

PROCESS DESCRIPTION – bruNo 1.0

The high-pressure water jet robot bruNo 1.0 works fast, effectively, material-saving and is therefore extremely economical.

Whether for the special cleaning of sewers or for the preparation of sewer rehabilitation - the bruNo 1.0 DRAIN-JET ROBOTICS complete system comprises a tailor-made technology package for the efficient acceleration of almost all cleaning work in the sewer through high-pressure water jets up to 22,000 PSI. The high-pressure water jet robot bruNo 1.0 works faster, more effectively and more gently in all known sewer profiles, making it significantly more economical than conventional milling robot technology.

Applications of DRAIN-JET ROBOTICS® technology

bruNo 1.0 removes encrustations and other hard deposits like concrete from sewer pipes in no time. The high-pressure water jet robot can be optimally adapted to the respective task via several parameters. Compared to conventional methods, the deterioration of the old pipe substance in the removal of solid deposits is in most cases significantly lower. An additional factor is the simultaneous visual control of the camera integrated in the robot. The operator sees what he is doing. This means that he can specifically dose the pressure under camera observation and set the beam to what he wants to process.

bruNo 1.0 with the high-pressure water jet technology quickly and thoroughly eliminates:

- encrustations, limescale and concrete deposits
- roots
- bitumen and fats
- GRP hose liners and needle felt liners

Advantages of the DRAIN-JET ROBOTICS® process:

- cost-effective process through highly efficient working method
- controlled process through camera monitoring
- protects pipe material, due to maximum-pressure water jet technology

Added to this is the argument of economy. For the target applications, bruNo 1.0 can deliver a significantly higher daily output than a conventional milling robot at comparable costs. Thus, the high-pressure water jet method is usually four times faster than the milling technique. For fine-

grained, homogeneous materials, such as twilight, it can also be factor six, eight or ten. Against this background, the high-pressure water jet technology is usually the more economical option.

Almost all obstacles are removed by bruNo 1.0 flush with the pipe wall, without that reworking is necessary. It is usually worked axially radiating with the water jet, that is approximately parallel to the pipe wall. In this way, the high-pressure water jet robot achieves optimum preparation for a sewer rehabilitation in just one operation. The sensitive handling is also and especially where a pre-damage of the sewer substance is present. In this case, the stability is not endangered by bruNo 1.0. Our system also works where the milling robot no longer dares to go, because the bruNo 1.0 high pressure water jet robot generates comparatively little mechanical vibration and vibrations that could destabilize the pipe-floor system.

DRAIN-JET ROBOTICS® - complete system bruNo 1.0

- high-pressure water jet robot, self-driving from DN300/12"
- various high-pressure water jet working arms
- extension up to DN 1.000/39" and egg-shaped profile
- vehicle installation set (including synchronous reel system: media line and high pressure hose)
- fully equipped operator vehicle
- high-pressure pump
- other accessories

Special features of bruNo 1.0

- endless rotation of the robot arms
- quick change system for different robot arms
- rear view camera
- practice-related construction
- multi plug for smaller machines
- high-pressure synchronous reel system for comfortable operation and safety

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