Widths between supports in following table arise from calculations for allowable deflection of max. 10 mm and the conventional distances of pipeline routes. Following please find widths between supports for pipes with gas filling and for different liquid densities.

Calculation base: assembly guidelines for pipings made from glass fibre reinforced reaction resin material. (Planungs u. Konstruktionshinweis, Bonn 1993)

E-modulus	=	10000 N/mm^2
Temperature range	=	0°- 100°C
Density FRP	=	1,6 kg/dm^3
Corrosion barrier (CSS)	=	2,5 mm
max. deflection	=	10 mm

DN [mm]	free widths between supports [m]		
	ρ =0 [kg/dm^3]	ρ =1,0 [kg/dm^3]	ρ =1,8 [kg/dm^3]
25	2,5	2,5	2,5
32	2,5	2,5	2,5
40	3,0	2,5	2,5
50	4,0	3,0	3,0
65	5,0	3,0	3,0
80	5,0	4,0	4,0
100	6,0	4,0	4,0
125	6,0	4,0	4,0
150	6,0	5,0	4,0
200	6,0	5,0	4,0
250	6,0	5,0	4,0
300	6,0	5,0	5,0
350	6,0	6,0	5,0
400	6,0	6,0	5,0
500	6,0	6,0	6,0
600	6,0	6,0	6,0
700	6,0	6,0	6,0
800	6,0	6,0	6,0
900	6,0	6,0	6,0
1000	6,0	6,0	6,0

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Manufacturer	KUROTEC-KTS Kunststofftechnik Stade GmbH
Date of manufacture	
Customer	
Pressure equipment	
Drawing no.	
Nominal diameter	
Category according to PED	
Nominal / operation / test pressure	
Operation temperature	
Medium	
Medium characteristic	

- Use of suitable gaskets according to customer requirements
- Calculation according to „AD 2000 Merkblatt“
- Employment of qualified personnel
- Final acceptance report is existing
- Isolation / coating
- Resistance of medium to glass and resin is already checked
- Suitable type of support
- Classification according to PED is already carrying out and fulfilled
- Pressure test protocol is existing

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These operation, service and maintenance instructions are applicable to GRP and GRP with thermoplastic Inliner pipelines and vessels.

- The owner of plant is responsible for all necessary laws, ordinance and rules depend of each country. It is the owner's responsibility to carrying out and to keep above regulations.
- Each changes regarding medium, pressure and temperature is not allowed.
- The support system is a fixed part of pipelines/vessels. It is not allowed to change the support system of pipelines without consultation with manufacturer.
- Please avoid every additionally weight by existing and mounted pipelines/vessels.
- You has to wash up and to clean every pipelines/vessels before test run.
- All pressure and full pipelines must be draw off slowly. Shock temperatures and shock pressure must be avoid strictly.
- After test run (operation run) you has to check and control all flange connections in consideration with suitable tightening torque's.
- The owner of plant or each section is responsible for correct and suitable processing.
- The pipelines/vessels must be proceed with operation/design condition specially regarding temperature, pressure and medium.
- Every improper handling /for example fire, attaches etc.) could damage the pipelines/vessels.
- Please avoid any attaches or bumps stress against pipelines/vessels.
- Please carry out all necessary measures to protect the "hot works" i.e. drilling, welding activities.
- The owner is responsible for regularly inspection and maintenance activities regarding pipelines/vessels.
- The pipelines/vessels must be empty completely during inspection activities.
- Please avoid vacuum effect when you empty the pipelines.
- Please avoid freeze inside of pipelines/vessels.
- Rinse/wash of HCL pipelines with water is not allowed.
- By freeze, please take care inside of pipelines/vessels is completely empty. Please avoid residue of medium.
- All changes and reparation of pipelines/vessels during warranty period must be carrying out by KUROTEC-KTS GmbH.
- Repairing activities in one's own and disregard of above instruction release the manufacturer from his warranty.

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