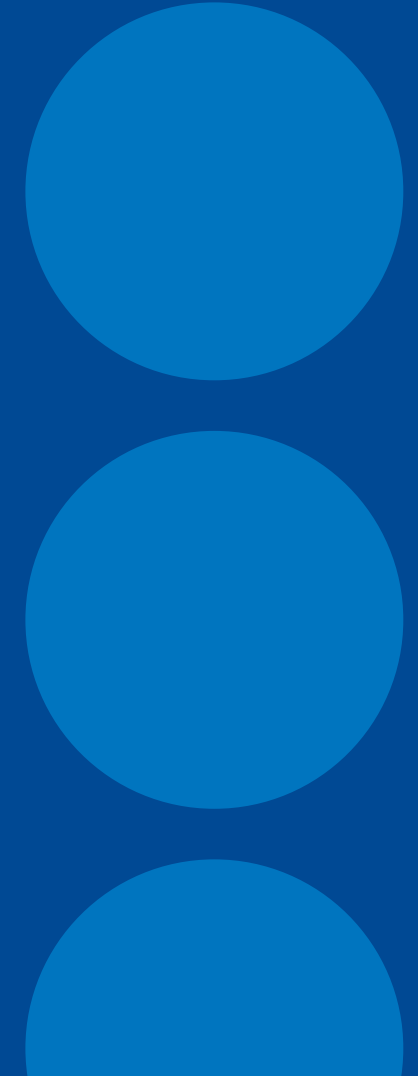




# Report from the CEN TC/274 „*Aircraft **G**round **S**upport **E**quipment*“ and other business

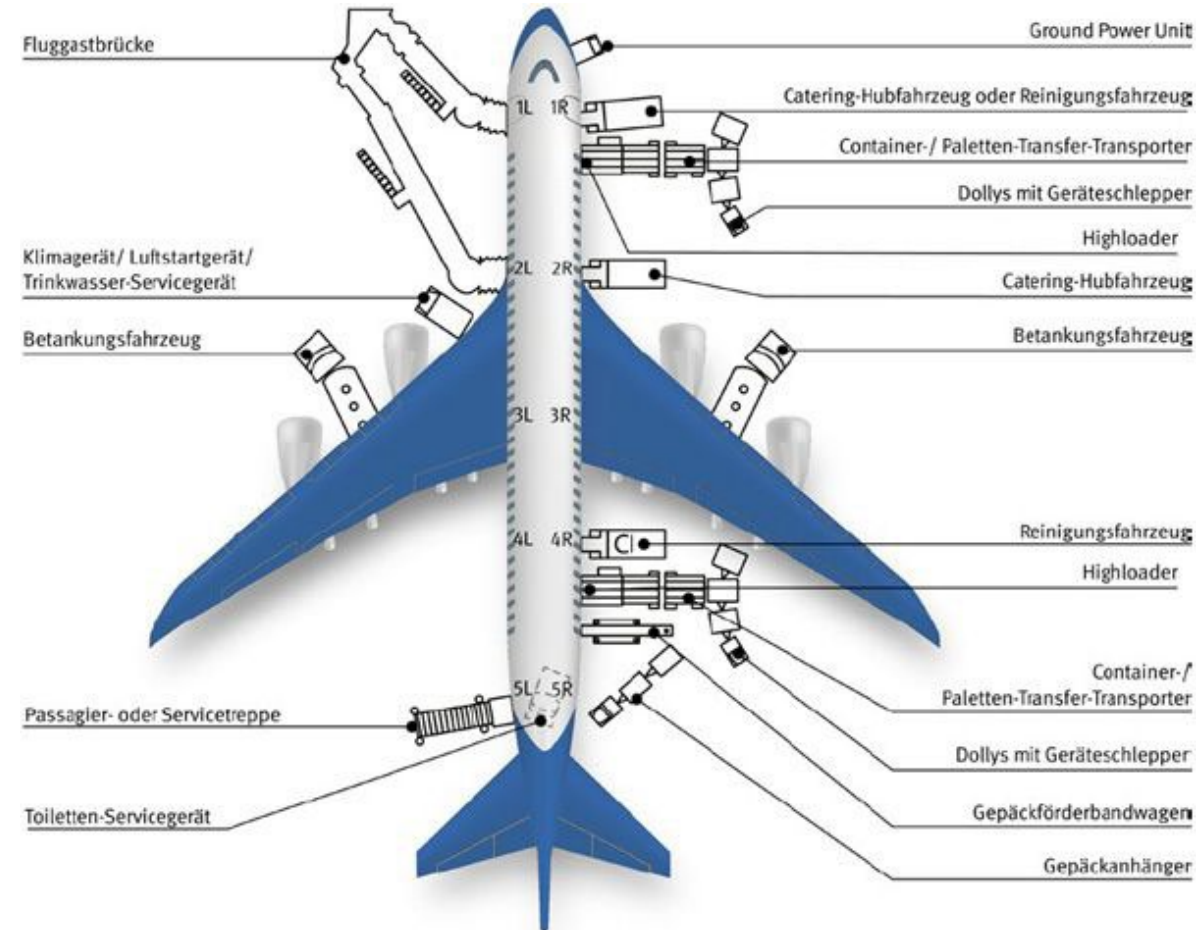


**Helge Homann, Prevention and Technical Officer**  
Head of department “Aviation” at BG Verkehr



# European standardization activities for GSE

- Personnel
- Brief overview of activities
- Prospects
- Joint of ISO/TC 20/SC 09 and CEN/TC 274
- **New machinery regulation**
- **Other business**



## Personnel

- **CEN/TC 274** "Aircraft ground support equipment"
  - Chairman: **Helge Homann (2018 – 2024/2027)**
  - Secretary: Dorothee Kretschmar; DIN
  
- **CEN/TC 274/WG 1** "Working Group Revision"
  - Convenor: **Helge Homann (2018 – 2024/2027)**
  - Secretary: Dorothee Kretschmar; DIN
  
- **NA 131-08-01** "Luftfahrtbodengeräte"
  - Convenor: **Caroline Krause (2022 - ....)**
  - Vice Convenor: **Helge Homann (2024 – 2026)**
  - Secretary: Dorothee Kretschmar; DIN

## Actual

- prEN 1915-1, *Basic safety requirements*
  - This standard has been published in the OJEU in December 2023! 😊
- prEN 12312-1, *Passenger stairs*
  - *The latest draft is in the survey at CEN until 24.04.2024*
- prEN 12312-4, *Passenger boarding bridges*
  - *The latest draft is in the survey at CEN until 24.04.2024*



DEUTSCHE NORM		Dezember 2023
	<b>DIN EN 1915-1</b>	<b>DIN</b>
ICS 49.100	Ersetzt für DIN EN 1915-1:2013-05	
