

# NIROFLEX®

Pipesystem



# NIROFLEX® –

## the pipe system



### The NIROFLEX®-family

NIROFLEX® is a single-walled corrugated piping system made of stainless steel. The constructional key element of these pipes, manufactured at our works in long lengths, is the helically corrugated pipe.

The basic advantage of BRUGG's spirally corrugated pipe technology is the optimized geometry of the corrugated pipes for minimal flow resistance, the good flushability and the efficient heat transfer characteristics, combined with great flexibility and high lateral rigidity.

### Applications

For the transport of fluids and gases above and below ground, as heat-exchanger piping system, as solar pipe system, as an ancillary hot water heating system, as an inner liner, as emptying pipe, protective pipe ...

### Construction

From the basic stainless steel pipe to the corrosion-protective sheathing via the heat-insulated corrugated pipe through to the corrugated pipe with integrated leak monitoring: the application decides the construction.

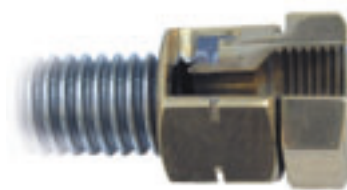
### System advantages

- fast and efficient laying
- no welding, no fittings needed
- high flexibility, self-compensating
- unique hydrodynamic characteristics through the spiral corrugation
- small bending radii

Expansion take-up is guaranteed by the corrugated pipe geometry. This makes NIROFLEX easy and fast to lay even when the routing is difficult, thus cutting the costs.

Trench work is minimized when the pipes are laid underground, the pipe can be pulled in one piece.

With surface-laid pipes, the optimum route can be chosen by using the correct mounting systems and taking advantage of the low bending radii.



### The pipesystem

NIROFLEX® with a corrugated inner pipe made of stainless steel and with excellent corrosion resistance.

Standard materials: 1.4301, 1.4404, 1.4571 and for some projects 1.4539

Nominal bores: DN 15 to DN 150

Pressure stages: PN 6 to PN 25



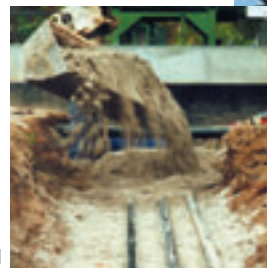
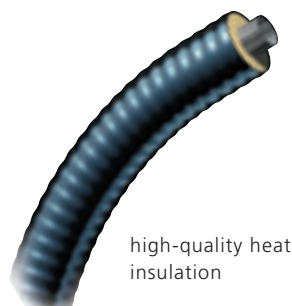
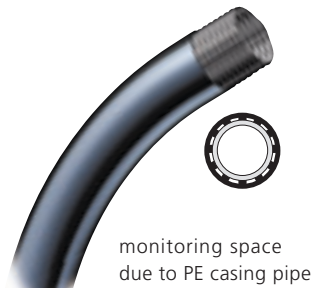
### Connecting technology

Optimized connections and fittings enable the pipes to be coupled to all standard connections. There are several variants of the connection technology (welded, non-welded graphite packing technology and flared-type connections). Non-welded connection technology enables time-savings on installation work in areas where explosions are a danger.



# - Corrugated pipe system

## The construction - the requirements



# Corrugated pipe

technology efficient  
heat transfer

used in producing  
bio-gas



mounting  
inside vessel  
(fermenter)

## System advantages

- better heat transfer through early turbulence formation
- surface up to 50 % higher
- better thermal efficiency
- easily bendable, small bending radii
- can be laid in long lengths
- pipe profile with optimized thermal and hydrodynamic characteristics
- highly economical with corrosion-resistant materials

# The NIROFLEX® – family



## NIROFLEX - corrugated pipe - (uncoated core pipe)

among other uses as an above-ground product transport system, as a heat-exchanging pipe inside vessels, as piping in the production of regenerative energies (bio-gas, solar energy), as an ancillary hot-water heating system.



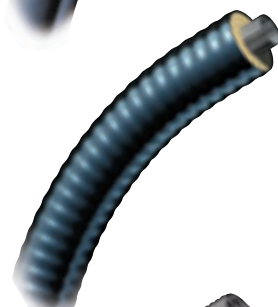
## NIROFLEX - corrugated pipe with high-quality external corrosion-proof sheathing

among other uses, as a product transport system for the most diverse media up to PN 16 above and below ground.



## NIROFLEX with high-quality external corrosion-proof sheathing and additional reinforcing bands

Among other uses, as a product transport system for the most diverse media up to PN 25 above and below ground.



## NIROFLEX - corrugated pipe with heat insulation

The heat insulating system consists of a flexible foam containing no hydro-fluorocarbons, which has excellent insulating characteristics. Available in dimensions DN 20, 25 and 32 as DUO pipe as well.



## NIROFLEX - corrugated pipe with external polyethylene jacket

The annular gap between the inner pipe and the external PE casing pipe can be used to contain spillages or for a leak detection system.

Type	DN	Minimum	
		pipe	bend radius
		Ø mm	m*
CNW 16/20	15	20,0	0,18
CNW 22/25	20	25,5	0,2
CNW 30/34	25	34,0	0,2
CNW 39/44	32	43,8	0,25
CNW 48/55	40	54,5	0,3
CNW 60/66	50	66,0	0,4
CNW 75/86	65	85,6	0,6
CNW 98/109	80	109,2	0,8
CNW 127/143	100	142,9	0,9
CNW 147/163	125	162,9	1,1
CNW 200/220	150	218,0	1,35

CNT 22/31	20	29,5	0,2
CNT 30/38	25	38,0	0,2
CNT 39/49	32	48,0	0,25
CNT 48/60	40	59,3	0,3
CNT 60/71	50	71,2	0,4
CNT 75/92	65	92,4	0,6
CNT 98/120	80	117,0	0,8
CNT 127/152	100	152	0,9
CNT 147/172	125	173	1,1
CNT 198/230	150	228	1,35

LPG 22/33	20	32,2	0,2
LPG 30/40	25	40,6	0,2
LPG 39/50	32	50,8	0,3
LPG 48/61	40	61,5	0,4
LPG 60/74	50	73,4	0,6

CFL 22/91	20	93	0,8
CFL 30/91	25	93	1,0
CFL 39/111	32	113	1,0
CFL 48/111	40	113	1,0
CFL 60/126	50	128	1,2

SEC 48/63	40	64	0,43
SEC 60/75	50	77	0,44
SEC 98/120	80	123	0,7



# Pipe systems for the future

District heating – Industry – Petrol stations – System packages



## Your partner for pipe systems

We are the people you should talk to when you need to find efficient solutions for transporting liquid materials. With our project engineers, development department, in-house production unit and our professional team of fitters, we have the know-how and the resources to look after your projects competently and reliably. For all types of heating systems, petrol station construction, industrial plant construction and system packages.

## International network

Our global partnership network can be reached on site at any time. More than 34 partners in 20 different countries will look after you wherever you are.

## Customer-specific solutions

Brugg is the full service provider in the field of single-wall, double-wall and insulated pipe systems. This know-how allows us to manufacture project-specific customised items.

## Give us a call!

Our engineers would be pleased to advise you and find a made-to-measure solution.

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