

# Example Workplace Assessment

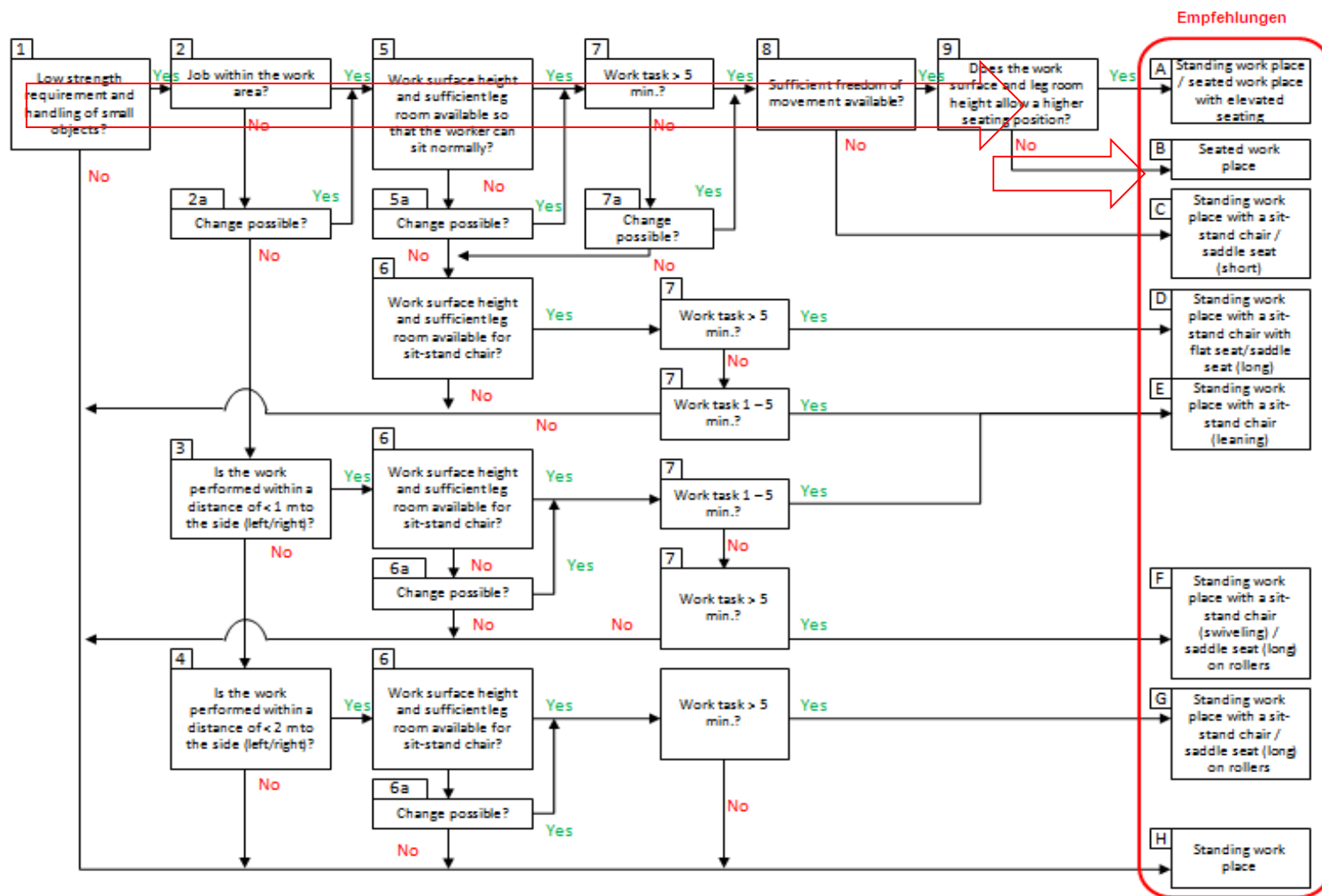
- › **Work task:** Vulcanisate processing
- › **Force requirement:** The vulcanisate is placed in the machine. This task requires low force.
- › **Work area:** The vulcanisates and is arranged as single item in the extended reaching area.
- › The work piece carrier is placed horizontally on the worktop, the work piece carrier and the structural height are not adjustable (C).
- › **Leg room:** The leg room of the workplace is concerning width and depth of restricted use.
- › **Duration of work task:** Average processing time is 30 minutes.
- › **Free movement area:** > 1,000 mm



