

## Ball valve technology in mobile applications

Safely shut off  
and direct your media



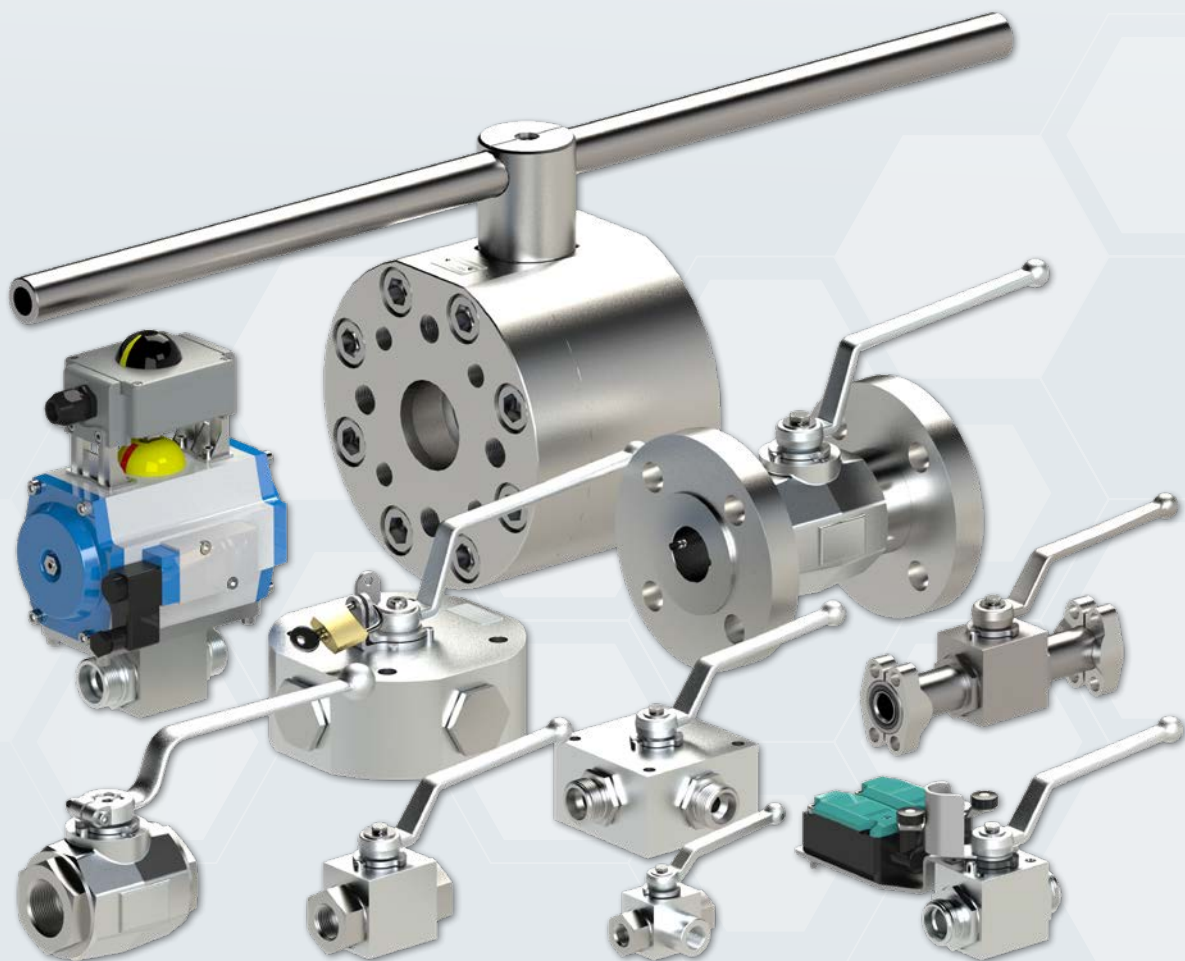
# The perfect combination of quality and performance – HYDAC ball valve technology

For more than 60 years, HYDAC ball valves have provided the highest level of safety when shutting off, diverting or distributing your media. High-quality materials for liquid, gaseous or abrasive media and a multitude of designs and connection types are available for virtually every application. Our products meet the highest safety standards when it comes to durability and leak tightness.

