

Safexpert

The most important innovations in Safexpert 9.0

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The most important innovations at a glance

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What's new in Safexpert 9.0

Don't worry! Although this Safexpert version includes many new features that will make your working life much easier, you will find the switch easy for two reasons:

- we have put special effort into the development of a modern and intuitive user interface and
- Core functions such as risk assessment and the CE Guide have received a facelift, but can still be used as usual.

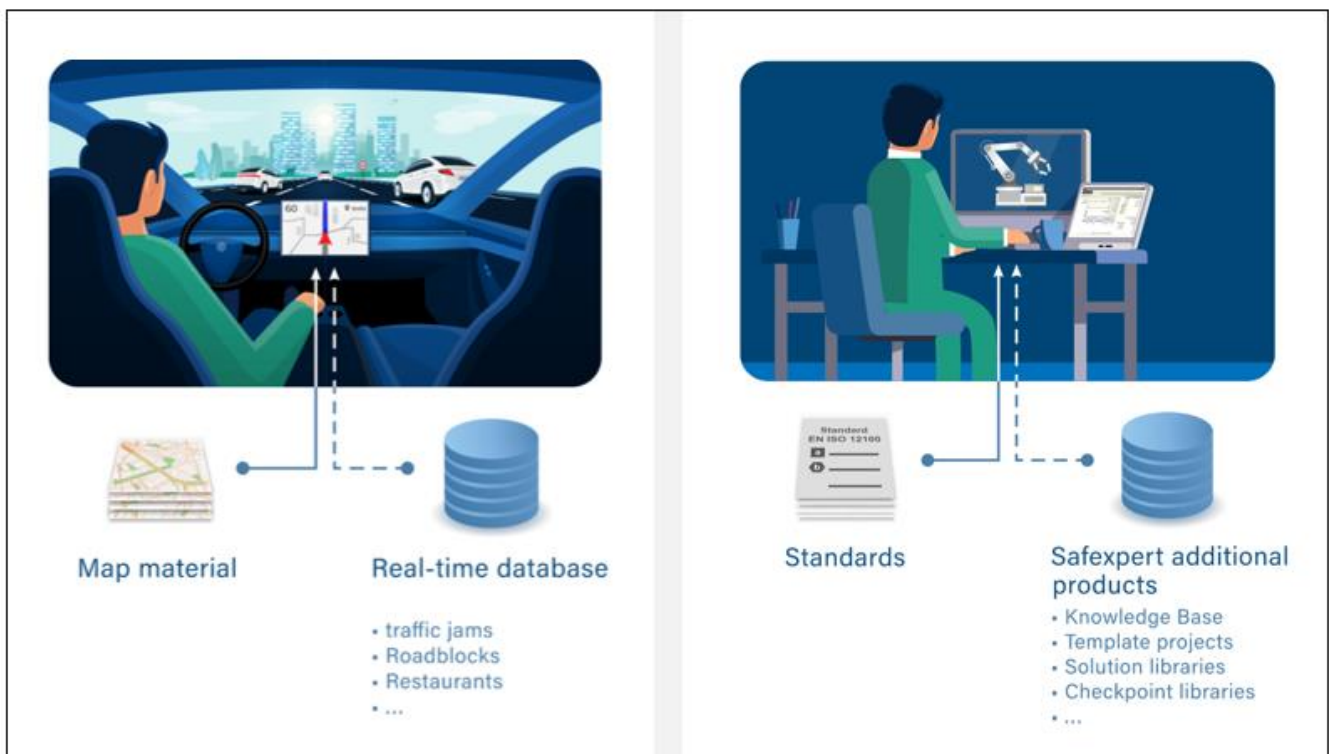
1 Digital standards management

With Safexpert 9.0, we are setting a new milestone in the field of digital standardisation. As before, we are not satisfied with providing standards documents in PDF format!

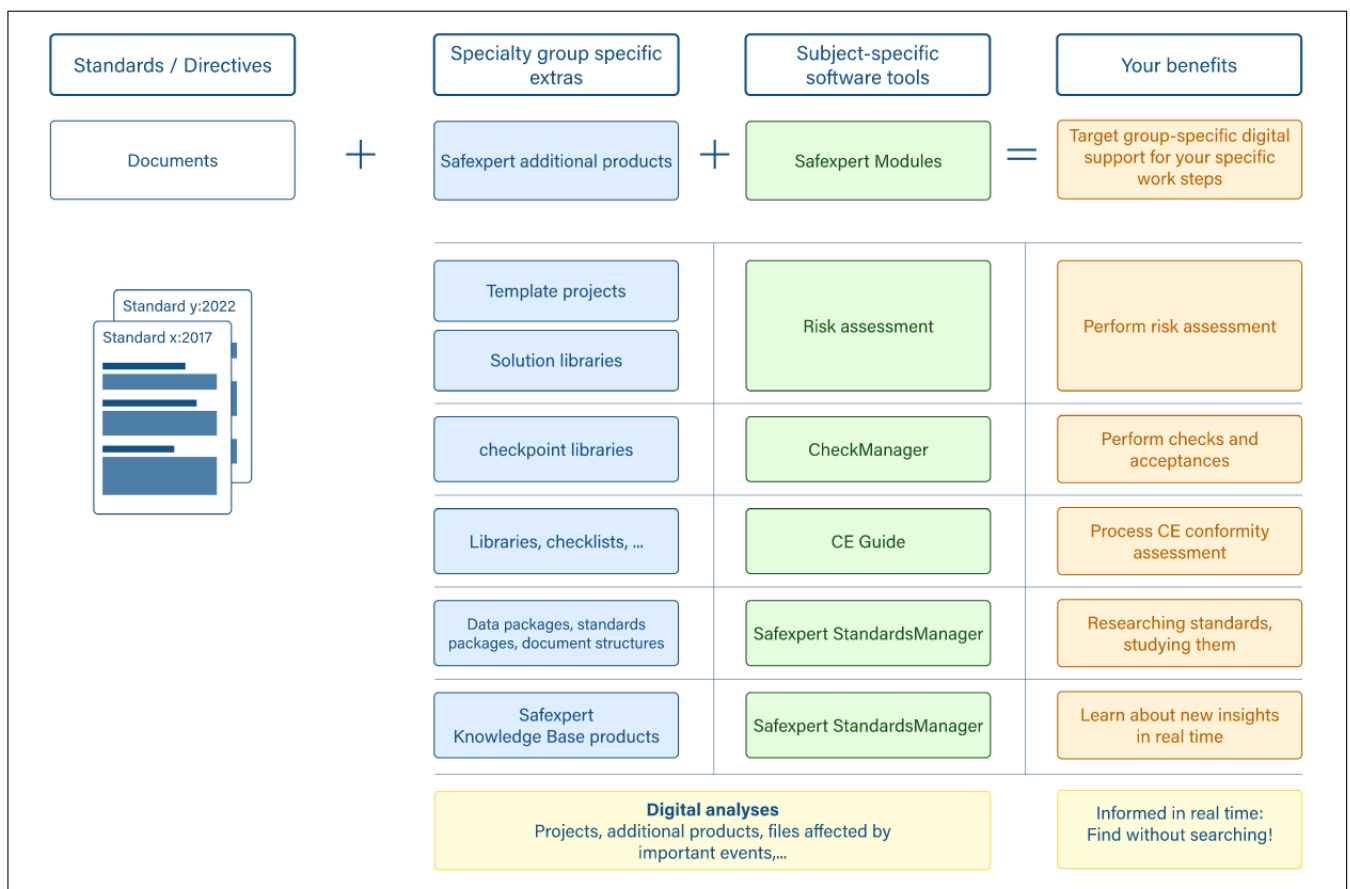
1.1 Project management with Safexpert

Standards are just like road maps. The days when you struggled through a foreign city with road maps are long gone. Navigation devices steer you reliably and safely to your destination. And they process more than maps. In the same way, standards are only the basis for you as a designer, planner or tester on your way to a safe and legally compliant product.

Knowledge of standards alone is often not enough. The state of the art develops more rapidly than the state of the standard. For this reason, we have placed a focus on the topic of "digital standardisation" in Safexpert 9.0 and developed functions to digitally build up requirements and knowledge in standards in such a way that it is available in machine-readable form and is suitable for informing the people concerned about important events in real time, similar to a navigation system:



Only the combination of digitally prepared standards content in Safexpert additional products (see 8) and subject-specific software modules form the optimum combination to provide you with suitable digital support for specific work steps:



Digital analyses (see 4) check daily whether important events have occurred that indicate that your projects are affected by important events. In your personal dashboard, you learn in real time about such important events that are of interest to you personally.

Above all, the new functions for managing solutions in a solution library (see 10) offer completely new functions with which you can standardize your risk assessments and keep your solutions not only at the state of the art, but at the state of the art!

1.2 Standards management with Safexpert

Safexpert is primarily intended for designers, planners, CE officers and other persons who perform risk assessments of machines, plants or electrical equipment or are otherwise involved in CE processes.

These target groups were also the focus of the new development of Safexpert StandardsManager.

But even people who have nothing to do with CE marking will be excited by our new concepts and solutions for digital standards management in the 21st century.

Therefore, it is possible to license only the Safexpert StandardsManager module and the matching Safexpert additional products.

Inform your colleagues in your standards office as well as in compliance or quality management about our new concepts for a contemporary and modern standards management:

www.ibf-solutions.com/digital-standardisation

2 Your personal dashboard

After starting and logging in, your personal dashboard always opens now. Here you will find the Safexpert main menu and a lot of important information:

2.1 Complete dashboard

PROJECTS

Set up new project | Project management

Non-completed projects

Name	Opened last	Changed last	Important	Open
Förderanlage PRJ-2022-09-21-0003	21.09.2022	21.09.2022 Daniel Zacek	No	Open
Demoprojekt Safexpert Professional - DE - Tischfräsmaschine - ISO/TR 14121-2 PRJ-2014-01-00002	21.09.2022	16.09.2022 Daniel Zacek		Open
Chain Conveyor VLP EN 619:2002+A1:2010 Chain Conveyor (Version 2018-03-17)	20.09.2022	17.03.2018 TUV Rheinland In...		Open
Kettenförderer VLP EN 619:2002+A1:2010 Kettenförderer (Version 2018-03-17)	20.09.2022	17.03.2018 TUV Rheinland In...		Open
Demoprojekt Safexpert Professional - EN - single-spindle vertical moulding machine - ISO/TR 14121-2 PRJ-2014-01-00001		27.04.2018 John Demoman		Open
Conveyeur a chaine PTE EN 619:2002+A1:2010 Kettenförderer (Version 2018-03-17)		17.03.2018 TUV Rheinland In...		Open

STANDARDSMANAGER

Opened last

- 2006/42/EC (Machinery Directive) Directive...
- ÖNORM EN ISO 13857:2... Safety of machinery - Safety dist...
- 2011/65/EU Directive 2011/65/EU of the Eur...
- ÖNORM EN ISO 12100:2... Sicherheit von Maschinen - Allg...
- EN ISO 11553-1:2008 Sicherheit von Maschinen - Lase...

OUTSTANDING TASKS

Due date	My tasks	All
Overdue	0	0
Today	0	0
Future	0	30

DOCUMENTS / ADDITIONAL PRODUCTS

1 important event for one or several documents / additional products located in your personal favourites.

SYSTEM

- Software/Modules
- Licence
- Memory
- Database

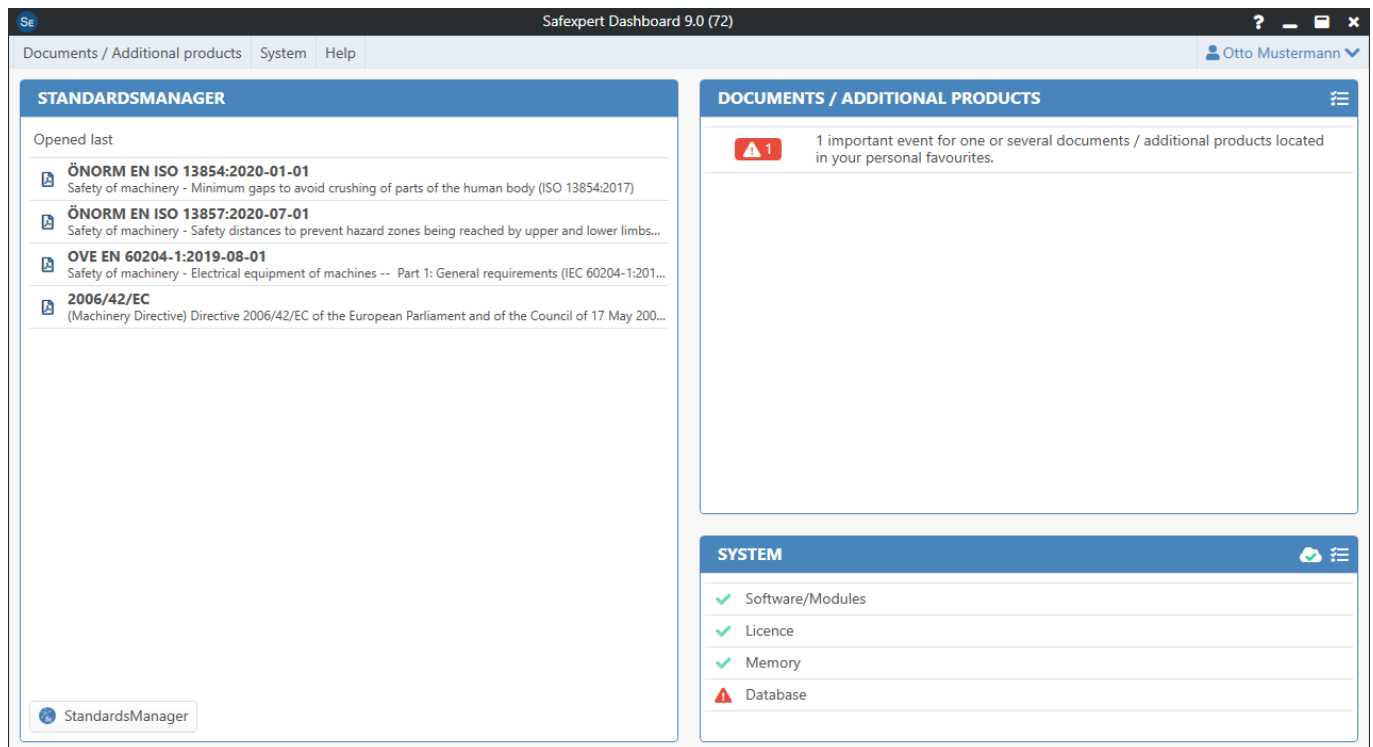
StandardsManager

Contents of the new dashboard:

- The main menu has been rearranged.
- In the upper right corner, you can see under which username you are logged in. Safexpert continues to use your login for history logging. In addition, special personalized digital analyses are performed (see 4).
- The orange header tells you if Safexpert cannot perform automatic checks, for example, because there is no Internet connection to the Safexpert Live Server or your company favourites are out of date. This way, you will not be lulled into a false sense of security.
- In the "PROJECTS" widget you can now find out which projects are affected by important events without having to open them first.
- The "DOCUMENTS / ADDITIONAL PRODUCTS" widget will tell you when documents or Safexpert additional products that you have marked as "Personal favourites" have changed.
- In the "NORMMANAGER" widget, open the last opened documents or the StandardsManager module.