# Example Workplace Assessment

Date of assessment:		Assessed by:		Work place:			
				Design thickness (K)/structural height (C):			
No.	Checkpoint	Wert	Ja	Nein	Wert	Ja	Nein
1	Is there a low strength requirement and handling of small objects?		X				
	Does the maximum depth of the work area (ABT) equal 415 mm?		X				
2	Does the maximum width of the work area (ABB) equal 1.167 mm?		X				
	Does the maximum height of the work area (ABH) equal 730 mm?		X				
2a	(Only answer if point above is not satisfied!) Is it possible to work in the work area by implementing simple change measures?		X				
3	(Only answer if point 2 or 2a above is not satisfied!) Is the work performed at a maximum distance of 1 m to the side (left/right)?						
4	(Only answer if point 2 above is not satisfied!) Is the work performed at a maximum distance of 2 m to the side and behind?						
	Does the minimum leg room depth (BET) equal 547 mm?						
	Does the minimum foot room depth (FBT) equal 882 mm?						
5	Does the minimum leg room height (BBH) equal 1020 mm?			X			
	Does the minimum leg room width (BBB) equal 330 mm?		X	X			
5a	(Only answer if point above is not satisfied!) Can the required leg room according to the dimensions specified previously be achieved through simple change measures?			X			
	Does the previously determined minimum leg room depth (BET) equal 285 mm?			X			
6	Does the previously determined minimum foot room depth (FBT) equal 570 mm?			X			
	Does the previously determined minimum leg room width (BBB) equal 330 mm?		X	X			
	Does the previously determined minimum leg room height (BBH) equal 1026 mm?			X			
6a	(Only answer if point above is not satisfied!) Can the required leg room according to the dimensions specified previously be achieved through simple change measures?			X			
7	Does the worker spend more than 5 min. at a time at this work place?		X	X			
	Does the worker spend more than 1 min. at a time at this work place?		X	X			
7a	(Only answer if point above is not satisfied!) Can the duration of the main activity be increased using simple organizational and/or design-related measures?			X			
8	Is freedom of movement of at least 1.000 mm available behind the work place?		X				
	Does the minimum leg room width (BBB) equal 334 mm?			X			
9	Does the minimum leg room height (BBH) equal 1.063 mm?			X			
<b>Result of the assessment:</b>		The work place satisfies all requirements for a					

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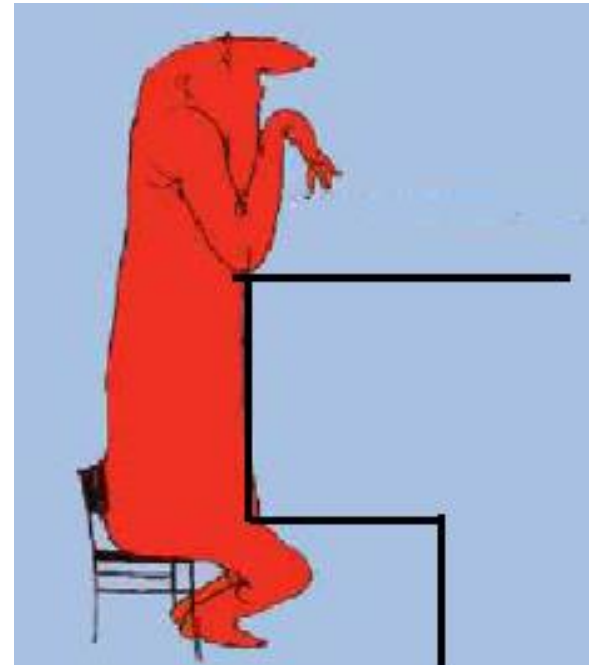
# Example Workplace Assessment

