



Products and Solutions

2026

BAIO®-System  
ZAK®-System  
Extension Spindles





## HAIDRO – built on a proven core

HAIDRO launches as a brand with a clear promise: Connections to rely on. For decades, our specialists have engineered valve systems for water distribution and sewage disposal that set standards in quality, functionality, and long term durability. As a system partner, we work closely with our customers to understand the specific needs of different markets. Together, we developed tailored solutions that are now embedded in our proven product portfolio.

Over the years, we have expanded into key markets across much of Europe, the Middle East, and the United States, improving the performance of water and sewage disposal networks with field proven technology. We carry this heritage forward with a global mindset and a mission to connect the world's flow.

Driven by innovation, we have shaped the industry with milestones and patented solutions. The flangeless and threadless connection technologies BAIO and ZAK were developed by us in Germany more than 30 years ago.

The entire value creation process, from casting to assembly, still takes place in our own production facilities – Both systems are established worldwide.. Our skilled specialists, stable supply, and smart solutions define our standard. We cover the entire value chain from foundry to manufacturing, with all engineering and production based in Europe.

Within the HAIDRO Group, our foundries Fürstenwalder Guss (Germany) and foundry MIV Varaždin (Croatia) cover all nominal sizes in heavy duty valve casting. Fürstenwalder Guss operates on two automatic molding line, while Gießerei MIV Varaždin specializes in hand molding. The result: European made quality with a lower CO2 footprint than long distance imports.

HAIDRO enters the market with a clear promise:

**Connections to rely on.**



**potable water products**



**sewage water products**

### **Explanations**

The scope of medium can be restricted within the product data sheets. In case of any inquiry or order point out the medium of each project.

In case of any questions, don't hesitate to contact our application engineers. E-Mail: [info@haidro.com](mailto:info@haidro.com)



# THE BAIO<sup>®</sup> SYSTEM

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Gate Valves  
Pipe Fittings  
Accessories  
Hydrants

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# THE ZAK<sup>®</sup> SYSTEM

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House Connection Gate Valves  
Fittings  
Accessories

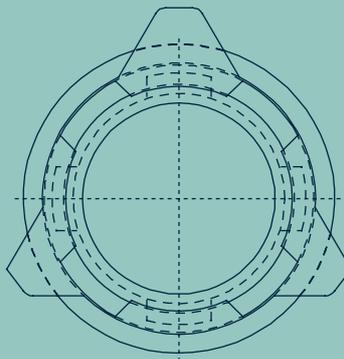
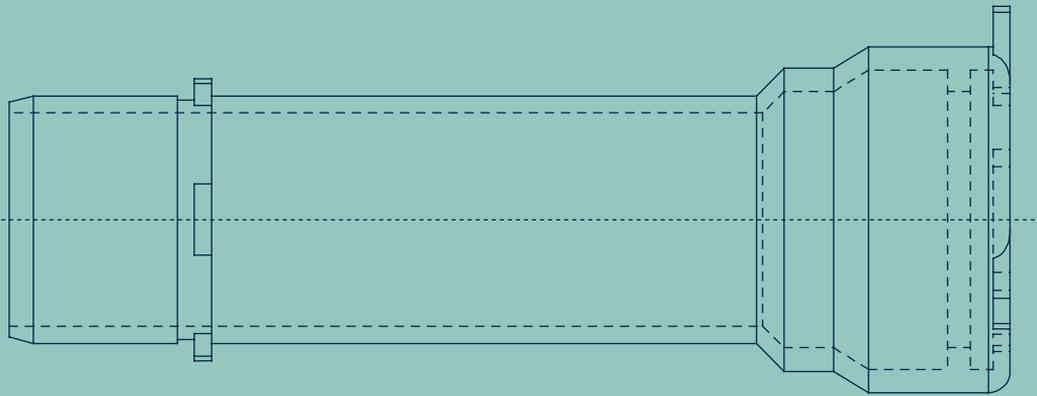
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# EXTENSION SPINDLES

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Gate Valves

# THE BAIO® SYSTEM





## Threadless Connections. Smart Engineering.

For decades, the BAIO® system has defined the benchmark for flangeless connection technology in underground drinking water and sewage water supply networks. Developed in the early 1980s, it was designed to make pipe installation simpler, faster, and more reliable, while ensuring maximum corrosion protection and long service life.

