures than maintaining crutches.





6. CROWD

Task: Navigate through furniture, avoiding collisions with roaming robots in the task space.

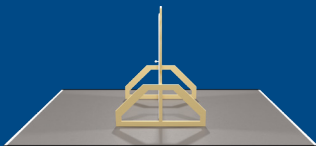
Test: Ability to navigate around static and moving objects to reach a desired destination.



7. HIGH STEP

Task: Navigate a quasi-random sequence of wooden boxes of varying height and length.

Test: Ability to walk over steps of various height.



8. DOOR

Task: Open, pass through, and close a door.

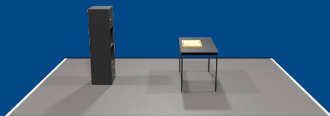
Test: Ability to open and close a door.



9. STONY PATH

Task: Walk over a series of stones.

Test: Ability to adjust leg trajectory and precisely place the foot.



10. KITCHEN

Task: Conduct several upper extremity tasks in a kitchen environment in an exoskeleton.

Test: Ability to perform tasks with upper extremities at different heights.

CYBATHLON EXO



For a world without barriers!

maxon



Schweizer
Paraplegiker
Stiftung



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Eidgenössisches Büro für die Gleichstellung
von Menschen mit Behinderungen EBGB

[sn]
super.natural



STADTKLOTEN