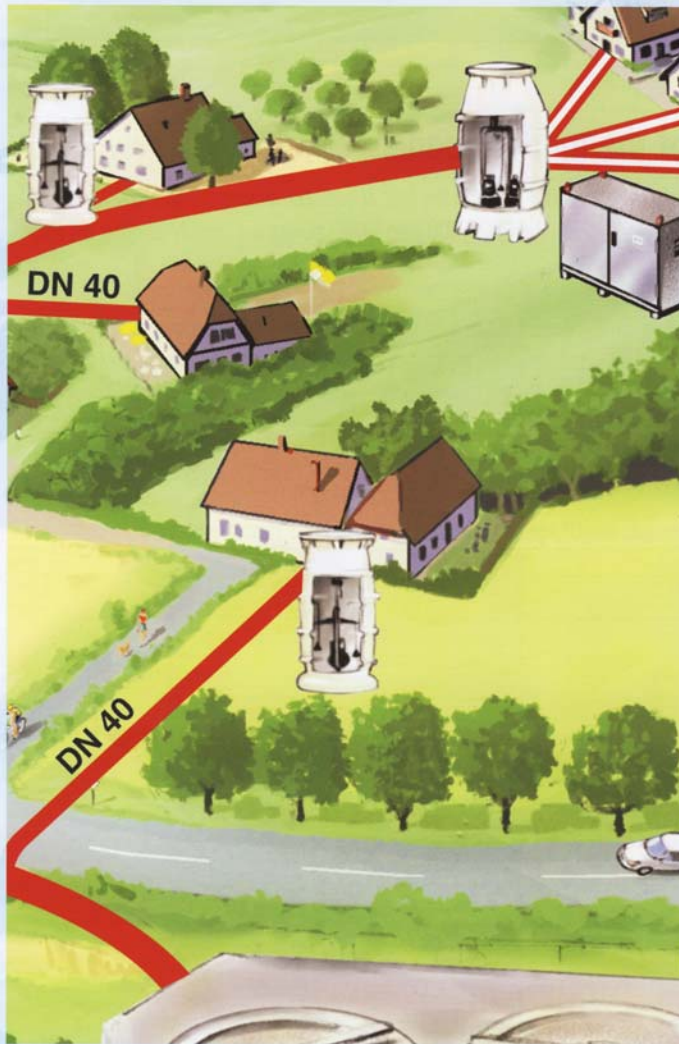


JUNG PUMPEN pressure drainage, the economical solution for your local public wastewater disposal



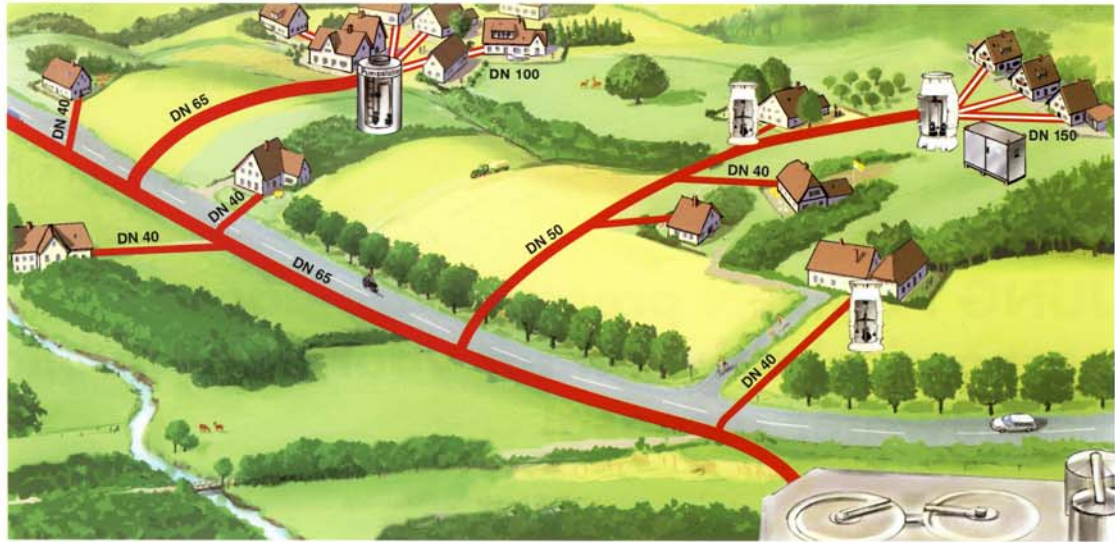
Cost-saving

Environmentally friendly

Dependable

Durable

80
YEARS
QUALITY



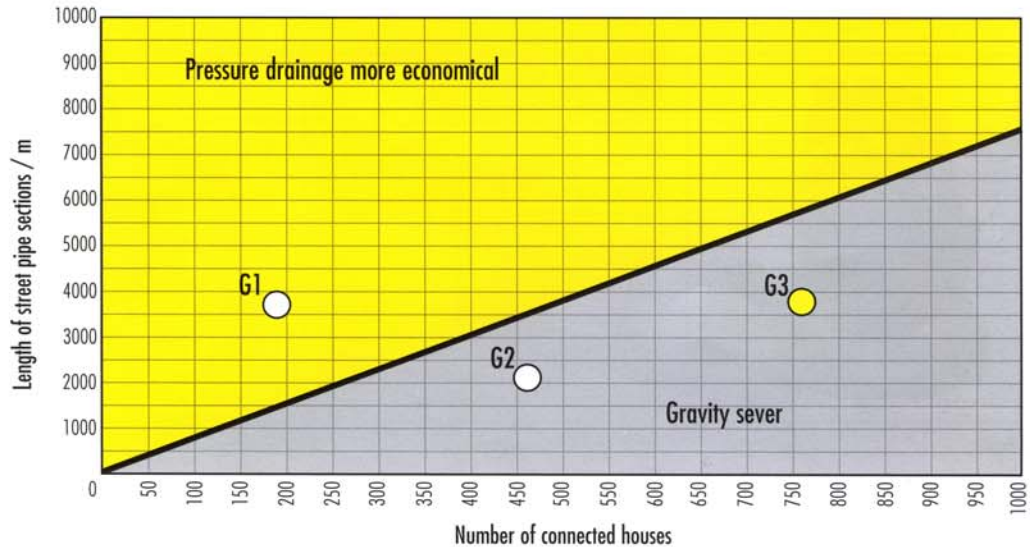
Profit from the success of the market leader.