Unlike traditional flange or threaded joints, which require bolts, welding, or sealing compounds, the BAIO® system features a threadless push-fit connection. Each joint is sealed and restrained automatically, creating a tight, durable, and maintenance-free connection that can easily absorb soil movement and thermal expansion.

### **Technical Features**

- + Universal socket system for connecting cast iron, steel, PE, and PVC pipes
- + Integrated sealing and tensile restraint – no need for bolts or welding
- + Flexible joint design allows up to 3° angular deflection per socket
- + Epoxy powder coating for long-lasting corrosion protection
- + Fully compatible with the ZAK® system for service connections

### **Advantages over conventional systems**

- + Faster Installation—no bolts, no flanges, no welding. Just push and lock
- + Lower Costs—fewer parts, shorter assembly time, and reduced storage needs.
- + Stress-Free Connections—flexible, self-sealing, and tolerant to soil movement.
- + Corrosion-Free Durability—no exposed metal surfaces; maintenance free for decades.
- + Universal Application—one system for multiple pipe materials and dimensions.

Pipe Fittings



**452-00E**

PE fusion end incl. lock ring

**Dimension**

DN 150–DN 200

**Pipe Type**

PE

**Max. Operating Pressure**

-  SDR 11: 16 bar / SDR 17: 10 bar
-  SDR 11: 16 bar / SDR 17: 10 bar



**530-01E**

Cut-in socket fitting with WAGA-Multi/Joint® multirange socket

**Dimension**

DN 150–DN 200

**Pipe Type**

Cast Iron | PE | PVC | AC\* | GFK | Steel  
(\*AC pipe not tension-resistant)

**Max. Operating Pressure**

-  16 bar
-  16 bar



**532-00E**

SM-fitting (spigot end / socket fitting)

**Dimension**

DN 80

**Pipe Type**

Cast Iron | PE | PVC | Steel

**Max. Operating Pressure**

-  16 bar
-  16 bar



**532-01E**

SM-fitting with ZAK® outlets

**Dimension**

DN 150–DN 200

**Pipe Type**

Cast Iron | PE | PVC | Steel

**Max. Operating Pressure**

-  16 bar
-  16 bar



**536-00E**

Concentric tapers (R reduced socket / RU reduced spigot end)

**Dimension**

DN 100–DN 150

**Pipe Type**

Cast Iron | PE | PVC | Steel

**Max. Operating Pressure**

-  16 bar
-  16 bar



**536-01E**

Transition fitting BAIO® spigot end / ZAK® socket

**Dimension**

DN 80 / ZAK 46

**Pipe Type**

-

**Max. Operating Pressure**

-  16 bar
-  16 bar



**537-00E**

B-fitting

**Dimension**

DN 150, Top outlet: DN 80

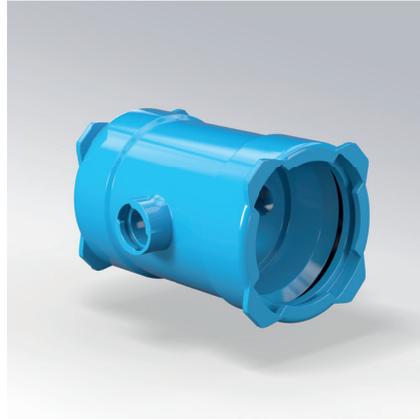
**Pipe Type**

Cast Iron | PE | PVC | Steel

**Max. Operating Pressure**

 16 bar

 16 bar



**541-00E**

U-fitting (collar)

