

Rector's Directive No. 5/2016 for Ensuring Health and Safety at Work in Workplaces with Risk of Falling from Height or into Depth at the Silesian University in Opava

Article 1

Introductory provisions

- 1.1 This Directive applies to employees who, in the course of their work, may be present in workplaces where there is a risk of falling from height or into depth, in accordance with Government Regulation No. 362/2005 Coll., On Detailed Requirements for Health and Safety at Work in Workplaces with Risk of Falling from Height or into Depth.
- 1.2 Employees who are in an employment or other similar relationship with the University are required to comply with this Directive. This includes employees of technical and operational departments.
- 1.3 Natural persons working in the buildings, workplaces or facilities of the University are also obliged to comply with this Directive to the extent that they have been demonstrably made familiar with the Directive.

Article 2

Ensuring safe operation

2.1 Obligations of the employer

- 2.1.1 The employer must take technical and organisational measures to prevent employees from falling from height or into depth or slipping, and must ensure that they are safely caught in the event of a fall. Senior staff are responsible for ensuring safe working conditions within the scope of their functions.
- 2.1.2 If the height is more than 1.50 m above the surrounding level or if there is a free depth below exceeding 1.50 m, it is the employer's duty to secure the employee against falling above the specified height.
- 2.1.3 Protection against falls must preferably be provided by means of collective protection measures, which are in particular technical structures such as guardrails and fencing, hatches, scaffolding, fencing or nets and temporary structures such as scaffolding or working platforms. Where this cannot be done, employees must be provided with personal fall protection equipment, taking into account the nature of the work envisaged in terms of its duration or the safety of the employee.

- 2.1.4 Fall protection is not necessary for work on continuous surfaces with a slope of less than 10 degrees from the horizontal, provided that suitable fall protection is provided, e.g. a guardrail is placed at a distance of at least 1.50 m from the edge where there is a risk of falling, or along the free edges of openings whose plan dimensions do not exceed 0.25 m in at least one direction, or if the ground or floor level of the workplace inside the building is at least 0.60 m below the crown of the wall to be built. There need be no fall protection if the opening in the walls is more than 1.10 m above the floor and the openings in the walls are not more than 0.30 m wide and not less than 0.75 m high.
- 2.1.5 Openings in the floor and ground depressions whose plan dimensions exceed 0.25 m in all directions must be covered immediately after their creation by hatches of adequate loadbearing capacity secured against displacement, or the free edges of the openings must be secured by a technical means of fall protection, such as railings or fencing.
- 2.1.6 The employer, unless the danger of breaking through is guaranteed on all surfaces, must secure persons against falling through.
- 2.1.7 When working at heights and above free depth alone or independently, the employee shall be made aware of the rules for communication by the employee's supervisor. This applies to communication between other employees in the workplace or for communication with the supervisor. In this case, for example, the employees (both parties) must be provided with a mobile phone. Furthermore, the employee must be instructed on the obligations to stop work if they cannot continue in a safe manner and must inform the supervisor or the employer of the interruption.
- 2.1.8 Appropriate personal fall protection equipment shall be assigned to employees by the appropriate manager.

2.2 Determination of conditions for the use of ladders - safety requirements

- 2.2.1 Only short-term, physically undemanding work may be carried out on the ladder using hand tools. Work involving the use of dangerous tools or implements such as portable chainsaws, hand-held pneumatic tools must not be carried out on the ladder.
- 2.2.2 When ascending, descending and working on ladders, the employee must face the ladder and at all times have a secure grip and reliable support.
- 2.2.3 Only loads weighing up to 15.0 kg may be carried up or down the ladder.
- 2.2.4 Ladders used for ascent or descent shall extend at least 1,10 m beyond the top end of the exit platform, which may be replaced by fixed handrails or other fixed part of the structure by which the ascending employee can securely hold on.
- 2.2.5 The slope of the ladder must not be less than 2,5 : 1, there must be a clear space of at least 0,18 m behind the rungs and a clear space of at least 0,6 m at the foot of the ladder on the access side.

