

# Safexpert

The most important innovations in Safexpert 9.0

Author: Helmut Frick Issue status: 26.08.2022

**IBF – YOUR PARTNER FOR EFFICIENT CE MARKING** 

177



# The most important innovations at a glance

1	[	Digita	al standards management	4
	1.1		Project management with Safexpert	4
	1.2	2	Standards management with Safexpert	5
2		Your	personal dashboard	6
	2.1		Complete dashboard	6
	2.2	2	Dashboard, if you have licensed only the StandardsManager module	7
3	F	Risk	assessment	8
4	[	Digita	al analyses	9
5	F	Proje	ect status	12
6	٦	The I	new StandardsManager	13
	6.1		Finding additional products for standards quickly	13
	6.2	2	Document structure / document comparison	15
	6	6.2.1	Open document structure	16
	6	6.2.2	2 Document comparison	16
	6.3	3	Giving feedback on standards	19
7	9	Safe	xpert Knowledge Base incl. Safexpert PDF Viewer	21
8	9	Safe	xpert additional products	22
	8.1		Product portfolio	22
	8.2	2	Search additional products	23
	8.3	3	Manage additional products	25
	8.4	Ļ	License models	25
9	(	Conr	nection to IBF Shop	26
1	0 5	Safe	xpert solution library	27
	10.	.1	Manage solution libraries	28
	10.	.2	Digital analysis: Solutions still up to date?	29
	10.	.3	Finding suitable solutions	31
	10.	.4	Interaction between template projects and solution libraries	32
1	1 7	Test	and acceptance assistant→ CheckManager	32
	11.	.1	Open CheckManager	32
	11.	.2	More overview in the inspection process	33
	11.	.3	New distinction: Checklists and Checkpoint Libraries	34
	1	11.3.	.1 Checklists	34
	1	11.3.	.2 Checkpoint Libraries	34
	11.	.4	Test methods flexibly expandable	34
	11.	.5	Cross references grouped	34
	11.	.6	Digital analyses for inspection processes	34
	11.	.7	Subject-specific examinations	35



1	1.8	Rep	eat checks eliminated	.35
			age Checkpoint Libraries	
			Your advantage with checkpoint libraries	
			Why do checklists still exist?	
12			innovations	
1	2.1	Con	version from Winforms to WPF	.36
			services	

# 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.

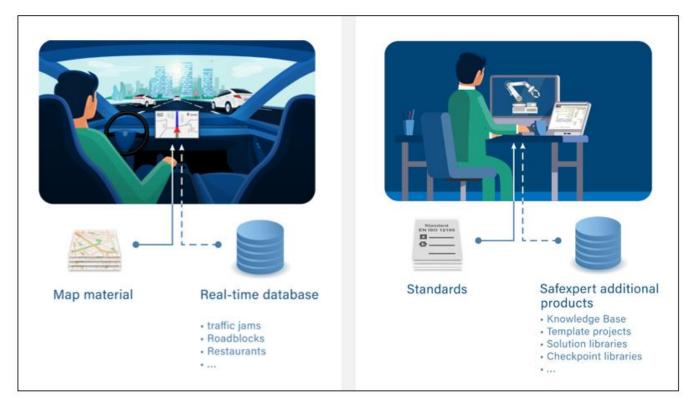
# 1 Digital standards management

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!

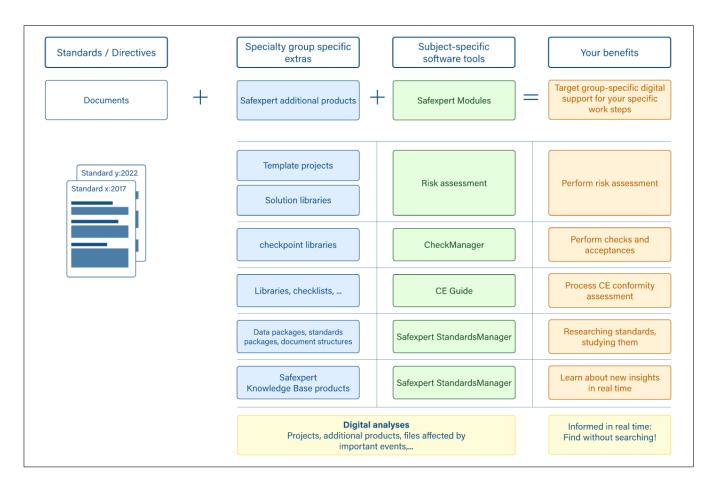
# 1.1 Project management with Safexpert

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 subjectspecific 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

E					Saf	expert Dashb	oard 9.0 (72)						? 🗕 🖬 🗄
Projects Docur	ments / Additional p	roducts	System	Help									±
PROJECTS												ST	ANDARDSMANAGER
📑 Set up new	r project 🗸 🍾	Project	managem	ent								Ope	ened last
Non-complet	ted projects 🚺											Ø	2006/42/EC (Machinery Directive) Directive
Name							Opened last	Changed last	Importan			Ø	ÖNORM EN ISO 13857:2 Safety of machinery - Safety dist
ITO LOLL OF								Dumer Luces				B	2011/65/EU
Förderanla PRJ-2022-09							21.09.2022	21.09.2022 Daniel Zacek	No	Open	~		Directive 2011/65/EU of the Eur
PRI-2014-01	ekt Safexpert Profe -00002	essional	- DE - Tisc	hfräsm	aschine - ISO/TR 1	4121-2	21.09.2022	16.09.2022 Daniel Zacek		Open	~	Ø	ÖNORM EN ISO 12100:2 Sicherheit von Maschinen - Allg
Chain Con	<b>veyor</b> 2002+A1:2010 Chain Co	nvevor(Ve	ersion 2018-(	13-17)			20.09.2022	17.03.2018 TÜV Rheinland I	. 🚺	Open	~	B	EN ISO 11553-1:2008 Sicherheit von Maschinen - Lase
+₂ Kettenförd							20.09.2022	17.03.2018 TÜV Rheinland I		Open	~		Sichemeit von Maschmen - Lase
Demoproj - ISO/TR 1 PRJ-2014-01		essional	- EN - sing	le-spin	dle vertical mould	ing machine	•	27.04.2018 John Demoman	Δ	Open	~		
Convoyeu	r a chaine 2002+A1:2010 Kettenför	rderer (Ver	rsion 2018-0	3-17)				17.03.2018 TÜV Rheinland I	n	Open	~		
OUTSTAND	ING TASKS	D	OCUME	NTS / /	ADDITIONAL PR	ODUCTS		E I	SYSTEM		⊘ (≘		
Due date	My tasks All		<b>A</b> 1	1 im	portant event for or	ne or several		_	<ul> <li>Software</li> </ul>	/Modules			
Overdue	0 0			addi	tional products loca	ited in your p	ersonal favouri		<ul> <li>Licence</li> </ul>				
Today	0 0								<ul> <li>Memory</li> </ul>				
Future	0 30	-											
ruture	0 50	-						-	A Database	:		0	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:

	Safexpert I	hboard 9.0 (72)	? _ 🖬 ×
Docu	ments / Additional products System Help		💄 Otto Mustermann 🗸
ST	ANDARDSMANAGER	DOCUMENTS / ADDITIONAL PRO	DDUCTS 🚝
Op	ened last	1 important event for one in your personal favourite	e or several documents / additional products located
Ø	ÖNORM EN ISO 13854:2020-01-01 Safety of machinery - Minimum gaps to avoid crushing of parts of the human body (ISO 13854:20		
Ø	ÖNORM EN ISO 13857:2020-07-01 Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lowe	nbs	
Ø	OVE EN 60204-1:2019-08-01 Safety of machinery - Electrical equipment of machines Part 1: General requirements (IEC 6020	:201	
Ø	2006/42/EC (Machinery Directive) Directive 2006/42/EC of the European Parliament and of the Council of 17 N	200	
		SYSTEM	👁 🕾
		✓ Software/Modules	
		✓ Licence	
		Memory	
0	StandardsManager	A Database	
			)

I:F



# 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):

Se Safexpert 9.0 (72) - Demoproje	Safexpert Professional - EN - single-spindle vertical moulding machine - ISO/TR 14121-2	? _ 🗐 ×
8 🤩 »		
Edit Status Current selection		~
<ul> <li>cross-references</li> <li>view</li> <li>Direct</li> </ul>	Image: Second secon	Print Spelling Restore standard window arrangement
Risk assessment View	Measures Edit	Window
Project data       X       Risk assessment       X         Image: Use-, space-, time- and other limits       Image: Use-, space-, time- and other limits       Image: Use-, space-, time- and other limits         Image: Use-, space-, time- and other limits       Image: Use-, space-, time- and other limits       Image: Use-, space-, time- and other limits         Image: Use-, space-, time- and other limits       Image: Use-, space-, time- and other limits       Image: Use-, space-, time- and other limits         Image: Use-, space-, time- and other limits       Image: Use-, space-, time- and other limits       Image: Use-, space-, time- and other limits         Image: Use-, space-, time- and other limits       Image: Use-, space-, time- and other limits       Image: Use-, space-, time- and other limits         Image: Use-, space-, time- and other limits       Image: Use-, space-, time- and other limits       Image: Use-, space-, time- and other limits         Image: Use-, space-, time- and time-	Hazard zone:     Working zone       Phase of the machinery life:     Setting - Trials       Hazard:     1 - Mechanical hazards / 1.2 - being thrown       Hazard description:     ((16)) Impact by ejected tools, parts of the machine (for example, gu Operator and other people exposed to ejection of parts (adjusting the spin)	
Instructions for proper fastening of th	Measures:	
	Making the part of the quide departs the teal of a coft material (for example	pends on a control Risk IN / OUT
Crushing	1 plastic, wood).	3/2
Cutting or severing     A A Working zone	2 Providing an indicator of the height of the spindle near the height adjustment PIC	2/0
<ul> <li>Setting - Changing tools (1)</li> <li>Providing an integral spindle locking sy</li> <li>Im — Internal parts.JPG</li> <li>Im — Instructions for using the spindle locki</li> <li>Setting - Changing tools (2)</li> <li>Im — Providing suitable hand tool(s).</li> <li>Im — Instructions to use.</li> </ul>	→ 3 Instructions for proper fastening of the tool. Add measure Add task X Delete measure Search for solution in	0/0 ···
Origin:		
acceleration, deceleration;     angular parts;	Applied documents Instructions-Assistant Instructions-Assistant	•
<ul> <li>approach of a moving element to a fixed part;</li> <li>cutting parts;</li> <li>elastic elements;</li> <li>failing objects;</li> <li>gravity;</li> <li>height from the ground;</li> <li>high pressure;</li> <li>instability;</li> <li>kinetic energy;</li> <li>machinery mobility;</li> </ul>	Status     Document number     Title     Discorp       V     Cut     Paste	Link destination
moving elements;     rotating elements;	Risk adequately reduced Declared by:	On:
		Last change: 27.04.2018 10:33

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.