2.2 Dashboard, if you have only licensed the StandardsManager module

If you have only licensed the StandardsManager module including the Knowledge Base and the Safexpert PDF viewer, the "PROJECTS" and "OPEN TASKS" widgets will not be displayed in your personal dashboard:



The screenshot displays the Safexpert Dashboard 9.0 (72) interface. The top navigation bar includes "Documents / Additional products", "System", and "Help". The user "Otto Mustermann" is logged in. The dashboard is divided into three main sections:

- STANDARDSMANAGER**: This section shows a list of standards under the heading "Opened last". The standards listed are:
 - ÖNORM EN ISO 13854:2020-01-01**: Safety of machinery - Minimum gaps to avoid crushing of parts of the human body (ISO 13854:2017)
 - ÖNORM EN ISO 13857:2020-07-01**: Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs...
 - OVE EN 60204-1:2019-08-01**: Safety of machinery - Electrical equipment of machines -- Part 1: General requirements (IEC 60204-1:201...
 - 2006/42/EC**: (Machinery Directive) Directive 2006/42/EC of the European Parliament and of the Council of 17 May 200...
- DOCUMENTS / ADDITIONAL PRODUCTS**: This section displays a notification: "1 important event for one or several documents / additional products located in your personal favourites." Below the notification is a large empty box.
- SYSTEM**: This section shows the status of various system components:
 - Software/Modules: ✓
 - Licence: ✓
 - Memory: ✓
 - Database: ⚠

A "StandardsManager" button is visible in the bottom left corner of the StandardsManager section.

3 Risk assessment

The risk assessment has remained almost unchanged compared to Safexpert 8.6.

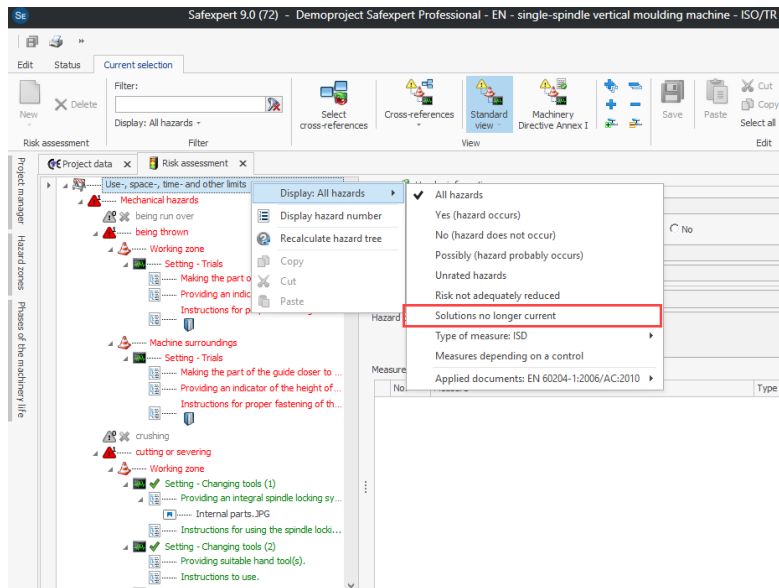
The most important new feature is the possibility to import complete solutions including the detailed data from a solution library (see 10):

The screenshot displays the Safexpert 9.0 Risk assessment interface. The main window is titled 'Safexpert 9.0 (72) - Demoproject Safexpert Professional - EN - single-spindle vertical moulding machine - ISO/TR 14121-2'. The interface includes a top menu bar with 'Edit', 'Status', and 'Current selection'. Below the menu bar is a toolbar with various icons for file operations, editing, and viewing. The main workspace is divided into several panes:

- Project data:** A tree view on the left showing the project structure, including 'Use-, space-, time- and other limits', 'Mechanical hazards', 'Working zone', 'Machine surroundings', 'crushing', 'cutting or severing', and 'Working zone'.
- Header information:** A central pane showing details for the selected hazard, including 'Limits of the machine', 'Hazard occurs', 'Hazard zone', 'Phase of the machinery life', 'Hazard', and 'Hazard description'.
- Measures:** A table listing measures for the hazard, including 'Making the part of the guide closer to the tool of a soft material (for example... plastic, wood)', 'Providing an indicator of the height of the spindle near the height adjustment...', and 'Instructions for proper fastening of the tool'.
- Origin:** A list of potential causes for the hazard, such as 'acceleration, deceleration', 'angular parts', 'approach of a moving element to a fixed part', 'cutting parts', 'elastic elements', 'falling objects', 'gravity', 'height from the ground', 'high pressure', 'instability', 'kinetic energy', 'machinery mobility', 'moving elements', and 'rotating elements'.
- Solutions library:** A context menu is open over the 'Measures' table, showing options like 'Add measure', 'Add task', 'Delete measure', 'Search for solution in solution libraries', and 'File in Solutions library'. The 'Search for solution in solution libraries' and 'File in Solutions library' options are highlighted with a red box.

The 'Solutions library' feature allows users to search for and import complete solutions from a library, including detailed data from a solution library publisher.

With the new filter "Solutions no longer current" you can easily and quickly find all solutions in your project that have been withdrawn on by the solution library publisher.

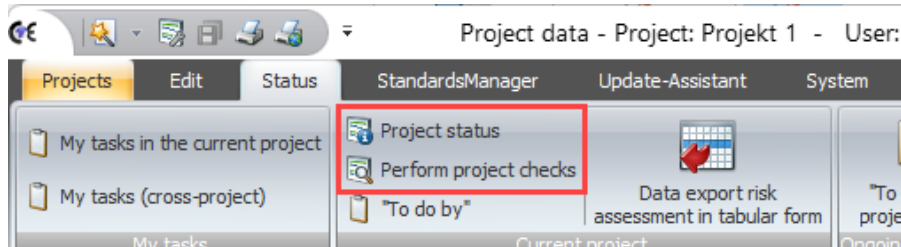


If a successor solution is available in the updated solution library, simply swap it out with a few mouse clicks.

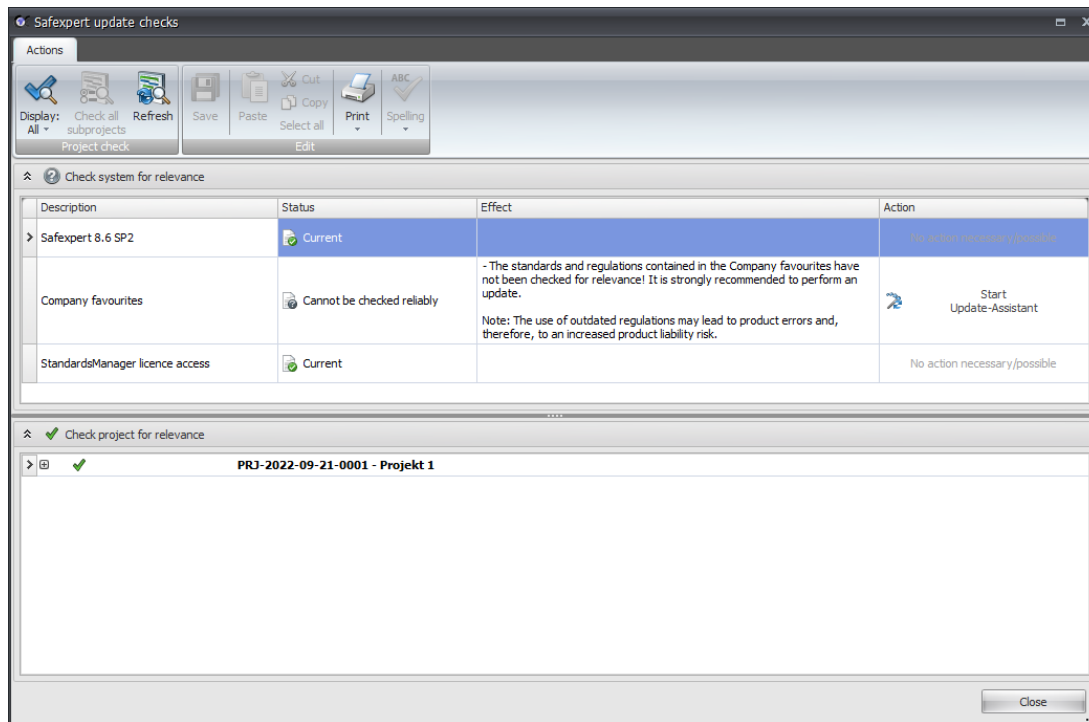
Important note: In accordance with this concept, it is now possible to withdraw solutions even though the standard has not (yet) changed. In this way, solutions can be adapted on a daily basis, e.g. even if it becomes apparent in the course of commissioning that a solution is causing difficulties or is no longer state of the art!

4 Digital analyses

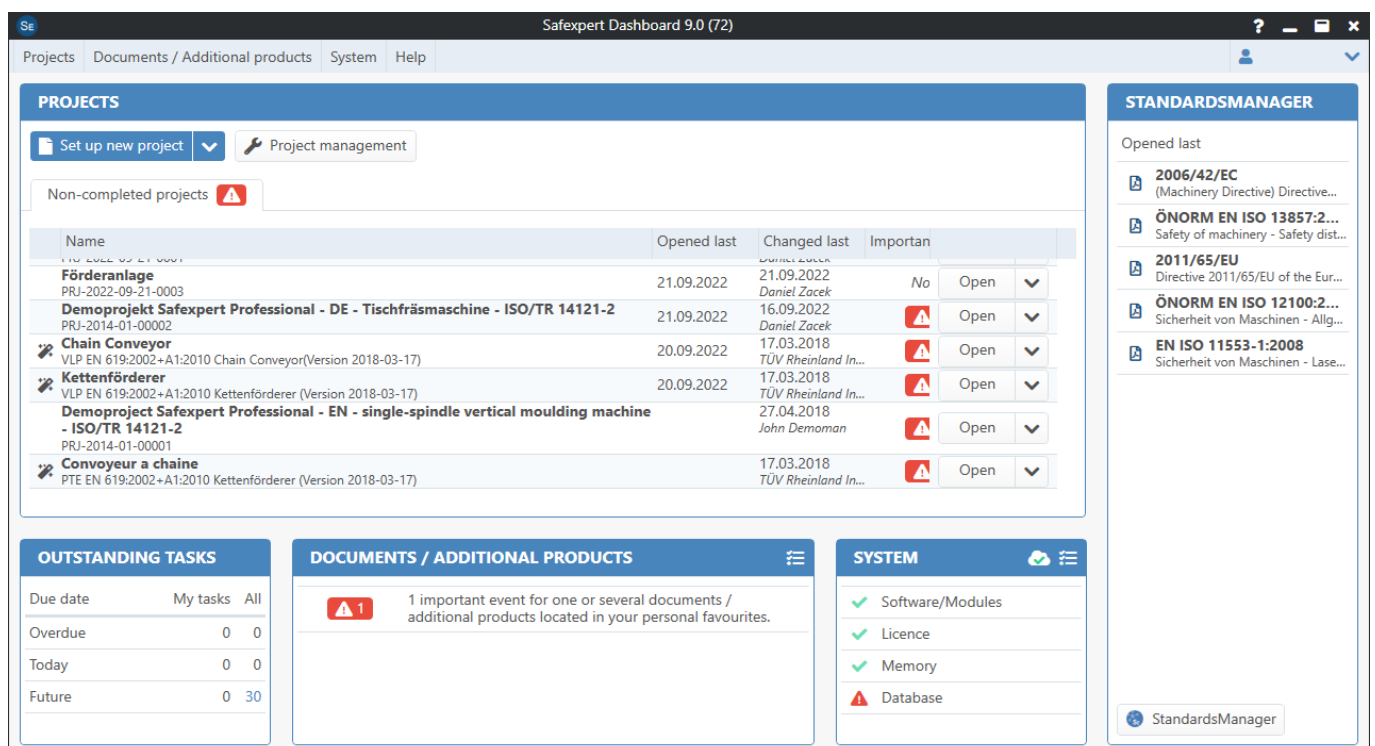
The "Project status" and "Project check" functions were previously located in the "Status" main menu:



When opening a project, the Safexpert Update Checks window was displayed automatically:



This window has been eliminated in Safexpert 9.0. The analysis results are now communicated in the new dashboard:



In contrast to Safexpert 8.6, the "PROJECTS" widget now shows which projects are affected by "important events" without having to open them.

In the widget "DOCUMENTS / ADDITIONAL PRODUCTS" you can see if there are important events for standards, guidelines or additional products that you have defined as personal favorites.

Clicking on the respective icon opens the details of the important events:

The screenshot displays the 'Projektstatus' window of Safexpert Professional. The main table lists various project tasks and their status. A red box highlights a green circle icon in the 'Status' column for the task 'Einstellungen - Probelauf'. A red arrow points from this icon to a detailed view of the event on the right side of the window.

The detailed view on the right, titled 'Projektanalysen / wichtige Ereignisse', shows the following information:

- Ereignis:** Die Lösung und die damit im Zusammenhang stehenden Maßnahmen wurden aus einer Lösungsbibliothek übernommen. Die Lösung wurde zurückgezogen am: 19.08.2022 00:00:00. Nachfolgelösung verfügbar: Fertigung aus weichem Material.
- Handlungshinweise:**
 1. Öffnen Sie die Risikobeurteilung.
 2. Setzen Sie den Filter auf "Lösungen nicht mehr aktuell".
 3. Prüfen Sie die Lösung.
- Gelesen:** ☐

Even if you as a designer have already set "risk adequately reduced", you will receive information about important events. Safexpert thus analyzes in the background and without your intervention whether your project decisions are affected by important events. Manually, this daily analysis would be completely impossible. For your IT, it is an effort of a few seconds.

Successively improve analysis results

It is challenging to define as generally valid rules as possible in advance and to develop suitable algorithms that inform you only about really important events and filter out unimportant ones.