<b>Luftfahrt-Bodengeräte – Allgemeine Anforderungen – Teil 1: Grundlegende Sicherheitsanforderungen; Deutsche und Englische Fassung EN 1915-1:2023</b>		
Aircraft ground support equipment – General requirements – Part 1: Basic safety requirements; German and English version EN 1915-1:2023		
Matériels au sol pour aéronefs – Exigences générales – Partie 1: Exigences fondamentales de sécurité; Version allemande et anglaise EN 1915-1:2023		
		Gesamtumfang 134 Seiten
DIN-Normenausschuss Luft- und Raumfahrt (NL)		
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		<small>www.din.de www.din.eu</small>
<small>Deutscher Institut für Normung e. V. (DIN)</small>		

## Main change in 1915-1

- e) Clause 5, Safety requirements and/or protective/risk reduction measures, has been revised, including the following;
- f) 5.4, Controls, has been completely revised, with part 5.4.6, Direction of movements, being added;
- g) 5.8, Brakes for travelling purposes or equivalent devices, has been updated with the addition of part 5.8.3, Complex electronic braking systems of GSE, concerning the requirements of braking systems for  $GSE > 15 \text{ km/h}$  and  $GSE \leq 15 \text{ km/h}$ ;
- h) 5.12, Warning auditory signals, was updated;
- i) 5.13, Standing areas and walkways of GSE, was updated;
- j) 5.14, Means of access, has been revised with the addition of new requirements to ladder systems;