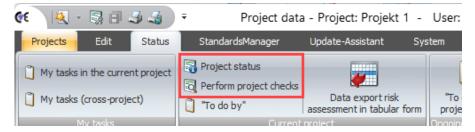
Safexpert 9.0 (72) - Demoproject Safexpert Professional - EN - single-spindle vertical moulding machine - ISO/TR 1 0 🍕 -Edit Status Filter: 4 Η X Cut 2 D Copy × Display: All bazards æ Select all Filter Edit 🗙 🚦 Risk ar ent x 66 Main Market Strate Stra Display: All ha > v All hazards manager Display hazard number Yes (hazard occ D No Recalculate hazard tre No (hazard does not occur) Hazard zones rking za Possibly (hazard probably occurs) 💼 Сору 100 Setting - Trials Unrated hazards Making the part o 💥 Cut Providing an indic Instructions for p Risk not adequately redu Phases of the machinery life 120 ···· ons no longer cu Type of measure: ISD Measures depending on a control Trials q the part of the guide closer Applied documents: EN 60204-1:2006/AC:2010 n indicator of the height of for proper fastening of th 12 ····· Q cutting or severing

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:

Safexpert update checks			= x
Dispay: Checkal Refresh Al subjoycets Project check	Cut Copy Copy Select all Edit		
Check system for relevance			
Description	Status	Effect	Action
> Safexpert 8.6 SP2	👼 Current		No action necessary/possible
Company favourites	Cannot be checked reliably	<ul> <li>The standards and regulations contained in the Company favourites have not been checked for relevance! It is strongly recommended to perform an update.</li> <li>Note: The use of outdated regulations may lead to product errors and, therefore, to an increased product liability risk.</li> </ul>	Start Update-Assistant
StandardsManager licence access	🗟 Current		No action necessary/possible
<ul> <li>★ Check project for relevance</li> <li>★ Ø PRJ-20</li> </ul>	022-09-21-0001 - Projekt 1		
			Close

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

				Safexpert Da	ashboard 9.0 (72)					? 🗕 🖬 🗙
Projects	Documents / Additional produ	cts System	Help							<b>≜</b> ∨
PROJ	ECTS									STANDARDSMANAGER
📑 Set	up new project 🗸 🎤 Proj	ect managem	ent							Opened last
Non-	completed projects									2006/42/EC (Machinery Directive) Directive
	ime				Opened last	Changed las	t Importan			Big Safety of machinery - Safety dist
	LULL 05 21 0001				Opened last	Dunici Zucch	importan			D 2011/65/EU
	-2022-09-21-0003				21.09.2022	21.09.2022 Daniel Zacek	No	Open	~	Directive 2011/65/EU of the Eur
	moprojekt Safexpert Professio -2014-01-00002	nal - DE - Tis	chfräsma	aschine - ISO/TR 14121-2	21.09.2022	16.09.2022 Daniel Zacek	Δ	Open	~	Sicherheit von Maschinen - Allg
X Cha	ain Conveyor PEN 619:2002+A1:2010 Chain Conveyo	r(Version 2018-	03-17)		20.09.2022	17.03.2018 TÜV Rheinland	In	Open	~	EN ISO 11553-1:2008 Sicherheit von Maschinen - Lase
+20 Ket	ttenförderer EN 619:2002+A1:2010 Kettenförderer				20.09.2022	17.03.2018 TÜV Rheinland	In	Open	~	
- IS	moproject Safexpert Profession SO/TR 14121-2 -2014-01-00001	nal - EN - sin	gle-spin	dle vertical moulding mac	hine	27.04.2018 John Demomai	n 🔼	Open	~	
PTE	nvoyeur a chaine EN 619:2002+A1:2010 Kettenförderer	(Version 2018-0	)3-17)			17.03.2018 TÜV Rheinland	In	Open	~	
	TANDING TASKS	DOCUME		ADDITIONAL PRODUCT	.c	Æ	SYSTEM		≥ ⊘	
0013		DOCOMIC		ODITIONAL TRODUCT	<b>,</b>	÷—	STSTEM		<b>•</b>	
Due dat	e My tasks All	<b>A</b> 1		oortant event for one or sev ional products located in yo		ites	<ul> <li>Software</li> </ul>	/Modules		
Overdue	e 0 0		addit	ional produces located in ye	ar personar lavour		<ul> <li>Licence</li> </ul>			
Today	0 0						<ul> <li>Memory</li> </ul>			
Future	0 30						🛕 Database	2		
										StandardsManager

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:

								<b>.</b>	Otto Mu
Pro	ojektstatus								
Q	Durchsuchen							Alle Status 🗸 🝸 Weitere Filter	er 🖸
Bezeich	hnung	•	Status	Projektanalysen	Wichtiges Ereignis	Projektanaly	sen / wic	htige Ereignisse	23
D	Demoprojekt Safexpert Pr	ofessional - DE - Tischfräsmaschin.	. O	Oas geplante Datum des Inverkehrbringens ist abgelaufen.		Einstellungen - Probe		inge Ereignisse	
	CE-Leitfaden - Maschir	nenrichtlinie 2006/42/EG				Projektanalyse	n		
	1. Einstufung des E	zeugnisses	0						
	<ul> <li>2. Anwendung von</li> </ul>	Richtlinien klären	0				Keine I	Daten vorhanden	
	2004/108/EG		0						
	3. Normenanwendu	ing klären				<ul> <li>Wichtige Ereig</li> </ul>	inisse		
	ISO/TR 14121-2	2012	0			Ereignis		und die damit im Zusammenhang steh wurden aus einer Lösungsbibliothek	nender
	EN ISO 13849-2	2008					übernomme Die Lösung v	n. wurde zurückgezogen am: 19.08.2022	00.00
	EN ISO 13849-1	2008/AC:2009	0				Nachfolgelö	sung verfügbar: Fertigung aus weichem Ma	
	EN 1037:1995+7	1:2008				Handlungshinweis	<ol><li>Setzer</li></ol>	n Sie die Risikobeurteilung. n Sie den Filter auf "Lösungen nicht me	ehr ak
	EN 60204-1:200	6/AC:2010	0			Gelesen	3. Prüfer	n Sie die Lösung.	
	EN 528:2008					Gelesen			
	<ul> <li>4. Risikobeurteilung</li> </ul>	durchführen	0			/			
	Verwendungs-, i	aumliche, zeitliche und weitere Gr.	. 0	Querverweisliste "Querverweisliste nach Richtlinie 2006/95/E					
	Gefährdungs	liste nach EN ISO 12100:2010, An							
	Mechanis	che Gefährdungen							
	Überfa	hren werden	0						
	Wegge	eschleudert werden							
	Art	eitsbereich	0						
		Einstellungen - Probelauf	9		Die Lösung und die damit im Zusammenhang stehende Die Lösung wurde zurückgezogen am: 19.08.2022 00:00 Nachfolgelösung verfügbar: Fertigung aus weichem Ma	D:			
		Jener Bereich der Führung, der.	. 🥑						
		Anzeige für die Spindelhöhe n	. 🥥						
		Anleitung für die richtige Befe	0						

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:

· · · · · · · · · · · · · · · · · · ·			Projektstatus - Anlage Beispiel 1		? _ 🖬 ×
					💄 Otto Mustermann
😵 Projektstruktur 🚺	Projektstatus				
Q Durchsuchen	Q Durchsuchen				Alle Status 🗸 🍸 Weitere Filter 🗈 🖻
🗅 🗱 Anlage Beispiel 1	Bezeichnung	<ul> <li>Status</li> </ul>	Projektanalysen	Wichtiges Ereignis	Projektanalysen / wichtige Ereignisse 🏼 4 🛛 🖸 🖉 🗙
	<ul> <li>Anlage Beispiel 1</li> </ul>		Oas geplante Datum des Inverkehrbringens ist abgelaufen.		EN 619:2002+A1:2010
- 🗱 1011	Bandförderer (Typ 1) <> Kettenförderer				✓ Projektanalvsen
- 🕰 Kettenförderer	CE-Leitfaden - Maschinenrichtlinie 2006/42/EG				Wichtige Ereignisse
🔗 Bandförderer (Typ 1) <> Kettenförderer	1. Einstufung des Erzeugnisses				
	<ul> <li>2. Anwendung von Richtlinien klären</li> </ul>				Stetigförderer und Systeme - Sicherheits- und EMV-
	2006/42/EG				Anforderungen an mechanische Fördereinrichtungen für Stückgut Typ-C-Norm
	<ul> <li>3. Normenanwendung klären</li> </ul>				Bibliographische Daten haben sich geändert:
	EN 619:2002+A1:2010			🛕 Die bibliographischen Daten des Dokuments	Erstveröffentlichung: "" -> "2016-08-12" DOC: "" -> "2011-06-30"
	EN ISO 12100:2010-11	0			Offizielle Bekanntmachung: "' -> "2016/C 293/03 2016/C 293/03"
	EN 1050:1996-11				Letzte Änderung am: "17.08.2016 00:00:00" -> "07.06.2022 00:00:00"
	<ul> <li>4. Risikobeurteilung durchführen</li> </ul>				Nachfolgedokument: "* -> "FDIS EN 619:2022" Schlüsselwörter Deutsch: "* -> "Stetigförderer
	Verwendungs-, räumliche, zeitliche und weitere G	r ()		Die Bibliothek oder Liste wurde ge	Sicherheitsandreiterung Planung
	Gefährdungsliste nach EN ISO 12100:2010, An.				Inbetriebnahme Gerät
	Mechanische Gefährdungen				Gefährdung
	Überfahren werden				Begriffe Terminologie
	Weggeschleudert werden				Arbeitssicherheitstechnik Abbildung
	Quetschen				Förderanlage Ergonomie
	Schneiden oder Abschneiden	0			Sicherheitstechnik Herstellung
	<ul> <li>Kettenförderer - Verkettete Anlagen</li> </ul>	0			Aufstellung Stückgut
	Normalbetrieb	0			Maschinenbau Fördereinrichtung
	M 1 GDM 1	0			EMV EMV-Anforderung
	M 2 GDM 1	0			elektromagnetische Verträglichkeit Sicherheit
	Einziehen oder Fangen				MASCHINENRICHTLINIE* Schlüsselwörter Englisch: "* -> "DIRECTIVE DE MACHINES
	Erfassen				DIRECTIVE OF MACHINERY
	Klemme				CONVEYERS ELECTROMAGNETIC COMPATIBILITY
	Reiben oder Abschürfen				STORAGE SYSTEM MISE EN OEUVRE
	Stoß				TRANSPORTEUR* Handlungshinweise Prüfen Sie, ob diese Änderung Auswirkungen auf dieses Projekt
	<ul> <li>Kettenförderer - Verkettete Anlagen.</li> </ul>				hat.
	Transport				Gelesen

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:

- 1. 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?
- 2. 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?
- 3. 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:

SE			Safexpert Dashboard 9	0 (72)	? _ 🖬 ×
Documents / Additional products	System	Help			💄 Otto Mustermann 🗸
STANDARDSMANAGER				DOCUMENTS / ADDITIONAL PRODUCTS	(≣

# 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

*		Safexpert StandardsManager 9.0 (72)								?	_	😑 🗙
D Fe	eedback overview									💄 Ot	to Mu	usterman
sa	afety of machinery 🗙	+								Sav	/ed se	arches
Q	safety of machinery				×	₽	Advar	nced se	arch sett	ings 😭 📥	Q	Search
100	) result(s) of 186 i	s/are shown () All					+ 1	New do	cument	Save search	8	
Fav	Document number	Title	Do	cument ty.	Stat	us		CE		Additional pr		-
~			A	· ·	A		~	All	~			<b>_</b>
*	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)	Tech	nnical Rule		~					7	•••
*	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 22100-4:2018)	Tech	nnical Rule		~					+	
*	EN 1005-1:2001 +A1:2008	Safety of machinery - Human physical performance - Part 1: Terms and definitions	type	e-B standar	d	~			~	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	e-B standar	d	~			~	5		•••
*	EN 1093-1:2008	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 1: Selection of test methods	type	e-B standar	ď	~			~	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	e-B standar	ď	~			~	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	e-B standar	ď	~			~	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	e-B standar	ď	~			<b>~</b>	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	e-B standar	d	~			<ul> <li>Image: A second s</li></ul>	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:

ŒF

*		Safexpert StandardsManager 9.0 (72)								1	? _	🖬 🗙
🗩 Fe	edback overview									<b>_</b> 0	tto Mu	istermanı
sa	fety of machinery 🗙	+								Sa	ved se	arches
Q	safety of machinery				×	茸 Ad	/ancec	l searc	ch setti	ngs 📩 🌰	Q	Search
100	result(s) of 186 i	are shown  All				-	- New	docu	ment	Save search	8	
Fav	Document number	Title	Documer	nt ty	Status		CE			Additional pr		
~			All	~	All	×	•	All	~			-
*	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		<b>~</b>					7	•••
*	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 22100-4:2018)	Technical	Rule		~					+	•••
*	EN 1005-1:2001 +A1:2008	Safety of machinery - Human physical performance - Part 1: Terms and definitions	type-B sta	indard		~		~	•	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 sta	indard		~		~	•	5		•••
*	EN 1093-1:2008	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 1: Selection of test methods	type-B sta	indard		~		~	•	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 pollutar	type-B sta	indard		~		~	•	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 sta	indard		~		~	•	2		•••

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

tional products for EN 1005-2: nter search concept (number,	-							
	title,)				earch settings	*	Q Se	earch
ults count 🚯			+ New addi	tional product	Import addition	nal product	0	Þ
roduct number	Title	Product type		Status	Applicable	Language		
		All	~	All 🗸	All 🗸	All	~	
RL EN 1005-2:2003+A1:2008	Cross-reference list to EN 1005-2:2003+A1:2008	Cross-reference li	st B standard	<b>~</b>	Yes	English	۵	••
SG 2006/42/EC (Version 022-09-12)	published in the Official Journal of the EU for the Machinery	Document structu	ire (group)	~	Yes	English	۵	•
SG 2006/42/EG (Version 022-09-12)	veröffentlichten Normen nach Maschinenrichtlinie 2006/42/	Document structu	ire (group)	~	Yes	German	۵	•
RC EN 1005-2:2003+A1:2008	Liste de références croisées vers EN 1005-2:2003+A1:2008	Cross-reference li	st B standard	~	Yes	French	D	
VL EN 1005-2:2003+A1:2008	Querverweisliste nach EN 1005-2:2003+A1:2008	Cross-reference li	st B standard	~	Yes	German		••
R S S S S S S S	oduct number           RL EN 1005-2:2003+A1:2008           GG 2006/42/EC (Version 22-09-12)           GG 2006/42/EG (Version 22-09-12)           C EN 1005-2:2003+A1:2008	oduct number       Title         RL EN 1005-2:2003+A1:2008       Cross-reference list to EN 1005-2:2003+A1:2008         SG 2006/42/EC (Version 22-09-12)       Document structure data according to the standards published in the Official Journal of the EU for the Machinery Directive 2006/42/EC         SG 2006/42/EG (Version 22-09-12)       Dokumentenstrukturdaten nach den im EU-Amtsblatt veröffentlichten Normen nach Maschinenrichtlinie 2006/42/EG	Doduct number       Title       Product type         All       All       All         RL EN 1005-2:2003+A1:2008       Cross-reference list to EN 1005-2:2003+A1:2008       Cross-reference li         SG 2006/42/EC (Version 22-09-12)       Document structure data according to the standards published in the Official Journal of the EU for the Machinery Directive 2006/42/EC       Document structure data according to the standards published in the Official Journal of the EU for the Machinery Directive 2006/42/EC       Document structure data according to the standards published in the Official Journal of the EU for the Machinery Directive 2006/42/EC       Document structure data according to the standards published in the Official Journal of the EU for the Machinery Directive 2006/42/EC       Document structure data according to the standards published in the Official Journal of the EU for the Machinery Directive 2006/42/EC         GG 2006/42/EG (Version 22-09-12)       Dokumentenstrukturdaten nach den im EU-Amtsblatt veröffentlichten Normen nach Maschinenrichtlinie 2006/42/       Document structure EG         C EN 1005-2:2003+A1:2008       Liste de références croisées vers EN 1005-2:2003+A1:2008       Cross-reference lister data according to the standards published data according to the standards published data according to the standards published data according to the standards acco	oduct number       Title       Product type         All       All         All       Cross-reference list to EN 1005-2:2003+A1:2008       Cross-reference list B standard         GG 2006/42/EC (Version 22-09-12)       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)         GG 2006/42/EG (Version 22-09-12)       Dokumentenstrukturdaten nach den im EU-Amtsblatt veröffentlichten Normen nach Maschinenrichtlinie 2006/42/ Document structure (group) EG       Document structure (group)         C EN 1005-2:2003+A1:2008       Liste de références croisées vers EN 1005-2:2003+A1:2008       Cross-reference list B standard	oduct number       Title       Product type       Status         All       All       All       All         RL EN 1005-2:2003+A1:2008       Cross-reference list to EN 1005-2:2003+A1:2008       Cross-reference list B standard       Image: Comparison of the standards published in the Official Journal of the EU for the Machinery Directive 2006/42/EC       Document structure data according to the standards published in the Official Journal of the EU for the Machinery Directive 2006/42/EC       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)       Image: Comparison of the EU for the Machinery Published in the Official Journal of the EU for the Machinery Published in the Official Journal of the EU for the Machinery Document structure (group)       Image: Comparison of the EU for the Machinery Published in the U-Amtsblatt veröffentlichten Normen nach Maschinenrichtlinie 2006/42/E       Document structure (group)       Image: Comparison of the EU for the Machinery Published in the U-Amtsblatt veröffentlichten Normen nach Maschinenrichtlinie 2006/42/E       Document structure (group)       Image: Comparison of the EU for the Machinery Published III for the EU for the EU for the Machinery Published III for the EU for the Machinery Published III for the EU for the EU for the Machinery Published III for the EU for th	Oduct number       Title       Product type       Status       Applicable         All       All       All       All       All       All         RL EN 1005-2:2003+A1:2008       Cross-reference list b standard       Yes       All       Yes         GG 2006/42/EC (Version 22-09-12)       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         GG 2006/42/EG (Version 22-09-12)       Dokumentenstrukturdaten nach den im EU-Amtsblatt veröffentlichten Normen nach Maschinenrichtlinie 2006/42/       Document structure (group)       Yes         C EN 1005-2:2003+A1:2008       Liste de références croisées vers EN 1005-2:2003+A1:2008       Cross-reference list B standard       Yes	oduct number       Title       Product type       Status       Applicable       Language         All       All<	oduct number       Title       Product type       Status       Applicable       Language         All       All<

