

ANNEX 3

- Task data sheet



Manual Material Handling – Lifting

Single task

Task:

Multiple task

Subtask:

of the task:

Company:

Date:

Observations:

.....
.....
.....

Population: general more protection

Variables

Duration: short medium long

Load mass (kg.):

Frequency (lif/min.):

Origin

Destination

Horizontal location (cm.):

Vertical location (cm.):

Angle of asymmetry (°):

Type of grip (good, fair, poor):

Control at destination: yes no

One handed operation: yes no

Two person operation: yes no

Additional task: yes no

Manual Material Handling – Carrying

Multiple task

Subtask:

of the task:

Company:

Date:

Observations:

.....

.....

.....

Population: general more protection

Variables

Load mass (kg):

Distance traveled (m):

Frequency (carries/min):

Height of the grip: hips elbows

Manual Material Handling – Pulling

Single task

Task:

Multiple task

Subtask:

of the task:

Company:

Date:

Observations:

.....

.....

.....

Population: general more protection

Variables

Initial force (kg):

Sustained force (kg):

Distance (m):

Frequency (pull/min):

Grip height (cm.):

Manual Material Handling – Pushing

Single task

Task:

Multiple task

Subtask:

of the task:

Company:

Date:

Observations:

.....

.....

.....

Population: general more protection

Variables

Initial force (kg):

Sustained force (kg):

Distance (m):

Frequency (push/min):

Grip height (cm):

Injured MMH

(1 de 1)

Task:

Company:

Date:

Observations:

.....

.....

Variables

Load mass (kg.):

Handling conditions

- **Horizontal location**
 - close (until 30 cm)
 - far (30-60 cm)

- **Vertical location**
 - floor level
 - knee level
 - waist level
 - shoulder level

- **Trunk rotation**
 - 0-30°
 - 30-60°
 - 60-90°

Repetitive Tasks

(1 de 2)

Task:

Company:

Date:

Observations:

.....

.....

Subtakss

	Subtask	Exposure (% of total task)	Arms Rep. (rep/min)	Hands Rep. (rep/min)
1.
2.
3.
4.
5.

Postures

	Posture	Time (% of total subtask)	Subtask
1.
2.
3.
4.
5.
6.
7.
8.
9.

Repetitive Task – Posture

(2 de 2)

Subtask:

Posture:

Time (% of total subtask):

Neck

Flexion or extension:

- flexion 0-10°
- flexion 10-20°
- flexion > 20°
- extension

Lateral tilt: yes no

Torsion: yes no

Arms

Flexion or extension:

- extension > 20°
- between 20° extension and 20° flexion
- flexion 20-45°
- flexion 45-90°
- flexion > 90°

Wrists

Flexion or extension:

- neutral position (0°)
- flexion or extension < 15°
- flexion or extension > 15°

Radial or ulnar deviation: yes no

Pronation or supination: yes no

Hand effort:

- light task (< 10% of maximum force)
- rather hard task (10-30% of maximum force)
- hard task (30-50% of maximum force)
- very hard task (50-80% of maximum force)
- nearly the maximum (> 80% of maximum force)

UNE EN 1005-5 [OCRA]

(1 de 4)

Task:

Company:

Date:

Observations:

.....

.....

Organization

Repetitive subtasks

Subtask	Description
.....
.....
.....
.....
.....

Subtask

Technical action

Side

Observations - action

Force

Check the force exerted according to the Borg scale (or its equivalent as a % of the maximum voluntary contraction)

- 0 **None at all**
- 0.5 **Extremely weak** (5% of MVC)
- 1 **Very weak** (10% of MVC)
- 2 **Weak** (20% of MVC)
- 3 **Moderate** (30% of MVC)
- 4 **Quite hard** (40% of MVC)
- ≥ 5 **Hard/very hard** (≥ 50% of MVC)