The wide variety ranges from simple switch valves to application-specific solutions for demanding media, such as hydrogen. Ball valves have been specifically developed for this purpose with specially adapted combinations of materials and sealing systems.

## Do you need a custom solution?

We'd be happy to support your projects with the help of our experienced engineering team and work with you to find the right components.



## **Precision in movement – Ball valves for the highest requirements**

When it comes to quality and reliability, we've been the preferred partner for ball valves for over 50 years. Over this long period of time, we've made a name for ourselves and have firmly established our position in the industry.

We owe our success to our passion for first-class products and our dedicated employees, who always work to the highest standards. Every single ball valve that leaves our production line is a product of meticulous craftsmanship and strict quality controls.

Our ball valves are characterised by their longevity, their resistance to corrosion and their efficient operation. They've been designed to meet the toughest requirements and to ensure that your systems will be available at all times in the long term.

### **From standard 2/2-way ball valves right up to the entire distribution system**

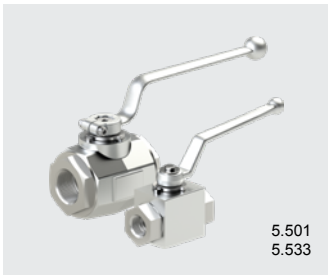
HYDAC multi-way ball valves and special blocks shut off, distribute or direct your media into the intended channels.

We offer custom solutions with additional safety features. Shut off or divert your media with a throttle or check function combined in a compact block.

Additional equipping with position monitoring and automation using pneumatic, electronic or hydraulic drives is available for virtually any design. Custom requirements can be implemented quickly thanks to our extensive experience and our manufacture and assembly on-site.

- Nominal width 04 – 150
- Pressure ratings up to 1,050 bar
- Numerous connection types
- Switching lever, safety hand lever, lever with detent function and much more.
- Pneumatic, electrical or hydraulic drives
- Locking devices
- Detent functions to secure the switch position
- High-quality materials and sealing variants
- Surface protection
- Design adjustments, e.g. protection against unintended actuation
- Numerous accessories
- Standard solutions available from stock

## From the standard ball valve...



5.501  
5.533

2-way ball valves



5.507  
5.510

Low-pressure ball valves



5.506  
5.509

Manifold mounted ball valves



5.504

Change-over ball valves



5.503

Multi-way ball valves



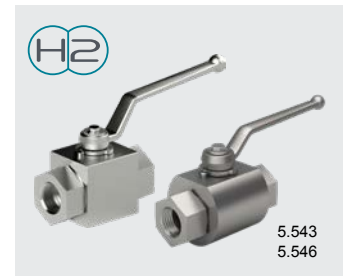
6.107

Stroke limiters



5.539

Ball valve combinations



5.543  
5.546

Ball valves for hydrogen

## ...to the system solution

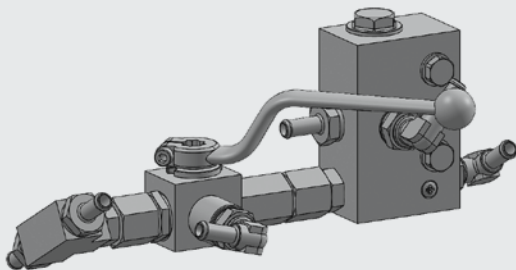
HYDAC ball valve blocks are specially designed for your application.

Custom solutions with additional safety functions, such as throttle or check functions, can be implemented quickly thanks to our extensive experience in design and development as well as manufacture and assembly on-site.

Also available with end position control, drive, mounting option, forced switching, locking device, detent or safety detent lever to prevent any unauthorised switching or self-adjustment due to vibration.