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



SE		Safexpert additional products: Libraries, lists, t	emplates, Knowledge Base, 9.0	) (72)				? _	. 🗆	×
Addi	tional products for EN ISO 12100	):2010 <b>×</b> +								
Q	inter search concept (number, titl	le,)			ŧ	Advanced s	earch settings  🖈		<b>)</b> Sear	rch
14 Re	sults count			+ New a	ddition	al product	Import additional p	oduct		₽
Favou	Product number	Title	Product type	Status		Applicable	Language			
			All 🗸	All	~	All				₹
*	CLI EN ISO 12100:2010 (Version 2016-07-01)	Checklist to EN ISO 12100:2010	Checkpoints library	~	•	Yes	English		•••	Î
*	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	F		
☆	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	F		)
*	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	C	•••	
*	HLI EN ISO 12100:2010_SYS_V3	Hazards list of EN ISO 12100:2010, Annex B	Hazards list	~	•	Yes	English	۵		
☆	LC EN ISO 12100:2010 (Version 2020-06-20)	Liste de contrôle selon EN ISO 12100:2010	Checkpoints library	~	•	Yes	French	1	•••	-

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)							?	-	<b>•</b> >
Fe Fe	edback overview								-	Dani	iel Zace
13	857 🗙 🕂								Save	ed sear	rches
Q	13857			×	≢/	Advanced	l search	settings		<b>Q</b> 9	Search
3 R	esults count					+ New	docum	ent	Save search	8	₿
Fav	Document number	Title	Docume	nt ty	Status		CE		Additional pr.		Ŧ
~			All	~	All	~	All	~			
*	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 st	andard		•		~	3	Ø	
*	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			•			ted links	_	
*	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			•			ish) EN ISO 138 Ilish) EN ISO 138		
								🔁 (Gern	nan) EN ISO 138	357:20 <sup>-</sup>	19
							[	Open:	ment structure	(Germ	an)
								Docu	ment structure	(Englis	sh)
								🕒 Docu	iment comparis	on (Ge	erman
								L Docu	iment comparis	on (En	glish)
								Kno			

# 6.2.1 Open document structure

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

SE	CO 42057 2040	Safexpert StandardsManager - Document	structure	?	-	■ ×
	SO 13857:2019 y of machinery — S	) <b>()</b> jafety distances to prevent hazard zones being reached by upper and lo	wer limbs (ISO 13857:2019)		Ĩ	Valid
۹	Search					•
No.	۷	Title	Link destination			
	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			
۵	4.1	General	4.1			
۵	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 <u>https://www.ibf-solutions.com/fileadmin/Dateidownloads/whitepaper-safexpert-change-assistant.pdf</u>).

## 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)".

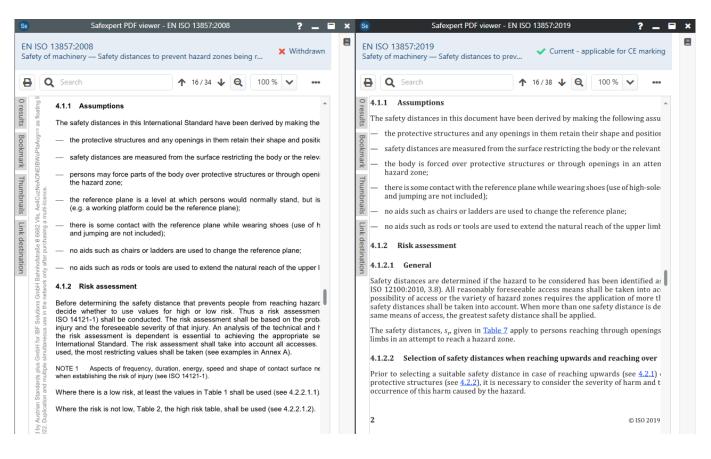
SE				S	afexpe	rt docur	nent	comp	paris	on 9.	0 (72)			? .	_ 🖬 ×
Safet		008 () — Safety distances to pr bs (ISO 13857:2008)	event hazard zon	ies bein		/ithdraw ned by		Safet	y of	macl	357:20 hinery – 357:2019	- Safety distances to prevent hazard zon	es being reached	d by upper an	✓ Valid d lower
۹	Search		<b>Filter</b>			🔒 Prin	t	۹	Sea	arch			<b>T</b> Filter		🔒 Print
No.		Title	Content chan	Renur	mber			No.				Title	Content chan	Renumber.	
	Annex ZA	Relationship between	Textual change	No		Ľ			Intr	roduc	ction		Textual change	No	Ľ
	Annex ZB	Relationship between	Deleted	-		Ľ			1			Scope	Textual change	No	Ľ
	ISO Contents	Contents	Textual change	Yes		Ľ			2			Normative references	Textual change	No	Ľ
	ISO Foreword	Foreword	Unknown	No		Ľ		-	3			Terms and definitions	Textual change	No	Ľ
	Introduction	Introduction	Textual change	No		Ľ				3.1		protective structure	Unchanged	No	Ľ
	1	Scope	Textual change	No		Ľ				3.2		reference plan	Textual change	Yes	Ľ
	2	Normative references	Textual change	No		Ľ				3.3		safety distance	Unchanged	Yes	Ľ
-	3	Terms and definitions	Textual change	No		Ľ		-	4			Safety distances to prevent reach or	Textual change	No	Ľ
	3.1	protective structure	Unchanged	No		Ľ				4.1		General	Unchanged	No	Ľ
	3.2	safety distance	Unchanged	Yes		Ľ				4.	.1.1	Assumptions	Textual change	No	Ľ
-	4	Safety distances to pr	Textual change	No		Ľ				4.	.1.2	Risk assessment	Textual change	No	Ľ
	4.1	General	Unchanged	No		Ľ					4.1.2.1	General	Textual change	Yes	Ľ
	4.1.1	Assumptions	Textual change	Yes		Ľ					4.1.2.2	Selection of safety distances when re	. Textual change	Yes	Ľ
	4.1.2	Risk assessment	Textual change	Yes		R				4.2		Safety distances to prevent access b	Unchanged	No	Ľ

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:

ŒF



# **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 email. 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) <sup>1</sup>	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

<sup>&</sup>lt;sup>1</sup> 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:

*	Safexpert Standa	ardsManag	er 9.0 (72)		? 🗕 🖬 🗙
Discrete Feedback overview					<b>.</b> :
12100 🗙 🕂					Saved searches
<b>Q</b> 12100			×		🗙 📥 🔍 Search
17 Results count ()	+ New document Save search	Э Б	★ CEN ISO 12100:20	010	C ⊵ ×
Fav Document number	Title	-	Safety of machinery - Gene reduction (ISO 12100:2010)	ral principles for design - Risk ass	essment and risk
🔶 EN 13861:2011	Safety of machinery - Guidance for the application of machinery			English	Feedback
🔶 EN ISO 12100:2010	Safety of machinery - General principles for design (ISO 12100:2010)		Title / Alternative title     Document description		Ø
EN ISO 19085-15:2021	Woodworking machines - Safety - Part 15: Presses (I 🕇		Short information T	his International Standard specific	
🔶 EN ISO 20607:2019	20607:2019)	•••	d	lesign of machinery. It specifies pr ssessment and risk reduction to h	rinciples of risk elp designers in
🔶 EN ISO 4413:2010	Hydraulic fluid power — General rules and safety re components (ISO 4413:2010)		k	chieving this objective. These prir nowledge and experience of the ccidents and risks associated with	design, use, incidents, 1 machinery.
🔶 EN ISO 4414:2010	Pneumatic fluid power — General rules and safety r D components (ISO 4414:2010)	•••	e	Procedures are described for ident stimating and evaluating risks du he machine life cycle, and for the	ring relevant phases of



#### and in the Safexpert PDF viewer:

SE		Safexpert PDF viewer - ÖNORM EN ISO 12100;2013-10-15	? _ 🖬 ×
		12100:2013-10-15 ry - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)	✓ Current
8	Q Search	↑ 3/92 ↓ Q 100 % ✔ Q □ E Create feedback for the document	
0 results		EUROPEAN STANDARD EN ISO 12100	
		NORME EUROPÉENNE	
Bookmark		EUROPÄISCHE NORM November 2010	
Thumbnails		ICS 13.110 Supersedes EN ISO 12100-1:2003, EN ISO 12100-2: 2003, EN ISO 14121-1:2007	
		English Version	
Link destination		Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)	
Ion		Sécurité des machines - Principes généraux de conception -         Sicherheit von Maschinen - Allgemeine           Appréciation du risque et réduction du risque         Gestaltungsleitsätze - Risikobeurteilung und           IGO 12100:2010)         Risikominderung (ISO 12100:2010)	
		This European Standard was approved by CEN on 9 October 2010.	

