

# Product information

## FRANK VTP<sup>®</sup> / Vertical Thermpipe

### Description:

- Completely factory-assembled, factory-welded FRANK VTP<sup>®</sup> in standard lengths
- Other lengths available on request
- Stable attachment of the heat exchanger pipe
- Fixed distance between pipes
- Made by DVS-certified welders
- Individual test certificate for each VTP
- Peak temperatures up to +70°C permissible (for temperature behaviour table, see page 3)
- Max. brine supply temperature in the subsoil +/- 17°C compared to ground temperature (acc. to VDI Directive 4640)

### Operating pressure:

- SDR 11 according to DIN 8074 pressure class PN 16 (safety coefficient 1.25)
- The working pressure is dependent on temperature and time (see page 2)

### Thermal conductivity:

- $\lambda$  0.40 W/mK (at 20°C)

### Connection:

- PE 100 pipe spigot for connection to electro fusion welded fittings

### Installation:

- Ideally using hollow stem auger or an auger and protective casing

### Material:

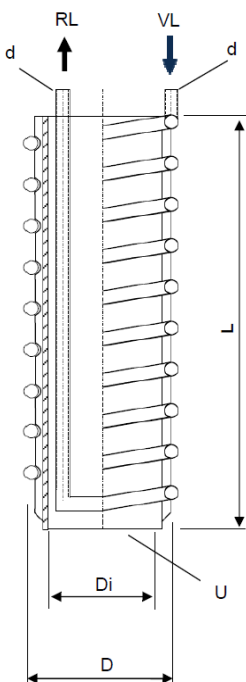
- Media pipe: extruded pipe made of polyethylene PE 100, d 25 mm / d 32 mm, SDR11, acc. to DIN 8074/8075
- Support pipe: extruded pipe made of polyethylene PE 100 acc. to DIN 8074/8075
- The material properties are dependent on temperature and pressure (see page 2)

### Temperature range:

- PE 100: Continuous operating temperature -10°C to max. + 40°C



### Dimensions:



Type		260			360		
		6 m	9 m	12 m	6 m	9 m	12 m
Length	L						
Outer diameter	D	260 mm			360 mm		
Media pipe	d	25 mm			32 mm		
Support pipe	Di	185 mm			260 mm		
Length of media pipe	-	54 m	80 m	107 m	65 m	98 m	130 m
Connection (PE 100, SDR 11)	-	Pipe spigot d 25 mm			Pipe spigot d 32 mm		
Base plate	U	With perforated base plate					
Filling amount of heat transfer medium	-	17.8 l	26.5 l	35.3 l	35.1 l	52.9 l	70.2 l

## Working pressure at continuous load for PE 100 in accordance with temperature and service life

Diameter/wall thickness ratio SDR 11 / PN 16 <sup>1</sup>		
Temperature [°C]	Service life [years]	Working pressure [bar]
10	5	20.2
	10	19.8
	25	19.3
	50	19.0
	100	18.7
20	5	16.9
	10	16.6
	25	16.2
	50	16.0
	100	15.7
30	5	14.4
	10	14.1
	25	13.8
	50	13.5
40	5	12.3
	10	12.1
	25	11.8
	50	11.6
50	5	10.7
	10	10.4
	15	9.5
60	5	7.7
70	2	6.2

The entries in the table apply to water as the flow medium. They have been calculated with a safety coefficient of C=1.25 according to DIN 8074 from the long-term hydrostatic strength diagram.