### Ball valve compact block with thermocouple for fuel supply

#### Initial situation:



#### Conventional solutions have:

- Complicated piping
- Large space requirements
- Lots of individual components ► lots of material numbers
- High requirements for assembly and maintenance
- Many potential leakage points

#### Optimised and integrated HYDAC solution:



#### HYDAC solutions feature:

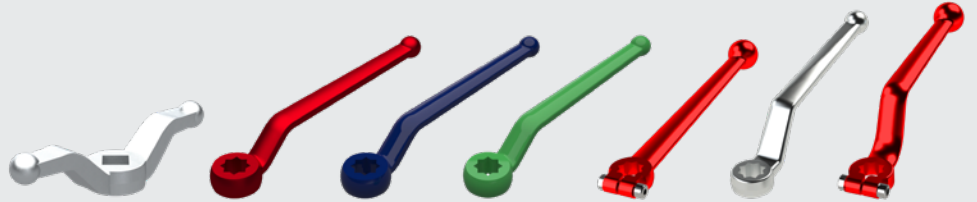
- Installation space optimisations
- Weight reductions
- Reduced requirements for assembly and maintenance
- A minimised risk of leakage points



# Special custom solutions and accessories

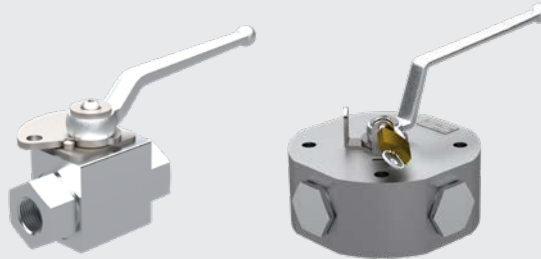
## Actuation

You can choose from numerous switching levers to actuate your ball valves. In addition to our standard levers made of aluminium, steel and stainless steel, designs, lengths and materials can be adjusted to suit your needs. Whether you're looking for a bent sheet metal part, a safety lever with a detent or a custom design – we don't set any limits on your requirements.



## Locking device

To protect ball valves from unintended or unauthorised switching, we offer numerous shut off solutions. In a custom configuration tailored to the customer, these are available with one or multiple locks, additional end position monitoring or as a retrofit for your system.



without lock SO760

with lock SO770

## Electromechanical position monitoring

Ball valves with end position monitoring using electromechanical position switches are used as part of a safety system. If the actuating bracket comes into contact with the actuator, an electrical connection is established or interrupted. The limit switch detects the ball valve's switch position and generates and relays a signal. Also available with a LoRaWan wireless output signal.



without position switch

with position switch

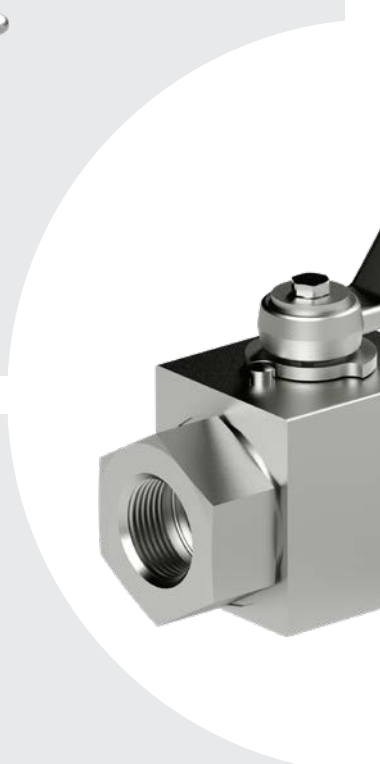
## Inductive position monitoring

Ball valves with end position monitoring using inductive proximity switches are actuated without any contact and monitor the switch position. When the contact is triggered, a signal is generated and relayed, and an electrical connection is established or interrupted. From the standard M12 initiator to IO-Link, designed to be redundant or as a safety switch, numerous designs and sizes are available.



