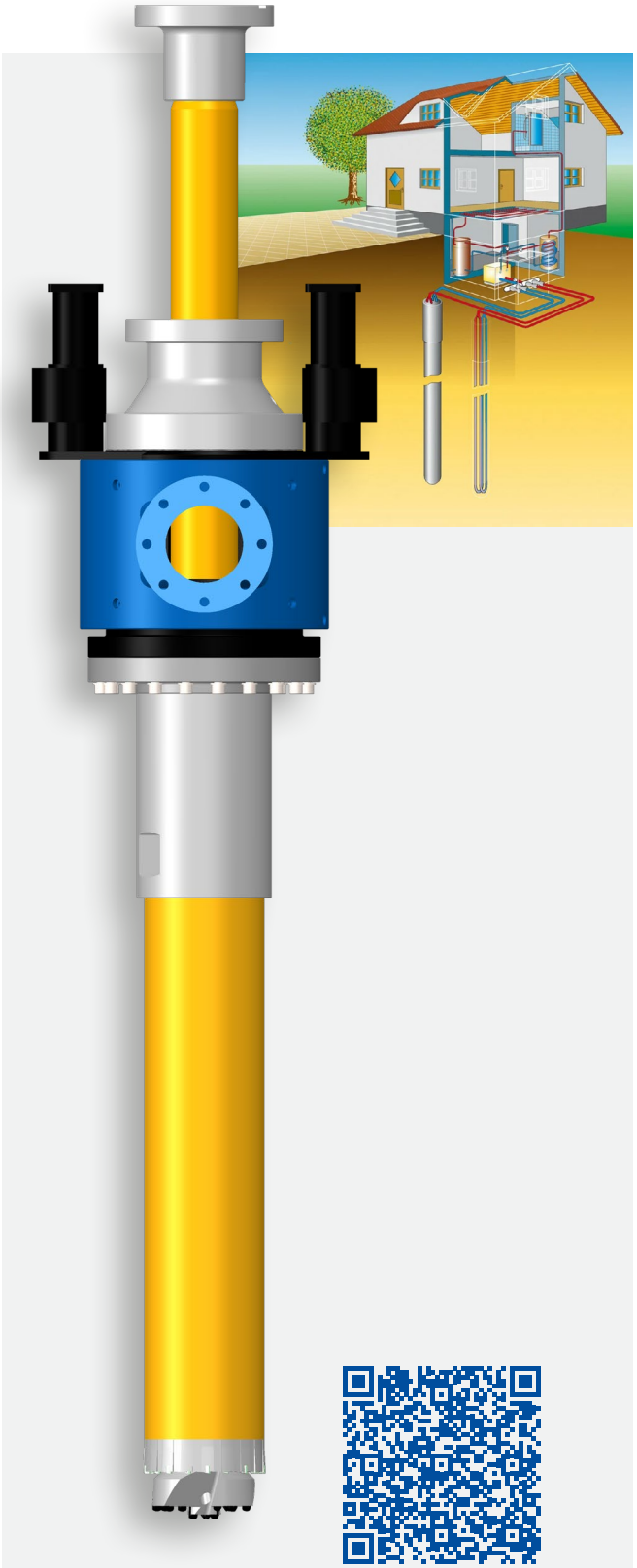
SYSBOHR®
Drilling Technique for the Construction Industry

11 GEOTHERMAL DRILLING SYSTEM D 152,4 mm – 219,1 mm (6"–8-5/8")

with double head unit (rotary/rotary)



Geothermal probes, coupled with geothermal heat pumps, is currently the most common medium utilising geothermal energy.

Drilling of boreholes, intended for the insertion of geothermal probes into the ground, require the penetration of diverse layers of rock strata that typically possess different hydraulic properties, fluid pressure conditions as well as groundwater with different hydro-chemical characteristics.

The complicated nature of these ground conditions, requires drill rigs with a double head setup to drive, as well as move the external and internal drill strings independently to one another. The outer rotary casings, also referred to as "shield tubes", are usually utilised in the overburden and in unconsolidated rock formations. Subsequent to the execution of the overburden drilling phase, the intended borehole depth, sometimes deeper than 200 m (approx. 660') can then be realised by drilling further with the internal drill string only.

Alternative drilling methods can be applied, which is of course dependent on the ground conditions. For instance, Down-the-Hole (DTH) hammer with standard or extension drill bits, rotary drill bits and round-attack pick reinforced rotary drill bits, are some of the options available. A contamination free job-site is guaranteed via discharge preventers mounted on the rotary head unit (when drilling through the overburden), and soil/ground preventers when drilling with the inner drill string only.

