



## Checklist for screening physical risks for manual handling

*RAMP - Risk Management tool for manual handling Proactively*

### Introduction

This checklist (RAMP I) is intended for identifying (screening) and assessing physical ergonomics risk factors when working with manual handling which may increase the risk of developing musculoskeletal disorders (MSDs). Manual handling involves for example manual lifting, holding, pushing or pulling of loads. At high or sustained exposure to the risk factors the risk of developing or worsening MSDs increases.

Use this tool to assess a work, work task, or a work station during an average work day. In some cases also rarely occurring extreme cases may warrant assessment. Assess the work of an employee who is representative for the group of employees who carry out this kind of work, or, alternatively two people so that the variation among employees is somewhat taken into account. This employee/these employees should be experienced in how the work should be carried out in an appropriate way. Those performing the assessment should be familiar with how the work is carried out. Otherwise, the assessment should be carried out in co-operation with someone with such knowledge. The person who carries out the assessment should have participated in a basic physical ergonomics course, an introduction in the RAMP-method and should have read the RAMP manual. During the assessment, choose the alternative which best matches the situation and mark the "Yes" or "No" box corresponding to the question/statement.

The results from the analysis show whether any risk factor has been identified or not. If no risk factor has been identified, the risk to develop MSD problems is assessed to be low for people with normal physical capacity. If one or more risk factors have been identified this implies that either there is a high risk to develop MSDs, or that a refined analysis is needed to assess whether the risk is low, moderate or high. A refined analysis can be carried out with the RAMP II module in most cases. The result of the RAMP I assessment is presented at three risk and priority levels:

	<b>High risk.</b> The loading situation has such a magnitude and characteristics that many employees are at an increased risk of developing musculoskeletal disorders. Improvement measures should be given high priority.
	<b>Investigate further.</b> An in more in depth analysis is required to assess the risk level. A refined analysis can be carried out for example with the RAMP II module.
	<b>Low risk.</b> The loading situation has such a magnitude and characteristics that most employees are at a low risk of developing musculoskeletal disorders. However, individuals with reduced physical capacity may be at risk. Individually tailored improvement measures may be needed.

The result is intended to form a part of the decision making basis when prioritizing and choosing actions in order to reduce the risk for MSDs.

Date: \_\_\_\_\_ Assessment of:  Work/ work task  Employee load

Work/work task: \_\_\_\_\_

Assessment ordered by: \_\_\_\_\_ Position \_\_\_\_\_

Assessment completed by: \_\_\_\_\_ Position \_\_\_\_\_

Company representative: \_\_\_\_\_ Position \_\_\_\_\_

Safety/work environment officer/employee: \_\_\_\_\_ Position \_\_\_\_\_

Other: \_\_\_\_\_ Position \_\_\_\_\_

Department: \_\_\_\_\_

Other information: \_\_\_\_\_

## RAMP I - Checklist for screening physical risks for manual handling

Mark the "Yes" or "No" boxes for the statements corresponding to the questions.	Yes	No	Comment:	
<b>1. Postures</b>				
1.1 Does work occur <u>often</u> or for a <u>long time</u> * in any of the following unfavourable postures?				
* <i>often</i> = about 100 times per work day or more				
* <i>a long time</i> = about 30 minutes per work day or more				
head bent backwards	<input type="checkbox"/>	<input type="checkbox"/>		
back/upper body bent or twisted - forwards, backwards or towards the side	<input type="checkbox"/>	<input type="checkbox"/>		
arm almost or fully stretched forwards (the hand more than about 45 cm from the spine)	<input type="checkbox"/>	<input type="checkbox"/>		
hand above shoulder height or below knee height	<input type="checkbox"/>	<input type="checkbox"/>		
hand/arm brought outwards to the side (to the right or to the left)	<input type="checkbox"/>	<input type="checkbox"/>		
1.2 Does work occur in any of the following unfavourable postures about 1 hour per work day or more?				
head clearly twisted or bent - forwards or towards a side	<input type="checkbox"/>	<input type="checkbox"/>		
hand clearly bent upwards, downwards or towards a side	<input type="checkbox"/>	<input type="checkbox"/>		
legs or feet have insufficient space, or the surface is unstable or with a slope	<input type="checkbox"/>	<input type="checkbox"/>		
<b>2. Work movements and repetitive work</b>				
2.1 Does work occur in any of the following ways?				
the work cycle is shorter than 30 seconds	<input type="checkbox"/>	<input type="checkbox"/>		
the work cycle is between 30 seconds and 5 minutes	<input type="checkbox"/>	<input type="checkbox"/>		
similar work movements are repeated more than 1/10 up to half of the work cycle time	<input type="checkbox"/>	<input type="checkbox"/>		
similar work movements are repeated more than half of the work cycle time	<input type="checkbox"/>	<input type="checkbox"/>		
<b>If "No" on all in 2.1, go to 3. If "Yes" on any in 2.1, answer 2.2 below.</b>				
2.2 How long time of the working day does such work occur? Choose one alternative.				
the work or similar work tasks are carried out between 1 and 4 hours of the work day	<input type="checkbox"/>	<input type="checkbox"/>		
the work or similar work tasks are carried out for more than 4 hours of the work day	<input type="checkbox"/>	<input type="checkbox"/>		
<b>3. Lifting work</b>				
3.1 Does lifting of loads occur? <b>If "No"</b> , go to 4.				
3.2 How heavy are the loads and how often are they lifted?				
less than 3 kg	<input type="checkbox"/>	<input type="checkbox"/>		
- more than 100 times per work day	<input type="checkbox"/>	<input type="checkbox"/>		
3-7 kg	<input type="checkbox"/>	<input type="checkbox"/>		
- more than 40 times per work day	<input type="checkbox"/>	<input type="checkbox"/>		
more than 7 kg - 14 kg	<input type="checkbox"/>	<input type="checkbox"/>		
- more than 20 times per work day	<input type="checkbox"/>	<input type="checkbox"/>		
more than 14 kg - 25 kg	<input type="checkbox"/>	<input type="checkbox"/>		
- more than 5 times per work day	<input type="checkbox"/>	<input type="checkbox"/>		
more than 25 kg	<input type="checkbox"/>	<input type="checkbox"/>		
3.3 Do the lifts generally occur in any of the following unfavourable postures?				
back/upper body clearly bent	<input type="checkbox"/>	<input type="checkbox"/>		
back/upper clearly twisted	<input type="checkbox"/>	<input type="checkbox"/>		
hand above shoulder height	<input type="checkbox"/>	<input type="checkbox"/>		
hand below knee height	<input type="checkbox"/>	<input type="checkbox"/>		
hand outside forearm distance	<input type="checkbox"/>	<input type="checkbox"/>		
arm clearly brought outward (to the right or to the left)	<input type="checkbox"/>	<input type="checkbox"/>		
lifting/holding with overhand grip (palm facing downward)	<input type="checkbox"/>	<input type="checkbox"/>		
one-hand lift where the load exceeds 6 kg	<input type="checkbox"/>	<input type="checkbox"/>		
lifting while seated where the load exceeds 7 kg	<input type="checkbox"/>	<input type="checkbox"/>		
<b>4. Pushing and pulling work</b>				
4.1 Does pushing and pulling work occur? <b>If "No"</b> , go to 5.				
4.2 How large is the exerted force in the pushing or pulling work?				
the starting force (the force to start the object moving) exceeds 150 Newton	<input type="checkbox"/>	<input type="checkbox"/>		
the starting force (the force to start the object moving) exceeds 300 Newton	<input type="checkbox"/>	<input type="checkbox"/>		
the continuous force (the force to keep the object moving) exceeds 100 Newton	<input type="checkbox"/>	<input type="checkbox"/>		
the continuous force (the force to keep the object moving) exceeds 200 Newton	<input type="checkbox"/>	<input type="checkbox"/>		