Posture

Check if the following postures and movements of the upper limb occur

Shoulder

- Flexion ≥ 80°
- Extension ≥ 20°
- Abduction ≥ 45°

Wrist

- Flexion/Extension ≥ 45°
- Radial/Ulnar dev. ≥ 20°

Elbow

- Flexion/Extension ≥ 60°
- Pronation ≥ 60°
- Supination ≥ 60°

Hand

- Pinch
- Hook
- Palmar
- Power

Additional

Check if there are other additional risk factors

- Vibrations
- Countershocks
- Precision
- Compression
- Cold
- Gloves
- Set pace
- Otros

Postures [OWAS]

(1 de 2)

Task:

Company:

Date:

Sampling interval: seconds

Subtasks:

1	
2	
3	
4	
5	

Back	<ol style="list-style-type: none"> 1. Straight 2. Bent 3. Twisted 4. Bent and twisted
Arms	<ol style="list-style-type: none"> 1. Both below the shoulder 2. One above the shoulder 3. Both above the shoulder
Legs	<ol style="list-style-type: none"> 1. Sitting 2. Standing, legs straight 3. Standing on a straight leg 4. Standing, legs bent 5. Standing on a bent leg 6. Kneeling on one/both legs 7. Walking
Force	<ol style="list-style-type: none"> 1. Less than or equal to 10 kg 2. Between 10 and 20 kg 3. Greater than 20 kg

	Back	Arms	Legs	Force	Subtask		Back	Arms	Legs	Force	Subtask
1						26					
2						27					
3						28					
4						29					
5						30					
6						31					
7						32					
8						33					
9						34					
10						35					
11						36					
12						37					
13						38					
14						39					
15						40					
16						41					
17						42					
18						43					
19						44					
20						45					
21						46					
22						47					
23						48					
24						49					
25						50					

Postures [OWAS]

Observations:

.....

.....

.....

	Back	Arms	Legs	Force	Subtask		Back	Arms	Legs	Force	Subtask
51						91					
52						92					
53						93					
54						94					
55						95					
56						96					
57						97					
58						98					
59						99					
60						100					
61						101					
62						102					
63						103					
64						104					
65						105					
66						106					
67						107					
68						108					
69						109					
70						110					
71						111					
72						112					
73						113					
74						114					
75						115					
76						116					
77						117					
78						118					
79						119					
80						120					
81						121					
82						122					
83						123					
84						124					
85						125					
86						126					
87						127					
88						128					
89						129					
90						130					

Posture data

Subtask: Posture:.....

Frequency: low medium high

Video reference:

Observations (posture):

.....

.....

.....

Group A – Trunk, Neck, Legs

• TRUNK

Select one option:

- Extension > 20°
- Extension up to 20°
- Straight
- Flexion up to 20°
- Flexion 20-60°
- Flexion > 60°

Check if there is also:

- Rotation
- Lateral tilt

• NECK

Select one option:

- Extension
- Flexion 0-20°
- Flexion > 20°

Check if there is also:

- Rotation
- Lateral tilt

• LEGS

Select one option:

- Bilateral support
- Walking
- Sitting
- Unilateral support or Unstable posture

Check if there is also:

- Knee(s) flexion 30-60°
- Knee(s) flexion > 60°
(except sitting)

Postures [REBA]

(3 de 4)

Group B – Arms, Forearms, Wrists

Side (Right/Left):

• ARM

Select one option:

- Extension > 20°
- Extension 20° to flexion 20°
- Flexion 20-45°
- Flexion 45-90°
- Flexion > 90°

Check if there is also:

- Arm abduction
- Arm rotation
- Raised shoulder
- Arm supported in favor of gravity

• FOREARM

Select one option:

- Flexion < 60°
- Flexion 60-100°
- Flexion > 100°

• WRIST

Select one option:

- Flexion or extension 0-15°
- Flexion or extension > 15°

Check if there is also:

- Rotation
- Lateral deviation

Force, Grip, Activity

• FORCE/LOAD

Select one option:

- < 5 kg
- 5-10 kg
- > 10 kg

Check if there is also:

- Sudden or abrupt force**

• GRIP

Select one optionn:

- Good** Appropriate handle and mid-range power grip
- Average** Acceptable but not ideal, or acceptable using another body part
- Bad** Not acceptable although possible
- Unacceptable** Awkward, unsafe, without handles, or unacceptable using other body parts

• ACTIVITY

Check if the following conditions exist:

- Static** (sustained > 1 min)

- Repeated** (> 4 times/min, except walking)

- Significant or rapid postural changes or unstable surface**

UNE EN 1005-3 [FORCES]

(1 de 3)

Task:

Company:

Date:

Observations:
.....
.....
.....