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GEOTHERMAL DRILLING SYSTEM
bottom mounted preventer on rotary head unit

DIAMETERS OF
152,4 mm TO 219,1 mm
(6″ TO 8-5/8″)

COMPLETE FLEXIBIITY

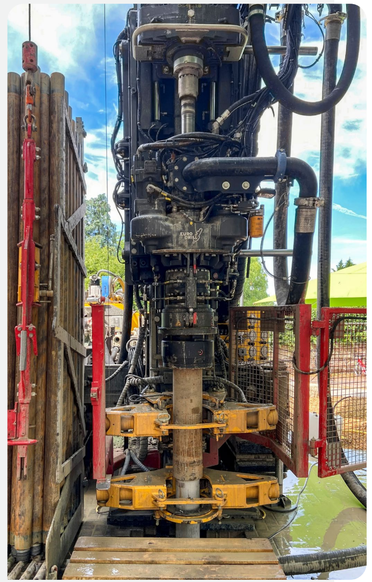
Each of our drilling systems are custom-made – 100 % adapted to the project needs and the ground conditions encountered at the construction site.

All drill bits are available in a plethora of designs and borehole diameters, project and / or customer specific

1	Flange suitable for the rear rotary head unit and balancing rod
2	Assembly cap for balancing rod
3	Balancing rod available in custom machine-dependent lengths and designs
4	Holders for rotary preventers suitable for front rotary head unit
5	Rotary discharge preventer / preventer “pot“
6	Drive flange suitable for outer casing
7	Thread-saver / starter (outer casing)
8	Lift-sub for outer casing
9	Rotary casing (external) – in lengths from 500 mm to 6000 mm
10	Rotary casing bit
11	Thread-saver / sub-adaptor (inner drill string)
12	Rotary drill rod (inner rod) – in lengths from 500 mm to 6000 mm
13	Rotary drill bit
14	Lift-sub for inner drill string
15	Check valve
16	Sub-adapter inner connection to DTH hammer
17	DTH hammer with shock absorber
18	DTH drill bit
19	Ground preventers – please see next page

The thread profiles are available in right-hand (RHT) and left-hand (LHT), as well as conical and cylindrical versions. All supplied casings are realised through various manufacturing methods and are application specific.

THE SYSTEM IN ACTION



GEOTHERMAL DRILLING SYSTEM
top mounted preventer
between rotary head units

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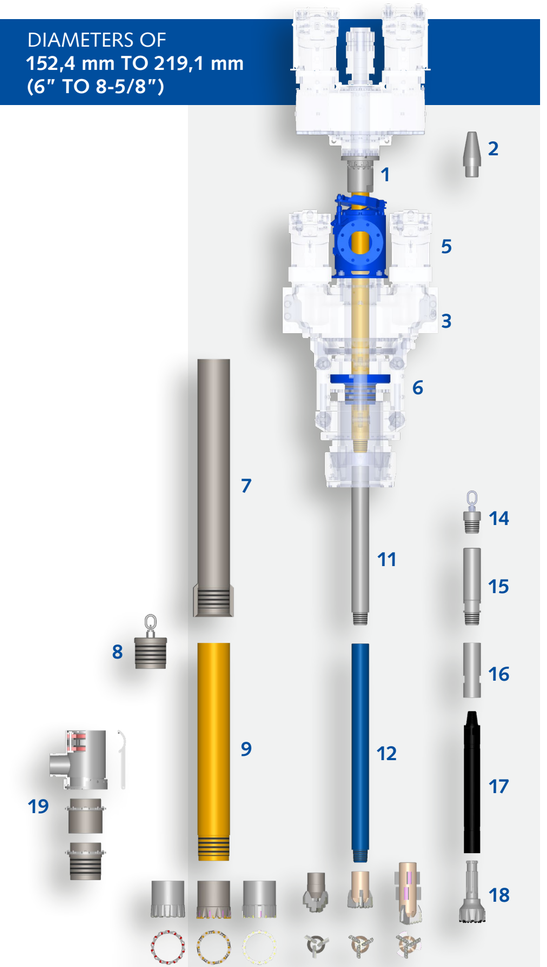
DIAMETERS OF
152,4 mm TO 219,1 mm
(6″ TO 8-5/8″)



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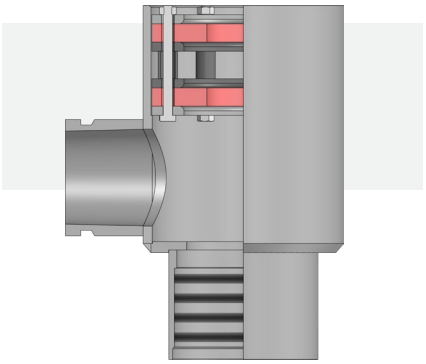
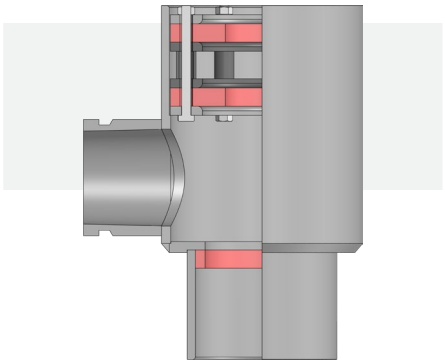
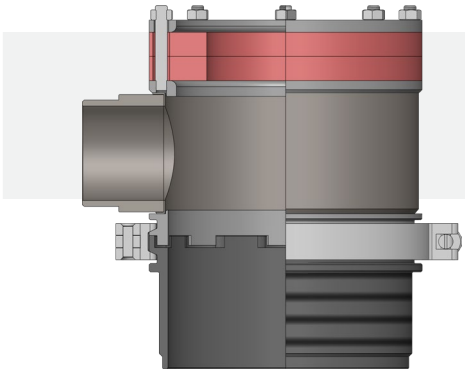
GROUND PREVENTER FOR GEOTHERMAL DRILLING SYSTEMS