Table for ladder inclination					
V - length of ladder in metres	S - min. distance of the lower end - heel from the vertical from the upper support point in metres				
2,0	0,80				



3,0	1,20
4,0	1,60
5,0	2,00

- 2.2.6 The ladder must always be positioned in such a way as to ensure its stability throughout its use, i.e. on a stable, solid, sufficiently large, immovable base so that the rungs are horizontal.
- 2.2.7 Portable ladders must be prevented from slipping.
- 2.2.8 Portable wooden ladders with a length greater than 12.0 m may not be used.
- 2.2.9 When working on a ladder, where the height of the feet is 5.0 m above the level of the surrounding terrain, the employee must be secured against falling by personal protective equipment, i.e. the employee is equipped with a safety harness with a shock-absorbing rope and is anchored to a predetermined location (determined by the person responsible for work at heights) that safely ensures stability.
- 2.2.10 Walking on a wooden double ladder (painting work) may be carried out by trained employees if they move on a surface where the risk of losing the stability of the ladder is eliminated.
- 2.2.11 The employer shall ensure that ladders are inspected and checked at least once every 12 months, unless the manufacturer's instructions specify a shorter period.

2.3 Securing objects and materials against falling

- 2.3.1 For storing small materials, e.g. nails, screws, the employee must be equipped with suitable gear or have adapted work clothing for this purpose.
- 2.3.2 Tools and work equipment, if stored at height, must be secured at all times against falling, slipping or dropping, both during and after work.
- 2.3.3 The area over which work is being carried out and the nature of the work poses a risk of persons or objects falling must always be safely secured in all directions:
 - a) by excluding traffic
 - b) fencing off the area at risk with a double-pole railing or an outstretched rope, construction of fall protection for persons and objects at or below the level of the workplace at height
 - c) supervision of the endangered premises by a designated employee at all times during the danger
- 2.3.4 The endangered area must be at least of this width from the free edge of the workplace:
 - a) 1.5 m when working at heights between 3,0 m and 10,0 m
 - b) 2.0 m when working at heights above 10.0 m up to 20.0 m
 - c) 2.5 m when working at heights above 20,0 m up to 30,0 m
 - d) 1/10 of the height of the object when working at a height above 30.0 m
- 2.3.5 The width of the endangered area shall be measured from the base of the vertical line passing through the outer edge of the free edge of the workplace at height.
- 2.3.6. When working on surfaces with an inclination of more than 25 degrees from the

horizontal, the width of the endangered area according to Article 2, paragraph 2.3.4 shall be increased by 0.5 m.

2.4 Interruption of work at heights

- 2.4.1 In the event of an adverse weather situation (e.g. working from a ladder in an outdoor environment, scaffolding, on roofs, etc.), the senior employee responsible for carrying out work at heights and the employee carrying out the work shall be obliged to interrupt the work, whereby an adverse weather situation where there is a risk of falling or slipping when working at heights is considered to be:
 - a) storm, rain, snow or ice formation
 - b) fresh winds above 8.0 m/sec, e.g. for mobile scaffolding or ladders above 5.0 m in height
 - c) visibility at the work site of less than 30.0 m
 - d) the temperature during the execution of the work is below -10° C

2.5 Staff training

- 2.5.1 The employer, or the employer's designated senior staff (e.g. the person responsible for work at heights), shall provide sufficient health and safety training to employees for work at heights and above free depth.
- 2.5.2 In addition, training must be given on the use of individual personal protective equipment for work at height (if used). Their determination in terms of risks is set out in the organisational directive on the provision of personal protective equipment.
- 2.5.3 The manufacturer's instructions for ladders and for the use of personal protective equipment are an integral part of the training. Examples of pictograms on ladders are shown in Appendix 2 of this Directive.

Training curriculum for employees performing work at heights or above free depth

Act No. 262/2006 Coll., the Labour Code, as amended, part OHS

- Government Regulation No 101/2005 Coll., On More Detailed Requirements for Workplaces and the Working Environment
- Government Regulation No 378/2001 Coll., laying down more detailed requirements for the safe operation and use of machinery, technical equipment, instruments and tools
- Government Regulation No. 362/2005 Coll., more detailed requirements for health and safety at work in workplaces with a risk of falling from height or into depth
- Government Regulation No. 591/2006 Coll., On Detailed Minimum Requirements for Health and Safety at Work on Construction Sites, as amended

Manufacturer's instructions for ladders in use,

Manufacturer's instructions for fall protection PPE,

This organizational Directive.