• The mask for recording feedback has been revised:

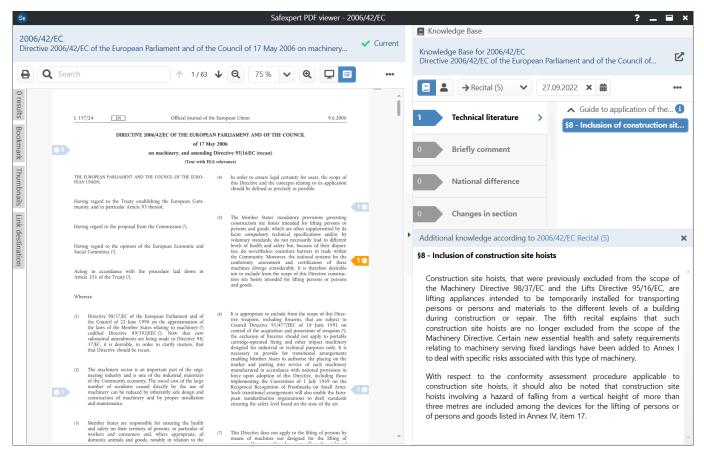
Se Feedback for ÖNORM EN ISO	12100:2013-10-1	5 <b>? _ E ×</b>
Feedback for ÖNORM EN ISO 12100:2013-10-15 Did you notice an error or other inconsistency in one or several sections in this document? If so, plea You can help us!	ase help us improv	e the quality and topicality of this document and the associated Knowledge Base:
Create new feedback Previous feedback (0)		
Q Search	Subject*	Enter the subject
Foreword Annex ZA Relationship between this European Standard and the Essential Requirements of EC Directive 2006/42/EC ISO Cover ISO Contents ISO Foreword Introduction 1 Scope 2 Normative references 3 Terms and definitions 4 Strategy for risk assessment and risk reduction 5 Risk assessment 5.1 General 5.2 Information for risk assessment 5.3 Determination of limits of machinery 5.4 Hazard identification 5 Si Risk estimation 5 Si Risk estimation	Message*	Enter your feedback
Show only edited sections		Dermanently delete all contents of this entry
I have read the General notes and agree to them.		Send X Cancel

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:

edback for ÖNORM I	N ISO 12100:2013-1	)-15					
l you notice an error or oth I can help us!	er inconsistency in one or s	everal sections in this documen	t? If so, please help us improv	e the quality and topicality	of this document and the	associated Knowlec	dge Base:
· · ·							
Create new feedback	Previous feedback (0)						
			<b>9</b>				
		You or other perso	ons of your comp	any have not ve	t		
		provided any feedl					
		provided any reed	read access.	a personally ha	C		
			reau access.				
	You or other p	ersons of your company have r	not yet provided any feedback	for which you personally h	ave read access.		

# 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**

#### Documents & additional products (Safexpert Live Server)

- 1. Documents
  - · Full texts (PDF documents)
  - Standards packages
- 2. Additional products
- 2.1. Internet standards database
  - · Data packages
  - Document structure (with or without references to the previous document)
- 2.2. Safexpert Knowledge Base
  - Technical literature:
  - Reference book & technical paper
  - Application example
  - Additional knowledge:
    - Short commentaries
    - National differences
    - Changes in sections
    - Legal notes
    - Accident information
- 2.3. Templates / Models
  - · Template projects
  - Lists:
    - Hazard lists
    - Cross-reference lists / Task lists
    - Technical documentation checklists
    - Operating instructions templates
  - Libraries:
    - Inspection point libraries
    - Pictogram library
    - Components library
    - Solution library

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 socalled 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:

SE	Safe	xpert Dash	board 9.0 (72)
Projects	Documents / Additional products	System	Help
PROJ	StandardsManager		
	Additional products		
Set	Start Update-Assistant	managem	ent
Non-	View update reports		
Na	SECOM Administration Area		

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

<b>BE</b>		Safexpert	additional products: Li	braries, lists, template	s, Knowledge	e Base,	9.0 (72	2)		? _ 8
6020	04-1 × +									
<b>Q</b> 6	0204-1							×	Advanced search settings	🛨 🔼 🔍 Sea
16 Re	sults count ()	+	New additional produ	uct Import addition	al product	0	₿	👷 CLI EN 60204-1:201	8 (Version 2020-08-21)	02
vou	Product number	Title		ict type	Status		Ŧ	Checklist to EN 60204-1:201	8	
~			All		✓ All					
*	DST OVE EN 60204-1:2019-08-01	Dokumentenstruktur in die einzelnen Absc aufgeteilt, inkl. Referenzen zu den Abschni Vorgängerdokuments: OVE EN 60204-1:20 Veraleich zu ÖVE/ÖNORM EN 60204-1:200	ten des 19-08-01 im Docur	nent structure	l	0	•	■ Open (English) ∨ Title	🕈 Open 🖋 Edit 🍵 Delete	
•	DST OVE EN 60204-1:2019-08-01	Document structure subdivided into the pr sections, including references to the sectio predecessor document: OVE EN 60204-1:2 comparison with ÖVE/ÖNORM EN 60204-	nticular ns of the D19-08-01 in Docur	nent structure	I	0	·	Title <ul> <li>Product description</li> </ul>	Checklist to EN 60204-1:2018	
k	CRL EN 60204-1:2006/A1:2009	Cross-reference list to EN 60204-1:2006/A	:2009 Cross-	reference list B standa	rd	<b>D</b>	•	Short information Keywords	- EN 60204-1	
	CRL EN 60204-1:2018	Cross-reference list to EN 60204-1:2018	Cross-	reference list B standa	rd	<b>[</b> ]	•		Safety of machinery Electrical equipment of machines	
k	LRC EN 60204-1:2006/A1:2009	Liste de références croisées vers EN 60204 A1:2009	1:2006/ Cross-	reference list B standa	rd	<b>[</b> ]	•	Product type Language	Checkpoints library English	
k	QVL EN 60204-1:2006/A1:2009	Querverweisliste nach EN 60204-1:2006/A	:2009 Cross-	reference list B standa	rd	<u> </u>	•	▲ Status		
k	QVL EN 60204-1:2018	Querverweisliste nach EN 60204-1:2018	Cross-	reference list B standa	ırd	<b>[</b> ]	•	Applicable	Yes	
<mark>}</mark>	CLI EN 60204-1:2018 (Version 2020-08-21)	Checklist to EN 60204-1:2018	Check	points library		<u></u>	•	Status code Valid from	Current 01.08.2019	
<u>k</u>	DST ÖVE/ÖNORM EN 60204-31:2014-04-01	Document structure subdivided into the pa sections: ÖVE/ÖNORM EN 60204-31:2014-	rticular Docur 04-01	nent structure		<u> </u>	•	Withdrawn Created on	- 17.08.2020	
k	DST ÖVE/ÖNORM EN 60204-31:2014-04-01	Dokumentenstruktur in die einzelnen Abso aufgeteilt: ÖVE/ÖNORM EN 60204-31:2014		nent structure		<b>D</b>	•	Last change on	18.09.2020	
ł.	DST ÖVE/ÖNORM EN 60204-32:2009-05-01	Dokumentenstruktur in die einzelnen Abso aufgeteilt: ÖVE/ÖNORM EN 60204-32:2009		nent structure		<u> </u>	•	Last change by Changes allowed by the use	Kjeldgaard Jørgen r Yes	
r	DST ÖVE/ÖNORM EN 60204-32:2009-05-01	Document structure subdivided into the pa sections: ÖVE/ÖNORM EN 60204-32:2009-	rticular Docur 05-01 Docur	nent structure		<b>D</b>	•	∧ Scope		
	DST ÖVE/ÖNORM EN	Document structure subdivided into the pa	rticular Docur	nent structure		<b>P</b>		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:

🙁 💬 Fe	eedback overview	Safexpert StandardsManager 9.0 (72)						? Da	niel Zaco
20	006/42 × +							Saved se	arches
Q	2006/42			×	] ≢	Advanced search	settings 😭 🕻		Search
10	Results count					+ New docum	ent 📕 Save sea	rch 🔒	
Fav	Document number	Title	Document type	Status All	~		Additional product	5	₹
*	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	l	
*	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	l	
*	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 (	E 🗸			0	ŀ	+
*	EN 474-1:2006 +A5:2018	Earth-moving machinery — Safety — Part 1: General requirements	type-C standard	<b>A</b>		✓ ▲	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	7	
*	FB Risikobeurteilung - 3. Auflage (Version 2020-02-20)	Efficient CE-marking of machines and equipment - risk assessment in practice	Knowledge Base Technical	k 🗸			0	-	F
*	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	Į	a
<b>*</b>	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	l	

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

	itional products for 2006/42/EC	× +							_			1	_
<b>Q</b>	nter search concept (number, tit	tle,)								search settings	* 🗖	٩	Searc
27 Re	sults count							+ New a	dditional product	Import additi	onal product	8	
avou	Product number	Title	Product type	Status		Applicable	Langu	age					
			All 🗸	All	~	All 🗸	All	~					
☆	CLI 2006/42/EC + 2009/127/EC (Version 2014-07-10)	Checklist to Directive 2006/42/EC incl. 2009/127/EC	Checkpoints library	~		Yes	Englisł	n				Ħ	•••
☆	CPL 2006/42/EC + 2009/127/ EC (Version 2022-05-07)	Checkpoint librabry to 2006/42/EC, Annex Lincl. 2009/127/EC (Version 2022-05-07)	Checkpoints library	~		Yes	Englisł	ı				F	
*	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	Englisł	ı			•	۵	•••
*	CTF 2006/42/EC + 2009/127/ EC	Machinery Directive 2006/42/EC incl. 2006/127/EC	Checklist: Technical file	~		Yes	Englisł	n				۵	•••
*	CTU 2006/42/EG + 2009/127/ EG	Maschinenrichtlinie 2006/42/EG inkl. 2009/127/EG	Checklist: Technical file	~		Yes	Germa	n				D	•••
☆	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	Englisł	ı				٦	•••
☆	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	Germa	n				7	•••
*	DST 2006/42/EC	Document structure subdivided into the particular sections: 2006/42/EC	Document structure	~		Yes	Englisł	n				D	•••
*	DST 2006/42/EC	Dokumentenstruktur in die einzelnen Abschnitte aufgeteilt: 2006/42/EC	Document structure	~		Yes	Germa	n					•••