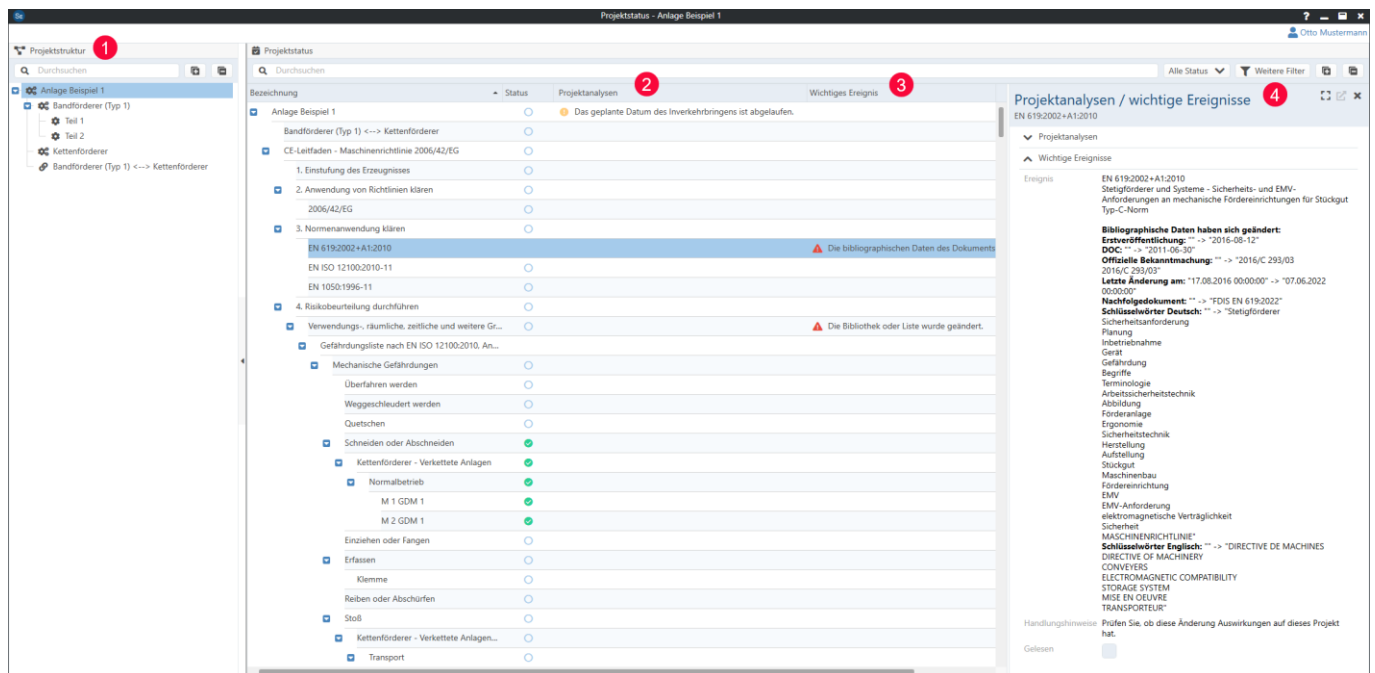
Therefore, we offer to extend or improve digital analyses on your behalf. And of course, we will also implement further valuable digital analyses ourselves in new Safexpert versions. Your feedback is particularly valuable to us in this process!

Important information on data protection

All digital analysis is done by the algorithms in your Safexpert installation in your company! No project data is transferred to IBF!

5 Project status

The Project Status window has been redesigned:



The analyses are now performed for the entire project structure (1). By clicking on the respective element, only the results for the project analyses (2) and the important events (3) are displayed.

Double-click on the respective analysis result to display the details of the event (4).

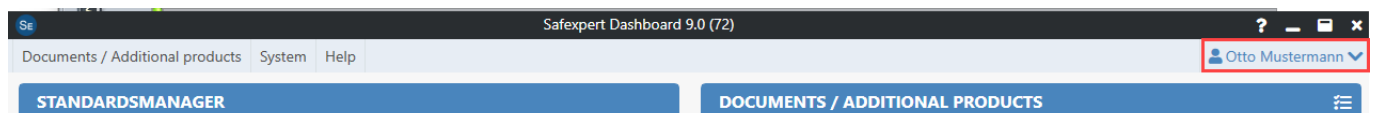
The "Additional filters" function offers the possibility to filter the results accordingly.

The analyses of important events are carried out in three stages:

- In the first step, Safexpert analyzes whether there are any new events, e.g.:
 - Have standard changed?
 - Are there any new findings on standards or sections of standards?
 - Have additional products (checkpoint libraries, solution libraries, ...) been updated?
- In the second step, Safexpert checks where in Safexpert this could have an impact, e.g.:
 - Are Safexpert functions affected?
 - Are documents or additional products affected?
 - Are projects affected and if so, at what points?
- The third step is the relevance analysis:
 - Are the events important to you personally?
 - At which points in the project do the events have an impact?

Personalized digital analytics

For personalized digital analytics, Safexpert uses your personal login:



Structural data as a basis

Safexpert requires the corresponding reference data for the digital analyses in specially developed Safexpert additional products (see 8).

6 The new StandardsManager

Fav...	Document number	Title	Document ty...	Status	CE	Additional pr...
★	CEN ISO/TR 22100-1:2021	Safety of machinery - Relationship with ISO 12100 - Part 1: How ISO 12100 relates to type-B and type-C standards (ISO/TR 22100-1:2021)	Technical Rule	✓		0
★	CEN ISO/TR 22100-4:2020	Safety of machinery - Relationship with ISO 12100 - Part 4: Guidance to machinery manufacturers for consideration of related IT-security (cyber security) aspects (ISO/TR 22100-4:2020)	Technical Rule	✓		0
★	EN 1005-1:2001+A1:2008	Safety of machinery - Human physical performance - Part 1: Terms and definitions	type-B standard	✓	✓	5
★	EN 1005-2:2003+A1:2008	Safety of machinery - Human physical performance - Part 2: Manual handling of machinery and component parts of machinery	type-B standard	✓	✓	5
★	EN 1093-1:2008	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 1: Selection of test methods	type-B standard	✓	✓	2
★	EN 1093-2:2006+A1:2008	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 2: Tracer gas method for the measurement of the emission rate of a given pollutant	type-B standard	✓	✓	2
★	EN 1093-3:2006+A1:2008	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 3: Test bench method for the measurement of the emission rate of a given pollutant	type-B standard	✓	✓	2
★	EN 1093-4:1996+A1:2008	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 4: Capture efficiency of an exhaust system - Tracer method (Amendment)	type-B standard	✓	✓	1
★	EN 12198-1:2000+A1:2008	Safety of machinery - Assessment and reduction of risks arising from radiation emitted by machinery - Part 1: General principles	type-B standard	✓	✓	5

The StandardsManager has been completely redeveloped and is still available as an independent module. This opens the way to use the Safexpert StandardsManager autonomously in all possible industries (see 1.2).

These functions are still available to you:

- Manage company favorites and your personal favorites
- Manage your own documents
- Search in your company favorites or on the Safexpert Live Server
- Filter in search results

New functions

- Safexpert Knowledge including the new PDF viewer to display top current knowledge in real time (see 7)
- Quickly find additional products for standards (6.1)
- Compare document structures (6.2)
- Send unbureaucratic feedback on standards or sections of standards (6.3)

6.1 Quickly find additional products for standards

In the new column "Additional products" you can see how many Safexpert additional products (see 8) have been purchased for the individual documents and are therefore available in your company favorites:

Safexpert StandardsManager 9.0 (72)

Feedback overview

OTTO MUSTERMANN

safety of machinery x +

Q safety of machinery x Advanced search settings Search

100 result(s) of 186 is/are shown All

+ New document Save search

Fav...	Document number	Title	Document ty...	Status	CE	Additional pr...	
★	CEN ISO/TR 22100-1:2021	Safety of machinery - Relationship with ISO 12100 - Part 1: How ISO 12100 relates to type-B and type-C standards (ISO/TR 22100-1:2021)	Technical Rule	✓		0	
★	CEN ISO/TR 22100-4:2020	Safety of machinery - Relationship with ISO 12100 - Part 4: Guidance to machinery manufacturers for consideration of related IT-security (cyber security) aspects (ISO/TR 22100-4:2020)	Technical Rule	✓		0	
★	EN 1005-1:2001 +A1:2008	Safety of machinery - Human physical performance - Part 1: Terms and definitions	type-B standard	✓	✓	5	
★	EN 1005-2:2003 +A1:2008	Safety of machinery - Human physical performance - Part 2: Manual handling of machinery and component parts of machinery	type-B standard	✓	✓	5	
★	EN 1093-1:2008	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 1: Selection of test methods	type-B standard	✓	✓	2	
★	EN 1093-2:2006 +A1:2008	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 2: Tracer gas method for the measurement of the emission rate of a given pollutant	type-B standard	✓	✓	2	
★	EN 1093-3:2006 +A1:2008	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 3: Test bench method for the measurement of the emission rate of a given pollutant	type-B standard	✓	✓	2	

By clicking on the number displayed, you can immediately see which "additional products" have already been licensed in your company:

Safexpert additional products: Libraries, lists, templates, Knowledge Base, ... 9.0 (72)

Additional products for EN 1005-2:2003+A1:2008 x +

Q Enter search concept (number, title, ...) Advanced search settings Search

5 Results count

+ New additional product Import additional product

Fav...	Product number	Title	Product type	Status	Applicable	Language	
★	CRL EN 1005-2:2003+A1:2008	Cross-reference list to EN 1005-2:2003+A1:2008	Cross-reference list B standard	✓	Yes	English	
★	DSG 2006/42/EC (Version 2022-09-12)	Document structure data according to the standards published in the Official Journal of the EU for the Machinery Directive 2006/42/EC	Document structure (group)	✓	Yes	English	
★	DSG 2006/42/EG (Version 2022-09-12)	Dokumentenstrukturdaten nach den im EU-Amtsblatt veröffentlichten Normen nach Maschinenrichtlinie 2006/42/EG	Document structure (group)	✓	Yes	German	
★	LRC EN 1005-2:2003+A1:2008	Liste de références croisées vers EN 1005-2:2003+A1:2008	Cross-reference list B standard	✓	Yes	French	
★	QVL EN 1005-2:2003+A1:2008	Querverweisliste nach EN 1005-2:2003+A1:2008	Cross-reference list B standard	✓	Yes	German	

To search for additional products available for this standard that you have not yet purchased, simply click on "Search on Safexpert Live Server":

Safexpert additional products: Libraries, lists, templates, Knowledge Base, ... 9.0 (72)

Additional products for EN ISO 12100:2010 x +

Enter search concept (number, title, ...) Advanced search settings Search

14 Results count

+ New additional product Import additional product

Favou...	Product number	Title	Product type	Status	Applicable	Language	
★	CLI EN ISO 12100:2010 (Version 2016-07-01)	Checklist to EN ISO 12100:2010	Checkpoints library	✓	Yes	English	...
★	CPL EN ISO 12100:2010, Annex B (Version 2022-05-07)	Checkpoint libraby to EN ISO 12100:2010, Annex B (Version 2022-05-07)	Checkpoints library	✓	Yes	English	...
★	CRL EN ISO 12100:2010	Cross-reference list to EN ISO 12100:2010	Cross-reference list A standard	✓	Yes	English	...
☆	DSG 2006/42/EC (Version 2022-09-12)	Document structure data according to the standards published in the Official Journal of the EU for the Machinery Directive 2006/42/EC	Document structure (group)	✓	Yes	English	...
☆	DSG 2006/42/EG (Version 2022-09-12)	Dokumentenstrukturdaten nach den im EU-Amtsblatt veröffentlichten Normen nach Maschinenrichtlinie 2006/42/EG	Document structure (group)	✓	Yes	German	...
★	FB Risikobeurteilung - 3. Auflage (Version 2020-02-20)	Effiziente CE-Kennzeichnung von Maschinen und Anlagen - Risikobeurteilung in der Praxis	Knowledge Base: technical bo...	✓	Yes	German	...
★	GLI EN ISO 12100:2010_SYS_V3	Gefährdungsliste nach EN ISO 12100:2010, Anhang B	Hazards list	✓	Yes	German	...
★	HLI EN ISO 12100:2010_SYS_V3	Hazards list of EN ISO 12100:2010, Annex B	Hazards list	✓	Yes	English	...
☆	LC EN ISO 12100:2010 (Version 2020-06-20)	Liste de contrôle selon EN ISO 12100:2010	Checkpoints library	✓	Yes	French	...

By clicking on the shopping cart, you will get more information about the additional product in the IBF Shop and the possibility to order directly.

6.2 Document structure / document comparison

If Safexpert additional products of the type "Document structure" (see 6.2.1) are available and have been licensed, then you will find the respective functions in the context menu:

Safexpert StandardsManager 9.0 (72)

Feedback overview Daniel Zacek

13857 x + Saved searches

Q 13857 Advanced search settings Search

3 Results count

+ New document Save search

Fav...	Document number	Title	Document ty...	Status	CE	Additional pr...	
★	EN ISO 13857:2019	Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2019)	type-B standard	✓	✓	3	...
★	ÖNORM EN ISO 13857:2020-07-01	Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2019)	Standard	✓			...
★	ÖNORM EN ISO 14738:2020-05-15	Safety of machinery - Anthropometric requirements for the design of workstations for industries and services (ISO/DIS 14738:2020)	Standard	✓			...

Connected links

- (English) EN ISO 13857:2019
- (English) EN ISO 13857:2019-10
- (German) EN ISO 13857:2019

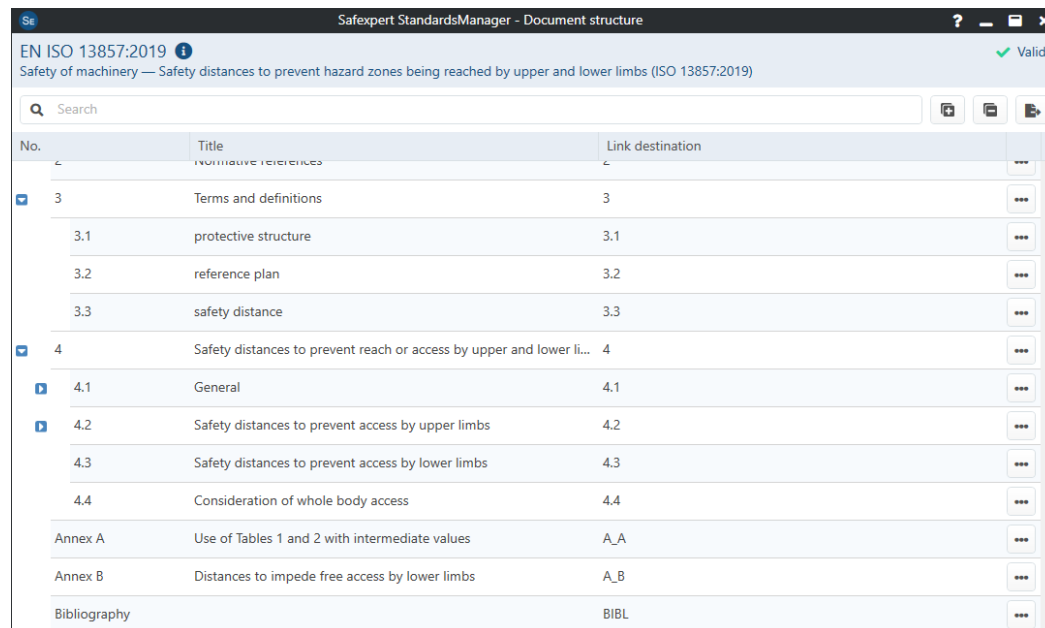
Open:

- Document structure (German)
- Document structure (English)
- Document comparison (German)
- Document comparison (English)

Knowledge Base

6.2.1 Open document structure

The "Document structure" function displays the selected document divided into its individual sections:



The screenshot shows a software window titled "Safexpert StandardsManager - Document structure". The window displays the document structure for "EN ISO 13857:2019" (Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2019)). A search bar is at the top. Below it is a table with columns "No.", "Title", and "Link destination". The table lists various sections of the standard, including normative references, terms and definitions, safety distances, and annexes. Each row has a small icon on the left and a three-dot menu on the right.

