

# BACK IN MOTION

FUNCTIONAL ASSESSMENTS INC.



## Job Demands Analysis - Arena Service Worker -

### JOB POSITION & SCHEDULE

<b>Job Title:</b>	Arena Service Worker.
<b>Essential Job Functions:</b>	Clean and maintain ice and rink surfaces, ice plant and arena building. Also responsible for assisting the general public and performing such tasks as setting up and taking down equipment for functions.
<b>Hours of work:</b>	9.33 hour shift with 8.33 hours worked.
<b>Breaks:</b>	Includes two 10-minute coffee breaks and one 1-hour lunch.
<b>Shifts:</b>	Variable days and start times. Nine shifts performed every two weeks for full time workers.

### ENVIRONMENTAL CONDITIONS

<b>Work Station Description:</b>	Indoor and outdoor environments.
<b>Lighting:</b>	Ambient indoor and outdoor lighting. Generally overhead fluorescent.
<b>Temperature:</b>	Exposure to sustained cold temperatures (40 to 42 degrees Fahrenheit)
<b>Weather:</b>	Exposure to the elements when working outside.
<b>Terrain:</b>	Level indoor terrain. Paved outdoor terrain.
<b>Biological Hazards:</b>	Potential exposure to body fluids.
<b>Chemical Hazards:</b>	Exposure to cleaning agents and ammonia.
<b>Physical Hazards:</b>	Risk of slip and fall, some work at height (ladders, steps), significant force application (lifting/carrying and pushing/pulling) required, power tool usage, potential for confrontations with the general public, occasional exposure to noise (refrigeration room and edger/Ice Resurfacer).

## ESSENTIAL WORK TASKS

Frequency: Rare 0-5%; Occasional 6-33%; Frequent 34-66%, Constant 67-100%

<i>Frequency</i>	<i>Description</i>
1. F	<b>Maintain Rink Surfaces:</b> <u>Ice surface:</u> <i>Driving Ice Resurfacer, spudding*</i> , “edging” (push edging machine), replacing glass/boards, watering the ice surface, shoveling snow*, drilling ice (measuring ice depth), taking ice out and putting ice in, washing arena glass. <u>Floor surface:</u> <i>Operating automated floor-machine, dry mopping, sweeping*.</i>
2. F	<b>Building Cleaning and Maintenance:</b> <i>Sweeping*</i> , mopping, hand-scrubbing (washroom cleaning duties), collecting/emptying garbage, pushing/pulling automated floor-machine, replacing lights (climbing ladders), replenishing supplies, picking up refuse.
3. O	<b>Maintain Ice Resurfacer:</b> <i>Replacing blades, filling with water, hose out the augers, washing.</i>
4. R	<b>Assorted Other Tasks:</b> <i>Moving nets (hockey and lacrosse)*, fixing nets, adjusting hockey sticks, locking/unlocking doors, table set-up and take down, computer applications (checking ice readings).</i>

\* Please see the Appendix for related images and description

## TOOLS & EQUIPMENT USED

- Ice Resurfacer, blades
- Automated floor-machine (“autoscrubber”)
- Hose for flooding ice
- Edger
- Spudder
- Arena glass (4’ by 4’ and 5’ by 4’ sheets)
- Arena boards
- Tables, chairs
- Hand and power tools (multiple assorted; e.g., pliers, wrenches, ratchets, screwdriver, table saw)
- Cleaning tools and supplies
- Safety equipment
- Step and extension ladders
- Dolly (to facilitate garbage bin transport)

## WEIGHTS AND MEASURES

Frequency (FQ): Rare 0-5%; Occasional 6-33%; Frequent 34-66%, Constant 67-100%

Activities requiring significant force application and/or duration are listed below:

- **Spudding:** Estimated 20 to 50 pounds of force application (with jarring) when chipping ice. Occasional; about twice per week for about 30 minutes sustained (though variable).
- **Edging:** Constant approximate 25 pounds of pushing force on ice. Estimated up to 40 pounds when pressing forcefully against the boards. Up to 95 pounds force to tilt and roll over lips (facilitated with body weight application). Occasional; about twice per week for about 15 minutes sustained.
- **Replacing Glass:** 50 to 70 pounds of lifting force (distributed amongst 2 to 3 workers, with some concurrent outer range reaching) for Plexiglas; 27 pound solo lift for temporary plywood sheet application. Rare.
- **Replacing Ice Resurfacer Blades:** 45 pound blade, carry/drag about 10 to 15 feet. Occasional; once per week typically (Rare).
- **Moving Nets:\***
  - **Ice:** 65 pounds initial force (to lift/tilt) for hockey nets\*: drag about 20 feet. Occasional: up to 4 times per shift.
  - **No ice:** 35 pounds of initial force for roller hockey nets (to tip, when positioning 2-wheeled net-mover); significantly less force for lacrosse nets (estimated at less than 20 pounds total). Push up to 50 feet. Occasional.
- **Garbage Bin Emptying:** Variable load weights estimated up to a maximum of 30 pounds (typically 10 to 15 pounds). Occasional: 25 bins in sequence, two times per week. Lift/tip over 5 foot lip into dumpster (may use stool to facilitate).
- **Opening Ice Rink Gates:** 50 to 70 pounds initial force to open; approximately 50 pounds of force to close. Occasional: 12 times per shift.\*
- **Shoveling Snow\*:** Repetitive lifting of loads on snow shovel estimated at 5 to 10 pounds (with additional force imposed by long lever arm of snow shovel). Typically brief exposure: up to 5 minutes sustained. Occasional.
- **Pushing Rental Skate Cart:** 45 pound initial pushing force. Rare.
- **Pulling Hoses:** 200 foot pull; approximately 30 pound of pulling force at maximum. Occasional.
- **Sweeping and Mopping:**
  - **Bleachers:** Sweep 12 steps time 200 feet (Minoru). Mop benches (same distance). Requires repetitive stair climbing. Approximately 2 hours total, performed once per week. Mop buckets of variable weight: typically 20 to 30 pounds). Occasional.
  - **Rink (without ice):** Sweep rink surface with large push broom (6-foot breadth). Approximately 30 minutes, performed twice per shift. Constant walking/pushing. Occasional.
- **Assisting with Events:** Move tables: 39 pounds each, variable quantities (typically less than 5), approximately 100 foot carry at maximum. May carry up and down steps (12 steps). Occasional.
- **Cleaning Duties:** Push a cart (less than 5 pounds force). Clean urinals, sinks, counters, toilets. Increased frequency in summer. Two hours (minimal) each shift, in summer. May be somewhat less in winter. Occasional to Frequent.