## Systematic reviews 2023/2024

- EN 1915-2:2009, *Stability and strength requirements, calculations and test methods*
- EN 1915-3:2009, *Vibration measurement methods and reduction*
- EN 1915-4:2009, *Noise measurement methods and reduction*
- EN 12312-10:2009, *Container/Pallet transfer transporters*
- EN 12312-11:2005, *Container/Pallet dollies and loose load trailers*
- EN 12312-16:2009, *Air start equipment*
- EN 12312-17:2009, *Air conditioning equipment*
- EN 12312-18:2009, *Nitrogen or Oxygen units*
- EN 12312-19:2009, *Aircraft jacks, axle jacks and hydraulic tail stanchions*
- EN 12312-20:2009, *Electrical ground power units*

*Red = revision necessary; Black = confirmed*

## Joint of ISO/TC 20/SC 09 and CEN/TC 274

- First discussions between chairs and secretary on merging EN standards and ISO standards for GSE in 2021
- first standard for the transfer will be the [EN 12312-11](#) [Container/Pallet dollies and loose load trailers]; it will be adopted as identical ISO [32312-11](#)
- Another standard for transfer to ISO could possibly be EN 1915-3 "Vibration measurement methods and reduction". **TC 20/ SC 09** voted on this in **2023**. Decision was positive (also from China and North America!!)





**NA 131-08-01 AA Luftfracht und Bodengeräte  
Normenausschuss: Luft- und Raumfahrt (NL)**



**CEN/TC 274 “Aircraft ground support  
equipment”, the secretariat is held by DIN.**



**ISO/TC 20 Aircraft and space vehicles  
Sekretariat: USA (ANSI)**





**Examples, not a conclusive list**

Item	IATA AHM	ISO	CEN
All kind of GSE	910	6966-1	1915-1
Passenger stairs	920	12056	12312-1
Catering-Trucks	926 / 927	27470 und 10841	12312-2
Conveyor belt vehicles	925	-	12312-3
Passenger boarding bridges	922	16004	12312-4
Deicers and deicing equipment	975	11077	12312-6
Aircraft movement equipment	938 / 955 / 956 / 957	7717 / 20683 / 9667	12312-7
Highloader, Container/Pallet loaders	930 / 931 / 932	27471 / 6968 / 6967	12312-9
.....			

## Outlook

The current ***Machinery Directive 2006/42 EC*** will be replaced by a new ***Machinery Products Regulation 2023/1230 EC***.

Transition period for the application **currently 36 months (January 2027)**.

## Plan of the EU Commission

- As a further measure, the transition of harmonized standards from the Machinery Directive to the EU Machinery Regulation is to be made easier for standard users.
- To this end, standards published *between 2024 and the first half of 2026* are to be provided with two [Annexes ZA](#) - one for the Machinery Directive and one for the EU Machinery Regulation - which indicate which sections of the standard cover which legal provisions.

## **Difference** between the Machinery *Directive* and the Machinery *Regulation*

- The main difference between the Machinery *Regulation* and the Machinery *Directive* is their binding nature. The directive is not binding and must first be transposed into national law by all member states. In contrast, the Regulation (after the expiry of certain transitional periods) applies directly to all EU states / countries - including companies in Germany.

