

## **Alone workstations**

#### Definition

By one-to-one work is generally understood to mean activities performed by one person alone, without the presence of another person. For the purposes of the evaluation, a distinction must be made between two types of lone work:

- Lone work, working in remote workplaces where only minor dangers occur (eg. office work)
- Working alone at workplaces with increased risk of accidents, i. at workplaces, where only with regard to the specific danger is it possible to provide temporary assistance during work assignments or at the end of the shift.

#### Ground rules, legal bases

At remote workplaces and workplaces with an increased risk of accidents, employees may only be employed on their own if effective supervision - in the sense of ensuring timely assistance in the event of injury or occurrence of damage - is ensured (Section 61 (6) ASchG).

Thus, solitary work is only permitted if timely assistance through appropriate organizational and / or technical security measures is guaranteed or a delayed assistance without consequential damage is possible. Solely working and securing persons must be sufficiently informed and instructed.

#### Evaluation of solo work

When evaluating solo work, the two fundamental factors of "seriousness of possible harm" and "presence" (of other persons) must be taken into account.

When estimating the "severity of potential damage" factor, predictable damage or predictable injury must be assessed. A rough subdivision into this can look like this:

- There is little danger, comparable to that in office work
- There is an increased risk that workplaces with an increased risk of accidents can be provided with a time-delayed delayed assistance.

There is a high risk, an immediate assistance is required in any case, i. Specifically, the maximum time to help is only a few minutes. Lone work is not allowed in this case.

When estimating the factor "presence" (from other persons), an assessment can be made as follows:

ß At least one other person is in sight and in the distance. There is no single employment.



At least one other person is in sight and distance at certain intervals. Interval inspection in these cases can be considered to be an effective safeguard for Isolated workplaces if the maximum period of time from the accident to the time of the assistance is complied with by the length of absence.

 At least one other person rarely or temporarily stays in the mobility area, i. E. within about 5 minutes or about 300 meters away. At low risk there is no remote workplace and therefore no one-to-one work.

#### **Risk assessment:**

In the context of the risk assessment it is necessary to assess the lone work with regard to the mentioned risk. The assessment is based on the likelihood of bodily abuse (the probability of an emergency) and the possible severity of the health impairments (hazard levels) and the time it takes for relief to begin.

#### Probability of an emergency:

On a scale of 1 - 10, the probability of an emergency is assessed. This rating is called the Emergency Probability (NW). The following table gives an orientation for the evaluation of typical areas and is not exhaustive. Depending on the operational situation, other assessments of the probability of an emergency may result.

#### Initiation of relief

For a final assessment of the risk in hazardous individual workplaces, the time between the triggering of the personal alarm and the beginning of assistance measures at the place of action must be taken into account.

### Table: Assessment of the time until the start of relief work at the individual workstation.

Time	Rating number EV
Less than 5 minutes	0
5 minutes to 10 minutes	1
10 minutes to 15 minutes	2



In order to be able to comply with the times given in the table in the event of an alarm, organizational measures must be provided until the beginning of relief measures (eg first aid). If the time until the start of relief measures is more than 15 minutes, the effectiveness of the rescue chain is not guaranteed. Therefore, personal emergency signal systems make no sense in this case.

#### **Risk assessment**

Already by the classification into the danger levels and in the probability of occurrence the following consequences result:

Hazard level "low":

In the case of a low hazard, monitoring of individual workplaces is basically not required.

• Likelihood of an accident "high" and a critical threat: in this case, lone work is not allowed.

In all other cases, an individual analysis is necessary, which can be specified with the following formula:

**Risk assessment** 

$$R = (GZ + EZ) \times NW$$

R risk

- GZ hazard figure
- EV score for time to commence relief
- NW score for emergency probability

The value range can thus be between  $R = (1 + 0) \times 1 = 1$  and the maximum value

 $R = (10 + 2) \times 10 = 120$ . The risk assessment is used to decide if the existing risk

- is acceptable; then there is security or
- is not acceptable, then there is a danger.

For an acceptable risk, R must not exceed 30. If this value is exceeded, there is an unacceptable risk or hazard and there are additional technical, structural and organizational measures, such as:

- use of personal signal systems or other alerting devices,
- Monitor monitoring
- Visibility in rooms and corridors
- Login or logout procedures
- Second person inspections, timed telemonitoring / radiomonitoring system) to minimize risk.