**Dimension**

DN 150, 2 x ZAK® 46

**Pipe Type**

Cast Iron | PE | PVC | Steel

**Max. Operating Pressure**

 16 bar

 16 bar



**542-00E**

All socket tee

**Dimension**

DN 150–DN 200

**Pipe Type**

Cast Iron | PE | PVC | Steel

**Max. Operating Pressure**

 16 bar

 16 bar



**548-00E**

Duckfoot bend

**Dimension**

DN 80–DN 100, Optional: 2 x ZAK® 46

**Pipe Type**

Cast Iron | PE | PVC | Steel

**Max. Operating Pressure**

 16 bar

 16 bar



**807-01E**

Spigot end cap

**Dimension**

DN 150, 1 x ZAK® 46

**Pipe Type**

-

**Max. Operating Pressure**

 16 bar

 16 bar



**437-00E**

Combi-T gate valve „E4evo“

**Dimension**

DN 150–DN 200

**Pipe Type**

Cast Iron | PE | PVC | Steel

**Max. Operating Pressure**

 16 bar

 -



**438-00E**

Combi III gate valve „E4evo“

**Dimension**

DN 150–DN 200, Side outlet: 2 x ZAK® 46  
Vertical outlet: BAIO® socket DN 80

**Additional Information**

3x BAIO® socket

**Max. Operating Pressure**

 16 bar

 -



**450-00E**

Gate valve with sockets „E4evo“

**Dimension**

DN 100–DN 200

**Additional Information**

3x BAIO® socket

**Max. Operating Pressure**

 16 bar

 -



**451-00E**

Gate valve with spigot/socket „E4evo“

**Dimension**

DN 100–DN 200

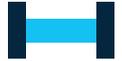
**Pipe Type**

Cast Iron | PE | PVC | Steel

**Max. Operating Pressure**

 16 bar

 -



**528-00E**

Stop restraint joint for DCI, PE and PVC pipes

**Dimension**  
DN 100–DN 200

**Pipe Type**  
Cast Iron | PE | PVC

**Max. Operating Pressure**

-  16 bar
-  16 bar



**490-05E**

Dirt cover and anti-rotation lock for BAIO® spigot ends

**Dimension**  
DN 80

**Additional Information**  
BAIO® spigot ends installed in vertical position shall be secured against unintentional unlocking using the dirt cover and locking ring.

**Max. Operating Pressure**

-  16 bar
-  16 bar



**529-05E**

Twist lock device for BAIO® spigot end

**Dimension**  
DN 100–DN 200

**Pipe Type**  
-

**Max. Operating Pressure**

-  16 bar
-  16 bar



**529-00E**

BAIO® lip gasket (BLD®)

**Dimension**  
DN 80–DN 200

**Pipe Type**  
Cast Iron | Steel

**Max. Operating Pressure**

-  16 bar
-  16 bar



**529-01E**

GKS gasket (DCI to plastic)

