

Technical static values BRAWO® LR

BRAWO SYSTEMS

Stand: 2023-11-29

Technical values for the stability calculation (BRAWO LR)

Circumference E-modulus 3-min short-term:	DIN EN 1228	2300 N/mm ²
Circumference E-modulus long-term:	DIN EN 1228	613 N/mm ²
3-point bending E-modulus short-term:	DIN EN ISO 178	2500 N/mm ²
3-point bending E-modulus long-term:	DIN EN ISO 178	667 N/mm ²
3-point flexural strength short-time:	DIN EN ISO 178	32 N/mm ²
3-point flexural strength long-time:	DIN EN ISO 178	8,50 N/mm ²
Compressive strength short-term:	DIN EN ISO 604	139 N/mm ²
Compressive strength long-term:	DIN EN ISO 604	37,1 N/mm ²
Attenuation factor:		3,75
Poisson's ratio μ :		0,36
Security factor γ :		1,35

Achievable wall thicknesses for the BRAWOLINER®

BRAWOLINER®	DN tube	Wall thickness	SN ¹⁾	(SN > 500 N/m ²)	Max. GW over pipe base (>1,5m)
BRAWOLINER® DN100	DN 100	3,5 mm	9145 N/m ²	Yes	n.s.
	DN 120	3,0 mm	3231 N/m ²	Yes	n.s.
BRAWOLINER® DN125	DN 125	3,5 mm	4582 N/m ²	Yes	5,0 m
	DN 150	3,0 mm	1629 N/m ²	Yes	2,5 m
BRAWOLINER® DN150	DN 150	3,5 mm	2614 N/m ²	Yes	> 2,5 m
	DN 175	3,0 mm	1017 N/m ²	Yes	n.s.
BRAWOLINER® DN200	DN 200	3,5 mm	1083 N/m ²	Yes	1,8 m
	DN 250	3,0 mm	343 N/m ²	No	n.s.

BRAWOLINER® XT	DN tube	Wall thickness	SN ¹⁾	(SN > 500 N/m ²)	Max. GW over pipe base (>1,5m)
BRAWOLINER® XT DN100	DN 100	4,5 mm	20053 N/m ²	Yes	n.s.
	DN 125	4,0 mm	6924 N/m ²	Yes	5,0 m
BRAWOLINER® XT DN125	DN 125	4,5 mm	9982 N/m ²	Yes	5,0 m
	DN 150	4,0 mm	3942 N/m ²	Yes	> 2,5 m
BRAWOLINER® XT DN150	DN 150	4,5 mm	5670 N/m ²	Yes	> 2,5 m
	DN 175	4,0 mm	2453 N/m ²	Yes	n.s.
BRAWOLINER® XT DN200/250	DN 200	4,5 mm	2337 N/m ²	Yes	> 1,8 m
	DN 250	4,0 mm	824 N/m ²	Yes	n.s.

BRAWOLINER® 3D	DN tube	Wall thickness	SN ¹⁾	(SN > 500 N/m ²)	Max. GW over pipe base (>1,5m)
BRAWOLINER® 3D DN 70-100	DN 70	4,0 mm	42667 N/m ²	Yes	5,0 m
	DN 80	3,5 mm	18356 N/m ²	Yes	5,0 m
	DN 100	3,0 mm	5670 N/m ²	Yes	> 2,5 m
BRAWOLINER® 3D DN 100-150 ²⁾	DN 100	4,0 mm	13865 N/m ²	Yes	5,0 m
	DN 125	3,5 mm	4582 N/m ²	Yes	5,0 m
	DN 150	3,0 mm	1629 N/m ²	Yes	2,5 m
BRAWOLINER® 3D DN 150-225 ²⁾	DN 150	4,0 mm	3942 N/m ²	Yes	5,0 m
	DN 200	3,5 mm	1083 N/m ²	Yes	1,8 m
	DN 225	3,0 mm	473 N/m ²	No	1,0 m ³⁾
BRAWOLINER® 3D DN 200-300	DN 200	5,3 mm	3866 N/m ²	Yes	n.s.
	DN 225	5,0 mm	2250 N/m ²	Yes	n.s.
	DN 250	4,8 mm	1438 N/m ²	Yes	n.s.
	DN 300	4,5 mm	677 N/m ²	Yes	n.s.

¹⁾ Calculation of nominal ring stiffness (SN) in accordance with DIN EN 1228

E = Circumference E-modulus 3-min short-term : e = wall thickness : de = internal diameter old pipe

²⁾ Part of DIBt approval Z-42.3-566

³⁾ Value is below the minimum load of $h_{W,S0} = d_a + 0,1m \geq 1,5 m$ (DWA-A 143 Part 2)

⁴⁾ DWA-A 143 Part 2

$$SN = \frac{E \cdot e^3}{12 \cdot (d_e - e)^3}$$