Population: general more protection

Subtasks

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Subtask data

Subtask:

Observations (subtask):

• SUBTASK DURATION

Select one option:

- 1 hour or less
- Between 1-2 hours
- Between 2 and 8 hours

• ACTIVITY

Select one option:

Working with hand

- grabbing with the whole hand

Working with the arm

- Upwards
- Downwards
- Outwards
- Inwards
- Pushing with supported trunk
- Pushing with unsupported trunk
- Pulling with supported trunk
- Pulling with unsupported trunk

Working with the whole body

- Pushing
- Pulling

Working with the foot

- Action of the ankle
- Action of the leg

UNE EN 1005-3 [FORCES]

(3 de 3)

• MOVEMENT SPEED

Select one option:

- The action involves immobility or very slow movement
- The action involves noticeable movement

• SUBTASK FREQUENCY

Select one option:

Actions per minute

- Less than or equal to 0.2 actions/min
- Between 0.2-2 actions/min
- Between 2-20 actions/min
- More than 20 actions/min

Duration of each action

- Less than or equal to 3 seconds
- More than 3 seconds

• FORCE EXERTED (Kg). Measured with a dynamometer

Value 1	Value 2	Value 3	Value4

VALUE CONSIDERED OF THE FORCE EXERTED (kg)

Office

(1 de 3)

Task:

Company:

Date:

Observations:

.....

.....

.....

Computer

- The top edge of the screen is above the level of the user's eyes.
- The visual distance between the screen and the eyes is <40 cm.
- The screen is not in front of the user.
- The keyboard is not in front of the user.
- The keyboard tilt is not adjustable and/or does not remain stable in the selected position.
- The horizontal distance between the front edge of the table and the keyboard is <10 cm.
- The size of the screen (measured diagonally) is <35 cm. (14") for Reading tasks, or <42 cm. (17") for tasks including graphics.
- The mouse is not designed for left-handed people to comfortably handle it.
- When using the mouse, the forearm cannot be supported on the work surface or the arm is excessively stretched.
- The worker has difficulty reading the information on the screen due to the small size of the characters, the unstable image or an improper adjustment of brightness and contrast between the screen background and the characters.
- The worker has difficulty reading documents (in paper) when working with display screens (for example, in data entry tasks), due to factors such as the character size or the contrast between the characters and the document background.

Chair

- Some accessible parts of the chair may have rough edges, protrusions or coatings which might cause injuries.
- The chair is not stable and may fall over when leaning on the edge of the seat, the back, or one of the armrests.
- The seat or back are not padded or are made of a non-breathable material.
- The seat does not rotate.
- The base of the chair does not have 5 legs on rolling casters.
- The seat height is not adjustable while seated.
- The seat back is not adjustable while seated.
- The dimensions of the back do not support the back properly.
- When the worker leans back completely on the chair back, the seat edge will press the back of the legs.
- The chair does not have armrests.
- The armrests hit the edge of the table and prevent the user from getting closer to it.

Table

- The edges and corners are not rounded or there are protrusions that can cause injuries.
- There are drawers or cross planks below the central part of the board.
- The table does not have a matte finish and is not a soft color.
- The table height is approximately the height of the user elbows when seated.
- The free space under the table is not enough to accommodate the user.
- The surface of the main board is not enough to place all the work elements and to perform the task comfortably.

Accessories

- The worker does not have a footrest (to use it, for example, when the feet are not entirely supported on the ground once the seat height has been properly adjusted with respect to the height of the table).
- There is no special support or stand to place documents in those tasks that require reading often.