**Question: Do the existing structure (C) and design thickness (K) offer :**

**1) Sufficient thigh leg room for the tallest person?**



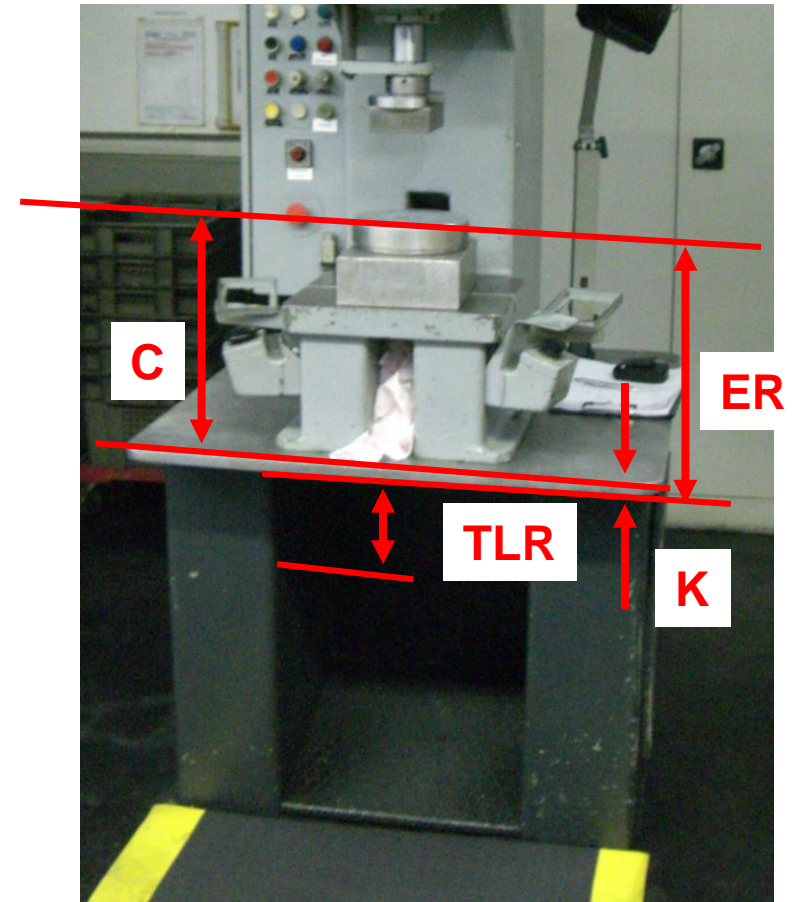
**2) Is the distance between the place of manual work (top edge C) and the smallest person's thighs small enough?**



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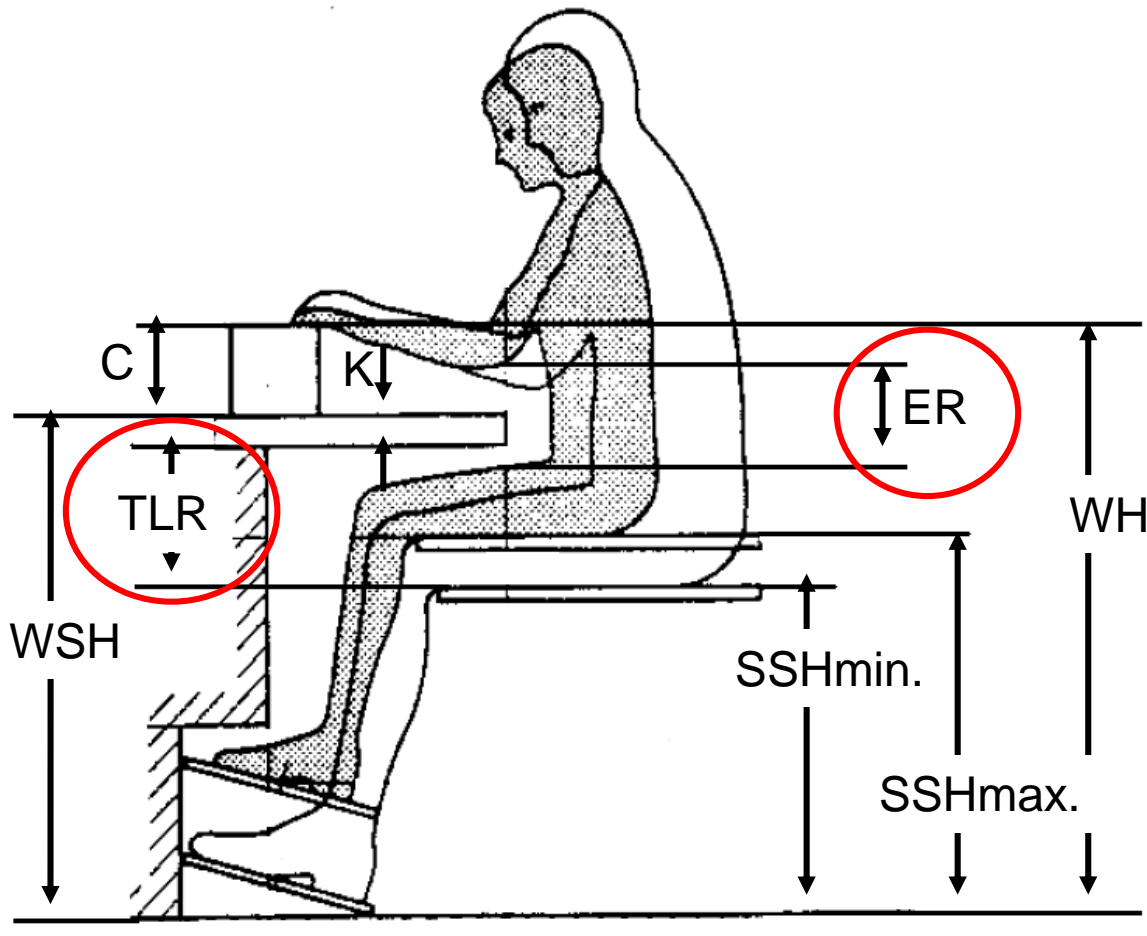
Structural height (C)

