

Pneumaform

Egg-profile sewers in monolithic design
with polymer concrete and cast-in-place concrete



The modern
construction in
cast-in-place
concrete

Pneumaform



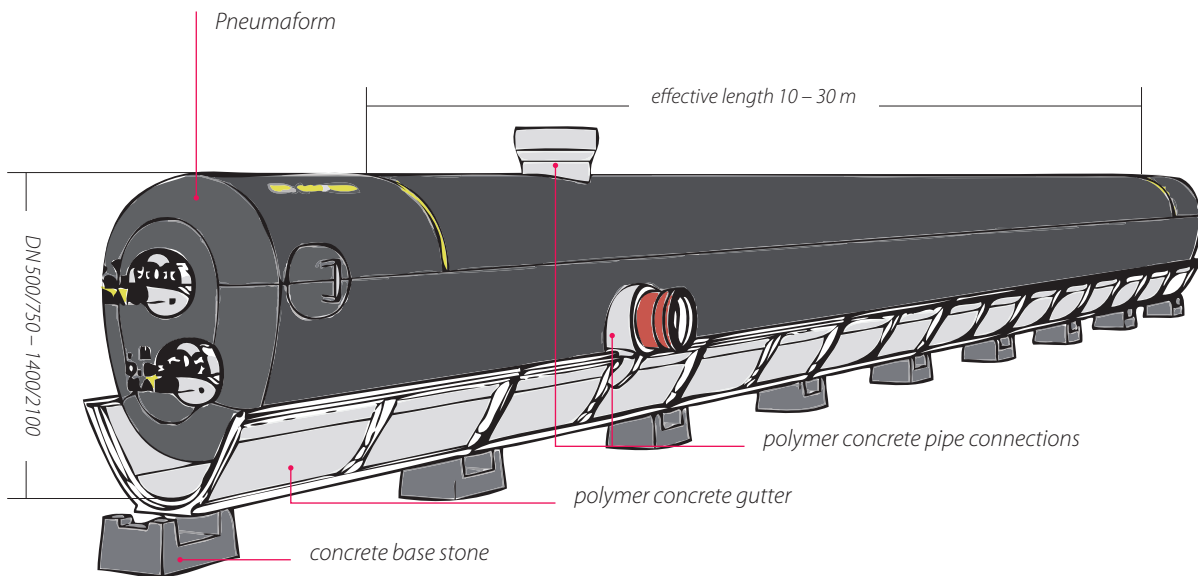
*The advantages of the egg-profile in sewage technology are generally known. Sewer structures in **cast-in-place concrete** are highly valued because of their outstanding quality, tightness and durability.*

However, conventional technologies for the production of egg-profile sewers are costly in terms of labour and often not competitive with regard to construction progress and quality.

*With the pneumatic formwork, we offer an **established sewer construction system** for the cost-efficient production of egg-profile sewers in cast-in-place concrete. The result is a **quasi-monolithic sewer structure** with a highly resistant dry-weather channel and smooth concrete surfaces **in the best, sustainable quality**.*

***Pneumaform – the modern construction
in cast-in-place concrete***

Pneumaform – the modern construction in cast-in-place concrete



The pneumaform, the gutter of polymer concrete and the base stone are **perfectly** co-ordinated **system components**.

The **pneumaform** is a hose element of a neoprene-coated special fabric. During concreting, the patented multi-chamber system also ensures the form stability of the pneumatic formwork when bloated.

The blow-up pressure of the two chambers – 0.5 bar and 0.05 bar – is controlled and regulated by the pressure gauge that is mounted frontally.

The dimensionally accurate **system channels** that are perfectly matched to the pneumaform are made out of **polymer concrete**, the perfect material for the highest requirements in sewage technology: They are **chemical-resistant**, extremely **pressure and bending-resistant**, non-porous and have a hydraulically **smooth surface**. They make high efficiency in terms of **laying performance** and quality, as well as a **reduction of joints**, possible. The gutters are connected by a rebated joint; the thought-out geometry of the gutter's flank forms a **clean and tight transition** to the profile concrete and ensures the durable **bracing** of the elements.

Suitable component parts for the production of **pipe connections** or **manhole locations** in polymer concrete complement the system.

The special construction of the **base stone** guarantees that the concrete flows completely and tightly below the laid gutters.



1

Concreting of the base of the sewer:
laying of the base stones and the gutters according to alignment and incline



2

Installation of the pneumoform:
inflating by means of construction compressor



3

Installation of the buoyancy control and the front formwork, application of the release agent



4

Concreting of the egg-profile:
placing of the concrete in layers, compaction by means of the concrete vibrator

5

Finishing/Deflating:
The pneumoform loosens from the sewer profile and is prepared for the next phase of construction



Advantages

The **advantages** of the systems with regard to the construction/reconstruction of sewers can be seen, first, in each individual phase of the planning and construction process and, second, in the high quality and lifetime of the sewer structures constructed by means of this system.

The amount of work connected with the system can be carried out by a few semi-skilled workers without heavy equipment. The system guarantees a **fast progress of construction work** and demands only a minimum of completion work.









The system implicates a „**lean**“ **construction site** and, therefore, reduces the necessary earthworks by a good 40%, compared to the conventional laying of pre-fabricated pipes. The **small width of the ditch** connected with construction using cast-in-place concrete carries a considerable rationalisation potential in the entire **construction site logistics**, as well as a massively **reduced traffic obstruction** caused by the construction project.

The sewer construction system is extremely **flexible in its application**: The connection of existing **house sewers** can be realised as easily as the installation of all types of **man-**

holes or the connection to other sewage systems.

A special advantage of the pneumaform is that it is possible to easily construct **curved sewer lines** – this can potentially save the installation of additional manholes.

The result is a quasi-monolithic, tight sewer structure that features sustainable quality, stability and a long lifetime.

Dimensions	00	0	I	II	III	IV	VI	VIII
Nominal diameter w/h in mm	500/750	600/900	700/1050	800/1200	900/1350	1000/1500	1200/1800	1400/2100
Cross-section area A in m ²	0,287	0,413	0,563	0,735	0,930	1,149	1,654	2,251
Effective length in m	10, 15, 20	10, 20, 30	10, 20	10, 20, 25	10, 20	10, 15	10, 15	10
								



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