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:

Addi	tional products for 2006/42/EC	× +								
<b>Q</b>	nter search concept (number, til	le,)							earch settings 🛛 🛧 📥	<b>Q</b> Sea
18 Re	sults count 🕕						+ New a	additional product	Import additional produc	t 🔒 🛛
avou	Product number	Title	Product type	Status		Applicable	Language			
×.			All 🗸	All	~	All 🗸	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			
*	DST 2006/42/EC	Document structure subdivided into the particular sections: 2006/42/EC	Document structure	~		Yes	English		Open	
*	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		Copy Export Transfer Checklist: Tech	staal file ta
*	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			
*	KB Safexpert general	General Knowledge Base for Safexpert	Knowledge Base: Additional k	~		Yes	English			

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:

Feedback ove	erview										
machine 🗙	+									Saved se	earches
<b>Q</b> machine						×	😫 Advan	ced search sett	ings 🔺 🕻		Searc
00 result(s)	of 356 i	s/are shown ① All					<b>+</b> N	ew document	Save sear	ch 🗧	B
v Document	t number	Title	Document type		Status		CE		ditional products	;	
			All	~	All		✓ All	~		_	
EN 415-7:2 +A1:2008		Safety of packaging machines - Part 7: Group and secondary packaging machines	type-C standard			~		<b>~</b>		F	
EN ISO 19085-7:2	2019	Woodworking machines - Safety - Part 7: Surface planing, thickness planing, combined surface/thickness planing machines (ISO 19085-7:2019)	type-C standard			~		<b>~</b>		+	•••
EN 931:19 +A2:2009		Footwear manufacturing machines - Lasting machines - Safety requirements	type-C standard			~		~		1	
EN 972:19 +A1:2010		Tannery machines — Reciprocating roller machines — Safety requirements	type-C standard			~		×		F	•••
EN 972:19 +A1:2010/		Tannery machines — Reciprocating roller machines — Safety requirements	type-C standard			~		~		+	
CEN 1034-1	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			~				۳	•••
7 EN 12750:	:2013	Safety of woodworking machines - Four sided moulding machines	type-C standard					~		F	
EN ISO 19085-14:	:2021	Woodworking machines - Safety - Part 14: Four-sided moulding machines (ISO 19085-14:2021)	type-C standard			~				+	•••
> 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			~				+	•••

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

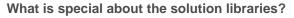
Checklist according to EN ISO 12100:2010 - Annex B - Risk Assessment 730,00 € zzgl. MwSt, kostenloser Versand, Lieferzeit ca. 1-3 Werktage Checklist Lizenztyp: Erstlizenz (Floating) 730,00€ 0 Folgelizenz (Personalisiert) 170.00€ ADDITIONAL 0 1210 00 € Standortlizenz 0 Summe (Lizenzen) 0€ In den Warenkorb 📜 EN ISO 12100 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:// Produkteigenschaften Sprache: EN Basisdokument: EN ISO 12100:2010 13.110 ICS: IBF Solutions GmbH Herausgeber:

# **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.



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 <u>https://www.ibf-solutions.com/fileadmin/Dateidownloads/whitepaper-safexpert-change-assistant.pdf</u>).

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:

SE		Safexpert additional	products: Libraries, lists, temp	olates, Kr	nowledge l	Base,	9.0 (72)				Ĩ	? _	a ×
New	v search 🗙 🕂												
Q	Enter search concept (number, til	tle,)								<b>≢</b> Advanced	search settings 🔍 📩 📥	Q :	Search
Solut	tions library 🗙												
3 res	ult(s) of 377 is/are shown (	All							+ Ne	w additional product	Import additional product	•	₽
	Product number	Title	Product type		Status		Applicabl		anguage				Ŧ
			All	~	All	~	All	~	All 🗸				
*	LB - EN 619: Stetigförderer für Stückgut	EN 619: Stetigförderer für Stückgut	Solutions library		~		Yes	G	German			٥	
*	LB - EN ISO 16090-1: Werkzeugmaschinen Sicherheit	EN ISO 16090-1: Werkzeugmaschinen Sicherheit	Solutions library		~		Yes	G	Berman			٥	
*	LB - EN ISO 16092-3: Werkzeugmaschinen Sicherheit - Hydraulische Pressen	EN ISO 16092-3: Werkzeugmaschinen Sicherheit - Hydraulische Pressen	Solutions library		~		Yes	G	German			٥	

# 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":

E Safexper	rt Dashboard 9.0 (	72)				? _ 🗖
Projects Documents / Additional products System Help						
PROJECTS						STANDARDSMANAGER
🖹 Set up new project 💙 🌽 Project management						Opened last
Non-completed projects						2006/42/EC (Machinery Directive) Directive 200.
Name	Opened last 🕁	Changed last	Important events			CLI EN 60204-1:2018 (Versi Checklist to EN 60204-1:2018
Demoproject Safexpert Professional - EN - single-spindle vertical moulding machi - ISO/TR 14121-2		27.04.2018 John Demoman		Open	~	BAV IEC/IEEE 82079-1:2019 Betriebsanleitungsvorlage nach IE
PRJ-2014-01-00001 Chain Conveyor VLP EN 619:2002+A1:2010 Chain Conveyor(Version 2018-03-17)	22.09.2022	17.03.2018 TÜV Rheinland In	<b>A</b> 7	Open	~	ÖNORM EN ISO 12100:201 Sicherheit von Maschinen - Allgem.
Flurförderer PRJ-2022-09-21-0002	21.09.2022	21.09.2022 Daniel Zacek	None	Open	~	Safety of machinery - General prin.
Roboter-Zelle PRJ-2022-09-21-0001	21.09.2022	21.09.2022 Daniel Zacek	None	Open	~	ÖNORM EN ISO 13857:202 Safety of machinery - Safety distan
Förderanlage PRJ-2022-09-21-0003	21.09.2022	21.09.2022 Daniel Zacek	None	Open	~	Directive 2011/65/EU of the Europ.
Demoprojekt Safexpert Professional - DE - Tischfräsmaschine - ISO/TR 14121-2 PRJ-2014-01-00002	21.09.2022	16.09.2022 Daniel Zacek	<b>A</b> 6	Open	~	EN ISO 11553-1:2008 Sicherheit von Maschinen - Laserb.
OUTSTANDING TASKS DOCUMENTS / ADDITIONAL PRODUCT	rs	≅	SYSTEM		🕗 紹	
Due date My tasks All 1 important event for one or sev		additional	✓ Software/N	Aodules		
Overdue 0 0	ai tavourites.		<ul> <li>Licence</li> </ul>			
Today 0 0			<ul> <li>Memory</li> </ul>			
Future 0 30			A Database			StandardsManager

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

						🚨 Otto Muste
Projektst	atus					
Q Durch	isuchen					Alle Status 🗙 🝸 Weitere Filter 🖪
Bezeichnung			<ul> <li>Status</li> </ul>	Wichtiges Ereignis	Projektanalysen	Projektanalysen / wichtige Ereignisse 🖸 🛛
	EN ISO 1	3732-1:2008	0			Normalbetrieb, Instandhaltung
	EN ISO 1	2100:2010-11	0			Projektanalysen
	EN 6020	4-1:2006/AC:2010	0	▲ Die bibliographischen Daten des Dokuments wurden geändert.		
	4. Risikobeu	rteilung durchführen	0			Keine Daten vorhanden
	Verwend	ungs-, räumliche, zeitliche und weiter				▲ Wichtige Ereignisse
	Gefäh	nrdungsliste nach EN ISO 12100:2010,				
	M M	echanische Gefährdungen	0			Ereignis Die Lösung und die damit im Zusammenhang stehenden Maßnahmen
		Überfahren werden	0			wurden aus einer Lösungsbibliothek übernommen.
		Weggeschleudert werden	0			Die Lösung wurde zurückgezogen am: 04.02.2022 00:00:00
		Quetschen				Nachfolgelösung verfügbar: Vorsehen von festen Schutzeinrichtungen (Nachfolger)
		Schneiden oder Abschneiden	0			Handlungshinweise 1. Öffnen Sie die Risikobeurteilung.
		Einziehen oder Fangen	0			<ol> <li>Setzen Sie den Filter auf "Lösungen nicht mehr aktuell".</li> </ol>
		An vorstehenden Teilen	0		-	3. Prüfen Sie die Lösung.
		<ul> <li>Normalbetrieb, Instandhaltun</li> </ul>	9	Die Lösung und die damit im Zusammenhang stehenden Maßnahme Die Lösung wurde zurückgezogen am: 04.02.2022 00:00:00 Nachfolgelösung verfügbar: Vorsehen von festen Schutzeinrichtunge		
		Vorsehen von festen Schut	O		-	
		Kraftübertragungselemente	0			

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:

	Aktuelle Auswahl		<u>^</u> ,=	e i	A (	<b></b>		Managaratan I	ABC 🥔	
K Löschen	Maßnahmenart: PIK +	Querverweise auswählen	Querverv	3		enrichtlinie hang I	Speichern Finfügen	X Ausschneiden	Drucken Rechtschreibur	ng Standard Fensteranor wiederhersteller
kobeurteilung	Alle Gefährdungen		1		Ansicht			Bearbeiten		Fenster
<b>GE</b> Projektdater										
⊿ ∭ Vi	e Nein (Gefährdung tritt nicht auf)			-liii Konf	information					
		tht auf)	<u> </u>							
	Nicht bewertete Gefährdungen		Gefähr	dung: enbesch			usrüstung / 18.1 - Direkter Ko			
	Risiko nicht hinreichend verminde	ert	Gerann	enbesch	<ul> <li>Geranroung du</li> </ul>		e, wenn Teile der elektris Verbindungen zwischen			enneinrichtung unter
	Lösungen nicht mehr aktuell				Spannung bier	Den, 2.D. aurgrund von	verbindungen zwischen	Abschnitten eines	Steligiorderersystems.	
	✓ Maßnahmenart: PIK		Maßnal	hmen:						
4	Von einer Steuerung abhängige M	laßnahmen	N	r. 🔺	Maßnahme			Art	Hängt von einer Steuer	Risiko IN / OUT
			▶ 1		Anbringen von Kennzeichn	ungen.		рік 🗸		
	Angewandte Dokumente: EN 1037				Vorsehen von Schutz gege	n direktes Berühren.				
	Gefährdungsereignisse: Elektrischen Ausrüs	stung	2					ISK		
•	Elektrische Ausrüstung - ausgenomn     Elektrische Ausrüstung - ausgenomn     Mormalbetrieb, Instandhaltung     Elektrische Anbringen von Kennzeichnur		:							
			Ang	ewandte	Dokumente Piktogram	me Betriebsanleitungs-	Assistent			
				Status	Dokumentnummer	Titel		Abschnitt		Sprungziel
					The C to DODD - 1 4 DO to	Stetigförderer und Syste	me - Sicherheits- und EMV	5.2.1.1		/d=5.2.1.1
			•		EN 619:2002+A1:2010		- Elektrische Ausrüctung	5.3.5		/d=5.3.5
Ursprung:			•	io 10	EN 619:2002+A1:2010 EN 60204-1:2006/A1:2	Sicherheit von Maschiner	- Liekulsche Ausrustung			
	 nhang stehend mit der elektrischen Aus	srüstung.	•				s Europäischen Parlaments	Anhang I, 1.7.1.		/d=I_1.7.1.
Ursprung: - In Zusammer		srüstung. ^	•	8	EN 60204-1:2006/A1:2	Richtlinie 2006/42/EG de	-	Anhang I, 1.7.1. Anhang I, 1.5.1.		/d=I_1.7.1. /d=I_1.5.1.
		srüstung. ^	•		EN 60204-1:2006/A1:2 2006/42/EG	Richtlinie 2006/42/EG de	s Europäischen Parlaments			
		srüstung. ^	4		EN 60204-1:2006/A1:2 2006/42/EG	Richtlinie 2006/42/EG de	s Europäischen Parlaments			

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

SE	Safexpert 9.0 (71) - Kettenförderer	? _ 🖬 ×
8 ⊴ ⊲ =		
Bearbeiten Status Aktuelle Auswahl		~
Löschen	schinenrichtlinie Anhang I Angewandte Dokumente	Standard Fensteranordnung wiederherstellen Fenster
3 🚱 Projektdaten 🗙 🚦 Risikobeurteilung 🗙		ę
Kerner Verwendungs-, räumliche, zetilche und weitere Grenzen     Mechanische Gefährdungen     Mechanische Gefährdungen     Mechanische Gefährdungen     Mechanische Gefährdungen		
an ordsteinieten reteri Normsbetreiten, Instandhaltung ↓ ■ Normsbetreiten, Instandhaltung ↓ ■ Normsbetreiten, Instandhaltung	Wellen, Wellenenden. Aus Lösungsbibliothek "LB EN 619:2002+A1:2010 (Version 2022-02-07)" übernommen:	Lösungsbibliothek
sberg	Ads Losaligabilionex Lb EN 015:2002 #41:2010 (Version 2022-02-07) aben lonninen.	Losungsbibliotnek
the Lebensphasen	Nr. ▲         Maßnahme         Art         Maßnahmen wurde           Vorsehen von festen Schutzeinrichtungen.         Die Lösung wurde         Die Lösung wurde	: damit im Zusammenhang stehenden n aus einer Lösungshibliofhek übernommen. zurückgezogen am: 04.02.2022 00:00:00 er fügbar: Vorsehen von festen n (Nachfolger)
	Angewandte Dokumente Betriebsanleitungs-Assistent	
	: Status Dokumentnummer Titel	Abschnitt Sprungziel
	EN 619:2002+A1:2010 Stetigförderer und Systeme - Sicherheits- und EMV-Anforderungen an mec	5.1.2 /d=5.1.2
	EN ISO 14120:2015 Sicherheit von Maschinen — Trennende Schutzeinrichtungen — Allgemeine	Inhalt /d=CONTENT
	EN ISO 13857:2008 Sicherheit von Maschinen - Sicherheitsabstände gegen das Erreichen von G	Inhalt /p=4
	2006/42/EG Richtlinie 2006/42/EG des Europäischen Parlaments und des Rates vom 17	Anhang I, 1.3 /d=I_1.3.7.
Ursprung:	2006/42/EG Richtlinie 2006/42/EG des Europäischen Parlaments und des Rates vom 17	Anhang I, 1.3 /d=I_1.3.8.1.
- Beschleunigung/Abbremsung;	2006/42/EG Richtlinie 2006/42/EG des Europäischen Parlaments und des Rates vom 17	Anhang I, 1.4 /d=I_1.4.1.
- spitze Teile;	2006/42/EG Richtlinie 2006/42/EG des Europäischen Parlaments und des Rates vom 17	Anhang I, 1.4 /d=I_1.4.2.1.
<ul> <li>Ann\u00e4herung eines sich bewegenden Teils an ein feststehendes Teil;</li> </ul>	2006/42/EG Richtlinie 2006/42/EG des Europäischen Parlaments und des Rates vom 17	Anhang I, 1.3 /d=I_1.3.8.2.
- schneidende Teile;	2006/42/EG Richtlinie 2006/42/EG des Europäischen Parlaments und des Rates vom 17	Anhang I, 1.3 /d=I_1.3.8.
- elastische Elemente; - herabfallende Gegenstände; - Schwerkraft:	2006/42/EG Richtlinie 2006/42/EG des Europäischen Parlaments und des Rates vom 17	Anhang I, 1.2 /d=I_1.2.1.
- Höhe gegenüber dem Boden; - Hochdruck;	Risiko hinreichend vermindert Erklärt von:	am:
		Letzte Änderung: 07.02.2022 08:10

EF

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:

SE			Lösungsbibliothe	ek.							? -	. 🗆 ×
Aktionen												
Filter: Allgemein (2) >	📡 🔤 Excel Expor	t 👻										
Bezeichnung Matcher	de Gefährdung / Gefä	Fundstelle	Produkttyp			Lebensphase	Gefährdungsbereich	Gültig ab	Zurückgezogen	Vorgänger	Nachfolger	
Bibliothek: Lösungsbibliothek nach 619:2002+A1:201	- Stetigförderer für Stü	ckgut										
Vorsehen von festen Schutzenrichtungen ME	Einziehen oder Fangen	EN 619:2002+A1:2010, 5.1.2	Kettenförderer, Rollenbahnen, Horizontal-Umsetzeir Tragkettenförderer, Horizontal-Umsetzeir Rollenbahn, Vertikal-Umsetzeinric Tragkettenförderer, Vertikal-Umsetzeinric Rollenbahn	richtur htung	ng mit mit		An vorstehenden Teilen		04.02.2022		Lösungsbiblid 619:2002+A Stetigfördere Stückgut - Vo festen Schutzeinrich (Nachfolger)	1:2010 - er für orsehen von ntungen
Vorsehen von festen Schutzeinrichtungen (Nachfolger)	Einziehen oder Fangen	EN 619:2002+A1:2010	Bandförderer, Horizontal-Umsetzein Bandförderer, Vertikal-Umsetzeinric Bandförderer, Hängeförderer als So Hängeförderer als Kr	htung hiener	mit nhängebah	n,	An vorstehenden Teilen	04.02.2022		Lösungsbibliothek nach 619:2002+A1:2010 - Stetigförderer für Stückgut - Vorsehen von festen Schutzeinrichtungen		
Wählen Sie die Maßnahme(n) und ggf. die Detailinformationen aus, die	bernommen werden soll(en)			N	Nr. 🔺 Ma	ßnahme			Art	Hängt von einer St	Risiko IN /	ОЛТ
Maßnahme     Riskoeinschätzung				+ 1	1 Vo	rsehen von festen	Schutzeinrichtungen.		TES			
Bewertungen RL, SIL, Kategorie     Bautele     Pittogramme     Angewandte Dokumente												
Sistema Projekte				Ang	gewandte D	Dokumente						
					Status	Dokumentnummer	Titel		Abschnitt		Sprung	ziel
				•	2	EN 619:2002+A1	Stetigförderer und	Systeme - Sicher	heit 5.1.2		/d=5.1	.2 ^
							15 Sicherheit von Mas				/d=CO	NTENT
					000		08 Sicherheit von Mas				/p=4	~
						0000 (40 MO			Anhana T	127		
										Übernehmer	Abb	orechen

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.