Article 3

Duties of employees

- 3.1 Employees are required to:
 - 3.1.1 Comply with safe workplace practices in relation to established work procedures for working at heights and compliance with relevant safety regulations for the area.
 - 3.1.2 Discontinue work at heights when the values specified in Article 2, paragraph 2.4.1 of this Directive are met or exceeded and immediately inform the person responsible for work at heights of this fact.
 - 3.1.3 Inspect personal protective equipment before use to ensure that it is in working order and in a safe condition. When ascending, descending and working on ladders, the employee must face the ladder and at all times have a secure grip and reliable support.
 - 3.1.4 Before using the ladder, check its stability to ensure that it is placed on a stable, solid and sufficiently large non-moving base so that the rungs are always horizontal.
 - 3.1.5 For portable ladders, check the anti-slip barriers against slipping, for double ladders, check the strength of the chain, straps or fittings installed to prevent unwanted opening.
 - 3.1.6 Workers must only work on a ladder at a safe distance from its upper end a safe foot clearance of at least 0.8 m for a support ladder and at least 0.5 m from the upper end for a double ladder.
 - 3.1.7 When working on ladders where the employee stands with their feet at a height of more than 5.0 m, personal protective equipment must be worn to prevent falls; this personal protective equipment is provided by the person responsible for work at heights the employee's supervisor.
 - 3.1.8 Mark out and secure the endangered area below and around the work at height in accordance with Article 2, paragraphs 2.3.3 and 2.3.4 of this Directive
 - 3.1.9 Before starting work at heights or above free depth, the employee carrying out the work must check the condition and functionality of the personal protective equipment to be used for work at heights or above free depth
 - 3.1.10 Before using the ladder, the employee carrying out the work must visually check its strength, completeness of the equipment and its integrity in terms of safe use.

Article 4 Duties of senior staff

- 4.1 Responsibility for compliance with this directive and continuous monitoring, including the development of a technological or work procedure for individual work at heights or above free depth, is delegated to the person responsible for carrying out work at heights and above free depth the relevant senior employee who orders the work.
- 4.2 If collective fall protection cannot be used, the relevant manager must secure the employee using personal fall protection and assign the employee fall protection PPE. Personal protective equipment, which is personal protective equipment against falls, shall be used where the nature of the work precludes the use of collective protection equipment or where the use of collective protection equipment is not practical or sufficient for the safety of the employee, having regard to the nature, expected extent and duration of the work and the number of employees concerned.

- 4.3 The employer shall ensure that the personal protective equipment chosen is appropriate to the nature of the work to be carried out, the anticipated risks and the weather conditions, that it allows safe movement and that it is regularly inspected and tested in accordance with the requirements of the accompanying documentation; only personal protective equipment that meets the requirements laid down in specific legislation may be used. This shall be the responsibility of the relevant senior member of staff.
- 4.4 The relevant senior employee is required to draw up a technological procedure in which they also determine the appropriate personal protective equipment against falls, including anchoring points. The anchoring point for the personal fall protection equipment must be sufficiently robust in the direction of the fall. In the case of work which does not require the development of a technological procedure, the employee's supervisor shall determine the appropriate method of fall protection or work positioning, including anchoring points.

Article 5 Prohibited activities

5.1 Employees are prohibited from:

- 5.1.1 Entering surfaces that are not protected against breaking through (e.g. roofs, old cesspools, etc.)
- 5.1.2 Carrying out work at height in adverse weather situations or where the safety and health of the employee may be endangered
- 5.1.3 Performing work at heights and above free depth alone or independently unless the employee is familiar with the rules for communicating with the person responsible for work at heights
- 5.1.4 Carrying out work on a ladder using dangerous tools or implements, such as portable chainsaws or hand-held pneumatic tools
- 5.1.5 Climbing up or down a ladder if another person is working on it
- 5.1.6 Using a ladder as a transition bridge unless such use is intended by the manufacturer
- 5.1.7 Using portable wooden ladders with a length greater than 12.0 m
- 5.1.8 Working on ladders where feet stand at a height greater than 5.0 m without being secured against falling by personal protective equipment
- 5.1.9 Using loose or pocketed small materials such as nails, screws or hand tools such as wrenches, screwdriver, hammer
- 5.1.10 Overloading the ladder with more weight than specified in the manufacturer's accompanying documentation
- 5.1.11 Dropping objects or material unless a safe area is provided to prevent entry of unauthorized persons and to prevent excessive dust, noise or other undesirable effects.
- 5.1.12 It is forbidden to drop objects and material where it is not safe to predict the point of impact, or to drop objects and material that could pull the employee from a height.
- 5.1.13 Lifting or carrying loads weighing more than 15.0 kg on a ladder.
- 5.1.14 Performing interventions in the ladder structure.
- 5.1.15 Unstable objects and objects intended for other uses (buckets, barrels, chairs, tables, etc.) may not be used to raise the workplace or to exit.