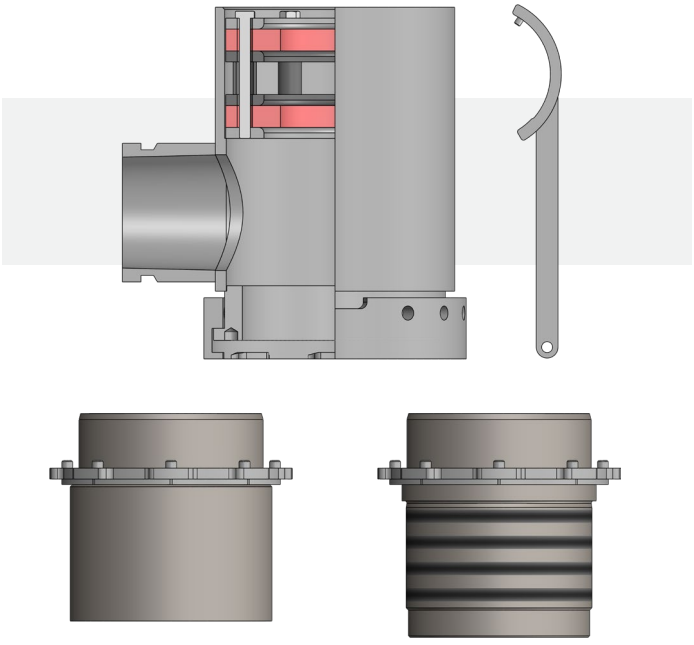
19.1
Ground preventer standard with threaded connection to outer casing



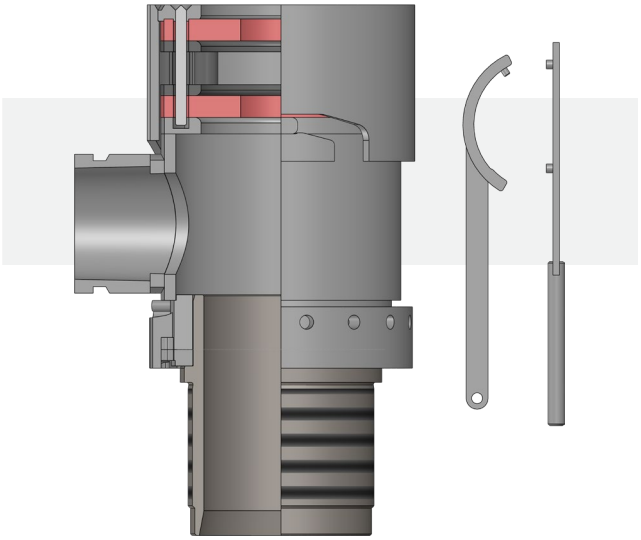
19.2
Ground preventer with sheath (non-threaded connection)



19.3
Ground preventer most compact design with male threads



19.4
Ground preventer with bayonet locking system bottom with hook spanner



19.5
Ground preventer with double bayonet locking system top / bottom with hook spanners

PRECISION ENGINEERED DRILLING SOLUTIONS FROM INITIAL CONCEPT TO FINAL TOOL SYSTEMS – EVERYTHING UNDER ONE UMBRELLA!

Sysbohr's highly qualified team develop custom tooling and economically efficient solutions for all drilling projects in the special civil engineering and geothermal energy sectors.

THE ADDED ADVANTAGE

Project planning including: Support and guidance of drilling personnel over the entire duration of the project at hand. Quick and on-track customer results mirrrored by Sysbohr's quick turn around times from order to final delivery.

We look forward to being your partner of choice on your next projects and challenges.

Sysbohr's offering includes the development and production of tools and accessories for the entire range of applications in diameters from 51 mm (2") to 610 mm (24").

The systems shown in this product catalogue show standard system variants and can be combined together to form unique systems if required.

Non-off-the-shelf products for complex drilling applications and extreme drilling conditions can be tailor-made to meet customer needs and expectations.

Sysbohr's sales team look forward to guiding customers through a detailed in-house consulting process, whereby a comprehensive drilling solution is identified and generated.

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