No.	Title	Link destination
2	Normative references	2
3	Terms and definitions	3
3.1	protective structure	3.1
3.2	reference plan	3.2
3.3	safety distance	3.3
4	Safety distances to prevent reach or access by upper and lower li...	4
4.1	General	4.1
4.2	Safety distances to prevent access by upper limbs	4.2
4.3	Safety distances to prevent access by lower limbs	4.3
4.4	Consideration of whole body access	4.4
Annex A	Use of Tables 1 and 2 with intermediate values	A_A
Annex B	Distances to impede free access by lower limbs	A_B
Bibliography		BIBL

The preparation of data in this form is a prerequisite for a certain edition of a standard so that the references to the predecessor document can be created when a subsequent standard is published. The data of the additional products of the type "document structure incl. references to the predecessor" are required for the document comparison (see 6.2.2) and for the Update assistant function in the Risk assessment module. This function was already included in Safexpert 8.6 and explained in the whitepaper on the Change Assistant (see <https://www.ibf-solutions.com/fileadmin/Dateidownloads/whitepaper-safexpert-change-assistant.pdf>).

6.2.2 Document comparison

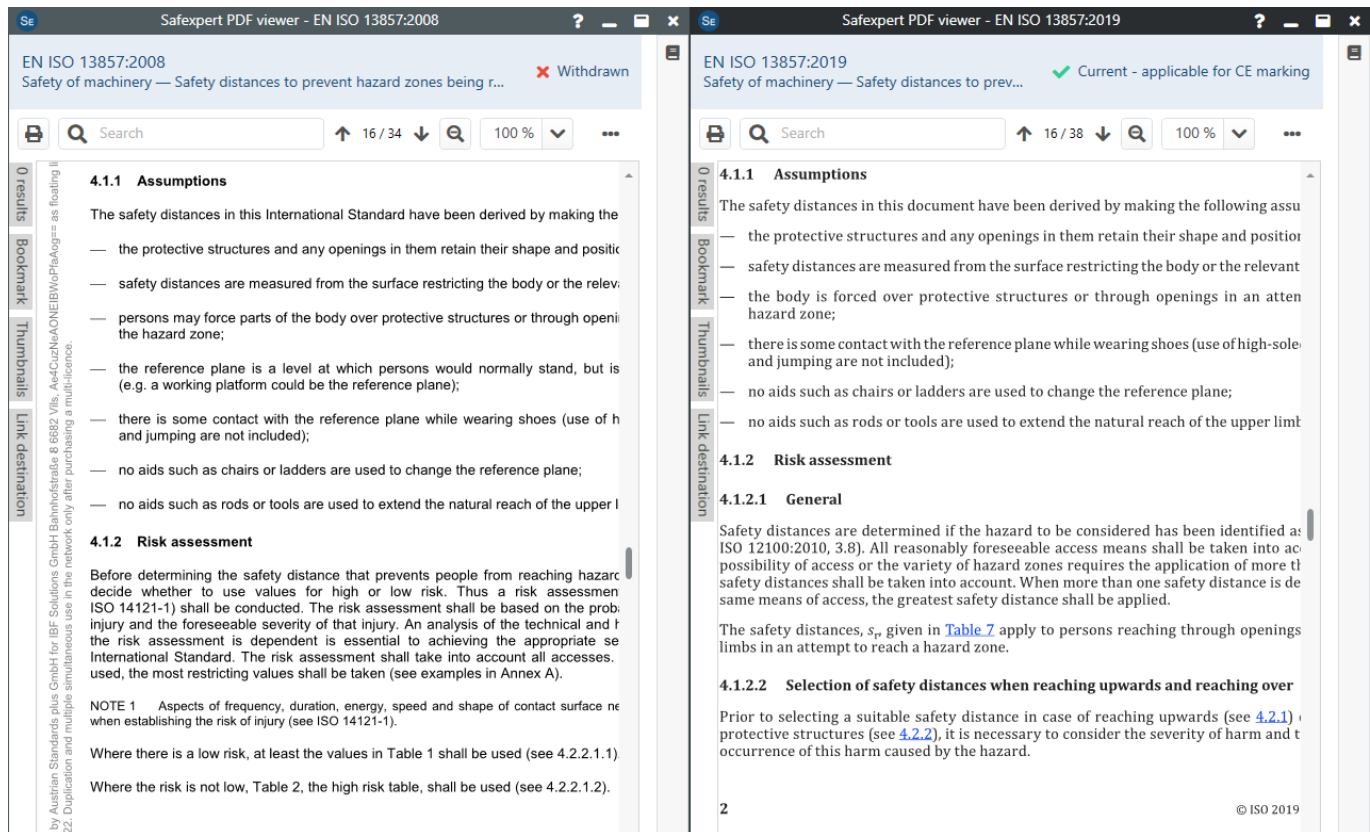
When standards change, you probably want to know what exactly has changed. This new function supports you in doing so in conjunction with the respective Safexpert additional products of the type "Document structure (incl. references to the predecessor document)".

Safexpert document comparison 9.0 (72)									
EN ISO 13857:2008 Withdrawn					EN ISO 13857:2019 Valid				
Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)					Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2019)				
<input type="text"/> Search <input type="button" value="Filter"/> <input type="button" value="Print"/>					<input type="text"/> Search <input type="button" value="Filter"/> <input type="button" value="Print"/>				
No.	Title	Content chan...	Renumber...		No.	Title	Content chan...	Renumber...	
Annex ZA	Relationship between...	Textual change	No			Introduction	Textual change	No	
Annex ZB	Relationship between...	Deleted	-			1	Scope	Textual change	No
ISO Contents	Contents	Textual change	Yes			2	Normative references	Textual change	No
ISO Foreword	Foreword	Unknown	No			3	Terms and definitions	Textual change	No
Introduction	Introduction	Textual change	No			3.1	protective structure	Unchanged	No
1	Scope	Textual change	No			3.2	reference plan	Textual change	Yes
2	Normative references	Textual change	No			3.3	safety distance	Unchanged	Yes
3	Terms and definitions	Textual change	No			4	Safety distances to prevent reach or...	Textual change	No
3.1	protective structure	Unchanged	No			4.1	General	Unchanged	No
3.2	safety distance	Unchanged	Yes			4.1.1	Assumptions	Textual change	No
4	Safety distances to pr...	Textual change	No			4.1.2	Risk assessment	Textual change	No
4.1	General	Unchanged	No			4.1.2.1	General	Textual change	Yes
4.1.1	Assumptions	Textual change	Yes			4.1.2.2	Selection of safety distances when re...	Textual change	Yes
4.1.2	Risk assessment	Textual change	Yes			4.2	Safety distances to prevent access b...	Unchanged	No

Convenient filter functions provide answers to common questions:

- Which sections have been deleted (or not included) in the new standard?
- Where is a section of the predecessor document located in the successor document?
And vice versa: Where was a section in the successor document located in the predecessor document?
- Has any section changed in content?
- Has a section been renumbered?
- Which sections are new in the follow-up document?

Clicking on one of the two "Open" icons opens both documents at the appropriate place so that you can see as quickly as possible exactly what has changed in terms of content:



Required licenses

In order for you to take advantage of these valuable features, you will need:

- the StandardsManager module,
- the MRL-EU data package so that you can search for the standards in the StandardsManager,
- the corresponding Safexpert additional product of the "document structure" type (including the links to the sections of the predecessor or successor document)
- the full text documents in PDF format.

If you cannot find suitable additional products for the standard you require in the IBF Shop, please send us an e-mail. We will clarify for you without obligation whether a SECOM expert is interested in developing the required products for you. If the products could be interesting for other customers, the development costs could be reduced. Please refer to our Early Adopter Program (www.ibf-solutions.com/safexpert-zusatzprodukte#c19115).

Product group to the harmonized standards according to the Machinery Directive

Safexpert additional products of type Document structure (group) ¹	Item no.	License fee [per user per month]*
Document structure data according to the standards published in the EU Official Journal in accordance with the Machinery Directive 2006/42/EC	4016-SE.EN.ML	5,00

*Will be billed annually

¹ Previously named "Standards reference data"

Content and our service for these two products:

- We have divided all harmonized standards published in the Official Journal of the EU in accordance with the Machinery Directive into their individual sections in meticulous detail in German and English and stored them in the additional products. In total, there are currently around 2,000 standards with almost 200,000 (!) sections.
- Since 2016, we have also divided around 400 successor documents in German and English into their individual sections. In addition, we have recorded which section of a successor document replaces which section of the predecessor document.
- Our experts continue to do this work for these additional products when standards change according to the Machinery Directive in the EU Official Journal.
- And the best for the end: For all subsequent standards contained in these additional products, our SECOM experts have also been comparing the old with the new standards in terms of content since December 1, 2020. Depending on whether the headings or the content of a section changes compared to the predecessor section, the data record receives the attribute "Text change" or "Unchanged".

One additional product - triple benefit!

Safexpert 9.0 uses the data from these additional products not only for document comparison but also for

- in the Risk Assessment module in the Change Assistant function and
- in the StandardsManager module and in the Safexpert PDF viewer for selecting the standards section for which you want to provide feedback (see 6.3).

6.3 Provide feedback on standards

Safexpert has had the "Give feedback" function for some time. This allows you, as a standards user, to provide feedback on individual standards sections very easily and unbureaucratically, for example if you notice an error or if you are of the opinion that a requirement no longer meets the state of the art.

However, your feedback will not be published immediately in the Safexpert Knowledge Base, but will be edited and, if necessary, coordinated with the responsible standards committee.

The features that allow you to write and send your feedback to us have been expanded and improved in Safexpert 9.0:

- The function can be called in two places. In the StandardsManager in the detail area of a standard:

The screenshot shows the 'Safexpert StandardsManager 9.0 (72)' application window. The top bar includes a search bar with '12100' entered and a 'Search' button. Below the search bar, a table lists 17 results. The second result, 'EN ISO 12100:2010 Safety of machinery - General principles for design (ISO 12100:2010)', is selected. To the right of this table, a detailed view for the selected standard is shown. In this view, the 'Feedback' button is highlighted with a red rectangle. The interface also shows options for language (English) and document actions (New document, Save search, etc.).

Fav...	Document number	Title
★	EN 13861:2011	Safety of machinery - Guidance for the application of design of machinery
★	EN ISO 12100:2010	Safety of machinery - General principles for design (ISO 12100:2010)
★	EN ISO 19085-15:2021	Woodworking machines - Safety - Part 15: Presses (ISO 19085-15:2021)
★	EN ISO 20607:2019	Safety of machinery - Instruction handbook - General (ISO 20607:2019)
★	EN ISO 4413:2010	Hydraulic fluid power — General rules and safety requirements (ISO 4413:2010)
★	EN ISO 4414:2010	Pneumatic fluid power — General rules and safety requirements (ISO 4414:2010)

EN ISO 12100:2010
Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)

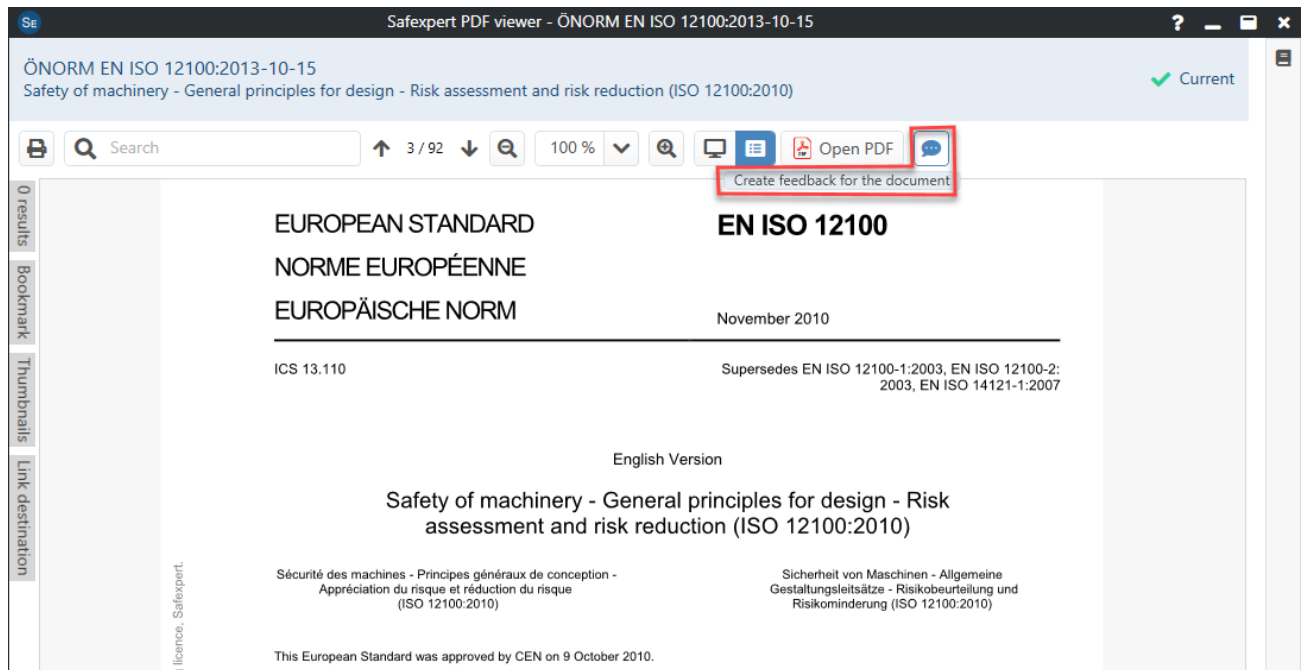
English Feedback

Title / Alternative title

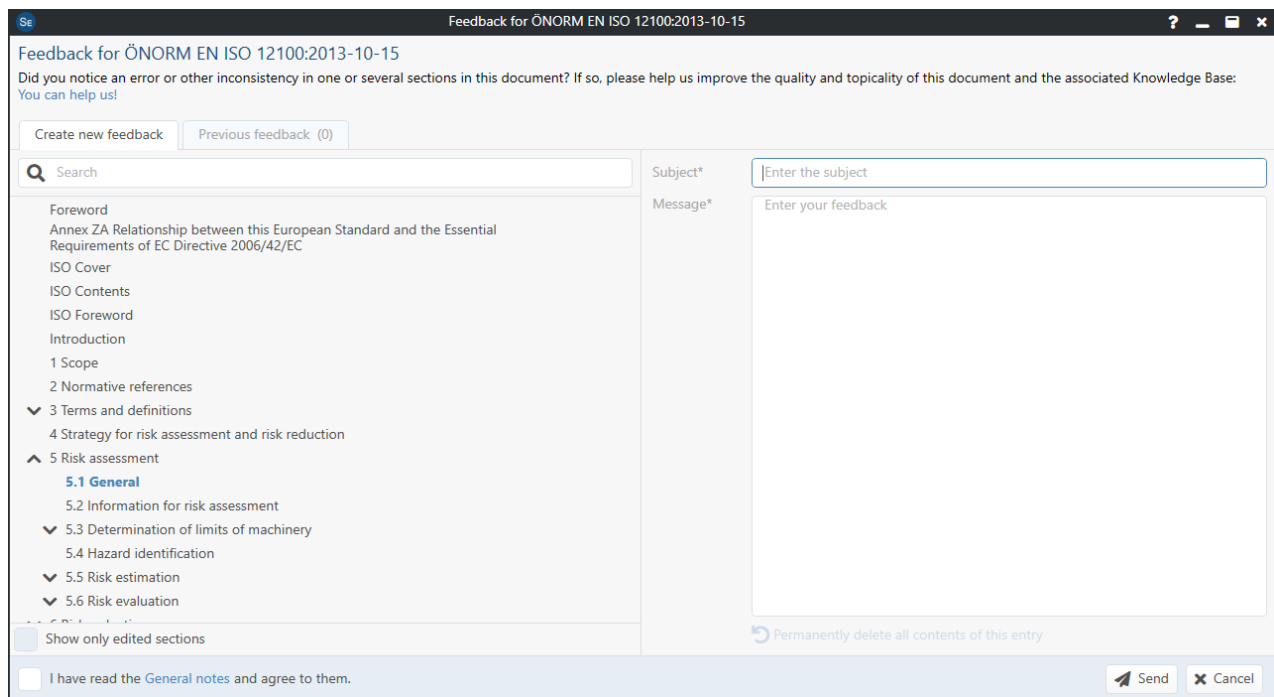
Document description

Short information This International Standard specifies basic terminology, principles and a methodology for achieving safety in the design of machinery. It specifies principles of risk assessment and risk reduction to help designers in achieving this objective. These principles are based on knowledge and experience of the design, use, incidents, accidents and risks associated with machinery. Procedures are described for identifying hazards and estimating and evaluating risks during relevant phases of the machine life cycle, and for the elimination of hazards

and in the Safexpert PDF viewer:

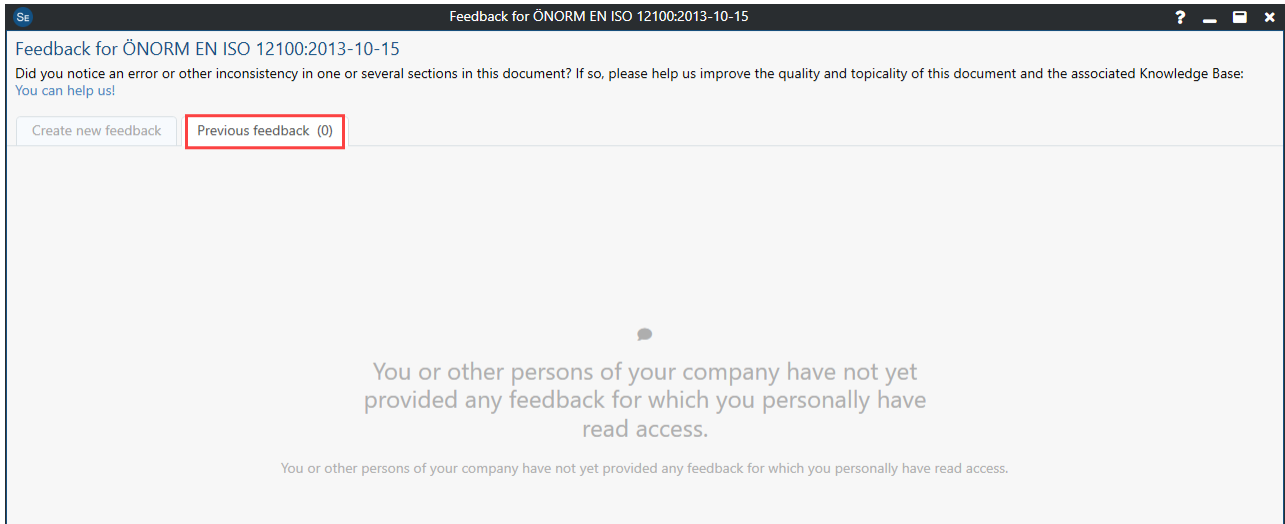


- The mask for recording feedback has been revised:

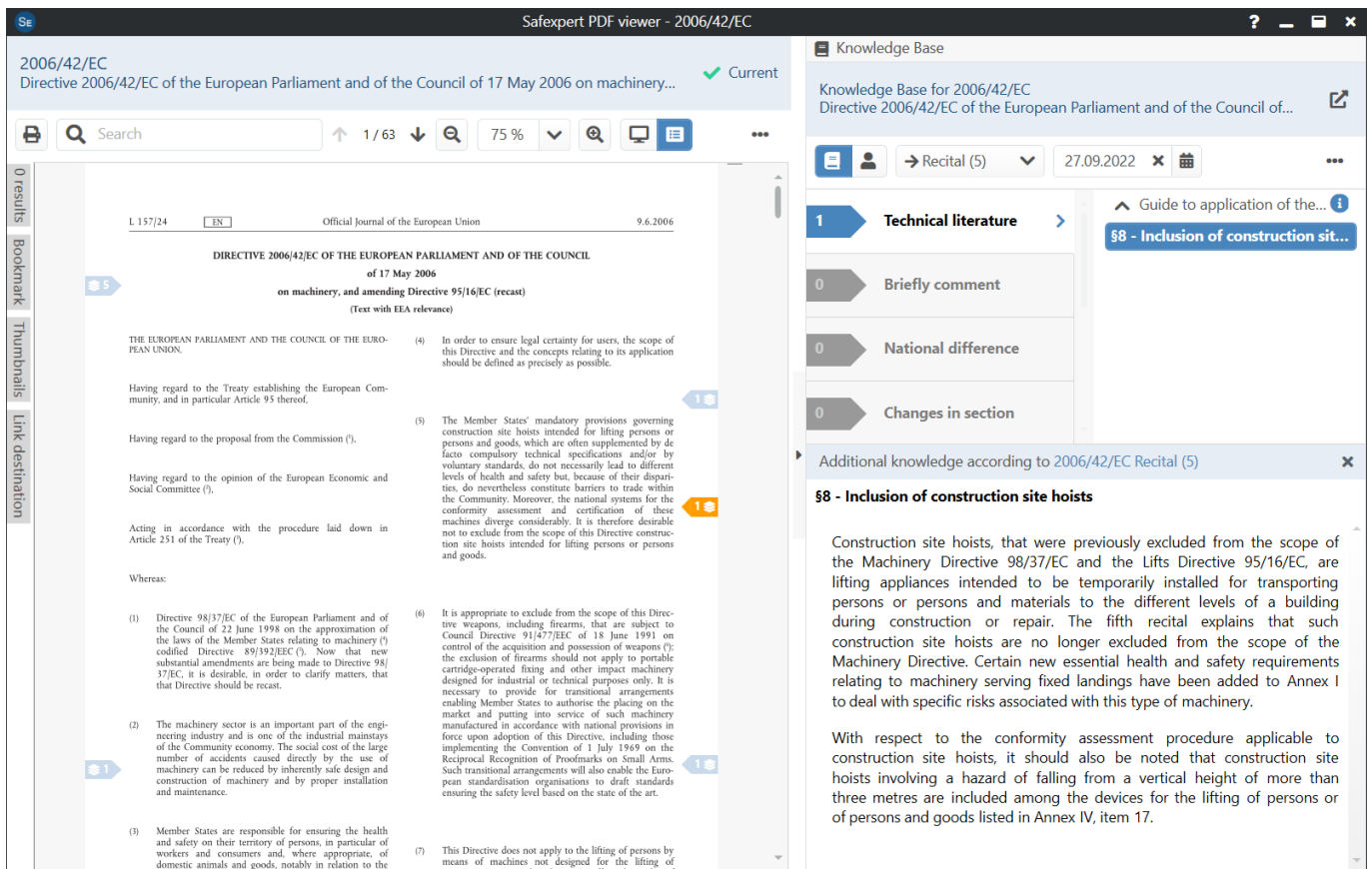


You can now also see the sections of a standard, provided that an additional product of the type "Document structure" (see 6.2.1) is available.

- You can now also see if you have already sent feedback to us on this standard:



7 Safexpert Knowledge Base incl. Safexpert PDF Viewer



With the Safexpert Knowledge Base we offer you a worldwide unique system to display daily updated additional knowledge exactly where it is needed, directly on the screens of the responsible persons.

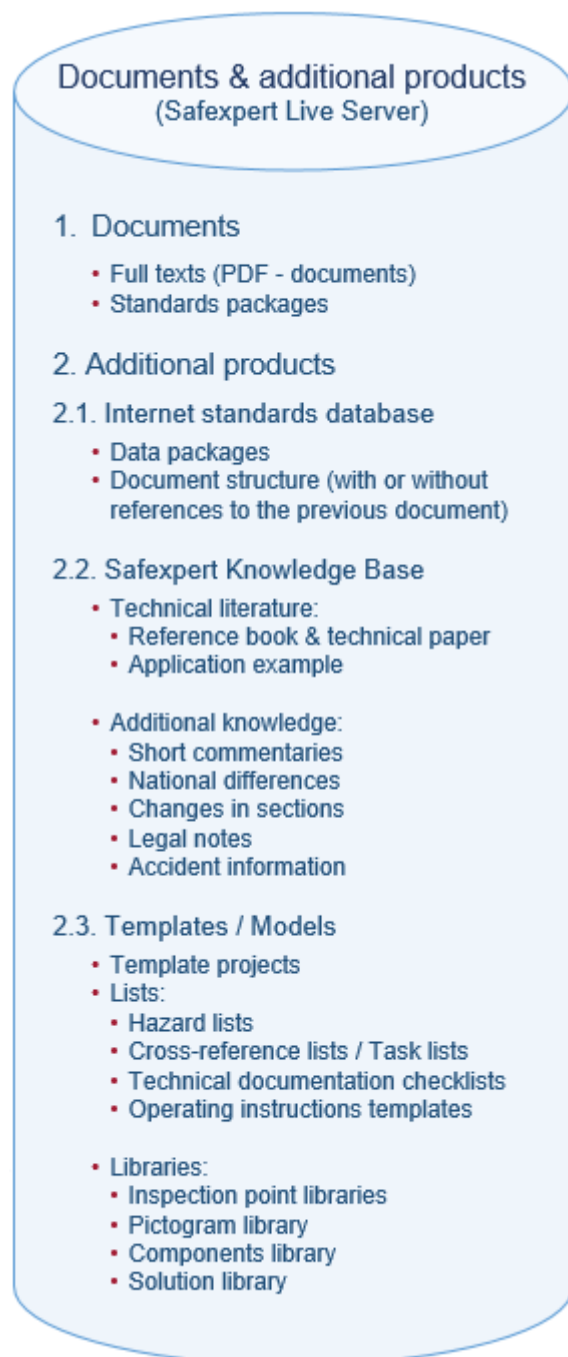
While the document is loading in the also newly developed PDF viewer, Safexpert checks in real time whether entries are available in the Safexpert Knowledge Base on the Safexpert Live Server in the Knowledge Base products you have licensed. The number of entries found is displayed directly for each section in the base document.

Clicking on the flag displays the additional knowledge directly. There may be links to websites that provide you with even more information on the topic.

To free you from ballast that is of no interest to you, only data from Knowledge Base products you have marked as "personal favorites" are displayed.

8 Safexpert additional products

8.1 Product portfolio



As before, Safexpert contains standards or other documents in full text in PDF format, as well as data packages on the harmonized standards of various EU directives.

In addition to the standards, we offer Safexpert additional products, which are divided into groups for a better overview.

Safexpert Knowledge Base

Safexpert 9.0 comes up with a worldwide unique novelty: for every standard - and even for every single standard section (!) top up-to-date additional knowledge can now be provided in so-called knowledge base products.

Until now, users of standards have purchased a technical book, for example, to obtain background and empirical knowledge about standards. With Safexpert 9.0, our customers now purchase access to updated data on the Safexpert Live Server.

This has three key advantages:

- The content can be updated daily at a central location.
- New information is available to users in real time.
- The data are available in machine-readable form and can therefore be used for digital analyses (see 4). This means that data subjects can be informed about "important events" even though they did not search for them. We call this:

Find without searching! (Need to know)

Template / Models

In this product group there are important innovations in connection with checklists or checkpoint Libraries (see section 11.8) and a sensational novelty: the Safexpert solution library (see section 10).

Detailed information on Safexpert additional products can be found on our homepage:

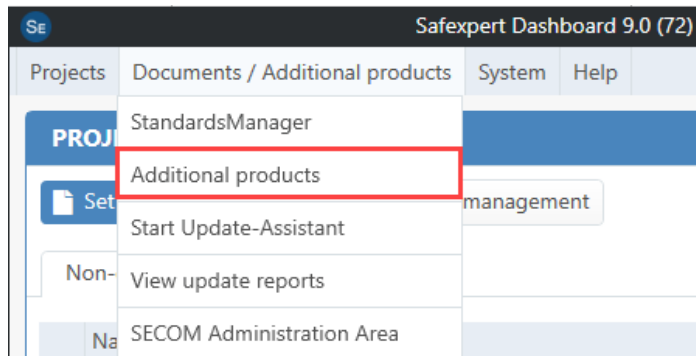
- www.ibf-solutions.com/safexpert-zusatzprodukte

If you are a SECOM expert and would like to develop additional products yourself, you can also obtain the document free of charge:

- Guide to the production of Safexpert additional products

8.2 Search additional products

This new feature is located in the Safexpert Dashboard in the main menu:



The functionality is very similar to the search and management of standards in Safexpert StandardsManager:

Favou...	Product number	Title	Product type	Status
★	DST ÖVE EN 60204-1:2019-08-01	Dokumentenstruktur in die einzelnen Abschnitte aufgeteilt, inkl. Referenzen zu den Abschnitten des Vorgängerdokuments: ÖVE EN 60204-1:2019-08-01 im Vergleich zu ÖVE/ÖNORM EN 60204-1:2009-12-01	Document structure	
★	DST ÖVE EN 60204-1:2019-08-01	Document structure subdivided into the particular sections, including references to the sections of the predecessor document: ÖVE EN 60204-1:2019-08-01 in comparison with ÖVE/ÖNORM EN 60204-1:2007-08-01	Document structure	
★	CRL EN 60204-1:2006/A1:2009	Cross-reference list to EN 60204-1:2006/A1:2009	Cross-reference list B standard	
★	CRL EN 60204-1:2018	Cross-reference list to EN 60204-1:2018	Cross-reference list B standard	
★	LRC EN 60204-1:2006/A1:2009	Liste de références croisées vers EN 60204-1:2006/A1:2009	Cross-reference list B standard	
★	QVL EN 60204-1:2006/A1:2009	Querverweisliste nach EN 60204-1:2006/A1:2009	Cross-reference list B standard	
★	QVL EN 60204-1:2018	Querverweisliste nach EN 60204-1:2018	Cross-reference list B standard	
★	CLI EN 60204-1:2018 (Version 2020-08-21)	Checklist to EN 60204-1:2018	Checkpoints library	
★	DST ÖVE/ÖNORM EN 60204-31:2014-04-01	Document structure subdivided into the particular sections: ÖVE/ÖNORM EN 60204-31:2014-04-01	Document structure	
★	DST ÖVE/ÖNORM EN 60204-31:2014-04-01	Dokumentenstruktur in die einzelnen Abschnitte aufgeteilt: ÖVE/ÖNORM EN 60204-31:2014-04-01	Document structure	
★	DST ÖVE/ÖNORM EN 60204-32:2009-05-01	Dokumentenstruktur in die einzelnen Abschnitte aufgeteilt: ÖVE/ÖNORM EN 60204-32:2009-05-01	Document structure	
★	DST ÖVE/ÖNORM EN 60204-32:2009-05-01	Document structure subdivided into the particular sections: ÖVE/ÖNORM EN 60204-32:2009-05-01	Document structure	
★	DST ÖVE/ÖNORM EN 60204-32:2009-05-01	Document structure subdivided into the particular sections: ÖVE/ÖNORM EN 60204-32:2009-05-01	Document structure	

★ CLI EN 60204-1:2018 (Version 2020-08-21)
Checklist to EN 60204-1:2018

Open (English) Open Edit Delete

Title
 Title Checklist to EN 60204-1:2018

Product description
 Short information -
 Keywords EN 60204-1
 Safety of machinery
 Electrical equipment of machines
 Product type Checkpoints library
 Language English

Status
 Applicable Yes
 Status code Current
 Valid from 01.08.2019
 Withdrawn -
 Created on 17.08.2020
 Last change on 18.09.2020
 Last change by Kjeldgaard Jørgen
 Changes allowed by the user Yes

Scope
 Subject area (ICS) ICS 29.020. ICS 13.110.