Design thickness (K)



# Example Workplace Assessment

## › Checking thigh legroom and elbow room



WH	Working height
SFHmax	Seating surface height of the smallest person <span style="color: red;">To determine!</span>
SFHmin	Seating surface height of the tallest person
ER	Elbow room
C	Structural height
K	Design thickness
WSH	Work surface height <span style="color: red;">To determine!</span>
TLR	Thigh legroom



# Example Workplace Assessment

## › Resulting from work place assessment:

Working height (WH)	= 1120 mm
Structural height(C)	= 380 mm
Work surface height (WSH)	= AH – C = 740 mm
Design thickness	= 20 mm

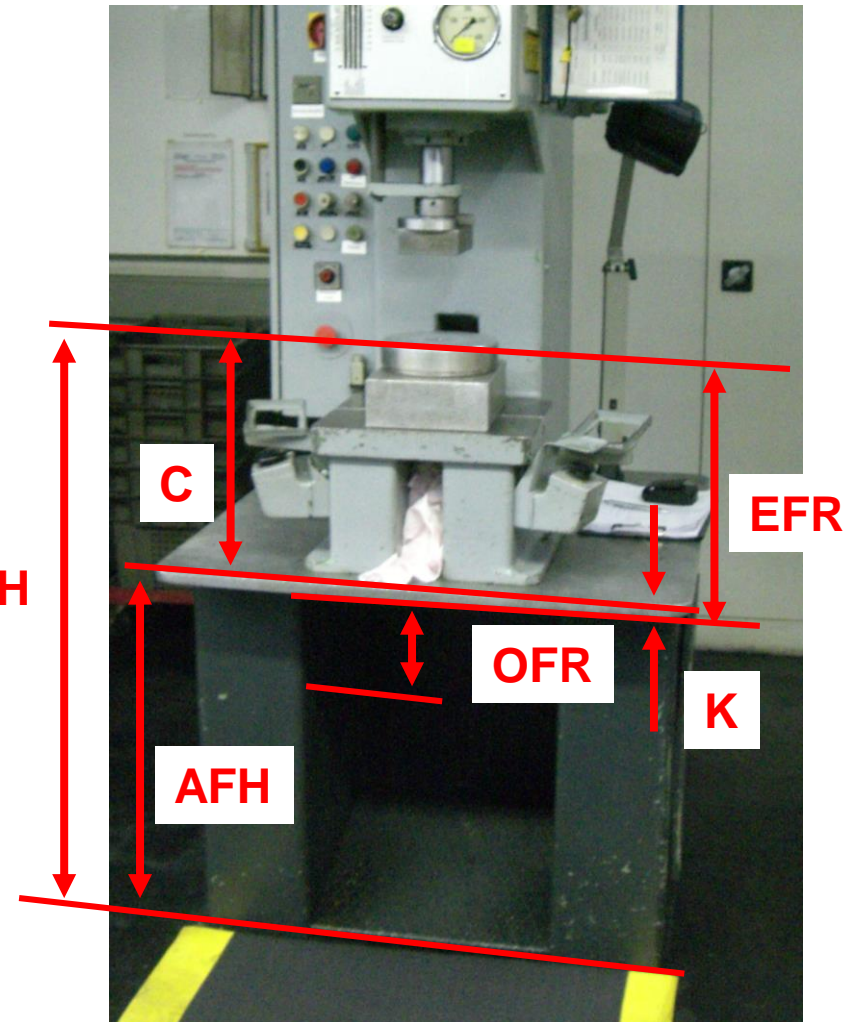
## › Resulting from recommendations for seating workplace with fixed working height

