

JANSEN hipress

The most powerful borehole heat exchanger in the world



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- 1 40 mm geothermal plain tube for usual probe connection
- 2 42 x 3.5 mm reinforced PE metal multi-layer pipe PN 35
- 3 Metal-reinforced probe foot with patented double socket welding

Thanks to its outstanding technical attributes, the JANSEN hipress can be used universally and is always the choice of the highest quality. It thus allows innovative geothermal applications with increased safety and efficiency down to a depth of almost 500 meters, as well as effective cost reductions.

Robust & high pressure resistant (PN 35)

The PE metal multi-layer design and the high-pressure probe foot with a metal jacket withstand the highest pressure loads and raw construction site conditions. With their 1.5 mm thick outer protective layer, the JANSEN hipress tubes offer the greatest abrasion resistance available. The patented double socket-mandrel welding process stands for absolute safety.

Impermeable

As a diffusion barrier, the encapsulating metal interlayer prevents the intrusion of gases from the underground through the pipe walls (permeation) and guarantees a permanently danger and trouble-free operation.

Safe in handling

The probe can be used as single or double U, is suitable for all conventional drilling methods, can be pressure-tested at any depth, and can be decoiled from common installation device (according to SIA 384/6). Jansen's accessories (e.g. "SPS" lowering tip, probe weights, SmartTight couplings) ensure easy and safe handling. In the standard version, the top section consists of classic 40 mm PE100RC pipes. This allows the probe to be horizontally connected with electrofusion fittings. (Optionally also available with multilayer pipe throughout).

Minimum hydraulic resistance available

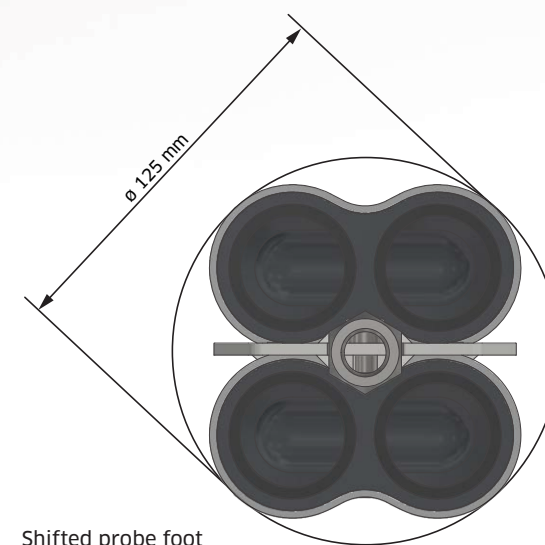
The cylindrical pipe design (continuous 35 mm inside diameter from the connection to the probe foot) offers minimal pressure loss. This represents the absolute top of the market. Compared to competitor products, the pressure loss of the probe system can be reduced by approx. 20% to 30%. A smaller circulating pump is less expensive and saves electricity.

Highest heat transport

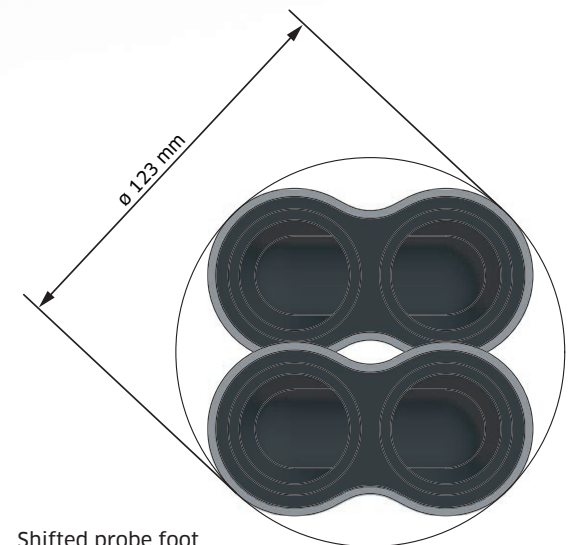
The tubes have a metal core and only require a thickness of 3.5 mm. This minimises the heat resistance and, due to optimum heat transmission, ensures an efficient use of the existing geothermal energy. For comparison: A JANSEN hipress single U is on about the same performance level as a conventional double U, but thanks to its 1-circuit design it is considerably less expensive as well as easier to install. In many other cases, approx. 5% of the drilling length can be saved.

Small installation diameter

With the accessories for offset probe foot mounting, the installation diameter can be reduced down to 123 mm. In this way, the JANSEN hipress permits being installed gently and quickly to the final depth even when drilling small diameters.



Shifted probe foot installation with lowering tip (SPSH)



Shifted probe foot installation with adapter (ADAP)

Our quality. Your safety.