To find suitable additional products for a standard, the column "Additional products" has been implemented in the StandardsManager:

Safexpert StandardsManager 9.0 (72)

Feedback overview

2006/42 x +

Q 2006/42

Advanced search settings

Search

10 Results count

+ New document Save search

Fav...	Document number	Title	Document type	Status	CE	Additional products	
★	2006/42/EC	(Machinery Directive) Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (recast) (1)	Directive	✓	✓	18	
★	2006/42/EC	Corrigendum to Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC	Correction	✓	✓	0	
★	2009/127/EC	Directive 2009/127/EC of the European Parliament and of the Council of 21 October 2009 amending Directive 2006/42/EC with regard to machinery for pesticide application	Directive	✓	✓	15	
★	2009/128/EC	Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides	Directive	✓	✓	0	
★	2022/586	Commission Regulation (EU) 2022/586 of 8 April 2022 amending Annex XIV to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)	Administrative Document (f	✓		0	
★	EN 474-1:2006 + A5:2018	Earth-moving machinery — Safety — Part 1: General requirements	type-C standard	⚠	✓ ⚠	0	
★	EN ISO 19085-3:2017	Woodworking machines - Safety - Part 3: Numerically controlled (NC) boring and routing machines (ISO 19085-3:2017)	type-C standard	⚠	✓ ⚠	0	
★	FB Risikobeurteilung - 3. Auflage (Version 2020-02-20)	Efficient CE-marking of machines and equipment - risk assessment in practice	Knowledge Base Technical t	✓		0	
★	GDE EU 2006/42/EC - Edition 2.2 (Version 2019-10-01)	Guide to application of the Machinery Directive 2006/42/EC - Edition 2.2 - October 2020 (English version)	Knowledge Base Technical t	✓		1	
★	LF EU 2006/42/EG - Auflage 2.2 (Version 2019-10-01)	Leitfaden für die Anwendung der Maschinenrichtlinie 2006/42/EG - Auflage 2.2 - Oktober 2019	Knowledge Base Technical t	✓		2	

The number indicates how many additional products have already been licensed for your company for a standard or other document.

Safexpert additional products: Libraries, lists, templates, Knowledge Base, ... 9.0 (72)

Additional products for 2006/42/EC x +

Q [Enter search concept (number, title, ...)]

Advanced search settings

Search

27 Results count

+ New additional product Import additional product

Fav...	Product number	Title	Product type	Status	Applicable	Language	
★	CLI 2006/42/EC + 2009/127/EC (Version 2014-07-10)	Checklist to Directive 2006/42/EC incl. 2009/127/EC	Checkpoints library	✓	Yes	English	
★	CPL 2006/42/EC + 2009/127/EC (Version 2022-05-07)	Checkpoint library to 2006/42/EC, Annex I incl. 2009/127/EC (Version 2022-05-07)	Checkpoints library	✓	Yes	English	
★	CRL 2006/42/EC + 2009/127/EC - (Version 2011-12-16)	Cross-reference list to Directive 2006/42/EC incl. 2009/127/EC	Cross-reference list	✓	Yes	English	
★	CTF 2006/42/EC + 2009/127/EC	Machinery Directive 2006/42/EC incl. 2006/127/EC	Checklist: Technical file	✓	Yes	English	
★	CTU 2006/42/EG + 2009/127/EG	Maschinenrichtlinie 2006/42/EG inkl. 2009/127/EG	Checklist: Technical file	✓	Yes	German	
★	DSG 2006/42/EC (Version 2022-09-12)	Document structure data according to the standards published in the Official Journal of the EU for the Machinery Directive 2006/42/EC	Document structure (group)	✓	Yes	English	
★	DSG 2006/42/EG (Version 2022-09-12)	Dokumentenstrukturdaten nach den im EU-Amtsblatt veröffentlichten Normen nach Maschinenrichtlinie 2006/42/EG	Document structure (group)	✓	Yes	German	
★	DST 2006/42/EC	Document structure subdivided into the particular sections: 2006/42/EC	Document structure	✓	Yes	English	
★	DST 2006/42/EC	Dokumentenstruktur in die einzelnen Abschnitte aufgeteilt: 2006/42/EC	Document structure	✓	Yes	German	

If you extend the search to the Safexpert Live Server, you will see all other available additional products for a document. A click on the shopping cart leads you to the IBF Shop (see section 9).

Additional products can now also be defined as "personal favourites". This makes it easier to find the additional products that are marked as important for you. This also controls whether an additional product should be displayed in the Safexpert Knowledge Base. This relieves you of information that is unnecessary for you.

8.3 Manage additional products

The additional products are also managed in this window:

Additional products for 2006/42/EC x +

Q Enter search concept (number, title, ...)

Advanced search settings

18 Results count

+ New additional product Import additional product

Favou...	Product number	Title	Product type	Status	Applicable	Language	
★	CRL 2006/42/EC + 2009/127/EC - (Version 2011-12-16)	Cross-reference list to Directive 2006/42/EC incl. 2009/127/EC	Cross-reference list	✓	Yes	English	[Icon] ...
★	CTF 2006/42/EC + 2009/127/EC	Machinery Directive 2006/42/EC incl. 2006/127/EC	Checklist: Technical file	✓	Yes	English	[Icon] ...
★	DST 2006/42/EC	Document structure subdivided into the particular sections: 2006/42/EC	Document structure	✓	Yes	English	[Icon] ...
★	DST 2021/0105	Document structure subdivided into the particular sections including references to the sections of the predecessor document: 2021/0105 in comparison with 2006/42/EC	Document structure	✓	Yes	English	[Icon] ...
★	GDE EU 2006/42/EC - Edition 2.2 (Version 2019-10-01)	Guide to application of the Machinery Directive 2006/42/EC - Edition 2.2 – October 2020	Knowledge Base: technical bo...	✓	Yes	English	[Icon] ...
★	KB Safexpert general	General Knowledge Base for Safexpert	Knowledge Base: Additional k...	✓	Yes	English	[Icon] ...

Open
Copy
Export
Transfer Checklist: Technical file to IBF

Here you can create, import export and open for editing additional products.

8.4 License models

You use the Safexpert modules as before in a floating license (simultaneous parallel use in the purchased number).

We offer Safexpert additional products as a personalized license for the following reasons:

- People in different roles need different software tools and therefore different additional products.
- It would not be practical if you had to pay for products that you do not need.
- In order for the digital analyses in Safexpert to take place simultaneously in the background, all Safexpert users need simultaneous access to "their" Safexpert additional products.
- The copyrights for many additional products are not held by IBF. The publishers themselves decide on the license models offered.
- The cost of developing and updating additional products can be enormous. For business reasons, providing them at affordable prices is basically only possible if the costs can be spread over many shoulders.

Nevertheless, it is possible to put together individual license packages for your department or company. Please feel free to contact us if you have any requirements in this regard. We will be happy to provide you with a non-binding offer.

9 Connection to the IBF Shop

Both in StandardsManager and when searching for additional products, the icon with the shopping cart is displayed if a license has not yet been purchased for the product in your company:

Safexpert StandardsManager 9.0 (7/2)

Feedback overview

machine x +

Q machine

Advanced search settings

Search

100 result(s) of 356 is/are shown All

+ New document Save search

Fav...	Document number	Title	Document type	Status	CE	Additional products	
☆	EN 415-7:2006 +A1:2008	Safety of packaging machines - Part 7: Group and secondary packaging machines	type-C standard	✓	✓	0	🛒 ...
☆	EN ISO 19085-7:2019	Woodworking machines - Safety - Part 7: Surface planing, thickness planing, combined surface/thickness planing machines (ISO 19085-7:2019)	type-C standard	✓	✓	0	+ ...
☆	EN 931:1997 +A2:2009	Footwear manufacturing machines - Lasting machines - Safety requirements	type-C standard	✓	✓	0	🛒 ...
☆	EN 972:1998 +A1:2010	Tannery machines — Reciprocating roller machines — Safety requirements	type-C standard	✓	✓	0	🛒 ...
☆	EN 972:1998 +A1:2010/AC:2011	Tannery machines — Reciprocating roller machines — Safety requirements	type-C standard	✓	✓	0	+ ...
☆	EN 1034-1:2021	Safety of machinery - Safety requirements for the design and construction of paper making and finishing machines - Part 1: Common requirements	type-C standard	✓		0	🛒 ...
☆	EN 12750:2013	Safety of woodworking machines - Four sided moulding machines	type-C standard	⚠	✓	0	🛒 ...
☆	EN ISO 19085-14:2021	Woodworking machines - Safety - Part 14: Four-sided moulding machines (ISO 19085-14:2021)	type-C standard	✓		0	+ ...
☆	EN 17106-3-1:2021	Road operation machinery - Safety - Part 3-1: Winter service machines - Requirements for snow clearing machines with rotating tools and snow ploughs	type-C standard	✓		0	+ ...

Click on the "shopping cart" icon to open the IBF Shop:

Checklist according to EN ISO 12100:2010 - Annex B - Risk Assessment

Checklist



730,00 €

● zzgl. MwSt, kostenloser Versand, Lieferzeit ca. 1-3 Werktage

Lizenztyp:

<input type="text" value="0"/>	Erstlizenz (Floating)	730,00 €
<input type="text" value="0"/>	Folgelizenz (Personalisiert)	170,00 €
<input type="text" value="0"/>	Standortlizenz	1210,00 €

Summe (Lizenzen) 0 €

In den Warenkorb

Beschreibung

Produktinformationen "Checklist according to EN ISO 12100:2010 - Annex B - Risk Assessment"

This checklist contains checkpoints in accordance to the annexes B.2 (examples of hazards) and B.4 (examples of hazardous events). For each checkpoint the checklist contains direct cross-references to the paragraphs of EN ISO 12100:2010 and Annex I of the Machinery Directive 2006/42/EC.

In order to use this product you need the Safexpert module Check and Acceptance Assistant: <https://www.ibf-solutions.com/en/ce-software-safexpert/check-and-acceptance-assistant>

Produkteigenschaften

Sprache:	EN
Basisdokument:	EN ISO 12100:2010
ICS:	13.110
Herausgeber:	IBF Solutions GmbH

10 Safexpert solution library

Besides the Safexpert Knowledge Base, this is probably the most important new feature in Safexpert 9.0 if you use Safexpert to perform and document risk assessments!

The new function replaces the previous "measures library" and will massively simplify your safety-related product management!

The measure libraries developed on your system are automatically converted into solution libraries during setup. These can then be manually extended to the Safexpert 9.0 state.

What is special about the solution libraries?

Designers and planners are primarily looking for solutions, not standards. In product development, a lot of time could be saved if one could fall back on solutions that are already available.

But there is a catch: standards and the state of the art are constantly evolving. A solution that met the safety requirements yesterday may no longer be suitable today. This is also expressed in the harmonized EN ISO 12100 standard:

EIN ISO 12100:2010, Section 4, Note 2:

"A machine design that is acceptable at a particular point in time may no longer be justifiable if technological developments permit the design of an equivalent machine with less risk. "

Safexpert has previously already checked whether the standards applied when developing the measures are still current when adopting solutions from the measures library. If standards changed, the designers then had to check themselves what exactly had changed in the standard and check and, if necessary, adapt the selected measures.

The "Change Assistantchan" implemented in Safexpert version 8.6 supports this work (see <https://www.ibf-solutions.com/fileadmin/Dateidownloads/whitepaper-safexpert-change-assistant.pdf>).

But Safexpert 9.0 can do even more:

- complete solutions developed on the basis of standards are now centrally managed in solution libraries worldwide,
- the publishers of solution libraries can update them centrally in one place worldwide,
- Designers can find predefined solutions in solution libraries,
- in the projects, digital analyses (see 10.2) whether the solutions applied are still up to date,
- affected persons learn about such events that are important to them via their personal dashboard,
- by means of the new filter "Solutions no longer up to date" you can very quickly find all withdrawn solutions in your projects,
- if successor solutions have been defined by the publisher for withdrawn solutions, exchange them in your projects with a few mouse clicks.

With this novel concept and the implementation in Safexpert, you save yourself the tedious clarification of what has changed in standards and in which projects at which points this has an impact. Safexpert delivers these analyses and the new solutions free to your desk every day (see 10.2).

10.1 Manage solution libraries

Like all other additional products, you can find the solution libraries in the "Safexpert additional products ..." window:

Favou...	Product number	Title	Product type	Status	Applicable	Language	
★	LB - EN 619: Stetigförderer für Stückgut	EN 619: Stetigförderer für Stückgut	Solutions library	✓	Yes	German	
★	LB - EN ISO 16090-1: Werkzeugmaschinen Sicherheit	EN ISO 16090-1: Werkzeugmaschinen Sicherheit	Solutions library	✓	Yes	German	
★	LB - EN ISO 16092-3: Werkzeugmaschinen Sicherheit - Hydraulische Pressen	EN ISO 16092-3: Werkzeugmaschinen Sicherheit - Hydraulische Pressen	Solutions library	✓	Yes	German	

10.2 Digital analysis: Solutions still up to date?

Safexpert now no longer "only" checks whether the applied standards are still up-to-date. Now Safexpert also supplies the successor solutions adapted to a standard. You simply replace your outdated solution with a few mouse clicks!