Office

(3 de 3)

Environment

- Workers think that the light level is not sufficient to perform the task comfortably.
- There are no bright light sources that produce direct dazzle (ceiling lights, windows, auxiliary lamp of a nearby workstation, etc.) in the visual field of the worker.
- There are reflections that produce indirect dazzle (from the screen, keyboard, desk, other computers, floor, etc.) in the visual field worker.
- The noise level in the office is so high that it interferes with the communication or concentration of the workers.
- Workers think that the temperature in the workplace is not suitable.
- In the space that surrounds the table where the chair of the worker is the minimum free surface is $<2 \text{ m}^2$, or the distance between the frontal edge of the table and the closest obstacle behind the worker is $<115 \text{ cm}$.

Organization

- The organization of the work, the task and the furniture arrangement do not promote voluntary change of posture.
- The worker has not been informed about the risks involved in the job and the preventive measures associated with them.
- Workers do not have instructions for use of the working elements (computer, desk chair, etc.) so that they can adjust their workstation.

ErgoMater

(1 of 3)

Task:

Company:

Date:

Worker:

Worker's opinion

How would you score the physical effort in your work (related to postures, movements, applied force, handling loads, work rythm, etc.)?:

- heavy normal light

Have you noted any change in working ability from the beginning of pregnancy?:

.....

Postures and movements

- Standing for >1 hour in a row, in a static posture (without displacements)
- Standing for >4 hours/day, in a static posture or combined with displacements
- Trunk bending forward >20° or trunk bending sideways or twisting clearly visible, in a sustained manner (>1 minute in a row) or repeatedly (>2 times/min)
- Trunk bending forward >60° with a frequency of >10 times/hour
- Kneeling or squatting
- Wrist flexion, extension, lateral deviation and/or twisting clearly visible, in a sustained manner (>1 minute in a row), repeatedly (>2 times/min) and/or applying force
- Sitting for >2 hours in a row
- Sitting with legs hanging off the seat and no support for the feet
- Sitting without suitable backrest for the trunk
- Sitting without enough space under the work surface to comfortably move the legs

Manual materials handling

- Handling loads over the **ACCEPTABLE MASS**.
(record the **handling conditions** on the attached sheet)
- Pushing or pulling forces over 10 kg
- Handling loads >3 kg or applying considerable force while sitting

Environment

- Working on elevated surfaces (step ladders, platforms, step stools, etc.)
- Moving on unstable, irregular or slippery surfaces (floors with obstacles or holes, slippery areas, etc.)
- Risk of blows or compression to the abdomen (confined spaces, moving objects, constrictive belts or safety harnesses, sudden starts and stops in vehicles, etc.)

Organization

- Working >40 hours/week
- Night work, either fixed or in rotating shifts
- Paced work without self-selected breaks

Observations:

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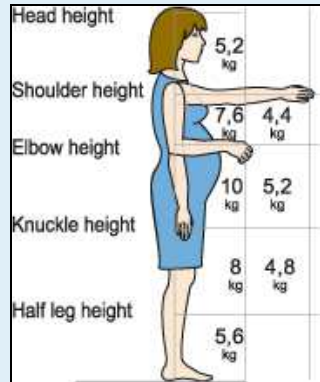
.....

ErgoMater – ACCEPTABLE MASS

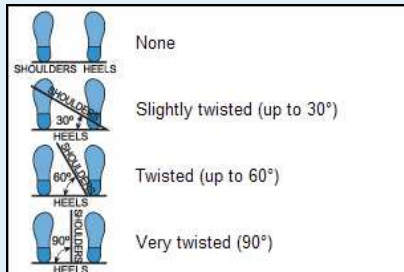
(3 of 3)

Handling conditions

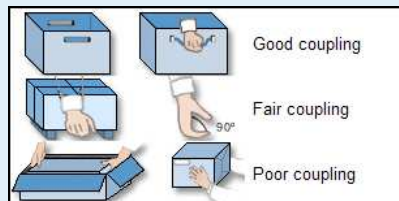
- **Handling zone** (mark on the illustration):



- **Vertical displacement:**
 - up to 25 cm
 - up to 50 cm
 - up to 100 cm
 - up to 175 cm
 - >175 cm
- **Trunk twisting** (mark on the illustration):



- **Coupling** (mark on the illustration):



- **Duration:** ≤1 hour 1-2 hours 2-8 hours
- **Frequency:** times/min