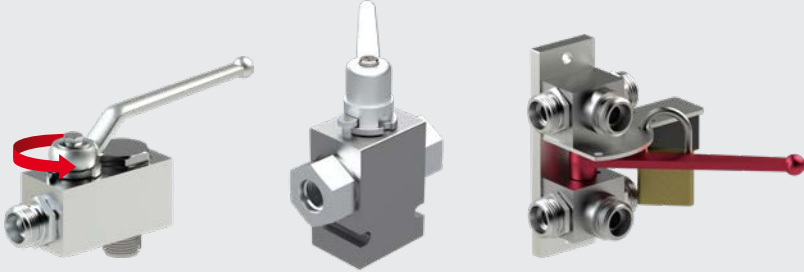
without initiator

with initiator



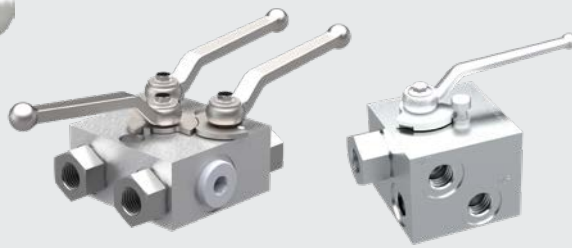
## Mounting solutions

There are numerous options available for mounting your ball valve. Whether it's through-holes, threaded holes, mounting manifolds, tongue and groove systems, pivotable designs or custom solutions, you can be certain we'll have the solution to suit you.



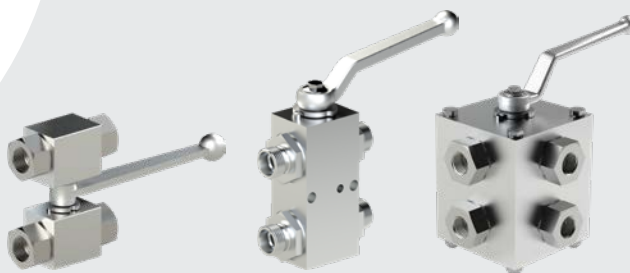
## Detent Forced switching

In a custom configuration tailored to the customer, a series of switching ball valves can be implemented with the locking discs located on the ball valve. This ensures that the media flows are only opened or closed in a predetermined order. Alternatively, numerous detent options are available to secure the switch position.



## Combinations

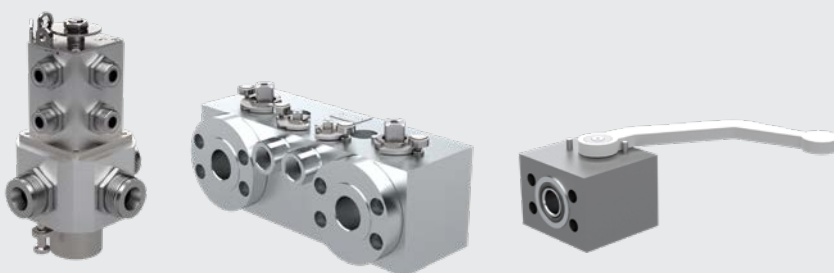
Ball valve combinations consist of at least two ball valves which are switched synchronously with a switching lever. In a custom configuration tailored to the customer, multiple media flows can be shut off or distributed in parallel. Block solutions or combinations of multiple ball valves are available. Can also be supplied with a safety handle lever, detent, locking device, end position monitoring or supplied in an automated version.



## Distribution blocks

Distribution blocks allow multiple media flows to be shut off or distributed. Solutions with integrated valves or a manometer connection can be implemented on a custom basis.

Designs, materials, sealing systems and connections according to your requirements; additional safety functions, such as position monitoring, forced switching, safety levers or locking devices can be integrated.



# Custom solutions for a wide range of applications



## Efficient

HYDAC ball valve blocks are designed to customer requirements. Installation space optimisation, a reduced weight, fewer possible leakage points and time savings during assembly are just a few of the benefits of this compact unit.



## Safe

HYDAC safety brake blocks are used as a hydraulic safety brake system for agricultural and forestry tractors. A combination of ball valves and bladder accumulators ensures that the attached devices are braked quickly and safely in an emergency.



## Comfortable

HYDAC ball valves combined with valve functions enable the body to be lifted smoothly and the hydraulic circuit to be shut off to support and secure the tipper body for maintenance. A safety handle lever prevents unauthorised switching or self-adjustment due to vibration.