For more than 25 years, JUNG PUMPEN has been successfully active in the field of pressure drainage. Numerous references across Europe speak to our success. In these projects, more than 100,000 long-lasting pumps are reliably carrying out their tasks.

At the same time, the JUNG PUMPEN pressure drainage system is the economical alternative for local drainage in comparison to traditional gravity sewer systems. Simple, quick, site independent, inexpensive to install and dependable for any application were the deciding factors for many municipalities who have already implemented our system.

Pressure Drainage	Gravity Sever
Work with small PE-HD pressure pipes	Work with pipes of large dimensions made from concrete, vitrified clay, etc.
Up to 3,000 m of piping can be laid per day with an excavator (e.g. pipe-laying plough)	Extensive earthworks with some activities lasting for months
Parallel installation for drinking water and wastewater pipes as well as electrical and telephone lines possible with one device (e.g. pipe-laying plough)	Parallel installations for different pipes and wiring not possible
Pipe laying independent of the nature of the ground	Ground layers such as sand or the ground water table must be taken into consideration
Laying of pipes is site independent	Pipe slopes must be kept. Under some circumstances, expensive additional pumping stations may need to be installed
Virtually no damages to corridors	Greater corridor damages due to extensive floor movements
Low level of disturbance for residents as a result of quick installation	Higher level of disturbance for residents with noise pollution and long installation times
Flow of traffic is not interrupted	Frequent street closings with confusing detours
Durable, flexible PE-HD piping	Risk of fracture with concrete pipes due to building settling

As far as investment costs are concerned, pressure drainage is the ideal system for drainage in rural and built-up regions and also offers numerous interesting possibilities for urban drainage in fringe areas. A comparison of costs between pressure drainage and gravity sewer systems for 1000 houses is depicted in Figure 1. This chart shows the simple delivery from the number of houses connected and the street pipe sections to the clarification plant or to the additional pumping stations (costs for house connection with normal ground conditions have already been taken into consideration).



Investment costs comparison: Pressure drainage/Open-channel *

Community G1	
Connected houses	192
Total pipe length	3,700 m
Ground conditions	normal
From the chart it is obvious that pressure drainage is more economical. In this case, investment savings for this community was € 495,000.	

Community G2	
Connected houses	477
Total pipe length	2,100 m
Ground conditions	normal
From the chart it is obvious that an open-channel system is more economical.	

Community G3	
Connected houses	768
Total pipe length	3,900 m
Ground conditions	complicated
From the chart it is obvious that an open-channel system is more economical. However, due to the nature of the ground and the resulting higher costs, a pressure drainage system was selected.	

*Data sources: 1. Wastewater disposal in Brandenburg – benchmark values for 2003 – Expenses for wastewater piping and treatment: Publisher: MLUR (Brandenburg Ministry for Agriculture, Environment and Regional Planning), March 2003

2. Sewage disposal in rural areas: Publisher: MLUR-NRW (North Rhine-Westphalia Ministry for Environment, Agriculture and Consumer Protection), September 2004

Calculated for soil type 3-5. Gravity sewer with average pipe diameter DN 250 and depth of 2,5 m. Pressure drainage with average pipe diameter DN 65 and depth 1,5 m.

Costs for such aspects as sump drainage for gravity sewer, operating costs and maintenance must be considered separately. Average value of operating costs for grinder pump MultiCut 25/2 M with a water consumption of 100 l/inhabitant and day are about 7 kWh/inhabitant and year.

The components

JUNG PUMPEN offers a fully-developed technological system: The reliable and durable MultiCut cutting system, the buoyancy-proof and easy-to-maintain PKS-800 polyethylene chamber (accessible from above), the robust and user-friendly AD46ExM control unit – also available as a microprocessor control unit.



MultiCut

In order to meet different requirements, an extensive selection of pump models is available. The submersible pumps, with an externally located and adjustable cutting system for chopping solid material normally found in household wastewater, offer a high degree of safety.



With the MultiCut cutting system, the use of smaller pressure pipes (from DN 32) is possible.



PKS-800 Polyethylene Chamber

A polyethylene chamber (Z.42.1-331) constructed from recyclable and corrosion resistant polyethylene, approved by the German Institute for Building Technology (DIBt) and buoyancy-proof. The chamber is transferred to the ground without concrete works and can be installed in areas used by pedestrians and cyclists. In areas of motorised traffic, it is necessary to install our plastic PKSD or concrete DKS/KS pumping station.



AD46ExM Control Units

Control units for switching a submersible motor pump on or off, depending on the water level. The control unit works with two independently active level contact switches for increased operational safety. An extensive standard equipment package and optional accessories enable individualised adjustments to be made for meeting the needs of the customer. As an alternative to conventional control units, microprocessor control units can be incorporated. These units can be extended modularly for connection to a remote signalling / remote control system.

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