

REGULATIONS

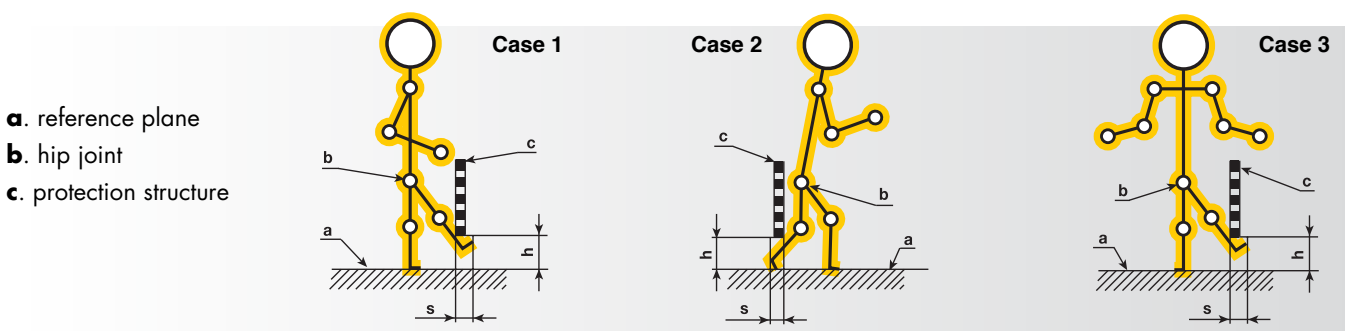


Our guards are designed according to the following norms:

- UNI EN 953** Safety of machinery Guards General requirements for the design and construction of fixed and movable guards.
- UNI EN ISO 12100-1/2** Safety of machinery - Basic concepts, general principles for design.
- UNI EN 13849-1** Safety of machinery - Safety related parts of control systems - Part 1: General principles for design.
- CEI EN 60204-1** Safety of machinery - Electrical equipment of machinery - Part 1: General principles.
- UNI EN ISO 13857** Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs.
- UNI EN 349** Safety of machinery - Minimum gaps to avoid crushing of parts of the human body.
- UNI EN 1088** Safety of machinery - Interlocking devices associated with guards. Principles for design and selection.
- DIRECTIVE 2006/42/CE** New Machinery Directive.
- UNI EN 14119** Safety of machinery – Interlocking devices associated with guards – Principles for design and selection.

REFERENCE TABLE LOWER LIMBS

RESTRICTION OF FREE MOVEMENT UNDER PROTECTIVE STRUCTURES



Irregular openings and accessibility from below: The slot openings > 180 mm, and square or circular > 240 mm do allow access of the entire body.

Height Shelter h	Distance s		
	Case 1	Case 2	Case 3
$h \leq 200$	≥ 340	≥ 665	≥ 290
$200 < h \leq 400$	≥ 550	≥ 765	≥ 615
$400 < h \leq 600$	≥ 850	≥ 950	≥ 800
$600 < h \leq 800$	≥ 950	≥ 950	≥ 900
$800 < h \leq 1000$	≥ 1125	≥ 1195	≥ 1015

dimensioni in mm

REFERENCE TABLE UPPER LIMBS

RESTRICTION OF FREE MOVEMENT UP PROTECTIVE STRUCTURES

Reaching upwards

- If there is a low risk from hazard zone, then the height of the hazard zone, h , shall be 2 500 mm or more.
- If there is a high risk from the hazard zone, then the height of the hazard zone, h , shall be 2 700 mm or more.

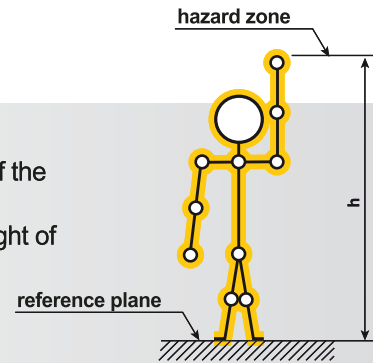


Fig. 1

Reaching over protective structures

- a height of hazard zone
- b height of protective structure
- c horizontal safety distance to hazard zone

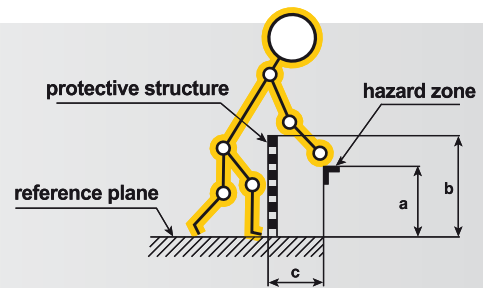


Fig. 2

The table below (high risk situations) does not consider protection structures with height < 1000 mm, because they don't restrict sufficient body movement. Protective structures with height < 1400 mm should not be used without additional security measures.

In low risk situations are conceivable protective structures of height $H = 1000$ mm.

If safety distance is expressed in the table below with a dash, then you must use the distances according to the size of the net, with mesh 32x67 wire 03 or 40x40 wire 03 04, the minimum safety distance is 200 mm.

Height of danger zone a	Height of protection structure b									
	1000	1200	1400	1600	1800	2000	2200	2400	2500	2700
Horizontal distance from the danger zone c										
2700	-	-	-	-	-	-	-	-	-	-
2600	900	800	700	600	600	500	400	300	100	-
2400	1100	1000	900	800	700	600	400	300	100	-
2200	1300	1200	1000	900	800	600	400	300	-	-
2000	1400	1300	1100	900	800	600	400	-	-	-
1800	1500	1400	1100	900	800	600	-	-	-	-
1600	1500	1400	1100	900	800	500	-	-	-	-
1400	1500	1400	1100	900	800	-	-	-	-	-
1200	1500	1400	1100	900	700	-	-	-	-	-
1000	1500	1400	1000	800	-	-	-	-	-	-
800	1500	1300	900	600	-	-	-	-	-	-
600	1400	1300	800	-	-	-	-	-	-	-
400	1400	1200	400	-	-	-	-	-	-	-
200	1200	900	-	-	-	-	-	-	-	-
0	1100	500	-	-	-	-	-	-	-	-