2b. seated workplace work surface height fixed

Seating surface height for the smallest person(SSHmax.)	= 625 mm
Seating surface for the tallest person (SSHmin.)	= 535 mm

## › Target dimensions:

Available thigh legroom (TLR)	= ??? mm
Available elbow room (ER)	= ??? mm



# Checking the Existing Thigh Legroom and Elbow Room

## Checking the thigh legroom:

- › Equation to calculate the available thigh legroom for standing/seated work places and seated work places

(according to [control calculation for checking the thigh leg room](#))

$$\text{OFR} = \text{Work surface height (WSH)} - \text{SSHmin.} - \text{K}$$

Dimensions from the work place assessment

Dimensions for the seating surface height given in the table for the work place type in question  
(in this case for [2b Seated workplace work surface height fixed](#))



# Checking the Existing Thigh Legroom and Elbow Room

## Checking the elbow room:

- › Equation to calculate the available elbow room for standing/seated work places and seated work places
- › (according to control calculation for checking the thigh leg room)

$$\text{EFR} = \text{Work surface height (WSH)} - \text{SSHmax} - \text{K}$$

Dimensions from the work place assessment

Dimensions for the seating surface height given in the table for the work place type in question  
(in this case 2b Seated workplace work surface height fixed)

# Checking the Existing Thigh Legroom and Elbow Room

## Checking the elbow room:

Necessary elbow room:

$$ER = \text{Work surface height (WSH)} - \text{SSHmax.} - K$$

$$ER = 740 \text{ mm} - 625 \text{ mm} - 20 \text{ mm}$$

$$ER = \underline{95 \text{ mm}} < 125 \text{ mm (thigh height P5, according table 1)}$$

Tabelle 1: Perzentile der Oberschenkelhöhen von Frauen (F) und Männer (M)

	Euro-Mensch		Deutschland				Korea			
	M/F		M		F		M		F	
	P5	P95	P5	P95	P5	P95	P5	P95	P5	P95
Oberschenkelhöhe	125	185	130	180	125	175	128	179	117	159

Source table1: [Control calculation for checking the thigh legroom and elbow room](#)

# Checking the Existing Thigh Legroom and Elbow Room

## Checking the thigh leg room:

Necessary thigh leg room :

$TLR = \text{Work surface height (WSH)} - \text{SSHmin.} - K$

$TLR = 740 \text{ mm} - 535 \text{ mm} - 20 \text{ mm}$

$TLR = 185 \text{ mm} = 185 \text{ mm}$  (thigh height P95, according table 1)

Tabelle 1: Perzentile der Oberschenkelhöhen von Frauen (F) und Männer (M)

	Euro-Mensch		Deutschland				Korea			
	M/F		M		F		M		F	
	P5	P95	P5	P95	P5	P95	P5	P95	P5	P95
Oberschenkelhöhe	125	185	130	180	125	175	128	179	117	159

Source table 1: [Control calculation for checking the thigh leg room and elbow room](#)

# Example Work Place Assessment

## Result of the calculation:

- › Thigh height of the tallest person equals the existing thigh leg room  
→ OK!
- › The required room for sufficient free moving space of the elbows (relating to the smallest person ) is below target  
→ Not Ok!

# Example Work Place Assessment

## Modification measures:

→ Reduce structural height (C) by 30 mm!

## Are no modification measures possible :

→ Standing work place

