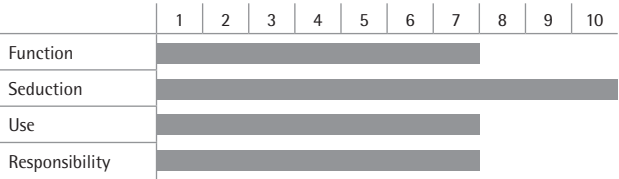


# Design Fundamentals

The basics of good design



reddot design museum



FOR Odivis Suite Faucets  
Faucet collection  
Manufacturer: FOR, Germany  
Design: ARTEFAKT DESIGN, Germany  
Red Dot: Best of the Best 2024

# What is good design about?

The structure of the Red Dot Design Museum offers visitors the opportunity to start their visit by familiarising themselves with some of the general principles of good design – the “Design Fundamentals”. This includes the four qualities of good design (chapter 1), the most important design principles (chapter 2) and the quality factors in design (chapter 3). It also explains what constitutes design in the age of big data (chapter 4). A tour of the museum’s ground floor with its short introductory texts and exemplary products will enable them to give an answer to the above question “What is good design about?”.

## The four qualities of good design

Good design is multilayered – a product should be able to impress on several levels. According to Peter Zec in his book “The Form of Success” (2019), it must combine the four qualities of good design:

- The quality of function
- The quality of seduction
- The quality of use
- The quality of responsibility

In order to make this principle comprehensible, the products in the exhibition “Milestones of Contemporary Design” are labelled with a graphic that illustrates the extent to which the four qualities are pronounced in the respective product.

The quality of function

Product development begins with the question: How can a specific purpose become a thing? Which form results from the purpose, which technology, which material is particularly suitable? The answers to these questions result in a functioning product.

One example of the quality of function is the Fiskars Oscillating Sprinklers lawn sprinkler system: the range of the sprinkler can be individually adjusted for even, efficient and precise irrigation and therefore optimised water consumption. The width and direction can also be set easily, as all control elements are highlighted in colour.

The ATEM 1 M/E Advanced Panel 30, a control panel for live production mixers, impresses with its functionality that has been thought through down to the last detail. A multitude of professional functions and the clear layout of the operating elements predestine the product for complex live productions in which it is vital to be able to respond rapidly.



|                | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------|---|---|---|---|---|---|---|---|---|----|
| Function       |   |   |   |   |   |   |   |   |   |    |
| Seduction      |   |   |   |   |   |   |   |   |   |    |
| Use            |   |   |   |   |   |   |   |   |   |    |
| Responsibility |   |   |   |   |   |   |   |   |   |    |

Fiskars Oscillating Sprinklers  
Lawn sprinkler system  
Manufacturer: Fiskars, Finland  
In-house design  
Red Dot: Best of the Best 2024



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| Responsibility |   |   |   |   |   |   |   |   |   |    |

Blackmagic ATEM 1 M/E  
Advanced Panel 30  
Control panel for live production mixers  
Manufacturer: Blackmagic Design,  
Australia  
In-house design  
Red Dot: Best of the Best 2024



|                | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
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| Responsibility |   |   |   |   |   |   |   |   |   |    |

Midsummer  
Vases  
Manufacturer: Orrefors, Sweden  
Design: Claesson Koivisto Rune, Sweden  
Red Dot: Best of the Best 2024

## The quality of seduction

In addition to the functional aspects of design, there is also an aesthetic quality that is not primarily orientated towards the utility and use of an object, but is based on the pursuit of beauty.

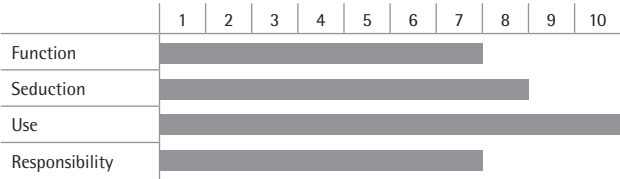
The vases in the Midsummer series are an example of products in which the quality of seduction is pronounced. Whether placed individually or arranged as an ensemble, they are eye-catching with their different shapes and delicate colouring. The quality of the glass and the precision craftsmanship are just as impressive as the carefully balanced proportions.

The “Chronograph 1 Utility - Limited Edition” wristwatch impresses with its harmonious design in every respect – from the differentiated hands to the scratch-resistant case material with its enduring beauty.



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Chronograph 1 Utility –  
Limited Edition  
Wristwatch  
Manufacturer: Porsche Lifestyle,  
Germany  
In-house design  
Red Dot: Best of the Best 2024



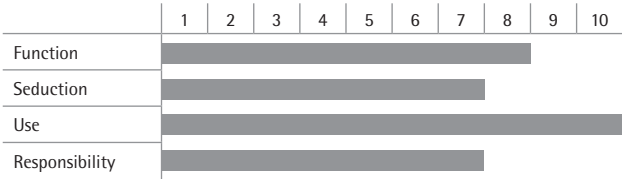
**Bugaboo Dragonfly**  
Pushchair  
Manufacturer: Bugaboo, Netherlands  
In-house design  
Red Dot: Best of the Best 2024

The quality of use

In the early 1990s, the German communication designer Otl Aicher spoke of the phenomenon of “objects of utility that are not usable”. For there are things that function excellently on their own, but are difficult to use. The easier a product is to operate – in other words, to use – the greater its benefit to the user.