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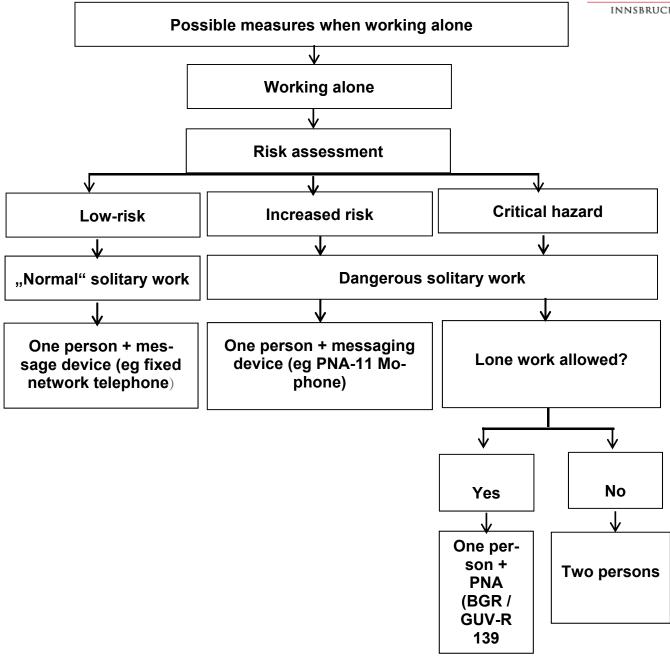
#### If measures for risk minimization are not possible and if R > 30, sole employment is not permitted!

	Probability of an emergency	Rating NW	
Low	In principle, no emergencies are to be ex-		
	pected; under similar working conditions, an	1 - 3	
	emergency has hardly ever occurred or is		
	conceivable.		
Elevated	Experience shows that emergencies are pos-		
	sible. Emergencies have occasionally oc-	4 - 6	
	curred under similar working conditions		
Critical	It is also expected under normal circum-		
	stances with emergency. Emergencies have	7 - 10	
	repeatedly occurred under similar working		
	conditions.		

#### Possible measures when working alone

The type of measure depends on the specified hazard level. If the assessment shows a low hazard, monitoring is basically not necessary. It suffices a message device eg. a telephone. If the assignment results in an increased risk, a message device-for example a mobile telephone or a personal emergency signal system (PNA) -can be considered. In the case of a critical danger, for example, a PNA or the presence of a second person is required.





# When selecting and using reporting equipment, the following criteria must be observed in particular:

- Suitability of the reporting device for the intended purpose,
- Intended use according to the specifications of the manufacturer,
- Creation of an operating instruction (with instructions for malfunctioning of the reporting device),
- First and recurring instruction of the insured according to the operating instructions,
- Regular testing of the reporting equipment.

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## Attachment:

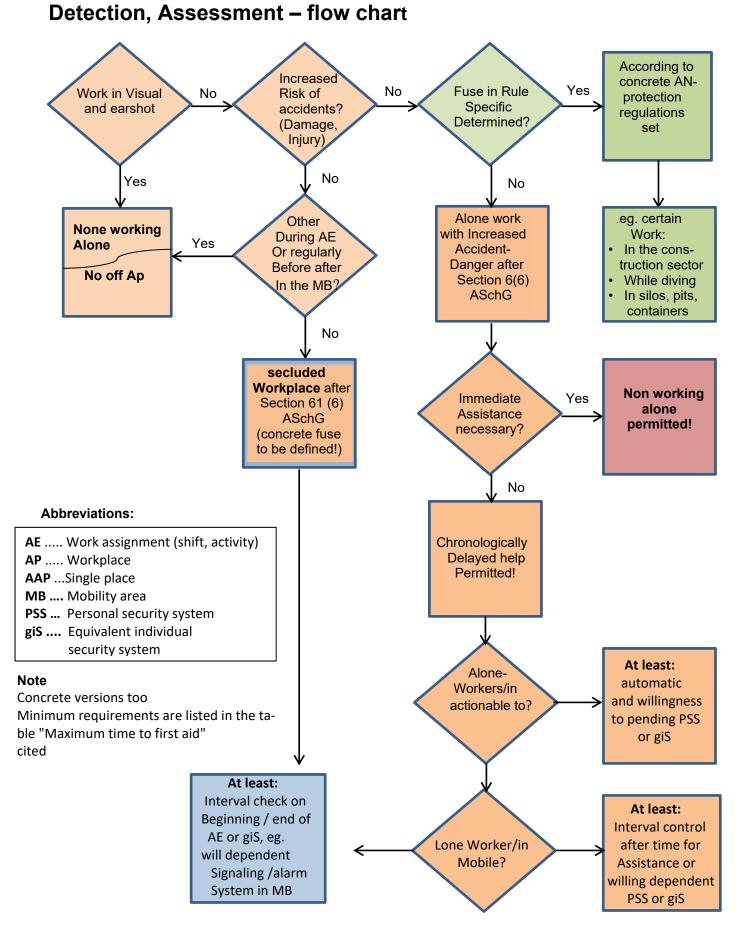
Maximum time to first aid	Condition of accident victim	Minimum backup measures
<ul> <li>Zero to a few minutes danger of suffocation / breathing due to body position) after loss of conscious- ness, eg due to the effect of chemical substances on the body or impact on the head with subsequent brain injury or brain injury.</li> <li>Danger of suffocation due to pressure on the chest.</li> <li>Circulatory arrest, unconsciousness, lack of breathing due to electrification (so- called ventilation and external heart mas- sage necessary).</li> <li>Danger of suffocation due to lack of ox- ygen, eg due to gas spreading</li> <li>By gas diffusion.</li> <li>Arterial bleeding from large impact veins, such as cuts to the upper arm, thighs or neck.</li> </ul>	Person is neither mobile nor able to act Person is neither mobile nor able to act Person is neither mobile nor able to act Person is not or only for a very short time mobile and able to act. Person only very short time mobile and able to act	No lone work allowed. Even personal security systems take too long for assistance.
<ul> <li>Until about ¼ hour</li> <li>Internal bleeding due to abdominal or thoracic injuries caused by a blunt object (spleen / liver tear), eg due to tipping over an object.</li> <li>Until about ½ hour</li> <li>Pelvic fracture, fracture of the spine eg. because of a fall</li> </ul>	Person is no longer mobile, possibly still limited ability to act. Person is no longer mobile, possibly still limited ability to act.	At least one Voluntary PSS or equiva- lent individual backup sys- tem required. The person to be alarmed has to stay close enough to the single workplace, otherwise no solo work is allowed.

## Maximum time to first aid



Maximum time to first aid	Condition of acci- dent victim	Minimum backup measures
<ul> <li>Until about 1 hour</li> <li>Thigh fracture, eg due to mechanical impact</li> </ul>	Person is no longer mo- bile, but still able to act.	At least interval checks every half hour or a PSS or equivalent individual backup system for help
Until about 2 hours <ul> <li>Serious finger or hand injury</li> </ul>	Person remains mobile and able to	At least interval checks every ½ hour or on a fore- seeable injury tuned will- sensitive reporting or alarm system in the mobil- ity of the person working alone.
<ul> <li>Until about 4 hours</li> <li>Open lower leg fracture or open arm fracture, eg due to falling on a staircase or carrying objects or loads.</li> <li>Until about 6 hours</li> </ul>	Person remains able to act, but with a leg injury only limited mobile Person remains able to	Minimum interval control every 2 hours or PSS or equivalent individual backup system required.
<ul> <li>Closed lower leg or arm fracture, fractures of the wrist or ankle, joint dislocation fractured ribs, head scar injuries, eg due to falling on level ground due to stumbling or slippery ground.</li> </ul>	act, but with a leg injury only limited mobile	
<ul> <li>Until about 8 hours</li> <li>sprains, bruises on the extremities, bruises,eg. due to misstep or due to move ment of mechanical parts with energies.</li> </ul>	Person remains mobile and able to act. It is assumed that mobility	At least interval controls at the beginning and at the end of the work or the shift (8 h) or especially in case of psychiatric stress (anxiety) require a volun-
<ul> <li>Abandoned workplaces         <ul> <li>(no accident risk),sudden illness             mental stress.</li> </ul> </li> </ul>	and ability to act will be maintained.	tary reporting or alarm system in the mobility area of the sole working person or equivalent indi- vidual safety system





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