Article 6 Dropping objects

- 6.1 Dropping objects and materials on lower areas is permitted:
 - a) into the open space
 - b) using closed drops
- 6.2 Employees carrying out the dropping of objects are prohibited from:
 - a) dropping objects and materials when it is not safe to predict the place of their impact
 - b) dropping objects and materials that could pull employees from a height
 - c) dropping materials and objects into an area where other persons may be present
 - d) dropping objects and material using damaged drops
 - e) continuing working if the drop is blocked (clogged).
- 6.3 Employees carrying out the dropping of items are required to:
 - a) secure the impact site against the entry of other persons before starting the drop
 - b) secure the place of impact of objects and materials against possible bouncing or splashing of the dropped object or material
 - c) check that the drop is securely fastened at the point of loading materials or objects into the drop
 - d) interrupt work if the drop is blocked

Article 7

Risk assessment

7.1 Working at heights is one of the riskiest jobs. The consequences of falls from height are almost always permanent, sometimes resulting in death.

The risk factors are mainly:

- a) technical constructions
- b) use of ladders
- c) securing against falling objects
- d) securing under the workplace
- e) PPE
- 7.2 The risk assessment according to the ROVS Rožnovský vzdělávací servis s.r.o. PC risk programme, which enables compliance with the requirements of Section 102 of the Labour Code, is presented in Appendix 3 to this Directive. The risk is evaluated as "Moderate risk", which is eliminated by using appropriate PPE, training of relevant employees and other measures, see Appendix 3.

Article 8

Conclusion

- 8.1 Taking into account the specific conditions of individual departments of the University, implementing instructions may be issued by the Deans, Directors or Heads of units of the University to implement this Directive.
- 8.2 Compliance with this Directive shall be monitored by the Vice-Rectors in the assigned area of activity, the Deans of Faculties, the Bursar and the Occupational Health and Safety Officer, who shall be responsible for ensuring that all employees performing work at heights and on ladders are familiar with this Directive and that all such employees strictly comply with its provisions.

In Opava

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Appendix	- 1
Appendix	1

Area Activities Hazard ic		Hazard identification		se		n ty of	Possible Precautions	Note
			Р	٢	ЧН	R		
Risks - OBSERVED OBJECTS AND PARTS OF OBJECTS / Ladders / Portable ladders	Single and double ladders	* fall of a person from a ladder	3		3 1	9	 * use ladders only for short-term, physically undemanding work using simple tools; * maintain ladders in proper technical condition; * remove damaged ladders from the workplace; * when using ladders, observe the following prohibitions: using damaged ladders, working above each other and ascending and descending ladders more than one person at the same time, leaning dangerously and excessively (i.e. skewing the centre of gravity of the body) outside the axis of the ladder carrying up and down loads weighing more than 15.0 kg, working on a single ladder with feet within 0.8 m of the end and on a double ladder within 0.5 m of the end, climbing a ladder with damaged, unsuitable or dirty footwear, long laces, etc. * observe the prohibition of unsafe sideways leaning from the ladder and of working too close to the upper end of the ladder, when the stability of the ladder is reduced; * to ensure stability, secure the ladder against displacement, lateral deflection, twisting and opening; * support the upper end securely against the upper guardrail, or secure the ladder to a stable structure * ensure that the ladder at a slope up to 2.5 : 1; * when working on a ladder, when the worker's feet are at a height greater than 5 m, use personal fall protection; * before each use of the ladder, carry out visual inspections of the ladder (carried out by the worker using the ladder); * regular inspections, not overloading the ladder; * keep ladders; 	
	double ladders	 * fall of a person from a ladder when ascending or descending; * fall of a worker from a ladder due to excessive deflection from the ladder, when the ladder is placed on uneven ground and support; overloading and uneven loading of the ladder; 				2	 reep radiets in proper technical condition, remove damaged ladders from the workplace; when using ladders, observe the following prohibitions: using damaged ladders, working above one another and ascending and descending ladders for more than one person at the same time, leaning dangerously and excessively (i.e. leaning 	