An example of high quality of use is the Bugaboo Dragonfly. Thanks to an innovative folding mechanism, this pushchair can be folded compactly, including the bassinet or seat attached, in one single movement.

Magnos, on the other hand, is a compact examination device for the early detection of skin cancer that meets high ergonomic requirements. The user interface in the form of a dual-touch display and the interaction concept were designed to be purely digital. The handling of Magnos is therefore similar to that of smartphones and ensures that users are guided safely and intuitively through the screening process.



**Magnos**  
Dermatoscope  
Manufacturer: Magnosco, Germany  
Design: In-house design; Wilddesign, Germany  
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**Yoshino Solid-State Portable Power Stations**  
Mobile power supply  
Manufacturer: Yoshino Technology, USA  
Design: fuse project, USA  
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## The quality of responsibility

In view of climate and demographic change, the quality of responsibility is now more important than ever. This is because the design of a product is always accompanied by a responsibility towards people and the environment. Even before a product is developed, companies and designers can consider how they can design and produce it in a more sustainable, durable and therefore more environmentally-friendly way.

Yoshino portable batteries offer energy independence with a robust and aesthetic housing – for example on family outings, on building sites or in emergency situations. In addition to the safety aspect, the advantages of these solid-state batteries include a higher energy density and therefore a lower weight.

The Meadow Daisy Top packaging system is a refill concept for the cosmetics industry and is based on a standard beverage can, an innovative cap and a pump dispenser.



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**Meadow Daisy Top™**  
Packaging system  
Manufacturer: Meadow, Sweden  
Design: manufactured.design, United Kingdom; Instrument Industries, United Kingdom  
Red Dot: Best of the Best 2024

### Form follows function

The design principle "form follows function" was coined at the beginning of the 20th century by the American architect Louis Henry Sullivan (1856–1924) and later became the maxim of many generations of designers. What is understood by this is that in the design of products, the functional and best possible form inevitably results from their function. The obvious conclusion is that under this principle very reduced, purpose-built products are created – just purely functional. Sullivan himself, however, was of the opinion that additional elements, such as ornaments on a building, could also fulfil a function, for example by defining it as particularly representative.



**Atlas 190 DLX Pro Sensor Life Jacket**  
Manufacturer: Mustang Survival, Canada  
In-house design  
Red Dot 2024

### Form follows emotion

"Form follows emotion" is a design approach that was devised by the German-American designer Hartmut Esslinger (\*1944), the founder of frog design. In the 1980s, Esslinger criticised the still young high-tech industry for the fact that its products for the mass market looked like purely technical instruments. In turn, he wanted the sight, but above all the use of such products to become an emotional, sensually charged process. Esslinger's goal was to help shape the relationship between people and devices, thereby facilitating their access to technical products.



**INSTAX Pal**  
Digital camera  
Manufacturer: FUJIFILM, Japan  
In-house design  
Red Dot 2024

## The execution

A particularly precise and careful production often only reveals itself to people when in use. Such products meet expectations that the buyer did not even know he/she had. The quality becomes an experience. However, such quality also has its price: the last ten per cent increase in quality can double the production costs.



**mocopi**  
Motion capture system  
Manufacturer: Sony, Japan  
In-house design  
Red Dot: Best of the Best 2024

## The dominant form

A striking design gives products a high recognition value. Such products stand out from the mass and are imprinted on our memory. Iconic shapes help products to become design classics that can sometimes stay on the market for decades. True quality in form is timeless.



**C44E**  
Charging station  
Manufacturer: CUBOS Service, Germany  
In-house design  
Red Dot 2024



## Materials – rethought

Materials are an important source of inspiration for the development of innovative products. This includes not only new materials in the narrower sense, but also new technologies or new possibilities for processing and production. They are one of the strongest drivers of innovation in product design, because they enable both the creation of completely new products and the continuous improvement of existing objects.

Made from 50 per cent recycled polycarbonate water cooler jugs, the Philips MyCreation Jewels Pendants skilfully combine sustainability with high-quality aesthetics. Innovative 3D printing techniques are used to create a rippling texture on the lampshade, which in turn results in natural, sparkling light effects. The delicate blue hue of the transparent shade reflects the origin of the material and makes reference to water as the source of inspiration for the design.



**Philips MyCreation Jewels Pendants**  
Hanging lamps  
Manufacturer: Signify, Netherlands  
Design: Signify Design, Netherlands  
Red Dot 2024

Thanks to innovative Carbon Deck technology and its „tip-tail“ shape, the Ripstick 96 freeride ski enables precise and dynamic power transmission in different snow and terrain conditions. A flax fibre layer serves to reduce vibrations at high speeds, while the precise profile ensures good manoeuvrability and reliable edge grip. The appealing graphic design visualises dynamics and skiing fun with its colour gradient.