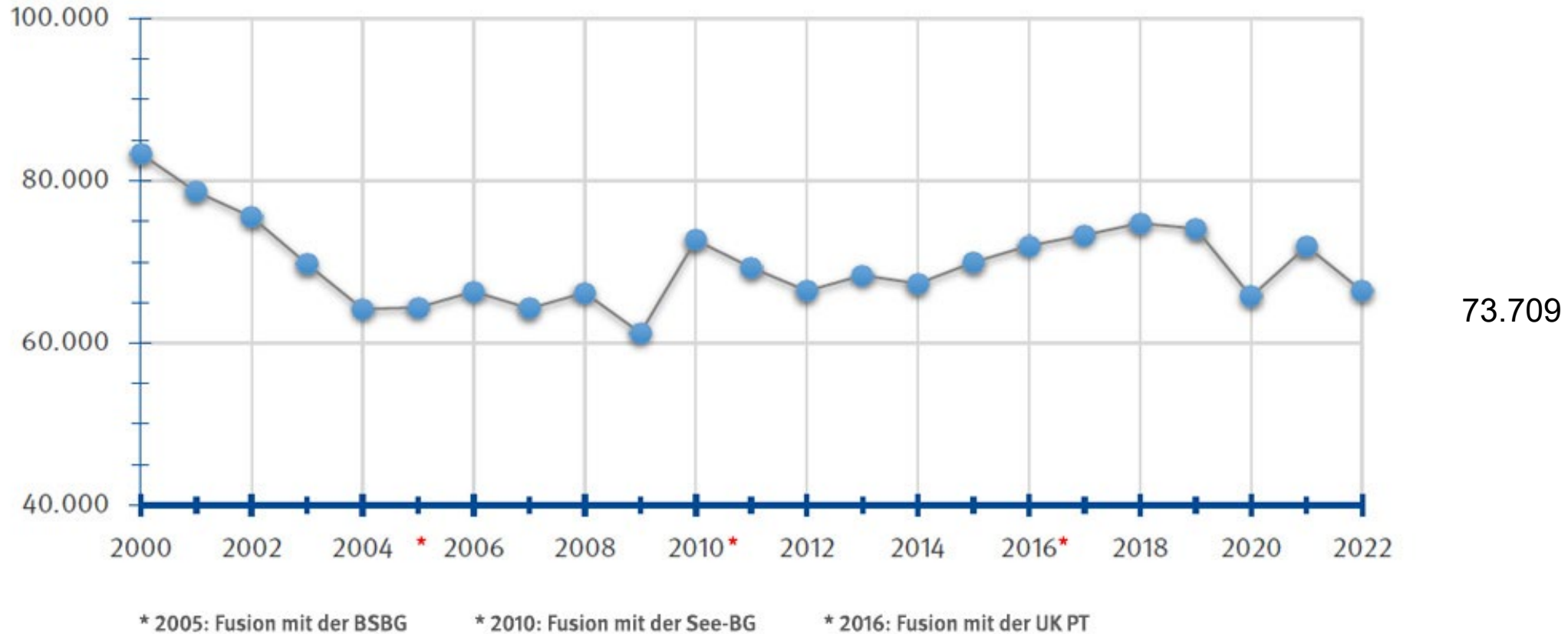
## Additional work for the TC 274 (Gap-Analysis)

- The TCs are requested to **carry out the gap-analysis** on whether their harmonized standards (hENs) under **Machinery Directive** (MD) are impacted by new or modified Essential Health and Safety Requirements (EHRs) of **Machinery Regulation** (MR).
- This analysis shall be conducted for all harmonized standards, including EN ISO standards, that are today listed in the OJEU under the MD.
- Has to be done by October 2024
- ***Review of content for 24 standards for GSE (!!!)***

- BG Verkehr is **publishing** more and more information or regulations in ***different languages*** (some examples)
  - **Safe operations of helicopters during aerial work**
  - **Safe and Sound from Take-off to Landing**
  - **Safety through inspections of work equipment**
  - Attention on the Road
  - Lifting and carrying
  - Coupling – but safely!
  - Purchasing guide for company vehicles
  - Training for work on vehicles with high voltage systems
  - First aid (poster)
  - [Instructing while reversing - \)](#) (Video)