Practical example:

1. A prefabricated solution from a solution library was adopted in the "chain conveyor" project.
2. When standards or the state-of-the-art change, SECOM experts update the solutions managed on the Safexpert Live Server in the solution library.
3. You'll hear about it in the dashboard and update your solution libraries across your organization.
4. In the "PROJECTS" widget, you can find out which projects have "important events":

The screenshot shows the Safexpert Dashboard 9.0 (72) with the following components:

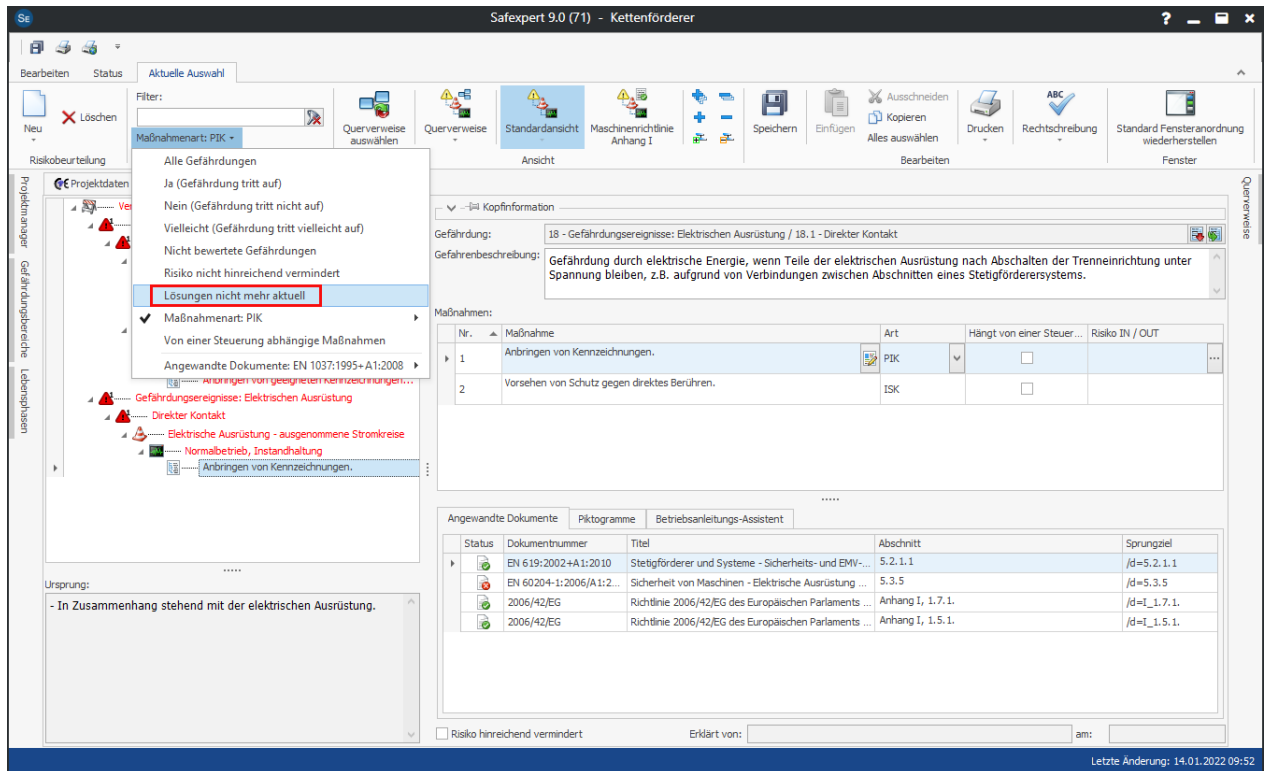
- PROJECTS** widget: A table listing projects with columns for Name, Opened last, Changed last, Important events, and Open. The 'Important events' column is highlighted with a red box, showing icons for 2, 7, and 6 events.
- STANDARDSMANAGER** widget: A list of standards including 2006/42/EC, CLI EN 60204-1:2018, BAV IEC/IEEE 82079-1:2019, ÖNORM EN ISO 12100:2010, and EN ISO 11553-1:2008.
- OUTSTANDING TASKS** widget: A table showing due dates and task counts.
- DOCUMENTS / ADDITIONAL PRODUCTS** widget: A notification about 1 important event for documents/products.
- SYSTEM** widget: A list of system components like Software/Modules, Licence, Memory, and Database.

5. Clicking on the icon opens the "Project status" window. Here you can see which solutions are no longer current:

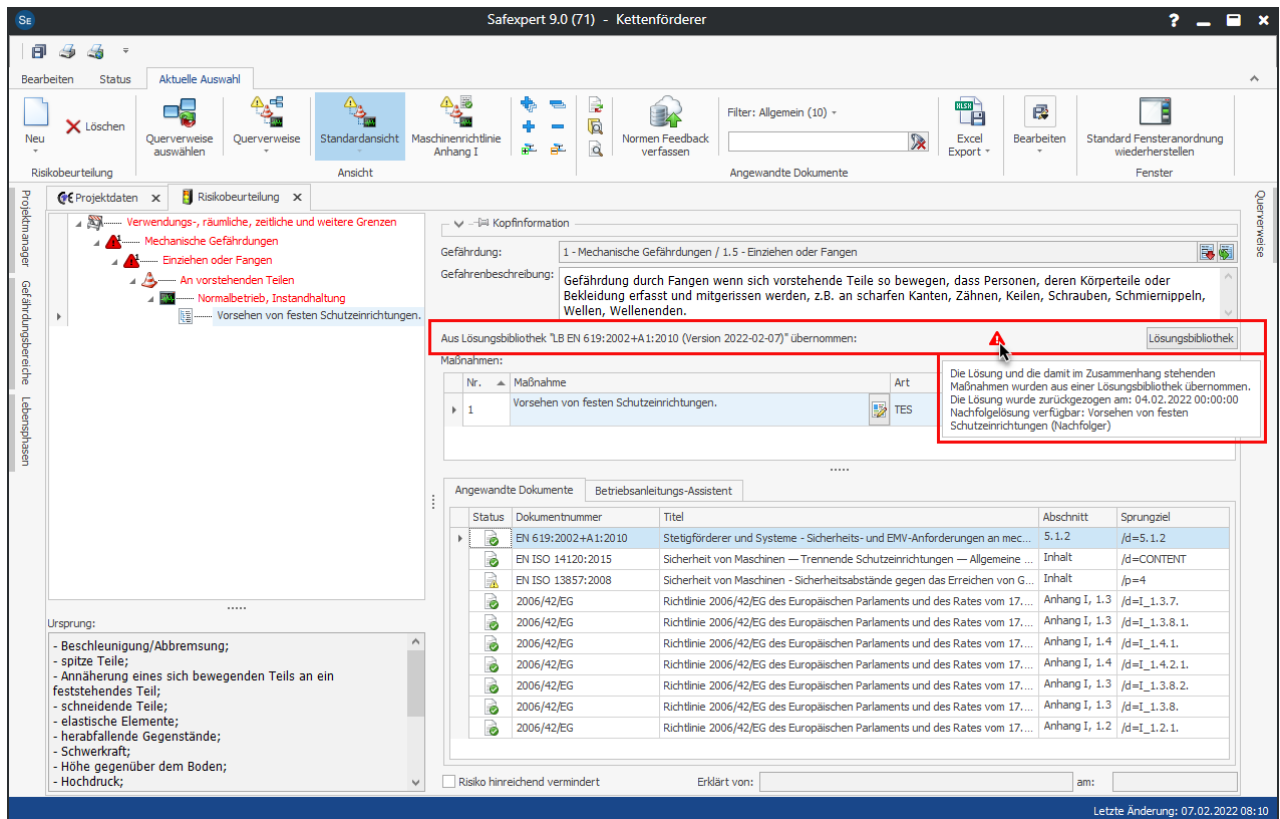
The screenshot shows the 'Projektstatus - Kettenförderer' window with the following components:

- Projektstatus** header: Includes a search bar and filters.
- Table**: A list of standards with columns for Bezeichnung, Status, Wichtiges Ereignis, and Projektanalysen. The 'Wichtiges Ereignis' column is highlighted with a red box, showing a warning icon and text about outdated solutions.
- Projektanalysen / wichtige Ereignisse** sidebar: A panel showing details about the outdated solutions, including a list of events and handling instructions.

6. In the "Risk assessment" window, you can find the outdated solutions using the "Solutions no longer up to date" filter newly developed in Safexpert 9.0:



7. For each individual solution, you can see from which solution library the obsolete solution originates:



8. Clicking on "Solution library" opens the solution library. The cursor is positioned on the obsolete solution currently contained in the project. In addition, the available successor solutions are displayed:

9. Now select the appropriate successor solution and click "Apply".

This means that your solution is up to date in the project - including all detailed data on the solution, such as the applied documents.

10.3 Find suitable solutions

To help you find the right solution as quickly as possible from a large number of possible solutions, we have added further fields to the existing match code, in which the SECOM expert can enter the cases for which a solution is suitable.

The "Reference" field specifies the standard or standard section for which the solution is suitable. This means: SECOM experts can provide one or more standardized solutions in the solution library for each section of a standard.


The fields "Product type", "Phase of the machinery life" and "Hazard area" are used to enter the case for the solution is suitable.

The fields "Valid from", "Withdrawn", "Predecessor" and "Successor" are used for versioning solutions. Safexpert uses these status fields for the digital analyses (see 4). As a solution library manufacturer, you can use them to withdraw each solution on a daily basis if, for example, it no longer meets the state of the art.

Of course, this does not release you as a designer from the decision whether the adopted solutions fit in the individual case. Therefore, you continue to declare "Risk sufficiently mitigated" manually. This way, you can be sure that Safexpert does not unknowingly make unwanted decisions for you in the background.

10.4 Interaction between template projects and solution libraries

Until now, suitable safety-related solutions or measures were entered in the template projects by means of "variants". In a solution library in Safexpert 9.0, it is now possible to define several solutions as alternatives to each other:

Lösungsbibliothek							
Aktionen							
Filter: Allgemein (1335) 							
Bezeichnung	Matchcode	Gefährdung / Gefährd...	Fundstelle	Produkttyp	Lebensphase	Gefährdungsbereich	Gültig
Vorsehen von Füllstücken	ME	Einziehen oder Fangen	EN 619:2002+A1:2010, 5.1.3.3	Kettenförderer, Rollenbahnen, Horizontal-Umsetzeinrichtung mit Tragkettenförderer, Horizontal-Umsetzeinrichtung mit Rollenbahn, Vertikal-Umsetzeinrichtung mit Tragkettenförderer, Vertikal-Umsetzeinrichtung mit Rollenbahn		Zugorgane - Umlenkstellen	
Vorsehen von Füllstücken	ME	Einziehen oder Fangen	EN 619:2002+A1:2010, Anhang D - Bild D.7	Kettenförderer, Rollenbahnen, Horizontal-Umsetzeinrichtung mit Tragkettenförderer, Horizontal-Umsetzeinrichtung mit Rollenbahn, Vertikal-Umsetzeinrichtung mit Tragkettenförderer, Vertikal-Umsetzeinrichtung mit Rollenbahn		Zugorgane - Umlenkstellen	
Vorsehen von Verkleidungen.	ME	Einziehen oder Fangen	EN 619:2002+A1:2010, 5.1.3.3	Kettenförderer, Rollenbahnen, Horizontal-Umsetzeinrichtung mit Tragkettenförderer, Horizontal-Umsetzeinrichtung mit Rollenbahn, Vertikal-Umsetzeinrichtung mit Tragkettenförderer, Vertikal-Umsetzeinrichtung mit Rollenbahn		Zugorgane - Umlenkstellen	
Vorsehen von Füllstücken	ME	Einziehen oder Fangen	EN 619:2002+A1:2010, 5.1.3.3	Kettenförderer, Rollenbahnen, Horizontal-Umsetzeinrichtung mit Tragkettenförderer, Horizontal-Umsetzeinrichtung mit Rollenbahn, Vertikal-Umsetzeinrichtung mit Tragkettenförderer, Vertikal-Umsetzeinrichtung mit Rollenbahn		Zugorgane - Kettenrader	

This means:

- In your projects, Safexpert shows whether there are alternatives to a selected solution in the solution library. Thus, you can replace a selected solution with an alternative solution at any time.
- Solutions from a solution library can now be integrated into template projects. This means that the digital analyses for checking the up-to-dateness of solutions are also available in template projects.

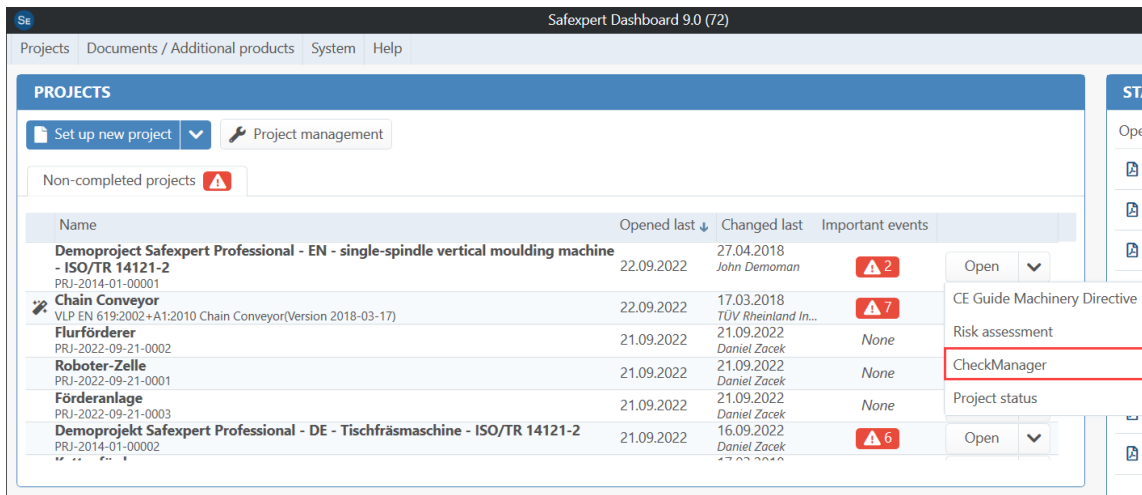
11 Check and Acceptance Assistant→ CheckManager

The previous "Check and Acceptance Assistant" module has been completely redeveloped. It is now available under the new product name "Safexpert CheckManager".

Numerous new functions support you in performing uniform checks or acceptances and in managing checkpoints.