**Ripstick 96**  
Ski  
Manufacturer: Elan, Slovenia  
In-house design  
Red Dot 2024

## Materials – newly combined

The products of the German manufacturer Franz Kaldewei are also characterised by their special materiality: KALDEWEI steel enamel is a combination of the natural materials steel and glass, which is produced in Ahlen using a proprietary recipe for enamelling. The composite material combines the strengths of both materials: Steel stands for strength, high load-bearing capacity, sturdiness and mouldability. Glass offers an attractive visual appearance and is particularly resistant to chemical or thermal stress.

This steel enamel is recyclable, can be 100 per cent recycled and itself consists of 20 per cent recycled steel. The Miena washbasin bowl stands out with its particularly thin edges and soft contours. In combination with its round shape, Miena emanates an extraordinary lightness. At the same time, the KALDEWEI steel enamel ensures stability.



**Miena**  
Washbasin bowl  
Manufacturer: Franz Kaldewei, Germany  
Design: Anke Salomon, Germany  
Red Dot 2018

The MEISTERSTÜCK OYO DUO free-standing bathtub is also made of steel enamel. "Creating a flowing shape of this size from sustainable, double-walled steel enamel is a design novelty," praised the jury, "especially as the design also takes into account the aspect of water saving in addition to appearance and material."



**MEISTERSTÜCK OYO DUO**  
Bathtub  
Manufacturer: Franz Kaldewei, Germany  
Design: Stefan Diez, Germany  
Red Dot 2023

### Products and systems

In an era of digitisation, more and more products are no longer stand-alone. Instead, they are integrated in entire service and data-processing systems. The task of the designer is to design the interaction with these products perfectly so that these devices can be used simply and intuitively even without a deeper understanding of the underlying processes and can be integrated as naturally as possible in our world.

The challenge for designers is to shape the mutual communication and interaction between products as well as between humans on the one hand and products or entire systems on the other. Within this process, the design of individual products becomes less significant in favour of the design of comprehensive systems. The products are representative of the underlying system and make it possible to use services or access data and interact with that data.

The "less is more" principle appears to be informing the design of these devices: The more complex the systems, the more reduced the design of the devices that serve as an interface between the data and the users. The actual design retreats behind ease of use and sophisticated system-based communication.



**CLOi ServeBot (Shelf Type)**  
Service robot  
Manufacturer: LG Electronics, South Korea  
In-house design  
Red Dot: Best of the Best 2024



**GravaStar Mercury Gaming Mouse**  
Manufacturer: ZhuoYe ChuangYi, China  
In-house design  
Red Dot 2024



**KUKA KR 500 FORTEC-2**  
Industrial robot  
Manufacturer: KUKA, Germany  
Design: In-house design;  
Selic Industriedesign, Germany  
Red Dot: Best of the Best 2024

## Robot design – between humanoid and technoid

Robots are increasingly becoming part of our day-to-day life. The question is always how these autonomous machines should be designed so that they are not perceived as a threat but rather accepted as a natural part of our lifestyle and work environment in the future. The general image of robots has so far been strongly influenced by pop culture – through films, books, comics and manga – with either the technical aspect of the machine being the dominant feature or the humanoid, human-like side of the robot taking centre stage in terms of design.

### Industrial robots

Thanks to big data and networking, semi-autonomous or autonomous machines are now capable of flexible and individualised production. They take over monotonous or energy-consuming tasks or those that require highest precision, thus relieving the burden on humans. The driving force behind this is the desire to increase productivity and rationalisation. The emotional quality of the design of these machines plays an even more important role. The designers counter the slight unease of people who work side by side with such robots on a daily basis with an anthropomorphic design language that makes the robots appear less technoid and threatening.

### Household robots

The purpose of household robots consists mainly of relieving people by doing their work for them. It is ultimately only a question of time before vacuum-cleaning and dusting robots will be considered part of normal household equipment. Interestingly, from a design perspective, household robots have nothing at all in common with the at least remotely humanoid robot image propagated by pop culture. Their appearance is predominantly characterised by a clear form language, which appears businesslike to likeable, and by no means threatening.



**BlueNexus**  
**Intelligent Cordless Pool Cleaner**  
Cleaning robot  
Manufacturer: Subblue Underwater Ai, China  
In-house design  
Red Dot 2024

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[www.red-dot-design-museum.org](http://www.red-dot-design-museum.org)

### Opening hours

Tue–Sun: 11 a.m.–6 p.m.

Mondays: closed (except for public holidays and during school holidays in North Rhine-Westphalia)

Fridays: pay what you want

Subject to change, current information can be found at

[www.red-dot-design-museum.org](http://www.red-dot-design-museum.org)

### Individual tour booking by phone

+49 201 30104-40

Information on all exhibited products can be found at [www.red-dot.org](http://www.red-dot.org)

#### Cover:

##### Super Chair

Manufacturer: DAMIANO LATINI, Italy

Design: In-house Design; Nicholas Baker Studio, USA;

Antonio Lanzillo & Partners, Italy

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#### Layout

Maren Reinecke, [www.goldhaehnchen.com](http://www.goldhaehnchen.com)



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