We know the way to optimal safety. Accompany us.

1. DIRECTIVES AND STANDARDS RESEARCH
2. DEFINITION OF THE SAFETY CHAIN
3. SAFETY-RELEVANT INDICATORS
4. TECHNICAL IMPLEMENTATION
5. VALIDATION
6. TRAINING COURSES

Your key questions:
- Which potential hazards can occur in my machine and how can I assess them?
- Is a safety function involved? Does a failure of this function lead to the endangerment of persons?
- Do my protective devices depend on a control system?
- Should SMC provide an installation-ready solution (e.g. in the form of a control cabinet)?
- What Performance Level emerges from my risk assessment?
- Do constructive measures suffice to minimize the hazard?
- Which safety functions are appropriate for the respective hazard situation?
- Which components belong to the safety function?
- Which options do I have to achieve the required Performance Level?
- How often can the safety function expect to be actuated?
- Does the safety chain’s service life correspond with that required by the standard?
- To what extent must I be able to detect a safety function’s failure?
- How do I design a standardized circuit?
- Must a circuit be evaluated by external assessors?
- What do I need for complete CE-conformant documentation?
- In which form must the documentation exist?
- How long must the documentation be available?
- Was the required Performance Level actually achieved?
- Have I worked according to the latest state of technology?
- Were all safety principles properly implemented?
- Have I analyzed all of the measures that could be expected?
- Which errors can I preclude?
- Does my quality assurance satisfy the requirements of the standard?
- What duty of information do I have towards the machine’s user?
- Does a need exist in my team for further education and training in the area of machine safety and pneumatics?

SMC offers solutions:
- We support you during the risk assessment as well as with questions about various directives and about Performance Level.
- We help you to find the appropriate safety functions corresponding to the hazard and to implement them under ISO 13849 and the current safety regulations.
- We gladly provide all of the necessary parameters for SMC components. Furthermore, SMC offers expert support when calculating the safety function pursuant to ISO 13849-1.
- We support you comprehensively in the drafting of circuit schematics and concepts – from the simple circuit to complete, installation-ready CE-conformant solutions.
- We gladly support your during the testing and analysis of your safety system according to ISO 13849-2.
- SMC offers targeted, customized training courses and advanced education on the subject of safe control with emphasis on pneumatics and electrical equipment.