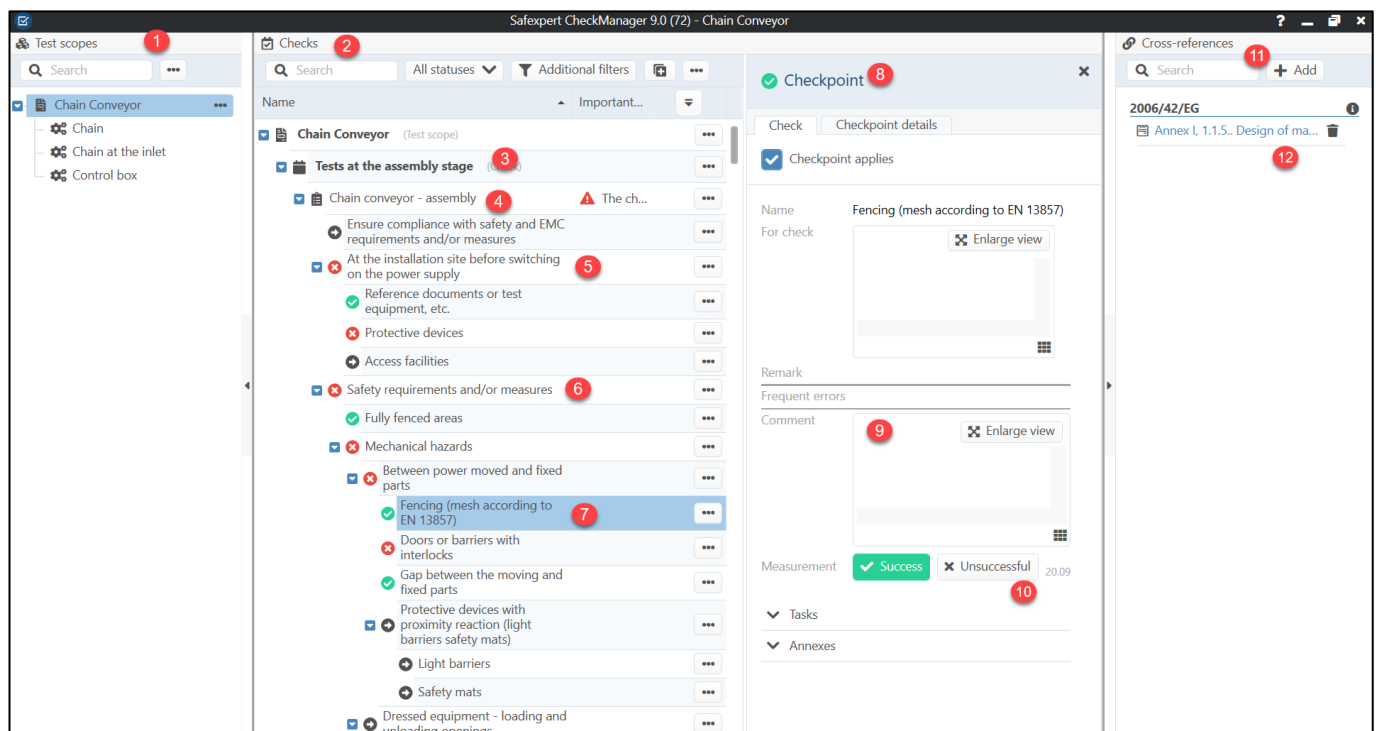
11.1 Open CheckManager

- You can now open the CheckManager directly from the Dashboard:



11.2 More overview in the testing process

The window for performing checks or acceptances has been completely revised:



You can now divide larger test objects into check areas (1). Clicking on the checkpoint area displays only the checkpoints that are to be checked for this area. This saves you unnecessary paths when inspecting from location.

In the "Checks" window section (2) you have the possibility to add one or more checks (3) to each individual check area.

As before, you can add one or more complete checklists (4) to an inspection. You can continue to structure the checklists (5) and (6). As before, the lowest level is formed by the concrete checkpoints (7).

On the right side in the "Checks" window (8), you document the test results as before in the form of test comments (9) and test methods (10).

The cross-references (11) are now displayed grouped to the respective document (12).

11.3 New distinction: Checklists and Checkpoint Libraries

11.3.1 Checklists

Previously, only an entire checklist could be transferred to the test project. The checklist could not be changed individually in the project. Individual checkpoints could therefore not be subsequently deleted and others could not be added.

From now on, it is possible to compile the checklists for a specific test order individually.

11.3.2 Checkpoint Libraries

Previously, it was necessary to create separate checklists for different check times and for different product types. Now, individual checkpoints are managed in a so-called checkpoint Library and distinguished from each other by means of the new parameters "check time" and "product".

This allows the large number of checklists previously required to be reduced to one checkpoint Library. For details see section 11.9.

11.4 Test methods flexibly expandable

The test methods (visual inspection, functional test, measurement and documentation test) can now be extended as required at the checkpoint level.

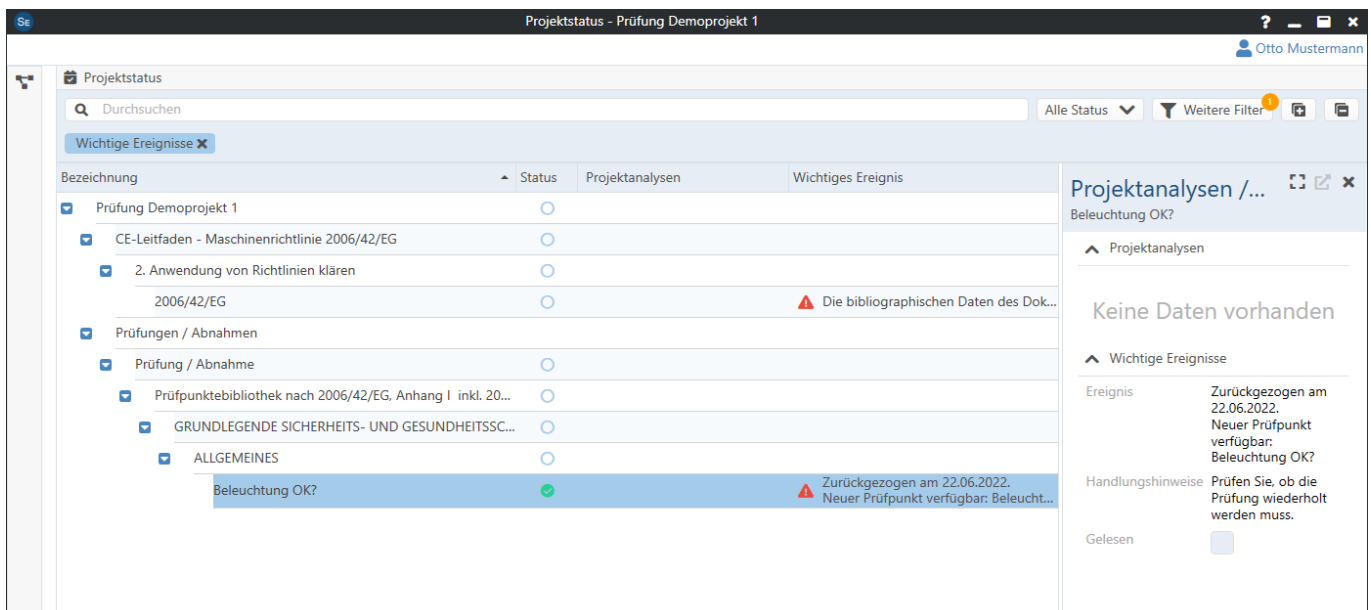
11.5 Cross references grouped

The cross-references to important sections of documents are now displayed grouped by document. This makes it even easier than before to find the appropriate standards bodies that can support you in the review process.

11.6 Digital analyses for testing processes

For general information on digital analyses, see section 4.

There are two areas in CheckManager where results of digital analyses are displayed:



The screenshot displays the 'Projektstatus - Prüfung Demoprojekt 1' window. The main table lists various checkpoints with their status (green circle for OK, red triangle for warning). The 'Beleuchtung OK?' checkpoint is highlighted in blue and marked as OK. A right-hand sidebar shows a detailed view of the 'Projektanalysen / ...' section, indicating 'Keine Daten vorhanden' (No data available) for the current analysis.

Bezeichnung	Status	Projektanalysen	Wichtiges Ereignis
Prüfung Demoprojekt 1	○		
CE-Leitfaden - Maschinenrichtlinie 2006/42/EG	○		
2. Anwendung von Richtlinien klären	○		
2006/42/EG	○		⚠ Die bibliographischen Daten des Dok...
Prüfungen / Abnahmen			
Prüfung / Abnahme	○		
Prüfungspunktbibliothek nach 2006/42/EG, Anhang I inkl. 20...	○		
GRUNDLEGENDE SICHERHEITS- UND GESUNDHEITSSC...	○		
ALLGEMEINES	○		
Beleuchtung OK?	●		⚠ Zurückgezogen am 22.06.2022. Neuer Prüfpunkt verfügbar: Beleucht...

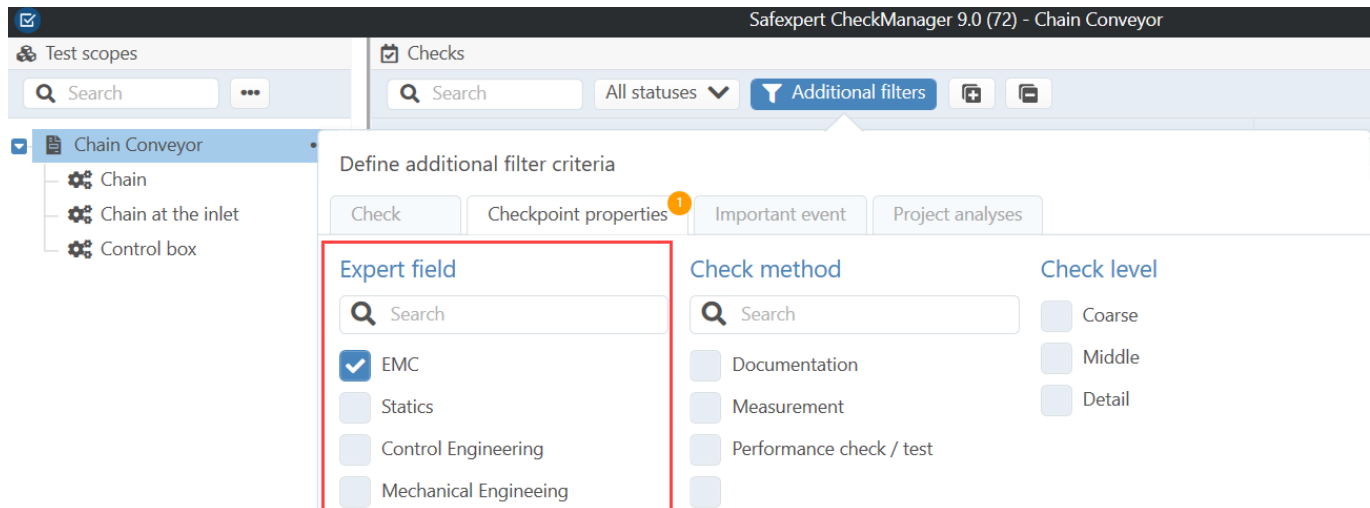
These digital analyses are available in CheckManager in Safexpert 9.0:

1. Are the checkpoints still up to date?

- Are successor checkpoints available for withdrawn on checkpoint?

11.7 Subject-specific exams

Another useful feature is the new "Expert field" parameter. This allows you to define for each checkpoint which inspection competencies are required for the inspection. With the new "Expert field" filter, you only display the checkpoints that meet these criteria:



As before, it is possible to filter by the checkpoints that correspond to specific test methods or check levels.

11.8 Repeat exams eliminated

The "Repeat check" function (Safexpert 8.6 manual, section 12.4) has been eliminated, since a complete check can now simply be copied, as is usual in Windows.

11.9 Manage Checkpoint Libraries

Instead of "checklists", checkpoints are managed in "checkpoint libraries" as of Safexpert 9.0. For each individual checkpoint, it is now possible to define for which product type and for which check times a checkpoint is suitable.

11.9.1 Your advantage with checkpoint Libraries

Previously, for example, 44 checklists had to be developed for the harmonized standard EN 619 (continuous conveyors) (eleven for the conveyor types covered by the standard, each for four different check times). Now, only one checkpoint Library needs to be developed for the entire standard.

In the new "Product" and "Check time" fields, it is now possible to define for which product type dealt with in the standard or for which "Check time" a checkpoint is suitable. This reduces not only the checklists, but also the number of checkpoints enormously. This in turn makes it easier to update the checkpoint Library when standards change.

Each checkpoint now receives its own status. As a result, it is now possible to withdraw checkpoints worldwide centrally on the Safexpert Live Server and to define successors. In digital analyses, Safexpert can thus determine whether individual checkpoints have changed in ongoing test projects and for which persons this event is important. You can see the results of the digital analyses in CheckManager and also in the "Project status" window (see 5).

Checkpoint Libraries are Safexpert additional products that you can produce yourself as before, have developed by SECOM experts or purchase from the IBF Shop.

11.9.2 Why do checklists continue to exist?

The checklists already contained in your database will of course retain their previous names after updating to Safexpert 9.0. However, the product type is automatically changed to the name "Checkpoint Library".

Within the test projects, we continue to use the term "checklist". They are compiled from checkpoint libraries or self-created checkpoints for the respective checkpoint project.

This means for you:

- Your checklists in the already created test projects remain unchanged.
- Your checklists purchased from IBF or created by yourself remain unchanged. During setup, the product type is changed to Checkpoint Library.
- After setup, you can rename your existing checklists yourself so that the product designation matches the type designation again.
- You can develop a checkpoint Library from the checklists you have created yourself so far.

12 Technical innovations

To ensure that Safexpert continues to run in your future IT environments and is in line with the state of the art in development and application methods, we are also continuously developing Safexpert on a technological level.

In Safexpert 9.0, a lot has been done in this respect:

12.1 Conversion from Winforms to WPF

Thanks to Microsoft's further developments, WPF offers new technical possibilities to massively increase the performance of software systems, for example by the fact that certain tasks are now completed by the graphics card, which previously burdened the processor.

However, due to further developments by Microsoft, it is also becoming apparent that systems developed on the earlier Winforms technology will no longer run on future operating systems in the medium term. We have taken this development into account with Safexpert 9.0 and have already completely redeveloped numerous elements on WPF technology. This also sets the course for portability of the systems to other platforms.

In order to make the leap into the new generation of Safexpert as easy as possible for you as a user and to avoid unnecessarily dragging out the update cycles, we have developed Safexpert 9.0 as a hybrid application. This means that some modules and functions have already been completely converted to WPF, such as the newly developed Dashboard, StandardsManager, Knowledge Base, CheckManager (formerly Test and Acceptance Wizard).

Other modules, such as the CE Guide and the risk assessment, were integrated into the frame application in the previous Winforms technology. Thus, the usability in these areas has not changed significantly for you either. Unfortunately, the performance of Safexpert suffers a bit due to the hybrid application. When all modules are switched to WPF, full performance will be achieved under WPF.

12.2 Web services

Data is provided in Safexpert by means of additional products (see 8). From a technical point of view, access to the basic data of the licensed additional products takes place by means of web services.

This technology offers the possibility to make the data from Safexpert additional products also usable for software systems of other software manufacturers. This opens up completely new possibilities for manufacturers of software systems related to standards to integrate digital analyses in their software solutions as well. For example, a function could be developed for an ERP system to determine whether a product for which a quotation is being prepared still complies with the normative requirements at all at the desired time and place of delivery.