Single and double ladders	* greater demands on ensuring the stability of lightweight aluminium ladders (greater demands for safe use than wooden ladders); * overturning of the ladder by another person, being run over by a passing vehicle, etc;	4	3	1	6	opening; * support the upper end securely against the upper guardrail, or, if necessary, against the ladder's top. * ensure that the ladder is long enough so that the ladder used for ascent extends beyond the exit level (floor, platform) by 1.1 m (fixed handrails may replace the overhang) of the part of the structure by which it can be securely grasped; * erect a single ladder at a slope of up to 2.5 : 1; * when working on a ladder where the worker's feet are at a height greater than 5.0 m, use personal fall protection; * before each use of the ladder, carry out visual inspections of the ladder (carried out by the worker using the ladder); * use ladders, not overloading the ladder, proper storage of wooden ladders; * use ladders only for short-term, physically undemanding work using simple tools; * maintain ladders in proper technical condition; * when using ladders, observe the following prohibitions: - using damaged ladders, - working above each other and ascending and descending ladders more than one person at the same time, - leaning dangerously and excessively (i.e. skewing the centre of gravity of the body) outside the axis of the ladder - carrying up and down loads weighing more than 15.0 kg. - climbing a ladder with damaged, unsuitable or dirty footwear, long laces, etc. * to ensure stability, secure the metal ladder reliably against displacement, lateral deflection, twisting and opening according to the manufacturer's instructions (instructions for use, symbols marked on the ladder' side rails); * to securely support the upper end against the lapper side rails, or, if necessary, against the ladder 's side rails. Or, if necessary,
Single and double ladders	 cracking, breaking of wooden ladder rungs with subsequent fall of the worker; 	3	3	1	9	 * maintain ladders in proper technical condition; * remove damaged ladders from the workplace; * do not use damaged ladders; * do not work above one another and do not ascend or descend the ladder more than one person at the same time; * do not carry up or down loads weighing more than 15.0 kg; * carry out visual inspections of the ladder before

					each use of the ladder (carried out by the worker using the ladder); * regular inspections, not overloading the ladder, proper storage of wooden ladders;	
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Appendix 2



Annex 3

Risk assessment according to the requirements of Section 102 of the Labour Code

The risk assessment is carried out for typical work at heights that occurs at the university - cleaning gutters (gutters, downspouts) from ladders. This work is carried out on a minimal scale both in time and quantity. All risks, even in the case of other activities of a working at heights nature, will be evaluated in the technological procedure of each activity.

Analysis for risk assessment

According to the simple scoring method, the assessed risk is marked by taking into account the probability of occurrence and consequences, the degree of severity, the number of persons at risk, the time of exposure to the risk, and possibly other influences potentiating the risk; it is a simpler subjective method. The estimate of the probability with which the hazard under consideration may actually occur is determined according to a scale of probability estimation in ascending order from 1 to 5, where the degree, level and criteria of each hazard are included in a simplified way. The following specification is used to assess and evaluate the sources of the risks, which is recorded in the columns "RISK ASSESSMENT"

P) Probability of occurrence and existence of risk

1.	random

- 2. unlikely
- 3. probable
- 4. very likely
- 5. permanent

N) Probability of consequences - severity

- 1. injuries without incapacity for work
- 2. absenteeism (with incapacity for work)
- 3. serious injury requiring hospitalisation
- 4. serious and permanent injury
- 5. fatal accident

H) Opinion of the evaluators

- 1. negligible influence on the level of danger and threat
- 2. little influence on the level of danger and threat
- 3. a greater, not insignificant influence on the level of danger and threat
- 4. a large and significant influence on the level of danger and threat
- 5. multiple significant and adverse influences on the severity and consequences of threats and hazards