**Dimension**  
DN 100–DN 200

**Pipe Type**  
PVC | PE

**Max. Operating Pressure**

-  16 bar
-  16 bar



**590-00E**

Support liner of stainless steel for PE pipes

**Additional Information**  
DM 90 mm–225 mm, SDR 11–17

**Pipe Type**  
PE

**Max. Operating Pressure**

-  16 bar
-  16 bar



**490-00E**

Freeflow underground hydrant

**Dimension**  
DN 80

**Pipe cover depth**  
1.25 m; 1.50 m; 1.80 m

**Max. Operating Pressure**



**492-02E**

TeleHydrant Coupling Norway

**Dimension**  
DN 80

**Pipe cover depth**  
1.25 m; 1.50 m

**Max. Operating Pressure**



**494-01E**

Underground Hydrant height-adjustable with Teleunit

**Dimension**  
DN 80

**Pipe cover depth**  
1.50 m

**Max. Operating Pressure**



**494-00E**

Freeflow underground hydrant  
„height adjustable“

**Dimension**  
DN 80

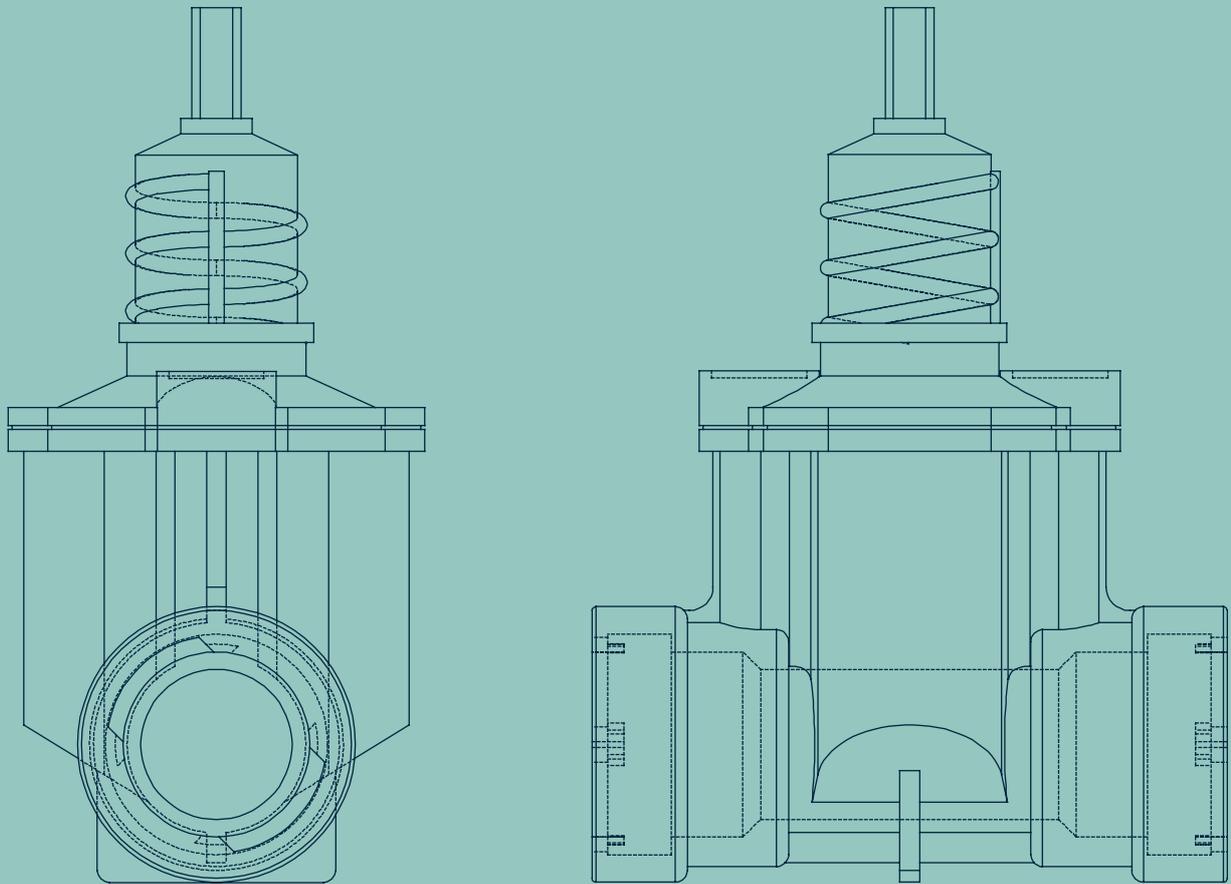
**Pipe cover depth**  
1.50 - 2.05 m

**Max. Operating Pressure**





# THE ZAK® SYSTEM





## Simple. Secure. Fast.

The ZAK® system redefines how house connections and branch lines are installed. Designed for practicality and performance, ZAK® makes every connection quick, secure, and corrosion-free, even under challenging underground conditions.

Developed as the next step in our innovation journey, the ZAK® system eliminates the need for traditional threaded joints that require tools, sealing, and time-consuming assembly. Its bayonet-style push-fit design with double O-ring sealing ensures lasting tightness and easy handling. The result: fewer installation errors, shorter downtimes, and greater operational safety.

### Technical Features

- + Mediums: drinking water and sewage water
- + Nominal diameters:
  - + ZAK 34: 1"
  - + ZAK 46: 1½"
  - + ZAK 69: 2"
- + Operating pressure: Drinking and sewage water: up to 16 bar
- + Connection type: corrosion-resistant bayonet locking mechanism with double O-ring sealing
- + Flexible connection: reduces tension in the pipeline and absorbs minor ground movement
- + No tools required: quick, threadless assembly on-site
- + Compatible with BAIO® system through transition fittings (536-01E)

### Advantages over conventional systems

- + Fast and Easy Installation—Push, turn, lock. No screwing, sealing, or special tools required.
- + Reliable Sealing—Double O-ring design guarantees long-term tightness under pressure.
- + Corrosion Protection—No exposed threads or metal surfaces. Fully protected for underground use.
- + Reduced Stress and Maintenance—Flexible connections absorb movement and eliminate the need for retightening.
- + Proven Compatibility—Fully integrable with the BAIO® system for seamless network connections