## Robust

HYDAC multi-way ball valves shut off and distribute your media even in harsh environments. Mounted on demolition shears, for example, they easily withstand vibrations and the highest loads.



## Advanced

HYDAC ball valves for new media, such as hydrogen. Selected materials and sealing systems and demanding leakage tests and strength tests enable reliable process workflows in your systems. For custom applications, we supply tailor-made solutions.



## Contact us today

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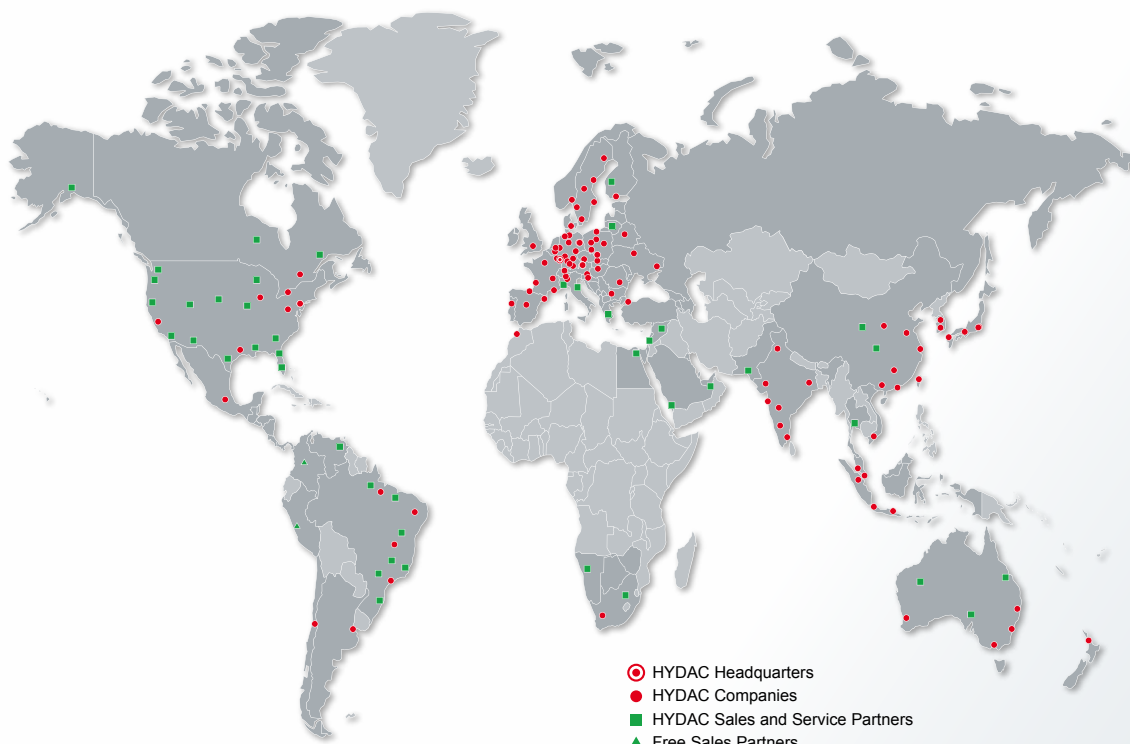
Internet: [www.hydac.com](http://www.hydac.com)

# HYDAC is your development partner

With over 60 years of expertise in the fields of fluid technology, hydraulics and electronics and impressive innovative strength, we devote our energy to the technologies of the future.

Around 10,000 employees, 50 HYDAC subsidiaries and more than 500 sales and service partners ensure that HYDAC is on hand to help you as a reliable partner worldwide. Our product range extends from components and subsystems right up to complex drive units with closed-loop control for mobile and industrial systems. We also offer our customers a large range of technical services relating to HYDAC fluid engineering for hydraulic oils, lubricants, coolants and water.

Trust in our global network of experts and our top quality standards.



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### Note

The information in this brochure relates to the operating conditions and applications described. For applications and operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.