R) Risk level

- 1. 0 3: No significant risk
- 2. 4 10: Acceptable risk
- 3. 11 40: Moderate risk
- 4. 41 90: Adverse risk
- 5. 91 125: Unacceptable risk

Safety measures to reduce risk

In the spreadsheet in the Appendix to this Directive, standard risk reduction measures are set out to make the risk acceptable, mostly organisational measures. They are not listed as 'familiarisation' or 'training' measures, as these educational measures are taken for granted. It is the duty of the senior workers of the responsible employees to ensure and check these measures, which are mostly based on safety regulations and operating instructions. The employer must ensure, within the framework of the internal OHS management system, that the OHS officer ensures that the established and existing measures are implemented, which is particularly important when assessing the likelihood of a risk occurring or the possible consequences of a hazard expressed as a risk level of 41 or higher. The following principles apply when prioritising procedures and measures to reduce and manage risks:

- a) the order of effectiveness of the anti-injury measures:
- elimination of the source of risk
- minimising the source of risk of injury
- complete separation of the source of the risk of injury
- partial cover for the source of the risk of accident
- moving the person away from the source of the risk of injury, hazardous area
- reducing the likelihood of exposure to a source of risk of injury
- highlighting the source of the risk (safety messages, etc.)
- worker protection
- selection, education and training of the worker (medical and professional competence - qualification, training, verification of knowledge)
- legislation (prohibitions and orders)
- b) where possible, the hazard should be eliminated altogether or the source of the risk suppressed (e.g. by using safer substances and technologies);
- c) where possible, work should be adapted to the worker (e.g. individual mental and physical abilities should be taken into account);
- d) monitor and exploit developments in technology and technical progress to reduce risk;
- e) so called collective safety measures, which protect several workers at the same time, must be preferred;
- f) as a rule, technical, organisational, educational and other measures must be combined in an appropriate way;
- g) the introduction and application of planned preventive maintenance of machinery, including safety equipment;
- h) consider emergency measures in the event of adverse weather conditions at unprotected workplaces;
- i) improve the occupational safety management system:
- j) ensure implementation of preventive measures to reduce risks, including reviewing risk assessments if hazard and risk conditions change;
- k) where risks cannot be completely eliminated, they should at least be minimised and the residual risk checked.

Should atypical and unforeseen situations arise at the workplace or should more serious problems with risk assessment arise, or should risks and hazardous situations be difficult to manage, these problems must be addressed in cooperation with the university management or external experts.

Main risks sought

Falling from a ladder during various activities.

Analysis of the risks found

Risk se	Risk severity assessment						
]	P	Ν	Н	The product			
2	2	4	3	24			

Measures

- before using the ladders, the person using the ladder should visually inspect the ladder for damage, missing rungs or stiffening elements, broken (cracked or otherwise damaged), or damaged plugs and sockets,
- the ladder may only be used for short-term, physically undemanding work using simple tools; when ascending, descending and working on the ladder, the worker must face the ladder and be able to hold onto it with both hands,
- Loads weighing more than 15.0 kg may not be carried up or down the ladder, it is forbidden to work on ladders above one another, it is forbidden for more than one worker to ascend and descend the ladder at the same time,
- work involving the use of pneumatic tools, injection devices, chainsaws and other similar dangerous tools shall not be carried out on ladders,
- the maximum permissible length of portable wooden ladders is 8.0 m,
- ladders used for climbing must extend 1,1 m beyond the climbing platform, the overhang of the ladder may be replaced by fixed handrails or other fixed part of the structure by which it can be securely grasped, to ensure stability the ladder must be secured against displacement, lateral deflection, twisting or opening, the slope of a single ladder must not be less than 2,5 : 1,
- there must be a clear space of at least 0.18 m behind the rungs and a clear space of at least 0.6 m at the foot of the ladder on the access side,
- ladders must only be worked on at a safe distance from the upper end of the ladder, or, in the case of a single ladder, at a distance of no more than 0.8 m of the feet,
- a check must be carried out at the time of dispatch from or receipt into the warehouse and before each use. The building contractor must regularly carry out, as required by the technical standards, stability and strength tests on ladders at least once a year; ladders which are damaged and those which fail the tests must not be used.