House Connection Gate Valves



**253-00E**

Service valve with ZAK® spigot end and ZAK® socket

**Dimension**  
ZAK® 46

**Pipe Type**  
-

**Max. Operating Pressure**



**253-01E**

Service valve with ZAK® sockets

**Dimension**  
ZAK® 46

**Pipe Type**  
-

**Max. Operating Pressure**



**281-00E**

Service valve with ZAK® spigot end and push fit socket

**Dimension**  
ZAK® 46

**Pipe Type**  
PE  
Pipe: d 32 mm, d 40 mm

**Max. Operating Pressure**



**Accessories**

**249-00E**

ZAK® plug

**Dimension**  
ZAK® 46

**Pipe Type**  
-

**Max. Operating Pressure**





**536-01E**

Transition fitting BAIO® spigot end / ZAK® socket

**Dimension**  
DN 80 / ZAK 46

**Pipe Type**  
-

**Max. Operating Pressure**

-  16 bar
-  16 bar



**616-00E**

Push-fit fitting with ZAK® spigot end

**Dimension**  
ZAK® 46

**Pipe Type**  
PE-X | PE 80 | PE 100  
Pipe: d 32 mm, d 40mm , d 50 mm, d 63 mm

**Max. Operating Pressure**

-  16 bar
-  16 bar



**630-02E**

Connector (S-fitting, rotating-type) with two ZAK® spigot ends

**Dimension**  
ZAK® 46

**Pipe Type**  
-

**Max. Operating Pressure**

-  16 bar
-  16 bar



**646-00E**

Rotating push-fit fitting 90° with ZAK® spigot end and ZAK® socket (360° rotatable)

**Dimension**  
ZAK® 46

**Pipe Type**  
-

**Max. Operating Pressure**

-  16 bar
-  16 bar



**651-01E**

Tee branch fitting with ZAK® sockets and ZAK® spigot end

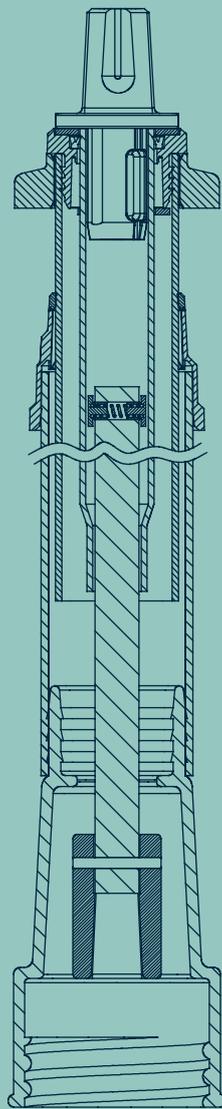
**Dimension**  
ZAK® 46

**Pipe Type**  
-

**Max. Operating Pressure**

-  16 bar
-  16 bar

# EXTENSION SPINDLES





## Reliable Operation Made Simple

Our extension spindles ensure a safe, precise, and effortless operation of valves installed underground. They transmit the rotary movement from the surface directly to the valve stem, with maximum stability and corrosion protection.

Designed for efficient installation and long-term reliability, each component reflects our engineering quality: robust materials, intuitive assembly, and dependable performance in any condition.

### Technical Features

- + Threaded Bell Connection for gate valves up to DN 200, house connection valves, tapping valves, etc.
- + No pinning required for DN 100–DN 200—secure, form-fit connection without extra parts
- + Adjustable height versions (950-00E, 960-00E) for flexible adaptation to varying installation depths
- + Full compatibility with third-party valves

### Advantages over conventional systems

- + Fast and secure installation—simply screw on, no tools or pinning needed
- + Stable torque transfer—ensures precise operation and prevents misalignment
- + Flexible adjustment—height-adjustable models fit diverse site conditions
- + Maintenance-free durability—corrosion-protected for long service life
- + System versatility—compatible across valve types and manufacturers



**960-00E**

Telescopic extension spindle (type S) for service valve and valve saddle

**Additional Information**

For pipe cover depth 1.00–2.50 m



**950-00E**

Telescopic extension spindle

**Additional Information**

For sewage water gate valve DN 200

For gate valve E4evo DN 100 - 200

Pipe cover depth (sewage water gate valve): 1.25–2.55 m

Pipe cover depth (gate valve E4evo): 1.25–2.60 m

Spindle square: 19.3–24.3 mm



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