Technical data

Thanks to state-of-the-art production technologies and highly qualified employees, as a Swiss manufacturer, Jansen ensures a top-class and long-lasting product. The continuously high quality is ensured by the careful selection and checking of materials used as well as continuous production and goods monitoring, which exceed the latest international standards.

The rated operating pressure of 35 bar relates to a duration of at least 50 years as per DIN 8074. JANSEN hipress fulfils the requirements of SIA 384/6, ÖWAV 207 as well as VDI 4640 and is delivered with an individual factory certification as per EN 10204.

Information on available lengths and accessories can be found in our latest price list on jansen.com. If you have any questions about the installation or application possibilities, please feel free to consult the installation instructions as well as our technical support team.



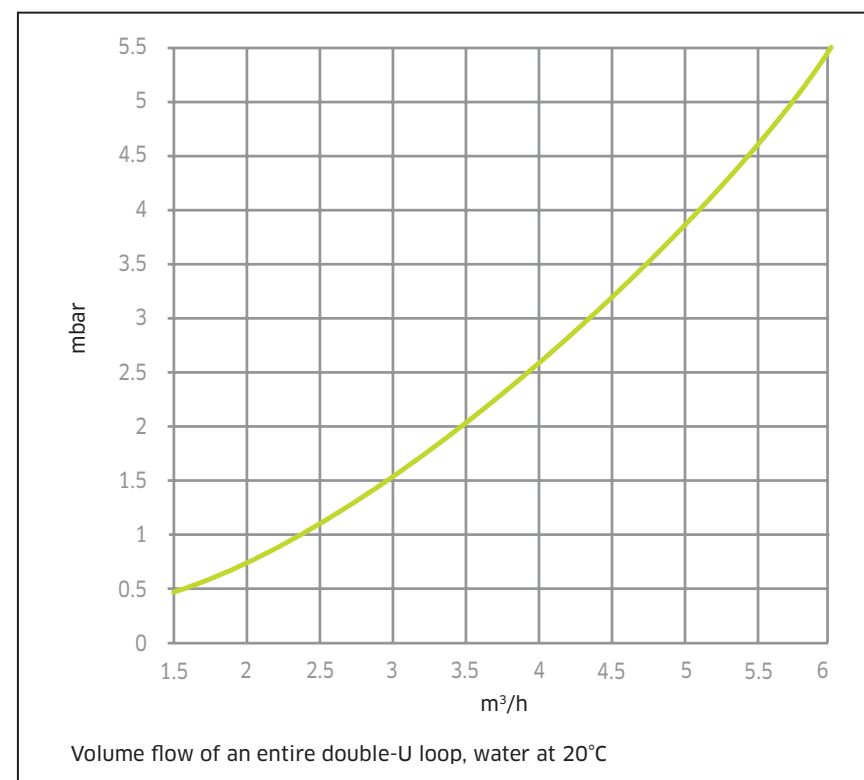
Erdwärme Gemeinschaft
Bayern e.V.

bwp Bundesverband
Wärmepumpe e.V.

GEOTHERMIE
SCHWEIZ SUISSE SVIZZERA

Raw material	PE 100 RC (polyethylene resistant to crack) as per PAS 1075
Continuous service temperature	-20° C to +40° C
Pressure class	PN 35
Probe pipes	42 x 3.5 mm PE multi-layer metal
Connection pipes	40 x 3.7 mm PE
Minimum bend radius	840 mm @ 20° C
Recommended minimum laying temperature	-10° C
Nominal thermal conductivity	0.48 - 0.50 W/mK

Nominal pressure loss per m borehole heat exchanger



A new degree of depth

The earth holds a tremendous source of energy. Jansen is an expert when it comes to making this reservoir accessible for heating or cooling purposes. Since the ground temperature rises the deeper you go, deep geothermal probes can be used to efficiently cover the energy demands of major construction projects, even where space is limited.

Down to a depth of about 20 meters below the earth's surface, the temperature fluctuates seasonally. Below this layer, the temperature rises by around 1 Kelvin every 30 meters, depending on the location. At a depth of 450 meters, this effect results in a temperature of the ground of approx. 25° C.

High temperatures at greater depths mean a greater energy reservoir while also improving the efficiency of the heat pump. Thanks to a longer borehole heat exchanger there is a larger heat transfer surface, which can absorb more energy.

At the same time, however, the demands made on man, material and machine are increasing, too. The new JANSEN hipress borehole heat exchanger is the answer to these challenges. It opens up new application possibilities.

Conventional
borehole heat
exchangers

~200 m

17° C

JANSEN hipress

~450 m

25° C



«The innovative JANSEN hipress has the lowest hydraulic resistance in relation to the required installation diameter and is currently the strongest geothermal probe on the market, which also has a positive effect on the drilling costs.
A strong solution.»

Jansen AG

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