	L				Lösungsbibliothek bearbeiten - LB EN 619:20	02+A1:2010 (Version 2022-02-07)					? -
Instruction on factor Subdiversibility       Image: Subd	Klöschen Alternativenbestehungen aufheben Lösungsbibliothek	Fundstelle h (aus Norm)	inzufügen Fundstele Konverterung Kanager) entfernen -	en Mačnahman	Decel Spectern Derlugen Alles aussistern Beport - Berlugen Alles aussistern Bearbeit	Drucken Rechtschreibung Qualitätsprüfung durchführen en Status					
Proder un feite Schuberniturgen         Pd         Partier un feite Schuberniturgen         Pde Schuberniturgen         Partier un feite Schuberniturgen         Pariniturgen feite Schuberniturgen         Partier un feit			Gefährdung / Gefährdungsereignis	Fundstelle	Produkttyp	Lebensphase Gefährdungsbereich	Guiltig ab	Zurückgezogen am	Vorgänger	Nachfolger	Detaldaten
<ul> <li>Instantes de l'actende de l'act</li></ul>				619-2902+A1:2910, 5.1.2	Rollenbahnen, Horzontal-Umetzennichtung mit Traglerttenförderer, Horzontal-Umetzennichtung mit Rollenbahn, Vertikal-Umetzennichtuna mit Traglerttenförderer,	An vorstehenden Telen.		<ul> <li>■ 04.03.2023</li> </ul>		619:2002+A1:2010 - Statgförderer für Stückgut - Vorashen von finten	Letzte Änderung am
- Traulen un felen Stutzenstrunge (kaldiger) HE Breihn in Fragen Britishours (kaldiger) Heigher Grief (kaldiger) Heigher	Vorsehen von fiesten Schutzeinsichtungen (enteprechend de	ME	Einziehen oder Fangen	EN 619:2002+A1:2010, 5.1.2	Bandforderer, Hontontal-Unsetzennichtung nit Bandförderer, Vert Mal-Unsetzennichtung nit Bandförderer, Hängeförder et als Schemenhängebahn, Hängeförder et als Schemenhängebahn,	An vorstehenden Telen	/				+ 1 ··· ·
Variane van fanten indenten Schulerendragen.     Variane van fanten indenten Variane van fanten indenten van fanten van fa	– Vorsehen von flesten Schutzeinrichtungen (Nachfolger)	ME		BN 619:2002+A1:2010	Horizontal-Umsetzeinrichtung mit Bandförderer, Vertikal-Umsetzeinrichtung mit Bandförderer, Hängeförderer als Kreisförderer Hängeförderer als Kreisförderer		04.02.2022		619:2002+A1:2010 - Stetigförderer für Stückaut - Vorsehen von festen		
	<ul> <li>Vorsehen von festen Schutzeinichtungen.</li> </ul>	ME		BV 619:2002+A1:2010, Anhang F.1	Kettenförderer, Rolenbahnen						
	– Yanashen von fisten Schutzelmichtungen.	NE	Zugang zu/Kantakt mit beweglichen Telen	EH 619:2002+A1:2010, Anharg F.1	Hängeförderer als Schlenenhängebahn,	Lastein- und Lastuaschkousentellen - Lindersolte des Stetspforderen					Angewandte Dok
											E. Sich 2. Rich 2. Rich 2. Rich 2. Rich 2. Rich
	seichnung entbillt vorsehen von festen schutzennichtungen									Edit Filter	2 Rich

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 which 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:

Se				Lösungsbibliothek			
Aktionen							
Filter: Allgemein (1335) 🝷		📡 🔊	Excel Export 🔹				
Bezeichnung	Matchcode	Gefährdung / Gefährd	Fundstelle	Produkttyp	Lebensphase	Gefährdungsbereich	Gü
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 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 Rollenbahn		Zugorgane - Umlenkstellen	
Vorsehen von Hullstucken	ME	Einziehen oder Hangen	EN 619:2002+A1:2010, 5.1.3.3	Kettentorderer, Rollenbahnen, Horizontal-Umsetzeinrichtung mit Tragkettenförderer, Horizontal-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:

Safexpert D	ashboard 9.0 (	72)			
ojects Documents / Additional products System Help					
PROJECTS					
🖹 Set up new project 💙 🌽 Project management					
Non-completed projects					
Name	Opened last +	Changed last	Important events		
	Opened last 🦆		Important events		-
Demoproject Safexpert Professional - EN - single-spindle vertical moulding machine - ISO/TR 14121-2	22.09.2022	27.04.2018			
	22.09.2022	John Demoman	<b>A</b> 2	Open •	✓
PRJ-2014-01-00001	22.09.2022	John Demoman 17.03.2018 TÜV Rheinland In		· ·	- achinery Direct
PRJ-2014-01-00001 Chain Conveyor VLP EN 619:2002+A1:2010 Chain Conveyor(Version 2018-03-17)		17.03.2018		CE Guide Ma Risk assessm	achinery Directi nent
PRJ-2014-01-00001  PRJ-2014-01-00001  VLP EN 619:2002+A1:2010 Chain Conveyor(Version 2018-03-17)  Flurförderer PRJ-2022-09-21-0002  PRJ-2022-09-21-0002	22.09.2022	17.03.2018 TÜV Rheinland In 21.09.2022	<b>A</b> 7	CE Guide Ma	achinery Directi nent
PRJ-2014-01-00001  PRJ-2014-01-00001  VLP EN 6192002+41/2010 Chain Conveyor(Version 2018-03-17)  Flurförderer PRJ-2022-09-21-0002  Roboter-Zelle PRJ-2022-09-21-0001  Eörderavalare	22.09.2022 21.09.2022	17.03.2018 TÜV Rheinland In 21.09.2022 Daniel Zacek 21.09.2022	None	CE Guide Ma Risk assessm	achinery Directi nent ger

# 11.2 More overview in the testing process

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

	Safexpert CheckManager 9.0 (72	2) - Chain Conveyor	? 🗖 🖬 🗙
🗞 Test scopes 🛛 🚺	🔁 Checks <sub>(2)</sub>		
Q Search •••	Q Search All statuses V Y Additional filters	Checkpoint 8	< Q Search + Add
Chain Conveyor	Name   Important	₹	2006/42/EG
— 🗱 Chain	Chain Conveyor (Test scope)	Check Checkpoint details	🖺 Annex I, 1.1.5 Design of ma 🍵
<ul> <li>Chain at the inlet</li> <li>Control box</li> </ul>	🛙 🚞 Tests at the assembly stage 🛛 🔏	Checkpoint applies	12
	Chain conveyor - assembly	••• Name Fencing (mesh according to EN 13857)	
	<ul> <li>Ensure compliance with safety and EMC requirements and/or measures</li> </ul>	For check 🔀 Enlarge view	
	<ul> <li>At the installation site before switching</li> <li>on the power supply</li> </ul>	•••	
	<ul> <li>Reference documents or test equipment, etc.</li> </ul>		
	Protective devices	•••	
	Access facilities	Remark	
	I Safety requirements and/or measures     6     6	Frequent errors	Þ
	<ul> <li>Fully fenced areas</li> </ul>	Comment 9 & Enlarge view	
	🖬 😣 Mechanical hazards	•••	
	Between power moved and fixed parts	•••	
	Fencing (mesh according to EN 13857)		
	Ocors or barriers with interlocks	Measurement V Success VInsuccessful 20.00	
	Gap between the moving and fixed parts	Measurement     Success     X Unsuccessful     20.09       10	
	Protective devices with           Image: Constraint of the second	••• Tasks	
	barriers safety mats)	✓ Annexes	
	Light barriers	•••	
	Safety mats	•••	
	<ul> <li>Dressed equipment - loading and unloading openings</li> </ul>	•••	

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:

SE					Projekt	status - Prüfung Demopi	rojekt 1		? 🔔 🖃 🗙
😴 P	roje	ektsta	itus						-
-	Q Durchsuchen			n			A	lle Status 🗸 🝸 Wei	itere Filter
Wi	ichti	ige Er	reignis	sse 🗙					
Bezei	ezeichnung				▲ Status	Projektanalysen	Wichtiges Ereignis	Projektanalysen /	
	Prüfung Demoprojekt 1			oprojekt 1	0			Beleuchtung OK?	en / 🖬 🖻 🗰
		CE-L	CE-Leitfaden - Maschinenrichtlinie 2006/42/EG		0			Projektanalysen	
	<ul> <li>2. Anwendung von Richtlinien klärer</li> </ul>		endung von Richtlinien klären	0					
			200	6/42/EG	0		🛕 Die bibliographischen Daten des Dok.	Keine Date	n vorhanden
	Prüfungen / Abnahmen						Kenne Date	in vonanach	
	Prüfung / Abnahme		0			<ul> <li>Wichtige Ereign</li> </ul>	isse		
		•	Prüf	fpunktebibliothek nach 2006/42/EG, Anh	ang Linkl. 20 🔘			Ereignis	Zurückgezogen am 22.06.2022.
				GRUNDLEGENDE SICHERHEITS- UND GE	SUNDHEITSSC 🔘				Neuer Prüfpunkt verfügbar:
				ALLGEMEINES	0				Beleuchtung OK?
				Beleuchtung OK?	0		A Zurückgezogen am 22.06.2022. Neuer Prüfpunkt verfügbar: Beleucht	Handlungshinweise	Prüfen Sie, ob die Prüfung wiederholt werden muss.
								Gelesen	

These digital analyses are available in CheckManager in Safexpert 9.0:

1. Are the checkpoints still up to date?

2. 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:

		Safexpert CheckManager 9.0 (72) - (	Chain Conveyor				
🚷 Test scopes	Checks						
Q Search •••	Q Search All statu	uses 🗸 📉 Additional filters					
<ul> <li>Chain Conveyor</li> <li></li></ul>	Define additional filter criteria						
– 🏘 Chain at the inlet	Check Checkpoint properties						
– 🗱 Control box	Expert field	Check method	Check level				
	<b>Q</b> Search	Q Search	Coarse				
	EMC	Documentation	Middle				
	Statics	Measurement	Detail				
	Control Engineering	Performance check / test					
	Mechanical Engineeing						

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 selfcreated 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.