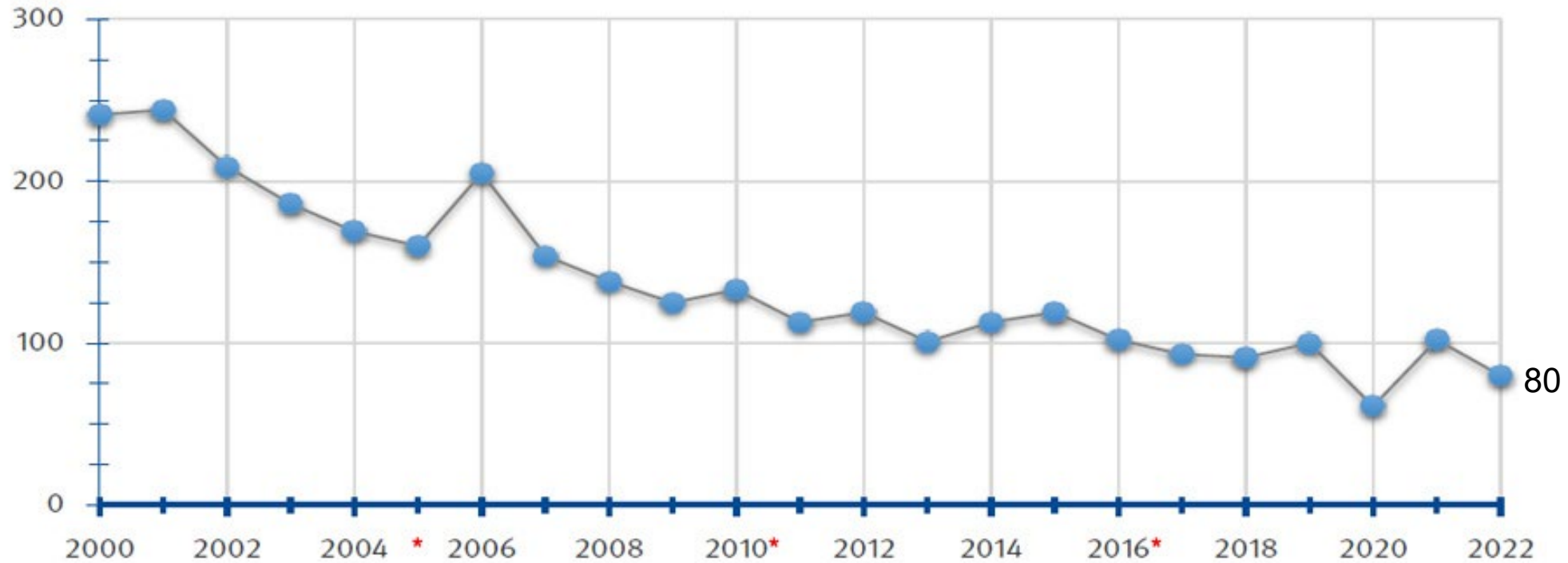


## Number of reportable\* accidents at work in total BG Verkehr



\*Reportable accidents at work are accidents resulting in more than three days' absence from work (including "way-to-work-accidents")

# Number of fatal work and commuting accidents



\* 2005: Fusion mit der BSBG

\* 2010: Fusion mit der See-BG

\* 2016: Fusion mit der UK PT

# Deaths by category in Germany 2022

source: Statistisches Bundesamt

Age	Deaths by category					
	total	Accidents at work/school	traffic accidents	accidents at home	sports accidents	other accidents
unter 1 Jahr	18	-	3	8	-	7
1 bis 4	59	..	20	16	3	19
5 bis 15	69	..	30	17	7	14
15 bis 25	620	19	351	55	14	181
25 bis 35	665	34	290	84	20	237
35 bis 45	873	46	243	176	20	388
45 bis 55	1 231	60	328	288	21	534
55 bis 65	2 396	89	496	787	39	985
65 bis 75	3 397	38	400	1 490	34	1 435
75 bis 85	8 814	10	511	4 506	31	3 756
85 und älter	14 445	5	264	8 124	29	6 023
<b>total</b>	<b>32 587</b>	<b>303</b>	<b>2 936</b>	<b>15 551</b>	<b>218</b>	<b>13 579</b>