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4.3 Does the pushing and pulling work generally occur in any of the following unfavourable conditions?				
the gripping height clearly deviates from elbow height				
the work is carried out with the back/upper body clearly twisted				
the force is exerted towards the side or upwards (i.e. not straight forwards or backwards)				
the force is exerted with one hand				
the pushing or pulling is carried out often (approx. more than 100 times per work day)				
the pushing or pulling distance exceeds 30 meters				
4.4 Are load carriers with 1-2 wheels (e.g. two-wheel cart) or similar used, under the following condition?				
the employee bares the whole or part of the load, and the load weight exceeds 100 kg				
<b>5. Influencing factors</b>				
<b>5.1 Influencing physical factors hand/arm</b> - do the following occur? The times refer to "per work day".				
the employee is exposed to hand-arm vibrations more than 20 minutes (10 for strongly vib)				
the employee is exposed to hand-arm vibrations more than 90 minutes (60 for strongly vib)				
warm or cold objects are handled manually				
the hand is used as an impact tool often or a long time*				
holding hand tools weighing more than 2.3 kg for more than 30 minutes				
holding precision tools weighing more than 0.4 kg for more than 30 minutes				
<b>5.2 Other physical factors</b> - do the following occur? The times refer to "per work day".				
the employee is exposed to whole-body vibrations more than 1 hour				
the employee is exposed to whole-body vibrations more than 6 hours				
the visual conditions are insufficient for the task				
the work is carried out in hot or cold temperatures or in draughty environments				
standing or walking on a hard surface more than half of the work day				
prolonged sedentary work without possibility to change to do the work standing up				
prolonged standing work without possibility to change to do the work sitting down				
kneeling/squatting more than 30 times or more than 30 minutes				
<b>5.3 Work organisational and psychosocial factors</b> - do the following occur?				
there is no possibility to influence at what pace the work is performed				
there is no possibility to influence the work setting or how the work shall be carried out				
it is often difficult to keep up with the work tasks				
the employees often work rapidly in order to be able to take a longer break				
there is no possibility for recovery time during the work (other than formal breaks)				
<b>6. Reports on physically strenuous work</b>				
6.1 Do documented reports exist on physically strenuous tasks (near misses, incident reports, journal notes, or other) when carrying out the work task?				
6.2 If "Yes" on 6.1, what type of work that has led to this? If "No", go to 7.				
lifting				
holding/carrying				
pushing/pulling				
pushing with hand or fingers				
other (please note) _____				
<b>7. Perceived physical discomfort</b> Ask five people who perform this work task				
7.1 Are there parts of the work which lead to physical discomfort (e.g. in muscles or joints) during the work day? Answer "Yes" if any employee experiences such discomfort.				
7.2 If "Yes" on question 7.1, which is the worst task?				
Person 1: _____				
Person 2: _____				
Person 3: _____				
Person 4: _____				
Person 5: _____				

**Comment:**