- **Floor Cleaning:** Fill with water via hose, then push automated floor-machine (minimal force: self propelled). Approximately 1 hour continuously. Total of 2 hours per shift. Occasional.

**Overall Strength Category** (per the Dictionary of Occupational Titles):

**Heavy:** Exerting 50-100 lbs. of force occasionally, and/or 25-50 lbs. of force frequently, and/or 10-20 lbs. of force constantly to move objects.

<b>PHYSICAL &amp; POSTURAL DEMANDS CHECKLIST</b>
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*Frequency (FQ): Rare 0-5%; Occasional 6-33%; Frequent 34-66%, Constant 67-100%*

<b>Demand</b>	<b>Frequency</b>	<b>Description</b>
Forward Reaching (inner/outer range)	F	Inner range when grasping some controls/handles (edger, buffer). To outer range when shoveling, spudding, lifting bins and sheets of glass/plywood, moving nets, ratcheting Ice Resurfacer blade nuts, driving Ice Resurfacer, using hand tools (e.g. fixing boards), sweeping and mopping (e.g., rink., arena stands, other floor surfaces). <b>NB:</b> <i>inner-range reaching:</i> within a forearm's length, with elbows close to the torso; <i>outer-range reaching:</i> the arm extends forward & away from the body; <i>vertical reaching:</i> reaching above shoulder level
Vertical Reaching	O	Lifting glass or plywood into place on arena boards. Lifting garbage containers when dumping in dumpster. Reaching upwards from ladder to replace bulbs. Taking supplies off of shelves. Scrubbing walls/mirrors. Vacuuming vents.
Handling	C	Assorted tools and equipment, Ice Resurfacer controls.
Forceful Grasping	F	In particular when spudding, shoveling, or mopping. Sustained up to about 30 minutes.
Fingering	O	Ice Resurfacer controls (push buttons), pen and paper tasks, computer applications.
Sitting	O	Driving Ice Resurfacer, performing computer applications. 7 to 13 times per shift approximately. About 10 minutes at a time. Typically interspersed with other tasks.
Standing	F to C	When not driving Ice Resurfacer driving or performing computer applications. Typically sustained up to about 1 hour. May be in excess of 2 hours continuously. Less seated work in summer months.
Walking	F	Large facility; walk to access different work environments. Constant walking when sweeping rinks (2 hours, once per week in summer) or bleachers (30 minutes, twice per shift

		in summer) or using automated floor-machine.
Climbing (stairs/ladders)	O	Climb 20-foot extension ladders (e.g., bulb replacement). Climb onto Ice Resurfacer: 3 steps); climb bleacher steps.
Bending/Stooping	O	Mild to moderate stooping (with concurrent lateral trunk tilt) when shoveling or spudding. Mild to moderate stooping when pushing edger (handle at 37 inches above-floor). Mild to moderate stooping when cleaning washroom surfaces. Mild stooping when sweeping. <i>Mild stooping = up to approximately 20 degrees of flexion at the waist; moderate stooping = between approximately 20 and 45 degrees of flexion at the waist; severe stooping = greater than approximately 45 degrees of flexion at the waist.</i>
Twisting	O	Repetitive when shoveling, sweeping, watering the ice.
Low Level Postures (kneel/crouch)	O	Sustained crouch or knee to remove and replace Ice Resurfacer blade (with concurrent forward rounded trunk). Crouch/kneel to drill ice. Crouch to scrub toilet.
Balance	O	Dynamic when walking on ice surfaces. Static when perching on ladders (change bulbs).
Driving	O	Ice Resurfacer. Note: Ice Resurfacer driving is performed with left hand on wheel, right hand on blade controls.
Carrying	O	Hand tools. Replacement parts. Garbage bins and bags. Panes of glass. Plywood sheets. Ice Resurfacer blade. Dolly available to ease carrying demands.
Pushing/Pulling	O	Pushing and pulling of edger. Dragging nets. Sliding plywood sheets and Ice Resurfacer blades. Pulling lengths of hose (about 200 feet). Opening or closing gates. Push automated floor-machine.
Lifting	O	Rink glass replacement, Ice Resurfacer blade replacement, tilting nets and edger, garbage bins, shovel snow, tables, mop buckets, tools and supplies.
Awkward Postures	O	Sustained crouch or knee to remove and replace Ice Resurfacer blade (with concurrent forward rounded trunk). Sustained trunk side-tilting (to left) when gauging path of Ice Resurfacer. Shoveling actions include concurrent stooping and side tilting with force application.

**APPENDIX: PHOTOS**



**Tilting Nets**



**Moving Nets**



**Opening Rink Gates**



**Snow-Shoveling: starting and finishing posture**



**Edging: forceful “hit” against boards**

**Rink-Sweeping (summers)**