<b>aviation Gz 740</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>Member companies</b>	4.342	4.503	4.634	4.740	
<b>Full worker</b>	130.084	124.805	123.239	112.343	
<b>Reportable accidents at work</b>	<b>3.143</b>	<b>2.977</b>	<b>1.338</b>	<b>1.490</b>	
<b>Reportable commuting accidents</b>	745	760	411	322	
<b>total</b>	3.888	3.737	1.749	1.812	
<b>Thousand-man quota Aviation</b>	24,16	23,85	10,86	13,26	
<b>Thousand-man quota BG Verkehr</b>	44,41	43,62	39,32	43,01	
<b>New occupational accident pensions</b>	19	21	20	19	
<b>New commuting accident pensions</b>	8	11	14	5	
<b>Compensation benefits BG Verkehr in Million €</b>	657,75	684,83	690,09	691,86	
<b>Compensation benefits aviation BG Verkehr in Million €</b>	<b>21,24</b>	<b>22,57</b>	<b>21,67</b>	<b>20,63</b>	

# Cost-intensive accidents Aviation 1.03.23 - 01.04.2024

Course of accident	injury	job	costs in €
Car driver collided head-on with a truck	Multiple contusions and fractures of the lower extremities	IT Consultant	<b>113.175€</b>
Lost consciousness on the stairs and fell	10 cm head laceration	Aircraft mechanic	<b>107.340€</b>
Assaulted on the way to work on his own doorstep. Pushed to the ground by the perpetrator	Fracture of thoracic vertebral body 12 and lumbar vertebral body 1	IT Manager	<b>107.243€</b>
Cyclist drove through a pothole and crashed	Multiple fractures of the elbow and foot on the right	Planning engineer	<b>100.334€</b>
Lost control of the car	Multiple comminuted fractures entire body	Aircraft mechanic	<b>65.044€</b>
Falling over the edge of the carpet in the home office	Fracture of the proximal humerus and shoulder dislocation	Clerc	<b>63.668€</b>
While transferring from the flight kit (trolley case) fell forward and hit the knee	Left kneecap broken	Flight attendant	<b>61.674€</b>
Fell from the step when opening the cargo door and fell onto the thorax/neck area	<b>Paraplegics</b>	loader	<b>54.239€</b>
Plane crash shortly after take-off with Learjet	Multiple <b>fatal</b> injuries	Pilot	<b>50.359€</b>
Crashed from a height of approx. 50 m during a training jump	Fracture of lumbar vertebral body 5, fracture of metatarsus, pelvic fracture, etc.	Skydiving instructor	<b>47.508€</b>

Course of accident	injury	job	costs in €
Plane crash shortly after take-off with Learjet (2nd Person)	Multiple <b>fatal</b> injuries	Pilot	<b>37.998€</b>
Thumb overstretched when closing a waste garbage can in the on-board toilet	Thumb joint and tendon hyperextended	Flight attendant	<b>36.460€</b>
Twisted over on landing during a tandem jump	Ankle dislocation	Trainee	<b>36.177€</b>
Cut his left hand on a sharp edge while waiting at the bus stop	Deep cut	Flight attendant	<b>31.643€</b>
Fell while lifting out the slide-in boxes in the galley	Contusion of the shoulder joint	Flight attendant	<b>29.305€</b>
Twisted his right foot while descending stairs at the airport	Ankle fracture with surgical intervention	Loader	<b>28.608€</b>
Twisted wrist during exercise on the emergency slide	Closed fracture of the wrist	Flight attendant	<b>27.224€</b>
Crashed while approaching a red light on a bicycle	Right ankle sprain	Clerc	<b>26.297€</b>
Stuck at the security checkpoint when passing through the turnstile	Closed fracture of the femoral neck	Clerc	<b>25.614€</b>
Flown into a cable car cable during take-off as a paragliding instructor	Open fracture of both lower legs	Skydiving instructor	<b>23.395€</b>



Thank you very much  
for your attention!

Q & A

